UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 3.5 - 12.7 install median rumble strip, widen shoulder.	Calculated By/Entered By:	
	Project 1	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	15.7	$94,200
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$121,460	1	$121,460
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	16,600	$332,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	38,300	$612,800
		EMBANKMENT COMPACTION	CY	$2	20,700	$41,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	194,400	$1,166,400
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	1	$0
		CONCRETE BRIDGES WIDENING	LS	$0	1	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	1	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	14,700	$955,500
		CRUSHED SURFACING	TON	$25	10,800	$270,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	22.4	$44,800
		WETLAND MITIGATION	LS	$620,000	1	$620,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$287,000	1	$287,000
		LANDSCAPING	LS	$502,000	1	$502,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$0	1	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0
		ITS FOR HOT-LANES	LS	$0	1	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 3.5 - 12.7 install median rumble strip, widen shoulder.	Calculated By/Entered By:	
	Project 1	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$505,800	1	$505,800
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$111,300	1	$111,300
		SPECIAL ITEMS	EST	$334,000	1	$334,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$1,802,600	1	$1,802,600
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$7,811,260**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$781,200	1	$781,200
9		**SUBTOTAL (ITEMS 7 & 8)**				**$8,592,460**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$799,100	1	$799,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$9,391,560**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$2,818,000	1	$2,818,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$12,209,560**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$3,662,900	1	$3,662,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$61,100	1	$61,100
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$16,040,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$18,060,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 1
Location snohomish to monroe

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: 0
Checked By: 0

Segment 1

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	snohomish to monroe

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	AREA SF	(ACRE)
48,576	14	680064	15.7
	sub-total		**15.7**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**15.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**15.7**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$121,460**
Commercial Buildings	**$0**

Sub Total	**$121,460**
Uncertainty Factor (U_f)	**1**
TOTAL	**$121,460**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	48,576	4	2.0	388608	14393

Sub Total	**14,393**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**16,600**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	4	48,576	5	5	485,760	17,991	33,290	17,991

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**33,290**	**17,991**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**38,300**	**20,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	48576	4	194,304

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	85,494	CF
Prorated Water Quality Volume Required	16710.144	CF
Detention Bottom Area (based on 3' depth)	28497.92	SF
WQ Surface Area (Based on 3' WQ depth)	5570.048	SF
Greater of Detention and WQ areas	28497.92	SF
Pond Bottom Length (3:1 aspect ratio)	292	FT
Pond Bottom Width	97	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	316	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	337	FT
Pond Length at Outside to of Berm (4' @2:1)	**353**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	121	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	142	FT
Pond Width at Outside to of Berm (4' @2:1)	**158**	**FT**

Pond Footprint Dimensions	160 x360		FTxFT
Pond Footprint Area	**57,600**	**SF**	
	1.32	Ac.	

Sub Total	**194,304**
Uncertainty Factor (U_f)	**1**
TOTAL	**194,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	4.0	5	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	48,576	4	194304	0.9	174874	6477	13277

Sub Total	**13277**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**14700**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	194304	0.7	136013	5038	9319

Sub Total	**9319**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**10800**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	680,064	15.7
Landscape Area	291456	6.7

Sub Total	**22.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**22.4**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4500	1	4500
	ditch S	9000	1	9000

Sub Total	**13500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$619,835**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$620,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$620,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 4,770,560	$	286,234

Sub Total	**$**	**286,234**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**287,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	48,576	6	291456	6.69	$501,818

Sub Total	291456.00	**$501,818**
Uncertainty Factor (U_f)		**1**
TOTAL		**$502,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	48,576	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
5th St	$150,000
	$150,000
	$0
Sub Total	**$300,000**
Uncertainty Factor (U_f)	**0**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	48,576	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	48,576	**9.20**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	48,576	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	48,576	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

	LS	SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 5,057,560	$ 505,756

Sub Total	**$**	**505,756**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**505,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 5,563,360	$ 111,267

Sub Total	**$**	**111,267**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**111,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$333,700**

Sub Total	**$333,700**
Uncertainty Factor (U_f)	**1**
TOTAL	**$334,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 3.5 - 56.76 install ITS Traveler infromation (CCTV,VMS)	Calculated By/Entered By:	
	Project 2	Checked By:	

Segment 1 - Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	-	$0
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$0	-	$0
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	-	$0
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	-	$0
		EMBANKMENT COMPACTION	CY	$2	-	$0
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	-	$0
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	-	$0
		CRUSHED SURFACING	TON	$25	-	$0
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$82,000	-	$0
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 3.5 - 56.76 install ITS Traveler infromation (CCTV,VMS)	Calculated By/Entered By:	
	Project 2	Checked By:	

Segment 1 - Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$1,347,000	1	$1,347,000
		TRAFFIC CONTROL (10%)	LS	$135,700	1	$135,700
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$29,900	1	$29,900
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$456,800	1	$456,800
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,979,400**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$198,000	1	$198,000
9		**SUBTOTAL (ITEMS 7 & 8)**				**$2,177,400**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$202,500	1	$202,500
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$2,379,900**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$714,000	1	$714,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$3,093,900**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$928,200	1	$928,200
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$15,500	1	$15,500
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$4,040,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$4,550,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

PLANNING LEVEL OPINION OF COST

Project: US 2 Corridor Plan
Corridor: Segment 1 - Segment 4
Location: snohomish to skykomish

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: 0
Checked By: 0

Segment 1 - Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 1 - Segment 4
Location snohomish to skykomish

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: 0
Checked By: 0

Segment 1 - Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1 - Segment 4
Location:	snohomish to skykomish

Segment 1 - Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 1 - Segment 4		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 1 - Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	SF	(ACRE)
104,122	0	0	0.0
	sub-total		**0.0**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	TOP OF POND AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$0**
Commercial Buildings	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1 - Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 1 - Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	0	20	2.0	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1 - Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 1 - Segment 4

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	0	2,665	5	5	0	0	0	0

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**0**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	104122	0	0

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	0	CF
Prorated Water Quality Volume Required	0	CF
Detention Bottom Area (based on 3' depth)	0	SF
WQ Surface Area (Based on 3' WQ depth)	0	SF
Greater of Detention and WQ areas	0	SF
Pond Bottom Length (3:1 aspect ratio)	0	FT
Pond Bottom Width	0	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	24	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Length at Outside to of Berm (4' @2:1)	**61**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	24	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Width at Outside to of Berm (4' @2:1)	**61**	**FT**

Pond Footprint Dimensions	70 x70		FTxFT
Pond Footprint Area	**4,900**	**SF**	
	0.11	Ac.	

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	4.0	5	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	104,122	0	0	0.1	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	0.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -
Hydraulic Permit Approval		WDFW		0	$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT	0		$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE	**0**		$ -

Sub Total	**$ -**	**LS $**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 1,357,000	$ 81,420

Sub Total	**$**	**81,420**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**82,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	52,061	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	104,122	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	104,122	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	279,840	**53.00**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	104,122	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	104,122	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
ITS Traveler Information	**$1,346,080**
	$0
	$0
	$0

Sub Total	**$1,346,080**
Uncertainty Factor (U_f)	**1**
TOTAL	**$1,347,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 1,357,000	$ 135,700

Sub Total	**$**	**135,700**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**135,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 1,492,700	$ 29,854

Sub Total	**$**	**29,854**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**29,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1 - Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1 - Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 12.46 Dairy Farm Channelization and safety improvements	Calculated By/Entered By:	
	Project 3	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.6	$3,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$18,700	1	$18,700
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,000	$40,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	700	$11,200
		EMBANKMENT COMPACTION	CY	$2	400	$800
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	22,400	$134,400
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	5	$6,000
		CATCH BASIN TYPE 2	EA	$2,200	2	$4,400
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	880	$30,800
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	880	$39,600
		STRUCTURE EXCAVATION CL. B	CY	$15	700	$10,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,900	$123,500
		CRUSHED SURFACING	TON	$25	1,300	$32,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.8	$1,600
		WETLAND MITIGATION	LS	$92,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$30,000	1	$30,000
		LANDSCAPING	LS	$14,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	800	$16,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 12.46 Dairy Farm Channelization and safety improvements	Calculated By/Entered By:	
	Project 3	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$51,400	1	$51,400
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$11,300	1	$11,300
		SPECIAL ITEMS	EST	$51,000	1	$51,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$188,200	1	$188,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$815,500**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$81,600	1	$81,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$897,100**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$83,500	1	$83,500
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$980,600**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$295,000	1	$295,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,275,600**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$382,700	1	$382,700
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$6,400	1	$6,400
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,670,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,880,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actua stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 1

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	snohomish to skykomish

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	800	28	22400	0.6
		sub-total		**0.6**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.6**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$18,700**
Commercial Buildings	**$0**

Sub Total	**$18,700**
Uncertainty Factor (U_f)	**1**
TOTAL	**$18,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	800	28	2.0	44800	1659

Sub Total	**1,659**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2,000**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	28	800	1	1	8,400	311	580	311

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**580**	**311**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**700**	**400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	800	28	22,400

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	9,856	CF
Prorated Water Quality Volume Required	1926.4	CF
Detention Bottom Area (based on 3' depth)	3285.333333	SF
WQ Surface Area (Based on 3' WQ depth)	642.1333333	SF
Greater of Detention and WQ areas	3285.333333	SF
Pond Bottom Length (3:1 aspect ratio)	99	FT
Pond Bottom Width	33	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	123	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	144	FT
Pond Length at Outside to of Berm (4' @2:1)	**160**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	57	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	78	FT
Pond Width at Outside to of Berm (4' @2:1)	**94**	**FT**

Pond Footprint Dimensions	100 x170		FTxFT
Pond Footprint Area	**17,000**	**SF**	
	0.39	Ac.	

Sub Total	**22,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**22,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	800	800	800	4	1

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**800**	**800**	**4**	**1**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**880**	**880**	**5**	**2**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	6.0	3	0	0
	800	4.0	5	16,000	593

Sub Total	**593**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	800	28	22400	1.0	22400	830	1701

Sub Total	**1701**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1900**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	22400	0.7	15680	581	1074

Sub Total	**1074**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1300**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	22,400	0.6
Landscape Area	8000	0.2

Sub Total	**0.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	2000	1	2000
	ditch S	0	1	0

Sub Total	**2000**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$91,827**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$92,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$92,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 483,600	$ 29,016

Sub Total	**$**	**29,016**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**30,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	800	10	8000	0.18	$13,774

Sub Total	8000.00	**$13,774**
Uncertainty Factor (U_f)		**1**
TOTAL		**$14,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	800	1	800

Sub Total	**800**
Uncertainty Factor (U_f)	**1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	800	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	279,840	**53.00**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	800	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	800	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 513,600	$ 51,360

Sub Total	**$**	**51,360**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**51,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 565,000	$ 11,300

Sub Total	**$**	**11,300**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**11,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$5,000**
Trimming	**$15,000**
Training	**$6,000**
Soil residual herbicide	**$10,000.00**
pavement marking	**$15,000**

Sub Total	**$51,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$51,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 2
Location: Add a second SB left turn land on Chain Lake Rd at US 2 and EB WB right turn only on US2

UPDATED USING CITY OF MONROE ESTIMATE $3 MILLION

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: yzhu
Checked By: GW

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	900	$40,500
		RIGHT OF WAY (urban undeveloped)	SF	$20	12,600	$252,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	3	$45,000
		RIGHT OF WAY TOTAL				**$337,500**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.1	$843
		REMOVING EXISTING PAVEMENT	SY	$10	300	$3,000
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,000	$20,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	200	$3,200
		EMBANKMENT COMPACTION	CY	$2	100	$200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	11,100	$66,600
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	6	$7,200
		CATCH BASIN TYPE 2	EA	$2,200	3	$6,600
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	960	$33,600
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	960	$43,200
		STRUCTURE EXCAVATION CL. B	CY	$15	1,500	$22,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,000	$65,000
		CRUSHED SURFACING	TON	$25	600	$15,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.2	$400
		WETLAND MITIGATION	LS	$30,000	1	$30,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$23,000	1	$23,000
		LANDSCAPING	LS	$6,000	1	$6,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$12,000	1	$12,000
		SIGNING	LS	$5,000	1	$5,000
		CURBS	LF	$15	1,000	$15,000
		SIDEWALKS	SY	$25	700	$17,500

Perteet Inc.
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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 2
Location: Add a second SB left turn land on Chain Lake Rd at US 2 and EB WB right turn only on US2

UPDATED USING CITY OF MONROE ESTIMATE $3 MILLION

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: yzhu
Checked By: GW

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$40,600	1	$40,600
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$9,000	1	$9,000
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$136,700	1	$136,700
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$592,143**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$59,300	1	$59,300
9		**SUBTOTAL (ITEMS 7 & 8)**				**$651,443**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$60,600	1	$60,600
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$712,043**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$107,000	1	$107,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$819,043**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$245,800	1	$245,800
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$4,100	1	$4,100
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,410,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$3,000,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

Perteet Inc.
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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 2
Location Add a second SB left turn land on Chain Lake Rd at US 2 and

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: yzhu
Checked By: GW

Segment 2

DESIGN ASSUMPTIONS

1	Assumption for:	**Design**
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	Assumption for:	**ROAD DESIGN SPEED**
		Design Speed Mainline: 70MPH Posted Speed Mainline: 60MPH
3	Assumption for:	**Roadway Horizontal Alignment**
		Roadway will shift crown of road 6' south
4	Assumption for:	**Roadway Vertical Alignment**
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	Assumption for:	**Existing cross section**
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	**Proposed cross section**
		Mainline travel lanes: 12'
		Ramp lanes: 15' single lane, 25' double lane
		Mainline Shoulders: 4' Left, 10' Right
		Ramp Shoulders: 4' Left, 8' Right
		Where new HOV is installed a 4' gap will separate HOV lanes from GP lanes.
7	Assumption for:	**Walls**
		Walls shall be placed to minimize right of way take
		Confined area so use MSE wall with precast panels. Use $40 (WSDOT Bridge Design Manual Section 12 - Conservatively)
		Approach on fill requires conc. barrier on top of wall. Use $65/lf (WSDOT Bridge Design Manual Section 12 - Mid Range)
8	Assumption for:	**Signal/Illumination**
		Illumination System at Interchanges.
9	Assumption for:	**Pavement**
		0.9' HMA
		0.7' CSBC
10	Assumption for:	**Storm Drainage**
		Assume 1 CB every 200', both sides for normal crown, 1 side for superelevation.
		Assume Conveyance Pipe as 18' Plain Conc. For the Length of the Ramp (If your super elevated)
		Assume minimum cover is required because ramps are on fill with good grade.

ESTIMATING ASSUMPTIONS

I.		**RIGHT OF WAY**
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
II.		**CONSTRUCTION**
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actua stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Rigid pavements (PCCP including dowels) are estimated by the square foot ($10 per square foot) assuming a 12" PCC pavment se

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 2
Location Add a second SB left turn land on Chain Lake Rd at US 2 and

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: yzhu
Checked By: GW

Segment 2

		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 2
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and

Segment 2

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		
SE corner NB inside lane	280	0.1
SW & NE corners	600	0.1
		0.0
Sub Total	**880**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**900**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality	12,600	0.3
Sub Total	**12,600**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**12,600**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses		
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences		
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations		
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration		
	3	All properties acquired will require administration (title search, etc.)
Sub Total	**3**	**EA**
	1.0	
TOTAL	**3**	

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date:	39098
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Segment 2

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	LENGTH	WIDTH	AREA (SF)	(ACRE)
	180	18	3240	0.1
	160	18	2880	0.1

Sub Total	**0.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.1**

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LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	ɔnd SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (SY)
	865	3	2,595	288

Sub Total	**288**
Uncertainty Factor (U_f)	**1**
TOTAL	**300**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date:	39098
Location:	Add a second SB left turn land on Chain Lake	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date: 01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index: 2006
		Calculated By/Entered By: yzhu
		Checked By: GW

Segment 2

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

*12.5ft is the total of 6' sidewalk, 6' bike lane and curb

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
SW sidewalk & bikelane	175	12.5	2.0	4375	162
SE sidewalk & bikelane	175	12.5	2.0	4375	162
NW sidewalk & bikelane	175	12.5	2.0	4375	162
NE sidewalk & bikelane	175	12.5	2.0	4375	162
SR 203 N addl left turn lane	185	18	2	6660	247

Sub Total	**895**	**CY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1,000**	**CY**

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
				0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date: 01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index: 2006
		Calculated By/Entered By: yzhu
		Checked By: GW

Segment 2

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	SELECT BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
SE corner	5	175	1	0	219	8	20	8
SW corner	5	175	1	0	219	8	20	8
NE corner	5	175	1	0	219	8	20	8
NW corner	5	175	1	0	219	8	20	8
SR 203 N addl left turn lane	18	185	1	0	833	31	60	31

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**140**	**63**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**200**	**100**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

SF DETENTION & TREATMENT

Addl 6' sidewalk and bike lanes

DESCRIPTION	**AREA (SF)**
Proposed Impervious Area	11,055

This table for calculating Pond ROW requirements only.

Pond Area Calculations		
Prorated Detention Volume Required	4,864	CF
Prorated Water Quality Volume Required	950.73	CF
Detention Bottom Area (based on 3' depth)	1621.4	SF
WQ Surface Area (Based on 3' WQ depth)	316.91	SF
Greater of Detention and WQ areas	1621.4	SF
Pond Bottom Length (3:1 aspect ratio)	70	FT
Pond Bottom Width	23	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	94	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	115	FT
Pond Length at Outside to of Berm (4' @2:1)	**131**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	47	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	68	FT
Pond Width at Outside to of Berm (4' @2:1)	**84**	**FT**

Pond Footprint Dimensions	90 x140		FTxFT
Pond Footprint Area	**12,600**	**SF**	
	0.29	Ac.	

Sub Total	**11,055**
Uncertainty Factor (U_f)	**1**
TOTAL	**11,100**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
	865	865	865	5	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**865**	**865**	**5**	**2**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**960**	**960**	**6**	**3**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	865	4.0	5	17,300	641
	865	4.0	5	17,300	641

Sub Total	**1,281**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,500**

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Location:	Add a second SB left turn land on Chain Lake Rd at U	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
CONCRETE BRIDGE			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index:	2006
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		Checked By:	GW

Segment 2

MSE WALL WITH PRECAST PANELS

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
				0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Checked By:	GW

Segment 2

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

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		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

TON **HOT MIX ASPHALT**

***assuming 6' bike lanes**

DESCRIPTION	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
New Road Area	7410	1.5	11115	412	844

Sub Total	**844**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1000**	**TON**

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		Checked By:	GW

Segment 2

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

***under new bikelanes and sidewalks, 12.5 ft wide**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
New Road Area	7410	1.0	7410	274	508

Sub Total	**508**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**600**	**TON**

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Corner		1	0
NE Corner		1	0
SW Corner		1	0
SE Corner		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Segment 2

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing and grubbing	6,120	0.2

Sub Total	**0.2**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.2**

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PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	GW

Segment 2

ENVIRONMENTAL PERMITS - MITIGATION

Assume 5 ft width for ditches as wetlands

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
	ditch NW	650	1	650

Sub Total	**650**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$29,844**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$30,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
			0
			0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$30,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency			$ -
Hydraulic Permit Approval		WDFW			$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT			$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE			$ -
				Sub Total	**$ -** **LS $**
				Uncertainty Factor (U_f)	**1**
				TOTAL	**$0** **LS $**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 382,843	$ 22,971

Sub Total	**$**	**22,971**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**23,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length	Width	LS PRICE
	865	4	$5,957

Sub Total	**$5,957**
Uncertainty Factor (U_f)	**1**
TOTAL	**$6,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0		0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0
		1	0
		0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at US 2 and	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **SIGNAL SYSTEM**

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

SIGNAL SYSTEMS

	No. New	LS PRICE
	0	$0
	0	$0
Sub Total		**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **ILLUMINATION SYSTEM**

*assume 1 new light per corner

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Along US - 2	350	1	2
Along SR203	185	1	1

Sub Total	**3**	
@	**4,000**	**EA**
$ Sub Total	**$11,760**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$12,000**	

TOTAL LUMP SUM	**$12,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Date in	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **SIGNING**

DESCRIPTION	LS PRICE
Lump Sum for Intersection	$5,000

Sub Total	**$5,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$5,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Corner	175	1	175
NE Corner	175	1	175
SW Corner	175	1	175
SE Corner	175	1	175
SR203 N addl left turn lane	185	1	185

Sub Total	**885**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1000**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
NW Corner	175	6	117
NE Corner	175	6	117
SW Corner	175	6	117
SE Corner	175	6	117
SR 203 N addl left turn lane	185	6	123

Sub Total	**590**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**700**	

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	GW

Segment 2

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 405,843	$ 40,584

Sub Total	**$**	**40,584**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**40,600**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	GW

Segment 2

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 446,443	$ 8,929

Sub Total	**$**	**8,929**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**9,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	Add a second SB left turn land on Chain Lake Rd at	Date of Cost Index:	2006
		Calculated By/Entered By:	yzhu
		Checked By:	GW

Segment 2

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 2
Location: mp 15.15 Anne/Woods Cr. RD - Double left turn

project 5

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: KAH
Checked By: JAT

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	1,300	$58,500
		RIGHT OF WAY (urban undeveloped)	SF	$20	13,500	$270,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	2	$30,000
		RIGHT OF WAY TOTAL				**$358,500**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.8	$4,800
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,400	$28,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	800	$12,800
		EMBANKMENT COMPACTION	CY	$2	500	$1,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	15,600	$93,600
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	16	$19,200
		CATCH BASIN TYPE 2	EA	$2,200	5	$11,000
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	1,430	$50,050
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	1,430	$64,350
		STRUCTURE EXCAVATION CL. B	CY	$15	1,100	$16,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	600	$39,000
		CRUSHED SURFACING	TON	$25	500	$12,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$46,000	1	$46,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$45,000	1	$45,000
		LANDSCAPING	LS	$11,000	1	$11,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$250,000	1	$250,000
		ILLUMINATION	LS	$12,000	1	$12,000
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	1,500	$22,500
		SIDEWALKS	SY	$25	1,000	$25,000

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 2
Location: mp 15.15 Anne/Woods Cr. RD - Double left turn

project 5

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: KAH
Checked By: JAT

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$78,500	1	$78,500
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$17,300	1	$17,300
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$264,100	1	$264,100
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,144,200**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$114,500	1	$114,500
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,258,700**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$117,100	1	$117,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,375,800**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$207,000	1	$207,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,582,800**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$474,900	1	$474,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$8,000	1	$8,000
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,430,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$4,270,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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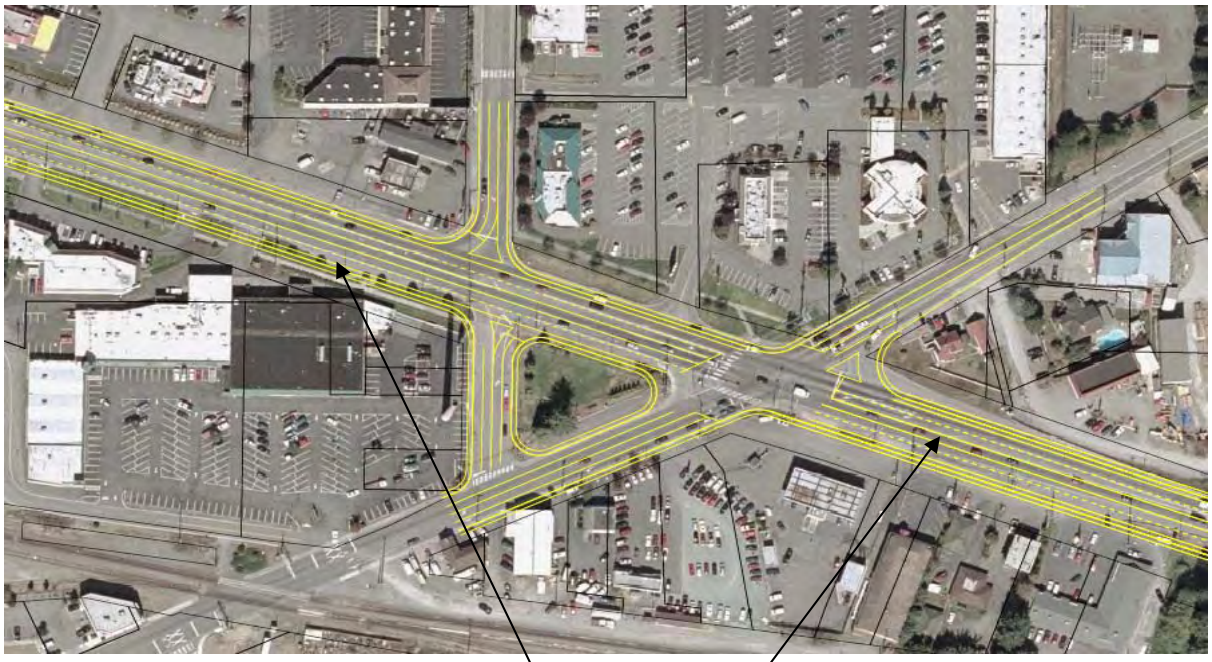
PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	mp 15.15 Anne/Woods Cr. RD - Double left turn	Date of Cost Index:	2006
		Calculated By/Entered By:	KAH
		Checked By:	JAT

Segment 2



650'

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 2
Location mp 15.15 Anne/Woods Cr. RD - Double left turn

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: KAH
Checked By: JAT

Segment 2

DESIGN ASSUMPTIONS

1	Assumption for:	Design
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Turn lane: 12'
		Shoulder/bike lane: 6'
		Curb and gutter
		Sidewalk: 6'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required because ramps are on fill with good grade.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 2	Date: 39098
Location mp 15.15 Anne/Woods Cr. RD - Double left turn	Date of Cost Index: 2006
	Calculated By/Entered By: KAH
	Checked By: JAT

Segment 2

		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 2
Location:	mp 15.15 Anne/Woods Cr. RD - Double left turn

Segment 2

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Segment 2

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA	
Urban Developed	**(SF)**	**(ACRE)**
NE corner	1,250	0.1
		0.0
		0.0

Sub Total	**1,250**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**1,300**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	13,500	0.4

Sub Total	**13,500**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**13,500**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Administration	**(EA)**	
	2	All properties acquired will require administration (title search, etc.)

Sub Total	**2**	**EA**
	1.0	
TOTAL	**2**	

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		Checked By:	JAT

Segment 2

ACRE CLEARING AND GRUBBING

assume clearing from existing edge of pavement to R/W

DESCRIPTION		**AREA**	
Area Measured in AutoCAD	**(SF)**	**by2**	**(ACRE)**
NONE		1	0.0
		1	0.0
		1	0.0
		1	0.0
		Sub Total	**0.8**
		Uncertainty Factor (U_f)	**1**
		TOTAL	**0.8**

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Segment 2

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	AREA (SF)	AREA (SY)
		0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 2

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Segment 2

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

*12.5ft is the total of 6' sidewalk, 6' bike lane and curb

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
SW sidewalk & bikelane	400	12.5	2.0	10000	370
SE sidewalk & bikelane	250	12.5	2.0	6250	231
NW sidewalk & bikelane	500	12.5	2.0	12500	463
NE sidewalk & bikelane	150	12.5	2.0	3750	139

Sub Total	**1,204**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,400**	**CY**

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Segment 2

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
				0	0
				0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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		Checked By:

Segment 2

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
SE corner	5	400	4	2	3,000	111	210	111
SW corner	5	250	4	2	1,875	69	130	69
NE corner	5	500	4	2	3,750	139	260	139
NW corner	5	150	4	2	1,125	42	80	42

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**680**	**361**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**800**	**500**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 2

SF **DETENTION & TREATMENT**

Addl 6' sidewalk

DESCRIPTION	**AREA (SF)**
Proposed Impervious Area	15,600

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	6,864	CF
Prorated Water Quality Volume Required	1341.6	CF
Detention Bottom Area (based on 3' depth)	2288	SF
WQ Surface Area (Based on 3' WQ depth)	447.2	SF
Greater of Detention and WQ areas	2288	SF
Pond Bottom Length (3:1 aspect ratio)	83	FT
Pond Bottom Width	28	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	107	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	128	FT
Pond Length at Outside to of Berm (4' @2:1)	**144**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	52	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	73	FT
Pond Width at Outside to of Berm (4' @2:1)	**89**	**FT**

Pond Footprint Dimensions	90 x150		FTxFT
Pond Footprint Area	**13,500**	**SF**	
	0.31	Ac.	

Sub Total	**15,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**15,600**

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Segment 2

DRAINAGE

Drainage estimate is based on the length of ramp/road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

Assume ramps are super elevated and/or built with no crown so conveyance on one side only.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Along US - 2	650	650	650	7	2
Along Kelsey Street	650	650	650	7	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**1,300**	**1,300**	**14**	**4**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**1,430**	**1,430**	**16**	**5**

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Segment 2

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
Along US - 2	650	4.0	5	13,000	481
Along Kelsey Street	650	4.0	5	13,000	481

Sub Total	**963**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,100**

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Segment 2

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
CONCRETE BRIDGE			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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Segment 2

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
				0	1	0
				0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 2

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 2

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 2

TON **HOT MIX ASPHALT**

***assuming 6' bike lanes**

DESCRIPTION		AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	New Road Area	7800	0.9	7020	260	533

Sub Total	**533**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**600**	**TON**

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Segment 2

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

***under new bikelanes and sidewalks, 12.5 ft wide**

DESCRIPITON		AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	New Road Area	7800	0.7	5460	202	374

Sub Total	**374**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**500**	**TON**

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Segment 2

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Corner		1	0
NE Corner		1	0
SW Corner		1	0
SE Corner		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	mp 15.15 Anne/Woods Cr. RD - Double letter	Date of Cost Index:	2006
		Calculated By/Entered By:	KAH
		Checked By:	JAT

Segment 2

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Assume 20' strip for length of project for Clear and Grub		0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	mp 15.15 Anne/Woods Cr. RD - Double left turn	Date of Cost Index:	2006
		Calculated By/Entered By:	KAH
		Checked By:	JAT

Segment 2

ENVIRONMENTAL PERMITS - MITIGATION

Assume 5 ft width for ditches as wetlands

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
	ditch SE	1000	1	1000

Sub Total	**1000**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$45,914**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$46,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
			0
			0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$46,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency			$ -
Hydraulic Permit Approval		WDFW			$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT			$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE			$ -
				Sub Total	**$ - LS $**
				Uncertainty Factor (U_f)	**1**
				TOTAL	**$0 LS $**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	mp 15.15 Anne/Woods Cr. RD - Double left tur	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 2

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 739,300	$ 44,358

Sub Total	**$**	**44,358**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**45,000**

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	mp 15.15 Anne/Woods Cr. RD - Double left turn	Date of Cost Index:	2006
		Calculated By/Entered By:	KAH
		Checked By:	JAT

Segment 2

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length	Width	LS PRICE
	600	10	$10,331

Sub Total	**$10,331**
Uncertainty Factor (U_f)	**1**
TOTAL	**$11,000**

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	mp 15.15 Anne/Woods Cr. RD - Double left turn	Date of Cost Index:	2006
		Calculated By/Entered By:	KAH
		Checked By:	JAT

Segment 2

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0		0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Calculated By/Entered By:	KAH
		Checked By:	JAT

Segment 2

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0
		1	0
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 2

LS **SIGNAL SYSTEM**

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

SIGNAL SYSTEMS

	No. New	LS PRICE
At Intersociont of US - 2 and E. Roosevelt Road	1	$250,000

Sub Total	**$250,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$250,000**

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Corridor Section:	Segment 2	Date:	01/16/07
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		Checked By:	JAT

Segment 2

LS **ILLUMINATION SYSTEM**

*assume 1 new light per corner

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Along US - 2	650	1	2
Along Kelsey Street	160	1	1

Sub Total	**3**	
@	**4,000**	**EA**
$ Sub Total	**$11,760**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$12,000**	

TOTAL LUMP SUM	**$12,000**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 2

LS SIGNING

DESCRIPTION	LS PRICE
Lump Sum for Intersection	$10,000

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Segment 2

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Corner	650	2	1,300

Sub Total	**1,300**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1500**

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Segment 2

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Left	650	6	433
Right	650	6	433
	0	6	0
	0	6	0

Sub Total	**867**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1,000**	

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		Checked By:	JAT

Segment 2

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Segment 2

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Corridor Section:	Segment 2	Date:	01/16/07
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Segment 2

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 784,300	$ 78,430

Sub Total	**$**	**78,430**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**78,500**

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Corridor Section:	Segment 2	Date:	01/16/07
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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 2

	LS	**SURVEY**		
Use 2% of Construction Costs		**Construction Items**		**2%**
Total Const items from summary sheet	$	862,800	$	17,256

Sub Total	**$**	**17,256**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**17,300**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 2	Date:	01/16/07
Location:	mp 15.15 Anne/Woods Cr. RD - Double left tu	Date of Cost Index:	2006
		Calculated By/Entered By:	KAH
		Checked By:	JAT

Segment 2

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Corridor Section:	Segment 2	Date:	01/16/07
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Segment 2

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 3.5 - 12.7 install median rumble strip	Calculated By/Entered By:	
	Project 6	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	-	$0
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$66,000	1	$66,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	-	$0
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	-	$0
		EMBANKMENT COMPACTION	CY	$2	-	$0
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	-	$0
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	-	$0
		CRUSHED SURFACING	TON	$25	-	$0
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$620,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$4,000	-	$0
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$300,000	-	$0
		ILLUMINATION	LS	$1,666,000	-	$0
		SIGNING	LS	$10,000	-	$0
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 3.5 - 12.7 install median rumble strip	Calculated By/Entered By:	
	Project 6	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	-	$0
		TRAFFIC CONTROL (10%)	LS	$6,600	1	$6,600
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$1,500	-	$0
		SPECIAL ITEMS	EST	$514,000	1	$514,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$176,000	-	$0
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$586,600**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$58,700	1	$58,700
9		**SUBTOTAL (ITEMS 7 & 8)**				**$645,300**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$60,100	1	$60,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$705,400**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$212,000	1	$212,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$917,400**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$275,300	1	$275,300
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$4,600	1	$4,600
		ENVIRONMENTAL PERMITS	EST	$105,000	-	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,200,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,360,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 1
Location snohomish to monroe

Client: WSDOT
Date: 39098
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Segment 1

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	snohomish to monroe

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	0

Segment 1

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1		Date: 39098
Location:	snohomish to monroe		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	SF	(ACRE)
104,122	0	0	0.0
	sub-total		**0.0**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	TOP OF POND AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
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		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	39098
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		Checked By:	0

Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best
engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$0**
Commercial Buildings	**$0**
remove paitnt line	66000

Sub Total	**$66,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$66,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	**LENGTH (LF)**	**WIDTH (FT)**	**DEPTH (FT)**	**VOLUME (CF)**	**(CY)**
Section 1	0	20	2.0	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	0	2,665	5	5	0	0	0	0

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**0**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	104122	0	0

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	0	CF
Prorated Water Quality Volume Required	0	CF
Detention Bottom Area (based on 3' depth)	0	SF
WQ Surface Area (Based on 3' WQ depth)	0	SF
Greater of Detention and WQ areas	0	SF
Pond Bottom Length (3:1 aspect ratio)	0	FT
Pond Bottom Width	0	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	24	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Length at Outside to of Berm (4' @2:1)	**61**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	24	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Width at Outside to of Berm (4' @2:1)	**61**	**FT**

Pond Footprint Dimensions	70 x70		FTxFT
Pond Footprint Area	**4,900**	**SF**	
	0.11	Ac.	

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
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		Checked By:	0

Segment 1

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	4.0	5	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
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		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
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		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
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		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

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		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

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		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	104,122	3	295706	0.1	35485	1314	2694

Sub Total	**2694**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
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		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	295706	0.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

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		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	0

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	0

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4500	1	4500
	ditch S	9000	1	9000

Sub Total	**13500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$619,835**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$620,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$620,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	0

Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 66,000	$ 3,960

Sub Total	**$**	**3,960**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**4,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	52,061	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	104,122	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
5th St	$150,000
	$150,000
	$0

Sub Total	**$300,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$300,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	104,122	1	416

Sub Total	**416**	
@	**4,000**	**EA**
$ Sub Total	**$1,665,952**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$1,666,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$1,666,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	104,122	**19.72**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	104,122	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	104,122	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS	**SC&DI (ITS)**	

DESCRIPTION	**LS PRICE**
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 66,000	$ 6,600

Sub Total	**$**	**6,600**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**6,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 72,600	$ 1,452

Sub Total	**$**	**1,452**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**1,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
piant line/rpm/plasticline	**$471,546**

Sub Total	**$514,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$514,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 17.91 WB left turn and EB right turn	Calculated By/Entered By:	
	Project 7	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.7	$4,200
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$27,400	1	$27,400
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,300	$46,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	900	$14,400
		EMBANKMENT COMPACTION	CY	$2	500	$1,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	27,000	$162,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,100	$16,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	2,300	$149,500
		CRUSHED SURFACING	TON	$25	1,500	$37,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.7	$1,400
		WETLAND MITIGATION	LS	$92,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$29,000	1	$29,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 17.91 WB left turn and EB right turn	Calculated By/Entered By:	
	Project 7	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$49,900	1	$49,900
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$11,000	1	$11,000
		SPECIAL ITEMS	EST	$51,000	1	$51,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$183,300	1	$183,300
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$794,100**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$79,500	1	$79,500
9		**SUBTOTAL (ITEMS 7 & 8)**				**$873,600**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$81,300	1	$81,300
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$954,900**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$287,000	1	$287,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,241,900**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$372,600	1	$372,600
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$6,300	1	$6,300
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,630,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,840,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	1,500	18	27000	0.7
		sub-total		**0.7**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.7**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$27,400**
Commercial Buildings	**$0**

Sub Total	**$27,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**$27,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,500	18	2.0	54000	2000

Sub Total	**2,000**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2,300**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	18	1,500	1	1	10,125	375	700	375

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**700**	**375**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**900**	**500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1500	18	27,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	11,880	CF
Prorated Water Quality Volume Required	2322	CF
Detention Bottom Area (based on 3' depth)	3960	SF
WQ Surface Area (Based on 3' WQ depth)	774	SF
Greater of Detention and WQ areas	3960	SF
Pond Bottom Length (3:1 aspect ratio)	109	FT
Pond Bottom Width	36	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	133	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	154	FT
Pond Length at Outside to of Berm (4' @2:1)	**170**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	60	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	81	FT
Pond Width at Outside to of Berm (4' @2:1)	**97**	**FT**

Pond Footprint Dimensions	100 x170		FTxFT
Pond Footprint Area	**17,000**	**SF**	
	0.39	Ac.	

Sub Total	**27,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**27,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,500	6.0	3	27,000	1,000
	0	4.0	5	0	0

Sub Total	**1,000**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,500	18	27000	1.0	27000	1000	2050

Sub Total	**2050**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2300**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	27000	0.7	18900	700	1295

Sub Total	**1295**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	27,000	0.7
Landscape Area	0	0

Sub Total	**0.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.7**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	2000	1	2000
	ditch S	0	1	0

Sub Total	**2000**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$91,827**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$92,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$92,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 469,900	$ 28,194

Sub Total	**$**	**28,194**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**29,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	750	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	1,500	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,500	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	279,840	**53.00**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,500	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,500	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 498,900	$ 49,890

Sub Total	**$**	**49,890**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**49,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 548,800	$ 10,976

Sub Total	**$**	**10,976**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**11,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$5,000**
Trimming	**$15,000**
Training	**$6,000**
Soil residual herbicide	**$10,000.00**
pavement marking	**$15,000**

Sub Total	**$51,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$51,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 18.3 EB left turn lane	Calculated By/Entered By:	
	Project 8	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.5	$3,000
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$30,040	1	$30,040
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,600	$32,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	600	$9,600
		EMBANKMENT COMPACTION	CY	$2	300	$600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	18,000	$108,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,500	$22,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,600	$104,000
		CRUSHED SURFACING	TON	$25	1,000	$25,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.5	$1,000
		WETLAND MITIGATION	LS	$184,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$21,000	1	$21,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 18.3 EB left turn lane	Calculated By/Entered By:	
	Project 8	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$36,700	1	$36,700
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$8,100	1	$8,100
		SPECIAL ITEMS	EST	$169,000	1	$169,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$174,200	1	$174,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$754,740**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$75,500	1	$75,500
9		**SUBTOTAL (ITEMS 7 & 8)**				**$830,240**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$77,300	1	$77,300
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$907,540**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$273,000	1	$273,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,180,540**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$354,200	1	$354,200
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$6,000	1	$6,000
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,550,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,750,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	1,000	18	18000	0.5
		sub-total		**0.5**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$30,040**
Commercial Buildings	**$0**

Sub Total	**$30,040**
Uncertainty Factor (U_f)	**1**
TOTAL	**$30,040**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,000	18	2.0	36000	1333

Sub Total	**1,333**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,600**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	18	1,000	1	1	6,750	250	470	250

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**470**	**250**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**600**	**300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1000	18	18,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	7,920	CF
Prorated Water Quality Volume Required	1548	CF
Detention Bottom Area (based on 3' depth)	2640	SF
WQ Surface Area (Based on 3' WQ depth)	516	SF
Greater of Detention and WQ areas	2640	SF
Pond Bottom Length (3:1 aspect ratio)	89	FT
Pond Bottom Width	30	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	113	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	134	FT
Pond Length at Outside to of Berm (4' @2:1)	**150**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	54	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	75	FT
Pond Width at Outside to of Berm (4' @2:1)	**91**	**FT**

Pond Footprint Dimensions	100 x150		FTxFT
Pond Footprint Area	**15,000**	**SF**	
	0.34	Ac.	

Sub Total	**18,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**18,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,000	12.0	3	36,000	1,333
	0	4.0	5	0	0

Sub Total	**1,333**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,000	18	18000	1.0	18000	667	1367

Sub Total	**1367**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	18000	0.7	12600	467	863

Sub Total	**863**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1000**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	18,000	0.5
Landscape Area	0	0

Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4000	1	4000
	ditch S	0	1	0

Sub Total	**4000**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$183,655**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$184,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$184,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 345,740	$ 20,744

Sub Total	**$**	**20,744**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**21,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	500	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	1,000	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	279,840	**53.00**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,000	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,000	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 366,740	$ 36,674

Sub Total	**$**	**36,674**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**36,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 403,440	$ 8,069

Sub Total	**$**	**8,069**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**8,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$5,000**
Trimming	**$15,000**
Training	**$6,000**
Soil residual herbicide	**$10,000.00**
pavement marking	**$15,000**
traffic control labor and safety	118000

Sub Total	**$169,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$169,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$22
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 18.98 construct wb left turn and eb right turn lane	Calculated By/Entered By:	
	project 9	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.6	$3,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$35,010	1	$35,010
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,700	$34,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	500	$12,500
		BORROW INCL. HAUL	TON	$16	600	$9,600
		EMBANKMENT COMPACTION	CY	$2	3,200	$6,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	27,000	$162,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,100	$16,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	2,000	$130,000
		CRUSHED SURFACING	TON	$22	1,500	$33,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	3,000	$45,000
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$620,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$33,000	1	$33,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$50,000	1	$50,000
		ILLUMINATION	LS	$1,666,000	-	$0
		SIGNING	LS	$10,000	-	$0
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 18.98 construct wb left turn and eb right turn lane	Calculated By/Entered By:	
	project 9	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	-	$0
		TRAFFIC CONTROL (10%)	LS	$57,100	1	$57,100
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$12,600	1	$12,600
		SPECIAL ITEMS	EST	$44,000	1	$44,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$205,300	1	$205,300
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$889,610**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$89,000	1	$89,000
9		**SUBTOTAL (ITEMS 7 & 8)**				**$978,610**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$91,100	1	$91,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,069,710**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$321,000	1	$321,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,390,710**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$417,300	1	$417,300
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$7,000	-	$0
		ENVIRONMENTAL PERMITS	EST	$105,000	-	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,810,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$2,040,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to monroe

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	SF	(ACRE)
104,122	0	0	0.0
	sub-total		**0.0**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.6

sub-total	**0.6**
Sub Total	**0.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.6**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$11,480**
Commercial Buildings	**$0**
removing Guardrail	4500
removing Guardral anchor	800
removal misc	17230
sawcut existing pavement	1000

Sub Total	**$35,010**
Uncertainty Factor (U_f)	**1**
TOTAL	**$35,010**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	0	20	2.0	0	1700

Sub Total	**1,700**	**CY**
Uncertainty Factor (U_f)	**1**	
TOTAL	**1,700**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	1,000

Sub Total	**500**	**CY**
Uncertainty Factor (U_f)	**1**	
TOTAL	**500**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	0	2,665	5	5	0	500	500	2,700

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**500**	**2,700**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**600**	**3,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

	SF	DETENTION & TREATMENT	
12' lane + 8' shoulder			
DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	104122	0	0

This table for calculating Pond ROW requirements only.

Pond Area Calculations		
Prorated Detention Volume Required	0	CF
Prorated Water Quality Volume Required	0	CF
Detention Bottom Area (based on 3' depth)	0	SF
WQ Surface Area (Based on 3' WQ depth)	0	SF
Greater of Detention and WQ areas	0	SF
Pond Bottom Length (3:1 aspect ratio)	0	FT
Pond Bottom Width	0	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	24	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Length at Outside to of Berm (4' @2:1)	**61**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	24	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Width at Outside to of Berm (4' @2:1)	**61**	**FT**

Pond Footprint Dimensions	70 x70		FTxFT
Pond Footprint Area	**4,900**	**SF**	
	0.11	Ac.	

Sub Total	**27,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**27,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	4.0	5	0	0
	0	4.0	5	0	0

Sub Total	**1,000**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	104,122	3	295706	0.1	35485	1314	2000

Sub Total	**2000**	**TON**
Uncertainty Factor (U_f)	**1**	
TOTAL	**2000**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	295706	0.0	0	0	0

Sub Total	**1300**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	3,000

Sub Total	**3,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**3000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4500	1	4500
	ditch S	9000	1	9000

Sub Total	**13500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$619,835**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$620,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$620,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 537,610	$ 32,257

Sub Total	**$**	**32,257**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**33,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	52,061	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	104,122	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

NEW SIGNAL SYSTEMS	**LS PRICE**
	$0
	$0
	$0
total traffic including pait and signs	
	$50,000
	$0

Sub Total	**$50,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$50,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	104,122	1	416

Sub Total	**416**	
@	**4,000**	**EA**
$ Sub Total	**$1,665,952**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$1,666,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$1,666,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
	104,122	**19.72**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	104,122	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	104,122	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS	**SC&DI (ITS)**	

DESCRIPTION	**LS PRICE**
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 570,610	$ 57,061

Sub Total	**$**	**57,061**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**57,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 627,710	$ 12,554

Sub Total	**$**	**12,554**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**12,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
soil residual herbicide	**$9,000**
water	2200
training	2500
shoring or extra excavation	**$30,000.00**

Sub Total	**$43,700**
Uncertainty Factor (U_f)	**1**
TOTAL	**$44,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 3
Location: MP 20.10-20.15 add left turn and right turn lanes
project 10

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By:
Checked By:

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.6	$3,306
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$52,900	1	$52,900
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,000	$40,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	5,000	$80,000
		EMBANKMENT COMPACTION	CY	$2	2,700	$5,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	24,000	$144,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	2,500	$37,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	2,100	$136,500
		CRUSHED SURFACING	TON	$25	1,900	$47,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.6	$1,200
		WETLAND MITIGATION	LS	$368,000	1	$368,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$60,000	1	$60,000
		LANDSCAPING	LS	$42,000	1	$42,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	1,100	$22,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$0	1	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
	project 10	Calculated By/Entered By:	
		Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$105,100	1	$105,100
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$23,200	1	$23,200
		SPECIAL ITEMS	EST	$62,000	1	$62,000
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$372,200	1	$372,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,612,806**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$161,300	1	$161,300
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,774,106**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$165,000	1	$165,000
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,939,106**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$291,000	1	$291,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$2,230,106**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$669,100	1	$669,100
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$11,200	1	$11,200
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,920,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$3,000,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 3
Location MP 20.10-20.15 add left turn and right turn lanes

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: 0
Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	**Design**
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	Assumption for:	**ROAD DESIGN SPEED**
		Design Speed Mainline: 70MPH Posted Speed Mainline: 60MPH
3	Assumption for:	**Roadway Horizontal Alignment**
		Roadway will shift crown of road 6' south
4	Assumption for:	**Roadway Vertical Alignment**
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	Assumption for:	**Existing cross section**
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	**Proposed cross section**
		Mainline travel lanes: 12'
		Ramp lanes: 15' single lane, 25' double lane
		Mainline Shoulders: 4' Left, 10' Right
		Ramp Shoulders: 4' Left, 8' Right
		Where new HOV is installed a 4' gap will separate HOV lanes from GP lanes.
7	Assumption for:	**Walls**
		Walls shall be placed to minimize right of way take
		Confined area so use MSE wall with precast panels. Use $40 (WSDOT Bridge Design Manual Section 12 - Conservatively)
		Approach on fill requires conc. barrier on top of wall. Use $65/lf (WSDOT Bridge Design Manual Section 12 - Mid Range)
8	Assumption for:	**Signal/Illumination**
		Illumination System at Interchanges.
9	Assumption for:	**Pavement**
		0.9' HMA
		0.7' CSBC
10	Assumption for:	**Storm Drainage**
		Assume 1 CB every 200', both sides for normal crown, 1 side for superelevation.
		Assume Conveyance Pipe as 18' Plain Conc. For the Length of the Ramp (If your super elevated)
		Assume minimum cover is required because ramps are on fill with good grade.

ESTIMATING ASSUMPTIONS

I.		**RIGHT OF WAY**
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
II.		**CONSTRUCTION**
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actua stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Rigid pavements (PCCP including dowels) are estimated by the square foot ($10 per square foot) assuming a 12" PCC pavment se

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 3
Location MP 20.10-20.15 add left turn and right turn lanes

Client: WSDOT
Date: 39098
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Segment 3

		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	MP 20.10-20.15 add left turn and right turn lanes

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Segment 3

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		
SE corner NB inside lane	0	0.0
SW & NE corners	0	0.0
		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality	0	0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations		
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration		
	0	All properties acquired will require administration (title search, etc.)

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

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		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	LENGTH	WIDTH	AREA (SF)	(ACRE)
	2,000	12	24000	0.6

Sub Total	**0.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.6**

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LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	39098
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		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	3	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$52,900**

Sub Total	**$52,900**
Uncertainty Factor (U_f)	**1**
TOTAL	**$52,900**

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		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

*12.5ft is the total of 6' sidewalk, 6' bike lane and curb

ROADWAY	**LENGTH (LF)**	**WIDTH (FT)**	**DEPTH (FT)**	**VOLUME (CF)**	**(CY)**
roadway	2000	12	2.0	48000	1778

Sub Total	**1,778**	**CY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2,000**	**CY**

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		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
				0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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Corridor Section:	Segment 3	Date: 01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: GW

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Roadway	12	2000	5	5	60,000	2,222	4,120	2,222

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**4,120**	**2,222**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**5,000**	**2,700**

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Corridor Section:	Segment 3	Date:	01/16/07
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		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

Addl 6' sidewalk and bike lanes

DESCRIPTION	**AREA (SF)**
Proposed Impervious Area	24,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations		
Prorated Detention Volume Required	10,560	CF
Prorated Water Quality Volume Required	2064	CF
Detention Bottom Area (based on 3' depth)	3520	SF
WQ Surface Area (Based on 3' WQ depth)	688	SF
Greater of Detention and WQ areas	3520	SF
Pond Bottom Length (3:1 aspect ratio)	103	FT
Pond Bottom Width	34	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	127	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	148	FT
Pond Length at Outside to of Berm (4' @2:1)	**164**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	58	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	79	FT
Pond Width at Outside to of Berm (4' @2:1)	**95**	**FT**

Pond Footprint Dimensions	100 x170		FTxFT
Pond Footprint Area	**17,000**	**SF**	
	0.39	Ac.	

Sub Total	**24,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**24,000**

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		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

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		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	2000	6.0	5	60,000	2,222
	0	4.0	5	0	0

Sub Total	**2,222**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**2,500**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
CONCRETE BRIDGE			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
				0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

***assuming 6' bike lanes**

DESCRIPTION		AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	New Road Area	24000	1.0	24000	889	1822

Sub Total	**1822**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2100**	**TON**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

***under new bikelanes and sidewalks, 12.5 ft wide**

DESCRIPITON		AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	New Road Area	24000	1.0	24000	889	1644

Sub Total	**1644**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1900**	**TON**

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Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Corner		1	0
NE Corner		1	0
SW Corner		1	0
SE Corner		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing and grubbing	24,000	0.6

Sub Total	**0.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.6**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

Assume 5 ft width for ditches as wetlands

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
	ditch NW	8000	1	8000

Sub Total	**8000**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$367,309**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$368,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
			0
			0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$368,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency			$ -
Hydraulic Permit Approval		WDFW			$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT			$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE			$ -
				Sub Total	**$ -** **LS $**
				Uncertainty Factor (U_f)	**1**
				TOTAL	**$0** **LS $**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 990,306	$ 59,418

Sub Total	**$**	**59,418**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**60,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length	Width	LS PRICE
	2,000	12	$41,322

Sub Total	**$41,322**
Uncertainty Factor (U_f)	**1**
TOTAL	**$42,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	1,010	1	1,010

Sub Total	**1,010**
Uncertainty Factor (U_f)	**1**
TOTAL	**1100**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0
		1	0
		0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNAL SYSTEM**

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

SIGNAL SYSTEMS

	No. New	LS PRICE
	0	$0
	0	$0
Sub Total		**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*assume 1 new light per corner

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Along US - 2	0	1	0
Along SR203	0	1	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

TOTAL LUMP SUM	**$0**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNING

DESCRIPTION	LS PRICE
Lump Sum for Intersection	$10,000

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
NW Corner	0	6	0
NE Corner	0	6	0
SW Corner	0	6	0
SE Corner	0	6	0
SR 203 N addl left turn lane	0	6	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 1,050,306	$ 105,031

Sub Total	**$**	**105,031**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**105,100**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 1,155,406	$ 23,108

Sub Total	**$**	**23,108**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**23,200**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble strip	**$1,500**
Soil Residual Herbicide	8100
unsuitable foundation excavation	12000
shoring and extra excavation	**$40,000**

Sub Total	**$61,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$62,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	MP 20.10-20.15 add left turn and right turn lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 20.7-21.4 install wb passing lane	Calculated By/Entered By:	
	Project 11	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	1.1	$6,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$66,000	1	$66,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	3,800	$76,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	2,700	$43,200
		EMBANKMENT COMPACTION	CY	$2	1,500	$3,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	22,200	$133,200
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	2,800	$42,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,600	$104,000
		CRUSHED SURFACING	TON	$25	3,500	$87,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	1.1	$2,200
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$36,000	1	$36,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	1,000	$20,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 20.7-21.4 install wb passing lane	Calculated By/Entered By:	
	Project 11	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$63,000	1	$63,000
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$13,900	1	$13,900
		SPECIAL ITEMS	EST	$384,000	1	$384,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$327,200	1	$327,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,417,800**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$141,800	1	$141,800
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,559,600**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$145,100	1	$145,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,704,700**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$512,000	1	$512,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$2,216,700**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$665,100	1	$665,100
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$11,100	1	$11,100
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,900,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$3,270,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 3
Location snohomish to skykomish

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: 0
Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	3,700	12	44400	1.1
		sub-total		**1.1**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	LENGTH (FT)	TOP OF POND WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0
							sub-total	**0.0**

Sub Total	**1.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$66,000**
Commercial Buildings	**$0**

Sub Total	**$66,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$66,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	3,700	12	2.0	88800	3289

Sub Total	**3,289**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3,800**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	6	3,700	3	3	33,300	1,233	2,290	1,233

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**2,290**	**1,233**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**2,700**	**1,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	3700	6	22,200

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	9,768	CF
Prorated Water Quality Volume Required	1909.2	CF
Detention Bottom Area (based on 3' depth)	3256	SF
WQ Surface Area (Based on 3' WQ depth)	636.4	SF
Greater of Detention and WQ areas	3256	SF
Pond Bottom Length (3:1 aspect ratio)	99	FT
Pond Bottom Width	33	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	123	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	144	FT
Pond Length at Outside to of Berm (4' @2:1)	**160**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	57	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	78	FT
Pond Width at Outside to of Berm (4' @2:1)	**94**	**FT**

Pond Footprint Dimensions	100 x160		FTxFT
Pond Footprint Area	**16,000**	**SF**	
	0.37	Ac.	

Sub Total	**22,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**22,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	3,700	6.0	3	66,600	2,467
	0	4.0	5	0	0

Sub Total	**2,467**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**2,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,000	18	18000	1.0	18000	667	1367

Sub Total	**1367**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	44400	1.0	44400	1644	3042

Sub Total	**3042**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	44,400	1.1
Landscape Area	0	0

Sub Total	**1.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 593,700	$ 35,622

Sub Total	**$**	**35,622**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**36,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	500	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	1,000	1	1,000

Sub Total	**1,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**1000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

NEW SIGNAL SYSTEMS	**LS PRICE**
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	3,700	**0.70**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,000	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,000	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 629,700	$ 62,970

Sub Total	**$**	**62,970**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**63,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 692,700	$ 13,854

Sub Total	**$**	**13,854**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**13,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$2,000**
unsuitable foundation excavation	**$20,000**
Training	**$6,000**
Soil residual herbicide	**$15,000.00**
pavement marking	**$37,000**
traffic control labor and safety	209300
shoring and extra excavation	72860
trim	20930

Sub Total	**$383,090**
Uncertainty Factor (U_f)	**1**
TOTAL	**$384,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 20.45 eliminate wide turn out area	Calculated By/Entered By:	
	Project 12	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	-	$0
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$1,560	-	$0
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,800	$36,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	-	$0
		EMBANKMENT COMPACTION	CY	$2	1,500	$3,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	-	$0
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	-	$0
		CRUSHED SURFACING	TON	$25	-	$0
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	4,000	$60,000
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$620,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$8,000	-	$0
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$300,000	-	$0
		ILLUMINATION	LS	$1,666,000	-	$0
		SIGNING	LS	$600	1	$600
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 20.45 eliminate wide turn out area	Calculated By/Entered By:	
	Project 12	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	-	$0
		TRAFFIC CONTROL (10%)	LS	$10,000	1	$10,000
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$2,200	1	$2,200
		SPECIAL ITEMS	EST	$4,000	1	$4,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$34,800	-	$0
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$115,800**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$11,600	1	$11,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$127,400**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$11,900	1	$11,900
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$139,300**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$42,000	1	$42,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$181,300**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$54,390	1	$54,390
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$1,000	1	$1,000
		ENVIRONMENTAL PERMITS	EST	$105,000	-	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$240,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$280,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to monroe

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	SF	(ACRE)
104,122	0	0	0.0
	sub-total		**0.0**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	TOP OF POND AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$1,560**
Commercial Buildings	**$0**

Sub Total	**$1,560**
Uncertainty Factor (U_f)	**1**
TOTAL	**$1,560**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	0	20	2.0	0	1481

Sub Total	**1,481**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,800**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	0	2,665	5	5	0	0	0	0

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**1,481**
Uncertainty Factor (U_f)	**1**	**1**
TOTAL	**0**	**1,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	104122	0	0

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	0	CF
Prorated Water Quality Volume Required	0	CF
Detention Bottom Area (based on 3' depth)	0	SF
WQ Surface Area (Based on 3' WQ depth)	0	SF
Greater of Detention and WQ areas	0	SF
Pond Bottom Length (3:1 aspect ratio)	0	FT
Pond Bottom Width	0	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	24	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Length at Outside to of Berm (4' @2:1)	**61**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	24	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Width at Outside to of Berm (4' @2:1)	**61**	**FT**

Pond Footprint Dimensions	70 x70		FTxFT
Pond Footprint Area	**4,900**	**SF**	
	0.11	Ac.	

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	4.0	5	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	104,122	3	295706	0.1	35485	1314	2694

Sub Total	**2694**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	295706	0.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	4,000

Sub Total	**4,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**4000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4500	1	4500
	ditch S	9000	1	9000

Sub Total	**13500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$619,835**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$620,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$620,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 99,600	$ 5,976

Sub Total	**$**	**7,220**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**8,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	52,061	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	104,122	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
5th St	$150,000
	$150,000
	$0
Sub Total	**$300,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$300,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	104,122	1	416

Sub Total	**416**	
@	**4,000**	**EA**
$ Sub Total	**$1,665,952**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$1,666,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$1,666,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
	104,122	**19.72**	$600
			$0
			$0
			$0

Sub Total	**$600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	104,122	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	104,122	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 99,600	$ 9,960

Sub Total	**$**	**9,960**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 109,600	$ 2,192

Sub Total	**$**	**2,192**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**2,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
TRIMMING AND CLEAN UP	**$1,560**
spcc PLAN	2000

Sub Total	**$3,560**
Uncertainty Factor (U_f)	**1**
TOTAL	**$4,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 22.24-22.93 additional wb lane, restrict left turn access	Calculated By/Entered By:	
	Project 13	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	1.1	$6,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$66,000	1	$66,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	3,800	$76,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	2,700	$43,200
		EMBANKMENT COMPACTION	CY	$2	1,500	$3,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	22,200	$133,200
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	2,800	$42,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,600	$104,000
		CRUSHED SURFACING	TON	$25	3,500	$87,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	1.1	$2,200
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$35,000	1	$35,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	300	$6,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 22.24-22.93 additional wb lane, restrict left turn access	Calculated By/Entered By:	
	Project 13	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$61,500	1	$61,500
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$13,600	1	$13,600
		SPECIAL ITEMS	EST	$370,000	1	$370,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$318,000	1	$318,000
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,377,800**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$137,800	1	$137,800
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,515,600**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$141,000	1	$141,000
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,656,600**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$497,000	1	$497,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$2,153,600**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$646,100	1	$646,100
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$10,800	1	$10,800
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,820,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$3,180,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 3		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	3,700	12	44400	1.1
		sub-total		**1.1**

DETENTION PONDS

POND LOCATION	**BOTTOM OF POND LENGTH (FT)**	**BOTTOM OF POND WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**TOP OF POND LENGTH (FT)**	**TOP OF POND WIDTH (FT)**	**TOP OF POND AREA (SF)**	**AREA (ACRE)**
	0	18	0	6	0	18	0	0.0
							sub-total	**0.0**
							Sub Total	**1.1**
							Uncertainty Factor (U_f)	**1**
							TOTAL	**1.1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$66,000**
Commercial Buildings	**$0**

Sub Total	**$66,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$66,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. ROADWAY EXCAVATION INCL. HAUL

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	3,700	12	2.0	88800	3289

Sub Total	**3,289**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3,800**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	6	3,700	3	3	33,300	1,233	2,290	1,233

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**2,290**	**1,233**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**2,700**	**1,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	3700	6	22,200

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	9,768	CF
Prorated Water Quality Volume Required	1909.2	CF
Detention Bottom Area (based on 3' depth)	3256	SF
WQ Surface Area (Based on 3' WQ depth)	636.4	SF
Greater of Detention and WQ areas	3256	SF
Pond Bottom Length (3:1 aspect ratio)	99	FT
Pond Bottom Width	33	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	123	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	144	FT
Pond Length at Outside to of Berm (4' @2:1)	**160**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	57	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	78	FT
Pond Width at Outside to of Berm (4' @2:1)	**94**	**FT**

Pond Footprint Dimensions	100 x160		FTxFT
Pond Footprint Area	**16,000**	**SF**	
	0.37	Ac.	

Sub Total	**22,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**22,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	3,700	6.0	3	66,600	2,467
	0	4.0	5	0	0

Sub Total	**2,467**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**2,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,000	18	18000	1.0	18000	667	1367

Sub Total	**1367**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	44400	1.0	44400	1644	3042

Sub Total	**3042**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	44,400	1.1
Landscape Area	0	0

Sub Total	**1.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)	
Wetland Mitigation					
Wetland Buffer		0	1	0	
Wetland	ditch N	0	1	0	
	ditch S	0	1	0	
			Sub Total	**0**	**SF**
			@	**$45.91**	**per SF**
			Sub Total $	**$0**	
			Uncertainty Factor (U_f)	**1**	
			TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)	
Wetland Mitigation				
Stream Buffer		1	0	
Stream		7	0	
		Sub Total	**0**	**SF**
		@	**$45.91**	**per SF**
		Sub Total $	**$0**	
		Uncertainty Factor (U_f)	**1**	
		TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -	
Hydraulic Permit Approval		WDFW		0	$ -	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	0		$ -	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**0**		$ -	
				Sub Total	**$ -**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 579,700	$ 34,782

Sub Total	**$**	**34,782**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**35,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	500	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	250	1	250

Sub Total	**250**
Uncertainty Factor (U_f)	**1**
TOTAL	**300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	3,700	**0.70**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,000	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,000	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 614,700	$ 61,470

Sub Total	**$**	**61,470**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**61,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 676,200	$ 13,524

Sub Total	**$**	**13,524**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**13,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$2,000**
unsuitable foundation excavation	**$20,000**
Training	**$2,500**
Soil residual herbicide	**$15,000.00**
pavement marking	**$37,000**
traffic control labor and safety	199750
shoring and extra excavation	72860
trim	19970
Sub Total	**$369,080**
Uncertainty Factor (U_f)	**1**
TOTAL	**$370,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 24.73 install left turn lane widen shoulder or, restrict left turn access	Calculated By/Entered By:	
	Project 14	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.5	$3,000
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$22,200	1	$22,200
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,800	$36,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	2,400	$38,400
		EMBANKMENT COMPACTION	CY	$2	1,300	$2,600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	6,000	$36,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	800	$12,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,700	$110,500
		CRUSHED SURFACING	TON	$25	1,600	$40,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.5	$1,000
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$20,000	1	$20,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	300	$6,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 24.73 install left turn lane widen shoulder or, restrict left turn access	Calculated By/Entered By:	
	Project 14	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$33,800	1	$33,800
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$7,500	1	$7,500
		SPECIAL ITEMS	EST	$140,000	1	$140,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$155,700	1	$155,700
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$674,700**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$67,500	1	$67,500
9		**SUBTOTAL (ITEMS 7 & 8)**				**$742,200**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$69,100	1	$69,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$811,300**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$244,000	1	$244,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,055,300**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$316,600	1	$316,600
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$5,300	1	$5,300
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,380,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,560,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 3
Location snohomish to skykomish

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: 0
Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 3		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	AREA SF	(ACRE)
1,000	20	20000	0.5
	sub-total		**0.5**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$22,200**
Commercial Buildings	**$0**

Sub Total	**$22,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$22,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,000	20	2.0	40000	1481

Sub Total	**1,481**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,800**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	20	1,000	3	3	30,000	1,111	2,060	1,111

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**2,060**	**1,111**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**2,400**	**1,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1000	6	6,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	2,640	CF
Prorated Water Quality Volume Required	516	CF
Detention Bottom Area (based on 3' depth)	880	SF
WQ Surface Area (Based on 3' WQ depth)	172	SF
Greater of Detention and WQ areas	880	SF
Pond Bottom Length (3:1 aspect ratio)	51	FT
Pond Bottom Width	17	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	75	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	96	FT
Pond Length at Outside to of Berm (4' @2:1)	**112**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	41	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	62	FT
Pond Width at Outside to of Berm (4' @2:1)	**78**	**FT**

Pond Footprint Dimensions	80 x120		FTxFT
Pond Footprint Area	**9,600**	**SF**	
	0.22	Ac.	

Sub Total	**6,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**6,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,000	6.0	3	18,000	667
	0	4.0	5	0	0

Sub Total	**667**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,000	20	20000	1.0	20000	741	1519

Sub Total	**1519**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1700**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	20000	1.0	20000	741	1370

Sub Total	**1370**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	20,000	0.5
Landscape Area	0	0

Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)	
Wetland Mitigation					
Wetland Buffer		0	1	0	
Wetland	ditch N	0	1	0	
	ditch S	0	1	0	
			Sub Total	**0**	**SF**
			@	**$45.91**	**per SF**
			Sub Total $	**$0**	
			Uncertainty Factor (U_f)	**1**	
			TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)	
Wetland Mitigation				
Stream Buffer		1	0	
Stream		7	0	
		Sub Total	**0**	**SF**
		@	**$45.91**	**per SF**
		Sub Total $	**$0**	
		Uncertainty Factor (U_f)	**1**	
		TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -	
Hydraulic Permit Approval		WDFW		0	$ -	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	0		$ -	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**0**		$ -	
				Sub Total	**$ -**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 317,700	$ 19,062

Sub Total	**$**	**19,062**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**20,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	500	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	250	1	250

Sub Total	**250**
Uncertainty Factor (U_f)	**1**
TOTAL	**300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	3,700	**0.70**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,000	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,000	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 337,700	$ 33,770

Sub Total	**$**	**33,770**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**33,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 371,500	$ 7,430

Sub Total	**$**	**7,430**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**7,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$2,000**
unsuitable foundation excavation	**$0**
Training	**$2,500**
Soil residual herbicide	**$7,000.00**
pavement marking	**$20,000**
traffic control labor and safety	80000
shoring and extra excavation	20000
trim	8100
Sub Total	**$139,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$140,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$35
		STRUCTURE EX. CL. A INCL. HAUL	CY	$20
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$4
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$4
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 27 add eb left turn lane	Calculated By/Entered By:	
	Project 15	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.5	$3,000
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$133,330	1	$133,330
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$35	1,500	$52,500
		STRUCTURE EX. CL. A INCL. HAUL	CY	$20	1,500	$30,000
		BORROW INCL. HAUL	TON	$16	370	$5,920
		EMBANKMENT COMPACTION	CY	$4	2,300	$9,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	20,000	$120,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$6,690
		HOT MIX ASPHALT	TON	$65	1,520	$98,800
		CRUSHED SURFACING	TON	$25	1,200	$30,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$4	2,000	$8,000
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$620,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$32,000	-	$0
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$530
		SIGNAL SYSTEMS	LS	$300,000	-	$3,210
		ILLUMINATION	LS	$1,666,000	-	$0
		SIGNING	LS	$10,000	-	$0
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$16,370

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 27 add eb left turn lane	Calculated By/Entered By:	
	Project 15	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	-	$246
		TRAFFIC CONTROL (10%)	LS	$51,800	1	$51,800
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$11,400	1	$11,400
		SPECIAL ITEMS	EST	$334,000	-	$0
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$174,300	1	$174,300
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$755,296**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$75,600	1	$75,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$830,896**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$77,300	1	$77,300
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$908,196**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$273,000	1	$273,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,181,196**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$354,400	-	$0
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$6,000	1	$6,000
		ENVIRONMENTAL PERMITS	EST	$105,000	-	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,190,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,340,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to monroe

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 3		Date: 39098
Location:	snohomish to monroe		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	SF	AREA (ACRE)
104,122	0	0	0.0
	sub-total		**0.0**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.5
							sub-total	**0.5**

Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best
engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$8,330**
Commercial Buildings	**$0**
misc	125000

Sub Total	**$133,330**
Uncertainty Factor (U_f)	**1**
TOTAL	**$133,330**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. ROADWAY EXCAVATION INCL. HAUL

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	0	20	2.0	0	1259

Sub Total	**1,259**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,500**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	1,333

Sub Total	**1,333**	**CY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1,500**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	0	2,665	5	5	0	0	0	370

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**2,000**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**370**	**2,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	104122	0	20,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	8,800	CF
Prorated Water Quality Volume Required	1720	CF
Detention Bottom Area (based on 3' depth)	2933.333333	SF
WQ Surface Area (Based on 3' WQ depth)	573.3333333	SF
Greater of Detention and WQ areas	2933.333333	SF
Pond Bottom Length (3:1 aspect ratio)	94	FT
Pond Bottom Width	31	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	118	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	139	FT
Pond Length at Outside to of Berm (4' @2:1)	**155**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	55	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	76	FT
Pond Width at Outside to of Berm (4' @2:1)	**92**	**FT**

Pond Footprint Dimensions	100 x160		FTxFT
Pond Footprint Area	**16,000**	**SF**	
	0.37	Ac.	

Sub Total	**20,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**20,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	4.0	5	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	104,122	3	295706	0.1	35485	1314	2694

Sub Total	**1520**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1520**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	295706	0.0	0	0	0

Sub Total	**960**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1200**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	2,000

Sub Total	**2,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**2000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4500	1	4500
	ditch S	9000	1	9000

Sub Total	**13500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$619,835**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$620,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$620,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 517,796	$ 31,068

Sub Total	**$**	**31,068**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**32,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	52,061	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	104,122	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
5th St	$150,000
	$150,000
	$0

Sub Total	**$300,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$300,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	104,122	1	416

Sub Total	**416**	
@	**4,000**	**EA**
$ Sub Total	**$1,665,952**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$1,666,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$1,666,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	104,122	**19.72**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	104,122	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	104,122	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS	**SC&DI (ITS)**	

DESCRIPTION	**LS PRICE**
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 517,796	$ 51,780

Sub Total	**$**	**51,780**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**51,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 569,596	$ 11,392

Sub Total	**$**	**11,392**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**11,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$333,700**

Sub Total	**$333,700**
Uncertainty Factor (U_f)	**1**
TOTAL	**$334,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 27.45 install left turn lane	Calculated By/Entered By:	
	Project 16	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.5	$3,000
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$22,200	1	$22,200
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,600	$32,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	2,200	$35,200
		EMBANKMENT COMPACTION	CY	$2	1,200	$2,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	6,000	$36,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	800	$12,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,600	$104,000
		CRUSHED SURFACING	TON	$25	1,500	$37,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.5	$1,000
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$18,000	1	$18,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 27.45 install left turn lane	Calculated By/Entered By:	
	Project 16	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$31,400	1	$31,400
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$6,900	1	$6,900
		SPECIAL ITEMS	EST	$128,000	1	$128,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$143,900	1	$143,900
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$623,500**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$62,400	1	$62,400
9		**SUBTOTAL (ITEMS 7 & 8)**				**$685,900**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$63,800	1	$63,800
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$749,700**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$225,000	1	$225,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$974,700**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$292,500	1	$292,500
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$4,900	1	$4,900
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,280,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,450,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 3		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	1,000	18	18000	0.5
		sub-total		**0.5**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	0	18	0	6	0	18	0	0.0
							sub-total	**0.0**

Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$22,200**
Commercial Buildings	**$0**

Sub Total	**$22,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$22,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. ROADWAY EXCAVATION INCL. HAUL

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,000	18	2.0	36000	1333

Sub Total	**1,333**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,600**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	18	1,000	3	3	27,000	1,000	1,850	1,000

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**1,850**	**1,000**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**2,200**	**1,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1000	6	6,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	2,640	CF
Prorated Water Quality Volume Required	516	CF
Detention Bottom Area (based on 3' depth)	880	SF
WQ Surface Area (Based on 3' WQ depth)	172	SF
Greater of Detention and WQ areas	880	SF
Pond Bottom Length (3:1 aspect ratio)	51	FT
Pond Bottom Width	17	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	75	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	96	FT
Pond Length at Outside to of Berm (4' @2:1)	**112**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	41	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	62	FT
Pond Width at Outside to of Berm (4' @2:1)	**78**	**FT**

Pond Footprint Dimensions	80 x120		FTxFT
Pond Footprint Area	**9,600**	**SF**	
	0.22	Ac.	

Sub Total	**6,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**6,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,000	6.0	3	18,000	667
	0	4.0	5	0	0

Sub Total	**667**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,000	18	18000	1.0	18000	667	1367

Sub Total	**1367**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	18000	1.0	18000	667	1233

Sub Total	**1233**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	18,000	0.5
Landscape Area	0	0

Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 295,300	$ 17,718

Sub Total	**$**	**17,718**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**18,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	500	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	3,700	**0.70**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,000	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,000	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 313,300	$ 31,330

Sub Total	**$**	**31,330**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**31,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 344,700	$ 6,894

Sub Total	**$**	**6,894**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**6,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$2,000**
unsuitable foundation excavation	**$8,300**
Training	**$2,500**
Soil residual herbicide	**$6,000.00**
pavement marking	**$10,000**
traffic control labor and safety	72000
shoring and extra excavation	20000
trim	7200

Sub Total	**$128,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$128,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 28.59-28.9 extend 2 way left turn lane to 17th street	Calculated By/Entered By:	
	Project 17	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.5	$3,000
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$197,800	1	$197,800
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,800	$36,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	2,500	$40,000
		EMBANKMENT COMPACTION	CY	$2	1,400	$2,800
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	20,400	$122,400
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,300	$19,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,800	$117,000
		CRUSHED SURFACING	TON	$25	1,700	$42,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	1.0	$2,000
		WETLAND MITIGATION	LS	$304,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$37,000	1	$37,000
		LANDSCAPING	LS	$36,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	800	$16,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 28.59-28.9 extend 2 way left turn lane to 17th street	Calculated By/Entered By:	
	Project 17	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$64,600	1	$64,600
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$14,300	1	$14,300
		SPECIAL ITEMS	EST	$273,000	1	$273,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$299,400	1	$299,400
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,297,300**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$129,800	1	$129,800
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,427,100**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$132,800	1	$132,800
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,559,900**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$468,000	1	$468,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$2,027,900**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$608,400	1	$608,400
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$10,200	1	$10,200
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,650,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$2,990,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	1,700	12	20400	0.5
		sub-total		**0.5**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$197,800**
Commercial Buildings	**$0**

Sub Total	**$197,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**$197,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,670	12	2.0	40080	1484

Sub Total	**1,484**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,800**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	12	1,700	3	3	30,600	1,133	2,100	1,133

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**2,100**	**1,133**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**2,500**	**1,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1700	12	20,400

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	8,976	CF
Prorated Water Quality Volume Required	1754.4	CF
Detention Bottom Area (based on 3' depth)	2992	SF
WQ Surface Area (Based on 3' WQ depth)	584.8	SF
Greater of Detention and WQ areas	2992	SF
Pond Bottom Length (3:1 aspect ratio)	95	FT
Pond Bottom Width	32	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	119	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	140	FT
Pond Length at Outside to of Berm (4' @2:1)	**156**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	56	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	77	FT
Pond Width at Outside to of Berm (4' @2:1)	**93**	**FT**

Pond Footprint Dimensions	100 x160		FTxFT
Pond Footprint Area	**16,000**	**SF**	
	0.37	Ac.	

Sub Total	**20,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**20,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,700	6.0	3	30,600	1,133
	0	4.0	5	0	0

Sub Total	**1,133**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,700	12	20400	1.0	20400	756	1549

Sub Total	**1549**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1800**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	20500	1.0	20500	759	1405

Sub Total	**1405**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1700**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	20,400	0.5
Landscape Area	20400	0.5

Sub Total	**1**
Uncertainty Factor (U_f)	**1**
TOTAL	**1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	6600	1	6600
	ditch S	0	1	0

Sub Total	**6600**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$303,030**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$304,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$304,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 609,000	$ 36,540

Sub Total	**$**	**36,540**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**37,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	1,700	12	20400	0.47	$35,124

Sub Total	20400.00	**$35,124**
Uncertainty Factor (U_f)		**1**
TOTAL		**$36,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	800	1	800

Sub Total	**800**
Uncertainty Factor (U_f)	**1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

NEW SIGNAL SYSTEMS	**LS PRICE**
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,700	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	3,700	**0.70**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,700	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,700	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 646,000	$ 64,600

Sub Total	**$**	**64,600**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**64,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 710,600	$ 14,212

Sub Total	**$**	**14,212**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**14,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$1,200**
unsuitable foundation excavation	**$9,100**
Training	**$2,500**
Soil residual herbicide	**$6,000.00**
pavement marking	**$16,000**
traffic control labor and safety	186000
shoring and extra excavation	32700
trim	18600
Sub Total	**$272,100**
Uncertainty Factor (U_f)	**1**
TOTAL	**$273,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 29.48 roundabout	Calculated By/Entered By:	
	Project 18	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.4	$2,400
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$19,970	1	$19,970
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,400	$28,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	1,900	$30,400
		EMBANKMENT COMPACTION	CY	$2	1,100	$2,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	6,000	$36,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	800	$12,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,400	$91,000
		CRUSHED SURFACING	TON	$25	1,300	$32,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.6	$1,200
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$17,000	1	$17,000
		LANDSCAPING	LS	$11,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	800	$16,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 29.48 roundabout	Calculated By/Entered By:	
	Project 18	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$29,900	1	$29,900
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$6,600	1	$6,600
		SPECIAL ITEMS	EST	$148,000	1	$148,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$145,000	1	$145,000
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$628,170**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$62,900	1	$62,900
9		**SUBTOTAL (ITEMS 7 & 8)**				**$691,070**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$64,300	1	$64,300
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$755,370**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$227,000	1	$227,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$982,370**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$294,800	1	$294,800
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$5,000	1	$5,000
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,290,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,460,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	1,000	16	16000	0.4
		sub-total		**0.4**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.4**

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$19,970**
Commercial Buildings	**$0**

Sub Total	**$19,970**
Uncertainty Factor (U_f)	**1**
TOTAL	**$19,970**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. ROADWAY EXCAVATION INCL. HAUL

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,000	16	2.0	32000	1185

Sub Total	**1,185**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,400**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	16	1,000	3	3	24,000	889	1,650	889

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**1,650**	**889**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**1,900**	**1,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1000	6	6,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	2,640	CF
Prorated Water Quality Volume Required	516	CF
Detention Bottom Area (based on 3' depth)	880	SF
WQ Surface Area (Based on 3' WQ depth)	172	SF
Greater of Detention and WQ areas	880	SF
Pond Bottom Length (3:1 aspect ratio)	51	FT
Pond Bottom Width	17	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	75	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	96	FT
Pond Length at Outside to of Berm (4' @2:1)	**112**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	41	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	62	FT
Pond Width at Outside to of Berm (4' @2:1)	**78**	**FT**

Pond Footprint Dimensions	80 x120		FTxFT
Pond Footprint Area	**9,600**	**SF**	
	0.22	Ac.	

Sub Total	**6,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**6,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,000	6.0	3	18,000	667
	0	4.0	5	0	0

Sub Total	**667**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,000	16	16000	1.0	16000	593	1215

Sub Total	**1215**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1400**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	16000	1.0	16000	593	1096

Sub Total	**1096**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1300**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	16,000	0.4
Landscape Area	6000	0.2

Sub Total	**0.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.6**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 281,670	$ 16,900

Sub Total	**$**	**16,900**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**17,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	1,000	6	6000	0.14	$10,331

Sub Total	6000.00	**$10,331**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$11,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	800	1	800

Sub Total	**800**
Uncertainty Factor (U_f)	**1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

NEW SIGNAL SYSTEMS	**LS PRICE**
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,000	**0.19**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,000	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,000	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 298,670	$ 29,867

Sub Total	**$**	**29,867**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**29,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 328,570	$ 6,571

Sub Total	**$**	**6,571**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**6,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble Strip	**$1,200**
unsuitable foundation excavation	**$7,500**
Training	**$2,500**
Soil residual herbicide	**$6,000.00**
pavement marking	**$10,000**
traffic control labor and safety	72000
shoring and extra excavation	40000
trim	8000
Sub Total	**$147,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$148,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 3
Location: mp 30.04 Reiter Rd. add wb right turn lane
project 19

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: GLW
Checked By: JAT

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	11,700	$234,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	1	$15,000
		RIGHT OF WAY TOTAL				**$249,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.2	$1,200
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	800	$16,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	1,700	$27,200
		EMBANKMENT COMPACTION	CY	$2	900	$1,800
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	18,000	$108,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	4	$4,800
		CATCH BASIN TYPE 2	EA	$2,200	2	$4,400
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	500	$17,500
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	500	$22,500
		STRUCTURE EXCAVATION CL. B	CY	$15	400	$6,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	700	$45,500
		CRUSHED SURFACING	TON	$25	500	$12,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.4	$800
		WETLAND MITIGATION	LS	$0	1	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$19,000	1	$19,000
		LANDSCAPING	LS	$0	1	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	500	$10,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$15,000	1	$15,000
		SIGNING	LS	$2,000	1	$2,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
	project 19	Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$32,500	1	$32,500
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$7,200	1	$7,200
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$109,200	1	$109,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$473,100**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$47,400	1	$47,400
9		**SUBTOTAL (ITEMS 7 & 8)**				**$520,500**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$48,500	1	$48,500
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$569,000**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$86,000	1	$86,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$655,000**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$196,500	1	$196,500
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$3,300	1	$3,300
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,210,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$2,130,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 3
Location mp 30.04 Reiter Rd. add wb right turn lane

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: GLW
Checked By: JAT

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.
11	Assumption for:	Roundabouts

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index: 2006
	Calculated By/Entered By: GLW
	Checked By: JAT

Segment 3

		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	mp 30.04 Reiter Rd. add wb right turn lane

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	39098
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		
Lot XYZ		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality	11,700	0.3
Wetland Mitigation	0	

Sub Total	**11,700**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**11,700**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration	1	All properties acquired will require administration (title search, etc.)

Sub Total	**1**	**EA**
	1.0	
TOTAL	**1**	

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Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	Length	Width left	AREA Width right	SF	(ACRE)
Section 1	450	15	20	15750	0.2
				0	0.0
		sub-total		15750	**0.2**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.0
							sub-total	**0.0**
							Sub Total	**0.2**
							Uncertainty Factor (U_f)	**1**
							TOTAL	**0.2**

PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	JAT

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (SY)
Section 1	0	40	0	0

AREA (SF)	AREA (SY)
0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**
Commercial Buildings	**$0**
Signals	**$0**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Corridor Section:	Segment 3	Date: 01/16/07
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		Calculated By/Entered By: GLW
		Checked By: JAT

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
	450	20	2.0	18000	667

Sub Total	**667**	**CY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**800**	**CY**

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		Checked By: JAT

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index: 2006
		Calculated By/Entered By: GLW
		Checked By:

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	35	400	3	3	21,000	778	1,440	778

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**1,440**	**778**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**1,700**	**900**

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		Checked By:	JAT

Segment 3

SF **DETENTION & TREATMENT**

DESCRIPTION	Length FT	Width FT	AREA (SF)
Section 1	450	20	9,000
			9,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	3,960	CF
Prorated Water Quality Volume Required	774	CF
Detention Bottom Area (based on 3' depth)	1320	SF
WQ Surface Area (Based on 3' WQ depth)	258	SF
Greater of Detention and WQ areas	1320	SF
Pond Bottom Length (3:1 aspect ratio)	63	FT
Pond Bottom Width	21	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	87	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	108	FT
Pond Length at Outside to of Berm (4' @2:1)	**124**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	45	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	66	FT
Pond Width at Outside to of Berm (4' @2:1)	**82**	**FT**

Pond Footprint Dimensions	90 x130		FTxFT
Pond Footprint Area	**11,700**	**SF**	
	0.27	Ac.	

Sub Total	**18,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**18,000**

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Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	450	450	450	3	1

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**450**	**450**	**3**	**1**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**500**	**500**	**4**	**2**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
Section 1	450	4.0	5	9,000	333

Sub Total	**333**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**400**

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		Checked By:	JAT

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	450	20	9000	0.9	8100	300	615

AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
0	0.9	0	0	0

Sub Total	**615**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**700**	**TON**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	9000	0.7	6300	233	432

AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
0	0.7	0	0	0
0	0.7	0	0	0

Sub Total	**432**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**500**	**TON**

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		Checked By:	JAT

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Checked By:	JAT

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	15,750	0.4
Landscape Area	0	0

Sub Total	**0.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.4**

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Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Buffer	0	1	0
Wetland		7	0

Sub Total	**0**	**SF**
@	**$2.30**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$2.30**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 305,200	$ 18,312

Sub Total	**$**	**18,312**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**19,000**

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Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
Section 1	450	0	0	0.00	$0

Area SF	Area ACRE	
0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

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Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
Section 1	450	1	450

Sub Total	**450**
Uncertainty Factor (U_f)	**1**
TOTAL	**500**

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Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	450	2	4

Sub Total	**4**	
@	**4,000**	**EA**
$ Sub Total	**$14,400**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$15,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$15,000**

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Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
Section 1	450	**0.09**	$2,000

Sub Total	**$2,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$2,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Cement Conc Curb & Gutter Section 1	450	0	0

	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	450	0	2	0

LENGTH (FT)	WIDTH (FT)	AREA (SY)
0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 324,200	$ 32,420

Sub Total	**$**	**32,420**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**32,500**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 356,700	$ 7,134

Sub Total	**$**	**7,134**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**7,200**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 30.04 Reiter Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 30.3 - 50 install median rumble strip	Calculated By/Entered By:	
	Project 20	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	-	$0
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$125,000	1	$125,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	-	$0
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	-	$0
		EMBANKMENT COMPACTION	CY	$2	-	$0
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	-	$0
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	-	$0
		CRUSHED SURFACING	TON	$25	-	$0
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$620,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$8,000	-	$0
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$300,000	-	$0
		ILLUMINATION	LS	$1,666,000	-	$0
		SIGNING	LS	$10,000	-	$0
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 30.3 - 50 install median rumble strip	Calculated By/Entered By:	
	Project 20	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	-	$0
		TRAFFIC CONTROL (10%)	LS	$12,500	1	$12,500
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$2,800	-	$0
		SPECIAL ITEMS	EST	$928,413	1	$928,413
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$319,800	-	$0
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,065,913**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$106,600	1	$106,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,172,513**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$109,100	1	$109,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,281,613**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$385,000	1	$385,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,666,613**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$500,000	1	$500,000
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$8,400	1	$8,400
		ENVIRONMENTAL PERMITS	EST	$105,000	-	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,180,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$2,460,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 1
Location snohomish to monroe

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: 0
Checked By: 0

Segment 1

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	snohomish to monroe

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 1		Date: 39098
Location:	snohomish to monroe		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	SF	(ACRE)
104,122	0	0	0.0
	sub-total		**0.0**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	TOP OF POND AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$0**
Commercial Buildings	**$0**
remove paitnt line	125000

Sub Total	**$125,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$125,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	0	20	2.0	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	0	2,665	5	5	0	0	0	0

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**0**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	104122	0	0

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	0	CF
Prorated Water Quality Volume Required	0	CF
Detention Bottom Area (based on 3' depth)	0	SF
WQ Surface Area (Based on 3' WQ depth)	0	SF
Greater of Detention and WQ areas	0	SF
Pond Bottom Length (3:1 aspect ratio)	0	FT
Pond Bottom Width	0	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	24	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Length at Outside to of Berm (4' @2:1)	**61**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	24	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Width at Outside to of Berm (4' @2:1)	**61**	**FT**

Pond Footprint Dimensions	70 x70		FTxFT
Pond Footprint Area	**4,900**	**SF**	
	0.11	Ac.	

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	4.0	5	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	104,122	3	295706	0.1	35485	1314	2694

Sub Total	**2694**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	295706	0.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4500	1	4500
	ditch S	9000	1	9000

Sub Total	**13500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$619,835**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$620,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$620,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 125,000	$ 7,500

Sub Total	**$**	**7,500**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**8,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	52,061	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	104,122	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
5th St	$150,000
	$150,000
	$0

Sub Total	**$300,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$300,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	104,122	1	416

Sub Total	**416**	
@	**4,000**	**EA**
$ Sub Total	**$1,665,952**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$1,666,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$1,666,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	104,122	**19.72**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	104,122	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	104,122	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

	LS	SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 125,000	$ 12,500

Sub Total	**$**	**12,500**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**12,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 137,500	$ 2,750

Sub Total	**$**	**2,750**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**2,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
piant line/rpm/plasticline	**$471,546**

Sub Total	**$928,413**
Uncertainty Factor (U_f)	**1**
TOTAL	**$928,413**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		sotrm water quality facilities/flow control	CY	$6
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 30.6 intersection improvements	Calculated By/Entered By:	GLW
	Project 21	Checked By:	JAT

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.3	$1,800
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$33,363	1	$33,363
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	900	$18,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	222	$3,552
		EMBANKMENT COMPACTION	CY	$2	1,200	$2,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	12,000	$72,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$6	13,200	$79,200
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	1,000	$40,000
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	1,340	$4,020
		HOT MIX ASPHALT	TON	$65	920	$59,800
		CRUSHED SURFACING	TON	$25	700	$17,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	2,000	$30,000
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$620,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$8,000	-	$27,930
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$45,000	-	$0
		ILLUMINATION	LS	$1,666,000	-	$0
		SIGNING	LS	$600	1	$600
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to monroe	Date of Cost Index:	2006
	mp 30.6 intersection improvements	Calculated By/Entered By:	GLW
	Project 21	Checked By:	JAT

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	-	$0
		TRAFFIC CONTROL (10%)	LS	$39,100	1	$39,100
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$4,300	1	$4,300
		SPECIAL ITEMS	EST	$33,000	1	$33,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$140,000	-	$0
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$466,565**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$46,700	1	$46,700
9		**SUBTOTAL (ITEMS 7 & 8)**				**$513,265**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$47,800	1	$47,800
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$561,065**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$169,000	1	$169,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$730,065**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$109,510	1	$109,510
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$3,700	1	$3,700
		ENVIRONMENTAL PERMITS	EST	$105,000	-	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$850,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$960,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 4
Location snohomish to monroe

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: GLW
Checked By: JAT

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to monroe	Date of Cost Index: 2006
	Calculated By/Entered By: GLW
	Checked By: JAT

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to monroe

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 4		Date: 39098
Location:	snohomish to monroe		Date of Cost Index: 2006
			Calculated By/Entered By: GLW
			Checked By: JAT

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	104,122	0	0	0.0
		sub-total		**0.0**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	0	0	0	6	0	0	0	0.3

sub-total	**0.3**
Sub Total	**0.3**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.3**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$6,050**
Commercial Buildings	**$0**
guardrail	4500
guardrail anchor	400
removal misc	9080
ditch excavation including Haul	13333

Sub Total	**$33,363**
Uncertainty Factor (U_f)	**1**
TOTAL	**$33,363**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: GLW
		Checked By: JAT

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	**LENGTH (LF)**	**WIDTH (FT)**	**DEPTH (FT)**	**VOLUME (CF)**	**(CY)**
Section 1	0	20	2.0	0	756

Sub Total	**756**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**900**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to monroe	Date of Cost Index: 2006
		Calculated By/Entered By: GLW
		Checked By:

Segment 4

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	0	2,665	5	5	0	0	0	0

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**1,200**
Uncertainty Factor (U_f)	**1**	**1**
TOTAL	**222**	**1,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	104122	0	12,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	5,280	CF
Prorated Water Quality Volume Required	1032	CF
Detention Bottom Area (based on 3' depth)	1760	SF
WQ Surface Area (Based on 3' WQ depth)	344	SF
Greater of Detention and WQ areas	1760	SF
Pond Bottom Length (3:1 aspect ratio)	73	FT
Pond Bottom Width	24	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	97	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	118	FT
Pond Length at Outside to of Berm (4' @2:1)	**134**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	48	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	69	FT
Pond Width at Outside to of Berm (4' @2:1)	**85**	**FT**

Pond Footprint Dimensions	90 x140		FTxFT
Pond Footprint Area	**12,600**	**SF**	
	0.29	Ac.	

Sub Total	**12,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**12,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	4.0	5	0	12,000
	0	4.0	5	0	0

Sub Total	**12,000**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**13,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			920

Sub Total	**920**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**1000**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	104,122	3	295706	0.1	35485	1314	920

Sub Total	**920**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**920**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	295706	0.0	0	0	580

Sub Total	**580**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**700**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	2,000

Sub Total	**2,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**2000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4500	1	4500
	ditch S	9000	1	9000

Sub Total	**13500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$619,835**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$620,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$620,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 362,235	$ 21,734

Sub Total	**$**	**7,220**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**8,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	52,061	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	104,122	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

NEW SIGNAL SYSTEMS	**LS PRICE**
permanaent signing	$2,330
beam guardral	$21,000
beamtrainsition section	$2,600
SIGNAL SYSTEM REVISIONS	
others	$18,487
	$0

Sub Total	**$44,417**
Uncertainty Factor (U_f)	**1**
TOTAL	**$45,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	104,122	1	416

Sub Total	**416**	
@	**4,000**	**EA**
$ Sub Total	**$1,665,952**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$1,666,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$1,666,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
	104,122	**19.72**	$600
			$0
			$0
			$0

Sub Total	**$600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	104,122	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	104,122	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

	LS	SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 390,165	$ 39,017

Sub Total	**$**	**39,017**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**39,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 429,265	$ 8,585

Sub Total	**$**	**8,585**
Uncertainty Factor (U_f)	**0.5**	
TOTAL	**$**	**4,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
TRIMMING AND CLEAN UP	**$6,050**
spcc PLAN	2000
shoring or extra excavation	20000
water	**$2,200.00**
training	**$2,500**

Sub Total	**$32,750**
Uncertainty Factor (U_f)	**1**
TOTAL	**$33,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to monroe	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 31.26-31.73 add left turn lane for gravel pit driveway	Calculated By/Entered By:	
	Project 22	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.4	$2,400
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$22,200	1	$22,200
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,400	$28,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	1,900	$30,400
		EMBANKMENT COMPACTION	CY	$2	1,100	$2,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	16,000	$96,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	800	$12,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,400	$91,000
		CRUSHED SURFACING	TON	$25	1,300	$32,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.8	$1,600
		WETLAND MITIGATION	LS	$304,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$21,000	1	$21,000
		LANDSCAPING	LS	$28,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	800	$16,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 31.26-31.73 add left turn lane for gravel pit driveway	Calculated By/Entered By:	
	Project 22	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$36,600	1	$36,600
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$8,100	1	$8,100
		SPECIAL ITEMS	EST	$145,000	1	$145,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$166,500	1	$166,500
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$721,500**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$72,200	1	$72,200
9		**SUBTOTAL (ITEMS 7 & 8)**				**$793,700**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$73,900	1	$73,900
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$867,600**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$261,000	1	$261,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,128,600**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$338,600	1	$338,600
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$5,700	1	$5,700
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,480,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,670,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	1,000	16	16000	0.4
		sub-total		**0.4**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.4**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$22,200**
Commercial Buildings	**$0**

Sub Total	**$22,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$22,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,000	16	2.0	32000	1185

Sub Total	**1,185**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,400**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 4

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	16	1,000	3	3	24,000	889	1,650	889

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**1,650**	**889**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**1,900**	**1,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1000	16	16,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	7,040	CF
Prorated Water Quality Volume Required	1376	CF
Detention Bottom Area (based on 3' depth)	2346.666667	SF
WQ Surface Area (Based on 3' WQ depth)	458.6666667	SF
Greater of Detention and WQ areas	2346.666667	SF
Pond Bottom Length (3:1 aspect ratio)	84	FT
Pond Bottom Width	28	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	108	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	129	FT
Pond Length at Outside to of Berm (4' @2:1)	**145**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	52	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	73	FT
Pond Width at Outside to of Berm (4' @2:1)	**89**	**FT**

Pond Footprint Dimensions	90 x150		FTxFT
Pond Footprint Area	**13,500**	**SF**	
	0.31	Ac.	

Sub Total	**16,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**16,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,000	6.0	3	18,000	667
	0	4.0	5	0	0

Sub Total	**667**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,000	16	16000	1.0	16000	593	1215

Sub Total	**1215**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1400**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	16000	1.0	16000	593	1096

Sub Total	**1096**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1300**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	16,000	0.4
Landscape Area	16000	0.4

Sub Total	**0.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	6600	1	6600
	ditch S	0	1	0

Sub Total	**6600**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$303,030**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$304,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$304,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 344,300	$ 20,658

Sub Total	**$**	**20,658**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**21,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	1,000	16	16000	0.37	$27,548

Sub Total	16000.00	**$27,548**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$28,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	800	1	800

Sub Total	**800**
Uncertainty Factor (U_f)	**1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,000	**0.19**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,000	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,000	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
ITS Traveler Information	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 365,300	$ 36,530

Sub Total	**$**	**36,530**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**36,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 401,900	$ 8,038

Sub Total	**$**	**8,038**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**8,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$1,200**
unsuitable foundation excavation	**$7,500**
Training	**$2,500**
Soil residual herbicide	**$5,400.00**
pavement marking	**$10,000**
traffic control labor and safety	71000
shoring and extra excavation	40000
trim	7200

Sub Total	**$144,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**$145,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 32.23-32.96 remark passing lane	Calculated By/Entered By:	
	Project 23	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	-	$0
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$2,300	1	$2,300
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	-	$0
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	-	$0
		EMBANKMENT COMPACTION	CY	$2	-	$0
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	-	$0
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	-	$0
		CRUSHED SURFACING	TON	$25	-	$0
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$304,000	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$1,000	1	$1,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 32.23-32.96 remark passing lane	Calculated By/Entered By:	
	Project 23	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$1,400	1	$1,400
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$300	1	$300
		SPECIAL ITEMS	EST	$97,000	1	$97,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$33,600	1	$33,600
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$145,600**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$14,600	1	$14,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$160,200**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$14,900	1	$14,900
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$175,100**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$53,000	1	$53,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$228,100**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$68,500	1	$68,500
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$1,200	1	$1,200
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$300,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$340,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
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	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 4		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	0	16	0	0.0
		sub-total		**0.0**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	0	18	0	6	0	18	0	0.0
							sub-total	**0.0**

Sub Total	**0.0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$2,300**
Commercial Buildings	**$0**

Sub Total	**$2,300**
Uncertainty Factor (U_f)	**1**
TOTAL	**$2,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	**LENGTH (LF)**	**WIDTH (FT)**	**DEPTH (FT)**	**VOLUME (CF)**	**(CY)**
Section 1	0	16	2.0	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	0	1,000	3	3	0	0	0	0

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**0**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
	0	16	0

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	0	CF
Prorated Water Quality Volume Required	0	CF
Detention Bottom Area (based on 3' depth)	0	SF
WQ Surface Area (Based on 3' WQ depth)	0	SF
Greater of Detention and WQ areas	0	SF
Pond Bottom Length (3:1 aspect ratio)	0	FT
Pond Bottom Width	0	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	24	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Length at Outside to of Berm (4' @2:1)	**61**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	24	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Width at Outside to of Berm (4' @2:1)	**61**	**FT**

Pond Footprint Dimensions	70 x70		FTxFT
Pond Footprint Area	**4,900**	**SF**	
	0.11	Ac.	

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	6.0	3	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	16	0	1.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	1.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	6600	1	6600
	ditch S	0	1	0

Sub Total	**6600**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$303,030**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$304,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$304,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 12,300	$ 738

Sub Total	**$**	**738**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**1,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	0	16	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	0	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,000	**0.19**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	0	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	0	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 13,300	$ 1,330

Sub Total	**$**	**1,330**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**1,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 14,700	$ 294

Sub Total	**$**	**294**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble Strip	**$0**
unsuitable foundation excavation	**$0**
Training	**$2,500**
Soil residual herbicide	**$0.00**
pavement marking	**$77,100**
traffic control labor and safety	15000
shoring and extra excavation	0
trim	1500
Sub Total	**$96,100**
Uncertainty Factor (U_f)	**1**
TOTAL	**$97,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 35.1-35.62 realign and widen eb and wb bridge approaches	Calculated By/Entered By:	
	Project 24	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	1.1	$6,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$99,050	1	$99,050
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	3,900	$78,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	5,400	$86,400
		EMBANKMENT COMPACTION	CY	$2	2,900	$5,800
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	44,800	$268,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	2,100	$31,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	3,700	$240,500
		CRUSHED SURFACING	TON	$25	3,500	$87,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	2.1	$4,200
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$57,000	1	$57,000
		LANDSCAPING	LS	$75,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	700	$14,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$13,000	1	$13,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 35.1-35.62 realign and widen eb and wb bridge approaches	Calculated By/Entered By:	
	Project 24	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$99,300	1	$99,300
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$21,900	1	$21,900
		SPECIAL ITEMS	EST	$1,004,000	1	$1,004,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$635,300	1	$635,300
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$2,752,850**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$275,300	1	$275,300
9		**SUBTOTAL (ITEMS 7 & 8)**				**$3,028,150**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$281,700	1	$281,700
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$3,309,850**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$993,000	1	$993,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$4,302,850**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$1,290,900	1	$1,290,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$21,600	1	$21,600
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$5,620,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$6,330,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	2,800	16	44800	1.1
		sub-total		**1.1**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**1.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$99,050**
Commercial Buildings	**$0**

Sub Total	**$99,050**
Uncertainty Factor (U_f)	**1**
TOTAL	**$99,050**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	2,800	16	2.0	89600	3319

Sub Total	**3,319**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3,900**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 4

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	16	2,800	3	3	67,200	2,489	4,610	2,489

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**4,610**	**2,489**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**5,400**	**2,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	2800	16	44,800

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	19,712	CF
Prorated Water Quality Volume Required	3852.8	CF
Detention Bottom Area (based on 3' depth)	6570.666667	SF
WQ Surface Area (Based on 3' WQ depth)	1284.266667	SF
Greater of Detention and WQ areas	6570.666667	SF
Pond Bottom Length (3:1 aspect ratio)	140	FT
Pond Bottom Width	47	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	164	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	185	FT
Pond Length at Outside to of Berm (4' @2:1)	**201**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	71	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	92	FT
Pond Width at Outside to of Berm (4' @2:1)	**108**	**FT**

Pond Footprint Dimensions	110 x210		FTxFT
Pond Footprint Area	**23,100**	**SF**	
	0.53	Ac.	

Sub Total	**44,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**44,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	2,800	6.0	3	50,400	1,867
	0	4.0	5	0	0

Sub Total	**1,867**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**2,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	2,700	16	43200	1.0	43200	1600	3280

Sub Total	**3280**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**3700**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	43200	1.0	43200	1600	2960

Sub Total	**2960**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	44,800	1.1
Landscape Area	43200	1

Sub Total	**2.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**2.1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 935,350	$ 56,121

Sub Total	**$**	**56,121**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**57,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	2,700	16	43200	0.99	$74,380

Sub Total	43200.00	**$74,380**
Uncertainty Factor (U_f)		**1**
TOTAL		**$75,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	700	1	700

Sub Total	**700**
Uncertainty Factor (U_f)	**1**
TOTAL	**700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	2,700	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,000	**0.19**	$13,000
			$0
			$0
			$0

Sub Total	**$13,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$13,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	2,700	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	2,700	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 992,350	$ 99,235

Sub Total	**$**	**99,235**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**99,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 1,091,650	$ 21,833

Sub Total	**$**	**21,833**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**21,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$2,000**
unsuitable foundation excavation	**$61,000**
Training	**$2,500**
Soil residual herbicide	**$15,000.00**
pavement marking	**$28,000**
traffic control labor and safety	336000
shoring and extra excavation	55000
trim	504000

Sub Total	**$1,003,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$1,004,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 35.45-35.55 install chevron warning signs	Calculated By/Entered By:	
	Project 25	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	-	$0
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$500	1	$500
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	-	$0
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	-	$0
		EMBANKMENT COMPACTION	CY	$2	-	$0
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	-	$0
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	-	$0
		CRUSHED SURFACING	TON	$25	-	$0
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$1,000	-	$0
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$13,000	1	$13,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 35.45-35.55 install chevron warning signs	Calculated By/Entered By:	
	Project 25	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$1,400	1	$1,400
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$300	1	$300
		SPECIAL ITEMS	EST	$9,000	1	$9,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$7,300	1	$7,300
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$31,500**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$3,200	1	$3,200
9		**SUBTOTAL (ITEMS 7 & 8)**				**$34,700**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$3,300	1	$3,300
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$38,000**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$12,000	1	$12,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$50,000**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$15,000	1	$15,000
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$300	1	$300
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$70,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$80,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	0	16	0	0.0
		sub-total		**0.0**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	LENGTH (FT)	TOP OF POND WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$500**
Commercial Buildings	**$0**

Sub Total	**$500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	**LENGTH (LF)**	**WIDTH (FT)**	**DEPTH (FT)**	**VOLUME (CF)**	**(CY)**
Section 1	0	16	2.0	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	0	2,800	3	3	0	0	0	0

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**0**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
	0	16	0

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	0	CF
Prorated Water Quality Volume Required	0	CF
Detention Bottom Area (based on 3' depth)	0	SF
WQ Surface Area (Based on 3' WQ depth)	0	SF
Greater of Detention and WQ areas	0	SF
Pond Bottom Length (3:1 aspect ratio)	0	FT
Pond Bottom Width	0	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	24	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Length at Outside to of Berm (4' @2:1)	**61**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	24	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Width at Outside to of Berm (4' @2:1)	**61**	**FT**

Pond Footprint Dimensions	70 x70		FTxFT
Pond Footprint Area	**4,900**	**SF**	
	0.11	Ac.	

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	6.0	3	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	16	0	1.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	1.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 13,500	$ 810

Sub Total	**$**	**810**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**1,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	0	16	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	0	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,000	**0.19**	$13,000
			$0
			$0
			$0

Sub Total	**$13,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$13,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	0	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	0	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 13,500	$ 1,350

Sub Total	**$**	**1,350**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**1,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 14,900	$ 298

Sub Total	**$**	**298**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$2,000**
unsuitable foundation excavation	**$0**
Training	**$500**
Soil residual herbicide	**$2,700.00**
pavement marking	**$0**
traffic control labor and safety	2700
shoring and extra excavation	0
trim	300
Sub Total	**$8,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$9,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 35.35-35.62 eliminate driveway access, install edge rumble strip	Calculated By/Entered By:	
	Project 26	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.5	$3,000
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$16,900	1	$16,900
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,600	$32,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	2,200	$35,200
		EMBANKMENT COMPACTION	CY	$2	1,200	$2,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	18,000	$108,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,100	$16,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,600	$104,000
		CRUSHED SURFACING	TON	$25	1,500	$37,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.5	$1,000
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$23,000	-	$0
		LANDSCAPING	LS	$31,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	700	$14,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 35.35-35.62 eliminate driveway access, install edge rumble strip	Calculated By/Entered By:	
	Project 26	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$38,100	1	$38,100
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$8,400	1	$8,400
		SPECIAL ITEMS	EST	$112,000	1	$112,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$161,700	1	$161,700
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$700,700**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$70,100	1	$70,100
9		**SUBTOTAL (ITEMS 7 & 8)**				**$770,800**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$71,700	1	$71,700
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$842,500**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$253,000	1	$253,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,095,500**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$328,700	1	$328,700
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$5,500	1	$5,500
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,430,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,610,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	0	16	0	0.0
		sub-total		**0.0**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	1500	12	0	6	1500	12	18,000	0.4

sub-total	**0.5**
Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$16,900**
Commercial Buildings	**$0**

Sub Total	**$16,900**
Uncertainty Factor (U_f)	**1**
TOTAL	**$16,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,500	12	2.0	36000	1333

Sub Total	**1,333**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,600**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	12	1,500	3	3	27,000	1,000	1,850	1,000

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**1,850**	**1,000**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**2,200**	**1,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1500	12	18,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	7,920	CF
Prorated Water Quality Volume Required	1548	CF
Detention Bottom Area (based on 3' depth)	2640	SF
WQ Surface Area (Based on 3' WQ depth)	516	SF
Greater of Detention and WQ areas	2640	SF
Pond Bottom Length (3:1 aspect ratio)	89	FT
Pond Bottom Width	30	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	113	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	134	FT
Pond Length at Outside to of Berm (4' @2:1)	**150**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	54	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	75	FT
Pond Width at Outside to of Berm (4' @2:1)	**91**	**FT**

Pond Footprint Dimensions	100 x150		FTxFT
Pond Footprint Area	**15,000**	**SF**	
	0.34	Ac.	

Sub Total	**18,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**18,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,500	6.0	3	27,000	1,000
	0	4.0	5	0	0

Sub Total	**1,000**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,500	12	18000	1.0	18000	667	1367

Sub Total	**1367**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	18000	1.0	18000	667	1233

Sub Total	**1233**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	0	0
Landscape Area	18000	0.5

Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 380,500	$ 22,830

Sub Total	**$**	**22,830**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**23,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	1,500	12	18000	0.41	$30,992

Sub Total	18000.00	**$30,992**
Uncertainty Factor (U_f)		**1**
TOTAL		**$31,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	700	1	700

Sub Total	**700**
Uncertainty Factor (U_f)	**1**
TOTAL	**700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,500	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,500	**0.28**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,500	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,500	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 380,500	$ 38,050

Sub Total	**$**	**38,050**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**38,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 418,600	$ 8,372

Sub Total	**$**	**8,372**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**8,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$1,000**
unsuitable foundation excavation	**$8,000**
Training	**$2,500**
Soil residual herbicide	**$5,700.00**
pavement marking	**$17,000**
traffic control labor and safety	70100
shoring and extra excavation	0
trim	7020
Sub Total	**$111,320**
Uncertainty Factor (U_f)	**1**
TOTAL	**$112,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 35.95-36.4 construct eb truck climbing lane	Calculated By/Entered By:	
	Project 27	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	1.2	$7,200
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$57,600	1	$57,600
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,500	$50,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	3,600	$57,600
		EMBANKMENT COMPACTION	CY	$2	2,000	$4,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	28,800	$172,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,800	$27,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	2,500	$162,500
		CRUSHED SURFACING	TON	$25	2,300	$57,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	1.4	$2,800
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$39,000	-	$0
		LANDSCAPING	LS	$50,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	1,400	$28,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 35.95-36.4 construct eb truck climbing lane	Calculated By/Entered By:	
	Project 27	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$63,700	1	$63,700
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$14,100	1	$14,100
		SPECIAL ITEMS	EST	$284,000	1	$284,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$299,700	1	$299,700
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,298,500**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$129,900	1	$129,900
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,428,400**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$132,900	1	$132,900
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,561,300**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$469,000	1	$469,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$2,030,300**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$609,100	1	$609,100
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$10,200	1	$10,200
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,650,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$2,990,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	2,400	12	28800	0.7
		sub-total		**0.7**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	1500	12	0	6	1500	12	18,000	0.4

sub-total	**0.5**
Sub Total	**1.2**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.2**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$57,600**
Commercial Buildings	**$0**

Sub Total	**$57,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$57,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	2,400	12	2.0	57600	2133

Sub Total	**2,133**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2,500**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	12	2,500	3	3	45,000	1,667	3,090	1,667

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**3,090**	**1,667**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**3,600**	**2,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	2400	12	28,800

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	12,672	CF
Prorated Water Quality Volume Required	2476.8	CF
Detention Bottom Area (based on 3' depth)	4224	SF
WQ Surface Area (Based on 3' WQ depth)	825.6	SF
Greater of Detention and WQ areas	4224	SF
Pond Bottom Length (3:1 aspect ratio)	113	FT
Pond Bottom Width	38	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	137	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	158	FT
Pond Length at Outside to of Berm (4' @2:1)	**174**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	62	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	83	FT
Pond Width at Outside to of Berm (4' @2:1)	**99**	**FT**

Pond Footprint Dimensions	100 x180		FTxFT
Pond Footprint Area	**18,000**	**SF**	
	0.41	Ac.	

Sub Total	**28,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**28,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	2,400	6.0	3	43,200	1,600
	0	4.0	5	0	0

Sub Total	**1,600**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	2,400	12	28800	1.0	28800	1067	2187

Sub Total	**2187**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	28800	1.0	28800	1067	1973

Sub Total	**1973**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2300**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	28,800	0.7
Landscape Area	28800	0.7

Sub Total	**1.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.4**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)	
Wetland Mitigation					
Wetland Buffer		0	1	0	
Wetland	ditch N	0	1	0	
	ditch S	0	1	0	
			Sub Total	**0**	**SF**
			@	**$45.91**	**per SF**
			Sub Total $	**$0**	
			Uncertainty Factor (U_f)	**1**	
			TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)	
Wetland Mitigation				
Stream Buffer		1	0	
Stream		7	0	
		Sub Total	**0**	**SF**
		@	**$45.91**	**per SF**
		Sub Total $	**$0**	
		Uncertainty Factor (U_f)	**1**	
		TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -	
Hydraulic Permit Approval		WDFW		0	$ -	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	0		$ -	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**0**		$ -	
				Sub Total	**$ -**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 637,000	$ 38,220

Sub Total	**$**	**38,220**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**39,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	2,400	12	28800	0.66	$49,587

Sub Total	28800.00	**$49,587**
Uncertainty Factor (U_f)		**1**
TOTAL		**$50,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	1,400	1	1,400

Sub Total	**1,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**1400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	2,400	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	2,400	**0.45**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	2,400	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	2,400	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 637,000	$ 63,700

Sub Total	**$**	**63,700**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**63,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 700,700	$ 14,014

Sub Total	**$**	**14,014**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**14,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$1,800**
unsuitable foundation excavation	**$13,200**
Training	**$2,500**
Soil residual herbicide	**$9,500.00**
pavement marking	**$24,000**
traffic control labor and safety	168000
shoring and extra excavation	47500
trim	16700

Sub Total	**$283,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$284,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 38.5 reslope shoulder	Calculated By/Entered By:	
	Project 28	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	1.1	$6,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$25,600	1	$25,600
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,100	$42,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	2,900	$46,400
		EMBANKMENT COMPACTION	CY	$2	1,600	$3,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	24,000	$144,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,100	$16,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	-	$0
		CRUSHED SURFACING	TON	$25	-	$0
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	1.2	$2,400
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$19,000	-	$0
		LANDSCAPING	LS	$42,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	800	$16,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 38.5 reslope shoulder	Calculated By/Entered By:	
	Project 28	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$31,300	1	$31,300
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$6,900	1	$6,900
		SPECIAL ITEMS	EST	$81,000	1	$81,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$129,600	1	$129,600
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$561,500**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$56,200	1	$56,200
9		**SUBTOTAL (ITEMS 7 & 8)**				**$617,700**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$57,500	1	$57,500
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$675,200**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$203,000	1	$203,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$878,200**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$263,500	1	$263,500
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$4,400	1	$4,400
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,150,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,300,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	AREA SF	(ACRE)
1,500	16	24000	0.6
	sub-total		**0.6**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	1500	12	0	6	1500	12	18,000	0.4

sub-total	**0.5**
Sub Total	**1.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$25,600**
Commercial Buildings	**$0**

Sub Total	**$25,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$25,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,500	16	2.0	48000	1778

Sub Total	**1,778**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2,100**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 4

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	16	1,500	3	3	36,000	1,333	2,470	1,333

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**2,470**	**1,333**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**2,900**	**1,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	1500	16	24,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	10,560	CF
Prorated Water Quality Volume Required	2064	CF
Detention Bottom Area (based on 3' depth)	3520	SF
WQ Surface Area (Based on 3' WQ depth)	688	SF
Greater of Detention and WQ areas	3520	SF
Pond Bottom Length (3:1 aspect ratio)	103	FT
Pond Bottom Width	34	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	127	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	148	FT
Pond Length at Outside to of Berm (4' @2:1)	**164**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	58	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	79	FT
Pond Width at Outside to of Berm (4' @2:1)	**95**	**FT**

Pond Footprint Dimensions	100 x170		FTxFT
Pond Footprint Area	**17,000**	**SF**	
	0.39	Ac.	

Sub Total	**24,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**24,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,500	6.0	3	27,000	1,000
	0	4.0	5	0	0

Sub Total	**1,000**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	16	0	1.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	1.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	24,000	0.6
Landscape Area	24000	0.6

Sub Total	**1.2**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.2**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)	
Wetland Mitigation					
Wetland Buffer		0	1	0	
Wetland	ditch N	0	1	0	
	ditch S	0	1	0	
			Sub Total	**0**	**SF**
			@	**$45.91**	**per SF**
			Sub Total $	**$0**	
			Uncertainty Factor (U_f)	**1**	
			TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)	
Wetland Mitigation				
Stream Buffer		1	0	
Stream		7	0	
		Sub Total	**0**	**SF**
		@	**$45.91**	**per SF**
		Sub Total $	**$0**	
		Uncertainty Factor (U_f)	**1**	
		TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -	
Hydraulic Permit Approval		WDFW		0	$ -	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	0		$ -	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**0**		$ -	
				Sub Total	**$ -**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 312,700	$ 18,762

Sub Total	**$**	**18,762**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**19,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	1,500	16	24000	0.55	$41,322

Sub Total	24000.00	**$41,322**
Uncertainty Factor (U_f)		**1**
TOTAL		**$42,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	750	1	750

Sub Total	**750**
Uncertainty Factor (U_f)	**1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	0	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,500	**0.28**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	0	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	0	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 312,700	$ 31,270

Sub Total	**$**	**31,270**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**31,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 344,000	$ 6,880

Sub Total	**$**	**6,880**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**6,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$0**
unsuitable foundation excavation	**$0**
Training	**$2,500**
Soil residual herbicide	**$0.00**
pavement marking	**$0**
traffic control labor and safety	71000
shoring and extra excavation	0
trim	7100

Sub Total	**$80,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$81,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 45.9 add wb left turn lane	Calculated By/Entered By:	
	Project 29	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.8	$4,800
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$30,300	1	$30,300
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,100	$42,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	1,500	$24,000
		EMBANKMENT COMPACTION	CY	$2	800	$1,600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	12,000	$72,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	800	$12,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	2,000	$130,000
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,100	$71,500
		CRUSHED SURFACING	TON	$25	1,000	$25,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.6	$1,200
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$27,000	-	$0
		LANDSCAPING	LS	$21,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	500	$10,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 45.9 add wb left turn lane	Calculated By/Entered By:	
	Project 29	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$43,500	1	$43,500
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$9,600	1	$9,600
		SPECIAL ITEMS	EST	$163,000	1	$163,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$195,200	1	$195,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$845,700**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$84,600	1	$84,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$930,300**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$86,600	1	$86,600
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,016,900**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$306,000	1	$306,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,322,900**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$396,900	1	$396,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$6,700	1	$6,700
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,730,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,950,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	AREA SF	(ACRE)
1,000	12	12000	0.3
	sub-total		**0.3**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	1500	12	0	6	1500	12	18,000	0.4

sub-total	**0.5**
Sub Total	**0.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$30,300**
Commercial Buildings	**$0**

Sub Total	**$30,300**
Uncertainty Factor (U_f)	**1**
TOTAL	**$30,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,500	16	2.0	48000	1778

Sub Total	**1,778**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2,100**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	12	1,000	3	3	18,000	667	1,240	667

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**1,240**	**667**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**1,500**	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
	1000	12	12,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	5,280	CF
Prorated Water Quality Volume Required	1032	CF
Detention Bottom Area (based on 3' depth)	1760	SF
WQ Surface Area (Based on 3' WQ depth)	344	SF
Greater of Detention and WQ areas	1760	SF
Pond Bottom Length (3:1 aspect ratio)	73	FT
Pond Bottom Width	24	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	97	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	118	FT
Pond Length at Outside to of Berm (4' @2:1)	**134**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	48	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	69	FT
Pond Width at Outside to of Berm (4' @2:1)	**85**	**FT**

Pond Footprint Dimensions	90 x140		FTxFT
Pond Footprint Area	**12,600**	**SF**	
	0.29	Ac.	

Sub Total	**12,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**12,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	1,000	6.0	3	18,000	667
	0	4.0	5	0	0

Sub Total	**667**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	1000	2 FT	2 FT	2000	1	2000

Sub Total	**2,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**2,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1,000	12	12000	1.0	12000	444	911

Sub Total	**911**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1100**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	12000	1.0	12000	444	822

Sub Total	**822**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1000**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	12,000	0.3
Landscape Area	12000	0.3

Sub Total	**0.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.6**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 434,400	$ 26,064

Sub Total	**$**	**26,064**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**27,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	1,000	12	12000	0.28	$20,661

Sub Total	12000.00	**$20,661**
Uncertainty Factor (U_f)		**1**
TOTAL		**$21,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	500	1	500

Sub Total	**500**
Uncertainty Factor (U_f)	**1**
TOTAL	**500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	1,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,000	**0.19**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	1,000	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,000	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 434,400	$ 43,440

Sub Total	**$**	**43,440**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**43,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 477,900	$ 9,558

Sub Total	**$**	**9,558**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**9,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$800**
unsuitable foundation excavation	**$5,500**
Training	**$2,500**
Soil residual herbicide	**$4,000.00**
pavement marking	**$20,000**
traffic control labor and safety	100000
shoring and extra excavation	20000
trim	10000
Sub Total	**$162,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**$163,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 48.7-49.5 pedestrian improvement	Calculated By/Entered By:	
	Project 30	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	1.3	$7,800
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$66,780	1	$66,780
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	3,000	$60,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	4,100	$65,600
		EMBANKMENT COMPACTION	CY	$2	2,200	$4,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	60,200	$361,200
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	3,200	$48,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	2,000	$130,000
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	2,900	$188,500
		CRUSHED SURFACING	TON	$25	2,800	$70,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	1.6	$3,200
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$66,000	-	$0
		LANDSCAPING	LS	$60,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	4,800	$72,000
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 48.7-49.5 pedestrian improvement	Calculated By/Entered By:	
	Project 30	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$108,800	1	$108,800
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$24,000	1	$24,000
		SPECIAL ITEMS	EST	$443,000	1	$443,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$499,000	1	$499,000
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$2,162,280**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$216,300	1	$216,300
9		**SUBTOTAL (ITEMS 7 & 8)**				**$2,378,580**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$221,300	1	$221,300
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$2,599,880**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$780,000	1	$780,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$3,379,880**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$1,014,000	1	$1,014,000
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$16,900	1	$16,900
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$4,420,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$4,980,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	AREA SF	(ACRE)
4,300	8	34400	0.8
	sub-total		**0.8**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	1500	12	0	6	1500	12	18,000	0.4

sub-total	**0.5**
Sub Total	**1.3**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.3**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$66,780**
Commercial Buildings	**$0**

Sub Total	**$66,780**
Uncertainty Factor (U_f)	**1**
TOTAL	**$66,780**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	4,300	8	2.0	68800	2548

Sub Total	**2,548**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3,000**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	8	4,300	3	3	51,600	1,911	3,540	1,911

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**3,540**	**1,911**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**4,100**	**2,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	4300	14	60,200

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	26,488	CF
Prorated Water Quality Volume Required	5177.2	CF
Detention Bottom Area (based on 3' depth)	8829.333333	SF
WQ Surface Area (Based on 3' WQ depth)	1725.733333	SF
Greater of Detention and WQ areas	8829.333333	SF
Pond Bottom Length (3:1 aspect ratio)	163	FT
Pond Bottom Width	54	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	187	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	208	FT
Pond Length at Outside to of Berm (4' @2:1)	**224**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	78	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	99	FT
Pond Width at Outside to of Berm (4' @2:1)	**115**	**FT**

Pond Footprint Dimensions	120 x230		FTxFT
Pond Footprint Area	**27,600**	**SF**	
	0.63	Ac.	

Sub Total	**60,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**60,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	4,300	6.0	3	77,400	2,867
	0	4.0	5	0	0

Sub Total	**2,867**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**3,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	1000	2 FT	2 FT	2000	1	2000

Sub Total	**2,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**2,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	4,300	8	34400	1.0	34400	1274	2612

Sub Total	**2612**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2900**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	34400	1.0	34400	1274	2357

Sub Total	**2357**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2800**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	34,400	0.8
Landscape Area	34400	0.8

Sub Total	**1.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.6**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 1,087,480	$ 65,249

Sub Total	**$**	**65,249**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**66,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	4,300	8	34400	0.79	$59,229

Sub Total	34400.00	**$59,229**
Uncertainty Factor (U_f)		**1**
TOTAL		**$60,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	4,300	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,000	**0.19**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	4,300	1	4,300

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**4,300**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**4800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	4,300	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 1,087,480	$ 108,748

Sub Total	**$**	**108,748**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**108,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 1,196,280	$ 23,926

Sub Total	**$**	**23,926**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**24,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$3,200**
unsuitable foundation excavation	**$47,000**
Training	**$2,500**
Soil residual herbicide	**$12,000.00**
pavement marking	**$43,000**
traffic control labor and safety	228000
shoring and extra excavation	84500
trim	22800

Sub Total	**$443,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$443,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	20%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 49.51 add wb left turn lane	Calculated By/Entered By:	
	Project 31	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.5	$3,000
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$19,730	1	$19,730
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,500	$30,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	500	$8,000
		EMBANKMENT COMPACTION	CY	$2	2,300	$4,600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	20,000	$120,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,200	$18,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,700	$110,500
		CRUSHED SURFACING	TON	$25	1,200	$30,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	2,000	$30,000
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	3.0	$6,000
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$24,000	1	$24,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$4,000	1	$4,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 49.51 add wb left turn lane	Calculated By/Entered By:	
	Project 31	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$2	5,000	$10,000
		TRAFFIC CONTROL (10%)	LS	$41,800	1	$41,800
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$9,200	1	$9,200
		SPECIAL ITEMS	EST	$35,000	1	$35,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$151,200	1	$151,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$655,030**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$65,600	1	$65,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$720,630**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$67,100	1	$67,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$787,730**
13		**CONSTRUCTION**				
		ENGINEERING (20% OF ITEM 12)	EST	$158,000	1	$158,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$945,730**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$283,800	1	$283,800
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$4,800	1	$4,800
		ENVIRONMENTAL PERMITS	EST	$0	-	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,240,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,400,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project	US 2 Corridor Plan		Client: WSDOT
Corridor	Segment 4		Date: 39098
Location	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	Length	Width	AREA SF	(ACRE)
	3,700	12	44400	0.5
		sub-total		**0.5**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
removal os structures and obstructions 1%	**$7,890**
removing misc (1.5%)	**$11,840**

Sub Total	**$19,730**
Uncertainty Factor (U_f)	**1**
TOTAL	**$19,730**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	3,700	12	2.0	1259	1259

Sub Total	**1,259**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,500**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	6	3,700	3	3	370	14	370	2,000

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**370**	**2,000**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**500**	**2,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	3700	6	20,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	8,800	CF
Prorated Water Quality Volume Required	1720	CF
Detention Bottom Area (based on 3' depth)	2933.333333	SF
WQ Surface Area (Based on 3' WQ depth)	573.3333333	SF
Greater of Detention and WQ areas	2933.333333	SF
Pond Bottom Length (3:1 aspect ratio)	94	FT
Pond Bottom Width	31	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	118	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	139	FT
Pond Length at Outside to of Berm (4' @2:1)	**155**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	55	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	76	FT
Pond Width at Outside to of Berm (4' @2:1)	**92**	**FT**

Pond Footprint Dimensions	100 x160		FTxFT
Pond Footprint Area	**16,000**	**SF**	
	0.37	Ac.	

Sub Total	**20,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**20,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	3,700	6.0	3	66,600	1,030
	0	4.0	5	0	0

Sub Total	**1,030**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	0	0	0.0	0	0	1520

Sub Total	**1520**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1700**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	0.0	0	0	960

Sub Total	**960**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1200**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	2,000

Sub Total	**2,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**2000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	44,400	
Landscape Area	0	3

Sub Total	**3**
Uncertainty Factor (U_f)	**1**
TOTAL	**3**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 393,830	$ 23,630

Sub Total	**$**	**23,630**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**24,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	0	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	0	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	3,700	**0.70**	$3,040
			$0
			$0
			$0

Sub Total	**$3,040**
Uncertainty Factor (U_f)	**1**
TOTAL	**$4,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	0	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	0	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	
PAINT LINE/RPM/PLASTIC LINE	**$2**
	$0
	$0

Sub Total	**$2**
Uncertainty Factor (U_f)	**1**
TOTAL	**$2**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 417,830	$ 41,783

Sub Total	**$**	**41,783**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**41,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 459,630	$ 9,193

Sub Total	**$**	**9,193**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**9,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble Strip	**$0**
unsuitable foundation excavation	**$0**
Training	**$2,500**
WATER	**$2,200.00**
pavement marking	**$0**
traffic control labor and safety	0
shoring and extra excavation	20000
trim	7890
SPCC PLAN	2000
Sub Total	**$34,590**
Uncertainty Factor (U_f)	**1**
TOTAL	**$35,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 4	Date:	1/16/2007
Location:	mp 49.98 Old Cascade Hwy	Date of Cost Index:	2006
	add wb left turn lane	Calculated By/Entered By:	GLW
	project 32	Checked By:	JAT

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	13,500	$270,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	1	$15,000
		RIGHT OF WAY TOTAL				**$285,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.5	$3,000
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	500	$10,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	1,100	$17,600
		EMBANKMENT COMPACTION	CY	$2	600	$1,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	16,900	$101,400
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	6	$7,200
		CATCH BASIN TYPE 2	EA	$2,200	3	$6,600
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	930	$32,550
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	930	$41,850
		STRUCTURE EXCAVATION CL. B	CY	$15	1,400	$21,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,300	$84,500
		CRUSHED SURFACING	TON	$25	1,000	$25,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.5	$1,000
		WETLAND MITIGATION	LS	$0	1	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$23,000	1	$23,000
		LANDSCAPING	LS	$0	1	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$14,000	1	$14,000
		SIGNING	LS	$3,000	1	$3,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$40,300	1	$40,300
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$8,900	1	$8,900
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$135,700	1	$135,700
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$587,800**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$58,800	1	$58,800
9		**SUBTOTAL (ITEMS 7 & 8)**				**$646,600**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$60,200	1	$60,200
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$706,800**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$107,000	1	$107,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$813,800**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$244,200	1	$244,200
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$4,100	1	$4,100
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,460,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$2,570,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

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Corridor Section:	Segment 4	Date:	39098
Location:	mp 49.98 Old Cascade Hwy	Date of Cost Index:	2006
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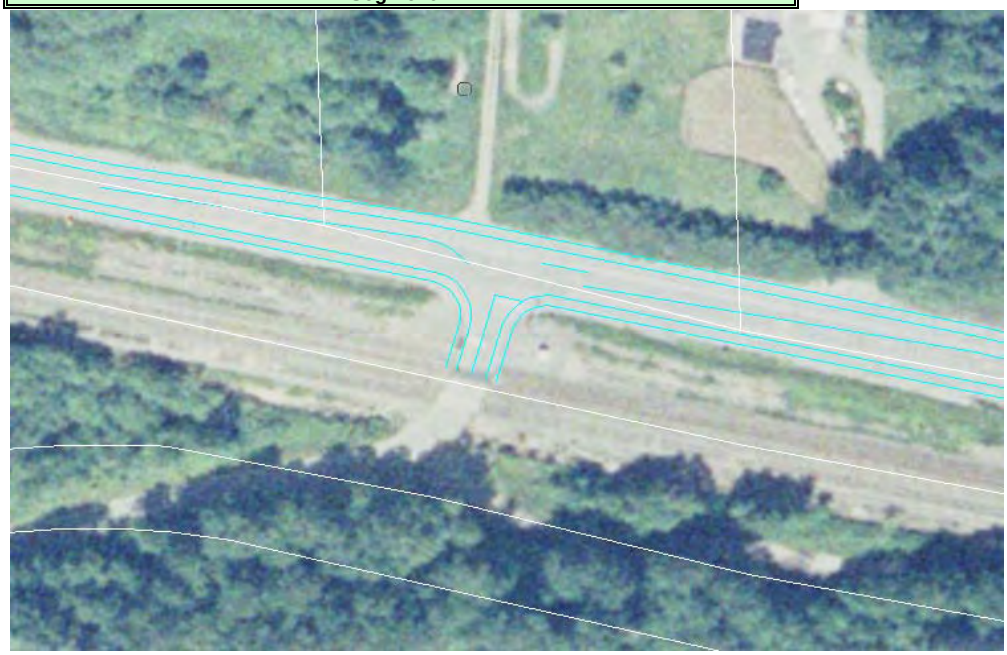
Segment 4



PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 4
Location mp 49.98 Old Cascade Hwy

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: GLW
Checked By: JAT

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Turn pocket: 12'
		Mainline Shoulders: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS

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Segment 4

		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	mp 49.98 Old Cascade Hwy

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Segment 4

RIGHT OF WAY

Assume widening will fit in Ex R/W

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		
Lot XYZ		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality	13,500	0.4
Wetland Mitigation	0	

Sub Total	**13,500**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**13,500**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations		
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration		
	1	All properties acquired will require administration (title search, etc.)

Sub Total	**1**	**EA**
	1.0	
TOTAL	**1**	

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Segment 4

ACRE **CLEARING AND GRUBBING**

Assumed average width from edge of asphalt to catchline

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	845	23	19435	0.5
		sub-total		**0.5**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

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Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
Section 1	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**
Commercial Buildings	**$0**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Segment 4

C.Y. ROADWAY EXCAVATION INCL. HAUL

12' of widening for LT lane

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	423	12	2.0	10140	376

Sub Total	**376**	**CY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**500**	**CY**

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Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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		Checked By:

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	12	423	5	5	12,675	469	870	469

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**870**	**469**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**1,100**	**600**

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Location:	mp 49.98 Old Cascade Hwy	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF DETENTION & TREATMENT

DESCRIPTION	Length FT	Width FT	AREA (SF)
Section 1	845	20	16,900

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	7,436	CF
Prorated Water Quality Volume Required	1453.4	CF
Detention Bottom Area (based on 3' depth)	2478.666667	SF
WQ Surface Area (Based on 3' WQ depth)	484.4666667	SF
Greater of Detention and WQ areas	2478.666667	SF
Pond Bottom Length (3:1 aspect ratio)	86	FT
Pond Bottom Width	29	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	110	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	131	FT
Pond Length at Outside to of Berm (4' @2:1)	**147**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	53	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	74	FT
Pond Width at Outside to of Berm (4' @2:1)	**90**	**FT**

Pond Footprint Dimensions	90 x150		FTxFT
Pond Footprint Area	**13,500**	**SF**	
	0.31	Ac.	

Sub Total	**16,900**
Uncertainty Factor (U_f)	**1**
TOTAL	**16,900**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	845	845	845	5	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**845**	**845**	**5**	**2**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**930**	**930**	**6**	**3**

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		Checked By:	JAT

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	845	4.0	5	16,900	626
	845	4.0	5	16,900	626

Sub Total	**1,252**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,400**

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Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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		Checked By:	JAT

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Checked By:	JAT

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Checked By:	JAT

Segment 4

TON **HOT MIX ASPHALT**

12' land + 8' shoulder

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	845	20	16900	0.9	15210	563	1155

Sub Total	**1155**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1300**	**TON**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	16900	0.7	11830	438	811

Sub Total	**811**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1000**	**TON**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0
	0	1	0
	0	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	19,435	0.5
Landscape Area	0	0

Sub Total	**0.5**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.5**

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Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Buffer	0	1	0
Wetland		7	0

Sub Total	**0**	**SF**
@	**$2.30**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$2.30**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 379,900	$ 22,794

Sub Total	**$**	**22,794**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**23,000**

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Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	423	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

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		Checked By:	JAT

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	845	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Checked By:	JAT

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	845	1	3

Sub Total	**3**	
@	**4,000**	**EA**
$ Sub Total	**$13,520**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$14,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$14,000**

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Segment 4

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
	845	0.16	$2,500
			$0
			$0
			$0

Sub Total	**$2,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$3,000**

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Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	845	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	845	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 4

LS SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 402,900	$ 40,290

Sub Total	**$**	**40,290**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**40,300**

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		Checked By:	JAT

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 443,200	$ 8,864

Sub Total	**$**	**8,864**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$**	**8,900**

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Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Segment 4

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	20%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 49.8-50.2 add 2 way left turn lane	Calculated By/Entered By:	
	Project 33	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.6	$3,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$33,602	1	$33,602
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,900	$38,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	600	$15,000
		BORROW INCL. HAUL	TON	$16	500	$8,000
		EMBANKMENT COMPACTION	CY	$2	3,000	$6,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	25,400	$152,400
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	1,200	$18,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	2,200	$143,000
		CRUSHED SURFACING	TON	$25	1,200	$30,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	4,300	$64,500
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	-	$0
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$34,000	1	$34,000
		LANDSCAPING	LS	$0	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$33,000	1	$33,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 49.8-50.2 add 2 way left turn lane	Calculated By/Entered By:	
	Project 33	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$2	5,000	$10,000
		TRAFFIC CONTROL (10%)	LS	$59,000	1	$59,000
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$13,000	1	$13,000
		SPECIAL ITEMS	EST	$36,000	1	$36,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$209,200	1	$209,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$906,302**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$90,700	1	$90,700
9		**SUBTOTAL (ITEMS 7 & 8)**				**$997,002**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$92,800	1	$92,800
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,089,802**
13		**CONSTRUCTION**				
		ENGINEERING (20% OF ITEM 12)	EST	$218,000	1	$218,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,307,802**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$392,400	1	$392,400
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$6,600	1	$6,600
		ENVIRONMENTAL PERMITS	EST	$0	-	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,710,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,930,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	3,700	12	44400	0.6
		sub-total		**0.6**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	LENGTH (FT)	TOP OF POND WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.6**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 4	Date:	39098
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		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
removal os structures and obstructions 1%	**$11,120**
removing misc (1.5%)	**$16,670**
sawcut existing pavement	4224
removing gardrail anchor	400
removing guardrail	1188

Sub Total	**$33,602**
Uncertainty Factor (U_f)	**1**
TOTAL	**$33,602**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	3,700	12	2.0	1259	1600

Sub Total	**1,600**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,900**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	500

Sub Total	**500**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**600**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	6	3,700	3	3	370	14	2,540	2,540

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**370**	**2,540**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**500**	**3,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	3700	6	25,344

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	11,151	CF
Prorated Water Quality Volume Required	2179.584	CF
Detention Bottom Area (based on 3' depth)	3717.12	SF
WQ Surface Area (Based on 3' WQ depth)	726.528	SF
Greater of Detention and WQ areas	3717.12	SF
Pond Bottom Length (3:1 aspect ratio)	106	FT
Pond Bottom Width	35	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	130	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	151	FT
Pond Length at Outside to of Berm (4' @2:1)	**167**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	59	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	80	FT
Pond Width at Outside to of Berm (4' @2:1)	**96**	**FT**

Pond Footprint Dimensions	100 x170		FTxFT
Pond Footprint Area	**17,000**	**SF**	
	0.39	Ac.	

Sub Total	**25,344**
Uncertainty Factor (U_f)	**1**
TOTAL	**25,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	3,700	6.0	3	66,600	1,030
	0	4.0	5	0	0

Sub Total	**1,030**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	0	0	0.0	0	0	1930

Sub Total	**1930**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2200**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	0.0	0	0	960

Sub Total	**960**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1200**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	4,224

Sub Total	**4,224**
Uncertainty Factor (U_f)	**1**
TOTAL	**4300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	44,400	
Landscape Area	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 555,102	$ 33,306

Sub Total	**$**	**33,306**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**34,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	0	0	0	0.00	$0

Sub Total	0.00	**$0**
Uncertainty Factor (U_f)		**1**
TOTAL		**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	0	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	3,700	**0.70**	$32,244
			$0
			$0
			$0

Sub Total	**$32,244**
Uncertainty Factor (U_f)	**1**
TOTAL	**$33,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	0	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	0	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	
PAINT LINE/RPM/PLASTIC LINE	**$2**
	$0
	$0

Sub Total	**$2**
Uncertainty Factor (U_f)	**1**
TOTAL	**$2**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 589,102	$ 58,910

Sub Total	**$**	**58,910**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**59,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 648,102	$ 12,962

Sub Total	**$**	**12,962**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**13,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
soil residual herbicide	**$870**
unsuitable foundation excavation	**$0**
Training	**$2,500**
WATER	**$2,200.00**
pavement marking	**$0**
traffic control labor and safety	0
shoring and extra excavation	20000
trim	7890
SPCC PLAN	2000
Sub Total	**$35,460**
Uncertainty Factor (U_f)	**1**
TOTAL	**$36,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	$350
		CONCRETE BRIDGES WIDENING	LS	$400
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 1
Location: mp 3.85 add wb pvercrosing and modify eb on ramp project 34

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: JLMR
Checked By: JAT

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	56,000	$1,120,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	1	$15,000
		RIGHT OF WAY TOTAL				**$1,135,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	2.6	$15,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	21,200	$424,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	1,000	$25,000
		BORROW INCL. HAUL	TON	$16	40,800	$652,800
		EMBANKMENT COMPACTION	CY	$2	22,100	$44,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	242,800	$1,456,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	22	$26,400
		CATCH BASIN TYPE 2	EA	$2,200	6	$13,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	4,230	$190,350
		STRUCTURE EXCAVATION CL. B	CY	$15	3,200	$48,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	SF	$350	6,200	$2,170,000
		CONCRETE BRIDGES WIDENING	SF	$400	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	34,000	$2,210,000
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	14,300	$3,003,000
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	13,500	$877,500
		CRUSHED SURFACING	TON	$25	9,900	$247,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	4,500	$67,500
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.9	$1,800
		WETLAND MITIGATION	LS	$345,000	1	$345,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$729,000	1	$729,000
		LANDSCAPING	LS	$110,000	1	$110,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	800	$16,000
		CONCRETE BARRIER	LF	$65	1,700	$110,500
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$62,000	1	$62,000
		SIGNING	LS	$15,000	1	$15,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 3.85 add wb pvercrosing and modify eb on ramp project 34	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
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Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$1,287,200	1	$1,287,200
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$283,200	1	$283,200
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$4,332,500	1	$4,332,500
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$18,774,050**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$1,877,500	1	$1,877,500
9		**SUBTOTAL (ITEMS 7 & 8)**				**$20,651,550**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$1,920,600	1	$1,920,600
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$22,572,150**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$3,386,000	1	$3,386,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$25,958,150**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$7,787,500	1	$7,787,500
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$129,800	1	$129,800
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$35,020,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$61,410,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 3.85 add wb pvercrosing and modify eb on	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
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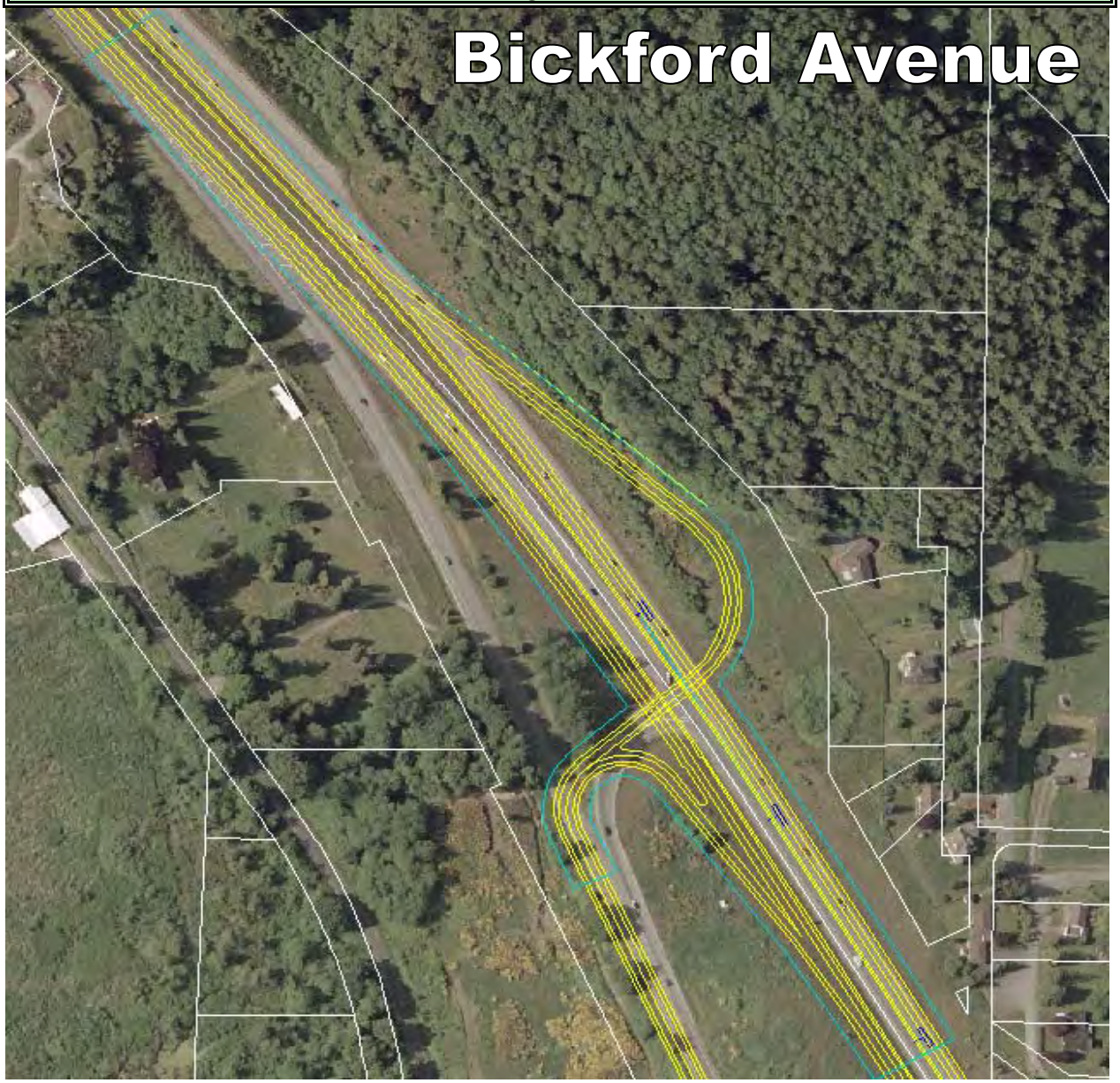
Segment 1



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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 1
Location mp 3.85 add wb pvercrosing and modify eb on ramp

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: JLMR
Checked By: JAT

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	Design
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Mainline shoulders: 8'
		Mainline median 10'
		Ramp lanes: 12'
		Ramp shoulder: 8'
7	Assumption for:	Walls
		Walls shall be placed to minimize right of way take
		Confined area so use MSE wall with precast panels. Use $65 (WSDOT Bridge Design Manual Section 12 - Conservatively)
		Approach on fill requires conc. barrier on top of wall. Use $210/lf (WSDOT Bridge Design Manual Section 12 - Mid Range)
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required because ramps are on fill with good grade.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actua stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING

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Corridor Segment 1
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Segment 1

		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

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Corridor Section:	Segment 1
Location:	mp 3.85 add wb pvercrosing and modify eb on ramp

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Segment 1

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		0.0
Treatment and Detention	56,000	

Sub Total	**56,000**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**56,000**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration	1	All properties acquired will require administration (title search, etc.)

Sub Total	**1**	**EA**
	1.0	
TOTAL	**1**	

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Segment 1

ACRE

***assume clearing from existing edge of pavement to R/W**

*clearing on NE side only, where new ramp is proposed

DESCRIPTION	**AREA**		
Area Measured in Microstation	**(SF)**	**by2**	**(ACRE)**
East of US - 2	48,363	1	1.2
West of US - 2	38,065	1	0.9
West of US - 2 and East of Bickford Ave	19,262	1	0.5
		sub-total	**2.6**

Sub Total	**2.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**2.6**

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Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION		**AREA (SF)**	**(SY)**
	US - 2 Existing Roadway		0
Bickford Avenue	Existing Roadway + Ramps		0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Segment 1

C.Y. ROADWAY EXCAVATION INCL. HAUL

ROADWAY	AREA (SF)	Ave DEPTH (FT)	VOLUME (CF)	(CY)
US - 2 Existing Roadway Shoulders	58,000	2.0	116000	4296
Bickford Avenue Existing Roadway + Ramps	30,000	2.0	60000	2222
Cut into hillside East of US 2	40000	8.0	320000	11852

Sub Total	**18,370**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**21,200**	**CY**

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Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
East Wall on NB Ramp	1033	3.0	2	6,198	230
West Wall on NB Ramp	768	3.0	2	4,608	171
Northern Wall on SB Ramp	387	3.0	2	2,322	86
Southern Wall on SB Ramp	994	3.0	2	5,964	221
Walls in Southern Median	241	3.0	2	1,446	54
				Sub Total	**761** **CY**
				Uncertainty Factor (U_f)	**1.2**
				TOTAL	**1,000**

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Segment 1

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

****ASSUMED BRIDGE IS 25' HIGH**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
WB Ramp	30	1033	25	0	193,688	7,174	13,280	7,174
EB Ramp	30	661	25	0	123,938	4,590	8,500	4,590
Bickford Avenue	40	387	25	0	96,750	3,583	6,630	3,583
4:1 Fill WB Ramp	25	1033	12.5	0	80,703	2,989	5,530	2,989

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**33,940**	**18,336**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**40,800**	**22,100**

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Segment 1

SF DETENTION & TREATMENT

DESCRIPTION	**AREA (SF)**
Area of New Road	242745
Less Areas of Medians	63,652
Area of New Impervious Area	**179,093**

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	78,801	CF
Prorated Water Quality Volume Required	15401.998	CF
Detention Bottom Area (based on 3' depth)	26266.97333	SF
WQ Surface Area (Based on 3' WQ depth)	5133.999333	SF
Greater of Detention and WQ areas	26266.97333	SF
Pond Bottom Length (3:1 aspect ratio)	281	FT
Pond Bottom Width	94	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	305	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	326	FT
Pond Length at Outside to of Berm (4' @2:1)	**342**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	118	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	139	FT
Pond Width at Outside to of Berm (4' @2:1)	**155**	**FT**

Pond Footprint Dimensions	160 x350		FTxFT
Pond Footprint Area	**56,000**	**SF**	
	1.29	Ac.	

Sub Total	**242,745**
Uncertainty Factor (U_f)	**1**
TOTAL	**242,800**

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Segment 1

DRAINAGE

Drainage estimate is based on the length of ramp/road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

Assume ramps are super elevated and/or built with no crown so conveyance on one side only.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
US - 2	2335		2,335	12	3
Bickford Avenue	1503		1,503	8	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**3,838**	**20**	**5**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**4,230**	**22**	**6**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	01/16/07
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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
US - 2	2335	4.0	5	46,703	1,730
Bickford Avenue	1503	4.0	5	30,051	1,113

Sub Total	**2,843**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**3,200**

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Segment 1

SF BRIDGE STRUCTURE

***measurements are best guess based on Microstation measurements**

DESCRIPTION CONCRETE BRIDGE	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bickford Avenue Over US - 2	140	40	5,600

Sub Total	**5,600**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**6,200**	**SF**

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		Checked By:	JAT

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre
****ASSUMED BRIDGE IS 25' HIGH**

Fill Walls DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
West Wall on WB Ramp	768	0 FT	25 FT	9600	1	9600
Northern Wall on EB Ramp	387	5 FT	25 FT	5810	1	5810
Southern Wall on EB Ramp	994	0 FT	25 FT	12430	1	12430
Walls in Southern Median	241	0 FT	25 FT	3020	1	3020

Sub Total	**30,860**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**34,000**

Cut Walls DESCRIPTION	LENGTH (FT)	DEPTH (FT)	DEPTH (FT)	(AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
East Wall on WB Ramp	1033	0 FT	25 FT	12920	1	12920

Sub Total	**12,920**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**14,300**

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		Checked By:	JAT

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Checked By:	JAT

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Checked By:	JAT

Segment 1

TON HOT MIX ASPHALT

***assume bridge ramp will be back at ground level 465' from merge**

DESCRIPTION	AREA (SF)	DEPTH (FT)	VOLUME (CF)	(CY)	(TON)
US - 2	180949	0.9	162854	6032	12365
Bickford Avenue and Ramp	61796	0.9	55616	2060	4223
Less Median East of US - 2	58552	0.9	52697	1952	4001
Less Median West of US - 2	5100	0.9	4590	170	348

Sub Total	**12238**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**13500**	**TON**

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Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 3.85 add wb pvercrosing and modify eb on ramp	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	VOLUME (CF)	(CY)	(TON)
US - 2	180949	0.7	126664	4691	8679
Bickford Avenue and Ramp	61796	0.7	43257	1602	2964
Less Median East of US - 2	58552	0.7	40987	1518	2808
Less Median West of US - 2	5100	0.7	3570	132	245

Sub Total	**8590**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**9900**	**TON**

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Location:	mp 3.85 add wb pvercrosing and modify eb on ramp	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
West of US - 2	2452	1	2,452
East of US - 2	1949	1	1,949

Sub Total	**4,401**
Uncertainty Factor (U_f)	**1**
TOTAL	**4500**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Assume 20' strip for length of project for Clear and Grub	38,065	0.9

Sub Total	**0.9**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.9**

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		Checked By:	JAT

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

Assume 5 ft width for ditches as wetlands

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland	ditch NW	1000	1	1000
	ditch NE	0	1	0
	ditch SW	1750	1	1750
	ditch SE	4750	1	4750
Wetland buffer			1	0

Sub Total	**7500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$344,353**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$345,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream		7	0
Stream buffer		1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$345,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency			$ -
Hydraulic Permit Approval		WDFW			$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT			$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE			$ -

Sub Total	**$ -**	**LS $**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	**LS $**

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Location:	mp 3.85 add wb pvercrosing and modify eb ordrate	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 12,142,150	$	728,529

Sub Total	**$**	**728,529**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**729,000**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	AREA (SF)	LS PRICE
Northern Median	58552	$100,813
Southern Median	5100	$8,780

Sub Total	**$109,593**
Uncertainty Factor (U_f)	**1**
TOTAL	**$110,000**

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Location:	mp 3.85 add wb pvercrosing and modify eb on ra	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
West Wall on WB Ramp	768	1	768

Sub Total	**768**
Uncertainty Factor (U_f)	**1**
TOTAL	**800**

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		Checked By:	JAT

Segment 1

Barrier Required on fill structure/MSE wall
*based on ramp length assumptions

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0
			0
Northern Wall on EB Ramp	387	1	387
Southern Wall on EB Ramp	994	1	994
Walls in Southern Median	241	1	241

Sub Total	**1,622**
Uncertainty Factor (U_f)	**1**
TOTAL	**1700**

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Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 3.85 add wb pvercrosing and modify eb on-ramp	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS **ILLUMINATION SYSTEM**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Along US - 2	2,335	1	9
Bickford Avenue	1,503	1	6

Sub Total	**15**	
@	**4,000**	**EA**
$ Sub Total	**$61,408**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$62,000**	

TOTAL LUMP SUM	**$62,000**

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Segment 1

LS **SIGNING**

DESCRIPTION	LS PRICE
Lump Sum for Intersection	$15,000

Sub Total	**$15,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$15,000**

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Segment 1

	LF	CURBS	
			2.3
Includes all types of curb used in project			12144

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		2	0
	0	1	0
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
			0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 1

	LS	SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 12,871,150	$ 1,287,115

Sub Total	**$ 1,287,115**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 1,287,200**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 14,158,350	$ 283,167

Sub Total	**$**	**283,167**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**283,200**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Segment 1

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 5.04 SR 9 Interchange	Date of Cost Index:	2006
	add eb lane, new ramp connectors, traffic signals and illumination	Calculated By/Entered By:	JLMR
	project 35	Checked By:	JAT

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	5.7	$34,200
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	33,800	$676,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	700	$17,500
		BORROW INCL. HAUL	TON	$16	35,700	$571,200
		EMBANKMENT COMPACTION	CY	$2	19,300	$38,600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	451,300	$2,707,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	52	$62,400
		CATCH BASIN TYPE 2	EA	$2,200	15	$33,000
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	9,620	$432,900
		STRUCTURE EXCAVATION CL. B	CY	$15	7,200	$108,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$610,000	1	$610,000
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	30,000	$1,950,000
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	34,000	$2,210,000
		CRUSHED SURFACING	TON	$25	60,500	$1,512,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	5,100	$76,500
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	6.8	$13,600
		WETLAND MITIGATION	LS	$1,696,000	1	$1,696,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$878,000	1	$878,000
		LANDSCAPING	LS	$1,106,000	1	$1,106,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	2,400	$48,000
		CONCRETE BARRIER	LF	$65	2,400	$156,000
		SIGNAL SYSTEMS	LS	$500,000	1	$500,000
		ILLUMINATION	LS	$34,000	1	$34,000
		SIGNING	LS	$15,000	1	$15,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 5.04 SR 9 Interchange	Date of Cost Index:	2006
	add eb lane, new ramp connectors, traffic signals and illumination	Calculated By/Entered By:	JLMR
	project 35	Checked By:	JAT

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$1,549,800	1	$1,549,800
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$341,000	1	$341,000
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$5,216,400	1	$5,216,400
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$22,604,400**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$2,260,500	1	$2,260,500
9		**SUBTOTAL (ITEMS 7 & 8)**				**$24,864,900**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$2,312,500	1	$2,312,500
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$27,177,400**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$4,077,000	1	$4,077,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$31,254,400**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$9,376,400	1	$9,376,400
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$156,300	1	$156,300
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$40,900,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$71,720,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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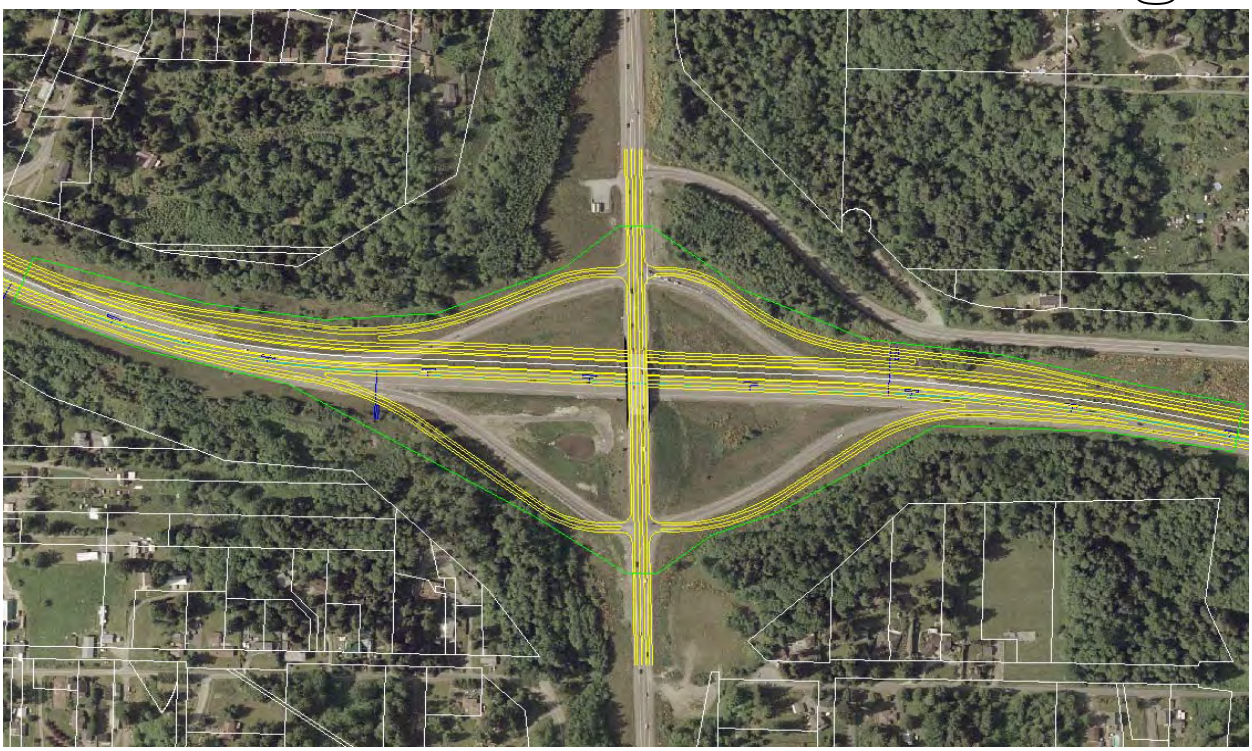
PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 5.04 SR 9 Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

SR 9 Interchange



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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location mp 5.04 SR 9 Interchange	Date of Cost Index: 2006
	Calculated By/Entered By: JLMR
	Checked By: JAT

Segment 1

DESIGN ASSUMPTIONS

1	**Assumption for:**	**Design**
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	**Assumption for:**	**ROAD DESIGN SPEED**
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	**Assumption for:**	**Roadway Horizontal Alignment**
4	**Assumption for:**	**Roadway Vertical Alignment**
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	**Assumption for:**	**Existing cross section**
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	**Assumption for:**	**Proposed cross section**
		Mainline travel lanes: 12'
		Mainline shoulders: 8'
		Mainline median 10'
		Ramp lanes: 12'
		Ramp shoulder: 8'
7	**Assumption for:**	**Walls**
		Walls shall be placed to minimize right of way take
		Confined area so use MSE wall with precast panels. Use $65 (WSDOT Bridge Design Manual Section 12 - Conservatively)
		Approach on fill requires conc. barrier on top of wall. Use $210/lf (WSDOT Bridge Design Manual Section 12 - Mid Range)
8	**Assumption for:**	**Signal/Illumination**
9	**Assumption for:**	**Pavement**
		0.9' HMA
		0.7' CSBC
10	**Assumption for:**	**Storm Drainage**
		Assume 1 CB every 200'
		Assume minimum cover is required because ramps are on fill with good grade.

ESTIMATING ASSUMPTIONS

I.		**RIGHT OF WAY**
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos
II.		**CONSTRUCTION**
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
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Segment 1

		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	mp 5.04 SR 9 Interchange

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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		Checked By:	JAT

Segment 1

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		
Lot XYZ		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality		0.0
Wetland Mitigation		

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations		
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration		
	0	All properties acquired will require administration (title search, etc.)

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	JAT

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION Area Measured in AutoCAD	**(SF)**	**AREA by2**	**(ACRE)**
Southwest of US - 2	39,419	1	1.0
Southeast of US - 2	63,273	1	1.5
Northwest of US - 2	37,773	1	0.9
Northeast of US - 2	39,293	1	1.0
North Median	55,365	1	1.3
South Median	58,626	1	1.4

Sub Total	**5.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**5.7**

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Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION

	AREA	
Remove All Existing Pavement	**(SF)**	**(SY)**
US - 2	0	0
NW Ramp	0	0
NE Ramp	0	0
SW Ramp	0	0
SE Ramp	0	0
Sub Total		**0**
Uncertainty Factor (U_f)		**1**
TOTAL		**0**

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Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Corridor Section:	Segment 1	Date: 01/16/07
Location:	mp 5.04 SR 9 Interchange	Date of Cost Index: 2006
		Calculated By/Entered By: JLMR
		Checked By: JAT

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	**AREA (SF)**	**DEPTH (FT)**	**VOLUME (CF)**	**VOLUME (CY)**
US - 2	232,914	2.0	465827	17253
NW Ramp	36,670	2.0	73340	2716
NE Ramp	33,662	2.0	67324	2493
SW Ramp	52,065	2.0	104130	3857
SE Ramp	41,205	2.0	82409	3052

Sub Total	**29,372**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**33,800**	**CY**

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		Calculated By/Entered By:
		Checked By: JAT

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
NW Ramp Outside	916	3.0	2	5,495	204
NE Ramp Outside	1497	3.0	2	8,982	333
SW Ramp Outside	1259	3.0	2	7,553	280
SE Ramp Outside	1406	3.0	2	8,439	313
				Sub Total	**536** **CY**
				Uncertainty Factor (U_f)	**1.2**
				TOTAL	**700**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 5.04 SR 9 Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
NW Ramp	30	200	13	0	18,750	694	1,290	694
Fill slopes	26	458	13	0	38,701	1,433	2,660	1,433
NE Ramp	30	350	13	0	32,813	1,215	2,250	1,215
Fill slopes	26	749	13	0	60,856	2,254	4,170	2,254
SW Ramp	30	300	13	0	28,125	1,042	1,930	1,042
Fill slopes	26	629	13	0	51,106	1,893	3,510	1,893
SE Ramp	30	350	13	0	32,813	1,215	2,250	1,215
Fill slopes	26	703	13	0	57,119	2,116	3,920	2,116
Approaching SR - 9								
NW Ramp	15	200	25	0	18,750	694	1,290	694
NE Ramp	15	350	25	0	32,813	1,215	2,250	1,215
SW Ramp	15	300	25	0	28,125	1,042	1,930	1,042
SE Ramp	15	350	25	0	32,813	1,215	2,250	1,215

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**29,700**	**16,029**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**35,700**	**19,300**

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		Checked By:	JAT

Segment 1

SF DETENTION & TREATMENT

DESCRIPTION	**AREA (SF)**
Area of New Impervious Area	451,224

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	198,539	CF
Prorated Water Quality Volume Required	38805.29582	CF
Detention Bottom Area (based on 3' depth)	66179.57427	SF
WQ Surface Area (Based on 3' WQ depth)	12935.09861	SF
Greater of Detention and WQ areas	66179.57427	SF
Pond Bottom Length (3:1 aspect ratio)	446	FT
Pond Bottom Width	149	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	470	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	491	FT
Pond Length at Outside to of Berm (4' @2:1)	**507**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	173	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	194	FT
Pond Width at Outside to of Berm (4' @2:1)	**210**	**FT**

Pond Footprint Dimensions	210 x510		FTxFT
Pond Footprint Area	**107,100**	**SF**	
	2.46	Ac.	

Sub Total	**451,224**
Uncertainty Factor (U_f)	**1**
TOTAL	**451,300**

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Segment 1

DRAINAGE

Drainage estimate is based on the length of ramp/road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

Assume ramps are super elevated and/or built with no crown so conveyance on one side only.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Along US-2	3666		3,666	19	5
Along NW Ramp	916		916	5	2
Along NE Ramp	1497		1,497	8	2
Along SW Ramp	1259		1,259	7	2
Along SE Ramp	1406		1,406	8	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**8,744**	**47**	**13**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**9,620**	**52**	**15**

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PLANNING LEVEL OPINION OF COST SUMMARY

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
Along US-2	3666	4.0	5	73,320	2,716
Along NW Ramp	916	4.0	5	18,320	679
Along NE Ramp	1497	4.0	5	29,940	1,109
Along SW Ramp	1259	4.0	5	25,180	933
Along SE Ramp	1406	4.0	5	28,120	1,041

Sub Total	**6,477**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**7,200**

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		Checked By:	JAT

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(LS)	
BRIDGE NO. 9/124.7 - PTBX			0	610000	Extension

Sub Total	**0**	**SF**	**610,000**
Uncertainty Factor (U_f)	**1.1**		**1**
TOTAL	**0**	**SF**	**610,000**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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		Checked By:	JAT

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
NW Ramp	400	0 FT	25 FT	5000	1	5000
NE Ramp	700	0 FT	25 FT	8750	1	8750
SW Ramp	600	0 FT	25 FT	7500	1	7500
SE Ramp	700	0 FT	25 FT	8750	1	8750

Sub Total	**30,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**30,000**

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		Checked By:	JAT

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Checked By:	JAT

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Checked By:	JAT

Segment 1

TON **HOT MIX ASPHALT**

DESCRIPTION	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
US - 2 Westbound	152937	0.9	137643	5098	10451
US - 2 Eastbound	126627	0.9	113965	4221	8653
NW Ramp	28725	0.9	25853	958	1963
NE Ramp	46020	0.9	41418	1534	3145
SW Ramp	51106	0.9	45996	1704	3492
SE Ramp	45809	0.9	41228	1527	3130

Sub Total	**30834**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**34000**	**TON**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	VOLUME (CF)	(CY)	(TON)
US - 2 Westbound	152937	1.7	259992	9629	17814
US - 2 Eastbound	126627	1.7	215266	7973	14750
NW Ramp	28725	1.7	48833	1809	3346
NE Ramp	46020	1.7	78233	2898	5360
SW Ramp	51106	1.7	86881	3218	5953
SE Ramp	45809	1.7	77876	2884	5336

Sub Total	**52559**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**60500**	**TON**

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		Checked By:	JAT

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Ramp Outside	916	1	916
NE Ramp Outside	1497	1	1,497
SW Ramp Outside	1259	1	1,259
SE Ramp Outside	1406	1	1,406

Sub Total	**5,078**
Uncertainty Factor (U_f)	**1**
TOTAL	**5100**

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		Checked By:	JAT

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Assume 20' strip for length of project for Clear and Grub	293,749	6.8

Sub Total	**6.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**6.8**

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		Checked By:	JAT

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Buffer		1	0
Wetland	18040	1	18040

Sub Total	**18040**	**SF**
@	**$94.00**	**per SF**
Sub Total $	**$1,695,760**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$1,696,000**	**LS $**

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$94.00**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$1,696,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 14,619,200	$ 877,152

Sub Total	**$**	**877,152**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**878,000**

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Segment 1

LS **LANDSCAPING**

$75,000 per Acre per acre

DESCRIPTION		**AREA (SF)**	**LS PRICE**
	NW Median	92496	$159,256
	NE Median	88344	$152,108
	SW Median	226467	$389,923
	SE Median	234495	$403,744

Sub Total	**$1,105,032**
Uncertainty Factor (U_f)	**1**
TOTAL	**$1,106,000**

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		Checked By:	JAT

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
NW Ramp	400	1	400
NE Ramp	700	1	700
SW Ramp	600	1	600
SE Ramp	700	1	700

Sub Total	**2,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**2400**

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		Checked By:	JAT

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Ramp	400	1	400
NE Ramp	700	1	700
SW Ramp	600	1	600
SE Ramp	700	1	700

Sub Total	**2,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**2400**

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Segment 1

LS **SIGNAL SYSTEM**

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

SIGNAL SYSTEMS

	No. Revised	No. New	LS PRICE
Northern Intersection		1	$250,000
Southern Intersection		1	$250,000

Sub Total	**$500,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$500,000**

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		Calculated By/Entered By:	JLMR
		Checked By:	

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
US - 2	373	1	1
NW Ramp	400	1	2
NE Ramp	700	1	3
SW Ramp	600	1	2
SE Ramp	700	1	3

Sub Total	**8**	**EA**
@	**4,000**	
$ Sub Total	**$33,168**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$34,000**	

TOTAL LUMP SUM	**$34,000**

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		Checked By:	JAT

Segment 1

LS SIGNING

DESCRIPTION	LS PRICE
Lump Sum for Intersection	$15,000
	$0

Sub Total	**$15,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$15,000**

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		Checked By:	JAT

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Cement Conc Curb & Gutter	0	2	0
Extruded Curb	0	1	0
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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		Checked By:	JAT

Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
	0		0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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		Checked By:	JAT

Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 1

	LS	SC&DI (ITS)
DESCRIPTION		**LS PRICE**
		$0
		$0
		$0
		$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 15,497,200	$ 1,549,720

Sub Total	**$ 1,549,720**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 1,549,800**

Perteet Inc.
425-252-7700 I 1-800-615-9900
2707 Colby Avenue, Suite 900
Everett, Washington 98201

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 5.04 SR 9 Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 17,047,000	$ 340,940

Sub Total	**$**	**340,940**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**341,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 5.04 SR 9 Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Everett, Washington 98201

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 5.04 SR 9 Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 1

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 12.7-15.6 sidewalk improvement	Calculated By/Entered By:	
	Project 36	Checked By:	

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	9.7	$58,200
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$96,000	1	$96,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	17,000	$340,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	-	$0
		EMBANKMENT COMPACTION	CY	$2	-	$0
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	-	$0
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	-	$0
		CRUSHED SURFACING	TON	$25	-	$0
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	12.8	$25,600
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$77,000	-	$0
		LANDSCAPING	LS	$264,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	30,000	$750,000

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 12.7-15.6 sidewalk improvement	Calculated By/Entered By:	
	Project 36	Checked By:	

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$128,000	1	$128,000
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$28,200	1	$28,200
		SPECIAL ITEMS	EST	$51,000	1	$51,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$446,100	1	$446,100
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,933,100**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$193,400	1	$193,400
9		**SUBTOTAL (ITEMS 7 & 8)**				**$2,126,500**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$197,800	1	$197,800
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$2,324,300**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$698,000	1	$698,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$3,022,300**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$906,700	1	$906,700
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$15,200	1	$15,200
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$3,950,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$4,450,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 2	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 2

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 2	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 2

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 2
Location:	snohomish to skykomish

Segment 2

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	15,300	26	397800	9.2
		sub-total		**9.2**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	1500	12	0	6	1500	12	18,000	0.4
							sub-total	**0.5**
							Sub Total	**9.7**
							Uncertainty Factor (U_f)	**1**
							TOTAL	**9.7**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$96,000**
Commercial Buildings	**$0**

Sub Total	**$96,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$96,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 2	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 2

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	15,300	26	1.0	397800	14733

Sub Total	**14,733**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**17,000**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 2	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 2

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	0	4,300	3	3	0	0	0	0

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**0**	**0**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
	0	14	0

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	0	CF
Prorated Water Quality Volume Required	0	CF
Detention Bottom Area (based on 3' depth)	0	SF
WQ Surface Area (Based on 3' WQ depth)	0	SF
Greater of Detention and WQ areas	0	SF
Pond Bottom Length (3:1 aspect ratio)	0	FT
Pond Bottom Width	0	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	24	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Length at Outside to of Berm (4' @2:1)	**61**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	24	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	45	FT
Pond Width at Outside to of Berm (4' @2:1)	**61**	**FT**

Pond Footprint Dimensions	70 x70		FTxFT
Pond Footprint Area	**4,900**	**SF**	
	0.11	Ac.	

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	6.0	3	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	2 FT	2 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	8	0	1.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	0	1.0	0	0	0

Sub Total	**0**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**0**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	397,800	9.2
Landscape Area	153000	3.6

Sub Total	**12.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**12.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 1,279,800	$ 76,788

Sub Total	**$**	**76,788**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**77,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	15,300	10	153000	3.51	$263,430

Sub Total	153000.00	**$263,430**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$264,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	0	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	15,300	**2.90**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	0	1	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	15,300	16	1	27,200

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**27,200**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**30,000**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 1,279,800	$ 127,980

Sub Total	**$**	**127,980**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**128,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 1,407,800	$ 28,156

Sub Total	**$**	**28,156**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**28,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble Strip	**$0**
unsuitable foundation excavation	**$0**
Training	**$2,500**
Soil residual herbicide	**$0.00**
pavement marking	**$0**
traffic control labor and safety	0
shoring and extra excavation	0
trim	48000
Sub Total	**$50,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$51,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 3
Location: snohomish to skykomish
mp 15.6 to 30.28 rural area only widen shoulders, rumble strip, misce.
Project 37

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By:
Checked By:

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	5.1	$30,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$458,500	1	$458,500
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	17,200	$344,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	8,000	$128,000
		EMBANKMENT COMPACTION	CY	$2	4,300	$8,600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	200,800	$1,204,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	9	$10,800
		CATCH BASIN TYPE 2	EA	$2,200	3	$6,600
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	1,760	$61,600
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	1,760	$79,200
		STRUCTURE EXCAVATION CL. B	CY	$15	18,400	$276,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	16,800	$1,092,000
		CRUSHED SURFACING	TON	$25	15,900	$397,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	5.4	$10,800
		WETLAND MITIGATION	LS	$0	1	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$283,000	1	$283,000
		LANDSCAPING	LS	$346,000	1	$346,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	10,700	$214,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$0	1	$0
		SIGNING	LS	$41,000	1	$41,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 15.6 to 30.28 rural area only widen shoulders, rumble strip, misce.	Calculated By/Entered By:	
	Project 37	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$499,300	1	$499,300
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$109,900	1	$109,900
		SPECIAL ITEMS	EST	$1,537,000	1	$1,537,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$2,141,800	1	$2,141,800
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$9,281,000**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$928,100	1	$928,100
9		**SUBTOTAL (ITEMS 7 & 8)**				**$10,209,100**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$949,500	1	$949,500
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$11,158,600**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$3,348,000	1	$3,348,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$14,506,600**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$4,352,000	1	$4,352,000
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$72,600	1	$72,600
		ENVIRONMENTAL PERMITS	EST	$1,600,000	1	$1,600,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$20,540,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$23,120,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

AREA			
Length	**Width**	**SF**	**(ACRE)**
4,400	6	26400	0.7
20,700	8	165600	3.9
	sub-total		**4.6**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	1500	12	0	6	1500	12	18,000	0.4

sub-total	**0.5**
Sub Total	**5.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**5.1**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$458,500**
Commercial Buildings	**$0**

Sub Total	**$458,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$458,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	25,100	8	2.0	401600	14874

Sub Total	**14,874**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**17,200**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	25100	8	1	1	100,400	3,719	6,880	3,719

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**6,880**	**3,719**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**8,000**	**4,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	25100	8	200,800

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	88,352	CF
Prorated Water Quality Volume Required	17268.8	CF
Detention Bottom Area (based on 3' depth)	29450.66667	SF
WQ Surface Area (Based on 3' WQ depth)	5756.266667	SF
Greater of Detention and WQ areas	29450.66667	SF
Pond Bottom Length (3:1 aspect ratio)	297	FT
Pond Bottom Width	99	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	321	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	342	FT
Pond Length at Outside to of Berm (4' @2:1)	**358**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	123	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	144	FT
Pond Width at Outside to of Berm (4' @2:1)	**160**	**FT**

Pond Footprint Dimensions	170 x360		FTxFT
Pond Footprint Area	**61,200**	**SF**	
	1.40	Ac.	

Sub Total	**200,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**200,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	1,600	1,600	1,600	8	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**1,600**	**1,600**	**8**	**2**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**1,760**	**1,760**	**9**	**3**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	6.0	3	0	0
	15,000	6.0	5	450,000	16,667

Sub Total	**16,667**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**18,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	2 FT	2 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	25,100	8	200800	1.0	200800	7437	15246

Sub Total	**15246**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**16800**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	200800	1.0	200800	7437	13759

Sub Total	**13759**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**15900**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	26,400	0.7
Landscape Area	200800	4.7

Sub Total	**5.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**5.4**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**1,600,000**	**LS $**
				Uncertainty Factor (U_f)		**1**	
				TOTAL		**$1,600,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 4,710,000	$	282,600

Sub Total	**$**	**282,600**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**283,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	25,100	8	200800	4.61	$345,730

Sub Total	200800.00	**$345,730**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$346,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	10,700	1	10,700

Sub Total	**10,700**
Uncertainty Factor (U_f)	**1**
TOTAL	**10700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	25,100	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	25,100	**4.75**	$41,000
			$0
			$0
			$0

Sub Total	**$41,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$41,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	0	1	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	0	16	1	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 4,993,000	$ 499,300

Sub Total	**$**	**499,300**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**499,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 5,492,300	$ 109,846

Sub Total	**$**	**109,846**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**109,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$30,000**
unsuitable foundation excavation	**$25,000**
Training	**$2,500**
Soil residual herbicide	**$65,000.00**
pavement marking	**$200,000**
traffic control labor and safety	965000
shoring and extra excavation	56000
trim	193000
Sub Total	**$1,536,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$1,537,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 3
Location: mp 21.42-24.44 Sultan (Additional WB lane)

project 38

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: GLW
Checked By: JAT

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	13,000	$585,000
		RIGHT OF WAY (urban undeveloped)	SF	$20	34,500	$690,000
		RELOCATIONS: BUSINESSES	EA	$150,000	1	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	4	$400,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	14	$210,000
		RIGHT OF WAY TOTAL				**$2,035,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	1.6	$9,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$40,000	1	$40,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	4,600	$92,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	3,200	$51,200
		EMBANKMENT COMPACTION	CY	$2	1,800	$3,600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	53,300	$319,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	16	$19,200
		CATCH BASIN TYPE 2	EA	$2,200	5	$11,000
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	2,940	$102,900
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	2,940	$132,300
		STRUCTURE EXCAVATION CL. B	CY	$15	4,400	$66,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	4,100	$266,500
		CRUSHED SURFACING	TON	$25	3,000	$75,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	2.0	$4,000
		WETLAND MITIGATION	LS	$620,000	1	$620,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$132,000	1	$132,000
		LANDSCAPING	LS	$28,000	1	$28,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$300,000	1	$300,000
		ILLUMINATION	LS	$43,000	1	$43,000
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	1/16/2007
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
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	project 38	Checked By:	JAT

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$232,700	1	$232,700
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$51,200	1	$51,200
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$783,000	1	$783,000
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$3,393,000**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$339,300	1	$339,300
9		**SUBTOTAL (ITEMS 7 & 8)**				**$3,732,300**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$347,200	1	$347,200
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$4,079,500**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$612,000	1	$612,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$4,691,500**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$1,407,500	1	$1,407,500
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$23,500	1	$23,500
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$8,270,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$9,310,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

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Corridor Section:	Segment 3	Date:	39098
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
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Segment 3

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 3
Location mp 21.42-24.44 Sultan (Additional WB lane)

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: GLW
Checked By: JAT

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index: 2006
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Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	mp 21.42-24.44 Sultan (Additional WB lane)

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	7,000	0.2
Additional 10' of R/W from east of 5th to almostMain	6000	

Sub Total	**13,000**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**13,000**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	26,400	0.7
Wetland Mitigation	8,100	

Sub Total	**34,500**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**34,500**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	1	Parcel acquisitions only

Sub Total	**1**	**EA**
	1.0	
TOTAL	**1**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	4	Assume that 30% of all properties acquired will require condemnations

Sub Total	**4**	**EA**
	1.0	
TOTAL	**4**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	14	All properties acquired will require administration (title search, etc.)

Sub Total	**14**	**EA**
	1.0	
TOTAL	**14**	

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Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	2,665	25	66625	1.6
sub-total				**1.6**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	0	0	0	6	0	0	0	0.0
sub-total								**0.0**

Sub Total	**1.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.6**

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Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**
Commercial Buildings	**$30,000**

Sub Total	**$40,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$40,000**

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		Checked By: JAT

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	2,665	20	2.0	106600	3948

Sub Total	**3,948**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**4,600**	**CY**

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Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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		Checked By:

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	6	2,665	5	5	39,975	1,481	2,740	1,481

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**2,740**	**1,481**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**3,200**	**1,800**

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Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	2665	20	53,300

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	23,452	CF
Prorated Water Quality Volume Required	4583.8	CF
Detention Bottom Area (based on 3' depth)	7817.333333	SF
WQ Surface Area (Based on 3' WQ depth)	1527.933333	SF
Greater of Detention and WQ areas	7817.333333	SF
Pond Bottom Length (3:1 aspect ratio)	153	FT
Pond Bottom Width	51	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	177	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	198	FT
Pond Length at Outside to of Berm (4' @2:1)	**214**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	75	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	96	FT
Pond Width at Outside to of Berm (4' @2:1)	**112**	**FT**

Pond Footprint Dimensions	120 x220		FTxFT
Pond Footprint Area	**26,400**	**SF**	
	0.61	Ac.	

Sub Total	**53,300**
Uncertainty Factor (U_f)	**1**
TOTAL	**53,300**

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Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	2,665	2,665	2,665	14	4

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**2,665**	**2,665**	**14**	**4**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**2,940**	**2,940**	**16**	**5**

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Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	2,665	4.0	5	53,300	1,974
	2,665	4.0	5	53,300	1,974

Sub Total	**3,948**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**4,400**

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Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	VOLUME (CF)	(CY)	(TON)
Section 1	2,665	20	53300	0.9	47970	1777	3642

Sub Total	**3642**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**4100**	**TON**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	53300	0.7	37310	1382	2556

Sub Total	**2556**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3000**	**TON**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lanes)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	66,625	1.6
Landscape Area	15990	0.4

Sub Total	**2**
Uncertainty Factor (U_f)	**1**
TOTAL	**2**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	4500	1	4500
	ditch S	9000	1	9000

Sub Total	**13500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$619,835**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$620,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$620,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 2,194,100	$	131,646

Sub Total	**$**	**131,646**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**132,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	1,333	12	15990	0.37	$27,531

Sub Total	15990.00	**$27,531**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$28,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	2,665	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
5th St	$150,000
	$150,000
	$0
Sub Total	**$300,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$300,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	2,665	1	11

Sub Total	**11**	
@	**4,000**	**EA**
$ Sub Total	**$42,640**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$43,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$43,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional Info	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	2,665	**0.50**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	2,665	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	2,665	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

	LS	SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	$0
Uncertainty Factor (U_f)	1
TOTAL	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 2,326,100	$ 232,610

Sub Total	**$**	**232,610**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**232,700**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 2,558,800	$ 51,176

Sub Total	**$**	**51,176**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**51,200**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (Additional WB lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Corridor Section:	Segment 3	Date:	01/16/07
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		Checked By:	JAT

Segment 3

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
	Include Roundabout cost	Calculated By/Entered By:	GLW
	project 39	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	42,700	$854,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	2	$30,000
		RIGHT OF WAY TOTAL				**$884,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	2.3	$13,800
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$15,000	1	$15,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	1,100	$22,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	7,000	$112,000
		EMBANKMENT COMPACTION	CY	$2	3,800	$7,600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	97,700	$586,200
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	32	$38,400
		CATCH BASIN TYPE 2	EA	$2,200	10	$22,000
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	6,150	$215,250
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	6,150	$276,750
		STRUCTURE EXCAVATION CL. B	CY	$15	9,100	$136,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	7,400	$481,000
		CRUSHED SURFACING	TON	$25	5,400	$135,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	4.1	$8,200
		WETLAND MITIGATION	LS	$375,000	1	$375,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$212,000	1	$212,000
		LANDSCAPING	LS	$138,000	1	$138,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$179,000	1	$179,000
		SIGNING	LS	$11,000	1	$11,000
		CURBS	LF	$15	10,800	$162,000
		SIDEWALKS	SY	$25	23,900	$597,500

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
	Include Roundabout cost	Calculated By/Entered By:	GLW
	project 39	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$374,500	1	$374,500
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$82,400	1	$82,400
		SPECIAL ITEMS	EST	$3,480,000	1	$3,480,000
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$2,304,400	1	$2,304,400
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$9,985,500**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$998,600	1	$998,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$10,984,100**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$1,021,600	1	$1,021,600
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$12,005,700**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$1,801,000	1	$1,801,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$13,806,700**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$4,142,100	1	$4,142,100
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$69,100	1	$69,100
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$19,010,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$21,400,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index: 2006
	Calculated By/Entered By: GLW
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lane: 12'
		Medians: 4'
		Mainline Shoulders: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.
11	Assumption for:	Roundabouts
		150' inscribed circle diameter
		32' circulating roadway width

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actua stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

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Corridor Segment 3	Date: 39098
Location mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index: 2006
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Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Corridor Section:	Segment 3	Date:	39098
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		
Assume road can be built in ex. 80' R/W		0.0
Some R/W needed for RA see RA estimate		

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality	37,800	0.9
Wetland Mitigation	4,890	

Sub Total	**42,690**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**42,700**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations		
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration		
	2	All properties acquired will require administration (title search, etc.)

Sub Total	**2**	**EA**
	1.0	
TOTAL	**2**	

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		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	Length	Width left	AREA SF	(ACRE)
Section 1	1,200	24	28800	0.7
Section 2	1,322	19	25118	0.6
Section 3	1,375	17	23375	0.6
Secton 4	987	17	16779	0.4
		sub-total	94072	**2.3**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**2.3**
Uncertainty Factor (U_f)	**1**
TOTAL	**2.3**

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		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (SY)
Section 1			0	0
Section 2			0	0
Section 3			0	0
Section 4			0	0

AREA (SF)	AREA (SY)
	0
	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$15,000**
Commercial Buildings	**$0**
Signals	**$0**

Sub Total	**$15,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$15,000**

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		Calculated By/Entered By: GLW
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	**LENGTH (LF)**	**WIDTH (FT)**	**DEPTH (FT)**	**VOLUME (CF)**	**(CY)**
Section 1	1,200	4	2.0	9600	356
Section 2	1,322	4	2.0	5288	196
Section 3	1,375	4	2.0	5500	204
Section 4	987	4	2.0	3948	146
		AREA (SF)			
				0	0
				0	0

Sub Total	**901**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1,100**	**CY**

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		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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		Calculated By/Entered By: GLW
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

For fill slopes

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	SELECT BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	12	1,200	3	3	21,600	800	1,480	800
Section 2	12	1,322	3	3	23,796	881	1,640	881
Section 3	12	1,375	3	3	24,750	917	1,700	917
Section 4	12	987	3	3	17,766	658	1,220	658

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**6,040**	**3,256**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**7,000**	**3,800**

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		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

DESCRIPTION	Length FT	Width FT	AREA (SF)
Section 1	1200	20	24,000
Section 2	1322	20	26,440
Section 3	1375	20	27,500
Section 4	987	20	19,740
			97,680

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	42,979	CF
Prorated Water Quality Volume Required	8400.48	CF
Detention Bottom Area (based on 3' depth)	14326.4	SF
WQ Surface Area (Based on 3' WQ depth)	2800.16	SF
Greater of Detention and WQ areas	14326.4	SF
Pond Bottom Length (3:1 aspect ratio)	207	FT
Pond Bottom Width	69	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	231	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	252	FT
Pond Length at Outside to of Berm (4' @2:1)	**268**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	93	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	114	FT
Pond Width at Outside to of Berm (4' @2:1)	**130**	**FT**

Pond Footprint Dimensions	140 x270		FTxFT
Pond Footprint Area	**37,800**	**SF**	
	0.87	Ac.	

Sub Total	**97,680**
Uncertainty Factor (U_f)	**1**
TOTAL	**97,700**

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		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	1,550	1,550	1,550	8	2
Section 2	1,322	1,322	1,322	7	2
Section 3	1,725	1,725	1,725	9	3
Section 4	987	987	987	5	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**5,584**	**5,584**	**29**	**9**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**6,150**	**6,150**	**32**	**10**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)	
Section 1	1,550	4.0	5	31,000	1,148	for 12"
Section 2	1,322	4.0	5	26,440	979	
Section 3	1,725	4.0	5	34,500	1,278	
Section 4	987	4.0	5	19,740	731	
Section 1	1,550	4.0	5	31,000	1,148	for 18"
Section 2	1,322	4.0	5	26,440	979	
Section 3	1,725	4.0	5	34,500	1,278	
Section 4	987	4.0	5	19,740	731	

Sub Total	**8,273**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**9,100**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add lanes	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, at	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	1,200	20	24000	0.9	21600	800	1640
Section 2	1,322	20	26440	0.9	23796	881	1807
Section 3	1,375	20	27500	0.9	24750	917	1879
Section 4	987	20	19740	0.9	17766	658	1349
			AREA (SF)	**DEPTH (FT)**	**(CF)**	**VOLUME (CY)**	**(TON)**

4,884

Sub Total	**6675**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**7400**	**TON**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	24000	0.7	16800	622	1151
Section 2	26440	0.7	18508	685	1268
Section 3	27500	0.7	19250	713	1319
Section 4	19740	0.7	13818	512	947

	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Roundabout 1	0	0.7	0	0	0
Roundabout 2	0	0.7	0	0	0

Sub Total	**4685**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**5400**	**TON**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, Date	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add to	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	94,072	2.2
Landscape Area	79744	1.9

Sub Total	**4.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**4.1**

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Corridor Section:	Segment 3	Date:	01/16/07
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		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

Assume 5 ft width for ditches as wetlands

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	1900	1	1900
	ditch S	6250	1	6250

Sub Total	**8150**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$374,197**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$375,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$2.30**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$375,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wide	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 3,532,200	$	211,932

Sub Total	**$**	**211,932**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**212,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
Section 1	1,200	12	14400	0.33	$24,793
Section 2	1,322	12	15864	0.36	$27,314
Section 3	1,375	12	16500	0.38	$28,409
Section 4	987	12	11844	0.27	$20,393
			Area SF	**Area ACRE**	
Roundabout 1			10568	0.24	$18,196
Roundabout 2			10568	0.24	$18,196

Sub Total	79744.00	**$137,300**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$138,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add w/bat	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
Section 1	1,550	0	0
Section 2	1,322	0	0
Section 3	1,725	0	0
Section 4	987	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wide	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wideners	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wide	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)	
Section 1	1,550	2	12	
Section 2	1,322	2	11	
Section 3	1,725	2	14	
Section 4	987	2	8	
		Sub Total	**45**	
		@	**4,000**	**EA**
		$ Sub Total	**$178,688**	
		Uncertainty Factor (U_f)	**1**	
		TOTAL	**$179,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$179,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Tree)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
Section 1	1,550	0.29	$2,936
Section 2	1,322	0.25	$2,504
Section 3	1,725	0.33	$3,267
Section 4	987	0.19	$1,869

Sub Total	**$10,576**
Uncertainty Factor (U_f)	**1**
TOTAL	**$11,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wide	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH**		**TOTAL**
Cement Conc Curb & Gutter	**(LF)**	**NO. OF SIDES**	**(LF)**
Section 1	1,200	2	2,400
Section 2	1,322	2	2,644
Section 3	1,375	2	2,750
Section 4	987	2	1,974
	LENGTH		**TOTAL**
	(LF)	**NO. OF SIDES**	**(LF)**
			0
			0
Extruded Curb	0	1	0

Sub Total	**9,768**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**10800**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,200	6	21	16,800
Section 2	1,322	6	2	1,763
Section 3	1,375	6	2	1,833
Section 4	987	6	2	1,316

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**21,712**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**23,900**	

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add w/ Date of Cost Index:		2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add w/ Date of Cost Index:		2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wide	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 3,744,200	$ 374,420

Sub Total	**$**	**374,420**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**374,500**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wide	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 4,118,700	$ 82,374

Sub Total	**$**	**82,374**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**82,400**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add wb lane, median	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	unit cost	unit	LS PRICE
roundabout	**$1,300,000.00**	**2**	**$2,600,000**
others			300000

Sub Total	**$2,900,000**
Uncertainty Factor (U_f)	**1.2**
TOTAL	**$3,480,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (Short Term) add widen,	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	0

Segment 3

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

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		Calculated By/Entered By:	GLW
	project 40	Checked By:	JAT

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	95,900	$4,315,500
		RIGHT OF WAY (urban undeveloped)	SF	$20	31,400	$628,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	44	$660,000
		RIGHT OF WAY TOTAL				**$5,603,500**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.4	$2,400
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$20,000	1	$20,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	3,200	$64,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	8,300	$132,800
		EMBANKMENT COMPACTION	CY	$2	4,500	$9,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	117,300	$703,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	18	$21,600
		CATCH BASIN TYPE 2	EA	$2,200	6	$13,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	3,360	$117,600
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	3,360	$151,200
		STRUCTURE EXCAVATION CL. B	CY	$15	4,600	$69,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	4,500	$292,500
		CRUSHED SURFACING	TON	$25	3,300	$82,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	3.3	$6,600
		WETLAND MITIGATION	LS	$287,000	1	$287,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$139,000	1	$139,000
		LANDSCAPING	LS	$68,000	1	$68,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$90,000	1	$90,000
		SIGNING	LS	$11,000	1	$11,000
		CURBS	LF	$15	5,400	$81,000
		SIDEWALKS	SY	$25	3,600	$90,000
		ITS FOR HOT-LANES	LS	$0	1	$0

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	project 40	Checked By:	JAT

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$245,300	1	$245,300
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$54,000	1	$54,000
		SPECIAL ITEMS	EST	$100,000	1	$100,000
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$855,500	1	$855,500
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$3,707,000**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$370,700	1	$370,700
9		**SUBTOTAL (ITEMS 7 & 8)**				**$4,077,700**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$379,300	1	$379,300
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$4,457,000**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$669,000	1	$669,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$5,126,000**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$1,537,800	1	$1,537,800
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$25,700	1	$25,700
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$12,400,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$21,750,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	mp 27.51-28.72 Gold Bar (add EB lane through	Date of Cost Index:	2006
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Segment 3

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location mp 27.51-28.72 Gold Bar (add EB lane through Gold Bar	Date of Cost Index: 2006
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	Checked By: JAT

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.
11	Assumption for:	Roundabouts

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation

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Corridor Segment 3	Date: 39098
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Segment 3

		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

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Corridor Section:	Segment 3
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold Bar

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Segment 3

RIGHT OF WAY

DESCRIPTION			ROW ACQUISITION AREA	
Urban Developed	Length	width	**(SF)**	**(ACRE)**
Ave 80 Ex. R/W 20' both sides	3194.4	20	63,888	1.5
Ave 80 Ex. R/W 20' one side	3194.4	10	31,944	0.8

Sub Total	**95,832**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**95,900**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	27,600	0.7
Wetland Mitigation	3,750	

Sub Total	**31,350**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**31,400**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Administration	**(EA)**	
	44	All properties acquired will require administration (title search, etc.)

Sub Total	**44**	**EA**
	1.0	
TOTAL	**44**	

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Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	Length	Width left	AREA Width right	SF	(ACRE)
Section 1	1,200	1	21	26400	0.1
Section 2	1,322	1	20	27762	0.1
Section 3	1,375	1	19	27500	0.1
Section 4	987	1	19	19740	0.1
		sub-total		101402	**0.4**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	TOP OF POND AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.4**

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Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (SY)
Section 1			0	0
Section 2			0	0
Section 3			0	0
Section 4			0	0
			(SF)	**(SY)**

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.
Assume no buildings will be required widening can be done to the south

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$20,000**
Commercial Buildings	**$0**
Signals	**$0**

Sub Total	**$20,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$20,000**

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Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	1,200	12	2.0	28800	1067
Section 2	1,322	12	2.0	15864	588
Section 3	1,375	12	2.0	16500	611
Section 4	987	12	2.0	11844	439

	AREA (SF)			
0	0	2	0	0
0	0	2	0	0

Sub Total	**2,704**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3,200**	**CY**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold Bar	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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Corridor Section:	Segment 3	Date: 01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold Bar	Date of Cost Index: 2006
		Calculated By/Entered By: GLW
		Checked By:

Segment 3

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	SELECT BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	12	1,550	3	3	27,900	1,033	1,920	1,033
Section 2	12	1,322	3	3	23,796	881	1,640	881
Section 3	12	1,725	3	3	31,050	1,150	2,130	1,150
Section 4	12	987	3	3	17,766	658	1,220	658

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**6,910**	**3,723**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**8,300**	**4,500**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF DETENTION & TREATMENT

DESCRIPTION	Length FT	Width FT	AREA (SF)
Section 1	1200	12	14,400
Section 2	1322	12	15,864
Section 3	1375	12	16,500
Section 4	987	12	11,844
			58,608

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	25,788	CF
Prorated Water Quality Volume Required	5040.288	CF
Detention Bottom Area (based on 3' depth)	8595.84	SF
WQ Surface Area (Based on 3' WQ depth)	1680.096	SF
Greater of Detention and WQ areas	8595.84	SF
Pond Bottom Length (3:1 aspect ratio)	161	FT
Pond Bottom Width	54	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	185	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	206	FT
Pond Length at Outside to of Berm (4' @2:1)	**222**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	78	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	99	FT
Pond Width at Outside to of Berm (4' @2:1)	**115**	**FT**

Pond Footprint Dimensions	120 x230		FTxFT
Pond Footprint Area	**27,600**	**SF**	
	0.63	Ac.	

Sub Total	**117,216**
Uncertainty Factor (U_f)	**1**
TOTAL	**117,300**

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		Checked By:	JAT

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	1,550	1,550	1,550	8	2
Section 2	1,322	1,322	1,322	7	2
Section 3	1,725	1,725	1,725	9	3
Section 4	987	987	987	5	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**5,584**	**5,584**	**29**	**9**
Uncertainty Factor (U_f)	**0.6**	**0.6**	**0.6**	**0.6**
TOTAL	**3,360**	**3,360**	**18**	**6**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
Section 1	1,550	4.0	5	31,000	1,148
Section 2	1,322	4.0	5	26,440	979
Section 3	1,725	4.0	5	34,500	1,278
Section 4	987	4.0	5	19,740	731

Sub Total	**4,136**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**4,600**

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Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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		Checked By:	JAT

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	1,200	12	14400	0.9	12960	480	984
Section 2	1,322	12	15864	0.9	14278	529	1084
Section 3	1,375	12	16500	0.9	14850	550	1128
Section 4	987	12	11844	0.9	10660	395	809
			AREA (SF)	**DEPTH (FT)**	**(CF)**	**VOLUME (CY)**	**(TON)**

4,884

Sub Total	**4005**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**4500**	**TON**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	14400	0.7	10080	373	691
Section 2	15864	0.7	11105	411	761
Section 3	16500	0.7	11550	428	791
Section 4	11844	0.7	8291	307	568

	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Roundabout 1	0	0.7	0	0	0
Roundabout 2	0	0.7	0	0	0

Sub Total	**2811**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3300**	**TON**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Checked By:	JAT

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	101,402	2.4
Landscape Area	39072	0.9

Sub Total	**3.3**
Uncertainty Factor (U_f)	**1**
TOTAL	**3.3**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

Assume 5 ft width for ditches as wetlands

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	6250.00	1	6250

Sub Total	**6250**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$286,961**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$287,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$287,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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		Checked By:	JAT

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 2,313,200	$	138,792

Sub Total	**$**	**138,792**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**139,000**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
Section 1	1,200	8	9600	0.22	$16,529
Section 2	1,322	8	10576	0.24	$18,209
Section 3	1,375	8	11000	0.25	$18,939
Section 4	987	8	7896	0.18	$13,595
			Area SF	**Area ACRE**	

Sub Total	39072.00	**$67,273**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$68,000**

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		Checked By:	JAT

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
Section 1	1,550	0	0
Section 2	1,322	0	0
Section 3	1,725	0	0
Section 4	987	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)	
Section 1	1,550	1	6	
Section 2	1,322	1	5	
Section 3	1,725	1	7	
Section 4	987	1	4	
		Sub Total	**22**	
		@	**4,000**	**EA**
		$ Sub Total	**$89,344**	
		Uncertainty Factor (U_f)	**1**	
		TOTAL	**$90,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$90,000**

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		Checked By:	JAT

Segment 3

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
Section 1	1,550	**0.29**	$2,936
Section 2	1,322	**0.25**	$2,504
Section 3	1,725	**0.33**	$3,267
Section 4	987	**0.19**	$1,869

Sub Total	**$10,576**
Uncertainty Factor (U_f)	**1**
TOTAL	**$11,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gi	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH**		**TOTAL**
Cement Conc Curb & Gutter	**(LF)**	**NO. OF SIDES**	**(LF)**
Section 1	1,200	1	1,200
Section 2	1,322	1	1,322
Section 3	1,375	1	1,375
Section 4	987	1	987
	LENGTH		**TOTAL**
	(LF)	**NO. OF SIDES**	**(LF)**
Extruded Curb	0	1	0

Sub Total	**4,884**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**5400**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	1,200	6	1	800
Section 2	1,322	6	1	881
Section 3	1,375	6	1	917
Section 4	987	6	1	658

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	6	0
Roundabout 2	0	6	0

Sub Total	**3,256**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**3,600**	

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold	Base Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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2707 Colby Avenue, Suite 900
Everett, Washington 98201

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold	Base Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through G	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 2,452,200	$ 245,220

Sub Total	**$**	**245,220**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**245,300**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 2,697,500	$ 53,950

Sub Total	**$**	**53,950**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**54,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Roundabout modifications	**$100,000**
Assuming Roundabouts built in short term	
$150,000/EA	

Sub Total	**$100,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$100,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 27.51-28.72 Gold Bar (add EB lane through Gold	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 30.3-50 widen shoulders, install rumble strip.	Calculated By/Entered By:	
	Project 41	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	38.8	$232,800
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$8,450,000	1	$8,450,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	141,800	$2,836,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	196,700	$3,147,200
		EMBANKMENT COMPACTION	CY	$2	106,400	$212,800
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	1,872,000	$11,232,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	1,650	$74,250
		STRUCTURE EXCAVATION CL. B	CY	$15	127,200	$1,908,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	208,000	$13,520,000
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	139,000	$9,035,000
		CRUSHED SURFACING	TON	$25	131,200	$3,280,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	76.6	$153,200
		WETLAND MITIGATION	LS	$19,124,000	1	$19,124,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$4,860,000	1	$4,860,000
		LANDSCAPING	LS	$2,866,000	1	$2,866,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	208,000	$4,160,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$0	1	$0
		SIGNING	LS	$761,000	1	$761,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0
		ITS FOR HOT-LANES	LS	$0	1	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 30.3-50 widen shoulders, install rumble strip.	Calculated By/Entered By:	
	Project 41	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$8,585,300	1	$8,585,300
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$1,888,800	1	$1,888,800
		SPECIAL ITEMS	EST	$28,116,000	1	$28,116,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$37,332,800	1	$37,332,800
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$161,775,150**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$16,177,600	1	$16,177,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$177,952,750**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$16,549,700	1	$16,549,700
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$194,502,450**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$58,351,000	1	$58,351,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$252,853,450**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$75,856,100	1	$75,856,100
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$1,264,300	1	$1,264,300
		ENVIRONMENTAL PERMITS	EST	$1,600,000	1	$1,600,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$331,580,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$373,200,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	AREA SF	(ACRE)
104,200	16	1667200	38.3
0	8	0	0.0
	sub-total		**38.3**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	1500	12	0	6	1500	12	18,000	0.4

sub-total	**0.5**
Sub Total	**38.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**38.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$8,450,000**
Commercial Buildings	**$0**

Sub Total	**$8,450,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$8,450,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	104,000	16	2.0	3328000	123259

Sub Total	**123,259**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**141,800**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	104000	16	3	3	2,496,000	92,444	171,030	92,444

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**171,030**	**92,444**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**196,700**	**106,400**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	104000	18	1,872,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	823,680	CF
Prorated Water Quality Volume Required	160992	CF
Detention Bottom Area (based on 3' depth)	274560	SF
WQ Surface Area (Based on 3' WQ depth)	53664	SF
Greater of Detention and WQ areas	274560	SF
Pond Bottom Length (3:1 aspect ratio)	908	FT
Pond Bottom Width	303	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	932	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	953	FT
Pond Length at Outside to of Berm (4' @2:1)	**969**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	327	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	348	FT
Pond Width at Outside to of Berm (4' @2:1)	**364**	**FT**

Pond Footprint Dimensions	370 x970		FTxFT
Pond Footprint Area	**358,900**	**SF**	
	8.24	Ac.	

Sub Total	**1,872,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**1,872,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0
			1,500		

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**1,500**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**1,650**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	6.0	3	0	0
	104,000	6.0	5	3,120,000	115,556

Sub Total	**115,556**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**127,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	104000	2 FT	2 FT	208000	1	208000

Sub Total	**208,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**208,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	104,000	16	1664000	1.0	1664000	61630	126341

Sub Total	**126341**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**139000**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1664000	1.0	1664000	61630	114015

Sub Total	**114015**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**131200**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	1,667,200	38.3
Landscape Area	1664000	38.3

Sub Total	**76.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**76.6**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	416500	1	416500
	ditch S	0	1	0

Sub Total	**416500**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$19,123,049**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$19,124,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$19,124,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$ 1,600,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$1,600,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 80,992,250	$ 4,859,535

Sub Total	**$ 4,859,535**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 4,860,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	104,000	16	1664000	38.20	$2,865,014

Sub Total	########	**$2,865,014**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$2,866,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	208,000	1	208,000

Sub Total	**208,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**208000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	104,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	104,000	**19.70**	$760,700
			$0
			$0
			$0

Sub Total	**$760,700**
Uncertainty Factor (U_f)	**1**
TOTAL	**$761,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	0	1	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	0	16	1	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 85,852,250	$ 8,585,225

Sub Total	**$ 8,585,225**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 8,585,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 94,437,550	$ 1,888,751

Sub Total	**$ 1,888,751**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 1,888,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$55,000**
unsuitable foundation excavation	**$300,000**
Training	**$2,500**
Soil residual herbicide	**$555,000.00**
pavement marking	**$1,041,000**
traffic control labor and safety	19777000
shoring and extra excavation	2430000
trim	3955000
Sub Total	**$28,115,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$28,116,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

US 2 Route Development Plan
MP 3.5 to MP 50.0
Bridge Construction Cost Estimate

Bridge No.	Bridge Name	MP	Year	Oper. Rating	Type	Length	Exist. Width	Work Width or Length	Work Type	Feature	Unit Cost /S.F.	Repair Cost	Construction Cost	Engineering Cost	Total Cost
2/ 9	87 TH AVE OC	4.37	1982	F 99	PCB	138	55	20	Widening	87TH AVE.	$230	$0	$634,800	$190,440	$825,240
9/ 124.7	JCT SR 9	5.04	1979	F 99	PTBX	198	63	20	Extension	SR 9 Uxing	$260	$500,000	$827,600	$248,280	$1,075,880
2/ 10	PILCHUCK RIVER BRIDGE	6.37	1983	F 99	POTB	862	41	34	Widening	River Xing	$230	$0	$6,740,840	$2,022,252	$8,763,092
2/ 11	US 2 OC, THREE LAKES RD	7.11	1983	F 60	PCB	219	42	270	Replacement	Road Xing	$200	$0	$2,268,000	$680,400	$2,948,400
2/ 12	US 2 OC, CAMPBELL RD	8.51	1983	F 80	PCB	203	43	250	Replacement	Road Xing	$200	$0	$2,150,000	$645,000	$2,795,000
2/ 17	FRENCH CR	11.41	1948	F 75	CTB	82	41	34	Widening+Repair	Creek Xing	$200	$620,000	$1,177,600	$353,280	$1,530,880
2/ 18	FARM RD OC	11.68	1948	F 75	CS	82	41	34	Widening+Repair	Road Xing	$200	$620,000	$1,177,600	$353,280	$1,530,880
												Total Segment 1	**$14,976,440**	**$4,492,932**	**$19,469,372**
522/ 150	SR 522 UC	14.27	1971	F 57	PCB	351	42	0	Repair	SR 522 Xing	$200	$670,000	$670,000	$201,000	$871,000
2/ 22	WOODS CR	15.37	1950	F 55	CTB	141	35	47	Widening+Repair	Creek Xing	$200	$530,000	$1,855,400	$556,620	$2,412,020
												Total Segment 2	**$2,525,400**	**$757,620**	**$3,283,020**
2/ 26	SULTAN R	22.04	1940	F 31	ST CTB	590	26	69	Replacement	River Xing	$200	$1,750,000	$8,142,000	$2,442,600	$10,584,600
2/ 28	SULTAN MILL POND	23.07	1952	F 50	CTB	117	34	35	Widening	Pond Xing	$200	$0	$819,000	$245,700	$1,064,700
2/ 30	WALLACE R	26.51	1940	F 34	ST CTB	236	26	69	Replacement	River Xing	$200	$0	$3,256,800	$977,040	$4,233,840
												Total Segment 3	**$12,217,800**	**$3,665,340**	**$15,883,140**
2/ 35	SKYKOMISH R	30.28	1932	F 49	ST SG	577	33	45	Replacement	River Xing	$230	$0	$5,971,950	$1,791,585	$7,763,535
2/ 36	BN RR UC (GN)	30.97	1963	N 60	SG	180	-	310	Replacement	RR Xing	$17,000	$0	$5,270,000	$1,581,000	$6,851,000
2/ 37	PROCTOR CR	31.07	1933	F 34	SB	135	31	45	Replacement	Creek Xing	$200	$0	$1,215,000	$364,500	$1,579,500
2/ 38	NO NAME CR	33.34	1933	F 63	CTB	93	31	14	Widening	Creek Xing	$230	$0	$299,460	$89,838	$389,298
2/ 39	ANDERSON CR	34.25	1933	F 55	CTB	93	32	45	Replacement	Creek Xing	$200	$0	$837,000	$251,100	$1,088,100
2/ 40	S FK SKYKOMISH R	35.21	1933	F 39	ST CTB	446	25	45	Replacement	River Xing	$200	$1,750,000	$4,014,000	$1,204,200	$5,218,200
2/ 42	BN RR UC (GN)	35.92	1963	N 60	SG	32	-	52	Extension	RR Xing	$17,000	$0	$884,000	$265,200	$1,149,200
2/ 45	BN RR OC (GN)	38.61	1936	F 57	CTB	257	31	14	Widening	RR Xing	$200	$0	$719,600	$215,880	$935,480
2/ 46	EAGLE FALLS CRK	38.97	1986	F 90	PCS	70	44	5	Widening	Creek Xing	$260	$0	$91,000	$27,300	$118,300
2/ 48	BARCLAY CR	39.96	2003	F 96	SG	178	37	8	Widening	Creek Xing	$340	$0	$484,160	$145,248	$629,408
2/ 49	STREAM	40.08	1986	F 62	PCTB	88	44	5	Widening	Stream Xing	$260	$0	$114,400	$34,320	$148,720
	SNOHOMISH - KING CO LINE														
2/ 101	SLOUGH	40.73	1986	F 99	PCS	70	44	5	Widening	Slough Xing	$260	$0	$91,000	$27,300	$118,300
2/ 102	STREAM	40.99	1986	F 99	PCS	69	44	5	Widening	Stream Xing	$260	$0	$89,700	$26,910	$116,610
2/ 103	STREAM	41.41	1986	F 99	PCS	70	44	5	Widening	Stream Xing	$260	$0	$91,000	$27,300	$118,300
2/ 104	BEAVER CREEK	42.71	1986	F 99	PCS	58	44	5	Widening	Creek Xing	$260	$0	$75,400	$22,620	$98,020
2/ 105	BNRR OVERCROSSING	43.04	1986	F 64	PCB	355	43	5	Widening	RR Xing	$260	$0	$461,500	$138,450	$599,950
2/ 106	STREAM	43.87	1988	F 99	PCS	61	43	5	Widening	Stream Xing	$260	$0	$79,300	$23,790	$103,090
2/ 107	STREAM	44.42	1988	F 75	PCS	61	44	5	Widening	Stream Xing	$260	$0	$79,300	$23,790	$103,090
2/ 108	TUNNEL	45.98	1937	O 99	CTUN	184	35	25	Widening		$260	$0	$1,196,000	$358,800	$1,554,800
2/ 109	STREAM	46.31	1937	W 47	TTT	47	31	14	Widening	Stream Xing	$260	$0	$171,080	$51,324	$222,404
2/ 110	STREAM	46.49	1937	W 48	TTT	77	31	14	Widening	Stream Xing	$260	$0	$280,280	$84,084	$364,364
2/ 111	STREAM	46.76	1937	W 47	TTT	47	31	14	Widening	Stream Xing	$260	$0	$171,080	$51,324	$222,404
2/ 112	SLOUGH	47.27	1989	F 42	PCTB	77	53	0	Widening	Slough Xing	$200	$0	$0	$0	$0
2/ 113	STREAM	47.71	1937	W 47	TTT	45	31	14	Widening	Stream Xing	$260	$0	$163,800	$49,140	$212,940
2/ 114	STREAM	47.91	1937	W 47	TTT	47	31	14	Widening	Stream Xing	$260	$0	$171,080	$51,324	$222,404
2/ 115A	JOHN GLICK HENRY MEM BR	48.68	1939	F 35	ST CTB	279	25	45	Replacement	River Xing	$170	$0	$2,134,350	$640,305	$2,774,655
2/ 116	S FK SKYKOMISH R	49.65	1938	F 29	ST CTB	339	25	45	Replacement	River Xing	$170	$0	$2,593,350	$778,005	$3,371,355
2/118	ANTHRACITE CREEK	50.55	1940	F 27	CTB	45	30	45	Replacement	Creek Xing	$170	$0	$344,250	$103,275	$447,525
												Total Segment 4	**$28,093,040**	**$8,427,912**	**$36,520,952**
												Grand Total			**$75,200,000**

Assumptions:

1. The costs were modified for 2006 dollars.

2. For bridge widening, the bridge areas were computed based on the assumption that the bridge length is unchanged.

3. For bridge extension, the bridge areas were computed based on the assumption that the bridge width is unchanged.

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 4
Location: mp 35.62 Index - Galena Rd. add wb right turn lane

project 43

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: GLW
Checked By: JAT

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	17,000	$340,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	1	$15,000
		RIGHT OF WAY TOTAL				**$355,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.7	$4,200
		REMOVING EXISTING PAVEMENT	SY	$10	800	$8,000
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,100	$42,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	500	$8,000
		EMBANKMENT COMPACTION	CY	$2	300	$600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	22,500	$135,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	8	$9,600
		CATCH BASIN TYPE 2	EA	$2,200	4	$8,800
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	1,380	$48,300
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	1,380	$62,100
		STRUCTURE EXCAVATION CL. B	CY	$15	1,100	$16,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,700	$110,500
		CRUSHED SURFACING	TON	$25	1,300	$32,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.6	$1,200
		WETLAND MITIGATION	LS	$0	1	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$38,000	1	$38,000
		LANDSCAPING	LS	$25,000	1	$25,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	1,100	$22,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$36,000	1	$36,000
		SIGNING	LS	$5,000	1	$5,000
		CURBS	LF	$15	2,800	$42,000
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	mp 35.62 Index - Galena Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
	project 43	Checked By:	JAT

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$66,600	1	$66,600
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$14,700	1	$14,700
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$224,000	1	$224,000
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$970,600**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$97,100	1	$97,100
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,067,700**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$99,300	1	$99,300
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,167,000**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$176,000	1	$176,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,343,000**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$402,900	1	$402,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$6,800	1	$6,800
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,220,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$3,900,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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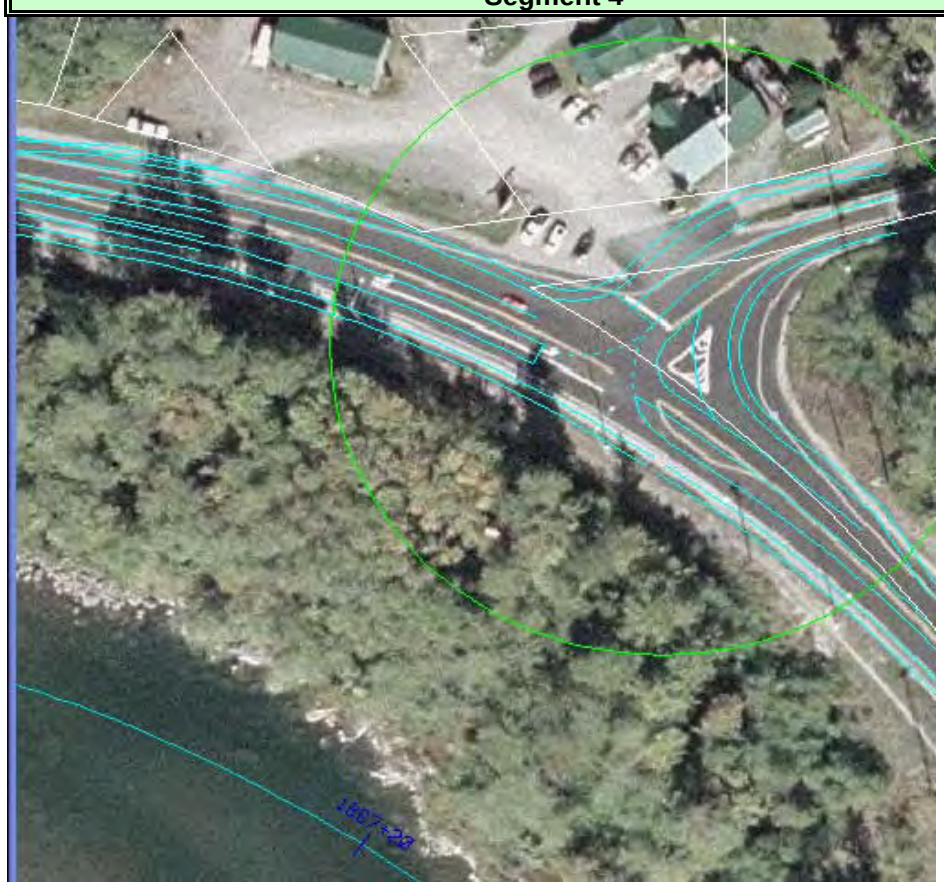
PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	mp 35.62 Index - Galena Rd. add wb right turn l	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4



Index-Galena Road

Intersection includes 550' on each side of US2 and 150' of Index-galer

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alena road

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location mp 35.62 Index - Galena Rd. add wb right turn lane	Date of Cost Index: 2006
	Calculated By/Entered By: GLW
	Checked By: JAT

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200', both sides for normal crown, 1 side for superelevation.
		Assume minimum cover is required.
11	Assumption for:	Roundabouts
		150' inscribed circle diameter
		32' circulating roadway width

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 4
Location mp 35.62 Index - Galena Rd. add wb right turn lane

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: GLW
Checked By: JAT

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	mp 35.62 Index - Galena Rd. add wb right turn lane

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	mp 35.62 Index - Galena Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality	17,000	0.4
Wetland Mitigation	0	

Sub Total	**17,000**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**17,000**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration	1	All properties acquired will require administration (title search, etc.)

Sub Total	**1**	**EA**
	1.0	
TOTAL	**1**	

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Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	Length	AREA right	SF	(ACRE)
West approach	550	20	11000	0.3
East approach	550	20	11000	0.3
index-galena rd	150	20	3000	0.1
		sub-total	25000	**0.7**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	TOP OF POND AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**0.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.7**

PLANNING LEVEL OPINION OF COST SUMMARY

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		Checked By:	JAT

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (SY)
	550	12	6,600	733

	AREA (SF)	AREA (SY)
Roundabout 1		0

Sub Total	**733**
Uncertainty Factor (U_f)	**1**
TOTAL	**800**

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Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**
Commercial Buildings	**$0**
Signals	**$0**

.

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Location:	mp 35.62 Index - Galena Rd. add wb right turn lane	Date of Cost Index: 2006
		Calculated By/Entered By: GLW
		Checked By: JAT

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
east approach	550	20	2.0	22000	815
west approach	550	20	2.0	22000	815
index-galena rd	150	20	2.0	6000	222

Sub Total	**1,852**	**CY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2,100**	**CY**

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Corridor Section:	Segment 4	Date:	01/16/07
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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
		3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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		Calculated By/Entered By: GLW
		Checked By:

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	SELECT BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
west approach	18	550	1	0	2,475	92	170	92
east approach	18	550	1	0	2,475	92	170	92
index-galena rd	18	150	1	0	675	25	50	25

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**390**	**208**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**500**	**300**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **DETENTION & TREATMENT**

DESCRIPTION	Length FT	Width FT	AREA (SF)
east approach	550	18	9,900
west approach	550	18	9,900
index-galena road	150	18	2,700
			22,500

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	9,900	CF
Prorated Water Quality Volume Required	1935	CF
Detention Bottom Area (based on 3' depth)	3300	SF
WQ Surface Area (Based on 3' WQ depth)	645	SF
Greater of Detention and WQ areas	3300	SF
Pond Bottom Length (3:1 aspect ratio)	99	FT
Pond Bottom Width	33	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	123	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	144	FT
Pond Length at Outside to of Berm (4' @2:1)	**160**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	57	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	78	FT
Pond Width at Outside to of Berm (4' @2:1)	**94**	**FT**

Pond Footprint Dimensions	100 x170		FTxFT
Pond Footprint Area	**17,000**	**SF**	
	0.39	Ac.	

Sub Total	**22,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**22,500**

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Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
east approach	550	550	550	3	1
west approach	550	550	550	3	1
index-galena rd	150	150	150	1	1

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**1,250**	**1,250**	**7**	**3**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**1,380**	**1,380**	**8**	**4**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
east approach	550	4.0	5	11,000	407
west approch	550	4.0	5	11,000	407
index-galena rd	150	4.0	5	3,000	111

Sub Total	**926**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,100**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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		Checked By:	JAT

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
		5 FT	20 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
east approach	550	18	9900	0.9	8910	330	677
west approach	550	18	9900	0.9	8910	330	677
index-galena rd	150	18	2700	0.9	2430	90	185

Sub Total	**1538**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1700**	**TON**

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		Checked By:	JAT

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	VOLUME (CF)	VOLUME (CY)	VOLUME (TON)
east approach	9900	0.7	6930	257	475
west approach	9900	0.7	6930	257	475
index-galena rd	2700	0.7	1890	70	130

Sub Total	**1079**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1300**	**TON**

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		Checked By:	JAT

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	25,000	0.6

Sub Total	**0.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.6**

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Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Buffer	0	1	0
Wetland		7	0

Sub Total	0	SF
@	$2.30	per SF
Sub Total $	$0	
Uncertainty Factor (U_f)	1	
TOTAL $	$0	LS $

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Stream Buffer		1	0
Stream		7	0

Sub Total	0	SF
@	$2.30	per SF
Sub Total $	$0	
Uncertainty Factor (U_f)	1	
TOTAL $	$0	LS $

Total Mitigation Cost	$0	LS $

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	$ 105,000	LS $
				Uncertainty Factor (U_f)	1	
				TOTAL	$105,000	LS $

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Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 627,300	$ 37,638

Sub Total	**$**	**37,638**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**38,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 35.62 Index - Galena Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
Medians	300	12	3600	0.08	$6,198

	Area SF	Area ACRE	
Roundabout 1	10568	0.24	$18,196

Sub Total	14168.00	**$24,394**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$25,000**

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Corridor Section:	Segment 4	Date:	01/16/07
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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
east approach	550	1	550
west approach	550	1	550

Sub Total	**1,100**
Uncertainty Factor (U_f)	**1**
TOTAL	**1100**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 4	Date:	01/16/07
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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
east approach	550	2	4
west approach	550	2	4

Sub Total	**9**	
@	**4,000**	**EA**
$ Sub Total	**$35,200**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$36,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$36,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 35.62 Index - Galena Rd. add Weight	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
		0.00	$5,000

Sub Total	**$5,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$5,000**

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Location:	mp 35.62 Index - Galena Rd. add wb right turn lat	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH**		**TOTAL**
Cement Conc Curb & Gutter	**(LF)**	**NO. OF SIDES**	**(LF)**
east approach	550	2	1,100
west approach	550	2	1,100
index-galena rd	150	2	300

Sub Total	**2,500**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**2800**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
		6	2	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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		Checked By:	JAT

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 35.62 Index - Galena Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 665,300	$ 66,530

Sub Total	**$**	**66,530**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**66,600**

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Corridor Section:	Segment 4	Date:	01/16/07
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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 731,900	$ 14,638

Sub Total	**$**	**14,638**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**14,700**

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Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 35.62 Index - Galena Rd. add wb right turn lane	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 4

LS SPECIAL ITEMS

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Corridor Section:	Segment 4	Date:	01/16/07
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Segment 4

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 41-43 widen to 4 lanes	Calculated By/Entered By:	
	Project 44	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	9.8	$58,800
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$466,200	-	$0
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	36,200	$724,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	66,900	$1,070,400
		EMBANKMENT COMPACTION	CY	$2	36,200	$72,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	424,000	$2,544,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	-	$0
		STRUCTURE EXCAVATION CL. B	CY	$15	7,800	$117,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	35,500	$2,307,500
		CRUSHED SURFACING	TON	$25	33,500	$837,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	106.8	$213,600
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$480,000	-	$0
		LANDSCAPING	LS	$7,273,000	-	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	2,000	$40,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 41-43 widen to 4 lanes	Calculated By/Entered By:	
	Project 44	Checked By:	

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$799,600	1	$799,600
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$175,900	1	$175,900
		SPECIAL ITEMS	EST	$2,380,000	1	$2,380,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$3,405,300	1	$3,405,300
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$14,756,000**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$1,475,600	1	$1,475,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$16,231,600**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$1,509,600	1	$1,509,600
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$17,741,200**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$5,323,000	1	$5,323,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$23,064,200**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$6,919,300	1	$6,919,300
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$115,400	1	$115,400
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$30,100,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$33,880,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 4

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	snohomish to skykomish

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	10,600	40	424000	9.8
		sub-total		**9.8**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**9.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**9.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$466,200**
Commercial Buildings	**$0**

Sub Total	**$466,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$466,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 4	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	10,600	40	2.0	848000	31407

Sub Total	**31,407**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**36,200**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	40	10,600	4	4	848,000	31,407	58,110	31,407

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**58,110**	**31,407**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**66,900**	**36,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	10600	40	424,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	186,560	CF
Prorated Water Quality Volume Required	36464	CF
Detention Bottom Area (based on 3' depth)	62186.66667	SF
WQ Surface Area (Based on 3' WQ depth)	12154.66667	SF
Greater of Detention and WQ areas	62186.66667	SF
Pond Bottom Length (3:1 aspect ratio)	432	FT
Pond Bottom Width	144	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	456	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	477	FT
Pond Length at Outside to of Berm (4' @2:1)	**493**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	168	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	189	FT
Pond Width at Outside to of Berm (4' @2:1)	**205**	**FT**

Pond Footprint Dimensions	210 x500		FTxFT
Pond Footprint Area	**105,000**	**SF**	
	2.41	Ac.	

Sub Total	**424,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**424,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**0**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**0**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	10,600	6.0	3	190,800	7,067
	0	4.0	5	0	0

Sub Total	**7,067**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**7,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	10,600	40	424000	1.0	424000	15704	32193

Sub Total	**32193**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**35500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	424000	1.0	424000	15704	29052

Sub Total	**29052**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**33500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	424,000	9.8
Landscape Area	4224000	97

Sub Total	**106.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**106.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -
Hydraulic Permit Approval		WDFW		0	$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT	0		$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE	**0**		$ -

Sub Total	**$ -**	**LS $**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 7,995,200	$	479,712

Sub Total	**$**	**479,712**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**480,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	105,600	40	4224000	96.97	$7,272,727

Sub Total	########	**$7,272,727**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$7,273,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	2,000	1	2,000

Sub Total	**2,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**2000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	10,600	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	279,840	**53.00**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	10,600	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	10,600	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 7,995,200	$ 799,520

Sub Total	**$**	**799,520**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**799,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 8,794,800	$ 175,896

Sub Total	**$**	**175,896**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**175,900**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$8,500**
pavement marking	106000
training	2500
traffic control labor and safety	**$1,736,000.00**
shoring or extra excavation	**$212,000**
trimming	173600
soil residual herbicide	141000

Sub Total	**$2,379,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$2,380,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 4

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description: US 2 Corridor Plan
Corridor Section: Segment 4
Location: mp 48.71 5th Street - Skyhomish Roundabout

project 45

Client: WSDOT
Date: 1/16/2007
Date of Cost Index: 2006
Calculated By/Entered By: JLMR
Checked By: JAT

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	24,000	$480,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	2	$30,000
		RIGHT OF WAY TOTAL				**$510,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.4	$2,400
		REMOVING EXISTING PAVEMENT	SY	$10	3,300	$33,000
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	3,500	$70,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	1,200	$19,200
		EMBANKMENT COMPACTION	CY	$2	700	$1,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	49,700	$298,200
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	5	$6,000
		CATCH BASIN TYPE 2	EA	$2,200	3	$6,600
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	710	$24,850
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	710	$31,950
		STRUCTURE EXCAVATION CL. B	CY	$15	1,100	$16,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	3,800	$247,000
		CRUSHED SURFACING	TON	$25	2,800	$70,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.7	$1,400
		WETLAND MITIGATION	LS	$0	1	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$54,000	1	$54,000
		LANDSCAPING	LS	$19,000	1	$19,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$24,000	1	$24,000
		SIGNING	LS	$5,000	1	$5,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	1/16/2007
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
	project 45	Checked By:	JAT

Segment 4

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$94,100	1	$94,100
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$20,700	1	$20,700
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$316,600	1	$316,600
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,371,900**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$137,200	1	$137,200
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,509,100**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$140,400	1	$140,400
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,649,500**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$248,000	1	$248,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,897,500**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$569,300	1	$569,300
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$9,500	1	$9,500
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$3,100,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$5,440,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 4	Date: 39098
Location mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index: 2006
	Calculated By/Entered By: JLMR
	Checked By: JAT

Segment 4

DESIGN ASSUMPTIONS

1	Assumption for:	Design
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Mainline Shoulders: 8'
7	Assumption for:	Walls
		Walls shall be placed to minimize right of way take
		Confined area so use MSE wall with precast panels. Use $65 (WSDOT Bridge Design Manual Section 12 - Conservatively)
		Approach on fill requires conc. barrier on top of wall. Use $210/lf (WSDOT Bridge Design Manual Section 12 - Mid Range)
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required because ramps are on fill with good grade.
11	Assumption for:	Roundabouts
		150' inscribed circle diameter
		32' circulating roadway width

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actua stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 4
Location mp 48.71 5th Street - Skyhomish Roundabout

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: JLMR
Checked By: JAT

Segment 4

		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	39098
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 4

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 4
Location:	mp 48.71 5th Street - Skyhomish Roundabout

Segment 4

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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PLANNING LEVEL OPINION OF COST SUMMARY

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 4

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		0.0
	6000	
Detention and Treatment	18,000	

Sub Total	**24,000**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**24,000**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration	2	All properties acquired will require administration (title search, etc.)

Sub Total	**2**	**EA**
	1.0	
TOTAL	**2**	

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Segment 4

ACRE **CLEARING AND GRUBBING**

DESCRIPTION Area Measured in AutoCAD	**(SF)**	**AREA by2**	**(ACRE)**
North side of US - 2	16,013	1	0.4

Sub Total	**0.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.4**

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Segment 4

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (SY)
Approaches	600	24	14,400	1,600

Sub Total	**3,241**
Uncertainty Factor (U_f)	**1**
TOTAL	**3,300**

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Segment 4

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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Segment 4

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	VOLUME (CY)
Approaches (200' each leg)	600	50	2.0	60000	2222
		AREA (SF)			
Roundabout 1		10936	2	21871	810

Sub Total	**3,032**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**3,500**	**CY**

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		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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		Checked By:	

Segment 4

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
North of US - 2	10	559	10	0	13,975	518	960	518

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**960**	**518**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**1,200**	**700**

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Segment 4

SF DETENTION & TREATMENT

DESCRIPTION	**AREA (SF)**
Approaches	28,800
Roundabout	20,835
	49,635

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	12,672	CF
Prorated Water Quality Volume Required	2476.8	CF
Detention Bottom Area (based on 3' depth)	4224	SF
WQ Surface Area (Based on 3' WQ depth)	825.6	SF
Greater of Detention and WQ areas	4224	SF
Pond Bottom Length (3:1 aspect ratio)	113	FT
Pond Bottom Width	38	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	137	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	158	FT
Pond Length at Outside to of Berm (4' @2:1)	**174**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	62	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	83	FT
Pond Width at Outside to of Berm (4' @2:1)	**99**	**FT**

Pond Footprint Dimensions	100 x180		FTxFT
Pond Footprint Area	**18,000**	**SF**	
	0.41	Ac.	

Sub Total	**49,635**
Uncertainty Factor (U_f)	**1**
TOTAL	**49,700**

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Segment 4

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Along US - 2	479	479	479	3	1
Along 5th Street	158	158	158	1	1

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**637**	**637**	**4**	**2**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**710**	**710**	**5**	**3**

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Segment 4

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
Along US - 2	959	4.0	5	19,172	710
Along 5th Street	316	4.0	5	6,325	234

Sub Total	**944**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**1,100**

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Segment 4

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
CONCRETE BRIDGE			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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Segment 4

MSE WALL WITH PRECAST PANELS

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	10 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 4

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 4

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 4

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Approaches	600	48	28800	0.9	25920	960	1968

	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Roundabout 1	20835	0.9	18752	695	1424
Total paved area	49635				

Sub Total	**3392**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**3800**	**TON**

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Segment 4

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Aproaches	28800	0.7	20160	747	1381

	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Roundabout 1	20835	0.7	14585	540	999

Sub Total	**2381**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2800**	**TON**

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Segment 4

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
North of US - 2	559	0	0
West of 5th Ave	248	0	0
East of 5th Ave	270	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 4

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	16,013	0.4
Landscape Area	10568	0.3

Sub Total	**0.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.7**

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Segment 4

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION **Wetland Mitigation**	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Buffer		1	0
Wetland		7	0

Sub Total	**0**	**SF**
@	**$2.30**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION **Wetland Mitigation**	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$2.30**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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Segment 4

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 886,500	$ 53,190

Sub Total	**$**	**53,190**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**54,000**

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Segment 4

LS **LANDSCAPING**

$75,000 per Acre per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
				0.00	$0

	Area SF	Area ACRE	
Roundabout 1	10568	0.24	$18,196

Sub Total	10568.00	**$18,196**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$19,000**

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Segment 4

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 4

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Southwest of US 2	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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Segment 4

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2005
		Calculated By/Entered By:	JLMR
		Checked By:	

Segment 4

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side Min. 2 per leg

DESCRIPTION	Legs #	NO. OF SIDES	TOTAL (EA)
North Side of US - 2	3	2	6

Sub Total	**6**	
@	**4,000**	**EA**
$ Sub Total	**$24,000**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$24,000**	

TOTAL LUMP SUM	**$24,000**

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Everett, Washington 98201

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 4

LS **SIGNING**

DESCRIPTION	**LS PRICE**
Lump Sum for Intersection	$5,000

Sub Total	**$5,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$5,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Cement Conc Curb & Gutter	730	0	0
Extruded Curb	270	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
	0	6	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 940,500	$ 94,050

Sub Total	**$**	**94,050**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**94,100**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 1,034,600	$ 20,692

Sub Total	**$**	**20,692**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**20,700**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 4	Date:	01/16/07
Location:	mp 48.71 5th Street - Skyhomish Roundabout	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 4

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 3.5-12.7 widen to 4 lanes	Calculated By/Entered By:	
	Project 46	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	35.8	$214,800
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$3,186,600	1	$3,186,600
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	132,500	$2,650,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	122,600	$1,961,600
		EMBANKMENT COMPACTION	CY	$2	66,300	$132,600
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	1,555,200	$9,331,200
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	660	$29,700
		STRUCTURE EXCAVATION CL. B	CY	$15	39,200	$588,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$19,469,000	1	$19,469,000
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	129,900	$8,443,500
		CRUSHED SURFACING	TON	$25	122,600	$3,065,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	71.6	$143,200
		WETLAND MITIGATION	LS	$8,926,000	1	$8,926,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$3,885,000	1	$3,885,000
		LANDSCAPING	LS	$2,678,000	1	$2,678,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	19,000	$380,000
		CONCRETE BARRIER	LF	$65	48,600	$3,159,000
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$377,000	1	$377,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$6,862,100	1	$6,862,100
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$1,509,700	1	$1,509,700

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 3.5-12.7 widen to 4 lanes	Calculated By/Entered By:	
	Project 46	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		SPECIAL ITEMS	EST	$9,301,000	1	$9,301,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$25,887,900	1	$25,887,900
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$112,180,900**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$11,218,100	1	$11,218,100
9		**SUBTOTAL (ITEMS 7 & 8)**				**$123,399,000**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$11,476,200	1	$11,476,200
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$134,875,200**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$40,463,000	1	$40,463,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$175,338,200**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$52,601,500	1	$52,601,500
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$876,700	1	$876,700
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$228,820,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$257,540,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project	US 2 Corridor Plan
Corridor	Segment 1
Location	snohomish to skykomish
Client:	WSDOT
Date:	39098
Date of Cost Index:	2006
Calculated By/Entered By:	0
Checked By:	0

Segment 1

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	snohomish to skykomish

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 1		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	48,600	32	1555200	35.8
		sub-total		**35.8**

DETENTION PONDS

POND LOCATION	**BOTTOM OF POND LENGTH (FT)**	**BOTTOM OF POND WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**TOP OF POND LENGTH (FT)**	**TOP OF POND WIDTH (FT)**	**TOP OF POND AREA (SF)**	**TOP OF POND AREA (ACRE)**
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**35.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**35.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$3,186,600**
Commercial Buildings	**$0**

Sub Total	**$3,186,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$3,186,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	48,600	32	2.0	3110400	115200

Sub Total	**115,200**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**132,500**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 1

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	32	48,600	2	2	1,555,200	57,600	106,560	57,600

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**106,560**	**57,600**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**122,600**	**66,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	48600	32	1,555,200

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	684,288	CF
Prorated Water Quality Volume Required	133747.2	CF
Detention Bottom Area (based on 3' depth)	228096	SF
WQ Surface Area (Based on 3' WQ depth)	44582.4	SF
Greater of Detention and WQ areas	228096	SF
Pond Bottom Length (3:1 aspect ratio)	827	FT
Pond Bottom Width	276	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	851	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	872	FT
Pond Length at Outside to of Berm (4' @2:1)	**888**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	300	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	321	FT
Pond Width at Outside to of Berm (4' @2:1)	**337**	**FT**

Pond Footprint Dimensions	340 x890		FTxFT
Pond Footprint Area	**302,600**	**SF**	
	6.95	Ac.	

Sub Total	**1,555,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**1,555,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0
			600		

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**600**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**660**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	80,000	4.0	3	960,000	35,556
	0	4.0	5	0	0

Sub Total	**35,556**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**39,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	48,600	32	1555200	1.0	1555200	57600	118080

Sub Total	**118080**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**129900**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1555200	1.0	1555200	57600	106560

Sub Total	**106560**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**122600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	1,555,200	35.8
Landscape Area	1555200	35.8

Sub Total	**71.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**71.6**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	194400	1	194400
	ditch S	0	1	0

Sub Total	**194400**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$8,925,620**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$8,926,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$8,926,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -
Hydraulic Permit Approval		WDFW		0	$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT	0		$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE	**0**		$ -
				Sub Total	**$ -** **LS $**
				Uncertainty Factor (U_f)	**1**
				TOTAL	**$0** **LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 64,735,200	$ 3,884,112

Sub Total	**$ 3,884,112**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 3,885,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	48,600	32	1555200	35.70	$2,677,686

Sub Total	########	**$2,677,686**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$2,678,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	19,000	1	19,000

Sub Total	**19,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**19000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	48,600	1	48,600

Sub Total	**48,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**48600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	48,600	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	48,600	**9.20**	$376,200
			$0
			$0
			$0

Sub Total	**$376,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$377,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	48,600	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	48,600	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 68,620,200	$ 6,862,020

Sub Total	**$ 6,862,020**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 6,862,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 75,482,300	$ 1,509,646

Sub Total	**$ 1,509,646**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 1,509,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
Rumble Strip	**$25,200**
pavement marking	583200
training	2500
traffic control labor and safety	**$7,524,000.00**
shoring or extra excavation	**$48,000**
trimming	150500
soil residual herbicide	518000
planing bituminous pavement	324000
unsuitable foundation excavation	125000
Sub Total	**$9,300,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**$9,301,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 1

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 3.5-12.7 widen to 4 lanes	Calculated By/Entered By:	MAS
	Project 46	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	46.9	$281,400
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$3,186,600	1	$3,186,600
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	173,900	$3,478,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	160,900	$2,574,400
		EMBANKMENT COMPACTION	CY	$2	87,000	$174,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	2,041,200	$12,247,200
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	-	$0
		CATCH BASIN TYPE 2	EA	$2,200	-	$0
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	660	$29,700
		STRUCTURE EXCAVATION CL. B	CY	$15	39,200	$588,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$25,111,000	1	$25,111,000
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	170,500	$11,082,500
		CRUSHED SURFACING	TON	$25	160,900	$4,022,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	93.8	$187,600
		WETLAND MITIGATION	LS	$8,926,000	1	$8,926,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$4,782,000	1	$4,782,000
		LANDSCAPING	LS	$3,515,000	1	$3,515,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	38,000	$760,000
		CONCRETE BARRIER	LF	$65	48,600	$3,159,000
		SIGNAL SYSTEMS	LS	$0	-	$0
		ILLUMINATION	LS	$0	-	$0
		SIGNING	LS	$377,000	1	$377,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0
		ITS FOR HOT-LANES	LS	$0	-	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$8,448,200	1	$8,448,200
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$1,858,700	1	$1,858,700

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 3.5-12.7 widen to 4 lanes	Calculated By/Entered By:	MAS
	Project 46	Checked By:	

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		SPECIAL ITEMS	EST	$9,301,000	1	$9,301,000
		UTILITY RELOCATIONS	EST	$0	-	$0
6		**MISCELLANEOUS (30%)**	LS	$31,227,000	1	$31,227,000
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$135,316,800**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$13,531,700	1	$13,531,700
9		**SUBTOTAL (ITEMS 7 & 8)**				**$148,848,500**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$13,843,000	1	$13,843,000
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$162,691,500**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$48,808,000	1	$48,808,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$211,499,500**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$63,449,900	1	$63,449,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$1,057,500	1	$1,057,500
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$276,010,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$310,660,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: MAS
	Checked By: 0

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH 60
		Posted Speed Mainline: MPH 55
3	Assumption for:	Roadway Horizontal Alignment
		Remain in current location
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 18'
		Mainline Shoulders: 8'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: MAS
	Checked By: 0

Segment 1

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	snohomish to skykomish

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 1		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: MAS
			Checked By: 0

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

Length	Width	AREA SF	(ACRE)
48,600	42	2041200	46.9
	sub-total		**46.9**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**46.9**
Uncertainty Factor (U_f)	**1**
TOTAL	**46.9**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$3,186,600**
Commercial Buildings	**$0**

Sub Total	**$3,186,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$3,186,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: MAS
		Checked By: 0

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	48,600	42	2.0	4082400	151200

Sub Total	**151,200**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**173,900**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: MAS
		Checked By:

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	42	48,600	2	2	2,041,200	75,600	139,860	75,600

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**139,860**	**75,600**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**160,900**	**87,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	**Length FT**	**Width FT**	**AREA (SF)**
Section 1	48600	42	2,041,200

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	898,128	CF
Prorated Water Quality Volume Required	175543.2	CF
Detention Bottom Area (based on 3' depth)	299376	SF
WQ Surface Area (Based on 3' WQ depth)	58514.4	SF
Greater of Detention and WQ areas	299376	SF
Pond Bottom Length (3:1 aspect ratio)	948	FT
Pond Bottom Width	316	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	972	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	993	FT
Pond Length at Outside to of Berm (4' @2:1)	**1009**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	340	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	361	FT
Pond Width at Outside to of Berm (4' @2:1)	**377**	**FT**

Pond Footprint Dimensions	380 x1010		FTxFT
Pond Footprint Area	**383,800**	**SF**	
	8.81	Ac.	

Sub Total	**2,041,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**2,041,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	0	0	0	0	0
			600		

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**600**	**0**	**0**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**660**	**0**	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	80,000	4.0	3	960,000	35,556
	0	4.0	5	0	0

Sub Total	**35,556**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**39,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	48,600	42	2041200	1.0	2041200	75600	154980

Sub Total	**154980**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**170500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	2041200	1.0	2041200	75600	139860

Sub Total	**139860**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**160900**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	2,041,200	46.9
Landscape Area	2041200	46.9

Sub Total	**93.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**93.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	194400	1	194400
	ditch S	0	1	0

Sub Total	**194400**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$8,925,620**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$8,926,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$8,926,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -
Hydraulic Permit Approval		WDFW		0	$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT	0		$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE	**0**		$ -

Sub Total	**$ -**	**LS $**
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 79,699,900	$ 4,781,994

Sub Total	**$**	**4,781,994**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**4,782,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	48,600	42	2041200	46.86	$3,514,463

Sub Total	########	**$3,514,463**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$3,515,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	19,000	2	38,000

Sub Total	**38,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**38000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	48,600	1	48,600

Sub Total	**48,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**48600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	48,600	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS SIGNING

DESCRIPTION	Length FT	Length Mile	LS PRICE
	48,600	**9.20**	$376,200
			$0
			$0
			$0

Sub Total	**$376,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$377,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	48,600	0	0

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	48,600	0	0	0

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
ITS Traveler Information	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 84,481,900	$ 8,448,190

Sub Total	**$**	**8,448,190**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**8,448,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 92,930,100	$ 1,858,602

Sub Total	**$ 1,858,602**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 1,858,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble Strip	**$25,200**
pavement marking	583200
training	2500
traffic control labor and safety	**$7,524,000.00**
shoring or extra excavation	**$48,000**
trimming	150500
soil residual herbicide	518000
planing bituminous pavement	324000
unsuitable foundation excavation	125000
Sub Total	**$9,300,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**$9,301,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	MAS
		Checked By:	0

Segment 1

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 8.51 88th St Interchange	Date of Cost Index:	2006
	add eb lane, new ramp connectors	Calculated By/Entered By:	JLMR
	project 47	Checked By:	JAT

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	13.6	$81,600
		REMOVING EXISTING PAVEMENT	SY	$10	-	$0
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	44,500	$890,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	2,400	$60,000
		BORROW INCL. HAUL	TON	$16	18,600	$297,600
		EMBANKMENT COMPACTION	CY	$2	10,000	$20,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	350,000	$2,100,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	77	$92,400
		CATCH BASIN TYPE 2	EA	$2,200	21	$46,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	14,630	$658,350
		STRUCTURE EXCAVATION CL. B	CY	$15	10,900	$163,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$2,150,000	1	$2,150,000
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	30,000	$1,950,000
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	26,400	$1,716,000
		CRUSHED SURFACING	TON	$25	19,400	$485,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	8,900	$133,500
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	16.7	$33,400
		WETLAND MITIGATION	LS	$737,000	1	$737,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$819,000	1	$819,000
		LANDSCAPING	LS	$1,086,000	1	$1,086,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	2,400	$48,000
		CONCRETE BARRIER	LF	$65	2,400	$156,000
		SIGNAL SYSTEMS	LS	$500,000	1	$500,000
		ILLUMINATION	LS	$213,000	1	$213,000
		SIGNING	LS	$15,000	1	$15,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 8.51 88th St Interchange	Date of Cost Index:	2006
	add eb lane, new ramp connectors	Calculated By/Entered By:	JLMR
	project 47	Checked By:	JAT

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$1,446,200	1	$1,446,200
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$318,200	1	$318,200
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$4,867,800	1	$4,867,800
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$21,093,750**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$2,109,400	1	$2,109,400
9		**SUBTOTAL (ITEMS 7 & 8)**				**$23,203,150**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$2,157,900	1	$2,157,900
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$25,361,050**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$3,805,000	1	$3,805,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$29,166,050**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$8,749,900	1	$8,749,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$145,900	1	$145,900
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$38,170,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$66,940,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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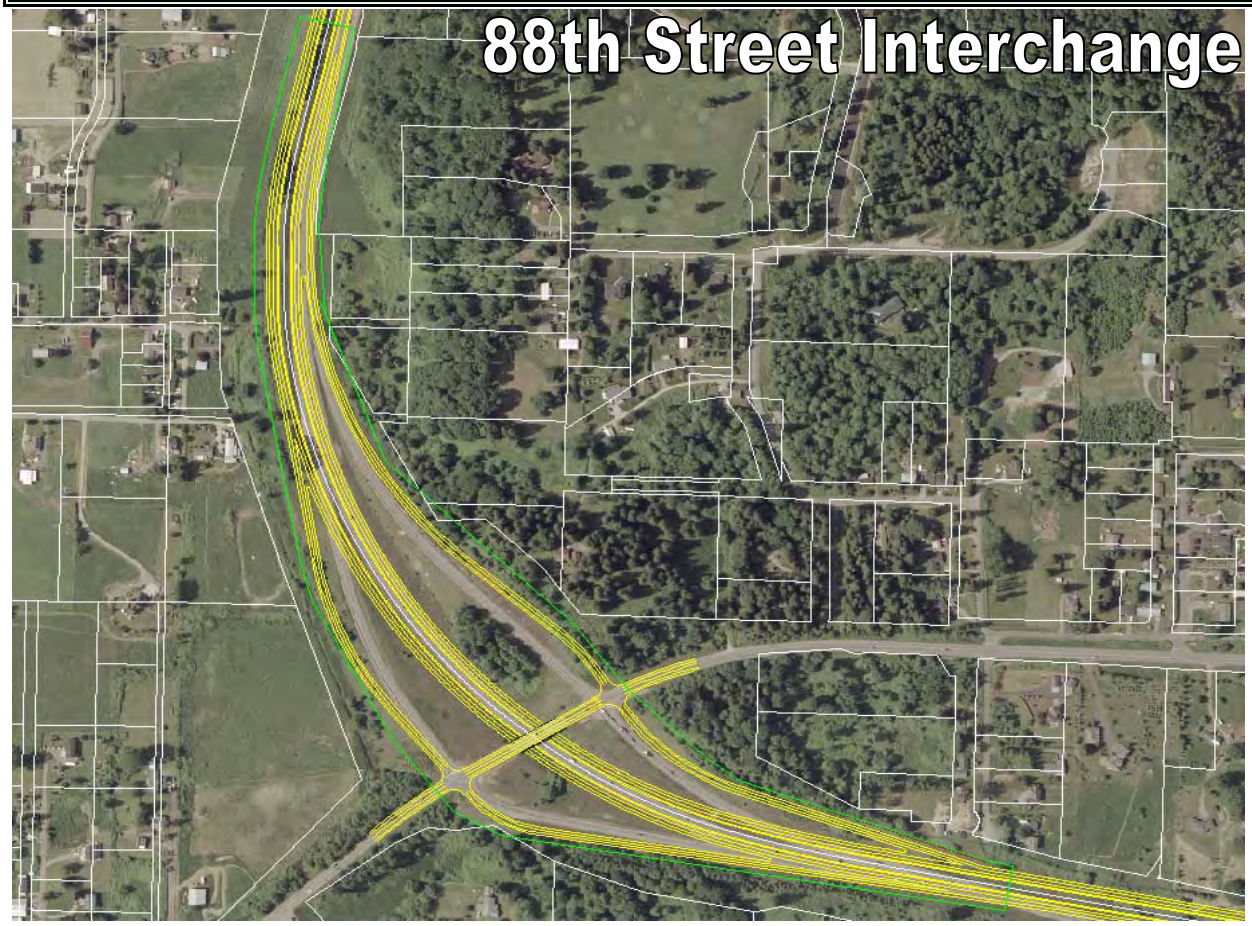
PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 8.51 88th St Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1



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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 1
Location mp 8.51 88th St Interchange

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: JLMR
Checked By: JAT

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	**Design**
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	Assumption for:	**ROAD DESIGN SPEED**
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	**Roadway Horizontal Alignment**
4	Assumption for:	**Roadway Vertical Alignment**
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	Assumption for:	**Existing cross section**
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	**Proposed cross section**
		Mainline travel lanes: 12'
		Mainline shoulders: 8'
		Mainline median 10'
		Ramp lanes: 12'
		Ramp shoulder: 8'
7	Assumption for:	**Walls**
		Walls shall be placed to minimize right of way take
		Confined area so use MSE wall with precast panels. Use $65 (WSDOT Bridge Design Manual Section 12 - Conservatively)
		Approach on fill requires conc. barrier on top of wall. Use $210/lf (WSDOT Bridge Design Manual Section 12 - Mid Range)
8	Assumption for:	**Signal/Illumination**
9	Assumption for:	**Pavement**
		0.9' HMA
		0.7' CSBC
10	Assumption for:	**Storm Drainage**
		Assume 1 CB every 200'
		Assume minimum cover is required because ramps are on fill with good grade.

ESTIMATING ASSUMPTIONS

I.		**RIGHT OF WAY**
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
II.		**CONSTRUCTION**
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 1
Location mp 8.51 88th St Interchange

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
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Segment 1

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	mp 8.51 88th St Interchange

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Corridor Section:	Segment 1	Date:	39098
Location:	mp 8.51 88th St Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 1

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		
Lot XYZ		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality		0.0
Wetland Mitigation		

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations		
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration		
	0	All properties acquired will require administration (title search, etc.)

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION Area Measured in AutoCAD	**(SF)**	**AREA by2**	**(ACRE)**
NW Ramp	241,635	1	5.6
NE Ramp	131,897	1	3.1
SW Ramp	82,750	1	1.9
SE Ramp	130,292	1	3.0
NW Median	34,246	1	0.8
NE Median	55,451	1	1.3
SW Median	27,681	1	0.7
SE Median	21,957	1	0.6

Sub Total	**13.6**
Uncertainty Factor (U_f)	**1**
TOTAL	**13.6**

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		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION

	AREA (SF)	AREA (SY)
Remove all existing pavement		0
Less Median Areas		0
Sub Total		**0**
Uncertainty Factor (U_f)		**1**
TOTAL		**0**

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Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date: 01/16/07
Location:	mp 8.51 88th St Interchange	Date of Cost Index: 2006
		Calculated By/Entered By: JLMR
		Checked By: JAT

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	AREA (SF)	DEPTH (FT)	VOLUME (CF)	VOLUME (CY)
Remove All Existing Pavement	521954	2.0	1043908	38663

Sub Total	**38,663**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**44,500**	**CY**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date: 01/16/07
Location:	mp 8.51 88th St Interchange	Date of Cost Index: JLMR
		Calculated By/Entered By:
		Checked By: JAT

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION		FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	NW Ramp	2823	3.0	2	16,936	627
	NE Ramp	2689	3.0	2	16,134	598
	SW Ramp	1857	3.0	2	11,141	413
	SE Ramp	1444	3.0	2	8,663	321

Sub Total	**1,958**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**2,400**	

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		Checked By:	

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
NW Ramp	30	300	13	0	28,125	1,042	1,930	1,042
NE Ramp	30	300	13	0	28,125	1,042	1,930	1,042
SW Ramp	30	300	13	0	28,125	1,042	1,930	1,042
SE Ramp	30	300	13	0	28,125	1,042	1,930	1,042
Approaching 88th Street								
NW Ramp	15	300	25	0	28,125	1,042	1,930	1,042
NE Ramp	15	300	25	0	28,125	1,042	1,930	1,042
SW Ramp	15	300	25	0	28,125	1,042	1,930	1,042
SE Ramp	15	300	25	0	28,125	1,042	1,930	1,042

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**15,440**	**8,333**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**18,600**	**10,000**

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Segment 1

SF DETENTION & TREATMENT

DESCRIPTION	**AREA (SF)**
New Road on Northern Side Less Medians	170000
New Road on Southern Side Less Median	180000
Area of New Impervious Area	350,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	154,000	CF
Prorated Water Quality Volume Required	30100	CF
Detention Bottom Area (based on 3' depth)	51333.33333	SF
WQ Surface Area (Based on 3' WQ depth)	10033.33333	SF
Greater of Detention and WQ areas	51333.33333	SF
Pond Bottom Length (3:1 aspect ratio)	392	FT
Pond Bottom Width	131	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	416	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	437	FT
Pond Length at Outside to of Berm (4' @2:1)	**453**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	155	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	176	FT
Pond Width at Outside to of Berm (4' @2:1)	**192**	**FT**

Pond Footprint Dimensions	200 x460		FTxFT
Pond Footprint Area	**92,000**	**SF**	
	2.11	Ac.	

Sub Total	**350,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**350,000**

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Segment 1

DRAINAGE

Drainage estimate is based on the length of ramp/road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

Assume ramps are super elevated and/or built with no crown so conveyance on one side only.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Along US-2	4484		4,484	23	6
Along NW Ramp	2823		2,823	15	4
Along NE Ramp	2689		2,689	14	4
Along SW Ramp	1857		1,857	10	3
Along SE Ramp	1444		1,444	8	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**13,297**	**70**	**19**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**14,630**	**77**	**21**

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Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
Along US-2	4484	4.0	5	89,690	3,322
Along NW Ramp	2823	4.0	5	56,453	2,091
Along NE Ramp	2689	4.0	5	53,780	1,992
Along SW Ramp	1857	4.0	5	37,135	1,375
Along SE Ramp	1444	4.0	5	28,878	1,070

Sub Total	**9,849**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**10,900**

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Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(LS)	
CONCRETE BRIDGE					
Bridge No. 2/12 - PCB			0	2150000	Replacement

Sub Total	**0**	**SF**	**2,150,000**
Uncertainty Factor (U_f)	**1.1**		**1**
TOTAL	**0**	**SF**	**2,150,000**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
NW Ramp	600	0 FT	25 FT	7500	1	7500
NE Ramp	600	0 FT	25 FT	7500	1	7500
SW Ramp	600	0 FT	25 FT	7500	1	7500
SE Ramp	600	0 FT	25 FT	7500	1	7500

Sub Total	**30,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**30,000**

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		Checked By:	JAT

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 1

TON **HOT MIX ASPHALT**

ramp width = 30

20' widening on US 2

DESCRIPTION	**AREA (SF)**	**DEPTH (FT)**	**(CF)**	**VOLUME (CY)**	**(TON)**
New Road on Northern Side	170000	0.9	153000	5667	11617
New Road on Southern Side	180000	0.9	162000	6000	12300

Sub Total	**23917**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**26400**	**TON**

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Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
New Road on Norther	170000	0.7	119000	4407	8154
0	0	0.7	0	0	0
New Road on Souther	180000	0.7	126000	4667	8633
0	0	0.7	0	0	0

Sub Total	**16787**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**19400**	**TON**

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		Checked By:	JAT

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Ramp	2823	1	2,823
NE Ramp	2689	1	2,689
SW Ramp	1857	1	1,857
SE Ramp	1444	1	1,444

Sub Total	**8,812**	**LF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**8900**	

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Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Assume 20' strip for length of project for Clear and Grub	725,908	16.7

Sub Total	**16.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**16.7**

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		Checked By:	JAT

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Buffer		1	0
Wetland	7833	1	7833

Sub Total	**7833**	**SF**
@	**$94.00**	**per SF**
Sub Total $	**$736,302**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$737,000**	**LS $**

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$94.00**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$737,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 13,642,550	$	818,553

Sub Total	**$**	**818,553**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**819,000**

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Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION		AREA (SF)	LS PRICE
	NW Median	147757	$254,403
	NE Median	268087	$461,582
	SW Median	112335	$193,415
	SE Median	102288	$176,115
	Sub Total		**$1,085,515**
	Uncertainty Factor (U_f)		**1**
	TOTAL		**$1,086,000**

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Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
NW Ramp	600	1	600
NE Ramp	600	1	600
SW Ramp	600	1	600
SE Ramp	600	1	600

Sub Total	**2,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**2400**

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Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
NW Ramp	600	1	600
NE Ramp	600	1	600
SW Ramp	600	1	600
SE Ramp	600	1	600

Sub Total	**2,400**
Uncertainty Factor (U_f)	**1**
TOTAL	**2400**

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Segment 1

LS **SIGNAL SYSTEM**

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

SIGNAL SYSTEMS

	No. Revised	No. New	LS PRICE
Northeastern Intersection		1	$250,000
Southwestern Intersection		1	$250,000

Sub Total	**$500,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$500,000**

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		Checked By:	

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Along US-2	4484	1	18
Along NW Ramp	2823	1	11
Along NE Ramp	2689	1	11
Along SW Ramp	1857	1	7
Along SE Ramp	1444	1	6

Sub Total	**53**	
@	**4,000**	**EA**
$ Sub Total	**$212,749**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$213,000**	

TOTAL LUMP SUM	**$213,000**

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Segment 1

LS **SIGNING**

DESCRIPTION	LS PRICE
Lump Sum for Intersection	$15,000

Sub Total	**$15,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$15,000**

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Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Cement Conc Curb & Gutter	0	2	0
Extruded Curb	0	1	0
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
	0		0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 1

	LS	SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 8.51 88th St Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 14,461,550	$ 1,446,155

Sub Total	**$ 1,446,155**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 1,446,200**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 8.51 88th St Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	JAT

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 15,907,750	$ 318,155

Sub Total	**$**	**318,155**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**318,200**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 8.51 88th St Interchange	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	JAT

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 8.51 88th St Interchange	Date of Cost Index:	2006
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Segment 1

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
	realign intersection, add lanes, consolidate driveways	Calculated By/Entered By:	JLMR
	project 48	Checked By:	KAH

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	6,500	$292,500
		RIGHT OF WAY (urban undeveloped)	SF	$20	16,000	$320,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	2	$30,000
		RIGHT OF WAY TOTAL				**$642,500**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	2.1	$12,600
		REMOVING EXISTING PAVEMENT	SY	$10	1,300	$13,000
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,000	$40,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	200	$5,000
		BORROW INCL. HAUL	TON	$16	4,400	$70,400
		EMBANKMENT COMPACTION	CY	$2	2,400	$4,800
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	22,000	$132,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	5	$6,000
		CATCH BASIN TYPE 2	EA	$2,200	3	$6,600
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	-	$0
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	660	$29,700
		STRUCTURE EXCAVATION CL. B	CY	$15	600	$9,000
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	3,400	$221,000
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	1,700	$110,500
		CRUSHED SURFACING	TON	$25	1,300	$32,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	800	$12,000
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	2.1	$4,200
		WETLAND MITIGATION	LS	$19,000	1	$19,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$47,000	1	$47,000
		LANDSCAPING	LS	$0	1	$0
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	400	$8,000
		CONCRETE BARRIER	LF	$65	400	$26,000
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$6,000	1	$6,000
		SIGNING	LS	$5,000	1	$5,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
	realign intersection, add lanes, consolidate driveways	Calculated By/Entered By:	JLMR
	project 48	Checked By:	KAH

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$83,100	1	$83,100
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$18,300	1	$18,300
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$279,600	1	$279,600
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,211,300**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$121,200	1	$121,200
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,332,500**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$124,000	1	$124,000
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$1,456,500**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$219,000	1	$219,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,675,500**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$502,700	1	$502,700
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$8,400	1	$8,400
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$2,940,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2005	2006	**$2,860,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location mp 10.08 Westwick Road	Date of Cost Index: 2006
	Calculated By/Entered By: JLMR
	Checked By: KAH

Segment 1

DESIGN ASSUMPTIONS

1	**Assumption for:**	**Design**
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	**Assumption for:**	**ROAD DESIGN SPEED**
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	**Assumption for:**	**Roadway Horizontal Alignment**
4	**Assumption for:**	**Roadway Vertical Alignment**
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	**Assumption for:**	**Existing cross section**
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	**Assumption for:**	**Proposed cross section**
		Mainline travel lanes: 12'
		Mainline shoulders: 8'
		Mainline median 10'
		Connector lanes: 12'
		Connector shoulder: 6'
7	**Assumption for:**	**Walls**
		Walls shall be placed to minimize right of way take
		Confined area so use MSE wall with precast panels. Use $65 (WSDOT Bridge Design Manual Section 12 - Conservatively)
		Approach on fill requires conc. barrier on top of wall. Use $210/lf (WSDOT Bridge Design Manual Section 12 - Mid Range)
8	**Assumption for:**	**Signal/Illumination**
		Illumination System at Interchanges.
9	**Assumption for:**	**Pavement**
		0.9' HMA
		0.7' CSBC
10	**Assumption for:**	**Storm Drainage**
		Assume 1 CB every 200'
		Assume minimum cover is required because ramps are on fill with good grade.

ESTIMATING ASSUMPTIONS

I.		**RIGHT OF WAY**
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
II.		**CONSTRUCTION**
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 1
Location mp 10.08 Westwick Road

Client: WSDOT
Date: 39098
Date of Cost Index: 2006
Calculated By/Entered By: JLMR
Checked By: KAH

Segment 1

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	mp 10.08 Westwick Road

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA	
Urban Developed	**(SF)**	**(ACRE)**
NE corner	6,453	0.2

Sub Total	**6,453**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**6,500**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	16,000	0.4
Wetland Mitigation		

Sub Total	**16,000**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**16,000**	**SF**

DESCRIPTION	ROW ACQUISITION AREA	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE	
Administration	**(EA)**	
	2	All properties acquired will require administration (title search, etc.)

Sub Total	**2**	**EA**
	1.0	
TOTAL	**2**	

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION Area Measured in AutoCAD	**(SF)**	**AREA by2**	**(ACRE)**
Southwest of US 2	7,500	1	0.2
Westwick	80,230	1	1.9
		1	0.0

Sub Total	**2.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**2.1**

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Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION

	AREA (SF)	AREA (SY)
Remove westwick	11,550	1,283

Sub Total	**1,283**
Uncertainty Factor (U_f)	**1**
TOTAL	**1,300**

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Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Location:	mp 10.08 Westwick Road	Date of Cost Index: 2006
		Calculated By/Entered By: JLMR
		Checked By: KAH

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	**AREA (SF)**	**DEPTH (FT)**	**VOLUME (CF)**	**(CY)**
Existing Roadway	7500	2.0	15000	556
westwick	11550	2	23100	856
driveway	3840	2	7680	284
		Sub Total	**1,696**	**CY**
		Uncertainty Factor (U_f)	**1.15**	
		TOTAL	**2,000**	**CY**

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Corridor Section:	Segment 1	Date: 01/16/07
Location:	mp 10.08 Westwick Road	Date of Cost Index: JLMR
		Calculated By/Entered By:
		Checked By: KAH

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
Wall on Southwest side of US 2	373	3.0	2	2,235	83
Wall on east side of westwick	150	3.0	2	900	33

Sub Total	**116**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**200**	

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		Checked By:	KAH

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

Fill assumed for shoulder widening

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Southwest side of US 2	20	373	5	5	18,625	690	1,280	690
westwick	35	100	5	5	17,500	648	1,200	648
driveway	12	320	5	5	19,200	711	1,320	711

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**3,800**	**2,049**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**4,400**	**2,400**

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		Checked By:	KAH

Segment 1

SF DETENTION & TREATMENT

DESCRIPTION	**AREA (SF)**
Area of New Impervious Area	21,990

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	9,676	CF
Prorated Water Quality Volume Required	1891.14	CF
Detention Bottom Area (based on 3' depth)	3225.2	SF
WQ Surface Area (Based on 3' WQ depth)	630.38	SF
Greater of Detention and WQ areas	3225.2	SF
Pond Bottom Length (3:1 aspect ratio)	98	FT
Pond Bottom Width	33	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	122	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	143	FT
Pond Length at Outside to of Berm (4' @2:1)	**159**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	57	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	78	FT
Pond Width at Outside to of Berm (4' @2:1)	**94**	**FT**

Pond Footprint Dimensions	100 x160		FTxFT
Pond Footprint Area	**16,000**	**SF**	
	0.37	Ac.	

Sub Total	**21,990**
Uncertainty Factor (U_f)	**1**
TOTAL	**22,000**

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Segment 1

DRAINAGE

Drainage estimate is based on the length of ramp/road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

Assume ramps are super elevated and/or built with no crown so conveyance on one side only.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Along US-2	373		373	2	1
Along Westwick Road	225		225	2	1

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**0**	**598**	**4**	**2**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**0**	**660**	**5**	**3**

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		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
Along US-2	373	4.0	5	7,460	276
Along Westwick Road	330	4.0	5	6,600	244

Sub Total	**521**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**600**

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		Checked By:	KAH

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
CONCRETE BRIDGE			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

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		Checked By:	KAH

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
Northeast side of US 2	373	0 FT	10 FT	1870	1	1870
westwick	150	0	10	750	2	1500

Sub Total	**3,370**
Uncertainty Factor (U_f)	**1**
TOTAL	**3,400**

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		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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Segment 1

TON HOT MIX ASPHALT

us2 addn is 20'x330', westwick is 35'x330', driveway is 12'x320

DESCRIPTION	AREA (SF)	DEPTH (FT)	VOLUME (CF)	(CY)	(TON)
New Pavement Area	21990	0.9	19791	733	1503
		0.9	0	0	0

Sub Total	**1503**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**1700**	**TON**

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		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
New Pavement Area	21990	0.7	15393	570	1055
	0	0.7	0	0	0

Sub Total	**1055**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**1300**	**TON**

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Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Southwest of US 2	373	1	373
North of Westwick Road	179	1	179
South of Westwick Road	235	1	235

Sub Total	**786**
Uncertainty Factor (U_f)	**1**
TOTAL	**800**

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Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Assume 20' strip for length of project for Clear and Grub	87,730	2.1

Sub Total	**2.1**
Uncertainty Factor (U_f)	**1**
TOTAL	**2.1**

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Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

Assume 5 ft width for ditches as wetlands

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer			1	0
Wetland	ditch NW	150	1	150
	ditch NE	250	1	250

Sub Total	**400**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$18,365**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$19,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$19,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 783,300	$ 46,998

Sub Total	**$**	**46,998**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**47,000**

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Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length	Width	LS PRICE
			$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
Southwest of US 2	373	1	373

Sub Total	**373**
Uncertainty Factor (U_f)	**1**
TOTAL	**400**

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		Checked By:	KAH

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Southwest of US 2	373	1	373

Sub Total	**373**
Uncertainty Factor (U_f)	**1**
TOTAL	**400**

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Segment 1

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	KAH

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
On southwest side of US 2	373	1	1

Sub Total	**1**	
@	**4,000**	**EA**
$ Sub Total	**$5,968**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$6,000**	

TOTAL LUMP SUM	**$6,000**

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Segment 1

LS **SIGNING**

DESCRIPTION	LS PRICE
Lump Sum for Intersection	$5,000
	$0

Sub Total	**$5,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$5,000**

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		Checked By:	KAH

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Cement Conc Curb & Gutter	0	2	0
Extruded Curb	0	1	0
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

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Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
	0		0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

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Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

	LS	SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

Perteet Inc.
425-252-7700 I 1-800-615-9900
2707 Colby Avenue, Suite 900
Everett, Washington 98201

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 830,300	$ 83,030

Sub Total	**$**	**83,030**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**83,100**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 913,400	$ 18,268

Sub Total	**$**	**18,268**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**18,300**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.08 Westwick Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	01/16/07
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Segment 1

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
	Realign the intersection, add one lane for each direction	Calculated By/Entered By:	JLMR
	project 49	Checked By:	KAH

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	8,800	$176,000
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	1	$15,000
		RIGHT OF WAY TOTAL				**$191,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.8	$4,800
		REMOVING EXISTING PAVEMENT	SY	$10	1,100	$11,000
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$10,000	1	$10,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	-	$0
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	1,100	$17,600
		EMBANKMENT COMPACTION	CY	$2	600	$1,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	9,500	$57,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	3	$3,600
		CATCH BASIN TYPE 2	EA	$2,200	2	$4,400
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	280	$9,800
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	280	$12,600
		STRUCTURE EXCAVATION CL. B	CY	$15	500	$7,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	800	$52,000
		CRUSHED SURFACING	TON	$25	600	$15,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	0.7	$1,400
		WETLAND MITIGATION	LS	$46,000	1	$46,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$32,000	1	$32,000
		LANDSCAPING	LS	$5,000	1	$5,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$250,000	1	$250,000
		ILLUMINATION	LS	$4,000	1	$4,000
		SIGNING	LS	$5,000	1	$5,000
		CURBS	LF	$15	-	$0
		SIDEWALKS	SY	$25	-	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	1/16/2007
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
	Realign the intersection, add one lane for each direction	Calculated By/Entered By:	JLMR
	project 49	Checked By:	KAH

Segment 1

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$55,000	1	$55,000
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$12,100	1	$12,100
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$185,100	1	$185,100
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$802,100**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$80,300	1	$80,300
9		**SUBTOTAL (ITEMS 7 & 8)**				**$882,400**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$82,100	1	$82,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$964,500**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$145,000	1	$145,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$1,109,500**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$332,900	1	$332,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$5,600	1	$5,600
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$1,750,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$1,970,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location mp 10.55 Roosevelt Road	Date of Cost Index: 2006
	Calculated By/Entered By: JLMR
	Checked By: KAH

Segment 1

DESIGN ASSUMPTIONS

1	Assumption for:	**Design**
		We are assuming that Ramp metering will not be installed at on connections at this point.
2	Assumption for:	**ROAD DESIGN SPEED**
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	**Roadway Horizontal Alignment**
4	Assumption for:	**Roadway Vertical Alignment**
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%. Overcrossings will be assumed to be 20' to 25' above lower grades for each level of overcrossing.
5	Assumption for:	**Existing cross section**
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	**Proposed cross section**
		Mainline travel lanes: 12'
		Shoulders: 8'
		Median 10'
7	Assumption for:	**Walls**
		Walls shall be placed to minimize right of way take
		Confined area so use MSE wall with precast panels. Use $65 (WSDOT Bridge Design Manual Section 12 - Conservatively)
		Approach on fill requires conc. barrier on top of wall. Use $210/lf (WSDOT Bridge Design Manual Section 12 - Mid Range)
8	Assumption for:	**Signal/Illumination**
9	Assumption for:	**Pavement**
		0.9' HMA
		0.7' CSBC
10	Assumption for:	**Storm Drainage**
		Assume 1 CB every 200'
		Assume minimum cover is required because ramps are on fill with good grade.

ESTIMATING ASSUMPTIONS

I.		**RIGHT OF WAY**
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
II.		**CONSTRUCTION**
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Concrete bridge SF is the square footage of the entire new bridge.
		Concrete bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HAM tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 1	Date: 39098
Location mp 10.55 Roosevelt Road	Date of Cost Index: 2006
	Calculated By/Entered By: JLMR
	Checked By: KAH

Segment 1

		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		SC&DI is for the freeway interconnect system for ramp metering and traffic counting.
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 1
Location:	mp 10.55 Roosevelt Road

Segment 1

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

RIGHT OF WAY

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Developed		
Lot XYZ		0.0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (SF)	(ACRE)
Urban Undeveloped		
Detention and Water Quality	8,800	0.3
Wetland Mitigation		

Sub Total	**8,800**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**8,800**	**SF**

DESCRIPTION	ROW ACQUISITION AREA (EA)	
Relocations: Businesses		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Relocations: Residences		
	0	Parcel acquisitions only

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Condemnations		
	0	Assume that 30% of all properties acquired will require condemnations

Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	ROW ACQUISITION TYPE (EA)	
Administration		
	1	All properties acquired will require administration (title search, etc.)

Sub Total	**1**	**EA**
	1.0	
TOTAL	**1**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

ACRE **CLEARING AND GRUBBING**

DESCRIPTION Area Measured in AutoCAD	**(SF)**	**AREA by2**	**(ACRE)**
Southwest of US 2	6,535	1	0.2
North of Roosevelt Road	9,071	1	0.3
South of Roosevelt Road	10,918	1	0.3
	26,524	**Sub Total**	**0.8**
		Uncertainty Factor (U_f)	**1**
		TOTAL	**0.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	AREA (SF)	AREA (SY)
	9,500	1,056
Sub Total		**1,056**
Uncertainty Factor (U_f)		**1**
TOTAL		**1,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	39098
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 1	Date: 01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index: 2006
		Calculated By/Entered By: JLMR
		Checked By: KAH

Segment 1

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	**AREA (SF)**	**DEPTH (FT)**	**VOLUME (CF)**	**(CY)**
roosevelt	9500	2.0	46667	1728

Sub Total	**1,728**	**CY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2,000**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

TON	**BORROW INCL. HAUL**
C.Y.	**EMBANKMENT COMPACTION**

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Southwest side of US 2	20	250	5	5	12,500	463	860	463

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**860**	**463**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**1,100**	**600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

SF DETENTION & TREATMENT

DESCRIPTION	**AREA (SF)**
Area of New Impervious Area	9,500

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	4,180	CF
Prorated Water Quality Volume Required	817	CF
Detention Bottom Area (based on 3' depth)	1393.333333	SF
WQ Surface Area (Based on 3' WQ depth)	272.3333333	SF
Greater of Detention and WQ areas	1393.333333	SF
Pond Bottom Length (3:1 aspect ratio)	65	FT
Pond Bottom Width	22	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	89	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	110	FT
Pond Length at Outside to of Berm (4' @2:1)	**126**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	46	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	67	FT
Pond Width at Outside to of Berm (4' @2:1)	**83**	**FT**

Pond Footprint Dimensions	90 x130		FTxFT
Pond Footprint Area	**11,700**	**SF**	
	0.27	Ac.	

Sub Total	**9,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**9,500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

DRAINAGE

Drainage estimate is based on the length of ramp/road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

Assume ramps are super elevated and/or built with no crown so conveyance on one side only.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Along US-2	250	250	250	2	1

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**250**	**250**	**2**	**1**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**280**	**280**	**3**	**2**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	250	4.0	5	5,000	185
	250	4.0	5	5,000	185

Sub Total	**370**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**500**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
CONCRETE BRIDGE			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	10 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

TON **HOT MIX ASPHALT**

DESCRIPTION	LENGTH	WIDTH	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
New Pavement Area	250	38	9500	0.9	8550	317	649

Sub Total	**649**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**800**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	9500	0.7	6650	246	456

Sub Total	**456**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	252	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Assume 20' strip for length of project for Clear and Grub	26,524	0.7

Sub Total	**0.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.7**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

ENVIRONMENTAL PERMITS - MITIGATION

Assume 5 ft width for ditches as wetlands

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer			1	0
Wetland	ditch SW	750	1	750
	ditch SE	250	1	250

Sub Total	**1000**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$45,914**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$46,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$46,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6 of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 517,900	$ 31,074

Sub Total	**$**	**31,074**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**32,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length	Width	LS PRICE
Medians	**200**	**12**	**$4,132**

Sub Total	**$4,132**
Uncertainty Factor (U_f)	**1**
TOTAL	**$5,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	250	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
roosevelt		1	0
		1	0
		0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

LS **SIGNAL SYSTEM**

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$250,000
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0

Sub Total	**$250,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$250,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2005
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
On southwest side of US 2	250	1	1

Sub Total	**1**	
@	**4,000**	**EA**
$ Sub Total	**$4,000**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$4,000**	

TOTAL LUMP SUM	**$4,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LS SIGNING

DESCRIPTION	LS PRICE
Lump Sum for Intersection	$5,000

Sub Total	**$5,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$5,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Cement Conc Curb & Gutter	0	2	0
Extruded Curb	0	1	0
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SY)
	0		0

Sub Total	**0**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

	LS	SC&DI (ITS)

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 549,900	$ 54,990

Sub Total	**$**	**54,990**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**55,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	JLMR
		Checked By:	KAH

Segment 1

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 604,900	$ 12,098

Sub Total	**$**	**12,098**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**12,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 1	Date:	01/16/07
Location:	mp 10.55 Roosevelt Road	Date of Cost Index:	2006
		Calculated By/Entered By:	
		Checked By:	KAH

Segment 1

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

The Washington State Department of Transportation

Snohomish County RTID Projects

December 12, 2006

US 2 at SR 522 Bypass Phase 1 and Phase 2

Phase 1 - SR 522 Spur

Scope of Work

This project will improve the safety and capacity of the existing US 2 corridor by directly routing traffic between the existing SR 522 corridor and the area of Snohomish County and Monroe that is north of US 2. A two-lane limited-access extension of SR 522 will be constructed to a roundabout intersection that will connect with the future US 2 Bypass. The SR 522 Spur will be approximately 3000 feet long. The roadway will be 44 feet wide, with one 12-foot lane and an 8-foot shoulder in each direction separated by a 4-foot median buffer with rumble strips. The SR 522 spur will be constructed entirely on existing WSDOT right –of-way.

Local road connections will be constructed from the roundabout to 191st Avenue (Galaxy Way) and to the FR7 frontage road that is being constructed by a developer. Improvements at the existing SR 522/US 2 interchange include a new bridge for westbound SR 522 traffic over US 2 and the BNSF railroad tracks and other ramp improvements.

The project will be entirely within City of Monroe corporate limits.

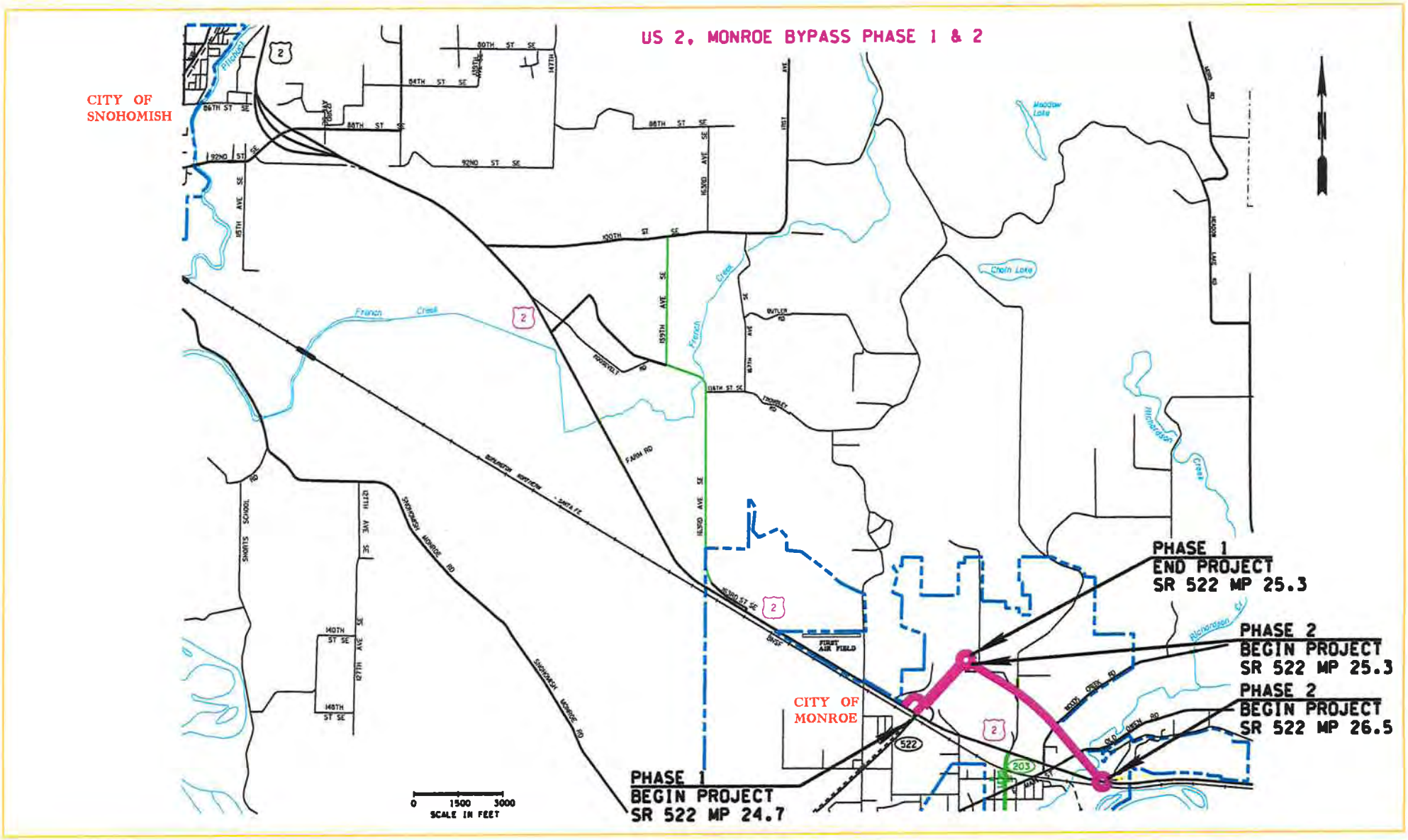
Phase 2 – US 2 at SR 522 Bypass (East)

Scope of Work

Phase 2 will provide additional safety and capacity relief to the existing US 2 corridor by extending a two-lane limited access roadway from the roundabout constructed in Phase 1 to a roundabout on existing US 2 east of Woods Creek at the eastern Monroe city limits. The length of the Phase 2 US 2 Bypass is approximately 6500 feet. As with Phase 1, the roadway will be 44 feet wide, with one 12-foot lane and an 8-foot shoulder in each direction separated by a 4-foot median buffer with rumble strips. This bypass will allow regional traffic from the Skykomish Valley and Stevens Pass to access SR 522 without encountering the congestion and delay that occurs on the existing US 2 corridor through Monroe.

There will not be any at-grade connections between the roundabout at the end of the SR 522 Spur and the roundabout on US 2. Three bridges will be constructed to provide grade-separated crossings with Chain Lake Road, Woods Creek Road, and Old Owen Road. A bridge will also be constructed over Woods Creek.

Part of the project will be on existing WSDOT US 2 Bypass right-of-way. Right-of-way purchase will be necessary in the eastern part of the corridor where the acquisition was not completed as originally envisioned. The project is within City of Monroe corporate limits with the exception of the segment between Woods Creek Road and Old Owen Road, which is within unincorporated Snohomish County.


US 2, MONROE BYPASS PHASE 1 & 2
CITY OF SNOHOMISH
CITY OF MONROE
PHASE 1
END PROJECT
SR 522 MP 25.3
PHASE 2
BEGIN PROJECT
SR 522 MP 25.3
PHASE 2
BEGIN PROJECT
SR 522 MP 26.5
PHASE 1
BEGIN PROJECT
SR 522 MP 24.7
0 1500 3000
SCALE IN FEET
French Creek
Chain Lake
Meadow Lake
Richardson Creek
FIRST AIR FIELD
BURLINGTON NORTHERN - SANTA FE
SNOHOMISH MONROE RD
FARM RD
ROOSEVELT RD
BUTLER RD
SHORTS SCHOOL RD
MOOD CREEK RD
OLD MOOD CREEK RD
522
203
2

Project: US 2 Monroe Bypass						
Project Number:						
DRAFT ESTIMATE: Phase 1 - New SR522 spur from US2 to roundabout						
Prepared by:	**Brian Bailey/Kirk Wilcox (PMX) on 11/30/06**					
Supplemented:						
SAFETY CATEGORY:						
PIN #		Revised PE to 25% and bridge cost to $250.sf - Attila Laszlo 12-7-06				
		Phase 1 - SR 522 Spur Sta 901+50 to Sta 931+00				
I. RIGHT OF WAY						
II. CONSTRUCTION						Year 2006
	1. Preparation					$2,119,200
		Removing Paint Stripe	$0	Remove Catch Basins	$0	
		Removing RPMs	$0	Clearing and grubbing	$38,227	
		Gravel Borrow	$638,206	Roadway Excavation	$1,411,200	
		Remove Asphalt Curb	$0	Rock Cut Excavation/Blasting	$0	
		Remove Guardrail	$0	Grinding Rumble Strip	$8,000	
		Unsuitable Foundation Excav	$23,568			
	2. Structures		$0			$6,297,267
		SR522 WB Ramp Undercrossing	$ 1,620,000.00	Retaining Wall (MSE)	$477,267	
		US2/BNSF Overcrossing	$4,200,000	Noise Walls	$0	
				Tunnels (wildlife)	$0	
	3. Surfacing & Paving					
		Surfacing Type: Shoulder Ballast	$0	Paving Type: Pre-Level	$0	$1,890,144
		Surfacing Type: C.S.B.C.	$229,855	Paving Type: HMA Cl. 1/2"	$1,660,290	
	4. Roadside Development & Drainage					
		Planting	$175,296	Wetland Mitigation	$1,908,287	$3,385,024
		Seeding, Fert., Mulching	$8,765	Stormwater Collect./Treatment	$1,292,675	
		Temp. Water Pol. Control	$1,733,897	Streams & culverts	$0	
	5. Traffic Services & Safety					
		Guardrail	$25,875	Guideposts	$983	$1,801,906
		Intersection control	$450,000	Raised Pavement Markers	$29,500	
		Illumination	$250,000	Asphalt Curb	$41,400	
		Signing	$60,000	Traffic Control	$211,601	
		Striping	$7,080	ITS	$646,667	
		Fencing	$70,800	Rumble Strips	$8,000	
	6. Allowance (20%) for misc Construction Items					$3,098,708
	7. Construction Subtotal - Lines 1 through 6					$18,592,249
	8. Mobilization (10% of Line 7)					$1,859,225
	9. Subtotal (Lines 7 & 8)					$20,451,474
	10. Sales Tax (8.9% of Line 9)					$1,820,181
	11. Other Environmental Permits & Mitigation - Arena Creek					$500,000
	12. Subtotals (Lines 9 through 11)					$22,771,655
	13. Const. Eng. (10% of Line 12)		$2,277,166	Contingencies (4% of Line 12)	$910,866	$3,188,032
	14. State Work Force Below the Line					
	15. Construction Total (Lines 12, 13, 14)					$25,959,687
III. PRELIMINARY ENGINEERING						$5,112,869
TOTAL ESTIMATED COST						**$31,072,556**
Notes:						
1. Estimate based on 2006 Dollars.						

Project: US 2 Monroe Bypass
Project Number:

DRAFT ESTIMATE: Phase 1 - Roundabout to FR7

Prepared by: **Brian Bailey/Kirk Wilcox (PMX) on 11/30/06**
Supplemented:
SAFETY CATEGORY:
PIN # Revised PE to 25% - Attila Laszlo 12-7-06

Phase 1 - Roundabout to FR7

I. RIGHT OF WAY					
II. CONSTRUCTION					Year 2006
1. Preparation					$83,624
	Removing Paint Stripe	$0	Remove Catch Basins	$0	
	Removing RPMs	$0	Clearing and grubbing	$7,496	
	Gravel Borrow	$17,668	Roadway Excavation	$58,460	
	Remove Asphalt Curb	$0	Rock Cut Excavation/Blasting	$0	
	Remove Guardrail	$0	Grinding Rumble Strip	$0	
	Unsuitable Foundation Excav	$0			
2. Structures					$0
			Retaining Wall (MSE)	$0	
			Noise Walls	$0	
3. Surfacing & Paving					$94,511
	Surfacing Type: Shoulder Ballast	$0	Paving Type: Pre-Level	$0	
	Surfacing Type: C.S.B.C.	$12,663	Paving Type: HMA Cl. 1/2"	$81,848	
4. Roadside Development & Drainage					$235,683
	Planting	$33,984	Wetland Mitigation	$0	
	Seeding, Fert., Mulching	$1,699	Stormwater Collect./Treatment	$200,000	
	Temp. Water Pol. Control	$173,390	Streams & culverts	$0	
5. Traffic Services & Safety					$844,817
	Guardrail	$5,450	Guideposts	$167	
	Intersection control	$650,000	Raised Pavement Markers	$5,000	
	Illumination	$100,000	Asphalt Curb	$6,000	
	Signing	$15,000	Traffic Control	$50,000	
	Striping	$1,200	ITS	$0	
	Fencing	$12,000	Rumble Strips	$0	
6. Allowance (20%) for misc Construction Items					$251,727
7. Construction Subtotal - Lines 1 through 6					$1,510,361
8. Mobilization (10% of Line 7)					$151,036
9. Subtotal (Lines 7 & 8)					$1,661,398
10. Sales Tax (8.9% of Line 9)					$147,864
11. Other Environmental Permits & Mitigation [3]					$0
12. Subtotals (Lines 9 through 11)					$1,809,262
13. Const. Eng. (10% of Line 12)		$180,926	Contingencies (4% of Line 12)	$72,370	$253,297
14. State Work Force Below the Line					
15. Construction Total (Lines 12, 13, 14)					$2,062,559
III. PRELIMINARY ENGINEERING					$415,349
TOTAL ESTIMATED COST					**$2,477,908**

Notes:

1. Estimate based on 2006 Dollars.

Project: US 2 Monroe Bypass

Project Number:

DRAFT ESTIMATE: Phase 1 - 191st Ave extension to roundabout

Prepared by: **Brian Bailey/Kirk Wilcox (PMX) on 11/30/06**

Supplemented:

SAFETY CATEGORY:

PIN # Revised PE to 25% - Attila Laszlo 12-7-06

Phase 1 - 191st Ave Sta 0+00 to Sta 14+70

I. RIGHT OF WAY					
II. CONSTRUCTION					Year 2006
1. Preparation					$1,081,324
	Removing Paint Stripe	$0	Remove Catch Basins	$0	
	Removing RPMs	$0	Clearing and grubbing	$7,496	
	Gravel Borrow	$17,668	Roadway Excavation	$1,056,160	
	Remove Asphalt Curb	$0	Rock Cut Excavation/Blasting	$0	
	Remove Guardrail	$0	Grinding Rumble Strip	$0	
	Unsuitable Foundation Excav	$0			
2. Structures					$954,533
			Retaining Wall (MSE)	$954,533	
			Noise Walls	$0	
3. Surfacing & Paving					$277,862
	Surfacing Type: Shoulder Ballast	$0	Paving Type: Pre-Level	$0	
	Surfacing Type: C.S.B.C.	$37,228	Paving Type: HMA Cl. 1/2"	$240,634	
4. Roadside Development & Drainage					$993,832
	Planting	$119,808	Wetland Mitigation	$0	
	Seeding, Fert., Mulching	$5,990	Stormwater Collect./Treatment	$868,034	
	Temp. Water Pol. Control	$693,559	Streams & culverts	$0	
5. Traffic Services & Safety					$952,663
	Guardrail	$11,025	Guideposts	$490	
	Intersection control	$500,000	Raised Pavement Markers	$14,700	
	Illumination	$250,000	Asphalt Curb	$17,640	
	Signing	$20,000	Traffic Control	$100,000	
	Striping	$3,528	ITS	$0	
	Fencing	$35,280	Rumble Strips	$0	
6. Allowance (20%) for misc Construction Items					$852,043
7. Construction Subtotal - Lines 1 through 6					$5,112,257
8. Mobilization (10% of Line 7)					$511,226
9. Subtotal (Lines 7 & 8)					$5,623,482
10. Sales Tax (8.9% of Line 9)					$500,490
11. Other Environmental Permits & Mitigation					$0
12. Subtotals (Lines 9 through 11)					$6,123,972
13. Const. Eng. (10% of Line 12)		$612,397	Contingencies (4% of Line 12)	$244,959	$857,356
14. State Work Force Below the Line					
15. Construction Total (Lines 12, 13, 14)					$6,981,328
III. PRELIMINARY ENGINEERING					$1,405,871
TOTAL ESTIMATED COST					**$8,387,199**

Notes:

1. Estimate based on 2006 Dollars.

Project: US 2 Monroe Bypass
Project Number:

DRAFT ESTIMATE: Phase 2 - US 2 bypasss from Roundabout to existing US2

Prepared by: **Brian Bailey/Kirk Wilcox (PMX) on 11/30/06**
Supplemented:
SAFETY CATEGORY:
PIN # Revised PE to 25% and bridge cost to $250.sf - Attila Laszlo 12-7-06

Phase 2 - Sta 740+00 to Sta 803+00

I. RIGHT OF WAY				$22,217,500
II. CONSTRUCTION				Year 2006
1. Preparation				$6,816,928
Removing Paint Stripe	$0	Remove Catch Basins	$0	
Removing RPMs	$0	Clearing and grubbing	$109,983	
Gravel Borrow	$2,360,945	Roadway Excavation	$4,346,000	
Remove Asphalt Curb	$0	Rock Cut Excavation/Blasting	$0	
Remove Guardrail	$0	Grinding Rumble Strip	$0	
Unsuitable Foundation Excav	$0			
2. Structures				$21,913,867
Chain Lake Overcrossing	$4,800,000	Concrete Girder-US2/RR	$0	
Woods Cr Rd Overcrossing	$3,600,000	Retaining Wall (MSE)	$1,053,867	
Old Owen Rd Overcrossing	$4,800,000	Noise Walls	$460,000	
Woods Creek Overcrossing	$7,200,000	Tunnels (wildlife)	$0	
3. Surfacing & Paving				$1,359,403
Surfacing Type: Shoulder Ballast	$0	Paving Type: Pre-Level	$0	
Surfacing Type: C.S.B.C.	$173,423	Paving Type: HMA Cl. 1/2"	$1,185,980	
4. Roadside Development & Drainage				$4,990,765
Planting - see note 5	$498,624	Wetland Mitigation	$2,510,904	
Seeding, Fert., Mulching	$24,931	Stormwater Collect./Treatment	$1,956,305	
Temp. Water Pol. Control	$1,733,897	Streams & culverts	$0	
5. Traffic Services & Safety				$1,855,648
Guardrail	$47,250	Guideposts	$1,150	
Intersection control	$450,000	Raised Pavement Markers	$34,500	
Illumination	$250,000	Asphalt Curb	$41,400	
Signing	$70,000	Traffic Control	$211,601	
Striping	$8,280	ITS	$646,667	
Fencing	$82,800	Rumble Strips	$12,000	
6. Allowance (20%) for misc Construction Items				$7,387,322
7. Construction Subtotal - Lines 1 through 6				$44,323,932
8. Mobilization (10% of Line 7)				$4,432,393
9. Subtotal (Lines 7 & 8)				$48,756,325
10. Sales Tax (8.9% of Line 9)				$4,339,313
11. Other Environmental Permits & Mitigation - Woods Creek				$1,000,000
12. Subtotals (Lines 9 through 11)				$54,095,638
13. Const. Eng. (10% of Line 12)	$5,409,564	Contingencies (4% of Line 12)	$2,163,826	$7,573,389
14. State Work Force Below the Line				
15. Construction Total (Lines 12, 13, 14)				$61,669,027
III. PRELIMINARY ENGINEERING				$12,189,081
TOTAL ESTIMATED COST				**$96,075,609**

Notes:
All bridge options require 300' span over the river and a center pier in the river
1. Estimate based on 2006 Dollars. Assume that Kirk's estimate include connections to the new bridge

Aging Form Without Inflation

Lead Agency:	Start Date	End Date

Description: US 2 Bypass - The December 2006 un-inflated cost for the US 2 Monroe Bypass Phase 1 and 2 is $140,000,000 and aged as shown in the lower section (without inflation).

Constant $	YOE $	RTID	New Law	Cur. Law	Nickel	Federal	Local	Unfunded
	140,100,000	140,100,000	0	0	0	0	0	0

Expenditures

	Control Total	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total
Design (PE)	19,100,000	0	0	0	0	0	5,605,934	5,590,617	5,590,617	2,312,831	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19,100,000
Right of way	24,300,000	0	0	0	0	0	0	6,443,501	15,371,750	2,484,749	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,300,000
Construction	96,700,000	0	0	0	0	0	0	0	0	19,352,271	33,097,809	29,232,466	15,017,454	0	0	0	0	0	0	0	0	0	0	0	0	0	96,700,000
Project Total	140,100,000	0	0	0	0	0	5,605,934	12,034,118	20,962,368	24,149,850	33,097,809	29,232,466	15,017,454	0	0	0	0	0	0	0	0	0	0	0	0	0	140,100,000

Revenues

	Control Total	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total
Current Law	0																										0
Nickel	0																										0
TPA	0																										0
RTID	140,100,000	0	0	0	0	0	5,605,934	12,034,118	20,962,368	24,149,850	33,097,809	29,232,466	15,017,454	0	0	0	0	0	0	0	0	0	0	0	0	0	140,100,000
Federal	0																										0
Local	0																										0
Tolls/Other	0																										0
Unfunded	0																										0
Project Total	140,100,000	0	0	0	0	0	5,605,934	12,034,118	20,962,368	24,149,850	33,097,809	29,232,466	15,017,454	0	0	0	0	0	0	0	0	0	0	0	0	0	140,100,000

US 2 Bypass Phase 1																											
Design (PE)	6,900,000	0	0	0	0	0	2,025,180	2,019,647	2,019,647	835,525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,900,000
Right of way	2,100,000	0	0	0	0	0	0	556,846	1,328,423	214,731	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,100,000
Construction	35,000,000	0	0	0	0	0	0	0	0	8,780,774	15,017,585	11,201,641	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35,000,000
Project Total	44,000,000	0	0	0	0	0	2,025,180	2,576,493	3,348,070	9,831,030	15,017,585	11,201,641	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44,000,000
US 2 Bypass Phase 2																											
Design (PE)	12,200,000	0	0	0	0	0	3,580,754	3,570,970	3,570,970	1,477,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,200,000
Right of way	22,200,000	0	0	0	0	0	0	5,886,655	14,043,328	2,270,017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,200,000
Construction	61,700,000	0	0	0	0	0	0	0	0	10,571,497	18,080,224	18,030,825	15,017,454	0	0	0	0	0	0	0	0	0	0	0	0	0	61,700,000
Project Total	96,100,000	0	0	0	0	0	3,580,754	9,457,625	17,614,298	14,318,820	18,080,224	18,030,825	15,017,454	0	0	0	0	0	0	0	0	0	0	0	0	0	96,100,000
	140,100,000	0	0	0	0	0	5,605,934	12,034,118	20,962,368	24,149,850	33,097,809	29,232,466	15,017,454	0	0	0	0	0	0	0	0	0	0	0	0	0	140,100,000

Aging Form With Inflation

Lead Agency:	Start Date	End Date

Description: US 2 Bypass - The December 2006 un-inflated cost for the US 2 Monroe Bypass is $140,000,000 and aged as shown in the lower section (including inflation).

	YOE $	RTID	New Law	Cur. Law	Nickel	Federal	Local	Unfunded
Constant $	140,100,000	159,954,206	0	0	0	0	0	0

Expenditures

	Control Total	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total
Design (PE)	22,256,616	0	0	0	0	0	6,372,936	6,503,512	6,609,795	2,770,373	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,256,616
Right of way	30,758,873	0	0	0	0	0	0	7,826,453	19,625,219	3,307,201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,758,873
Construction	106,938,717	0	0	0	0	0	0	0	0	20,961,584	36,350,528	32,606,593	17,020,012	0	0	0	0	0	0	0	0	0	0	0	0	0	106,938,717
Project Total	159,954,206	0	0	0	0	0	6,372,936	14,329,965	26,235,014	27,039,158	36,350,528	32,606,593	17,020,012	0	0	0	0	0	0	0	0	0	0	0	0	0	159,954,206

Revenues

	Control Total	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total
Current Law	0																										0
Nickel	0																										0
TPA	0																										0
RTID	159,954,206	0	0	0	0	0	6,372,936	14,329,965	26,235,014	27,039,158	36,350,528	32,606,593	17,020,012	0	0	0	0	0	0	0	0	0	0	0	0	0	159,954,206
Federal	0																										0
Local	0																										0
Tolls/Other	0																										0
Unfunded	0																										0
Project Total	159,954,206	0	0	0	0	0	6,372,936	14,329,965	26,235,014	27,039,158	36,350,528	32,606,593	17,020,012	0	0	0	0	0	0	0	0	0	0	0	0	0	159,954,206

US 2 Bypass Phase 1																											
Design (PE)	8,040,348	0	0	0	0	0	2,302,265	2,349,436	2,387,832	1,000,815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,040,348
Right of way	2,658,174	0	0	0	0	0	0	676,360	1,696,007	285,807	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,658,174
Construction	38,483,382	0	0	0	0	0	0	0	0	9,510,973	16,493,453	12,478,957	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38,483,382
Project Total	49,181,904	0	0	0	0	0	2,302,265	3,025,796	4,083,838	10,797,596	16,493,453	12,478,957	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49,181,904
US 2 Bypass Phase 2																											
Design (PE)	14,216,268	0	0	0	0	0	4,070,671	4,154,076	4,221,963	1,769,558	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,216,268
Right of way	28,100,698	0	0	0	0	0	0	7,150,093	17,929,212	3,021,393	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28,100,698
Construction	68,455,335	0	0	0	0	0	0	0	0	11,450,611	19,857,076	20,127,637	17,020,012	0	0	0	0	0	0	0	0	0	0	0	0	0	68,455,335
Project Total	110,772,301	0	0	0	0	0	4,070,671	11,304,168	22,151,176	16,241,562	19,857,076	20,127,637	17,020,012	0	0	0	0	0	0	0	0	0	0	0	0	0	110,772,301
	159,954,206	0	0	0	0	0	6,372,936	14,329,965	26,235,014	27,039,158	36,350,528	32,606,593	17,020,012	0	0	0	0	0	0	0	0	0	0	0	0	0	159,954,206

US 2 Route Development Plan
MP 3.5 to MP 50.0
Bridge Construction Cost Estimate

Bridge No.	Bridge Name	MP	Year	Oper. Rating	Type	Length	Exist. Width	Work Width or Length	Work Type	Feature	Unit Cost /S.F.	Repair Cost	Construction Cost	Engineering Cost	Total Cost
2/ 9	87 TH AVE OC	4.37	1982	F 99	PCB	138	55	20	Widening	87TH AVE.	$230	$0	$634,800	$190,440	$825,240
9/ 124.7	JCT SR 9	5.04	1979	F 99	PTBX	198	63	20	Extension	SR 9 Uxing	$260	$500,000	$827,600	$248,280	$1,075,880
2/ 10	PILCHUCK RIVER BRIDGE	6.37	1983	F 99	POTB	862	41	34	Widening	River Xing	$230	$0	$6,740,840	$2,022,252	$8,763,092
2/ 11	US 2 OC, THREE LAKES RD	7.11	1983	F 60	PCB	219	42	270	Replacement	Road Xing	$200	$0	$2,268,000	$680,400	$2,948,400
2/ 12	US 2 OC, CAMPBELL RD	8.51	1983	F 80	PCB	203	43	250	Replacement	Road Xing	$200	$0	$2,150,000	$645,000	$2,795,000
2/ 17	FRENCH CR	11.41	1948	F 75	CTB	82	41	34	Widening+Repair	Creek Xing	$200	$620,000	$1,177,600	$353,280	$1,530,880
2/ 18	FARM RD OC	11.68	1948	F 75	CS	82	41	34	Widening+Repair	Road Xing	$200	$620,000	$1,177,600	$353,280	$1,530,880
												Total Segment 1	**$14,976,440**	**$4,492,932**	**$19,469,372**
522/ 150	SR 522 UC	14.27	1971	F 57	PCB	351	42	0	Repair	SR 522 Xing	$200	$670,000	$670,000	$201,000	$871,000
2/ 22	WOODS CR	15.37	1950	F 55	CTB	141	35	47	Widening+Repair	Creek Xing	$200	$530,000	$1,855,400	$556,620	$2,412,020
												Total Segment 2	**$2,525,400**	**$757,620**	**$3,283,020**
2/ 26	SULTAN R	22.04	1940	F 31	ST CTB	590	26	69	Replacement	River Xing	$200	$1,750,000	$8,142,000	$2,442,600	$10,584,600
2/ 28	SULTAN MILL POND	23.07	1952	F 50	CTB	117	34	35	Widening	Pond Xing	$200	$0	$819,000	$245,700	$1,064,700
2/ 30	WALLACE R	26.51	1940	F 34	ST CTB	236	26	69	Replacement	River Xing	$200	$0	$3,256,800	$977,040	$4,233,840
												Total Segment 3	**$12,217,800**	**$3,665,340**	**$15,883,140**
2/ 35	SKYKOMISH R	30.28	1932	F 49	ST SG	577	33	45	Replacement	River Xing	$230	$0	$5,971,950	$1,791,585	$7,763,535
2/ 36	BN RR UC (GN)	30.97	1963	N 60	SG	180	-	310	Replacement	RR Xing	$17,000	$0	$5,270,000	$1,581,000	$6,851,000
2/ 37	PROCTOR CR	31.07	1933	F 34	SB	135	31	45	Replacement	Creek Xing	$200	$0	$1,215,000	$364,500	$1,579,500
2/ 38	NO NAME CR	33.34	1933	F 63	CTB	93	31	14	Widening	Creek Xing	$230	$0	$299,460	$89,838	$389,298
2/ 39	ANDERSON CR	34.25	1933	F 55	CTB	93	32	45	Replacement	Creek Xing	$200	$0	$837,000	$251,100	$1,088,100
2/ 40	S FK SKYKOMISH R	35.21	1933	F 39	ST CTB	446	25	45	Replacement	River Xing	$200	$1,750,000	$4,014,000	$1,204,200	$5,218,200
2/ 42	BN RR UC (GN)	35.92	1963	N 60	SG	32	-	52	Extension	RR Xing	$17,000	$0	$884,000	$265,200	$1,149,200
2/ 45	BN RR OC (GN)	38.61	1936	F 57	CTB	257	31	14	Widening	RR Xing	$200	$0	$719,600	$215,880	$935,480
2/ 46	EAGLE FALLS CRK	38.97	1986	F 90	PCS	70	44	5	Widening	Creek Xing	$260	$0	$91,000	$27,300	$118,300
2/ 48	BARCLAY CR	39.96	2003	F 96	SG	178	37	8	Widening	Creek Xing	$340	$0	$484,160	$145,248	$629,408
2/ 49	STREAM	40.08	1986	F 62	PCTB	88	44	5	Widening	Stream Xing	$260	$0	$114,400	$34,320	$148,720
	SNOHOMISH - KING CO LINE														
2/ 101	SLOUGH	40.73	1986	F 99	PCS	70	44	5	Widening	Slough Xing	$260	$0	$91,000	$27,300	$118,300
2/ 102	STREAM	40.99	1986	F 99	PCS	69	44	5	Widening	Stream Xing	$260	$0	$89,700	$26,910	$116,610
2/ 103	STREAM	41.41	1986	F 99	PCS	70	44	5	Widening	Stream Xing	$260	$0	$91,000	$27,300	$118,300
2/ 104	BEAVER CREEK	42.71	1986	F 99	PCS	58	44	5	Widening	Creek Xing	$260	$0	$75,400	$22,620	$98,020
2/ 105	BNRR OVERCROSSING	43.04	1986	F 64	PCB	355	43	5	Widening	RR Xing	$260	$0	$461,500	$138,450	$599,950
2/ 106	STREAM	43.87	1988	F 99	PCS	61	43	5	Widening	Stream Xing	$260	$0	$79,300	$23,790	$103,090
2/ 107	STREAM	44.42	1988	F 75	PCS	61	44	5	Widening	Stream Xing	$260	$0	$79,300	$23,790	$103,090
2/ 108	TUNNEL	45.98	1937	O 99	CTUN	184	35	25	Widening		$260	$0	$1,196,000	$358,800	$1,554,800
2/ 109	STREAM	46.31	1937	W 47	TTT	47	31	14	Widening	Stream Xing	$260	$0	$171,080	$51,324	$222,404
2/ 110	STREAM	46.49	1937	W 48	TTT	77	31	14	Widening	Stream Xing	$260	$0	$280,280	$84,084	$364,364
2/ 111	STREAM	46.76	1937	W 47	TTT	47	31	14	Widening	Stream Xing	$260	$0	$171,080	$51,324	$222,404
2/ 112	SLOUGH	47.27	1989	F 42	PCTB	77	53	0	Widening	Slough Xing	$200	$0	$0	$0	$0
2/ 113	STREAM	47.71	1937	W 47	TTT	45	31	14	Widening	Stream Xing	$260	$0	$163,800	$49,140	$212,940
2/ 114	STREAM	47.91	1937	W 47	TTT	47	31	14	Widening	Stream Xing	$260	$0	$171,080	$51,324	$222,404
2/ 115A	JOHN GLICK HENRY MEM BR	48.68	1939	F 35	ST CTB	279	25	45	Replacement	River Xing	$170	$0	$2,134,350	$640,305	$2,774,655
2/ 116	S FK SKYKOMISH R	49.65	1938	F 29	ST CTB	339	25	45	Replacement	River Xing	$170	$0	$2,593,350	$778,005	$3,371,355
2/118	ANTHRACITE CREEK	50.55	1940	F 27	CTB	45	30	45	Replacement	Creek Xing	$170	$0	$344,250	$103,275	$447,525
												Total Segment 4	**$28,093,040**	**$8,427,912**	**$36,520,952**
												Grand Total			**$75,200,000**

Assumptions:

1. The costs were modified for 2006 dollars.

2. For bridge widening, the bridge areas were computed based on the assumption that the bridge length is unchanged.

3. For bridge extension, the bridge areas were computed based on the assumption that the bridge width is unchanged.

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 12.7-14.57 add wb lane, kelsey through 179th ave.	Calculated By/Entered By:	
	Project 53	Checked By:	

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	0.7	$4,200
		REMOVING EXISTING PAVEMENT	SY	$10	1	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$22,200	1	$22,200
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	2,600	$52,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	3,600	$57,600
		EMBANKMENT COMPACTION	CY	$2	2,000	$4,000
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	30,000	$180,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	15	$18,000
		CATCH BASIN TYPE 2	EA	$2,200	5	$11,000
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	2,750	$96,250
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	2,750	$123,750
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	2,600	$169,000
		CRUSHED SURFACING	TON	$25	2,400	$60,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	1.4	$2,800
		WETLAND MITIGATION	LS	$0	-	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$59,000	1	$59,000
		LANDSCAPING	LS	$52,000	1	$52,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$0	1	$0
		SIGNING	LS	$10,000	1	$10,000
		CURBS	LF	$15	2,800	$42,000
		SIDEWALKS	SY	$25	2,500	$62,500

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 12.7-14.57 add wb lane, kelsey through 179th ave.	Calculated By/Entered By:	
	Project 53	Checked By:	

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$102,700	1	$102,700
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$22,600	1	$22,600
		SPECIAL ITEMS	EST	$145,000	1	$145,000
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$389,000	1	$389,000
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$1,685,610**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$168,600	1	$168,600
9		**SUBTOTAL (ITEMS 7 & 8)**				**$1,854,210**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$172,500	1	$172,500
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$2,026,710**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$609,000	1	$609,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$2,635,710**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$790,800	1	$790,800
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$13,200	1	$13,200
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$3,440,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$3,880,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 2	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 2

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 2	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 2

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY tc
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 2
Location:	snohomish to skykomish

Segment 2

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

ACRE **CLEARING AND GRUBBING**

DESCRIPTION	AREA Length	Width	SF	(ACRE)
	2,500	12	30000	0.7
		sub-total		**0.7**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**0.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**0.7**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$22,200**
Commercial Buildings	**$0**

Sub Total	**$22,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$22,200**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 2	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 2

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	2,500	12	2.0	60000	2222

Sub Total	**2,222**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2,600**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 2	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 2

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	12	2,500	3	3	45,000	1,667	3,090	1,667

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**3,090**	**1,667**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**3,600**	**2,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	2500	12	30,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	13,200	CF
Prorated Water Quality Volume Required	2580	CF
Detention Bottom Area (based on 3' depth)	4400	SF
WQ Surface Area (Based on 3' WQ depth)	860	SF
Greater of Detention and WQ areas	4400	SF
Pond Bottom Length (3:1 aspect ratio)	115	FT
Pond Bottom Width	38	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	139	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	160	FT
Pond Length at Outside to of Berm (4' @2:1)	**176**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	62	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	83	FT
Pond Width at Outside to of Berm (4' @2:1)	**99**	**FT**

Pond Footprint Dimensions	100 x180		FTxFT
Pond Footprint Area	**18,000**	**SF**	
	0.41	Ac.	

Sub Total	**30,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**30,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	2,500	2,500	2,500	13	4

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**2,500**	**2,500**	**13**	**4**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**2,750**	**2,750**	**15**	**5**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	6.0	3	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	2,500	12	30000	1.0	30000	1111	2278

Sub Total	**2278**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2600**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	30000	1.0	30000	1111	2056

Sub Total	**2056**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**2400**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	30,000	0.7
Landscape Area	30000	0.7

Sub Total	**1.4**
Uncertainty Factor (U_f)	**1**
TOTAL	**1.4**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 967,310	$ 58,039

Sub Total	**$**	**58,039**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**59,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	2,500	12	30000	0.69	$51,653

Sub Total	30000.00	**$51,653**
Uncertainty Factor (U_f)		**1**
TOTAL		**$52,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	2,500	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	1,000	**0.19**	$10,000
			$0
			$0
			$0

Sub Total	**$10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$10,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	2,500	1	2,500

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**2,500**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**2800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	2,500	8	1	2,222

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**2,222**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**2,500**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 1,026,310	$ 102,631

Sub Total	**$**	**102,631**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**102,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 1,129,010	$ 22,580

Sub Total	**$**	**22,580**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**22,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble Strip	**$1,200**
unsuitable foundation excavation	**$7,500**
Training	**$2,500**
Soil residual herbicide	**$5,400.00**
pavement marking	**$10,000**
traffic control labor and safety	71000
shoring and extra excavation	40000
trim	7200

Sub Total	**$144,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**$145,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 12.7-15.64 add one lane in each direction	Calculated By/Entered By:	
	Project 54	Checked By:	

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	4.9	$29,400
		REMOVING EXISTING PAVEMENT	SY	$10	1	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$536,600	1	$536,600
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	10,300	$206,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	4,700	$75,200
		EMBANKMENT COMPACTION	CY	$2	2,600	$5,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	121,800	$730,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	63	$75,600
		CATCH BASIN TYPE 2	EA	$2,200	17	$37,400
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	12,540	$438,900
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	12,540	$564,300
		STRUCTURE EXCAVATION CL. B	CY	$15	-	$0
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	10,100	$656,500
		CRUSHED SURFACING	TON	$25	9,300	$232,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	7.7	$15,400
		WETLAND MITIGATION	LS	$0	1	$0
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$260,000	1	$260,000
		LANDSCAPING	LS	$210,000	1	$210,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	-	$0
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$0	1	$0
		SIGNING	LS	$50,000	1	$50,000
		CURBS	LF	$15	12,600	$189,000
		SIDEWALKS	SY	$25	11,200	$280,000

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 12.7-15.64 add one lane in each direction	Calculated By/Entered By:	
	Project 54	Checked By:	

Segment 2

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		ITS FOR HOT-LANES	LS	$0	1	$0
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$459,300	1	$459,300
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$101,100	1	$101,100
		SPECIAL ITEMS	EST	$2,524,000	1	$2,524,000
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$2,303,200	1	$2,303,200
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$9,980,410**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$998,100	1	$998,100
9		**SUBTOTAL (ITEMS 7 & 8)**				**$10,978,510**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$1,021,100	1	$1,021,100
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$11,999,610**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$3,600,000	1	$3,600,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$15,599,610**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$4,679,900	1	$4,679,900
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$78,000	1	$78,000
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$20,360,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$22,920,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 2	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 2

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 2	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 2

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 2
Location:	snohomish to skykomish

Segment 2

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 2		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 2

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	Length	Width	AREA SF	(ACRE)
	5,702	37	210974	4.9
		sub-total		**4.9**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	18	0	6	0	18	0	0.0

sub-total	**0.0**
Sub Total	**4.9**
Uncertainty Factor (U_f)	**1**
TOTAL	**4.9**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$536,600**
Commercial Buildings	**$0**

Sub Total	**$536,600**
Uncertainty Factor (U_f)	**1**
TOTAL	**$536,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 2	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 2

C.Y. ROADWAY EXCAVATION INCL. HAUL

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	5,702	21	2.0	239484	8870

Sub Total	**8,870**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**10,300**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 2	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 2

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	5	7,900	3	3	59,250	2,194	4,060	2,194

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**4,060**	**2,194**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**4,700**	**2,600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	5800	21	121,800

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	53,592	CF
Prorated Water Quality Volume Required	10474.8	CF
Detention Bottom Area (based on 3' depth)	17864	SF
WQ Surface Area (Based on 3' WQ depth)	3491.6	SF
Greater of Detention and WQ areas	17864	SF
Pond Bottom Length (3:1 aspect ratio)	231	FT
Pond Bottom Width	77	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	255	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	276	FT
Pond Length at Outside to of Berm (4' @2:1)	**292**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	101	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	122	FT
Pond Width at Outside to of Berm (4' @2:1)	**138**	**FT**

Pond Footprint Dimensions	140 x300		FTxFT
Pond Footprint Area	**42,000**	**SF**	
	0.96	Ac.	

Sub Total	**121,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**121,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	11,400	11,400	11,400	57	15

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**11,400**	**11,400**	**57**	**15**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**12,540**	**12,540**	**63**	**17**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	6.0	3	0	0
	0	4.0	5	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	5,702	21	119742	1.0	119742	4435	9092

Sub Total	**9092**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**10100**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	118000	1.0	118000	4370	8085

Sub Total	**8085**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**9300**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	210,974	4.9
Landscape Area	121800	2.8

Sub Total	**7.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**7.7**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	0	1	0
	ditch S	0	1	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$0**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$	-
Local Agency Review	CAR, CG, FP	Local Agency		0	$	-
Hydraulic Permit Approval		WDFW		0	$	-
Section 404 Permit (NW or Indiv)		Army Corps			$	-
Shoreline Permit		Local Agency			$	-
NEPA/SEPA + DRs		WSDOT	0		$	-
Coastal Zone Management Certification		DOE			$	-
NPDES		DOE	**0**		$	-
				Sub Total	**$**	**-** **LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$0**	**LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**		**6%**
Total Const items from summary sheet	$ 4,332,810	$	259,969

Sub Total	**$**	**259,969**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**260,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	5,800	21	121800	2.80	$209,711

Sub Total	121800.00	**$209,711**
Uncertainty Factor (U_f)		**1**
TOTAL		**$210,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	5,702	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	5,800	**1.10**	$50,000
			$0
			$0
			$0

Sub Total	**$50,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$50,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	5,702	2	11,404

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**11,404**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**12600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	5,702	8	2	10,137

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**10,137**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**11,200**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 4,592,810	$ 459,281

Sub Total	**$**	**459,281**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**459,300**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 5,052,110	$ 101,042

Sub Total	**$**	**101,042**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**101,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble Strip	**$0**
unsuitable foundation excavation	**$100,000**
Training	**$2,500**
Soil residual herbicide	**$62,000.00**
pavement marking	**$196,000**
traffic control labor and safety	1200000
shoring and extra excavation	640000
trim	240000
cement conc. Driveway	83000
Sub Total	**$2,523,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$2,524,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 2	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 2

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS

CHANGE UNIT COSTS ON THIS SHEET

CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	30%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 15.6-30.1 widen to four lanes	Calculated By/Entered By:	
	Project 55	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	-	$0
		RIGHT OF WAY (urban undeveloped)	SF	$20	-	$0
		RELOCATIONS: BUSINESSES	EA	$150,000	-	$0
		RELOCATIONS: RESIDENCES	EA	$110,000	-	$0
		CONDEMNATION PROCEDURE	EA	$100,000	-	$0
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	-	$0
		RIGHT OF WAY TOTAL				**$0**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	32.9	$197,400
		REMOVING EXISTING PAVEMENT	SY	$10	1	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$3,412,800	1	$3,412,800
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	121,900	$2,438,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	39,100	$625,600
		EMBANKMENT COMPACTION	CY	$2	21,100	$42,200
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	1,430,000	$8,580,000
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	193	$231,600
		CATCH BASIN TYPE 2	EA	$2,200	49	$107,800
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	38,500	$1,347,500
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	38,500	$1,732,500
		STRUCTURE EXCAVATION CL. B	CY	$15	14,700	$220,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$0	-	$0
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$0	-	$0
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	-	$0
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	-	$0
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	119,500	$7,767,500
		CRUSHED SURFACING	TON	$25	112,700	$2,817,500
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	65.8	$131,600
		WETLAND MITIGATION	LS	$10,102,000	1	$10,102,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$2,619,000	1	$2,619,000
		LANDSCAPING	LS	$2,463,000	1	$2,463,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	42,000	$840,000
		CONCRETE BARRIER	LF	$65	-	$0
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$0	1	$0
		SIGNING	LS	$334,000	1	$334,000
		CURBS	LF	$15	6,600	$99,000
		SIDEWALKS	SY	$25	5,900	$147,500
		ITS FOR HOT-LANES	LS	$0	1	$0

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	snohomish to skykomish	Date of Cost Index:	2006
	mp 15.6-30.1 widen to four lanes	Calculated By/Entered By:	
	Project 55	Checked By:	

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$4,625,800	1	$4,625,800
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$1,017,700	1	$1,017,700
		SPECIAL ITEMS	EST	$11,521,000	1	$11,521,000
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$19,026,500	1	$19,026,500
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$82,448,010**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$8,244,900	1	$8,244,900
9		**SUBTOTAL (ITEMS 7 & 8)**				**$90,692,910**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$8,434,500	1	$8,434,500
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$99,127,410**
13		**CONSTRUCTION**				
		ENGINEERING (30% OF ITEM 12)	EST	$29,739,000	1	$29,739,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$128,866,410**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$38,660,000	1	$38,660,000
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$644,400	1	$644,400
		ENVIRONMENTAL PERMITS	EST	$0	1	$0
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$168,180,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2010	2006	**$189,290,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Medians: 12'
		Mainline Shoulders: 6'
		Turn lane: 12'
		Sidewalk: 6'
		Parking: 8'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Specia consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING
		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT

PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location snohomish to skykomish	Date of Cost Index: 2006
	Calculated By/Entered By: 0
	Checked By: 0

Segment 3

		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan
Corridor Section:	Segment 3
Location:	snohomish to skykomish

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
turn around	0	0.0
Additional 10' of R/W from east of 5th to almostMain	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	0	0.0
Wetland Mitigation	0	
Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**0**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	0	Parcel acquisitions only
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	0	Assume that 30% of all properties acquired will require condemnations
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	0	All properties acquired will require administration (title search, etc.)
Sub Total	**0**	**EA**
	1.0	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan		Client: WSDOT
Corridor Section:	Segment 3		Date: 39098
Location:	snohomish to skykomish		Date of Cost Index: 2006
			Calculated By/Entered By: 0
			Checked By: 0

Segment 3

ACRE **CLEARING AND GRUBBING**

DESCRIPTION

	AREA			
	Length	**Width**	**SF**	**(ACRE)**
	55,000	26	1430000	32.9
		sub-total		**32.9**

DETENTION PONDS

	BOTTOM OF POND					TOP OF POND		
POND LOCATION	**LENGTH (FT)**	**WIDTH (FT)**	**SIDE SLOPES 1 : H**	**HEIGHT (FT)**	**LENGTH (FT)**	**WIDTH (FT)**	**AREA (SF)**	**AREA (ACRE)**
	0	18	0	6	0	18	0	0.0
							sub-total	**0.0**

Sub Total	**32.9**
Uncertainty Factor (U_f)	**1**
TOTAL	**32.9**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SY **REMOVING EXISTING PAVEMENT**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(SY)
	0	12	0	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$3,412,800**
Commercial Buildings	**$0**

Sub Total	**$3,412,800**
Uncertainty Factor (U_f)	**1**
TOTAL	**$3,412,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By: 0

Segment 3

C.Y. **ROADWAY EXCAVATION INCL. HAUL**

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	55,000	26	2.0	2860000	105926

Sub Total	**105,926**	**CY**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**121,900**	**CY**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client: WSDOT
Corridor Section:	Segment 3	Date: 01/16/07
Location:	snohomish to skykomish	Date of Cost Index: 2006
		Calculated By/Entered By: 0
		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
	6	55,000	3	3	495,000	18,333	33,920	18,333

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**33,920**	**18,333**
Uncertainty Factor (U_f)	**1.15**	**1.15**
TOTAL	**39,100**	**21,100**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **DETENTION & TREATMENT**

12' lane + 8' shoulder

DESCRIPTION	Length FT	Width FT	AREA (SF)
	55000	26	1,430,000

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	629,200	CF
Prorated Water Quality Volume Required	122980	CF
Detention Bottom Area (based on 3' depth)	209733.3333	SF
WQ Surface Area (Based on 3' WQ depth)	40993.33333	SF
Greater of Detention and WQ areas	209733.3333	SF
Pond Bottom Length (3:1 aspect ratio)	793	FT
Pond Bottom Width	264	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	817	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	838	FT
Pond Length at Outside to of Berm (4' @2:1)	**854**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	288	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	309	FT
Pond Width at Outside to of Berm (4' @2:1)	**325**	**FT**

Pond Footprint Dimensions	330 x860		FTxFT
Pond Footprint Area	**283,800**	**SF**	
	6.52	Ac.	

Sub Total	**1,430,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**1,430,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	35,000	35,000	35,000	175	44

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**35,000**	**35,000**	**175**	**44**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**38,500**	**38,500**	**193**	**49**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	20,000	6.0	3	360,000	13,333
	0	4.0	5	0	0

Sub Total	**13,333**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**14,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
STEEL THRU TRUSS	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
BRIDGE WIDENING			
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**0**	**SF**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
	0	0 FT	5 FT	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
Bridge No.	0	0	0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	55,000	26	1430000	1.0	1430000	52963	108574

Sub Total	**108574**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**119500**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
	1430000	1.0	1430000	52963	97981

Sub Total	**97981**	**TON**
Uncertainty Factor (U_f)	**1.15**	
TOTAL	**112700**	**TON**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	1,430,000	32.9
Landscape Area	1430000	32.9

Sub Total	**65.8**
Uncertainty Factor (U_f)	**1**
TOTAL	**65.8**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION		APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation				
Wetland Buffer		0	1	0
Wetland	ditch N	220000	1	220000
	ditch S	0	1	0

Sub Total	**220000**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$10,101,010**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$10,102,000**	**LS $**

DESCRIPTION	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Mitigation			
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$10,102,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum
401 Water Quality Certification		DOE			$ -
Local Agency Review	CAR, CG, FP	Local Agency		0	$ -
Hydraulic Permit Approval		WDFW		0	$ -
Section 404 Permit (NW or Indiv)		Army Corps			$ -
Shoreline Permit		Local Agency			$ -
NEPA/SEPA + DRs		WSDOT	0		$ -
Coastal Zone Management Certification		DOE			$ -
NPDES		DOE	**0**		$ -
				Sub Total	**$ -** **LS $**
				Uncertainty Factor (U_f)	**1**
				TOTAL	**$0** **LS $**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 43,638,010	$ 2,618,281

Sub Total	**$ 2,618,281**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 2,619,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
	55,000	26	1430000	32.83	$2,462,121

Sub Total	########	**$2,462,121**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$2,463,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
	42,000	1	42,000

Sub Total	**42,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**42000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
	0	1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)
Section 1	55,000	0	0

Sub Total	**0**	
@	**4,000**	**EA**
$ Sub Total	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL	**$0**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SIGNING**

DESCRIPTION	Length FT	Length Mile	LS PRICE
	55,000	**10.42**	$333,500
			$0
			$0
			$0

Sub Total	**$333,500**
Uncertainty Factor (U_f)	**1**
TOTAL	**$334,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH (LF)**	**NO. OF SIDES**	**TOTAL (LF)**
Cement Conc Curb & Gutter Section 1	6,000	1	6,000

	LENGTH (LF)	**NO. OF SIDES**	**TOTAL (LF)**
Roundabout 1	0	0	0
Roundabout 2	0	0	0
Extruded Curb	0	1	0

Sub Total	**6,000**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**6600**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	6,000	8	1	5,333

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	0	0	0
Roundabout 2	0	0	0

Sub Total	**5,333**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**5,900**	

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	**LS PRICE**
ITS Traveler Information	**$0**
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 46,257,010	$ 4,625,701

Sub Total	**$**	**4,625,701**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**4,625,800**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 50,882,810	$ 1,017,656

Sub Total	**$ 1,017,656**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 1,017,700**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	**LS PRICE**
Rumble Strip	**$57,000**
unsuitable foundation excavation	**$200,000**
Training	**$2,500**
Soil residual herbicide	**$476,700.00**
pavement marking	**$660,000**
traffic control labor and safety	8000000
shoring and extra excavation	256000
trim	1600000
cement conc. Driveway	268000
Sub Total	**$11,520,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**$11,521,000**

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	snohomish to skykomish	Date of Cost Index:	2006
		Calculated By/Entered By:	0
		Checked By:	0

Segment 3

LS **UTILITY RELOCATIONS / AGREEMENTS**

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

UNIT COSTS
CHANGE UNIT COSTS ON THIS SHEET
CHANGE COST PERCENTAGES ON THIS SHEET

		ITEM	UNIT	ESTIMATED UNIT COST
I.		**RIGHT OF WAY**		
		RIGHT OF WAY (urban developed)	SF	$45
		RIGHT OF WAY (urban undeveloped)	SF	$20
		RELOCATIONS: BUSINESSES	EA	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000
		RIGHT OF WAY TOTAL		
II.		**CONSTRUCTION**		
1		**PREPARATION/GRADING/DRAINAGE**		
	1.1	**PREPARATION**		
		CLEAR & GRUB,DEMO	ACRE	$6,000
		REMOVING EXISTING PAVEMENT	SY	$10
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	NA
	1.2	**EARTHWORK**		
		ROADWAY EXCAVATION INCL, HAUL	CY	$20
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25
		BORROW INCL. HAUL	TON	$16
		EMBANKMENT COMPACTION	CY	$2
	1.3	**STORMWATER MITIGATION**		
		DETENTION AND TREATMENT	SF	$6
	1.4	**STORM SEWER**		
		CATCH BASIN TYPE 1	EA	$1,200
		CATCH BASIN TYPE 2	EA	$2,200
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45
		STRUCTURE EXCAVATION CL. B	CY	$15
2		**STRUCTURE**		
		CONCRETE BRIDGES	LS	NA
		CONCRETE BRIDGES WIDENING	LS	NA
		PEDESTRIAN BRIDGES	SF	$400
		STEEL BRIDGES	LS	NA
		BRIDGE ABUTMENT RETROFIT	SF	$150
		RETAINING WALLS (Cast in Place)	SF	$65
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210
		BRIDGE REMOVAL	SF	$30
		NOISE WALLS	SF	$40
3		**SURFACING**		
		PORTLAND CEMENT CONCRETE	SF	$10
		HOT MIX ASPHALT	TON	$65
		CRUSHED SURFACING	TON	$25
4		**ROADSIDE DEVELOPMENT**		
		FENCING	LF	$15
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000
		ENVIRONMENTAL PERMITS AND MITIGATION	LS	NA
		TEMPORARY WATER POLLUTION & EROSION CONTROL	LS	6%
		LANDSCAPING	LS	NA
5		**TRAFFIC**		
		GUARD RAIL	LF	$20
		CONCRETE BARRIER	LF	$65
		SIGNAL SYSTEMS	LS	NA
		ILLUMINATION	LS	NA
		SIGNING	LS	NA
		CURBS	LF	$15
		SIDEWALKS	SY	$25
		ITS FOR HOT-LANES	LS	NA
		SC&DI (ITS)	LS	NA
		TRAFFIC CONTROL	LS	10%
5.1		**OTHER ITEMS**		
		SURVEYING	LS	2%
		SPECIAL ITEMS	EST	NA
		UTILITY RELOCATIONS	EST	NA
6		**MISCELLANEOUS**	LS	30%
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**		
8		**MOBILIZATION**		
		MOBILIZATION	EST	10%
9		**SUBTOTAL (ITEMS 7 & 8)**		
10		**SALES TAX**		
		SALES TAX	EST	9.3%
11		**AGREEMENTS (Utilities, WSP, etc.)**		
			EST	NA
12		**SUBTOTAL (ITEMS 9 THRU 11)**		
13		**CONSTRUCTION**		
		ENGINEERING	EST	15%
		ENVIRONMENTAL COMPLIANCE	EST	0%
		DIRECT PROJECT SUPPORT	EST	0%
		PROGRAM MANAGEMENT - DURRING CONST.	EST	0%
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**		
III.		**PRELIMINARY ENGINEERING**		
		PROJECT ENGINEERING	EST	30%
		PROGRAM MANAGEMENT - PRE CONSTRUCTION	EST	0%
		REGIONAL ITS FACILITY	EST	0.5%
		ENVIRONMENTAL PERMITS		NA
		INFLATION RATE	%	3.00%

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	mp 21.42-24.44 Sultan (4 Lane)	Date of Cost Index:	2006
	Includes Roundabouts	Calculated By/Entered By:	GLW
	project 56	Checked By:	JAT

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.		**RIGHT OF WAY**				
		RIGHT OF WAY (urban developed)	SF	$45	23,600	$1,062,000
		RIGHT OF WAY (urban undeveloped)	SF	$20	140,700	$2,814,000
		RELOCATIONS: BUSINESSES	EA	$150,000	1	$150,000
		RELOCATIONS: RESIDENCES	EA	$110,000	1	$110,000
		CONDEMNATION PROCEDURE	EA	$100,000	5	$500,000
		ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	$15,000	15	$225,000
		RIGHT OF WAY TOTAL				**$4,861,000**
II.		**CONSTRUCTION**				
1		**PREPARATION/GRADING/DRAINAGE**				
	1.1	**PREPARATION**				
		CLEAR & GRUB,DEMO	ACRE	$6,000	11.9	$71,400
		REMOVING EXISTING PAVEMENT	SY	$10	1,600	$16,000
		REMOVAL STRUCTURES & OBSTRUCTIONS	LS	$60,000	1	$60,000
	1.2	**EARTHWORK**				
		ROADWAY EXCAVATION INCL, HAUL	CY	$20	17,600	$352,000
		STRUCTURE EX. CL. A INCL. HAUL	CY	$25	-	$0
		BORROW INCL. HAUL	TON	$16	54,000	$864,000
		EMBANKMENT COMPACTION	CY	$2	29,200	$58,400
	1.3	**STORMWATER MITIGATION**				
		DETENTION AND TREATMENT	SF	$6	542,800	$3,256,800
	1.4	**STORM SEWER**				
		CATCH BASIN TYPE 1	EA	$1,200	58	$69,600
		CATCH BASIN TYPE 2	EA	$2,200	17	$37,400
		PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	$35	10,840	$379,400
		PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	$45	10,840	$487,800
		STRUCTURE EXCAVATION CL. B	CY	$15	16,100	$241,500
2		**STRUCTURE**				
		CONCRETE BRIDGES	LS	$0	-	$0
		CONCRETE BRIDGES WIDENING	LS	$820,000	1	$820,000
		PEDESTRIAN BRIDGES	SF	$400	-	$0
		STEEL BRIDGES	LS	$8,130,000	1	$8,130,000
		BRIDGE ABUTMENT RETROFIT	SF	$150	-	$0
		RETAINING WALLS (Cast in Place)	SF	$65	10,000	$650,000
		RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	$210	-	$0
		BRIDGE REMOVAL	SF	$30	16,000	$480,000
		NOISE WALLS	SF	$40	-	$0
3		**SURFACING**				
		PORTLAND CEMENT CONCRETE	SF	$10	-	$0
		HOT MIX ASPHALT	TON	$65	40,800	$2,652,000
		CRUSHED SURFACING	TON	$25	30,000	$750,000
4		**ROADSIDE DEVELOPMENT**				
		FENCING	LF	$15	-	$0
		SEEDING, MULCHING & FERTILIZING	ACRE	$2,000	8.7	$17,400
		WETLAND MITIGATION	LS	$1,087,000	1	$1,087,000
		TEMPORARY WATER POLLUTION & EROSION CONTROL (6%)	LS	$1,324,000	1	$1,324,000
		LANDSCAPING	LS	$377,000	1	$377,000
5		**TRAFFIC**				
		GUARD RAIL	LF	$20	6,900	$138,000
		CONCRETE BARRIER	LF	$65	1,200	$78,000
		SIGNAL SYSTEMS	LS	$0	1	$0
		ILLUMINATION	LS	$241,000	1	$241,000
		SIGNING	LS	$28,000	1	$28,000
		CURBS	LF	$15	22,700	$340,500
		SIDEWALKS	SY	$25	15,100	$377,500
		ITS FOR HOT-LANES	LS	$0	1	$0

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	1/16/2007
Location:	mp 21.42-24.44 Sultan (4 Lane)	Date of Cost Index:	2006
	Includes Roundabouts	Calculated By/Entered By:	GLW
	project 56	Checked By:	JAT

Segment 3

		ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
		SC&DI (ITS)	LS	$0	1	$0
		TRAFFIC CONTROL (10%)	LS	$2,338,500	1	$2,338,500
5.1		**OTHER ITEMS**				
		SURVEYING (2%)	LS	$514,500	1	$514,500
		SPECIAL ITEMS	EST	$0	1	$0
		UTILITY RELOCATIONS	EST	$0	1	$0
6		**MISCELLANEOUS (30%)**	LS	$7,871,400	1	$7,871,400
7		**CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)**				**$34,109,100**
8		**MOBILIZATION (10%)**				
		10% OF ITEM 7	EST	$3,411,000	1	$3,411,000
9		**SUBTOTAL (ITEMS 7 & 8)**				**$37,520,100**
10		**SALES TAX**				
		9.3% OF ITEM 9	EST	$3,489,400	1	$3,489,400
11		**AGREEMENTS (Utilities, WSP, etc.)**				
			EST	$0	1	$0
12		**SUBTOTAL (ITEMS 9 THRU 11)**				**$41,009,500**
13		**CONSTRUCTION**				
		ENGINEERING (15% OF ITEM 12)	EST	$6,152,000	1	$6,152,000
14		**CONSTRUCTION TOTAL (ITEMS 12 & 13)**				**$47,161,500**
III.		**PRELIMINARY WORK**				
		PRELIMINARY ENGINEERING (30.0% OF ITEM 14)	EST	$14,148,500	1	$14,148,500
		REGIONAL ITS FACILITY (0.5% OF ITEM 14)	EST	$235,900	1	$235,900
		ENVIRONMENTAL PERMITS	EST	$105,000	1	$105,000
IV.		**TOTAL ESTIMATED COST**				
		(ITEMS I, 14 & III)				**$66,520,000**
V.		**FUTURE ESTIMATED COST**				
			Inflation	**Const. Year**	**Cost Index**	**Future Cost**
		FUTURE COST BASED ON INFLATION RATE	3.00%	2025	2006	**$116,650,000**

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet, Inc. does not guarantee or warrant the accuracy of this planning level estimate.

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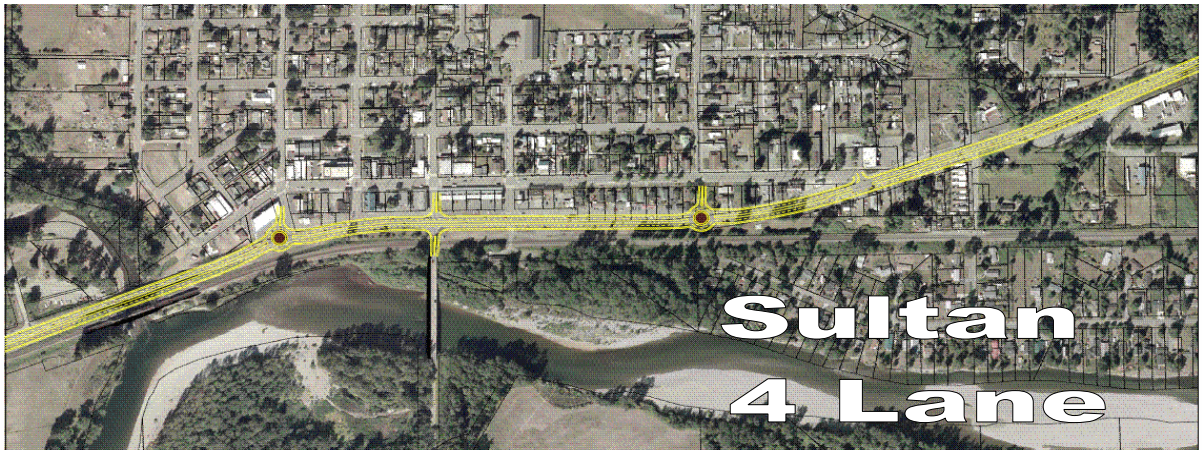
PLANNING LEVEL OPINION OF COST

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	39098
Location:	mp 21.42-24.44 Sultan (4 Lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3



PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan	Client: WSDOT
Corridor Segment 3	Date: 39098
Location mp 21.42-24.44 Sultan (4 Lane)	Date of Cost Index: 2006
	Calculated By/Entered By: GLW
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Segment 3

DESIGN ASSUMPTIONS

1	Assumption for:	Design
2	Assumption for:	ROAD DESIGN SPEED
		Design Speed Mainline: MPH Posted Speed Mainline: MPH
3	Assumption for:	Roadway Horizontal Alignment
4	Assumption for:	Roadway Vertical Alignment
		Vertical Alignments will not be designed for this stage of planning estimates. Assumptions will be made as to design profile on a level of assumed maximum grades of 5% to 7%.
5	Assumption for:	Existing cross section
		Mainline travel lanes: 12'
		It is assumed that existing shoulder pavement is not structurally sound and will be removed, new shoulders will be full depth.
6	Assumption for:	Proposed cross section
		Mainline travel lanes: 12'
		Mainline parking lanes: 8'
		Mainline Shoulders: 6'
		Medians: 12'
		Curb and gutter
		Sidewalks: 6'
7	Assumption for:	Walls
8	Assumption for:	Signal/Illumination
9	Assumption for:	Pavement
		0.9' HMA
		0.7' CSBC
10	Assumption for:	Storm Drainage
		Assume 1 CB every 200'
		Assume minimum cover is required.
11	Assumption for:	Roundabouts
		150' inscribed circle diameter
		32' circulating roadway width

ESTIMATING ASSUMPTIONS

I.		RIGHT OF WAY
		Per square foot costs are based on average commercial and residential assessed property tax values of similar properties. Special consideration should be taken for large businesses or elaborate homes. Costs for relocations, condemnations, and administration are based on similar projects in the area.
		R/W estimated using available WSDOT Right-of-Way plans, GIS Parcel layers and existing ground features from aerial photos.
II.		CONSTRUCTION
		PREPARATION - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
		A lump sum of $10,000 is assumed for large jobs in developed areas. This should be adjusted if there is special knowledge of removals or if the area is very clear of any possible obstructions.
		STORMWATER MITIGATION - DETENTION AND TREATMENT
		Storm water detention and treatment is used for all new impervious surface area. $6 per square foot of impervious area is an estimate of what the detention and treatment systems cost for the typical large road job. This cost includes pond excavation and conveyance. This number has been tested and confirmed during SCORE reviews and provides a good approximation of the actual stormwater mitigation costs. If it is known that ROW will have to be purchased and that ROW cost is not included in section I. then $10 per square foot of impervious area would provide for ROW cost as well as stormwater mitigation costs.
		STRUCTURE
		Bridge SF is the square footage of the entire new bridge.
		Bridge widening SF is the square footage of the new portion of the bridge.
		Bridge abutment retrofit SF would be for retrofitting an existing bridge abutment for earthquake standards or for rebuilding the last span of an abutment for bridge lengthening.
		SURFACING

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PLANNING LEVEL OPINION OF COST

Project US 2 Corridor Plan
Corridor Segment 3
Location mp 21.42-24.44 Sultan (4 Lane)

Client: WSDOT
Date: 39098
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Segment 3

		Hot Mix Asphalts are estimated by the ton of HMA. This HMA tonnage should include all bituminous material. It is usually not necessary to break this down beyond this.
		The item Crushed Surfacing includes all crushed rock base course and / or top course.
		ROADSIDE DEVELOPMENT
		Environmental permits and mitigation
		Temporary water pollution and erosion control is estimated at 2% of the total project cost. This is a typical cost of temporary water pollution and erosion control for the typical road project. This number has gone through the SCORE review process. If there is special knowledge that the area is not sensitive and will not require much TESC then this number could be decreased.
		TRAFFIC
		OTHER ITEMS
		Utility Relocation is the cost of relocating a major utility as part of the project, and due to special circumstances is paid for by the client and not the utility.
		UNCERTAINTY FACTOR
		The Uncertainty Factor is to take into account any uncertainty in the quantity of the item that it is being applied to. The Uncertainty Factor takes into account variability due to limited information available, preliminary or incomplete design, very preliminary review o site conditions, etc. and utilizes a scale from 1 to 2. Applying these factors involves the use of Engineering Judgment. The following is a summary of factors (see more detailed information regarding Uncertainty Factor values, attached sheet).
		General values to use are as follows:
		1 = The quantity is fairly accurate for preliminary design and the calculated quantity is unlikely to change within 10% if the design remains the same.
		1.2 = The calculated quantity could vary due to actual site conditions at the time of construction and due to details of actual design, and there is some variability due to information available.
		1.4 = There is a good deal of uncertainty in the calculated quantity and there is a possibility that the quantity will change.
		2.0 = It is very uncertain as to the calculated quantity and it is very likely that the number will probably be higher, however it is difficult to calculate this number in preliminary design stages.
		SIGNIFICANT DIGITS AND ROUNDING
		Special attention needs to be given to the significant digits used and when rounding is applied to numbers used within this spreadsheet. This is a preliminary opinion of cost. Thus the accuracy of the numbers used within this cost estimate are usually no to the nearest dollar. A good rule of thumb is as follows:
		- Round individual entries (Roadway Ex., Gravel Borrow, etc.) to a decent round number that represents the level of accuracy, and should be done within the individual quantity sheets. For example, round 399 CY to 400 CY, or round 526,345 CY to
		- Round up the final total of the estimate. Round the final number to two or three significant digits, or use half of the numbers left of the decimal point as significant digits.
		- Rounding at intermediate totals and summaries within the spreadsheet should be avoided as these will just introduce compounding error. The only numbers that should be rounded are the values input into the summary spreadsheet and the final cost number.

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PLANNING LEVEL OPINION OF COST

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Corridor Section:	Segment 3
Location:	mp 21.42-24.44 Sultan (4 Lane)

Segment 3

Planning Level Opinion of Cost - Uncertainty Factor Values

ITEM	U_f	Comment
ROW	1.?	If you get exact land values you could use 1.2 or ? to adjust for inflation and actual sale price. If using some estimated value per SF and you are confident in your areas then I would use 1. Any fluff factor is in the SF value.
Clearing and Grubbing	1.?	User specified. If you're already estimating very high then use 1.
Removing Pavement	1	This should be a pretty specific value.
Removal of Structures and Obstructions	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Roadway Excavation	1.?	User specified. If you're estimating high then use 1.
Structure Ex. Cl. A	1.?	User specified. If you're estimating high then use 1.
Gravel Borrow	1.15	This should be a pretty specific value.
Embankment Compaction	1.15	This should be a pretty specific value.
Detention and Treatment	1	The area should be pretty specific. There are already contingencies in the cost / SF value.
Storm Sewer Items	1.?	User specific.
Structure Ex. Cl. B	1.?	Same as used for pipe length.
Bridge	1	This should be a very specific value.
Retaining Wall	1.0-1.1	This should be pretty specific.
Remove Bridge	1	This should be a very specific value.
Noise Wall	1.0-1.1	This should be pretty specific.
Pavement	1.15	This should be pretty specific. Same as in bid estimate.
CSBC	1.15	This should be pretty specific. Same as in bid estimate.
Fencing	1.?	User specific.
Seeding, Mulching	1.?	User specific.
Environmental Permits	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Temporary Water Pollution and Erosion Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Landscaping	1.?	User specific.
Guardrail	1.0-1.1	This should be pretty specific.
Barrier	1.0-1.1	This should be pretty specific.
Signal System	1	This should be a very specific value.
Illumination	1.0-1.1	This should be pretty specific.
Signing	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Curbs	1.0-1.1	This should be pretty specific.
Sidewalk	1.0-1.1	This should be pretty specific.
Traffic Control	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Survey	1	We're using a big lump sum value and there are contingencies being added to this in the summary sheet.
Special Items	1.?	User specific.
Utility Agreements	1.?	User specific.

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Segment 3

RIGHT OF WAY

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Developed	**(SF)**	**(ACRE)**
Feed store	12,100	0.3
Other property on 5th	5500	
Additional 10' of R/W from east of 5th to almostMain	6000	

Sub Total	**23,600**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**23,600**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Urban Undeveloped	**(SF)**	**(ACRE)**
Detention and Water Quality	126,500	3.0
Wetland Mitigation	14,197	

Sub Total	**140,697**	**SF**
Uncertainty Factor (U_f)	**1.0**	
TOTAL	**140,700**	**SF**

DESCRIPTION	**ROW ACQUISITION AREA**	
Relocations: Businesses	**(EA)**	
	1	Parcel acquisitions only

Sub Total	**1**	**EA**
	1.0	
TOTAL	**1**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Relocations: Residences	**(EA)**	
	1	Parcel acquisitions only

Sub Total	**1**	**EA**
	1.0	
TOTAL	**1**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Condemnations	**(EA)**	
	5	Assume that 30% of all properties acquired will require condemnations

Sub Total	**5**	**EA**
	1.0	
TOTAL	**5**	

DESCRIPTION	**ROW ACQUISITION TYPE**	
Administration	**(EA)**	
	15	All properties acquired will require administration (title search, etc.)

Sub Total	**15**	**EA**
	1.0	
TOTAL	**15**	

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Segment 3

ACRE **CLEARING AND GRUBBING**

Width from edge of lane to back of sidewalk

DESCRIPTION	Length	Width left	AREA Width right	SF	(ACRE)
Section 1	2,596	23	36	153164	3.6
Section 2	310	18	42	18600	0.5
Section 3	1,490	15	45	89400	2.1
Section 4	1,711	24	35	100949	2.4
Section 5	617	24	35	36403	0.9
Section 6	1,373	24	35	81007	1.9
Roundabout 1				2827	0.1
Roundabout 2				2827	0.1
Roundabout 3				2827	0.1
Roundabout 4				2827	0.1
Roundabout 5				2827	0.1
		sub-total			**11.9**

DETENTION PONDS

POND LOCATION	BOTTOM OF POND LENGTH (FT)	BOTTOM OF POND WIDTH (FT)	SIDE SLOPES 1 : H	HEIGHT (FT)	TOP OF POND LENGTH (FT)	TOP OF POND WIDTH (FT)	TOP OF POND AREA (SF)	AREA (ACRE)
	0	0	0	6	0	0	0	0.0

sub-total	**0.0**
Sub Total	**11.9**
Uncertainty Factor (U_f)	**1**
TOTAL	**11.9**

PLANNING LEVEL OPINION OF COST SUMMARY

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Segment 3

SY **REMOVING EXISTING PAVEMENT**

Remove existing pavement at proposed median and center of roundabouts.

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	AREA (SY)
Section 1		12	0	0
Section 2		12	0	0
Section 3		12	0	0
Section 4		12	0	0
Section 5		12	0	0
Section 6		12	0	0

	AREA (SF)	AREA (SY)
Roundabout 1	2827	314
Roundabout 2	2827	314
Roundabout 3	2827	314
Roundabout 4	2827	314
Roundabout 5	2827	314

Sub Total	**1,571**
Uncertainty Factor (U_f)	**1**
TOTAL	**1,600**

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Segment 3

LS **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

General removal of structures and obstructions is based on general items, see assumptions sheet.
Assume $15,000 for small building, $30,000 for small commercial building, use best engineering judgement for a large commercial building (hotel, strip mall, etc.)
For project of $3 million or more, assume $10,000 of unknown structures and obstructions.

DESCRIPTION	LS PRICE
General items, see assumptions sheet.	**$10,000**
Commercial Buildings	**$30,000**
Signals	**$20,000**

Sub Total	**$60,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**$60,000**

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Segment 3

C.Y. ROADWAY EXCAVATION INCL. HAUL

ROADWAY	LENGTH (LF)	WIDTH (FT)	DEPTH (FT)	VOLUME (CF)	(CY)
Section 1	2,596	30	2.0	155760	5769
Section 2	310	30	2.0	9300	344
Section 3	1,490	30	2.0	44700	1656
Section 4	1,711	30	2.0	51330	1901
Section 5	617	30	2.0	18510	686
Section 6	1,373	30	2.0	41190	1526

	AREA (SF)			
Roundabout 1	10936	2.0	21871	810
Roundabout 2	10936	2.0	21871	810
Roundabout 3	10936	2.0	21871	810
Roundabout 4	10936	2.0	21871	810
Roundabout 5	10936	2.0	21871	810

Sub Total	**15,931**	**CY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**17,600**	**CY**

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Segment 3

CY **STRUCTURE EXCAVATION CLASS A INCL. HAUL**

DESCRIPTION	FOOTING LENGTH (LF)	FOOTING WIDTH (LF)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
	0	3.0	2	0	0

Sub Total	**0**	**CY**
Uncertainty Factor (U_f)	**1.2**	
TOTAL	**0**	

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		Checked By:

Segment 3

TON **BORROW INCL. HAUL**
C.Y. **EMBANKMENT COMPACTION**

Fill for shoulders

DESCRIPTION	WIDTH (FT)	LENGTH (FT)	MAX DEPTH (FT)	MIN DEPTH (FT)	VOLUME (CF)	SELECT BORROW VOLUME (CY)	VOLUME (TON)	COMPACTION VOLUME (CY)
Section 1	15	2,596	3	0	29,205	1,082	2,010	1,082
Section 2	15	310	3	0	3,488	129	240	129
Section 3	15	1,490	3	0	16,763	621	1,150	621
Section 4	15	1,711	20	20	256,650	9,506	17,590	9,506
Section 5	15	617	3	20	53,216	1,971	3,650	1,971
Section 6	15	1,373	20	20	205,950	7,628	14,120	7,628
Roundabout 1	20	350	3	0	5,250	194	360	194
Roundabout 2	20	350	3	0	5,250	194	360	194
Roundabout 3	20	350	3	0	5,250	194	360	194
Roundabout 4	20	350	3	0	5,250	194	360	194
Roundabout 5	20	350	20	20	70,000	2,593	4,800	2,593

	BORROW VOLUME (TON)	COMPACTION VOLUME (CY)
Sub Total	**45,000**	**24,306**
Uncertainty Factor (U_f)	**1.2**	**1.2**
TOTAL	**54,000**	**29,200**

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Segment 3

SF **DETENTION & TREATMENT**

Total impervious area.

DESCRIPTION	Length FT	Width FT	AREA (SF)
Section 1	2596	52	134,992
Section 2	310	52	16,120
Section 3	1490	52	77,480
Section 4	1711	52	88,972
Section 5	617	52	32,084
Section 6	1373	52	71,396
Roundabout 1			26,135
Roundabout 2			21,635
Roundabout 3			26,135
Roundabout 4			21,635
Roundabout 5			26,135
			542,721

This table for calculating Pond ROW requirements only.

Pond Area Calculations

Prorated Detention Volume Required	238,797	CF
Prorated Water Quality Volume Required	46673.99568	CF
Detention Bottom Area (based on 3' depth)	79599.0624	SF
WQ Surface Area (Based on 3' WQ depth)	15557.99856	SF
Greater of Detention and WQ areas	79599.0624	SF
Pond Bottom Length (3:1 aspect ratio)	489	FT
Pond Bottom Width	163	FT
Pond Top Length (3' depth +1' Freeboard @3:1)	513	FT
Pond Length Outside of Berm (1-6' berm +1-15' berm for acces.)	534	FT
Pond Length at Outside to of Berm (4' @2:1)	**550**	**FT**
Pond Top Width (3' depth +1' Freeboard @3:1)	187	FT
Pond Width Outside of Berm (1-6' berm +1-15' berm for acces.)	208	FT
Pond Width at Outside to of Berm (4' @2:1)	**224**	**FT**

Pond Footprint Dimensions	230 x550		FTxFT
Pond Footprint Area	**126,500**	**SF**	
	2.90	Ac.	

Sub Total	**542,721**
Uncertainty Factor (U_f)	**1**
TOTAL	**542,800**

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PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (4 Lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

DRAINAGE

Drainage estimate is based on the length of road
Assume 1 CB every 200', both sides of roadway, unless superelevated.

DESCRIPTION	LENGTH (LF)	12" Plain Conc Pipe (LF)	18" Plain Conc Pipe (LF)	Type 1 CB (EA)	Type 2 CB (EA)
Section 1	2,946	2,946	2,946	15	4
Section 2	660	660	660	4	1
Section 3	1,840	1,840	1,840	10	3
Section 4	2,061	2,061	2,061	11	3
Section 5	967	967	967	5	2
Section 6	1,373	1,373	1,373	7	2

	12" PIPE (LF)	18" PIPE (LF)	CB Type 1 (EA)	CB Type 2
Sub Total	**9,847**	**9,847**	**52**	**15**
Uncertainty Factor (U_f)	**1.1**	**1.1**	**1.1**	**1.1**
TOTAL	**10,840**	**10,840**	**58**	**17**

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		Checked By:	JAT

Segment 3

CY **STRUCTURE EXCAVATION CLASS B INCL. HAUL**

DESCRIPTION	PIPE LENGTH (FT)	TRENCH WIDTH (FT)	AVERAGE DEPTH BELOW EX. GROUND (FT)	TOTAL VOLUME (CF)	TOTAL VOLUME (CY)
18"	2,946	4.0	5	58,920	2,182
	660	4.0	5	13,200	489
	1,840	4.0	5	36,800	1,363
	2,061	4.0	5	41,220	1,527
	967	4.0	5	19,340	716
	1,373	4.0	5	27,460	1,017
12"	2,946	4.0	5	58,920	2,182
	660	4.0	5	13,200	489
	1,840	4.0	5	36,800	1,363
	2,061	4.0	5	41,220	1,527
	967	4.0	5	19,340	716
	1,373	4.0	5	27,460	1,017
				Sub Total	**14,588**
				Uncertainty Factor (U_f)	**1.1**
				TOTAL	**16,100**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **BRIDGE STRUCTURE**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(LS)
REPLACE STEEL BRIDGE 2/26	400	0	0	$8,130,000
		Sub Total	**0**	$8,130,000
		Uncertainty Factor (U_f)	**1**	1
		TOTAL	**0**	**8,130,000**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	(LS)
WIDEN CONCRETE BRIDGE 2/28	117	0	0	$820,000
		Sub Total	**0**	$820,000
		Uncertainty Factor (U_f)	**1**	1
		TOTAL	**0**	**820,000**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (4 Lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

MSE WALL WITH PRECAST PANELS

Use MSE with precast panels for fill structre

DESCRIPTION	LENGTH (FT)	LOW DEPTH (FT)	HIGH DEPTH (FT)	AREA (AVG DEPTH) (SF)	NO. OF SIDES	TOTAL (SF)
Bridge approaches 200' each	800	0 FT	25 FT	10000	1	10000

Sub Total	**10,000**
Uncertainty Factor (U_f)	**1**
TOTAL	**10,000**

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		Checked By:	JAT

Segment 3

SF **BRIDGE REMOVAL**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
	400	40	16,000

Sub Total	**16,000**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**16,000**	

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

SF **NOISE WALL**

Use a panel height of 15'

DESCRIPTION	LENGTH (FT)	Height (FT)	AREA (SF)
			0

Sub Total	**0**	**SF**
Uncertainty Factor (U_f)	**1**	
TOTAL	**0**	

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

TON **HOT MIX ASPHALT**

DESCRIPTION	Length (FT)	Width (FT)	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	2,596	52	134992	0.9	121493	4500	9224
Section 2	310	52	16120	0.9	14508	537	1102
Section 3	1,490	52	77480	0.9	69732	2583	5294
Section 4	1,711	52	88972	0.9	80075	2966	6080
Section 5	617	52	32084	0.9	28876	1069	2192
Section 6	1,373	52	71396	0.9	64256	2380	4879

Roundabout pavement includes circulating roadway width and 100' from inscribed circle

	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Roundabout 1	26135	0.9	23522	871	1786
Roundabout 2	21635	0.9	19472	721	1478
Roundabout 3	26135	0.9	23522	871	1786
Roundabout 4	21635	0.9	19472	721	1478
Roundabout 5	26135	0.9	23522	871	1786

Sub Total	**37086**	**TON**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**40800**	**TON**

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Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (4 Lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

TON **CRUSHED SURFACING BASE COURSE/TOP COURSE**

DESCRIPITON	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Section 1	134992	0.7	94494	3500	6475
Section 2	16120	0.7	11284	418	773
Section 3	77480	0.7	54236	2009	3716
Section 4	88972	0.7	62280	2307	4267
Section 5	32084	0.7	22459	832	1539
Section 6	71396	0.7	49977	1851	3424

	AREA (SF)	DEPTH (FT)	(CF)	VOLUME (CY)	(TON)
Roundabout 1	26135	0.7	18295	678	1254
Roundabout 2	21635	0.7	15145	561	1038
Roundabout 3	26135	0.7	18295	678	1254
Roundabout 4	21635	0.7	15145	561	1038
Roundabout 5	26135	0.7	18295	678	1254
				Sub Total	**26031** **TON**
				Uncertainty Factor (U_f)	**1.15**
				TOTAL	**30000** **TON**

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		Checked By:	JAT

Segment 3

LF **FENCING**

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
		1	0

Sub Total	**0**
Uncertainty Factor (U_f)	**1**
TOTAL	**0**

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		Checked By:	JAT

Segment 3

ACRE **SEEDING, MULCHING & FERTILIZING**

DESCRIPTION	SF	ACRE
Clearing/Grubbing Area	153,164	3.6
Landscape Area	218840.88	5.1

Sub Total	**8.7**
Uncertainty Factor (U_f)	**1**
TOTAL	**8.7**

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		Checked By:	JAT

Segment 3

ENVIRONMENTAL PERMITS - MITIGATION

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Wetland Buffer	0	1	0
Wetland	23662	1	23662

Sub Total	**23662**	**SF**
@	**$45.91**	**per SF**
Sub Total $	**$1,086,410**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$1,087,000**	**LS $**

DESCRIPTION Wetland Mitigation	APPROXIMATE IMPACT AREA (SF)	REPLACEMENT RATIO X:1	MITIGATION AREA (SF)
Stream Buffer		1	0
Stream		7	0

Sub Total	**0**	**SF**
@	**$2.30**	**per SF**
Sub Total $	**$0**	
Uncertainty Factor (U_f)	**1**	
TOTAL $	**$0**	**LS $**

Total Mitigation Cost	**$1,087,000**	**LS $**

PERMITS		AGENCY	PERMIT FOR ENTIRE SEGMENT	PERMIT FOR INDIVIDUAL SEG.	Lump Sum	
401 Water Quality Certification		DOE			$ -	
Local Agency Review	CAR, CG, FP	Local Agency		3	$ 15,000	
Hydraulic Permit Approval		WDFW		1	$ 10,000	
Section 404 Permit (NW or Indiv)		Army Corps			$ -	
Shoreline Permit		Local Agency			$ -	
NEPA/SEPA + DRs		WSDOT	1		$ 75,000	
Coastal Zone Management Certification		DOE			$ -	
NPDES		DOE	**1**		$ 5,000	
				Sub Total	**$ 105,000**	**LS $**
				Uncertainty Factor (U_f)	**1**	
				TOTAL	**$105,000**	**LS $**

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		Checked By:	JAT

Segment 3

LS **TEMPORARY WATER POLLUTION & EROSION CONTROL**

Use 6% of Construction Costs	**Construction Items**	**6%**
Total Const items from summary sheet	$ 22,060,700	$ 1,323,642

Sub Total	**$ 1,323,642**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 1,324,000**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **LANDSCAPING**

$75,000 per acre

DESCRIPTION	Length FT	Width FT	Area SF	Area ACRE	LS PRICE
Section 1	2,596	12	31152	0.72	$53,636
Section 2	310	12	3720	0.09	$6,405
Section 3	1,490	12	17880	0.41	$30,785
Section 4	1,711	12	20532	0.47	$35,351
Section 5	617	12	7404	0.17	$12,748
Section 6	1,373	12	16476	0.38	$28,368

	Area SF	Area ACRE	
Roundabout 1	26135	0.60	$44,999
Roundabout 2	21635	0.50	$37,251
Roundabout 3	26135	0.60	$44,999
Roundabout 4	21635	0.50	$37,251
Roundabout 5	26135	0.60	$44,999

Sub Total	218840.88	**$376,792**
	Uncertainty Factor (U_f)	**1**
	TOTAL	**$377,000**

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		Checked By:	JAT

Segment 3

Guardrail

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (FT)
Section 1	2,946	0	0
Section 2	660	0	0
Section 3	1,840	0	0
Section 4	2,061	2	4,122
Section 5	967	0	0
Section 6	1,373	2	2,746

Sub Total	**6,868**
Uncertainty Factor (U_f)	**1**
TOTAL	**6900**

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		Checked By:	JAT

Segment 3

Barrier Required on fill structure/MSE wall

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (LF)
Bridge and walls	600	2	1,200

Sub Total	**1,200**
Uncertainty Factor (U_f)	**1**
TOTAL	**1200**

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		Checked By:	JAT

Segment 3

LS SIGNAL SYSTEM

Use $250,000 for new signal systems
Use $150,000 for signal system revisions

	LS PRICE
NEW SIGNAL SYSTEMS	
	$0
	$0
	$0
SIGNAL SYSTEM REVISIONS	
	$0
	$0
	$0
	$0
Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Checked By:	JAT

Segment 3

LS **ILLUMINATION SYSTEM**

*Use luminaire spacing of one every 250', one side

DESCRIPTION	LENGTH (LF)	NO. OF SIDES	TOTAL (EA)	
Section 1	2,946	2	24	
Section 2	660	2	5	
Section 3	1,840	2	15	
Section 4	2,061	2	16	
Section 5	967	2	8	
Section 6	1,373	2	11	
		Sub Total	**60**	
		@	**4,000**	**EA**
		$ Sub Total	**$240,224**	
		Uncertainty Factor (U_f)	**1**	
		TOTAL	**$241,000**	

DESCRIPTION	LUMP SUM
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

TOTAL LUMP SUM	**$241,000**

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		Checked By:	JAT

Segment 3

LS SIGNING

DESCRIPTION	Length LF	Length Mile	LS PRICE
Section 1	2,946	**0.56**	$8,369
Section 2	660	**0.13**	$1,875
Section 3	1,840	**0.35**	$5,227
Section 4	2,061	**0.39**	$5,855
Section 5	967	**0.18**	$2,747
Section 6	1,373	**0.26**	$3,901

Sub Total	**$27,974**
Uncertainty Factor (U_f)	**1**
TOTAL	**$28,000**

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		Checked By:	JAT

Segment 3

LF **CURBS**

Includes all types of curb used in project

DESCRIPTION	**LENGTH**		**TOTAL**
Cement Conc Curb & Gutter	**(LF)**	**NO. OF SIDES**	**(LF)**
Section 1	2,596	2	5,192
Section 2	310	2	620
Section 3	1,490	2	2,980
Section 4	1,711	2	3,422
Section 5	617	2	1,234
Section 6	1,373	2	2,746

	LENGTH		**TOTAL**
	(LF)	**NO. OF SIDES**	**(LF)**
Roundabout 1	871	1	871
Roundabout 2	871	1	871
Roundabout 3	871	1	871
Roundabout 4	871	1	871
Roundabout 5	871	1	871

Extruded Curb	0	1	0

Sub Total	**20,550**
Uncertainty Factor (U_f)	**1.1**
TOTAL	**22700**

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		Checked By:	JAT

Segment 3

SF **SIDEWALK**

DESCRIPTION	LENGTH (FT)	WIDTH (FT)	No. of Sides	AREA (SY)
Section 1	2,596	6	2	3,461
Section 2	310	6	2	413
Section 3	1,490	6	2	1,987
Section 4	1,711	6	2	2,281
Section 5	617	6	2	823
Section 6	1,373	6	2	1,831

	LENGTH (FT)	WIDTH (FT)	AREA (SY)
Roundabout 1	871	6	581
Roundabout 2	871	6	581
Roundabout 3	871	6	581
Roundabout 4	871	6	581
Roundabout 5	871	6	581

Sub Total	**13,700**	**SY**
Uncertainty Factor (U_f)	**1.1**	
TOTAL	**15,100**	

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		Checked By:	JAT

Segment 3

LS **ITS Hot Lanes**

DESCRIPTION	LS PRICE
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **SC&DI (ITS)**

DESCRIPTION	LS PRICE
	$0
	$0
	$0
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Everett, Washington 98201

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	US 2 Corridor Plan	Client:	WSDOT
Corridor Section:	Segment 3	Date:	01/16/07
Location:	mp 21.42-24.44 Sultan (4 Lane)	Date of Cost Index:	2006
		Calculated By/Entered By:	GLW
		Checked By:	JAT

Segment 3

LS **TRAFFIC CONTROL**

Use 10% of Construction Costs	**Construction Items**	**10%**
Total Const items from summary sheet	$ 23,384,700	$ 2,338,470

Sub Total	**$ 2,338,470**
Uncertainty Factor (U_f)	**1**
TOTAL	**$ 2,338,500**

Perteet Inc.
425-252-7700 I 1-800-615-9900
2707 Colby Avenue, Suite 900
Everett, Washington 98201

PLANNING LEVEL OPINION OF COST SUMMARY

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Corridor Section:	Segment 3	Date:	01/16/07
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Segment 3

LS **SURVEY**

Use 2% of Construction Costs	**Construction Items**	**2%**
Total Const items from summary sheet	$ 25,723,200	$ 514,464

Sub Total	**$**	**514,464**
Uncertainty Factor (U_f)		**1**
TOTAL	**$**	**514,500**

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Corridor Section:	Segment 3	Date:	01/16/07
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Segment 3

LS **SPECIAL ITEMS**

Identify any special items included in the project.

DESCRIPTION	LS PRICE
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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Segment 3

LS UTILITY RELOCATIONS / AGREEMENTS

Explain any obvious utility work. If outside existing ROW that will be impacted it will cost WSDOT and will need an estimate. If State Patrol will be needed for traffic contol give an estimate based on working days.

DESCRIPTION RELOCATIONS	**LS PRICE**
Relocate Utility Poles	**$0**

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

DESCRIPTION AGREEMENTS	**LS PRICE**
	$0

Sub Total	**$0**
Uncertainty Factor (U_f)	**1**
TOTAL	**$0**

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