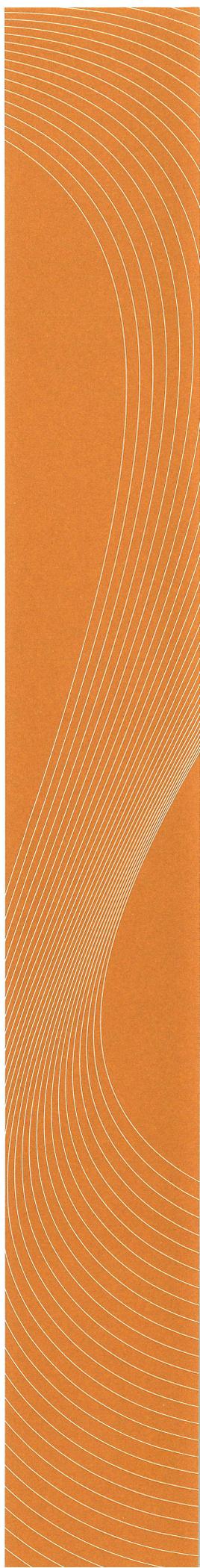




**APPENDIX C**  
**EXISTING STRUCTURES (AS-BUILT CONDITIONS)**  
**ALONG PROJECT CORRIDOR**

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Bridge No. 405/15 (21)  
 Bridge Location I-405 overcrossing of SR-167  
 Number of Piers 5

Original As-Built Plan Sheet 3 "Primary State Highway No. 1, Green River to Burnett Street - Bridges, King County, PSH No.5 Overcrossing" dated August 7, 1963  
 Original Datum USC & GS Upper

North & South Bridges					
Pier No.	1	2	3	4	5
<b>Treated Timber Piles (Original)</b>					
Approx. Top of Pile Elevation (ft)	36.7	19.0	19.0	19.0	37.7
Approximate Embedment Depth (ft)	†	†	†	†	†
Allowable Pile Capacity (kips)	54	54	54	54	54

Note: Extensive fill placed at abutments (Piers 1 & 5)

Widening As-Built Plan Sheet 674 "SR 405, Tukwila to South Renton, HOV Lanes, SR 167 O'Xing 405/15 Widening" dated February 1984  
 Widening Datum NGVD of 1929

North & South Bridges					
Pier No.	1	2	3	4	5
<b>Treated Timber Piles (Widening)</b>					
Approx. Top of Pile Elevation (ft)	varies	19.0	19.0	19.0	varies
Approximate Embedment Depth (ft)	†	†	†	†	†
Allowable Pile Capacity (kips)	80	80	80	80	80

#### Explorations

Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	Foundation Soil Conditions Provided on Log
N/A. See as-built plans	H-4*			2 (widening)			
N/A. See as-built plans	H-6*			4 (widening)			
N/A. See as-built plans	H-5*			5 (widening)			
L-3478	H-1-99	85	Grain Size	North of alignment	26.8**	4.8	48 to 64 ft of alluvial deposits (sand, silt, gravel organics) over sandstone
L-3478	H-2-99	85	Grain Size	North of alignment	26.9**	15.9	
L-3478	H-6-99	24	Grain Size	NW of alignment	45.2 **	37.7	20 ft of gravel fill over loose silty sand
L-3478	H-6-83						
L-3478	H-3-60						
L-0560	CCTV-624	3.5		SE of alignment		None	
L-6166	CR2-69	3		South of alignment			
Current	SRX-16-05	70.8		SE of bridge	37.7**	21.0**	14 ft of dense to very dense sand with varying organics over very dense weathered to highly weathered sandstone
Current	SRX-11-05	75.5	Grain Size	SW of bridge	21.2**	7.7**	23 ft of very loose to loose sand and silty sand, 18 ft of medium dense to dense sand, over dense to very dense silty sand with gravel

#### Embankment Slopes

2H:1V maximum slope

† Not provided on as-built plans listed above. Information may be available from WSDOT.

\* Boring logs not included on as-built plans

\*\* Datum: NAVD 88 for current borings and L-3478

£ Groundwater elevation noted on exploration log

Bridge No. SS2 Line Bridge  
 Bridge Location SR 167 Interchange - Flyover structure to southbound SR 167  
 As-Built Plan Sheets 105 to 118 "SR 405, SR 167 I/C Modification" dated January 1999  
 Number of Piers 5  
 Datum NAVD 88

**All as-built plan units are Metric; LRFD Design**

Pier No.	1	2	3	4	5
<b>2.440 m Drilled Shafts</b>					
Top of Shaft Elevation (m)		7.60	9.60	10.60	
Embedment Depth (m)		21.40	21.40	21.40	
Shaft Tip Elevation (m)		-13.80	-11.80	-10.80	
Ultimate Shaft Capacity (kN)		31,000	31,000	32,000	
<b>610 mm CIP Concrete Piles</b>					
Top of Pile Elevation (m)	6.50				10.60
Approximate Embedment Depth (m)	†				†
Ultimate Pile Capacity (kN)	4,500				4,500

**All exploration units are English**

<b>Explorations</b>							
Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring	Groundwater	Foundation Soil Conditions Provided on Log
					Elevation (ft)	Elevation (ft) <sup>£</sup>	
L-3478	H-6-99	24	Grain Size	1	45.2	37.7	Up to 20 feet of fill consisting of very loose to dense sand and gravel with cobbles and boulders and loose sandy organic soil with asphalt and coal pieces, over 41 to 54 feet of alluvial deposits consisting of interbedded loose to dense sand and gravel and very soft to soft silt and organic silt (organic soils vary from 2 to 8 feet in thickness). Sandstone encountered below alluvial deposits.
L-3478	H-1-99	85	Grain Size	1	26.8	4.8	
L-3478	H-2-99	85	Grain Size	2	26.9	15.4	
L-3478	H-3-99	85	Grain Size	3	31.2	27.7	
L-3478	H-4-99	80	Grain Size	4	35	24	
L-3478	H-5-99	90.4	Grain Size	4	41.2	29.2	

**Embankment Slopes**

Not applicable

† Not provided on as-built plans listed above. Information may be available from WSDOT.

£ Groundwater elevation noted on exploration log

Bridge No. 405/16 (22)  
 Bridge Location I-405 overcrossing of Talbot Road South (Hwy 515)  
 Number of Piers 4

Original As-Built Plan Sheet 6 "Primary State Highways No. 1, Green River to Burnett Street - Bridges, King County, Burnett Street Overcrossing" dated August 7, 1963.  
 As built changes dated January 15, 1965.  
 Original Datum USC & GS Upper Datum

South Bridge				
Pier No.	1	2	3	4
<b>Steel H-Piles (Original)***</b>				
Approx. Top of Pile Elevation (ft)	47.10	25.0	28.5	55.17
Approximate Embedment Depth (ft)	†	†	†	†
Allowable Pile Capacity (kips)	92	92	92	92
North Bridge				
<b>Steel H-Piles (Original)***</b>				
Approx. Top of Pile Elevation (ft)	46.65	22.0	29.0	54.93
Approximate Embedment Depth (ft)	†	†	†	†
Allowable Pile Capacity (kips)	92	92	92	92

Note: Extensive fill placed at abutments (Piers 1 and 4)

Widening As-Built Plan Sheet 688 "SR 405, Tukwila to South Renton, HOV Lanes, Burnett St O'Xing 405/16 Widening" dated February 1984  
 Widening Datum NGVD of 1929

North and South Bridge				
Pier No.	1	2	3	4
<b>Steel H-Piles (Widening)***</b>				
Approx. Top of Pile Elevation (ft)	varies	varies	varies	varies
Approximate Embedment Depth (ft)	†	†	†	†
Allowable Pile Capacity (kips)	140	110	110	140

\*\*\* Pile size unknown

† Not provided on as-built plans listed above. Information may be available from WSDOT.

Explorations							
Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	Foundation Soil Conditions Provided on Log
N/A. See as-built plans	H-3	41.25		1 (original)	27.9		16.5 ft of organic & sand layers, 8 ft of clayey silt over sandstone and shale
N/A. See as-built plans	H-2	39		2 (original)	27.7		4 ft of organics, 22 ft of silty sand and clay over sandstone and shale
N/A. See as-built plans	H-1	35		2/3 (original)	26.8	26.8	8 ft of organics, 9ft of silty sand and clay over sandstone
N/A. See as-built plans	H-5	27		3 (original)	39.0	35	4 ft of stiff clay, 14 ft of silty gravel over highly fractured sandstone
N/A. See as-built plans	H-4	40		4 (original)	41.0	37.5	3.5 ft of organic clayey silt over highly fractured sandstone
N/A. See as-built plans	H-6*			1/2 (widening)			
N/A. See as-built plans	H-8*			2 (widening)			
N/A. See as-built plans	H-9*			3 (widening)			
N/A. See as-built plans	H-7*			4 (widening)			
L-6166	L-86	9.5		West of alignment	36	None	Weathered sandstone
Current	SRL-5-05			West side of bridge	**		
Current	SRL-6-05			East side of bridge	**		
Current	SRX-18-05	55.5		West of alignment	47.8**	-5.7**	Approx. 7 ft of medium dense silt, 20 ft of loose to medium dense sand, 10 ft of very loose to medium dense sandy silt and silty sand, over very dense sandstone

**Embankment Slopes**

2H:1V maximum slope

† Not provided on as-built plans listed above. Information may be available from WSDOT.

\* Boring logs not included on as-built plans

\*\* Datum: NAVD 88 for current borings

£ Groundwater elevation noted on exploration log

Bridge No. 405/17 (23)  
 Bridge Location I-405 undercrossing of Benson Road  
 Original As-Built Plan Sheet 45 "Primary State Highways Nos. 1 & 5, Longacres to Cedar River Bridge in Renton, King County, SSH No. 5-C Undercrossing" dated December 31, 1962  
 Number of Piers 5  
 Datum USC & GS Upper Datum

Pier No.	1	2	3	4	5
<b>Spread Footings</b>					
Bottom of Footing Elevation (ft)	72.5	65.5	68.0	65.5	84.0
Approximate Footing Width (ft)	†	†	†	†	†
Allowable Bearing Pressure (ksf)	16	16	16	16	16

<b>Explorations</b>							
Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	Foundation Soil Conditions Provided on Log
N/A. See as-built plans	H-1	35		1	81.2	~ 75	Decomposed sandstone
N/A. See as-built plans	H-2	45.25		2	76.8		Decomposed sandstone
N/A. See as-built plans	H-3	29.23		3	83.5		Sandstone
N/A. See as-built plans	H-4	30.25		4	88.0	~ 64	Decomposed sandstone
N/A. See as-built plans	H-5	35.25		5	91.7		Decomposed sandstone
Current	SRX-19-05	34		West side of bridge	85.2*	65.2*	7 ft of very dense silty sand over sandstone
L-6166	L-88	3.0		West of alignment	78.0		

**Embankment Slopes**  
 2H:1V maximum slope

† Not provided on as-built plans listed above. Information may be available from WSDOT.

\* Datum: NAVD 88 for current boring

£ Groundwater elevation noted on exploration log

Bridge No. 405/17.3 (24)  
 Bridge Location I-405 undercrossing of Cedar Avenue  
 As-Built Plan Sheet 345 "SR 405 South Renton to Sunset Blvd. HOV, Cedar Ave. U'Xing Stage 2" dated October 13, 1991  
 As built changes dated October 8, 1997  
 Number of Piers 3  
 Datum NGVD of 1929

Pier No.	1	2	3
<b>Spread Footings</b>			
Bottom of Footing Elevation (ft)	61.0	57.0	83.4
Approximate Footing Width (ft)	†	†	†
Allowable Bearing Pressure (ksf)	10	10	10

<b>Explorations</b>							
Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	Foundation Soil Conditions Provided on Log
L7974	HQ-8-89	91	Uniaxial Core Compression Grain Size	3	101.9	94.7 to 97.5 & 82.3 to 86.9	Weathered sandstone
L7974	HQ-9-89	65	Uniaxial Core Compression Grain Size	2	89.5	73.8 to 83.3 & 59.3 to 72.4	12 ft of very dense sand, silt and gravel over weathered sandstone
L7974	HQ-9-1-89	47	Uniaxial Core Compression Grain Size	1	70.7	59.4 to 62.6 & 43.6 to 49.7	Weathered sandstone
L7974	TH-7	18		NW of alignment	68.1		
L7974	G-8-89			SE of alignment			

**Embankment Slopes**  
 Embankments supported by retaining walls. Soil nail wall present at Pier 3

† Not provided on as-built plans listed above. Information may be available from WSDOT.  
 £ Groundwater elevation noted on exploration log

Bridge No. 405/17.7 (25)  
 Bridge Location I-405 undercrossing of Renton Avenue South  
 As-Built Plan Sheet 268 "SR 405 Tukwila to Sunset Blvd., Cedar River Pipelines Relocation, Renton Avenue U'Xing 405/17B"  
 dated October 6, 1990  
 Number of Piers 2  
 Datum NGVD of 1929

Pier No.	1	2
<b>Spread Footings</b>		
Bottom of Footing Elevation (ft)	60.0	
Approximate Footing Width (ft)	†	
Allowable Bearing Pressure (ksf)	8	
<b>4-ft Diameter Drilled Shafts</b>		
Approx. Top of Pile Elevation (ft)		†
Approximate Tip Elevation (ft)		31
Allowable Pile Capacity (ksf)		8

Note: Extensive fill placed at abutments (Piers 1 and 2)

Explorations							
Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	Foundation Soil Conditions Provided on Log
L7974	HQ-13-89	80.6	Grain Size	2	89.7	53.5 to 55.7	4 ft of organic silt, 4 ft of very loose silty gravel, 22 ft of dense to very dense silty sand and gravel over sandstone & volcanics
L7974	TP-10-89	15.0	Grain Size	SE of alignment	89.7		
L7974	HQ-14-89	67.9	Grain Size	North of alignment	84.7	47.5 to 50.7	
L7974	HQ-18-89	52.0	Grain Size, Uniaxial Core Compression	North of alignment	51.0	28.5 to 30.0	
L7974	P-10-NB	14.0		NE of alignment	48.0	45.0	
L7974	HE-9-90	23	Grain Size	NW of alignment	47.6	25.1	
Current	SRX-23						

**Embankment Slopes**

Embankments supported by retaining walls. Temporary geotextile fabric wall at Pier 1. Wall 2A at Pier 2

† Not provided on as-built plans listed above. Information may be available from WSDOT.

£ Groundwater elevation noted on exploration log

Bridge No. 405/18E (26)  
 Bridge Location Northbound I-405 overcrossing of Cedar River  
 Original As-Built Plan Sheet 228 "SR 405 South Renton to Sunset Blvd. HOV, Cedar River & BNRR O'Xing, Br. 405/18E & W Replacement" dated October, 1991

Number of Piers 5  
 Datum N.G.V.D. of 1929

Pier No.	1	2	3	4	5
<b>Spread Footings</b>					
Bottom of Footing Elevation (ft)	37.0	33.0	17.0	17.0	34.0
Approximate Footing Width (ft)	†	†	†	†	†
Allowable Bearing Pressure (ksf)	†	†	†	†	†
Approximate Seal Bottom Depth (ft)	N/A	N/A	10.0	10.0	N/A

<b>Explorations</b>							
Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft)	Foundation Soil Conditions Provided on Log
L7974	HQ-15-89	49.5		1	49.4	--	Weathered sandstone
L7974	HQ-16-89	90		1	68.7	--	Weathered sandstone
L7974	HQ-81-90	59.2	Grain Size	2	48.6	19.6	Very dense very silty fine to medium sand (sandstone?)
L7974	HQ-82-90	47.3		3	29.6	26.6	Very dense sandstone
L7974	TH-10	28		3	21.2	River Level	Dense silty fine to coarse sand and gravel
L7974	HQ-84-90	43	Grain Size	4	34	~21	Dense to very dense silty and sandy gravel with cobbles and boulders
L7974	HQ-19-89	61		5	42.3	--	Dense silty fine to coarse sandy gravel
L7974	HQ-86-90	59	Grain Size, Atterberg	5	60.9	19.9	Dense to very dense slightly silty fine to coarse sandy gravel

**Embankment Slopes**  
 None specified (river bank)

† Not provided on as-built plans listed above. Information may be available from WSDOT.  
 N/A Not applicable

Bridge No. 405/18W (27)  
 Bridge Location Southbound I-405 overcrossing of Cedar River  
 Original As-Built Plan Sheet 228 "SR 405 South Renton to Sunset Blvd. HOV, Cedar River & BNRR O'Xing, Br. 405/18E & W Replacement" dated October, 1991

Number of Piers 5  
 Datum N.G.V.D. of 1929

Pier No.	1	2	3	4	5
<b>Spread Footings</b>					
Bottom of Footing Elevation (ft)	30.0	33.0	17.0	17.0	34.0
Approximate Footing Width (ft)	†	†	†	†	†
Allowable Bearing Pressure (ksf)	†	†	†	†	†
Approximate Seal Bottom Elev. (ft)	N/A	N/A	10	10	N/A

<b>Explorations</b>							
Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft)£	Foundation Soil Conditions Provided on Log
L7974	P-11-NB	21		1	46	28	Dense sandstone
L7974	H-10	20.2		1	46.5	--	Dense sandstone
L7974	TH-2	35		2	48	--	Very dense fine to coarse sand and gravel
L7974	HQ-83-90	50	Grain Size	3	38	25	Dense slightly silty gravelly sand with cobbles over weathered sandstone
L7974	TH-1	54.7		4	33.7	20.7	Very dense sand and gravel
L7974	HQ-20-89	76.5	Grain Size	5	37.2	22.2	Dense slightly silty fine to coarse sandy gravel with cobbles
L7974	HQ-85-90	60.5	Grain Size, Atterberg	5	59.5	41	Medium dense to dense slightly silty fine to coarse sandy gravel with cobbles

**Embankment Slopes**  
 None specified (river bank)

† Not provided on as-built plans listed above. Information may be available from WSDOT.  
 N/A Not Applicable  
 £ Groundwater elevation noted on exploration log

Bridge No. 405/18P (28)  
 Bridge Location Cedar River Pedestrian Bridge - Below Bridge 405/18E(26)  
 Original As-Built Plan Sheet 316 "SR 405 South Renton to Sunset Blvd. HOV, Cedar River Pedestrian Bridge" dated November 13, 1991

Number of Piers 4  
 Datum N.G.V.D. of 1929

Pier No.	1	2	3	4
<b>Spread Footings</b>				
Bottom of Footing Elevation (ft)	28.0			28.0
Approximate Footing Width (ft)	†			†
Allowable Bearing Pressure (ksf)	6			6
<b>Existing Bridge Column</b>				
Bottom of Footing Elevation (ft)		Pier 14 - NB ♦ 17.0	Pier 15 - NB ♦ 17.0	
Approximate Footing Width (ft)		†	†	
Allowable Bearing Pressure (ksf)		†	†	

**Explorations**

Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft)£	Foundation Soil Conditions Provided on Log
L7974	HQ-81-90	59.2	Grain Size	1	48.6	19.6	Very dense silty fine to medium sand (sandstone?)
L7974	TH-10	28		2	21.2	River Level	Dense silty fine to coarse sand and gravel
L7974	HQ-82-90	47.3		2	29.6	26.6	Very dense sandstone
L7974	HQ-84-90	43	Grain Size	4	34		Very dense silty fine to coarse sandy gravel with pieces of concrete (fill?)

**Embankment Slopes**

None specified (river bank)

† Not provided on as-built plans listed above. Information may be available from WSDOT.  
 ♦ Piers 2 and 3 tied to existing columns of Bridge 405/18E(26)

Bridge No. 405/20 (29)  
 Bridge Location Northbound and Southbound I-405 overcrossing of SR-169  
 Original As-Built Plan Sheet 363 "SR 405 South Renton to Sunset Blvd. HOV, SR-169 O'Xing BR. 405/20 Replacement, Layout" dated January 1991

Number of Piers 2  
 Datum N.G.V.D. of 1929

Pier No.	1	2
<b>Spread Footings</b>		
Bottom of Footing Elevation (ft)	37.5	39 to 49.5
Approximate Footing Width (ft)	†	†
Allowable Bearing Pressure (ksf)	6	6

Explorations							
Job Number	Boring ID	Depth (ft)	Lab Data	Pier No.	Approx. Boring Elevation (ft)	Groundwater Elevation (ft)£	Foundation Soil Conditions Provided on Log
L7974	HQ-21-89	58.5	Grain Size	1	44	20.5	Medium dense slightly silty fine to coarse sandy gravel
L7974	HQ-21A-89	24	Grain Size, Atterberg	1	64.5	--	Dense gravelly silty fine to medium sand (bottom of boring approximately 3 ft above footing elevation)
L7974	HQ-22-89	59	Grain Size	2	44	22	Medium dense slightly silty fine to coarse sandy gravel

**Embankment Slopes**  
 2H:1V maximum slope

† Not provided on as-built plans listed above. Information may be available from WSDOT.  
 £ Groundwater elevation noted on exploration log

Wall No. SS2 Wall 1  
 Wall Location SB I-405 Offramp to SB SR-167; west end of bridge  
 As-Built Plan Sheets 139 and 143 "SR 405, SR 167 I/C Modification" dated April 2001  
 Datum NAVD 88

**All As-Built Plan units are Metric; LRF Design**

Wall Type Structural Earth Wall  
 Wall Stationing STA SS2 2+560.000 (4.457 LT) to STA SS2 2+585.000 (4.05 LT)

Wall Height (m)	4.331 to 7.82
Leveling Pad Width (mm)	305
Minimum Embedment Depth (mm)	610
Reinforcement Spacing (mm)	762
Reinforcement Length (mm)	†

**All exploration units are English**

Explorations						
Job Number	Boring ID	Depth (ft)	Lab Data	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	General Soil Conditions Provided on Log(s)
L-3478	H-6-99	24	Grain Size	45.2	37.7	20 ft of medium dense gravel fill over loose silty sand
L-3478	H-1-99	85	Grain Size	26.8	4.8	Up to 10 ft of very loose silty sand with cobbles and boulders over 54 ft of alluvial deposits consisting of interbedded layers of loose to dense sand and gravel and very soft silt with organics (6 ft thickness). Alluvial deposits underlain by sandstone

† Mesh length spans to back of SS2 Wall 1A (back to back walls) - 8.10 m or 70 % of wall height  
 £ Groundwater elevation noted on exploration log

Wall No. SS2 Wall 1A  
 Wall Location SB I-405 Offramp to SB SR-167; west end of bridge  
 As-Built Plan Sheets 139 and 143 "SR 405, SR 167 I/C Modification" dated April 2001  
 Datum NAVD 88

**All As-Built Plan units are Metric; LRFD Design**

Wall Type Structural Earth Wall  
 Wall Stationing STA SS2 2+560.000 (4.05 RT) to STA SS2 2+585.000 (4.05 RT)

Wall Height (m)	1.67 to 4.87
Leveling Pad Width (mm)	305
Minimum Embedment Depth (mm)	610
Reinforcement Spacing (mm)	762
Reinforcement Length (mm)	†

**All exploration units are English**

Explorations						
Job Number	Boring ID	Depth (ft)	Lab Data	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	General Soil Conditions Provided on Log(s)
L-3478	H-6-99	24	Grain Size	45.2	37.7	20 ft of medium dense gravel fill over loose silty sand
L-3478	H-1-99	85	Grain Size	26.8	4.8	Up to 10 ft of very loose silty sand with cobbles and boulders over 54 ft of alluvial deposits consisting of interbedded layers of loose to dense sand and gravel and very soft silt with organics (6 ft thickness). Alluvial deposits underlain by sandstone

† Mesh length spans to back of SS2 Wall 1 (back to back walls) - 8.10 m or 70 % of wall height  
 £ Groundwater elevation noted on exploration log

Wall No. SS2 Wall 2  
 Wall Location SB I-405 Offramp to SB SR-167; east end of bridge  
 As-Built Plan Sheets 140 and 143 "SR 405, SR 167 I/C Modification" dated April 2001  
 Datum NAVD 88

**All As-Built Plan units are Metric; LRFD Design**

Wall Type Structural Earth Wall  
 Wall Stationing STA SS2 2+742.925 (4.05 LT) to STA SS2 2+855.000 (4.05 LT)

Wall Height (m)	2.77 to 8.81
Leveling Pad Width (mm)	305
Minimum Embedment Depth (mm)	610
Reinforcement Spacing (mm)	762
Reinforcement Length (mm)	†

**All exploration units are English**

Explorations						
Job Number	Boring ID	Depth (ft)	Lab Data	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	General Soil Conditions Provided on Log(s)
L-3478	H-5-99	90.4	Grain Size	41.2	29.2	39 to 54 ft of fill and alluvial deposits consisting of interbedded layers of loose to medium dense sand and gravel and soft to stiff silt, organic silt, and organic clay (organics vary from 0 to 11 ft in thickness). Alluvial deposits underlain by sandstone
L-3478	H-8-99	43.7	Grain Size	40.7	34.2	
L-3478	H-10-99	40.2	Grain Size	33.1	28.1	
L-6166	L-126	3		23*	none	3 ft of silty sand fill material

\* USC & GS Datum

† Mesh length spans to back of SS2 Wall 3 (back to back walls) - 8.10 m or 70 % of wall height

£ Groundwater elevation noted on exploration log

Wall No. SS2 Wall 3  
 Wall Location SB I-405 Offramp to SB SR-167; east end of bridge  
 As-Built Plan Sheets 107,141, 143, and 145 "SR 405, SR 167 I/C Modification" dated April 2001  
 Datum NAVD 88

All As-Built Plan units are Metric; LRFD Design

Wall Type CIP Concrete, Standard Plan D-1a and Structural Earth Wall  
 Wall Stationing CIP Concrete: (STA SS2 2+742.925 (4.05 RT) to STA SS2 2+775.945 (4.05 RT))  
 Structural Earth: STA SS2 2+775.945 (4.05 RT) to STA SS2 2+930.000 (4.05 RT)

Wall	CIP Concrete	Structural Earth
Height (m)	7.36 to 8.79	0.77 to 7.36
Leveling Pad Width (mm)		305
Minimum Embedment Depth (mm)		610
Reinforcement Spacing (mm)		762
Reinforcement Length (mm)		†
<b>610 mm CIP Concrete Piles</b>		
Top of Pile Elevation (m)	10.09 to 10.62	
Approximate Embedment Depth (m)	**	
Allowable Pile Capacity (kN)	4500	

All exploration units are English

Explorations						
Job Number	Boring ID	Depth (ft)	Lab Data	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	General Soil Conditions Provided on Log(s)
L-3478	H-5-99	90.4	Grain Size	41.2	29.2	39 to 54 ft of fill and alluvial deposits consisting of interbedded layers of loose to medium dense sand and gravel and soft to stiff silt, organic silt, and organic clay (organics vary from 0 to 11 ft in thickness). Alluvial deposits underlain by sandstone
L-3478	H-8-99	43.7	Grain Size	40.7	34.2	
L-3478	H-10-99	40.2	Grain Size	33.1	28.1	
L-6166	L-126	3		23*	none	Up to 5 ft of silt, sand and gravel (fill) over alluvial deposits similar to those described above
L-6166	DL2-119	3		28*	none	
L-6166	DL2-122	3		29.5*	none	
L-6166	L-121	27		23.5*	16.5*	

\* USC & GS Datum

\*\* Not shown on as-built plans. Information may be available from WSDOT

† Mesh length spans to back of SS2 Wall 2 where present (back to back walls) - 8.10 m or 70 % of wall height

£ Groundwater elevation noted on exploration log

Wall No. SS2 Wall 4  
 Wall Location SB I-405 Offramp to NB SR-167  
 As-Built Plan Sheets 142 and 143 "SR 405, SR 167 I/C Modification" dated April 2001  
 Datum NAVD 88

**All As-Built Plan units are Metric; LRFD Design**

Wall Type Structural Earth Wall  
 Wall Stationing STA SS2 2+800.000 (5.28 LT) to STA SS2 2+915.000 (5.28 LT)

Wall Height, H (m)	1.109 to 4.00
Leveling Pad Width (mm)	305
Minimum Embedment Depth (mm)	610
Reinforcement Spacing (mm)	762
Reinforcement Length (mm)	70 % H

**All exploration units are English**

Explorations						
Job Number	Boring ID	Depth (ft)	Lab Data	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	General Soil Conditions Provided on Log(s)
L-6166	DL2-119	3		28.0 *	none	
L-6166	L-120	4.5		27 *	none	Up to 5 ft of silt, sand and gravel (fill) over alluvial deposits
L-6166	L-121	27		23.5 *	16.5 *	consisting of interbedded layers of loose to medium dense
L-6166	DL2-122	3		29.5 *	none	sand and gravel and soft to stiff silt, organic silt, and organic
L-6166	DL2-123	4		19 *	15 *	clay
L-6166	L-124	2.5		29.8 *	none	
L-6166	H-8-99	43.7	Grain Size	40.7*	34.2*	Up to 41 ft of fill and alluvial deposits consisting of loose to
						medium dense silty sand and gravel with varying amounts of
						organics over sandstone
Current	SRX-17	47.3		35.7	18.4	10 ft of loose sand, 7 ft of dense sand over sandstone

\* USC & GS Datum

£ Groundwater elevation noted on exploration log

Wall No. Main Avenue South Retaining Wall  
 Wall Location East side of Main Ave S from Renton City Hall to S Grady Way  
 As-Built Plan Sheets 1, 13, 14, 43 and 44 "Main Avenue South Improvement Project" dated May 1998  
 Datum NAVD 88

All As-Built Plan units are English

Wall Type Soil Nail Wall  
 Wall Stationing STA B 615+50 (25.00 RT) to STA B 610+80.10 (25.00 RT)

Soil Nails	
Bar Sizes	**
Minimum Nail Lengths (ft)	5
Minimum Allowable Nail Capacity (kips/ft)	**

All exploration units are English

Explorations						
Job Number	Boring ID	Depth (ft)	Lab Data	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	General Soil Conditions Provided on Log(s)
L-7974	D-3-89	25		87.9*	none	6 ft of gravel fill over weathered sandstone
L-7974	D-4-88	30		85.2*	none	4 ft of gravel fill over weathered to fresh sandstone
XL-2066	SRX-21	42.5		89.6	66.6	14 ft of loose to medium dense sand over highly to slightly weathered sandstone

\* Unknown Datum

\*\* Not shown on as-built plans. Information may be available from WSDOT

£ Groundwater elevation noted on exploration log

Wall No. 1  
 Wall Location SB I-405 South of Cedar Avenue Undercrossing  
 As-Built Plan Not available  
 Interdepartmental "C.S. 1743, SR-405, L-7974, South Renton I/C to Sunset Blvd., Walls 1, 17, 18, 20, 21, and 22, Foundation Recommendations" by  
 Communication (IDC) WSDOT dated May 1, 1990

**Note: All wall data obtained from IDC**

Wall Type †  
 Wall Stationing LS 228+80 to LS 245+10

Wall Height (ft)	Up to 18
Leveling Pad Width (ft)	†
Minimum Embedment Depth (ft)	†
Reinforcement Spacing (ft)	†
Reinforcement Length (ft)	†

<b>Foundation Soil**</b>
5 to 15 ft of medium dense silty gravelly sand fill over weathered to fresh sandstone

† Not provided in IDC

\*\* Foundation soil information from IDC

Wall No. 3  
 Wall Location I-405 Cedar Avenue Undercrossing, between northbound and southbound lanes  
 As-Built Plan Sheet 345 "SR 405, South Renton to Sunset Blvd. HOV, Cedar Ave. U'Xing Stage 2" dated October 13, 1994  
 Interdepartmental "C.S. 1743, SR-405, L-7974, South Renton to Sunset Blvd. HOV Lanes, Retaining Walls 3, 5, 6, 10, and Temporary Detour Wall at Bridge  
 Communication (IDC) 405/17B, Foundation Recommendations" by WSDOT dated May 11, 1989.  
 Datum Unknown

**Note: All wall data obtained from IDC**

Wall Type Standard Reinforced Concrete Type 2 Wall with Traffic Barrier, L-Wall with Traffic Barrier, or Facing Wall with Rock Bolts  
 Wall Stationing LN 241+50 to LN 257+80

Foundation	Shallow Footing
Wall Height (ft)	Up to 18
Minimum Footing Width (ft)	†
Allowable Bearing Pressure (ksf)	
LN 241+50 to LN 248+00	20
LN 248+00 to LN 256+80	10
LN 256+80 to LN 257+80	6

Station	Foundation Soil**
LN 241+50 to LN 248+00	Weathered sandstone
LN 248+00 to LN 256+80	Very dense glacial till
LN 256+80 to LN 257+80	Compacted granular fill

Representative Explorations	
Job Number	Boring ID
L-7974	H-7-89*
L-7974	H-8-89*
L-7974	HQ-5-89*
L-7974	HQ-7-90*
L-7974	C-1-89*
L-7974	C-2-89*
L-7974	HQ-9-89*
L-7974	BH-7-89*

† Not provided in IDC. Information available from WSDOT.

\* NGVD of 1929 Datum

\*\* Foundation soil information from IDC.

Wall No. 4  
 Wall Location South of I-405 Cedar Avenue Undercrossing along east side of I-405  
 As-Built Plan Not available  
 Interdepartmental "C.S. 1743, SR-405, L-7974, South Renton I/C to Sunset Blvd. HOV Lanes, Walls 2A, 2B and 4, and M-Line Design and FR-Line  
 Communication (IDC) Design, Final Foundation Recommendations" by WSDOT dated August 1, 1990  
 Datum Unknown

**Note: All wall data obtained from IDC**

Wall Type MSE Wall with full height CIP or precast concrete panels  
 Wall Stationing LN 236+00 to LN 243+00

Wall Height (ft)	18
Minimum Wall Base Width (ft)	0.7H
Allowable Bearing Capacity (ksf)	4
Minimum Embedment Depth (ft)	0.15H or 3
Reinforcement Spacing (ft)	†
Reinforcement Length (ft)	†

**Foundation Soil\*\***

Medium dense silty sand fill over weathered sandstone

† Not provided in IDC

\*\* Foundation soil information from IDC

Wall No. 5  
 Wall Location SR 405 Cedar Avenue Undercrossing, west approach embankment  
 As-Built Plan Sheet 345 "SR 405, South Renton to Sunset Blvd. HOV, Cedar Ave. U'Xing Stage 2" dated October 13, 1994  
 Interdepartmental "C.S. 1743, SR-405, L-7974, South Renton to Sunset Blvd. HOV Lanes, Retaining Walls 3, 5, 6, 10, and  
 Communication (IDC) Temporary Detour Wall at Bridge 405/17B, Foundation Recommendations" by WSDOT dated May 11, 1989  
 Datum Unknown

**Note: All wall data obtained from IDC**

Wall Type MSE Wall (VSL, Reinforced Earth, Cribblock, Hilfiker) or Standard Reinforced Concrete Wall Supported on H-Piles  
 Wall Stationing C 13+75 to C 17+22

Wall Type	MSE	Reinforced Concrete		
Station	13+75 to 17+20	13+75	15+90	17+20
Wall Height (ft)	Up to 40			
Allowable Bearing Pressure (ksf)	7			
Estimated Settlement (in)	3			
<b>H-Piles</b>				
Top of Pile Elevation (ft)		†		
Approximate Embedment Depth (ft)		†		
Allowable Pile Capacity (kips)		140		
Estimated Tip Elevation (ft)		40	20	45

Foundation Soil**
15 to 20 feet of loose to very dense silty gravelly sand over weathered sandstone; groundwater at contact with sandstone

Representative Explorations	
Job Number	Boring ID
L-7974	HQ-9-1-89*
L-7974	TH-7*

† Not provided in IDC

\* NGVD of 1929 Datum

\*\* Foundation soil information from IDC

Wall No. 6  
 Wall Location SR 405 South Renton Avenue Undercrossing, west approach embankment  
 As-Built Plan Sheet 268 "SR 405 Tukwila to Sunset Blvd., Cedar River Pipelines Relocation, Renton Avenue U'Xing 405/17B" dated October 6, 1990  
 Interdepartmental "C.S. 1743, SR-405, L-7974, South Renton to Sunset Blvd. HOV Lanes, Retaining Walls 3, 5, 6, 10, and  
 Communication (IDC) Temporary Detour Wall at Bridge 405/17B, Foundation Recommendations" by WSDOT dated May 11, 1989  
 Datum Unknown

**Note: All wall data obtained from IDC**

Wall Type MSE Wall (VSL, Reinforced Earth, Criblock, Hilfiker) or Standard Reinforced Concrete wall supported on H-Piles  
 Wall Stationing R 12+50 to R 15+22

Wall Type	MSE	Reinforced Concrete		
	Station	12+50	14+00	15+20
Wall Height (ft)	42	42		
Allowable Bearing Pressure (ksf)	8			
Estimated Settlement (in)	5			
<b>H-Piles</b>				
Top of Pile Elevation (ft)		†		
Approximate Embedment Depth (ft)		†		
Allowable Pile Capacity (kips)		140		
Estimated Tip Elevation (ft)		31	30	28

Note: As-built plan indicates geotextile wall installed, however no data available

**Foundation Soil\*\***

12 to 18 feet of loose to very dense silty sand over weathered sandstone; groundwater at contact with sandstone

Representative Explorations	
Job Number	Boring ID
L-7974	HQ-18-89*
L-7974	HE-7-90*
L-7974	HE-9-90*
L-7974	HE-11-90*
L-7974	HE-10-90*
L-7974	D-11-89*

† Not provided in IDC

\* NGVD of 1929 Datum

\*\* Foundation soil information from IDC

Wall No. † ; Pier 1 of Bridge 405/17.3  
 Wall Location SR 405 Cedar Avenue Undercrossing, West Abutment  
 As-Built Plan Sheet 345 "SR 405, South Renton to Sunset Blvd. HOV, Cedar Ave. U'Xing Stage 2" dated October 13, 1991  
 Interdepartmental "CS 1743, SR-405, L-7974, South Renton to Sunset Blvd. HOV Lanes, Cedar Ave.S. U'Xing 405/17A, Foundation  
 Communication (IDC) Recommendations" by WSDOT dated July 5, 1989  
 Datum NGVD of 1929

**Note: All wall data obtained from IDC**

Wall Type Reinforced Concrete Retaining Wall  
 Wall Stationing † (56 ft long)

Foundation	Shallow Footing
Wall Height (ft)	†
Approximate Footing Width (ft)	†
Allowable Bearing Pressure (ksf)	10
Bottom of Footing Elevation (ft)	61
Estimated Settlement (in)	1

Job Number	Boring ID	Depth (ft)	Lab Data	Explorations		Foundation Soil Conditions Provided on Log
				Approx. Boring Elevation (ft)	Groundwater Elevation (ft) £	
L7974	HQ-9-1-89	47	Uniaxial Core, Compression, Grain Size	70.7	59.4 to 62.6 & 43.6 to 49.7	Weathered sandstone

† Not provided in IDC

£ Groundwater elevation noted on exploration log

Wall No. 2A  
 Wall Location I-405 Cedar Avenue Undercrossing, East Abutment  
 As-Built Plan Sheet 345 "SR 405, South Renton to Sunset Blvd. HOV, Cedar Ave. U'Xing Stage 2" dated October 13, 1991  
 Interdepartmental "C.S. 1743, SR-405, L-7974, South Renton I/C to Sunset Blvd. HOV Lanes, Walls 2A, 2B and 4, and M-Line Design and  
 Communication (IDC) FR-Line Design, Final Foundation Recommendations" by WSDOT dated August 1, 1990  
 Datum NGVD of 1929 (based on as-built plan)

**Note: Wall data obtained from IDC**

Wall Type Soil Nail and Reinforced Concrete  
 Wall Stationing Soil Nail (LN 241+02 to LN 255+50)  
 Reinforced Concrete (LN 255+50 to LN 257+38)

Wall	Soil Nail	Reinforced Concrete	
Station	241+02 to 255+50	255+50 to 256+97	256+97 to 257+38
Wall Height (ft)	4 to 17.5	†	
<b>Soil Nail Wall Design Info</b>			
Bar Sizes	No. 7 to No. 11, 1-inch (150 ksi)		
Minimum Nail Lengths (ft)	8 to 54		
Minimum Allowable Nail Capacity (kips/ft)	1.4 (glacial deposit) to 3.5 (fresh sandstone)		
<b>Shallow Footing</b>			
Approximate Footing Width (ft)	†		
Allowable Bearing Pressure (ksf)	8 (must overexcavate)		4 with overexcavation, 2.6 without
Recommended Excavation Depth (ft)	-6		
Minimum Embedment Depth (ft)	2		

Station	Foundation Soil**
LN 241+00 to LN 244+00	3 to 10 ft of weathered sandstone over fresh sandstone
LN 244+00 to LN 254+00	2 to 7 feet of fill over 0 to 6 feet of colluvium over 0 to 7 feet of glacial deposits over weathered to fresh sandstone
LN 254+00 to LN 257+38	2 to 7 feet of fill over 5 to 20 feet of glacial deposits over weathered to fresh sandstone

Representative Explorations			
Job Number	Boring ID	Job Number	Boring ID
L-7974	HQ-1-89	L-7974	HQ-9-89
L-7974	HQ-50-89	L-7974	6-8-89
L-7974	HQ-5-888	L-7974	HQ-8-88
L-7974	HQ-6-89	L-7974	HQ-54-89
L-7974	HQ-5-89	L-7974	HQ-11-89
L-7974	HQ-52-89	L-7974	HQ-10-89
L-7974	HQ-7-90	L-7974	HQ-15-89
L-7974	HQ-53-89	L-7974	HQ-13-89
L-7974	C-1-89	L-7974	HQ-16-89
L-7974	C-2-89		

† Not provided in IDC  
 \*\* Foundation soil information from IDC

Wall No. 2B  
 Wall Location I-405 Cedar Avenue Undercrossing, East Abutment  
 As-Built Plan Sheet 345 "SR 405, South Renton to Sunset Blvd. HOV, Cedar Ave. U'Xing Stage 2" dated October 13, 1991  
 Interdepartmental "C.S. 1743, SR-405, L-7974, South Renton I/C to Sunset Blvd. HOV Lanes, Walls 2A, 2B and 4, and M-Line Design and FR-  
 Communication (IDC) Line Design, Final Foundation Recommendations" by WSDOT dated August 1, 1990  
 Datum NGVD of 1929 (based on as-built plan)

**Note: Wall data obtained from IDC**

Wall Type Reinforced Concrete Retaining Wall  
 Wall Stationing LN 242+98 to LN 256+97

Foundation	Shallow Footing			
Station	242+98 to 248+84	253+36 to 254+75	254+75 to 255+50	255+50 to 256+97
Wall Height (ft)	†			
Approximate Footing Width (ft)	†			
Allowable Bearing Pressure (ksf)	8	6	6	4 with excavation, 2.6 without
Recommended Excavation Depth (ft)	N/A	N/A	N/A	~5
Bottom of Footing Elevation (ft)	†	†	83	†
Minimum Embedment Depth (ft)	2	2	†	2

Station	Foundation Soil**
LN 242+98 to LN 244+00	3 to 10 ft of weathered sandstone over fresh sandstone
LN 244+00 to LN 254+00	2 to 7 feet of fill over 0 to 6 feet of colluvium over 0 to 7 feet of glacial deposits over weathered to fresh sandstone
LN 254+00 to LN 256+97	2 to 7 feet of fill over 5 to 20 feet of glacial deposits over weathered to fresh sandstone

Representative Explorations			
Job Number	Boring ID	Job Number	Boring ID
L-7974	HQ-1-89	L-7974	HQ-9-89
L-7974	HQ-50-89	L-7974	6-8-89
L-7974	HQ-5-888	L-7974	HQ-8-88
L-7974	HQ-6-89	L-7974	HQ-54-89
L-7974	HQ-5-89	L-7974	HQ-11-89
L-7974	HQ-52-89	L-7974	HQ-10-89
L-7974	HQ-7-90	L-7974	HQ-15-89
L-7974	HQ-53-89	L-7974	HQ-13-89
L-7974	C-1-89	L-7974	HQ-16-89
L-7974	C-2-89		

† Not provided in IDC  
 \*\* Foundation soil information from IDC

**Existing Retaining Walls with no As Built Information Available**

Wall Type	Approximate Location	Nearby Borings
Concrete Facing (possibly cantilever concrete wall)	South side of northbound SR-167 onramp to northbound I-405, from interchange to Shattuck Ave S	DR2-70, DR2-71, DR2-72, DR2-73 (L-6166)
Röckery	Southbound I-405, west of Talbot Road S (north of ROW) to One Renton Place building	L-111, L-114 (L-6166)
Rockery	East abutment of Bridge No. 405/16 (22)	SRL-6-05 (Current)
Soldier Pile Wall with Concrete Facing	East of Sam's Club near stream culvert crossing	No borings
Gabion Basket Wall and Reinforced Concrete Wall	West side of Main Ave S near Renton City Hall	No borings
Concrete Facing (possibly cantilever concrete wall)	East side of northbound Cedar Ave S, south of Bridge No. 405/17.3 (24)	HRR-100, HRR-101, HRR-102, TH-8, TH-9 (L-7974); SRX-22 (Current)

**All As-Built Plan Units are Metric**

**General Information**

Stormwater Facility	NW Quadrant Bioswale
Approximate Location	Northwest quadrant of I-405/SR-167 Interchange
Approximate Station	BL2' Line 2+497.157 (13.505 RT) to 2+406.686 (11.415 RT)
Approximate Mile Post	Single cell bioswale
As-Built Plan	Sheets 28, 36, and 38, "SR 405, SR 167 I/C Modification" dated March 30, 2001
Datum	NAVD 88

**Facility Information**

Approximate Bottom Elevation (m)	†
Approximate Bottom Width (m)	1.0
Approximate Length (m)	64
Side Slopes (H:V)	3:1

Bottom and side slopes lined with topsoil Type A

**All exploration units are English**

**Explorations**

Job Number	Boring ID	Depth (ft)	Lab Data	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	Foundation Soil Conditions Provided on Log
L-3478	H-7-99	51.5		33	Not determined	Up to 11 feet of dense fill over alluvial deposits consisting of interbedded layers of soft to medium stiff silt and peat and very loose to dense sand to silty sand
L-3478	H-9-99	22		29.3	Not encountered	
L-6166	BL2-136	8	Grain Size	39.2*	Not determined	Loose to very dense sandy gravel with cobbles
L-6166	BL2-137	4	Grain Size	21.4*	15.9*	1 foot of silty sandy gravel over weathered sandstone. NOTE: Shallow sandstone description is not consistent with geology or nearby explorations.

\* USC & GS Datum

† Unknown, not provided on as-built plans. Information may be available from WSDOT

£ Groundwater elevation noted on exploration log

**All As-Built Plan Units are Metric**

**General Information**

Stormwater Facility	NE Quadrant Bioswale
Approximate Location	Northeast quadrant of I-405/SR-167 Interchange
Approximate Station	CL2' Line 2+845.03 (12.275 LT) to 2+763.105 (16.067 LT)
Facility Type	Four cell bioswale
As-Built Plan	Sheets 29, 37, and 38 "SR 405, SR 167 I/C Modification" dated March 30, 2001
Datum	NAVD 88

**Facility Information**

	Cell No.			
	1	2	3	4
Approximate Bottom Elevation (m)	†	†	†	†
Approximate Bottom Width (m)	6.7	6.7	6.7 to 7.7	7.7
Approximate Length (m)	36	67	81	25
Side Slopes (H:V)	2:1	2:1	2:1	2:1

Note: Cell's 1 & 2 are lined with a Geosynthetic clay liner

**All exploration units are English**

**Explorations**

Job Number	Boring ID	Depth (ft)	Lab Data	Approx. Boring Elevation (ft)	Groundwater Elevation (ft) <sup>£</sup>	Foundation Soil Conditions Provided on Log
L-3478	H-2-99	85	Grain Size	26.9	15.4	Up to 14 feet of loose to medium dense sandy silt, silty gravel, and sandy organic soil with asphalt and coal pieces (fill?) overlying 41 to 51 feet of alluvial deposits consisting of interbedded layers of loose to dense sand and gravel and very soft to soft silt and organic silt. Sandstone encountered below alluvial deposits.
L-3478	H-3-99	85	Grain Size	31.2	27.7	
L-3478	H-4-99	80	Grain Size	35	24	
L-6166	CL2-129	4		33.8 *	none	1.5 to 3.5 feet of silty sand and gravel over silty sand (logged as weathered sandstone). NOTE: Shallow sandstone description is not consistent with geology or nearby explorations.
L-6166	CL2-130	4		35.4 *	none	
L-6166	CL2-131	4		28.5 *	none	
L-6166	CL2-132	3.5		23.1 *	none	
L-6166	CL2-133	3		20.1 *	19.9 *	

\* USC & GS Datum

† Unknown, not provided on as-built plans. Information may be available from WSDOT

£ Groundwater elevation noted on exploration log