



**Washington State  
Department of Transportation**

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TECHNICAL MANUAL

# **Utilities Accommodation Policy**

M 22-86.02

July 2009

**Environmental and Engineering Programs**  
Design Office

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The *Utilities Accommodation Policy* was established in cooperation with the utility industry; AASHTO policy guidelines on accommodating utilities within highway/ freeway rights of way; state laws and regulations governing the accommodation of utility facilities; and in compliance with federal-aid policies and procedures.

It is the objective of this policy to prescribe the means by which utility installations may be accommodated within state highway rights of way, when located in a manner that does not interfere with the free and safe flow of traffic or impair the visual quality of the highway.

The *Utilities Accommodation Policy* includes:

- Requirements involving underground utility encroachments.
- Control Zone Guidelines for utilities.
- Cost-Effective Selection Procedure (CESP) to determine whether a Location II Object is cost-effective to relocate.
- Memorandum of Understanding Related to Scenic Classification for Utilities Accommodation on State Highway Rights of Way.
- Scenic classification of state highways: 1989 listing with corrections, including the addition of State Routes added by the Legislative RJT Act of 1991.
- Chapter 468-34 WAC, Utility Lines – Franchises and Permits.

/s/ Kyle R. McKeon

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**Kyle R. McKeon**  
Business Manager,  
WSDOT HQ Design Office



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### 1.01 General

### 1.02 Longitudinal and Crossing Coverage Detail

#### 1.01 General

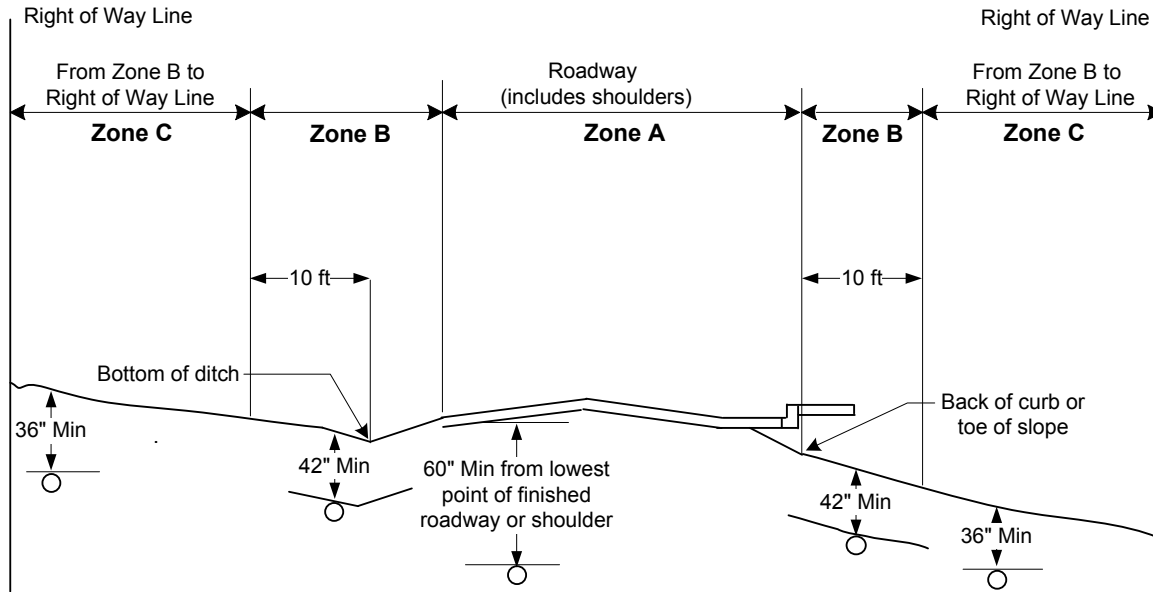
Utility facilities shall be buried in accordance with each facility's permit and franchise provisions (see [Figure 1-1](#)).

- **Zone A** is the roadway, which includes shoulders and medians of less than 16 feet in width. (Zone A minimum coverage is 60 inches from the lowest point of the finished roadway or shoulder.)
- **Zone B** is the area within the foreslope and backslope where routine maintenance operations generally occur. This area is defined as between the outer edge of each shoulder and 10 feet beyond the bottom of the ditch/toe of slope or 15 feet beyond edge of shoulder, whichever is farther. (Zone B minimum coverage is 42 inches.)
- **Zone C** is the area beyond Zone B to the right of way line. (Zone C minimum coverage is 36 inches.)

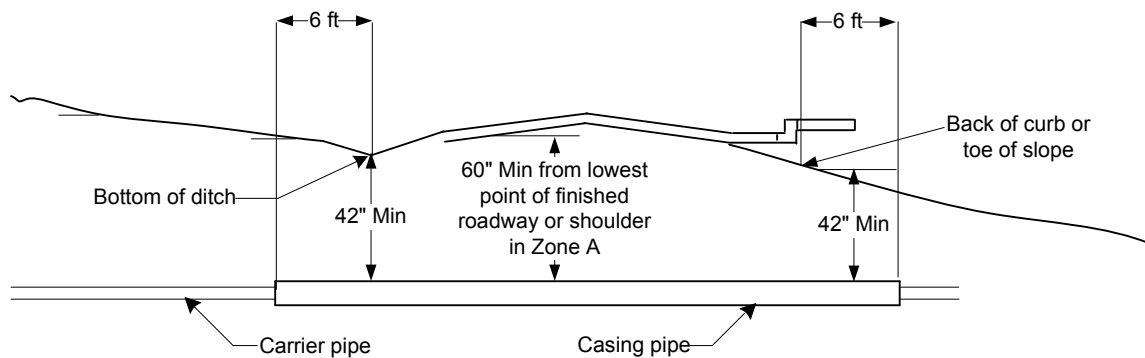
It is necessary to consider future projects to determine whether the typical depth is sufficient. In the case where a road widening may occur and Zone C will become Zone B, it would benefit the utility and the Washington State Department of Transportation (WSDOT) if the installation were staged as though it were a Zone B application.

#### 1.02 Longitudinal and Crossing Coverage Detail

Pipeline cover, which is defined as the distance from the finish grade of the roadway or the existing grade line to the top of carrier pipe or top of casing, if used, shall be installed at the minimum depths shown in [Figures 1-1](#) and [1-2](#). They depict the minimum cover for pipe installation. Utility accommodation applications proposing to install utilities at depths less than those shown are a variance to WSDOT policy. Utility depths should also consider variations in topography for longitudinal installations. Likewise, the minimum depth when crossing should be measured from the lowest point of the entire roadway prism.



**Longitudinal Coverage Detail**  
*Figure 1-1*



**Note:**  
 Casing pipes shall extend a minimum of 6 feet beyond the toe of fill slopes, or bottom of ditch line, or outside curb.

**Crossing Coverage Detail**  
*Figure 1-2*



- 2.01 Introduction
- 2.02 Rules
- 2.03 Control Zone Guidelines
- 2.04 Sample Control Zone Calculations
- 2.05 Design/Maintenance Supplement Information

### 2.01 Introduction

This chapter provides guidance on the procedures used to process requests for utility occupancy of Washington State Department of Transportation (WSDOT) highway rights of way.

### 2.02 Rules

- (a) Utility facilities are to be accommodated in accordance with the guidelines in [2.03](#), Control Zone Guidelines.
- (b) It is not WSDOT's intent to force utilities to relocate outside the right of way. Therefore, it is critical for Headquarters (HQ) and the regions to work cooperatively with the utilities in implementing these guidelines. The regions will need to help the utilities understand WSDOT terminology, traffic data, and the necessary calculations associated with accommodation of their facilities in the right of way.
- (c) It will be necessary for the regions to work closely with the utilities in the following ways:
  1. Assist the utilities in determining how their new construction, relocation, or reconstructed facility can be outside the Control Zone, covered by a variance, or designated as a Location III Object.
  2. Assist the utilities on highway projects to ensure they are not adjusting their facility beyond the scope of the highway work.
  3. Assist the utilities with Franchise Renewals or Consolidations and ensure they are adjusting or protecting those facilities where corrective action is necessary.

It is expected that a utility company will have budgeted the needed resources to accomplish the work necessary to comply with these guidelines.

## 2.03 Control Zone Guidelines

### (1) Purpose

WSDOT is charged with overall supervision and administration of the state's highway system. This includes planning, operation, design, construction, economics, safety, and accommodation of utility facilities on state highway right of way.

It has been recognized that it is in the public interest for utility facilities to jointly use the right of way of public roads and streets when such use and occupancy do not interfere with the primary purpose of the highway. In this way, the highway right of way can be used to transmit and distribute utility services for the benefit of the public as well as to serve conventional highway needs.

It is WSDOT's policy to accommodate utilities within the highway right of way when such use is consistent with the provisions of federal, state, or local laws and regulations. This policy adopts the American Association of State Highway and Transportation Officials (AASHTO), National Research Council (NRC) and Federal Highway Administration (FHWA) principles.

Control Zone Guidelines have been developed to provide direction regarding when and how utilities may use state highway right of way, and where they may be placed. Every effort should be made to accommodate utilities as cost-effectively as possible while maintaining public safety.

The Control Zone Guidelines are reviewed with the utility industry every two years for workability, and they are updated as the need arises. Safety improvements accomplished as a result of these guidelines will help maintain highway safety in the future.

### (2) Definitions

#### (a) Alternative Countermeasures

Alternative countermeasures are alternatives to the relocation of nontraversable utility objects to outside the Control Zone. They include:

- Putting utility lines underground.
- Increasing the lateral offset of utility objects from the edge of the traveled way.
- Locating to an inaccessible area such as toward the top or on the top of cut slopes.
- Reducing the number of utility objects through joint use, increased span lengths, and/or placing utility objects on only one side of the road.
- Installing protective devices such as guardrails, traffic barriers, or impact attenuators.
- Using a breakaway design.

(b) **Auxiliary Lane**

An auxiliary lane is that portion of the roadway adjoining the traveled way for parking, speed change, turning, storage for turning, weaving, truck climbing, or for other purposes supplementary to the traveled way.

(c) **Control Zone**

The roadside area defined by a calculated Control Zone distance where the placement of utility objects is controlled or prohibited.

(d) **Cost-Effectiveness Selection Procedure (CESP)**

The CESP is a rational methodology developed by AASHTO for comparing roadside improvement alternatives. AASHTO's methodology, published as [Appendix A](#) to its 2002 (or current version) *Roadside Design Guide*, can be used manually or through a computer program (ROADSIDE) or the newer Roadside Safety Analysis Program (RSAP). It allows its user to predict the total costs associated with specific traffic and roadway conditions and to select the most appropriate alternative (see [Appendix A](#)).

(e) **Location I Objects**

Utility objects located within the Control Zone in the following areas are normally considered Location I Objects unless classified as a Location III Object:

- Outside of horizontal curves where advisory signed speeds for the curve are 15 mph or more below the posted speed limit for that section of highway. The Control Zone distance is established using the posted speed limit of the highway, not the advisory speed limit.
- Within the turn radius area of public at-grade intersections (see [2.05\(1\)](#), Utility Design Considerations).
- Where a barrier, embankment, rock outcropping, ditch, or other roadside feature is likely to direct a vehicle into a utility object.
- Closer than 5 feet horizontal beyond the edge of the usable shoulder.

(f) **Location II Objects**

Location II Objects are all utility objects located within the Control Zone that are not classified as Location I or Location III Objects.

(g) **Location III Objects**

- Located outside the Control Zone.
- Objects within the Control Zone that are mitigated by an alternative countermeasure.
- Location II Objects that have been classified as Location III Objects (see [Appendix A](#)).

(h) **Slope**

- **Backslope:** A sideslope that goes up as the distance increases from the roadway (cut slopes).
- **Foreslope:** A sideslope that goes down as the distance increases from the roadway (fill slopes and ditch inslopes).

(i) **Traveled Way**

The portion of the roadway intended for the movement of vehicles, exclusive of shoulders and lanes for parking, turning, and storage for turning. It is the beginning point for measuring the Control Zone; it does not include shoulders, parking lanes, turning lanes, storage for turning lanes, pullout lanes, bike lanes, or adjacent pedestrian paths. It is generally described as the area between the outer edge stripes (also known as fog lines).

(j) **Usable Shoulder**

That portion of the roadway extending beyond the traveled way that can be used for emergency parking by motorists. Usable shoulder is the average width being used as a shoulder along a section of highway, exclusive of intermittent widened areas, but not to exceed 10 feet in width.

(k) **Utility Object**

Utility objects are defined for the purpose of these guidelines as aboveground utility facilities located within state highway right of way.

(l) **Utility Reconstruction**

Work where more than 50% of the poles or towers within any mile are replaced. This does not include periodic pole or tower replacement.

**(3) Application**

Under the Control Zone Guidelines, all new utility objects will be constructed outside the Control Zone unless they are covered by a variance (discussed below) or are Location III Objects. In addition, utilities will be required to relocate or mitigate existing objects within the clear zone by addressing existing objects during WSDOT highway projects, utility reconstruction, Franchise Renewal/Consolidation, and through a hazard evaluation program and study of accident history related to poles and other objects.

(a) **Utility Construction or Reconstruction**

During utility construction or reconstruction, the utility will locate all utility objects to outside the Control Zone unless they are classified as Location III Objects or a variance is granted.

**(b) Highway Improvement Projects**

During the early design phase of state highway improvement projects, WSDOT will inform the utility that it is required to adjust utility objects that, prior to or as the result of the project, are located in the Control Zone.

- For projects where WSDOT does not address safety items, any individual Location I Objects that demonstrate a need for adjustment will be adjusted before or during the project.
- For projects where WSDOT addresses safety item(s), the utility shall adjust Location I Objects and may be required to adjust Location II Objects to qualify as Location III Objects. Objects requiring relocation to Location III Objects so that the project can be completed (for example, because the highway is to be widened) should be adjusted before or during the project.
- If it is determined, through an Engineering Analysis, that a Location I Object cannot be moved to Location III or mitigated, a variance may be granted.

WSDOT will notify the utilities of upcoming highway improvement projects as early as possible. During the project development phase, the utility will be advised of the scheduled project advertisement date and of those utility objects requiring relocation. When available, a copy of the Roadside Clear Zone Inventory sheet prepared by the department will be provided.

**(4) Franchise Renewal and Consolidation**

The utility shall review all Location I and Location II Objects within the proposed Franchise Renewal or Consolidation and develop and submit a Corrective Action Plan and schedule of relocation, reclassification, or countermeasures for WSDOT review and approval.

**(5) Utility Object Accident Sites**

The utility shall notify WSDOT within one week of an object being contacted by a vehicle. If the object is damaged, immediate repairs may be made by the utility to maintain service, upon notice to the appropriate highway maintenance staff. Evaluation shall be jointly conducted by the utility and the region Utilities Office to determine mitigation alternatives for the object.

Through an Engineering Analysis and the Cost-Effective Selection Procedure (CESP), it will be determined whether a Location II Object will be moved to Location III, mitigated, or reclassified.

(a) **Variance**

WSDOT recognizes that conditions may arise that make it infeasible to comply with the maximum Control Zone. Variances from such compliance may be allowed when justified by suitable utility engineering studies that consider traffic safety.

Examples of conditions rendering compliance infeasible include:

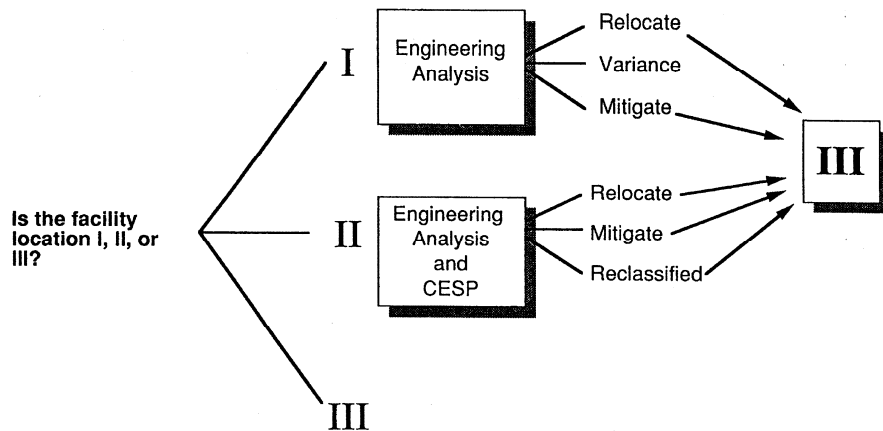
- WSDOT right of way that is not adequate to accommodate utility objects outside the Control Zone.
- Segments of utility facilities that, due to terrain or other features, do not warrant being located in full compliance with the maximum Control Zone.

In these situations, a variance, if adequately justified, may be granted by WSDOT to allow utility objects to remain or be installed within the Control Zone.

At a minimum, any variance request must include the following supporting information:

- The reason the object should not be located as Location III.
- Evidence that installation in an alternate location outside the Control Zone or right of way is extremely difficult because of installation problems and/or unreasonable costs. Show detailed cost comparisons and describe alternatives that were considered.
- Pictures and typical cross sections, which shall include location of proposed and existing utility objects with reference to the edge of the traveled way.
- The use of the alternative measures addressed.

**Control Zone Decision Paths**



CESP means Cost Effective Selection Procedure.  
 Engineering Analysis means Engineering feasibility study.

**Control Zone Decision Paths**  
 Figure 2-1

**(b) Criteria**

The Control Zone distance varies according to the posted speed, sideslope, and traffic volume of the highway. This Control Zone distance is measured in feet normal to the highway, beginning at the edge of the traveled way and extending outward perpendicular from the traveled way.

To calculate the Control Zone distance, select the following condition that best fits the conditions of the highway, then follow the instructions printed for that example. Use the Utility Object Relocation Record (see the *Utilities Manual*, Chapter 9) to record field measurements and Control Zone calculations. The Control Zone distance can be determined using the Control Zone Distance Table and the Recovery Area Formula (see [Figures 2-2](#) and [2-3](#)). Note that:

- All distances are measured from the edge of the through lane.
- Roadside width is the distance measured from the edge of the traveled lane to the beginning of the backslope, as in Conditions 2, 3, and 4 (see the *Utilities Manual*, Section 900.08), and from the edge of the traveled lane to the toe of the slope, as in Condition 6.
- Slope ratios are expressed as 3H:1V, 4H:1V, and 5H:1V, meaning 3 feet to 1 foot, 4 feet to 1 foot, and 5 feet to 1 foot. The first number represents the horizontal distance and the second represents the vertical distance.
- The Recovery Area Formula is used ONLY when the cut section foreslope (Condition 4) or the fill section sideslope (Condition 6) are 3H:1V or steeper.

When auxiliary lanes that are parking lanes, turning lanes, or storage for turning lanes are present, the Control Zone begins at the edge of the traveled lane.

**1. Cut sections with no ditch and fill sections:**

The Control Zone distance is read directly from the Control Zone Distances Table (see [Figure 2-2](#)) based on posted speed, average daily traffic (ADT), and sideslope.

If the fill height is greater than 10 feet, consult the Guidelines for Embankment Barrier in [Appendix A](#). If embankment barrier is not recommended, the Control Zone is the Shoulder Width plus the Horizontal Distance of the nonrecoverable sideslope.

**2. Cut section with ditch (foreslope 4H:1V or flatter):**

The Control Zone distance is the greater of:

- The Control Zone distance for a 10H:1V cut section based on speed and ADT.
- Five feet horizontal beyond the beginning of the backslope.

**3. Cut section with ditch (foreslope steeper than 4H:1V and backslope steeper than 3H:1V):**

The Control Zone distance is established at 10 feet horizontal beyond the beginning of the backslope.

**4. Cut section with ditch (foreslope 3H:1V or steeper and backslope not steeper than 3H:1V):**

The Control Zone distance is the distance established using the Recovery Area Formula (see [Figure 2-3](#)).

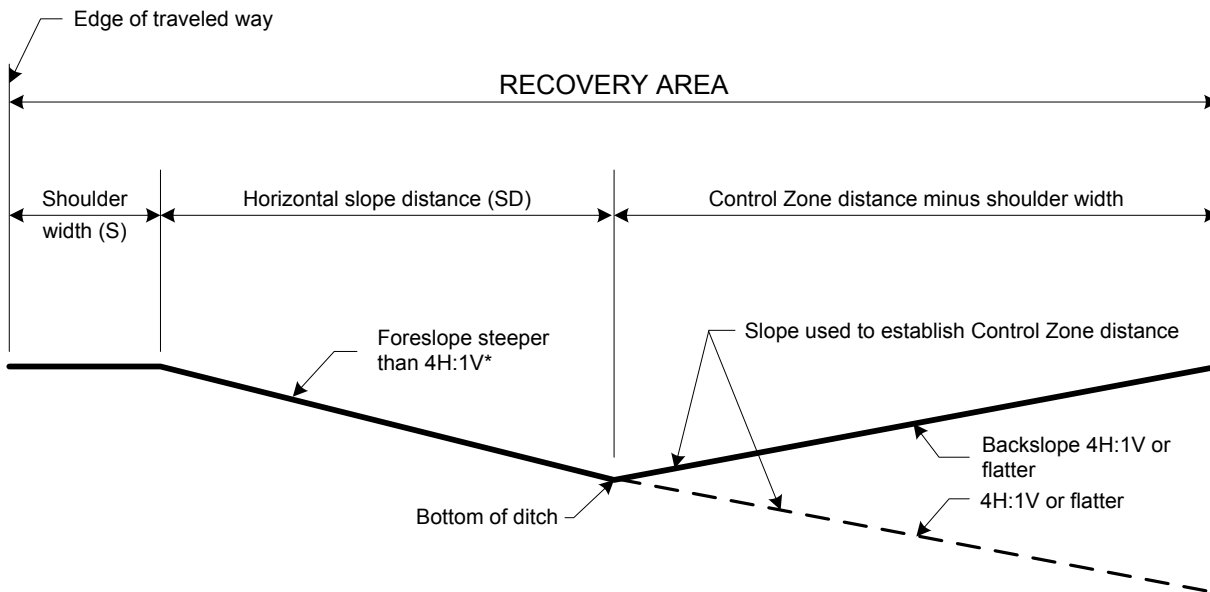


Control Zone Distances Table

Posted Speed (mph)	Average Daily Traffic	Cut Section (Backslope) (H:V)						Fill Section (H:V)					
		3:1	4:1	5:1	6:1	8:1	10:1	3:1	4:1	5:1	6:1	8:1	10:1
<b>35 or Less</b>		<b>The Control Zone Distance is 10 ft</b>											
40	Under 250	10	10	10	10	10	10	*	13	12	11	11	10
	251-800	11	11	11	11	11	11	*	14	14	13	12	11
	801-2,000	12	12	12	12	12	12	*	16	15	14	13	12
	2,001-6,000	14	14	14	14	14	14	*	17	17	16	15	14
	Over 6,000	15	15	15	15	15	15	*	19	18	17	16	15
45	Under 250	11	11	11	11	11	11	*	16	14	13	12	11
	251-800	12	12	13	13	13	13	*	18	16	14	14	13
	801-2,000	13	13	14	14	14	14	*	20	17	16	15	14
	2,001-6,000	15	15	16	16	16	16	*	22	19	17	17	16
	Over 6,000	16	16	17	17	17	17	*	24	21	19	18	17
50	Under 250	11	12	13	13	13	13	*	19	16	15	13	13
	251-800	13	14	14	15	15	15	*	22	18	17	15	15
	801-2,000	14	15	16	17	17	17	*	24	20	18	17	17
	2,001-6,000	16	17	17	18	18	18	*	27	22	20	18	18
	Over 6,000	17	18	19	20	20	20	*	29	24	22	20	20
55	Under 250	12	14	15	16	16	17	*	25	21	19	17	17
	251-800	14	16	17	18	18	19	*	28	23	21	20	19
	801-2,000	15	17	19	20	20	21	*	31	26	23	22	21
	2,001-6,000	17	19	21	22	22	23	*	34	29	26	24	23
	Over 6,000	18	21	23	24	24	25	*	37	31	28	26	25
60	Under 250	13	16	17	18	19	19	*	30	25	23	21	20
	251-800	15	18	20	20	21	22	*	34	28	26	23	23
	801-2,000	17	20	22	22	23	24	*	37	31	28	26	25
	2,001-6,000	18	22	24	25	26	27	*	41	34	31	29	28
	Over 6,000	20	24	26	27	28	29	*	45	37	34	31	30
65	Under 250	15	18	19	20	21	21	*	33	27	25	23	22
	251-800	17	20	22	22	24	24	*	38	31	29	26	25
	801-2,000	19	22	24	25	26	27	*	41	34	31	29	28
	2,001-6,000	20	25	27	27	29	30	*	46	37	35	32	31
	Over 6,000	22	27	29	30	31	32	*	50	41	38	34	33
70	Under 250	16	19	21	21	23	23	*	36	29	27	25	24
	251-800	18	22	23	24	26	26	*	41	33	31	28	27
	801-2,000	20	24	26	27	28	29	*	45	37	34	31	30
	2,001-6,000	22	27	29	29	31	32	*	50	40	38	34	33
	Over 6,000	24	29	31	32	34	35	*	54	44	41	37	36

\*When the Fill Section slope is 3H:1V or steeper, the Control Zone is called a recovery area and is calculated using the Recovery Area Formula (see [Figure 2-3](#)). The basic philosophy behind the Recovery Area Formula is that a vehicle can traverse a 3H:1V slope, but cannot recover (control steering), and therefore the formula does not allow a credit toward the recovery area for the horizontal distance. [Figure 2-3](#) is intended to clarify the use of the Recovery Area Formula.

**Control Zone Distances Table**  
*Figure 2-2*



\* Recovery area normally applies to slopes steeper than 4H:1V but no steeper than 3H:1V. For steeper slopes, the Recovery Area Formula may be used as a guide if the embankment height is 10 feet or less.

**Formula:**

$$\text{Recovery area} = (\text{shoulder width}) + (\text{horizontal distance}) + (\text{Control Zone distance} - \text{shoulder width})$$

**Recovery Area Formula**  
Figure 2-3

## 2.04 Sample Control Zone Calculations

### (1) Cut Section: Conditions 1, 2, 3, and 4

#### (a) Cut Section: Condition 1

- No ditch
- Backslopes of 3H:1V or flatter

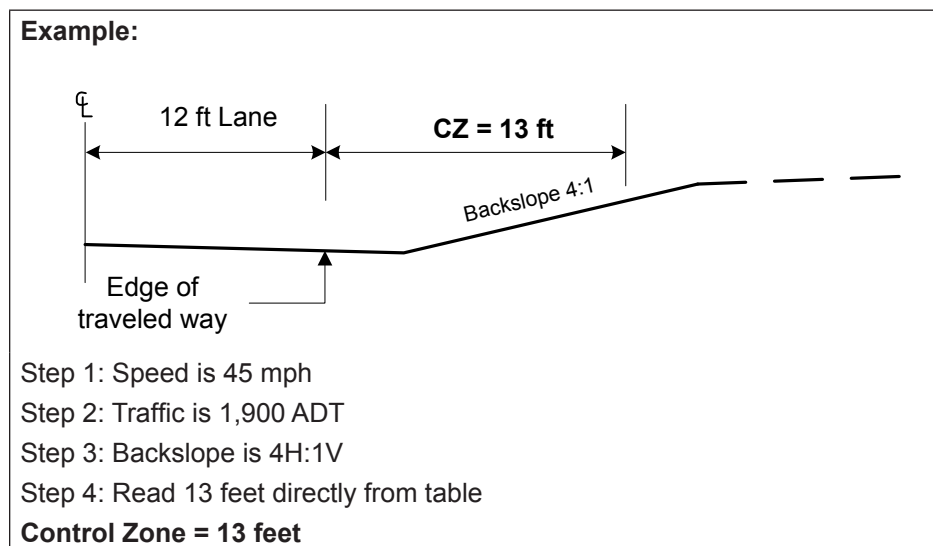
The Control Zone is read directly from the table based on posted speed, average daily traffic (ADT), and backslope.

STEP 1: Locate posted speed

STEP 2: Locate ADT

STEP 3: Locate backslope

STEP 4: Read CZ directly from table



**Control Zone Cut Section: Condition 1**

*Figure 2-4*

(b) **Cut Section: Condition 2**

- **Ditch foreslopes of 4H:1V or flatter**
- **For all ditch backslopes, use 10H:1V cut section in calculations**

The Control Zone distance is the greater of:

1. Read directly from the table based on posted speed, average daily traffic (ADT), and a backslope of 10H:1V.

STEP 1: Locate posted speed

STEP 2: Locate ADT

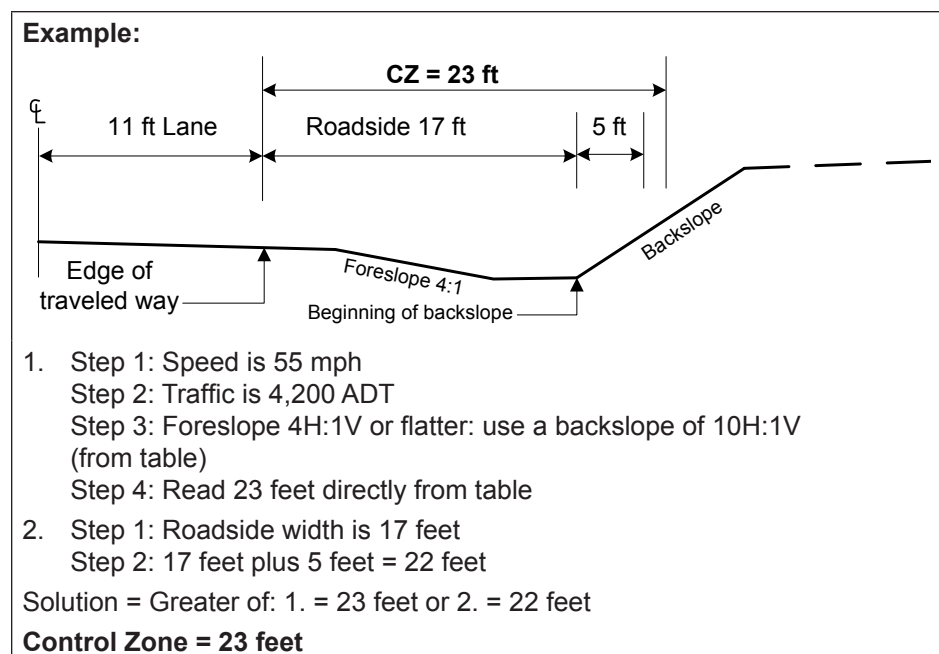
STEP 3: Use backslope of 10H:1V

STEP 4: Read directly from table

2. Five feet beyond the roadside width.

STEP 1: Locate roadside width

STEP 2: Add 5 feet to the roadside width



**Control Zone Cut Section: Condition 2**

*Figure 2-5*

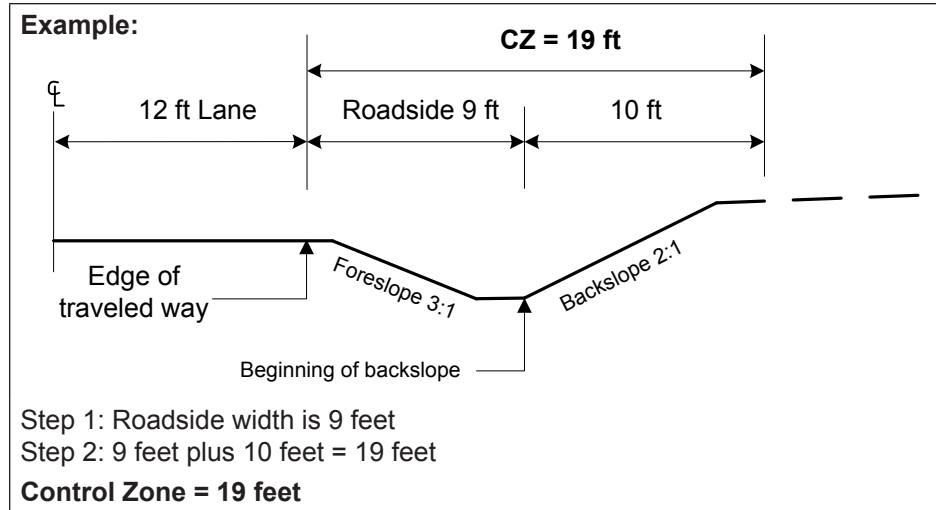
(c) **Cut Section: Condition 3**

- Ditch foreslope steeper than 4H:1V
- Ditch backslope steeper than 3H:1V

The Control Zone distance is established at 10 feet beyond the beginning of backslope (roadside width).

STEP 1: Locate roadside width

STEP 2: Add 10 feet to the beginning of backslope (roadside width)



**Control Zone Cut Section: Condition 3**

*Figure 2-6*

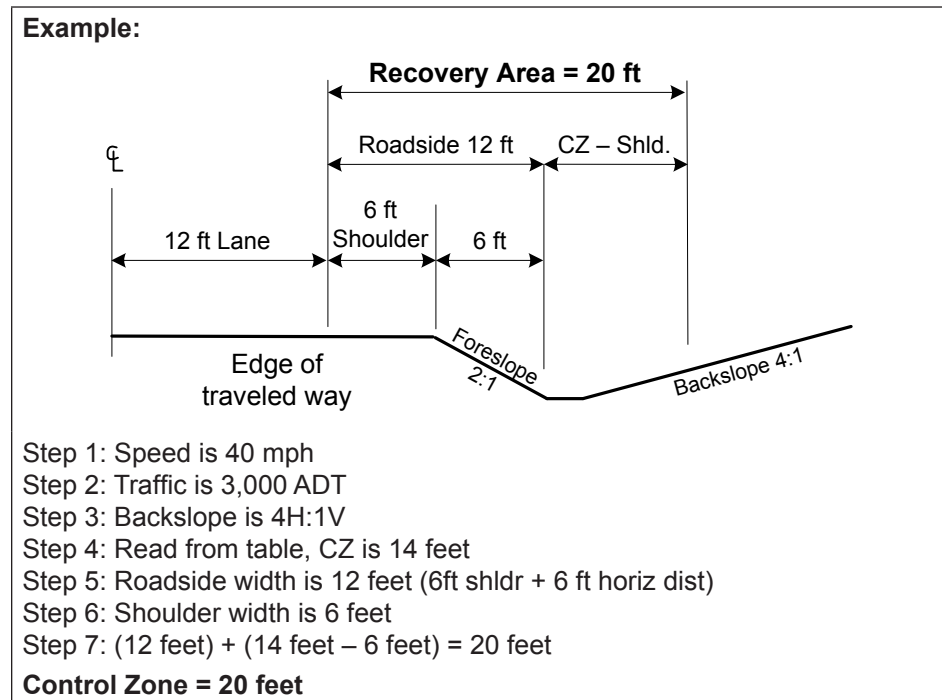
(d) **Cut Section: Condition 4**

- Ditch foreslope is 3H:1V or steeper
- Ditch backslope is not steeper than 3H:1V

The Control Zone distance is the recovery area calculated using the Recovery Area Formula:

Recovery Area = (roadside width) + (Control Zone distance from table – shoulder width)

- STEP 1: Locate posted speed  
 STEP 2: Locate ADT  
 STEP 3: Locate backslope  
 STEP 4: Read CZ distance from table  
 STEP 5: Locate roadside width  
 STEP 6: Locate shoulder width  
 STEP 7: Use Recovery Area Formula

**Control Zone Cut Section: Condition 4***Figure 2-7*

**(2) Fill Section: Conditions 5 and 6****(a) Fill Section: Condition 5**

- The sideslope is 4H:1V or flatter

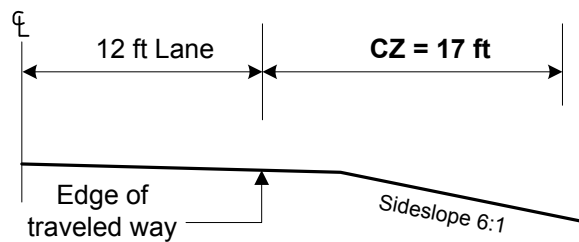
The Control Zone distance is read directly from the table based on posted speed, sideslope, and average daily traffic (ADT).

STEP 1: Locate posted speed

STEP 2: Locate ADT

STEP 3: Locate sideslope

STEP 4: Read CZ directly from table

**Example:**

Step 1: Speed is 50 mph  
 Step 2: Traffic is 320 ADT  
 Step 3: Sideslope is 6H:1V  
 Step 4: Read 17 feet directly from table

**Control Zone = 17 feet**

**Fill Section: Condition 5**

*Figure 2-8*

(b) **Fill Section: Condition 6**

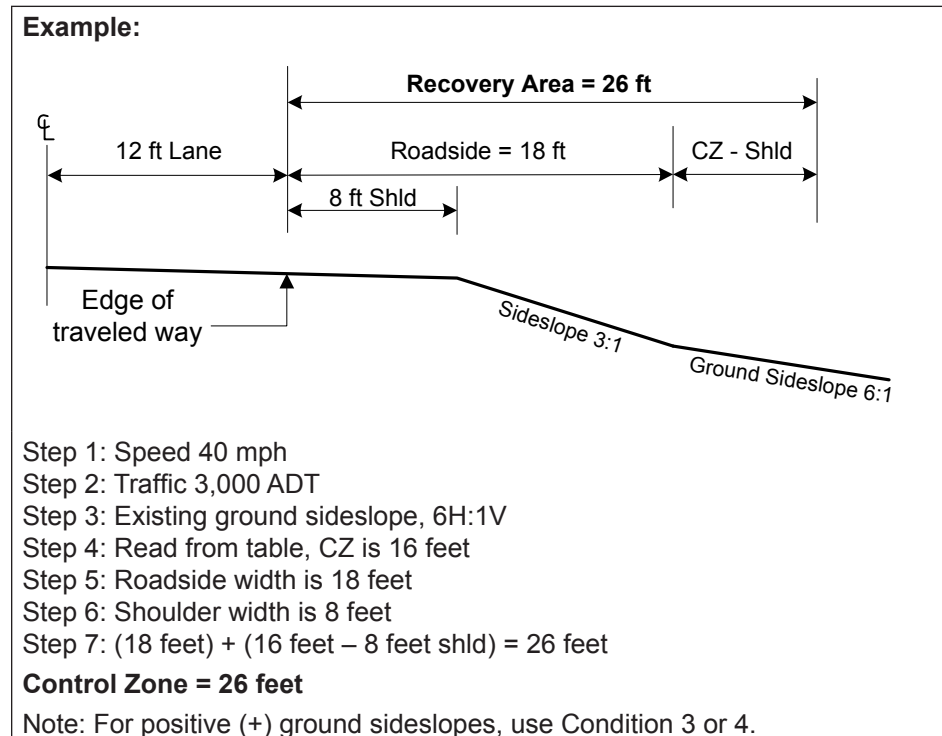
- **Sideslope is 3H:1V or steeper**

The Control Zone distance is the recovery area, calculated using the Recovery Area Formula.

For installations where the sideslope is steeper than 3H:1V and the fill height is greater than 10 feet, consult the Guidelines for Embankment Barrier in [Appendix A](#). If embankment barrier is not recommended, Control Zone is the Recovery Area.

Recovery Area = shoulder width + horizontal nonrecoverable sideslope distance (roadside width) + (Control Zone distance from table – shoulder width)

- STEP 1: Locate posted speed
- STEP 2: Locate ADT
- STEP 3: Locate existing ground sideslope
- STEP 4: Read CZ distance from table
- STEP 5: Locate roadside width
- STEP 6: Locate shoulder width
- STEP 7: Use Recovery Area Formula



**Fill Section: Condition 6**  
**Figure 2-9**



## 2.05 Design/Maintenance Supplemental Information

### (1) Utility Design Considerations

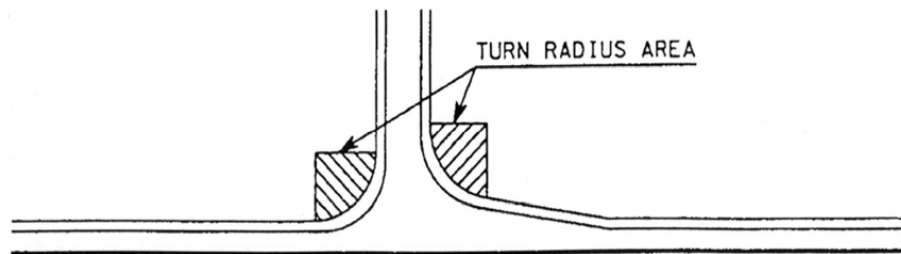
The following items are provided as a guide to the utility industry for consideration during design and maintenance of their facilities:

#### (a) Horizontal Curves

If it is not necessary, do not place utility objects on the outside of horizontal curves.

#### (b) Public Grade Intersections

If feasible, design the facility to place utility objects outside the turn radius area of public grade intersections (see [Figure 2-10](#)). If this is not possible, the facility should be placed outside the Control Zone.



Intersection Radius Area

Figure 2-10

#### (c) Placement of Utility Objects Behind Barriers

Objects should not be placed within the deflection distance of the barrier used (see [Figure 2-11](#)).

#### (d) Service Poles

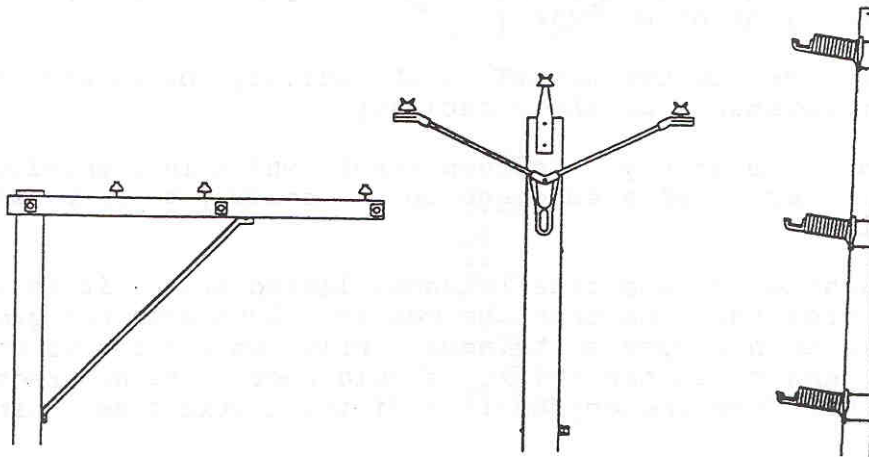
Place service poles on owners' properties, not state right of way. Consideration should be given to placing the service pole as far as feasible from the highway right of way—at least outside the Control Zone.

#### (e) Pole Design

Where Control Zone requirements within the highway right of way are tight, consideration should be given to alternative pole designs (see [Figure 2-12](#)). The purpose of the alternative designs is to allow construction at or close to the right of way line.

Barrier Type	System Type	Deflection
Cable barrier or beam guardrail, Types 20 and 21, on G-2 posts	Flexible	Up to 12 ft (face of barrier to object)
Beam guardrail, Types 1, 1a, 2, 10, and 31	Semirigid	3 ft (face of barrier to object)
Two-sided W-beam guardrail, Types 3 and 4	Semirigid	2 ft (face of barrier to object)
Permanent concrete barrier, unanchored	Unrestrained Rigid	3 ft <sup>[1]</sup> (back of barrier to object)
Temporary concrete barrier, unanchored	Unrestrained Rigid	2 ft <sup>[2]</sup> (back of barrier to object)
Precast concrete barrier, anchored	Rigid	6 inches (back of barrier to object)
Rigid concrete barrier	Rigid	No deflection
<p><b>Notes:</b></p> <p>[1] When placed in front of a 2H:1V or flatter fill slope, the deflection distance can be reduced to 2 feet.</p> <p>[2] When used as temporary bridge rail, anchor all barrier within 3 feet of a drop-off.</p>		

**Longitudinal Barrier Deflection**  
*Figure 2-11*



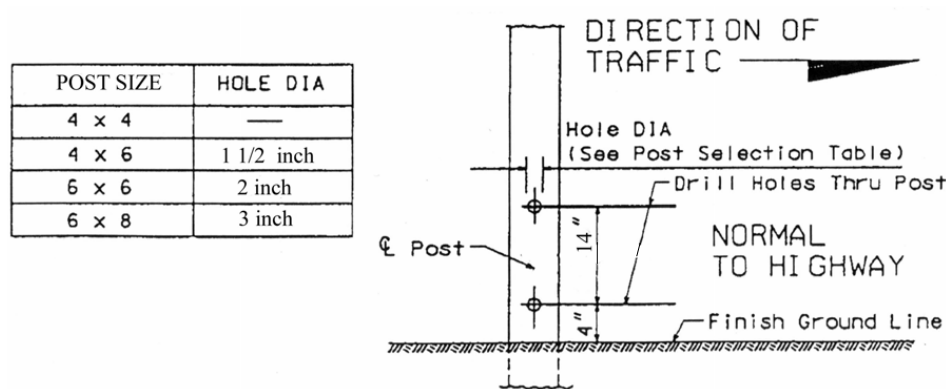
**Alternative Pole Design**  
*Figure 2-12*

(f) **Guy Poles/Wires**

Guy poles and/or wires are not to be installed between the pole line and highway lanes unless the guy pole/wire is outside the Control Zone. Consideration should be given to utilizing breakaway designs on guy poles and wires within the Control Zone. Guy and anchor wires are considered hazard objects.

(g) **Utility Location Markers**

Markers (such as a telephone pedestal) used to identify or protect utility facilities may not be larger than a 4-inch x 4-inch (16 sq in) wood post unless drilled to accommodate breakaways (see [Figure 2-13](#)). Solid markers, such as concrete, also may not be used. Telephone pedestals that meet the breakaway criteria are acceptable to be placed within the Control Zone.



**Wooden Post Breakaway Details**

**Figure 2-13**

Note: Posts that are larger than 6 inches x 8 inches require barrier protection when located within the Control Zone.

(h) **Cutting/Trimming Trees and Brush**

The following mutual benefits can be achieved through clearing trees and brush to the state's right of way line:

- Allows installation of the utility facility at or close to the right of way line.
- Provides better access to the utility for construction and maintenance of its facility.
- Improves safety, removes trees (which in themselves may be a hazard), and opens up the roadway to increased sunlight.

For aesthetics and the other reasons listed above, it is often preferred that the trees be removed flush with the ground rather than topped or trimmed. Prior to cutting or trimming trees and brush, the utility should coordinate with and receive approval from the appropriate region Utilities Engineer.

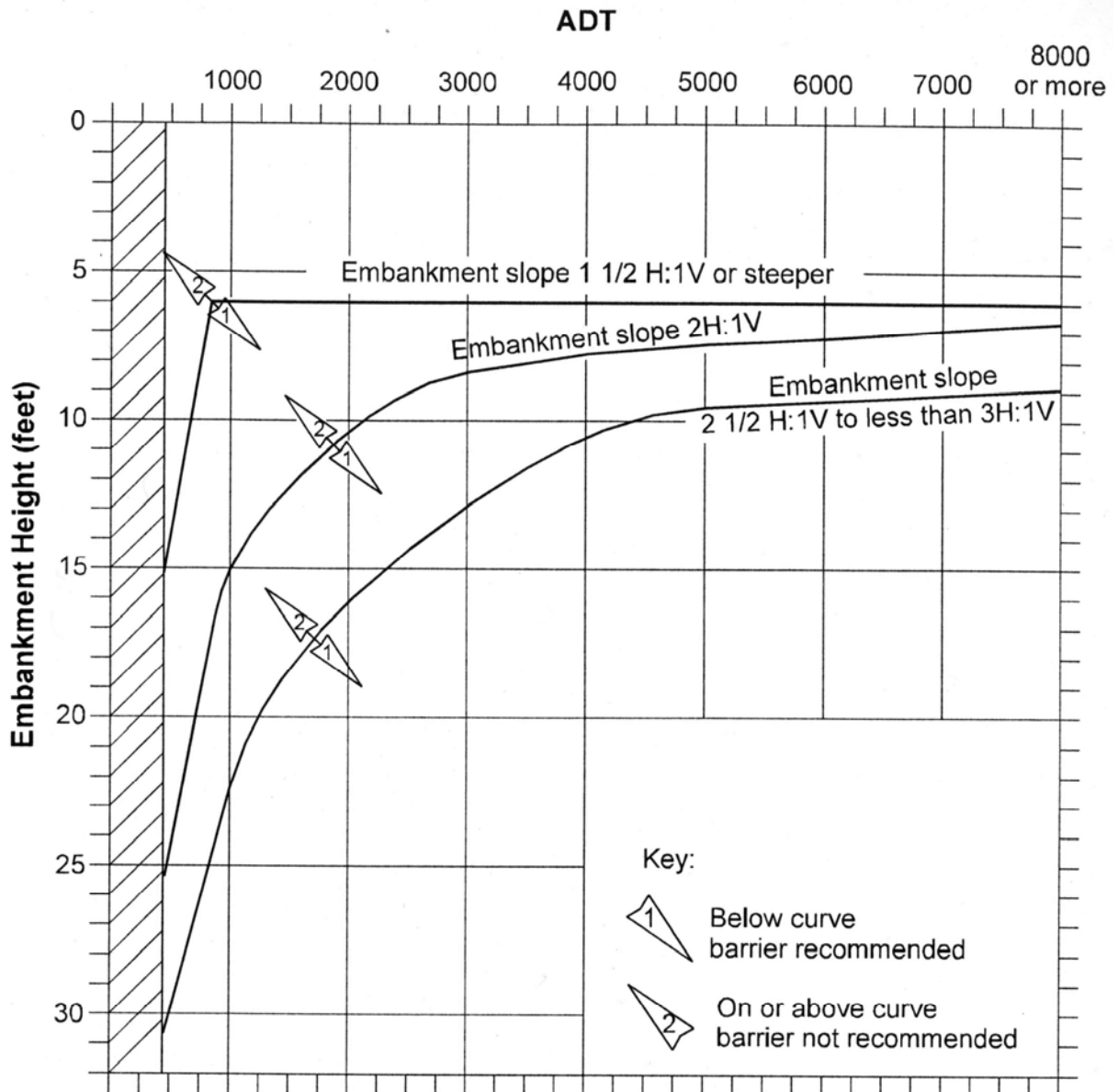


# Process to Determine Whether a Location II Object is Cost-Effective to Relocate

## Appendix A

### (1) Guidelines for Embankment Barrier

In a fill area, check the chart below. If guardrail is warranted, the object may be considered not cost-effective to relocate.



Note: Routes with ADTs under 400 may be evaluated on a case-by-case basis.

### Guidelines for Embankment Barrier

## (2) Cost-Effective Selection Procedure (CESP)

Complete the CESP for objects not in an area recommended for guardrail using the AASHTO formula, “ROADSIDE,” or the Roadside Safety Analysis Program (RSAP). The lateral placement from the traveled way to the objects, for both the existing object and the relocated object, should be multiplied by the slope factors in the following table:

	Cut Slope				Fill Slope		
<b>Slope Ratio</b>	3H:1V	4H:1V	5V:1V	Flat	5H:1V	4H:1V	3H:1V
<b>Slope Factor</b>	1.5	1.2	1.1	1.0	0.8	0.7	0

Adjusted lateral distance = (lateral distance – shoulder width ) x the slope factor + shoulder width.

Note: Each slope between the shoulder and the existing object or relocated object should be adjusted by its factor.

### (a) Variables for the Cost-Effective Selection Procedure

The following AASHTO cost factors<sup>1</sup> will be used in the CESP formula until notified otherwise by WSDOT:

- 1. Fatal collision \$ 4,165,000
- 2. Disabling injury collision \$ 350,000
- 3. Evident injury collision \$ 75,000
- 4. Possible injury collision \$ 40,000
- 5. Property damage only collision \$ 7,000

<sup>1</sup> The WSDOT Transportation Data Office (TDO) has applied inflation to the AASHTO cost factors to bring these numbers current as of July 2009.

**(b) Calculating the CESP Formula**

Use the following guidance when calculating the CESP formula:

- **Traffic Growth Rate:** Use 5% unless otherwise indicated by WSDOT.
- **Severity Index:** 3.6 for 40 mph, 4.2 for 50 mph, 5.0 for 60 mph, and 6.0 for 70 mph.
- **Project Life:** Life of the existing or new pole.
- **Discount Rate:** The rate shall be equal to the weighted rate average cost of capital for each utility.
- **Cost of Installation:** Determined by the utility for the installation being evaluated.
- **Cost of Repair:** Determined by the utility for the installation being evaluated.
- **Maintenance Cost per Year:** Determined by the utility for the installation being evaluated.
- **Salvage Value:** Determined by the utility for the installation being evaluated.

**(c) Initial Encroachment Frequencies**

Initial encroachment frequencies should be as follows:

Highway Type	Initial Encroachment Frequency (encroachments/mile/year)
Rural Interstate	0.0009 ADT
Rural Multilane Divided Highway	0.00059 ADT
Wide Rural Two-Lane Highway (Roadbed > 36 ft)	0.000742 ADT
Narrow Rural Two-Lane Highway (Roadbed < 36 ft)	0.00121 ADT
Urban Interstate	0.0009 ADT
Urban Multilane Divided Highway	0.0009 ADT
Urban Street	0.00133 ADT





**Memorandum of Understanding  
Related to Scenic Classification  
for Utilities Accommodation  
on State Highway Rights of Way**

**Appendix B**

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This Memorandum of Understanding by and between the Washington State Department of Transportation, hereinafter referenced "WSDOT," and the Washington Utilities Coordinating Council, hereinafter referenced "WUCC," establishes objectives and procedures for the continued operation and upgrading of the scenic classification system.

IT IS MUTUALLY RECOGNIZED THAT:

WSDOT is charged with the management of the State's highway rights of way which includes the accommodation of utilities in a compatible fashion relative to preserving scenic quality as well as the operational needs of the highway.

WUCC, through its member organizations, is responsible for the installation and maintenance of utility lines as prescribed in the Washington Administrative Codes contained in the "Utilities Accommodation Policy," WSDOT publication number M 22-86 (HR).

The original Legislative intent when they established the Scenic and Recreational Highway System, was that all overhead utilities should be underground along these highways.

Recognizing that the intended undergrounding mandate was not only unreasonable but also unnecessary in many cases for preserving scenic quality on the State's Scenic and Recreational Highway System, the Legislature charged the WSDOT and the Aerial Utility Industry to work out a more reasonable plan.

A scenic classification system was developed through the cooperation of the WSDOT and the Aerial Utility Industry and said system is described in WAC 468-34-330 "Scenic Enhancement" in the WSDOT publication M 22-86 (HR). It is the basic aesthetic criteria for the accommodation of overhead utilities on the State's highway system.

The scenic classification system requires periodic updating. The character of the landscape elements outside highway rights of way are ever-changing, whether it be by man-made or natural causes. Also, the State's highways are continually changing through upgrading, realignment, new highways, and transfer of ownership.

Nothing in this Memorandum or Understanding is to be construed as conflicting with existing laws, regulations, and prescribed responsibilities.

In recognition of the responsibilities, interests, and limitations set forth above, and the mutual benefits of established procedures to facilitate agreement on specific matters, the WSDOT and the WUCC mutually agree as follows:

I. SCENIC CLASSIFICATION SYSTEM

The scenic classification system, originally established in 1973, must be updated approximately once every two years depending upon need, and as mutually agreed upon. A scenic classification team shall be formed for these updates. The methodology should be compatible to the original survey procedure.

II. RESPONSIBILITIES

A. The WUCC will:

1. Provide and cover per diem costs for one member of the scenic classification team. That member's company will cover salary and fringe benefits.
  - a. Normally should involve 10 working days or less. If the estimated amount of time exceeds 10 working days, approval of the WUCC Board of Directors is required for the additional expenditure.
  - b. Recommend a different team member for each update to maximize exposure of the process.
2. Provide WSDOT a list of highways that member organizations desire to be re-evaluated. The list should include mile post limits and reasons for the re-evaluation recommendations.

B. The WSDOT will:

1. Provide and cover the costs of a WSDOT Engineer and a WSDOT Landscape Architect to the team along with vehicle and driver.
2. Coordinate scenic classification update and publish updated scenic class listing.

III. LONG RANGE OBJECTIVES

To maintain the scenic class as up to date as possible.

To get all overhead utilities in consonance with the visual and functional needs of the State's highway system.

III. CONCLUSTIONS AND APPROVALS

- A. This Memorandum of Understanding may be amended or supplemented by mutual agreement between the signers or their successors. This Memorandum of Understanding may be terminated by either party through written notice to the other.
- B. We have read the foregoing and agree to accept and abide by the procedure and objectives herein.

WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION

By: *Chris Hammer* Dec. 12, 1994  
Project Development Engineer Date

WASHINGTON UTILITIES  
COORDINATING COUNCIL

By: *Leonard B. Mitchell* 12/12/84  
Acting President Date

*Joseph W. Jennings Jr.* 12/11/84  
Acting Vice President Date

SR	MP	MP	CLASS
2	0.0	0.8	D
	0.8	2.1	C
	2.1	4.5	BX
	4.5	5.6	C
	5.6	6.5	B
	6.5	11.8	BX
	11.8	12.3	B
	12.3	31.5	C
	31.5	32.6	BX
	32.6	35.2	C
	35.2	38.3	BX
	38.3	40.0	C
	40.0	56.8	BX
	56.8	58.6	B
	62.3	68.5	B
	68.5	90.4	BX
	90.4	99.2	A
	99.2	100.0	B
	100.0	108.0	BX
	108.0	108.6	A
	108.6	112.6	BX
	112.6	114.0	B
	114.0	119.3	BX
	119.3	119.8	B
	119.8	120.8	A
Equation	120.77 BK =	127.83 AH	
	127.8	132.2	BX
	132.2	133.0	C
	133.0	133.6	BX
	133.6	138.6	AX
	138.6	140.4	BX
	140.4	146.0	B
	146.0	149.4	BX
	149.4	149.8	C
	149.8	150.8	B
	150.8	151.8	BX
	151.8	154.1	C
	154.1	169.3	BX
	172.1	172.8	A
	172.8	186.9	BX
	186.9	191.0	AX
	191.0	191.7	C
	191.7	201.1	BX
	201.1	202.2	C
2	202.2	220.0	BX
	220.0	222.6	C
	222.6	230.1	BX
	230.7	236.6	BX
	236.6	237.3	B
	237.3	250.5	BX
	250.5	251.6	C
	251.6	263.5	BX
	263.5	265.8	C
	265.8	271.7	BX
	271.7	273.6	C

SR	MP	MP	CLASS
	273.6	274.0	BX
	274.0	282.2	C
	282.2	283.2	BX
	283.2	286.9	*
*Coincident with SR 090	277.7	281.3	
	286.9	290.5	D
	290.5	290.9	C
	290.9	291.7	D
	291.7	294.9	C
	294.9	295.6	BX
	295.6	309.7	C
	309.7	313.1	BC
	313.1	315.0	C
	315.0	324.4	BX
	324.4	326.7	C
	326.7	331.0	BX
	331.0	334.9	C
2Cou/Evr	0.8	1.6	BX(p)
2Cou/Bro	287.5	288.1	BX(p)
2Cou/Div	289.2	290.7	BX(p)
2Cou/Nwp	334.4	334.8	BX(p)
3	0.0	1.6	C
	1.6	3.5	BX
	4.3	8.6	BX
	8.6	10.0	C
	10.0	20.4	BX
	20.4	22.0	C
	22.0	23.5	BX
3	23.5	26.8	C
	26.8	30.4	BX
	30.4	31.5	C
	31.5	33.3	BX
	33.3	35.4	C
	35.4	36.9	BX
	36.9	37.7	C
	37.7	45.9	BX
3	45.9	47.0	C
	50.6	52.3	C
	52.3	54.7	BX
	54.7	55.4	C
	55.4	60.0	BX
4	0.0	2.2	BX
	2.2	5.0	C
	5.0	6.3	BX
	6.3	7.0	C
	7.0	8.3	BX
	8.3	15.0	C
	15.0	23.8	BX

SR	MP	MP	CLASS
	23.8	29.4	C
	29.4	33.5	BX
	36.6	45.2	BX
	45.2	47.5	A
	47.5	54.4	BX
	54.4	60.7	C
	60.7	62.2	D
4Cou/Kel	61.7	61.9	BX(p)
5	0.0	1.0	C
	1.0	3.0	BX
	3.0	10.3	C
	10.3	11.1	BX
	11.1	13.6	B
	13.6	20.0	BX
	20.0	22.0	C
	22.0	29.8	BX
	29.8	30.5	C
	30.5	57.7	BX
	57.7	59.8	C
	59.8	77.5	BX
	77.5	79.1	C
	79.1	82.4	B
	82.4	84.6	C
5	84.6	88.6	BX
	88.6	92.1	B
	92.1	102.0	BX
	102.0	103.4	C
	103.4	104.8	B
	104.8	109.0	C
	109.0	113.4	BX
	113.4	115.0	B
	115.0	117.0	BX
	117.0	133.6	C
	133.6	134.4	B
	134.4	151.6	C
	151.6	155.0	BX
	155.0	160.3	C
	160.3	167.3	A
	167.3	168.3	B
	168.3	169.2	A
	169.2	170.0	B
	170.0	172.8	BX
	172.8	186.0	C
	186.0	188.7	BX
	188.7	190.6	C
	190.6	192.3	BX
	192.3	192.7	C
	192.7	196.9	BX
	196.9	199.6	C
	199.6	202.4	BX
	202.4	203.9	C
	203.9	204.4	BX

SR	MP	MP	CLASS
	204.4	206.0	C
	206.0	211.7	BX
	211.7	212.8	C
	212.8	225.0	BX
	225.0	227.8	C
	227.8	235.6	B
	235.6	244.5	BX
	244.5	245.4	B
	245.4	251.5	BX
	251.5	260.0	C
	260.0	273.1	BX
	273.1	274.5	C
	274.5	276.6	B
6	0.0	8.5	C
	8.5	14.3	BX
	14.3	15.3	C
6	15.3	27.9	BX
	27.9	28.7	C
	28.7	47.9	BX
	47.9	49.1	C
	49.1	51.4	BX
7	0.0	0.4	B
	1.0	4.9	C
	4.9	11.4	BX
	11.4	12.7	C
	12.7	13.0	AX
	13.0	15.2	BX
	15.2	17.2	C
	17.2	19.4	BX
	19.4	21.7	C
	21.7	22.3	BX
	22.3	23.4	C
	23.4	25.9	BX
	25.9	26.4	C
	26.4	27.6	B
	27.6	31.0	C
	31.0	31.5	AX
	31.5	33.4	C
	33.4	35.3	BX
	35.3	35.4	AX
	35.4	36.7	C
	36.7	37.5	BX
	37.5	41.0	C
	41.0	44.6	BX
	44.6	48.0	C
	48.0	49.4	D
	49.4	50.0	C
	50.0	54.2	D
	54.2	58.6	C
8	0.0	20.7	BX

SR	MP	MP	CLASS
9	0.0	7.5	C
	7.5	9.5	B
	9.5	11.3	C
	11.3	15.5	BX
	15.5	16.0	C
	16.0	17.0	BX
	17.0	18.2	C
	18.2	28.8	BX
	28.8	31.8	C
9	31.8	32.9	BX
	32.9	40.5	C
	40.5	44.3	BX
	44.3	54.1	C
	54.1	54.4	BX
	54.4	55.9	C
	55.9	57.2	*
* Coincident with SR 020	64.8	66.1	
	57.2	63.9	C
	63.9	71.0	BX
	71.0	73.9	C
	73.9	77.0	BX
	77.0	79.4	C
	79.4	84.0	*
* Coincident with SR 542	10.0	14.6	
	84.0	86.8	BX
	86.8	92.8	C
	92.8	96.5	BX
	96.5	97.4	C
	97.4	98.2	BX
9Spur	98.0	98.2	BX(p)
10	88.3	89.6	BX
	89.6	94.2	B
	94.2	94.9	A
	94.9	96.6	B
	96.6	98.3	AX
	98.3	99.3	B
	99.3	100.1	C
	100.1	102.4	BX
	102.4	104.3	C
	104.3	104.5	BX
11	0.0	9.0	B
	9.0	9.3	A
	9.3	11.7	B
	11.7	15.0	A
	15.0	15.9	B
	15.9	16.7	C
	16.7	18.4	BX
	18.4	21.3	C

SR	MP	MP	CLASS
12	0.0	0.6	D
	0.6	1.4	BX
	1.4	8.3	C
	8.3	9.1	BX
	9.1	11.2	C
	11.2	16.2	BX
	16.2	18.0	B
	18.0	18.6	BX
	18.6	21.0	B
	21.0	23.0	C
	23.0	34.6	BX
	34.6	35.6	C
	35.6	40.0	BX
	40.0	42.3	C
	42.3	46.6	BX
	46.6	66.5	*
* Coincident with SR 005	68.4	88.3	
	66.5	70.9	C
	70.9	71.3	BX
	71.3	82.0	C
	82.0	82.3	BX
	82.3	84.5	C
	84.5	86.0	BX
	86.0	88.9	C
	88.9	93.4	BX
	93.4	94.2	C
	94.2	98.5	BX
	98.5	102.0	C
	102.0	104.5	BX
	104.5	112.2	C
	112.2	112.7	BX
	112.7	113.6	C
	113.6	114.8	BX
	114.8	115.2	C
	115.2	119.0	B
	119.0	120.5	BX
	120.5	126.5	C
	126.5	130.5	BX
	130.5	132.6	C
	132.6	141.9	BX
	141.9	145.6	B
	145.6	151.4	A
	151.4	153.0	B
	153.0	156.8	A
12	156.8	160.4	B
	160.4	166.9	A
	166.9	189.0	BX
	189.0	200.4	C
	200.4	202.9	BX
	202.9	273.9	*
* Coincident with SR 82	31.4	102.6	
	273.9	291.7	*

SR	MP	MP	CLASS
* Coincident with SR 182	0.0	15.2	
	291.7	299.3	C
	299.3	304.0	BX
	304.0	307.4	C
	307.4	316.0	BX
	316.0	317.7	AX
	317.7	319.5	BX
	319.5	338.4	C
	338.4	339.0	BX
	339.0	341.0	C
	341.0	347.5	BX
	347.5	353.0	C
	353.0	357.0	BX
	357.0	374.6	C
	374.6	376.0	BX
	376.0	378.3	C
	378.3	383.5	BX
	383.5	413.0	C
	413.0	413.6	B
	413.6	425.4	BX
	425.4	432.6	B
	432.6	434.2	C
12Cou/Abr	0.3	0.7	BX(p)
14	0.0	6.5	C
	6.5	11.3	BX
	11.3	15.5	C
	15.5	16.8	BX
	16.8	17.4	C
	17.4	19.6	B
	19.6	24.6	BX
	24.6	25.2	A
	25.2	27.0	BX
14	27.0	29.0	C
	29.0	38.1	BX
	38.1	39.7	B
	39.7	42.0	BX
	42.0	45.8	C
	45.8	63.5	BX
	63.5	64.7	AX
	64.7	65.9	BX
	65.9	67.1	C
	67.1	72.4	BX
	72.4	75.9	AX
	75.9	76.5	C
	76.5	85.6	BX
	85.6	85.9	AX
	85.9	87.9	BX
	87.9	91.7	AX
	91.7	92.7	BX
	92.7	95.5	AX
	95.5	97.5	B

SR	MP	MP	CLASS
	97.5	99.0	A
	99.0	101.0	BX
	101.0	101.4	*
* Coincident with SR 097	1.9	2.3	
	101.4	105.8	BX
	105.8	108.3	AX
	108.3	115.8	BX
	115.8	118.0	B
	118.0	120.0	A
	120.0	124.9	BX
	124.9	127.6	A
	127.6	129.3	BX
	129.3	130.7	B
	130.7	158.3	BX
	158.3	159.4	C
	159.4	162.0	BX
	162.0	162.8	C
	162.8	180.8	BX
14Spur	100.1	101.1	BX(p)
16	0.0	0.7	D
	0.7	4.6	C
	4.6	5.0	B
Equation 16	005.04 BK =	007.23 AH	
	7.2	8.4	A
	8.4	11.6	BX
	11.6	13.4	C
	13.4	14.8	BX
	14.8	15.7	C
	15.7	16.5	BX
	16.5	17.1	C
	17.1	27.8	BX
	27.8	29.0	C
16Spur	28.7	29.1	BX(p)
17	7.4	10.0	BX
	10.0	41.6	C
	41.6	42.0	BX
	42.0	53.3	C
	53.3	53.8	BX
	53.8	55.6	C
	55.6	62.4	BX
	62.4	70.7	C
	70.7	73.5	B
	73.5	76.4	C
	76.4	78.6	B
	78.6	87.0	A
	87.0	95.9	B
	95.9	96.6	C
	96.6	98.3	*
* Coincident with SR 002	187.4	188.6	

SR	MP	MP	CLASS
	98.3	99.6	BX
	99.6	102.5	C
	102.5	113.7	BX
	113.7	121.9	C
	121.9	125.1	C
	125.1	133.2	BX
	133.2	136.4	C
	136.4	144.2	BX
18	2.2B	2.7B	C
Equation	002.73 BK =	000.0 AH	
	0.0	2.0	C
18	2.0	3.5	BX
	2.2	2.7	C
	3.5	4.2	D
	4.2	6.2	C
	6.2	6.7	BX
	6.7	12.2	C
	12.2	16.5	BX
	16.5	22.0	C
	22.0	27.9	BX
19	0.0	14.2	BX(p)
20	0.0	2.2	BX
	2.2	2.6	B
	2.6	6.0	BX
	6.0	6.6	C
	6.6	7.8	BX
	7.8	11.1	C
	11.1	11.6	B
	11.6	12.9	C
	12.9	15.3	B
	15.3	16.3	C
	16.3	17.6	BX
	17.6	19.2	B
	19.2	22.7	BX
	22.7	25.3	C
	25.3	30.5	BX
	30.5	31.3	C
	31.3	31.7	D
	31.7	36.0	C
	36.0	39.6	BX
	39.6	40.4	C
	40.4	41.0	BX
	41.0	42.2	A
	42.2	43.3	B
	43.3	44.8	BX
	44.8	45.3	C
	45.3	48.5	BX
	48.5	49.0	C
	49.0	50.6	BX
	50.6	53.5	C
	53.5	57.0	BX
	57.0	58.8	BX

SR	MP	MP	CLASS
	58.8	59.7	BX
	59.7	60.3	D
	60.3	62.8	C
20	62.8	63.3	BX
	63.3	66.9	C
	66.9	70.3	BX
	70.3	71.8	C
	71.8	74.0	BX
	74.0	77.8	C
	77.8	80.5	BX
	80.5	82.8	C
	82.2	84.7	BX
	84.7	86.3	C
	86.3	86.7	BX
	86.7	91.7	C
	91.7	92.0	BX
	92.0	92.8	C
	92.8	101.8	BX
	101.8	102.5	C
	102.5	104.8	BX
	104.8	111.0	C
	111.0	114.0	BX
	114.0	120.4	C
	120.4	128.0	A
	128.0	130.5	B
	130.5	135.6	A
	135.6	141.2	B
	141.2	169.9	A
	169.9	173.0	B
	173.0	192.8	BX
	192.8	193.0	A
	193.0	199.5	BX
	199.5	202.9	C
	202.9	208.6	BX
	204.1	232.4	BX
	232.4	232.9	C
	232.9	233.3	B
	233.3	262.0	*
* Coincident with SR 097	286.2	314.8	
	262.0	262.8	BX
	262.8	266.6	C
	266.6	275.4	C
	275.4	276.4	C
	276.4	299.0	BX
	299.0	303.5	C
	303.5	342.1	BX
	342.1	354.3	*
* Coincident with SR 395	229.6	241.9	
	354.3	355.4	C
	355.4	388.8	BX
	388.8	390.4	C
	390.4	400.0	BX
	400.0	400.4	C



SR	MP	MP	CLASS
	400.4	418.7	BX
	418.7	419.2	C
	419.2	420.4	B
	420.4	436.7	BX
	436.7	436.9	C
020Spur	47.9	50.6	BX
	50.6	51.0	C
	51.0	52.0	B
	52.0	53.8	C
	53.8	55.6	BX
21	0.0	4.4	C
	4.4	23.6	BX
	23.6	24.8	*
* Coincident with SR 395 Equation	81.1	82.3	
	24.79 BK =	0.0 AH	
	0.0	4.5	C
	4.5	31.2	BX
	31.2	33.0	C
	33.0	33.6	BX
	33.6	66.7	B
	66.7	67.6	BX
	67.6	68.1	*
* Coincident with SR 002	220.1	221.5	
	68.1	68.5	C
	68.5	69.0	B
	68.5	69.0	BX
	69.0	72.1	C
	72.1	73.5	BX
	73.5	74.0	C
	74.0	75.0	BX
	75.0	81.5	B
	81.5	87.0	BX
	87.0	88.1	AX
21	88.1	91.6	BX
	93.0	135.8	BX
	135.8	138.3	*
* Coincident with SR 020	302.7	305.2	
	138.3	140.2	C
	140.2	167.0	BX
22	0.0	5.0	C
	5.0	9.4	BX
	9.4	13.2	C
	13.2	20.0	BX
	20.0	32.4	C
	32.4	33.9	BX
	33.9	34.5	C
	34.5	35.3	BX
	35.3	36.4	C

SR	MP	MP	CLASS
23	0.0	21.6	C
	21.6	27.0	BX
	27.0	35.3	C
	35.3	42.7	BX
	42.7	43.7	C
	43.7	65.0	BX
	65.0	65.9	C
24	0.0	1.3	BX
	1.3	5.4	B
	5.4	7.0	C
	7.0	18.1	BX
	18.1	20.5	C
	20.5	41.3	BX
	41.3	42.4	B
	42.4	46.0	BX
	46.0	69.6	C
	69.6	72.5	BX
	72.5	75.0	B
	75.0	77.5	C
	77.5	79.0	BX
	79.0	79.6	D
25	0.0	5.4	C
	5.4	6.2	BX
	6.2	8.1	C
	8.1	13.0	BX
25	13.0	13.8	C
	13.8	15.8	BX
	15.8	17.5	C
	17.5	21.1	BX
	21.1	21.5	B
	21.5	22.4	AX
	22.4	23.5	B
	23.5	26.6	AX
	26.6	30.4	C
	30.4	33.6	BX
	33.6	36.9	C
	36.9	37.3	BX
	37.3	38.3	C
	38.3	41.9	BX
	41.9	42.6	C
	42.6	46.8	BX
	46.8	49.7	C
	49.7	53.7	BX
	53.7	55.0	AX
	55.0	61.1	BX
	61.1	63.0	AX
	63.0	65.9	BX
	65.9	68.0	C
	68.0	74.4	BX
	74.4	76.3	C
	76.3	79.3	BX

SR	MP	MP	CLASS
	79.3	81.1	C
	81.1	112.8	BX
	112.8	113.9	C
	113.9	121.2	BX
26	0.0	1.9	AX
	1.9	33.0	BX
	33.0	35.8	C
	35.8	37.4	BX
	37.4	42.6	C
	42.6	82.7	BX
	82.7	83.2	C
	83.2	90.5	BX
	90.5	93.4	B
	93.4	100.0	BX
	100.0	103.5	C
	103.5	118.8	BX
	118.8	133.5	C
26Spur	133.4	133.5	BX(p)
27	0.0	0.7	D
	0.7	2.3	C
	2.3	2.4	*
* Coincident with SR 270	2.3	2.4	
	2.4	7.0	C
	7.0	14.3	BX
	14.3	15.0	D
	15.0	16.3	C
	16.3	22.0	BX
	22.0	35.7	C
	35.7	36.5	D
	36.5	47.6	BX
	47.6	48.0	C
	48.0	48.2	D
	48.2	50.0	C
	50.0	55.0	BX
	55.0	56.4	C
	56.4	63.2	BX
	63.2	64.1	C
	64.1	75.1	BX
	75.1	75.5	C
	75.5	83.1	BX
	83.1	86.6	C
	86.6	87.2	BX(p)
28	.0B	1.8B	BX
	1.8B	4.5B	C
Equation	004.46 BK =	000.31 AH	
	0.3	0.7	C
	0.7	5.7	BX
	5.7	11.0	C
	11.0	17.0	BX

SR	MP	MP	CLASS
	17.0	18.7	B
	18.7	19.6	BX
	19.6	21.8	AX
	21.8	23.3	BX
	23.3	23.9	AX
	23.9	26.4	BX
	26.4	40.1	C
	40.1	43.4	BX
	43.4	51.2	C
	51.2	51.7	BX
	51.7	52.9	C
28	52.9	56.0	BX
	56.0	57.0	C
	57.0	58.0	BX
	58.0	61.2	C
	61.2	65.5	BX
	65.5	67.0	C
	67.0	82.0	BX
	82.0	91.2	C
	91.2	92.6	BX
	92.6	115.4	C
	115.4	116.9	BX
	116.9	118.0	D
	118.0	129.4	C
	129.4	130.4	BX
	130.4	131.2	D
31	0.0	1.1	C
	1.1	1.9	BX
	1.9	4.4	C
	4.4	12.5	BX
	12.5	12.8	C
	12.8	14.2	BX
	14.2	15.0	C
	15.0	26.8	BX
82	0.0	3.6	B
	3.6	11.3	A
	11.3	15.0	B
	15.0	17.0	A
	17.0	20.8	B
	20.8	24.5	A
	24.5	28.3	BX
	28.3	29.3	C
	29.3	30.0	BX
	30.0	39.3	C
	39.3	47.0	BX
	47.0	48.3	C
	48.3	67.5	BX
	67.5	82.8	C
	82.8	131.6	BX
	131.6	132.6	BX(p)

SR	MP	MP	CLASS
90	2.4	4.2	C
	4.2	5.9	A
90	5.9	14.2	C
	14.2	14.9	BX
90	14.9	17.6	C
	17.6	34.0	BX
90	34.0	55.3	B
	55.3	60.7	AX
90	60.7	118.0	BX
	118.0	121.4	C
90	121.4	123.0	BX
	123.0	126.9	AX
90	126.9	136.0	BX
	136.0	137.7	B
90	137.7	139.6	A
	139.6	141.3	BX
90	141.3	141.8	A
	141.8	147.0	B
90	147.0	151.3	BX
	151.3	152.0	B
90	152.0	164.3	BX
	164.3	169.8	C
90	169.8	174.0	BX
	174.0	175.5	C
90	175.5	175.9	BX
	175.9	176.5	C
90	176.5	177.8	B
	177.8	187.0	C
90	187.0	188.3	BX
	188.3	191.9	C
90	191.9	228.1	BX
	228.1	228.8	B
90	228.8	233.3	BX
	233.3	253.0	B
90	253.0	277.4	BX
	277.4	279.1	B
90	279.1	279.5	BX
	279.5	290.8	C
90	290.8	294.0	BX
	294.0	298.2	B
90	298.2	300.0	BX
	92	0.0	2.7
92	2.7	3.4	C
	3.4	4.5	BX
92	4.5	6.5	C
	6.5	7.9	BX(p)
92	7.9	8.3	C
	95	0.0	0.9
96	0.0	3.4	C
	3.4	6.8	BX

SR	MP	MP	CLASS
97	0.0	0.6	B
	0.6	5.7	A
97	5.7	6.5	AX
	6.5	12.8	BX
97	12.8	16.3	C
	16.3	51.3	BX
97	51.3	56.9	A
	56.9	58.7	BX
97	58.7	76.4	C
	76.4	114.2	*
* Coincident with SR 082	0.0	37.8	
	114.2	119.0	*
* Coincident with SR 090	106.1	110.9	
	Equation	119.30 BK = 133.90 AH	
97	133.9	134.3	C
	134.3	135.3	BX
97	135.3	137.5	C
	137.5	147.0	BX
97	147.0	148.0	AX
	148.0	183.9	BX
97	183.9	185.0	B
	185.0	213.0	*
* Coincident with SR 002	104.7	213.0	
	Equation	199.98 BK = 199.83 AH	
97	Equation	212.98 BK = 213.00 AH	
	213.0	235.3	BX
97	235.3	235.9	C
	235.9	236.5	B
97	236.5	236.9	A
	236.9	237.5	C
97	237.5	253.8	BX
	253.8	255.2	C
97	255.2	258.1	BX
	258.1	261.6	C
97	261.6	262.7	BX
	262.7	263.8	C
97	263.8	282.1	BX
	282.1	288.9	C
97	288.9	290.9	BX
	290.9	292.5	C
97	292.5	314.6	BX
	314.6	322.5	C
97	322.5	331.0	BX
	331.0	333.0	C
97	333.0	336.5	BX
	97Alternate	199.8	200.0
97Alternate	200.0	203.0	C
	203.0	206.2	B

SR	MP	MP	CLASS
	206.2	207.0	C
	207.0	207.8	B
	207.8	209.9	C
	209.9	214.0	B
	214.0	224.4	C
	224.4	224.9	B
	224.9	228.3	BX
	228.3	230.3	B
	230.3	232.0	BX
	232.0	236.3	C
	236.3	239.6	BX
97Couplet	2.6	2.7	BX(p)
97Spur	213.4	213.6	BX(p)
99	0.0	14.2	C
	14.2	15.7	D
	15.7	19.3	C
	19.3	22.5	D
	22.5	26.2	C
	26.2	26.8	BX
	26.8	28.6	D
	28.6	29.0	C
	29.0	30.2	D
	30.2	32.0	C
	32.0	36.0	B
	36.0	36.9	BX
	36.9	38.8	D
	38.8	39.2	C
	39.2	47.2	D
99	47.2	50.3	C
	50.3	50.8	*
* Coincident with SR 525	2.3	2.8	
	50.8	55.4	C
100	0.0	4.7	BX(p)
100Spur	3.0	3.6	BX(p)
101	0.0	0.5	A
	0.5	3.5	BX
	3.5	7.6	C
	7.6	9.4	BX
	9.4	11.2	C
	11.2	11.9	D
	11.9	18.3	C
	18.3	20.8	BX
	20.8	24.9	AX
	24.9	45.1	BX
	45.1	47.5	AX
	47.5	53.3	BX
	53.3	61.1	C
	61.1	61.8	BX

SR	MP	MP	CLASS
	61.8	66.2	C
	66.2	70.9	BX
	70.9	77.0	C
	77.0	78.5	BX
	78.5	83.2	C
	83.2	85.8	D
	85.8	91.1	C
	91.1	105.5	BX
	105.5	106.6	C
	106.6	109.1	BX
	109.1	110.1	C
	110.1	122.2	BX
	122.2	123.4	C
	123.4	126.3	AX
	126.3	126.7	BX
	126.7	127.3	C
	127.3	128.5	BX
	128.5	128.7	C
	128.7	129.4	AX
	129.4	131.1	BX
	131.1	134.2	C
	134.2	148.3	BX
101	148.3	149.5	C
	149.5	151.8	BX
	151.8	152.3	C
	152.3	158.1	BX
	158.1	158.6	AX
	158.6	165.0	BX
	165.0	168.0	AX
	168.0	171.6	BX
	171.6	172.1	C
	172.1	181.3	BX
	181.3	181.6	C
	181.6	185.5	BX
	185.5	185.9	C
	185.9	189.9	BX
	189.9	196.0	C
	196.0	198.8	BX
	198.8	199.5	C
	199.5	203.0	BX
	203.0	204.2	C
	204.2	204.7	BX
	204.7	205.2	C
	205.2	221.3	BX
	221.3	223.5	A
	223.5	223.9	B
	223.9	224.5	A
	224.5	225.0	B
	225.0	227.0	A
	227.0	228.3	B
	228.3	228.9	A
	228.9	229.4	B
	229.4	231.2	A
	231.2	232.0	B
	232.0	243.2	BX

SR	MP	MP	CLASS
	243.2	252.0	C
	252.0	253.0	B
	253.0	253.9	BX
	253.9	261.2	B
	261.2	265.9	C
	265.9	270.2	BX
	270.2	273.8	C
	273.8	281.5	BX
	281.5	282.8	C
	282.8	284.7	BX
	284.7	287.0	C
	287.0	292.7	BX
	292.7	295.5	C
101	295.5	305.9	BX
	305.9	306.9	C
	306.9	319.7	BX
	319.7	320.1	A
	320.1	331.6	BX
	331.6	332.0	C
	332.0	336.0	BX
	336.0	341.8	C
	341.8	343.8	BX
	343.8	346.2	C
	346.2	349.5	BX
	349.5	351.0	C
	351.0	359.2	BX
	359.2	359.9	C
	359.9	361.8	BX
	361.8	365.4	C
	365.4	367.4	BX
101Alt	9.4	10.0	BX(p)
101Cou/Abe	87.5	91.7	BX(p)
101Cou/Her	83.8	83.9	BX(p)
101Cou/Prt	249.7	251.3	BX(p)
102	0.0	1.7	BX
	1.7	2.5	C
103	0.0	11.1	C
	11.1	19.9	BX(p)
104	0.2	13.9	BX
	13.9	15.5	A
	15.5	23.4	BX
	23.4	26.2	C
	26.2	26.6	D
	26.6	30.5	C
	30.5	32.0	BX
	32.0	32.3	C
104Cou/Kin	24.5	24.9	BX(p)

SR	MP	MP	CLASS
105	0.0	0.8	C
	0.8	1.6	BX
105	1.6	2.2	C
	2.2	8.5	BX
	8.5	11.7	AX
	11.7	18.5	BX
	18.5	19.8	AX
	19.8	25.7	BX
	25.7	28.0	C
	28.0	32.0	BX
	32.0	32.6	A
	32.6	37.3	BX
	37.3	37.7	B
	37.7	46.4	BX
	46.4	48.2	C
	48.2	48.8	D
105Sp/WPo	30.3	32.5	C
	32.5	33.2	D
	33.2	34.4	C
105SP/Boo	48.7	48.1	BX(p)
106	0.0	2.2	C
	2.2	20.1	BX
107	0.0	8.0	C
108	0.0	2.2	C
	2.2	3.3	BX
	3.3	4.3	B
	4.3	6.2	BX
	6.2	7.3	C
	7.3	9.4	BX
	9.4	11.9	C
109	0.0	1.8	C
	1.8	3.5	BX
	3.5	5.8	A
	5.8	15.9	BX
	15.9	16.3	C
	16.3	17.4	BX
	17.4	19.3	C
	19.3	20.7	BX
	20.7	21.6	C
	21.6	27.7	B
	27.7	27.8	AX
	27.8	29.0	BX
109	29.0	32.0	C
	32.0	34.6	BX
	34.6	35.4	AX
	35.4	40.3	BX
	40.3	40.5	D

SR	MP	MP	CLASS
109Cou/Hqu	0.1	0.3	BX(p)
109Spur	1.8	3.6	BX(p)
110	0.0	11.1	BX(p)
110Spur	7.8	10.5	BX(p)
112	0.0	11.0	BX
	11.0	14.4	C
	14.4	16.3	BX
	16.3	17.2	C
	17.2	20.0	BX
	20.0	26.7	C
	26.7	38.5	BX
	38.5	39.0	AX
	39.0	45.2	BX
	45.2	52.3	C
	52.3	53.7	BX
	53.7	57.7	C
	57.7	61.0	BX
	61.0	66.5	C
113	0.0	10.0	BX(p)
115	0.0	1.9	BX
	1.9	2.3	C
116	0.0	9.8	BX(p)
117	0.0	1.4	BX(p)
119	0.0	11.0	BX(p)
121	0.0	7.7	BX(p)
122	0.0	7.9	BX(p)
123	0.0	7.5	A
124	0.0	5.6	C
	5.6	13.3	BX
	13.3	45.0	C
125	0.0	5.0	C
	5.0	5.6	D
	5.6	23.7	C
125Spur	6.1	6.8	BX(p)
127	0.0	0.8	C
	0.8	1.8	BX
	1.8	6.1	C
	6.1	6.7	B
	6.7	9.7	BX

SR	MP	MP	CLASS
	9.7	10.0	B
	10.0	27.3	BX
128	0.0	0.5	C
	0.5	2.3	BX(p)
129	0.0	12.0	A
	12.0	14.0	AX
	14.0	17.1	BX
	17.1	17.7	C
	17.7	24.0	BX
	24.0	31.1	B
	31.1	35.5	A
	35.5	41.7	BX
	41.7	42.6	C
129 Spur	42.2	42.4	BX(p)
131	0.0	2.1	BX(p)
141	0.0	0.3	C
	0.3	0.8	BX
	0.8	1.7	C
	1.7	12.4	BX
	12.4	13.0	C
	13.0	23.8	BX
	23.8	25.5	C
	25.5	29.3	BX
141Spur	4.7	6.9	BX
142	0.0	12.3	BX
	12.3	13.4	C
	13.4	20.5	BX
	20.5	22.3	AX
	22.3	23.0	BX
	23.0	24.7	AX
	24.7	25.5	C
	25.5	27.5	BX
	27.5	28.2	C
	28.2	33.3	BX
	33.3	35.3	C
Columbia	River	Bridge	
143	0.6	1.4	BX
	1.4	2.4	C
150	0.0	2.9	C
	2.9	4.0	BX
	4.0	5.2	C
	5.2	5.5	BX
	5.5	6.8	C
	6.8	7.4	BX
	7.4	8.0	C
	8.0	8.2	BX(p)
	8.2	9.1	*

SR	MP	MP	CLASS
* Coincident with SR 97A	234.2	235.0	
	9.1	9.5	C
	9.5	11.1	BX
	11.1	12.8	C
	12.8	13.0	BX
153	0.0	29.5	BX
	29.5	30.7	B
155	0.0	22.1	A
	22.1	23.0	B
	23.0	24.0	A
	24.0	24.5	C
	24.5	24.9	BX
	24.9	25.7	B
	25.7	33.0	C
	33.0	36.7	B
	36.7	44.4	BX
155	44.4	44.9	C
	44.9	72.3	BX
	72.3	78.1	B
	78.1	78.9	A
	78.9	79.4	C
Equation	079.37 BK =	079.63 AH	
	79.6	80.5	C
155Spur	80.1	80.5	C
160	0.0	7.5	BX(p)
161	0.0	1.0	BX
	1.0	2.8	C
	2.8	3.4	BX
	3.4	5.6	C
	5.6	6.2	BX
	6.2	8.2	C
	8.2	9.5	BX
	9.5	13.0	C
	13.0	13.2	BX
	13.2	15.3	C
	15.3	15.9	BX
	15.9	16.2	C
	16.2	17.5	BX
	17.5	25.8	C
	25.8	29.9	*
* Coincident with SR 512	8.7	13.0	
* Coincident with SR 167	5.3	6.1	
Equation	029.89 BK =	028.69 AH	
	28.7	29.1	C

SR	MP	MP	CLASS
	29.1	29.6	BX
	29.6	35.0	C
162	0.0	0.8	C
Equation	000.83 BK =	003.21 AH	
	3.2	7.5	C
	7.5	10.7	BX
162	10.7	19.8	C
163	0.0	3.4	BX(p)
164	0.3	5.2	C
	5.2	5.6	BX
	5.6	9.3	C
	9.3	14.5	BX
	14.5	15.1	C
165	0.0	4.5	A
	4.5	7.4	BX
	7.4	7.8	A
	7.8	16.5	BX
	16.5	17.2	C
	17.2	18.5	BX
	18.5	20.2	C
	20.2	21.2	BX
166	0.0	3.0	BX
	3.0	4.6	C
166Spur	3.9	4.0	BX(p)
167	0.0	5.8	C *
	*Future	Route	
	5.8	6.4	D
	6.4	6.6	BX
Equation	006.58 BK =	005.26 AH	
	5.3	7.8	BX
	7.8	8.7	C
	8.7	13.0	BX
	13.0	14.0	C
	14.0	18.1	BX
	18.1	27.2	C
167Cou/Puy	5.7	6.3	BX(p)
169	0.0	1.0	C
	1.0	3.0	BX
	3.0	3.4	C
	3.4	7.0	BX
	7.0	8.6	C
169	8.6	9.5	B
	9.5	13.6	BX
	13.6	24.3	C
	24.3	25.3	D

SR	MP	MP	CLASS
170	0.0	3.7	C
171	0.0	1.0	C
	1.0	4.0	D
172	0.0	5.5	BX
	5.5	8.4	C
	8.4	9.1	BX
	9.1	25.1	C
	25.1	26.5	B
	26.5	29.1	C
	29.1	30.6	B
	30.6	35.1	C
173	0.0	1.7	C
	1.7	2.7	BX
	2.7	8.8	C
	8.8	10.5	BX
	10.5	11.0	B
	11.0	12.0	D
174	0.0	2.1	AX
	2.1	13.2	BX
	13.2	14.2	AX
	14.2	17.1	BX
	17.1	18.9	B
	18.9	19.8	A
	19.8	23.4	C
	23.4	25.1	AX
	25.1	26.0	B
	26.0	27.2	A
	27.2	30.0	B
	30.0	31.0	BX
	31.0	37.0	B
	37.0	40.7	BX
174Spur	19.5	20.6	A
	20.6	20.9	B
181	5.3(a)	5.5	C
181	5.5	6.0	D
	6.0	8.0	C
	8.0	11.4	D
182	0.0	14.4	BX(p)
193	0.0	1.4	C
	1.4	2.0	BX
	2.0	3.1	B
194	0.0	21.1	BX(p)

SR	MP	MP	CLASS
195	0.1	5.0	BX
	5.0	8.3	C
	8.3	12.0	BX
	12.0	20.0	C
	20.0	36.8	BX
	36.8	39.0	C
	39.0	40.0	BX
	40.0	46.0	C
	46.0	47.6	BX
	47.6	48.4	C
	48.4	62.3	BX
	62.3	80.2	B
	80.2	80.5	C
	80.5	93.0	BX
	93.0	96.0	C
195Spur	0.1	0.6	BX(p)
197	0.0	0.6	B
	0.6	3.2	A
202	0.0	2.3	C
	2.3	4.6	BX
	4.6	11.4	C
	11.4	12.5	BX
	12.5	23.9	C
	23.9	26.0	BX
	26.0	27.7	C
	27.7	28.7	BX
	28.7	29.9	C
	29.9	30.2	BX(p)
	30.2	30.6	BX(p)
202Cou/Red	7.3	7.7	BX(p)
203	0.0	2.6	C
	2.6	3.2	BX
	3.2	23.3	C
	23.3	23.8	BX
	23.8	24.2	C
204	0.0	0.7	C
	0.7	1.1	BX
	1.1	2.4	C
205	26.3	27.2	B
	27.2	30.5	BX
	30.2	31.4	C
	31.4	34.4	BX
	34.4	37.2	C
206	0.0	0.5	C
	0.5	15.4	BX



SR	MP	MP	CLASS
207	0.0	1.0	BX
	1.0	4.4	C
211	0.0	15.2	BX
215	0.0	6.2	C
221	0.0	0.4	BX
	0.4	1.5	AX
	1.5	23.6	BX
	23.6	25.9	A
	25.9	26.1	BX
223	0.0	3.8	C
224	0.0	6.3	BX
	6.3	7.9	D
	7.9	9.9	C
225	0.0	11.3	BX(p)
231	0.0	14.7	BX
	14.7	15.6	B
	15.6	16.2	C
231	16.2	17.2	BX
	17.2	21.2	C
	21.2	26.1	BX
	26.1	28.1	C
	28.1	31.1	*
* Coincident with SR 002	261.1	264.0	
	31.1	31.5	C
	31.5	34.0	BX
	34.0	35.6	C
	35.6	42.1	BX
	42.1	43.8	B
	43.8	49.0	BX
	49.0	50.3	C
	50.3	55.4	BX
	55.4	65.3	C
	65.3	69.6	BX
	69.6	71.9	C
	71.9	15.2	BX
240	0.0	28.8	BX
Equation	28.8 BK =	30.6 AH	
	30.6	33.0	C
	33.0	34.3	BX
	34.3	34.9	C
	34.9	36.1	*
* Coincident with SR 182	3.9	5.0	
	36.1	39.5	C
	39.5	43.2	BX

SR	MP	MP	CLASS
241	0.0	8.0	BX(p)
	8.0	8.6	D
	8.6	9.6	BX
	9.6	10.6	C
	10.6	25.2	BX
243	0.0	20.0	BX
	20.0	21.3	C
	21.3	28.3	BX
251	0.0	0.5	C
	0.5	3.7	BX
	3.7	4.5	AX
251	4.5	10.8	BX
260	0.0	4.3	C
	4.3	5.9	BX
	5.9	7.5	C
	7.5	12.2	BX
	Equation	012.19 BK =	013.71 AH
	13.7	24.5	BX
	24.5	25.2	C
	25.2	38.6	BX
	38.6	39.5	C
261	0.0	10.0	C
	10.0	14.6	BX
	14.6	15.2	A
	15.2	29.4	BX
	29.4	35.8	*
* Coincident with SR 260	33.1	39.5	
	35.8	36.3	C
	36.3	53.2	B
	53.2	53.5	C
	53.5	62.8	BX
262	0.0	24.2	BX(p)
263	0.0	9.2	BX(p)
270	0.0	9.9	C
270Cou/Pul	2.7	2.9	BX(p)
271	0.0	9.0	BX
272	0.0	2.2	C
	2.2	15.8	BX
	15.8	16.5	C
	16.5	16.8	*
* Coincident with SR 027	15.1	15.3	
	16.8	18.0	C
	18.0	19.2	BX

SR	MP	MP	CLASS
274	0.0	0.5	C
	0.5	1.6	BX
	1.6	1.9	C
278	0.0	5.5	BX(p)
281	0.0	9.8	BX
	9.8	10.5	C
281Spur	2.6	4.3	BX
282	0.0	1.8	C
	1.8	4.9	BX
283	0.0	14.7	BX
	14.7	14.9	C
285	0.3	5.0	BX(p)
285Cou	2.9	4.6	BX(p)
290	0.0	6.3	D
	6.3	18.4	C
290Spur	0.7	1.3	BX(p)
291	0.0	1.4	C
	1.4	6.0	BX
	6.0	7.1	C
	7.1	7.4	BX
	7.4	9.0	C
	9.0	13.5	BX
	13.5	14.2	C
	14.2	20.3	BX
	20.3	21.3	C
	21.3	33.0	BX
292	0.0	5.0	BX
	5.0	5.9	C
300	0.0	2.9	BX
	2.9	3.3	C
302	0.0	1.3	BX(p)
	1.3(a)	7.7(a)	BX
	7.7(a)	10.6(a)	BX(p)
302	10.6(a)	16.0	BX
	16.0	16.8	C
303	0.0	0.7	C
	0.7	1.5	BX
	1.5	5.4	C
	5.4	9.2	BX(p)

SR	MP	MP	CLASS
303Spur	1.5	3.0	C
	3.0	3.3	A
	3.3	3.4	C
304	0.0	0.9	BX
	0.9	1.2	D
	1.9	3.2	D
	3.2	3.5	C
305	0.0	0.2	C
	0.2	11.4	BX
	11.4	11.9	C
	11.9	12.5	BX
	12.5	12.9	C
	12.9	13.3	BX
307	0.0	5.4	BX(p)
308	0.0	2.3	C
310	0.0	1.8	BX(p)
395	0.0	13.0	*
* Coincident with SR 82	132.6	112.8	
	13.0	14.2	A
	14.2	15.5	BX
	15.5	20.5	C
	20.5	22.8	*
* Coincident with SR 182	12.2	14.4	
	22.8	25.2	C
	25.2	28.2	BX
	28.2	40.6	C
	40.6	45.0	BX
	45.0	56.0	B
395	56.0	95.9	BX
	95.9	158.5	*
* Coincident with SR 090	220.5	281.3	
	158.5	164.5	*
* Coincident with SR 002	286.9	292.9	
	164.5	167.0	D
	167.0	168.0	C
	168.0	170.2	BX
	170.2	172.5	B
	172.5	178.0	BX
	178.0	190.3	C
	190.3	201.6	BX
	201.6	205.1	B
	205.1	208.4	C
	208.4	215.7	BX

SR	MP	MP	CLASS
	215.7	216.0	C
	216.0	228.6	BX
	228.6	229.6	C
	229.6	230.2	D
	230.2	230.7	C
	230.7	232.3	BX
	232.3	233.4	C
	233.4	237.8	BX
	237.8	241.3	C
	241.3	243.7	BX
	243.7	245.3	C
	245.3	248.0	BX
	248.0	249.4	C
	249.4	260.0	BX
	260.0	260.5	C
	260.5	270.3	BX
397	0.0	11.2	BX(p)
401	0.0	9.7	BX
	9.7	12.1	C
405	0.0	6.7	C
	6.7	9.7	BX
	9.7	11.1	C
	11.1	11.5	B
	11.5	11.8	BX
	11.8	17.0	C
405	17.0	18.3	BX
	18.3	23.0	C
	23.0	24.0	B
	24.0	30.3	BX
409	0.0	3.9	C
410	0.0	5.8	C
	5.8	6.4	D
	6.4	6.6	BX
	6.6	8.8	*
* Coincident with SR 167	5.3	7.1	
	8.8	13.0	BX
	13.0	13.4	C
	13.4	14.0	B
	14.0	19.6	C
	19.6	20.3	BX
	20.3	21.2	C
	21.2	21.4	BX
	21.4	38.0	C
	38.0	39.0	BX
	39.0	42.4	B
	42.4	43.0	BX
	43.0	56.3	B
	56.3	91.8	A

SR	MP	MP	CLASS
	91.8	107.8	BX
	107.8	110.8	BX
	110.8	116.4	B
411	0.0	1.8	BX(p)
	1.8	2.3	D
	2.3	4.4	BX(p)
	4.4	5.9	C
	5.9	10.8	BX
	10.8	13.5	C
411Spur	1.7	1.9	BX(p)
432	0.0	5.1	BX(p)
	5.1	6.7	C
	6.7	7.2	D
	7.2	10.3	C
433	0.0	0.9	
500	0.0	3.9	BX
	3.9	4.5	C
	4.5	5.3	BX
	5.3	20.4	C
501	0.0	1.2	C
	1.2	2.6	D
	2.6	5.3	C
	5.3	10.8	BX
	10.8	12.7	AX
Proposed Route	12.7	16.9	
	16.9	18.7	C
	18.7	19.9	BX
502	0.0	3.9	C
	3.9	4.5	BX
	4.5	6.5	C
	6.5	7.6	BX
503	0.0	8.6	C
	8.6	13.6	BX
	13.6	18.4	C
	18.4	19.5	BX
	19.5	22.4	C
	22.4	24.1	BX
	24.1	25.6	C
	25.6	26.6	BX
	26.6	30.0	C
	30.0	30.3	BX
	30.3	32.1	C
	32.1	33.0	BX
	33.0	33.4	C
	33.4	34.0	BX

SR	MP	MP	CLASS
	34.0	34.7	C
	34.7	38.1	BX
	38.1	40.4	C
	40.4	43.5	BX
	43.5	54.4	C
503Spur	31.3	39.7	BX(p)
504	0.0	2.2	C
	2.2	3.0	BX
	3.0	4.0	C
	4.0	8.8	BX
504	8.8	11.4	C
	11.4	17.6	BX
	17.6	21.0	B
	21.0	40.8	BX(p)
505	0.0	3.8	BX(p)
	3.8	5.6	C
	5.6	6.0	BX
	6.0	10.1	C
	10.1	18.1	BX
	18.1	19.3	C
506	0.0	6.6	C
	6.6	10.0	BX
	10.0	11.5	C
507	0.0	18.0	C
	18.0	21.0	BX
	21.0	24.9	C
	24.9	25.8	BX
	25.8	28.7	C
	28.7	30.5	BX
	30.5	33.7	C
	33.7	35.0	BX
	35.0	37.0	C
	37.0	43.6	BX
507Spur	2.3	3.5	BX(p)
508	0.0	0.2	B
	0.2	0.4	BX
	0.4	1.5	C
	1.5	2.8	B
	2.8	14.0	C
	14.0	16.5	BX
	16.5	17.7	C
	17.7	24.5	BX
	24.5	32.8	C
509	0.0	3.2	BX(p)
	3.2B	6.4B	BX(p)
Equation	6.4BK =	3.2 AH	
	3.2	5.0	C

SR	MP	MP	CLASS
	5.0	5.6	BX
	5.6	10.3	C
509	10.3	11.2	BX
	11.2	14.3	C
	14.3	18.4	*
* Coincident with SR 099 and SR 516	11.4 and 0.0	12.5 and 1.8	
	18.4	19.6	*
* Coincident with SR 516	0.0	1.8	
Equation	020.2 BK =	019.6 AH	
	19.6	20.3	D
	20.3	27.7	C
	27.7	29.5	BX
	29.5	29.8	C
510	0.0	0.5	C
Equation	000.50 BK =	002.62 AH	
	2.6	3.0	C
	3.0	3.8	BX
Equation	003.82 BK =	004.28 AH	
	4.3	6.3	C
	6.3	8.9	BX
	8.9	13.0	C
	13.0	14.8	BX
	14.8	15.7	C
512	0.0	1.0	BX
	1.0	4.3	C
	4.3	5.0	BX
	5.0	8.8	C
	8.8	12.0	BX
513	0.0	3.4	C
515	0.0	7.8	C
516	0.0	1.0	BX
	1.0	2.3	C
	2.3	3.9	BX
	3.9	16.2	C
518	0.0	3.8	C
519	0.0	1.3	BX(p)
520	0.0	0.8	BX
	0.8	1.6	C
	1.6	4.0	A
	4.0	5.5	C
	5.5	5.8	BX
	5.8	7.4	C
	7.4	12.5	BX
	12.5	13.0	C

SR	MP	MP	CLASS
522	0.0	1.4	D
	1.4	2.0	C
	2.0	4.4	D
	4.4	6.7	C
	6.7	8.2	D
	8.2	9.2	C
	9.2	10.4	D
	10.4	20.5	C
	20.5	24.7	BX
523	0.0	2.5	BX(p)
524	0.0	1.5	C
	1.5	2.3	BX
	2.3	6.5	D
	6.5	7.6	BX
	7.6	8.0	C
	8.0	8.3	BX
	8.3	9.9	D
	9.9	10.9	BX
	10.9	11.5	D
	11.5	13.0	BX
	13.0	13.2	D
	13.2	14.1	BX
	14.1	14.6	C
524Sp/3Av	0.0	0.7	BX(p)
524Sp/Cwy	4.6	5.1	C
525	0.0	2.8	BX
	2.8	7.2	C
525	7.2	8.5	BX
	8.5	8.7	B
	8.7	9.4	C
	9.4	14.3	BX
	14.3	14.9	C
	14.9	30.5	BX
526	0.0	0.3	BX
	0.3	0.8	C
	0.8	2.3	B
	2.3	4.6	C
	0.0	9.5	C
527	0.0	9.5	C
	9.5	10.4	BX
	10.4	11.9	C
528	0.0	0.4	D
	0.4	3.5	C
529	0.0	4.3	BX(p)
	4.3	6.5	C
	6.5	6.7	D

SR	MP	MP	CLASS
529Spur	0.4	0.6	BX(p)
530	17.0	20.8	BX
	20.8	20.9	*
* Coincident with SR 009	29.5	29.6	
	20.9	25.6	C
	25.6	27.5	BX
	27.5	35.8	C
	35.8	49.1	BX
	49.1	50.1	C
	50.1	52.5	BX
	52.5	54.8	C
	54.8	67.7	BX
531	0.0	4.9	BX
	4.9	6.5	C
	6.5	6.9	D
	6.9	8.0	C
	8.0	8.5	D
531	8.5	9.9	C
532	0.0	3.7	BX
	3.7	5.3	C
	5.3	5.8	BX
	5.8	6.8	C
	6.8	8.0	BX
	8.0	10.1	C
534	0.0	1.0	BX
	1.0	5.1	C
536	0.0	3.4	BX
	3.4	4.1	C
	4.1	5.4	D
538	0.0	0.6	D
	0.6	1.3	C
	1.3	2.8	BX
	2.8	3.7	C
539	0.0	8.2	C
	8.2	10.2	BX
	10.2	11.0	D
	11.0	11.5	C
	11.5	15.2	BX
542	0.0	9.0	C
	9.0	20.5	BX
	20.5	21.5	C
	21.5	23.5	BX
	23.5	25.3	C
	25.3	25.6	BX
	25.6	26.3	C

SR	MP	MP	CLASS
	26.3	29.1	BX
	29.1	29.5	AX
	29.5	30.7	B
	30.7	33.6	BX
	33.6	48.0	AX
	48.0	57.3	A
542Cou/MtB	54.6	55.0	BX(p0)
543	0.0	1.1	C
544	0.0	0.4	C
	0.4	1.0	BX
	1.0	2.6	C
	2.6	4.2	BX
	4.2	9.0	C
546	0.0	3.5	BX
	3.5	8.0	C
547	0.0	8.3	C
	8.3	10.7	BX
548	0.0	13.9	BX(p)
599	0.0	1.7	C
702	0.0	1.5	C
	1.5	2.5	BX
	2.5	3.9	C
	3.9	4.9	BX
	4.9	7.0	C
	7.0	7.8	BX
	7.8	9.3	C
Over view of Tacoma	And Bay	Mt Rainier	
705	0.7	1.5	C
706	0.0	2.5	C
	2.5	3.0	BX
	3.0	4.2	C
	4.2	5.8	BX
	5.8	13.6	C
730	0.0	3.0	BX
	3.0	4.3	AX
	4.3	6.1	BX
730Spur	5.8	6.1	BX(p)

SR	MP	MP	CLASS
821	0.0	1.0	B
	1.0	2.0	BX
	2.0	13.9	B
	13.9	14.5	A
821	14.5	23.7	B
	23.7	23.9	A
	23.9	25.2	BX
823	0.0	0.6	C
	0.6	4.7	BX(p)
900	5.9	11.5	C
	11.5	12.5	*
* Coincident with SR 405	4.5	5.4	
	12.5	21.6	C
900Cou/Ren	10.7	11.4	BX(p)
902	0.0	4.1	BX(p)
	4.1	5.9	BX
	5.9	7.7	C
	7.7	12.4	BX
903	0.0	2.7	C
	2.7	3.8	BX
	3.8	6.1	C
	6.1	7.0	BX
	7.0	8.2	C
	8.2	10.0	BX
903Spur	0.2	0.5	BX(p)
904	0.0	0.8	C
	0.8	8.7	BX
	8.7	16.9	C
906	0.0	1.9	C
	1.9	2.6	BX
906Spur	2.6	3.0	BX(p)
908	3.5	6.6	C
908Cou/Red	6.7	6.9	BX(p)
970	0.0	2.7	C
971	0.0	15.0	BX(p)

**UTILITY LINES – FRANCHISES AND PERMITS**

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468-34-280 Overhead power and communication lines—Type of construction

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468-34-340 Miscellaneous  
468-34-350 Control zone guidelines

**WAC 468-34-010 Applications.**

Applications for franchises and permits submitted to the Washington state department of transportation shall conform with the following requirements:

- (1) Applications shall be submitted upon forms available from the department.
- (2) Applications shall include the utility facility description plus additional plans and data for CAT 1 and CAT 2 installations.
- (3) Applications shall indicate compliance with the standards as set forth in the POLICY ON ACCOMMODATION OF UTILITIES ON HIGHWAY RIGHTS OF WAY as contained in these rules and any amendments thereto.
- (4) The application shall discuss alternate possibilities, especially when a location on or across a limited access facility is considered necessary. Reasons for need to adhere to location as proposed must be adequately set forth in the application.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-010, filed 10/10/95, effective 11/10/95. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-010, filed 12/20/78. Formerly WAC 252-04-010.]

**WAC 468-34-020 Costs.**

(1) The applicant shall pay the reasonable cost to the department for investigating, handling and granting the franchise or permit, including but not limited to fees of hearing officers and reporters, including basic overhead charges upon the application and for providing an inspector during construction and/or maintenance of the utility facility as follows:

For permit/franchise/amendment	
Category 1	\$500.00
Category 2	\$300.00
Category 3	\$150.00
For franchise consolidation	\$300.00
For franchise renewal	\$250.00
For franchise assignment	\$50.00

together with an additional charge in the amount of expenses, if any, actually incurred by the department: Provided, That no charge shall be made for applications for franchise or permit where the applicant is the United States or any of its agencies, or a utility anticipating relocation from its private easement acquired or to be acquired by the department for construction or reconstruction of a state highway.

(2) An equitable portion of the added costs of design and construction of highway structures shall be charged to any utility company which is required to pay the costs of relocation of its facilities and/or to any utility company making new installations.

(3) Before any construction work is started, a surety bond in an amount required by the department, but not less than one thousand dollars, written by a surety company authorized to do business in the state of Washington, may be required by the department to insure completion of construction, including the restoration of surfacing, slopes, slope treatment, top soil, landscape treatment, drainage facilities and cleanup of right of way for a period ending not more than one year after date of completion, except the applicant shall be required to maintain an individual bond for a period to

two years after date of completion where the utility facility disturbs the traveled lanes or usable shoulder. A blanket surety bond may be maintained covering multiple franchises or permits in lieu of individual bonds at the department's discretion. A blanket surety bond shall be in an amount of not less than ten thousand dollars.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-020, filed 10/10/95, effective 11/10/95; 89-05-022 (Order 119), § 468-34-020, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-020, filed 12/20/78. Formerly WAC 252-04-020.]

**WAC 468-34-030 Determination of need for franchise hearing.**

(1) Upon the filing of an application for franchise, the department shall determine whether the work involved with the franchise may:

- (a) During construction, significantly disrupt the flow of traffic or use of driveways or other facilities within the right-of-way; or
- (b) During or following construction, cause a significant and adverse effect upon the surrounding environment, in order to determine whether a hearing or hearing opportunity is required.

(2) If the department deems it to be in the public interest a hearing or hearing opportunity may be required for any franchise application. A hearing or hearing opportunity will normally be required for a franchise which involves any of the following:

- (a) Overhead transmission lines in excess of 35 kV;
- (b) Facilities involving the installation of pipe larger than eighteen inches nominal diameter;
- (c) Conduits requiring an excavation wider than three feet;



(d) Pipelines carrying transmittants which are flammable, corrosive, expansive, energized or unstable and are larger than four inches nominal diameter;

(e) Pressurized carrier pipes larger than twelve inches nominal diameter;

(f) Underground installations of any size that require excavation through landscaped areas which are authorized by permit and which are maintained by owners of abutting property.

(3) The department may dispense with holding a hearing where the planned facility has already been or is the subject of environmental land use or other hearings or where the applicant presents evidence of a direct contact with owners of abutting property.

(4) Those franchise applications which the department determines warrant a hearing or hearing opportunity shall be processed in accordance with WAC 468-34-040 through 468-34-090. All other franchise applications may be approved by the department without being processed in accordance with WAC 468-34-040 through 468-34-090, including franchises previously filed but not advertised.

[Statutory Authority: Chapter 47.44 RCW and 1980 c 28. 80-13-042 (Order 58), § 468-34-030, filed 9/15/80.]

#### **WAC 468-34-040 Franchise hearings.**

Arrangements for a hearing before the secretary of transportation or his designee at the earliest possible date will be made by the department on any matters with respect to which a protest has been filed. Based on written objections or disputes which the department is unable to resolve or upon which it may have a divergent recommendation, the applicant and/or affected parties will be given the opportunity to appear before the secretary or his designee in support of their requests or contentions.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-040, filed 12/20/78. Formerly WAC 252-04-040.]

#### **WAC 468-34-050 Notice of filing.**

Upon the filing of application for franchise, the department shall cause notice thereof to be given in the county or counties in which any portion of the highway upon which the franchise applied for is located, at the expense of the applicant, by publishing a notice once a week for two consecutive weeks, in a newspaper having a general circulation in such county or counties. The notice shall state the name of the applicant and a description of the state highway or part thereof over which the franchise application extends.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-050, filed 10/10/95, effective 11/10/95. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-050, filed 12/20/78. Formerly WAC 252-04-045.]

#### **WAC 468-34-060 Protests.**

Any person whose interests would be adversely affected by the granting of a franchise may file protests thereto. No form of protest is prescribed, but such protests shall be in writing, mailed to the department of transportation at the address listed in the notice, and to the applicant at the address stated in the application for franchise, and shall briefly state the facts upon which such protest is based. No protest or amendment thereof shall be considered by the department unless received within fourteen days after the notice of filing has been posted and published.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-060, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-060, filed 12/20/78. Formerly WAC 252-04-050.]

**WAC 468-34-070 Uncontested applications.**

If no protest to a franchise application is received within fourteen days after the notice of filing has been posted and published, the department may grant the franchise without further proceedings.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-070, filed 12/20/78. Formerly WAC 252-04-052.]

**WAC 468-34-080 Procedure on protests.**

If a protest or protests to an application are filed with the department, the secretary or his designee shall, at the time for hearing such application, insofar as is practicable, state the issues raised by the protest or protests, take such other steps as it may deem necessary for complete hearing on such issues, and continue such hearing from time to time until the hearing is completed in accordance with these rules.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-080, filed 12/20/78. Formerly WAC 252-04-055.]

**WAC 468-34-090 Hearing officers.**

The secretary may designate any qualified person as hearing officer with respect to hearings on any franchise application. Subject to later review and ruling by the secretary or his designee, such hearing officer may:

- (1) Administer oaths and affirmations, examine witnesses, and receive evidence;
- (2) Admit evidence which possesses probative value commonly accepted by reasonable, prudent men in the conduct of their affairs, giving effect to the rules of privilege recognized by law and excluding incompetent, irrelevant, immaterial and unduly repetitious evidence;
- (3) Rule on offers of proof and receive relevant evidence;
- (4) Regulate the course of the hearing;

(5) Hold conferences for the settlement or simplification of the issues by consent of the parties;

(6) Dispose of procedural requests or similar matters;

(7) Prepare the proposed order, including findings of fact and conclusions of law, disposing of such application and submit the same to the secretary or his designee for consideration.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-090, filed 12/20/78. Formerly WAC 252-04-060.]

**WAC 468-34-100 Policy on accommodation of utilities on highway rights of way.**

This policy shall apply to all franchises and permits issued subject to chapter 47.44 RCW to all public RCW to all public, private, and governmental utility lines that are to be located, adjusted or relocated within the rights of way of state highways other than provided for in chapter 47.24 RCW.

Nothing in this policy shall be construed as limiting the rights of the department to impose restrictions or requirements in addition to and/or deviations from those stated herein in any franchise or permit where the department deems it advisable to do so.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-100, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-100, filed 12/20/78. Formerly WAC 252-04-065.]

**WAC 468-34-110 Definition of terms.**

Unless otherwise stated, words and phrases used herein shall have the following meaning:

(1) Highway - A general term denoting a street, road or public way for purposes of vehicular travel, including the entire area within the right of way.

(2) Conventional highway - An arterial highway without access control.

(3) Limited access highway - A highway upon which the rights to ingress and egress, light, view and air are controlled by law.

(a) Full control of access - Means that the authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads by prohibiting crossings or direct private driveway connections at grade.

(b) Partial control of access - Means that the authority to control access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossings and some private driveway connections at grade.

(c) Modified control of access - Means that the authority to control access is exercised to give preference to through traffic to such a degree that most approaches, including commercial approaches, existing and in use at the time of establishment, may be allowed.

(d) Freeway - A fully controlled limited access highway of four or more traffic lanes with the opposing traffic lanes separated by a median strip of arbitrary width.

(4) Frontage road - A local street or road auxiliary to an arterial highway for service to abutting property and adjacent areas and for control of access.

(5) Scenic route - A highway forming a part of the scenic and recreational highway system as set forth under chapter 47.39 RCW.

(6) Roadway prism - That portion of the highway right of way between back of ditch, bottom of ditch, back of curbs including slopes, shoulders, pavement and a median of less than sixteen feet in width.

(7) Roadway - The portion of a highway including shoulders, for vehicular use. A divided highway has two or more roadways.

(8) Median - The portion of a divided highway separating the traveled ways for traffic in opposite directions.

(9) Roadside - The roadside is the area between the edge of the roadway shoulder and the right of way line and unpaved medians on multilane highways.

(10) Rest area - A roadside area with parking facilities separated from the roadway provided for motorists to stop and rest. It may include drinking water, toilets, tables and benches, telephones, information, and other facilities for travelers.

(11) Viewpoint - A roadside area provided for motorists to stop their vehicles beyond the shoulder, primarily for viewing the scenery in safety.

(12) Right of way - A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to highway transportation purposes.

(13) Clear roadside policy - The policy employed by a highway authority to increase safety, improve traffic operation and enhance the appearance of highways by designing, constructing and maintaining highway roadsides as wide, flat, and rounded as practical and as free as practical from physical obstructions above the ground such as trees, drainage structures, nonyielding sign supports, utility poles and other ground-mounted obstructions.

(14) Encroachment - Unauthorized use of highway right of way as for signs, fences, buildings, etc.

(15) Restoration - A general term denoting replacing, repairing or otherwise restoring the right of way to the same or equal conditions as before any change or construction thereon.

(16) Franchise - Occupancy and use document required for longitudinal occupancy of highway rights of way in accordance with chapter 47.44 RCW.

(17) Permit - Occupancy and use document required for an occupancy of the highway rights of way other than by franchise as provided in chapter 47.44 RCW.

(18) Private lines - Privately owned facilities which convey or transmit commodities as listed in WAC 468-34-100, but are devoted exclusively to the use of the owner.

(19) Roadway structure - The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

(20) Overcrossing - A grade separation where the subject highway passes over an intersecting highway or railroad.

(21) Undercrossing - A grade separation where the subject highway passes under an intersecting highway or railroad.

(22) Backfill - Replacement of soil around and over a pipe.

(23) Bedding - Organization of soil or fine gravel to support a pipe.

(24) Overfill - Backfill above a pipe.

(25) Sidefill - Backfill alongside a pipe.

(26) Carrier - Pipe directly enclosing a transmitted fluid (liquid or gas).

(27) Casing - A larger pipe enclosing a carrier.

(28) Sleeve - Short casing through pier or abutment of highway structure.

(29) Vent - Appurtenance to discharge gaseous contaminants from casings.

(30) Coating - Material applied to or wrapped around a pipe.

(31) Conduit or duct - An enclosed tubular runway for protecting wires or cables.

(32) Cover - Depth of top of pipe below grade of roadway or ditch.

(33) Drain - Appurtenance to discharge accumulated liquid contaminants from casings or other enclosures.

(34) Encasement - Structural element surrounding a pipe.

(a) Jacket - Encasement by concrete poured around a pipe.

(b) Walled - Partially encased by concrete poured alongside the pipe.

(35) Gallery - An underpass for two or more pipelines.

(36) Grounded - Connected to earth or to some extended conducting body which serves as a ground instead of the earth.

(37) Manhole - An opening in an underground system which workmen or others may enter for the purpose of making installations, inspections, repairs, connections, and tests.

(38) Pipeline - A tubular product made as a production item for sale as such.

(39) Pressure - Relative internal pressure in psig (pounds per square inch gage).

(40) Slab, floating - Slab between but not contacting pipe and pavement.

(41) Trenched - Installed in a narrow open excavation.

(42) Untrenched - Installed without breaking ground or pavement surface, such as by jacking or boring.

(43) Utility service connection - A service connection from a utility's distribution or feeder line or main to the premises served.

(44) Traffic control - Those provisions necessary to safeguard the public during construction activities.

(45) Normal - Crossing at a right angle.

(46) Standard specifications for road, bridge, and municipal construction - The compilation of standard requirements for road, bridge, and municipal construction issued by the Washington state department of transportation.

(47) True line and grade - A line reasonably free from variation on both horizontal and vertical alignment.

(48) Control zone guidelines - Guidelines established to control the placement of above-ground utility facilities within the highway right of way.

(49) Major reconstruction - Upgrading the capacity of the facility and/or replacement of more than fifty percent of the poles or towers within any mile.

(50) Roadbed - The graded part of the roadway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

(51) Subgrade - The top surface of the roadbed on which subbase, base, surfacing, pavement, or layers of similar materials are placed.

(52) Utility - A term denoting electric power, communication, cable television, water, gas, oil, petroleum products, steam, chemicals, sewage, drainage, irrigation, fire or police signal systems, and similar lines. Also, the term utility includes those utility-type facilities which are owned or leased by a government agency for its own use, or otherwise dedicated solely to governmental use. The term utility does not include utility-type facilities required for the support, control, operation, and maintenance of the highway system, if they are owned and controlled by the highway authority.

(53) Installation categories - Utility installations will be defined by the effect the installation will have on the highway integrity and impact to the traveling public.

(a) Category 1 installations have considerable impact on highway facilities and the public and will require a detailed review effort by more than one department office.

(b) Category 2 installations have limited impact on highway facilities and the public and may require review by more than one department office.

(c) Category 3 installations have little or no impact on highway facilities and the public and will be reviewed only by the office processing the application.

(d) Category 4 installations are same-side service connections below a specified size (see application instructions) and are exempt from the permit/franchise process except in limited access controlled areas.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-110, filed 10/10/95, effective 11/10/95; 89-05-022 (Order 119), § 468-34-110, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-110, filed 12/20/78. Formerly WAC 252-04-075.]

### **WAC 468-34-120 Application of policy to various types of right of way.**

The applicable policy for the accommodation of utilities on various types of highways shall be in accordance with the following:

(1) Freeways - Accommodation of utilities shall be in accordance with “A Policy on the Accommodation of Utilities on Freeway Rights of Way” issued by the American Association of State Highway and Transportation Officials (AASHTO) 1982, and amendments thereto, and this policy.

(2) Limited access highways - Accommodation of utilities shall be the same as for freeways.

(3) Conventional highways - Rural - Accommodation of utilities shall be in accordance with this policy.

(4) Conventional highways - Cities and towns - Accommodation of utilities shall be in accordance with:

(a) Underground

(i) Water and sewer - The current “Standard Specifications for Road, Bridge, and Municipal Construction.”

(ii) All other facilities - Accommodation of utilities shall be in accordance with this policy.

(b) Overhead - Accommodation of utilities shall be in accordance with this policy.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-120, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-120, filed 12/20/78. Formerly WAC 252-04-085.]

### **WAC 468-34-130 Location**

(1) Utility installations should be located to minimize need for later adjustment to accommodate future highway improvements and to permit access for servicing such lines with minimum interference to highway traffic and must be located in accordance with the control zone guidelines.

(2) Longitudinal installations should be located on a uniform alignment and grade as near as practicable to the right of way line so as to provide a safe environment for traffic operation and preserve space for future highway improvements or other utility installations.

(3) Utility line crossings of the highway shall be normal to the highway center line to the extent feasible and practical. Crossings should be made on a true line and grade. Crossings entering the right of way at an angle greater than forty-five degrees from normal shall be considered longitudinal location except crossings within public road intersections.

(4) The horizontal location shall be placed with relation to the centerline of the highway as approved by the department.

(5) The vertical location of underground utility lines shall be in accordance with the currently applicable design standard for underground utility encroachments. The vertical clearance of above ground facilities shall be consistent with the clearances as provided in WAC 468-34-290.

(6) In all cases, full consideration shall be given to visual quality, sound engineering principles, and overall economic aspects.

(7) Utility installations that are needed for a highway purpose, such as for continuous highway lighting or to serve a weigh station, rest or recreational area, are to be located and designed in accordance with the requirements of this policy.

(8) The department may restrict the number of utility service connections, and require the placement of one or more distribution lines in lieu thereof.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-130, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-130, filed 12/20/78. Formerly WAC 252-04-095.]

#### **WAC 468-34-140 Utility tunnels and bridges.**

The department should ensure adequate study is made by the utility companies to anticipate their needs (present and future) for crossings and to determine if convergence of several crossings can be made to make it more feasible to use a utility tunnel or bridge.

In a combined tunnel or bridge, provision shall be made to isolate mutually hazardous transmittants such as fuels and electric energy by compartmentizing or by auxiliary encasement of incompatible carriers.

The utility tunnel or bridge shall comply in appearance, location, cover, earthwork and markers with the standards as set in the current Standard Specifications for Road, Bridge, and Municipal Construction.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-140, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-140, filed 12/20/78. Formerly WAC 252-04-105.]

#### **WAC 468-34-150 Design.**

(1) The utility company shall be responsible for the design of the utility facility. The department shall review and approve the utility's plans with respect to location and the manner in which the utility facility is to be installed and measures to be taken to preserve safe and free flow of traffic, structural integrity of the roadway or highway structure, ease of highway maintenance, appearance of the highway and the integrity of the utility facility.

(2) Utility installations on, over or under the rights of way and utility attachments to highway structures shall as a minimum comply with the following standards and/or amendments thereto:

(a) Electric power and communication facilities shall conform with the currently applicable National Electric Safety Code and/or Washington State Safety Code.

(b) Water lines shall conform with the current Standard Specifications for Road, Bridge, and Municipal Construction including but not limited to:

Welded Steel Water Pipe	AWWAC201 & ASTM A 120 AWWAC203
Reinforced Concrete Water Pipe	AWWAC205 AWWAC300 AWWAC301 AWWAC302
Cast Iron Water Pipe	AWWAC106 AWWAC108 AWWAC111
Wrought Iron Water Pipe	ASTMA72

(c) Pressure pipeline shall conform with the currently applicable sections of Standard Code for Pressure Piping of the American National Standards Institute and applicable industry codes, including:

- (i) Power Piping, ANSI B 31.10
- (ii) Petroleum Refinery Piping, ANSI B 31.3
- (iii) Liquid Petroleum Transportation Piping Systems, ANSI B 31.4
- (iv) CFR 49, Part 192, Transportation of Natural and Other Gas by Pipeline - Minimum Federal Safety Standards
- (v) Liquid petroleum pipelines shall conform with the currently applicable recommended practice of the American Petroleum Institute for Pipeline Crossings Under Railroad and Highways. (API RP 1102)

(d) Sewer pipe shall conform with the current Standard Specifications for Road, Bridge, and Municipal Construction.

(e) Drainage pipe shall conform with the current Standard Specifications for Road, Bridge, and Municipal Construction.

(3) Ground mounted utility facilities shall be of a design compatible with the visual quality of the specific highway section being traversed.

(4) All utility installations on, over, or under highway right of way and attachment to highway structures shall be of durable material

designed for long service life expectancy and relatively free from routine servicing and maintenance.

(5) On new installations or adjustment of existing utility lines, provision shall be made for known or planned expansion of the utility facilities, particularly those located underground or attached to structures. They shall be planned so as to minimize hazards and interference with highway traffic when additional overhead or underground lines are installed at some future date.

(6) Government or industry codes required by law or regulation shall be followed in addition to rules and regulations referred to herein. This shall include any highway design standards which the department shall deem necessary to provide adequate protection to the highway, its safe operation, appearance and maintenance.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-150, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-150, filed 12/20/78. Formerly WAC 252-04-115.]

**WAC 468-34-160 Permits and franchises.**

Except as provided in WAC 468-34-180, a permit or franchise shall be required for occupancy of highway right of way by utility facilities, including private lines.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-160, filed 12/20/78. Formerly WAC 252-04-125.]

**WAC 468-34-170 Permits and franchises -- Contents.**

All permits or franchises shall:

- (1) Incorporate all pertinent provisions of this policy as to location, construction, traffic protection, maintenance, access restriction, preservation of visual qualities, and such special conditions as the department may deem appropriate.

- (2) Generally describe the facilities to be installed as to size, type, nature and extent.
- (3) Contain adequate exhibits depicting:
- (a) Existing or proposed location in relation to the highway.
  - (b) Existing or planned highway improvements.
  - (c) Right of way.
  - (d) Control of access and access points.
- (4) Contain a summarization of the effects the installation will have on the aesthetics of the highway right of way and visible natural features.
- (5) Specify the extent of liability and responsibilities associated with future adjustment of the utility facilities to accommodate highway improvements.
- (6) Specify the effect of noncompliance with the conditions thereof.
- (7) Contain terms which shall commit the holder to a pledge that performance of routine cutting and trimming work will be accomplished in such a manner that the roadside appearance will not be disfigured. When major work is involved, or damage to roadside appearance may become significant, the holder shall secure the approval of the department in advance of the work.
- (8) Contain a certification of compliance with the control zone guidelines.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-170, filed 10/10/95, effective 11/10/95; 89-05-022 (Order 119), § 468-34-170, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-170, filed 12/20/78. Formerly WAC 252-04-135.]

**WAC 468-34-180 Accommodation where prior right.**

Where the utility facilities are to be adjusted to accommodate highway construction and the utility has a prior property right in its location, the department and the utility may enter into a common use agreement providing for joint

occupancy of right of way consistent with the requirements of each party.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-180, filed 12/20/78. Formerly WAC 252-04-145.]

**WAC 468-34-190 Pipelines -- Location and alignment.**

(1) For all crossings, the angle of crossing should be based on economic considerations of practical alternates. The crossings should be as near normal to the highway centerlines as practical.

(2) Pipeline crossings should avoid deep cuts, footings of bridges and retaining walls, wet or rocky terrain or locations where highway drainage would be affected.

(3) Longitudinal installations shall parallel the highway and lie as near as practicable to the highway right of way line. Any longitudinal installation in the roadway or median, as defined in WAC 468-34-110 (7) and (8), shall be considered a variance from this policy. Any request for such a variance must demonstrate that:

(a) The installation will not adversely affect the design, construction, stability, structural integrity, traffic safety or operation of the highway.

(b) The installation, other than in the roadway or median, will create an undue hardship or financial burden by reason of terrain, geology, or environmental damage along the roadside.

(4) Trenched crossing in the roadway as defined in WAC 468-34-110(7) shall be considered a variance from this policy. Any request for such a variance shall comply with subsection (3)(a) and (b) of this section.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-190, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-190, filed 12/20/78. Formerly WAC 252-04-155.]



**WAC 468-34-200 Pipelines -- Cover.**

(1) The grade of the top of pipe within the highway right of way shall comply with the applicable Design Standard for Underground Utility Encroachment.

(2) Where less than minimum cover is made necessary to avoid obstacles, the pipe should either be rerouted or protected with a casing or concrete slab acceptable to the department.

(3) Cover for pipelines carrying transmittants which are flammable, corrosive, expansive, energized, or unstable shall not be reduced below safety limits as specified in the appropriate industry standards and specifications.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-200, filed 12/20/78. Formerly WAC 252-04-165.]

**WAC 468-34-210 Pipelines -- Encasement.**

(1) Casings shall not be required for the following conditions:

(a) Pipelines conveying natural or other gas which meet the design, installation and cathodic protection provisions of the Minimum federal Safety Standards, 49 CFR part 192 and chapter 480-93WAC Gas companies – Safety.

(b) Local service lines and connections conveying natural or other gas which meet the design, installation and cathodic protection provisions of the Minimum Federal Safety Standards, 49 CFR part 192 and chapter 480-93 WAC Gas companies -- Safety.

(2) Casings shall be required for the following conditions:

(a) Pipeline crossings where casing is required by appropriate industry practice or special conditions.

(b) Pressurized carrier pipes and carriers of transmittants other than natural gas which are flammable, corrosive, expansive, energized, or unstable.

(c) Pipeline installations where local features, embankment materials, construction methods or other conditions indicate probability of damage to the pipeline that will render it unusable.

(3) Casings may be required as protection for carrier pipe from external loads or shock during existing highway improvement projects or new highway construction.

(4) Casing pipes shall extend a minimum of six feet beyond the toe of fill slopes, or back of ditch line, or outside curb unless limited by restrictive local conditions. The casing pipe need not be continuous on freeways with or without frontage roads; however, maintenance in the median shall not be required on a routine basis.

(5) Casing pipes shall be sealed at the ends.

(6) Casing pipes shall be designed to support the load of the highway and superimposed loads thereon and, as a minimum, shall equal the structural requirements for highway drainage facilities. Casings shall be composed of materials of sufficient durability to withstand any conditions to which they may be exposed.

[Statutory Authority: Chapter 47.44 RCW. 07-16-082, § 468-34-210, filed 7/30/07, effective 8/30/07; 89-05-022 (Order 119), § 468-34-210, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-210, filed 12/20/78. Formerly WAC 252-04-175.]

**WAC 468-34-220 Pipelines -- Appurtenances.**

(1) Vents shall be required for casings, tunnels and galleries enclosing carriers of fuel where required by CFR 49, Part 192, Minimum Federal Safety Standards. Vent standpipes shall be located and constructed so as not to interfere with maintenance of the highway nor to be concealed by vegetation; preferably they should stand by a fence or on the right of way line.

(2) Drains shall be required for casings, tunnels, or galleries enclosing carriers of liquid, liquefied gas or heavy gas. Drains may outfall into the roadway ditch or natural water course at locations approved by the department. The outfall shall not be used as a wasteway for purging the carrier unless specifically authorized by the department.

(3) Marker location and emergency information shall be conspicuously marked for all pipelines, using color if necessary to contrast with the environment. They should be provided at one end of a normal crossing, at both ends of an oblique crossing and at five hundred foot intervals along a longitudinal installation. Markers shall include pipeline identification and station; owner of the pipeline; and telephone number or other means of contact with local office. Markers may also include depth of cover, size, pressure and contents of carrier, and potential of ducted wires and cables.

(4) Manholes shall not be located in the pavement or shoulders of any access controlled highway. Manholes should be designed and located in such a manner that will cause the least interference to other utilities and future highway expansion.

(5) Automatic shut-off valves shall be installed in line at or near ends of structures, near unusual hazards, unless the hazardous segments can be isolated by other sectionalizing devices within a reasonable distance.

(6) Above-ground appurtenances shall be located to comply with the control zone guidelines.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-220, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-220, filed 12/20/78. Formerly WAC 252-04-185.]

#### **WAC 468-34-230 Pipelines -- Uncased carriers.**

(1) The carrier pipe shall conform to the material and design requirements of the utility industry and government codes and specifications.

(2) The carrier pipe shall be designed to support the load of the highway plus superimposed loads thereon when the pipe is operated under all ranges of pressure from maximum internal to zero pressures.

(3) Suitable bridging, concrete slabs, or other appropriate measures as approved by the department shall be used to protect existing carrier pipes which by reason of shallow bury or location makes them vulnerable to damage from highway construction or maintenance operations.

(4) Existing carrier pipelines may remain in place without further protective measures if they are of adequate depth and do not conflict with highway construction or maintenance and provided the department (and the pipeline officials) agree that the lines are, and will remain, structurally sound and operationally safe.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-230, filed 12/20/78. Formerly WAC 252-04-195.]

#### **WAC 468-34-240 Pipelines -- Restrictions against varied use.**

(1) Pipeline installation requests shall specify the class of transmittant, the maximum working, test, or design pressures, and the design standards for the carrier.

(2) A change in the class of transmittant, or an increase in the maximum design pressure specified in the permit or franchise, shall require approval of the department. The request for the change shall specify the applicable codes to be used.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-240, filed 12/20/78. Formerly WAC 252-04-205.]

**WAC 468-34-250 Pipelines -- Installation.**

Installation or replacement of pipelines along or crossing highways shall ordinarily be controlled by end-product specifications. However, to insure safety of traffic and preservation of the earth structure supporting the pavement, any required construction shall be in accordance with the following controls:

- (1) Trenched construction and backfill. The essential features for trench and backfill construction are:
  - (a) Restoration of the structural integrity of entrenched roadbed.
  - (b) Security of the pipe against deformation likely to cause leakage.
  - (c) Assurance against the trench becoming a drainage channel or against drainage being blocked by the backfill.
- (2) Trenched construction - bedding and backfill.
  - (a) Trenches shall be cut to have vertical faces, where soil and depth conditions permit, with a maximum width of outside diameter of pipe plus two feet. Shoring shall comply with the department of labor and industries safety code for construction and/or as directed by the department.
  - (b) Bedding shall be provided to a depth of six inches or half the diameter of the pipe, whichever is least. Bedding should consist of granular material free of lumps, clods, stones, and frozen material. Bedding shall be graded to a firm but yielding surface without abrupt change in bearing value. Unstable soils and rock ledges should be subexcavated from the bedding zone and replaced with suitable material or as directed by the department. The bottom of the trench should be prepared to provide the pipe with uniform bedding throughout the length of the installation.
  - (c) Backfill shall be placed in two stages:
    - (i) Sidefill to the level of top of pipe.
    - (ii) Overfill to former grade surface. Sidefill and overfill shall consist of granular material laid in six-inch layers, each consolidated by mechanical tamping and controlled addition

of moisture, to a density of ninety-five percent in accordance with the current Standard Specifications for Road, Bridge, and Municipal Construction. Consolidation by saturation or ponding is not permitted. Backfilling and methods of compaction should be adapted to achieve prompt restoration of traffic. Additional cutback of base and surfacing and transitioning of trench shoulders to minimize later development of sag in the grade of the pavement over the trench shall be as directed by the department.

(3) Untrenched construction shall be required on all pipeline crossings of limited access highways and:

- (a) The width of untrenched construction shall extend a minimum of six feet outside the roadway prism.
- (b) Pipelines installed under a highway without disturbing the surface shall be made using a technique approved by the department.
- (c) The size of the opening shall not exceed five percent oversize in diameter. Backfill is required for pipes over twelve inches in diameter.
- (d) Overbreaks, unused holes, or abandoned casings shall be backfilled as directed by the department.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-250, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-250, filed 12/20/78. Formerly WAC 252-04-215.]

**WAC 468-34-260 Pipelines -- Adjustment.**

- (1) An existing pipeline should be relocated in plan and/or grade whenever the top of the pipe is less than the requirements of the currently applicable standard design plate for underground utility encroachments.
- (2) An existing or relocated pipeline shall be encased or otherwise protected wherever such treatment normally would be required for a future pipeline at the site.

(3) An existing pipeline which would lack adequate cover for protection against vehicular live loads or highway construction operations may, in lieu of encasement, be protected by a floating slab.

(4) Notwithstanding reinforcement or protection otherwise provided, the highway construction contractor should be warned and made responsible for the security of each existing pipeline within the construction zone. Where there are unusual utility hazards and where heavy construction equipment will be needed, it should be arranged that the contractor provide an adequate temporary protective cover of earth or bridge the utility if underground.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-260, filed 12/20/78. Formerly WAC 252-04-225.]

**WAC 468-34-270 Installations on highway structures.**

Attachment of utility lines to a highway structure may be allowed where such attachment shall conform to sound engineering considerations for preserving the highway, its safe operation, maintenance and appearance. The attachment shall be in accordance with the following:

(1) Each proposed bridge attachment should be considered on its individual merits and separately designed so as to be compatible with the appearance of the structure.

(2) Bridge attachment of a utility should not be considered unless the structure in question is of a design that is adequate to support the additional load and to accommodate the utility facility without compromise of highway features, including reasonable ease of bridge maintenance.

(3) Utility positionings on a structure which would inhibit access to any structure part for bridge painting, repair or maintenance should not be allowed. Manholes for utility access shall not be allowed in the bridge deck on overcrossings.

(4) Attachment on a structure of a pipeline carrying a hazardous transmittant shall be avoided where practical.

(5) The utility attachment shall not effectively reduce the clearance of the structure where such clearance is critical.

(6) Generally, utility attachments should be beneath the structure's floor, between the girders or beams or within a cell and at an elevation above low superstructure steel or masonry. Attachment to the outside of the bridges should be avoided where there are reasonable alternatives.

(7) Utility mountings should be of a type which will not create noise resulting from vibration.

(8) The hole created in the bridge abutment shall be of the minimum size necessary to accommodate the utility line. The hole shall be sealed to prevent any leakage of water or backfill material.

(9) The utility line back of the bridge abutment should curve or angle out to align outside the roadbed area in as short a distance as is operationally practicable.

(10) Acceptable utility attachment methods are hangers and/or roller assemblies suspended from inserts in the underside of the bridge floor or from hanger rods clamped to the flange of some substructure member or as otherwise specified by the department.

(11) Utility construction shall conform to applicable codes, standards and specifications.

(12) The utility company shall be responsible for any restoration or repair of any portion of bridge or highway disturbed by the utility installation or use.

(13) Communication and electric power line attachments shall be suitably insulated, grounded, and carried in protective conduit or pipe from point of exit from ground to reentry. The cable shall be carried to a manhole located beyond the backwall of the structure. Carrier pipe and casing pipe shall be suitably insulated from electric power line attachments.

(14) WAC 468-34-210 shall apply to installations on structures.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-270, filed 12/20/78. Formerly WAC 252-04-235.]

**WAC 468-34-280 Overhead power and communication lines -- Type of construction.**

Longitudinal installations on the right of way should be single pole construction. Joint use single pole construction is generally desirable and should be used whenever feasible.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-280, filed 12/20/78. Formerly WAC 252-04-245.]

**WAC 468-34-290 Vertical clearance.**

The vertical clearance for overhead power and communication lines above the highway and the lateral and vertical clearance from bridges shall conform with the National Electrical Safety Code and/or with the clearances as shown below, whichever is greater.

TYPE OF UTILITY LINE	LINES CROSSING ROADWAYS	LONGI-TUDINAL
Communications and Cable Television	24'	20'
Communications and/or Cable Television joint usage with electrical	20'	20'
ELECTRICAL		
0 - 750 volts	24'	24'
751 - 15,000 volts	30'	27'
15,001 - 50,000 volts	32'	32'
50,001 volts & over	34'	32'

(1) The minimum height of highway crossing shall be measured from the point of the roadway directly under the crossing.

(2) The minimum height of longitudinal lines shall be measured from ground line.

(3) All clearances shall be at State Electrical Construction Code temperature and loading standards, and comply with all other requirements of this code.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-290, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-290, filed 12/20/78. Formerly WAC 252-04-255.]

**WAC 468-34-300 Overhead lines -- Location.**

(1) Pole lines must be located in accordance with the control zone guidelines.

(2) Guy wires to ground anchors and stub poles shall be located in accordance with the control zone guidelines.

(3) Where irregular shaped portions of the right of way extend beyond the normal right of way limits, variances in the location from the right of way line should be allowed as necessary to maintain a reasonably uniform alignment for longitudinal overhead and underground installations.

(4) On and along conventional highways, poles and related facilities should be located as near as practicable to the right of way line.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-300, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-300, filed 12/20/78. Formerly WAC 252-04-265.]

**WAC 468-34-310 Underground power and communication lines.**

(1) The general controls relative to pipelines shall apply to underground installation of power and communication lines.

(2) The general controls set forth in WAC 468-34-270 relative to installations on highway structures shall be followed.

(3) The design of underground installations should reflect consideration of possible future highway and/or utility enlargement.

(4) Manholes shall be designed and located in such a manner that will cause the least interference to other utilities and future highway expansion.

(5) New underground utility installations may be permitted in scenic strips, overlooks, where they will not require extensive removal or alteration of trees visible to the highway user or impair the visual quality of the lands being traversed.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-310, filed 12/20/78. Formerly WAC 252-04-275.]

**WAC 468-34-320 Conversion to underground or relocation of overhead lines -- Responsibility.**

Consistent with existing statutes and the necessity for protecting roadside appearance and removal or relocation of existing aerial lines within certain areas, the following methods of sharing cost responsibility shall pertain under various circumstances.

(1) Where an aerial utility line exists under franchise and for reasons of visual quality the department desires undergrounding or aerial relocation during the life of the franchise to serve the highway purpose, the department will pay the cost of the new facility, plus cost of removal of the old plant, less a credit for depreciation and salvage on the replaced plant.

(2) For new franchises for new utility lines where none presently exist and where the department determines on the basis of scenic classification (WAC 468-34-330) that the facilities shall be placed underground, the entire cost shall be borne by the utility.

Where a franchise is to be amended or has been renewed for the first time after the effective date (August 20, 1974) of this policy revision and the department determines on the basis of scenic classification (WAC 468-34-330) that the facility should be placed underground or relocated aerially, the cost for such undergrounding or relocation shall be borne by the utility. Such undergrounding or relocation shall occur at the time of reconstruction of the line by the utility or at a time determined by the utility within the renewal period, whichever occurs first.

(3) Within the limits of projects for highway construction where the utility occupies the right of way by right of franchise and where the department determines on the basis of scenic classification (WAC 468-34-330) that the facility should be placed underground or, based on design and/or location considerations the facility may be relocated aerially, the cost responsibilities shall be determined as follows:

(a) The utility shall be responsible for the full cost of that portion of the existing aerial facility that must be relocated within the physical limits of construction.

(b) The department will pay the cost of the new facility, plus the cost of removal of the old plant less a credit for depreciation and salvage on the replaced plant, for that portion of aerial line not physically affected by the highway construction.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-320, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-320, filed 12/20/78. Formerly WAC 252-04-280.]

**WAC 468-34-330 Scenic enhancement.**

(1) Undergrounding requirements within scenic areas: In the interest of protection and preservation of roadside appearance and visual quality of scenic areas, the following requirements shall pertain to highway sections classified in accordance with the definitions set forth in subsection (3) of this section.

Class A and B:

Initial franchises and franchise amendments where aerial facilities are nonexistent: Installation shall be underground except as may be justified as special exceptions listed in subsection (2) of this section.

Initial franchises and franchise amendments where aerial facilities exist: An aerial facility may be allowed on existing poles with the franchise to expire on the date of the existing franchise for the aerial line. No major reconstruction of the existing pole line

or construction of a new aerial facility will be allowed except as may be justified under subsection (2) of this section.

Franchise renewals of existing aerial facilities: Upon expiration of an existing franchise, one franchise renewal for a period of twenty-five years may be granted for existing aerial lines with a special provision included in the franchise requiring the utility to apply for an initial franchise, franchise amendment or franchise renewal for burial of the facility either at the time major reconstruction of the line, for that portion of line to be reconstructed, or prior to expiration of the first franchise renewal. Existing facilities may be allowed to remain aerial if justified under subsection (2) of this section.

In considering approval of aerial facilities as special exceptions under subsection (2) of this section, greater emphasis upon the justification of facilities within Class A route segments shall be given by the department as compared to those in Class B.

Class C and D:

Aerial installations within highway sections having Class C and D scenic classification are permitted.

Class AX and BX:

An aerial facility may be allowed if found acceptable to the department based on design and/or location which will not detract from scenic values typical of those defined in Classes A and B.

(2) Special exceptions: Special exceptions may be made where one or more of the following conditions exist:

Power lines of voltage in excess of 35 KV. Special design should be incorporated to minimize the visual impact of the facility.

Other utility locations are not available or are usually difficult and unreasonably costly, or are more undesirable from the standpoint of visual quality.

The placing of the utility underground is not technically feasible or is unreasonably costly.

The impact of the required undergrounding adversely affects the utility consumer rates or the long term economics of the utility.

(3) Classifications:

Class A -- Superior scenic qualities: Unique settings of superior scenic quality, historic or cultural, interest that should be protected or preserved by special treatment for heritage of others. Panoramic views from the highway of ocean beaches, scenic valleys, lake frontage, mountain forests, rivers, etc.

Class B -- High scenic value: Areas where valuable scenic and environmental amenities exist and are enjoyed generally by travelers and public and deserve serious consideration for preservation and protective measures.

Class C -- Secondary scenic importance: Scenic characteristics are of marginal importance.

Class D -- Industrial, heavily urbanized or deteriorated areas: Industrial areas, urban settings and blighted areas which expense for beautification measures is not appropriate.

Subclass X -- Alternative for Class A and B: Areas where based on design alternatives, such as configurations, color and location, an aerial facility could be allowed without changing the landscape quality.

General criteria: Classifications are to be based on the scenic values of the view from the roadway including the roadway appearance attainable after ultimate improvements within the right of way. Sections are to be of sufficient length to sustain separate distinguishable area characteristics.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-330, filed 12/20/78. Formerly WAC 252-04-285.]

**WAC 468-34-340 Miscellaneous.**

(1) Preservation, restoration and cleanup

(a) Disturbed areas - The size of the disturbed area shall be kept to a minimum. Restoration methods shall be in accordance with the specifications and/or special provisions of the permit or franchise. Unsatisfactory restoration work shall be promptly redone by the utility. If necessary, restoration work that is not acceptable to the department, may be repaired by the department and billed to the utility company.

(b) Drainage - Care shall be taken in utility installations to avoid disturbing existing drainage facilities. Underground utility facilities should be backfilled with pervious material and outlets provided for entrapped water. Underdrains should be provided where necessary. No jetting or puddling shall be permitted under the roadway.

(c) Spraying, cutting and trimming of trees - The indiscriminate cutting of trees or disfiguring of any feature of scenic value shall not be permitted. The utility shall repair or replace in kind any tree or shrub removed or disfigured when such is not necessary for the utility installation.

(d) If chemical sprays are used to kill weeds and brush, they shall comply with currently applicable federal and state department of agriculture regulations and the following:

(i) A special permit issued by the department shall be required.

(ii) Brush and trees thirty inches or higher shall be close cut and treated with spray to kill the roots and stumps.

(iii) Brush shall be disposed of by chipping or removal from the right of way.

(iv) Brush and weeds thirty inches or less in height may be treated with a chemical spray. After the brush and weeds have died, they shall be immediately removed to prevent a serious fire hazard.

(v) The utility shall be responsible for any drift of the spray that contacts vegetation on private property adjacent to the highway.

(vi) Ingredients that are toxic to livestock, game animals or fowls shall not be used.

(e) Refuse and debris shall be disposed of to the satisfaction of the department.

(2) Safety and convenience

(a) Traffic controls including detours for utility construction and maintenance shall conform with currently applicable "Manual on Uniform Traffic Control Devices for Streets and Highways." All construction and maintenance operations shall be planned to keep interference with traffic to an absolute minimum. On heavily traveled highways construction operations interfering with traffic shall not be allowed during periods of peak traffic flow. Work shall be planned so that closure of intersecting streets, road approaches or other access points is held to a minimum. Adequate provisions shall be made to safeguard any open excavation to include barricades, lights, flagmen, or other protective devices as may be necessary.

(b) All utility facilities shall be kept in good state of repair both structurally and from the standpoint of appearance. The permit or franchise shall specify the maintenance operations which are permitted and the required notification to the department before any work is accomplished. Vehicle parking and the storage of materials on through roadways or ramps shall not be allowed.

(c) If emergency repairs are required, such repairs shall be undertaken and notice given immediately and approval as to the manner of repair secured as soon as possible. The utility shall confine its operations as much as possible to the nontraveled portion of the right of way and shall exercise caution to protect the traveling public during such repairs. Flagmen, warning lights, barricades, and signs shall be employed in accordance with currently applicable Manual on Uniform Traffic Control Devices for Streets and Highways, and Manual for Emergency Traffic Control for Protection of Men and Equipment.



(d) Installations included in the Category 4 exemption require twenty-four hours notice to the department prior to construction. Vehicle parking and the storage of materials on through roadways or ramps shall not be permitted. Flagmen, warning lights, barricades, and signs shall be employed in accordance with currently applicable Manual on Uniform Traffic Control Devices for Streets and Highways, and Manual for Emergency Traffic Control for Protection of Men and Equipment.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-340, filed 10/10/95, effective 11/10/95; 89-05-022 (Order 119), § 468-34-340, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-340, filed 12/20/78. Formerly WAC 252-04-295.]

**WAC 468-34-350 Control zone guidelines.**

Consistent with federal, state, or local laws or regulations all utility installations within the highway right of way shall be located in accordance with the control zone guidelines. The control zone guidelines govern the location of utilities within the right of way for the following:

- (1) New installations or reconstruction.
- (2) Highway projects involving safety improvements.
- (3) Franchise renewal or consolidation of existing utility objects.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-350, filed 2/10/89.]

