1-07 REFERENCES

A. Specific

In the event these Standards and other applicable rules adopted by Snohomish County do not provide necessary design information, the following publications of the Washington State Department of Transportation (WSDOT) may be referenced with said reference(s) applying to the publications as adopted and amended:

1. Standard Plans for Road, Bridge and Municipal Construction ("Standard Plans")
2. Standard Specifications for Road, Bridge and Municipal Construction ("Standard Specifications")
3. Bridge Design Manual
4. Construction Manual
5. Design Manual
6. Hydraulics Manual
7. Highway Runoff Manual
8. Roadside Manual
9. Traffic Manual
10. Utilities Manual
11. Criteria for Sewage Works Design (Orange Book, WA DOE)
12. Water System Design Manual (WA DOH)
~~12.~~13. AASHTO Guide for Design of Pavement Structures

3-01 ROAD CIRCULATION

See Standard Drawings 3-040, 3-050, 3-066, 3-150

B. Layout and Design

The following criteria for circulation shall be used in the layout and design of the county road network:

3. The road network shall be designed so that the maximum separation between public roads is approximately ~~800~~ 330 to 660 feet in urban areas or approximately ~~1320~~ 2,640 to 5,280 feet in rural areas. With the Engineer's approval, exceptions to the approximate road separation requirements may be granted when meeting them would be infeasible or impractical due to topography, critical areas, the surrounding road network, soils, hydrology, or other constraints. ~~—~~ The public roads defining a block shall comply with the minimum centerline offset standards of EDDS Section 3-09. Access points within a block shall comply with the separation and corner clearance requirements of EDDS Sections 2-04 and 2-05.

3-05 PRIVATE ROAD NETWORK ELEMENTS

See Standard Drawings 3-060, 3-065, 3-066, 3-067, 3-068, 3-080, 3-100, 3-102

B. Private Roads

A private road is a road network element that is privately owned and maintained, located in a tract or easement and designed for access to three or more lots. Private roads do not include "drive aisles." The design standards for private roads, whether urban or rural, are the same as for public roads with corresponding traffic volumes~~, with only one exception~~ except ~~being the~~ that ~~"~~private rural ~~low volume access~~ roads ~~(rural)"~~ serving 90 ADT or less shall be designed according ~~(refer~~ to Standard Drawing 3-080~~)~~.

Private road specifications are provided in Standard Drawings 3-060, 3-065 and 3-080. Rural private road intersections shall comply with Standard Drawing 3-100.

A roadway surfacing design prepared by a licensed geotechnical engineer according to the AASHTO Guide for the Design of Pavement Structures can be proposed for the Engineer's approval in place of the public road surfacing requirements in EDDS 4-09. A private road that could be converted to a public road shall be designed according to the public road surfacing standards in EDDS 4-09.

8-05 UNDERGROUND UTILITY INSTALLATION

See Standard Drawings 8-030, 8-040

C. Restoration Requirements

1. Trenches and Multiple Window Cuts. The restoration of trenches and multiple window cuts shall be as follows, provided that single window cuts made by more than one Utility Purveyor that are associated with a private development project will be considered multiple window cuts for restoration purposes:

   i. All trench backfill shall be per WSDOT/APWA Specification 7-08.3(3) and these Standards, using bank run gravel or CSTC conforming to Specifications 9-03.19 or 9-03.9(3), respectively. Backfill shall be placed to the bottom edge of the existing asphalt or within 6-inches of existing road grade, whichever is greater, in successive layers not exceeding 6 inches in loose thickness. Each layer shall be compacted with mechanical tampers to 95 percent of maximum density as determined in ASTM D1557. Verification of backfill compaction shall be required and shall bear the stamp and signature of a professional engineer licensed in the State of Washington. The verification of backfill compaction test shall be submitted to the County prior to the placement of the overlay required by EDDS Section 8-05.C.1.iii below.

   ii. After placing a tack coat on the existing asphalt edges, the final patch shall be constructed with 6-inches of compacted HMA placed in the trench cut up to finished grade per WSDOT Standard Specifications Division 5-04.

   iii. After the backfill compaction has been verified and placement of the compacted HMA final patch, a~~n~~ full-width overlay consisting of 2-inches of compacted HMA shall be placed per WSDOT Standard Specifications Section 5-04. ~~over the full width of the road and extended 10 feet longitudinally from the outer most ends of either the first and last window cut or lateral trench, for multiple window cuts or lateral trenches, or a single lateral or longitudinal trench.~~ In preparation for overlaying an existing asphalt road, the ends of the overlay project and any areas where matching existing curb or pavement will be necessary shall be planed in accordance with Standard Drawing 4-165. Should the final patch not be of satisfactory surface texture and grade, an asphalt pre-level shall immediately be done to ensure a smooth driving surface during the period before the final asphalt overlay.

   iv. Full-Width Overlay Limits for A Single Lateral Trench

   The full-width overlay limits for a single lateral trench extend laterally from the curb line or edge of pavement to curb line or edge of pavement and longitudinally from 10 feet before the first pavement cut line of the trench to 10 feet beyond the last pavement cut line of the trench as illustrated in Figure 8 - 1.

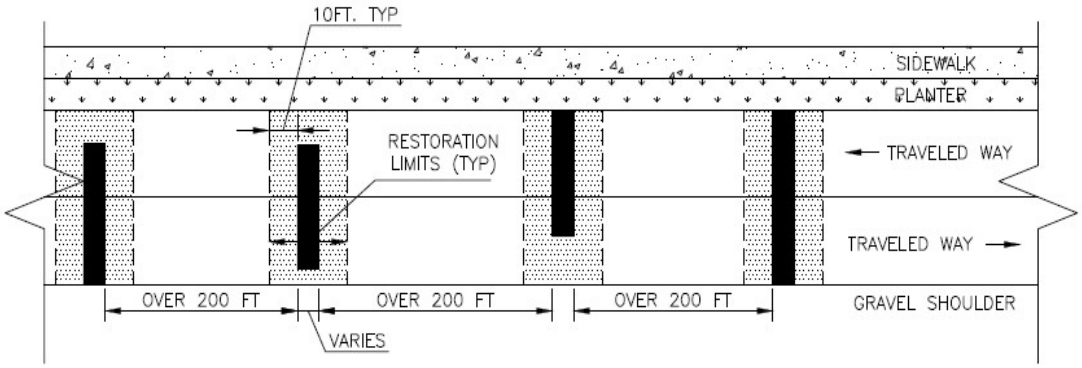


Figure 8 - 1 Full-Width Overlay Limits for A Single Lateral Trench

v. Full Width Overlay Limits for Trenches and/or Multiple Window Cuts

The full-width overlay limits for trenches and/or multiple window cuts that are less than 200 feet apart extend laterally from curb line or edge of pavement to curb line or edge of pavement and longitudinally along the roadway from 10 feet before the first pavement cut line to 10 feet beyond the last pavement cut line as illustrated in Figure 8 - 2 and Figure 8 - 3.

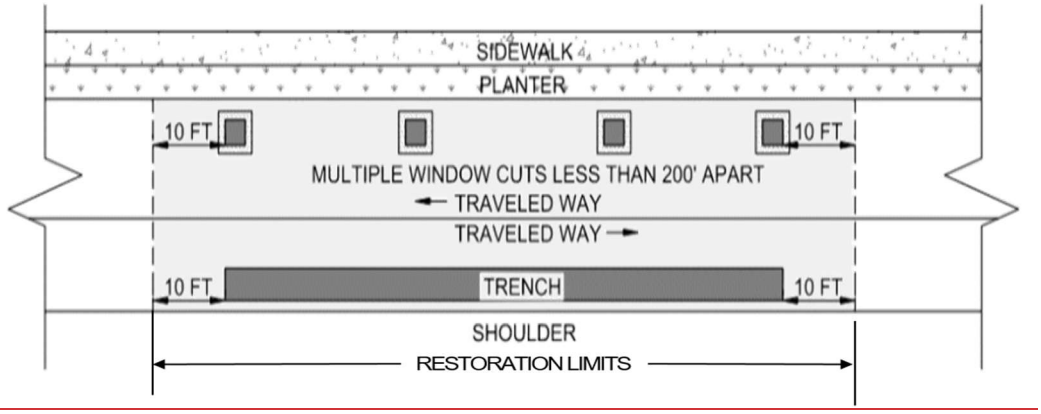


Figure 8 - 2 Full-Width Overlay Limits for Longitudinal Trenches and/or Multiple Window Cuts

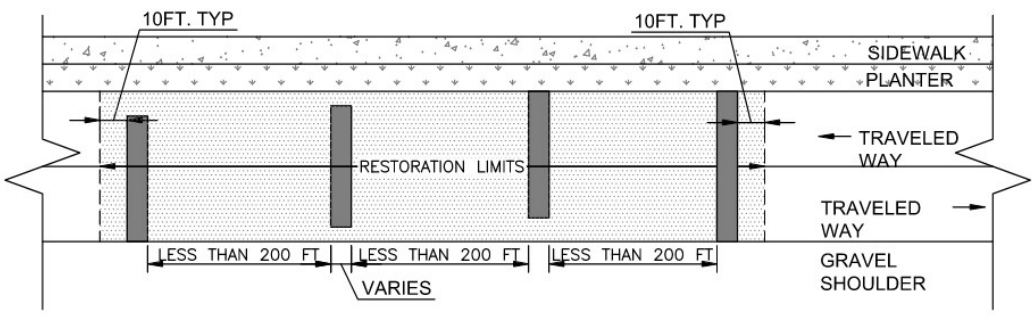
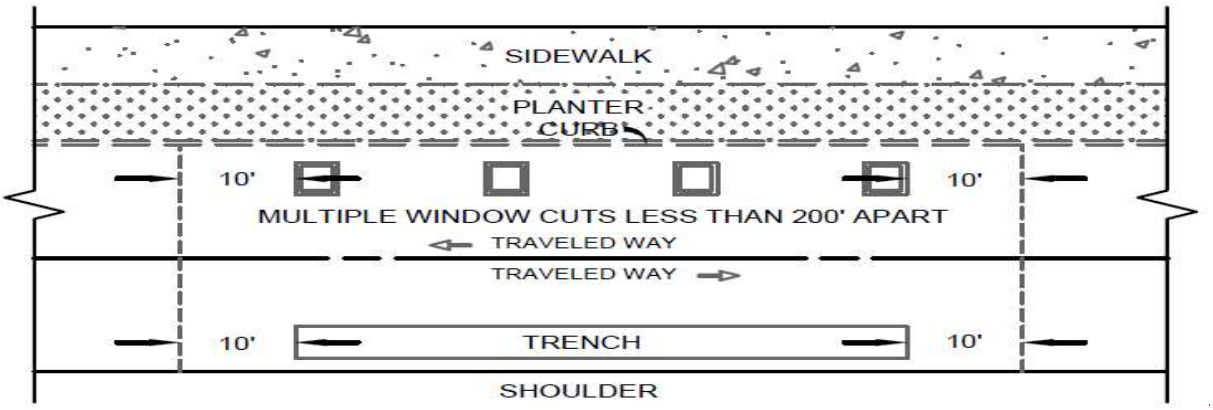


Figure 8 - 3 Full-Width Overlay Limits for Multiple Lateral Trenches

vi. Single Window Cuts by More Than One Utility Purveyor

Single window cuts made by more than one utility purveyor that are associated with a private development project will be considered multiple window cuts for restoration purposes.

RESTORATION (OVERLAY) LIMITS FOR MULTIPLE WINDOW CUTS OR TRENCH



viii. Half-Width Overlays

a. Applicability

A full-width overlay shall be reduced to a half-width overlay without the need for an EDDS deviation in each of the following circumstances, provided that no pavement cut line is within 3 feet of the crown of the road:

- A longitudinal trench entirely on one side of the road crown;
- A single lateral trench, or multiple lateral trenches less than 200 feet apart, made by the same utility entirely on one side of the road crown;
- Multiple window cuts less than 200 feet apart made by the same utility entirely on one side of the road crown; or

- A combination of longitudinal trenches, lateral trenches, and/or window cuts made by the same utility entirely on one side of the road crown.

b. Approximating the Crown of the Road

Since the crown of the road is not typically shown on project plans, the pavement centerline will be used to approximate the road crown. If a road is super-elevated, then the pavement centerline shall be used as a substitute for the crown of the road.

c. Half-Width Overlay Limits

The half-width overlay limits extend laterally from the curb line or outside edge of pavement to the crown of the road and longitudinally along the roadway from 10 feet before the first pavement cut line to 10 feet beyond the last pavement cut line.

d. Cuts Within 3 Feet of the Crown of the Road

If a trench comes within 3 feet of the crown of the road, a full-width overlay is required from 10 feet before the first point at which the trench comes within 3 feet of the crown of the road to 10 feet beyond the last point at which the trench comes within 3 feet of the crown of the road as illustrated in the examples in Figure 8 - 4. The remainder of the pavement may be restored as a half-width overlay provided that no other pavement cut comes within 3 feet of the crown of the road.

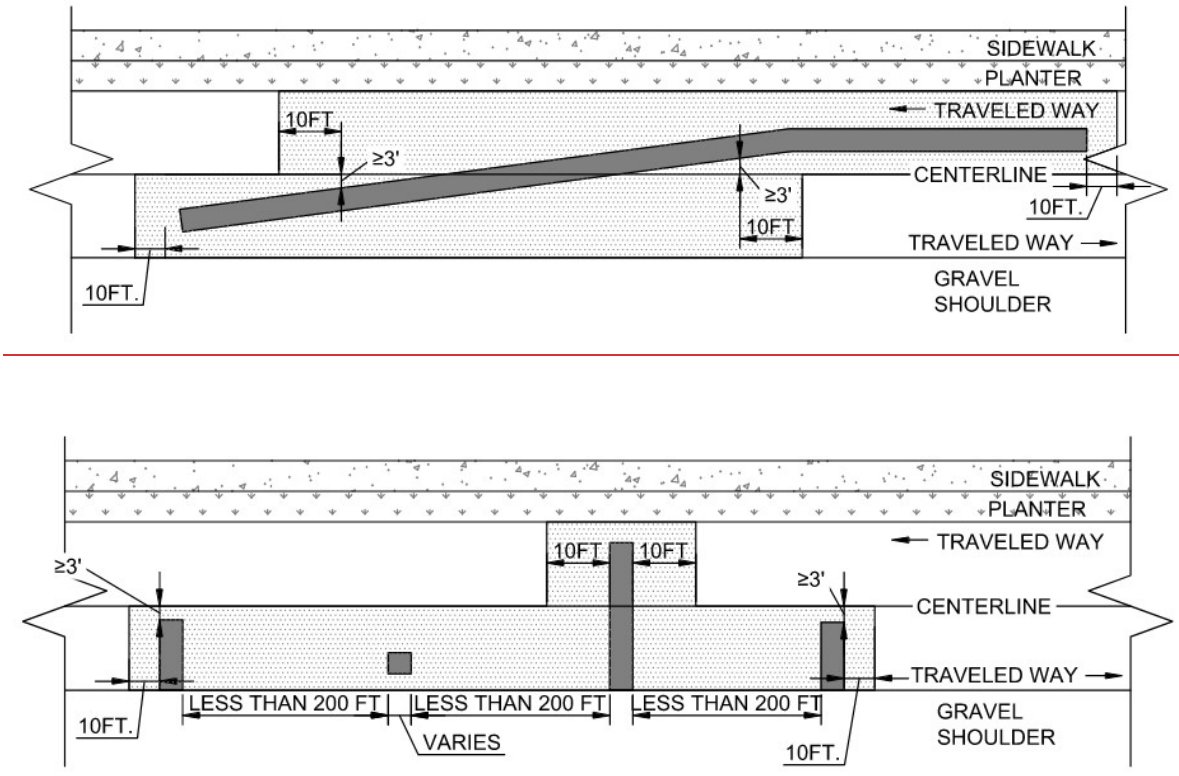


Figure 8 - 4 Overlay Limits for Trenches Within 3 Feet of the Crown of the Road

ix. Lane-Width Overlays

a. Applicability

A half-width overlay shall be reduced to a lane-width overlay on roads with four or more lanes, without approval of an EDDS deviation, in each of the following circumstances, provided that no pavement cut line is within 3 feet of the crown of the road:

- A longitudinal trench entirely within a single lane;
- A single lateral trench, or multiple lateral trenches less than 200 feet apart, made by the same utility entirely within a single lane;
- Multiple window cuts less than 200 feet apart made by the same utility within a single; or
- A combination of longitudinal trenches, lateral trenches, and/or window cuts by the same utility entirely within a single lane.

b. Lane-Width Overlay Limits

The lane-width overlay limits extend laterally across the full width of the lane that is cut and longitudinally along the roadway from 10 feet before the first pavement cut line to 10 feet beyond the last pavement cut line.

c. Bike Lane & Paved Shoulders

The bike lane or paved shoulder shall be added to the lane width overlay limits when the adjacent lane is cut and overlaid.

d. Crossing from One Lane to Another

If a trench crosses from one lane to another then the lateral extents of the overlay increase to include the full width of both lanes that are cut from 10 feet before the first point at which the trench crosses a lane line to 10 feet beyond the last point at which the trench crosses a lane line as illustrated in the examples in Figure 8 - 5.

e. Cuts Within 3 Feet of the Crown of the Road

If a trench comes within 3 feet of the crown of the road, an overlay extending laterally across the full width of the cut lane plus the full width of the adjacent lane on the other side of the road crown is required from 10 feet before the first point at which the trench comes within 3 feet of the crown of the road to 10 feet beyond the last point at which the trench comes within 3 feet of the crown of the road. The remainder of the pavement may be restored as a lane-width overlay provided that no other pavement cut comes within 3 feet of the crown of the road.

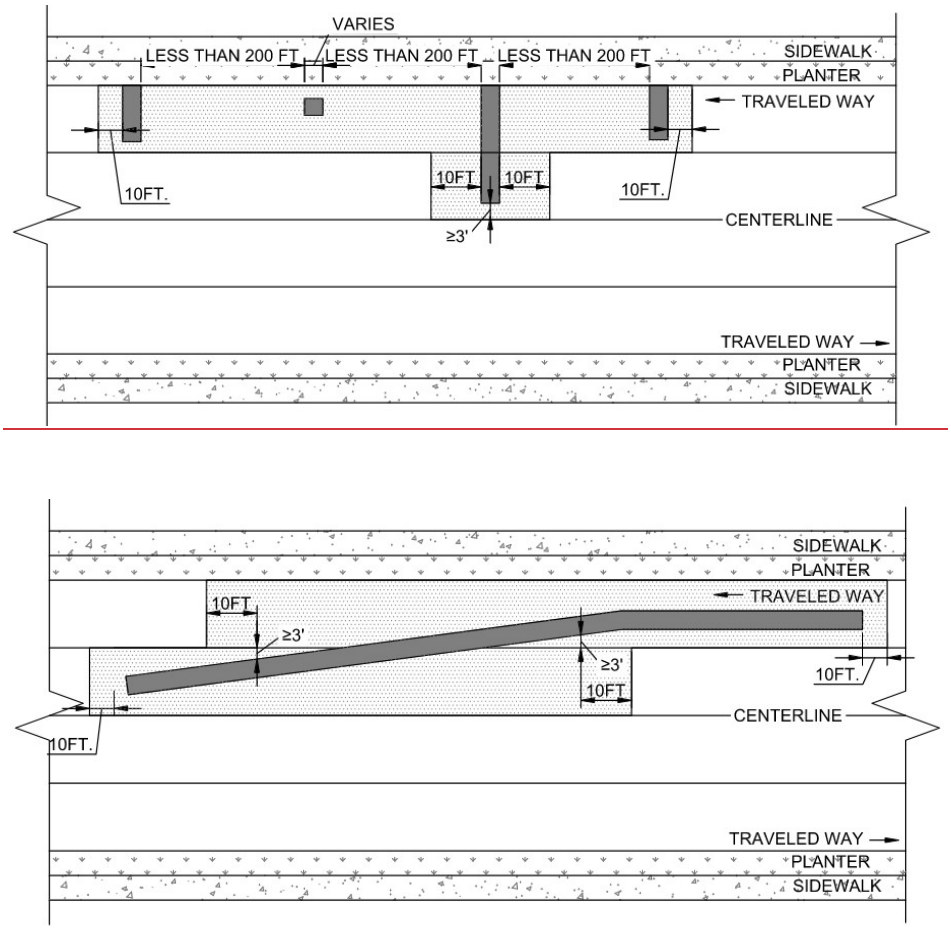


Figure 8 - 5 Overlay Limits for Pavement Cuts that Cross from One -Lane to Another