EDDS 2020 Changes

Changes Are Effective November 1, 2020

Adopted EDDS Revisions Related to Those Sections and Standard Drawings Identified In The Last Row of the SCHEDULE OF EDDS UPDATES Below

SCHEDULE OF EDDS UPDATES

(Updates From 10-1-2004)

EFFECTIVE DATE	EDDS SECTIONS	STANDARD DRAWINGS
10-1-2004	General revisions	
4-5-2009	Rural cluster subdivision revisions	
6-18-2009	Urban residential design standards	
9-18-2009	Bridge design standards	
9-30-2010	NPDES revisions	
1-1-2013	Chapter 30.24 SCC revisions	
1-22-2016	NPDES revisions	
12-1-2017	LID revisions	3-102, 11-040
8-6-2018	SCHEDULE OF EDDS UPDATES (new), 1-01, 1-03, 1-04, 1-05, 1-07, 1-17, 2-03, 3-01.C.3), 3-02, 3-05.C, 3-09.B, 3-10.A.6), 3-14.A &.B, Table 3-12, 4-01.D, 4-03.B, 4-05.A, 4-06.A & .B, 4-13.D.1), 4-15.A.1) & .2), 5-010.K, 8-03.A.2) & .3), 8-04.A.1) & .6), 8-05.A.2) & .4), .B.1) &.C, 8-08.A.2) & new .3), 11-02.F.4), TEXT INDEX (delete), APPENDIX A, (delete contents), APPENDIX B (relabel as A), APPENDIX C (delete), and APPENDIX D (relabel as B)	2-070, 3-010, 3-020, 3-030A, 3-040, 3-050, 3-065, 3-066, 3-102, 4-130 7-170, 8-010, 8-020, 8-030.
7-24-2019		3-050 (corrected formatting errors)
9-4-19		Deleted duplicate drawing 5-300B

11-01-2020	1-05.B, **1-17 Definitions:** **<u>Deleted</u>**: Auto Court **<u>Revised</u>**: Alley, Applicant, Arterial, Best Management Practices (drainage), Best Management Practices (critical areas), Bollard, Buffer, Compaction, Construction Plans, Conveyance System, Critical Areas, Design Speed, Design Storm, Detention, Detention Facility, Developer, Drainage, Drainage Facility, Drainage Manual, Drive Aisle, Driveway, Easement, Effective Impervious Surface, Fire Lane, Hard Surface, Hyporheic Zone, Impervious Surface, Land Disturbing Activity, Low Impact Development, New Development, Operating Speed, Posted Speed, Pervious Surface, Private Road, Project Site, Public Road, Redevelopment, Replaced Hard Surface, Retention, Retention Facility, Right-of-way (R/W), Road-Private, Road-Public, Road Network, Road Network Element, Rural Area, Shared Court, Shared Driveway, Stormwater Facility, Stream, Urban Area, Urban Growth Areas(UGAs), Utility, and Wetlands **<u>New</u>**: Frontage Improvements, Reconstruction, Trench-Lateral-Single, and Trench-Lateral-Multiple **<u>Other EDDS Sections</u>** 3-03.C, 3-06.A, .B, & C, 3-07.A, .B, & .C, 3-08.A, .B, .C, .D, & .G, 3-14.B, 4-05.B, 4-014.A, 4-15.A, 8-05.C,	**Revised** 2-050, 3-105, 3-060, 3-065, 3-110, 3-120, and 3-130 **New** 3-106 and 3-107

1-05 DEVIATION FROM STANDARDS

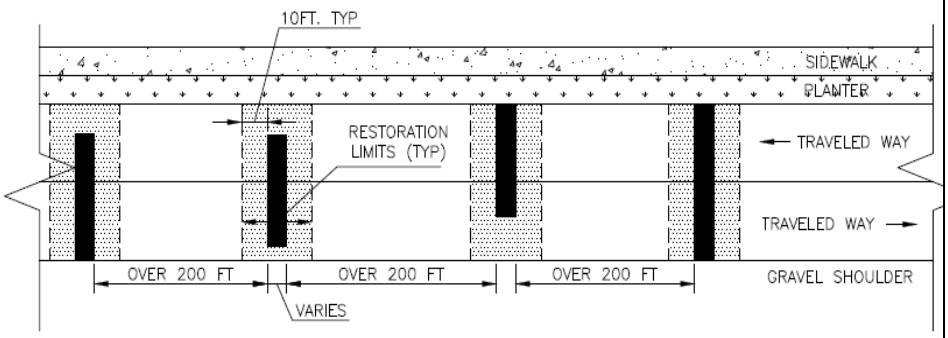
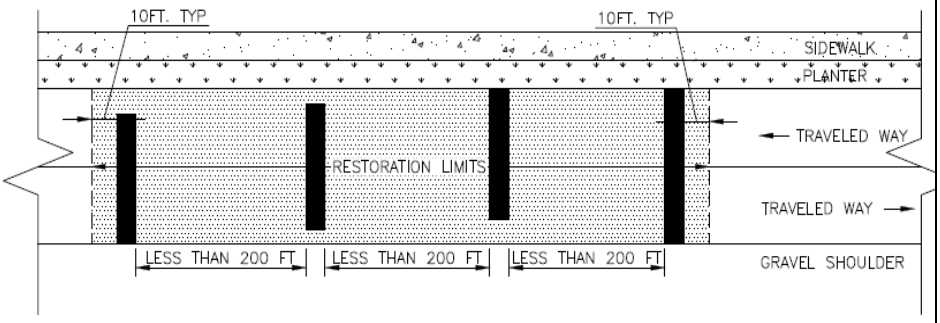
B. ADA Structural Impracticability Determination

All pedestrian facilities that are new construction shall fully comply with ADA requirements except in those rare circumstances when the unique characteristics of terrain prevent the incorporation of accessibility features (28 CFR 35.151(a)(2)). Even in those circumstances where the exception applies, portions of a facility that can be made accessible must still be made accessible. This exception is very narrow and should not be used in cases of merely hilly terrain. It is expected that the exception will be used in only rare and unusual circumstances. All deviations under this section shall be approved before construction plans are approved.

1-17 DEFINITIONS

Alley	Shall have the same meaning as defined in SCC 30.91A.150.
Applicant	Shall have the same meaning as defined in SCC 30.91A.220.
Arterial	Shall have the same meaning as defined in SCC 30.91A.270.
Best Management Practices (drainage)	Shall have the same meaning as defined in SCC 30.91B.080.
Best Management Practices (critical areas)	Shall have the same meaning as defined in SCC 30.91A.090.
Bollard	Shall have the same meaning as defined in SCC 30.91B.175.
Buffer	Shall have the same meaning as defined in SCC 30.91B.190.
Compaction	Shall have the same meaning as defined in SCC 30.91C.210.
Construction Plans	Shall have the same meaning as defined in SCC 30.91C.280.
Conveyance System	Shall have the same meaning as defined in SCC 30.91C.300.
Critical Area	Shall have the same meaning as defined in SCC 30.91C.340.
Design Speed	A selected speed used to determine the various geometric design features of the roadway.
Design Storm	Shall have the same meaning as defined in SCC 30.91D.160.
Detention	Shall have the same meaning as defined in SCC 30.91D.170.
Detention Facility	Shall have the same meaning as defined in SCC 30.91D.180.
Developer	Shall have the same meaning as defined in SCC 30.91D.190.
Drainage	Shall have the same meaning as defined in SCC 30.91D.350.
Drainage Facility	Shall have the same meaning as defined in SCC 30.91D.370.
Drainage Manual	Shall have the same meaning as defined in SCC 30.91D.400.
Drive Aisle	Shall have the same meaning as defined in SCC 30.91D.455.
Driveway	Shall have the same meaning as defined in SCC 30.91D.460.

Easement	Shall have the same meaning as defined in SCC 30.91E.030.
Effective Impervious Surface	Shall have the same meaning as defined in SCC 30.91E.070.
Fire Lane	Shall have the same meaning as defined in SCC 30.91F.300.
Frontage Improvement	Road improvements that are constructed along a development's public road frontage. This definition does not include the construction or reconstruction of an access point when that is the only improvement being constructed.
Hard Surface	Shall have the same meaning as defined in SCC 30.91H.035.
Hyporheic Zone	Shall have the same meaning as defined in SCC 30.91H.280.
Impervious Surface	Shall have the same meaning as defined in SCC 30.91I.010.
Land Disturbing Activity	Shall have the same meaning as defined in SCC 30.91L.025.
Low Impact Development "LID"	Shall have the same meaning as defined in SCC 30.91L.215.
New Development	Shall have the same meaning as defined in SCC 30.91N.044.
Operating Speed	A speed used for design that is based on the 85th percentile of the distribution of observed speeds as determined by the Engineer.
Pervious Surface	Shall have the same meaning as defined in SCC 30.91P.188.
Posted Speed	Maximum vehicle speed signed along a roadway or, if not posted, the regulatory speed required by Chapter 11.16 SCC
Project Site	Shall have the same meaning as defined in SCC 30.91P.354..
Reconstruction	Reconstruction (including Reconstructed) is where a continuous section of an existing road is rebuilt in its entirety to be in compliance with the EDDS. This definition does not include Frontage Improvements.
Redevelopment	Shall have the same meaning as defined in SCC 30.91R.070.
Replaced Hard Surface	Shall have the same meaning as defined in SCC 30.91R.119.
Retention	Shall have the same meaning as defined in SCC 30.91R.160.
Retention Facility	Shall have the same meaning as defined in SCC 30.91R.170.
Right-of-Way (R/W)	Shall have the same meaning as defined in SCC 30.91R.200.
Road, Private	Shall have the same meaning as defined in SCC 30.91R.230.
Road, Public	Shall have the same meaning as defined in SCC 30.91R.220.
Road Network	Shall have the same meaning as defined in SCC 30.91R.214.
Road Network Element	Shall have the same meaning as defined in SCC 30.91R.215.
Rural Area	Shall have the same meaning as defined in SCC 30.91R.260.

Shared Court	Shall have the same meaning as defined in SCC 30.91S.175.
Shared Driveway	Shall have the same meaning as defined in SCC 30.91D.465.
Stormwater Facility	Shall have the same meaning as defined in SCC 30.91S.596. Same as "Drainage Facility."
Stream	Shall have the same meaning as defined in SCC 30.91S.640.
Trench, Lateral, Single	A single lateral trench made by a single Utility Purveyor located within the paved portion of the roadway from curb to curb, shoulder to shoulder, or curb to shoulder and is located more than 200 feet from another lateral trench made by the same Utility Purveyor, Provided that single lateral trenches made by more than one Utility Purveyor that are associated with a private development project will be considered multiple lateral trenches for restoration purposes. SINGLE LATERAL TRENCH 
Trench, Lateral, Multiple	Multiple lateral trenches are single lateral trenches made by a single Utility Purveyor located within the paved portion of the roadway from curb to curb, shoulder to shoulder, or curb to shoulder and are located closer than 200 feet to another lateral trench, Provided, that multiple lateral trenches associated with a private development project that are made by more than one Utility Purveyor will be considered together for restoration purposes. MULTIPLE LATERAL TRENCHES 
Urban Area	Those areas located within an urban growth area (UGA) officially adopted by the County Council pursuant to the State Growth Management Act, RCW 36.70A.
Urban Growth Areas (UGAs)	Shall have the same meaning as defined in SCC 30.91U.090.
Utility	Shall have the same meaning as defined in SCC 30.91U.110.
Wetlands	Shall have the same meaning as defined in SCC 30.91W.060.

MINIMUM ACCESS POINT SPACING – COMMERCIAL/INDUSTRIAL (FEET) ① ⑤

POSTED SPEED (MPH)	DIMENSION A		DIMENSION B ⑤		DIMENSION C ⑤	
	ARTERIALS ③	NON–ARTERIALS ④	ARTERIALS	NON–ARTERIALS	ARTERIALS	NON–ARTERIALS
25	105	35	105	75	105	35
30	125	40	125	75	125	40
35	150	45	150	75	150	45
40	185	50	185	75	185	50
45	230	50	230	75	230	50
50	275	50	275	75	275	50

NOTES:

1. ACCESS POINT SPACING ONLY. FOR PUBLIC STREET SPACING, SEE TEXT SECTION 3–09.

2. RESERVED.

3. BETWEEN THE NEAREST EDGES OF TWO–WAY ACCESS POINTS. DISTANCES BETWEEN ADJACENT, ONE–WAY ACCESS POINTS (WITH THE INBOUND ACCESS UPSTREAM) CAN BE ONE–HALF THE DISTANCES SHOWN ABOVE.

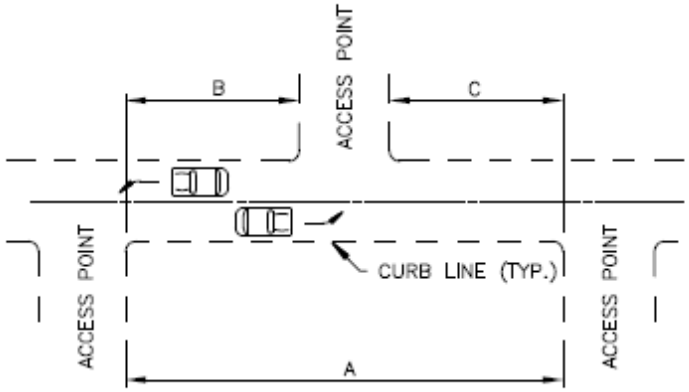
4. BETWEEN THE NEAREST EDGES OF ONE OR TWO–WAY ACCESS POINTS.

5. ACCESS POINTS DIRECTLY OPPOSITE FROM EACH OTHER ARE MOST DESIRABLE. WHERE THIS IS NOT POSSIBLE, THESE DIMENSIONS WILL APPLY.

6. WHERE ACCESS POINTS ARE TO BE SIGNALIZED, A MINIMUM SPACING OF 1200 FEET TO ANY OTHER SIGNALIZED INTERSECTION SHOULD BE MAINTAINED. IF THE SIGNALIZED ACCESS POINTS FORM A "T" INTERSECTION WITH LITTLE POSSIBILITY OF ANY FUTURE ACCESS POINT ACROSS THE STREET, A MINIMUM SPACING OF 600 FEET FROM THE NEAREST SIGNALIZED INTERSECTION MAY BE ACCEPTABLE.

7. IN CASES WHERE ACCESS POINT SPACING IS NOT ATTAINABLE BECAUSE EXISTING FRONTAGES ARE NARROW, ACCESS POINTS SHOULD BE LOCATED AS CLOSE TO THE TABULATED VALUES SHOWN ABOVE AS POSSIBLE. WHEN THIS OCCURS, THE ENGINEER MAY REQUIRE ANALYSIS TO DETERMINE IF LEFT TURNS SHOULD BE PROHIBITED INTO OR OUT OF THE ACCESS POINT.

SEE TEXT SECTION 2–04



PLAN

SNOHOMISH COUNTY PUBLIC WORKS

2–050 COMMERCIAL/INDUSTRIAL ACCESS POINT SPACING

APPROVED BY: Douglas W McCormick 10/23/2020

COUNTY ROAD ENGINEER DATE

3-03 RIGHT-OF-WAY WIDTH

C. Separate Tracts and Easements

Under certain circumstances, it may be desirable to reduce right-of-way width and locate facilities, such as sidewalks, walkways or trails, in separate tracts of land or easements outside the right-of-way. Such tracts or easements shall be owned and maintained by a homeowners or condominium association and guaranteed by covenants recorded with the plat, condominium, or binding site plan. The recorded covenants shall be referenced on the approved final plat, condominium, or binding site plan document. Use of a non-standard road section or a right-of-way section with an adjacent tract easement must be approved by the Engineer.

3-06 DESIGN SPEED

A. Design Speed

Design speed shall be used to determine the various geometric design features of a roadway. Unless otherwise specified by the Engineer, the speeds in:

1. Table 3-2 shall be used to determine the design speed for new non-arterial roads; and
2. Table 3-3 shall be used to determine the design speed for existing and new arterials and existing non-arterial roads.

Table 3-2 Design Speed for New Non-Arterial Roads

	URBAN	RURAL
Collector	30 MPH [1]	30 MPH [1]
Residential / Subcollector	25 MPH [2]	25 MPH [2]
Local Access	25 MPH [2]	25 MPH [2]

[1] May be reduced to 25 MPH (urban) with approval by the Engineer. Refer to Standard Drawings 3-060 and 3-065.

[2] May be reduced to 20 MPH on a cul-de-sac road no tangent longer than 250 feet or for other circumstances approved by the Engineer.

Table 3-3 Design Speed for Existing and New Arterials and Existing Non-Arterial Roads

DESIGN SPEED = POSTED SPEED + MODIFIER	
POSTED SPEED [1]	**MODIFIER**
30 MPH and Below	0 MPH
35 MPH	+ 8 MPH
40 MPH and Above	+ 10 MPH

[1] The Engineer shall determine the posted speed for new arterial roads.

3-07 HORIZONTAL AND VERTICAL ALIGNMENT

See Standard Drawings 3-105, 3-106, 3-107, 3-110, 3-120

A. Horizontal Curve Radii and Superelevation

Table 3-4 contains the minimum horizontal curve design criteria, including superelevation, for low speed curves (design speed of 40 mph or less).

Table 3-4 Horizontal Curves Minimum Radii and Superelevation

DESIGN SPEED MPH	MAXIMUM SUPER-ELEVATION, e (%) (U = Urban, R = Rural)	MINIMUM RADIUS (FEET) FOR			
		e =6%	e =4%	e =2%	CROWN SECTION e =0%
20	n/a	n/a	n/a	n/a	90 *
25	n/a	n/a	n/a	n/a	165 *
30	4% (U/R)	n/a	230	250	275
35	6% (U) 10% (R)	320	345	375	415
40	6 % (U) 10% (R)	450	490	540	600

* As an alternative, a 90 degree (+/- 10 degrees) "elbow" intersection may be constructed in accordance with Standard Drawing 3-105, 3-106, or 3-107 as provided in text section 3-07.A.6 below

1. For design speeds above 40 MPH, horizontal curve design shall comply with Division 12 (Geometrics) of the WSDOT Design Manual.
2. Additional pavement width may be required on horizontal curves to provide for vehicle maneuvers where no superelevation is used and the minimum horizontal curve criteria in Table 3-4 or the WSDOT Design Manual are not met. Calculations for widening shall comply with Chapter 3 of AASHTO A Policy on Geometric Design of Highways and Streets or Division 12 (Geometrics) of the WSDOT Design Manual.
3. The Engineer may approve a lower design speed and centerline radius for curves in arterial roads in urban areas.
4. All roadway designs utilizing superelevation are subject to review by the Engineer. Chapter 1250 (Superelevation) of the WSDOT Design Manual should be consulted for superelevation design.
5. If reverse curves with superelevation are required in a design, then sufficient tangent length for superelevation runoff for both curves shall be provided in accordance with Chapter 1250 (Superelevation) of the WSDOT Design Manual.
6. A 90 degree (+/- 10 degrees) "elbow" intersection may be constructed on the following non-arterials:
    i. Urban local access roads according to Standard Drawing 3-105 or 3-106.
    ii. Urban residential roads according to Standard Drawing 3-105.

iii. Rural local access and rural sub-collector roads according to Standard Drawing 3-107.

B. Vertical Curves

Vertical curves shall meet or exceed the criteria in Standard Drawing 3-110 for crest vertical curves and Standard Drawing 3-120 for sag vertical curves, to ensure that minimum stopping sight distance is provided. Sight distance is discussed in detail in Section 3-08. For new arterial roads in rural areas, passing sight distance shall be evaluated in accordance with Chapter 1260 (Sight Distance) of the WSDOT Design Manual.

C. Road Grades

1. The minimum grades of all road network elements shall be 0.5% to provide proper drainage.
2. The maximum grade on any new or reconstructed road network element, except for a driveway, or a shared driveway that is not a fire lane, shall not exceed the limits in EDDS Table 3-5.
3. Grade transitions shall be constructed as vertical curves except at new intersections where the difference in grade is one percent or less. Refer to EDDS Subsection 3-09.B for additional grade at intersection requirements.

Table 3-5 Maximum Road Grades

ARTERIAL	10%
NON-ARTERIAL:	
COLLECTOR	10%
RESIDENTIAL/SUBCOLLECTOR	12%
LOCAL ACCESS	15%
PRIVATE ROAD NETWORK ELEMENT (Not including a driveway, or a shared driveway that is not a fire lane)	15%
CUL-DE-SAC (Public or Private) (Temporary or Permanent)	6%
HAMMERHEAD (Public or Private) (Temporary or Permanent)	6%
CROWN	2%

3-08 SIGHT DISTANCE

See Standard Drawings 3-110, 3-120, 3-130, 3-140

A. General

1. Sight distance criteria established in this section are based upon A Policy on Geometric Design of Highways and Streets, AASHTO.
2. New or Reconstructed Roads

The Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD) requirements set forth in Sections 3-08.B and 3-08.D, respectively, of this chapter shall be met along all sections of the new or reconstructed road.

3. Existing Roads and Development Frontage

   Each new or existing intersection or access point shall meet the SSD and ISD requirements set forth in Sections 3-08.B and 3-08.D, respectively, of this chapter. During review of the formal development application and based on the conditions of the road and proportionate impacts of the development or construction project, the Engineer may require SSD improvements be made at other locations beyond the intersection or access point.

4. Sight distance requirements in this section are based on passenger car operation and do not account for heavy vehicle operating characteristics. Access points or intersections that will handle significant numbers of heavy vehicles or trucks, as determined by the Engineer, shall be designed in accordance with AASHTO.

B. Stopping Sight Distance

Stopping Sight Distance (SSD) is the distance needed for a vehicle traveling at or near the design speed of the road to stop before reaching a stationary object in its path. The provision of stopping sight distance is fundamental to the safe operation of the road. [Chapter 2 of AASHTO]

1. Design speed shall be used to determine SSD requirements.

   The SSD requirements in Table 3-6 shall be the minimum acceptable values for designing vertical and horizontal road alignments and evaluating the adequacy of existing vertical and horizontal alignments on roads with downgrades or upgrades of less than 3 percent.

Table 3-6 Stopping Sight Distance (SSD) on Roads With Upgrades or Downgrades Less Than 3 %

DESIGN SPEED (MPH)	DISTANCE, "D" (FEET)
20	115
25	155
30	200
35	250
40	305
43	340
45	360
50	425
55	495

From Table 3-1, A Policy on Geometric Design of Highways and Streets, AASHTO.

2. Driver's Eye and Object Height. In measuring SSD, the height of the driver's eyes is assumed to be 3.5 feet and the height of the object to be seen by the driver is 2.0 feet above the pavement. The driver's line-of-sight may not fall within the limits of the road; for example, on a horizontal curve the sight line will be a chord of the curve. SSD is measured along the centerline of the vehicle's travel lane, as shown in Standard Drawing 3-130.

C. Stopping Sight Distance (SSD) On Roads With Upgrades or Downgrades of 3% or Greater

Table 3-7 shall be used on roads with upgrades or downgrades of 3% or greater. Grades other than those shown in Table 3-7 may require interpolation.

Table 3-7 Stopping Sight Distance (SSD) on Roads With Upgrades or Downgrades of 3% or Greater

SSD (FEET) FOR DOWNGRADE						SSD (FEET) FOR UPGRADE					
DESIGN SPEED (MPH)	3%	6%	9%	12%	15%	DESIGN SPEED (MPH)	3%	6%	9%	12%	15%
20	116	120	126	132	141	20	109	107	104	102	100
25	158	165	173	183	197	25	147	143	140	136	134
30	205	215	227	242	262	30	200	184	179	174	171
35	257	271	287	308	335	35	237	229	222	216	211
40	315	333	354	381	417	40	289	278	269	261	254
43	352	372	397	429	470	43	321	309	299	290	282
45	378	400	427	462	507	45	344	331	320	310	301
50	446	474	507	550	605	50	405	388	375	362	351
55	520	553	593	645	712	55	469	450	433	418	405

Based on Table 3-2A, A Policy on Geometric Design of Highways and Streets, AASHTO.

D. Intersection Sight Distance

Table 3-8 Intersection Sight Distance Where The ADT On The Minor Road Or Access Point Is < 80 ADT

DESIGN SPEED (MPH)	DISTANCE, "D" * (FEET)
20	115
25	155
30	200
35	250
40	305
43	340
45	360
50	425
55	495

*Table 3-7 applies if grade is 3% or greater.
From Exhibit 3-1, A Policy on Geometric Design of Highways and Streets, AASHTO.

Table 3-9 Intersection Sight Distance Where the ADT On Minor Road Or Access Point Is > 80 ADT

POSTED SPEED (MPH)	DISTANCE, "D" (FEET)
20	225
25	280
30	335
35	390
40	445
45	500
50	555
55	610

From Table 9-7, A Policy on Geometric Design of Highways and Streets, AASHTO.

G. Documentation of Sight Distance

To verify acceptable sight distance, the Engineer may require a developer to evaluate and document an existing sight distance condition. The evaluation and documentation of sight distance shall include the following, or such additional information as may be necessary to make a determination:

1. Plan, profile and cross-section drawings along the sight line
2. Posted speed, design speed, and/or speed study data
3. Right-of-way and easement limits (existing and proposed)

When the Engineer determines from the documentation presented that a location has insufficient sight distance, a plan to improve the sight distance to meet these standards will be required.

3-14 PEDESTRIAN CIRCULATION

See Standard Drawings 3-010, 3-020, 3-040, 3-050, 3-060, 3-065, 3-066, 3-150

B. Pedestrian Facility Options

1. Sidewalk separated by curb, gutter, and planter strip

   (Standard Drawings 3-020, 3-050)

2. Walkway separated by ditch, gravel or planter strip

   (Standard Drawings 3-010, 3-040)

3. Raised walkway separated by extruded curb
4. Shoulder

   Shoulders shall be constructed of the same material and to the same standard as the adjacent road network element. Provided, that pervious pavement may be used when it complies with the requirements of EDDS Chapter 11.

(Standard Drawing 3-010)

5. At-grade sidewalk (adjacent to a drive aisle)

   At-grade sidewalks adjacent to a drive aisle shall be constructed of a material, such as concrete or permeable concrete where feasible, that is different from the asphalt section to provide visual identification as a separate facility. The sidewalk surface shall be capable of supporting emergency vehicle loading. For concrete, this is 6 inches of concrete over 6 inches of compacted Crushed Surfacing Base Course (CSBC). Permeable pavement shall be designed per EDDS Chapter 11.

Table 3-12 Pedestrian Facility Standards

AREA	FACILITY LOCATION	INTERIM OR ULTIMATE	SEC. 3-14.B OPTIONS	SPECIAL PROVISIONS
Urban	On-site	Ultimate	1)	
Urban	On-site	Ultimate	5)	When allowed under Section 3-05.C.
Urban	Off-site	Ultimate	1)	
Urban	Off-site	Interim	2)	Minimum width and separation 5 feet.
Urban	Off-site	Interim	3)	Use where right-of-way is limited. Illumination required. Adjacent travel lane 13 feet wide.
Urban / Rural	Off-site	Interim	4)	Non-arterials only with posted speed 30 mph or less. A minimum width of 7 feet when providing pedestrian facilities for school children walking to and from a school or school bus stop. Provided that a narrower width may be approved by the Engineer when there is insufficient right-of-way.
Rural	On-site	Ultimate	4)	Width determined by Std. Drwgs. 3-030B and 3-060
Rural	On-site	Ultimate	2)	An optional pedestrian facility.

VOLUME (1)	PUBLIC OR PRIVATE	SURFACE WIDTH (FT) (2) (7)	SURFACE TYPE	WALKWAY/ SHOULDER	ROW WIDTH (FT)	STANDARD DRAWING
LOCAL ACCESS (1–90 ADT)	PRIVATE	20	GRAVEL OR PAVED	NONE (3)	(4)	3–080
LOCAL ACCESS (1–90 ADT)	PUBLIC	22	PAVED	NONE (3)	44–60 (6)	3–040
SUB–COLLECTOR (91 – 2000)	EITHER	24	PAVED	5 FT SEPARATED WALKWAY OR 8 FT SHOULDER	44–60 (6)	3–040
COLLECTOR (2001+ ADT)	EITHER					

NOTES:

1. ADT VOLUMES ARE TYPICAL THRESHOLDS ONLY. THE COUNTY ENGINEER MAY MODIFY A ROAD STANDARD BASED ON SITE CONDITIONS, TRAFFIC VOLUME, ULTIMATE DEVELOPMENT POTENTIAL OF AN AREA OR OTHER RELEVANT FACTORS.
2. NO PARKING IS ALLOWED.
3. SEE SCC 30.24.080 TO DETERMINE IF PEDESTRIAN FACILITIES ARE REQUIRED
4. MINIMUM 30 FT EASEMENT.
5. RESERVED
6. RIGHT–OF–WAY WIDTH MAY VARY DEPENDING ON LOCATION AND OWNERSHIP OF DRAINAGE AND PEDESTRIAN FACILITIES.
7. WIDTH OF SHOULDER IS IN ADDITION TO THIS WIDTH

	SNOHOMISH COUNTY PUBLIC WORKS	APPROVED BY: Douglas M McCormick 10/23/2020
	3–060 ROAD STANDARDS – NON–ARTERIALS (RURAL)	COUNTY ROAD ENGINEER DATE

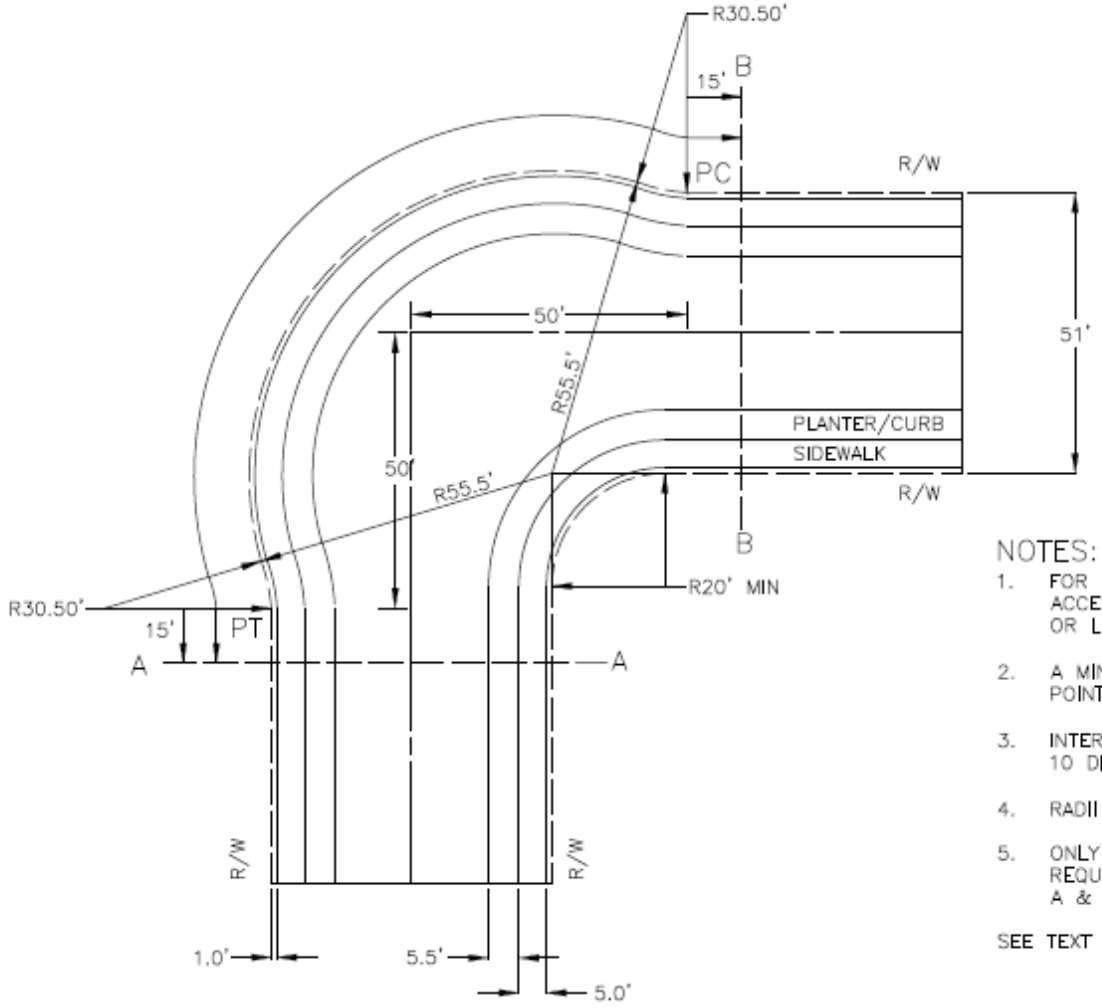
②① ROAD CLASSIFICATION	PAVEMENT WIDTH	TRAVEL LANES	PARKING LANE	PLANTER WIDTH	SIDEWALK WIDTH	④⑤ R/W WIDTH	SEE STD DRAWING
LOCAL ACCESS (UP TO 250 ADT)	24'	2x12'	NONE	5' MIN.	5' MIN. ⑥	47'–51'	3–050
RESIDENTIAL (251–2000 ADT)	28'	2x10'	1x8' ②	5' MIN. ⑥	5' MIN.	51'–55'	3–050
COLLECTOR (2001+ ADT)	36'	2x10'	2x8'	5' MIN.	5' MIN.	59'–63'	3–050

NOTES:

1. SEE EDDS SECTION 3–02.B FOR DESCRIPTION OF NON–ARTERIAL ROAD CLASSIFICATIONS.
2. PARKING RESTRICTED TO ONE SIDE.
3. RESERVED
4. BICYCLE LANES SHALL BE REQUIRED ON ROADS THAT ARE DESIGNATED BIKEWAY ROUTES. PAVEMENT AND R/W WIDTH SHALL BE WIDENED AS NECESSARY. SEE TEXT SECTION 4–08.
5. RIGHT OF WAY WIDTH MAY VARY. SEE TEXT SECTION 3–03B.
6. FOR RESIDENTIAL ROADS SERVING 90 ADT OR LESS AND HAVING NO POTENTIAL FOR CONNECTIVITY, SIDEWALKS AND PLANTERS ARE NOT REQUIRED.

SEE TEXT CHAPTER 3

	SNOHOMISH COUNTY PUBLIC WORKS	APPROVED BY: Douglas M McCormick 10/23/2020
	3–065 ROAD STANDARDS – NON–ARTERIALS (URBAN)	COUNTY ROAD ENGINEER DATE

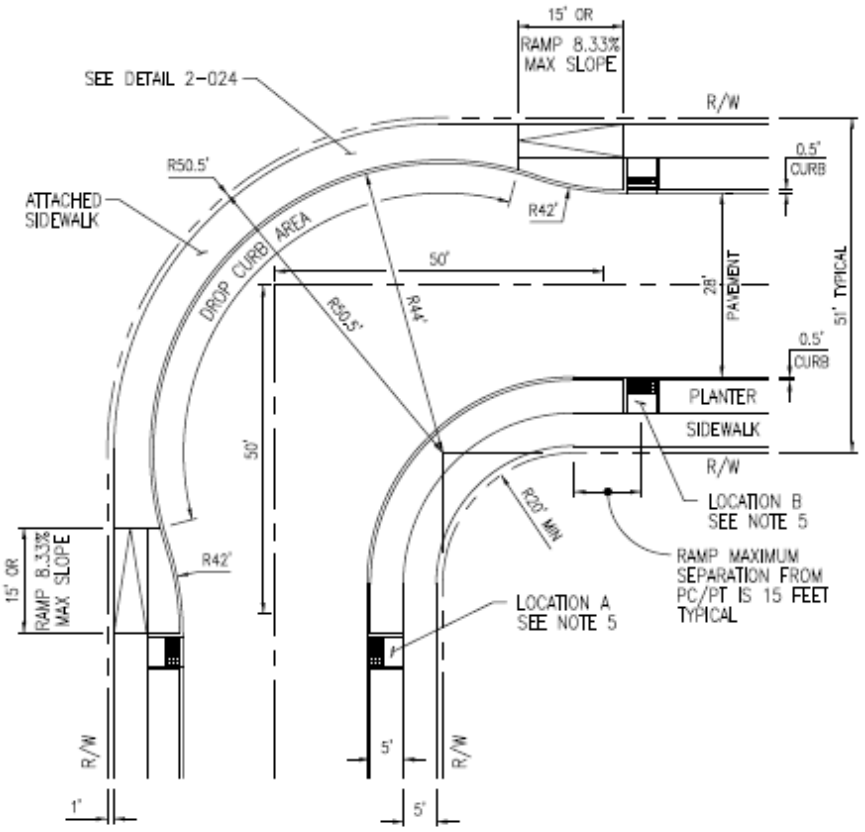


NOTES:

1. FOR USE ON URBAN RESIDENTIAL OR LOCAL ACCESS ROADS WITH A DESIGN SPEED OF 25 MPH OR LESS.
2. A MINIMUM 50' TANGENT IS REQUIRED FROM THE POINT OF INTERSECTION OF THE CENTERLINES.
3. INTERSECTION ANGLE SHALL BE 90 DEGREES +\- 10 DEGREES.
4. RADII SHOWN APPLY FOR A 51-FOOT R/W.
5. ONLY ONE CROSSWALK WITH CURB RAMPS IS REQUIRED AND SHALL BE LOCATED BETWEEN POINTS A & B. SEE EDDS SECTIONS 4-05.D.2 & .4

SEE TEXT SECTION 3-07.A.6, 3-09 AND TABLE 3-4.

	SNOHOMISH COUNTY PUBLIC WORKS	APPROVED BY: Douglas M McCormick 10/23/2020
	3-105 URBAN NON-ARTERIAL 90° INTERSECTION ELBOW	COUNTY ROAD ENGINEER DATE

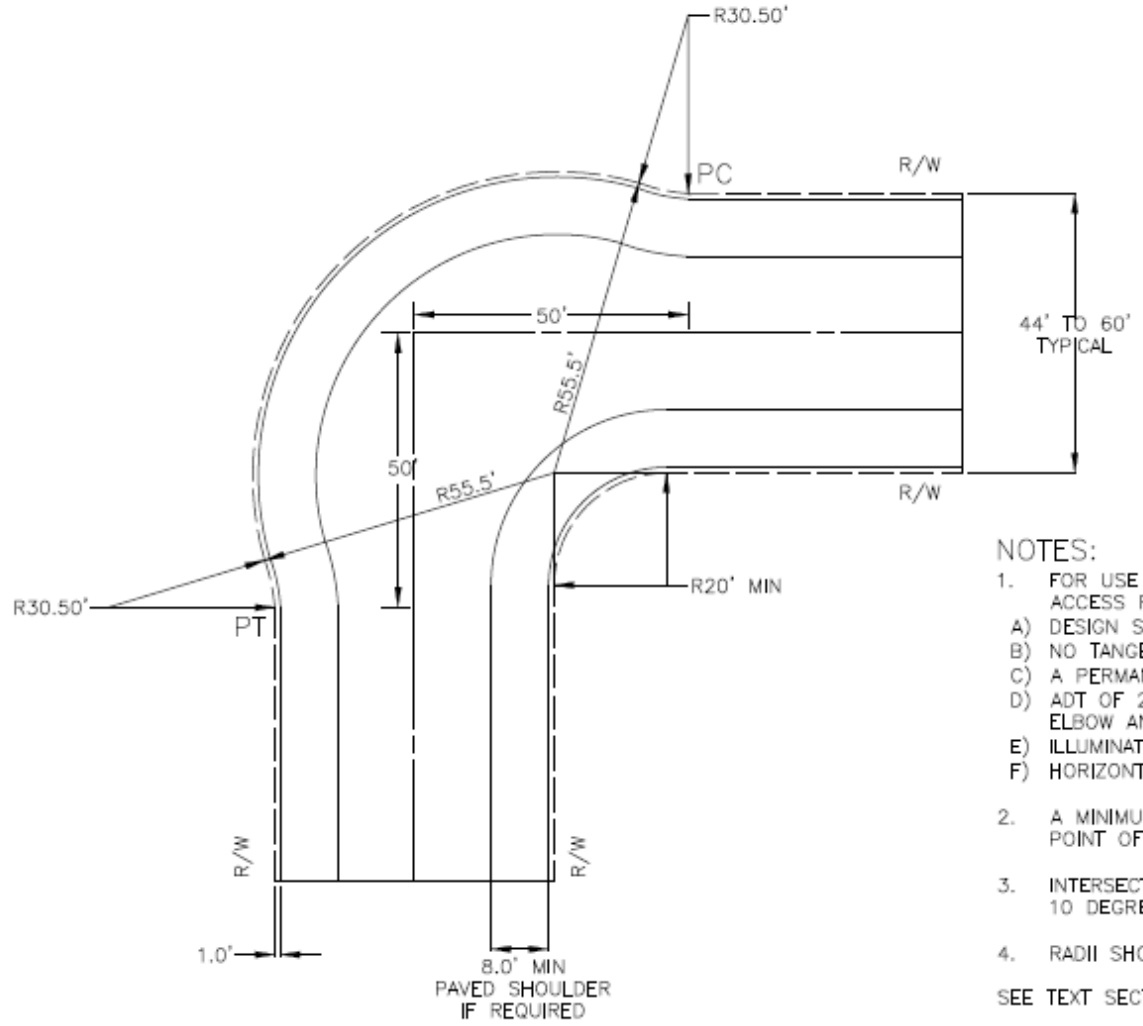


NOTES:

1. FOR USE ON URBAN LOCAL ACCESS ROADS WITH A DESIGN SPEED OF 25 MPH OR LESS.
2. A MINIMUM 50' TANGENT IS REQUIRED FROM THE POINT OF INTERSECTION OF THE CENTERLINES.
3. INTERSECTION ANGLE SHALL BE 90 DEGREES +\− 10 DEGREES.
4. RADII SHOWN APPLY FOR A 51−FOOT R/W.
5. ONLY ONE CROSSWALK WITH CURB RAMPS IS REQUIRED AND SHALL BE LOCATED AT LOCATION A OR B. SEE EDDS SECTIONS 4−05.D.2 & .4

SEE TEXT SECTION 3−07.A.6, 3−09 AND TABLE 3−4.

	SNOHOMISH COUNTY PUBLIC WORKS	APPROVED BY: Douglas M McCormick 10/23/2020
	3−106 URBAN NON−ARTERIAL 90° INTERSECTION ELBOW DROP CURB	COUNTY ROAD ENGINEER DATE

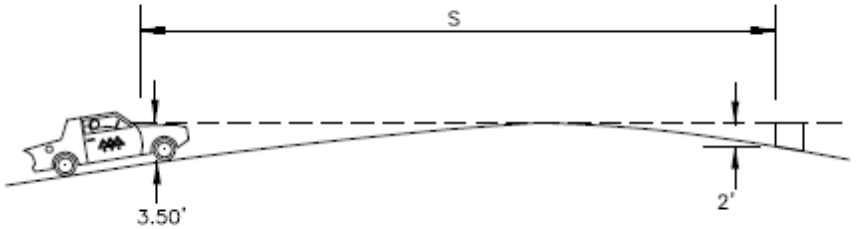


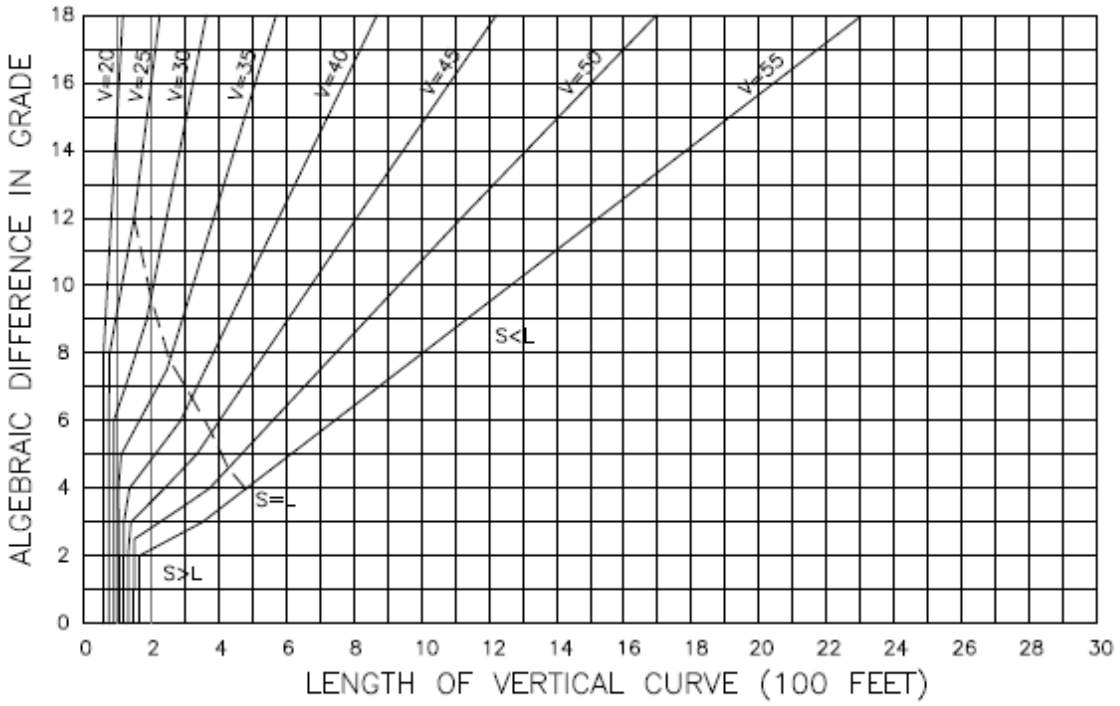
NOTES:

1. FOR USE ON RURAL SUB–COLLECTOR OR LOCAL ACCESS ROADS WITH:
   - A) DESIGN SPEED OF 20 MPH OR LESS
   - B) NO TANGENT LONGER THAN 200 FT
   - C) A PERMANENT DEAD–END ROAD
   - D) ADT OF 250 OR LESS BETWEEN THE 90 DEGREE ELBOW AND THE ROAD END
   - E) ILLUMINATION AT ELBOW
   - F) HORIZONTAL CURVE SIGNANGE
2. A MINIMUM 50' TANGENT IS REQUIRED FROM THE POINT OF INTERSECTION OF THE CENTERLINES.
3. INTERSECTION ANGLE SHALL BE 90 DEGREES +\– 10 DEGREES.
4. RADII SHOWN APPLY FOR A 51–FOOT R/W.

SEE TEXT SECTION 3–07.A.6 AND TABLE 3–4.

	SNOHOMISH COUNTY PUBLIC WORKS	APPROVED BY: Douglas M McCormick 10/23/2020
	3–107 RURAL NON–ARTERIAL 90° INTERSECTION ELBOW	COUNTY ROAD ENGINEER DATE





WHEN S > L	WHEN S < L
$L = 2S - \frac{2158}{A}$	$L = \frac{AS^2}{2158}$

L = CURVE LENGTH (FEET)
A = ALGEBRAIC GRADE DIFFERENCE (PERCENT)
S = SIGHT DISTANCE (FEET)

DESIGN SPEED (MPH)	DESIRABLE MINIMUM STOPPING DISTANCE (FEET)	MINIMUM LENGTH (FEET)
20	115	60
25	155	75
30	200	90
35	250	105
40	305	120
45	360	135
50	425	150
55	495	165

NOTES:

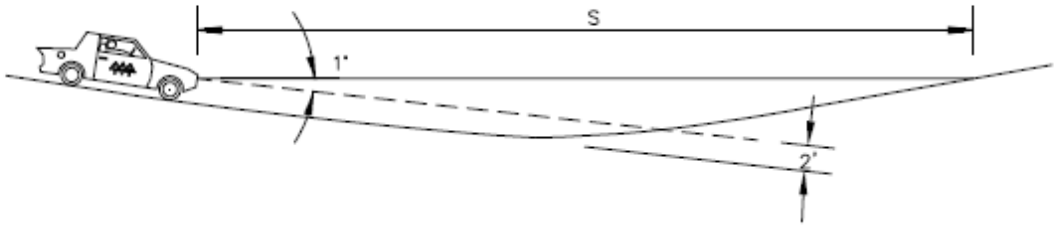
1. L=MINIMUM LENGTH OF CURVE BASED ON MINIMUM STOPPING SIGHT DISTANCE.

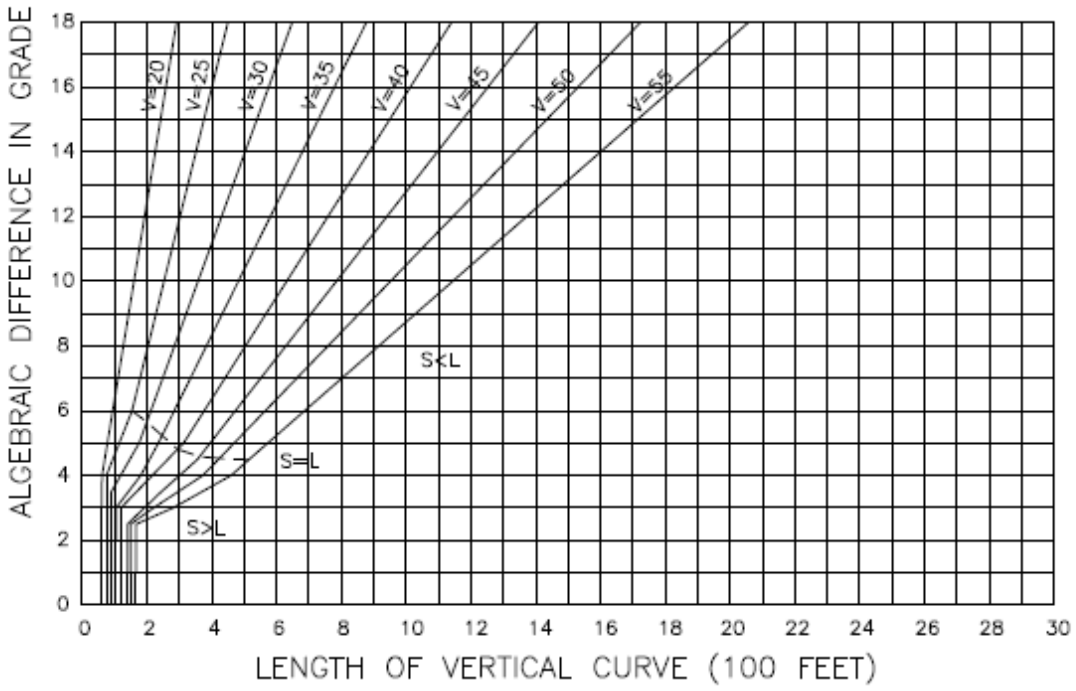
SEE TEXT CHAPTER 3

SNOHOMISH COUNTY PUBLIC WORKS

3–110 CREST VERTICAL CURVES

APPROVED BY:
Douglas M McCormick 10/23/2020
COUNTY ROAD ENGINEER DATE





INCREASE FOR DOWNGRADES:
SEE TABLE 3–7 IN TEXT

WHEN S > L	WHEN S < L
$L = 2S - \frac{400+3.5S}{A}$	$L = \frac{AS^2}{400+3.5S}$

L = CURVE LENGTH (FEET)
A = ALGEBRAIC GRADE DIFFERENCE (PERCENT)
S = SIGHT DISTANCE (FEET)

DESIGN SPEED (MPH)	DESIRABLE MINIMUM STOPPING DISTANCE (FEET)	MINIMUM LENGTH (FEET)
20	115	60
25	155	75
30	200	90
35	250	105
40	305	120
45	360	135
50	425	150
55	495	165

NOTES:

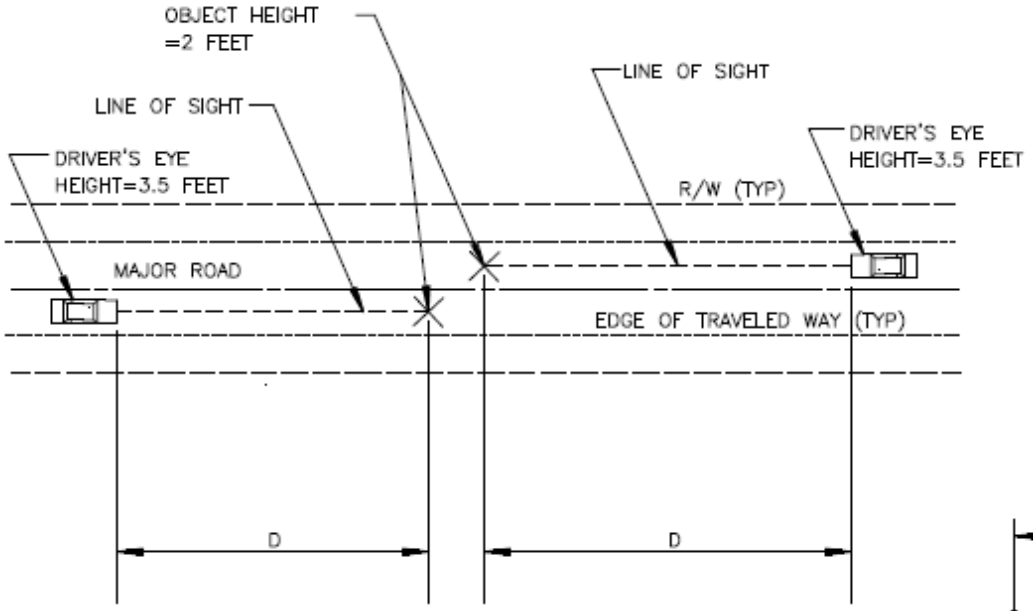
1. L–MINIMUM LENGTH OF CURVE BASED ON MINIMUM STOPPING SIGHT DISTANCE.

SEE TEXT CHAPTER 3

SNOHOMISH COUNTY PUBLIC WORKS

3–120 SAG VERTICAL CURVES

APPROVED BY:
Douglas W McCormick 10/23/2020
COUNTY ROAD ENGINEER DATE



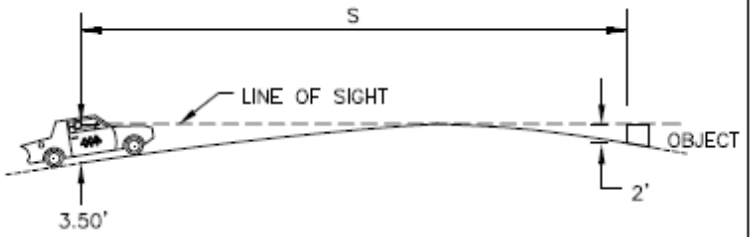
STOPPING SIGHT DISTANCE

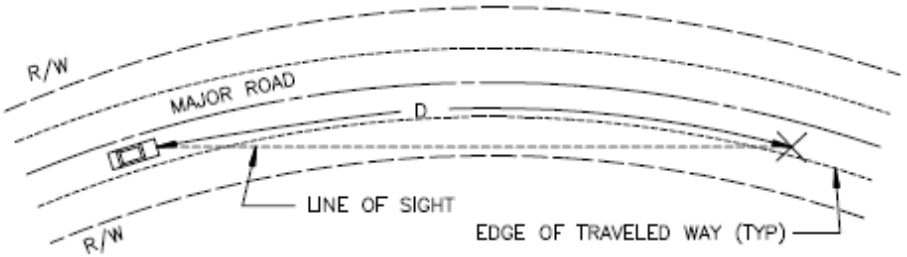
NOTES:

1. CREST VERTICAL CURVE CONDITION SHOWN. FOR EVALUATION OF CREST VERTICAL CURVE ALIGNMENT FOR STOPPING SIGHT DISTANCE REQUIREMENTS, REFER TO STD DWG 3–110. FOR EVALUATION OF SAG VERTICAL CURVE ALIGNMENT FOR STOPPING SIGHT DISTANCE REQUIREMENTS, REFER TO STD DWG 3–120.

SEE TEXT SECTION 3–07 & 3–08.

D=STOPPING SIGHT DISTANCE





	SNOHOMISH COUNTY PUBLIC WORKS	APPROVED BY: Douglas W McCormick 10/23/2020
	3–130 STOPPING SIGHT DISTANCE	COUNTY ROAD ENGINEER DATE

4-05 SIDEWALKS

See Standard Drawings 4-150

B. Width

1. Single-family residential development: 5 feet minimum.
2. Commercial, industrial or other development not single-family residential: 7 feet minimum.
3. Where a sidewalk is located adjacent to a curb, the width of sidewalk is measured from the back of the curb to the back of the sidewalk.
4. Meandering sidewalks, where approved by the Engineer, shall be constructed to maintain a full 5-foot width plus one foot of clearance around obstructions, including utility poles, mailbox mountings, or other such features that cannot be relocated. Additional right-of-way or, when approved by the Engineer, an easement, will be required to accommodate a meandering sidewalk or to relocate the obstruction behind the sidewalk.
5. Deviations requests to widths less than the ADA minimum of 4 feet are not allowed.

C. Curb Ramps

1. Curb ramps are required:
   i. At all marked crosswalks, or
   ii. At or near all unmarked crosswalks unless an official sign is posted to prohibit pedestrian crossings.
2. Only one crosswalk with curb ramps is required at an Urban 90 Degree Intersection Elbow. See Standard Drawings 3-105 and 3-106 for placement requirements.
3. Curb ramp types are categorized by their design and position relative to the pedestrian facility and the roadway. Types and specifications are provided in WSDOT Standard Plans F-40 (series) and in the Revised Draft Guidelines for Accessible Public Rights-of-Way (2005 PROWAG, U.S. Access Board). .
4. Diagonal curb ramps, located at the midpoint of curb radii, are prohibited at signalized intersections and may be installed at unsignalized intersections only where approved by the Engineer.
5. Drainage low points, catchbasins or inlets are not allowed within a curb ramp or crosswalk.
6. Ramps shall not be obstructed by hydrants, signposts, poles, pedestals or other utilities, gratings, access covers or any other obstruction.
7. If a new curb ramp is installed, or an existing curb ramp is altered, on one end crosswalk, then the responsible party shall install a curb ramp on the opposite end of the crosswalk if one is missing, unless there is no curb or sidewalk on the opposite end of the crosswalk.
8. The center of a curb ramp can be offset up to 15 degrees from the center of the companion curb ramp on the other end of the crosswalk to avoid conflicts with utilities or other obstructions in the roadway. The center of a curb ramp is measured at the back of the curb.
9. Decorative surface materials, such as bricks or tiles, shall not be used in curb ramps or crosswalks because of the uneven surface they create for pedestrians.

10. If the limits of a project include alteration work past the point of curvature of the corner radius of an intersection all non-compliant curb ramps located wholly or partially within the project limits and wholly or partially within the corner radius of the intersection shall be reconstructed to meet ADA requirements.
11. Transitional segments are required to blend between existing undisturbed facilities and newly altered curb ramps. This may permit the work of the alteration to more nearly meet the new construction standards. Transitional segments are required over a minimum of 5 feet; or vertical discontinuities up to 0.5 inches maximum can be beveled at 1:2 minimum.
12. Detectable warning surfaces are required on curb ramps, blended transitions, or other sloped areas at midblock pedestrian crossings, pedestrian crossings at intersections, and pedestrian crossings of commercial driveways or private roads that are signalized or have returned curbs. Detectable warning surfaces shall not be installed on drop curb driveway ramps or at crossings of auto courts, alleys, or transitions from the ends of sidewalk to the shoulder or roadway.
13. Installation of an Accessible Pedestrian Signal (APS) system is required at signalized intersections when alterations require moving existing pushbuttons or alter access to existing pushbuttons; when installing, altering, or upgrading pedestrian countdown indications, or when constructing a new pedestrian crossing. Routine maintenance or minor signal timing adjustments do not require the installation of APS systems at signalized intersections. Routine maintenance includes rewiring, fixing damaged or broken equipment, software updates, or replacing parts in-kind.

4-14 SIDE SLOPES

A. General

1. Side slopes along arterial and collector roads shall be constructed no steeper than 3H:1V for fill slopes and 2H:1V for cut slopes and along local access and residential roads, fill slopes may be no steeper than 2:1 and cut slopes no steeper than 1-1/2H:1V. Provided, that slopes within the clear zone shall not exceed 4H:1V. Steeper slopes outside of the clear zone may be approved by the Engineer upon showing that the steeper slopes, based on geotechnical and hydraulic analyses, will be stable.
2. Guardrails shall be installed where appropriate pursuant to the AASHTO Roadside Design Guide.
3. Side slopes shall be stabilized by grass sod, seeding or by other planting or surfacing materials acceptable to the Engineer. All requirements of Chapters 30.63A and 30.63B SCC shall be met prior to construction approval.
4. Slope easements adjacent to the right-of-way may be required for maintenance of cut or fill slopes.

4-15 FIXED OBJECTS

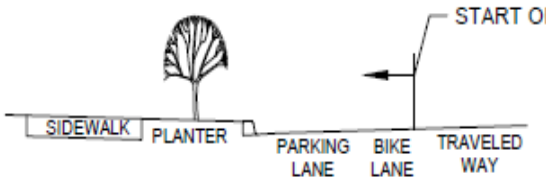
See Standard Drawings 3-010, 3-020, 3-040, 3-050

A. General

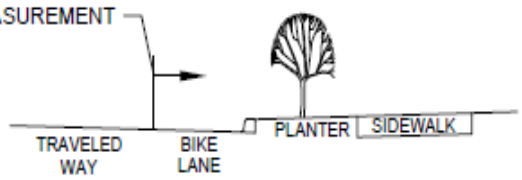
1. Fixed objects in the right-of-way shall be compatible with driveways, intersections, and other roadway features and shall conform to the clear zone requirements in Chapter 1600 of the WSDOT Design Manual and this section. Provided, that the provisions of EDDS Section 5-05.L.1 shall be used for driveway culverts and cross culverts 30 inches or less in diameter.
2. Fixed objects may be allowed in the clear zone if they have breakaway features as shown in Chapter 1600 of the WSDOT Design Manual and the WSDOT Standard Plans and shall maintain a minimum lateral offset of 18 inches from the face of curb in an urban area or the edge of asphalt in a rural area, or they shall be located or relocated outside of the clear zone. Provided, that the provisions of EDDS Section 5-05.L.1 shall be used for driveway culverts and cross culverts 30 inches or less in diameter.
3. All projects or developments that alter the relationship between the traveled way and the roadside by widening or realignment have altered the existing clear zone, and require an evaluation of existing, proposed or relocated fixed objects in the existing and new clear zones. Provided, that for the purposes of this section, installing a new access point or upgrading an existing access point shall not be considered as altering the existing clear zone for a development unless:
    i. Any fixed object within a new or altered access point needs to be removed or relocated;
    ii. Site distance at the new or altered access point does not comply with the appropriate standards, or
    iii. The improvements for the new or altered access point occupy more than 90 percent of a developments frontage.
4. The clear/control zone is measured from the edge of traveled way. Where there is or will be an insufficient length of frontage improvements to safely delineate the edge of traveled way, it will be determined based on the roads ultimate constructed and delineated configuration when sufficient improvements allow for delineation. The starting point for measuring the clear/control zone is determined as shown below:

Drawings Not to Scale

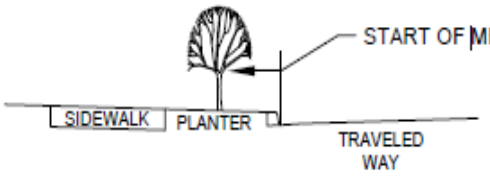
Urban Road Section with Parking and Bike Lane and Curb



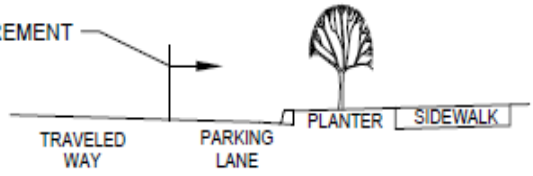
Urban Road Section with Bike Lane and Curb



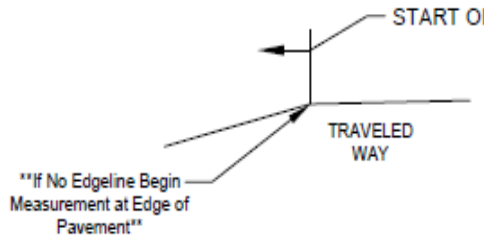
Urban Road Section with Curb Only



Urban Road Section with Parking Lane and Curb



Rural Road Section Without Shoulder



Rural Road Section with Shoulder