

NOTES:

1. SEE STANDARD DRAWING 8-020 FOR PLACEMENT OF UTILITIES.
2. URBAN CLEAR ZONE DISTANCE SHALL BE 2 FT. BEYOND THE FACE OF CURB FOR ROADS WITH A POSTED SPEED OF 35 MPH OR LESS. CLEAR ZONE DISTANCES FOR ROADS POSTED AT GREATER THAN 35 MPH SHOULD BE DETERMINED ACCORDING TO CHAPTER 7 OF THE WSDOT DESIGN MANUAL.
3. INDUSTRIAL/COMMERCIAL ROADS SERVING SIGNIFICANT VOLUMES OF TRUCK TRAFFIC MAY REQUIRE ADDITIONAL WIDTH AND PAVEMENT DEPTH AS DETERMINED BY THE ENGINEER BASED ON DATA SUBMITTED BY THE DEVELOPER.
4. FOR ACCESS AND SUBCOLLECTOR ROADS, FILL SLOPES MAY BE 2:1 MAX. AND CUT SLOPES MAY BE 1-1/2:1 MAX.
5. REFER TO SECTION 4-01 FOR LANDSCAPING REQUIREMENTS. ALL LANDSCAPING WITHIN THE RIGHT OF WAY IS SUBJECT TO APPROVAL BY DPW.
6. AN 8 FT PARKING LANE MAY BE REQUIRED ON ONE OR BOTH SIDES, SEE STANDARD DRAWING 3-065.
7. THE R/W LINE SHALL BE AT LEAST 1.0 FEET BEHIND THE BACK OF SIDEWALK.
8. CROSS-SECTION MAY BE ALTERED WHERE A STREAM OR WETLAND BORDERS THE ROAD.
9. REFER TO TEXT SECTION 4-05 FOR SIDEWALK WIDTH REQUIREMENTS.
10. SEE STANDARD DRAWING 3-065 FOR WIDTH REQUIREMENTS. IF THE ROAD IS A DESIGNATED BIKEWAY ROUTE, BICYCLE LANES MAY BE REQUIRED IN ADDITION TO, OR IN PLACE OF, THE PARKING LANES. SEE TEXT SECTION 4-08.

SEE TEXT CHAPTERS 3 AND 4

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SNOHOMISH COUNTY PUBLIC WORKS

3-050

TYPICAL NON-ARTERIAL ROAD - URBAN AREAS

APPROVED BY:

Steve E. Morrow 5-29-03

COUNTY ROAD ENGINEER

DATE

NOTES:

1. ROAD STANDARDS BASED ON "RESIDENTIAL STREETS", 2ND EDITION, PUBLISHED JOINTLY BY THE AMERICAN SOCIETY OF CIVIL ENGINEERS, THE NATIONAL ASSOCIATION OF HOME BUILDERS AND THE URBAN LAND INSTITUTE.

2. MAY BE REDUCED UPON APPROVAL OF THE ENGINEER. REFER TO SECTION 3-06.

3. A WIDENED SHOULDER WILL NOT BE REQUIRED FOR A WALKWAY ALONG AN ACCESS ROAD SERVING 8 OR FEWER SINGLE FAMILY LOTS (80 ADT) WITH NO POTENTIAL FOR CONNECTIVITY OR WHERE A SEPARATED WALKWAY IS PROVIDED.

4. A 7' PAVED SHOULDER REQUIRED ON ONE SIDE IF ADT IS 250 OR GREATER OR IF PRIVATE ROAD IS WITHIN THE DISTANCE FROM A PUBLIC SCHOOL AS SPECIFIED BY STATE LAW (RCW 28A.160.160).

5. EASEMENT WIDTH VARIES, BUT SHALL BE NO LESS THAN 30 FEET.

SEE TEXT CHAPTER 3

PRIVATE ROAD STANDARD – RURAL

ROAD CLASSIFICATION	DESIGN SPEED (MPH)	PAVEMENT WIDTH	SURFACE	EASEMENT WIDTH	WALKWAY	SEE STD DRAWING
PRIVATE LOW VOLUME ACCESS (90 ADT OR LESS)	20	20'	GRAVEL	⑤	NONE	3-080
PRIVATE SUBCOLLECTOR (91 TO 1000 ADT)	30	20'-30'	PAVED	⑤	1x7' PAVED SHOULDER ④	3-090

PUBLIC ROAD STANDARD – RURAL

ROAD CLASSIFICATION	DESIGN SPEED (MPH)	PAVEMENT WIDTH	TRAVEL LANES	SHOULDERS	PLANTER WIDTH	WALKWAY WIDTH	R/W WIDTH	SEE STD DRAWING
LOCAL ACCESS ROAD (ADT < 250)	25 ②	28'	2x9' 2x9'	3'/7' 3'/3' ③	NONE	7'(SHLDR) NONE ③	38'-50'	3-040
RESIDENTIAL (ADT 250 - 1000)	30	30'	2x10'	3'/7'	NONE	7'(SHLDR)	40'-60'	3-040
COLLECTOR ROAD (ADT 1001 - 3000)	② 30-35	36'	2x11'	7'/7'	NONE	7'(SHLDR)	42'-60'	3-040

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SNOHOMISH COUNTY PUBLIC WORKS

3-060

ROAD STANDARDS – NON-ARTERIALS (RURAL)

APPROVED BY:

Steve C. Norman 2-7-03

COUNTY ROAD ENGINEER

DATE

NOTES:

1. ROAD STANDARDS BASED ON "RESIDENTIAL STREETS", 2ND EDITION, PUBLISHED JOINTLY BY THE AMERICAN SOCIETY OF CIVIL ENGINEERS, THE NATIONAL ASSOCIATION OF HOME BUILDERS AND THE URBAN LAND INSTITUTE.
 2. PARKING RESTRICTED TO ONE SIDE.
 3. NO RESTRICTION ON PARKING.
 4. MAY BE REDUCED UPON APPROVAL OF THE ENGINEER. REFER TO SECTION 3-06.
 5. BICYCLE LANES MAY BE REQUIRED ON ROADS THAT ARE DESIGNATED BIKEWAY ROUTES. PAVEMENT AND R/W WIDTH SHALL BE WIDENED AS NECESSARY. SEE TEXT SECTION 4-08.
 6. RIGHT OF WAY WIDTH MAY VARY. SEE TEXT SECTION 3-03B.
- SEE TEXT CHAPTER 3

PUBLIC AND PRIVATE ROAD STANDARD – URBAN

ROAD CLASSIFICATION	DESIGN SPEED (MPH)	PAVEMENT WIDTH	TRAVEL LANES	PARKING LANE	PLANTER WIDTH	SIDEWALK WIDTH	⑤ R/W WIDTH	⑥	SEE STD DRAWING
RESIDENTIAL (ADT 1 – 1000)	④ 25	28'	2x10'	1x8' ②	5' MIN.	5' MIN.	51'–55'		3-050
COLLECTOR (ADT 1001 – 3000)	④ 30–35	36'	2x10'	2x8' ③	5' MIN.	5' MIN.	59'–63'		3-050

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SNOHOMISH COUNTY PUBLIC WORKS

3-065

ROAD STANDARDS – NON-ARTERIALS (URBAN)

APPROVED BY:

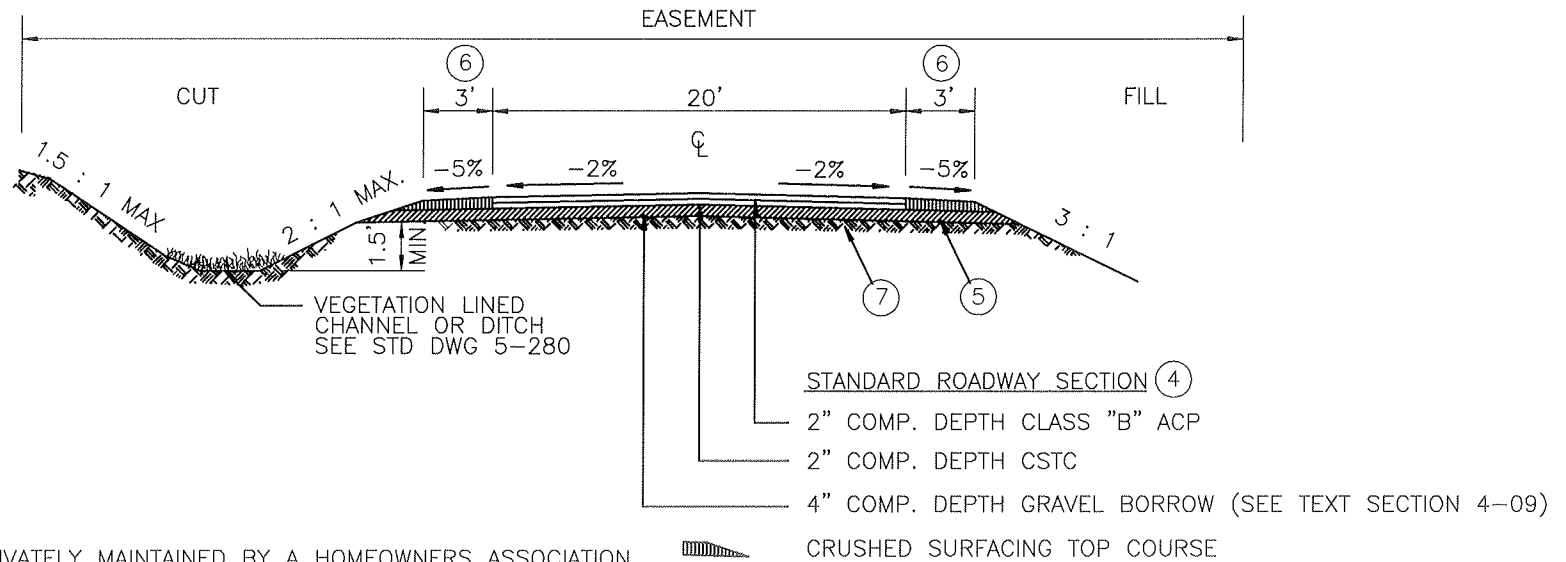
Steve Morrison

COUNTY ROAD ENGINEER

5-29-03

DATE

91 TO 1000 ADT



NOTES:

1. ROAD SHALL BE PRIVATELY MAINTAINED BY A HOMEOWNERS ASSOCIATION.
 2. REFER TO STD DWG 3-060 FOR GEOMETRIC STANDARDS.
 3. PRIVATE ROAD INTERSECTIONS SHALL COMPLY WITH STD DWG 3-100.
 4. ROADWAY SECTION MAY BE ADJUSTED WITH THE APPROVAL OF THE ENGINEER UPON SUBMISSION OF SUBSTANTIATING ENGINEERING DATA (SOILS TESTS, ETC.)
 5. AT THE ENGINEER'S DISCRETION, THE 4 INCH GRAVEL BORROW LAYER MAY BE ELIMINATED OR SUBSTITUTED WITH A LESSER THICKNESS OF GRAVEL BORROW OR EQUIVALENT MATERIAL WHEN SUBGRADE CONDITIONS WARRANT, AS SUBSTANTIATED BY MATERIALS TESTING.
 6. A WALKWAY WILL BE REQUIRED WHERE THE PRIVATE ROAD ADT IS PROJECTED TO BE 250 OR GREATER. THE WALKWAY SHALL CONSIST OF A 7 (SEVEN) FT. PAVED SHOULDER ON ONE SIDE OF THE ROAD, DELINEATED BY A FOUR INCH WHITE PAINTED STRIPE. A 3 FT. PAVED SHOULDER SHALL BE PROVIDED ON THE OTHER SIDE.
 7. SUBGRADE SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SECTION 2-03.3(14)C OF THE WSDOT/APWA SPECIFICATIONS (METHOD B). SURFACING MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
- SEE TEXT SECTION 3-05

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SNOHOMISH COUNTY PUBLIC WORKS

3-090

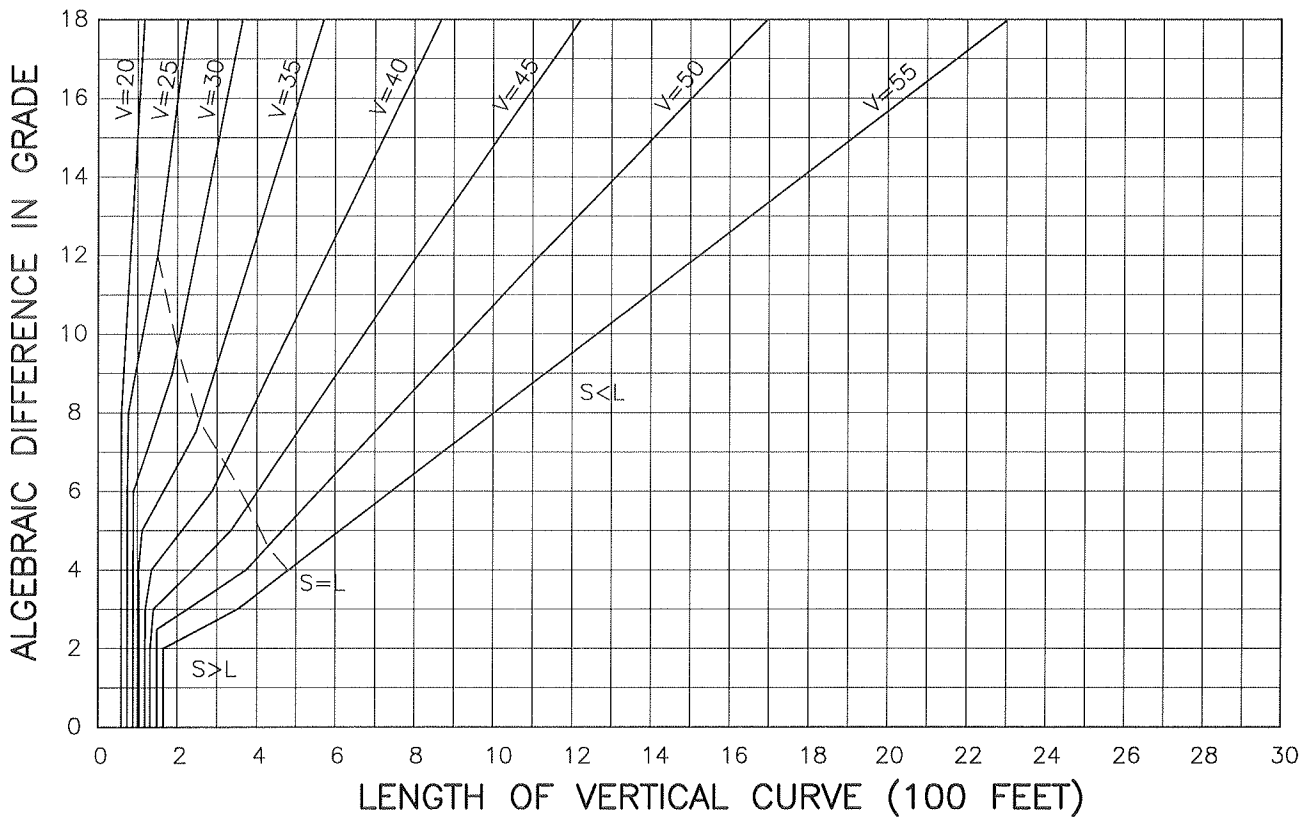
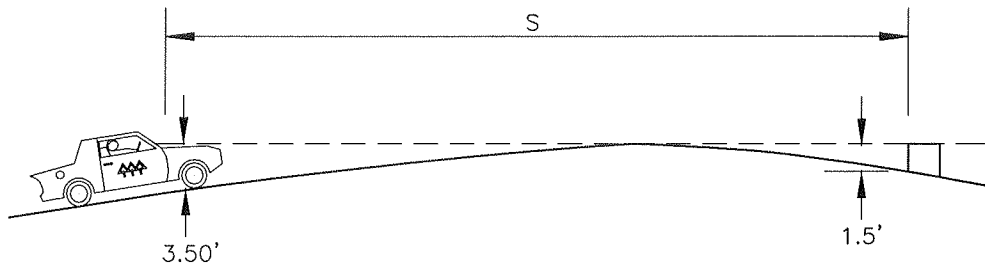
PRIVATE SUBCOLLECTOR ROAD (RURAL)

APPROVED BY:

Stewart E. Norman 4-17-03

COUNTY ROAD ENGINEER

DATE



WHEN S > L	WHEN S < L
$L = 2S - \frac{1917}{A}$	$L = \frac{AS^2}{1917}$
L = CURVE LENGTH (FEET) A = ALGEBRAIC GRADE DIFFERENCE (PERCENT) S = SIGHT DISTANCE (FEET)	

DESIGN SPEED (MPH)	DESIRABLE MINIMUM STOPPING DISTANCE (FEET)	MINIMUM LENGTH (FEET)
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

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SNOHOMISH COUNTY PUBLIC WORKS

3-110

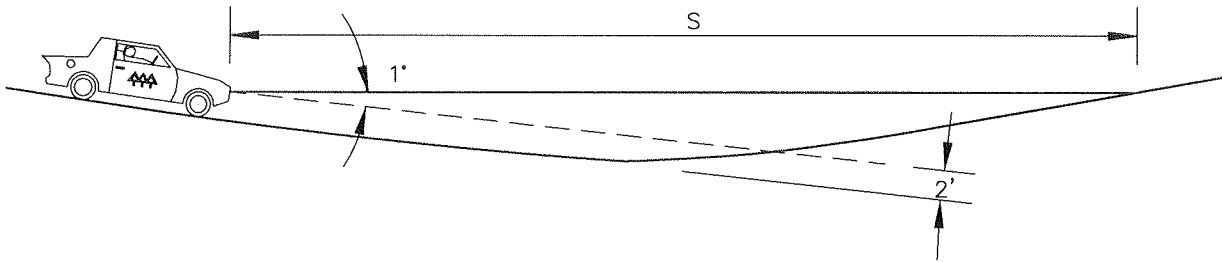
CREST VERTICAL CURVES

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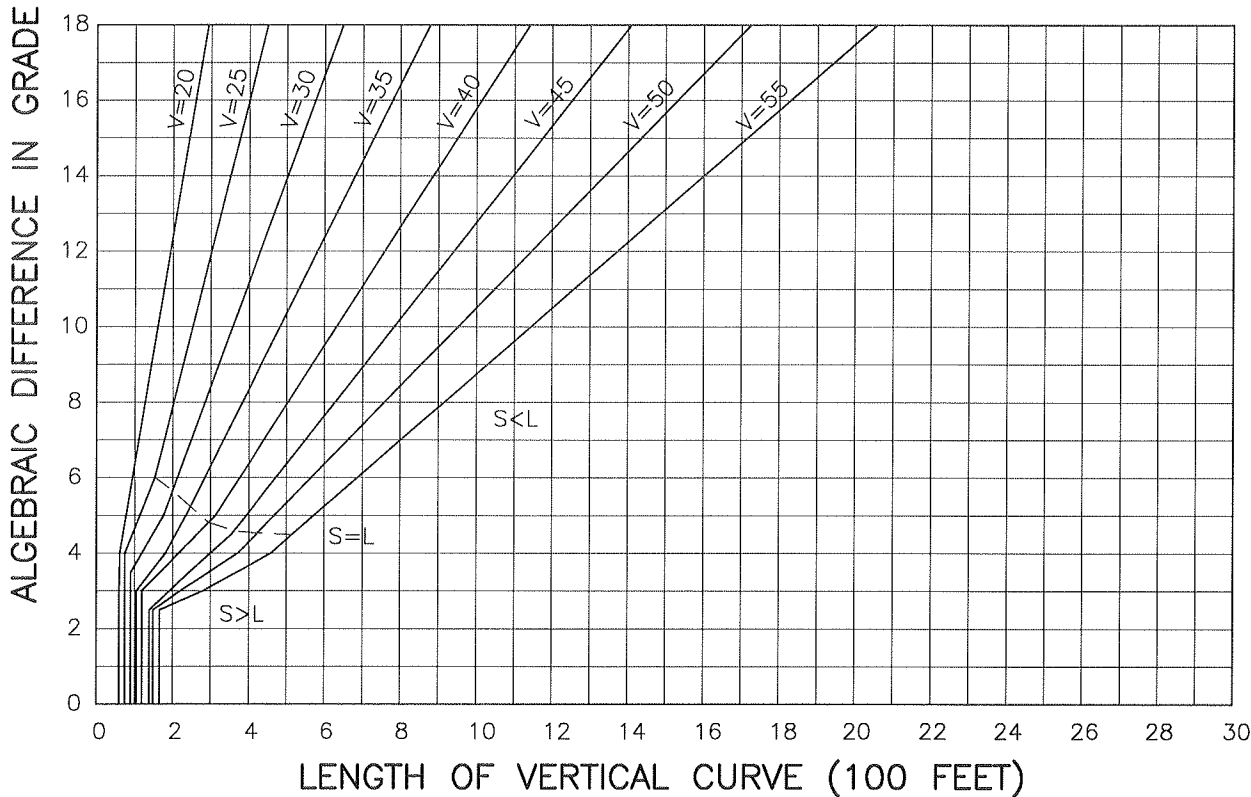
Steve Morrison 2-7-03

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)
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

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SNOHOMISH COUNTY PUBLIC WORKS

3-120

SAG VERTICAL CURVES

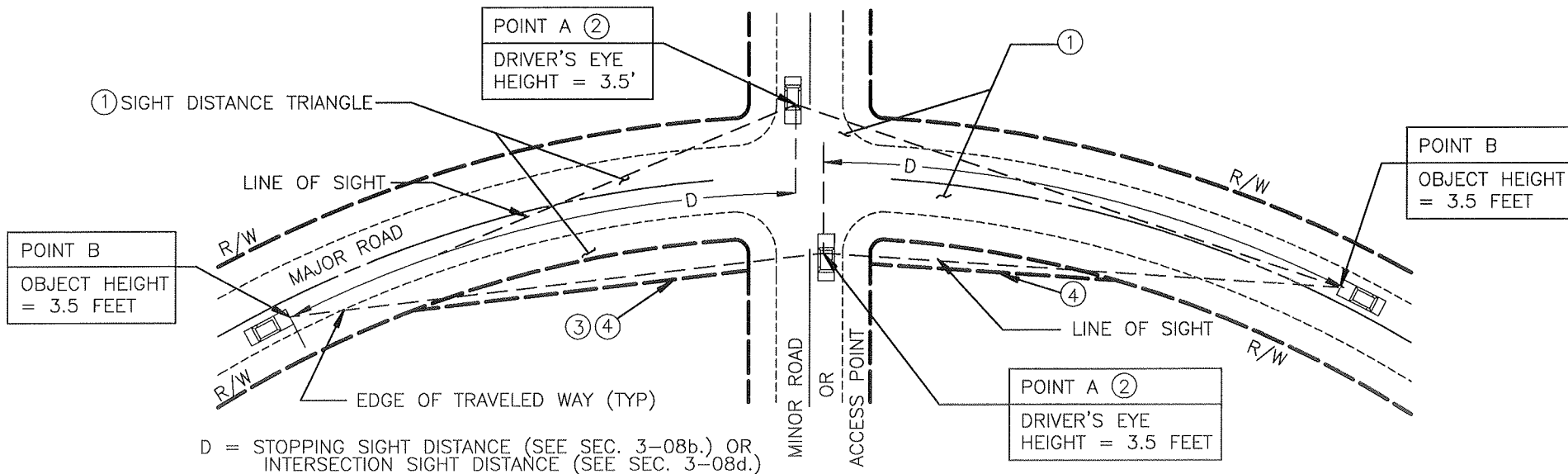
APPROVED BY:

Steve C. Newman

COUNTY ROAD ENGINEER

2-7-03

DATE



NOTES:

1. AT ANY INTERSECTION OR ACCESS POINT CONNECTION, THERE MUST EXIST CLEAR SIGHT TRIANGLES, FREE OF SIGHT OBSCURING OBJECTS. UNOBSTRUCTED LINES OF SIGHT MUST BE PROVIDED FROM A POINT ON THE MINOR ROAD 15 FEET BEHIND THE EDGE OF TRAVELED WAY (POINT A) TO ALL POINTS IN THE TRAVELED WAY INCLUDED IN THE CLEAR SIGHT TRIANGLES. THE BASE OF EACH CLEAR SIGHT TRIANGLE SHALL BE AT LEAST EQUAL TO THE STOPPING SIGHT DISTANCE D.
 2. THE DRIVER'S EYE TO DETERMINE LINE OF SIGHT AT INTERSECTIONS IS 3.5 FEET ABOVE THE MINOR ROAD PAVEMENT, WITH AN OBJECT HEIGHT OF 3.5 FEET ABOVE THE MAJOR ROAD PAVEMENT.
 3. THE AREA WITHIN THE CLEAR SIGHT TRIANGLE MUST BE FREE FROM ANY SIGHT OBSCURING OBJECTS. GROUND SHALL BE REGRADED AND VEGETATION TRIMMED OR REMOVED SO THAT NO OBJECT PROTRUDES CLOSER THAN 18 INCHES TO THE LINE OF SIGHT BETWEEN THE MINOR ROAD/ACCESS POINT AND THE MAJOR ROAD.
 4. ADDITIONAL R/W WHERE REQUIRED FOR SIGHT DISTANCE.
- SEE TEXT SECTION 3-08.

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SNOHOMISH COUNTY PUBLIC WORKS

3-140

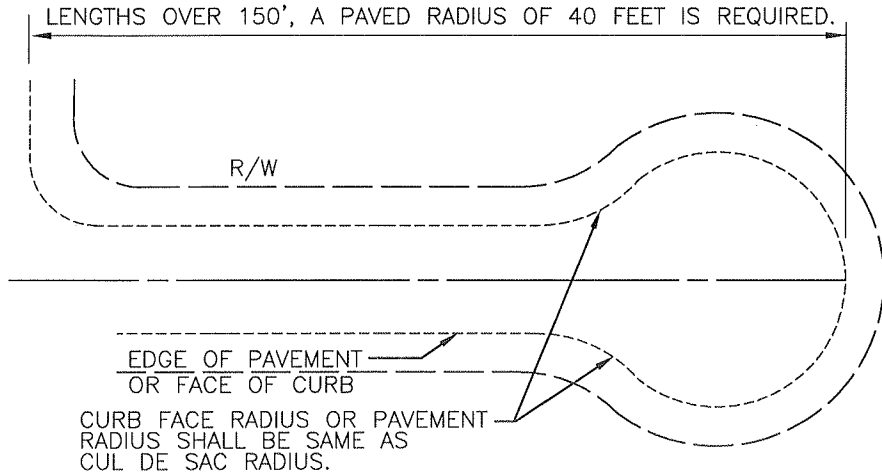
CLEAR SIGHT TRIANGLES

APPROVED BY:

Steve E. Norman 2-28-03

COUNTY ROAD ENGINEER

DATE

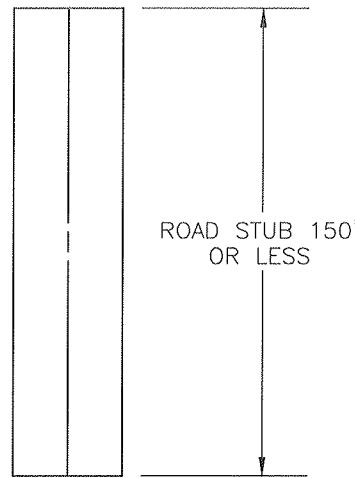
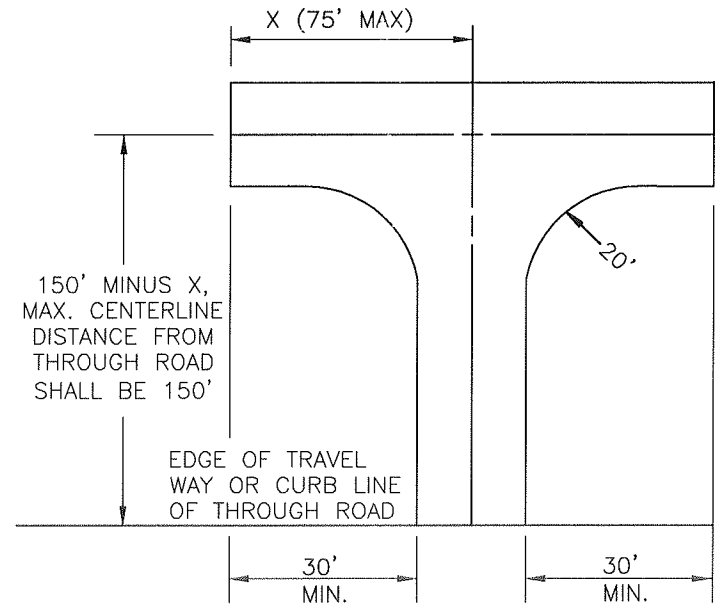


**CUL-DE-SAC
(PERMANENT)**

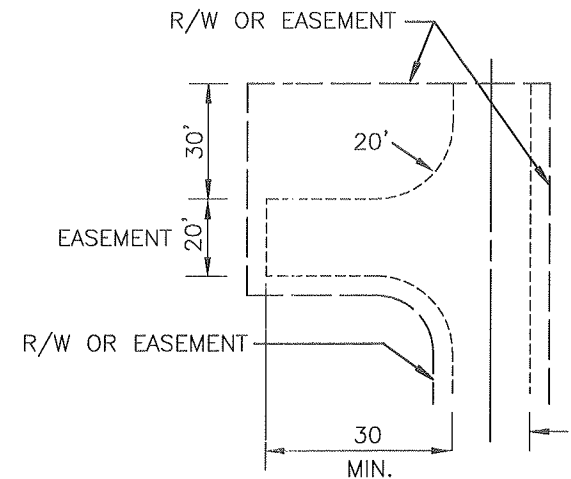
NOTES:

1. ROAD WIDTH AND PAVEMENT SECTION SHALL BE AS SPECIFIED FOR EACH CLASS OF ROAD. REFER TO SECTION 3 AND STANDARD DRAWINGS 3-010 THROUGH 3-060.
2. LENGTH OF ROAD END IS MEASURED FROM THE FACE OF CURB LINE (EXTENDED) OF THE PREVIOUS INTERSECTING ROAD.
3. NO DRIVE THROUGH CUL DE SACS ARE ALLOWED.
4. HAMMERHEAD TURNAROUNDS ARE ALLOWED ONLY UPON APPROVAL OF THE FIRE MARSHAL AS A TEMPORARY TURNAROUND.
5. PERMANENT ROAD ENDS SHALL INCLUDE PEDESTRIAN FACILITIES IN URBAN AREAS OR WHERE THESE FACILITIES ARE PROVIDED ALONG THE ROAD LEADING TO THE PERMANENT ROAD END. PEDESTRIAN FACILITIES ARE NOT REQUIRED ALONG ROADS 150 FEET OR LESS IN LENGTH.
6. ROADS 150 FEET OR LESS MAY END IN A ROAD STUB. HOWEVER, IF FOUR OR MORE ACCESS POINTS ARE LOCATED WITHIN 50 FEET OF THE ROAD END, THEN A CUL-DE-SAC WITH A MINIMUM PAVED RADIUS OF 30 FEET IS REQUIRED.

SEE TEXT SECTION 3-10



ROAD STUB



**HAMMERHEAD
(TEMPORARY)**

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SNOHOMISH COUNTY PUBLIC WORKS

3-150

ROAD ENDS

APPROVED BY:

Stewart E. Norman 2-28-09

COUNTY ROAD ENGINEER

DATE