CITY OF BLACK DIAMOND

June 18, 2009 Workstudy Agenda

25510 Lawson St., Black Diamond, Washington

Workstudies are meetings for Council to review upcoming and pertinent business of the City. Public testimony is only accepted at the discretion of the Council

6:00 P.M. – CALL TO ORDER, ROLL CALL

1.) Construction Standards - Streets – Mr. Boettcher

2.) Adjournment

CHAPTER 3 – TRANSPORTATION

3.1 GENERAL STANDARDS

3.1.01 GENERAL

The intent of this chapter is to encourage the uniform development of an integrated and accessible public transportation system that will support present and future transportation demands. Through the implementation of these standards, streets are built as transportation facilities as well as public space, contributing positively to the character of an area. These standards help create an efficient multimodal transportation system with minimal environmental impact to the community.

3.1.02 GENERAL NOTES (STREET CONSTRUCTION)

The following is a listing of General Notes that should be incorporated on any plan set submitted to the City Engineer for construction approval dealing with street design. These notes should be included on the first street plan sheet. All the notes on the list may not pertain to every project. The Engineer should include only those notes that are relevant to the project and may omit non-relevant notes. If additional notes are needed for specific aspects, they should be added after the General Notes.

Streets General Notes:

1. All workmanship and materials will be in accordance with the current City of Black Diamond Standards and the most current edition of the *State of Washington Standard Specifications for Road, Bridge and Municipal Construction.*

2. The contractor will be responsible for all traffic control in accordance with *U.S. Department of Transportation Manual on Uniform Traffic Control Devices* (MUTCD). Prior to disruption of any traffic, traffic control plans will be prepared and submitted to the City for approval. No work will commence until all approved traffic control is in place. Work shall cease when traffic control fails to meet minimum requirements.

3. All curb, curb and gutter, street grades, sidewalk grades, and any other vertical and/or horizontal alignment will be staked by a licensed engineering or surveying firm capable of performing such work.

4. Where new asphalt joins existing, the existing asphalt will be cut to a neat vertical edge and tacked with Asphalt Emulsion Type CSS-1 in accordance

with the standard specifications. The new asphalt will be feathered back over existing asphalt to provide for a seal at the saw cut location and the joint sealed with Grade AR-4000W paving asphalt. A sand blanket shall be applied to the surface to minimize "tracking" of same.

5. All local access streets shall require sawcut and sealing of all joints.

6. All arterials and collectors shall require tapered grinding/inlay for all joints

7. Compaction of subgrade, rock, and asphalt will be in accordance with the WSDOT standard specifications.

8. Form and subgrade inspection by the City is required before pouring concrete. A minimum twenty-four hours notice is required to be provided to the City for form inspection.

9. Testing and sampling frequencies will be as described in Section 3.3.12.

3.2 ROADWAY DESIGN

3.2.00 GENERAL

Street design must provide for the maximum loading conditions anticipated. The width and grade of the pavement must conform to specific standards set forth herein for safety and uniformity.

3.2.01 FUNCTIONAL CLASSIFICATION

City streets are divided into Principal arterial, Minor arterial, Collector, Neighborhood collector, and local access streets in accordance with regional transportation needs and the functional use each serves. Function is the controlling element for classification and shall govern right-of-way, road width, and road geometrics. New streets will be classified by the City Engineer.

3.2.02 DESIGN STANDARDS

The design of public streets and roads shall depend upon their type and usage. The design elements of city streets will conform to City standards as set forth herein. See the table of Minimum Street Design Standards.

A. Alignment: The layout of streets shall provide for the continuation of existing arterial and collector streets in adjoining subdivisions or of their proper projection when adjoining property is not subdivided.

Local access streets, which serve primarily to provide access to abutting property, shall be designed to discourage through traffic.

B. Grade: Street grade should conform closely to the natural contour of the land. The minimum allowable profile grade for roadways with a gutter shall be .5%. The minimum allowable profile grade for roadways without a gutter shall be .7%. The maximum grade varies depending on the functional classification of the roadway. See table of Minimum Street Design Standards.

C. Width: The pavement and right-of-way width depend upon the street classification. The table of Minimum Street Design Standards shows the minimum widths allowed. Pavement widths will be measured as shown on Standard Plans for each street classification.

D. Streets shall be extended to serve no more than 150 units, except on an interim basis up to 300 units where a future point of access will be extended.

MINIMUM STREET DESIGN STANDARDS

DESIGN STANDARD	ARTERIALS		COLLECTORS		LOCAL ACCESS		
	PRINC. ART.	MINOR ART.	COLL-ECTOR	NGBHD. COLL.	INDUS.	COMM.	RESIDEN-TIAL
Average Daily Trips	15,000 +	10,000 – 20,000	5,000 – 10,000	1,000 – 5,000	0-1,000	0-1,000	0-1,000
Design Speed (mph)	35 – 45*	35 – 45*	25 – 30*	25 – 30*	25	25	25
Min. Right-of-Way	60'-100'	54' (2 lane) 66' (3 lane)	60'-72'	70'	50'	60'-68'	48'-60'
Min. pavement Width (face of gutter to face of gutter)	38'-62'	30' (2 lane) 40' (3 lane)	28' (2 lane) 40' (3 lane)	28' (width depends on storm water design)	28'	36'	32' parking both sides; 28' parking one side; 22' no parking
Number of Lanes	3 - 5	2 - 3	2 – 3	2	2	2	2
Traffic Lane Widths	13 ' - 14' 12' TWLT lane	14' – 15' 12' TWLT lane	14' 12' TWLT lane	14'	14'	11'	9' - 10' (w/ parking); 11' (no parking)
Parking Lane	None	None	None	None	None	Both Sides	No, One Side, Both Sides
Min. / Max. Grade	.5% - 8%	.5% - 8%	.5% - 10%	.7% - 6%	.5% - 8%	.5% - 10%	.5% - 12%
Planting Strip	0' - 10', both sides	4' – 6', both sides	8', both sides	4' both sides	7', both sides	none	6', both sides
Curb	Curb & Gutter, both sides	Curb & Gutter, both sides	Cub & Gutter, both sides	Curb, both sides	Curb & Gutter, both sides	Curb & Gutter, both sides	Curb & Gutter, both sides
Sidewalks	6' Conc. sidewalk both sides	6' Conc. sidewalk both sides	5' Conc. sidewalk both sides	5' Asphalt sidewalk both sides	5' Conc. sidewalk	10.5' Conc. Sidewalk both sides	5' Conc. sidewalk

Cul-De-Sac Radius	N/A	N/A	N/A	N/A	N/A	N/A	45'
Intersection Curb Radius	35'	35'	35'	25'	25'	25'	25'
Bicycle Facilities	Shared Roadway	Shared Roadway	Shared Roadway	Shared Roadway	Shared Roadway	Shared Roadway	Shared Roadway
Street Lighting	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* Specific Design speed shall be identified by the City's Public Works Director.

3.2.03 NAMING

The developer must check with the Public Works Department regarding the naming of streets. This should be done at the time the project submittal. The Community Development Department will ensure that the name assigned to a new street is consistent with policies of the City.

3.2.04 SIGNING AND STRIPING

Street signs are defined as any regulatory, warning, or guide signs. The developer is responsible for providing all street signs. Street signs will comply with the latest edition of the *U.S. Department of Transportation Manual on Uniform Traffic Control Devices* (MUTCD).

Street signs shall be located at the Northeast Corner of each intersection. Street designation signs, including poles and hardware, will be provided and installed by the developer. Street designation signs will display street names or grid numbers as applicable.

Thermoplastic pavement markings shall be in conformance with the latest edition of the *U.S. Department of Transportation Manual on Uniform Traffic Control Devices* (MUTCD). Pavement markings shall be completed by the developer.

Signage and channelization plans shall be a separate sheet as part of the engineering plan submittal.

3.2.05 RIGHT-OF-WAY

Right-of-way is determined by the functional classification of a street. See Minimum Street Design Standards Table for additional information.

Right-of-way requirements may be increased if additional lanes, pockets, transit lanes, bus loading zones, operational speed, bike lanes, utilities, schools, or other factors are proposed and/or required by the City Engineer.

Right-of-way will be conveyed to the City on a recorded plat or by a right-of-way dedication or separate instrument. All costs of same to be borne by the property owner/developer.

3.2.06 PRIVATE STREETS

Private streets will be allowed only if:

1) the streets meet all applicable public street standards, including right-of-way widths,

2) no through connection points to the existing or future public street system is needed,

3) a financial analysis shall be prepared to determine the amount of funding needed to maintain the street annually and repave the street after 25 years. The developer shall establish a Street maintenance Covenant with each home served by the street establishing a overseeing association and monthly contributions for maintenance and funds to be set aside for major rehabilitation in the distant future. The form of the street maintenance association and the covenant shall be approved by the City Attorney.

4) used as part of a short plat.

3.2.07 STREET FRONTAGE IMPROVEMENTS

A. All commercial and multifamily development, plats, and short plats will install street frontage improvements at the time of construction as required by the City. Such improvements may include curb and gutter; sidewalk; street storm drainage; street lighting system; traffic signal modification; regrading; realignment; street trees; utility relocation or installation; undergrounding of franchised utilities; landscaping; and street widening, all pursuant to these Standards. Plans will be prepared and signed by a licensed civil engineer registered in the State of Washington.

B. At a minimum, all street frontage improvements will provide a City Standard base and pavement section across the full frontage of the property being developed from centerline to right-of-way line and tapered in to meet the existing improvement width on the downstream traffic side.

C. If the City has a pending public project on the subject street, the Public Works Director may accept an assignment of funds for the estimated cost of the frontage improvement construction cost.

D. In certain circumstances it may not be appropriate to require installation of street frontage improvements at the time a development occurs. In such situations, the Public Works Director is authorized to permit deferral of installation of such improvements. The applicant may enter into an agreement with the City which provides for the improvements to be installed at a later date by the applicant.

Alternatively, at the City's discretion, the applicant may sign a waiver of protest in a Local Improvement District (LID) or Utility Local Improvement District (ULID). Storm Drainage issues and impractical improvements will be key factors in this decision.

3.2.08 HALF STREET

A half street is an otherwise acceptable roadway section modified to conform to limited right-of-way on the boundary of property subject to development. A half street may be permitted subject to approval by the City Engineer when:

1. There is reasonable assurance of obtaining the prescribed additional right-of-way from the adjoining property suitable for completion of a full-section roadway; and

2. Such alignment is consistent with or will establish a reasonable circulation pattern; and

3. The right-of-way width of the half street will equal at least 30', or 50% of the required right-of-way, whichever is greater; and

4. The traveled way will be surfaced the same as the designated street classification to a width not less than 20'; and

5. The half street will be graded consistent with the centerline of the ultimate roadway section; and

6. Property line edge of street will be finished with permanent concrete curb, or curb and gutter to ensure proper drainage, bank stability, and traffic safety.

3.2.09 MEDIANS

A median will be in addition to, not part of, the specified roadway. Medians shall be designed so as not to limit turning radius or sight distance at intersections. Landscaping and irrigation shall be installed when directed by the City Engineer.

3.2.10 CUL-DE-SAC

Cul-de-sacs are discouraged as they do not promote interconnectivity of the street network. Cul-de-sacs are streets designed to have one end permanently closed and shall be no longer than 500'. At the closed end, there shall be a widened "bulb" having a minimum paved traveled radius as shown in the Minimum Street Design Standards Table. A landscaped island in the center of any cul-de-sac will be allowed if a viable Home Owners Association accepts the maintenance.

3.2.11 TEMPORARY DEAD ENDS

Where a street is temporarily dead ended, turn around provisions must be provided where the road serves more than one lot. If pre-approved by the local fire marshal and the City Engineer, the turn around may be a hammerhead with a minimum distance on both sides at the centerline intersection of 60' to facilitate emergency vehicle turn-around.

3.2.12 INTERSECTIONS

A. Traffic control will be as specified in the current edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) or as modified by the City Engineer as a result of appropriate traffic engineering studies.

B. Street intersections shall be laid out so as to intersect as nearly as possible at right angles. Sharp-angled intersections will be avoided. For reasons of traffic safety, a "T" intersection (three-legged) is preferable to a crossroad (four-legged) intersection for local access streets. For safe design, the following types of intersection features should be avoided:
    1. Intersection with more than four intersecting streets;
    2. "Y"-type intersections where streets meet at acute angles;
    3. Intersections adjacent to bridges and other sight obstructions;
    4. In no case will the angle of intersection be less than 60 degrees or greater than 120 degrees. The preferred angle of an intersection is 90 degrees.

C. Spacing between adjacent intersecting streets, whether crossing or "T," should be as follows:

WHEN HIGHEST CLASSIFICATION INVOLVED IS:	CENTERLINE OFFSET SHOULD BE:	
	DESIRABLE	MINIMUM
Principal Arterial	500-750 feet	350 feet
Minor Arterial	400-600 feet	300 feet
Major Collector	350-500 feet	250 feet
Neighborhood Collector	250-350 feet	200 feet
Local Access	250-350 feet	150 feet

"Desirable" conditions shall be applied when sufficient space or street frontage is available. When different class streets intersect, the higher standard will apply on curb radii. Deviations to this may be allowed at the discretion of the City Engineer.

D. On sloping approaches at an intersection, landings shall be provided when practical. Approach grades in excess of 3% shall be avoided on the intersecting roads in the vicinity of the intersection. Where conditions make such designs too expensive or

impractical, grades shall not exceed 6%, with a corresponding adjustment in specific geometric design elements such as sight distance. Grades in excess of 3% shall be require approval of the City Engineer.

3.2.13 DRIVEWAYS

3.2.13.1 GENERAL

1. All driveway approaches from the curb to the back of the sidewalk shall be constructed of Portland Cement concrete and shall be subject to the same testing and inspection requirements as curb, gutter, and sidewalk. Where there is no sidewalk, curb or gutter required an asphalt driveway approach is also an option.

2. The angle between any driveway and the street shall be not less than 60-degrees. The two edges of each driveway shall be parallel.

3. Maintenance of driveway approaches shall be the responsibility of the owners whose property they serve.

4. All abandoned driveway areas shall be removed and the curbing and sidewalk or shoulder and ditch section shall be properly restored, at the Property Owner's expense. No public curb shall be cut unless a driveway is installed.

5. Joint-use driveways serving two adjacent parcels is encouraged and may be built on their common boundary upon formal written agreement by both property owners & approval of the City. The agreement shall include a recorded easement for both parcels of land specifying joint use.

6. The vertical grade of the driveway shall not exceed 15% and shall be designed in such a way as to preclude vehicles dragging when entering or exiting the site.

7. No driveway shall be located as to create a hazard to pedestrians, bicyclists or motorists or to invite or compel illegal or unsafe traffic movements. No driveway shall be constructed in such a manner as to be a hazard to any existing street light, utility pole, traffic regulating device, or fire hydrant. The cost of relocating any such structure, when necessary to do so, shall be paid by the abutting property owner and shall require approval by the City.

8. No commercial or industrial driveway shall be approved where backing onto the street or sidewalk will occur.

9. Only one driveway will be allowed per single family lot.

3.2.13.2 ARTERIAL STREETS

1. No driveway may access an arterial street within 75' (measured along the arterial) of any other such arterial access on either side of the street; provided that such access may be located directly opposite another access. No driveway access shall be allowed onto an arterial street within 150' of the nearest right-of-way line of an intersecting street. No driveway connections will be allowed to an arterial where an alternative side street or frontage road can be developed as identified in the Comprehensive Plan..

2. If access to lesser classified streets cannot be obtained or developed, direct driveway access will be allowed. The City reserves the right to restrict access, require frontage road connections or local access street development as part of any development along an arterial.

3. Within the limitations set forth above, access to arterial streets within the City shall be limited to one driveway for each tract of property separately owned, unless otherwise approved in writing by the City Engineer.

4. Driveways giving direct access onto arterials may be denied if alternate access is available.

3.2.13.3 WIDTH

1. The maximum driveway section width shall be as outlined in the table below. A road approach or wider driveway width may be approved by the City Engineer where substantial oversized vehicle traffic exists, where divisional islands are required/desired, or where multiple exit or entrance lanes are needed.

ACCESS ON TO ROADWAY CLASSIFICATION	MAXIMUM DRIVEWAY WIDTH (FT)		
	INDUSTRIAL USE	COMMERCIAL USE	RESIDENTIAL USE
TWO-WAY ACCESS DRIVES			
Arterial / Collector	35	30	24
Local Access	30	26	24
ONE-WAY ACCESS DRIVES			
Arterial / Collector	24	20	20

Local Access	24	20	14

2. Except as otherwise provided, the width of any residential driveway shall not exceed 24'. The City Engineer may authorize additional residential driveway widths for three-car garages or for access driveways necessary for off-street parking of recreational vehicles.

3.2.13.4 DRIVEWAY AND ACCESS SIGHT DISTANCE REQUIREMENTS

Adequate entering sight distance and stopping sight distance shall be provided. Sight clearance requirements shall take into account the proportional relationship between speed and stopping distance. The sight distance area is a clear-view triangle formed on all intersections by extending two lines of specified length from the center of the intersecting streets along the centerlines of both streets and connecting those endpoints to form the hypotenuse of the triangle.

The area within the triangle will be subject to restrictions to maintain a clear view on the intersection approaches. The vertical clearance area within the sight distance triangle will be free from obstructions to a motor vehicle operator's view between a height of 2.5' and 10' above the existing surface of the street.

Sight obstructions that may be excluded from these requirements include: fences in conformance with all applicable City codes; utility poles; regulatory signs; trees trimmed from the base to a height of 10' above the street; places where the contour of the ground is such that there can be no cross visibility at the intersection; saplings or plant species of open growth habits and not in the form of a hedge that are so planted and trimmed as to leave at all seasons a clear and unobstructed cross view; buildings constructed in conformance with the provisions of appropriate zoning regulations; and preexisting buildings.

3.2.14 INFILL DEVELOPMENT ALONG EXISTING STREETS

These "Engineering Design and Construction Standards" have been developed with a primary focus on new, green-field development within the City. However, a substantial portion of "Old" Black Diamond (downtown area) has existing streets built within narrow right-of-ways. The City recognizes the need for flexibility in determining design standards for improvements to these existing streets. The following table and transportation details included in a later section of this document serve to assist in outlining the required minimum standards. Professional engineering judgment shall be

used by the design professional to determine the appropriate level of improvements required.

The developer will be responsible to improve the transportation system as per these infill development requirements for all projects involving developments which meet the following criteria:

1. Creation of a new residential or commercial structure;
2. Remodeling of an existing structure which results in an increase in the appraised value of 25% or more.

Actual development requirements may vary based on such conditions, including, but not limited to: existing pavement condition; presence of existing curbs and/or sidewalks; anticipated traffic volumes.

STREET NAME	FROM	TO	ROW WIDTH (FT)	TYPICAL SECTION FOR DEVELOPMENT
1ST AVE	2ND AVE	3RD AVE / SR 169	50	NO CHANGE
1ST AVE	3RD AVE / SR 169	PARK ST	60	DEV. STANDARDS
1ST AVE	BAKER ST	2ND AVE	50	NO CHANGE
1ST AVE	END	BAKER ST	60	ST-12
218TH AVE SE	SE 289TH ST	SE 292ND ST	60	ST-24
218TH PL SE	SE 292ND ST	SE 295TH PL	60	ST-24
220TH PL SE	222ND PL SE	SE 289TH SE	60	ST-24
222ND PL SE	SE 290TH ST	220TH PL SE	60	ST-24
225TH AVE SE	SE 302ND ST	SE 300TH ST	60	ST-24
225TH AVE SE	SE 304TH PL	END	40	ST-20
225TH PL SE	SE 298TH ST	END	60	ST-20
226TH AVE SE	SE 298TH ST	END	60	ST-24
227TH PL SE	SE 304TH PL	END	40	ST-16
227TH PL SE	SE 304TH PL	SE 307TH PL	40	ST-20

228TH AVE SE	SE 288TH ST	229TH PL SE	60	ST-24
229TH AVE SE	229TH PL SE	SE 292ND PL	60	ST-24
229TH PL SE	228TH AVE SE	END	60	ST-24
229TH PL SE	SE 307TH PL	END	40	ST-24
230TH CT SE	SE 288TH ST	END	40	NO CHANGE
232ND AVE SE	SE 288TH ST	290TH ST	60	NO CHANGE
232ND AVE SE	SE 290TH ST	SE 291ST CT	60	NO CHANGE
232ND AVE SE	SE 291ST CT	SE 292ND PL	60	NO CHANGE
232ND AVE SE	SE 292ND PL	SE 293RD PL	60	NO CHANGE
232ND AVE SE	SE 293RD PL	SE 298TH ST	60	ST-20
232ND AVE SE	SE 298TH ST	232ND PL SE	60	ST-20
232ND PL SE	232ND AVE SE	234TH AVE SE	60	ST-20
233RD AVE SE	SE 289TH ST	SE 291ST ST	48	NO CHANGE
233RD AVE SE	SE 293RD PL	END	48	NO CHANGE
234TH AVE SE	232ND PL SE	END	60	ST-20
234TH AVE SE	SE 288TH ST	SE 289TH ST	60	NO CHANGE
234TH AVE SE	SE 289TH ST	SE 291ST ST	60	NO CHANGE
235TH AVE SE	SE 293RD PL	SE 298TH ST	60	NO CHANGE
236TH AVE SE	SE 291ST ST	SE 293RD PL	30	NO CHANGE
289TH ST, SE	220TH PL SE	218TH AVE SE	60	ST-24
289TH ST, SE	234TH AVE SE	233RD AVE SE	48	NO CHANGE
289TH ST, SE	234TH AVE SE	END	48	NO CHANGE
290TH ST, SE	224TH AVE SE	222ND PL SE	60	ST-24
290TH ST, SE	232ND AVE SE	END	40	NO CHANGE

291ST CT, SE	232ND AVE SE	END	40	NO CHANGE
291ST ST, SE	233RD AVE SE	234TH AVE SE	48	NO CHANGE
292ND PL, SE	229TH AVE SE	232ND AVE SE	60	ST-24
292ND ST, SE	216TH AVE SE	218TH AVE, SE	60	ST-30
293RD PL, SE	232ND AVE SE	233RD AVE SE	60	NO CHANGE
293RD PL, SE	233RD AVE SE	235TH AVE SE	60	NO CHANGE
293RD PL, SE	235TH AVE SE	236TH AVE SE	60	NO CHANGE
295TH PL, SE	218TH PL SE	SE 296TH ST	60	ST-24
296TH ST, SE	224TH AVE SE	END	60	ST-24
297TH ST, SE	224TH AVE SE	SE 298TH ST	60	ST-24
298TH ST, SE	232ND AVE SE	235TH AVE SE	60	ST-24
298TH ST, SE	SE 297TH ST	226TH AVE SE	60	ST-24
299TH ST, SE	235TH AVE SE	END	60	ST-24
2ND AVE	BAKER ST	LAWSON ST	30	ST-24
2ND AVE	LAWSON ST	1ST AVE	50	NO CHANGE
2ND AVE	PARK ST	BAKER ST	30-40	ST-20
300TH ST, SE	224TH AVE SE	END	60	ST-24
302ND ST, SE	224TH AVE SE	225TH AVE SE	60	ST-24
304TH PL, SE	224TH AVE SE	225TH AVE SE	40-60	ST-24
304TH PL, SE	225TH AVE SE	227TH PL SE	40	ST-24
307TH PL, SE	224TH AVE SE	229TH PL SE	40-50	ST-24
312TH ST, SE	228TH AVE SE	END	60	ST-30
4TH AVE	BAKER ST	LAWSON ST	30	ST-20
4TH AVE	JAMES ST	PARK ST	40	ST-20

4TH AVE	PARK ST	BAKER ST	30	ST-20
5TH AVE	BAKER ST	PARK ST	40	ST-24
5TH AVE	LAWSON ST	BAKER ST	40	ST-24
5TH AVE	LAWSON ST	PACIFIC AVE	40	ST-24
5TH AVE	PARK ST	END	40	ST-24
6TH AVE	BAKER ST	AUBURN / BLACK DIAMOND RD	40	ST-24
ALPINE DRIVE	MORGAN DRIVE	UNION DRIVE	20	ST-16
BAKER STREET	3RD AVE / SR 169	4TH AVE	45	ST-20
BAKER STREET	4TH AVE	5TH AVE	45	ST-20
BAKER STREET	5TH AVE	6TH AVE	40	ST-20
BOTTS DRIVE	LAWSON ST	END	35	ST-20
BRANCH ROAD	ROBERTS DRIVE	MORGAN STREET	50	ST-16
BRUCKNER'S COURT	BRUCKNER'S WAY	END	50	NO CHANGE
BRUCKNER'S WAY	BRUCKNER'S COURT	FAIRFAX STREET	50	NO CHANGE
BRUCKNER'S WAY	FAIRFAX STREET	END	50	NO CHANGE
BRUCKNER'S WAY	ROBERTS DRIVE	BRUCKNER'S COURT	50	NO CHANGE
BUENA VISTA DRIVE	MORGAN DRIVE	UNION DRIVE	25	ST-16
BUENA VISTA DRIVE	UNION DRIVE	HIGHLAND DRIVE	25	ST-16
COMMISSION ST	RAILROAD AVE	FAVRO ST	40	ST-16
CUMBERLAND PLACE	KANASKET DR	END	50	NO CHANGE
CUMBERLAND WAY	KANASKET DR	SELLECK PLACE	50	NO CHANGE
CUMBERLAND WAY	SELLECK PLACE	UNNAMED CUL-DE-SAC	50	NO CHANGE
CUMBERLAND WAY	UNNAMED CUL-DE-SAC	KANASKET DR	50	NO CHANGE
DAIL DRIVE	MORGAN DRIVE	UNION DRIVE	20	ST-12

E SUMMIT DR	N SUMMIT DR	S SUMMIT DR	40	NO CHANGE
FAIRFAX STREET	BRUCKNER'S WAY	END	50	NO CHANGE
FAIRFAX STREET	SUNNY LANE	BRUCKNER'S WAY	50	NO CHANGE
FAVRO STREET	MERINO ST	COMMISSION ST	30	ST-16
FRANKLIN DR	W SUMMIT DR	E SUMMIT DR	40	NO CHANGE
HIGHLAND DR	BUENA VISTA DR	END	20	ST-12
HYDE AVENUE	MASON STREET	END	40	NO CHANGE
JAMES STREET	3RD AVE / SR 169	4TH AVE	40	ST-20
KANASKET DR	BLACK DIAMOND - RAVENSDALE RD	CUMBERLAND WAY	60	NO CHANGE
KANASKET DR	CUMBERLAND PL	END	60	NO CHANGE
KANASKET DR	CUMBERLAND WAY	PALMER PLACE	60	NO CHANGE
KANASKET DR	PALMER PLACE	CUMBERLAND PL	60	NO CHANGE
LYNCH LANE	ROBERTS DRIVE	END	30	NO CHANGE
MASON STREET	ABRAMS DRIVE	HYDE AVE	50	NO CHANGE
MASON STREET	HYDE AVE	END	50	NO CHANGE
MCKAY LANE	NEWCASTLE DR	NEWCASTLE DR	50	NO CHANGE
MERINO STREET	FAVRO ST	END	30	ST-16
MERINO STREET	RAILROAD AVE	FAVRO ST	20-30	ST-16
MORGAN DRIVE	ALPINE DRIVE	BUENA VISTA DRIVE	20	ST-16
MORGAN DRIVE	BUENA VISTA DR	END	20	DEV. STANDARDS
MORGAN DRIVE	DAIL DRIVE	END	25	ST-12
MORGAN DRIVE	ROBERTS DRIVE	DAIL DRIVE	25	ST-12
MORGAN DRIVE	ROBERTS DRIVE	ALPINE DRIVE	25	ST-16
NEWCASTLE DRIVE	LAWSON ST	MCKAY LANE	50	NO CHANGE

NEWCASTLE DRIVE	MCKAY LANE	END	50	NO CHANGE
NEWCASTLE DRIVE	MCKAY LANE	MCKAY LANE	50	NO CHANGE
OLD LAWSON RD	3RD AVE / SR 169	END	40	ST-20
PALMER PLACE	KANASKET DR	END	50	NO CHANGE
PARK STREET	2ND AVE	3RD AVE / SR 169	35	ST-20
PARK STREET	3RD AVE / SR 169	4TH AVE	40	ST-30
PARK STREET	4TH AVE	5TH AVE	40	DEV. STANDARDS
RAILROAD AVE	BAKER ST	MERINO ST	80	NO CHANGE
RAILROAD AVE	END	BAKER ST	50	NO CHANGE
SELLECK PLACE	CUMBERLAND WAY	END	50	NO CHANGE
SUMMIT DR, S	3RD AVE / SR 169	E SUMMIT DR	40	NO CHANGE
SUMMIT DR, S	E SUMMIT DR	W SUMMIT DR	40	NO CHANGE
SUMMIT DR, W	S SUMMIT DR	N SUMMIT DR	40	NO CHANGE
SUNNY LANE	FAIRFAX STREET	END	60	NO CHANGE
SUNNY LANE	ROBERTS DRIVE	FAIRFAX STREET	60	NO CHANGE
TERRACE PLACE	MORGAN STREET	END	50	NO CHANGE
UNION DRIVE	ALPINE DRIVE	BUENA VISTA DRIVE	20	ST-16
UNION DRIVE	BUENA VISTA DR	END	20	ST-12
UNION DRIVE	DAIL DRIVE	END	20	ST-12
UNION DRIVE	ROBERTS DRIVE	DAIL DRIVE	20-40	ST-12
UNION DRIVE	ROBERTS DRIVE	ALPINE DRIVE	20	ST-16
UNNAMED STREET (ST. B CHURCH)	6TH AVE	END	20	NO CHANGE
WAGON ROAD	ROBERTS DRIVE	END	20	NO CHANGE

3.3 STREETS

3.3.01 SUBGRADE PREPARATION

The subgrade area of the street right-of-way shall be cleared of brush, weeds, vegetation, grass and debris. All cleared and grubbed materials shall be satisfactorily disposed of. The existing grade shall be excavated to bearing soil as approved by the design engineer and approved by the City Engineer. The subgrade shall be compacted to a minimum density and be witnessed by the City inspector. Compaction tests may be required to be conducted at the discretion of the City to verify same. All subgrade preparation shall be completed in conformance with the Washington State Department of Transportation Standard Specifications.

3.3.02 SURFACING REQUIREMENTS

The following are the minimum pavement sections that shall be constructed if an engineered pavement design is not submitted to and approved by the City Engineer:

MINIMUM PAVEMENT SECTION WITHOUT PAVEMENT DESIGN

	ARTERIALS		COLLECTORS		LOCAL ACCESS		
	PRINC. ART.	MINOR ART.	MAJOR COLL.	NGBHD. COLL.	INDUS.	COMM.	RES.
AC	8"	8"	4"	4"	4"	4"	4"
CSTC	2"	2"	2"	2"	2"	2"	2"
Gravel Base	25"	25"	25"	16"	25"	10"	10"

The following are the minimum pavement sections that shall be constructed if an engineered pavement design is submitted to and approved by the City Engineer. The pavement design shall be based on "in place" soils, depth of "free draining" structural materials, projected pavement loadings, roadway classification, average daily traffic volume, etc. Pavement design for arterials shall be for a 30-year performance period. Pavement design for all other roads shall be for a 20-year performance period. Design criteria and standards established by AASHTO, WSDOT, or the Asphalt Institute may be used to determine paving and subgrade depths and types of materials for the roadway section.

MINIMUM PAVEMENT SECTION WITH PAVEMENT DESIGN

	ARTERIALS		COLLECTORS		LOCAL ACCESS		
	PRINC.	MINOR	MAJOR	NGBHD.	INDUS.	COMM.	RES.

	ART.	ART.	COLL.	COLL.			
AC	6"	6"	4"	4"	4"	4"	4"
CSTC	2"	2"	2"	2"	2"	2"	2"
Gravel Base	6"	6"	6"	6"	6"	4"	4"

No traffic or equipment shall come in contact with the compacted asphalt surfacing until it has cooled and set sufficiently.

CONCRETE STREETS (ARTERIAL)

All arterial intersections shall be concrete extending 75' from the intersection in all directions.

In cases where a concrete street is to be utilized, a structural section design for a 30 year life shall be submitted to the City for review and approval. A minimum of an 8" concrete section shall be required.

For concrete pavement surfacing, no traffic shall come in contact with the finished surface for a period of 14 days after the concrete is placed, unless otherwise directed by the Engineer.

3.3.03 TEMPORARY STREET PATCHING

Temporary restoration of trenches will be accomplished by using 2" medium curing (MC-250) liquid asphalt (cold mix), 2" asphalt treated base (ATB), or steel plates suitable for H-20 traffic loading conditions. Steel plates shall have a smooth transition of "cold mix" between pavement and steel plate.

Asphalt Treated Base (ATB) used for temporary restoration may be dumped directly into the trench, bladed and rolled. After rolling, the trench must be filled flush with asphalt concrete pavement to provide a smooth-riding surface.

Prior to beginning street trenching work, the contractor will ensure that temporary patching material is stockpiled at the project site, both for completing and maintaining the temporary patching. All temporary patches shall be maintained by the contractor until such time as the permanent pavement patch is in place. A permanent patch / pavement restoration shall be provided within three (3) working days. If the contractor is unable to maintain a patch for whatever reason, the City will patch it at actual cost plus overhead and materials and the contractor shall pay said City costs.

3.3.04 PAVEMENT RESTORATION

Trench cuts in roadways greatly degrade the condition of the pavement, as well as reduce the design life. The most significant damage can be seen in newer pavements. It is the goal of pavement restoration to have a pavement in better or as good as pre-trench cut condition. This can be achieved through prevention of trench cuts through utility coordination, and high-quality pavement restoration.

3.3.04.1 LANE WIDTH RESTORATION REQUIREMENTS

For longitudinal utility trench cuts in pavements over five years old, a minimum 2" overlay or full-depth pavement reconstruction is required for the following widths:

1. One-lane overlay or reconstruction: when trench cut or patch is within one travel lane.
2. Two-lane overlay or reconstruction: when trench cut or patch is within two travel lanes.
3. Additional overlay or reconstruction: when the remaining pavement area to the edge of existing pavement on either side is less than one travel lane or pavement is less than five years old. No longitudinal joints will be allowed in the wheel path.

3.3.04.2 PAVEMENT RESTORATION REQUIREMENTS

The "Pavement Restoration Requirements" table describes pavement restoration requirements for various size projects and various existing pavement conditions.

PAVEMENT RESTORATION REQUIREMENTS

PROJECT TYPE	EXISTING PAVEMENT CONDITION		
	NEW PAVEMENTS <5 YEARS OLD	PAVEMENTS >5 YEARS OLD	PAVEMENTS IDENTIFIED BY THE CITY TO BE RECONSTRUCTED

			WITHIN 2 YEARS
LARGE PROJECTS			
Consists of a project requiring a longitudinal trench cut through the paved roadway surface 50' or greater, or four or more transverse trench cuts per 300' of roadway	Complete reconstruction, grind/inlay, or overlay of entire paved surface (all lanes). Pavement section based on pavement design.	Grind/inlay, reconstruction, or overlay. Width per lane requirements in Section 3.3.04.1. Pavement section based on pavement design.	Depending on intended reconstruction strategy, could utilize lesser pavement restoration. Minimum restoration is patch.
SMALL PROJECTS			
Consists of a project requiring a longitudinal trench cut through the paved roadway surface less than 50' or less than four transverse trench cuts per 300' of roadway.	Pavement patch pursuant to standard plans. Trench restoration penalty assessed per square yard of trench.	Pavement patch pursuant to standard plans.	Depending on intended reconstruction strategy, could utilize lesser pavement restoration. Minimum restoration is patch.
EMERGENCY PROJECTS			
Consists of a project that could not be foreseen requiring immediate attention for the preservation of life or property.	Complete reconstruction, grind/inlay, overlay, or patch (dependent on project size – see above). Width pursuant to lane requirements in Section 3.3.04.1. Pavement section based on pavement design.	Complete reconstruction, grind/inlay, overlay, or patch (dependent on project size – see above). Width pursuant to lane requirements in Section 3.3.04.1. Pavement section based on pavement design.	Depending on intended reconstruction strategy, could utilize lesser pavement restoration. Minimum restoration is patch.

3.3.04.3 TRENCH CUTS IN NEW PAVEMENTS

Trench cuts are not permitted in pavements that have been constructed or rehabilitated within the last seven years. Rehabilitation includes all asphalt overlays. If there is no other option but to cut into a new pavement, the pavement must be restored pursuant to the "Pavement Restoration Requirements" table.

3.3.04.4 FEE-IN-LIEU

If it is determined by the City Engineer that full paved surface restoration impacts are excessive (i.e. traffic congestion, business impacts, etc.) and the City has a pending public project, restoration may be reduced to trench restoration only and a fee-in-lieu equal to the cost of full paved surface restoration assessed.

3.3.04.5 CONSTRUCTION REQUIREMENTS

1. All trench and pavement cuts will be made uniformly by wheel or saw cutting. If edge of trench line degrades, ravels, or is non-

uniform, additional saw cutting will be required prior to final patch or paving.

2. Tack coat will be applied to the existing pavement and edge of cut and will be emulsified asphalt grade CSS-1 as specified in the latest version of the WSDOT Standard Specifications. Longitudinal joints between successive layers of asphalt concrete shall be displaced laterally a minimum of 12" unless otherwise approved by the City Engineer.

3. Connection to existing asphalt at centerline, lane edges, and overlay ends shall be made by grinding. Feathering of asphalt is not acceptable without written approval from the City Engineer. Grind can be a few inches off centerline to avoid existing striping.

4. Surface smoothness shall be pursuant to the latest version of the WSDOT Standard Specifications. The paving will be corrected by removal and repaving.

5. All joints on trenching or overlays shall be sealed using crack sealant as specified in the latest version of the WSDOT Standard Specifications.

6. If existing concrete panels are affected, the full panel shall be removed and replaced. Cutting of existing concrete panels will not be allowed.

7. When trenching within the roadway shoulder(s), the shoulder should be restored to its original or better condition.

8. The final patch shall be completed as soon as possible and will be completed within three days after first opening the trench. This time frame may be adjusted if delays are due to inclement paving weather or other adverse conditions that may exist. However, delaying of final patch or overlay work is allowable only subject to the City Engineer's approval.

3.3.05 TRENCH EXCAVATION

Before commencement of trenching provide inlet protection for all downhill storm drain catch basins per City of Black Diamond and Washington Department of Ecology standards. Plastic sheeting must be available on-site. Any stockpiled material must be covered and secured if raining or left unattended overnight.

Clearing and grubbing limits may be established by the Engineer for certain areas and the Contractor shall confine his operations within those limits. Debris resulting from the clearing and grubbing shall be disposed of by the Contractor.

Trenches shall be excavated to the line and grade designated by the Engineer and in accordance with the Standards. Trenches shall comply with OSHA and WISHA requirements regarding worker safety. Where higher strength pipe or special bedding is required because of excess trench width or depth, it shall be furnished.

The trench shall be kept free from water until joining has been completed. Surface water shall be diverted so as not to enter the trench. The Contractor shall maintain sufficient dewatering equipment on the job to ensure that these provisions are carried out. The Contractor shall perform all excavation of every description and of whatever substance encountered as part of his trench excavation cost. Unsuitable material below the depth of the bedding shall be removed and replaced with satisfactory materials as determined by these Standards, the Standard Specifications, and the Engineer.

Trenching operations shall not proceed more than 100' in advance of pipe laying except with written approval of the Engineer.

When trenching operations take place in the public right-of-way, the pavement, and all other improvements, shall be restored as required by these Standards.

3.3.06 SHEETING AND SHORING

The Contractor shall provide and install sheeting and shoring as necessary to protect workmen, the work and existing utilities and other properties in compliance with OSHA and WISHA requirements. All sheeting and shoring above the pipe shall be removed prior to backfilling. Sheeting below the top of the pipe may be cut off and left in place.

Removal of the sheeting and shoring shall be accomplished in such a manner that there will be no damage to the work or to the other properties.

3.3.07 TRENCH DEWATERING

When water is encountered to a degree that a successful trenching and pipe laying operation is hampered, dewatering will be the responsibility of the Contractor. Determination of the method to be used to dewater trenched areas will be the responsibility of the Contractor, but any method used must be in accordance with the specifications and requirements of the Washington State Department of Ecology and the City.

3.3.08 PIPE ZONE BEDDING AND BACKFILL

Pipe shall be placed on a prepared subgrade of 5/8" minus crushed rock WSDOT spec 9-03.9(3) Base Course, at least 6" deep below the barrel of the pipe and filled around the pipe as shown in the Standard Details. The imported material shall be 5/8" minus crushed rock in conformance with Section 9-03.4(2) of the 2008 WSDOT Standard Specifications. After preparation of the subgrade, bell holes shall be excavated so the pipe, when laid, will have a uniform bearing under the full length of the pipe. The

Contractor shall be responsible for adequate support and bedding for the pipe. The trench shall be hand backfilled and compacted from the spring line of the pipe to 6" above the top of the pipe as shown in the Standard Detail. The material shall be placed and compacted to no less than 95 percent of the maximum theoretical density as measured by ASTM D-1557 prior to placement of the next layer.

Where the undisturbed trench below the bedding is unstable, the unstable materials shall be removed and backfilled with 5/8" minus crushed rock as necessary to produce a stable foundation upon which to place the bedding. The Contractor shall be responsible for providing a stable foundation for placing of the bedding.

Boulders, rocks, and other obstructions shall be entirely removed or cut out the full width of the trench and to a depth 6" below the pipe bottom and backfilled as provided above.

Whenever the trench is excavated below the depth required for proper bedding, it shall be backfilled with 5/8" minus crushed rock and compacted.

3.3.09 TRENCH BACKFILL

Compaction of backfill from the bottom of the trench to 6" above the top of the pipe shall be as specified in Section 3.3.08, Pipe Bedding.

Backfilling and surface restoration shall closely follow installation of pipe so that not more than 100' are left exposed during construction hours without approval of the City. Backfill shall not be deposited in the trench in any manner which will damage or disturb the pipe or the initial backfill. Compaction of the backfill may be accomplished by mechanical tamper, by vibrating, rolling, jetting, or a combination of these methods, as approved by the City. The Contractor shall provide the services of a testing laboratory acceptable to the Engineer to perform in place density tests to show that the specified density has been obtained. The approval of the compaction method and the achievement of the specified density shall, in no way, relieve the Contractor of responsibility for all repairs caused by settlement of the backfill prior to acceptance and during the two-year period after acceptance of the project.

All trenching shall be backfilled with bank run gravel for trench backfill materials conforming to the WSDOT Standard Specifications Section 9-03.19, unless otherwise approved by the City. The City shall be the sole judge of approving materials to be utilized for backfill. All backfill material shall be free from cinders, ashes, refuse, vegetable or organic material, boulders, rocks or stones, frozen soil, or other unsuitable material.

Backfill shall be compacted to 95% of the maximum density in traveled areas and road prisms, driveways, roadways, shoulders, parking lots or other traveled areas and 90% in all other areas. Backfill compaction shall be performed in 8" to 12" lifts. Compaction test results shall be supplied to the City for review and approval prior to paving.

3.3.10 CONTROLLED DENSITY FILL

Controlled Density Fill (CDF) can be proportioned to be flowable, non-segregating, or excavatable by hand or machine. CDF shall be placed by any reasonable means into the area to be filled. Desired flowability shall be achieved with the following guidelines:

Low Flowability	below 6" slump
Normal Flowability	6" – 8" slump
High Flowability	8" slump or greater

CDF patching, mixing and placing may be started if weather conditions are favorable, when the temperature is at 34° F and rising. At the time of placement, CDF must have a temperature of at least 40° F. Mixing and placing shall stop when temperature is 38° F or less and falling. Each filling stage shall be as continuous an operation as is practicable. CDF shall not be placed on frozen ground.

Trench section to be filled with CDF shall be contained at either end of trench section by bulkhead or earth fill.

When used to support existing asbestos cement (A.C.) pipe, the flowable CDF shall be brought up uniformly to the bottom of the A.C. pipe, as shown on the plans, or as directed by the Engineer.

Contractor shall provide steel plates to span utility trenches and prevent traffic contact with CDF for at least 24 hours after placement or until CDF is compacted or hardened to prevent rutting by construction equipment or traffic.

3.3.11 STAKING

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed by the State of Washington. All construction staking shall be inspected by the City prior to construction. Cut sheets shall be delivered to the City prior to the commencement of construction. A preconstruction meeting shall be held with the City prior to commencing staking.

The minimum staking of streets shall be as follows:

A. Stake centerline alignment every 25' (50' in tangent sections) with cuts and/or fills to subgrade.
B. Stake top of ballast and top of crushed surfacing at centerline and edge of pavement every 25'.
C. Stake top back of curb at a consistent offset for vertical and horizontal alignment.

3.3.12 TESTING

Testing shall be required at the developer's or contractor's expense. The testing shall be ordered by the developer or contractor, and the chosen testing lab shall be pre-approved by the City construction inspector. Testing shall be done on all materials and construction as specified in the WSDOT Standard Specifications and with frequency as specified herein or as required by the City construction inspector. Copies of the test and sample results shall be provided to the City within three days of the test results. In addition, the City shall be notified before each phase of street construction commences (i.e., staking, grading, subgrade, ballast, base, top course, and surfacing).

ITEM	TYPE OF TESTS	MINIMUM NUMBER	FREQUENCY
Gravel borrow	Grading & Sand Equiv.	1 Each	1 per 4000 Ton
Sand Drainage Blanket	Grading	1 Each	1 per 4000 Ton
CSTC	Grading, Sand Equiv. & Fracture	1 Each	1 per 2000 Ton
CSBC	Grading, Sand Equiv. & Fracture	1 Each	1 per 2000 Ton
Ballast	Grading, Sand Equiv. & Dust Ratio	1 Each	1 per 2000 Ton
Backfill / Sand Drains	Grading	1 Each	1 per 2000 Ton
Cement	Chemical & Physical Certification	1 Each	1 per Job
Asphalt Materials	Certification	1	1 per Job
Rubberized Asphalt	Certification	1	1 per Job
Gravel Backfill for:			
Foundations	Grading, Sand Equiv. & Dust Ratio	1 Each	1 per 1000 Ton
Walls	Grading, Sand Equiv. & Dust Ratio	1 Each	1 per 1000 Ton
Pipe Bedding	Grading, Sand Equiv. & Dust Ratio	1 Each	1 per 1000 Ton
Drains	Grading	1 Each	1 per 100 Ton
PCC Structures (Sidewalk, Curb and Gutter, Foundations):			
Coarse Aggregate	Grading	1 Each	1 per 1000 Ton
Fine Aggregate	Grading	1 Each	1 per 500 Ton
Consistency	Slump	1 Each	1 per 100 CY
Air Content	Air	1 Each	1 per 100 CY
Cylinders (28 Day)	Compressive Strength	2 Each	1 per 100 CY
Asphalt Cement Concrete:			
Blend Sand	Sand Equiv.	1 Each	1 per 1000 Ton
Mineral Filler	S.G. & Pi, Certification	1	1 per Job
Completed Mix	Grading, Sand Equiv. & Fracture Asphalt Content Compaction	1 Each 2 Each	1 per 1000 Ton 5 per 400 Ton
Asphalt Treated Base:			
Completed Mix	Grading & Sand Equiv. Asphalt Content Compaction	1 Each 1 Each	1 per 1000 Ton 5 per normal day's production (For 200 Tons or less per day, min. of 2)
Compaction Testing:			
Embankment	Compaction	1 Per Each 2-Ft Lift	1 per 500 LF
Cut Section	Compaction	1 Each	1 per 500 LF
CSTC	Compaction	1 Each	1 per 500 LF
CSBC	Compaction	1 Each	1 per 500 LF
Ballast	Compaction	1 Each	1 per 500 LF
Trench Backfill	Compaction	1 Per Each 1-Ft Lift	1 per 100 LF

3.4 SIDEWALKS, CURBS, AND GUTTERS

3.4.01 DESIGN STANDARDS

Plans for the construction of sidewalks and curb / curb and gutter are to be submitted as part of the street plans when applicable.

The City has set forth minimum standards that must be met in the design and construction of sidewalks, curbs, and gutters. Because these are minimum standards, they may be modified by the City should the City Engineer feel circumstances require increased or decreased widths.

3.4.02 SIDEWALKS

Sidewalks shall be constructed of Portland Cement Concrete, 4" thick (6" thick at driveway sections) per WSDOT Standard Specifications. When the sidewalk and curb / curb and gutter are contiguous, the width of the sidewalk will be measured from back of curb to back of sidewalk.

A. Arterial and Collector Streets. Sidewalks and curb / curb and gutter shall be required on both sides of all arterial and collector streets interior to the development. Sidewalks and curb / curb and gutter shall also be required on the development side of streets abutting the exterior of said development.

B. Local Access Streets. Sidewalks shall be required on both sides of local access streets interior to the development and on the development side of local access streets abutting the exterior of said development including cul-de-sacs.

C. The design and construction of all sidewalks shall provide for a gradual rather than an abrupt transition between sidewalks of different widths or alignments.

D. Form and subgrade inspection by the City is required before sidewalk is poured.

E. Monolithic pour of curb and sidewalk will not be allowed.

F. Repair, maintenance, and upkeep of the sidewalk and all streetside features, including landscaped areas and trees, is the responsibility of the abutting property owner.

3.4.03 CURB / CURB AND GUTTER

Cement concrete curb / curb and gutter will be used for all street edges as specified in Standard Plans for each street classification unless otherwise approved by the City Engineer.

Form and subgrade inspection by the City are required before curb / curb and gutter are poured.

3.4.04 CURB ACCESS RAMPS

All sidewalks must be constructed to provide for access ramps in accordance with the WSDOT ADA standards.

Curb access ramps shall be constructed of Portland Cement Concrete. Form and subgrade inspection by the City are required before an access ramp is poured.

3.4.05 STAKING

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of curb, gutter and sidewalk will be as follows:

> Stake top back of sidewalk or top back of curb at a consistent offset for vertical and horizontal alignment every 25' (50' in tangent sections).

3.5 ILLUMINATION

3.5.01 GENERAL

Street lights shall be required with the development of all new subdivisions, short plats, multi-family/townhouse projects, planned unit developments and other commercial or industrial property developments.

3.5.02 DESIGN STANDARDS

A street lighting plan submitted by the applicant and approved by the City Engineer shall be required for all street light installations. Street lighting shall conform with the applicable portions of the WSDOT Standard Specifications and as modified by the City of Black Diamond herein.

All public street light designs shall be prepared by an engineering firm capable of performing such work. The engineer shall be licensed by the State of Washington. The illumination plan shall be submitted on a separate sheet.

Arterials shall be lighted to maintain 0.04 lumens per square foot. Collectors shall be lighted at 0.03 lumens per square foot along the roadway and meet 0.04 lumens per square foot at intersections. Local access streets shall provide 0.03 lumens per square foot along the sidewalks either by regular front porch lights or pedestal 10 to 15 foot pedestrian level lighting. Commercial local access shall be lighted by regular store front lighting and or mid level street lighting. All street lighting fixtures shall be Light Emitting Diode bulb compatible and direct light toward the ground.

Additional lighting beyond the project limits may be required to address safe walk connections as determined by the traffic study for the development.

3.5.03 STAKING

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of luminaires shall be as follows:

1. Location and elevation to the center of every pole base
2. Location and elevation of each service disconnect
3. Location and elevation of each junction box

3.5.04 TESTING

All luminaires shall be subject to an electrical inspection. Lamp, photocell and fixture shall be warranted for a period of one year.

3.6 ROUNDABOUTS

All roundabouts shall be concrete and designed in accordance with chapter 915 of the WSDOT design manual.

3.7 SIGNALS

3.7.01 GENERAL

Signals shall be installed pursuant to the requirements set forth herein. This work shall consist of furnishing and installing a complete and functional traffic control system of controllers, signals, and appurtenances as required by the City.

3.7.02 DESIGN STANDARDS

Signal systems shall be designed in accordance with the specifications as set forth in the WSDOT Design Manual and the WSDOT Standard Specifications. All public signal designs shall be prepared by an engineering firm capable of performing such work. The engineer shall be licensed by the State of Washington. Approval of plans and specifications shall be obtained before construction commences.

Emergency vehicle preemption shall be included in the signal system design.

3.7.03 VIDEO DETECTION CONTROL

Induction loops will only be allowed where video detection is proved to be non functional.

Induction loops shall be constructed pursuant to WSDOT Standard Specifications, and the following:

A. Loops shall not be cut into final lift of new asphalt
B. Loops shall be preformed in crushed surfacing top course (CSTC) before paving or shall be cut in existing asphalt or leveling course to sub-base before intersection is overlaid

3.7.04 STAKING

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of signals will be as follows:

A. Location with cut or fill to center of all pole bases
B. Location of junction box
C. Location of all corners of controller base

D. Location of service disconnect
E. Locations of conduit crossings

3.7.05 TESTING

All signals will be subject to any necessary electrical inspections as well as requirements as set forth in the WSDOT Design Manual and the WSDOT Standard Specifications.

A signal system will not be approved or accepted by the City until the signal has performed correctly to the City's satisfaction for a 30-day "checkout" period as outlined below.

Controller and cabinet testing may be required by WSDOT and/or the City. All specifications and material samples will be submitted to the City for review and approval prior to installation.

3.7.06 CHECKOUT PROCEDURES

The contractor will call for an intersection checkout after completing the controller cabinet installation along with all other signal equipment complete with wiring connections. All parts and workmanship will be warranted for one year from date of acceptance.

New signals will operate without any type of failure for a period of 30 days. The contractor will have technical personnel available to respond to system failure within 24 hours during the 30-day checkout period.

Failure of any control equipment or hardware within the checkout period will restart the 30-day checkout period.

3.8 MISCELLANEOUS STREETSIDE FEATURES

3.8.01 GENERAL

Miscellaneous features included herein shall be developed and constructed to encourage the uniform development and use of roadside features wherever possible.

3.8.02 DESIGN STANDARDS

The design and placement of roadside features included herein shall adhere to the specific requirements as listed for each feature.

3.8.03 STAKING

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All staking shall be inspected by the City prior to construction.

3.8.04 TESTING

Testing shall be required at the developer's or contractor's expense on all materials and construction as specified in the WSDOT Standard Specifications and with a frequency as specified in the WSDOT Construction Manual.

3.8.05 SURVEY MONUMENTS

All existing (or new) survey control monuments and/or markers that are disturbed, lost, or destroyed during surveying or construction shall be replaced with the proper monument by a land surveyor registered in the State of Washington at the expense of the responsible contractor, builder or developer.

For monuments located on arterial or collector streets, a pre-cast concrete monument with cast iron monument case and cover is required. If the monument case and cover are placed in cement concrete pavement, the pre-cast base will not be necessary.

For monuments located on local access streets, a cast-in-place concrete surface monument with sufficient ferrous metal embedded to allow for detection by a magnetic detection device is required.

Appropriate monuments shall be placed as follows:

1. At all street intersections;
2. At the PC and PTs of all horizontal curves;
3. At PI of all horizontal curves of streets where the PI lies within the limits of the traveled roadway;
4. At all section corners, quarter corners, and sixteenth corners that fall within the right-of-way.

3.8.06 MAILBOXES

A. During construction, existing mailboxes shall be accessible for the delivery of mail or, if necessary, moved to a temporary location. Temporary relocation shall be coordinated with the U.S. Postal Service. The mailboxes shall be reinstalled at the

original location or to a new location as may be required by the local Postmaster, as outlined below and approved by the U.S. Postal Service.

B. Location
   1. Bottom or base of box shall be 36" to 42" above the road surface.
   2. Front of mailbox shall be 18" behind vertical curb face or outside edge of shoulder.
   3. Clustered mailboxes will, in all likelihood, be required in new developments. Sidewalks shall be constructed to facilitate same.
   4. Additional sidewalk width and/or sidewalk realignment may be required to accommodate mailbox location.

C. Mailboxes shall be set on posts strong enough to give firm support but not to exceed 4" x 4" wood or one 1-1/2" diameter pipe, or material and design with comparable breakaway characteristics.

3.8.07 GUARDRAILS

For purposes of design and location, all guardrails along roadways shall conform to the criteria of the WSDOT Design Manual as may be amended or revised.

3.8.08 STREET TREES

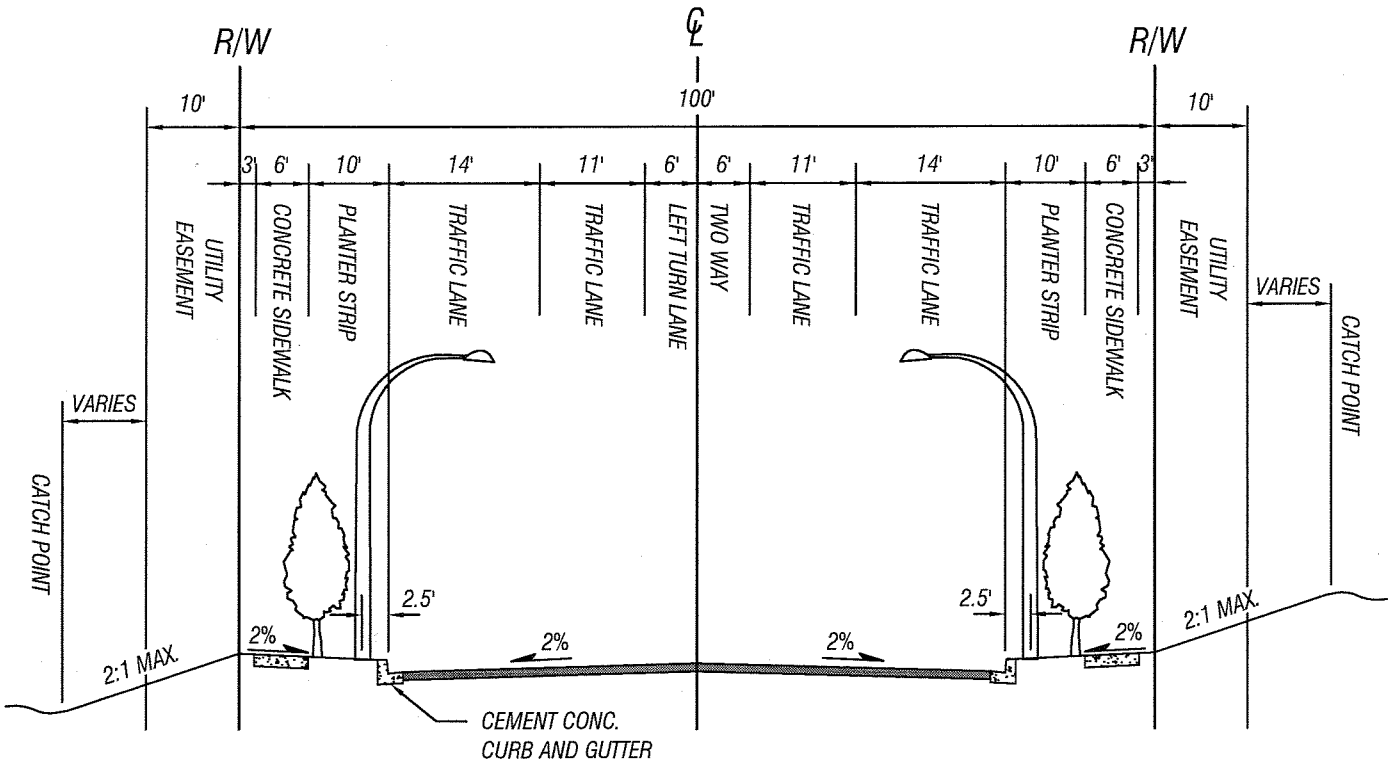
Street trees and shrubs shall be planted in the planter strip area in accordance with the following:

3.8.08.1 PLANT SIZE & SELECTION

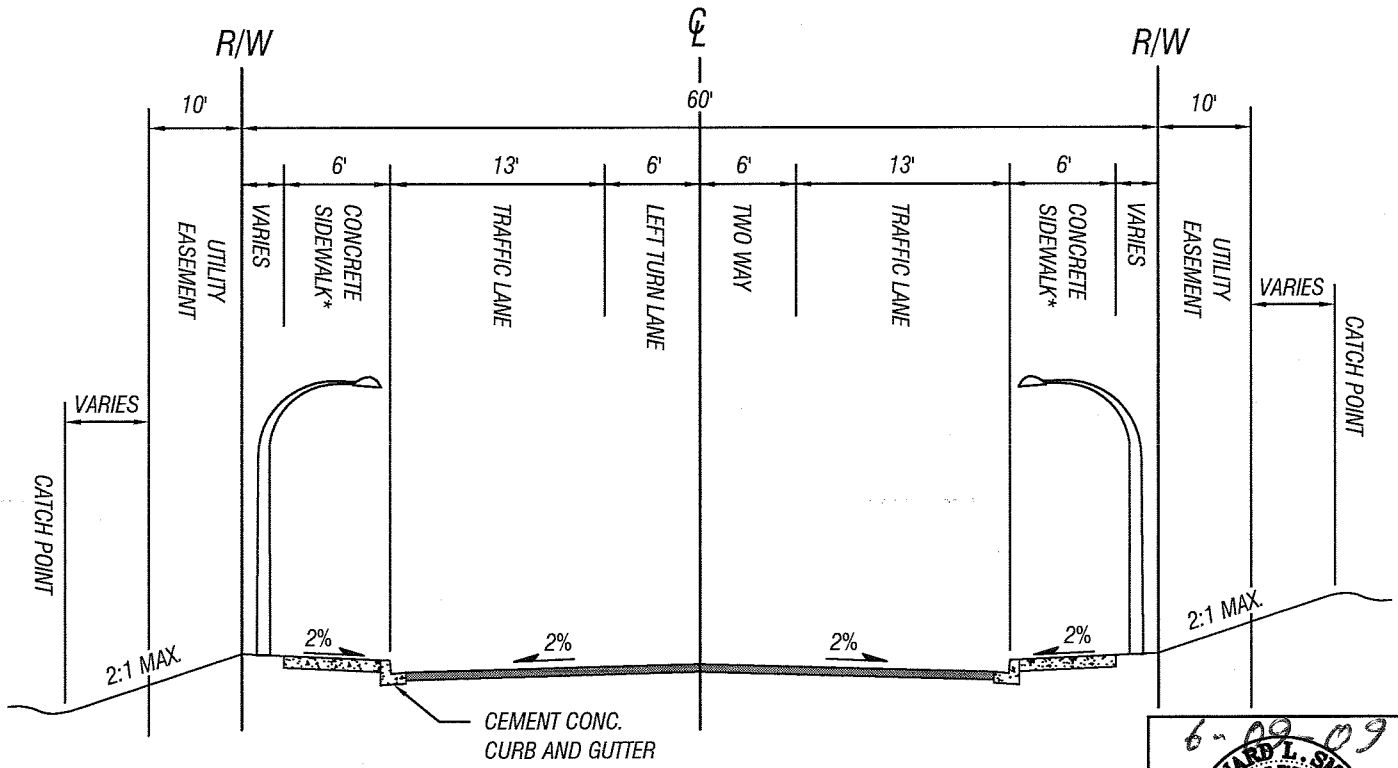
A. Trees, 2" to 3" caliper, measured 6" above the base.
B. Ground cover (i.e. ivy), 4" pot spaced 18"-20" on center or 1 gallon pots at 20" on center.
C. Low growth shrubs (i.e. juniper), 1 gallon pots at 3' on center.
D. Shrubs (i.e. rhododendron), 18"-24" height at 5' on center or 3 gallon pot at 5' on center.

3.8.08.2 LOCATION

Trees shall be located 4' behind the back of curb. Trees shall be spaced 35' on center. Tree spacing may be adjusted slightly to allow for a 10' clear zone on either side of a driveway.



5-LANE SECTION: FOR USE NORTH OF ROBERTS DRIVE



3-LANE SECTION: FOR USE SOUTH OF ROBERTS DRIVE

6-09-09

LEONARD L. SMITH
STATE OF WASHINGTON
20090
REGISTERED
PROFESSIONAL ENGINEER

Leonard L. Smith

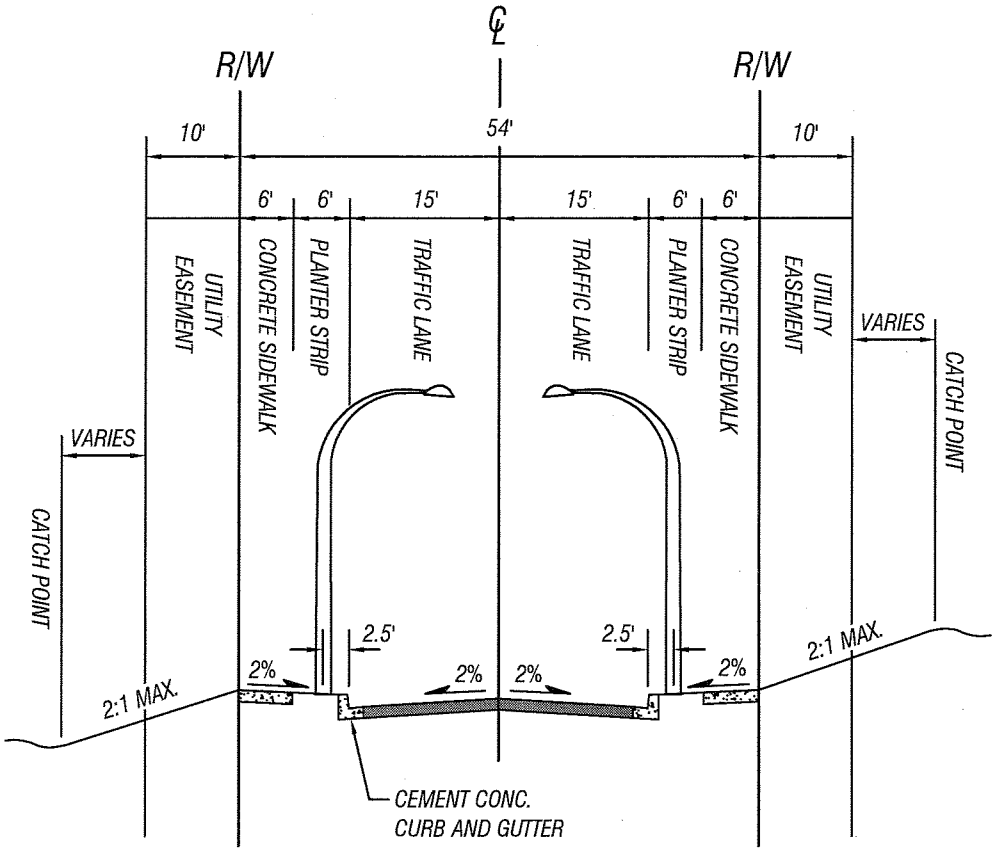
* SIDEWALKS WILL BE REQUIRED AS ADEQUATE RIGHT OF WAY AND SETBACK TO STRUCTURES IS AVAILABLE

CITY OF BLACK DIAMOND

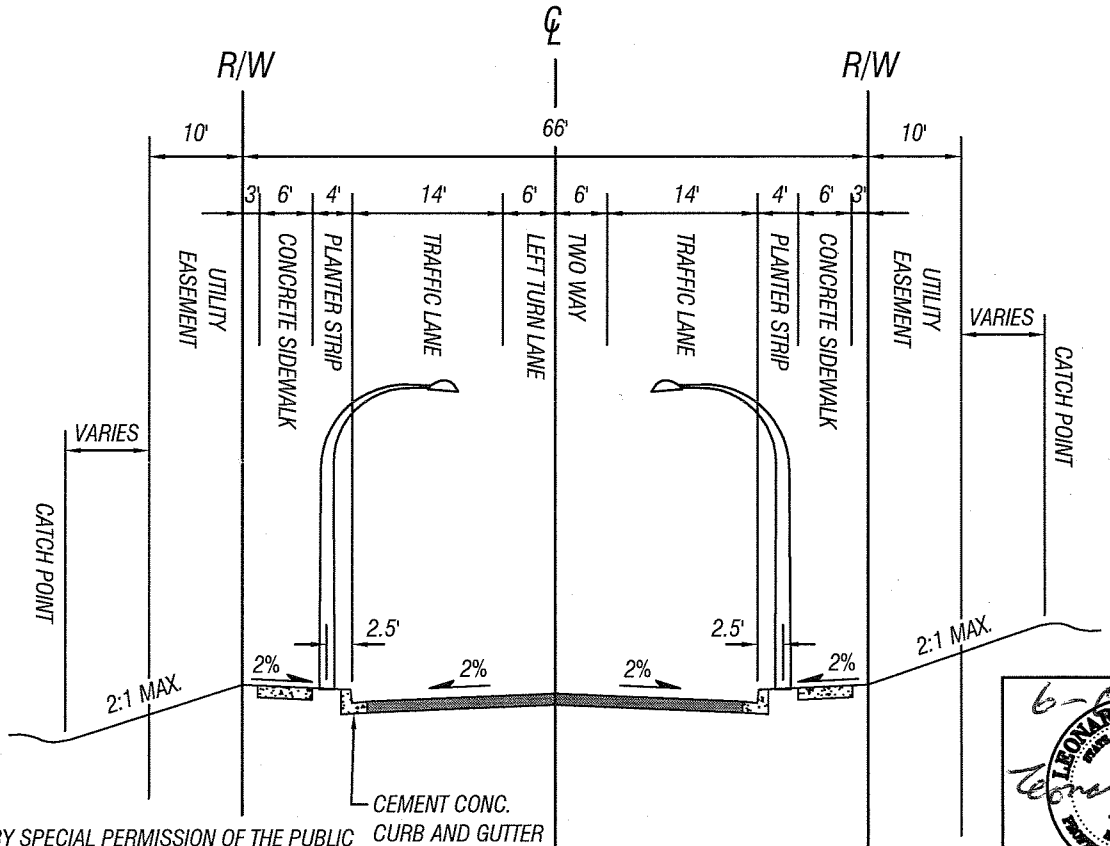
PRINCIPAL ARTERIAL

STANDARD DWG TR-1	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington



2-LANE SECTION



3-LANE SECTION

FOR USE ONLY BY SPECIAL PERMISSION OF THE PUBLIC WORKS DIRECTOR WHERE THERE ARE EXISTING DIRECT ACCESS ISSUES.

6-09-09

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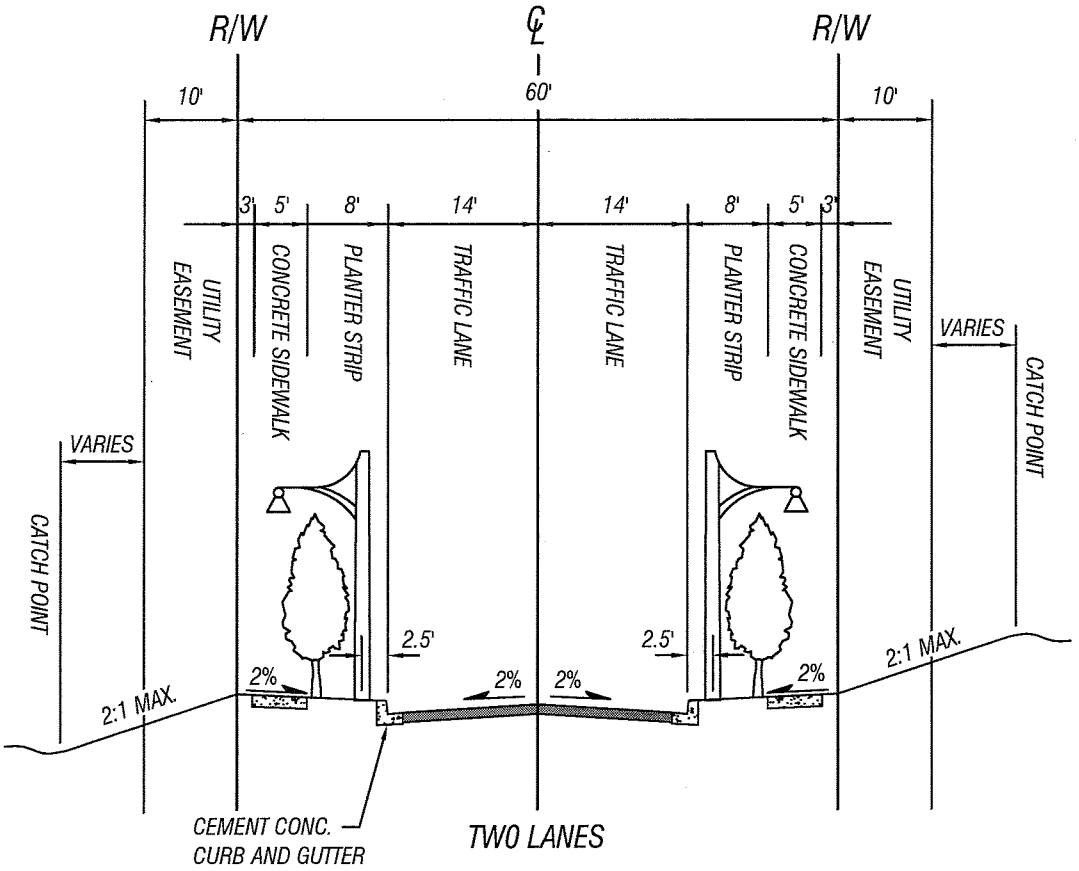
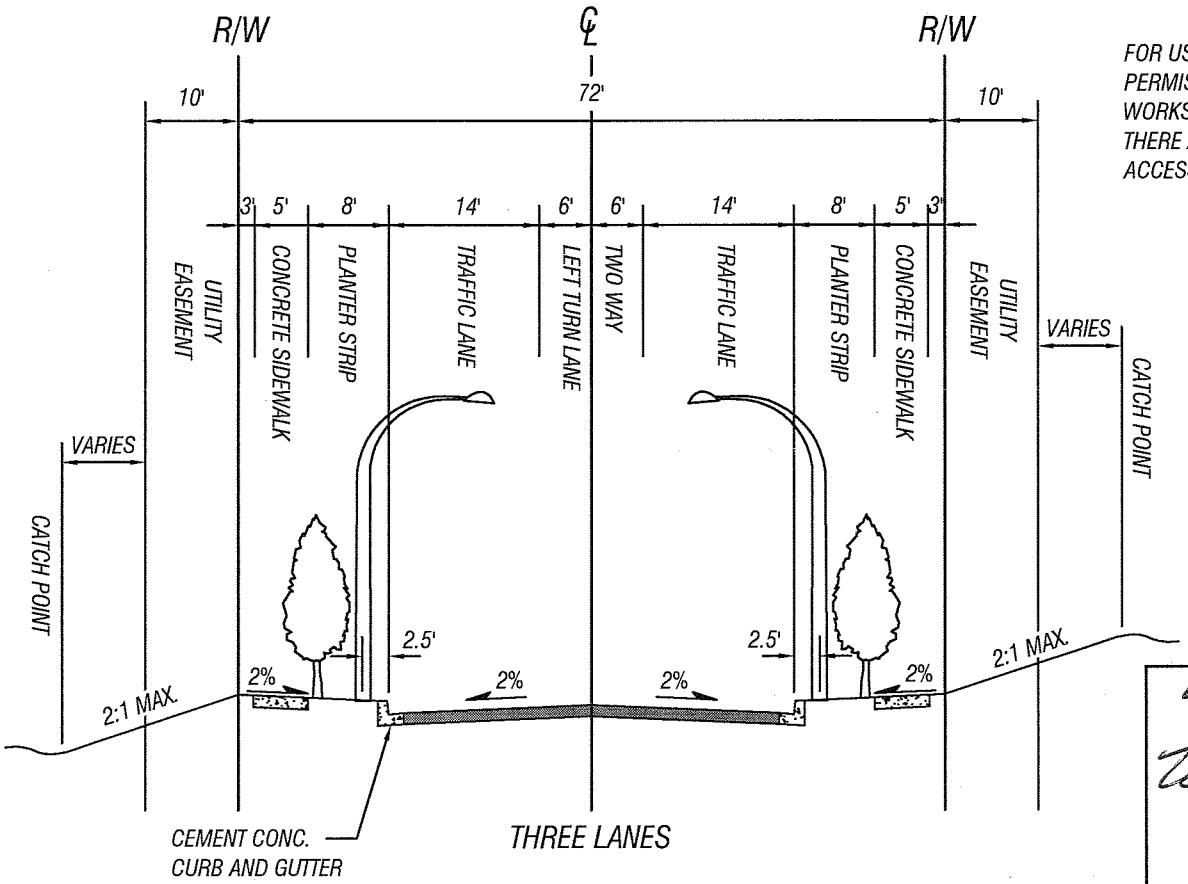
CITY OF BLACK DIAMOND

MINOR ARTERIAL

STANDARD DWG TR-2	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington





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6-03-09

LEONARD L. SMITH
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CITY OF BLACK DIAMOND

COLLECTOR

STANDARD DWG TR-3	NOT TO SCALE	04/01/09

PacWest Engineering
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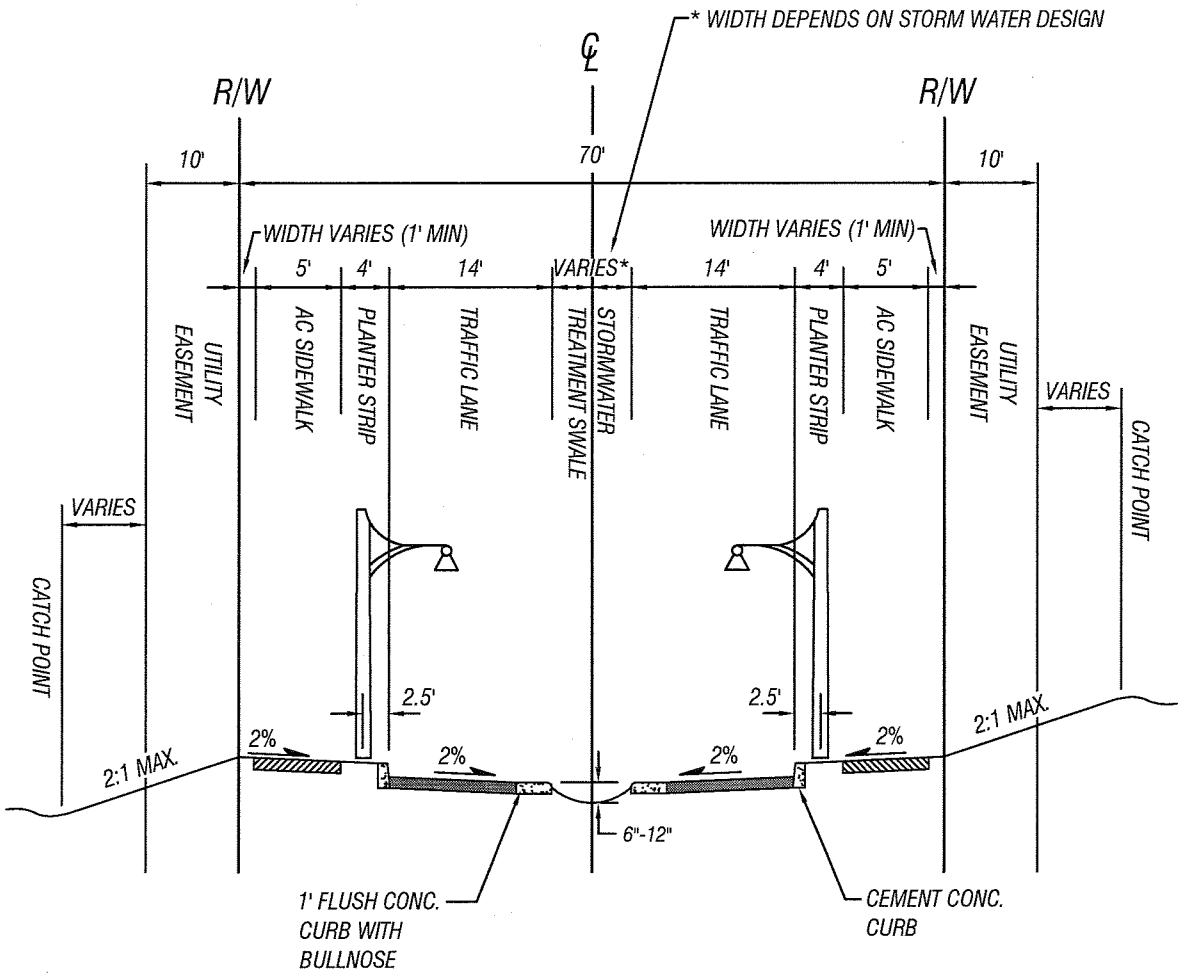

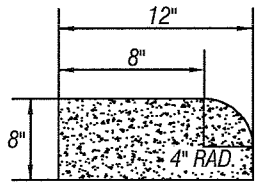

NOTE:

1. DECORATIVE STREET LIGHTS AT INTERSECTIONS SHALL PROVIDE 0.04 LUMENS / SQ.FT.
2. DECORATIVE STREET LIGHTS BETWEEN INTERSECTIONS SHALL PROVIDE 0.03 LUMENS / SQ.FT.
3. USE OF THIS STANDARD REQUIRES APPROVAL BY THE PUBLIC WORKS DIRECTOR.

6-09-09

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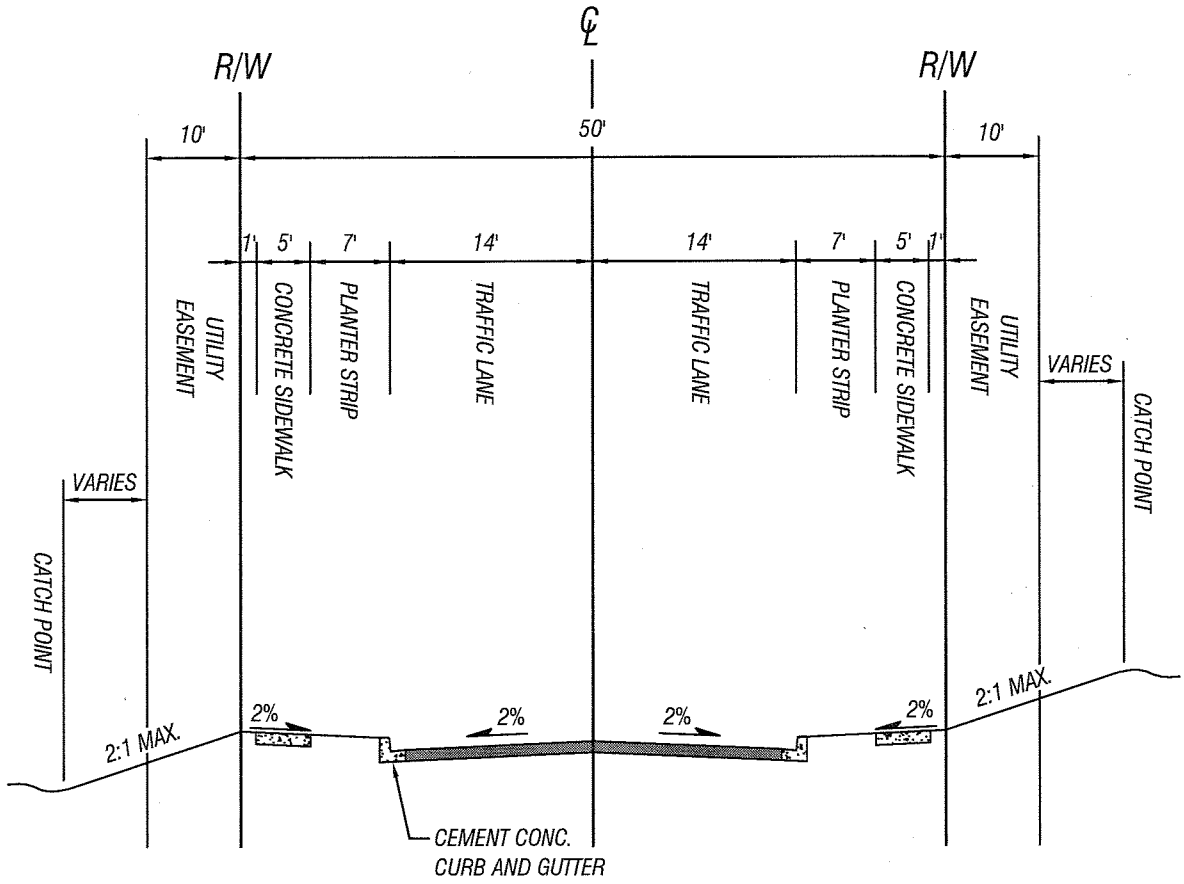
NEIGHBORHOOD COLLECTOR

STANDARD DWG TR-4	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington



NOTE:
TURNING RADIUS AT INTERSECTIONS SHALL BE BASED ON A WB-40 VEHICLE

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LOCAL ACCESS INDUSTRIAL

STANDARD DWG TR-5	NOT TO SCALE	04/01/09

PWE
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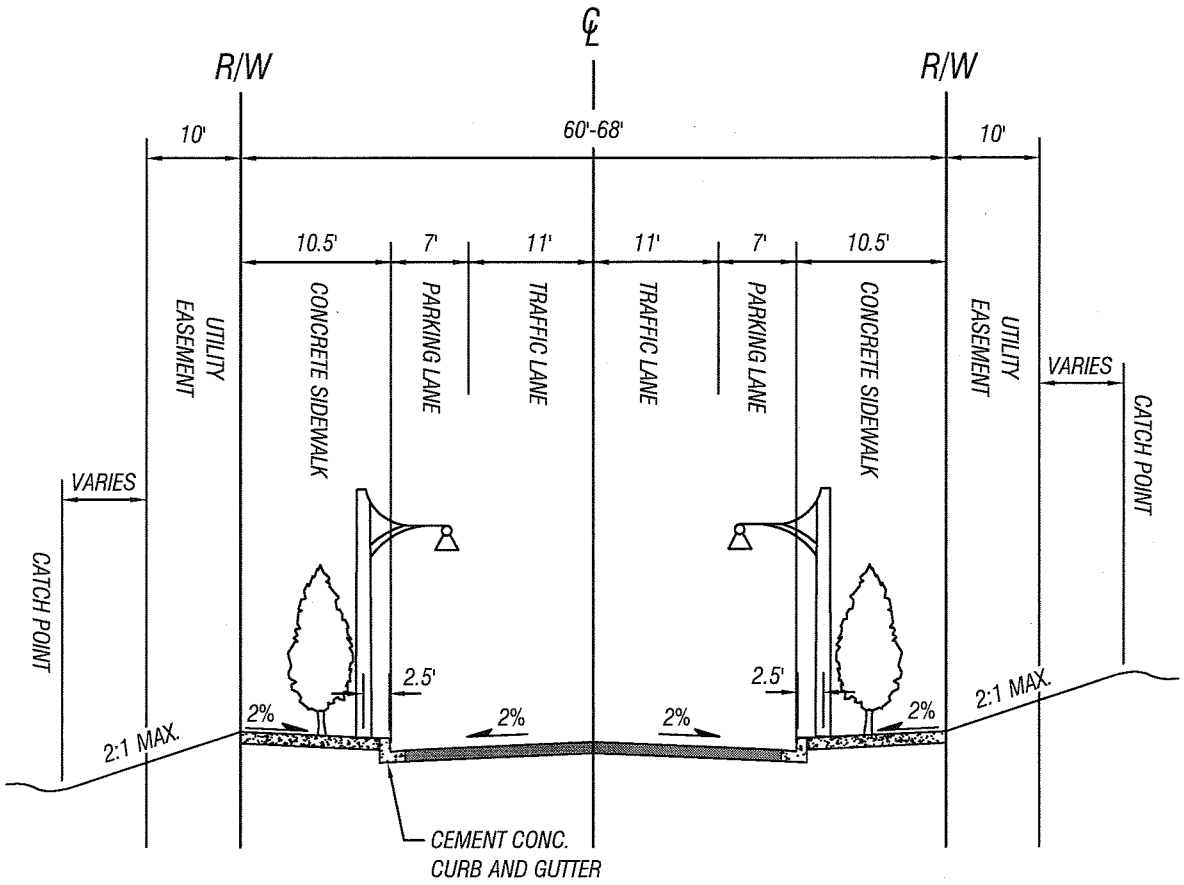
Fife, Washington



NOTE:

1. *DECORATIVE AND STORE FRONT LIGHT TO PROVIDE 0.04 LUMENS / SQ.FT..*
2. *4' TREE-WELLS TO BE LOCATED ADJACENT TO CURB.*

6-09-09

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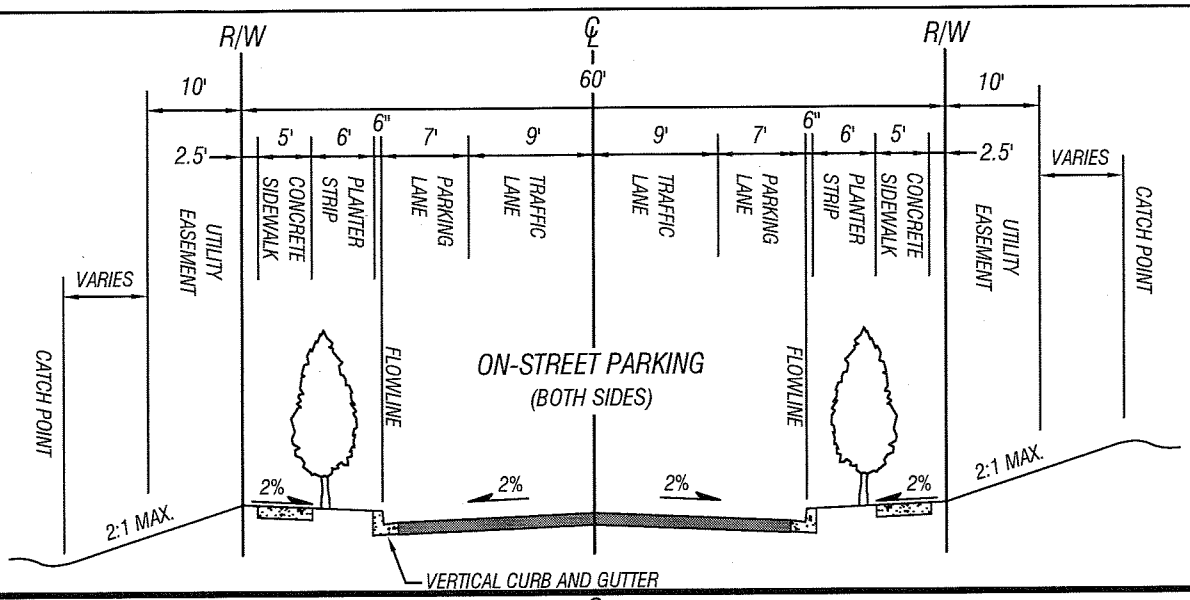
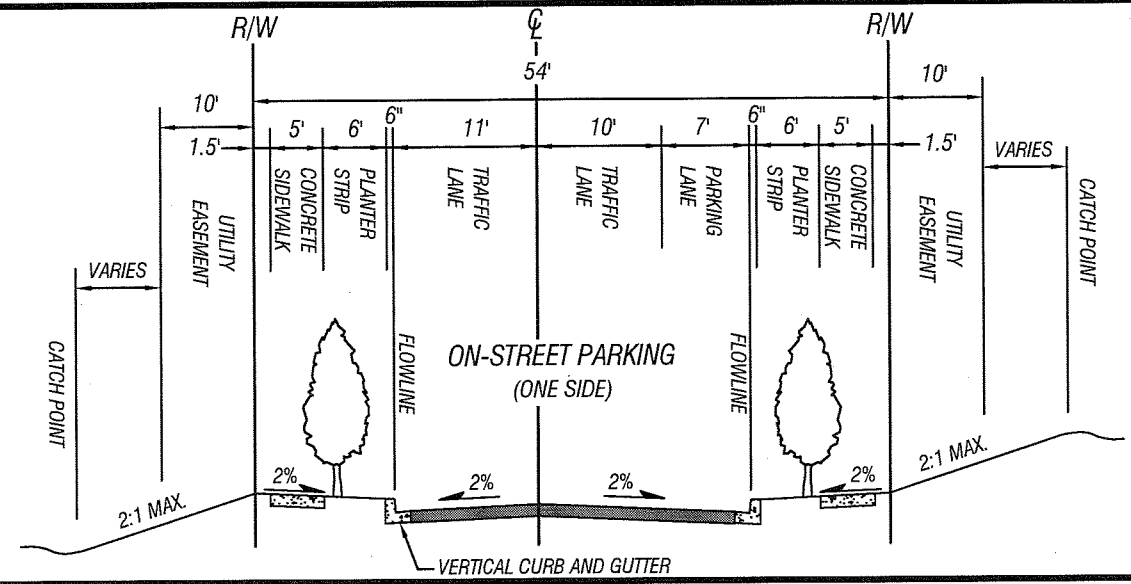
CITY OF BLACK DIAMOND

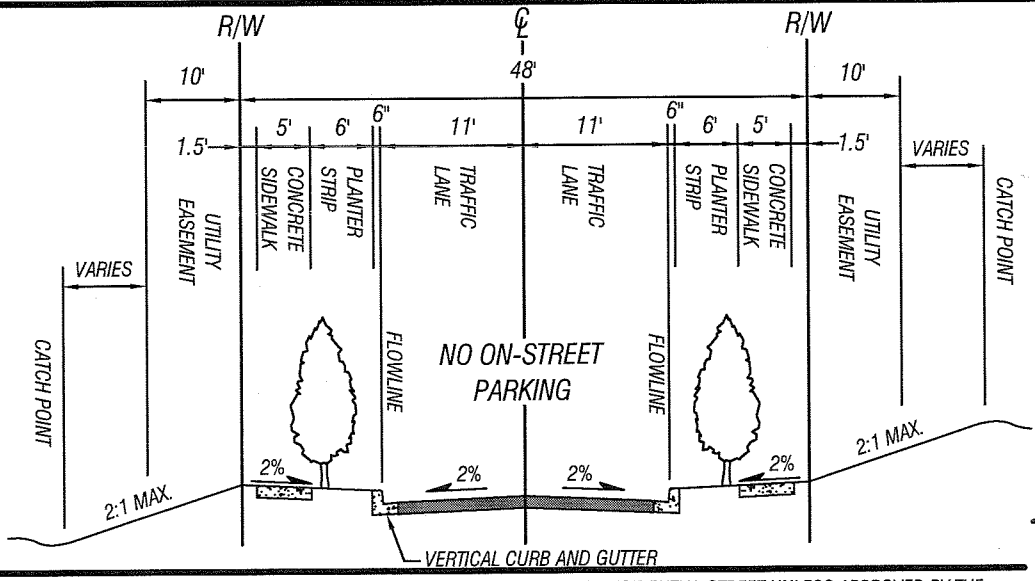
LOCAL ACCESS COMMERCIAL

STANDARD DWG TR-6	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington







NOTE: ON-STREET PARKING IS REQUIRED ALONG BOTH SIDES OF A LOCAL ACCESS RESIDENTIAL STREET UNLESS APPROVED BY THE PUBLIC WORKS DIRECTOR AND DIRECTOR OF COMMUNITY DEVELOPMENT. THE NEED FOR ON-STREET PARKING WILL BE ANALYZED BASED ON THE DENSITY OF THE SURROUNDING USES AND THE AVAILABILITY OF ON-SITE PARKING.

6-09-09

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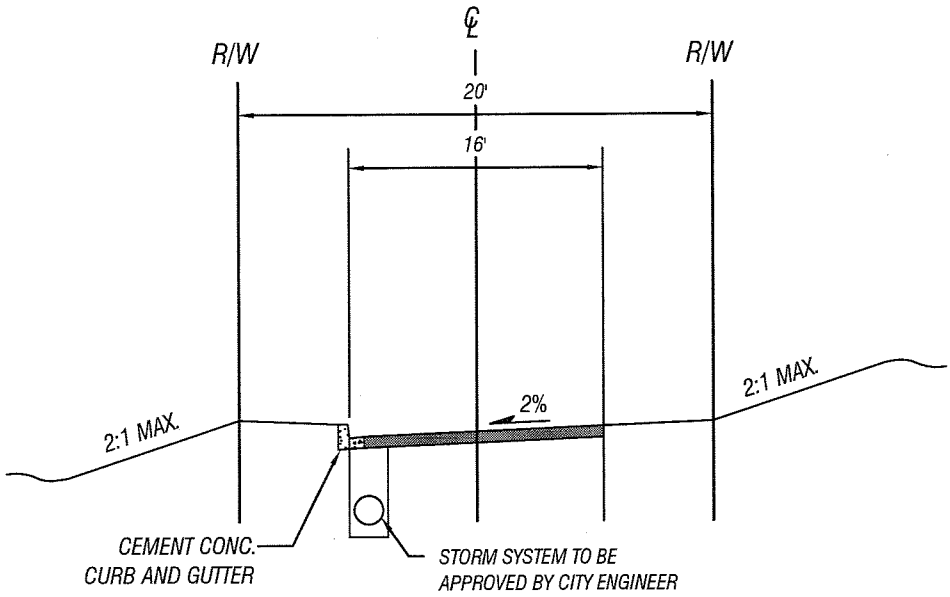
LOCAL ACCESS RESIDENTIAL
(WITH CURB AND GUTTER)

STANDARD DWG TR-7	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington



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CITY OF BLACK DIAMOND

ALLEY SECTION

STANDARD DWG TR-8	NOT TO SCALE	04/01/09

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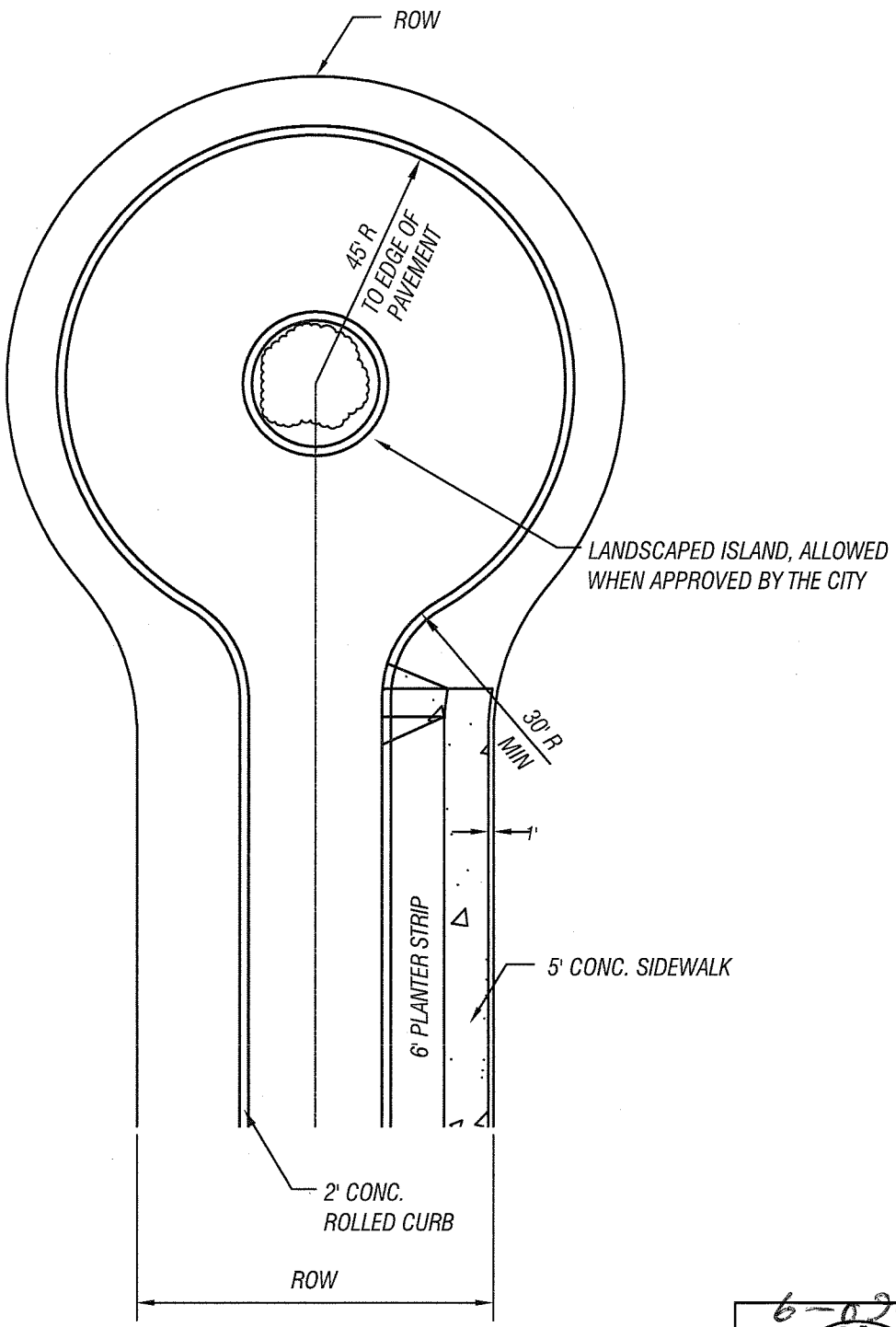

6-02-09

LEONARD L. SMITH
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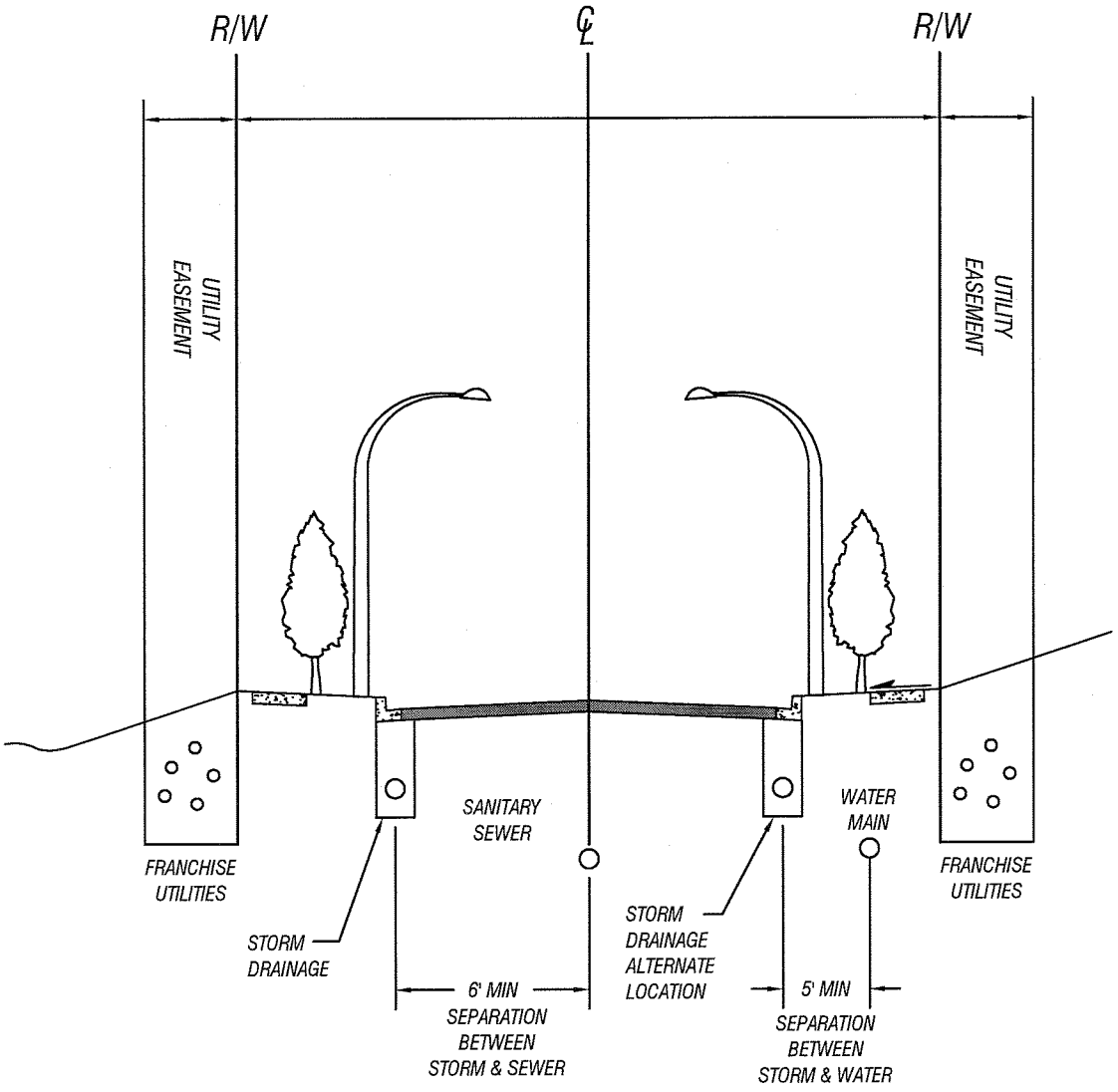
Leonard Smith

CITY OF BLACK DIAMOND

CUL-DE-SAC

STANDARD DWG TR-9	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington



FACING NORTH OR WEST

NOTES:

1. MAINTAIN HORIZONTAL & VERTICAL UTILITY SEPARATIONS PER WASHINGTON STATE DEPARTMENT OF ECOLOGY & DEPARTMENT OF HEALTH MINIMUM REQUIREMENTS.

6-02-09

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CITY OF BLACK DIAMOND

STANDARD UTILITY LOCATIONS

STANDARD DWG TR-10	NOT TO SCALE	04/01/09

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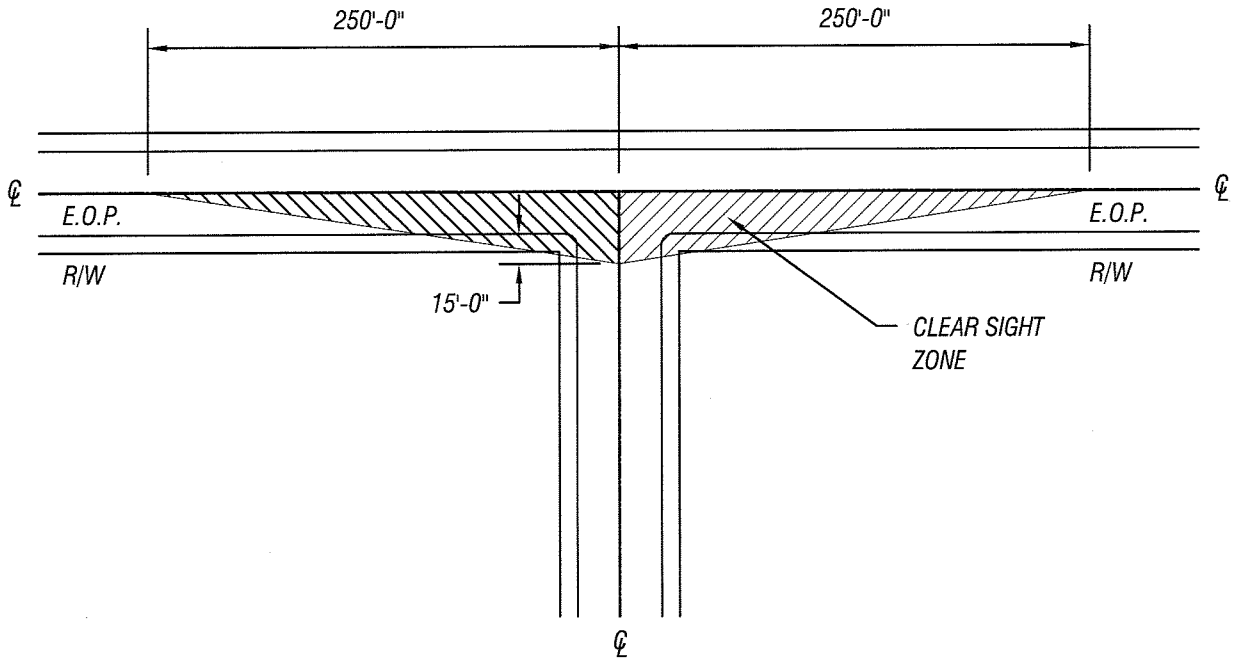
Fife, Washington

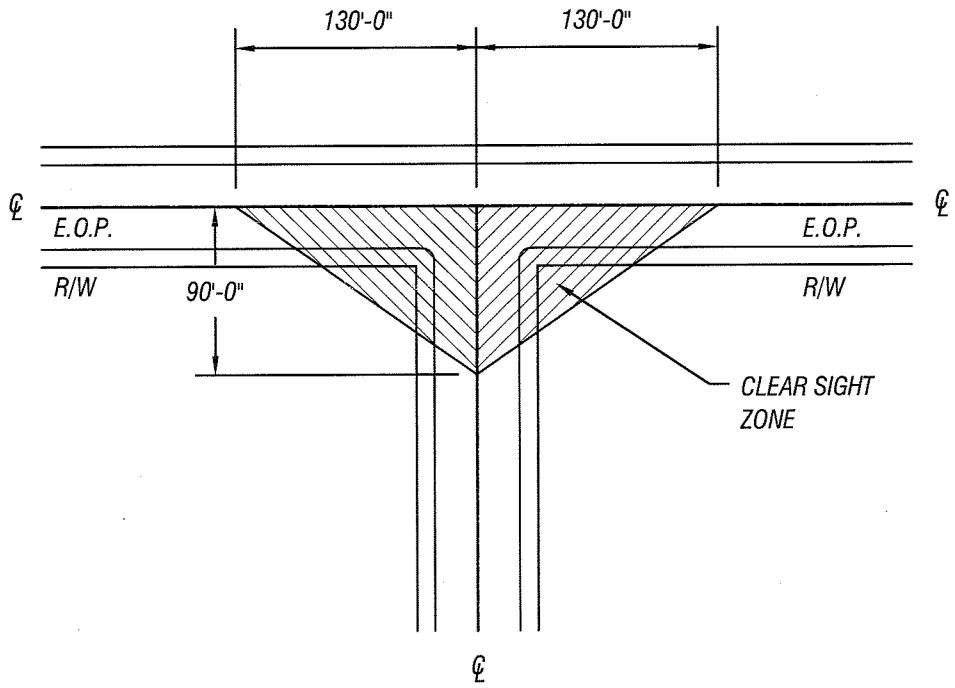
STOP OR YIELD CONTROLLED INTERSECTIONS

EXAMPLE: MAJOR STREET SPEED LIMIT = 25 M.P.H.



UNCONTROLLED INTERSECTIONS

EXAMPLE: MAJOR STREET SPEED LIMIT = 30 M.P.H.
MINOR STREET SPEED LIMIT = 20 M.P.H.



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PROFESSIONAL ENGINEER

CITY OF
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SIGHT OBSTRUCTION

STANDARD DWG TR-11	NOT TO SCALE	04/01/09

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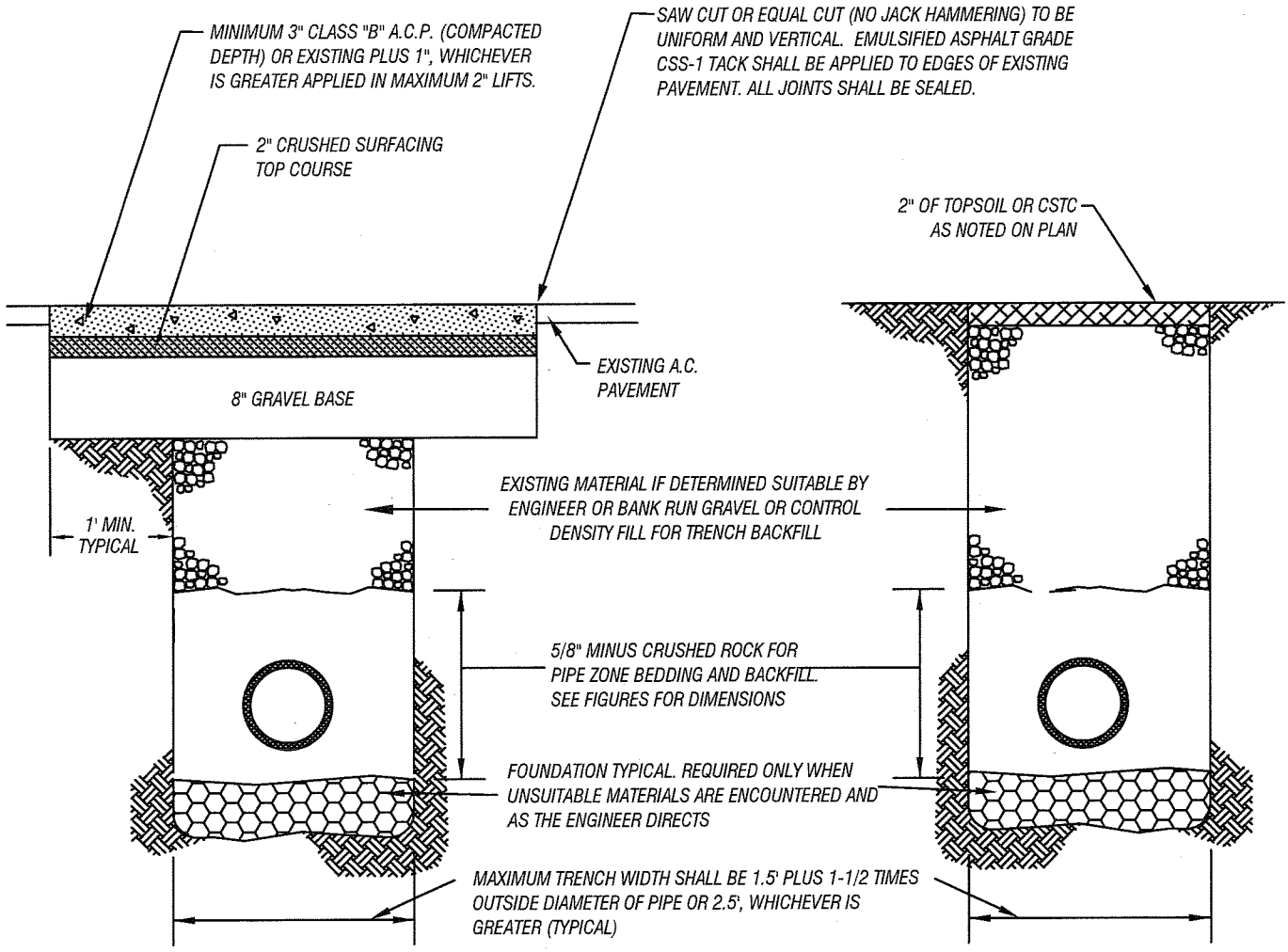
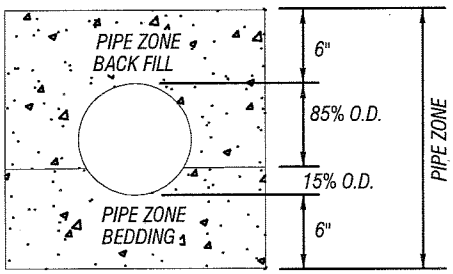
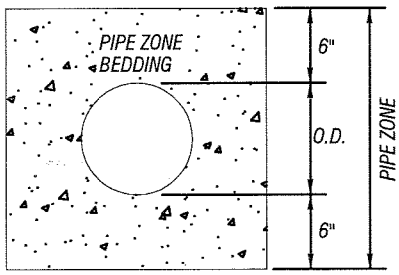


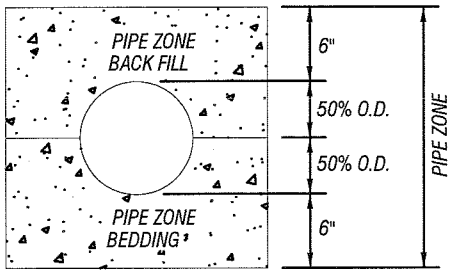
CONCRETE AND DUCTILE IRON PIPE



THERMOPLASTIC PIPE



METAL PIPE



NOTES:

1. ALL MATERIALS EXCEPT A.C.P. AND BEDDING MATERIAL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY.
2. COMPACTION: BEDDING AND BACKFILL WITHIN THE PIPE ZONE SHALL BE COMPACTED TO 95% MAX. AS DETERMINED BY ASTM D1557. BACKFILL ABOVE THE PIPE ZONE SHALL BE COMPACTED TO 90% IN UNPAVED AREA, AND 95% IN PAVED OR SHOULDER AREAS AS DETERMINED BY ASTM D1557.

6-09-09
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CITY OF BLACK DIAMOND

TRENCH RESTORATION

STANDARD DWG TR-12	NOT TO SCALE	04/01/09

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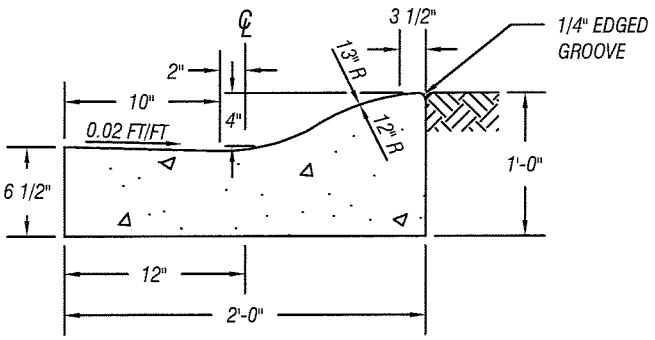
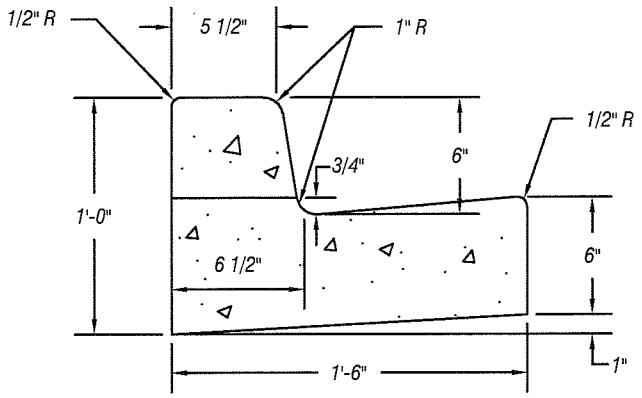
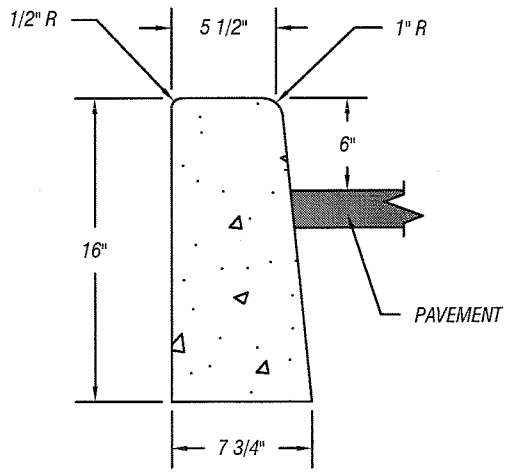


ROLLED CONCRETE CURB



CEMENT CONCRETE TRAFFIC CURB & GUTTER



CEMENT CONCRETE TRAFFIC CURB

6-02-09

LEONARD L. SMITH
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CITY OF BLACK DIAMOND

CONCRETE CURBS

STANDARD DWG TR-13	NOT TO SCALE	04/01/09

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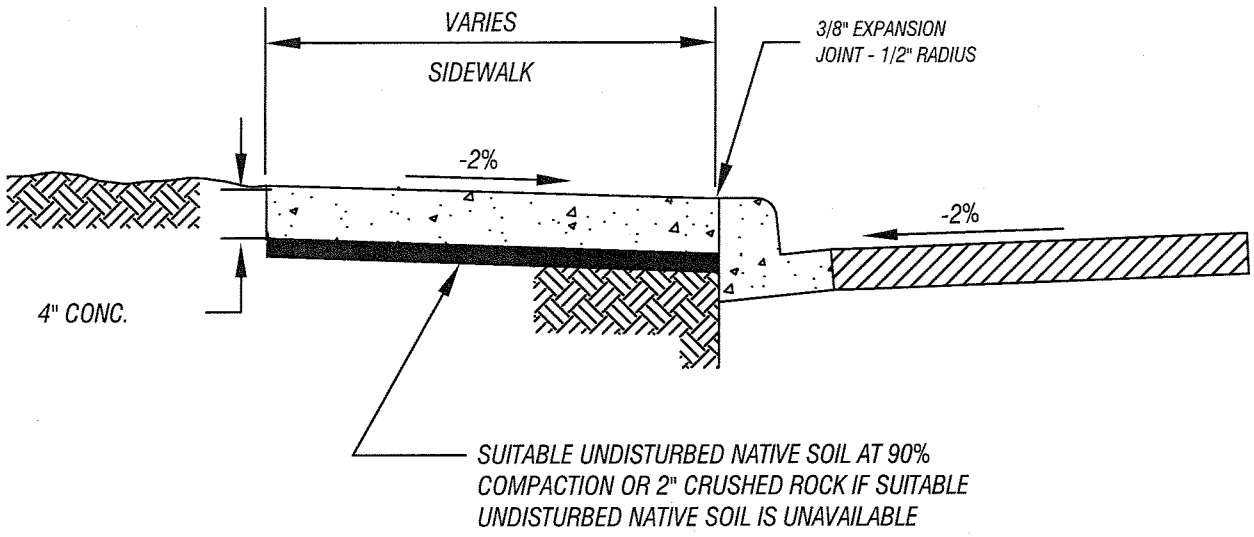
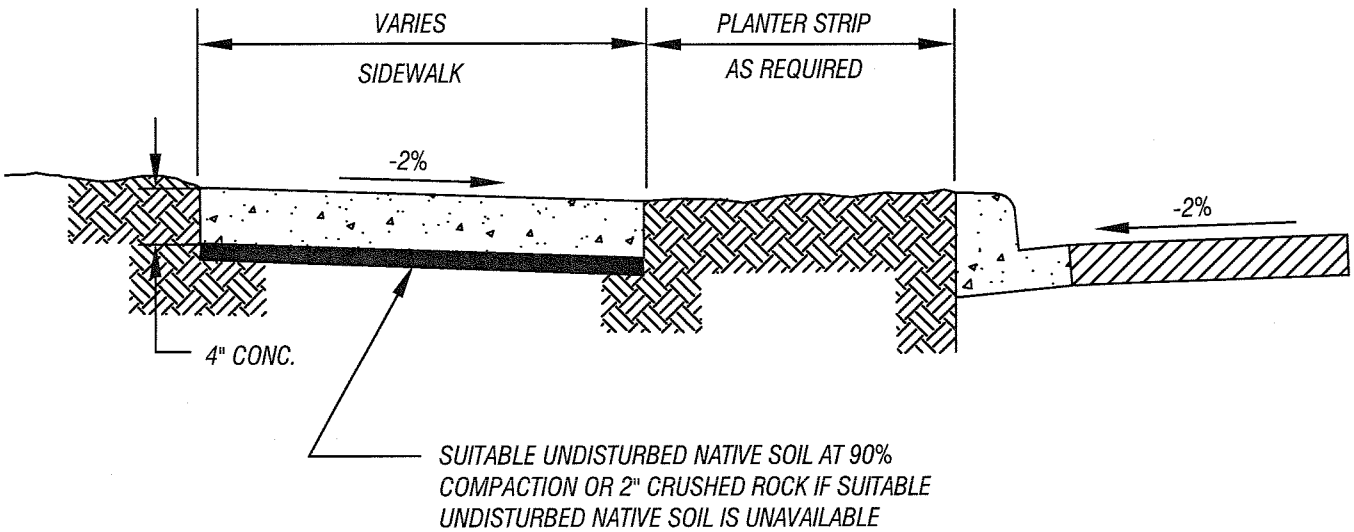
Fife, Washington





GENERAL NOTES:

1. CONCRETE DRIVEWAYS REQUIRE A MINIMUM DEPTH OF 6".
2. WHEN CHECKED WITH A 10 FOOT STRAIGHTEDGE, GRADE SHALL NOT DEVIATE MORE THAN 1/8 INCH, AND ALIGNMENT SHALL NOT VARY MORE THAN 1/4 INCH.

6-24-09
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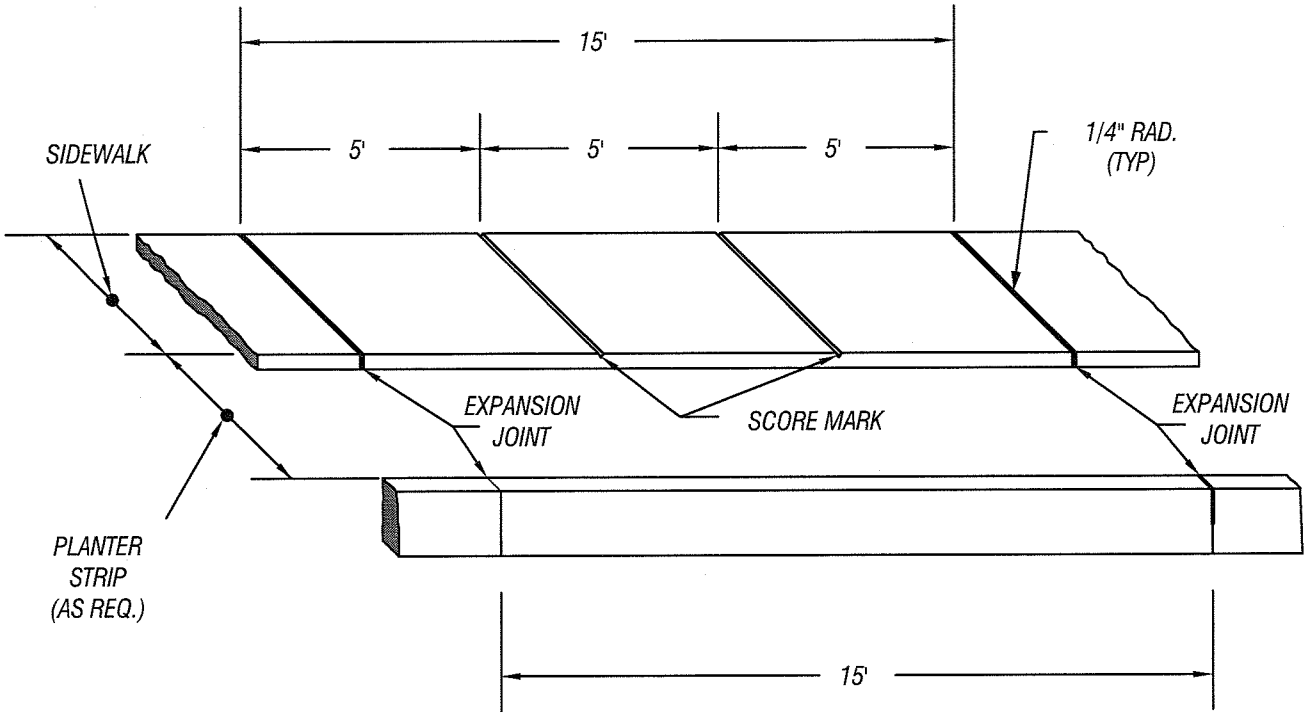
SIDEWALK

STANDARD DWG TR-14	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington



GENERAL NOTES:

1. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PREMOLDED JOINT FILLER FULL THICKNESS OF CONCRETE.
2. FORM AND SUBGRADE INSPECTION REQUIRED BEFORE POURING CONCRETE.
3. SCORE MARKS SHALL BE ±1/8" WIDE BY ±1/4" DEEP. FOR SIDEWALKS OVER 8' IN WIDTH, A LONGITUDINAL SCORE MARK SHALL BE MADE ALONG CENTER OF WALK.
4. EXPANSION JOINTS SHALL BE INSTALLED IN CURB AND GUTTER AND IN SIDEWALK AT PC AND PT AT ALL CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALK AT SAME LOCATIONS AS THOSE IN CURB AND GUTTER WHEN SIDEWALK IS ADJACENT TO CURB AND GUTTER, UNLESS OTHERWISE DIRECTED BY ENGINEER.

6-02-09

LEONARD L. SMITH
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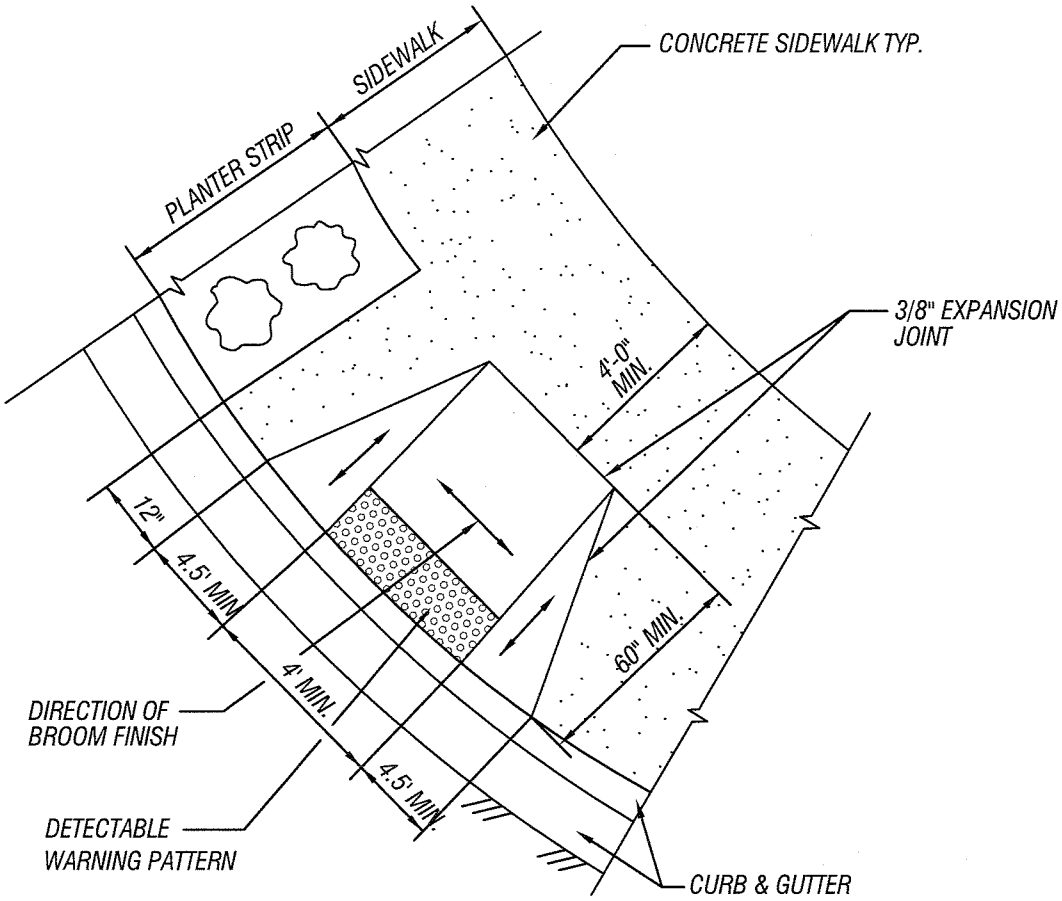
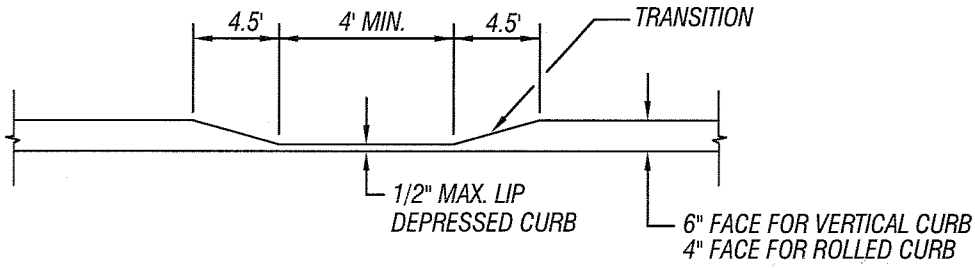
CITY OF
BLACK DIAMOND

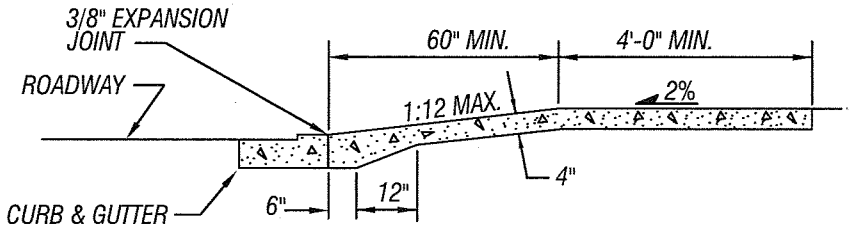
SIDEWALK SPACING

STANDARD DWG TR-15	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington







NOTE:

1. SIDEWALK ACCESS RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS

6-07-09

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CITY OF BLACK DIAMOND

SIDEWALK ACCESS RAMP

STANDARD DWG TR-16	NOT TO SCALE	04/01/09

PacWest Engineering
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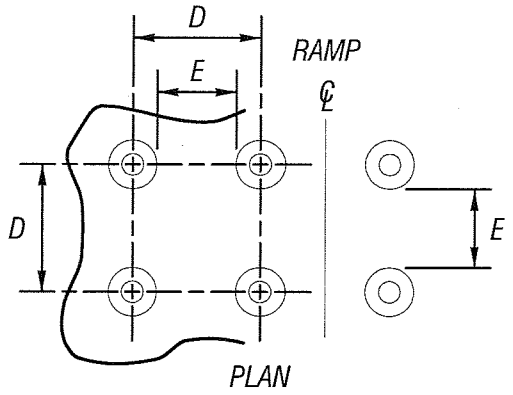
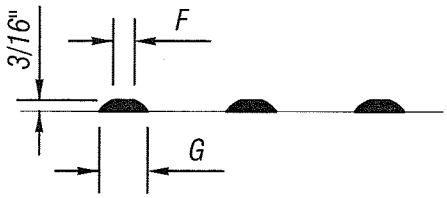




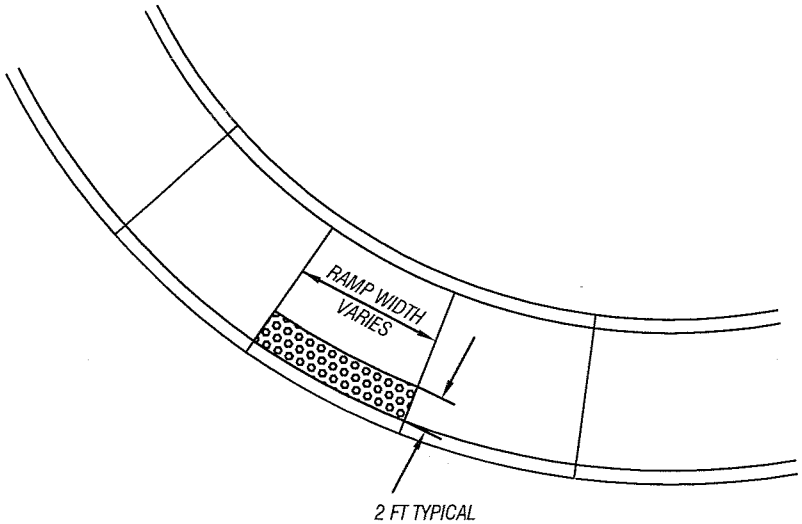
	MIN.	MAX.
D	1 5/8"	2 3/8"
E	5/8"	1 1/2"
F	7/16"	3/4"
G	7/8"	1 7/16"

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

NOTES:

1. DETECTABLE WARNING PATTERNS MAY BE CREATED BY ANY METHOD THAT WILL ACHIEVE THE TRUNCATED DOME DIMENSIONS AND SPACING SHOWN. THE DETECTABLE WARNING PATTERN AREA SHALL BE YELLOW, IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATION 8-14.3(3).
2. THE COLOR CONTRAST SHALL MEET THE FEDERAL REQUIREMENTS AS DEFINED BY THE FOLLOWING: DETECTABLE WARNINGS ON WALKING SURFACES. THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70%. CONTRAST IN PERCENT IS DETERMINED BY : CONTRAST = ((A-B)/A)*100

A= LIGHT REFLECTANCE VALUE OF THE LIGHTER AREA AND B=LIGHT REFLECTANCE VALUE OF THE DARKER AREA.



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20930
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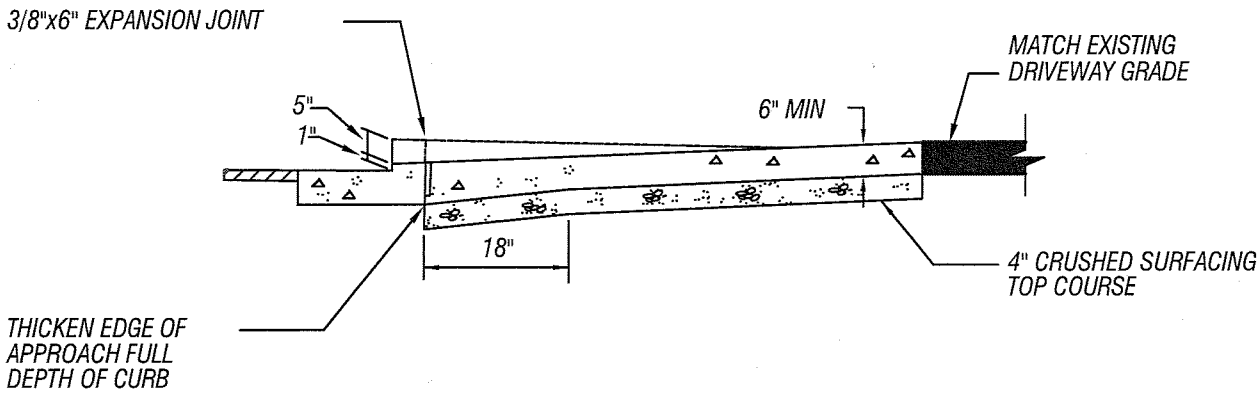
CITY OF BLACK DIAMOND

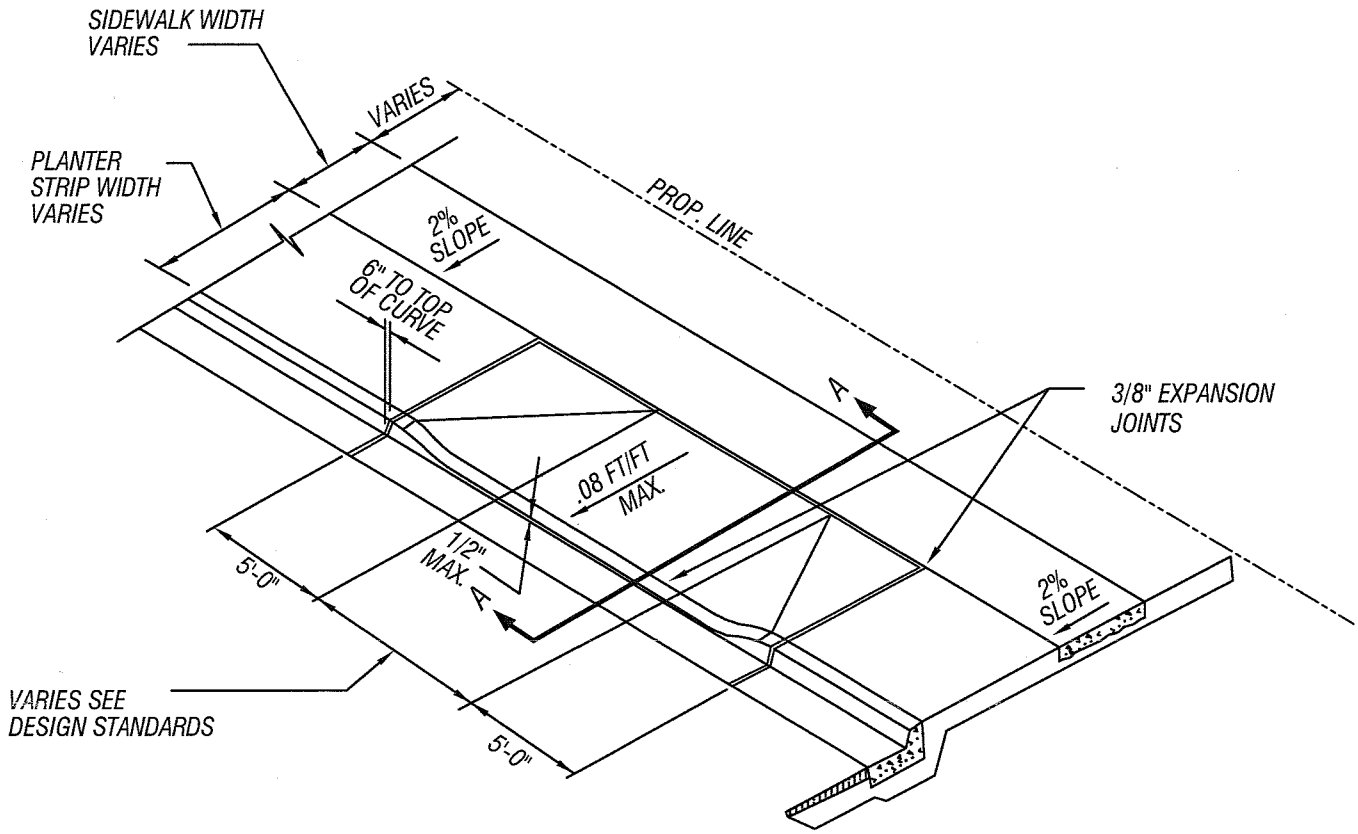
SIDEWALK ACCESS RAMP
DETECTABLE WARNING PATTERN

STANDARD DWG TR-17	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington



SECTION A-A



6-02-09

LEONARD L. SMITH
STATE OF WASHINGTON
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PROFESSIONAL ENGINEER

Leonard L. Smith

CITY OF
BLACK DIAMOND

CEMENT CONCRETE DRIVEWAY

STANDARD DWG TR-18	NOT TO SCALE	04/01/09

PWE
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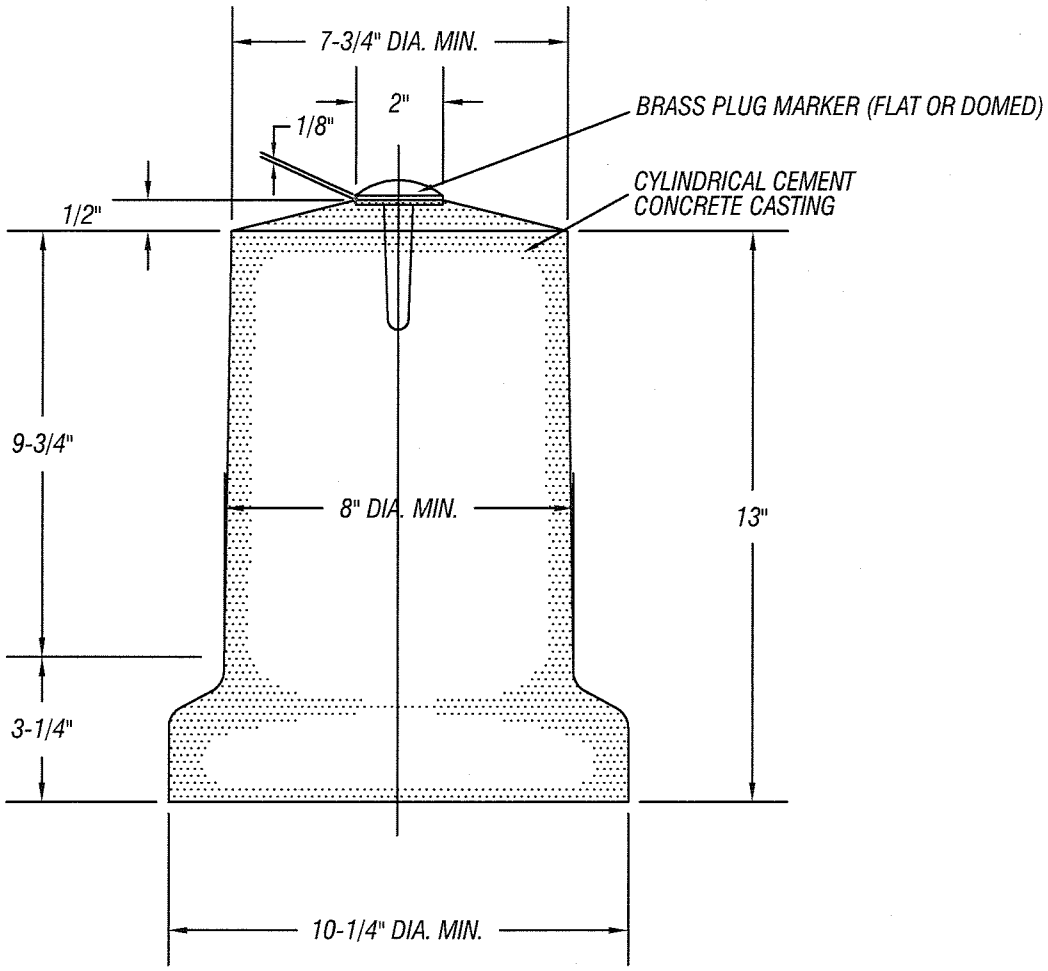

GENERAL NOTES:

MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE CASTING AT 28 DAYS - 3000#. MAXIMUM AGGREGATE SIZE TO BE 1".

6-09-09

LEONARD L. SMITH

CITY OF BLACK DIAMOND

PRECAST CONCRETE MONUMENT

STANDARD DWG TR-19	NOT TO SCALE	04/01/09

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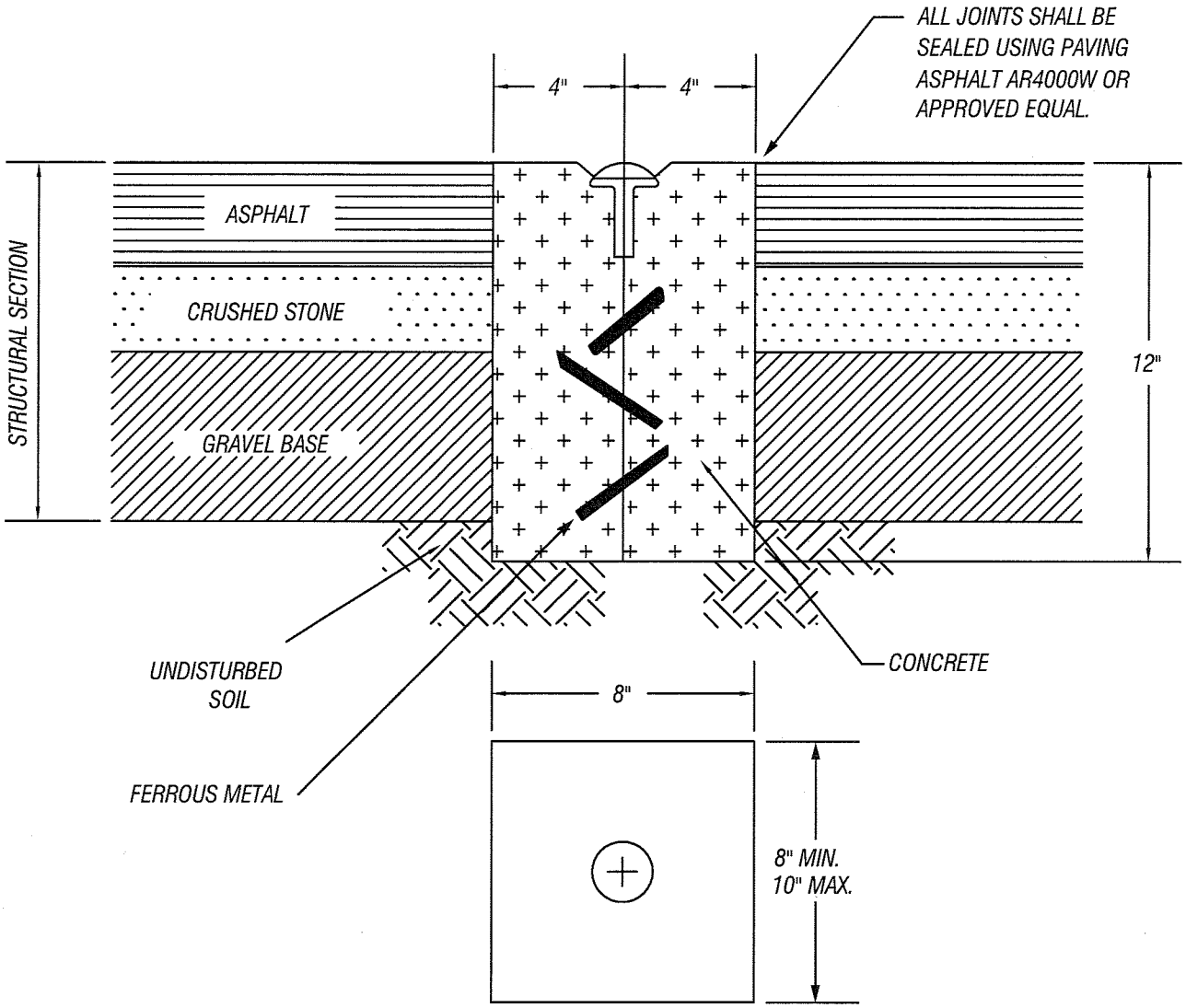

GENERAL NOTES:

1. *THIS MONUMENT TO BE USED PRIMARILY ON BITUMINOUS OR ASPHALT CONCRETE PAVEMENT FOR USE PRIMARILY ON LOCAL ACCESS STREETS.*
2. *CONCRETE BASE DIMENSIONS SHOWN ARE MINIMUM AND MAXIMUM. CONCRETE BASE NEED NOT BE FORMED.*
3. *CAP SHALL BE A 2" BRASS PLUG MARKER.*
4. *CONCRETE TO BE PLACED ON A FIRM AND UNYIELDING FOUNDATION.*

6-09-09
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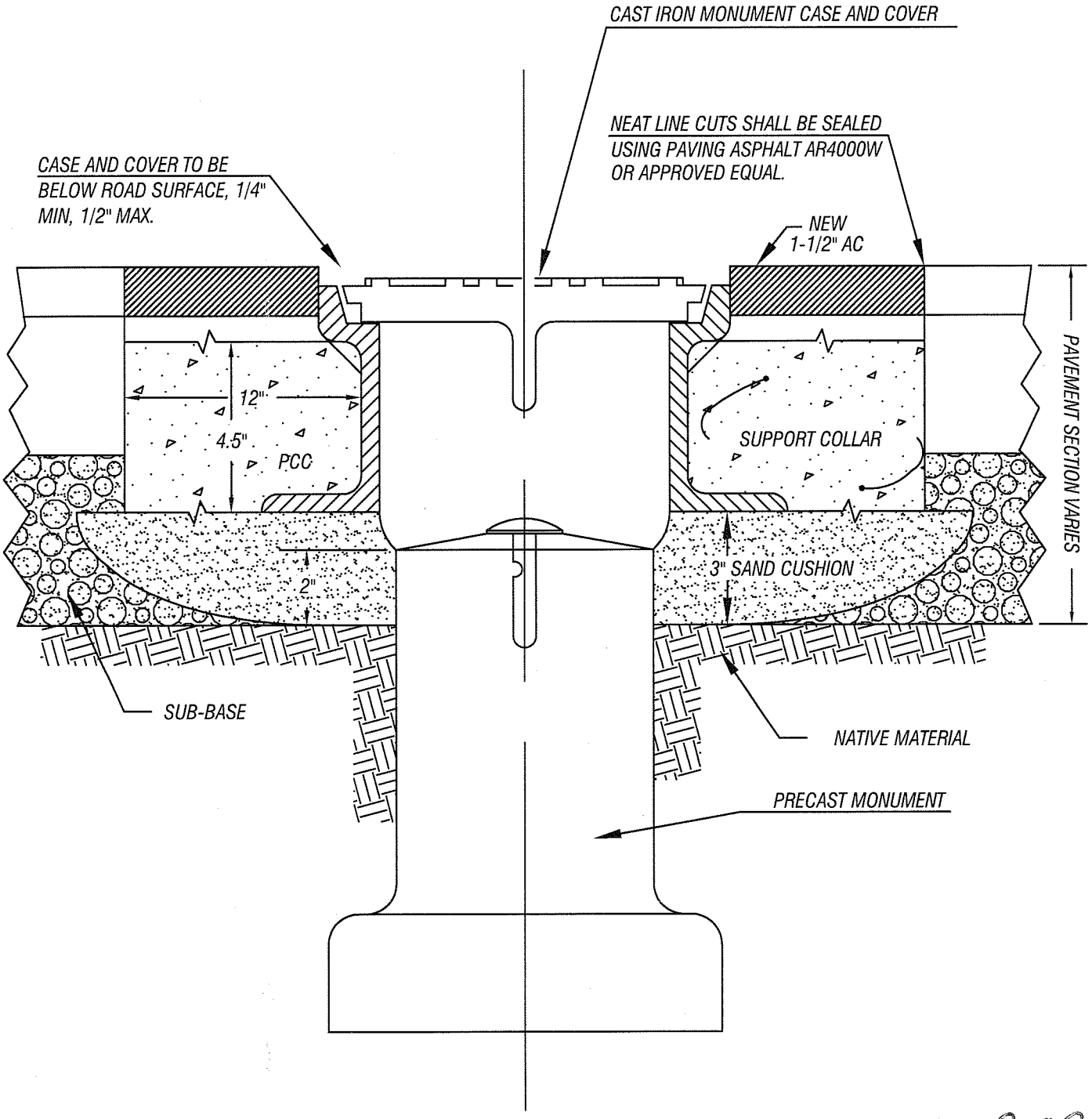
CITY OF BLACK DIAMOND

CAST-IN-PLACE MONUMENT

STANDARD DWG TR-20	NOT TO SCALE	04/01/09

PacWest Engineering
Fife, Washington



NOTE: IN CONCRETE ROADWAY,
DEPTH OF PCC SUPPORT COLLAR
SHALL BE INCREASED TO
MINIMUM OF 6".

6-02-09

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MONUMENT CASE

STANDARD DWG TR-21	NOT TO SCALE	04/01/09

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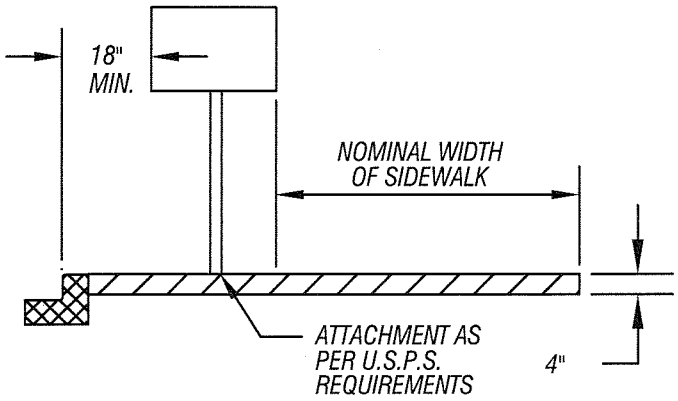
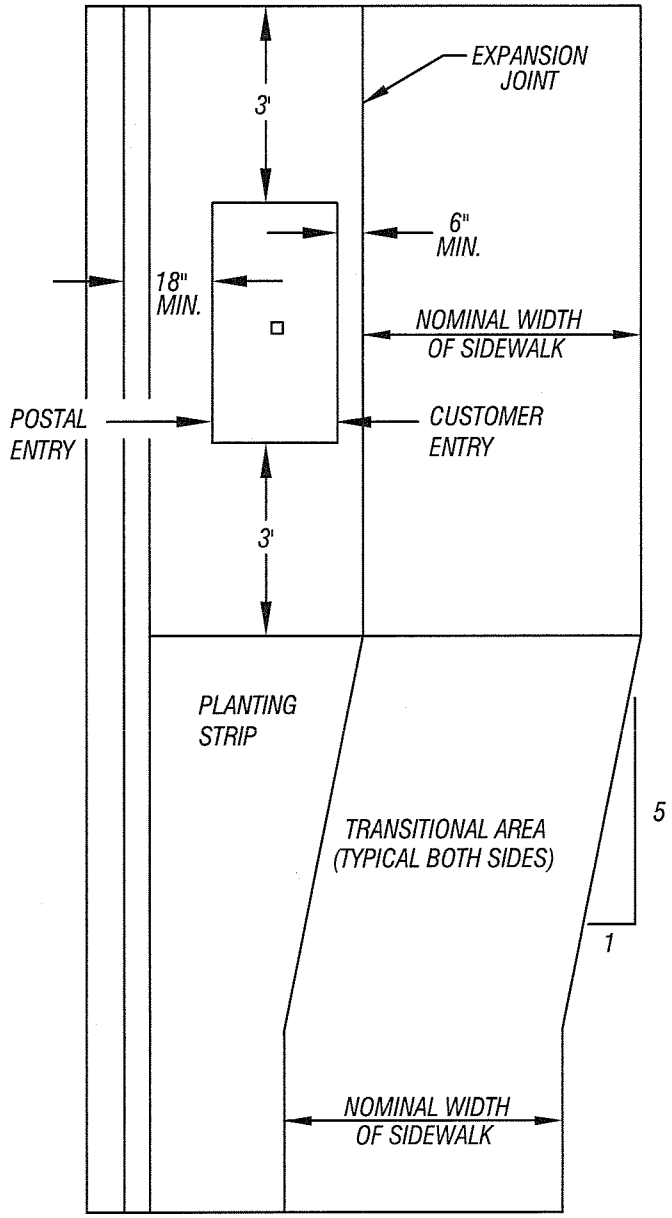
Fife, Washington





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MAIL BOX

STANDARD DWG TR-22	NOT TO SCALE	04/01/09

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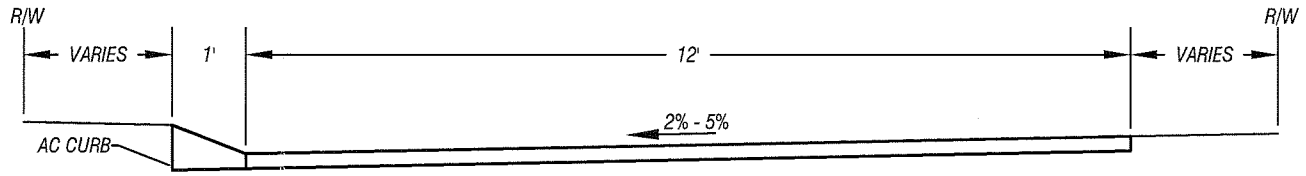
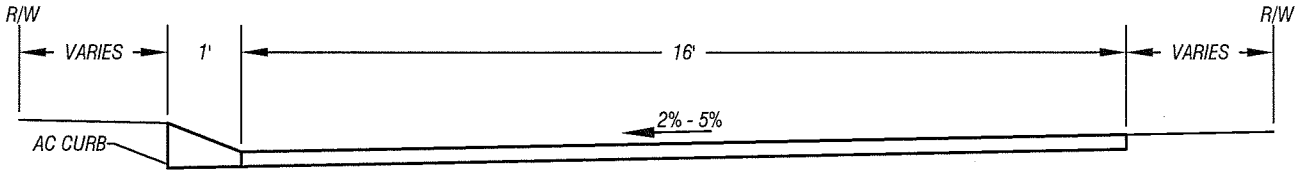
Fife, Washington

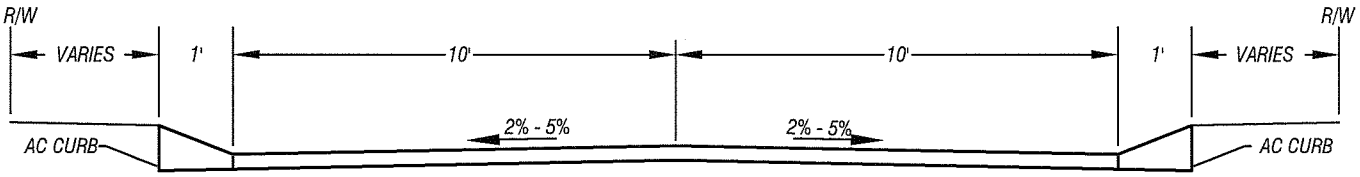
STREET SECTION
ST-12



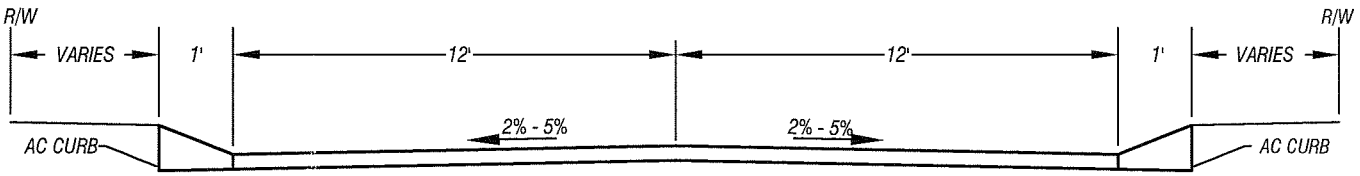
STREET SECTION
ST-16



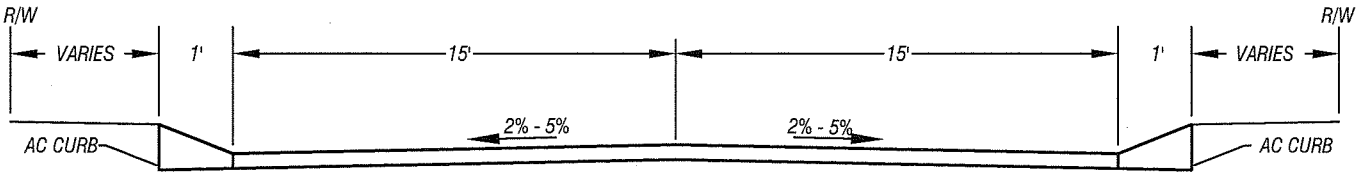
STREET SECTION
ST-20



STREET SECTION
ST-24



STREET SECTION
ST-30



6-22-09

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Leonard Smith

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IN-FILL DEVELOPMENT STREET SECTIONS

STANDARD DWG TR-23	NOT TO SCALE	04/01/09

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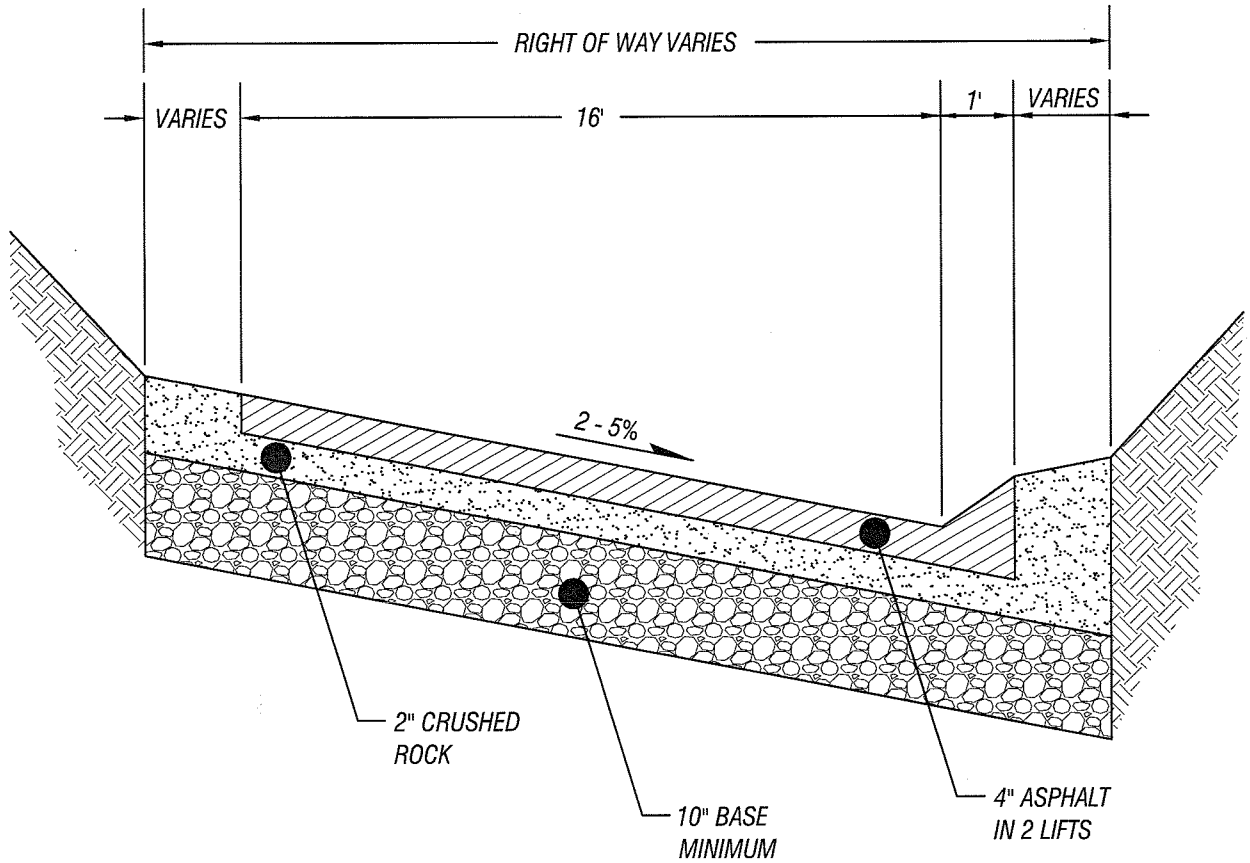
IN-FILL DEVELOPMENT IN DEVELOPED PORTIONS OF OLD BLACK DIAMOND



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IN-FILL SECTION 1

STANDARD DWG TR-24	NOT TO SCALE	04/01/09

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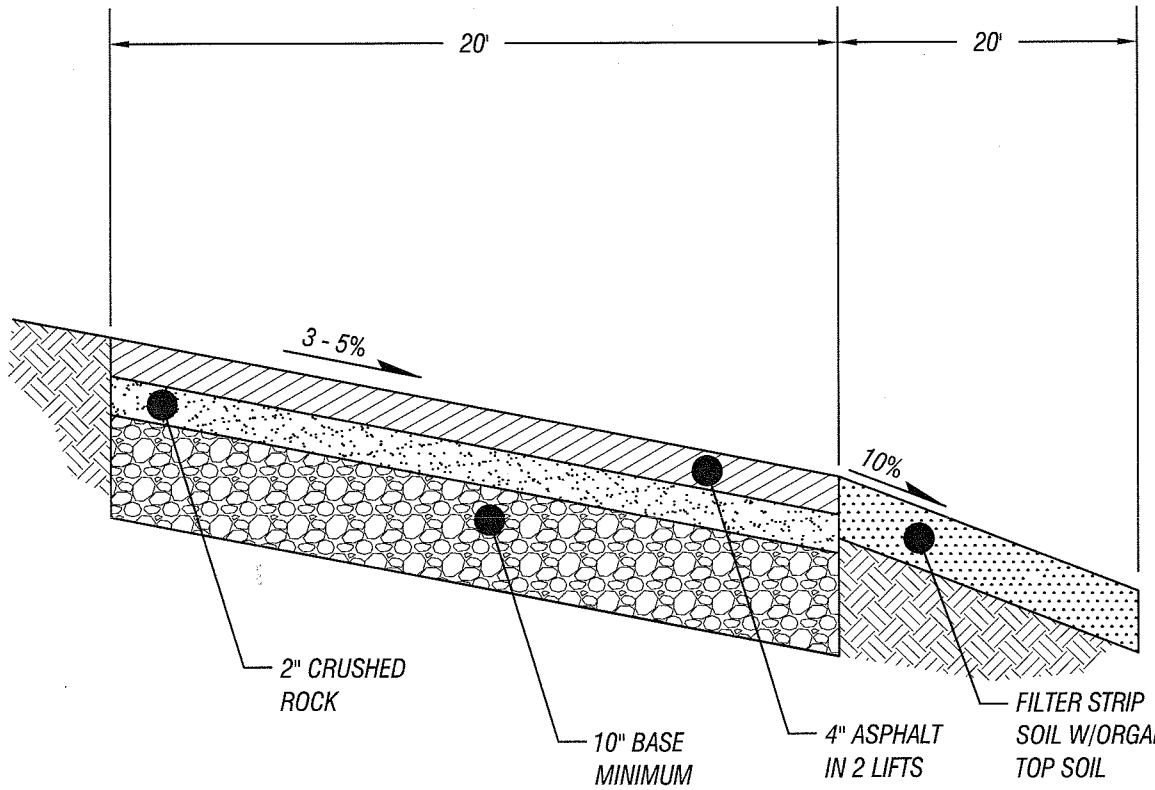
IN-FILL DEVELOPMENT IN DEVELOPED PORTIONS OF OLD BLACK DIAMOND



NOTE:
FOR USE WHAERE CLOSED STORM DRAINAGE SYSTEMS ARE UNAVAILABLE.

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IN-FILL SECTION 2
(DRAINAGE ALTERNATIVE)

STANDARD DWG TR-25	NOT TO SCALE	04/01/09

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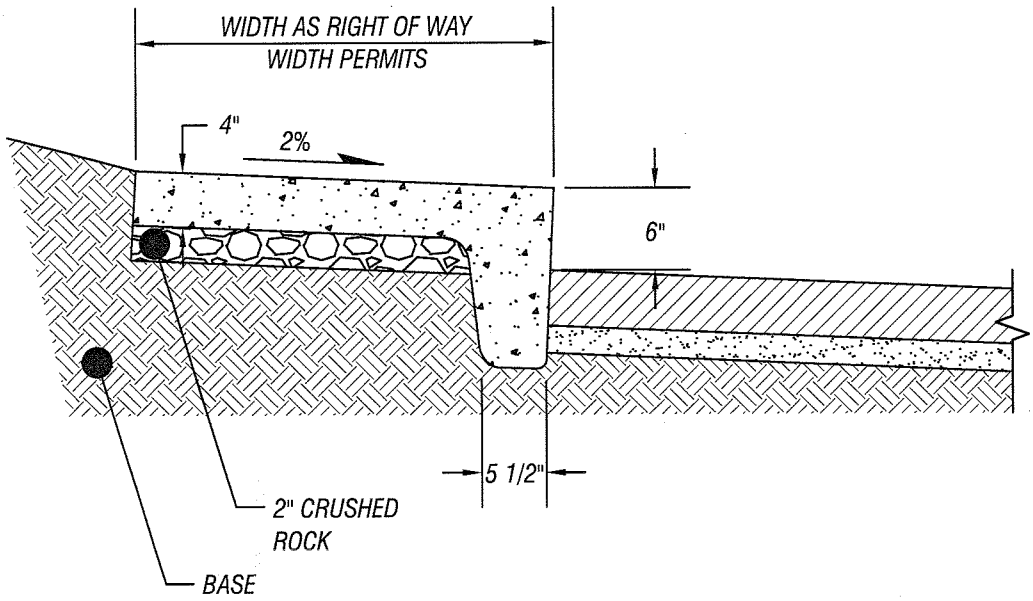
IN-FILL DEVELOPMENT IN DEVELOPED PORTIONS OF OLD BLACK DIAMOND



NOTE:
FOR USE WITH SECTIONS ST-12 AND ST-16.

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IN-FILL SIDEWALK SECTION OPTION

STANDARD DWG TR-26	NOT TO SCALE	04/01/09

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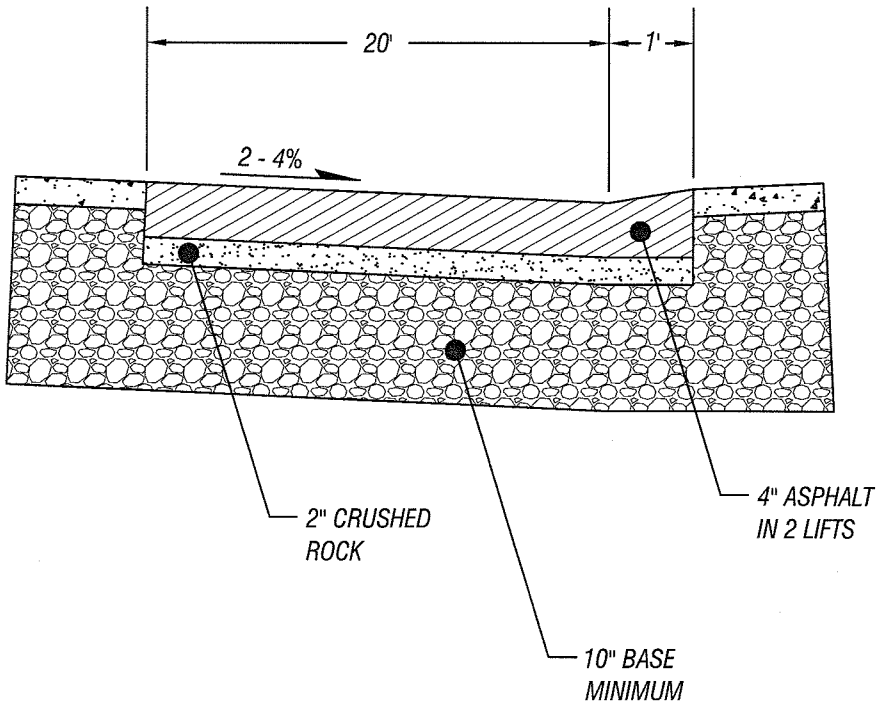
IN-FILL DEVELOPMENT IN DEVELOPED PORTIONS OF OLD BLACK DIAMOND



6-8-09

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IN-FILL SECTION ST-20 OPTION

STANDARD DWG TR-27	NOT TO SCALE	04/01/09

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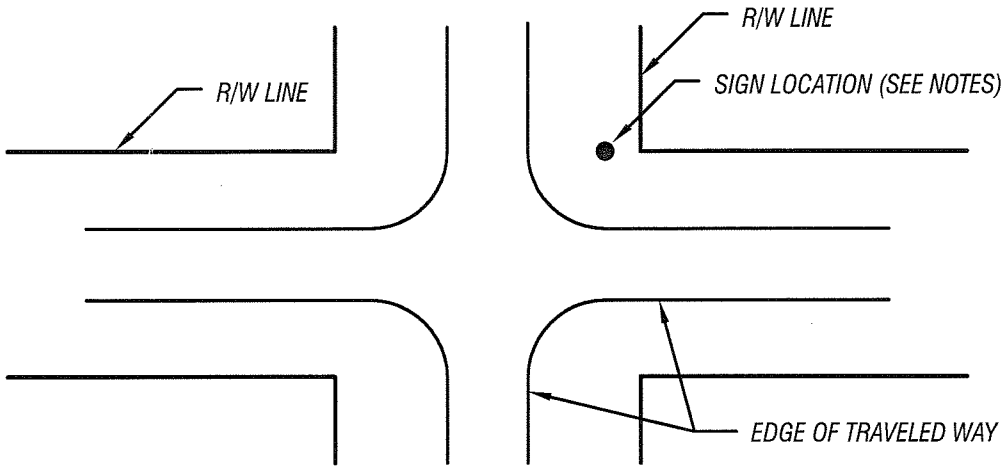


SIGN PLACEMENT

NOTES:

SIGN MATERIAL REQUIREMENTS

1) SHEET ALUMINUM SIGN SHALL BE CONSTRUCTED OF ALLOY 6061-T6, 5052-H36 OR 5052-H38. THICKNESS SHALL BE 0.080" OR 14 GAGE.

2) SIGN FACE MATERIAL SHALL BE MADE OF GREEN REFLECTIVE SHEETING WITH 4" WHITE REFLECTIVE LETTERING, ENGINEER GRADE.

SIGN POST REQUIREMENTS

1) SIGN POSTS SHALL BE TREATED POSTS WITH A 4" X 4" NOMINAL DIMENSION FOR ALL SIGNS ALONG ARTERIALS, IN RESIDENTIAL AND ALONG COLLECTOR STREETS. IN COMMERCIAL AREAS THE SIGN POSTS SHLL BE ENAMAL PAINTED STEEL POSTS.

HARDWARE PUBLIC ROAD SIGNS

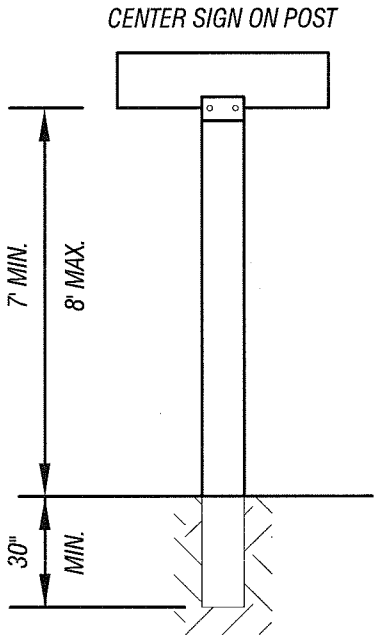
1) SIGN BRACKET SHALL BE A 2 WAY DIE CAST HIGH STRENGTH ALUMINUM ALLOY BRACKET DESIGNED FOR MOUNTING ON TOP OF THE POST. SLOTS FOR SIGNS SHALL HAVE A NOMINAL LENGTH OF 3" WITH TWO 5/16" ZINC PLATED STANDARD ALLEN WRENCH SET SCREWS.

2) ALL OTHER HARDWARE AND FASTENERS SHALL BE GALVANIZED STEEL.

SIGN LOCATION

1) ALL SIGNS SHALL BE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION.

2) SIGNS SHALL BE PLACED WITHIN THE RIGHT OF WAY IN A LOCATION WHICH DOES NOT PRESENT CONFLICTS WITH VEHICULAR OR PEDESTRIAN MOVEMENTS.



SIGN INSTALLATION

6-09-09

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STREET SIGNS

STANDARD DWG TR-28	NOT TO SCALE	04/01/09

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