

Title 12

STREETS, SIDEWALKS, PATHWAYS, PUBLIC PLACES

Chapters:

- 12.04** **Track Vehicles**
- 12.10** **Overnight Camping**
- 12.12** **Pathways--Motorized Vehicles**
- 12.14** **Signage on City Right of Ways**
- 12.16** **Park Hours**
- 12.24** **Street Design and Planning Standards**
- 12.28** **Street Construction Standards**
- 12.30** **Street Addressing**

Chapter 12.04

TRACK VEHICLES

Sections:

- 12.04.010** **Track vehicles prohibited.**
- 12.04.020** **Exceptions.**
- 12.04.030** **Penalties.**
- 12.04.040** **Restitution.**

12.04.010 **Track vehicles prohibited.**

Operation of track vehicles on or across city streets, pathways, curbs or parking areas shall be prohibited. (Ord. 379 § 1 (part), 1978)

12.04.020 **Exceptions.**

(a) The transport of said track vehicle across paved areas when using wooden planking or other suitable material to distribute the vehicles weight and prevent direct contact of the track vehicle with the paved surface.

(b) By permit issued by the City Council of North Bonneville for the expressed purpose of City authorized maintenance on municipal utilities or facilities. (Ord. 379 § 1(a, b), 1978)

12.04.030 **Penalties.**

Any person, firm or corporation violating any of the provisions of this chapter shall upon conviction be fined in a sum not to exceed one hundred dollars (\$100.00), or imprisoned for a period not to exceed thirty days, or both, so fined and imprisoned on the discretion of the Court, and for each day shall be considered a separate offense. (Ord. 379 § 2, 1978)

12.04.040 **Restitution.**

Any person, firm or corporation violating any provision of this Chapter shall upon examination of any damage created, be assessed the full value for repair or replacement of the damaged area. (Ord. 379 § 3, 1978)

Chapter 12.10

OVERNIGHT CAMPING

Sections:

- 12.10.010** Overnight camping prohibited.
- 12.10.020** Camping defined.
- 12.08.030** Infractions; Penalties.

12.10.010 Overnight camping prohibited.

Overnight camping, as defined in section 12.10.20 below, in all public streets, right of ways, municipal parking lots and other public places within the City shall be prohibited. (Ord. 995, 2011)

12.10.020 Camping defined.

“Camping” means the use of any public street, right of way, municipal parking lot or other public place for living accommodation purposes, including but not limited to any of the following:

1. Erecting any tent, tarpaulin, shelter, or other structure that would permit one to sleep overnight; or
2. Using a recreational vehicle for the purpose of sleeping overnight unless a temporary parking permit is applied for and granted pursuant to chapter 12.08. (Ord. 995, 2011)

12.10.030 Infractions; Penalties.

A. Any person violating the provisions of this chapter shall receive a civil infraction pursuant to chapter 1.08 NBMC, and may have their vehicle, trailer, camper or other camping facilities towed or removed as permitted by law. Persons wishing to challenge a civil infraction for violation of this chapter may appeal such determination pursuant to chapter 1.08 NBMC.

B. Any person violating the provisions of this chapter shall be subject to: (i) a fine in accordance with Sections 7.01.020(A) for each infraction, and (ii) for any vehicles, trailers, campers or camping facilities which have been towed or removed, costs of towing or removal plus actual administrative costs of not less than \$50.

(Ord. 995, 2011)

Chapter 12.12

PATHWAYS--MOTORIZED VEHICLES

Sections:

- 12.12.010** Purpose.
- 12.12.020** Motorized vehicles prohibited.
- 12.12.030** Exceptions.
- 12.12.040** Golf cart permits.
- 12.12.050** Penalties.

12.12.010 Purpose.

All public pedestrian pathways within the corporate limits of the City of North Bonneville shall be reserved for use by pedestrians and bicycles, shopping carts, baby carriages, and similar non-motorized vehicles; that, furthermore all public pedestrian pathways shall be adequately marked by posted signs at all intersections with city streets. (Ord. 568 § 1, 1986)

12.12.020 Motorized vehicles prohibited.

Operating any motorized vehicle on any public pedestrian pathway shall be prohibited. (Ord. 568 § 2 (part), 1986)

12.12.030 Exceptions.

Self-balancing personal transportation devices with two wheels, motorized wheelchairs, golf carts with approved permits, children toys, riding lawnmowers (without blades engaged), emergency vehicles in case of emergency and city maintenance vehicles for maintaining city property shall be exempt from the provisions of Section 12.12.020. They shall be subject to a maximum speed limit of ten (10) miles per hour and shall be prohibited from operation between sunset and sunrise. Pedestrians, non-motorized vehicles as defined in Section 12.12.010, and motorized wheelchairs shall have the right-of-way over these vehicles. (Ord. 968, 2010; Ord. 950, 2009; Ord. 568 § 2 (part), 1986)

12.12.040 Golf cart permits.

Golf carts shall be subject to an annual permit fee of twenty dollars must be inspected and approved by a representative authorized by the city. Proof of liability insurance must be presented at the time of inspection and be in the operator's possession when operating on city property or property open to the public. Golf carts are only authorized to cross a city street to get to another public pedestrian pathway. They shall not travel over 100 feet in either direction on a city street, except for the Hamilton Creek Bridge on Cascade Drive where crossing will be allowed. Minimum age to operate a golf cart shall be sixteen (16) years. (Ord. 968, 2010; Ord. 568 § 3, 1986)

12.12.050 Penalties.

Violations of this chapter are a civil infraction and shall be subject to the provisions in the North Bonneville Municipal Code Section 7.01.020(B)*. However, violations which constitute criminal traffic offenses may be charged as such and are subject to the maximum penalties allowed for such offenses. (Ord. 968, 2010; Ord. 568 § 4, 1986)

Chapter 12.14

SIGNAGE ON CITY RIGHT OF WAYS

Sections:

12.14.010 Permit required

12.14.020 Application for permit

12.14.030 Sign size and number allowances

12.14.040 Revocation of permit

12.14.050 Display of signs without a permit

12.14.060 Political Campaign Signs

12.14.010 Permit required.

Banners and signs may be displayed on city right of ways with a valid sign permit. (Ord. 1019, 2013)

12.14.020 Application for permit.

To obtain a sign permit for display of signs, the applicant shall file an application in writing on a form furnished by City. The applicant's submittal shall include the dimensions, design, locations and proposed duration of each sign and other information as requested by the city. (Ord. 1019, 2013)

12.14.030 Sign size and number allowances.

No more than three signs including banners are allowed under a sign permit. Signs excluding banners shall be no larger than 18-inches by 24-inches and must be located on the city's bulletin board and/or approved designations. Banners shall be no larger than 32 square feet and shall be approved for specific location and duration. (Ord. 1019, 2013)

12.14.040 Revocation of permit.

The city reserves the right to revoke permits for signs on city right of ways at any time. (Ord. 1019, 2013)

12.14.050 Display of temporary signs without a permit.

Display of signs on city right of ways without a permit may result in immediate removal. (Ord. 1019, 2013)

12.14.060 Political Campaign Signs.

No political signs shall be posted on city right of ways.

“Political campaign sign” means a sign which announces, promotes or advertises the name, program or political party of any candidate for public office, or an opinion regarding a public referendum regarding some political issue in an upcoming election. (Ord. 1020, 2013)

Chapter 12.16

PARK HOURS

Sections:

12.16.010 Park hours designated.

12.16.020 Penalties.

12.16.010 Park hours designated.

The City Park of North Bonneville, Washington shall be available for use to the public between the hours of 6 a.m. and 10:30 p.m. each day. Use of the City Park by any individual or organization between the hours of 10:30 p.m. and 6 a.m. may be permitted only upon written application of the user responsible and approval by Mayor. (Ord. 633 § 1, 1989)

12.16.020 Penalties.

Violation of this chapter shall be a misdemeanor and, upon conviction thereof, shall be punishable by up to 90 days in jail and/or fine of up to \$500.00. (Ord. 633 § 2, 1989)

Chapter 12.24

STREET DESIGN AND PLANNING STANDARDS

Sections:

12.24.010 Functional classification.

12.24.020 Access.

12.24.030 Width.

12.24.040 Number of lanes.

- 12.24.050 Design speed.
- 12.24.060 Dedications.
- 12.24.070 Private streets.
- 12.24.080 Horizontal alignment.
- 12.24.090 Vertical alignment.
- 12.24.100 Transitions.
- 12.24.110 Street frontage improvements.
- 12.24.120 Street ends.
- 12.24.130 Medians.
- 12.24.140 Intersections and curb returns.
- 12.24.150 Sight obstruction requirements.
- 12.24.160 Curb and gutter--Types and application.
- 12.24.170 Survey monuments.
- 12.24.180 Concrete sidewalks.
- 12.24.190 Asphalt sidewalks.
- 12.24.200 Multi-use pathway.
- 12.24.210 Bikeways/bikelanes.
- 12.24.220 Driveways.
- 12.24.230 Bridges.
- 12.24.240 Landscaping in the right-of-way, easements and access tracts.
- 12.24.250 Mailboxes.
- 12.24.260 Street illumination.
- 12.24.270 Traffic control and signing.
- 12.24.280 Appurtenances.
- 12.24.290 Franchise utilities.
- 12.24.300 Safety railing.
- 12.24.310 Guard rails.
- 12.24.320 Surfacing requirements.
- 12.24.330 Utilities.

12.24.010 Functional classification.

The functional classification of existing and proposed roads is established by the city on an individual basis using the existing land use and existing operational characteristics. North Bonneville classifies roads and streets as follows:

A. Regional Arterials. These facilities are the supporting elements of both the principal routes and collector systems. Regional arterials, in combination with principal routes, are intended to provide a high level of mobility for travel within the region. All trips from one subarea through an adjacent subarea traveling to other points in the region should occur on a regional arterial or principal route. State Route 14 is the only regional arterial within North Bonneville.

B. Major Arterials. The major arterial system complements and supports the principal and regional systems, but is primarily oriented toward travel within and between adjacent subareas. An adequate major arterial system is needed to ensure that these movements do not occur on principal routes or regional arterials. These facilities provide connections to major activity centers and provide access from the principal and regional arterial systems into each subarea.

C. Collectors. The collector system is deployed nearly entirely within subregions to provide mobility between communities and neighborhoods or from neighborhoods to the minor and major arterial systems. An adequate collector system is needed to ensure these movements do not occur on principal routes or major arterials. Land is directly accessible with emphasis on collection and distribution of trips within an arterial grid. (Ord. 773 § 1.00, 1999)

12.24.020 Access.

Access to public streets shall conform to the requirements listed herein. The city shall have the authority to limit access and designate access locations on public streets under the jurisdiction of the city. Access to streets and highways under U.S. Government or State of Washington jurisdiction must be formally approved by those entities at the applicant's initiative and expense. Additionally, regulation and control of vehicular access and connection points of ingress to and egress from the state highway system within the city are regulated by RCW 47.50. (Ord. 933, 2008: Ord. 773 § 1.01, 1999)

12.24.030 Width.

Table 12.24.030A is a summary of road width standards by the functional classification of the road. It should be noted that public utility easements beyond the right-of-way are occasionally required.

**Table 12.24.030A
STREET WIDTHS**

	Regional Arterial	Major Arterial	Industrial/ Commercial	Residential Collector	Residential Access
Right-of-way	90	80	60	60	54
Total pavement width	62	48	42	32	28
Number of drive lanes	4	4	3	2	2
Width of drive lane	12	12	14	11	10
Number of turn lanes	1	0	0	0	0
Width of turn lane	14	--	--	--	--
Number of sidewalks	2	2	2	2	2*
Width of sidewalks	8	8	6	5	5
Number of planter Strips (curb-sidewalk Separation)	2	2	0	2	2
Width of planter strips	6	6	0	6	6
Design volume	24,000	24,000	10,000	5,000	2,000
Design speed	50	40	35	25	25

Notes to Table 12.24.030A. * Not required if access to a pedestrian pathway is provided. (Ord. 773 § 1.02, 1999)

12.24.040 Number of lanes.

The number of lanes for each class of road shall be as directed by the city. Additional lanes and right-of-way may be required at intersections in excess of the road sections shown in Table 12.24.030A. (Ord. 773 § 1.03, 1999)

12.24.050 Design speed.

The minimum design speed for each road classification shall be as shown in Table 12.24.030A or as otherwise determined by the city. (Ord. 773 § 1.04, 1999)

12.24.060 Dedications.

A. Right-of-way shall be deeded for streets and other improvements as required per Table 12.24.030A to accommodate motorized and non-motorized transportation, landscaping, utility and buffer requirements. Some reduction in the minimum right-of-way requirement may be granted by the city where it can be demonstrated that sufficient area has been provided for all functions within the right-of-way and/or alternate locations. Conveyance shall be fee simple using a statutory warranty deed.

B. Easements for all public systems shall be provided as required. Particular design features of a road may necessitate slope, wall or drainage easements. Such easements may be required by the city in conjunction with dedication or acquisition of right-of-way and other standard easements (temporary construction, right of entry, sidewalk, pedestrian, street lighting and traffic control devices, etc.).

C. Special Access Easements or Tracts. Where it is necessary to facilitate pedestrian circulation as part of the city pathway system between neighborhoods, schools, shopping or other activity centers, public access easements or tracts shall be dedicated.

Improvements to the easement shall include a sidewalk or trail consistent with other nonmotorized facilities in the area. Fences, diverters or bollards shall be installed at the direction of the city in areas of potential traffic hazards or areas of natural hazards.

D. All subdivisions and short subdivisions (short plats) will be required to deed additional right-of-way, as a condition of approval of the subdivision, where the existing right-of-way for a public street is not adequate to incorporate necessary frontage improvements for public safety and provide compatibility with area's circulation system.

All short subdivisions (short plats) will be required to deed additional right-of-way, as a condition of approval of the short plat, under one or more of the following conditions:

1. The short plat abuts an existing sub-standard public street and the additional right-of-way is necessary to incorporate future frontage improvements necessary for public safety; or
2. Additional right-of-way is needed to provide right-of-way for the extension of existing public street improvements necessary for public safety; or
3. Additional right-of-way is needed to provide future street improvements necessary for public safety for planned new public streets.

E. It is within the authority of the city to refuse to approve or sign any land partition, partition plat, or subdivision plat for a development that has not installed or completed the construction of the necessary public infrastructure to serve the proposed and affected existing lots. Such approval may be withheld until it can be verified that the location and width of proposed rights-of-way and easements are adequate for the completed infrastructure.

F. Easements are subject to the approval of the city attorney prior to recording. Variation from the city standard form of conveyance shall be allowed only when extraordinary circumstances warrant, as determined by the city and city attorney.

G. Bikeway\Multipurpose Pathway. Where bikeway\multipurpose pathways are constructed, a thirty-foot dedicated right-of-way shall be granted to the city.

H. Easement Widths.

1. Pedestrian access easements or tracts shall be a minimum of ten (10) feet wide. If the easement is over one hundred and fifty (150) feet in length but less than three hundred (300) feet, the width shall be

fifteen (15) feet; if over three-hundred (300) feet in length, the width shall be twenty (20) feet. Structure setbacks shall be a minimum of fifteen (15) feet from the edge of the easement or tract

2. In residential subdivisions or residential short subdivisions, minimum panhandle width shall be twenty-five (25) feet. A greater width may be required to accommodate grading or utility requirements.

3. In commercial subdivisions or commercial short subdivisions, minimum private roadway easement or panhandle width shall be thirty (30) feet. A greater width may be required to accommodate grading or utility requirements.

I. All recording costs for easements created by private development shall be borne by the developer unless specifically agreed to by the city. (Ord. 773 § 1.05, 1999)

12.24.070 Private streets.

A. Criteria for Authorization. It is the City of North Bonneville policy to discourage private streets and to only permit them under unusual circumstances. Where private streets are permitted they will only be under the following conditions:

1. Covenants have been approved, recorded, and verified with the city which provide for maintenance of the private streets and associated parking areas by owners in the development; and

2. Provision is made for the streets to be open at all times for emergency and public service vehicles; and

3. The private streets will not obstruct public street circulation; and

4. At least one of the following conditions exists:

a. The plat or short plat street will ultimately serve four (4) or fewer lots. Any access serving two (2) or more homes shall be either a public or private street,

b. The roadways serve commercial or industrial facilities where no circulation continuity is necessary,

c. The city determines that no other access is available and the private road is adequate.

B. Notice. A statement is required on the face of any plat or short plat containing a private road with the following:

Purchasers of lots in this plat are advised that the road (roads) within this plat is (are) private. Private roads are not maintained by the City of North Bonneville. The lot owners within the plat must pay for all maintenance of the private road(s) including grading, surfacing, drainage and snow plowing. The size, design and condition of the private road(s) may effect subsequent attempts to divide lots or to dedicate the road to the city.

C. Easements. Private roads shall be constructed within easements with easement width equal to the paved width plus sidewalk plus ten (10) feet.

D. Design Requirements. Private streets shall conform to public street construction standards with the exceptions noted herein.

1. Private streets shall be improved with two (2) inches of asphalt concrete over eight (8) inches of crushed rock. The improved roadway width shall be a minimum of twenty (20) feet.

2. Private roadway easement width shall be the width of surfacing plus ten (10) feet.

3. The maximum grade for private roadways shall be twenty (20) percent. Fire access roadways shall be a maximum of fifteen (15) percent.

4. Roadways in planned unit developments (PUD's) shall be constructed to public street standards.

5. Drainage improvement requirements shall be as specified in the original city design contract or as amended by the city.

6. Utility requirements shall be as specified by the city.

7. Street illumination is required at the intersection of a private street and a public street. No street lighting is required on the private street.

E. Acceptance as Public Streets. Acceptance of private streets as public streets will be considered if the street meets all applicable public street standards, including adequate right-of-way, contained herein. (Ord. 773 § 1.06, 1999)

12.24.080 Horizontal alignment.

A. Street alignments shall meet the following requirements:

1. Center line alignment of improvements should be parallel to the center line of the right-of-way.
2. Center line of a proposed street extension shall be aligned with the existing street center line.
3. Horizontal curves in alignments shall meet the minimum radius requirements as shown in Table 12.24.080A.
4. Reversing horizontal curves shall be separated by no less than fifty (50) feet of tangent. On arterials, the separation shall be no less than one hundred (100) feet.

Table 12.24.080A

DESIGN SPEED/CENTER LINE RADIUS -- MINIMUMS

		Arterials Streets					
Design Speed (mph)	Friction factor (F)						
		(e)-4%	(e)-2.5%	(e) 0%	(e)2.5%	(e)4%	(e)6%
25	0.165	335'	300'	255'	220'	205'	185'
30	0.160	500'	445'	375'	325'	300'	275'
35	0.155	710'	630'	530'	455'	420'	380'

		Residential Streets					
Design Speed (mph)	Friction factor (F)						
		(e)-4%	(e)-2.5%	(e) 0%	(e)2.5%	(e)4%	(e)6%
25	0.252	195'	185'	165'	150'	145'	135'
30	0.221	330'	305'	270'	245'	230'	215'
35	0.197	520'	475'	415'	370'	345'	320'

Notes. For Table 12.24.080A: off right-of-way runoff shall be controlled to prevent concentrated cross flow in super-elevated sections.

Super elevations may only be used with the written approval of the city. Where super elevation is used, street curves should be designed per AASHTO guidelines except that the maximum super elevation rate of 0.04 shall be used. If terrain dictates sharp curvature, a maximum super elevation of 0.06 is justified if the curve is long enough to provide an adequate super elevation transition.

On local streets, requests for design speeds less than twenty-five (25) miles per hour shall be based on topography, right-of-way, or geographic conditions which impose an economic hardship on the applicant. Requests must show that a reduction in center line radius will not compromise safety. There will be posting requirements associated with designs below twenty-five (25) miles per hour.

Offset crown cross-sections are not acceptable as super elevation sections.

Super elevation transitions shall be designed to not allow concentrations of stormwater to flow over the travel lanes. (Ord. 773 § 1.07, 1999)

12.24.090 Vertical alignment.

A. Street alignments shall meet the following requirements:

1. Minimum tangent street gradients shall be one-half (0.5) percent along the crown and curb.
2. Maximum street gradients shall be fifteen (15) percent for residential streets, and ten (10) percent for all other streets. Grades in excess of fifteen (15) percent must be approved in writing by the city on an individual basis.
3. Local streets intersecting with a residential collector or greater functional classification street or streets intended to be posted with a stop sign shall provide a landing averaging five (5) percent or less. Landings are that portion of the street within twenty (20) feet of the projected curbline of the intersecting street at full improvement.
4. Grade changes of more than one (1) percent shall be accomplished with vertical curves.
5. At street intersections, the crown of the major (higher classification) street shall continue through the intersection. The roadway section of the minor street will flatten to match the longitudinal grade of the major street at the projected curbline.
6. Street grades, intersections, and super elevation transitions shall be designed to not allow concentrations of stormwater to flow across the travel lanes.
7. Offset crowns shall be allowed only with the specific prior approval of the city.
8. Slope easements shall be dedicated or obtained for the purposes of grading outside of the right-of-way.
9. Streets intersected by streets not constructed to full urban standards shall be designed to match both present and future (as far as practicable) vertical alignments of the intersecting street. The requirements of Chapters 12.24 and 12.28 shall be met for both present and future conditions.

B. When new streets are built adjacent to or crossing drainage ways, the following standards shall govern the vertical alignment:

Functional Classification

Vertical Standard

Arterial streets	Travel lanes at or above the 50 year flood elevation but not lower than 6 inches below the 100 year flood elevation.
All other streets	Travel lanes at or above the 25 year flood elevation but not lower than 6 inches below the 50 year flood elevation.

If alternate access is available for properties served by a particular local street, a design could be considered for approval by the city that would set the travel lanes at or above the ten (10) year flood elevation but not lower than six (6) inches below the twenty-five (25) year flood event.

C. Vertical curves shall conform to the values found in Tables 12.24.090A and 12.24.090B.

Table 12.24.090A

**DESIGN CONTROLS FOR CREST
VERTICAL CURVES BASED ON
STOPPING SIGHT DISTANCE**

Design Speed	Minimum k
25	020 -- 020
30	030 -- 030
35	040 -- 050
40	060 -- 080
45	080 -- 120
50	110 -- 160
55	150 -- 220

k=L=feet A = Algebraic difference in grades,
A Percent percent
L = Length of vertical curve, feet.

Table 12.24.090B

**DESIGN CONTROLS FOR SAG
VERTICAL CURVES BASED ON
STOPPING SIGHT DISTANCE**

Design Speed	Minimum k
25	030 -- 030
30	040 -- 040
35	050 -- 050
40	060 -- 070
45	070 -- 090
50	090 -- 110
55	100 -- 130

k=L=feet A = Algebraic difference in grades,
A Percent percent
L = Length of vertical curve, feet.

D. AASHTO provides the designer of sag vertical curves the option of using shorter curves with the installation of street lighting. These "comfort" designs can also be slightly modified by providing a one (1) percent grade break at each end of the curve. The following table compares sag curve lengths using these criteria:

Table 12.24.090C

**DESIGN CONTROLS FOR LIGHTED
SAG VERTICAL CURVES 25 MILES PER HOUR**

Algebraic Difference in Grades	Standard (k)	Comfort (k)	Comfort with Grade Breaks (k)
05.00%	30	13.4	09.8
07.50	30	13.4	09.9
12.50	30	13.4	11.3
17.50	30	13.4	11.9

E. At the intersection of a local street with another local street or a minor collector street, a minimum design speed of fifteen (15) mph is allowed on the intersecting street. Minimum k factors for sag curves are as follows:

Table 12.24.090D

**DESIGN CONTROLS FOR LIGHTED
SAG VERTICAL CURVES
15 MILES PER HOUR**

Algebraic Difference in Grades	Comfort (k)	Comfort with Grade Breaks (k)
5.00%	4.8	3
7.50%	4.8	3.6
12.50%	4.8	4.1
17.50%	4.9	4.3

(Ord. 773 § 1.08, 1999)

12.24.100 Transitions.

A. Street width transitions from a narrower width to a wider width shall be designed with a three (3) to one (1) taper. Delineators, as approved by the city, shall be installed to define the configuration.

B. For street width transitions from a wider width to a narrower width, the length of transition taper shall be determined as follows:

$$L = S \times W \text{ (for } S = 45 \text{ mph or more)}$$

$$L = \frac{W \times S^2}{60} \text{ (for } S = \text{less than } 45)$$

60

L = minimum length of taper (feet)

S = Design speed (mph)

W = EP to EP offset width

Delineators, as approved by the city, may be installed to define the configuration. Maximum spacing of delineators shall be the numerical value of the design speed, in feet (i.e., thirty-five (35) foot spacing for thirty-five (35) mph).

In situations where a tapered transition cannot be provided, a barricade shall be installed at the end of the wider section of the street and a taper shall be appointed and delineated as approved by the city. If the wider section does not provide an additional travel lane, only a barricade is required without the transition. (Ord. 773 § 1.09, 1999)

12.24.110 Street frontage improvements.

A. All residential subdivisions, commercial developments and short plats shall install street frontage improvements at the time of construction as detailed in their subdivision or short plat approval, as detailed in their approved building plans, or as directed by the city. Such improvements may include curb and gutter; sidewalk; street storm drainage; street lighting system; traffic signal modification, relocation or installation; utility relocation; landscaping and irrigation and street widening all per these standards. Plans shall be prepared and signed by a licensed civil engineer registered in the State of Washington.

B. Street frontage design shall incorporate all applicable sections of these standards and other standard reference materials. The designer shall utilize good engineering practice in any situation not specified in these standards. (Ord. 773 § 1.10, 1999)

12.24.120 Street ends.

A. Cul-de-sacs shall be provided at all public and private street ends.

B. Hammerheads may be used in lieu of a cul-de-sac provided that the street serves six (6) or less lots and the street is less than two hundred (200) feet in length.

C. Temporary Dead Ends. Where a street is temporarily dead ended, turn around provisions must be provided where the road serves more than one (1) lot. The turn around may be a hammerhead if the dead end is less than two-hundred (200) feet in length. If over two-hundred (200) feet long, a cul-de-sac with a minimum radius of forty-one (41) feet is required for residential streets with mountable curbs, and forty-eight (48) feet for industrial streets.

D. Design Requirements. The following specifies the minimum requirements for cul-de-sacs, eyebrows, and turnaround areas. Other turnaround geometrics may be used when conditions warrant and city approves the design and application of its use.

1. Cul-de-sacs shall have a minimum outside curb radius of forty-one (41) feet for residential streets and forty-eight (48) feet for industrial streets.

2. Cul-de-sacs, eyebrows, and turnaround areas shall be allowed only on local streets and commercial/industrial streets.

3. Cul-de-sacs shall be not be more than five hundred (500) feet in length. The length of a cul-de-sac shall be measured along the center line of the roadway from the near side right-of-way of the nearest through traffic intersecting street to the farthest point of the cul-de-sac right-of-way.

4. The minimum curb radius for transitions into cul-de-sac bulbs shall be twenty-five (25) feet, and the right-of-way radius shall be sufficient to maintain the same right-of-way to curb spacing as in the adjacent portion of the road.

5. Hammerheads may be used in lieu of a cul-de-sac provided that the street serves six (6) or less lots and the street is less than two hundred (200) feet in length.

6. An eyebrow corner may be used on a local street where expected ADT will not exceed five hundred (500) vehicles per day or as otherwise approved by the city. Minimum curb radius on the outside of an eyebrow corner is thirty-six (36) feet; minimum right-of-way radius is forty-five (45) feet. Eyebrow geometry shall be evaluated on the basis of turning requirements for Fire Department vehicles. (Ord. 773 § 1.11, 1999)

12.24.130 Medians.

A. A median shall be in addition to, not part of the specified roadway width. 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.

B. Where raised medians are allowed, the following criteria must be met:

1. Edges shall be vertical curb in urban areas, and either vertical curb or thickened edge in suburban areas.
2. Landscaping and irrigation are required. Plans shall be prepared by a qualified landscape architect.
3. Shall be designed so as not to limit turning radius or sight distance at intersections.
 - a. The raised median shall be set back at least two (2) feet from the median lane on both sides.
 - b. Street lighting shall be sufficient to provide illumination of the raised median.
 - c. Objects, such as trees, shrubs, signs, and light poles shall not physically or visually interfere with vehicle or pedestrian traffic in the travel way.
 - d. The style and design of the raised median shall be site specific. The raised median shall be safe for the design speed, and shall be subject to city approval. (Ord. 773 § 1.12, 1999)

12.24.140 Intersections and curb returns.

A. Traffic control will be as specified in the Manual of Uniform Traffic Control Devices (MUTCD) or as modified by the city as a result of appropriate traffic engineering studies.

B. Traffic signal modification, relocation or installation is required when roadway or driveway geometrics interfere with existing signal facilities, or would result in an unsignalized approach or intersection that meets signal warrants.

C. Angle Between Intersections. The following specifies the minimum requirements for intersections:

The interior angle at intersecting streets shall be kept as near to ninety (90) degrees as possible and in no case shall it be less than seventy-five (75) degrees. A tangent section shall be carried a minimum of twenty-five (25) feet each side of intersecting right-of-way lines.

D. Maximum street spacing: five hundred (500) feet.

E. Minimum center line offset of adjacent streets:

1. Residential: one hundred sixty (160) feet.
2. Residential or arterials intersecting arterials: three hundred (300) feet.

F. Sloping Approaches. On sloping approaches, including commercial driveways, garage entrances, and private street openings, landings are not to exceed two (2) feet difference in elevation for a distance of thirty (30) feet approaching an arterial or twenty (20) feet approaching a local collector or industrial or commercial street measured from the back of sidewalk or the back of curb if no sidewalk exists.

G. Curb Returns. Curb radii at intersections shall be shown in Table 12.24.140A for the various functional classifications. The right-of-way radii at intersections shall be sufficient to maintain at least the same right-of-way to curb spacing as the lower classified street.

Sidewalk access ramps shall be provided at all corners of all intersections, regardless of curb type.

Table 12.24.140A

TURNING RADII (FEET) EDGE OF PAVEMENT/CURB MINIMUMS

Street Classification	Major/Minor Arterial Street	Residential Collector Street	Commercial Industrial Street	Residential Access/Local Street
Major/minor arterial street	55	30	40	20
Residential collector street	30	20	30	15
Commercial industrial street	40	30	40	25
Local street	20	20	15	15

If bike lane or on-street parking exists, above radii may be reduced by five (5) feet.
 The radii of the major street will be used for all intersection curb returns.
 (Ord. 773 § 1.13, 1999)

12.24.150 Sight obstruction requirements.

- A. Sight distance should be maintained at all drive-ways, building or garage entrances where structures, wing walls, etc. are located adjacent to or in close proximity to a pedestrian walkway.
- B. Sight lines to traffic control devices (signs, signals, etc.) should not be obscured by landscaping, street furniture, marquees, awnings or other obstructions. Refer to the Manual of Uniform Traffic Control Devices (MUTCD) for required sightlines.
- C. Sight Distance. It is the policy of the city to have the developer's engineer evaluate safe intersection sight distance using the principles and methods recommended by AASHTO. The following minimum standards shall apply.

The following table is for intersection and driveway sight distances:

Table 12.24.150A

CORNER SIGHT DISTANCE

Design Speed (MPH)	Minimum Corner Sight Distance (Feet)
20	210
30	310
40	415
50	515
60	650

Sight distance should always be measured from a driver's eye three and one-half (3.5) feet high and fifteen (15) feet from the near edge of the nearest lane to a distance of four and one-quarter (4.25) feet.

Sight distances must be checked on the actual vertical and horizontal values of the proposed improvement. There shall be nothing to block observation of objects between six (6) inches and four (4) feet, three (3) inches above grade in both directions. The only exceptions should be for luminaire or utility poles, conforming traffic control devices, and fire hydrants. Cumulative effects must be considered, and all efforts taken to minimize sight obstructions.

Modifications or exceptions to these standards shall be approved by the city. (Ord. 773 § 1.14, 1999)

12.24.160 Curb and gutter--Types and application.

A. Curb and gutter shall be utilized for street edges whenever possible and shall always be used under the following conditions:

1. All streets: residential, commercial, or arterial;
2. Modified curb and gutter shall be used on designated bicycle lanes.

B. Vertical curb shall be used for edges of islands and medians except when emergency vehicle access across the median is required.

C. Rolled curb may be used at the end of cul-de-sacs where approved by the city.

D. The following specifies the requirements for curbs and cross-slope grading for streets:

1. All streets shall include curbs on both sides except in the situations of interim width improvements. Interim designs, where approved in writing by the city, shall have shoulders and ditches. Interim width streets shall have six (6) foot side shoulders adjacent to the street at a two and one-half (2-1/2) percent cross-slope and roadside ditches each side of the shoulders with a maximum side-slope of two (2) horizontal to one (1) vertical. The six (6) foot shoulder area may consist of a section of pavement and/or a section of crushed rock. The pavement section shall be a minimum of two (2) feet wide and a maximum of six (6) feet wide.

2. Cross-slope of the street section shall be no less than two and one-half (2.5) percent and no greater than five (5) percent. Whenever possible, the crown of the street shall be the same elevation as the top of the curbs.

3. Grading outside the improved areas shall be as follows, unless approved in writing by the city:

- a. Arterials shall have a maximum two (2) percent upward grading to the right-of-way line, and no steeper than two (2) to one (1) up, or two (2) to one (1) down, outside the right-of-way.
- b. Local street and commercial/industrial functional classifications shall have a maximum two (2) percent upward grading to the right-of-way line, a five (5) to one (1) upward or downward grading within the public utility easement, and no steeper than two (2) to one (1) up, or two (2) to one (1) down outside the public utility easement.

4. Retaining walls shall be used if slopes are greater than the two (2) to one (1) requirement in subsections (D)(1) through (D)(3) of this section or where slope stability is a problem. If slopes are to be maintained (mowed) by the city, a maximum of three (3) to one (1) slope will be required. Retaining walls shall be constructed to a height where the slope is no more than two (2) to one (1). (Ord. 773 § 1.15, 1999)

12.24.170 Survey monuments.

A permanent survey monument shall be located at each street intersection in all subdivisions and short plats. (Ord. 773 § 1.16, 1999)

12.24.180 Concrete sidewalks.

A. Where Required. Concrete sidewalks shall be provided as follows:

1. Both sides of all arterial streets.
2. Both sides of all other streets (through street or dead-end) except permanent dead-end streets less than three-hundred (300) feet in length;
3. One side of local permanent dead-end streets less than three-hundred (300) feet in length;
4. Both sides of dead-end streets over three hundred (300) feet, except in the cul-de-sacs or hammerhead turnarounds. In these circumstances installed sidewalks may end at the property line nearest

the street/cul-de-sac transitions, unless a bikeway/multipurpose trail is located at the end of the street in which case the sidewalk shall be extended to connect to that trail.

B. Exceptions. Where subdivision design provides an acceptable surfaced and maintained internal walkway system as approved by the city, a sidewalk may not be required adjacent to the street.

C. Width:

1. Residential streets: four (4) feet with planter strip;
2. Local commercial/industrial streets: six (6) feet;
3. Arterial streets: eight (8) feet;
4. Designated bikeways: ten (10) feet when there is insufficient roadway width for bicycle lanes.

Bicycle lanes shall be five (5) feet in width;

5. Width of sidewalk does not include curb. When the sidewalk is adjacent to the curb, the width shall be increased by one (1) foot;

6. Meandering sidewalks shall maintain the full design width around obstructions that either relocate the obstruction or meander the sidewalk;

7. Sidewalk widening behind the mailbox shall be five (5) feet long with a ten to one (10:1) taper to the standard sidewalk section.

D. Material. All sidewalks shall be five (5) inch thick Class B concrete over two (2) inches of crushed rock. At driveways the concrete shall be six (6) inches thick.

E. Landscape/Separation. A minimum six (6) foot separation between the back of the curb and sidewalk is required for landscaping and appurtenance locating purposes unless no practicable alternative exists and when approved in writing by the city. Sidewalks shall meander no more than six (6) feet from the curb at all pedestrian crossings and at driveways.

F. Wheelchair Ramps. In accordance with state law, wheelchair ramps shall be provided at all pedestrian crossings with curb sections.

G. Curb Ramps. The edge of the sidewalk shall merge into curb ramps. One ramp is used on each curb return on residential streets and unsignalized intersections. At signalized intersections, a curb ramp shall be aligned with each crosswalk. (Ord. 773 § 1.17, 1999)

12.24.190 Asphalt sidewalks.

Asphalt sidewalks may be allowed in lieu of concrete sidewalks where the sidewalk as determined by the city is deemed to be of a temporary nature (such as during construction activities) or due to future construction considerations. (Ord. 773 § 1.18, 1999)

12.24.200 Multi-use pathway.

Design requirements:

- A. Multi-use pathways shall be a minimum of six (6) feet wide.
- B. Materials shall be per the requirements of Section 12.24.320.
- C. Multi-use trails shall be a minimum of four (4) feet from the edge of the vehicular travel way unless no practicable alternative exists and when approved by the city.
- D. Maximum grade is fifteen (15) percent. Minimum curve radius is ten (10) feet.
- E. Access easement termination (Type II) shall be installed as directed by the city.
- F. Multi-use trails may be used as a substitute for concrete sidewalks in planned unit developments where the city deems that nonmotorized transportation goals of the city are being met. (Ord. 773 § 1.19, 1999)

12.24.210 Bikeways/bikelanes.

A. Bikeway construction is required in conjunction with commercial development, plat or short plat approval, when the need for such a bikeway is established by the Planning Department.

B. Separated bikeways (bicycles only) shall be a minimum of five (5) feet wide for one (1) way and ten (10) feet wide for two (2) way flow. Separated bikeways combined with pedestrian facilities shall be a minimum of ten (10) feet wide.

C. Where joint vehicular and bicycle facilities (bikelanes) are constructed, the curb lane shall be fourteen (14) feet wide and use eighteen (18) inch wide Type A curb and gutter.

D. Surfacing requirements for separated bike-ways shall be as specified in Section 1.31.

E. Maximum grade for separated bikeways shall be ten (10) percent. Minimum curve radius is one-hundred (100) feet. Curves should be minimized.

F. Bump Outs. A "bump out" at street intersections shall be installed on all routes with bike lanes using the following criteria:

1. Two-lane roadway: not applicable;
2. Three-lane roadway: "bump out" at all signalized intersections only;
3. Four- to five-lane roadway: "bump out" at all signalized intersections and at major side street intersections where the right turn volume onto the minor street exceeds 600 ADT. (Ord. 773 § 1.20, 1999)

12.24.220 Driveways.

A. General Requirements.

1. Standard residential or commercial driveways shall be required for all developments, short plats and subdivisions.

B. Conditions of Approval.

1. Driveways directly giving access onto arterials may be denied if reasonable alternate access is available.

2. All abandoned driveway areas on the street frontage to be improved shall be removed and new curb, gutter, and sidewalk shall be installed.

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

4. Left turns from and to a driveway may be restricted as a development condition or in the future if such maneuvers are found to be unduly hazardous.

5. Driveways shall be aligned wherever possible with existing driveways on the opposite side of the street.

6. All driveways shall be angled ninety (90) degrees to the street.

C. Design Criteria.

1. Width. The maximum two (2) way driveway width shall be twenty (20) feet for residential uses and thirty (30) feet for commercial uses. A wider commercial driveway width may be approved by the city where a substantial percentage of oversized vehicle traffic exists. In this case the driveway should be sized to accommodate the largest vehicles. Commercial driveways shall be thirty (30) feet on any arterial, twenty-six (26) feet to thirty (30) feet on any local street. Where intersection openings are approved the width shall be as determined by the city.

Maximum one-way driveway width shall be ten (10) feet for residential and twenty-two (22) feet for commercial driveways. Parking lot circulation needs shall be met on-site. The public right-of-way shall not be utilized as part of a one-way parking lot flow.

Driveways on local access streets serving single-family homes may be up to thirty (30) feet in width, subject to approval by the city.

2. Elevation. Back edge of driveway shall be at the same elevation as the back of the sidewalk adjacent to the driveway approach.

3. Clearance from structures. No object (including fire hydrants, light or power poles, street trees) shall be placed within fifteen (15) feet of the driveway edge.

Where the building facade or other design element is less than ten (10) feet behind the sidewalk front setback both pedestrian and vehicular sight distance shall be maintained. Vehicular sight distance shall be per Section 12.24.150.

4. Sight Distance. Pedestrian sight distance shall be as follows: The driver of an exiting vehicle shall be able to view a one (1) foot high object fifteen (15) feet away from either edge of the driveway throat when the driver's eye is fourteen (14) feet behind the back of the sidewalk.

5. Maximum driveway grade shall be fifteen (15) percent.

6. On sloping approaches, a landing as described in Section 12.24.090, shall be provided.

7. Approach grades and configuration shall accommodate future street widening to prevent major driveway reconstruction. (Ord. 773 § 1.21, 1999)

12.24.230 Bridges.

A. Design Principles. All bridges whether on public or private roadways shall meet the minimum requirements set forth in the latest edition of Standard Specifications for Highway Bridges, adopted by AASHTO. All new bridges shall be designed to carry an AASHTO HS-20-44 live load or greater.

B. Geometrics. In the general case, the bridge shall comprise the full width and configuration of the road being served (traveled way plus curb, sidewalk walkway, bike lane, and/or shoulder on one or both sides). Requirements of utilities shall be considered. Traffic and pedestrian railings or combination traffic-pedestrian railings shall meet AASHTO specifications. Overhead vertical clearances on the traveled street or under overpasses shall be sixteen and one-half (16.5) feet minimum. (Ord. 773 § 1.22, 1999)

12.24.240 Landscaping in the right-of-way, easements and access tracts.

A. Landscaping in the right-of-way will not be done without a right-of-way use permit.

B. Plantings established in the right-of-way shall be maintained by the abutting property owner.

C. Any existing planting areas within the right-of-way that are disturbed by construction activity shall be restored to their original condition.

D. Any plantings or other improvements placed within the right-of-way (by abutting property owners) are subject to removal when the right-of-way is needed for public use. The property owner is responsible for removing any landscaping or other improvements upon official notice. The property owners shall be responsible for survival of the relocated plantings.

E. Measures shall be taken by the developer to provide groundcover in areas within the right-of-way which have been stripped of natural vegetation or have a potential for erosion. Native plants shall be used whenever possible.

F. Plantings within the right-of-way shall comply with the following provisions:

1. All landscaping shall comply with the sight distance provisions of these standards.

2. Where existing landscaping maintained by the city exists every effort shall be taken to protect and preserve the existing vegetation during construction. Plants shall be relocated or removed only upon approval of the city. Damaged landscape areas shall be restored prior to issuing a final occupancy permit.

3. In areas where an existing landscaping concept or pattern has been established or approved, all new landscaping shall conform to the intent of the concept. Plantings shall be of a similar variety, size, and spacing to those already established and/or approved for the area.

4. All trees planted in areas with adjacent pedestrian usage shall maintain a seven (7) foot clearance to the lowest branches.

5. Approval from the city must be received before trees are planted in or adjacent to sidewalk sections. (Ord. 773 § 1.23, 1999)

12.24.250 Mailboxes.

A. Mailboxes should be clustered together when practical and when reasonably convenient to the houses served.

B. When mailboxes are located in the sidewalk, individually or in clusters, sidewalk shall be widened to provide the full design width around the mailboxes.

C. In the case of new road construction, or reconstruction requiring mailboxes to be moved back or rearranged, the designer and builder shall coordinate with the local postmaster of the U.S. Postal Service. Mailbox locations approved by the post office shall be shown on approved road construction plans. (Ord. 773 § 1.24, 1999)

12.24.260 Street illumination.

A. Plats and Short Plats. Street lighting is required for all public streets. The street lighting design shall be reviewed and approved by the city prior to final plat approval. The cost of all street lighting shall be paid for by the developer.

The city will accept maintenance and power cost responsibility for the public street light system when a plat is fifty (50) percent or more occupied. Until the plat is fifty (50) percent occupied, the developer is responsible for the maintenance and energy charges for the street lighting system.

Street lighting is not required on private streets within a plat. However, a street lighting system is encouraged. The city does not install or maintain private street lighting systems. On private streets, all street light maintenance and power cost shall be paid by the developer, homeowner, or homeowners' association.

B. Existing Residential Areas. If a resident or group of residents desires the installation of a new street light they must apply to the city.

C. Commercial. Street lighting is provided by the city on all public street frontages in the platted commercial areas. The developer is responsible for design and installation of new lighting.

D. General Considerations.

1. All public street light designs shall be prepared by a licensed engineer experienced in lighting design. The design calculations should indicate illuminaire spacing, illumination levels, uniformity ratio, line losses and the electrical and physical layout of the system, including its connection to the existing system.

2. All public street light systems shall be accessible for public maintenance by a wheeled vehicle weighing twenty-thousand (20,000) pounds.

3. All street light installations including wiring, conduit, and power connections shall be located underground. Exception: existing residential areas with existing aboveground utilities may have street lighting installed on the existing power poles.

4. As-built drawings on twenty-four (24) inch by thirty-six (36) inch mylar are required for all new or relocated underground street lighting systems prior to receiving a final occupancy permit.

5. All street lights shall be on one hundred and twenty (120) volt single phase systems. The exact location of the power source should be indicated together with the remaining capacity of that circuit. System continuity and extension should be considered.

6. Contractor cabinets equipped with electrical meters, time clocks, circuit breakers and other required components are required on commercial installations of five (5) or more street lights.

7. Particular attention shall be given to locating luminaires near intersections, at all street ends and at pedestrian and/or equestrian crossings.

E. Illumination.

1. Street lighting system designs are to be prepared by a licensed engineer experienced with lighting design. Calculations should include illuminaire spacing, illumination level, uniformity ratio, line loses, power source and other necessary details for the electrical and physical installation of the street lighting system. The lighting engineer shall use the standard specifications of the Washington State Department of Transportation, unless otherwise noted.

Illumination Levels

Street Classification	Horizontal Foot Candles	Uniformity Ratio (Average to Minimum)
Principal arterials	1.5 FC	3:1
Minor and collector arterials	1.0 FC	3:1
Local commercial/ industrial	1.0 FC	3:1
Local residential collectors	0.7 FC	3:1
Local residential streets	0.3 FC	None; 300 foot maximum spacing

(Ord. 773 § 1.25, 1999)

12.24.270 Traffic control and signing.

A. Traffic Control Devices. The city shall review and approve all traffic control devices.

B. Signing. In new plats the developer shall install all traffic control signs which shall include but not be limited to street name, parking, stop, dead end, and pedestrian signing. The developer will be responsible for supplying and installing the required signs.

C. Pavement Marking. In new plats or commercial developments pavement markings, including buttons, paint, thermoplastics and delineators will be required for roadway safety. Such markings shall be provided and installed by the developer. All markings shall be approved by the city prior to installation.

D. Temporary Traffic Control. It is the responsibility of the developer to provide adequate temporary traffic control to ensure traffic safety during construction activities.

E. Speed Humps. Speed humps are demonstration devices used to control vehicle speeds on local access/neighborhood collector streets.

F. Traffic Signal Modification. Traffic signal modification designs shall be prepared by a licensed engineer experienced in traffic signal design.

G. Design Requirements.

1. Traffic Control Devices. All traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD) as adopted by the Washington State Department of Transportation (WDOT).

2. Signing. See WDOT Standard Drawings for typical installations and details.

3. Pavement Marking. All markings shall conform to the current Manual on Uniform Traffic Control Devices (MUTCD) as adopted by the Washington State Department of Transportation (WDOT).

4. Temporary Traffic Control. All traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD) as adopted by the Washington State Department of Transportation (WDOT) or as modified by the city.

5. Speed Humps. Speed humps are approximately three (3) inches in height with a length of at least twelve (12) feet at base.

6. Traffic Signal Modification. The developers engineer shall use the standard specifications developed by the city in conjunction with the current edition of the Washington State Department of Transportation's (WDOT) Standard Plans and Specifications for Road, Bridge, and Municipal Construction. Traffic signal plans shall be submitted on twenty-two (22) inch by thirty-four (34) inch mylar. (Ord. 773 § 1.26, 1999)

12.24.280 Appurtenances.

An appurtenance shall be considered to be any fixed object located adjacent to the roadway and deemed to be a possible safety hazard.

A. All appurtenances shall be located a minimum of three (3) feet behind the face of the curb to the face of the object. Where no curb exists the distance from the edge of the travel way to the face of the object shall be at least six (6) feet.

B. All breakaway objects shall be located a minimum of two (2) feet behind the face of curb to the face of the object. All objects having properties up to that of a four (4) inch by four (4) inch wooden post shall be considered breakaway.

C. Appurtenances shall be located outside of the sidewalk area except when the sidewalk is widened around the appurtenance to the satisfaction of the city. (Ord. 773 § 1.27, 1999)

12.24.290 Franchise utilities.

A. Non-city owned franchise utilities are required to relocate existing facilities at their own expense when a conflict results between their facilities and public street improvements. The improvement work must be required by the non-city owned utility in order for the relocation work to be the financial responsibility of the utility, otherwise all costs shall be the responsibility of the developer.

B. All non-city owned franchise utility distribution or collection systems including power, fiber-optics, TV cable and telephone, in new plats or short plats shall be underground.

C. As a minimum on all new single-family plats and short plats, a minimum ten (10) foot wide common or individual non-exclusive utility easement shall be provided connecting any lots without public street frontage to a public street. Easements for existing or future utility lines which do not lie along rear or side lot lines shall be of a width specified by the serving utility. (Ord. 773 § 1.28, 1999)

12.24.300 Safety railing.

A. Along a pathway or other non-motorized transportation facility a safety railing shall be required when:

1. There is a nearby traffic hazard.
2. There is a nearby natural hazard such as a steep drop or water body.
3. The slopes adjacent to the sidewalk or other facility average greater than two to one (2'H:1'V).

B. Safety railings or other approved devices (such as walls, high curbs, landscape features or guard rails) shall be required where grading operations will produce a parking area, service yard or other vehicle area which has a drop-off grade separation in relation to adjoining properties or streets.

C. Safety railings shall be constructed of two (2) inch galvanized steel pipe or aluminum with vertical supports ten (10) feet on center and three (3) horizontal railings fourteen (14) inches on center, the lowest railing center being fourteen (14) inches above finished grade. All joints shall be welded, cold galvanized if welded after galvanizing, and the entire safety railing may be painted or vinyl coated to assure corrosion protection and a pleasing appearance. Railings shall be erected and adjusted, if necessary, after initially set to assure a continuous line and grade.

D. Wooden railings may be used when approved by the city. Wooden railings shall be sturdily constructed of pressure treated timbers and galvanized carriage bolts (no nails allowed). Posts shall be minimum four (4) inch by four (4) inch on four (4) foot centers. Three (3) inch by six (6) inch rails shall be bolted to the posts. Alternate designs may be considered. (Ord. 773 § 1.29, 1999)

12.24.310 Guard rails.

For purposes of warrants, design, and location, all guard rails along roadways shall conform to the criteria of the Washington State Department of Transportation Design Manual as may be amended or revised. The decision of whether to install a guardrail or not shall be based on information found in AASHTO publication, Guide for Selecting, Locating, and Designing Traffic Barriers. (Ord. 773 § 1.30, 1999)

12.24.320 Surfacing requirements.

All materials and workmanship shall be in accordance with the standard specifications, these standards, and as approved by the city.

A. Minimum Structural Section. The following are the minimum requirements for surfacing for specific facilities as described elsewhere in these standards.

Facility	Surfacing Requirements
1. Roadways Arterials - industrial, Commercial	5 inch Class B asphalt over 4 inch crushed surfacing
Residential collector	4 inch Class B asphalt over 12 inch crushed surfacing
Access and local residential, residential streets	3 inch Class B asphalt over 10 inch crushed surfacing
2. Concrete sidewalks	5 inch portland cement concrete over 3 inch of crushed surfacing
3. Bikeway or pathway	2 1/2 inch Class B asphalt over 4 inch crushed rock base

All minimum surfacing requirements assume an acceptable, well drained, stable, compacted subgrade. Additional requirements may be imposed at the discretion of the city if suitable subgrade conditions are not met. A pervious material, such as Grasscrete or Ritter Ring, may be used in parking lots upon approval of the city.

B. Alternative Sections.

1. Streets may be constructed of either of the following:

- Asphaltic concrete with crushed rock base or treated bases;
- Full depth asphaltic concrete;
- Portland cement concrete with cushion course of crushed rock or on a base of crushed rock or treated base.

2. Alternative sections may be approved by the city following submission of calculations by a registered engineer and per the design requirements described herein. Soil testing to obtain the strength of the soil is required for all roads and streets in order to analyze and design the structural section. Soil tests are needed on undisturbed samples of the subgrade materials that are expected to be within three (3) feet of the planned subgrade elevation. Samples are needed for each five hundred (500) feet of roadway and for each visually observed soil type. Soil tests are required from a minimum of three (3) locations.

3. The selected design structural strength of the soil needs to be consistent with the subgrade compaction requirements. The strength and compaction moisture content, at optimum to slightly over optimum, needs to be specified. The soils report shall address subgrade drainage and ground water considerations for year round conditions.

4. Recommendations for both summer and winter construction shall be included. The required density of treated and untreated subgrade materials shall not be less than ninety-five (95) percent maximum density as determined by AASHTO T-99.

C. Aggregate Base. All aggregate shall meet WDOT specifications for base rock.

During compaction, materials shall be maintained within two (2) percent of the optimum moisture content. The contractor shall begin compaction of each layer immediately after the material is spread, and continue until a density of not less than ninety-five (95) percent of the maximum density has been achieved. Maximum density will be determined by AASHTO T-180, or WDOT Test Method 705.

D. Asphalt Pavement Design. The base course of asphalt concrete (AC) streets shall be WDOT Class B and the wearing course shall be WDOT Class B or G.

The compaction shall be at least ninety-one (91) percent based on a Rice theoretical maximum density, as determined in conformance with AASHTO T 209, as modified by WDOT. In addition, for each mix used, a fifty (50) blow Marshall (AASHTO T 245) shall be performed and all related test data shall be provided to the city. The minimum stability shall be one thousand eight hundred (1800) pounds, the flow shall be between eight (8.0) and sixteen (16.0) hundredths of an inch, and the voids shall be between three (3.0) and five (5.0) percent. The Marshall requirement may be waived by the city on a case-by-case evaluation.

Asphalt pavement shall be designed by the Asphalt Institute Method, or an approved equivalent method provided it is a nationally recognized procedure.

Design of asphalt concrete pavement structures by the Asphalt Institute Method shall conform to the guidelines of the Asphalt Institute publication, Thickness Design Asphalt Pavements for Highways and Streets Manual Series No. I.

AASHTO T-193 (CBR method), or

AASHTO T-190 (R-value method), or

If the CBR value of the subgrade exceeds twenty (20) or the R-value of the subgrade exceeds sixty (60) then CBR and R-value methods shall not be used.

E. Portland Cement Concrete Pavement.

1. The design of portland cement concrete streets shall be governed by the guidelines and requirements of the Portland Cement Association (PCA) design procedures found in the below listed publications:

- a. Concrete Streets: Typical Pavement Sections and Jointing Details;
- b. Thickness Design for Concrete Highway and Street Pavements;
- c. Joint Design for Concrete Highway and Street Pavements.

2. The subgrade shall be tested to determine the modulus of subgrade reaction, k, in order to design the street structure. A correlation of CBR to k may be made using Figure 2, Thickness Designs for Concrete Highway and Street Pavements. In addition, the city will require that the following be incorporated into the design and construction specifications:

- a. Use a minimum twenty (20) year design period.
- b. Minimum thickness of portland cement concrete shall be five (5) inches.
- c. The minimum concrete specifications shall be five thousand (5000) psi (compressive) and six hundred fifty (650) psi (flexural) in twenty-eight (28) days. The minimum cement content will be six hundred sixty (660) pounds per yard, with a maximum water/cement ratio of 0.48. The slump shall range from three (3) inch to four and one-half (4-1/2) inch. The entrained air shall be from four (4.0) to six (6.0) percent.
- d. A design joint plan shall be prepared and incorporated into the street construction plans. Longitudinal and transverse joint locations shall be clearly delineated. Transverse joints shall be skewed forward two (2) feet per lane with right and left curb street stationing noted for each end. Joint spacing (in feet) should not exceed 1.5 to 1.75 times the slab thickness (in inches). For example, an eight (8) inch thick slab would have a maximum joint spacing of twelve (12) to fourteen (14) feet. The maximum length to width ratio shall be 1.25 : 1.0 for any panel unless there are other constraints that the city will examine on a case by case basis. (Ord. 773 § 1.31, 1999)

12.24.330 Utilities.

A. Depth. Underground utilities shall be buried at the depth required by individual utilities and approved by the city.

B. Curb Markings. When new curbing is being placed, a stamp shall be placed to mark where each water and sanitary sewer service crosses the curb line. The method of marking the curb shall be approved by the city and noted on the approved construction plans. If an imprinting stamp is used, the impression left for a water service shall be the letter "W"; for a sanitary sewer service, it shall be the letter "S". These impressions shall be two (2) inches high, placed on the top of the curb.

C. Trench Restorations. Trench restoration shall be either by a patch or overlay method. When a patch method is used, the trench limits shall be sawcut prior to the final patch.

All trench and pavement cuts shall be made by sawcuts. The sawcuts shall be a minimum of one (1) foot outside the trench width. If the permit requires an overlay, the contractor may use a jackhammer for the cutting of the existing pavement.

D. Utility Locations. Utilities shall be located horizontally within the right-of-way in accordance with city standards. (Ord. 773 § 1.32, 1999)

Chapter 12.28

STREET CONSTRUCTION STANDARDS

Sections:

- 12.28.010 General requirements.**
- 12.28.020 Surfacing requirements.**
- 12.28.030 Curb and gutter.**
- 12.28.040 Concrete sidewalks.**
- 12.28.050 Driveways.**
- 12.28.060 Mailboxes.**
- 12.28.070 Survey monuments.**
- 12.28.080 Street illumination.**
- 12.28.090 Safety railings.**
- 12.28.100 Utilities.**
- 12.28.110 Inspection.**

12.28.010 General requirements.

A. Preconstruction Conference Requirement.

B. Construction Standards. All street, roadway, or sidewalk construction within public right-of-way shall conform to the most recent design standards of the city and other requirements of the city. All work and materials shall be in accordance with this chapter and the Standard Specifications (WDOT Standard Specifications for Road, Bridge, and Municipal Construction). Where conflicts exist the more stringent specification shall apply, as determined by the city.

C. Plans and Specifications. The installation of street and sidewalks shall be in accordance with construction plans and specifications prepared by the developer's engineer and reviewed and approved by the city. (Ord. 773 § 1.00, 1999)

12.28.020 Surfacing requirements.

A. General Requirements. Subgrade, aggregate base, and pavement shall be constructed in accordance with the Standard Specifications.

B. Aggregate Base. All aggregate shall meet WDOT specifications for base rock.

During compaction, materials shall be maintained within two (2) percent of the optimum moisture content. The contractor shall begin compaction of each layer immediately after the material is spread, and continue until a density of not less than ninety-five (95) percent of the maximum density has been achieved. Maximum density will be determined by AASHTO T-180, or WDOT Test Method 705.

C. Asphalt Pavement. The base course of asphalt concrete (AC) streets shall be WDOT Class B and the wearing course shall be WDOT Class B or G.

The compaction shall be at least ninety-one (91) percent based on a Rice theoretical maximum density, as determined in conformance with AASHTO T- 209, as modified by WDOT.

In addition, for each mix used, a fifty (50) blow Marshall (AASHTO T-245) shall be performed and all related test data shall be provided to the City Engineer. The minimum stability shall be one thousand eight hundred (1800) pounds, the flow shall be between eight (8.0) and sixteen (16.0) hundredths of an inch, and the voids shall be between three (3.0) and five (5.0) percent. The Marshall requirement may be waived by the city on a case-by-case evaluation. (Ord. 773 § 1.01, 1999)

12.28.030 Curb and gutter.

All curb and gutter shall be constructed with Class B concrete, and shall be constructed over a prepared foundation of compacted aggregate.

When new curbing is being placed, a stamp shall be placed to mark where each water and sanitary sewer service crosses the curb line. The method of marking the curb shall be approved by the city and noted on the approved construction plans. If an imprinting stamp is used, the impression left for a water service shall be the letter "W"; for a sanitary service, it shall be the letter "S." These impressions shall be two (2) inches high, placed on the top of the curb. (Ord. 773 § 1.02, 1999)

12.28.040 Concrete sidewalks.

All sidewalks shall be five (5) inch thick Class B concrete, and shall be constructed over a prepared foundation of compacted aggregate with a stiff broom finish. At driveways the concrete shall be six (6) inches thick. (Ord. 773 § 1.03, 1999)

12.28.050 Driveways.

A. Clearance from structures. No object (including fire hydrants, light or power poles, street trees) shall be placed within fifteen (15) feet of the driveway edge.

Where the building facade or other design element is less than ten (10) feet behind the sidewalk front setback both pedestrian and vehicular sight distance shall be maintained.

B. Construction shall be per Standard Drawings. (Ord. 773 § 1.04, 1999)

12.28.060 Mailboxes.

It shall be the responsibility of the developer to ascertain mailbox design requirements as required by the postmaster. Mailboxes, in the general case, shall be set:

A. Bottom or base of box forty-four (44) inches above road surface or as directed by the postmaster;

B. Placement in relation to curb or sidewalk:

1. Local streets: Front of mailbox one (1) foot back of vertical curb face or outside edge of shoulder; six (6) inches behind back edge of rolled curbs;

2. Arterial streets: front of mailbox one (1) foot behind the back of sidewalk;

C. On posts strong enough to give firm support but not to exceed four (4) inch by four (4) inch wood or one and one-half (1-1/2) inch diameter pipe, or material with comparable breakaway characteristics;

D. Sidewalk widening behind the mailbox shall be five (5) feet long with a ten to one (10:1) taper to the standard sidewalk section. (Ord. 773 § 1.05, 1999)

12.28.070 Survey monuments.

Monument case and cover: see WDOT Standard Drawings. (Ord. 773 § 1.06, 1999)

12.28.080 Street illumination.

A. Signing. See WDOT Standard Drawings for typical installations and details.

B. Pavement Marking. All materials shall conform to the State of Washington Standard Specifications for Road, Bridge, and Municipal Construction, latest edition.

C. Traffic Signal Modification. The developers engineer shall use the standard specifications in the current edition of the Washington State Department of Transportation's (WDOT) Standard Plans and Specifications for Road, Bridge, and Municipal Construction. (Ord. 773 § 1.07, 1999)

12.28.090 Safety railings.

A. Safety railings shall be constructed of two (2) inch galvanized steel pipe or aluminum with vertical supports ten (10) feet on center and three (3) horizontal railings fourteen (14) inches on center, the lowest railing center being fourteen (14) inches above finished grade. All joints shall be welded, cold galvanized if welded after galvanizing, and the entire safety railing may be painted or vinyl coated to assure corrosion protection and a pleasing appearance. Railings shall be erected and adjusted, if necessary, after initially set to assure a continuous line and grade.

B. Wooden railings may be used when approved by the city. Wooden railings shall be sturdily constructed of pressure treated timbers and galvanized carriage bolts (no nails allowed). Posts shall be minimum four (4) inch by four (4) inch on four (4) foot centers. Three (3), three (3) inch by six (6) inch rails shall be bolted to the posts. Alternate designs may be considered. (Ord. 773 § 1.08, 1999)

12.28.100 Utilities.

A. Depth. Underground utilities shall be buried at depth as required by individual utility and approved by the city.

B. Curb Markings. When new curbing is being placed, a stamp shall be placed to mark where each water and sanitary sewer service crosses the curb- line. The method of marking the curb shall be approved by the city and noted on the approved construction plans. If an imprinting stamp is used, the impression left for a water service shall be the letter "W"; for a sanitary sewer service, it shall be the letter "S." These impressions shall be two (2) inches high, placed on the top of the curb.

C. Trench Restorations. Trench restoration shall be either by a patch or overlay method. When a patch method is used, the trench limits shall be sawcut prior to the final patch.

All trench and pavement cuts shall be made by sawcuts. The sawcuts shall be a minimum of one (1) foot outside the trench width. If the permit requires an overlay, the contractor may use a jackhammer for the cutting of the existing pavement.

All trenching shall be backfilled with crushed surfacing approved by the city. The trench shall be compacted to ninety-five (95) percent maximum density.

Backfill compaction shall be performed in eight (8) to twelve (12) inch lifts. The compaction tests shall be performed in four (4) foot increments maximum. The test results shall be given to the city for review and approval prior to paving. Number of tests required shall be as specified by the city. Additional testing may also be performed by the city.

Temporary restoration of trenches for overnight use shall be accomplished by using MC mix (cold mix), ATB, or steel plates. ATB used for temporary restoration may be dumped directly into the trench, bladed out and rolled. After rolling, the trench must be filled flush with asphalt to provide a smooth riding surface.

Tack shall be applied to the existing pavement and edge of sawcuts and shall be emulsified asphalt grade CSS-1.

Asphalt concrete Class B shall be placed on the prepared surface by an approved paving machine, except that longitudinal joints between successive layers of asphalt concrete shall be displaced laterally a minimum of twelve (12) inches or unless otherwise approved by the city. Asphalt concrete over two (2) inches thick shall be placed in equal lifts not to exceed two (2) inches each.

All street surfaces, walks or driveways within the street trenching areas affected by the trenching shall be feathered and shimmed to an extent that provides a smooth-riding connection and expeditious drainage

flow for the newly paved surface. Shimming and feathering as required by the city shall be accomplished by raking out the oversized aggregates from the Class B mix as appropriate.

The paving shall be corrected by removal and repaving of the trench only.

Asphalt patch depths will vary based upon the streets being trenched and whether the trenching is parallel or perpendicular to the streets. The actual depths of asphalt shall be shown on the right-of-way use permit and the work shall be performed as required by the attached details.

Compaction of all lifts of asphalt shall be an average of ninety-two (92) percent of maximum density as determined by WDOT Test Method 705. Number of tests required shall be as specified by the city.

All joints shall be sand sealed using paving asphalt AR4000W.

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

The final patch shall be completed as soon as possible and shall be completed within thirty (30) 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's approval. The city may deem it necessary to complete the work within the thirty (30) days time frame and not allow any time extension. If this occurs, the contractor shall perform the necessary work as directed by the city. (Ord. 773 § 1.09, 1999)

12.28.110 Inspection.

A. Step Inspections. The following items of work shall be inspected by city forces:

1. For street or sidewalk work, subgrade shall be inspected by the city (and tested by the contractor) prior to placement of crushed surfacing;
2. Crushed surfacing shall be inspected by the city (and tested by the contractor) prior to placement of paving, curb, or sidewalks;
3. Pavement, curb, and sidewalk. Notify the city prior to the placement of any paving, curbs, or sidewalk;
4. Compaction of bedding and backfill of utility trenches;
5. Compaction of bedding within public right-of-way and slope easement.

Other items of inspection notification are included under the various items of work outlined in these standards.

B. Progress of Construction. Construction shall proceed in a systematic manner that will result in a minimum of inconvenience to the public. (Ord. 773 § 1.10, 1999)

Chapter 12.30 STREET ADDRESSING

Sections:

- 12.30.010 Applicability.**
- 12.30.020 Official map.**
- 12.30.030 Street name review.**
- 12.30.040 Name and address assignment.**
- 12.30.050 Notification of address change.**
- 12.30.060 Building numbering system.**
- 12.30.070 Posting street names.**
- 12.30.080 Enforcement.**

12.30.010 Applicability.

This chapter applies to all properties within the city limits of the city of North Bonneville. For the purposes of this chapter, public and private ways shall mean public and private ways capable of supporting motor vehicle traffic. (Ord. 1052, 2015)

12.30.020 Official map.

The official map of the city of North Bonneville shall be the North Bonneville comprehensive plan map adopted by resolution of the North Bonneville city council. The North Bonneville city administrator, in consultation with the city planning advisor and building inspector, may adopt, maintain, and modify a building number axis map which is consistent with the North Bonneville comprehensive plan map. The official map and the building numbering axis map shall be available upon request for public inspection. (Ord. 1052, 2015)

12.30.030 Street name review.

With the exception of alleyways, all public ways shall have a name. All private ways serving more than two properties, improved or unimproved, or providing access to three or more dwellings shall have a name. Names shall conform generally with the following guidelines:

A. Where a proposed public or private way is a continuation of or in alignment with an existing public or private way; it shall utilize the same name as the existing public or private way. A new name shall be required if the proposed public or private way is disconnected from the existing public or private way by an offset greater than one hundred fifty feet.

B. Usage of names derived from geographic features shall be limited to locations in close proximity to such geographic features.

C. The following names and naming conventions are prohibited:

1. Names which duplicate or phonetically approximate existing names within the city limits;
2. Names of similar pronunciation or spelling with existing names;
3. Variations of the same name with a different roadway designation, unless the public or private way is a continuation or in alignment with another public or private way having the same name;
4. Names which include numbers, dashes, apostrophes or other non-alphabetical characters;
5. Names beginning with articles (a, an or the);
6. Names which duplicate common facility names;
7. Names exceeding three words or twenty-two characters not including the roadway designator;
8. Names which the North Bonneville city administrator or designee determines to be unacceptable due to duplication or other difficulties related to emergency service dispatch. (Ord. 1052, 2015)

12.30.040 Name and address assignment.

The North Bonneville city administrator, in consultation with the city planning advisor and building inspector, shall have the authority to assign names and addresses in accordance with the provisions of this chapter. (Ord. 1052, 2015)

12.30.050 Notification of address change.

When the city changes an address or name, the city shall notify affected property owners and residents by mail, at their last address known to the city of North Bonneville, of any name or address change. The city shall also notify the United States Postal Service, utility companies which serve the affected property, and other affected governmental and emergency service agencies.

An affected property owner may appeal assignment of a name or address by filing a notice of appeal with the North Bonneville city clerk no later than fourteen calendar days after the date of mailing of notice by the city of North Bonneville. Appeals shall be heard by the North Bonneville city council within thirty days after the filing of the notice of appeal. The North Bonneville city council may affirm, reverse, or modify the assignment made by the North Bonneville city administrator or designee.

Unless appealed in accordance with this section, assignments made by the North Bonneville city administrator or designee shall be final. Assignments made or confirmed by the North Bonneville city council on any appeal shall be final. Property owners shall change the address numbers at affected locations within ten days after an assignment becomes final. (Ord. 1052, 2015)

12.30.060 Building numbering system.

The property owner is responsible for posting and continued maintenance of the property address on the front of an addressed structure. Numbers shall be plainly visible and legible from the public or private way. Numbers posted shall be Arabic only. Numbers shall be placed on the addressed structure as near to the front door as practicable. Numbers shall contrast clearly with any background color. The figures designating the number shall be not less than three inches in height and three-quarter inches in width. On corner lots, the number shall only be displayed to face the street upon which the property is numbered. If address numbers are not posted and maintained in accordance with this section, the city of North Bonneville shall not be responsible if a property cannot be located by emergency services personnel. (Ord. 1052, 2015)

12.30.070 Posting street names.

It shall be the duty of the North Bonneville city administrator, or designee, to identify all existing public intersections by the erection and maintenance of adequate signs and posts. For new developments, the North Bonneville city administrator, or designee, may require erection and maintenance of signs and posts by the developer at his/her expense. Property owners using private ways to access their properties shall be responsible for the erection and maintenance of name signs in locations visible at the intersections between the private way and any other public or private way. Private name signs shall be in compliance with standards established by the North Bonneville city administrator, or designee. (Ord. 1052, 2015)

12.30.080 Enforcement.

If an address number is missing, illegible or incorrect, or otherwise not in conformance with standards of this chapter, the city administrator, or designee, may notify the property owner in writing and require that correction be made within ten days. Any person or entity who shall in any manner violate any of the provisions of this chapter shall be deemed guilty of a misdemeanor and upon conviction shall be punished by a fine in accordance with Section 7.01.020(B). (Ord. 1052, 2015)