

# Pierce County

Department of Planning and Land Services  
Development Engineering Section

PROJECT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

APPLICATION NO.: \_\_\_\_\_ PCDE NO.: \_\_\_\_\_

*Circled items need to be addressed. Checked items are OK. A determination cannot yet be made on items left blank. Address these items. If you believe a particular blank item does not apply, state this explicitly.*

## ROAD REVIEW CHECKLIST ORDINANCE 2004-56S

### Major Arterials

1. \_\_\_\_ The design year ADT is approximately 5,000 to 30,000+ vehicles per day. (2-1.2.1)
2. \_\_\_\_ The spacing of major arterials is 1 mile in highly developed business areas to 5+ miles in rural areas. (2-1.2.1)
3. \_\_\_\_ Located on community and neighborhood boundaries or adjacent to but not through major shopping centers, parks, and other homogeneous areas. (2-1.2.1)
4. \_\_\_\_ Designed per Details: PC.A1.1, PC.A1.2, PC.A1.3, PC.A1.4, PC.A4.1

### Secondary Arterials

5. \_\_\_\_ The design year ADT is approximately 2,500 to 15,000 vehicles per day. (2-1.2.2)
6. \_\_\_\_ Spacing of secondary arterials is < 1 mile in fully developed areas to 3+ miles in rural areas. (2-1.2.2)
7. \_\_\_\_ They provide intra-community continuity and are typically a continuous road with a direct rather than a meandering alignment. (2-1.2.2)
8. \_\_\_\_ They usually do not penetrate identifiable neighborhoods. (2-1.2.2)
9. \_\_\_\_ Designed per Details: PC.A1.1, PC.A1.2, PC.A1.3, PC.A1.4, PC.A4.1

### Collector Arterials

10. \_\_\_\_ The design year ADT is approximately 1,000 to 4,000 vehicles per day. (2-1.2.3)
11. \_\_\_\_ They may be on a somewhat meandering alignment. (2-1.2.3)
12. \_\_\_\_ Spacing ranges from 1/4 mile in developed areas to 3 miles in rural areas. (2-1.2.3)
13. \_\_\_\_ Collector arterials provide both land access service and traffic circulation within residential neighborhoods, commercial, and industrial areas. (2-1.2.3)
14. \_\_\_\_ They may penetrate identifiable residential neighborhoods. (2-1.2.3)
15. \_\_\_\_ Designed per Details: PC.A1.1, PC.A1.2, PC.A1.3, PC.A1.4, PC.A4.1

### Local Road System

16. \_\_\_\_ There should be a limited number of access points with the arterial roads that border the subdivision. (2-1.2.4)
17. \_\_\_\_ Local roads should be designed for relatively uniform low volume of traffic upon full development, particularly for Local Road Minor and Cul-de-sacs. (2-1.2.4)
18. \_\_\_\_ Internal roads with direct lot access should be discontinuous so as to discourage through traffic. (2-1.2.4)

**Local Road Feeder**

- 19. \_\_\_\_ Distributes traffic from the Local Road Minor in residential neighborhoods and channels it to the arterial system. (2-1.2.4.A)
- 20. \_\_\_\_ There is no direct lot access from local road feeders. (2-1.2.4.A)
- 21. \_\_\_\_ It directly serves any major traffic generators within the neighborhood, such as an elementary school or a church. (2-1.2.4.A)
- 22. \_\_\_\_ It usually serves one moderate size neighborhood or a combination of a few small developments, rather than interconnecting two or more larger neighborhoods. (2-1.2.4.A)
- 23. \_\_\_\_ Serves little, if any, through traffic generated outside the neighborhood. (2-1.2.4.A)
- 24. \_\_\_\_ Typical ADT may range from about 400 to 1,500 vehicles per day. (2-1.2.4.A)
- 25. \_\_\_\_ Abutting residences are oriented away from the feeder road. (2-1.2.4.A)
- 26. \_\_\_\_ Designed per Details: PC.A2.1, PC.A2.2, PC.A2.3, PC.A2.4

**Local Road Minor**

- 27. \_\_\_\_ They are typically an internal subdivision road providing circulation within the subdivision or between subdivisions. (2-1.2.4.B)
- 28. \_\_\_\_ Service to through-traffic is deliberately discouraged. (2-1.2.4.B)
- 29. \_\_\_\_ Typical ADT may range from about 300 to 1,000 vehicles per day. (2-1.2.4.B)
- 30. \_\_\_\_ Designed per Details: PC.A3.1, PC.A3.2, PC.A3.3, PC.A3.4, PC.A3.5, PC.A3.6

**Local Road Cul-De-Sac**

- 31. \_\_\_\_ It is less than 700' in total length as measured along the roadway centerline from the center of the cul-de-sac to the nearest right- of-way line extension of the first intersection, excluding "L" intersections. (2-1.2.4.C)
- 32. \_\_\_\_ Serves less than 21 residences and has a typical ADT of 200 vehicles per day or less. (2-1.2.4.C)
- 33. \_\_\_\_ Designed per Details: PC.A3.1, PC.A3.2, PC.A3.3, PC.A3.4, PC.A3.5, PC.A3.6, PC.A4.1, PC.A5.1

**Right-of-Way**

- 34. \_\_\_\_ The minimum right-of-way width to be 60', except a local road may utilize a 50' wide right-of-way provided all utilities are located underground. (2-2)
- 35. \_\_\_\_ The minimum right-of-way width for a local road located within a plat may be reduced to 40', provided a non-exclusive utility easement is provided abutting the right-of-way on one or both sides such that the total width of right-of-way and easement be no less than 60' or 50' when all utilities are located underground. (2-2)
- 36. \_\_\_\_ The minimum right-of-way widths used for arterial roads:

<b>Recommended Minimum Arterial Right-of-Way Widths (2-2)</b>	
<b>Major</b>	80'
<b>Secondary</b>	70'
<b>Collector</b>	60'

- 37. \_\_\_\_ The final right-of-way width shall exceed the roadway width by a minimum of 4' on each side. (2-2)

**Design Vehicle**

- 38. \_\_\_\_ In the design of any road facility the largest design vehicle likely to use that facility with considerable frequency or a design vehicle with special characteristics that must be taken into account in dimensioning the facility is used to determine the design of such critical features as radii at intersections and radii of turning roadways. (2-3)

**Design Vehicle (Continued)**

<b>Design Vehicle (2-3)</b>	
<b>Arterials</b>	
<b>Major</b>	Bus/WS-50
<b>Secondary</b>	Bus/WS-50
<b>Collector</b>	SU/Bus
<b>Local</b>	
<b>Feeder</b>	SU/P
<b>Minor</b>	P
<b>Cul-de-sac</b>	P

**Design Speed**

39. \_\_\_\_\_ Design speed called out on plans: \_\_\_\_\_ MPH
40. \_\_\_\_\_ Geometric design features of a road facility should be consistent with the design speed appropriate for the facility. (2-4)

<b>Design Speed (2-4)</b>			
		<b>Urban (mph)</b>	<b>Rural (mph)</b>
<b>Arterials</b>	Major	45	
	Secondary	40	45
	Collector	35	40
<b>Local Road</b>	Feeder	30	
	Minor	25	
<b>Cul-de-sac</b>	Stem over 250' in length	25	
	250' or less in length	20	

**Traffic Characteristics**

41. \_\_\_\_\_ Trip Generation, as published by the Institute of Transportation Engineers, shall be used when developing traffic generation volumes. (2-5.1)
42. \_\_\_\_\_ Truck turning radii as detailed in the AASHTO Green Book should be provided where significant volumes of heavy trucks are expected. (2-5.4) (Exhibit 2-2)
43. \_\_\_\_\_ Truck climbing lanes, where warranted, shall be provided as detailed in the AASHTO Green Book. (2-5.4) (AASHTO Chap. 4)
44. \_\_\_\_\_ Bus turnouts shall conform to the design requirements of the County Engineer and Detail PC.A.8. (2-5.5)

**Pedestrians**

45. \_\_\_\_\_ Sidewalks shall be provided in all new urban developments located in urban growth areas. (2-6) (17B.30.040.B.1)
46. \_\_\_\_\_ Curb ramps shall meet the requirements of the Americans with Disability Act. (2-6.1)
47. \_\_\_\_\_ Walkway and trail design shall be coordinated with the County Engineer in order to receive specific design direction and parameters. (2-6.2)
48. \_\_\_\_\_ Bicycle design shall be coordinated with the County Engineer in order to receive specific design direction and parameters. (2- 7)
49. \_\_\_\_\_ Designed per Details: PC.F7.1, PC.F7.2

**Passing Sight Distance**

50. \_\_\_\_\_ Passing sight distance on rural arterials. (3-1)

**Stopping Sight Distance**

51. \_\_\_\_\_ Calculations provided to verify SSD.
52. \_\_\_\_\_ Minimum Stopping Sight Distance (SSD) shall be designed for wet pavement as follows:

**Stopping Sight Distance (Continued)**

<b>Minimum Stopping Sight Distance (3-1)</b>						
<b>Design Speed (mph)</b>	20	25	30	35	40	45
<b>SSD (feet)</b>	125	150	200	250	325	400

Values are based on an object height of 0.5' and a driver's eye height of 3.5'. (3-1)

53. \_\_\_\_\_ The effects of grade must be accounted for through the use of a correction factor for grades steeper than 3% as follows:

Design increase (feet) for downhill per the following table:

<b>Downhill Grade Correction Factors (3-1)</b>			
<b>Design Speed (mph)</b>	<b>Increase (feet) for Downhill</b>		
	<b>3%</b>	<b>6%</b>	<b>9%</b>
20	10	20	30
25	15	30	45
30	20	40	70
35	25	55	
40	30	70	
45	40	90	

**Entering Sight Distance**

54. \_\_\_\_\_ Calculations provided to verify ESD

Entering Sight Distance must be equal to or exceed the required entering sight distance listed below for the legal posted speed limit. Values are based on drivers eye height of 3.5' set back at least 10.0' from the edge of traveled way and an object height of 4.25' as illustrated in Details C-1 and C-2 in Appendix C. (3-1)

<b>Entering Sight Distance (3-1)</b>					
<b>Posted Speed (mph)</b>	25	30	35	40	45
<b>ESD (feet)</b>	295	355	415	470	530

55. \_\_\_\_\_ Entering Sight Distance for all movements shall be designed for the posted speed of the facility being entered as follows, unless unusual design or safety considerations warrant increased sight distance requirements as determined by the County Engineer:
56. \_\_\_\_\_ Entering Sight Distance must be calculated for situations that involve road approach grades in excess of 6% to account for the reduction in vehicle acceleration and deceleration. (3-1)
57. \_\_\_\_\_ Exiting Sight Distance for vehicles on the major road to view an oncoming vehicle traveling at the speed limit and turn safely onto a minor road or driveway shall be made available. Design analysis should be similar to that used for Entering Sight Distance. (3-1)
58. \_\_\_\_\_ Roadway and driveway approaches, public or private, should be designed so as to provide adequate entering sight distance in both directions on the roadway being accessed (see Details C-1 and C-2 in Appendix "C") and so as not to interfere with drainage. (5-1.1)

**Vertical Curves**

59. \_\_\_\_\_ All changes in grade greater than 1% shall be connected by a vertical curve. (3-3.1)
60. \_\_\_\_\_ All vertical curves shall be designed per the AASHTO Green Book. (3-3.2)
61. \_\_\_\_\_ All vertical curves must be symmetrical parabolic curves. (3-3.2)
62. \_\_\_\_\_ Design speeds for vertical curves located within the area controlled by a STOP sign can be reduced in accordance with the anticipated speed of the vehicle approaching the STOP control. (3-3.2)

### Vertical Alignment

63. \_\_\_\_ For rural projects, the AASHTO Green Book includes tables of maximum grades related to design speed and terrain. (3-3)

64. \_\_\_\_ The maximum gradient on any new or reconstructed road shall not exceed the following:

<b>Maximum Grades (3-3.1) &amp; (17B.20.020.C.9)</b>		
<b>Arterials</b>	Major	8%
	Secondary	
	Collector	
<b>Local Road</b>	Feeder	10%
	Minor	
	Cul-de-sac Stem	15%
	Cul-de-sac Turnaround	6%
<b>Shared Access Facility</b>	Gravel	12%
	Paved	15%
	Cul-de-sac	6%

65. \_\_\_\_ The centerline and gutterline gradient of any road shall not be less than 0.7% when an asphalt concrete gutterline is used and not less than 0.4% when a cement concrete gutterline is used. (3-3.1)

66. \_\_\_\_ The centerline gradient of any road shall not be less than 0.7% when drainage is not contained. (3-3.1)

### Horizontal Alignment

67. \_\_\_\_ The road construction centerline must match as much as possible the right-of-way centerline. (3-2)

68. \_\_\_\_ The normal roadway crown slope for new construction is 2% unless the road is in superelevation or an intersection design requires a varying slope. (3-2)

69. \_\_\_\_ When widening of an existing road is being done, a maximum of 4% cross slope will be permitted. Grinding and/or overlaying as applicable will be required if the cross slope will exceed this amount.

70. \_\_\_\_ The design for horizontal curvature shall be determined using the following formula:  $R_{min} = V^2/15(e+f)$ . (Not applicable for Shared Access Facilities)

Where:  $R_{min}$  = minimum radius (feet)  
 $V$  = Design speed (mph)  
 $e$  = Superelevation (ft./ft.)  
 $f$  = Maximum side friction factor

<b>Maximum Side Friction Factors ("f") (3-2)</b>		
Design speed (mph)	Rural "f"	Urban "f"
20	0.170	0.300
25	0.165	0.252
30	0.160	0.221
35	0.155	0.197
40	0.150	0.178
45	0.145	0.145

71. \_\_\_\_ Maximum superelevation rates are:

<b>Maximum Superelevation Rates (3-2)</b>	
Road Class	Max "e" (feet/foot)
Arterials	0.04
Local Feeder and Minor	0.02
Cul-de-sac	Not allowed

72. \_\_\_\_ Superelevation is not recommended for use on non-arterials. When superelevation is used, the required superelevation runoff length shall be provided in accordance with AASHTO Green Book, and distributed in accordance with Design "A" contained in the WSDOT Design Manual. (3-2)

### Horizontal Alignment (Continued)

73. \_\_\_\_\_ Curve widening shall be considered and design, when warranted, in accordance with the AASHTO Green Book. (3-2) (AASHTO Chapter 3)
74. \_\_\_\_\_ Broken-back curves are strongly discouraged. (3-2)

### Utilities

75. \_\_\_\_\_ All public or private utility installations and patches shall conform to the requirements outlined in the Manual on Accommodating Utilities in Pierce County Right-of-Way, Pierce County Code 17B.10.060. (4-2)
76. \_\_\_\_\_ Utility trenching or transverse cuts in new County roads will not be permitted unless it can be shown that alternatives such as boring or jacking or relocating outside the paved roadway area is not feasible unless the utility can be installed just prior to reconstruction or overlay of the road. (4-2)

### Pavement

77. \_\_\_\_\_ Paving and subgrade material for non-arterial roads shall be made up of a minimum of 2" compacted depth of asphalt concrete Class "B," 2" compacted depth of crushed surfacing top course, and 6" compacted depth of gravel base. (4-3)
78. \_\_\_\_\_ Paving for all roads shall be asphalt concrete Class "B." (4-3)

### Arterial Pavement

79. \_\_\_\_\_ Paving and subgrade material for arterial roads will be based on a pavement design analysis made by the Engineer. Supporting design criteria and calculations must be submitted to verify the design shall not be less than that required for local roads. (4-3)
80. \_\_\_\_\_ Pavement design for a major arterial road shall be for a 30-year performance period. Pavement design for all other arterial roads shall be for a 20-year performance period. (4-3)
81. \_\_\_\_\_ Design criteria and standards established by AASHTO, WSDOT, the Asphalt Institute, or other nationally recognized organizations may be used to determine paving and subgrade depths and types of materials for the roadway section. (4-3)
82. \_\_\_\_\_ Non-destructive testing or a falling weight deflectometer or a modulus value established by a geotechnical engineer should be used to determine the materials characterization of the existing soils conditions for the pavement design. (4-3)

### Lane Widths

83. \_\_\_\_\_ All through travel lanes shall be 12' wide for two and three lane roadways and 11' wide for multi-lane roadways and two-lane local road cul-de-sac roadways. (4-4)
84. \_\_\_\_\_ Exclusive turn lanes or two-way left-turn lanes shall be 12' wide, or as directed by the County Engineer. (4-4)
85. \_\_\_\_\_ Widened curb lanes shall be 15' wide for 2 and 3 lane roadways and 14' wide for multi-lane roadways. (4-4)
86. \_\_\_\_\_ A combination of lane width and shoulder area of 20' in width shall be used when a two-lane roadway includes a raised median as provided in Section 4-8. (4-4)
87. \_\_\_\_\_ Single egress lanes on an arterial road, for traffic leaving a roadway intersection, shall have an initial width of 15', tapering to the normal lane width in 100'. Egress lanes accepting double left turn or right turn lane movements shall be widened consistent with tracking of the design vehicle for the intersection. (4-4)

### Shoulders

88. \_\_\_\_\_ Shall be 6' wide, measured from the back of curb or from the outside of the outside lane, when no curb is used. (4-5)

### Curbs

89. \_\_\_\_\_ Asphalt concrete raised edges and asphalt concrete barrier curbs must be constructed integrally with the pavement construction. (4-6)
90. \_\_\_\_\_ Acceptable curb designs for these and cement concrete curb and gutter and cement concrete rolled curb are provided by the County Engineer. (4-6)

### **Sidewalks and Pathways**

- 91. \_\_\_\_ Cement concrete sidewalks, walkways, and trails, shall conform to design parameters and direction provided by the County Engineer. (4-7)
- 92. \_\_\_\_ Storm drain percolation systems shall not be permitted under any sidewalk, walkway, or trail. (4-7)

### **Buffers and Medians**

- 93. \_\_\_\_ Buffer width shall be 4' – 12'. (4-8)
- 94. \_\_\_\_ The maximum height of vegetation, except for street trees, placed in a buffer shall be 18" above the top of curb provided no safety related concern is created. (4-8)
- 95. \_\_\_\_ Street trees conforming to the type and size outlined in PCC 18A.35.030, Landscaping and Buffering, are allowed within the buffer area on a local road within the boundary of a plat provided no safety or visibility related concern is created. Provide a landscape plan. (4-8)
- 96. \_\_\_\_ Street trees are not allowed within the buffer area on an arterial road. (4-8)
- 97. \_\_\_\_ The County Engineer shall not allow placement of street trees within the buffer area if safety or visibility concerns exist. (4-8)
- 98. \_\_\_\_ Storm drain percolation systems shall not be permitted under or within any buffer or median. (4-8)
- 99. \_\_\_\_ The maximum width of any median shall be 16' from back of curb to back of curb. The maximum height of medians shall be 18" above the top of curb. (4-8)
- 100. \_\_\_\_ The maximum height of vegetation, except for street trees, placed in the median shall be 24" above the top of the curb. (4-8)
- 101. \_\_\_\_ Street trees are allowed within the median on a local road within the boundary of a plat, provided the trees conform to the type and size outlined in PCC 18A.35.030, Landscaping and Buffering. (4-8)
- 102. \_\_\_\_ Where the median is privately owned from back of curb to back of curb, installation of privately-owned irrigation systems is acceptable provided the irrigation water meter must be located within the median. (4-8)
- 103. \_\_\_\_ The minimum length for a median is 200'. (4-8)
- 104. \_\_\_\_ Designed per Detail: PC.F9.

### **Clear Areas**

- 105. \_\_\_\_ On the outside of curves, the removal of certain trees and relocation of utility poles are recommended. (4-9)
- 106. \_\_\_\_ The placement of guardrail on steep slopes, removal of unnecessary guardrail on flat slopes, and the flattening of steep but low embankments are recommended. (4-9)

### **Roadside Control**

- 107. \_\_\_\_ Side slopes shall be constructed no steeper than 2 H:1 V for curbed sections and 4 H:1 V on shoulder sections on fill slopes and 1 H:1 V on cut slopes. Flatter slopes are preferred and will be required if there are indications that the earth is unstable and subject to sliding, sloughing, or erosion. (4-10.1)
- 108. \_\_\_\_ Side slopes shall be stabilized by grass sod, hydroseeding, by other planting, or surfacing materials, or by the use of other material types acceptable to the County. (4-10.1)
- 109. \_\_\_\_ Placement of utilities outside of their standard location as per other adopted standards due to steep side slopes shall not be permitted. (4-10.1)
- 110. \_\_\_\_ Side slopes higher than 15' shall be terraced with 5' minimum wide bench for every 15' of vertical height, sloped to drain properly. (4-10.1)
- 111. \_\_\_\_ Mail boxes shall be installed in such a manner as to be placed as far removed from the driving portion of the right-of-way as possible. (4-10.2) (PC.H3)
- 112. \_\_\_\_ Landscaping street trees and other vegetation over 18" in height located within the County right-of-way for a local road within the boundaries of a plat shall be placed a minimum of 6' back from the gutter line when a curbed section is used and shall be placed a minimum of 6' back from the back of shoulder when no curb is used. (4-10.3)

### Roadside Control (Continued)

113. \_\_\_\_\_ Street trees and other vegetation over 18" in height located within the County right-of-way for an arterial or local road not within the boundaries of a plat shall be placed a minimum of 12' back from the gutter line when a curbed section is used and shall be placed a minimum of 12' back from the back of the shoulder when no curb is used. (4-10.3)
114. \_\_\_\_\_ Street trees shall conform to the type and size outlined in PCC 18A.35.030 Landscaping and Buffering. Street trees shall be placed a minimum of 3' from any paved surface. (4-10.3)
115. \_\_\_\_\_ Street trees used within County right-of-way shall not conflict with overhead utilities, traffic control devices, sight distance or visibility, requirements, and root development shall not conflict with underground utilities, pavement, curbs, sidewalks, walkways, trails, or storm drainage facilities. (4-10.3)
116. \_\_\_\_\_ Irrigation systems not specifically permitted or licensed by the County Engineer must be installed on private property. (4-10.3)
117. \_\_\_\_\_ AASHTO, Roadside Design Guide, and WSDOT's design manuals should be used as a guide to determine the need for guardrail and for the design. The designer should be aware that warrants and designs developed for high volume, high speed facilities are not necessarily appropriate for low volume and/or low speed, locations. (4-10.4)
118. \_\_\_\_\_ The designer must determine the best location, type of construction, and post-spacing that would be most appropriate for the function and anticipated traffic volume of the facility. (4-10.4)

### Access Control

119. \_\_\_\_\_ When a 3 or more lane approach is requested, a traffic engineering study along with a signing, striping and traffic channelization plan shall be completed. (5-1)
120. \_\_\_\_\_ Intersections should not be located on or near sharp curves, i.e., curves with radii close to the AASHTO Green Book minimums. (5-1.1.A)
121. \_\_\_\_\_ Intersections should be located sufficient distance from all curves to provide proper sight distance for vehicles on the intersecting road or driveway and on the through road. (5-1.1.A)
122. \_\_\_\_\_ Multi-leg intersections (i.e., those with more than 4 legs) are not permitted within local road networks. (5-1.1.B)
123. \_\_\_\_\_ In local road networks "T" and "L" intersections only are encouraged. (5-1.1B)
124. \_\_\_\_\_ For arterial access, four-leg intersections are encouraged. (5-1.1.B)
125. \_\_\_\_\_ Whenever a potential feasible access exists to any property from 2 or more roads, the County Engineer may refuse access to the higher classified road. (5-1.1.C)
126. \_\_\_\_\_ Wherever a potential feasible access exists to any property from both a public road and private easement, the County Engineer may refuse access to the public road. (5-1.1.D)
127. \_\_\_\_\_ New access locations internal to the platting of property shall be unified whenever possible to create the fewest number of access points onto a road if they access roads of a classification higher than a local road minor. (5-1.1.E)
128. \_\_\_\_\_ Lots of record in existing formal plat subdivisions, short plats and large lots not served by a minor or major driveway shall be permitted a minimum of one residential driveway. (5-1.1.E)
129. \_\_\_\_\_ The intersection of two local roads should be designed to operate without any traffic control device (e.g., Stop or Yield signs) whenever possible. (5-1.1.F)
130. \_\_\_\_\_ Intersections within the subdivision should be of the "T" type; for lower speed facilities of minor or cul-de-sac classification "L" type intersections are acceptable. (5-1.1.G)
131. \_\_\_\_\_ Four legged intersections within the subdivision must receive the approval of the County Engineer. (5-1.1.G)
132. \_\_\_\_\_ Access to comer lots should be from the lesser-classified road, at the greatest distance possible from the intersection. (5-1.1.H)
133. \_\_\_\_\_ The number of intersections should be minimized as much as possible, particularly as classification of the affected roads increases. Intersection spacing should be maximized wherever possible. (5-1.1)



### Access Control (Continued)

134. \_\_\_\_\_ In order to minimize the number of conflicts between vehicles entering and exiting the roadway and vehicles traveling along a roadway, maximize the distances between driveways along the roadway. (5-1.2)
135. \_\_\_\_\_ Minimum distances between roadways, measured from the centerline of the roadway at the extension of the right-of-way line should apply for either same side or opposite sides of the primary street:

<b>Minimum Distance Between Roadways (5-1.2)</b>	
Local Roads Intersecting Local Roads	125'
Local Roads Intersecting Arterials	250'
Arterials Intersecting Arterials	¼ Mile

### Driveway Approaches

136. \_\_\_\_\_ The minimum spacing distance for non-residential driveway approach to any roadway is 125'. Measured from the R/W to the EP. (5-1.2)
137. \_\_\_\_\_ Driveway Approaches design needs to address the type of vehicle composition anticipated, traffic volume, and land use activities being accessed. (5-2)
138. \_\_\_\_\_ Closely spaced Driveway Approaches are discouraged. (5-2)

### Residential Driveway Approach

139. \_\_\_\_\_ A Residential Driveway Approach is used to serve up to 2 single-family residences or 1 duplex unit. (5-2)
140. \_\_\_\_\_ Constructed the maximum practical distance, but in no event, less than 35' from an arterial or local road feeder intersection or less than 25' from a local road minor or cul-de-sac intersection. The distance is measured along the property line from the intersecting road right-of-way line to the nearest edge of the driveway width. (5-2.1)
141. \_\_\_\_\_ All Residential Driveway Approaches, which serve 2 lots or a duplex on 1 lot, must be constructed to the maximum width as specified in the specific geometric requirements provided by the County Engineer. (5-2.1)
142. \_\_\_\_\_ Designed per Details: PC.F1.1, PC.F2.1, PC.F2.2, PC.F2.3, PC.F2.4, PC.F2.5, PC.F2.6, PC.F2.7, PC.F2.8.

### Minor Driveway Approach

143. \_\_\_\_\_ A Minor Driveway Approach is used for a single driveway approach which serves a shared access facility. (5-2)
144. \_\_\_\_\_ A Minor Driveway Approach is used for multi-family and commercial uses with an approach traffic volumes of up to 1,500 vehicle trips per day or up to 150 vehicles trips per peak hour . (5-2)
145. \_\_\_\_\_ Grading and restoration of the driveway beyond the end of the driveway approach shall be done to provide a smooth, passable, and safe transition to the existing facility. (5-2.2)
146. \_\_\_\_\_ Located a minimum of 125' from an intersection, except where physical site conditions and spacing of existing driveway approaches may cause the County Engineer to require another location. The 125' is measured along the property line from the intersecting road right-of-way line to the edge of the driveway width. (5-2.2)
147. \_\_\_\_\_ Access to a comer lot with a frontage less than 155' in width will be established on a case-by-case basis by the County Engineer and the driveway approach shall be placed at such a location to maximize safety. (5-2.2)
148. \_\_\_\_\_ Designed per Details: PC.F3.1, PC.F4.1, PC.F4.2, PC.F4.3, PC.F4.4, PC.F4.5, PC.F4.6, PC.F4.7, PC.F4.8.

### Major Driveway Approach

149. \_\_\_\_\_ A Major Driveway Approach is used to serve multi-family and commercial uses with an approach traffic volume of 1,500+ vehicle trips per day or 150+ vehicle trips per peak hour. (5-2)
150. \_\_\_\_\_ Located a minimum of 125' from an intersection, except where physical site conditions and spacing of existing driveway approaches may cause another location. The 125' is measured along the property line from the intersecting road right-of-way line to the edge of the driveway width. (5-2.3)

**Major Driveway Approach (Continued)**

- 151. \_\_\_\_ Access to a corner lot with a frontage < 155' in width will be established on a case-by-case basis and the driveway approach shall be placed at such a location to maximize safety. (5-2.3)
- 152. \_\_\_\_ The number, location, and size shall be determined by the volume and type of traffic generated by the development, other driveway approaches in the vicinity of the proposed approach, the amount of lot frontage along the road, and channelization/traffic control on the road along the lot frontage. (5-2.3)
- 153. \_\_\_\_ When multiple Major Driveway Approaches to one parcel or development are permitted, they shall not be less than 125' apart, measured from centerline to centerline. (5-2.3)
- 154. \_\_\_\_ A minimum of 2 driveway approaches (combination of minor and/or major) will be required for developments that will generate 3,000+ ADT unless other mitigating measures are approved. (5-2.3)
- 155. \_\_\_\_ Designed per Details: PC.F5.1, PC.F6.1, PC.F6.2, PC.F6.3, PC.F6.4, PC.F6.5, PC.F6.6.

**Construction Criteria**

- 156. \_\_\_\_ The outer edge of a driveway approach shall not be constructed closer than 70' to a bridge, culvert or other structure that may warrant end protection using guard-railing in accordance with the most current criteria adopted by the Washington State Department of Transportation. (5-2.4)
- 157. \_\_\_\_ All driveway approaches shall be paved to the right-of-way line or 3' beyond the end of the radius, whichever is greater, with a minimum of 2" compacted depth of asphalt concrete over 2" compacted depth crushed surfacing top course or 6" Portland Cement concrete if the existing road is paved. If the existing road is gravel, a driveway constructed of 4" compacted depth crushed surfacing top course is acceptable. (5-2.4)
- 158. \_\_\_\_ Driveway approaches on Anderson Island may be constructed of bituminous surface treatment, Class A, in accordance with the latest edition of the Standard Specifications for Road, Bridge, and Municipal Construction, as published by the Washington State Department of Transportation. (5-2.4)
- 159. \_\_\_\_ Access from the driveway to the abutting property shall be controlled along the driveway from the end of the driveway radius into the property for a distance of 80' on a major driveway approach and 20' on a minor driveway approach. (5-2.4)
- 160. \_\_\_\_ The minimum distance between the paved edge of a driveway approach and the face of an obstruction, including existing utility appurtenances which may cause a traffic safety concern, may be no less than 4' without curbing and 3' with curbing on the approach. Obstructions located closer than these distances which may cause a traffic safety concern must be relocated. (5-2.4)

**Temporary Driveway Approach**

- 161. \_\_\_\_ A Temporary Driveway Approach shall be constructed in accordance with the requirement contained in Section 5-2, except paving. (5-2.5)
- 162. \_\_\_\_ Provide a financial guarantee in the amount of \$2,000.00 for access to a paved road and \$1,500.00 for access to a gravel or primitive road. (5-2.5) (17A.20.050.B)

**Roadway Intersections**

- 163. \_\_\_\_ Proposed roads must intersect one another at 90° angles or as close to 90° as topography permits. If 90° is not possible, the skew angle shall not vary more than 15° from right angles. (5-3.1)
- 164. \_\_\_\_ At road intersections, the following typical ranges of curb line radii are required:

<b>Corner Radii (5-3.2)</b>	
Local Road – Local Road Intersection	25'
Local. Road - Arterial Intersection	25-30'
Arterial - Arterial Intersection	35-45'

- 165. \_\_\_\_ Corner radii outside of the above ranges should be considered if the anticipated composition of traffic warrants such a need.

### **Geometrics**

166. \_\_\_\_ When either of the road centerline profile grades within 35' of an intersection have a gradient of 8% or more, an intersection detail drawn to a scale of 1" = 20' must be included as a detail on the road construction plans. Show spot elevations every 10-25' on the road centerline, around the curb return, and grate elevations for drainage structures in the intersection. (5-3.3)
167. \_\_\_\_ The intersection plan must be clearly detailed to show flow line grades and how surface drainage will be controlled at the intersection. (5-3.3)
168. \_\_\_\_ Curb return data for gradients < 8% shall be shown on the road construction plans. (5-3.3)
169. \_\_\_\_ At the intersection of different classifications of roads (e.g., a secondary arterial with a collector arterial), the centerline slope and typical cross section of the higher classified road should be carried through the intersection with the lower classified road matching in a manner which will not interfere with the smooth movement of traffic in the travel lanes of the higher classified road. (5-3.3)
170. \_\_\_\_ Where 2 roads of the same classification intersect, the centerline grade shall be matched at the center of the intersection with cross slopes varying through the intersection to allow drainage. All classes of local roads shall be treated as the same classification for purposes of this paragraph. (5-3.3)

### **Islands and Turning Roadways**

171. \_\_\_\_ When necessary for the channelization of traffic at an arterial intersection the design of traffic islands and turning roadways should conform to the criteria contained in the AASHTO Green Book. (5-3.4)

### **Railroad Crossings**

172. \_\_\_\_ The roadway width across a railroad should be the same as the roadway width on each side of the crossing. (5-4)
173. \_\_\_\_ Appropriate grade crossing controls should be provided (including advance warning signs) commensurate with the design speed of the facility and sight distance required. (5-4)
174. \_\_\_\_ Maximum, practicable sight distance at the crossing itself is desirable, especially on a mainline crossing where train speeds are high. (5-4)
175. \_\_\_\_ Approval of any design affecting a railroad crossing shall be obtained from the Washington State Utilities and Transportation Commission prior to being approved by the County. (5-4)

### **Bridges**

176. \_\_\_\_ Design of bridges shall be coordinated with the County Engineer in order to receive specific design direction and parameters. (6-1)
177. \_\_\_\_ The minimum bridge deck width shall not be less than the design roadway width for the road being served. Roadway width includes lane width plus shoulder width. (6-1)
178. \_\_\_\_ Bridge roadway width shall be measured between curbs or between face of rails, whichever is less, but in no case shall be less than 28'. (6-1)
179. \_\_\_\_ Pedestrian facilities shall be provided on the bridge if adjoining roadway has or will have sidewalks or walkways. (6-1)
180. \_\_\_\_ Additional widening shall also be provided for bicycles if the road is an established bicycle route. (6-1)
181. \_\_\_\_ Loading HS 25-44. (6-1)
182. \_\_\_\_ Vehicular Railing per AASHTO Crash Tested Rail, or Approved Crash Tested Rail. (6-1)
183. \_\_\_\_ Pedestrian Railing per AASHTO Standard Specifications for Highway Bridges. (6-1)
184. \_\_\_\_ Approach Railing per AASHTO Crash Tested Rail, or Approved Crash Tested Rail. (6-1)
185. \_\_\_\_ Vertical Clearance 16.5' minimum over roadways and 23.5' minimum over railroads. (6-1)
186. \_\_\_\_ Requirements for utility accommodation shall be duly considered. (6-1)
187. \_\_\_\_ A new structure shall not create a backwater elevation rise of > 1 foot. (6-1)

### **Bridges (Continued)**

- 188. \_\_\_\_ The bottom of the superstructure shall be a minimum of 3' above the 100-year base flood elevation. (6-1)
- 189. \_\_\_\_ The aesthetic aspects of the bridge will be reviewed on a case-by-case basis. (6-1)
- 190. \_\_\_\_ The design and record drawings for all bridges shall be certified by a licensed structural engineer. (17B.30.020.B.4)

### **Retaining Walls**

- 191. \_\_\_\_ For heights over 8' or when soil is unstable, a structural wall of acceptable design shall be used. A soils investigation and report by a geotechnical engineer may be required if soils conditions are questionable. (6-2)

### **Rockfaces**

- 192. \_\_\_\_ Rockfaces may be used for the containment of cut slopes or fill embankments up to a maximum height of 8' if stable soil conditions exist. (6-3) (PC.D1)
  - 193. \_\_\_\_ The rock material shall be as nearly rectangular as possible with all rock extending through the wall. (6-3) (PC.D1)
  - 194. \_\_\_\_ The rock material shall be hard, sound, durable, and free from weathered portions, seams, cracks, and other defects. (6-3) (PC.D1)
  - 195. \_\_\_\_ The rock density shall be a minimum of 160 pounds per cubic foot. (6-3) (PC.D1)
  - 196. \_\_\_\_ Rock shall be placed to minimize voids and, in the exposed face of the wall, no open voids over 6" across in any direction will be permitted. (6-3) (PC.D1)
  - 197. \_\_\_\_ The larger rocks shall be placed at the base of the rockery so that the wall will be stable. (6-3) (PC.D1)
  - 198. \_\_\_\_ The rocks shall be placed so that the longitudinal axis of the rock shall be perpendicular to the rockface. (6-3) (PC.D1)
  - 199. \_\_\_\_ The rocks shall have all inclining faces sloping to the back of the rockface. (6-3) (PC.D1)
  - 200. \_\_\_\_ Each course of rocks shall be seated as tightly and evenly as possible on the course beneath. (6-3) (PC.D1)
  - 201. \_\_\_\_ The final course shall have a continuous appearance and be placed to minimize erosion of the backfill material. (6-3) (PC.D1)
  - 202. \_\_\_\_ Backfill shall be placed to a 12" minimum thickness between the entire wall and the cut or fill material. (6-3) (PC.D1)
  - 203. \_\_\_\_ The backfill material shall be placed in lifts to an elevation approximately 6" below the top of each course of rocks as they are placed, until the uppermost course is placed. (6-3) (PC.D1)
  - 204. \_\_\_\_ Any backfill material on the bearing surface of a rock course shall be removed before setting the next course. (6-3) (PC.D1)
  - 205. \_\_\_\_ A 6" perforated drain pipe shall be installed behind the first course of rock and laid on original ground. (6-3) (PC.D1)
  - 206. \_\_\_\_ Positive drainage for the perforated drain pipe shall be provided. (6-3) (PC.D1)
  - 207. \_\_\_\_ For rockface in fill sections all fill material placed beyond the backfill shall be placed and compacted in a maximum of 6" compacted lifts. (6-3) (PC.D1)
  - 208. \_\_\_\_ A chain link fence shall be required at the top of the rockface if the wall height exceeds 30". (6-3) (PC.D1)
  - 209. \_\_\_\_ A concrete cap is required at the top of the rockface, as directed by the County Engineer. (6-3) (PC.D1)
- ### **Signs**
- 210. \_\_\_\_ All traffic signs must conform to the MUTCD, as modified by the Washington State Transportation Commission per RCW 47.36.030. (7-1)

### Signs (Continued)

211. \_\_\_\_ Stop signs shall be installed in accordance with the requirements of the County Engineer on all local public road approaches to County arterials or State highways, all private road approaches to County arterial roads, and at other locations determined by the County Engineer. (7-1.1) (PC.G2)
212. \_\_\_\_ Street name signs for private road or driveway approaches shall be installed within County right-of-way in accordance with the requirements of the County Engineer. (7-1.2) (PC.G1.3)

### Pavement Markings

213. \_\_\_\_ Pavement markings are required on all County arterials and roadways having channelization. (7-2) (PC.H)
214. \_\_\_\_ The Engineer will indicate on the approved road construction plans that the County Traffic Engineer shall be contacted prior to construction to confirm the County's intent to do the work and charge the proponent or, if not feasible, require the proponent to do the work. (7-2)

### Illumination

215. \_\_\_\_ Provide street lighting at signalized intersections. (7-4)
216. \_\_\_\_ Provide street lighting when raised median channelization is installed within the traveled way of an arterial. (7-4)
217. \_\_\_\_ Provide street lighting as a part of major roadway construction or reconstruction projects, continuous street lighting on major and secondary County arterials that are in areas with a highly dense concentration of urban commercial development, and in areas that have a significant concentration of both commercial and high density multi-family development. (7-4)
218. \_\_\_\_ Street lighting placed by a franchised electrical utility within the County right-of-way shall be placed such that the nearest face of the structure is a minimum of 6 feet back from the edge of travel way when a curbed section is used but in no event shall the structure be placed closer than 2 feet from face of curb.
219. \_\_\_\_ Street lighting placed by a franchised electrical utility within the County right-of-way shall be placed such that the nearest face of the structure is a minimum of 10 feet back from the edge of travel way when no curb is used, but in no event shall the structure be placed closer than 0.5 feet from the back of shoulder.
220. \_\_\_\_ Street lighting shall not be placed within any shoulder, sidewalk, or pathway.
221. \_\_\_\_ Street lighting used within County right-of-way shall not conflict with overhead utilities, traffic control devices, sight distance or visibility requirements, and the base (subsurface) portion of the structure shall be flush with the surrounding ground walkways, trails, or storm drainage facilities.
222. \_\_\_\_ Design criteria and specifications shall be consistent with applicable standards outlined by the Washington State Department of Transportation. (7-4)
223. \_\_\_\_ At other locations, franchised electrical utilities are allowed to own, operate, and maintain street or area lights within the County right-of-way under the provisions of their franchise agreement with Pierce County. (7-4)
224. \_\_\_\_ Private individuals or homeowner associations are not granted permission to install lights within the County right-of-way. (7-4)
225. \_\_\_\_ Privately owned and maintained lighting shall be located on private property. (7-4)
226. \_\_\_\_ Street lighting is required by Section 17B.30.040 of the Pierce County Code, in all new urban developments located in urban growth areas at the following locations:
- A. Intersections controlled by a "Stop" or "Yield" sign. (7-4)
  - B. Uncontrolled intersections. (7-4)
  - C. The end of any cul-de-sac. (7-4)
227. \_\_\_\_ Street lighting required by Section 17B.30.040 of the Pierce County Code shall be located on private property or owned, operated and maintained by the franchised utility unless specifically approved in writing by the County Engineer. (7-4)

### Survey Control

228. \_\_\_\_ Survey control monuments shall be constructed as shown on the approved construction plans in conformance with the approved details for survey monuments. (8-4) (PC.H1)

### **Survey Control (Continued)**

229. \_\_\_\_\_ Survey monuments shall be required at all intersections, at the PC and PT (or PI if it falls in the paving) of all curves, centers of cul-de-sacs, and other appropriate locations as determined necessary by the County. (8-4)

### **Access and Driveways**

230. \_\_\_\_\_ Any change of use or any improvement that increases the traffic volumes using an existing driveway approach will require the obtaining of a new Driveway Approach Permit and otherwise complying with all standards and requirement set forth in these Regulations. (17B.20.010)

### **Shared Access Facility**

231. \_\_\_\_\_ In the event multiple easements are available to provide a shared access facility to a proposed division of land, a shared access facility will need to be constructed in each easement unless it can be shown to the satisfaction of the County that the other easements will not be utilized. (17B.20.020.A)

Shared access facilities may be utilized in the following situations:

232. \_\_\_\_\_ As a single driveway approach which serves up to and including 4 residential lots in the rural area or 2 residential lots in the urban area. A shared access facility may serve any combination of dwelling units. The number of residential lots served by a shared access facility may be increased through a PDD review process. (17B.20.020.B.1)

To serve any number of lots in a proposed division of land that is intended for non-residential uses if:

233. \_\_\_\_\_ The intent of the shared access facility is to provide access through inter-linked or shared parking facilities as are commonplace in commercial centers (e.g. shopping malls). (17B.20.020.B.2.a)
234. \_\_\_\_\_ Provisions are implemented (curbing, signing, striping, increased shared access facility width, etc.) that assures that vehicle parking will not impact the shared access facility. (17B.20.020.B.2.c)
235. \_\_\_\_\_ Adequate provisions are made for separation of pedestrians and vehicles, such as sidewalks, curbing, or separated pathways. (17B.20.020.B.2.d)
236. \_\_\_\_\_ Adequate provisions are made for mass transit when deemed necessary by the County. (17B.20.020.B.2.e)
237. \_\_\_\_\_ The facility shall extend from the public or private road a length < 500', as measured along the centerline. (17B.20.020.C.1)
238. \_\_\_\_\_ The length of a shared access facility serving non-residential lots shall extend from a public or private road for a length < 500' as measured along the centerline unless provisions are implemented that assure vehicle speeds of < 20 mph. (17B.20.020.C.1)
239. \_\_\_\_\_ The facility shall not be less than 24' in width. The easement width for a Shared Access Facility shall exceed by a minimum of 2' on each side of the facility width. (17B.20.020.C.2)
240. \_\_\_\_\_ The facility shall have an unobstructed vertical clearance of not less than 13'-6". (17B.20.020.C.3)
241. \_\_\_\_\_ The facility shall be provided with a paved surface within the urban area and a gravel or paved surface within the rural area. (17B.20.020.C.4)
242. \_\_\_\_\_ A minimum outside turning radius of 45' shall be provided for all curves or turns in the facilities alignment. (17B.20.020.C.5)
243. \_\_\_\_\_ A dead-end facility in excess of 150' in length shall be provided with a cul-de-sac. (17B.20.020.C.6)
244. \_\_\_\_\_ All structures, including drainage structures, on the facility shall be capable of carrying a minimum design load of HS-20. (17B.20.020.C.7)

### **Alleyway**

245. \_\_\_\_\_ An Alleyway is permissible for the provision of vehicular access to the rear of lots located in a PDD. (17B.20.030.A)

**Alleyway (Continued)**

- 246. \_\_\_\_ All lots served by the alleyway shall also abut a public or private road. (17B.20.030.A)
- 247. \_\_\_\_ If emergency vehicle access requirements are not met by public or private roads, shared access facilities, or driveways to any of the lots served by the alleyway, then that alleyway shall meet all the requirements of the emergency access standards contained in PCC Title 17C. (17B.20.030.A)
- 248. \_\_\_\_ The facility shall extend between a minimum of 2 connection points with public or private roads for a length not greater than 750'. (17B.20.030.B.1)
- 249. \_\_\_\_ One-way alleyways with a minimum width of 12' will be allowed if approved as a part of a PDD. (17B.20.030.B.2)
- 250. \_\_\_\_ Two-way alleyways shall have a width of 16'. The easement width for an alleyway shall exceed by a minimum of 2' on each side of the alleyway width. (17B.20.030.B.2)
- 251. \_\_\_\_ The facility shall have an unobstructed vertical clearance of not less than 13'-6" inches. (17B.20.030.B.3)
- 252. \_\_\_\_ The facility shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a paved surface. (17B.20.030.B.4)
- 253. \_\_\_\_ Alleyways shall be constructed to allow for reasonable ingress and egress from each residence, with minimum turning movements as described for a design passenger vehicle by the AASHTO design standards. (17B.20.030.B.5)
- 254. \_\_\_\_ A dead-end alleyway shall not be allowed. (17B.20.030.B.6)
- 255. \_\_\_\_ An alleyway shall not be constructed which would require the use of a bridge or other structures, including drainage structures. (17B.20.030.B.7)
- 256. \_\_\_\_ Gates shall not be allowed on or at the entrances or exits to the alleyway. (17B.20.030.B.8)
- 257. \_\_\_\_ The maximum grade (vertical profile grade) of the facility shall be 10% and shall be paved with 2", compacted depth, of asphalt concrete Class "B." (17B.20.030.B.9)
- 258. \_\_\_\_ Approved one-way alleyways shall be signed with a "Do Not Enter" sign, meeting the requirements outlined in the "MUTCD," placed at the exiting end of the alleyway. (17B.20.030.B.11)

**Public Roads**

- 259. \_\_\_\_ No development, except a single-family residential building, shall be allowed which proposes to use a dedicated, but unopened, County right- of-way. (17B.30.010.B.1)
- 260. \_\_\_\_ If right-of-way exists and/or right-of-way can be deeded to provide right-of-way widths in accordance with PCC 12.24.040, the development will be required to construct roads within the unopened right-of-way adjacent to the development boundaries and for distances necessary to provide access to the development. (17B.30.010.B.2)
- 261. \_\_\_\_ Proposed new County roads must be connected directly with existing County roads. (17B.30.010.C)

**Existing Offsite Private Road Requirements**

- 262. \_\_\_\_ All existing off-site private roads and easements which serve as accesses to all proposed divisions of land, including short subdivisions and large lot divisions, shall meet the minimum requirements contained in PCC Section 17B.30.060. (17B.30.020.A)

<b>Table 17B.30-1 Minimum Existing Offsite Private Road Geometric Criteria by ADT (17B.30.060.B)</b>			
<b>ADT</b>	<b>Traveled Surface Width</b>	<b>Surfacing</b>	<b>Shoulder</b>
≤ 40	25'	Gravel (see note 1)	N/A
41 – 100	30'		
101 – 300	22'	Paved	5' wide on each side
301 – 1000	24'		
> 1,000	24'		6' wide on each side

Note 1: Roads with grades > 12% shall be paved.

## Existing Offsite Private Road Requirements (Continued)

Table 17B.30-2 Minimum existing Offsite Private Road Geometric Criteria by Design Speed (17B.30.060.B)				
Posted/Design Speed (MPH)	Horizontal & Vertical Curves	Minimum Stopping Sight Distance (SSD) (feet)	Minimum Entering Sight Distance (ESD) (feet)	Maximum Grade
≤ 25	Sufficient to provide necessary minimum ESD & SSD	150	160	15%
30		200	210	
35		225	260	
40		275	310	
45		325	360	
50		400	415	

263. \_\_\_\_\_ Existing off-site private roads and easements that do not meet Section 17B.30.060 must be improved/ reconstructed to meet the requirements of PCC Section 17B.30.060. (17B.30.020.A)
264. \_\_\_\_\_ In the event that multiple existing off-site private roads or easements are available to provide access to a proposed division of land, only the existing off-site private road or easement which will carry the majority of the project's traffic will need to meet PCC 17B.30.060 unless a second connection to a public road is necessary. (17B.30.020.A)
265. \_\_\_\_\_ All proposed lots must have access to the existing off-site private road(s) or easement(s) that meet PCC 17B.30.060. (17B.30.020.A)
266. \_\_\_\_\_ The private road or easement must have an unobstructed vertical clearance of not less than 13'-6". (17B.30.060.B.2)
267. \_\_\_\_\_ All bridges and structures, including drainage structures, must be capable of carrying a minimum design load of HS-25. (17B.30.060.B.3)
268. \_\_\_\_\_ Provide a tract or easement of sufficient width to completely contain the minimum required traveled way, shoulder and associated drainage facilities. (17B.30.060.B.5)
269. \_\_\_\_\_ Obstructions, including street lighting, utility poles, utility boxes, street trees, retaining walls, fire hydrants, and/or landscaping material shall not be located within the required traveled way or shoulder area. (17B.30.060.B.6)
270. \_\_\_\_\_ Sight obscuring objects must be removed or relocated to provide sight distance per Table 17B.30-2. (17B.30.060.B.6)
271. \_\_\_\_\_ Road name signs per PCC 17B.10.060 installed. (17B.30.060.B.7.a)
272. \_\_\_\_\_ Stop signs located on road approaches to a County arterial per PCC 17B.10.060. (17B.30.060.B.7.b)
273. \_\_\_\_\_ Speed limit signs installed consistent with available ESD and SSD. (17B.30.060.B.7.c)
274. \_\_\_\_\_ Road grades > 12% shall be paved. (17B.30.060.B.8)
275. \_\_\_\_\_ Minimum of 20' of traveled surface width of 20' on each side of a median. (17B.30.060.B.9)
276. \_\_\_\_\_ Cul-de-sac or intersection provided at a minimum of 1,500' (measured from road centerlines/center of cul-de-sacs to road centerlines/center of cul-de-sacs) (17B.30.060.B.10)

### Private Roads

277. \_\_\_\_\_ Be constructed using public road standards contained in Chapter 17B.10 PCC and storm drainage standards contained in Title 17 A PCC. (17B.30.020.B.1)
278. \_\_\_\_\_ Have an unobstructed vertical clearance of not less than 13' – 6". (17B.30.020.B.3)
279. \_\_\_\_\_ Design of all structures, including drainage structures, shall be capable of carrying a minimum design load of HS-25. (17B.30.020.B.4)
280. \_\_\_\_\_ Provide all appropriate utility easements on the proposed project or recorded with the Pierce County Auditor if utilities are placed outside the private road easement. All above ground and below-ground utilities located within the private road easement shall be placed and constructed in conformance to the provisions contained in Chapter 17B.10 PCC. (17B.30.020.B.5)



### **Private Roads (Continued)**

281. \_\_\_\_\_ All private roads must have easement widths which conform to the public road right-of-way requirements outlined in Chapter 12.24 PCC. (17B.30.020.C.1)

### **Obstructions In/Adjacent to Easements**

282. \_\_\_\_\_ Obstructions located on private property, including but not limited to fences, landscaping retaining walls, basketball hoops, or yard fixtures, shall not be permitted within the private road easement. (17B.30.020.G.1)
283. \_\_\_\_\_ Obstructions normally found within a public right-of-way, including but not limited to, street lighting poles, power poles, utility boxes, telephone boxes, street trees, and/or landscaping material shall not be allowed in a manner or location that will interfere with the traveled surface, pedestrian area, and shoulder area. (17B.30.020.G.2)

### **Traffic Signs**

284. \_\_\_\_\_ Sight-obscuring objects must be located to provide sight distances as required in the road standards contained in PCC Chapter 17B.10. H., Traffic Signs. (17B.30.020.G.3)
285. \_\_\_\_\_ All private road approaches to County arterial roads shall have a STOP sign installed and maintained by the property owners, in accordance with requirements outlined in PCC Section 7B.10.060, at the time of the Engineer's final inspection. (17B.30.020.H.2)

### **Development Standards Within Urban Growth Areas**

286. \_\_\_\_\_ The following urban development standards shall be required for all urban developments and shall apply to all new development in urban growth areas, except for one-lot subdivisions, and except as provided in 17B.30.040 C PCC. (17B.30.040.B)
287. \_\_\_\_\_ Public and private roads constructed through the development process shall be required to include curbs, gutters, and sidewalks on both sides of the newly constructed road. (17B.30.040.B.1)
288. \_\_\_\_\_ Street lighting shall be required at traffic signalized intersections created as a result of the new subdivision. (17B.30.040.B.2)
289. \_\_\_\_\_ Street lighting within the boundary of a new subdivision, including each intersection which is abutting the boundary of the new subdivision and used to access the new subdivision, shall be provided at all intersections controlled by a traffic signal, "Stop" sign, or "Yield" sign; at all uncontrolled intersections; and at the end of cul-de-sacs. (17B.30.040.B.2)
290. \_\_\_\_\_ When ownership of the street lighting has not been assumed by the County, the structure upon which street lighting is mounted shall be located on private property. (17B.30.040.B.2)

### **Gates**

291. \_\_\_\_\_ Any proposed gate location(s) coordinated with gate reviewer.