# **CHAPTER 2**

# 2.000 TRANSPORTATION

## 2A GENERAL CONSIDERATIONS

The overall goal of this chapter is to set forth uniform guidelines to encourage the uniform development of an integrated, fully accessible public transportation system that will facilitate present and future travel demand with minimal environmental impact to the community as a whole.

This chapter provides minimum development standards supplementing the applicable standards as set forth in Section 1.010.

## **2B** STREETS

#### 2B.010 General

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

It is City policy that after a street is newly paved, open-cut will not be allowed for a period of five years (AHMC 12.10.230), provided that the Public Works Department will provide utility companies a minimum of six months notice of specific street projects. In addition, the City's Six-Year Transportation Plan, which is adopted annually, will be provided to all utility companies after its approval and adoption by the City Council.

## 2B.020 Design Standards

The design of public streets and roads shall depend upon their type and usage. The design elements of City streets shall conform to City standards as set forth herein and current design practice as set forth in Section 1.010. Standard design structures are shown on details 2-02 through 2-07 at the end of this chapter. Alternate structures may be used based on the criteria as outlined in Chapter 2B.160.

The layout of streets shall provide for the continuation of existing principal streets in adjoining subdivisions or of their proper projection when adjoining property is not subdivided. Minor streets, which serve primarily to provide access to abutting property, shall be designed to discourage through traffic. See the table of the Minimum Street Design Standards (AHMC 16.24.030).

- A. <u>Alignment</u>. Alignment of major arterials, minor arterials and collectors shall conform as nearly as possible with that shown in the Comprehensive Plan.
- B. <u>Grade</u>. Street grade should conform closely to the natural contour of the land. In some cases a different grade may be required by the City Engineer. The minimum allowable grade shall be 0.5 percent. The maximum allowable grade shall be 15 percent, depending upon the street classification.
- C. <u>Width</u>. The pavement and right-of-way width depend upon the street classification. The table of Minimum Street Design Standards show the minimum widths allowed.

Street widths shall be measured from face of curb to face of curb on streets with cement concrete curb and gutter.

D. The General Notes following shall be included on any plans dealing with street design in addition to all applicable requirements in Section 1.040.

# MINIMUM STREET DESIGN STANDARDS <u>TABLE 2-1</u>

Design Standard	Boulevard	Major or Minor Arterial	Commercial Collector	Neighbor- hood Collector	Local	Private
Design Limitations	Access and inter o	sections should b n-street parking.	e limited. No			
Minimum Structural Design		See Stan	dard Drawing Nu	mber 2-30		
Minimum Right-of-Way	90';94';102'	80'-60'	60'	60'	60'	50'
Minimum Pavement Width	48' with 16' median	50'-40'	40'	40'	40'	40'
Parking Lane	None allowed.			None or both; See details	Both sides	
Minimum/ Maximum Grade	0.5% - 8.0%	0.5% - 8.0%	0.5% - 10.0%	0.5% - 12.0%	0.5% - 15.0%	0.5% - 15.0%
Curb	Longitudinal slope or 1/2% - Cement concrete curb and gutter					
Sidewalks	Both sides: 5.5'			Both sides 5.5'	Both sides 5.5'	One side 5'
Cul-de-sac Radius (Pavement Width)	N/A	N/A	50' on industrial street only	N/A	45' min or 47'*	Fire Dept. Stds
Intersection Curb Radius	35'	35'	35'	35'	25'	Fire Dept. Stds
Design Speed (MPH)**	40	35	35	25	25	15

\*With landscaped island with island radius of 17'

\*\*Established by City Council

## GENERAL NOTES (STREET CONSTRUCTION)

- 1. All workmanship and materials shall be in accordance with City of Airway Heights standards as specified on Table 2-1 and the most current copy of the State of Washington Standard Specifications for Road, Bridge, and Municipal Construction.
- 2. The contractor shall be responsible for all traffic control in accordance with M.U.T.C.D. Prior to disruption of any traffic, traffic control plans shall be prepared and submitted to the City for approval. No work shall commence until all approved traffic control is in place and the appropriate agency notification (Police and Fire Depts.).
- 3. All curb and gutter, street grades, sidewalk grades, and any other vertical and/or horizontal alignment shall be staked by an engineering or surveying firm capable of performing such work.
- 4. Where new asphalt joins existing, the existing asphalt shall be cut to a neat vertical edge and tacked with Asphalt Emulsion type CSS-1 in accordance with the standard specifications. The new asphalt shall be feathered back over existing to provide for a seal at the saw cut location and the joint sealed with grade AR-4000W paving asphalt.
- 5. Compaction of subgrade, rock, and asphalt shall be in accordance with the standard specifications.
- 6. Form and subgrade inspection by a licensed engineer is required before pouring concrete. Twenty-four hours notice is required for form inspection.
- 7. See Section 2B.200 for testing and sampling frequencies.
- 8. The City shall purchase and install street name and regulatory signs at the contractor's/developer's expense as established by the latest adopted resolution. Signs shall be requested at the time construction begins.

## 2B.040 Naming

Streets and roads (ways-of-travel) shall be named according to the following specific criteria:

- A. Streets are major ways-of-travel which run in a north/south direction.
- B. Avenues are major ways-of-travel which run in an east/west direction.

- C. Drives are winding major ways-of-travel or other major ways-of-travel, as designated by the Airway Heights Technical Review Committee.
- D. The designation "road," as determined by the Technical Review Committee shall be used only where the name has long-standing meaning or public sentiment.
- E. Places shall be permanently closed avenues which run in a north/south direction.
- F. Courts shall be permanently closed streets which run east-west, such as a cul-de-sac.
- G. Loops shall be small loop-type streets to carry the name of the street from which they originate.
- H. Lanes shall be private roads.

All proposed names for new or existing ways-of-travel and private roads must be reviewed and approved by the Airway Heights Technical Review Committee (private driveways are exempt). The proposed name shall come from a list submitted by the Airway Heights Historical Society or from other lists as approved by the Airway Heights City Council.

An address number will be assigned to all new buildings at the time the building

permit is issued. It is then the owner's responsibility to see that the house numbers are placed clearly and visibly at the main entrance to the property or at the principal place of ingress (AHMC 12.08.070).

The developer must check with the Technical Review Committee regarding the naming of streets. This should be done at the time the preliminary plat is submitted and again upon approval of the final plat. The Technical Review Committee will insure that the name assigned to a new street is consistent with policies of the City.

#### 2B.050 Signing

The developer is responsible for providing all traffic control signs. Traffic control signing shall comply with the provisions as established by the U.S. Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD).

Street designation signs, including posts, hardware, and installation will be paid

for by the developer but will be designed, furnished and installed by the City to establish uniformity. A written request must be submitted to the City Public Works Department when signing is needed and the developer will be billed upon completion, as established by the latest adopted resolution.

Street designation signs shall display the name or numerical designation of the way-of-travel, and the district designation.

## 2B.060 Right-of-Way

Right-of-way is determined by the functional classification of a street. Boulevards shall have a right-of-way of not less than 90 feet. Arterials shall have a right-of-way of not less than 60 feet. Commercial collectors and industrial streets shall have a right-of-way of not less than 60 feet. Neighborhood collectors shall have a right-of-way of not less than 60 feet, depending on whether driveway access is allowed. See drawing details 2-02 through 2-06 for specific widths. Local access streets shall have a right-of-way of not less than 50 feet. See 2B.090 for radius requirements at cul-de-sac "bulb." Right-of-way at "bulb" shall be increased accordingly.

Right-of-way requirements may be increased if additional lanes, pockets, transit lanes, bus loading zones, operational speed, bike lanes, utilities, schools or other factors are required as determined by the Public Works Director.

Right-of-way shall be conveyed to the City on a recorded plat or by a right-of-way dedication deed.

## 2B.070 Private Streets

See definition of private street in Section 1.025.

- A. Private streets may be allowed under the following conditions:
  - 1. Permanently established by tract or easement providing legal access to serve no more than four dwelling units or businesses on separate parcels, or unlimited dwelling units or businesses situated on one parcel as approved by the City Council as a Planned Unit Development or Planned Residential Development, and sufficient to accommodate required improvements, to include provisions for future use by adjacent property owners when applicable, and
  - 2. Have a minimum 40 foot paved surface. A private street serving multi-family, mobile home, or commercial uses shall provide a

five-foot sidewalk on one side with such a design as to prevent parking on the sidewalk. Except mining and agricultural zones.

- 3. Accessible at all times for emergency and public service vehicle use, and
- 4. Will not result in landlocking of present or future parcels nor obstruct public street circulation, and
- 5. Covenants have been approved, recorded, and verified with the City, which provide for maintenance of the private streets and associated parking areas by the owner or homeowners' association or other legal entity.
- B. Acceptance as Public Streets. Acceptance of private streets as public streets will be considered only if the street(s) meet all applicable public street standards, including right-of-way widths.

Residential streets shall have curbing and sidewalks on both sides.

Commercial streets shall have curbing and sidewalk on one side only, unless technical review committee waives this requirement in lieu of more paving within City limits.

## 2B.080 Street Frontage Improvements

- A. All commercial and residential (including multi-family) developments, plats, and short plats shall install street frontage improvements at the time of construction as required by the Public Works Department. Such street improvements shall 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. All frontage improvements shall be made across full frontage of property from centerline to right-of-way line.
- C. Exceptions. When the Technical Review Committee deems that the above improvements cannot be accomplished at the time of building construction, a recorded agreement on forms provided by the Public Works Department shall be completed which provide for these improvements to be installed at a later date by the applicant or by the applicant's signing of a waiver of protest in a Local Improvement District

(L.I.D.), and by posting a performance bond that shall allow phasing of the improvement.

D Performance Bonds shall be posted with the City to guarantee the Construction in an equal amount to 110% of the City's Engineering Consultant estimate of all public road, private alley, and private road improvements, including by not limited to the roadway, drainage improvement, utility work within the City right-of-way, monumentation, and construction inspection costs. The term of the surety shall be for two years and may be extended at the option of the City.

## 2B.090 Cul-de-sac

Streets designed to have one end permanently closed shall be no longer than 400 feet. At the closed end, there shall be a widened "bulb" having a minimum paved traveled radius as shown in the Minimum Street Design Standards Table, or a "Y" or "T" which allows for comparable ease in turning for emergency vehicles (Detail Drawing 2-29).

## 2B.100 Temporary Dead Ends

Where a street is temporarily dead-ended, turnaround provisions must be provided where the road serves more than one lot. The turn around may be a hammerhead with a minimum distance on both sides at the centerline intersection of 60 feet to facilitate emergency vehicle turn-around (Detail Drawing 2-28).

## 2B.110 Half Street

A half street is permitted as an interim facility. Half streets may be used pending construction of the entire street by the owner on the opposite side of the road. Half streets shall extend two feet past centerline.

A half street is an otherwise acceptable roadway section modified to conform to limited right-of-way on the boundary of property subject to development. See definition in Section 1.025.

- A. A half street may be permitted subject to approval by the Public Works Director when:
  - 1. There is reasonable assurance of obtaining the prescribed additional right-of-way from the adjoining property suitable for

completion of a full-section roadway, and

- 2. Such alignment is consistent with or will establish a reasonable circulation pattern, and
- 3. The right-of-way width of the half street shall equal at least 30 feet, and
- 4. The paved surface shall be surfaced the same as the designated street classification to a width not less than 24 feet, and
- 5. The half street shall be graded consistent with locating centerline of the ultimate roadway section on the property line, and
- 6. Property line edge of street shall be finished with permanent curb and gutter to insure proper drainage, bank stability and traffic safety.

#### 2B.120 Medians

A median shall be in addition to, not part of, the specified roadway width except on a road classified as a boulevard. Medians shall be designed so as not to limit turning radius or sight distance at intersections. Landscaping and, or irrigation shall be installed as specified by Chapter 17 in the AWMC and this standard manual.

## 2B.130 Intersections

- A. Traffic control will be as specified in the Manual on Uniform Traffic Control Devices (MUTCD) or as modified by the City Engineer as a result of appropriate traffic engineering studies.
- B. Street intersections shall be laid out so as to intersect as nearly as possible at right angles. Sharp angled intersections shall be avoided. For reasons of traffic safety, a "T" intersection (three-legged) is preferable to the cross-road (four-legged) intersection for local access streets. For safe design, the following types of intersection features should be avoided:
  - 1. Intersections with more than four intersecting streets;
  - 2. "Y" type intersections where streets meet at acute angles;
  - 3. Intersections adjacent to bridges and other sight obstructions.

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

When highest classification involved is:	Minimum centerline offset should be:
Major Arterial	350 feet
Minor Arterial	300 feet
Commercial Collector	200 feet
Neighborhood Collector	200 feet
Local Access	150 feet

## 2B.135 Fire Department Requirements

- A. General
  - 1. These requirements are derived from the Uniform Fire Code.
  - 2. The intent is to assure adequate provisions for emergency vehicle access. The road plan detail need only be adequate to determine conformance.
  - 3. Generally, fire department access roads shall be provided for every building when located more than 150 feet from an approved public way, and must be completed and accepted prior to issuance of building permits or with approval from the City Fire Department.
  - 4. A secondary access road shall be provided when servicing more than 20 residential units or parcels.
- B. Maintenance and Acceptance
  - 1. A maintenance agreement shall be established by the owners to insure that the access road be open at all times for emergency and public service access.
  - 2. Permits for structures cannot be issued prior to acceptance of the access road and the recording of required covenants, title notices, and maintenance agreements. The as-built access road shall be certified by a civil engineer, unless a performance bond is posted.
  - 3. Phasing of project may be allowed subject to approval of Technical Review Committee and with the posting of a

performance bond 110% of total phased project.

C. Existing Access Roads

Existing fire department access roads shall be required to be brought substantially into conformance if it is determined by the Fire Department that the existing access road constitutes a distinct hazard to life or property. The written determination of findings shall include minimum improvements necessary to mitigate the distinct hazard(s).

- D. Plans
  - 1. Access road plans shall be prepared and stamped by a registered civil engineer and submitted to the Technical Review Committee for review. The plan shall depict road location and be in accordance with applicable engineering practices. In order to determine conformance, the road plan shall show, at a minimum, a survey indicating the location of the easement, road gradient, surfacing description, drainage controls, and road dimensions. Plans shall be circulated to the Fire Department for review and comments.
  - 2. When it is found by the Technical Review Committee that the access road plan substantially conforms to the following road specifications, construction may proceed.
- E. Road Width
  - 1. Access roads serving up to 6 lots/parcels shall have an unobstructed width of not less than 24 feet (if parking is intended or permitted, then overall widths shall be increased by 6 feet).
  - 2. Access roads serving 7-20 lots/parcels shall have an unobstructed width of not less than 30 feet (if parking is intended or permitted, then overall widths shall be increased by 6 feet).
  - 3. Access roads serving 21 or more lots/parcels shall have an unobstructed width of not less than 36 feet (if parking is intended or permitted, then overall widths shall be increased by 6 feet).

F. Easement Width

A dedicated easement shall be not less than 30 feet wide. If parking is intended or permitted, then overall widths shall be increased by 6 feet.

G. Vertical Clearance

Access roads shall have an unobstructed vertical clearance of not less than 13 feet, 6 inches.

- H. Surface
  - 1. Access roads shall provide all-weather driving capabilities.
  - 2. Access roads shall be designed to support imposed loads of fire apparatus (gross vehicular weight) of 60,000 lbs, or as determined by the Fire Department.
- I. Turning Radius
  - 1. Access roads in excess of 150 feet in length which dead-end shall have a minimum 60 foot radius cul-de-sac.
  - 2. An approved hammerhead not less than the required road width is an acceptable option.
- J. Grade

Access roads shall not exceed 12% grade.

K. Drainage

Drainage of surface water shall be away from access roads.

L. Design Speed

20 miles an hour.

M. Stopping Sight Distance

120 feet.

N. Signage

Access roads shall be designated by names or numbers on signs clearly visible and legible.

O. Bridges

Shall use designed live loading sufficient to carry the imposed loads of apparatus.

## 2B.140 Driveways

fire

- A. General
  - 1. Details of driveway sections are located at the end of this chapter.
  - 2. All abandoned driveway sections on the same frontage shall be removed and the curbing and sidewalk or shoulder and ditch section shall be properly restored.
  - 3. All driveways that are within an existing or proposed sidewalk section shall be constructed of Portland Concrete Cement and shall be subject to the same testing and inspection requirements as curb, gutter, and sidewalk construction.
  - 4. Joint-use driveway sections serving two adjacent parcels may be built on their common boundary upon formal written agreement by both property owners and approval of the City. The agreement shall be a recorded easement for both parcels of land specifying joint usage.
  - 5. Grade breaks, including the tie to the roadway, shall be constructed as smooth vertical curves. The maximum change in driveway grade shall be 8 percent within any 10 feet of distance on a crest and 12 percent within any 10 feet of distance in a sag vertical curve.
  - 6. No commercial driveway shall be approved where backing onto the sidewalk or street will occur unless determined by Technical Review Committee that no reasonable alternative exists.

- 7. Use of culverts or other storm drainage control as designated by the Public Works Director.
- 8. An Approach Permit is required for each connection to a City street.
- B. Arterial Streets
  - 1. No driveway may access an arterial street within 75 feet (measured along the arterial) of any other such arterial street access on either side of the street; provided, that such access may be located directly opposite another access.
  - 2. No driveway access shall be allowed to an arterial street within 150 feet of the nearest right-of-way line of an intersecting street.
  - 3. Within the limitations set forth above, access to arterial streets within the City shall be limited to one driveway for each tract of property separately owned. Properties contiguous to each other and owned by the same person are considered to be one tract.
  - 4. Driveways giving direct access onto arterials may be denied if alternate access is available. Deviations of these standards may be permitted by the Technical Review Committee.
- C. Width
  - 1. The maximum driveway section width for two-way access drives onto an arterial or collector shall be 24 feet for residential 40 feet for commercial uses, and 40 feet for industrial uses. Maximum driveway widths for one way access drives onto an arterial or collector shall be 20 feet for residential, 26 feet for commercial, and 30 feet for industrial uses. A road approach or wider driveway width may be approved by the Technical Review Committee where a substantial percentage of oversized vehicle traffic exists, where divisional islands are desired, or where multiple exit or entrance lanes are needed.
  - 2. The maximum driveway section width onto a local access street shall be 24 feet for residential uses and 26 feet for commercial uses.
  - 3. The maximum one-way driveway width shall be 14 feet for residential and 22 feet for commercial driveways. Parking lot

circulation and signing needs shall be met on site. The public right-of-way shall not be utilized as part of a one-way parking lot flow.

4. Road approaches and/or ingress and egress tapers may be required in industrial and commercially zoned areas as directed by the Technical Review Committee.

## 2B.150 Sight Obstruction

The following sight clearance requirements take into account the proportional relationship between speed and stopping distance. Refer to AHMC 17.20 for further information.

The sight distance area is a clear-view triangle formed on all intersections by extending two lines of specified length (A) and (B) as shown below from the center of the intersecting streets along the centerlines of both streets and connecting those endpoints to form the hypotenuse of the triangle. See Detail Drawing 2-01 at the end of this chapter. The area within the triangle shall be subject to said restrictions to maintain a clear view on the intersection approaches.

Sight Distance Triangle:

A. Stop- or Yield-Controlled Intersection

	Sight Distance (Ft.)		
	(A)	(B)	
Speed Limit	Major Street	Minor Street	
20 mph	200	*	
25 mph	250	*	
30 mph	300	*	
35 mph	350	*	
40 mph	400	*	

\*Sight distance measured from a point on the minor road 10 feet from the edge (extended) of the major road pavement and measured from a height of eye at 3.50 feet on the minor road to height of object at 4.25 feet on the major road (See Detail Drawing 2-01).

a' 1 . D' .

B. Uncontrolled Intersection

	Signt Distance (Ft.)		
	(A)	(B)	
Speed Limit	Major Street	Minor Street	
20 mph	90	90	
25 mph	110	110	
30 mph	130	130	
35 mph	155	155	
40 mph	180	180	

- C. The vertical clearance area within the sight distance triangle shall be free from obstructions to a motor vehicle operator's view between a height of 42 inches and 10 feet above the existing surface of the street as specified in 17.20.020 in AHMC.
- D. Exclusions. Sight obstructions that may be excluded from these requirements include: fences in conformance with all applicable City codes, utility poles, regulatory signs, trees trimmed from the base to a height of 10 feet above the street, places where the contour of the ground is such that there can be no cross-visibility at the intersection, saplings or plant species of open growth habits and not in the form of a hedge which are so planted and trimmed as to leave at all seasons a clear and unobstructed cross-view, buildings constructed in conformance with the provisions of appropriate zoning regulations and preexisting buildings.

## **2B.160** Surfacing Requirements

The following are the surfacing requirements for each application listed. These designs are based on Washington stabilimeter subgrade R-value of 5. Alternate structures will be accepted based on soil tests to determine the actual Washington stabilimeter R-value. Soil tests and a completed worksheet for each road classification shall accompany plans submitted if other than the structures shown below are used.

One soil sample per each 500 LF of centerline with 3 minimum per project representative of the roadway subgrade shall be taken to determine a statistical representation of the existing soil conditions.

Soil tests shall be performed by an engineering firm specializing in soils analysis. The soils report, signed and stamped by a soils engineer licensed by the State of Washington, shall be based on actual soils tests and submitted with the plans. All depths indicated are a minimum compacted depth.

	SURFACING	TOP COURSE	BASE
Boulevard and Arterial Streets	0.50' Class B Asphalt Concrete	0.17' Crushed Surfacing Top Course	2.08' Ballast
Alternate	0.50' Class B Asphalt Concrete *Class A Chip Seal	0.61' Asphalt Treated Base (ATB)	0.17' Crushed Surfacing Base Course
Commercial Collector and Industrial Streets	0.33' Class B Asphalt Concrete	0.17' Crushed Surfacing Top Course	2.09' Ballast
Alternate	0.33' Class B Asphalt Concrete *Class A Chip Seal	0.62' Asphalt Treated Base	0.17' Crushed Surfacing Base Course
Neighborhood Collector Streets	0.33' Class B Asphalt Concrete	0.17' Crushed Surfacing Top Course	1.36' Ballast
Alternate	0.25' Class B Asphalt Concrete	0.20' Asphalt Treated Base	0.17' Crushed Surfacing Base Course
Local Access Streets	0.25' Class B Asphalt Concrete	0.17' Crushed Surfacing Top Course	0.69' Ballast
Alternate	0.25' Class B Asphalt Concrete	0.20' Asphalt Treated Base	0.17' Crushed Surfacing Base Course
Sidewalks Parking Lots	4" Commercial Concrete 0.25 Class B Asphalt Concrete	0.17' Crushed Surfacing Top Course	Crushed Surfacing Top .069' Ballast
Alternate	Asphalt*		
Driveway Approach	6" Commercial Concrete		1" Crushed Surfacing Top Course or Well Graded Sand
Bikeway	4" Commercial Concrete		1" Crushed Surfacing Top Course
Alternate	2-1/2" Class B Asphalt Concrete		4" Ballast

<sup>\*</sup>Asphalt sidewalks will not be permitted unless otherwise approved by the Technical Committee. Class A Chip Seal may be permitted with Technical Committee approval. Parking lots shall be constructed as specified in this table.

## 2B.170 Temporary Street Patching

Temporary restoration of trenches shall be accomplished by using 2" Class B Asphalt Concrete Pavement when available or 2" medium-curing (MC-250) Liquid Asphalt (cold mix), 2" Asphalt Treated Base (ATB), or steel plates.

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

All temporary patches shall be maintained by the contractor until such time as the permanent pavement patch is in place.

If the contractor is unable to maintain a patch for whatever reason, the City will patch it at actual cost plus overhead and materials and contractor shall pay said City costs.

## 2B.180 Trench Backfill And Restoration

Trench restoration shall be either by a patch or patch-plus-overlay as required by the City.

- A. All trench and pavement cuts shall be made by spade-bladed jackhammer or sawcuts. The cuts shall be a minimum of 1 foot outside the trench width.
- B. All trenching shall be backfilled with crushed surfacing materials conforming to Section 7-08.3(3) of the WSDOT/APWA Standard Specifications. The trench shall be compacted to 95 percent maximum density, as described in Section 2-03.3(14)D of the WSDOT/APWA Standard Specifications.

If the existing material is determined by the City to be suitable for backfill, the contractor may use the native material except that the top 8 inches of trench shall be 3/4 inch minus ballast. All trench backfill materials shall be compacted to 95% density.

Backfill compaction shall be performed in 6-inch lifts.

Replacement of the asphalt concrete or Portland concrete cement shall be of existing depth plus 1 inch or 3 inches, whichever is greater.

- C. Tack shall be applied to the existing pavement and edge of cut and shall be emulsified asphalt grade CSS-1 as specified in Section 9-02.1(6) of the WSDOT/APWA Standard Specifications. Tack coat shall be applied as specified in Section 5.04.3(5)(A) of the WSDOT/APWA Standard Specifications.
- D. Asphalt concrete Class B shall be placed on the prepared surface by an approved paving machine and shall be in accordance with the applicable requirements of Section 5-04 of the WSDOT/APWA Standard Specifications, except that longitudinal joints between successive layers of asphalt concrete shall be displaced laterally a minimum of 12 inches unless otherwise approved by the City Engineer. Fine and coarse aggregate shall be in accordance with Section 9-03.8 of the WSDOT/APWA Standard Specifications. Asphalt concrete over 2 inches thick shall follow WSDOT 5-04.0(9).

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 Engineer shall be accomplished by raking out the oversized aggregates from the Class B mix as appropriate.

Surface smoothness shall be per Section 5-04.3(13) of the WSDOT/APWA Standard Specifications. The paving shall be corrected by removal and repaving of the trench only.

- E. All joints shall be sealed using paving asphalt AR4000W.
- F. When trenching within the roadway shoulder(s), the shoulder shall be restored to its original or better condition.
- G. The final patch shall be completed as soon as possible and shall be completed within 72 hours 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 of overlay work is allowable only subject to the City Engineer's approval. The Public Works Director may deem it necessary to complete the work within the 30 days time frame and not allow any time extension. If this occurs, the Contractor shall perform the necessary work as directed by the Public Works Director.

## 2B.190 Staking

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

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

The minimum staking of streets shall be as follows:

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

## 2B.200 Testing

Testing shall be required at the developer's or contractor's expense. The testing shall be ordered by the developer or contractor and chosen testing lab shall be approved by the City construction inspector. Testing shall be done on all materials and construction as specified in the WSDOT/APWA Standard Specifications and with frequency as specified in project specifications and/or as requested by the City Engineer.

In addition, the City shall be notified before each phase that street construction commences (i.e., staking, grading, subgrade, ballast, base, top course, and surfacing).

# **2C SIDEWALKS, CURBS AND GUTTERS**

## 2C.020 Design Standards

Plans for the construction of sidewalks, curbs and gutters are to be submitted as part of the street plans when applicable. The City has set forth minimum

standards as outlined in Section 1.040 which must be met in the design and construction of sidewalks, curbs and gutters.

Because these are minimum standards, they may be modified by the Director of Public Works should the Director feel circumstances require increased or decreased widths.

## 2C.030 Sidewalks

Sidewalks shall be constructed of "air entrained concrete class 3000" as specified by WSDOT 8-14-2 4 inches thick. When the sidewalk, curb and gutter are contiguous, the width of the sidewalk shall be measured from back of curb and gutter to back of sidewalk.

- A. Arterial Streets. Sidewalks, curbs and gutters shall be required on both sides of all arterial streets interior to the development. Sidewalks, curbs and gutters shall also be required on the development side of streets abutting the exterior of said development. Arterial streets for purposes of this subsection shall include major arterials, secondary arterials and collector streets. This requirement may be waived in the industrial/commercial zoned areas if an acceptable alternative can be reached for an enhancement to some other City owned property, streets or building and must be agreed to by City Council.
- B. Local Access Streets. Sidewalks shall be required on both sides of local access streets interior to the development and on the development side of local access streets abutting the exterior of said development including cul-de-sacs.
- C. The design and construction of all sidewalks, curbs, gutters and walkways shall meet the following minimum standards:

The width of sidewalks shall be as shown in the street design drawings. Those sidewalks designated in the comprehensive bike plan of the City as bike paths shall, in addition, meet the minimum width requirements established for said bike paths. The Public Works Director shall require that the design of all sidewalks provides for a gradual rather than an abrupt transition between sidewalks of different widths or alignments.

- D. Form and subgrade inspection by the City are required before sidewalk is poured.
- E. For driveway requirements, see Chapter 2B.140.

## 2C.040 Curb and Gutter

Cement concrete curb and gutter shall be used for all street edges unless otherwise approved by the Technical Review Committee. All curbs and gutters shall be constructed of "air entrained concrete class 3000" as specified by WSDOT 8-14.2 as shown on Detail Drawing 2-16.

Rolled edge concrete curb and gutter per WSDOT/APWA Standard Specifications is allowed if a minimum of three feet of planter strip is provided between the curb and the sidewalk. Planter strips are to be maintained by the property owner and zone specific trees specified by the City shall be planted at the owners expense with no less that two trees per parcel.

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

The face or top of all new curbs shall be embossed to denote the location of water and sewer services crossings and valve locations. Water services shall be marked 1/4 inch into concrete with a "W" and side sewers shall be marked with an "S".

## 2C.050 Handicap Ramps

All sidewalks must be constructed to provide for handicap ramps in accordance with the standards of state law. (See Detail Drawings 2-12 thru 2-15)

Handicap Ramps shall be constructed of "air entrained concrete class 3000" as specified by WSDOT 8-14.2. Form and subgrade inspection by the City are required before handicap ramp is poured.

## 2C.060 Staking

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

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

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

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

## 2C.070 Testing

Testing shall be required at the developer's or contractor's expense on all materials and construction as specified in the WSDOT/APWA Standard Specifications.

At a minimum, one slump test and 2 test cylinders shall be taken once per day. All other testing frequencies shall be as specified in the project specifications and/or as requested by the City Engineer.

In addition, the City shall be notified before each phase of sidewalk, curb and gutter construction commences.

# 2D BIKEWAYS

#### 2D.010 General

Bikeway or Urban Trail construction may be required in conjunction with any new development or redevelopment where the estimated cost of improvements on such properties exceeds 25 percent of the value of the existing structures, or plat or short plat approval, when the need for such a bikeway is required by the Public Works Director.

#### 2D.020 Design Standards

The design of bicycle paths shall depend upon their type and usage. Bikeway surfacing shall be as outlined in Section 2B.160.

All minimum design standards as set forth in Section 1.040 shall apply.

Normally, bikeways are shared with other transportation modes, although they may be provided exclusively for bicycle use.

## 2D.030 Staking and Testing

Staking and testing shall be done in accordance with street staking and testing as outlined in Section 2B.190 and 2B.200.

# **2E ILLUMINATION**

## 2E.010 General

Street lights will be required on boulevards, arterial streets, and where these streets intersect other City streets. Street lights shall be required in new residential subdivisions, short plats, or other developments, as determined by the Technical Review Committee.

## 2E.020 Design Standards

A street lighting plan submitted by the applicant and approved by the Technical Review Committee shall be required for all street light installations. Type of installation shall be as set forth in WSDOT/APWA Standard Specifications and as directed by the City except where noted herein. Posting a performance bond may be allowed for phased projects as determined by the Technical Review Committee.

All public street light designs shall be prepared by an engineering firm capable of performing such work. The engineer shall be licensed by the State of Washington. All developments shall submit the lighting plan on a separate sheet. After system is completed and approved, a set of "as built" mylars shall be submitted to the City as a permanent record.

Lights shall be located in accordance with the Illumination Standards Table and Detail Drawings 2-2 through 2-6. In addition, intersections shall be illuminated to 1.5 times the highest foot candle requirement of the streets surrounding the intersection. Exception: In residential areas, local and collector streets intersecting other local and collector streets do not need 1.5 times the illumination provided a luminaire is placed at the intersection.

For the purposes of this section, area classes are determined by zoning as follows:

Commercial

- C1 Commercial/Light Industrial
- B1 Retail, Limited
- B2 Retail, General

## Intermediate

- RB1 Residential Business
- RB2 Residential/Business
- DB Downtown Business

## **Residential**

- R1 Single Family
- R2 Single Family/Duplex
- R3 Multifamily

As new zones are created, they will be classified for the design of illumination by the City Engineer. If road widths differ from those in the Illuminations Standards table, other spacings will be determined by the City Engineer using the following criteria:

AVERAGE MAINTAINED HORIZONTAL ILLUMINATION (FOOT CANDLES)						
		AREA CLASS				
Road Class	Residential	Residential Intermediate		Commercia 1		
Local	0.4	0.6	N/A	0.89		
Collector	0.6	0.8	1.0	1.2		
Arterial	0.8	1.2	1.4	1.6		
Boulevard	N/A	1.2	1.4	1.6		

Uniformity ratio: 6:1 average - minimum for 0.6fc and less 4:1 average - minimum for 01.8fc and greater

Dirt Factor = 0.85, lamp lumen depreciation factor = 0.73

Weak Point Light = 0.2fc except residential local street

Average illumination at intersections 1.5 times the illumination required on the more highly illuminated street.

Line loss calculations shall show that no more than five percent voltage drop occurs in any circuit. Branch circuits shall serve a minimum of four luminaires. Pole foundations shall be per Detail Drawing number 2-17. Poles shall be as follows:

	6' Single Arm	8' Single Arm	8' Twin Arm
General Electric	40SA6S8.01B	40SA8S8.01B	40SA8D10.02B
НарСо	50700-001	50700-002	50701-013
Lexington	3608-45806T4	3608-45806T4	3608-60106T4

All street light electrical installations including wiring conduit, and power connections shall be located underground.

The General Notes on the following page need to be included on any plans dealing with street design in addition to all applicable requirements as set forth in Section 3.040.

ILLUMINATION STANDARDS							
						Maximum Spacing	
Road Class	Area Class	Street Width (feet)	Luminaire HPS (watt)	Mounting Height (feet)	Curb Overhang (feet)	One Side (feet)	Both Sides Opposite (feet)
Local	Res	36	100	40	1	235	
	Res	36	100	40	5	215	
	Int	36	200	40	5	225	
Collector	Res	28	200	40	4	225	
	Res	40	200	40	5	245	
	Int	58	400	40	4	200	
	Com	40	400	40	5		265
Arterial	Res	58	400	40	5	220	
	Res	70	400	40	5	175	
	Int	58	400	40	5	200	
	Int	70	400	40	5	175	
	Com	58	400	40	5		250
	Com	70	400	40	5		255
Boulevard	All	24/16/24	400	40	0	175	2 Luminaires Pole in Median

All luminaires to be flat lens, medium cut off IES Type III distribution and shall comply with Peninsula Light standard spm 1425.2000.

## **GENERAL NOTES (STREET LIGHT CONSTRUCTION)**

- 1. All workmanship, materials and testing shall be in accordance with WSDOT/APWA, MUTCD, NEC or City of Airway Heights Public Works Standards unless otherwise specified below. In cases of conflict the most stringent guideline shall apply.
- 2. Electrical permits and inspections are required for all street lighting installations within the City of Airway Heights. The contractor is responsible for obtaining said permits prior to any type of actual construction. These permits are available from the Washington State Department of Labor & Industries.
- 3. A clearly marked service disconnect shall be provided for every lighting circuit. The location and installation of the disconnect shall conform to National Electrical Code (NEC) and City of Airway Heights standards. The photo cell window shall face north unless otherwise directed by the City. The service disconnect shall not be mounted on the luminaire pole. The service disconnect shall be of a type equal to a Meyers MEUGL-M10OC-UM or Unicorn CP111B-01113A service, 120/240 VAC, 103W, Caltrans Type 3B with contactors, photo electric cell and test switch. All service disconnects shall be used to their fullest capabilities, i.e., maximum number of luminaires per circuit.
- 4. All lighting wire shall be copper with a minimum size of #8. All wire shall be suitable for wet locations. All wire shall be installed in schedule 40 PVC conduit with a minimum diameter of 1-1/4 inches. A bushing or bell-end shall be used at the end of a conduit that terminates at a junction box or luminaire pole. Conductor identification shall be an integral part of the insulation of the conductors throughout the system i.e., color coded wire. Equipment grounding conductor shall be #8 copper. All splices or taps shall be made by approved methods utilizing epoxy kits rated at 600 volts (i.e., 3-M 82-A2). All splices shall be made with pressure type connectors (wire nuts will not be allowed). Direct burial wire will not be allowed. All other installation shall conform to NEC, WSDOT/APWA and MUTCD standards.
- 5. Each luminaire pole shall have an in-line, fused, water-tight electrical disconnect located at the base of the pole. Access to these fused disconnects shall be through the hand-hole on the pole. The hand-hole shall be facing away from on-coming traffic. Additional conductor length shall be left inside the pole and pull or junction box equal to a loop having a diameter of one foot. Load side of in-line fuse to luminaire head shall be cable and pole bracket wire, 2 conductor, 19 strand copper #10 and shall be supported at the end of the luminaire arm by an approved means. Fuse size, disconnect installation and grounding in pole shall conform to NEC standards.
- 6. Approved pull boxes or junction boxes shall be installed when conduit runs are more than 200 feet. In addition, a pull box or junction box shall be located within 10 feet of each

luminaire pole and at every road crossing. Boxes shall be clearly and indelibly marked as lighting boxes by the legend, "L.T." or "LIGHTING." See WSDOT standard plan J-11a.

- 7. All lighting poles shall have tapered round shafts with a linear taper of between 0.125 and 0.14 inches per foot. All poles shall be Hapco 50700-005 or 50700-006 for single arm and Hapco 50701-010 for twin arm or approved equal. In existing developed areas, the City may approve/require use of other poles to establish consistency within the developed area.
- 8. Mounting heights, arm length, power source, luminaire, and bolt patterns shall be as follows:

Mounting Height:	40 ft.
Arm Length:	6 ft,
Power Source:	240 VAC, Single Phase, 3 Wire
Luminaire Type:	200 Watt, High Pressure Sodium
	Flat Lens Medium Cutoff I.E.S.
	Type 3 Distribution
Bolt Pattern:	4 Bolt, Diameter Bolt C

- 9. Cement concrete bases shall follow WSDOT Standard Plan J-1b, Sheet 1, Foundation Detail. Conduit shall extend between 3 and 6 inches above the concrete base.
- 10. Any modification to approved plans shall be reviewed and approved by the City prior to installation.

## 2E.040 Staking

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

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

The minimum staking of luminaires shall be as follows:

- A. Location and elevation to the center of every pole base.
- B. Location and elevation of each service disconnect.

## 2E.050 Testing

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

# 2F SIGNALS

## 2F.010 General

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

## 2F.020 Design Standards

Signal systems shall be designed in accordance with the specifications as set forth in the WSDOT Design Manual and the WSDOT/APWA Standard Specifications unless otherwise authorized by the City.

All public signal designs shall be prepared by an engineering firm capable of performing such work. The engineer shall be licensed by the State of Washington. All applicable requirements set forth in Section 1.040 shall be included.

## 2F.030 Induction Loops

Induction loops shall be constructed per WSDOT/APWA Standard Specification 8-20.3(14)C and the following:

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

## 2F.040 Staking

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

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

The minimum staking of signals shall be as follows:

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

## 2F.050 Testing

All signals shall be subject to any necessary electrical inspections as well as requirements as set forth in the WSDOT Design manual and the WSDOT/APWA Standard Specifications.

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

Controller and cabinet testing may be required by WSDOT District 3 laboratory and/or the City of Airway Heights. All specifications and material samples shall be submitted to the City for review and approval prior to installation.

## 2F.060 Check-Out Procedure

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

New signals shall operate without any type of failure for a period of 30 days. The contractor shall have a person available to respond to system failure within 24 hours during the 30 day "check-out" period.

Failure of any control equipment or hardware within the "check-out" period shall restart the 30 day "check-out" period.

# 2G ROADSIDE FEATURES

#### 2G.010 General

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

#### 2G.020 Design Standards

The design and placement of roadside features included herein shall adhere to the specific requirements as listed for each feature, and, when applicable, to the appropriate standards as set forth by the Technical Review Committee.

#### 2G.030 Staking

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

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

## 2G.040 Testing

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

## 2G.050 Survey Monuments

- A. All existing survey control monuments which are disturbed, lost, or destroyed during surveying or building shall be replaced with the proper monument as outlined in B or C below by a land surveyor registered in the State of Washington at the expense of the responsible builder or developer. (See Detail Drawings 2-21 through 2-24)
- B. Street type: Major Arterial; Minor Arterial.

A pre-cast concrete monument with cast iron monument case and cover installed per City of Airway Heights standards is required.

If the monument case and cover are placed in cement concrete pavement, the pre-cast base will not be necessary.

C. Street type: Commercial Collector; Neighborhood Collector; and Local.

A cast-in-place concrete surface monument with sufficient ferrous metal embedded to allow for detection by a magnetic detection device per City of Airway Heights standards is required. Cap shall be "Berntsen RB Series" (or approved equal) or brass plug marker.

D. Monument Locations

Appropriate monuments shall be placed:

- 1. At all street intersections;
- 2. At the PC and PT's of all horizontal curves;
- 3. At PI of all horizontal curves of streets where the PI lies within the

limits of the traveled roadway;

- 4. At all corners, control points and angle points around the perimeter of subdivisions as determined by the City;
- 5. At all section corners, quarter corners, and sixteenth corners that fall within the right-of-way.
- E. The monument case shall be installed after the final course of surfacing has been placed.

## **2G.060 Mailboxes** (Where applicable)

- A. During construction, existing mailboxes shall be accessible for the delivery of mail or, if necessary, moved to a temporary location. Temporary relocation shall be coordinated with the U.S. Postal Service. The mailboxes shall be reinstalled at the original location or, if construction has made it impossible, to a location as outlined below and approved by the U.S. Postal Service.
- B. Location
  - 1. Bottom or base of box shall be 36" to 42" above the road surface.
  - 2. Front of mailbox 18 inches behind vertical curb face or outside edge of shoulder.
  - 3. New developments. Clustered mailboxes are required. Contact the U.S. Postal Service for details. See Detail Drawing 2-18.
- C. Mailboxes shall be set on posts strong enough to give firm support but not to exceed 4 x 4 inch wood or one 1 1/2 inch diameter pipe, or material and design with comparable breakaway characteristics. (See Detail Drawing 2-19)

## 2G.070 Guard Rails

For purposes of 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.

## 2G.080 Retaining Walls

A. Rock walls may be used for erosion protection of cut or fill embankments up to a maximum height of 8 feet in stable soil conditions which will result in no significant foundation settlement or outward thrust upon the walls. For heights over 6 feet or when soil is unstable, structural wall of acceptable design stamped by a licensed structural engineer shall be used. Rock walls over 6 feet high shall be subject to inspection by a geotechnical engineer as outlined in the following paragraph. (See Detail Drawing 2-25)

Any rock wall over 48 inches high in a fill section shall require an engineered design by a geotechnical engineer. The geotechnical engineer shall continuously inspect the installation of the wall as it progresses and shall submit inspection reports, including compaction test results and photographs taken during the construction, documenting the techniques used and the degree of conformance to the geotechnical engineer's design.

In the absence of such a rock wall design, walls having heights over 6 feet or walls to be constructed in conditions when soil is unstable require a structural wall having a design approved by the Public Works Department or the Building Department if outside the right-of-way. The design of structural walls shall be by a professional engineer qualified in retaining wall design. Structural walls require issuance of a Building Permit prior to construction.

- B. The rock material shall be as nearly rectangular as possible. No stone shall be used which does not extend through the wall. The rock material shall be hard, sound, durable and free from weathered portions, seams, cracks and other defects. The rock density shall be a minimum of 160 pounds per cubic foot.
- C. The rock wall shall be started by excavating a trench having a depth below subgrade of one-half the base course or one foot (whichever is greater).
- D. Rock selection and placement shall be such that there will be minimum voids and, in the exposed face, no open voids over 6 inches across in any direction. The final course shall have a continuous appearance and shall be placed to minimize erosion of the backfill material. The larger rocks shall be placed at the base of the rockery so that the wall will be stable and have a stable appearance. The rocks shall be placed in a manner such that the longitudinal axis of the rock shall be at right angles or perpendicular to the rockery face. The rocks shall have all inclining faces sloping to the

back of the rockery. Each course of rocks shall be seated as tightly and evenly as possible on the course beneath. After setting each course of rock, all voids between the rocks shall be chinked on the back with quarry rock to eliminate any void sufficient to pass a 2 inch square probe.

- E. The wall backfill shall consist of quarry spalls with a maximum size of 6 inches and a minimum size of 4 inches or as specified by a licensed engineer. This material shall be placed to a 12 inch minimum thickness between the entire wall and the cut or fill material. The backfill material shall be placed in lifts to an elevation approximately 6 inches below the top of each course of rocks as they are placed, until the uppermost course is placed. Any backfill material on the bearing surface of one rock course shall be removed before setting the next course.
- F. Perforated drainage pipe and filter fabric shall be installed as per Detail Drawing 2-25. This pipe requirement may be waived by the Engineer upon a showing by the developer that no subsurface water problem exists.

## 2G.090 Street Trees

It is the goal of the City to continue patterns that may currently exist, or to create streetscapes of distinctive character where it is presently lacking consistent with the Zoning Code and as may be approved as specified in Chapter 17.23 in the AHMC.

Street trees in or along the Public Right-of-Way shall be placed in accordance with the following:

- A. Planting size: Trees, 2 to 3 inch caliper, measured 6 inches above the base. Ground cover (e.g., ivy), 4 inch pot spaced 18 to 20 inches on center or 1 gallon pots at 20 inches on center. Low growth shrubs (e.g., juniper), 1 gallon pots at 3 feet on center. Shrubs (e.g., rhododendron), 18 to 24 inches in height at 5 feet on center or 3 gallon pot at 5 feet on center.
- B. Location: Trees shall be located in the center of the greenbelt or four (4) feet behind the backside of the curb. Trees shall be spaced 35 feet on center starting 15 feet from the property line. Tree spacing may be adjusted slightly to allow a 10-foot clear zone on either side of a driveway.
- C. Maintenance: All developments required to plant street trees will also be required to maintain the trees for the life of the project, and any damage to streets, curbs, sidewalk or utilities regardless of ownership.

D. Exceptions to the planting theme may be authorized by the City Council.

# 2H PARKING REQUIREMENTS

## 2H.100 Parking Lots

Requirements for construction and design of such a lot will be determined through the Site Plan Review process in compliance with the most recent edition of the Uniform Zoning Code (UZC) Section 801.4 and Section 1107 of the most recent edition of the UBC Washington State Amendments and Table 11-F of the same Section which are attached at the end of this Chapter.

Storm water retention shall be provided and shall follow the criteria as set forth in Chapter 3 of these standards.

Four sets of plans and specifications shall be required to be submitted for review and approval by the City with respect to storm drainage discharge and on-site retention or detention, matching street and/or sidewalk grades, access locations, parking layout, and to check for future street improvement conformity and City zoning regulations.

Parking lot surfacing materials shall satisfy the requirement for a permanent all-weather surface as specified in the table on page 2-18. Asphalt concrete pavement and cement concrete pavement satisfy this requirement and are approved materials. Gravel surfaces are not acceptable or approved surface material types. Combination grass/paving systems are approved surface material types, however, their use requires submittal of an overall parking lot paving plan showing the limits of the grass/paving systems and a description of how the systems will be irrigated and maintained. If the Technical Review Committee determines the grass/paving system is not appropriate for the specific application, alternate approved surfacing materials shall be utilized.

Minimum requirements for parking lot capacity shall be determined at Site Plan Review and will conform with the most recent edition of the UZC Section 801.2 and Table 8-A of that section and attached to this Chapter.

Parking Stall Dimensions will be in accordance with the most recent edition of the UZC Section 8.01.3 attached at the end of this chapter.

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