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A5.000 General

A5.001 Policy

Development shall coincide with provision of adequate public facilities and services including access, drainage, water and sewerage services.

To meet this policy, a development shall be required to provide the above public facilities to serve the site and to extend the public facilities to provide for the logical continuation of the City's utility and street systems. A development may be required to modify or replace existing off-site systems to provide adequate public facilities. The Manager shall have the authority to review designs, approve plans, inspect construction and accept public improvements, for City ownership, operation and maintenance. The Manager may establish administrative procedures for the above process in order to protect the life, safety, and welfare of the public.

A5.002 Design and Construction Standards

A. Design and construction of all public facility improvements shall be in accordance with the “City of Gresham Public Works Design Standards," the "Public Works Standard Drawings," and the “Public Works Standard Construction Specifications." The above three volumes comprise the "City of Gresham Public Works Standards."

B. No person shall construct public facility improvements unless the person has met the standards of responsibility as provided by ORS 279C.375(2)(b). The Manager may waive the requirement if in the best interest of the City. If a person is found not to meet the standards of responsibility, the person may appeal within three business days of receipt of notice as provided by ORS 279C.450.

A5.003 Guarantee of Completion

A. Prior to approval of any final map or plat, the required public improvements must be completed and all development fees and charges must be paid, or a Guarantee of Completion shall be required to ensure the completion of or payment for public improvements and payment of development fees and charges. Prior to construction of any privately financed public improvement, a Guarantee of Completion shall be required for all improvements other than those constructed on private property which will become public upon City approval of a final map or plat. The Guarantee of Completion shall be for 110 percent of the estimated plan check, administration, inspection and construction costs of the public improvement. The estimated costs shall be determined by the Engineer's estimate, the tabulation of bids or other method acceptable to the Manager.

B. The Manager may allow reduction of the guarantee amount as portions of the public improvements are satisfactorily constructed and inspected. Ten percent of the cost of those portions constructed shall be retained as the guarantee amount is reduced. Upon acceptance for ownership and operation, the guarantee shall be released or returned unless required to satisfy the warranty guarantee requirement in **Section A5.004**.

C. The Manager shall establish standard forms for the Guarantee of Completion and an administrative procedure for reduction of guarantee amount when permitted.

A5.004 Warranty Guarantee

A. A guarantee of completion for warranty work shall be required prior to City acceptance for ownership and operation of privately financed public improvements. The warranty guarantee shall be for 10 percent of the actual construction cost and will be in effect from the date of acceptance for ownership and operation for a period of two years.

B. Repairs required within the warranty period shall be guaranteed for two years from the date of completion of such repair. The warranty guarantee may be incorporated as part of the guarantee of completion for construction or provided separately. The City may require a separate warranty guarantee for any repairs done pursuant to the warranty obligation. Such separate warranty guarantee shall be for a period of two years from the date of completion of such repairs. The Manager shall establish standard forms and procedures for the warranty guarantee.

A5.005 Utility Easements Owned by the Public

A. Prior to construction of utilities owned by the public outside the public right-of-way or prior to the approval of a final plat or final map on a development for which such off-site utilities are required, applicant shall provide the City with easement documents for the construction, operation and maintenance. The easements shall be substantially in the form provided by the City and furnished to the City for review and approval prior to recording. All applicable recording fees shall be the responsibility of the developer and the City shall record the easements.

B. For utilities owned by the public serving subdivision lots within a subdivision, the location, purpose, grantee and width of the easement shall be shown on the plat map. Descriptions or conditions of the easement shall be shown.

C. If the utility owned by the public is outside the plat boundaries or serves areas outside the plat boundary, a separate instrument for the easement shall be required.

D. Size of the easements shall be in accordance with the Public Works Standards.

A5.006 Subdivisions and Land Partitions

A. In all subdivisions and land partitions approved under this document, public streets and other public transportation facilities, sewer, water and storm drainage facilities shall be designed and constructed in accordance with City of Gresham Public Works Standards. All construction within the public right-of-way, and publicly owned utility easements shall be in conformance with the above standards.

B. When required for continuation of City transportation and utility systems, streets, storm drains, sanitary sewers and waterlines shall be extended to the plat boundaries or to a terminus approved by the Manager where physical constraints prohibit compliance. Improvements outside the boundary of a phased subdivision may be staged as determined by the Manager.

C. The plat shall be recorded prior to the issuance of any building permits.

D. The Manager may approve issuance of up to 50 percent of the building permits after the public improvements are completed as described below:

1. Sewer and water facilities are complete and operational, constructed to City standards and ready for acceptance ("Final" inspection corrections completed).

2. Storm drain facilities are complete and operational, constructed to City standards and ready for acceptance ("Final" inspection corrections completed).

3. Streets are curbed and at least one lift (2-inch minimum section) of asphalt is installed. Streetlight installations shall be completed and ready for energizing.
4. As-built drawings of the sewer and water systems are submitted and accepted.
5. All site grading is completed and approved in accordance with the City of Gresham Public Works Standards, the City of Gresham Community Development Code and Gresham Revised Code.

E. Building permits for model homes may be approved prior to the 50 percent of permit release, subject to the following conditions:

1. One model home is permitted for a land division with a total of 20 or fewer lots in all phases. For a subdivision with a total of more than 20 lots in all phases, the maximum number of model homes permitted for each phase shall be 10 percent of the total number of lots in that phase, rounded down to the nearest whole number.
2. The final plat must be recorded prior to issuance of the model building permit.
3. The applicant must select the lot or lots for the model homes and the Manager must approve the selection.
4. Fire coverage, including emergency access and water supply, are approved by the Fire Department.

   Connection to the sewer, water and storm drain systems will not be permitted until those systems are complete and approved by the Manager.

F. 100% release of building permit shall not be allowed until:

1. All public improvements necessary to serve structures that could be built pursuant to such building permits have been accepted by the Manager,
2. All fees and charges related to such public improvements have been paid, and
3. All work is completed in accordance with applicable standards including but not limited to this Code and Public Works Standards, the Gresham Revised Code, and applicable conditions of approval.

G. If the criteria for 100% release of building permits have not been met, the Manager may elect, if it is in the best interest of the City, to approve release of additional building permits. The Manager shall ensure that the City's and public's interests are adequately protected before releasing any additional permits.

A5.007 Commercial, Mixed Use, Industrial, Institutional, and Moderate and High Density Residential Building Permits Development

A. Commercial, mixed use, industrial, institutional, and moderate and high density residential building permits shall not be issued until the receipt of engineered drawings and a Guarantee of Completion as per **Section A5.003** for any required public improvements.

B. Generally, any required public improvements must be completed before occupancy is permitted. Completion of the required public improvements may be required prior to issuance of building permits where Manager determines that it is necessary for the public health, safety and welfare.

C. Public improvements required for site design and land partition permits in the above districts may be staged to coincide with the staging of private improvements to the property when the following conditions exist:

1. It is impractical to construct all public facilities at the time of the initial development permit due to the scale of development, conflict with planned public improvement projects, or physical constraints.
2. Staging will not jeopardize the logical extension of public facilities or result in significantly increased costs to the public.
3. The staging of public improvements will occur in increments practical for construction.
4. The required off-site public facilities are provided to the original proposed for development.
5. The public facilities provided will be adequate to serve each building permit as it is issued. Staging of public improvements may be allowed for the following permit applications:
    a. Partition and design review where less than all lots created are included in the application for design review;
    b. Design review which is staged under **Article 7** of the Development Code;
    c. Design review which does not include the total parcel;
    d. A partition without design review.

D. The Manager may elect to withhold final inspection or the issuance of a certificate of occupancy until:

1. All public improvements necessary to serve the structures have been accepted by the Manager, and
2. All fees and charges related to such public improvements have been paid.

A5.008 Suspension and Stop Work

For public facilities to be installed in compliance with the Public Works Standards of the City of Gresham, the suspension of work shall be in accordance with the Public Works Standards. In addition, the Manager may issue a stop work order pursuant to GRC 7.50.100 et. seq. at any time the work is not in compliance with such standards. The stop work order may apply to work in the public right-of-way, erosion control work, and work pursuant to a building permit to the extent authorized by the building code official.

A5.009 Deferral or In-Lieu-Of Payments for Public Improvements

The Manager may determine that physical conditions make the required public improvements impractical; there is a lack of rough proportionality between the nature and extent of the required work and the nature and extent of the projected impacts caused by the proposed development; or it would be appropriate to coordinate the required work with improvements funded by other development or the City. In such a case, the Manager may elect to defer the work or require the payment of a cash-in-lieu-of improvement charge in an amount determined by the Manager. If the work is deferred, the property owner shall sign an agreement that commits the property to participate in the future cost of the work.

A5.010 Plan Check, Inspection

In order to carry out the provisions of **Appendix 5**, the City shall review and approve plans for, inspect the construction of and accept public improvements in accordance with the following provisions:

A. All development shall be subject to the plan check and inspection. This includes, but is not limited to: 1) the review and approval of public improvement plans; 2) the inspection of public improvements constructed; 3) the testing of materials; 4) project administration; and 5) any review provided by City departments related to the project.

B. A person required to construct the public improvements shall pay a fee in the amount of actual costs incurred by the City to provide plan check and inspection. The City shall require an advance deposit of the fee and, if costs are anticipated to exceed the deposit, the City may require additional deposit(s) to cover incurred and anticipated costs. The person required to construct the public improvements shall make the required deposit within ten days of the request. Failure to make the additional deposit may result in a suspension of plan check and inspection by the City.

C. A person required to construct the public improvements shall do so as required by the Gresham Community Development Code, the Gresham Revised Code, the Gresham Public Works Standards and the condition of approval for the development.

D. A public improvement plan is valid for one year from the date of approval of the plan, unless the Manager approves a longer period of time. Thereafter, a Notice to Proceed shall not be issued unless the public improvement plan is resubmitted in compliance with the Public Works Standards in effect at the time the plan is resubmitted. All public improvements shall be completed within two years of the issuance of the Notice to Proceed unless the Manager approves a longer period of time.

E. In addition to any other remedy allowed by law, in the event of a breach of any agreement relating to the payment of System Development or Facility Charges for the development or if any money is owed to the City pursuant to this section, the City may suspend plan check and inspection. The City shall not accept the public improvements for ownership and operation until the breach is cured or the money paid.

F. As used herein, "public improvement" includes work related to plans submitted pursuant to **Section 9.0500**, *et. seq.*

A5.011 Standards for Utilities, Utility Lines, Stormwater Facilities and Rights-of-Way and Public Access Easements in the Pleasant Valley Environmentally Sensitive/Restoration Areas (ESRA-PV) and the Springwater Environmentally Sensitive Resource Areas (ESRA-SW)

ESRA-PV utilities, utility line and stormwater facility standards are located in **Section 4.1441**. ESRA-PV right-of-way and public access easement standards are found in **Section 4.1442**.

ESRA-SW utilities, utility line and stormwater facility standards are located in **Section 4.1581**. ESRA-SW right-of-way and public access easement standards are found in **Section 4.1582**.

A5.100 Sanitary Sewer Facilities

A5.101 General Provisions

A. The applicant shall install sanitary sewerage facilities in a manner prescribed by the Department of Environmental Quality (DEQ) and the City of Gresham. Connection to sewerage lines shall be permitted if the Manager determines that the following facilities have adequate additional capacity to serve the development:

1. The interceptor, trunk and feeder lines to the wastewater treatment plant; and

2. The wastewater treatment plant.

B. All connections to and uses of the sanitary sewer system shall be made in accordance with the Gresham Revised Code. The DEQ requirements shall be as detailed in the latest OAR, Chapter 340, Division 52 except that the City of Gresham minimum requirements shall be per OAR 340-52 Appendices A, "Guidelines for Public Sewers," and B, "Guidelines for Raw Sewage Lift Stations".

C. Sanitary sewer facilities shall be designed and constructed in conformance to the "City of Gresham Public Works Standards."

A5.102 Separate Connections

All lots must have separate connections to the public sanitary sewer system in accordance with all of Chapter 4. Sewer of the Gresham Revised Code (in particular, see Article 4.05.010 Definitions – Sanitary Sewer Main, Article 4.15. Connection to Sanitary Sewerage System Required, and Article 4.20. Building Sewers).

A5.103 Sewage Pumps/Lift Stations

All public sewer improvements for lands divisions and other developments shall be designed to provide gravity service to potential building envelopes for all lots. This shall apply except where topographical and/or jurisdictional limitations exist and gravity sewer service cannot be obtained.

A5.104 System Design

Sanitary sewer system shall be designed for the ultimate population, which shall be determined by the land uses identified by the Community Development Plan. System design shall comply with the Sewer Master Plan. System location, capacity and grade shall allow for extension of future development. Sewer capacities within a subdivision or partition shall be adequate to handle the sewage contributed by that subdivision or partition. Sewer lines through a subdivision or partition shall be sized to be adequate in capacity for ultimate tributary areas outside of the subdivision or partition.

A5.105 Subsurface Sewage Disposal

A. Subsurface sewage disposal may be used within the affected area of the mid-Multnomah County Sewer Implementation Plan, subject to Multnomah County and State regulations.

B. New subsurface disposal systems may be permitted in those portions of the City outside the mid-Multnomah County sewer implementation plan affected area, subject to the following conditions:

1. Only one single family dwelling can be served.

2. The parcel must be an existing lot of record.

3. Parcel and proposed subsurface system must conform to all County and State standards.

4. A public sewer line is not within the vicinity of the property as provided by Chapter Four of the Gresham Revised Code, nor are there plans to extend sewer service through a project identified in the City's Capital Improvement Plan, a proposed sanitary sewer local improvement district, or in conjunction with an approved development permit.

5. No new commercial, industrial, institutional, or multi-family use may be served by a subsurface sewage disposal system.

6. The property must not be within the boundaries of a proposed sanitary sewer LID.

7. The applicant must agree to connect to the sewer when it becomes available.

An existing commercial, industrial or institutional use which is currently using subsurface disposal may expand, if its existing subsurface disposal system can accommodate the increased loading without modification. A licensed sanitarian must confirm the adequacy of the existing system for the proposed expansion of use. An existing single family dwelling presently using subsurface sewage disposal may be remodeled if no additional dwelling units are created.

An existing subsurface disposal system within a parcel being developed which does not fit the above criteria must be abandoned in accordance with Chapter 4 of the Gresham Revised Code, County and DEQ administrative rules, and any buildings remaining as part of the development must be connected to the public sewer system.

A5.106 Termination of the Use of a Subsurface Sewage Disposal System

Termination of subsurface sewage disposal systems will be in accordance with Gresham Revised Code Chapter 4 and DEQ regulations.

A5.107 Use of Public Sewers

Use of the public sewer shall be subject to the conditions and restrictions of Chapter 4 of the Gresham Revised Code.

A5.108 Easements

A. When sewer availability or topographic constraints prohibit installation of public sewers within public rights-of-way (i.e. streets), the public sewer line shall be placed in a public easement. Except with the consent of the Engineer, the easement shall be placed on a single property, so as to minimize the disruption of adjacent properties.

B. All easement documents and plat language relating to easements shall be substantially in the form provided by the City and furnished to the City for review and approval prior to recording. All applicable recording fees shall be the responsibility of the developer and the City shall record the easements.

C. Design, dimensioning, and use of sanitary sewer easements shall be in accordance with Public Works Standards.

A5.200 Surface Water Management Systems

A5.201 General Provisions

A. Stormwater Drainage System

1. The Manager shall issue a development permit only where there is adequate capacity in the storm drainage system to accommodate the runoff from the site.

2. All storm water from the site shall be conveyed to a point of disposal approved by the Manager.

3. The applicant is responsible for extension of the storm drainage system.

4. Storm drainage facilities shall be designed and constructed in conformance with the "City of Gresham Public Works Standards."

B. Stormwater Quality Treatment System

1. The Manager shall issue a development permit only where stormwater quality treatment controls have been incorporated into site design, except for developments specified in **Section 9.0520**.

2. Stormwater quality facilities shall be designed and constructed in conformance with the City of Gresham Public Works Standards.

A5.202 Accommodation of Upstream Drainage

Any extension of the public storm drainage facilities shall be designed to accommodate all potential runoff from the upstream tributary areas, whether such areas are inside or outside the development. The quantity of runoff to be accommodated shall be based upon the ultimate potential watershed of all upstream development. Upstream development shall be as permitted by the ultimate land use in the Community Development Plan. The basis for the design of all public system improvements shall be the design storm(s) as set forth in the Public Works Design Standards and/or as required by the conditions of approval for the project.

A5.203 Effect on Downstream Drainage

Where it is anticipated that the additional runoff incident to the development will overload an existing drainage facility, the approval authority shall withhold approval of the development until provisions have been made for improvement of said potential condition. If development will increase or concentrate runoff across an adjacent private property, written permission must be obtained from the affected property owner.

A5.204 Data Requirements

A. All applications shall include sufficient information for the Manager to evaluate the applicant's intent to convey the site's storm water to an acceptable point of disposal in accordance with **Section 9.0500** of this document, and the feasibility of his proposed methods to do so. This information, unless otherwise stated in this document, may be included as part of the site development plan, preliminary map or preliminary plat.

B. If the site lies within, or partially within, the Hillside Constraint District, the special reports described in **Section 5.0200** will be required as part of the application. If the property contains terrain over 15% slope which is outside the mapped Hillside Physical Constraint Overlay District, the Manager may require some or all of those reports be submitted to show the feasibility of the applicant's proposal.

C. Sufficient data shall be included with any building permit application to show compliance with **Sections 9.0510, 9.0513, 9.0514** and **A5.200** of this document. The Manager may require that a grading and drainage plan meeting the requirements of **Section 9.0502** be submitted with the building permit application. This requirement shall be based on scale of development, significant cuts and fills or likelihood of serious drainage problems.

D. An approved grading and drainage plan meeting the requirements of **Section 9.0502** will be required prior to start of construction or final plat approval for any subdivision.

E. Floodplain information, delineating the 100-year floodplain limits, shall be shown where it occurs within the development. Floodplain limits shall be based on maps prepared by the U.S. Army Corps of Engineers and the Federal Emergency Management Agency (FEMA). Where more accurate information is available, it shall be used by the design engineer.

A5.205 Drainage Management Practices

Storm drainage systems shall comply with the recommendations and requirements of accepted basin stormwater Master Plans. In the absence of a basin stormwater master plan, or where specific recommendations or requirements do not exist in an accepted master plan, or where downstream facilities are deemed inadequate by the Manager, a development may be required to employ drainage management practices which minimize the amount and rate of surface water runoff into the public stormwater system. Such storm drainage systems shall comply with the Detention Requirements of **Section A5.206** until stormwater master plans are adopted and long-term management systems/structures are available. Drainage management practices may include, but are not limited to:

A. Emphasizing natural groundwater infiltration recharge (where supported by soil analysis) and natural drainageways;

B. Minimization of impervious surfaces;

C. Prevention of uncontrolled runoff from developments;

D. Temporary Ponding of Water;

E. Permanent Storage basins;

F. Stabilization of natural drainageways as necessary below drainage and culvert discharge points for a distance sufficient to convey the discharge without channel erosion; runoff from impervious surfaces shall be collected and transported to a natural drainageway with sufficient capacity to accept the discharge.

A5.206 Detention Requirements

Requirements for detention, in accordance with Public Works Design Standards Section 4.0000 – Storm Drainage, shall apply with the following exception:

A. Development that will add or replace less than 1,000 square feet of impervious area.

A5.207 Subsurface Storm Drainage Facilities

The requirement for public storm drains may be met by the use of private, on-site, infiltration-groundwater recharge storm water disposal under the following conditions:

A. A geotechnical investigation is provided which shows the suitability of the soils for the permanent use of infiltration-groundwater recharge systems. Such investigations shall include one or more in-situ, percolation tests conducted in conformance with City of Gresham requirements for such tests and as set forth in the Public Works Design Standards, Section 4.0000 – Storm Drainage.

B. The use of infiltration-groundwater recharge disposal will not jeopardize the implementation of a Basin Master Plan or preclude the extension of required major storm drain improvements.

C. The use of infiltration-groundwater recharge stormwater disposal complies with the regulatory requirements of the Oregon Department of Environmental Quality (DEQ) Underground Injection Control (UIC) Program. Refer to Chapter 340, Division 44 et. Seq. Oregon Administrative Rules, Construction and Use of Waste Disposal Wells or Other Underground Injection Activities (Underground Injection Control).

On-site systems proposed under this section shall be designed and constructed to meet public facility performance standards in accordance with the Public Works Design Standards, Section 4.0000 – Storm Drainage. Once constructed, the on-site system shall be privately owned, operated and maintained. It shall be the owner's responsibility to maintain or replace the system to prevent runoff to the public right-of-way or other properties.

A5.208 Minimum Design Criteria

Design Storm - The design storm recurrence interval, and duration, to be used in the design of all public stormwater systems shall be in accordance with the Public Works Design Standards.

A5.209 Easements

A. When storm drain availability or topographic constraints prohibit installation of public storm drains within public rights-of-way (i.e. streets), the public storm drain line shall be placed in a public easement. Except with the consent of the Engineer, the easement shall be placed on a single property, so as to minimize the disruption of adjacent properties. Easements may also be required for public stormwater retention, detention and public stormwater quality facilities.

B. All easement documents and plat language relating to easements shall be substantially in the form provided by the City and furnished to the City for review and approval prior to recording. All applicable recording fees shall be the responsibility of the developer and the City shall record the easements.

C. Design, dimensioning, and use of stormwater easements shall be in accordance with Public Works Standards.

A5.210 Private Drainage Systems

When subdivision lots drain to the rear, it may be necessary to provide a private drainage system in private easements. This system shall be for the collection of runoff from roof drains, footing drains, and surface runoff. This system shall be designed to meet the Uniform Plumbing Code requirements. Maintenance of private drainage systems shall be the responsibility of the property owner and/or homeowners association or equivalent. Maintenance responsibility shall include all elements of the system up to the point of connection with a drainage structure of the public stormwater system. Such connection shall be subject to the City approval.

A5.220 Stormwater Quality Control Requirements

A5.220 Stormwater Quality Control Requirements

Stormwater quality control requirements shall be in accordance with **Sections 9.0520, 9.0521**, and the Water Quality Manual.

A5.300 – Water Facilities

A5.301 General Provisions

A. Water distribution systems shall be designed to meet State Water Administrative Rules, and the guidelines of the Water System Master Plan, May, 1986, and its updates.

B. Except as authorized by **Subsection (C)**, an applicant for a development permit shall provide for installation of water distribution and fire protection facilities necessary to directly serve the proposed development. Required water system demands shall be met by maintaining the minimum operating pressures required by the City. For single family residential areas, the minimum static pressure shall be 35 psi (pounds per square inch) and the minimum fire flow shall be 1,000 gpm (gallons per minute).The facilities shall be connected to an approved existing water system. All water lines shall be located within the public right-of-way or as directed by the City Engineer. The applicant must demonstrate that adequate facilities are available to properly serve the development.

C. An applicant for a development permit to construct a single-family dwelling unit on an existing lot of record, when the property is more than 300 feet from a public water main, may construct an on-site private well for water service until a public water main is available to serve the site. Such development shall be exempt from the fire protection facilities requirement when the property is more than 600 feet from a public water main. When a water line is between 301 feet and 600 feet from the lot, the property owner shall pay for the cost of a fire hydrant and its installation at the terminus of the existing water line prior to issuance of a development permit if a hydrant is needed. The construction of the private well shall meet State of Oregon well standards. Upon construction of a public water main to a lot which abuts a property that is served by a well, the owner will be required to connect to the water system within 12 months from the date the new water main is extended to the abutting lot. Connection to the private well shall be severed upon connection to the public water system unless the property owner installs a City approved backflow prevention device on the public water system. The property owner shall pay the property's fair share of the public water system along the lot's street frontage or through the property in order to provide for the logical continuation of the water system. Prior to the issuance of a development permit, the property owners shall sign an agreement to pay the appropriate share of the waterline construction costs at the time it is constructed.

D. Connections to public water systems shall be made in accordance with Chapter 5 of the City of Gresham Code.

E. Water distribution systems shall be in conformance with the “City of Gresham Public Works Standards."

A5.302 System Design

Design of a water system to serve a development shall take into account future extensions beyond the development and shall be consistent with the Water Master Plan. Except for a private well water system, as authorized by **Section A5.301(C)**, a water system shall have the proper pressure to assure adequate fire protection and fulfill consumer demand. A water system shall provide the minimum fire flows and pressures required under the Gresham Revised Code Chapter 5. These requirements do not apply to a single-family dwelling unit on an existing lot of record, when the property is more than 300 feet from a public water main, as provided in **Section A5.301(C)**.

A5.303 Grid System

The distribution system mains shall be looped at all possible locations. All developments will be required to extend mains across existing or proposed streets for future extensions by the City or other developments. All terminations shall be planned and located such that new or existing pavement will not have to be cut in the future when the main is extended. Permanent dead-end mains that provide fire protection shall not exceed 250 feet in length. Single mains serving relatively large areas will not be permitted.

A5.304 Connection to Public Water Lines

If more than one water line exists to which a new development may connect, the new development must connect to the City of Gresham water line. A City of Gresham water line is considered available if the City water line is located at the property's boundary, and the property is identified within the same service level as the adjacent water line.

A5.305 Water Line Oversizing and Reimbursement

A development shall be required to build water line facilities in accordance with the Master Plan. If the water line size exceeds the minimum size needed to provide fire, domestic, and irrigation flows to the development, the applicant may be reimbursed by the City for oversizing of the water line. A deferred reimbursement may be permitted, if adjoining properties can connect to the water line.

A5.306 Easements

A. When water availability or topographic constraints prohibit installation of public water mains within public rights-of-way (i.e. streets), the public water main shall be placed in a public easement. Except with the consent of the Engineer, the easement shall be placed on a single property, so as to minimize the disruption of adjacent properties.

B. All easement documents and plat language relating to easements shall be substantially in the form provided by the City and furnished to the City for review and approval prior to recording. All applicable recording fees shall be the responsibility of the developer and the City shall record the easements.

C. Design, dimensioning, and use of water easements shall be in accordance with Public Works Standards.

A5.400 Streets

A5.401 General Provisions

The City's transportation policies assure public street connectivity in general, and specifically require public street frontage and access for residential parcels. No development permit shall be issued unless the development has frontage or approved access to a public street. Abutting streets shall be dedicated and improved to the "City of Gresham Public Works Standards." No development will be permitted where it will cause traffic generation and an unacceptable Level of Service beyond the street's current carrying capacity including pavement width and signalization. No development permits will be granted where such development will create dangerous or hazardous traffic conditions. "Approved access" may be appropriate as an alternative to the preferred public street frontage for qualified residential flag lots, mixed use and commercial centers, and industrial business parks where access easements promote an acceptable level of public access and street system connectivity.

As used in this section, for development in Heavy Industrial (HI) and General Industrial (GI) land use districts, "current carrying capacity" includes capacity from a transportation improvement that: i) is included in the City of Gresham adopted Five-Year Capital Improvement Plan as a funded project; and ii) is included in the City-approved project list for the Transportation System Development Charge; and iii) there is a City-approved mechanism in place to fund the transportation improvement; and iv) the schedule to complete the transportation improvement has been approved by the City Manager.

A5.402 General Design Requirements

A. **Performance Standards** - All street designs shall provide for the safe and efficient travel of motor vehicles, bicycles, and pedestrians. Streets shall be designed to carry the recommended traffic volumes identified for each street classification. Street classifications are set forth in **Section A5.501**.

Streets shall be designed to meet or exceed minimum guidelines. These guidelines are set forth in the "AASHTO Policy on Geometric Design of Highways and Streets" (latest edition) and the City of Gresham Public Works Standards. Traffic Control Devices shall conform to the Manual on Uniform Traffic Control Devices for Streets and Highways", Federal Highway Administration, with Oregon Supplements, Oregon Dept. of Transportation (latest edition).

B. **Identification** - Development plans shall depict which streets are proposed to be the listed classifications in **Section A5.501**. The plan shall also identify which street section is proposed for each street.

C. **Level of Service Criteria –** Minimum performance must be maintained at city intersections. The standards are based on the ratio of the measured turning movement volumes to the calculated intersection capacity (volume to capacity ratio or V/C). Different standards apply depending on where the intersection is located. Most city intersections require an overall V/C of 0.90 or less, with no individual movement having a V/C larger than 0.95. At intersections that are within Metro-designated Regional or Town Centers (such as Downtown Gresham or Central Rockwood), the overall V/C must be below 0.99 and there is no maximum V/C for individual movements.

D. For Residential Subdivisions and for Attached Dwellings on a Single Lot

The primary local street shall be the local queuing street. The local transitional street shall be used only when consistent with **Section A5.501(F)(2)** or when exceptions are allowed to the maximum 400 foot block length due to topographic or physical constraints, existing development patterns, or as approved through an adopted Pleasant Valley Master Plan. A cul-de-sac, a minor access street or the termination of an existing temporary cul-de-sac may be approved consistent with **Sections A5.501(F)(5)**, **A5.501(F)(6)**, and **A5.402(E) & (F)**, or as approved through an adopted Pleasant Valley Master Plan.

Street layouts shall be generally rectilinear and may be aligned as physically proper to adapt streets to topographic or other natural conditions; or to provide a variety of alignments or grid patterns within an interconnected street system. Street layouts should discourage the use of local streets by non-local traffic from adjacent collectors and arterials.

Block lengths for local streets shall not exceed 400 feet. Any collector or arterials shall not exceed 530 feet between intersecting streets measured along the nearside right-of-way line. The maximum perimeter of the blocks formed by local and collector streets shall not exceed 1800 feet measured along the nearside right-of-way line.

Block and perimeter lengths may be exceeded where precluded by topographic or other physical constraints, or existing development patterns, or as approved through an adopted Pleasant Valley Master Plan; average perimeter of the blocks formed by local and collector streets should be 1000 feet to 1500 feet. Local street block lengths may exceed 400 feet where precluded by topographic or other physical constraints, or existing development patterns, or as approved through an adopted Pleasant Valley Master Plan but in no case shall they exceed 530 feet. When the block length is permitted to exceed 400 feet, a mid-block pedestrian walkway and street crossing is required. The block to block pedestrian walkway shall be 10-foot wide paved walkway in a 15-foot easement. The mid-block street crossing shall be 10-foot wide.

Alleys are encouraged pursuant to **Section A5.501(G)(6)**.

The street classifications shall be per the functional classification map in the Transportation System Plan, the Pleasant Valley Transportation System Plan and the Springwater Transportation System Plan.

E. The Manager may approve a cul-de-sac, a minor access street, or the termination of an existing temporary dead-end street when the following criteria are met:

1. Where construction of a through street is impractical due to topography, or existing development patterns, or arterial and collector intersection spacing restrictions, or significant physical constraints such as a jurisdictional wetland, a natural resource area, dedicated open space, a detention facility or waters of the state; and

2. Emergency vehicle access and fire protection are provided satisfactory to the Manager, and Neighborhood circulation is not adversely impacted.

3. A minor access street shall also be consistent with **Section A5.501(F)(6)**.
Note: The criteria in this section is not intended to preclude the use of curvilinear "eyebrow" widening of a local street where needed to provide adequate lot frontage. An eyebrow is not considered a cul-de-sac.

F. No land division shall be approved which accesses a permanent dead end street system when:

1. The street is in excess of 200 feet, or

2. More than 25 units would access the street, or

3. The street exceeds the allowable grade in the City of Gresham Public Works Standards.

A5.403 Truck Restrictions

For Minor Arterial streets, trucks will be allowed if the trip destination is on a connecting residential or commercial local street.

For Local, Local: Queuing Street, Local: Lane, Minor Access Street and Cul-de-sac streets, no trucks will be allowed in residential or commercial areas except local delivery or service vehicles.

A5.404 Residential Lot Access to Major and Standard Arterials

A. When single-family residential development abuts an existing or proposed major or standard arterial, the approval authority shall require that access to such streets be limited to one of the following means:

1. The lots of the development have access to a local street or alley running parallel to the major or standard arterial.

2. The lots access cul-de-sacs, lanes or shared driveways. No lots shall derive direct vehicle access to the major, standard or minor arterial.

3. Lots adjacent to a major or standard arterial, but with frontage on a lower classification street, shall be restricted to access to the lower classification street unless otherwise approved by the Manager.

B. When driveway access from major or standard arterials is necessary for several adjoining lots, the Manager shall require that such lots be served by a combined access driveway in order to limit possible traffic hazards. The driveway design shall avoid requiring vehicles to back into traffic on major or standard arterials.

C. If access to a lesser class street is available, an access control strip shall be placed along major or standard arterial lot frontages requiring access onto the lesser class street.

A5.405 Street Surfacing and Improvements

A. Public streets, including alleys, within the development shall be improved in accordance with the requirements of this Ordinance, the City of Gresham Public Works Standards, and the requirements of the City Engineer.

B. In any area, if the City requires a subdivider or partitioner to install a street with pavement width greater than 48 feet to provide an arterial, boulevard, or collector street, the City may pay that portion of the cost in excess of the cost of a 48 foot street. The City may allow staging of the street improvement requiring a lesser pavement width than is called for in **Table A5.501(A)**, while reserving adequate right-of-way for the future widening to full street standard. If staging is permitted, setbacks for adjoining development shall be determined by the right-of-way requirements for the full street standards found in **Sections A5.501**. If the ultimate development exceeds a potential of 100 lots or living units and any one of the streets is a collector or arterial, the developer shall pay the entire cost of such street width as determined by the Manager to be necessary to adequately serve anticipated traffic loading.

A5.406 Street Lighting

A. A complete lighting system (including, but not limited to: conduits, wiring, bases, poles, arms, and fixtures), shall be the financial responsibility of the applicant on all streets upon which the development has frontage.

B. A copy of the land division proposal shall be sent to Portland General Electric where a Lighting Plan shall be developed for approval of the Manager.

C. All future street lighting shall be high pressure sodium (HPS) vapor lamps, in accordance with City of Gresham Public Works Standards.

A5.407 Street and Traffic Control Sign Standards

The City shall install all street and traffic control signs in new development and the applicant shall pay for the signs prior to the signing of the final plat or map. Required signing shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways" published by the Federal Highway Administration, U.S. Dept. of Transportation, and as designated by the Manager.

A5.408 Half Streets

Half-street construction is generally not acceptable. Where such a street is justified, the right-of-way and pavement width shall be approved by the City Engineer. In no case shall the pavement width required be less than that required to provide two lanes of traffic to pass at a safe distance. For any local street, the half-street improvement shall be at least 20 feet. Half-streets will only be approved when the abutting or opposite property is undeveloped and the full improvement will be provided with development of the abutting or opposite (upon right-of-way dedication) frontage property.

A development on an unimproved street shall be responsible for constructing a continuous City standard street to a connection with the nearest (publicly-maintained) street.

A5.409 Additional Right-of-Way and Street Improvements

Except for alterations to single family dwellings, ancillary dwellings and accessory dwellings, whenever existing public street improvements including public streets adjacent to or within a development do not meet city standards, the property owner or developer must construct the public street improvements, including dedication of rights-of-way, to the Gresham Public Works Standards.

A5.410 Street Names

No street name shall be used that will duplicate or be confused with the name of existing streets in the Portland East Metro area, except for extensions of existing streets. Street names and property numbers shall conform to the City of Gresham Street Naming and Property Addressing Guidelines, a document published separately.

A5.411 Traffic Analysis

The City Engineer will require a traffic analysis report as determined by the type of development and its potential impact to existing street systems. A traffic analysis will generally be required for a development 1) when it will generate 1,000 vehicle trips per weekday or more, or 2) when a development's location, proposed site plan, traffic characteristics could affect traffic safety, access management, street capacity, or known traffic problems or deficiencies in a development's study area.

The report will be prepared by a licensed traffic engineer in the State of Oregon. At a minimum, the report shall contain the following:

A. Purpose of Report and Study Objectives
A discussion of key traffic issues to be addressed and the transportation system and development objectives related to a specific development.
General transportation system objectives are:

1. to maintain easy and safe traffic flow on surrounding street system;

2. to provide effective and safe transfer of vehicle traffic between the site and the street system;

3. to provide convenient, safe and efficient on-site and off-site movement of vehicles, pedestrians, transit, service and delivery vehicles, and bicycles;

4. to effectively mitigate adverse site-generated traffic impacts on affected streets and intersections. Site-specific objectives may be established by the City for each study.

B. Executive Summary
A concise summary of the study purpose/objectives, site location and study area, development description, key assumptions, findings, conclusions and recommendations.

C. Description of Site and Study Area Roadways
A description of the site and study area, existing traffic conditions in the study area, and anticipated nearby development and committed roadway improvements which would affect future traffic in the study area.
The study area will be defined by:

All roads, ramps and intersections through which peak hour site traffic composes at least 5% of the existing capacity of an intersection approach, or roadway sections on which accident character or residential traffic character is expected to be significantly impacted.

D. On-site Traffic Evaluation
An evaluation of the proposed (and alternative) site access locations, the adequacy of access drive depth, driveway lanes, and queuing storage, the safety and efficiency of proposed vehicular circulation, parking layout, pedestrian and service vehicle routes/facilities, together with recommendations for on-site traffic markings and controls.

E. Technical Appendix
A technical appendix including worksheets, charts, drawings to support findings described in the body of the report.

F. Recommendations for Public Improvements
Recommendations should be made for external roadway improvements, such as additional through lanes and turn lanes, and traffic control devices necessitated as a result of the development. Recommended improvements to transit facilities, and pedestrian and bike circulation should also be reported.

The recommendations should specify the time period within which improvements should be made, particularly if improvements are associated with a phased development, the estimated cost of improvements, and any monitoring of operating conditions and improvements that may be needed. If needed street improvements, unrelated to the development, are identified during the analysis, such improvements should be reported.

G. Access Management
On sites with arterial and collector street frontages, the report shall evaluate and recommend the use of access management plans or techniques:

To separate basic conflict areas. (Reduce number of driveways or increase spacing between driveways and intersections.)

To remove turning vehicles or queues from the through lanes. (Reduce both the frequency and severity of conflicts by providing separate paths and storage area for turning vehicles and queues.)

These techniques may include turn restrictions, striping, medians, frontage roads, channelization of lanes or driveways, shared driveways and access between similar uses, access consolidation, lanes for left or right turns, and other transportation system management (TSM) actions.

H. A review of alternative access points for site access to highways, city streets, and county roads.

I. The analysis of alternate access proposals should include:

1. Existing daily and P.M. peak hour counts, by traffic movements, at intersections effected by generated traffic from the development. (Use traffic flow diagrams.)

2. Projected daily and P.M. peak hour volumes for these same intersections and proposed access points when the development is in full service. (Use traffic flow diagrams.)

3. A determination of the existing levels of service and projected levels of service at each intersection and access points studied.

4. A discussion of the need for traffic signals. This should include a traffic warrant computation based on the National Manual on Uniform Traffic Control Devices.

J. The recommendations made in the report should be specific, and should be based on a minimum level of service “D" when the development is in full service. As an example, if a traffic signal is recommended, the recommendation should include the type of traffic signal control and what movements should be signalized. If a storage lane for right turns or left turns is needed, the recommendation should include the amount of storage needed. If several intersections are involved for signalization, and an interconnect system is considered, specific analysis should be made concerning progression of traffic between intersections.

K. The report should include a discussion of bike and pedestrian usage and the availability of mass transit to serve the development.

A5.412 Utility License Required

A. The Manager shall not accept a public street improvement for ownership and operation if, within the dedicated public right-of-way or general utility easement, there are any utility facilities that are not authorized by a utility license issued pursuant to GRC Article 6.30.

B. No development shall exclude any person who has a utility license issued pursuant to GRC Article 6.30 from installing utility facilities within the dedicated public right-of-way or general utility easement. Such installation shall be coordinated with the developer and other utilities.

A5.500 Transportation System Description and Function

A5.501 Streets

Street functional classification refers to the design of streets to accommodate various levels of traffic demand, adjacent land uses, transit service, and bicycle and pedestrian travel. The Functional Classification System Map depicts the classification of all streets designated Freeway through Community Street. All other streets are local streets. Additional Community Streets or Collectors may be identified through development or City initiated Future Street Plans.

Table A5.501 A

	Functional Parameters		**Design Elements**							
Street Classification	Volume – ADT[1]	Design Speed-MPH[2]	Motorist Travel Lanes	Bicycle Lane	Parking	Median	Landscape Strip	Sidewalk	Curb and Gutter Total	Right-of-Way Width
Major Arterial	25,000-60,000	35-45	4 lanes 12’ wide	Yes – 6’ wide	Not allowed, except where designated boulevard, then optional.	Yes	Yes – 8’ wide	Yes – 6’ wide	2’	104’
Standard Arterial	15,000-40,000	35-45	4 lanes 12’ wide	Yes – 6’ wide	Not allowed, except where designated boulevard, then optional.	Yes	Yes – 8’ wide	Yes – 6’ wide	2’	96’
Minor Arterial	10,000-20,000	25-40	2 lanes 12’ wide	Yes – 6’ wide	No	Yes	Yes – 6’ wide	Yes – 6’ wide	2’	74’
Major Collector	1,000-10,000	25-35	2 lanes 12’ wide	Yes – 6’ wide	Yes – 7’ wide	No	Yes – 6’ wide	Yes – 6’ wide	2’	74’
Standard Collector	1,000-10,000	25-35	2 lanes 12’ wide	Yes – 6’ wide	No	No	Yes – 6’ wide	Yes – 5’ wide	2’	60’
Minor Collector	1,000-10,000	25-35	2 lanes 12’ wide	No	Yes – 7’ wide	No	Yes – 6’ wide	Yes – 5’ wide	2’	60’

Where a design element is listed as “No” for a particular classification, that element is not included in the standard design due to the operational characteristics of that classification, particularly design speed and volume. Bicycle lanes are required on all streets except for those designated as minor collectors. Where bicycle lanes are not required, bicycle travel will occur within the travel lanes. Sharrows or other bicycle travel indicators may be used to provide bicyclists directional information and to inform motorists of

bicyclists on the road. For other design elements, when "Yes" is listed or other guidance is provided, the design element is preferred but may not be included in a particular improvement project depending on specific operational or land use characteristics identified during project development and design. Parking on standard and major arterials designated as boulevard has an "optional" requirement. Where adequate right-of-way allows for on-street parking on boulevards, it should be built. Where adequate right-of-way does not exist, the developer may choose to dedicate right-of-way and provide on-street parking. The on-street parking must meet Public Works Standards.

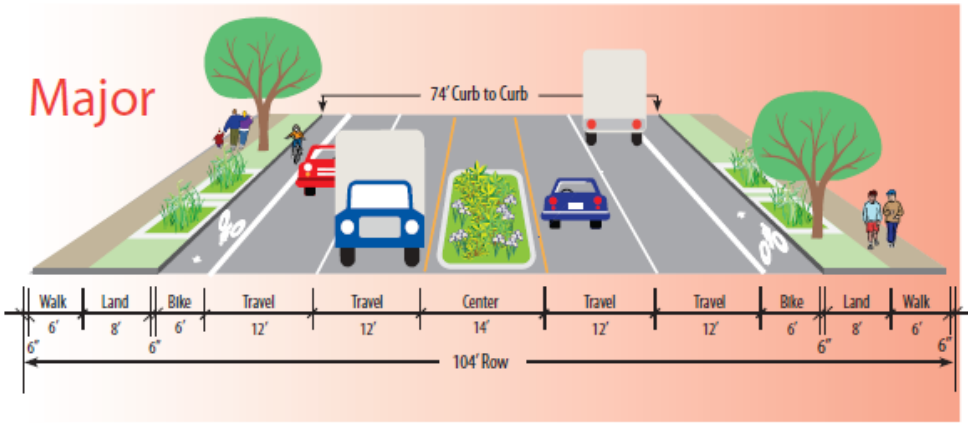
B. Major and Standard Arterials

Major and standard arterials are moderate speed, high volume streets that accommodate the majority of regional travel through Gresham. They consist of four auto travel lanes with a center lane designed as a turn lane or raised median as needed for travel safety, mobility and bicycle lanes. The major and standard arterials provide access to major activity centers and facilitate travel from collector streets to the freeway and principle arterial. They carry traffic volumes typically between 15,000 and 30,000 and maybe as high as 40,000 vehicles per day.

Primary bus routes are provided on the arterial street system, with frequent bus stops located to serve major destinations. Sidewalks and planter strips behind the street curb are also provided for pedestrian mobility, street aesthetics and stormwater management.

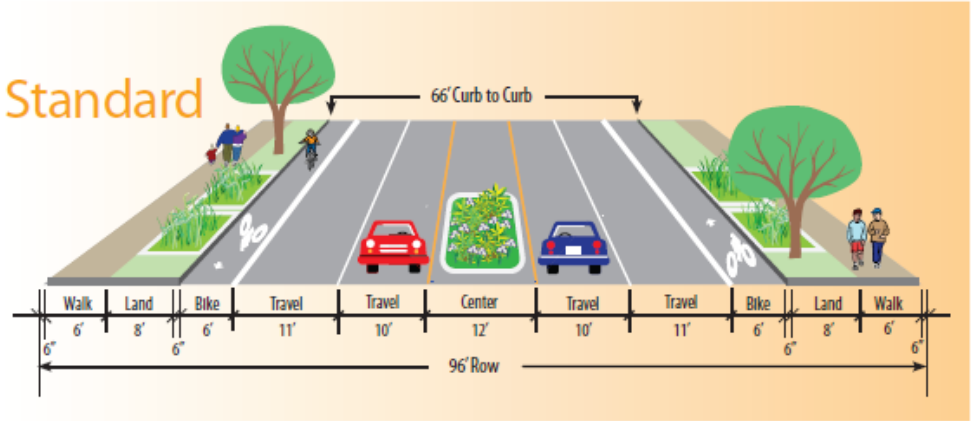
1. Major Arterial

   The major arterial is designed to facilitate high demand travel needs of Gresham's valuable industrial and employment land uses. Gresham's major arterials are Sandy Boulevard and Hogan Drive. Sandy Boulevard serves Gresham's Title 4 industrial/employment land. Hogan Drive serves north/south freight movement and will increase freight volumes as the industrially significant Springwater Plan Area develops. The major arterial has two 12' auto travel lanes in each direction and a 14' median to accommodate large freight vehicles, 6' bicycle lanes, 8' planter strips and 6' sidewalks.



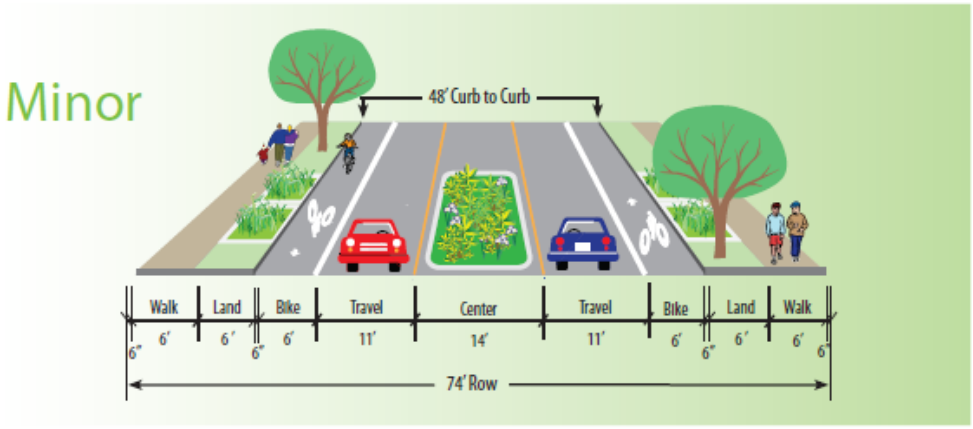
2. Standard Arterial

The standard arterial is designed to accommodate high traffic volumes at a community level scale. The standard arterial has one 10' interior and one 11' exterior travel lane in each direction and a 12' center lane for autos, 6' bicycle lanes, 8' planter strips, and 6' sidewalks. The narrower cross-section will support adjacent land uses but is more pedestrian friendly to cross and requires less right-of-way encumbrance on developments.



C. Minor Arterial

Minor arterials provide access between neighborhoods or from neighborhoods to the arterial system. Land is directly accessible with emphasis on collection and distribution of trips within an arterial grid. Minor Arterials consist of one 10' interior and one 11' exterior travel lane with a 12' center lane for autos, 6' bicycle lanes, 6' planter strips, and 6' sidewalks. Left turn lanes are provided at local streets and major driveways. A continuous left turn lane may be provided where necessary for access within commercial and industrial areas. Traffic volumes are typically between 10,000 and 15,000 and maybe as high as 20,000 vehicles per day.



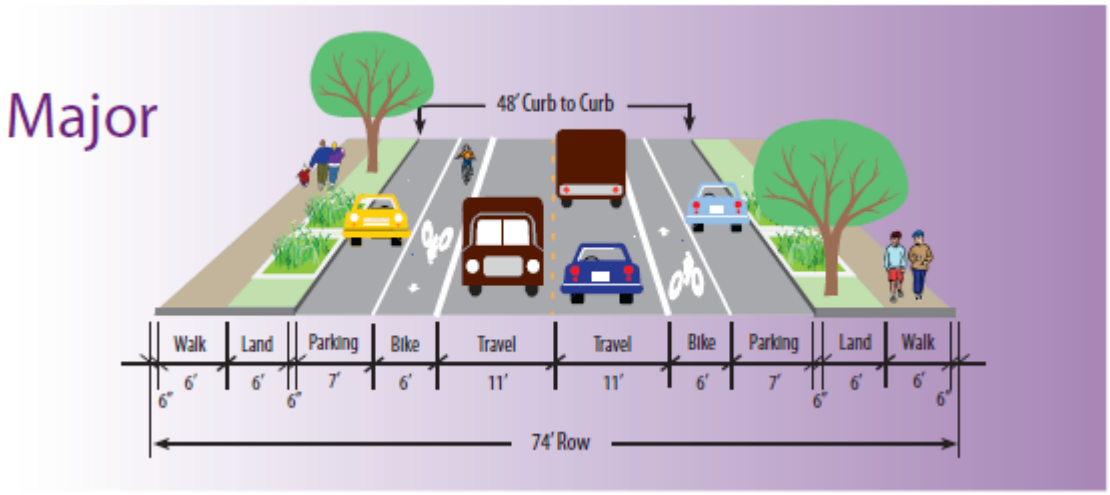
D. Major, Standard and Minor Collector

Major, standard and minor collectors facilitate travel within the community and neighborhoods, with an emphasis on serving adjacent land uses. Traffic volumes are typically 1,000-10,000 per day.

Transit service, where provided, consists of neighborhood circulation routes. Sidewalks and bicycle lanes or shared automobile/bicycle travel lanes facilitate neighborhood access.

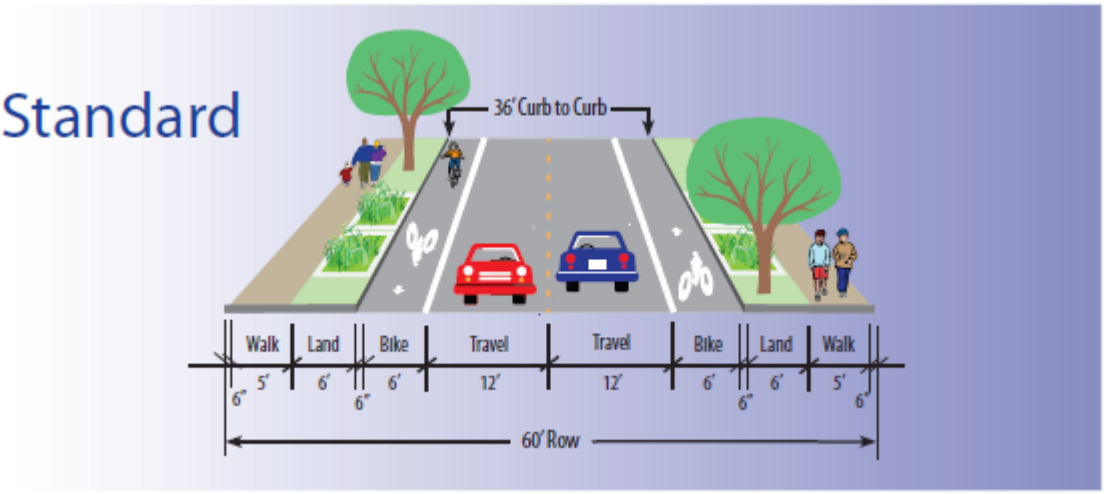
1. Major Collector

   Major collectors consist of two 11' auto lanes, 6' bicycle lanes, 7' parking zones, 6' planter strips, and 6' sidewalks and on-street parking. They are located primarily in the specially planned areas of Pleasant Valley.



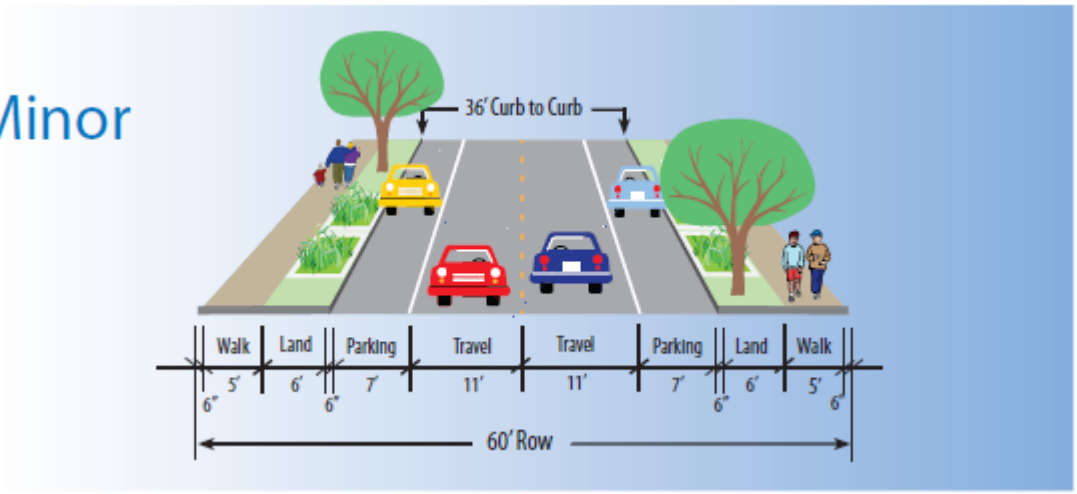
2. Standard Collector

   Standard collectors consist of two 12' auto lanes, 6' bicycle lanes, 6' planter strips, and 5' sidewalks. On-street parking will be provided by the adjacent local street network.



3. Minor Collector

Minor collectors consist of two 11' auto lanes, 7'on-street parking, 6' planter strips, and 5' sidewalks. Bicycle travel will be provided within the motor lanes. Sharrows or other bicycle indicators may be utilized to illustrate the shared nature of the Minor Collector's motor/bicycle lane.



E. (Intentionally Blank)

F. Local Streets

The local street system is used throughout the city to provide local circulation and direct property access. It provides mobility within neighborhoods and other homogeneous land uses, and comprises the largest percentage of total street mileage.

1. Queuing Street

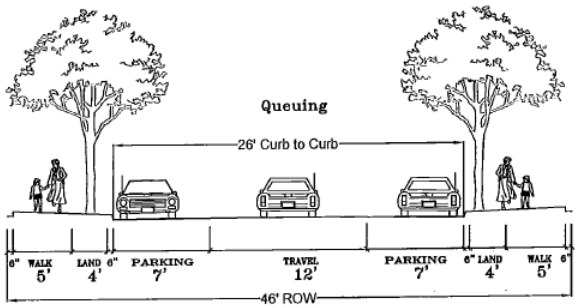
Queuing streets are through streets intended for two way travel. They include one travel lane and two parking lanes. When two vehicles meet on a queuing street, one vehicle must yield by pulling over into a vacant segment of the adjacent parking lane.

a. Limits: The 26 feet pavement width local queuing street standard is most appropriate for use in single-family residential districts.

b. Pavement: Queuing streets consist of a 26 feet pavement width consisting of one 10 feet travel lane and two 8 feet parking lanes. 46 feet of right-of-way also includes 5 feet sidewalks, 6 inches survey monument area between the sidewalk and the abutting property line, 4 feet tree planter strips and 6 inches curbs. Note: An applicant may increase the right-of-way width up to 50 feet in order to increase the tree planter strip or sidewalk width(s).

c. Maximum Block Length: The maximum block length for a queuing street is 400 feet. A queuing street may not terminate in a cul-de-sac, but may temporarily dead end with a planned future street extension.

d. Parking: "No Parking" shall be posted within 30 feet of curb return.



2. Transitional Street

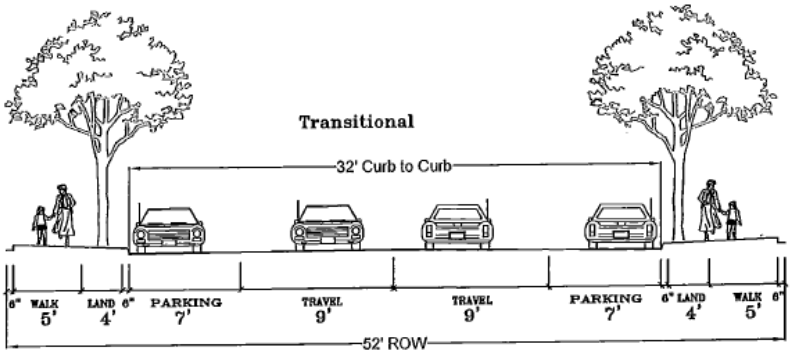
Low speed, low volume street with two travel lanes. Serves access needs of abutting properties, not to move through-traffic. Volumes will typically be 1,000 vehicles per day or less. The local transitional street standard of 32 feet wide pavement applies in the following areas:

a. Continuation of existing local streets in established neighborhoods to the next intersection.

b. In multi-family or mixed-use neighborhoods where density precludes queuing streets due to insufficient off-street parking and breaks in on street parking, as determined by the Manager.

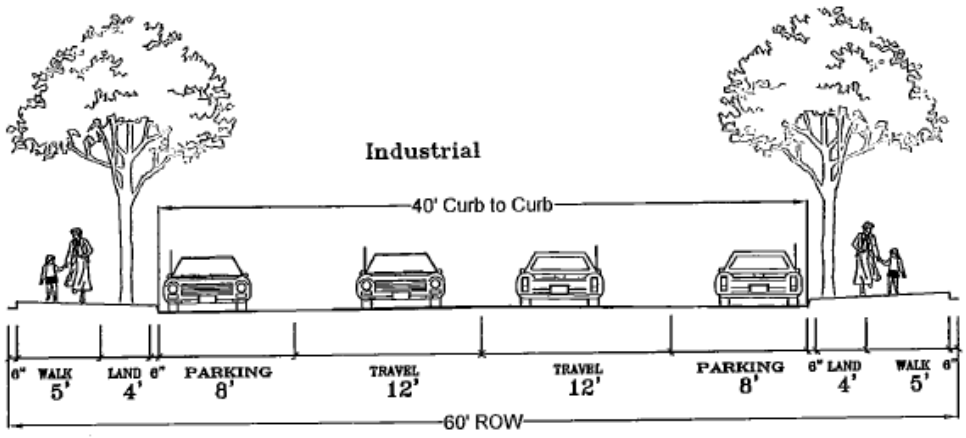
c. On primary emergency response routes.

d. On local streets where volumes are expected to exceed 800 ADT.



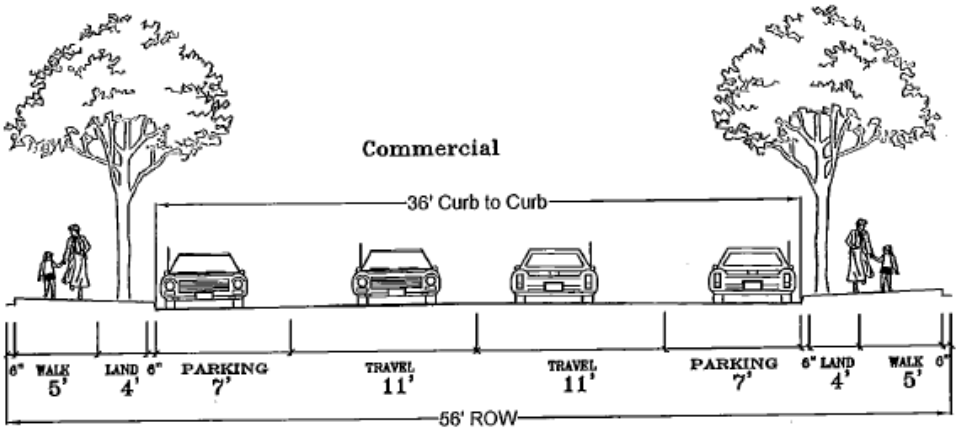
3. Industrial

Low speed, low volume street with two travel lanes. Serves access needs of abutting industrial properties, not to move through-traffic. Volumes will typically be 1,000 vehicles per day or less. The local industrial street standard of 40 feet wide pavement applies in industrial districts.



4. Commercial

Low speed, low volume street with two travel lanes. Serves access needs of abutting commercial properties, not to move through-traffic. Volumes will typically be 1,000 vehicles per day or less. The local commercial street standard of 36 feet wide pavement applies in commercial districts.



5. Cul-de-Sac

Short, low speed, low volume street with two travel lanes, terminating in a dead-end turnaround. Volumes will typically be 1000 vehicles per day or less.

6. Minor Access Streets

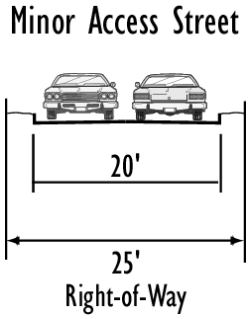
This street is intended to provide public street access to lots created as part of an infill process where; a cul-de-sac turnaround is not warranted; and there is no opportunity for connection to another public street by a local street or lane.

a. Limits: The maximum length of a minor access street shall be 150 feet. No more than six residential units can have frontage and/or access to a minor access street. No more than two residential units may be built beyond the end of the street. The maximum setback from the end of the street to the front of the building shall be pursuant to **Table 4.0130(E), Note [10]**.

b. Building Orientation: All buildings shall be oriented to and access the minor access street. Additional on-site parking for one car per dwelling unit must be provided. Public parking for visitors (3-4 spaces) and a branch-type turnaround designed to AASHTO Fig. V-2 shall be provided at the end of the minor access street. A dead-end sign shall be posted at the entrance to the street.

c. Pavement: The pavement section shall be 20 feet wide within a 25 feet right-of-way. If the 25 feet right-of-way standard precludes the development due to lot depth standard, a reduction to 20 feet with a utility easement may be approved. No sidewalks are required due to the extremely low traffic volumes on the street. Design Speed is 15 mph.

d. Parking: "No Parking" shall be posted for the entire minor access street.



7. Public Park Access Road

The park access road is a limited purpose classification to address the access needs and requirements within the City's park and recreation facilities, including but not limited to parks, open space, natural areas, and trails. This standard would be applied when the full standard public street design is not necessary due to the limited nature of the access needed to or through park or open space areas. The circumstances of the surrounding land use shall be considered when applying this special function classification.

The intent of this special function is to minimize the impact and intrusion on the natural systems that exist while providing a minimum level of access for emergency services, maintenance and user needs.

a. Limits: The park road standard is principally intended to provide emergency service or park user access to an area that does not possess neighborhood circulation requirements. The road may provide public access to a terminal trailhead, allow ingress and egress for maintenance and operation purposes or to be used for emergency services purposes.

The road may be designed with removable traffic control bollards at the entrances to the open space, dependent upon use patterns, to prevent unwanted vehicular traffic. If neighborhood circulation is required in addition to the other requirements, the lane standard may be applied to the road classification.

b. Pavement: The surface material for the access road shall be dependent upon several factors that are specific to the site, including but not limited to the type of use, frequency of use by vehicles, terrain, and soil type. If warranted by conditions and use, the Standard City Street Pavement Section shall be required. If not warranted, an alternative surfacing material shall be acceptable as approved by the Manager. The pavement section shall be 20 feet wide within a 25 feet right-of-way. Vehicle control devices may be installed to deter vehicular intrusion into the park, open space and natural areas. These include but are not limited to bollards, berms, or 6 inches extruded curb, and should be compatible with the surrounding environment and resistant to vandalism.

c. Parking: Parking shall be permitted only in designed and designated turnouts and parking areas.

d. Signage: Signs shall be designed to be compatible with natural character of the site.

G. Other Classifications

Several other specialized classifications have been created to indicate streets with specialized characteristics of major transit routes, private local streets, and scenic routes.

1. Transit Street

A street which serves a significant function of carrying high volume transit service. The traffic carrying function is secondary to its transit service function. Ease of pedestrian movement and pedestrian safety and transit-supportive development are primary considerations on this type of street. This designation is applied in addition to the basic street classification.

Transit streets are designated on selected streets which currently or are planned to have a high frequency of weekday transit service and some service seven days a week. The criteria for transit street designation are:

a. Current 20 minute (or better) frequency of service, weekday peaks, and; Daytime and evening service, weekdays and; Weekend service on both Saturday and Sunday; or

b. A street designated as a regional transit corridor in a regional growth plan or transportation plan, or designated a high capacity or primary transit route in the Gresham Transportation System Plan.

Future refinement of transit service levels and network may occur through future regional and local transportation system planning processes.

2. Transitway

A transitway serves as an exclusive right-of-way for transit use, either bus or light rail. A transitway will provide regional trunk route service which will be supported by a network of local feeder buses, transit centers, and park-and-ride facilities.

3. Transit Route

Transit routes are designated on all streets with current but infrequent transit service (that do not meet transit street service criteria). Transit routes are subject to future designation as transit streets, as future refinement of transit service levels and network occurs through the regional and local transportation system planning processes.

4. Private Driveway Accesses

A private driveway access serves a number of dwelling units under condominium unit ownership, or within a manufactured home park, or apartments in those areas where a continuation of a public street system is not needed.

If the use of private driveway accesses may create conflicts with efficient local circulation and emergency access needs, public streets may be required.

5. Scenic Routes

A street which offers unique scenic views and is used as a scenic or recreational drive. Access and traffic restrictions may be imposed to preserve the scenic character. This designation may be applied in addition to the basic street classification (arterial, collector, or local).

6. Alleys

a. Alleys are allowed in residential developments and can provide efficient lot use, support front yard pedestrian orientation and landscape spaces and reduced lot coverage by driveways. Alleys serve as a common driveway, for access, utilities, and deliveries. Alleys may be provided in commercial and industrial developments with approval by the Manager.

b. Alleys shall be dedicated to the City and shall meet the same design criteria as other public streets. The exception to those criteria may be centerline radius and design speed. Generally, alleys shall be designed for one-way operation.

c. Alleys must be constructed continuously from one street to a parallel or intersecting street. All lots must have frontage to a public street. If there are parking restrictions on the public street, additional parking spaces must be provided off of the alley.

A5.502 Intersections

Connecting street intersections shall be located to provide for traffic flow, safety, and turning movements, as conditions warrant.

Arterial Intersections: Exclusive left and right turn lanes will be provided; bus turnouts will be provided if traffic flow and safety conditions warrant; designated crosswalks will be provided at controlled locations; street alignments across intersections shall be continuous.

Collector Street and Local Street Intersections: Street and intersection alignments should facilitate local circulation but avoid alignments that encourage non-local through traffic.

Streets shall be aligned so as to intersect at right angles (90 degrees). Angles of less than 75 will not be permitted. Intersection of more than two streets at one point will not be permitted.

New streets shall intersect with existing street intersections so that centerlines are not offset, except as provided in the City of Gresham Public Works Standards. Where existing streets adjacent to a proposed development do not align properly, conditions may be required of the development to provide for proper alignment or prohibit some traffic movements.

A5.503 Driveways

Access to private property shall be permitted with the use of driveway curb cuts. The access points with the street shall be the minimum necessary to provide access while not inhibiting the safe circulation and carrying capacity of the street.

On arterial and collector streets and above, one driveway per site frontage will be the normal maximum number. Double frontage and corner lots on these streets may be limited to access from a single street, usually the lower classification street. If additional driveways are approved by the Manager, a finding shall be made that no imminent traffic hazard would result and impacts on through traffic would be minimal. Restrictions may be imposed on additional driveways, such as limited turn movements, shared access between uses, closure of existing driveways, or other access management actions. Commercial developments with frontage greater than 250 feet may request an additional driveway if needed.

For classification of Collector and above, driveways adjacent to street intersections shall be located beyond the required queue length for traffic movements at the intersection. If this requirement prohibits access to the site, a driveway with restricted turn movements may be allowed.

Curb cuts shall be a minimum of seven feet from the property line, unless a shared driveway is installed or the lot is platted as a zero lot line or platted as an attached single-family lot.

Within commercial, industrial, institutional and multi-family areas, shared driveways and internal access between similar uses are encouraged to reduce the access points to the higher classified roadways, to improve internal site circulation, and to reduce local trips or movements on the street system. Shared

driveways or internal access between uses will be established by means of common access easements at the time of development.

Multi-family access driveways will be required to meet the same access requirements as commercial driveways if the multi-family site generates 100 or more trips per day.

Table A5.503(A) Driveway Locations (Minimum Distance to Curb Return)

Street Classification	Residential	Commercial	Industrial
Major Arterial	100 feet [1, 3]	100 feet [1]	100 feet [1]
Standard Arterial	100 feet [1, 3]	100 feet [1]	100 feet [1]
Boulevard	100 feet [1, 3]	100 feet [1]	100 feet [1]
Minor Arterial	45 feet [3]	100 feet [1]	100 feet [1]
Major, Standard Minor Collector	45 feet [2, 3]	100 feet [1]	100 feet [1]
Local Transitional	45 feet [2]	45 feet	45 feet
Local Queuing	45 feet [2]		
Minor Access Street	45 feet [2]		

Notes:

1. Minimum distance from curb return unless this prohibits access to the site.
2. Corner lot driveways on a frontage which is less than 75 feet shall be located no more than 7 feet from the interior property line and shall be no more than 24 feet wide.
3. Direct access to this street may not be allowed if an alternative exists or is planned.

Table A5.503(B) Driveway Approach Widths (Minimum/Maximum)

Street Classification	Residential	Commercial	Industrial
Major Arterial	N/A [1]	12/36	12/36
Standard Arterial	12/24 [2]	12/36	12/36
Boulevard	12/24 [2]	12/36	12/36
Minor Arterial	12/24 [2]	12/36	12/36
Major, Standard Minor Collector	12/24 [2]	12/36	12/36
Local Transitional	12/24 [2, 4]	12/36 [3]	12/36 [3]
Local Queuing	12/24 [2, 4]	N/A	N/A
Minor Access Street	12/24 [2, 4]	N/A	N/A

Notes:

1. Special conditions may warrant access.
2. 28 feet maximum with 3 car garage (three bays wide).
3. Build to Community Street standard.
4. In the LDR-5 and LDR-7 Districts, the maximum width is 16 feet on interior lots with less than 45 feet of street frontage. Corner lots accessing the street with less than 36 feet of street frontage as measured from the curb return to property line are limited to a 12 feet driveway width.

A5.504 Transit Facility Standards

The following provisions are to ensure access to transit services. All developments shall meet the following standards for transit facilities:

A. When development is proposed adjacent to Transit Streets or existing and future Transit Routes. Development shall be reviewed by Tri-Met which may recommend transit-related facilities to be constructed at the time of development.

Transit facilities recommended by Tri-Met and required by the Manager shall be identified on the site plan to be submitted prior to final approval.

B. Transit facilities shall be provided if any portion of a site's major or standard arterial street frontage is greater than 600 feet from a controlled intersection or other transit improvements.

Transit facilities shall be located at controlled street intersections, where possible. Transit improvement shall also be provided on streets which are transit streets, current or future transit routes, or other transit routes.

C. At a minimum, transit facilities shall include a paved waiting area and signage complying with current transit agency design standards. Sidewalks may serve as a waiting area. The Manager may require additional improvements based on anticipated ridership. These improvements may include bus turnouts, curb extensions, median refuges for pedestrian crossings, bus shelters, public telephones, benches, or pedestrian lights.

Factors which determine the level of transit facility improvements include street classification, length of block, proximity of major pedestrian destinations, and level of Transit Service in adjacent streets, and transit needs of a development.

1. Where a transit stop has already been established within 500 feet of the affected development, a new transit stop shall only be provided if recommended by Tri-Met and required by the Manager. Otherwise, the developer shall upgrade the existing stop through provisions of improved waiting facilities (i.e. installation of benches, shelters or landscaping).

2. Developments that are estimated to generate over 1,000 average daily vehicle trips may be required to provide a transit improvement dedication along the frontage of the transit street for the installation of a bus turnout and other facilities. The need for a turnout will be evaluated by Tri-Met.

3. A bus stop shall consist of at least a bus stop pad designed in compliance with the Americans with Disabilities Act.
A bus stop pad shall have a minimum clear length of 8 feet (measured from the curb or roadway edge) and a minimum clear width of 5 feet (measured parallel to the roadway) to the maximum extent allowed by legal or site constraints. This passenger area should be located 1 foot from the stopping distance of the bus. The bus stop sign shall be placed 3 feet in front of where the front of the bus stops. The slope of the parallel bus stop pad shall be the same as the roadway.

4. The location of the bus stop shall be chosen so that there is a connection to an accessible route.

A5.505 Transitway Standards for Light Rail

A. Light Rail Transitways should be located on major arterial streets (or less) or within separate rights of way.

B. In the event that a Light Rail Transitway must be located on a standard arterial due to infeasibility of alternative routes, the right-of-way shall be designed as a continuous tree-lined boulevard with pedestrian paths.

C. Light Rail Transitway Stations shall be located, when possible, at locations with 24 hour activity.

D. The location of curb ramps, elevators and other parts of the circulation path in new light rail stations shall be placed to minimize the distance wheelchair users have to travel.

E. Pedestrian crossings for light rail tracks shall have different paving material to distinguish light rail crossing areas from street pavement or exclusively pedestrian areas.

F. Platform edges bordering a drop-off and not protected by screens or guard rails shall have a detectable warning.

G. All light rail stations areas, entrances and exits shall be well lighted.

1. Exterior lighting should be an integral part of architectural and landscape design.

2. The minimum lighting level for station walkways is 4 footcandles. Lighting shall be pedestrian scale 3 feet to 12 feet and the source of light shall be shielded to reduce glare.

H. All light rail stations shall have telephones installed in an easily seen and accessible area.

I. Light Rail shelters shall be designed with public safety in mind. Shelters must be designed so that people can be easily recognized and be seen inside the structure from adjacent streets and designed with two access points/escape routes from both ends or through the structure.

A5.506 Sidewalks

A. Public sidewalks are required on the public street frontage of all new residential construction, all commercial and industrial construction that requires a development permit and residential remodeling that involves substantial improvement as defined in **Section 3.0103** of this document. Sidewalks will be required along street frontage of dedicated greenway areas. If required, their construction will be the responsibility of the applicant. Construction of sidewalks and driveways will be in accordance with the City of Gresham Public Works Standards. In a subdivision the applicant shall provide a guarantee of completion equal to 110% of the estimated cost to complete construction of sidewalks to assure complete construction of all public sidewalks within two years of the date the street is accepted for ownership and operation.

B. Sidewalks are generally buffered from the roadway to provide for the safety and comfort of pedestrians. Where Planter strips are required, sidewalks shall be 6 inches off the right-of-way line (except cul-de-sacs). Where no planter strips are required, sidewalks shall abut curbs.

C. If there are obstructions in the walk, a minimum of 3 feet wide sidewalk area free of obstruction must be maintained at all times. Where possible, obstructions should be located outside required sidewalk area.

D. All utilities with facilities in the sidewalk area shall locate their facilities to be in conformance with the 36 inch minimum horizontal clearance. A 7 foot vertical clearance above the sidewalk shall be maintained. Federal Americans with Disabilities Act (ADA) requirements shall supersede when in conflict with City standards.

E. The Manager may allow modifications to standard sidewalk design and location for the following reasons:

1. Topography

2. To match existing sidewalks

3. To preserve existing trees that are found to be of significant value

4. Right-of-way constraints.

F. Sidewalks may meander within the dedicated right-of-way or outside of the right-of-way within an easement with the approval of the Manager.

G. New subdivisions shall have sidewalks on both sides of the street, unless the conditions in **subsection E** above apply.

A5.507 Bicycle Facilities

Bicycle lanes are required on all new or improved principal arterial, arterial, boulevard and collector streets as described in **Section A5.502**. In addition, the City has adopted the "Gresham Transportation System Plan." This plan summarizes the City's policy and implementation strategies for bicycle facilities within the City and for connection with metropolitan bikeways. The City's plan has adopted both AASHTO and ODOT standards and criteria as the minimum guidelines for bicycle facility design, construction and control.

The City's adopted guidelines for bicycle facilities consist of the following:

A. Guide for Development of New Bicycle Facilities 1981

B. AASHTO, Oregon Supplements and Exceptions to AASHTO Guide

C. Manual on Uniform Traffic Control Devices with Oregon supplements by Oregon Transportation Commission

A5.508 Pedestrian/Bicycle Accessways

Accessways are intended to link the following uses: A residential area, neighborhood activity center, an industrial or commercial center, a transit facility, a park, a school, open space, or a trail facility.

Public street connections for cars, pedestrians and bicycle circulation are preferable to accessways. Accessways should only be used to ensure connectivity to nearby activities in areas where no other public street options are available.

Off-street bicycle paths in excess of 400 feet in length are not considered accessways and shall be constructed in accordance with requirements of **Table A5.610**.

A. Criteria - Accessways shall be provided in the following situations:

1. Bicycle and pedestrian connections are required between discontinuous street rights-of-way, where a new street is not feasible; through excessively long blocks; or wherever the lack of street continuity creates inconvenient or out of direction travel patterns for local pedestrian or bicycle trips.

2. Pedestrian and bicycle access shall be provided as follows for all development:

a. To provide direct access to nearby pedestrian/bicycle destination, transit streets or transit facilities to connect with all existing or approved accessways that abut the development site.

b. To provide direct connection of cul-de-sacs and dead end streets to the nearest available street or pedestrian/bicycle destinations.

c. To provide connections from local or cul-de-sac streets to collector or arterial streets.

d. Spacing between full street or accessway connections shall be no more than 330' for residential and mixed-use development, and no more than 530' for commercial and industrial development.

3. Accessway Type and Purpose. When required, one of the following accessway types will be deemed appropriate by the Manager during development review:

a. Neighborhood Accessway: Provides neighborhood connections through blocks, links various uses, and promotes direct non-motorized travel.

b. Public/Private Integrated Accessway: Provides dual purpose as part of a private, on-site circulation pattern; with a public easement to link proximate streets, uses, and activities.

c. Park/Natural Area Accessway: Provides neighborhood access to park and natural areas.

4. An exception may be made when the Manager determines that construction of a separate accessway is not feasible due to physical or jurisdictional constraints. Such evidence may include, but is not limited to:

a. Other Federal, State, or Local requirements prevent construction of an accessway;

b. The nature of abutting existing development makes construction of an accessway impractical;

c. The accessway would cross an area affected by a special purpose district overlay and the accessway is incompatible with the purposes of the special purpose district;

d. The accessway would cross topography where slopes exceed 30%; and/or

e. The accessway would terminate at the urban growth boundary and extension to another public right-of-way is not part of an adopted plan.

B. Street Entry: Except at the end of a cul-de-sac, entry points shall align where possible with safe pedestrian crossing points along adjacent streets and with adjacent street intersections.

C. Accessways are subject to the following Design Standards:

1. All rights-of-way for pedestrian and bicycle accessways shall be dedicated to the City for public use or may be approved as public access easements on private property. Accessways shall be maintained as part of the public right-of-way, or by the underlying landowner if constructed as public easements over private land.

2. Right-of-Way or Easement Width

a. Shall be 10 to 12 feet.

b. The Manager may approve accessways exceeding 200 feet in length, with adequate right-of-way or easement width to provide for safe pedestrian and bicycle travel.

c. A minimum 15-foot width is required for accessways that also provide for public utility corridors. If an accessway also provides secondary fire access, a minimum 20-foot width is required.

d. Approved easement accessways for public/private integrated use may be reduced to a minimum 8-foot width.

3. A clear-vision triangle, the same as for a Residential Driveway, **Section 9.0200**, shall be provided at the ends of all accessways. Accessways shall be straight enough to allow both ends of the accessway to be seen from the adjacent public streets. On-street parking shall be prohibited within 15 feet of the intersection of an accessway and a public street to preserve safe sight distance.

4. Accessways shall be lighted by pedestrian-scale lighting with a maximum standard height of 12 feet along the accessway unless existing on-site lighting or adjacent street lighting provides adequate accessway illumination as approved by the Manager. Lighting shall not shine into adjacent residences.

5. The construction of stairways shall be avoided whenever possible. Where the path grade would exceed 12% slope, an accessway will be constructed as stairs for pedestrians. Based on local conditions, the Manager may approve alternatives to stairs, including the use of switchbacks and alternative materials. If stairways are needed, they shall be at least 5 feet wide with handrails on both sides.

6. Fencing & Screening: When required for buffering, accessways shall be fenced and screened along adjacent property lines. The area between the pathway and fences shall be planted with a combination of ground cover or low growing shrubs that will reach no more than 2 feet at maturity.

7. Accessways shall be designed to prohibit motorized traffic.

8. Accessway surfaces shall be designed to drain stormwater run-off to the side or sides of the accessway. Maximum cross slope shall be 2%.

9. Pavement width shall generally be 10 to 12 feet. The Manager may approve an accessway of minimum 8-foot width based on specific site constraints. Park/natural area accessways may be hard or soft surface, based on natural area constraints and anticipated level of use.

10. Accessways shall be constructed in accordance with the City of Gresham Public Works Standard Drawings.

A5.509 Public Paths and Trails

If required as a condition of the development approval, construction will be the responsibility of the applicant. Construction of paths and trails will be in accordance with the City of Gresham Public Works Standards.

A. In granting an easement for public paths and trails, the owner shall demonstrate compliance with the following criteria:

1. Recommended width for any trails easement shall be 25 feet or as acceptable to the Manager.

2. Trail easements shall allow for future construction of trails in accordance with specifications as to width and surfacing as contained in the City of Gresham Public Works Standards.

3. Trail easements shall be located within a site in such a manner as to allow the trail to be buffered from existing and proposed dwellings on the site and on adjacent properties, and to maintain the maximum feasible privacy for residents.

4. Trail easements shall be located within a site so that future trails construction will avoid parking and driveway areas and other activity areas which might conflict with pedestrian movements.

B. Site area included within a trail easement shall be counted as a portion of the landscaped and open space area required for the proposed development.

A5.510 Underground Utilities

A. Purpose:
Overhead utilities and associated poles clutter the streetscape and pose significant obstacles to pedestrian circulation, transit access, and the provision of pedestrian and transit facilities. Placement of utilities underground reduces these obstacles and provides an enhanced environment.

B. Standards:

1. All developments required to obtain a development permit pursuant to **Section 11.0101** shall, at the development's own cost, install new utility facilities needed for the development underground and relocate underground all existing utility facilities along all of the development's public street frontages or otherwise in or abutting the development. Utility facilities to be undergrounded include, but are not limited to, electrical, cable and telecommunication facilities and lines connecting traffic signals. The undergrounding requirement shall not apply to development permits obtained by utilities to establish, construct, maintain or terminate electrical power distribution lines and telephone and television cable transmission lines in the Flood Plain Overlay District, Hillside Physical Constraint Overlay District, in a natural resource district or where the utility would be exempt from obtaining a development permit pursuant to **Section 11.0102**.

2. Electric power lines 50,000 volts and above, transformer pads, and other similar utility facilities that the Manager determines would be technically infeasible to underground are exempted from these requirements. In cases where a portion of the facilities are technically infeasible to underground, the remaining overhead facilities shall still be subject to undergrounding requirements.

3. If the estimated cost of undergrounding existing overhead utilities exceeds 10% of the estimated cost to construct public improvements required in conjunction with the development or exceeds 1% of the total development project value, then the developer shall be responsible for undergrounding an amount of overhead utilities equivalent to 10% of the estimated cost to construct public improvements required in conjunction with the development or 1% of the total development project value, whichever is less, as the developer's proportional share of its impacts.

A5.511 Street Trees

Street trees located within public rights of way shall comply with standards provided in **Section 9.1000**.

A5.512 Additional Public Facilities Requirements

Additional public facilities requirements exceeding those in **Appendix 5.000** are required by some land use districts for implementation as part of design review. Refer to individual districts for such requirements as are applicable.