CHAPTER THREE

CHAPTER 3

GENERAL ENGINEERING CONSIDERATIONS

3.1 Standard Specifications

Design, detail, workmanship, and materials shall be in accordance with the current edition of the "Standard Specifications for Road, Bridge and Municipal Construction", the "APWA Amendments to Division One", and the "Standard Plans for Road, Bridge and Municipal Construction", all written and promulgated by the Washington State Chapter of the American Public Works Association and the Washington State Department of Transportation, except where these Standards provide otherwise.

The following specifications shall be applicable when pertinent, when specifically cited in the Standards, or when required by a higher funding authority.

A. Conditions and standards as set forth in the City of Tumwater Water System Plan, most current edition.

B. Conditions and standards as set forth in the City of Tumwater Comprehensive Sanitary Sewer Plan, most current edition.

C. Conditions and standards as set forth in the Tumwater Zoning Code, Land Use and Transportation Plans.

D. Rules and regulations as adopted in the Tumwater Municipal Code.

E. Conditions and standards as set forth in the Thurston County Coordinated Water System Plan.

F. Criteria set forth in the Local Agency Guidelines as amended and approved by the Washington State Department of Transportation.

G. City and County Design Standards for the Construction of Urban and Rural Arterial and Collector Roads Promulgated by the City Engineers Association of Washington.

H. Conditions and standards as set forth in the WSDOT Design Manual as amended and approved by WSDOT.

I. U.S. Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD) as amended and approved by Washington State Department of Transportation.

J. DOT Construction Manual as amended and approved by Washington State Department of Transportation.

K. Rules and regulations of the State Board of Health regarding public water supplies as published by the State Department of Health.

L. Conditions and standards as set forth in the State of Washington Department of Ecology "Criteria for Sewage Works Design", most current edition.

M. Conditions and standards as set forth by the State of Washington, Department of Labor and Industries.

N. Institute of Transportation Engineers Trip Generation Manual, 5th edition.

O. Design criteria of federal agencies, including Department of Housing and Urban Development and Federal Housing Administration.

P. Other specifications not listed above as may apply when required by the City of Tumwater.

3.2 Shortened Designation

The City of Tumwater Development Guide shall be cited routinely in the text as the "Guide."

3.3 Applicability

These standards shall govern all new construction and upgrading of facilities, both in the right-of-way and on-site for transportation and transportation-related facilities; storm drainage facilities; sewer and water improvements; and park, recreation, subdivisions, landscaping, erosion control, and open space facilities.

3.4 Definitions and Terms

"AVERAGE DAILY TRAFFIC" or ADT - The average number of vehicles

passing a specified point during a 24-hour period. Annual average daily traffic (AADT) denotes that daily traffic that is averaged over one calendar year.

"CITY ENGINEER" - The City Engineer or his/her duly authorized representative.

"DEVELOPER" - Any person, firm, partnership, association, joint venture, or corporation or any other entity responsible for a given project.

"DIRECTOR OF PUBLIC WORKS" - The City of Tumwater Public Works Director or his/her duly authorized representative.

"EASEMENT" - The right to use a defined area of property for specific purpose(s) as set forth in the easement document, on a plat or short plat, or as required for purposes as set forth herein.

"ENGINEER" - Any Washington State licensed professional engineer who represents the developer.

"ERU" - The unit used to calculate sewer consumption. One Equivalent Residential Unit (ERU) equals 900 cubic feet of water consumed per month. For purposes of these Standards, the term ERU shall be as follows:

1. Single family residence, including mobile homes: One ERU per living unit.

2. Duplex (two family residence): Two ERUs.

3. Residential buildings containing more than two living units: 7/10 of an ERU per living unit.

4. Commercial, industrial or other customers not readily identified as a residential customer, including, but not limited to, hotels, motels, boarding or rooming houses, nursing homes, and transient (overnight) trailer parks: One ERU for each estimated 900 cubic feet of water to be consumed per month.

"HALF STREET" - Street constructed along an edge of development utilizing half the regular width of the right-of-way and permitted as an interim facility pending construction of the other half of the street by the

adjacent owner.

"INTERCEPTOR" - Is the sewer that receives flow from a number of main or trunk sewers, force mains, etc.

"LATERAL" - Shall be that section of the sewer line extending from the City's main to the right-of-way or easement line.

"LOT STREET FRONTAGE" - The distance between the two points where the lot lines intersect the boundary of public street right-of-way.

"PLANS" - The plans, profiles, cross sections, elevations, details, and supplementary specifications, signed by a licensed professional engineer and approved by the Director of Public Works, or his/her designee for city-installed projects, and the City Engineer for privately sponsored projects which show the location, character, dimensions, and details of the work to be performed.

"PRIVATE SEWER" - Shall be that portion of the system located on private property where no easements are granted to the City. Maintenance of a private sewer shall be the responsibility of the property owner(s).

"PRIVATE STREET" - Private vehicular access provided for by an access tract, easement, or other legal means, to serve property that is privately owned and maintained.

"PROJECT" - General term encompassing all phases of the work to be performed and is synonymous to the term "improvement" or "work."

"PUBLIC SEWER" - Shall be that portion of the system located within public rights-of-way or easements and which are operated and maintained by the City.

"PUBLIC STREET" - Publicly owned and maintained street.

"RIGHT-OF-WAY" - A general term denoting public land, property, or interest therein (e.g. an easement) acquired for or devoted to a public street, public access or public use.

"ROAD" - Used interchangeably with street.

"SEWER MAIN" OR "TRUNK" - Shall be a sewer that receives flow from one or more mains.

"SIDE SEWER" - Shall be that portion of the line beginning two feet outside the outer foundation wall of the structure to the sanitary sewer main, or to a cleanout located at the right-of-way or easement line and are privately owned and maintained sewers.

"STREET" - Used interchangeably with road.

"TMC" - Tumwater Municipal Code.

"USE OF PRONOUN" - As used herein, the singular shall include the plural, and the plural the singular; any masculine pronoun shall include the feminine or neuter gender and vice versa; and the term "person" includes natural person or persons, firm co-partnership, corporation, or association, or combination thereof.

"UTILITY" - A company providing public service including, but not limited to, gas, oil, electric power, street lighting, telephone, telegraph, water, sewer, storm drainage, or cable television, whether or not such company is privately owned or owned by a government entity.

NOTE: Words, terms and phrases not specifically defined in this chapter will have the meaning as defined in any standard American dictionary of the English language or as commonly used in the public works industry.

3.5 Severability

If any part of this City of Tumwater Development Guide, as established by ordinance, shall be found invalid, all other parts shall remain in effect.

3.6 Engineering Plan Submittal Requirements

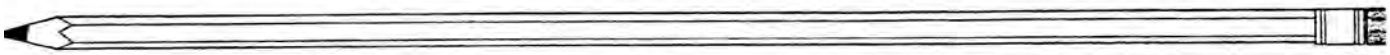
A. Detailed plans, prepared by a licensed engineer, must be submitted to the City for plan review and approval prior to the commencement of any construction. Applicant's engineer shall be a Professional Engineer, registered as such in the State of Washington. All plans must be signed and stamped by the applicant's engineer prior to submittal for plan review. Final plans shall be approved by the City Engineer prior to the start of construction and shall be so noted on the face of each sheet.

B. Two folded copies of the plans are required to be submitted. All drawings shall be on 24" x 36" sheet size. Original sheets shall be good quality reproducible ink on mylar. Mylar shall be a

minimum standard of 3 mil. single mat film. Original drawings of the approved plan shall become the property of the City of Tumwater.

C. Plans and profile drawings are required for all proposed transportation-related improvements; street illumination; traffic signalization; storm drainage facilities; and sewer and water improvements. Submittals for each type of improvement shall be on separate sheets unless approved otherwise by the City Engineer. For specific minimum requirements, see the Plan Checklist on the following pages. On occasion, the scope of a project (i.e., relocating one hydrant) may not require engineered plans and can instead be handled via a Right of Way Access Permit. This option will be decided during Site Plan Review.

D. Specifications shall be required and submitted with the plans if General Notes do not adequately cover the project requirements.



Development Services Department
City of Tumwater
555 Israel Rd SW
Tumwater, Washington 98501

OFFICIAL USE ONLY
Date Received:_____

Received By: _____

PLAN REVIEW APPLICATION

USE **BLACK** INK ONLY

Owner:_____
Address:_____
City & State:_____
Zip:_____Phone:_____

Applicant:_____

Address:_____

City & State:_____

Zip: _____Phone:_____

PROPERTY LOCATION:

North South East West side of:
(road name):_____

between (road name):_____

and (road name):_____

Property Address:_____

Section____Township____Range_____
Assessor's Parcel No._____

SUMMARY OF REQUEST
(List type of use)

_____

_____

_____

_____

No. of proposed dwelling units:___

Dimensions of property:_____

Total sq. ft. of site:_____
Total sq. ft. in buildings:_____

Total sq. ft. of landscaped areas:

FOR OFFICIAL USE ONLY
Total square feet of impervious surface_____
Fire Flow Required_____gpm

Water connection estimate:_____

Sewer connection estimate:_____

Estimates required:_____

Right-of-way required:_____

Bonding required:_____

Latecomers:_____

A cursory check of the plans against the attached counter checklist will be made. If the plans meet the minimum checklist requirements as to content, they will be routed to the appropriate City staff and the plan review process will begin. If minimum checklist requirements are not met, the plans will be returned to the submitting engineer.

COUNTER CHECKLIST FOR ENGINEERING PLANS

For more detailed drafting standards, please refer to the attached plan checklist.

REQ'D	RCV'D	
☐	☐	Cover sheet with project title.
☐	☐	Vicinity map, street index, legend (may be on cover sheet)
☐	☐	Erosion control plan, details. Drainage and erosion control plan and report including backup calculations and soil logs.
☐	☐	Utility system map (one drawing with all proposed utilities; including water, sewer, street, storm, gas, power, cable TV and telephone)
☐	☐	Sewer plan/profile, details, general notes. Velocity calculations, discharge calculations.
☐	☐	Water plan/profile, details, general notes.
☐	☐	Fire flow calculations,proposed amount of water use, velocity calculations.
☐	☐	Sewer pump station plan, details, backup calculations including capacity/flow calculations.
☐	☐	Sewer step system plan/profile, details, backup calculations including capacity/flow calculations.
☐	☐	Storm drainage facility maintenance report.
☐	☐	Street plan/profile, details, general notes.
☐	☐	Storm sewer plan/profile in right-of-way, details, general notes, backup calculations.
☐	☐	Illumination and signalization, details, general notes.
☐	☐	Illumination line loss calculations.
☐	☐	Street channelization plan, details.
☐	☐	Traffic control plan.
☐	☐	Latecomer's agreement.
☐	☐	Plan Checklist.

PLAN CHECKLIST

STANDARD ITEMS: WATER, SANITARY SEWER, STORM SEWER, STREET, LIGHTING, AND SIGNALS

( ) Vicinity Map
( ) Legend (APWA Standard Symbols)
( ) North Arrow
( ) Scale Bar
( ) Datum - Bench Mark Elevation And Location (on all sheets where elevations are referenced)
( ) Title Block:
  ( ) Title:
  ( ) Design By:
  ( ) Drawn By:
  ( ) Date:
  ( ) Checked By:
  ( ) Signature Approval Block (see above example):
  ( ) Sheet Number of Total Sheets:

APPROVED FOR CONSTRUCTION
BY: _____ DATE: _____
DIRECTOR OF PUBLIC WORKS
APPROVAL EXPIRES: _____

( ) Section, Township and Range (every plan/profile sheet)
( ) Engineers Stamp (signed and dated)
( ) Project Title (cover sheet)
( ) Utility System Map (showing all proposed utilities on one drawing)
( ) Revision Block

PLAN PORTION STANDARD ITEMS

( ) Centerline and Stations
( ) Edge of Pavement and Width
( ) Right-of-Way and Width
( ) Proposed Survey Monumentation Locations and Details
( ) Sidewalk and Width
( ) Roadway Sections

( ) Existing Utilities (above and below ground)
( ) Adjacent Property Lines, Ownership, Parcel Number, and Street Address
( ) Identify Street Names, Right-of-Way, Lots
( ) Identify Match Existing Sheet Numbers and Stations
( ) Easements, Width and Type
( ) Define Survey Baseline
( ) Stations for Structures
( ) Flow Direction Arrows

PROFILE PORTION STANDARD ITEMS

( ) Profile Grades (decimal FT./FT.)
( ) Existing Ground
( ) Scale (horizontal and vertical)
( ) Stationing
( ) Vertical Elevation Increments
( ) Existing Utilities (if available)

Misc.

( ) Detail Sheet
( ) General Notes

SANITARY SEWER

Plan View:

( ) Manhole
  ( ) Station Shown at Each Manhole (watch spacing).
  ( ) Manholes Numbered
  ( ) Manhole Type Designation
  ( ) Flow Direction (with arrow on pipe)
  ( ) Depth at Property Line and Distance from Downhill Manhole for Side Sewer
  ( ) Distance from Water Lines
( ) Service to Each Lot

Profile View:

( ) Manholes Numbered
( ) Invert Elevation Showing Direction, In and Out
( ) Rim Elevation
( ) Grades Shown (decimal form FT./FT.) (minimum slopes)
( ) Type of Pipe
( ) Size of Pipe
( ) Length of Pipe (In L.F.)
( ) Existing Utilities Shown

Misc.

( ) Detail Sheet
( ) Sewer General Notes

WATER

Plan View:

( ) System Map (1" = 300') showing existing and proposed with line size, valves, and hydrants
( ) Existing Utility Conflicts
( ) Fixtures (need horizontal and vertical control)
  ( ) Fire Hydrants (at all intersections. See Lacey Fire District #3.)
  ( ) Blow-off (at end of line)
  ( ) Vacuum and Air Release Valves When Required
( ) Tees, Crosses, Elbows, Adapters and Valves Need Coupling Type, Meter Locations
( ) Valves (2 each tee, 3 each cross)
( ) Fire Department Connection
( ) Thrust Blocking Required at all Fittings Including In-Line Valves
( ) Distance from Sewer
( ) Service to Each Lot (include open tracts)

Profile View:

( ) Existing Utility Crossings
( ) Show Fixtures (tees, crosses, hydrants)
( ) Show Valves and Couplers

( ) Size of Watermain

( ) Length of Watermain In L.F.

( ) Cover Over Pipe

( ) Grades (Engineered Design Grade to F.L.)

Misc.

( ) Detail Sheet

( ) Water General Notes

STORM SEWER

( ) Drainage and Erosion Control Plan Report

- ( ) Cover Sheet
- ( ) Table of Contents
- ( ) Section 1 - Proposed Project Description
- ( ) Section 2 - Existing Conditions
- ( ) Section 3 - Infiltration Rates/Soils Report
- ( ) Section 4 - Wells
- ( ) Section 5 - Fuel Tanks
- ( ) Section 6 - Sub-Basin Description
- ( ) Section 7 - Analysis of the 100-Year Flood
- ( ) Section 8 - Aesthetic Considerations for Facilities
- ( ) Section 9 - Downstream Analysis
- ( ) Section 10 - Covenants, Dedications, Easements
- ( ) Section 11 - Homeowners - Articles of Incorporation
- ( ) Project Engineers Certificate
- ( ) Facility Summary Form
- ( ) Engineer's Estimate

( ) Erosion Control Plan Report

- ( ) Section 1 - Construction Sequence and Procedure
- ( ) Section 2 - Trapping Sediment
- ( ) Section 3 - Permanent Erosion Control and Site Restoration
- ( ) Section 4 - Geotechnical Analysis and Report
- ( ) Section 5 - Inspection Sequence

( ) Drawings and Specifications
- ( ) Vicinity map
- ( ) Project Boundaries
- ( ) Sub-Basin Boundaries
- ( ) Off-Site Area Tributary to Project
- ( ) Contours
- ( ) Major Drainage Features
- ( ) Flow Path

( ) Site Map
- ( ) Existing Topography at Least 50 Feet Beyond Site Boundaries
- ( ) Finished Grades
- ( ) Existing Structures within 100 Feet of Project Boundary
- ( ) Utilities
- ( ) Easements, Both Existing and Proposed
- ( ) Environmentally Sensitive Areas
- ( ) 100-Year Flood Plain Boundary
- ( ) Existing and Proposed Wells within 1,200 feet of Proposed Retention Facility
- ( ) Existing and Proposed Fuel Tanks
- ( ) Existing and Proposed On-Site Sanitary Systems within 100 Feet of Detention/Retention Facilities
- ( ) Proposed Structures Including Roads and Parking Surfaces
- ( ) Lot Dimensions and Areas
- ( ) Proposed Drainage Facilities and Sufficient Cross-Sections and Details to Build

( ) Plan View - Conveyance System
- ( ) Station and Number at each Manhole/Catch Basin
- ( ) Manhole/Catch Basin Type and Size
- ( ) Manhole/Catch Basin Rim Elevation
- ( ) Flow Direction with Arrow on Pipe/Channel
- ( ) Type and Size of Pipe
- ( ) Length of Pipe in Lineal Feet

( ) Profile View - Conveyance System
- ( ) Station and Number at each Manhole/Catch Basin
- ( ) Rim Elevation
- ( ) Invert In and Out

- ( ) Length of Pipe in Lineal Feet
- ( ) Grades (FT/FT)
- ( ) Design Velocity

( ) Work Map

- ( ) Unit Areas (Including Off-Site Contributing Areas)
- ( ) Percentage Impervious
- ( ) Average Slope
- ( ) Estimated Ultimate Infiltration Rate
- ( ) Conveyance Date, Identifier (for Reference to Model Output), Length, Slope, Inverts
- ( ) Overland Flow Paths and Distances
- ( ) Soil Types
- ( ) Spot Water Surface Elevations, Discharges and Velocities for the Design Event

( ) Erosion Control Drawing

- ( ) Soil Types
- ( ) Locations of Soil Pits and Infiltration Tests
- ( ) Construction Entrance Detail
- ( ) Silt Fences and Traps
- ( ) Mulching and Vegetation Plan
- ( ) Clearing and Grubbing Limits
- ( ) Existing and Finished Grade
- ( ) Details and Locations of all BMPs Recommended
- ( ) Location and Details of Temporary Sediment Ponds

( ) Maintenance Report

- ( ) Required Type and Frequency of Long-Term Maintenance
- ( ) Identification of Responsible Maintenance Organization
- ( ) Frequency of Sediment Removal
- ( ) Cleaning of Catch Basins
- ( ) Vegetation Control
- ( ) Annual Cost Estimate of Maintenance

( ) Construction Inspection Report

Misc.

( ) Detail Sheet

( ) Storm General Notes

STREET

an View:

( ) Flow Direction Arrows at Curb Returns Showing Grade
( ) Spot Elevations on Curb Returns
( ) Station PC, PT, PI and Intersections
( ) Curve Information Delta, Radius, Length and Tangent
( ) BCR and ECR (Begin Curb Radius, End Curb Radius)
( ) Identify All Field Design Situations
( ) Typical Sections
( ) Pavement Marking Details With Station and Offset
( ) Sidewalks
    ( ) Driveway Entrances
        ( ) Station
        ( ) Width, Material (AC, PCC)
        ( ) Driveway Type
    ( ) Handicap Ramps - Detail and Type

Profile View:

( ) Vertical Information VPI, BVC, EVC, AP, Low Point, High Point
( ) Show Grades in Decimal Form with (+ Or -) Slope
( ) Super Elevated Roadways
    ( ) Detail - Show Transitions
    ( ) Special Detail Showing Gutter Flowing Adequately

Misc.

( ) Detail Sheet
( ) Street General Notes
( ) AASHTO Street Design Worksheet, With Soils Report, if Applicable

ILLUMINATION AND SIGNALS

( ) Lighting
    ( ) Station and Offset to Fixtures
    ( ) Pole Type, Including Manufacturer and Model Number

- ( ) Mounting Height, Arm Length, Anchor Bolt Size and Pattern
- ( ) Power Source
  - ( ) Wire Size, Type, Conduit
  - ( ) Line Loss Calculations
- ( ) Luminaire Type, Lamp Wattage
- ( ) Location of Service Disconnects (5% Max Voltage Drop from Source to Farthest Luminaire)
- ( ) J-Box Location (include station and offset)

( ) Signals (Follow WSDOT Specs Unless Otherwise Required by the City)

- ( ) Station and Offset to Signal Base, Cabinets, Ped. Lead. Loops, etc.
- ( ) Wiring Schedule
  - ( ) Signal Heads and Mounting Assembly
  - ( ) Detection Loops
  - ( ) Opticom
  - ( ) Control Cabinet, Size and Layout
  - ( ) Power Source
  - ( ) Conduit
  - ( ) Wire Size and Type
- ( ) Construction Notes
- ( ) J-Box Schedule
- ( ) Pedestrian Signal Type with Push Button
- ( ) Controller Type, Configuration, and Wiring Schematic

Misc.

( ) Detail Sheet
( ) Lighting General Notes
( ) Line Loss Calculations

MISCELLANEOUS

( ) Easements and/or Dedication Deeds
( ) Contract Documents/Specifications

Additional Items:

( ) Sheet Index (on title sheet if required)
( ) Field Verify Note on DWG. - Expose Connection Points And Verify Fittings 48 Hours Prior To Distributing Shut-Down Notices
( ) Call Before You Dig Note
( ) Signing - Temporary And Permanent
( ) Channelization
( ) Location of Cluster Mailboxes
( ) Location of School Bus (and/or IT) Bus Shelter/Pad

APWA STANDARD SYMBOLS

WATER SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION (ABBR)	BLOCK	LAYER

GAS/POWER/TELEPHONE SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION (ABBR)	BLOCK	LAYER

SURVEY SYMBOLS

SYMBOL THEOR./ EXIST.	SYMBOL FOUND/ PROP.	DESCRIPTION (ABBR)	BLOCK	LAYER

SIGNALIZATION SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION (ABBR)	BLOCK	LAYER

SANITARY/STORM SEWER SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION (ABBR)	BLOCK	LAYER

3.7 Plan Review

All plans are to be submitted to the City Development Services Department at the time of application. A check of the plans against the Counter Checklist on the preceding pages will be made by City staff. If the plans meet the minimum checklist requirements as to content, they will be routed to the appropriate City staff and the plan review process will begin. Also attached are a set of detailed drafting standards entitled "Plan Checklist." Please check off the appropriate items and submit with your plans. Plans will not be reviewed without a completed Plan Checklist.

The initial turn-around time for the first review of plans submitted is normally fourteen working days. The engineer is then requested to submit the original drawings for approval or is notified of required revisions. Additional review time will be required following resubmittal if revisions are necessary.

If plans require a third submittal, additional fees will be levied as established by resolution of the City Council. "Third Submittal" shall mean the third and any subsequent submittals of construction drawings, specifications, drainage calculations, and/or other information that requires additional plan checking pertaining to the construction of City facilities.

Plans that have been approved more than one year before construction begins (i.e., a pre-construction meeting scheduled and inspection fees paid) shall be subject to re-review based on the fee rate, as established for third submittal by fee resolution.

3.8 Pre-Construction (Pre-Con) Conference

A pre-construction conference shall be held prior to any work that occurs under a Right of Way Access permit unless otherwise waived by the City Engineer.

Prior to scheduling a pre-construction meeting, the following needs to occur:

1. All required engineering/building plans shall have been submitted, reviewed, and approved by the City unless otherwise waived by the City Engineer.

2. All appropriate fees must be paid.

3. All required City, State and federal permits must be approved.

The time and date of the pre-construction conference can be scheduled with the City's Permit Specialist. Those required to be present include the owner or owner's representative, the project engineer, the superintendent for the project, and representatives for subcontractors as deemed necessary. The City will be responsible for inviting all other representatives that are necessary for attendance at the pre-construction conference.

The owner/contractor shall submit to the City the following during the conference:

1. The order of work consisting of a general work schedule.

2. Cut sheets for street and utility work.

3. If appropriate, indication that monuments have been tied.

4. Location of pits with test information verifying material uniform to WSDOT specifications for ballast and crushed surfacing.

3.9 Construction Control and Inspection

Work performed for the construction or improvement of public or private roads and utilities, whether by or for a private developer, by City staff, or by a City contractor, shall be done in accordance with approved plans. It is emphasized that no work shall be started until such plans are approved. Any revision to such plans shall be approved by the City before being implemented. Failure to receive the City's approval can result in removal or modification of construction at the contractor's or developer's expense to bring it into conformance with approved plans.

3.10 Inspection

All work performed within public rights-of-way or easements, or as described in these standards, whether by or for a private developer, by City staff, or by a City contractor, shall be done to the satisfaction of the City and in accordance with the WSDOT Standard Specifications, any approved plans and City standards. Unless otherwise approved, any revision to construction plans must be approved by the City before being implemented.

It is the responsibility of the developer, contractor, or their agents to notify the City in advance of the commencement of any authorized work.

A pre-construction meeting and/or field review shall be required before the commencement of work. Inspection fees shall be paid at or before the pre-construction meeting. Any necessary easements or dedications are required before vertical construction or final subdivision approval.

It is the responsibility of the developer, contractor or their agents to have an approved set of plans and any necessary permits on the job site whenever work is being accomplished.

The City shall have authority to enforce these standards as well as other referenced or pertinent specifications. The City will appoint project engineers, assistants and inspectors as necessary to inspect the work, and they will exercise such authority as the City Engineer may delegate.

All specific inspections, test measurements or actions required of all work and materials are set forth in their respective chapters herein. Tests shall be performed at the developer's or contractor's expense.

Failure to comply with the provisions of these standards may result in stop work orders, removal of work accomplished, or other penalties as established by ordinance.

A project is considered final when a letter of acceptance is issued by the City to the party responsible for the project.

3.11 Fees

Fees, charges or bonding requirements shall be as established by the City Council by the passage of a resolution adopting a fee, charge, and bonding requirement schedule except where specifically set forth in the Tumwater Municipal Code (TMC). A copy of the current fee schedule can be provided by City staff.

All plan check fees are due prior to the release of approved plans.

All inspection fees are due prior to or at the time of the pre-construction meeting.

In addition, there are various service and connection fees and charges. We strongly urge all applicants to request an estimate of these fees and charges and the timing of when they must be paid from the City's Engineer as soon as practical.

3.12 Permits

It is unlawful for any person to dig, break, excavate, tunnel, undermine, or in any manner break up any street, or to make or cause to be made any excavation in or under the surface of any street for any purpose, or to place, deposit, or leave upon any street for any purpose, or to place, deposit or leave upon any street any earth or other excavated material obstructing or tending to interfere with the free use of the street, unless such person shall first have obtained a Right of Way Access Permit. A separate permit shall be obtained for each separate project.

In the case of work contracted for by the Department of Public Works, the signing of the contract shall constitute a Right of Way Access Permit.

Much of the work covered under these standards will require multiple permit authority review and approvals. Several types of permits and approvals require prior approval before a building or other permit can be issued. Any questions regarding information about permits, approvals and agreements should be directed to the Development Services Department.

The following general categories describe some of the permits, approvals and agreements, along with issuing permit/Code authority identified in parentheses:

A. Environmental Review

When an Environmental Checklist is required, it must be completed by the applicant and submitted along with plans, specifications, a transportation currency application, and other information when approval or permits are being requested for a project. The Development Review Committee conducts the Environmental Review and the Director of Development Services makes a SEPA Threshold Determination for the City.

See Chapter 1 for more details on Environmental Review.

B. Construction Permits

1. Tree Cutting Permit (Planning division of the Development Services Department). A Tree Cutting Permit is required as regulated by the Tree and Vegetation Protection Ordinance. A Tree Cutting Permit is typically issued separately and is a prerequisite to receiving a grading permit. A strict inventory and landscaping plan is required for all Tree Cutting Permits.

2. A Grading Permit is required for grading on private property (Building division of the Development Services

Department). Certain types of grading are exempt from permits and are outlined in the Uniform Building Code Appendix, Chapter 70. Excavations and fills in excess of 100 cubic yards throughout the life of the excavation or fill are required to go through the environmental review process.

3. Building Permit (Building division of the Development Services Department). A Building Permit is required for most building construction work including alteration, repairs and demolition. Demolition Permits for structures greater than four thousand square feet (4,000 sq. ft.) require the submittal of an Environmental Checklist.

4. Right of Way Access Permit (Development Services Department). A Right of Way Access Permit is required for any work within the right-of-way as outlined at the beginning of this chapter. Such work may include utilities work, street construction, lane closures, driveways, curbs, sidewalks, and haul routes.

   Permission to temporarily close a street or portion thereof for construction activities or special events is obtained through the Right of Way Access Permit.

C. Approvals and Other Permits

There are several other permits or approvals which may be required and referred to in these standards: Site Plan Review; plat or short plat approvals; Binding Site Plan; and Certificate of Occupancy.

In addition, there are several other City approvals (land use) which may have to be obtained prior to the above listed permits and which may affect the standards as contained in this document: Rezone; Conditional Use; Planned Unit Development; and Shoreline Substantial Development Permit.

3.13 Bonding

Bonds or other allowable securities may be required by the City to guarantee the performance of or maintenance of required work. The type and amount of security shall be per Municipal Code, or, if not specified, be at the discretion of the City. Types of securities include, but are not limited to, a bond with a surety qualified to do a bonding business in this State, a cash deposit, an assigned savings account, or a

letter of credit.

The following are the most frequent bonds required:

A. **Performance Bond.** Before approval of a Final Plat, Binding Site Plan, Large Lot Subdivision, or Final Short Plat, required public improvements shall be installed or provided for by surety or other method. All public improvements shall be installed within one year of final approval or a lesser time as established by the Development Services Director. No Certificate of Occupancy shall be issued until all improvements are completed and final acceptance granted or, with the approval of the Development Services Director, a performance bond as outlined above for offsite improvements not immediately required to support the development in an amount equal to 150 percent of the cost of the improvements is posted with the City. Surety shall be approved by the City Attorney.

B. **Maintenance Bond.** The permittee shall be responsible for the maintenance and timely repair to all public improvements for a period of twenty-four (24) months following acceptance by the City Council. Prior to final approval, the permittee or the contractor for the permittee shall post with the City a maintenance bond for the guarantee of the public works improvements in an amount equal to 15 percent of the estimated cost of the improvements for a period of thirty (30) months after the completed job is accepted by the City. Release of bond will occur thirty (30) months from the date of City acceptance if all maintenance and repair has been accepted by the City.

3.14 Utility Locations Amended October 9, 2023

A. Utilities within a right-of-way or easement on new or existing roads shall be located as approved by the City. Where existing utilities are in place, new utilities shall conform to these standards as nearly as practical and yet be compatible with the existing installations. Deviations of location shall be approved by the City Engineer. Existing utilities shall be shown using the best information available. This verification may require exploration/excavation (potholing) if the possibility exists that utilities may be in conflict with the proposed design.

The contractor/developer shall be responsible for utility locates through the one call system (1-800-424-5555) in conjunction with their project throughout the life of the project until final approval 3-13 is given.

B. All new utilities including services from overhead facilities to new structures shall be installed underground by the utility owning said facility, and new and existing facilities shall comply with provisions as set

forth in TMC 17.12.200, Land Division, and provisions as set forth in franchise agreements and/or permits between the City and the utility.

Existing overhead utilities are required to be relocated underground in the following circumstances:

1. More than 10 new dwellings units are being created,
2. Frontage improvements are required and the cumulative frontage length where existing overhead utilities exist is over 200 linear feet for properties zoned single-family low, single-family medium, residential/sensitive resource or 100 linear feet for properties zoned other than single-family. Utilities converted from overhead to underground on existing roadways shall be located within the right-of-way unless otherwise approved by the City.

C. A Right of Way Access Permit is required of any utility, except City-owned utilities, for any work done within the right-of-way and shall comply with all provisions as set forth in TMC 12.16, Street Excavations, and Section 3.12 of these Guidelines.

3.15 Easements

A. Where City utilities and/or their conveyance systems cross private lands, an easement must be granted to the City. The Development Services Department will generally process, record and file all easements. If the property is platted, the easement may be conveyed when the short plat or final plat is filed. All easements not shown on a plat must be prepared by a licensed land surveyor or engineering firm capable of performing such work. Easement documents must include a drawing of the easement.

B. Easement widths shall be 15 feet for a single utility and 20 feet for dual utilities. Construction easements shall be a minimum of 30 feet minimum in total width, including the permanent easement. When trench depths dictate or where pipe diameter or vault widths exceed four feet, a wider easement may be required by the City Engineer.

C. Signed easements for water facilities are required to be submitted for review and approval prior to vertical construction. All other easement documents for each project are required to be submitted for review and approval prior to certificate of occupancy or final subdivision approval.

3.16 Latecomers Agreements

Any person who constructs a water or sewer main extension or a street improvement at the direction of the City in conjunction with their project which meets or exceeds minimum standards and will benefit other 3-14 properties

abutting the improvement, may apply for a Latecomers Agreement with the City. This agreement will provide a mechanism for the developer to be reimbursed for that portion of the construction cost that benefits the adjoining properties and/or is in excess of the minimum standard. This contract is commonly termed a "Latecomers Agreement."

To be considered, an application for a Latecomers Agreement must be submitted for review and approval no later than ninety (90) days after completion of construction of the infrastructure and acceptance of the same as facilities of the City. Latecomers applications submitted after ninety (90) days will not be accepted.

The City Council has the authority to approve, deny or modify proposed Latecomer Agreements.

In the case of a street latecomers agreement, an ordinance that requires the particular street improvement must be passed by the City Council prior to the required street improvement being constructed. The developer is responsible for initiating, executing and, after City approval, filing the Latecomers Agreement. The Agreement shall include a list of those properties which will benefit from the extension, a map outlining and designating these properties, legal descriptions as required by the City, method of calculating assessment, assessment amount for each parcel, and backup data supporting the costs submitted. The City shall exercise its best efforts to collect all reimbursements described in the latecomers agreement and subsequently see that the developer receives the payment, as set by resolution. However, the City assumes no obligation to collect any or all such reimbursements.

All existing latecomers for any property being subdivided are required to be paid in full, for the total property involved in the subdivision, prior to the subdivision of the property.

3.17 Street/Alley Vacations

The owners of an interest in any real estate abutting upon any street or alley who may desire to vacate the street or alley may do so by petitioning the City Council as outlined in Chapter 12.04 of the TMC.

3.18 Utility Extension Amended October 9, 2023

A. Anyone who wishes to extend any City utility should contact the Development Services Department for an Extension/Connection Fee Estimate and any special extension requirements.

B. Utility mains shall be extended to and along all frontage, including private roads and easements, any property connecting to City utilities, including new development, sites needing City sewer due to failing septic system, sites needing City water due to failing well(s), and lots of record needing City Utility service for any reason to provide for loop closures, future development, and potential future connections as determined by the City. Size shall be as shown on comprehensive plans or as required to serve future development, but not less than the minimums required elsewhere in this document.

C. In the case of a property being developed and, upon the determination of the Development Services Director, not being required to connect to the City utility for reasons typically associated with the property's lack of proximity to existing utilities or location outside city limits, the owner

may be allowed the option, at the discretion of the Development Services Director, of paying a fee in lieu of actual installation of the otherwise required extensions.

The fee in lieu of will be calculated based on an estimate for the total cost of construction of said utility extension compiled by a professional engineer or contractor competent in the work and approved by the City. The estimate shall be itemized and all-inclusive. The City reserves the right to review, comment on, adjust, and deny the estimate prior to approval. For water and sewer utility extensions, the fee in lieu of will be set at 50% of the total cost estimate. For roadway frontage improvements including any required storm facilities for said improvements, the fee in lieu of will be set at 100% of the total cost estimate.

D. For utility extensions outside the City limits, all infrastructure improvements should be made at the more restrictive jurisdictional requirements.

E. For more specific information regarding utilities, please refer to the appropriate chapter in this Guide

3.19 Annexation Requirement

Owners of properties lying outside of, but contiguous to City boundaries, must apply for annexation of their property to the City prior to being served by a City-owned utility. Owners of properties lying outside of but not contiguous to the City must legally commit their property to eventual annexation by signing a Waiver of Protest Power of Attorney prior to being served by the City's utility system. Such waivers of protest should be recorded with the Auditor and displayed on the face of the final plat and on the property deed. City policy requires a surcharge for water service outside the corporate boundaries. All properties outside the city limits connecting to or becoming part of the City's utilities system (i.e., city-owned/operated on-site community or satellite systems) will be required to pay a 40% surcharge on their monthly billings

These annexation requirements will be applied to all extensions of the City's utility to areas outside the City limits including city owned/operated on-site, community or satellite systems. Anyone who desires to extend the City's utility system should contact the Policy and Planning Department for specific annexation requirements

3.20 Traffic Control

A. The developer/contractor shall be responsible for interim traffic control during construction on or along traveled roadways. Traffic control shall follow the guidelines of the WSDOT/APWA Standard Specifications. All

barricades, signs and flagging shall conform to the requirements of the MUTCD.

City utilities constructed within Thurston County rights-of-way shall follow all traffic control requirements as set forth by Thurston County Department of Public Works and MUTCD. 3-17 Signs must be legible and visible and should be removed at the end of each work day if not applicable after construction hours.

B. When road closures and detours cannot be avoided, the contractor/developer shall notify the City Engineer. The City may require a detour plan to be prepared, submitted and approved prior to closing any portion of a City roadway

C. A street Right of Way Access Permit is required before work in the right of way can commence. See requirements in Section 3.12 and 3.14 and contact the Development Services Department for specific permit information.

3.21 Call Before You Dig

All developers/contractors are responsible for timely notification of all utilities in advance of any construction in right-of-way or utility easements. The utilities one-call Underground Location Center phone number is 1-800-424-5555.