CHAPTER 1

1.0 GENERAL PUBLIC WORKS CONSIDERATIONS

1.005 Applicability

These City of Gig Harbor Public Works Standards are applicable in varying locations, depending on the service area of the City facility or service. In general, the following Chapters are applicable in the specific locations of each facility or service provided by the City as noted below.

Chapter 2 – Transportation: Incorporated limits of the City of Gig Harbor
Chapter 3 – Stormwater: Incorporated limits of the City of Gig Harbor
Chapter 4 – Water: Water Service area of the City of Gig Harbor Water Department
Chapter 5 – Wastewater: Urban growth area of the City of Gig Harbor and special service areas as determined by Pierce County and the City of Gig Harbor

1.010 Standard Specifications

Design detail, workmanship, and materials shall be in accordance with the most current edition of the *WSDOT Standard Specifications for Road, Bridge and Municipal Construction* 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. (Section 13.12.010 GHMC)

All applicable rules of Washington State shall be adhered to with respect to safety, construction methods, and other state requirements. This includes, but is not limited to the Revised Code of Washington (RCW) and the Washington Administrative Code (WAC).

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 most current edition of the *City of Gig Harbor Water System Plan*.

B. Conditions and standards as set forth in the most current edition of the *City of Gig Harbor Wastewater Comprehensive Plan*.

C. Conditions and standards as set forth in the most current edition of the *City of Gig Harbor Stormwater Management and Site Development Manual* and *Stormwater Comprehensive Plan*.

D. Conditions and standards as set forth in the most current edition of the *City of Gig Harbor Parks, Recreation and Open Space Plan.*

E. Conditions and standards as set forth in the most current edition of the *Gig Harbor Peninsula Community Plan.*

F. Rules and regulations as adopted in the City of Gig Harbor Municipal Code (GHMC).

G. Conditions and standards as set forth in the most current edition of the *City of Gig Harbor Transportation Plan.*

H. Criteria set forth in the Local Agency Guidelines as amended and approved by *Washington State Department of Transportation Standard Specifications for Roads, Bridges and Municipal Construction*, *most current edition.*

I. *City and County Design Standards for the Construction of Urban and Rural Arterial and Collector Roads Promulgated by the City Engineers Association of Washington, most current edition.*

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

K. *Washington State Department of Transportation Design Manua*l as amended and approved by Washington State Department of Transportation (WSDOT).

L. *Washington State Department of Transportation Construction Manual* as amended and approved by WSDOT.

M. *Washington State Department of Transportation Standard Plans for Road, Bridge, and Municipal Construction* (Standard Plans) as amended and approved by WSDOT.

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

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

P. Conditions and standards as set forth in the most current adopted edition of the International Fire Code.

Q. Conditions and standards as set forth in the International Building Code, *most current adopted edition*.

R. Criteria set forth in the *Access Management Manual* by the Transportation Research Board and the National Research Council, 2003.

S. Criteria set forth in *Transportation and Land Development* by V.G. Stover and F. Koepke and the Institute of Transportation Engineers.

T. Criteria and guidelines set forth in *A Policy On Geometric Design of Highways and Streets* by American Association of State Highway and Transportation Officials (AASHTO), most current addition.

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

V. *Rules and regulations of the State Board of Health regarding public water supplies*, as published by the State Department of Health and the American Water Works Association.

W. Spellings shall be defined by the Oxford Advanced American Dictionary.

W. Other specifications not listed above may apply when required by the City of Gig Harbor.

1.015 Shortened Designation

These Public Works Standards shall be cited routinely in the text as the "Standards." This is not to infer that the guideline portion of this book constitutes Standards, this is simply a shortened designation for the name of this document.

1.020 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, landscape and irrigation, park, recreation, and open-space facilities within the City of Gig Harbor and the City of Gig Harbor Urban Growth Area.

1.025 Definitions and Terms

“Access Way” - Travel way with private ownership and maintenance where general public use is allowed.

“Building Sewer” – That section of the sewer line extending from the lateral sewer (located at the edge of right-of-way or edge of the public sewer easement) to two feet outside the outer foundation wall of a building or structure.

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

“City Inspector” -- The City of Gig Harbor inspector or his/her duly authorized representative.

"Curb Cut" – An access without a curb radius, generally used where lower traffic volumes are anticipated.

"Curb Return" – An access with a turning or curb radius. A curb return is generally used for higher traffic volumes to enable vehicles to turn safely off the roadway.

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

"Easement" -- The right to use a defined area of property for specific purpose/purposes 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 150 gallons of water consumed per day.

"Force Main" -- Any sewer main that transports wastewater under pressure.

"GHMC" -- City of Gig Harbor Municipal Code.

“Gravity Sewer Main” or “Main” – That section of sewer line in which lateral sewers connect to, is located in the right of way or public sewer easement, and is operated and maintained by the City. See also public sanitary sewer.

“Grease Interceptor” -- An interceptor of at least 750 gallon capacity to serve one or more fixtures and which shall be remotely located.

“Grease Trap” -- A device designed to retain grease from one to a maximum of four fixtures.

“Grinder Pump” -- A pump that grinds sewage waste into a fine slurry and then pressurizes it to permit transport through small diameter sewer force main pipes.

"Half-Street" -- Street improvements constructed along the entire property frontage 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. In some instances, it may be necessary to construct more than half the street depending on the classification of the street.

"Interceptor" -- A sewer that receives flow from a number of main or trunk sewers, force mains, etc.

“Land Surveyor” -- Professional Surveyor registered in the State of Washington to practice Land Surveying per RCW 18.43.

“Latecomers Agreement” -- A written contract between the City and the developer(s) providing the partial reimbursement of the cost of constructing the water and/or sewer facilities. (GHMC 13.35)

"Lateral Sewer" -- That section of the sewer line extending from the public sanitary sewer to the edge of right-of-way or edge of the public sewer easement.

"Lot or Street Frontage" -- The distance between the two points where the lot lines intersect the boundary of public street right-of-way.

“Peak Hour” -- The 60 minute period with the greatest sum of traffic volumes on a roadway segment or passing through the area of a project.

“Planning Director” -- the City of Gig Harbor Planning Director or his/her duly authorized representative.

"Plans" -- The plans, profiles, cross sections, elevations, details, and supplementary specifications, signed by a licensed professional engineer and approved by the Planning Director and the City Engineer, which show the location, character, dimensions, and details of the work to be performed.

“Private Driveway” - Travel way with private ownership and maintenance that has limited or restricted access by the ownership for no more than two tax parcels or no more than two residential units.

"Private Roadway" -- Travel way with private ownership and maintenance where general public use is limited or restricted at the discretion of the private ownership.

"Private Sewer" -- 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).

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

"Public Sanitary Sewer" – That section of sewer line in which lateral sewers connect to, is located in the right of way or public sewer easement, and is operated and maintained by the City. See also Gravity Sewer Main.

"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.

"Road or Driveway" – A traveled surface used to represent an access point onto the roadway.

"Sewer Main" or "Trunk" -- A sewer that receives flow from one or more mains.

“Side Sewer” – The term used to describe both the building sewer and the lateral sewer.

"S.T.E.P. Main" -- Septic Tank Effluent Pumping main. A low pressure, sewer force main that transports only effluent from S.T.E.P. tanks.

"Street" -- Used interchangeably with road.

“Trip Generation Manual” -- The latest edition of the Trip Generation Manual as published by the Institute of Transportation Engineers.

"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 are not limited to, gas, oil, electric power, street lighting, telephone, telegraph, water, sewer, or cable television, whether or not such company is privately owned or owned by a governmental entity.

1.030 Changes to Standards

These Standards are adopted by ordinance and may only be amended upon approval by the City Council.

1.035 Variances

A. Submittal Requirements. A request for a variance from the Public Works Standards must be submitted in writing to the City Engineer for review. A separate and stand along application is required for each and every variance request along with the required filing fee. Multiple variance requests cannot be combined under a single variance application. A complete application for a variance shall consist of:

1. Completed variance application;
2. Two (2) 11”x17” sets of the site plan;

3. A letter describing the variance requested, explaining the reasons for the requested variance, and addressing each of the criteria for approval as found in Ordinance 832. The letter must be sealed by a registered engineer licensed in the state of Washington;
4. Supporting exhibits; and
5. Payment of the filing fee as established by the City.

B. Processing. A variance from the Public Works Standards is a Type II application (see GHMC § 19.01.003). Because the technical nature of a variance request may require review by an outside consultant, variance requests shall not be subject to the deadline for issuance of a final decision in GHMC § 19.05.008 and RCW 36.70B.C90. However, the variance is subject to the determination of application completeness in GHMC § 19.02.003, optional consolidated permit processing procedures in GHMC § 19.01.002, the notice of application procedures in GHMC § 19.02.003 and the issuance of a notice of written notice of decision in GHMC § 19.05.008. The remaining sections of Title 19 GHMC are optional for the processing of a variance under this section.

C. Criteria for Approval. Variances from the Public Works Standards may be granted by the City Engineer if the applicant presents substantial evidence to demonstrate that all of the following criteria for approval are satisfied:

1. Strict compliance with the public works standards is undesirable or impractical because of impracticality or undesirable conditions;
2. The proposed variation(s) are functionally equivalent to and are consistent with the intent of the Public Works Standards, and/or provide compensating benefits to the City and the public;
3. The proposed variation(s) are based on sound engineering judgment;
4. The proposed variations have not been made necessary by actions of the applicant or property owner; and
5. Safety, function, appearance and. economical maintenance requirements are met with the proposed variation(s).

D. Final Decision. The City Engineer shall issue his/her findings and conclusions on the variance in writing, and shall provide a copy to the applicant as well as all persons requesting notification. If the application does not satisfy any one of the above criteria, the City Engineer shall deny the application. A variance may be conditioned to the extent necessary to address any engineering, public health, safety, or welfare concerns, and as allowed by applicable law.

E. Appeals. Appeals of a variance shall be filed and processed as described in Title 19 GHMC for a Type II application.

1.040 Design Standards

A. Detailed plans, prepared by a Washington state licensed engineer, must be submitted to the City for plan review and

approval prior to the commencement of any construction. The applicant's engineer shall be a Professional engineer, registered as such in the State of Washington. All plans must be checked, signed and stamped by the applicant's engineer prior to submittal for plan review. Final plans shall be approved by the Planning Director and the City Engineer prior to the start of construction.

B. The number and size of plans shall be published in a checklist by the City Engineer and available on the City webpage and at the Public Works Department.

C. Separate plan and profile drawings are required for all proposed transportation-related improvements, street illumination, traffic signalization, storm drainage facilities (whether public or private), and sewer and water improvements. For specific minimum requirements, contact the City of Gig Harbor Engineering Department for the latest version of the Plan Check List. Some items of the checklist, though called for, may be unnecessary for a given project. This will be decided during the Site Plan Review or the Engineering Plan Review stage.

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

E. Signed originals of all necessary easements and/or right-of-way dedication documents meeting all the current recording Standards must be reviewed, approved and recorded prior to receiving signed issued for construction plans.

F. A copy of the Maintenance Schedule for Drainage Systems can be found in Chapter 8 of the *City of Gig Harbor Stormwater Management and Site Development Manual*.

G. An Engineer's Estimate prepared by an engineer licensed in the State of Washington shall be required prior to Engineering plan approval, and shall follow the WSDOT Standard Bid Item Description and Format.

H. All entrances onto public right-of-way must have a sight distance certification and be stamped and signed by a licensed professional engineer. The design criteria must adhere to the guidelines set forth by A Policy on Geometric Design of Highways and Streets by AASHTO.

I. Please contact the City of Gig Harbor Engineering Department for a copy of the most current Plan Review Application and Plan Review Checklist.

1.050 Plan Review

A. Preliminary Civil Plan Review
All plans and related documents are to be submitted to the Planning Department along with payment of the plan review fee, as required in Section 1.070. The Public Works Department will review the plans in accordance with the City's Municipal Code.

B. Civil Construction Plan Review
All plans and related documents are to be submitted to the Public Works Department along with payment of the plan review fee, as required in Section 1.070. The Public Works Department and other appropriate City Departments will review the plans in accordance with the City's Municipal code.

Any necessary easements or dedications shall be signed and notarized and submitted in a recordable format along with the plans. An engineer's estimate shall be submitted prior to plan approval. City staff will make a cursory check of the plans against the plan's checklist on the preceding pages. Plans that meet the minimum checklist requirements as to context will be routed to the appropriate City staff and the Plan Review Process will begin.

The initial turn-around time for the first review of plans submittal is normally three weeks. The Engineer is then requested to submit the original drawings for approval or is notified of additional required revisions. For subsequent reviews, the Engineer will submit three sets of drawings for re-review or will be notified of additional required revisions. Additional review time will be required if revisions are necessary.

If the City's comments are not adequately addressed at a second review, a third submittal is required and additional fees for review of a third submittal will be levied, as established by resolution of the city council. "Third Submittal" shall mean the third and any subsequent submittal of construction drawings, specifications, drainage calculations, and/or other information that requires additional plan checking even when plans have otherwise been approved.

Approved plans will be returned to the Engineer only after the plan check, construction inspection fees have been paid and any required agreements, easements or dedications have been signed and notarized by the developer. Utility connection fees shall be paid prior to the Building Permit issuance.

Plans that have been approved more than 180 days before construction begins (i.e., a preconstruction meeting scheduled and inspection fees paid) shall be subject to re-review.

1.055 Construction Control

Work performed for the construction or improvement of City roads and utilities whether by or for a private developer, by City employees, or by a City contractor, shall be done to the satisfaction of the City and 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.

The developer, contractor or their agents shall have on site or have web access to the digital version of the most current copy of the *City of Gig Harbor Public Works Standards* during the entire construction along with an approved, signed set of construction drawings and any necessary permits required for the project. A pre-construction meeting shall be required in advance of any construction and at which time the approved sets of construction drawings will be provided. The pre-construction meeting shall be held a minimum of 72 hours prior to the start of construction. Call the City of Gig Harbor Engineering Department to schedule a pre-construction meeting at (253) 851-6170.

1.060 Inspection

All work performed within the public right-of-way or easements, or as described in these Standards or Title 12 of the GHMC, whether by or for a private developer, by City employees, or by a City contractor, shall be completed to the satisfaction of the City and in accordance with the WSDOT Standard Specifications, any approved plans and these Standards. Unless otherwise approved, any revision to construction plans must be approved by the City before being implemented. Revisions shall be prepared by the developer's engineer and submitted to the City for review and approval. City plan approval is required prior to construction.

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 preconstruction meeting and/or field review shall be required before the commencement of work. All fees shall be paid prior to the preconstruction meeting. **Any necessary easements or dedications are required before plan approval.**

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 sections herein. Tests shall be performed at the developer or contractor's expense.

The City will not accept any unauthorized or defective work. Unauthorized or defective work includes work or materials that do not conform to City

requirements; work done beyond the lines and grades set by the approved plans or the engineer; and materials furnished without the City's knowledge. At the City's order, the contractor shall immediately remedy, remove, replace, or dispose of unauthorized or defective work or materials and bear all costs of doing so.

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 the City Council has accepted the project as complete and a maintenance bond for the project has been accepted by the City.

1.065 Record Drawings

Record drawings shall be required whenever field changes are made to approved plans. The record drawing shall be completed and certified and sealed by a professional engineer currently licensed in the State of Washington. The record drawing shall be submitted on paper and on a read/write CD in AutoCAD compatible format unless otherwise approved by the City. The digital format of the drawings shall be in AutoCAD compatible file and include all improvements in the right of way an all storm water, water, and sewer utilities. The horizontal datum shall be NAD1983/91 HARN State Plane South FIPS 4602, or as otherwise approved by the City Engineer. The vertical datum shall be NAVD 88, or as otherwise approved by the City Engineer. Final City project approval will not be granted until the record drawing has been submitted and accepted by the City.

The AutoCAD Record Drawings shall depict and incorporate all the field revisions and shall be stamped and signed by the Engineer of Record. The Record Drawings must be a "bound" CAD file, which makes all the XREFS files part of the one file.

Construction Features

1. Record drawings will show accurate locations of storm, sewer, water mains and other water appurtenances, structures, conduits, power poles, light standards, power service cabinets, vaults, width of streets, sidewalks, landscaping areas, building footprints, channelization and pavement markings, property lined, easements, storm ponds etc.

2. The following is a list of the tolerance limits and construction features to be incorporated into the record drawings:

   Tolerance Limits:

   - Surveyed sewer and storm water elevations…….....+/-0.01'
     Includes pipe invert elevations, top of casting (manhole, Inlets, etc.)

   - Surveyed water elevations……+/-0.25'

- Horizontal and vertical alignment…….....+/-0.10’

Storm Drainage

Storm drainage features are intended to move rainwater and/or groundwater. Record drawings shall indicate all necessary information about the storm drainage system to evaluate whether the constructed features will be able to function as intended by the design. Information shall be field verified and/or surveyed as outlined in the following table. Generally the following information is required who should provide the information is shown in parentheses:

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Figure 1.1 Storm Drainage

Storm Drainage Features	**Field Verify** Mark on field drawing plan set all changes from design drawings (Contractor and Inspector)	**Survey** (Licensed Surveyor)	**Indicate on Record Drawings** (Record Drawing Preparer/Engineer
Pipes	Material, Diameter	**Inverts**-(All pipe ends in structures of out) **Location of Ends**- (Not in Structures)	**Redraw** pipe on drawings if it moved two ft. or more. **Recalculate** slope based in record length and surveyed inverts. **Indicate** new information on plans (ex. Slope, length, diameter, etc.)
CB's/manholes/inlets	Size, type	**Rim Elevation** **Location of Structure**	**Redraw** Structure on drawings if it moved two ft. or more. **Indicate** new information on plans
Culverts	Material/ size	**Location of ends** **Inverts**-(Of structure ends and of stream if flow line natural or filled with earth)	**Redraw** culvert on drawings if it moved two ft. or move two ft. or more. **Recalculate** slope based on record length and surveyed inverts. **Indicate** new information on plans (ex. Slope, length, diameter, etc.)
Under drains	Pipe location, material, cleanout locations		**Redraw** under drains on drawings if it moved two ft. or more.
Other drainage features			**Redraw** feature on drawings if it moved two ft. or more.

Stormwater Management

Stormwater Management features are intended to control the rate and/or quality of the rainwater runoff. Record drawings shall indicate all necessary information about the stormwater management system to evaluate whether the constructed features will be able to function as intended by the design. Information shall be field verified and/or surveyed as outlined in the following table. The record drawings must include a Storm Pond Certification Letter stamped and signed by the engineer of record. This letter must state that the pond was constructed per the engineer's design and that the as-built size meets or exceeds the designed storage capacity. Generally the following information is required who should provide the information is shown in parentheses:

Figure 1.2 Stormwater Management

Storm drainage features	**Field verify** Mark on field drawing plan set all changes from design drawings (Contractor and Inspector)	**Survey** (Licensed Surveyor)	**Indicate on record drawings** (Record Drawing Preparer/Engineer)
Vaults	Material, type, size, control systems (orifice size, weir dimensions)	**Control structure location** **Control elevations** (orifice inverts, weir elevations) **Bottom elevation** **Access locations**	**Redraw** structures on drawings if it moved two ft. or more. **Indicate** new information on plans (ex.. size type, etc.)
Ponds	Size, shape, letter from engineer of record certifying the construction and size of the storm pond.	**Control structure location** **Control elevations** (orifice inverts, Weir elevations) **Overflow elevation** **Bottom elevation** Water surface shape (spot locations around edge of water surface – enough to indicate shape/ location six shots minimum)	**Redraw** pond on drawings if moved ten ft. or more. **Recalculate size** based on water surface shape. **Indicate** new information on plans (ex. size, shape, etc.)
Bio filters/ swales	Length, width	**Inlet invert** **Outlet invert**	**Redraw** biofilter/swale on drawings if it moved two ft. or more.
Infiltration systems/ French drains	Material, size, pipe (size, type, diameter)	**Inlet invert** **Bottom elevation**	**Redraw** feature on drawings it moved two ft. or more.

Natural Resources

Natural resources features are non-structural features that convey and/or hold water. Record drawings shall indicate all necessary information about the natural resource to evaluate whether the constructed features will be able to function as intended by the design. Information shall be field verified and/or surveyed as outlined in the following table. Generally the following information is required who should provide the information is shown in parentheses:

Figure 1.3 Natural Resources

Natural Resources feature	**Field verify** Mark on field drawing plan set all changes from design drawings (Contractor and Inspector)	**Survey** (Licensed Surveyor)	**Indicate on record drawings** (Record Drawing Prepare/Engineer)
Streams		**Centerline of stream**	**Redraw** stream on drawings if it moved two ft. of more
Wetlands		**Boundary of created of modified wetlands, and boundary of current wetlands**	**Redraw** wetland in drawings if it moved ten ft. or more. **Recalculate size** based on wetlands shape. **Indicate** new information on plans (ex. size, shape, etc.)

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Water System

Water system features are intended to move or hold potable water. Record drawings shall indicate all necessary information about the water system to evaluate whether the constructed features will be able to function as intended by the design. Information shall be field verified and/or surveyed as outlined in the following table. Generally the following information is required who should provide the information is shown in parentheses:

Figure 1.4 Water System

Water system feature	**Field verify** Mark on field drawing plan set all changed from design drawings (Contractor and Inspector)	**Survey** (Licensed Surveyor)	**Indicate on record drawings** (Record Drawing Preparer/Engineer)
Pipes and fittings	1) Material, size, joint type, and fitting 2) Crossing invert location and invert of any utility crossings 3) Depth of pipes at every fitting	Horizontal location of main: 1) Outside of ROW- every 100 ft. 2) Within ROW- distance off centerline of road. (Use pipe locator for location.)	**Redraw** pipe on drawings if it moved two or more ft. horizontally. **Indicate** new information on plans (ex. diameter, horizontal and vertical location of pipe, length between fittings, joint type, etc.)
Valves (Gate valves GV, Butterfly Valves BFV, Air Vac AV, fire line detector check valves, and Blow Offs BO	Size, type, length of valve extension used	Horizontal locations as follows: 1) GV –center of valve (same as center of box) 2) BFV –center of valve box 3) AV –center of meter box assembly and center of stand pope at post 4) BO –center of meter box assembly	**Redraw** valve on drawings if it moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)
Hydrants	Hydrant bury depth	Horizontal location of hydrant (center of valve stem)	**Redraw** hydrant on drawings if it moved two ft. of more. **Indicate** new information on plans
Service lines	Material, size, location		**Redraw** service line on setter on drawings if it moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)

Meters	Type, size, vault or box and size	Horizontal location of center of box or vault	**Redraw** box or vault on drawings if it moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)
PRV (Pressure Reducer Valve)	Size, vault size, vault drain data	1) Horizontal location of the center of vault 2) Horizontal location of relief pipe, catch basin, and air vac stand pipe.	**Redraw** vault on drawings if it moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)
Fire system (PIV post indicator valve, FDC fire dept. connection) Private fire line	Material, size, locations of pipe and appurtenances	1) Horizontal location of PIV, FDC (center) 2) Horizontal location of vault center 3) All valve connections to City mains	**Redraw** pipe, vault, PIV, FDC, on drawings if it moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)
Back flow devices	Device type, size, service line size, location of drain	Horizontal location of center of vault of box.	**Redraw** vault or box on drawings if moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)

Sanitary Sewer

Sanitary sewer features are intended to transport sanitary waste into a collection system. Record drawings shall indicate all necessary information about the sanitary sewer system to evaluate whether the constructed features will be able to function as intended by the design. Information shall be field verified and/or surveyed as outlined in the following table. Generally the following information is required who should provide the information is shown in parentheses:

Figure 1.5 Sanitary Sewer

Sanitary Sewer Feature	**Field Verify** Mark on field drawing plan set all changed from design drawings (Contractor and Inspector)	**Survey** (Licensed Surveyor)	**Indicate on record drawings** (Record Drawing Preparer/Engineer)
Manholes	Manhole diameter, type	1) Horizontal location of center of manhole. 2) Rim elevation and all pipe invert elevations.	Note all changes and correct elevations
Pipe (Gravity Sewer Main)	Material, size, Distance to each side sewer tee location from the downstream manhole.	Length (horizontal length if pipe from center of manhole to center of manhole.)	**Redraw** pipe on drawings if it moved two ft. or more. **Recalculate** slope based on record length and surveyed inverts. **Indicate** new information on plans (ex. slope, length, diameter, etc.)
Pipe and fittings (Force Main)	1)Material, size, joint type, fittings 2) Measure distance between fittings from center of fittings. 3) Crossing information –location of any utility crossings 4) Depth of force main	Horizontal location of main: 1) Outside of ROW- every 100 ft. 2) Within ROW- distance off centerline of road. (Use pipe locator for location.)	**Redraw** pipe on drawings if moved two ft. or more. **Indicate** new information on plans (ex. size, length, etc.)

Side Sewer	**Plats** Pipe material, size, length of side sewer stub. **Commercial** 1) Pipe material and size. 2) Length of side sewer stub. 3) Distance between each cleanout.	**Plats** 1) Location of end of side sewer (marked by 4x4.) **Commercial** Horizontal location and ground elevation of all side sewer surface cleanouts.	**Plats** 1) Note all changes. 2) Show side sewer tee station. **Commercial** 1) Note all changes. 2) Show location and ground elevation of side sewer cleanouts. 3) Side sewer as-built
Valves	Size, type, length of valve nut extension used	1) Horizontal location of GV –center of valve box 2) AV –center of meter box assembly and center of stand pipe at post 3) BO –center of meter box assembly	**Redraw** valve on drawings if moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)
Air Vacs	Size, type	1) Horizontal location of center of meter box assembly and center of stand pipe of post.	**Redraw** air vac on drawings if moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)
Cleanouts	Size	1) Rim elevation of center of cleanout. 2) Horizontal location of center of cleanout.	**Redraw** cleanout on drawings if moved two ft. or more. **Indicate** new information on plans.
Grease Interceptor/ Oil Water Separators	1) Pipe material, size 2) Vault dimensions and size	Horizontal location of center of vault	**Redraw** structures on drawings if moved two ft. or more. **Indicate** new information on plans (ex. size, type, etc.)

Transportation

Transportation features are surface structures that are intended to help facilitate the movement of the general public. Record drawings shall indicate all necessary information about the transportation features to evaluate whether the constructed features will be able to function as intended by the design. Information shall be field verified and/or surveyed as outlined in the following table. Generally the following information is required and who should provide the information is shown in parentheses:

Figure 1.6 Transportation

Transportation Features	**Field verify** Mark on field drawing plan set all changed from design drawings (Contractor and Inspector)	**Survey** (Licensed Surveyor)	**Indicate on record drawings** (Record Drawing Preparer/ Engineer)
Pavement	Material, depth, width		
Curb and Gutter	Location of face of curb, type, and top of curb elevations		**Redraw** structure on drawings if moved two ft. or more
Driveways	Location, width, type, curve and line information		**Redraw** structure on drawings if moved two ft. or more
Channelization	Materials and layout		
Signage	Location, size, type		
Street Lighting	Height, wattage	Pole location, service cabinet location, j-boxes	**Redraw** structure on drawings if moved two ft. or more
Sidewalk	Location, width		
Traffic Signals		Pole locations, signal cabinets, j-boxes, traffic loops	**Redraw** structure on drawings if moved two ft. or more
Monument Cases	Location	Horizontal coordinates, and vertical elevation	
Conduit	Location, size, type		
Junction Boxes	Location, type		
ADA Facilities	Location, type	Revise all spot elevation points and slope percentages from original design construction drawings	**Redraw** entire ADA ramp showing as-constructed elevations and slopes for all points originally shown on construction drawings

1.070 Fees

Fees, charges or financial guarantee requirements shall be as established by the city council by the passage of a resolution adopting a fee, charge, and financial guarantee requirement schedule except where specifically set forth in the City of Gig Harbor Municipal Code (GHMC). It is the applicant's responsibility to verify the current fee schedule.

All plan review fees are due upon submittal of plans for review.

All remaining plan check fees are due prior to the release of the “Issued for Construction” plans.

All inspection fees are due before final, “Issued for Construction” plans are released.

In addition, there are various service and General Facility charges. We strongly urge all applicants to request an estimate of these fees and charges from the City's Public Works and Planning and Building Departments as soon as practical.

1.080 Permits

Before any person, firm or corporation shall commence or permit any other person, firm or corporation to commence any work to grade, pave, level, alter, construct, repair, remove, excavate or place any pavement, sidewalk, crosswalk, curb, driveway, gutter, drain, sewer, water, conduit, tank, vault, street banner or any other structure, utility or improvement located over, under or upon any public right-of-way or easement in the City of Gig Harbor, or place any structure, building, barricade, material, earth, gravel, rock, debris or any other material or thing tending to obstruct, damage, disturb, occupy, or interfere with the free use thereof or any improvement situate therein, or cause a dangerous condition, a permit shall be obtained in accordance with Title 12 of the Gig Harbor Municipal Code. A separate permit shall be obtained for each separate project.

In the case of work contracted with the City, the signing of the contract shall constitute an Encroachment Permit.

Much of the work covered under these Standards will require multiple permit authority reviews and approvals. Several types of permits and approvals require prior approval from the authority before a building or other permit can be issued. Any questions regarding information about permits, approvals and agreements should be directed to the appropriate departments.

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

A. Environmental Review

For most projects, a SEPA Environmental Checklist must be completed by the applicant and submitted along with plans, specifications and other

information when approval or permits are being requested for a project. Environmental reviews are conducted by the SEPA responsible official.

B. Construction Permits

1. Clearing and Grading Permit (Engineering Division of the Public Works Department). A Clearing and Grading Permit is required in accordance with Section 14.40 of the Gig Harbor Municipal Code.

2. Building Permit (Building Division). A Building Permit is required for most construction work including alteration, repairs and demolition.

3. Encroachment Permit (Engineering Division of the Public Works Department). An Encroachment Permit is required for any work within the right-of-way as set forth in Section 12.02 of the GHMC. Such work may include: utilities work, 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 Encroachment Permit.

4. Civil Permit. A Civil Permit is required for any site development activity, including construction activity. Site development activities requiring a Civil Permit are listed in GHMC 12.06.

C. Approvals and other Permits

There are several other permits or approvals that may be required and referred to in these Standards which include but are not limited to: Site Plan Review, Design Review Board, plat and short plat approvals, 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 and which include, but are not limited to, Variance; Conditional Use; Planned Residential Development; Planned Unit Development; Shoreline Substantial Development Permit or any other State or Federal permits.

1.090 Financial Guarantees

Bonds or other allowable financial securities may be required by the City to guarantee the performance of or maintenance of required work. A guarantee shall be required for maintenance as outlined in Section 12.06.100 of the City of Gig Harbor Municipal Code and *Stormwater Management and Site Development Manual*. The type and amount of security shall be per 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 cash set aside. For bond forms, see City of Gig Harbor Website or contact City of Gig Harbor Engineering Department.

Final City acceptance shall not be given until all the required work is complete and accepted by the City and the maintenance financial guarantee(s) are in place.

1.100 Utility Locations

A. Applicants shall call 811 for utility locates for design purposes and show existing utilities on application materials using the best information available. Additional verification may be required during design, including excavation (potholing), if utilities are shown to be in conflict with the proposed design or may not meet minimum cover depths during construction.

B. Proposed and existing utilities within a proposed or existing public right-of-way or public easement shall be located (or relocated) as shown in the Details. Deviations from the Details will be allowed as follows:

1. Where frontage improvements are not required in accordance with Section 2B.080 existing utilities may remain in their original location; or

2. Where the public right of way frontage along the developing property is less than 200 ft. long the existing overhead utilities may remain overhead; or

3. Where existing utilities are converted from overhead to underground beyond the frontage of the developing property the relocated utility may be located within the right-of-way under the sidewalk; or

4. Where the existing overhead utility contains electrical voltage at or above medium voltage distribution as defined by IEEE, the City Engineer shall consult with the franchise utility regarding relocation of the overhead utility lines. The City Engineer shall approve a deviation where:

i. The franchise utility plans to relocate the existing overhead utility to underground within seven (7) years of the date of the underlying project permit decision as depicted in the utility's Reliability Plan. If the franchise utility determines the project falls within said Plan, the developer will only be responsible for the installation of the required underground utility civil infrastructure and the franchise utility will be required to complete the work according to the established Plan; or

ii. The franchise utility identifies substantial operational impacts to the franchise utility infrastructure caused by relocating existing overhead utility to underground.

5. Any deviation approved through subsection B shall become a condition of the underlying project permit application and may be appealed with any appeal of the underlying project permit application as prescribed in Title 19 of the Gig Harbor Municipal Code.

C. All costs associated with installing new utilities, undergrounding existing overhead utilities, and relocating existing overhead utilities shall be paid fully by the developer in accordance with Section 12.18.260 GHMC. Where, for operational purposes, the utility requires extending undergrounding or relocating their utility line beyond the frontage of the developing property, those additional expenses shall also be paid fully by the developer.

D. An Encroachment Permit is required of any existing utility work in accordance with Title 12 GHMC and Section 1.080.

1.110 Easements

A. Where public utilities and/or their conveyance systems cross private lands, an easement must be granted to the City. The Public Works Department will generally process, record and file all easements. If the property is to be platted, the easement must 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.

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

C. Easements are required to be submitted in draft, unsigned, for review and approval by the City Attorney prior to plan approval. Signed, notarized easements are required prior to plan approval. Any change in design which places an amenity i.e., water, sewer, sidewalk, etc. outside of the easement may necessitate stopping of construction until plans and easements can be resubmitted and approved. A plan review fee shall be based on the rate as established for resubmittals. Easements will be filed by the City upon plan approval.

1.120 Latecomers Agreements

Any person who constructs a water or sewer main extension may, with the approval of the City Engineer and the City Council, execute a Latecomer Agreement for water and/or sewer facilities. (GHMC 13.35)

The water and/or sewer facility to be constructed must be consistent with the City's latest adopted version of the Comprehensive Plan and shall be within the City or within ten miles of the City corporate limits and connecting with the City

public water or City sewage system to serve the area in which the real estate owned by the latecomers is located.

The applicant must comply with all the terms and conditions of Section 13.35 GHMC.

1.130 Utility Extension

A. Utility mains shall be extended to and through the extremes of the property being developed when the following situations occur:

1. Roadway frontage improvements are required in accordance with Section 2B.080; or
2. The extension will allow for a future loop connection, benefit public health or safety, or due to impacts from the development.

In all other cases utility mains shall, at a minimum, be extended to the location of the perpendicular utility connection to the building(s).

B. Owners of properties lying outside of the current city limits, but within the City's Utility Service Area, may connect to City utilities contingent on approval of a City-provided utility extension agreement in accordance with Chapter 13.34 GHMC.

1.140 Traffic Control

See Section 2B.130.

1.150 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 811 or www.wucc.org.

End of Section