

# INDEX

## PAGE

### WATER AND SEWER SPECIFICATIONS - GENERAL PROVISIONS

GP-1	DEFINITIONS.....	1
GP-2	PURPOSE.....	2
GP-3	AUTHORITY OF DISTRICT .....	2
GP-4	DEVELOPER TO BE INFORMED.....	2
GP-5	PLANS AND SPECIFICATIONS ACCESSIBLE .....	3
GP-6	"AS-BUILT" DRAWINGS .....	3
GP-7	OWNERSHIP OF PLANS.....	4
GP-8	QUALITY OF MATERIALS AND WORKMANSHIP .....	4
GP-9	MATERIAL AND EQUIPMENT LIST .....	4
GP-10	DETERMINATION OF "AS EQUAL" .....	5
GP-11	OMISSIONS AND DISCREPANCIES .....	5
GP-12	INSPECTION AND TESTS .....	5
GP-13	FINAL INSPECTION .....	7
GP-14	FINAL ACCEPTANCE.....	7
GP-15	COMPLIANCE WITH PUBLIC AUTHORITY .....	8
GP-16	CROSS-CONNECTION CONTROL .....	8
GP-17	PRECONSTRUCTION CONFERENCE .....	9
GP-18	PRECONSTRUCTION VIDEOS.....	9
GP-19	PERMITS .....	9
GP-20	SURVEY CONTROL .....	10
GP-21	RESTORATION OF IMPROVEMENTS.....	10
GP-22	ACCESS.....	10
GP-23	SPECIFICATIONS INCORPORATED BY REFERENCE .....	10
GP-24	USE OF COMPLETED PORTIONS .....	10
GP-25	EXISTING UTILITIES OR OBSTRUCTIONS .....	11
GP-26	SITE MAINTENANCE .....	11
GP-27	PUBLIC HAZARD OR INCONVENIENCE.....	12
GP-28	PROTECTION OF WORK AND PROPERTY.....	12
GP-29	ROYALTIES AND PATENTS .....	13
GP-30	OTHER WORK.....	13
GP-31	CONTRACTORS.....	13
GP-32	TRAFFIC MAINTENANCE AND PROTECTION .....	13
GP-33	SANITATION .....	14
GP-34	SAFETY .....	14
GP-35	CONFINEMENT OF CONTRACTOR'S OPERATIONS.....	14
GP-36	TAPS AND CUT-INS .....	15
GP-37	RECORDING.....	15
GP-38	COST OF WATER.....	15
GP-39	CONFINED SPACE ENTRY .....	15
GP-40	SHORING.....	16
GP-41	TEMPORARY EROSION CONTROL.....	16

GP-42	RESTORATION OF DISTURBED AREAS.....	20
GP-43	CLEARING AND GRUBBING.....	22
GP-44	GUARANTEES, BONDS AND INSURANCE .....	22
GP-45	PLAN REVIEW .....	25
GP-46	EASEMENT CRITERIA.....	36
GP-47	ASBESTOS CONTROL.....	38
GP-48	TEMPORARY WATER SERVICE .....	39
GP-49	DEVIATION FROM STANDARDS.....	39
GP-50	DESIGN IN ACCORDANCE WITH THE DISTRICT'S COMPREHENSIVE PLAN.....	40

NOTE: Our Standard Specifications can be accessed online per the link below

<http://www.woodinvillewater.com/for-developers/standard-specifications-for-developer-extensions.html>

## **WATER AND SEWER SPECIFICATIONS GENERAL PROVISIONS**

### **GP-1 DEFINITIONS**

- A. "Concerned Parties" means those persons, companies, or agencies designated by the District to attend the preconstruction conference.
- B. "Contractor" means the person or firms employed by the Developer to do any part of the work, all of whom shall be considered agents of the Developer.
- C. "Design" means the preparation of the Plans for the extension to the District's water distribution and/or sewer collection system.
- D. "Developer" means the owner(s) of property to be benefited by the proposed extension, or that person or organization in charge of developing the project, either on behalf of the owner(s) or pursuant to an agreement to purchase the property, and includes the Developer's agents and/or contractors and subcontractors.
- E. "Developer Engineer" means the engineering firm, and that firm's representatives, retained by Developer to Design the Plans for the work to be performed under this agreement, and which shall be considered agent of the Developer.
- F. "District" means WOODINVILLE WATER DISTRICT and its employees.
- G. "District Engineer" means the engineering firm, and that firm's representatives, which may be retained by the District Board of Commissioners to act as the Engineer for the work to be performed under this agreement.
- H. "Extension" means the water and/or sewer system to be constructed according to this Agreement and connected to the District's water distribution and/or sewer collection system and transferred to the District for operation and maintenance.
- I. "Otherwise Specified," or "As Specified" means the directions contained in the Plans, Special Specifications, if any, and otherwise as given by the District incident to the performance of the work other than in these General Specifications.
- J. "Plans" means drawings, including reproductions, of the work to be done as an extension to the District's water distribution and/or sewer collection system, prepared or approved by the District's Engineers, and approved by the District Board of Commissioners.

- K. "Specifications" means the directions, provisions, standards and requirements as approved by the District Board of Commissioners for the performance of the work and for the quantity and quality of materials.
- L. "Standard Specifications" are the most recent Standard Specifications for Road, Bridge and Municipal Construction by WSDOT/APWA, including the Local Agency General Special Provisions (APWA)," except as herein supplemented or modified.
- M. "Work" means the labor, materials, superintendence, equipment, transportation, supplies and other facilities necessary or convenient to the completion of the proposed extension.

## **GP-2 PURPOSE**

WOODINVILLE WATER DISTRICT, as a municipal corporation approximately 30 square miles in area and serving the City of Woodinville, portions of the Cities of Bothell, Redmond, and Kirkland, and portions of the surrounding unincorporated King County, is responsible to the public for insuring that water and sewer mains laid in public streets or easements are constructed in accordance with currently accepted standards for public work. The requirements imposed upon developers and contractors herein are intended by the District as a contract with the Developer, which incorporates minimum standards prerequisite to acceptance of the work by the District as a part of its water and sewer systems. Privately constructed extensions will not be permitted to connect to the District's systems unless the work is performed and paid for in accordance with this Agreement.

## **GP-3 AUTHORITY OF DISTRICT**

The District shall have authority to approve, reject or require changes in Plans designed by Developer's Engineer. The District shall have authority to require such changes in the Plans during the course of work. The District shall have authority to inspect the work and shall have authority to stop work whenever necessary to insure compliance with the approved Plans and Specifications. The District shall have authority to reject work and materials which do not conform to the Plans and Specifications and to decide questions which may arise in the execution of the work. The District shall have the authority to impose fines for violation of District policies adopted pursuant to resolution.

## **GP-4 DEVELOPER TO BE INFORMED**

The Developer is expected to be fully informed regarding the nature, quality and extent of the work to be done, and if in doubt, to secure specific instructions from the District.

The Developer shall keep a competent supervisor on the work during its progress who shall represent the Developer, and to whom instructions may be given as

though to the Developer. The Supervisor shall be familiar with the Plans and Specifications and shall promptly report to the District any error, inconsistency or omission which may be discovered.

#### **GP-5 PLANS AND SPECIFICATIONS ACCESSIBLE**

The Developer shall have one copy of the District approved Plans Stamped and dated "Approved for Construction" and Specifications constantly accessible on the job. Woodinville Water District Standard Specifications for Developer Extensions is available online at <https://www.woodinvillewater.com/for-developers.html>

#### **GP-6 "AS-BUILT" DRAWINGS**

The contractor shall record daily required "as-built" information as construction progresses. The District will maintain the "as-built" information about the project.. This information will be available to the Developer's Engineer for preparation of final "as-built" mylars to be prepared at the Developer's expense.

Required "as-built" information as construction progresses:

Water:

- 1 Changes in water main alignments & cover over the water main (referencing finish grade). Lengths of water main – measured center to center on fittings.
- 2 Reference offsets for bends, tees or appurtenances not accessible after backfill.
- 3 Brand names of water main, valving, fire hydrants, air vac's, service materials and other appurtenances.
- 4 Fire hydrant bury depths.
- 5 Details of connections, vaults, vertical bends and areas not able to be clearly shown at plan scale.
- 6 Asbuilt connection details.

Sewer:

1. Side sewer tee locations – measured from center of downstream MH.
2. Distance from center of Mainline tee to cleanout
3. Length from cleanout to stub end and depth (at stub end) of side sewers.

Before any work will be accepted by the District, the Developer/Contractor shall supply the District Inspector with one neatly and legibly marked set of mylar drawings of the approved as-built construction plans, bearing the stamp and "wet" signature of either a registered professional engineer or a registered land surveyor. These drawings shall show any and all changes in the final locations of all items of work including, but not limited to: fire hydrants, valves, water lines, sewer lines, manholes, lift stations, booster pump stations, force mains, new and existing utilities, and their appurtenances included in the work.

Sewer As-Built survey is required for manholes, clean-outs, ends of side sewer stubs, manhole inverts and rim elevations, sewer main lengths and grades shall be adjusted.

Water and sewer appurtenances that cannot be accessed after backfill shall be accurately measured prior to backfill. The District reserves the right to have undocumented fittings and appurtenances excavated by the contractor.

Reference offsets shall be provided for water line bends (angle points) and tee locations if no valve will be available for surface location.

Refer to specific sections of these Standards for requirements for each type of work. The District Inspector must review and approve all mylar as-builts. The Developer shall make all changes to the as-builts requested by the District Inspector before the District will accept the mylar as-built.

The District requires a digital file of the as-built submitted in conjunction with the mylar. The digital file should be capable of being imported to AutoCAD, (check with District for current version). The as-built drawing cad file submittal shall include all fonts, linestyles and xref drawings used to create the as-built mylar.

As-builts shall be required whether for private or public construction in accordance with the following:

#### Private Development

Utility Extensions - Final acceptance of the improvements will be withheld until after the as-built drawings have been submitted and approved.

#### Public Construction

As-built drawings shall be considered an item on the Contractor's punchlist. Until all items on the punch list are completed, the project will not be sent to the Board for approval. Final acceptance and payment will be withheld until the as-built drawings are submitted and approved.

### **GP-7 OWNERSHIP OF PLANS**

The originals of all "as built" Plans prepared by Developer's Engineer shall be delivered to the District as a condition of and prior to acceptance of the project, and shall become the property of the District. Neither Developer nor Developer's Engineer shall have any rights of ownership, copyright, trademark or patent in the Plans.

### **GP-8 QUALITY OF MATERIALS AND WORKMANSHIP**

All materials shall be new, and workmanship and materials shall be of the highest quality commonly used. The Developer shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

## **GP-9 MATERIAL AND EQUIPMENT LIST**

The Developer shall file a material and equipment list with the District prior to the preconstruction meeting, including the quantity, manufacturer and model number, acceptability under any specified inspections and/or tests required by ASTM and/or AWWA specification if applicable (or) of material and equipment to be installed as part of the work. The District retains the right to reject materials and equipment which do not conform to District specifications and the approved Plans. Failure of the District to reject materials and equipment at the time the list is filed shall not be a waiver of the District's right to reject such materials or equipment at a later time.

## **GP-10 DETERMINATION OF "AS EQUAL"**

The District and its Engineer shall be the sole judge whether supplies or material qualify "as equal" substitutions under the Plans and Specifications.

## **GP-11 OMISSIONS AND DISCREPANCIES**

Minor items of work or materials omitted from Plans and Specifications prepared by the District, District's Engineer, or Developer's Engineer, but clearly inferable there from and which are called for by accepted good practice, shall be provided and/or performed by the Developer as part of the construction. In case of doubt, the District's decision shall be final.

## **GP-12 INSPECTION AND TESTS**

All work shall be subject to inspection by the District. The Developer shall keep the District's inspector informed of their schedule. The District shall have access to the work at all times, and the Developer shall provide proper facilities for such access and inspection. The Developer shall make reasonable tests of the work at the Developer's expense upon the District's request. Whenever work must be specially tested or inspected for compliance with public regulations, or with the Plans and Specifications, the Developer shall give the District 24 hour notice of the readiness of the work for such test or inspection. The District shall make inspections within 24 hours of notification by the Developer. Such inspections and tests shall not relieve the Developer of any of its responsibilities under this Agreement.

The presence or absence of a District inspector on any job will be at the sole discretion of the District, and neither presence nor absence of a District inspector will relieve the Developer of responsibility to obtain the construction results specified in this agreement.

The District is not a safety expert, and is not engaged in that capacity whenever performing inspections and tests. The authority of the District to perform inspection and tests shall not relieve the Developer of the responsibility for safety, as specified in GP-33.

Work performed on construction or improvements within the District, whether by a private developer, a District contractor, or District forces, shall be completed in accordance with the approved plans and specifications and to the satisfaction of the District Engineer.

No work may be started until such plans are approved. Any revision to such plans shall be submitted by the Developer's engineer to the District Engineer for approval, prior to performance of any work for the revision.

The District Engineer will have authority to enforce these District Standards as well as other referenced or pertinent specifications and will appoint project engineers, assistants and inspectors as necessary to inspect the work for compliance.

#### **A. Inspection of Work**

The Contractor shall give the District timely notice that work, or any part thereof, which has been constructed within the District's service area, is ready for inspection. The District shall make inspections within 24 hours of notification by the Developer. In no event shall the work, or any portion thereof, be covered up or placed into operation until the District Inspector has directed otherwise. If any work has been covered up without prior inspection or authorization by the District Inspector, it must be dug up for inspection at the discretion of the District Inspector, at the Developer's expense.

For inspections required on private property due to issuance of permits by the District, the District retains the right to enter the subject property at reasonable times for purposes of inspection for compliance with permit conditions. The Contractor shall provide access for the District Inspector.

To ensure the Inspector's safety and access during these inspections, the Contractor shall provide any equipment needed, such as walkways, railings, ladders, and platforms. When the Inspector requests, the Contractor shall (without charge) provide samples of materials used or to be used in the work. Inspection by the District does not relieve the Contractor of his/her obligation to furnish satisfactory material and workmanship.

#### **B. Materials Sampling & Testing**

##### **1. Developments**

It shall be the responsibility of the Developer to provide test reports certified by a professional engineer licensed in the State of Washington to verify compliance of materials used in the project. Sampling and/or testing shall be at a frequency and magnitude determined by the District Engineer or designated representative. Copies of all test reports shall be furnished to the District Inspector. All costs incurred



for testing or sampling, as required, shall be the responsibility of the Developer.

## **2. District Inspection of District Contractors**

Construction work performed by District contractors shall be inspected by District Inspectors or contract inspectors reporting directly to the District. Sampling and testing shall be performed by District Inspectors or by an independent professional testing laboratory. Contractor shall cover costs of inspection and testing as specified in the Project Manual.

## **3. Notification of Inspection**

The Developer shall notify the District of inspection needs in a timely manner. In general, a minimum of 24 hours advance notice will be required. Failure to provide adequate advance notification may oblige the District to arrange appropriate sampling and testing after-the-fact, with certification by a qualified private testing laboratory. Costs of such testing and certification shall be borne by the Developer.

### **GP-13 FINAL INSPECTION**

Before acceptance by the District, all materials and completed work shall be subject to final inspection by the District Inspector and Operations team, to determine whether the work complies with the approved Plans and Specifications. A final punch-list shall be created and the Developer will have 30 days to complete the outstanding items. Prior to final acceptance, all items identified by the District Inspector, as needing additional work shall be completed and re-inspected to the satisfaction of the District Inspector.

### **GP-14 FINAL ACCEPTANCE**

The Woodinville Water District Board of Commissioners must approve final acceptance. The Board meets the first and third Tuesdays of a month. The following items must be completed prior to Staff recommendation of a project:

- Construction completed.
- Final inspection and punch list completed.
- All associated permits finalized.
- Asbuilts completed and approved. Asbuilt Mylars and Cad forwarded to the District.
- Easements signed and returned.
- Bill of sale signed and returned.
- Balance due paid (if applicable).

These are the minimal items that are required for full acceptance. Other items required depending on the specific project.

The above items must be completed 10 days prior to a Board Meeting to make the agenda packet.

#### **GP-15 COMPLIANCE WITH PUBLIC AUTHORITY**

The work shall be performed in accordance with regulations of each public authority which may have jurisdiction over the manner and quality of performance of the work. The Developer shall be responsible for investigating and ascertaining the requirements of each public authority. The public shall not be inconvenienced unnecessarily in its use of the public streets. The Developer shall enforce discipline and good order among its employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned. Employees or agents of the Developer who may impair the quality of the construction shall be removed from the work upon the written request of the District.

Construction in public roads or rights-of-way shall be performed in accordance with the standards and requirements of the governmental agency having jurisdiction, and in accordance with requirements of the franchise or permit therefor. The Developer and Contractor shall be responsible to ascertain all permit requirements and to fulfill them in all respects.

The Developer shall be responsible for assuring compliance with the requirements of all permits, including Fire permits, franchises, and licenses and for payment of all associated costs. The Developer shall also comply with County, City or State Correction Notices in the time period noted. Should the Developer's Contractor not respond in a timely manner, the District or District's contractor will perform the work and bill the developer for all costs.

The Developer shall be responsible for coordinating construction activity with all interested parties and agencies.

#### **GP-16 CROSS-CONNECTION CONTROL**

Developer shall comply with all government and District rules and regulations prohibiting cross-connections. Developer shall install and maintain backflow prevention devices as required by the District to isolate the sewer and water systems. In addition, an inspection or test report from a State-approved inspector shall be required as a condition of receiving final acceptance of the extension improvements and utility service from the District for water systems.

For each commercial water service connection, the Developer shall install and furnish an approved Reduced Pressure Backflow Assembly (RPBA) per Water Standard Plan 19 or 20.

For each connection for irrigation, single-family residential fire sprinkler, or single family residential with auxiliary water supply service, the Developer shall install and furnish an approved Double Check Valve Assembly (DCVA) per Water Standard Plan 21 or 22.

For each non-single-family fire sprinkler service connection, the Developer shall install an approved Double Detector Check Valve Assembly (DDCVA) per Water Standard Plan 25.

Refer to the current Woodinville Water District Cross Connection Control Manual to comply with the District's policies and standards.

#### **GP-17 PRECONSTRUCTION CONFERENCE**

A preconstruction meeting shall be held at the District prior to any construction work being performed by the Developer. Prior to the preconstruction meeting, the Developer shall have in his/her possession, construction plans approved by the District, Certificate of Insurance (naming additional insured WWD/District Engineer), Performance Bond (or Assignment of Funds or Cash), construction / inspection fees paid, material submittals, and all required permits.

The person who will be responsible for completion of the work shall be present during the entire preconstruction meeting. The Developer shall bring a representative from each subcontractor that will be performing work on the project to the preconstruction meeting. The Developer shall coordinate the meeting time with the District's Engineering Technician.

If the Developer changes contractors / subcontractors after the preconstruction meeting, the District will determine if an additional preconstruction meeting is warranted. Such additional preconstruction meeting will be at the Developer's expense.

The District reserves the right to request progress meetings should construction issues arise.

#### **GP-18 PRECONSTRUCTION VIDEO**

Preconstruction video, in digital DVD format shall be submitted to the District at the preconstruction meeting.

#### **GP-19 PERMITS**

The Developer shall not hold a preconstruction conference until all necessary permits have been issued by public authority and are in District possession. The District will apply for and obtain the right-of-way permit. The Developer shall obtain all other permits, including fire permits and pay the cost of obtaining all required permits, and shall reimburse the District for all costs incurred by the District for permits, inspection fees and other charges imposed by public

authorities because of the work. The Developer shall be responsible for assuring compliance with the requirements of all permits, franchises and licenses.

#### **GP-20 SURVEY CONTROL**

The Developer shall provide all horizontal control, including property corners and street centerline stakes, for locating and staking the lines and appurtenances and shall provide reasonable and necessary opportunities and facilities for setting points and making measurements, including any easements which require staking. The work shall not commence until the Developer has made provision to establish such points as may be necessary for the work. The work shall be done in strict conformity with such points and instructions. Accuracy of such horizontal control is the sole responsibility of the Developer, and any modification of horizontal location of any facility shall be at the Developer's expense. The Developer shall carefully preserve bench marks, reference points and stakes, and, in case of destruction, shall pay for any resulting expense and shall be responsible for any errors that may be caused by their absence or disturbance.

#### **GP-21 RESTORATION OF IMPROVEMENTS**

All existing improvements removed or disturbed in the course of the work shall be restored to their original condition. A signed release from the affected property owner will be required. As a minimum requirement, all restoration shall be made to the condition of the area prior to construction. All restoration shall be performed at Developer's expense.

#### **GP-22 ACCESS**

Bridging shall be provided across private driveways and roadways during the period when trenches are open to avoid interference with normal traffic flow.

#### **GP-23 SPECIFICATIONS INCORPORATED BY REFERENCE**

Where any specifications are referenced or included by reference herein the latest issue and/or amendment thereto published at the date of approval of the agreement by the District shall be incorporated into the contract as if set forth herein in full. Should a conflict exist between the approved design drawings and any specifications or details referenced herein, the District shall determine which shall prevail. Additional referenced specifications shall include the Woodinville Water District Code, latest editions of WSDOT/APWA Standard Specifications for Road, Bridge, Municipal Construction and the Washington State Department of Ecology Criteria for Sewage Works Design, (the "Orange Book") and Local Jurisdictional Standards.

## **GP-24 USE OF COMPLETED PORTIONS**

The District shall have the right to take possession of and use any completed or partially completed portions of the work, and this shall not be deemed acceptance of any of the work.

## **GP-25 EXISTING UTILITIES OR OBSTRUCTIONS**

### **A. Preparation of Plans by Developer Engineer.**

The District shall provide to the Developer any information it may have regarding existing utilities and obstructions. Such information is not guaranteed but is provided only for such value as it may have. Incomplete or erroneous information shall not be the cause of claim against the District Engineer or the District and shall not relieve the Developer of responsibility for repairing any damage caused to such utilities during performance of the work.

### **B. Notification of Utilities.**

The Developer shall be responsible for contacting all utilities and determining what existing utilities and obstructions may exist. The Developer/ Contractor shall follow the rules of the Washington State dig laws for requesting locates and maintaining utility marks. The Developer shall reimburse the District for damage to the property of the District or damage to property of others for which the District is liable caused by the Developer and for other expenses, including reasonable attorneys' fees and court costs incurred by the District because of such damage. Whenever the Developer fails to repair or restore existing improvements damaged by its contractors within 72 hours of notice, the District may order the work done by others and all costs incurred shall be paid by the Developer; provided that whenever the District determines an emergency exists, it may notify the Developer who shall commence repair or restoration work immediately, or undertake the work itself or through another contractor at the Developer's expense. The Developer shall be responsible for locating water or sewer facilities on projects that have not been accepted by the Water District's Board of Commissioners. To get the locating requests the Developer/ contractor shall join 811 for the full duration of the project.

### **C. Separation from Existing Utilities**

Required separation from other utilities running parallel with the proposed water or sewer installation shall be as follows:

Power, gas, telephone, communication lines shall be 5' horizontal (min.). Power, telephone or other utility poles shall have a min. separation of 8' with bases of the poles 2' lower than the proposed water or sewer. The Developer shall inform the District if this criteria cannot be met.

## **GP-26 SITE MAINTENANCE**

The construction site shall be kept clear during the progress of the work. Before the work shall be considered complete, the Developer shall clean out ditches filled during the work, replace damaged surfacing, remove surplus materials and trash and dispose of brush, repair all damages, and otherwise leave the job in a neat, orderly and workmanlike condition.

The Developer and Contractor shall schedule and control his/her work so as to prevent all hazards to public safety, health and welfare.

- A. The Developer shall ensure that no project related dust, dirt, or construction debris remains on any public roadway. Streets shall be cleaned of dirt and debris on no less than a daily basis, at the end of the day. In addition, the Developer shall supply a roadway sweeper to clean up public roadways which have been burdened by the project's construction debris within 24 hours of verbal or written notice by the District Engineer. Removal shall be performed on a more frequent basis should the District determine that such removal is necessary. The Contractor's sweeper shall meet the requirements of the jurisdictional authority for dust / mud control. Pick-up brooms may be required.
- B. Pedestrian facilities shall be kept free of hazards, obstruction, and continuity shall be maintained at all times unless otherwise approved by the Engineering Department.
- C. On existing streets, two-way traffic shall be maintained at all time unless lane closures or detour plans have been approved in advance by the regulating jurisdiction.
- D. Pedestrian and vehicular access to occupied buildings shall be maintained at all times except where approval from the building owner has been obtained.
- E. Access to mailboxes shall be provided during construction. District owned infrastructure (i.e., manholes, valve boxes, meters, hydrants, etc.) shall be accessible at all times.

## **GP-27 PUBLIC HAZARD OR INCONVENIENCE**

If performance of the work results in hazard or substantial inconvenience to the public, then the District may correct the same, and the Developer shall reimburse the District for expense incurred. The Developer shall also reimburse the District for the expense incurred in complying with any order of public authority lawfully made with respect to the work during the performance of the work or within two years after acceptance of the same.

## **GP-28 PROTECTION OF WORK AND PROPERTY**

### **A. Property**

The Contractor shall protect and preserve from damage, interference and destruction all private and public property on or in the vicinity of the work. If such property is damaged or destroyed or its use interfered with by the Contractor or his/her agents, it shall be restored immediately to its former condition or better by the Contractor at his/her expense and such interference terminated. A signed release from the affected property owner will be required.

### **B. Utilities**

The Contractor shall protect from damage private and public utilities, including telephone and cable television lines, power lines, gas lines, sewer, water and storm drain lines, railroad tracks and appurtenances, highway lighting and signal systems, and similar facilities. Before beginning any excavation, the Contractor shall provide notice of commencement to all owners of underground facilities through the one number locator service, phone number 811, if available; if not the Contractor shall give notice to all individual utility owners. Such notice shall be given not less than 2 or more than 10 business days before the scheduled date of excavation.

## **GP-29 ROYALTIES AND PATENTS**

Developers shall pay all royalties and license fees and defend all suits or claims for infringement of any patent rights and shall save the District harmless on account thereof, except the District shall be responsible for all such loss if a particular process or the product of a particular manufacturer is specified by the District, unless either the Developer or its Contractor has information that the process or article is an infringement of a patent and fails to promptly notify the District thereof in writing.

### **GP-30 OTHER WORK**

The District has the right to let contracts for other work which may affect the work hereunder. Persons performing such other work shall be afforded reasonable opportunity by the Developer herein for introduction and storage of their materials and execution of their work. The work hereunder and such other work shall be properly coordinated and connected.

### **GP-31 CONTRACTORS**

Only contractors licensed and bonded with the State of Washington shall install water and/or sewer extensions; a copy of the license shall be provided to the District. Developer shall submit in writing not less than fifteen (15) days before the preconstruction conference, the name(s), address(es) and telephone number(s) of all contractors and subcontractors the Developer proposes to use in doing the work. If the District disapproves, then it shall notify Developer within ten (10) days. Nothing contained in this agreement shall create any contractual rights between the District and any person or firm employed to do the work.

### **GP-32 TRAFFIC MAINTENANCE AND PROTECTION**

All work shall be performed with due regard for the safety and convenience of the public and so that interference with automotive and pedestrian traffic will be minimized. Flagging personnel, barricades, signs and traffic control shall be furnished as required by appropriate agency. Emergency vehicles shall be provided access at all times. The Developer/Contractor shall coordinate any traffic light or signal outages for off-site project work with the appropriate responsible jurisdiction.

### **GP-33 SANITATION**

Necessary sanitation convenience, properly secluded from public observation, shall be provided and maintained during the performance of the work as required by appropriate agency.

### **GP-34 SAFETY**

The Developer and Developer's Contractor will be solely and completely responsible for conditions of the job site, including safety of all persons and property during the performance of the work, and for compliance with all federal, state and local safety laws and regulations. This requirement will apply continuously and will not be limited to normal working hours.

The right of the District or the District Engineer to conduct construction review of the Contractor's performance or inspection of the work or the site is not intended to include review of the adequacy of the Contractor's safety measures in, on or near the construction site.



The Contractor is required to provide a competent person(s) trained to identify existing or predictable hazards related to trench safety, soil conditions, and shoring requirements in accordance with WAC 296-155(N). Representatives of the District shall not be required to perform the role of competent person for Developer projects. No workers shall enter a trench or other excavation four feet or more in depth without a trench safety system in place.

#### **GP-35 CONFINEMENT OF CONTRACTOR'S OPERATIONS**

The Developer is responsible to ensure that the Contractor confines construction activities within the property of the Developer and the limits of easements and construction permits outside of the Developer's property. The Developer is responsible to ensure that all work on easements and permit areas outside the Developer's property shall be performed in strict compliance with the provisions of the easement or permit with which provisions the Contractor shall be familiar. Damage to property or persons from any encroachment beyond these limits shall be the responsibility of the Developer.

## **GP-36 TAPS AND CUT-INS**

### **A. Sewer**

Connections to existing sewer mains shall only be made after notification to, and approval by, the District.

### **B. Water**

All taps and cut-ins to existing water mains shall be made only after notification of and approval by, the District. If extensions require meters three inches or larger, then meter installation, including valves, piping, vaults, drain lines, meters, etc. shall be performed by the Developer's contractor conforming to District standards. The Developer shall pay the meter test fee established by the District and shall sign a District meter application form and pay all fees and charges due at that time. Large Meters installed during construction shall be locked off until project acceptance.

## **GP-37 RECORDING**

The District will not approve the Plat for recording until all of the underground portion of the water and/or sewer facilities have been installed, tested and in the case of sewers, video-inspected; and a copy of the final plat to be recorded is delivered to the District for review of adequacy of easements. A copy of the final recorded plat and all necessary recorded easements shall be delivered to the District before service connections will be allowed to the extension.

## **GP-38 COST OF WATER**

Developer shall pay the cost of water furnished by the District except for a reasonable amount of water without cost for the initial testing, pigging, flushing and purifying of the system. All water used in filling flushing and testing shall be metered and monitored by the District's Inspector. The Developer shall pay for water used beyond the initial fill and flush.

Construction water shall be furnished at District's regular rates through a temporary meter rented to Developer at rates established by District resolution. The contractor shall e-mail in monthly reads on the meter. A state approved double check valve shall always be used at the source of the water. The District shall designate the allowable connection point. If a fire hydrant is approved for connection point, only one person who is trained in the proper operation shall operate the fire hydrant, Return of the meter(s) is a condition of acceptance.

## **GP-39 CONFINED SPACE ENTRY**

Developer shall provide for proper testing of the air in all confined spaces such as manholes and vaults prior to entry. Developer shall be responsible for proper ventilation at all times while personnel are inside any confined space. The required safety rescue gear shall also be on site at all times, in accordance with federal, state and local confined space entry requirements (with the most stringent requirement prevailing).

#### **GP-40 SHORING**

The Developer shall provide, place and maintain responsibility for shoring, sheeting, bracing, sloping or otherwise supporting the sides of trenches and excavations, including embankments by a means of sufficient strength to provide safe working conditions in the excavation. In addition, shoring systems shall protect adjacent property and improvements, utilities, pavement, etc. Such shoring and associated responsibilities shall be in accordance with federal, state and local safety requirements (with the most stringent requirement prevailing).

Removal of any or all shoring systems from the trench shall be accomplished in such a manner as to fulfill all of the above requirements and shall also be accomplished in such a manner as to prevent any damage to the work. Damages resulting from improper shoring or from failure to shore shall be the sole responsibility of the Developer.

#### **GP-41 TEMPORARY EROSION CONTROL**

Developer shall be responsible for installation and maintenance of temporary erosion control facilities on the project site as well as for work in the right-of-way. If required by the right-of-way permit, the Developer shall prepare and submit three copies of a site-specific temporary erosion control plan for review and approval by the agency having right-of-way jurisdiction.

Temporary erosion control shall conform to the appropriate regulatory agency's requirements. Sedimentation control facilities must be installed and operational prior to construction to ensure that sediment laden water does not enter the natural drainage system. Sediment facilities shall be maintained in a satisfactory condition until such time that clearing and/or construction is completed and potential for erosion has passed. Developer shall be responsible to clean, repair and restore existing drainage facilities to their pre-construction condition prior to project acceptance.

##### **A. EROSION CONTROL**

Erosion control provisions shall meet or exceed the requirements of the jurisdiction in which the project is located (King County or the City of Woodinville). The Contractor shall be responsible for the design and installation of all siltation control facilities.

When provisions are specified and shown on the drawings, they are the minimum requirements.

The Contractor shall not permit any sediment laden waters to enter drainage facilities.

No pavement cutting allowed in rainy weather. Saw cut slurry shall be vacuumed immediately following pavement or concrete saw cutting.

As construction progresses and seasonal conditions dictate, additional erosion control facilities may be required. It shall be the responsibility of the Contractor to address new conditions that may be created and to provide additional facilities over and above the minimum requirements as may be required.

#### B. SETTLING TANKS

Settling tanks shall be provided on site to desilt all stormwater or water pumped from excavations. If additional siltation control is required, check dams or silt fences may be placed in ditches receiving stormwater from areas disturbed by construction.

#### C. FILTER FABRIC FENCES

Filter fabric fence shall consist of filter fabric fastened to wire fabric with staples or wire rings. Wire shall be fastened to posts set at 4-foot centers.

Where possible, fabric shall be buried into ground in a 4-inch by 4-inch square trench with the fabric extending down the bottom and up the far side to prevent silt from washing under fabric. Trench shall be backfilled with native material or washed gravel. In areas where there is not enough room to bury the filter fabric fence, or as directed, sandbags shall be installed continuously along the edge to hold the fence in place.

Fence shall be located to catch silt and prevent discharge to drainage courses. Installation of filter fabric fences parallel to ditches may be required to separate the work zone from the ditch.

#### D. CATCH BASIN PROTECTION

Filter fabric protection shall be provided at all catch basins within the work area. Filter fabric "sock" type of catch basin inserts shall be provided and secured to the catch basin grate.

Sediment shall be removed immediately and disposed off site. Sediment shall not be removed with water.

#### E. CHECK DAMS

Check dams shall be installed in drainage ditches to catch silt. Contractor shall install check dams in dry drainage ditches using 2- to 4-inch rocks.

#### F. JUTE MATTING

Seed and fertilizer shall be placed prior to placing of matting.

Jute matting shall be unrolled parallel to the flow of water. Where more than 1 strip of jute matting is required to cover the given area, it shall overlap the adjacent mat a minimum of 4 inches. The ends of matting shall overlap at least 6 inches with the upgrade section on top.

The up-slope end of each strip of matting shall be staked and buried in a 6-inch deep trench with the soil firmly tamped against the mat. Three stakes per width of matting (1 stake at each overlap) shall be driven below the finish ground line prior to backfilling of the trench.

The Engineer may require that any other edge exposed to more than normal flow of water or strong prevailing winds be staked and buried in a similar manner.

Check-slots shall be placed between the ends of strips by placing a tight fold of the matting at least 6 inches vertically into the soil. These shall be tamped and stapled the same as upslope ends. Check-slots must be spaced so that one check-slot or one end occurs within each 50 feet of slope.

Edges of matting shall be buried around the edges of catch basins and other structures as herein described. Matting must be spread evenly and smoothly and in contact with the soil at all points.

Matting shall be held in place by approved wire staples, pins, spikes or wooden stakes driven vertically into the soil. Matting shall be fastened at intervals not more than 3 feet apart in 3 rows for each strip of matting, with 1 row along each edge and 1 row alternately spaced in the middle. All ends of the matting and check slots shall be fastened at 6-inch intervals across their width. Length of fastening devices shall be sufficient to securely anchor matting against the soil and driven flush with the finished grade.

#### G. CLEAR PLASTIC COVERING

Clear plastic covering shall be installed on erodible embankment slopes as shown in the plans or as designated by the Engineer.

The clear plastic covering shall be installed immediately after completion of the application of roadside seeding.

The Contractor shall maintain the cover tightly in place by using sandbags. All seams shall be taped or weighted down full length. There shall be at least a 12-inch overlap of all seams.

The Contractor shall be responsible to immediately repair all damaged areas.

#### H. EXISTING DRAINAGE FACILITIES

Should a storm sewer, culvert or ditch become blocked or have its capacity restricted due to discharge siltation from Contractor's operations, the Contractor shall make arrangements with the jurisdictional agency for the cleaning of the facility at no additional expense to the Owner.

I. DRAINAGE DIVERSION

Contractor shall divert the surface runoff water around the site as may be required.

Ditch interceptors shall be installed in a ditch with water prior to installing the service line or fire hydrant lateral.

After construction of service or fire hydrant lateral, ditch shall be restored with sod and jute mat.

Ditch interceptor shall remain in place until grass in ditch is established.

Drainage shall be restored to condition existing prior to construction unless otherwise shown on the Drawings.

J. ROADWAY CLEANING

Contractor shall clean the roadways at the end of each day's operation with a power pick-up broom.

K. SEED

The seed mixture for restoration of unimproved areas shall have the following composition, proportion and quality:

<u>Kind and Variety of % by Seed in Mixture</u>	<u>Min. % of Weight</u>	<u>Min. % of PureSeed</u>	<u>Germination</u>
Colonial Bent Grass: (Highland or Astoria)	10%	9.8%	85%
Creeping Red Fescue: (Illahee Rainier or Pennlawn)	40%	39.2%	90%
Perennial Rye Grass:	30%	29.4%	90%
White Clover: (Preinoculated)	20%	19.6%	90%
Maximum Percentage of Weed Seed:		1.0%	
Maximum Inert and Other Crops:		1.0%	

Seed mixture for restoration of lawn areas shall match closely to the existing grass composition. Analysis of content shall be determined by qualified personnel. As an alternative, sod may be cut out, removed and replaced. Sod shall be watered as necessary and shall be replaced within 1 week.

Refer to the latest edition of King County Surface Water Design Manual, Appendix D, Section D.3.2.6 for alternative allowable seed mixtures for specific surface conditions.

#### L. FERTILIZER

The fertilizer shall be a standard commercial grade of inorganic fertilizer with 10/20/20 mix of nitrate, phosphate and potash, used at a rate of 90 pounds per acre. Slow-release fertilizers are preferred. Disturbed areas within 200 feet of water bodies and wetlands must use slow-release low-phosphorous fertilizer.

#### M. MULCH

Wood cellulose fiber mulch shall be specially processed wood fiber containing no growth or germination inhibiting factors and shall be dyed a suitable color to facilitate inspection of the placement of the material. It shall be manufactured in such a manner that after addition and agitation in slurry tanks with water, the fibers in the material will become uniformly suspended to form a homogenous slurry. When hydraulically sprayed on the ground, the material shall allow the absorption and percolation of moisture. Refer to the latest edition of the King County Surface Water Design Manual, Appendix D, for additional requirements for mulching.

### **GP-42 RESTORATION OF DISTURBED AREAS**

Restoration of public and private improvements shall be performed by experienced contractors or by employees of the Developer who are qualified in this type of work.

The Developer shall be responsible to maintain all roadway areas until the permanent repair is accomplished.

The Developer shall limit his construction time on each easement to the very minimum possible, including the time required for installation and testing. Restoration work shall follow immediately after pipe testing with due allowance for weather and season of year.

#### Asphalt Pavement

The existing asphalt concrete shall be cut on a neat line by saw cutting or similar approved tool prior to excavation. Before the end of each day, the trench shall be backfilled and compacted, and a temporary hot mix patch shall be placed and maintained in good condition until replaced.

Immediately prior to permanent resurfacing of bituminous surfaced roads, the edges shall be retrimmed 12 inches wider than each side of the excavation "T" cut, or as required by the local jurisdiction, with straight vertical edges free from irregularities and the temporary patch shall be removed. Edges of the trimmed surfacing shall be thoroughly tacked with emulsified asphalt and asphalt concrete shall then be placed to a minimum depth of two inches and compacted to the



grade of the original surface. All asphalt joints shall be sealed with an approved sealer, unless asphalt overlay is planned prior to winter season.

### Crushed Surfacing

The existing gravel roadway shall be restored by grading the surface to a uniform grade to the width of the roadway prior to construction.

Where ditch sections are disturbed during construction, the ditch shall be restored to the same cross sections as existed prior to construction and shall be restored prior to placement of the crushed surfacing.

The Developer shall spread the crushed surfacing as each load is placed and shall compact the crushed surfacing after the material has been spread.

### Landscaped and Improved Areas

All improvements and landscaping within the construction area which are damaged, destroyed or have the use thereof interfered with due to the operation of the Developer shall be immediately restored to its former condition by the Developer at his own expense, except where noted otherwise. Notice should be given to the property owner along the route of construction by the Developer advising them of the methods he will use to preserve and restore the improvements.

### Unimproved Areas

All areas disturbed by this construction for which no other restoration is specified, and for which there were no private improvements existing prior to construction, shall be seeded for erosion control.

Seeding shall not be done during windy weather or when the ground is frozen, excessively wet, or otherwise untillable. Seed shall be placed at a minimum rate of 120 pounds per acre.

Seeding, fertilizing and mulching shall be installed using an approved type hydroseeder. If hand seeding is used with prior approval, evidence of vigorous growth, in the opinion of the District, will be required prior to final acceptance.

Fertilizer shall be applied in accordance with the procedures and requirements for seeding at a minimum rate of 90 pounds per acre.

Wood cellulose fiber mulch shall be applied in accordance with the procedures and requirements for seeding at a minimum rate of 1000 to 1500 pounds per acre.

### **GP-43 CLEARING AND GRUBBING**

Clearing, grubbing, and grading where required shall be performed within the public right of way or easements as permitted by the governing agencies or property owners. Construction work in forested and native unimproved areas shall be conducted with extra precaution. Construction activity, stored materials and piles of earth shall not extend beyond the designated work limits. Trees and foliage which are not to be removed in construction shall be protected. Finish grades after completion shall match original grades, sloped to prevent ponding. Remove any surplus dirt or over burden piled around trees to prevent future damage; remove such material by hand if necessary. Clear and fell trees with sufficient care to prevent damage.

All trees which are removed by the Developer shall become the property of the Developer and shall become the Developer's responsibility to remove from the site, unless otherwise noted in the easement stipulations or elsewhere in these specifications. Removal of clearing and grubbing debris shall be subject to the approval of the District and shall in no way constitute a hazard to the continuous operation of any existing utilities.

All clearing and grubbing debris shall be disposed of by hauling to a site selected and obtained by the Developer and approved by King County.

The Developer shall apply for and obtain Grading Permits from the appropriate jurisdiction prior to any work which may require such approvals.

### **GP-44 GUARANTEES, BONDS AND INSURANCE**

Guarantees in the form of performance and maintenance bonds and insurance will be required for all District improvements.

Acceptable methods of performance guarantees will be as follows:

1. Performance Bond
2. Assignment of Funds
3. Cash Set Aside Agreement
4. Cash Deposit
5. Irrevocable Standby Letter of Credit

Standard forms of the above referenced documents acceptable to the District will be available from the Engineering Section. Changes or substitutions for the above noted forms will require advance review and approval by the District Attorney. The Developer will be responsible for all legal expenses incurred by the review. A written request for deviation to the standard form may be presented to the District Engineer.

The Developer shall provide a detailed cost of construction estimate to the District, prepared by a civil engineer licensed within the State of Washington, for the cost of improvements based on the approved plans. The estimate shall itemize descriptions, quantities and unit costs. The submitted data will be reviewed by the Engineering Section for use in establishing the bond amounts. Generally the bond amount will equal one hundred and fifty percent (150%) of the approved engineer's cost of construction estimate. The estimate should be submitted as early as possible during the review process to allow adequate review time and to avoid delays in the permit issuance process.

#### **A. Performance Bonds**

Performance bonds will be required for all improvements located in the public right-of-ways and offsite easements for all utilities as detailed on the approved plans. Following is a summary of typical bond requirements:

##### Utilities (public)

Estimated cost of improvements calculated by the Engineers estimate or contractor's bid price prior to issuance of construction permits. (\$1,000 minimum).

The initial guarantee and subsequent extensions will be limited to two year increments. If time extensions are approved, the bond amount shall be revised to reflect inflation and/or other cost impacts.

Before the District will release the performance bond or surety, the Developer shall:

- Record all easements with the County.
- Request a final inspection and complete and obtain approval on corrections as identified by the District inspector.
- Provide mylar as-builts of the improvements for the District Inspector to review. Before any as-builts will be accepted by the District, the Developer shall make all modifications to the as-builts as directed by the District Inspector. See Section GP-7
- Post a Maintenance Bond or other surety accepted by the District.

##### Paving Bonds

A Paving Bond will be required if the project, with the exception of final paving and adjustment of valve boxes and other appurtenances to final grade is ready for final acceptance by the District.

In such cases, the District shall allow the Developer to furnish a Paving Bond in the minimum amount of \$2,000, or the estimated cost for adjusting all valve boxes and appurtenances to final grade once paving is completed.

Paving Bonds will be permitted only for those portions of the improvements within the Plat Boundaries, and not those within dedicated public right-of-ways.

Methods of posting of the Paving Bond shall be the same as for the Performance Bond.

Upon completion of final paving, and the District Engineer's approval of the adjustment of the utilities to final grade, the Paving Bond shall be released and converted to a 2-year Maintenance Paving Bond.

**B. Maintenance Bonds**

Maintenance Bonds will be required at the time of final acceptance of the constructed improvements required by the Developer Extension. The maintenance bond amount will normally be equal to ten percent (10%) of the documented final cost of the improvements. The maintenance bond must be in place prior to District release of the performance bond. Methods of posting maintenance bond shall be the same as for performance bond and shall be for two years.

**C. Insurance**

The Developer shall procure from insurance companies which have an A.M. Best rating of "A VII" or better commercial general liability and automobile liability insurance against liability to the Developer, the District, the engineer and the District employees for negligent injury to person or property resulting from performance, supervision, or inspection of the work. The District and the District's Engineer shall be named as an additional insured under such policy.

Proof of the existence of such insurance shall be provided to the District in a form acceptable to the District. The minimum limits of coverage shall be as follows:

General Aggregate	\$1,000,000
Products – Comp/OPS Aggregate	1,000,000
Personal Injury	1,000,000
Each Occurrence	1,000,000
Automobile Liability	1,000,000

The District shall be given at least 45 days written notice of cancellation, non-renewal, material reduction or modification of coverage. Such notice shall be by "certified mail".

The coverage as provided by the Developer's insurance policies are to be primary to any insurance maintained by the District, except with respect to losses attributable to the sole negligence of the District. Any insurances that

might cover this Agreement which are maintained by the District shall be in excess of the Developer's insurance and shall not contribute with it.

The Developer's insurance policy shall protect each insured in the same manner as though a separate policy had been issued to each. The inclusion of more than one insured shall not affect the rights of any insured with respect to any claim, suit or judgment made or brought by or for any other insured or by or for any employee of any other insured.

The general aggregate provisions of the Developer's insurance policy shall be amended to show that the general aggregate limit of the policies apply separately to this project.

The Developer's insurance policy shall not contain a deductible or self-insured retentions in excess of \$10,000 unless approved by the District.

The Developer's insurance policies shall contain a provision that the District has no obligation to report events which might give rise to a claim until a claim has been filed with the District's Board of Commissioners.

Providing coverages in the stated amounts shall not be construed to relieve the Developer from liability in excess of such limits.

## **GP-45 PLAN REVIEW**

### **A. Format and Required Data**

1. All plans for development project shall also be submitted with a digital file E-mailed to the Engineering Department, prior to issuance of permits. The drawings shall be in a file format which can be read by the District's CAD system. Prior to submittal, the Developer shall contact the Engineering Department to verify the current AutoCAD version.
2. All civil engineering plans for utility systems shall be prepared in a plan/profile format with sheets printed with the plan view in the upper half of the sheet and the profile in the lower half of the sheet. For all Capital Improvement Projects, all plans shall be prepared on standard District mylar sheets (or photo mylars of these sheets). The standard sheet size is "D" size (22 inches by 34 inches) and is available in AutoCAD format from the District.
3. Depending upon drawing complexity, more than one drawing may be submitted. Combined water and sewer sheets will not be accepted. If either plan set (water or sewer) contains two or more sheets, not including detail sheets, provide a cover sheet. Do not include a cover sheet if less than two sheets.

4. Water and Sewer Plan and Profile sheets. The plan shall be over the matching profile in all cases. Plans shall be prepared with all utilities, both new and existing, shown on all sets of plans. For example, on the sanitary sewer plans, the water and storm drains shall be shown half toned with the sanitary sewer portions being heavily highlighted. Other utilities shall be shown in profile views where crossings occur. The crown elevation of the lower utility and the invert of the upper utility shall be indicated. Provide a legend of existing and proposed improvements on the first sheet of each drawing type (i.e.: water, sanitary sewer). Plan views shall show:

- Right-of-way lines,
- Centerline of right-of-way,
- Lot lines,
- Lot numbers,
- Street names (identify if public or private street),
- All easements,
- All improvements – existing or proposed, Including the “Dry Utility” layouts
- Current District sewer and water general notes,
- Contours shall be shown at 2-foot intervals with 10-foot contours in bold and elevations labeled. Contours shall extend 25 feet beyond property lines.
- Finish Floor Elevations

Profiles shall show:

- All existing finished floor elevations and all critical and specified future minimum sewer outlet elevations.
- All utility crossings, including storm, shall be shown on the profile view at crossings. The crown elevation of the lower utility and the invert of the upper utility shall be indicated.
- Unusual subsurface conditions and the ground water table identified in applicable geotechnical reports(s) shall be shown on the profile view.

5. An overall plan sheet of Water or Sewer shall be provided for clarity and shall include a sheet index.
6. Add an overall easement plan if more than (2) easements will be required.
7. All utilities crossing the proposed water or sewer shall have a circle at the location and crossing information shown on the plans. 12” minimum clearance required for crossing utilities.

8. Whenever possible, use notes specifying District Standard Detail numbers for common items such as manholes, restrictors, fire hydrant assemblies, etc.
9. Show complete data for utility locations (new and existing), curb elevations, street stationing, street widths, existing adjacent improvement, elevations of existing street improvements, and utilities, etc.
10. All existing and proposed improvements shall be located and dimensioned with datum to King County or Cities of Bothel, Kirkland Redmond and Woodinville survey monuments, monument lines or street centerlines. Dimensioning must be completed by stationing and offset from these control lines.
11. All elevations and grades on development or CIP plans shall be to vertical datum: D\_North\_American\_1983\_HARN; and horizontal datum: NAD\_1983\_HARN\_StatePlane\_Washington\_North\_FIPS\_4601\_Feet
12. For development projects, a summary of quantities for all work within the public right-of-way or in easements granted to the District shall be listed on the title sheet or on the first sheet of all plans or sets of plans. The following list can be used as a guideline for the items to be listed but is to be supplemented as necessary for a particular project.

Ductile iron water main (size)	Linear feet
Gate valves (size)	Each
Butterfly valves (size)	Each
Concrete, PVC, HDPE or DIP sewer main (size)	Linear feet
Concrete, PVC, HDPE or DIP side sewer (size)	Linear feet
Sewer manholes (type)	Each
Fire Hydrant Assemblies	Each
Water main blow-offs	Each
Water main air-vacs	Each
Water meters (size)	Each

13. Match lines with matched sheet number shall be provided where plan and profile is drawn on two or more sheets. Where plan is shown on three or more sheets, include a total site plan index map at scale 1"=100' or 1"=200' to cross reference portions of the project with their corresponding plan sheet location.
14. All division or phase lines shall be indicated showing proposed limits of construction.

15. Existing and proposed topography contours shall cover the entire site and minimum of 25 feet beyond the site boundary. Existing topography should be screened. Topography contours shall be shown at two foot intervals with 10-foot contours in bold and elevations labeled. If topographic mapping and property boundary lines are provided in a separate base topographic and property line drawing, this drawing shall contain the Professional Land Surveyor's professional stamp and signature. If topographic and property line information is not provided in a separate base topographic and property line drawing, all drawings containing topographic and property line information shall contain the PLS professional stamp and signature in addition to the Engineer's stamp and signature.
16. Show and clearly label property lines (with distances and bearings), right-of-way lines, sensitive areas and set backs, and all existing easements with their recording numbers, and proposed easements. Show existing and proposed building footprints.
17. Label all streets by City or County names and/or numbers.
18. Plans shall include a key for abbreviations and a legend for symbols where such are used.
19. Drawings shall include the District name, Developer and Engineering firm who prepared the drawings, Owner, Surveyor and other utilities and shall include contact information for each.
20. An approval signature block for District signature located in the lower right corner of the sheet.
21. Provide District Drawing Number (to be assigned by the Engineering Department) in lower right corner of each sheet.

## **B. Drafting Standards**

When construction plans for utilities including water and sewer, improvements are prepared and are to be constructed within the District or service area, the project plans must meet the standards and requirements shown below.

1. The Professional Engineer's seal, signature, address and phone number shall be placed in the title block area in the lower right portion of each sheet.
2. Scales: Use horizontal scale of 1"=20' or 1"=30'; and vertical scale of 1"=5' unless otherwise required or approved by the Engineering Section. (Note: complex utility locations may require a larger scale plan to show the necessary detail.)



3. Draw the plan so the North Arrow points to the right or to the top of the sheet.
4. Control line distances and features shall, at no point, have an error greater than 0.2 feet (scaled distance) on a 20-scale drawing.
5. Use the standard Washington State Chapter of the APWA symbols as supplemented by current District Standard Details.

### **C. Cad Standards**

Woodinville Water District Engineering Department has prepared the following set of cad standards to give uniformity to the look, organization and content of AutoCad digital files. Attempt has been made to accommodate earlier versions of AutoCad but development was based on Map 2010 version.

1. All base maps will be developed with the horizontal and vertical datums referenced previously and use standard Auto cad linetypes and fonts. Base map information shall be screened back (per WWD.stb styles) to improve drawing clarity.
2. Woodinville Water District (WWD) Standard title blocks shall be used. The standard title blocks are in .dwt drawing template format and contain standard layering, Layout setups (paper space), Linetype scales and other variables.
3. Use Woodinville Water District Standard Water and sewer symbols, fonts and linetypes.
4. Model Space/ Paper Space. WWD standard title blocks have layouts tabs setup for 20 and 30 scale plan & profiles. All real world drawing elements including notes and dimensions, shall be in model space. Paper Space shall contain Title blocks and information, general notes, etc.
5. Plotting- WWD.stb pen style table shall be used for plotting. Drawing file available to view various plot styles.
6. Drawing files shall be e-transmitted (standard feature under the File menu) when drawings are approved for construction and final approved As-Built Record Drawing.
7. Contact the Engineering Department for an e-transmitted package containing Standard drawings, etc referenced above.

### **D. Required Drawings**

The number of plan sets specified on the Developer Extension Agreement are required at the time of submittal of the permit application. At a minimum, the following items shall be included in the plan set. Additional elements may be

required depending on project requirements. The 811 (“Dial-a-Dig” telephone number shall be provided on each sheet.

1. Title Sheet with Vicinity Map, Index Map (if appropriate),
2. Overall plan with sheet index
3. Overall Easement Plan if more than (2) easements.
  
4. Site Topographic and Horizontal Control Plan,
5. Temporary Erosion & Sediment Control Plan,
6. Sanitary sewer plan/profile,
7. Water system plan/profile,
8. Pigging plan for the Water System.
9. Composite Utility Plan,
10. Preliminary Traffic Control Plan and/or Detour Route,
11. Details and Specifications for the improvements, including duplicate copies of all standard drawings referenced on the plan and in the notes.

**a. Title Sheet**

Each submittal shall contain the following project information on the title sheet or first sheet:

1. Title: Project name
2. Table of contents
3. Vicinity Map (Scale sufficient to cover project limits on one sheet or 1”=200’, whichever is greater).
4. General description of site, including Quarter Section Township and Range.
5. Name and phone number of engineering firm preparing plans.
6. Index map to sheets, as appropriate.
7. WWD Developer Extension number.
8. Appropriate quantities.

9. Name and phone number of all utility providers (Contractor must update phone numbers).

(Bill to add sheet requirements for Overall Plan with Sheet Index, Overall Easement plan and Pigging plan)

**b. Site Topography & Horizontal Control Plan**

Show all existing underground, surface improvements and topography in proximity to the project. The information must be shown for the full width of the right-of-way or the easement and for a sufficient distance on either side of the right-of-way or easement to show possible impacts on adjacent properties and/or the relationship to related facilities (typically 200'). Information on existing surface and underground District facilities may be obtained from the Engineering Section. Other utility information may be obtained from the respective utility owners (i.e. PSE, GTE, etc.).

1. Label each section or detail in the plans. Section and detail labels should be shown on both the plan and the section detail, and should include assigned section/detail numbers and plan sheet location number.
2. Sewer and Water Improvements: Provide profiles of all proposed sewer and water lines. Show existing underground improvements within ten (10) feet of where they cross or connect to the new improvements. Label all private facilities.
3. Grades: All profile and cross sections must show the proposed as well as the existing grade. Utility plans shall indicate invert elevations of upper utility and crown elevation of lower utility at all crossing points on profile view.
4. All water mains are required to be within utility easements granted to the District in a form acceptable to the District. The easement width will vary according to pipe diameter and depth, but shall not be less than 15 feet wide. There shall be sufficient area included for all necessary appurtenances such as hydrants, valves, meters, blocking, etc. Easements shall be shown on the water main plan sheets.
5. Public Sanitary sewers not located within street right-of-way shall be within easements granted to the District in a form acceptable to the District. The easement widths will vary according to pipe diameter and depth but shall not be less than

20 feet wide or twice the depth, whichever is greater. Easements shall be shown on the sanitary sewer plan sheets.

6. Stationing shall be provided on all centerlines and reference lines. All intersection street centerlines, utility crossings, right-of-way lines, property lines, railroad crossings, drainage structures and signal and light poles shall be referenced by station and offset. Side Sewers shall be stationed from the center of the downstream manhole.

**c. Temporary Erosion and Sediment Control Plan (TESCP)**

The TESCP should show the following:

1. Existing and proposed topography.
2. Clearing limits.
3. Specify the construction sequence.
4. Provide all necessary details to illustrate the intent of the TESCP.
5. Show interim catch basin sedimentation protection.
6. Specify areas to receive special treatment such as jute matting, rock lining, sod, mulching and seeding.
7. Provide all necessary dimensioning and details for sediment traps, berms, filtering devices, rock check dams, silt fabric fences, and other design elements.
8. In addition, the plan shall comply with the regulations of the jurisdiction that controls surface and storm water design, (King County, City of Woodinville, City of Bothell, City of Kirkland etc.).

**d. Sanitary Sewer Plan/Profile**

1. Label all manholes and clean outs in sequential number. Label rim and invert elevations and manhole size and type.
2. Include flow direction arrows on all sanitary sewer lines.
3. Label pipe size, length, material and slope in profile.
4. Show all stub-out locations for future connections and side sewer connection stubs. Commercial side sewers and

Multifamily side sewers shall connect to a manhole. Single family side sewers shall tee off the mainline unless at the end of a main where they shall connect to a Manhole.

5. Maximum length for a side sewer shall be 150lf.
6. Standard Sanitary Sewer notes required.

**e. Water System Plan/Profile**

1. Show “before” and “after” connection details for water main connections. Refer to District standard details for samples of connection details.
2. For utility crossings which involve vertical offsets in water line, provide detail showing the crossing, including vertical bends, blocking, shackle rods, and pipe invert elevations.
3. Call out types of fitting connections (MJ=mechanical joints, FL=flanged, PE=plain end, RJ=restrained joint).
4. Hydrants shall be free and clear of all structures, landscaping or other interferences for a minimum of five feet of clearance around the hydrant.
5. Show District details for the following items:
  - Fire Hydrants,
  - Appropriately sized water services,
  - Water service meters and master meters,
  - Temporary or permanent blow-off, when used,
  - All valves in the distribution system,
  - Air-vacuum release valve, when used,
  - All backflow prevention assemblies,
  - Details of water main connections. Note that the correct details(s) should be selected, and modified to suit the project conditions.
  - Vaulted appurtenances – i.e. control valves, fittings, etc.: piping systems.
6. Plans for water mains located in easements over, on, and across private property shall contain the following information and standards:
  - Locate water mains in driving lanes (not under parking stalls).
  - Show locations of all hydrants (proposed and existing) within 300 feet of site.

- Show location and size of cross-connection control assembly (Note: could be a double-check detector assembly (DCDA) or a Reduced Pressure Backflow Assembly (RPBA) for fire sprinkler vault or enclosure.) Also, show location of fire department connections, direction of pumper ports, and distance from curb.
- Show size and location of domestic water meters and of irrigation water meters and the associated cross-connection control assembly.
- Show location of carports, dumpsters, and mailboxes.
- Show primary hydrant within 150 feet of structure, and no closer than 50 feet.
- Hydrant service shall be 8-inch diameter if over 50 feet from main.

7. Standard Water notes required.

**f. Composite Utility Plan**

Include a composite utility plan sheet showing existing utilities (half tone) and all new utilities. The composite utility plans shall show all underground utilities and all associated surface improvements that include the locations of the sewer and storm drain laterals, water meters, fire hydrants, street lighting standards, traffic signal poles, mail boxes, transformers, telephone risers, utility vaults, etc., to establish clearances. Underground utilities of concern include sewer, storm drain, water, power, cable TV, telephone, street lighting, traffic signal wiring, gas, and overhead electric/telephone/cable facilities. Show locations of relocated overhead utilities and poles where applicable.

**g. Traffic Control and Detour Plan**

1. General

Traffic control for all projects shall comply with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). The Contractor shall be responsible to plan, furnish and maintain all required labor and materials necessary to protect the public and workers during the course of construction. The Contractor shall submit a proposed traffic control plan for review and approval prior to initiating the work.

The Contractor shall conduct his/her operations so as to offer the least possible obstruction and inconvenience to the public, and shall have under construction no greater length or amount of work than he can prosecute properly with regard to the right of the public. The Contractor shall not open up sections of the

work and leave them unfinished, but shall finish the work as he goes insofar as practicable.

Unless otherwise approved in writing by the District General Manager, all public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible. The Contractor shall keep existing roads and streets adjacent to or within the limits of the project open to and maintained in a good and safe condition for traffic at all times. The contractor shall remove any deposits or debris and shall repair any damage resulting from his/her operations. Construction shall be conducted so as to cause as little inconvenience as possible to abutting property owners. Convenient access to driveways, houses and buildings along the line of work shall be maintained. Emergency access shall be maintained to all residences and businesses at all times unless special arrangements have been prepared by the Contractor and approved by the Fire Chief prior to starting work.

2. Detours, Land and Street Closures

Approval must be received from the appropriate jurisdiction (King County, City of Woodinville), in advance for all proposed detours, lane and street closures. A formal traffic control plan complying with the MUTCD shall be submitted for review at least 10 working days prior to scheduled closure. Longer review times may be necessary where notices to the public are required and mailings, signage, and newspaper requirements dictate longer times for coordination. Approval by the Engineering Department is required prior to any work proceeding. Notification shall also be given to the police, fire, postmaster, school district, solid waste provider, Metro, Sound Transit, and Community Transit to allow advance planning of travel routes. Street closures shall require the posting of advanced road closure signs placed for each direction of affected travel seven (7) days in advance of the closure.

3. Haul Routes

The District Engineer shall have the authority to determine truck haul routes related to construction activities. Where reasonable alternative routing of construction related vehicles can occur to the arterial system as determined by the District Engineer, the approved haul routes may be conditioned so as to minimize construction related impacts on residential streets or other roadways not intended for heavy truck use.

#### 4. Flaggers, Barricades and Signs

Licensed flagger(s), barricades and signs shall conform to the standards established in the latest edition of the MUTCD. The Contractor shall prepare a traffic control plan showing the required construction signage, barricades and flagger(s) for the project. The plan shall be submitted to the Engineering Department at least 10 working days in advance for the review and approval of the time the signage and barricades will be required. All equipment and materials required for traffic control shall be furnished, installed and maintained by the Contractor to the satisfaction of the Engineering Department.

During construction activity at signalized locations, an off-duty, uniformed police officer shall be required at all times the signal or beacon is turned off, or when the traffic signal indicator is countermanded or if the District Engineer or the appropriate jurisdiction determines it is necessary for traffic control. Officers are also required for new traffic signal work. A uniformed police officer shall be provided at the expense of the Contractor.

#### **E. Fire Department Approvals**

The Developer shall be responsible for applying for and obtaining approval, in writing, from the Fire Department or the Fire Marshall's office in the appropriate jurisdiction for the location of all fire hydrants, fire sprinkler services and fire sprinkler vaults. A copy of such approval shall be furnished to the District Engineer prior to final approval of the plans by the District.

A separate letter identifying the required fire flow for commercial, industrial, or business developments and Plats, is required from the Fire Department or the Fire Marshall's office in the appropriate jurisdiction. A copy of such letter shall be furnished to the District Engineer prior to final approval of the plans by the District.

#### **F. Plan Changes**

Requests for changes or modifications to plans which have been previously approved by the District shall be submitted in writing to the District Engineer by the Developer's Engineer.

Upon completion of the review of the proposed changes or modifications, a revised set of plans shall be submitted to the District Engineer for final approval and signature by the District.

The Contractor shall maintain a copy of the latest revised plans on-site.



## **GP-46 EASEMENT CRITERIA**

Utility improvements that are to be a part of the public system and represent a part of the District's capital improvements shall be constructed in public right-of-ways or easements. Easements to accommodate utilities shall also be provided for projects which require new roadway construction or widening of existing roadways. This shall include subdivisions, short plats, planned unit developments, binding site plans and certain building projects.

All easements for water utilities shall be a minimum of fifteen (15) feet in width. The District Engineer may require greater easement width to accommodate larger pipe sizes, access needs, or other special requirements. Width of sewer easements shall be at a minimum twenty (20) feet or two times the depth of the pipe, whichever is greater.

Joint use easements with water and sewer utilities shall be a minimum of twenty five (25) feet in width. Minimum separation between water and sewer utilities shall be in accordance with District and State standards.

All easements shall have a minimum 5 foot Building Set-Back Line (BSBL) from each edge of the easement. All easements shall be located to run within single lots adjacent and parallel to property lines rather than being split by a lot line. BSBL's may cross into adjacent property. No permanent structures, obstructions, or fill are allowed within the easement area.

Landscaping within easements shall be restricted to low growing, non-invasive type shrubs, grasses, beauty bark, etc. Utilities shall not be located beneath sidewalks. In addition, paved access, capable of supporting a vactor truck will be provided to all sewer manholes, except as specifically approved by the District Engineer. See Sewer Standard Plan No. 23. For sanitary sewers, the guiding criteria shall be that the upstream and downstream manholes must be accessible and within 300 feet of the inaccessible manhole to allow for clearing blockages within all lines. All easements shall be dimensioned and accurately drawn on all plan sheets. All easements shall be recorded before final PUD, Plat, or project approval is granted. The following information shall be provided to the District for the checking of all easements:

1. A legal description(s) of the easement certified by a State of Washington licensed Professional Land Surveyor (PLS).
2. A current title report covering the properties to be encumbered by the easement.
3. A scaled drawing on an 8-1/2" by 11" sheet shall accompany all legal descriptions, showing the easement in a clear and legible manner, with

bearings and distances along all sides and the center line and distances to any visible appurtenances such as fences and structures.

The following information shall be provided to the District on the construction plans for the checking of all easements:

1. Easement width and location.
2. Location of the utility within the easement.
3. Distance from the utility line to the easement centerline
4. Water mains, sanitary sewers, and storm drain lines shall normally be located on the easement centerline.

Easements granted to the District for the placement of public utilities shall be on the District's standard easement form. The easements shall be recorded with the Department of Records for the county in which the easement is located after acceptance of the dedication is acknowledged on the face of the document by the appropriate District official.

## **GP-47 ASBESTOS CONTROL**

### **A. General**

The Contractor shall refer to the Puget Sound Air Pollution Control Authority (PSAPCA) Guidelines for identification, inspection, reporting, handling and removal of materials containing asbestos. Asbestos containing material (ACM) may be encountered during a construction project in the form of asbestos cement pipe, pipe insulation, or as insulation in a structure that is being demolished. It can be found in pipe for water and sewer mains, electrical conduits, drainage pipe, vent pipes, etc. Normal breakage and crushing of the material can cause an asbestos fiber release which presents a serious respiratory hazard. It is imperative that asbestos fiber release be controlled. Citations by regulatory agencies for an asbestos fiber release carry substantial fines.

When required by applicable laws and regulations, the Contractor shall have all asbestos legally removed from the site and properly disposed of by a State licensed asbestos contractor in accordance with the practices specified by the State of Washington Department of Ecology, the King or Snohomish County Solid Waste Division, and all other pertinent State and Federal Regulations. See WAC 296-62-077.

## **B. Asbestos Cement (AC) Water Main Replacement**

New development projects with frontage improvements required by the local jurisdiction that propose to extend or tap new water mains from, or tie new services into an existing AC water main, shall replace any existing AC water mains within the frontage of the development with new Ductile Iron pipe. The minimum pipe diameter shall be 8-inch. The pipe diameter shall be determined by Hydraulic Modeling to be performed by the District Engineer, at the Developer's expense.

### **GP-48 TEMPORARY WATER SERVICE**

Temporary water service prior to final acceptance of the project may be provided as follows:

1. Within Plats, via a District furnished Fire Hydrant Meter with an approved backflow device.
2. On commercial projects, an existing domestic meter may be used for temporary water service with an approved backflow device.
3. Charges for temporary water usage shall be the same as for Fire Hydrant Meters.
4. The Developer shall be responsible for all costs associated with the Fire Hydrant Meter and water usage.
5. Usage of Fire Hydrant Meters shall be in compliance with all Woodinville Water District Standards and Policies.

### **GP-49 DEVIATION FROM STANDARDS**

Permissible alternatives different from these Standards may be approved by the General Manager upon review of evidence submitted by the Developer that such modifications are:

1. Equal to or better than the requirements in these Standards.
2. In the public interest.
3. Based upon sound engineering judgement and practices.
4. Requirements for safety, function, appearance, and maintainability are fully met.

Requests for proposed alternatives should be submitted as soon as possible during the permit process to allow time for review and decision by the General Manager. Requested alternatives must be reviewed and approved prior to construction. The General Manager will make the decision as to whether a requested alternative will be considered permissible.

All other alternatives will be considered as a variance and will be reviewed according to the process established in Title 4 of the Woodinville Water District Code.

Periodically, the General Manager may modify the Woodinville Water District Standards in order to make corrections, clarify procedures, and to revise the Standards and/or Specifications to conform to municipal practice and new technology or State or Federal standards. Proposed, substantial changes will be submitted by the General Manager to the Board of Commissioners for adoption as amendments to the approved Woodinville Water District Standards and Specifications.

**GP-50 DESIGN IN ACCORDANCE WITH WATER AND SEWER COMPREHENSIVE PLANS.**

Water and Sewer designs shall be designed with the intent of the Comprehensive plans for water and sewer. Comprehensive Plans are available on the District's Web site. [www.woodinvillewater.com](http://www.woodinvillewater.com)