

**Appendix I**  
**Developer Extension Agreement**

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**SAMMAMISH PLATEAU WATER & SEWER DISTRICT  
KING COUNTY, WASHINGTON**

**RESOLUTION NO. 4738**

RESOLUTION OF THE BOARD OF COMMISSIONERS OF SAMMAMISH PLATEAU WATER AND SEWER DISTRICT, KING COUNTY, WASHINGTON, AUTHORIZING AND APPROVING THE FORM DISTRICT DEVELOPER EXTENSION AGREEMENT AND DISTRICT STANDARD TECHNICAL SPECIFICATIONS

**WHEREAS**, parties desiring to undertake certain land use actions, such as subdivision of, development of, and construction upon real property within the Sammamish Plateau Water and Sewer District ("District") requiring the extension of the District's water and/or sewer utility systems have been required to do so by developer extension agreement with the District pursuant to Chapter 57.22 RCW; and

**WHEREAS**, the District, by adoption of Resolution No. 4333 on April 7, 2014, updated, revised and readopted a form developer extension agreement and associated fee schedule; and

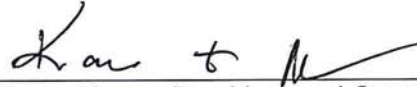
**WHEREAS**, District staff has updated and revised the portion of such form developer extension agreement entitled District Technical Specifications, in the form included in "Exhibit A" and incorporated herein by this reference; now, therefore,

**BE IT RESOLVED**, by the Board of Commissioners of Sammamish Plateau Water & Sewer District, King County, Washington, as follows:

1. The developer extension agreement for construction extensions to the District's water and sewer systems in the form attached hereto as Exhibit "A" is hereby approved and adopted for use in the District effective the date of the adoption of this resolution.
2. All District resolutions, policies, and procedures, including Resolution No. 4333 are hereby superseded, rescinded and modified to be in accordance with such amendment to the form developer extension agreement.
3. This resolution and the policies and procedures set forth herein shall be effective the date set forth below.

**ADOPTED** by the Board of Commissioners of Sammamish Plateau Water and Sewer District, King County, Washington, at a regular open public meeting held on the 9<sup>th</sup> day of October 2017.

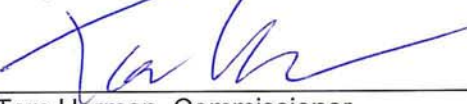
***Individual Commissioner's  
Vote on this Resolution:***



\_\_\_\_\_  
Karen Moran, President and Commissioner

\_\_\_\_\_  
Mahbubul Islam, Vice President and Commissioner

\_\_\_\_\_  
Mary Shustov, Secretary and Commissioner



\_\_\_\_\_  
Tom Harman, Commissioner



\_\_\_\_\_  
Lloyd Warren, Commissioner





## DEVELOPER EXTENSION AGREEMENT

Extension \_\_\_\_\_  
\_\_\_\_\_

Developer \_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_

Water \_\_\_\_\_ Sewer \_\_\_\_\_

**SAMMAMISH PLATEAU WATER AND SEWER DISTRICT**

**1510 – 228th Avenue SE**

**Sammamish, Washington 98075**

**Telephone Number: (425) 392-6256 Fax Number: (425) 391-5389**

**www.spwsd.org**

**COMMISSIONERS**

**Thomas C. Harman, Commissioner**

**Karen Moran, Commissioner**

**Mary Shustov, Commissioner**

**Lloyd J. Warren, Commissioner**

**Mahbubul Islam, Commissioner**

**GENERAL MANAGER**

**John C. Krauss**

**PLANNING ENGINEER**

**Jay Regenstreif, P.E.**

**ENGINEERING MANAGER**

**Kyle Wong, P.E.**

**ENGINEERING STAFF**

**John Faille, E.I.T.**

**Jackson Dove, P.E.**

**James E. Konigsfeld, P.E.**

**Jon Bork, Inspector**

**Mike Lillejord, Inspector**

**James Whitney, Inspector**

**Jan McLean, Developer Extension Coordinator**

**Karen Terrell, Administrative Assistant**

**GIS STAFF**

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**Brett Angel**

**ATTORNEY**

**John Milne, Attorney**

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**P.O. Box C-90016**

**Bellevue, Washington 98009-9016**

**Telephone Number: (425) 455-1234 Fax Number: (425) 635-7720**

Development Name: \_\_\_\_\_  
 Water \_\_\_\_\_ and/or Sewer \_\_\_\_\_

**DISTRICT CHECKLIST**

**Preliminary Fee Phase**

**Date**

- 1. Development Proposal Provided to District with Application and Application Fee \_\_\_\_\_
- 2. Equivalent Residential Units (ERUs) Calculated \_\_\_\_\_
- 3. District Check Compliance with Comprehensive Plans \_\_\_\_\_
- 4. Determine if Project within Urban Growth Boundary (sewer) \_\_\_\_\_
- 5. Determine Need for Special Agreements \_\_\_\_\_
  - Future Water or Sewer Connection Agreement
  - No-Protest Annexation Agreement
  - Future Services upon Subdivision
  - Future LFC Acknowledgement
  - Additional Future LFC Owing
  - Interim Sewer Amendment
  - Participation Agreement
  - Other \_\_\_\_\_
- 6. Developer Signs Developer Extension Agreement \_\_\_\_\_
- 7. **Pay Partial Preliminary/Certificate Fees and Development Services Deposit** \_\_\_\_\_  
**Receipt # \_\_\_\_\_**
- 8. District Approves Extension Agreement by Resolution # \_\_\_\_\_
- 9. Complete Certificate of Water and/or Sewer Availability if required \_\_\_\_\_
- 10. Provide Certificate(s) & Signed Agreement to Developer \_\_\_\_\_
- 11. District Records Notice of DEA on Property included in DEA \_\_\_\_\_

=====

**Design Phase**

**Date**

- 12. Developer Engineer Identified \_\_\_\_\_
  - Submit Public Information Request for surrounding facilities as-built drawings \_\_\_\_\_
  - Submit draft Preliminary Plat, Road/Storm/Grading Plan for District review \_\_\_\_\_
- 13. Developer Executes Application for or Waiver of Reimbursement Agreement \_\_\_\_\_
- 14. Pre-Design Meeting \_\_\_\_\_
- 15. Board of Commissioners Approves Participation Agreement \_\_\_\_\_
- 16. District and Developer Execute Participation Agreement \_\_\_\_\_
- 17. Developer Submits Design Drawings (3 sets) and Preliminary Estimate of Construction Cost to District \_\_\_\_\_
- 18. District Sends Notification to Benefited Property(ies) for Reimbursement Agreement \_\_\_\_\_

**Date**

Development Name: \_\_\_\_\_  
 Water \_\_\_\_\_ and/or Sewer \_\_\_\_\_

- 19. **Remaining General Facility Charges are due prior to District approval of plans for construction, prior to installation of water meters and/or sale of side sewer permit(s), or prior to Final Acceptance if no construction is required** \_\_\_\_\_
- 20. Reevaluate ERU Calculations \_\_\_\_\_
- 21. **Pay Remaining General Facility Charges** Receipt # \_\_\_\_\_
- 22. Final Plan Approved/Mylars Signed by District \_\_\_\_\_
- 23. Mylars Returned to Engineer \_\_\_\_\_
- 24. Most Current District Standards Provided to Developer Engineer for Inclusion with Copies of Construction Drawings \_\_\_\_\_
- 25. Developer Provides District Plan Sets # \_\_\_\_\_
  - a. PDF of Signed Construction Plans for input to GIS Electronic
  - b. Developer Extension File 1 (Full-size w/standards)
  - Developer Extension File 1 (11"x17" w/standards)
  - c. In house copy/Flat File 1 (Full-size w/standards)
  - d. Inspectors 1 (Full-size w/standards)
  - e. Permits/Approvals (Full-size Drawings)
    - 1) Right of Way – Water (half-size for City of Sammamish) Electronic, 2 (11"x17")
    - 2) Right of Way – Sewer (half-size for City of Sammamish) Electronic, 2 (11"x17")
    - 3) King County DNR - Sewer Electronic
    - 4) DOH - Water 1 (if not exempt)
    - 5) City of Sammamish or Issaquah Electronic
    - 6) Other - \_\_\_\_\_

**\*Note: All other permits are the responsibility of the Developer**

- 26. Permit/Approval Applications
  - a. Right of Way - Water Sent \_\_\_\_\_ Approved \_\_\_\_\_
  - b. Right of Way - Sewer Sent \_\_\_\_\_ Approved \_\_\_\_\_
  - c. King County DNR - Sewer Sent \_\_\_\_\_ Approved \_\_\_\_\_
  - d. DOH - Water if not exempt Sent \_\_\_\_\_ Approved \_\_\_\_\_
  - e. King County Special Use Permit Sent \_\_\_\_\_ Approved \_\_\_\_\_
  - f. Other - \_\_\_\_\_ Sent \_\_\_\_\_ Approved \_\_\_\_\_
- 27. SEPA Checklist (required for pipe > 8")
  - a. Submit draft checklist for District review \_\_\_\_\_
  - b. Determination \_\_\_\_\_
  - c. Notice of Action \_\_\_\_\_

**Preconstruction Phase**

**Date**

- 28. Offsite Easements Acquired by Developer and Provided to District \_\_\_\_\_
- 29. Copy of Clearing and Grading Permit Provided to District by Developer (if Project not in Right-of-Way) \_\_\_\_\_
- 30. Materials and Equipment Submittals Provided to District (3 copies) \_\_\_\_\_
- 31. Certificate of Insurance including Endorsements Provided to District \_\_\_\_\_
- 32. Submit Copy of Itemized Water/Sewer Construction Bid for Cost Verification \_\_\_\_\_
- 33. Performance Guarantee Provided to District \_\_\_\_\_

**Date**

Development Name: \_\_\_\_\_  
 Water \_\_\_\_\_ and/or Sewer \_\_\_\_\_

- 34. Preconstruction Conference at District Office \_\_\_\_\_
- 35. Right-of-Way Preconstruction Conference at Job Site \_\_\_\_\_

**Construction/Final Acceptance Phase**

**Date**

- 36. Minimum 48 Hour Notice to District of Construction Start \_\_\_\_\_
- 37. Construction, with Inspection by the District \_\_\_\_\_
- 38. Contractor Performs Jetting and CCTVing of Project’s Sewer System with District Inspection to confirm proper sewer installation \_\_\_\_\_
- 39. Developer Performs Final Paving or Submits “Agreement for System Use Prior to Final Lift of Asphalt” for District Approval \_\_\_\_\_
- 40. Contractor Performs Jetting of Project’s Sewer System with District Inspection \_\_\_\_\_
- 41. Contractor Declares Construction Complete and District Acknowledges Declaration \_\_\_\_\_
- 42. Surveyor Surveys Final As-built Locations of all Facilities and Developer Engineer Prepares/Submits Point-Plot Map Superimposed on District-approved Construction Drawings, together with Contractor Markups and 2 Sets of Draft As-built Plans with the Electronic AutoCAD files \_\_\_\_\_
- 43. District Inspector Reviews Point-Plot Drawings, Draft As-Built Plans, and Contractor’s Field Notes, and Performs Field Check \_\_\_\_\_
- 44. Contractor Requests Final Punchlist Inspection \_\_\_\_\_
- 45. District Inspector Prepares Punchlist \_\_\_\_\_
- 46. **Punchlist Inspection Approved by District = Construction Final** \_\_\_\_\_ \*
- 47. District Engineer Reviews/Returns Draft As-Built Plans to Developer Engineer for Revisions \_\_\_\_\_
- 48. Developer Engineer submits 2 sets of Revised, Unsigned As-Built Plans \_\_\_\_\_
- 49. District Engineer Reviews Final As-Built Plans and Requests Mylars \_\_\_\_\_
- 50. **As-Built Drawings**
  - Developer Engineer Submits to District: \_\_\_\_\_
  - a. Mylars with As-Built revisions for District signature \_\_\_\_\_ \*
  - b. District returns signed As-Built mylars for reproduction \_\_\_\_\_ \*
  - c. Developer Engineer Returns to District \_\_\_\_\_
    - 1) 3 sets of full-size As-Built Drawings w/o District standards \_\_\_\_\_ \*
    - 2) 1 set of full-size As-Built Drawings with District standards(23-Month) \_\_\_\_\_ \*
    - 3) 1 set 11”x17” As-Built Drawings w/o District standards \_\_\_\_\_ \*
    - 4) As-Built AutoCAD files including point-plot files \_\_\_\_\_ \*
    - 5) Scanned (.PDF) Files \_\_\_\_\_ \*
- 51. District Enters As-built Drawings into Geographic Information System \_\_\_\_\_
- 52. District Inspector Inputs Data into Asset Management System \_\_\_\_\_

Development Name: \_\_\_\_\_  
 Water \_\_\_\_\_ and/or Sewer \_\_\_\_\_

		<u>Date</u>
53.	<b>Easements Provided to District for Recording</b>	_____ *
	Water _____	_____ *
	Sewer _____	_____
54.	District Records Easements with King County	_____
55.	<b>Copy of Development Documents to be Recorded with County Provided to District</b>	
	a. Verify Easement Locations	_____ *
	b. Verify Easement Restrictions	_____ *
56.	<b>Bill(s) of Sale Provided to District</b>	_____ *
	Water _____	_____ *
	Sewer _____	_____
57.	<b>Developer Provides Final Cost Summary for Construction of Water and/or Sewer Facilities</b>	_____ *
58.	Developer Provides Copy of Recorded Development Documents	_____ #
59.	Developer Submits Executed Reimbursement Agreement if Appropriate	_____
60.	District Processes Reimbursement Agreement	_____
61.	Reevaluate ERU Calculations	_____
62.	Calculate Final Acceptance Fees	_____
63.	District Checks for Unpaid Invoices Owing for District Expenses	_____
64.	<b>Payment of Final Acceptance Fees</b>	Receipt # _____ *
65.	<b>Maintenance Guarantee Provided to District</b>	_____ *
66.	<b>Backflow Prevention Assembly Test Report(s) Provided to District</b>	_____ *
67.	Letter to Health Department, King County and/or City Stating District Acceptance	_____
68.	District Prepares Meter Page	_____
69.	District Prepares DOH "Completion Report"	_____

\* Indicates Items required for Final Acceptance of the Developer Extension Agreement by the District. The Date of Final Acceptance is the Date that the last item required was received. The Maintenance Guarantee is to be in force for at least two years from the Date of Final Acceptance.

	<u>Date</u>
70.	<u>YES/NO</u>
	Approved System Use Prior to Final Asphalt Lift
	If YES, Maintenance Guarantee is in effect until 2 years AFTER District Final Inspection and Acceptance Following the Final Lift of Asphalt.
	This means the Maintenance Guarantee will be in effect for a period longer than 24 months on the entire system.
71.	_____
	<b>Resolution Accepting Extension(s) Adopted by the Board</b>
72.	_____
	Determine Final ERUs and Include in Final Resolution

Development Name: \_\_\_\_\_  
Water \_\_\_\_\_ and/or Sewer \_\_\_\_\_

**Two- Year Post Acceptance Warranty Phase**

**Date**

- 73. District Accepts Meter and Side Sewer Applications \_\_\_\_\_
- 74. District Releases Performance Guarantee \_\_\_\_\_

---

**23-Month Inspection Phase**

- 75. Developer Performs Jetting of Project Sewer System Immediately Prior to 23-month Inspection \_\_\_\_\_ #
- 76. District Performs 23-Month Inspection \_\_\_\_\_
- 77. District Provides Punchlist of Inspection to Developer \_\_\_\_\_
- 78. Correction of Punchlist Items by Developer \_\_\_\_\_ #
- 79. Current Backflow Prevention Assembly Test Report(s) provided to District \_\_\_\_\_ #
- 80. District Checks for Unpaid Invoices by Developer \_\_\_\_\_ #
- 81. District releases Maintenance Guarantee \_\_\_\_\_
- 82. District Refunds Development Services Deposit \_\_\_\_\_

# Indicates items required for the release of the Maintenance Guarantee and refund of Development Services Deposit.

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**SAMMAMISH PLATEAU WATER AND SEWER DISTRICT  
DEVELOPER EXTENSION AGREEMENT**

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## GENERAL PROVISIONS WATER AND SEWER

### WS-1 DEFINITIONS

- (a) "Contractor" means the person or firms employed by the Developer to do any part of the work, all of who shall be considered agents of the Developer.
- (b) "Design" means the preparation of the Plans for the extension to the District's water distribution and/or sewer collection system.
- (c) "Developer" means the party(s) entering into this Agreement with the District, including the Owner(s) and the Owner's Agent(s) (if applicable), as defined herein.
- (d) "District" means Sammamish Plateau Water and Sewer District, its authorized representatives, and the District Engineer.
- (e) "District Engineer" means the District Engineering Staff or the engineering firm, and that firm's representatives, which may be retained and assigned by the District Board of Commissioners to act as the Engineer for the work to be performed under this agreement.
- (f) "Extension" means the water and/or sewer lines and appurtenances to be constructed and installed through Developer's performance of this developer extension agreement.
- (g) "Inspection" means the District examination of the Work wherever it is in preparation or progress, and reasonable tests of the work.
- (h) "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.
- (i) "Owner" means the fee owner of the real property benefited by the proposed extension of the District's water distribution and/or sewer collection system.
- (j) "Owner's Agent(s)" means a party, firm, or entity that, by agreement with the Owner, is developing the real property, which is the subject of and to be benefited by the proposed extension to the District's water distribution and/or sewer collection system.
- (k) "Plans" means drawings, lists, notes and instructions, including reproductions thereof, 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.
- (l) "Project" means the subdivision, plat, short plat, commercial development, multi-family development, building or other facility or improvement for which the extension of the water and/or sewer system is being undertaken.
- (m) "Project Agent" means a party or firm, on behalf of the Developer, that facilitates the Project through the Developer Extension process.

- (n) "Project Engineer" (also known as "Developer's Engineer") means the engineering firm, and that firm's representatives, retained by Developer, to design and prepare the Plans for the work to be performed under this agreement in accordance with District specifications.
- (o) "Real Property" means the property(ies) owned by the Developer, and/or other owners for whom the Developer is acting as agent, for which the Extension is being installed.
- (p) "Specifications" means the directions, provisions, standards and requirements established by the District's Engineers for the performance of the work and for the quantity and quality of materials.
- (q) "Work" means the labor, materials, superintending, equipment, transportation, supplies and other facilities necessary or convenient to the completion of the proposed extension described in the application contained herein.

#### WS-2 PURPOSE

Sammamish Plateau Water and Sewer District, as a municipal corporation, has a responsibility to the public to insure that water and sewer mains laid on public streets or easements are constructed in accordance with currently accepted standards for public work. The requirements imposed upon Developers by these regulations are not arbitrary, but are intended by the District as a contract with the Developer, incorporating minimum standards which are 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 thereto unless the work is performed and paid for in accordance with these regulations.

#### WS-3 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.

#### WS-4 NO THIRD PERSON SHALL HAVE ANY RIGHTS HEREUNDER

This agreement is made entirely for the benefit of the District and the Developer and successors in interest and no third person or party shall have any rights hereunder whether by agency or as a third-party beneficiary or otherwise.

#### WS-5 AUTHORITY OF PROJECT ENGINEER

The Developer shall have the right to select its own engineer to design and prepare the Plans. The Project Engineer shall only have authority to design and prepare the Plans for the extension to the District's water distribution and/or sewer collection system. Design work shall be in accordance with prudent engineering practice and all applicable governmental regulations and laws. The Plans shall conform in all respects to District specifications and must be approved by the District Engineer prior to commencement of work. The District shall have the sole right to approve or reject the Plans or require changes to be made to them. Failure of the District to require changes in the Plans prior to approval of them shall not be deemed a waiver of the District's right to require such changes in the Plans as the District may deem necessary during the course of Work. It is the responsibility of the Developer to ensure that the Plans prepared by Project Engineer conform in all respects to District

Specifications. Failure by the District to discover errors, omissions or discrepancies in the Plans shall not relieve the Developer of this responsibility.

#### WS-6 SELECTION OF PROJECT ENGINEER

At the time of Developer's payment of Development Services Fees to the District, the Developer shall notify the District in writing of the person or firm proposed to do the Design. The Developer shall not employ any person or firm for any part of the Design work that the District may object to as incompetent, unfit or irresponsible.

#### WS-7 AUTHORITY OF DISTRICT

The District shall have authority to approve, reject or require changes in Plans prepared by Project Engineer. The District shall also have authority to require such changes in the Plans as the District may deem necessary during the course of work. The District shall have general supervision and direction of work and shall have authority to stop work whenever, in the opinion of the District, the work stoppage shall be necessary to insure compliance with the approved Plans and Specifications. The District shall have authority to reject work and materials that do not conform to the approved Plans and Specifications and permit requirements and to decide questions that may arise in the execution of the work.

Failure or omission on the part of the District to reject unsuitable, inferior or defective work shall not release the Developer or Developer's bond from performing work in accordance with this contract. District representatives have no authority to waive the obligation of the Developer to perform work in accordance with this contract.

#### WS-8 OWNERSHIP OF PLANS

All Plans and Specifications prepared by the Project Engineer and submitted to the District as a condition of this contract shall be owned by and be the property of the District. The Project Engineer agrees to assign all ownership and use rights to the Plans and Specifications to the District.

#### WS-9 SPECIFICATIONS INCORPORATED BY REFERENCE

Where federal, AWWA, ASTM, WASHDOT/APWA, King County, City of Sammamish, City of Issaquah, District or any other standard specifications are referenced to or included by reference herein, the latest issue and/or amendment thereto published at the date of approval of the Drawings by the District shall be incorporated in the contract by said reference as if set forth herein in full. Should a conflict exist between the approved design drawings and any standard specifications or details referenced herein, the approved design drawings shall prevail.

#### WS-10 PERMITS

The Developer shall not begin work until all necessary permits have been issued by the appropriate public authority. The Developer shall reimburse the District for all costs incurred by the District for permits, inspection fees and other charges imposed by any public authority because of the work. The Developer shall comply with the requirements of all permits issued for the work.

## WS-11 PERFORMANCE GUARANTEE

Developer shall provide District with a Performance Guarantee, of a type and form (Cash, Performance Bond, Letter of Credit) as determined by the District in its sole discretion, to guarantee the completion of the construction of the facilities. It shall be provided prior to the time of the Preconstruction Meeting and shall run until such time as the District has; 1) accepted the work, including final inspection and acceptance in the field, and receipt of as-built drawings, Bill of Sale, fees owing to the District, and Maintenance Guarantee or 2) otherwise agreed to release the Performance Guarantee pursuant to Paragraph WS-55 "Developer Extension Termination". The Performance Guarantee shall be in the amount of the cost of installation of facilities covered under the Developer Extension Agreement. Such amount shall be determined by the Engineer's estimated cost of the extension or the Contractor bid price at the election of the District.

## WS-12 LIABILITY INSURANCE

The Developer shall procure commercial general liability, automobile liability, excess/umbrella liability, and workers compensation insurance on an occurrence basis against liability to the developer, the District, the District Engineer and the District employees for negligent injury to person or property related in any way to the performance of this Agreement and/or resulting from performance, supervision, or inspection of the work. The District shall be named as an additional insured/certificate holder under such policy. Proof of the existence of such insurance shall be provided to the District by original certificate of insurance and endorsements in the form attached hereto. The minimum limits of coverage shall be as follows:

1. Commercial General Liability
  - \$2,000,000 each occurrence Bodily Injury and Property Damage
  - \$2,000,000 General Aggregate
  - Employees and Volunteers as Additional Insured for both on-going and completed operations
  - Premises and operations
  - Broad form property damage including underground, explosion and collapse hazards (XCU)
  - Products completed operations (through guaranty period)
  - Blanket contractual
  - Subcontractors
  - Personal Injury with employee exclusion deleted
  - Employers liability (Stop gap)
2. Automobile Liability
  - \$2,000,000 per accident Bodily Injury and Property Liability covering:
    - o Any owned automobile
    - o Hired automobiles
    - o Non-owned automobile
3. Umbrella Liability
  - \$2,000,000 per occurrence
  - \$2,000,000 aggregate
4. Workers Compensation and Employers' Liability
  - \$2,000,000 per occurrence
  - \$2,000,000 aggregate

#### WS-13 INDEMNITY

The Developer shall indemnify, defend and hold the District and all its representatives harmless from and against all losses and claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against the District by reason of the act or omission of the Developer, Developer's agents or employees, in the performance of the work, and for any cost or expense incurred by the District in connection therewith, including overhead expense, legal expense, attorney's fees and costs attributable thereto; and if suit in respect to the foregoing is filed, the Developer shall appear and defend the same at its own cost and expense, and if judgment is rendered or settlement made requiring payment of damages by the District, the Developer shall pay the same.

#### WS-14 NO DISCRIMINATION IN EMPLOYMENT

In connection with the performance of work, the Developer and Contractor shall comply with all federal, state and local codes, statutes and ordinances prohibiting employment discrimination.

#### WS-15 NOTICE OF DEVELOPER EXTENSION AGREEMENT

District shall have the right to record notice of the Developer Extension Agreement on the Real Property which is the subject of this Developer Extension Agreement. The Notice will be recorded with the King County Recorder's Office.

#### WS-16 GOVERNING LAWS

This agreement shall be construed and enforced in accordance with, and the validity and performance hereof shall be governed by the laws of the State of Washington. Any suit to enforce the provisions of the agreement shall be brought in King County, Washington, Superior Court.

#### WS-17 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 hold 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 the Developer or Developer's Contractor has information that the process or article is an infringement of a patent and fails to promptly notify the District thereof in writing.

#### WS-18 CONTRACTORS

At least five (5) days prior to the start of work by any person or firm, the Developer shall notify the District in writing of the name of the person or firm proposed to do the work and shall not employ any person or firm for any part of the work that the District may object to as incompetent, unfit, or irresponsible. Nothing contained in this agreement shall create any contractual rights between the District and any person or firm employed to do the work.

## WS-19 EXISTING UTILITIES OR OBSTRUCTIONS

Existing utilities and obstructions shall be shown on the Plans so far as known to the Project Engineer responsible for the preparation of the Design, but may have been obtained from old drawings or verbally from persons connected with a particular utility. Such information is not guaranteed but is made available to the Developer for such value as it may have. Incompleteness or errors in this information shall not be the cause of claim against the District nor shall it relieve the Developer of responsibility for repairing any damage Developer's activities may cause to such utilities. The Developer shall reimburse the District for damage to the property of the District or damage to the property of others for which the District is liable, caused by the Developer and for other expense, including attorney's fees and court costs incurred by the District because of such damage. Whenever the Contractor fails to repair or restore existing improvements damaged by Contractor's operators within 72 hours of notice from the District to effect such repair and restoration, the District may order said work done by others and all costs incurred shall be paid by the Developer. The District recommends the use of One-Call for underground utility locations, of which the telephone number is available at the District Office.

## WS-20 MATERIALS AND EQUIPMENT SUBMITTAL

The Developer shall submit three (3) copies of the materials and equipment submittal with the District no later than ten (10) calendar days prior to the beginning of construction, including the quantity, manufacturer, model number and technical specifications, if applicable, of material and equipment to be installed as part of the work. The submittal shall include the manufacturers' information ("catalog cuts") for specified material and equipment, including information on operation and maintenance of the material and equipment. Information shall be furnished to the District in three (3) separate, labeled binders. The District shall have the right to reject materials and equipment which, in the District's opinion, 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 deemed a waiver of the District's right to reject such materials or equipment at a later time.

## WS-21 GUARANTEE BY MANUFACTURER

If requested by the District or the District Engineer, a written guarantee made by the manufacturer of any materials to be incorporated into the work shall be furnished, guaranteeing to the District that such materials shall conform to District Specifications and the Specifications otherwise applying to the work.

## WS-22 DETERMINATION OF "OR EQUAL"

The District shall be the sole and final judge whether pipe, supplies, materials, and other components or equipment qualify as "or equal" substitutions under the Plans and Specifications.



#### WS-23 DEVELOPER'S SUPERVISION

The Developer shall keep on the work, during its progress, a competent supervisor who shall represent the Developer during Developer's absence, and to whom instructions may be given as though to the Developer. The Supervisor shall make themselves familiar with the terms and conditions of this Developer Extension Agreement, the Plans and Specifications and shall promptly report to the District any error, inconsistency or omission which they may discover.

#### WS-24 COMPLIANCE WITH PUBLIC AUTHORITY

The work shall be done in accordance with regulations of each public authority, including the local, county, state and federal agencies that may have jurisdiction over the manner and quality of performance of the work. 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 to them. 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.

All construction in public roads or rights-of-way shall be done in accordance with the standards and requirements of the governmental agency having jurisdiction, and in accordance with requirements of the franchise or permit therefore. The Developer and Contractor shall be responsible to ascertain these requirements.

#### WS-25 OMISSIONS AND DISCREPANCIES

Minor items of work or materials omitted from Plans and Specifications, but clearly inferable from the same 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 shall be consulted and its decision shall be determinative.

The Developer shall carefully study and compare all drawings, specifications, and other constructions and shall report in writing to the District any error, inconsistency or omission. If in the course of construction any discrepancies between the drawings and the physical condition of the site are found the Developer shall notify the District immediately in writing. Any work done after such discovery and before District approved changes to the Plans and Specifications will be done at the Developer's risk.

#### WS-26 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 although the time may not have expired for completing the entire work, and this shall not be deemed acceptance of any of the work. However, the District is not obligated to supply service to the Developer's property until all work and the requirements of the Developer Extension Agreement are completed and the Developer Extension Agreement is granted Final Acceptance by the District.

#### WS-27 POINTS AND INSTRUCTIONS

The Developer shall provide all property corners, and street and easement centerline stakes, and shall provide reasonable and necessary opportunities and facilities for setting points and making measurements. The Developer shall not proceed until they have made timely request of the District for, and have received, such points and instructions as may be necessary as the work progresses. The work shall be done in strict conformity with such points and instructions. The Developer shall carefully preserve bench marks, reference points and stakes, and, in case of destruction, shall be charged for any resulting expense such as the cost of restaking and shall be responsible for any errors that may be caused by their absence or disturbance.

#### WS-28 STAKING OF WORK

The Developer shall be responsible for providing the Contractor with survey staking necessary to install the work as shown on the plans. The survey staking shall be performed by persons skilled in the practice.

#### WS-29 USE OF WATER

The Developer shall be charged, pursuant to District resolution, for all water used in construction, street cleaning or other use. The cost of water used for flushing the water mains and/or for jetting the sewer mains during construction is included in the Development Services Fee that is incorporated in this Agreement. If repeated flushing/jetting of the main(s) is necessary and the District determines the flushing/jetting is beyond that covered by the fees referenced above, the Developer shall be charged for the water use not covered by the Development Services Fee.

#### WS-30 INSPECTION AND TESTS

All work shall be subject to full-time inspection by the District. The District shall at all times have access to the work wherever it is in preparation or progress, 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 reasonable notice of the readiness of the work for such test or inspection. The District will attempt to make inspections within 24 hours of notification by the Developer. Work shall not be covered up without consent of the District, and if it should be covered without such consent, it must be uncovered for inspection at the Developer's expense if requested by the District. Such inspections and test shall not relieve the Developer of any of the responsibilities under this Agreement.

#### WS-31 PLANS AND SPECIFICATIONS ACCESSIBLE

The Developer shall have one copy of the Approved Plans and Specifications constantly accessible on the job.

## WS-32 QUALITY OF MATERIALS AND WORKMANSHIP

Unless otherwise specified, 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.

## WS-33 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. This requirement will apply continuously and not be limited to normal working hours.

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

## WS-34 SANITATION

Necessary sanitation convenience for the use of workmen on the job, properly excluded from public observation, shall be provided and maintained during the performance of the work.

## WS-35 SERVICE INTERRUPTIONS

The Developer shall notify the District at least five (5) working days before an interruption of service is scheduled to occur. The District will notify persons whose service will be interrupted due to the work covered herein. Service interruptions shall not be scheduled on Friday.

## WS-36 ACCESS

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

## WS-37 PUBLIC HAZARD OR INCONVENIENCE

If the performance of the work should result in hazard or substantial inconvenience to the public, the District may correct the same, if in the opinion of the District, the correction is necessary. The Developer shall, on request, reimburse the District for the 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 one year after final acceptance of the same.

## WS-38 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 furnished or provided shall conform to the standards established in the latest

edition of the Manual on Uniform Traffic Control Devices. The District may require the construction of two-way vehicular bridges of approved construction on important streets. Where detours are built, they shall be graded and maintained to the satisfaction of the District. Soft shoulders shall be plainly marked to warn motorists. Access shall be provided to cross cut roads and driveways as directed by the District.

Where construction has been completed or is in progress in existing streets, the streets shall be graded and maintained to the satisfaction of the District. No detours for foot traffic shall be more than one block in length and where crossing trenches, detours shall be provided with adequate footbridges with handrails. At least one half of existing streets shall be left open for traffic and emergency vehicles at all times.

#### WS-39 CONFINEMENT OF CONTRACTOR'S OPERATIONS

The Contractor shall confine construction activities within the property of the Developer and the limits of easements and construction permits outside of the Developer's property. 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. Any damage to property or persons from any encroachment beyond these limits shall be the responsibility of the Developer. Equipment and materials storage shall be confined to the Developer's property. Pipe strung on public right-of-way shall be placed a safe distance from any traveled road in such manner as to avoid accidental rolling onto the road. No driveways shall be blocked. Lighted barricades in an adequate number and locations, pursuant to state, county and local regulations, shall be provided.

#### WS-40 PROTECTION OF WORK AND PROPERTY

The Developer shall exercise due care to protect property and the work addressed by this agreement. The Developer shall be solely responsible for any loss or damage to property or the work herein occurring prior to the completion of and final acceptance of the work by the District.

#### WS-41 OTHER WORK

The District has the right to let other contracts for other work that may affect the work hereunder. Other persons performing such other work shall be afforded reasonable opportunity 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. If any of the work hereunder depends on the proper execution of the work of other persons, the Developer shall inspect and promptly notify the District in writing of any defects in such other work which render it unsuitable for the execution of the work hereunder. The Developer's failure to inspect and notify the District shall constitute acceptance of the other work as suitable.

The District is not obligated to provide service to the Developer's property if the other work has not been completed and accepted by the District and is necessary to provide service to the Developer's property.

Where the Developer and others are working in the same area, the District will attempt to coordinate such work for its harmonious and timely completion.

#### WS-42 PAVEMENT REMOVAL

Removal of existing paving in public roads shall be done in accordance with the governing agency's requirements and in private property shall be precut to one foot wider than the trench shoulder line and to a neat vertical edge.

#### WS-43 CLEANUP

The construction site shall be kept clean during the progress of the work. Before the work shall be considered complete, the Developer shall clean out ditches that may have been 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. Dust control shall be provided during the progress of the work and during cleanup. 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, on a daily basis, any deposits or debris that may have accumulated on the roadway surface as a result of construction operations. Removal shall be performed on a more frequent basis should the District determine that such removal is necessary. Any damage resulting from the Contractor's operation shall be repaired by the Contractor at no expense to the Owner or District.

#### WS-44 FINAL INSPECTION AND ACCEPTANCE

All material and completed work are subject to final inspection by the District, which shall have the right to subject any portion thereof to such tests as in the opinion of the District shall be necessary to determine whether or not the work complies with the Plans and Specifications.

#### WS-45 DEFECTIVE WORK AND CORRECTIVE ACTION

During construction, work that is found by the District not to comply with the Plans and Specifications shall be remedied so as to comply therewith. Subsequent to completion and within one year after the work has received final approval and acceptance by the District, the Developer shall correct or replace any defective work or material discovered by the District. Such correction or replacement **shall commence within seven days** from the time of receipt of notice from the District and shall be completed promptly. Failure to commence such correction or replacement within seven days will result in the District notifying the Developer's bonding company of the Developer's failure to complete the required construction and giving the bonding company 30 days to complete the required correction or replacement. If not so commenced within the above-stated time period, or in an emergency as determined by the District at its sole discretion, when damage may result from delay, such correction or replacement may be made by the District, or by a contractor hired by the District, at the expense of the Developer. The Developer shall reimburse the District, upon demand, for any expense resulting from defects which appear within one year after acceptance of the Developer's work, including actual damages, cost of materials and labor expended by the District in making emergency

repairs, cost of engineering, inspections and supervision by the District or the Engineers, legal expense, and attorney's fees and costs reasonably incurred by the District as a result thereof.

#### WS-46 RESTORATION OF IMPROVEMENTS

Culverts, driveways, roadways, pipelines, monuments or other existing improvements which are removed or disturbed in the course of the work shall be restored to their original condition at the expense of the Developer. In cutting through established lawns, the sod shall be removed before trenching and replaced after backfilling to the satisfaction of the property owner. A signed release from the affected property owners will be required. As a minimum requirement, all restoration shall be made to the condition of the area prior to construction.

In areas where restoration of existing improvements will be necessary and to provide records of existing improvements, the Developer shall provide a video and/or photographic record before and after construction as required and acceptable to the District.

#### WS-47 "AS-BUILT" DRAWINGS

The Developer/Contractor shall maintain, on the jobsite, project field plans marked to indicate District approved plan revisions made in the field and other details of construction. The marked-up project field plans shall be made available to the District upon completion of the construction. The Developer shall be provided with a copy of the field plans and shall be responsible for providing the District with "As-Built" record drawings on a mylar format, clearly marked as "As-Built", as defined in the District *Technical Specifications*, current edition.

The Developer shall furnish any additional information required by the District for the preparation of "As-Built" record drawings, such as, but not limited to; surveyed location of bends installed in the water main, survey of sewer inverts, and field-survey of all water and sewer features visible from the surface (meter boxes, valves, fire hydrants, side sewer stakes, manholes, cleanouts, etc.).

#### WS-48 MAINTENANCE GUARANTEE

Upon completion of the work and approval of the District, the Developer shall, as a condition of acceptance by the District, supply to the District a Maintenance Bond or Cash Maintenance Agreement (forms are attached), to guarantee all materials and workmanship for a period of two years after final acceptance of work. The Maintenance Guarantee shall be in the amount of twenty (20) percent of the construction cost, including tax, for the water and/or sewer improvements. The minimum Maintenance Guarantee shall be seven thousand five hundred dollars (\$7,500.00, or the actual cost of construction if the actual cost is less than seven thousand five hundred dollars (7,500.00). A copy of the contractor's bid, and/or payment requests, as required by the District, shall be provided to the District upon completion of the work, as backup for the Maintenance Guarantee amount.

## WS-49 LIENS

Prior to acceptance of the work, the Developer shall deliver to the District a complete release of all liens that might arise out of the performance of the work or such other evidence as may be acceptable to the District that there are no liens against the work. If any lien arises or remains unsatisfied after acceptance of the work, the Developer shall reimburse the District for any costs incurred on account thereof.

## WS-50 EASEMENTS

All easements required shall be obtained by the Developer without cost to the District and shall provide for permanent easements and construction easements as shown on the Plans. The Developer shall provide the District with supporting data to verify the location of all easements. All easements shall be a minimum of 15 feet in width. The Developer shall provide the District the Easement(s) through a form or process acceptable to the District. This shall be on one of the District's standard forms, and may also be shown on documents recorded with as part of King County's, the City of Sammamish's or the City of Issaquah's requirements for final acceptance of the Development. On the District's standard forms the legal description shall be clearly written in a manner that the easement can be plotted from the description. In the event that legal services are required incident to easements beyond review of the form thereof, the costs of such services shall be paid by the Developer in amount as billed to the District before acceptance of the proposed extension.

Any required easements not located on the property for which this Developer Extension Agreement is being completed shall be obtained, in the name of the District, by Developer, at Developer's expense, using a standard District form. The original easement or a copy of such recorded easement shall be delivered to the District prior to commencement of construction.

All required easements located on the property for which this Developer Extension Agreement is being completed shall be provided by the Developer prior to Final Acceptance of the water and/or sewer improvements covered by this Agreement. Where water and sewer facilities are not located in the right-of-way or proposed right-of-way, such facilities shall be located in separate utility tracts and easements encompassing the tracts will be granted to the District. Prior to acceptance of said extension the; 1) original easement on a standard District form and 2) a copy of the documents to be recorded as part of King County's, the City of Sammamish's or City of Issaquah's requirements for final acceptance of the Development showing the easement location and containing the same easement restrictions as on the standard District form, shall be delivered to the District.

The Developer shall provide all necessary easements at Developer's sole cost regardless of changes in the Contract Plans and, if required, a title insurance policy in a sum not less than \$10,000 per 500 feet of easement free and clear of encumbrances. The District may require the Developer to provide a survey of the as-built improvement to verify the location in the easement.

#### WS-51 BILL OF SALE

Upon completion of the work and approval of the District, the Developer shall, as a condition of acceptance by the District, convey the work to the District by Bill of Sale, a form of which is attached.

#### WS-52 CROSS CONNECTION CERTIFICATION

Pursuant to Washington State Regulations, WAC 248-54-285, and District Resolution No. 3340, all backflow prevention devices installed must be certified and tested by a Certified Washington State Cross Connection Specialist or Backflow Tester. This includes all such devices in facilities served by District water service provided by this Agreement.

#### WS-53 REIMBURSEMENT APPLICATION

Pursuant to District Resolution No. 3475, or as such Resolution is updated or modified by the District Board of Commissioners, when the Developer is eligible for reimbursement for water and/or sewer facilities to be constructed as part of the Developer Extension Agreement pursuant to Chapter 57.22 RCW, the Developer shall execute an Application for or Waiver of Reimbursement Agreement for Water/Sewer Facilities, at the time of the Predesign Meeting indicating whether the Developer chooses to exercise the right to apply for or receive reimbursement. If the Developer chooses to exercise the right for reimbursement, the Developer shall comply with the requirements for executing a reimbursement agreement with the District in the form as attached herein, or as more recently revised by the District.

#### WS-54 RATES AND CHARGES

The Property described in this Agreement shall be subject to all rates and charges established by the District.

#### WS-55 DEVELOPER EXTENSION AGREEMENT TERMINATION

- A. Initiated by District  
Should the Developer fail to comply with, perform and/or meet any of the conditions associated with the Agreement or conditions associated with Certificate(s) of Water and/or Sewer Availability issued by the District in conjunction with the Agreement, the District may, in its sole discretion, terminate the Developer Extension Agreement prior to its completion. In the event of such termination the District shall reimburse connection fees and charges paid by the Developer pursuant to this Developer Extension Agreement, up to a maximum of \$250 per Equivalent Residential Unit for water and up to \$250 per Equivalent Residential Unit for sewer, to the extent that such fees and charges have not been used, committed to or the collection of such relied upon for the planning, facilities construction, etc. by the District.
- B. Initiated by Developer  
Should the Developer request that the Developer Extension Agreement be terminated before its completion, the District will consider and may approve such request on the condition that 1) all District fees such as Engineering, administrative and legal relating to the Agreement be



paid in full, and 2) as otherwise conditioned by the District such as the completion of a portion of the extension improvements.

The District shall reimburse connection fees and charges paid by the Developer pursuant to this Developer Extension Agreement, up to a maximum of \$250 per Equivalent Residential Unit for water and up to \$250 per Equivalent Residential Unit for sewer, to the extent that such fees and charges have not been used, committed to or the collection of such relied upon for the planning, facilities construction, etc. by the District.

#### WS-56 INCORPORATION OF CERTIFICATE(S) OF AVAILABILITY

If a Certificate of Water and/or Sewer Availability (“Certificate”) is issued by the District for the Project that relates to this Developer Extension Agreement, the terms and conditions for the Certificate(s) are hereby incorporated in the Developer Extension Agreement by this reference as if set forth herein in full.

END OF SECTION

**SAMMAMISH PLATEAU WATER AND SEWER DISTRICT  
DEVELOPER EXTENSION AGREEMENT  
PROJECT INFORMATION**

**WATER** \_\_\_\_\_ and/or **SEWER** \_\_\_\_\_

Name of Development \_\_\_\_\_

<p><b><u>APPLICANT</u></b></p> <p>Name: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <p>Fax: _____</p> <p>E-Mail: _____</p> <p><b>Designate Applicant Status:</b>          Corporation <input type="checkbox"/>, Partnership <input type="checkbox"/>, LLC <input type="checkbox"/>,          Joint Venture <input type="checkbox"/>, Sole Proprietorship <input type="checkbox"/>          Other <input type="checkbox"/></p>	<p><b><u>OWNER</u></b> <i>Same as Applicant? Yes <input type="checkbox"/> / No <input type="checkbox"/></i>          (Optional if Owner same as Applicant)</p> <p>Name: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <p>Fax: _____</p> <p>E-Mail: _____</p> <p><b>Designate Owner Status:</b>          Corporation <input type="checkbox"/>, Partnership <input type="checkbox"/>, LLC <input type="checkbox"/>,          Joint Venture <input type="checkbox"/>, Sole Proprietorship <input type="checkbox"/>          Other <input type="checkbox"/></p>
<p><b><u>APPLICANT'S AGENT</u></b></p> <p>Name: _____</p> <p>Company: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <p>Fax: _____</p> <p>E-Mail: _____</p>	<p><b><u>APPLICANT'S ENGINEER</u></b></p> <p>Name: _____</p> <p>Company: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <p>Fax: _____</p> <p>E-Mail: _____</p>

**PRIMARY CONTACT:**                      Applicant     Owner     Agent     Engineer

**PARTY TO RECEIVE BILLS**    Applicant     Owner     Agent     Engineer

Refer to the General Provisions, Section WS-1, "Definitions", for an explanation of each of the parties and their project roles listed above. Complete this page indicating all owners of the real property who must sign this agreement and are responsible for its performance. Also identify the Owner's Agent, if any. Project Agent and Project Engineer shall also be indicated.

**REAL PROPERTY INFORMATION**

Tax Lot Number(s): _____ Attach a legal description Property Size: _____ Property Zoning: _____ Location Description: _____
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APPLICATION AND AGREEMENT TO CONSTRUCT  
EXTENSION(S) TO WATER AND/OR SEWER SYSTEM(S)

The undersigned, as the Developer herein, hereby makes application to the Commissioners of the Sammamish Plateau Water and Sewer District, as the District herein, for permission to construct and connect a private extension to the District's existing water and/or sewer system(s) as herein provided. If this application is accepted, the undersigned, in consideration of the mutual promises and covenants herein contained, agrees to the terms and conditions of this Developer Extension Agreement and as follows:

**1. Location of Water and/or Sewer System Extension(s).**

The proposed water and/or sewer system extension(s) (the "extension(s)") will be installed in streets and other approved rights-of-way, tracts and/or easements and shall be for the use and benefit of the property hereinafter described, which property is owned by the Developer and/or other owners for whom the Developer is acting as agent. Any such owners have joined in this application and are designated on the signature page hereof as "additional owners". The legal description of the property is:

See Attached Real Property Legal Description

**2. Warranty of Authority.**

The Developer and any additional owners warrant that they are the owners of all the property described in this Agreement. Developer shall also, upon request, provide a title report to the District establishing that the parties executing this Agreement are the owners of all the real property described herein.

**3. No Assignment Without District Approval.**

The Developer's rights and responsibilities arising out of this Agreement are not assignable unless District consent is obtained, as conditioned by the District, prior to any proposed assignment. Written documents as required by the District of any District approved assignment shall be filed with the District by the Developer herein at the time of any assignment.

**4. Description of Extension(s).**

The proposed extension(s) will consist of water pipe and appurtenances and/or sewer pipe and appurtenances and shall be installed in accordance with this Agreement and with such Plans and Specifications as Project Engineer may prepare in conformity with District specifications and as approved by the District.

## **5. Fees to be paid by the Developer.**

### **(A) Preliminary Fees**

#### **(1) Application Fee**

The Application fee shall be as set by District Resolution. The resolution establishing the Application fee for the Developer Extension Agreement is available at the District Office. All Application fees for the Developer Extension Agreement shall be paid at the time the Application is submitted to the District, and any application for a Developer Extension Agreement will not be received, accepted, or processed by the District until the Application fee is paid in full to the District. The Application fee is for District staff costs associated with providing preliminary design information, preparing the Agreement, and preparing a resolution of initial acceptance by the District's Board of Commissioners. The Application fee is non-refundable.

#### **(2) General Facility Charges**

The Developer shall pay General Facility Charges, as determined by the District as a condition of final acceptance of this Developer Extension Agreement and the extension improvements by the District. The General Facility Charge shall be set by District Resolution. If the General Facility Charge is revised by District Resolution after this Developer Extension Agreement has been entered into and before the General Facility Charges have been paid by the Developer, the charges in effect at the time that the Developer pays the General Facility Charges shall apply. The resolution establishing the General Facility Charges is available at the District Office.

At the time of, and as a condition of the District entering into this Developer Extension Agreement, a partial payment on the General Facility Charges owing for the Project shall be paid by the Developer. This partial payment of the General Facility Charges is termed the "Preliminary General Facility Charges". For Single Family Residential Developments this shall be at a rate of \$500 per lot for Water General Facility Charges and/or \$500 per lot for Sewer General Facility Charges. For Non-Single Family Residential Developments, including commercial developments, this shall be at a rate of \$500 per Equivalent Residential Unit (ERU) for Water General Facility Charges and/or \$500 per ERU for Sewer General Facility Charges, the number of ERUs to be determined by the District.

The portion of the General Facility Charges not paid upon entering into the Developer Extension Agreement, termed the "Remaining General Facility Charges", shall be paid to the District by the Developer at any point before the District's General Manager approves with his/her signature the design for construction of the water and/or sewer improvements. The District will not charge interest on Remaining General Facility Charges owing. The District rate in effect at the time that the Developer pays the Remaining General Facility Charges will apply. If the project does not include construction of any water and/or sewer facilities, the Developer shall pay to the District the Remaining General Facility Charges before installation of water meters and/or side

sewers and before the District's Final Acceptance of the Developer Extension Agreement.

Once the Remaining General Facility Charges are paid for a specific number of ERUs, the General Facility Charges for those ERUs is established at that rate and are not subject to further adjustments. For changes in the number of ERUs associated with the Developer Extension Agreement, see Section 5. (D)(5), General Facility Charge Adjustments, of this Agreement.

**(B) Development Services Deposit**

The District's administration and execution of the Developer Extension Agreement (Development Services) includes, but is not limited to, the following District services:

- Preparation of Certificates of Water and/or Sewer Availability
- Analysis, review, and approval of the design of water and/or sewer facilities prepared by the Developer's Engineer, including checking for conformity with the District's Comprehensive Plans
- Coordination with the land use agency for the proposed development and review of submittals from the land use agency
- Review and approval of easements if applicable
- Assistance in securing right-of-way permits if applicable
- Review and approval of preliminary and final plat documents
- Environmental documentation review and processing if applicable
- Legal services and/or outside consultant costs if applicable
- Review and approval of reimbursement agreements
- Review and approval of materials submittals
- Other agency permitting fees and inspection costs administered through the District
- Construction inspection and testing services
- Review and approval of final project documentation including as-built drawings, input of as-built drawings into the District's GIS system, input of facility data into the District's asset management system, and document recording

The District does not provide the following services: design services, property surveys; surveying; or staking of mains, facilities or appurtenance.

**(1) Development Services Deposit**

The Developer shall pay a Development Services Deposit ("DS Deposit") listed on the District's Development Services Fee Rate Schedule at the time of, and as a condition of, entering into this Developer Extension Agreement. The District will hold this deposit as a retainer for District expenses until the completion of the maintenance period following final acceptance of the Developer Extension Agreement, at which time the deposit will be refunded. The resolution establishing the DS Deposit is available at the District Office.

(2) Payment for Development Services

The Developer is responsible for paying, on a time-and-materials basis, for all of the District's actual labor costs and expenses as they are incurred, including overhead, associated with the District's administration and execution of the Developer Extension Agreement.

Beginning immediately after Initial Acceptance of the Developer Extension Agreement by the District's Board of Commissioners and continuing to the end of the Maintenance Period following Final Acceptance of the Developer Extension Agreement, the District will provide the Developer with periodic invoices showing the District costs expended to date. All invoices are due within thirty (30) days of the invoice date. **Failure to pay the invoice within thirty (30) days of the date of the invoice will result in suspension of all District development services activities associated with the Developer Extension Agreement, including construction activities related to the water and sewer facilities or final acceptance of the project, until such time as the invoice is paid in full. If the invoice is not paid within ninety (90) days of the date of the invoice, the amount owing will be deducted from the DS Deposit. District development services associated with the Developer Extension Agreement will not resume until the Developer restores the DS Deposit to its original amount and pays any District invoices owing.**

(C) **Flushing/Jetting Water**

Flushing water is used during normal construction procedures to obtain pressure tests and to flush the water mains for purity testing, and to jet the sewer lines for normal cleaning and prior to TV inspections. The District will invoice the Developer for flushing water actually used through rented or District hydrant meters, or through the water obtained through the hydrant honor system.

Flushing/jetting water fees do not cover water used in or around buildings during the construction period for plumbing tests, irrigation or other uses. Applications for use of hydrant meters may be obtained at the District to obtain water for these uses. **Developer and/or Developer's Contractor shall be fined for tampering with the District's water system if valves, including fire hydrant valves, are operated without the District's prior approval and without the District being present.**

(D) **Final Acceptance Fees**

Developers shall pay the Final Acceptance Fees prior to the District's final acceptance of the water and/or sewer system improvements and before the Developer may receive a letter (Health Letter) from the District stating that the water and/or sewer system improvements have been or will be finished in accordance with the District approved Plans and Specifications. If a Health Letter is not required for a project, or fees are identified after the Health Letter has been issued, payment of fees will be required prior to District accepting water meter or side sewer applications for property included in the Developer's project.

(1) Meter and Side Sewer Charges

a) Meter Charges:

Developers of Single Family Residential Projects shall pay applicable meter charges for irrigation meters. Domestic meter drop fees (for Single Family Residential Projects) shall be paid by the Builder/Owner of each individual lot at the time of meter application. If the Developer chooses, the Developer may pay the meter drop fees for the domestic water meters.

For Non-Single Family Residential Projects, including commercial developments, Developer shall pay the applicable meter charges for all Domestic and Irrigation water meters.

The meter drop fees are set by District Resolution, a copy of which is available at the District Offices. If the meter drop fees are revised by District Resolution after this Developer Extension Agreement has been entered into and before the water and/or sewer system improvements have been finally accepted for ownership by the District, the fees in effect at final acceptance shall apply.

b) Side Sewer Inspection Charges:

Domestic side sewer inspection fees, (for Single Family Residential Projects), shall be paid by the Builder/Owner of each individual lot at the time of side sewer application. If the Developer chooses, the Developer may pay the side sewer inspection fees for the domestic side sewers.

For Non-Single Family Residential Projects, including commercial developments, Developer shall pay the applicable side sewer inspection charges for all side sewer connections.

The side sewer inspection fees are set by District Resolution, a copy of which is available at the District Offices. If the side sewer inspection fees are revised by District Resolution after this Developer Extension Agreement has been entered into and before the water and/or sewer system improvements have been finally accepted for ownership by the District, the fees in effect at final acceptance shall apply.

(2) Regional Capital Facility Charges

Developers of Single Family Residential Projects shall pay applicable Regional Capital Facility Charges for irrigation meters. Regional Capital Facility Charges for domestic meters, (for Single Family Residential Projects), shall be paid by the Builder/Owner of each individual lot at the time of meter application.

For Non-Single Family Residential Projects, including commercial developments, Developer shall pay the applicable Regional Capital Facility Charges for all Domestic and Irrigation water meters at the time of meter application.

The Regional Capital Facility Charges are set by District Resolution, a copy of which is available at the District Offices. If the Regional Capital Facility Charges are revised by District Resolution after this Developer Extension Agreement has been entered into and before the water and/or sewer system improvements have been finally accepted for ownership by the District, the fees in effect at final acceptance shall apply.

(3) Local Facility Charge

The Developer shall pay Local Facility Charge fees as determined by the District. The Local Facility Charge fees are required to cover the Developer's property's equitable share of the cost of water mains and/or sewer mains that have already been installed or will be installed in the future, adjacent to their property, if that property has not previously paid its equitable share of such improvements. Developer's property includes the entire parcel, including but not limited to sensitive areas, tracts and areas that may be set aside as non-buildable or other open space or reserve tracts, as part of the Development.

The Local Facility Charge fees are set by District Resolutions, copies of which are available at the District Office. If the Local Facility Charge fees are revised by District Resolution after this Developer Extension Agreement has been entered into and before the water and/or sewer system improvements have been finally accepted for ownership by the District, the fees in effect at final acceptance shall apply.

(4) Reimbursement Fees (Owing to Others)

The Developer shall pay all reimbursement charges owing for the Property. Reimbursement charges shall be owing for:

- a) Any existing reimbursement agreement with the District applicable to the Developer's extension/real property; or
- b) Any reimbursement agreement in force and effect applicable to the Developer's extension/real property at the time of the District's final acceptance of the Developer's extension.



(5) General Facility Charge Adjustments

If the number of ERUs associated with the Developer Extension Agreement changes during the course of the project, the General Facility Charges will be re-evaluated prior to the District's Final Acceptance of the Developer Extension Agreement. If the number of ERUs is reduced, District will refund the General Facility Charges for the unused ERUs at the rate paid by the Developer. If the number of ERUs is increased, the Developer owes General Facility Charges for the additional ERUs at the rate in effect on the date that the Developer pays for the additional ERUs. The General Facility Charges are set by District Resolution, copies of which are available at the District Office.

Any refund will be made by the District by processing a voucher with King County, payable to the Developer, through the District's normal accounts payable process. The accounts payable process can take up to 60 days. When the check from King County for the excess General Facility Charge payment reimbursement is received by the District, it will be mailed to the Developer at the address listed on the Project Information sheet included as part of this Developers Extension Agreement, unless otherwise directed by the Developer in writing.

(6) Supplemental Developer Agreement Fees

The District will provide the Developer with periodic invoices showing the District costs expended to date associated with the following supplemental services.

a) Reimbursement Agreements

If the Developer chooses to enter into a Reimbursement Agreement with the District for facilities Developer has installed which benefit other properties adjacent or near to the installed facility, Developer shall pay: all District expenses, on a time-and-materials basis, associated with the Reimbursement Agreement; filing fees for recording the Reimbursement Agreement with King County; and expenses for legal services in excess of those normally used in preparing the District's standard Reimbursement Agreement, including but not limited to changes to the District's standard Reimbursement Agreement requested by the Developer.

The Developer is also responsible for providing the District with, or paying fees and charges related to obtaining, legal descriptions for all Properties identified in the Reimbursement Agreement.

b) Satellite Water Service Agreements

If it is necessary or desirable for the Developer's Project to be developed with a Satellite Water System, a Satellite Water Service Agreement may be entered into between the Developer and the District.

Developer shall pay: all District fees identified in the Satellite Service Agreement; filing fees for recording the Satellite Service Agreement with King County; and expenses for legal services in excess of those normally used in preparing the District's standard Satellite Service Agreement, including but not be limited to changes to the District's standard Satellite Service Agreement requested by the Developer. In addition the Developer is responsible for all fees and charges necessary for all applicable permits and approvals by all federal, state and county agencies having jurisdiction.

c) Agreement for System Use Prior to Final Lift of Asphalt

If the Developer requests and District agrees to allow use of the water and/or sewer system prior to completion of the water and/or sewer facility improvements, where the Developer has completed ALL REQUIREMENTS for Final Acceptance of the project EXCEPT placement of the final lift of asphalt, an Agreement for System Use Prior to Final Lift of Asphalt may be entered into between the Developer and the District.

Developer shall pay all District fees identified in the Agreement for System

Use Prior to Final Lift of Asphalt, with such fees being set by District Resolution.

d) Future Sewer Connection Agreement

The King County Comprehensive Plan requires Urban Designated property be developed with sewer service. In areas where sewer service is not currently available and will not be extended as part of the Developer Extension Agreement a Future Sewer Connection Agreement may be required by King County, the City of Sammamish or the City of Issaquah.

Developer shall pay all District fees associated with the execution and recording of the Future Sewer Connection Agreement.

e) Other Agreements

If any other Agreements between the Developer and the District are found to be necessary during the course of the Developer Extension Agreement, payment of additional fees or charges may be required. The Developer shall pay for all items such as, but not limited to, the preparation or review of any Agreements by the District's attorney and document recording fees.

WATER FEE SUMMARY SHEET  
first of three sheets

\_\_\_\_\_ Development Name

**PRELIMINARY/CERTIFICATE FEES**

(1) General Facility Charges

a) **Partial Payment @ \$500/ERU**

No. Lots \_\_\_\_\_, No. ERUs \_\_\_\_\_ (See Page A-15a for ERUs)  
Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

1.5% Excise Tax on GFC = **\$7.50/ERU**

b) **Development Services Deposit** (pay **EITHER** with Water **OR** Sewer phase)  
Single Family Short Plat (1-9 Lots) = \$5,000; All Other Projects = \$10,000

**Minimum Payment Necessary to Enter into Agreement**

**Total** \_\_\_\_\_  
Date Pd. \_\_\_\_\_  
Receipt # \_\_\_\_\_

Date of District Approval of Agreement \_\_\_\_\_

c) **Remaining General Facility Charges**

The GFC in effect at the time of payment of Remaining GFCs shall be charged. The figures given here are those in effect at the time of Agreement preparation, and are subject to change at any time without prior public notice

Meter Size	3/4"	1"	1-1/2"	2"
GFCs	\$5,165.00	\$12,912.00	\$25,823.00	\$41,316.00

No. Lots \_\_\_\_\_, No. ERUs \_\_\_\_\_ (See Calculation Pages for ERUs)  
Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

GFC Rate in effect at time Remaining GFC Payment  
= \$ \_\_\_\_\_ /ERU x \_\_\_\_\_ ERUs

less Partial Payment in (1)a) (\_\_\_\_\_)

Remaining GFC Subtotal \_\_\_\_\_

1.5% Excise Tax on Remaining GFC Subtotal \_\_\_\_\_

**Total** \_\_\_\_\_  
Date Pd. \_\_\_\_\_  
Receipt # \_\_\_\_\_

WATER FEE SUMMARY SHEET  
second of three sheets

\_\_\_\_\_  
Development Name

**FINAL ACCEPTANCE FEES**

(1) Meter Charges (Meter drop prices shown below)

Domestic Meters \_\_\_\_\_

(Optional for Single Family Residential)

\_\_\_\_\_ - 3/4" @ \$425.00; \_\_\_\_\_ - 1" @ \$500.00, \_\_\_\_\_ - 1-1/2" @ \$825.00

\_\_\_\_\_ - 2" @ \$1,050.00, \_\_\_\_\_ - 3" @ T&M; \_\_\_\_\_ - 4" @ T&M

Irrigation Meters \_\_\_\_\_

\_\_\_\_\_ - 3/4" @ \$425.00; \_\_\_\_\_ - 1" @ \$500.00, \_\_\_\_\_ - 1-1/2" @ \$825.00

\_\_\_\_\_ - 2" @ \$1,050.00, \_\_\_\_\_ - 3" @ T&M; \_\_\_\_\_ - 4" @ T&M

Note: Prices quoted are for meter drops, meter installation fees are not quoted.

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(2) Regional Capital Facility Charges

All Meters (Optional for Single Family Residential)

\_\_\_\_\_ - 3/4" @ \$6,005.00; \_\_\_\_\_ - 1" @ \$15,012.50, \_\_\_\_\_ - 1-1/2" @ \$30,025.00

\_\_\_\_\_ - 2" @ \$48,040.00, \_\_\_\_\_ - 3" @ \$96,080.00; \_\_\_\_\_ - 4" @ \$150,125.00

Excise Tax @ 1.5%

\_\_\_\_\_ - 3/4" @ \$90.08; \_\_\_\_\_ - 1" @ \$225.19, \_\_\_\_\_ - 1-1/2" @ \$450.38

\_\_\_\_\_ - 2" @ \$720.00, \_\_\_\_\_ - 3" @ \$1,441.20; \_\_\_\_\_ - 4" @ \$2,251.88

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(3) Local Facility Charge

\_\_\_\_\_ lineal feet at \$ \_\_\_\_\_ /lineal foot

Streets or areas of frontage:

\_\_\_\_\_

LFC Excise Tax @ **1.5%**

The LFC rate in effect at the time of Final Acceptance shall be charged. The general rate given here, \$178.00 per lineal foot, was in effect at the time of Agreement preparation, and is subject to change at any time without prior public notice

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(4) Reimbursement Fees (Owing to Others)

Description of Reimbursement Basis and Factors:

\_\_\_\_\_

\_\_\_\_\_

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(5) General Facility Charge Adjustments

See Calculation Sheets for Explanation

TOTAL + or - \_\_\_\_\_

GFC Excise Tax @ **1.5%** \_\_\_\_\_

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(6) Other Charges

\_\_\_\_\_

WATER FEE SUMMARY SHEET  
third of three sheets

\_\_\_\_\_  
Development Name

**FINAL ACCEPTANCE FEES – SUMMARY AND TOTAL**

(1) Meter Charges

Domestic Meters \_\_\_\_\_

Irrigation Meters \_\_\_\_\_

(2) Regional Capital Facility Charges \_\_\_\_\_

(3) Local Facility Charges \_\_\_\_\_

(4) Reimbursement Fees \_\_\_\_\_

(5) General Facility Charge Adjustments \_\_\_\_\_

(6) Other Charges \_\_\_\_\_

(7) Excise Tax @ 1.5%:

RCFC \_\_\_\_\_ LFC \_\_\_\_\_ GFC \_\_\_\_\_

TOTAL \_\_\_\_\_

Date Pd. \_\_\_\_\_

Receipt # \_\_\_\_\_

**FINAL LIFT PHASING, IF APPLICABLE**

Final Lift Phasing Deposit \_\_\_\_\_

Date Pd. \_\_\_\_\_

Receipt # \_\_\_\_\_

Final Lift Phasing Deposit Refund \_\_\_\_\_

Payment to Developer Voucher # \_\_\_\_\_

if TOTAL is negative (owe Developer) \_\_\_\_\_

**PROJECT CLOSEOUT**

(1) 23-month Inspection and Project Final Costs \_\_\_\_\_

(2) Development Services Deposit Refund \_\_\_\_\_

(3) Other \_\_\_\_\_

TOTAL \_\_\_\_\_

Date Pd. \_\_\_\_\_

Receipt # \_\_\_\_\_

Payment to Developer Voucher # \_\_\_\_\_

if TOTAL is negative (owe Developer) \_\_\_\_\_

SEWER FEE SUMMARY SHEET  
first of three sheets

\_\_\_\_\_ Development Name

**PRELIMINARY/CERTIFICATE FEES**

(1) General Facility Charges

a) **Partial Payment @ \$500/ERU**

No. Lots \_\_\_\_\_, No. ERUs \_\_\_\_\_ (See Page A-15-a for ERUs)

Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

1.5% Excise Tax on GFC = **\$7.50/ERU**

b) **Development Services Deposit** (pay **EITHER** with Water **OR** Sewer phase)

Single Family Short Plat (1-9 Lots) = \$5,000; All Other Projects = \$10,000

**Minimum Payment Necessary to Enter into Agreement**

**Total**

Date Pd. \_\_\_\_\_

Receipt # \_\_\_\_\_

Date of District Approval of Agreement \_\_\_\_\_

c) **Remaining General Facility Charges**

The GFC in effect at the time of payment of Remaining GFCs shall be charged. The figures given here are those in effect at the time of Agreement preparation, and are subject to change at any time without prior public notice

Meter Size	3/4"	1"	1-1/2"	2"
GFCs	\$4,007.00	\$10,018.00	\$20,035.00	\$32,056.00

No. Lots \_\_\_\_\_, No. ERUs \_\_\_\_\_ (See Calculation Pages for ERUs)

Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

GFC Rate in effect at time Remaining GFC Payment

= \$ \_\_\_\_\_ /ERU x \_\_\_\_\_ ERUs

Less Partial Payment in (1)a) (\_\_\_\_\_)

Remaining GFC Subtotal \_\_\_\_\_

1.5% Excise Tax on Remaining GFC Subtotal \_\_\_\_\_

**Total**

Date Pd. \_\_\_\_\_

Receipt # \_\_\_\_\_

SEWER FEE SUMMARY SHEET  
second of three sheets

\_\_\_\_\_  
Development Name

**FINAL ACCEPTANCE FEES**

(1) Side Sewer Inspection Charges

Single Family Residential (Optional)  
Number of Lots \_\_\_\_\_ x \$200.00 \_\_\_\_\_

Non-Single Family Residential  
Number of Side Sewers \_\_\_\_\_ x \$300.00 \_\_\_\_\_

Oil/Water Separators or Grease Interceptors  
Number of Side Sewers \_\_\_\_\_ x \$1,100.00 \_\_\_\_\_

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(2) Local Facility Charge

\_\_\_\_\_ lineal feet at \$ \_\_\_\_\_ /lineal foot \_\_\_\_\_  
Streets or areas of frontage: \_\_\_\_\_

Excise Tax @ **\$1.5 %** \_\_\_\_\_

The LFC rate in effect at the time of Final Acceptance shall be charged. The general rate given here, \$228 per lineal foot, was in effect at the time of Agreement preparation, and is subject to change at any time without prior public notice

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(3) Reimbursement Fees (Owing to Others) \_\_\_\_\_

Description of Reimbursement Basis and Factors: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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(4) General Facility Charge Adjustments

See Calculation Sheets for Explanation

TOTAL + or - \_\_\_\_\_

GFC Excise Tax @ **1.5%** \_\_\_\_\_

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(5) Other Charges \_\_\_\_\_



SEWER FEE SUMMARY SHEET  
third of three sheets

\_\_\_\_\_  
Development Name

**FINAL ACCEPTANCE FEES – SUMMARY AND TOTAL**

(1) Side Sewer Inspection Charges

Single Family Residential (Optional) \_\_\_\_\_

Non-Single Family Residential \_\_\_\_\_

(2) Local Facility Charge \_\_\_\_\_

(3) Reimbursement Fees (Owing to Others) \_\_\_\_\_

(4) General Facility Charge Adjustments \_\_\_\_\_

(5) Other Charges \_\_\_\_\_

(6) Excise Tax @ 1.5%:

LFC \_\_\_\_\_ GFC \_\_\_\_\_

TOTAL \_\_\_\_\_

Date Pd. \_\_\_\_\_

Receipt # \_\_\_\_\_

**FINAL LIFT PHASING, IF APPLICABLE**

Final Lift Phasing Deposit

Date Pd. \_\_\_\_\_

Receipt # \_\_\_\_\_

Final Lift Phasing Deposit Refund

Payment to Developer Voucher # \_\_\_\_\_  
if TOTAL is negative (owe Developer)

**PROJECT CLOSEOUT**

(1) 23-month Inspection and Project Final Costs \_\_\_\_\_

(2) Development Services Deposit Refund \_\_\_\_\_

(3) Other \_\_\_\_\_

TOTAL \_\_\_\_\_

Date Pd. \_\_\_\_\_

Receipt # \_\_\_\_\_

Payment to Developer Voucher # \_\_\_\_\_  
if TOTAL is negative (owe Developer)

**Calculation of Equivalent Residential Units (ERUs)**

Date \_\_\_\_\_  
By \_\_\_\_\_

1 ERU = The water use for a Single Family Building using a 3/4" meter.

ERUs are based on meter size. The number of ERUs each meter size represents is based on American Water Works Association (AWWA) capacity ratings.

Water: ERUs based on meter size.

Sewer: ERUs based on meter size.

Category Used for basis of Calculation: \_\_\_\_\_

Single Family Residential: No. Lots \_\_\_\_\_;  
Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

Non Single Family Residential: Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

If the meter size is not known, an estimate based on similar facilities installed in the District should be used.

<u>Meter Size</u>	<u>ERUs</u>
3/4"	1
1"	2.5
1 1/2"	5
2"	8
3"	16
4"	25
6"	50
8"	80
10"	115

Other Criteria \_\_\_\_\_

\_\_\_\_\_  
CALCULATIONS FOR ERU'S AT TIME OF ENTERING INTO AGREEMENT:

<p><b># Water ERUs</b> _____</p> <p><b># Sewer ERUs</b> _____</p> <p>By ____ Date _____</p>
---

**CALCULATIONS FOR ERU'S IF CHANGES TO SCOPE OF DEVELOPMENT HAVE OCCURRED PRIOR TO PAYMENT OF REMAINING GFC'S:**

Single Family Residential: No. Lots \_\_\_\_\_;  
Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

Non-Single Family Residential: Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_,  
Other \_\_\_\_\_

If the meter size is not known, an estimate based on similar facilities installed in the District should be used.  
Other Criteria \_\_\_\_\_

# Water ERUs \_\_\_\_\_

# Sewer ERUs \_\_\_\_\_

By \_\_\_ Date \_\_\_\_\_

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**CALCULATIONS FOR ERU'S IF CHANGES TO SCOPE OF DEVELOPMENT HAVE OCCURRED PRIOR TO PAYMENT OF FINAL ACCEPTANCE FEES:**

Single Family Residential: No. Lots \_\_\_\_\_;  
Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

Non Single Family Residential: Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_,  
Other \_\_\_\_\_

If the meter size is not known, an estimate based on similar facilities installed in the District should be used.  
Other Criteria \_\_\_\_\_

# Water ERUs \_\_\_\_\_

# Sewer ERUs \_\_\_\_\_

By \_\_\_ Date \_\_\_\_\_

(5) General Facility Charge Adjustments - **Water**

a) Change in Project Scope \_\_\_\_\_

b) Other Reasons \_\_\_\_\_

**Final Project Scope**

Single Family Residential: No. Lots \_\_\_\_\_;  
Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

Non Single Family Residential: Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

ERU Calculations

**ERU Adjustment:**

Final ERU Calculations \_\_\_\_\_

less ERUs included at payment of Remaining GFCs see (1)c) « \_\_\_\_\_ »

Change in ERUs \_\_\_\_\_

**Final Water GFC Calculation**

Final Water GFC Rate = \$ \_\_\_\_\_ /ERU x \_\_\_\_\_ ERUs = \$ \_\_\_\_\_

Adjustment to General Facility Charge + or - \_\_\_\_\_ **Copy to Page A-12**

(4) General Facility Charge Adjustments - **Sewer**

a) Change in Project Scope \_\_\_\_\_

b) Other Reasons \_\_\_\_\_

**Final Project Scope**

Single Family Residential: No. Lots \_\_\_\_\_;  
Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

Non Single Family Residential: Meter Sizes: 3/4" \_\_\_\_\_, 1" \_\_\_\_\_, 1-1/2" \_\_\_\_\_, 2" \_\_\_\_\_, Other \_\_\_\_\_

ERU Calculations

**ERU Adjustment:**

Final ERU Calculations \_\_\_\_\_

less ERUs included at payment of Remaining GFCs see (1)c) « \_\_\_\_\_ »

Change in ERUs \_\_\_\_\_

**Final Sewer GFC Calculation**

Final Sewer GFC Rate = \$ \_\_\_\_\_ /ERU x \_\_\_\_\_ ERUs = \$ \_\_\_\_\_

Adjustment to General Facility Charge + or - \_\_\_\_\_ **Copy to Page A-15**

DEVELOPER EXTENSION AGREEMENT FEE SCHEDULE  
04/07/2014

FEE/DEPOSIT	AMOUNT	EXPLANATION
Application Fee	\$ 1,000.00	Required with Application for a Water and/or Sewer Developer Extension Agreement
Development Services Deposit	\$ 5,000.00	For Single-Family projects encompassing 1 to 9 lots, including short plats
	\$ 10,000.00	For all other projects  Refundable at end of Maintenance Period
Flushing Water	\$ Actual costs	Water used in association with a Developer Extension Agreement filling and flushing of water mains, jetting of sewers, and other construction uses shall be metered through the use of a hydrant meter (or hydrant use "honor system" if approved by the District), and the Developer will be billed for water use
Satellite Water Service Agreements	\$ 250.00	Administrative Fee
	\$ 3,000.00	Future Water System Conversion
System Use Prior to Final Lift of Asphalt		
Deposit (refundable)	500.00	Per Manhole
	\$ 250.00	Per Valve Box
	\$ 50.00	Meter Boxes & Stripes
	\$ 125.00	Hydrants with Blue Reflectors
	\$ 100.00	Per Type 1 Blow-off
	\$ 200.00	Per Type 2 Blow-off
	\$ 100.00	Air Relief Valves
	\$ 100.00	Valve Marker Posts
	\$ 100.00	Cleanouts
	\$	

## **6. Preparation of Plans**

Developer shall retain its own engineer to prepare the Plans for the extension(s) according to District Specifications.

- (A) The Developer must obtain District approval of Project Engineer in accordance with Paragraph WS-6 of this Agreement.
- (B) As part of the preparation of the Plans, Developer must file with the District copies of the:
  - 1) Draft and Approved Preliminary Plat for Developer's project.
  - 2) Road and storm sewer plans and profiles for the project.
  - 3) A contour map of the project with contour intervals of five (5) feet or less. For projects including sewer, more detailed contour information may be required.
- (C) The Developer shall submit an electronic request for a copy of As-Built drawings for surrounding District utilities, as may be available.
- (D) The Developer and the Developer's Engineer shall schedule a pre-design meeting with the District to discuss the items listed below.
  - 1) Water system - a conceptual plan illustrating the overall system grid required, the necessary sizes of pipes, gradients of water lines and such other special requirements as may be deemed necessary. The drawings shall include all water facilities required to provide service to the Real Property included in the Developer Extension Agreement, any offsite facilities required to reach the Real Property, and extension across the Real Property in all directions so as to provide for future extension of the water system beyond the Real Property.
  - 2) Sewer system - a conceptual plan illustrating the overall collection system required, the necessary sizes of pipes, points of connection and such other special requirements as may be deemed necessary. The drawings shall include all sewer facilities required to provide service to the Real Property included in the Developer Extension Agreement, any offsite facilities required to reach the Real Property, and extension across the Real Property in all directions so as to provide for future extension of the sewer system beyond the Real Property.
- (E) Following the predesign meeting, the Project Engineer shall prepare and submit to the District three (3) copies of a preliminary Design and Plans for review and approval by the District. The District shall have the right to require changes in the preliminary Design and Plans as may be deemed necessary. All Designs and Plans prepared by Project Engineer shall be prepared in accordance with: Part One - Design Standards for Water and Sewer Systems, and Part Five - Drawing Standards for Water and Sewer Systems of this Agreement's Technical Specifications. Upon approval of the preliminary Design and Plans by the District, Project Engineer shall prepare a final Plan and submit the original mylar drawing of the final Plan to the District.

- (F) Upon approval of the final Plan by the District, the District Manager shall indicate his/her approval of the Plan on the original mylar drawings, and the District will furnish the Developer with the District's most current technical standards for inclusion with the District-Approved Plans.
- (G) Copies of the Plans
- 1) The Developer will make the following copies of the District-Approved Plans as necessary for Permit submittals and for District use during construction and inspection. The District reserves the right to request additional copies as needed.
    - Adobe PDF of the District-Approved Plans, including District Standards (electronic submittal shall be on CD)
    - Three (3) Full-size sets with District Standards
    - Two (2) 11"x17" (half-size) set with District Standards
  - 2) The original mylars will be kept by the Developer's Engineer for preparation of As-Built Record Drawings at the completion of construction.
  - 3) The Developer shall provide all necessary copies of the District-Approved Plans to the Developer's Contractor.

## **7. Technical Detail and Specifications**

Refer to the *Technical Specifications* Sections of this Agreement; Part One – Design Standards, Part Two – Material Standards, Part Three – Construction Standards, Part Four - Standard Details, and Part Five – Drawing Standards; which are attached hereto and made a part of this Agreement. In addition, the Sammamish Plateau Water and Sewer District *Side Sewer Regulations*, a separate document, are included by this reference.

## **8. Permits and Approvals by other Agencies**

When the original mylar Plan Drawings have been approved by the District Manager, the District will apply for such right-of-way permits and approvals for the Plan as may be necessary. It is the Developer's responsibility to prepare applications for permits such as grading permits, site development permits, fire hydrant permits, and State Environmental Policy Act compliance. Should changes to the Plan be required in order to receive said permits and approvals, the Engineer who prepared the plan shall make all changes as required.

## **9. Performance Guarantee**

The Developer shall provide a signed copy of the contractor's bid for the extension(s), (unless the Developer is undertaking the work itself), for the District's review, a minimum of five (5) days prior to the preconstruction conference. Developer shall furnish to the District, prior to the preconstruction conference a performance guarantee of a type and in a form as determined by the District, in its sole discretion, in an amount equal to either the engineer's estimated cost of the extension(s) or contractor bid price as required by the District.

The Performance Guarantee shall require completion of all work within a period of eighteen (18) months from the date of payment of the Development Services Fee to the District in accordance with the Agreement, the Plans and Specifications and other requirements of the District. The Performance Guarantee shall be released by the District upon the District's final

acceptance of the work in accordance with paragraph WS-11 "Performance Guarantee" of this agreement.

The District in its sole discretion may also require a payment bond of a type and in a form as determined by the District requiring the payment by the Developer of all persons furnishing labor and materials in connection with the work performed under the Agreement, and shall hold the District harmless from any claims therefrom. Any payment bond required by the District shall be provided to the District prior to the preconstruction conference or following commencement of work as a condition of the District granting final acceptance of the work referenced herein.

No third person or party shall have any rights under any performance or payment guarantee the District may require from the Developer and such are provided entirely for the benefit of the District and the Developer and their successors in interest.

#### **10. Subletting and Subcontracting**

Developer is fully responsible for the acts and omissions of subcontractors and persons employed, directly or indirectly, by subcontractors, as well as the acts and omissions of persons directly employed by the Developer.

#### **11. Preconstruction Meeting**

After the Plans have been approved by the District, review and approval of construction material submittals is completed by the District, and a Performance Guarantee has been supplied to the District, the Developer shall contact the District to schedule a preconstruction meeting. Construction of the water and/or sewer improvements for the Developer's project shall not begin for at least 48 hours after the preconstruction meeting. The preconstruction meeting shall be at the District's offices, located at 1510 - 228th Avenue SE, Sammamish, Washington, during normal District office hours. If deemed necessary, the meeting may be continued at the project site.

The meeting shall be attended by the Developer, Developer's Contractor and project superintendent, any sub-Contractor who will be involved in the construction of the water and/or sewer improvements, Project Engineer, if appropriate, District Inspector, other District staff personnel and government agency representatives with jurisdiction on the water and/or sewer improvements installation, if they so request to be present. The District may elect to excuse the attendance at the meeting of any of the attendees upon request.

If the Developer changes Contractors or hires additional Contractors who were not included in the preconstruction meeting for the installation of the water and/or sewer facilities, an additional meeting may be required by the District prior to the new Contractor(s) doing any work on the water and/or sewer installations.

Prior to any work being performed on the water and/or sewer improvements, a Certificate of Insurance covering each Contractor who will be working on the water and/or sewer improvements must be provided to the District. The Certificate shall list the name of the project, with the District as Certificate Holder on the certificate, and shall name the District as an insured, together with an endorsement to the Developer's comprehensive general liability insurance naming the District as an insured as required herein.



## **12. Work Performed Outside of Normal District Work Hours (Overtime)**

District services beyond normal District working hours are considered overtime for purposes of compensation of District services. The District will make reasonable accommodation to provide development services outside of normal District working hours.

District services provided beyond normal working hours will be at the District's overtime rate (1.5 times actual salary) plus overhead.

The request for overtime shall be made in writing by either the developer or the developer's contractor. The developer acknowledges that the contractor is acting as the developer's agent in requesting overtime, for which the District will be compensated by the developer.

District overtime services that are scheduled to begin after normal working hours (overnight or Saturday) shall be compensated at a minimum of 4 hours. Failure to perform the work ("no show") without notifying the District in writing at least 48 hours in advance will result in a 4-hour minimum charge.

## **13. Final Acceptance - Conditions Precedent**

### (A) Compliance with this Agreement

Compliance with all terms and conditions of this Agreement, the Plans and Specifications prepared hereunder and other District requirements shall be a condition precedent to the District's final acceptance of the extension(s) and acceptance of the bill(s) of sale to the extension(s) and to the District's agreement to maintain and operate the extension(s) and to provide water and/or sewer service to the real property that is described in this Agreement.

### (B) Payment of Fees and Costs

No connection to the District water and/or sewer system(s) of any portion of the real property described in this Agreement shall be allowed if there are any fees or costs unpaid to the District under this Agreement or there are other fees arising under other District requirements which are unpaid.

### (C) Construction Completion

#### 1) Third Party Facilities

The District shall not be obligated to provide water and/or sewer service to the property described in this Agreement if construction by third parties of facilities to be transferred to the District has not been completed and title accepted by the District if such third-party facilities are necessary to provide water and/or sewer service to the property described in this Agreement.

#### 2) Developer's Project Facilities

The District will accept title to the extension(s) at such time as all work which may, in any way, affect the water and/or sewer lines constituting the extension(s) has been completed, any damage to said extension(s) which may exist has been repaired, and the District has made final inspection and given the approval to the extension(s) as having been completed in

accordance with this Agreement, the Plans and Specifications and other requirements of the District.

(D) Maintenance Guarantee

Such acceptance by the District shall not relieve the Developer of the obligation to correct defects in labor and/or materials as herein provided and/or the obligations set forth in applicable paragraphs hereof. After acceptance of the extension(s) by the District and the transferring of title to such extension(s) as set forth herein, the Developer shall furnish to the District a maintenance guarantee (cash or bond) which shall continue in force from the date of final acceptance of said extension(s) for a period of two years. The period of two years does not start until all improvements are complete, including adjustments in the final lift of asphalt. The guarantee shall be in a form as contained herein and shall require the Developer and/or the bonding company to correct the defects in labor and materials which arise in said system for a period of one year from the date of final acceptance of the system. The maintenance guarantee shall be in an amount equal to twenty (20) percent of the cost of said extension(s), but not less than seven thousand five hundred dollars (\$7,500.00), or the actual cost of construction if less than seven thousand five hundred dollars.

(E) As-Built Record Drawings

The Developer shall provide to the District the project field plans maintained by the Developer/Contractor, marked to indicate District-approved plan revisions made in the field and other details of construction. The Developer shall also furnish any additional information not shown on the project field plans required by the District for the preparation of As-Built record drawings, such as but not limited to, locating bends in the water main from two permanent above ground fixtures and survey of sewer inverts and the location of all above ground water and sewer facilities and/or structures.

The Developer shall be responsible for providing the District with As-Built record drawings, on a mylar format, clearly marked as "As-Built". The as-built record drawings shall also be provided in a digital format. In addition, for all as-built record drawings, electronic file(s) containing a scanned image of each sheet shall be provided. See *Technical Specifications* for details. Prior to their acceptance the District shall review the As-Built Record Drawings and inform the Developer of any additional information required and not shown, such as but not limited to, survey of water and/or sewer improvements not located in County or City Right-of-Way.

(F) Easements

All easements required shall be provided by the Developer prior to Final Acceptance of the water and/or sewer improvements covered by this Agreement. The Developer shall provide the District the Easement(s) on one of the District's standard forms. In addition, the easement shall be shown on documents recorded as part of King County's, the City of Sammamish's or the City of Issaquah's requirements for final acceptance of the Development.

1) Standard Forms

Copies of the District's standard easement forms are available at the District offices.

## 2) On Documents

The easement to be provided to the District shall be shown on Development documents recorded with King County. The easement shall be identified as a "Water Easement" or "Sanitary Sewer Easement" and shall have the same restrictions identified on the District's standard easement forms. The Developer shall provide the District with a copy of the Development documents, such as the proposed final short plat or plat, as they are to be recorded, for District's review and approval of waterline and sewer line easements, prior to recording. A copy of the recorded document shall also be provided to the District, after final recording.

### (G) Cross Connection Certification

All backflow prevention devices shall be installed prior to final inspection and a Backflow Prevention Assembly Test Report for each device must be submitted to the District prior to Final Acceptance of and service to the project. The test report may be on the District's standard form, which is available at the District offices, or on a form similar to the form provided in the Forms section of this Agreement.

Prior to the lapse of the one year maintenance period and release of the Maintenance Guarantee, the Developer is required to have all backflow prevention devices retested, certified and a Backflow Prevention Assembly Test Report submitted to the District. Thereafter, on an annual basis, the Owner of the property is required to have the backflow prevention devices retested, certified and a test report submitted to the District.

#### **14. Warranties of Developer**

The Bill of Sale to be provided by the Developer to the District shall contain the following warranties with the District as beneficiary:

(A) Developer is the owner of the property, the same is free and clear of all encumbrances and Developer has good right and authority to transfer title thereto to the District and will defend the title of the District against the claims of all third parties claiming to own the same or claiming any interest therein or encumbrance thereon; and

(B) The water system and/or sewer system extension(s) is/are in proper working condition, order and repair, and is/are adequate and fit for the intended purpose of use as a water system and/or sewer system and as an integral part of the water supply and distribution system of the District and/or as an integral part of the sewer collection system of the District; and

(C) For a period of two years from the date of Final Acceptance of the extension(s) by the District, the extension(s) and all parts thereof shall remain in proper working condition, order and repair, and Developer shall repair or replace, at Developers expense, any work or material which may prove to be defective during the period of the warranty.

In addition, Developer shall obtain warranties and guaranties from its subcontractor(s) and/or supplier(s) where such Warranties or guaranties are required by the District. When corrections of defects occurring within the warranty period are made, Developer shall further warrant corrected work for two years after acceptance of the corrected work by the District.

#### **15. Procedure for Acceptance**

Acceptance of title to the extension(s) will be made by motion and resolution of the Board of Commissioners of the District. Prior to such acceptance, an executed Bill of Sale in a form approved by the District and containing the warranties required by this Agreement shall be executed by the Developer and any additional owners and delivered to the District.

#### **16. Effect of Acceptance**

Acceptance by District shall cause the extension(s) to be subject to the control, use and operation of the District and all regulations and conditions of service and service charges as the District determines to be reasonable and proper.

#### **17. Provision of Service**

The Developer will be required to provide the District with a copy of any recorded documents which indicate the final subdivisions, easements, rights-of-way or legal descriptions of the real property described in this Agreement. This shall include but not be limited to Plat Certificates, Final Short Plat maps or Record of Surveys.

Water and/or sewer service will be provided to individual users upon receipt of a completed application and payment of any fees, such as Regional Facility Connection Charges, meter drop fees and/or side sewer inspection fees, owing for such service, as required by District

policies and resolutions. If sewer service is available to the property, and there is no pre-existing alternate source of sewage disposal, connection to the sewer service may be required at the time water service is provided.

### **18. Phased Construction**

The extension(s) may be constructed in phases with prior District approval and as further conditioned by the District. Acceptance may also be on a phased basis when all requirements have been met. There will be no conditional acceptance or acceptance for use and operation.

If phased construction is requested by Developer prior to design review, the Developer shall enter into a new, additional Developer Extension Agreement for each additional phase, and the scope of the original Developer Extension Agreement shall be revised to reflect the initial phase. The District reserves the right to refuse the phased construction request if necessary portions of the water and/or sewer system would be eliminated by the separation. Separate and distinct plan sets will be required for each Developer Extension Agreement. All fees and charges required for each individual Developer Extension Agreement will be assessed and paid in full.

If phased construction is requested after design review has commenced, but prior to construction, the Developer shall enter into a new the Developer Extension Agreement for each additional phase, and shall submit new plans for original Developer Extension Agreement that reflect the revised initial phase. The District reserves the right to refuse the phased construction request if necessary portions of the water and/or sewer system would be eliminated by the separation. Separate and distinct plan sets will be required for each Developer Extension Agreement. All fees and charges required for each individual Developer Extension Agreement will be assessed and paid in full, and any additional costs for re-reviewing plans previously started will be assessed.

Phased construction requests following District approval of the plans will not be allowed.

However, requests for phased acceptance of the water and sewer improvements will be considered in cases where the water and sewer improvements have been completed except for adjustment for final lift of asphalt. These requests will be considered on a case by case basis. The minimum following conditions must be in place prior to District consideration of the request.

- a. Asphalt treated base (ATB) is placed.
- b. Punchlist is completed except for final asphalt lift.
- c. Developer provides all paperwork necessary for District acceptance of the Developer Extension Agreement.
- d. Developer pays all final fees.
- e. Developer executes Agreement for System Use Prior to Final Lift of Asphalt, including payment of all associated fees.

For phased acceptance prior to placement of the final lift of asphalt, the Developer shall enter into an Agreement for Water/Sewer Facilities System Use Prior to Final Asphalt Lift with the District, a copy of which is contained herein.

## **19. Use and Operation of System Prior to Final Acceptance**

The District shall have the right to take possession of and use any completed or partially completed portions of the work although the time may not have expired for completing the entire work, and this shall not be deemed acceptance of any of the work. However, the District is not obligated to supply service to the Developer's property until all work is completed and accepted by the District.

## **20. Limitation of Period of Acceptance**

The extension(s) shall be completed and accepted within eighteen (18) months of the date of payment of the Development Services Fee to the District. If the extension(s) is/are not completed and accepted within the eighteen (18) month period, then this Agreement and all of the Developer's rights herein shall terminate and cease. In the event the Agreement terminates, the District shall have the option, in its sole discretion, to allow the Developer an extension on the existing agreement or to require the Developer to make a new application for extension agreement to the District. If the District decides to allow the Developer an extension of the existing agreement, the existing agreement shall then be subject to any new or amended resolutions or policies which have taken affect since the initial execution of the agreement. Any such new agreement entered into between the District and the Developer pursuant to a new application shall be subject to any new or amended resolutions or policies which have taken affect since the execution of the terminated agreement.

## **21. Inspection/Corrections of Defects Occurring Within Maintenance Period**

When defects in the extension(s) are discovered within the maintenance period, Developer shall start work to remedy any such defects within seven (7) days of notice by the District and shall complete such work within thirty (30) days of beginning remedial work. Failure to commence such correction or replacement within seven days will result in the District notifying the Developer's bonding company of the Developer's failure to complete the required construction and giving the bonding company 30 days to complete the required correction or replacement. If not so commenced within the above-stated time period, or in an emergency as determined by the District at its sole discretion, when damage may result from delay, such correction or replacement may be made by the District, or by a contractor hired by the District, at the expense of the Developer.

In emergencies, which shall be determined by the District at its sole discretion, where damages may result from delay and where loss of service may result, corrections may be made by the District upon discovery, in which case the cost thereof shall be borne by the Developer. In the event the Developer does not commence and/or accomplish corrections within the time specified, the work may be accomplished by the District, or by a contractor hired by the District, at its option, and the cost thereof shall be paid by the Developer.

Developer shall be responsible for any expenses incurred by the District resulting from defects in the Developer's work, including actual damages, costs of materials and labor expended by the District in making repairs and the cost of engineering, inspections and supervision by the District.

## **22. Cleaning of Sewer System Within Maintenance Period**

Twenty-three months after acceptance of the extension(s) by the District, the Developer shall have the sewer system jetted completely, prior to the District's Maintenance Period inspection. The Developer shall arrange with the District to have a District representative

observe the jetting operation. All debris and jetting water shall be removed (vactored) from the sewer system and disposed of properly. The District may, at its sole discretion, allow the decant water from the vactor truck to be disposed of at specific locations within the District, but only in the presence of a District representative.







## **FORMS Table of Contents**

Approval Block for Plans

Easements

Easement for Water Lines

Easement for Sewer Lines with Access Road

**Additional District Standard Easements Are Available at [www.spwsd.org](http://www.spwsd.org)  
Contact District for Applicable Easement(s) for Each Project**

Performance Guarantees

Cash Performance and Pledge of Monies Agreement

Performance Bond

Sample Letter of Credit Form Acceptable to the District

Materials and Equipment Submittal

Certificate of Insurance including Endorsements (Sample)

Acceptance by Property Owner of Restoration Improvements

As-Built Drawing (Samples)

Water

Sewer

Affidavit of No Liens

Bill of Sale

Bill of Sale - Water

Bill of Sale - Sewer

Maintenance Guarantee

Maintenance Bond

Cash Maintenance and Pledge of Monies Agreement

System Use Prior to Final Lift of Asphalt

Final Cost Summary

Water Final Cost Summary

Sewer Final Cost Summary

Backflow Prevention Assembly Test Report

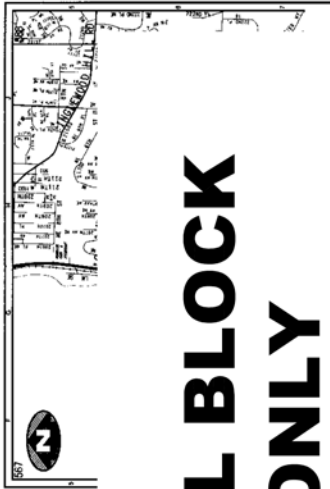
Reimbursement Agreement for Water/Sewer Facilities

Waiver/Application Form

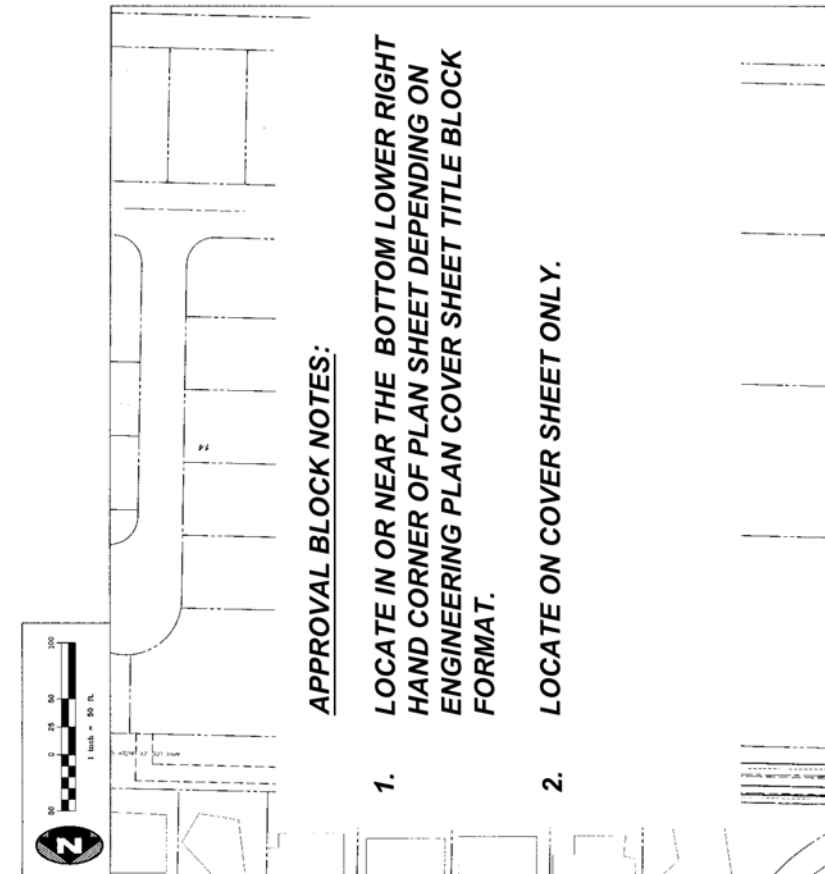
Reimbursement Agreement Process

Reimbursement Agreement

SEC 32, TWP 25N, RGE 6E



# SAMPLE FORMAT FOR DISTRICT STANDARD APPROVAL BLOCK LOCATE ON COVER SHEET ONLY

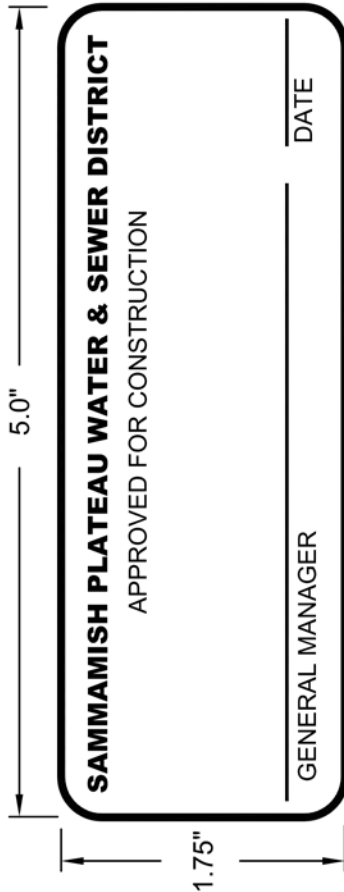


**APPROVAL BLOCK NOTES:**

1. LOCATE IN OR NEAR THE BOTTOM LOWER RIGHT HAND CORNER OF PLAN SHEET DEPENDING ON ENGINEERING PLAN COVER SHEET TITLE BLOCK FORMAT.
2. LOCATE ON COVER SHEET ONLY.

PLAT OVERVIEW

1" = 50'



NOT TO SCALE

**SAMMAMISH PLATEAU WATER & SEWER DISTRICT**  
APPROVED FOR CONSTRUCTION

GENERAL MANAGER \_\_\_\_\_ DATE \_\_\_\_\_

Recording Requested By And  
When Recorded Mail To:

Sammamish Plateau Water and Sewer District  
1510 - 228th Avenue S.E.  
Sammamish, Washington 98075

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**DOCUMENT TITLE:** *EASEMENT FOR WATER LINES*  
**REFERENCE NUMBER OF RELATED DOCUMENT:** *Not Applicable*  
**GRANTOR(S):**  
**ADDITIONAL GRANTORS ON PAGE OF DOCUMENT**  
**GRANTEE(S):** *SAMMAMISH PLATEAU WATER & SEWER DISTRICT*  
**ADDITIONAL GRANTEES ON PAGE OF DOCUMENT**  
**ABBREVIATED LEGAL DESCRIPTION:**  
**ASSESSOR'S TAX / PARCEL NUMBER(S):**

---

### **EASEMENT FOR WATER LINES**

The undersigned, \_\_\_\_\_ (“Grantor”), for and in consideration of good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, hereby grants and conveys to Sammamish Plateau Water and Sewer District, a municipal corporation in King County, Washington (“Grantee”), and its successors and assigns, a permanent Easement for Water Lines including water lines and appurtenances thereto (“Easement”) as follows:

1. Nature and Location of Easement. Grantor owns that certain real property legally described in *Exhibit “A”*, attached hereto and incorporated herein by this reference (“Real Property”). The Easement granted by Grantor herein shall be a permanent easement for the benefit of Grantee over, upon, across, through and under a portion of the Real Property, such Easement as legally described on *Exhibit “B”* and as described and depicted on *Exhibit “C”*, attached hereto and incorporated herein by this reference, for the purposes of installing, laying, constructing, maintaining, inspecting, repairing, removing, replacing, renewing, using and operating water lines, together with all facilities, connectors and appurtenances (“Water Lines”), including the right of ingress and egress with all necessary vehicles and equipment for said purposes.
2. Right of Entry. Grantee shall have the right, without notice and without prior institution of any suit or proceeding at law or equity, at all times as may be necessary to enter upon the Real Property to install, lay, construct, maintain, inspect, repair, remove, replace, renew, use and operate the Water Lines for the purposes of serving the Real Property and other properties with utility service. Grantee agrees to restore the Real Property as nearly as reasonably possible to its

condition prior to any material disturbance from construction, operation, maintenance, repair, or replacement of the Water Lines.

3. Encroachment/Construction Activity. Grantor shall not undertake, authorize, permit or consent to any construction or excavation including, without limitation, digging, tunneling, or other forms of construction activity on or near the Easement which might in any fashion unearth, undermine, or damage the Water Lines or endanger the lateral or other support of the Water Lines without Grantee's prior written approval. Grantor further agrees that no structure or obstruction including, without limitation, fences and rockeries shall be erected over, upon or within the Easement, and no trees, bushes or other shrubbery shall be planted or maintained within the Easement, provided Grantor shall have full use of the surface of the Real Property within the Easement, so long as such use does not interfere with the Easement or the Water Lines.

4. Binding Effect/ Warranty of Title. The Easement and the covenants, terms, and conditions contained herein are intended to and shall run with the Real Property and shall be binding upon Grantee and Grantor and their respective successors, heirs and assigns. Grantor warrants that Grantor has good title to the Real Property and warrants the Grantee title to and quiet enjoyment of the Easement.

5. Recording. Upon its execution, the Easement shall be recorded with the Department of Records and Elections, King County, Washington.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

GRANTOR(S)

By \_\_\_\_\_

By \_\_\_\_\_

\_\_\_\_\_  
(Print or type name(s))

Its \_\_\_\_\_  
(Print or type position held)

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

I certify that I know or have satisfactory evidence that \_\_\_\_\_  
is the person who appeared before me, and said person acknowledged that he/she signed this  
instrument and acknowledged it to be his/her free and voluntary act, for the uses and purposes  
mentioned in the instrument.

SUBSCRIBED AND SWORN to before me this \_\_\_\_\_ day of \_\_\_\_\_,  
\_\_\_\_\_.

\_\_\_\_\_  
(Printed Name)  
NOTARY PUBLIC in and for the State of  
Washington.  
My Commission Expires \_\_\_\_\_

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

I certify that I know or have satisfactory evidence that \_\_\_\_\_  
is the person who appeared before me, and said person acknowledged that he/she signed this  
instrument, on oath stated that he/she was authorized to execute the instrument, and acknowledged  
it as the \_\_\_\_\_ of \_\_\_\_\_,  
to be the free and voluntary act of such entity, for the uses and purposes mentioned in the  
instrument.

SUBSCRIBED AND SWORN to before me this \_\_\_\_\_ day of \_\_\_\_\_,  
\_\_\_\_\_.

\_\_\_\_\_  
(Printed Name)  
NOTARY PUBLIC in and for the State of  
Washington.  
My Commission Expires \_\_\_\_\_

**EXHIBIT A**  
**LEGAL DESCRIPTION OF REAL PROPERTY**

**EXHIBIT B**  
**LEGAL DESCRIPTION OF WATER EASEMENT**



**EXHIBIT C**  
**DEPICTION OF WATER EASEMENT**

**EXHIBIT A**  
**LEGAL DESCRIPTION OF REAL PROPERTY**

*insert "Real Property" legal description – maintain 1-inch margins on all sides*

*For example,*

*That portion of the South 125 feet of the East 318.5 feet of the S ½ of the SE ¼ of the NE ¼ of the NE ¼ of Section xx, Township yy North, Range zz East, Willamette Meridian, in King County, Washington.*

*Or*

*Lot x of the Plat of xx recorded on Pages yyy to zzzz, Volume X of Plats, located in King County, Washington.*

**EXHIBIT B**  
**LEGAL DESCRIPTION OF WATER EASEMENT**

*insert "Water Easement" legal description – maintain 1-inch margins on all sides*

*For example,*

*The water easement occupies that portion of the west half of the northeast quarter of the northeast quarter of Section xx, Township yy N, Range zz E, Willamette Meridian, in King County, Washington, known as Tax Lot No. \_\_\_\_\_ - \_\_\_\_\_, lying within the area described as follows:*

*Commencing at the southeast corner of said property, thence N0°48'12"E for a distance of 15.00 feet, thence N89°32'3"W for a distance of 161.61 feet, thence ... to the point of origin of this description.*

**EXHIBIT C**  
**DEPICTION OF WATER EASEMENT**

*Insert depiction of "Water Easement" on the "Real Property" – maintain 1-inch margins on all sides*

SAMPLE

Recording Requested By And  
When Recorded Mail To:

Sammamish Plateau Water and Sewer District  
1510 - 228th Avenue S.E.  
Sammamish, Washington 98075

---

**DOCUMENT TITLE:** *EASEMENT FOR SEWER LINES WITH ACCESS ROAD*  
**REFERENCE NUMBER OF RELATED DOCUMENT:** *Not Applicable*  
**GRANTOR(S):**  
**ADDITIONAL GRANTORS ON PAGE OF DOCUMENT**  
**GRANTEE(S):** *SAMMAMISH PLATEAU WATER & SEWER DISTRICT*  
**ADDITIONAL GRANTEES ON PAGE OF DOCUMENT**  
**ABBREVIATED LEGAL DESCRIPTION:**  
**ASSESSOR'S TAX / PARCEL NUMBER(S):**

---

### **EASEMENT FOR SEWER LINES WITH ACCESS ROAD**

The undersigned, \_\_\_\_\_ (“Grantor”), for and in consideration of good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, hereby grants and conveys to Sammamish Plateau Water and Sewer District, a municipal corporation in King County, Washington (“Grantee”), and its successors and assigns, a permanent Easement for Sewer Lines including sewer lines and appurtenances thereto (“Easement”) as follows:

1. Nature and Location of Easement. The Easement granted by Grantor herein shall be a permanent easement for the benefit of Grantee over, upon, across, through and under the real property legally described in *Exhibit “A”*, attached hereto and incorporated herein by this reference (“Real Property”), such Easement as legally described on *Exhibit “B”* and as described and depicted on *Exhibit “C”*, attached hereto and incorporated herein by this reference, for the purposes of installing, laying, constructing, maintaining, inspecting, repairing, removing, replacing, renewing, using and operating sewer lines, together with all facilities, connectors and appurtenances (“Sewer Lines”), including the right of ingress and egress for said purposes.
2. Access Easement and Access Road. Grantor also hereby dedicates, conveys and grants to Grantee a permanent non-exclusive access easement and access road for ingress and egress over the portion of the Real Property as legally described on *Exhibit “D”* attached hereto (“Access Easement and Access Road”) and as depicted on *Exhibit “E”* attached hereto.
3. Right of Entry. Grantee shall have the right, without notice and without prior institution of any suit or proceeding at law or equity, at all times as may be necessary to enter upon the Real Property to install, lay, construct, maintain, inspect, repair, remove, replace, renew, use and operate the Sewer Lines for the purposes of serving the Real Property and other properties with

utility service. Grantee agrees to restore the Real Property as nearly as reasonably possible to its condition prior to any material disturbance from construction, operation, maintenance, repair, or replacement of the Sewer Lines.

4. Encroachment/Construction Activity. Grantor shall not undertake, authorize, permit or consent to any construction or excavation including, without limitation, digging, tunneling, or other forms of construction activity on or near the Easement which might in any fashion unearth, undermine, or damage the Sewer Lines or endanger the lateral or other support of the Sewer Lines without Grantee's prior written approval. Grantor further agrees that no structure or obstruction including, without limitation, fences and rockeries shall be erected over, upon or within the Easement, and no trees, bushes or other shrubbery shall be planted or maintained within the Easement, provided Grantor shall have full use of the surface of the Real Property within the Easement, so long as such use does not interfere with the Easement or the Sewer Lines.
5. Binding Effect/ Warranty of Title. The Easement and the covenants, terms, and conditions contained herein are intended to and shall run with the Real Property and shall be binding upon Grantee and Grantor and their respective successors, heirs and assigns. Grantor warrants that Grantor has good title to the Real Property and warrants the Grantee title to and quiet enjoyment of the Easement.
6. Recording. Upon its execution, the Easement shall be recorded with the Department of Records and Elections, King County, Washington.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

GRANTOR(S)

By \_\_\_\_\_

\_\_\_\_\_  
(Print or type name(s))

By \_\_\_\_\_

\_\_\_\_\_  
(Print or type name(s))

Its \_\_\_\_\_

(Print or type position held)

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that he/she signed this instrument and acknowledged it to be his/her free and voluntary act, for the uses and purposes mentioned in the instrument.

SUBSCRIBED AND SWORN to before me this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
(Printed Name)  
NOTARY PUBLIC in and for the State of  
Washington.  
My Commission Expires \_\_\_\_\_

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument, and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_, to be the free and voluntary act of such entity, for the uses and purposes mentioned in the instrument.

SUBSCRIBED AND SWORN to before me this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
(Printed Name)  
NOTARY PUBLIC in and for the State of  
Washington.  
My Commission Expires \_\_\_\_\_

**EXHIBIT A**  
**LEGAL DESCRIPTION OF REAL PROPERTY**



**EXHIBIT B**  
**LEGAL DESCRIPTION OF SEWER EASEMENT**

**EXHIBIT C**  
**DEPICTION OF SEWER EASEMENT**

**EXHIBIT D**  
**LEGAL DESCRIPTION OF ACCESS EASEMENT AND ACCESS ROAD**

**EXHIBIT E**  
**DEPICTION OF ACCESS EASEMENT AND ACCESS ROAD**

**EXHIBIT A**  
**LEGAL DESCRIPTION OF REAL PROPERTY**

*insert "Real Property" legal description – maintain 1-inch margins on all sides*

*For example,*

**TAX PARCEL xxxxxxxxxx**

*That portion of the South 125 feet of the East 318.5 feet of the S ½ of the SE ¼ of the NE ¼ of the NE ¼ of Section xx, Township yy North, Range zz East, Willamette Meridian, in King County, Washington.*

*Or*

*Lot x of the Plat of xx recorded on Pages yyy to zzzz, Volume X of Plats, located in King County, Washington.*

**EXHIBIT B**  
**LEGAL DESCRIPTION OF SEWER EASEMENT**

*insert "Sewer Easement" legal description – maintain 1-inch margins on all sides*

*For example,*

*The sewer easement occupies that portion of the west half of the northeast quarter of the northeast quarter of Section xx, Township yy N, Range zz E, Willamette Meridian, in King County, Washington, known as Tax Lot No. \_\_\_\_\_ - \_\_\_\_\_, lying within the area described as follows:*

*Commencing at the southeast corner of said property, thence  $N0^{\circ}48'12''E$  for a distance of 15.00 feet, thence  $N89^{\circ}32'3''W$  for a distance of 161.61 feet, thence ... to the point of origin of this description.*

**EXHIBIT C**  
**DEPICTION OF SEWER EASEMENT**

*Insert depiction of "Sewer Easement" on the "Real Property" – maintain 1-inch margins on all sides*

SAMPLE

**EXHIBIT D**  
**LEGAL DESCRIPTION OF ACCESS EASEMENT AND ACCESS ROAD**

*insert legal description of the access road – maintain 1-inch margins on all sides. Include hammerhead turnarounds (40-foot inside radius) if needed. Note that some or all of the legal description for the access road MAY have the same legal description as for the sewer easement, but it must be a separate exhibit*

*For example,*

*The access road is a 12-foot wide gravel road is centered within the 15-foot access easement.*

*The access road occupies that portion of the west half of the northeast quarter of the northeast quarter of Section xx, Township yy N, Range zz E, Willamette Meridian, in King County, Washington, known as Tax Lot No. \_\_\_\_\_ - \_\_\_\_\_, lying within the area described as follows:*

*Commencing at the southeast corner of said property, thence N0°48'12"E for a distance of 12.00 feet, thence N89°32'3"W for a distance of 161.61 feet, thence ... to the point of origin of this description.*



**EXHIBIT E**  
**DEPICTION OF ACCESS EASEMENT AND ACCESS ROAD**

*Insert pictorial depiction of the access road, including what kind of surfacing (gravel, paved, etc), on the "Real Property" – maintain 1-inch margins on all sides. Include hammerhead turnarounds (40-foot inside radius) if needed*

SAMPLE

## CASH PERFORMANCE AND PLEDGE OF MONIES AGREEMENT

THIS AGREEMENT ("Agreement") is made this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ between Sammamish Plateau Water and Sewer District, a municipal corporation ("District"), and \_\_\_\_\_ ("Developer") (individually a "Party" and collectively the "Parties").

### SECTION 1: RECITALS

1.01 The District and the Developer are parties to a \_\_\_\_\_ (Water/Sewer) Developer Extension Agreement dated the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ ("Extension Agreement"), regarding the construction of certain extension improvements for the project known as \_\_\_\_\_ ("Project") referenced therein.

1.02 Pursuant to paragraph WS-11, "Performance Guarantee", of the Extension Agreement, the Developer is required to furnish the District with a performance guarantee to guarantee the completion and acceptance of the extension improvements for the project. Pursuant to such provision, the Developer desires to furnish the District a cash bond in lieu of a corporate surety performance bond as the required performance guarantee.

1.03 The District will accept, hold and disburse such cash bond as set forth below.

1.04 Therefore, the Parties, in consideration of the terms and conditions herein stated, now agree as follows:

### SECTION 2: CASH PERFORMANCE BOND

2.01 The Developer shall provide the District cash funds ("Funds") in the amount of U.S. \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) to guarantee the Developer's performance of the Extension Agreement referenced in paragraph 1.01 above.

2.02 The District shall hold and deposit such funds in a non-interest-bearing account with the King County Department of Finance ("Bank"), such account to be in the sole name of the District.

2.03 The conditions under which the District will disburse or utilize such Funds for the completion of the Developer's obligations under the Extension Agreement are such that:

a. If the extension improvements which are the subject of the Extension Agreement are completed and are given final acceptance by the District within eighteen (18) months from the date of payment of the Design and Inspection Phase Fees to the District as required by the Extension Agreement, the District shall disburse the Funds, less charges for District administrative and other costs referenced in this Agreement, to the Developer within thirty (30) days of such acceptance; or

b. If the extension improvements which are the subject of the Extension Agreement are not completed and accepted by the District within eighteen (18) months of the date referenced above, the District shall have the right to use the Funds to complete such extension improvements to the District's satisfaction and specifications referenced in the Extension Agreement and the Bank shall release the Funds to the District for that purpose upon demand by the District to do so; in such event, the District shall return any unused Funds thereon to the Developer within thirty (30) days of the completion and acceptance of the extension improvements by the District.

### SECTION 3: PLEDGE AND SECURITY AGREEMENT

3.01 Developer hereby grants to the District, its successors and assigns, a security interest in the Funds pursuant to Chapter 62A.9A RCW, including RCW 62A.9A-312, 313 and 314, and as such statutes may be amended and revised, which Funds will be delivered to the District and placed in the District's possession and control. Developer further grants to the District a security interest in all proceeds of the Funds, whether in the form of profits, dividends, accrued interest or otherwise.

3.02 For purposes of the security interest granted herein, Bank shall be the agent of the District for possession of the Funds such that possession of the Funds by Bank shall be deemed to be possession of the Funds by the District.

3.03 Developer warrants that, except as provided for herein, Developer has full title to the Funds and the Funds are free and clear of any other security interest, encumbrance, or claim of right, title or ownership. Developer will not create or permit the existence of any lien or security interest other than that hereby created in the Funds without the express written consent of the District nor shall Developer assign any interest in the Funds without said written consent.

3.04 Developer agrees to repay to the District all sums which the District may expend or incur in conserving or protecting the Funds, or in enforcing its security interest herein, including without limitation such sums as may be charged by Bank or any governmental entity with respect to the Funds. The sums agreed to be paid herein shall be secured by this Agreement.

3.05 The District shall have the right to enforce and collect on its security interest in the Funds in accordance with the terms and provisions contained in this Agreement. Enforcement and collection of the District's security interest in the Funds shall be in addition to all other rights and remedies granted by law, equity or contract to the District to seek reimbursement of additional damages incurred and/or to enforce the provisions of the Extension Agreement and this Agreement, should the Funds be insufficient to discharge the Developer's obligations to the District.

### SECTION 4: GENERAL PROVISIONS

4.01 This Agreement shall serve as an addendum to the Extension Agreement and shall supersede and amend such Extension Agreement to the extent provided herein.

4.02 All time limits set forth herein are of the essence. All parties agree to perform all obligations under this Agreement with due diligence.

4.03 In the event that this Agreement or any obligation secured by it is referred to an attorney for protecting or defending the priority of the District's interest in the Funds, or for collection or realization procedures, Developer agrees to pay a reasonable attorney's fee, including fees incurred in both trial and appellate courts or fees incurred without suit, and all court costs and costs of the public officials. The sums agreed to be paid herein shall be secured by this Agreement.

4.04 The District will cause to be performed certain services by its legal counsel, engineers and District personnel to carry out the foregoing purposes, including but not limited to the preparation and administration of this and any related agreements and documents. The Developer agrees to pay the cost of such services as a condition of the District's agreement herein.

4.05 This Agreement shall be governed by and construed in accordance with the laws of the State of Washington. The State of Washington shall also be the jurisdiction for the Bank for the purposes of this Agreement pursuant to RCW 62A.9A-304(b). Venue for any action arising out of or relating to this Agreement shall lie in King County Superior Court.

SAMMAMISH PLATEAU  
WATER AND SEWER DISTRICT  
("District)

\_\_\_\_\_  
\_\_\_\_\_  
("Developer")

By \_\_\_\_\_

By \_\_\_\_\_

Its \_\_\_\_\_

Its \_\_\_\_\_

KING COUNTY DEPARTMENT OF FINANCE ("BANK") hereby consents and agrees that it is the agent of SAMMAMISH PLATEAU WATER AND SEWER DISTRICT ("District") for purposes of possession by Sammamish Plateau Water and Sewer District of cash funds in the amount of \_\_\_\_\_ (\$\_\_\_\_\_), which funds the District has a security interest in pursuant to this Agreement and pursuant to RCW 62A.9-304.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

KING COUNTY DEPARTMENT OF FINANCE  
("BANK"),

By \_\_\_\_\_

Its \_\_\_\_\_

STATE OF WASHINGTON            )  
  )ss.  
COUNTY OF KING                )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that \_\_\_\_\_ signed this instrument, on oath stated that \_\_\_\_\_ was authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of **KING COUNTY DEPARTMENT OF FINANCE** to be the free and voluntary act of such corporation for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State of  
Washington, residing at

\_\_\_\_\_  
My Appointment Expires: \_\_\_\_\_

STATE OF WASHINGTON            )  
  )ss.  
COUNTY OF KING                )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that \_\_\_\_\_ signed this instrument, on oath stated that \_\_\_\_\_ was authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_ to be the free and voluntary act of such corporation for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State of  
Washington, residing at

\_\_\_\_\_  
My Appointment Expires: \_\_\_\_\_

STATE OF WASHINGTON            )  
  )ss.  
COUNTY OF KING                )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that \_\_\_\_\_ signed this instrument, on oath stated that \_\_\_\_\_ was authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of **SAMMAMISH PLATEAU WATER AND SEWER DISTRICT** to be the free and voluntary act of such corporation for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State of  
Washington, residing at

\_\_\_\_\_  
My Appointment Expires: \_\_\_\_\_

PERFORMANCE BOND

SAMMAMISH PLATEAU WATER AND  
SEWER DISTRICT  
1510 - 228TH Ave. S.E.  
Sammamish, Washington 98075

KNOW ALL MEN BY THESE PRESENTS: That we, \_\_\_\_\_,  
as Principal, and \_\_\_\_\_,  
authorized to transact business in the State of Washington, as Surety, having its principal office and  
place of business at \_\_\_\_\_,  
are held and firmly bound unto Sammamish Plateau Water and Sewer District ("the District"), King  
County, Washington, as Oblige, in the sum of \_\_\_\_\_  
Dollars (\$ \_\_\_\_\_) lawful money of the United States of America, for which payments we  
and each of us bind ourselves, our heirs, executors, administrators, successors and assigns, jointly  
and severally, firmly by these presents.

The conditions of the above obligation are such that:

WHEREAS, the above named Principal has entered into a certain developer extension  
agreement with the District for the installation of water and/or sanitary sewer improvements by  
extension agreement dated the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ as is more and fully  
described in such extension agreement;

AND that said extension improvements shall be completed within eighteen (18) months from  
the date of the payment of the Design and Inspection Phase Fees to the District as required by the  
extension agreement, unless extended as herein provided,

NOW, THEREFORE, it is understood and agreed that this obligation shall continue in effect  
until released in writing by the District, King County, Washington;

AND in the event that if the Principal shall well and truly and in good, sufficient and  
workmanlike manner, perform or cause to be performed the extension contract, and each and every  
of the covenants, promises, agreements and provisions therein stipulated, and in each and every  
respect comply with the conditions therein contained, then this obligation shall be void and promptly  
released by Sammamish Plateau Water and Sewer District, otherwise to remain in full force and  
effect.

AND the Surety hereby waives notice of any alteration or extension of time made by the  
District.

SIGNED, sealed and delivered this \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

By \_\_\_\_\_

By \_\_\_\_\_

\_\_\_\_\_

SURETY

PRINCIPAL

(Title)

(Print or type name(s))

(Print or type name(s))

\_\_\_\_\_

\_\_\_\_\_

Mailing Address

Mailing Address

Attorney in Fact \_\_\_\_\_  
(ATTACH POWER OF ATTORNEY)

**SAMPLE PERFORMANCE BOND FOR CONTRACTOR/DEVELOPER**  
**PERFORMANCE BOND**

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT  
1510 - 228TH Ave. S.E.  
Sammamish, Washington 98029

KNOW ALL MEN BY THESE PRESENTS: That we, CONTRACTOR/DEVELOPER,  
as Principal, and SURETY,  
authorized to transact business in the State of Washington, as Surety, having its principal office and  
place of business at SURETY'S ADDRESS,  
are held and firmly bound unto Sammamish Plateau Water and Sewer District ("the District"), King  
County, Washington, as Oblige, in the sum of \_\_\_\_\_  
Dollars (\$ \_\_\_\_\_) lawful money of the United States of America, for which payments we  
and each of us bind ourselves, our heirs, executors, administrators, successors and assigns, jointly  
and severally, firmly by these presents.

The conditions of the above obligation are such that:

WHEREAS, the above named Principal has entered into a certain developer extension  
agreement with the District for the installation of water and/or sanitary sewer improvements by  
extension agreement dated the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ as is more and fully  
described in such extension agreement;

AND that said extension improvements shall be completed within eighteen (18) months from  
the date of the payment of the Design and Inspection Phase Fees to the District as required by the  
extension agreement, unless extended as herein provided,

NOW, THEREFORE, it is understood and agreed that this obligation shall continue in effect  
until released in writing by the District, King County, Washington;

AND in the event that if the Principal shall well and truly and in good, sufficient and  
workmanlike manner, perform or cause to be performed the extension contract, and each and every  
of the covenants, promises, agreements and provisions therein stipulated, and in each and every  
respect comply with the conditions therein contained, then this obligation shall be void and promptly  
released by Sammamish Plateau Water and Sewer District, otherwise to remain in full force and  
effect.

AND the Surety hereby waives notice of any alteration or extension of time made by the  
District.

SIGNED, sealed and delivered this \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

By _____	By _____
_____	_____
PRINCIPAL	SURETY
_____	_____
(Print or type name(s))	(Title)
_____	_____
_____	_____
_____	_____
Mailing Address	Mailing Address

Attorney in Fact \_\_\_\_\_  
(ATTACH POWER OF ATTORNEY)



SAMPLE LETTER OF CREDIT FORM  
ACCEPTABLE TO THE DISTRICT

Page 1 of 2  
Standby LC Number \_\_\_\_\_

IRREVOCABLE LETTER OF CREDIT

\_\_\_\_\_, \_\_\_\_\_  
LETTER OF CREDIT NUMBER \_\_\_\_\_

BENEFICIARY:  
SAMMAMISH PLATEAU WATER & SEWER DISTRICT  
1510 - 228TH AVENUE S.E.  
SAMMAMISH, WASHINGTON 98029

ACCOUNT PARTY:  
(DEVELOPER) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

AMOUNT: USD  
\$ \_\_\_\_\_

\_\_\_\_\_

WE HEREBY ISSUE OUR IRREVOCABLE STANDBY LETTER OF CREDIT IN YOUR FAVOR WHICH IS AVAILABLE AGAINST PRESENTATION OF THE FOLLOWING:

1. YOUR SIGHT DRAFT DRAWN ON \_\_\_\_\_ (BANK NAME) AND STATING THE LETTER OF CREDIT NUMBER.
2. CERTIFICATION PURPORTEDLY SIGNED BY THE PRESIDENT OF THE BOARD OF COMMISSIONERS OF SAMMAMISH PLATEAU WATER & SEWER DISTRICT, SAMMAMISH, WASHINGTON, AS FOLLOWS:
  - A. AT LEAST 548 DAYS HAVE PASSED SINCE THE DATE OF THE PAYMENT OF THE DESIGN AND INSPECTION PHASE FEES TO THE DISTRICT, THE DAY OF \_\_\_\_\_, \_\_\_\_\_ (D.E. DATE), AS REQUIRED IN THAT CERTAIN WATER AND/OR SEWER "DEVELOPER EXTENSION AGREEMENT" DATED \_\_\_\_\_ BETWEEN SAMMAMISH PLATEAU WATER AND SEWER DISTRICT AND \_\_\_\_\_ (DEVELOPER); AND
  - B. \_\_\_\_\_ (DEVELOPER) HAS NOT COMPLETED AND SAMMAMISH PLATEAU WATER AND SEWER DISTRICT HAS NOT YET GIVEN FINAL ACCEPTANCE TO THE EXTENSION IMPROVEMENTS REFERENCED IN SUCH WATER AND/OR SEWER "DEVELOPER EXTENSION AGREEMENT" DATED \_\_\_\_\_.

Page 2 of 2  
Standby LC Number \_\_\_\_\_

3. THE ORIGINAL OF THIS STANDBY LETTER OF CREDIT.

THIS LETTER OF CREDIT EXPIRES AT THE COUNTERS OF \_\_\_\_\_  
\_\_\_\_\_  
(BANK), LETTER OF CREDIT DEPARTMENT,  
CURRENTLY LOCATED AT \_\_\_\_\_  
\_\_\_\_\_  
(BANK ADDRESS) ON \_\_\_\_\_ (19  
MONTHS AFTER D.E. DATE)

SPECIAL CONDITIONS:

1. ANY AMENDMENTS UNDER THIS STANDBY LETTER OF CREDIT ARE SUBJECT TO THE APPROVAL OF THE BENEFICIARY AND THE ACCOUNTEE.

WE HEREBY ENGAGE WITH YOU THAT DRAFTS AND DOCUMENTS DRAWN UNDER AND IN STRICT COMPLIANCE WITH THE TERMS OF THIS LETTER OF CREDIT WILL BE DULY HONORED UPON PRESENTATION TO US.

THIS LETTER OF CREDIT IS SUBJECT TO UCP 1983 REVISION ICC PUBLICATION NUMBER 400.

VERY TRULY YOURS,

\_\_\_\_\_ (BANK NAME)

BY \_\_\_\_\_  
AUTHORIZED SIGNATURE

BY \_\_\_\_\_  
AUTHORIZED SIGNATURE

CORPUS

**PROJECT NAME:** \_\_\_\_\_

## MATERIALS & EQUIPMENT SUBMITTAL LIST

Prior to scheduling a pre-construction meeting, contractors shall provide equipment and material lists (with catalogue cuts/ technical specifications) for all applicable water and sewer system items, which indicate compliance with the District’s material standards.

The submittal “packet” shall be bound by three ring binders or soft folders that accommodate three-hole paper. The submittal packet shall be labeled, identifying the project name and contractor and submitted in three (3) separate sets, sequentially numbered (preferably “tabbed”) with a cover letter identifying each submittal item number, submittal description, Manufacturer, and Model # in a similar format as follows for sewer and water systems:

### Sewer System Submittals:

Submittal Item No.	Description	Manufacturer	Model #	<b>For District Use Only</b> <b>FIELD CHECK</b> Approved product delivered/ installed on Project?
1.	Sewer Pipe (gravity, low pressure and force main systems)			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
2.	Sewer Fittings			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
3.	Restrained Joints			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
4.	Manhole Structures			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
5.	Manhole Joint Gaskets			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
6.	Manhole Adapters	<i>(Kor-N-Seal or equal)</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
7.	Manhole Frame & Grate			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
8.	Manhole Ladders			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
9.	Manhole Steps			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
10.	Clean outs (non-pressure systems)			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
11.	Clean Outs (pressure systems)			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
12.	Manhole Lining (pressure systems)			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
13.	Air-vac Assemblies (pressure systems)			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____
14.	Grease Interceptor/Oil Water Separator			<input type="checkbox"/> Yes <input type="checkbox"/> No Field Check _____ Date _____

**PROJECT NAME:** \_\_\_\_\_

**Water System Submittals:**

Submittal Item No.	Description	Manufacturer	Model #	For District Use Only	
				FIELD CHECK	
				Approved product delivered/ installed on Project?	
1.	Water system pipe			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
2.	Water system fittings			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
3.	Restrained Joints			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
4.	Polywrap for DI pipe			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
5.	Valves (specify sizes) Gate Butterfly			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
6.	Tapping Sleeves & Valve Assembly			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
7.	Valve Boxes			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
8.	Valve Marker Posts			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
9.	Hydrants			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
10.	Hydrant Guard Posts			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
11.	Storz Adapter			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
12.	Service Saddle			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
13.	Service Pipe	<i>(DriscoPlex Ultraline 5100, Eagle Pipe)</i>		<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
14.	Meter Setters			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
15.	Corp. Stops			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
16.	Joint Couplers			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
17.	Service Fittings			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
18.	Meter Boxes			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
19.	Galvanized Fittings for Blow-offs and Air-vacs			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
20.	Air-vac Assemblies	<i>APCO No 143-C (1") APCO No. 145-C (2")</i>		<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____
21.	Backflow Prevention Devices (list by type and location)			<input type="checkbox"/> Yes Field Check _____	<input type="checkbox"/> No Date _____

**SAMPLE CERTIFICATE OF LIABILITY  
(SEE CONTRACT FOR EXACT LIMITS)**

<b>ACORD™ CERTIFICATE OF LIABILITY INSURANCE</b>		DATE (MM/DD/YYYY) <b>08/26/03</b>
<b>PRODUCER</b> Contractors Insurance Services P.O. Box 1000 Anytown, WA License No. 123456	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
<b>INSURED</b> ABC Construction Co. 123 Main Street Hometown, WA	<b>INSURERS AFFORDING COVERAGE</b>	
	INSURER A: Travelers Insurance Co.	<b>NAIC #</b>
	INSURER B: Hartford	
	INSURER C: Fireman's Fund	
	INSURER D: DPIC	
	INSURER E:	

**COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
<b>A</b>		GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Stop Gap \$1,000,000 <input type="checkbox"/> _____ GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC	GL1234	10/01/02	10/01/03	EACH OCCURRENCE	\$ 2,000,000
						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 50,000
						MED EXP (Any one person)	\$ 10,000
						PERSONAL & ADV INJURY	\$ 2,000,000
						GENERAL AGGREGATE	\$ 2,000,000
						PRODUCTS - CON/PROP AGG	\$ 2,000,000
<b>B</b>		AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> _____ <input type="checkbox"/> _____	AL1234	10/01/02	10/01/03	COMBINED SINGLE LIMIT (Ea accident)	\$ 2,000,000
						BODILY INJURY (Per person)	\$
						BODILY INJURY (Per accident)	\$
						PROPERTY DAMAGE (Per accident)	\$
		GARAGE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> _____				AUTO ONLY - EA ACCIDENT	\$
						OTHER THAN EA ACC	\$
						AUTO ONLY: AGG	\$
<b>C</b>		EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$	XS2345	10/01/02	10/01/03	EACH OCCURRENCE	\$ 2,000,000
						AGGREGATE	\$ 2,000,000
							\$
							\$
							\$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Washington Labor & Industries # _____				<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
						E.L. EACH ACCIDENT	\$
						E.L. DISEASE - EA EMPLOYEE	\$
						E.L. DISEASE - POLICY LIMIT	\$
<b>D</b>		OTHER Professional Liability	PL3456	10/01/02	10/01/03	2,000,000 per Claim 2,000,000 Aggregate	

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS**

(Member) District is an Additional Insured on General and Auto Liability Policies with respect to Pumphouse Construction Project for (Member) District at 456 Main Street Site.

<b>CERTIFICATE HOLDER</b>	<b>CANCELLATION</b>
(Member) District 456 Main Street Hometown, WA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 45 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE
	AUTHORIZED REPRESENTATIVE Contractor's Agent/Broker

## **IMPORTANT**

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

## **DISCLAIMER**

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

# ACORD<sup>TM</sup> CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

PRODUCER	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
	INSURERS AFFORDING COVERAGE	NAIC #
INSURED	INSURER A:	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

## COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR ADD'L LTR INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS								
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC				EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$								
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$								
	<b>GARAGE LIABILITY</b> <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$								
	<b>EXCESS/UMBRELLA LIABILITY</b> <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE  <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$ \$								
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				<table border="1"> <tr> <td>WC STATU-TORY LIMITS</td> <td>OTH-ER</td> </tr> <tr> <td>E.L. EACH ACCIDENT</td> <td>\$</td> </tr> <tr> <td>E.L. DISEASE - EA EMPLOYEE</td> <td>\$</td> </tr> <tr> <td>E.L. DISEASE - POLICY LIMIT</td> <td>\$</td> </tr> </table>	WC STATU-TORY LIMITS	OTH-ER	E.L. EACH ACCIDENT	\$	E.L. DISEASE - EA EMPLOYEE	\$	E.L. DISEASE - POLICY LIMIT	\$
WC STATU-TORY LIMITS	OTH-ER												
E.L. EACH ACCIDENT	\$												
E.L. DISEASE - EA EMPLOYEE	\$												
E.L. DISEASE - POLICY LIMIT	\$												
	<b>OTHER</b>												

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

CERTIFICATE HOLDER	<b>CANCELLATION</b>
	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL _____ DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE

## **IMPORTANT**

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

## **DISCLAIMER**

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.



**SAMPLE ENDORSEMENT OF ADDITIONAL INSURED  
(1985 Form covering both on-going and completed operations)**

Sage Document: ISO-Forms | CG 20 10-Additional Insured-Owners, Lessees-Form B | 11-8 Page 1 of 1

ISO | Commercial General Liability Forms | 11/01/85

POLICY NUMBER: COMMERCIAL GENERAL LIABILITY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED -- OWNERS, LESSEES OR  
CONTRACTORS (FORM B)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART.

SCHEDULE

Name of Person or Organization:

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you.

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**SAMPLE ALTERNATIVE ENDORSEMENT OF ADDITIONAL INSURED**  
**(Alternative Forms to cover on-going and completed operations**  
**Both of the following are required in place of CG 20 10 11 85)**

---

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY  
CG 20 10 10 01

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED – OWNERS, LESSEES OR  
CONTRACTORS – SCHEDULED PERSON OR  
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

**Name of Person or Organization:**

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

**A. Section II – Who Is An Insured** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.

**B.** With respect to the insurance afforded to these additional insureds, the following exclusion is added:

**2. Exclusions**

This insurance does not apply to "bodily injury" or "property damage" occurring after:

- (1)** All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or
- (2)** That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY  
CG 20 37 10 01

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED – OWNERS, LESSEES OR  
CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

**SCHEDULE**

<b>Name of Person or Organization:</b>
<b>Location And Description of Completed Operations:</b>
<b>Additional Premium:</b>

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

**Section II – Who Is An Insured** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" at the location designated and described in the schedule of this endorsement performed for that insured and included in the "products-completed operations hazard".

## SAMPLE ENDORSEMENT OF AGGREGATE LIMITS

---

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY  
CG 25 03 03 97

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

### **DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

#### SCHEDULE

Designated Construction Projects:

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under **COVERAGE A** (SECTION I), and for all medical expenses caused by accidents under **COVERAGE C** (SECTION I), which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
  2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under **COVERAGE A**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under **COVERAGE C** regardless of the number of:
    - a. Insureds;
    - b. Claims made or "suits" brought; or
    - c. Persons or organizations making claims or bringing "suits".
  3. Any payments made under **COVERAGE A** for damages or under **COVERAGE C** for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
- 4.** The limits shown in the Declarations for Each Occurrence, Fire Damage and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.
- B.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under **COVERAGE A** (SECTION I), and for all medical expenses caused by accidents under **COVERAGE C** (SECTION I), which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under **COVERAGE A** for damages or under **COVERAGE C** for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-Completed Operations Aggregate Limit, whichever is applicable; and
  2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C.** When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-Completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.

**D.** If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.

**E.** The provisions of Limits Of Insurance (SECTION III) not otherwise modified by this endorsement shall continue to apply as stipulated.

**SAMPLE QUESTIONNAIRE**

**NOTE: THIS QUESTIONNAIRE MUST BE COMPLETED AND ATTACHED TO CERTIFICATE OF INSURANCE AND POLICY ENDORSEMENT.**

**Insurance Coverage Questionnaire**

For Big Toys Construction, Inc.  
(Name of Insured)

Project Number 93-0011

Project Owner Big Mountain Water and Sewer District

Are the following coverages &/or conditions in effect?		
	Yes	No
The Policy form is ISO Commercial General Liability form CG 00 01 of CG 00 02 (circle one). If No, attach a copy of the policy with required coverages clearly identified.	X	
Products and Completed operations coverage	X	
Personal Injury Liability Coverage. (with employee exclusion deleted)	X	
Broad Form Property Damage with X, C, U Hazards included	X	
Blanket Contractual Liability coverage applying to this contract	X	
Employers Liability - Stop Gap	x	

Deductibles  
or SIRs:                      GL \$500                      AL None                      Excess \$10,000

Insurer' Best Rating              GL A-XI                      AL A-XV                      Excess A-XV

This Questionnaire is issued as a matter of information. This questionnaire is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies indicated on the attached Certificate of Insurance.

ADF Insurance Agency  
Agency/Broker

1234 5<sup>th</sup> Street, Any Place, WA  
Address

Sal Smith  
Name of Person to contact

Jane Doolittle  
Completed by (type)

\_\_\_\_\_  
Completed by (Signature)

(206) 555-1234  
Telephone Number

**NOTE: THIS QUESTIONNAIRE MUST BE COMPLETED AND ATTACHED TO CERTIFICATE OF INSURANCE AND POLICY ENDORSEMENT.**

**Insurance Coverage Questionnaire**

For \_\_\_\_\_  
 (Name of Insured)

Project Number \_\_\_\_\_

Project Owner \_\_\_\_\_

Are the following coverages &/or conditions in effect?		
	Yes	No
The Policy form is ISO Commercial General Liability form CG 00 01 of CG 00 02 (circle one). If No, attach a copy of the policy with required coverages clearly identified.		
Products and Completed operations coverage		
Personal Injury Liability Coverage. (with employee exclusion deleted)		
Broad Form Property Damage with X, C, U Hazards included		
Blanket Contractual Liability coverage applying to this contract		
Employers Liability - Stop Gap		

Deductibles or SIRs:                      GL \_\_\_\_\_                      AL \_\_\_\_\_                      Excess \_\_\_\_\_

Insurer' Best Rating                      GL \_\_\_\_\_                      AL \_\_\_\_\_                      Excess \_\_\_\_\_

This Questionnaire is issued as a matter of information. This questionnaire is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies indicated on the attached Certificate of Insurance.

\_\_\_\_\_  
 Agency/Broker

\_\_\_\_\_  
 Completed by (type)

\_\_\_\_\_  
 Address

\_\_\_\_\_  
 Completed by (Signature)

\_\_\_\_\_  
 Name of Person to contact

\_\_\_\_\_  
 Telephone Number

ACCEPTANCE BY PROPERTY OWNER OF  
RESTORATION IMPROVEMENTS

I/We, the undersigned owner(s) of Real Property having the address and/or legal description as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

do hereby approve and accept the restoration work performed by

\_\_\_\_\_

\_\_\_\_\_, the developer/contractor on the construction of water and/or sewer utility improvements on easements over and across my/our property.

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Telephone: \_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Telephone: \_\_\_\_\_



AFFIDAVIT OF NO LIENS

I/we, the undersigned developer(s) of water and/or sewer extension improvements for the project known as \_\_\_\_\_ pursuant to the developer extension agreement executed between the Sammamish Plateau Water and Sewer District and the undersigned on the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, do hereby certify, represent, and warrant as follows:

- 1. That there are no liens against, or which may be filed against the water and/or sewer extension improvement which are the subject of the above-referenced developer extension agreement.
2. That all debts, wages, labor, and bills for material and all applicable state taxes have been paid in connection with the above-referenced water and/or sewer developer extension improvements.

Date: \_\_\_\_\_

By: \_\_\_\_\_
Name: \_\_\_\_\_
Address: \_\_\_\_\_
Telephone: \_\_\_\_\_

STATE OF WASHINGTON )
)ss.
COUNTY OF KING )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that \_\_\_\_\_ signed this instrument, on oath stated that \_\_\_\_\_ was authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_ to be the free and voluntary act of such corporation for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_

Notary Public in and for the State of Washington, residing at \_\_\_\_\_

My Appointment Expires: \_\_\_\_\_

BILL OF SALE - WATER

THE UNDERSIGNED hereby conveys and transfers to Sammamish Plateau Water and Sewer District (the "District"), Sammamish, Washington, the property described on Attachment A:

See Attachment A - Page 2 of 2

This conveyance is made in consideration of the District's agreement to provide routine maintenance of said property and to provide water services pursuant to the District's regulations, which may be amended from time to time.

The undersigned and its successors and assigns covenants and agrees to and with the District, its successors and assigns, that the undersigned is the owner of said property and has good right and authority to sell the same and that it will, and does, hereby warrant and agree to defend the sale of said property to the District, its successors and assigns, against all and every person or persons whomsoever lawfully claiming or to claim the same.

The undersigned further guarantees that the property is fit for purposes intended, i.e., as for use as a water distribution system including distribution and supply lines adequate for the service intended and has been constructed in accordance with the conditions and standards of the District.

The undersigned covenants and agrees with the District to replace, repair and correct any defect in work or materials in respect to the personal property subject to this Bill of Sale arising during a period of one (1) year from date hereof, without cost to the District.

DEVELOPER: \_\_\_\_\_

By \_\_\_\_\_

(Print or type name)

Its \_\_\_\_\_

STATE OF WASHINGTON )

) ss.

COUNTY OF KING )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that they signed this instrument, on oath stated that they were authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_ to be the free and voluntary act for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State  
of Washington, residing at

My Appointment Expires \_\_\_\_\_

BILL OF SALE - WATER  
ATTACHMENT A

DESCRIPTION OF SYSTEM FOR  
DEVELOPER EXTENSION AGREEMENT PROJECT: \_\_\_\_\_

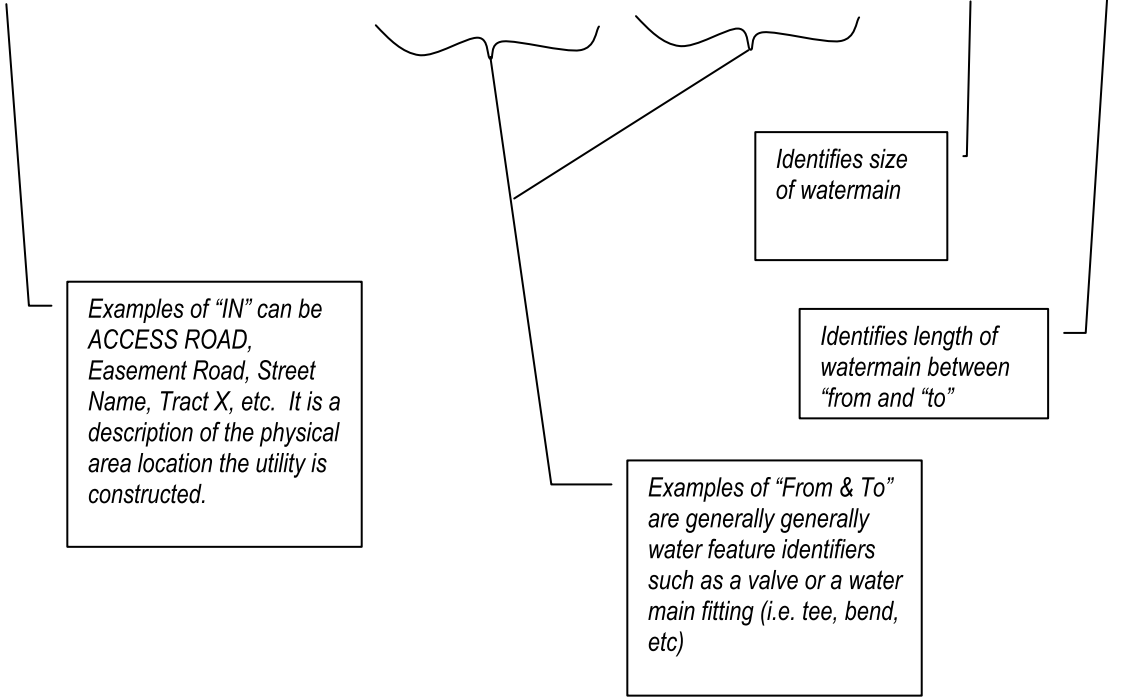
IN                                      FROM                                      TO                                      SIZE LENGTH

**BILL OF SALE - WATER  
ATTACHMENT A**

DESCRIPTION OF SYSTEM FOR DEVELOPER EXTENSION AGREEMENT PROJECT: Name of Project

<u>IN</u>	<u>FROM</u>	<u>TO</u>	<u>SIZE</u>	<u>LENGTH</u>
<b><u>EXAMPLE(S)</u></b>				
228 <sup>TH</sup> AVENUE	8" GATE VAVE	45° BEND	8"	200 LF

EASEMENT ROAD	HYDRANT TEE	8" VALVE	12"	50 LF
---------------	-------------	----------	-----	-------



BILL OF SALE - SEWER

THE UNDERSIGNED hereby conveys and transfers to Sammamish Plateau Water and Sewer District (the "District"), Sammamish, Washington, the property described on Attachment A:

See Attachment A - Page 2 of 2

This conveyance is made in consideration of the District's agreement to provide routine maintenance of said property and to provide sewer services pursuant to the District's regulations, which may be amended from time to time.

The undersigned and its successors and assigns covenants and agrees to and with the District, its successors and assigns, that the undersigned is the owner of said property and has good right and authority to sell the same and that it will, and does, hereby warrant and agree to defend the sale of said property to the District, its successors and assigns, against all and every person or persons whomsoever lawfully claiming or to claim the same.

The undersigned further guarantees that the property is fit for purposes intended, i.e., as for use as a sewer collection system including collection and transmission lines adequate for the service intended and has been constructed in accordance with the conditions and standards of the District.

The undersigned covenants and agrees with the District to replace, repair and correct any defect in work or materials in respect to the personal property subject to this Bill of Sale arising during a period of one (1) year from date hereof, without cost to the District.

DEVELOPER: \_\_\_\_\_

By \_\_\_\_\_

\_\_\_\_\_  
(Print or type name)

Its \_\_\_\_\_

STATE OF WASHINGTON )  
  ) ss.  
COUNTY OF KING      )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that they signed this instrument, on oath stated that they were authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_ to be the free and voluntary act for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State  
of Washington, residing at

My Appointment Expires \_\_\_\_\_

BILL OF SALE - SEWER  
ATTACHMENT A

DESCRIPTION OF SYSTEM FOR  
DEVELOPER EXTENSION AGREEMENT PROJECT: \_\_\_\_\_

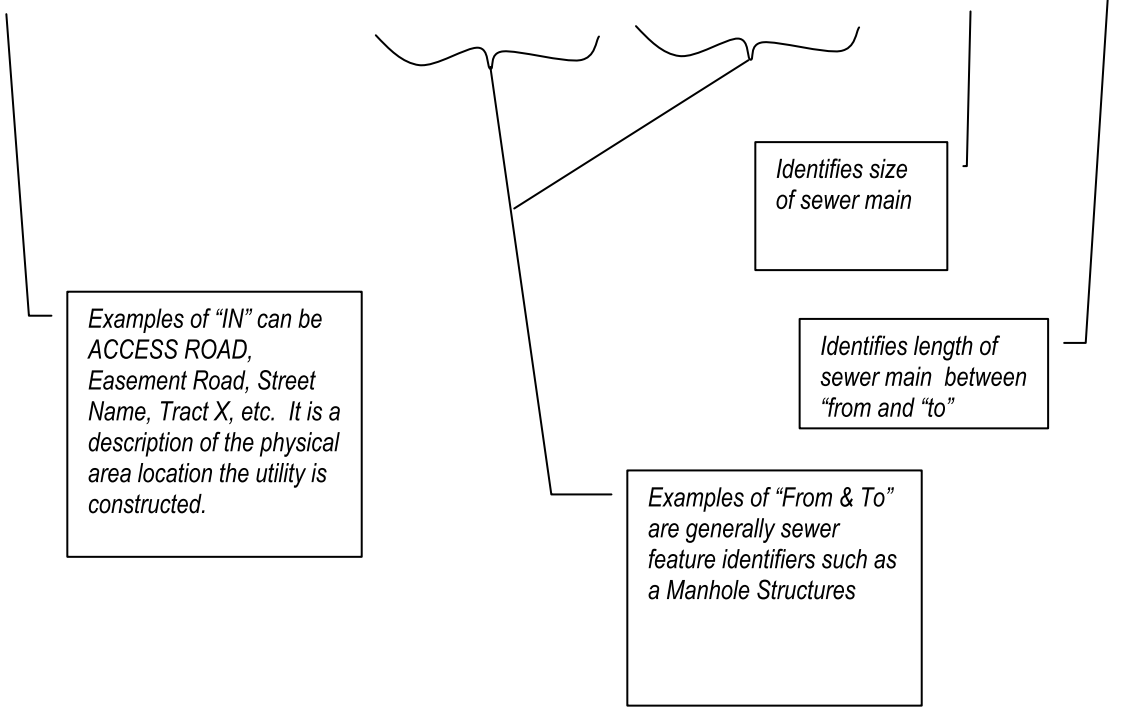
<u>IN</u>	<u>FROM</u>	<u>TO</u>	<u>SIZE</u>	<u>LENGTH</u>
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BILL OF SALE - SEWER  
ATTACHMENT A

DESCRIPTION OF SYSTEM FOR DEVELOPER EXTENSION AGREEMENT PROJECT: Name of Project

<u>IN</u>	<u>FROM</u>	<u>TO</u>	<u>SIZE</u>	<u>LENGTH</u>
<b>EXAMPLE(S)</b>				
228 <sup>TH</sup> AVENUE	Exist. SSMH	SSMH#1	8"	200 LF

EASEMENT ROAD	SSMH#1	SSMH#2	8"	50 LF
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SAMMAMISH PLATEAU  
WATER & SEWER DISTRICT  
1510 - 228th Ave. S.E.  
Sammamish, Washington 98029

MAINTENANCE BOND

STATE OF WASHINGTON     )  
  ) SS  
COUNTY OF KING             )

KNOW ALL MEN BY THESE PRESENTS: That we, \_\_\_\_\_  
as Principal, and \_\_\_\_\_, a Corporation organized and  
existing under and by virtue of the laws of \_\_\_\_\_ as surety, are held  
and firmly bound unto SAMMAMISH PLATEAU WATER & SEWER DISTRICT ("the District"),  
as obligee in the sum of \_\_\_\_\_ (\$ \_\_\_\_\_) Dollars,  
for the payment of which, well and truly to be made, said Principal and surety bind themselves,  
executors, administrators, successors and assigns, jointly and severally by these present.

WHEREAS, the said Principal has entered into a Developer Extension Agreement with the  
obligee dated the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, for the construction and acceptance of a water  
line and/or sewer extension for the project known as \_\_\_\_\_.

NOW, THEREFORE, the condition of this obligation is such that, if the Principal shall  
maintain and remedy said work free from defects and materials and workmanship as more fully set  
forth in the Developer Extension Agreement referenced above for a period of two (2) years  
following completion and acceptance by the District, then this obligations shall be void; otherwise it  
shall remain in full force and effect.

Signed, sealed and dated this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Authorized Signature:

Mail Address: \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Surety

Mail Address: \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Attorney in Fact  
[Attach Power of Attorney]



CASH MAINTENANCE AND PLEDGE OF MONIES AGREEMENT

THIS AGREEMENT is made this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ between Sammamish Plateau Water and Sewer District, a municipal corporation ("District"), and \_\_\_\_\_ ("Developer").

SECTION 1: RECITALS

1.01 The District and the Developer are parties to a \_\_\_\_\_ (Water/Sewer) Developer Extension Agreement dated the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ ("Extension Agreement"), regarding the construction of certain extension improvements for the project known as \_\_\_\_\_ ("Project") referenced therein.

1.02 Pursuant to paragraph WS-48, "Maintenance Guarantee", of the Extension Agreement, the Developer is required to furnish the District with a maintenance guarantee to guarantee to correct defects in labor and materials which arise in the extension improvements for a period of two (2) years from the date of acceptance of the extension improvements for the project and transfer of the title to the District. In the event of phasing of the Project, such two (2) years period shall commence on the date of the District's acceptance of the last phase of such Project. Pursuant to such provision, the Developer desires to furnish the District a cash bond in lieu of a corporate surety maintenance bond as the required maintenance guarantee.

1.03 The District will accept, hold and disburse such cash bond as set forth below.

1.04 Therefore, the parties, in consideration of the terms and conditions herein stated, now agree as follows:

SECTION 2: CASH MAINTENANCE BOND

2.01 The Developer shall provide the District cash funds ("Funds") in the amount of U.S. \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) to guarantee the Developer's maintenance of the extension improvements referenced in paragraph 1.02 above.

2.02 The District shall hold and deposit such funds in a non-interest-bearing account in the \_\_\_\_\_ Bank ("Bank"), such account to be in the sole name of the District.

2.03 The conditions under which the District will disburse or utilize such Funds for the completion of the Developer's obligations under the Extension Agreement are such that:

a. If the extension improvements which are the subject of the Extension Agreement are free from defects in labor and/or materials for a period of two (2) years from the date of acceptance of

the extension improvements and transfer of title to the District or in the event of phasing of the Project, for a two (2) years period from the date of the District's acceptance of the last phase of such Project, the District shall disburse the funds less charges for District administrative and other costs referenced in this Agreement, to the Developer within thirty (30) days of such determination by the District; or

b. If the extension improvements which are the subject of the Extension Agreement are not free from defects in labor and/or materials for a period of two (2) years from the date of acceptance of the extension improvements and transfer of title to the District or in the event of phasing of the Project, for a two (2) years period from the date of the District's acceptance of the last phase of such Project, and the Developer has failed to remedy to the District's satisfaction any such defects within fifteen (15) days of notice from the District to correct such defect, the District shall have the right to use the Funds to correct such defect to the District's satisfaction and specifications referenced in the Extension Agreement; in such event, the District shall return any unused Funds thereon to the Developer within thirty (30) days of the end of the time period referenced in 2.03(a) above.

### SECTION 3: PLEDGE AND SECURITY AGREEMENT

3.01 Developer hereby grants to the District, its successors and assigns, a security interest in the Funds, which Funds will be delivered to the District and placed in the District's possession and control. Developer further grants to the District a security interest in all proceeds of the Funds, whether in the form of profits, dividends, accrued interest or otherwise.

3.02 For purposes of the security interest granted herein, Bank shall be the agent of the District for possession of the Funds such that possession of the Funds by Bank shall be deemed to be possession of the Funds by the District.

3.03 Developer warrants that, except as provided for herein, Developer has full title to the Funds and the Funds are free and clear of any other security interest, encumbrance, or claim of right, title or ownership. Developer will not create or permit the existence of any lien or security interest other than that hereby created in the Funds without the express written consent of the District nor shall Developer assign any interest in the Funds without said written consent.

3.04 Developer agrees to repay to the District all sums which the District may expend or incur in conserving or protecting the Funds, or in enforcing its security interest herein, including without limitation such sums as may be charged by Bank or any governmental entity with respect to the Funds. The sums agreed to be paid herein shall be secured by this Agreement.

3.05 The District shall have the right to enforce and collect on its security interest in the Funds in accordance with the terms and provisions contained in this Agreement. Enforcement and collection of the District's security interest in the Funds shall be in addition to all other rights and remedies granted by law, equity or contract to the District to seek reimbursement of additional damages incurred and/or to enforce the provisions of the Extension Agreement and this Agreement, should the Funds be insufficient to discharge the Developer's obligations to the District.

SECTION 4: GENERAL PROVISIONS

4.01 This agreement shall serve as an addendum to the Extension Agreement and shall supersede and amend such Extension Agreement to the extent provided herein.

4.02 All time limits set forth herein are of the essence. All parties agree to perform all obligations under this Agreement with due diligence.

4.03 In the event that this Agreement or any obligation secured by it is referred to an attorney for protecting or defending the priority of the District's interest in the Funds, or for collection or realization procedures, Developer agrees to pay a reasonable attorney's fee, including fees incurred in both trial and appellate courts or fees incurred without suit, and all court costs and costs of the public officials. The sums agreed to be paid herein shall be secured by this Agreement.

4.04 The District will cause to be performed certain services by its legal counsel, engineers and District personnel to carry out the foregoing purposes, including but not limited to the preparation and administration of this and any related agreements and documents. The Developer agrees to pay the cost of such services as a condition of the District's agreement herein.

SAMMAMISH PLATEAU  
WATER AND SEWER DISTRICT  
("District")

\_\_\_\_\_  
\_\_\_\_\_  
("Developer")

By \_\_\_\_\_  
Its \_\_\_\_\_

By \_\_\_\_\_  
Its \_\_\_\_\_

\_\_\_\_\_ BANK hereby consents and agrees that it is the agent of SAMMAMISH PLATEAU WATER AND SEWER DISTRICT ("District") for purposes of possession by Sammamish Plateau Water and Sewer District of cash funds in the amount of \_\_\_\_\_ (\$ \_\_\_\_\_), which funds the District has a security interest in pursuant to this Agreement and pursuant to RCW 62A.9-304.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_ BANK ("BANK"),  
\_\_\_\_\_ Branch  
By \_\_\_\_\_  
Its \_\_\_\_\_

STATE OF WASHINGTON        )  
  )ss.  
COUNTY OF KING            )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that \_\_\_\_\_ signed this instrument, on oath stated that \_\_\_\_\_ was authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_ to be the free and voluntary act of such corporation for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_  
\_\_\_\_\_

Notary Public in and for the State of  
Washington, residing at  
\_\_\_\_\_

My Appointment Expires: \_\_\_\_\_

STATE OF WASHINGTON        )  
  )ss.  
COUNTY OF KING            )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that \_\_\_\_\_ signed this instrument, on oath stated that \_\_\_\_\_ was authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_ to be the free and voluntary act of such corporation for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_  
\_\_\_\_\_

Notary Public in and for the State of  
Washington, residing at  
\_\_\_\_\_

My Appointment Expires: \_\_\_\_\_



SAMMAMISH PLATEAU WATER AND SEWER DISTRICT

AGREEMENT FOR WATER/SEWER FACILITIES SYSTEM USE  
PRIOR TO FINAL ASPHALT LIFT

The undersigned \_\_\_\_\_ ("Developer") hereby applies to Sammamish Plateau Water and Sewer District ("District") for water and/or sewer service prior to the placement of the final asphalt lift and full completion of the water and/or sewer extensions included in the Developer Extension Agreement for the Project known as \_\_\_\_\_ executed by the Developer and granted final acceptance by the District on the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ ("Extension Agreement").

In consideration of the District allowing the Developer to use the water and/or sewer extensions prior to full completion of the water and/or sewer extensions, including the placement of the final asphalt lift within the Project site, the Developer agrees to pay the District for its services related to administration and inspection of water and/or sewer facilities installed as part of the Extension Agreement. The District will invoice the Developer periodically as actual District expenses are incurred, on a time-and-materials basis including overhead.

In addition, the Developer agrees to pay the following deposits to the District at the time of the execution of this agreement ("Agreement") to guarantee that all water and sewer facilities constructed as part of the Extension Agreement are raised, adjusted, and/or installed in accordance with District requirements following placement of the final asphalt lift. These funds may be refunded upon the completion of the water and/or sewer extensions by the Developer, or utilized by the District to complete such work as further provided herein.

**Facilities Completion Deposit:**

Manholes	(# to be raised)	_____	at \$500/each =	\$_____
Cleanouts	(# to be raised)	_____	at \$100/each =	\$_____
Valve Boxes	(# to be raised)	_____	at \$250/each =	\$_____
Meter Boxes & Stripes	(# to be installed)	_____	at \$50/meter box =	\$_____
Air Relief Valves	(# to be installed)	_____	at \$100/valve =	\$_____
Valve Marker Posts	(# to be installed)	_____	at \$100/post =	\$_____
Hydrants w/ Blue Reflectors	(# to be painted/Cole numbers)	_____	at \$125/each =	\$_____
Type I Blowoff	(# to be painted/Cole numbers)	_____	at \$100/each =	\$_____
Type 2 Blowoff:	(# to be adjusted)	_____	at \$200 /each =	\$_____

**Facilities Completion Refundable Total \$\_\_\_\_\_**

The Developer shall notify the District’s Developer Extension Coordinator **in writing** of Developer’s proposed final asphalt lift schedule no sooner than ninety-six (96) hours and no later than seventy-two (72) hours before the proposed commencement of the final asphalt lift. Developer shall obtain the District’s approval of the proposed final lift schedule before commencing such work. District approval of the schedule for the proposed final lift shall identify a date after which the final lift work may commence and a deadline for the completion of such work. **No placement of the final asphalt lift shall occur until the District has inspected the area of the proposed final lift and the water and sewer extensions in such area.** Following the District’s inspection of the proposed final lift area, District shall have the right to require the Developer to correct any deficiencies in the water and sewer extensions and/or pavement deficiencies, and such corrections shall be performed by the Developer, **with District inspection personnel present**, to the District’s satisfaction prior to any placement of the final lift. The District will notify the land use agency in writing when the area of the proposed final lift is acceptable to the District for placement of final lift.

Following the placement of the final asphalt lift, District shall conduct an inspection of the water and sewer extension work in the area of the final asphalt lift and shall provide to the Developer a punchlist of any deficiencies identified and corrections in the extension work required by the District. The Developer shall notify the District and start work to remedy such deficiencies within seven (7) days of receipt of the punchlist and shall complete such work within thirty (30) days of beginning corrective work. If the Developer fails to complete the work within this time period, the District will notify the Developer that the work has not been completed, and give the Developer seven (7) more days to complete the work. If the work is not completed within the seven (7) day extension, the District shall have the right to hire a contractor to complete the work, and the costs shall be deducted from the Facilities Completion funds deposited with the District.

In addition to the fees and charges identified in this Agreement, all paperwork, fees, charges, agreements and other requirements of the Extension Agreement shall be completed, satisfied, and/or paid prior to the District allowing service to the Real Property which is the subject of the Extension Agreement.

Agreed To: _____ (Company Name)	Date: _____
Address: _____ _____	
Telephone: _____ _____	Accepted by District: _____
By: _____ (Signature)	_____ (Signature)
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____





**SEWER FINAL COST SUMMARY**

PROJECT: < insert project name here >

DEVELOPER: < insert Developer name here >

CONTRACTOR: < insert Contractor name here >

DATE: < insert date here >

DESCRIPTION	UNIT PRICE	ACTUAL QUANTITY	UNIT	ACTUAL PRICE
<b>SEWER MAINS</b>				
8-inch PVC Sewer Main	-	-	LF	-
10-inch PVC Sewer Main	-	-	LF	-
8-inch DI Sewer Main	-	-	LF	-
10-inch DI Sewer Main	-	-	LF	-
2-inch Sewer Force Main	-	0	LF	-
<b>SINGLE SIDE SEWERS</b>	-	0	EA	-
<b>DOUBLE SIDE SEWERS</b>	-	0	EA	-
<b>MANHOLES</b>				
48-inch	-	0	EA	-
72-inch	-	0	EA	-
<b>GRINDER PUMPS</b>	-	-	EA	-
<b>LIFT STATIONS</b>	-	-	EA	-
<b>AIR/VACUUM RELEASE ASSEMBLIES</b>	-	-	EA	-
<b>MISCELLANEOUS (describe)</b>				
Cleanout	-	-	EA	-
Collection Valve Box	-	-	EA	-
-	-	-	0	-

SEWER SYSTEM SUBTOTAL            \$0.00

WASHINGTON STATE SALES TAX:      8.80%      \$0.00

SEWER SYSTEM CONSTRUCTION SUBTOTAL W/ TAX      \$0.00

<b>NON-TAX ITEMS</b>				
District Design/Inspection Fees	-	-	LS	-
Engineering	-	-	LS	-
Surveying	-	-	LS	-
Soils Testing	-	-	LS	-
	-	-	LS	-
	-	-	LS	-

NON-TAX ITEMS SUBTOTAL            \$0.00

**SEWER SYSTEM PROJECT TOTAL            \$0.00**



# BACKFLOW PREVENTION ASSEMBLY TEST REPORT

1510 228th Avenue SE  
Sammamish, WA 98075  
Main: 425.392.6256  
Fax: 425.391.5389  
www.spwater.org

INSTALL ID: \_\_\_\_\_ ACCOUNT #: \_\_\_\_\_

NAME OF PREMISE: \_\_\_\_\_ Commercial  Residential

SERVICE ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ ZIP: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_ PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

LOCATION OF ASSEMBLY: \_\_\_\_\_

DOWNSTREAM PROCESS: \_\_\_\_\_ DCVA  RPBA  PVBA  OTHER: \_\_\_\_\_

NEW INSTALLATION  EXISTING  REPLACEMENT  OLD SER.#: \_\_\_\_\_ Proper Installation? Yes  No

MAKE OF ASSEMBLY: \_\_\_\_\_ MODEL: \_\_\_\_\_ SERIAL NO.: \_\_\_\_\_ SIZE: \_\_\_\_\_

INITIAL TEST  PASSED <input type="checkbox"/> FAILED <input type="checkbox"/>	<u>DCVA/RPBA</u> <u>CHECK VALVE NO. 1</u>			<u>DCVA/RPBA</u> <u>CHECK VALVE NO. 2</u>			<u>RPBA</u>			<u>PVBA</u> AIR INLET		
	LEAKED <input type="checkbox"/> _____PSID			LEAKED <input type="checkbox"/> _____PSID			OPENED AT _____PSID #1 CHECK _____PSID AIR GAP OK? _____			OPENED AT _____PSID DID NOT OPEN <input type="checkbox"/>		
NEW PARTS AND REPAIRS	CLEAN	REPLACE	PART	CLEAN	REPLACE	PART	CLEAN	REPLACE	PART	CHECK VALVE		
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		HELD AT _____PSID		
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		LEAKED <input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		CLEANED <input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		REPAIRED <input type="checkbox"/>		
TEST AFTER REPAIRS	_____PSID			_____PSID			OPENED AT _____PSID #1 CHECK _____PSID			AIR INLET _____PSID CHK VALVE _____PSID		

AIR GAP INSPECTION: Required minimum air gap separation provided? Yes  No  Detector Meter Reading \_\_\_\_\_

REMARKS: \_\_\_\_\_ LINE PRESSURE \_\_\_\_\_ PSI

\_\_\_\_\_ CONFINED SPACE? \_\_\_\_\_

TESTER'S SIGNATURE \_\_\_\_\_ CERT.NO. \_\_\_\_\_ DATE \_\_\_\_\_

TESTER'S NAME PRINTED \_\_\_\_\_ TESTERS PHONE # ( ) \_\_\_\_\_

REPAIRED BY \_\_\_\_\_ CERT.NO. \_\_\_\_\_ DATE \_\_\_\_\_

FINAL TEST BY \_\_\_\_\_ CERT.NO. \_\_\_\_\_ DATE \_\_\_\_\_

Gauge # \_\_\_\_\_ Model \_\_\_\_\_ Make \_\_\_\_\_

GAGE CALIBRATION DATE \_\_\_\_/\_\_\_\_/\_\_\_\_ WATER SERVICE RESTORED Yes  No

Sammamish Plateau Water 1510- 228th Ave. SE, Sammamish, WA 98075

Phone: (425) 392-6256 Fax: (425) 391-5389

Submit test reports to: [crossconnection@spwater.org](mailto:crossconnection@spwater.org)

*I certify that this report is accurate, and I have used WAC 246-290-490 approved test methods and test equipment.*

**REIMBURSEMENT AGREEMENT  
FOR WATER/SEWER FACILITIES**

**Waiver/Application Form**

**Explanation of Process**

**Reimbursement Agreement**

**SAMMAMISH PLATEAU WATER AND SEWER DISTRICT**

**APPLICATION FOR OR WAIVER OF  
REIMBURSEMENT AGREEMENT FOR WATER/SEWER FACILITIES**

The undersigned \_\_\_\_\_ ("Applicant") hereby: (initial only one box)

Acknowledges that the water and/or sewer facilities constructed pursuant to the developer extension agreement executed by the applicant and the Sammamish Plateau Water and Sewer District on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ ("D.E. Agreement") are not eligible for reimbursement pursuant to Chapter 57.22 RCW or as amended.

Irrevocably waives the right to apply for or receive reimbursement pursuant to Chapter 57.22 RCW or as amended for the water and/or sewer facilities constructed pursuant to the developer extension agreement executed by the applicant and the Sammamish Plateau Water and Sewer District on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ ("D.E. Agreement").

Applies to Sammamish Plateau Water and Sewer District for a Reimbursement Agreement pursuant to the developer extension agreement executed by applicant in District on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ ("D.E. Agreement").

THIS DOCUMENT, TOGETHER WITH THE INFORMATION LISTED IN **STEP 6** OF THE PROCESS INCLUDED AS ATTACHMENT A, MUST BE SUBMITTED TO THE DISTRICT NO LATER THAN THE PREDESIGN MEETING FOR THE ABOVE-REFERENCED D.E. AGREEMENT. THE DESIGN DRAWINGS WILL NOT BE REVIEWED BY THE DISTRICT UNTIL THE REQUIRED INFORMATION IS REVIEWED AND APPROVED FOR PROCESSING BY THE DISTRICT.

THE EXECUTED, NOTARIZED REIMBURSEMENT AGREEMENT AND ALL SUPPORTING DOCUMENTATION MUST BE SUBMITTED TO THE DISTRICT PRIOR TO THE DISTRICT'S ACCEPTANCE OF THE EXTENSION FACILITIES. THE DEVELOPER MUST RESPOND WITHIN TWENTY-ONE (21) DAYS TO THE DISTRICT'S REQUEST(S) FOR ADDITIONAL INFORMATION OR REVISIONS TO THE REIMBURSEMENT AGREEMENT.

**FAILURE TO COMPLY WITH THESE REQUIREMENTS WILL RESULT IN FORFEITURE OF THE DEVELOPER'S RIGHT TO A REIMBURSEMENT AGREEMENT UNDER CHAPTER 57.22 RCW.**

Name of Applicant: \_\_\_\_\_

Name of Project: \_\_\_\_\_ (per District Resolution)

Description of Project or Project Portion for which reimbursement is requested: \_\_\_\_\_

Developer shall be responsible for all District labor including overhead and direct expenses associated with engineering review, legal services, administration, setup, mailing, public notification, public hearings and meetings, and recording of the Reimbursement Agreement. The District will provide the Developer with periodic invoices of the District's expenses. Payment for District services is due within 30 days of the date of the invoice. Failure to pay invoices by the due date will result in suspension of all District activities on the Reimbursement Agreement until the invoices are paid in full. Some expenses will be incurred following approval of the Reimbursement Agreement by the District's Board of Commissioners. These expenses include, but are not limited to, District labor, certified mailing costs, and recording fees from King County. No reimbursement payments will be made to the Developer until all District invoices are paid in full.

APPLICANT:

Date: \_\_\_\_\_

\_\_\_\_\_  
(Signature)

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
Telephone: \_\_\_\_\_

**ATTACHMENT A**  
**DISTRICT REIMBURSEMENT AGREEMENT PROCESS**  
**FOR WATER/SEWER FACILITIES**

Pursuant to District Resolution No.4334, the procedure for processing reimbursement agreements under a Developer Extension Agreement is as follows:

1. Developer enters into Developer Extension Agreement.
2. Developer meets with District staff in predesign meeting to discuss the proposed design, including any offsite water/sewer facilities, facilities within the project that can provide direct service to other properties, or facilities such as lift stations or booster pump stations that serve a larger area than just the Developer's property.
3. Developer submits signed application/waiver form for reimbursement agreement (required for **ALL** Developer Extension Agreements) no later than the time of the predesign meeting.
4. If the Developer is entering into a reimbursement agreement, the Developer will pay all District expenses on a time-and-materials basis, including labor and overhead, for District services associated with the review, dissemination, adoption, and recording of the reimbursement agreement. Payment for District services is due within 30 days of the date of the invoice. Failure to pay invoices by the due date will result in suspension of all District activities on the Reimbursement Agreement until the invoices are paid in full. No reimbursement payments will be made to the Developer until the invoices are paid in full.
5. Developer prepares design and submits to District.
6. If Developer is applying for a reimbursement agreement, the Developer shall submit the following, and District staff will not review plans until the required submittals have been received in a form acceptable to the District.
  - A map of the reimbursement area: a plan (up to 11"x17" size) showing the facilities to be constructed and tax lots affected by reimbursement agreement;
  - Electronic database containing properties within the proposed reimbursement area (tax lot number, property owner name and mailing address, property owner telephone number);
  - Mailing labels for the property owners of record;
  - Estimated total costs of the water and/or sewer improvements, prepared by a qualified licensed professional engineer, including an estimate of all costs proposed to be included (such as engineering, surveying, testing, landscape restoration, paving, reimbursement agreement administration costs, etc.);
  - Proposed methodology for calculating the pro rata reimbursement charges for each property; and the estimated reimbursement charge to be assessed for each of the parcels in the proposed reimbursement area.
7. District mails notification to each of the owners of real property within the reimbursement area (by certified mail, copy received and by regular U.S. Mail) regarding the estimated proposed reimbursement charge for the proposed reimbursement area. The letter contains an explanation of the methodology proposed to be used, a map showing the real property and the water and/or sewer facilities being installed, the conditions under which the property owners would be required to pay the assessed fees, and the time period for reimbursement.
8. Developer completes the design, which is approved by the District, and the Developer constructs the project.
9. Following District acceptance of the project construction and before the District issues Final Acceptance of the DEA, the Developer submits the following:

- Reimbursement Agreement that has been completed, signed and notarized, including all exhibits. The date on the first page of the Reimbursement Agreement as submitted is the date from which the 15 year term of the Reimbursement Agreement will run.
  - Revisions to property owner information for real property to be subject to reimbursement.
  - Backup invoices of actual costs incurred
10. Developer receives Final Acceptance for project (resolution from Board)
  11. District staff reviews Reimbursement Agreement.
    - A. If District staff determines the Reimbursement Agreement and its exhibits are in a form acceptable to the District the Reimbursement Agreement Process continues to the next step.
    - B. If District staff finds corrections to the reimbursement agreement or exhibits are required
      - i. The Reimbursement Agreement will be returned to the Developer for correction.
      - ii. The Developer will have 21 calendar days to resubmit a corrected Reimbursement Agreement.
      - iii. **If the corrections are not resubmitted to the District within the 21 calendar days, the Developer's Application for Reimbursement Agreement becomes null and void.**
      - iv. District staff reviews revisions and repeats this step.
  12. District staff mails notification to each of the owners of real property within the reimbursement area (by certified mail, copy received and by regular U.S. Mail) regarding the final proposed reimbursement charge for the proposed reimbursement area. The letter contains an explanation of the methodology used, the statutes regarding reimbursement agreements, the conditions under which the property owners would be required to pay the assessed fees, the time period for reimbursement, and how and when the property owners can review the cost information and project data at the District. Property owners are informed to submit comments to the District by a certain date (within 3 weeks) and that the Board of Commissioners will consider the reimbursement agreement at the next regularly scheduled Board meeting following the 3 week period.
  13. Following the 3 week comment period, District staff schedules the proposed reimbursement agreement for the next regularly-scheduled Board meeting
  14. The Board reviews the proposed reimbursement agreement, together with any comments received by the affected property owners.
    - A. If the Board approves the reimbursement agreement, by Resolution, the Reimbursement Agreement Process continues to the next step.
    - B. If the Board does not approve the reimbursement agreement in the form proposed, District staff will return the reimbursement agreement to the Developer for modification or correction and repeats step 10 above.
    - C. If the Board determines that a reimbursement agreement is not allowable for this development and the facilities included, the reimbursement agreement application will be denied and District staff will mails notification to each of the owners of real property within the proposed reimbursement area (by certified mail, copy received and by regular U.S. Mail) informing them that the reimbursement agreement will not be recorded. The developer will be notified by District staff of the Board's finding and the reimbursement agreement process ends.
  15. District staff mails notification to each of the owners of real property within the reimbursement area (by certified mail, copy received and by regular U.S. Mail) informing them that the reimbursement charge will be imposed and the reimbursement agreement will be recorded against their property.

16. District staff submits reimbursement agreement to King County for recording.
17. District staff receives the recorded reimbursement agreement from King County and puts it in the reimbursement agreement notebook
18. As properties included in the reimbursement area submit requests for water/sewer service, District staff will determine if a reimbursement amount is owed. If a reimbursement amount is owing, the District will collect this reimbursement amount as part of the property service connection charges. The District will then process payment to the developer, pursuant to the terms of the reimbursement agreement, of the reimbursement amount collected less a District administration fee of \$150 per reimbursement charge collected.
19. **Developer must submit to the District updated contact information every two years plus sixty (60) days, even if there is no change to the contact information,** with the two year date measured from the date on the first page of the reimbursement agreement.
  - A. If the Developer submits the required updated contact information every two years plus sixty (60) days, as required, the District will update the developers contact information and any reimbursement amounts collected by the District pursuant to the approved reimbursement agreement will be paid to the developer in accordance with the reimbursement agreement.
  - B. If the Developer has not submitted the required updated contact information every two years plus sixty (60) days, as required, and if the District collects reimbursement charges from owners of Benefited Property, the District will then attempt to contact the developer by mail at the contact location most recently provided by the developer, and request the developer confirm and/or update their contact information within 60 days from the date the inquiry is sent, so the District can continue to process the reimbursement agreement.
    - i. If the developer responds to the request for updated contact information within the 60-day period, the District will incorporate the updated information and any reimbursement amounts collected by the District pursuant to the approved reimbursement agreement will be paid to the developer in accordance with the reimbursement agreement.
    - ii. If the developer does not respond to the request for updated contact information within the 60-day period, **the right of the developer to receive reimbursement amounts collected by the District shall be terminated** and any amounts collected by the District pursuant to the approved reimbursement agreement shall be retained by the District.
20. When the Reimbursement Agreement reaches its expiration date, fifteen years after the date on the first page of the Reimbursement Agreement, the Reimbursement Agreement shall expire. Any properties that were subject to the Reimbursement Agreement, and that did not connect to the Reimbursement Facilities during the term of the Reimbursement Agreement, but which are connected to the Reimbursement Facilities following expiration of the Reimbursement Agreement shall pay a local facility charge to the District pursuant to District rules and regulations in effect at the time of application for such connection. The local facility charge shall be based on District rates in effect at the time of application for such connection and not at the rate established through the Reimbursement Agreement.



**SAMMAMISH PLATEAU WATER & SEWER DISTRICT  
REIMBURSEMENT AGREEMENT**

THIS AGREEMENT ("Agreement") is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, ("Effective Date") between the Sammamish Plateau Water & Sewer District, a municipal corporation ("District") and \_\_\_\_\_ ("Developer").

RECITALS:

A. District is a duly organized water and sewer district under the laws of the State of Washington, and is empowered to furnish both water and sewer service, to property owners within or without the District in the manner provided by law; and

B. Developer previously entered into a Developer Extension Agreement ("DEA") dated the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, for the construction and installation of water and/or sewer extensions to serve Developer's property which is described on Exhibit "A" attached hereto; Developer completed installation of such extensions in accordance with the terms of the DEA, portions of which make utility service available to real property other than the Developer's property within (and without) the District hereinafter known as the benefited properties ("Benefited Properties"), described on Exhibit "B" attached hereto; the owners of such Benefited Properties have not contributed to the cost of the extensions ("Extension Facilities") installed by Developer; and Developer is entitled to reimbursement from real property owners seeking connection to or use of such Extension Facilities for the cost of such Extension Facilities in excess of Developer's pro rata share therefor which costs have been determined as set forth below; and

C. District will collect charges from the owners of Benefited Properties within (and without) the District connecting to or using the Extension Facilities; and such charges are the sole source of funds for the District from which reimbursement to Developer can and will be made, as and when the same are collected; and

D. District is authorized to enter into a reimbursement agreement with Developer under the provisions of Chapter 57.22 RCW; and the parties desire to enter into a written reimbursement agreement ("Agreement") with reference to the foregoing matter, now, therefore,

IN CONSIDERATION of the following terms and conditions, the District and the Developer agree as follows:

1. Records/Costs. After completion of the construction of the Extension Facilities, Developer will certify to the District the final design, engineering, construction and restoration costs incurred by Developer in constructing the Extension Facilities and submit such supporting vouchers, invoices and other data as the District may require to substantiate the certified costs. The executed, notarized Agreement, all exhibits, and all supporting documentation must be submitted to the District before the Extension Facilities will be accepted by the District. Any changes or additional information requested by the District must be submitted to the District within 21 days of District notification to the Developer. District reserves the right to approve or reject the certified costs as reasonable and subject to reimbursement. The District shall allocate the cost of the Extension Facilities among Developer's property and the Benefited Properties on a pro rata share basis. However, the District reserves the right to allocate such costs in any manner conforming with applicable law and the policies of the District.

2. Charges. District shall require owner(s) of the Benefited Property to pay a reimbursement charge determined in accordance with the terms of this Agreement. The reimbursement charge shall be payable in total at the time of such owner's connection to or use of the Extension Facilities. The amount of such reimbursement charge to be collected prior to such connection is set forth on Exhibit "C" attached hereto; such charges may include, but are not limited to, pro rata share of District legal, engineering, administrative, set-up, handling and actual costs of the Extension Facilities. Such reimbursement charges shall be in addition to all other District charges in effect at the time of seeking connection to such Extension Facilities. Upon application by Benefited Property owners, the District may further segregate reimbursement charges attributed to property connecting to the Extension Facilities. All costs of such segregation shall be borne by the party requesting such segregation.

3. Developer Charge. The District shall deduct the sum of \$150.00 ("Developer Charge") for each reimbursement payment received before the Developer shall be entitled to receive the balance of such payment. Such base fee and charges herein described shall be collected by the District for costs and expenses incurred in connection with the administration of this Agreement.

4. Recording, Liens. This Agreement shall be recorded in the office of the King County Auditor, King County, Washington, upon execution by the District and the Developer. Such Agreement shall constitute a lien and record notice upon the property described in Exhibit "B" not contributing to the original cost of the Extension Facilities installed by Developer under the provisions hereof and shall be binding upon the present owner thereof, and all successors and assigns to those respective parties in accordance with Chapter 57.22 RCW. When paid by any party seeking connection to the Extension Facilities, the lien shall be satisfied and discharged of record. Developer hereby appoints the Secretary of the Board of Commissioners, or his/her successor, as its attorney-in-fact, to prepare, execute and file for record with the King County Recorder a document appropriate to cancel and release the lien, charge or obligation of the Benefited Property owner paying the reimbursement amount to District, which will describe with particularity the property so connecting and paying the reimbursement amount, and thereupon this agreement shall no longer apply to such property. This appointment as attorney-in-fact is irrevocable during the existence of this Agreement.

5. Developer Contact Information: The Developer shall provide the District with contact information ("Contact Location"). The initial Contact Location shall be provided as follows:

Contact Information and Address for Receipt of Reimbursement Funds

---

(Printed Name of Developer's Representative)

---

(Company Name)

---

(Mailing Address)

---

(City, State, Zip code)

---

(Telephone/FAX)

The Developer shall inform the District, in writing, of their current Contact Location every two years plus sixty (60) days from the Effective Date (“Contact Update Dates”), or sooner of company name, address, or telephone number for the receipt of reimbursement funds.

If the Developer fails to submit their current Contact Location to the District at least every two years plus sixty (60) days from the Contact Update Dates noted above the District may terminate the right of the Developer to receive any reimbursement charges collected by the District after such Contact Update Date as described in Section 7 of this Agreement.

The notification of current Developer Contact Location shall be sent to the District at the following address, unless the District provides written notification to Developer of a change in District address as follows.

District Contact Information

General Manager  
Sammamish Plateau Water and Sewer District  
1510 – 228<sup>th</sup> Avenue SE  
Sammamish, WA 98075  
(425) 392-6256

6. Payment Procedure. The District will pay any reimbursement charges collected to Developer, less the Developer Charge, within sixty (60) days following receipt thereof, District to follow its established procedures of depositing such funds received with the King County Treasurer and drawing upon the same and making payment by King County Treasurer warrant in the manner provided by law. The District shall forward reimbursement funds referenced herein to Developer at the address provided by the Developer as their Contact Location.

As a condition of receiving such reimbursement funds, Developer shall execute a receipt to the District for such reimbursement amounts so paid upon the receipt form provided by District. Such form shall include the name of the Benefiting Property owner making payment of such amount to the District and the legal description of the Benefited Property connecting to the Extension Facilities.

In the event of a dispute as to the rightful party to receive such funds, the District may pay the same to the Developer referenced herein or interplead such funds to the court; in either event, District shall thereupon be relieved of any further obligation or of liability hereunder as to such reimbursement funds so paid.

7. Termination of Developer’s Right to Receive Reimbursement. In the event the District collects reimbursement charges from owners of Benefited Property and the Developer has failed to comply with the requirements of Section 5 of this Agreement, the District will attempt to contact the Developer by mail at their most recent Contact Location and request the Developer provide, within 60 days from the date of mailing of the request, written confirmation and update of their current Contact Location. If the Developer fails to submit an Updated Contact Location within the 60-day period, the right of the Developer to receive reimbursement charges collected by the District shall terminate, and any reimbursement charges collected by the District following the Contact Update Date shall be collected and retained by the District and deposited in the District’s capital fund for expenditure by the District.

8. Term. This Agreement shall remain effective for a period of fifteen (15) years from the date set forth on page one (1) of this Agreement as to any Benefited Property for which a connection application is submitted to the District during such fifteen (15) year term. Developer shall have no further claim as to monies collected from any Benefited Properties after the expiration of the fifteen (15) year term.

9. Agreement Implementation. The District will use its best efforts to collect and distribute the reimbursement funds pursuant to the process set forth in this Agreement. However, the District, its officials, employees or agents shall not be held liable or responsible for failure to implement any of the provisions of this Agreement unless such failure is willful or intentional.

10. General. All exhibits referred to herein are by this reference made a part hereof as though set forth in full. This Agreement is binding upon the heirs, executors, administrators, successors and assigns, of each of the parties hereto.

11. Assignment. The Developer shall not assign its rights and obligations under this Agreement without the prior written consent of the District. In the event of an assignment, such person or entity shall be referred to as the "Developer" or "Developer's Assigns".

12. Effective Date. This Agreement shall be effective upon the date set forth on page one (1) of this Agreement ("Effective Date").

SAMMAMISH PLATEAU WATER &  
SEWER DISTRICT ("District")

\_\_\_\_\_  
("Developer")

By \_\_\_\_\_

By \_\_\_\_\_

Its \_\_\_\_\_

Its \_\_\_\_\_

STATE OF WASHINGTON )  
  ) ss.  
COUNTY OF KING        )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that they signed this instrument, on oath stated that they were authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_ to be the free and voluntary act of such corporation for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State of Washington,  
residing at

\_\_\_\_\_  
My Appointment Expires \_\_\_\_\_

STATE OF WASHINGTON )  
  ) ss.  
COUNTY OF KING        )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that they signed this instrument, on oath stated that they were authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of Sammamish Plateau Water and Sewer District to be the free and voluntary act of such corporation for the uses and purposes mentioned in the instrument.

Dated \_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State of Washington,  
residing at

\_\_\_\_\_  
My Appointment Expires \_\_\_\_\_

**EXHIBIT A**  
**LEGAL DESCRIPTION OF DEVELOPER'S PROPERTY**

**EXHIBIT B**  
**LEGAL DESCRIPTION OF BENEFITED PROPERTY(IES)**

**EXHIBIT C**  
**DESCRIPTION OF REIMBURSEMENT**



## **PART FOUR - DISTRICT STANDARD DETAILS AND NOTES**

The “*District Technical Specifications*” contain the District’s Standard Details in 8-1/2” x 11” format. The District’s Standard Details are also shown on the District Standard Detail Drawings (22” x 34” format).



# Sammamish Plateau Water®

## **DISTRICT TECHNICAL SPECIFICATIONS**

### OWNER

**Sammamish Plateau Water and Sewer District**  
1510 - 228<sup>th</sup> Avenue SE  
Sammamish, Washington 98075  
(425) 392-6256 FAX (425) 391-5389

Revised October 2017

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## **PART ONE - DESIGN STANDARDS**

### **1.1 WATER SYSTEMS**

The work shall be done in accordance with the Plans and Specifications prepared by the District's Engineer and/or Developer's Engineer and approved by the District. As a preliminary guide to applicants, the following general standards of design are set forth:

#### **A. Watermain Extension –**

1. Watermains shall be extended from the existing District water system to the Developer's Real Property. Such offsite watermains shall include watermain laterals and/or service lines, as directed by the District at its sole discretion, to all real property adjacent to the watermain so that future water service can be provided to such other real property.
2. Watermains shall be extended across the Real Property in all directions, as required by the District at its sole discretion, so as to provide for future extension of the water system beyond the Real Property.
3. Watermains shall be constructed within the Real Property so that they are adjacent to all proposed and existing lots and/or buildings within the Real Property.

**B. Main Location - Mains shall be laid only in right-of-way or proposed right-of-way or within separate utility tracts in easements that have been or will be granted to the District. Easements across individual lots require District approval during preliminary design.**

**C. Easements - All easements shall be a minimum of fifteen (15) feet in width and shall be subject to standard District easement restrictions. Piping shall be installed no closer than five (5) feet clear from the easement's edge. Widths in excess of fifteen feet may be required by the District for locations where the District feels that construction, maintenance or repair of the water line within the easement would not be feasible.**

The standard District Easement restrictions are set forth in the easement form included as a part of this Agreement. Prohibited items include locating structures over the easement, such as rockeries, walls, concrete slabs and fences.

**D. Location of Line within Street Corridor - Normally the water lines shall be located on the North and/or East side of the street. Exceptions to these criteria may be granted based on excessive crossings of other utilities, separation from other utilities or other extenuating circumstances.**

Criteria for location within the street cross-section:

1. Thickened edge - Locate 1-1/2 feet behind the edge of the asphalt.
2. Curb/gutter
  - a) Sidewalks - locate 6 feet off of street centerline.
  - b) No Sidewalks - locate 3 feet behind back of curb
  - c) Combination - keep the water line location consistent throughout the project.

3. Shoulder roads - locate 1 foot behind the fog line.
4. Access tracts – extend watermain down access tract (either 4” or 8” diameter pipe), unless only 1 or 2 lots are served AND the lots are within 50 feet of the edge of right-of-way
5. Valves kept out of curb/gutter and avoid storm lines.
6. Need minimum 5 foot run to hydrants.
7. Maintenance of water line possible within the Right-of-Way.

E. Water Line Cover - Minimum depth of cover over top of water main shall be 3 feet. Maximum depth of cover over the top of water main shall be 5 feet.

F. Separation Between Other Utilities

1. Sanitary Sewer - in accordance with criteria set forth in DOE guidelines
2. Storm Sewer - Three (3) foot horizontal clearance.
3. Underground Power, Gas, Telephone and Cable - A three (3) foot horizontal clearance is preferred when utilities are aligned parallel to the water main. In any case where less than three-foot separation occurs exact measurements to the utility lines shall be provided on the As-Built drawing.

G. Line Size - Minimum line size shall be eight (8) inch diameter. In certain cul-de-sac streets or other similar circumstances the District may allow reduction to a four (4) inch diameter line size. For non-single family residential developments, the minimum line size shall be twelve (12) inch diameter unless the requirement is waived by the District.

H. Pipe Material - Pipe shall be cement-lined, Class 52 ductile iron unless otherwise indicated on the plans. Pipe shall be wrapped with a polywrap material conforming to AWWA C-600, unless otherwise indicated on the plans.

I. Dead-end Water Lines - Dead-end lines are not permitted, except in certain cul-de-sac streets, in which case hydrants or blow-offs must be provided at the end of the main.

J. Blocking on End of Mains - Concrete Deadman Blocking is required for mains that may be extended in the future.

K. Connection to Existing Mains

1. End of Main Line - A main line valve, sized the same as the main line size, may be required to be installed at the end of the existing main and new main construction connected to the new valve. Exceptions shall be considered where there is an existing valve in close proximity to the new connection.
2. Tee Connection by Wet Tap - Where the tee connection has the same size diameter as the main being tapped and the main is ductile iron, or the tee connection has a smaller diameter than the main being tapped, a wet tap of the main under pressure shall be used for connection, unless otherwise directed by the District.
3. Cut-in - Cut-in connections shall be utilized in cases where wet taps are not used or when crossing under an existing AC watermain. The cut-in connection normally consists of a

ductile iron tee, appropriate valving, two 10-foot lengths of ductile iron pipe (one on each side of the tee), and fittings necessary to connect the ductile iron pipe to the existing pipe.

- L. Fitting Material - Fittings must be cement-lined ductile iron.
- M. Multiple Fittings - Where more than one fitting occurs in close proximity to each other, i.e. a tee and valve, the fittings shall be flanged to each other.
- N. Lines Entering/Exiting Structures - A flexible fitting shall be placed on all lines entering/exiting vaults or other structures, outside of the structure, within five feet of the structure, for protection from earthquake shaking by providing a point where the difference in vibration rates of the pipe and the structure can be absorbed. The fitting shall be a mechanical joint ductile iron sleeve. If a mechanical joint or bell connection occurs within 5 feet of the structure, outside of the structure, the flexible fitting may be omitted.
- O. Pipe Anchors - Pipe anchors shall be required on all lines where the slope of the line is equal to or in excess of 20 percent. For grades up to 35 percent, anchors shall be placed at not over 36 feet on center. For grades between 35 and 50 percent, anchors shall be placed at not over 24 feet on center. For grades over 50 percent, anchors shall be placed at not over 16 feet on center.
- P. Hill Holders - Hill holders shall be required where the finished grade is greater than or equal to 15 percent.
- Q. Fire Hydrant Location - Standard 5-1/4 inch Main Valve Opening (MVO) fire hydrants are required approximately every 500 feet in urban areas and every 700 feet in rural areas. Standard 5-1/4 inch MVO fire hydrants are required approximately every 300 feet in commercial areas. The location of the fire hydrants shall be approved by the King County Fire Marshall's Office. Hydrants shall not be located within 3 feet of water meter boxes on center. The trunk of trees and bushes shall not be planted within 5 feet of the hydrant.
- R. Fire Hydrant Line Size - Pipe runs from main line to standard hydrants less than or equal to 50 feet in length must be a minimum of 6 inches in diameter. Pipe runs from main line to standard hydrants greater than 50 feet in length must be a minimum of 8 inches in diameter. No other water connections shall be allowed on fire hydrant runs.
- S. Hydrant Guard Posts - Hydrant Guard Posts shall be required wherever their installation does not violate the King County Road Standards for obstacle placement. Unless otherwise required by the District, guard posts shall be required with hydrants located on streets without vertical curb and gutter sections and in all multi-family/commercial/industrial developments. Use of guard posts for hydrants located in easements in situations other than those mentioned above shall be evaluated on an individual case basis. A minimum of two, and up to four, guardposts may be required for each hydrant.
- T. Valve Type
  - 1. Gate valves shall be used for all water mains less than 12 inches in diameter. Gate valves are allowed for wet taps that are 12 inch or larger, provided adequate cover exists.

2. Butterfly valves shall be installed on all water mains 12 inches and larger. Butterfly valves may require plugging for testing purposes.
3. All valves installed for future extensions shall be plugged by blind flange or mechanical plug.

U. Valve Locations

1. Not more than 800 feet between valves in residential areas, not more than 500 feet in commercial areas.
2. At intersections:
3. Full valve clusters at all major water line intersections.
4. Valve on dead end line where dead end line intersects the main water line.
5. Provide ability to serve water line from alternate directions in a looped system, while isolating a section of main for maintenance, repair or continuation.
6. Locate at positions that will be readily located in the future. i.e., at intersections or in conjunction with a fire hydrant.
7. Local circumstances, such as construction requirements.

V. Blow-offs – Blow-offs shall be located at the end of all dead end mains. The District has two standard types of blow-offs, as shown on the Standard District Details. See Part Four of these Technical Specifications. Type I blow-offs are normally used where the main may be extended in the future. Type II blow-offs are required where the main will not likely be extended in the future. Type II blow-offs may be substituted for Type I blow-offs. If a hydrant is located at the end of a dead end main, the District may consider waiving the blow-off requirement.

W. Air and Vacuum Release Valves - Two-inch air and vacuum release valves shall be installed at high points in the system. One-inch air and vacuum release valves may be allowed upon District approval, where calculations indicate the anticipated air volume is within manufacturers specifications for one-inch valves. The depth of the watermain near the air/vacuum release valve shall be deep enough to achieve at least the minimum upslope (2%) to the air/vacuum release valve. The depth of the watermain shall be shown on the drawings.

X. Meters

1. Single-Family Residential

a) Location

All lots shall have meters located along their frontage. Wherever possible, meters shall be located within 5 feet of the property line.

If a lot does not have frontage on a water main, the meter shall be located on the lot's legal access route. Meters must be located within 50 feet of the property line on the access route. If the distance is greater than 50 feet, a watermain must be extended along the access route to the property to be served. The District shall approve all other

locations. The private water service line between the meter and the property must be located under the pavement to protect the private water service line from damage from other utilities, landscaping, fencing, and other construction activities.

All meter locations shall be within the right-of-way or easements granted to the District. The location shall be easily accessible by District personnel at all times.

The trunks of trees and structures shall not be located within 5 feet of meter boxes. Meter boxes shall be positioned with at least 18 inches clearance from any other utilities, bushes or obstructions. Meters shall be located, where practical, on lot corners. A single meter setter for each lot shall be used.

Locating meter boxes in driveways or paved areas shall not be permitted, except with written District approval. Where unavoidable traffic bearing meter boxes shall be used, a 3/4 inch expansion joint shall be provided around the box with a eighteen (18) inch gap between the expansion joint and meter box on all sides. Sanitary side sewers shall be a minimum of 10 feet away from the meter location.

- b) Size - Meter size shall be based on the lot or house size, total plumbing fixture count, system pressure, the use of in-ground irrigation and/or the need for fire sprinkler systems. The standard meter sizes are 3/4" and 1". If there are lots that have specific meter size requirements based on the need for fire sprinkler systems, or other reasons, they shall be called out on the design. Single family houses with separate ADUs (accessory dwelling unit) may be served by a single meter. The plumbing fixture count shall be the combined total for both structures.
- c) The following are the District criteria for meter and service line sizes:

Type of Service	Service Line Size	Setter Size	Meter Size
Standard	1"	Single 3/4"	3/4"
No. of Plumbing Fixtures Requiring Greater than 3/4" Meter*	1"	Single 1"	1"
Fire Sprinklers	1"	Single 1"	1" Note: If pressures are less than 55 psi, inform developer and find out if larger lines/meters will be required

\*Requires that the property owner apply for a larger meter and pay all necessary fees.

2. Multi-Family/Commercial/Industrial

- a) Service to Each Building – For non-single family residential developments, each building shall be served by at least one individual meter. Where a building has service from multiple meters, the plumbing system served by each meter shall be separate, so that service is provided only from one meter.

- b) Location - The District shall approve all meter locations. All meter locations shall be within the right-of-way or easements granted to the District. The location shall be easily accessible by District personnel at all times. Locating meter boxes in driving areas shall not be allowed. Traffic bearing meter boxes shall be used if the location is in an area where vehicles may enter within 2 feet of driving surface. Sanitary sewers or side sewers shall be a minimum of 10 feet away from the meter location. A single meter setter for each lot shall be used.
- c) Size - Meter size shall be based on the needs and requirements of the development. Specific meter sizes shall be called out on the design. With 3" and 4" meters the meter should be specified as a Compound or other type meter.

### 3. Irrigation

- a) Location - The District shall approve all meter location. All meter locations shall be within the right-of-way or easements granted to the District. The location shall be easily accessible by District personnel at all times. Irrigation meters shall not be placed on double setters, where the other meter may be for domestic use. Locating meter boxes in driving areas shall not be allowed. Traffic bearing meter boxes shall be used if the location is in an area where vehicles may enter within 2 feet of driving surface. Sanitary sewers or side sewers shall be a minimum of 10 feet away from the meter location.
- b) Size - Meter size shall be based on the needs and requirements of the development. Specific meter sizes shall be called out on the design. With 3" and 4" meters the meter should be specified as a Turbine or other type meter. Non single-family residential customers shall have an irrigation meter that is separate from the domestic supply water meter.
- c) Cross-Connection Control - Irrigation water meters shall have a cross-connection control device, approved in the State of Washington, installed on the customer side of the meter, near the meter box. The cross-connection control device shall be tested at the time of installation by a State-certified backflow prevention tester.

### Y. Service Lines

- 1. Location - Service lines shall run as close to perpendicular across the street and/or right-of-way as possible, from the main to the meter box. The maximum length service line shall be 60 feet. Where "bubbles" are located off to the side of a street, the length may be increased if there are two or less service lines that are greater than sixty feet in length. If the right-of-way width is greater than sixty feet, the service line length may be increased accordingly.
- 2. Size - Service line size shall be based on the number of meters that will be served by the line, the size of the meter(s) to be served, system pressure and/or the size of the lots being served. Within a development, if there are more than one service line size based on the District criteria, the larger line size shall be used for all domestic services. District criteria for single family residential development services are given in the Meters section above. Irrigation, multi-family, commercial or industrial service line sizes shall be based on the request and needs of the developer.

3. Obstructions - Structures that shall not be constructed over the service lines include, but are not limited to: fences, carports, buildings, landscape timbers, retaining walls, mailbox stands, trees, and rockeries.

#### Z. Backflow Prevention

1. For non single-family structures, double check detector assemblies (DCDA) shall be provided on fire sprinkler lines. DCDA's shall be located in vaults as shown in Part Four.
2. Additional backflow prevention devices may be required depending on type of facility. For facilities designated by the State of Washington as high hazard facilities (such as car washes, service stations, multi-use commercial building pads, mixed-use multi-family, etc.), premise isolation of all water service lines shall be provided using reduced pressure backflow assemblies (RPBA). Such high hazard facilities shall be required to have a DCDA for the fire sprinkler system, unless such fire sprinkler system has chemicals added.
3. For single-family structures, backflow prevention devices shall be provided for in-ground irrigation systems at the point where the irrigation lines are connected to the domestic supply line to the house, and for fire sprinkler systems. Backflow devices for fire sprinkler systems shall be double check valve assemblies (DCVA) installed directly behind the water meter.
4. For multi-family residential structures greater than 30 feet in height shall have a DCVA installed directly behind the water meter. Multi-family in a mixed use development shall require a RPBA.
5. For additional information, see the District's Cross Connection Control Program requirements.

#### AA. Fire Sprinkler Lines

1. Fire sprinkler lines shall be a minimum of 4 inch diameter ductile iron between the main and the DCDA vault. The line shall be fully restrained with megalug fittings, field lock push on joints, and thrust blocks.
2. For non single-family customers, fire sprinkler service shall be provided through a separate tap to the water main, and a DCDA shall be required. Some single-family customers may also require a separate tap.
3. Additional backflow prevention devices may be required depending on type of facility or system.

- BB. District Sampling Stations - District sampling stations, installed where directed by the District, shall consist of a 1-inch water service line and meter stop. District will install sampling station.



## 1.2 SANITARY SEWER SYSTEMS

The work shall be done in accordance with the Plans and Specifications prepared by the District's Engineer and/or Developer's Engineer and approved by the District. As a preliminary guide to applicants, the following general standards of design are set forth:

- A. Sewer Extension
1. Sewers shall be extended from the existing District sewer system to the Developer's Real Property. Such offsite sewers shall include sewer mains and/or side sewer stubs, as directed by the District at its sole discretion, to all real property adjacent to the sewer so that future sewer service can be provided to such other real property.
  2. Sewers shall be extended across the Real Property in all directions so as to provide for future extension of the sewer system beyond the Real Property.
  3. Sewers shall be constructed within the Real Property so that they are adjacent to all proposed or existing lots and/or buildings within the Real Property.
- B. Design Criteria - All design shall be in accordance with Department of Ecology "Criteria for Sewer Works Design", latest revision.
- C. Sewer Flow - All sanitary sewer design shall be by gravity flow, except by special arrangement with the District.
- D. Storm/Surface/Ground Water Restrictions - No storm water, surface water or ground water shall be discharged into sanitary sewers.
- E. Main Location - Mains shall be laid only in right-of-way or proposed right-of-way or within separate utility tracts in easements that have been or will be granted to the District. They shall be located in public right-of-way in preference to easements. Easements across individual lots require District approval during preliminary design.
- F. Easements - All easements shall be a minimum of fifteen (15) feet in width and shall be subject to standard District easement restrictions. Piping shall be installed no closer than five (5) feet clear from the easement's edge. Widths in excess of fifteen feet may be required by the District for locations where the District feels that construction, maintenance or repair of the sewer line within the easement would not be feasible.
- The standard District Easement restrictions are set forth in the easement form included as a part of this Agreement. Prohibited items include locating structures over the easement, such as rockeries, walls, concrete slabs, fences, and trees.
- G. Location of Line within Street Corridor - Normally the sewer lines shall be located on the South and/or West side of the street. Exceptions to these criteria may be granted based on excessive crossings of other utilities, separation from other utilities or other extenuating circumstances.

### Criteria for Location within the Street Cross-Section

1. Thickened edge - Locate 6 feet off of street centerline.

2. Curb/gutter - locate 6 feet off of street centerline.
3. Shoulder roads - locate 2 feet behind the fog line.
4. Manholes kept out of curb/gutter and drainage courses.
5. Maintenance considerations - accessible and maintenance of sewer line possible within the Right-of-Way.
6. Amount of restoration that will be required following construction.

#### H. Sewer Line Depth

1. All gravity sewer mains shall be a sufficient depth to drain basements and be protected against damage by frost and traffic. There shall be a minimum of five (5) feet of cover over the crown of the sewer line. At natural drainage crossings, this may be reduced to three (3) feet.
2. A minimum of four (4) feet of cover shall be provided over low pressure mainlines.

#### I. Separation Between Other Utilities

1. Water - in accordance with criteria set forth in DOE guidelines
2. Storm Sewer - Three (3) foot horizontal clearance.
3. Underground Power, Gas, Telephone and Cable - A three (3) foot horizontal clearance is preferred when utilities are aligned parallel to the water main. In any case where less than three foot separation occurs exact measurements to the utility lines shall be provided on the As-Built drawing.

#### J. Line Size

1. Minimum gravity line size shall be eight (8) inch diameter.
2. Minimum low pressure mainline size shall be two (2) inch diameter.
3. The extension shall incorporate adequate capacity to provide the future expansion of the system in conformity with the District's comprehensive planning and future needs.

#### K. Pipe Material

1. Gravity pipe shall be PVC or ductile iron unless otherwise indicated on the plans. Ductile iron pipe shall be wrapped with a polywrap material conforming to AWWA C-600 and shall be lined with Protecto 401, unless otherwise indicated on the plans. C-905 pipe may be considered for lines fourteen (14) inches and greater in diameter. Pipes with slopes greater than or equal to twenty (20) percent shall be ductile iron or C-900 or C-905. Pipes buried twenty (20) feet deep or deeper shall be ductile iron, C-900 or C-905. Ductile iron pipe shall be lined with Protecto 401 ceramic epoxy lining.
2. Low pressure pipe shall be HDPE SDR 11 with tracer wire.

## L. Gravity Pipe Grade

1. Lines shall be on straight alignment and uniform grade between manholes.
2. No grade shall be permitted resulting in a velocity of less than two feet per second at design flow.
3. If slope and volume are such that velocities above twelve feet per second are realized at average flow, special provisions shall be made for anchoring the pipe and protect against erosion of the sewer system. In any case where the slope of the pipe is greater than twenty (20) percent, pipe anchors shall be required.
4. The crowns of pipes of different diameters entering a manhole shall be installed at the same elevation.
5. If the slope of the sewer pipe upstream or downstream of a manhole exceeds five (5%) percent, the greatest slope shall be conveyed through the manhole. Manhole invert elevations shall be calculated reflecting this condition and shall be shown on the drawings.

M. Hill Holders - Where the finished grade of the ground is in excess of fifteen (15) percent, hill holders shall be required.

N. End of Sewer Mains - All sewer mains shall end in a manhole. Cleanouts may be considered on an individual case basis with written District approval.

O. Manhole Location - A manhole shall be provided at each grade, alignment or size change. No distances in excess of 300 feet shall be permitted between manholes unless authorized in writing by the District.

P. Manhole Size - All manholes less than 20 feet deep shall be forty-eight (48) inch minimum diameter, and eight (8) foot minimum depth from invert to rim elevation. The District may, at its sole discretion, allow manholes between six (6) feet and eight (8) feet in depth from invert to rim elevation. Manholes 8 feet deep and shallower shall have two (2) foot cones. If the depth of the sewer is 20 feet or greater, sixty (60) inch minimum diameter manholes shall be used. If the diameter of the sewer is 15 inches or greater, seventy-two (72) inch minimum diameter manholes shall be used.

Q. Direction Change through Manholes - The change in direction between flow entering and exiting a manhole shall not be less than ninety (90) degrees. (Any change in direction requiring an acute angle in the manhole channel is not permitted.)

R. Manhole Channels - Manholes shall be full-channel with a minimum of one-tenth (0.1) foot drop in elevation through the manhole. Where the slope of a sewer line is greater than five (5%) percent as discussed above, the greater slope shall be continued through the manhole. The channel for sewer lines entering manholes perpendicular to the through direction of flow shall be curved in a sweeping radius to direct the flow downstream. No pre-channeled manholes shall be allowed.

- S. Transition Manholes – In cases where a sewer main with a slope in excess of four (4) percent must turn through a manhole at an angle between 45° and 90°, a transition manhole shall be provided upstream to reduce the slope to a maximum of 2 percent and/or to reduce the angle of the turn to between 0° and 45°. Outside drop connections may be used ONLY where the angle of the downstream direction of flow is between 0° and 45°.
- T. Manhole Lining – The manhole into which a force main or low pressure mainline discharges shall be lined with 5-9 mils of Tnemec Series 141 Epoxoline or Wasser Aeroshield. In addition, the two manholes downstream of that manhole shall be lined with Tnemec Series 141 Epoxoline or Wasser Aeroshield, if installed as part of the same project. If existing, the two downstream manholes shall be lined with a protective coating resistant to hydrogen sulfide corrosion, such as Wasser Aeroshield, or Tnemec Series 141 Epoxoline. Submit product information for District review. Coating thickness shall be per the manufacturer's recommendations.
- U. Manhole Cone - Manholes eight (8) feet and less in depth shall have cones a maximum of two (2) feet in height.
- V. Manhole Access Roads – Wherever possible, access to manholes shall be provided on public or private roads to which the District has access. Where such access is not possible, access roads shall be required to ALL manholes not located within or immediately adjacent to public or private roads. Turnarounds conforming to the District's standard detail shall be provided at the end of dead end manhole access roads.
- W. Gravity Side Sewer Connections - Connections to a new sewer main shall be made with tee fittings. Connections to an existing sewer main of a single-side sewer not associated with a new development may be made, with written District approval, by cut-in tee fitting or side sewer saddle connection conforming to the requirements in Part 2.
- X. Low Pressure Side Sewer Connections – Connections shall be made with SDR 11 or Schedule 80 threaded fittings and shall terminate in Collector Valve Boxes as shown in the Standard Details.
- Y. Joint Gravity Side Sewers - Double side sewers shall be split with wye fittings. If a side sewer serves three or four housing units, a minimum of six (6) inch diameter pipe shall be used to the last (upper) wye. A cleanout will be required at the wye where the upper connection is made. Side sewers serving more than two residential structures shall be subject to approval by the District. Up to three housing units in one building (triplex) may be served by one side sewer. Joint side sewers for commercial structures are not permitted. Each commercial structure shall be equipped with its own side sewer.
- Z. Gravity Side Sewer Grade - Side sewers from the sewer main to the building shall have a minimum slope of two (2) percent. At the District's sole discretion, slopes may be reduced to one (1) percent; in that case, the side sewer diameter shall be increased to six (6) inches.
- AA. Side Sewer Cleanouts – Cleanouts shall be installed at intervals not to exceed one hundred (100) feet in straight runs and for each aggregate horizontal change in direction exceeding one hundred thirty-five (135) degrees per the Uniform Plumbing Code. The maximum length of side sewer shall be 200 feet unless the requirement is waived by the District. Side sewer

cleanouts shall be located no more than three feet from the building foundation. For single-family residential developments, cleanouts located in unimproved or landscaped areas shall be no more than 12 inches below ground surface. Cleanouts located in sidewalks, pavement, or other improved areas and cleanouts for non-single family developments shall be brought to grade as shown in the Standard Detail. For multiple single-family residential connections, a six (6) inch diameter wye and cleanout shall be installed where the last (upper) connection is made. The District may require a forty-eight (48) inch manhole at the upper terminus of such lines on both residential and commercial tracts in lieu of cleanouts.

#### BB. Side Sewer Locations

1. In single family residential developments the side sewers shall be extended at least ten (10) feet into the individual lots, and shall be at least five (5) feet from a side property line.
2. Side sewers shall be installed perpendicular to the main.
3. All lots shall have side sewers located along their frontage and shall not be located in private side sewer easements without the express prior written consent of the District.
4. On extensions through areas not currently being developed, side sewers shall be extended as close as practical to the property line.
5. In non-single family residential developments the locations of the side sewer extensions shall be decided on a case by case basis.
6. A minimum of ten (10) foot separation shall be maintained between the side sewer and water mains or water service lines.
7. Structures that shall not be constructed over the side sewer lines include, but are not limited to, fences, carports, buildings, landscape timbers, retaining walls, mailbox stands, trees, and rockeries.
8. A maximum of two (2) side sewers shall be connected to a manhole.

CC. Lift Stations - In any case where a lift station is being considered, the District shall be consulted for its latest criteria on lift stations standards for controls, telemetry, generators and other associated components. Permanent lift stations shall have permanent standby generators.

DD. Lift Station Rock Catch Basin - The last manhole in the lift station site before entering the wet well shall have a two (2) foot deep catch below the lowest pipe invert. This manhole shall be located so that it is accessible for regular cleaning of the manhole by a vactor truck.

EE. Lift Station Water Service - A water service with a 3/4-inch hose bib shall be provided at all lift stations, with a Reduced Pressure Backflow Assembly (RPBA) backflow prevention device, located at the property line. In wet well/dry well installations the service shall be located within the dry well.

FF. Grinder Pump Stations - Grinder pumps may be installed for individual structures as designated by the District. Standard lift stations will normally be required where gravity flow cannot be achieved. See Standard Details.

- GG. Force Main Size - The force main shall be sized to maintain a minimum velocity of three (3) feet per second (fps) with design flows and a maximum velocity of 8 fps. A minimum diameter of four (4) inches shall be used with sewage pumps that can pass a three (3) inch solid.
- HH. Force Main Material – Permanent force mains shall be ductile iron for diameters of four (4) inches or greater, and high-molecular weight polyethylene pipe (HDPE) for diameters less than four (4) inches. Permanent ductile iron force mains under gas easements shall be AWWA C900, Class 150 pipe. Temporary force mains may be AWWA C900, Class 150 for diameters of four (4) inches or greater, and high-molecular weight polyethylene pipe for diameters less than four (4) inches. The determination of whether a force main is temporary or permanent shall be made solely by the District.
- II. Force Main Depth - A minimum cover of six (6) feet is required. This cover may be reduced to four (4) feet when ductile iron pipe is used. The cover may be reduced to three feet when crossing a drainage course. The cover for grinder pump collector force mains shall be a minimum of three (3) feet.
- JJ. Force Main Cleaning – For force mains 8 inches in diameter and larger, the lift station will be equipped with a pig launch facility unless otherwise directed by the District. The manhole into which the force main discharges shall be equipped with an aluminum pig catch grating. Cleanouts will be provided on force mains 6 inches in diameter and smaller, with the cleanouts spaced at 500-foot intervals.
- KK. Force Main Tracer Wire Locate Stations – Test stations containing tracer wire shall be located over the centerline of all force mains at 500-foot intervals and at bends.
- LL. Force Mains Entering/Exiting Structures - A flexible fitting shall be placed on all lines entering/exiting vaults or other structures, outside of the structure, within five feet of the structure, for protection from earthquake shaking by providing a point where the difference in vibration rates of the pipe and the structure can be absorbed.
- MM. Force Main Air Release/Vacuum Breaker Valves - Air release/vacuum breaker valves shall be required at high points in the force main and as designated by the District.
- NN. Grease Interceptors – All commercial or industrial facilities, schools, churches, or other non-single family residential facilities that have food service facilities or car washes shall be equipped with an approved type and adequately sized grease interceptors or oil/water separators. Submit sizing calculations for District review. Piping shall be a minimum of 6 inches in diameter and the discharge pipe shall be connected directly to a manhole. Connection to the blackwater building sewer requires written District approval. All commercial building pads with unidentified or potentially variable uses must be provided with a grease interceptor at the time of initial construction. Provide graywater plumbing to building pad(s). If discharge into manhole is not feasible, in the sole opinion of the District, provide a sampling point prior to discharge to sewer. Submit plan and product submittal for District review. For additional information, see the District’s Fats, Oils, and Grease regulations.
- OO. Oil/Water Separators – Oil/water separators shall be provided for parking garages, car washes, service stations, and other covered facilities where gasoline and oil may contaminate storm water handling facilities. Submit sizing calculations for District review. The oil/water

separator shall be located on the side sewer just upstream from the District's sewer system, and shall be privately maintained and owned. Open air parking lots, although they may be equipped with oil/water separators, shall not be routed to the sewer system since they will introduce stormwater inflow to the sewer system. If discharge into manhole is not feasible, in the sole opinion of the District, provide a sampling point prior to discharge to sewer. Submit plan and product submittal for District review. For additional information, see the District's Fats, Oils, and Grease regulations.

- PP. Backwater Valves – “The Uniform Plumbing Code requires backwater valves on building sewers where the finished floor is below the rim of the upstream manhole. Backwater valves, if they are installed, must be located within the building footprint upstream of the cleanout. The District is not responsible for their installation, maintenance, or operation. The side sewer permit for a building with a backwater valve shall include a hold harmless clause which indemnifies the District against any liability, damage, or cost which may accrue from the installation and operation of a backwater valve in the side sewer.” A note with the exact wording shown in quotes above shall be placed on the drawings with an asterisk, and each building or lot whose finished floor elevation indicates the need for a backwater valve shall have an asterisk next to the building number or lot number as reference to the note.

**PART TWO - MATERIAL STANDARDS**

2.1 GENERAL

All materials and equipment shall be new and undamaged. Where possible, the same manufacturer of each item shall be used throughout the job. In accordance with paragraph WS-20 "Material and Equipment List" of this Agreement, the Developer or Contractor shall file a material and equipment list with the District including the quantity, manufacturer, model number and technical specifications, if applicable, of material and equipment to be installed as part of the work. If requested by the District, five (5) copies of all information concerning the specifications, installation, operation and maintenance of material and equipment installed as part of the work shall be furnished to the District in five separate labeled binders.

A. Foundation Gravel

Foundation gravel used for backfill of over-excavated trenches shall conform to the requirements of WSDOT/APWA 9-03.17, "Foundation Material, Class B."

B. Controlled Density Fill (CDF)

Controlled Density Fill (CDF) shall be a mixture of Portland cement (Type I or II), fly ash (ASTM C618, Class F), fine aggregates (coarse sand with 100% passing 3/8-inch sieve, 60-100% passing No. 4 sieve, and 0-5% passing No. 200 sieve), and water, with a maximum 28-day compressive strength of 100 psi, conforming to following proportions:

<u>Material</u>	<u>Batch Weight/Cubic Yard</u>
Mixing Water	50 lb/cu yd
Portland Cement	30 lb/cu yd
Fly Ash	200 lb/cu yd
Fine Aggregate	3200 lb/cu yd

Submit CDF mix design for District review prior to use.

C. Pea Gravel

Bedding material for PVC or HDPE pipe shall be well graded, clean granular gravel material commonly known as pea gravel. Material slightly smaller than pea gravel may be used.

Bedding material shall meet the following requirements:

<u>U.S. STANDARD SIEVE SIZE</u>	<u>PERCENT PASSING</u>
3/8" Square Opening	100%
No. 8 Sieve	0 - 5%



#### D. Sand Bedding Material

Bedding material for ductile iron pipe shall conform to the requirements of WSDOT/APWA 9-03.13, "Backfill for Sand Drain".

#### E. Concrete Encasement

Concrete material for encasing water mains crossing over sewer pipes shall have a 30-day compressive strength of not less than 1,500 psi. The mix shall have a slump of between one (1) and five (5) inches.

#### F. Native Backfill Material

Native materials will be considered suitable for use in backfilling if the material is not sensitive to moisture (compactable if moisture content is greater than optimum). Native materials shall be a sand and gravel combination with no deleterious materials. All materials shall pass a 3-inch sieve.

#### G. Imported Backfill Material

Durable crushed gravel or rock; or naturally occurring sands and gravels free from wood, bark, roots or other extraneous material, meeting the requirements of WSDOT/APWA 9-03.19 for "Bank Run Gravel for Trench Backfill", with percent passing the No. 200 sieve limited to 5 percent max.

#### H. Hot Mix Asphalt (HMA)

Hot Mix Asphalt (HMA) shall be CL ½" as specified in WSDOT/APWA Section 9-03.9(6) Aggregates for Hot Mix Asphalt, HMA Proportions of Materials, and Performance Graded PG 58-22. Aggregate for asphalt concrete shall conform to the requirements of WSDOT/APWA Sections 9-03.8(1) through 9-03.8(6) for Aggregates for Hot Mix Asphalt, inclusive.

#### I. Crushed Surfacing

1. Top Course and Keystone Material (5/8" Minus): For use in the restoration of excavated areas. Top Course and Keystone material shall conform to the requirements of WSDOT/APWA 9-03.9(3), "Crushed Surfacing" for Top Course and Keystone.
2. Base Course Material (1 ¼" Minus): Base Course Material shall conform to the requirements of WSDOT/APWA 9-03.9(3), "Crushed Surfacing" for Base Course.

#### J. Not Used

#### K. 7/8-inch Drain Rock

Material for drains around facilities such as hydrants, blowoffs, and hill holders shall conform to the requirements of WSDOT/APWA 9-03.12(5), "Gravel Backfill for Drywells", except that the material shall be washed to remove fines.

L. Not Used

M. Grout

Grout shall consist of one part Portland Cement, three parts fine sand, and sufficient water to allow proper workability. “Jet-Set” is not allowed.

N. Trench Plug

Low permeable fill material, a non-dispersible clay material having a minimum plasticity index of 10.

O. Unsuitable Materials

1. Unsuitable materials include the materials listed below:

- (a) Soils which, when classified under ASTM D 2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System), fall in the classifications of Pt (Peat), OH (organic clays of medium to high plasticity, organic silts), CH (inorganic clays of high plasticity, fat clays), MH (inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts), or OL ( organic silts and organic silty clays of low plasticity). OH, CH, MH with liquid limits of greater than 50 and OL liquid limit less than 50.
- (b) Soils which cannot be compacted sufficiently to achieve the density specified for the intended use or as determined by the District. Soil additives for drying or stabilization will not be allowed, including but not limited to fly ash, Portland cement, or kiln dust.
- (c) Materials that contain organic material, hazardous or designated waste materials including petroleum hydrocarbons, pesticides, heavy metals, and any material which may be classified as hazardous or toxic according to applicable regulations.
- (d) Soils that contain greater concentrations of chloride or sulfate ions, or have a soil resistivity or pH less than the existing on-site soils.

P. Ductile Iron Pipe

Ductile Iron pipe shall be cement mortar-lined and zinc coating as specified herein unless otherwise indicated on the plans. Any pipe found to have dimensional tolerances in excess of those prescribed by the manufacturer or having defects which prevent adequate joint seal or any other damage shall be rejected. If requested by the District, not less than three nor more than five pipe lengths of pipe for each size, selected from stock by the District, shall be tested as specified for maximum dimensional tolerance of the respective pipe.

Ductile Iron pipe shall conform to AWWA Standard C151, Thickness Class 52 or as indicated on the Drawings. Pipe with cement mortar lining shall conform to AWWA C104. The exterior of Ductile Iron pipe shall be coated with a layer of arc-sprayed zinc per ISO 8179. The mass of the zinc applied shall be 200b/m<sup>2</sup>. A finishing layer topcoat shall be applied to the zinc. The mean dry film thickness of the finishing layer shall not be less than 3 mils with a local minimum not less than 2 mils. The coating system shall conform in every respect to ISO 8179-1 “Ductile iron pipes- External zinc-based coating – Part 1: Metallic zinc with finishing layer” Second edition 2004-06-01 Ductile Iron pipe and fittings for sewer shall be lined with PROTECTO 401 ceramic epoxy coating (Manufacturer – Induron, Birmingham, Alabama (888) 773-2401). Joints shall be mechanical joint or push-on joint and shall conform to AWWA C111.

1. Ductile Iron and Cast Iron fittings shall conform to AWWA Standard C110. Mechanical or push-on joints shall conform to AWWA Standard C111. Flanged joints shall conform to ASA Standard B-16.1, Class 125 with ductile iron followers. All fittings shall be cement mortar lined in conformance with AWWA Standard C104.
2. Where required on the Drawings, restrained push-on joint pipe and fittings shall be provided. Restrained joint pipe shall conform to AWWA Standard C151, Thickness Class 52 or as indicated on the Drawings. Pipe shall have cement mortar lining conforming to AWWA C104. Push-on restrained joints shall conform to AWWA C111. Restrained joints shall be designed for a water working pressure of 350 psi for sizes 4-inch through 24-inch, 250 psi for sizes 30-inch through 48-inch, and 150 psi for sizes 54-inch through 64-inch. Submit type of restrained joint pipe to the District for approval.
3. Where fittings are called for on restrained joint pipes, mechanical joints with megalugs or Alpha fittings shall be used.
4. Ductile Iron pipe shall be polywrapped.
5. Ductile Iron pipe shall be furnished with factory-installed plugs in each end of each stick of pipe. Such plugs shall remain installed until the pipe is ready to be installed in the trench.

#### Q. Polywrap for Ductile Iron Pipe

Polywrap shall conform to ANSI/AWWA A21.5/C105 (See AWWA C600) for linear low-density polyethylene film. The inside surface of the polyethylene wrap to be in contact with the pipe exterior shall be infused with a blend of anti-microbial biocide to mitigate microbiologically influenced corrosion and volatile corrosion inhibitor to control galvanic corrosion.

#### R. PVC Pipe for Watermains

PVC pipe 4 inches or larger in diameter shall conform to AWWA C900, Class 150. PVC pipe for water service shall only be used where crossing the gas pipeline easement. The pipe shall conform to WSDOT/APWA 9-30.1(5).

#### S. PVC Pipe for Non-Pressure (Gravity) Sewers

PVC pipe for depths up to twenty (20) feet, and less than 14 inches in diameter shall conform to ASTM D3034 and shall be defined as flexible conduit. Joints shall conform to ASTM D3212 using a restrained rubber gasket conforming to ASTM F477. Fittings shall be injection molded tees. Saddles fastened to pipe with external bands are not acceptable on any new system.

PVC pipe used for depths twenty (20) feet and greater and less than 14 inches in diameter shall conform to AWWA specification C900, Class 150 (DR 18). Joints shall conform to ASTM D3139 with rubber gaskets meeting ASTM F477. Fittings shall be Class 150 injection molded tees, meeting the requirements of AWWA C-907 and ASTM D1784.

#### T. HDPE Pipe for Water Mains and Pressure Sewers

HDPE pipe for water mains and pressure sewers may be used in specific situations where Ductile Iron pipe is not appropriate or feasible. The use of HDPE requires written District approval. The specifications and class of the HDPE will be determined on a project-specific basis including such factors as working pressure.

#### U. C-905 PVC Pipe for Non-Pressure (Gravity) Sewers

C-905 PVC pipe may be considered for lines that are fourteen (14) inches and greater in diameter. Pipe shall conform to the requirements of AWWA C905 and Uni-B-11.

All pipe joints shall be rubber gasketed. Rubber gaskets shall conform to ASTM F477.

#### V. Gate Valves

1. Gate valves shall conform to AWWA C-515, be epoxy coated, resilient seated, have a non-rising stem, a minimum of 200 PSI working pressure unless otherwise specified, shall have a standard 2-inch operating nut, and the standard opening rotation shall be counter-clockwise.
2. Gate valves shall be used for all water mains less than 12 inches in diameter. Gate valves are allowed for wet taps.
3. Butterfly valves shall be installed on all water mains 12 inches and larger. Butterfly valves may require plugging for testing purposes.
4. Where called for on the plans, gate valves shall be used for sewers four (4) inches and larger.
5. Special valves and fittings shall be as specified on the plans.
6. Gate Valves shall be one of the following types, with stainless steel bolts:
  - a) Mueller
  - b) Kennedy M & H
  - c) Clow
  - d) US Pipe
  - e) American Flow Control Series 25002-17
  - f) AVK

### W. Valve Boxes

Valve boxes shall be Cast Iron, 2 piece, suitable for installation required, equal to Olympic Foundry Company/APWA Valve Box VB045. Valve box lids shall fit snugly in the casting. Valve Box Lid shall be marked "WATER" for water facilities. Valve boxes shall be equal to Olympic Foundry 940 and marked "SEWER" for sewer facilities.

### X. Valve Marker Posts

Valve marker posts shall be reinforced concrete posts, 4"x4" on one end and 4"x6" on the other end, and 42" long. Posts shall be equipped with 1.5" raised Cole brand numbers referencing distance to the valve to the nearest foot. Cole brand numbers shall be installed using waterproof Liquid Nails brand glue suitable for metal surfaces.

### Y. Concrete Blocking

Concrete blocking shall be a 1:3:6 mix with a six-inch (6") maximum slump.

### Z. Bolts In Piping

All bolts shall be new and shall be of the same type and quality of the pipe or fittings as supplied by the manufacturer. Bolts shall be in conformance with AWWA Standard C110.

### AA. Flange Gaskets

Flange gaskets shall be Ring-type cloth insert rubber gaskets 1/16-inch thick equal to Rainbow or Durable Garlock. Gaskets shall cover the full face of flanged fitting ends.

### BB. Flexible Coupling

Flexible couplings shall be cement-lined, Mechanical Joint, Ductile Iron long-pattern sleeves unless otherwise approved by the District.

### CC. Galvanized Steel, Pipe And Fittings For Blowoffs And Air Vacuum Relief Valves

Galvanized steel pipe shall conform to ASTM A120-65, Schedule 40. Galvanized steel fittings shall be malleable galvanized.

## 2.2 WATER SYSTEMS

All water mains shall be cement-lined Ductile Iron as specified herein unless otherwise indicated on the Plans.

### A. Butterfly Valves

Butterfly valves shall conform to AWWA C-504. Unless otherwise specified the valves shall be class 150, ductile iron, epoxy coated, stainless steel bolts, shaft seals shall be "O" ring type, the standard opening rotation shall be counter-clockwise and shall have a standard 2" operating nut.

1. Butterfly Valves shall be one of the following types:

- a) Mueller/ Pratt
- b) Kennedy M & H

#### B. Fire Hydrants

1. Fire hydrants shall be a dry-barrel, compression-type traffic model with a 5-1/4 inch main valve opening (MVO) with brass on brass or brass on stainless steel seating as specified for 36-inch trench, unless otherwise designated, flanged at ground line, 6 inch MJ connection with lugs suitable for rods; two 2-1/2 inch hose connections, National Standard Thread; pumper connection shall be a 4-inch Seattle Standard Thread 4.875 x 6 equipped with a five (5) inch, 125-5 Storz quick connect fitting, unless otherwise noted on the drawings or as required by the local fire department jurisdiction. Operating nut shall be 1-1/4 inch pentagon and shall open counter-clockwise. Hydrant shall be so constructed that the direction facing of pumper connection may be rotated to face the roadway. Hydrants shall comply with AWWA C502. Unless otherwise specified, hydrant shall be of dry barrel traffic type with break flange construction.
2. Hydrants shall be one of the following types:
  - a) Dresser M&H 129
  - b) Mueller A423 (Super Centurion 250)
  - c) Clow Medallion
  - d) American Darling B-62-B
  - e) AVK Series 2780
  - f) U.S. Pipe Sentinel 250

#### C. Tapping Sleeve And Valve Assembly

Where required by the District, tapping sleeves shall be Romac FTS 420 or JCM 412 , with fusion-bonded epoxy coating and Type 304 stainless steel fasteners. The gate valve shall conform to the requirements herein.

#### D. Corporation Stop

See Standard Details - Service Connections.

#### E. Service Saddle

See Standard Details - Service Connections.

#### F. Water Service Pipe

Water service pipe shall be DRISCOPEX 5100 ULTRA-LINE or equal manufactured from a high density, extra high molecular weight pipe resin polyethylene defined by ASTM D3350 having a cell classification of 345564C as polyethylene type III, grade, PE4710. Pipe shall be Iron Pipe Size – ID ASTM D2239 – SIDR 7 and have a working pressure of 200 PSI at 73.4 degrees F. The polyethylene extrusion compound from which the PE pipe and tubing are

extruded shall be made of virgin quality material. The polyethylene pipe or tubing shall be marked in accordance with ASTM D-2239 for IPS pipe sizes and carry the National Sanitation Foundation (NSF) seal of approval. See Standard Details for installation procedures.

**G. Air and Vacuum Relief Valve Assemblies**

Air and Vacuum Relief Valve assemblies shall be APCO No. 143-C, Crispin UL10 or District approved equal for one (1) inch assemblies and APCO No. 145-C, Crispin UL20 or District approved equal for two (2) inch assemblies, or approved equal, equipped with a brass plug on top service port, and shall conform to WSDOT/APWA 9-30.3(7).

**H. Hydrant Guard Posts**

Hydrant guard posts shall be reinforced concrete posts, 8"x8"x6' long, 8" diameter x 6' long, or 9" diameter x 6' long. The same size and type of guard posts shall be used around each hydrant.

**2.3 SEWER SYSTEMS**

**A. Sewer Pipe and Appurtenances, Non-Pressure**

Gravity sewer pipe shall be either PVC Pipe for Non-Pressure (Gravity) Sewer Service or PROTECTO 401 ceramic epoxy lined Ductile Iron pipe as specified herein. Pipes with slopes greater than or equal to twenty (20) percent shall be PROTECTO 401 ceramic epoxy lined Ductile Iron pipe or C-900 PVC. C-905 PVC pipe may be considered for lines which are fourteen (14) inches in diameter or greater.

**B. Sewer Pipe and Appurtenances, Pressure**

High pressure sewer pipe and appurtenances shall be Ductile Iron or HDPE pipe as specified herein.

**C. Side Sewer Pipe, Non-Pressure**

1. Gravity side sewer pipe shall conform to the requirements of the Sammamish Plateau Water and Sewer District "Side Sewer Regulations", latest edition.
2. New side sewer connections on an existing sewer main for a single connection (not in conjunction with a new development) shall conform to the requirements listed below.
  - a. For existing D3034 PVC Sewer Main (less than 20 feet in depth), the side sewer connection shall be one of the following:
    - Cut-in PVC side sewer tee
    - Romac "SST" Stainless Steel Tapping Sleeve (w/ stainless steel flange), with FLxMJ adapter with PROTECTO 401 ceramic epoxy lining and gasket sized for D3034 PVC side sewer. Romac side sewer saddle, Model CB, is NOT allowed.

- b. For existing C900 PVC Sewer Main (20 feet or greater in depth), the side sewer connection shall be a cut-in tee of one of the following materials:
- C900 PVC side sewer tee with a C900 side sewer up to the transition point to D3034 PVC
  - Epoxy-lined ductile iron tee with a C900 side sewer up to the transition point to 4-inch D3034 PVC
- c. For existing ductile iron Sewer Main (20 feet or greater in depth), the side sewer connection shall be a cut-in tee of epoxy-lined ductile iron, with a C900 side sewer up to the transition to 4-inch D3034 PVC or Romac "SST" Stainless Steel Tapping Sleeve (w/ stainless steel flange), with FLxMJ adapter with PROTECTO 401 ceramic epoxy lining.

#### D. Side Sewer Pipe, Pressure

Grinder pump side sewer pipe shall conform to the requirements of the Sammamish Plateau Water and Sewer District "Side Sewer Regulations", latest edition.

#### E. Low Pressure Mainline Sewer Pipe and Appurtenances

Low pressure mainline sewer pipe shall be either two (2) inch or three (3) inch diameter high-density polyethylene plastic pipe (HDPE SDR 11), conforming to the materials requirements in the Sammamish Plateau Water and Sewer District "Side Sewer Regulations", latest edition.

#### F. Manholes

Galvanized steel shall not be used in manholes. See Standard Details for material requirements for standard manholes and for deep manholes.

##### 1. Cast Iron Frames and Covers

Cast Iron frames and covers shall conform to the Olympic Foundry Company No. MH 30A Traffic Type or equivalent marked "SEWER" in two (2) inch raised letters. Castings shall conform to the requirements of ASTM A 48, Class 30 and shall be free of porosity, shrink cavities, cold shuts, or cracks or any surface defects which would impair service ability. Repair or defects by welding, or by the use of "smooth-on" or similar material will not be permitted. Cover shall have a maximum of one hole, and a rubber plug per the Standard District Detail shall be installed in the hole.

Manholes located outside of public rights-of-way shall be equipped with a 3-bolt, lockdown cover. All movable parts shall be made of noncorrosive metals otherwise arranged to avoid possible binding. The locking frame and cover shall be Olympic Foundry Company No. MH 30 D/T Traffic Type or equivalent marked "SEWER" in two (2) inch raised letters.

Manhole covers in pedestrian or bike lane areas shall have low embossment lids.

All manholes rings and covers shall be machine finished or ground on seating surfaces so as to assure nonrocking fit in any position, and interchangeability. At the request of the



District, there shall be made available at the foundry standard rings and standard covers for use by inspectors in testing fit and seating.

At the request of the District, there shall be made available at the foundry a testing device suitable for proving the capacity of the assembly to resist an uplift pressure on the lid equal to a 20-foot head.

All manhole frames and covers shall be identified by the name or symbol of the manufacturer. This identification shall be in a plainly visible location when the frame and cover is installed. In addition to the manufacturer's identification, the material shall be identified by the following "NOD" or "DUC" for nodular or ductile iron respectively. The manufacturer's identification and the material identification shall be adjacent to each other and shall be minimum 1/2 inch letters recessed to be flush with the adjacent surfaces.

## 2. Precast Manhole Components

Precast manhole components shall conform to ASTM C478 except as modified herein. Base section openings to receive pipe shall be circular and held to the minimum size practical to accommodate the pipe to be inserted to effectively seal the joint. Kor-n-Seal boots shall be used for all pipe penetrations. Connections shall conform to WSDOT/APWA 7-05.3. All manholes shall be channeled in the field. Pre-channeled manholes are not permitted.

Where the direction of future extensions from the manhole are known, a 2-foot stub and cap shall be installed in a Kor-n-Seal boot at that location and the manhole shall be channeled to receive the future flow. The 2-foot stub shall be removed and replaced when the future extension is installed.

Precast manhole elements shall be provided with steps and/or ladders such that the completed manhole will contain a continuous vertical ladder with rungs equally spaced at twelve (12) inches plus or minus 3/4 inch. The lowest rung shall be not more than sixteen (16) inches above the shelf, and the uppermost rung shall be not more than eighteen (18) inches below the street surface. Ladder rungs or handholds in the manhole neck area must be recessed 2 inches for improved clearance.

Joints between precast manhole elements shall be rubber gasketed with O-rings or approved equal conforming to AASHTO M198 and shall be grouted on the inside. Shop drawings of the joint design shall be submitted to the District for approval, prior to manufacture or purchase. Completed joints shall show no visible leakage and shall conform to the dimensional requirements of ASTM C478.

Drop manholes, wherever shown on the plans, shall conform in all respects to the requirements for standard manholes as specified above. Pipe and fitting materials shall be ductile iron and shall conform to the specifications for ductile iron pressure sewer main.

Standard precast cones shall provide an eccentric reduction from forty-eight (48) inches to twenty-four (24) inches and shall not be less than seventeen (17) inches in height. Precast cones shall conform to WSDOT/APWA 9-12.4.

## 3. Manhole Steps

Polypropylene plastic steps shall be a polypropylene plastic step injection molded around a 1/2 inch diameter ASTM A-615, Grade 60, steel reinforcing bar. Step dimensions and pattern shall conform to the WSDOT/APWA 7-03.5.

4. Ladders

Precast manhole base sections shall be provided with a ladder as shown in the Standard Details. Ladders shall be made of the same material as the steps installed in the manhole sections. All ladders shall be subject to approval by the District.

Ladders shall be installed so they are centered on the largest shelf of the manhole or as otherwise directed by the District.

5. Manhole Lining

The manhole into which a force main or low pressure mainline discharges shall be lined 5-9 mils of Tnemec Series 141 Epoxoline or Wasser Aeroshield. In addition, the two manholes downstream of that manhole shall be lined with Tnemec Series 141 Epoxoline or Wasser Aeroshield if installed as part of the same project.

Existing manholes downstream of the force main discharge shall be lined with a material resistant to hydrogen sulfide corrosion, such as Wasser Aeroshield or Tnemec Series 141 Epoxoline. Submit product information for District review.

G. Air And Vacuum Relief Valve Assemblies

Air and Vacuum Relief Valve assemblies, size 2-inch, shall be stainless steel ARI D-020 with flanged connection.

H. Cleanout Assemblies

Cleanout assemblies for private side sewers shall not be allowed in the right-of-way or in private access tracts. Cleanout assemblies shall be brought up to finished grade with a locking cleanout cover (Olympic Foundry No. M-1025, marked "SEWER"). See District Standard Detail.

## **PART THREE - CONSTRUCTION STANDARDS**

### **3.1 GENERAL**

Except as otherwise noted herein, all work shall be done in accordance with the Plans and Specifications approved by the District and as recommended in the applicable American Water Works Association (AWWA) specifications and/or the latest edition of the Washington State Department of Transportation/American Public Works Association, Washington State Chapter (WSDOT/APWA) Standard Specifications for Road, Bridge, and Municipal Construction, and/or the 10 States Standards, and according to the recommendations of the material or equipment manufacturer. In the event of a conflict between the specifications herein, the District shall determine which specification controls. Work shall be done only by contractors licensed and bonded with the State of Washington and experienced in the installation of public water and/or sewer mains.

The District will strictly enforce the erosion and sedimentation control requirements of other agencies. These requirements include, but are not limited to, silt fencing, check dams, catch basin filtration, and removal of debris from sawcuts by appropriate methods such as vacuuming.

Temporary lot numbers, addresses, or building numbers shall be clearly marked on the curb. These numbers are used by the District for side sewer inspections and water meter installations.

No work shall be done until all necessary permits have been received from the agencies having authority.

A preconstruction conference and a minimum of 48-hours notice will be required prior to starting construction.

Inspection shall be by a representative of the Sammamish Plateau Water and Sewer District. All work shall be inspected prior to backfill. All pressure testing shall be done in the presence of the District. The Contractor shall supply all equipment and materials necessary for testing.

**ANY APPROVED CHANGES TO THE PLANS AS APPROVED SHALL BE NOTED ON THE CONTRACTOR'S CONSTRUCTION DRAWINGS. THE CONTRACTOR'S MARKUPS SHALL BE PROVIDED TO THE DISTRICT AT THE COMPLETION OF CONSTRUCTION.**

All locations of existing utilities shown are approximate and it shall be the Contractor's responsibility to verify the true and correct location so as to avoid damage or disturbance. Separations from potable water mains shall conform to Washington State Department of Ecology's "Criteria for Sewage Works Design".

Separation Between Other Utilities:

Water – in accordance with criteria set forth in DOE guidelines

Storm Sewer – Three (3) foot horizontal clearance

Underground Power, Gas, Telephone and Cable – Three (3) foot horizontal clearance is preferred when utilities are aligned parallel to the water main. In any case where less than

three (3) foot separation occurs, exact measurements to the utility lines shall be provided on the As-Built drawings.

Horizontal distances on construction drawings are measured between centerlines (e.g., centerlines of water fittings, centerlines of sewer manholes, etc.). Actual distances shall be computed at the time of staking.

Pipes Entering Structures – A flexible fitting shall be placed on all lines entering/exiting vaults or other structures, shall be located outside of the structure, and shall be located within five (5) feet of the structure. The flexible fitting shall provide protection from earthquake shaking by providing a point where the difference in vibration rates of the pipe and the structure can be absorbed. For watermains, for example, the fitting shall be a mechanical joint ductile iron sleeve, unless a mechanical joint bell connection occurs within 5 feet of the structure, outside of the structure, in which case the flexible fitting may be omitted.

Repaving shall be in accordance with the requirements of the agency having jurisdiction over the area to be paved. Monuments shall be restored by a Washington State licensed surveyor following completion of the overlay. Monument cases shall conform to King County standards; monument cases of other agencies (such as Snohomish County monument cases) will not be allowed.

#### A. Alignment

Unless otherwise specified, the location of the water mains, sewer mains, fittings, manholes and other appurtenances shall be staked out by a Washington State licensed surveyor supplied by the Developer/Contractor.

Contractor shall provide survey and layout required to perform the work. In all questions arising as to proper location of lines and grades, the District decision will be final. Cuts to invert of watermain and sewer main shall be shown on staking along with finish grade elevations. Deviations from the alignment shown on the plans must be specifically authorized by the District.

The Contractor's Washington State licensed surveyor shall place offset wood hubs (in soil) and/or steel pins (in asphalt or concrete) showing finished grade and cut depth to invert periodically (at least every 100 feet) along the pipeline alignment, and before and at all changes in alignment vertically or horizontally. Hubs/pins shall be placed far enough in advance of such alignment changes so that the manufacturers and specified deflections can be met. Hubs/pins shall be placed and marked for fittings and provide the District with a cut sheet containing the location, description, and elevation information for all hubs and pins. The Washington State licensed surveyor shall survey the installed invert elevation at the bell end of each piece of pipe and shall provide the District with a cut sheet of the invert elevations.

## B. Trench Excavation

Trench excavation shall be in compliance with OSHA and WISHA regulations and requirements and shall meet the following requirements unless otherwise directed by the District or otherwise shown on the District-approved Plans.

Trenches shall be excavated to the line, depth and grade as approved by the District. Unless otherwise directed by Contract Documents or the District, trench excavation shall provide a minimum cover over the pipe of thirty-six (36) inches for water mains, forty-eight (48) inches for sewer mains, or as required to meet the depth requirements of sanitary sewer manholes or other necessary structures. Trench sides shall be excavated vertically. Trench widths shall be adequate for proper working space and the placement of any required bedding material under and around the pipe. The maximum trench width at the crown of the pipe shall be the outside diameter of the pipe barrel plus twenty-four (24) inches. For eighteen (18) inch diameter or larger pipe, the trench width at the crown of the pipe shall not exceed 1.5 times the inside diameter. If these widths are exceeded, a stronger grade of pipe and/or a higher classification and amount of bedding material shall be furnished, as directed by the District. Excavation for manholes or other structures shall be sufficient to provide a minimum of twelve (12) inches between their outer surfaces and the sides of the excavation.

The trench shall be kept free from water until jointing is complete. Surface water shall be diverted so as not to enter the trench. The Contractor shall maintain sufficient pumping equipment on the job to insure that these provisions are carried out. Gravel required in the bottom of the trench due to action of weather or workers shall be furnished by the Contractor. Boulders, rocks, logs, roots and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth six (6) inches below pipe. Where material is removed from below grade, the trench shall be backfilled to grade with material which meets the District's standards for trench foundation gravel, and thoroughly compacted. Trenching operations shall not proceed more than 100 feet in advance of pipe laying.

If the native trench bottoms will provide a firm base for the subsequent placement of bedding, pipe and backfill, such native trench bottom may be used if the bottom is leveled and smoothed so that the entire length of pipe will rest on a well compacted base.

Trench bottoms shall be over-excavated as necessary to remove all unstable soil and eliminate "boiling" or "quick" conditions to such a depth as to provide a firm base. Over-excavated materials shall be replaced with trench foundation gravel as directed by the District. Trench foundation gravel shall be placed in no more than one foot lifts. When trenching operations cut through concrete or asphalt pavement, the pavement shall be removed to a width of eighteen (18) inches greater than the top width of the trench. The concrete shall be cut on a straight line. Asphalt paving shall be cut ahead of the trenching equipment to prevent excessive tearing up on the surfacing and to eliminate ragged edges.

## C. Timbering and Sheeting

The Developer and/or Contractor shall provide and install timbering and sheeting as necessary to protect workers, the work, existing buildings, utilities and other properties. All timbering and sheeting above the pipe shall be removed prior to backfilling. All sheeting below the top of the

pipe shall be cut off and left in place. Removal of timbering shall be accomplished in such a manner that there will be no damage to the work or to other properties. All timbering and sheeting shall be to the Developer's design and shall meet all requirements as specified by OSHA and WISHA.

#### D. Pipe Laying

Each gravity sewer pipe shall be laid with bells up grade and the invert of the pipe to the alignment and grade shown on the plans. Concentric joints shall be closed and a smooth invert provided.

Open ends of pipe or fittings shall be temporarily capped or plugged at all times.

A laser alignment tool shall be utilized for alignment and be capable of self-leveling adjustable line and grade with locking features. The tool shall be inserted into the pipe with a Class IIIA < 5.0mW Laser Diode. For gravity sewers, adjustment to the line and grade shall be done by scraping away or filling in and tamping bedding material under the body of the pipe. No wedging or blocking of the pipe for adjustment to line and grade may be done.

Tees, wyes, elbows, valves, cleanouts, and other appurtenances shall be installed as shown in the standard details herein and at such locations as are shown on the plans or as otherwise directed by the District, and shall not be covered until the District has completed inspection and exact location has been recorded on the project field plan drawings by the Contractor.

For gravity sewers, variance from established line and grade shall not be greater than 1/32nd of an inch per inch of pipe diameter, but shall not exceed 1/2 inch or result in a level or reverse sloping invert. Variation in the invert elevation between adjoining ends of pipe due to non-concentricity of joining surface and pipe interior surfaces shall not exceed 1/64th of an inch per inch of pipe diameter or 1/2 inch in any event.

For sewers, the furthest downstream manhole shall be plugged in the downstream side and remain plugged throughout the period of construction, until final acceptance of the project by the District, to prevent debris and/or infiltration from entering the District system.

##### 1. Ductile Iron Pipe

Pipe laying shall in general conform to AWWA Standard C600 and the manufacturer's recommendations unless specifically contradicted by these Specifications. Special care shall be taken in handling pipe to avoid damaging ends, coatings and linings. Pipe shall be carried in slings and shall not be rolled or dragged. The pipe shall be examined for defects and damage while suspended before lowering into trench. Any damage shall be repaired before pipe is lowered into trench. All pipe shall be poly-wrapped in accordance with AWWA C600. Special care shall be taken to avoid damaging the polywrap during installation and backfilling.

## 2. PVC Pipe

PVC pipe shall be bedded by hand with material containing no organic matter and no rocks larger than 3/4". When in the opinion of the District the native material will not meet this requirement, the District may require that bedding material be imported that meets the WSDOT/APWA classification of bedding material, Section 9-03.16. Pipe shall not be dropped or handled roughly and shall be checked for cracks and defects prior to installation. Any cracked or defective pipe shall not be installed.

## 3. HDPE (Low Pressure Mainline) Sewer Pipe

HDPE pipe shall meet the installation requirements for PVC pipe. Joints shall be flanged or thermal fusion butt-welded and shall meet the requirements in the District's "Side Sewer Regulations", latest edition. Tracer wire shall be installed with the low pressure mainline to its termination point. A minimum of three (3) feet and a maximum of six (6) feet of cover shall be provided.

## 4. Contamination Prevention

All pipe, fittings, and valves shall be carefully cleaned of all dirt and foreign materials as they are placed. The open ends of pipe and fittings shall be plugged with a temporary watertight plug at all times. Groundwater shall be prevented from entering the pipe at all times.

## E. Pipe Joints

No joints shall be covered until examined and approved by the District. Joint material shall be installed according to the manufacturer's recommendations.

The pipe shall be properly aligned before the joint is forced home. During insertion of the tongue or spigot the pipe shall be partially supported by hand, sling or crane as required to minimize lateral pressure on the gasket and to maintain concentricity until the gasket is properly positioned. Pipe deflection and straightening shall be avoided once the joint is home, to prevent creep of the joint. Pipe must be constructed upslope.

Pressure shall be applied in making the joint to assure that the joint is home, as defined in the pipe manufacturer's standard instructions for installation. Restraint shall be applied to the line to assure the joints, once home, are held so by tamping fill under and alongside the pipe or by other appropriate means. When pipe laying is not in progress, the last pipe laid shall be plugged and blocked in such a manner as may be required to prevent water and debris from entering the pipe and creep during downtime.

## F. Bedding Material Placement

Bedding material shall be placed from a minimum of six (6) inches below the pipe barrel to six (6) inches over the top of the pipe as shown on the standard details herein. Bedding material shall be placed before the pipe is installed and shall be spread smoothly so that the pipe is uniformly supported along the barrel. Subsequent lifts of not more than six (6) inch thickness shall be placed

to six (6) inches over the crown on the pipe and individually compacted to 90% of maximum density.

Removal of shoring or moveable trench shields or boxes shall be accomplished so that the bedding material placement is not disturbed.

In solid rock excavation, all ledge rock, boulders or stones shall be removed to provide a minimum clearance of eight (8) inches under the pipe. All material thus removed shall be replaced with bedding material.

#### G. Backfilling

No backfilling shall be performed until after the District has inspected the installation of the pipe and approved backfilling.

Native material that meets the requirements of Imported Backfill may be used for trench backfill upon approval by the District. In addition, 100% import backfill will be required for trench backfill during the wet season from October 1 to April 30.

Backfill material shall be moisture-conditioned as necessary to achieve the required compaction as described herein.

Fill and backfill materials to be placed within 6 inches of any structure or pipe shall be free of rocks or unbroken masses of earth materials having a maximum dimension larger than 3 inches. Backfilling shall be performed carefully so that no damage is done to the pipe or to its alignment. The District may direct the contractor to use special backfill techniques when it deems necessary.

Fill, backfill materials shall be selected or processed clean, fine earth, rock, or sand, free from grass, roots, brush, or other vegetation and organic materials. In areas such as existing paving, or in areas to be paved, where the District determines that minor settlement would be detrimental and the native excavated material is not suitable for compaction as backfill, the trench shall be backfilled with Imported Backfill material.

Materials not defined as unsuitable in Part Two – Material Standards are defined as suitable materials and may be used in fills, backfilling, and embankment construction subject to the indicated limitations. Suitable materials may be obtained from on-site excavations, may be processed on-site materials, or may be imported. If imported materials are required to meet the quantity requirements for the project, imported materials shall conform to the suitable material standards herein. Suitable materials are defined in Part Two – Material Standards.

All trenches shall be fully backfilled at the end of each day or, in lieu thereof, shall be covered by heavy steel plates adequately braced and capable of supporting vehicular traffic in those locations where it is impractical to backfill at the end of each day at the District's discretion. Backfilling operations shall not follow more than 100 feet from pipe laying operations. The above requirements for backfilling or use of steel plate will be waived in cases where the trench is located further than 100 feet from any traveled roadway or occupied structure. In such cases, however, barricades and warning lights meeting applicable safety requirements shall be provided



and maintained. All street crossings shall be backfilled with 1 1/4" crushed rock or as otherwise required by the District, or Local Agency (City/King County).

The pipe zone is defined as that portion of the vertical trench cross-section lying between a plane below the bottom surface of the pipe and a plane at a point above the top surface of the pipe as identified on the standard trench section detail. The bedding is defined as that portion of pipe zone backfill material between the trench subgrade and the bottom of the pipe.

Backfill material shall be placed and compacted around and under the pipelines by hand tools, unless otherwise approved by the District, to a height of six (6) inches above the top of the pipe.

The pipe zone shall be backfilled with suitable backfill material as described herein. Care shall be exercised to prevent damage to the pipeline coating, cathodic bonds, and the pipe itself during the installation and backfill operations. If a moveable trench shield is used during backfill operations the shield shall be lifted to a location above each layer of backfill material prior to compaction of the layer. The pipe or backfill shall not be displaced while the shield is being moved.

Backfill material around another utility crossing the water or sewer trench, such as gas, power, and fiber optic, shall comply with the backfill material requirements of that utility.

After the pipe zone backfills have been placed, backfilling of the trench zone may proceed. The trench zone is defined as that portion of the vertical trench cross-section lying as indicated between a plane above the top surface of the pipe and a plane at a point 18 inches below the finished surface grade, or if the trench is under pavement, 18 inches below the roadway subgrade.

Final backfill is all backfill in the trench cross-sectional area within 18 inches of finished grade, or if the trench is under pavement, all backfill within 18 inches of the roadway subgrade.

In addition, all backfill in right-of-way shall meet King County Road Standards, latest edition or appropriate governing authority's requirements.

The remaining backfill material shall be placed and compacted in layers not more than twelve (12) inches thick (two feet loose thickness), except that under roadways all backfill material shall be placed in layers not more than six (6) inches thick and mechanically compacted to the density of the existing subgrade, unless state or county requirements are more stringent. All backfill shall be compacted to 95 percent of maximum density (modified Proctor), unless otherwise directed by the District.

Where compaction densities are specified, measurements of density shall be by the modified AASHTO method. The District may require that an independent laboratory or King County Laboratory be employed to perform in-place density tests as proof of compaction which meets these Specifications. Compaction of native material as trench backfill shall be tested and certified by an independent laboratory. All costs shall be borne by the Developer. At its discretion, the District may request supply samples for testing of any material used in the work.

All test trenches and excavations including excavation, trench support, and groundwater removal for the field soils testing operations shall be provided as required by the District. The trenches

and excavations shall be provided at the locations and to the depths required by the District. Lawn areas destroyed by test trenching and excavation shall be regraded and re-landscaped with sod or hydro seeding as directed by the District.

Compaction testing shall be performed at a frequency of every five feet of depth and every 50 feet or with any changes in soils conditions, equipment, or operator personnel, or as directed by the District.

Regardless of the approval of the District as to manner of compaction, testing, acceptance by the District or otherwise, the Contractor/Developer shall repair any settlement of trenches and excavations that may occur within one year after completion and acceptance of the work by the District.

All pavement trench repair shall be provided in accordance with WSDOT/APWA 5-04.3(5)E and joints, surface smoothness and other related pavement construction shall be provided as specified in WSDOT/APWA 5.04, or as directed by the District.

#### H. Grade Lines

The contractor shall maintain the correct grades of sewer pipes. All bench marks, reference points and stakes shall be preserved and, in case of destruction of any of them, the resulting expense of restoration shall be borne by the Developer. Laser beam equipment for grade and alignment control shall be required.

#### I. Boring and Casing

In situations where the pipeline is to be bored, the pipeline shall be placed inside a casing. The casing pipe shall be smooth steel, bare pipe, 0.375 inch minimum wall thickness, and comply with ASTM A139, Grade C, with a minimum steel yield of 36,000 psi. To support the pipe inside the casing, pipe slides, casing spacers or 4" x 4" treated timbers with stainless steel straps shall be used to maintain vertical and horizontal alignment. After installation of the pipe in the casing is complete, the casing void shall be filled with sand or grout and the ends of the casing shall be grouted.

#### J. Pipe in Fills

Special treatment may be required at the discretion of the District for pipe in fills. This treatment may consist of compacting the backfill in 6-inch layers, careful choice of backfill materials, use of ductile iron pipe in short lengths, or such other reasonable methods or combinations as may be necessary in the opinion of the District.

#### K. Highway Crossings

This item applies only to rigid surface pavements. The Developer may use any method which provides satisfactory results and is acceptable to the governmental agency having control of the road and to the District, provided that the Developer restores the roadway to its original condition. Normally, highway crossings require the placing of a steel casing by jacking, tunneling or boring

and laying the pipeline within this casing. In case of tunneling, subsequent low pressure grouting through the pavement may be required.

#### L. Valve Installation

Before installation, valves shall be cleaned of all foreign material as hereinbefore specified for installation of pipe. Such blocking as the District may deem necessary shall be provided.

#### M. Valve Box Installation

The valve box shall be set centered on the valve operating nut. Valve boxes shall be set flush in pavement. In gravel roads the valve box shall be set in a three (3) foot diameter circular pad of two (2) inch thick asphalt, flush with the gravel surface. Installation of pavers or slip cans to adjust valve boxes to finished grade is not allowed.

#### N. Valve Marker Posts

Valve marker posts shall be set where required by the District for all valves outside of paved roads, except auxiliary valves for hydrants and Type I blowoffs. The marker shall be set on a line through the valve. The marker shall generally be set on the property line unless the District decides another location is safer or more conspicuous.

#### O. Concrete Blocking

Concrete blocking with specified material shall be cast in place and have a minimum of 1/4 square foot bearing against the fitting and bearing area against undisturbed soil as shown on the District's Standard Details. Additional bearing area may be required by the District. Blocking shall bear against fittings only and shall be clear of joints so as to permit taking up or dismantling joints. All fire hydrants, bends, tees and valves shall be blocked. All sewer force main bends and valves shall be blocked. The Developer/Contractor shall install blocking which is adequate to withstand full test pressure as well as to continuously stand operating pressures under all conditions of service.

#### P. Air and Vacuum Release Valve Installation

Location of the air release valves as shown on the Plans is approximate. The installation shall be set at the high point of the line.

#### Q. Access Roads

Access roads shall be used only where the use of public or private roads to which the District has access is infeasible or unavailable. Use of access roads to water and sewer facilities must be approved by the District. The road surfacing shall be appropriate to the neighborhood (such as gravel, grass-crete, paving, cobblestones, etc.). At a minimum, access roads shall be twelve (12) feet wide designed for H-20 loading, with a minimum of two-and-a-half (2-1/2) inches crushed surfacing base course and one-and-a-half (1-1/2) inches crushed surfacing top course, as defined in WSDOT/APWA Section 9-03.9(3), over a District-approved subgrade compacted to 95 percent relative compaction, unless otherwise approved by the District.

Turnarounds shall be provided at all dead ends, either a hammerhead type with forty-five (45) foot long legs and forty (43) foot inside radii, or circular with a diameter of eighty-five (85) feet. The maximum road grade for gravel access roads shall be 7 percent (7%). If the road grade is greater than seven percent, the access road surfacing shall be paved with asphalt concrete pavement.

## R. Painting

### 1. Exposed parts above ground shall be painted as follows:

- a) Fire hydrants shall be painted with two coats of semi-gloss quick set enamel. The color shall be Safety Yellow.
- b) Hydrant posts, type I blowoff assemblies, water air/vacuum assemblies for water mains and water valve markers shall be painted with two coats of semi-gloss quick set enamel. The color shall be Safety Yellow.
- c) Distance to valves shall be marked with raised Cole numbers on the valve marker, blowoff stem, air vacuum assembly stem or Hydrant. Apply numbers with waterproof Liquid Nail.
- d) Sewer air/vacuum release valve vents shall be painted with two coats of semi-gloss quick set enamel. The color shall be Safety Green.

### 2. Piping and Appurtenances within Structures:

- a) Water Facilities: One (1) rust resistor prime coat and two (2) coats of semi-gloss quick set enamel. The color shall be Safety Blue.
- b) Sewer Facilities: One (1) rust resistor prime coat and two (2) coats of semi-gloss quick set enamel. The color shall be Safety Green.

### 3. Vaults:

The exterior of vaults below grade shall be painted with two (2) coats of black bitumastic solution.

### 4. Meter Box Location stripes:

Meter Box Location stripes (3 in. x 12 in.) shall be painted with two coats of semi-gloss, quick set enamel. The color shall be Safety Yellow.

### 5. Sewer Air/Vacuum Release Valve Vents:

Two coats of semi-gloss quick set enamel. The color shall be Safety Green.

## S. Raising Structures to Grade

The Developer/Contractor shall notify the District prior to raising any water or sewer system structures to grade. All water or sewer system structures (i.e. valves, manholes, clean-outs, monuments, etc) shall be raised within 48 hours of installation of ATB or Asphalt Concrete overlay unless directed by the District to raise said structures sooner.

## 3.2 WATER SYSTEMS

All water mains shall have a minimum cover of 36 inches below finished grade. Where utility conflicts occur, water mains shall be lowered to clear, except that water mains may not be installed under sewer facilities.

Where more than one fitting occurs in close proximity to each other (i.e., a tee and a valve), the fittings shall be flanged together.

### A. Fire Hydrant Installation

Hydrant installation shall generally conform to AWWA Standard C600 unless specifically contradicted by the detail for Fire Hydrant Assembly included in the District's Standard Details. In addition, the fire hydrant run shall be installed with District approved restrained joints. The concrete guard posts as shown on the Standard Detail shall be installed where required by the District. Pumper nozzle shall face the road after installation is completed, unless otherwise specified. Hydrants shall be covered with a bag until operational.

No fences, rockeries, trees, or guardrails shall be installed between the fire hydrant and the main. A minimum of five (5) feet clear zone shall be provided between the fire hydrant and any rockery or structure.

### B. Water Service Connections

Connections shall be installed with double strap type pipe saddle that uses stainless steel straps.

Installation shall be as shown in the District Standard Details. Splices or couplings in service lines will not be acceptable.

Draining the water system to install the meter setters will not be allowed. Water services shall be installed so that filings/shavings are removed

### C. Meter Box Installations

Meter boxes shall be installed only in unimproved or landscaped areas not subjected to driving or parking. In unimproved or landscaped areas, meter boxes shall be set two (2) inches above the finished grade, including landscaping or mulch. Meter boxes shall be centered over the meter setter(s).

The area surrounding meter boxes shall be backfilled with backfill material conforming to Part 2.1 F (Native Backfill Material) or 2.1 G (Import Backfill Material). Maximum size particle shall be 2 inches. Sand or pea gravel shall NOT be used.

If paved or concrete areas are installed around meter boxes after the meter box is installed, the water service shall be abandoned at the main and a new water service shall be installed perpendicular to the main so that the new meter box is located in an unimproved area not subject to traffic.

Meter boxes may be located in or near driveways or paved areas only with written District approval, or as required by the District. Such meter boxes shall be traffic-bearing boxes as specified on the Standard Details. Meter boxes shall be set flush with concrete or asphalt surfaces (roadway, sidewalk, driveways, driving or parking surfaces, etc.).

When the meter box is installed in concrete paving, a 5/8-inch expansion joint shall be provided around the box with a eighteen (18) inch gap between the expansion joint and meter box on all sides.

Install a water meter marker post at the meter box location until landscaping is completed.

A twelve (12) inch by three (3) inch stripe shall be painted on the ATB or finished asphalt, perpendicular to the edge of the asphalt, to mark the location of each meter box. The color of the stripe shall be as per section 3-1.R(4) "Painting".

No fences, rockeries, trees, or guardrails shall be installed between the meter box and the main.

#### D. Backflow Prevention (Cross Connection Control)

Where the possibility of contamination of the water supply exists, the District will require that certain services be equipped with a backflow prevention assembly that is approved by DOH. The determination as to the need of a backflow prevention assembly shall be solely determined by the District.

Pursuant to Washington State Regulation WAC 246-290-490 and current District Resolution regulating the District's Cross Connection Program, the District shall receive a Backflow Prevention Assembly Test Report performed by a certified Washington State Tester, prior to acceptance of the system by the District.

Any transfer of water from a District water main to a vehicle or container must have District inspection and approval as to the method and equipment.

Any use of District water for construction purposes must be from a hydrant or other District-approved source with appropriate, District-approved cross connection control. District personnel will inspect the installation for conformance with District requirements.

#### E. Connections To Existing Water Mains

District standard testing connections shall be installed on new water main construction. Direct connection to the District's existing system shall not be made until the new water main is tested and accepted by the District. Following receipt of satisfactory purity tests, schedule with District (1 week minimum notice) for water main shutdowns. Following completion of new water system construction, testing, and acceptance by the District, remove testing connection and install

segment of ductile iron pipe, length to suit, with two long-pattern sleeves or as directed on the District-approved drawings. Installation and connection to the existing water system shall be with 100% District inspection.

Connections to the end of an existing water main line shall be made with a main line valve, sized the same as the main line size, and new main construction connected to the new valve. Exceptions shall be considered where there is an existing valve in close proximity to the new connection.

Tapping of existing DI pipelines where required by the District, shall be made under pressure with tapping sleeve and valve assembly. Joints shall be tested using normal test pressure prior to start of tapping existing main. District shall determine where tapping under pressure is required. Romac FTS 420, or JCM 412 fusion-bonded, epoxy coated, steel tapping sleeves with Type 316 stainless steel fasteners or approved equal shall be required.

Where cut-ins are to be made in existing pipes, the work shall be conducted at a time specified by District and in such a manner as to minimize the interruption of service. Necessary pipe, fittings and gate valves shall be assembled at the site ready for installation prior to the shutting off of water in the existing main. Once the water has been cut off, the work shall be prosecuted vigorously and shall not be halted until the line is restored to service.

Unless specifically provided for elsewhere in these Specifications, the Developer shall have the responsibility of giving at least 5 business days notice to the District of intention to disrupt service and shall give at least 72 hours notice to the affected water users. Water service shutdowns shall not be scheduled on Mondays or Fridays.

#### F. Operation of District Valves

Developer/Contractor shall not operate any valves, including fire hydrant valves, in any part of the District's water system, except in the presence of the District. **Developer and/or Developer's Contractor shall be fined for tampering with the District's water system if valves are operated without the District being present.** Developer shall notify the District 48 hours in advance of need to operate system.

### 3.3 SEWER SYSTEMS

#### A. Manholes

Precast manhole base sections shall be placed on a well-compacted bedding course of bedding material. The depth of the bedding shall be four (4) inches thick or greater, extending a minimum of twelve (12) inches beyond the outside perimeter of the base section. The balance of any remaining excavated area shall be filled with imported backfill material and well-tamped to the level of the top of the bedding before the manhole is set in place. The bedding shall be well-tamped and made smooth and level to assure uniform contact and support of the precast elements.

All lift holes (inside and outside) and the inside face of rubber gasket joints between precast sections shall be thoroughly wetted and then filled with grout, smoothed and all joints pointed.

Precast sections shall be placed and aligned to provide vertical sides and vertical alignment of ladder rungs. Eccentric cone shall be positioned to allow vertical access to the ladder. The completed manhole shall be rigid, true to dimension and watertight.

Manholes eight (8) feet and less in depth shall have cones a maximum of two (2) feet in height.

Manholes twenty (20) feet or greater in depth shall conform to the Deep Manhole detail on the Standard Details.

Manholes set in paved streets or other paved areas shall be set flush with finished grade of the paving and when required, the manhole frame shall be tilted to conform to the grade on the paved surface.

Manholes set in gravel shoulders or other non-paved improved areas shall be set flush with the finished grade and in an asphalt apron six (6) feet in outside diameter. The asphalt apron shall be tapered per the Standard District Details. The manhole frame shall be tilted to conform to the grade of the finished surface.

Manholes not set in paved or improved areas shall be set at a finished grade six (6) inches to twelve (12) inches higher than the surrounding terrain to prevent surface water infiltration into the system, unless plans specify otherwise. Manholes shall be surrounded by an asphalt apron as shown on the Standard Details.

Manholes installed in wet areas shall have additional measures added to ensure no water infiltration. Consult with District for requirements.

Manhole channels shall be made to conform to the sewer grade and shall be brought together with well-rounded junctions. Channel sides shall be carried up vertically to the top of the largest pipe's diameter and rounded to the shelf at the largest pipe's crown elevation. The concrete shelf shall be smoothly finished with slopes to drain.

The openings through which pipes come into the manhole shall be completely and thoroughly grouted. A watertight joint (Kor-n-Seal boot or approved equal) shall be provided where the pipe passes through the manhole wall.

#### B. 6-Inch Side Sewer from Main to Property Line

The strength class of side sewer pipe shall be the same as the sewer pipe to which it connects and these specifications shall be applicable to side sewer work.

The slope of side sewers shall not exceed one (1) foot vertical to one (1) foot horizontal when using SDR 35 D3034 PVC, nor be less than 2 percent. If ductile iron or C900 piping is used along with the corresponding change in mainline material, then slope is allowed a maximum of two (2) foot vertical to one (1) foot horizontal nor be less than two percent. When change in slope between connecting pipes exceeds two (2) inches per foot, standard 1/8 bends shall be used. All side sewers shall be plugged and plugs blocked.



The end of all side sewers at the property lines shall be marked with a vertical twelve (12) foot long, 2"x4" board, the bottom of which shall be located at the invert of the elevations of the side sewer and top of which shall be painted white and extend above the ground. The board shall be wrapped from one end to the other with a 12 AWG insulated wire. The wire shall be securely wrapped around the end of the side sewer. The word "SEWER" shall be stenciled in two (2) inch high black letters on the upper end of the board. Depth to invert shall be clearly shown on the board. For inverts that are deeper than 12 feet, the boards shall be extended to at least 4 feet above finish grade and the corresponding measurements to invert shall also be clearly shown.

### C. Connection to the Existing Sewer System

Extensions to the District's sewer system shall be isolated from the existing system with a plug installed at the existing manhole in the presence of District personnel and maintained by the Developer until the sewer extension is accepted by the District. **Developer and/or Developer's Contractor shall be fined for tampering with the District's sewer system if the plug is removed or a connection is made without the District being present.** Developer shall notify the District 48 hours in advance of need to install or remove plug or connect to the system. No connections shall be made to the existing sewer system without the presence of the District. Written application for connection shall be made to the District, and the connection shall be made at a time agreed upon with the District.

#### 1. Connections to existing manholes shall be made as follows:

- a) If the manhole is "live", the manhole channel shall be tightly covered to prevent debris from entering the sewer line prior to breaking into the manhole wall. Immediately after the connection is made, the new pipe shall be plugged and blocked in such a manner that no water shall enter into the existing manhole. The plug shall not be removed without permission of the District. Additional upstream plugs may be required by District.
- b) If the existing manhole is not "live", a plug shall be installed in the downstream or discharge pipe of the existing manhole in addition to the above. Where new connections to existing manholes require an outside drop, two plugs for each drop shall be installed and blocked.
- c) The existing manhole shall be rechanneled

#### 2. Connections to existing sewer main shall be made as follows:

- a) The existing line shall be cut and removed from the manhole excavation. A new manhole shall be installed in place of the removed existing line. The manhole shall be precast, minimum 48-inch diameter. The manhole shall be placed with a full stick of pipe centered through the manhole and coupled to both ends of the existing sewer line. The new sewer line inside the manhole shall be cut out and the manhole channeled. Sewage must be bypassed during channelling.

3. Connections of side sewers to an existing sewer line shall be made as follows:
- a) The connection to an existing sewer main shall be made with a cut in tee with slip couplings. If the connection is made to the existing sewer pipe while in operation, the existing sewer pipe shall be cut with a saw or approved equal to give a smooth beveled edge of the proper size and the lip shall be filed smooth. Each connection shall be bedded with a minimum of six (6) inches of bedding material. Unsuitable foundation material shall be over-excavated and replaced with bedding material.
  - b) Alternatively, the connection shall be made with Romac “SST” Stainless Steel Tapping Sleeve (with stainless steel flange), with Protecto 401 FLxMJ adapter and gasket sized for appropriate side sewer pipe material; or an Insert-a-Tee. Romac side sewer saddle, Model CB, is NOT allowed.

#### D. Side Sewers (Gravity or Pressure)

Gravity or pressure (grinder pump) side sewers shall be installed and tested in accordance with the Sammamish Plateau Water and Sewer District “Side Sewer Regulations”, latest edition.

#### E. Use of Ductile Iron Pipe for Sewers

The contractor shall furnish repair kits and shall repair the PROTECTO 401 ceramic epoxy lining damaged during installation, welding and/or field cutting operations.

#### F. Lift Stations

Lift stations shall be installed per District-approved plans and specifications. Lift stations shall be tested with representatives of the District, Developer, Contractor and all sub-contractors involved with the lift station present. Developer/Contractor shall furnish the District with three (3) copies of the Operation and Maintenance Manuals for the Lift Station in labeled binders.

### 3.4 TESTING FOR WATER AND SEWER PIPELINES

#### A. Hydrostatic Tests For Ductile Iron Water and Sewer Mains

Ductile iron water and sewer main installations shall be subjected to a hydrostatic pressure test of 250 PSI for a minimum of 15 minutes, before leakage measurement starts. Location of the test pump shall be approved by the District. It shall then be held at this pressure, without pumping, and any leaks or imperfections developing under said pressure shall be remedied by the Contractor before final acceptance of the work. Leakage shall be measured by approved means in the presence of the District. The Contractor shall provide all necessary equipment to allow the District’s inspectors to use their gauges and equipment and shall perform all work connected with the tests. Tests shall be made after corporation stops and service lines are installed, and the trench is backfilled and compacted. All valves within the section being tested shall be open, if possible. No more than 1,500 feet of 8-inch main can be tested at one time. Butterfly valves shall be tested at 150 psi above the static water pressure, with a maximum pressure of 250 psi unless otherwise noted.

Allowable leakage in gallons per fifteen minutes per 1,000 feet of pipe:

2" - 0.06 gallons	8" - 0.24 gallons	14" - 0.42 gallons	20" - 0.59 gallons
4" - 0.12 gallons	10" - 0.30 gallons	16" - 0.48 gallons	24" - 0.71 gallons
6" - 0.18 gallons	12" - 0.36 gallons	18" - 0.54 gallons	

**B. Hydrostatic Tests For HDPE Water and Sewer Mains**

HDPE water and sewer main installations shall be subjected to a hydrostatic pressure test of 1.5 times the rated operating pressure of the pipe. Location of the test pump shall be approved by the District. To establish equilibrium, the pipe shall be raised to the test pressure and allowed to stand without makeup pressure for 2 to 3 hours to allow for expansion of the pipe, unless otherwise approved or directed by the District. After equilibrium is established, the test section shall be pressurized to 1.5 times the rated operating pressure of the pipe. The pump shall be turned off and the final test pressure shall be held for 1, 2, or 3 hours as determined by the District at the time of testing. The amount of “make up” water shall be measured in the presence of the the District Inspector, utilizing a District-approved method. The allowable amounts of make up water for expansion during the leak test are as listed below (US Gallons / 100-feet of pipe):

Nominal Pipe Size (inches)	1 – Hour Test	2 – Hour Test	3 – Hour Test
3	0.10	0.15	0.25
4	0.13	0.25	0.40
6	0.30	0.60	0.90
8	0.50	1.00	1.50
10	0.80	1.30	2.10
11	1.00	2.00	3.00
12	1.10	2.30	3.40
14	1.40	2.80	4.20
16	1.70	3.30	5.00
18	2.00	4.30	6.50
20	2.80	5.50	8.00
22	3.50	7.00	10.50
24	4.50	8.90	13.30
28	5.50	11.10	16.80
32	7.00	14.30	21.50
36	9.00	18.00	27.00
42	12.00	23.10	35.30
48	15.00	27.00	43.00

Under no circumstances shall the total time under the test exceed eight (8) hours at 1.5 times the pressure rating. If the test is not completed due to leakage, equipment failure, etc., the test section shall be allowed to “relax” for eight (8) hours prior to the next test.

Any leaks or imperfections developing under said pressure shall be remedied by the Contractor before final acceptance of the work. The Contractor shall provide all necessary equipment to allow the District’s inspectors to use their gauges and equipment and shall perform all work connected with the tests. Tests shall be made after corporation stops and service lines are installed. All valves within the section being tested shall be open, if possible.

### C. Sterilization and Flushing Of Water Mains

Flushing of the water mains is to clean and sterilize the mains. Cleaning includes the flushing at a velocity and volume that will remove rocks and debris from the main.

Sterilization of water mains shall be accomplished by the Contractor in accordance with the requirements of the State Department of Health (DOH) and in a manner satisfactory to the District. During pipe installation the Contractor shall install chlorine granules per manufacturer’s specifications to achieve a chlorine concentration of not less than 50 PPM. When a chlorine concentration of not less than 50 PPM has been established throughout the line, the valves shall be closed and the line left undisturbed for 24 hours. The line shall then be thoroughly flushed and water samples taken for approval by the local health agency.

If the main fails to pass purity tests the following procedure shall be followed. The section to be sterilized shall be thoroughly flushed at maximum flow prior to chlorination. Flushing shall be done in the presence of the District. Sections will ordinarily be sterilized between adjacent gate valves unless, in the opinion of the District, a longer section may be satisfactorily handled. Chlorine shall be applied by solution feed at one end of the section with a valve or hydrant at the opposite end opened sufficiently to permit a flow through during chlorine application. The chlorine solution shall be fed into the pipeline already mixed by an automatically proportioning applicator so as to provide a steady application rate of not less than 60 ppm chlorine. Hydrants along the chlorinated section shall be opened during application until the presence of chlorine has definitely been detected. When a chlorine concentration of not less than 50 ppm has been established throughout the line, the valves shall be closed and the line left undisturbed for 24 hours. The line shall then be thoroughly flushed and water samples taken for approval by the local health agency. Chlorination shall be repeated until water samples test satisfactory. The Contractor shall exercise special care in flushing to avoid damage to surrounding property.

The Contractor shall be responsible for disposal of treated water flushed from mains and shall neutralize the wastewater for protection of aquatic life in the receiving water before disposal into any natural drainage channel.

### D. Cleaning And Jetting Of Sewer Mains

Prior to sewer pipe testing, all pipes and manholes shall be completely cleaned by jetting and vactoring. All debris from the jetting shall be removed at the first manhole where presence of

the debris is noted. In event that cemented or wedged debris or damaged pipe cannot be dislodged by jetting, the obstruction shall be removed and/or repaired. No debris or jetting water shall be permitted to enter the existing sewer system.

#### E. Testing Of Non-Pressure Sewer Pipe

Testing, which includes CCTV Inspection, of all non-pressure sewer pipe shall be conducted on a manhole-to-manhole basis. Testing for District's approval shall only be allowed after all other nearby utilities have been installed and their trenches backfilled and compacted, all manholes have been channeled, and all manholes and sewer mains have been cleaned as discussed above in Subsection D.

All wyes, tees and ends of side sewer stubs shall be plugged with gasketed caps or plugs, or an alternate acceptable to the District and securely fastened to withstand the internal test pressure. Such plugs or caps shall be readily removable.

If any section of the sewer system is found to have deficiencies or fails to pass a test, the Contractor shall locate and repair any and all deficiencies or substandard work. After all repairs are made, the Contractor shall retest the full run of sewer main, manhole-to-manhole, at the District's sole discretion. All work, testing and retesting, under this section shall be completed at the Developer's or Contractor's expense.

Final Approval of the sewer system is conditional on successful completion of all tests and Inspections.

1. Pressure Testing: All runs of non-pressure sewer pipe shall be air tested at 4 psi. The procedures set forth in this section shall be employed in conducting the testing. All facilities and personnel for conducting the testing under the observation of the District shall be furnished by the Developer and/or Contractor. All equipment and personnel to conduct the test shall be subject to the approval of the District. Although air testing may be performed for the convenience of the contractor prior to backfilling, no pipe shall be accepted until air tests have been performed after backfilling and compacting. The installed pipe shall be tested with low pressure air as set forth in WSDOT/APWA 7-17.3(2)F.. All test gauges shall be brought to the surface and allow District personnel to verify the testing without entering the manhole structure.
2. Deflection Testing: All sanitary sewers constructed of flexible pipe shall be deflection-tested not less than 30 days after the trench backfill and compaction has been completed. The test shall be conducted by pulling a solid-pointed mandrel with a diameter equal to 95% of the pipe diameter through the completed pipeline.
3. Infiltration Testing: The District may require an infiltration test if it appears that there is excessive infiltration after air tests are completed. The District shall also be the sole judge of whether or not this test is required. The maximum allowable limit for infiltration shall be as per WSDOT/APWA 7-17.3(2)C. Failure to pass the infiltration test shall be cause for rejection.

4. Television/CCTV Inspection: The District shall require all runs of sewer pipe to be inspected by the use of a television camera not less than 30 days after the trench backfill and compaction has been completed. The costs of making all inspections and re-inspections, shall be borne by the Developer or Contractor.

a. CCTV Equipment:

- 1) Television inspection equipment shall have an accurate footage counter that will display on the monitor and record the camera distance from the centerline of the starting manhole.
- 2) The camera shall be of the remotely operated pan and tilt type. The rotating camera and light head configuration shall have the capability of panning 360° with pan and tilt capability of providing a full view of the pipe to ensure complete inspection of the mainline pipe and service laterals.
- 3) The camera, television monitor, and other components shall be color. To ensure peak picture quality throughout all conditions encountered, the color camera shall be equipped with the necessary circuitry to allow for the remote adjustment of the optical focus iris from the power control unit at the viewing station. A variable intensity control of the camera lights shall also be located at the viewing station.
- 4) Lighting and camera quality shall be suitable to allow a clear, in-focus picture for the entire inside periphery of pipelines extending at least ten (10) feet in front of the camera. In High Density Polyethylene (HDPE) or ductile iron poly-lined pipe, lighting should be sufficient enough to provide a clear view at least two (2) feet in front of the camera. The replay of the recorded video information shall be free of electrical interference and shall provide a clear stable image.
- 5) Camera quality shall be suitable to provide a full 360° view of the pipe during the inspection.
- 6) The travel speed of the camera shall be variable but uniform and shall not exceed 30 feet per minute. Any means of propelling the camera through the sewer line which would produce non-uniform or jerky movement of the camera, will not be acceptable.
- 7) The television system shall be capable of performing line segment inspection in increments of 400 feet with one setup.
- 8) The District's 1-1/2" target, or the contractor's District-approved target, shall be used

b. CCTV Procedure:

- 1) Just prior to performing the video inspection procedure, dyed water must be introduced into the nearest upstream manhole until observed at the nearest downstream manhole. This will insure that any pipe segments with bellies are easily

identified during CCTV inspection. Introduction of the dyed water shall be recorded.

- 2) All fog shall be evacuated from the pipeline and the pipeline kept clear of any fog during the CCTV inspection process.
  - 3) Perform the inspection on all mainline sections from manhole to manhole.
  - 4) Should access to a particular sewer segment be difficult, and where adjacent segments require television inspection, the CCTV Contractor may be allowed to complete the inspection of multiple sewer line segments with one setup. When multiple sewer line segments are inspected utilizing one setup, the CCTV Contractor shall zero the footage counter at each subsequent sewer manhole to establish a uniform starting point for each line segment televised
  - 5) The interior of the pipe shall be carefully inspected to determine the location and extent of all deficiencies. Pipe conditions that result in a question of proper installation procedures shall be noted so that these conditions can be reviewed and, if necessary, corrected before actual acceptance of the sewer system.
  - 6) At all service connections, the camera shall be stopped and the pan and tilt features shall be used to obtain a clear picture. At each service lateral, the camera shall be panned to view up each lateral or point of connection. Make note of any deficiencies through the use of Data Collection Software.
  - 7) Prior to the beginning of each CCTV inspection, manhole identification numbers, as indicated on the record drawings, will be displayed in the title and shall become a part of the video record.
  - 8) As directed by District, the Developer's Engineer or thier representative, the camera shall be stopped to view and analyze conditions that appear unusual or uncommon. The CCTV inspection technician shall, at all times, be able to move the camera through the lines in either direction without the loss of quality in the video presentation
- c. The television-inspection format shall be provided on DVD in a MPEG file type that is able to be viewed using Windows Media Player, with separate MPEG files individually designated between each sewer run between manholes and listed on an index or menu. The file names shall reflect the manhole numbers on the plan for each sewer run between manholes. The associated television-inspection reports and the original DVDs shall be provided to the District immediately upon completion of the television-inspection. If contractor wants a copy, the contractor shall obtain one at same time as the original is completed. Provide the District with two copies of the written report for each sewer run between manholes.

#### F. Hydrostatic Tests For Pressure Sewer Pipe

After the trench is backfilled and compacted, all pressure sewer pipe shall be subjected to a hydrostatic pressure test in accordance with the test for the applicable pipe material, as specified previously in this section. All facilities and personnel for conducting the testing under the observation of the District shall be furnished by the Developer/Contractor and shall be subject to the approval of the District.

#### G. Testing For Low Pressure Mainline Sewers And Grinder Pump Systems

Testing shall conform to the requirements in the District's "Side Sewer Regulations", latest edition.

### 3.5 ABANDONMENT OF WATER AND SEWER FACILITIES

#### A. Abandonment of Water Mains

Water mains and valves to be abandoned shall be abandoned in accordance with the procedures listed below, so as to minimize the risk of leaking from abandoned valves and to minimize obstructions within the right-of-way. If an active water main that has an abandoned valve attached to it will be abandoned in the foreseeable future, as determined solely by the District, the abandoned valve can remain and its valve can and valve box shall be raised to finished grade, in accordance with A.1 below. However, if the valve is a double disc valve or if it is leaking, it must be removed in accordance with A.2 below. If an active water main that has an abandoned valve attached to it will NOT be abandoned in the foreseeable future, as determined solely by the District, the abandoned valve must be removed and the tee plugged or blind-flanged, in accordance with A.2 below.

1. For Abandoned Water Valve to Remain:
  - a. Turn valve to the closed position.
  - b. Remove valve box and valve can.
  - c. Inspect valve for longevity of leaking from packing, etc.
  - d. If valve is not leaking, cut out section of main from old valve.
  - e. Install MJ plug or blind flange on valve.
  - f. Plug old pipe with concrete. If pressure build-up from ground water entering the abandoned pipe is likely to occur (especially on hillsides), install a blocked MJ cap.
  - g. Re-install the valve box and valve can, and install 6" grout in valve can to indicate a plugged valve.
  - h. Backfill and compact.
  
2. For Abandoned Water Valve to Be Removed:
  - a. Schedule a water main shutdown.
  - b. Turn valve to the closed position.
  - c. Remove valve box and valve can.



- d. Cut out section of main from old valve.
- e. Remove valve, and install blind flange or MJ plug on tee.
- f. Plug old pipe with concrete. If pressure build-up from ground water entering the abandoned pipe is likely to occur (especially on hillsides), install a blocked MJ cap.
- g. Backfill and compact.

## B. Abandonment of Fire Hydrants

Fire hydrants to be abandoned shall be abandoned in accordance with the procedures listed below, so as to minimize the risk of leaking from abandoned valves and to minimize obstructions within the right-of-way. If an active water main that has an abandoned hydrant foot valve attached to it will be abandoned in the foreseeable future, as determined solely by the District, the abandoned foot valve can remain and its valve can and valve box shall be raised to finished grade, in accordance with B.1 below. However, if the valve is a double disc valve or if it is leaking, it must be removed in accordance with B.2 below. If an active water main that has an abandoned foot valve attached to it will NOT be abandoned in the foreseeable future, as determined solely by the District, the abandoned foot valve must be removed and the tee plugged or blind-flanged, in accordance with B.2 below.

1. For Abandoned Foot Valve to Remain:
  - a. Turn 6-inch valve to the closed position.
  - b. Remove valve box, valve can, and fire hydrant.
  - c. If valve is not leaking, remove entire 6-inch pipe to hydrant, or cut out at least a 1-foot section of main from old valve.
  - d. Install MJ plug or blind flange on valve.
  - e. If hydrant run is not removed, plug both ends of hydrant run pipe with concrete.
  - f. Re-install the valve box and valve can, and install 6" grout in valve can to indicate a plugged valve.
  - g. Backfill and compact.
  - h. If the existing hydrant is to be relocated due to some conflict, a new hydrant will be installed. The existing hydrant shall be delivered to the District's offices.
2. For Abandoned Foot Valve to Be Removed:
  - a. Schedule a water main shutdown.
  - b. Turn valve to the closed position.
  - c. Remove valve box, valve can, and fire hydrant.
  - d. Remove entire 6-inch pipe to hydrant, or cut out at least a 1-foot section of main from old valve.
  - e. Remove valve, and install blind flange or MJ plug on tee.
  - f. If hydrant run is not removed, plug both ends of hydrant run pipe with concrete.

- g. Backfill and compact.
- h. If the existing hydrant is to be relocated due to some conflict, a new hydrant will be installed. The existing hydrant shall be delivered to the District's offices.

#### C. Abandonment of Water Services

Water services must be abandoned at the water main in accordance with the following procedure:

1. Excavate to corporation stop and saddle.
2. If saddle is a single strap or is not stainless steel or the stainless steel strap/saddle/corporation stop is in poor condition, schedule a water main shutdown, then replace the saddle with a stainless steel repair band.
3. If the saddle is a stainless steel double strap in good condition, it can remain in place. Shut off the corporation stop and plug the abandoned service line. Polybag all exposed components of the abandoned saddle.
4. Install a brass plug on the corporation stop.
5. On the setter side, cut the service line away from the setter, plug the line, remove the setter and dispose of properly (return to District and place in recycle bin).
6. Arrange with the District's Customer Service Department for disposition of the water meter and documentation of the last meter reading.
7. Backfill and compact.

#### D. Abandonment of Manholes or Vaults

Manholes, vaults, and similar underground structures must be abandoned in accordance with the following procedure:

1. Remove frame and cover or vault lid and hatch(es).
2. Remove manhole cone and sections or vault sections as necessary so that remaining structure is at least 4 feet below finished grade.
3. Plug all pipe penetrations with grout.
4. Fill remaining structure with pea gravel to within 3.5 feet of the top of the remaining structure.
5. Fill the next 3.5 feet (to the top of the remaining structure) with CDF.
6. Backfill and compact the top 4 feet with suitable native material or import backfill to finished grade.

#### E. Abandonment of Pressure Sewers (Force Mains, Low Pressure Force Mains, and Grinder Pump Lines)

All pressure sewer lines, including force mains, low pressure force mains, and grinder pump lines, must be abandoned in accordance with the following procedure:

1. Force mains, low pressure force mains, and grinder pump lines that are to be abandoned should be flushed in a sanitary way to eliminate a septic condition, if possible.

2. Mains shall be physically disconnected from District's system and plug all forcemains larger than 2 inches in diameter with grout. Plug or cap all pipe ends 2 inches or smaller.
3. If pressure build-up from groundwater entering the abandoned force main or low pressure force main is likely to occur (especially on hillsides), install a blocked cap or plug on pipe 4 inches or larger, and install a watertight connection (e.g., pack joint) for pipe smaller than 4 inches.
4. Possible pressure grouting of abandoned main may be required on a case-by-case basis.

F. Abandonment of Gravity Side Sewers

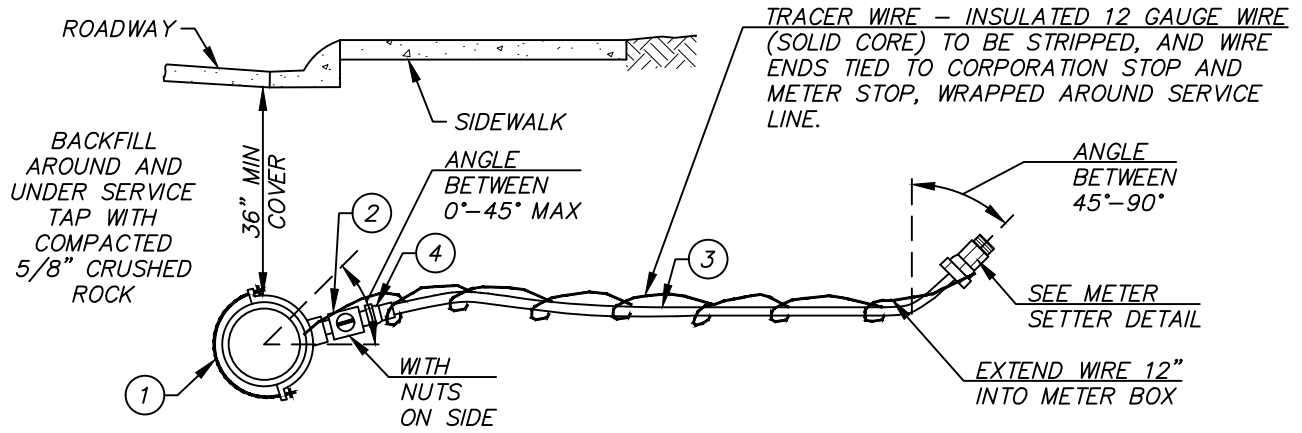
All gravity side sewer lines must be abandoned in accordance with the following procedure:

1. Side sewer shall be physically disconnected from District's system.
2. A plug shall be installed in the side sewer tee at the sewer main.
3. A cap shall be installed on both ends of the side sewer.

**PART FOUR - DISTRICT STANDARD DETAILS AND NOTES**

The following details are also shown on the District Standard Details Drawings (22" x 34" format).

**WATER DETAILS**



ITEM	DESCRIPTION	FORD PART NO	MUELLER PART NO	A.Y. MCDONALD	OTHER PART NO.	QTY
①	1" SADDLE I.P.T.	N/A	N/A	N/A	ROMAC 202S	1
②	1" CORPSTOP (MIPxMIP)	FB500-4	B2996	3131B1	N/A	1
③	1" HDPE PIPE	—DRISCOPLEX 5100 ULTRA LINE SDR7 200 PSI IPS OR PW EAGLE—				1
④	1" FIPxCOMPRESSION ADAPTOR W/ STAINLESS STEEL STIFFENER	C16-44P	H15454.10	4754-33	N/A	2
		INSERT 53-72	505142	6136	N/A	2

\* QUICK JOINT ACCEPTABLE, GRIP JOINT NOT ACCEPTABLE

**1" SERVICE LINE**

REV. 10/19/17

**NOTES**

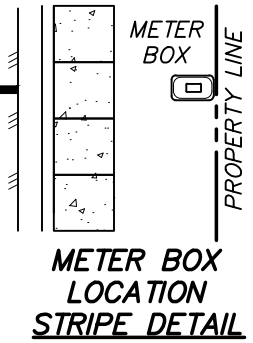
1. ALL PIPE AND FITTINGS TO BE ASSEMBLED WITH TEFLON TAPE AND PIPE DOPE UNLESS OTHERWISE NOTED.
2. SERVICE LINES SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN.
3. THE SERVICE LINE SHALL BE INSTALLED TO ALLOW FOR THE FAR SIDE OF THE METER BOX TO BE INSTALLED ON THE R/O/W AND CENTERED ON THE PROPERTY LINE OR EASEMENT LINE, UNLESS OTHERWISE DIRECTED BY THE DISTRICT.
4. THE METER BOX SHALL BE INSTALLED WITH THE FAR SIDE OF THE METER BOX (BACK SIDE) ON THE R/O/W, PROPERTY LINE OR EASEMENT LINE, IN LANDSCAPED (NON-TRAFFIC, NON-CRUSHED SURFACING TOP COARSE, NON-CONCRETE) AREAS.
5. BACKFILL AROUND METER BOXES AND SETTERS SHALL BE WITH IMPORTED BACKFILL, OR WITH NATIVE MATERIAL THAT MEETS THE REQUIREMENTS FOR IMPORTED BACKFILL, EXCEPT THAT 100% SHALL PASS 2" SQUARE. PEA GRAVEL OR SAND ARE NOT ALLOWED.
6. PROVIDE AT LEAST 18-INCHES CLEARANCE FROM ALL OTHER UTILITIES, BUSHES, AND OBSTRUCTIONS. PROVIDE AT LEAST 5- FEET FROM ALL TREES, AND STRUCTURES. NO FENCES OR ROCKERIES SHALL BE PLACED BETWEEN THE METER BOX AND THE MAIN.
7. METER BOXES LOCATED WITHIN 2 FEET OF DRIVEWAYS, PAVED AREAS, OR AREAS WHERE THE BOX CAN BE SUBJECTED TO VEHICULAR TRAFFIC, SHALL BE A TRAFFIC BEARING METER BOX AS NOTED BELOW. LOCATING A METER BOX IN AN AREA SUBJECT TO VEHICULAR TRAFFIC REQUIRES WRITTEN DISTRICT APPROVAL DURING DESIGN. METER BOXES THAT BECOME LOCATED IN TRAFFIC AREAS DURING OR AFTER CONSTRUCTION WITHOUT DISTRICT WRITTEN APPROVAL DURING DESIGN SHALL BE ABANDONED AT THE MAIN AND A NEW SERVICE SHALL BE INSTALLED TO A LANDSCAPED (NON-TRAFFIC) AREA.
8. WHERE TRAFFIC BEARING METER BOXES ARE USED WITHIN A CONCRETE SURFACE, A 5/8 INCH EXPANSION JOINT SHALL BE PROVIDED AROUND THE BOX WITH AN EIGHTEEN (18) INCH GAP BETWEEN THE EXPANSION JOINT AND METER BOX ON ALL SIDES.
9. APPROVED METER BOXES SHALL BE AS FOLLOWS:  
 A) APPROVED METER BOXES FOR SINGLE SERVICES IN NON-TRAFFIC AREAS: CARSON 1220-12  
 B) FOR SINGLE SERVICE IN TRAFFIC AREAS: FOGTITE B10 W/ALUMINUM LID.
10. MAINTAIN AND LEAVE SERVICE MARKER IN PLACE UNTIL LANDSCAPING IS DONE.
11. ANY DEVIATION FROM THESE ABOVE STANDARDS SHALL REQUIRE A WRITTEN VARIANCE REQUEST TO THE DISTRICT FOR REVIEW AND CONSIDERATION.

REV. 10/27/17

**WATER SERVICE NOTES AND METER BOX REQUIREMENTS**

**SEE WATER SERVICE NOTES  
AND METER BOX REQUIREMENTS**

METER BOX LOCATION STRIPE  
(1 PER METER BOX)

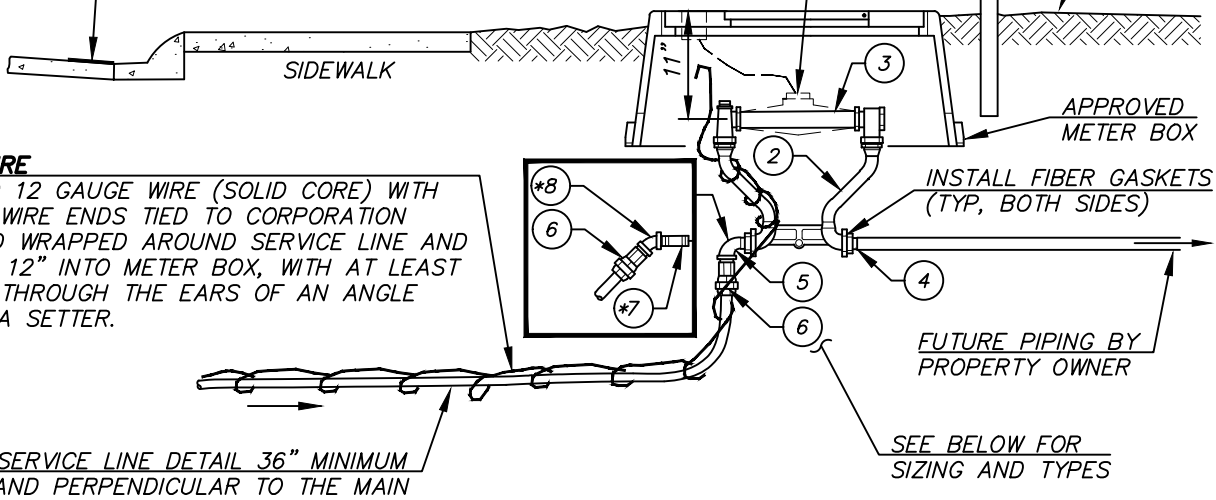


2" X 4" STUD SERVICE MARKER PAINT WHITE  
AND STENCIL "WATER" W/2" BLACK  
LETTERING (LEAVE IN PLACE UNTIL  
LANDSCAPING IS DONE)

METER(S) TO BE PURCHASED FROM  
DISTRICT. METER(S) INSTALLED BY  
DISTRICT AFTER JOB "FINALLED"  
UNLESS OTHERWISE NOTED

**METER BOX LOCATION STRIPE (SEE DETAILS ABOVE)**

TWO COATS OF SAFETY YELLOW TO MARK LOCATION  
OF EACH METER BOX AT TIME OF INSTALLATION  
(12-INCH X 3-INCH STRIP PERPENDICULAR TO THE  
EDGE OF THE ASPHALT). SPRAY APPLICATION IS  
NOT ACCEPTABLE, ONLY BRUSH OR ROLL ON



**TRACER WIRE**

INSULATED 12 GAUGE WIRE (SOLID CORE) WITH  
STRIPPED WIRE ENDS TIED TO CORPORATION  
STOP, AND WRAPPED AROUND SERVICE LINE AND  
EXTENDED 12" INTO METER BOX, WITH AT LEAST  
6 INCHES THROUGH THE EARS OF AN ANGLE  
STOP ON A SETTER.

SEE 1" SERVICE LINE DETAIL 36" MINIMUM  
COVER AND PERPENDICULAR TO THE MAIN

**METER SETTER PROFILE VIEW**

**SINGLE 3/4" METER SETTER**

ITEM	DESCRIPTION	FORD PART NO	MUELLER PART NO	A.Y. MCDONALD	OTHER PART NO	QTY
①	NOT REQUIRED					-
②	3/4" METER SETTER	VBH72-12W-11-33-NL	N/A	N/A	N/A	1
③	1" x 7-1/2" IDLER W/WASHERS		PVC SCH 80			1
④	3/4" PVC PLUG		PVC SCH 40/80			1
⑤	3/4" BRASS 90° STREET ELL					1
⑥	3/4" MIP x 1" IPS PAC JOINT W/ STIFFENER	FOC8634	H15429	473-CP	N/A	1
*⑦	3/4" x 3" BRASS NIPPLE (OPTIONAL)					1
*⑧	3/4" BRASS 45° BEND OR ELL (OPTIONAL)					1

**SINGLE 1" METER SETTER**

ITEM	DESCRIPTION	FORD PART NO	MUELLER PART NO	A.Y. MCDONALD	OTHER PART NO	QTY
①	NOT REQUIRED					-
②	1" METER SETTER	VBH74-12W-11-44-NL	N/A	N/A	N/A	1
③	1-1/4" x 11" IDLER W/WASHERS		PVC SCH 80			1
④	1" PVC PLUG		PVC SCH 40/80			1
⑤	1" BRASS 90° STREET ELL					1
⑥	1" MIP x 1" IPS PAC JOINT W/ STIFFENER	FOC8644	H15429	473-CP	N/A	1
*⑦	1" x 3" BRASS NIPPLE (OPTIONAL)					1
*⑧	1" BRASS 45° BEND OR ELL (OPTIONAL)					1

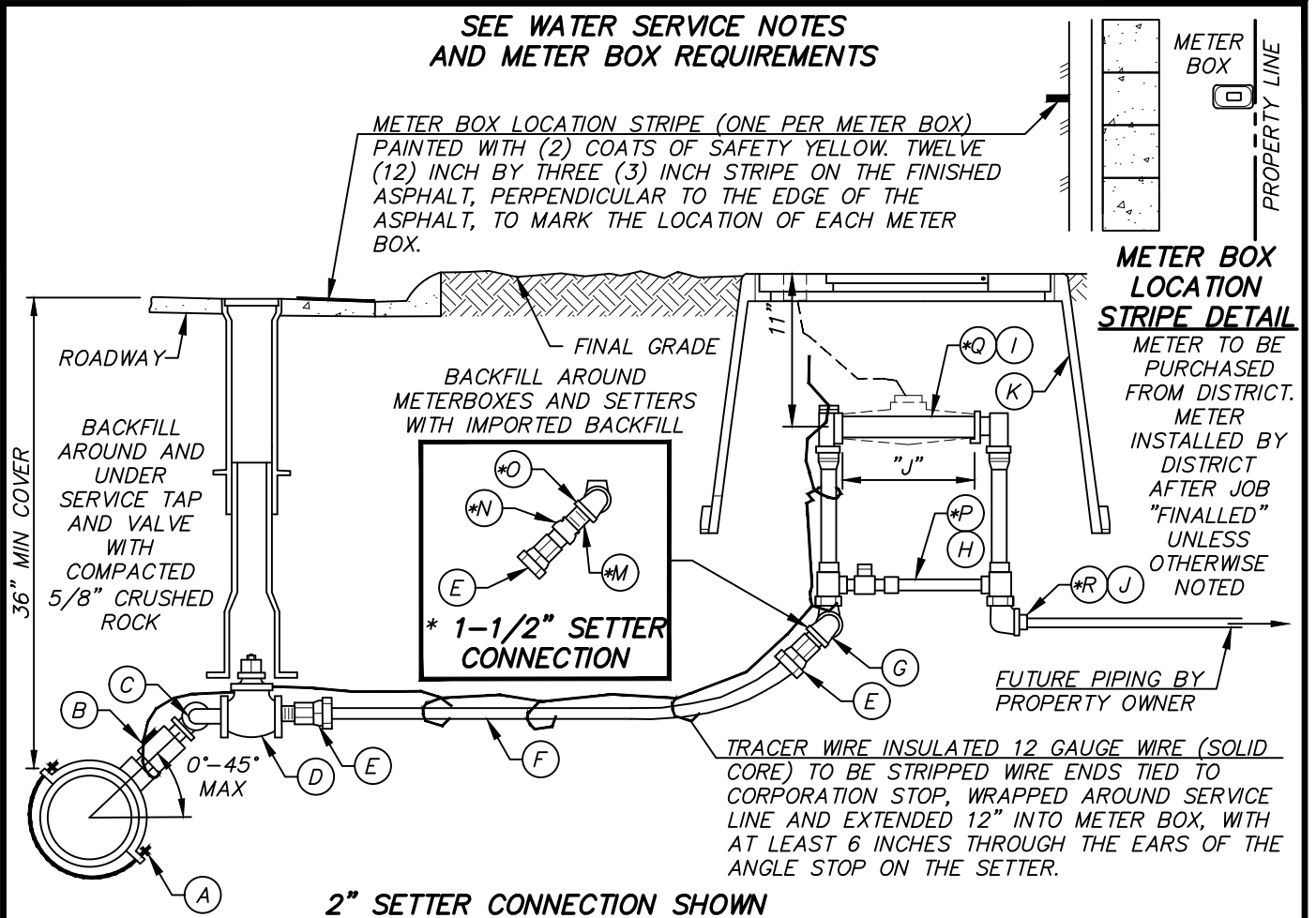
\* OPTIONAL

1

**3/4" AND 1" METER SETTER**

REV. 10/27/17

**SEE WATER SERVICE NOTES  
AND METER BOX REQUIREMENTS**



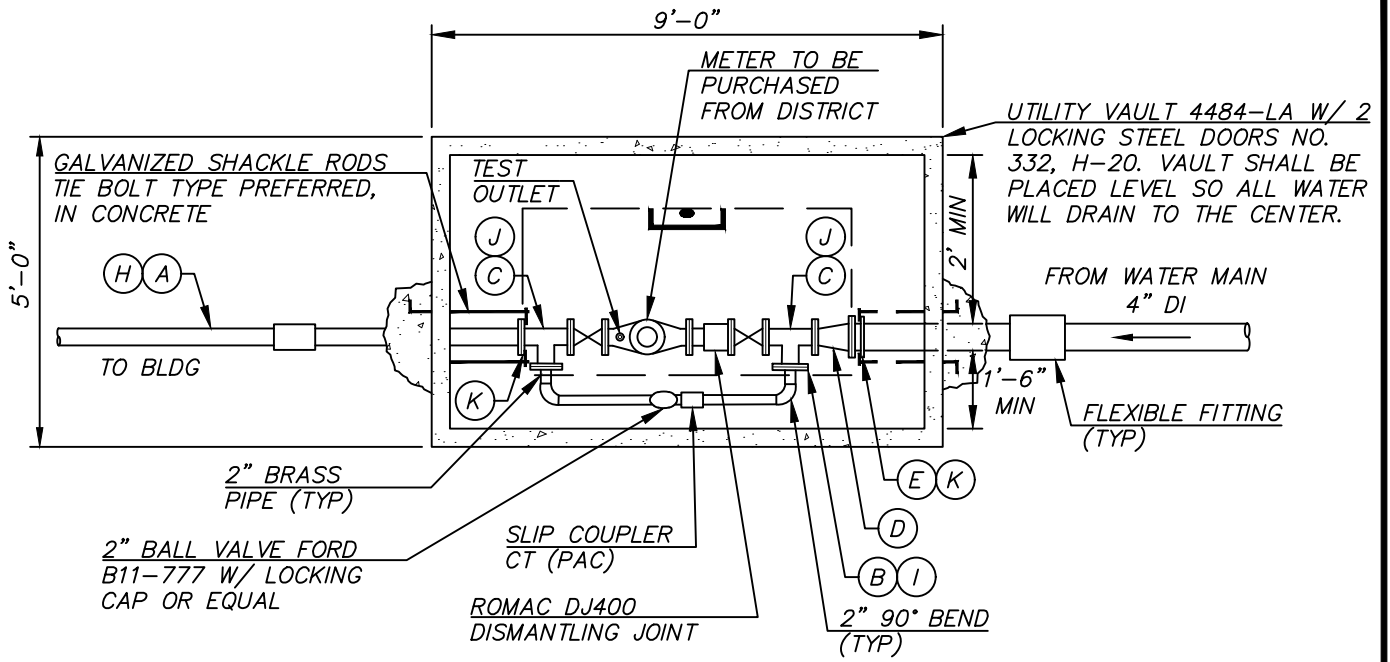
**NOTES**

1. ALL PIPE AND FITTINGS TO BE ASSEMBLED WITH TEFLON TAPE AND PIPE DOPE UNLESS OTHERWISE NOTED.
2. METER BOXES LOCATED WITHIN 2 FEET OF DRIVEWAYS, PAVED AREAS, OR AREAS WHERE THE BOX CAN BE SUBJECTED TO VEHICULAR TRAFFIC OR AT THE DIRECTION OF THE DISTRICT, SHALL BE A FOGTITE TYPE 2 METER BOX WITH A STEEL REINFORCED LID.
3. WHERE TRAFFIC BEARING METER BOXES ARE USED WITHIN A CONCRETE SURFACE, A 5/8 INCH EXPANSION JOINT SHALL BE PROVIDED AROUND THE BOX WITH AN EIGHTEEN (18) INCH GAP BETWEEN THE EXPANSION JOINT AND METER BOX ON ALL SIDES.
4. METER BOXES TO BE INSTALLED IN NON TRAFFIC AREAS. ALTERNATIVE LOCATIONS REQUIRE WRITTEN DISTRICT APPROVAL.
5. METER BOXES SHALL BE INSTALLED WITH THE FAR SIDE OF THE BOX (BACK SIDE) ON THE R/O/W, PROPERTY OR EASEMENT LINE, UNLESS OTHERWISE DIRECTED BY THE DISTRICT. SERVICES SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN.

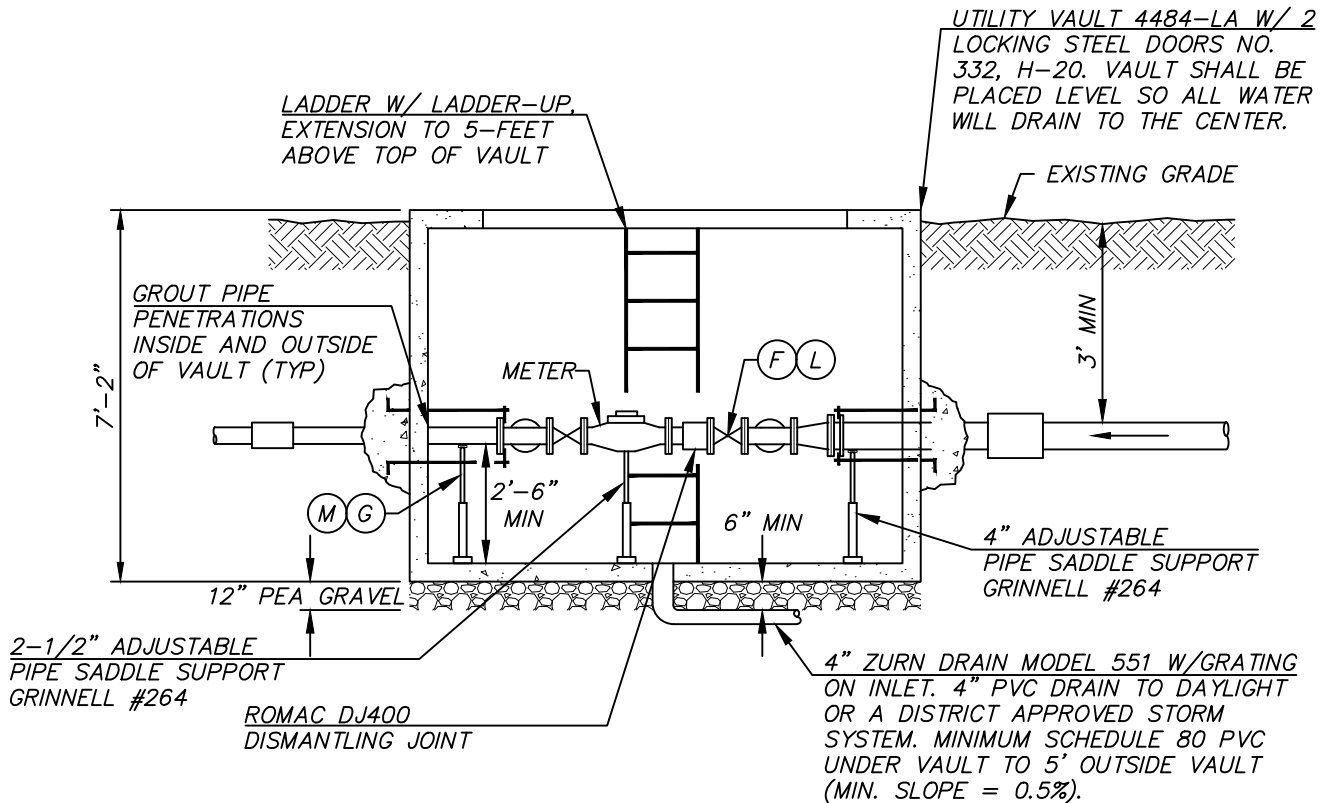
ITEM	QTY	DESCRIPTION
A	1	2" ROMAC SADDLE IPT, STYLE #202S, DOUBLE STRAP
B	1	2" CORPORATION STOP MIP X MIP, W/ NUT ON TOP (FORD# FB500, MUELLER# B2996, A.Y. MCDONALD# 3131B)
C	2	2" BRASS STREET ELBOW (SWING JOINT)
D	1	2" (RSGV) GATE VALVE X FIP W/SQUARE OPERATING NUT W/ CAST IRON VALVE BOX AND LONG SKIRT LID
E	1	2" PACK JOINT W/STAINLESS STEEL STIFFENER X MIP (FORD# C86-77, MUELLER # E15929)
F	VARIOUS	DRISCOPLEX 5100 ULTRA LINE OR PW EAGLE, 2" HIMOL POLY PIPE SDR-7 200 PSI
G	2	2" 90° BRASS STREET ELBOW
H	1	2" METER SETTER, FORD NO. VBH 87-12B-11-77 (ONLY) W/ BRASS STREET 90
I	1	2" IDLER SCH. 80 (J= 17") W/WASHERS
J	1	2" PVC PLUG, SCHEDULE 40/80
K	-	METER BOX - CARSON JUMBO #1730 W/P5L METER READING LID AND INSPECTION PLATE (MARKED FOR WATER) FOR NON TRAFFIC AREAS. WITH WRITTEN DISTRICT APPROVAL FOGTITE TYPE 2 (MARKED FOR WATER) W/ STEEL REINF. LID FOR TRAFFIC AREAS.
*M	1	1-1/2" x 3" BRASS NIPPLE
*N	1	1-1/2" x 2" BELL REDUCER
*O	2	1-1/2" 90° BRASS STREET ELBOW
*P	1	1-1/2" METER SETTER, FORD NO. VBH 86-12B-11-66 W/ BRASS STREET 90 OR VBH 76-12B
*Q	1	1-1/2" IDLER SCH. 80 (J=13") W/ WASHERS
*R	1	1-1/2" PLUG, SCHEDULE 40/80

**1-1/2" AND 2" METER SETTER**

REV. 10/19/17



**PLAN**



**ELEVATION**

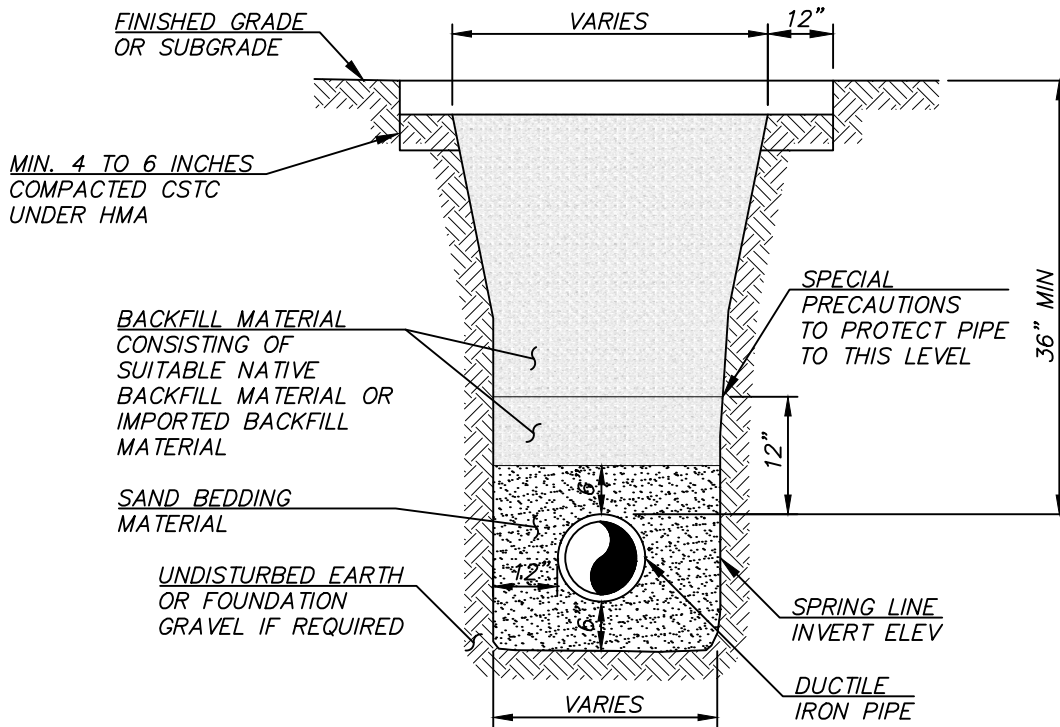
**NOTES**

1. SEE 3" AND 4" METER NOTES AND MATERIALS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.
2. DISTRICT SUPPLIED METER IS A 3" OR 4" WITH TRPL REGISTER (TOUCH PAD MOUNTED IN VAULT LID).

**3" AND 4" METER**

REV. 10/20/17





**WATER MAIN TRENCH SECTION**

REV. 10/30/17

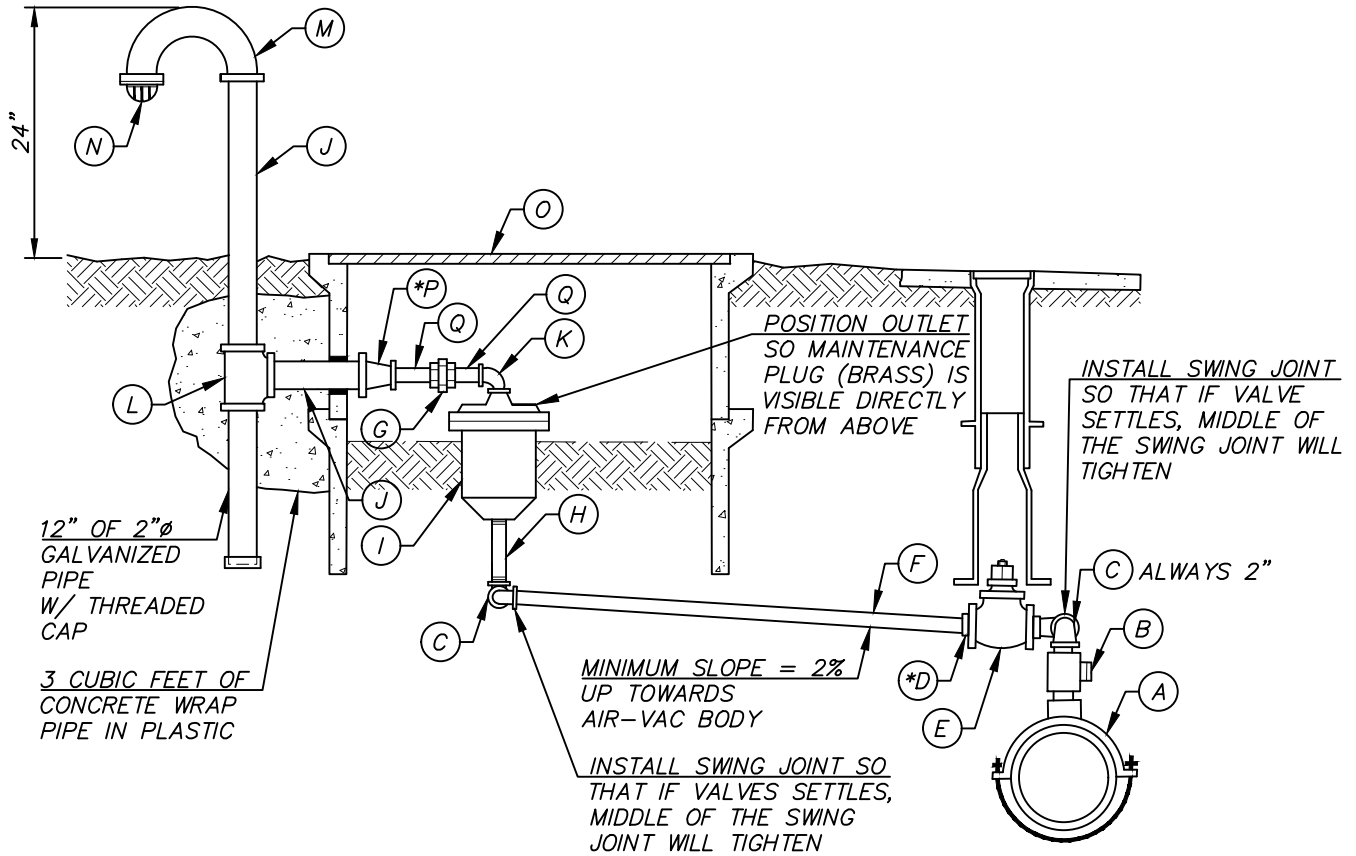
○ 3" METER (ONLY)	⬡ 4" METER (ONLY)
A 3" GALV	H 4" DI
B 3" BLIND FLG TAPPED 2" (2 PLACES TYP)	I 4" BLIND FLANGE TAPPED 2" (2 PLACES TYP)
C 3" TEE (FLG)	J 4" TEE (FLG) (TYP)
D 4" x 3" REDUCER (FLxFL)	K 4" FCA (TYP)
E 4" FCA (TYP)	L 4" GATE VALVE (FLG) W/HAND WHEEL OPERATOR (TYP)
F 3" GATE VALVE (FLG) W/HAND WHEEL OPERATOR (TYP)	M 4" ADJUSTABLE PIPE SADDLE SUPPORT GRINNELL #264
G 3" ADJUSTABLE PIPE SADDLE SUPPORT GRINNELL #264	

**NOTES**

- VAULT COVER SHALL MATCH EXISTING GRADE OR 6" ABOVE IN UNIMPROVED AREAS.
- PAINT SCHEDULE:  
EXTERIOR OF VAULT – BELOW GRADE TWO COATS OF BLACK BITUMASTIC SOLUTION (VAULT SHOULD BE DRIED WITH NO MOISTURE PRESENT PRIOR TO APPLICATION OF COATINGS)  
  
PAINT INTERIOR PIPING (NON BRASS) – ONE (1) COAT RUST RESISTOR PRIMER TWO (2) COATS SAFETY BLUE SEMI GLOSS PAINT
- IF POSITIVE DRAINAGE FROM VAULT CANNOT BE ACHIEVED A SUMP PUMP SYSTEM WILL BE REQUIRED WITH DISTRICT APPROVAL. POWER SHALL BE SUPPLIED AND MAINTAINED BY THE DEVELOPMENT.
- FLEXIBLE FITTING WHEN ENTERING AND EXITING VAULT WITHIN 5 FEET OF VAULT. IF (MJ) BELL CONNECTION IS WITHIN 5 FEET OF THE VAULT, FITTING MAY BE OMITTED (2 PLACES TYPICAL).
- CORE DRILL 1-3/4" HOLE IN ONE OF THE HATCHES NEAR CENTER FOR INSTALLATION OF A ANTENNAE MOUNT, WHEN NOT IN TRAFFIC AREA.
- USE 2" THREADED BRASS AND UNION AS NEEDED.

**3" AND 4" METER NOTES AND MATERIALS**

REV. 10/30/17



**NOTES**

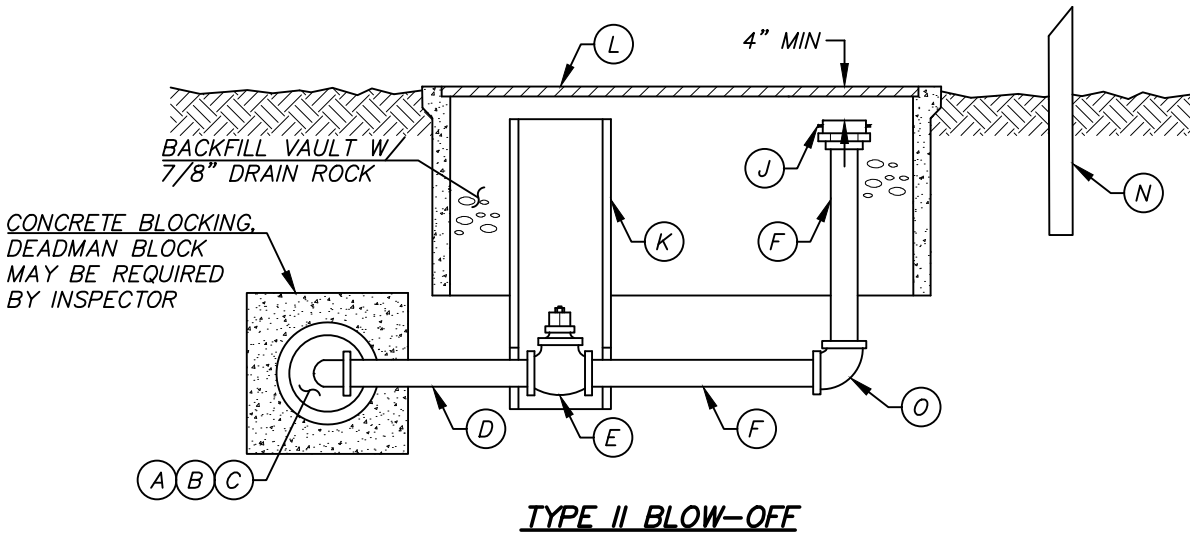
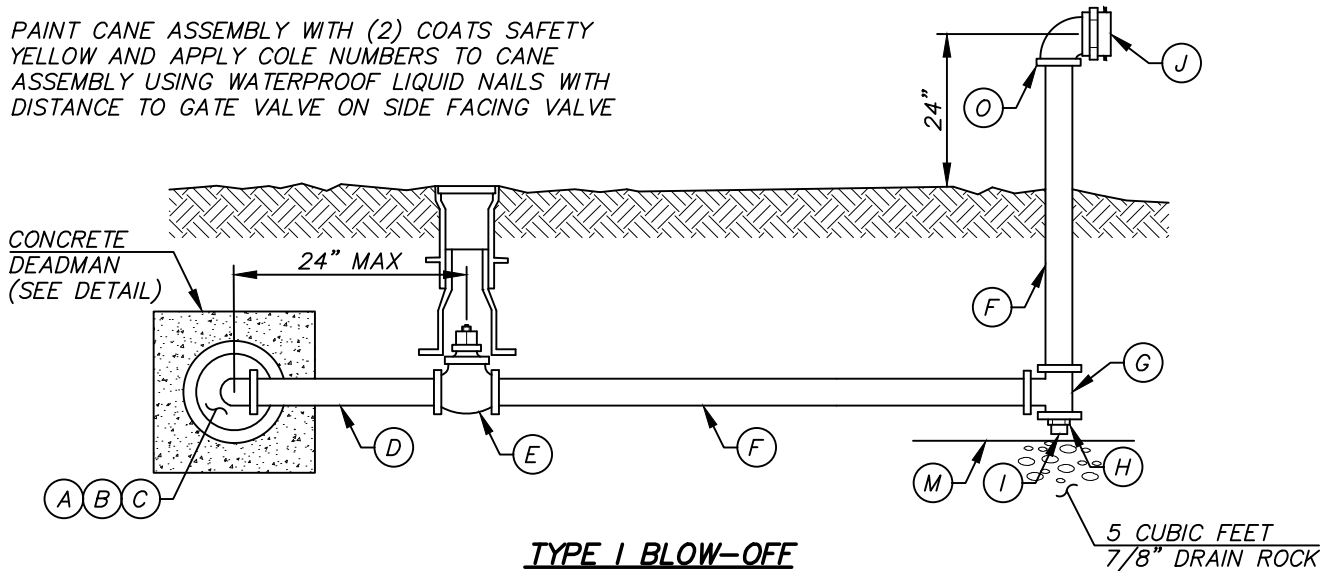
1. ALL PIPE AND FITTINGS TO BE GALVANIZED EXCEPT WERE NOTED AND ASSEMBLED WITH TEFLON TAPE AND PIPE DOPE.
2. LOCATION OF THE AIR AND VACUUM RELIEF ASSEMBLY AS SHOWN ON THE PLANS IS APPROXIMATE.
3. INSTALLATION OF THE VALVE SHALL BE SET AT THE HIGH POINT OF THE LINE.
4. PAINT CANE ASSEMBLY WITH TWO (2) COATS OF SAFETY YELLOW AND APPLY COLE LETTERS TO CANE ASSEMBLY WITH FOOTAGE TO VALVE ON SIDE FACING ROADWAY IN 1.5" COLE NUMBERS. APPLY WITH WATER PROOF LIQUID NAILS.
5. PROVIDE 5-FOOT OF CLEARANCE FROM TREES, AND STRUCTURES, 18-INCHES FROM BUSHES.

MK	QTY	ITEM
A	1	2" ROMAC SADDLE I.P.T., DOUBLE STRAP STYLE 202S
B	1	2" CORPORATION STOP MIP X MIP, WITH NUT ON SIDE (NOT UNDER VALVE)
C	4	1" OR 2" BRASS STREET ELBOW, BRASS SWING JOINT W/ COUPLING OR 90° BEND
*D	1	2" X 1" BRASS BUSHING
E	1	2" GATE VALVE (FIP X FIP) W/2" SQUARE OPERATING NUT AND CAST IRON VALVE BOX AND LONG SKIRT LID
F	-	1" OR 2" THREADED BRASS PIPE (LENGTH TO SUIT) ON FIRM SUBGRADE
G	2	1" OR 2" GALVANIZED UNION
H	1	1 OR 2" BRASS NIPPLE
I	1	1" OR 2" APCO AIR AND VACUUM RELIEF VALVE (#143-C FOR 1" AND #145-C FOR 2") OR DISTRICT APPROVED EQUAL (REPLACE IRON ACCESS PLUG WITH BRASS PLUG)
J	-	2" GALVANIZED SCH. 40 PIPE (LENGTH TO SUIT)
K	1	1" OR 2" GALVANIZED STREET 90° ELBOW
L	1	2" TEE
M	1	2" RETURN BEND, SCH. 40 GALVANIZED
N	1	BEEHIVE STRAINER GREENBURG P-24-08, MALE FOR 2" PIPE
O	2	FOGTITE TYPE II CONCRETE BOX WITH STEEL LID, REINFORCED FOUR SIDES OR DISTRICT APPROVED EQUAL MARKED "A.V."
*P	1	2" X 1" GALVANIZED BELL REDUCER (NOT REQUIRED WITH A 2" ASSEMBLY)
Q	2	1" OR 2" GALVANIZED NIPPLE (ONLY ONE REQUIRED WITH 2")

\* DENOTES ITEMS NOT REQUIRED WITH A 2" ASSEMBLY

**1" AND 2" AIR AND VACUUM RELIEF VALVE ASSEMBLY** REV. 10/20/17

PAINT CANE ASSEMBLY WITH (2) COATS SAFETY YELLOW AND APPLY COLE NUMBERS TO CANE ASSEMBLY USING WATERPROOF LIQUID NAILS WITH DISTANCE TO GATE VALVE ON SIDE FACING VALVE



**NOTE**

1. ALL PIPE AND FITTINGS TO BE GALVANIZED EXCEPT WHERE NOTES AND ALL ASSEMBLED WITH TEFLON TAPE AND PIPE DOPE.

ITEM	TYPE I QTY	TYPE II QTY	DESCRIPTION
A	1	1	CAP W/ 2" IPS TAP
B	1	1	2" X 6" BRASS NIPPLE
C	1	1	2" 90° BRASS BEND
D	-	-	2" BRASS PIPE (LENGTH TO SUIT)
E	1	1	2" GATE VALVE W/SQUARE OPERATING NUT
F	-	-	TYPE I REQUIRES CAST IRON VALVE BOX W/ DEEP SKIRT LID, TYPE II WITH 6" PVC PIPE ONLY
G	1	0	2" X 2" TEE
H	1	0	2" X 1/2" BUSHING
I	1	0	AUTOMATIC DRAIN VALVE - WEATHERMATIC 910
J	1	1	2" MIP X 2 1/2" NST FIRE HOSE ADAPTOR W/CAP
K	0	1	TYPE I (MIP), TYPE II (FIP) W/ 2" COUPLER
L	0	1	6" PVC (LENGTH TO SUIT)
M	-	-	FOGITITE TYPE 2 METER BOX W/ 3/8" SOLID STEEL TRAFFIC COVER (REINFORCED ON FOUR SIDES) AND H-20 LOADING MARKED "B.O."
N	0	1	FABRIC OR PLASTIC BARRIER
O	1	1	VALVE MARKER POST
			2" 90° GALV. BEND

**TYPE I AND II BLOW-OFF ASSEMBLY**

REV. 10/20/17

**NOTES**

1. FIRE HYDRANT BOLLARDS SHALL NOT BE INSTALLED WITHIN RIGHT-OF-WAY UNLESS OTHERWISE DIRECTED BY THE DISTRICT.
2. FIRE HYDRANT BOLLARDS SHALL BE INSTALLED WITHIN COMMERCIAL DEVELOPMENTS UNLESS OTHERWISE DIRECTED BY THE DISTRICT.
3. THE NUMBER OF BOLLARDS AND PLACEMENT OF BOLLARDS SHALL BE SUFFICIENT TO PROTECT THE FIRE HYDRANT FROM VEHICULAR TRAFFIC AND AS DIRECTED BY THE DISTRICT.
4. "BLUE DOT" (STIMSONITE RAISED PAVEMENT MARKER-#88AB) REQUIRED 6" OFF CENTERLINE (OR 4" OFF ANY OTHER MARKER" OF ROAD PERPENDICULAR TO FIRE HYDRANT.
5. FIRE HYDRANT AND BOLLARDS SHALL BE PAINTED WITH (2) COATS OF SAFETY YELLOW SEMI GLOSS.
6. DISTANCE FROM CENTER OF HYDRANT TO ISOLATION VALVE CAP SHALL BE SHOWN ON BONNET OF HYDRANT IN FEET (TO THE CLOSEST FOOT) USING COLE NUMBERS AND APPLIED WITH WATERPROOF LIQUID NAILS.

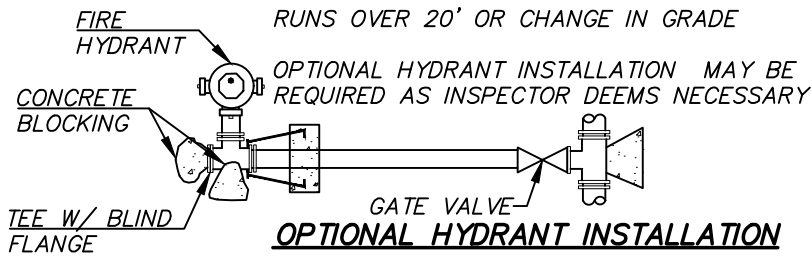
APPROVED FIRE HYDRANTS:

- DRESSER M&H 129-S
- MUELLER A423 (SUPER CENTURION 250)
- CLOW MEDALLION
- AMERICAN DARLING B-62-B
- AVK SERIES 2780
- U.S. PIPE SENTINEL 250

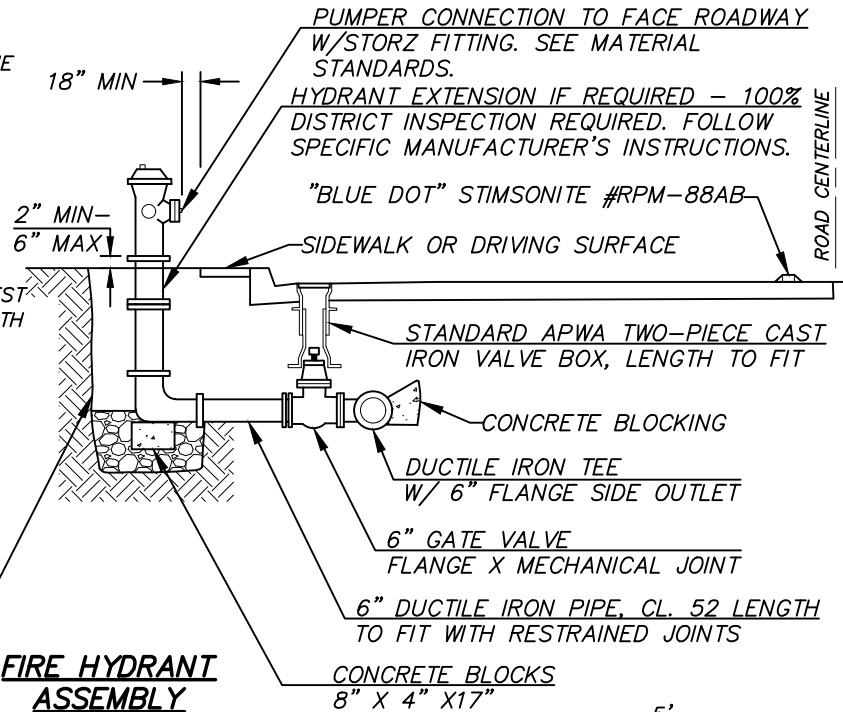
PLASTIC BARRIER REQUIRED BETWEEN HYDRANT AND WASHED ROCK 1 CU. YD. TO ABOVE WEEP HOLES OF HYDRANT MINIMUM 7/8" DRAIN ROCK.

DEADMAN ASSEMBLY MAY BE REQUIRED ON RUNS OVER 20' OR CHANGE IN GRADE

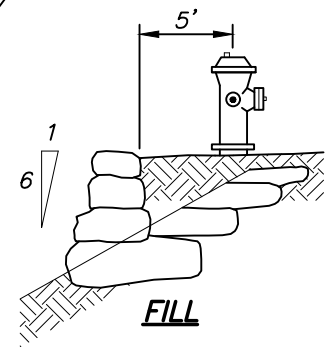
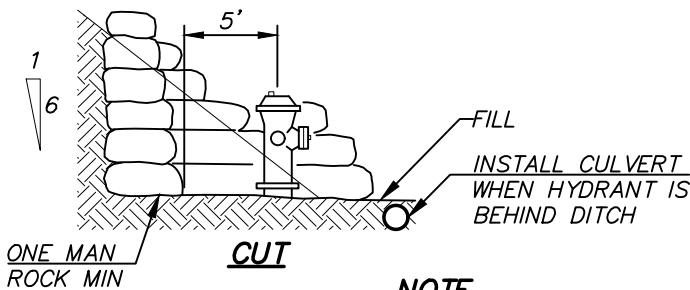
OPTIONAL HYDRANT INSTALLATION MAY BE REQUIRED AS INSPECTOR DEEMS NECESSARY



**OPTIONAL HYDRANT INSTALLATION**



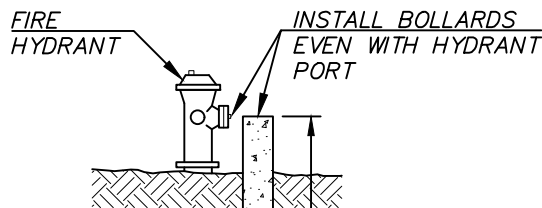
**FIRE HYDRANT ASSEMBLY**



**NOTE**

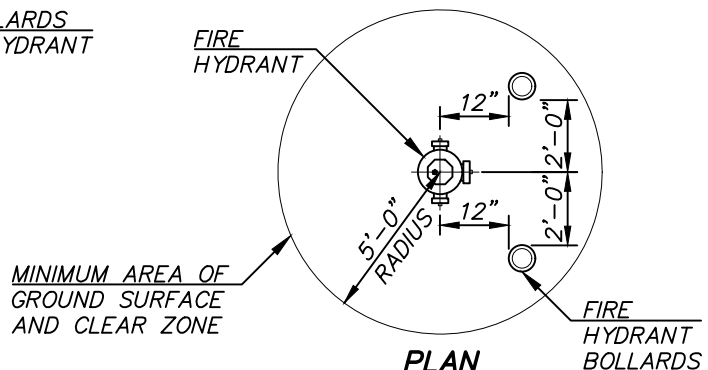
1. 5' MIN CLEARANCE AROUND FIRE HYDRANT

**FIRE HYDRANT LOCATION IN CUT OR FILL**



GUARD POST 9" ROUND REINFORCED CONCRETE 6'-0" LG, EQUAL TO UTILITY VAULT CO TO BE INSTALLED WHERE DIRECTED

**ELEVATION**

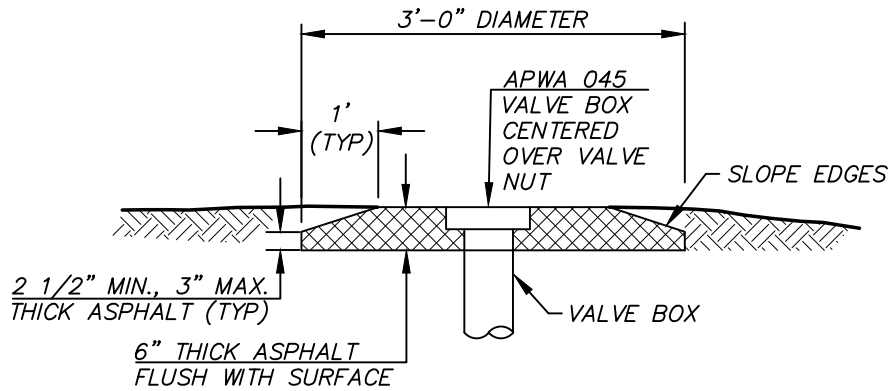


MINIMUM AREA OF GROUND SURFACE AND CLEAR ZONE

**PLAN**

**FIRE HYDRANT BOLLARDS INSTALLATION**

**FIRE HYDRANT ASSEMBLY**

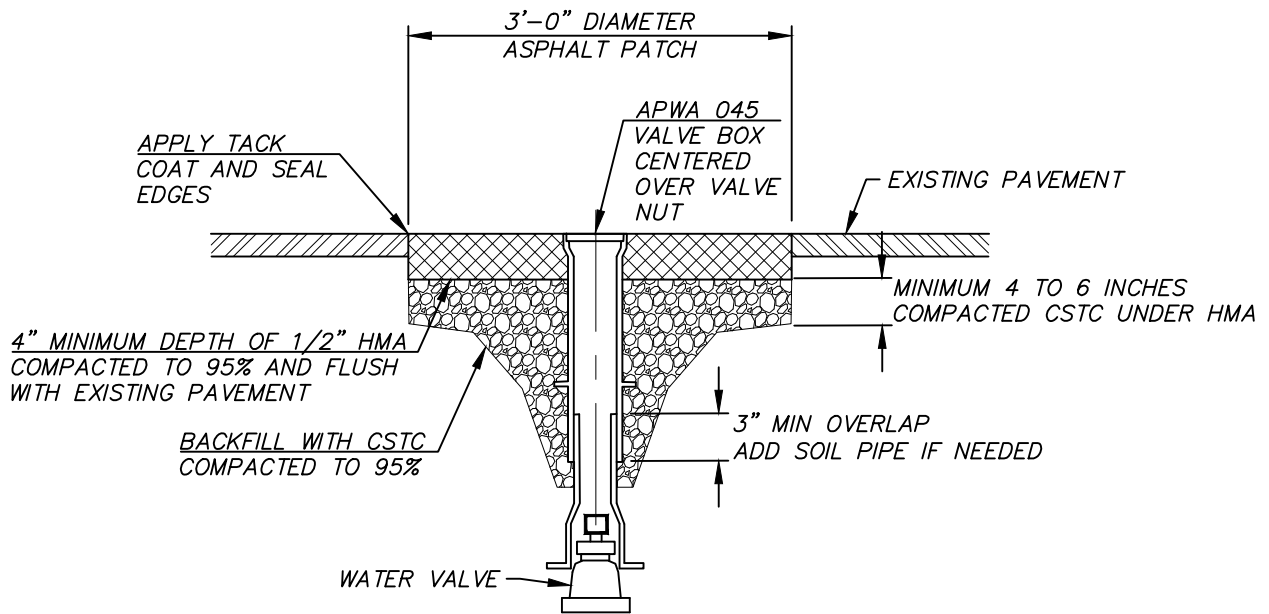


**NOTES**

1. THE COMPLETED PATCH SHALL BE FLUSH WITH THE SURROUNDING FINAL GRADE, SHALL NOT BE MORE THAN 1/8" FLUSH WITH THE SURROUND PAVEMENT, AND SHALL BE SMOOTH FOR TRAFFIC.
2. WHEN RAISING THE VALVE BOX TO FINISHED GRADE, EXCAVATE CASTING TO A DEPTH NECESSARY TO VERIFY CASTING OVERLAPS SOIL PIPE BY 3". ADD SOIL PIPE AS NEEDED. VALVE BOX SHALL BE CENTERED OVER THE VALVE NUT.
3. SLIP CANS ARE NOT ALLOWED WHEN RAISING VALVE BOXES TO GRADE.

REV. 10/20/17

**VALVE BOX ASPHALT COLLAR DETAIL FOR NON-PAVED AREAS**

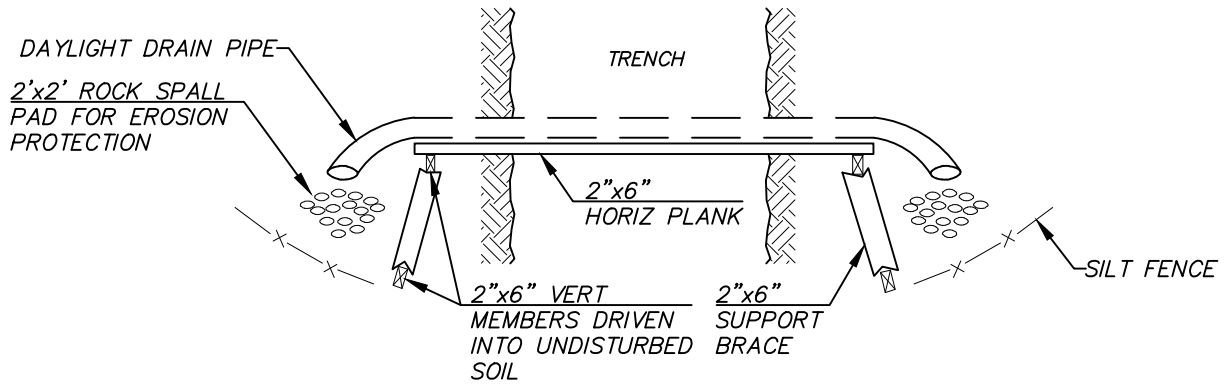


**NOTES**

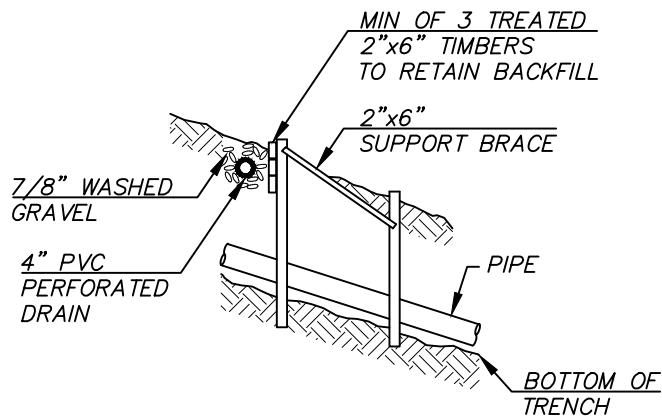
1. VALVE CANS SHALL BE RAISED TO GRADE AFTER PLACEMENT OF THE ASPHALT'S FINAL LIFT AND WITHIN 48 HOURS UNLESS OTHERWISE APPROVED BY THE DISTRICT.
2. NEATLY REMOVE ASPHALT AROUND EXISTING VALVE CASTING.
3. EXCAVATE VALVE CASTING TO A DEPTH NECESSARY TO RAISE CASTING AND VERIFY CASTING OVERLAPS SOIL PIPE BY 3". ADD SOIL PIPE AS NEEDED. VALVE BOX SHALL BE CENTERED OVER THE VALVE NUT.
4. SLIP CANS ARE NOT ALLOWED.
5. BACKFILL WITH CSTC COMPACTED TO 95% (MODIFIED PROCTOR).
6. INSTALL 1/2" HMA IN 2-INCH LIFTS, TO A COMPACTED DEPTH EQUAL TO THE EXISTING PAVEMENT OR A MINIMUM OF 4", WHICHEVER IS GREATER. TACK ALL EDGES AND SEAL FINISH JOINTS WITH TAR AND SAND.
7. THE COMPLETED PATCH SHALL BE FLUSH WITH THE SURROUNDING PAVEMENT, SHALL NOT VARY FROM BEING FLUSH BY MORE THAN 1/8", AND SHALL BE SMOOTH FOR TRAFFIC.

REV. 10/20/17

**VALVE BOX PAVEMENT PATCH DETAIL AND PAVED AREAS**



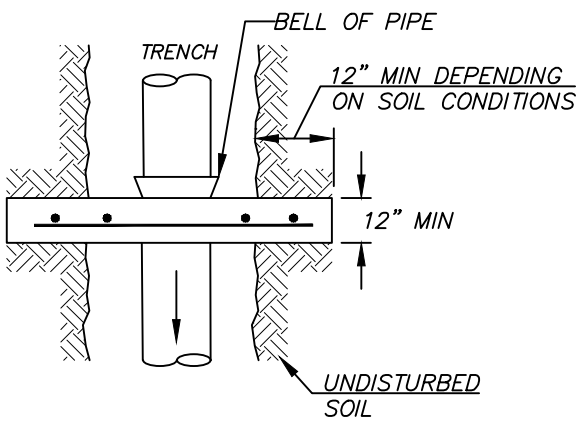
**PLAN**



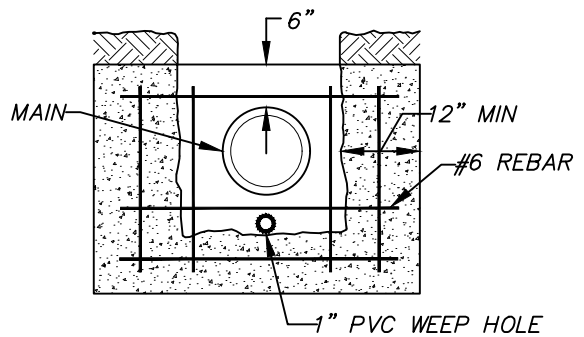
**PROFILE**

REV. 10/20/17

**HILL HOLDER**



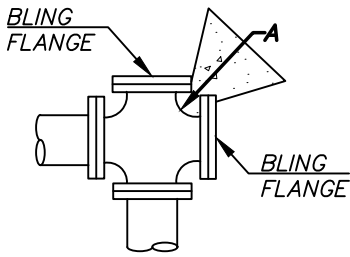
**PLAN**



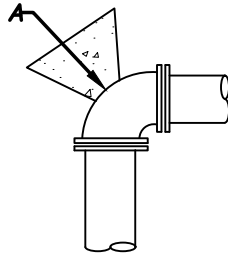
**ELEVATION**

**PIPE ANCHOR**

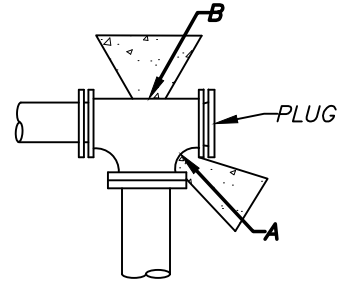
REV. 10/20/17



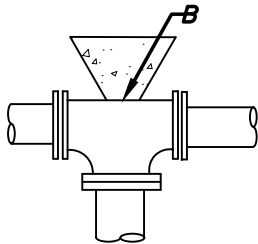
**CAPPED CROSS**



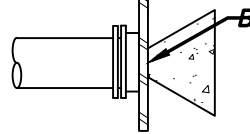
**90° BEND**



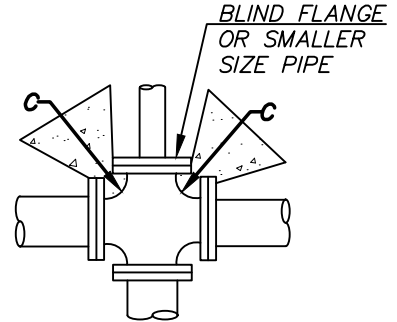
**TEE**



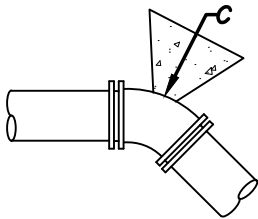
**TEE**



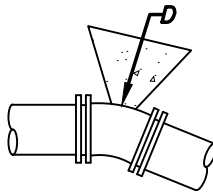
**CAP**



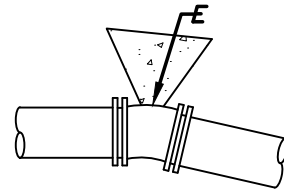
**CROSS**



**45° BEND**



**22 1/2° BEND**



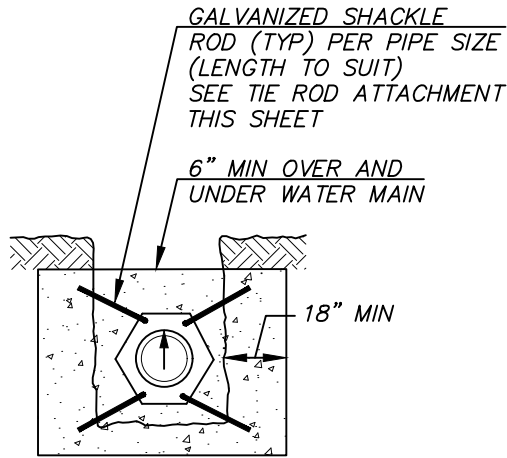
**11 1/4° BEND**

**THRUST BLOCK TABLE**  
MIN BEARING AREA AGAINST UNDISTURBED SOIL (SF)

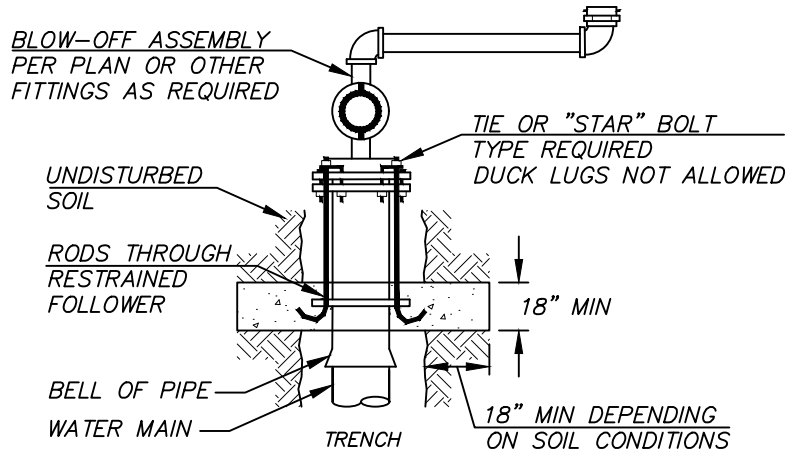
PIPE SIZE	A(FT <sup>2</sup> )	B(FT <sup>2</sup> )	C(FT <sup>2</sup> )	D(FT <sup>2</sup> )	E(FT <sup>2</sup> )	X
4"	3	1	1	1	1	NONE
6"	4	4	2	1	1	NONE
8"	7	6	4	2	1	4
10"	11	10	6	3	2	6
12"	16	14	9	5	3	9
14"	22	19	12	6	3	12
16"	29	25	16	8	4	16
18"	36	31	20	10	5	20
20"	45	39	24	13	6	24
22"	54	47	29	15	8	29
24"	64	56	35	18	9	35
28"	87	76	48	24	12	48
30"	101	87	55	28	14	55
36"	145	125	78	40	20	78
42"	197	171	107	55	27	107
48"	257	223	140	71	36	140

**NOTES**

1. BEARING AREA OF CONCRETE THRUST-BLOCK BASED ON 200 PSI PRESSURE AND SAFE SOIL BEARING LOAD OF 2,000 POUNDS PER SQUARE FOOT.
2. AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES AND SOIL CONDITIONS.
3. CONCRETE BLOCKING SHALL BE CAST-IN-PLACE AND HAVE A MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.
4. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING OF JOINT.
5. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATION PRESSURE UNDER ALL CONDITIONS OF SERVICE.



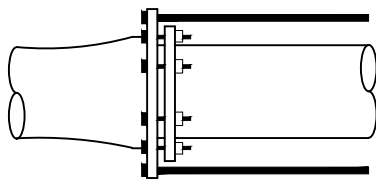
**ELEVATION**



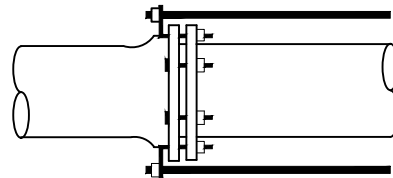
**PLAN**

**DEADMAN**

REV. 10/18/17



**CAST OF LUGS**



**TIE BOLT**

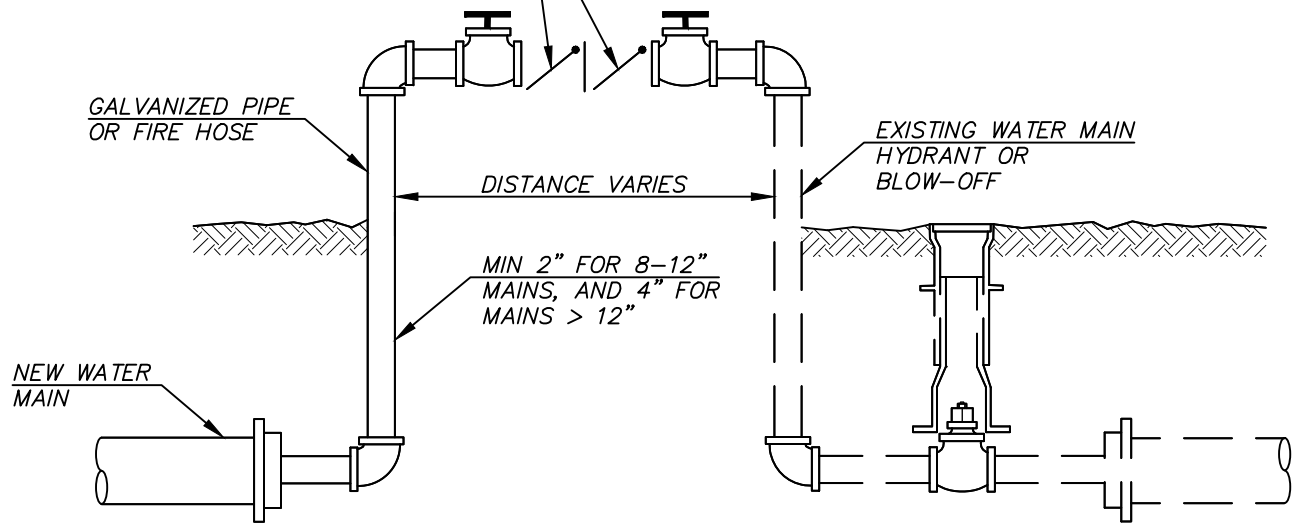
SIZE	PRESSURE PSI	FORCE IN POUNDS	NUMBER OF TIE RODS												
			2	3	4	6	8	10	12	14	16	24			
3"	300	2,120	3/8"												
4"	300	3,780	3/8"												
6"	300	8,500	5/8"	1/2"		3/8"									
8"	300	15,100		3/4"	5/8"	1/2"									
10"	275	21,620			3/4"	5/8"	1/2"								
12"	250	33,930				3/4"	5/8"								
14"	250	46,200					3/4"								
16"	225	45,250					3/4"		5/8"						
18"	200	50,900					3/4"		5/8"						
20"	200	62,840						3/4"		5/8"					
24"	200	90,480								3/4"					
30"	200	141,370									1"	7/8"			
36"	200	203,580										1"	7/8"		

**TIE ROD ATTACHMENTS**

REV. 10/18/17



DOUBLE CHECK VALVES TO MATCH PIPE DIAMETER APPROVED IN WASHINGTON STATE AND TESTED WHENEVER INSTALLED OR MOVED. PROVIDE CERTIFICATION TO DISTRICT.

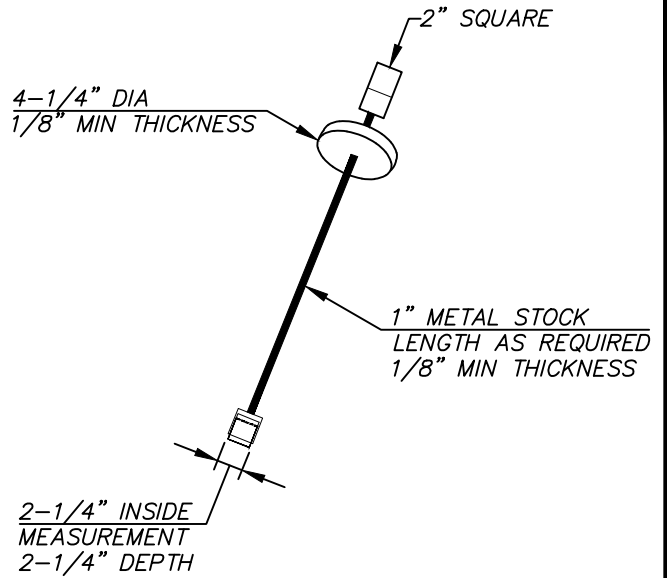
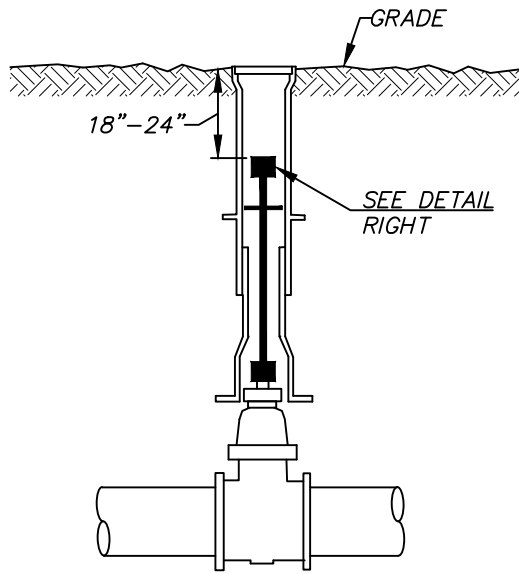


**NOTES**

1. FOR BELOW GROUND INSTALLATION, USE TYPE II BLOW-OFF ASSEMBLY, MODIFIED AS REQUIRED BY DISTRICT. INSTALL IN AREA NOT SUBJECT TO FLOODING.
2. ALL FILLING AND FLUSHING SHALL BE METERED BY DISTRICT. PROVIDE SPACE FOR INSTALLATION OF METER.
3. ALL NEW MAINS SHALL BE KEPT SEPARATE FROM THE DISTRICT'S EXISTING SYSTEM UNTIL THE NEW MAINS ARE TESTED AND ACCEPTED. FINAL CONNECTION REQUIRES 100% INSPECTION BY DISTRICT.
4. PROTECT ABOVE GROUND INSTALLATION FROM DAMAGE AND FREEZING.

**TESTING CONNECTION**

REV. 10/18/17



**NOTE**

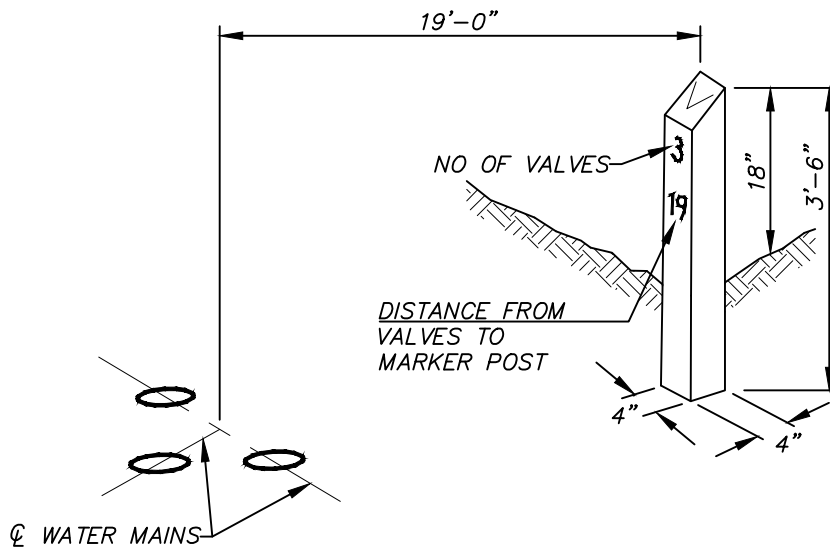
EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN 36" BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG. ONLY ONE EXTENSION TO BE USED PER VALVE. VALVE EXTENSION TO BE WITHIN 18" TO 24" OF FINISHED GRADE.

**NOTE**

ALL EXTENSIONS ARE TO BE MADE OF STEEL SIZED AS NOTED, AND PAINTED WITH TWO COATS OF CARBON ELASTIC (ATCO #222) AS SPECIFIED BY PRESERVATIVE PAINT CO. OR AN APPROVED EQUAL.

**VALVE OPERATING NUT EXTENSION**

REV. 10/24/17

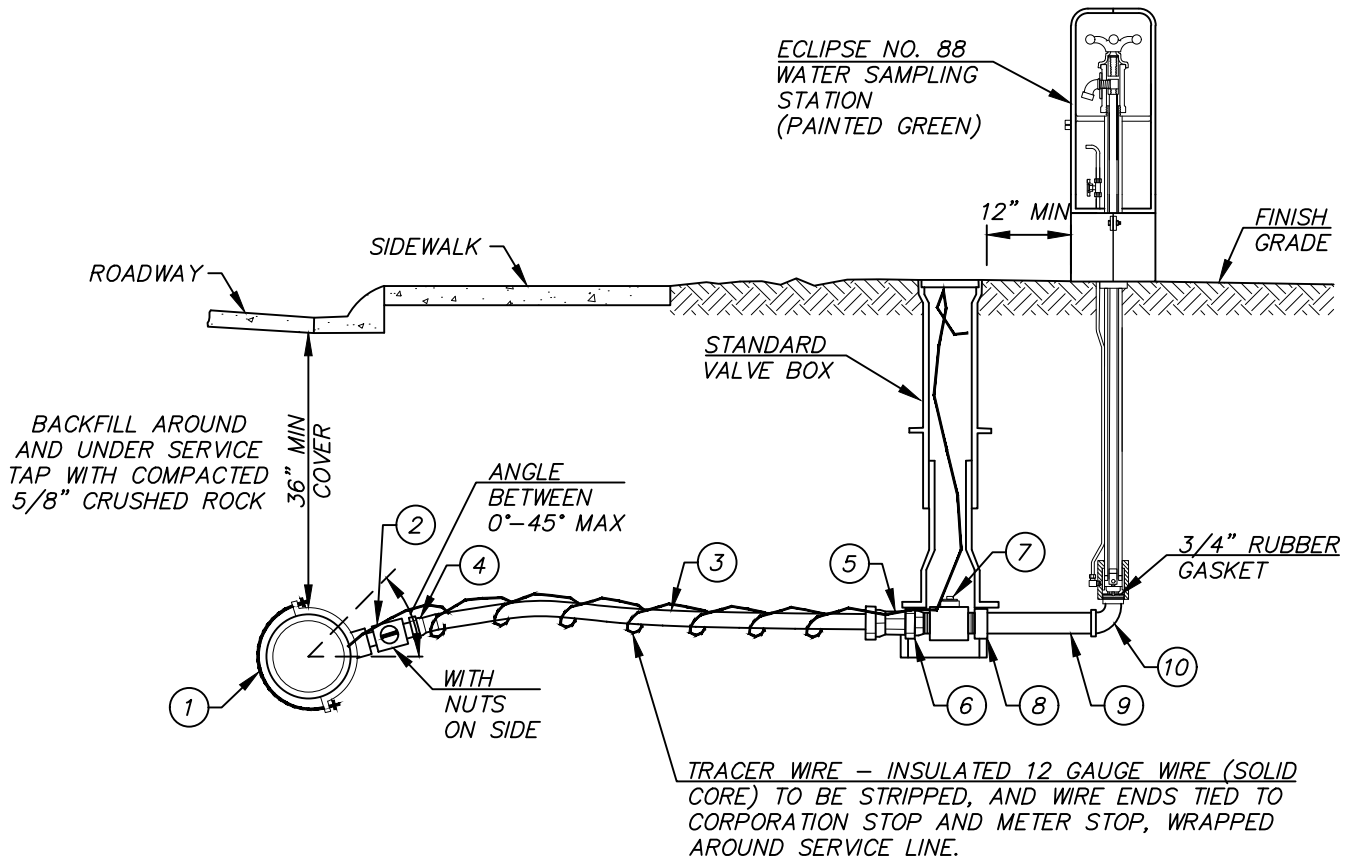


**NOTES**

1. VALVE MARKER POST SHALL BE A FOGTITE VALVE MARKER OR APPROVED EQUAL.
2. THE POST SHALL BE SET AT RIGHT ANGLES TO THE ROADWAY FROM THE VALVE AND SHALL BE SITUATED IN A SAFE AND REASONABLY CONSPICUOUS LOCATION.
3. FOR MORE THAN ONE VALVE, THE NUMBER OF VALVES SHALL BE NOTED NEAR THE TOP OF THE POST WITH THE DISTANCE TO THE CENTER OF THE VALVE (OR CLUSTER) MARKED BELOW.
4. PAINT VALVE MARKER WITH (2) COATS ALKYD INDUSTRIAL ENAMEL SAFETY YELLOW AND APPLY NUMBER OF VALVES AND DISTANCE (TO THE CLOSEST FOOT) TO THE LINE VALVE CAPS IN COLE NUMBERS APPLIED WITH WATERPROOF LIQUID NAILS.

**VALVE MARKER POST**

REV. 10/24/17



ITEM	DESCRIPTION	FORD PART NO	MUELLER PART NO	A.Y. MCDONALD	OTHER PART NO.	QTY
①	1" SADDLE I.P.T.	N/A	N/A	N/A	ROMAC 202S	1
②	1" CORPSTOP (MIPxMIP)	FB500-4	B2996	3131B1	N/A	1
③	1" HDPE PIPE	— DRISCOPLEX	5100 ULTRA LINE	SDR7 200 PSI IPS OR PW EAGLE—		1
④	1" FIPxCOMPRESSION ADAPTOR W/ STAINLESS STEEL STIFFENER	C16-44P *	H15454.10	4754-33	N/A	2
⑤	1" PAC JOINT x 1" MIP	INSERT-72	505142	6136	N/A	2
⑥	1" FIP x 3/4 FIP REDUCER	C86-44	H15429	475-CP	N/A	1
⑦	3/4" BALL CORP MIP x MIP	C11-43	N/A	N/A	N/A	1
⑧	3/4" COUPLING	FB500-3	N/A	N/A	N/A	1
⑨	3/4" BRASS NIPPLE	N/A	N/A	N/A	N/A	1
⑩	3/4" 90° BRASS STREET ELL	N/A	N/A	N/A	N/A	1

\* QUICK JOINT ACCEPTABLE, GRIP JOINT NOT ACCEPTABLE

**NOTES**

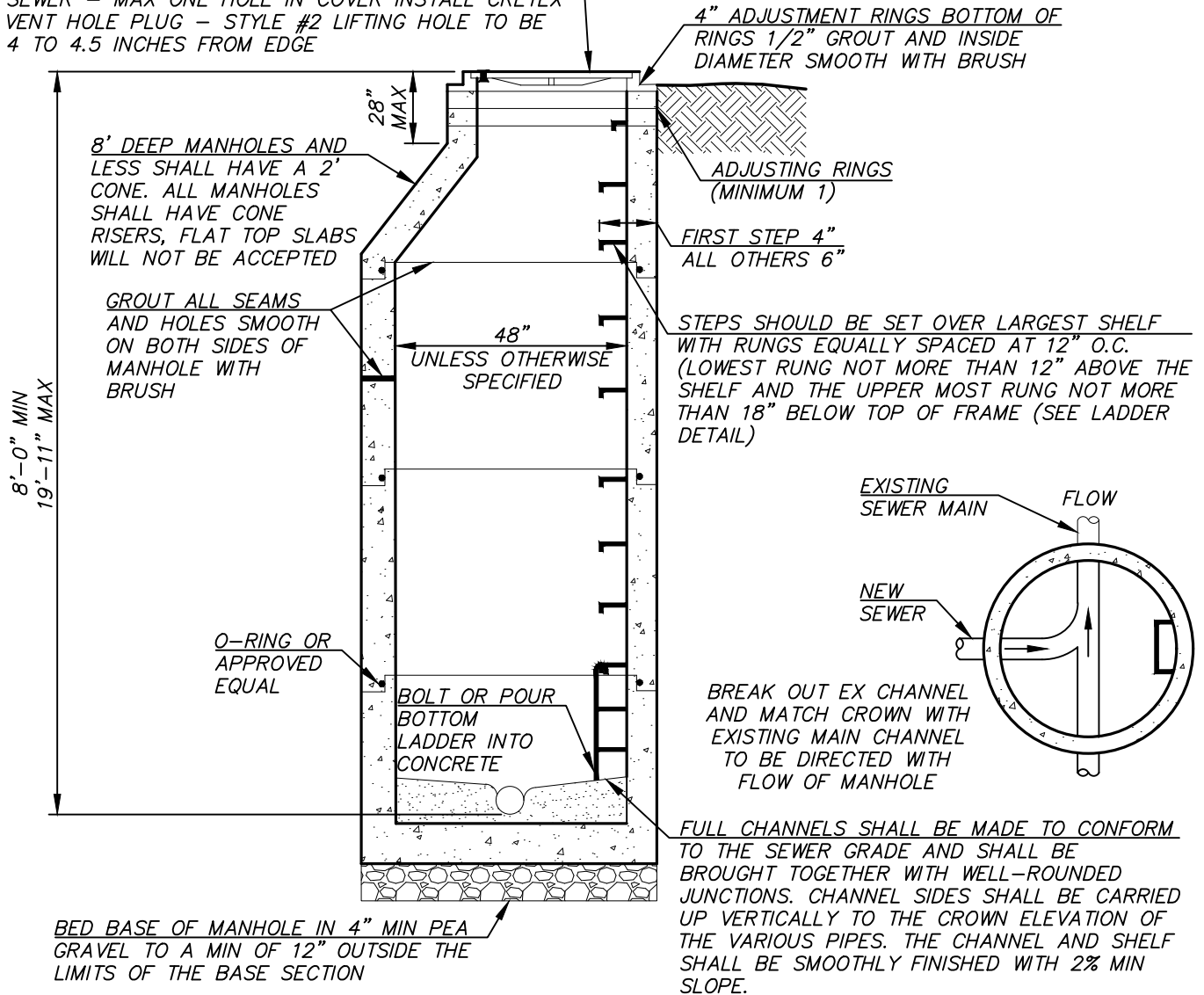
- ALL PIPE AND FITTINGS TO BE ASSEMBLED WITH TEFLON TAPE AND PIPE DOPE UNLESS OTHERWISE NOTED.
- SERVICE LINES SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN.
- THE SERVICE LINE SHALL BE INSTALLED TO ALLOW FOR THE FAR SIDE OF THE SAMPLE STATION TO BE INSTALLED IN THE R/O/W OR EASEMENT LINE, UNLESS OTHERWISE DIRECTED BY THE DISTRICT.

**WATER SAMPLING STATION**

REV. 10/30/17

## **SEWER DETAILS**

OLYMPIC FOUNDRY # MH 30 TRAFFIC TYPE MARKED:  
SEWER - MAX ONE HOLE IN COVER INSTALL CRETEX  
VENT HOLE PLUG - STYLE #2 LIFTING HOLE TO BE  
4 TO 4.5 INCHES FROM EDGE

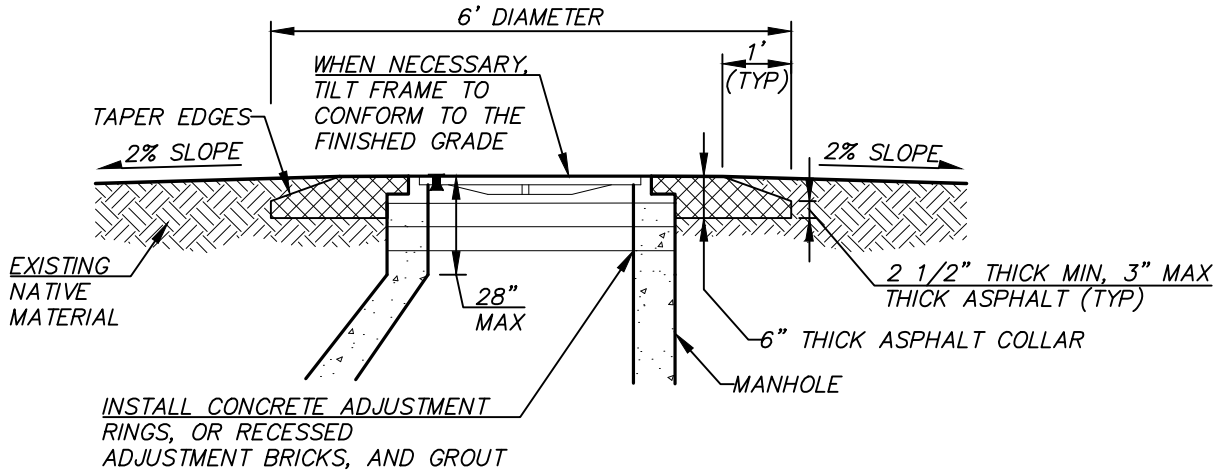


**NOTES**

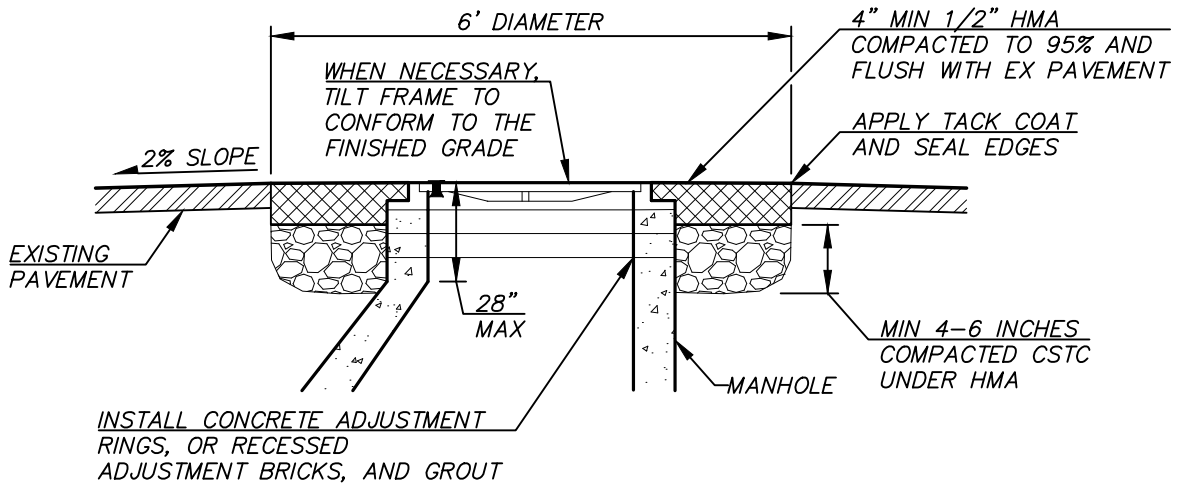
1. BACKFILLING AND MECHANICAL COMPACTION SHALL BE PERFORMED CAREFULLY SO THAT NO DAMAGE IS DONE TO THE PIPE OR TO ITS ALIGNMENT. THE DISTRICT MAY DIRECT THE CONTRACTOR TO USE SPECIAL BACKFILL TECHNIQUES WHEN THE DISTRICT DEEMS IT NECESSARY. COMPACTION IS TO MEET KING COUNTY REQUIREMENTS.
2. MANHOLES SET IN PAVED STREETS OR OTHER PAVED AREAS SHALL BE SET TO FINISHED GRADE OF THE PAVING, AND WHEN REQUIRED THE MANHOLE FRAME SHALL BE TILTED TO CONFORM TO THE GRADE OF THE PAVED SURFACE. REMOVE ASPHALT FROM COVER AFTER PAVING.
3. ASPHALT PATCH WILL BE REQUIRED ON ALL MANHOLES INSTALLED ON THE SHOULDER OF THE ROADWAY. (SEE SANITARY MANHOLE ASPHALT PATCH DETAIL).
4. IF MANHOLE IS INSTALLED ON UNIMPROVED GROUND SET MANHOLE TOP 6" ABOVE GRADE WITH LOCKING COVER AND FRAME (OLYMPIC FOUNDRY #MH 30 D/T) AND ASPHALT PATCH (SEE MANHOLE ASPHALT COLLAR DETAIL).
5. BASE SECTION OPENINGS TO RECEIVE PIPE SHALL BE CIRCULAR CORE-DRILLED OR KNOCK-OUTS. KOR-N-SEAL CONNECTOR REQUIRED.
6. HORIZONTAL DISTANCE BETWEEN MANHOLES SCALED FROM WORKSHEETS AND ROADWAY PLAN AND PROFILES. ACTUAL DISTANCES TO BE COMPUTED AT TIME OF STAKING.
7. MANHOLES BETWEEN 6- FEET AND 8- FEET DEEP REQUIRE WRITTEN DISTRICT APPROVAL. MANHOLES LESS THAN 6 FEET DEEP ARE NOT ALLOWED.
8. MANHOLES 20' AND GREATER IN DEPTH SHALL BE 60" DIAMETER. FOR PIPE 15" OR GREATER DIAMETER, MANHOLES SHALL BE 72" DIAMETER.

**STANDARD SANITARY MANHOLE**

REV. 10/19/17



**MANHOLE ASPHALT COLLAR FOR NON-PAVED AREAS** REV. 10/19/17



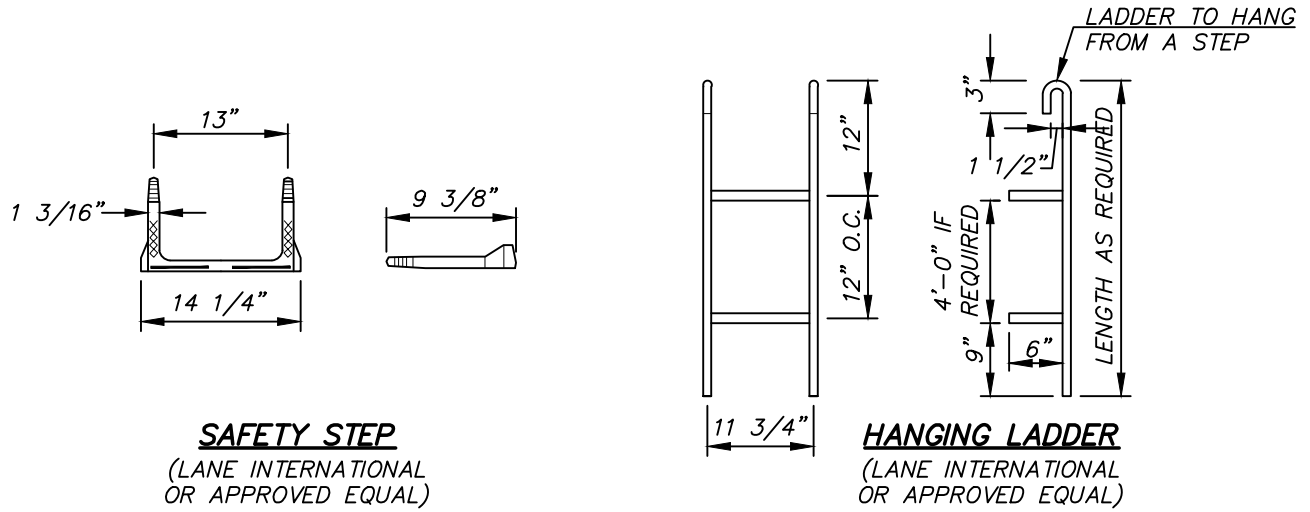
**MANHOLE PAVEMENT PATCH FOR PAVED AREAS** REV. 10/19/17

**NOTES**

1. CONTRACTOR SHALL WARRANTY MANHOLE ADJUSTMENT AREA FREE FROM LEAKS FOR ONE YEAR.
2. IN PAVED AREAS, MANHOLE FRAMES SHALL BE RAISED TO GRADE AFTER PLACEMENT OF THE ASPHALT'S FINAL LIFT AND WITHIN 48 HOURS UNLESS OTHERWISE APPROVED BY THE DISTRICT.
3. IN PAVED AREAS, NEATLY REMOVE ASPHALT AROUND EXISTING MANHOLE FRAME.
4. INSTALL CHANNEL BOARD IN MANHOLE PRIOR TO ANY WORK, AND REMOVE AFTER FINAL ADJUSTMENT.
5. PRIOR TO ADJUSTMENT, NOTIFY DISTRICT IF THE FINAL MANHOLE NECK WILL EXCEED 28".
6. IN PAVED AREAS, EXCAVATE AROUND EXISTING MANHOLE FRAME TO A MIN. DEPTH OF 12".
7. REMOVE FRAME AND COVER, AND INSTALL ADJUSTMENT RINGS, TILTING FRAME AS NECESSARY TO MATCH EXISTING GRADE. ADJUSTMENT BRICKS RECESSED FOR GROUTING, CAN BE UTILIZED. REINSTALL FRAME AND COVER.
8. IN PAVED AREAS BACKFILL WITH CRUSHED SURFACING TOP COURSE (CSTC) COMPACTED TO 95% (MODIFIED PROCTOR).
9. IN NON-PAVED AREAS, BACKFILL WITH APPROVED BACKFILL MATERIAL COMPACTED TO 95%.
10. IN PAVED AREAS, INSTALL 1/2" HMA IN 2-INCH LIFTS, TO A COMPACTED DEPTH EQUAL TO THE EXISTING PAVEMENT OR A MINIMUM OF 4", WHICHEVER IS GREATER. TACK ALL EDGES AND SEAL FINISH JOINTS WITH TAR AND SAND.
11. IN UN-PAVED AREAS, INSTALL ASPHALT PATCH TO A MINIMUM COMPACTED DEPTH OF 6" AS SHOWN ABOVE.
12. GROUT MANHOLE NECK. "JETSET" NOT ALLOWED. DO NOT RUN GROUT ONTO MANHOLE FRAME.

REV. 10/19/17

**GENERAL NOTES FOR ASPHALT COLLAR/PATCHES AROUND MANHOLES**



**SAFETY STEP**

(LANE INTERNATIONAL OR APPROVED EQUAL)

**HANGING LADDER**

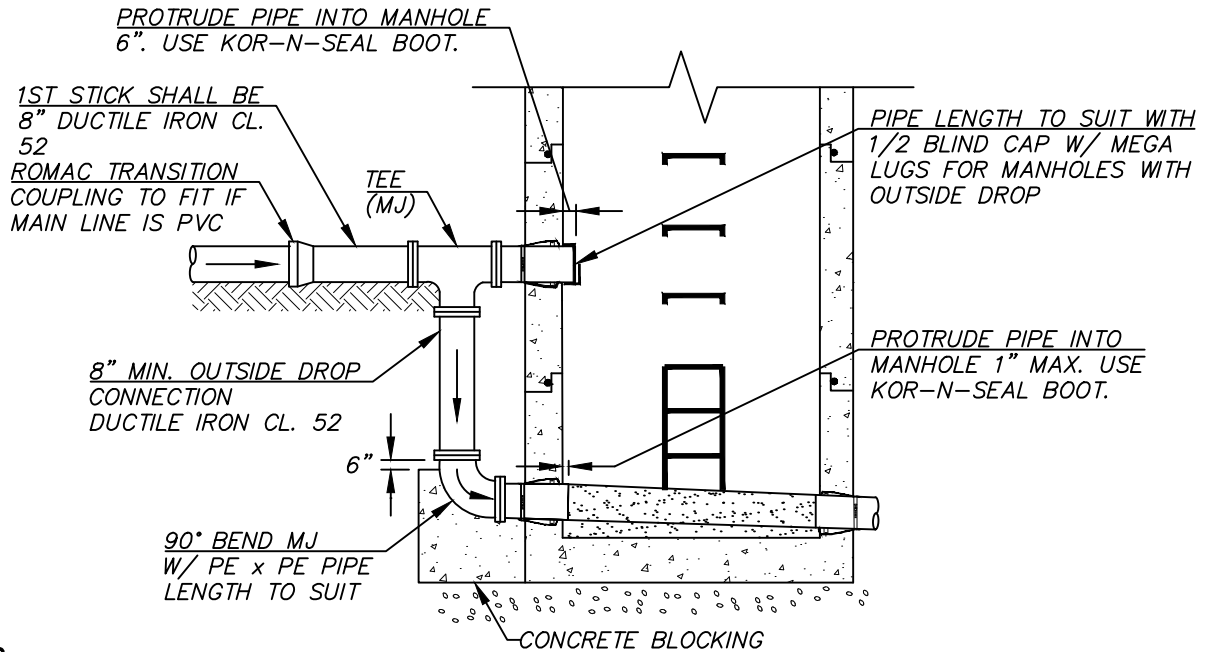
(LANE INTERNATIONAL OR APPROVED EQUAL)

**NOTES**

1. POLYPROPYLENE PLASTIC STEPS SHALL BE A POLYPROPYLENE PLASTIC STEP INJECTION MOLDED AROUND A 1/2 INCH DIAMETER ASTM A-615, GRADE 60, STEEL REINFORCING BAR. INSTALLATION AS PER THE MANUFACTURER'S SPECIFICATIONS.
2. POLYPROPYLENE PLASTIC LADDER SHALL HAVE A POLYPROPYLENE PLASTIC STEP INJECTION MOLDED AROUND A 1/2 INCH DIAMETER ASTM A-615, GRADE 60, STEEL REINFORCING BAR, AND A POLYPROPYLENE PLASTIC RAIL INJECTION MOLDED AROUND A 9/16 INCH DIAMETER ASTM C-1018, COLD DRAWN BAR. INSTALLATION AS PER THE MANUFACTURER'S SPECIFICATION.

**MANHOLE STEP AND LADDER**

REV. 10/19/17

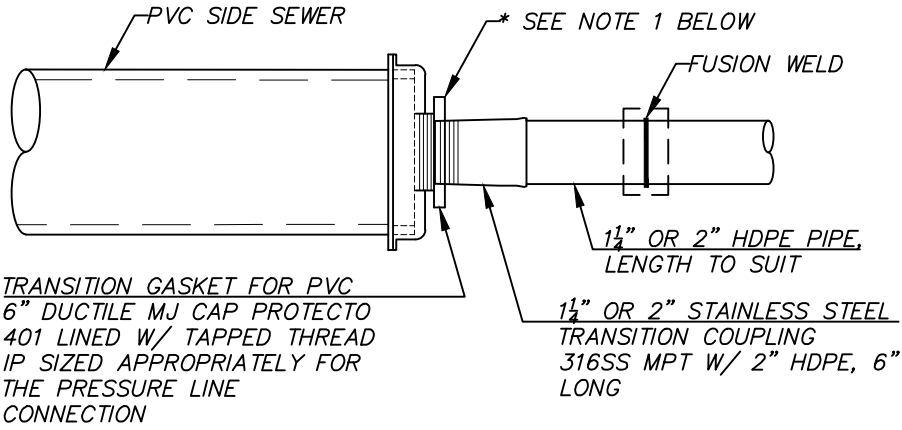


**NOTES**

1. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE PROTECTO 401 LINED.
2. DROP MANHOLE SHALL MEET ALL REQUIREMENTS AS STATED IN THE STANDARD MANHOLE DETAIL, MATERIALS AND CONSTRUCTION NOTES.
3. DROP MANHOLES SHALL ONLY BE USED IN STRAIGHT FLOW-THROUGH LOCATIONS (NO 90° TURNS).
4. ALL DUCTILE IRON FITTINGS WITH MEGA-LUGS.
5. VERTICAL BEND MAY BE REQUIRED DUE TO PIPE SLOPE CONDITIONS AT DUCTILE IRON TEE.

**DROP MANHOLE**

REV. 10/19/17

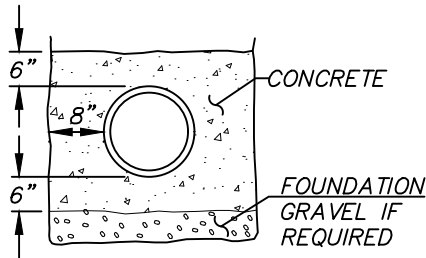


**NOTES**

1. FOR 1-1/4" SERVICE USE 2"x1-1/4" BRASS BUSHING.
2. FOR 2" SERVICE, OMIT BUSHING.

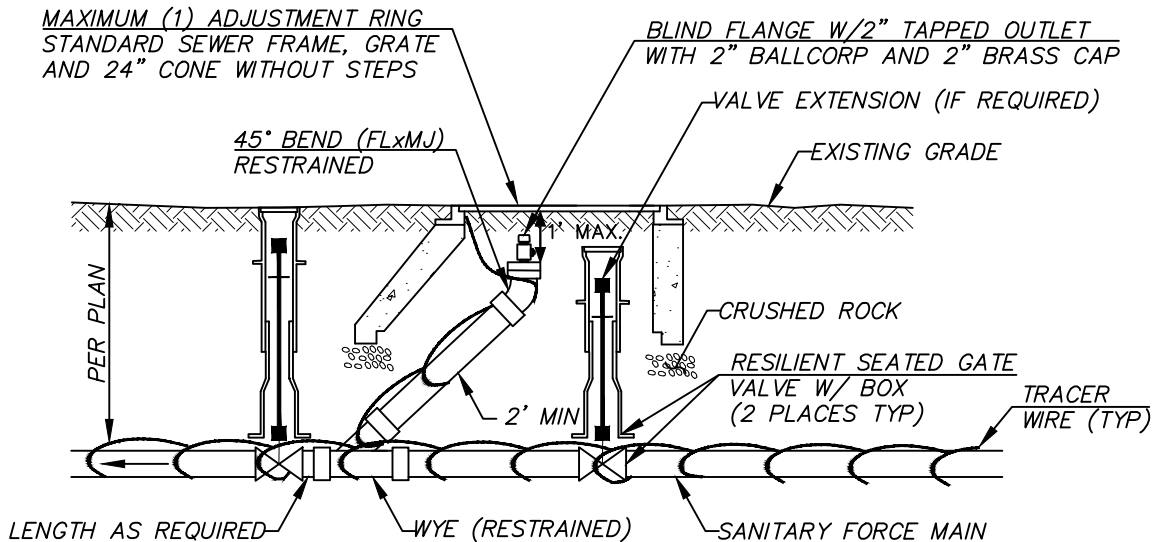
**PRESSURE LINE CONNECTION**

REV. 10/19/17



**CONCRETE ENCASEMENT FOR SANITARY SEWERS**

REV. 10/19/17



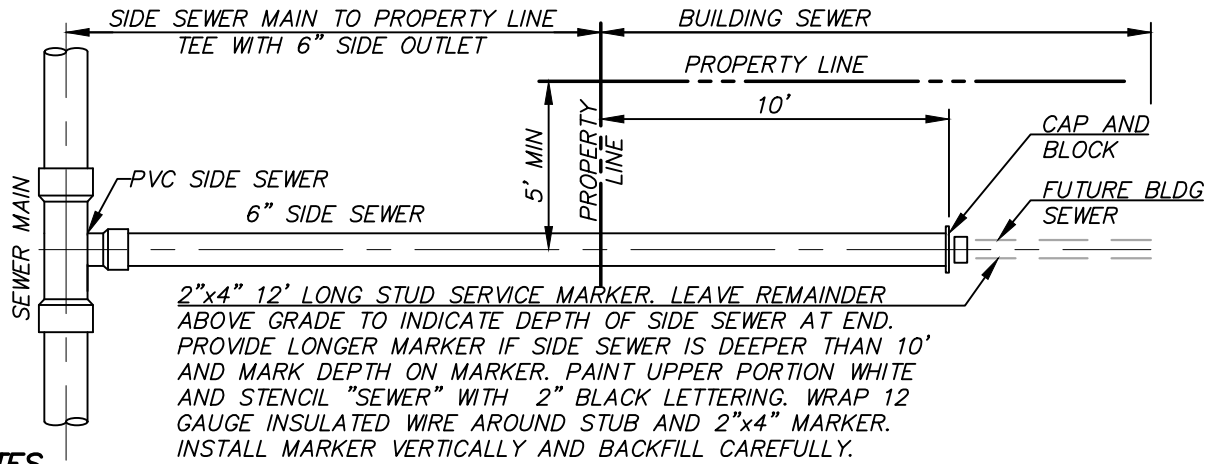
**NOTES**

1. VALVES, VALVE BOXES AND VALVE EXTENSIONS SHALL MEET THE SAME REQUIREMENTS AS SHOWN IN THE STANDARD WATER DETAILS. VALVE BOX COVERS SHALL OLYMPIC FOUNDRY 940 OR EQUAL MARKED "SEWER".
2. VALVE MARKER POSTS SHALL MEET THE SAME REQUIREMENTS AS SHOWN IN THE WATER DETAILS AND BE PAINTED AS SPECIFIED IN THE STANDARD CONSTRUCTION NOTES.
3. ALL D.I. PIPE AND FITTINGS SHALL BE PROTECTOR 401 EPOXY COATED. ALL PIPE AND FITTINGS SHALL BE RESTRAINED JOINT.

**SANITARY FORCE MAIN CLEANOUT TYPE II**

REV. 10/19/17





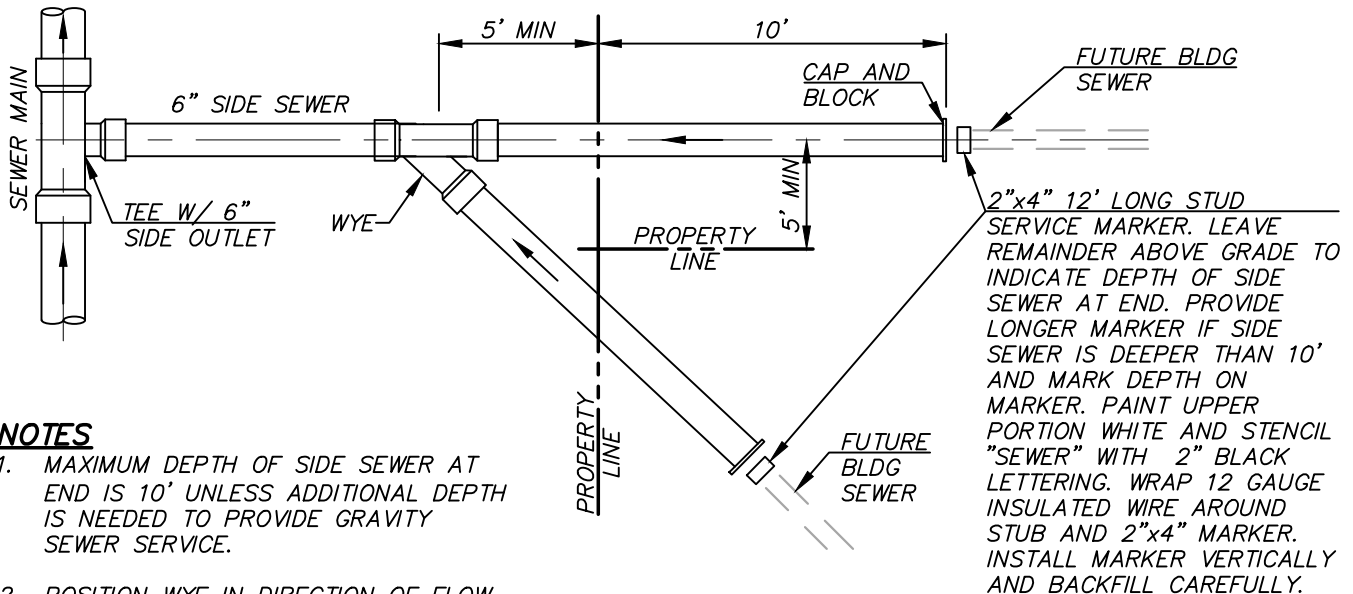
2"x4" 12' LONG STUD SERVICE MARKER. LEAVE REMAINDER ABOVE GRADE TO INDICATE DEPTH OF SIDE SEWER AT END. PROVIDE LONGER MARKER IF SIDE SEWER IS DEEPER THAN 10' AND MARK DEPTH ON MARKER. PAINT UPPER PORTION WHITE AND STENCIL "SEWER" WITH 2" BLACK LETTERING. WRAP 12 GAUGE INSULATED WIRE AROUND STUB AND 2"x4" MARKER. INSTALL MARKER VERTICALLY AND BACKFILL CAREFULLY.

**NOTES**

1. MAXIMUM DEPTH OF SIDE SEWER AT END IS 10' UNLESS ADDITIONAL DEPTH IS NEEDED TO PROVIDE GRAVITY SEWER SERVICE.
2. FOR MULTI-FAMILY AND/OR COMMERCIAL PROJECTS, SIDE SEWERS MAY BE EXTENDED, AT THE DISTRICT'S DISCRETION, FROM THE EDGE OF THE ROAD OR PROPERTY LINE TO WITHIN 3 FEET OF THE BUILDING FOUNDATION.

**SINGLE SIDE SEWER**

REV. 10/19/17



**NOTES**

1. MAXIMUM DEPTH OF SIDE SEWER AT END IS 10' UNLESS ADDITIONAL DEPTH IS NEEDED TO PROVIDE GRAVITY SEWER SERVICE.
2. POSITION WYE IN DIRECTION OF FLOW.

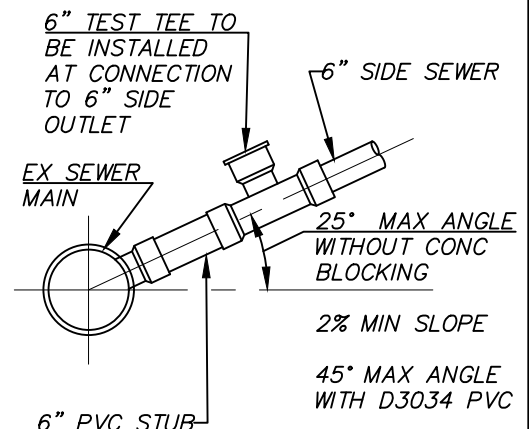
2"x4" 12' LONG STUD SERVICE MARKER. LEAVE REMAINDER ABOVE GRADE TO INDICATE DEPTH OF SIDE SEWER AT END. PROVIDE LONGER MARKER IF SIDE SEWER IS DEEPER THAN 10' AND MARK DEPTH ON MARKER. PAINT UPPER PORTION WHITE AND STENCIL "SEWER" WITH 2" BLACK LETTERING. WRAP 12 GAUGE INSULATED WIRE AROUND STUB AND 2"x4" MARKER. INSTALL MARKER VERTICALLY AND BACKFILL CAREFULLY.

**DOUBLE SIDE SEWER**

REV. 10/19/17

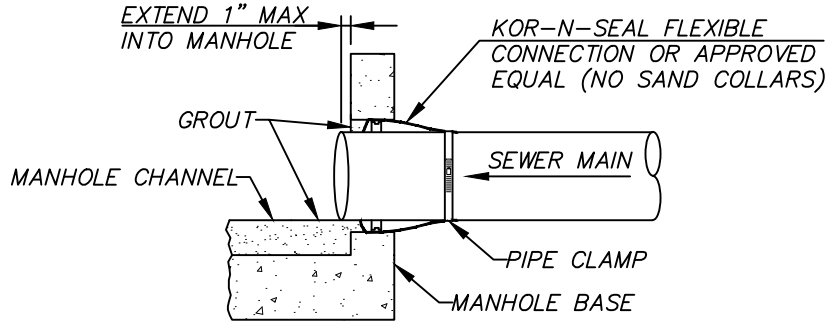
**NOTES**

1. CONNECTION OF NEW SIDE SEWER TO EXISTING MAIN MAY USE EITHER:
  - CUT IN TEE W/ PVC SLIP COUPLINGS.
  - ROMAC SST STAINLESS STEEL TAPPING SLEEVE W/ FL X MJ ADAPTER AND GASKET SIZED FOR D3034 PVC SIDE SEWER. ROMAC SIDE SEWER SADDLE, MODEL CB, IS NOT ALLOWED.
2. UNLESS OTHERWISE SHOWN ON PLAN, MINIMUM COVER FOR SIDE SEWERS (WHICHEVER IS LOWER):
  - 18" - PRIVATE PROPERTY
  - 3' - AT PROPERTY LINE
  - 2'-6" IF CROSSING A DITCH IN PUBLIC RIGHT OF WAY LOWER THAN THE LOWEST HOUSE ELEVATION



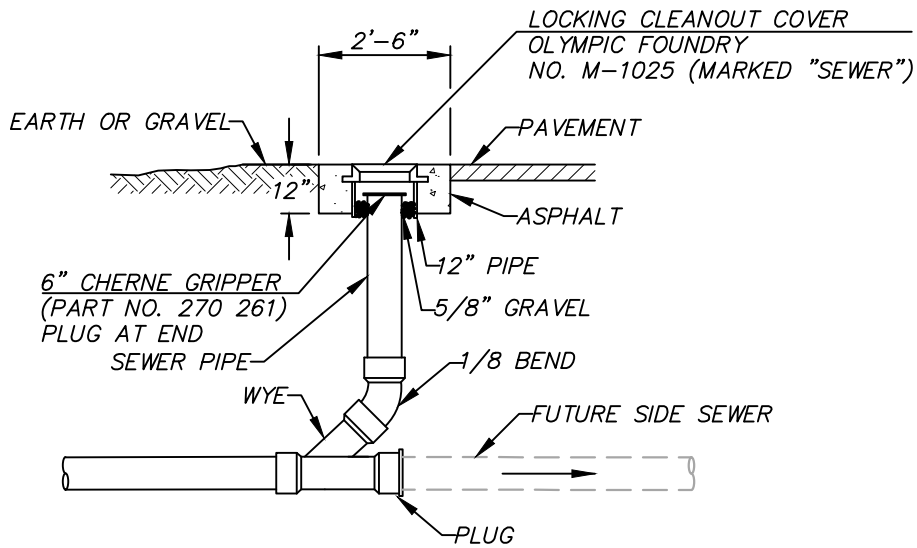
**SIDE SEWER DETAILS**

REV. 10/19/17



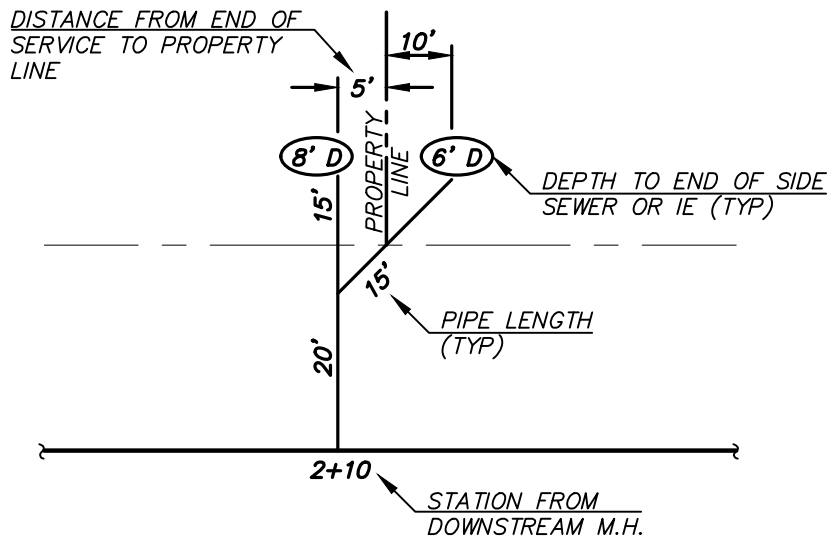
**SANITARY MANHOLE INLET CONNECTION**

REV. 10/19/17



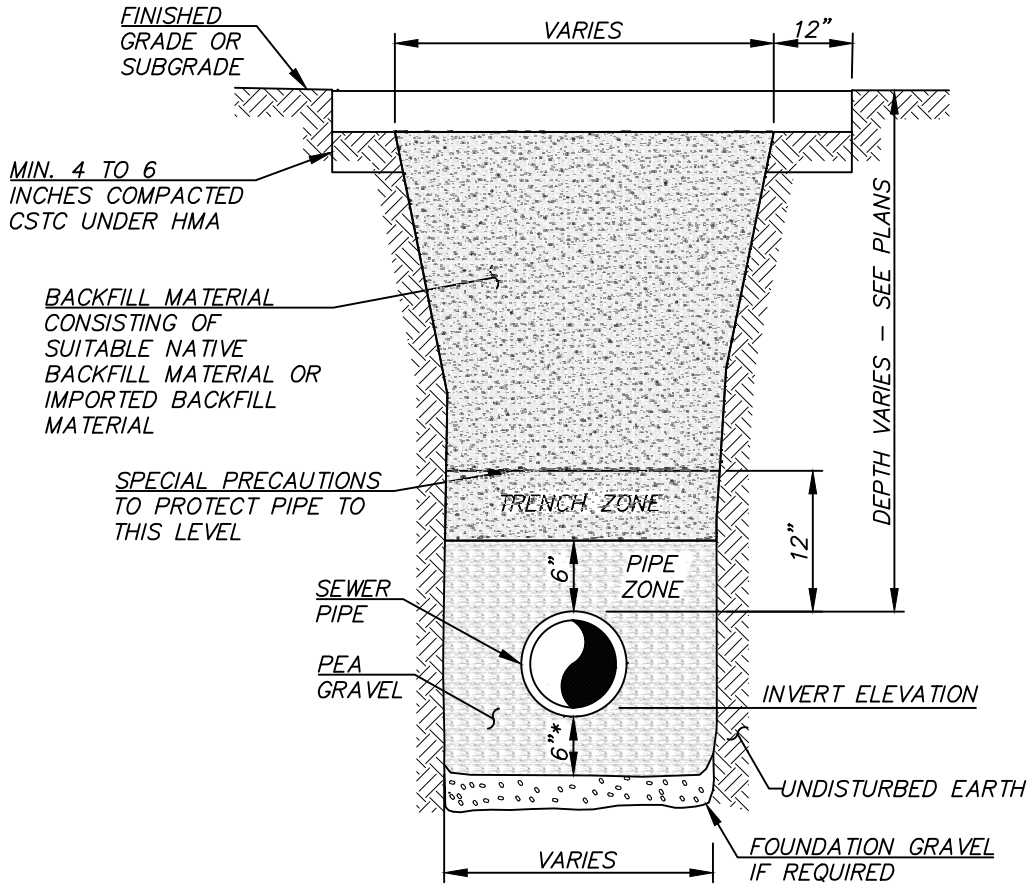
**SIDE SEWER CLEANOUT**

REV. 10/19/17



**SIDE SEWER AS-BUILT**

REV. 10/19/17

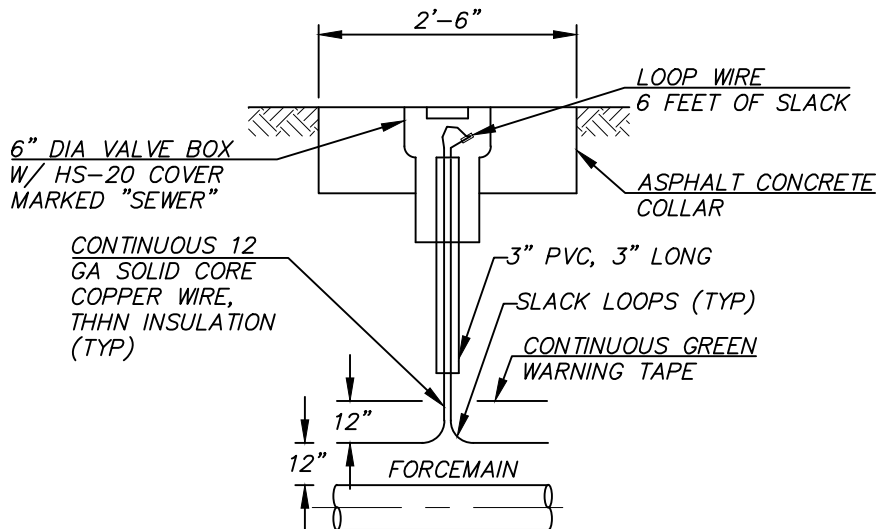


**NOTES**

1. \* FOR PIPE DEEPER THAN 18', PIPE BEDDING SHALL EXTEND 18" ABOVE CROWN OF PIPE
2. NOT TO SCALE

**SANITARY SEWER TRENCH SECTION**

REV. 10/30/17

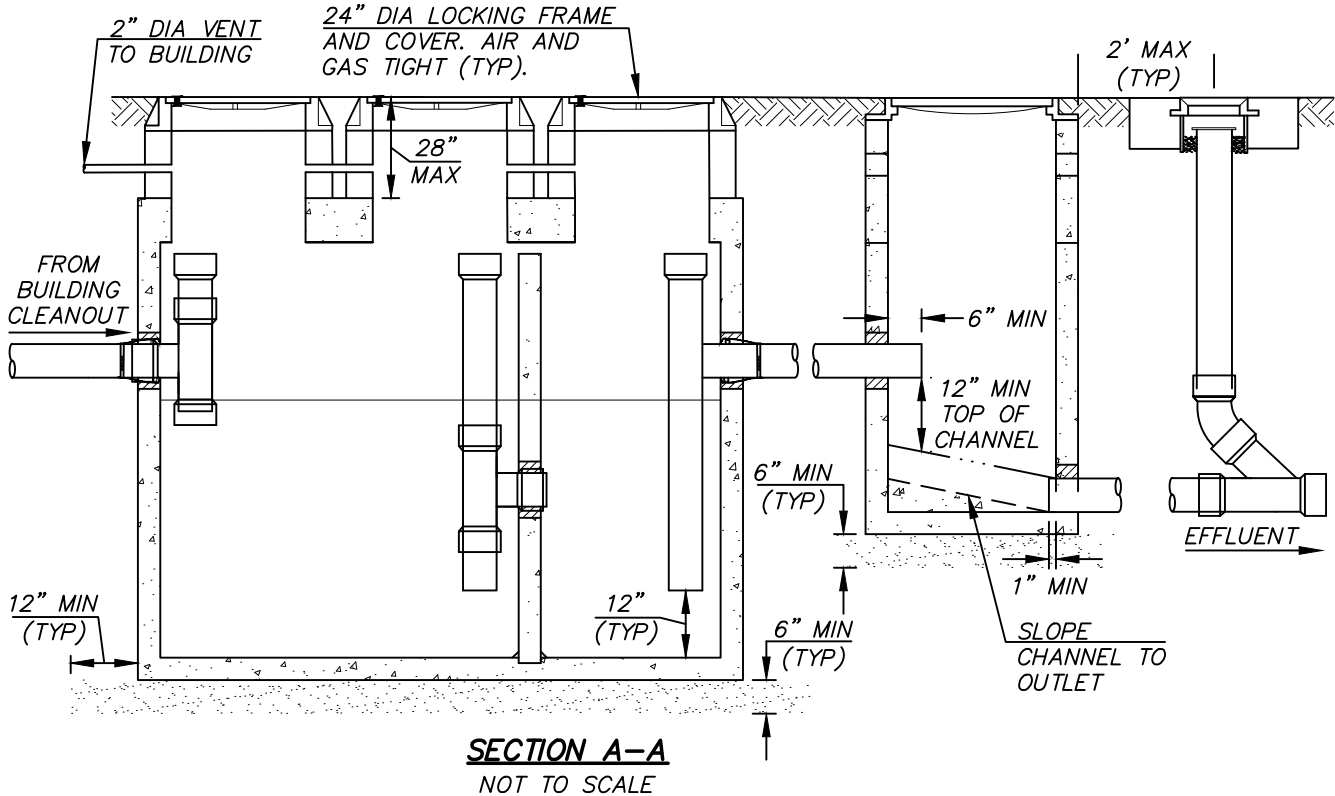
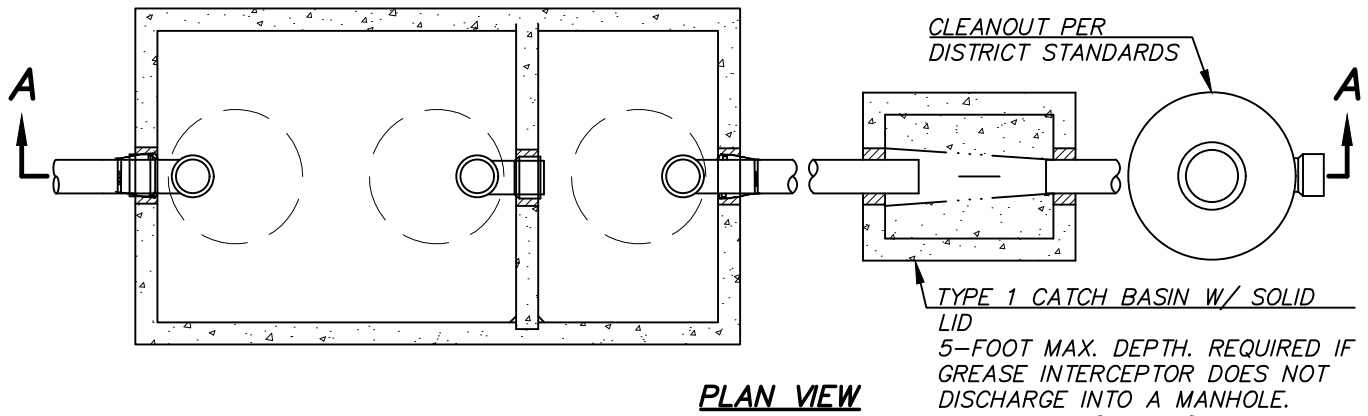


**NOTES**

1. LOCATE TEST BOX OVER CENTERLINE OF FORCEMAIN.
2. PROVIDE TEST BOX AT 500' INTERVALS AND AT BENDS.
3. PROVIDE 12" WIRE LOOP INSIDE VALVE BOX (TYP).
4. INLINE CONNECTORS ON WIRE ARE NOT ALLOWED.

**FORCEMAIN TRACER WIRE LOCATE STATION**

REV. 10/19/17



**CONSTRUCTION NOTES**

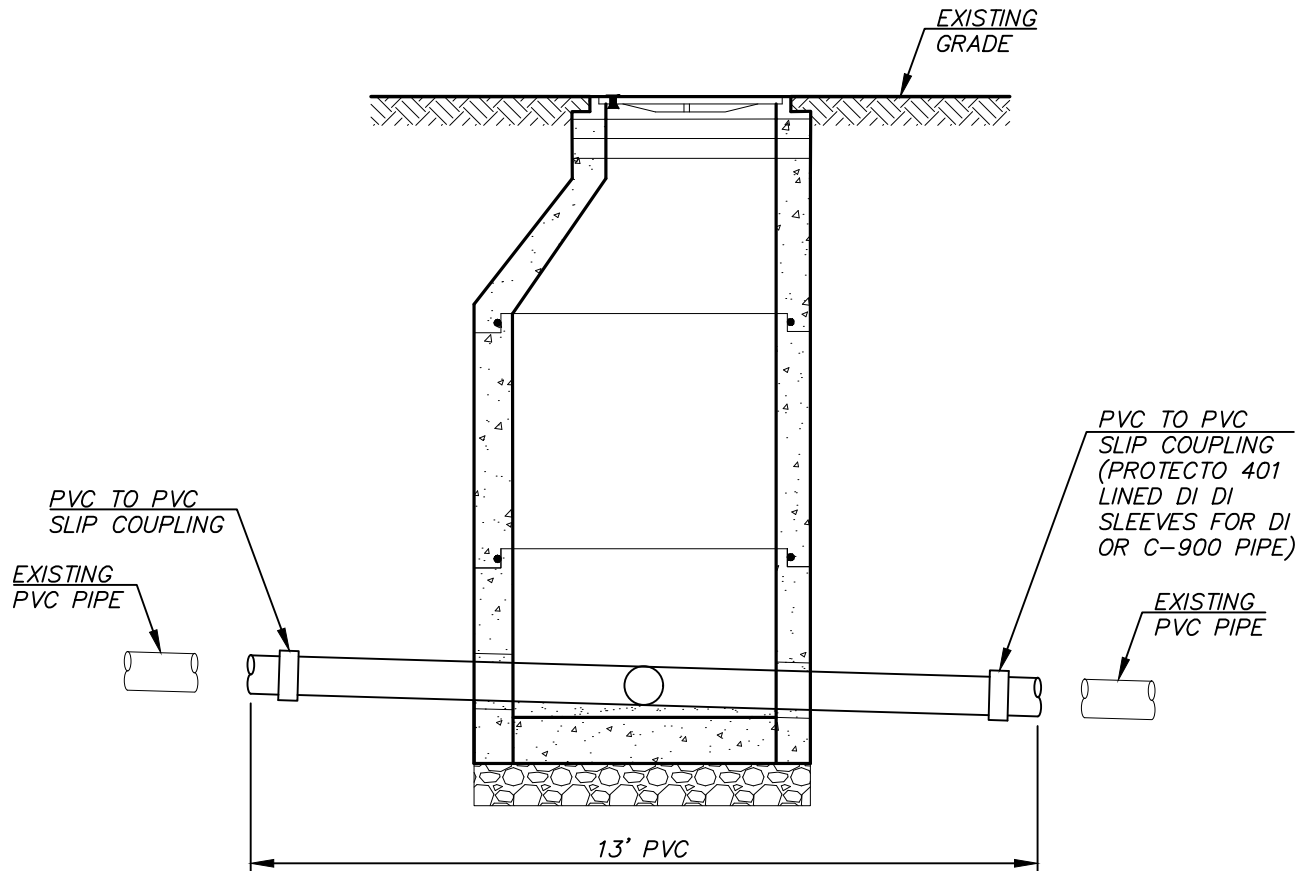
1. VAULT SHALL BE UTILITY VAULT GREASE INTERCEPTOR (1000 GALLON MINIMUM). VAULT SIZING CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL TO THE DISTRICT PRIOR TO APPROVAL OF CONSTRUCTION. LOCATED 50-FT MAX. FROM POINT OF ENTRY.
2. THE EXTERIOR OF VAULTS BELOW GRADE SHALL BE PAINTED WITH TWO (2) COATS OF BLACK BITUMASTIC SOLUTION. NO MOISTURE SHALL BE PRESENT DURING APPLICATION OF COATINGS.
3. NO MORE THAN 1-FOOT OF RISER RINGS FROM FINISHED GRADE. ADDITIONAL SECTIONS SHALL BE PROVIDED AS NECESSARY.
4. CLEAN OUTS PROVIDED 2-FOOT MAXIMUM AWAY FROM TYPE 1 CATCH BASIN.
5. MINIMUM OF 6-INCHES OF PEA GRAVEL BELOW STRUCTURES. EXTEND 12-INCHES BEYOND EDGES OF STRUCTURES.
6. ALL PIPING SHOWN IS 6" Ø PVC PER DISTRICT STANDARDS.

**INSPECTION REQUIREMENTS**

1. CONSTRUCTION WILL BE INSPECTED IN ACCORDANCE WITH THE DISTRICT'S SIDE SEWER STANDARDS. DOUBLE INSPECTION SHALL BE REQUIRED.
2. LEAK TESTING: VAULT MUST BE FILLED WITH WATER TO TEST FOR LEAKS. VAULT AND TYPE 1 CATCH BASIN MUST HOLD WATER FOR 10-MINUTES.
3. ALL PIPING PENETRATIONS MUST BE INSPECTED. ALL PENETRATIONS MUST BE PROVIDED WITH A KOR-N-SEAL ADAPTER. UNLESS OTHERWISE DIRECTED BY THE DISTRICT.
4. TRENCHES SHALL BE LEFT OPEN SO ALL STRUCTURES, PIPING, AND BEDDING CAN BE INSPECTED AND THE SIDE SEWER AS-BUILT DRAWING PROVIDED BY THE CONTRACTOR CAN BE CONFIRMED BY THE INSPECTOR.
5. INSPECTION IS REQUIRED AT THE EXISTING SIDE SEWER STUB OF WHERE THE FINAL CONNECTION WILL OCCUR.

REV. 10/19/17

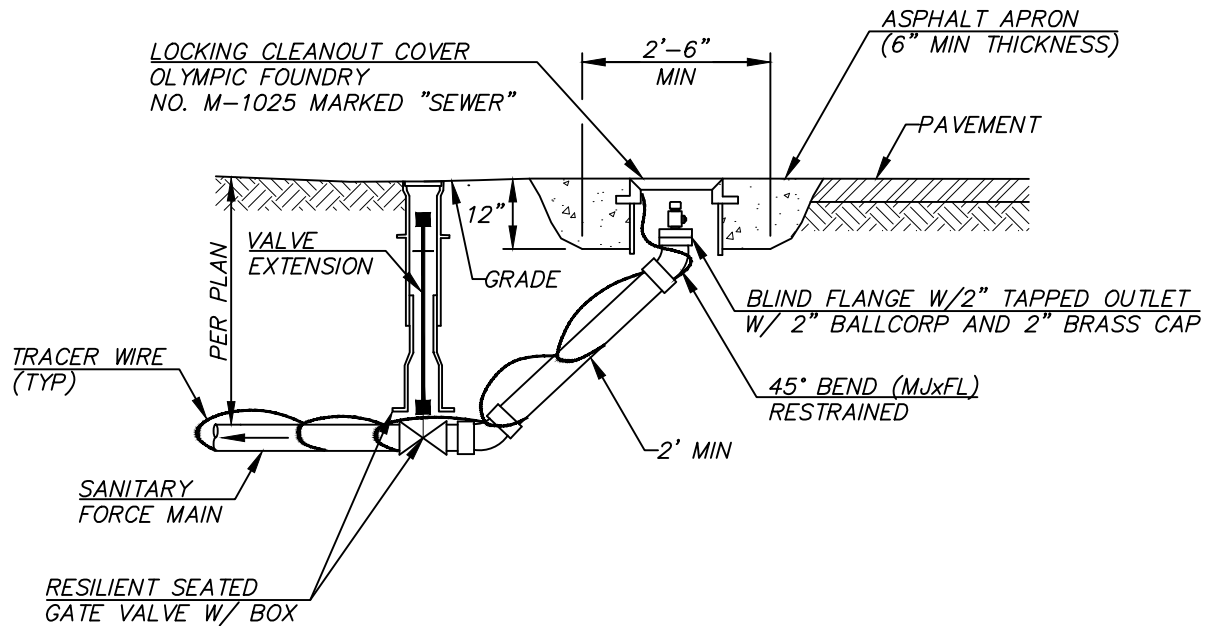
**STANDARD GREASE INTERCEPTOR (1,000 GALLON MIN)**

**NOTES**

1. PRIOR TO CUTTING THE EXISTING SEWER MAIN, THE CONTRACTOR SHALL HAVE EXACT MEASUREMENTS OF THE EXISTING PIPE INVERTS AND LENGTH MEASUREMENTS FOR INSTALLATION OF THE NEW MANHOLE AND NEW SEWER MAIN.
2. THE CONTRACTOR'S EXCAVATION SHALL BE ADEQUATE TO INSTALL THE SADDLE MANHOLE PRIOR TO CUTTING THE EXISTING SEWER MAIN.
3. THE CONTRACTOR SHALL BYPASS PUMP THE SEWER FLOW DURING THIS INSTALLATION.
4. THE CONTRACTOR SHALL HAVE A VACTOR TRUCK AVAILABLE FOR THIS CONSTRUCTION WORK.
5. SEE DISTRICT STANDARD MANHOLE DETAIL FOR OTHER SPECIFIC INSTALLATION REQUIREMENTS.
6. FOR A 72-INCH MANHOLE USE ROMAC DUCTILE IRON (DI) / PVC COUPLING TO CONNECT NEW PIPE TO EXISTING PIPE. USE 15-FOOT PIPE SEGMENT THROUGH MANHOLE.

**CUT-IN ("SADDLE") MANHOLE**

REV. 10/19/17

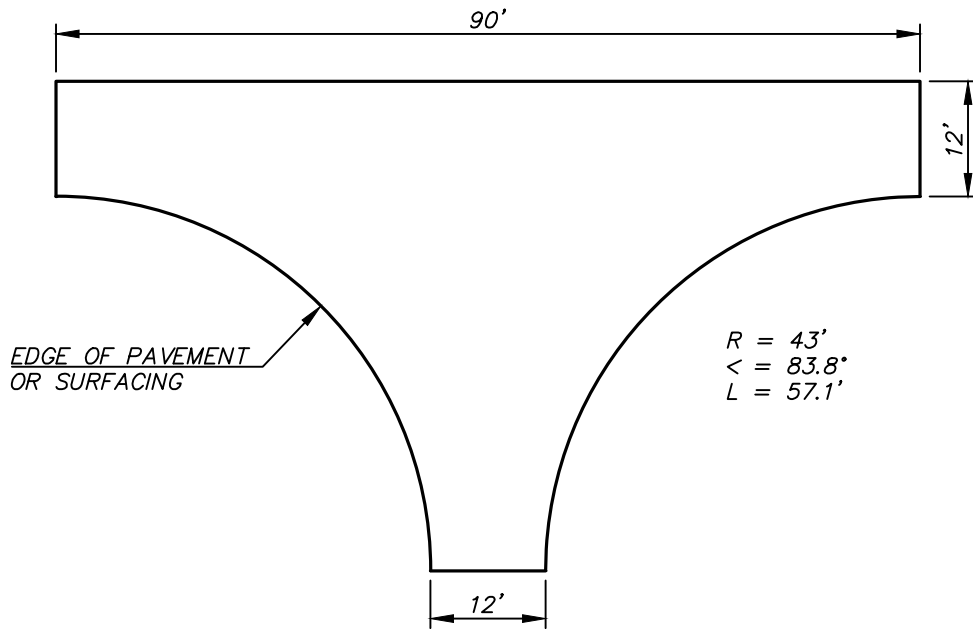


**NOTES**

1. VALVES, VALVE BOXES AND VALVE EXTENSIONS SHALL MEET THE SAME REQUIREMENTS AS SHOWN IN THE STANDARD WATER DETAILS. VALVE BOX COVERS SHALL BE OLYMPIC FOUNDRY 940 OR EQUAL MARKED "SEWER".
2. VALVE MARKER POSTS SHALL MEET THE SAME REQUIREMENTS AS SHOWN IN THE WATER DETAILS AND BE PAINTED AS SPECIFIED IN THE STANDARD CONSTRUCTION NOTES.
3. ALL D.I. PIPE AND FITTINGS SHALL BE PROTECTOR 401 EPOXY COATED. ALL PIPE AND FITTINGS SHALL BE RESTRAINED JOINT.

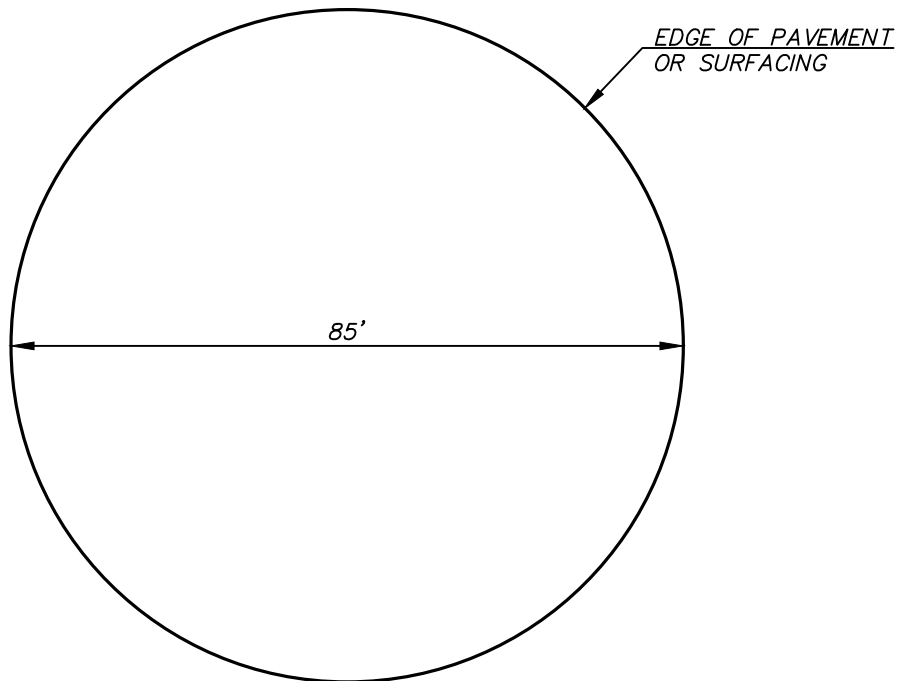
**SANITARY FORCE MAIN CLEANOUT, TYPE II**

REV. 10/19/17

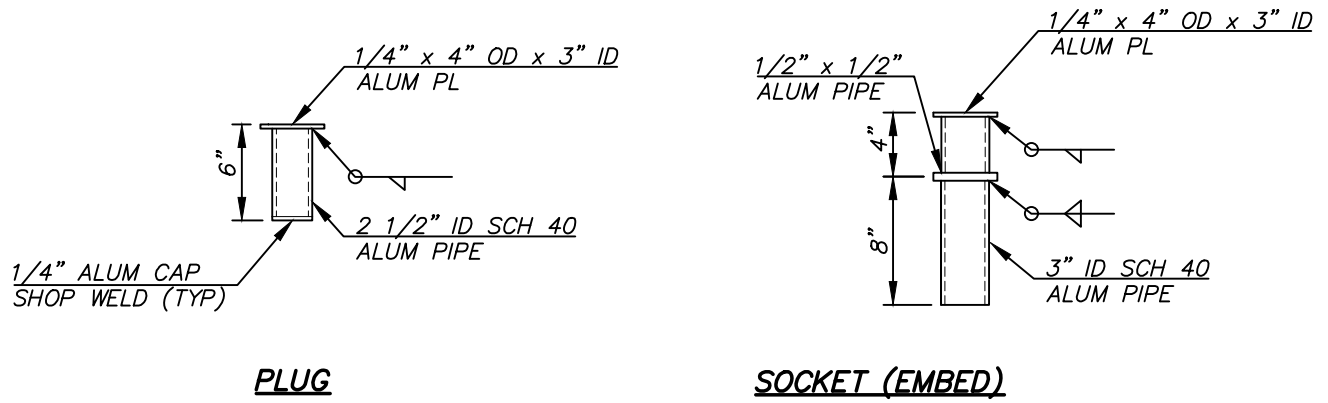


REV. 10/19/17

**VACTOR TRUCK MINIMUM HAMMERHEAD TURNAROUND**

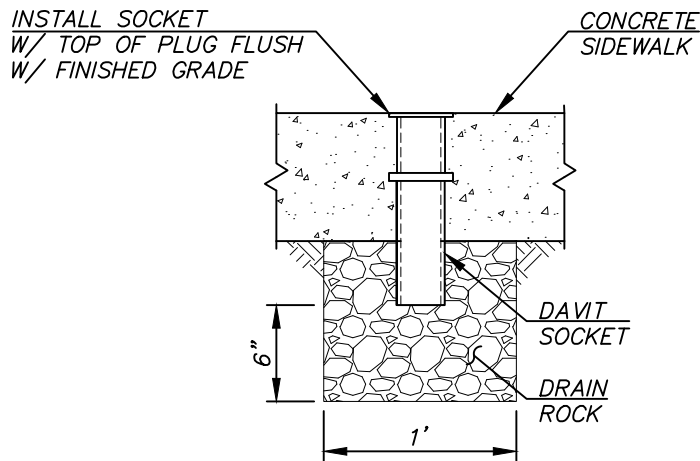


**VACTOR TRUCK MINIMUM CIRCULAR TURNAROUND** REV. 10/19/17



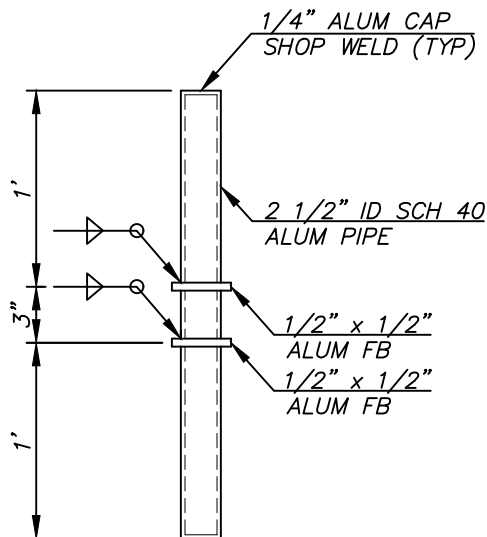
**RECESSED SOCKET**

REV. 10/19/17



**DAVIT SOCKET INSTALLATION SECTION**

REV. 10/19/17



**DAVIT SPINDLE**

REV. 10/19/17



## **CROSS CONNECTION DETAILS**

**PROCEDURAL REQUIREMENTS**

1. ALL ASSEMBLIES MUST BE ON THE WASHINGTON STATE DEPARTMENT OF HEALTH APPROVED BACKFLOW ASSEMBLY LIST.
2. ALL ASSEMBLIES ARE REQUIRED TO BE TESTED BY A WASHINGTON STATE CERTIFIED TESTER UPON INSTALLATION AND ANNUALLY. IN ADDITION, ASSEMBLIES MUST BE TESTED AFTER REPAIRS, RELOCATION, REINSTALLATION AND AFTER A BACKFLOW INCIDENT. NOTE THAT AIR GAPS INSTALLED IN LIEU OF A REDUCED PRESSURE BACKFLOW ASSEMBLY ALSO REQUIRE ANNUAL INSPECTION. TEST REPORTS MUST BE SUBMITTED IMMEDIATELY TO THE DISTRICT.
3. CONTACT DISTRICT FOR INSPECTION OF ALL NEWLY INSTALLED ASSEMBLIES.
4. A CATALOG CUT PRODUCT SUBMITTAL SHALL BE PROVIDED TO THE DISTRICT PRIOR TO INSTALLATION FOR VERIFICATION OF ASSEMBLY APPROVAL STATUS.
5. WHEN INSTALLING AN ASSEMBLY INSIDE A BUILDING, ENSURE ASSEMBLY IS LOCATED WHERE OCCASIONAL SPITTING FROM THE RELIEF VALVE PORT, A FOULED CHECK, OR WATER FLUSHED OUT DURING THE ANNUAL TEST WILL NOT BE OBJECTIONABLE. PROPER DRAINAGE MUST BE PROVIDED. DISTRICT WRITTEN APPROVAL MUST BE RECEIVED FOR INSIDE INSTALLATIONS.
6. ALL RBPA ASSEMBLIES SHALL BE PROTECTED FROM FREEZING, FLOODING AND MECHANICAL DAMAGE DUE TO WATER HAMMER AND EXCESSIVE PRESSURE BUILD UP.

**INSTALLATION REQUIREMENTS**

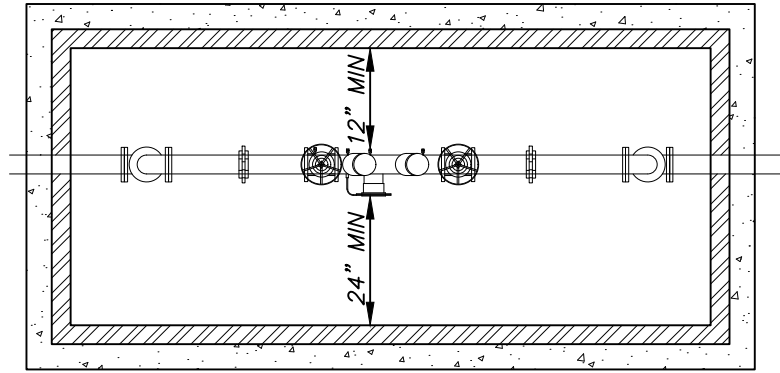
1. CONTACT DISTRICT TO ENSURE YOU ARE INSTALLING THE CORRECT ASSEMBLY FOR THE DEGREE OF HAZARD.
2. ASSEMBLY MUST BE INSTALLED AS A UNIT, INCLUDING TWO SHUT OFF VALVES, RELIEF PORT, TWO CHECK VALVES, AND FOUR TEST COCKS. ALL ASSEMBLIES ARE REQUIRED TO BE AS A UNIT IN THE CONFIGURATION THEY WERE APPROVED BY DOH AND USC.
3. THOROUGHLY FLUSH THE WATER LINE PRIOR TO INSTALLING ASSEMBLIES.
4. ASSEMBLIES MUST BE INSTALLED A MINIMUM OF 12-INCHES FROM THE BOTTOM OF THE RELIEF PORT TO FINISHED GRADE, AND NO HIGHER THAN 5-FEET FROM THE FLOOR TO CENTERLINE OF ASSEMBLY. AN ASSEMBLY INSTALLED MORE THAN 5-FEET ABOVE FLOOR OR GROUND LEVEL MUST HAVE A PERMANENT PLATFORM UNDER IT FOR THE TESTER OR MAINTENANCE PERSON TO STAND ON. THE PLATFORM MUST COMPLY WITH ALL CURRENT AND APPLICABLE SAFETY STANDARDS AND CODES IN EFFECT. ALL ASSEMBLIES MUST BE INSTALLED HORIZONTALLY, UNLESS THEY HAVE WASHINGTON STATE APPROVAL TO BE INSTALLED VERTICALLY. IF INSTALLED IN A VERTICAL CONFIGURATIONS, IT MUST BE A MINIMUM OF 12-INCHES FROM FLOOR, AND NO HIGHER THAN 5-FEET FROM THE FLOOR TO CENTER OF THE #2 SHUT OFF VALVE. ALL ASSEMBLIES MUST MAINTAIN A SUFFICIENT CLEARANCE FROM ANY WALL TO ENSURE ACCESSIBILITY OF MAINTENANCE AND TESTING. SIZES 2-1/2 INCHES AND LARGER IN DIAMETER MAY REQUIRE ADDITIONAL SPACE ON ONE SIDE OF THE ASSEMBLY. ASSEMBLIES 2-1/2 INCHES AND LARGER IN DIAMETER SHALL HAVE SUPPORT BLOCK TO PREVENT FLANGE DAMAGE.
5. REDUCED PRESSURE BACKFLOW ASSEMBLIES SHALL NOT BE INSTALLED BELOW GROUND AT ANYTIME.
6. ASSEMBLIES MUST MEET THE ABOVE REQUIREMENTS TO ENSURE ACCESSIBILITY FOR TESTING, MAINTENANCE AND APPROVAL OF THE DISTRICT. VARIANCE OF ANY INSTALLATION MUST HAVE PRIOR WRITTEN APPROVAL OF THE DISTRICT.

**AIR GAP REQUIREMENTS**

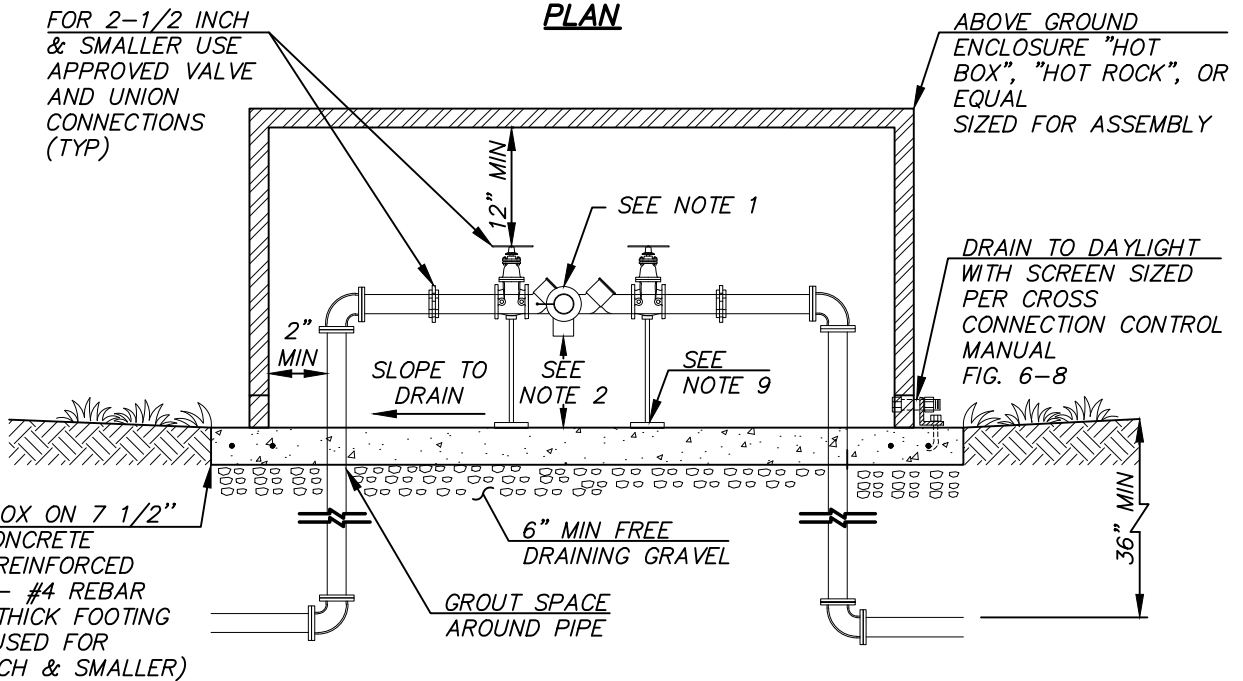
1. AIR GAP MUST BE TWICE THE INLET DIAMETER OF THE INLET PIPE, MINIMUM OF 1-INCH FOR 1/2" PIPE OR SMALLER.
2. THE AIR GAP MUST PROVIDE A PHYSICAL SEPARATION FROM THE BOTTOM OF THE INLET PIPING TO THE TOP OF THE OVERFLOW RIM OF THE RECEIVING VESSEL.
3. IF INLET PIPING IS CUT DIAGONALLY TO DECREASE SPLASHING, THE AIR GAP SEPARATION IS MEASURED FROM THE BOTTOM OF THE CUT TO THE RECEIVING VESSEL.
4. IF AIR GAP IS LOCATED NEAR SIDEWALLS, THE SEPARATION INCREASES TO THREE TIMES THE INLET DIAMETER OF THE INLET PIPING, MINIMUM OF 1-1/2 INCHES.

REV. 6/9/17

**STANDARD RPBA NOTES & INSTALLATION REQUIREMENTS**



**PLAN**



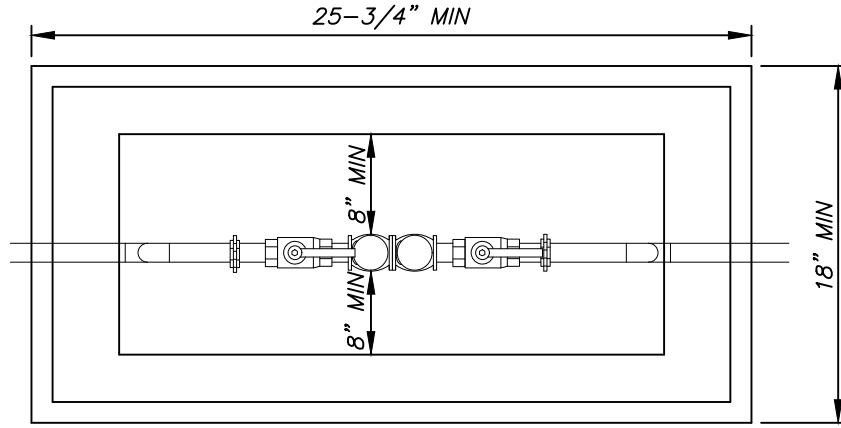
**ELEVATION**

**RPBA INSTALLATION NOTES**

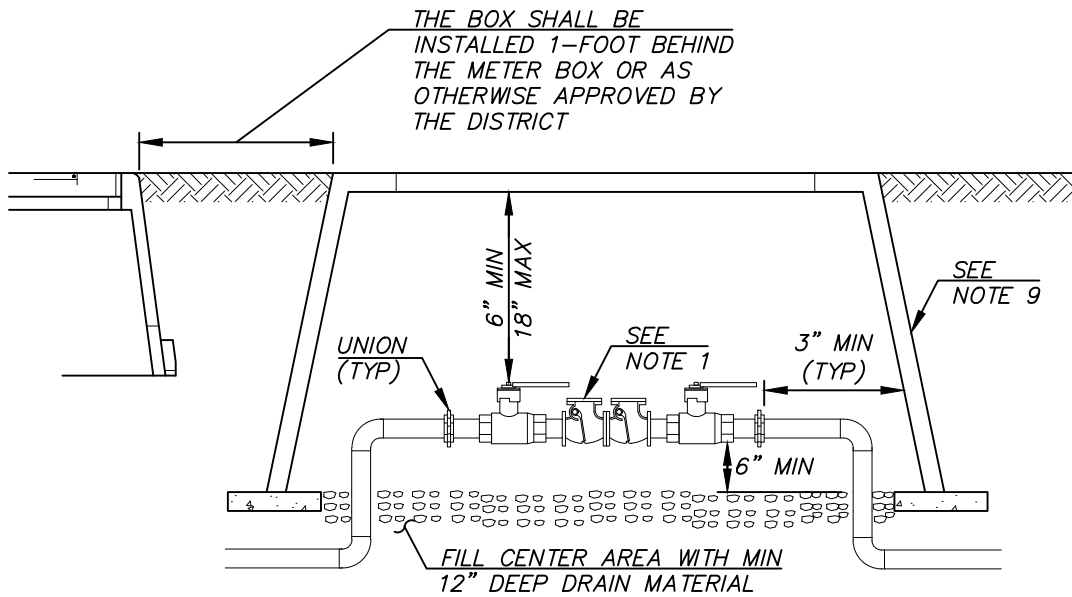
1. MUST BE ON THE LATEST DEPT. OF HEALTH APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES.
2. MUST BE INSTALLED ABOVE FINISHED GRADE, MIN. 12 INCHES TO BOTTOM OF RELIEF PORT.
3. WHEN INSTALLED INSIDE A BUILDING, A FLOOR DRAIN SIZED TO ACCEPT MAXIMUM DISCHARGE FROM THE RELIEF ASSEMBLY IS REQUIRED.
4. FREEZE PROTECTION MUST BE PROVIDED.
5. RISERS AND ALL PIPE IN BOX TO BE BRASS, COPPER, OR PVC.
6. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING. ASSEMBLIES MUST BE INSTALLED ABOVE GROUND.
7. A DISTRICT CROSS CONNECTION SPECIALIST SHALL INSPECT INSTALLATION OF DEVICE AND RECEIVE TEST REPORTS PRIOR TO ESTABLISHMENT OF WATER SERVICE OR APPROVAL. TEST REPORTS MUST BE SIGNED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER AND IMMEDIATELY SENT TO THE DISTRICT.
8. SOME CLEARANCES (I.E. SIDE AND TOP) MAY NOT BE REQUIRED FOR DEVICES WITH A FULLY REMOVABLE ENCLOSURE.
9. SUPPORTS MUST BE INSTALLED FOR SIZES LARGER THAN 2-1/2".

REV. 10/19/17

**REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) INSTALLATION**



**PLAN**



**ELEVATION**

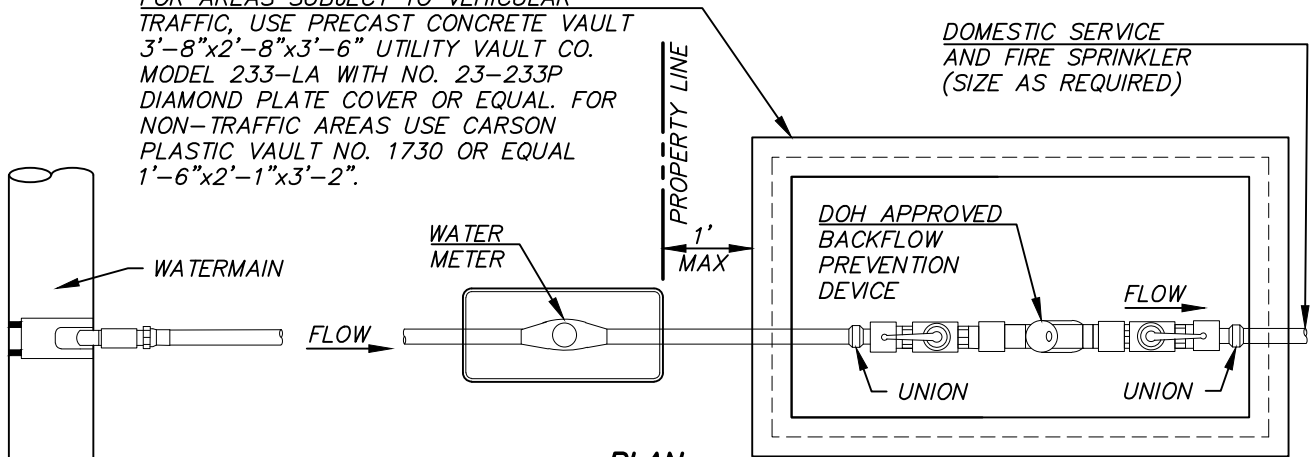
**DCVA INSTALLATION NOTES**

1. MUST BE ON THE LATEST DEPT. OF HEALTH APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES.
2. MAY BE INSTALLED BELOW GROUND IN AN APPROVED VAULT.
3. FREEZE PROTECTION IS THE RESPONSIBILITY OF THE OWNER.
4. RISERS AND ALL PIPE IN BOX TO BE BRASS, COPPER, OR PVC.
5. THE DCVA SHALL NOT BE INSTALLED WHERE IT MAY BECOME SUBMERGED.
6. A DISTRICT CROSS CONNECTION SPECIALIST SHALL INSPECT INSTALLATION OF DEVICE AND RECEIVE TEST REPORTS PRIOR TO ESTABLISHMENT OF WATER SERVICE OR APPROVAL. TEST REPORTS MUST BE SIGNED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER AND IMMEDIATELY SENT TO THE DISTRICT.
7. FOR 2-1/2" TO 3-1/2" DCVA'S, USE A UTILITY VAULT 506-LA W/LOCKING STEEL DOOR NO. 55-332.P.
8. FOR 4" AND LARGER DCVA'S, USE A UTILITY VAULT 687-LA W/BASE 687-SB AND 2 LOCKING STEEL DOOR NO. 686-TL-2-332P.
9. FOR 1-INCH AND SMALLER DCVA USE CARSON INDUSTRIES "1220-12" OR EQUAL (21-1/2"x15")  
FOR 1 1/4-INCH TO 2-INCH DCVA USE CARSON INDUSTRIES "JUMBO BOX 1730-12" OR EQUAL (33-1/2"x20-1/2").

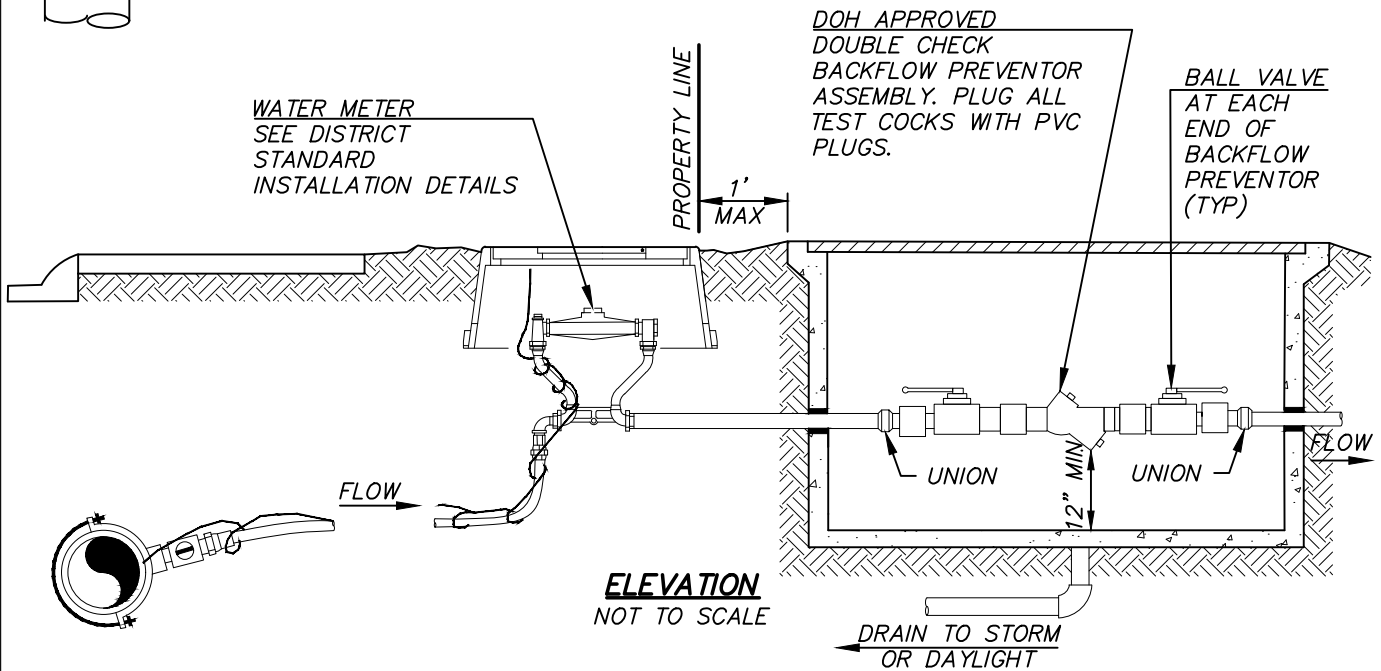
REV. 10/19/17

**DOUBLE CHECK VALVE ASSEMBLY (DCVA) INSTALLATION**

FOR AREAS SUBJECT TO VEHICULAR TRAFFIC, USE PRECAST CONCRETE VAULT 3'-8"x2'-8"x3'-6" UTILITY VAULT CO. MODEL 233-LA WITH NO. 23-233P DIAMOND PLATE COVER OR EQUAL. FOR NON-TRAFFIC AREAS USE CARSON PLASTIC VAULT NO. 1730 OR EQUAL 1'-6"x2'-1"x3'-2".



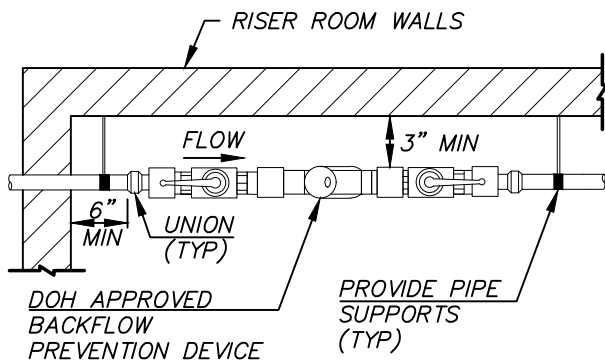
**PLAN**  
NOT TO SCALE



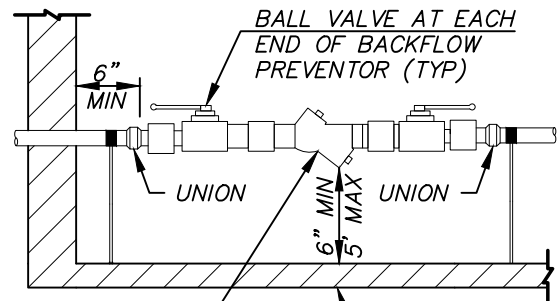
**ELEVATION**  
NOT TO SCALE

**NOTE**

1. NO FENCING, GATES OR OTHER OBSTACLES SHALL BE LOCATED AS TO RESTRICT ACCESS TO METER SERVICE.
2. SEE DISTRICT STANDARDS FOR WATER SERVICE METER BOX REQUIREMENTS.



**PLAN**  
NOT TO SCALE



DOH APPROVED DOUBLE CHECK BACKFLOW PREVENTOR ASSEMBLY. PLUG ALL TEST COCKS WITH PVC PLUGS.

**ELEVATION**  
NOT TO SCALE

**ALTERNATE/ADDITIONAL DCVA IN RISER ROOM**

**STANDARD FIRE SPRINKLER DCVA CONNECTION**

REV. 10/19/17

**GENERAL DCDA NOTES**

1. ALL CONSTRUCTION SHALL CONFORM TO THE APPROPRIATE FEDERAL, STATE, COUNTY OR DISTRICT REQUIREMENTS.
2. ALL DCDA<sub>s</sub> SHALL BE APPROVED FOR INSTALLATION WITHIN THE STATE OF WASHINGTON BY THE WASHINGTON STATE DEPARTMENT OF HEALTH. THE CONTRACTOR SHALL PROVIDE THE DISTRICT WITH SPECIFICATIONS AND SHOP DRAWINGS OF THE APPROVED DCDA PRIOR TO CONSTRUCTION.
3. THE SUPPLY LINE FOR THE DCDA SHALL BE DUCTILE IRON, A MINIMUM OF 4" DIA. AND MEET THE MATERIAL AND CONSTRUCTION REQUIREMENTS OF THE DISTRICT FOR WATER MAIN CONSTRUCTION.
4. THE CONTRACTOR SHALL INSTALL AT THE WATER MAIN A TEE AND 4" MINIMUM SIZED GATE VALVE ON ALL DCDA SYSTEMS. WET TAPS ARE ONLY ALLOWED ON EXISTING WATER MAINS.
5. A FLEXIBLE FITTING (MJ SLEEVE) SHALL BE INSTALLED WHEN ENTERING THE VAULT. THIS FITTING MAY BE OMITTED IF AN MJ BELL CONNECTION IS WITHIN 5 FEET OF THE VAULT.
6. THE CONTRACTOR SHALL LEVEL THE UTILITY VAULTS AND ADJUST THE COVER TO MATCH THE EXISTING GRADE OR 6" ABOVE GRADE IN UNIMPROVED AREAS.
7. THE CONTRACTOR SHALL INSTALL A LADDER-UP AS SHOWN IN THE DETAILS. SUBMIT PRODUCT INFORMATION FOR DISTRICT REVIEW.
8. ALL VAULTS SHALL BE INSTALLED WITH A 4" ZURN FLOOR DRAIN MODEL 551 W/ GRATING ON A 4" PVC DRAIN PIPE. THE DRAIN SHALL BE RUN TO DAYLIGHT OR A STORM DRAIN SYSTEM WITH A MINIMUM OF 4" SCHEDULE 80 PVC STORM PIPE. IF POSITIVE DRAINAGE FROM THE VAULT CANNOT BE ACHIEVED A SUMP PUMP SYSTEM WILL BE REQUIRED. SUMP PUMP SHALL BE ZOELLER "MIGHTY-MATE" AUTOMATIC SUBMERSIBLE PUMP. WRITTEN DISTRICT APPROVAL IS REQUIRED FOR SUMP PUMP SYSTEM. VAULT SHALL BE CONSTRUCTED SO BACKFLOW ASSEMBLY DOES NOT BECOME SUBMERGED.
9. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED, SIZED AND INSTALLED PER THE REQUIREMENTS OF THE FIRE MARSHAL AND AS SHOWN ON THE FIRE MARSHAL APPROVED DRAWINGS.
10. IF REQUIRED, THE POST INDICATOR VALVE IS TO BE INSTALLED AT THE LOCATION APPROVED BY THE FIRE MARSHAL AND AS SHOWN ON THE FIRE MARSHAL APPROVED DRAWINGS.
11. ALL TEST COCKS INSTALLED WITH THE DCDA SHALL HAVE THE APPROPRIATE PLUGS INSTALLED.
12. SIZING OF THE DCDA AND THE DCDA SUPPLY LINE IS THE RESPONSIBILITY OF THE PROPERTY OWNER. WHERE THE DCDA IS INSTALLED WITHIN AN UNDERGROUND VAULT AS SHOWN IN THE DETAILS, THE DISTRICT WILL MAINTAIN AND OPERATE THE SUPPLY LINE BETWEEN THE MAIN AND DCDA VAULT. THE DCDA VAULT AND ALL ITEMS AFTERWARDS ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.
13. BACKFLOW ASSEMBLY TYPE AND INSTALLATION REQUIREMENTS MAY VARY AND WILL BE AT THE DISTRICT'S DISCRETION BASED UPON WASHINGTON STATE DEPARTMENT OF HEALTH DRINKING WATER REGULATIONS RELATING TO CROSS CONNECTION WAC 246-290-010. THE DISTRICT REQUIREMENTS MAY BE EQUAL TO OR MORE STRINGENT THAN THE ABOVE CITED CODE.

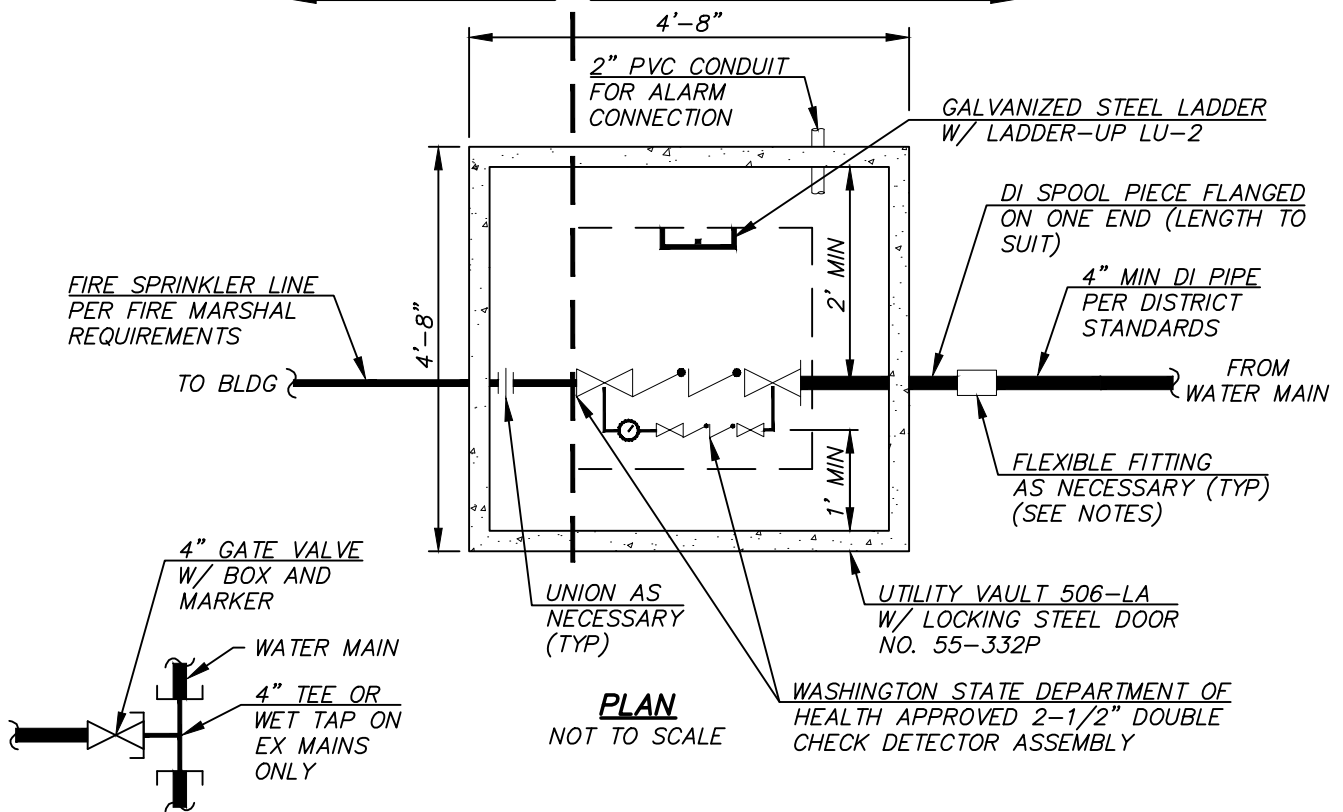
**PAINT SCHEDULE**

EXTERIOR OF VAULT BELOW GRADE TWO COATS OF BLACK BITUMASTIC SOLUTION VAULT SHOULD BE DRIED WITH NO MOISTURE PRESENT PRIOR TO APPLICATION OF COATINGS.

PAINT INTERIOR PIPING AND VALVES ONLY, BACKFLOW ASSEMBLY SHALL NOT BE PAINTED.

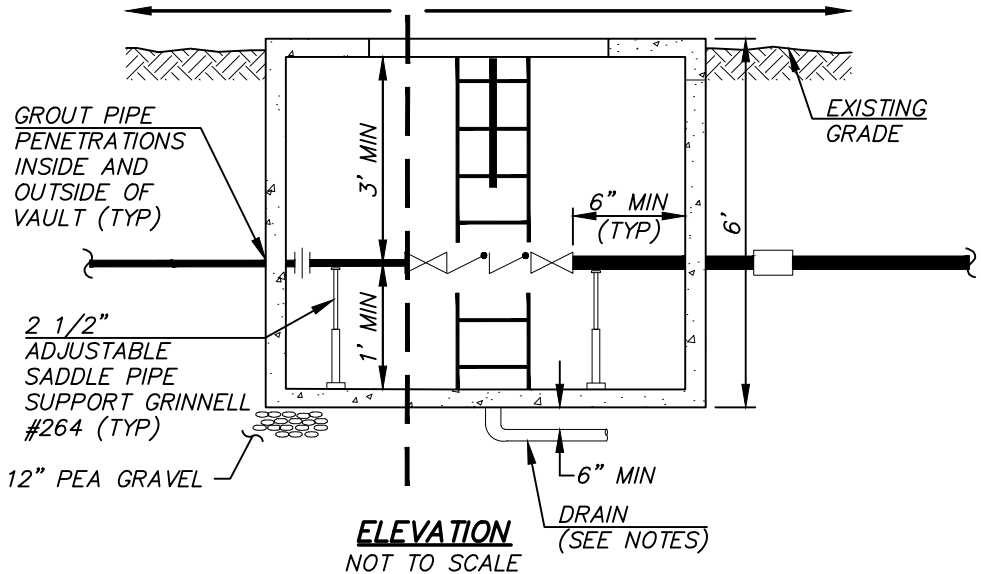
- 1 - COAT RUST RESISTOR PRIMER RED #1013
- 2 - COATS SAFETY BLUE

PLAN REVIEW AND INSPECTION BY FIRE MARSHAL | PLAN REVIEW AND INSPECTION BY SAMMAMISH PLATEAU WATER AND SEWER DISTRICT



**CONNECTION TO MAIN**  
NOT TO SCALE

PLAN REVIEW AND INSPECTION BY FIRE MARSHAL | PLAN REVIEW AND INSPECTION BY SAMMAMISH PLATEAU WATER AND SEWER DISTRICT



**NOTE**

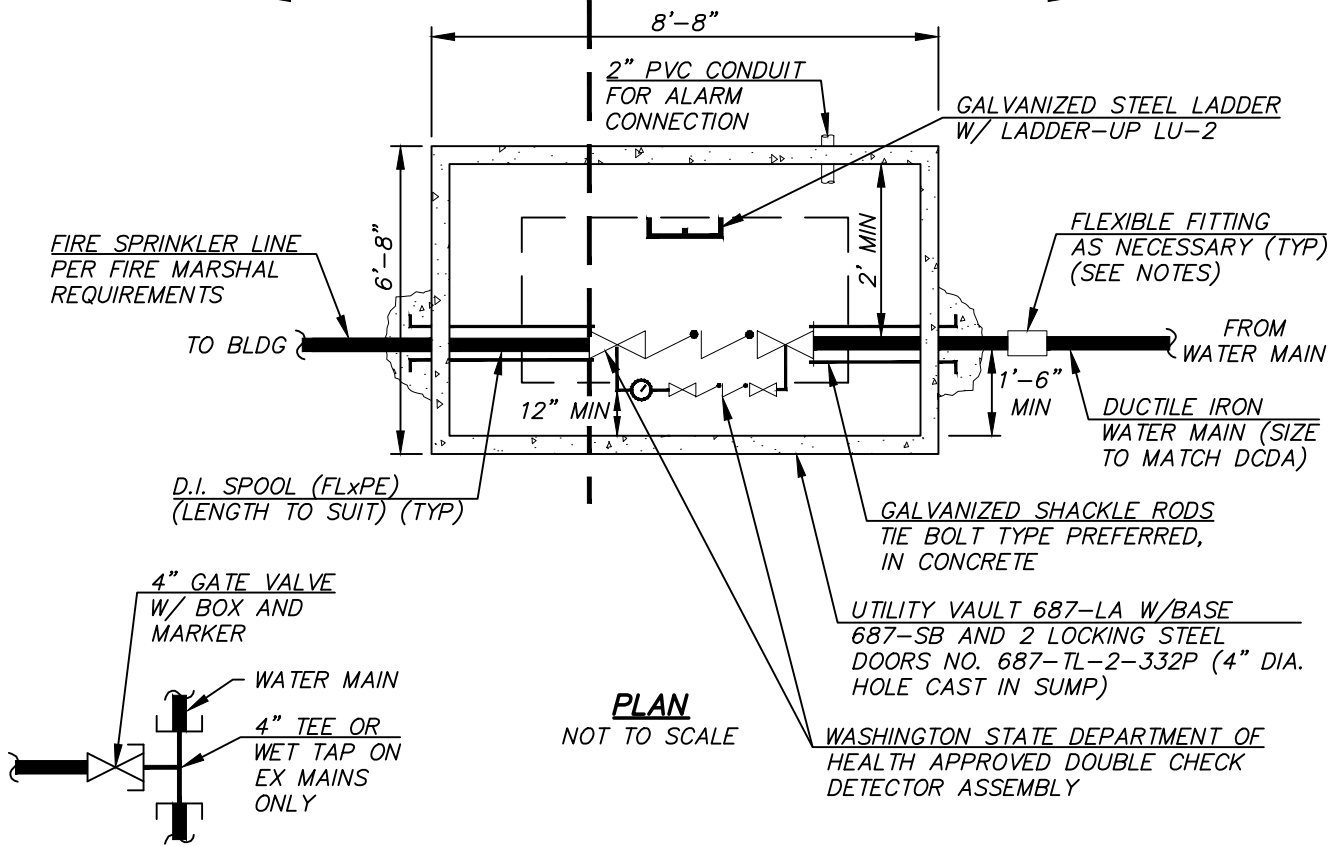
1. FOR LOCATION OF FIRE DEPARTMENT CONNECTION (FDC) AND POST INDICATOR VALVE (PIV), IF APPLICABLE, SEE FIRE MARSHAL APPROVED DRAWINGS.
2. DISTRICT OPERATIONS AND MAINTENANCE RESPONSIBILITY OF THE WATERMAIN ENDS AT THE FACE OF THE VAULT

**2-1/2" DOUBLE CHECK DETECTOR ASSEMBLY**

REV. 10/19/17

**PLAN REVIEW  
AND INSPECTION  
BY FIRE MARSHAL**

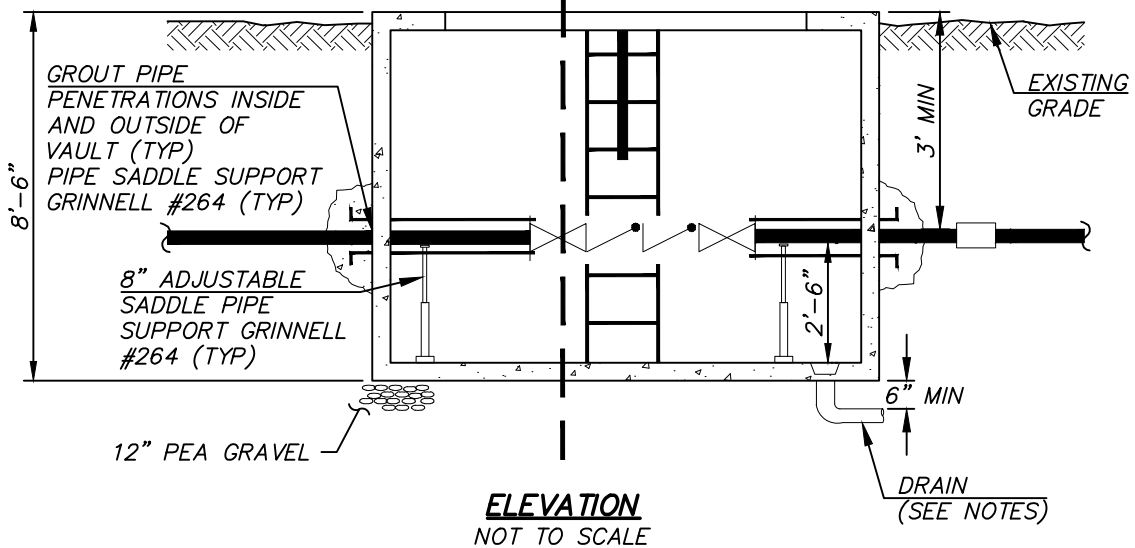
**PLAN REVIEW  
AND INSPECTION  
BY SAMMAMISH PLATEAU  
WATER AND SEWER DISTRICT**



**CONNECTION TO MAIN**  
NOT TO SCALE

**PLAN REVIEW  
AND INSPECTION  
BY FIRE MARSHAL**

**PLAN REVIEW  
AND INSPECTION  
BY SAMMAMISH PLATEAU  
WATER AND SEWER DISTRICT**

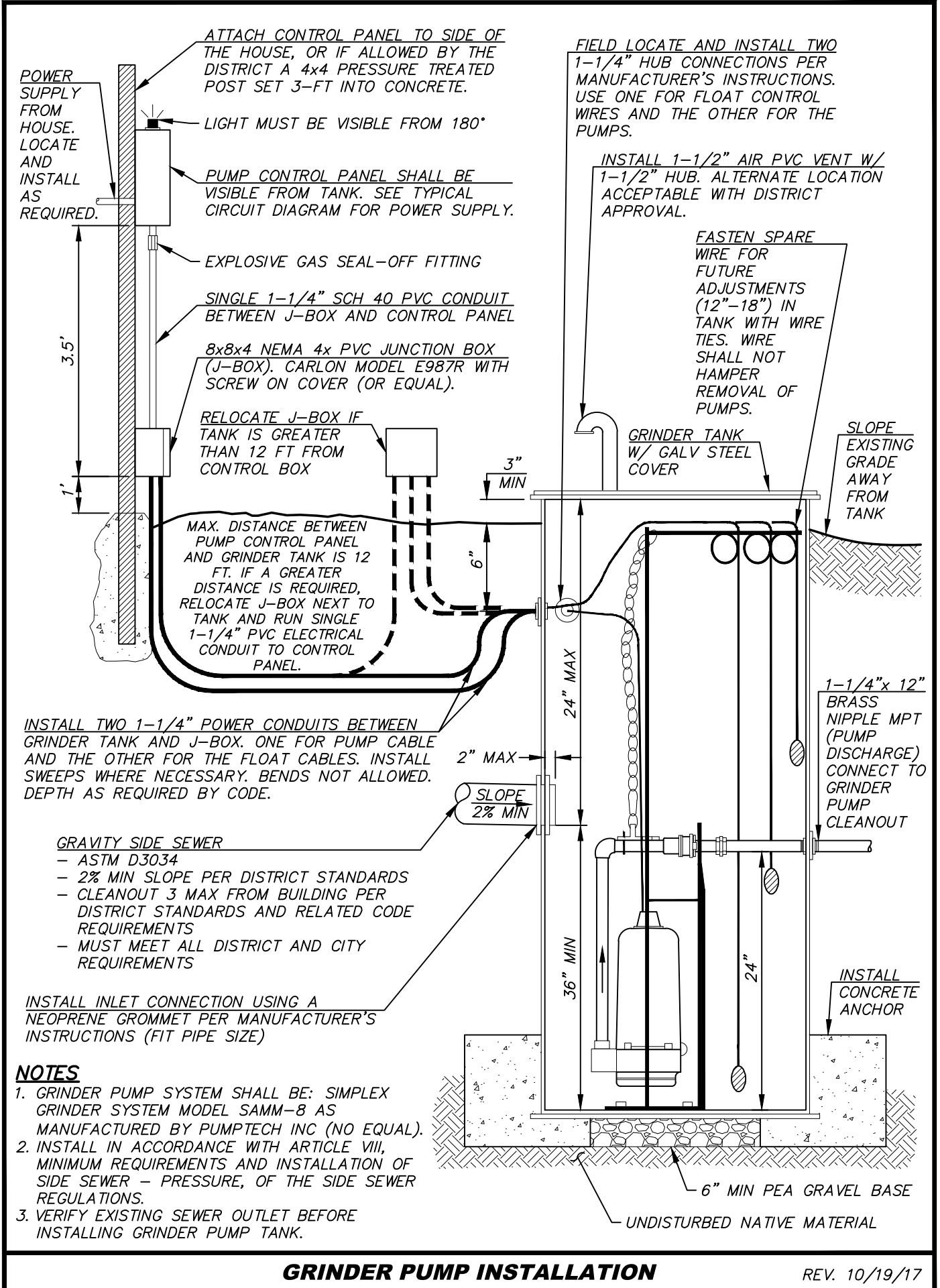


**NOTE**

1. FOR LOCATION OF FIRE DEPARTMENT CONNECTION (FDC) AND POST INDICATOR VALVE (PIV), IF APPLICABLE, SEE FIRE MARSHAL APPROVED DRAWINGS.
2. DISTRICT OPERATIONS AND MAINTENANCE RESPONSIBILITY OF THE WATERMAIN ENDS AT THE FACE OF THE VAULT.



## **GRINDER PUMP PLANS**



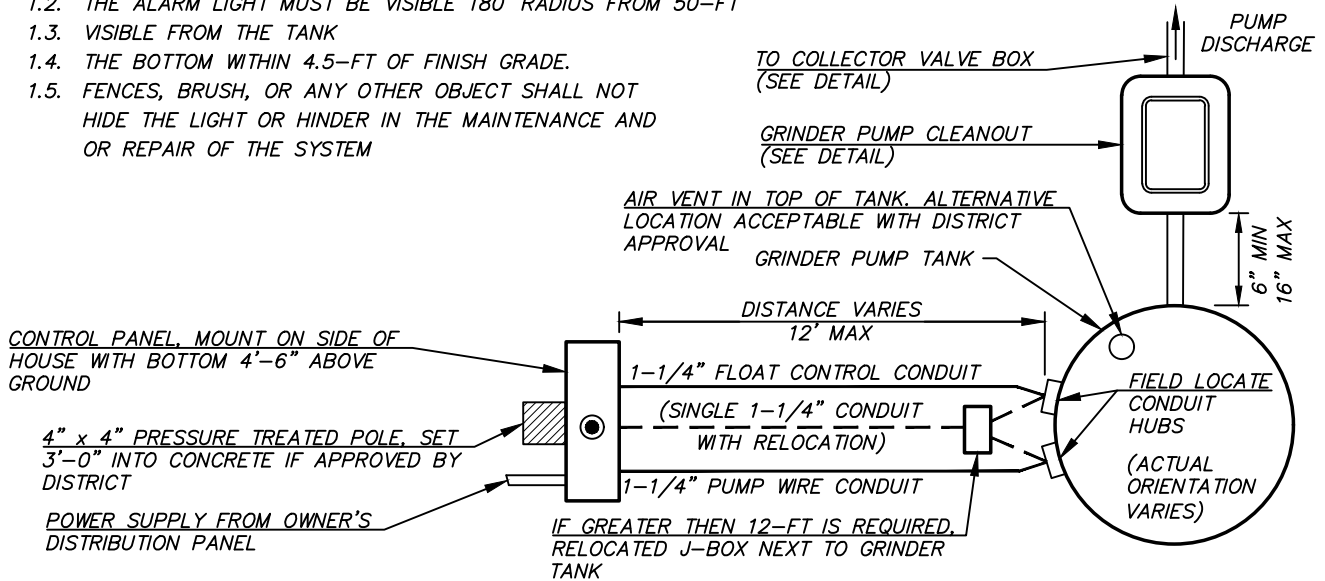
- NOTES**
1. GRINDER PUMP SYSTEM SHALL BE: SIMPLEX GRINDER SYSTEM MODEL SAMM-8 AS MANUFACTURED BY PUMPTech INC (NO EQUAL).
  2. INSTALL IN ACCORDANCE WITH ARTICLE VIII, MINIMUM REQUIREMENTS AND INSTALLATION OF SIDE SEWER - PRESSURE, OF THE SIDE SEWER REGULATIONS.
  3. VERIFY EXISTING SEWER OUTLET BEFORE INSTALLING GRINDER PUMP TANK.

**GRINDER PUMP INSTALLATION**

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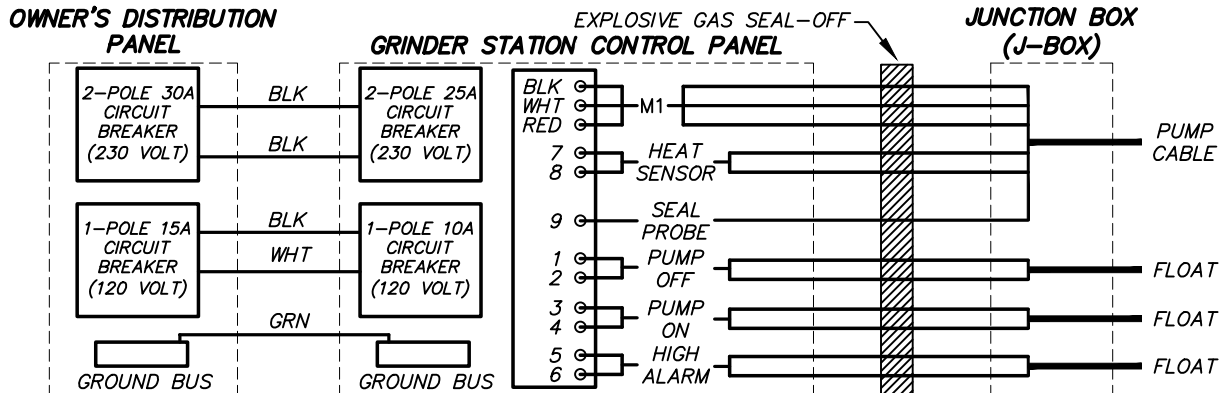
**NOTES**

1. THE GRINDER TANK SHALL BE INSTALLED WITHIN 12- FEET OF THE PUMP CONTROL PANEL. WHERE THIS DISTANCE MUST BE EXCEEDED, THE INSTALLER SHALL OBTAIN DISTRICT APPROVAL AND THEN RELOCATE THE ELECTRICAL JUNCTION BOX (J-BOX) WITHIN 1-FT OF THE GRINDER TANK AND 6-INCHES ABOVE FINISH GRADE.
2. THE TANK LOCATION SHALL BE ACCESSIBLE FOR MAINTENANCE AND REPAIR BY DISTRICT PERSONNEL.
3. TANK COVER SHALL BE APPROX 3" ABOVE FINISHED GRADE. FINISH GRADE SHALL BE FREE DRAINING AROUND AND AWAY FROM THE TANK SO THAT SURFACE WATER CANNOT POND AROUND THE STATION.
4. AIR VENT MAY BE INSTALLED IN ALTERNATIVE LOCATION WITH DISTRICT APPROVAL.
5. POSITION GRINDER PUMP TANK TO MINIMIZE NUMBER OF BENDS IN DISCHARGE PRESSURE PIPING. BENDS SHALL BE INSTALLED IN THE GRAVITY SIDE SEWER IF NEEDED.
6. NO PLANTS ARE TO BE LOCATED WITHIN 5-FT OF THE TANK. THE PROPERTY OWNER SHALL MAINTAIN A 5-FT CLEAR ZONE AROUND THE TANK.
7. THE LOCATION OF THE CONTROL PANEL SHALL BE:
  - 1.1. ACCESSIBLE FOR EASY MAINTENANCE AND REPAIR
  - 1.2. THE ALARM LIGHT MUST BE VISIBLE 180° RADIUS FROM 50-FT
  - 1.3. VISIBLE FROM THE TANK
  - 1.4. THE BOTTOM WITHIN 4.5-FT OF FINISH GRADE.
  - 1.5. FENCES, BRUSH, OR ANY OTHER OBJECT SHALL NOT HIDE THE LIGHT OR HINDER IN THE MAINTENANCE AND OR REPAIR OF THE SYSTEM



**GRINDER PUMP SITE LAYOUT INSTRUCTIONS**

REV. 10/19/17



**NOTES**

1. PUMP AND FLOAT CABLES TO BE EXTENDED INTO AND END AT THE J-BOX USING TWO SEPARATE CONDUITS; ONE FOR THE PUMP AND ONE FOR THE FLOATS. A SINGLE CONDUIT WITH INDIVIDUAL WIRES SHALL THEN EXTENDED FROM THE J-BOX TO PUMP CONTROL PANEL.
2. RUN FROM THE J-BOX TO THE PUMP CONTROL PANEL FOUR #10 AWG THHN WIRE FOR THE PUMP (WHITE, BLACK, RED, GROUND), TWO #14 AWG THHN WIRE WITH INDIVIDUAL COLORS FOR THE PUMP SENSOR AND PROBE, AND THREE SETS OF INDIVIDUAL COLORED #14 WIRE FOR THE FLOATS.
3. AN EXPLOSIVE GAS SEAL-OFF SHALL BE INSTALLED IN THE ELECTRICAL CONDUIT JUST PRIOR TO THE PUMP CONTROL PANEL.
4. INSTALLATION MUST CONFORM TO ALL REQUIREMENTS AND REGULATIONS OF THE NATIONAL ELECTRICAL CODE. AN ELECTRICAL PERMIT AND INSPECTION IS REQUIRED WHETHER THE WORK IS PERFORMED BY THE OWNER OR A CONTRACTOR.
5. THE OWNER'S DISTRIBUTION PANEL SHALL SUPPLY ONE SEPARATE 230-V SINGLE PHASE, 30-AMP CIRCUIT FOR THE PUMP, AND ANOTHER SEPARATE 120-VOLT, 15-AMP CIRCUIT FOR THE ALARM SYSTEM.
6. THE CONTRACTOR SHALL REFER TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE GRINDER PUMP CONTROL PANEL. THE TYPICAL CIRCUIT DIAGRAM SHOWN ABOVE IS ONLY AN EXAMPLE.

**TYPICAL CIRCUIT DIAGRAM**

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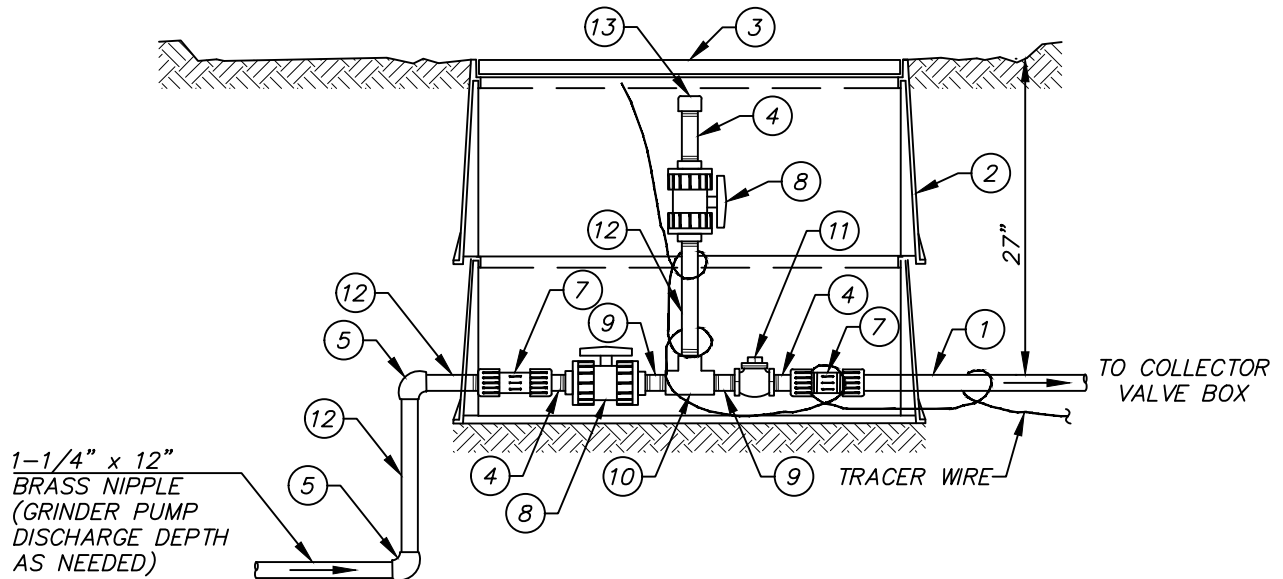
ITEM	MATERIAL LIST FOR GRINDER PUMP CLEANOUT AND COLLECTOR VALVE BOX DETAILS
①	1-1/4" HDPE PRESSURE PIPE SDR 11(LENGTH TO SUIT)
②	TWO STACKED CARSON JUMBO BOX (PART #1730)
③	CARSON LID (PART #1730) MARKED "SEWER"
④	1-1/4" MALE THREADED NIPPLE SCH. 80 PVC, (LENGTH TO SUIT)
⑤	1-1/4" X 90° BEND THREADED SCH. 80 PVC
⑥	1-1/4" HDPE x 316SS MPT TRANSITION COUPLING, 6-INCH
⑦	1-1/4" COMPRESSION COUPLING SCH. 40 PVC
⑧	1-1/4" UNION BALL VALVE THREADED SCH. 80 PVC
⑨	1-1/4" X 3" NIPPLE THREADED SCH. 80 PVC
⑩	1 - 1-1/4" TEE THREADED SCH. 80 PVC
⑪	1-1/4" BRASS SWING CHECK VALVE
⑫	1-1/4" X 8" NIPPLE THREADED SCH. 80 PVC
⑬	1-1/4" CAP THREADED SCH. 80 PVC
⑭	HDPE SOCKET WELDED COUPLING
⑮	HDPE SOCKET WELDED REDUCER SDR 11 (SIZE TO SUIT)
⑯	HDPE SOCKET WELDED TEE SDR 11 (SIZE TO SUIT)

**NOTES**

1. ALL HDPE WELDING SHALL BE MADE USING ELECTRO-FUSION.
2. WHEN BOXES LOCATED IN TRAFFIC AREAS: WHERE BOXES ARE SUBJECTED TO ANY POSSIBLE VEHICLE LOADING, REPLACE THE CARSON BOXES WITH FOGTITE #2 CONCRETE BOXES WITH FOGTITE STEEL TRAFFIC LIDS MARKED "SEWER".

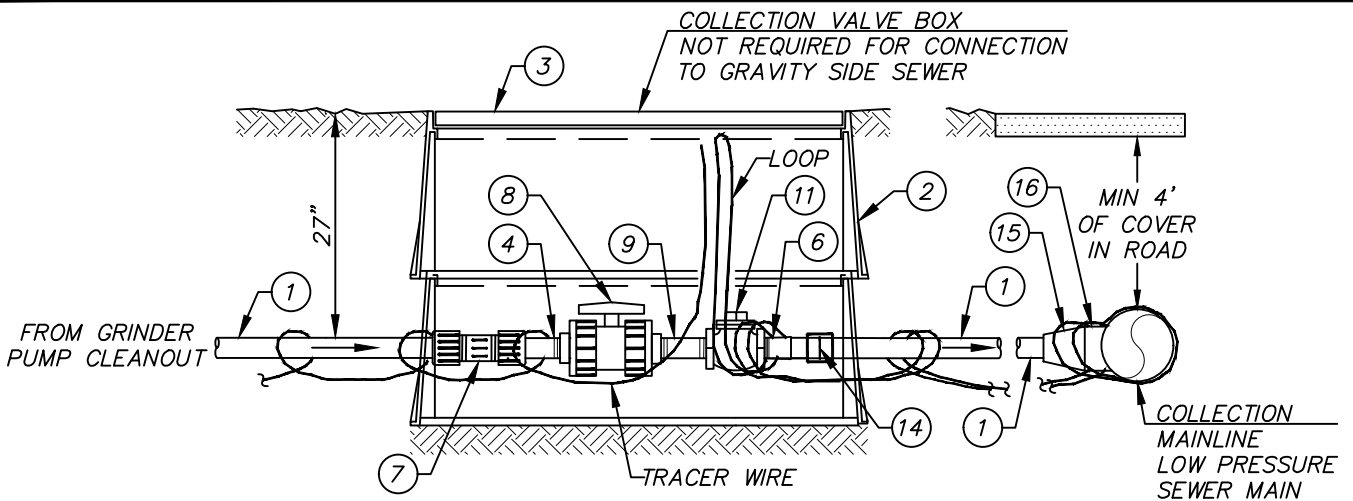
**TRACER WIRE NOTES**

1. ALL HDPE PIPE SHALL BE INSTALLED WITH 12-GAUGE SOLID CORE WIRE, TRACER WIRE. THE WIRE SHALL BE WRAPPED AROUND THE PIPE AS PART OF THE INITIAL INSTALLATION.
2. TRACER WIRE SHALL BE LOOPED THROUGH THE COLLECTION VALVE BOX AS SHOWN IN THE DETAIL.
3. WHERE A CUT-IN CONNECTION IS MADE TO AN EXISTING LOW PRESSURE SEWER, THE TRACER WIRES SHALL BE SPLICED TOGETHER USING BUTT CONNECTORS AND SHRINK TUBING PROTECTION.
4. TRACER WIRE SHALL EXTEND FROM THE GRINDER PUMP CLEANOUT TO THE COLLECTION VALVE BOX AS SHOWN IN THE DETAILS.



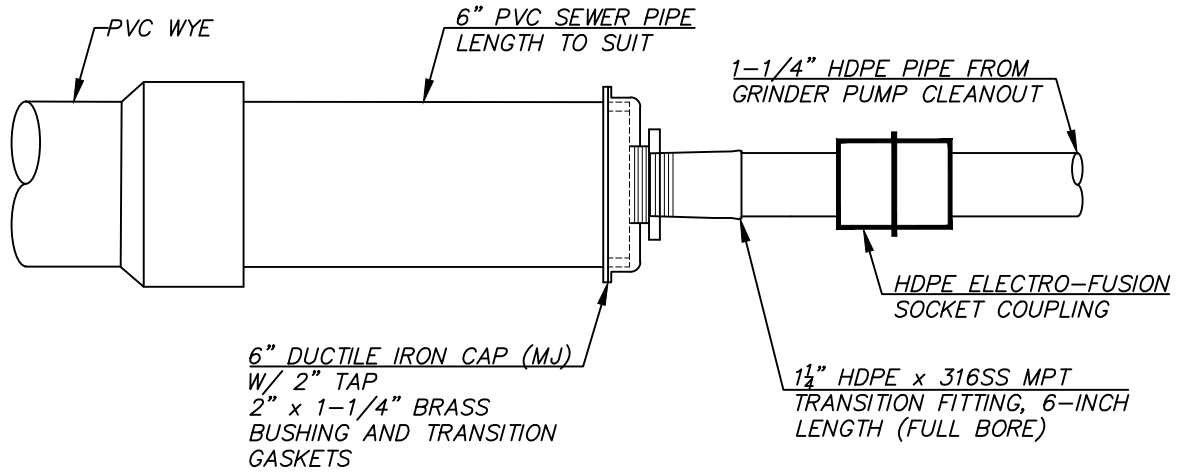
**GRINDER PUMP CLEANOUT**

REV. 10/19/17



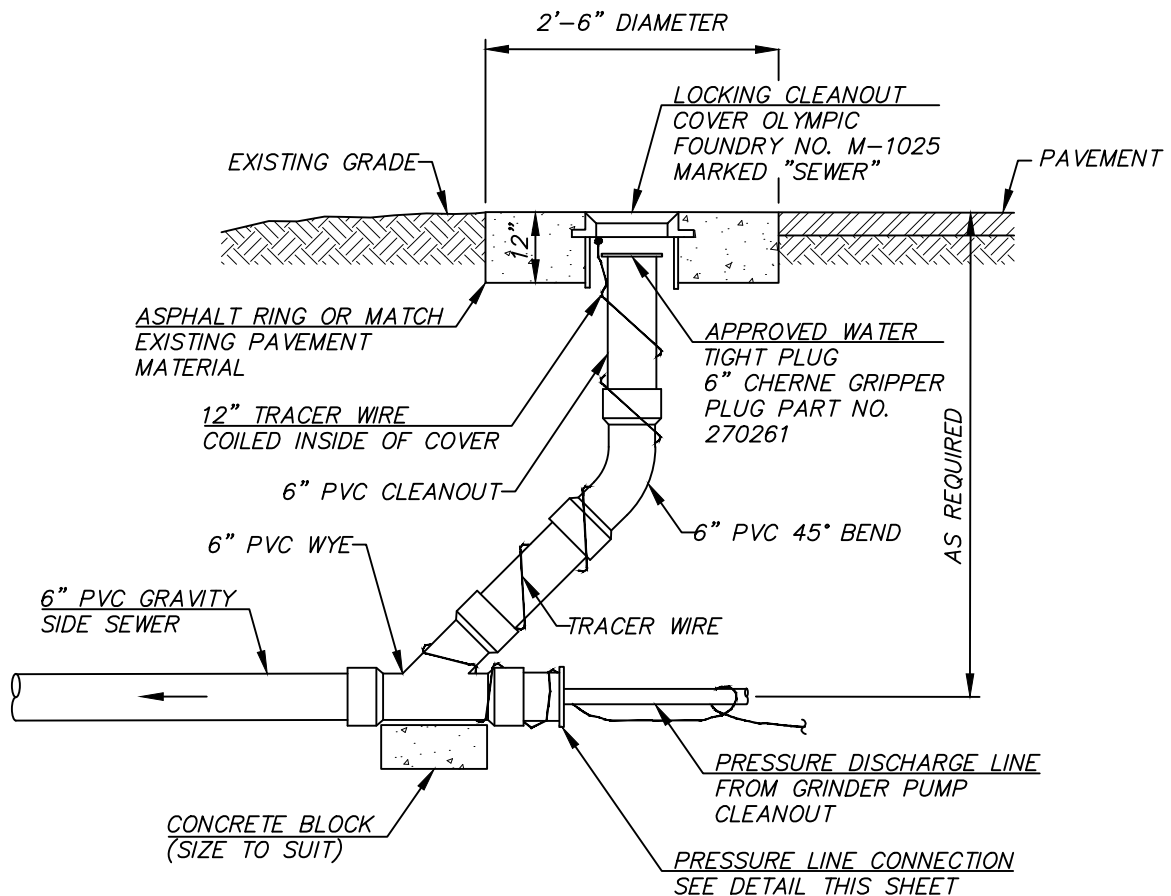
**COLLECTION VALVE BOX**

REV. 10/19/17



**PRESSURE LINE CONNECTION**

REV. 10/19/17

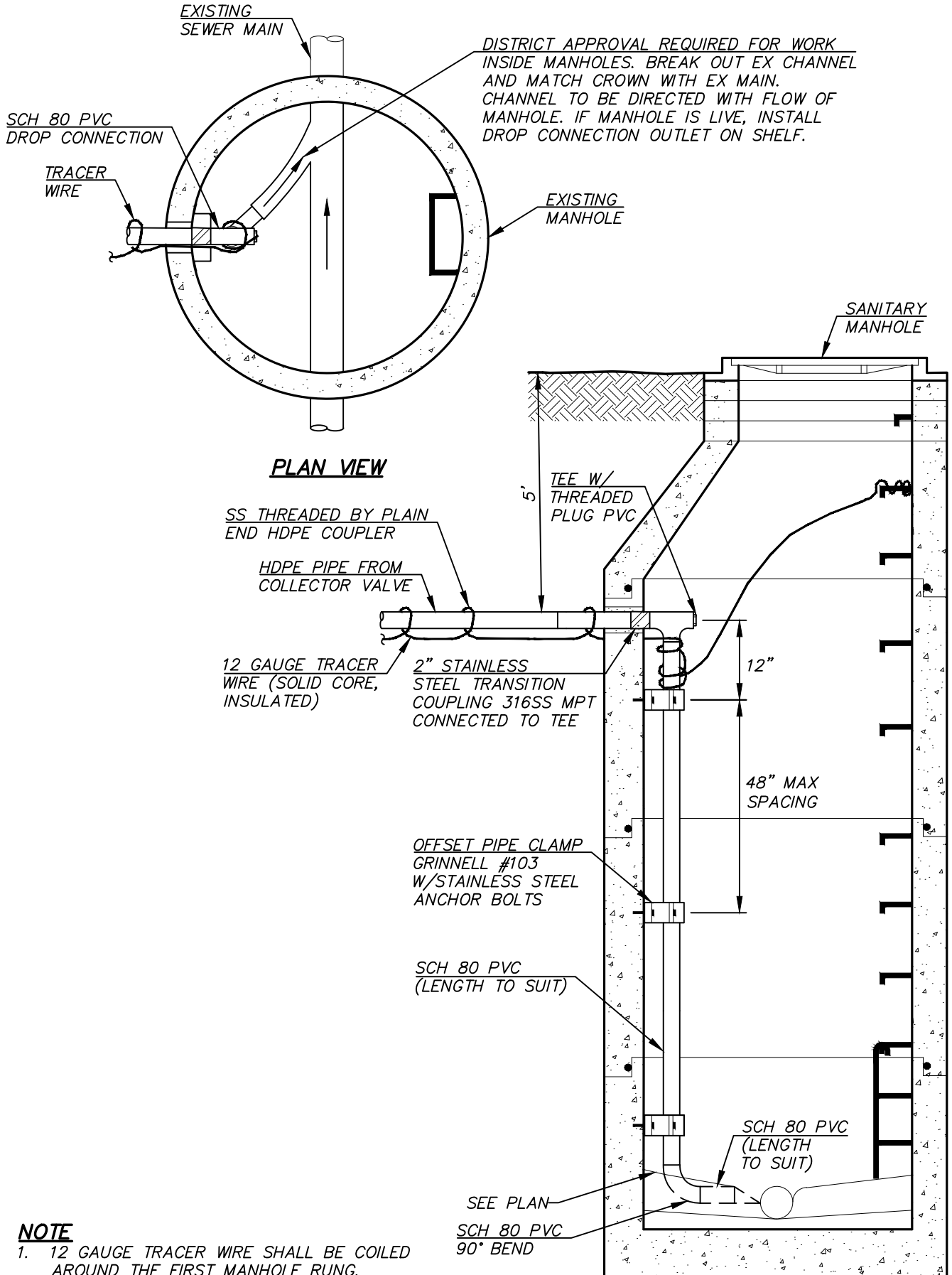


**NOTES**

1. ALL PVC FITTINGS SHALL BE GASKETED.
2. NO COLLECTION VALVE BOX REQUIRED WHEN CONNECTING TO A GRAVITY SIDE SEWER.

REV. 10/19/17

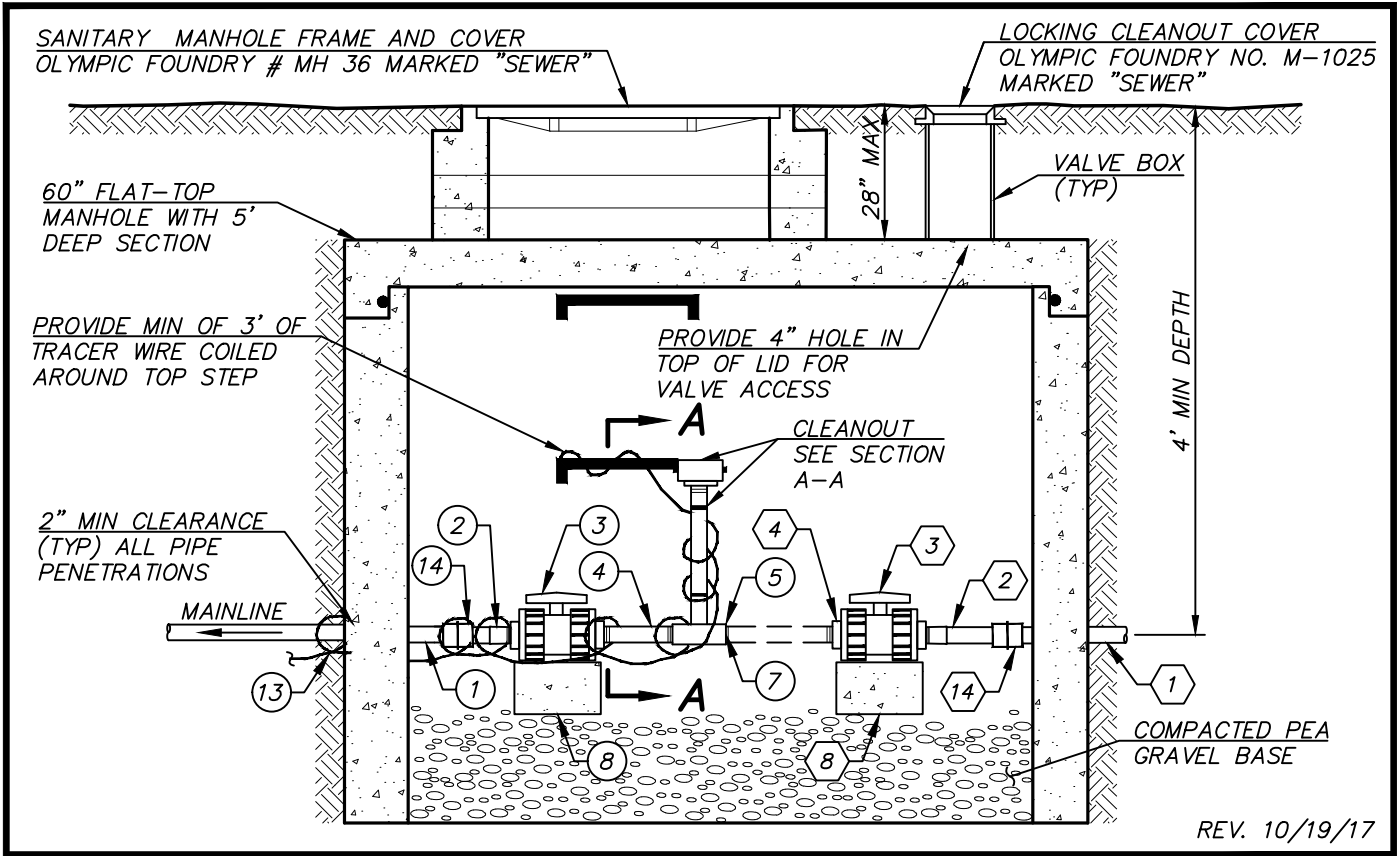
**PRESSURE LINE CONNECTION TO GRAVITY SANITARY SEWER**



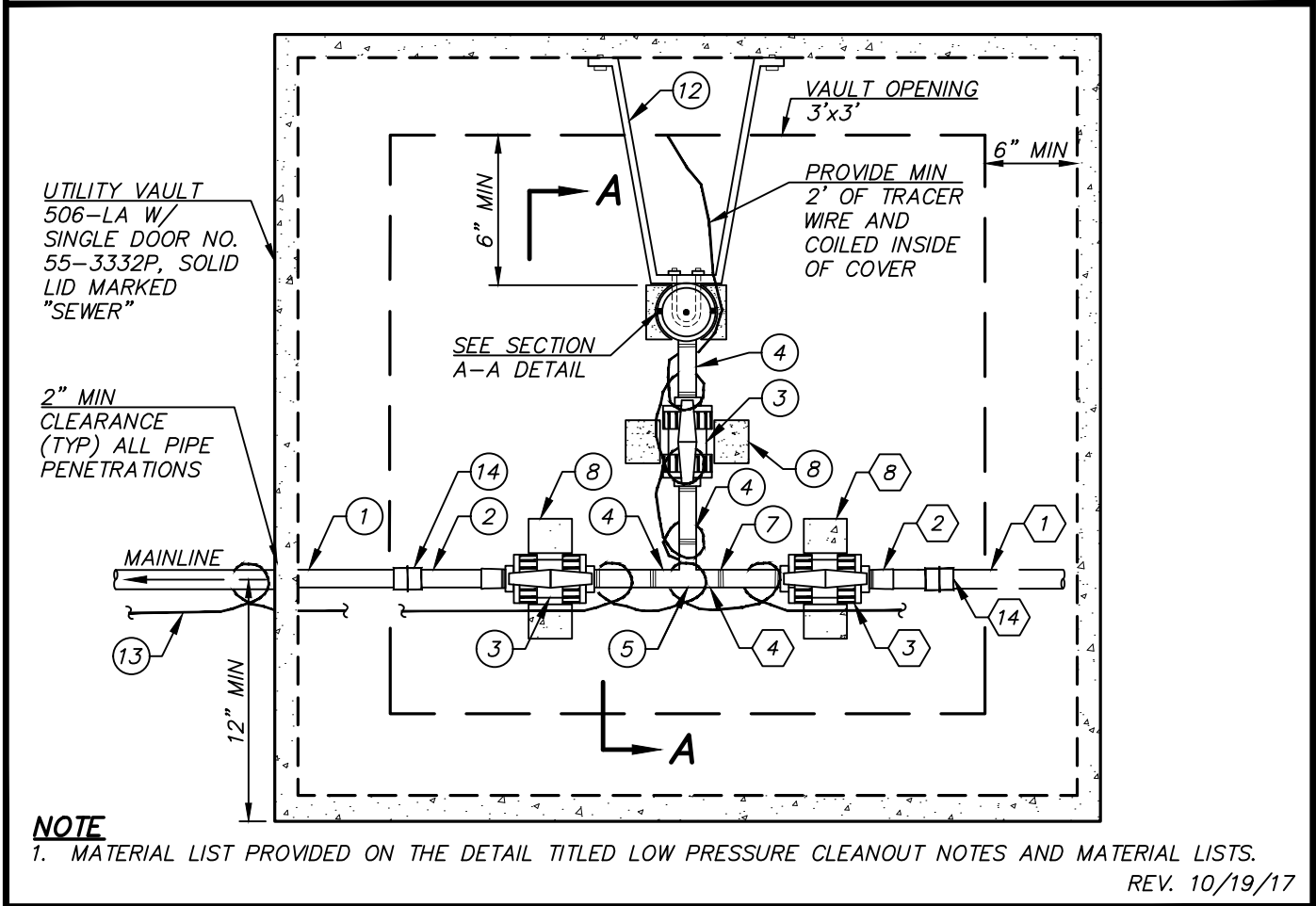
**NOTE**  
 1. 12 GAUGE TRACER WIRE SHALL BE COILED AROUND THE FIRST MANHOLE RUNG.

**PRESSURE SEWER DROP CONNECTION**

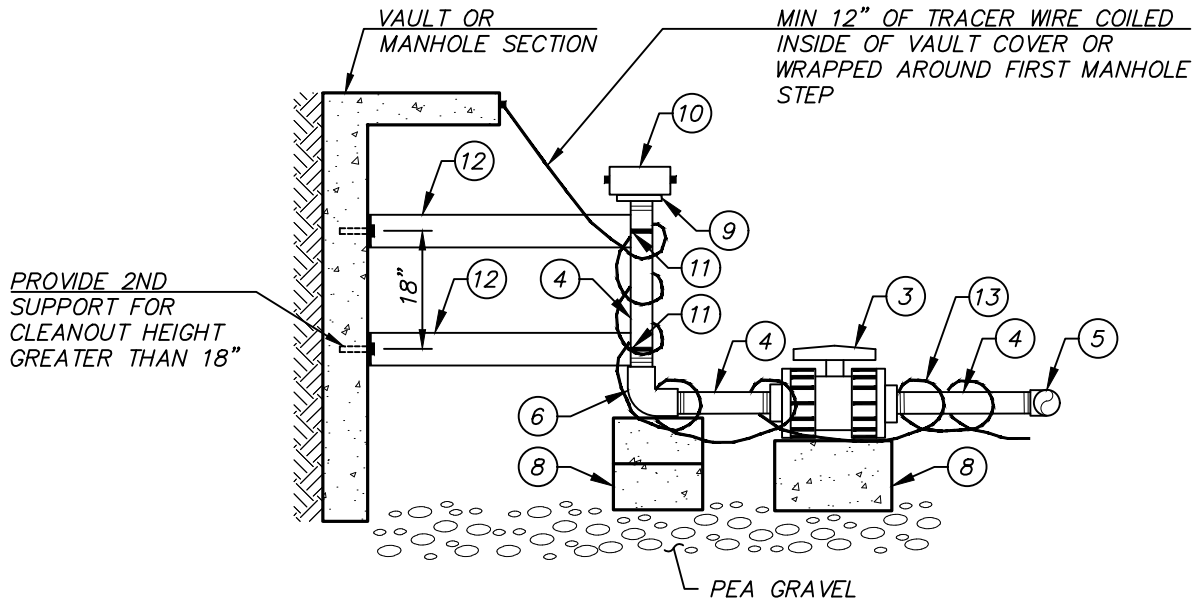
REV. 10/19/17



**TYPE II LOW PRESSURE CLEANOUT WITH MANHOLE (TRAFFIC AREAS)**



**TYPE I LOW PRESSURE CLEANOUT WITH MANHOLE (NON-TRAFFIC AREAS ONLY)**



**SECTION A-A FOR LOW PRESSURE CLEANOUTS**

REV. 10/19/17

**LOW PRESSURE CLEANOUT NOTES**

1. THE PIPING SYSTEM INSTALLED IN A TYPE I AND TYPE II CLEAN OUT IS THE SAME. THE ONLY DIFFERENCE BETWEEN THE TWO TYPES IS A TYPE I REQUIRES A PRE-MANUFACTURED VAULT, WHILE A TYPE II REQUIRES A FLAT-TOP MANHOLE SECTION.
2. LOW PRESSURE CLEANOUTS SHALL BE INSTALLED AT A MINIMUM OF EVERY 500-FT AND AT THE END, OR TERMINUS, OF THE LOW PRESSURE SEWER MAIN.
3. THE MANHOLE SECTION AND/OR VAULT SHALL BE INSTALLED LEVEL AND SHALL DRAIN TO DAYLIGHT OR STORM SYSTEM. THE COVER AND/OR LID SHALL BE ADJUSTED TO GRADE.
4. WHERE THE CLEAN OUT IS INSTALLED AT THE TERMINUS OF A MAIN, THE PVC PLUG (ITEM 7) SHALL BE INSTALLED INTO THE END OF THE PVC TEE (ITEM 5), ALLOWING FOR FUTURE MAIN EXTENSIONS.

**MATERIAL LIST**

1. ALL PARTS SHALL BE THREADED PVC, SCHEDULE 80, WITH THE SAME DIAMETER AS THE SEWER MAIN (EXCEPT AS NOTED).

(X) MATERIALS REQUIRED FOR LOW PRESSURE CLEANOUT

(X) MATERIALS REQUIRED FOR EXTENSION OF SEWER MAINLINE AS PART OF CURRENT OR FUTURE WORK

ITEM	ITEM NAME
1	HDPE PRESSURE PIPE SDR 11
2	HDPE x 316SS MPT TRANSITION FITTING, 6-INCH LENGTH (FULL BORE) DIAMETER SHALL BE SAME SIZE AS THE SEWER MAINLINE
3	UNION BALL VALVE, PVC
4	NIPPLE, PVC
5	TEE, PVC
6	90° ELBOW, PVC
7	PLUG, PVC (MIP)
8	CONCRETE BLOCK - (SIZE TO SUIT)
9	MIP X 2 1/2" MNST SWIVEL BRASS HOSE ADAPTOR (PROVIDE REDUCER AS REQUIRED)
10	2 1/2" FNST CAP W/CHAIN
11	ALUMINUM U-BOLTS BOLTED TO SUPPORTS WITH STAINLESS STEEL NUTS
12	1-1/2" X 3/16" ALUMINUM BAR, BENT AS SHOWN IN TYPE I CLEANOUT DETAIL AND ATTACHED TO CONCRETE WALL WITH STAINLESS STEEL ANCHOR BOLTS
13	TRACER WIRE, INSULATED 12-GAUGE SOLID CORE WIRE (WRAP TRACER WIRE AROUND ALL PIPES DURING INSTALLATION)
14	HDPE ELECTRO-FUSION SOCKET WELDED COUPLING

REV. 10/19/17

**LOW PRESSURE CLEANOUT NOTES AND MATERIAL LIST**



## **PART FIVE - DRAWING STANDARDS**

### **5.1 GENERAL**

#### **A. Plan Set**

1. All plans shall be ink on a reproducible mylar cut sheet, 22"x34" in size. The title block for each sheet shall include:
  - a) Name of the project
  - b) Owner/developer's name
  - c) Address and telephone number
  - d) Engineering firm's name, address and telephone number
  - e) Date the drawings were prepared
  - f) Dates and identification of any revisions to the drawings
  - g) Page number of the sheet within the plan set
2. Each set of plans shall include a cover sheet unless the plans are shown completely on one sheet. The cover sheet (or single drawing sheet) shall include:
  - a) Name of the project – if the improvements are being constructed as part of a larger development, the name and number of the division being constructed under this agreement and the name of the larger development shall be shown
  - b) Plat name or Short Plat Number and the agency (County or City) who has jurisdiction over the development of the project
  - c) Section, township, range, and existing King County tax parcel number(s) where the project is located
  - d) Vicinity map
  - e) List of drawings, including District standards
  - f) North arrow and scale designation
  - g) Datum used (1988 NAVD or latest District standard required) and benchmark location and elevation shall be surveyed at North American Vertical Datum of 1988 [NAVD 88]. Benchmark must be a known, registered benchmark by King County or the Cities of Sammamish or Issaquah. Assumed or surveyor set benchmarks will not be allowed. Elevations derived from as-built drawings or similar sources shall not be used as the basis for vertical control. The drawings shall be assigned the local projection of Washington State Plane North, NAD 1983 (HARN), US Feet.
  - h) Legend of symbols used
  - i) Identification of existing and proposed streets
  - j) Seal and signature of the Professional Engineer responsible for the plan set

- k) Signature box for the District's General Manager to sign and date the drawings, indicating District approval of the plans
- l) Fire district in which the project is located
- m) The following disclaimer: "Underground utilities are shown in the approximate location. There is no guarantee that all utility lines are shown, or that the location, size, and material is accurate. The Contractor shall uncover all indicated piping where crossing, interferences, or connections occur prior to trenching or excavation for any pipe or structures, to determine actual locations, size, and material. The Contractor shall make the appropriate provision for protection of said facilities. The Contractor shall notify ONE CALL at 1-800-424-5555 and arrange for field location of existing facilities before construction."

3. The set of drawings shall include:

- a) Erosion and sedimentation control plans
- b) Water and sewer facilities on separate drawings unless the requirement is waived by the District
- c) Location and general footprint of all buildings, shown with faded lines, with finished floor elevations for all floors
- d) All rockeries, fences, street trees, driveways, mailboxes, and other surface features, shown with faded lines
- e) Existing and finished grading (contour lines), shown with faded lines
- f) Symbols and font sizes conforming to the District drawing standards listed in Table 5.1.

4. Preliminary Plans sent for review may be provided on regular print paper.

B. Overall Drawing(s)

Where more than one sheet is required to cover all of the construction area, an overall drawing will be required. If the improvements being constructed are in a division of a larger development, the extent of the larger development shall be indicated.

The overall drawing(s) shall show the proposed location of water lines, valves, fire hydrants, blowoffs, sewer lines, manholes, cleanouts and other appurtenances. If the water and sewer plans are shown separately, separate overall drawings shall be provided for the water and sewer improvements.

The overall drawing shall be at a standard engineering scale. The overall drawing shall include the entire construction area. An index map shall be included, showing the sheet layout with associated page numbers, on the overall sheet.

# TABLE 5-1













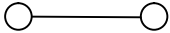

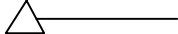

## STANDARD DRAWING WATER SYMBOLS

SYMBOL		DESCRIPTION (ABBREVIATION)
EXISTING	PROPOSED	
		CAP/PLUG
		COUPLING (CPL)
		GUARD POST (GP)
		REDUCER (RED)
		THRUST BLOCK (TB)
		WATER METER (WM)
		FIRE HYDRANT (FH)
		FLANGE/BLIND FL (FL)/(BL FL)
		MECHANICAL (MJ)
		PUSH-ON/HUB
		RESTRAINED JOINT (RJ)
		AIR/VACUUM RELEASE VALVE
		BLOW-OFF (BO)
		BUTTERFLY (BF)
		CHECK (CK)
		GATE/GENERAL (WV)
		PLUG VALVE (PV)
		TEE (TEE)
		BEND (BND)
		CROSS (X)
		PRESSURE REDUCING VALVE (PRV)
		ZONE VALVE
		WATER MAIN

**SYMBOLS SHOWN ON DRAWINGS SHALL BE AT LEAST THE SIZE SHOWN IN THIS TABLE, REGARDLESS OF DRAWING SCALE.**

# TABLE 5-1 (CONTINUED)

## STANDARD DRAWING SEWER SYMBOLS

SYMBOL		DESCRIPTION (ABBREVIATION)
EXISTING	PROPOSED	
		SEWER CLEAN OUT (CO)
		SEWER MANHOLE (SSMH)
		SEWER COLLECTION VALVE BOX
		SEWER AIR/VACUUM RELEASE VALVE
		GREASE INTERCEPTOR/OIL WATER SEPERATOR
		GRINDER PUMP
		SEWER MAIN
		SEWER FORCE MAIN

**SYMBOLS SHOWN ON DRAWINGS SHALL BE AT LEAST THE SIZE SHOWN IN THIS TABLE, REGARDLESS OF DRAWING SCALE.**

### C. District Standards Sheets

The latest issue and/or amendment of the District Standard sheets with standard notes and details, at the date of the Pre-Construction Meeting with the District, shall be incorporated in the Plan Set, and the numbering of the sheets shall reflect their inclusion.

### D. Shop Drawings

Shop drawings, when required, shall be provided on the standard size and type sheet.

The Shop drawings may be at any scale that will adequately show the detail necessary for fabrication or construction of the piping, equipment, machinery, etc. depicted on the shop drawing.

## 5.2 WATER SYSTEMS

The water system design shall be a plan view, at a scale that clearly shows the facilities to be constructed (typically, 1"=20' to 1"=30'). A smaller scale may be used if approved by the District. The design drawing shall show clearly the relationship of the water main to existing and proposed underground utilities as well as its relationship to street paving, curb, gutters and sidewalks. Water facilities drawings shall be separate from sewer facilities drawings unless combined drawings for simple designs are approved by the District.

A profile of the water system is required. The location of air/vacuum release valves shall be shown in profile. All other utility crossings shall be shown on the profile drawing. All new or proposed water improvements shall be depicted by a heavy solid line. All existing water improvements shall be depicted by a thin, dashed or faded line. The proposed sewer improvements shall be shown with faded lines on the water drawings. All existing sewer improvements shall be depicted by a thin, or faded dashed line. When showing existing water and sewer, and/or other existing and proposed underground utilities, care should be taken to clearly identify each line with unique letters or line types. The different lines should be shown in the drawing legend. If the District has approved combined water and sanitary sewer drawings, all new sewer shall be depicted by a heavy dashed line. Use the following nomenclature for identifying single ¾" water meters:

**INSTALL 1" SERVICE LINE WITH SINGLE ¾" METER SETTER**

For double ¾" water meters, use the following nomenclature:

**INSTALL 1" SERVICE LINE WITH DOUBLE ¾" METER SETTER**

Callouts for larger meters are similar.

All storm drainage facilities, existing or proposed, shall be shown with faded lines on the water and sewer drawings. In addition, the complete storm drainage improvement drawings shall be submitted for District review with the water and sewer drawings.

All valves, fire hydrants, fittings and other appurtenances shall be called out and fully located by stationing along centerline of street, or base line of easements, etc. The callouts shall indicate the line size and material. Fittings and appurtenances shall have indications of their size, type and connection type (i.e., flange or mechanical joint). Clusters of fittings and/or appurtenances shall be called out together.

Meter sizes and service line sizes shall be called out for all irrigation meters and domestic meters for multi-family/commercial/industrial developments. In single family residential developments, the service line size used for the lots shall be called out as noted above, and any locations where meters in excess of 3/4" are required shall be called out.

All drafted symbols, line work, and notes shall be completely legible on the final paper print. All notes shall be a minimum of 1/10<sup>th</sup> inch high (7 point font). Fonts shall be a plain, non-serif style, such as Arial. Shading or hatching in areas containing water improvements symbols, lines, or notes shall not be allowed.

Profile drawings are required by the District to show the relationship of the water line to finish grade, other underground utilities, crossings of railroad tracks, streets, rivers and drainage ditches, changes in the vertical alignment of the water line, and/or other places where it would clarify construction.

### **5.3 SEWER SYSTEMS**

The design of the sewer system shall include both a plan and profile view. The Horizontal scale shall be a scale that clearly shows the facilities to be constructed (typically, 1"=20' to 1"=30'), and the Vertical scale shall be 1"=5' or 1"=10'. A smaller scale may be used if approved by the District. The design drawing shall show clearly the relationship of the sewer main to existing and proposed underground utilities, especially all storm drainage facilities, as well as its relationship to street paving, curb, gutters and sidewalks. The sewer line locations shall be dimensioned from the street centerline where possible. Sewer facilities drawings shall be separate from water facilities drawings unless combined drawings for simple designs are approved by the District.

All new or proposed sewer improvements shall be depicted by a heavy dashed line. All existing sewer improvements shall be depicted by a thin, dashed or faded line. The proposed water improvements shall be shown with faded lines on the sewer drawings. All existing water improvements shall be depicted by a thin, or faded solid line. When showing existing water and sewer, and/or other existing and proposed underground utilities, care should be taken to clearly identify each line with unique letters or line types. The different lines should be shown in the drawing legend. If the District has approved combined sanitary sewer and water drawings, all new water shall be depicted by a heavy solid line.

All storm drainage facilities, existing or proposed, shall be shown with faded lines on the water and sewer drawings. In addition, the storm drainage improvement drawings shall be submitted for District review with the water and sewer drawings.

All manholes, cleanouts and other appurtenances shall be clearly labeled in both plan and profile and shall be fully located by stationing along centerline of street, or base line of easements, etc. All invert elevations for each manhole shall be shown on both plan and profile views, together with a

designation for the size of pipe, direction entering/leaving the manhole, and IN or OUT. Profiles shall also include the size, length, slope and pipe classification for each run of pipe from manhole to manhole. Fittings and appurtenances shall have indications of their size, type and connection type. All crossings and conflicts with other utilities shall be shown in both plan and profile. The plans shall also indicate all necessary easements and improvements in the area of the sewer construction, or that would be affected by the construction shall also be shown.

If the finished floor elevation of the lowest sewer floor is below the rim elevation of the manhole upstream of where the building's side sewer connects to the main, a backwater valve is required by the Uniform Plumbing Code. Each drawing plan sheet that contains such a building shall include the following note:

\*The Uniform Plumbing Code requires backwater valves on building sewers where the finished floor is below the rim of the upstream manhole. Backwater valves, if they are installed, must be located upstream of the cleanout closest to the building. The District is not responsible for their installation, maintenance, or operation. The side sewer permit for a building with a backwater valve shall include a hold harmless clause which indemnifies the District against any liability, damage, or cost which may accrue from the installation and operation of a backwater valve in the side sewer.

Each building or lot whose finished floor elevation indicates the need for a backwater valve shall have a large asterisk (\*) next to the building number or lot number as reference to the note.

All drafted symbols, line work, and notes shall be completely legible on the final paper print. All notes shall be a minimum of 1/10<sup>th</sup> inch high (7 point font). Fonts shall be a plain, non-serif style, such as Arial. Shading or hatching in areas containing sewer improvements symbols, lines, or notes shall not be allowed. It is preferred to have the plan and profile of each sewer from manhole to manhole shown on the same sheet with the same horizontal scale. When possible, the profiles shall be extended directly below or above the plan view. If including the plan and profile on the same sheet results in excessive fragmentation of the sewer plan view, profiles may be shown together on separate pages, clearly referencing the sheet number containing the plan view. Where profiles are shown on separate pages from the plan view, a horizontal scale of 1"=50' and a vertical scale of 1"=5' may be used for the profile.

## **5.4 AS-BUILT DRAWINGS**

### **A. Project Field Drawings**

The Developer/Contractor shall maintain, on the jobsite, project field plans marked to indicate District approved plan revisions made in the field and other details of construction. These changes and details of construction shall be provided to the Engineer of Record to include on the "As-Built" record drawings. All surface features of the water and sewer systems, together with the staked location of watermain bends, shall be field-surveyed by a Washington State licensed Surveyor during construction and the information used to prepare the As-Built drawings. The surveyed locations of all features shall be shown with an "X" on the draft as-built drawings superimposed on the water and sewer plans. (Point-Plot Map at the same scale as the as-built

drawings). The Developer's Engineer shall also submit to the District an electronic table of the surveyed points including identification number or description of the coordinates using the following projection: Horizontal: Washington State Plane North, North American Datum 1983/91, HARN, US Feet. Vertical Datum: NAVD 88. The Point-Plot Map and the draft as-built drawings shall be submitted electronically in addition to paper copies. The stationing, coordinates, callouts, and position of facilities shall be revised to represent the as-built location. If the original design drawings were prepared in digital format using AutoCAD or other automated drafting/design software, the revisions during construction shall be incorporated onto the as-built record drawings digitally. The drawings shall be on a minimum 4-mil mylar format, clearly marked in the lower right-hand corner as "As-Built". For manually-drafted drawings, if the "As-Built" record drawing is not on the original District Approved plan, a mylar of the original District approved plan shall also be provided. The Developer/Contractor's project field drawings shall be submitted to the District for review with the As-Built record drawings.

#### B. Changes in Street Names and/or Lot Lines/Numbers

If, during construction, street names, lot lines, and lot numbers were modified from those shown on the approved design drawings, the as-built drawings shall show the corrections. Street names shall match the names shown on the final plat certificate or similar document.

#### C. Plats and Short Plats

Plat drawings shall include the new tax lot numbers (10 digits) shown on the final plat certificate or similar document. Each lot may contain only the four (4) digit minor number. Short plat drawings shall include the short plat number.

#### D. As-Built Submittals

In addition to the as-built mylar drawings, the following shall be provided:

1. Copy of the recorded plat or short plat documents
2. Two (2) sets of full-size prints without District standards, plus one (1) full-size set of prints with District standards (for use at 11-month inspection)
3. One (1) sets of half-size prints (11"x17")
4. If the design was prepared using computer-aided drafting, provide (an) electronic file(s) containing the As-Built drawings. The electronic as-built drawing files shall be in a form compatible with AutoCAD Version 14 **or later** with the as-builts being assigned the local projection of Washington State Plane North, North American Datum 1983/91, HARN, US Feet and elevation Datum NAVD 88.
5. A single file containing all scanned images of the as-built drawings in Adobe's PDF format. PDF images shall be the full size of the original document.



#### E. Water System As-Built Details

The details of construction for water systems shall include, but not be limited to:

1. Bends - location of bends used, or deletion of bends shown on the plans and not used.
2. Meter boxes - changing the meter box location from one lot corner to another; measurements to meter boxes not located on lot corners from at least two permanent items such as catch basins, hydrants or manholes.
3. Service line locations - route the service line follows, if other than perpendicular to the street, from the main to the meter box. This is especially important in cul-de-sacs or bubbles.
4. Valves - The as-built location of all valves greater than 1 inch shall be shown.
5. Fittings - Any approved changes to the fitting callouts on the design plans should be noted.
6. Other Utilities - Crossings of other utilities and detailed locations of other utilities where they run parallel to the water main and are closer than 3 feet horizontally.

#### F. Sewer System As-Built Details

The details of construction for sewer systems shall include, but not be limited to, the items indicated below. Items 2 through 6 may be shown in a table on the drawing where the side sewers are shown.

1. Side sewer stubs - exact side sewer stub locations including all of the following measurements on each side sewer:
  2. Distance from the downstream manhole to the side sewer tee.
  3. Distance from the mainline to the wye (if double side sewer).
  4. Distance from the wye to the ends of the six (6) inch stubs.
  5. Perpendicular distance from the side property line to the end of the six (6) inch stubs.
  6. Depth of the end of the stub below finished grade and invert elevation.
7. Manhole inverts - all inverts to be verified by survey.
8. Manhole locations in unpaved areas - the as-built location of all manholes shall be shown, as determined by surveying described above.

9. Cleanout locations in unpaved areas - the as-built location of all cleanouts shall be shown, as determined by surveying described above.
10. Fittings - any changes to the fitting callouts on the design plans should be noted.
11. Force main bends - location of bends used, or deletion of bends shown on the plans and not used.
12. Other utilities - crossings of other utilities and detailed locations of other utilities where they run parallel to the sewer main and are closer than 3 feet horizontally.

**ANY CHANGES TO THE PLANS AS APPROVED SHOULD BE NOTED.**