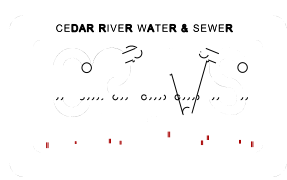


September 30, 2014



Cedar River Water & Sewer District

**18421 SE Petrovitsky Road
Renton, WA 98058**

SPECIFICATIONS AND REGULATIONS FOR SIDE SEWER PERMITTING, DESIGN, CONSTRUCTION AND USE

CEDAR RIVER WATER & SEWER DISTRICT
Renton, Washington

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Introduction

On October 7, 1964, the District exercised the right to construct, maintain and operate a sanitary sewer system within a defined, legal boundary as provided by Washington State Law RCW Chapter 56 (now Chapter 57). Through annexations, this boundary has been extended to its present sewer service area. The ultimate size of the District is limited in some areas by agreements with adjacent sewer districts and the District's Sewer System Comprehensive Plan.

The sewer system has been developed in accordance with the sewer portion of the District's Comprehensive Plan to assure the efficient and orderly construction of the system. The plan shows the location and size of major transmission lines, pump stations, and other existing and future facilities. These Specifications and Regulations for Side Sewer Construction and Use compliment and assist the District in carrying out the Comprehensive Plan and have been adopted by the District Board of Commissioners by resolution number _____ dated _____.

The Comprehensive Plan and descriptions of the District's legal and ultimate service area boundaries are available for inspection at the District office.

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I. DEFINITION OF TERMS

1. COMMERCIAL STRUCTURE

All Structures other than residential.

2. DISTRICT

Cedar River Water & Sewer District of King County

3. DOWNSPOUT

The leader or pipe above ground which is installed to conduct storm water from the roof gutter of any structure.

4. INDUSTRIAL WASTE

Any liquid, solid or gaseous substance, or combination thereof resulting from any process of industry, manufacturing, commercial food processing, business, trade or research, including development, recovering or processing of natural resources.

5. LATERAL

Sewer line which will receive the flow from one or more Side Sewers and discharge into a sewer main or trunk line.

6. LICENSED SIDE SEWER CONTRACTOR

Any person, partnership, corporation or association duly qualified and competent to install or repair Side Sewers under Permits issued by the District. Licensed Side Sewer Contractors shall have a State of Washington contractor's and business license and, if applicable, a business license issued by the municipality having jurisdiction in the work area. Licensed Side Sewer Contractors shall be bonded and provide proof of adequate insurance.

7. MANAGER

The General Manager of the District or his authorized deputy, inspector, agent or representative.

8. MULTI-FAMILY

Any structure containing more than one complete living unit as defined by the King County Building Code.

9. OCCUPANT

Any person or Owner in physical possession of a structure to which Sewer Service is available.

10. PERMIT

A printed and serially numbered side sewer form issued by the District prior to construction of any Side Sewer.

11. PERSON OR OWNER

Any individual, company, partnership, corporation, association, society or group and the singular term shall include the plural.

12. PRIVATE SEWER

A sewer system which is neither owned nor operated by the District.

13. PUBLIC SEWER

A Sewer, exclusive of Side Sewers, owned or operated by the District.

14. RESIDENTIAL STRUCTURE

A single family home.

15. SEWAGE

Water-carrying waste discharged from the sanitary facilities occupied or used by people.

16. SEWER or SEWER SYSTEM

Sewer main and appurtenances, including the Stub, designed or used to transport Waste Water and into which Storm Water, surface and ground waters are not intentionally admitted.

17. SEWER SERVICE

The continuing acceptance by the District of the Sewage from a structure into the Public Sewer.

18. SIDE SEWER

A line extending from the plumbing of a structure to and connecting with a Sewer Stub for the conveyance of sewage owned and maintained by the property owner.

19. STUB

That portion of the District Sewer System commencing from the Tee in the sewer main and terminating at the Right of Way or District easement line

20. STORM DRAIN

A conduit designed or used to transport storm water.

21. STORM WATER

Water on the surface of the ground or underground resulting from rainfall or other natural precipitation including downspouts, sump pumps, footing and yard drains, etc

22. WASTE WATER

Water-carrying wastes containing either/or both sewage and industrial waste and solids.

II. SEWERS AND SIDE SEWERS

A. General

Side Sewers must be installed and inspected pursuant to District Standards. Property owners are responsible and will maintain and repair Side Sewers up to the Right-of-Way or District easement line. The District shall be responsible for the Sewer System (which includes the Stub) within the public Right-of-Way and to the edge of District Easements.

The connection to the Stub is the responsibility of the property owner. The owner must apply for and be issued a Permit as a condition to connection. The Owner must notify District with 48hrs notice of the need for side sewer installation, repair or replacement inspection.

B. Sewer System Blockages

In the event of blockages,

1. **Property Owner Obligations.** The Property owner shall:
 - A. Notify Cedar River Water and Sewer District of blockages and flow problems.
 - B. Determine the location of the blockage. This can be done by any of the 3 methods listed below:
 1. Excavating the side sewer piping at the edge of the District’s easement or Right of Way Line and open the piping to visually see where the blockage lies.

2. TV inspection of the side sewer to show where the blockage lies
3. Uses of an electronic locating device called a sond which transmits a signal to ground surface that can show the location of the blockage. A sond must be used together with TV equipment to locate the blockage.

District personal must be on site to verify the procedure and will make the determination as to the party responsible for the blockage. If the blockage is within the Side Sewer, then the property owner shall perform the repair at its sole cost.

2. **District Obligations.** In the event of a blockage, the District shall:
 - A. Ensure the sewer main is operating properly.
 - B. Provide the best available information regarding the location and depth of the side sewer and stub.
 - C. Acquire a Right of Way Construction Permit from the municipality having jurisdiction if necessary.
 - D. The District may choose to jet the side sewer stub and raise the clean out to the surface for future maintenance.
 - E. Conduct repairs within the Right of Way or District easements by District staff or a contractor at the District's discretion
 - F. Require reimbursement from the owner for the cost of repairs if it can be shown to be the owner's responsibly.
 - G. Require a right of entry form be filled out and signed by property owner if access to private property is necessary.

3. **Guidelines for Responsibility.**
 - A. The Property Owner shall be responsible for repairs when:
 1. The problem is in the Side Sewer or outside the right of way or District easement.
 2. Side sewer stub is blocked by tree or shrub roots contained within the Side Sewer pipe originating from owner's property.
 3. Breakage of Side Sewer pipe and materials or other failure.
 4. Stub is blocked from something property owner has put in the sewer.
 5. Stub is blocked from debris getting into the line from a break in the Side Sewer.
 - B. The District shall be responsible for repairs when:
 1. Side sewer stub is blocked by tree or shrub roots that do not originate from the owner's property.
 2. Side sewer stub is blocked from debris originating from Right-of-Way or inside the District's easement.
 3. Right of entry form filled out and signed by the property owner if access on private property is necessary.

C. Prohibited Wastes

The discharge into any Sewer by direct or indirect means of any of the following is hereby prohibited:

From any person, firm, property or structure that has not received a Permit
Any waste prohibited by the Wastewater Treatment Division of King
County
Subsoil Foundation Drains
Footing Drains
Window Well Drains
Door Well Drains
Yard Drains
Unroofed Basement Floor Drains- Any outdoor or uncovered floor drains
Overflows from unpolluted water storage facilities
Clear water from refrigeration, reverse-cycle heat pumps and cooling or air-
conditioning equipment installed hereafter, except for the periodic draining and
cleaning of such systems
Roof drains or downspouts from areas exposed to rainfall or other precipitation
Storm surface or underground waters from any source
Any Septic Tank effluent or sludge, except from District approved systems.
Any obnoxious or malodorous gas or substance capable of creating a public
nuisance.
Any waste containing suspended solids of such character and quantity that
unusual attention or expense is required to handle such materials in the Public
Sewer Systems or at the sewage treatment plant

The property owner shall also verify and comply with the current King County Waste Water Treatment Division local discharge limits if any of the following materials will be discharged or suspected to be discharged into the District system:

Flammable or Explosive Materials: No flammable or explosive liquid, solid or gas may be discharged into the sewer system. These pollutants include, but are not limited to gasoline, kerosene, maltha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bedmates, carbides, hydrides, and sulfides. The pollutant may be anything that King County, the Fire Department, EPA, and Washington State recognize as a hazard.

High Temperature Materials: No liquid or vapor having a temperature higher than 150 degrees Fahrenheit (65 degrees C) at the point where it enters the public sewer system may be discharged into the sewer system.

Fats, Oil, and Grease (FOG): FOG is of two types: (1) petroleum or mineral origin (Nonpolar FOG); (2) animal or vegetable origin (Polar FOG).

The discharge limit for nonpolar and polar FOG is 100 milligrams per liter of discharged wastewater. Oil and water separators are used to prevent wastewater containing FOG.

Polar FOG must not be discharged if someone can see FOG floating on the surface or adhering to storage containers. Dischargers may not add agents to emulsify free-floating polar FOG.

The District's limits for corrosive substances are currently more restrictive than the King County local limit. No wastes having a pH lower than 5.5 and higher than 8.5 or having any corrosive property capable of causing damage or hazard to the structures, equipment or personnel of the District may be discharged into the system.

Organic Compounds: Organic compounds such as solvents, cleaners, thinners, pesticides, and laboratory chemicals that can cause toxic gases and fumes, which may harm sewer workers, are prohibited from being discharged into the sewer system. Anyone considering the discharge of wastewater containing organic compounds shall consult with the King County Industrial Waste Program at (206)263-3000.

Hydrogen Sulfide: The King County limit for atmospheric hydrogen sulfide is 10 ppm measured at a designated manhole.

Solids and Food Waste: An individual or company that discharges solids which cause a sewage backup is liable for any damages. The discharge to the sewer of materials such as ashes, sand, grass, household cleaning aids and gravel is prohibited. Industrial Wastewater must contain less than 7 milliliters per liter of solids capable of settling. Food waste, including food-grinder waste, must be capable of passing through a 1/4-inch sieve.

D. Preliminary Treatment

Preliminary treatment may be required if the biochemical oxygen demand of the waste exceeds 250 parts per million by weight. Such preliminary facilities shall be constructed, operated and maintained by the owner at this expense.

E. Connections to Cesspools and Septic Tanks

Direct connection from the plumbing fixtures in the structure to the Public or Private Sewer is required. Any connection to a cesspool or septic tank will be removed and proper connection directly made to the new Side Sewer. Cesspools or septic tanks shall be abandoned as per King County Health Department Policy and Procedure.

F. Grease Traps and Other Devices.

A District approved grit and oil trap located in the side sewer line shall be required for vehicle washing and vehicle service facilities, and all other facilities required by King County Waste Water Treatment Division and/or local Storm Drainage requirements where applicable.

A District approved grease trap or grease interceptor shall be installed at all locations where the District determines it is necessary to protect the sewer system. All discharge from grease traps into the sewer system must meet King County Waste Water Treatment Division fats, oil and grease limits.

Prior to construction, design drawings/submittals of traps and interceptors shall be presented to the District for review and approval. Traps and interceptors shall be inspected and asbuilt prior to and during installation at property owner's expense by District staff.

G. The Owner Desiring to Extend or Repair Existing Sewers Inside the Property

No person shall extend, repair, relay or make connections to a Side Sewer within the property lines or otherwise without first obtaining a permit from the District and requesting inspection of said work by the District.

**H. Illegal Connection and Illegal Disposal into District Sewer System
Illegal Connection; Penalties**

Any connection to the District's system from any Side Sewer, Grease Trap, or any other means to a manhole or sewer main, permanent or temporary in nature, which has not been authorized by the District by issuance of a Side Sewer Permit, is an unauthorized and illegal connection.

Any introduction of wastes other than from approved domestic or industrial customers that are prohibited to be discharged into the District sewer system is unauthorized and illegal.

Owners of illegal connections or of connections that facilitate illegal disposal, or parties that have illegally disposed wastes shall be liable to pay all costs of repair and remediation to the District's Sewer System and the King County Waste Water Treatment Division and for any other damages arising out of connections or disposal that are prohibited, unauthorized or illegal as set forth herein, including, but not limited to damages arising from back- ups or blockages.

Owners and responsible parties shall also be responsible for any damages resulting from the act of prohibited, unauthorized or illegal discharging and shall bear all costs for removing or restoring an illegal connection or connection facilitating illegal disposal to District's standards and requirements.

I. Fines.

In addition to bearing the cost for all such costs and damages, the owners and responsible parties will be liable for the District's fines listed below and all King County Waste Water Treatment Division fines (if applicable):

Cedar River Water & Sewer District Fines for Unauthorized Connection, Prohibited Disposal & Tampering:

- 1st Offense \$250.00
- 2nd Offense \$1 500.00
- 3rd Offense and each additional offense \$2,500.00

Illegal Disposal

- 1st Offense \$500.00
- 2nd Offense \$1,500.00
- 3rd Offense and each additional offense \$2,500.00

111. OBTAINING SIDE SEWER PERMIT

A. When Permit Must be Obtained

Before any work is started for construction of a Side Sewer either on private property or within public right-of-way, application shall be made for a Side Sewer Permit and said permit issued by the District. Where a Right of Way Permit is required, such a permit must be obtained prior to the start of work by the District. Applications for Side Sewer Permits must be submitted at least 24 hours in advance to allow time for processing.

B Timing of Side Sewer Installation

Side sewers shall be installed after the structure is weather tight and rough plumbing has been installed.

Special Circumstances

Installation of Side sewer may be allowed at building foundation stage if requested in advance providing the following provisions are met:

1. A two inspection side sewer permit is purchased
2. Side sewer is extended into crawl space and capped at least 1 foot above finished crawl space grade.
3. Side sewer stub in crawl space is not connected to building plumbing until after building is weather tight and rough plumbing is installed and crawl space is inspected by District staff.

C. Person Who Must Apply for Permit

Application for a Side Sewer Permit shall be made personally by the Owner of the property or the person serving as the Owner's representative.

D. Material Required for Application for Permit

A preliminary plat showing the size and location of structures on the property, the owner's name, address and legal description of the property to be served shall be provided. The full course of the proposed Side Sewer from the connection point to the

District System to the structure shall be shown on the plat. The application shall be signed by the Owner (or his designated representative) of the property to be served.

E. Permit for Each Individual Structure

A Side Sewer Permit is required for each individual structure to receive sewer service. Side Sewer Permit Fees are listed in the District's current Rate and Fee Schedule.

F. Work on Private Property

A Permit for Side Sewer Work on private property shall be issued only to the Owner of the property or his authorized representative. Where a Side Sewer is to be installed across the private property of another person, the applicant for the Side Sewer Permit shall provide a recorded copy of all executed easement(s) from all property owner(s).

The Owner is the only person authorized to install and repair Side Sewers on private property other than a Licensed Side Sewer Contractor. The Owner or contractor shall be wholly and solely responsible for workplace safety and compliance with all laws, regulations and permits.

G. Work Within A Public Right-of-Way

A Permit which includes Side Sewer work in a Right-of-Way may be issued only to the District for work to be performed by a Licensed Side Sewer Contractor.

H. Unauthorized Work

No Licensed Side Sewer Contractor shall do any Side Sewer Work under any other person's permit nor shall any unauthorized person do any Side Sewer work under a Licensed Side Sewer Contractor's Permit, except as may be otherwise authorized by the District.

I. Posting of Permit

The Contractor's Side Sewer Permit copy shall be available on the job and must be readily accessible to the District inspector for approval and signature. The contractor shall be responsible for all additional costs incurred by the District for additional inspections.

J. Other Permits Required

The issuance of a Side Sewer Permit by the District shall not relieve the Permit holder from the responsibility of obtaining such other permits or licenses as may be required.

K. Failure to Comply With Permit Provisions

If any work done under a Side Sewer Permit is not in accordance with District Specifications and if the contractor or persons doing the work fails or refuses to properly construct and complete such work, notice of such failure or refusal shall be given to the Owner or Owner's Representative. The District may cause said work to be stopped. If incomplete work in the opinion of the District constitutes a hazard to public safety, health or the Public Sewer, such work may be fully or partially completed by the District in order to alleviate the hazard. The cost of such work and any materials necessary therefore

shall be charged to the Owner and shall be payable by the Owner immediately upon written notice given by the District of the amount thereof or by posting a notice thereof on the premises.

L. Completion of Work in a Public Right-of-Way

All work within the limits of any public Right-of-Way shall be prosecuted to completion with due diligence, Excavations shall not be left open. Any excavation not properly covered may be backfilled and the public Right-of-Way restored by the District. Any cost incurred in such work shall be charged to the Side Sewer Contractor in charge of such work and shall be payable immediately to the District upon written notification of the amount thereof given to the contractor or posted at the location of the work.

IV. LICENSE, BOND AND INSURANCE

A. General Qualifications

A Side Sewer Contractor working in the District shall have a State of Washington contractor's license and shall be capable of performing Side Sewer installation and repair work. The contractor shall provide copy of the business license(s) from the municipality having jurisdiction in the area and Certificate of Insurance for the minimum amount) s) specified by the District. Side Sewer Contractors shall comply with the terms and conditions set forth herein.

The applicant shall read and understand the contents of the **SPECIFICATIONS AND REGULATIONS FOR SIDE SEWER PERMITTING, DESIGN, CONSTRUCTION AND USE** manual prior to construction.

B. Insurance

A Licensed Side Sewer Contractor shall have filed evidence of public liability insurance in the amount of not less than \$100,000.00 each person, \$300,000.00 each accident bodily injury and \$100,000.00 property damage with the District prior to the performance of any work with provision that such insurance shall not be canceled without at least forty-five (45) days written notice in advance to the District.

C. Hold Harmless

A Licensed Side Sewer Contractor shall execute a document whereby he shall hold harmless, indemnify and defend the District from any and all claims against the District as a result of the work done within the District pursuant to these regulations.

D. Performance Bond

A Licensed Side Sewer Contractor shall supply the District with a performance bond in an amount to be determined by the District in order to work on side sewer installations within the Public Right of Way. The bond is to protect the District in its obtaining road opening permits from City or County jurisdictional agencies.

E. Responsibility of Licensed Side Sewer Contractor for its Employees

The Licensed Side Sewer Contractor shall be responsible for any and all actions of its employees, laborers, agents, subcontractors and volunteers. The contractor's absence or

any misunderstanding of its orders by such persons shall not relieve the contractor of such responsibility.

F. Revoking of Permit

If the Licensed Side Sewer Contractor has not complied with the provisions in following the rules and regulations established herein or any amendments hereto, or has demonstrated just cause for suspension, the District shall have the right to revoke the Permit and privileges of said contractor.

V. SIDE SEWER CONTRACT WITH OWNER

A. Cedar River Water & Sewer District Regulations

The District shall require execution of a contract with property Owners and Licensed Side Sewer Contractors in connection with issuance of a Permit which requires compliance with all terms and conditions of this manual and any other District rule or regulation.

B. Release From Material and Labor Liens

The Contractor shall furnish the Property Owner with a release of lien from both labor and material, or an affidavit stating same has been paid, before payment is accepted by the Contractor for such labor and material.

C. Special Releases and Agreements

Side Sewers shall have a minimum slope as designated in section VII.A. If the slope of the Side Sewer is to be less than as provided in section VII A, the property Owner shall sign and acknowledge a grade release in a form approved by the District, the effect of which shall release the District from all future claims for damages due to the installation of said Side Sewer. If there is doubt about the grade, such grade release shall be executed before the pipe is laid; provided, however, the District's failure to require a grade release shall not constitute a waiver of the District's rights herein. Grade releases shall be recorded in the office of the County Auditor before any backfilling takes place.

No connection to a side sewer in the Right-of-Way shall be made without a District Side Sewer Permit.

When two or more structures on separate parcels are to be connected on one Side Sewer Stub, easements running with the land must be executed and recorded with the County Auditor before a Permit will be issued for construction. Copies of said easements shall be submitted to the District and shall insure that all properties involved shall have perpetual use of the Side Sewer.

Recording fees for grade releases and easements shall be paid for by the Owners of the properties affected.

Where physical conditions render compliance with any provision of this manual impracticable, the District may issue a special Permit for installation of a Side Sewer requiring compliance with said provisions insofar as is reasonably possible, but such Permit shall be issued only upon condition that the Property Owner execute and deliver to the District an instrument, in form furnished by the District, agreeing to hold harmless and indemnify the District for any damage or injury resulting from such sub-standard installation.

D. Private Pump

Individual connections to the District's sewer system shall typically be gravity flow whenever possible. Private sewer pump systems for Side Sewers must be submitted to and reviewed by the District.

VI. LOCATION OF MAIN SEWER Tees

A. Connection to Designated Tee

Connection shall be made to the tee designated at the time the Side Sewer Permit is issued. In the event a tee and stub does not exist, connection/tapping of the sewer main, construction of a side sewer stub and side sewer shall be made at a location as determined by the District.

B. Excavation

Excavation shall be made from the measurements furnished by the District for the location of the tee.

C. Prospecting for Tee

If the tee or riser is not located at the measurements as furnished, the contractor shall prospect four feet in all directions from the distance and depth given. If such prospecting fails to disclose the tee, the contractor shall immediately contact the District and report the circumstances. Upon receipt of such report the District representatives will visit the site and render further assistance. The District will attempt to provide information but will not be held responsible for cost of locating side sewers.

VII. MINIMUM REQUIREMENTS FOR SIDE SEWERS

A. Grade

4" side sewer minimum slope is 2%, maximum slope 20% without prior approval; 6" side sewer minimum slope is 1%, maximum slope 20% without prior approval

B Foundations

Side Sewers parallel to the foundation wall of any building shall be installed not less than 24 inches therefrom.

C Diameter of Pipe Within Public Right-of-Ways and Easements

No Side Sewer less than 6 inches in diameter shall be laid in public right-of-ways or in easements.

D. Joint Side Sewers

If a Side Sewer serves two, three or four Residential Structures, six-inch pipe shall be used from the Public or Private Sewer in the street to the Wye at the confluence of the separate Side Sewers.

E. Joint Side Sewer Cleanout

A maximum of four Residential Structures may be connected to a single 6" Sewer Stub, A six-inch cleanout in a cast iron lid and ring per the standard drawing (included) shall be installed upstream of the wye where the upper connection is made.

F. Minimum Surface Cover for Pipe

Minimum cover for Side Sewers on private property shall be eighteen (18) inches except as hereafter provided. Minimum cover for Side Sewers shall be six feet at the Right of Way line. Commercial and multi-family cover is determined on a case by case basis. Minimum cover for Side Sewers crossing a ditch in the public way except as otherwise provided herein shall be 3 feet.

G. Single Residence Connection

All Side Sewers serving a single Residential Structure shall be a minimum of 4 inches in diameter. All Side Sewers serving structures other than single Residential Structures shall be a minimum of 6 inches in diameter.

H. Lake Front Connections

Side Sewers on lake front lines shall use PVC pipe between the lake front connection and to a point two feet above the hydraulic gradient. A clean out shall be installed above the hydraulic grade line or lake level. The remainder of the installation will be standard or as specified herein for normal conditions. (See Section VIII.)

I. Steep Bluff Connections

Designs for Side Sewers in steep slopes must be submitted to and approved by the District. A steep bluff shall be defined as having a slope of greater than 50%.

J. Water Line Crossings

Horizontal and Vertical Separation for Parallel Lines:

The minimum horizontal separation edge to edge between parallel water and sewer lines shall be 10 feet. The minimum vertical separation between crown of side sewer and invert of water line is 18 inches.

Horizontal and Vertical Separation for Parallel Lines under Unusual Conditions:

When conditions prevent the minimum separation between parallel lines described above, a side sewer may be laid closer than 10 feet horizontally provided that it is laid in a separate trench. If a minimum vertical separation of 18 inches can not be obtained, the sewer shall be constructed of materials and joints that are equivalent to water main standards of construction and shall be pressure tested to ensure water tightness prior to backfilling.

If Side Sewers must be located in the same trench as a potable water line, special construction and mitigation is required. Both water lines and side sewer lines shall be constructed with a casing pipe of pressure-rated pipe material designed to withstand a minimum static pressure of 150 psi. The water line shall be placed on a bench of undisturbed earth with the bottom of the water pipe at least 18 inches above the crown of the sewer, and shall have at least 5 feet of horizontal separation at all times. Additional mitigation efforts, such as impermeable barriers, may be required by appropriate state and local agencies.

Vertical Separation for Perpendicular Lines:

Side Sewer lines crossing water lines shall be laid below the water lines to provide a separation of at least 18 inches between the invert of the water line and the crown of the sewer. The crossing shall be made as close as possible at an angle of 90 degrees.

Vertical Separation for Perpendicular Lines under Unusual Conditions:

When conditions prevent a vertical separation for perpendicular lines as described above, the side sewer shall be constructed of Ductile Iron C151 and C104 pipe with C111 joints and C110 fittings or with PVC C900 pipe with D3139 and FD7477 joints and C110 fittings. The one segment of the maximum standard length of pipe (but not less than 18 feet long) shall be used with the pipes centered to maximize joint separation. The crossing shall be made as close as possible at an angle of 90 degrees.

Standard gravity-sewer material may also be used if encased in concrete or in an 1/4-inch thick continuous steel, ductile iron, or pressure rated PVC pipe with a dimension ratio (Outside Diameter to the Pipe Wall Thickness) of 18 or less, with all voids pressure-grouted with sand-cement grout or bentonite. Commercially available pipe skids and end seal are acceptable.

The length of sewer pipe shall be centered at the point of crossing so that the joints will equidistant and as far as possible from the water line. The sewer pipe shall be the longest standard length available from the manufacturer.

Water Lines Crossing Under Gravity Side Sewers:

Water lines shall be protected by providing a vertical separation of at least 18 inches between the invert of the sewer and the crown of the water line. Adequate structural support for the sewers shall be provided to prevent excessive deflection of joints and settling on and breaking of the water lines. The length of sewer pipe shall be centered at the point of crossing so that the joints will equidistant and as far as possible from the water line. The sewer pipe shall be the longest standard length available from the manufacturer. The water line casing shall be a 1/4-inch thick continuous steel, ductile iron, or pressure rated PVC pipe with a dimension ratio (Outside Diameter to the Pipe Wall Thickness) of 18 or less, with all voids pressure-grouted with sand-cement grout or bentonite. Casing shall extend at least 5 feet beyond the outside edges of pipe. Commercially available pipe skids and end seal are acceptable.

Pressure Side Sewers Under Water Lines:

Individual connections to the District's sewer system shall typically be gravity flow whenever possible. Pressure side sewers when necessary shall only be constructed under water lines. The design and the materials specifications of the pressure Side Sewer must be submitted to and approved by the District.

VIII. INSTALLATION OF SIDE SEWER PIPE

A. Pipes acceptable for standard Side Sewers are as follows:

Unless otherwise called for, side sewer pipe shall be PVC or ductile iron and meet the following specifications.

Plastic Pipe

PVC = Type PSM-SDR-3S-ASTM 3034 (with standard gasket joints). ASTM D 3034, SDR 35.

Ductile iron Ductile Iron Class 50 AWWA C151 with mortar lining conforming to AWWA C104 with mechanical push-on type rubber joints),

Pipes

All pipe must be bedded with 5/8 crushed gravel 4" below to 6" above the pipe. All pipe bedding, laying and joining shall be done in accordance with the manufacturer's recommendations and as approved by the District.

B. Fittings

All changes in direction shall be made with 1/16 bends (22.5degrees), 1/8 bends (45 degrees) 90 degree turns shall be accomplished by installing 2 -1/8 (45 degree) bends with 24" between the bends. Not more than 90 degrees in bends or 100 lineal feet of pipe shall be installed between cleanouts. **Sanitary sewer waste pipes exiting the building less than 6' deep may connect to the side sewer with a 2 band flexible coupling. Sanitary sewer waste pipes increasing two pipe diameters, more than 6' deep, or dissimilar pipe materials must use a mechanical Romac style or slip coupling.**

C. Cleanouts

1. The connection to the District stub shall be a sweeping "T" also known as a "T-Y" or sanitary "T" cleanout in the same size as the District stub. This cleanout shall be extended to 3' from finished grade, capped (plugs not acceptable) with 1' of bedding material placed over the cap.
2. The cleanout ("Y" style) located at the structure shall be installed 2' from the structure minimum depth 2'. If installed deeper than 2' deep the cleanout shall be extended to 2' from the surface with a cap installed. This cleanout shall not be installed under any structure (eg. porches or decks). All other cleanouts shall be the same size as the side sewer (4" minimum) "Y" style.
3. Cleanouts installed in paved areas, rights of ways, commercial installations and recreational vehicle dump station facilities on single family residential properties shall be brought to the surface with a cast iron lid and ring installed per sewer "Cleanout (Lamphole)" plan (attached).

D. Backwater Valve

Sewer backwater valves shall be installed when the lowest finished floor of the structure is less than 24" higher in elevation than the first upstream sanitary sewer manhole cover. The back water valve shall be installed with an access riser and to the standards of the municipality having jurisdiction over the internal plumbing of the structure. The effective operation of the backwater valve shall be the responsibility of the owner of the side sewer.

E. Laying of Pipe

All Sewers shall be laid straight and true to grade with the bells up grade. No changes in Side Sewer direction will be allowed unless said changes are made with stock bends. Pipe shall have a minimum of four inches (4') of 5/8 minus crushed rock bedding under and six inches (6") over the pipe, unless otherwise specified. Pipe shall be carefully centered prior to jointing. The bottom of the trench shall be smooth and free from large rocks which may injure the Side Sewer pipe. When unsuitable foundation is found, as determined by the District inspector, the Side Sewer Contractor shall over-excavate as necessary and install suitable foundation to within four inches (4") of grade then install the pipe bedding. Backfilling of trenches shall be carefully performed to avoid damaging the pipe. All backfill between the Public or Private Sewer and property line shall be compacted in a manner approved by the District inspector unless otherwise required by the Municipality having jurisdiction over the public way. Open trenches shall not be left unattended. Trenches shall be backfilled or covered following the standards of the Municipality having jurisdiction during periods of work stoppage

F Connections to Public Sewer

Where a tee is not available, a PVC tapping tee shall be used. All sewer taps shall be performed with a sewer tapping machine that drills a clean smooth-edged hole in the sewer pipe. The drilled disc cut in the process of tapping the Sewer pipe shall not fall into or be left in the main line sewer. The drilled disc shall be delivered to the District Inspector. All taps will be made in coordination with the District. Forty-eight (48) hour notice shall be given the District by the Contractor prior to start of work. Trenches must be in a safe working condition and shoring as necessary per WAC 296 is required. A minimum of six inches (6") clearance under the main line sewer will be required for machinery clearance.

G. Length of Side Sewer

Contact District for current standards when proposing side sewer construction longer than 150' before commencing construction.

H. Depth of Side Sewer

For side sewers at 18' or deeper contact District for current standards before commencing construction.

I. Slope of Side Sewer

4" pipe shall be installed at a minimum 2% slope, 6" at a minimum 1% slope. If installed

greater than 15%, ductile iron must be used with one pipe anchor installed every 36 feet. Hill holder may also be required for steep slopes.

J. Impossibility of Gravity Flow Minimum Elevation

In any structure in which the plumbing drain is too low to permit gravity flow to the Public or Private Sewer, the Sewage shall be pumped or lifted by artificial means and discharged into the Public or Private Sewer.

IX. INSPECTION AND TESTING OF SIDE SEWER INSTALLATION

A. Call for Inspection

Arrangements for inspection of a Side Sewer installation shall be made with the District Side Sewer inspector or Construction Manager by the Side Sewer Contractor 24 hours in advance or as set forth in notices which will be distributed from time to time. Side Sewer permits must be obtained from the District prior to scheduling an inspection. The District reserves the right to set the time for inspection. All inspections shall be performed during normal working hours. No inspection appointments will be given before 8:30 AM or after 3:30 PM. Inspection requests left after hours by message will **not** be accepted. After hours inspections shall be approved by the District Construction Manager. Overtime inspection, if approved by the District, will be billed at the District rates for overtime.

B. Testing of Installation

Side Sewers and/or Private Sewers shall be tested for their entire length from the Side Sewer Stub by testing for visible leakage before backfilling by inserting a removable plumber's plug at the lower end of the line and filling the line with water to its highest point. The contractor shall make this test before calling for inspection so that the Inspector can observe and approve the installation in one visit. The Side Sewer Contractor or his job foremen must be present at the job during the inspections. Testing apparatus and water shall be furnished by the Side Sewer Contractor. Visible leakage shall be corrected and the line shall be retested.

C. Record Drawing

Record drawings shall be prepared by the Inspector with the Contractors assistance.

X. RESTORATION OF ROADWAYS

A. Restoration within a City, County or State Right-of-Way

It shall be the responsibility of the Licensed Side Sewer Contractor to cut the road surface, dig a trench, lay the pipe, make the connection to the wye or tee, backfill the trench and restore the roadway surfacing within the limits of any public thoroughfare or right-of-way. Such work shall be conducted in strict accordance with the rules and regulations of the Municipality having jurisdiction of said thoroughfare or right-of-way.

B. Restoration where not prescribed by City, County or State

The Licensed Side Sewer Contractor shall follow City, County and State Specifications and District requirements.

XI. SAFETY EQUIPMENT AND CLEANUP

A. Safety Equipment

The Side Sewer Contractor, before beginning excavation in a public area, shall have at the site sufficient barricades to properly protect the work. The barricades shall be illuminated during the night-time hours in accordance with the Municipality having jurisdiction regulations and requirements.

During the pipe laying operation, a ditch pump shall be available on site for immediate use. The Contractor shall have stock-piled and immediately available for use, sufficient shoring to adequately protect workmen when the ditch conditions require shoring by the Washington Industrial Safety & Health Act.

In addition to the foregoing provisions, the Side Sewer Contractor shall comply with all laws, ordinances and regulations of the state, county, city or town, relating to the safety and protection of the area affected.

Traffic Control must be provided in accordance with the governing agency standards whenever working in the public Right-of-Way. The Occupational Safety and Health Standards developed by the Occupational Safety and Health Administration, United States Department of Labor, or Washington Industrial Safety & Health Act, shall be adhered to wherever applicable.

B. Cleanup

1. Final cleanup work shall be completed as closely behind the construction work as it is physically possible to do so.
2. All excess material, rocks, logs, etc., shall be disposed of by the Contractor. No debris shall be disposed of by dumping on private property.
3. Drainage ditches affected by the construction operation shall be left in as good as, or better, operational condition than what existed prior to beginning work.
4. Removed grass/sod shall be replaced with sod and be watered in thoroughly.
5. Upon completion of all cleanup work, the entire site shall have a neat and workmanlike appearance.
6. The Contractor shall also notify the District of any damages and shall repair such damages, public or private, in kind immediately after backfilling

XII. MAINTENANCE OF SIDE SEWER INSTALLATIONS

A. Side Sewer Cleaning

All persons intending to clean a side sewer shall notify the District at least 24 hours prior to starting. The scope of work shall be conveyed to the District, grease removal, root removal, etc

B. Excavation and/or Modification of Side Sewer Installations

No person(s) shall excavate for the purpose of exposing a Side Sewer and such persons shall make no modifications to an existing Side Sewer (including the cutting of holes in the pipe line and/or installation of additional fit-tings) without first obtaining a "Side Sewer Repair or Rebuild Form". A minimum 24 hour notice shall be given to the District before such intended modification or excavation. All modifications must be inspected and

asbuilt by the District.

C. Demolished or Removed Buildings

The Property Owner or his contractor engaged in demolishing or removing any structure connected to the Public Sewer shall obtain a “Side Sewer Repair or Rebuild Form”. A minimum 24 hour notice shall be given to the District before such intended capping or excavation. The Contractor shall expose and cap the Side Sewer connection of such structure at the Right-of-Way or District Easement line in accordance with the requirements of the District. A District Inspector must observe and modify the record drawing to reflect the modification(s).

D. Grease Trap Maintenance

The owner shall inspect and maintain grease trap annually at a minimum and more often if necessary as to not allow any grease to enter the sanitary sewer system.

The owner shall keep maintenance records for all work, repairs, and maintenance performed on the grease trap. Such maintenance records may be requested for review by District inspector upon inspection of grease trap.

XIII. AUTHORITY OF THE MANAGER

A. Entry Upon Private Property

The District Manager or his representatives, bearing proper credentials and identification, shall be permitted to enter upon all and any premises at all reasonable times for the purpose of inspection, observation, measuring, sampling, testing of Sewers, Sewage Waste and performing all other act: or duties required of him in accordance with these provisions

B. Promulgation of Rules

The District may change or amend these specifications, as it shall deem necessary without notice.

XIV. PENALTIES

A. Violators

Any person who shall violate any provision of this Resolution shall be liable to the District for any expense, loss, damage, cost of inspection or cost of correction incurred by the District by reason of such violation, including any cost incurred by the District in collecting from such person said loss, damage, expense, cost of inspection or cost of correction.

B. Notice of Violation

Any person violating any provision of this Resolution shall be served with written notice of such violation by the District providing a reasonable time limit for the satisfactory correction thereof.