

SECTION 027608
PRIVATE SEWER SERVICES (S-39)
(FOR RESIDENTIAL AND COMMERCIAL APPLICATION)

1. Scope:

This section governs the furnishing of all labor, equipment, tools and materials necessary for the construction of private sewers services as shown on the plans, as outlined herein and as necessary to complete the project. Private sewer services lines (aka Building Sewers) are defined as the sewer piping extending from the customers structure to the clean-out at the property line.

2. General:

Construction of private sewer services shall comply with the provisions of the Standard Plumbing Code as published by the Southern Building Code Congress and as adopted, with local amendments, by the City of Corpus Christi, in addition to the plans and specs. In case of conflict, between the code and the plans the more stringent prevails.

3. Materials:

PVC pipe and fittings for sewers shall be in accordance with ASTM D2665 and ASTM D 3311. Solvent cement for PVC shall meet ASTM D2564. Asbestos cement pipe, concrete pipe and cast iron pipe shall not be used as sewer pipe. There shall be no co-mingling of different materials except through proper adaptors. Section (504.4.2) of the Standard Plumbing Code. Rejected materials shall be marked and removed from the job site.

4. Permits:

Normal plumbing permit application and fee requirements of the Standard Plumbing Code as adopted by City Code shall apply to this project. A plumbing permit for each lot will be issued to the Contractor by the Building Inspections Department of the City of Corpus Christi. The contractor shall make application for permits upon award of the contract.

5. General Obligations:

(a) Contractor: The contractor shall construct private sewer services in accordance with the plans and these specifications in a neat and workmanlike manner. The route of the proposed private service shall be determined by the Contractor subject to approval of the Owner and the Engineer. All work on private services shall be supervised and inspected by a licensed plumber. Good relationships with the public are essential to the success of this project. The contractor shall make all the required notifications and notices to the owner/occupants in the area. The work shall be accomplished with minimal inconvenience to the public and owner/occupants. The contractor shall cooperate with all City employees involved in the execution of this contract.

(b) City: The Engineer will review work proposed by the Contractor and the City Plumbing Inspector shall inspect the installation.

6. Sequence of Work:

(a) City will mail out general letter to property owners describing the project with Form WS-1 (See Appendix) for execution.

(b) Contractor to acquire authorizations from owners for site inspections using Form WS-1 in Appendix from those property owners not responding to general letter. The contractor is encouraged to take photographs of before and after conditions on each lot.

(c) Contractor performs site inspection and fills out required form and submits copy of inspection report and Site Plan Showing Route to Engineer. (Private Sanitary Sewer Service Inspection Report & Routing Recommendations Form S-2 and Sample Site Plan in Appendix).

(d) Form S-2 reviewed by Engineer and property owner. This should be completed prior to installing main sewer.

(e) Contractor notifies owner/occupant of proposed construction and acquires authority for proposed construction on Form S-2 and Site Plan in Appendix.

7. Construction Methods:

(a) Clean outs - A two-way, 4-inch double riser clean out shall be installed at the connection of proposed private sewer and building sewer and also a single wye riser at the property line. Clean outs shall be placed at change in direction and at a maximum spacing of 75 feet. All clean outs shall be brought to finish grade.

(b) Bends - Change in direction in drainage piping shall be made by the appropriate use of 45° wyes, long sweep quarter bends, one-sixth, one-eighth, or one-sixteenth bends or by a combination of these, or equivalent fittings.

(c) Disconnection from Old Main - Abandoned service lines shall be plugged below ground surface with concrete.

(d) Fittings prohibited - A straight tee shall not be used. Saddle type fitting or running threads shall not be used. Pipe shall not be drilled or tapped unless approved by the Engineer. A fitting having a hub in the direction opposite to flow shall not be used, unless the pipe is cut by a saw or snap cutter, which will assure clean, smooth cuts of the pipe. Adaptors for connecting new pipes to existing piping shall be of the non-shear type. Adaptors with internally fitted fiberglass support ring as manufactured by DFW/HPI or Adaptors with externally fitted stainless steel shear rings and hardware as manufactured by Fernco or approved equal shall be required for matching pipe with the same nominal dimensions such as 4" clay to 4" plastic. Other types of adaptors that do not have this feature shall not be used.

(e) Protection of foundations - Trenches shall not be excavated within 3 feet of foundations. (See Foundation Protection Exhibit in Appendix) Where trenching is not allowed because of insufficient clearance from foundation, the private service shall be installed in a bored or jacked casing. The ends of each casing shall be wrapped with Class AA± subsurface Geotextile per AASHTO M288. This steel casing will only be measured for pay when it falls within the areas where open trenching is not allowed because of it being excessively close to existing foundations. Boring under surface improvements such as existing driveways, sidewalks, etc. shall not require casing.

(f) Pipe size - Minimum pipe size for private services shall be 4" diameter for residential and 6" diameter for commercial.

(g) Slope/velocity - Minimum slope of services shall be not less than 0.01 or 1/8 inch per foot.

(h) Installation - Materials shall be installed in accordance with manufacturer requirements.

(I) Alignment/grade - The contractor shall be responsible for establishing alignment and grade for proposed services. (See paragraph (g) above.)

(j) Surface Restoration - Separate trenches (one for water and one for sewer) separated by undisturbed or compacted earth shall be excavated. Trenches shall be excavated in such a manner which will minimize damage to surface vegetation. After installation, the excavated material shall be tamped into the trench and the surface restored to like or better condition acceptable to the Engineer. Lines shall be bored, jetted or jacked under sidewalks, driveways or other such improved surfaces; unless authorized by the Engineer.

(k) Electrical ground - Where required by the building code, electrical ground wires shall be installed to assure any appliances grounded to the plumbing system remain grounded.

(l) Maintenance of service - Sanitary services shall be installed with a minimum of inconvenience to the occupant of the house. The contractor shall provide continuous service of all utilities during construction, where practical. In the event of damage to existing utility, restoration is the responsibility of the contractor.

(m) Interruption of service - In the event that an unavoidable interruption of service is anticipated, the contractor shall advise the building occupant (s) a minimum of 24 hours in advance of the interruption. After the service has been interrupted, the contractor shall expeditiously continue work until service has been restored. In no case shall sewer service be interrupted for more than four (4) hours.

(n) Testing - The Private sewer shall be tested for leaks prior to connecting with the clean-out at the property line. The private sewer service shall be plugged at the down stream end and a ten foot test riser placed at the up stream end(s). The line shall be filled with water and no measurable leaks shall be allowed. The Air Test [417.2.2] may be used at the option of the Contractor. Test equipment shall be provided by the Contractor.

8. - Measurement and Payment:

Unless indicated otherwise in the Proposal, Private Sewer Services shall be measured per each service installed. Some services may require more than one connection on the owner's pipe. For example, house with garage apartment. All connections of this nature made to common lot owner shall be considered one service. Rental house of a common owner shall be measured as separate unit for each house. Payment shall be at the contract unit bid prices and shall constitute full compensation for furnishing and installing all pipes, fittings and incidentals, trenching, trench safety, boring, jetting or jacking, flushing, surface restoration and all other work or material required to provide sewer service from the structure(s) to the sanitary clean-out at the property line.