

ITEM 933

SANITARY SERVICE LEADS AND CONNECTIONS OR RECONNECTIONS

933.1 General:

A. Scope: This item governs for construction of service lead or service line and its connection to the sewer main. Service line or service lead is defined as the sewer between main sewer and property line, or easement line, including connection to main sewer and, if applicable, connection to existing sewer service line at property line or easement line. Installation procedures, such as trench excavation, bedding, backfill, removal and replacement of street surfacing, etc., to be in accordance with applicable provisions of other specification items.

B. Related Specification Items:

Item 921 - Construction of Sanitary Sewers

933.2 Materials:

A. Main Sewer: In accordance with applicable material specification.

B. Tapping Tee: Use Fowler's "Insert-a-tee," two-rib rubber sleeve, conforming to ASTM C443, with SDR 26 PVC bell outlet and stainless steel band-bell. Fitting to conform to ASTM D3034. Tapping tees to be used on all ductile iron sewer mains, on all glass-fiber-reinforced thermosetting-resin sewer main, and all sewer mains 21-inch (21") diameter and larger.

C. Tapping Saddle: For service lead connection on sewer pipe of type other than those mentioned above, use pipe manufacturer's saddle tee fitting with neoprene seal and stainless steel bands (min. 2) with gasketed bell outlet. Bell outlet to conform to ASTM D3034. Provide saddles having socket reinforcement and lip that extends into cut hole.

D. Tee or Wye Fitting: In lieu of tapping saddles for service line connection on new sewers, reconstructed sewers, or in place replacement, use manufacturer's tee or wye fitting installed in sewer main. Tee or wye fittings to conform with applicable provisions of Specification Item 921.

E. Adapter: Provide adapter for making watertight transition from ASTM D3034 PVC gasketed bell outlet to elastomeric ring gasket joint for Schedule 80 PVC pipe. Adapter to have a spigot conforming to ASTM D3034 dimensions and a bell conforming to ASTM D2467 dimensions (D3034 spigot to IPS bell).

F. PVC Pipe and Fittings: Manufacture from cell classification 12454B, 12454C, or 14333D as defined in ASTM D1784. Furnish Schedule 40 pipe

conforming with ASTM D1785. Use socket-type with solvent-weld joint Schedule 40 fittings conforming to ASTM D2466.

G. Deep Cut Service Connection: Provide a deep cut service connection at locations where top of main sewer is greater than eight feet (8') below surface at trench line in accordance with details shown on Plans.

933.3 Construction Methods:

A. Trench Excavation: In accordance with Specification Item 921.

B. Tapping Tee Installation: Use Fowler Manufacturing Company's "Insert-a-tee" with two-rib rubber sleeve and stainless steel bands for service connection to main sewer. Cut opening in main sewer by use of Fowler's mechanical hole cutter; save all "coupons" removed. Install two-rib rubber sleeve and PVC hub outlet with stainless steel band in accordance with manufacturer's instructions.

C. Tapping Saddle Installation: Use a neoprene seal gasketed PVC saddle steel with two (2) stainless steel clamps for service connection sewer main. Cut opening in sewer by use of mechanical hole cutter; save all "coupons" removed. Lay out location and size of opening for saddle with template. Deburr and bevel opening to provide a smooth hole shaped to receive lip on saddle fitting. Place stainless steel banding clamps on upstream and downstream socket reinforcement of saddle and securely tighten to compress neoprene seal.

D. PVC Service Line: Connect PVC, Schedule 40 service line to tapping tee/tapping saddle/wye/tee by use of adapter manufactured for such transition as applicable. Extend service line to property line or easement line in accordance with details shown on Plans. Vertical stacks for deep service connection to be securely and firmly held in position during backfill of trench. Provide Schedule 40 fittings for adjustment of elevation, as shown and as required by particular installation. Provide watertight plug at end of service lead except where service lead connects to an existing service line at the property line or easement line. Attach new service lead stub-out or new stack and stub-out, where applicable, to existing service line with PVC flexible coupling "Fernco" or approved equal. Secure flexible coupling to service line and service lead stub out with stainless steel bands. Service replacements/reconnections shall be installed with a minimum number of fittings and no service shall have more than one Fernco adapter. On Sewer Rehabilitation projects, service replacements/reconnections shall be completed within 24 hours of pipe bursting/crushing operations for main sewer upon which affected services are attached.

E. Bedding and Backfill: In accordance with other appropriate specification items.

F. Surface Restoration: In accordance with other appropriate specification items.

G. Service Lead Location and Verification: On Sewer Rehabilitation projects, location of each service line will be determined in the field by the Contractor and will be coordinated through the OWNER or OWNER'S Field Representative. It shall be Contractor's responsibility to verify if service is active. Field Representative shall approve all verifications prior to reconnecting service to main sewer. All service replacements/reconnections shall be approved by OWNER or OWNER'S Field Representative before backfilling. Contractor will be required to expose services at his own expense for approval by Field Representative.

933.4 Measurement and Payment:

A. "Deep Cut Long Service Lead" and "Long-Side Service Lead" measured and paid for per **each** per size installed up to forty-five feet (45') measured horizontally from center line of sewer main to end of new service lead. "Deep Cut Long Service Lead" and "Long-Side Service Lead" constitute where its location traverses pavement of public or private street or road. Replacement of Long-Side service leads under pavement includes cost of pavement removal and replacement as incidental. Contractor may auger service line at his option as applicable. Payment for auguring service lead includes auger, pipe, and pit(s) shall be at unit price for Long -Side service replacement/reconnection.

B. "Deep Cut Short Service Lead" and "Short-Side Service Lead" measured and paid or per **each** per size installed up to fifteen feet (15') measured horizontally from center line of sewer main to end of new service lead. "Deep Cut Short Service Lead" and "Short-Side Service Lead" constitute where its location does not traverse pavement of public or private street or road.

C. "Service Lead Extension" beyond limits described above will be measured and paid for by **linear foot** per size. No distinction will be made if extension is for "Long Side" or "Short-Side" lead.

D. Double leads connecting two or more services to the same lead will be paid for as **one** short or long service lead plus footage for one or more branches as service lead extension per **linear foot** from branch, tee, or wye to service lead connection.

E. No separate pay for cost of material, labor, and equipment necessary to locate existing service leads scheduled for reconnection nor for verifications as to whether or not service is active.

END OF ITEM 933