

SANITARY SEWER SYSTEMS

****From Rutland City-Proctor STP 2728(1) Rutland City NH 2716(1)
Rutland City STP 019-3(57)**

- xx. DESCRIPTION. This work shall consist of the construction or reconstruction of sanitary sewer lines and appurtenances.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 628 of the Standard Specifications.

- xx. MATERIALS. Materials shall meet the requirements of the following Subsections:

Crushed Gravel for Subbase.....704.05
Sewer Cleanout Ring and Cover.....715.01

Concrete for reaction blocking shall conform to the requirements of Section 541 for Concrete, Class B unless otherwise specified. Flowable Fill shall be a Controlled Low Strength Material (i.e. removable fill with a compressive strength greater than 150 psi but not exceeding 200 psi).

All PVC Sewer Pipe shall be SDR 35.

- xx. SUBMITTALS. The Contractor shall submit Fabrication Drawings in accordance with Section 105.

- xx. LAYING PIPE. Concrete reaction blocking shall be provided as detailed at all pressure pipe bends, tees, crosses, reducers, valves, caps, and plugs. Pipe joint at these fittings shall be mechanical joint with retainer glands. The use of retainer glands does not reduce the requirements for thrust restraint.

- xx. TESTING OF SYSTEM. Manhole leakage tests shall be performed in accordance with SANITARY SEWER MANHOLES of Section 900.

- xx. BACKFILLING. Bedding and envelope material for pipes shall be crushed gravel meeting the gradation requirements of Table 704.05A - Fine.

- xx. HOUSE CONNECTIONS. The locations of sanitary sewer service connections are unknown and shall be determined by the Contractor by test pits during excavation. It is assumed that all properties have a service connection. This shall be verified by the Contractor during construction through test pits, excavation, and/or dye testing. All existing service connections shall be removed and new connections installed by the Contractor at a minimum to the east side curb line excavation for the sanitary sewer services located on the east side of Main Street, and to the limits of the excavation for the sanitary sewer services located on the west side of Main Street.

- xx. SEWER CLEANOUT. Sewer cleanouts shall be installed in locations as shown on the plans or as ordered by the Engineer.

xx. MANHOLES. Manholes shall conform to the requirements of SANITARY SEWER MANHOLES of Section 900.

xx. TRANSFER OF EXISTING SYSTEM TO NEW SYSTEM. When new sewers are connected to existing manholes and existing pipe penetrations cannot be used, pipe openings shall be core drilled to accommodate the new pipe. Approved watertight boots or gaskets shall be furnished and installed per manufacturer's instructions, and then the opening around the gasket shall be grouted to a watertight seal. Existing manhole grouted inverts, flow lines, aprons, etc. shall be chipped out and re-grouted to accommodate the new piping. Grout holes or damage in manhole wall opening with non-shrink grout until flush with outside face of wall. The exterior of the manholes shall be coated with a bitumastic or other watertight sealant meeting the approval of the sewer owner.

All lateral sanitary sewer service connections are approximate as depicted on the Plans. The Contractor shall perform exploratory excavation as noted above and per direction of the Engineer and prior to construction of the new sanitary sewer main on each existing lateral sewer service at the curb line for the existing sewer services located on the easterly side of Main Street and at the limits of excavation for the new 12"/24" sewer main for existing sewer services located on the westerly side of Main Street. The exploratory excavation shall confirm existing pipe size, material, exact location, invert, and active/abandoned status. The Contractor shall furnish all data to the Engineer in tabular format for review and approval as part of the Fabrication Drawing submittal.

The Contractor shall establish construction phasing such that the existing sanitary sewer main, including all manholes and lateral pipes, remains in service during construction of new sanitary sewer main and manholes. In locations of conflict between new sanitary sewer main and existing lateral services, the Contractor shall furnish and install temporary sewer service piping. Upon successful testing of new sanitary sewer main and manholes, existing lateral services may be transferred over to the new system and the existing system piping decommissioned as specified on the Plans.

Where existing manholes and other underground structures are to be removed as noted on the Plans, the Contractor shall remove the frame and cover for salvage, remove and properly dispose of the entire structure, plug the pipes with Flowable Fill, and backfill with suitable material. Backfill material shall be compacted to the requirements of the surrounding subgrade material. Salvaged frames and covers shall remain the property of the City of Rutland.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Sewer Cleanout) to be measured for payment will be the number of each unit installed in the complete and accepted work.

The quantity of Special Provision (PVC Sewer Pipe) of the size specified to be measured for payment will be the number of meters

(linear feet) of line installed in the complete and accepted work, as measured along the flow line of the pipe.

The quantity of Special Provision (Transfer to New System, Sanitary Sewer) to be measured for payment will be on a unit basis for each transfer performed in the complete and accepted work.

- xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Sewer Cleanout) will be paid for at the Contract unit price per each. Payment will be full compensation for furnishing, transporting, handling, installing, and testing the materials specified, including but not limited to bedding, backfill, PVC pipe, fittings, caps, and cast iron sewer cleanout ring and covers; for making all necessary connections; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

The accepted quantity of Special Provision (PVC Sewer Pipe) of the size specified will be paid for at the Contract unit price per meter (linear foot). Payment shall be full compensation for furnishing, transporting, handling, installing, and testing the materials specified; for furnishing and placing concrete or other materials for reaction blocking; for making all necessary connections; crushed gravel bedding; sawcutting pavement; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Excavation, including backfill and disposal of excavated material not suitable for backfill; and backfill, including material required to replace poor foundation material below the normal grade of pipe(s), will not be paid for separately but will be included for payment under the items of this Section.

The accepted quantity of Special Provision (Transfer to New System, Sanitary Sewer) will be paid for at the Contract lump sum price bid. Payment will be full compensation for furnishing all labor, materials, equipment, tools, and incidentals suitable for effecting the transfer of systems as specified. Items for payment under this lump sum amount include, but are not limited to, maintenance of existing sewage flows, including bypass pumping as required; temporary sewer service piping at new/existing conflicts; excavation including exploratory excavation and location of the new connection point(s), diversion of sewage flow from the connection point(s); associated pumping/dewatering of connection area; making the physical connection into existing systems including, but not limited to, excavation and backfill, all fittings and appurtenances, coring existing structures, new rigid board insulation sand blanket at sewer/storm crossings, and demolition and reconstruction of existing structures; transfer of sewage flow to the new system; excavation, removal, and disposal of existing structures; furnishing and placing flowable fill in existing sewer pipes to be abandoned in-place; removal of existing sanitary sewer or combined sewer pipes; abandonment of existing system; and furnishing all labor, equipment, tools, and incidentals necessary to complete the work.

Payment for all other exploratory excavation not specified under the work of this Section, including but not limited to water/storm piping crossings as depicted on the Plans, will be made under Contract item 204.22.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Sewer Cleanout)	Each
900.640 Special Provision (PVC Sewer Pipe)(X mm)(X ")	Meter (Linear Foot)
900.645 Special Provision (Transfer to New System, Sanitary Sewer)	Lump Sum