

ITEM 46

FACILITIES ABANDONMENT & SALVAGE

1.0 DESCRIPTION. The Contractor shall provide all labor, equipment, materials and service required for the abandonment and salvage of existing sewers, laterals, manholes, conduits, equipment and any facilities noted as such on the plans or detailed in these specifications.

2.0 SUBMITTALS. The Contractor shall submit a proposed abandonment plan to the engineer for approval prior to commencement of the abandonment process.

A. Reference Standards. This section is not applicable.

B. Shop Drawings.

1. The abandonment plan shall include a written description of the methodology the Contractor proposes to systematically abandon, dismantle or remove all structures, equipment, conduit etc. identified in the plans and specifications such that it does not adversely affect the operation of the newly installed items.

C. Calculations. This section is not applicable.

D. Certifications. This section is not applicable.

3.0 MATERIALS. This section is not applicable.

4.0 EXECUTION. The Contractor shall abandon, plug or remove sewer systems, conduits, manholes and equipment in accordance with the following specifications and all Contract drawings.

A. Abandonment.

1. Sewers and manholes that are to be abandoned shall be plugged or sealed where pipes join manholes. All existing sewers encountered in construction operations that are inactive or are to be abandoned as determined by the Engineer, shall be plugged or sealed, at both ends where broken into, before proceeding with backfilling.
2. Portions of the sewer to be abandoned that interferes with construction shall be removed with the remaining abandoned portions securely sealed. Pipes shall be sealed at the required locations by the construction of masonry bulkheads of concrete with the minimum thickness of three (3) feet.
3. If filling is required, the Contractor shall have fill using hydraulic methods. The hydraulic fill material shall follow the ODOT Construction and Material Specifications Item 613, Low Strength Mortar backfill with the mix adjusted to

ensure a flow able material. All material used shall be acceptable to the Engineer. The fill material placed in the sewers shall occupy, after solidification, at least seventy-five percent (75%) of the cross-sectional area of the sewer for the entire length.

4. Manholes designated to be abandoned shall be removed to a minimum of three (3) feet below the finished surface. Castings shall be carefully removed and delivered to the Stark County Metropolitan Sewer District as directed by the Engineer. After sealing the existing pipes as described above and removing the walls to the required depth, the remaining manhole must not have the ability to hold water.
5. Coring a 6" diameter hole in the base and backfilling the remaining cavities, filling the remaining manhole with low strength mortar or coring a 6" hole in the side of the manhole and filling the bench and invert to the cored elevation are several ways to combat water retention.
6. If the manhole is not filled with low strength mortar, it shall be backfilled according to Item 1 (outside of pavement) and Item 6 (beneath pavement). All restoration, both in and out of pavement, shall be performed as designated by the Engineer and shall be included in the unit price bid for the various sewer items.
7. Laterals to be abandoned shall be exposed at the right of way or easement line as directed by the Engineer and plugged as per the method described in the Description of Work below or as prescribed by the Engineer. A clean cut shall be made in the lateral and a section removed to allow working space to abandon the lateral. A 2" X 2" hardwood stake shall be installed at the disconnection point and shall be extended to finished grade so not to interfere with lawn maintenance equipment.
8. Conduits to be abandoned in-place shall have all above surface conduit removed and shall be excavated underground a minimum 2-ft from the exposed surface conduit and plugged with grout. Conduits to be abandoned in manholes shall be cut to be level with the internal manhole surface and filled with grout and plugged for a watertight seal.
9. Control panels to be removed shall have existing support posts removed and holes backfilled to match existing grade.

B. Lateral abandoning materials and methods.

1. PVC - The existing lateral shall be cut evenly and beveled if necessary to accept either a gasketed cap or a coupler and plug assembly.
2. Clay - The nearest joint shall be disassembled to provide a smooth surface for plugging with concrete. If a stainless steel sewer-coupling adapter is preferred, the pipe should be cut behind the bell and the adapter/plug assembly installed. Either a 1-foot plug of concrete or a stainless steel sewer-coupling adapter specified as an "RC Series" Strong Back Fernco (or equal) along with a plug is acceptable.
3. DIP/Cast Iron - The closest joint in the excavation should be disassembled or cut smoothly and a 3-foot plug of concrete installed.

4. ABS - The existing lateral shall be cut evenly to accept a solvent weld cap. A 3-foot concrete plug is also acceptable.

C. Disposal.

1. The Contractor shall properly dispose of all abandoned, dismantled or removed items unless said items are identified to remain property of the County. In which case the Contractor shall be responsible to neatly organize and secure said items on wooden pallets and deliver them to a location and time determined by the Engineer, at no cost to the County.
2. All removed equipment and facilities to be returned to the Stark County Metropolitan Sewer District shall be disinfected and cleaned by the Contractor prior to delivery.
3. Materials not salvaged shall be properly disposed of by the Contractor at no cost to the County.

5.0 ELECTRICAL. This section is not applicable.

6.0 QUALITY ASSURANCE. This section is not applicable.

7.0 MEASUREMENT. All measurement shall be in accordance with:

A. Item 46A Manhole Abandonment.

1. Manhole abandoned shall be the actual number of manholes and shall include the bulkheads both seen and unforeseen required on each pipeline at the manhole (Contractor shall field verify the number of connections prior to bidding), removing the top portion, providing drainage and backfilling the manhole to grade.

B. Item 46B Sewer Pipeline Abandonment.

1. All measurement shall be the actual number of lineal feet of pipeline filled or removed and sealed in accordance with this specification.

C. Item 46C Bulk Headed Sewer Pipe at Manholes.

1. All measurements shall be the number of locations where pipe is excavated, broken and bulkheaded in accordance with this specification.
2. Individual bulkheads are specified at manholes in Item 46 Appendix A, Table C and shall be included in the cost for other items. No separate payment will be made.

D. Item 46D Lateral Abandonment.

1. Measurement shall be the actual number of laterals abandoned including all location, excavation, cutting, plugging, filling, backfilling, staking and restoration in and out of the pavement as required.

E. Item 46E Conduit Removal/Abandonment.

1. Measurement shall be the abandonment or removal and proper disposal of all conduit associated with this project as indicated in the plans and on Table E of Item 46 Appendix A.

F. Item 46F Panels & Equipment Salvage.

1. Measurement shall be the removal and delivery of all equipment to Stark County Sanitary Engineers associated with this project as indicated on the plans and in Table F of Item 46- Appendix A.

8.0 PAYMENT. The payment shall be as stipulated in the proposal for each type of abandonment as indicated under Items 46A to 46F inclusive, as indicated below and shall include costs for all work necessary as described above to abandon each item as indicated in these specifications and on all Contract drawings.

All materials, labor, tools, restoration and equipment to complete the work as called for on the drawings and as specified herein shall be included in the unit prices bid for the various abandonment items.

<u>Item</u>	<u>Unit</u>	<u>Description</u>
46A	EA	Manholes Abandoned
46B	EA	Sewers Abandoned
46C	EA	Bulkhead Sewer
46D	EA	Lateral Abandoned
46E	EA	Conduit Abandoned
46F	EA	Panels & Equipment Salvage

END OF SECTION