

SECTION 021080
REMOVING ABANDONED STRUCTURES AND UTILITIES

1. DESCRIPTION

This specification shall provide for the demolition, removal and disposal of abandoned structures or portions of abandoned structures or utilities as noted on the drawings, and shall include all excavation and backfilling necessary to complete the removal. The work shall be done in accordance with the provisions of these specifications.

2. METHOD OF REMOVAL

Culverts and Pipe. Pipe shall be removed by careful excavation of all dirt on top and the sides in such manner that the pipe will not be damaged. Removal of utility appurtenances shall be included for removal with the pipe. Those pipes which are deemed unsatisfactory for reuse by the OAR may be removed in any manner the Contractor may select. Pipe that is not removed must be grout-filled per City Standard Details.

Concrete Structures. Unwanted concrete structures or concrete portions of structures shall be removed to the lines and dimensions shown on the drawings, and these materials shall be disposed of as shown on the drawings or as directed by the OAR. Any portion of the existing structure outside of the limits designated for removal which is damaged by the Contractor's operations shall be restored to its original condition at the Contractor's entire expense. Explosives shall not be used in the removal of portions of the existing structure unless approved by the OAR, in writing.

Portions of the abandoned structure shall be removed to the lines and dimensions shown on the plans, and these materials shall be disposed of as shown on the drawings or as directed by the OAR. Any portion of the existing structure, outside of the limits designated for removal, damaged during the operations of the Contractor, shall be restored to its original condition entirely at the Contractor's expense. Explosives shall not be used in the removal of portions of the existing structure unless approved by the OAR, in writing.

Concrete portions of structures below the permanent ground line, which will not interfere in any manner with the proposed construction, may be left in place, but removal shall be carried at least 5' below the permanent ground line and neatly squared off. Reinforcement shall be cut off close to the concrete.

Steel Structures. Steel structures or steel portions of structures shall be dismantled in sections as determined by the OAR. The sections shall be stored if the members are to be salvaged and reused. Rivets and bolts connecting steel railing members, steel beams of beam spans and steel stringers of truss spans, shall be removed by butting the heads with a "cold cut" and punching or drilling from the hole, or by such other method that will not injure the members for re-use and will meet the

approval of the OAR. The removal of rivets and bolts from connections of truss members, bracing members, and other similar members in the structure will not be required unless specifically called for on the plans or special provisions, and the Contractor shall have the option of dismantling these members by flame-cutting the members immediately adjacent to the connections. Flame-cutting will not be permitted, however, when the plans or special provisions call for the structure unit to be salvaged in such manner as to permit re-erection. In such case, all members shall be carefully matchmarked with paint in accordance with diagrams furnished by the OAR prior to dismantling, and all rivets and bolts shall be removed from the connections in the manner specified in the first portion of this paragraph.

Timber Structures. Timber structures or timber portions of structures to be reused shall be removed in such manner as to damage the timber for further use as little as possible. All bolts and nails shall be removed from such lumber as deemed salvable by the OAR.

Unless otherwise specified on the drawings, timber piles shall be either pulled or cut off at the point not less than 5' below ground line, with the choice between these two methods resting with the Contractor, unless otherwise specified.

Brick or Stone Structures. Unwanted brick or stone structures or stone portions of structures shall be removed. Portions of such structures below the permanent ground line, which will not in any manner interfere with the proposed construction, may be left in place, but removal shall be carried at least 5' below the permanent ground line and neatly squared off.

Salvage. All material such as pipe, timbers, railings, etc., which the OAR deems as salvable for reuse, and all salvaged structural steel, shall be delivered to a designated storage area.

Materials, other than structural steel, which are not deemed salvable by the OAR, shall become the property of the Contractor and shall be removed to suitable disposal sites off of the right-of-way arranged for by the Contractor, or otherwise disposed of in a manner satisfactory to the OAR.

Where temporary structures are necessary for a detour adjacent to the present structure, the Contractor will be permitted to use the material in the old structure for the detour structure, but he shall dismantle and stack or dispose of the material as required above as soon as the new structure is opened for traffic.

Backfill. All excavations made in connection with this specification and all openings below the natural ground line caused by the removal of abandoned structures or portions thereof shall be backfilled to the level of the original ground line, unless otherwise provided on the drawings. Backfill in accordance with applicable requirements of Sections 022020 "Excavation and Backfill for Utilities" and 022080 "Embankment". All open ends of abandoned pipe or other structures shall be grout filled or plugged as specified on the drawings and City Standard Details.

That portion of the backfill which will support any portion of the roadbed, embankment, levee, or

other structural feature shall be placed in layers of the same depth as those required for placing embankment, maximum 10" loose lifts unless otherwise specified. Material in each layer shall be wetted uniformly, if required, and shall be compacted to a minimum of 95% Standard Proctor density, and within 0-3% of optimum moisture, unless otherwise specified. In places inaccessible to blading and rolling equipment, mechanical or hand tamps or rammers shall be used to obtain the required compaction. The final 3' up to the bottom of the road base shall be backfilled with cement stabilized sand. If any portion of the excavation lies within 1' of the back of roadway curb (or within 1' of the pavement edge if there is no curb), the final 3' up to the bottom of the road base shall be backfilled with cement stabilized sand. The cement stabilized sand backfill shall be uniformly moistened and mixed at the rate of 1.5 sacks/CY.

That portion of the backfill which will not support any portion of the roadbed, embankment, or other structural feature shall be placed as directed by the OAR in such manner and to such state of compaction as will preclude objectionable amount of settlement, maximum 10" loose lifts to minimum 95% Standard Proctor density and within 3% of optimum moisture unless otherwise specified.

3. MEASUREMENT AND PAYMENT

Unless otherwise specified on the Bid Form for select significant items, the work governed by this specification shall not be measured for pay but shall be subsidiary to pay items under Specification Section 021020 "Site Clearing and Stripping" or Section 022040 "Street Excavation".

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