

## SECTION 02050

### DEMOLITIONS

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

###### A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment and incidentals as shown, specified and required for demolitions, removal and disposal Work.
2. Included, but not limited to, are demolition and removals of existing materials, equipment, or work necessary to install the new Work as shown and specified and to connect same with existing work in an approved manner. Demolition includes structural concrete, foundations, walls, doors, windows, structural steel, metals, roofs, masonry, attachments, appurtenances, piping, electrical and mechanical equipment, paving, curbs, walks, fencing, gates, and similar existing facilities.
3. Demolitions and removals which may be specified under other Sections shall conform to requirements of this Section.
4. SD1 reserves the right of ownership of any and all materials.

###### B. Related Sections:

1. Section 01010, Summary of Work.
2. Section 02220, Excavation and Backfill.

##### 1.2 SUBMITTALS

- ###### A. Schedule:
- Submit for approval proposed methods, equipment, and operating sequences. Include coordination for shut-off, capping, temporary services, continuation of utility services, and other applicable items to ensure no interruption of SD1's operations.

##### 1.3 JOB CONDITIONS

###### A. Protection:

1. Perform all demolition and removal Work to prevent damage or injury to structures, occupants thereof and adjacent features which might result from falling debris or other causes, and so as not to interfere with the use, and free and safe passage to and from adjacent structures.
2. Closing or obstructing of roadways, sidewalks, and passageways adjacent to the Work by the placement or storage of materials will not be permitted, and all operations shall be conducted with a minimum interference to traffic on these ways.
3. Erect and maintain barriers, lights, sidewalk sheds, and other necessary protective devices.

4. Repair damage to facilities to remain, or to any property belonging to the SD1 or occupants of the facilities.
- B. Scheduling:
1. Carry out operations so as to avoid interference with SD1's operations and work in the existing facilities.
- C. Notification:
1. At least 48 hours prior to commencement of a demolition or removal, notify ENGINEER in writing of proposed schedule therefor. SD1 will inspect the existing equipment and mark for identification those items which are to remain the property of the SD1. Do not start removals without the permission of the ENGINEER.
- D. Explosives:
1. Do not bring explosives on site nor use explosives for any demolition.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 GENERAL

- A. All materials and equipment removed from existing work, shall become the property of CONTRACTOR, except for those which SD1 has identified and marked for its use. All materials and equipment as indicated in Section 01010 or on the Contract Drawings shall be carefully removed by the CONTRACTOR, so as not to be damaged, and shall be cleaned and transported to the Lakeview Pump Station, 1045 Eaton Drive, Fort Wright, Kentucky 41017 or Dry Creek Waste Water Treatment Plant, 2999 Amsterdam Road, Villa Hills, Kentucky 41017 or as directed by the SD1.
- B. CONTRACTOR shall dispose of all demolition materials, equipment, debris, and all other items, except for equipment or materials which are to remain the property of SD1, off the site and in conformance with all existing applicable laws and regulations.
- C. Surfaces of walls, floors, ceilings, or other areas which are exposed by any of the removals specified herein, and which will remain as architecturally finished surfaces shall be repaired and re-finished by the CONTRACTOR with the same or matching materials as the existing adjacent surface or as may be otherwise approved by the ENGINEER.
- D. CONTRACTOR shall work closely with SD1 during completion of the Project to avoid disruptions to pump station operations.

- E. Pollution Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection.
  - 1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.
  - 2. Clean adjacent structures, facilities, and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to conditions existing prior to the start of the Work.
  
- F. Building Demolition:
  - 1. Unless otherwise approved by ENGINEER, proceed with demolition from the top of the structure to the ground. Complete demolition work above each floor or tier before disturbing supporting members of lower levels.
  - 2. Demolish concrete and masonry in small sections.
  - 3. Remove structural framing members and lower to ground by means of hoists, derricks, or other suitable methods.
  - 4. Break up and remove foundations and slabs-on-grade, unless otherwise shown to remain.
  - 5. Locate equipment used for demolition work, and remove demolished materials, so as to not impose excessive loads on supporting walls, floors or framing.

### 3.2 STRUCTURAL REMOVALS

- A. Remove structures to the lines and grades shown unless otherwise directed by the ENGINEER. Where no limits are shown, the limits shall be 4 inches outside the item to be installed. The removal of masonry beyond these limits shall be at the CONTRACTOR'S expense and these excess removals shall be reconstructed to the satisfaction of the ENGINEER with no additional compensation to the CONTRACTOR.
  
- B. All concrete, brick, tile, concrete block, roofing materials, reinforcement, structural or miscellaneous metals, plaster, wire mesh and other items contained in or upon the structure shall be removed and taken from the site, unless otherwise approved by the ENGINEER. Demolished items shall not be used in backfill adjacent to structures or in pipe line trenches.
  
- C. After removal of parts or all of masonry walls, slabs and like work which tie into new Work or existing work, the point of junction shall be neatly repaired so as to leave only finished edges and surface exposed.
  
- D. The jambs, sills and heads of any new windows, passageways, doors, or other openings cut into new Work or existing work, shall be dressed with new masonry, concrete or metal to provide a smooth, finished appearance.

- E. Where new anchoring materials including bolts, nuts, hangers, welds and reinforcing steel, are required to attach new Work to the existing work they shall be included under this Section, except where specified elsewhere.

### 3.3 MECHANICAL REMOVALS

- A. Mechanical removals shall consist of dismantling and removing of existing piping, pumps, motors, equipment and other appurtenances as specified, shown, or required for the completion of the Work. It shall include cutting, capping, and plugging as required, except that the cutting of existing piping for the purpose of making connections thereto will be included under **Division 15**.
- B. Existing process, water, chemical, gas, fuel oil and other piping not required for the new Work shall be removed where shown or where it will interfere with new Work. Piping not indicated to be removed or which does not interfere with new Work shall be removed to the nearest solid support, capped and left in place. Chemical and fuel lines and tanks shall be purged and made safe prior to removal or capping. Where piping that is to be removed passes through existing walls, it shall be cut off and properly capped on each side of the wall.
- C. When underground piping is to be altered or removed, the remaining piping shall be properly capped. Abandoned underground piping may be left in place unless it interferes with new Work or is shown or specified to be removed.
- D. Waste and vent piping shall be removed to points shown. Pipe shall be plugged with cleanouts and plugs. Where vent stacks pass through an existing roof that is to remain, they shall be removed and the hole in the roof properly patched and made watertight.
- E. Any changes to potable water piping and other plumbing and heating system work shall be made in conformance with all applicable codes and under the same requirements as other underground piping. All portions of the potable water system that have been altered or opened shall be pressure tested and disinfected in accordance with **Section 15051** and local codes. Other plumbing piping and heating piping shall be pressure tested only.

### 3.4 ELECTRICAL REMOVALS

- A. CONTRACTOR shall be responsible for disconnecting wiring at equipment to be removed. CONTRACTOR shall be responsible for removing the disconnected conduit, disconnect switches, wiring, lighting fixtures, receptacles, and all other appurtenant electrical removals unless otherwise noted on the Drawings.
- B. Electrical removals shall consist of the removal of existing transformers, distribution switchboards, control panels, motors, conduits and wires, poles and overhead wiring, panelboards, lighting fixtures, and miscellaneous electrical equipment all as shown, specified, or required to perform the Work.

- C. All existing electrical equipment and fixtures to be removed shall be removed with such care as may be required to prevent unnecessary damage, to keep existing systems in operation and to keep the integrity of the grounding systems.
- D. Distribution switchboards shall be removed or modified as shown. Switchboards to be removed shall be disconnected and dismantled, and all components shall be disposed of off the site. Circuit breakers and other control equipment on modified switchboards that will no longer be used shall be removed unless otherwise shown or specified. All new openings cut into the modified switchboard panels shall be cut square and dressed smooth to the dimensions required for the installation of the new equipment.
- E. Motors shall be disconnected and removed where shown or specified. Motors not designated by the SD1 to be salvaged shall be removed from the site. Motors or other electrical gear designated for reuse shall be stored in enclosed, heated storage.
- F. Conduits and wires shall be abandoned or removed where shown. All wires in abandoned conduits shall be removed, salvaged, and stored. Abandoned conduits concealed in floor or ceiling slabs, or in walls, shall be cut flush with the slab or wall at the point of entrance. The conduits shall be suitably plugged and the area repaired in a flush, smooth, approved manner. Exposed conduits and their supports shall be disassembled and removed from the site. Repair all areas of work to prevent rust spots on exposed surfaces.
- G. Where shown or otherwise required, wiring in the underground duct system shall be removed. All such wiring shall be salvaged and stored as specified. CONTRACTOR shall verify the function of all wiring before disconnecting and removing it. Ducts which are not to be reused shall be plugged where they enter buildings and made watertight.
- H. Where shown, direct-burial cable shall be abandoned. Such cable shall be disconnected at both ends of the run. Where it enters a building or structure, the cable shall be cut back to the point of entrance. All openings in buildings for entrance of abandoned direct-burial cable shall be patched and made watertight.
- I. Poles and overhead wiring shall be abandoned as shown and specified. Existing substation and poles owned by the power company will be removed by the power company. Poles not owned by the power company shall be completely removed from the site by the CONTRACTOR. The overhead wires shall be salvaged and stored as specified in Section 02050, Paragraph 3.1.A. CONTRACTOR shall perform this work after the new service has been completed and energized, and in accordance with the approved schedule. CONTRACTOR also shall make all the necessary arrangements with the power company for the removal of their transformers and metering equipment after the new electrical system has been installed and energized.

- J. Panelboards where shown shall be removed and disposed of off the site. Where shown or specified, they shall be replaced with new panelboards at the same or adjacent locations. All cutting and patching necessary for the removal and replacement of panelboards shall be performed.
- K. Lighting fixtures shall be removed or relocated as shown. Fixtures not relocated shall be removed from the site. Relocated fixtures shall be carefully removed from their present location and rehung where shown.
- L. Wall switches, receptacles, starters and other miscellaneous electrical equipment, shall be removed and disposed of off the site as required. Care shall be taken in removing all equipment so as to minimize damage to architectural and structural members. Any damage incurred shall be repaired.

### 3.5 ALTERATIONS AND CLOSURES

- A. Alterations shall conform to all applicable Specifications, the Drawings, and the directions and approvals of the ENGINEER.
- B. Where alterations require cutting or drilling into existing floors, walls, and roofs, the holes shall be repaired in an approved manner. CONTRACTOR shall repair such openings with the same or matching materials as the existing floor, wall, or roof or as otherwise approved by the ENGINEER. All repairs shall be smoothly finished unless otherwise approved by the ENGINEER.
- C. Openings in existing concrete slabs, ceilings, masonry walls, floors and partitions shall be closed and sealed as shown or otherwise directed by the ENGINEER. New Work shall be keyed into the existing Work in an acceptable manner. New reinforcing steel shall be welded to the existing reinforcing. Welding shall conform to AWS D12.1, Reinforcing Steel Welding Code. In general, use the same or matching materials as the existing adjacent surface. The finished closure shall be a smooth, tight, sealed, permanent closure acceptable to the ENGINEER.

### 3.6 CLEAN-UP

- A. CONTRACTOR shall remove from the site all debris resulting from the demolition operations as it accumulates. Upon completion of the Work, all materials, equipment, waste, and debris of every sort shall be removed and premises shall be left, clean, neat and orderly.

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