

SECTION 024116

DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of building features, interior finishes, site improvements, etc.
- B. Related Sections:
 - 1. Division 01 Section "Summary" for use of the premises and phasing requirements.
 - 2. Division 01 Section "Cutting and Patching" for cutting and patching procedures.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged.
- B. Existing to Remain (ETR): Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 SUBMITTALS

- A. Qualification Data: For qualified refrigerant recovery technician.
- B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
- C. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's building manager's on-site operations are uninterrupted.
 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 3. Coordination for shutoff, capping, and continuation of utility services.
 4. Use of stairs.
 5. Locations of proposed dust- and noise-control temporary partitions and means of egress, including for other tenants affected by selective demolition operations.
 6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
 7. Means of protection for items to remain and items in path of waste removal from building.
- D. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- C. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.
- D. Pre-demolition Conference: Conduct conference at Project site.
1. Inspect and discuss condition of construction to be demolished.
 2. Review structural load limitations of existing structures.
 3. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Review and finalize protection requirements.
 5. Review procedures for protection of adjacent buildings.
 6. Review items to be salvaged and returned to Owner.

1.7 PROJECT CONDITIONS

- A. All areas slated to be demolished will be vacated and their use discontinued before start of the Work.
- B. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- C. Owner assumes no responsibility for building features and structures to be demolished.
1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
 2. Before demolition, Owner will remove the following items:
 - a. Any and all unit equipment, historical & unit memorabilia, office furniture and office equipment currently be stored within the existing facility.
 - b. Owner will require a minimum of 5 business days notice prior to the start of any demolition work.
- D. Hazardous Materials: Asbestos has been identified in the existing wall panels above hanger doors.

1. Hazardous material remediation is specified elsewhere in the Contract Documents.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
- F. Storage or sale of removed items or materials on-site is not permitted.

1.8 COORDINATION

- A. Arrange demolition schedule so as to minimize interference with Owner's on-site operations or operations of adjacent occupied buildings.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting demolition operations.
- B. Review Project Record Documents, if any, of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Perform a pre-demolition survey of existing building conditions to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during the demolition operations.
- D. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- E. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Government Design Professional.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
- B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 1. Building manager will arrange to shut off indicated services/systems when requested by Contractor.
 2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.3 PREPARATION/PROTECTION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Existing Utilities: See Divisions 22 and 26 Sections for shutting off, disconnecting, removing, and sealing or capping utilities. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing.
- C. Existing Facilities: Protect adjacent walkways, building entries, and other building facilities during demolition operations. Maintain exits from existing buildings.
- D. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of demolition.
- E. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent areas of the facility to remain.
 - 1. Provide protection to ensure safe passage of people around demolition area and to and from occupied portions of building.
 - 2. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during demolition operations.
 - 3. Cover and protect furniture, furnishings, and equipment that have not been removed.
- F. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.
- G. Salvaged Items: Comply with the following:
 - 1. Clean salvaged items of dirt and demolition debris.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to storage area designated by Owner.
 - 5. Protect items from damage during transport and storage.

3.4 DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.

4. Maintain adequate ventilation when using cutting torches.
 5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 6. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 7. Dispose of demolished items and materials promptly. Comply with requirements in Division 01 Section "Construction Waste Management and Disposal."
- B. Surveys: During demolition, perform surveys to detect hazards that may result from building demolition activities.
- C. Explosives: Use of explosives is not permitted.

3.5 DEMOLITION BY MECHANICAL MEANS

- A. Proceed with demolition of structural framing members systematically, from higher to lower level.
- B. Remove debris from elevated portions of the building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
1. Remove structural framing members and lower to ground by method suitable to minimize ground impact and dust generation.
- C. Below-Grade Construction: Existing foundation walls and other below-grade construction shall remain in-place and disturbance kept to a minimum throughout the demolition phase.
- D. Existing Utilities: Refer to Electrical, HVAC and Plumbing design documents for requirements regarding all existing utilities.

3.6 SITE RESTORATION

- A. Prepare site and adjacent areas in accordance with all new construction outlined within the Project Design Documents.

3.7 REPAIRS

- A. Promptly repair damage to adjacent areas/surfaces caused by demolition operations.
- B. Existing Slab: Contractor shall repair any and all damage to the concrete slab prior to the beginning of new construction aspects.

3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and legally dispose of them in an EPA-approved landfill acceptable to authorities having jurisdiction. See Division 01 Section "Construction Waste Management and Disposal" for recycling and disposal of demolition waste.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Do not burn demolished materials.

3.9 CLEANING

- A. Clean adjacent areas, surfaces and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before demolition operations began. Areas that will involve additional demolition operations should be cleaned only to the point that will allow for further work to be conducted in a safe manner.
 - 1. Clean roadways of debris caused by debris transport.

END OF SECTION 024116