

**NEW PASSENGER TERMINAL
DULUTH INTERNATIONAL AIRPORT
DULUTH, MINNESOTA**

**SECTION 01732 – SELECTIVE
DEMOLITION**

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1 GENERAL

1. RELATED DOCUMENTS

- a. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

2. SUMMARY

a. Section Includes:

- 1) Demolition and removal of selected portions of building or structure.
- 2) Demolition and removal of selected site elements.
- 3) Salvage of existing items to be reused or recycled.

b. Related Requirements:

- 1) Division 1 Section "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
- 2) Division 2 Section "Site Clearing" for site clearing and removal of above- and below-grade improvements.

3. DEFINITIONS

- a. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- b. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.
- c. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- d. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

4. MATERIALS OWNERSHIP

- a. Unless otherwise indicated, demolition waste becomes property of Contractor.

- b. Historic items 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.

5. PREINSTALLATION MEETINGS

- a. Pre-demolition Conference: Conduct conference at Project site.
 - 1) Inspect and discuss condition of construction to be selectively demolished.
 - 2) Review structural load limitations of existing structure.
 - 3) Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4) Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5) Review areas where existing construction is to remain and requires protection.

6. INFORMATIONAL SUBMITTALS

- a. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property for environmental protection, dust control and for noise control. Indicate proposed locations and construction of barriers.
- b. 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 and other tenants' 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 elevator and stairs.
 - 5) Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- c. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.
- d. Pre-demolition Photographs or Video: Submit before Work begins.
- e. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- f. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

7. CLOSEOUT SUBMITTALS

- a. Inventory: Submit a list of items that have been removed and salvaged.
- b. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

8. QUALITY ASSURANCE

- a. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

9. FIELD CONDITIONS

- a. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- b. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
 - 1) Before selective demolition, Owner will remove the following items:
 - a) **<Insert items to be removed by Owner>**.
- c. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- d. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1) Hazardous materials will be removed by Owner before start of the Work.

If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- e. Storage or sale of removed items or materials on-site is not permitted.
- f. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1) Maintain fire-protection facilities in service during selective demolition operations.

2 PRODUCTS

1. PERFORMANCE REQUIREMENTS

- a. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- b. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

3 EXECUTION

1. EXAMINATION

- a. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- b. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- c. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- d. 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 Architect.
- e. Engage a professional engineer to perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
 - 1) Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- f. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs and/or preconstruction video.
 - 1) Comply with requirements specified in Division 1 Section "Photographic Documentation."
 - 2) Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

2. UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- a. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

- 1) Comply with requirements for existing services/systems interruptions specified in Division 1 Section "Summary."
- b. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
- 1) Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2) If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 3) Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.
 - a) Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b) Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
 - c) Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d) Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e) Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f) Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g) Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.
- c. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

3. PREPARATION

- 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.
 - 1) Comply with requirements for access and protection specified in Division 1 Section "Temporary Facilities and Controls."
- b. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1) Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.

- 2) Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3) Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4) Cover and protect furniture, furnishings, and equipment that have not been removed.
 - 5) Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 1 Section "Temporary Facilities and Controls."
- c. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- 1) Strengthen or add new supports when required during progress of selective demolition.

4. SELECTIVE 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) Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2) 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.
 - 3) Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4) 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 fire watch and portable fire-suppression devices during flame-cutting operations.
 - 5) Maintain adequate ventilation when using cutting torches.
 - 6) Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 7) Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - 8) Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 9) Dispose of demolished items and materials promptly. Comply with requirements in Division 1 Section "Construction Waste Management."
- b. Removed and Salvaged Items:
- 1) Clean salvaged items.

- 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 Owner's storage area designated by Owner.
 - 5) Protect items from damage during transport and storage.
- c. Removed and Reinstalled Items:
- 1) Clean and repair items to functional condition adequate for intended reuse.
 - 2) Pack or crate items after cleaning and repairing. Identify contents of containers.
 - 3) Protect items from damage during transport and storage.
 - 4) Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- d. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

5. SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- a. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch (19 mm) at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.
- b. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.
- c. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.
- d. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." Do not use methods requiring solvent-based adhesive strippers.
- e. Roofing: Remove existing roofing so that interior of building to remain remains weathertight.

6. DISPOSAL OF DEMOLISHED MATERIALS

- a. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 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.

- 3) Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 4) Comply with requirements specified in Division 1 Section "Construction Waste Management."
- b. Burning: Do not burn demolished materials.
 - c. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

7. CLEANING

- a. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

8. SELECTIVE DEMOLITION SCHEDULE

- a. Existing **[Items] [Construction]** to Be Removed: **<Insert description of items and construction to be removed>**.
- b. Existing Items to Be Removed and Salvaged: **<Insert description of items to be removed and salvaged>**.
- c. Existing Items to Be Removed and Reinstalled: **<Insert description of items to be removed and reinstalled>**.
- d. Existing Items to Remain: **<Insert description of items to remain>**.

END OF SECTION 01732