

SECTION 02070

SELECTIVE STRUCTURAL DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes the following:
1. Selective demolition and removal of portions of the existing building, as indicated and as required to perform the work, including but not limited to the following:
    - a. Concrete and steel stairs (historic stairs 1, 2, 3 & 4 and light court exit stairs A & B are to remain), including framing, railings, and landings as indicated.
    - b. 11<sup>th</sup> and 13<sup>th</sup> floors including slabs, beams, walls and other materials.
    - c. Provide openings in concrete slabs for HVAC building systems and elevators.
    - d. Masonry and concrete walls in basement, first floor and other levels as indicated.
    - e. Concrete and steel elevator penthouse structures and other penthouse structures.
    - f. Roof membranes, flashings, drains and brick pavers.
    - g. Penthouse walls and roof structures.
    - h. Building materials, equipment and debris.
    - i. Masonry roof parapets as indicated.
    - j. Concrete raised platform slabs, curbs and ramps.
    - k. Concrete slabs as indicated.
    - l. Metal ladders, rolling shutters and other items.
    - m. Stone paving at exterior door threshold to install door operation wiring.
    - n. Miscellaneous floor projections including marble thresholds, floors 1 to 9, brick and concrete curbs, floors 10 to 14, brick / tile pavers, and miscellaneous raised areas that need to be reduced to achieve desired floor elevation.
    - o. Steel elevator guide rail support beams at elevator shafts B to 9, B to 14
- B. Work includes protection of existing historic materials to remain in place, (2) Courtrooms at 8<sup>th</sup> Floor, Lobby Loggia on 2<sup>nd</sup> Floor and 1<sup>st</sup> Floor Entry.
1. Preserve the character of the existing building and salvage building materials and components where indicated for subsequent reinstallation rather than replacement.
  2. Historic building material and components shall be considered very fragile and if required, shall be dismantled, removed, worked-on, transported, and handled with special care. Historic materials damaged during selective demolition operation may not be available for replacement, and repair and restoration may be required. Cost of such repair and restoration shall be borne by the Contractor. Protection of existing materials, surfaces and finishes is of great importance.
  3. Areas where protective covering has been installed in a previous phase, at floors, walls, stairs, etc. are to be protected and not disturbed.
  4. Historic materials storage areas in the Basement and First Floor are to be protected and not disturbed.

## 1.02 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be salvaged or to remain the Owner's property.
- B. Salvage Items: Items to be salvaged shall be transported by the Contractor to a salvage yard approved by the County. County to receive salvage value. Quantities to be estimated by County for verification.
- C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in locations indicated.
- D. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Architect, items may be removed to a suitable, protected storage location during selective demolition and then reinstalled in their original locations.

## 1.03 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the Project site.

## 1.04 SUBMITTALS

- A. Submit each item in this Article for information only.
- B. Schedule of selective demolition activities indicating the following:
  - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
  - 2. Describe the procedures for demolition of the 11<sup>th</sup> and 13<sup>th</sup> floors, openings for stair transitions, roof penthouse structures and ramps at 1<sup>st</sup> floor.
  - 3. Demolition procedures shall be approved by the Contractor's structural engineer and submitted to the Architect for review. Damage to the existing structure and/or historic fabric as a result of demolition operations shall be repaired at no cost to the Owner.
- C. Inventory of items to be removed and salvaged and items to be removed and reinstalled.
- D. Inventory of items to be removed by Owner.
- E. Photographs or videotape, sufficiently detailed, of existing conditions, of adjoining construction and site improvements that might be misconstrued as damage caused by selective demolition operations.
- F. For selective demolition of historic elements, furnish the following prior to performing any demolition or removal work.
  - 1. Contractor's qualifications.
  - 2. Schedule of selective demolition indicating proposed sequence of operation for selective demolition work.
  - 3. Sample format for historic fabric removal inventory form indicating original location, material description, photo and/or drawing reference, condition and storage location.
  - 4. Historic fabric protection plan.
  - 5. Documentation of historic fabric to be removed, including photographs and/or drawings.
  - 6. Existing Conditions Photographs: Photographs of existing conditions of surfaces, materials, equipment, and adjacent improvements that might be misconstrued as damage relating to selective demolition operation. File with the Architect prior to start of work. Insufficient documentation of damaged items prior to the start of work may result in the Contractor's responsibility to restore these items.

1.05 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed selective demolition work similar to that required for this Project.
  - 1. Protection, documentation, removal and handling of historic fabric shall be supervised by personnel with 5-years experience in similar work on historic structures.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Pre-demolition Conference: Conduct conference at Project site as directed by the Architect or Owner's Representative.

1.06 PROJECT CONDITIONS

- A. Owner assumes no responsibility for actual condition of buildings to be selectively demolished. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Hazardous Materials:
  - 1. Abate all lead paint at all window frames, door frames, spandrel panels and other exterior painted metal elements, in accordance with applicable regulations. Refer to MACTEC Report, dated 12/14/04.
  - 2. Remove hazardous materials encountered at Penthouse demolition in accordance with MACTEC Report, dated 12/14/04. This may include mastics in built-up roofing, mastics/sealants at roof penetrations, Light Court roof and demolition of Penthouse structure.
- C. Storage or sale of removed items or materials on-site will not be permitted.
- D. Pre-construction Conference: Prior to submittals and prior to any demolition of historic elements, a pre-construction conference between the Contractor and the Architect will be held to review requirements and procedures. The conference shall include a walk-through of the building and a detailed report for the record.
- E. Protection: Protect existing historic fabric.
  - 1. Maintain existing protection of Historic areas installed in previous phase of work. Areas include: (4) historic stairs, 1<sup>st</sup> floor lobby, 2<sup>nd</sup> floor lobby / loggia, 2<sup>nd</sup> & 8<sup>th</sup> floor corridors, elevator lobbies 3 to 9, court rooms on 8<sup>th</sup> floor shall not be disturbed. Document photographically the condition of protected areas before starting work.
  - 2. Paths of access for workers and materials and all areas subject to impact from the work shall be protected throughout the Project. Protection shall be maintained throughout the Project and repaired or modified as required.
  - 3. Protect existing materials along path of travel route for workers and materials, including main entry.
  - 4. Protect exterior stone and metal elements to remain in place.
  - 5. Remove previously installed protection and install new protection as indicated for future phases.
- F. Identification of Existing Historic Materials to be Removed: Do not remove existing historic materials unless approved in advance by the Architect. If removal is required and approved, tag each item of historic fabric that is to be removed for review by the Architect. Tags shall be attached in a manner that will not damage sensitive historic finishes. No duct tape or attachments onto finish surfaces will be permitted.

PART 2 - PRODUCTS

Not used.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Verify that utilities not to be re-used have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect.
- E. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.
- F. Perform surveys as the demolition work progresses to detect hazards resulting from selective demolition activities.

### 3.02 UTILITY SERVICES

- A. Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
- B. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving building to be selectively demolished.
  - 1. Arrange to shut off indicated utilities with utility companies.
  - 2. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit after bypassing.

### 3.03 PREPARATION

- A. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with selective demolition operations.
- B. Conduct demolition operations and remove debris to ensure minimum interference with streets, walks, and other adjacent occupied and used facilities.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.
- D. Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of building to be selectively demolished.
  - 1. Strengthen or add new supports when required during progress of selective demolition.

### 3.04 PROTECTION OF HISTORIC FABRIC

- A. Provide shoring, bracing or support to prevent movement, settlement or collapse of areas of selective demolition and adjacent historic fabric to remain.
  - 1. Where openings are required in surfaces of exposed dimensional materials such as stone, tile, woodwork, etc, carefully cut openings along joint lines. Use tools where a blade thickness narrower than joint thickness whenever possible. Only remove whole pieces of materials. Do not mar or abrade exposed surfaces. Retain removed section for reinstallation or as indicated or as directed by the Architect. Document salvaged items.
  - 2. Do not use manual or power-driven impact tools where such use may damage existing historic fabric. Use of power tools shall be approved by the Architect.

3. Protect adjacent material from impact of removal process.
- B. Coordinate these instructions and specifications with hazardous material removals, as required.
- C. Items to be salvaged:
  1. Steel beams, plates, angles, channels at 11<sup>th</sup> and 13<sup>th</sup> floors
  2. Steel beams and columns at roof penthouse structures.
  3. Miscellaneous piping, steel stairs, angles, etc.
  4. Face brick at light courts for re-use.
  5. Terra cotta and stone copings.

### 3.05 SALVAGE

- A. Remove and clean items to be reused or returned to the Owner. Store items to be reused in a protected location until reinstalled.
- B. Salvage items for reuse shall be listed in a historic fabric removal inventory form. The location and condition of salvaged and stored materials shall be continuously updated and maintained.
- C. Steel beams, columns, plates, channels designated for demolition shall be cleaned and transported by the contractor to a salvage yard, approved by the county. County to receive salvage value. Quantities to be estimated by County for verification.

### 3.06 POLLUTION CONTROLS

- A. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.
  1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions.
- B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before start of selective demolition.

### 3.07 SELECTIVE DEMOLITION

- A. Protect existing facilities from damage, including historic materials and building elements. Items damaged as a result of demolition operations shall be repaired or replaced at no cost to the Owner.
- B. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete work within limitations of governing regulations and as follows:
  1. Proceed with selective demolition systematically. Complete selective demolition work above each floor or tier before disturbing supporting members on lower levels.
  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. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Provide barriers in accordance with OSHA Standards.

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 portable fire-suppression devices during flame-cutting operations.
  5. Maintain adequate ventilation when using cutting torches.
  6. Do not use impact tools in areas adjacent to historic materials that are to remain.
  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 throughout the structure 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. On-site storage of removed items is prohibited.
  10. Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.
- C. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain, using power-driven masonry saw or hand tools; do not use power-driven impact tools.

### 3.08 DISPOSAL OF DEMOLISHED MATERIALS

- A. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Transport demolished materials off Owner's property and legally dispose of them.

### 3.09 CLEANING

- A. Clean surfaces on which new materials will be applied, removing grease, adhesives, bitumen, and other adhering materials, as necessary to furnish acceptable substrates for new materials. Required substrate conditions shall be as approved by the manufacturer of the new material.
- B. Sweep the building broom clean on completion of selective demolition operation.

END OF SECTION