

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes (refer to Demolition Plan drawings A1.1, A1.1a, A1.2, and A1.3 for specific instructions):

1. Demolition and removal of existing interior walls, partitions, door/frame assemblies, ceiling and soffit systems, stair nosings, platform construction, windows, coat hooks, finishes, etc., as shown on drawings and/or as required to accommodate new construction.
2. Demolition and removal of existing vestibule construction; storefront system and related components; masonry wall construction; aluminum-and-glass solarium including slabs, walls, foundations, footings, etc.; walkways, ramps, steps, railings; as shown on drawings and/or as required to accommodate new construction.
3. Demolition and removal of existing metal seam roofing, trim and components.
4. Careful removal and temporary storage, for subsequent reinstallation, of indicated items including, but not limited to, autoclave, incubators, oven, flammable storage cabinets, lab refrigerator; door panic hardware; as shown on drawings and/or as required to accommodate new construction.
5. Removal of existing construction and finishes as encountered during the course of new construction, as required to accommodate new work.
6. Cutting of existing construction to accommodate new work as shown on drawings; such cutting to be performed by skilled craftsmen.
7. Preparation of surfaces at demolition and removal locations as required to accept new work.
8. Protection of existing building and spaces to remain, and shoring of the structure as required to maintain structural integrity and public safety.
9. Erection of temporary dustproof partitions.
10. Removal of debris.

B. Related Sections:

1. Removal of existing roof membrane portions: Division 7.
2. Refer to Divisions 15 and 16, and Mechanical and Electrical drawings for specific removals of mechanical and electrical items, including disconnecting, rerouting and capping of utilities.

1.2 SUBMITTALS

- A. Schedule of Demolition Operations: Submit demolition procedures and operational sequence for Architect's review prior to start of work. Submit a written request to Architect well in advance of executing any cutting or alteration which affects:
 - 1. The work of tying in or connecting to operational systems of the building, including electrical, mechanical and security systems.
 - 2. The work of the Owner or any separate Contractor.
 - 3. The structural value or integrity of any element of the project or of adjacent structures.
- B. Notice of Differing Conditions: Submit a written notification if, during the work of demolition and cutting, conditions are discovered which significantly vary from those shown on the drawings. Do not commence work until approval of Architect.
- C. Shop Drawings: Prior to starting work, submit drawings of temporary structural shoring, bracing, framing or support, for the information of the Architect. Such drawings will be reviewed by the Structural Engineer for the effects of such temporary members on the structural elements to remain. These drawings shall include the reason for such temporary members, the location, the direction and magnitude of design reaction forces on existing structure, and details showing how these reaction forces will be applied to the existing structure.
 - 1. Shop drawings shall be submitted with the Seal of the Professional Engineer engaged by Contractor; the Engineer must be licensed in the State of New Jersey.

1.3 QUALITY ASSURANCE

- A. Comply with the requirements of all applicable Federal, State and local safety and health regulations regarding the demolition of structures including ANSI/NFPD 241-Building Construction and Demolition Operations.
- B. Assume responsibility for any damage to any adjacent structures or buildings to remain.

1.4 PROJECT CONDITIONS

- A. Condition of Structure:
 - 1. Prior to submitting a bid, visit the site to examine the premises; determine existing conditions, character of equipment and facilities needed for the performance of the work; and all matters which may in any way affect the work.
 - a. Information regarding existing construction is based on available record drawings which may or may not accurately reflect existing conditions. Such information is included on the assumption that it may be of interest in carrying out the work, but the Owner, the Architect, and their consultants assume no responsibility for its accuracy or completeness.
 - b. Notify the Architect if, during the course of demolition and removals, conditions are

discovered which significantly vary from those shown on drawings. Do not proceed until authorization is received from the Architect.

2. Accept the condition of the site and structures as encountered. The Owner and the Architect assume no responsibility for the condition of the site or structures nor for the continuation of the conditions existing at the time of bidding or thereafter.
- B. Occupancy: The Owner will vacate areas of demolition but will continue to occupy the building. Conduct demolition work so that the School's operations will not be acoustically, environmentally or physically disturbed in any way, shape or form. Give not less than 72 hours notice to Owner of activities that will affect School operations. Under no circumstances shall the School's activities be disturbed during demolition operations.
- C. Unforeseen Conditions: Should unforeseen conditions be encountered that affect design or function of project, investigate fully and submit an accurate, detailed, written report to the Architect. While awaiting the Architect's response, reschedule operations if necessary to avoid delay of overall project.
- D. Partial Removal: Items of salvageable value must be transported from the site as they are removed.
1. Owner retains the right of first refusal on all removed items; coordinate therewith before disposal.
 2. Storage or sale of removed items on the site will not be permitted.
- E. Traffic: Conduct demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
1. Do not close or obstruct streets, walks, or other occupied or used facilities without permission of the Owner. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- F. Utilities: Maintain existing utilities required to remain; keep in service and protect against damage during demolition operations.
1. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by the Owner. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
 2. Coordinate all work with the Owner and local utility companies having jurisdiction.
 3. Before starting any work relating to existing utilities (electric, water, fire lines, etc.) that will temporarily discontinue or disrupt service to remaining structures, notify the Architect and the Owner 7 days in advance and obtain the Owner's approval in writing before proceeding with the work.
- G. Examination of Existing Conditions: Inspect existing masonry bearing walls prior to commencing work, and determine the necessity for control joints and/or repair work required. Report any deficiencies to the Architect and await further instructions.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PROTECTION

- A. Take full precautions to protect workmen, general public, Owner's personnel, and all other persons from falling debris and other hazards of demolition operations.
- B. Execute demolition work to ensure protection of existing portions of building against damages which might occur from falling debris or other causes. Do not interfere with use of adjacent occupied areas. Maintain free, safe passage to and from adjacent properties.
- C. Do not load structure with weight that will endanger, overload, or cause excessive deflection of existing structure, or that will damage finished surfaces adjacent to and/or supported by existing structure, except portion being removed.
- D. Provide, erect and maintain catch platforms, lights, barriers, warning signs, and other items as required for protection of workmen engaged in demolition and removal operations, occupants of the building, public and adjacent property.
 - 1. Assume responsibility for any and all damages which may arise or occur to any party by reason of neglect in providing proper lights, guards, barriers, or any other safeguards.

3.2 EXAMINATION

- A. Survey existing conditions and correlate with drawings and specifications to determine extent of demolition required.
- B. Insofar as is practicable, arrange operations to reveal unknown or concealed structural conditions for examination and verification before removal or demolition.
- C. Verify actual conditions to determine in advance whether removal or demolition of any element will result in structural deficiency, overloading, failure, or unplanned collapse.

3.3 PREPARATION

- A. Pollution Controls:
 - 1. Use temporary enclosures and other suitable methods to limit the amount of dust and debris rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection.
 - a. Do not use water for dust control.
 - 2. Clean adjacent surfaces and improvements of dust, dirt and debris caused by demolition operations. Return adjacent areas to conditions existing prior to start of the work.

B. Temporary Shoring:

1. 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.
 - a. Strengthen or add new supports when required during progress of selective demolition.

C. Temporary Partitions:

1. General: Provide substantial construction designed by the Contractor to provide effective protection as required.
 - a. Isolate demolition operations from other areas. Seal joints and perimeters (including doors) against passage of dust and dirt. Insulate to provide noise protection to occupied areas.
2. Construct temporary partitions in a manner at least equal to the following (or superior, if necessary to provide effective protection specified):
 - a. Wood studs covered with 1/2 inch thick plywood sheathing.
3. Gypsum board surfaces adjacent to occupied areas, with joints taped.
 - a. Equip partitions with doors where access is required.

3.4 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated in the contract documents. 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 and that will provide proper surfaces for patching of finish surfaces and installation of work by others. 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. Execute cutting and demolition by methods that will prevent damage to other work and will provide proper surface to receive installation of work by others and patching of finish surfaces. Do all cutting and removal so as to leave neat, true,

plumb and square edges. Use carborundum or diamond saw equipment for cutting masonry or concrete, where edges are to remain.

4. Do not cut or remove construction which might weaken or impair the integrity or strength of the structural framing or support systems which are to remain.
 5. 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.
 6. Maintain adequate ventilation when using cutting torches.
 7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 10. Dispose of demolished items and materials promptly. Remove debris daily.
 11. Where portions of the structure are to be removed, protect remaining portions from damage and prepare existing surfaces to fit new construction. Repair any damage caused to remaining portions of the structure at no cost to the Owner.
- B. Concrete: Demolish in small sections. Cut concrete to a depth of at least 3/4 inch at junctures with construction to remain, using power-driven saw. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete indicated for selective demolition. Neatly trim openings to dimensions indicated.
- C. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Promptly dispose of materials resulting from demolition operations. Do not allow materials to accumulate on site.
- B. Transport materials resulting from demolition operations and legally dispose of off-site. Pay any and all fees associated with disposal work.
- C. Do not burn removed materials on project site.
- D. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.

3.6 REPAIRS AND PATCHING

- A. Repair excess demolition. Employ skilled workmen to perform repair work.
- B. Where installation of similar new work is included, perform repairs in manner specified for installation of new work.
- C. Where similar new work is not included in the project, perform repairs using approved materials that are appropriate to the repair and, where practicable, are identical to the existing materials being repaired.
- D. Restore exposed finishes of patched areas in a manner which eliminates evidence of repairs.
 - 1. Continuous surfaces: Extend refinish to nearest intersection, with a neat transition to adjacent surfaces.
 - 2. Assemblies: Refinish entire unit.
 - 3. Painted piping, conduit, and duct: Clean and repaint.

3.7 CLEANING

- A. Remove tools and equipment. Dispose of scrap.
- B. Broom clean interior areas.
- C. Leave exterior areas free of debris.
- D. Clean soil, smudges, and dust from surfaces to remain.
- E. Return structures and surfaces to remain to condition existing prior to commencement of demolition.

END OF SECTION 024119

