SECTION 02060PS - PROTECTION OF SLABS & FOUNDATION WALLS DURING DECONSTRUCTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All drawings, construction general conditions, special conditions, technical specifications and reference documents apply to this section. The contractor's own field survey is also required to determine the exact scope of work based on the information available and existing conditions of the site.

1.2 SUMMARY

A. The Contractor is required to engage the services of a licensed surveyor in the State of New York as referenced in Annex 6 SOW and Section 1.3 below.

B. The work described in this section is to include all labor, materials, equipment, services, consultation, engineering, management, coordination and administration efforts to execute and complete the deconstruction of all structures, equipment, materials, etc. as indicated in the Contract Documents, in a manner and method which preserves and protects the exterior foundation walls and Cellar B slabs from any damage, and does not alter their existing structural capacity.

C. The contractor shall be responsible to conduct the execution of demolition with methods, materials and equipment that protect the remaining areas of the exterior foundation walls and Cellar B slabs & foundations walls from damage and excessive loading during all operations. It will be the contractor's responsibility to replace any slab areas damaged during their operations. Contractor shall utilize a NYS Licensed Engineer to verify and document all efforts associated with protecting the slabs & foundation walls during the deconstruction operations.

D. The accumulation of storm water in pits, trenches, floor depressions, ramps, basements, tunnels, voids and openings shall be limited to a level where the load of the water and possible other live loads do not exceed the allowable limits of the affected structural members such as walls, beams, slabs, etc.

E. Upon the completion of all demolition, the remaining pits, trenches, floor depressions, ramps, basement areas, tunnels, voids and openings shall be filled as per Specification Section 02222.

F. All concrete structures, such as pits, trenches, floor depressions, etc. that may have become stained with oil or other contaminants shall be cleaned in accordance with Specification Section 02089 and all Legal Requirements.

G. It is not intended to include removal of any of the below grade foundations, including pit areas. The tops of column may be demolished to allow for column removal. All foundation walls will remain in place when buried below grade. Any foundation wall above grade shall be removed to grade level. For pits located in slab on grade areas, they shall be filled with select fill. All

elevator pits shall be entirely filled regardless of depth, after they have been thoroughly cleaned in accordance with Specification Section 02089.

H. Under the demolition, the contractor must maintain the storm drain system that is independent of the structures being removed. The system must be protected during the demolition as it will remain active throughout, and after this contract is complete. All connections to the storm system which are being removed by slab removals shall be plugged and sealed where they go below grade or connect to the storm sewer main. All damaged manholes or piping shall be repaired, including any necessary repairs to correct existing conditions of loose masonry and or covers.

1.3 SUBMITTALS

A. The Contractor shall submit for review within its work plan all demolition procedures, engineering, designs, calculations, etc. prepared by a New York State licensed professional engineer and reviewed by the contractor's "engineer or record" including all structural requirements to ensure the protection of the Cellar B slabs and foundation walls. The following submittals shall also be required, but are not limited to:
   1. A pre-survey with field points is to be established to be utilized as a baseline in such a manner so as to monitor any and all movement of the existing slab and foundation walls. The pre-survey is to be submitted for review 30 Days prior to building deconstruction commencement.
   2. Loading calculations of any accumulated storm water in pits, trenches, etc.
   3. Design system to accommodate drainage as described in Section 1.2D.
   4. Any and all structural loading requirements for equipment, materials, etc. used during the demolition operations.

B. The detailed work plan shall include the means and methods for the protection of the remaining existing foundation walls and Cellar B slab during demolition work. The structural engineer shall be indicated either as an individual or firm providing the services required.

1.4 JOB CONDITIONS

A. INTENT
   1. The remaining Cellar B slab and foundation walls are intended to remain and reused in a future development. The slabs & foundation walls shall be protected in particular from damage due to impact and/or excessive weight of demolition debris or due to overloading by equipment, materials or demolition operations.
   2.

B. CONTRACTOR'S RESPONSIBILITY
   1. The contractor has the responsibility to assess the actual load capacity of the Cellar B slab and foundation walls to provide support bracing, shoring, structural systems and protection methods, and techniques as necessary to prevent damage to the Cellar B slabs and foundation walls.

   2. The contractor will be responsible to replace any exterior foundation walls and Cellar B slab areas damaged or determined to be structurally inadequate due to the result of their demolition, operations, equipment, methods, etc.

1.5 RESPONSIBILITIES OF STRUCTURAL ENGINEER

A. The Demolition Contractor shall retain a Structural Engineer (licensed in the State of New York) to provide all engineering services required within this section #02060 PS and 02221.

B. It is the structural engineer's role to provide verification and document all efforts performed by the Demolition Contractor and to provide engineering services or systems required to support preservation of basement slabs and foundation walls.

C. The Structural Engineer will be required to monitor and document all activities throughout the job duration. A daily Field Report will be prepared and maintained describing all activities and methods of operations which pertain to the deconstruction. At the completion of all work the Structural Engineer shall submit a summary report certifying the operations performed and their efforts incorporated into the demolition. The report will include, but not be limited to the following information:
   1. Deconstruction Contractor's Implementation Plan
   2. Daily Field Logs
   3. Amendments and Modifications to work plan
   4. Documentation of Equipment and/or Tools
   5. Photo log of various operations and methods
   6. Field Testing and Survey Results, studies or verifications made in field
   7. Engineering drawings and sketches provided in the field for assistance or clarity
   8. Identification of slab areas removed or damaged
   9. Identification of structurally inadequate areas
   10. Identification of damaged areas caused by Demolition operations
   11. All engineering designs including load calculations
   12. All support and bracing techniques involving sketches and engineered drawings or documents
   13. Permanent structural members or materials used during demolition such as plank or plate systems
   14. An overall slab and column drawing to be prepared as a work plan drawing indicating all elements listed above

D. The Structural Engineer shall prepare an as-built document indicating the entire slab areas and columns that may remain and provide on this document information which includes, but is not limited to the following:
   1. Identify all pits, openings and trenches which have been filled, plated or planked
   2. All slab depressions and elevation differences
   3. Voids and any slab areas which may have been repaired or removed
   4. All structural support systems used in conjunction with the slab/foundation support.
   5. All fencing, guide rails, and protection provided
   6. All lighting locations
   7. Layout drawings of all utilities that may have been abandoned in the slabs or foundation walls.

E. The Structural Engineer shall conclude the report and as-built documents certifying that all methods performed were engineered and have protected the slabs and foundation walls during Demolition operations. Information includes, but is not limited to the final certification of the structural engineer. Structural Engineer shall provide as follows:
   1. Statement that all work was performed per the Structural Engineer's work plan and overloading of the slabs and foundation walls did not occur.

2. All pits, trenches, voids, etc. have been prepared in a self-draining condition.
3. All stained or oil saturated concrete has been thoroughly cleaned and the remaining structures is structurally suitable for reuse.

F. The Structural Engineer shall be responsible to prepare the Deconstruction Contractor's Implementation Plan to incorporate all deconstruction operations required and as indicated in this technical section #02060 P.S. The Structural Engineer shall proceed with preparing the Deconstruction Contractors' Implementation Plan with the understanding of all deliverables required as a final submitted package which shall include the summary report and as-built documents described in this text as it relates to protecting the slabs and columns and final information and documentation required for future reuse considerations.

G. The Contractor shall include the cost of the Structural Engineer which can be an individual or firm.

END OF SECTION 02060PS