**SECTION 02 41 13**

**DEMOLITION**

#### BASED ON DFD MASTER SPECIFICATION DATED 9/17/2014

This section has been written to cover most (but not all) situations that you will encounter. Depending on the requirements of your specific project, you may have to add material, delete items, or modify what is currently written. The Division of Facilities Development expects changes and comments from you.

**P A R T 1 - G E N E R A L**

**SCOPE**

The work under this section shall consist of providing all work, materials, labor, equipment, and supervision necessary to provide for the demolition of site work and such features as required in these specifications and on the drawings. Included are the following topics:

PART1 - General

Scope

Related Work

Submittals

Record Drawings

Safety

Permits

Disconnection of Services

Provisions for Future Work

Removal/Salvaging of Items

Owner Salvaged or Removed Materials

PART 2 - Materials

Equipment

PART 3 - Execution

Protection of Existing Work and Facilities

Demolition

Building Demolition

Demolition below Grade

Demolition Backfill

Drain Tile

Transportation and Disposal of Demolition Waste

## RELATED WORK

Applicable provisions of the General Conditions and Division 1 shall govern work under this section.

Section 02 00 00 – Existing Conditions

Section 31 25 00 – Erosion Control

**SUBMITTALS**

For utilities or other services requiring removal or abandonment in-place, submit materials documenting completion of such work.

Submit record drawings.

Submit copies of records documenting recycling or disposal of demolition materials from the site.

## Record Drawings

Maintain record drawings showing actual locations of utilities and other features encountered, and any deviations from the original design. Show actual limits of removal and demolition.

## SAFETY

Verify that all gas and electrical utilities have been abandoned or disconnected and associated hazards mitigated, prior to beginning any demolition.

Take all necessary precautions while dismantling piping containing gas, gasoline, oil or other explosive or toxic fluids or gases. Purge lines and contain materials in accordance with all applicable regulations. Store such piping outdoors until fumes are removed.

Maintain a clean and orderly site. Remove debris at end of each workday.

Burning of debris is not permitted.

If hazardous materials are not anticipated, but encountered, terminate operations and contact the DFD Construction Representative immediately. Follow all applicable local, state and federal regulations pertaining to hazardous materials.

## permits

Unless otherwise noted, Contractor shall be responsible for obtaining and paying for all permits necessary to complete demolition work.

If necessary, file and maintain Notification of Demolition and/or Renovation and Application for Permit Exemption (WDNR Form 4500-113) in accordance with the Wisconsin Administrative Code Chapter NR447.

**DISCONNECTION OF SERVICES**

Prior to starting removal and/or demolition operations be responsible and coordinate disconnection of all existing utilities, communication systems, alarm systems and other services.

Disconnect all services in manner which insures continued operation in facilities not scheduled for demolition.

Disconnect all services in manner which allows for future connection to that service.

Disconnect services to equipment at unions, flanges, valves, or fittings wherever possible.

## provisions for future work

***Explain any specific provisions required to accommodate future work. Specify which site features must be protected during demolition.***

##### removal/salvaging of items

Carefully remove all items that are scheduled to be salvaged.

Secure salvaged items to allow for future movement; provide pallets, skids and other devices as necessary. Secure all loose parts.

Provide crates, padding, tarps and other measures necessary to protect salvaged items during storage. Store items in secure location, safe from vandalism, weather, dust and other adverse elements.

Where salvaged items are indicated to be turned over to Owner, deliver to location on property where designated by Owner.

Where indicated to be incorporated into new work, store the salvaged item in secure location until trade responsible for re-installation mobilizes his equipment and storage facilities to the site, or otherwise accepts responsibility for the salvaged item.

##### owner salvaged or removed materials

***Alert the Contractor that the Owner will be removing and/or salvaging some equipment or materials that may need to be received, stored, installed and/or which may need to be turned over to the Contractor or others. Refer to other sections for a more complete description of the equipment being salvaged or the work involved in installation.***

**P A R T 2 - M A T E R I A L S**

**Provide specifications for additional materials associated with demolition as necessary.**

**EQUIPMENT**

Use Contractor's normal equipment for demolition purposes and which meets all safety requirements imposed on such equipment.

**P A R T 3- E X E C U T I 0 N**

**PROTECTION OF EXISTING WORK AND FACILITIES**

Take all measures necessary to safeguard all existing work and facilities which are outside the limits of the work.

Furnish and install fencing or other barriers as shown on the plans or as otherwise necessary to protect existing features.

Verify the locations of, and protect, any buildings, structures, utilities, paved surfaces, signs, streetlights, utilities, landscaping and all other such facilities that are intended to remain or be salvaged.

Make such explorations and probes as necessary to ascertain any required protection measures that shall be used before proceeding with demolition.

Provide and maintain adequate catch platforms, warning lights, barricades, guards, weather protection, dust protection, fences, planking, bracing, shoring, piling, signs, and other items required for proper protection.

Provide protection for workmen, public, adjacent construction and occupants of existing building(s).

Report damage of any facilities or items scheduled for salvaging to the DFD Construction Representative.

Repair or replace any damaged facilities that are not scheduled for demolition.

Explosives shall not be used for demolition.

Keep streets, walks and all other adjacent paved areas clean and swept clear of dirt, mud and debris deposited as a result of this operation.

Protect surrounding area from dust. Control rodents, and other vermin associated with demolition operations.

## DEMOLITION

Remove all equipment, fixtures and other materials scheduled for salvage prior to beginning demolition operations.

Demolish and remove all buildings and structures scheduled for demolition as shown on the plans.

Abandon gas, electric and communication utilities in accordance with local utility company requirements, or applicable substantive requirements if considered private.

Carry out vehicle loading as necessary within the project boundaries or as defined or indicated on the drawings, but not in locations that block vehicular traffic on the streets or pedestrian traffic on adjacent public walks.

Dismantle each structure in an orderly manner to provide complete stability of the structure at all times. Provide bracing and shoring where necessary to avoid premature collapse of structure.

Conduct demolition operations and the removal of rubbish and debris in such a way that a minimum of nuisance dust is caused. Constantly sprinkle rubbish and debris with water if necessary to keep nuisance dust to a minimum.

Where necessary to prevent collapse of any construction, install temporary shores, underpinning, struts or bracing. Do not commence demolition work until all temporary construction is complete.

During the execution of the work, provide, operate, and maintain all pumping equipment, suction and discharge lines in a number of capacity as required to keep all cellars and pits free of water from any source whatsoever at all times.

Masonry and concrete shall be demolished in small sections. Use braces and shores as necessary to support the structure of the building or structure and protect it from damage. Where limits of demolition are exposed in the finished work, cutting shall be made with saws, providing an absolutely straight line, plumb, true and square.

Operate equipment so as to cause a minimum of damage to plaster which is to remain, and so as to keep dust and dirt to a minimum.

**If necessary, add applicable excerpts from Section 33 11 00 Water Distribution Systems and 33 30 00 Sanitary Sewer Systems, if these sections are not included in their entirety.**

###### building demolition

Proceed with demolition in a systematic manner, from top of structure to ground. Complete demolition work above each floor or tier before disturbing supporting members on lower levels.

Neatly saw or cut joints at the limits of removal; whenever possible, locate cutes at existing joints.

Cut existing plaster with power saws equipped with plaster cutting blades and dust collection system.

Patch or repair any damaged surfaces or structural members at the limits of removal.

Remove structural framing members and lower to ground by hoists, derricks or other suitable means.

Remove all existing flooring in accordance with plans. Leave exposed existing sub flooring or surface in suitable condition for receiving new finished flooring.

Locate demolition equipment and remove structure so as to not impose excessive loads to supporting walls, floors or framing.

Break up and remove concrete slabs-on-grade, unless otherwise shown to remain.

###### demolition below grade

Demolish foundation walls and other below grade features in accordance with the plans. Unless otherwise noted, remove all below grade features to a point 4’ below adjoining existing grade, or proposed grade, whichever is lower. Basement and/or lowest level floors more than 4’ below existing grade need not be removed, but must be broken up to permit drainage.

**DEMOLITION BACKFILL**

Backfill and compact below grade areas and voids resulting from demolition of structures and other abandonment and demolition.

Backfilling shall not begin until demolition and abandonment has been approved and documented by the DFD Construction Representative.

Prior to placement of fill materials, ensure that areas to be filled are free of standing water, frost, frozen materials, trash and debris.

### Backfill type, lift thickness and compaction requirements shall be in accordance with Section 31 20 00 – Earthmoving.

**DRAIN TILE**

Carefully protect and/or replace drain tiles encountered during demolition which are necessary to maintain site drainage conditions. Immediately repair or replace any drain tiles not scheduled for demolition, but damaged. Report damage to the DFD Construction Representative.

Repairs to drain tile or replacement drain tile shall be comparable or better than the existing drain tile system.

Test drain lines with water to assure free flow before covering. Remove all obstructions which may be found, retest until satisfactory.

## Transportation and disposal of demolition waste

Transport and dispose all demolition waste in accordance with local, state, and federal guidelines.

Whenever possible, or otherwise required by the Contract Documents, recycle demolition waste.

Demolition waste shall be disposed of at a landfill or dumpsite designed and approved to accept the given waste.

Maintain records documenting recycling and disposal of demolition waste. Record description of material, date removed, quantity removed, method of transport and recycling/disposal destination.

END OF SECTION