

DESIGN AND CONSTRUCTION GUIDELINES AND STANDARDS

DIVISION 2 • EXISTING CONDITIONS

02 41 00 • DEMOLITION

SECTION INCLUDES

Existing Conditions
Building Demolition
Selective Demolition

RELATED GUIDELINE SECTIONS

01 74 19 Waste Management
02 61 00 Contaminated Site Material Removal
02 65 00 Underground Storage Tank Removal
02 82 00 Asbestos Remediation
02 83 00 Lead Paint Remediation
21 00 00 Fire Suppression-Sprinklers
22 00 00 Plumbing
23 00 00 Heat, Ventilation & Air Conditioning
26 00 00 Electrical
31 00 00 Earthwork
33 00 00 Site Utilities

RESEARCH AND INVESTIGATION

- Perform **complete physical and record surveys** and photo-documentation of existing building and site conditions. Date all photos and reports.
- If warranted, perform **selective** demolition prior to bidding in an effort to expose latent conditions that may result in costly change orders during construction. Latent conditions need to be identified as much as practicable and included within the bid documents.
- Prepare an **inventory of materials to be removed from the site** and the inventory should indicate material with value as scrap, for resale, or donation, as well as materials that cannot be dumped in landfills. For example, existing metal stairs with lead-based paint can be sold to a scrap metal facility, are not considered hazardous waste, and provide a positive cash flow by eliminating the cost of disposal. Investigate the options to recycle all demolished materials and include specific provisions within the contract documents in Section 01.74.19 Construction and Demolition Waste Management.
- Prepare an **inventory of materials to be removed and returned to the owner or reinstalled**, as well as items to be protected in Section 01 11 10 Summary of Work.

In many cases the Housing Authority may have a use for the material to be removed. Building artifacts, such as plaques and ornate building components may be removed, refurbished, and reinstalled.
- Determine if the building is within a historic byway or historic district.
- Identify any procedures and permitting requirements of local, state and federal authorities of jurisdiction with oversight for building demolition.



DESIGN AND CONSTRUCTION GUIDELINES AND STANDARDS

DIVISION 2 • EXISTING CONDITIONS

02 41 00 • DEMOLITION

- Determine if the existing building is located in wetlands or in a flood zone.
- Be aware of local planning and zoning bylaws and other municipal requirements prior to demolition of any structure. Once a building has been removed from a site, local rules governing proposed occupancy, set back requirements, minimum lot size, and a host of other important concerns can all affect the owner's intended use of the property.
- Carefully investigate below grade conditions.

Housing Authority properties are typically not well documented by Dig Safe. Check for as built drawings from the housing authority as well as records that the city or town may have.

When doing work in basements of existing buildings to be rehabilitated, identify conditions with ledge, foundations of previous buildings, heavily reinforced slabs, etc. to determine the cost to incorporate the potential space for use within the building. Identify potential material that can interfere with the installation of waste piping, utility lines, and foundation construction.

- Locate nearby utility connections and show on drawings.

There may be a delay between the time of the site investigation and construction. Take continuing deterioration of existing buildings over time into account when preparing scopes of work. This is especially important when the scope of work involves reusing substantial portions of an existing building. A second survey of the building may be required just prior to bidding to verify if there has been further deterioration or new issues to consider.

HAZARDOUS MATERIALS

Testing, remediation and disposal of hazardous wastes often includes multiple public entities that may, or may not, be the actual Authority of Jurisdiction (AOJ). If the presence of hazardous material is unknown or suspected, care must be taken to fully research the appropriate AOJ, determine the specific requirements of the AOJ, and then plan accordingly.



- Lack of proper planning for the demolition project can result in the discovery of hazardous materials during demolition. Avoid this scenario at all costs since the entire project will likely halt while immediate health and safety concerns are addressed. Such ill-planned projects can result in personal injury, health claims, fines and penalties, construction delays, claims for unforeseen conditions, exorbitant change order costs, etc.
- Prior to building demolition, hazardous materials surveys conducted by trained and licensed individuals are recommended. Surveys can provide quantities of hazardous materials, remediation strategies, and cost estimates.
- It is not uncommon for an existing building structure to have been built over a previously demolished building, or for existing older buildings to contain sump pits or spaces with contaminated soils. Obtaining knowledge of these conditions and careful planning prior to demolition activities, is strongly advised in order to avoid problems and delays during demolition.

DESIGN AND CONSTRUCTION GUIDELINES AND STANDARDS

DIVISION 2 • EXISTING CONDITIONS

02 41 00 • DEMOLITION

- Animals may also contaminate a site. Health concerns can emerge for example due to large amounts of pigeon droppings in attics, cooling towers, or occupied spaces. Proper planning should take into account any requirements of the AOJ regarding cleaning and decontamination.
- Polychlorinated biphenyls (PCBs) may also contaminate a site. PCBs are manufactured materials that were added into building materials during past years. PCBs are regulated by the U.S. Environmental Protection Agency and are no longer allowed to be manufactured or allowed to be present in building materials. The EPA does not require testing to determine the presence PCBs and testing to determine the presence of PCBs is not included in DHCD's standard scope and is not required.

DRAWING AND SPECIFICATIONS FOR DEMOLITION

- Drawings and specifications prepared for the bid documents must be comprehensive and specific. Any furnishings must be addressed in the documents. Show the limits of demolition work on the site. Identify vegetation to be protected and/or removed.
- Drawings are required even for the complete demolition of an existing building.
- Include photographic documentation in the specifications to record the pre-construction conditions. Cover specific conditions related to the project where existing materials are to remain, proper disposal of waste, etc.
- General statements and sentences such as "as required" are not acceptable. All demolition materials should be qualified in the specifications.
- If shoring is anticipated the requirements must be explicit and included within the drawings and specifications.
- Based on the survey of existing conditions, include the specific materials that the contractor will be required to salvage or recycle.
- Determine if the Plumbing, HVAC, Fire Suppression-Sprinklers or Electrical filed sub-bidder should be responsible for specific demolition scope of work. If not specifically identified, demolition is provided by the general contractor, although the individual trades may be needed to cap off any utility connections to make the site safe for all workers. These specific functions need to be called out in the filed sub-bid sections.

EXECUTION

Contract documents must include the results of the Designer's or Designer's consultants Waste Management Plan.

Damage to the existing building beyond the demolition specified in the contract documents shall be repaired by the contractor.

Prepare an accurate record of capped utilities, subsurface obstructions, etc.