

Section 2401. Removal of Existing Structures

2401.01 DESCRIPTION.

- A. Remove all portions of an existing structure from the project, except the portions that may be required or permitted to be left in place.
- B. Unless provided otherwise, all structures or parts of structures to be removed become the Contractor's property.

2401.02 MATERIALS.

None.

2401.03 CONSTRUCTION.

A. Notification for Complete Removal of Bridges.

- 1. Notify the Iowa DNR by mail and the Engineer, with the "Notification of Demolition" form, no less than 10 business days prior to the start of bridge demolition.
- 2. If unable to begin work on the original intended start date, notify the Iowa DNR and the Engineer, by sending a revised "Notification of Demolition" form, of the new intended start date. Provide notification of the inability to commence work on the intended start date no later than 1 business day prior to the original intended start date. Failure to notify the Engineer of a change in start date 1 business day prior to the original intended start date will result in the need for a new 10 business day notification to the Iowa DNR and the Engineer.
- 3. The Contracting Authority has inspected the existing bridge for asbestos. Unless otherwise indicated in the contract documents, no asbestos was found, or it has been removed prior to the letting. The Contractor may use this information to complete the "Notification of Demolition" form.

B. Removal of Superstructures.

- 1. Dismantle and remove steel structures which may be re-erected in new locations in a manner that will avoid damage to any of the members.
 - a. Separate members at field connections.
 - b. Clearly and neatly match mark all members of trusses with white paint before dismantling. Similarly mark all pins, nuts, loose plates, and so on to indicate their proper location in the structure.
 - c. Clean and coat all pins, pin holes, and machined surfaces with waterproof National Lubricating Grease Institute, No. 3 multipurpose grease, or an approved equal.
 - d. Wire all loose parts to adjacent members or pack in suitable containers.
- 2. Concrete superstructures which are to be completely removed may be removed by any means consistent with regulations regarding safety and protection of adjacent property. Complete all operations which might endanger new work before constructing the new structure.

C. Removal of Substructures.

- 1. Remove substructures of existing structures to 1 foot (0.3 m) below natural stream bottom, unless otherwise provided or ordered. Remove those parts outside the stream to 1 foot (0.3 m) below natural ground surface. Where these portions of existing structures lie wholly or in part within limits for a new structure, remove as necessary to accommodate construction of the proposed structure.
- 2. Prior to placing new work, complete blasting or other operations which are necessary for removal of an existing structure or obstruction and which may damage new construction.

D. Remodeling of Structures.

1. On remodeling projects, match mark steel superstructure parts that are to be removed and reused. Store as designated in the contract documents. Dismantle and handle in such a way to not impair strength or usefulness of the material.
2. When contract documents require removal of existing concrete, carefully and accurately remove to lines indicated. Do not damage adjacent concrete, exposed reinforcing, or structural steel which the contract documents require to be incorporated into the remodeled structure. Saw match lines 3/4 inch (20 mm) deep where concrete floors are to be partially removed. This depth may require adjustment to ensure that the existing reinforcing steel is not damaged.
3. Demolition by impact methods with wrecking ball, pile hammer, and so on, or by explosives will be permitted only when superstructures are designated in the contract documents as unfit for re-erection. Apply [Article 2403.03, I](#), when bonding new and old work. Do not use explosives for removing a part of a structure to which an addition is to be made, except in the case of massive sections and only with the Engineer's written permission. When explosives have been used, remove the concrete for at least 6 inches (150 mm) beyond the point of visible damage using methods that will not damage the concrete that is to remain.

E. Removal of Steel.

1. Store structural steel members specified to remain the Contracting Authority's property in neat piles at locations specified in the contract documents or within the right-of-way in the vicinity of the work at points the Engineer designates.
2. Neatly store members of structures which are to be re-erected on skids above the surface of the ground.
3. When the contract documents specify that the removed steel is to become the Contractor's property, the contract documents will show an indication of total lead and total chromium in the existing paint system.

F. Removal of Concrete and Masonry.

Unless otherwise provided, concrete and masonry removed from old structures will become property of the Contractor. Remove according to [Article 1104.08](#).

G. Lumber.

1. If designated for salvage, remove lumber from structures by methods which preserves its usefulness. Remove nails, spikes, bolts, and other hardware from lumber, and pile the lumber in neat piles at locations designated by the Engineer.
2. If not designated for salvage, lumber becomes the Contractor's property. Remove according to [Article 1104.08](#).

H. Other Structures.

1. Remove pipe culverts and other small structures which are designated in the contract documents as suitable for salvage using methods which preserves their usefulness. Store these items nearby within the right-of-way.
2. If not so designated, these materials become the Contractor's property. Remove from the site.

I. Part or All of an Old Structure Lying Outside New Construction Limits.

Unless otherwise specified, for any excavation below finished grade line for the purpose of removing the old structure, place suitable earth backfill material to the original level or to the finished grade line (whichever is the lower) according to [Article 2402.03, H](#).

2401.04 METHOD OF MEASUREMENT.

Lump sum. No method of measurement.

2401.05 BASIS OF PAYMENT.

- A.** When the contract includes an item for Removal of Existing Structures, payment will be the Lump Sum contract price. When provisions in the contract documents do not cover payment for removal of a structure, including encased culvert pipe, footings, or other unforeseen obstacles to be removed, payment for their removal will include placement of backfill material made necessary by their removal. This payment will be as provided in [Article 1109.03, B](#).
- B.** The payment for removal of an existing structure is full compensation for:
- Furnishing all material, equipment, and labor and for performance of all work necessary for removal of the old structure from the project, and
 - Placement of backfill material made necessary by these operations.
 - If the existing structure will become the property of the Contracting Authority, payment for proper storage, salvage, and delivery of the structure shall be according to [Section 2555](#).