

## **Revision of Section 202 Removal of Bridge Railing**

**Revise Section 202 of the Standard Specifications for this project to include the following:**

### **Description**

This work consists of removing Bridge Rail Type 4, Bridge Rail Type 7, or other steel bridge railing with concrete curb per these specifications and conforming to the lines and details shown on the plans or as approved by the Engineer. This work shall include but not limited to:

- Removing railing.
- Saw cutting.
- Removing concrete.
- Removing reinforcing steel not designated in the plans to remain.
- Straightening existing reinforcing steel to remain.
- Sandblasting or hand-cleaning reinforcing steel, including epoxy repair.
- Disposing of removed materials and debris.

### **Construction Requirements**

At least 10 working days before beginning removal, the Contractor shall submit a method statement to the Engineer with details of the removal operations, including the means, methods, sequence of removal, tools, and equipment to be used. All removal operations, methods, and equipment must have the Engineer's acceptance before the work begins.

Remove the existing concrete as shown on the plans or as directed by the Engineer. The Contractor shall saw cut along the removal limits before removal. Removal operations shall not occur before Engineer's approval. Unless otherwise specified, saw concrete with a vertical face. Feathered edges will not be acceptable. The depth of the saw cut shall be 3/4-inch minimum.

The Contractor shall take all steps necessary to minimize spalling on the face of the existing concrete adjacent to the removal boundaries. Do not use pneumatic hammers heavier than the nominal 15-pound class for removals adjacent to the removal boundaries. Use hand tools such as hammers and chisels to remove particles of loose, unbonded concrete. Sandblast exposed concrete surfaces within the removal limits to remove all final fractured or loose particles. Repair in kind any damage caused by the Contractor to any portion of the structure not intended for repair at the Contractor's expense using means and methods approved by the Engineer with no allowance for contract time extension.

The Contractor shall take all steps necessary to prevent cutting or otherwise damaging reinforcing steel intended to remain in place. Repair or replace any reinforcing bars damaged by the Contractor's operation at the Contractor's expense using means and methods approved by the Engineer with no allowance for contract time extension.

2

**Revision of Section 202  
Removal of Bridge Railing**

Following the removal of the concrete, straighten all exposed non-epoxy reinforcing steel to remain in place as required and thoroughly clean to sound metal by sandblasting. Sandblasting equipment shall be capable of removing rust scale from non-epoxy reinforcing bars. If present, do not sandblast epoxy-coated reinforcing steel but clean with hand tools. Repaint epoxy coating on reinforcing steel, if damaged, with epoxy paint before placement of the concrete.

The Contractor is responsible for the disposal of all removed material and debris.

**Method of Measurement**

Removal of Bridge Railing will be measured by actual quantity, completed and accepted.

**Basis of Payment**

The accepted quantities of Removal of Bridge Railing will be paid for at the contract unit price.

Payment will be made under:

Pay Item	Pay Unit
Removal of Bridge Railing	Linear Foot

Payment for Removal of Bridge Railing will be total compensation for all labor, materials, tools, equipment, and incidentals required to complete the item, including:

- Removal of bridge railing.
- Saw cutting,
- Removal of concrete.
- Removal of reinforcing steel not designated in the plans to remain.
- Straightening existing reinforcing steel to remain.
- Sandblasting or hand-cleaning reinforcing steel, including epoxy repair
- Disposal of removed materials and debris.

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**Instructions to Designers (delete instructions and symbols from final draft):**

Use this project special provision when removing concrete bridge railing or curb (may include steel portions of bridge rail as well) from existing structures. Do not use for removing only the steel portion of bridge railing from existing structures (Use Removal of Bridge Railing (Steel Only).

If removing Type 10R or other railing where the anchors are drilled through the deck, modify this spec to address removal of loose anchors.

3  
**Revision of Section 202  
Removal of Bridge Railing**

Include Revision of Section 202 Sandblasting Reinforcing Steel in specification package.

**Revision of Section**      202 Removal Of Bridge Railing

<u>Date</u>	<u>Author</u>	<u>Description of Change</u>
1/14/19	BPM Cons.	Initial Website Issue
11.1.21	M. Kayen	Revisions to grammar, format as per CDOT Style Guide (4.22.21)
04.06.2023	M. Kayen	Revisions to make spec online accessibility-compliant. 5.22.23 Additional accessibility work.