

SECTION 01215 - LOCATE AND REMOVE NEAR-SURFACE METAL

(Follow all instructions and make all edits with "Track Changes" turned on. This Section is not published in the Oregon Standard. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the Project, unless the item(s) that are included in the subsection, paragraph, sentence, or bullet are not required on the Project and then they should be deleted. In general do not re-number or re-letter subsections when item(s) are deleted. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Section 01215, ~~which~~ is not a Standard Specification and, is included in this Project by Special Provision.

Description

01215.00 Scope - In addition to the requirements of Section 01201, Section 01210, Section 01235, and Section 01260, this Work consists of locating, and eliminating low resistance paths for CP current from the thermal spray anode to the rebar.

01215.02 Timing - Perform locating and marking of Essential and Non-Essential Near-Surface Metal after boundaries of damaged concrete have been marked for removal according to Section 01235.

01215.03 Submittals - At least 21 Calendar Days before beginning Work, submit according to 00150.37 detailed procedures for locating and marking Essential and Non-Essential Near-Surface Metal. Identify patching Materials and resins to be used. Include the manufacturers' specifications and operating instructions for all Equipment. The Engineer will respond within 21 Calendar Days after receipt of the submittal.

Do not start Work until written approval of submittals is received from the Engineer.

Materials

01215.10 Hand Patching Materials - Comply with 01201.10.

Construction

01215.40 Location and Removal Requirements - Locate and mark all metal bearing plates, drains, Bridge supports, anchors, and other exposed Essential Near-Surface Metal on all concrete surfaces receiving anode.

Locate all reinforcing bars, reinforcing mesh, and other Essential Near-Surface Metal that have less than 1/2 inch of concrete cover. Locate by visual inspection and by using a metal detector.

Within areas marked for replacing damaged concrete under Section 01235:

- Do not mark Essential Near-Surface Metal.
- Do not mark Non-Essential Near-Surface Metal.
- Do not remove Non-Essential Near-Surface Metal, as it ~~will be~~ is removed under 01235.
- Do not perform resin coating or concrete build-up over Essential Near-Surface Metal, as concrete cover ~~will be~~ is restored under Section 01235.

Outside areas marked for replacing damaged concrete under Section 01235:

- On surfaces identified as high visual impact in 01235.46, mark for resin buildup on shallow rebar according to 01235.46.
- On surfaces not identified as high visual impact in 01235.46, mark for mortar buildup on shallow rebar according to 01235.46.
- Remove all Non-Essential Near Surface Metal within 1/2 inch from the concrete surfaces. Do not remove or cover objects if it is obvious that none of the metal can survive abrasive blasting.

Wire brush and mask Essential Near-Surface Metal and the adjacent concrete surface within four inches of metal to prevent bonding of the anode to the exposed metal and the immediate area surrounding it.

Explore all spots of rust visually and with a metal detector to determine if a metallic object is present. Mark the location and extent of all known Non-Essential Near Surface Metal.

If a pattern of form ties or other objects is identified, examine all expected locations visually and with a metal detector. If form ties are found, examine the opposite side of the member to locate the other end of the tie.

Remove marked Non-Essential Near-Surface Metal to a minimum of 1/2 inch below the concrete surface, and clean the cavity.

An acceptable removal technique for Non-Essential Near Surface Metal of less than 1/4-inch diameter ~~which that~~ are oriented perpendicular to the concrete surface is to drill one or more small diameter holes, a minimum of 3/4 inch deep, with a rotary or rotary-impact drill beside each object. Sever the object at the required depth by grinding, sawing, or shearing.

Leave nails and other small metallic objects with their entire length at the concrete surface for removal during abrasive blasting under Section 01260.

Mark cavities that are greater than 1/2 square foot in area and long cavities such as those from removal of a piece of wire more than 12 inches long as repair damaged concrete under Section 01235.

Repair cavities with hand patching Materials created by non-essential near surface metal removal that are less than 1/2 square foot leaving no feathered edges. Observe QPL remarks and follow manufacturer's guidelines for application.

Measurement

01215.80 Measurement - The quantities of Work performed under this Section will be measured according to the following:

(a) **Locate Near Surface Metal** - Locating near surface metal will not be measured.

(b) **Remove Non-essential Near Surface Metal** - Removal of Non-Essential Near-Surface Metal will be measured on the unit basis.

Payment

01215.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per unit of measurement, for the following items:

Pay Item

Unit of Measurement

- | | |
|---|----------|
| (a) Locate Near Surface Metal | Lump Sum |
| (b) Remove Non-Essential Near-Surface Metal | Each |

Item (b) includes removing Non-Essential Near-Surface Metal and hand patching cavities less than 0.5 square foot.

No separate or additional payment will be made for Non-Essential Near-Surface Metal that is left in place to be removed by abrasive blasting under Section 01260.

Payment will be payment in full for furnishing and placing all Materials, and for furnishing providing all Equipment, labor and Incidentals necessary to complete the Work as specified.