

## SECTION 00390 - RIPRAP PROTECTION

*(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the project. 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.)*

Comply with Section 00390 of the Standard Specifications modified as follows:-

**00390.11(a) General** - Replace the bullet that begins "Be angular in shape ..." with the following bullet:

- Be angular in shape. Thickness of a single Rock is not less than one-third its length. Rounded Rock will not be accepted unless authorized by the Engineer.

**00390.11(b) Test Requirements** - Replace the paragraph that begins "Furnish the Rock..." with the following paragraph:

Furnish Rock meeting the following test requirements:

**00390.11(c)(1) Control Sample** - Replace this subsection, except for the subsection number and title, with the following:

If directed, provide, at a satisfactory location near the Project, a Rock sample of at least 5 Tons meeting the gradation for the class specified. The Engineer will use the sample as a frequent visual reference for judging the gradation of the riprap supplied.

**00390.11(c)(2) Sampling and Testing Assistance** - Replace this subsection, except for the subsection number and title, with the following:

The Engineer may request a gradation verification of two random truckloads of Rock. Provide mechanical Equipment, a sorting site and labor needed to assist in checking gradation at no additional cost to the Agency

**00390.42 Filter Blanket Construction** - Replace this subsection, except for the subsection number and title, with the following:

Place the Filter Blanket on the prepared area to the full specified thickness in one operation, using methods that do not cause segregation.

**00390.44(a) General** - Replace this subsection, except for the subsection number and title, with the following:

Unless otherwise directed, place the riprap protection as the embankment is constructed. Lag the riprap placement behind the embankment construction only as necessary to allow proper embankment construction and prevent mixture of embankment and riprap Material.

**00390.44(b) Loose Riprap** - Replace the bullet that begins "With a clamshell ..." with the following bullet:

- With a clamshell, orange-peel bucket, skip or similar approved device that will contain the riprap Material to its final destination. Do not open the bucket until it has been lowered to the slope where the Material is being placed.

Replace the bullet that begins "To produce a compact ..." with the following bullet:

- To produce a compact riprap protection where all sizes of Material are placed in their proper proportion.

**00390.44(c) Keyed Riprap** - Replace this subsection, except for the subsection number and title, with the following:

After placing Loose Riprap Material according to 00390.44(a) and 00390.44(b), key the riprap into place by slapping the surface with a piece of armor plating (approximately 4 feet x 5 feet in size weighing approximately 5,000 pounds) or other approved means that will produce a nearly smooth surface.

**00390.44(d) Grouted Riprap** - Replace the paragraph that begins "Thoroughly moisten the stones ..." with the following paragraph:

Thoroughly moisten the stones and sluice any excess fines to the underside of the riprap before grouting. Deliver the grout to the place of final deposit by any means that ensure uniformity and prevent segregation of the grout. Spade or rod the grout into the spaces to completely fill the voids in the riprap. Control pressure grouting and do not unseat the stones. Penetrate the grout to the depth as shown. If a rough surface is specified, brush the stone until 25 to 50 percent of the depth of surface stone is exposed. For a smooth surface, grout the crevices to within 5/8 inch of the surface.

**00390.90 Payment** - Replace the paragraph that begins "In items (b), (c), and (d) ..." with the following paragraph:

In items (b), (c), and (d), the class of riprap is inserted in the blank.

Replace the paragraph that begins "Payment will be payment ..." with the following paragraph:

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