

ROOT WAD REVETMENT

****From Cabot-Danville FEGC F 028-3(26) C/1**

- xx. DESCRIPTION. This work shall consist of furnishing and constructing root wad revetments at the locations indicated in the Plans and as directed by the Engineer.
- xx. MATERIALS. Materials shall be furnished in accordance with the Plans and the following requirements, and shall be approved by the Engineer prior to use.
- (a) Trees used as root wad revetments shall be sound and free from significant decay. Root wad revetment installation requires a length of tree trunk with the root mass attached as well as a second footer log. Typically, root wads are identified when present on site and marked by the Engineer for use by the Contractor.
 - (b) Root wads should be of substantial size, and a minimum of ten (10) feet of the trunk shall be attached to provide for adequate anchoring in the bank.
 - (c) Footer logs should be a minimum of eighteen (18) to twenty-four (24) inches in diameter and free of limbs.
 - (d) The root mass should exceed five (5) feet in diameter.
 - (e) Trees used for root wads can consist of any species that provides a dense, flattened root mass. Trees with primarily a deep tap root are not generally suitable for root wads.
- xx. EQUIPMENT. The construction of root wad revetments requires equipment that can place rock in precise locations. An excavator of a suitable size, and equipped with a thumb is suggested.
- xx. CONSTRUCTION REQUIREMENTS. Root wad revetments shall be constructed in accordance with the Plans, the following requirements, and as directed by the Engineer.
- (a) Footer logs shall be installed in a trench angled 45 degrees to the streambank in the upstream direction. Footer logs shall be buried securely in the bank on both ends.
 - (b) A trench shall be dug into the streambank at an angle and length that will accommodate the trunk portion of the root wad revetment. The trench shall be dug such that when buried, the root mass will face upstream, and the root wad log will be angled 45 degrees to the streambank in the downstream direction.
 - (c) The root wad shall be placed in the trench at an elevation where the majority of the root mass is below the bankfull elevation. The bottom of the root mass may extend to the thalweg bottom.
 - (d) After the root wad is placed in the correct position, two large bracing boulders, each with a two (2) foot minimum diameter, shall be placed on top of the footer log on either side of the root wad log, just behind the root mass, as indicated on the

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Plans, to help hold the root wad log in place. The trench shall then be backfilled and compacted.

(e) Placement of the footer log and large rocks is critical to the success of root wad revetments. To ensure proper placement, the Contractor shall provide a portable pump to dewater excessive ground water from the excavation.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Root Wad Revetment) to be measured for payment will be for each root wad revetment placed in the complete and accepted work.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Root Wad Revetment) will be paid for at the Contract unit price for each. Payment will be full compensation for constructing the root wad revetment as specified, including any necessary excavation and compaction, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Unless otherwise specified in the Contract Documents, payment for bracing boulders and footer logs will not be made separately, but will be considered incidental to Special Provision (Root Wad Revetment).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Root Wad Revetment)	Each