
CONSTRUCTION SPECIFICATION
CS-OR-237 LARGE WOOD FOR STREAMBANK STRUCTURES

237.1 SCOPE

This specification covers the installation of large woody debris (LWD) in streambank protection structures referred to as “engineered log jams”, “engineered large wood structures”, “log barbs”, and similar names. Installation of LWD shall be to the lines and grades as shown on the drawing and the requirements of this construction specification.

237.2 SITE PREPARATION

The bank shall be shaped to the lines and grades shown on the drawings. Excess material shall be disposed of by spreading in the areas shown on the drawings or removed from the site and disposed of in a legal fill site prior to installation of the LWD structure.

237.3 MATERIALS

Trees with rootwads for LWD structures shall be cedar, spruce, pine, or fir with limbs in tact to the fullest extent possible. Other wood species may be substituted upon approval of the NRCS engineer, prior to installation. Tree stems shall not be from logs that have been on the ground for more than one year and shall be sound throughout the entire stem and rootwad. Tree stems used in the structure shall have a minimum diameter of 24 inches and have a minimum rootwad fan diameter of 6 feet, unless otherwise specified on the drawings. The minimum effective length of the tree stem and rootwad is 23 feet.

If anchor bolts (or threaded rods) are shown, they shall be hot-dipped galvanized, A307 steel. All anchors shall be at locations and dimensions shown on the drawing. Rock for ballasting the large wood structures shall be in accordance with MS-OR-523, Rock for Riprap.

237.4 INSTALLATION

Selected trees with large and numerous limbs shall be placed in the log structures as illustrated on the drawings. Proposed trees with rootwads should be inspected by the NRCS engineer prior to installation. The placement of trees with rootwads shall begin at the lowest level next to the streambed and progress upward as illustrated on the plans. Tree stems and rootwads shall be oriented as illustrated on the drawings. Ballast the structure with large boulders as specified on the drawings. After the NRCS engineer has inspected the structure, fill all voids between tree stems with smaller trees, large limbs, and slash.

237.5 ITEMS OF WORK AND CONSTRUCTION DETAILS FOR THIS PROJECT