

SECTION 02231

SITE CLEARING AND GRUBBING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Clear, grub, remove and dispose of trees, stumps, and debris within the staked limits of the roadways, channels, easements, and other designated areas.

1.2 DEFINITIONS

- A. Clear: remove and dispose of trees, stumps, logs, limbs, sticks, vegetation, debris, and other material on the natural ground surface.
- B. Grub: remove and dispose of roots, buried logs, debris, and other material under the ground surface.

1.3 RELATED SECTIONS

- A. Section 01355: Environmental Protection.
- B. Section 01571: Temporary Environmental Controls.
- C. Section 02221: Remove Structure and Obstruction.

PART 2 PRODUCTS Not used.

PART 3 EXECUTION

3.1 PREPARATION

- A. Verify with Engineer which vegetation or objects are to be removed.
- B. Review work procedures with Engineer.
- C. Schedule work carefully with consideration for property owners and general public.

- D. Follow Section 01571 for temporary environmental measures.

3.2 VEGETATION REMOVAL

- A. Grub the areas 2 feet below natural ground within the limits of clearing of all stumps, roots, buried logs, and all other underground obstructions.
- B. Stumps, roots, and non-perishable solid objects may remain in cleared areas where the embankment is
 1. 2.0 feet or more above the natural ground.
 2. At least 2.0 feet away outside the slope stake lines.
- C. Completely grub stumps and roots where a structure is to be constructed, piles are to be driven, or unsuitable material is to be removed.

3.3 BACKFILLING

- A. Backfill all stump holes, cuts, depressions, and other holes resulting from clearing and grubbing within areas to receive embankment. Compact backfilled areas to the density of the surrounding ground.

3.4 DISPOSAL

- A. Dispose of material following Section 01355.
- B. Do not dispose of material within the designated roadbed.
- C. Do not end dump material over the side of the embankment.
- D. Off the right-of-way:
 1. Acceptable when done according to prevailing laws (including environmental laws), ordinances, regulations, and rules, and at no additional cost to the Department.
 2. Furnish the Engineer with copies of the disposal permits or agreements.
- E. On the right-of-way:
 1. Bury material at locations specified or acceptable to the Engineer.
 2. Use material to widen embankments and flatten embankment sides slopes as approved by the Engineer.
 3. Cover disposed material with a minimum of 2.0 feet of earth and grade to drain properly at no additional cost to the Department.

4. Reduce wood to chips a maximum of 1/2 inch thick for mulching cut and fill slopes. Chips may be buried or distributed uniformly on the ground surface and mixed with the underlying earth so the mixtures will not sustain burning.

3.5 TREE REMOVAL

- A. Trees removed with an 18.0 inch circumference or smaller trunk, measured at 2.0 feet above existing ground are considered incidental construction.
 1. A tree consists of stump, root, trunk, branches, and foliage.
 2. Department will not count multiple leaders rising from a common root separately.
- B. Remove the root system to a minimum depth of 2.0 feet below the finished ground level and within a 2.0 foot radius of the stump.
- C. For trees over 18.0 inches in circumference: Refer to Section 02221.

3.6 PROTECTION

- A. Land monuments, property markers, or official datum points:
 1. Protect until their removal is approved.
 2. Reference for re-establishment before removing.
- B. Protect trees from damage to roots and branches if they are designated to remain.
- C. Protect other vegetation and/or objects designated to remain.

END OF SECTION