

SECTION 02110
CLEARING AND GRUBBING

02110.01 GENERAL**A. Description**

Clearing and grubbing shall include, but not necessarily be limited to, clearing areas of trees, brush, shrubs, down timber, rotten wood, other vegetation, debris and rubbish, as well as removal of fences and incidental structures; and grubbing or removing from the ground all stumps, roots and stubs, brush, organic materials, and debris in accordance with the Contract Documents.

B. Related Work Included Elsewhere

1. Protection of the environment; Section 01500.
2. Tree protection; Section 02120.
3. Excavation; Sections 02210, 02220, 02230, 02240, 02250, 02260, and 02270.
4. Salvaged topsoil; Section 02811.

C. Quality Assurance

The Engineer will inspect the work to ensure that it is performed in accordance with the Contract Documents.

D. Submittals

None.

02110.02 MATERIALS

Not applicable.

02110.03 EXECUTION**A. Limits**

1. General
 - a. Unless otherwise indicated in the Contract Documents, all trees and other growth within the site or rights-of-ways may be removed. Trees in construction strips are to be saved.

- b. Within the limits indicated on the Plans to be cleared and grubbed, the Engineer has the right to designate trees and other growth, which the County may desire to leave standing.

2. Roadway Construction

Limits of clearing and grubbing include the construction area (out to out of excavation or embankment, as the case may be) and shall include all ditch areas and stream or channel change areas. All other areas within the right-of-way and easement areas shall be cleaned of all rubbish.

Each grading unit shall be limited to the amount of surface area of erodible earth material exposed at one time. A grading unit is defined as a complete grading spread consisting of earthmovers, hauling units, graders, compactors, etc. The Contractor shall be prepared to dress and seed each grading unit.

3. Utility Construction

Limits of clearing and grubbing include only those areas within the site or right-of-way, which are actually necessary for construction. Clearing will not be permitted in construction strips unless specially indicated in the Contract Document or approved by the Engineer.

B. Unsuitable Materials

Note that after the clearing and grubbing operations are completed, unsuitable materials such as unstable formations, root mat, or swamp muck encountered below the surface of the ground must also be removed. Removal of unsuitable material is described under the various earthwork sections specified in Section 02210.01.

C. Salvaged Materials

When indicated, such materials as leaf mold or other organic materials above the surface of the ground and suitable for use as mulch or topsoil shall be salvaged and stockpiled.

D. Trees, Shrubbery and Plants

The Engineer will designate and clearly mark any trees, shrubbery, and plants which are not to be removed, and the Contractor shall protect them from any damage, in accordance with Section 02120 and as outlined in the "General Provisions". Branches of trees overhanging the area to be occupied by paved surfaces and shoulders shall be cut and properly trimmed to maintain a clearance height of 16 feet. Where trees, which are left standing, are trimmed or become scarred by the Contractor's, the cuts or scars shall be repaired by the Contractor. All trimming and repairs shall be done by skilled workmen and in accordance with good tree surgery practices under the supervision of a tree expert licensed by the State of Maryland.

E. Burning

If allowed, the Contractor shall obtain the appropriate permits to allow the burning of trees, brush, trash, or other perishable materials. If burning is prohibited by the Fire Marshall, the Contractor shall remove these materials and dispose of them off-site in permitted disposal facilities.

F. Disposal Locations

1. Perishable materials and debris shall be removed from the site or right-of-way and disposed of at locations off the Project and outside the limits of view from the Project by the Contractor. The Contractor shall make all necessary arrangements with property owners in writing for obtaining suitable disposal locations and furnish the Engineer with a copy of the agreement. The cost involved shall be included in the price bid. The Contractor shall be responsible for obtaining all state and local permits for the disposal locations and furnish the Engineer with evidence indicating the sites are approved for disposal.
2. All wood 4-inch diameter or greater shall remain the property of the County and shall be cut to cord length and stacked for removal by the County. Wood less than 4-inch diameter shall be considered waste and disposed of as specified herein.

G. Fences

All fences within the site or right-of-way shall be removed as carefully as practicable and replaced as specified in Section 02130.03.

H. Excavation Areas

Within areas to be excavated, all imbedded stumps, root mats, etc., shall be removed to a depth of not less than 1 foot below the subgrade or slope surfaces. All depressions made below the subgrade or slope surfaces by the removal of stumps or roots shall be refilled with materials suitable for embankment and shall be compacted in accordance with the requirements in Section 02260.03.

I. High Embankments

Areas where embankment will be made 5 feet or more in depth, trees and stumps shall be cut off as close to the ground as practicable but not to exceed 1 foot above the existing ground surface. Near the toe of embankment slopes no stumps or trees shall extend above a point 1 foot beneath the finished slope surfaces.

J. Low Embankments

Areas where embankment will be made less than 5 feet in depth shall be grubbed. In the event that the embankment is 4 feet or less in depth, all of these materials shall be grubbed in the same manner required where excavation is to be made.

K. Streams and Channel Changes

Areas within which stream or channel changes are to be made shall be cleared and grubbed in accordance with the provisions of Section 02110.03, Article H. In addition, clearing in accordance with Section 02110.03, Article D, shall extend 3 feet beyond the top of the cut slopes of the completed channel change. Where old channels (outside of the normal excavation or embankment slopes) are indicated to be filled, clear and grub as described in Section 02110.03, Article I, except that no trees, brush, or stumps will have to be removed below the top of the fill.

L. Structure Sites

When the work contemplated by the Plans includes the construction of structures, the clearing and grubbing in areas affected by excavation shall be completed in accordance with the provisions of Section 02110.03, Article H.

02110.04 METHOD OF MEASUREMENT

The amount of clearing and grubbing will not be measured.

02110.05 BASIS OF PAYMENT**A. Lump Sum**

Payment for clearing and grubbing, within the limits of the Project, will be made at the lump sum price bid. The price bid shall include furnishing all labor, equipment, tools, and incidentals necessary to complete the work. If an item for selective tree trimming does not appear in the Proposal, any trimming which might be required shall be incidental to the lump sum price for clearing and grubbing.

B. Force Account

In the event that additional excavation is required as contemplated in Section 02210.03, Article D, Paragraph 4, subsequent to the completion of clearing and grubbing as originally proposed, the additional clearing and grubbing made necessary because of the excavation will be paid for in accordance with the Section on Force Account Work as outlined in the "General Provisions".

C. Incidental to Borrow Excavation

Any clearing and grubbing which might be necessary to permit additional excavation classified as Borrow as outlined under Section 02210.03, Article D, Paragraph 5 shall be considered as incidental to borrow excavation.