

SECTION 02110

SITE CLEARING

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Site Clearing
- B. Channel Clearing, Grubbing, and Snagging
- C. Site Demolition and Removal
- D. Remove Existing Vegetation

1.2 RELATED SECTIONS

- A. Section 02211 - Rough Grading.
- B. Section 02274 - Soil Erosion Prevention and Sedimentation Control.
- C. Section 02222 - Excavation.
- D. Section 02722 - Site Storm Sewerage Systems.
- E. Section 02923 - Landscape Grading.

1.3 REGULATORY REQUIREMENTS

- A. Conform to applicable code (local, county, and state) for disposal of debris, burning debris on site, and use of herbicides.
- B. Coordinate clearing Work with utility companies.

1.4 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Site Clearing:
  - 1. Basis of Measurement: At the lump sum price bid or at the unit price bid per acre, as stated in the proposal.
  - 2. Basis of Payment: Includes material, labor, and equipment for removal and disposal of trees, stumps, brush, and equipment for clearing of site, loading and removing waste material, and as indicated in specifications and/or drawings, loading and removing of unsalvageable structures, excavation, removing and hauling all trees, debris, stumps and root balls to upland locations or off site as specified on the plans. Also includes, root raking of spoils in residential areas removal of bituminous pavement, concrete pavement, curb and gutter, and culverts as indicated, and applying herbicide to designated plant life and cutting stumps as specified.
- B. Channel Clearing, Grubbing, and Snagging
  - 1. Basis of Measurement: At the unit price bid per linear foot for channel clearing, grubbing, and snagging or included in the unit price bid for open channel excavation as stated in the proposal.

2. Basis of Payment: Includes material, labor, and equipment for removal and disposal of trees, grubbing stumps, removal of brush, equipment for clearing of site, loading and removing waste material, and chipping as indicated in specifications and/or drawings, loading and removing of unsalvageable structures, excavation, removing and hauling all trees, debris, stumps and root balls to upland locations or off site as specified on the plans. Also includes, root raking of spoils in residential areas, and applying herbicide to designated plant life and cutting stumps as specified.

C. Site Demolition and Removal:

1. Basis of Measurement: At the lump sum price bid as stated in the proposal.
2. Basis of Payment: Includes all the labor, material, and equipment necessary to remove all items indicated on the plans and as directed by the Engineer. Removed materials shall be come property of the contractor unless otherwise noted.

D. Remove Existing Vegetation:

1. Basis of Measurement: At the lump sum price bid as stated in the proposal.
2. Basis of Payment: Includes all the labor, material, and equipment necessary to remove all existing vegetation (including trees and shrubs), grub stumps, backfill stump holes with Engineer approved material, landscape grade all disturbed areas, and remove all debris and logs from the site as detailed in the plans and specifications and as directed by the Engineer.

E. Tree Removal:

1. Basis of Measurement: At the unit bid price for each as stated in the proposal.
2. Basis of Payment: Includes all the labor, material, and equipment necessary to remove the tree, the stump, and roots from the site.

## 2. PART 2 PRODUCTS

### 2.1 MATERIALS

A. Herbicide:

1. Garlon 3A or approved equal shall be used on brush having diameter of 1 inch or less.
2. 25 percent Garlon 4 or approved equal and 75 percent Ax-it shall be used on all cut stumps and brush greater than 1 inch per manufacturer's specifications.
3. All herbicides shall contain a dye additive so that sprayed areas can be visually identified.
4. Applicator shall be certified.
5. Use only in locations approved by Engineer and with materials approved by Engineer and Owner.

## 3. PART 3 EXECUTION

### 3.1 PREPARATION

- A. Verify that existing plant life designated to remain is tagged or identified.
- B. The Contractor shall investigate for himself/herself, what trees, brush, etc. must be removed and verify with the Engineer.

### 3.2 PROTECTION

- A. Locate, identify, and protect utilities that remain from damage.

- B. Protect survey stakes and survey monuments. If monuments' stakes or benchmarks are damaged or destroyed, contractor will be responsible for replacement costs.
- C. Protect trees, plant growth, and features designated to remain as final landscaping.
- D. All trees outside of right-of-way shall be protected.
- E. Protect benchmarks and existing structures from damage or displacement.

### 3.3 CHANNEL CLEARING, GRUBBING AND SNAGGING

- A. Notify Engineer 48 hours prior to channel clearing, grubbing, and snagging or applying herbicide.
- B. In reaches proposed for open channel excavation and/or channel cleanout
  1. Contractor shall excavate according to the plans and specifications.
  2. Clear trees, shrubs, and brush as noted in the plans and according to the project details.
  3. Stumps located in proposed excavation areas shall be grubbed.
  4. Stumps not located in excavation areas opposite bank in one-sided excavation areas shall be trimmed flush with ground and sprayed with herbicide.
- C. In reaches proposed for channel clearing, grubbing, and snagging.
  1. Contractor shall not excavate.
  2. Grub from toe of slope to toe of slope only as directed by engineer.
  3. Clear trees, shrubs, and brush as noted in the plans and according to the project details.
  4. Stumps not located in grubbing areas shall be trimmed flush with ground and sprayed with herbicide.
- D. Protect all trees 18 inches and larger except in flow line unless otherwise directed by the Engineer.
- E. Chip all wood, brush, and debris spread as indicated or haul from site. Removed material shall become property of the contractor.
- F. All debris shall be hauled from landscaped, yard, agricultural, or open areas as determined by the Engineer.
- G. Clear areas required for access to site and execution of work as indicated on plans or as approved by the Engineer. No additional payment will be made for clearing of access roads.
- H. Snag all deadfalls and debris from in project work areas and haul or stack according to the project plans.

### 3.4 CLEARING - STORM SEWER/BOX CULVERT INSTALLATION, SITE CLEARING

- A. Clear areas required for access to site and execution of work.
- B. Remove trees and tree stumps within right-of-way and project limits as specified on the drawings and as necessary for construction. Haul material and dispose of off site.
- C. Remove existing storm sewer, drive culverts and catch basins as described on the drawings and within influence of construction. Any structure or piping shown on the drawing to be affected by the proposed work shall be removed completely.

- D. Clear all undergrowth, debris and downfalls, with a minimal disturbance to soil. Seed all disturbed areas according to Section 2936 – Seeding.

### 3.5 DEBRIS MANAGEMENT

- A. Debris shall be disposed of as indicated on the plans as directed by the Engineer.
- B. Coordinate debris management with Engineer prior to construction.
- C. Woody Debris
  1. Wooded areas – Unless otherwise indicated chip woody debris and spread as shown in details or haul as indicated. Bury stumps that are required to be grubbed in a location authorized by the Engineer.
  2. Agricultural areas – Unless otherwise indicated chip woody debris and haul. Bury stumps that are required to be grubbed.
  3. Residential areas - Unless otherwise indicated debris to be removed and become property of the contractor. Bury stumps that are to be grubbed.
- D. Prior to burying debris, coordinate locations with Engineer and landowners. Repair any damage to field tiles that occur from burying debris at no expense to the owner.
- E. Landowners shall have first call on all valuable timber.

### 3.6 FENCES AND/OR OTHER PRIVATE PROPERTY

- A. Contractor shall notify landowners and engineer of conflicts and provide reasonable cooperation and assistance.
- B. Any structures outside of drain right-of-way shall not be disturbed. Contractor shall correct all damage outside of right-of-way at own expense.
- C. Contractor shall disassemble fence, etc. and stockpile off right-of-way, and landowner is responsible for reassembly unless otherwise noted in the plans. No extra payment will be made for fences, etc.

END OF SECTION