

## Special Conditions

The following items to be included in the Special Conditions section of the Construction Manual:

### **XIV. Erosion Control:**

Contractor shall comply with all laws prohibiting the pollution of any lake, stream, river, or wetland by the dumping of any refuse, rubbish, dredge material, or debris therein.

**Contractor shall apply temporary and/or permanent erosion and sedimentation controls, as specified in the plans or directed to disturbed roadside areas, fifteen feet and beyond from road pavement, prior to initiating road base operations. Following asphalt paving of road pavement, apply temporary and/or permanent erosion and sedimentation controls to remaining disturbed areas, as specified in the plans or as directed.**

Contractor shall be responsible for the maintenance of all temporary and permanent water quality and erosion control measures proposed under the Storm Water Pollution Prevention Plan (SWPPP) or the Water Pollution Abatement Plan (WPAP) for the duration of the project construction. Upon completion of construction and before the Construction Observer issue the "Certificate of completion", Contractor shall be responsible for the removal of all temporary measures and the cleaning and resetting of all permanent measures. All costs associated with this work shall be considered subsidiary to other bid items and no additional compensation shall be allowed.

Contractor shall take special precautions during all periods of heavy rainfall and at all locations where storm water, groundwater and/or mud and debris may enter the sewer systems. All mud, stones, and debris that enter the sewer systems due to Contractor's operations, or his neglect, shall be cleaned from the system by Contractor. It shall be Contractor's responsibility to see that such storm water, groundwater and debris do not enter the sewer system. All costs for such work shall be merged in the unit prices bid and no-additional compensation shall be allowed.

If it is necessary in the prosecution of the work to interrupt existing surface drainage, sewers, or under drainage, temporary drainage shall be provided until permanent drainage work is completed. The construction of all temporary drainage installations shall be considered as incidental to the construction of the work. Drainage ways shall be kept clear or other satisfactory provisions made for drainage.

Contractor shall be responsible for and shall take all reasonable and necessary precautions to preserve and protect all existing tile drains, sewers, and other subsurface drains, or parts thereof, which may be continued in service without change. Contractor shall repair at his own expense any and all damage to such facilities resulting from negligence or carelessness on the part of his operations.

### **XXXIII. Tree and Plant Protection:**

Scope: Provide complete protection and maintenance of existing trees, shrubs **and grass areas designated to remain within construction limits and/or right-of-way.**

Coordination: Coordinate protection of existing trees, shrubs **and grass areas** with other trades so as to prevent damage to these items.

Payment for Damages: If existing trees, shrubs **or grass areas** are destroyed, killed or badly damaged as a result of construction observations, Contract sum will be reduced by the amount of assessed damages. Damages will be evaluated by the Construction Observer, using the following:

Trees: International Shade Tree Conference Standards and following formula – measurement of a cross section of tree trunk will be made at a point 2 feet above existing grade level to determine cross section area in square inches. Assessment for damage will be \$27.00 per square inch.

**Shrubs and Grass Areas: An initial fine of \$1,000 shall be imposed for any unauthorized disturbance within the boundaries of the shrub and grass areas to remain within the right-of-way and outside the limits of disturbance. This disturbance includes but is not limited to: parking or intrusion of equipment or vehicles; storage of any materials, and any unauthorized damage and/or removal of vegetation. In addition to the initial fine, a base fine of \$8.00 for every square foot of area of damaged vegetation within any areas designated to remain on the plans shall be imposed. The areas covered under this section include but are not limited to: areas designated to remain or no-work areas. In determining the amount of fine, the Construction Observer shall consider the degree and extent of harm caused by the violation, the cost of rectifying the damage, and whether the violation was committed willfully.**

Materials: Tree Protection lumber dimensions shall be 4x4 and 2x4 sizes.

Protection: Protect existing trees, shrubs **and grass areas** within construction limits and/or designated to remain within the right-of-way from the following damage:

1. Compaction of root area by equipment, vehicles or material storage;
2. Trunk damage by moving equipment material storage, nailing or bolting;
3. Strangling by tying ropes or guy wires to trunks or large branches;
4. Poisoning by pouring solvents, gas, paint or other chemicals on or around trees and roots, shrubs or grass areas;
5. Cutting of roots by excavating or ditching;
6. Damage of branches by improper pruning;
7. Drought from failure to water or by cutting or changing normal drainage pattern past roots;

8. Changes of soil pH factor by disposal of lime base materials such as concrete or plaster;
9. Do not cut roots 1-1/2" in diameter or over. Excavation and earthwork within drip line of trees shall be done by hand.

Install barricade protection around trees and large shrubs, constructed of 4x4 posts and 2x4 stringers top and bottom. Install protection prior to demolition or excavation operations. Leave protection until construction operations are essentially complete.

Maintenance:

1. Water trees and shrubs within construction limits as required to maintain their health during course of construction operations.
2. Pruning will be performed by County.