

## **SECTION 11 - EXCAVATION & GRADING**

### **11-1 GENERAL**

Excavation and grading shall consist of the removal and disposal of all earth, pavement, and rock as required on the Plans and as hereinafter specified. The item shall also include the construction of roadway or area fills to conform to the line and grade given on the plans.

### **11-2 EARTHWORK**

Earth work shall conform to the provision in Section 19 of the State Standard Specifications and these provisions.

Cut slopes shall be rounded.

Unsuitable and surplus material shall be disposed of outside the project area in accordance with the provisions in Section 19 of the State Standard Specifications.

The limits of excavation for compacting original ground as provided for in Section 19 of the State Standard Specifications shall be changed to the limits shown on the plans. Center islands will only require a relative compaction of 90% as determined by ASTM 1557.

### **11-3 ROADWAY EXCAVATION**

Roadway excavation is the removal and replacement of material required within the roadway to construct the subgrade, including the removal of unsatisfactory material, to the grade and crosssection as shown on the plans. Roadway, as used in this section, shall include all facilities within the street right-of-way, including the street, sidewalk, curb and gutter, medians, driveways, alleys, easements, landscaping or other surface improvement Work.

The subgrade to receive aggregate base or subbase, or asphalt concrete shall be prepared as follows:

1. The native material shall be bladed or disced to a depth of 6 inches and all rocks, hardpan chunks or otherwise unsuitable material over 2-1/2 inches in size, shall be removed and disposed of off the project site.
2. The material thus disced or bladed shall be thoroughly mixed, watered and rolled to a relative compaction of not less than 95% as determined by ASTM 1557.
3. The surface of the completed sub-grade shall not vary more than 0.05 foot above or below established grade.
4. Before aggregate base or asphalt concrete paving is placed the Engineer may require (at the Contractor's expense) a test roller of size and weight to meet his approval to pass over the finished sub-grade to insure that there are no soft or spongy areas.

5. No aggregate base or asphalt concrete paving shall be placed until the finished sub-grade is in a condition satisfactory to the Engineer.

The compacting will extend to and include all areas where concrete improvements are to be constructed. The relative compaction under curbs and gutters shall be 95% as determined by ASTM 1557. The sub-grade under sidewalks shall have a relative compaction of 90% as determined by ASTM 1557.

No compaction tests of sub-grade shall be made until such time as the sub-grade is finished to within one tenth of one foot of finished sub-grade and the Engineer has been notified of the time that such compaction tests will be made. The Engineer shall specify the locations where compaction tests are to be made.

All imported borrow shall have a minimum "R" value of 55. Tests for "R" value shall be made in accordance with Test Method No. Calif. 301 of the State Standard Specifications and shall be at the expense of the Contractor.

No excavation shall be made below the plane of the bottom of the curb and gutter subsequent to installing curb and gutter until backfill has been placed behind the curb.

#### **11-4 DUST CONTROL (See Section 7-8.1)**

#### **11-5 MISCELLANEOUS HIGHWAY FACILITIES**

The removal, reconstruction, adjustment, remodeling, and salvaging of the various highway facilities shall conform to the provisions in Section 15 of the State Standard Specifications and these provisions.

All miscellaneous highway facilities within the highway right of way, except those noted on the plans, shall be removed.

#### **11-6 PAYMENT**

Quantities of roadway excavation will be paid for at the contract unit price per cubic yard. Such price and payment shall include all labor, materials, tools, equipment and incidentals for performing the excavation and compaction of sub-grade as shown on the plans and required under these specifications and the Special Conditions.

Removing miscellaneous highway facilities will not be paid as a separate item, but shall be included in the price for excavation.