

SECTION 309 ROLLING AND SPRINKLING

309.01. DESCRIPTION.

This work shall consist of authorized rolling of embankments, subgrades, subbases, bases, or surface courses. When specified, rolling and/or sprinkling shall be done as directed by the Engineer in accordance with the Specifications for the particular type of work under construction.

309.03. EQUIPMENT.

When end results only are specified, use whatever compaction methods will satisfactorily produce the end results. When specific equipment is designated, it shall meet the requirements of Subsection 301.03.

309.04. CONSTRUCTION METHODS.

Apply water in the amount required to place the course or layers in the most satisfactory condition for proper compaction. Roll the course adequately to obtain the required density for the type of material being compacted.

Begin rolling at the edges and continue until the outside portion and the edges of the course are thoroughly compacted. After the edges have been firmly rolled, progress gradually toward the center, parallel to the center line of the roadway, uniformly lapping each preceding track and covering the entire surface with the rear wheels for the full width of the course. Start subsequent rolling at the edges and proceed as before, covering the full width across the road, and continuing until all parts of the course are thoroughly keyed and compacted to the satisfaction of the Engineer. On superelevated curves, after the edges have been thoroughly rolled as specified above, continue the rolling from the inside edge to the outside edge instead of from the edges to the center. Operate the rollers at the speed previously specified. When operations are such that one roller unit cannot perform the required compaction satisfactorily, provide additional roller units and continue operations in a manner approved by the Engineer.

309.05. METHOD OF MEASUREMENT.

Rolling, when an item for rolling is shown on the Plans or in the Proposal as a pay item, will be measured by the hour and pay quantities will be as follows:

The number of hours that the roller actually works will be divided by 5 and the quotient thus obtained multiplied by the actual outside rolling width in feet (meters) of the roller tread. In case of sheeps-foot rollers, the width to be used will be the sum of the widths in meters of the individual drums composing the roller. No time will be allowed for moving the roller to and from the location of the work being rolled.

Sprinkling, when an item for sprinkling is shown on the Plans or in the Proposal as a pay item, will be measured by the 1000 gallon (kiloliter) increments, or fractional part thereof, of water used and will be measured as delivered in calibrated tank trucks; or if water is obtained by pipe line, the Contractor shall supply an accurate water meter for measuring the water.

309.06. BASIS OF PAYMENT.

When an item for rolling is shown on the Plans or in the Proposal as a pay item, rolling, measured as provided above, will be paid for at the contract unit price per hour for rolling and such payment shall be full compensation for furnishing the roller, operator, all equipment, fuel, and incidentals necessary to complete the work as specified.

When an item for sprinkling is shown on the Plans or in the Proposal as a pay item, sprinkling, measured as provided above, will be paid for at the contract price per 1000 gallon (kiloliter) for sprinkling, and such payment shall be full compensation for the cost of the water, for hauling, applying and furnishing all equipment, tools, labor and incidentals necessary to complete the work as specified.

- (A) ROLLING HOUR
 (B) SPRINKLING M-GAL (KILOLITER)

SECTION 310 SUBGRADE

310.01. DESCRIPTION.

This work shall consist of preparing the subgrade for the immediate construction of subbase, base, pavement, or surface.

The subgrade shall be constructed in accordance with one of the methods specified herein or by the method indicated on the Plans or in the Proposal for the work.

310.04. CONSTRUCTION METHODS.

- **Method A-Traffic-Bound Surface Course.** *Shape and crown the full width of the existing roadbed with a blade grader to the approximate grade and section required. Unless otherwise indicated, the completed section shall have a crown of at least 2.00%. Remove all exposed rock larger than 3 inches (75 mm) and any unstable soil, and replace it with acceptable material. Finish the roadbed so that it is smooth and uniform, and maintain it in this condition until the next specified course is placed.*
- **Method B - All Other Subbases, Bases, Pavement, or Surface.** *Scarify or otherwise process the subgrade to permit uniform dispersion of moisture to a depth of approximately 6 inches (150 mm).*

NOTE: In areas with subgrade through rock cuts that cannot be scarified or otherwise processed, shape the areas with soil meeting the requirements of select borrow Subsection 202.02(f), unless otherwise specified, to conform to the planned profile and cross section.

When the loosened soil has been pulverized, compact it thoroughly and uniformly with suitable equipment for a depth of approximately 6 inches (150 mm) and to at least 95 percent of standard density in accordance with Subsection 202.02(b)(2). Moisture content of the subgrade material at the time of compaction shall be within two points of the optimum moisture content as determined by AASHTO T 99 unless otherwise specified. In areas of the subgrade which are not accessible to rolling equipment, compact them to the required density with approved mechanical tampers.