

SECTION 311

OPEN GRADED FREE DRAINING BASE COURSE

311.1-DESCRIPTION:

This work shall consist of constructing a base course of coarse stabilized aggregate spread and compacted on a prepared surface in accordance with these specifications and in reasonably close conformance with the lines, grades, thickness, and typical cross sections as shown on the Plans or as established by the Engineer. It is the intent to allow the Contractor a choice between asphalt stabilizer and Portland cement stabilizer.

311.2-MATERIALS:

Depending on the alternative chosen, (asphalt or Portland cement) the materials shall conform to the requirements of the following subsections of Division 700.

Material	Subsection	
Aggregate*	703.1, 703.2, 703.3, 703.4	AASHTO 57, 67, 357, or 467
Performance Graded Binders**	705.5	Standard grade for area
Portland cement***	701.1	Type 1
Water***	715.7	
Curing Material***	707.10	

* If river gravel is used, the crushed particle requirement shall be 100% two face fracture.

** Asphalt stabilized applications only.

*** Portland cement applications only.

CONSTRUCTION METHODS

311.3-GENERAL:

General requirements shall comply with the applicable portion of 401.3 of the Specifications.

311.4-COMPOSITION OF OPTIONAL STABILIZING MIXTURES:

If the asphalt stabilized alternative is used, the asphalt cement shall be confined to 2.0%, plus or minus 0.5% by weight of the mix if Blast Furnace Slag is used the asphalt cement may be increased.

If the Portland cement stabilized alternative is chosen, the cement shall be Type 1 and shall have a cement content of 150 ± 5 pounds per cubic yard ($90 \text{ kg} \pm 2 \text{ kg}$ per cubic meter).

311.5-TESTING:

311.6

Quality control testing by the Contractor shall be in accordance with 301.2.1 (for Portland cement bases) or 302.2.4 (for bituminous stabilized bases) of the Specifications. Unless otherwise specified, compaction testing shall be waived

311.6-WEATHER AND SEASONAL LIMITATIONS:

Weather and seasonal limitations shall be in accordance with 401.5 (for asphalt applications) or 301.4 (for Portland cement applications).

311.7-EQUIPMENT:

Depending on the alternative used, equipment shall meet the applicable requirements of 401.6, or 501.8 - whichever is appropriate.

311.8-PREPARATION AND BATCHING OF MATERIALS:

Preparation of materials for asphalt applications shall conform to the requirements of 401.7 of the Specifications except that the asphalt cement shall be heated within a temperature range of 250° - 275° F (120° - 135° C) and temperature of the mix shall be within the range of 200° - 250° F (95° - 120° C).

Preparation of materials for Portland cement applications shall conform to the requirements of 501.7.

311.9-MIXING AND TRANSPORTING REQUIREMENTS:

The materials used in asphalt mixes shall be mixed in a asphalt concrete mixing plant that has been inspected and approved by the Division. Transportation of such mixes shall be in accordance with 401.10 of the Specifications.

The materials used in Portland cement mixes may be mixed at a central mix plant, in a transit mix truck or a pugmill type mixer. Regardless of which type of equipment is used, the mixing time shall be a minimum of two minutes once all component materials are batched.

311.10-PLACING, SPREADING, AND/OR COMPACTING:

Placement of the stabilized material shall be by acceptable spreading equipment to the appropriate line, grade and thickness. Acceptable equipment includes asphalt pavers for asphalt stabilized bases and spreader boxes, self propelled spreaders or conventional concrete placing equipment for Portland cement stabilized bases.

A four to ten ton (3.6 to 9.1 Mg) steel wheel tandem roller shall be used to compact the asphalt stabilized free draining base material. The number of roller passes shall be two or three unless otherwise directed. In the case of the asphalt stabilized aggregate, the mat temperature, at the time of initial rolling, shall be between 150° and 175° F (65 and 80° C) unless otherwise directed. In the case of the asphalt stabilized aggregate, the purpose of the rolling is to compact the base sufficiently to support the weight of the equipment that will place the next layer or pavement. The compacted base is to be porous so that

water will drain through it. The base is not to be compacted to the point that it is not free draining or that the aggregate is crushed.

311.11-CURING:

Portland cement stabilized bases, immediately following spreading, shall be cured with the use of white polyethylene sheeting.

311.12-TOLERANCE:

Base tolerance shall meet the requirements of 302.11 for asphalt stabilized bases and 301.8 for Portland cement stabilized bases.

311.13-MAINTENANCE:

The Contractor shall maintain the base course porous and free from being contaminated or clogged by deleterious material, transported and deposited by construction equipment, traffic, etc., until the next layer of the pavement is placed. The Contractor shall also maintain the final surface of the base course true to specified line, grade and cross section until such time that the pavement is placed.

311.14-METHOD OF MEASUREMENT:

The quantity of work done will be the number of cubic yards (meters) established in the Proposal. Any additional work beyond the scope of the original plans but authorized by the Engineer will be measured in place and paid at the unit bid price, subject to the provisions of 104.2 and 109.2.

Base course constructed outside the lines, dimensions and cross sections shown on the Plans or designated will not be measured for payment.

311.15-BASIS OF PAYMENT:

The quantity, determined as provided above, will be paid for at the contract unit price bid for the item below, which price and payment shall constitute full compensation for furnishing all the materials and doing all the work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, and incidentals necessary to complete the work.

311.16-PAY ITEM:

ITEM	DESCRIPTION	UNIT
311006-*	OPEN GRADED FREE DRAINING BASE COURSE	CUBIC YARD (METER)

* Sequence number

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