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DRAFT

285 OPTIONAL BASE COURSE.
(REV 11-3-16) (FA 11-8-16) (7-17)

SECTION 285 is deleted and the following substituted:

SECTION 285
OPTIONAL BASE COURSE

285-1 Description.

Construct a base course composed of one of the optional materials shown on the typical cross-sections.

285-2 Materials.

Meet the material requirements as specified in the Section covering the particular type of base to be constructed.

Graded Aggregate .....Section 204
Asphalt .....Section 234
Reclaimed Asphalt Pavement (RAP)* .....Section 283
Limerock .....Section 911
Shell Base.....Section 911
Shell-Rock.....Section 911
Cemented Coquina.....Section 911
Recycled Concrete Aggregate (RCA)** .....Section 911

*Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications.

**Do not use on interstate roadways.

285-3 Selection of Base Option.

The Plans will include typical cross-sections indicating the various types of base construction (material and thickness) allowable.

When base options are specified in the Plans, use only those options. When base options are not specified, select one base option as allowed for each typical cross-section shown in the Plans. Only one base option is permitted for each typical cross-section. See Tables 285-1 and 285-2 for optional base materials, thickness and additional restrictions.

Notify the Engineer in writing of the base option selected for each typical cross-section at least 45 calendar days prior to beginning placement of base material.

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Table 285-1: Optional Base Groups 1 through 7							
	Base Group (Base Group Pay Item)						
Base Materials	1 (701)	2 (702)	3 (703)	4 (704)	5 (705)	6 (706)	7 (707)
Limerock, LBR 100	4”	5”	5-1/2”	6”	7”	8”	8-1/2”
Cemented Coquina, LBR 100	4”	5”	5-1/2”	6”	7”	8”	8-1/2”
Shell Rock, LBR 100	4”	5”	5-1/2”	6”	7”	8”	8-1/2”
Bank Run Shell, LBR 100	4”	5”	5-1/2”	6”	7”	8”	8-1/2”
Recycled Concrete Aggregate, LBR 150 (1)	4”	5”	5-1/2”	6”	7”	8”	8-1/2”
Graded Aggregate Base, LBR 100	4-1/2”	5-1/2”	6-1/2”	7-1/2”	8-1/2”	9”	10”
Type B-12.5	4” (3)	4” (3)	4” (3)	4” (3)	4-1/2”	5”	5-1/2”
B-12.5 and 4” Granular Subbase, LBR 100 (2)	-	-	-	-	-	-	-
RAP Base (4)	5” (4)	-	-	-	-	-	-

(1) Do not use on interstate roadways.
(2) The construction of both the subbase and Type B-12.5 will be bid and used as Optional Base. Granular subbases include limerock, cemented coquina, shell rock, bank run shell, recycled concrete aggregate and graded aggregate base. All subbase thicknesses are 4” minimum.
(3) Based on minimum practical thickness.
(4) Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications.
(5) To be used for widening, three feet or less.

Table 285-1(continued): Optional Base Groups 8 through 15								
	Base Group (Base Group Pay Item)							
Base Materials	8 (708)	9 (709)	10 (710)	11 (711)	12 (712)	13 (713)	14 (714)	15 (715)
Limerock, LBR 100	9-1/2”	10”	11”	12”	12-1/2”	13-1/2” (5)	14” (5)	-
Cemented Coquina, LBR 100	9-1/2”	10”	11”	12”	12-1/2”	13-1/2” (5)	14” (5)	-
Shell Rock, LBR 100	9-1/2”	10”	11”	12”	12-1/2”	13-1/2” (5)	14” (5)	-
Bank Run Shell, LBR 100	9-1/2”	10”	11”	12”	12-1/2”	13-1/2” (5)	14 (5)	-
Recycled Concrete Aggregate, LBR 150 (1)	9-1/2”	10”	11”	12”	12-1/2”	13-1/2” (5)	14” (5)	-
Graded Aggregate Base, LBR 100	11”	12”	13”	14”	-	-	-	-
Type B-12.5	5-1/2”	6”	6-1/2”	7”	7-1/2”	8”	8-1/2”	9”
B-12.5 and 4” Granular Subbase, LBR 100 (2)	-	4”	4-1/2”	5”	5-1/2”	6”	6-1/2”	7”
RAP Base (4)	-	-	-	-	-	-	-	-

(1) Do not use on interstate roadways.
(2) The construction of both the subbase and Type B-12.5 will be bid and used as Optional Base. Granular subbases include limerock, cemented coquina, shell rock, bank run shell, recycled concrete aggregate and graded aggregate base. All subbase thicknesses are 4” minimum.
(3) Based on minimum practical thickness.
(4) Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications.
(5) To be used for widening, three feet or less.

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Table 285-2: Limited Use Optional Base Groups[1]								
	Base Group (Base Group Pay Item)							
Base Materials	101 (701)	102 (702)	103 (703)	104 (704)	105 (705)	106 (706)	107 (707)	108 (708)
Limerock Stabilized, LBR 70	5”	6-1/2””	8”	9”	10”	11”	12-1/2”	-
Shell, LBR 70	5”	6-1/2”	8”	9”	10”	11”	12-1/2”	-
Shell Stabilized, LBR 70	7”	8-1/2”	9-1/2”	10-1/2”	12”	-	-	-
Sand-Clay, LBR 75	5”	6-1/2”	8”	9”	10”	11”	12-1/2”	-
Soil Cement (300 psi) (Plant Mixed)	5”	5-1/2”	6-1/2”	7-1/2”	8-1/2”	9”	10”	11”
Soil Cement (300 psi) (Road Mixed)	5”	5-1/2”	6-1/2”	7-1/2”	8-1/2”	-	-	-
Soil Cement (500 psi) (Plant Mixed)	4” [2]	4”	5”	5-1/2”	6”	7”	7-1/2”	8-1/2”
(1) Use only when specified in the Plans. (2) Based on minimum practical thicknesses.								

285-4 Construction Requirements.

Construct the base in accordance with the Section covering the particular type of base to be constructed.

Graded Aggregate .....Section 204
Asphalt .....Section 234
Reclaimed Asphalt Pavement (RAP)*.....Section 283
Limerock .....Section 200
Shell Base.....Section 200
Shell Rock.....Section 200
Cemented Coquina.....Section 200
Recycled Concrete Aggregate (RCA)** .....Section 200

*Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications.

**Do not use on interstate roadways.

285-5 Variation in Earthwork Quantities.

The Plans will identify the optional materials used by the Department for determining the earthwork quantities (Roadway Excavation, Borrow Excavation, Subsoil Excavation, Subsoil Earthwork, or Embankment). The Department will not revise the quantities, for those items having final pay based on plan quantity, to reflect any volumetric change caused by the Contractor’s selection of a different optional material.

285-6 Thickness Requirements.

285-6.1 Measurements: For non-asphalt bases, meet the requirements of 200-7.3.1.2. For subbases, meet the thickness requirements of 290-4.

The Engineer will determine the thickness of asphalt base courses in accordance with 234-8.1.

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285-6.2 Correction of Deficient Areas: For non-asphalt bases, correct all areas of the completed base having a deficiency in thickness in excess of 1/2 inch by scarifying and adding additional base material. As an exception, if authorized by the Engineer, such areas may be left in place without correction and with no payment.

For asphalt bases, correct all areas of deficient thickness in accordance with 234-8.

285-7 Calculation of Average Thickness of Base.

For bases that are not mixed in place, the Engineer will determine the average thickness from the measurements specified in 285-6.1, calculated as follows:

1. When the measured thickness is more than 1/2 inch greater than the design thickness shown on the typical cross-section in the Plans, it will be considered as the design thickness plus 1/2 inch.

2. Average thickness will be calculated per typical cross-section for the entire job as a unit.

3. Any areas of base left in place with no payment will not be included in the calculations.

4. Where it is not possible through borings to distinguish the base materials from the underlying materials, the thickness of the base used in the measurement will be the design thickness.

5. For Superpave asphalt base course, the average spread rate of each course shall be constructed in compliance with 234-8.

285-8 Method of Measurement.

The quantity to be paid for will be the plan quantity area in square yards, omitting any areas where under-thickness is in excess of the allowable tolerance as specified in 285-6. The pay area will be the surface area, determined as provided above, adjusted in accordance with the following formula:

$$Pay\ Area = Surface\ Area \left(\frac{Calculated\ Average\ Thickness\ per\ 285\text{-}7}{Plan\ Thickness} \right)$$

The pay area shall not exceed 105% of the surface area.

There will be no adjustment of the pay area on the basis of thickness for base courses constructed utilizing mixed-in-place operations.

For Superpave asphalt base course, the quantity to be paid for will be the plan quantity.

285-9 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, including tack coat between base layers, prime coat, cover material for prime coat, bituminous material used in bituminous plant mix, and cement used in soil-cement.

Where the Plans include a typical cross-section which requires the construction of an asphalt base only, price adjustments for bituminous material provided for in 9-2.1.2 will apply to that typical cross-section. For typical cross-sections which permit the use of asphalt or other materials for construction of an optional base, price adjustments for bituminous material provided for in 9-2.1.2 will not apply.

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Payment will be made under:

Item No. 285- 7- Optional Base - per square yard.