



Florida Department of Transportation

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GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JIM BOXOLD
SECRETARY

January 13, 2015

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: State Specifications and Estimates Office
Section **200**
Proposed Specification: **2000100 Rock Base.**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

The changes are proposed by John Shoucair of the State Materials Office (SMO) to delete references to Sections 913, 913A and 915. The language in these Sections will be moved to Section 911 and the Sections deleted. Also, construction requirements for recycled concrete aggregate (RCA), currently in SP2040000, will be incorporated in Section 200 with the restriction that it cannot be used on interstate roadway projects. SP2040000 will be deleted.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965DS or daniel.scheer@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 414-4130.

Sincerely,

Signature on file

Daniel Scheer, P.E.
State Specifications Engineer

DS/dt

Attachment

cc: Florida Transportation Builders' Assoc.
State Construction Engineer

ROCK BASE.(REV ~~11-17-14~~**13-15**)

SUBARTICLE 200-1 is deleted and the following substituted:

200-1 Description.

Construct a base composed of base rock. ~~Perform work in accordance with an approved Quality Control Plan meeting the requirements of 105-3~~ *Do not use reclaimed concrete aggregate (RCA) base on interstate roadways.*

ARTICLE 200-2 is deleted and the following substituted:

200-2 Materials.

200-2.1 General: Meet the requirements of ~~either~~ Section 911, ~~913, 913A or 915~~ for the particular type of base to be constructed. The Contractor may use more than one source of base rock on a single Contract provided that a single source is used throughout the entire width and depth of a section of base. Obtain approval from the Engineer before placing material from more than one source. Place material to ensure total thickness single source integrity at any station location of the base. Intermittent placement or “blending” of sources is not permitted. Base rock may be referred to hereinafter as “rock”.

The reuse of existing base may be considered provided it meets the requirements of this Section. Submit as a Cost Savings Initiative Proposal in accordance with Section 4.

200-2.2 Existing Rock: Meet the following requirements for use of existing rock on the same project:

1. Notify the Engineer in writing prior to excavating existing rock.
2. Submit a process control plan, herein referred to as “Plan” consisting of the

following:

- a. Locations where existing rock will be removed from the roadway.
- b. Locations where existing rock will be used for new construction.
- c. Method of excavation, transport, and placement to ensure excavated rock will be kept separate from other approved stockpiles. Excavation methods that may result in damage to the rock rendering it unfit to be used as base will not be approved.
- d. Proposed measures to prevent contamination and segregation.
- e. Proposed locations and methods for constructing stockpiles for sampling and testing.

- f. Method for sampling and reporting test results.

3. The Engineer will coordinate the review of the “Plan” with the District Materials Office.

4. Upon the Engineer’s review of the “Plan”, build a preliminary stockpile, not to exceed 1,000 cubic yards.

5. Collect and test a minimum of three samples from the preliminary stockpile. Once the stockpile has been sampled, do not add any additional material to the stockpile. Determine compliance with 200-2.1, with the exception of carbonate contents. Reject any stockpile if the Limerock Bearing Ratio (LBR) is less than 100. The District Materials Office will sample and test the preliminary stockpile to verify compliance with this Section.

6. If all test results meet the requirements of this Section, the Engineer will notify the Contractor in writing of the approved status of the preliminary stockpile based on the analysis of test data performed by the District Materials Office.

7. If the use of existing rock is approved, continue to produce additional stockpiles not exceeding 1,000 cubic yards. Ensure the rock meets the requirements of this Section by sampling and testing each new stockpile at a minimum frequency of one sample per 400 cubic yards. Once a stockpile has been sampled, do not add additional material to that stockpile. The District Materials Office may also perform sampling and testing. Materials will be accepted if test results meet the requirements of this Section.

8. After 10 consecutive quality control (QC) LBR test results meet the requirements of the Section and no individual LBR test is less than 120, the sampling and testing frequency may be reduced to a minimum frequency of one sample per 800 cubic yards for each stockpile. Notify the Engineer in writing prior to reducing testing frequency. If any ~~quality control~~ QC LBR test result falls below 120 or a stockpile is rejected, revert to original sampling frequency of one sample per 400 cubic yards.

9. Construct a new preliminary stockpile if there is a change in material, conditions not addressed in the "Plan" are encountered, or if production varies from the approved "Plan".

SUBARTICLE 200-7.2.1 is deleted and the following substituted:

200-7.2.1 Density: Within the entire limits of the width and depth of the base, obtain a minimum density in any LOT of 98% of modified Proctor maximum density as determined by FM 1-T 180, Method D or the Pit Proctor when using the Pit Proctor option. For shoulder only areas and bike/shared use paths, obtain a minimum density of 95% of the modified Proctor maximum density as determined by FM 1-T 180, Method D or the Pit Proctor when using the Pit Proctor option.

ARTICLE 200-8 is deleted and the following substituted:

200-8 Priming and Maintaining.

200-8.1 Priming: Apply the prime coat only when the base meets the specified density requirements and when the moisture content in the top half of the base does not exceed the optimum moisture of the base material. At the time of priming, ensure that the base is firm, unyielding and in such condition that no undue distortion will occur. *Ensure ~~that~~ the prime coat adheres to the base course.*

200-8.2 Maintaining: Maintain the true crown and template, with no rutting or other distortion, while applying the surface course.

ARTICLE 200-9 is deleted and the following substituted:

200-9 Calculations for Average Thickness of Base.

~~200-9.1 Existing Rock:~~ For bases that are not mixed in place, the Engineer will determine the average thickness from the measurements specified in 200-10.1, calculated as follows:

(a) 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.

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

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

(d) 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.

~~200-9.2 Reclaimed Concrete Aggregate (RCA) Base: Calculations for determining the average thickness of base will be made in accordance with 285-7.~~

ARTICLE 200-10 is deleted and the following substituted:

200-10 Method of Measurement.

200-10.1 General:

~~200-10.1.1 Existing Rock:~~ The quantity to be paid for will be the plan quantity, adjusted as specified below.

~~200-10.1.2 Reclaimed Concrete Aggregate Base: The quantity to be paid for will be the area, in square yards, completed and accepted.~~

200-10.2 Authorized Normal Thickness Base: ~~For existing base,~~ The surface area of authorized normal thickness base to be adjusted will be the plan quantity as specified above, ~~and for RCA, the surface area of authorized normal thickness base will be calculated as specified in 9-1.3,~~ omitting any areas not allowed for payment under the provisions of 200-6.3 and omitting areas which are to be included for payment under 200-10.3. The adjustment shall be made by adding or deducting, as appropriate, the area of base represented by the difference between the calculated average thickness, determined as provided in 200-9, and the specified normal thickness, converted to equivalent square yards of normal thickness base.

200-10.3 Authorized Variable Thickness Base: Where the base is constructed to a compacted thickness other than the normal thickness as shown on the typical section in the Plans, as specified in the Plans or ordered by the Engineer for providing additional depths at culverts or bridges, or for providing transitions to connecting pavements, the volume of such authorized variable thickness compacted base will be calculated from authorized lines and grades, or by other methods selected by the Engineer, converted to equivalent square yards of normal thickness base for payment.

ARTICLE 200-11 is deleted and the following substituted:

200-11 Basis of Payment.

Price and payment will be full compensation for all the work specified in this Section, including *dust abatement*, correcting all defective surface and deficient thickness, removing cracks and checks as provided in 200-6.4.2, the prime coat application as directed in 300-8, and the additional rock required for crack elimination.

Payment shall be made under:

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

ROCK BASE.
(REV 1-13-15)

SUBARTICLE 200-1 is deleted and the following substituted:

200-1 Description.

Construct a base composed of base rock. Do not use reclaimed concrete aggregate (RCA) base on interstate roadways.

ARTICLE 200-2 is deleted and the following substituted:

200-2 Materials.

200-2.1 General: Meet the requirements of Section 911 for the particular type of base to be constructed. The Contractor may use more than one source of base rock on a single Contract provided that a single source is used throughout the entire width and depth of a section of base. Obtain approval from the Engineer before placing material from more than one source. Place material to ensure total thickness single source integrity at any station location of the base. Intermittent placement or “blending” of sources is not permitted. Base rock may be referred to hereinafter as “rock”.

The reuse of existing base may be considered provided it meets the requirements of this Section. Submit as a Cost Savings Initiative Proposal in accordance with Section 4.

200-2.2 Existing Rock: Meet the following requirements for use of existing rock on the same project:

1. Notify the Engineer in writing prior to excavating existing rock.
2. Submit a process control plan, herein referred to as “Plan” consisting of the

following:

- a. Locations where existing rock will be removed from the roadway.
- b. Locations where existing rock will be used for new construction.
- c. Method of excavation, transport, and placement to ensure excavated rock will be kept separate from other approved stockpiles. Excavation methods that may result in damage to the rock rendering it unfit to be used as base will not be approved.
- d. Proposed measures to prevent contamination and segregation.
- e. Proposed locations and methods for constructing stockpiles for

sampling and testing.

- f. Method for sampling and reporting test results.

3. The Engineer will coordinate the review of the “Plan” with the District Materials Office.

4. Upon the Engineer’s review of the “Plan”, build a preliminary stockpile, not to exceed 1,000 cubic yards.

5. Collect and test a minimum of three samples from the preliminary stockpile. Once the stockpile has been sampled, do not add any additional material to the stockpile. Determine compliance with 200-2.1, with the exception of carbonate contents. Reject any stockpile if the Limerock Bearing Ratio (LBR) is less than 100. The District Materials Office will sample and test the preliminary stockpile to verify compliance with this Section.

6. If all test results meet the requirements of this Section, the Engineer will notify the Contractor in writing of the approved status of the preliminary stockpile based on the analysis of test data performed by the District Materials Office.

7. If the use of existing rock is approved, continue to produce additional stockpiles not exceeding 1,000 cubic yards. Ensure the rock meets the requirements of this Section by sampling and testing each new stockpile at a minimum frequency of one sample per 400 cubic yards. Once a stockpile has been sampled, do not add additional material to that stockpile. The District Materials Office may also perform sampling and testing. Materials will be accepted if test results meet the requirements of this Section.

8. After 10 consecutive quality control (QC) LBR test results meet the requirements of the Section and no individual LBR test is less than 120, the sampling and testing frequency may be reduced to a minimum frequency of one sample per 800 cubic yards for each stockpile. Notify the Engineer in writing prior to reducing testing frequency. If any QC LBR test result falls below 120 or a stockpile is rejected, revert to original sampling frequency of one sample per 400 cubic yards.

9. Construct a new preliminary stockpile if there is a change in material, conditions not addressed in the "Plan" are encountered, or if production varies from the approved "Plan".

SUBARTICLE 200-7.2.1 is deleted and the following substituted:

200-7.2.1 Density: Within the entire limits of the width and depth of the base, obtain a minimum density in any LOT of 98% of modified Proctor maximum density as determined by FM 1-T 180, Method D or the Pit Proctor when using the Pit Proctor option. For shoulder only areas and bike/shared use paths, obtain a minimum density of 95% of the modified Proctor maximum density as determined by FM 1-T 180, Method D or the Pit Proctor when using the Pit Proctor option.

ARTICLE 200-8 is deleted and the following substituted:

200-8 Priming and Maintaining.

200-8.1 Priming: Apply the prime coat only when the base meets the specified density requirements and when the moisture content in the top half of the base does not exceed the optimum moisture of the base material. At the time of priming, ensure that the base is firm, unyielding and in such condition that no undue distortion will occur. Ensure the prime coat adheres to the base course.

200-8.2 Maintaining: Maintain the true crown and template, with no rutting or other distortion, while applying the surface course.

ARTICLE 200-9 is deleted and the following substituted:

200-9 Calculations for Average Thickness of Base.

For bases that are not mixed in place, the Engineer will determine the average thickness from the measurements specified in 200-10.1, calculated as follows:

(a) 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.

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

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

(d) 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.

ARTICLE 200-10 is deleted and the following substituted:

200-10 Method of Measurement.

200-10.1 General: The quantity to be paid for will be the plan quantity, adjusted as specified below.

200-10.2 Authorized Normal Thickness Base: The surface area of authorized normal thickness base to be adjusted will be the plan quantity as specified above, omitting any areas not allowed for payment under the provisions of 200-6.3 and omitting areas which are to be included for payment under 200-10.3. The adjustment shall be made by adding or deducting, as appropriate, the area of base represented by the difference between the calculated average thickness, determined as provided in 200-9, and the specified normal thickness, converted to equivalent square yards of normal thickness base.

200-10.3 Authorized Variable Thickness Base: Where the base is constructed to a compacted thickness other than the normal thickness as shown on the typical section in the Plans, as specified in the Plans or ordered by the Engineer for providing additional depths at culverts or bridges, or for providing transitions to connecting pavements, the volume of such authorized variable thickness compacted base will be calculated from authorized lines and grades, or by other methods selected by the Engineer, converted to equivalent square yards of normal thickness base for payment.

ARTICLE 200-11 is deleted and the following substituted:

200-11 Basis of Payment.

Price and payment will be full compensation for all the work specified in this Section, including dust abatement, correcting all defective surface and deficient thickness, removing cracks and checks as provided in 200-6.4.2, the prime coat application as directed in 300-8, and the additional rock required for crack elimination.

Payment shall be made under:

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