# 3A

# AGGREGATE SUBGRADE IMPROVEMENT (District 3)

(Effective April 1, 2012; Revised January 1, 2013)

Add the following Section to the Standard Specifications:

“**SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT**

**303.01 Description.** This work shall consist of constructing an aggregate subgrade improvement.

**303.02 Materials.** Materials shall be according to the following.

Item Article/Section

(a) Coarse Aggregate ...................................................................................... 1004.06

(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2, and 3) ................................ 1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01 or CS 02 but shall not exceed 40 percent of the total product. The top size of the RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01 or CS 02 are used in lower lifts. The RAP shall not be gap graded, single sized, or have a maximum size of less than 3/4 in. (19 mm).

Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.

**303.03 Equipment.** The vibratory machine shall be according to Article 1101.01 or as approved by the Engineer.

**303.04 Soil Preparation.** The stability of the soil shall be according to the Department’s Subgrade Stability Manual for the aggregate thickness specified.

**303.05 Placing Aggregate.** The maximum nominal lift thickness of aggregate gradations CS 01 and CS 02 shall be 24 in. (600 mm).

**303.06 Capping Aggregate.** The top surface of the aggregate subgrade shall consist of a minimum 3 inches (75 mm) of aggregate gradations CA 06 or CA 10.

**303.07 Compaction.** All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

**303.08 Finishing and Maintenance of Aggregate Subgrade Improvement.** The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

**303.09 Method of Measurement.** This work will be measured for payment according to Article 311.08.

**303.10 Basis of Payment.** This work will be paid for at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.”

Add the following to Section 1004 of the Standard Specifications:

“**1004.06 Coarse Aggregate for Aggregate Subgrade Improvement.** The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete.

(b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.

(c) Gradation.

(1) The coarse aggregate gradation for total subgrade thickness less than or equal to 12 inches (300 mm) shall be CS 02.

The coarse aggregate gradation for total subgrade thickness more than 12 inches (300 mm) shall be CS 01 or CS 02.

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| --- | --- | --- | --- | --- | --- | --- |
|  | COARSE AGGREGATE SUBGRADE | | | | | |
| Grad No. | Sieve Size and Percent Passing | | | | | |
| 8” | 6” | 4” | 2” | #4 |  |
| CS 01 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |  |
| CS 02 |  | 100 | 80 ± 10 | 25 ± 15 |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | COARSE AGGREGATE SUBGRADE GRADATIONS | | | | | |
| Grad No. | Sieve Size and Percent Passing | | | | | |
| 200 mm | 150 mm | 100 mm | 50 mm | 4.75 mm |  |
| CS 01 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |  |
| CS 02 |  | 100 | 80 ± 10 | 25 ± 15 |  |  |

(2) The 3 inch (75 mm) capping aggregate shall be gradation CA 6 or CA 10."

DESIGNER NOTES:

Replaces BDE Special Provision - Do NOT check BDE Special.

Must obtain prior approval from Materials if using a thickness less than 12” or greater than 24”.

Must include BDE Special Provision for Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Pavement (RAS).

Underdrains are required when using this pay item and are paid for separately.

Pay for Geotextile Fabric for Ground Stabilization as a separate pay item if used.