

SECTION 00641 - AGGREGATE SUBBASE, BASE, AND SHOULDERS

(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the Project. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Comply with Section 00641 of the Standard Specifications modified as follows:

~~(Use the following subsection .10 only when the Contractor has the option of using more than one size of Base Aggregate. Specify sizes in the blanks. Do not use this subsection when the Base Aggregate size is included in the Pay Item name.)~~

00641.10(a) Base and Shoulder Aggregate - Replace the paragraph that begins "Aggregate for Bases ..." with the following paragraph:

Furnish Aggregate for Bases and Shoulders meeting sizes as specified. Furnish dense-graded Base Aggregate unless otherwise specified. For Shoulder Aggregates use either 1" - 0 or 3/4" - 0 size as the Contractor elects.

~~(Use the following subsection .10 two paragraphs only when the Contractor has the option of using more than one size of Base Aggregate. Specify sizes in the blanks. Do not use this subsection when the Base Aggregate size is included in the Pay Item name.)~~

In the paragraph that begins "Aggregate for bases...", add the following sentence after the first sentence:

Furnish Base Aggregate sized ~~shall be~~ either _____ or _____ ~~size~~.

00641.10(b) Subbase Aggregate - Replace this subsection, except for the subsection number and title, with the following:

Furnish crushed or uncrushed Aggregate, including Sands, reasonably well graded from coarse to fine for Subbases.

The maximum size Aggregate is not to exceed 75 percent of the compacted thickness of the layer that it is incorporated in. Furnish Aggregates passing the 1/4-inch sieve not less than 10 percent nor more than 50 percent of the whole, by weight. Furnish Aggregate with not more than 10 percent of the Aggregate passing the No. 100 sieve. Within these limits, furnish Subbase Aggregate with a gradation adequate to produce a dense, firm Base when placed and compacted.

(1) **Grading** - All of the grading requirements are given as percentages by weight. The gradation is determined by sieve analysis according to AASHTO T 27.

(2) **Abrasion** - Do not exceed 45 percent wear when tested according to AASHTO T 96 for the source materials for Aggregate Subbase unless otherwise approved.

(3) **Sand Equivalent** - Aggregate Subbase is tested according to AASHTO T 176, with a Sand equivalent of not less than 25.

00641.12 Limits of Mixture - Replace the paragraph that begins "Furnish a mixture ..." with the following paragraph:

Furnish a mixture of Aggregate and water having a uniform moisture content sufficient to obtain the required compaction. Proportions are in percentages by weight and is known as the Mix Design. Determine the proportion of Aggregate and water according to Section 00165. The amount of water for the Mix Design is based on the dry weight of the Aggregate.

00641.15(b) Preproduced Aggregate - Replace the paragraph that begins "Compliance of Aggregates ..." with the following paragraph:

Compliance of Aggregates produced and stockpiled before issuance of Notice to Proceed is determined according to (1) or (2) below.

00641.16 Acceptance of Aggregates - Replace the paragraph that begins "Acceptance will be ..." with the following paragraph:

Acceptance is according to Section 00165.

00641.16(a) Stockpiled Aggregate for Aggregate Base and Shoulders - Replace the paragraph that begins "Acceptance will be ..." with the following paragraph:

Acceptance is based on the Contractor's quality control testing, if verified, as required in Section 00165.

00641.16(a)(2) Non-specification Aggregate Gradation - Replace this subsection, except for the subsection number and title, with the following:

Stockpiled Aggregates having non-specification Aggregate gradation are rejected unless the non-specification material is removed from the stockpile. Do not add additional material to the stockpile until enough non-specification material has been removed so that the QL for each sieve size is equal to or greater than the QL in Table 00165-2 for a 1.00 PF.

No payment is made for non-specification materials.

00641.16(b) Aggregate Base and Shoulder Mixture - Replace this subsection, except for the subsection number and title, with the following:

Acceptance testing is performed on random samples obtained immediately following mixing with water according to Section 00165. For non-specification mixture the Engineer will

determine the appropriate price reduction or order its removal from the Work according to 00150.25.

00641.16(c) Aggregate Subbase - Replace this subsection, except for the subsection number and title, with the following:

Aggregate Subbase is accepted based on the Engineer's visual inspection. Samples are obtained and tested for compliance with 00641.10 by the Engineer if it is suspected that the material does not meet Specifications.

(Use the following subsection .20 when plant mix only is required.)

00641.20 Mixing Plant - Replace the sentence that begins "Mix Aggregate and water..." with the following two sentences:

Mix Aggregate and water according to subsection 00641.20(a). Road mix is not allowed on this Project.

00641.20(a) Mixing Plant - Replace the bullet that begins "Discharges water into ..." with the following bullet:

- Discharges water into the mixer by weighing or metering. Provide an adjustable device and assure uniform water content in the mixture.

00641.24 Compacting Equipment - Replace this subsection, except for the subsection number and title, with the following:

Provide self-propelled rollers and compactors capable of reversing without backlash. Use rollers and compactors with a gross static weight of at least 8 Tons, and capable of compacting to specified density while the mix is still moist.

00641.40 Preparation of Foundation - Replace this subsection, except for the subsection number and title, with the following:

Provide a firm surface or material, where Aggregates are to be placed, according to Sections 00320, 00330, or 00610 as applicable.

~~*(Use the following subsection .41 when plant mix only is required.)*~~

00641.41 Mixing, Hauling, and Placing - Replace the sentence that begins "Add water to the Aggregate..." with the following sentence:

Add water to the Aggregate while mixing to provide a moisture content meeting the requirements of 00641.12.

~~*(Use the following subsection .41two paragraphs when plant mix only is required.)*~~

Replace the sentence that begins "Add water to the Aggregate..." with the following two sentences:

Add water to the Aggregate while mixing to provide a moisture content according to 00641.12 and subsection 00641.41(a). Road mix is not allowed on this Project.

00641.43(a) Aggregate Base Courses - Replace the paragraph that begins "If the required ..." with the following paragraph:

If the required compacted depth of the Base Course exceeds 6 inches, construct it in two or more layers of nearly equal thickness. The maximum compacted thickness of any one layer is 6 inches unless approved.

00641.43(b) Aggregate Subbase Courses - Replace this subsection, except for the subsection number and title, with the following:

The maximum compacted thickness of any one layer is 9 inches unless approved.

00641.43(c) Shoulder Courses - Replace this subsection, except for the subsection number and title, with the following:

Place Aggregates in Shoulder areas, other than as part of the Base Course, in one layer, or in two or more layers of nearly equal thickness. The maximum compacted thickness of any one layer is 9 inches.

00641.44(a)(2) Open-graded Aggregates - Replace the paragraph that begins "Compact the surface ..." with the following paragraph:

Compact the surface of each layer of open-graded Aggregates using rollers according to 00641.24. Roll until there is no appreciable reaction or yielding under the compactor.

00641.45 Surface Tolerance - Replace this subsection, except for the subsection number and title, with the following:

Parallel the finished surface of the Aggregate and the surface of each underlying layer with the established grade and Cross Section for the finished surface within 0.04 foot.

Do not vary the finished surface of the compacted Aggregate, when tested with a 12-foot straightedge, from the testing edge by more than 1/2 inch at any point. Provide and operate the straightedge as directed.

Add the following subsection:

00641.46 Small, Irregular Areas – Haul, place, shape and compact small irregular areas according to 00640.41 through 00640.43. A small or irregular area is outside of the Traveled Way and requires no more than 5 Tons of Aggregate Base or as otherwise approved by the Engineer.

In areas not accessible to the Equipment specified in 00641.24, use a weighted roller, vibratory plate compactor, tamping rammer compactor, or other approved Equipment suitable for the area as approved by the Engineer.

00641.90 Payment - Replace the paragraph that begins "In items (c) and (e) ..." with the following paragraph:

In items (c) and (e), the designated size of Aggregate to be used is inserted in the blank.

Replace the paragraph that begins "In item (g) ..." with the following paragraph:

In item (g), the depth of Aggregate Base is inserted in the blank.

Replace the paragraph that begins "Payment will be payment ..." with the following paragraph:

Payment will be payment in full for furnishing and placing all Materials, and for providing all Equipment, labor, and Incidentals necessary to complete the Work as specified.