

SECTION 00597 - SOUND WALLS

(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.)

~~*(Use the following lead-in paragraph when none of the following subsections are included in the project.)*~~

~~Comply with Section 00597 of the Standard Specifications.~~

~~*(Use the following lead-in paragraph when any of the following subsections are included in the project.)*~~

Comply with Section 00597 of the Standard Specifications modified as follows:

(Use the following subsection .00 when only one type of sound wall is allowed. Fill in the blank with one of the following: "Concrete Block Walls", "Precast Concrete Panel Walls", or "Concrete Panel Fence Walls." Obtain information from the Bridge Designer.)

00597.00 Scope - Replace this subsection, except for the subsection number and title, with the following:

This Work consists of furnishing and constructing _____ at the location shown or directed.

00597.10 Materials - Replace this subsection, except for the subsection number and title, with the following:

Obtain all manufactured materials for the selected sound wall type from the same company. Only one type of wall is allowed on the Project unless otherwise specified.

Store concrete masonry units and cementitious materials at the Project Site in a manner that will protect the materials from contact with Soil and weather. Store mortar and grout materials in original unbroken packages.

00597.11(a) Concrete Blocks - Replace this subsection, except for the subsection number and title, with the following:

Furnish concrete blocks meeting the following requirements:

- Hollow, lightweight or medium weight load-bearing blocks with 28-Day compressive strength on net cross sectional area $f'_c = 1,800$ psi (individual unit) and 2,000 psi (average of three units) according to ASTM C90.
- Kiln dried to 33 percent total absorption
- Split face pattern on exposed areas unless noted otherwise.
- Standard block on unexposed areas
- Nominal 8-inch x 8-inch x 16-inch blocks at walls and nominal 16-inch x 8-inch x 16-inch blocks at pilasters.

Do not tint concrete blocks. Use uniform colored blocks along the length of individual walls.

00597.11(b) Concrete Caps - Replace the bullet that begins "Nominal 8 inch by 4 inch..." with the following bullet:

- Nominal 8-inch x 4-inch x 16-inch cap blocks at walls and nominal 16-inch x 4-inch x 16-inch cap blocks at pilasters.

00597.11(e) Mortar and Grout - Replace this subsection, except for the subsection number and title, with the following:

Furnish Type S mortar meeting the requirements of ASTM C270 that attains an ultimate compressive strength of at least 1,800 psi at 28 Days.

Furnish coarse grout meeting the requirements of ASTM C476 with a suitable consistency for pouring without segregation of material and attains an ultimate compressive strength of 2,000 psi at 28 Days.

00597.40 General - Replace this subsection, except for the subsection number and title, with the following:

Perform structure excavation according to Section 00510 to the limits and stages shown. Conform all sound walls, regardless of type, to the top of wall profile shown. Provide footings as shown or approved.

00597.41(a) General - Replace the paragraph that begins "Place the first course of ..." with the following paragraph:

Place the first course of masonry on the footing in a full mortar bed. Construct mortar joints between units that are 3/8 inch thick with full mortar coverage on vertical and horizontal face shells only. Shove tight vertical joints.

Replace the paragraph that begins "Grout all cells containing ..." with the following paragraph:

Grout all cells containing reinforcing bars. Full bed join walls and crosswebs forming cells to prevent leakage of grout. Position vertical steel in the center of the cell and securely tie in place at intervals not more than 5 feet. Use grout that is sufficiently fluid to flow into all grout spaces, leaving no voids. Perform grouting according to either "low-lift grouting" or "high-lift grouting" as follows:

00597.41(b) Waterproofing - Replace this subsection, except for the subsection number and title, with the following:

Treat all masonry wall cap surfaces with a waterproofing application of a high-build filler and rubber sealer. Treat at least 14 Calendar Days after the wall is completed. Apply filler by spraying or rolling according to the manufacturer's recommendations. Apply two coats of sealer to a minimum thickness of 10 mils. Use the color "Summer Gray" for the finished product.

00597.42 Precast Concrete Panel Sound Walls - Replace this subsection, except for the subsection number and title, with the following:

Construct precast concrete panel sound walls plumb, level and true and free of major cracks. The Engineer will measure the cracks in panels after they have been placed and walls have been backfilled. Cracks greater than 0.02 inch may require repairs or panel replacement, at the discretion of the Engineer.

00597.90 Payment - 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.