

PERMANENT CHANGES TO PROJECT DATED SPECIAL PROVISIONS

REVISION OF SECTION 607 FENCE CONCRETE (SOUND BARRIER)

<u>DATE</u>	<u>AUTHOR</u>	<u>DESCRIPTION OF CHANGE</u>
1999	DLD	Created
12/1999	M.Nord	Added Log Sheet. Converted to standard template.
04.11.2023	M. Kayen	Revisions to make spec online ADA-compliant. 5.22.23 Additional ADA.

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**REVISION OF SECTION 607
FENCE CONCRETE (NOISE BARRIER)**

Revise Section 607 of the Standard Specifications for this project as follows:

Subsection 607.01 shall include the following:

This work consists of the construction of a sound barrier in accordance with the plans, specifications, and in conformity with the lines and grades shown or established.

Subsection 607.02 shall include the following:

Steel Post and Access Door Assemblies

All steel shapes and plates shall conform to the requirements of ASTM A 36.

All welding shall be in accordance with ANSI/AWS D 1.1-96. In addition, all areas to be welded shall be ground to bright base metal.

The Contractor shall visually inspect all welds in accordance with ANSI/AWS D 1.1-96. Acceptance shall be in accordance with Table 6.1 for Cyclically Loaded Non Tubular Connections. The Contractor shall also inspect the welds of 10% to 15% of the post to base plate welds with Magnetic-Particle Testing in accordance with Section 6.14.5 of ANSI/AWS D 1.1-96.

After fabrication and inspection post assemblies shall be cleaned and painted. Steel shall be cleaned in accordance with the requirements of the Steel Structures Painting Council Surface Preparation Specification No. 6 (SSPC-SP 6, Commercial Blast Cleaning). Painting shall be accomplished before rust forms. The paint system shall be an approved two coat application of the inorganic zinc-rich primer and high-build urethane topcoat defined in Subsection 708.03. Both the primer and topcoat shall be applied in the fabrication shop prior to shipment to the project site. The color of the topcoat shall be as specified on the plans.

After field assembly and welding the access doors and frames shall be cleaned and painted as described above.

Threaded anchor rods (threaded full length) with suitable nuts and hardened washers shall conform to the requirements of ASTM A 449 and shall be zinc coated in accordance with ASTM A 123.

The Contractor shall submit Certified Mill Test Reports for all steel items (Shapes, plates, anchor rods, nuts, and washers) and a copy of all Inspection Reports to the Engineer and the:

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**REVISION OF SECTION 607
FENCE CONCRETE (NOISE BARRIER)**

Colorado Department of Transportation
Design/Construction Branch - Bridge
4201 E. Arkansas Ave., Room 330
Denver, Colorado 80222

Attn: Construction Engineer

Pre-Cast Concrete Panels

Reinforcing steel shall conform to the requirements of Section 602.

Pre-cast concrete panel construction shall conform to the requirements of Section 601 and the following:

1. Concrete Class D is required, and the 28-day strength shall be 31 MPa.
2. Form release agents shall be of a non-petroleum base that will not discolor the concrete panels and are compatible with the Structural Concrete Coating used on the project.
3. Panels shall be cast with the grooved pattern finish shown on the plans and a Structural Concrete Coating finish shall be applied to both sides of the panel. Surface preparation, patching, and Structural Concrete Coating application shall conform to the requirements of the Revision of Section 601 and 708. Steel posts shall be protected while the surfaces of the panels are prepared, patched, and coating applied. The color of the Structural Concrete Coating shall be as defined in the plans.
4. Panels shall be cured in accordance with the requirements of Section 601.13 (The Membrane Forming Curing Compound Method shall not be used).

Subsection 607.03 shall include the following:

The Contractor shall perform such Clearing and Grubbing, and/or Excavation and Backfill as may be necessary to construct the sound barrier to the required grade and alignment.

Clearing and Grubbing shall conform to the requirements of Section 201.

Backfill shall conform to the requirements of Section 203.08.

Prior to setting pre-cast panels, the material below the bottom panels shall be graded smooth to the elevations shown in the Roadway Plans or as directed by the Engineer.

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Steel posts shall be set plumb.

The grout placed between the post base plate and the top of the drilled caisson shall be a mortar mix, proportioned by volume, consisting of:

1. One part portland cement.
2. Two to three parts fine aggregate, conforming to the requirements of ASTM C 144.
3. A latex admixture that conforms to the requirements of ASTM C 1059, Type II (Non-redispersable). A minimum of 12% latex solids by weight of cement shall be added to the mortar mix.
4. Enough water to provide a plastic workable mix.

Subsection 607.04 shall include the following:

Fence Concrete (Sound Barrier) will be measured by the number of square meters of surface area on one side of the wall. Measurement will be from Beginning Station to End Station, excluding discontinuities, and from the bottom of the lower panel to the top of the upper panel.

Fence Concrete (Sound Barrier) will not be remeasured but will be the quantities shown on the plans. Exceptions for each sound barrier will be when field changes are ordered.

Subsection 607.05 shall include the following:

The accepted quantities of fence will be paid for at the contract unit price. Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Fence Concrete (Sound Barrier)	Square Meter (Square Foot)

Payment shall be full compensation for all materials, equipment, and labor necessary to complete the item and shall include, but is not limited to:

- (1) Clearing and Grubbing.
- (2) Excavation and Backfill.
- (3) Steel posts and access doors with frames.
- (4) Galvanized threaded anchor rods, nuts, and washers.
- (5) Pre-cast concrete panels.