

8-14 CEMENT CONCRETE SIDEWALKS

8-14.1 Description

This Work consists of constructing cement concrete sidewalks in accordance with details shown in the Standard Plans and these Specifications and in conformity to lines and grades shown in the Plans or as established by the Engineer.

8-14.2 Materials

Materials shall meet the requirements of the following sections:

| | |
|--|--------|
| Portland Cement | 9-01 |
| Aggregates | 9-03 |
| Premolded Joint Filler | 9-04.1 |
| Concrete Curing Materials and Admixtures | 9-23 |

8-14.3 Construction Requirements

The concrete in the sidewalks shall be air entrained concrete Class 3000 in accordance with the requirements of Section 6-02.

8-14.3(1) Excavation

Excavation shall be made to the required depth and to a width that will permit the installation and bracing of the forms. The foundation shall be shaped and compacted to a firm even surface conforming to the section shown in the Plans. All soft and yielding material shall be removed and replaced with acceptable material.

8-14.3(2) Forms

Forms shall be of wood or metal and shall extend for the full depth of the concrete. All forms shall be straight, free from warp, and of sufficient strength to resist the pressure of the concrete without springing. Bracing and staking of forms shall be such that the forms remain in both horizontal and vertical alignment until their removal. After the forms have been set to line and grade, the foundation shall be brought to the grade required and thoroughly wetted approximately 12-hours before placing the concrete.

8-14.3(3) Placing and Finishing Concrete

The concrete shall be placed in the forms and struck off with an approved straightedge. As soon as the surface can be worked, it shall be troweled smooth with a steel trowel.

After troweling and before installing the contraction joints or perimeter edging, the walking surfaces of the sidewalk and ramps shall be brushed in a transverse direction with a stiff bristled broom as shown in the Standard Plans.

Expansion and contraction joints shall be constructed as shown in the Standard Plans. When the sidewalk abuts a cement concrete curb or curb and gutter, the expansion joints in the sidewalk shall have the same spacing as the curb. The expansion joint shall be filled to full cross-section of the sidewalk with $\frac{3}{8}$ -inch premolded joint filler.

Sidewalk ramps shall be of the type specified in the Plans. The detectable warning pattern shall have the truncated dome shape shown in the Standard Plans and may be installed using a manufactured material before or after the concrete has cured, or by installing masonry or ceramic tiles. Embossing or stamping the wet concrete to achieve the truncated dome pattern or using a mold into which a catalyst hardened material is applied shall not be allowed. Acceptable manufacturers' products are shown on the Qualified Products List.

When masonry or ceramic tiles are used to create the detectable warning pattern, the Contractor shall block out the detectable warning pattern area to the depth required for installation of the tiles and finish the construction of the concrete ramp. After the concrete has set and the forms have been removed, the Contractor shall install the tiles using standard masonry practices.

The 2-foot wide detectable warning pattern area on the ramp shall be yellow and shall match Federal Standard 595a, color number 33538. When painting the detectable warning pattern is required, paint shall conform to Section 9-34.2(1).

8-14.3(4) Curing

Concrete sidewalks shall be cured for at least 72-hours. Curing shall be by means of moist burlap or quilted blankets or other approved methods. During the curing period, all traffic, both pedestrian and vehicular, shall be excluded. Vehicular traffic shall be excluded for such additional time as the Engineer may specify.

8-14.3(5) Ramp Detectable Warning Retrofit

Where shown in the Plans, the Contractor shall retrofit existing cement concrete sidewalk ramps by installing a detectable warning pattern having the truncated dome shape shown in the Standard Plans. The warning pattern shall be the width of the ramp and cover the bottom 2-feet of the ramp. The truncated dome pattern shall be perpendicular to the long axis of the ramp.

The Contractor shall use 1 of the detectable warning pattern products listed in the Qualified Products List or submit another manufacturer's product for approval by the Engineer. The warning pattern shall be capable of being bonded to an existing cement concrete surface. The surface of the warning pattern, excluding the domes, shall not be more than $\frac{3}{8}$ -inch above the surface of the concrete after installation.

8-14.4 Measurement

Cement concrete sidewalks will be measured by the square yard of finished surface and will not include the surface area of the sidewalk ramps. Measurement of sidewalk ramps will be by the unit for each complete ramp type.

Ramp detectable warning retrofit will be measured by the square foot of truncated dome material installed on the existing ramp.

8-14.5 Payment

Payment will be made in accordance with Section 1-04.1, for the following Bid items when included in the Proposal:

“Cement Conc. Sidewalk”, per square yard.

“Cement Conc. Sidewalk with Raised Edge”, per square yard.

“Monolithic Cement Conc. Curb and Sidewalk”, per square yard.

“Cement Conc. Sidewalk Ramp Type ___”, per each

Payment for excavation of material not related to the construction of the sidewalk but necessary before the sidewalk can be placed, when and if shown in the Plans, will be made in accordance with the provisions of Section 2-03. Otherwise, the Contractor shall make all excavations including haul and disposal, regardless of the depth required for constructing the sidewalk to the lines and grades shown, and shall include all costs thereof in the unit Contract price per square yard for “Cement Conc. Sidewalk”, “Cement Conc. Sidewalk with Raised Edge”, “Monolithic Cement Conc. Curb and Sidewalk”, or “Cement Conc. Sidewalk Ramp Type ___”.

“Ramp Detectable Warning Retrofit”, per square foot.