

# ALABAMA DEPARTMENT OF TRANSPORTATION

DATE: November 9, 2015

Special Provision No. 12-0300

EFFECTIVE DATE: July 1, 2017.

SUBJECT: Concrete Sidewalks and Driveways.

Alabama Standard Specifications, 2012 Edition, SECTION 618 shall be replaced by the following:

## SECTION 618 CONCRETE SIDEWALKS AND DRIVEWAYS

### 618.01 Description.

This Section shall cover the work of constructing a portland cement concrete sidewalk or driveway, with or without reinforcement as shown on the plans, in one course on a prepared subgrade in accordance with these specifications, and of the thickness and typical cross-section shown on the plans. Lines and grade shall be as shown on the plans or established. "Subgrade" in this Section shall mean the prepared foundation on which the sidewalk or driveway is constructed.

This Section shall also cover the work of retrofit installation of truncated domes (detectable warning devices) on existing sidewalks.

### 618.02 Materials.

All materials furnished for use shall comply with the appropriate requirements of Division 800, Materials, and the following:

- Concrete shall meet the requirements for a Class A concrete as provided in Section 501.
- Reinforcing steel shall meet the requirements of Section 502 and plan details.
- Truncated domes for retrofit shall be selected from the Department's List II-25, Detectable Warning Devices. This list is in the Department's Manual, "Materials, Sources, and Devices with Special Acceptance Requirements". Only the materials on this list shall be furnished for use. Information concerning this list is given in Subarticle 106.01(f) and ALDOT-355.

### 618.03 Construction Requirements.

#### (a) Equipment.

The equipment used for mixing concrete shall conform to the requirements of Section 501.

The Contractor may use forms or, if requested in writing and approved by the Department, an approved automatic extrusion type paving machine.

Forms shall be of wood, or metal, and shall be sufficiently staked to hold them true to line and grade while concrete is being deposited against them. If of wood, they shall be 2 inch {50 mm} or 3 inch {75 mm} (nominal size) stock lumber surfaces on all sides. If of metal, they shall be of approved section having a base width of at least 4 inches {100 mm} and shall have a flat surface on top. The depth of the forms shall equal the depth of the sidewalk or driveway. Adequate means shall be provided for securely fastening the ends of forms together.

Any automatic extrusion machine considered must be demonstrated to produce a consolidated concrete section conforming to the dimensions, cross section, line, and grades shown on the plans or directed within the requirements noted herein in this Section.

#### (b) Subgrade.

All soft or other unsuitable material in the subgrade shall be removed and replaced with suitable material. All fills and filling material shall be placed and compacted by rolling with an

approved roller or hand tamped with approved tamping devices in layers not exceeding 6 inches {150 mm} in thickness. Any existing areas that have been previously compacted by traffic to a greater degree than the remainder of the subgrade, shall be loosened and the whole subgrade uniformly compacted as directed.

**(c) Foundation Backfill.**

Where provided by the plans and/or proposal, foundation backfill shall be placed and constructed as provided in Section 214. No direct payment will be made for foundation backfill except when Item 214-B is provided in the proposal and such is ordered placed by the Engineer.

**(d) Setting Forms.**

Forms shall be set to true line and grade and rigidly held in place by stakes or braces. Ends of adjoining form sections shall be flush. Forms and division plates shall be cleaned and oiled before placing concrete against them.

**(e) Handling, Measuring, Proportioning, and Mixing Materials.**

The method of handling, measuring, proportioning, and mixing concrete materials shall conform to Section 501, Structure Concrete. Where metal reinforcement is shown on the plans and/or provided in the proposal, it shall be placed in accordance with Section 502.

**(f) Placing Concrete.**

A template resting upon the side forms and having its lower edge at the exact elevation of the subgrade shall be drawn along the forms and the subgrade shaped true before any concrete is deposited. The subgrade shall be moist and shall be free of debris and all foreign material when concrete is deposited upon it. The freshly mixed concrete shall be placed promptly on the prepared subgrade to the depth required to complete the sidewalk or driveway in one course. It shall then be vibrated and/or tamped and struck off with an approved straightedge resting upon the side forms and drawn forward with a sawing motion. The concrete shall then be floated with a wooden float until the surface is true. Concrete laid during cold weather shall conform to the requirements given in Section 501.

**(g) Joints.**

Unless otherwise shown by plan details, the surface of sidewalks and driveways shall be marked in squares or rectangles not exceeding 36 square feet {3.5 m<sup>2</sup>} in area by using an approved marking tool. The marking tool shall provide a groove approximately 1/2 inch {13 mm} in depth and with rounded edges.

Unless otherwise directed by the Engineer, expansion joints 3/8 of an inch {9 mm} (min.) wide shall be placed as follows:

- At all curb returns and where the walks or drives join other concrete units.
- To line up with expansion joints of adjacent curbs, drives, etc., but in no instance more than 80 feet {24 m} between joints.
- Where continuous runs of walks or drives are 80 feet {24 m} or longer, transverse expansion joints shall be provided; one joint for each additional 80 feet {24 m} or fraction thereof, of length.
- Where walks or drives are confined longitudinally by other concrete units and the width of the walk or drive is in excess of 15 feet {5 m}, one longitudinal expansion joint will be required for each additional 15 feet {5 m}, or fraction thereof, of width.
- Expansion joints shall be formed using a filler and sealer specified in Articles 832.01 and 832.02.
- Unless shown otherwise by plan details, the joint filler shall be from the bottom of the walks or drives to 1 inch {25 mm} from the top; the sealer shall be 3/4 of an inch {19 mm} thick and shall be recessed 1/4 of an inch {6 mm} from the top.

**(h) Curing and Protecting.**

Immediately after the finishing operations have been completed, the entire surface of the newly laid concrete shall be protected against rapid drying out and cured as provided in Subarticle 450.03(m), unless the Contractor elects to use Type III portland cement, in which case the total curing time will be reduced. No vehicles shall be permitted on the new concrete for seven days and pedestrians shall not be permitted thereon for at least 72 hours unless the Contractor elects

to use Type III portland cement, in which case the time limit will be reduced to 24 hours for walks and four days for driveways.

**(i) Backfilling.**

After the concrete has set sufficiently, the side forms shall be removed and the spaces on both sides shall be backfilled with suitable material. This backfill shall be compacted to a level 1 inch {25 mm} below the walk or driveway and left in a neat and workmanlike condition.

**(j) Truncated Dome Retrofit**

A truncated dome retrofit shall be installed according to the details shown in the plans.

**618.04 Method of Measurement.**

The quantity of accepted sidewalks or driveways will be measured, complete in place, and the area computed in square yards {square meters}. Measurement for separate payment for foundation backfill will only be made when Item 214-B is provided in the proposal and such is ordered by the Engineer.

Truncated dome retrofit shall be measured per square foot {square meter}, complete in place. Truncated domes installed as part of a new sidewalk will not be measured separately for payment, but will be included in the cost of the sidewalk.

**618.05 Basis of Payment.**

**(a) Unit Price Coverage.**

The accepted quantity of sidewalk or driveway will be paid for at the contract unit price for Concrete Sidewalks or Concrete Driveways, complete in place, which shall be payment in full for furnishing all materials (including joints), for the hauling, preparation, and placing of all materials, for the preparation of the subgrade, excavation, backfilling, and for all labor, equipment, tools, and incidentals necessary to complete the work.

The accepted quantity of truncated dome retrofit will be paid for at the contract unit price, complete in place, which shall be payment in full for furnishing all materials, for the hauling, preparation, and placing of all materials, for the preparation of the sites and for all labor, equipment, tools, and incidentals necessary to complete the work.

**(b) Payment will be made under Item No.:**

- 618-A Concrete Sidewalk, \_\_\_\_ inch(es) {mm} Thick - per square yard {square meter}
- 618-B Concrete Driveway, \_\_\_\_ inch(es) {mm} Thick - per square yard {square meter}
- 618-C Truncated Dome Retrofit - per square foot {square meter}