

ALABAMA DEPARTMENT OF TRANSPORTATION

DATE: April 24, 2015

Special Provision No. 12-0106(2)

EFFECTIVE DATE: October 1, 2015

SUBJECT: Concrete Barrier and Rail.

Alabama Standard Specifications, 2012 Edition, SECTION 629 shall be replaced by the following:

SECTION 629 CONCRETE BARRIER AND RAIL

629.01 Description.

This Section shall cover the work of constructing a concrete median or safety barrier at the location shown on the plans, proposal, or directed. Barriers shall be basically classified as to "Type" which will designate the size, shape, height, etc. all in accordance with details shown in the plans. Barriers may be cast in place, extruded by slip form equipment, or precast and installed in a permanent manner.

This Section shall also cover the work of retrofitting concrete bridge rail in accordance with the requirements shown on the plans.

629.02 Materials.

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

Concrete, unless otherwise specified by plan details, shall meet the requirements of Section 501 for Class A concrete.

Steel reinforcement shall meet the requirements of Section 502.

629.03 Construction Requirements.

(a) General.

The concrete mix, construction, placing of the concrete, curing, and finishing shall be in accordance with the appropriate provisions of Section 501, unless otherwise provided in this Section or noted in the plan details.

(b) Excavation and Backfill.

Excavation and backfill for permanent barriers shall be in accordance with the provisions of Section 214.

(c) Slip Form Method.

Barriers constructed by the use of a slip form extrusion machine shall be well compacted, dense concrete meeting all the requirements of Section 501, except for the requirement for fixed forms.

The forming portion of the extrusion machine shall be readily adjustable vertically during the forward motion of the machine so that the top of the barrier can be maintained at the predetermined grade.

(d) Concrete Surface Tolerances and Finishing.

The finished concrete shall be within reasonably close conformity to the lines, grades, and dimensions shown on the plans or directed; the barrier shall present a smooth uniform appearance free from objectional cavities or projections. A 10 foot {3 m} straightedge, laid on the top faces of the barrier, shall not vary more than 0.02 foot {6 mm} from the edge of the straightedge except at grade changes and curves and be free of humps, sags or other irregularities.

Concrete surfaces shall be finished in accordance with the provisions of **Section 501** with exposed surfaces receiving a Class 2 **coated surface finish**.

(e) Joints.

Joints shall be in accordance with the provisions of Section 501, except as follows:

Surface edges on exposed vertical contraction joints shall be rounded with a 1/4 inch {6 mm} edger or sawed.

Vertical expansion joints may be open or sealed in accordance with plan requirements.

629.04 Method of Measurement.

Concrete barriers will be measured for payment by the appropriate method designated by the plans or proposal in accordance with the following:

Item 629-A - linear foot {meter} measured to the nearest 0.1 foot {0.1 m} along the top surface barrier.

Item 629-B - cubic yards {cubic meters} of concrete with volumetric measure computed by the average end area method except where results obtained differ from those obtained by a more accurate mathematical computation.

Item 629-C - unit measurement where each end section is in accordance with the size, shape, and length designated by the plans.

Item 629-D - per each in accordance with the details shown on the plans. One retrofit will be measured for each end of each concrete guardrail where the retrofit is constructed.

Item 629-E - per linear foot in accordance with the details shown on the plans.

Excavation and backfill shall be measured in accordance with the provisions of Section 214.

629.05 Basis of Payment.

(a) Unit Price Coverage.

The various "Types" of Median or Safety Barriers, End Sections, and Bridge Guardrail and Rail Retrofit, will be paid for at the contract unit price. The unit price bid shall be full compensation for the furnishing of all materials and the construction of the barrier complete in place, including all equipment, tools, labor, and incidentals necessary to complete the work.

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

629-A Concrete Median or Safety Barrier, Type ___ - per linear foot {meter}

629-B Concrete Median or Safety Barrier, Type ___ - per cubic yard {cubic meter}

629-C Concrete Median or Safety Barrier End Section - per each

629-D Bridge Guardrail Retrofit, Type ___ - per each

629-E Bridge Rail Retrofit, Type ___ - per linear foot {meter}