



Designation: ~~C825 – 06 (Reapproved 2011)~~ C825 – 19

Standard Specification for Precast Concrete Barriers¹

This standard is issued under the fixed designation C825; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers precast concrete barriers, intended to be used adjacent to a roadway or as a median, to redirect vehicles unintentionally leaving the roadway.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

~~A82/A82M Specification for Steel Wire, Plain, for Concrete Reinforcement (Withdrawn 2013)~~³

~~A185/A185M Specification for Steel Welded Wire Reinforcement, Plain, for Concrete (Withdrawn 2013)~~³

~~A416/A416M Specification for Low-Relaxation, Seven-Wire Steel Strand for Prestressed Concrete~~

~~A421/A421M Specification for Stress-Relieved Steel Wire for Prestressed Concrete~~

~~A496/A496M Specification for Steel Wire, Deformed, for Concrete Reinforcement (Withdrawn 2013)~~³

~~A497/A497M Specification for Steel Welded Wire Reinforcement, Deformed, for Concrete (Withdrawn 2013)~~³

~~A615/A615M Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement~~

~~A996/A996M Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement~~

~~A1064/A1064M Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete~~

~~C31/C31M Practice for Making and Curing Concrete Test Specimens in the Field~~

~~€33C33/C33M Specification for Concrete Aggregates~~

~~C39/C39M Test Method for Compressive Strength of Cylindrical Concrete Specimens~~

~~C42/C42M Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete~~

~~€150C150/C150M Specification for Portland Cement~~

~~C173/C173M Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method~~

~~€231C231/C231M Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method~~

~~€260C260/C260M Specification for Air-Entraining Admixtures for Concrete~~

~~€330C330/C330M Specification for Lightweight Aggregates for Structural Concrete~~

~~C494/C494M Specification for Chemical Admixtures for Concrete~~

~~€595C595/C595M Specification for Blended Hydraulic Cements~~

~~C618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete~~

3. Classification

3.1 Precast concrete barriers manufactured in accordance with this specification shall be as shown in either Fig. 1 or Fig. 2.

4. Basis of Acceptance

4.1 Precast barrier shall comply with all of the provisions of this specification and shall be tested as prescribed in 8.3 and 8.4.

¹ This specification is under the jurisdiction of ASTM Committee C27 on Precast Concrete Products and is the direct responsibility of Subcommittee C27.20 on Architectural and Structural Products.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

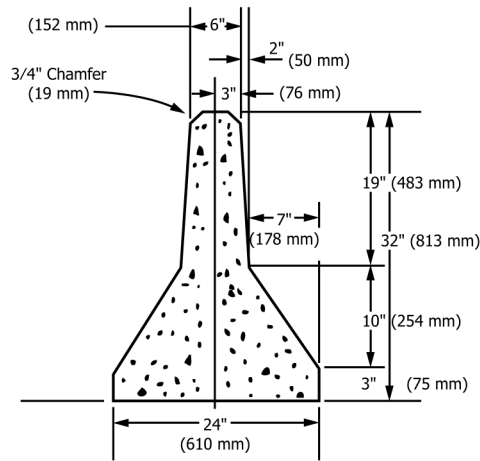


FIG. 1 New Jersey Barrier

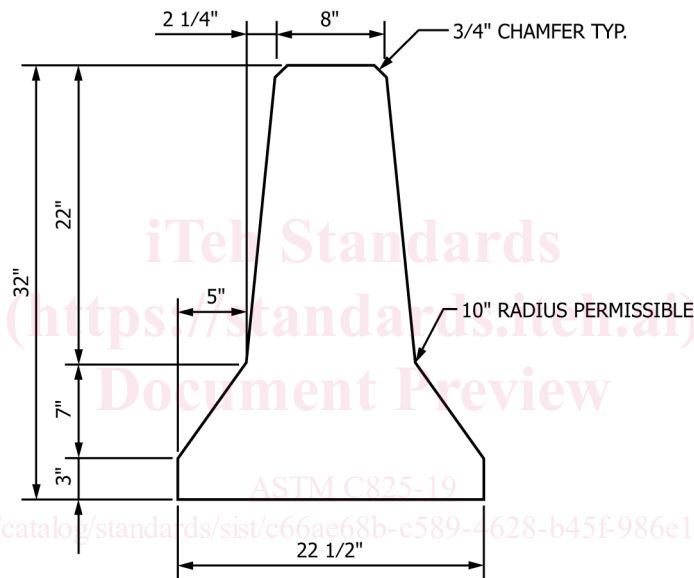


FIG. 2 Type-F Barrier

4.1.1 *Acceptance as to Strength Properties*—Concrete barrier shall be acceptable under the strength tests when the sections have met the requirements of Section 8.

4.1.2 *Acceptance as to Dimensional Properties*—Concrete barrier shall meet the dimensional tolerances of Section 9.

4.1.3 *Acceptance as to End Result*—The concrete barrier sections shall be finally acceptable to the purchaser at the designated point of delivery with no significant cracking. Significant cracking is defined as fractures or cracks passing through the section or any continuous structural crack extending for a length of 12 in. (305 mm) or more, regardless of position in the section.

5. Materials

5.1 *Cement*—Portland cement shall conform to the requirements of Specification ~~E150~~C150/C150M or shall be portland blast-furnace slag cement or portland-pozzolan cement conforming to the requirements of Specification ~~E595~~C595/C595M.

5.2 *Aggregates*—Aggregates shall conform to Specification ~~E330~~C333/C333M or ~~E330~~C330/C330M.

5.3 *Admixtures*—Admixtures may be used with the approval of the purchaser. Air-entraining admixtures shall conform to Specification ~~E260~~C260/C260M. Chemical admixtures shall conform to Specification ~~C494~~C494M. Fly ash or other pozzolanic admixtures shall conform to Specification ~~C618~~C618. Admixtures containing chlorides shall not be used in the manufacture of prestressed barrier sections.

5.4 *Steel Reinforcement*—Steel reinforcement shall consist of **wire fabric** conforming to Specifications ~~A185/~~A185MA1064/A1064M or ~~A497/A497M~~, or of **wire** conforming to Specifications ~~A82/A82M~~, ~~A421/A421M~~; or ~~A496/~~A496MA1064/A1064M, or of **strand** conforming to Specification ~~A416/A416M~~, or of **bars** conforming to Specifications ~~A615/A615M~~ or ~~A996/A996M~~.