



## Florida Department of Transportation

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ANANTH PRASAD  
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### ROADWAY DESIGN BULLETIN 13-05

**DATE:** April 15, 2013

**TO:** District Design Engineers and Plans Preparation Manual Holders

**FROM:** Frank T. Sullivan, P.E., Roadway Design Administrator

A handwritten signature in blue ink that reads "Frank T. Sullivan".

**COPIES:** Brian Blanchard, Tom Byron, David Sadler, Tim Lattner, Mark Wilson, Bruce Dana, John Krause, and Monica Gourdine (FHWA)

**SUBJECT:** Design Standards, Index 430 "Crash Cushion Details" Revised Index Drawing.

### REQUIREMENTS

This bulletin introduces a revision to design standard, Index 430 "Crash Cushion Details." This index aids in the selection of permanent crash cushions. The design lengths in the tables, for both concrete barrier wall and guardrail applications, are based on the shortest lengths from those Crash Cushions approved and listed on the Qualified Products List (QPL). A limitation on a shorter crash cushion was removed from the QPL which requires four (4) design lengths for the Guardrail Applications table to be reduced (revised).

### BACKGROUND

A limitation on a shorter crash cushion was removed from the QPL which requires four (4) design lengths for the Guardrail Applications table to be reduced.

### IMPLEMENTATION

Beginning with projects let on August 1, 2013 and later, the selection of permanent crash cushions will be based on immediate implementation of the requirements for the crash cushion details as shown by and noted in the Revised Index Drawings (RID) for Index 430.

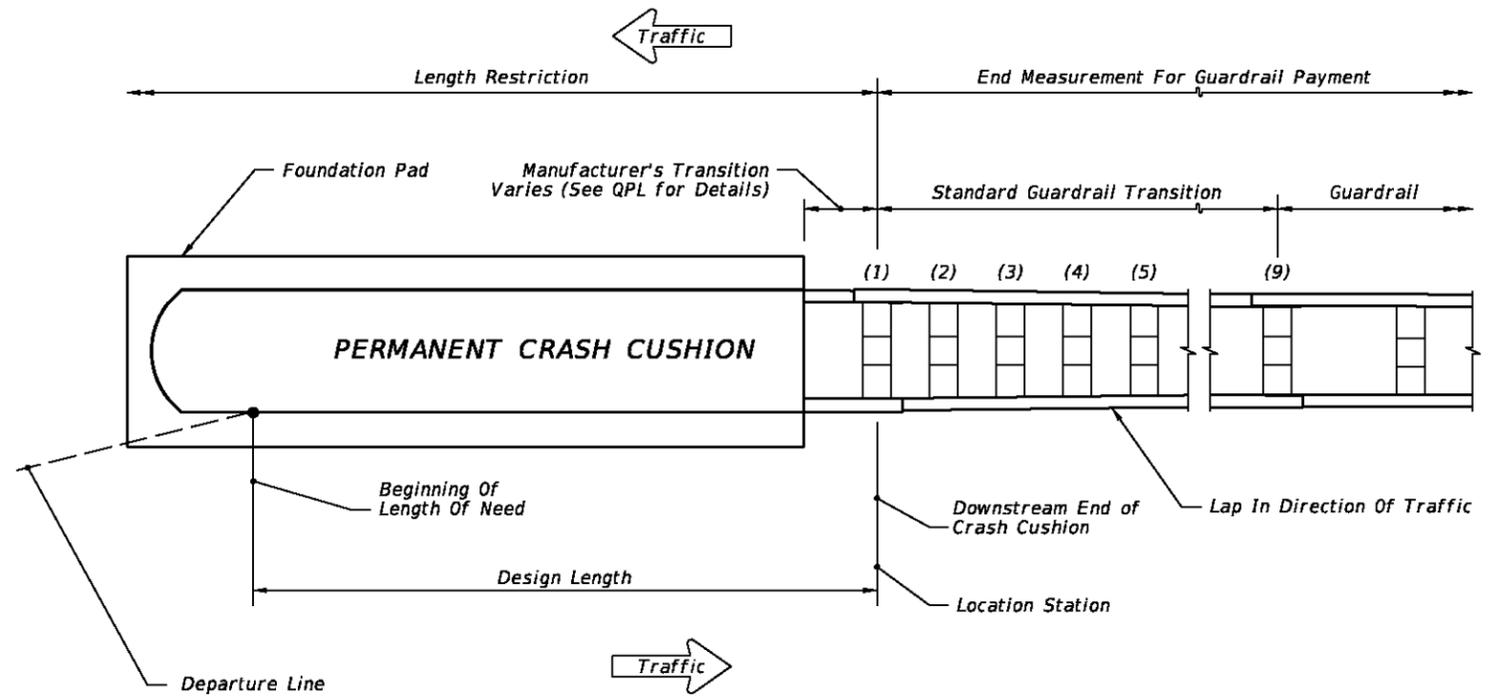
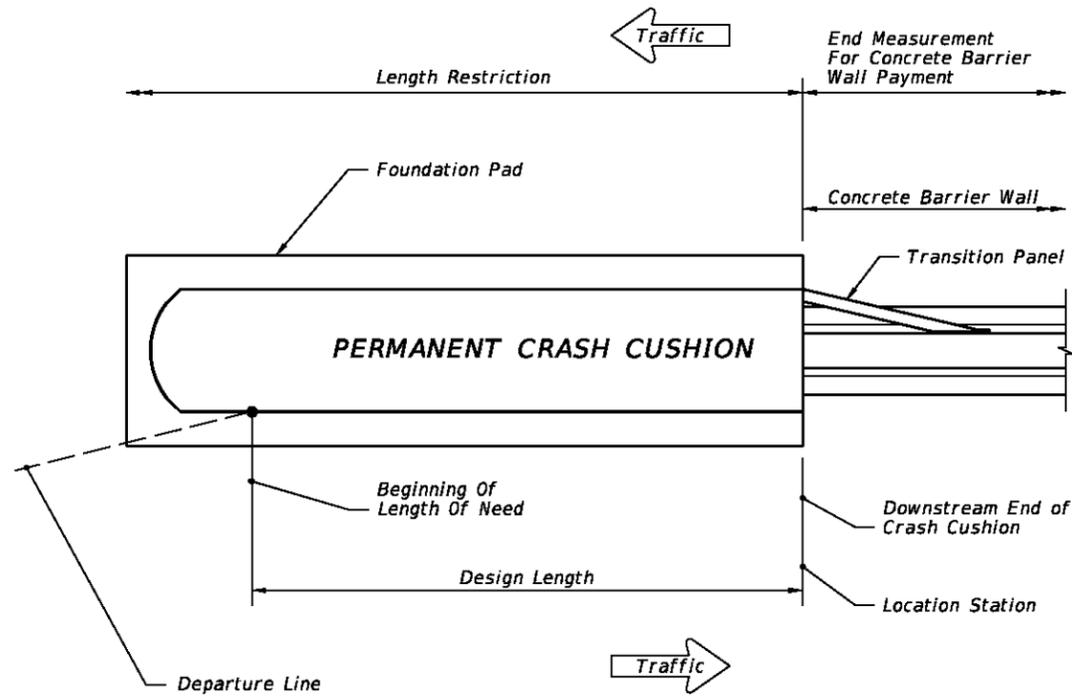
## **CONTACT**

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FS/JM/jm

Attachments:  
***Index 430, "Crash Cushion Details"***



**GENERAL NOTES**

1. Index 430 is applicable for permanent crash cushion installations that shield the ends of Concrete Barrier Wall or Guardrail, only.
2. Design Length is based on a given design speed and the shortest Crash Cushion available on the Qualified Products List (QPL).
3. For High Speed Facilities with a Design Speed greater than 60 mph, use a TL-3 Crash Cushion.
4. Assemble and install Crash Cushions according to the limitations noted on the Qualified Products List (QPL) webpage, the manufacturer's specifications, and the applicable crash cushion drawings posted on the QPL.
5. When subjected to reverse direction hits, construct Transition Panels from Concrete Barrier Walls to Crash Cushions; for additional details refer to the applicable crash cushion drawings on the QPL.
6. Galvanize metallic components to meet the requirements for Steel Guardrail, Section 967 of the Standard Specifications for Road and Bridge Construction.
7. For Guardrail Applications, construct the Manufacturer's Transition between the Permanent Crash Cushion and the Standard Guardrail Transition; refer to all Standard Guardrail Transition details of this index.
8. For additional information on the End Measurement for Guardrail Payment, refer to the Standard Specifications for Road and Bridge Construction, Section 536.
9. A yellow Type I Object Marker shall be centered 3' in front of the crash cushion nose. Mounting hardware shall be in conformance with Section 993 of the Standard Specifications for Road and Bridge Construction.

As an option, the contractor may install reflective sheeting on the nose of the crash cushion. The sheeting to be used must be solid yellow, Type III or better and must be a product listed on the Department's Qualified Products List (QPL). The sheeting to be applied to the nose of the crash cushion shall be a minimum of 360 square inches with a minimum height of 15 inches.

Design Length (ft.)	Design Speed (mph)	Crash Test Level
6.00	35	TL-2
6.00	40	
6.00	45	
9.00	50	TL-3
12.00	55	
15.00	≥ 60	

Design Length (ft.)	Design Speed (mph)	Crash Test Level
8.75	35	TL-2
11.50	40	
11.50	45	
14.25	50	TL-3
18.75	55	
18.75	≥ 60	

**PERMANENT CRASH CUSHION APPLICATIONS**

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