

ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information – Incomplete forms will be returned)

Contact Information:

Date: August 2, 2018
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Email:

Standard Plans:

Index Number: **544-001**
Sheet Number (s): 1 and 2 of 2
Index Title: Crash Cushion Details

Summary of the changes:

Redeveloped Sheets for improved clarity of details and new Length of Need process.
Sheet 1: Deleted Concrete Barrier and Guardrail Applications Tables; Revised the General Notes; Updated Departure Line locations, Length Restrictions, and other callouts.
Sheet 2: Updated Design Length. station location points. and other callouts



Commentary / Background:

Updated the SPI to provide increased designer information; Updated the Length of Need process in coordination with the Concrete Barrier and Guardrail Standards; Developed a uniform system of Plans development to handle most projects with a Contractor's option of varying proprietary crash cushion lengths

Other Affected Offices / Documents: (Provide name of responsible personnel)

- | Yes | No | |
|--------------------------|-------------------------------------|-----------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance – |

Origination Package Includes: (Email or hand deliver package to Derwood Sheppard)

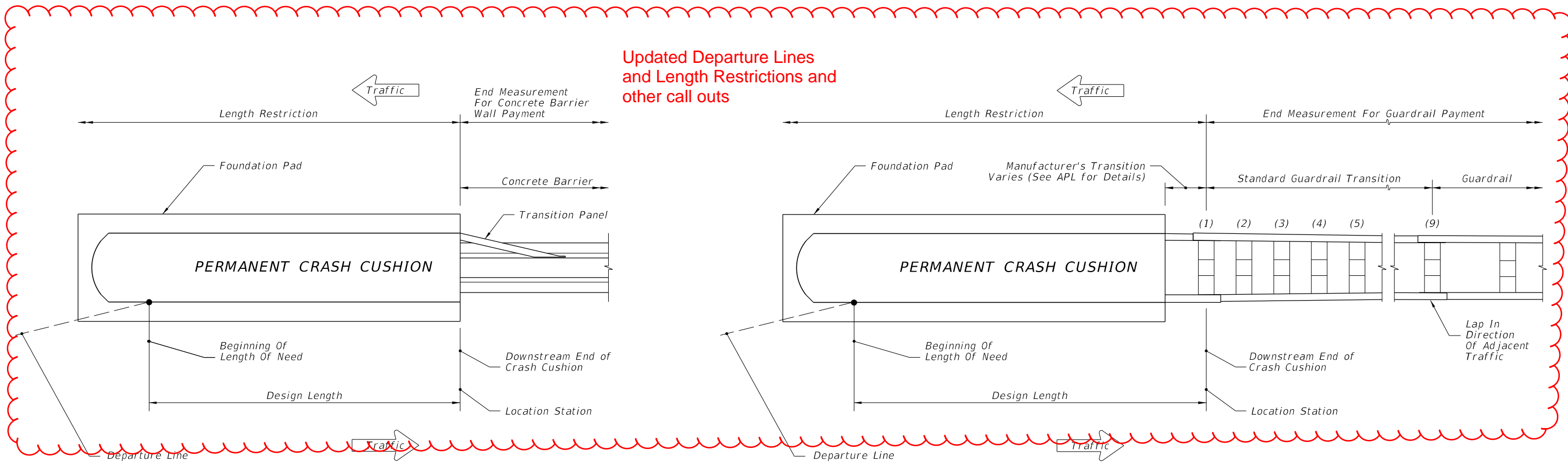
- | Yes | N/A | |
|-------------------------------------|-------------------------------------|-------------------------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Proposed Standard Plan Instructions (SPI) |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Revised SPI |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Support Documents |

Implementation:

- Design Bulletin (Interim) DCE Memo Program Mgmt. Bulletin FY-Standard Plans (Next Release)

Contact the Roadway Design Office for assistance in completing this form

Updated Departure Lines and Length Restrictions and other call outs



GENERAL NOTES

Changed General Notes

1. This Index is applicable for permanent crash cushion installations that shield the ends of Concrete Barrier or Guardrail, only.
2. Design Length is based on a given design speed and the shortest Crash Cushion available on the Approved Products List (APL). When a Length Restriction is not applicable (N/A), then the Contractor has the option to select valid Crash Cushions from the APL which have design lengths greater than or equal to the Design Length identified in the plans. When a Length Restriction is applicable, then the Contractor has the option to select valid Crash Cushions from the APL which have design lengths greater than or equal to the Design Length identified in the plans and that are less than or equal to the Length Restriction identified in the plans.
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 Approved Products List (APL) webpage, the manufacturer's specifications, and the applicable crash cushion drawings posted on the APL.
5. When subjected to reverse direction hits, construct Transition Panels from Concrete Barrier to Crash Cushions; for additional details refer to the applicable crash cushion drawings on the APL.
6. Galvanize metallic components are to meet the requirements in the Specification, Section 967.
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. Provide delineation in accordance with Specification, Section 544.
10. The EOR shall provide the station of the Length of Need (LON) location in the plans.

Deleted Table

~~Concrete Barrier Applications~~

Design Length (ft.)	Design Speed (mph)	Crash Test Level
5.75	35	TL-2
7.25	40	
7.25	45	
10.25	50	TL-3
13.25	55	
16.00	≥ 60	

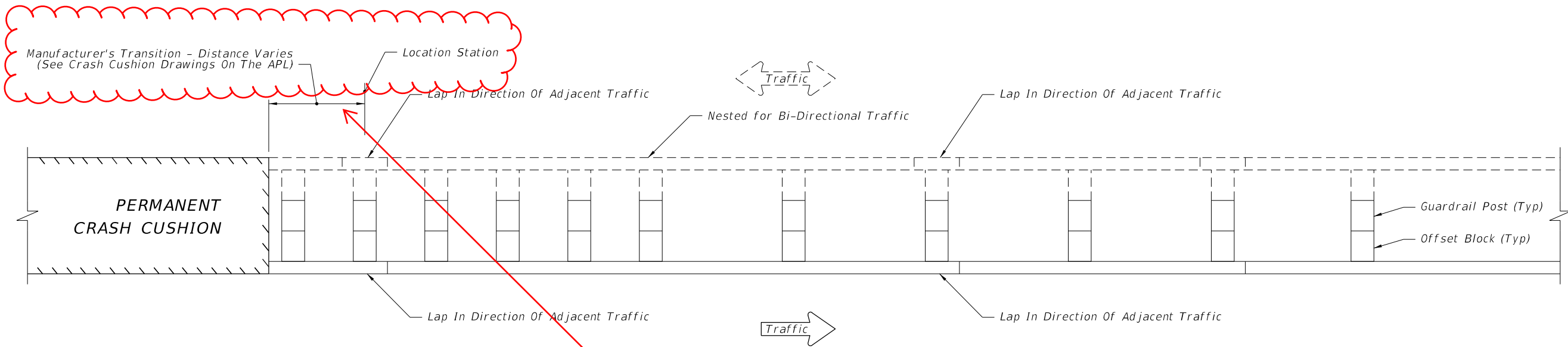
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~~Guardrail Applications~~

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
20.00	55	
22.75	≥ 60	

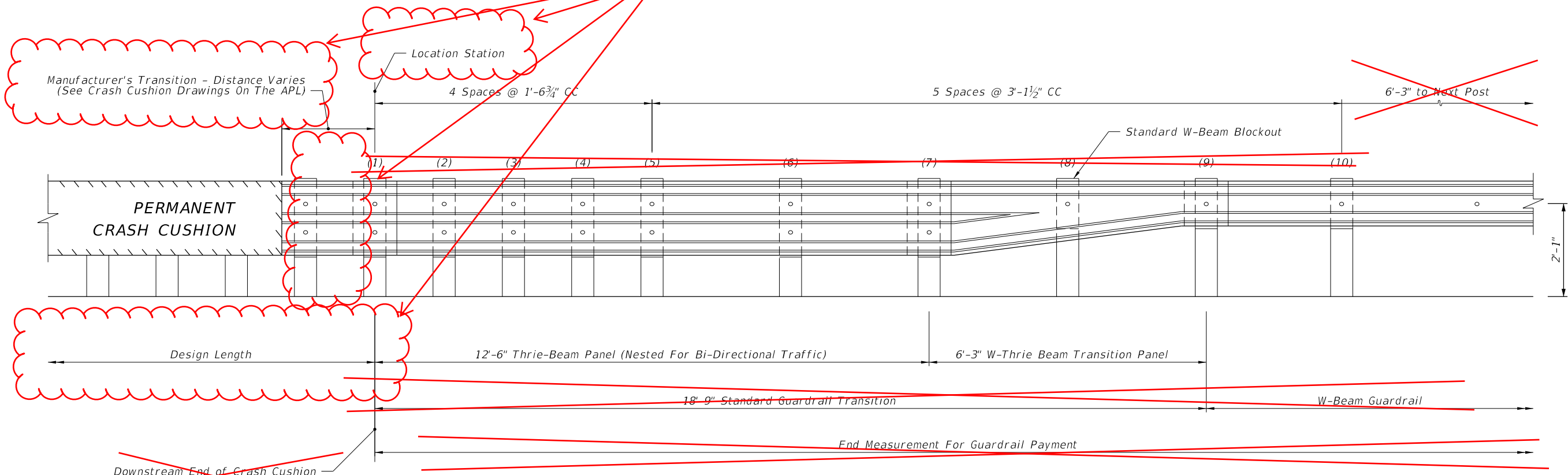
PERMANENT CRASH CUSHION APPLICATIONS

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PLAN VIEW

UPDATED



ELEVATION VIEW

Note:
Post Numbers 8, 9 and 10 will have Standard 6"x8"x14" Wooden W-beam Blockouts.
For Additional Information on Standard Guardrail Transitions see Index 536-001.

STANDARD GUARDRAIL TRANSITION

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LAST REVISION	DESCRIPTION:
11/01/17	11/01/18


 FY 2018-19
 STANDARD PLANS

CRASH CUSHION DETAILS

INDEX
 544-001

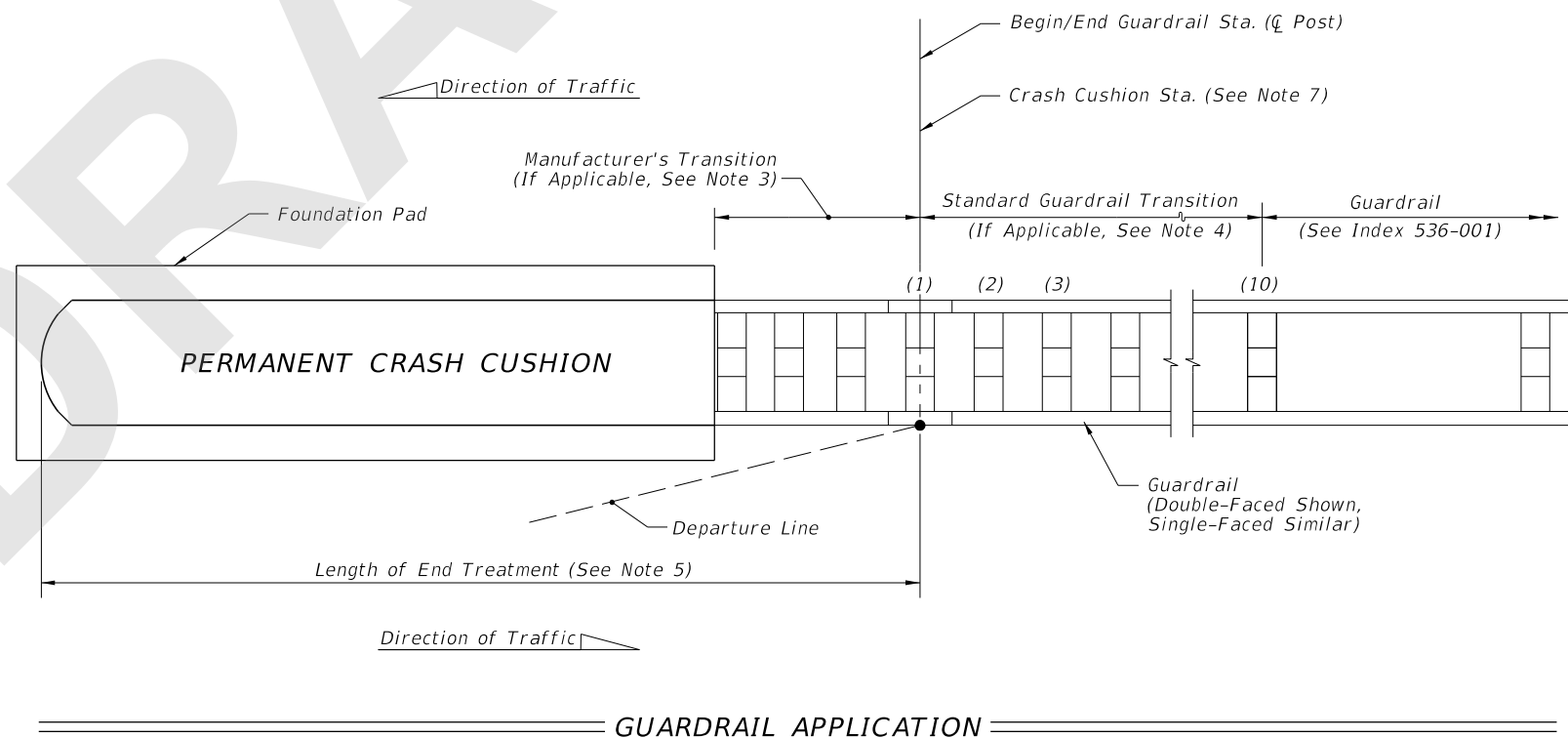
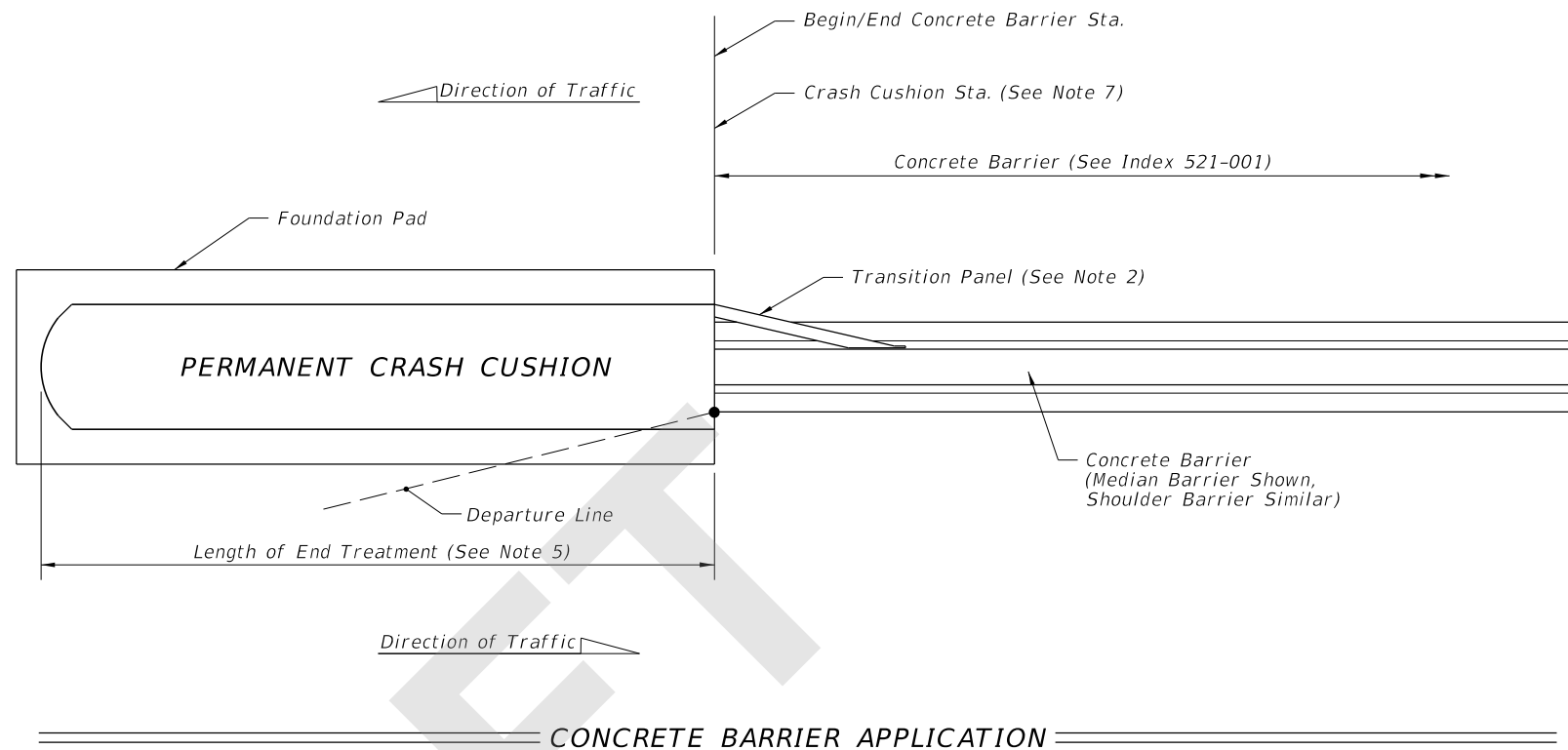
SHEET
 2 of 2

GENERAL NOTES:

1. GENERAL: Work this Index in accordance with Specification 544 and the "Summary of Permanent Crash Cushions" table in the Plans.
2. TRANSITION PANEL: Where crash cushions are placed between two-way traffic or adjacent to two-way two-lane traffic, place a Transition Panel from the Concrete Barrier to the Crash Cushion on the downstream side of the barrier end (as shown). Follow the requirements of the APL drawing.
3. MANUFACTURER'S TRANSITION: Construct the proprietary guardrail transition only if shown in the applicable APL drawing. See Note 4 below.
4. STANDARD GUARDRAIL TRANSITION: If the APL drawing does not provide a guardrail transition to w-beam guardrail, construct the Standard Guardrail Transition segment from three-beam to w-beam as shown per Sheet 2. This 21'-10½" segment must remain parallel to the roadway.


If the APL drawing does provide a guardrail transition to w-beam guardrail, replace the Standard Guardrail Transition segment with a w-beam guardrail segment at 6'-3" post spacing, except that Post (10) will remain where shown herein if it is located at a guardrail begin or end taper station callout per the Plans. This 21'-10½" segment must also remain parallel to the roadway.
5. LENGTH OF END TREATMENT: For Crash Cushions, the Length of End Treatment includes all proprietary elements of the design as shown in the APL drawing, including the manufacturer's transition of guardrail if applicable.

The actual Length of End Treatment varies per Crash Cushion type, but an estimated Length of End Treatment is generally shown in the Plans to provide sufficient space for the Contractor's option of differing Crash Cushion types.
6. LENGTH RESTRICTION: In the "Summary of Permanent Crash Cushions" table, if a value is provided in the Length Restriction column, then select a Crash Cushion from the APL which has a Length of End Treatment less than or equal to the value shown. If the table instead shows not applicable (N/A), then Crash Cushion selection is unrestricted regarding length.
7. CRASH CUSHION STATION: The Crash Cushion Station point shown herein corresponds to the station provided in the "Summary of Permanent Crash Cushions" table in the Plans.

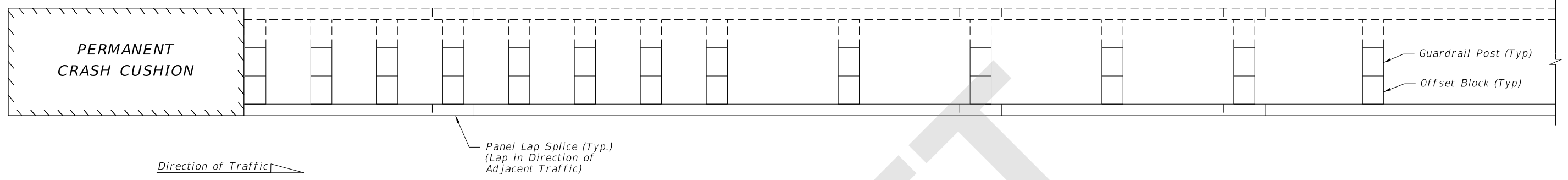


PERMANENT CRASH CUSHION APPLICATIONS

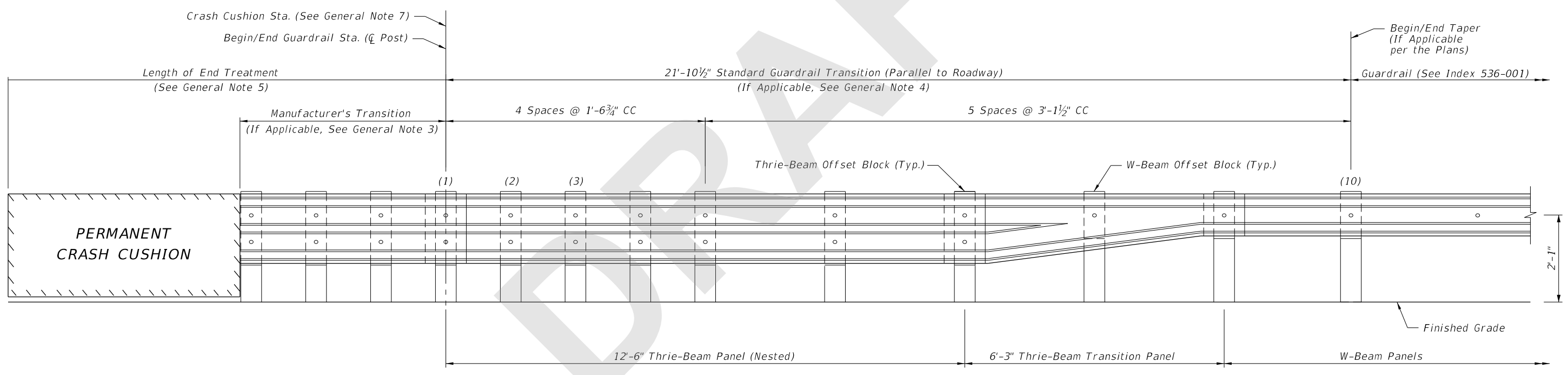
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LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	CRASH CUSHION DETAILS	INDEX 544-001	SHEET 1 of 2
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Direction of Traffic



PLAN VIEW



ELEVATION VIEW

NOTE:
Work this Sheet with the details and General Notes on Sheet 1.

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STANDARD GUARDRAIL TRANSITION

LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	CRASH CUSHION DETAILS	INDEX 544-001	SHEET 2 of 2
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