
ORIGINATION FORM

Proposed Revisions to a Standard Plans Index

(Please provide all information — Incomplete forms will be returned)

Contact Information:

Date: June 5, 2023

Originator: Dino Jameson

Phone: (352) 955-2933

Email: dino.jameson@dot.state.fl.us

Standard Plans:

Index Number: 102-110

Sheet Number (s): 4 of 17

Index Title:

Type K Temporary Concrete Barrier System

Summary of the changes:

Sheet 4: Updated the GEOTEXTILE FABRIC Note: GEOTEXTILE "Provide and install Type D-5 geotextile fabric in accordance with Specifications 514 to contain Back-Fill Materials behind the Barrier Units."

Areas of the Standard Plans where 985 is referenced for drainage details needs to now reference Specs 514 (Division II specs). The Contractor is not responsible for the producer requirements division III specs, but ensure that the product used is on the APL and used for appropriate intended use. Specs 514 essentially does reference 985 to meet the materials requirement.

Commentary / Background:

In the July 2022 SSRBC workbook, construction requirements for the Contractor for geosynthetic materials from Section 985 was removed. The reason for it was that the construction requirements doesn't belong in Division III of the specifications, as this is for producer requirements. Instead of applying specific requirements to each individual specs that references 985 in Division II, the Department is going to modify specification 514 to cover geosynthetics used for drainage applications. Specs 145 covers the reinforcement (structural) applications and construction requirements and erosion control has specific requirements in various areas of Division II, therefore, both erosion and reinforcement are covered. The only missing link in Division II is the drainage applications. Proposed changes to 514 cover construction requirements and material acceptance. In addition, specs 514 ensures that the Contractor obtains geosynthetic product from a manufacturer that meets 985 spec requirements.

Other Affected Offices / Documents: (Provide name of person contacted)

- | 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 checked="" type="checkbox"/> | <input type="checkbox"/> | Standard Specifications – Various sections where 985 is referenced. |
| <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: (Submit package to Rick Jenkins)

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

Implementation:

- | | |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/> | Design Bulletin (Interim) |
| <input type="checkbox"/> | DCE Memo |
| <input type="checkbox"/> | Program Mgmt. Bulletin |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

Contact the Roadway Design Office for assistance in completing this form

Email to: Rick Jenkins rick.jenkins@dot.state.fl.us and Darren Martin darren.martin@dot.state.fl.us

ORIGINATION FORM

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

Contact Information:

Date: September 27, 20⁺

Originator: Olivia Townsend

Phone: (850) 414-4303

Email: olivia.townsend@dot.state.fl.us

Standard Plans:

Index Number: 102-110

Sheet Number (s): 2 of 17

Index Title: Type K Temporary Concrete Barrier System

Summary of the changes:

Sheet 2: Updated the ADHESIVE-BONDING MATERIAL SYSTEM Note to “When using adhesive bonding material systems for anchor bolts, use a Type HSHV adhesive meeting the requirements of Specification 937 and listed on the APL. Install anchor bolts in accordance with Specification 416. Field testing requirements of Specification 416 do not apply”.

Commentary / Background:

Index 102-110 referenced Specification 416 for installation and field testing of temporary anchor bolts. The practicality of continuing this field testing was discussed with the Structures Design Office. Based on past performance of adhesive anchor testing for the Department, continuing this testing was determined to be unnecessary for these temporary installations moving forward.

Other Affected Offices / Documents: (Provide name of person contacted)

- | 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: (Submit package to Rick Jenkins)

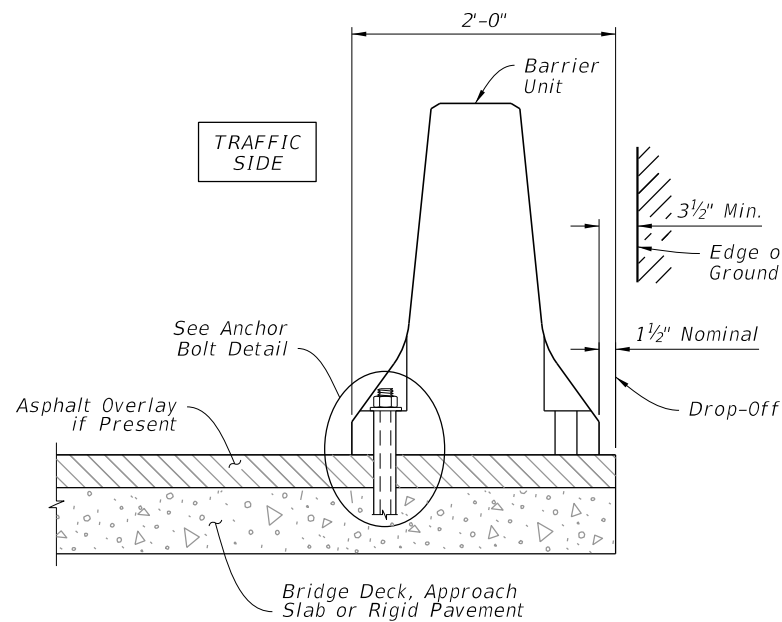
- | Yes | N/A | |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups |
| <input type="checkbox"/> | <input type="checkbox"/> | Revised or Proposed Standard Plan Instruction (SPI) |
| <input type="checkbox"/>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

Implementation:

- | | |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/> | Design Bulletin (Interim) |
| <input type="checkbox"/> | DCE Memo |
| <input type="checkbox"/> | Program Mgmt. Bulletin |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

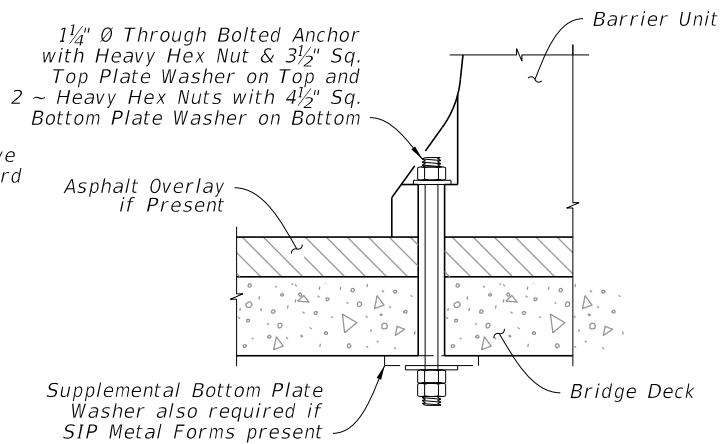
Contact the Roadway Design Office for assistance in completing this form

Email to: Rick Jenkins rick.jenkins@dot.state.fl.us and Darren Martin darren.martin@dot.state.fl.us

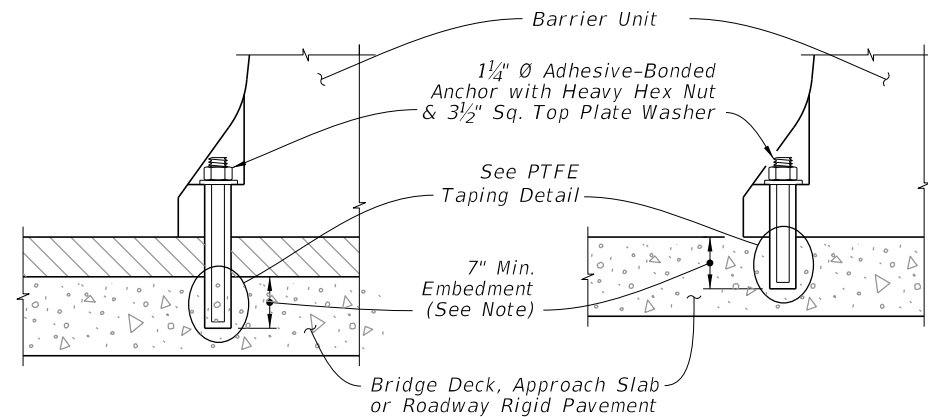


NOTE: Traffic Side for Transition to Median Traffic Railings, see Sheet 6

TYPICAL SECTION

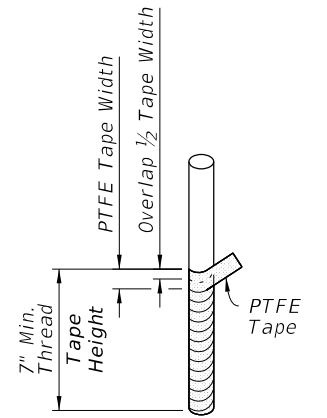


THROUGH BOLTED ANCHOR



WITH ASPHALT OVERLAY

WITHOUT ASPHALT OVERLAY



PTFE TAPING DETAIL

NOTE: Wrap threads with a single overlapping layer of PTFE tape to facilitate removal of anchors.

ADHESIVE BONDED ANCHOR INSTALLATION

NOTES FOR BOLTED INSTALLATIONS:

Bridge deck shown, approach slab or rigid pavement similar; installation adjacent to drop-off shown, median transition installation similar.

LIMITATION OF USE: This installation technique can only be used on rigid pavement and concrete bridge decks as shown. Anchor Bolts must not be installed on both sides of the Barrier Units. Do not bolt down Barrier Units across bridge finger or modular expansion joints.

ANCHOR BOLTS, NUTS AND WASHERS: When using Adhesive-Bonded Anchor Bolts, use fully threaded rods in accordance with ASTM F 1554 Grade 36. Install Anchor Bolts for through bolting in accordance with ASTM A 307 or ASTM F 1554 Grade 36. Install nuts in accordance with ASTM A 563 or ASTM A 194. Install Flat Washers in accordance with ASTM F 436 and Plate Washers in accordance with ASTM A 36 or ASTM A 709 Grade 36.

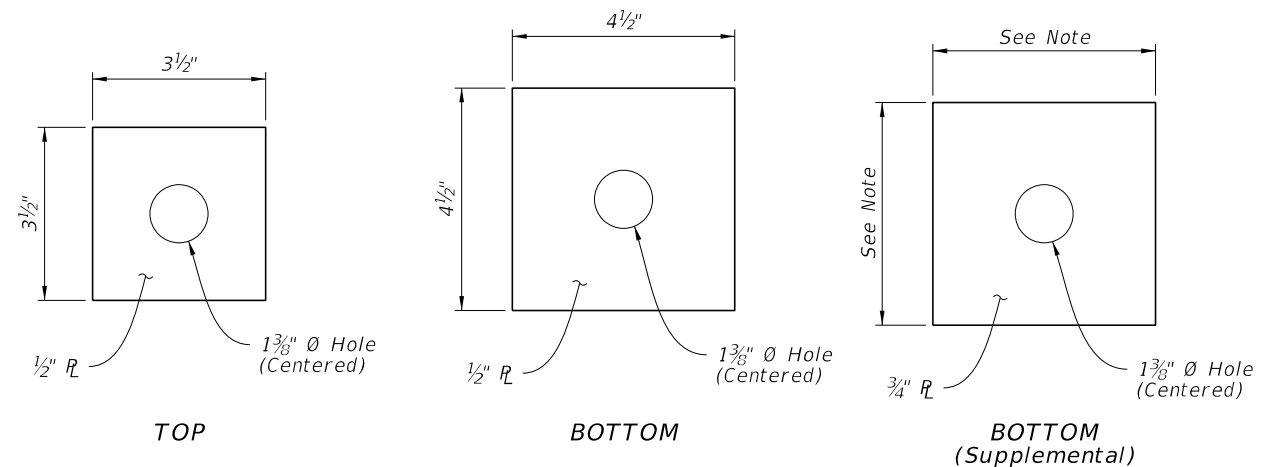
Install three (3) Anchor Bolts per Barrier Unit on the traffic side of the Barrier Units as shown, except for Transition Installations. For the number and positions of Anchor Bolts required in Transition Installations see Sheets 8 and 9 and Index 102-100. Drilling through deck reinforcing steel to install Anchor Bolts is permitted. Unless otherwise shown in the Plans, at the Contractor's option Barrier Units may be installed by through bolting (where geometrically possible) or by the use of Adhesive-Bonded Anchor Bolts. Do not drill into or otherwise damage the tops of supporting beams or girders, bridge deck expansion joints or drains. Install Anchor Bolts and Nuts so that the maximum extension beyond the face of the Barrier Units is 1/2". Snug tighten the Nuts on the Anchor Bolts. For through bolted installations, snug tighten the double Nuts on the underside of the deck against each other to minimize the potential for loosening.

Omit one (1) Anchor Bolt within a single Barrier Unit if a conflict exists between the Anchor Bolt location and a bridge deck expansion joint or drain. The adjacent Barrier Units must each be installed with the standard three (3) Anchor Bolts.

Omit one (1) Anchor Bolt within a single Barrier Unit as shown in the Treatment at Bridge Deck Expansion Joint Schematic if the Barrier Unit straddles a bridge deck expansion joint. The adjacent Barrier Units must each be installed with the standard three (3) Anchor Bolts.

ADHESIVE-BONDING MATERIAL SYSTEMS: When using Adhesive Bonding Material Systems for Anchor Bolts, Use Type HSHV in accordance with Specification 937 and installed them in accordance with Specification 416. Prior to installation of the Barrier Units in the Plan location(s), install a demonstration Barrier Unit using the proposed production installation method, at a location approved by the Engineer. In lieu of the production test requirements of Specification 416, install six (6) Adhesive-Bonded Anchor Bolts in the demonstration Barrier Unit and test each Anchor Bolt with a 29,800 pound tensile proof load. Install and test additional demonstration Barrier Units when requested by the Engineer. Remove the demonstration Barrier Unit prior to testing the Anchor Bolts. Remove the test Anchor Bolts after testing as directed by the Engineer.

Updated Note to read "When using adhesive bonding material systems for anchor bolts, use a Type HSHV adhesive meeting the requirements of Specification 937 and listed on the APL. Install anchor bolts in accordance with Specification 416. Field testing requirements of Specification 416 do not apply."



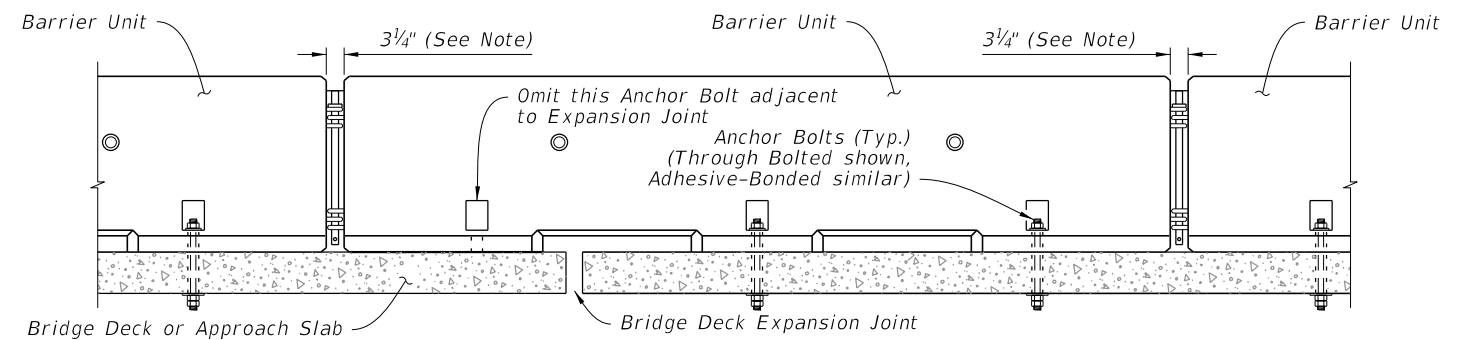
TOP

BOTTOM

BOTTOM (Supplemental)

NOTE: Dimension as required to span SIP Metal Form Corrugations plus 1/2" Minimum overlap each side.

PLATE WASHER DETAIL

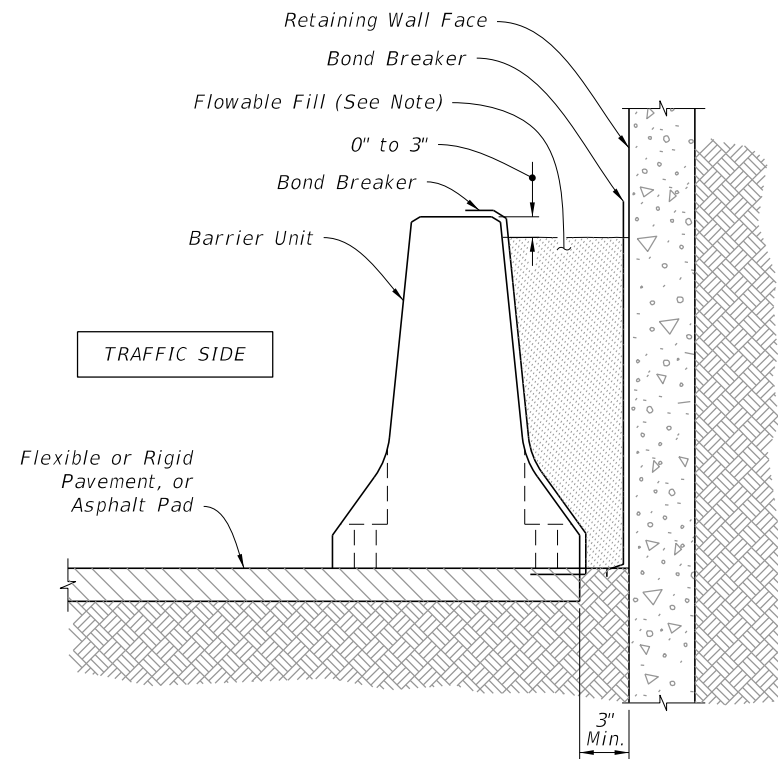


NOTE: Joint, set Barrier Units with 3 3/4" gap at locations shown.

DECK EXPANSION JOINT SCHEMATIC

2/14/2023 10:42:28 AM

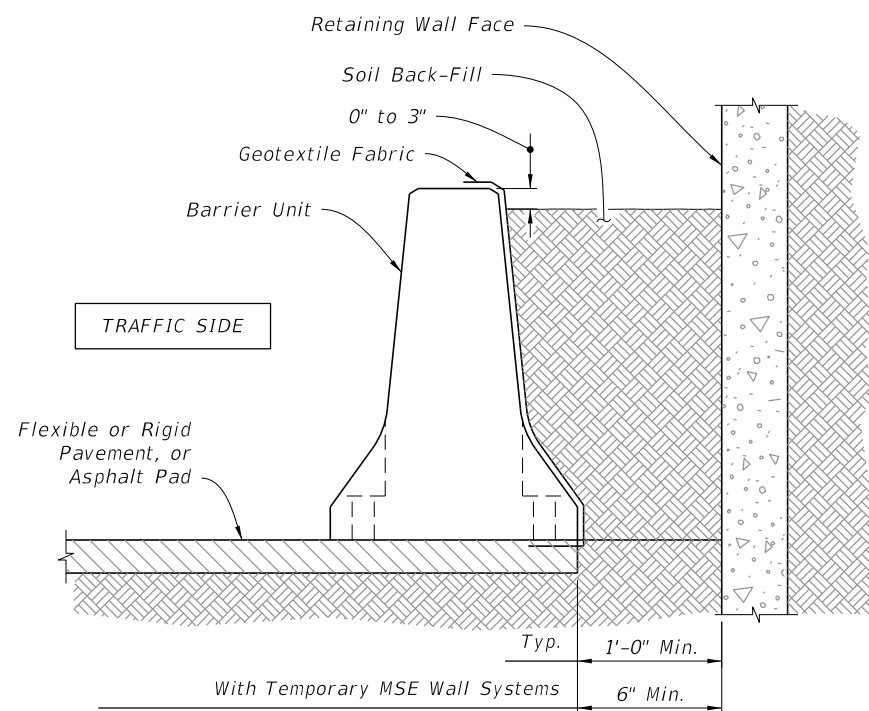
LAST REVISION 11/01/20	REVISION	DESCRIPTION: 11/01/23		FY 2023-24 STANDARD PLANS	TYPE K TEMPORARY CONCRETE BARRIER SYSTEM	INDEX 102-110	SHEET 2 of 17
---------------------------	----------	--------------------------	--	------------------------------	--	------------------	------------------



NOTE:
Provide Excavatable Flowable Fill in accordance with Specification 121.

TYPICAL SECTION
ADJACENT TO RETAINING WALL WITH FLOWABLE FILL BACK-FILL

FLOWABLE FILL BACK-FILL ROADSIDE INSTALLATIONS

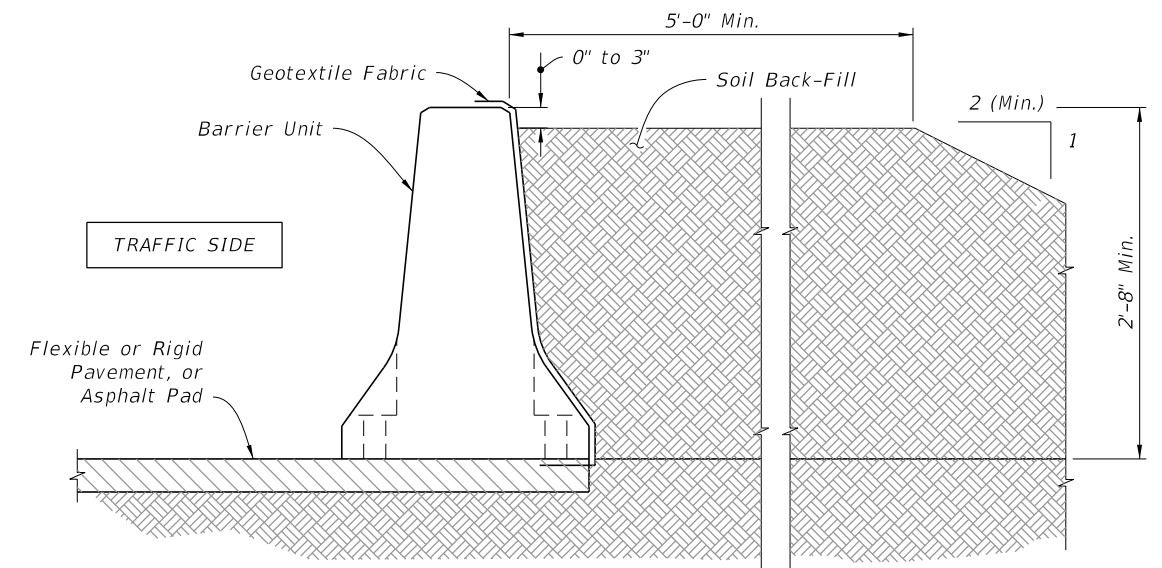


UPDATED: Provide and install Type D-5 geotextile in accordance with Specifications 514 to contain Back-Fill Materials behind the Barrier Units.

NOTES:

SOIL BACK-FILL MATERIAL: Provide Back-Fill Material consisting of any available clean soil. Compact Back-Fill Material until the soil mass is firm and unyielding. Provide erosion control as specified in the Plans. If none is specified in the Plans, provide erosion control as required to maintain the integrity of the Back Fill embankment.

GEOTEXTILE FABRIC: Provide Type D-5 Geotextile Fabric in accordance with Specification 985 to contain Back-Fill Material behind Barrier Units. Geotextile Fabric may be continuous over the length and height of the installation or may be individual pieces as required to cover the Lift/Drain Slots and open vertical joints between Barrier Units.



TYPICAL SECTION
ADJACENT TO RETAINING WALL WITH SOIL BACK-FILL

TYPICAL SECTION
WITH SOIL BACK-FILL

SOIL BACK-FILLED ROADSIDE INSTALLATIONS

10/6/2022 1:21:45 PM

LAST REVISION	DESCRIPTION:
11/01/17	
11/01/23	

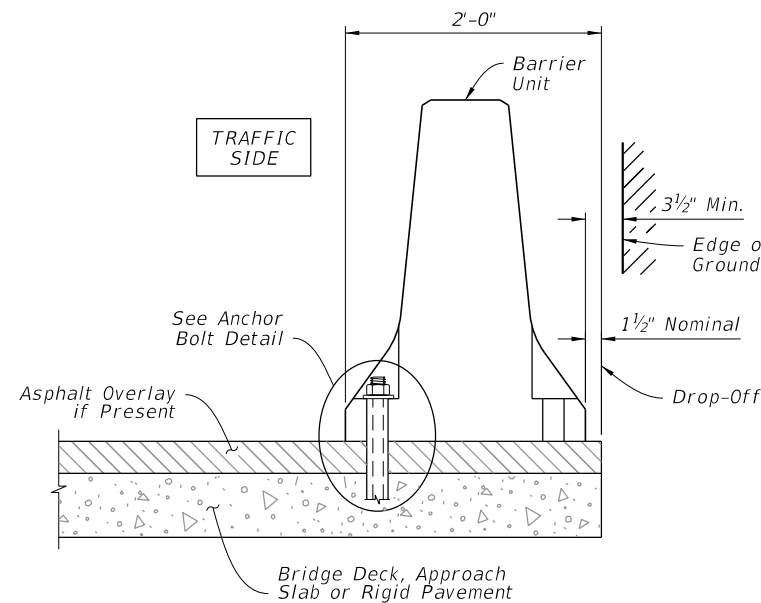


FY 2023-24
STANDARD PLANS

TYPE K TEMPORARY CONCRETE BARRIER SYSTEM

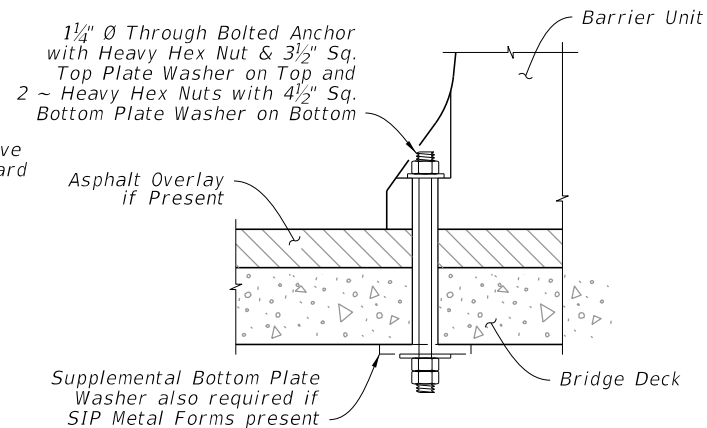
INDEX
102-110

SHEET
4 of 17

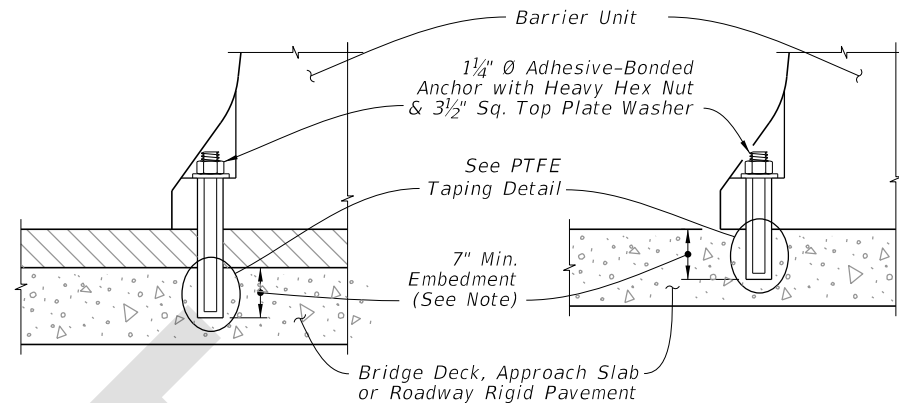


NOTE: Traffic Side for Transition to Median Traffic Railings, see Sheet 6

TYPICAL SECTION



THROUGH BOLTED ANCHOR

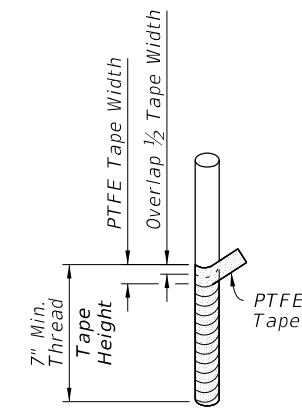


WITH ASPHALT OVERLAY

WITHOUT ASPHALT OVERLAY

NOTE: Wrap threads with a single overlapping layer of PTFE tape to facilitate removal of anchors.

ADHESIVE BONDED ANCHOR INSTALLATION



PTFE TAPING DETAIL

BOLTED INSTALLATION NOTES:

Bridge deck shown, approach slab or rigid pavement similar; installation adjacent to drop-off shown, median transition installation similar.

LIMITATION OF USE: This installation technique can only be used on rigid pavement and concrete bridge decks as shown. Anchor Bolts must not be installed on both sides of the Barrier Units. Do not bolt down Barrier Units across bridge finger or modular expansion joints.

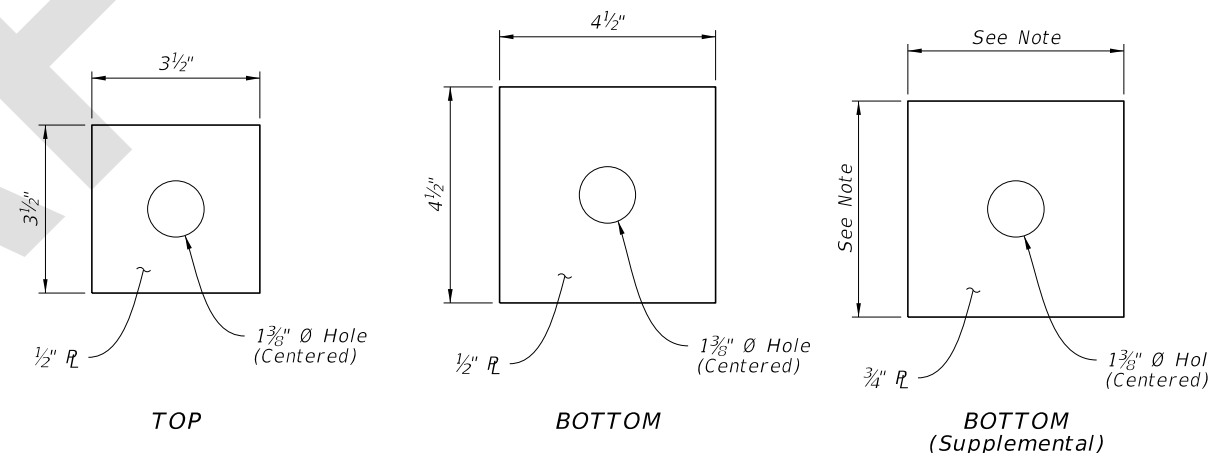
ANCHOR BOLTS, NUTS AND WASHERS: When using Adhesive-Bonded Anchor Bolts, use fully threaded rods in accordance with ASTM F 1554 Grade 36. Install Anchor Bolts for through bolting in accordance with ASTM A 307 or ASTM F 1554 Grade 36. Install nuts in accordance with ASTM A 563 or ASTM A 194. Install Flat Washers in accordance with ASTM F 436 and Plate Washers in accordance with ASTM A 36 or ASTM A 709 Grade 36.

Install three (3) Anchor Bolts per Barrier Unit on the traffic side of the Barrier Units as shown, except for Transition Installations. For the number and positions of Anchor Bolts required in Transition Installations see Sheets 8 and 9 and Index 102-100. Drilling through deck reinforcing steel to install Anchor Bolts is permitted. Unless otherwise shown in the Plans, at the Contractor's option Barrier Units may be installed by through bolting (where geometrically possible) or by the use of Adhesive-Bonded Anchor Bolts. Do not drill into or otherwise damage the tops of supporting beams or girders, bridge deck expansion joints or drains. Install Anchor Bolts and Nuts so that the maximum extension beyond the face of the Barrier Units is 1/2". Snug tighten the Nuts on the Anchor Bolts. For through bolted installations, snug tighten the double Nuts on the underside of the deck against each other to minimize the potential for loosening.

Omit one (1) Anchor Bolt within a single Barrier Unit if a conflict exists between the Anchor Bolt location and a bridge deck expansion joint or drain. The adjacent Barrier Units must each be installed with the standard three (3) Anchor Bolts.

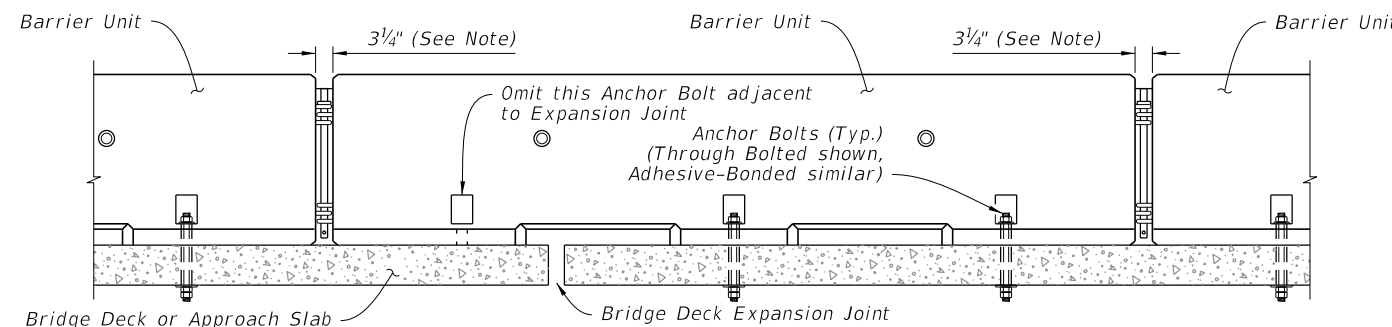
Omit one (1) Anchor Bolt within a single Barrier Unit as shown in the Treatment at Bridge Deck Expansion Joint Schematic if the Barrier Unit straddles a bridge deck expansion joint. The adjacent Barrier Units must each be installed with the standard three (3) Anchor Bolts.

ADHESIVE-BONDING MATERIAL SYSTEMS: When using adhesive bonding material systems for anchor bolts, use a Type HSHV adhesive meeting the requirements of Specification 937 and listed on the APL. Install anchor bolts in accordance with Specification 416. Field testing requirements of Specification 416 do not apply.



NOTE: Dimension as required to span SIP Metal Form Corrugations plus 1/2" Minimum overlap each side.

PLATE WASHER DETAIL




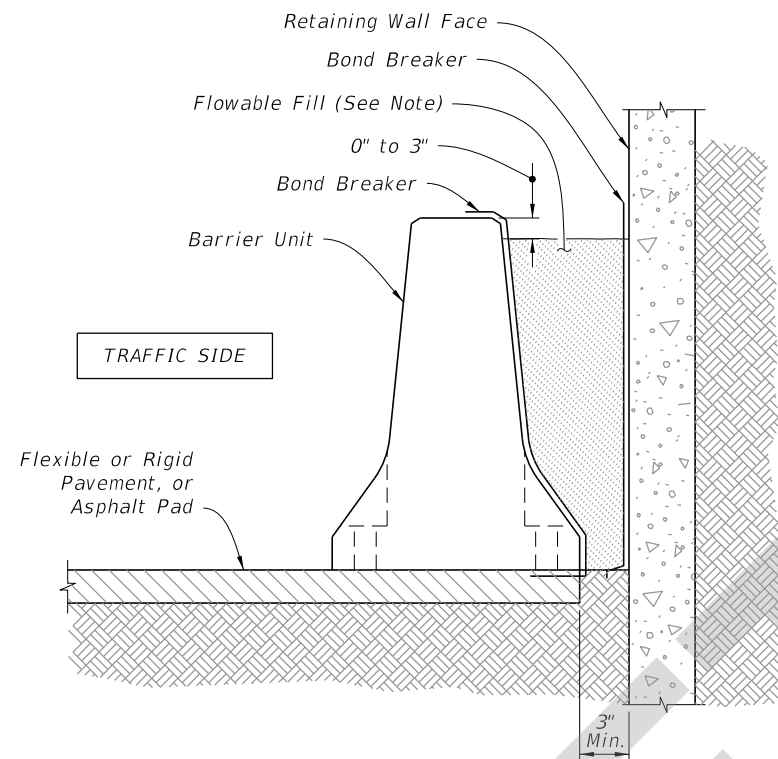
NOTE: To accommodate movement at Expansion Joint, set Barrier Units with 3 3/4" gap at locations shown.

TREATMENT AT BRIDGE DECK EXPANSION JOINT SCHEMATIC

ANCHORED INSTALLATIONS - BOLTED

6/5/2023 9:07:13 AM

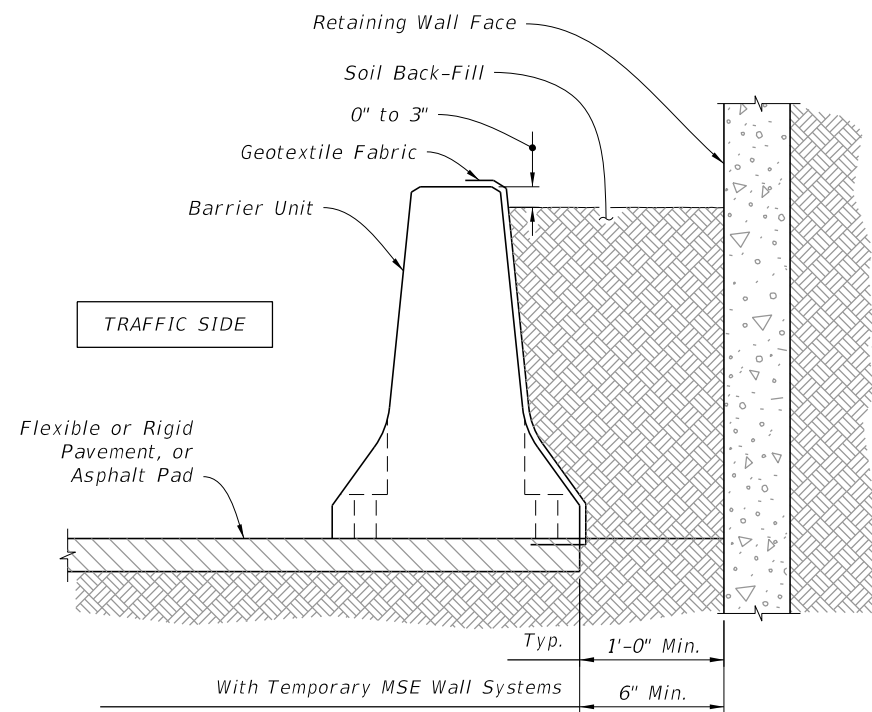
LAST REVISION 11/01/23	REVISION	DESCRIPTION:	 FY 2024-25 STANDARD PLANS	TYPE K TEMPORARY CONCRETE BARRIER SYSTEM	INDEX 102-110	SHEET 2 of 17
---------------------------	----------	--------------	---	---	------------------	------------------



NOTE:
Provide Excavatable Flowable Fill in accordance with Specification 121.

TYPICAL SECTION
ADJACENT TO RETAINING WALL WITH FLOWABLE FILL BACK-FILL

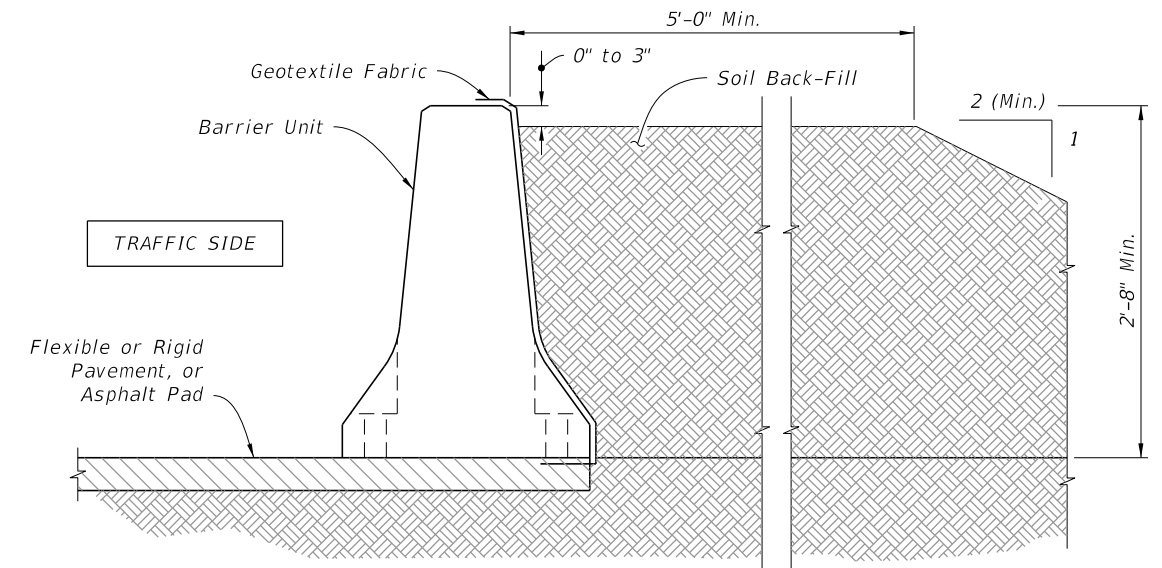
FLOWABLE FILL BACK-FILL ROADSIDE INSTALLATIONS



TYPICAL SECTION
ADJACENT TO RETAINING WALL WITH SOIL BACK-FILL

NOTES:
SOIL BACK-FILL MATERIAL: Provide Back-Fill Material consisting of any available clean soil. Compact Back-Fill Material until the soil mass is firm and unyielding. Provide erosion control as specified in the Plans. If none is specified in the Plans, provide erosion control as required to maintain the integrity of the Back-Fill embankment.


GEOTEXTILE: Provide and install Type D-5 geotextile in accordance with Specification 514 to contain Back-Fill Material behind the Barrier Units. Geotextile may be continuous over the length and height of the installation or may be individual pieces as required to cover the Lift/DrainSlots and open vertical joints between Barrier Units.



TYPICAL SECTION
WITH SOIL BACK-FILL

SOIL BACK-FILLED ROADSIDE INSTALLATIONS

6:58:33 AM
7/5/2023

LAST REVISION 11/01/23	REVISION	DESCRIPTION:		FY 2024-25 STANDARD PLANS	TYPE K TEMPORARY CONCRETE BARRIER SYSTEM	INDEX 102-110	SHEET 4 of 17
---------------------------	----------	--------------	---	------------------------------	--	------------------	------------------