FY 2022-23 Standard Plans
Update Training

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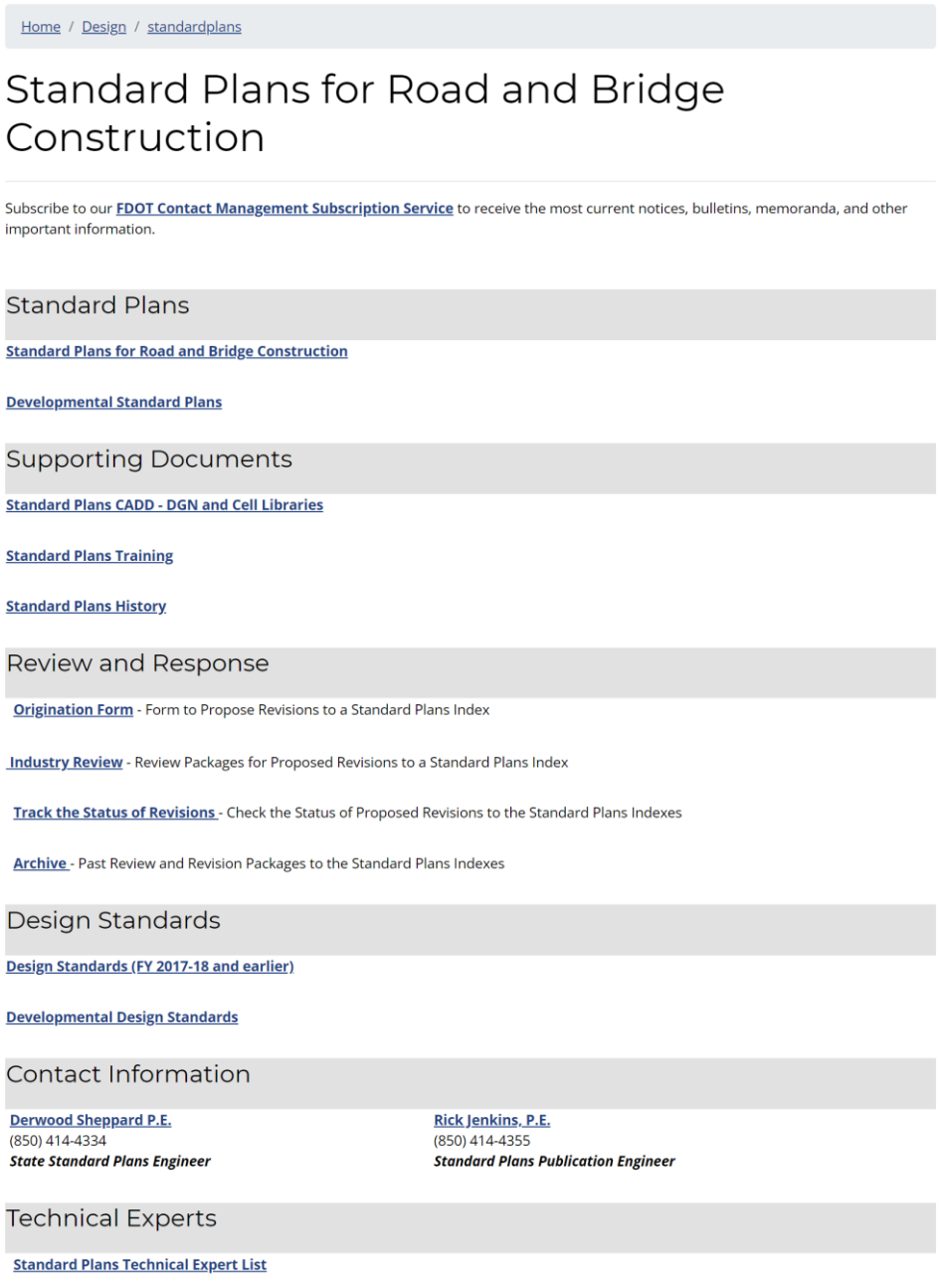
Update Training Agenda

- **General Overview**
  - **Rick Jenkins**
    - Website Updates (http://www.fdot.gov/design/standardplans/)
- **Standard Plans Updates**
  - **Rick Jenkins**
    - Miscellaneous Roadway Updates
  - **Derwood Sheppard**
    - 102 Series Temporary Traffic Control Updates
  - **Joshua Turley**
    - Structures and Bridge Related Updates

Standard Plans – Website Updates

Website:

http://www.fdot.gov/design/standardplans/



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Standard Plans for Road and Bridge Construction

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Standard Plans

Standard Plans for Road and Bridge Construction

Developmental Standard Plans

Supporting Documents

Standard Plans CADD - DGN and Cell Libraries

Standard Plans Training

Standard Plans History

Review and Response

Origination Form - Form to Propose Revisions to a Standard Plans Index

Industry Review - Review Packages for Proposed Revisions to a Standard Plans Index

Track the Status of Revisions - Check the Status of Proposed Revisions to the Standard Plans Indexes

Archive - Past Review and Revision Packages to the Standard Plans Indexes

Design Standards

Design Standards (FY 2017-18 and earlier)

Developmental Design Standards

Contact Information

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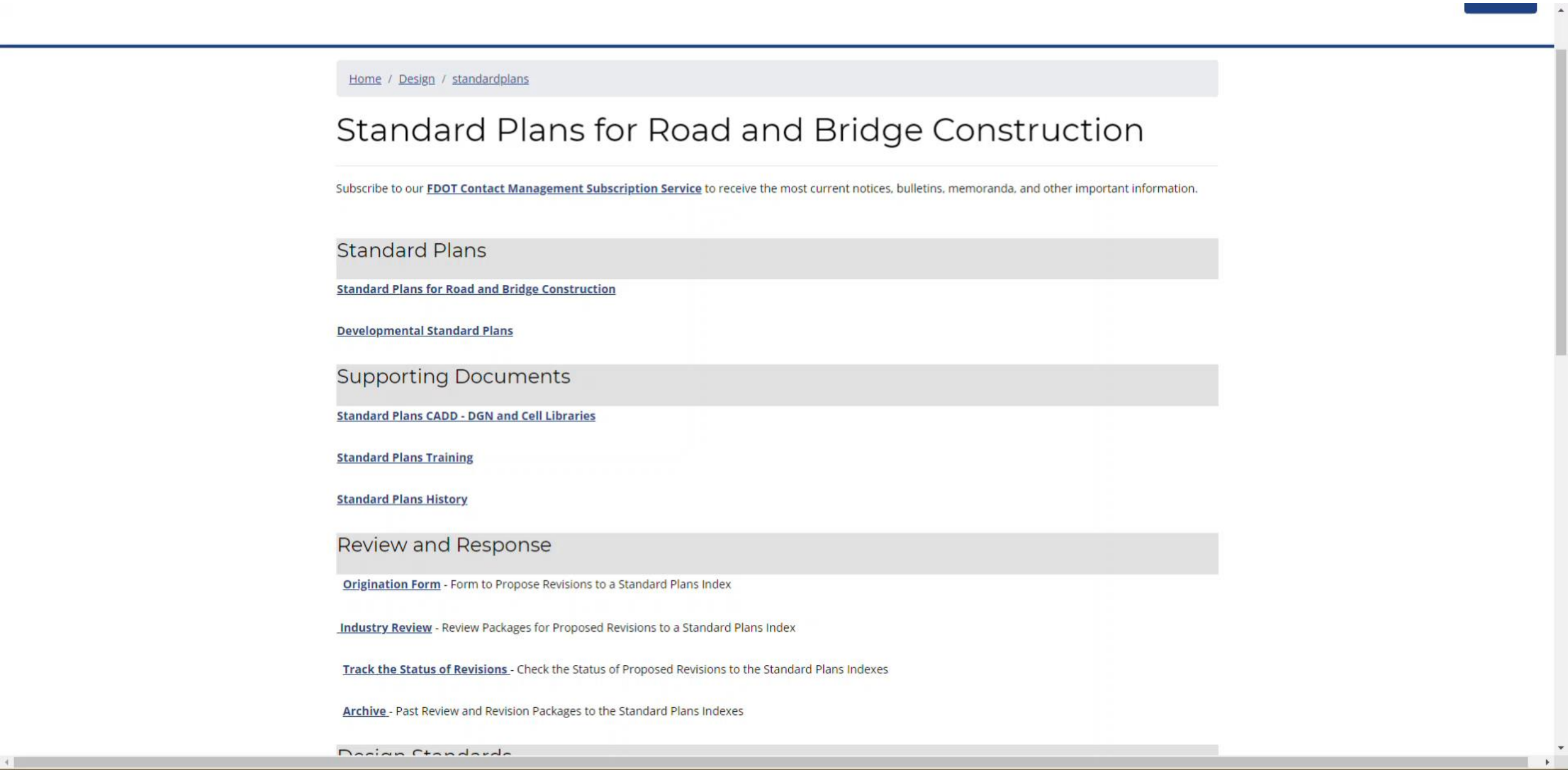
Standard Plans Publication Engineer

Technical Experts

Standard Plans Technical Expert List

Standard Plans – Website Updates



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Design Standards

- ***Standard Plans - Updates***:

  - ✓ General Overview, Agenda and Website
  - → Critical Roadway, Drainage, Traffic and Lighting Updates to the 2022-2023 Standard Plans Indexes

LET'S GET TO WORK

Per the request of Industry, the State Material Office removed Class I Concrete from the Specifications

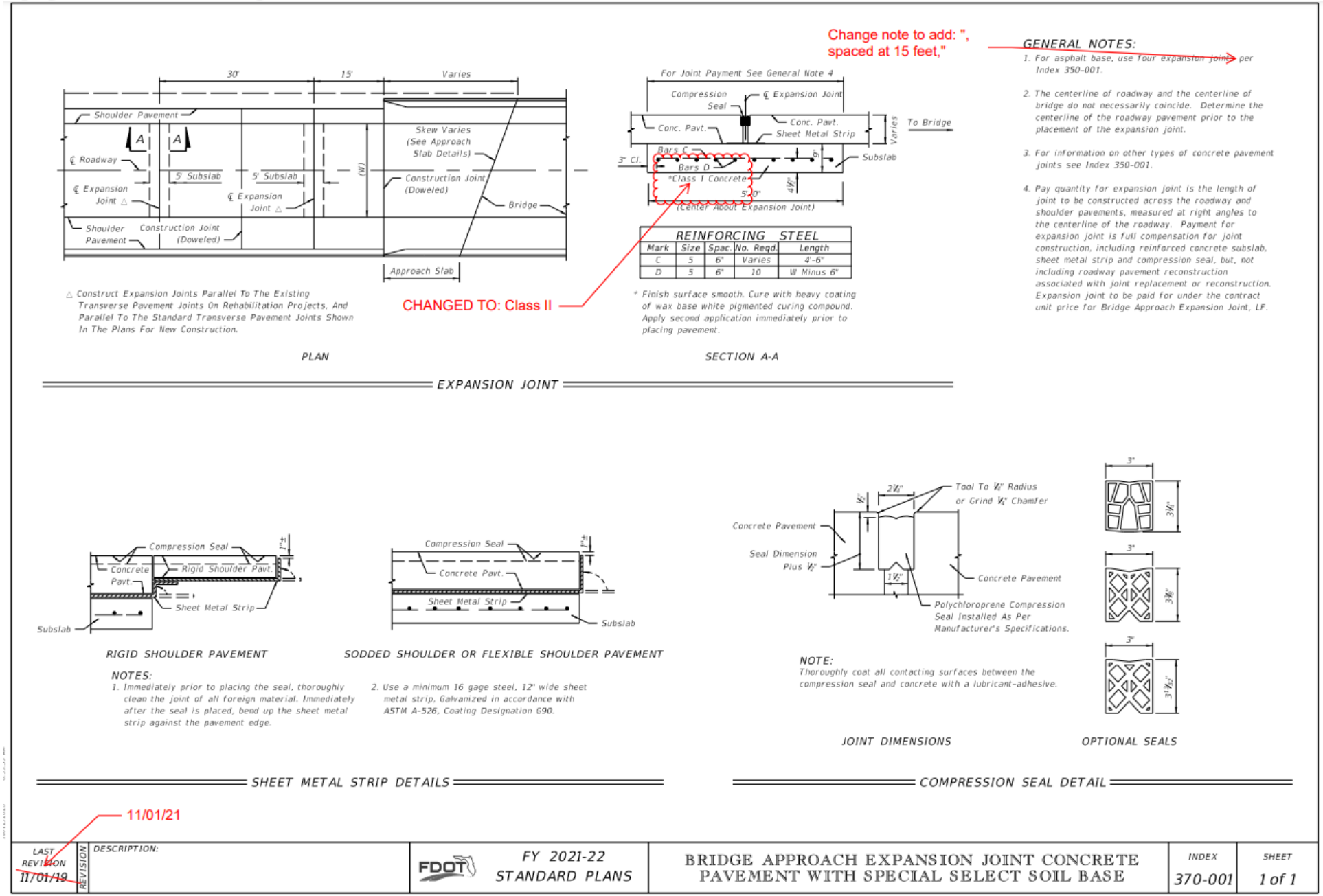
- ***All references in the Standard Plans to Class I Concrete were updated to Class II Concrete***

List of Indexes Updated:

- 370-001
- 425-060
- 430-010
- 430-011
- 430-012
- 430-020
- 430-030
- 430-040
- 430-090
- 440-002
- 508-T01
- 509-100
- 550-001
- 646-001
- 700-010
- 700-011
- 700-020
- 715-002

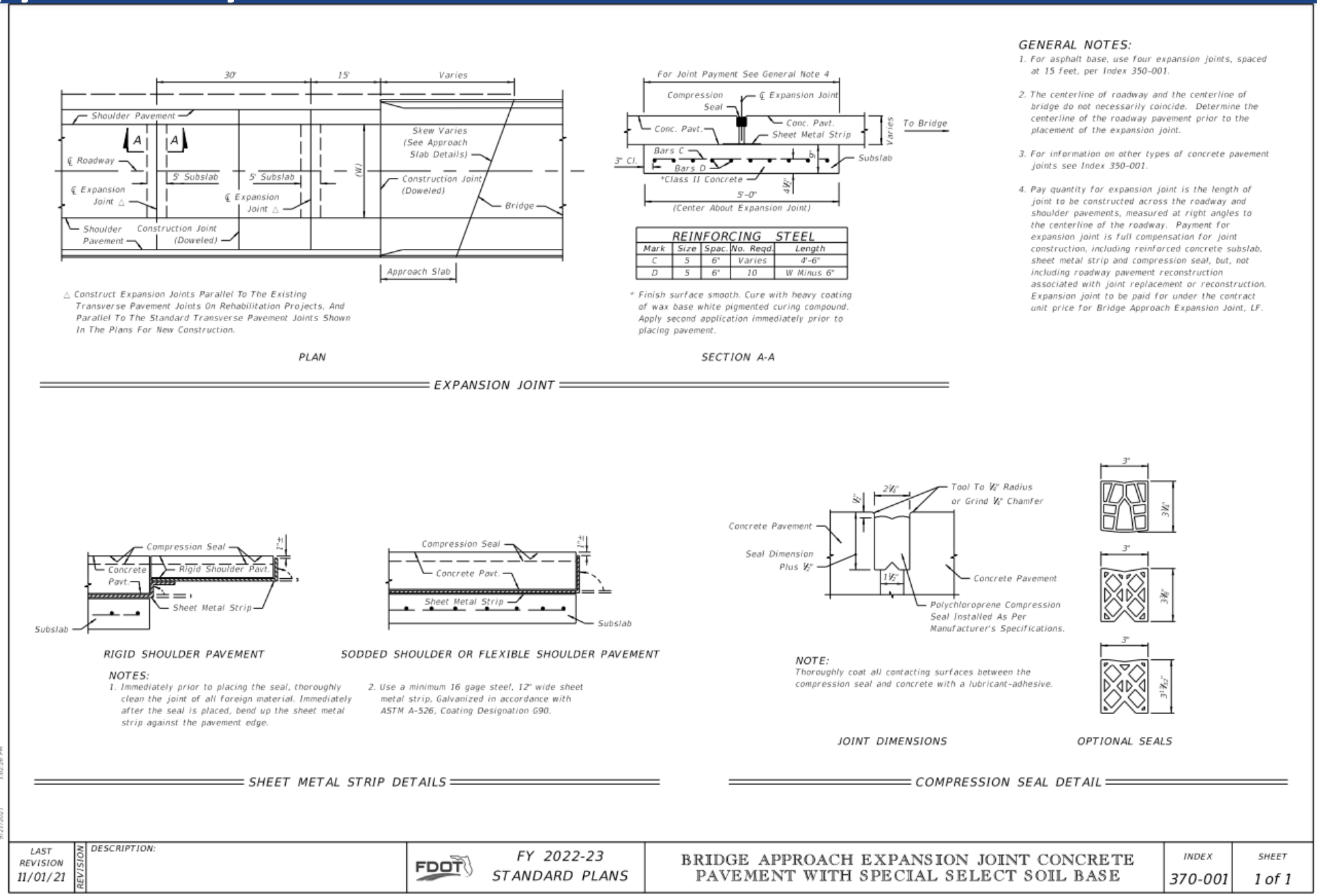
Bridge Approach Expansion Joint Concrete Pavement – Index 370-001

- ***Class I Concrete to Class II***
- ***Updated General Note 1***



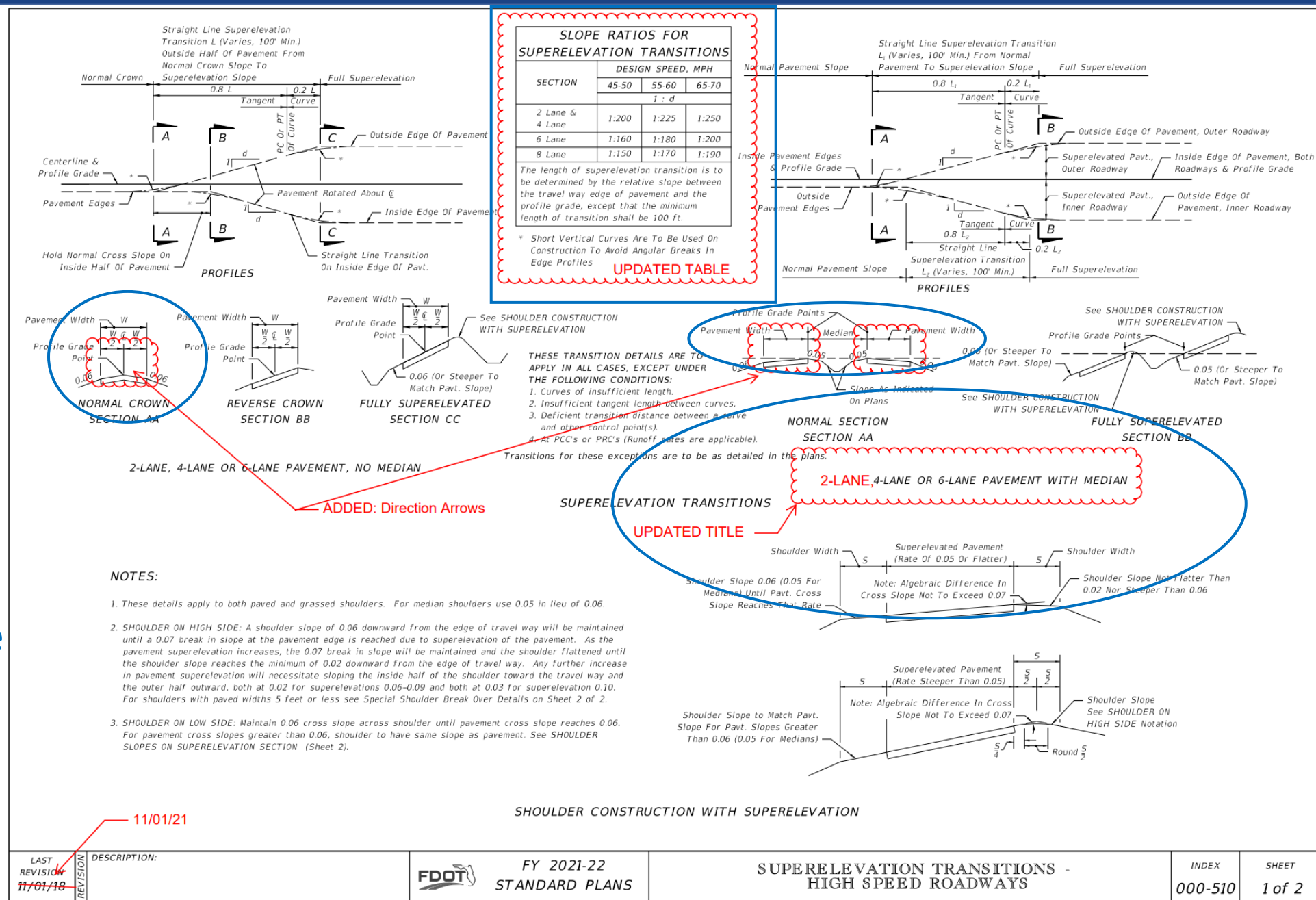
Bridge Approach Expansion Joint Concrete Pavement – Index 370-001

- ***Updated Index***



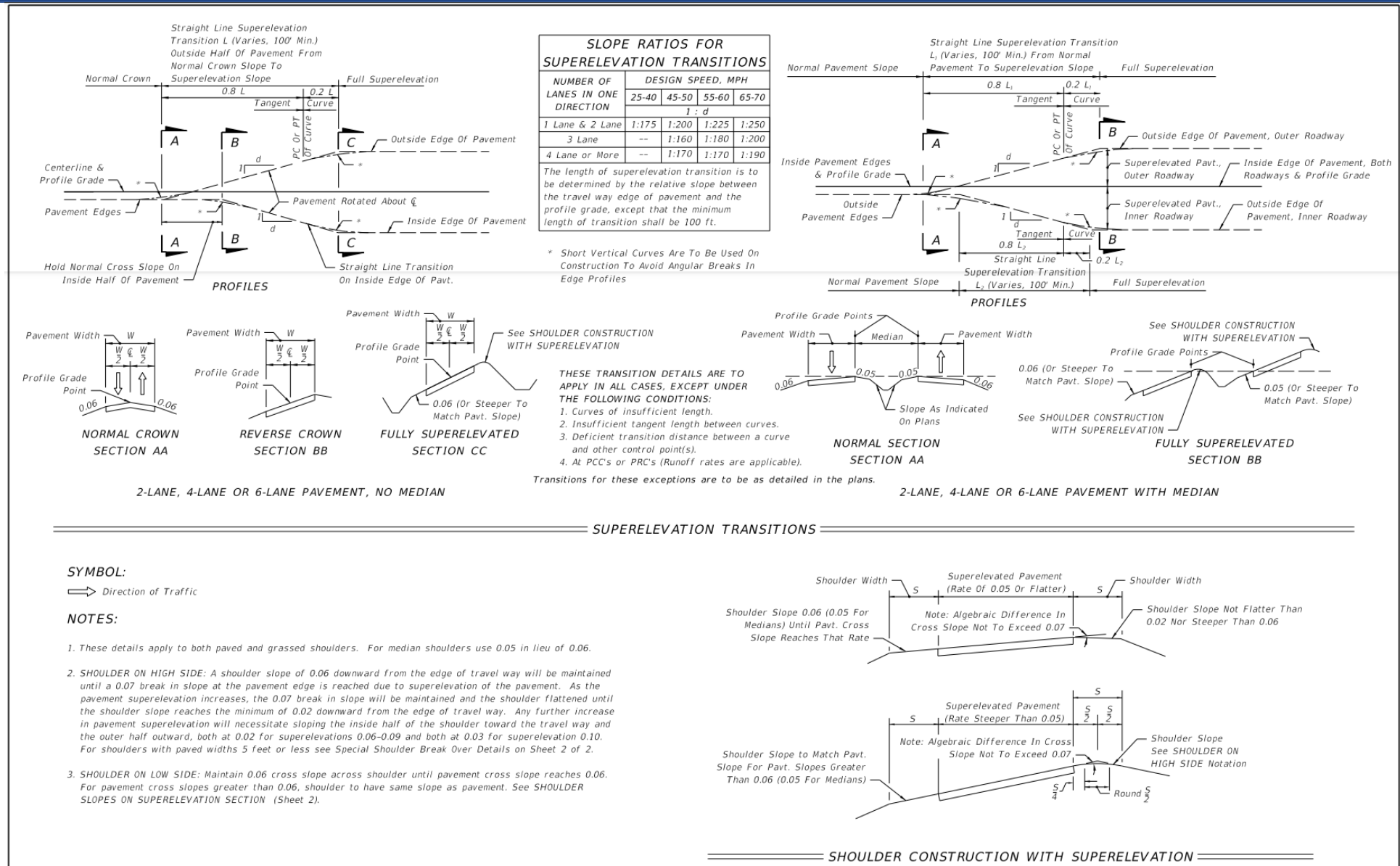
Superelevation Transitions, Index 000-510 & 511

- ***Updates to Index 000-510***:
  - Update to be consistent with FDM
  - Added Direction Arrows
  - Updated Slope Ratios Table
  - Added 2-Lane Option to Pavement with Median Detail



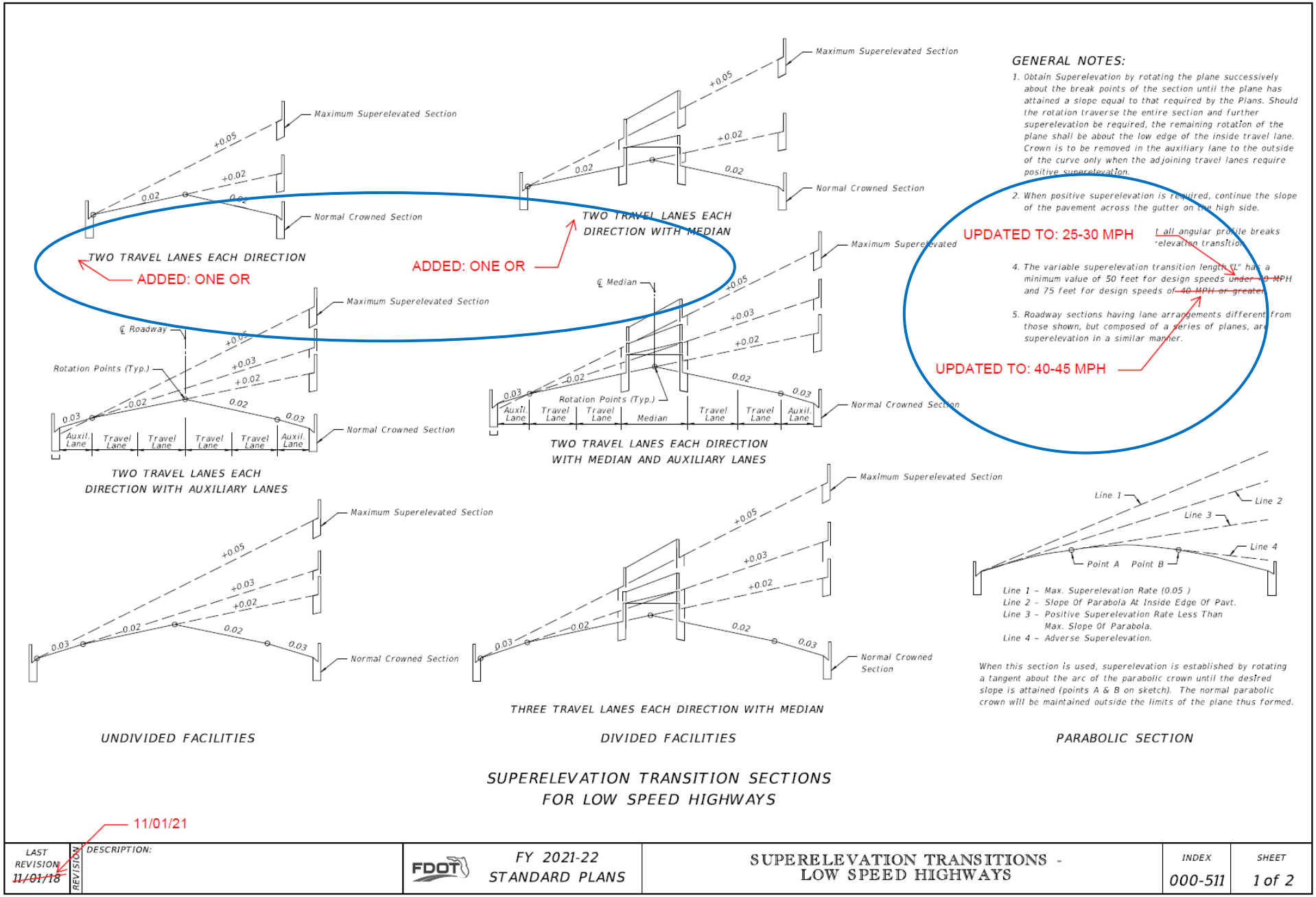
Superelevation Transitions, Index 000-510 & 511

- ***Updated Sheet 1 on Index 000-510***:



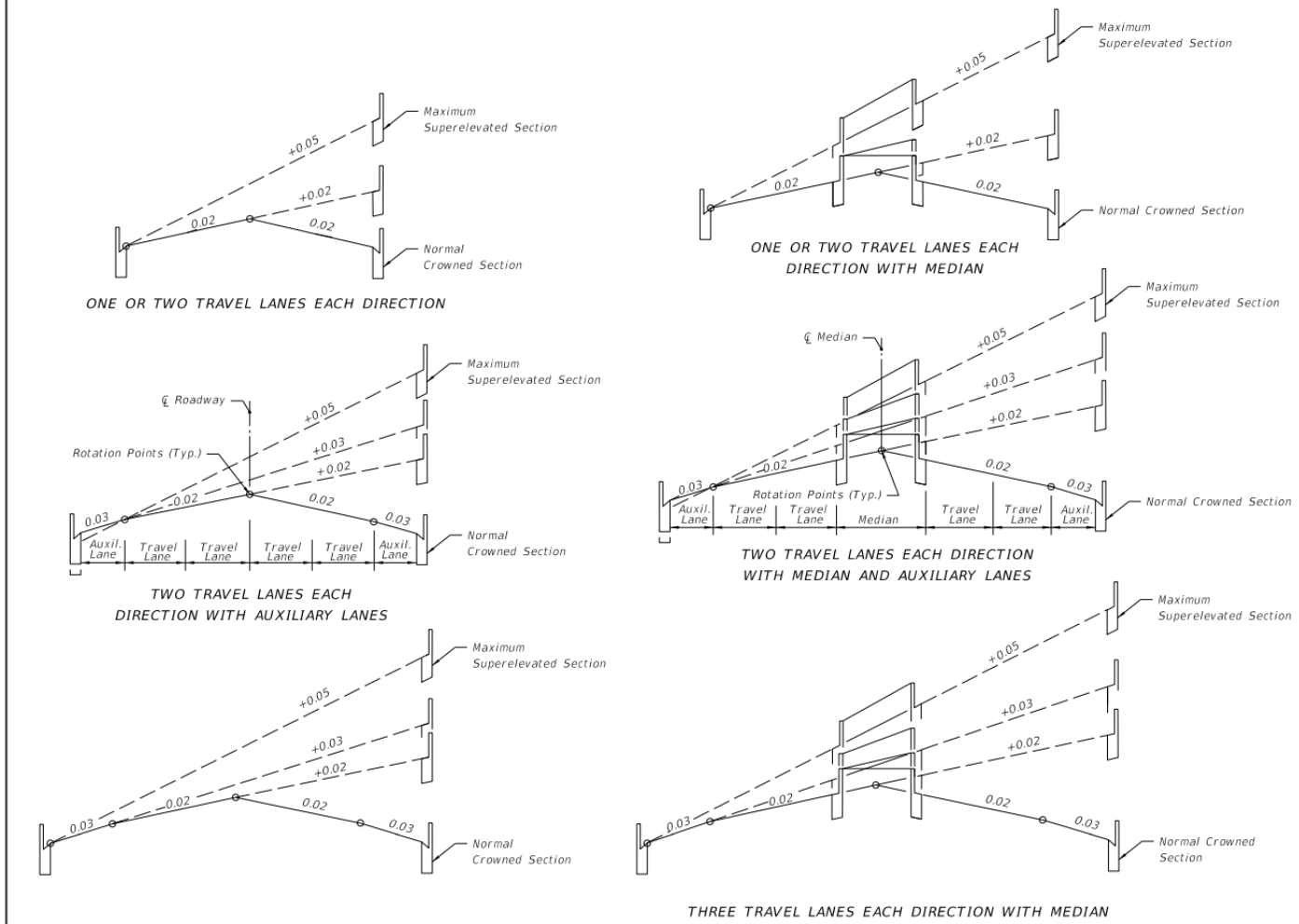
Superelevation Transitions, Index 000-510 & 511

- ***Updates to Index 000-511***:
  - Update to be consistent with FDM
  - Updated General Note 4
  - Added One Lane Option



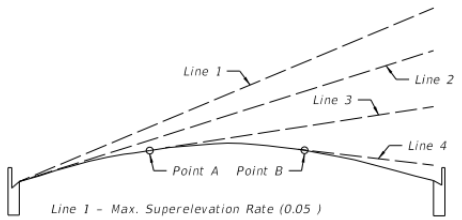
Superelevation Transitions, Index 000-510 & 511

- ***Updated Sheet 1 on Index 000-511***:



GENERAL NOTES:

1. Obtain Superelevation by rotating the plane successively about the break points of the section until the plane has attained a slope equal to that required by the Plans. Should the rotation traverse the entire section and further superelevation be required, the remaining rotation of the plane shall be about the low edge of the inside travel lane. Crown is to be removed in the auxiliary lane to the outside of the curve only when the adjoining travel lanes require positive superelevation.
2. When positive superelevation is required, continue the slope of the pavement across the gutter on the high side.
3. Place short vertical curves at all angular profile breaks within the limits of the superelevation transition.
4. The variable superelevation transition length "L" has a minimum value of 50 feet for design speeds of 25–30 MPH and 75 feet for design speeds of 40–45 MPH.
5. Roadway sections having lane arrangements different from those shown, but composed of a series of planes, are superelevation in a similar manner.



Line 1 – Max. Superelevation Rate (0.05)
Line 2 – Slope Of Parabola At Inside Edge Of Pavt.
Line 3 – Positive Superelevation Rate Less Than Max. Slope Of Parabola.
Line 4 – Adverse Superelevation.

When this section is used, superelevation is established by rotating a tangent about the arc of the parabolic crown until the desired slope is attained (points A & B on sketch). The normal parabolic crown will be maintained outside the limits of the plane thus formed.

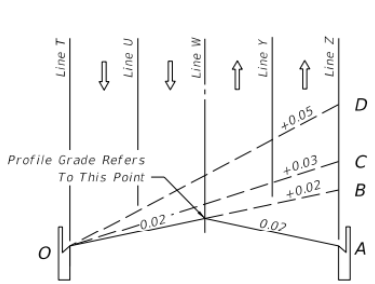
PARABOLIC SECTION

SUPERELEVATION TRANSITION SECTIONS FOR LOW SPEED HIGHWAYS

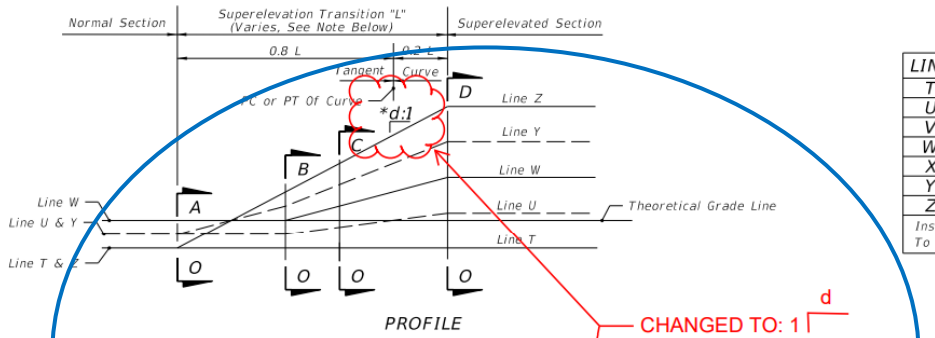
LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	SUPERELEVATION TRANSITIONS - LOW SPEED HIGHWAYS	INDEX	SHEET
11/01/21						000-511	1 of 2

Superelevation Transitions, Index 000-510 & 511

- ***Updates to Index 000-511***:
  - Update to be consistent with FDM
  - Updated Slope Ratio Table
  - Clarified Ratio Callout



SECTION 0-A to 0-D

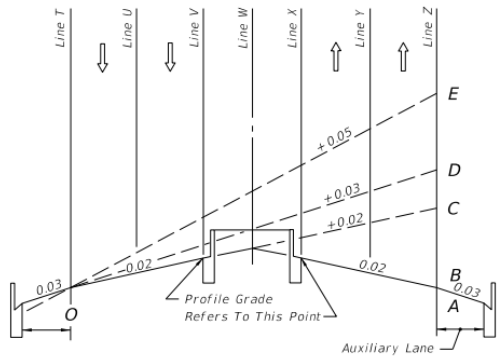


TWO LANES EACH DIRECTION

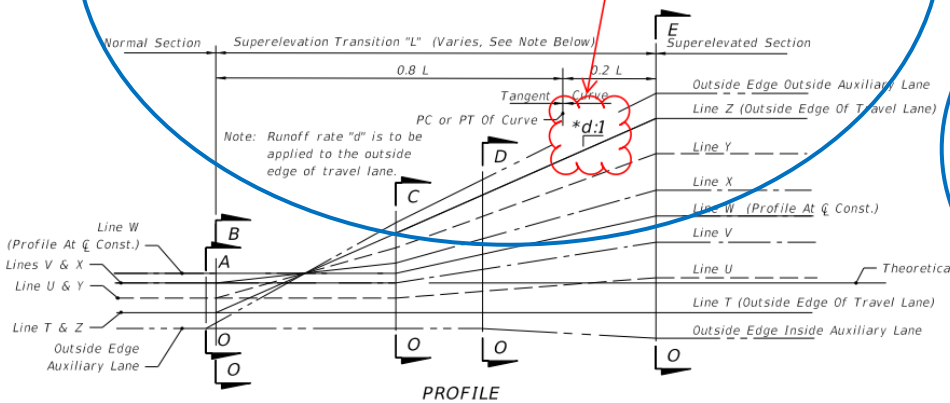
LINE	DESCRIPTION
T	Inside Travel Lane
U	Inside Lane Line
V	Inside Median Edge Pavement
W	℄ Construction
X	Outside Median Edge Pavement
Y	Outside Lane Line
Z	Outside Travel Lane

Inside And Outside Are Relative To Curve Center

CHANGED TO: 1 d



SECTION 0-A to 0-E



UPDATED TABLE

*d (Slope Ratio)	
30 MPH	1: 100
40 MPH	1: 125
45 MPH △	1: 150

△ 1: 125 May Be Used For 45 MPH Under Restricted Conditions.

TWO LANES EACH DIRECTION WITH MEDIAN AND AUXILIARY LANE

Note: The sections and profiles shown are examples of superelevation transitions. Similar schemes should be used for roadways having other sections.

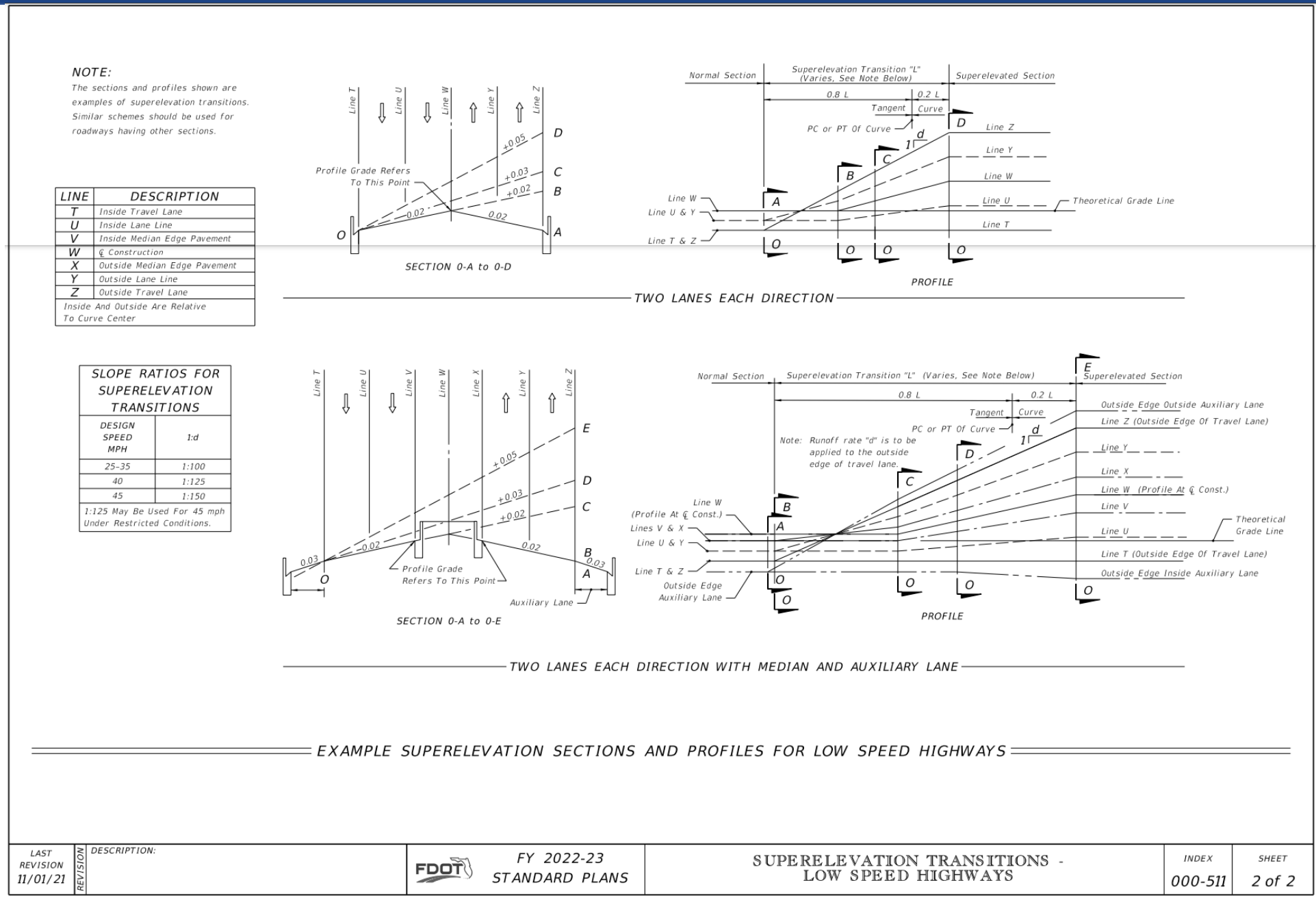
EXAMPLE SUPERELEVATION SECTIONS AND PROFILES FOR LOW SPEED HIGHWAYS

11/01/21

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2021-22 STANDARD PLANS	SUPERELEVATION TRANSITIONS - LOW SPEED HIGHWAYS	INDEX	SHEET
~~11/01/20~~						000-511	2 of 2

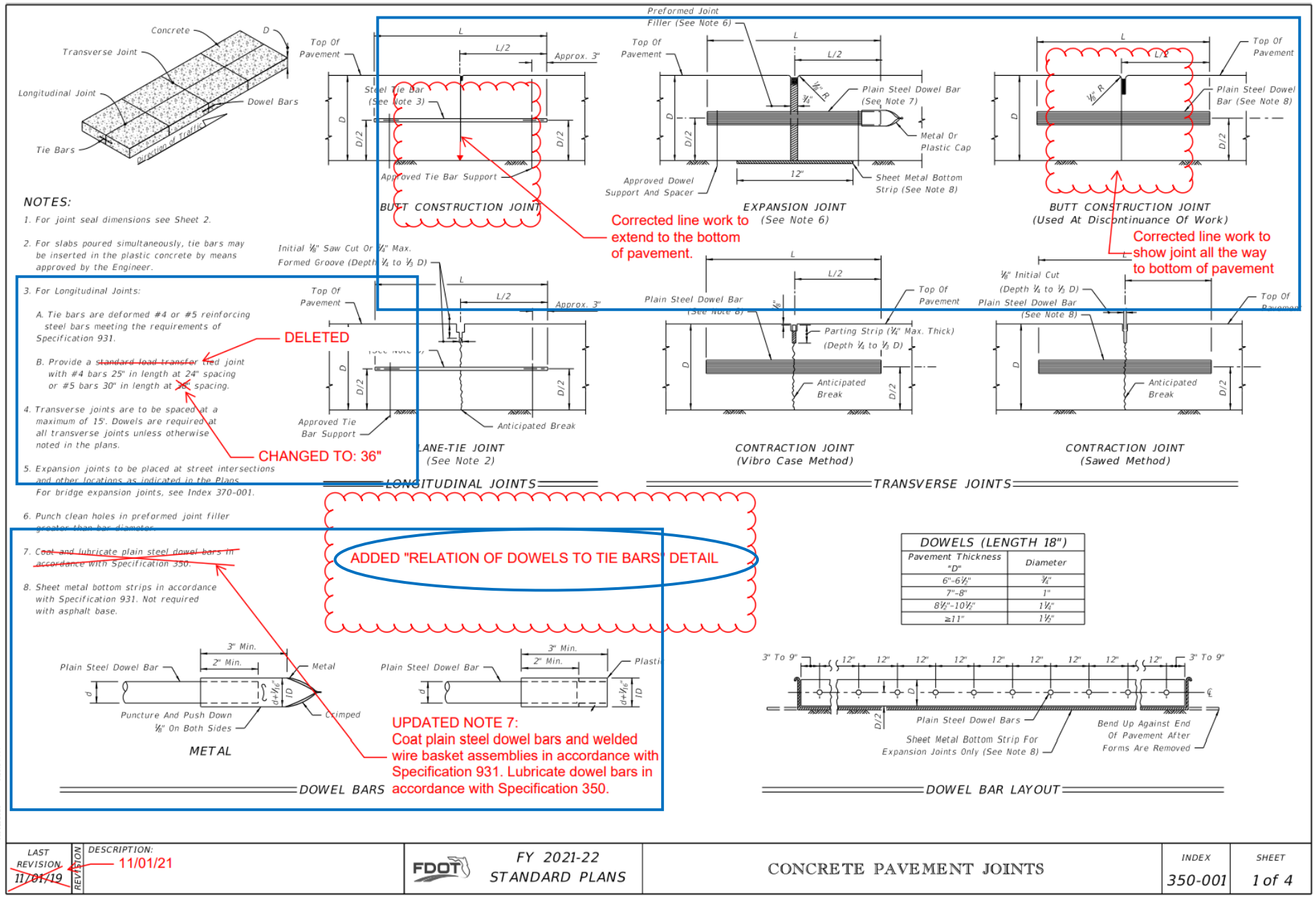
Superelevation Transitions, Index 000-510 & 511

- ***Updated Sheet 2 on Index 000-511***:



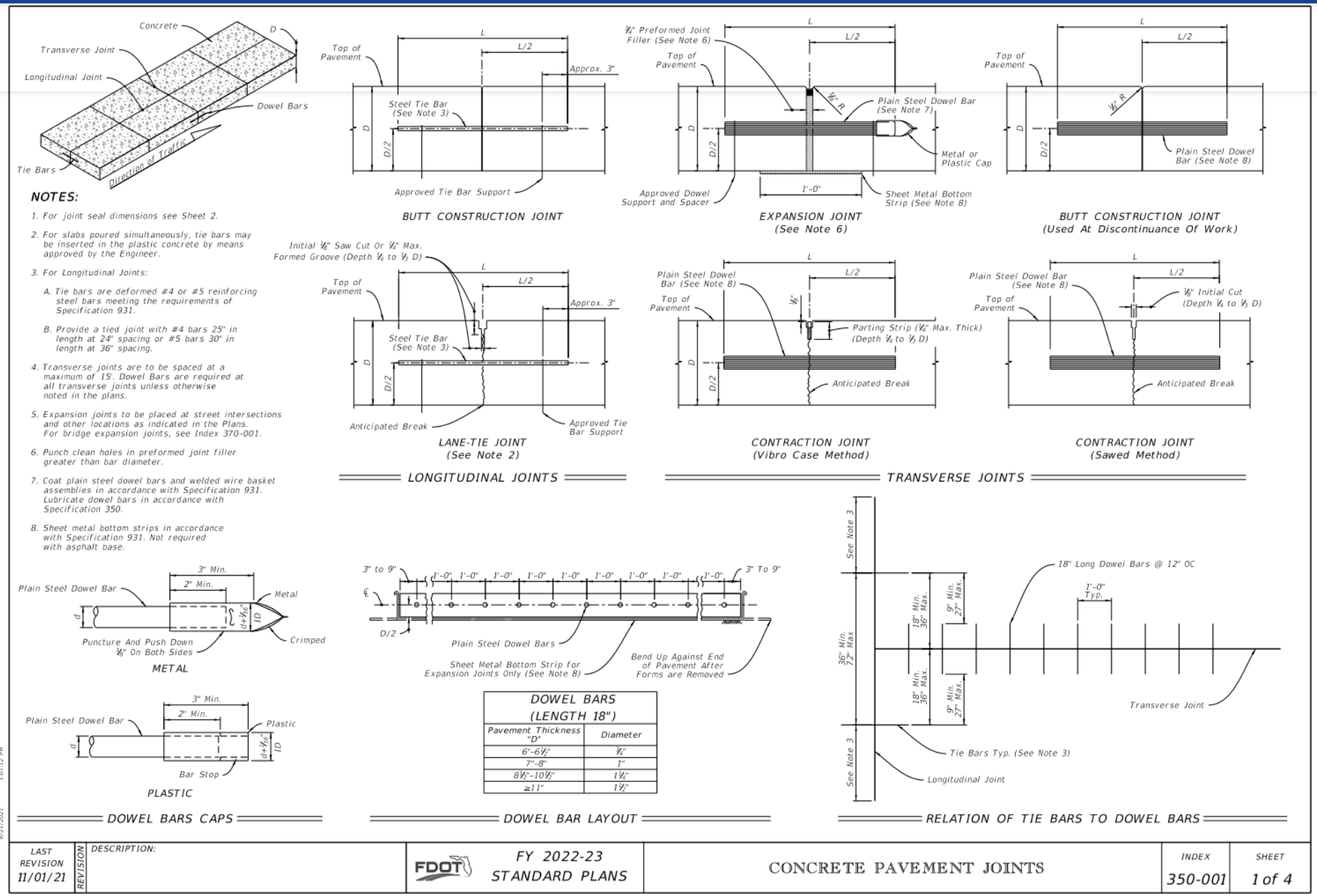
Concrete Pavement Joints, Index 350-001

- ***Updates to Index***:
  - Updated Note 3.B and Note 7
  - Clarify Butt Construction Joint Details
  - Added Relation of Dowels to Tie Bars Detail



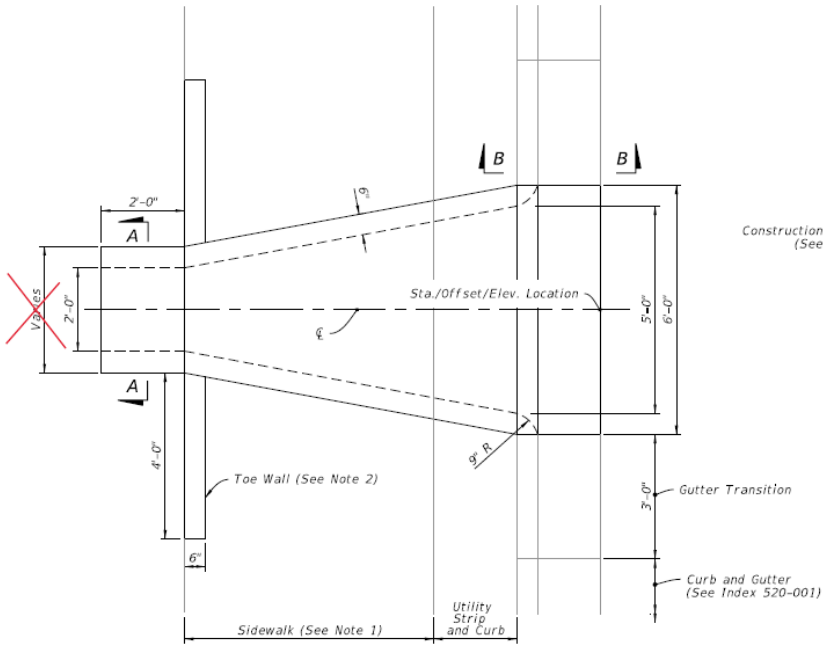
Concrete Pavement Joints, Index 350-001

- ***Updated Sheet 1 to Index 350-001***:

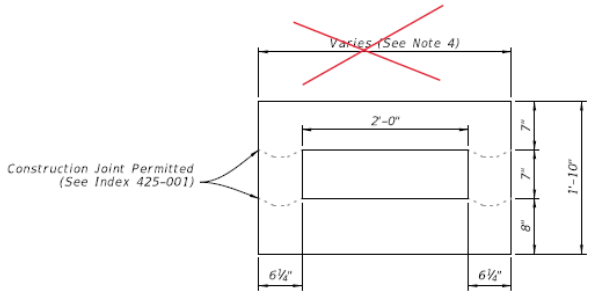


Closed Flume Inlet– Index 425-061

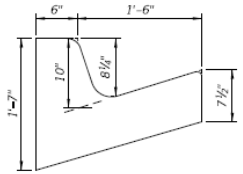
- ***Updated Index 425-061***
  - Added Flume Length Varies label



PLAN



SECTION A-A

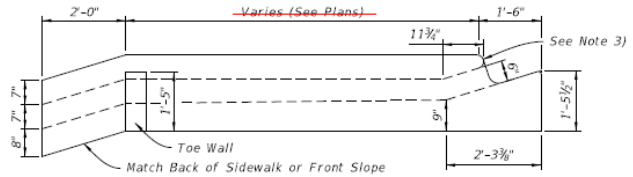


SECTION B-B

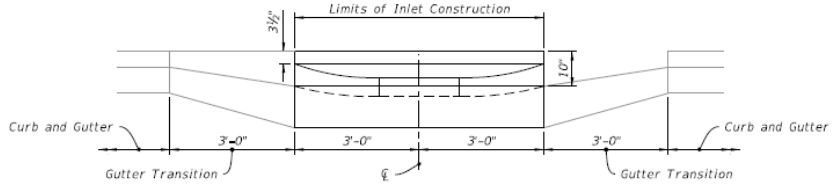
NOTES:

1. Use sloped section with sidewalk applications only.
2. Use Toe Walls with Sidewalk application only. For Endwall without Sidewalk see DETAILS on Sheet 4.
3. Slope to match adjacent curb with 2" top radius and 1¼" bottom radius.
4. ~~Varies from 3'-½" to 6'-0" for single barrel flume~~. See Sheet 5 for multiple barrel flumes span variation.

CHANGED TO: Flume Length Varies (See Plans)



SIDE ELEVATION



FRONT ELEVATION

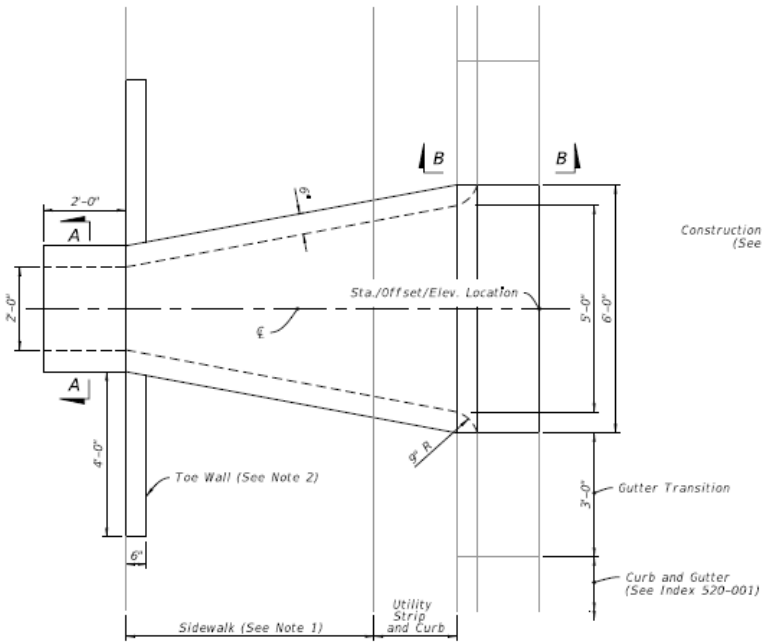
11/01/21

TYPE-I DIMENSIONAL DETAILS

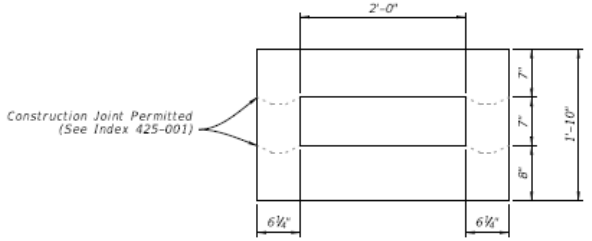
LAST REVISION 11/01/20	DESCRIPTION:	FY 2021-22 STANDARD PLANS	CLOSED FLUME INLET	INDEX 425-061	SHEET 2 of 5

Closed Flume Inlet– Index 425-061

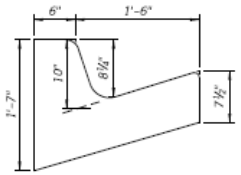
- ***Updated Index 425-061 Sheet 2***



PLAN



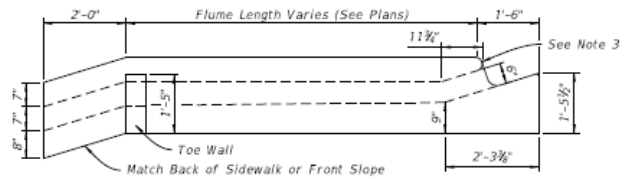
SECTION A-A



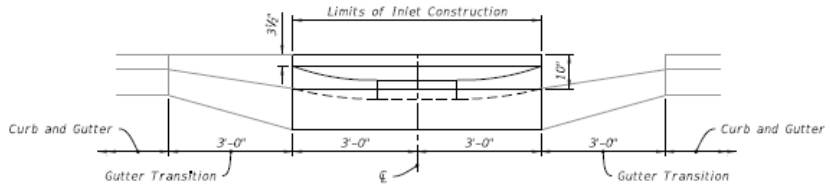
SECTION B-B

NOTES:

1. Use sloped section with sidewalk applications only.
2. Use Toe Walls with Sidewalk application only. For Endwall without Sidewalk see DETAILS on Sheet 4.
3. Slope to match adjacent curb with 2" top radius and 1½" bottom radius.
4. See Sheet 5 for multiple barrel flumes span variation.



SIDE ELEVATION



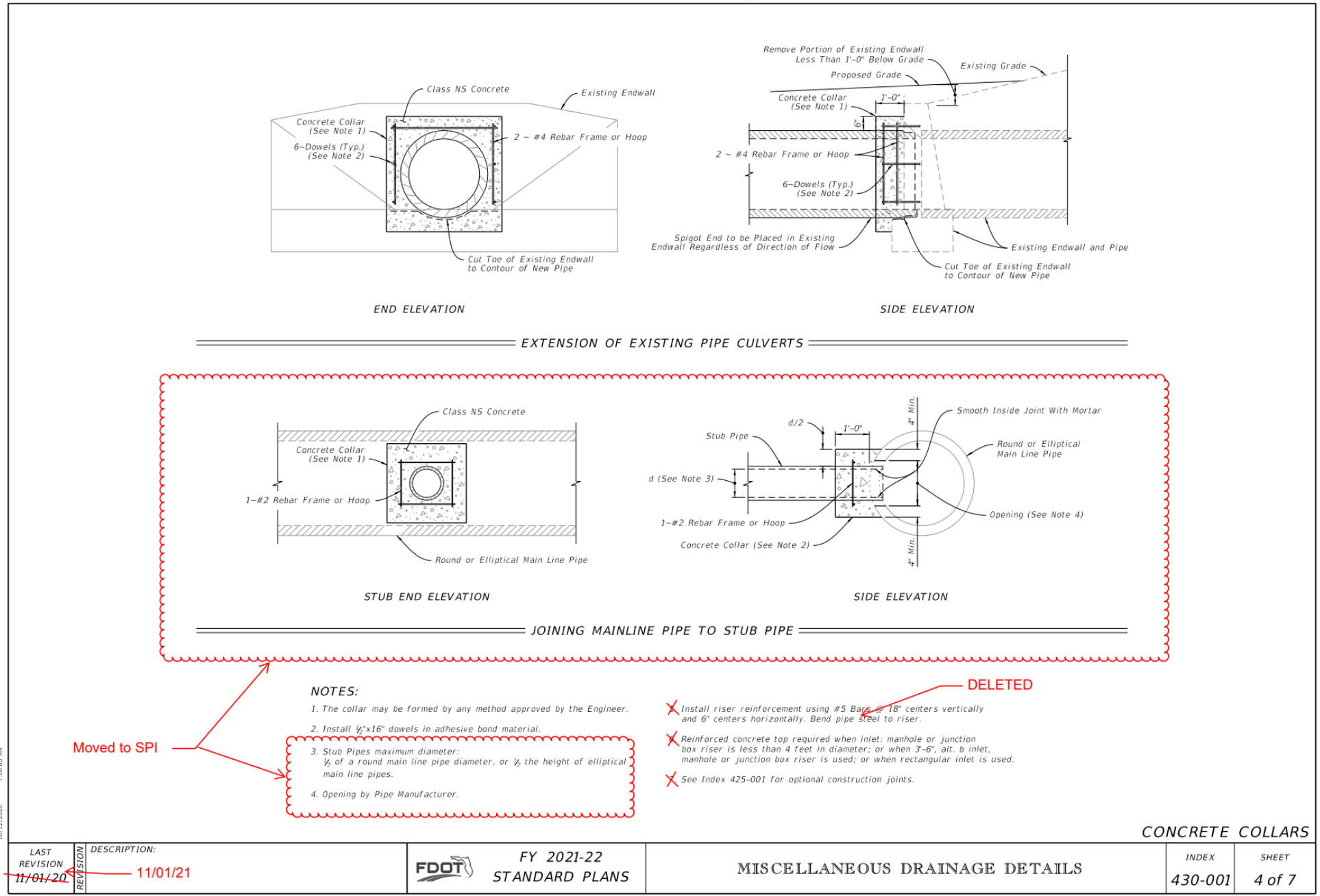
FRONT ELEVATION

TYPE-I DIMENSIONAL DETAILS

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	CLOSED FLUME INLET	INDEX 425-061	SHEET 2 of 5

Miscellaneous Drainage Details– Index 430-001

- ***Updates to Index 430-001***:
  - Moved Joining Mainline Pipe to Stub Pipe Details and notes to SPI



Miscellaneous Drainage Details– Index 430-001

- ***Updates to SPI 430-001***:
  - Moved Joining Mainline Pipe to Stub Pipe Details and notes to SPI

Index 430-001 Miscellaneous Drainage Details

Design Criteria

FDOT Design Manual (FDM); ***Drainage Manual (DM)***;

Design Assumptions and Limitations

Supplemental Details for use with other Drainage Indexes.

Plan Content Requirements

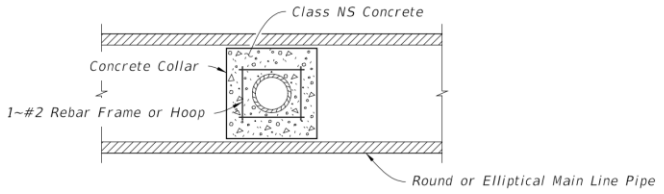
Included with other Drainage items.

Payment

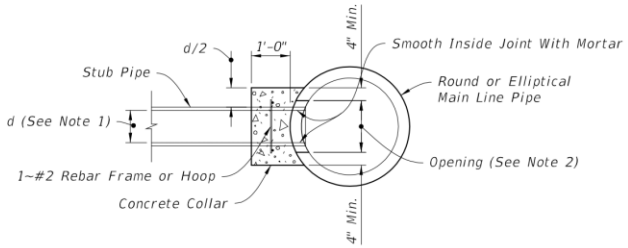
Item number	Item Description	Unit Measure
N/A	Included in other Pay Items	N/A

Example: Stub Connection Detail

Stub connections require approval of the District Drainage Engineer.



STUB END ELEVATION



SIDE ELEVATION

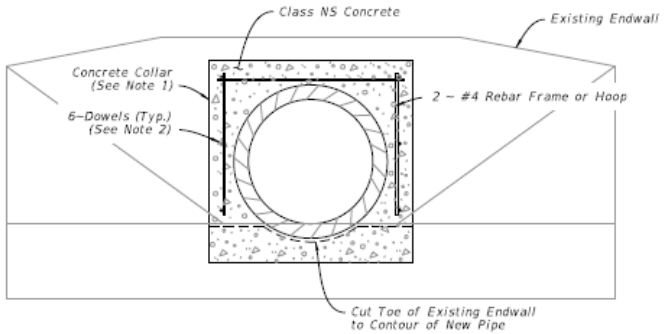
JOINING MAINLINE PIPE TO STUB PIPE

NOTES:

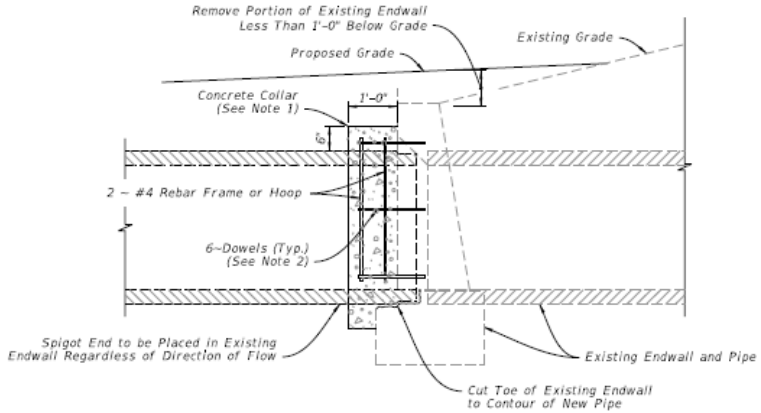
1. Stub Pipes maximum diameter: ½ of a round main line pipe diameter, or ½ the height of elliptical main line pipes.
2. Opening by Pipe Manufacturer.

Miscellaneous Drainage Details– Index 430-001

- ***Updated Sheet 4 Index 430-001***:



END ELEVATION



SIDE ELEVATION

EXTENSION OF EXISTING PIPE CULVERTS

NOTES:

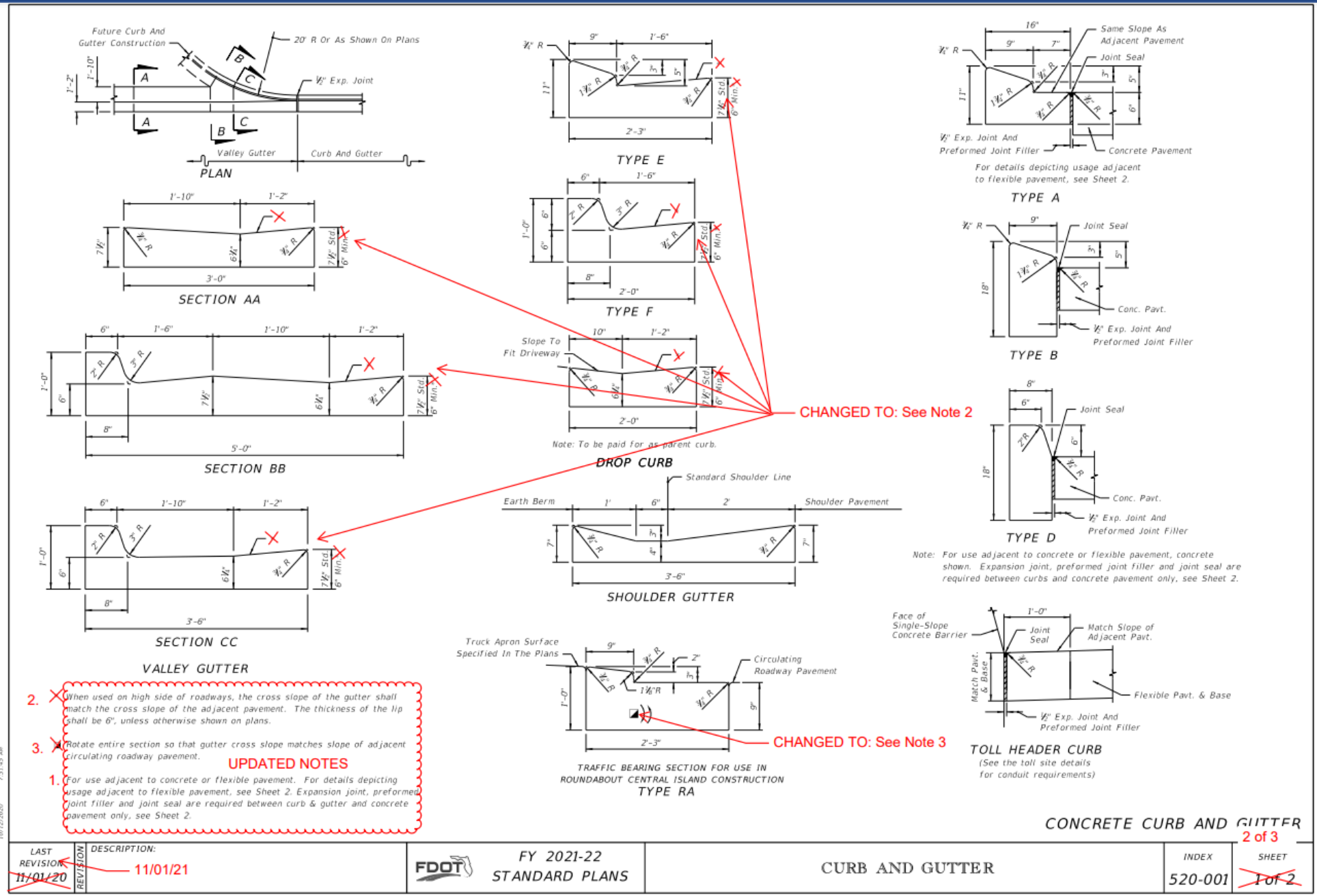
1. The collar may be formed by any method approved by the Engineer.
2. Install ½"x16" dowels in adhesive bond material.

CONCRETE COLLARS

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	MISCELLANEOUS DRAINAGE DETAILS	INDEX 430-001	SHEET 4 of 7

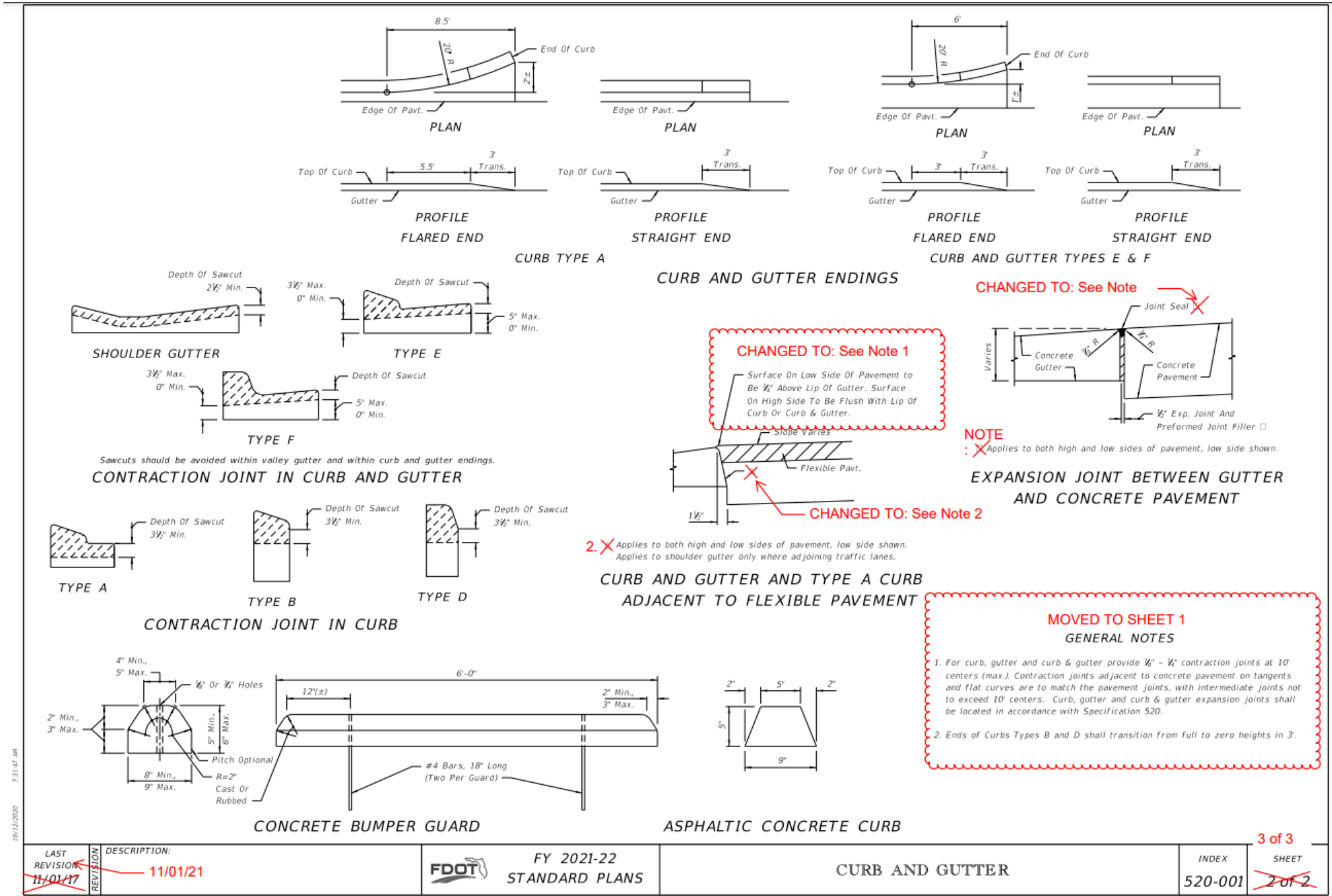
Curb and Gutter – Index 520-001

- ***Redeveloped Indexes:***
  - Index 520-001 (Curb and Gutter)
  - Index 520-005 (Concrete Shoulder Gutter Spillway)
  - 520-010 (Median Opening Flume)



Curb and Gutter – Index 520-001

- ***Redeveloped Index***



Curb and Gutter – Index 520-001

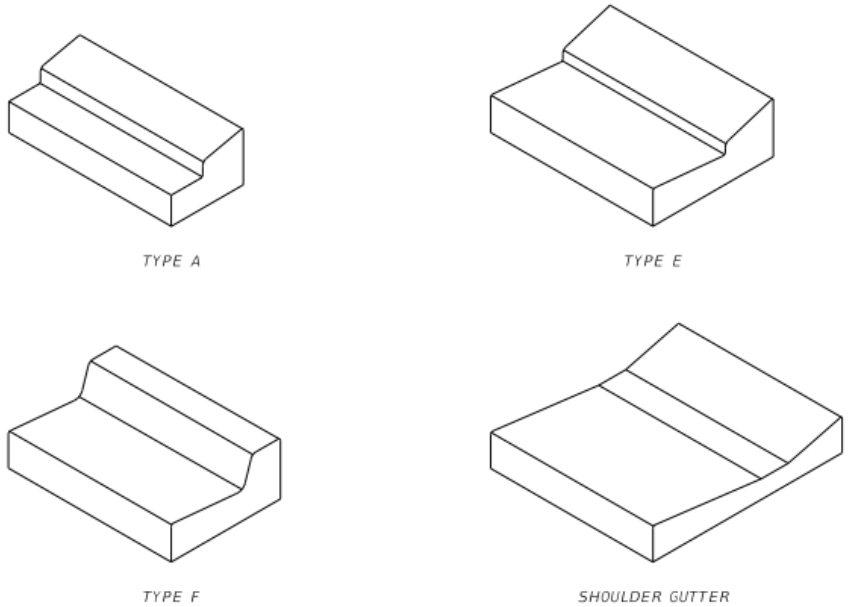
- ***Index 520-001***
  New Sheet 1

GENERAL NOTES:

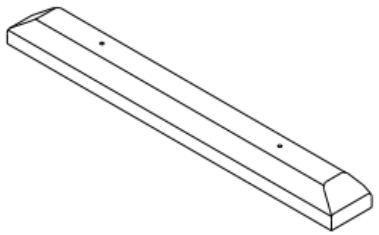
1. For curb, gutter and curb & gutter provide ⅛" – ½" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers.

2. Locate expansion joints for curb, gutter and curb & gutter in accordance with Specification 520.

TABLE OF CONTENTS:



TYPE A, TYPE E, TYPE F, AND SHOULDER GUTTER
(Other Types Similar)

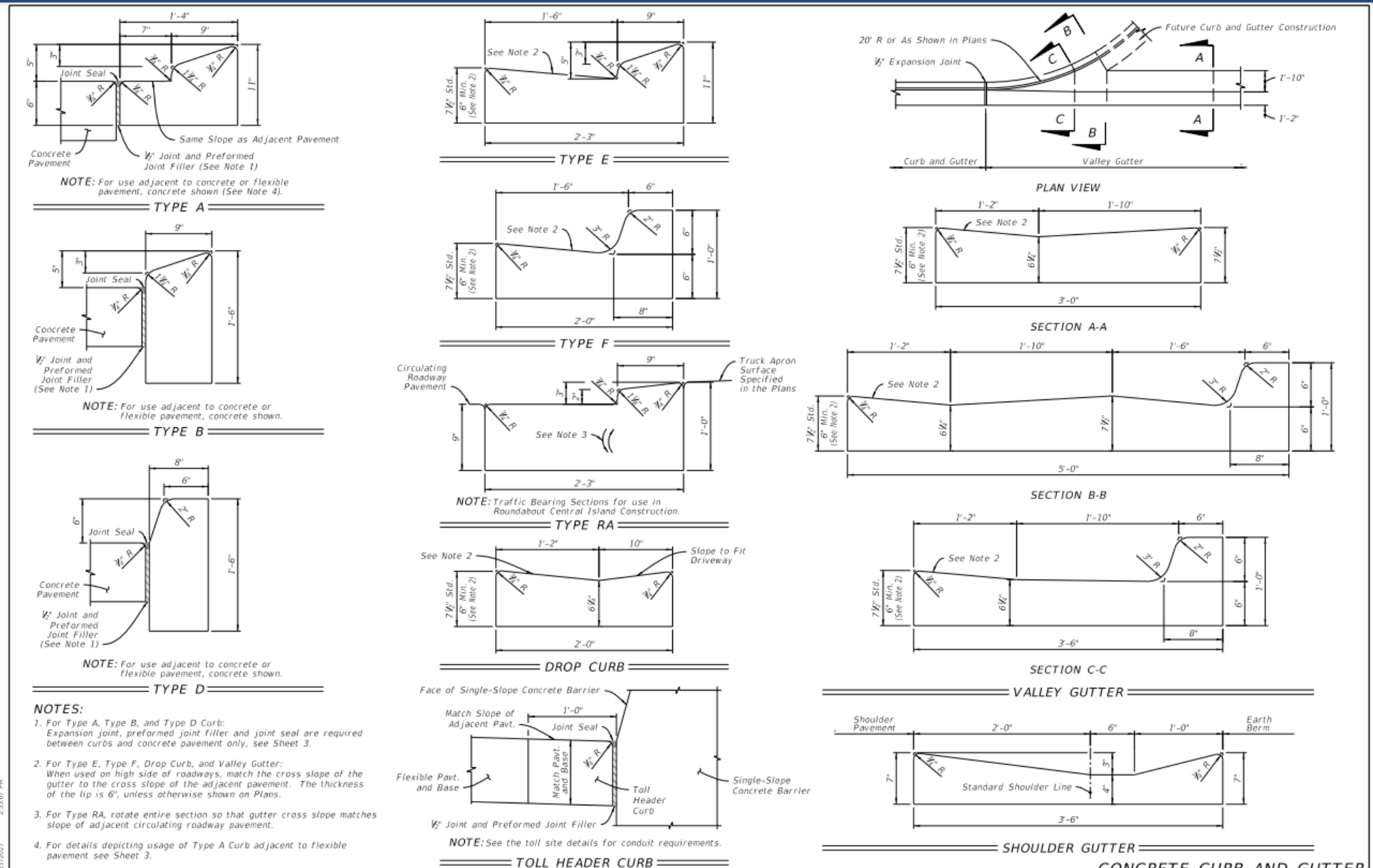


CONCRETE BUMPER GUARD

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	CURB AND GUTTER	INDEX	SHEET
11/01/21						520-001	1 of 3

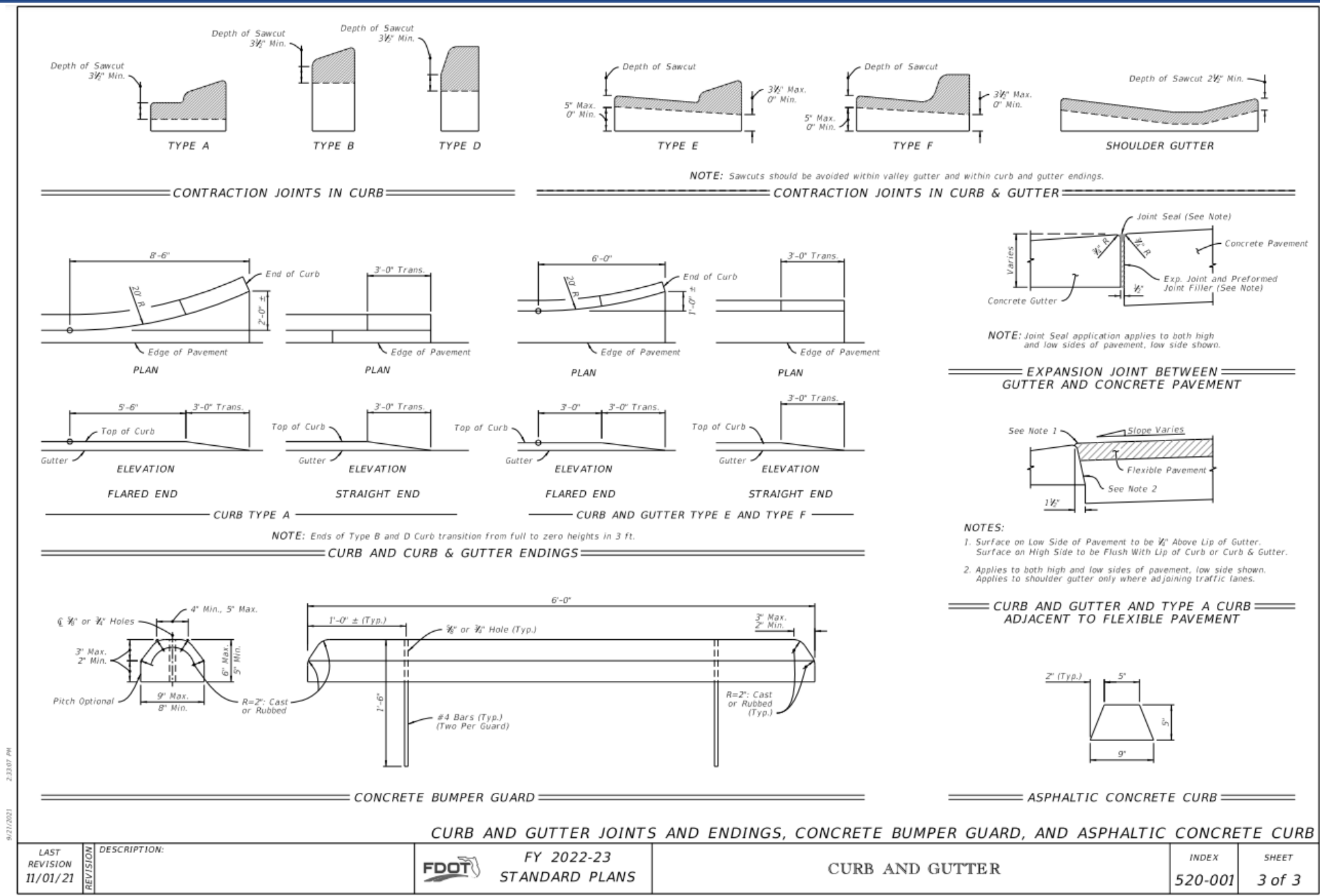
Curb and Gutter – Index 520-001

- ***Index 520-001***
  Updated Sheet 2



Curb and Gutter – Index 520-001

- ***Index 520-001 Updated Sheet 3***



Detectable Warnings and Sidewalk Curb Ramps– Index 522-002

- ***Index 522-002 Updates***
  - Added New Note 2.C.

GENERAL NOTES:

1. Cross Slopes and Grades:

   A. Sidewalk, ramp, and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this Index are maximums. With approval of the Engineer, provide the minimum feasible slope where the requirements cannot be met.

   B. Landings must have cross-slopes less than or equal to 0.02 in any direction.

   C. Maintain a single longitudinal slope along each side of the curb ramp. Ramp slopes are not required to exceed 15 feet in length.

   D. Joints permitted at the location of Slope Breaks. Otherwise locate joints in accordance with Index 522-001. No joints are permitted within the ramp portion of the Curb Ramp.

2. Curb, Curb and Gutter and/or Sidewalk:

   A. Refer to Index 522-001 for concrete thickness and sidewalk details.

   B. Remove any existing curb, curb and gutter, or sidewalk to the nearest joint beyond the curb transition or to the extent that no remaining section is less than 5 feet long.

3. Curb Ramp Alpha-Identification:

   A. Sidewalk curb ramp alpha-identifications (e.g. CR-A) are provided for reference purposes in the Plans.

   B. Alpha-identifications CR-I and CR-J are intentionally omitted.

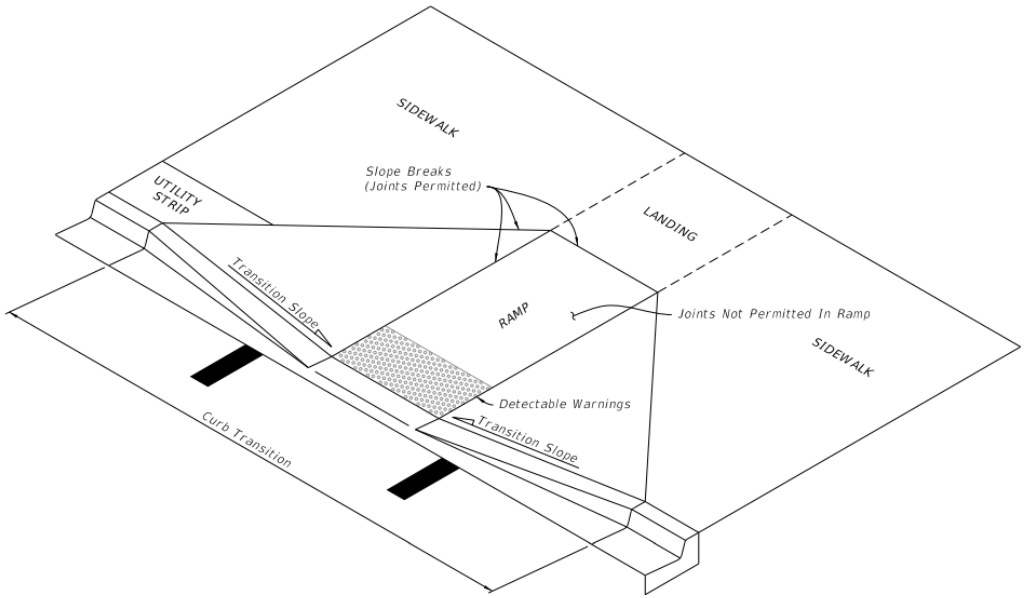
4. Detectable Warnings:

   A. Install detectable warnings in accordance with Specification 527.

   B. Place detectable warnings across the full width of the ramp or landing, to a minimum depth of 2 feet measured perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.

   C. If detectable warnings are shown in the Plans on slopes greater than 5%, align the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.

ADDED NOTE 2.C:
Width of Curb Ramp is 4'-0" minimum. Match sidewalk or Shared Use Path width as shown in the Plans.



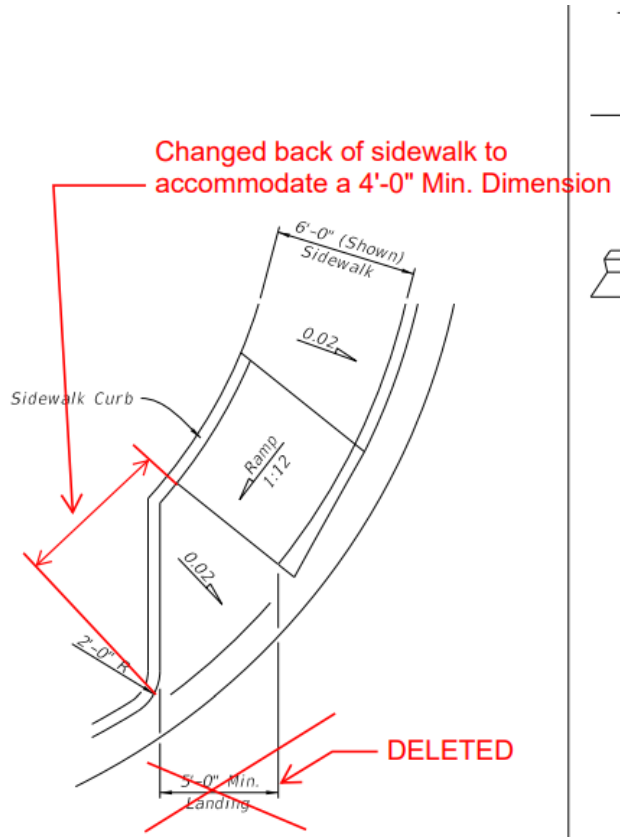
CURB RAMP NOMENCLATURE

10/14/2020 7:38:31 AM

LAST REVISION 11/01/20	REVISION	DESCRIPTION:	FDOT FY 2021-22 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX 522-002	SHEET 1 of 7

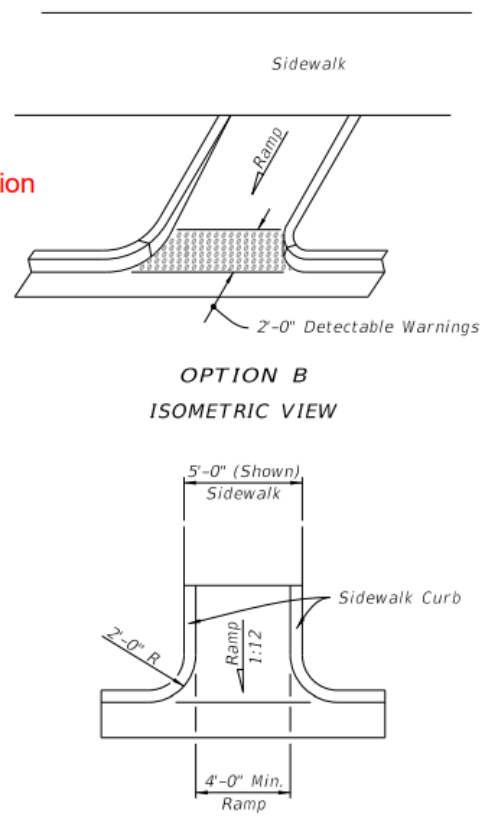
Detectable Warnings and Sidewalk Curb Ramps– Index 522-001

- ***Updated CR-D on Sheet 4***



PLAN VIEW

CR-D

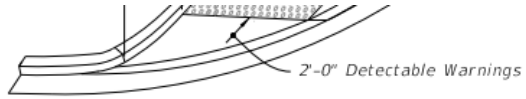


OPTION B

ISOMETRIC VIEW

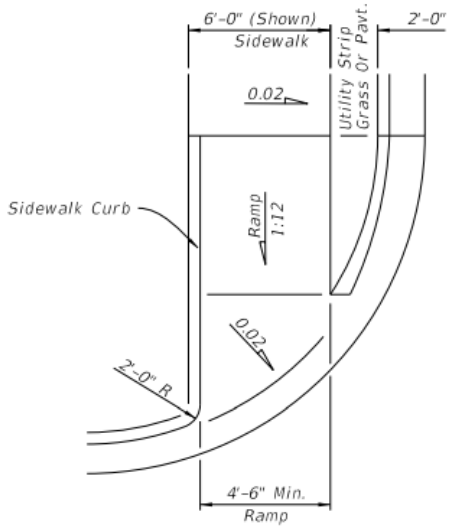
PLAN VIEW

CR-E



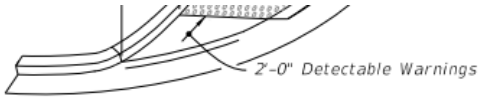
OPTION B

ISOMETRIC VIEW



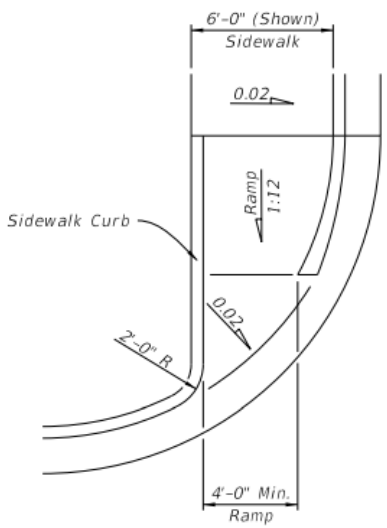
PLAN VIEW

CR-F



OPTION B

ISOMETRIC VIEW



PLAN VIEW

CR-G

SIDEWALK CURB RAMPS CR-D, CR-E, CR-F & CR-G

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2021-22 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX	SHEET
~~1/01/20~~ 11/01/21					522-002	4 of 7

Detectable Warnings and Sidewalk Curb Ramps– Index 522-001

- ***Index 522-001 Updated Sheet 1***

GENERAL NOTES:

1. Cross Slopes and Grades:

   A. Sidewalk, ramp, and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this Index are maximums. With approval of the Engineer, provide the minimum feasible slope where the requirements cannot be met.

   B. Landings must have cross-slopes less than or equal to 0.02 in any direction.

   C. Maintain a single longitudinal slope along each side of the curb ramp. Ramp slopes are not required to exceed 15 feet in length.

   D. Joints permitted at the location of Slope Breaks. Otherwise locate joints in accordance with Index 522-001. No joints are permitted within the ramp portion of the Curb Ramp.

2. Curb, Curb and Gutter and/or Sidewalk:

   A. Refer to Index 522-001 for concrete thickness and sidewalk details.

   B. Remove any existing curb, curb and gutter, or sidewalk to the nearest joint beyond the curb transition or to the extent that no remaining section is less than 5 feet long.

   C. Width of Curb Ramp is 4'-0" minimum. Match sidewalk or Shared Use Path width as shown in the Plans.

3. Curb Ramp Alpha-Identification:

   A. Sidewalk curb ramp alpha-identifications (e.g. CR-A) are provided for reference purposes in the Plans.

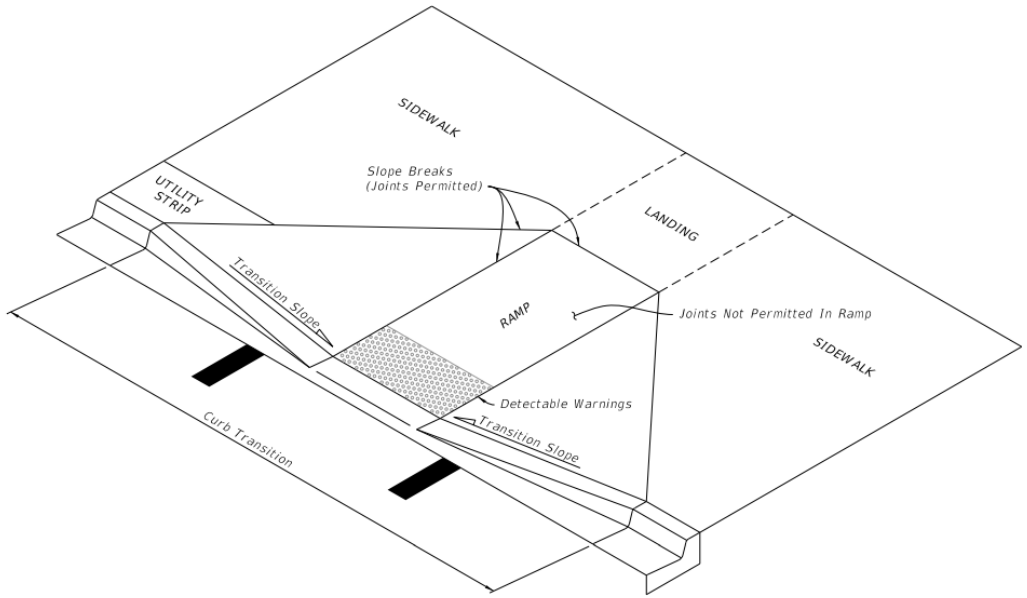
   B. Alpha-identifications CR-I and CR-J are intentionally omitted.

4. Detectable Warnings:

   A. Install detectable warnings in accordance with Specification 527.

   B. Place detectable warnings across the full width of the ramp or landing, to a minimum depth of 2 feet measured perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.

   C. If detectable warnings are shown in the Plans on slopes greater than 5%, align the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.

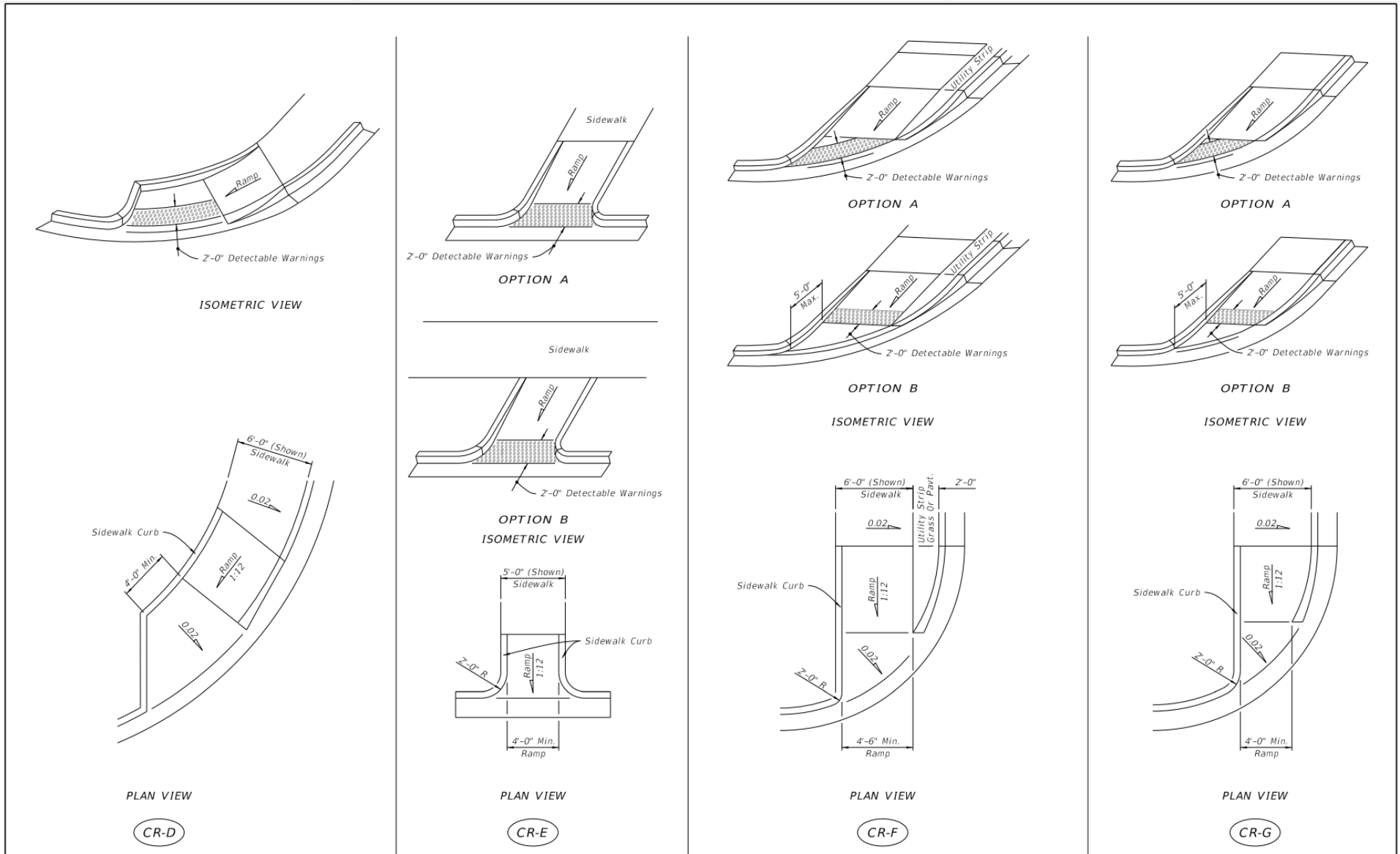


CURB RAMP NOMENCLATURE

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX 522-002	SHEET 1 of 7

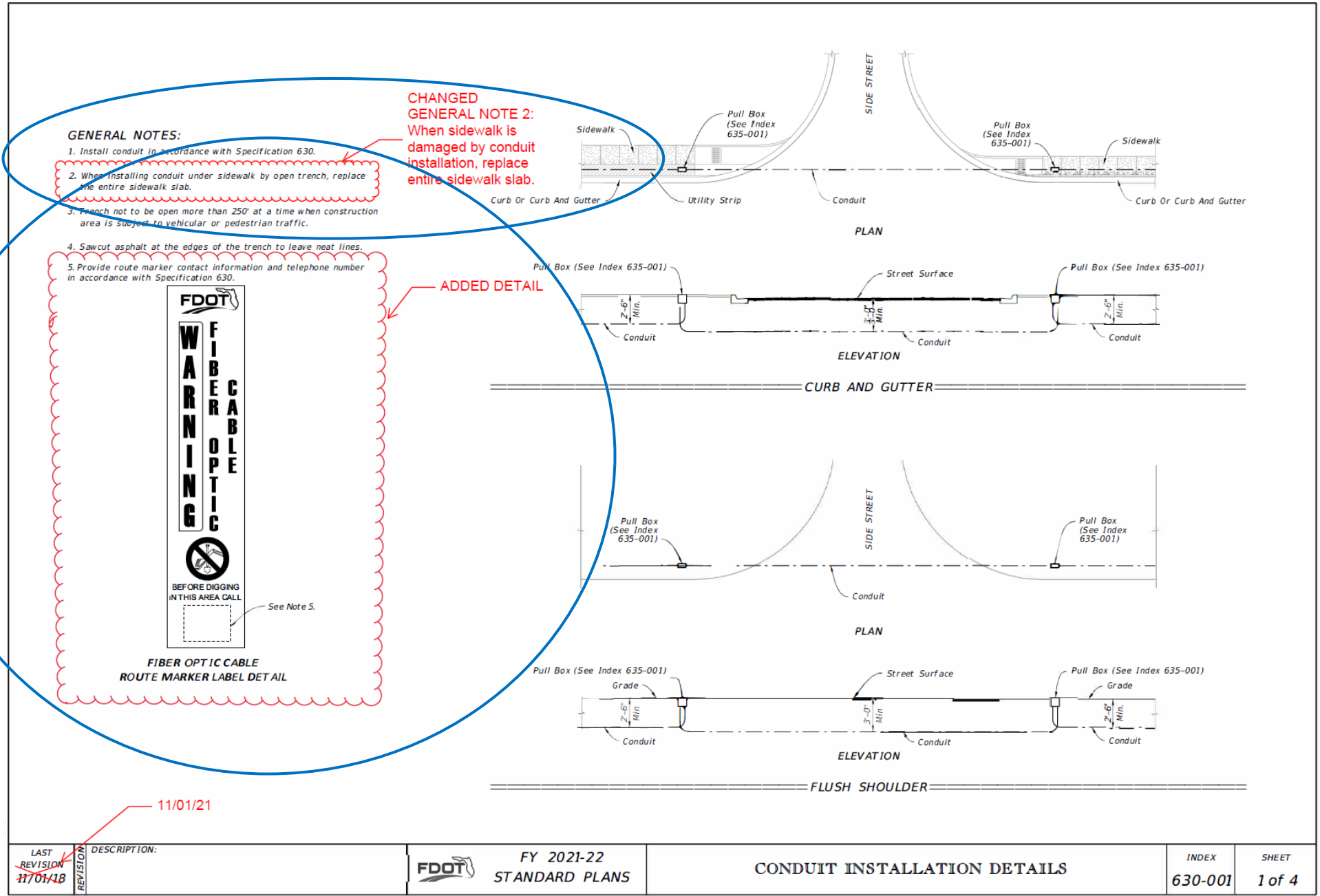
Detectable Warnings and Sidewalk Curb Ramps– Index 522-001

- ***Index 522-001***
  Updated Sheet 4



Conduit Installation Details, Index 630-001

- ***Index 630-001 Updates***
  - Updated Note 2
  - Added Fiber Optic Cable Route Marker Label

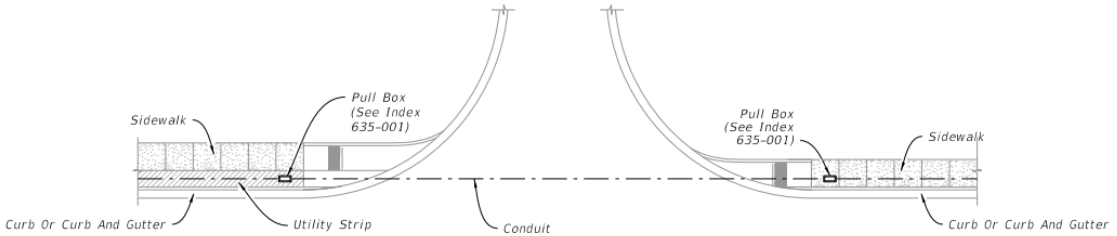


Conduit Installation Details, Index 630-001

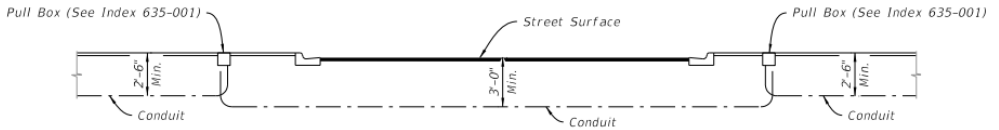
- ***Index 630-001 Updates***
  - Updated Index

GENERAL NOTES:

1. Install conduit in accordance with Specification 630.
2. When sidewalk is damaged by conduit installation, replace entire sidewalk slab.
3. Trench not to be open more than 250' at a time when construction area is subject to vehicular or pedestrian traffic.
4. Sawcut asphalt at the edges of the trench to leave neat lines.
5. Provide route marker and route marker label in accordance with Specification 630.



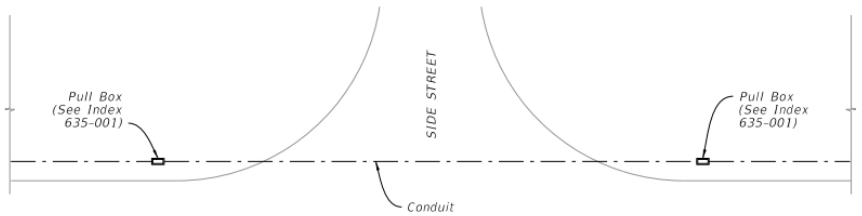
PLAN



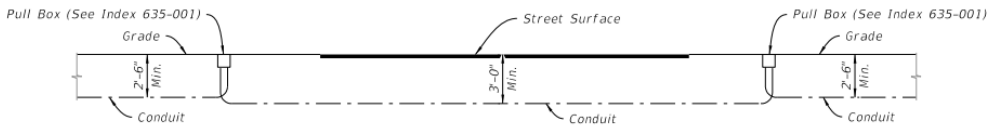
ELEVATION

CURB AND GUTTER

ROUTE MARKER DETAIL



PLAN



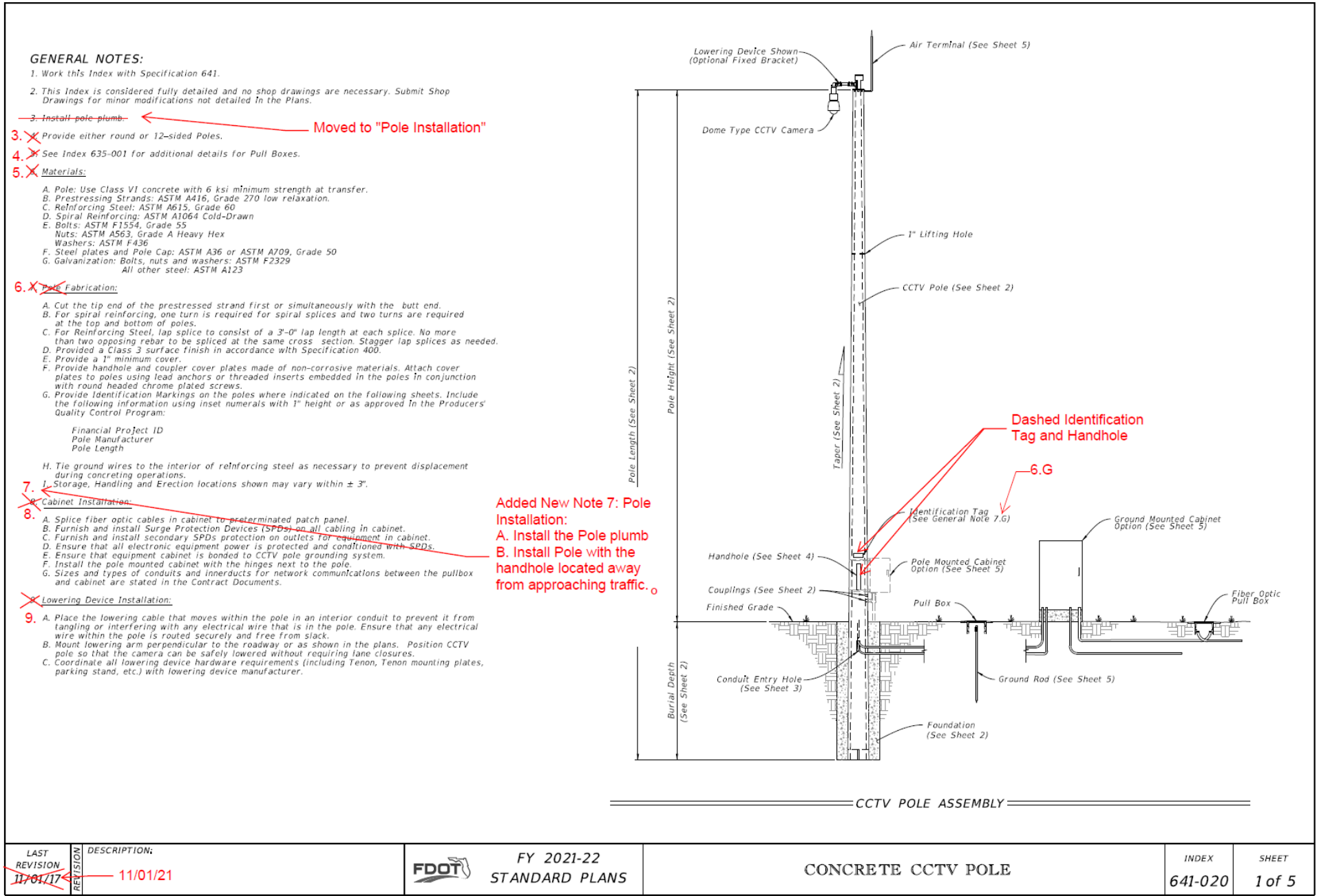
ELEVATION

FLUSH SHOULDER

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	CONDUIT INSTALLATION DETAILS	INDEX 630-001	SHEET 1 of 4

CCTV Poles, Index 641-020 and 649-020

- ***Index 641-020 Redlines***
  - Updated Handhole Locations to be downstream of Traffic
  - Added notes on Pole Installation



GENERAL NOTES:

1. Work this Index with Specification 641.
2. This Index is considered fully detailed and no shop drawings are necessary. Submit Shop Drawings for minor modifications not detailed in the Plans.
~~3. Install pole plumb.~~ — Moved to "Pole Installation"
3. Provide either round or 12-sided Poles.
4. See Index 635-001 for additional details for Pull Boxes.
5. Materials:

A. Pole: Use Class VI concrete with 6 ksi minimum strength at transfer.
B. Prestressing Strands: ASTM A416, Grade 270 low relaxation.
C. Reinforcing Steel: ASTM A615, Grade 60
D. Spiral Reinforcing: ASTM A1064 Cold-Drawn
E. Bolts: ASTM F1554, Grade 55
Nuts: ASTM A563, Grade A Heavy Hex
Washers: ASTM F436
F. Steel plates and Pole Cap: ASTM A36 or ASTM A709, Grade 50
G. Galvanization: Bolts, nuts and washers: ASTM F2329
All other steel: ASTM A123

6. Pole Fabrication:

A. Cut the tip end of the prestressed strand first or simultaneously with the butt end.
B. For spiral reinforcing, one turn is required for spiral splices and two turns are required at the top and bottom of poles.
C. For Reinforcing Steel, lap splice to consist of a 3'-0" lap length at each splice. No more than two opposing rebar to be spliced at the same cross section. Stagger lap splices as needed.
D. Provided a Class 3 surface finish in accordance with Specification 400.
E. Provide a 1" minimum cover.
F. Provide handhole and coupler cover plates made of non-corrosive materials. Attach cover plates to poles using lead anchors or threaded inserts embedded in the poles in conjunction with round headed chrome plated screws.
G. Provide Identification Markings on the poles where indicated on the following sheets. Include the following information using inset numerals with 1" height or as approved in the Producers' Quality Control Program:

Financial Project ID
Pole Manufacturer
Pole Length

H. Tie ground wires to the interior of reinforcing steel as necessary to prevent displacement during concreting operations.
I. Storage, Handling and Erection locations shown may vary within ± 3".

7. Cabinet Installation:

A. Splice fiber optic cables in cabinet to preterminated patch panel.
B. Furnish and install Surge Protection Devices (SPDs) on all cabling in cabinet.
C. Furnish and install secondary SPDs protection on outlets for equipment in cabinet.
D. Ensure that all electronic equipment power is protected and conditioned with SPDs.
E. Ensure that equipment cabinet is bonded to CCTV pole grounding system.
F. Install the pole mounted cabinet with the hinges next to the pole.
G. Sizes and types of conduits and innerducts for network communications between the pullbox and cabinet are stated in the Contract Documents.

8. Lowering Device Installation:

A. Place the lowering cable that moves within the pole in an interior conduit to prevent it from tangling or interfering with any electrical wire that is in the pole. Ensure that any electrical wire within the pole is routed securely and free from slack.
B. Mount lowering arm perpendicular to the roadway or as shown in the plans. Position CCTV pole so that the camera can be safely lowered without requiring lane closures.
C. Coordinate all lowering device hardware requirements (including Tenon, Tenon mounting plates, parking stand, etc.) with lowering device manufacturer.

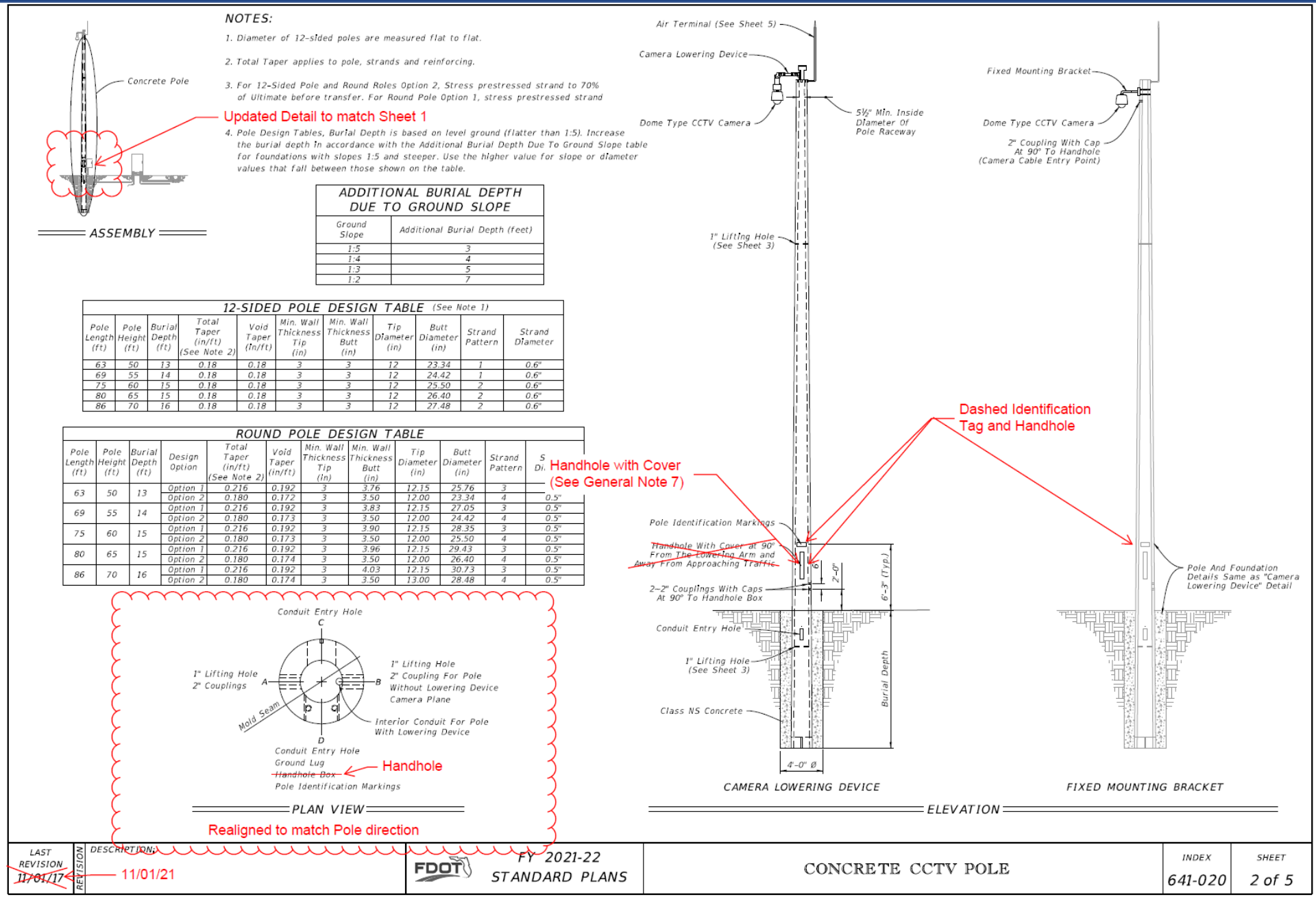
Added New Note 7: Pole Installation:
A. Install the Pole plumb
B. Install Pole with the handhole located away from approaching traffic.

CCTV POLE ASSEMBLY

LAST REVISION	DESCRIPTION:	FDOT	INDEX	SHEET
~~11/01/17~~	11/01/21	FY 2021-22 STANDARD PLANS — CONCRETE CCTV POLE	641-020	1 of 5

CCTV Poles, Index 641-020 and 649-020

- ***Index 641-020 Redlines***
  - Updated Handhole Locations to be downstream of Traffic
  - Added notes on Pole Installation

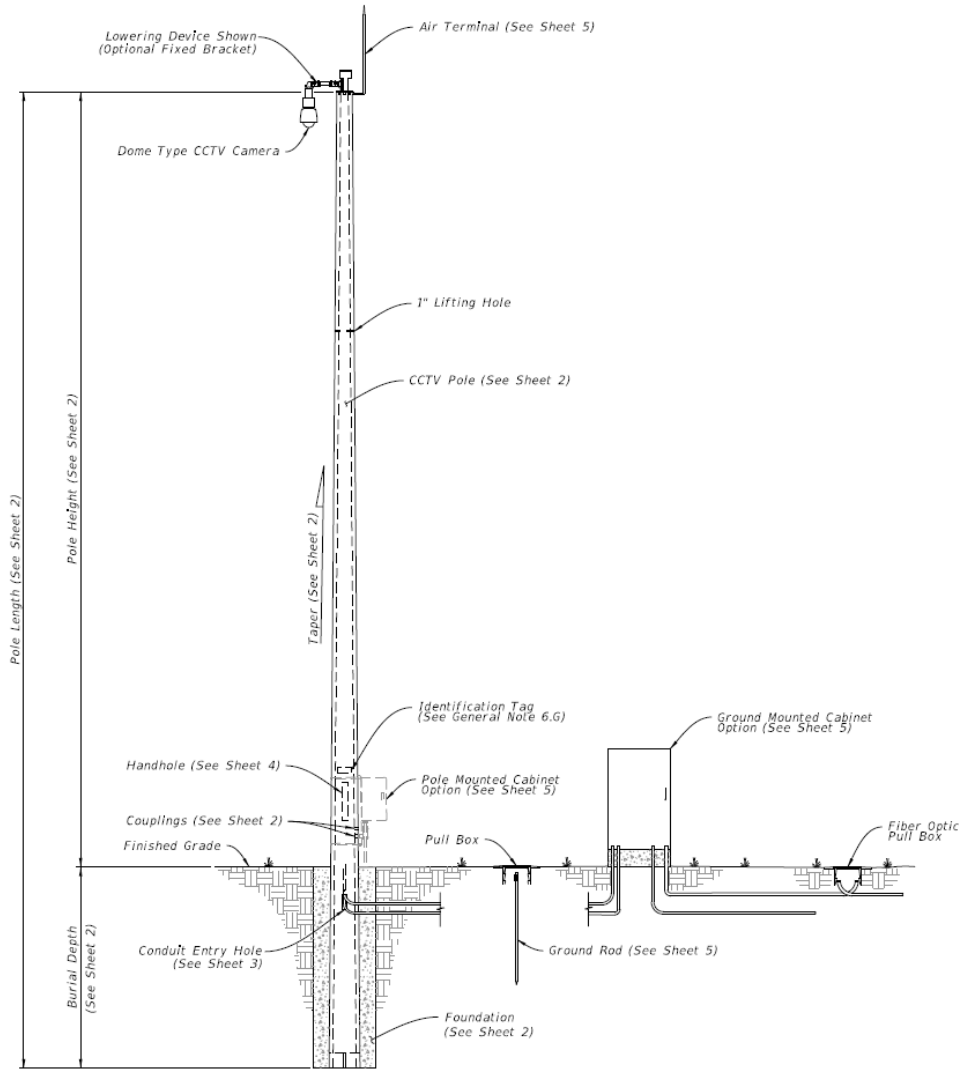


CCTV Poles, Index 641-020 and 649-020

- ***Index 641-020 Updated Index***
  - Updated Sheet 1

GENERAL NOTES:

1. Work this Index with Specification 641.
2. This Index is considered fully detailed and no shop drawings are necessary. Submit Shop Drawings for minor modifications not detailed in the Plans.
3. Provide either round or 12–sided Poles.
4. See Index 635-001 for additional details for Pull Boxes.
5. Materials:
   A. Pole: Use Class VI concrete with 6 ksi minimum strength at transfer.
   B. Prestressing Strands: ASTM A416, Grade 270 low relaxation.
   C. Reinforcing Steel: ASTM A615, Grade 60
   D. Spiral Reinforcing: ASTM A1064 Cold-Drawn
   E. Bolts: ASTM F1554, Grade 55
      Nuts: ASTM A563, Grade A Heavy Hex
      Washers: ASTM F436
   F. Steel plates and Pole Cap: ASTM A36 or ASTM A709, Grade 50
   G. Galvanization: Bolts, nuts and washers: ASTM F2329
      All other steel: ASTM A123
6. Fabrication:
   A. Cut the tip end of the prestressed strand first or simultaneously with the butt end.
   B. For spiral reinforcing, one turn is required for spiral splices and two turns are required at the top and bottom of poles.
   C. For Reinforcing Steel, lap splice to consist of a 3'–0" lap length at each splice. No more than two opposing rebar to be spliced at the same cross section. Stagger lap splices as needed.
   D. Provided a Class 3 surface finish in accordance with Specification 400.
   E. Provide a 1" minimum cover.
   F. Provide handhole and coupler cover plates made of non-corrosive materials. Attach cover plates to poles using lead anchors or threaded inserts embedded in the poles in conjunction with round headed chrome plated screws.
   G. Provide Identification Markings on the poles where indicated on the following sheets. Include the following information using inset numerals with 1" height or as approved in the Producers' Quality Control Program:
      Financial Project ID
      Pole Manufacturer
      Pole Length
   H. Tie ground wires to the interior of reinforcing steel as necessary to prevent displacement during concreting operations.
   I. Storage, Handling and Erection locations shown may vary within ± 3".
7. Pole Installation:
   A. Install the Pole plumb.
   B. Install Pole with the handhole located away from approaching traffic.
8. Cabinet Installation:
   A. Splice fiber optic cables in cabinet to preterminated patch panel.
   B. Furnish and install Surge Protection Devices (SPDs) on all cabling in cabinet.
   C. Furnish and install secondary SPDs protection on outlets for equipment in cabinet.
   D. Ensure that all electronic equipment power is protected and conditioned with SPDs.
   E. Ensure that equipment cabinet is bonded to CCTV pole grounding system.
   F. Install the pole mounted cabinet with the hinges next to the pole.
   G. Sizes and types of conduits and innerducts for network communications between the pullbox and cabinet are stated in the Contract Documents.
9. Lowering Device Installation:
   A. Place the lowering cable that moves within the pole in an interior conduit to prevent it from tangling or interfering with any electrical wire that is in the pole. Ensure that any electrical wire within the pole is routed securely and free from slack.
   B. Mount lowering arm perpendicular to the roadway or as shown in the plans. Position CCTV pole so that the camera can be safely lowered without requiring lane closures.
   C. Coordinate all lowering device hardware requirements (including Tenon, Tenon mounting plates, parking stand, etc.) with lowering device manufacturer.

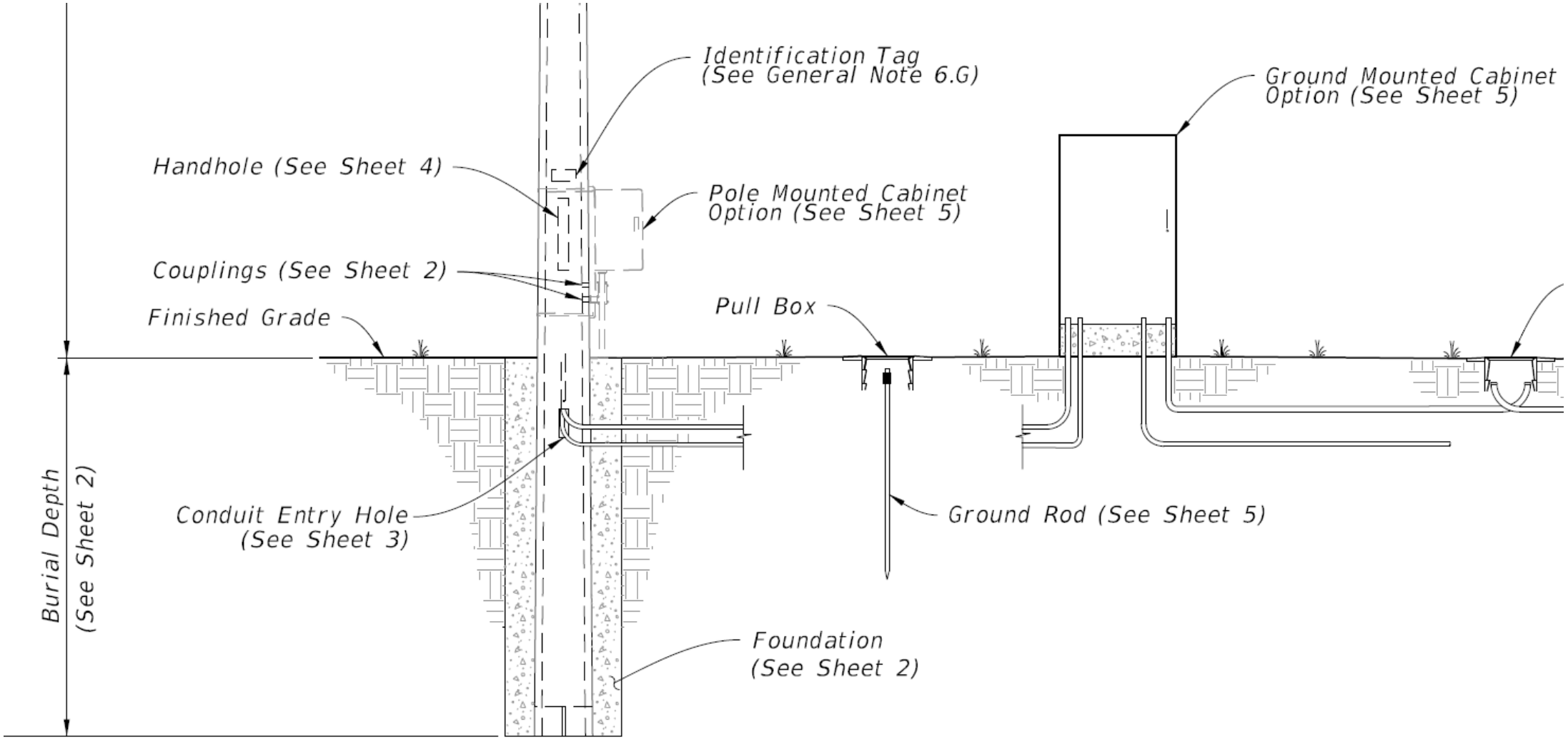


CCTV POLE ASSEMBLY

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	CONCRETE CCTV POLE	INDEX 641-020	SHEET 1 of 5

CCTV Poles, Index 641-020 and 649-020

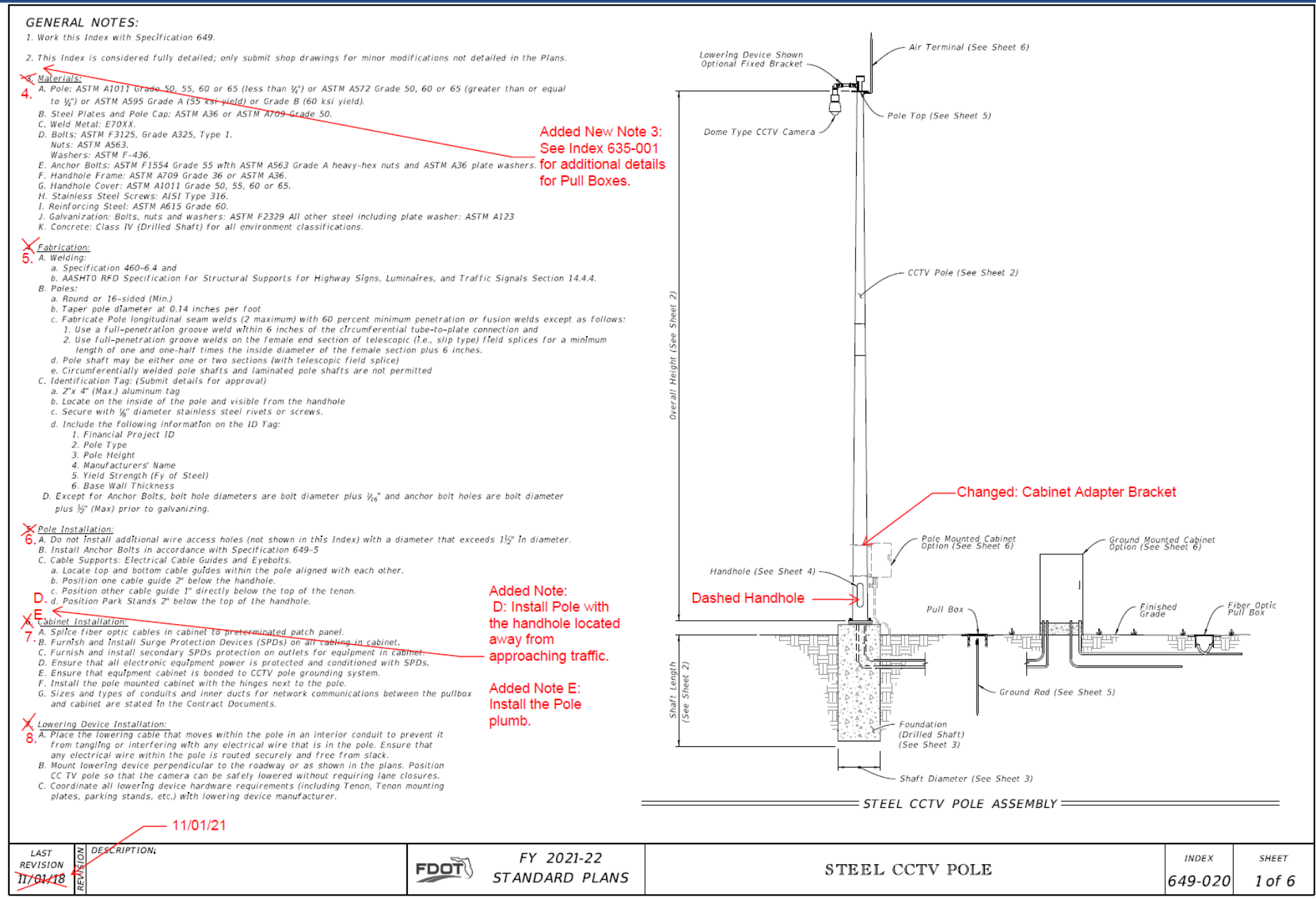
- **Index 641-020 Updated Index**



CCTV POLE ASSEMBLY

CCTV Poles, Index 641-020 and 649-020

- ***Index 649-020 Redlines***
  - Updated Handhole Locations to be downstream of Traffic
  - Added Notes to Match 641-020



GENERAL NOTES:

1. Work this Index with Specification 649.

2. This Index is considered fully detailed; only submit shop drawings for minor modifications not detailed in the Plans.

~~3.~~ Materials:
4. A. Pole: ASTM A1011 Grade 50, 55, 60 or 65 (less than ¼") or ASTM A572 Grade 50, 60 or 65 (greater than or equal to ¼") or ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield).
B. Steel Plates and Pole Cap: ASTM A36 or ASTM A709 Grade 50.
C. Weld Metal: E70XX.
D. Bolts: ASTM F3125, Grade A325, Type 1.
Nuts: ASTM A563.
Washers: ASTM F-436.
E. Anchor Bolts: ASTM F1554 Grade 55 with ASTM A563 Grade A heavy-hex nuts and ASTM A36 plate washers.
F. Handhole Frame: ASTM A709 Grade 36 or ASTM A36.
G. Handhole Cover: ASTM A1011 Grade 50, 55, 60 or 65.
H. Stainless Steel Screws: AISI Type 316.
I. Reinforcing Steel: ASTM A615 Grade 60.
J. Galvanization: Bolts, nuts and washers: ASTM F2329 All other steel including plate washer: ASTM A123
K. Concrete: Class IV (Drilled Shaft) for all environment classifications.

~~4.~~ Fabrication:
5. A. Welding:
a. Specification 460-6.4 and
b. AASHTO RFD Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Section 14.4.4.
B. Poles:
a. Round or 16-sided (Min.)
b. Taper pole diameter at 0.14 inches per foot
c. Fabricate Pole longitudinal seam welds (2 maximum) with 60 percent minimum penetration or fusion welds except as follows:
1. Use a full-penetration groove weld within 6 inches of the circumferential tube-to-plate connection and
2. Use full-penetration groove welds on the female end section of telescopic (i.e., slip type) field splices for a minimum length of one and one-half times the inside diameter of the female section plus 6 inches.
d. Pole shaft may be either one or two sections (with telescopic field splice)
e. Circumferentially welded pole shafts and laminated pole shafts are not permitted
C. Identification Tag: (Submit details for approval)
a. 2"x 4" (Max.) aluminum tag
b. Locate on the inside of the pole and visible from the handhole
c. Secure with ⅛" diameter stainless steel rivets or screws.
d. Include the following information on the ID Tag:
1. Financial Project ID
2. Pole Type
3. Pole Height
4. Manufacturers' Name
5. Yield Strength (Fy of Steel)
6. Base Wall Thickness
D. Except for Anchor Bolts, bolt hole diameters are bolt diameter plus 1/16" and anchor bolt holes are bolt diameter plus ½" (Max) prior to galvanizing.

~~5.~~ Pole Installation:
6. A. Do not install additional wire access holes (not shown in this Index) with a diameter that exceeds 1½" in diameter.
B. Install Anchor Bolts in accordance with Specification 649-5
C. Cable Supports: Electrical Cable Guides and Eyebolts.
a. Locate top and bottom cable guides within the pole aligned with each other.
b. Position one cable guide 2" below the handhole.
c. Position other cable guide 1" directly below the top of the tenon.
D. d. Position Park Stands 2" below the top of the handhole.
E

~~6.~~ Cabinet Installation:
7. A. Splice fiber optic cables in cabinet to preterminated patch panel.
B. Furnish and Install Surge Protection Devices (SPDs) on all cabling in cabinet.
C. Furnish and install secondary SPDs protection on outlets for equipment in cabinet.
D. Ensure that all electronic equipment power is protected and conditioned with SPDs.
E. Ensure that equipment cabinet is bonded to CCTV pole grounding system.
F. Install the pole mounted cabinet with the hinges next to the pole.
G. Sizes and types of conduits and inner ducts for network communications between the pullbox and cabinet are stated in the Contract Documents.

~~7.~~ Lowering Device Installation:
8. A. Place the lowering cable that moves within the pole in an interior conduit to prevent it from tangling or interfering with any electrical wire that is in the pole. Ensure that any electrical wire within the pole is routed securely and free from slack.
B. Mount lowering device perpendicular to the roadway or as shown in the plans. Position CC TV pole so that the camera can be safely lowered without requiring lane closures.
C. Coordinate all lowering device hardware requirements (including Tenon, Tenon mounting plates, parking stands, etc.) with lowering device manufacturer.

Added New Note 3: See Index 635-001 for additional details for Pull Boxes.

Added Note: D: Install Pole with the handhole located away from approaching traffic.

Added Note E: Install the Pole plumb.

11/01/21

Lowering Device Shown Optional Fixed Bracket
Air Terminal (See Sheet 6)
Pole Top (See Sheet 5)
Dome Type CCTV Camera
CCTV Pole (See Sheet 2)
Overall Height (See Sheet 2)
Changed: Cabinet Adapter Bracket
Pole Mounted Cabinet Option (See Sheet 6)
Ground Mounted Cabinet Option (See Sheet 6)
Handhole (See Sheet 4)
Dashed Handhole
Pull Box
Finished Grade
Fiber Optic Pull Box
Shaft Length (See Sheet 2)
Ground Rod (See Sheet 5)
Foundation (Drilled Shaft) (See Sheet 3)
Shaft Diameter (See Sheet 3)

STEEL CCTV POLE ASSEMBLY

LAST REVISION 11/01/18	REVISION	DESCRIPTION:	FDOT FY 2021-22 STANDARD PLANS	STEEL CCTV POLE	INDEX 649-020	SHEET 1 of 6

CCTV Poles, Index 641-020 and 649-020

- ***Index 649-020 Updated Sheet 1***
  - Updated Handhole Locations to be downstream of Traffic
  - Added Notes to Match 641-020

GENERAL NOTES:

1. Work this Index with Specification 649.

2. This Index is considered fully detailed; only submit shop drawings for minor modifications not detailed in the Plans.

3. See Index 635-001 for additional details for Pull Boxes.

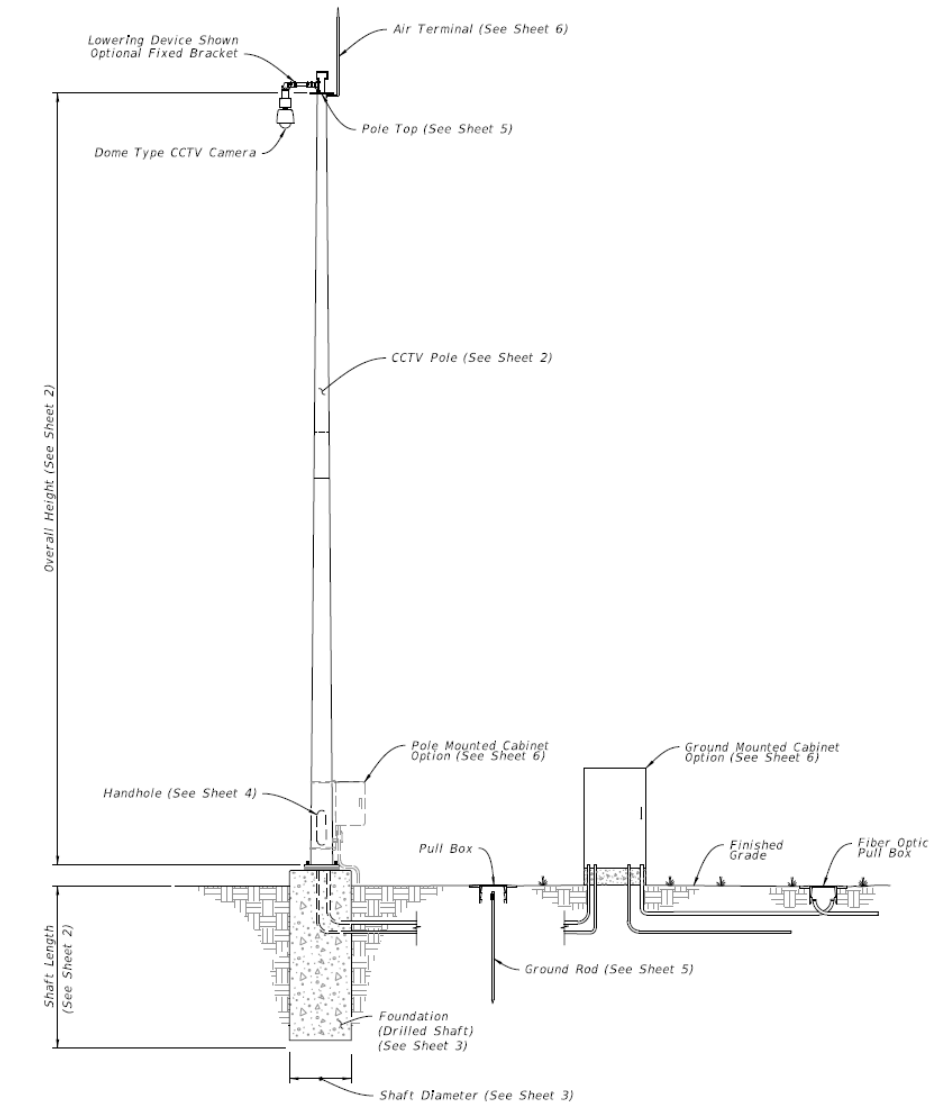
4. Materials:
   A. Pole: ASTM A1011 Grade 50, 55, 60 or 65 (less than ¼") or ASTM A572 Grade 50, 60 or 65 (greater than or equal to ¼") or ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield).
   B. Steel Plates and Pole Cap: ASTM A36 or ASTM A709 Grade 50.
   C. Weld Metal: E70XX.
   D. Bolts: ASTM F3125, Grade A325, Type 1.
   Nuts: ASTM A563.
   Washers: ASTM F-436.
   E. Anchor Bolts: ASTM F1554 Grade 55 with ASTM A563 Grade A heavy-hex nuts and ASTM A36 plate washers.
   F. Handhole Frame: ASTM A709 Grade 36 or ASTM A36.
   G. Handhole Cover: ASTM A1011 Grade 50, 55, 60 or 65.
   H. Stainless Steel Screws: AISI Type 316.
   I. Reinforcing Steel: ASTM A615 Grade 60.
   J. Galvanization: Bolts, nuts and washers: ASTM F2329 All other steel including plate washer: ASTM A123
   K. Concrete: Class IV (Drilled Shaft) for all environment classifications.

5. Fabrication:
   A. Welding:
      a. Specification 460-6.4 and
      b. AASHTO RFD Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Section 14.4.4.
   B. Poles:
      a. Round or 16-sided (Min.)
      b. Taper pole diameter at 0.14 inches per foot
      c. Fabricate Pole longitudinal seam welds (2 maximum) with 60 percent minimum penetration or fusion welds except as follows:
         1. Use a full-penetration groove weld within 6 inches of the circumferential tube-to-plate connection and
         2. Use full-penetration groove welds on the female end section of telescopic (i.e., slip type) field splices for a minimum length of one and one-half times the inside diameter of the female section plus 6 inches.
      d. Pole shaft may be either one or two sections (with telescopic field splice)
      e. Circumferentially welded pole shafts and laminated pole shafts are not permitted
   C. Identification Tag: (Submit details for approval)
      a. 2"x 4" (Max.) aluminum tag
      b. Locate on the inside of the pole and visible from the handhole
      c. Secure with ⅛" diameter stainless steel rivets or screws.
      d. Include the following information on the ID Tag:
         1. Financial Project ID
         2. Pole Type
         3. Pole Height
         4. Manufacturers' Name
         5. Yield Strength (Fy of Steel)
         6. Base Wall Thickness
   D. Except for Anchor Bolts, bolt hole diameters are bolt diameter plus 1/16" and anchor bolt holes are bolt diameter plus ½" (Max) prior to galvanizing.

6. Pole Installation:
   A. Do not install additional wire access holes (not shown in this Index) with a diameter that exceeds 1½" in diameter.
   B. Install Anchor Bolts in accordance with Specification 649-5.
   C. Cable Supports: Electrical Cable Guides and Eyebolts.
      a. Locate top and bottom cable guides within the pole aligned with each other.
      b. Position one cable guide 2" below the handhole.
      c. Position other cable guide 1" directly below the top of the tenon.
      d. Position Park Stands 2" below the top of the handhole.
   D. Install Pole with the handhole located away from approaching traffic.
   E. Install the Pole plumb.

7. Cabinet Installation:
   A. Splice fiber optic cables in cabinet to preterminated patch panel.
   B. Furnish and Install Surge Protection Devices (SPDs) on all cabling in cabinet.
   C. Furnish and install secondary SPDs protection on outlets for equipment in cabinet.
   D. Ensure that all electronic equipment power is protected and conditioned with SPDs.
   E. Ensure that equipment cabinet is bonded to CCTV pole grounding system.
   F. Install the pole mounted cabinet with the hinges next to the pole.
   G. Sizes and types of conduits and inner ducts for network communications between the pullbox and cabinet are stated in the Contract Documents.

8. Lowering Device Installation:
   A. Place the lowering cable that moves within the pole in an interior conduit to prevent it from tangling or interfering with any electrical wire that is in the pole. Ensure that any electrical wire within the pole is routed securely and free from slack.
   B. Mount lowering device perpendicular to the roadway or as shown in the plans. Position CC TV pole so that the camera can be safely lowered without requiring lane closures.
   C. Coordinate all lowering device hardware requirements (including Tenon, Tenon mounting plates, parking stands, etc.) with lowering device manufacturer.

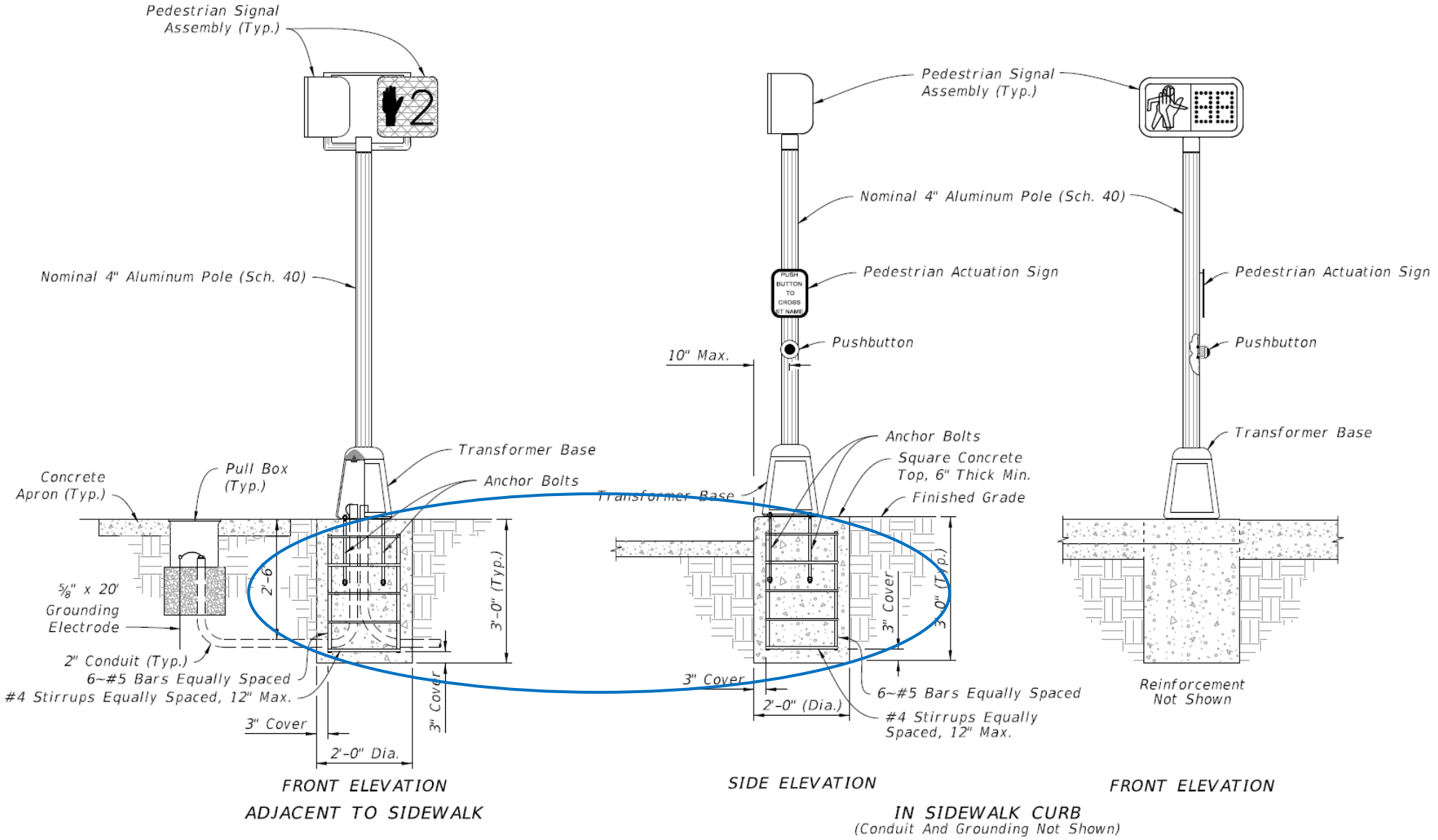


STEEL CCTV POLE ASSEMBLY

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	STEEL CCTV POLE	INDEX 649-020	SHEET 1 of 6

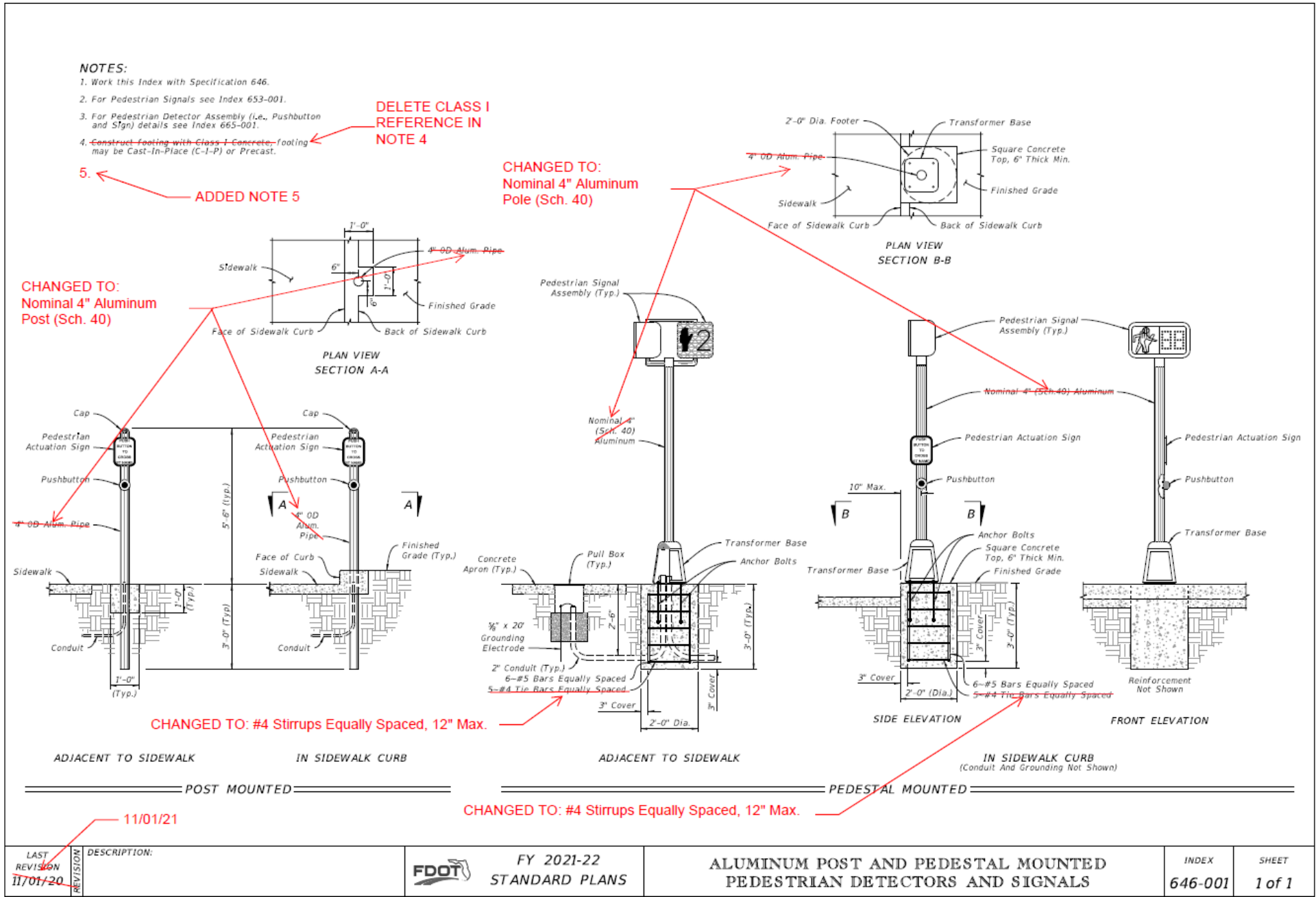
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- **Updated Foundations within Indexes 646-001, 654-001, 695-001 and 700-120**



Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 646 Updates***:
  - Delete Class I Concrete Reference in Note 4
  - Add Note 5
  - Update post callouts
  - Update Foundations



- ***Index 646 Updates***:
  - Pedestal Mounted Option

Home | Enter Search Terms | Go | APL | IPL | Other | Manufacturers | Account | Contact Product Evaluation | Help

Signal Pole, AASHTO MASH CP6 Series (APL Product)

by Frey Manufacturing Corp.

Model: CP6ACT4840TCSS

APL Certification

- 646-001-005 (Approval Date: 6/24/2021) (Service Life Expectancy:)

Product Types

- Transformer Base

Resource Links

- FDOT Standard Specifications for Road and Bridge Construction

Random Sampling Frequency

There are no items to display.

Limitations

Furnish and Install Transformer Base, Post, and Anchor Bolts in accordance with the Vendor drawings and installation instructions. Meet the requirements of Specification 646 for all other items.

Documents

Drawing (PDF 185 KB)

Installation Instructions (PDF 1254 KB)

Download the Adobe Reader

Comments

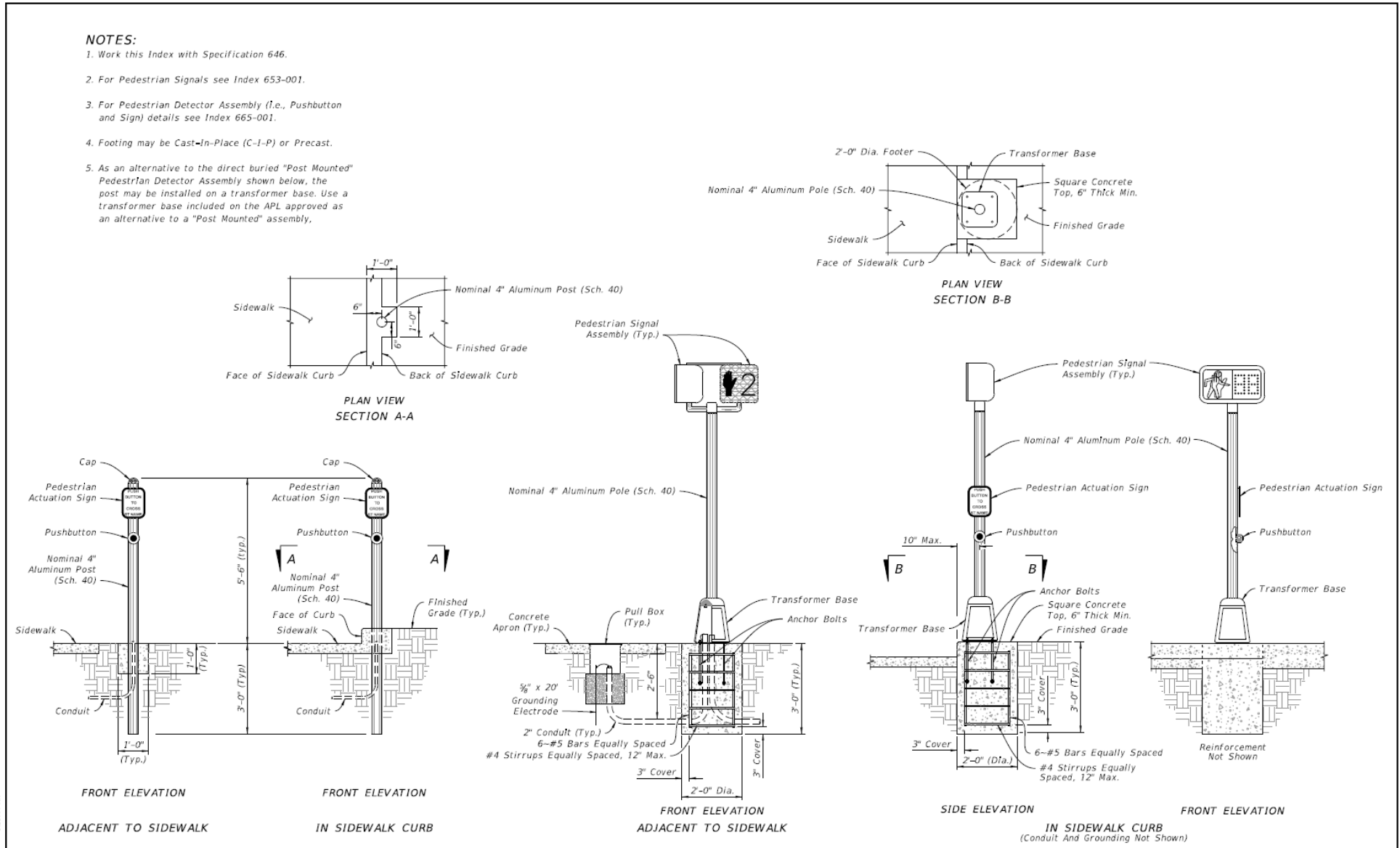
Approved as an alternative to the "Post Mounted" Pedestrian Detector Assembly included on FDOT Standard Plans, Index 646-001. Installation Pedestrian Detector Assembly (Pushbutton) and Actuation Sign in accordance with Standard Plans, Index 665-001.

Manufacturer Detail

Frey Manufacturing Corp.

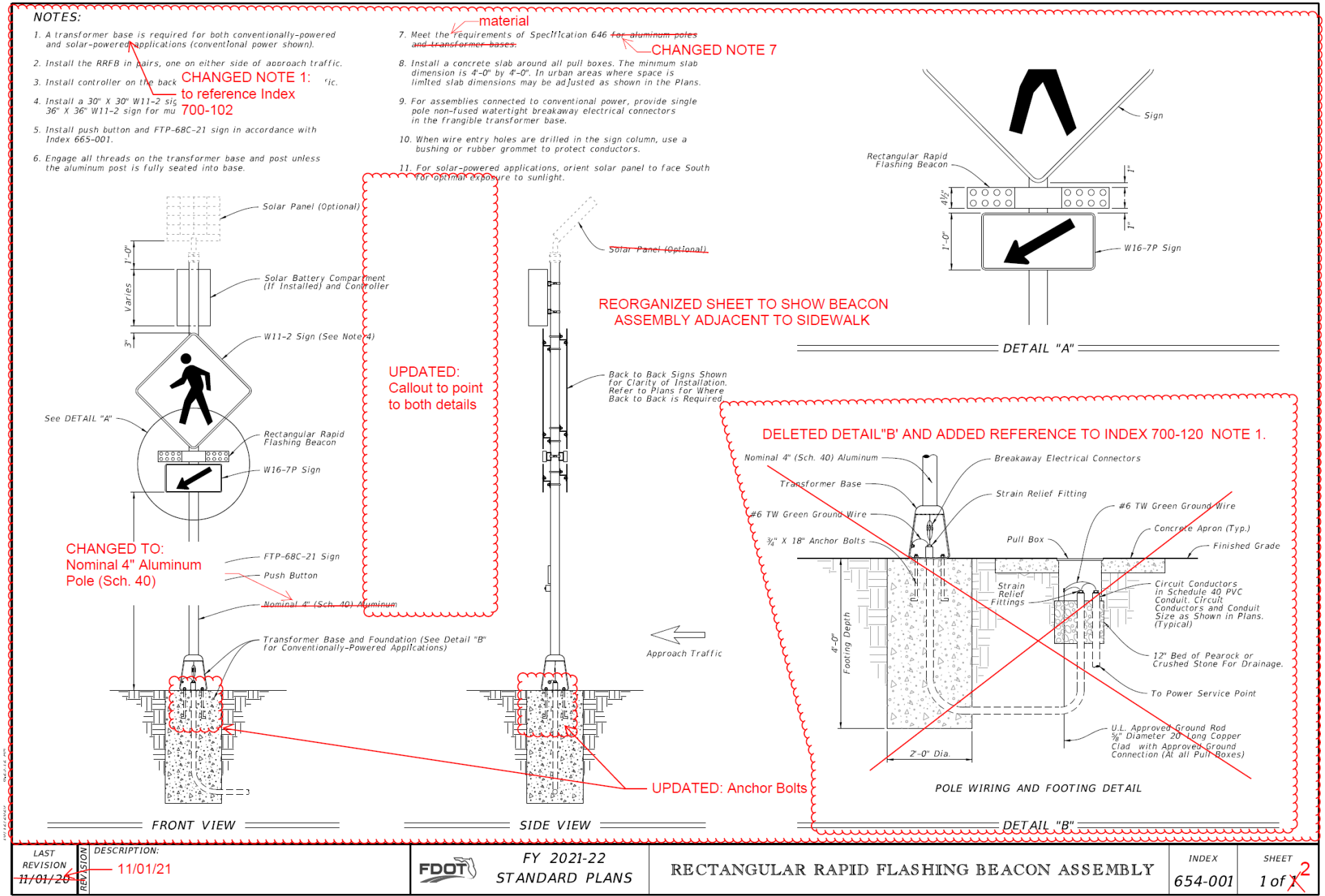
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Updated Index 646***



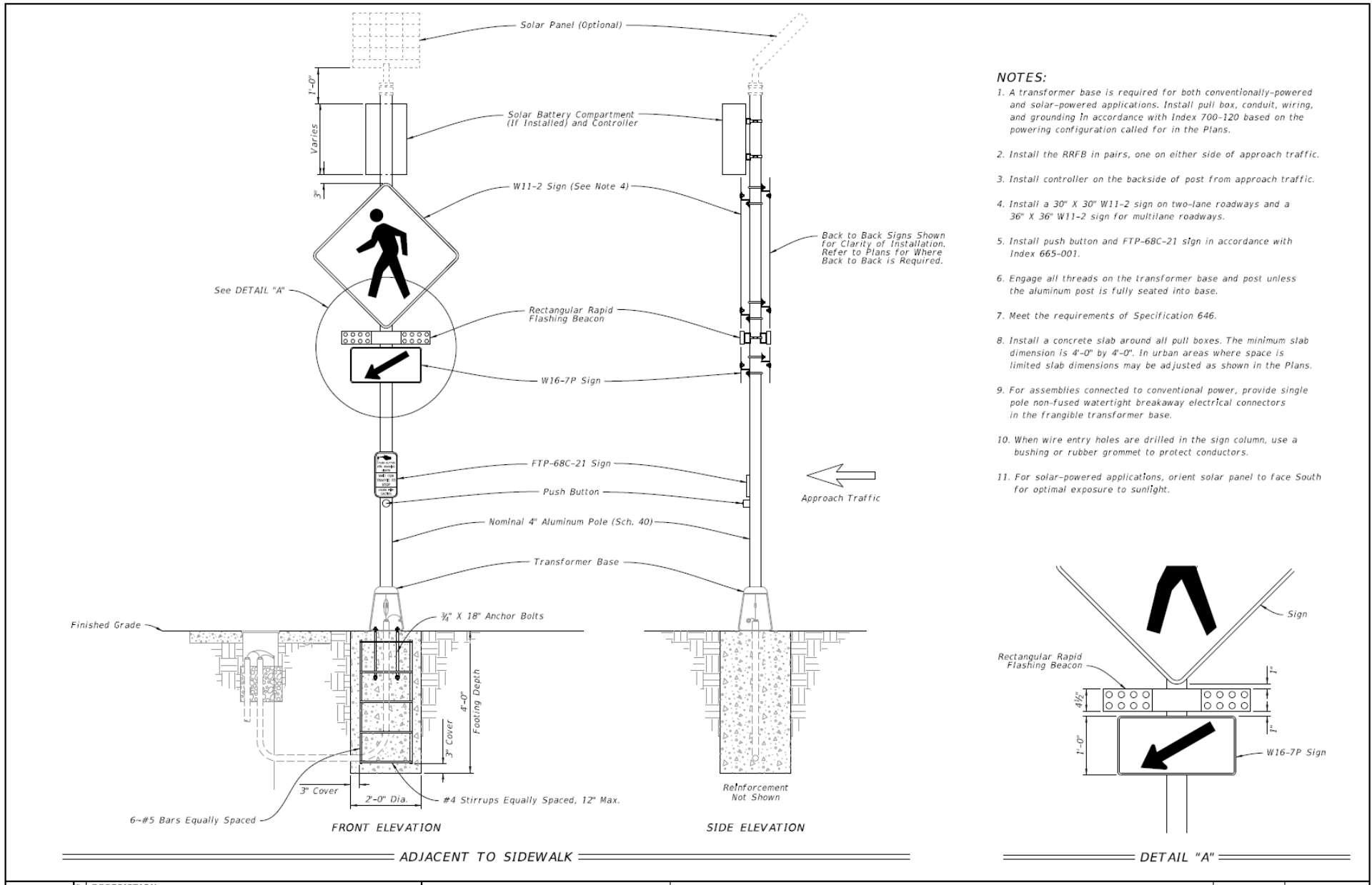
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 654 Updates***:
  - Reorganized to Show Beacon Assembly Adjacent to Sidewalk
  - Deleted Detail B and referenced Index 700-120 in Note 1
  - Update pole callouts
  - Update Foundations



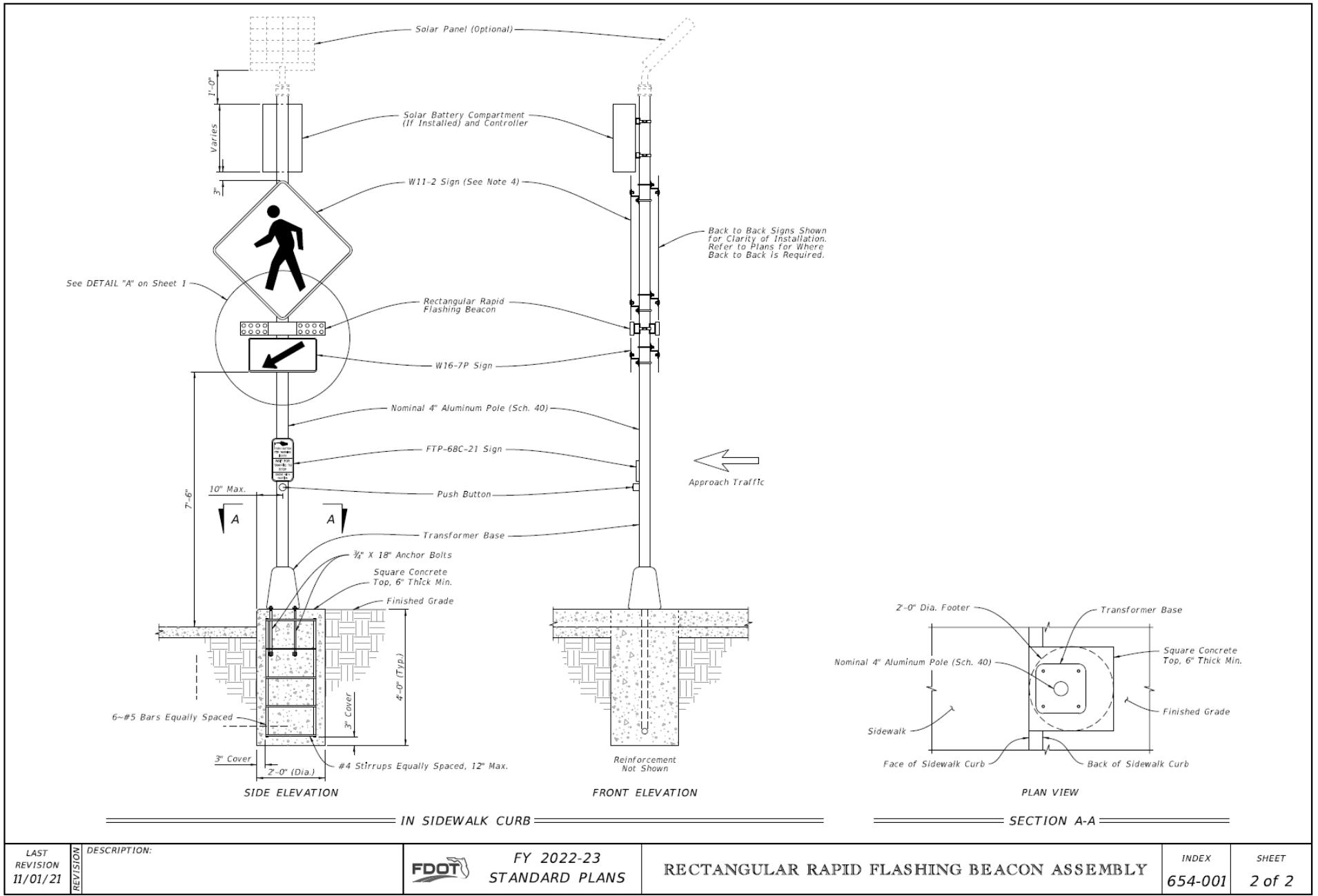
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 654 Updates***:
  - Updated Notes
  - Update post callouts
  - Update Foundations
  - Deleted Detail B and referenced Index 700-120



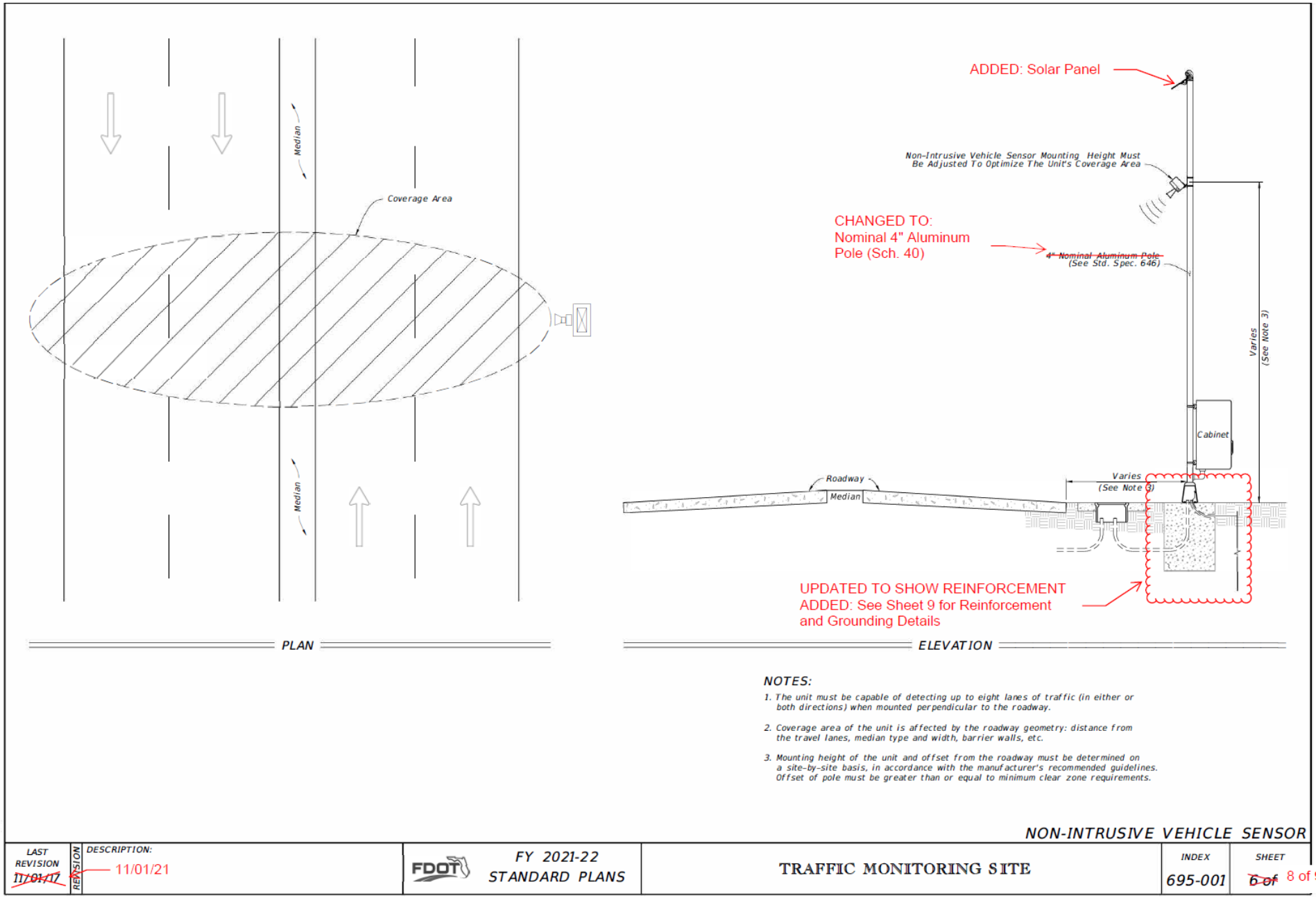
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 654 Updates***:
  - Added inside Curb Option



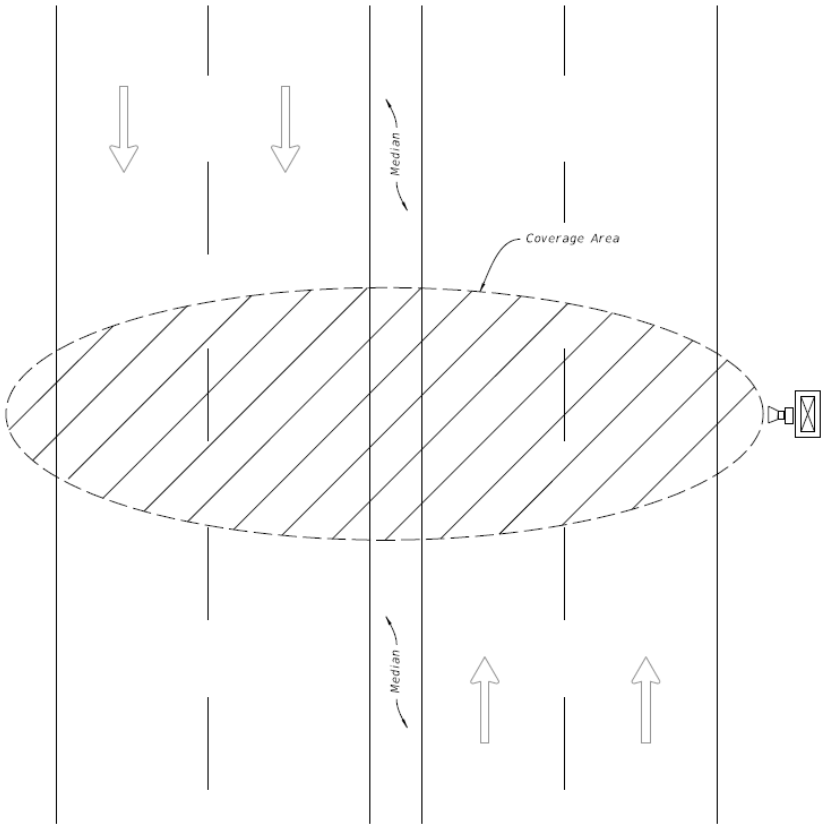
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 695 Updates***:
  - Updated Foundations
  - Updated Pole Callouts

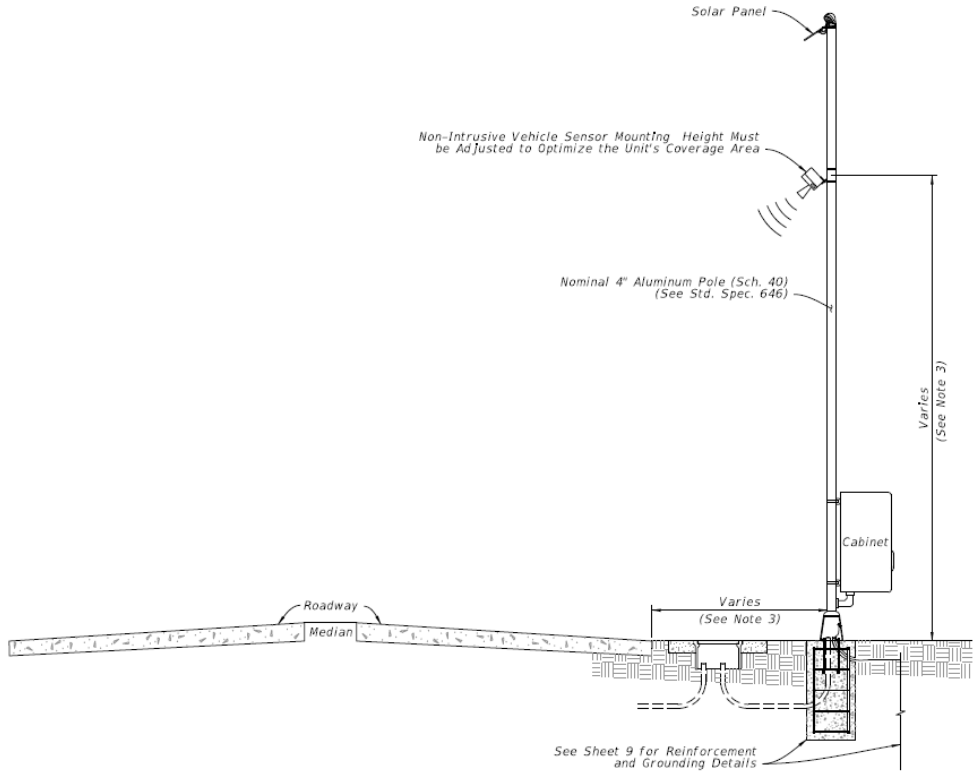


Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 695 Updated Sheet 8***:



PLAN



ELEVATION

NOTES:

1. The unit must be capable of detecting up to eight lanes of traffic (in elther or both directions) when mounted perpendicular to the roadway.
2. Coverage area of the unit is affected by the roadway geometry: distance from the travel lanes, median type and width, barrier walls, etc.
3. Mounting height of the unit and offset from the roadway must be determined on a site-by-site basis, in accordance with the manufacturer's recommended guidelines. Offset of pole must be greater than or equal to minimum clear zone requirements.

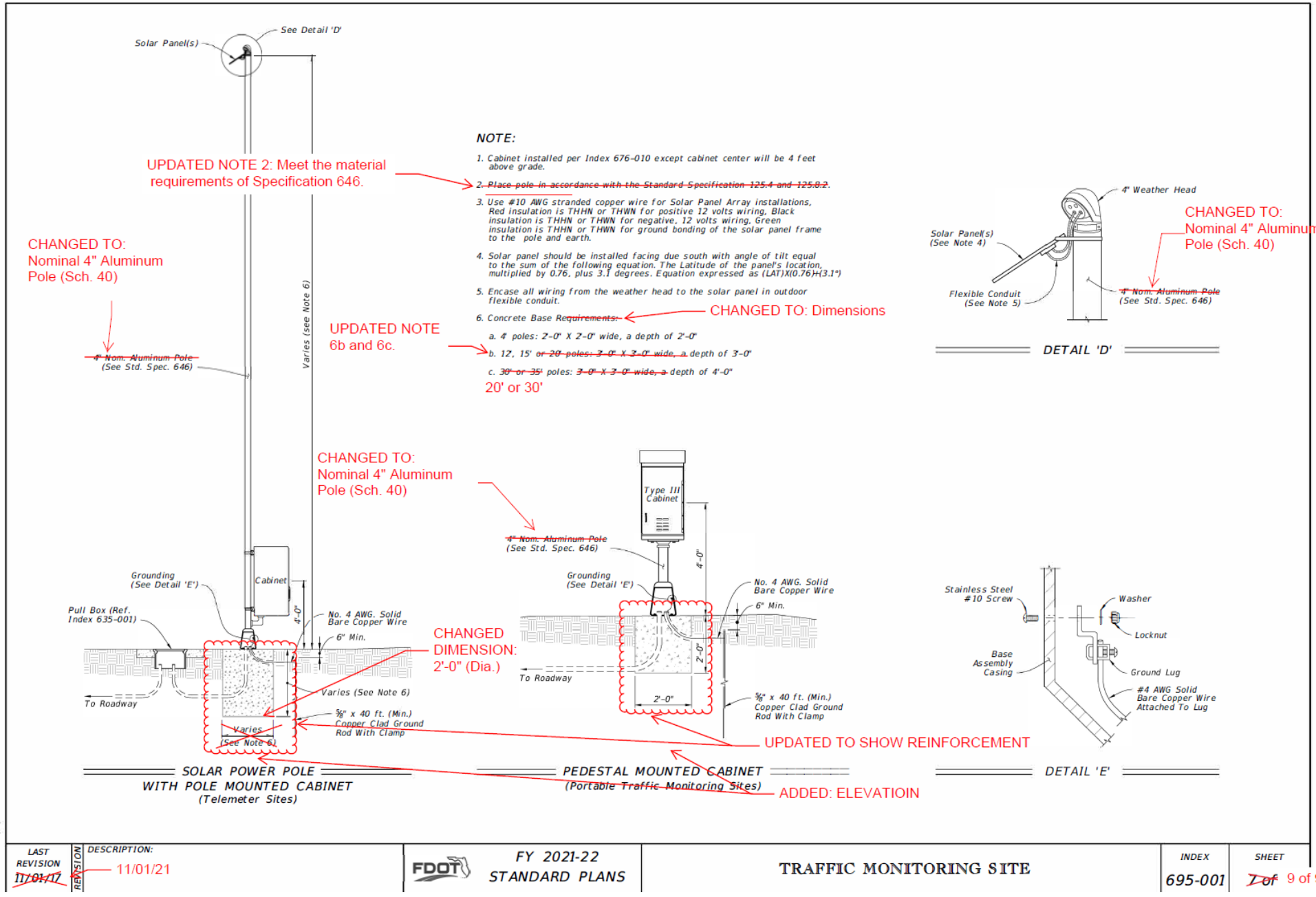
NON-INTRUSIVE VEHICLE SENSOR

10/22/2021 10:24:46 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX	SHEET
11/01/21						695-001	8 of 9

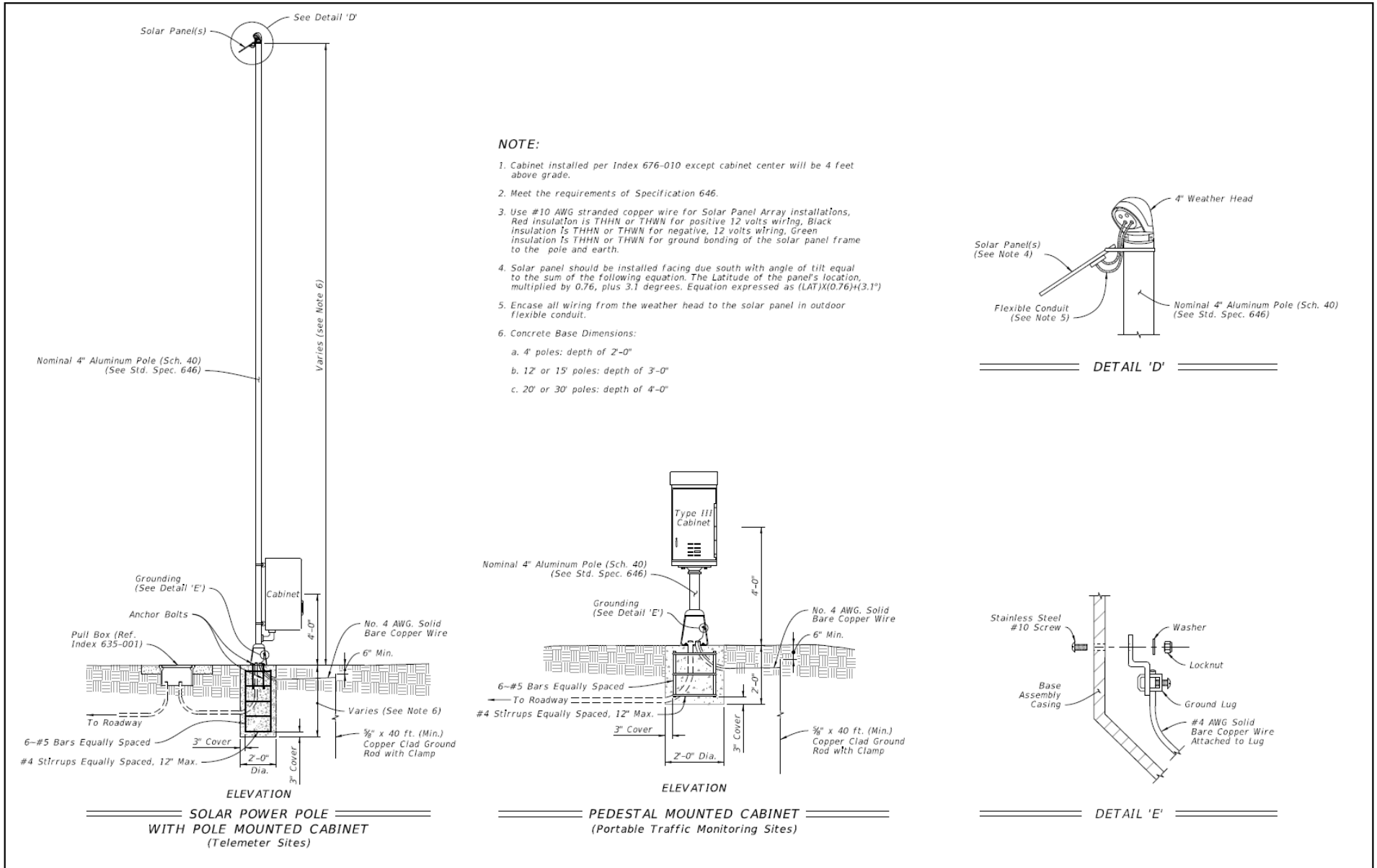
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 695 Updates***:
  - Updated Foundations
  - Updated Pole Callouts
  - Revised Note 2 and Note 6

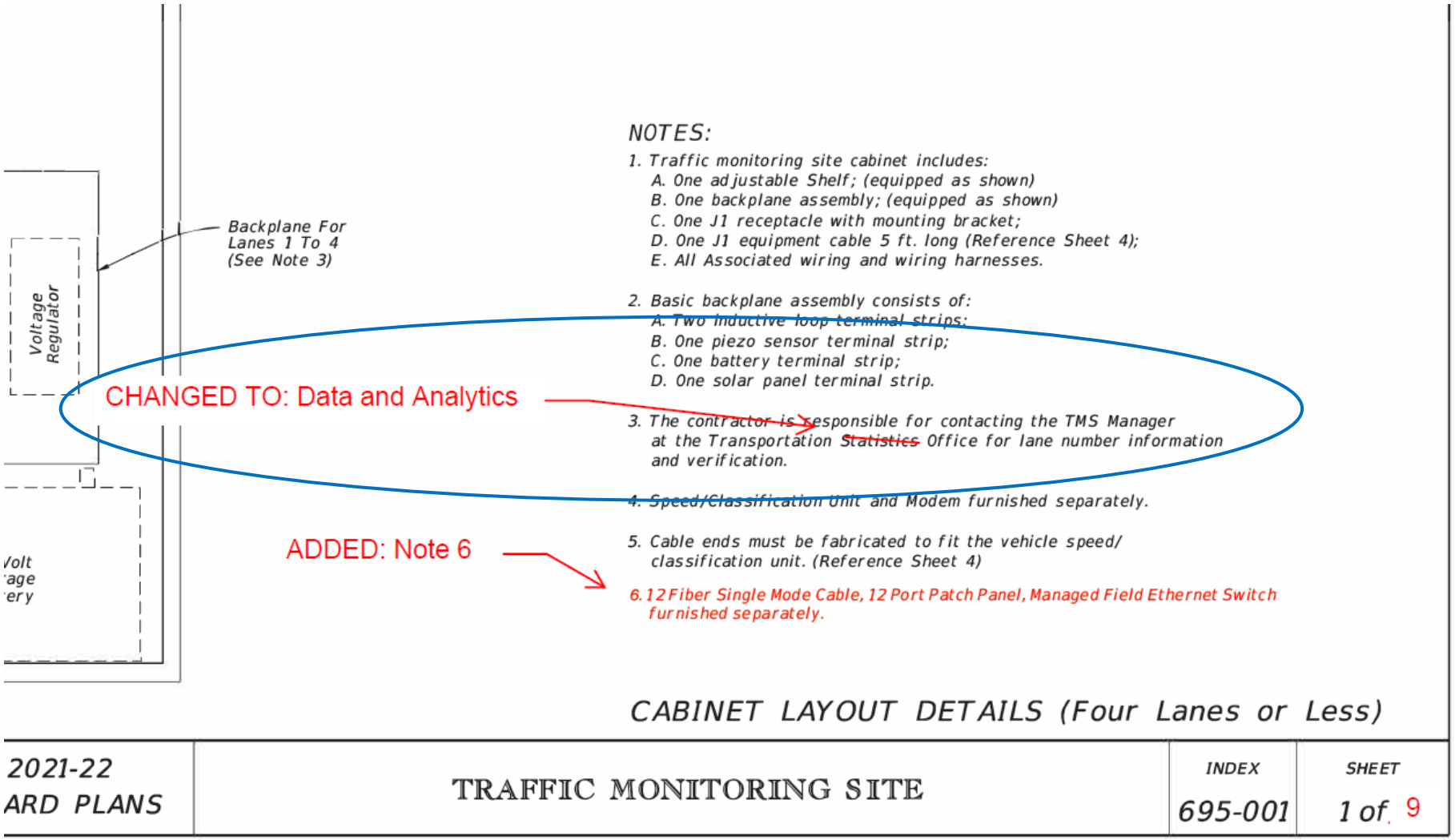


Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

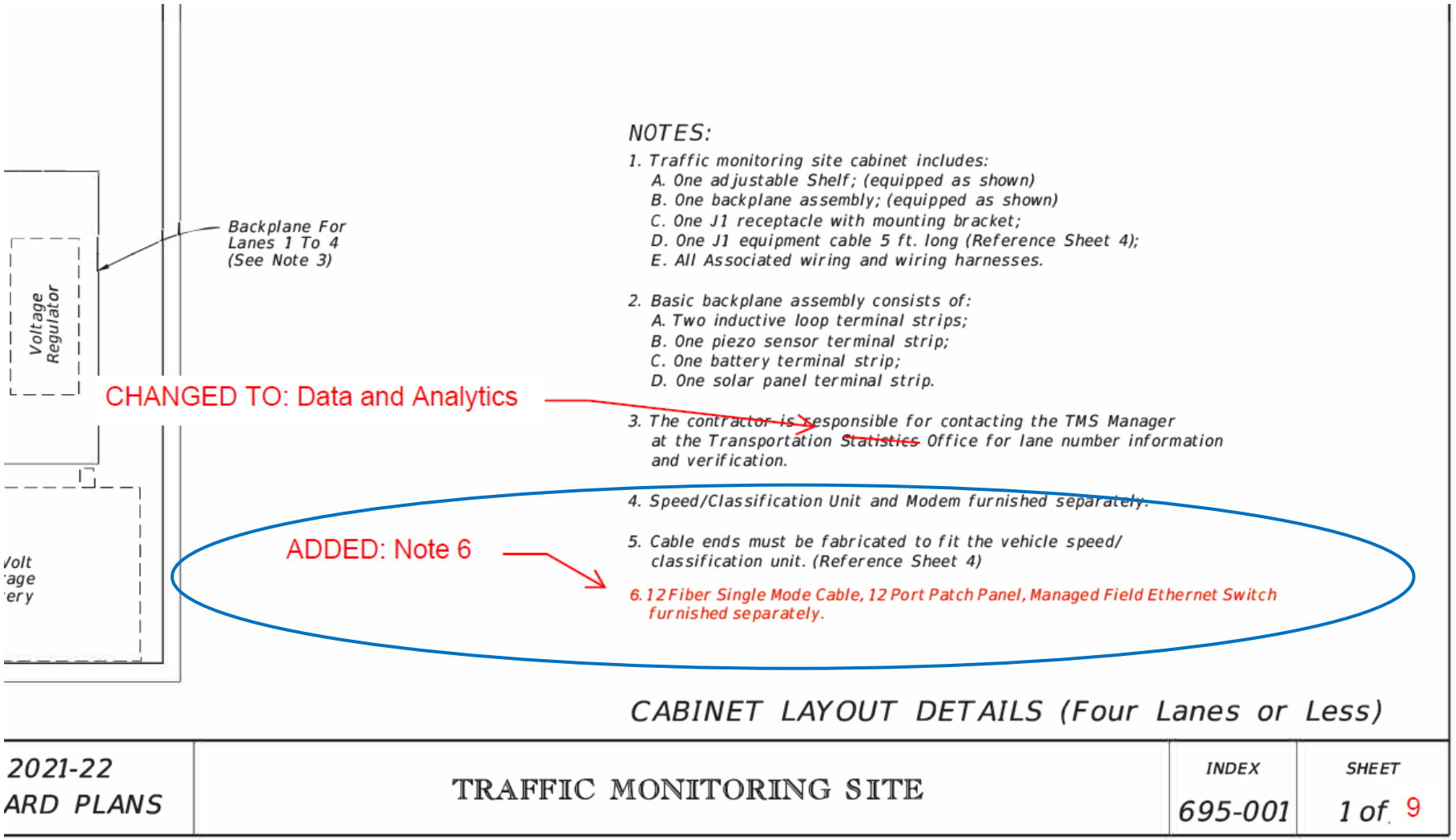
- ***Index 695 Updated Sheet 9***:



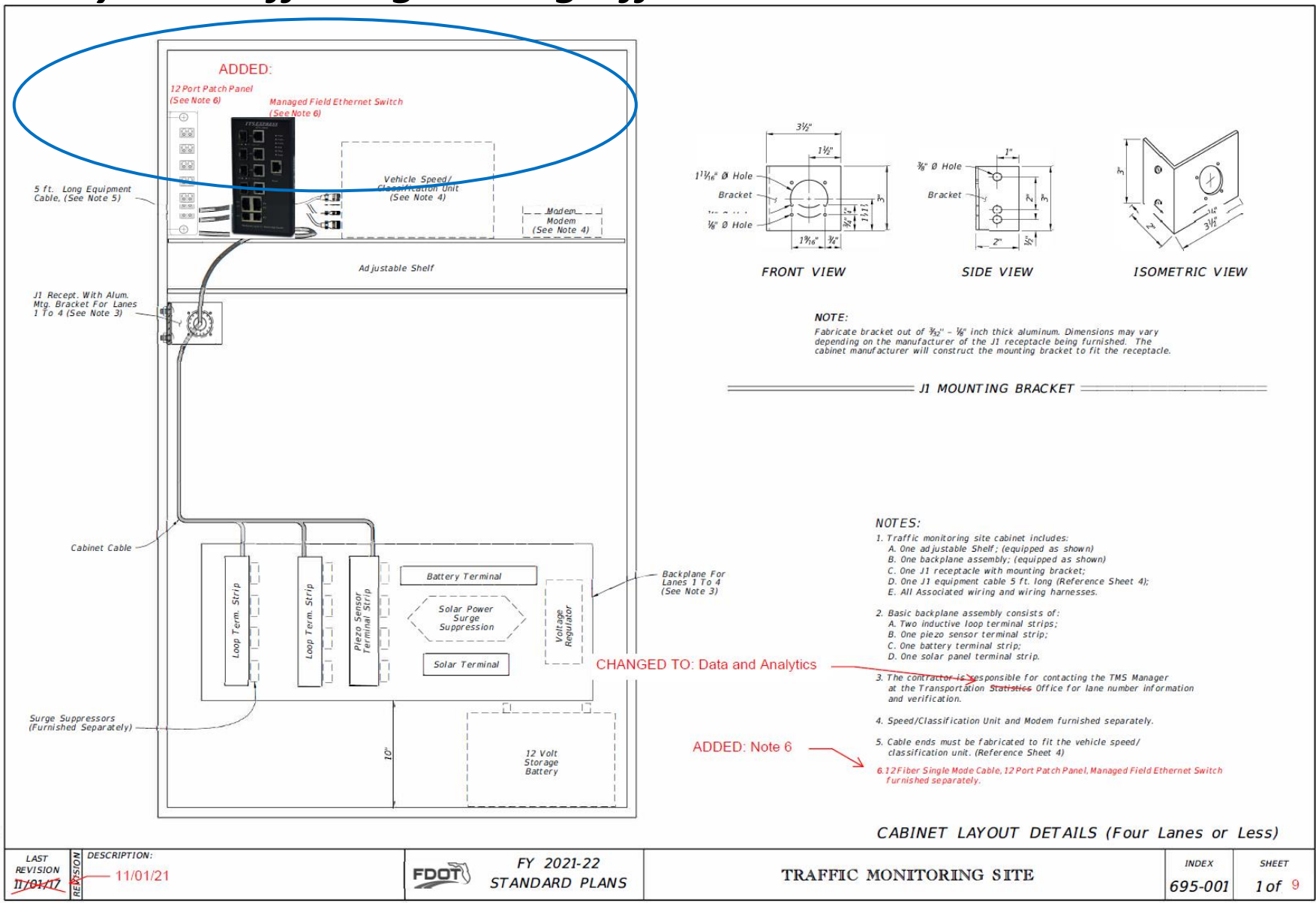
- ***Index 695 Updates Requested by the Traffic Engineering Office***:
  - Updated the name of the office from "Transportation Statistics" to "Transportation Data and Analytics".



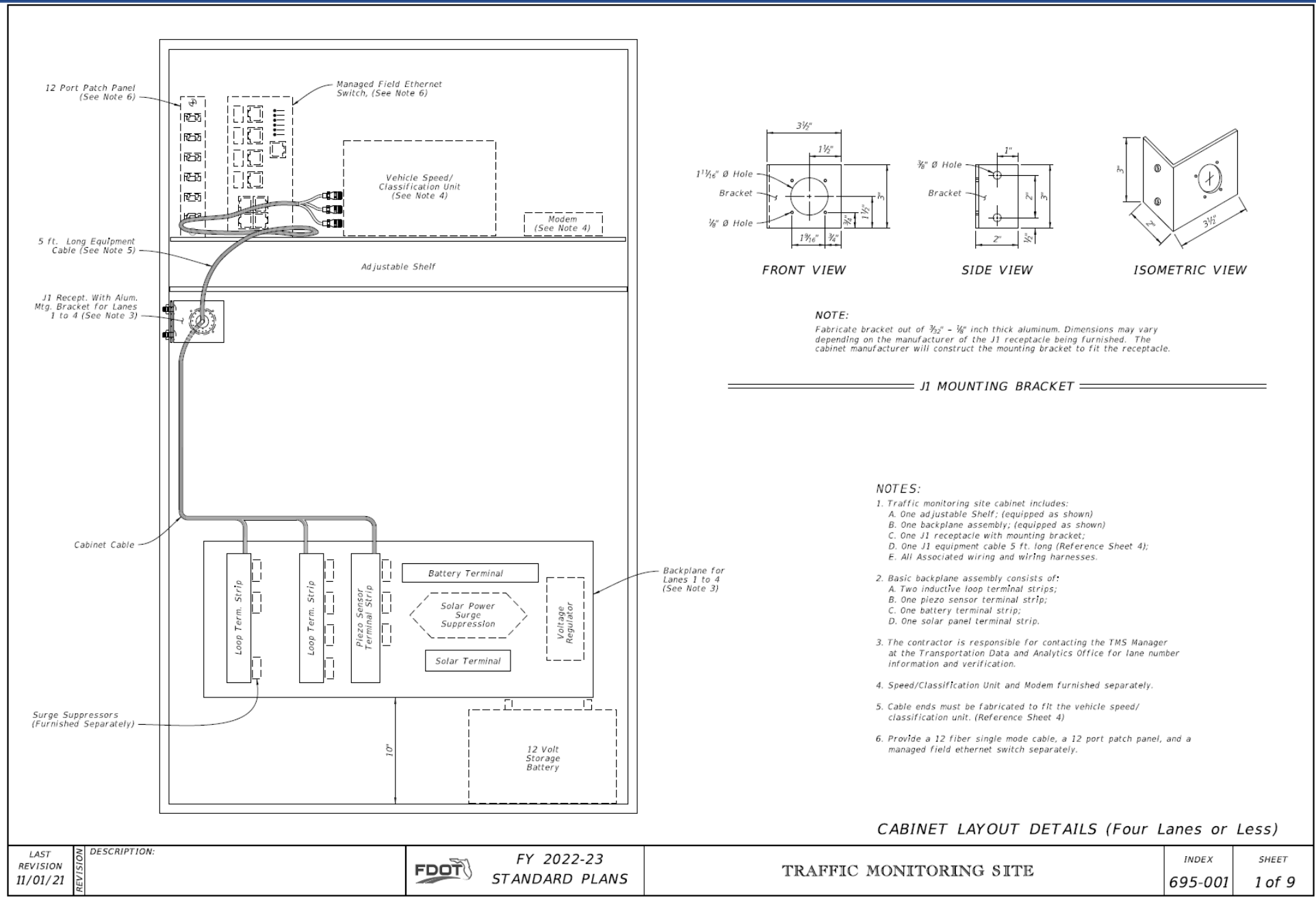
- ***Index 695 Updates Requested by the Traffic Engineering Office***:
  - Added note 6 on 12 Port Patch Panel and Managed Field Ethernet Switch



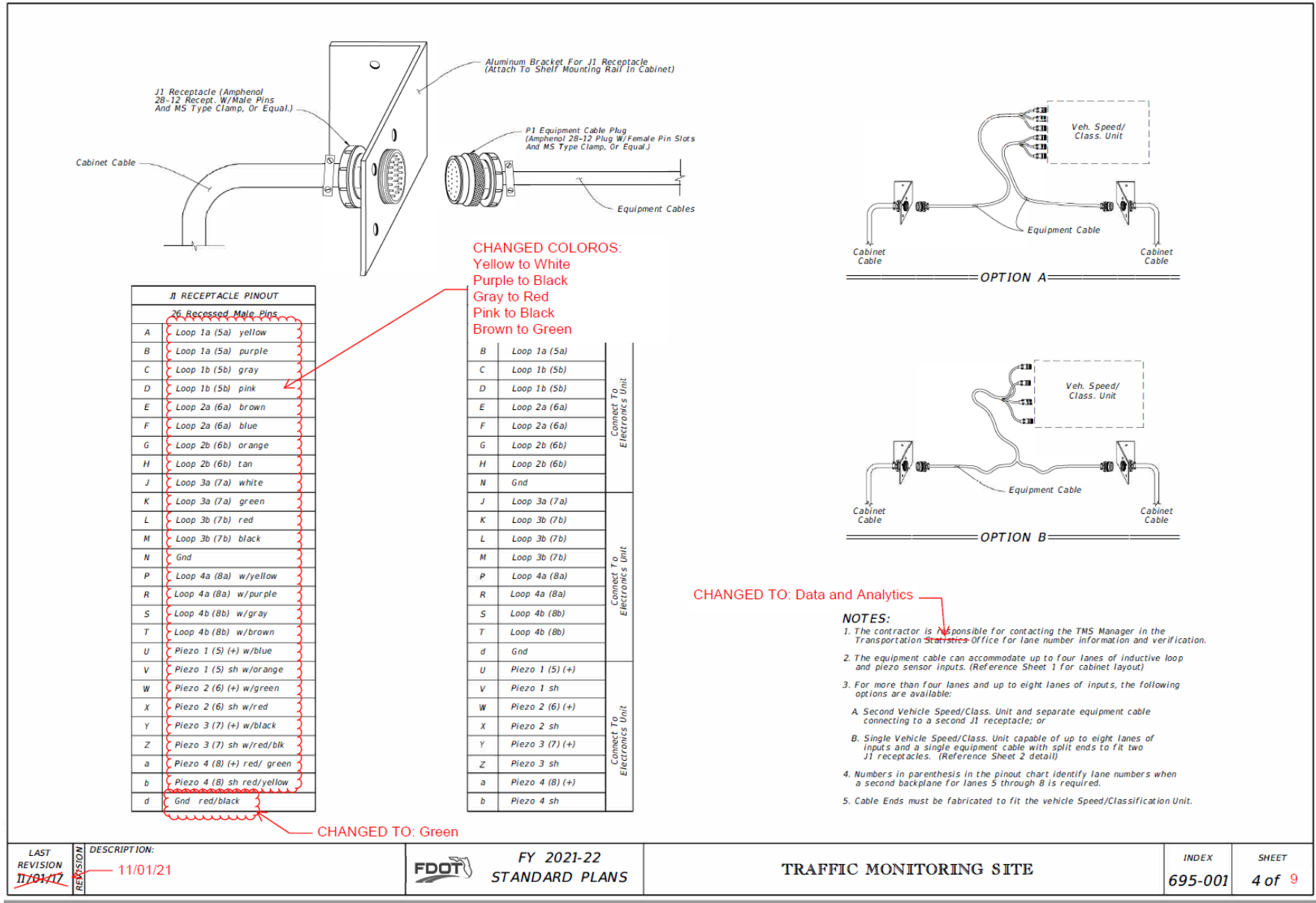
- ***Index 695 Updates Requested by the Traffic Engineering Office***:
  - Added reference to new Note 6



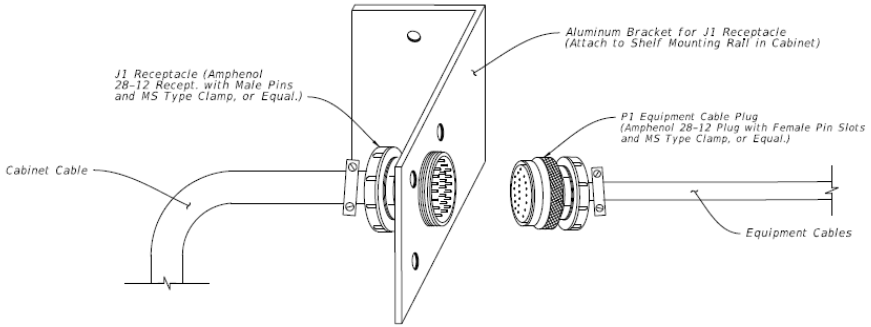
- ***Index 695***
  Updated Sheet 1:



- ***Index 695 Updates Requested by the Traffic Engineering Office***:
  - Updated color scheme to match vendor provided color scheme

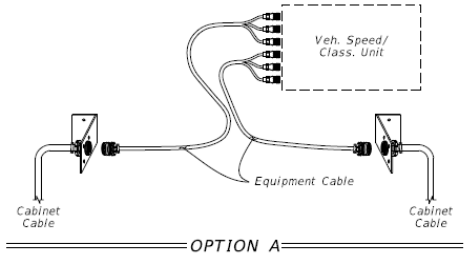


- ***Index 695 Updates Requested by the Traffic Engineering Office***:
  - Updated color scheme to match vendor provided color scheme

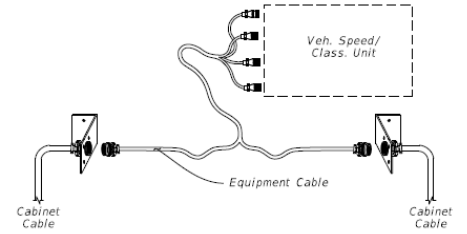


J1 RECEPTACLE PINOUT	
26 Recessed Male Pins	
A	Loop 1a (5a) white
B	Loop 1a (5a) black
C	Loop 1b (5b) red
D	Loop 1b (5b) black
E	Loop 2a (6a) green
F	Loop 2a (6a) blue
G	Loop 2b (6b) orange
H	Loop 2b (6b) tan
J	Loop 3a (7a) white
K	Loop 3a (7a) green
L	Loop 3b (7b) red
M	Loop 3b (7b) black
N	Gnd
P	Loop 4a (8a) w/white
R	Loop 4a (8a) w/black
S	Loop 4b (8b) w/red
T	Loop 4b (8b) w/green
U	Piezo 1 (5) (+) w/blue
V	Piezo 1 (5) sh w/orange
W	Piezo 2 (6) (+) w/green
X	Piezo 2 (6) sh w/red
Y	Piezo 3 (7) (+) w/black
Z	Piezo 3 (7) sh w/red/blk
a	Piezo 4 (8) (+) red/ green
b	Piezo 4 (8) sh red/white
d	Gnd green

J1 EQUIPMENT CABLE PLUG		
26 Female Pin Slots		
A	Loop 1a (5a)	Connect To Electronics Unit
B	Loop 1a (5a)	
C	Loop 1b (5b)	
D	Loop 1b (5b)	
E	Loop 2a (6a)	
F	Loop 2a (6a)	
G	Loop 2b (6b)	
H	Loop 2b (6b)	
N	Gnd	
J	Loop 3a (7a)	Connect To Electronics Unit
K	Loop 3b (7b)	
L	Loop 3b (7b)	
M	Loop 3b (7b)	
P	Loop 4a (8a)	
R	Loop 4a (8a)	
S	Loop 4b (8b)	
T	Loop 4b (8b)	
d	Gnd	
U	Piezo 1 (5) (+)	Connect To Electronics Unit
V	Piezo 1 sh	
W	Piezo 2 (6) (+)	
X	Piezo 2 sh	
Y	Piezo 3 (7) (+)	
Z	Piezo 3 sh	
a	Piezo 4 (8) (+)	
b	Piezo 4 sh	



OPTION A



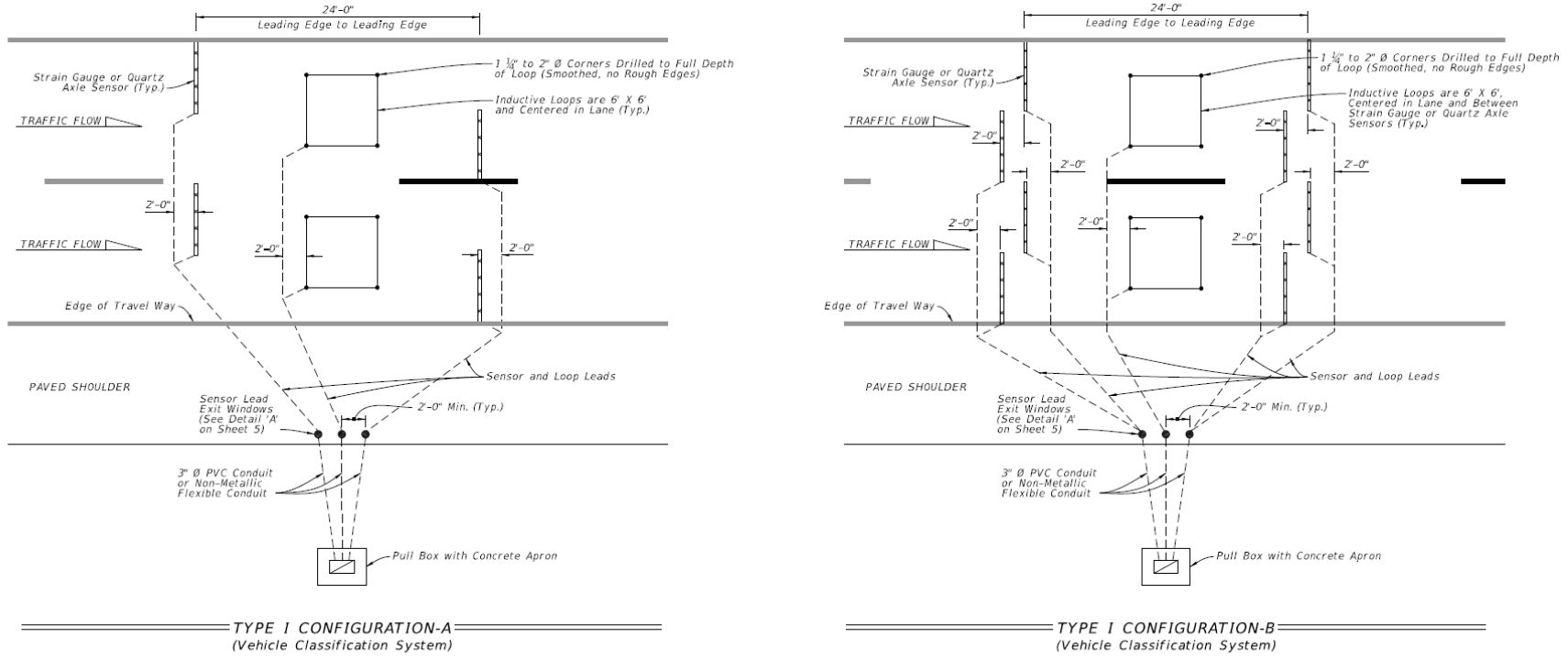
OPTION B

NOTES:

1. The contractor is responsible for contacting the TMS Manager in the Transportation Data and Analytics Office for lane number information and verification.
2. The equipment cable can accommodate up to four lanes of inductive loop and piezo sensor inputs. (Reference Sheet 1 for cabinet layout)
3. For more than four lanes and up to eight lanes of inputs, the following options are available:
   A. Second Vehicle Speed/Class. Unit and separate equipment cable connecting to a second J1 receptacle; or
   B. Single Vehicle Speed/Class. Unit capable of up to eight lanes of inputs and a single equipment cable with split ends to fit two J1 receptacles. (Reference Sheet 2 detail)
4. Numbers in parenthesis in the pinout chart identify lane numbers when a second backplane for lanes 5 through 8 is required.
5. Cable Ends must be fabricated to fit the vehicle Speed/Classification Unit.

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 4 of 9

- ***Index 695 Updates Requested by the Traffic Engineering Office***:
  - New Sheet 6

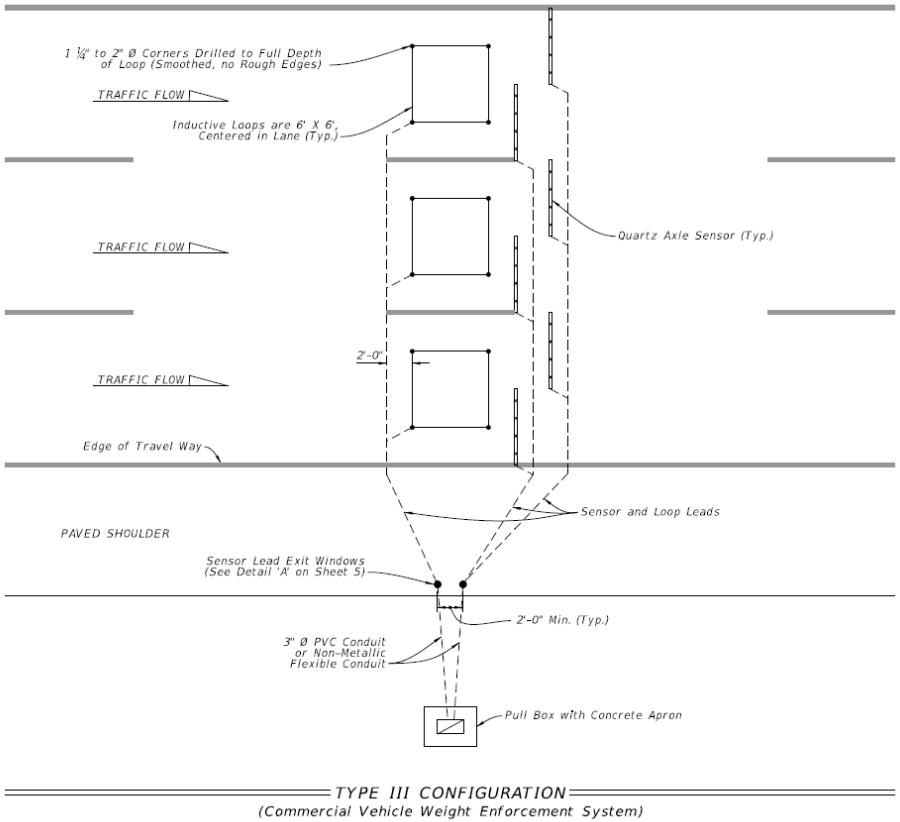


NOTE:
Configuration-A and Configuration-B are based on the vehicle Speed/classification unit. Contact the TMS Manager in the Transportation Data and Analytics Office for the correct configuration.

LANE CONFIGURATION FOR TMS INDUCTIVE LOOP AND STRAIN GAUGE/QUARTZ AXLE SENSOR

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 6 of 9

- ***Index 695 Updates Requested by the Traffic Engineering Office***:
  - New Sheet 7

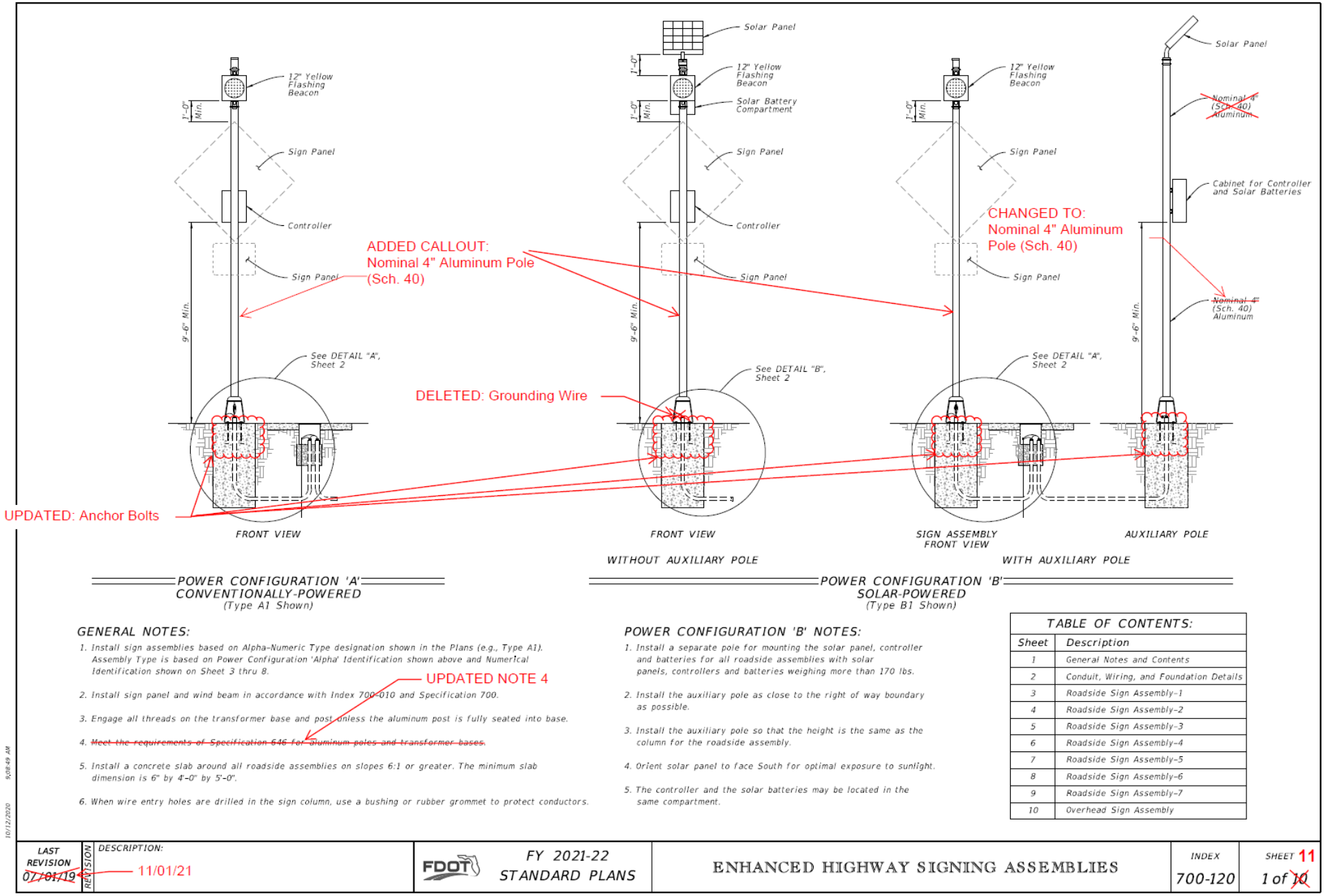


LANE CONFIGURATION FOR MAINLINE INDUCTIVE LOOP AND QUARTZ AXLE SENSOR

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 7 of 9

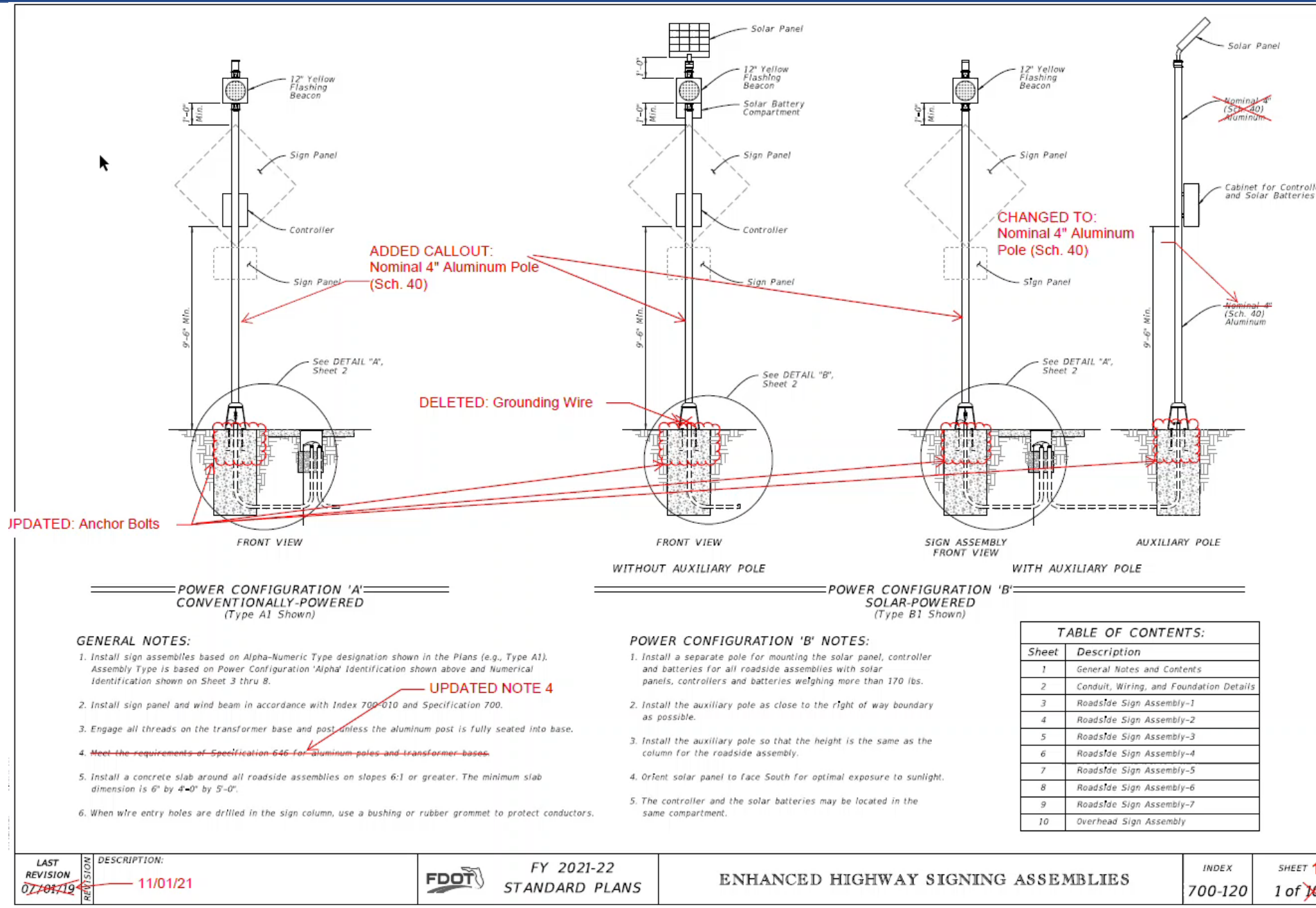
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 700-120 Updates***:
  - Updated Foundations
  - Updated Pole Callouts



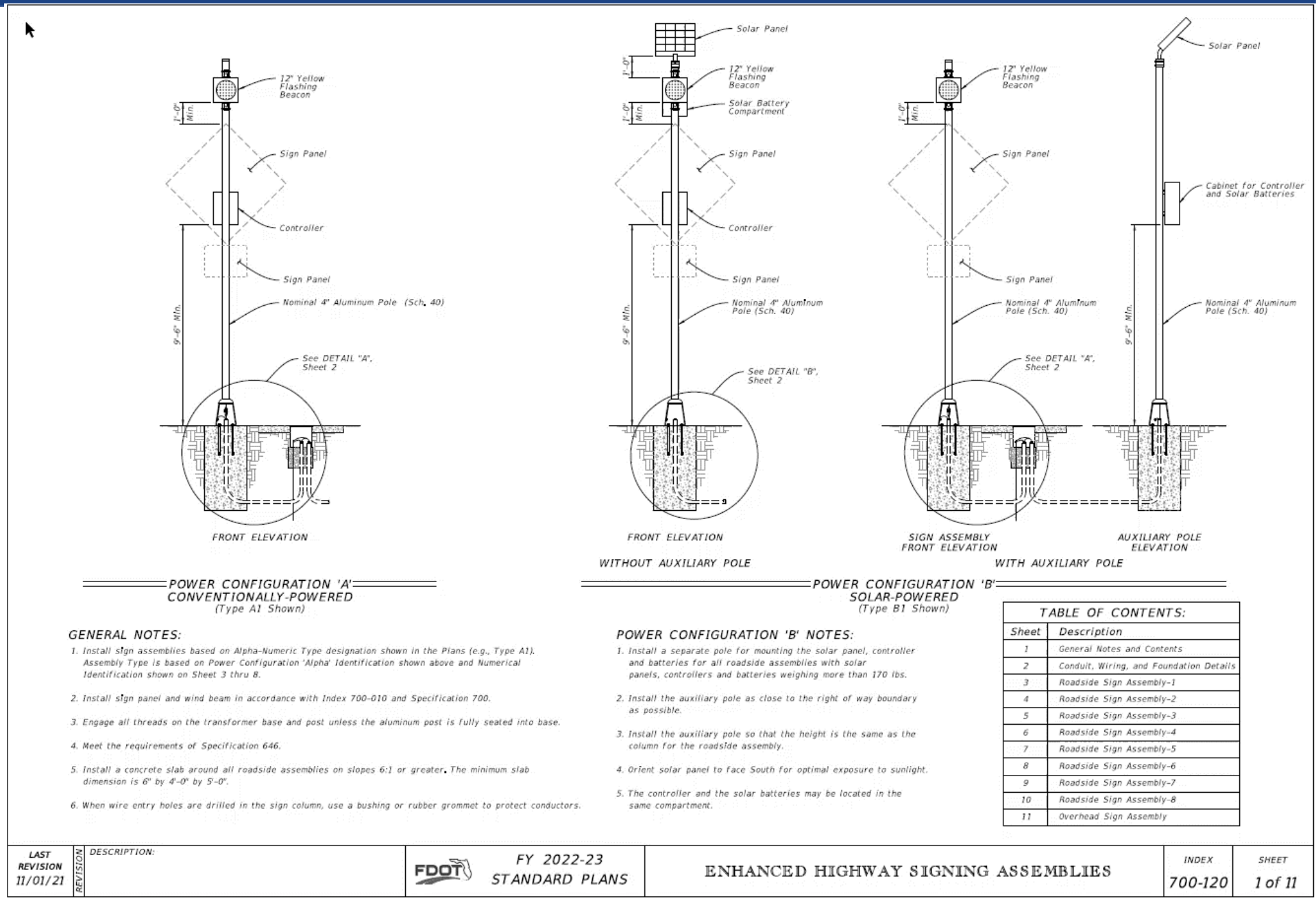
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 700-120 Updates***:
  - Updated Foundations
  - Updated Pole Callouts
  - Updated Various Notes throughout Index



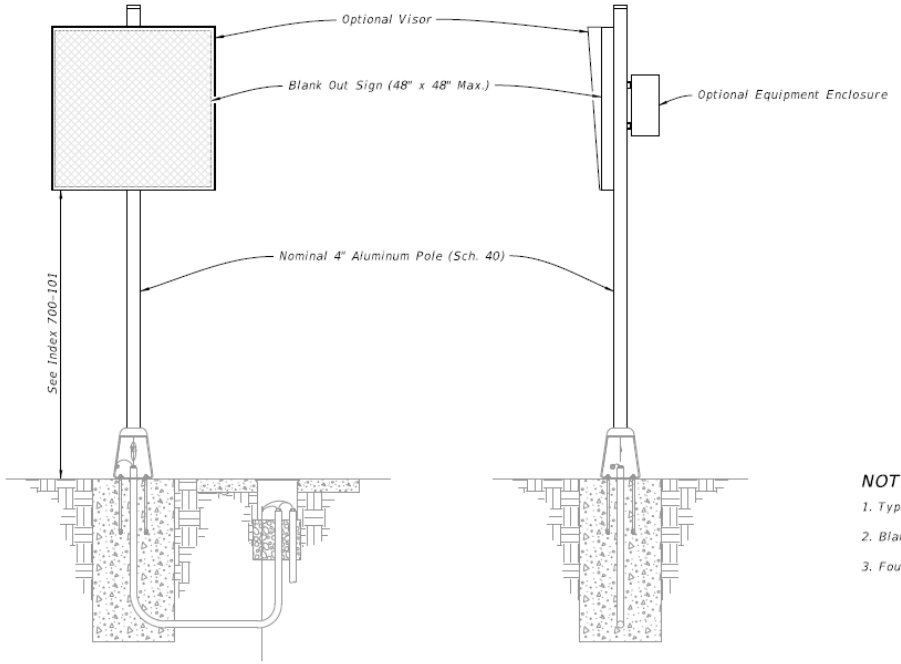
Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 700-120 Updated***:



Post Foundations, Indexes 646-001, 654-001, 695-001, 700-120

- ***Index 700-120 Updates***
  - New Sheet 10



NOTES:

1. Type A1 Assembly (conventionally-powered) is shown.
2. Blank Out Sign visors are optional.
3. Foundation reinforcement not shown.

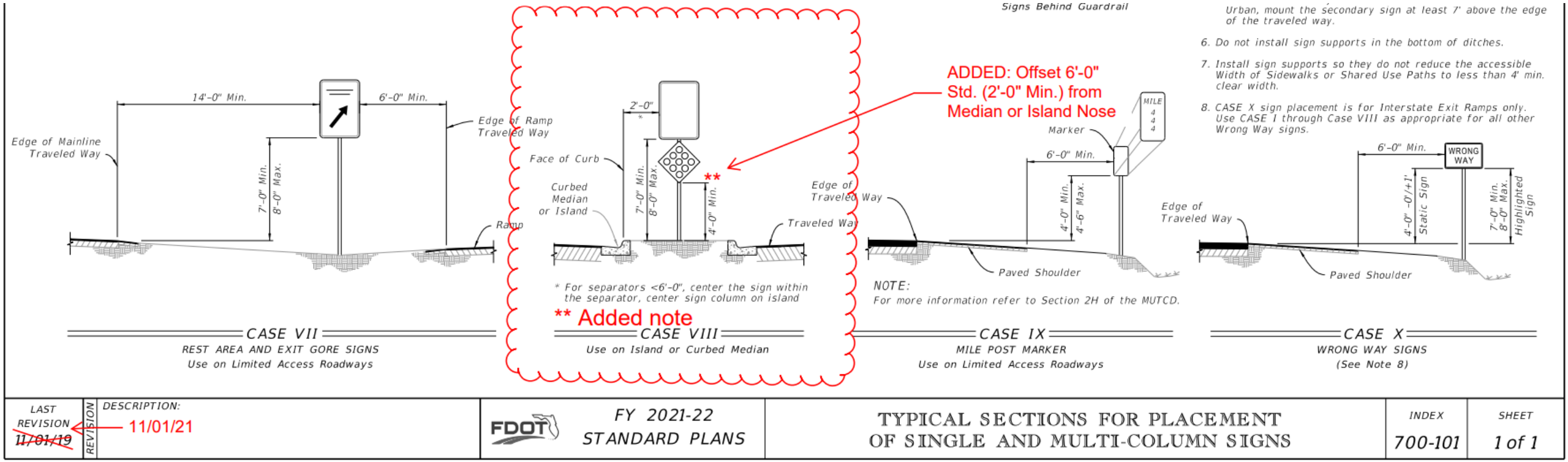
10/22/2021 10:09:50 AM

ROADSIDE SIGN ASSEMBLY-8

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	ENHANCED HIGHWAY SIGNING ASSEMBLIES	INDEX 700-120	SHEET 10 of 11

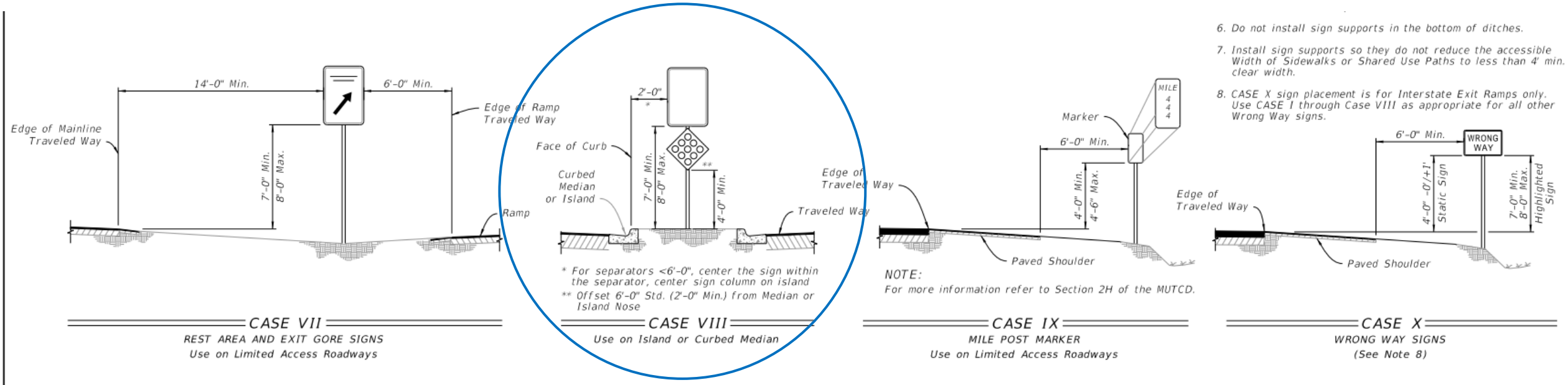
Typical Sections for Placement of Single & Multi-Column Signs, Index 700-101

- ***Index 700-101 Updates***
  - Added Median or Island Nose Offset Callout to Case VIII



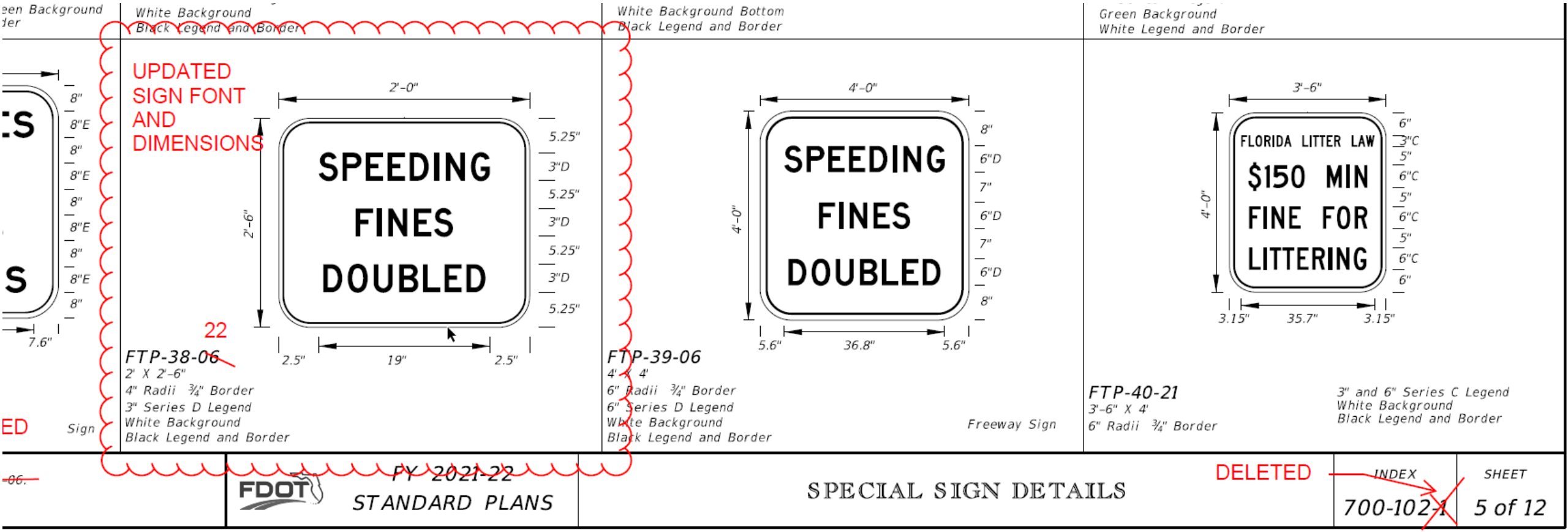
Typical Sections for Placement of Single & Multi-Column Signs, Index 700-101

- ***Index 700-101 Updated***
  - Added Median or Island Nose Offset Callout to Case VIII

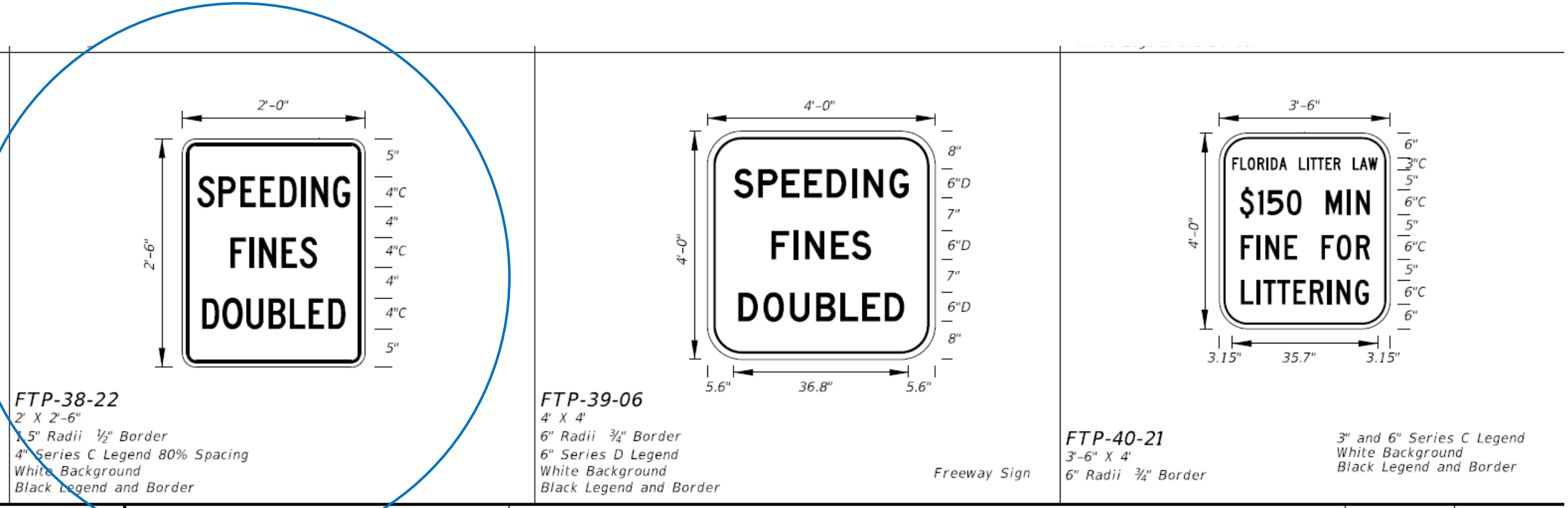


LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	TYPICAL SECTIONS FOR PLACEMENT OF SINGLE AND MULTI-COLUMN SIGNS	INDEX	SHEET
11/01/21						700-101	1 of 1

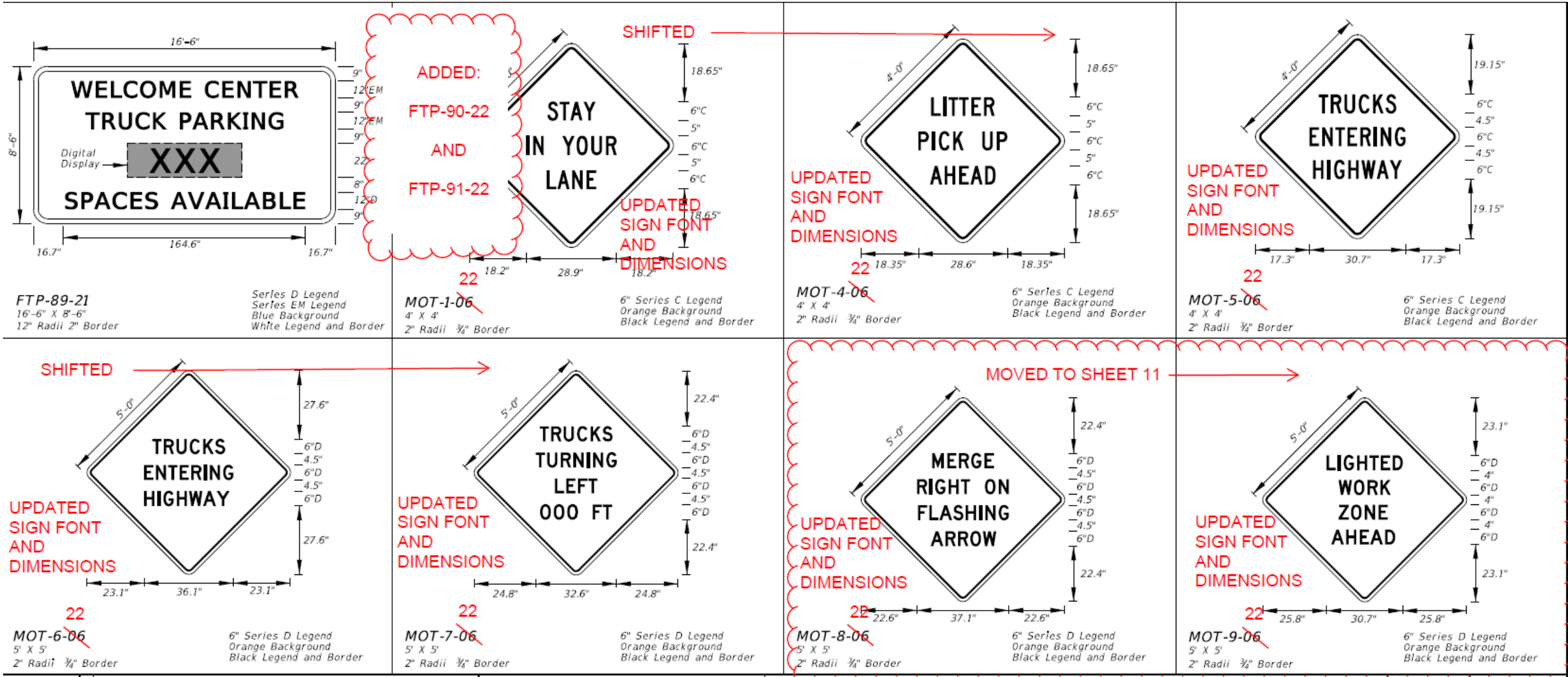
- ***Index 700-102 Updates***
  - Updated the Speeding Fines Doubled sign font, dimensions and number



- ***Index 700-102 Updates***
  - Updated the Speeding Fines Doubled sign font, dimensions and number



- **Index 700-102 Sheet 10 Updates**

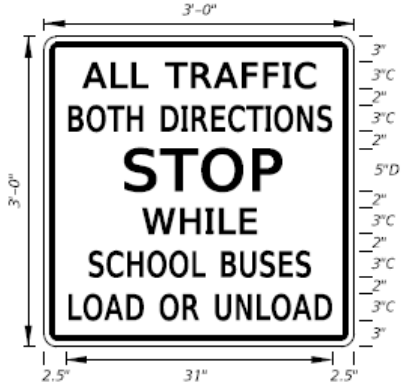


LAST REVISION	REVISION	DESCRIPTION:	FDOT			
~~11/01/20~~		11/01/21	FY 2021-22 STANDARD PLANS	SPECIAL SIGN DETAILS	INDEX 700-102	SHEET 10 of 12

- **Index 700-102 Sheet 10 Updated**

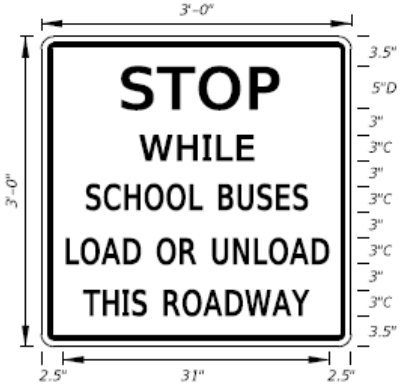
FTP-89-21
16'-6" X 8'-6"
12" Radii 2" Border

Series D Legend
Series EM Legend
Blue Background
White Legend and Border



FTP-90-22
3'-0" X 3'-0"
1.5" Radii ¾" Border

3" Series C Legend and
5" Series D Legend
White Background
Black Legend and Border



FTP-91-22
3'-0" X 3'-0"
1.5" Radii ¾" Border

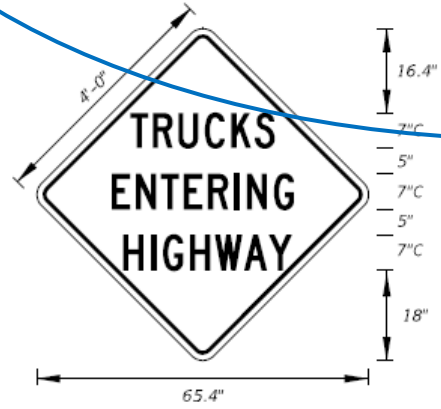
3" Series C Legend and
5" Series D Legend
White Background
Black Legend and Border

MOT-1-22
4' X 4'
3" Radii ¾" Border

8" Series C Legend
Orange Background
Black Legend and Border

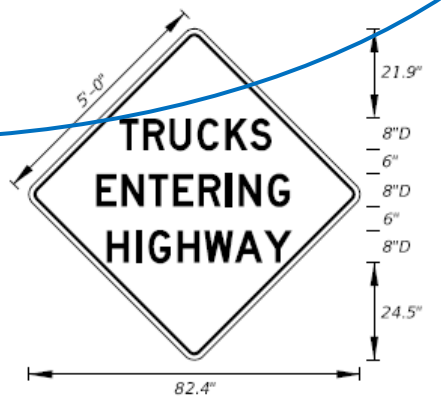
MOT-4-22
4' X 4'
3" Radii ¾" Border

8" Series C Legend
Orange Background
Black Legend and Border



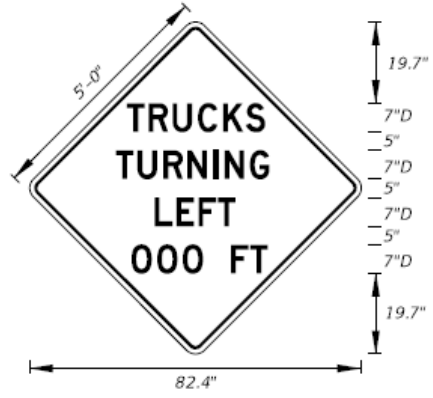
MOT-5-22
4' X 4'
3" Radii ¾" Border

7" Series C Legend
Orange Background
Black Legend and Border



MOT-6-22
5' X 5'
3" Radii ¾" Border

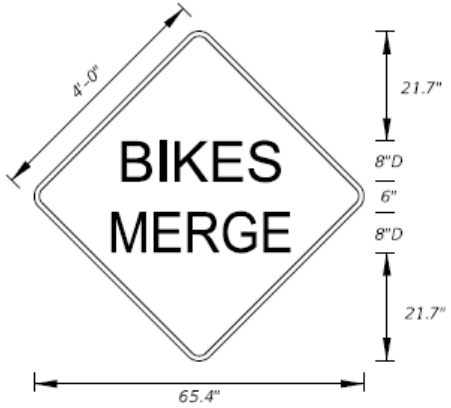
8" Series D Legend
Orange Background
Black Legend and Border



MOT-7-22
5' X 5'
3" Radii ¾" Border

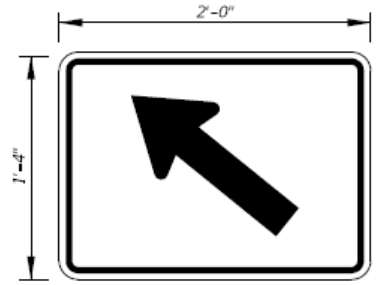
7" Series D Legend
Orange Background
Black Legend and Border

- ***Index 700-102 Sheet 12 Updated***
  - Added MOT-26A-22 and MOT-26B-22



MOT-26A-22
4' X 4'
3" Radii ¾" Border

8" Series D Legend
Orange Background
Black Legend and Border



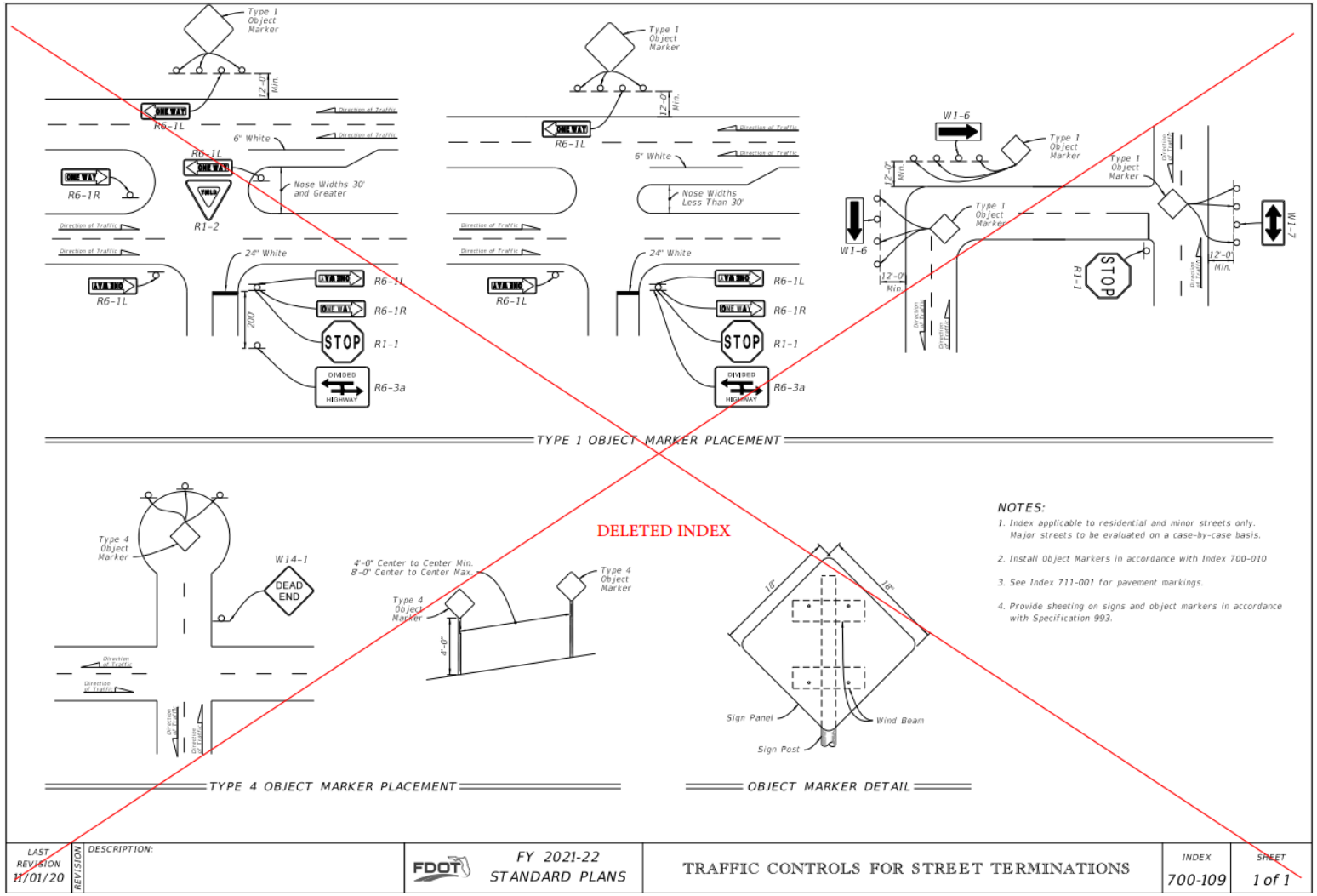
MOT-26B-22
2'-0" X 1'-4"
1.5" Radii ⅝" Border

Orange Background
Black Legend and Border

LAST REVISION	DESCRIPTION:	FY 2022-23 STANDARD PLANS	SPECIAL SIGN DETAILS	INDEX	SHEET
11/01/21				700-102	12 of 12

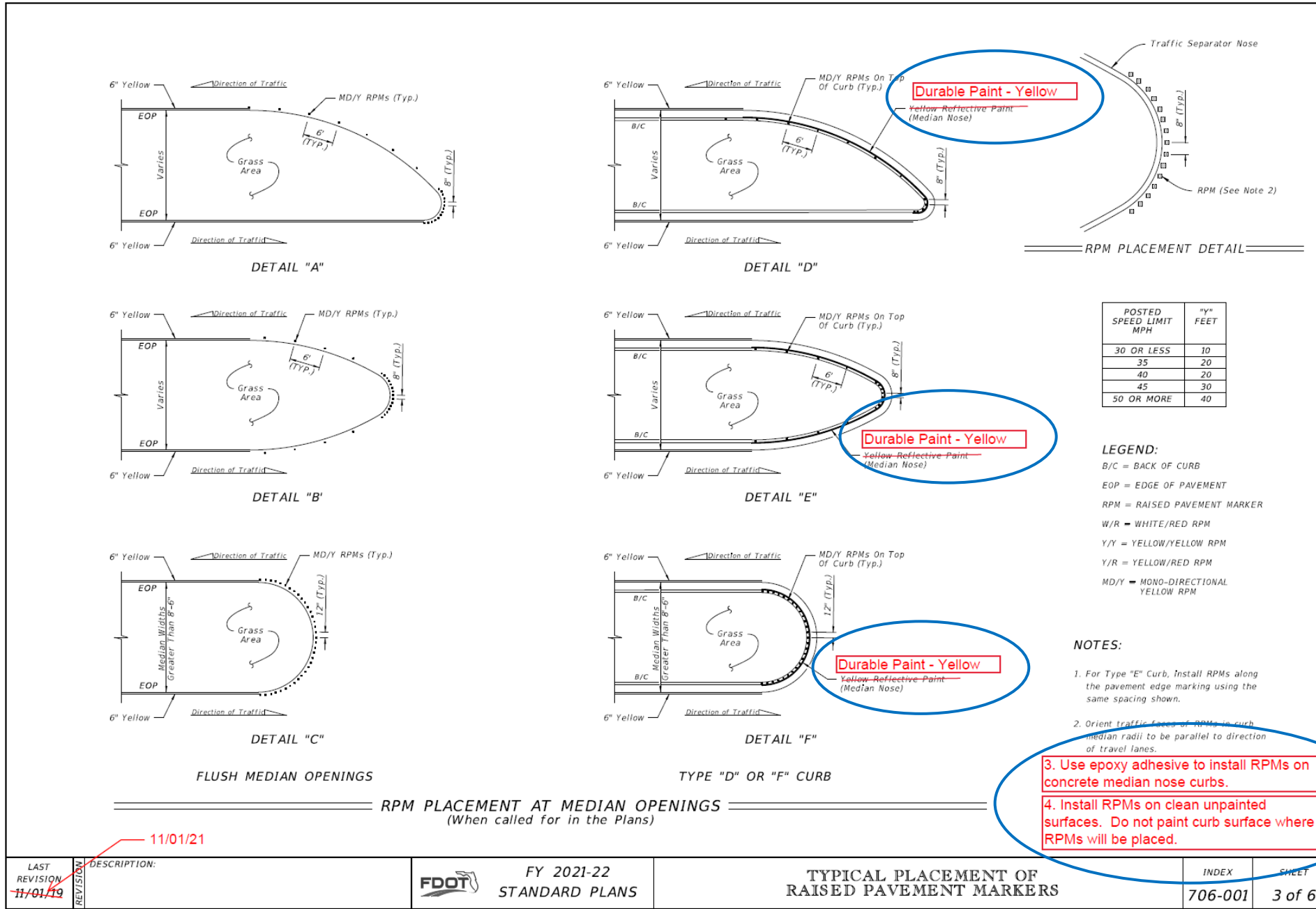
Traffic Control for Street Terminations, Index 700-109

- ***DELETED Index 700-109 Updates***
  - Deleted Index as Most Information is in FDM 230



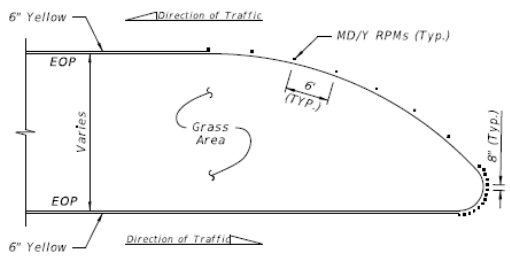
Typical Placement of Raised Pavement, Index 706-001

- ***Index 706-001 Updates***
  - Yellow Reflective Paint replaced w/ Durable Paint – Yellow
  - New Notes 3 & 4

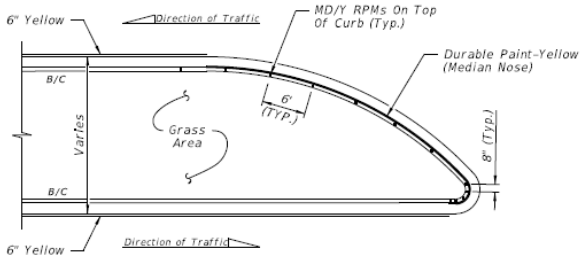


Typical Placement of Raised Pavement, Index 706-001

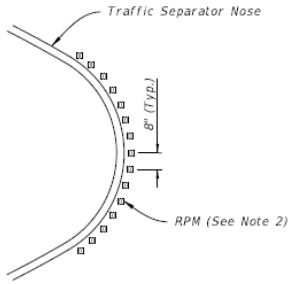
- ***Index 706-001 Updates***
  - Updated Sheet 3



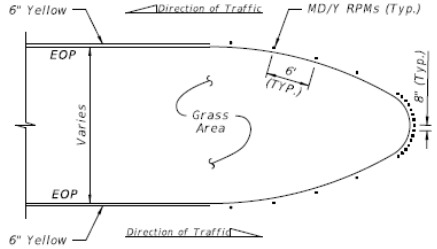
DETAIL "A"



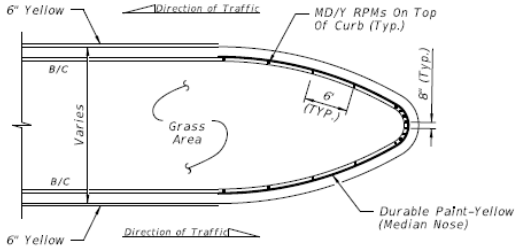
DETAIL "D"



RPM PLACEMENT DETAIL

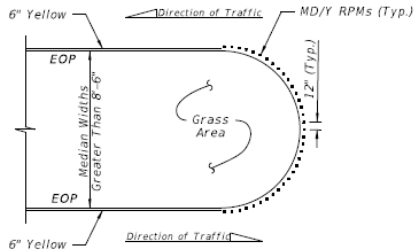


DETAIL "B"



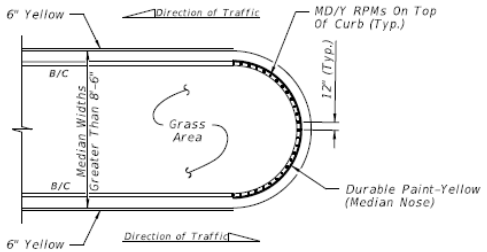
DETAIL "E"

POSTED SPEED LIMIT MPH	"Y" FEET
30 OR LESS	10
35	20
40	20
45	30
50 OR MORE	40



DETAIL "C"

FLUSH MEDIAN OPENINGS



DETAIL "F"

TYPE "D" OR "F" CURB

LEGEND:

B/C = BACK OF CURB

EOP = EDGE OF PAVEMENT

RPM = RAISED PAVEMENT MARKER

W/R = WHITE/RED RPM

Y/Y = YELLOW/YELLOW RPM

Y/R = YELLOW/RED RPM

MD/Y = MONO-DIRECTIONAL YELLOW RPM

NOTES:

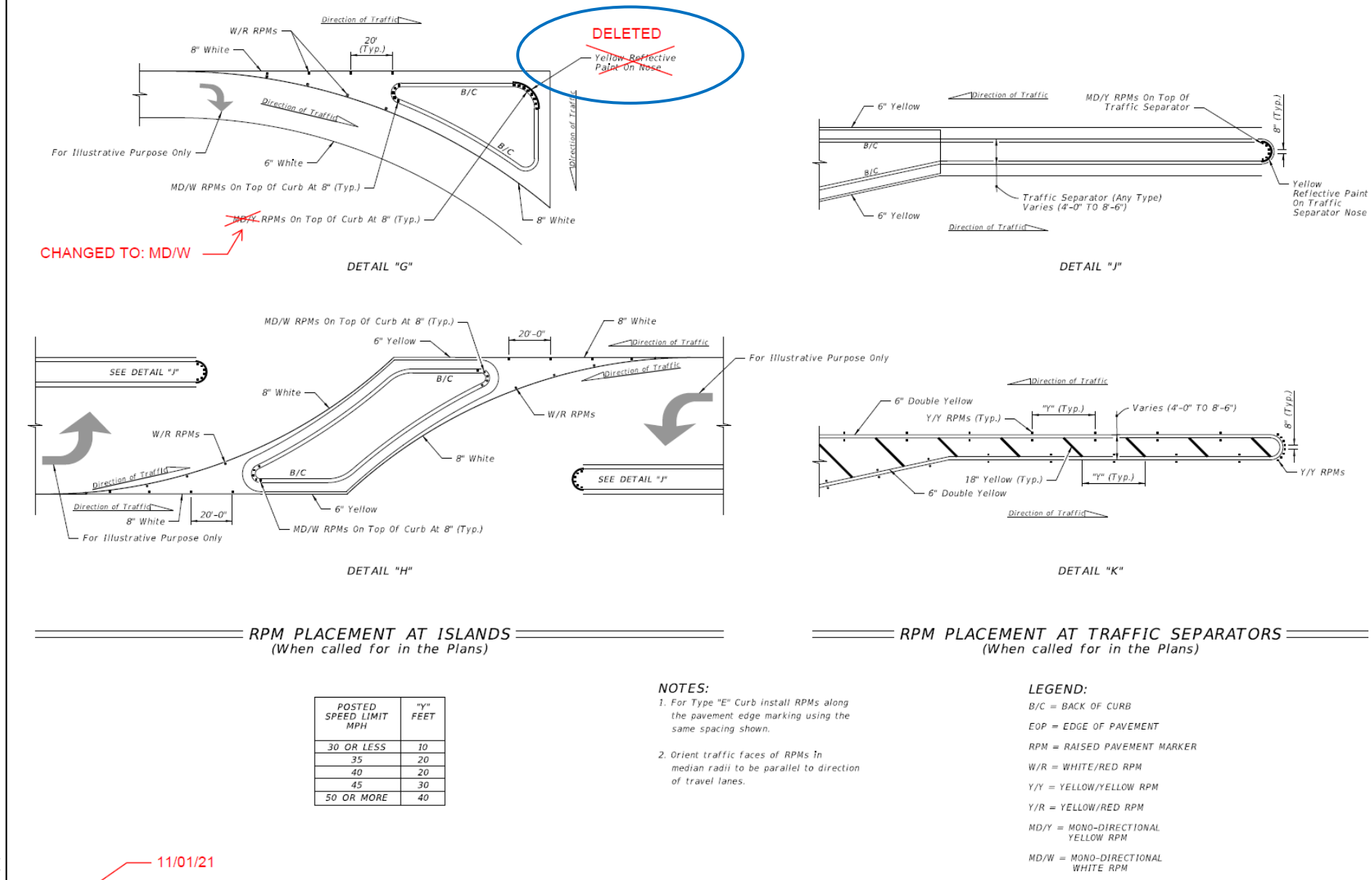
1. For Type "E" Curb, install RPMs along the pavement edge marking using the same spacing shown.
2. Orient traffic faces of RPMs in curb median radii to be parallel to direction of travel lanes.
3. Use epoxy adhesive to install RPMs on concrete median nose curbs.
4. Install RPMs on clean, unpainted surface. Do not paint curb surface where RPMs will be placed.

RPM PLACEMENT AT MEDIAN OPENINGS
(When called for in the Plans)

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TYPICAL PLACEMENT OF RAISED PAVEMENT MARKERS	INDEX 706-001	SHEET 3 of 6

Typical Placement of Raised Pavement, Index 706-001

- ***Index 706-001 Updates***
  - No yellow paint or yellow RPMs on nose of curb



RPM PLACEMENT AT ISLANDS
(When called for in the Plans)

RPM PLACEMENT AT TRAFFIC SEPARATORS
(When called for in the Plans)

POSTED SPEED LIMIT MPH	"Y" FEET
30 OR LESS	10
35	20
40	20
45	30
50 OR MORE	40

NOTES:
1. For Type "E" Curb install RPMs along the pavement edge marking using the same spacing shown.
2. Orient traffic faces of RPMs in median radii to be parallel to direction of travel lanes.

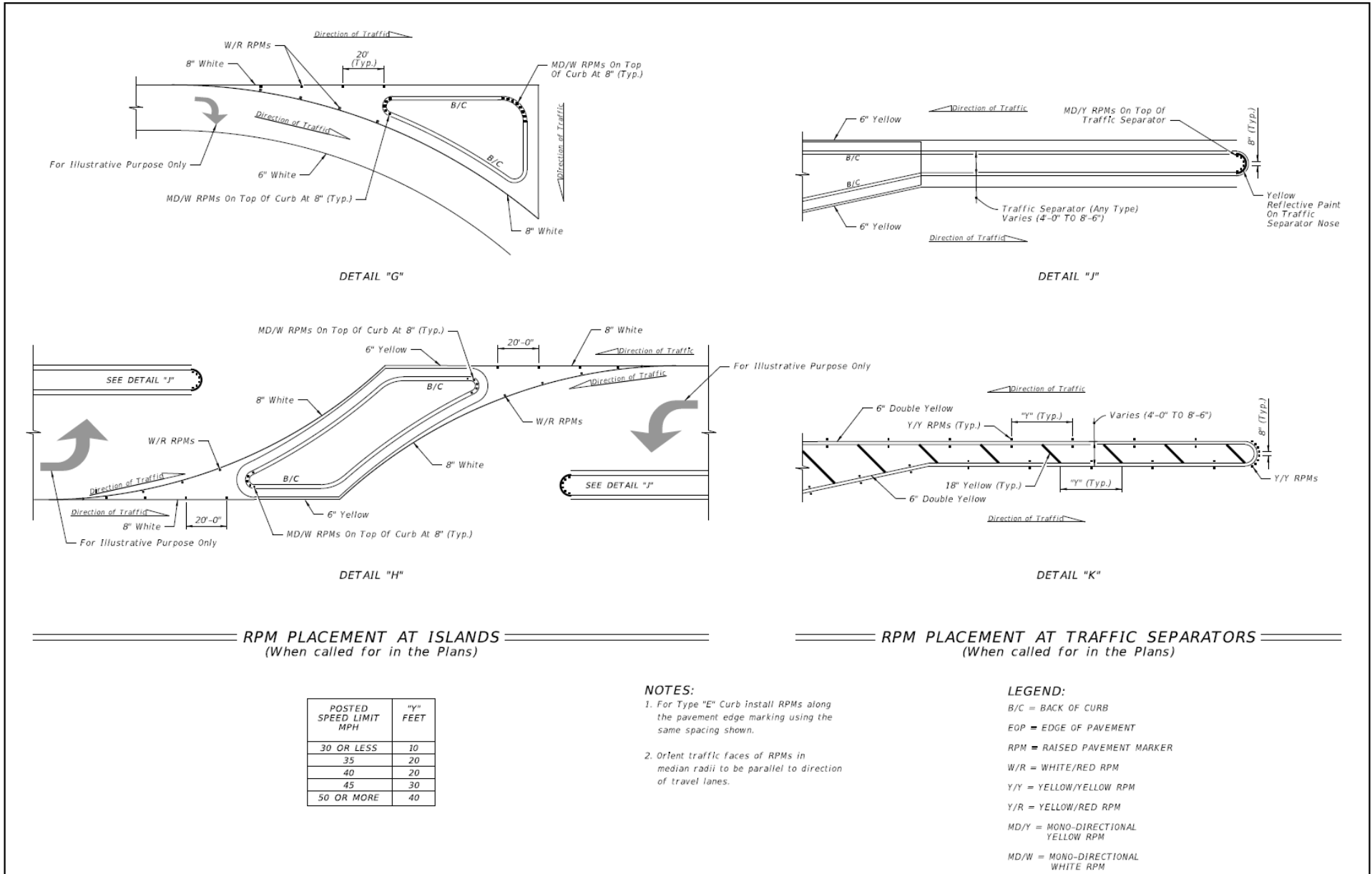
LEGEND:
B/C = BACK OF CURB
EOP = EDGE OF PAVEMENT
RPM = RAISED PAVEMENT MARKER
W/R = WHITE/RED RPM
Y/Y = YELLOW/YELLOW RPM
Y/R = YELLOW/RED RPM
MD/Y = MONO-DIRECTIONAL YELLOW RPM
MD/W = MONO-DIRECTIONAL WHITE RPM

10/12/2020 9:09:37 AM

LAST REVISION	DESCRIPTION:	FY 2021-22 STANDARD PLANS	TYPICAL PLACEMENT OF RAISED PAVEMENT MARKERS	INDEX	SHEET
~~11/01/18~~ 11/01/21				706-001	4 of 6

Typical Placement of Raised Pavement, Index 706-001

- ***Index 706-001 Updates***
  - Updated Sheet 4



RPM PLACEMENT AT ISLANDS
(When called for in the Plans)

POSTED SPEED LIMIT MPH	"Y" FEET
30 OR LESS	10
35	20
40	20
45	30
50 OR MORE	40

RPM PLACEMENT AT TRAFFIC SEPARATORS
(When called for in the Plans)

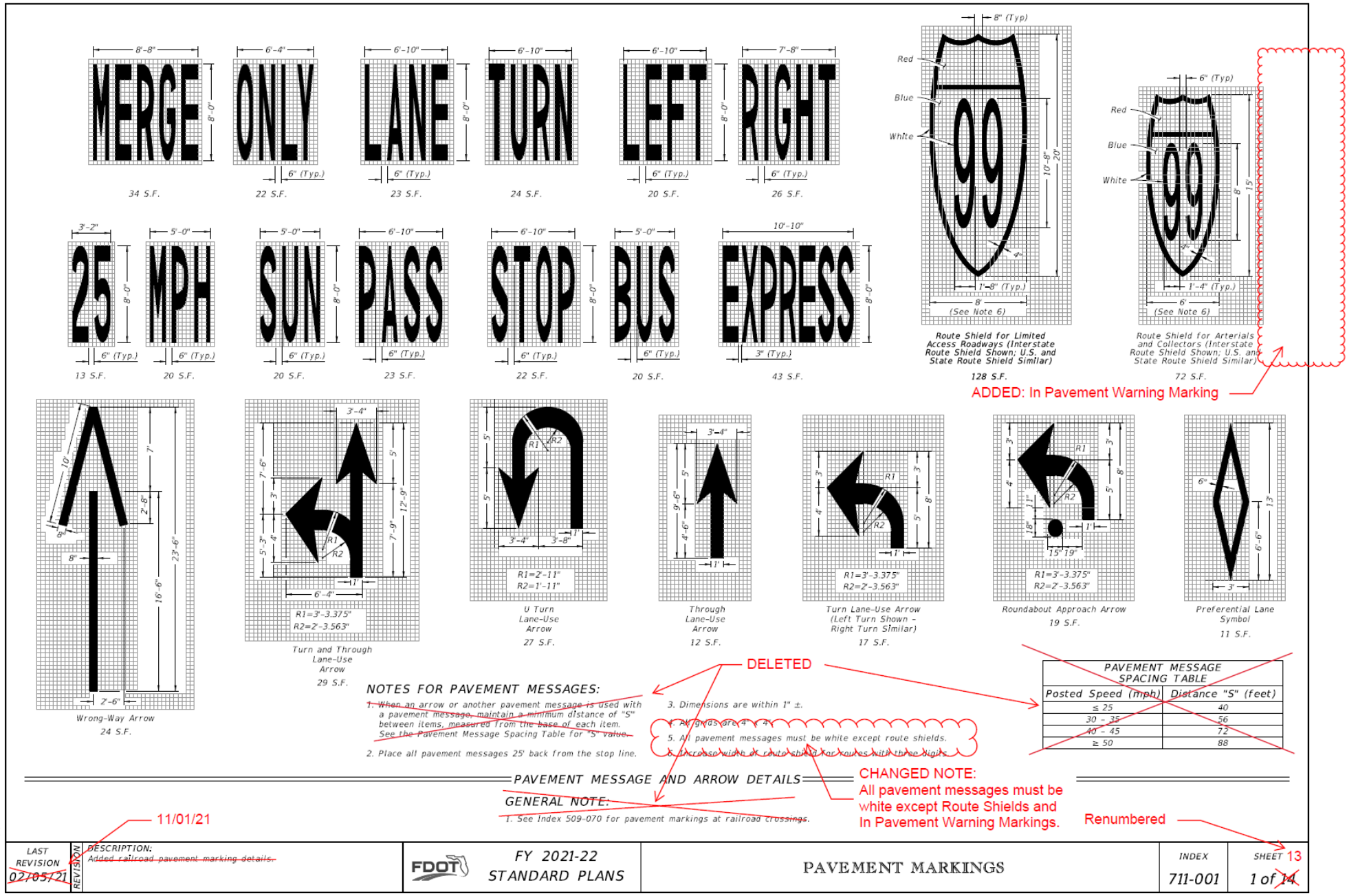
NOTES:
1. For Type "E" Curb install RPMs along the pavement edge marking using the same spacing shown.
2. Orient traffic faces of RPMs in median radii to be parallel to direction of travel lanes.

LEGEND:
B/C = BACK OF CURB
EOP = EDGE OF PAVEMENT
RPM = RAISED PAVEMENT MARKER
W/R = WHITE/RED RPM
Y/Y = YELLOW/YELLOW RPM
Y/R = YELLOW/RED RPM
MD/Y = MONO-DIRECTIONAL YELLOW RPM
MD/W = MONO-DIRECTIONAL WHITE RPM

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FY 2022-23 STANDARD PLANS	TYPICAL PLACEMENT OF RAISED PAVEMENT MARKERS	INDEX 706-001	SHEET 4 of 6

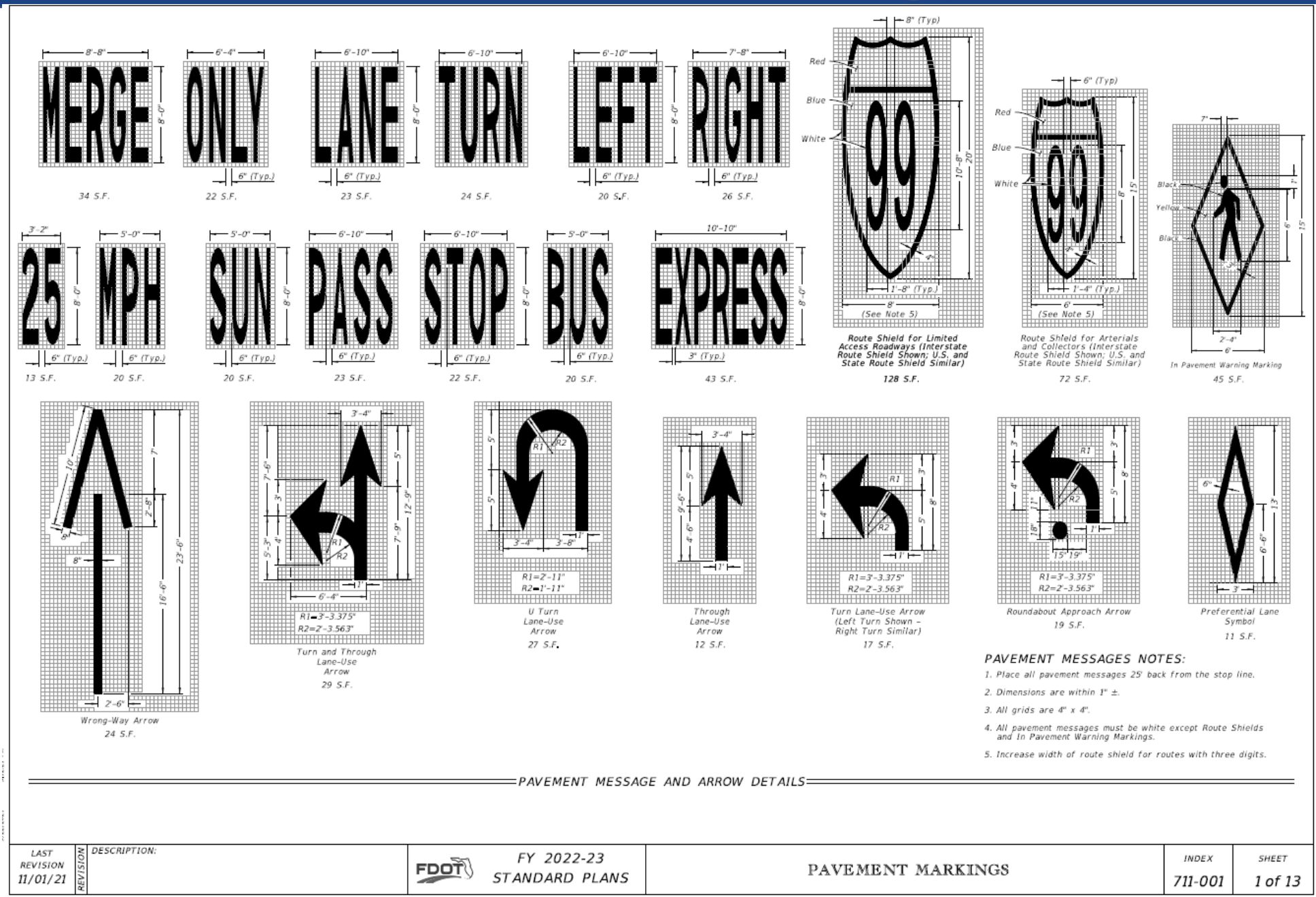
Pavement Markings, Index 711-001

- ***Index 711-001 Updates***
  - Added Pavement Warning Marking Detail
  - Updated Notes



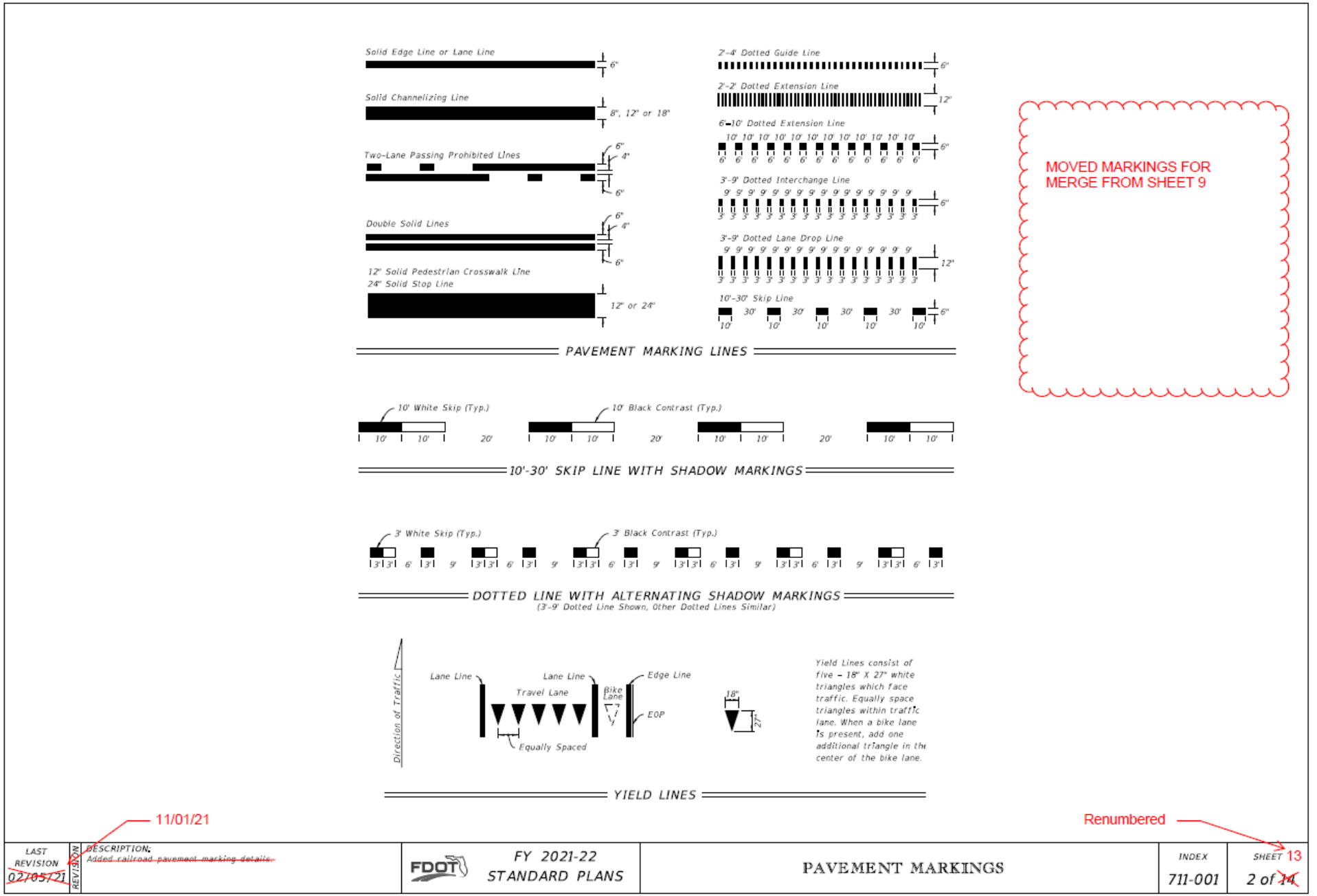
Pavement Markings, Index 711-001

- ***Index 711-001 Updated Sheet 1***



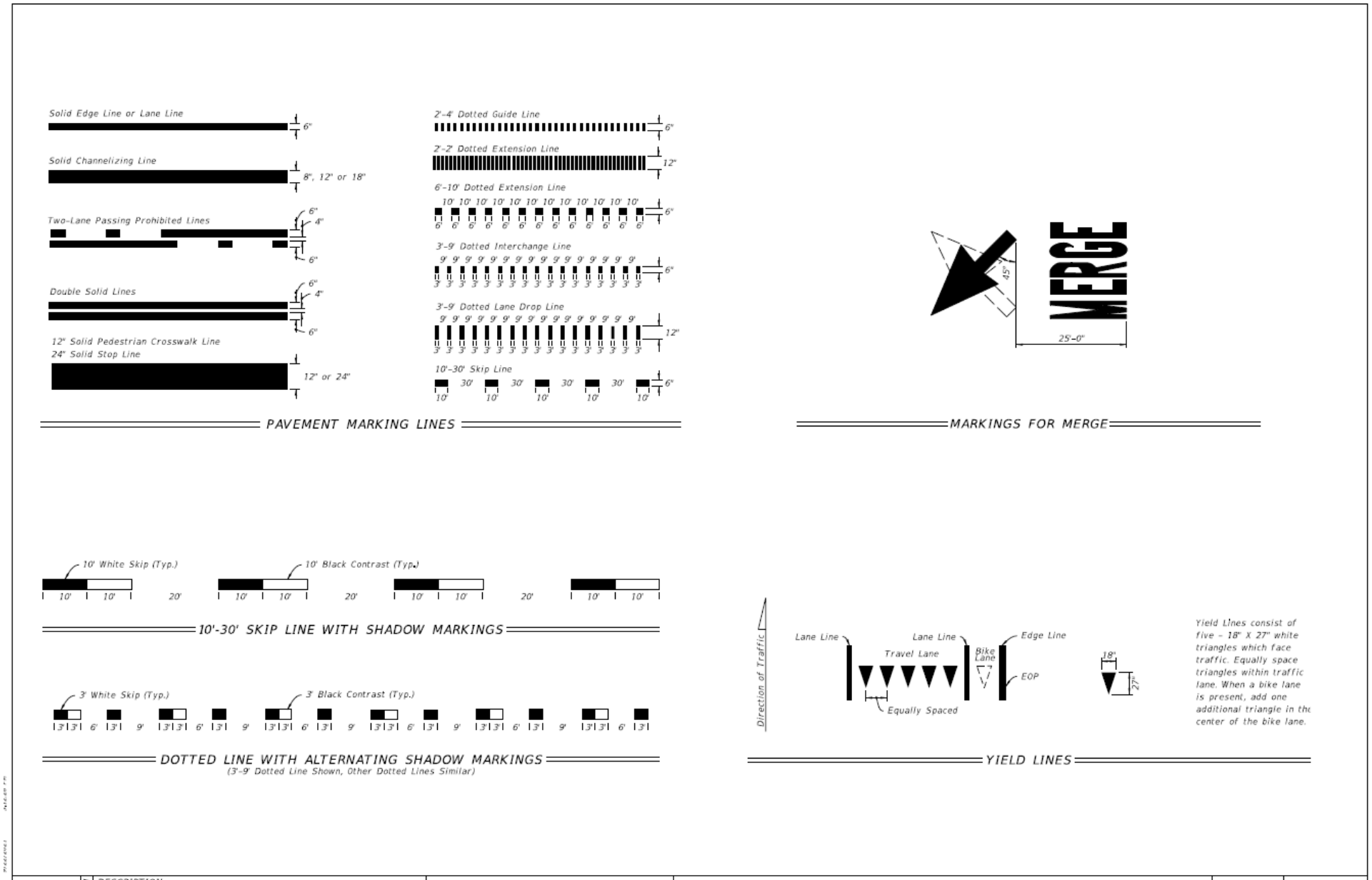
Pavement Markings, Index 711-001

- ***Index 711-001 Updates***
  - Added Markings for Merge Detail



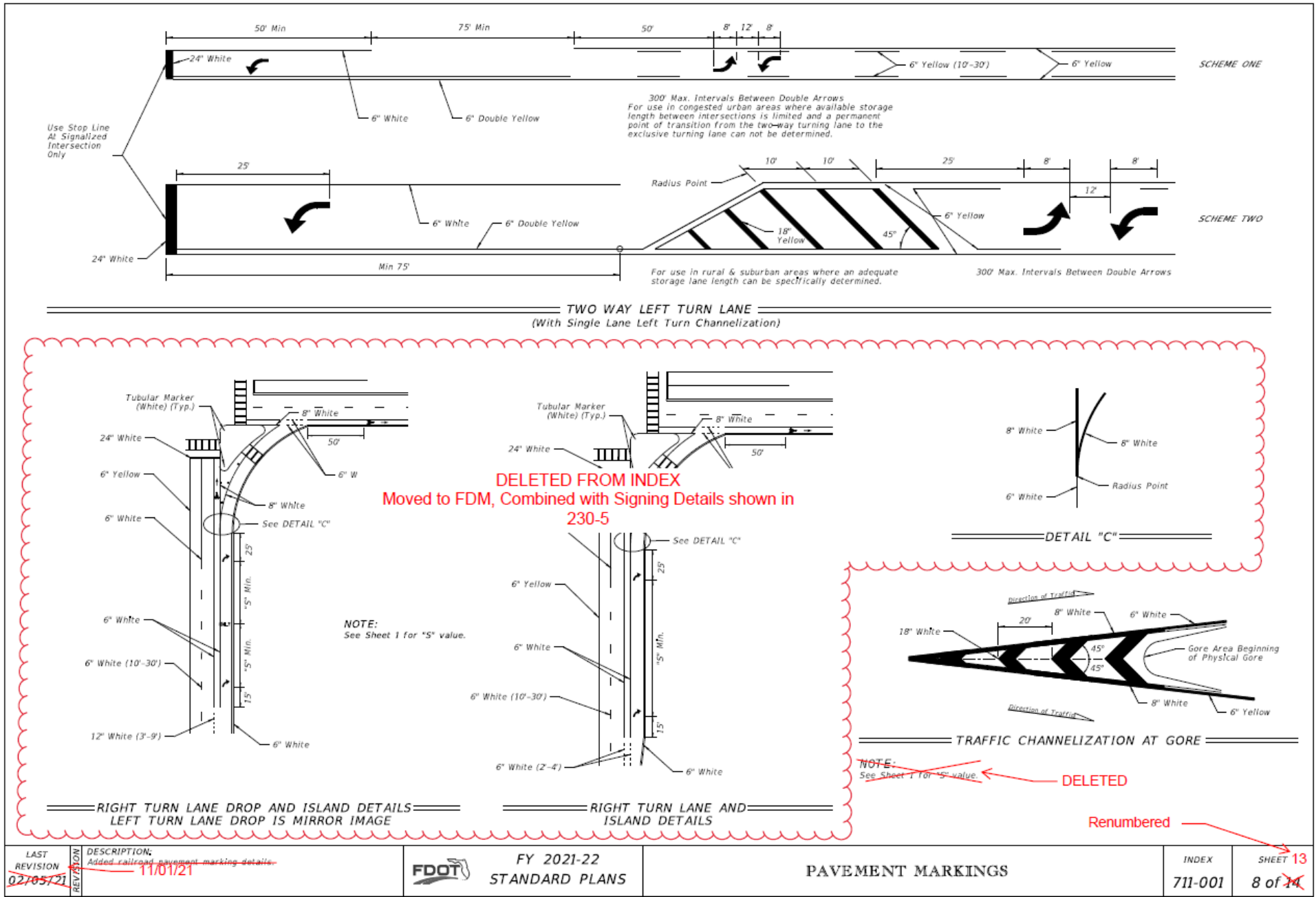
Pavement Markings, Index 711-001

- ***Index 711-001 Updated Sheet 2***



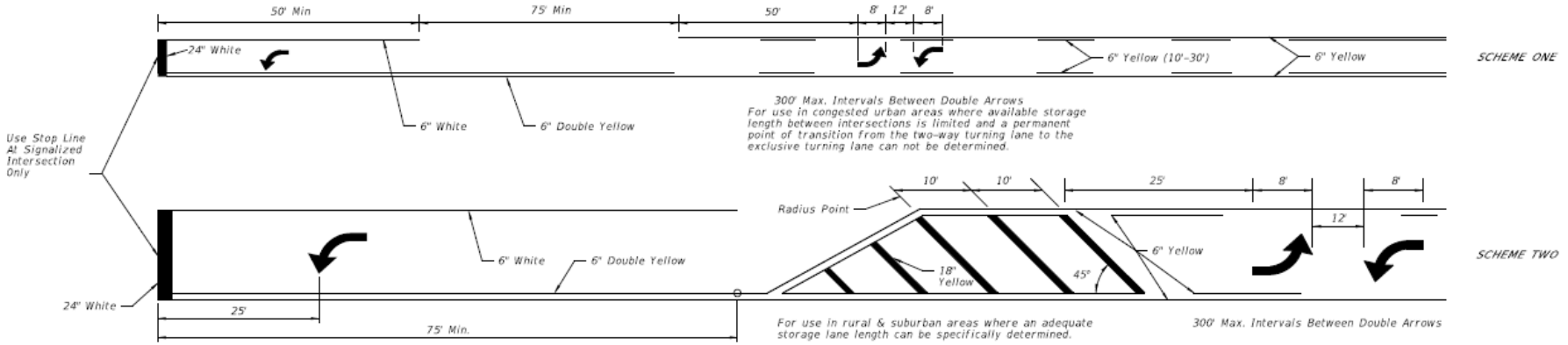
Pavement Markings, Index 711-001

- ***Index 711-001 Updates***
  - Deleted Right Turn Lane Details
  - Deleted Traffic Channelization at Gore Note



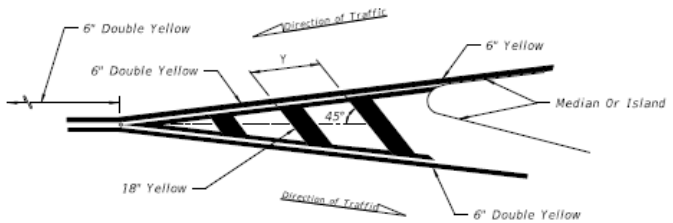
Pavement Markings, Index 711-001

- ***Index 711-001 Updated Sheet 8***

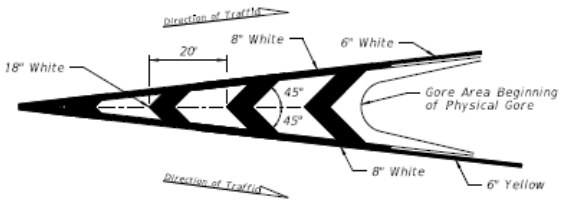


TWO WAY LEFT TURN LANE
(With Single Lane Left Turn Channelization)

POSTED SPEED LIMIT MPH	"y" (FT.)
30 OR LESS	10
35	20
40	20
45	30
50 OR MORE	40



MARKINGS FOR TRAFFIC SEPARATION

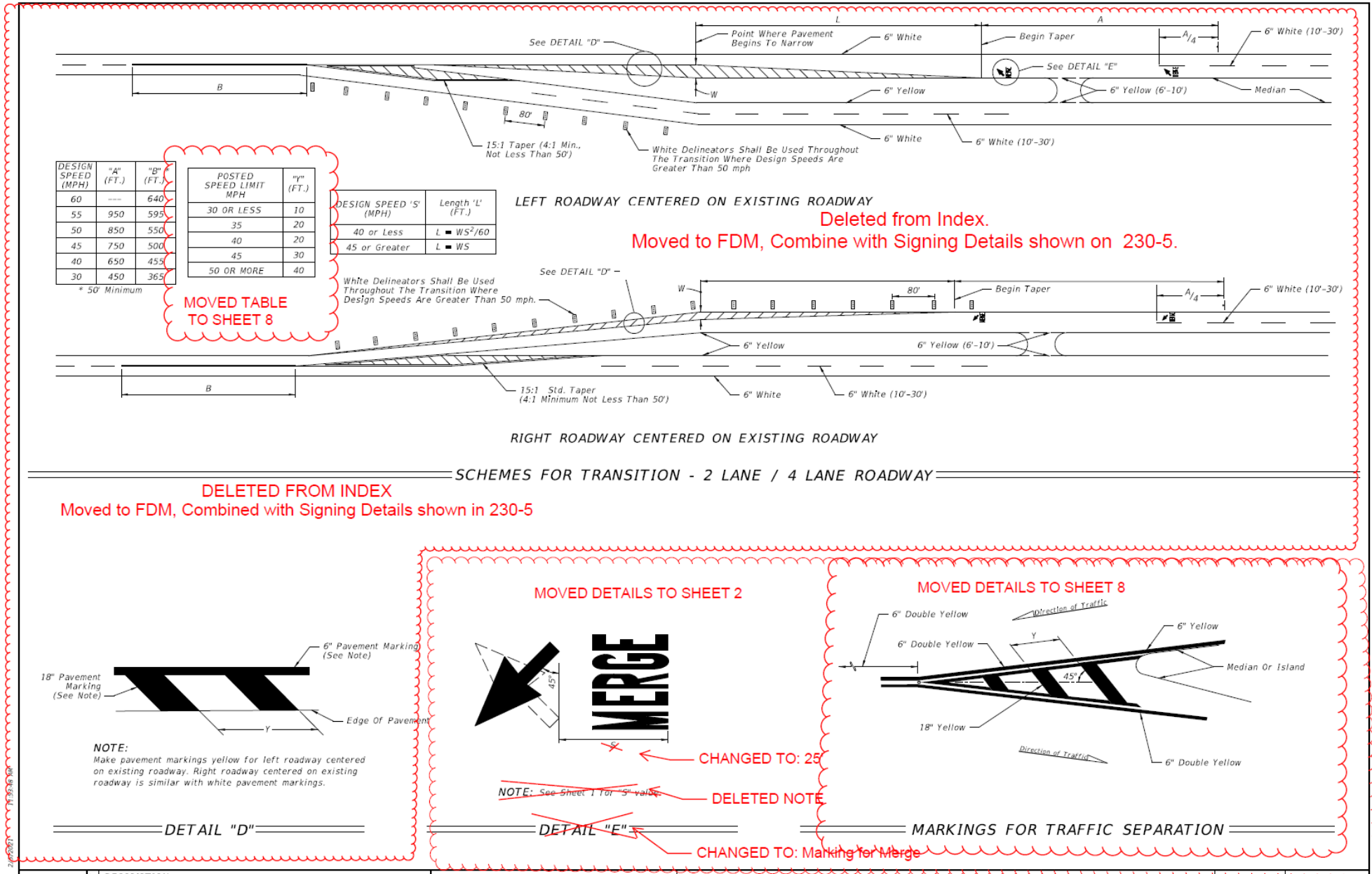


TRAFFIC CHANNELIZATION AT GORE

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 8 of 13

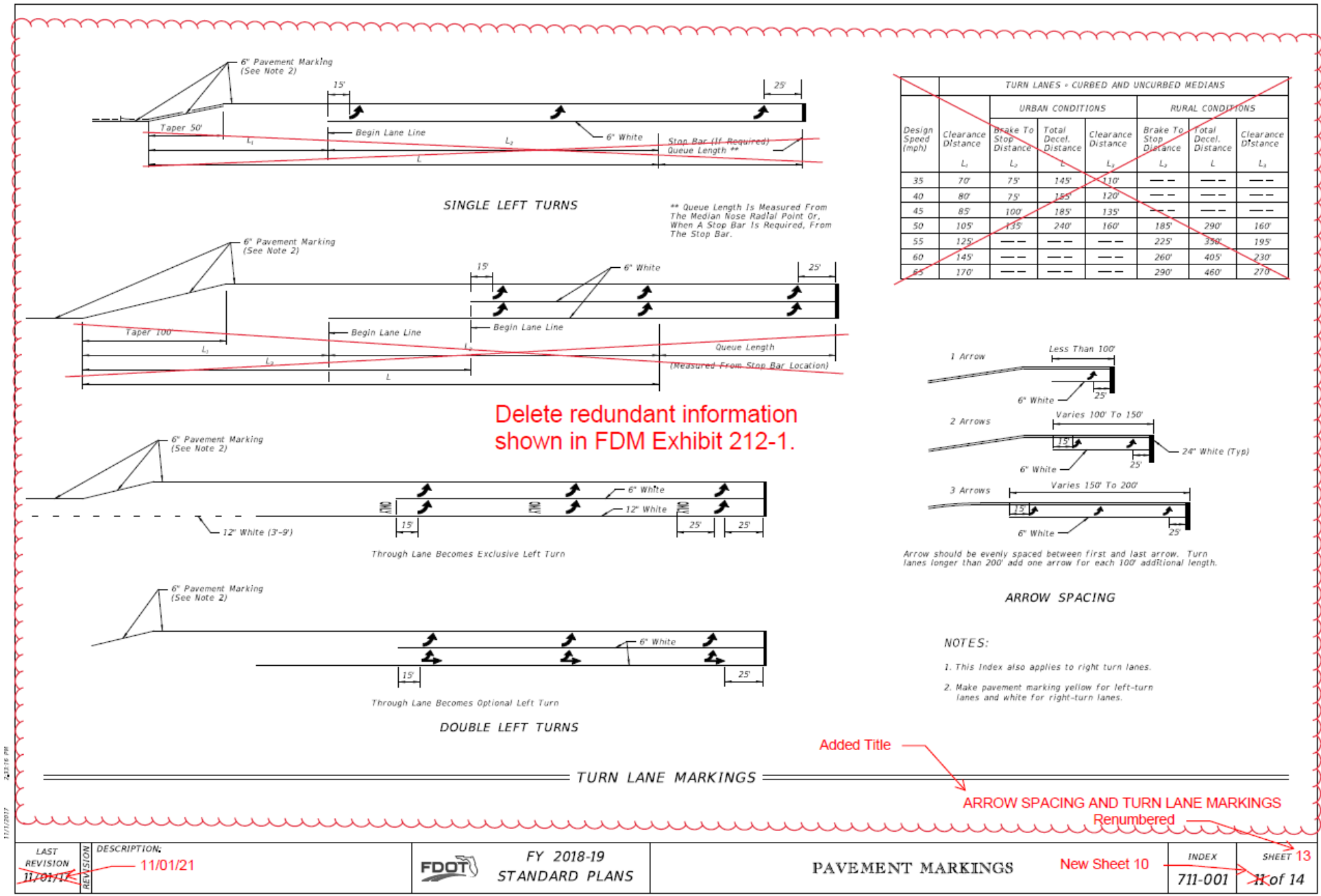
Pavement Markings, Index 711-001

- ***Index 711-001 Deleted Sheet 9***



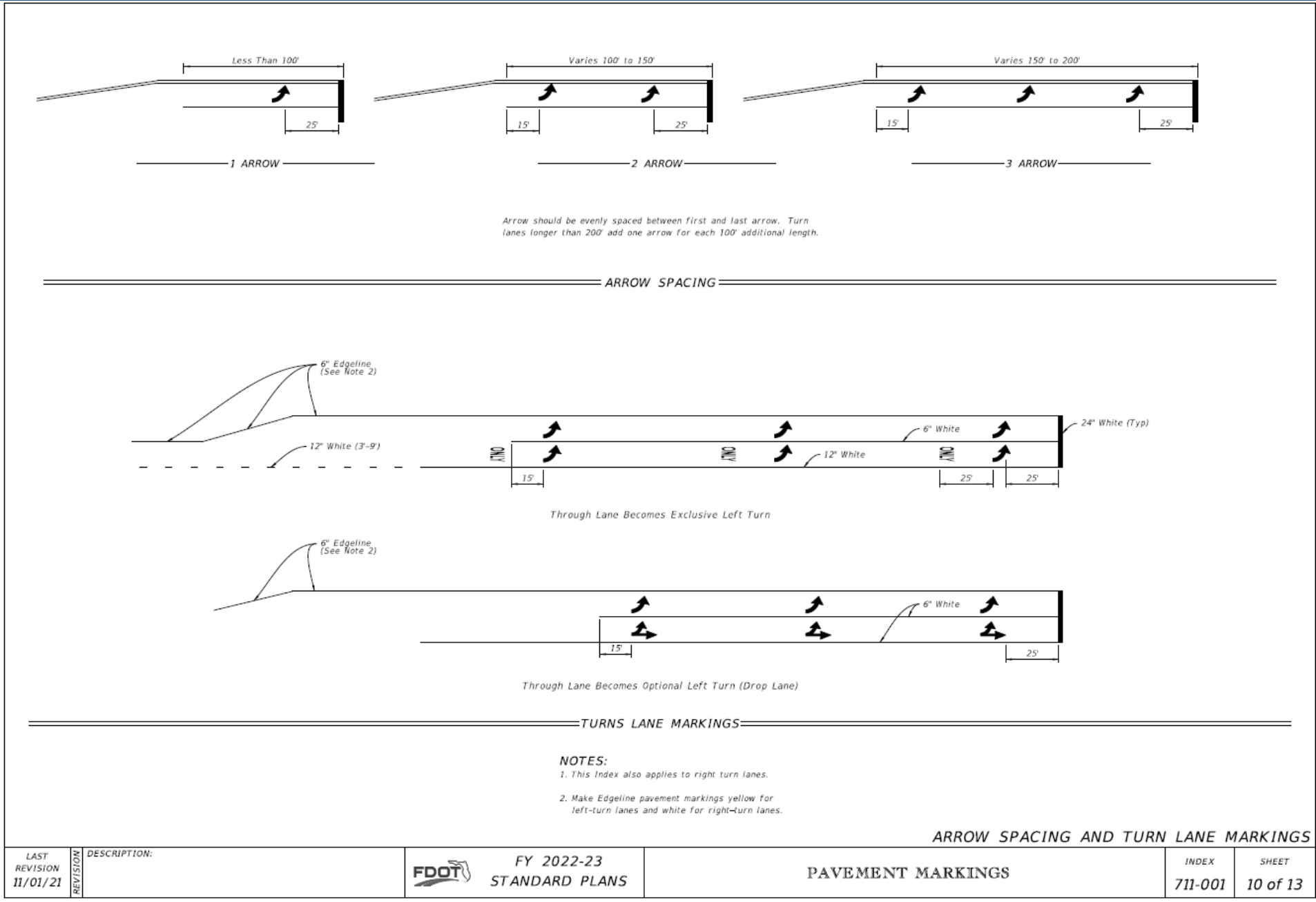
Pavement Markings, Index 711-001

- ***Index 711-001 Updates***
  - Deleted Redundant Information
  - Add Sheet Title



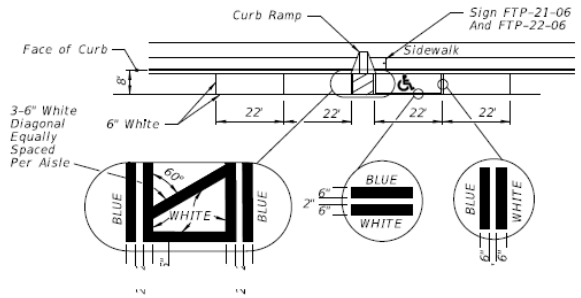
Pavement Markings, Index 711-001

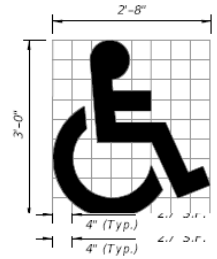
- ***Index 711-001***
  New Sheet 10

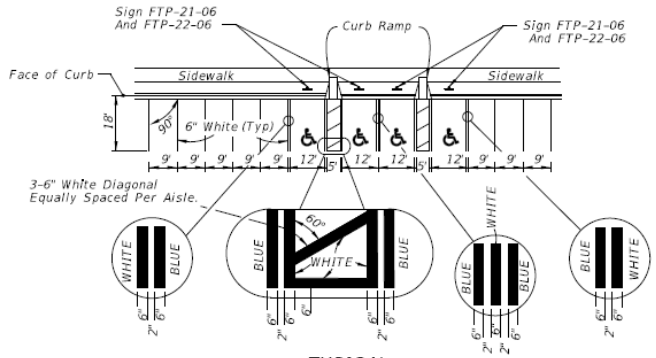


Pavement Markings, Index 711-001

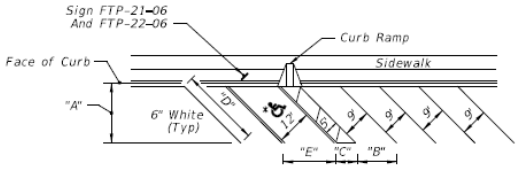
- ***Index 711-001 Updates***
  - Deleted Note 4



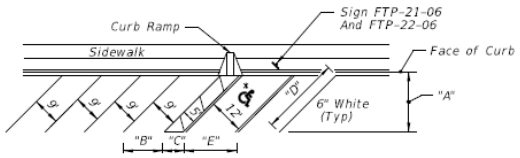




TYPICAL



FORWARD-IN PARKING

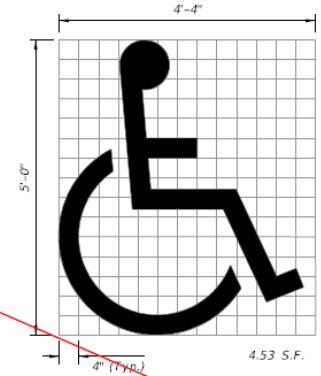


REVERSE-IN PARKING

*FOR ACCESSIBLE MARKINGS - SEE ABOVE

DIMENSIONS					
∠ θ	"A"	"B"	"C"	"D"	"E"
45°	17'-0"	12'-9"	7'-0"	24'-0"	17'-0"

PAVEMENT MARKING FOR PARKING



CHANGED REFERENCE TO: Note 5

(See Note 5)

UNIVERSAL SYMBOL OF ACCESSIBILITY

NOTES:

1. Dimensions are to the centerline of markings.
2. An Access Aisle is required for each accessible space when angle parking is used.
3. Criteria for pavement markings only, not public sidewalk curb ramp locations. For ramp locations refer to plans.
4. ~~Tint blue pavement markings to match color 15180 of Federal Standards 595a.~~
5. ~~5.~~ Mount FTP-22-06 sign below the FTP-21-06 sign.
6. ~~6.~~ Use of the pavement symbol in accessible parking spaces is optional. When pavement symbol is used, the symbol is either 3'-0" or 5'-0" high and white in color.

RENUMBERED

11/01/21

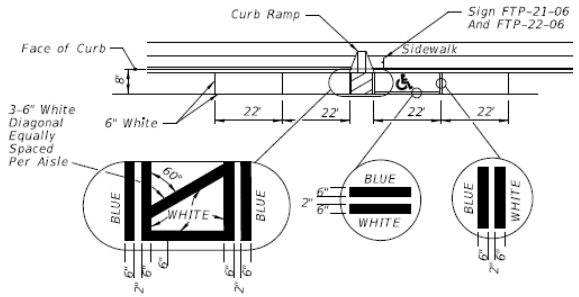
11 of 13

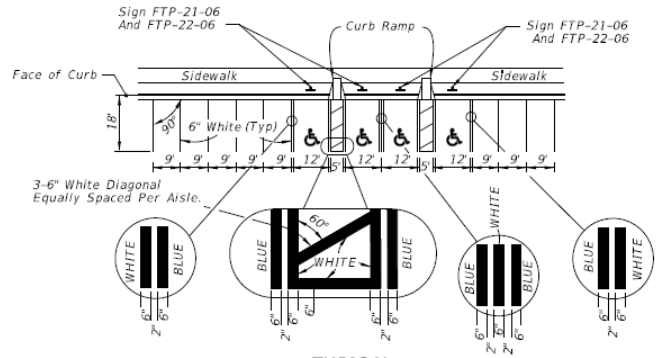
LAST REVISION	REVISION	DESCRIPTION:	FDOT		INDEX	SHEET
~~02/05/21~~		~~Added railroad pavement marking details.~~		FY 2021-22 STANDARD PLANS	711-001	~~12 of 14~~

PAVEMENT MARKINGS

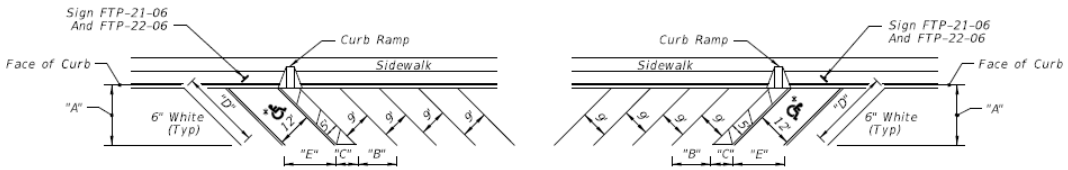
Pavement Markings, Index 711-001

- ***Index 711-001***
  New Sheet 11





TYPICAL



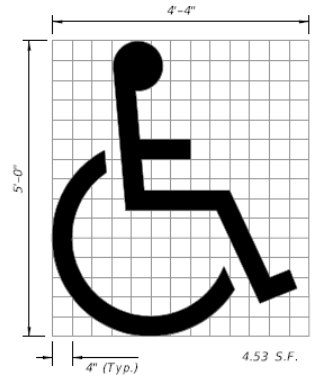
FORWARD-IN PARKING

REVERSE-IN PARKING

*FOR ACCESSIBLE MARKINGS - SEE ABOVE

DIMENSIONS					
∠ θ	"A"	"B"	"C"	"D"	"E"
45°	17'-0"	12'-9"	7'-0"	24'-0"	17'-0"

PAVEMENT MARKING FOR PARKING



(See Note 5)

UNIVERSAL SYMBOL OF ACCESSIBILITY

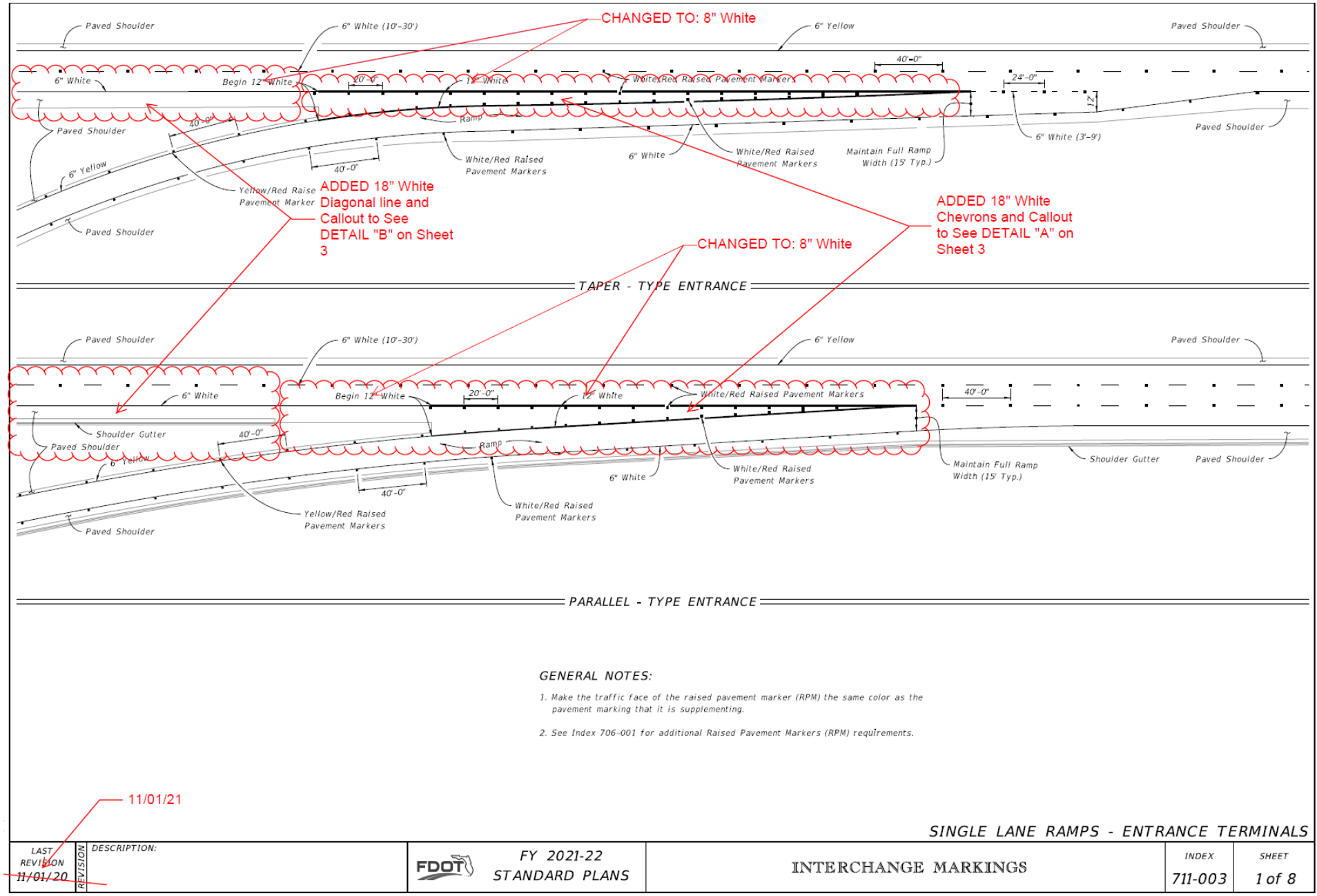
NOTES:

1. Dimensions are to the centerline of markings.
2. An Access Aisle is required for each accessible space when angle parking is used.
3. Criteria for pavement markings only, not public sidewalk curb ramp locations. For ramp locations refer to plans.
4. Mount FTP-22-06 sign below the FTP-21-06 sign.
5. Use of the pavement symbol in accessible parking spaces is optional. When pavement symbol is used, the symbol is either 3'-0" or 5'-0" high and white in color.

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 11 of 13

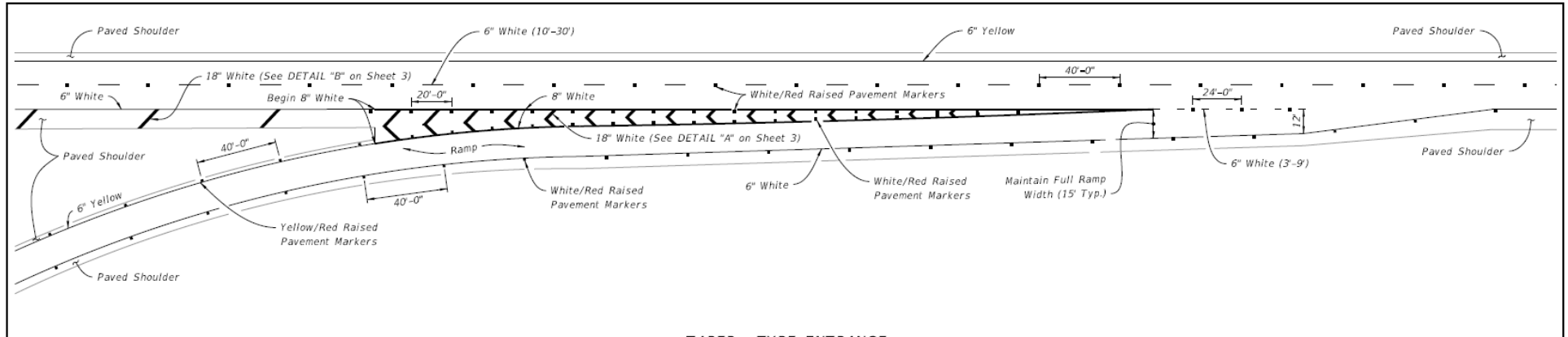
Interchange Markings, Index 711-003

- ***Index 711-003 Updates***
  - Added Chevrons and Associated Callouts

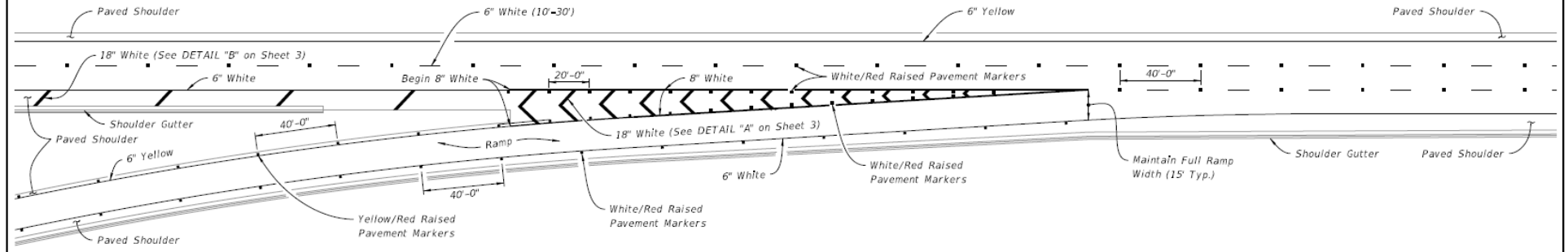


Interchange Markings, Index 711-003

- ***Index 711-003 Updated Sheet 1***



TAPER - TYPE ENTRANCE



PARALLEL - TYPE ENTRANCE

GENERAL NOTES:

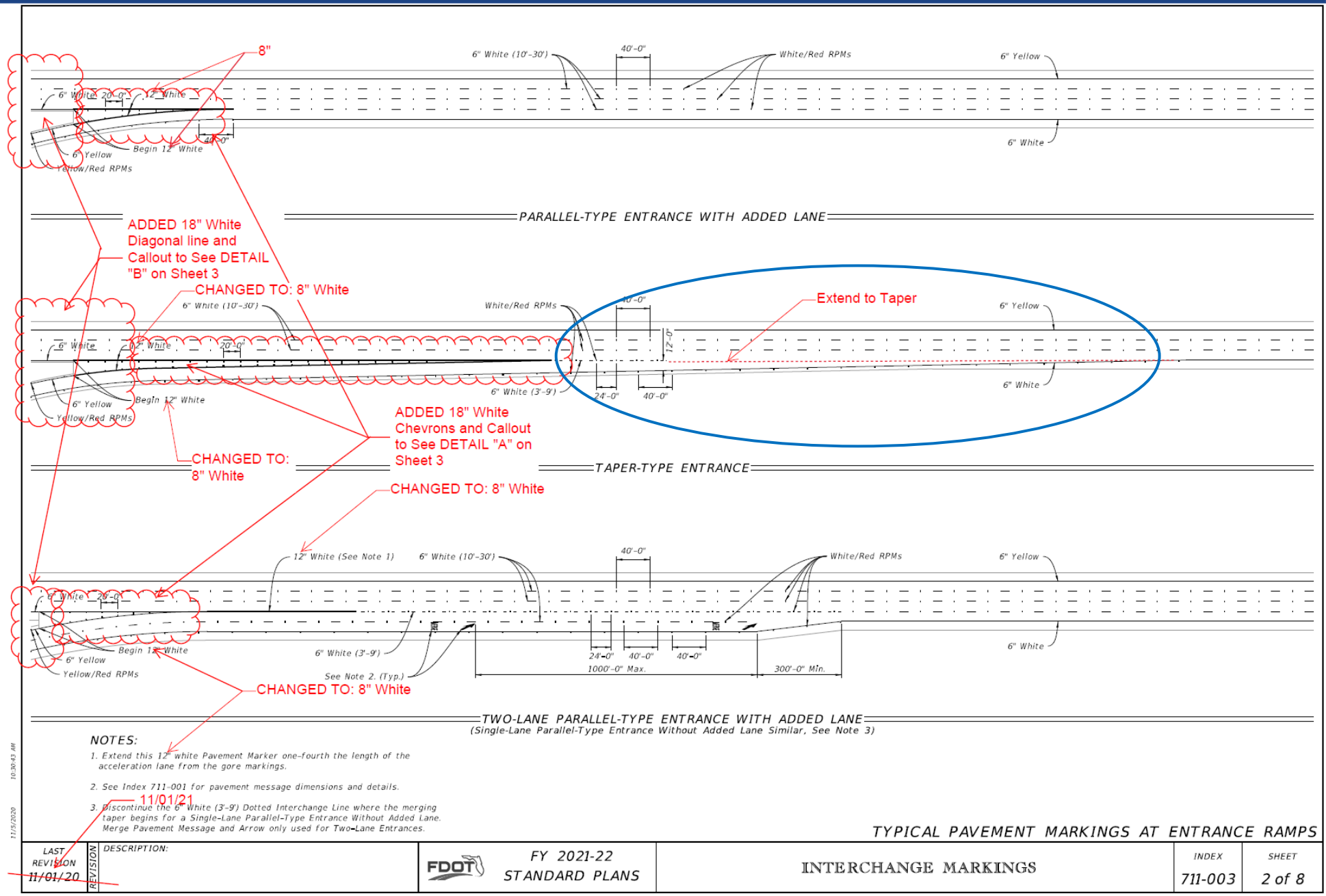
1. Make the traffic face of the raised pavement marker (RPM) the same color as the pavement marking that it is supplementing.
2. See Index 706-001 for additional Raised Pavement Markers (RPM) requirements.

SINGLE LANE RAMPS - ENTRANCE TERMINALS

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	INTERCHANGE MARKINGS	INDEX 711-003	SHEET 1 of 8

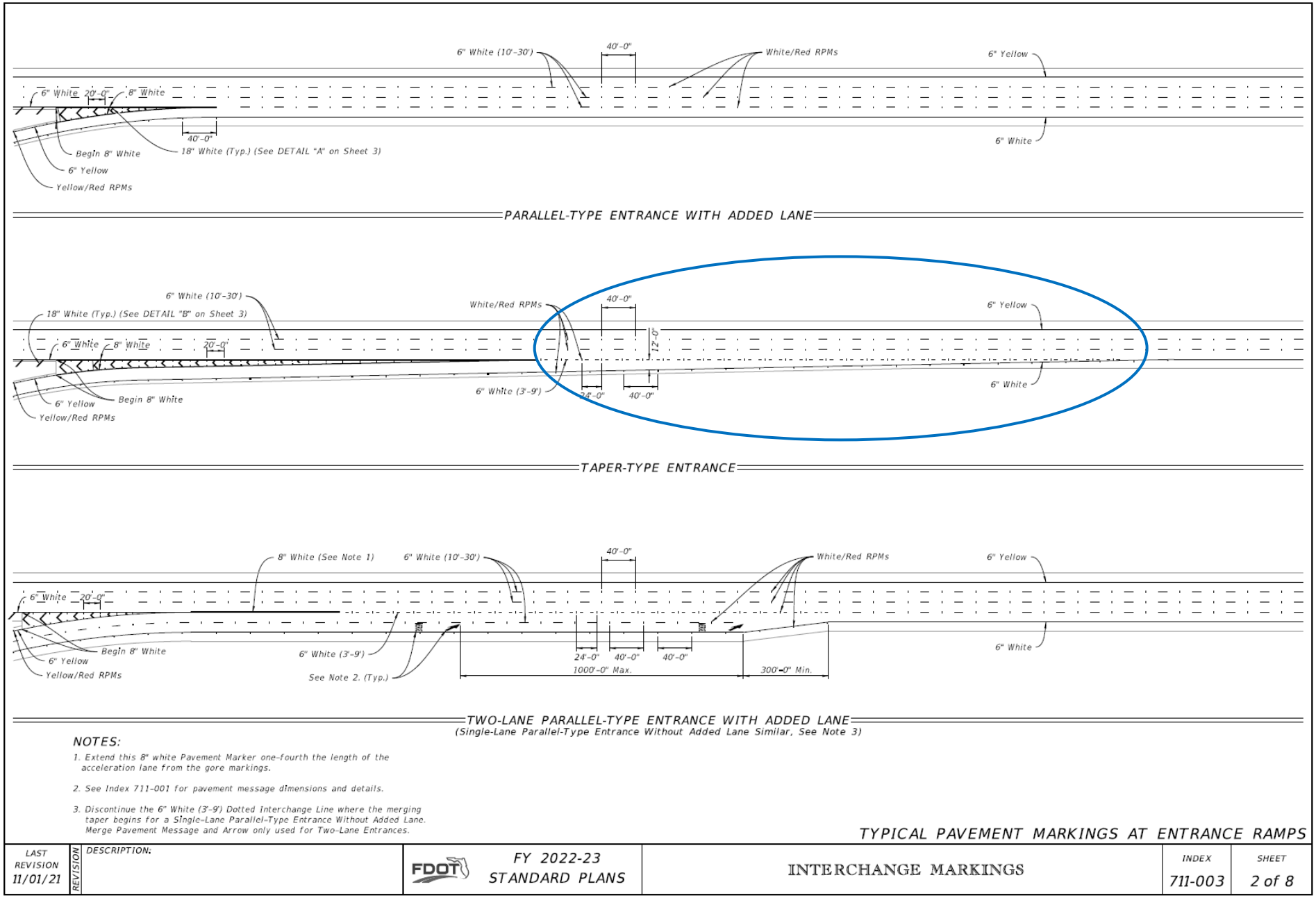
Interchange Markings, Index 711-003

- ***Index 711-003 Updates***
  - Added Chevrons and Associated Callouts
  - Extended lane Extension to End of Taper



Interchange Markings, Index 711-003

- ***Index 711-003 Updated Sheet 2***
  - Extended lane Extension to End of Taper



NOTES:

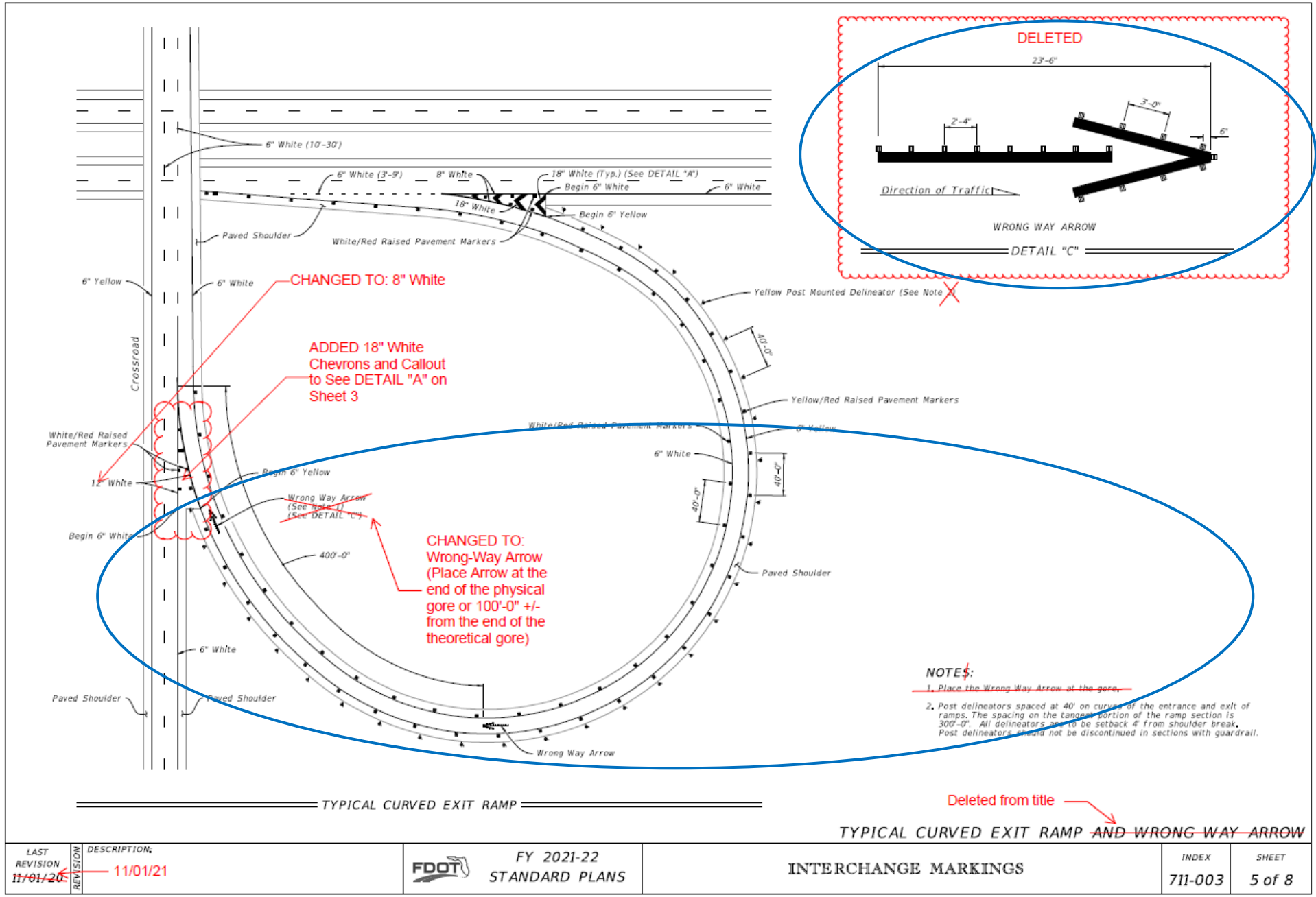
1. Extend this 8" white Pavement Marker one-fourth the length of the acceleration lane from the gore markings.
2. See Index 711-001 for pavement message dimensions and details.
3. Discontinue the 6" White (3'-9') Dotted Interchange Line where the merging taper begins for a Single-Lane Parallel-Type Entrance Without Added Lane. Merge Pavement Message and Arrow only used for Two-Lane Entrances.

TYPICAL PAVEMENT MARKINGS AT ENTRANCE RAMPS

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	INTERCHANGE MARKINGS	INDEX	SHEET
11/01/21						711-003	2 of 8

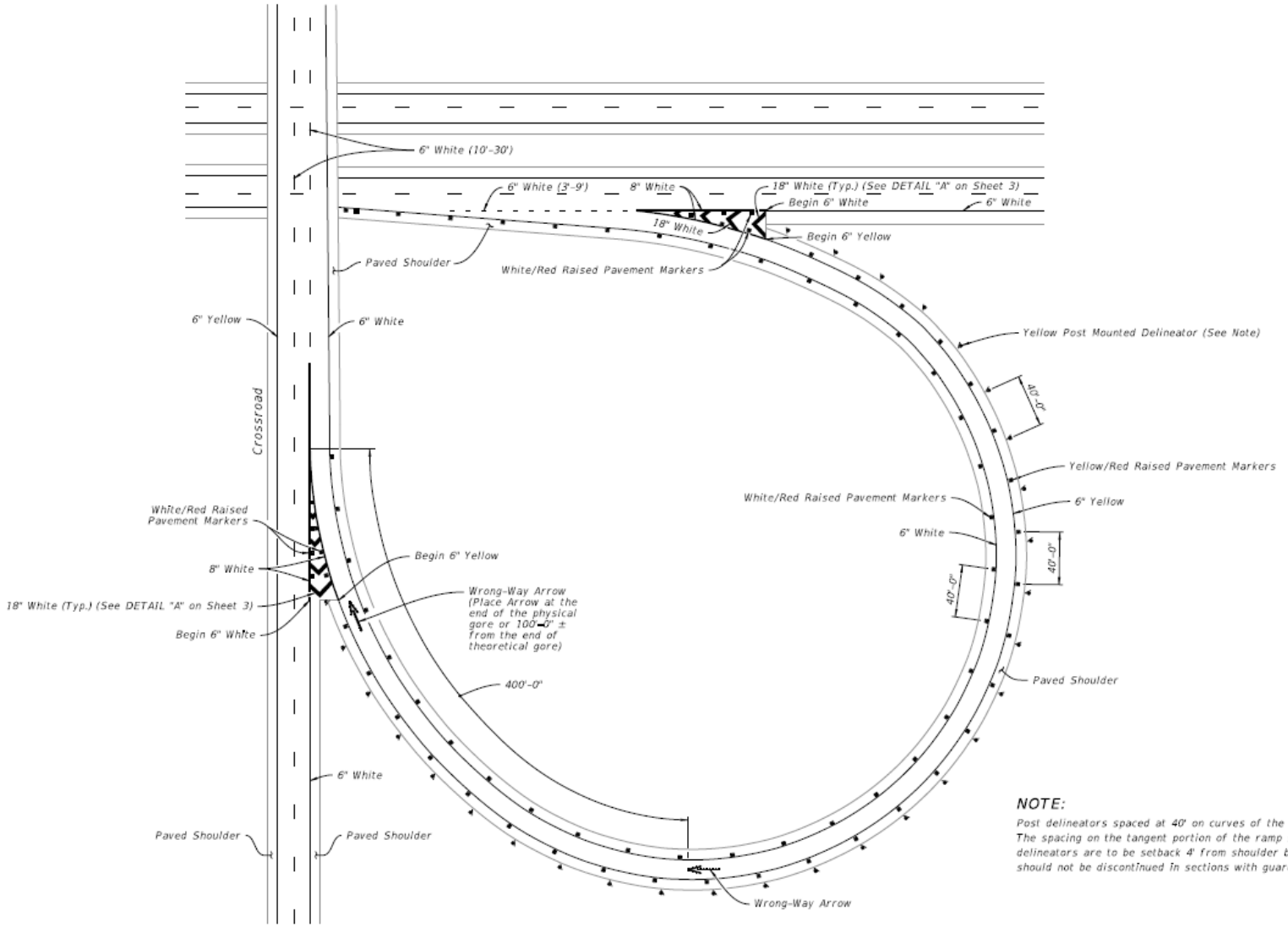
Interchange Markings, Index 711-003

- ***Index 711-003 Updated Sheet 2***
  - Added Chevrons to Entrance
  - Moved Detail C to Index 706-001
  - Moved Note 1 to a callout



Interchange Markings, Index 711-003

- ***Index 711-003 Updated Sheet 5***



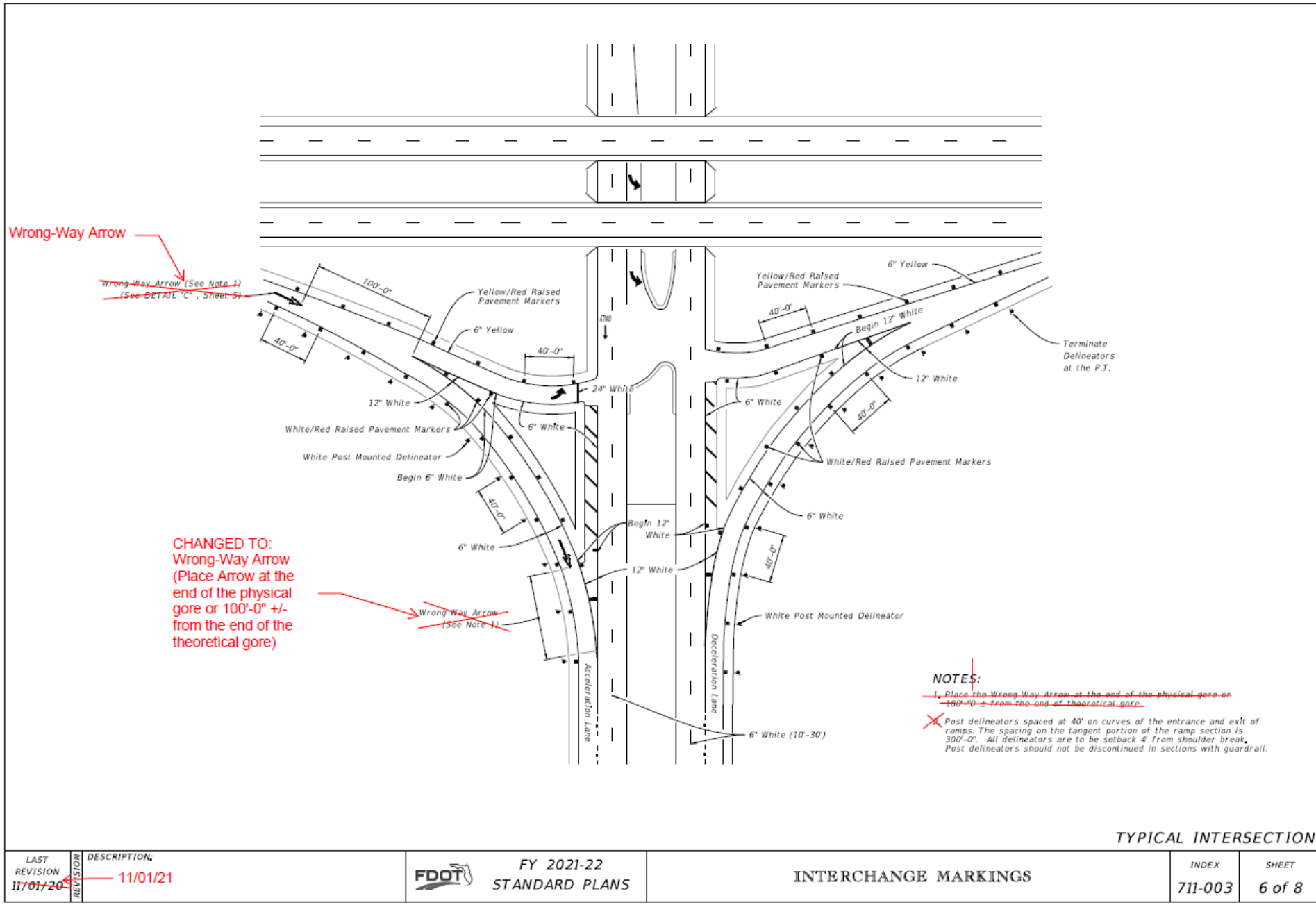
TYPICAL CURVED EXIT RAMP

TYPICAL CURVED EXIT RAMP

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	INTERCHANGE MARKINGS	INDEX 711-003	SHEET 5 of 8

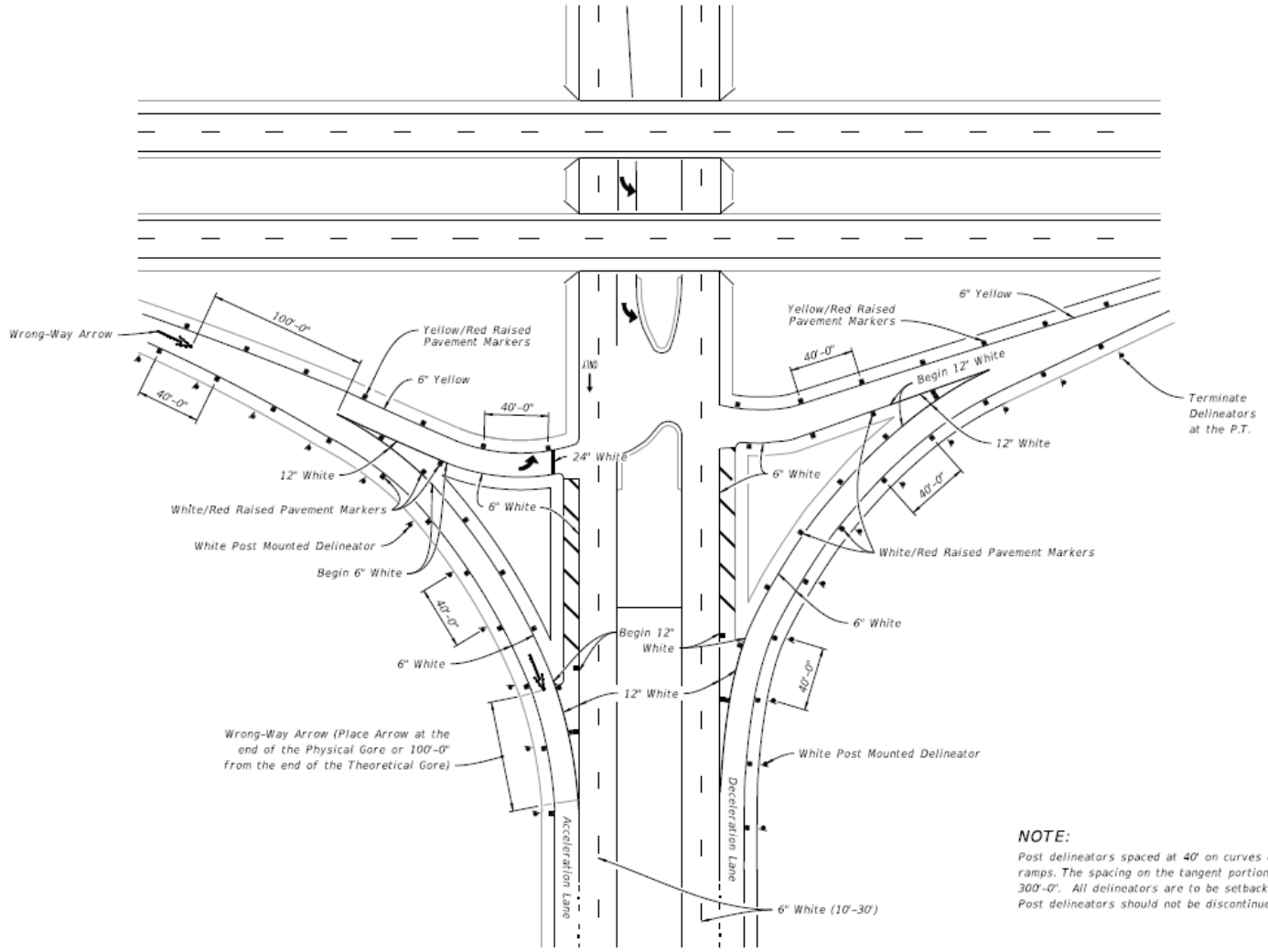
Interchange Markings, Index 711-003

- ***Index 711-003 Updates to Sheet 6***



Interchange Markings, Index 711-003

- ***Index 711-003 Updated Sheet 6***



NOTE:
Post delineators spaced at 40' on curves of the entrance and exit of ramps. The spacing on the tangent portion of the ramp section is 300'-0". All delineators are to be setback 4' from shoulder break. Post delineators should not be discontinued in sections with guardrail.

TYPICAL INTERSECTION

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	INTERCHANGE MARKINGS	INDEX 711-003	SHEET 6 of 8

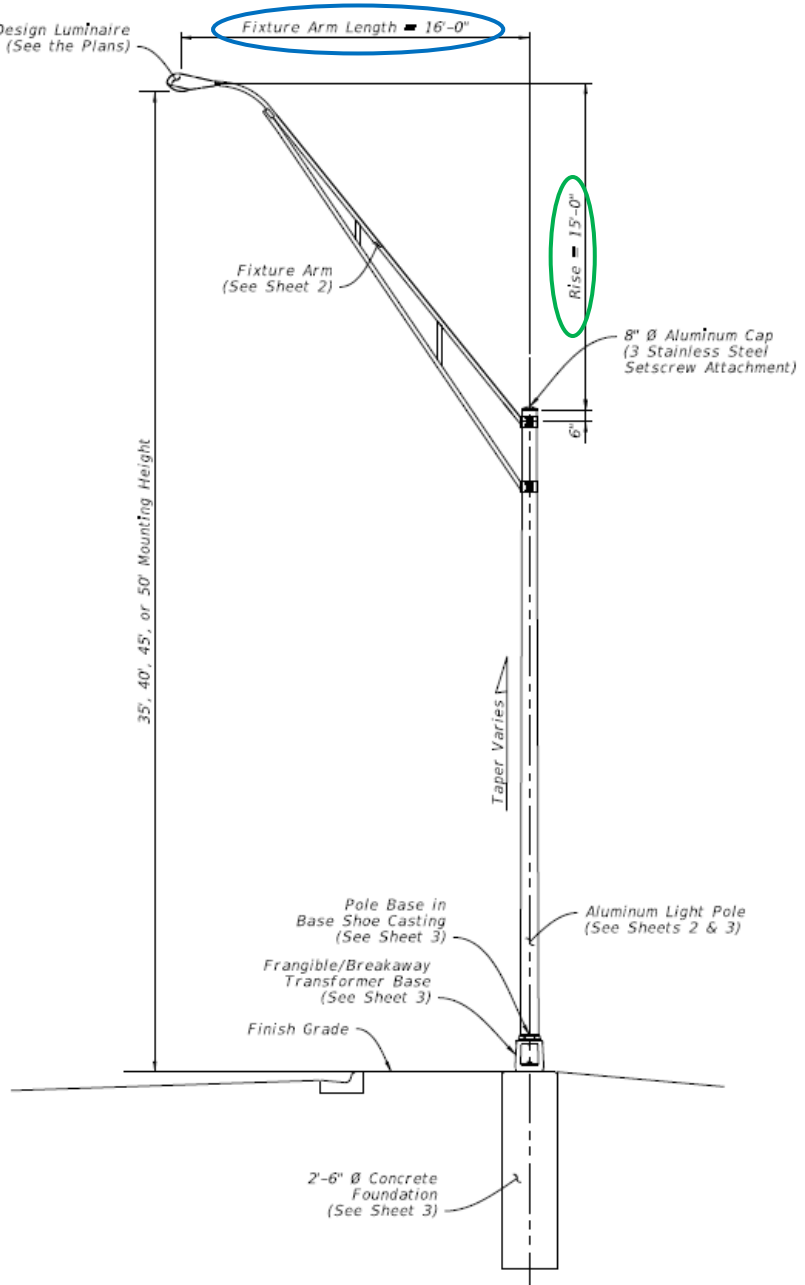
Utility Conflict Pole, Index 715-003

New Light Pole Type in Standard Plans

- ***Utility Conflict Pole*** is used for avoidance of overhead utilities and powerlines:
  - Horizontal Arm Length = 16 feet
  - Vertical Rise = 15 feet

- Previously very popular usage, but now…
  No longer requires project-specific Pay Item, special design, and Central Office review

- *Standard Plans include a complete design*

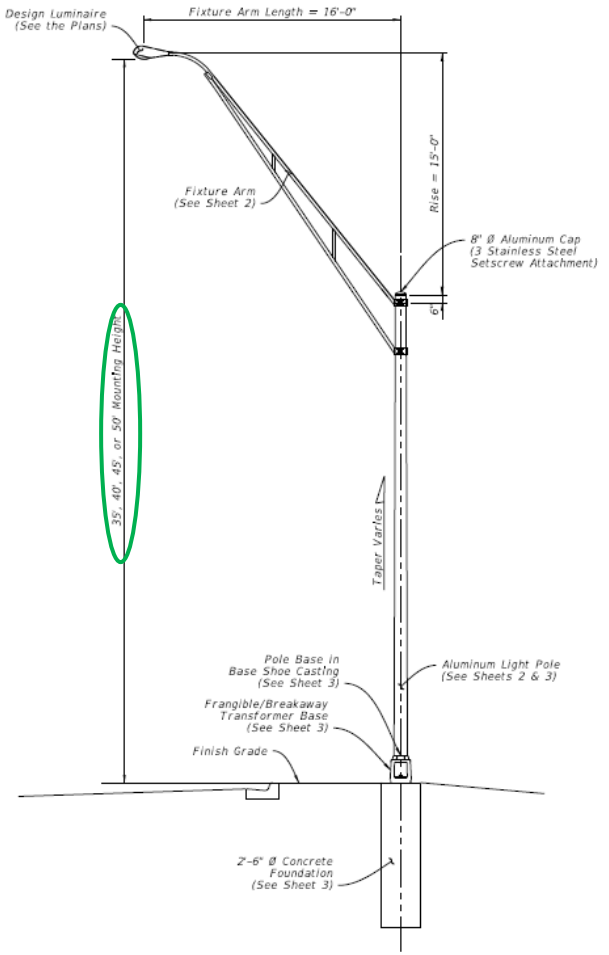


Sheet 1: General Notes & Light Pole Elevation

- Design includes materials, fabrication, and construction requirements
- Shop drawings are <u>not</u> required
- EOR chooses ***mounting height:*** **35 feet thru 50 feet**

GENERAL NOTES:

1. LUMINAIRE LOAD: Poles are designed to support the following:
   A. Luminaire Effective Projected Area (EPA): 1.55 SF
   B. Luminaire Weight: 75 lb.
2. SHOP DRAWINGS: This Index is considered fully detailed; only submit shop drawings for minor modifications not included in the Plans.
3. MATERIALS:
   A. Pole, Arm Tubes, Strut Tubes, Bars, Plates, Stiffeners: ASTM B221, Alloy 6063-T6 or Alloy 6061-T6
   B. Pole Connection Extrusion Clamp: ASTM B221, Alloy 6061-T6
   C. Caps and Covers: ASTM B-26, Alloy 319-F
   D. Aluminum Weld Material: ER 4043
   E. Transformer and Frangible Base Materials: ASTM B26 or ASTM B108, Alloy 356-T6
   F. Base Bolts, Nuts and Washers:
      a. Shoe Base Bolts: ASTM F3125, Grade A325, Type 1
      b. Nuts: ASTM A563 Grade DH Heavy-Hex
      c. Washer: ASTM F436 Type 1
   G. Anchor Bolts, Nuts, and Washers:
      a. Anchor Bolts: ASTM F1554 Grade 55
      b. Nuts: ASTM A563 Grade A Heavy-Hex
   H. Clamp Hardware: See Sheet 2
   I. Stainless Steel Cap Fasteners: ASTM F593 Alloy Group 2, Condition A, CW1 or SH1
   J. Nut Covers: ASTM B26 (319-F)
   K. Concrete: Class II
   L. Reinforcing Steel: Specification 415
4. FABRICATION:
   A. Weld Arm and Pole Alloy in the T4 temper using 4043 filler. Age the Arm and Pole artificially to the T6 temper after welding.
   B. Transverse welds are only allowed at the base.
   C. Light Pole Properties: Taper as required to provide a round top O.D. of 8" and a base O.D. of 10" for all pole heights. Portions of the pole near the base shoe and at the arm connections may be held constant to simplify fabrication. Maintain pole wall thickness of 0.313" Min.
   D. Fixture Arm Tube Properties: See Sheet 2.
   E. Provide 'J', 'S' or 'C' hook at top of pole for electrical wires.
   F. Perform all welding in accordance with AWS D1.2.
   G. Identification Tag: (Submit details for approval.)
      a. 2" x 4" (Max.) aluminum identification tag.
      b. Locate on the inside of the transformer base and visible from the door opening.
      c. Secure to transformer base with ⅛" diameter stainless steel rivets or screws.
      d. Include the following information on the ID Tag:
         1. Financial Project ID
         2. Pole Height
         3. Manufacturer's Name
5. COATINGS/FINISH:
   A. Pole and Arm Finish: 50 grit satin rubbed.
   B. Galvanize Steel Bolts, Screws, Nuts and Washers: ASTM F2329
   C. Hot Dip Galvanize miscellaneous steel items: ASTM A123
6. CONSTRUCTION:
   A. Foundation: Specification 455, except payment for the foundation is included in the cost of the pole.
   B. Frangible Base, Base Shoe, and Pole Connection Extrusion Clamp:
      a. Certify that the Pole Connection Extrusion Clamp, Frangible Transformer Base, and Base Shoe Design are capable of providing the required capacity, assuming a design wind speed of 160 MPH.
      b. Certify the Base conforms to the FHWA required AASHTO Frangibility Requirements, tested under NCHRP Report 350 Guidelines (e.g. Akron Foundry TB1-17).
      c. Do not erect pole without Luminaire attached.



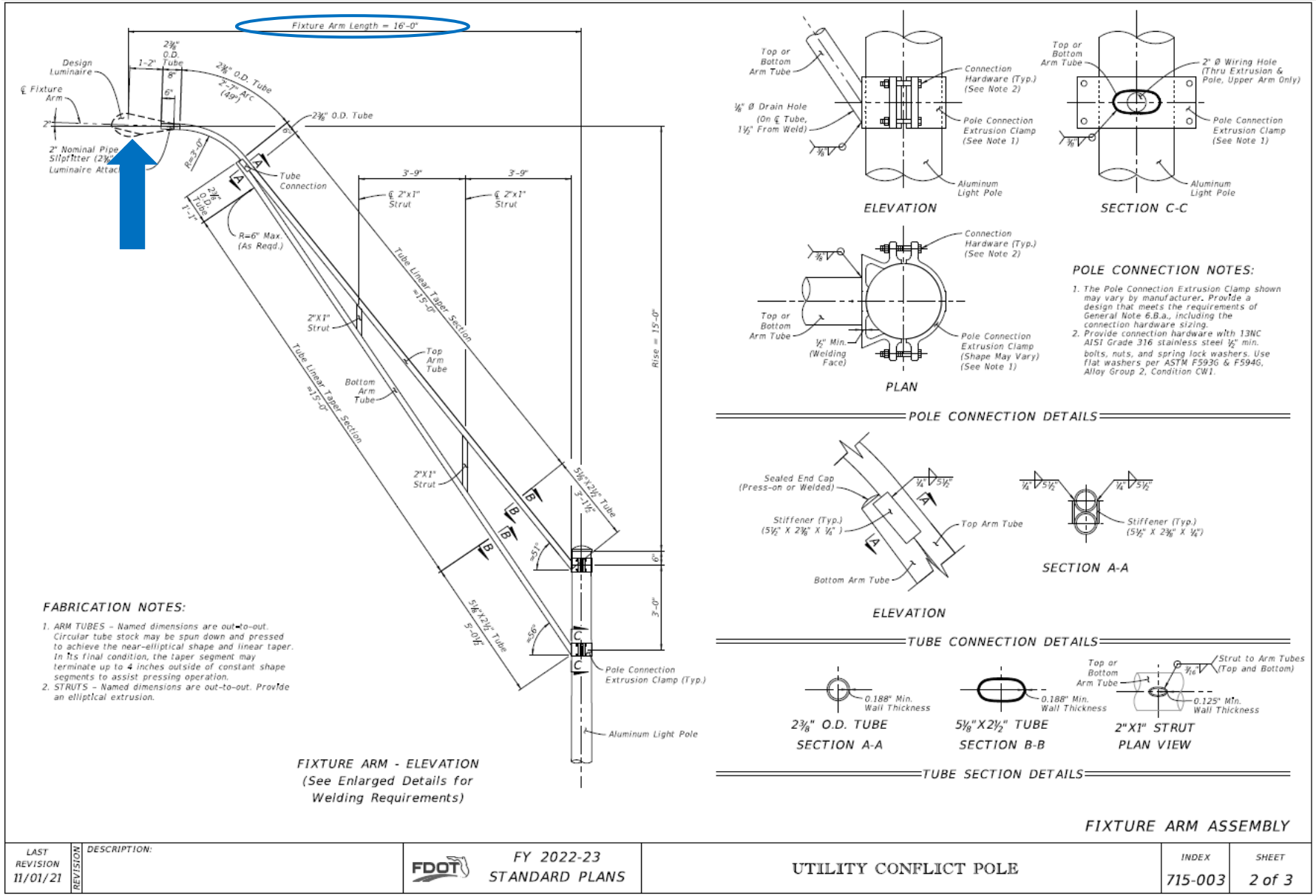
LIGHT POLE - ELEVATION

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	UTILITY CONFLICT POLE	INDEX 715-003	SHEET 1 of 3

Sheet 2: Fixture Arm Assembly

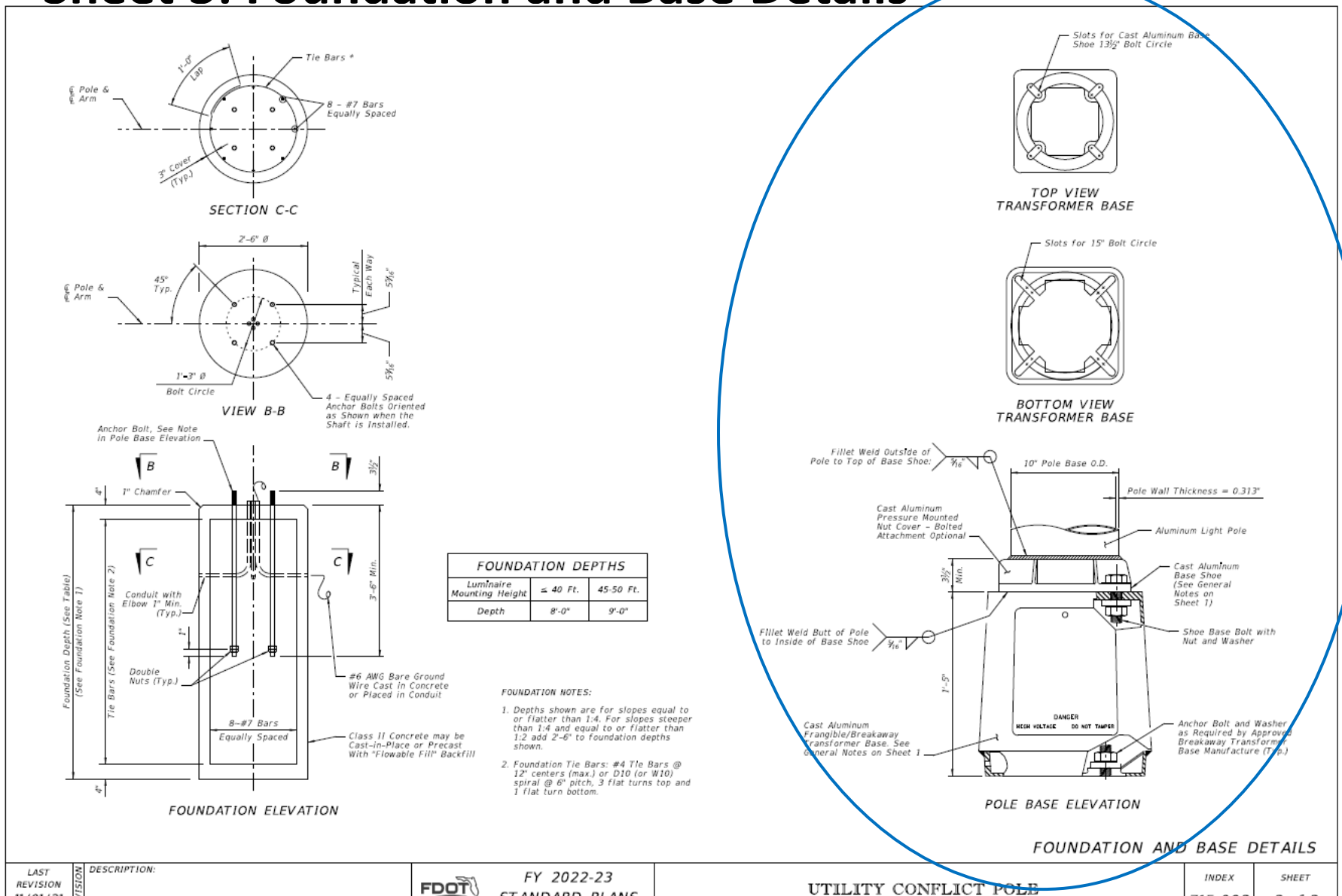
- Design includes welding and pole clamp requirements
- ‘Fixture Arm Length’ dimension measures from CL of pole to the approximate center of luminaire

(EOR can check exact dimensions on this sheet)



Sheet 3: Foundation and Base Details

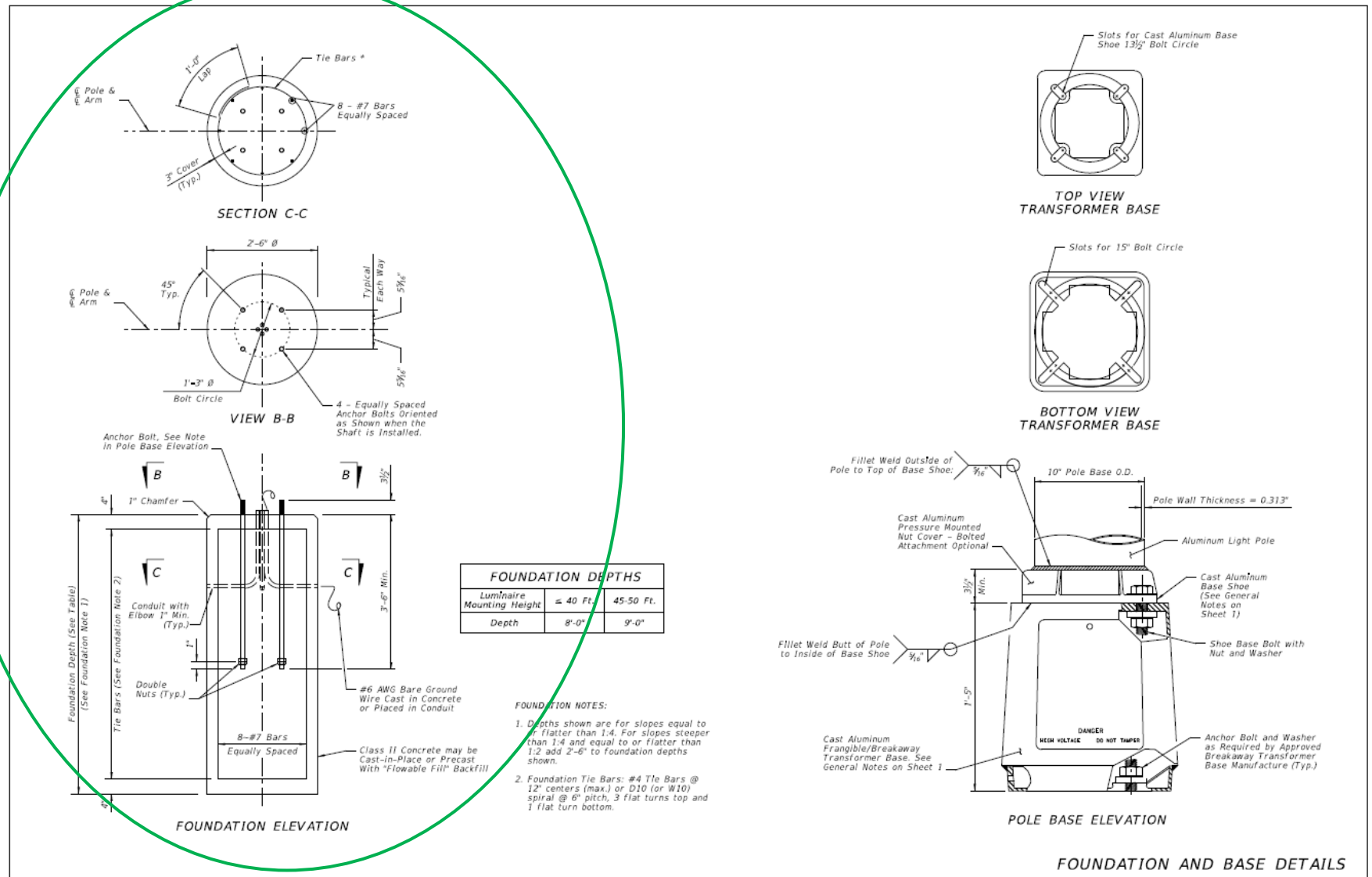
- Similar to normal poles of 715-002, but larger foundations and pole thickness is used here
- **Frangible/Breakaway Base** is included



Sheet 3: Foundation and Base Details

- **2’-6” diameter concrete foundation** is included…
- EOR selects the… **“Standard Foundation” Pay Item option** to use the foundation shown

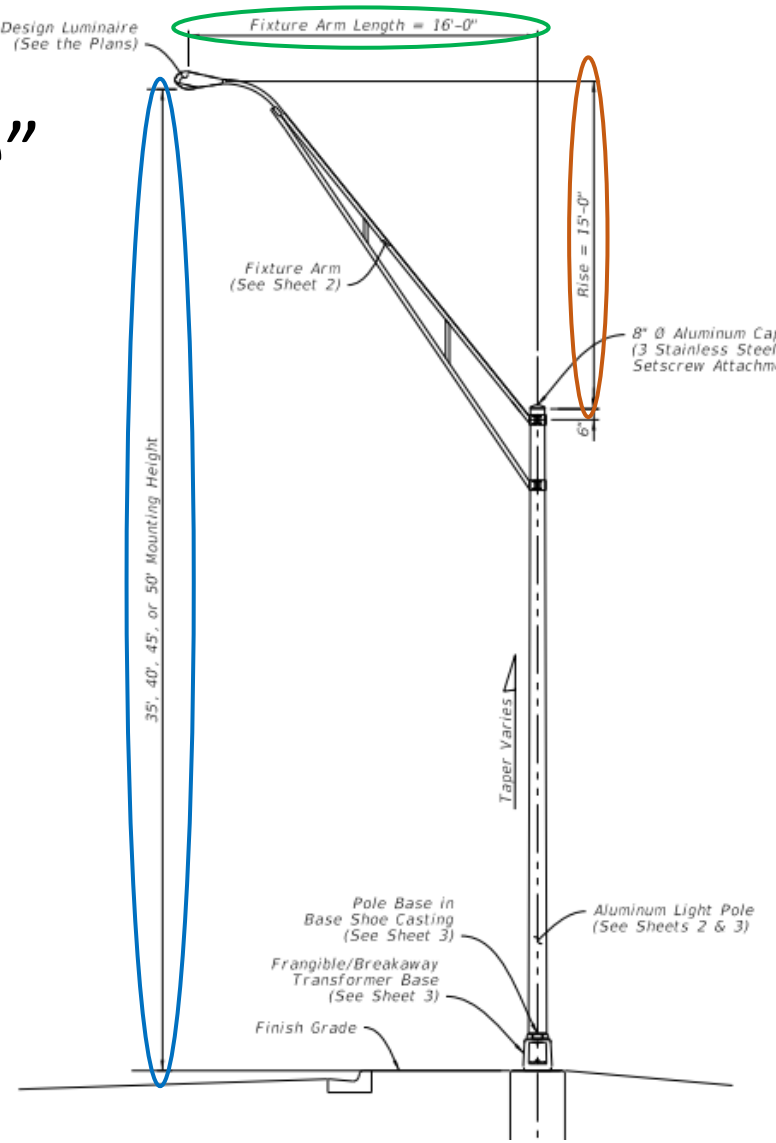
Otherwise, a project-specific design is required (e.g. for a spread footing)



NEW Basis of Estimates - Pay Item Structure

Pay Item: 715-6A-BCD for "Light Pole Complete"

- Used for both 715-002 (Standard Pole) & 715-003 (Utility Conflict Pole)
- Pay Item Structure Captures:
  - Index Number
  - Foundation Type (Standard or Project-Specific)
  - Mounting Height
  - Horizontal Arm Length
  - Vertical Arm Rise



Questions?

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FY 2022-23 Standard Plans
Update Training

102 Series - Temporary Traffic Control

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General Changes

- Changed nomenclature in notes from:

  “work zone” to “work operation”

- Removed redundant note:

  “If the work encroaches on a marked bicycle lane or ridable shoulder, close the lane or shoulder in accordance with the plans.”

5. The "Speeding Fines Doubled When Workers Present" sign (M0T-13-06) and "End Road Work" Sign (G20-2), along with associated Work Zone Sign Distances, may be omitted when the work zone will be in place for 24 hours or less. Additionally, arrow boards may be omitted when the work zone will be in place for 60 minutes or less and the speed limit is 45 mph or less.

5. The "Speeding Fines Doubled When Workers Present" sign (M0T-13-06) and "End Road Work" Sign (G20-2), along with associated Work Zone Sign Distances, may be omitted when the work operation will be in place for 24 hours or less. Additionally, arrow boards may be omitted when the work operation will be in place for 60 minutes or less and the speed limit is 45 mph or less.

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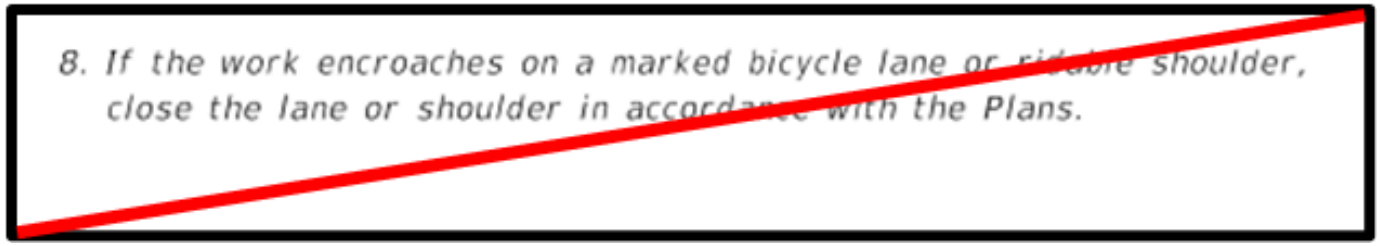

General Changes

General Construction Operations-Roadway		
Maintenance of Traffic		
102-100		Temporary Barrier
102-110		Type K Temporary Concrete Barrier System
102-120		Low Profile Barrier
102-600		General Information for Traffic Control Through Work Zones ***Quick Reference Sheet: 102 Series Tables***
102-601		Two-Lane and Multilane Roadway, Work Beyond the Shoulder
102-602		Two-Lane and Multilane, Work on Shoulder
102-603		Two-Lane, Two-Way, Work Within the Travel Way
102-604		Two-Lane, Two-Way, Intersection Work
102-606		Two-Lane Roadway, Lane Closure Using Temporary Traffic Sign

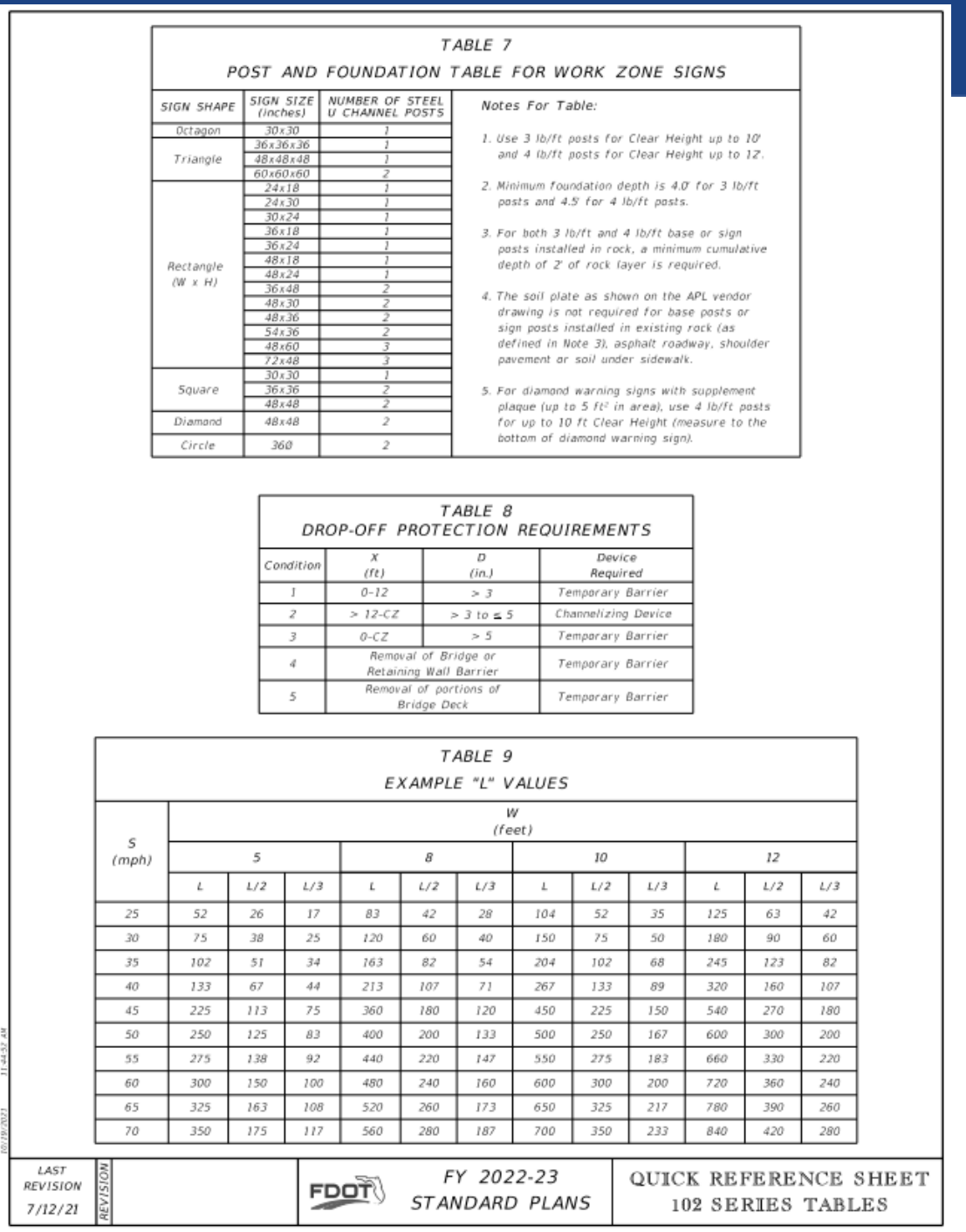

TABLE 7
POST AND FOUNDATION TABLE FOR WORK ZONE SIGNS

SIGN SHAPE	SIGN SIZE (inches)	NUMBER OF STEEL U CHANNEL POSTS
Octagon	30x30	1
Triangle	36x36x36	1
	48x48x48	1
	60x60x60	2
Rectangle (W x H)	24x18	1
	24x30	1
	30x24	1
	36x18	1
	36x24	1
	48x18	1
	48x24	1
	36x48	2
	48x30	2
	48x36	2
	54x36	2
	48x60	3
	72x48	3
Square	30x30	1
	36x36	2
	48x48	2
Diamond	48x48	2
Circle	36Ø	2

Notes For Table:

1. Use 3 lb/ft posts for Clear Height up to 10' and 4 lb/ft posts for Clear Height up to 12'.
2. Minimum foundation depth is 4.0' for 3 lb/ft posts and 4.5' for 4 lb/ft posts.
3. For both 3 lb/ft and 4 lb/ft base or sign posts installed in rock, a minimum cumulative depth of 2' of rock layer is required.
4. The soil plate as shown on the APL vendor drawing is not required for base posts or sign posts installed in existing rock (as defined in Note 3), asphalt roadway, shoulder pavement or soil under sidewalk.
5. For diamond warning signs with supplement plaque (up to 5 ft² in area), use 4 lb/ft posts for up to 10 ft Clear Height (measure to the bottom of diamond warning sign).

TABLE 8
DROP-OFF PROTECTION REQUIREMENTS

Condition	X (ft)	D (in.)	Device Required
1	0-12	> 3	Temporary Barrier
2	> 12-CZ	> 3 to ≤ 5	Channelizing Device
3	0-CZ	> 5	Temporary Barrier
4	Removal of Bridge or Retaining Wall Barrier		Temporary Barrier
5	Removal of portions of Bridge Deck		Temporary Barrier

TABLE 9
EXAMPLE "L" VALUES

S (mph)	W (feet)											
	5			8			10			12		
	L	L/2	L/3	L	L/2	L/3	L	L/2	L/3	L	L/2	L/3
25	52	26	17	83	42	28	104	52	35	125	63	42
30	75	38	25	120	60	40	150	75	50	180	90	60
35	102	51	34	163	82	54	204	102	68	245	123	82
40	133	67	44	213	107	71	267	133	89	320	160	107
45	225	113	75	360	180	120	450	225	150	540	270	180
50	250	125	83	400	200	133	500	250	167	600	300	200
55	275	138	92	440	220	147	550	275	183	660	330	220
60	300	150	100	480	240	160	600	300	200	720	360	240
65	325	163	108	520	260	173	650	325	217	780	390	260
70	350	175	117	560	280	187	700	350	233	840	420	280

LAST REVISION 7/12/21 | REVISION | FDOT FY 2022-23 STANDARD PLANS | QUICK REFERENCE SHEET 102 SERIES TABLES

General Information for Traffic Control Through Work Zones:

Sheet 5

Sign sizes 60'' x 54'' and 120'' x 60'' , and the associated note have been removed from the post and foundation table.

Note 9 has been moved into Table 7 as new Table Note 5.

9. For diamond warning signs with supplement plaque (up to 5 ft^2 in area), use 4 lb/ft posts for up to 10 ft Clear Height (measure to the bottom of diamond warning sign).

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	30x24	1
	36x18	1
	36x24	1
	48x18	1
	48x24	1
	36x48	2
	48x30	2
	48x36	2
	54x36	2
	48x60	3
	~~60x54~~	~~3~~
	72x48	3
	~~120x60*~~	~~4*~~
Square	30x30	1
	36x36	2
	48x48	2
Diamond (See Note 7)	48x48	2
Circle	360	2

Notes For Table:

1. Use 3 lb/ft posts for Clear Height up to 10' and 4 lb/ft posts for Clear Height up to 12'.

~~* Use 4 lb/ft U-channel sign post with a mounting height of 7' minimum and 8' max. Attach sign panel using Z-bracket detail on Sheet 6.~~

2. Minimum foundation depth is 4.0' for 3 lb/ft posts and 4.5' for 4 lb/ft posts.

3. For both 3 lb/ft and 4 lb/ft base or sign posts installed in rock, a minimum cumulative depth of 2' of rock layer is required.

4. The soil plate as shown on the APL vendor drawing is not required for base posts or sign posts installed in existing rock (as defined in Note 3), asphalt roadway, shoulder pavement or soil under sidewalk.

General Information for Traffic Control Through Work Zones:

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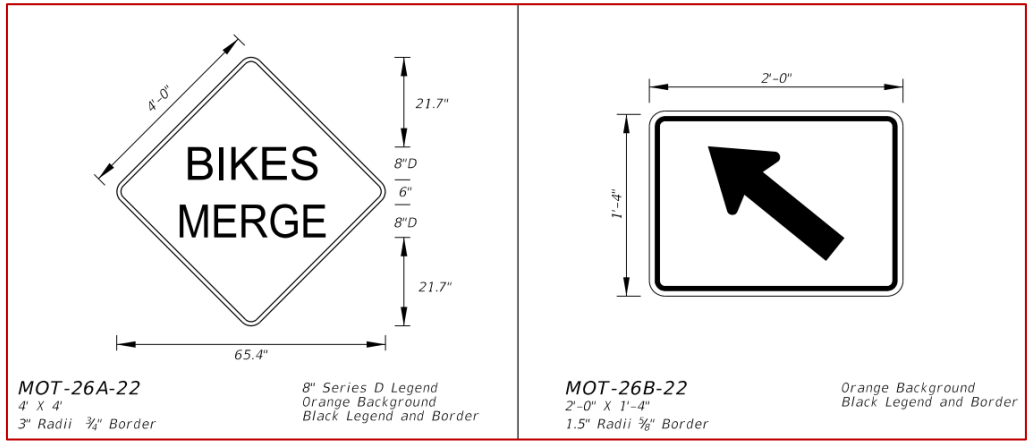
General Information for Traffic Control Through Work Zones:

Sheet 6

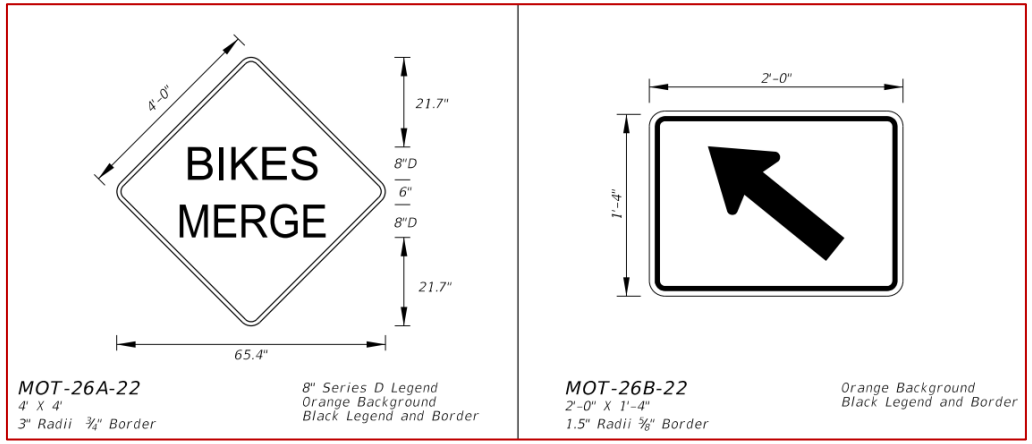
- MUTCD SHS Signs R4-11, W11-1, and W16-1P were added.
- MOT-26A-22 and MOT-26B-22 Add to Index 700-102



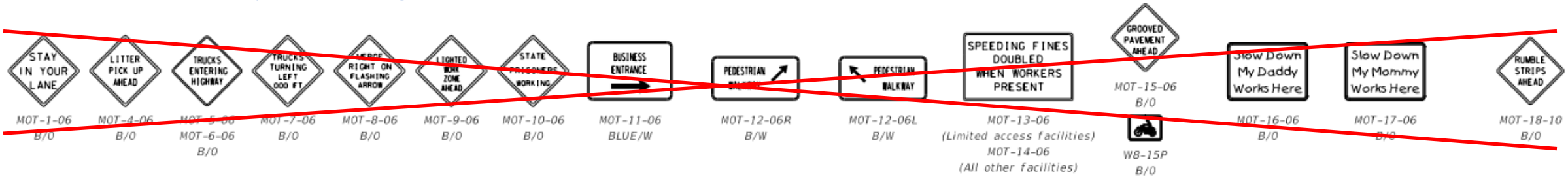
General Information for Traffic Control Through Work Zones:

Sheet 6

- MUTCD SHS Signs R4-11, W11-1, and W16-1P were added.
- MOT-26A-22 and MOT-26B-22 Add to Index 700-102



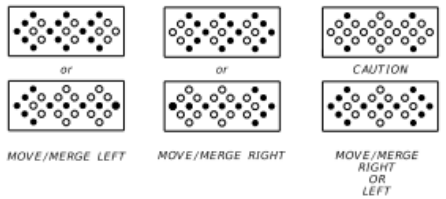
- All the FDOT Specific TTC signs were removed. See Standard Plans, Index 700-102



General Information for Traffic Control Through Work Zones:

Sheet 7

The Side Road Intersecting detail from Standard Plan 102-606 was added



MODES

NOTES:
An arrow board in the arrow or chevron mode shall be used only for stationary or moving lane closures on multilane roadways.

For shoulder work, blocking the shoulder, for roadside work near the shoulder, or for temporarily closing one lane on a two-lane, two-way roadway, an arrow board shall be used only in the caution mode.

A single arrow board shall not be used to merge traffic laterally more than one lane. When arrow boards are used to close multiple lanes, a single board shall be used at the merging taper for each closed lane.

When Advance Warning Arrow Boards are used at night, the intensity of the flashers shall be reduced during darkness when lower intensities are desirable.

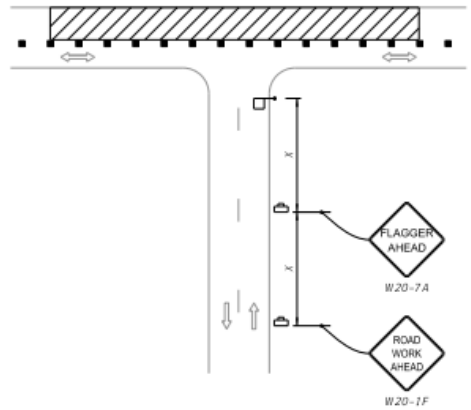
ADVANCE WARNING ARROW BOARDS

NOTES:
Manholes extending 1" or more above the travel lane and crosswalks having an uneven surface greater than ½" shall have a temporary asphalt apron constructed as shown in the diagram below.

All transverse joints that have a difference in elevation of 1" or more shall have a temporary asphalt apron constructed as shown in the diagram below.

The apron is to be removed prior to constructing the next lift of asphalt. The cost of the temporary asphalt shall be included in the contract unit price for Maintenance of Traffic, LS.

MANHOLES/CROSSWALKS/JOINTS



NOTE:
Optionally, use "Flagger Ahead" sign with text (W20-7A) instead of "Flagger Ahead" sign with symbol (W20-7).

SIDE ROAD INTERSECTING THE WORK ZONE

SIGNALS:
Existing traffic signal operations that require modification in order to carry out work zone traffic control shall be included in the Plans and be approved by the District Traffic Operations Engineer.

Refer to Specification 102-9 for additional information.

CHANNELIZING DEVICES:
Channelizing devices for work zone traffic control shall be as prescribed in Part VI of the MUTCD, subject to supplemental revisions provided in the contract documents and the 102 Series of Indexes. Lighting Devices must not be used to supplement channelization. Omit tapers and channelizing devices for paved shoulders less than 4' in width.

CHANNELIZING DEVICE CONSISTENCY:
Barricades, vertical panels, cones, tubular markers and drums shall not be intermixed within either the lateral transition or within the tangent alignment.

TRUCK/TRAILER-MOUNTED ATTENUATORS:
Truck/Trailer-mounted attenuators (TMA) can be used for moving operations and short-term stationary operations. For moving operations, see Index 102-607. For short-term, stationary operations, see Part VI of the MUTCD.

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX 102-600	SHEET 7 of 11

Two-Lane and Multilane, Work on Shoulder:

Sheet 1

- Note 3 was updated to:

  " Where work activates are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less"

- New Note 9 addresses roads with no paved shoulder.

> 3. Where work activities are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less.

> 9. When there is no paved shoulder, the "Worker" sign (W21-1) may be used instead of the "Shoulder Closed" sign (W21-5a).

Two-Lane, Two-Way, Work Within the Travel Way:

Sheet 1

Centerline Encroachment language was removed from Note 8. See Detail on Sheet 2 for layout.

8. Railroad Crossings:

a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.

b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

to provide for an 11' lane between the Work Area and the Edge of Existing Paved Shoulder and the Work Zone will be in place for 24 hours or less. Reduce the posted speed when appropriate.

Two-Lane, Two-Way, Intersection Work:

Sheet 1

- New Note 9 was added to give the option of using a flagger for side street control instead of using a stop sign and restricting left turn movements.

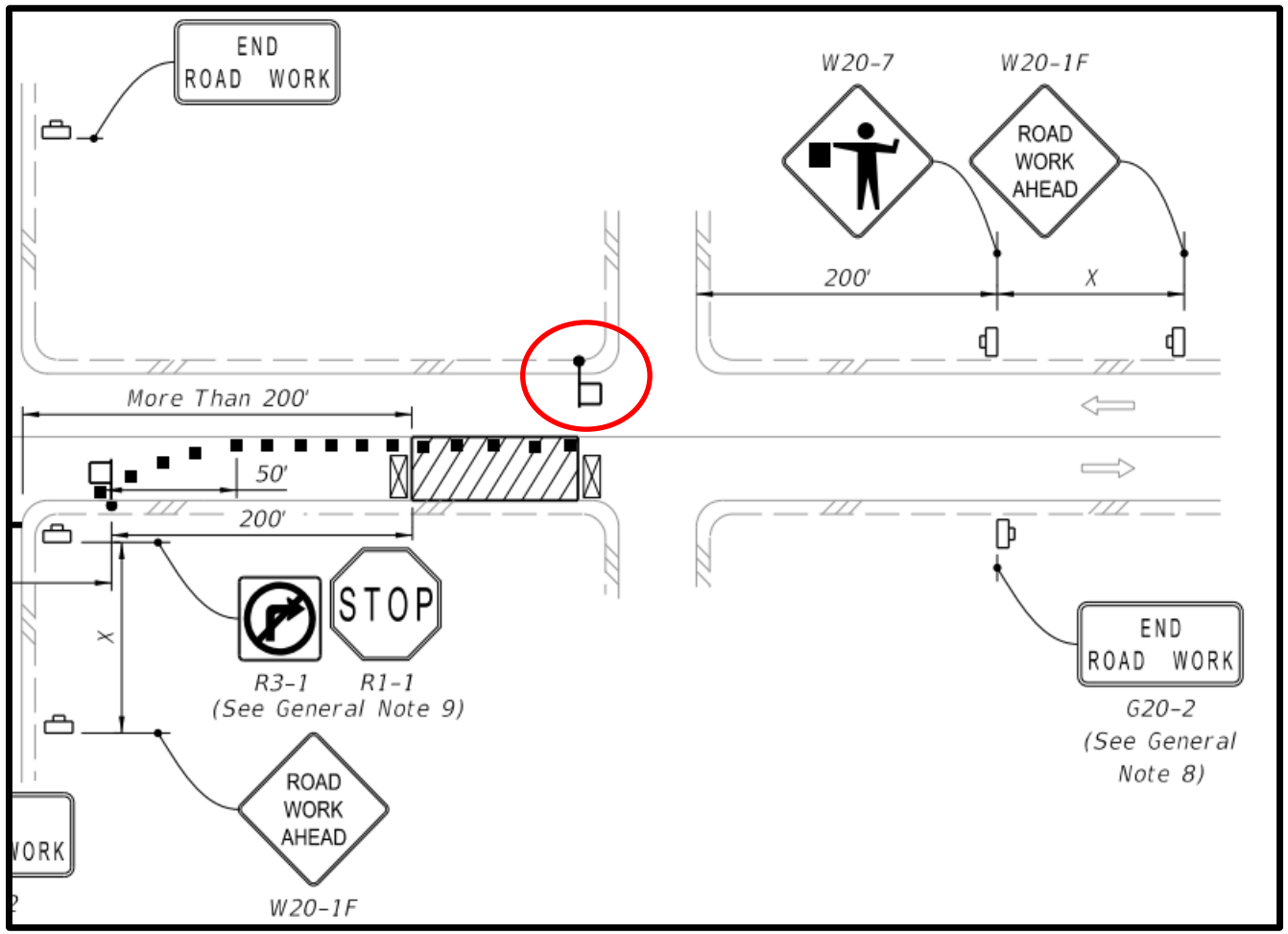
> 9. As an option to the "STOP" sign (R1-1) and Restricted Left/Right Turning Movement sign (R3-1 or R3-2), the "SIDE ROAD INTERSECTING THE WORK ZONE" flagging operation from Index 102-600 may be used.

Two-Lane, Two-Way, Intersection Work:

Sheet 1

- New Note 9 was added to give the option of using a flagger for side street control instead of using a stop sign and restricting left turn movements.

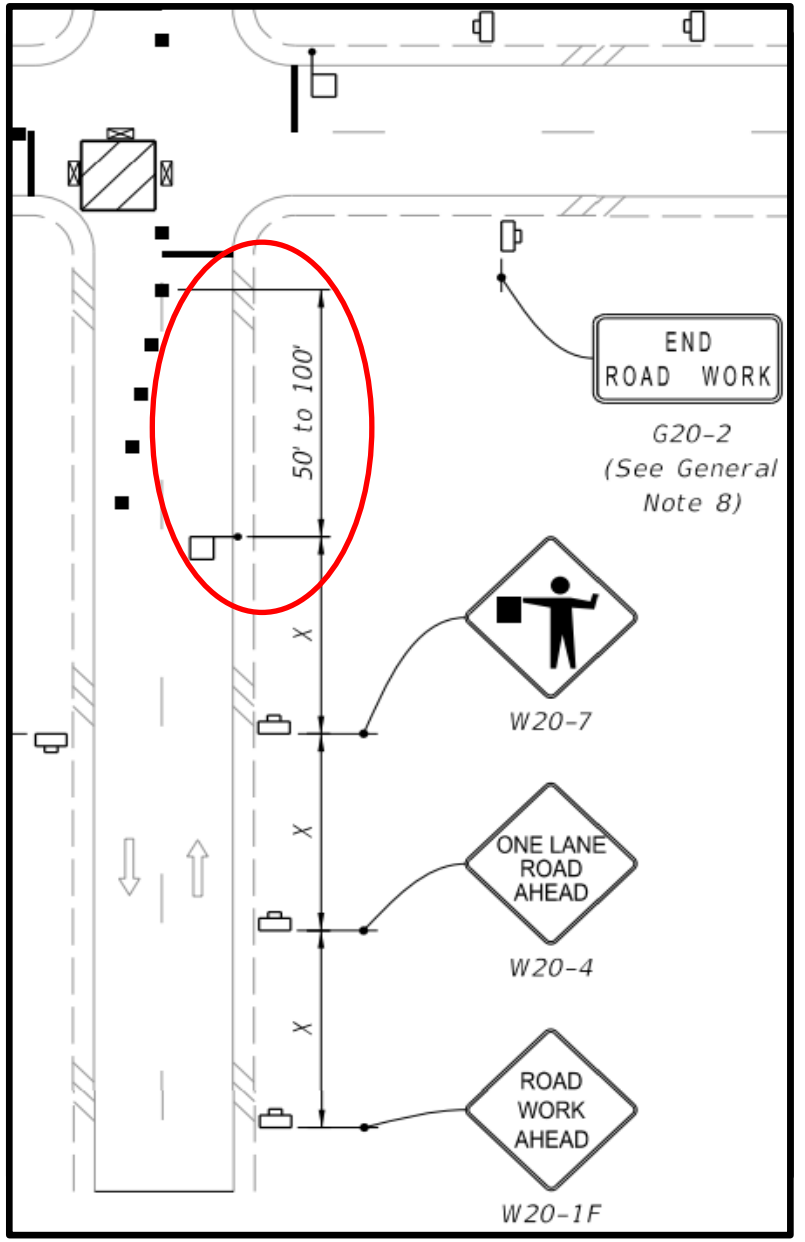
- The flagger location in the “lane closure for work more than 200’ from the intersection” detail was moved from the centerline to the shoulder.



Two-Lane, Two-Way, Intersection Work:

Sheet 1

The flagger and taper dimension in southbound approach of the detail was moved from the left shoulder to the right shoulder.



Mobile Operations:

Sheet 1

Removed vehicle light requirement statement from Note 4. This is a requirement of all equipment and vehicles in the Work Zone per *Standard Specification 102*.

4. Where work activities within 2' of the edge of travel way are incidental (i.e., Mowing, Litter Removal), the Engineer may delete requirements for signs and the Shadow vehicle on the shoulder ~~provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.~~

Multilane Roadway, Lane Closures:

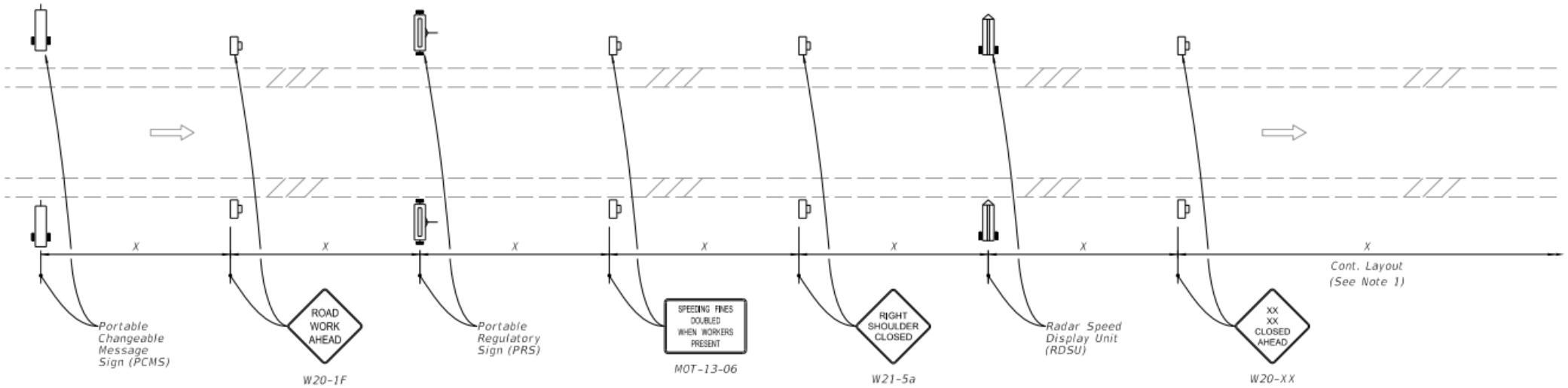
Sheet 5

Updated Note 1 to clarify usage of the Motorist Awareness System

i.e., “for lane closures of at least 5 days (consecutive or not) on multilane divided facilities with a posted speed of 55mph or greater.

NOTES:

1. Use the Motorist Awareness System (MAS) for lane closures of at least 5 days (consecutive or not) on multilane divided facilities with a posted speed of 55 or greater when workers are present and not protected by a barrier.

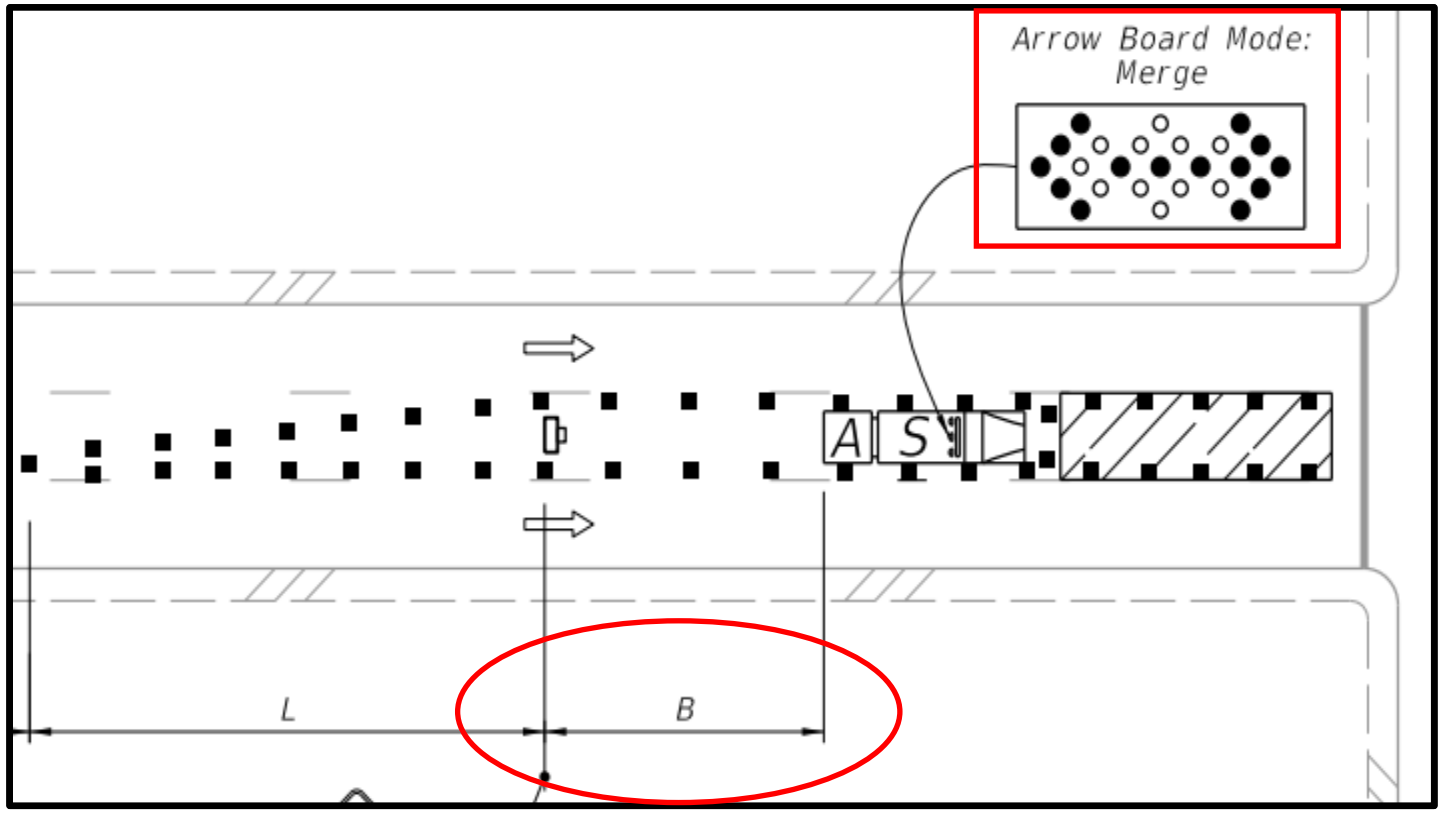


MOTORIST AWARENESS SYSTEM

Multilane Roadway, Intersection Work:

Sheet 4

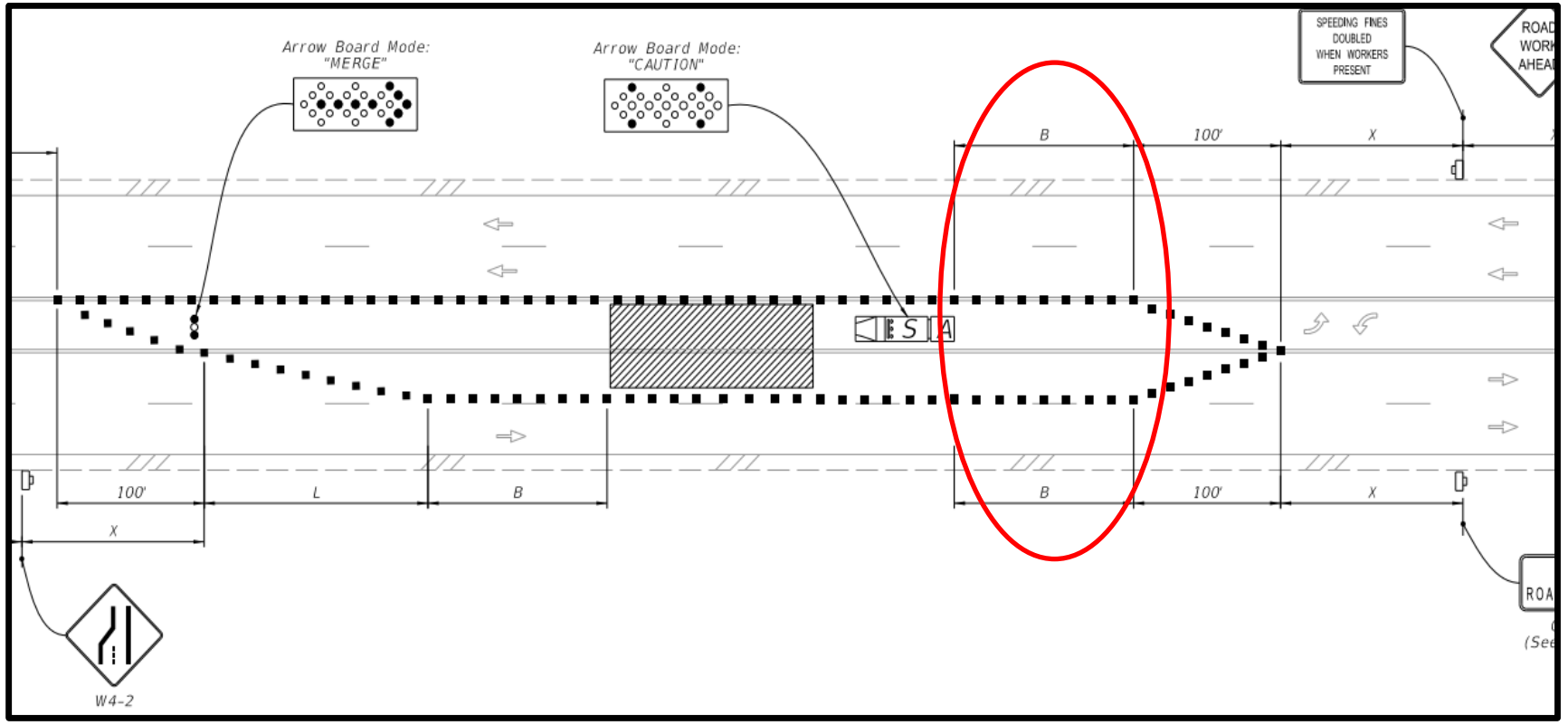
- Updated Buffer Space location to upstream of the Shadow Vehicle.
- Added Arrow Board Mode.



Two-Way Left Turn Lanes:

Sheet 1

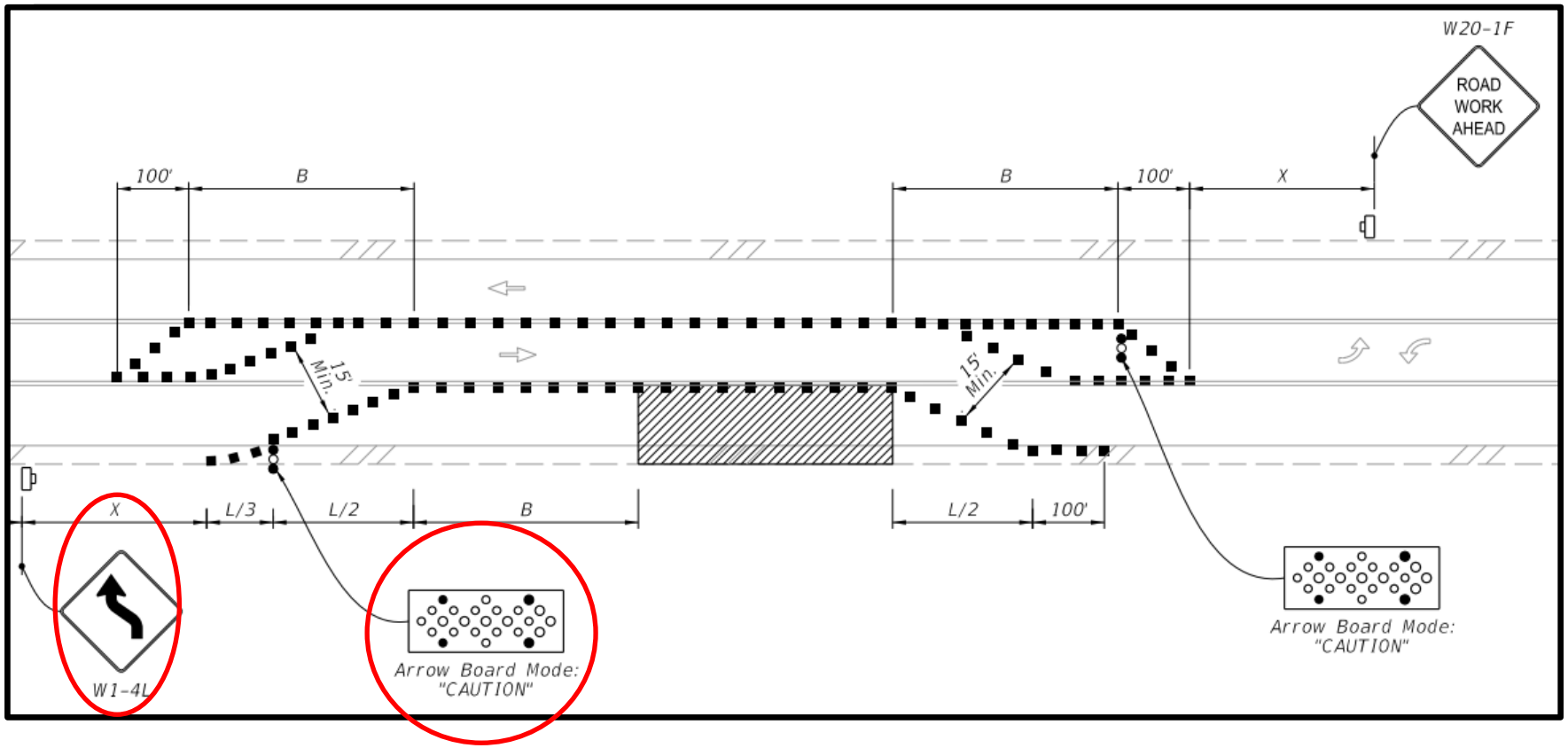
Updated Buffer Space location to upstream of the Shadow Vehicle.



Two-Way Left Turn Lanes:

Sheet 3

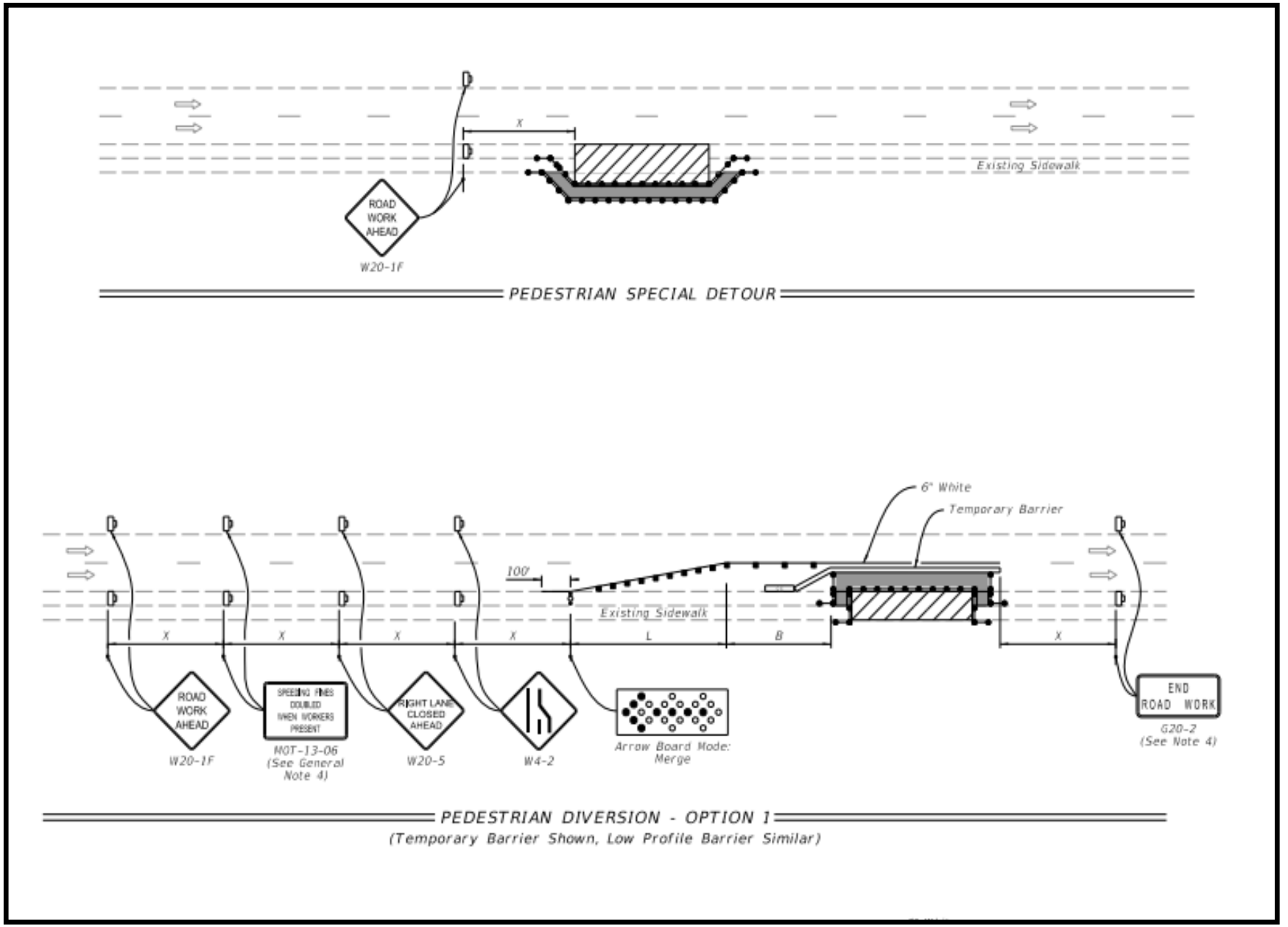
- Updated Arrow Board at Shifting Taper to “CAUTION” Mode instead of “MERGE” Mode.
- Changed “Right Lane Closed” (W20-5aR) sign to the W1-4L Lane Shift symbol sign.



Sidewalk Closure:

Sheet 2

- Changed “Temporary Pedestrian Way” detail title to “Pedestrian Special Detour”.
- Changed “Temporary Pedestrian Way Diverting Traffic Into the Traveled Way” detail title to “Pedestrian Diversion – Option 1”

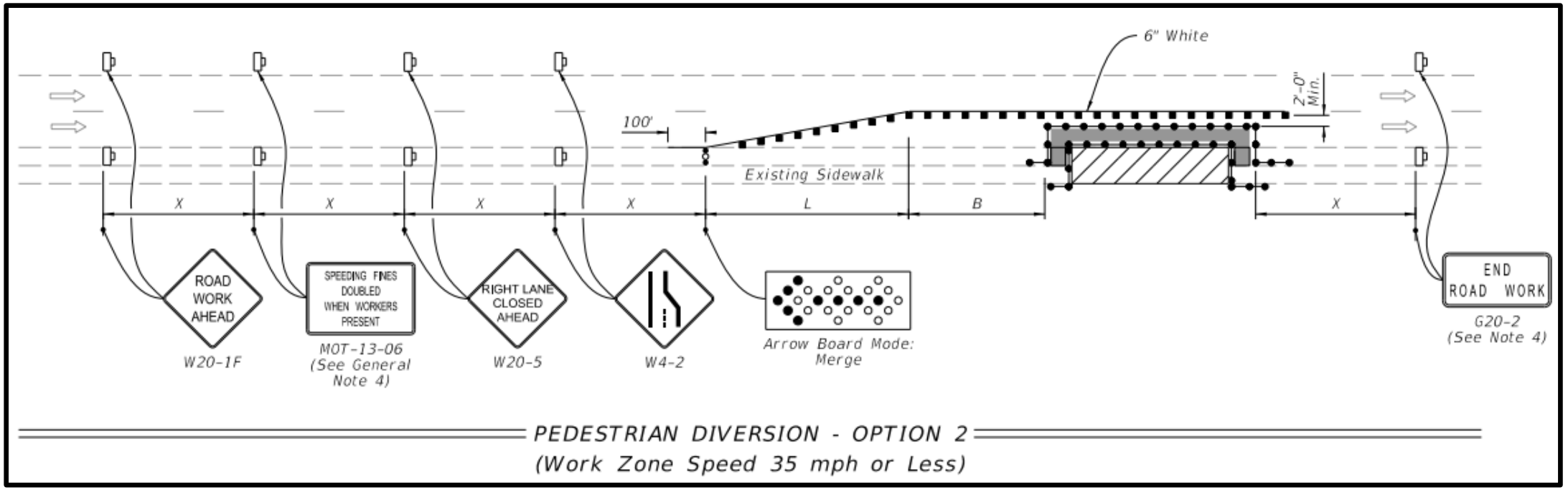


Sidewalk Closure:

Sheet 2 Cont'd

- Added "Pedestrian Diversion – Option 2".
- Added new Note 5.

> 5. Pedestrian Diversion Option 2 may only be used when called for in the Plans or as approved by an Engineer.

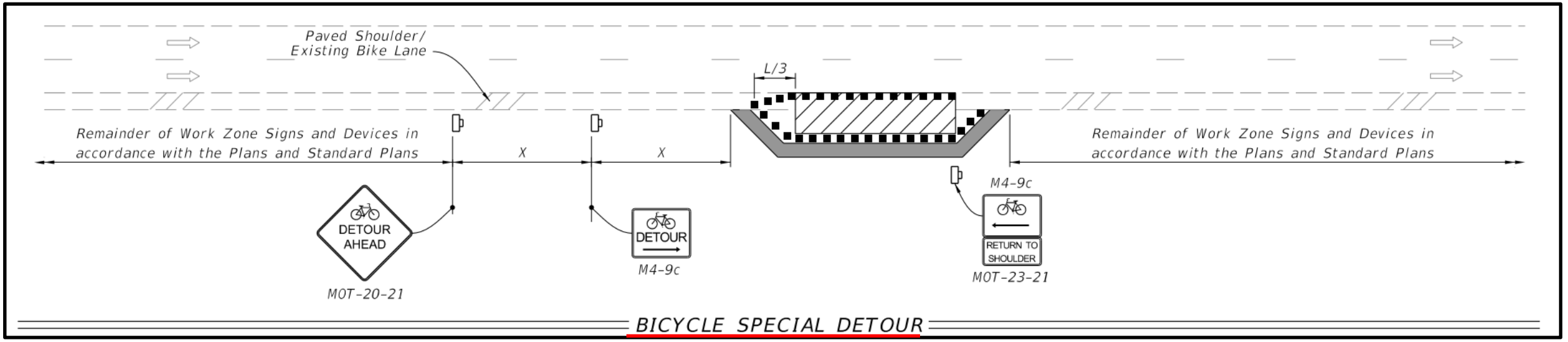


PEDESTRIAN DIVERSION - OPTION 2
(Work Zone Speed 35 mph or Less)

Bicycle Facility Closure:

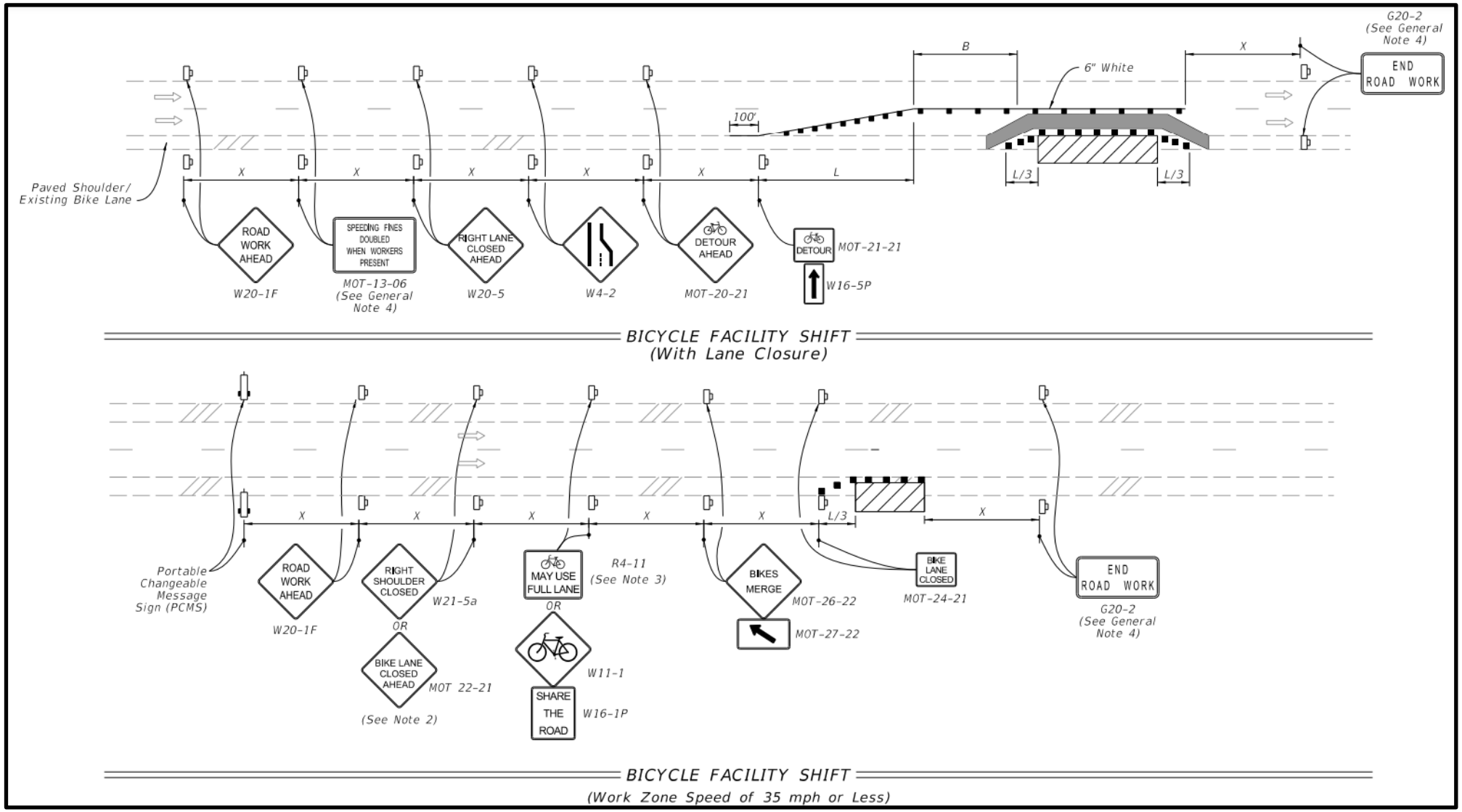
- Renamed “Bicycle Facility Closures”

- Sheet 2
  Changed the title for the “Temporary Bicycle Diversion” detail to “Bicycle Special Detour”.



Bicycle Facility Closure:

Added new detail for “Bicycle Facility Shift (Work Zone Speed of 35 mph or Less)”.



FY 2022-23 Standard Plans Update Training

Joshua Turley, P.E.
Structures Standard Plans Engineer
State Structures Design Office
(850) 414-4475
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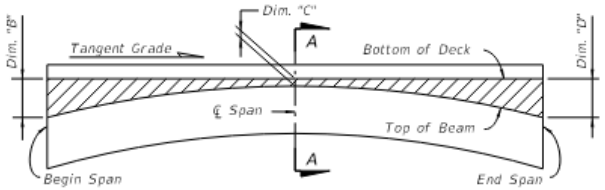
Standards

- 450-199
- 515-052
- 515-062
- 521-660
- 548-020
- 649-031
- 700-091

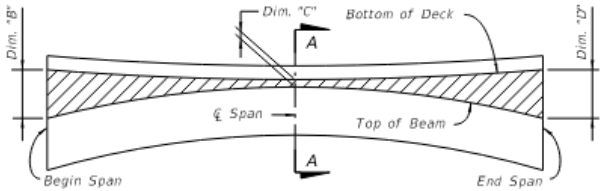
Standards

- 450-199 Prestressed I-Beams Build-Up & Deflection Data
- 515-052
- 515-062
- 521-660
- 548-020
- 649-031
- 700-091

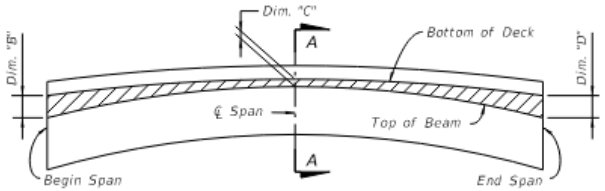
- Changed the camber tolerance to be inline with the specs



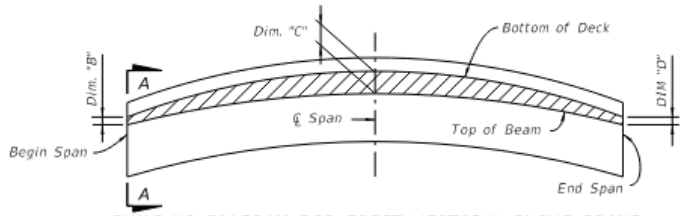
BUILD-UP DIAGRAM FOR TANGENT SPANS
(ALONG ℄ BEAM) (CASE 1)



BUILD-UP DIAGRAM FOR SAG VERTICAL CURVE & HORIZONTAL CURVE SPANS
(ALONG ℄ BEAM) (CASE 2)



BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT ℄ SPAN
(ALONG ℄ BEAM) (CASE 3)

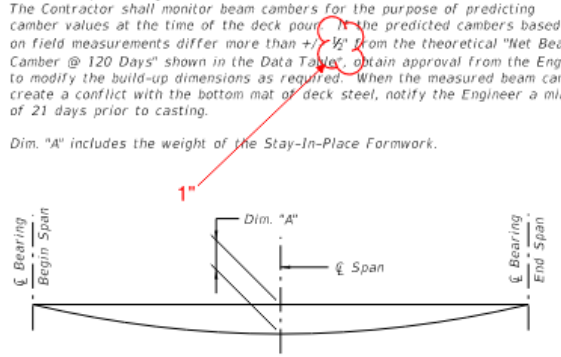


BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT BEGIN OR END SPAN
(ALONG ℄ BEAM) (CASE 4)

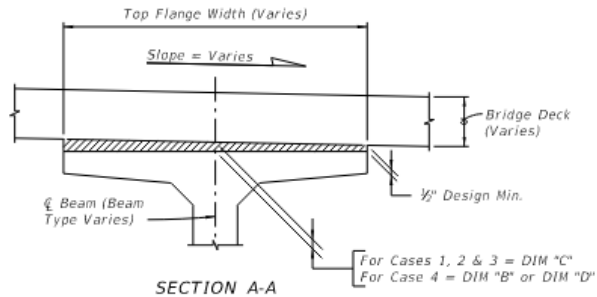
BEAM CAMBER AND BUILD-UP NOTES:

The build-up values given in the Data Table* are based on theoretical beam cambers. The Contractor shall monitor beam cambers for the purpose of predicting camber values at the time of the deck pour. If the predicted cambers based on field measurements differ more than +/- ½" from the theoretical "Net Beam Camber @ 120 Days" shown in the Data Table*, obtain approval from the Engineer to modify the build-up dimensions as required. When the measured beam cambers create a conflict with the bottom mat of deck steel, notify the Engineer a minimum of 21 days prior to casting.

Dim. "A" includes the weight of the Stay-In-Place Formwork.



DEAD LOAD DEFLECTION DIAGRAM

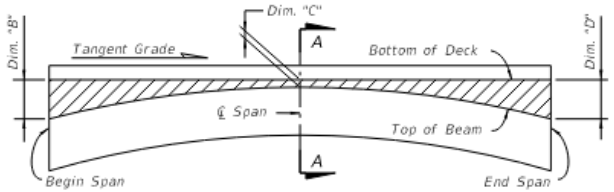


SECTION A-A
BUILD-UP OVER BEAMS
(Florida-I Beam Shown
AASHTO Type II Similar)

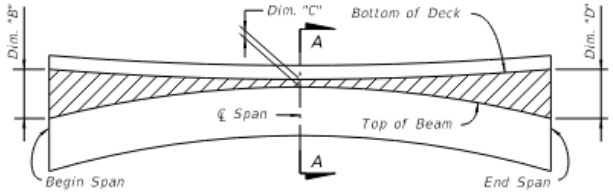
* NOTE:
Work this Index with the Build-up and Deflection Data Table for Florida-I and AASHTO Type II Beams in Structures Plans.

LAST REVISION 07/01/15	REVISION	DESCRIPTION:	FDOT FY 2021-22 STANDARD PLANS	PRESTRESSED I-BEAMS BUILD-UP & DEFLECTION DATA	INDEX 450-199	SHEET 1 of 1

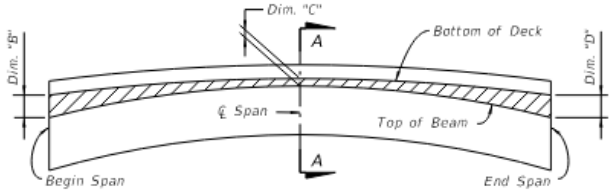
- Final sheet



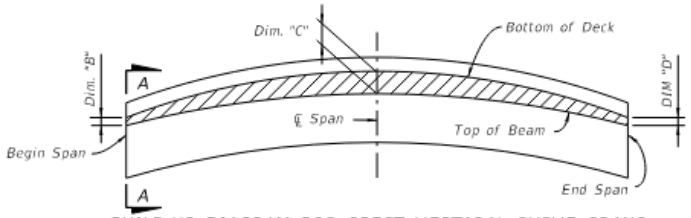
BUILD-UP DIAGRAM FOR TANGENT SPANS
(ALONG ℄ BEAM) (CASE 1)



BUILD-UP DIAGRAM FOR SAG VERTICAL CURVE & HORIZONTAL CURVE SPANS
(ALONG ℄ BEAM) (CASE 2)



BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT ℄ SPAN
(ALONG ℄ BEAM) (CASE 3)

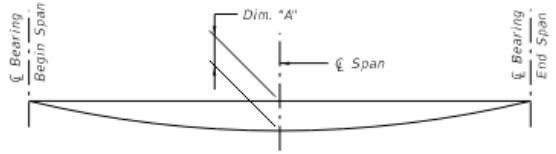


BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT BEGIN OR END SPAN
(ALONG ℄ BEAM) (CASE 4)

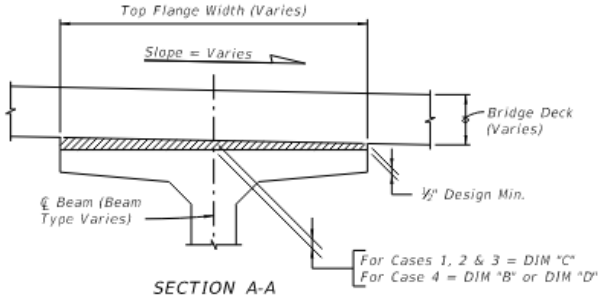
BEAM CAMBER AND BUILD-UP NOTES:

The build-up values given in the Data Table* are based on theoretical beam cambers. The Contractor shall monitor beam cambers for the purpose of predicting camber values at the time of the deck pour. If the predicted cambers based on field measurements differ more than +/- 1" from the theoretical "Net Beam Camber @ 120 Days" shown in the Data Table*, obtain approval from the Engineer to modify the build-up dimensions as required. When the measured beam cambers create a conflict with the bottom mat of deck steel, notify the Engineer a minimum of 21 days prior to casting.

Dim. "A" includes the weight of the Stay-In-Place Formwork.



DEAD LOAD DEFLECTION DIAGRAM



SECTION A-A
BUILD-UP OVER BEAMS
(Florida-I Beam Shown
AASHTO Type II Similar)

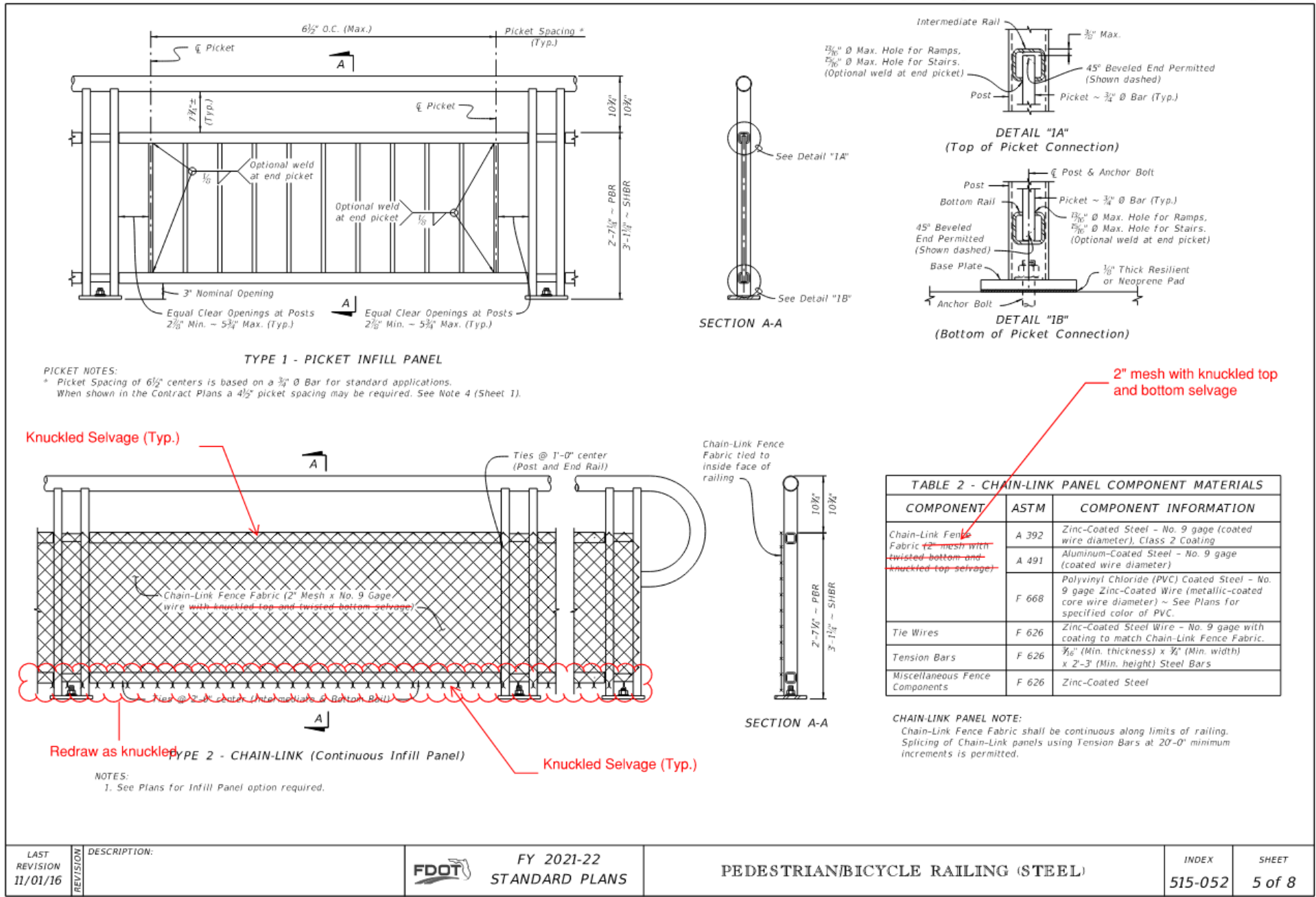
* NOTE:
Work this Index with the Build-up and Deflection Data Table for Florida-I and AASHTO Type II Beams in Structures Plans.

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	PRESTRESSED I-BEAMS BUILD-UP & DEFLECTION DATA	INDEX	SHEET
11/01/21					450-199	1 of 1

Standards

- 450-199 Prestressed I-Beams Build-Up & Deflection Data
- 515-052 Pedestrian/Bicycle Railing (Steel)
- 515-062 Pedestrian/Bicycle Railing (Aluminum)
- 521-660
- 548-020
- 649-031
- 700-091

- Changed the bottom of the fencing from twisted to a knuckled selvage. This was to prevent the fencing catching on pedestrians' feet and legs.
- This was done for both this standard and the aluminum version 515-062



- Final sheet

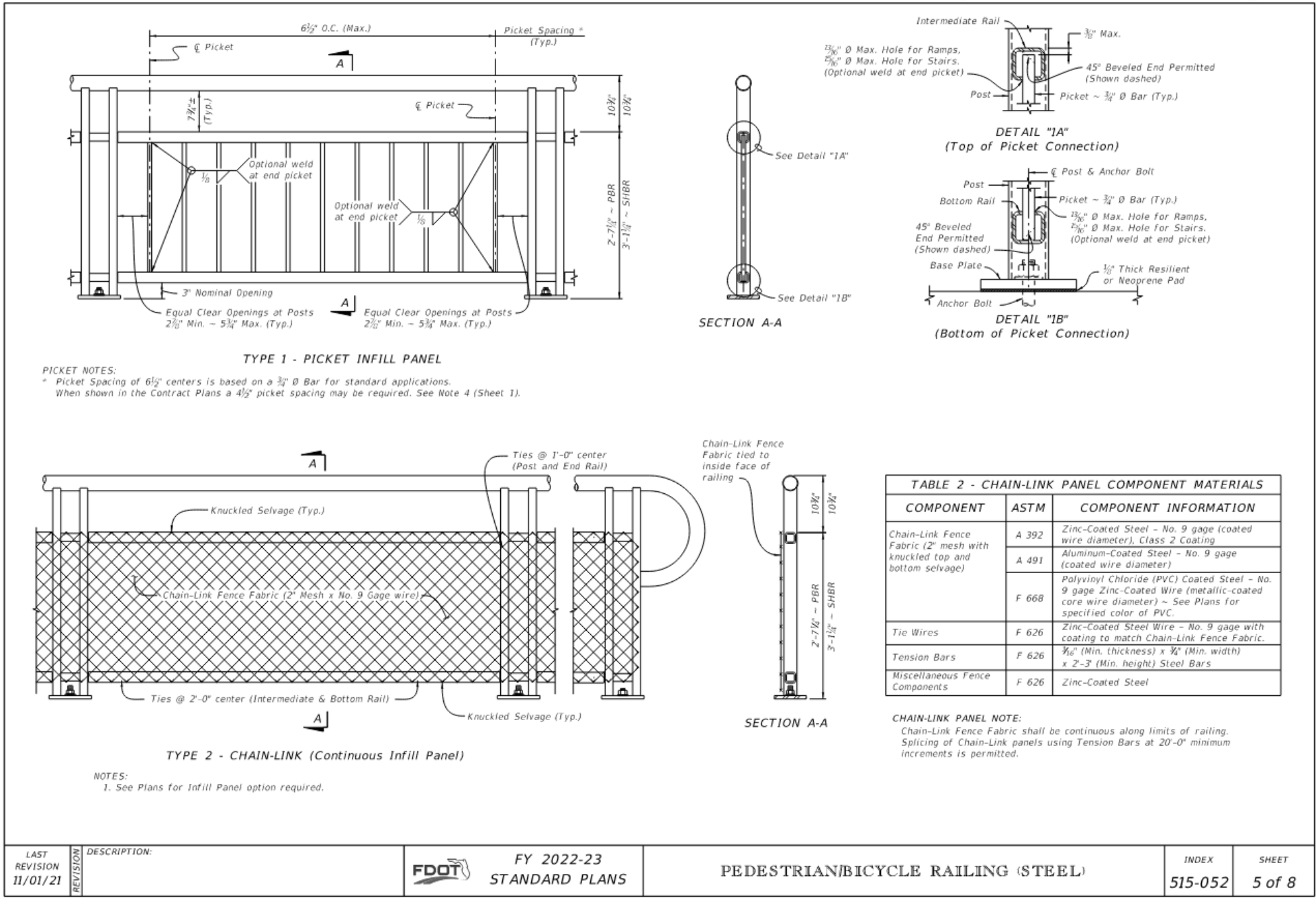


TABLE 2 - CHAIN-LINK PANEL COMPONENT MATERIALS		
COMPONENT	ASTM	COMPONENT INFORMATION
Chain-Link Fence Fabric (2" mesh with knuckled top and bottom selvage)	A 392	Zinc-Coated Steel – No. 9 gage (coated wire diameter), Class 2 Coating
	A 491	Aluminum-Coated Steel – No. 9 gage (coated wire diameter)
	F 668	Polyvinyl Chloride (PVC) Coated Steel – No. 9 gage Zinc-Coated Wire (metallic-coated core wire diameter) ~ See Plans for specified color of PVC.
Tie Wires	F 626	Zinc-Coated Steel Wire – No. 9 gage with coating to match Chain-Link Fence Fabric.
Tension Bars	F 626	3/16" (Min. thickness) x ¾" (Min. width) x 2'-3" (Min. height) Steel Bars
Miscellaneous Fence Components	F 626	Zinc-Coated Steel

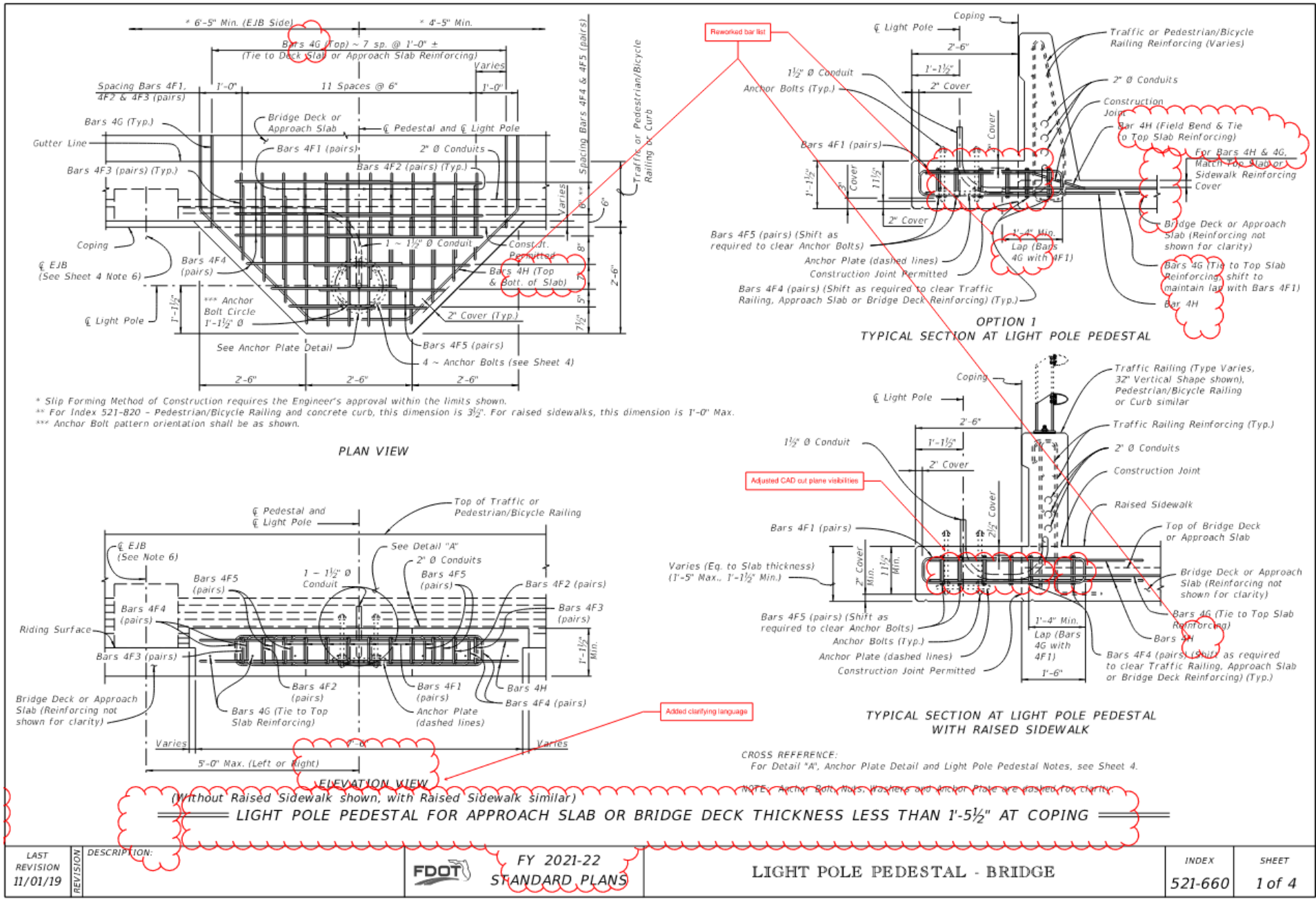
CHAIN-LINK PANEL NOTE:
Chain-Link Fence Fabric shall be continuous along limits of railing. Splicing of Chain-Link panels using Tension Bars at 20'-0" minimum increments is permitted.

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	PEDESTRIAN/BICYCLE RAILING (STEEL)	INDEX 515-052	SHEET 5 of 8

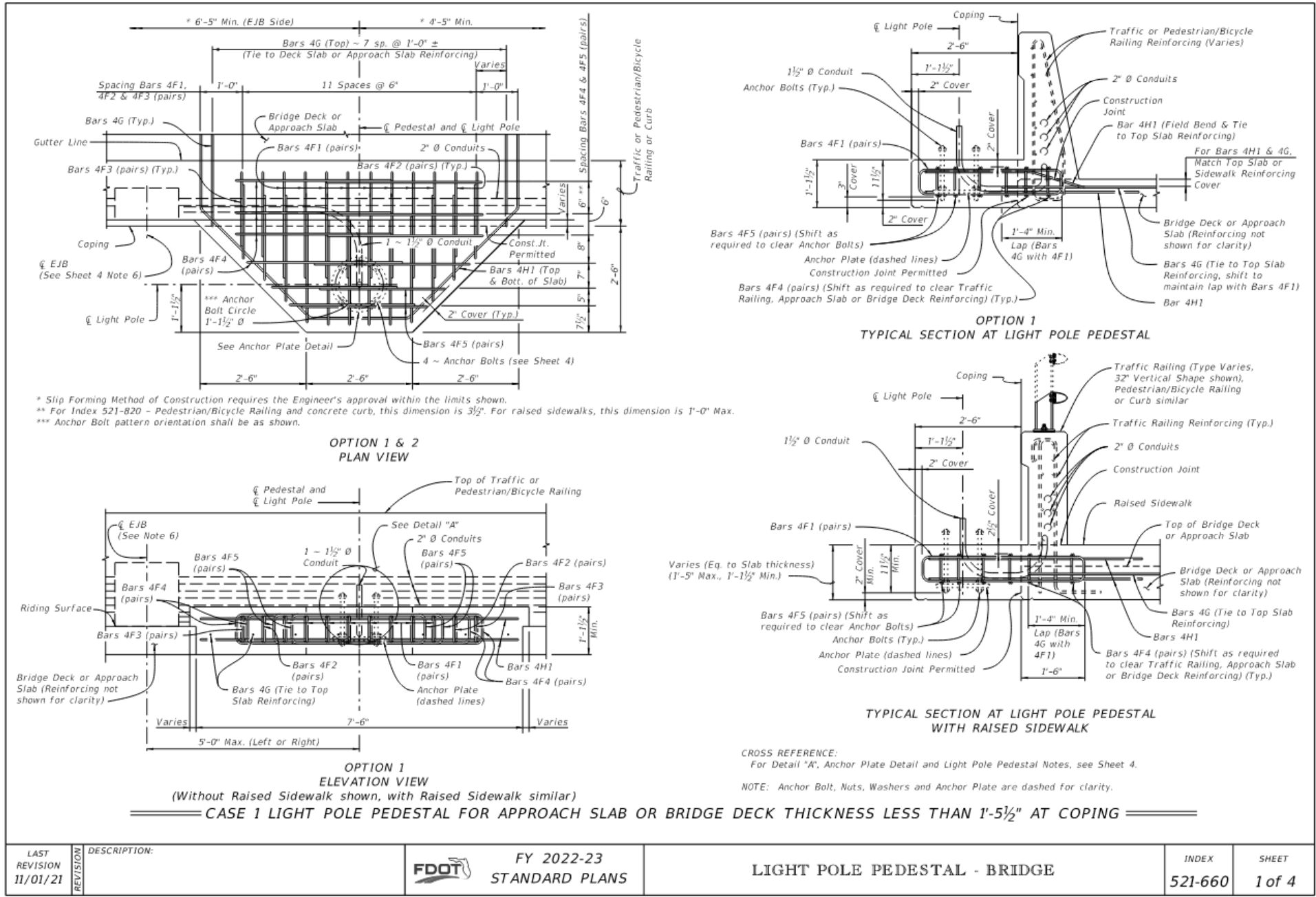
Standards

- 450-199 Prestressed I-Beams Build-Up & Deflection Data
- 515-052 Pedestrian/Bicycle Railing (Steel)
- 515-062 Pedestrian/Bicycle Railing (Aluminum)
- 521-660 Light Pole Pedestal - Bridge
- 548-020
- 649-031
- 700-091

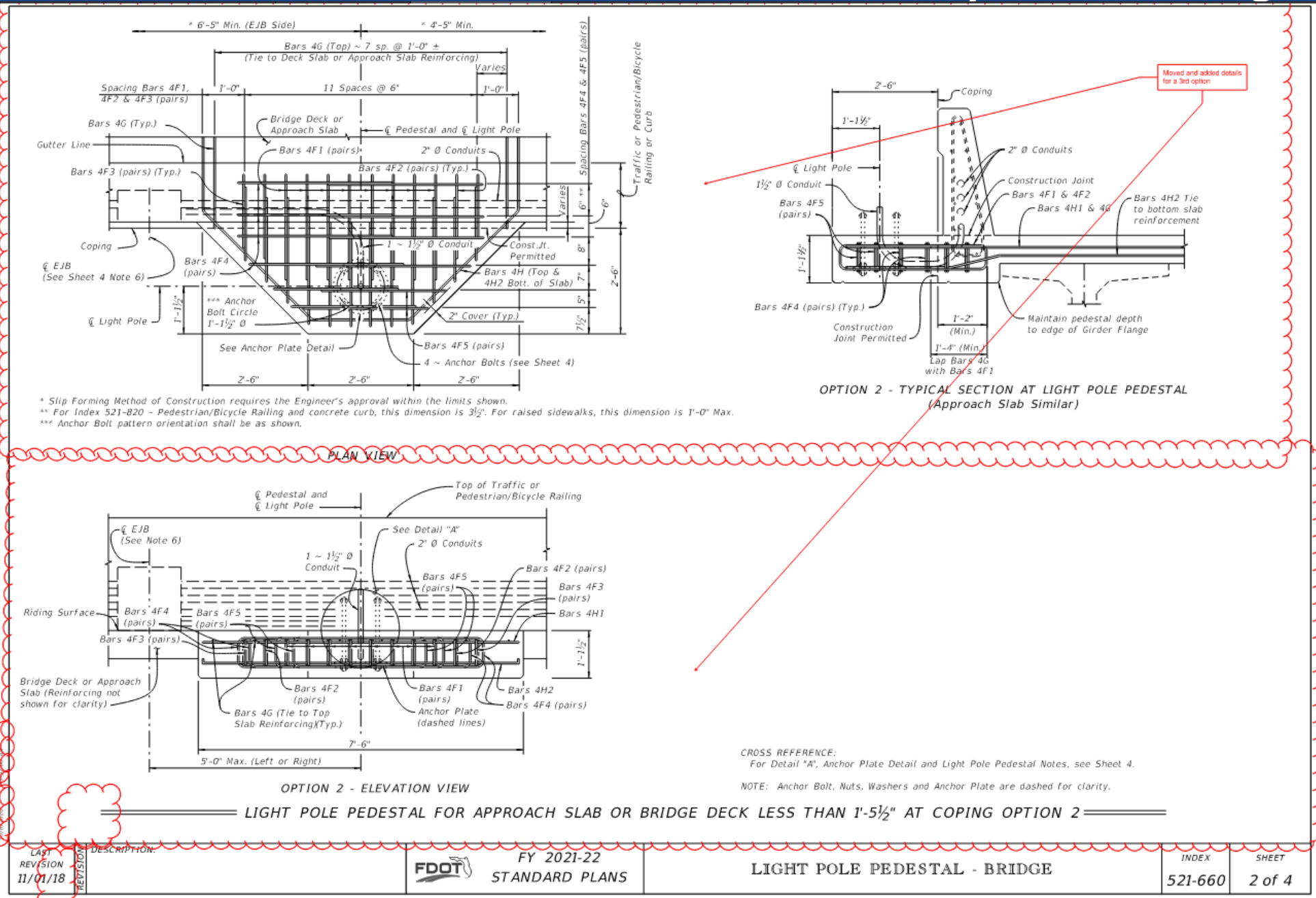
- We added an option to allow for slipforming past the pedestal.
- In doing so we reorganized the details and had to update the bill of reinforcing and labels



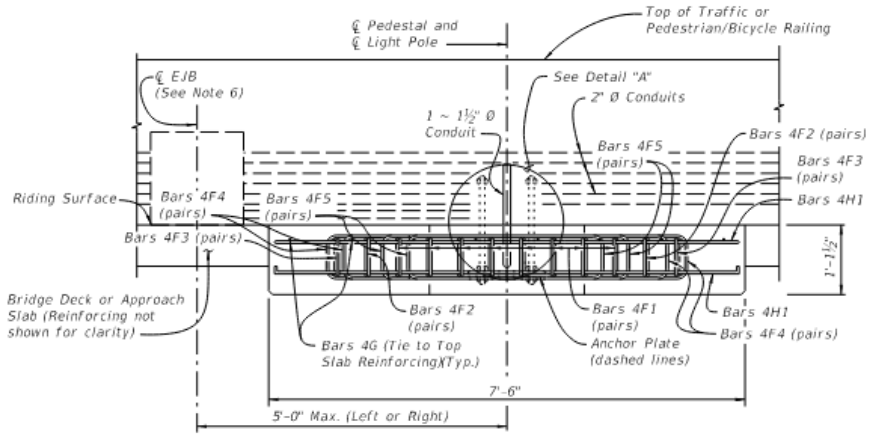
- Final Sheet 1



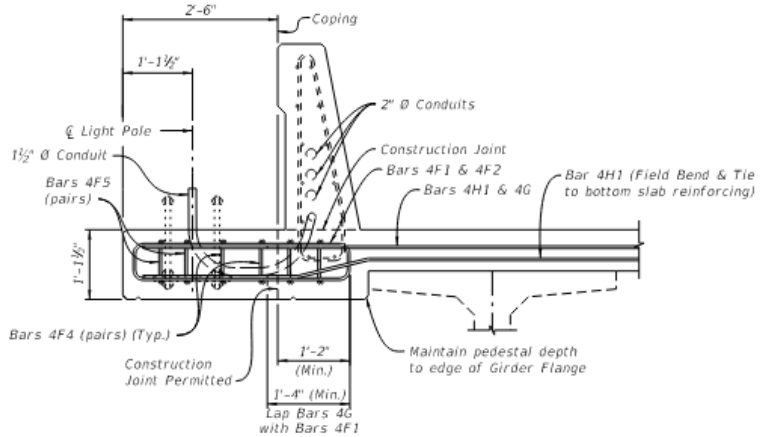
- Moved the details around to re-organize



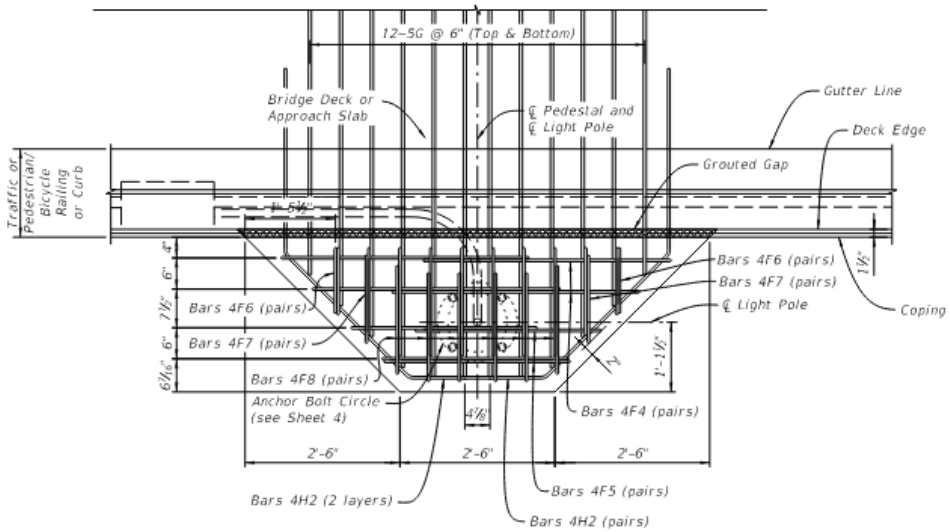
- Final Sheet
- Moved the details around to re-organize



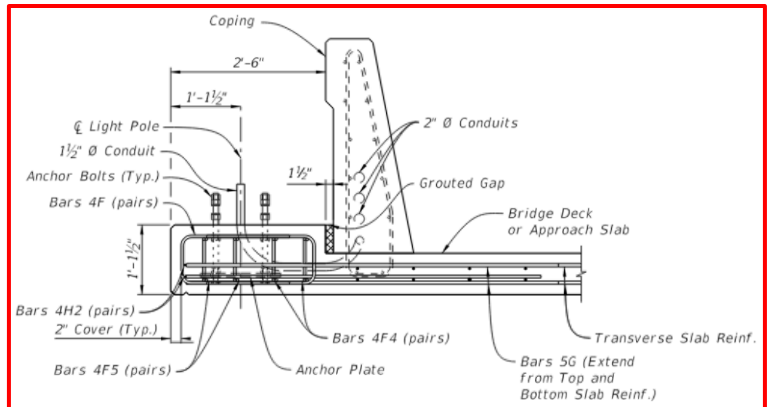
OPTION 2 - ELEVATION VIEW



OPTION 2 - TYPICAL SECTION AT LIGHT POLE PEDESTAL
(Approach Slab Similar)



OPTION 3 - PLAN VIEW
WITH GAP BETWEEN BARRIER AND PEDESTAL TO ALLOW SLIP FORMING



OPTION 3 - TYPICAL SECTION AT LIGHT POLE PEDESTAL
WITH GAP BETWEEN BARRIER AND PEDESTAL TO ALLOW SLIP FORMING

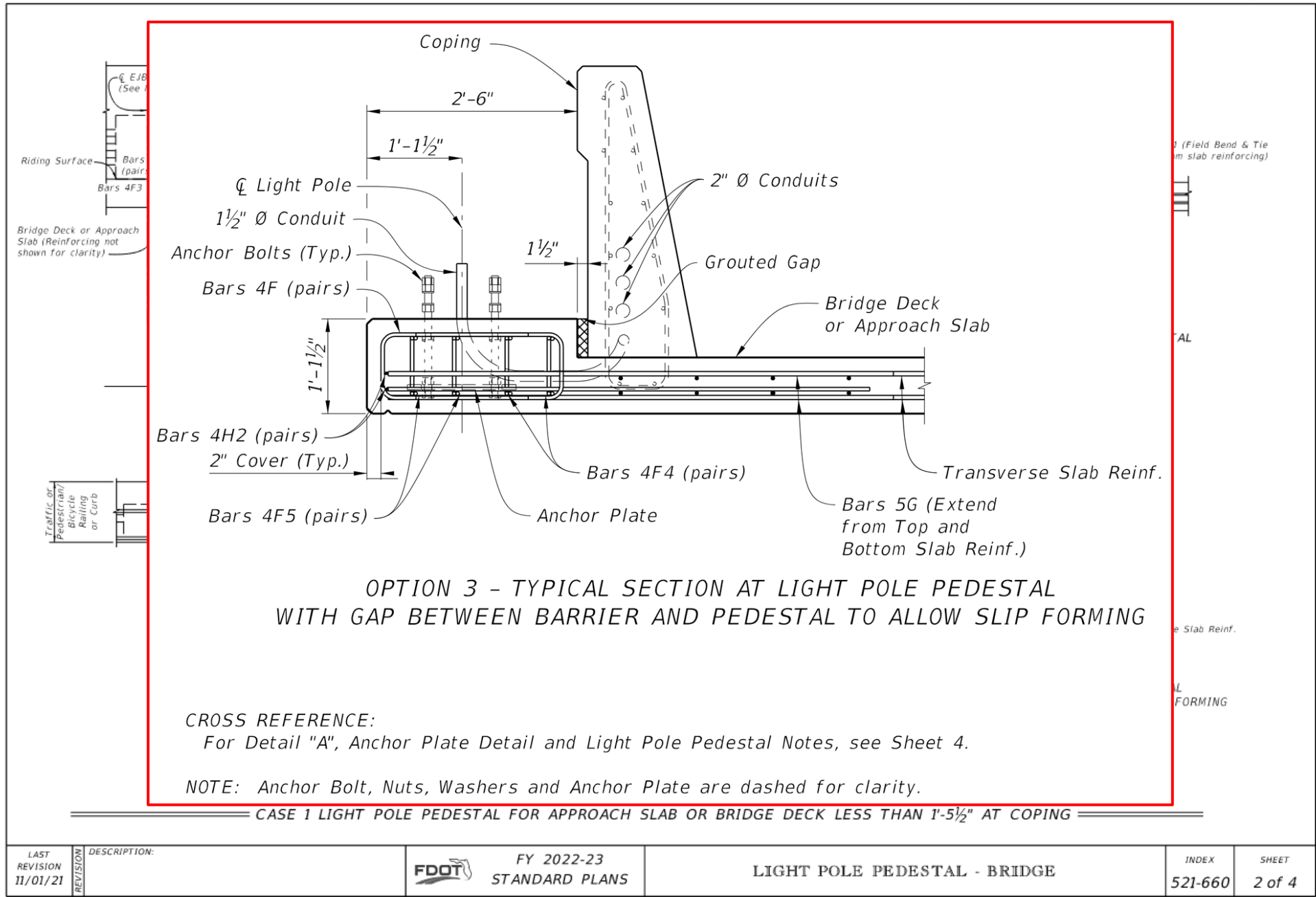
CROSS REFERENCE:
For Detail "A", Anchor Plate Detail and Light Pole Pedestal Notes, see Sheet 4.

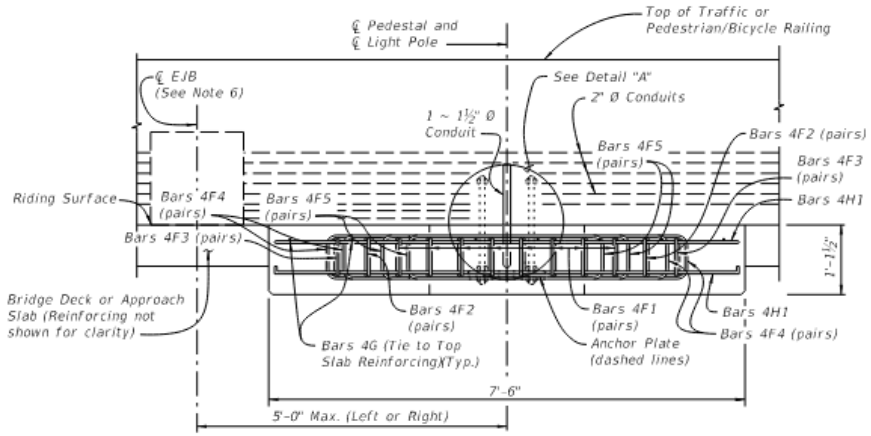
NOTE: Anchor Bolt, Nuts, Washers and Anchor Plate are dashed for clarity.

CASE 1 LIGHT POLE PEDESTAL FOR APPROACH SLAB OR BRIDGE DECK LESS THAN 1'-5½" AT COPING

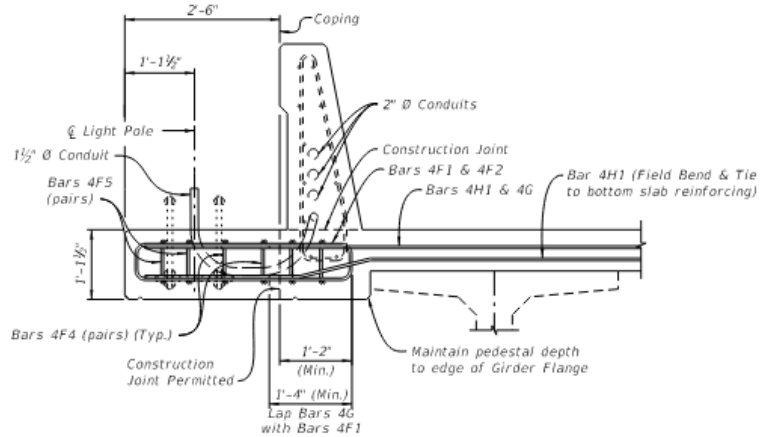
LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	LIGHT POLE PEDESTAL - BRIDGE	INDEX 521-660	SHEET 2 of 4

- New detail provides 1 ½” gap. The slab steel extends into the pedestal.
- The gap is grouted after slip forming

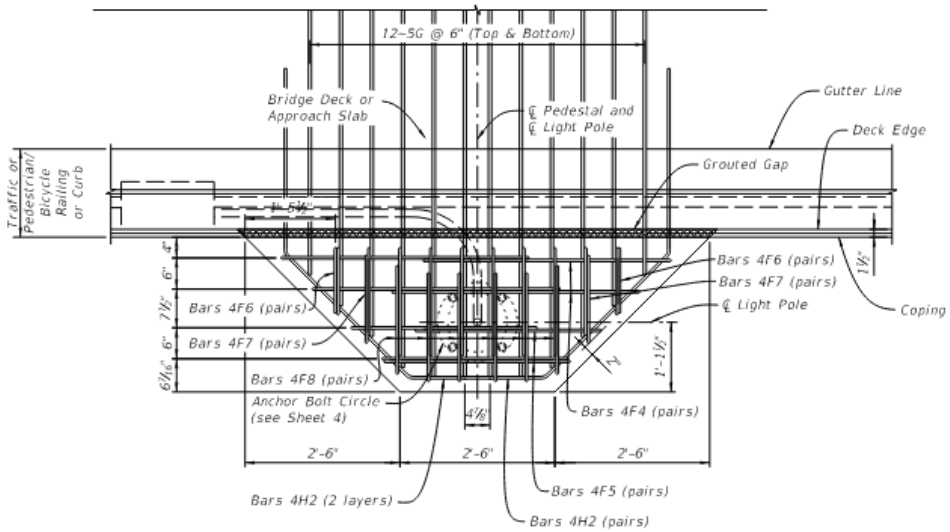




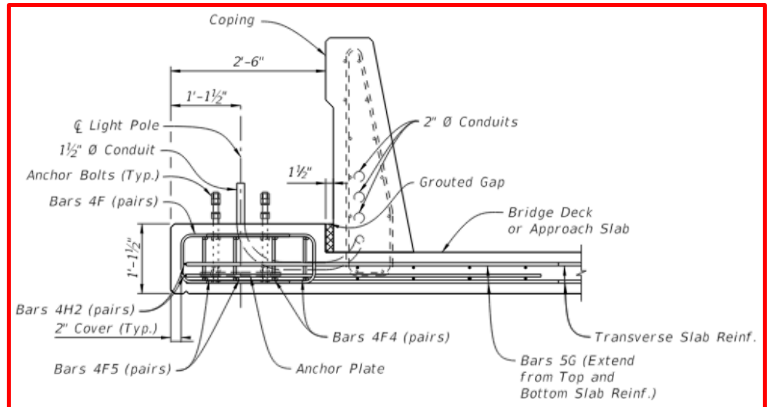
OPTION 2 - ELEVATION VIEW



OPTION 2 - TYPICAL SECTION AT LIGHT POLE PEDESTAL
(Approach Slab Similar)



OPTION 3 - PLAN VIEW
WITH GAP BETWEEN BARRIER AND PEDESTAL TO ALLOW SLIP FORMING



OPTION 3 - TYPICAL SECTION AT LIGHT POLE PEDESTAL
WITH GAP BETWEEN BARRIER AND PEDESTAL TO ALLOW SLIP FORMING

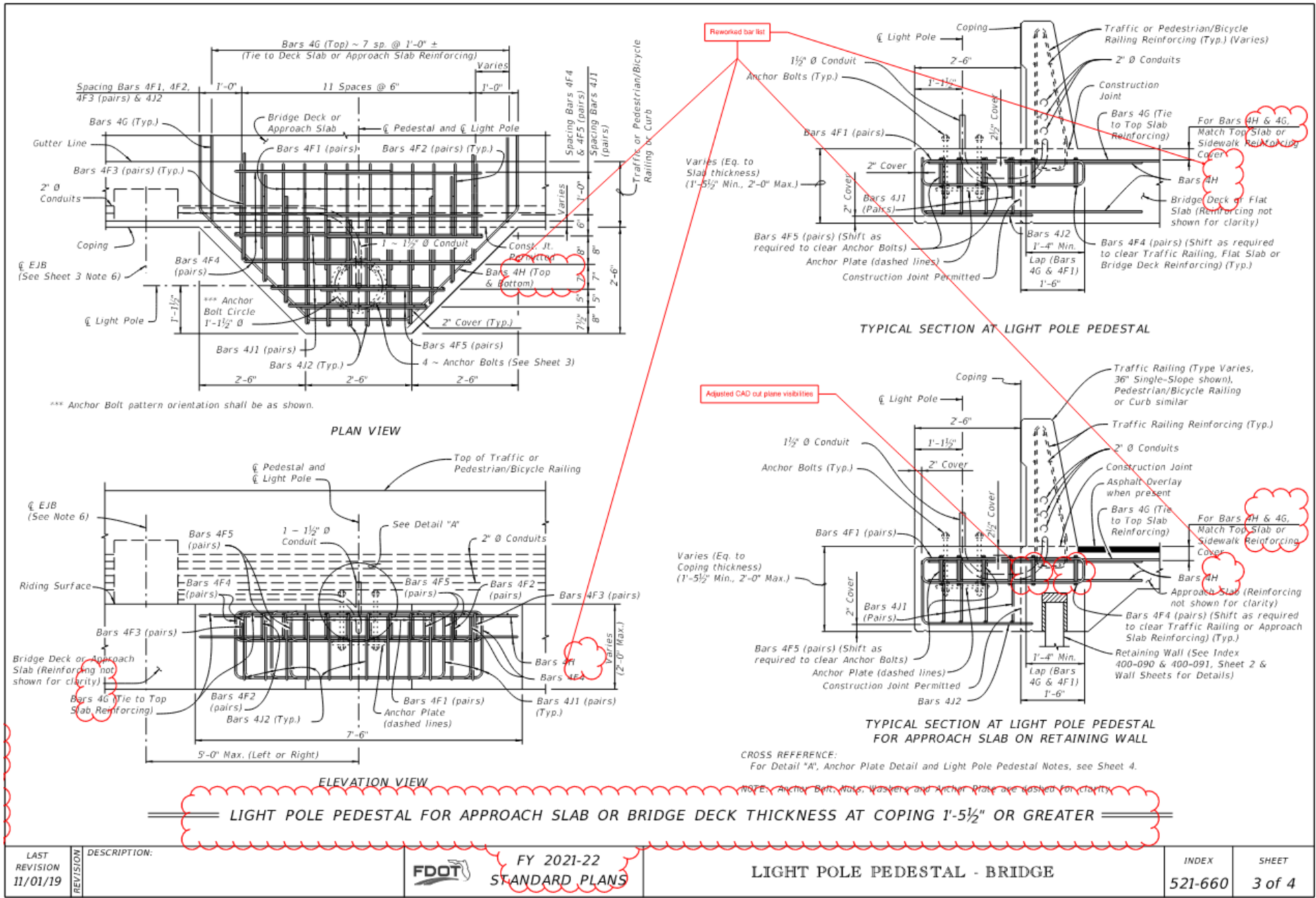
CROSS REFERENCE:
For Detail "A", Anchor Plate Detail and Light Pole Pedestal Notes, see Sheet 4.

NOTE: Anchor Bolt, Nuts, Washers and Anchor Plate are dashed for clarity.

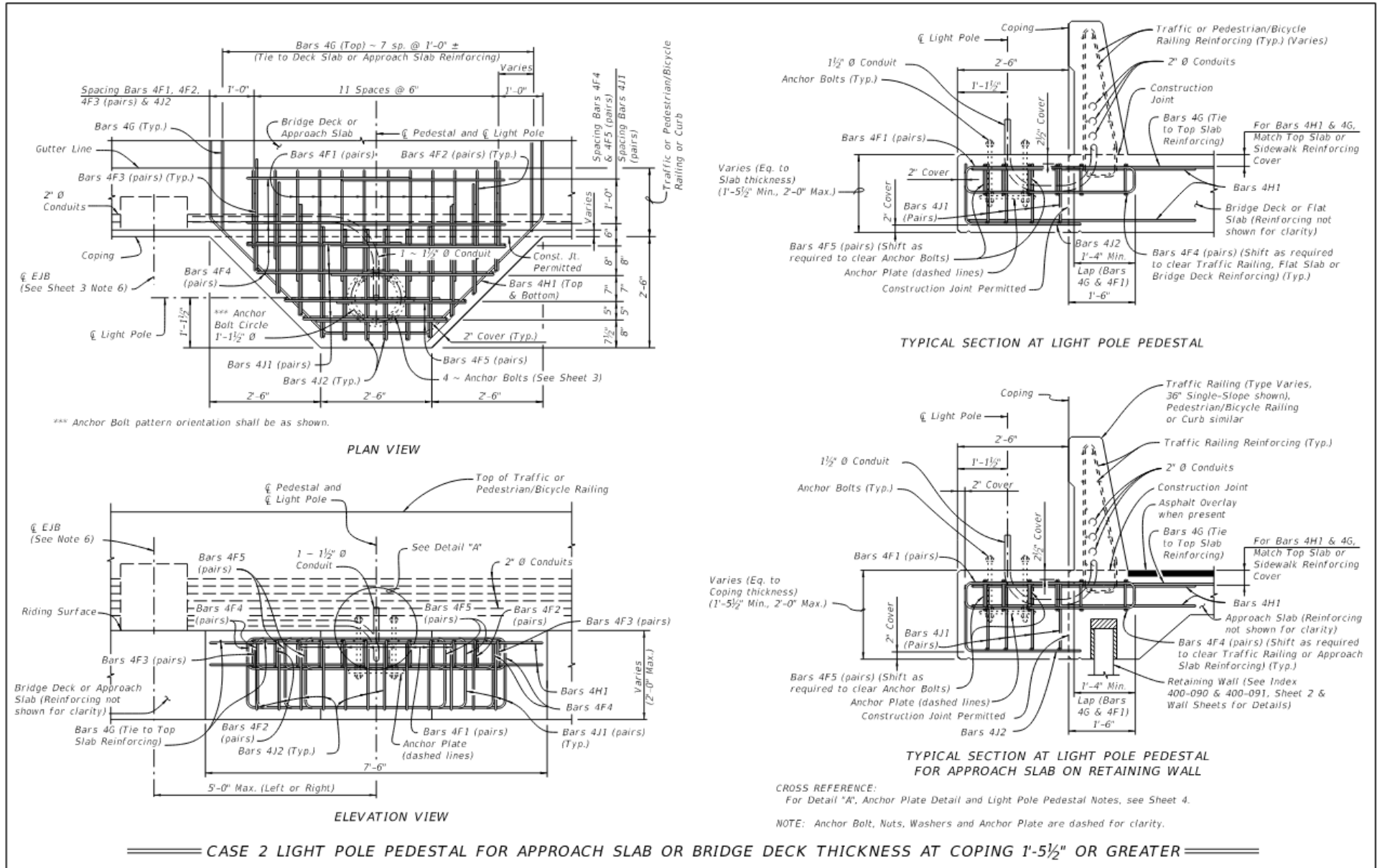
CASE 1 LIGHT POLE PEDESTAL FOR APPROACH SLAB OR BRIDGE DECK LESS THAN 1'-5½" AT COPING

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	LIGHT POLE PEDESTAL - BRIDGE	INDEX 521-660	SHEET 2 of 4

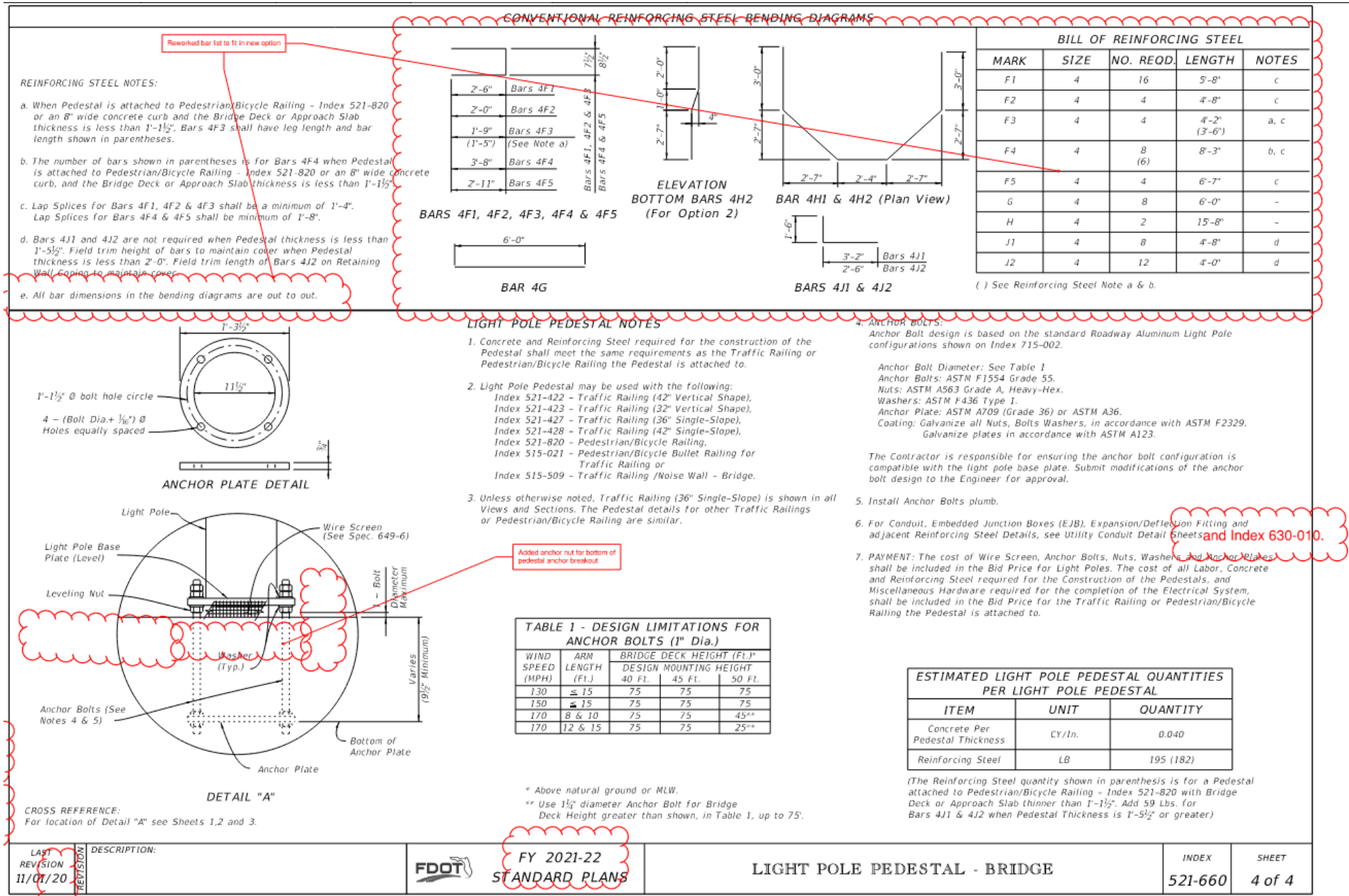
- Relabeled some of the bars due to reorganization



- Final sheet


Bars 4G (Top) ~ 7 sp. @ 1'-0" ± (Tie to Deck Slab or Approach Slab Reinforcing)
Spacing Bars 4F1, 4F2, 4F3 (pairs) & 4J2
11 Spaces @ 6"
Bridge Deck or Approach Slab
℄ Pedestal and ℄ Light Pole
Bars 4F1 (pairs)
Bars 4F2 (pairs) (Typ.)
Bars 4G (Typ.)
Gutter Line
Bars 4F3 (pairs) (Typ.)
2" Ø Conduits
Coping
℄ EJB (See Sheet 3 Note 6)
Bars 4F4 (pairs)
℄ Light Pole
*** Anchor Bolt Circle 1'-1½" Ø
1 ~ 1½" Ø Conduit
Const. Jt. Permitted
Bars 4H1 (Top & Bottom)
2" Cover (Typ.)
Bars 4J1 (pairs)
Bars 4J2 (Typ.)
Bars 4F5 (pairs)
4 ~ Anchor Bolts (See Sheet 3)
Spacing Bars 4F4 & 4F5 (pairs)
Spacing Bars 4J1 (pairs)
Traffic or Pedestrian/Bicycle Railing or Curb
*** Anchor Bolt pattern orientation shall be as shown.
PLAN VIEW
℄ Pedestal and ℄ Light Pole
Top of Traffic or Pedestrian/Bicycle Railing
℄ EJB (See Note 6)
Bars 4F5 (pairs)
1 ~ 1½" Ø Conduit
See Detail "A"
2" Ø Conduits
Riding Surface
Bars 4F4 (pairs)
Bars 4F5 (pairs)
Bars 4F2 (pairs)
Bars 4F3 (pairs)
Bridge Deck or Approach Slab (Reinforcing not shown for clarity)
Bars 4H1
Bars 4F4
Bars 4G (Tie to Top Slab Reinforcing)
Bars 4F2 (pairs)
Bars 4J2 (Typ.)
Bars 4F1 (pairs)
Anchor Plate (dashed lines)
Bars 4J1 (pairs) (Typ.)
7'-6"
5'-0" Max. (Left or Right)
ELEVATION VIEW
℄ Light Pole
Coping
Traffic or Pedestrian/Bicycle Railing Reinforcing (Typ.) (Varies)
1½" Ø Conduit
Anchor Bolts (Typ.)
2'-6"
1'-1½"
2" Ø Conduits
Construction Joint
Bars 4G (Tie to Top Slab Reinforcing)
For Bars 4H1 & 4G, Match Top Slab or Sidewalk Reinforcing Cover
Bars 4F1 (pairs)
2½" Cover
Varies (Eq. to Slab thickness) (1'-5½" Min., 2'-0" Max.)
2" Cover
Bars 4H1
Bars 4J1 (Pairs)
Bridge Deck or Flat Slab (Reinforcing not shown for clarity)
Bars 4F5 (pairs) (Shift as required to clear Anchor Bolts)
Bars 4J2
1'-4" Min.
Bars 4F4 (pairs) (Shift as required to clear Traffic Railing, Flat Slab or Bridge Deck Reinforcing) (Typ.)
Anchor Plate (dashed lines)
Lap (Bars 4G & 4F1) 1'-6"
Construction Joint Permitted
TYPICAL SECTION AT LIGHT POLE PEDESTAL
Coping
Traffic Railing (Type Varies, 36" Single-Slope shown), Pedestrian/Bicycle Railing or Curb similar
℄ Light Pole
2'-6"
Traffic Railing Reinforcing (Typ.)
1½" Ø Conduit
1'-1½"
2" Ø Conduits
Anchor Bolts (Typ.)
2" Cover
Construction Joint
Asphalt Overlay when present
Bars 4G (Tie to Top Slab Reinforcing)
For Bars 4H1 & 4G, Match Top Slab or Sidewalk Reinforcing Cover
Bars 4F1 (pairs)
2½" Cover
Varies (Eq. to Coping thickness) (1'-5½" Min., 2'-0" Max.)
Bars 4H1
2" Cover
Bars 4J1 (Pairs)
Approach Slab (Reinforcing not shown for clarity)
Bars 4F4 (pairs) (Shift as required to clear Traffic Railing or Approach Slab Reinforcing) (Typ.)
Bars 4F5 (pairs) (Shift as required to clear Anchor Bolts)
Retaining Wall (See Index 400-090 & 400-091, Sheet 2 & Wall Sheets for Details)
1'-4" Min.
Anchor Plate (dashed lines)
Lap (Bars 4G & 4F1) 1'-6"
Construction Joint Permitted
Bars 4J2
TYPICAL SECTION AT LIGHT POLE PEDESTAL FOR APPROACH SLAB ON RETAINING WALL
CROSS REFERENCE:
For Detail "A", Anchor Plate Detail and Light Pole Pedestal Notes, see Sheet 4.
NOTE: Anchor Bolt, Nuts, Washers and Anchor Plate are dashed for clarity.
CASE 2 LIGHT POLE PEDESTAL FOR APPROACH SLAB OR BRIDGE DECK THICKNESS AT COPING 1'-5½" OR GREATER
LAST REVISION 11/01/21
REVISION
DESCRIPTION:
FDOT
FY 2022-23 STANDARD PLANS
LIGHT POLE PEDESTAL - BRIDGE
INDEX 521-660
SHEET 3 of 4

- Reworked the bill of reinforcing to account for the new option.
- Added a reference for conduit to the appropriate standard
- Added a nut to the anchor bolt for breakout for compressive force in the anchor.



CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

Reworked bar list to fit in new option

REINFORCING STEEL NOTES:

a. When Pedestal is attached to Pedestrian/Bicycle Railing - Index 521-820 or an 8" wide concrete curb and the Bridge Deck or Approach Slab thickness is less than 1'-1½", Bars 4F3 shall have leg length and bar length shown in parentheses.

b. The number of bars shown in parentheses is for Bars 4F4 when Pedestal is attached to Pedestrian/Bicycle Railing - Index 521-820 or an 8" wide concrete curb, and the Bridge Deck or Approach Slab thickness is less than 1'-1½".

c. Lap Splices for Bars 4F1, 4F2 & 4F3 shall be a minimum of 1'-4". Lap Splices for Bars 4F4 & 4F5 shall be minimum of 1'-8".

d. Bars 4J1 and 4J2 are not required when Pedestal thickness is less than 1'-5½". Field trim height of bars to maintain cover when Pedestal thickness is less than 2'-0". Field trim length of Bars 4J2 on Retaining Wall Coping to maintain cover.

e. All bar dimensions in the bending diagrams are out to out.

BARS 4F1, 4F2, 4F3, 4F4 & 4F5

BAR 4G

ELEVATION BOTTOM BARS 4H2 (For Option 2)

BAR 4H1 & 4H2 (Plan View)

BARS 4J1 & 4J2

BILL OF REINFORCING STEEL

MARK	SIZE	NO. REQD.	LENGTH	NOTES
F1	4	16	5'-8"	c
F2	4	4	4'-8"	c
F3	4	4	4'-2" (3'-6")	a, c
F4	4	8 (6)	8'-3"	b, c
F5	4	4	6'-7"	c
G	4	8	6'-0"	-
H	4	2	15'-8"	-
J1	4	8	4'-8"	d
J2	4	12	4'-0"	d

( ) See Reinforcing Steel Note a & b.

ANCHOR PLATE DETAIL

DETAIL "A"

CROSS REFERENCE:
For location of Detail "A" see Sheets 1,2 and 3.

LIGHT POLE PEDESTAL NOTES

1. Concrete and Reinforcing Steel required for the construction of the Pedestal shall meet the same requirements as the Traffic Railing or Pedestrian/Bicycle Railing the Pedestal is attached to.

2. Light Pole Pedestal may be used with the following:
Index 521-422 - Traffic Railing (42" Vertical Shape),
Index 521-423 - Traffic Railing (32" Vertical Shape),
Index 521-427 - Traffic Railing (36" Single-Slope),
Index 521-428 - Traffic Railing (42" Single-Slope),
Index 521-820 - Pedestrian/Bicycle Railing,
Index 515-021 - Pedestrian/Bicycle Bullet Railing for Traffic Railing or
Index 515-509 - Traffic Railing /Noise Wall - Bridge.

3. Unless otherwise noted, Traffic Railing (36" Single-Slope) is shown in all Views and Sections. The Pedestal details for other Traffic Railings or Pedestrian/Bicycle Railing are similar.

4. ANCHOR BOLTS:
Anchor Bolt design is based on the standard Roadway Aluminum Light Pole configurations shown on Index 715-002.

Anchor Bolt Diameter: See Table 1
Anchor Bolts: ASTM F1554 Grade 55.
Nuts: ASTM A563 Grade A, Heavy-Hex.
Washers: ASTM F436 Type 1.
Anchor Plate: ASTM A709 (Grade 36) or ASTM A36.
Coating: Galvanize all Nuts, Bolts Washers, in accordance with ASTM F2329. Galvanize plates in accordance with ASTM A123.

The Contractor is responsible for ensuring the anchor bolt configuration is compatible with the light pole base plate. Submit modifications of the anchor bolt design to the Engineer for approval.

5. Install Anchor Bolts plumb.

6. For Conduit, Embedded Junction Boxes (EJB), Expansion/Deflection Fitting and adjacent Reinforcing Steel Details, see Utility Conduit Detail Sheets and Index 630-010.

7. PAYMENT: The cost of Wire Screen, Anchor Bolts, Nuts, Washers and Anchor Plates shall be included in the Bid Price for Light Poles. The cost of all Labor, Concrete and Reinforcing Steel required for the Construction of the Pedestals, and Miscellaneous Hardware required for the completion of the Electrical System, shall be included in the Bid Price for the Traffic Railing or Pedestrian/Bicycle Railing the Pedestal is attached to.

Added anchor nut for bottom of pedestal anchor breakout

TABLE 1 - DESIGN LIMITATIONS FOR ANCHOR BOLTS (1" Dia.)

WIND SPEED (MPH)	ARM LENGTH (Ft.)	BRIDGE DECK HEIGHT (Ft.)* DESIGN MOUNTING HEIGHT 40 Ft.	45 Ft.	50 Ft.
130	≤ 15	75	75	75
150	≤ 15	75	75	75
170	8 & 10	75	75	45**
170	12 & 15	75	75	25**

* Above natural ground or MLW.
** Use 1¼" diameter Anchor Bolt for Bridge Deck Height greater than shown, in Table 1, up to 75'.

ESTIMATED LIGHT POLE PEDESTAL QUANTITIES PER LIGHT POLE PEDESTAL

ITEM	UNIT	QUANTITY
Concrete Per Pedestal Thickness	CY/In.	0.040
Reinforcing Steel	LB	195 (182)

(The Reinforcing Steel quantity shown in parenthesis is for a Pedestal attached to Pedestrian/Bicycle Railing - Index 521-820 with Bridge Deck or Approach Slab thinner than 1'-1½". Add 59 Lbs. for Bars 4J1 & 4J2 when Pedestal Thickness is 1'-5½" or greater)

LAST REVISION	DESCRIPTION:			INDEX	SHEET
11/01/20		FY 2021-22 STANDARD PLANS	LIGHT POLE PEDESTAL - BRIDGE	521-660	4 of 4

- Final sheet

CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

REINFORCING STEEL NOTES:

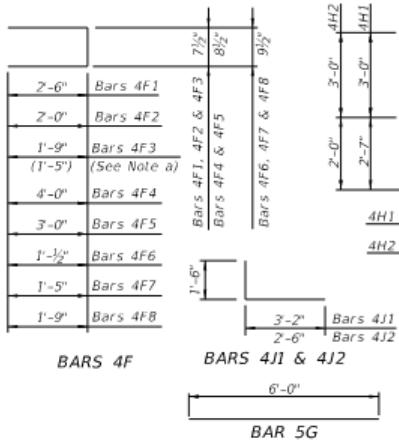
a. When Pedestal is attached to Pedestrian/Bicycle Railing – Index 521-820 or an 8" wide concrete curb and the Bridge Deck or Approach Slab thickness is less than 1'-1½", Bars 4F3 shall have leg length and bar length shown in parentheses.

b. The number of bars shown in parentheses is for Bars 4F4 when Pedestal is attached to Pedestrian/Bicycle Railing – Index 521-820 or an 8" wide concrete curb, and the Bridge Deck or Approach Slab thickness is less than 1'-1½".

c. Lap Splices for Bars 4F1, 4F2 & 4F3 shall be a minimum of 1'-4". Lap Splices for Bars 4F4 & 4F5 shall be minimum of 1'-8".

d. Bars 4J1 and 4J2 are not required when Pedestal thickness is less than 1'-5½". Field trim height of bars to maintain cover when Pedestal thickness is less than 2'-0". Field trim length of Bars 4J2 on Retaining Wall Coping to maintain cover.

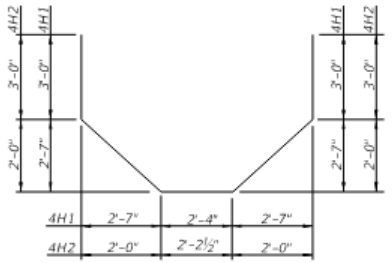
e. All bar dimensions in the bending diagrams are out to out.



BARS 4F

BARS 4J1 & 4J2

BAR 5G

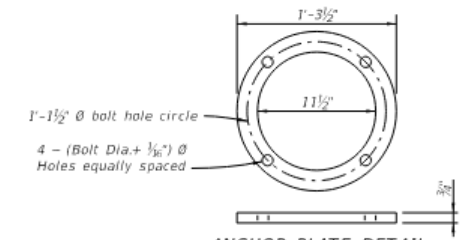


PLAN BARS 4H

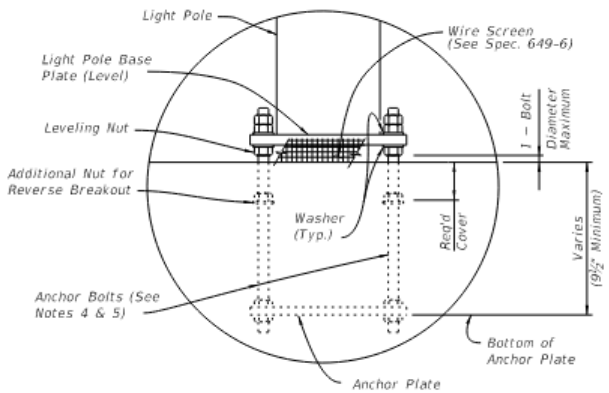
BILL OF REINFORCING STEEL

MARK	SIZE	NO. REQD.	LENGTH	NOTES
F1	4	16	5'-8"	c
F2	4	4	4'-8"	c
F3	4	4	4'-2" (3'-6")	a, c
F4	4	8 (6) [4 for Option 3]	8'-9"	b, c
F5	4	4	6'-9"	c
F6	4	4	2'-11"	–
F7	4	4	3'-8"	–
F8	4	12	4'-4"	–
G	4 [5 for Option 3]	8 [24 for Option 3]	6'-0"	–
H1	4	2	15'-8"	–
H2	4	2	13'-10"	–
J1	4	8	4'-8"	d
J2	4	12	4'-0"	d

( ) See Reinforcing Steel Note a & b.



ANCHOR PLATE DETAIL



DETAIL "A"

CROSS REFERENCE:
For location of Detail "A" see Sheets 1,2 and 3.

LIGHT POLE PEDESTAL NOTES

1. Concrete and Reinforcing Steel required for the construction of the Pedestal shall meet the same requirements as the Traffic Railing or Pedestrian/Bicycle Railing the Pedestal is attached to.

2. Light Pole Pedestal may be used with the following:
   Index 521-422 – Traffic Railing (42" Vertical Shape),
   Index 521-423 – Traffic Railing (32" Vertical Shape),
   Index 521-427 – Traffic Railing (36" Single-Slope),
   Index 521-428 – Traffic Railing (42" Single-Slope),
   Index 521-820 – Pedestrian/Bicycle Railing,
   Index 515-021 – Pedestrian/Bicycle Bullet Railing for Traffic Railing or
   Index 515-509 – Traffic Railing /Noise Wall – Bridge.

3. Unless otherwise noted, Traffic Railing (36" Single-Slope) is shown in all Views and Sections. The Pedestal details for other Traffic Railings or Pedestrian/Bicycle Railing are similar.

4. ANCHOR BOLTS:
   Anchor Bolt design is based on the standard Roadway Aluminum Light Pole configurations shown on Index 715-002.

   Anchor Bolt Diameter: See Table 1
   Anchor Bolts: ASTM F1554 Grade 55.
   Nuts: ASTM A563 Grade A, Heavy-Hex.
   Washers: ASTM F436 Type 1.
   Anchor Plate: ASTM A709 (Grade 36) or ASTM A36.
   Coating: Galvanize all Nuts, Bolts Washers, in accordance with ASTM F2329. Galvanize plates in accordance with ASTM A123.

   The Contractor is responsible for ensuring the anchor bolt configuration is compatible with the light pole base plate. Submit modifications of the anchor bolt design to the Engineer for approval.

5. Install Anchor Bolts plumb.

6. For Conduit, Embedded Junction Boxes (EJB), Expansion/Deflection Fitting and adjacent Reinforcing Steel Details, see Utility Conduit Detail Sheets and Index 630-010.

7. PAYMENT: The cost of Wire Screen, Anchor Bolts, Nuts, Washers and Anchor Plates shall be included in the Bid Price for Light Poles. The cost of all Labor, Concrete and Reinforcing Steel required for the Construction of the Pedestals, and Miscellaneous Hardware required for the completion of the Electrical System, shall be included in the Bid Price for the Traffic Railing or Pedestrian/Bicycle Railing the Pedestal is attached to.

TABLE 1 - DESIGN LIMITATIONS FOR ANCHOR BOLTS (1" Dia.)

WIND SPEED (MPH)	ARM LENGTH (Ft.)	BRIDGE DECK HEIGHT (Ft.)* DESIGN MOUNTING HEIGHT 40 Ft.	45 Ft.	50 Ft.
130	≤ 15	75	75	75
150	≤ 15	75	75	75
170	8 & 10	75	75	45**
170	12 & 15	75	75	25**

* Above natural ground or MLW.
** Use 1¼" diameter Anchor Bolt for Bridge Deck Height greater than shown, in Table 1, up to 75'.

ESTIMATED LIGHT POLE PEDESTAL QUANTITIES PER LIGHT POLE PEDESTAL

ITEM	UNIT	QUANTITY
Concrete Per Pedestal Thickness	CY/In.	0.040
Reinforcing Steel	LB	195 (182)

(The Reinforcing Steel quantity shown in parenthesis is for a Pedestal attached to Pedestrian/Bicycle Railing – Index 521-820 with Bridge Deck or Approach Slab thinner than 1'-1½". Add 59 Lbs. for Bars 4J1 & 4J2 when Pedestal Thickness is 1'-5½" or greater)

LAST REVISION	DESCRIPTION:	FDOT		INDEX	SHEET
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Standards

- 450-199 Prestressed I-Beams Build-Up & Deflection Data
- 515-052 Pedestrian/Bicycle Railing (Steel)
- 515-062 Pedestrian/Bicycle Railing (Aluminum)
- 521-660 Light Pole Pedestal - Bridge
- 548-020 MSE Retaining Wall Systems - Permanent
- 649-031
- 700-091

- Removed the 2E alternative wall option as an alternative to the 2D wall because it was felt the option may not be able to accommodate the more aggressive environment condition 2D was designated for.

NOTES

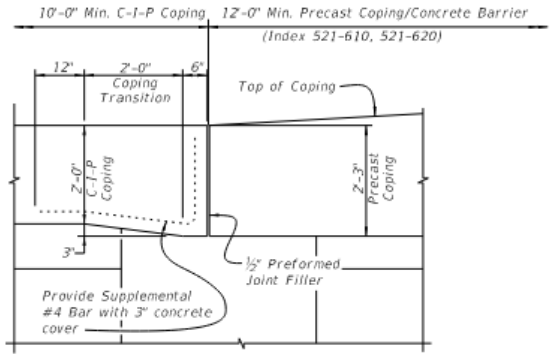
DESIGN CRITERIA:
1. Design is based on the assumption that the material contained within the reinforced soil volume, methods of construction and quality of prefabricated materials are in accordance with Specification Section 548 and Chapter 3 of the FDOT Structures Design Guidelines.

SOIL PARAMETERS:
1. See Wall Control Drawings for soil characteristics of foundation material to be used in the design of the wall system.
2. The Contractor will provide soil design parameters for backfill material based on the actual soil characteristics utilized at the site.

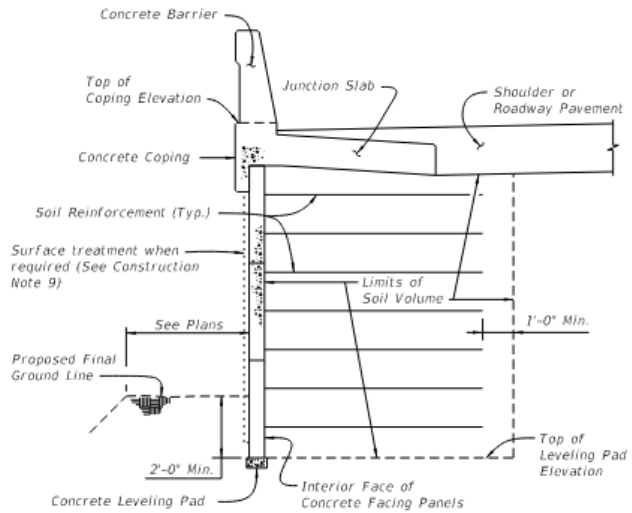
MATERIALS:
1. See Specification Section 548 for material requirements.

CONSTRUCTION:
1. Walls will be constructed in accordance with Specification Section 548 and the Wall Company's instructions.
2. For location and alignment of retaining walls, see Wall Control Drawings.
3. If required, locate manholes and drop inlets as shown on wall elevations.
4. Refer to Wall Control Drawings of individual walls for minimum reinforcement strip/mesh length, factored bearing resistance's, minimum wall embedment and anticipated long term and differential settlements.
5. The Contractor is responsible for controlling water during storm events as needed during construction.
6. It is the Contractor's responsibility to determine the location of any guardrail posts behind retaining wall panels. Prior to placement of the top layer of soil reinforcement, individual reinforcing strips/mesh may be skewed (15° maximum) to avoid the post locations if authorized by the Engineer. No cutting of soil reinforcement is allowed unless shown on Shop Drawings and approved by the Engineer. Any damage done to the soil reinforcement due to installation of the guardrail will be repaired by the Contractor at the Contractor's expense. Repair method will be approved by the Engineer.
7. If existing or future structures, pipes, foundations or guardrail posts within the reinforced soil volume interfere with the normal placement of soil reinforcement and specific directions have not been provided on the plans, the Contractor will notify the Engineer to determine what course of action shall be taken.
8. The Contractor is responsible for gradually displacing upper layer(s) of soil reinforcement downward (15° maximum from horizontal) to avoid cutting soil reinforcement and conflicts with paving and subgrade preparation. The Contractor's attention is directed especially to situations where roadway superelevation and/or soil mixing are anticipated.
9. For concrete facing panel surface treatment, see Wall Control Drawings. Extend surface treatment a minimum of 6" below final ground line.
10. Drive piles located within the soil volume prior to construction of the retaining wall, unless a method to protect the structure, acceptable to both the Engineer and Wall Company, is proposed and approved in writing. The portion of piles or drilled shafts extensions within the soil volume will be wrapped with polyethylene sheeting in accordance with Specification Section 459.
11. A structural extension of the connection of the retaining wall panel to soil reinforcement will be used whenever necessary to avoid cutting or excessive skewing (greater than 15°) of the soil reinforcement around obstructions (i.e., piles, pipes, manholes, drop inlets, etc.).
12. Steps in leveling pads will occur at MSE Wall panel interfaces. Panels will not cantilever more than 2" past the end of the upper tier leveling pad.
13. The top of the leveling pad or footing will be 2'-0" minimum below final ground line.
14. Top of leveling pad elevations shown in the Wall Control Drawings are maximum elevations. The constructed leveling pad elevations may be deeper based on the panel layout shown in the shop drawings.
15. The height of panels in the bottom course of MSE Walls must not be less than half the height of a standard panel.
16. Work this Index with Index 521-600 thru 521-650.

SHOP DRAWINGS:
See Specification Section 548 for shop drawing requirements.



ELEVATION VIEW OF COPING HEIGHT TRANSITION



TYPICAL MSE RETAINING WALL SECTION WITH A CONCRETE BARRIER (Showing Limits of the Reinforced Soil Volume)

FDOT MSE RETAINING WALL CLASSIFICATION TABLE

Applicable FDOT Wall Type *	Durability Requirements (Carbon-Steel Reinforcing)			Durability Requirements (FRP Reinforcing)			Soil Reinforcement Type	Other Allowable FDOT Wall Types					
	Concrete Cover (in.)	Concrete Class for Panels	Pozzolan Additions? **	Concrete Cover (in.)	Concrete Class for Panels	Pozzolan Additions? **		2A	2B	2C	2D	2E	2F
Type 2A	2	II	No	1.5	II	No	Metal		✓	✓	✓	✓	✓
Type 2B	2	IV	No	1.5	IV	No	Metal			✓	✓	✓	✓
Type 2C	3	IV	No	1.5	IV	No	Metal				✓	✓	✓
Type 2D	3	IV	Yes	2	IV	No	Metal					✓	✓
Type 2E	3	IV	No	2	IV	No	Plastic						✓
Type 2F	3	IV	Yes	2	IV	No	Plastic						

* See Data Table in Contract Plans.

** Highly Reactive Pozzolans.

Remove checkmark

GENERAL NOTES AND DETAILS

LAST REVISION 11/01/20	REVISION DESCRIPTION:	FDOT FY 2021-22 STANDARD PLANS	MSE RETAINING WALL SYSTEMS - PERMANENT	INDEX 548-020	SHEET 1 of 1

- Final sheet

NOTES

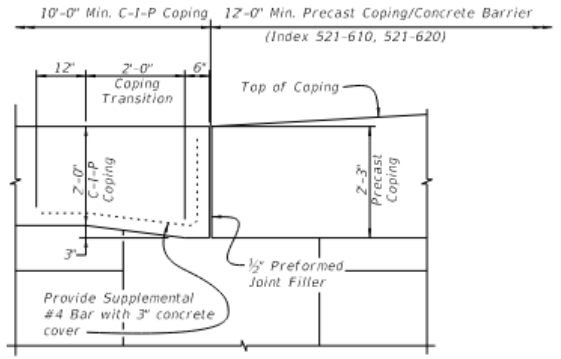
DESIGN CRITERIA:
1. Design is based on the assumption that the material contained within the reinforced soil volume, methods of construction and quality of prefabricated materials are in accordance with Specification Section 548 and Chapter 3 of the FDOT Structures Design Guidelines.

SOIL PARAMETERS:
1. See Wall Control Drawings for soil characteristics of foundation material to be used in the design of the wall system.
2. The Contractor will provide soil design parameters for backfill material based on the actual soil characteristics utilized at the site.

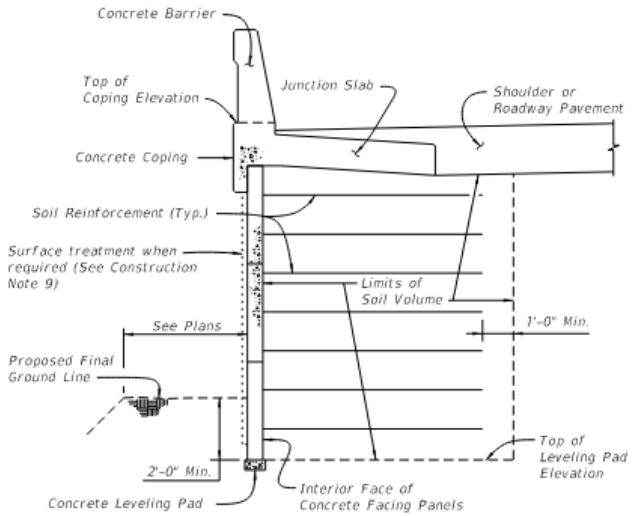
MATERIALS:
1. See Specification Section 548 for material requirements.

CONSTRUCTION:
1. Walls will be constructed in accordance with Specification Section 548 and the Wall Company's instructions.
2. For location and alignment of retaining walls, see Wall Control Drawings.
3. If required, locate manholes and drop inlets as shown on wall elevations.
4. Refer to Wall Control Drawings of individual walls for minimum reinforcement strip/mesh length, factored bearing resistance's, minimum wall embedment and anticipated long term and differential settlements.
5. The Contractor is responsible for controlling water during storm events as needed during construction.
6. It is the Contractor's responsibility to determine the location of any guardrail posts behind retaining wall panels. Prior to placement of the top layer of soil reinforcement, individual reinforcing strips/mesh may be skewed (15° maximum) to avoid the post locations if authorized by the Engineer. No cutting of soil reinforcement is allowed unless shown on Shop Drawings and approved by the Engineer. Any damage done to the soil reinforcement due to installation of the guardrail will be repaired by the Contractor at the Contractor's expense. Repair method will be approved by the Engineer.
7. If existing or future structures, pipes, foundations or guardrail posts within the reinforced soil volume interfere with the normal placement of soil reinforcement and specific directions have not been provided on the plans, the Contractor will notify the Engineer to determine what course of action shall be taken.
8. The Contractor is responsible for gradually displacing upper layer(s) of soil reinforcement downward (15° maximum from horizontal) to avoid cutting soil reinforcement and conflicts with paving and subgrade preparation. The Contractor's attention is directed especially to situations where roadway superelevation and/or soil mixing are anticipated.
9. For concrete facing panel surface treatment, see Wall Control Drawings. Extend surface treatment a minimum of 6" below final ground line.
10. Drive piles located within the soil volume prior to construction of the retaining wall, unless a method to protect the structure, acceptable to both the Engineer and Wall Company, is proposed and approved in writing. The portion of piles or drilled shafts extensions within the soil volume will be wrapped with polyethylene sheeting in accordance with Specification Section 459.
11. A structural extension of the connection of the retaining wall panel to soil reinforcement will be used whenever necessary to avoid cutting or excessive skewing (greater than 15°) of the soil reinforcement around obstructions (i.e., piles, pipes, manholes, drop inlets, etc.).
12. Steps in leveling pads will occur at MSE Wall panel interfaces. Panels will not cantilever more than 2" past the end of the upper tier leveling pad.
13. The top of the leveling pad or footing will be 2'-0" minimum below final ground line.
14. Top of leveling pad elevations shown in the Wall Control Drawings are maximum elevations. The constructed leveling pad elevations may be deeper based on the panel layout shown in the shop drawings.
15. The height of panels in the bottom course of MSE Walls must not be less than half the height of a standard panel.
16. Work this Index with Index 521-600 thru 521-650.

SHOP DRAWINGS:
See Specification Section 548 for shop drawing requirements.



ELEVATION VIEW OF
COPING HEIGHT TRANSITION



TYPICAL MSE RETAINING WALL SECTION
WITH A CONCRETE BARRIER
(Showing Limits of the Reinforced Soil Volume)

FDOT MSE RETAINING WALL CLASSIFICATION TABLE

Applicable FDOT Wall Type *	Durability Requirements (Carbon-Steel Reinforcing)			Durability Requirements (FRP Reinforcing)			Soil Reinforcement Type	Other Allowable FDOT Wall Types					
	Concrete Cover (in.)	Concrete Class for Panels	Pozzolan Additions? **	Concrete Cover (in.)	Concrete Class for Panels	Pozzolan Additions? **		2A	2B	2C	2D	2E	2F
Type 2A	2	II	No	1.5	II	No	Metal		✔	✔	✔	✔	✔
Type 2B	2	IV	No	1.5	IV	No	Metal			✔	✔	✔	✔
Type 2C	3	IV	No	1.5	IV	No	Metal				✔	✔	✔
Type 2D	3	IV	Yes	2	IV	No	Metal						✔
Type 2E	3	IV	No	2	IV	No	Plastic						✔
Type 2F	3	IV	Yes	2	IV	No	Plastic						

* See Data Table in Contract Plans.

** Highly Reactive Pozzolans.

GENERAL NOTES AND DETAILS

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	MSE RETAINING WALL SYSTEMS - PERMANENT	INDEX 548-020	SHEET 1 of 1

Standards

- 450-199 Prestressed I-Beams Build-Up & Deflection Data
- 515-052 Pedestrian/Bicycle Railing (Steel)
- 515-062 Pedestrian/Bicycle Railing (Aluminum)
- 521-660 Light Pole Pedestal - Bridge
- 548-020 MSE Retaining Wall Systems - Permanent
- 649-031 Mast Arm Assemblies
- 700-091

- Made modifications to this Standard based on requests from fabricators. Which repeatedly get addressed and approved in shops.
- In the first sheet we added some language about pole cap and nut cover materials.

GENERAL NOTES:

1. Shop Drawings: This Index is considered fully detailed, only submit shop drawings for minor modifications not detailed in the Plans.

2. Prior to Fabrication: Verify the installed foundation elevation will result in the required signal elevation and adjust the Pole height as needed.

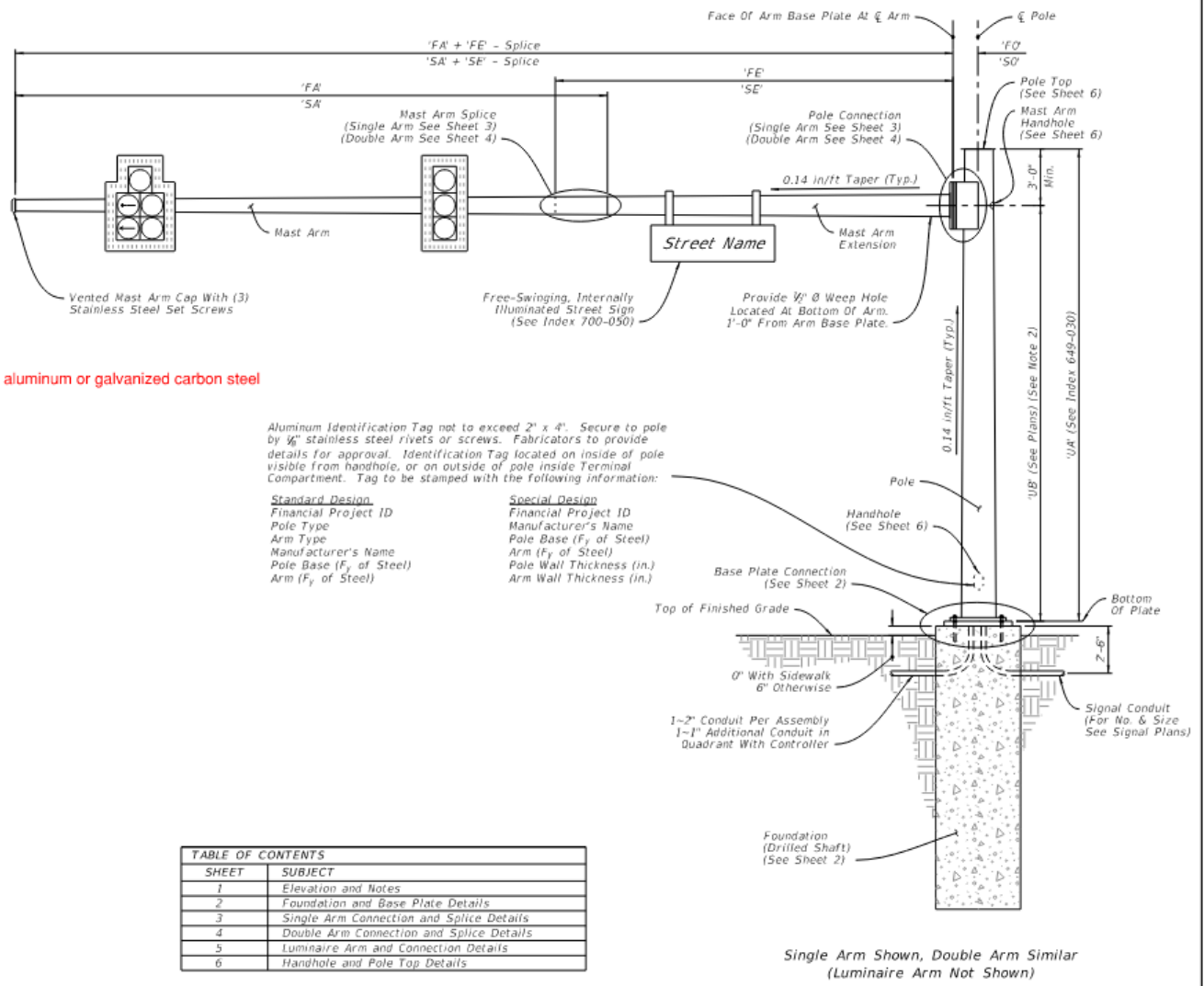
3. Details for Signal and Sign locations, Signal Head attachment, Sign attachment, Pedestrian Head attachment, and Foundation Conduit are not shown for simplicity.

4. Materials:
   - A. Poles, Mast Arms and Backing Rings:
     - a. Less than 3/16": ASTM A1011 Grade 50, 55, 60 or 65
     - b. Greater than or equal to 3/16": ASTM A572 Grade 50, 55, 60 or 65
     - c. ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield)
   - B. Steel Plates: ASTM A36
   - C. Weld Metal: E70XX
   - D. Bolts, Nuts and Washers:
     - a. High Strength Hex Head Bolts: ASTM F3125, Grade A325, Type 1
     - b. Nuts: ASTM A563 DH Heavy-Hex
     - c. Washers: ASTM F436 Type 1, one under turned element
   - E. Anchor Bolts, Nuts and Washers:
     - a. Anchor Bolts: ASTM F1554 Grade 55
     - b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per anchor bolt)
     - c. Plate Washers: ASTM A36 (2 per bolt)
   - F. Threaded Bars/Studs: ASTM A36 or ASTM A307
   - G. Handhole Frame: ASTM A709 or ASTM A36, Grade 36
   - H. Handhole Cover: ASTM A1011 Grade 50, 55, 60 or 65
   - I. Aluminum Pole Caps and Nut Covers: ~~ASTM B26 (319-F)~~ Fabricate from cast aluminum or galvanized carbon steel
   - J. Stainless Steel Screws: AISI Type 316
   - K. Concrete: Class IV (Drilled Shaft) for all environmental classifications.
   - L. Reinforcing Steel: Specification 415

5. Fabrication:
   - A. Welding:
     - a. Specification 460-6.4 and
     - b. AASHTO LRFD Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Section 14.4.4
   - B. Poles and Mast Arms:
     - a. Round or 12-sided (Min.)
     - b. Taper pole diameter at 0.14 inches per foot
     - c. Upright poles must be a single section. For arms and upright poles, circumferential welds and laminated sections are not permitted.
     - d. Arms may be either one or two sections. See Sheet 4 for telescopic splice detail
     - e. Fabricate longitudinal seam welds with 60 percent minimum penetration or fusion welds except:
       1. Use a full-penetration groove weld within 6 inches of the circumferential tube-to-plate connection.
       2. Use full-penetration groove welds on the female end section of telescopic (i.e., slip type) field splices for a minimum length of one and one-half times the inside diameter of the female section plus 6 inches.
     - f. Locate longitudinal seams weld along the:
       1. Lower quadrant of the arms.
       2. Same side of the pole as the arm connections
     - g. Face handhole perpendicular from arm on single arm poles, perpendicular from the first arm of double arms poles facing away from traffic or see special instructions on the Mast Arm Tabulation Sheet.
     - h. Provide a 'J' or 'C' hook at the top of the pole for signal wiring support (See Sheet 6)
     - i. First and Second arm camber angle = 2°
     - j. Bolt holes diameters as follows:
       1. Bolts (except Anchor bolts): Bolt diameter plus 1/16" prior to galvanizing.
       2. Anchor Bolts: Bolt diameter plus 1/2" (Max.).

6. Coatings:
   - A. All Nuts, Bolts, Washers and Threaded Bars/Studs: ASTM F2329
   - B. All other steel items including plate washers ASTM A123

7. Construction:
   - A. Foundation: Specification 455 Drilled Shaft, except that payment is included in the cost of the Mast Arm.
   - B. Install Pole vertically.
   - C. Place structural grout pad with drain between top of foundation and bottom of baseplate in accordance with Specification 649-7.
   - D. Attach Sign Panels and Signals centered on the elevation of the Mast Arm.
   - E. Wire Access holes are 1 1/2" or less in diameter.



Aluminum Identification Tag not to exceed 2" x 4". Secure to pole by 1/8" stainless steel rivets or screws. Fabricators to provide details for approval. Identification Tag located on inside of pole visible from handhole, or on outside of pole inside Terminal Compartment. Tag to be stamped with the following information:

Standard Design	Special Design
Financial Project ID	Financial Project ID
Pole Type	Manufacturer's Name
Arm Type	Pole Base (F_y of Steel)
Manufacturer's Name	Arm (F_y of Steel)
Pole Base (F_y of Steel)	Pole Wall Thickness (in.)
Arm (F_y of Steel)	Arm Wall Thickness (in.)

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Single Arm Shown, Double Arm Similar (Luminaire Arm Not Shown)

MAST ARM ASSEMBLY

ELEVATION AND NOTES

LAST REVISION	DESCRIPTION:	FDOT FY 2021-22 STANDARD PLANS	MAST ARM ASSEMBLIES	INDEX	SHEET
~~11/01/18~~ 11/01/21	REVISION			649-031	1 of 6

- Final sheet

GENERAL NOTES:

1. Shop Drawings: This Index is considered fully detailed, only submit shop drawings for minor modifications not detailed in the Plans.

2. Prior to Fabrication: Verify the installed foundation elevation will result in the required signal elevation and adjust the Pole height as needed.

3. Details for Signal and Sign locations, Signal Head attachment, Sign attachment, Pedestrian Head attachment, and Foundation Conduit are not shown for simplicity.

4. Materials:
   - A. Poles, Mast Arms and Backing Rings:
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     - c. ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield)
   - B. Steel Plates: ASTM A36
   - C. Weld Metal: E70XX
   - D. Bolts, Nuts and Washers:
     - a. High Strength Hex Head Bolts: ASTM F3125, Grade A325, Type 1
     - b. Nuts: ASTM A563 DH Heavy-Hex
     - c. Washers: ASTM F436 Type 1, one under turned element
   - E. Anchor Bolts, Nuts and Washers:
     - a. Anchor Bolts: ASTM F1554 Grade 55
     - b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per anchor bolt)
     - c. Plate Washers: ASTM A36 (2 per bolt)
   - F. Threaded Bars/Studs: ASTM A36 or ASTM A307
   - G. Handhole Frame: ASTM A709 or ASTM A36, Grade 36
   - H. Handhole Cover: ASTM A1011 Grade 50, 55, 60 or 65
   - I. Pole Caps and Nut Covers: Fabricate from cast aluminum or galvanized carbon steel.
   - J. Stainless Steel Screws: AISI Type 316
   - K. Concrete: Class IV (Drilled Shaft) for all environmental classifications.
   - L. Reinforcing Steel: Specification 415

5. Fabrication:
   - A. Welding:
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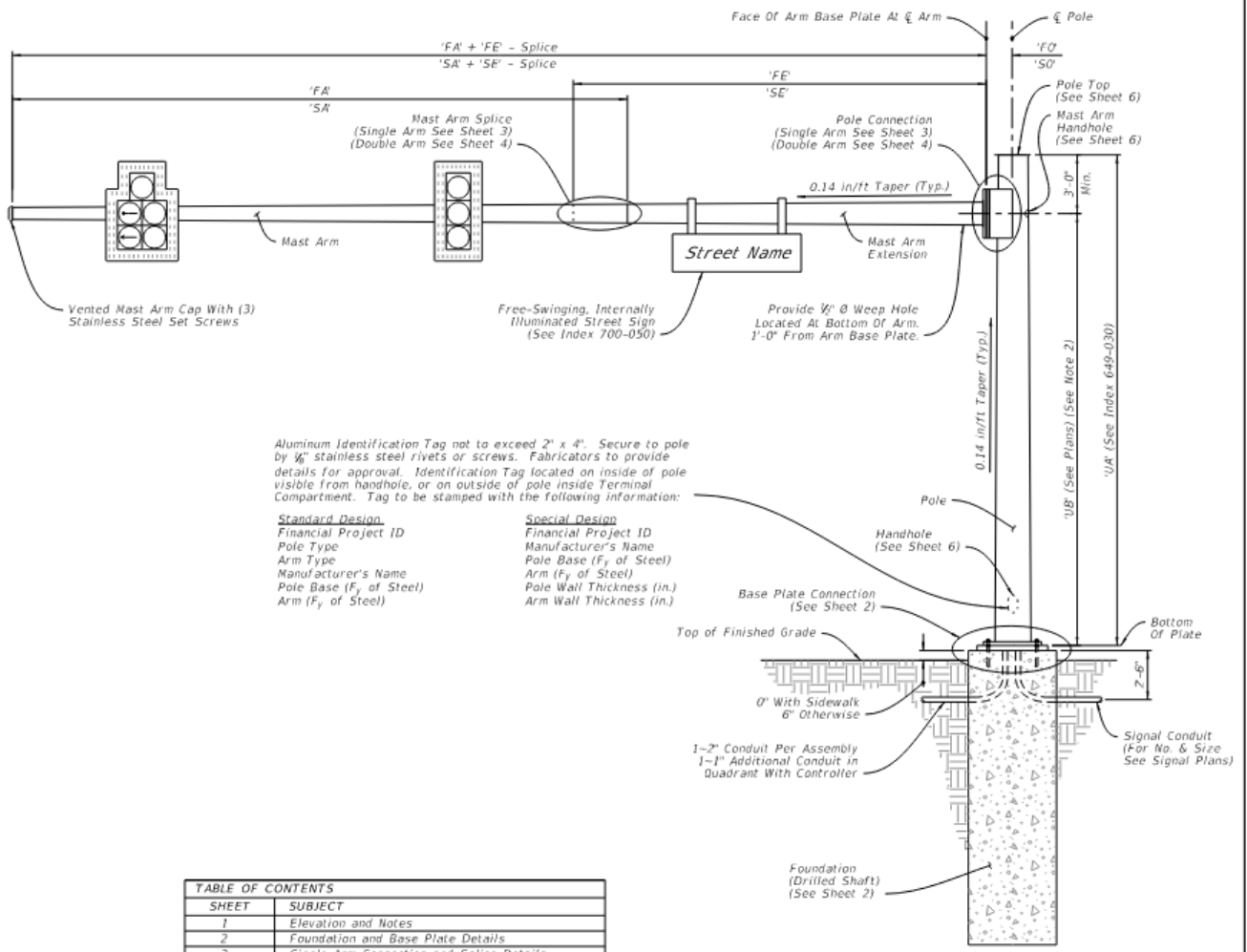
   - B. Poles and Mast Arms:
     - a. Round or 12-sided (Min.)
     - b. Taper pole diameter at 0.14 inches per foot
     - c. Upright poles must be a single section. For arms and upright poles, circumferential welds and laminated sections are not permitted.
     - d. Arms may be either one or two sections. See Sheet 4 for telescopic splice detail
     - e. Fabricate longitudinal seam welds with 60 percent minimum penetration or fusion welds except:
       1. Use a full-penetration groove weld within 6 inches of the circumferential tube-to-plate connection.
       2. Use full-penetration groove welds on the female end section of telescopic (i.e., slip type) field splices for a minimum length of one and one-half times the inside diameter of the female section plus 6 inches.
     - f. Locate longitudinal seams weld along the:
       1. Lower quadrant of the arms.
       2. Same side of the pole as the arm connections
     - g. Face handhole perpendicular from arm on single arm poles, perpendicular from the first arm of double arms poles facing away from traffic or see special instructions on the Mast Arm Tabulation Sheet.
     - h. Provide a 'J' or 'C' hook at the top of the pole for signal wiring support (See Sheet 6)
     - i. First and Second arm camber angle = 2'
     - j. Bolt holes diameters as follows:
       1. Bolts (except Anchor bolts): Bolt diameter plus 1/16" prior to galvanizing.
       2. Anchor Bolts: Bolt diameter plus 1/2" (Max.).

6. Coatings:
   - A. All Nuts, Bolts, Washers and Threaded Bars/Studs: ASTM F2329
   - B. All other steel items including plate washers ASTM A123

7. Construction:
   - A. Foundation: Specification 455 Drilled Shaft, except that payment is included in the cost of the Mast Arm.
   - B. Install Pole vertically.
   - C. Place structural grout pad with drain between top of foundation and bottom of baseplate in accordance with Specification 649-7.
   - D. Attach Sign Panels and Signals centered on the elevation of the Mast Arm.
   - E. Wire Access holes are 1½" or less in diameter.



Single Arm Shown, Double Arm Similar (Luminaire Arm Not Shown)

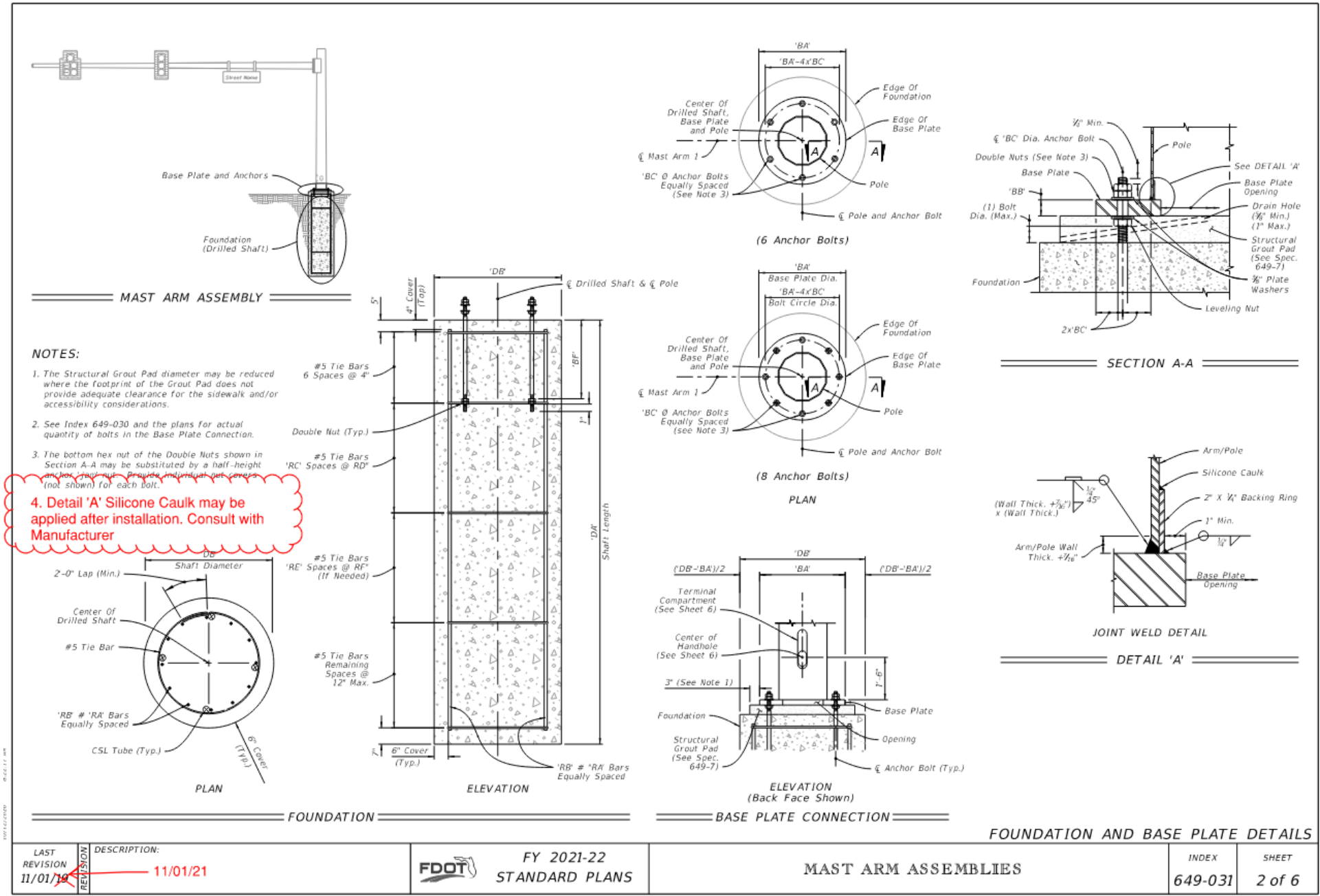
MAST ARM ASSEMBLY

TABLE OF CONTENTS

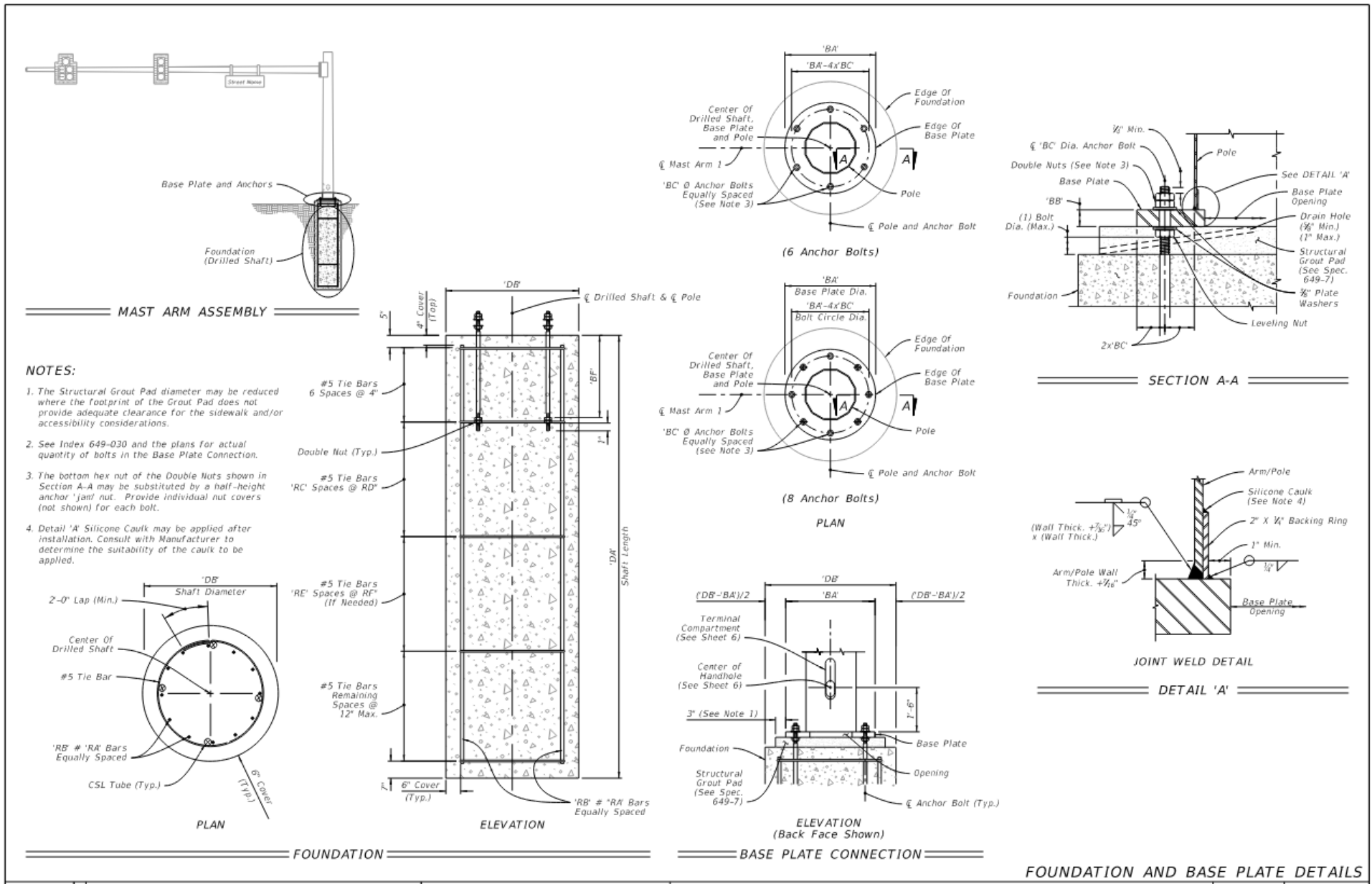
ELEVATION AND NOTES

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	MAST ARM ASSEMBLIES	INDEX 649-031	SHEET 1 of 6

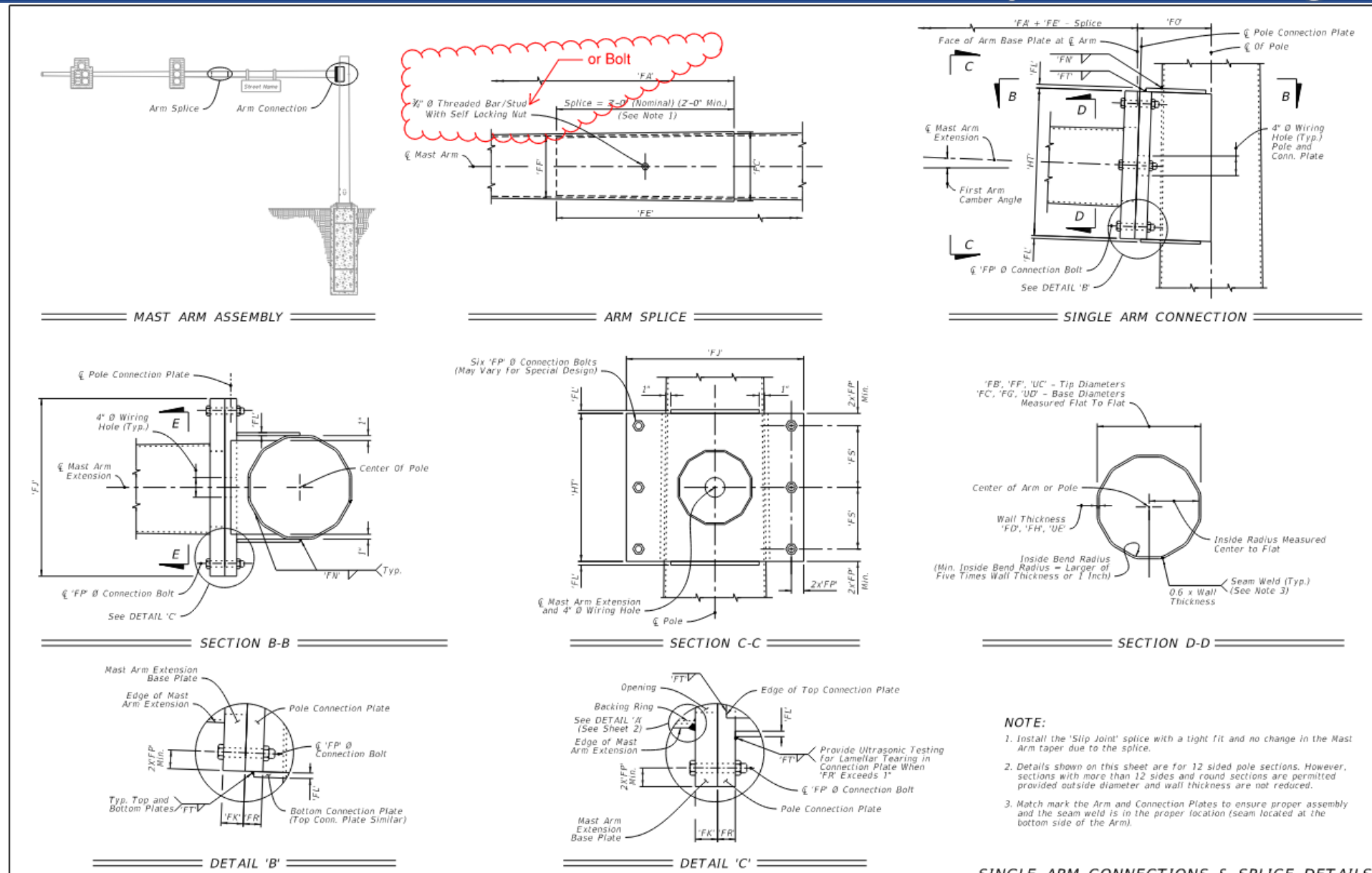
- Added note about caulking



- Final sheet


Base Plate and Anchors
Foundation (Drilled Shaft)
MAST ARM ASSEMBLY
NOTES:
1. The Structural Grout Pad diameter may be reduced where the footprint of the Grout Pad does not provide adequate clearance for the sidewalk and/or accessibility considerations.
2. See Index 649-030 and the plans for actual quantity of bolts in the Base Plate Connection.
3. The bottom hex nut of the Double Nuts shown in Section A-A may be substituted by a half-height anchor 'jam' nut. Provide individual nut covers (not shown) for each bolt.
4. Detail 'A' Silicone Caulk may be applied after installation. Consult with Manufacturer to determine the suitability of the caulk to be applied.
'DB' Shaft Diameter
2'-0" Lap (Min.)
Center Of Drilled Shaft
#5 Tie Bar
'RB' # 'RA' Bars Equally Spaced
CSL Tube (Typ.)
6" Cover (Typ.)
PLAN
'DB'
℄ Drilled Shaft & ℄ Pole
5"
4" Cover (Top)
#5 Tie Bars 6 Spaces @ 4"
Double Nut (Typ.)
#5 Tie Bars 'RC' Spaces @ RD"
#5 Tie Bars 'RE' Spaces @ RF" (If Needed)
#5 Tie Bars Remaining Spaces @ 12" Max.
'BF'
1"
'DA' Shaft Length
6" Cover (Typ.)
'RB' # 'RA' Bars Equally Spaced
ELEVATION
FOUNDATION
'BA'
'BA'-4x'BC'
Edge Of Foundation
Center Of Drilled Shaft, Base Plate and Pole
Edge Of Base Plate
℄ Mast Arm 1
'BC' Ø Anchor Bolts Equally Spaced (See Note 3)
A
Pole
℄ Pole and Anchor Bolt
(6 Anchor Bolts)
'BA'
Base Plate Dia.
'BA'-4x'BC'
Bolt Circle Dia.
Center Of Drilled Shaft, Base Plate and Pole
Edge Of Foundation
Edge Of Base Plate
℄ Mast Arm 1
'BC' Ø Anchor Bolts Equally Spaced (see Note 3)
A
Pole
℄ Pole and Anchor Bolt
(8 Anchor Bolts)
PLAN
'DB'
('DB'-'BA')/2
'BA'
('DB'-'BA')/2
Terminal Compartment (See Sheet 6)
Center of Handhole (See Sheet 6)
3" (See Note 1)
1'-6"
Foundation
Structural Grout Pad (See Spec. 649-7)
Base Plate
Opening
℄ Anchor Bolt (Typ.)
ELEVATION
(Back Face Shown)
BASE PLATE CONNECTION
1½" Min.
℄ 'BC' Dia. Anchor Bolt
Double Nuts (See Note 3)
Base Plate
'BB'
(1) Bolt Dia. (Max.)
Foundation
2x'BC'
Pole
See DETAIL 'A'
Base Plate Opening
Drain Hole (⅜" Min.) (1" Max.)
Structural Grout Pad (See Spec. 649-7)
¾" Plate Washers
Leveling Nut
SECTION A-A
Arm/Pole
Silicone Caulk (See Note 4)
(Wall Thick. +3/16") x (Wall Thick.)
45°
2" X ¼" Backing Ring
1" Min.
¼"
Arm/Pole Wall Thick. +7/16"
Base Plate Opening
JOINT WELD DETAIL
DETAIL 'A'
FOUNDATION AND BASE PLATE DETAILS
LAST REVISION 11/01/21
REVISION
DESCRIPTION:
FDOT
FY 2022-23 STANDARD PLANS
MAST ARM ASSEMBLIES
INDEX 649-031
SHEET 2 of 6

- Added option for a bolt at the arm splice
- Same for sheet 4 with the double arm



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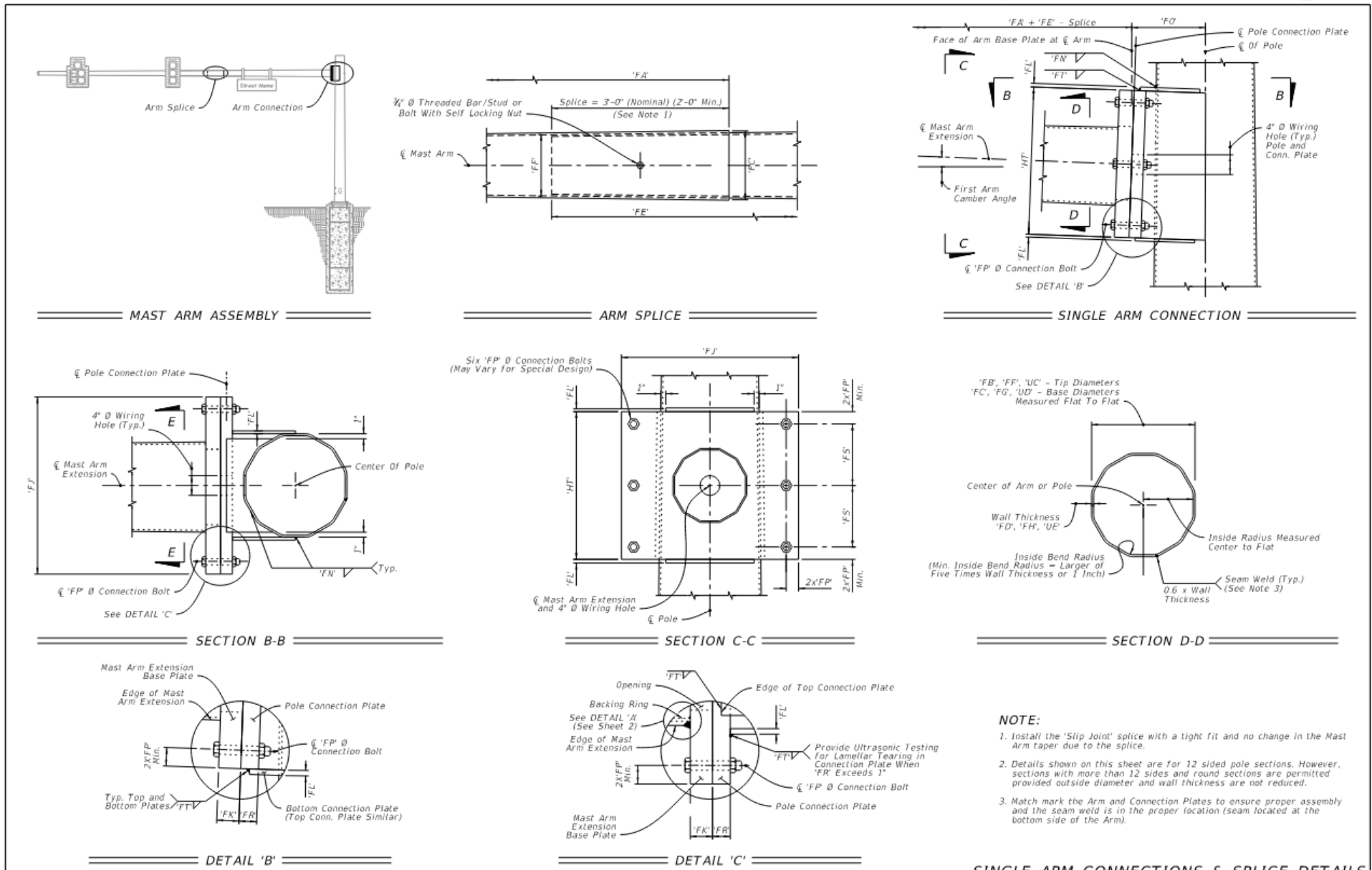
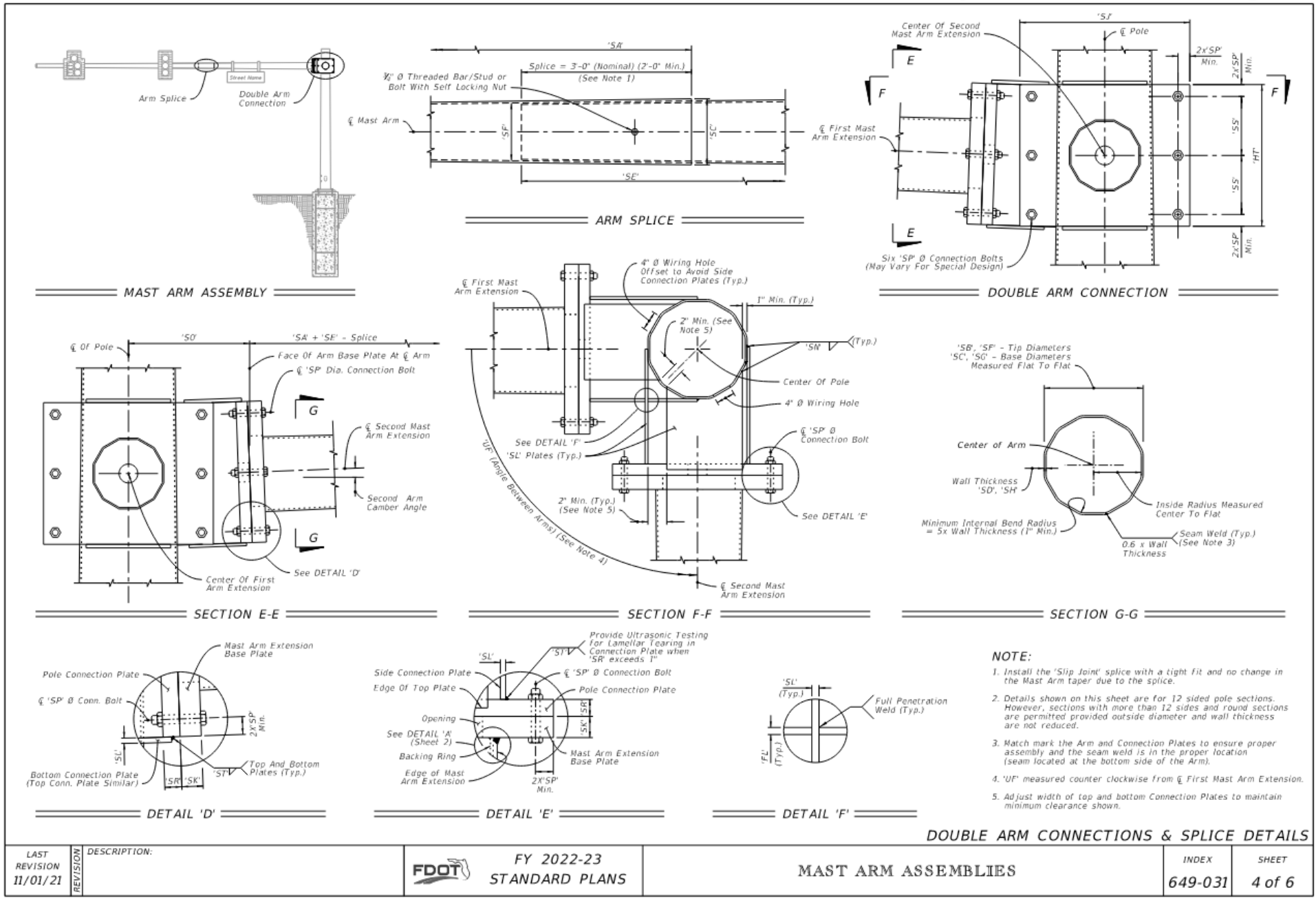
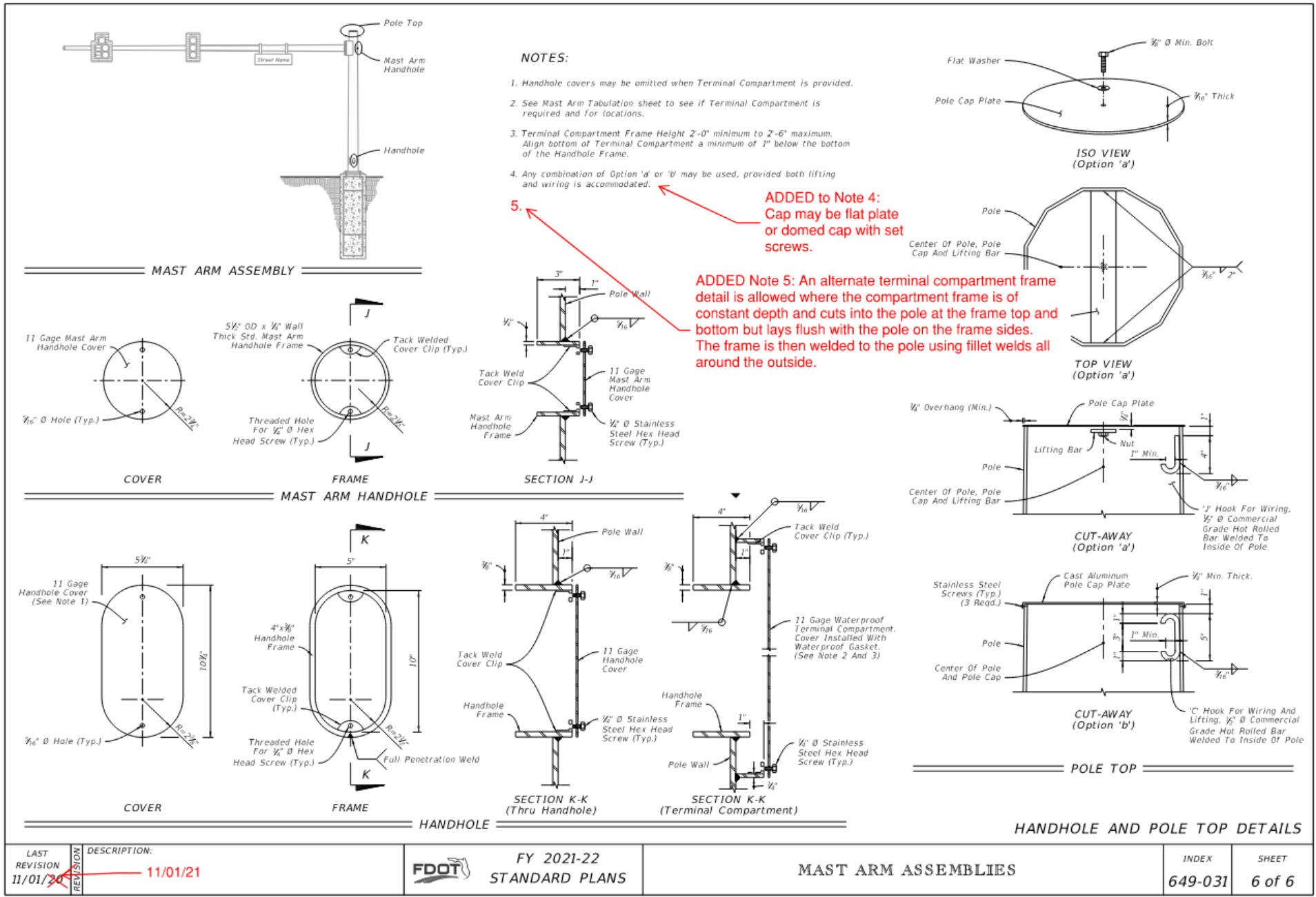

Arm Splice
Arm Connection
MAST ARM ASSEMBLY
'FA'
Splice = 3'-0" (Nominal) (2'-0" Min.)
(See Note 1)
℄ Mast Arm
'FE'
ARM SPLICE
'FA' + 'FE' - Splice
'FG'
Face of Arm Base Plate at ℄ Arm
℄ Pole Connection Plate
℄ Of Pole
℄ Mast Arm Extension
First Arm Camber Angle
4" Ø Wiring Hole (Typ.) Pole and Conn. Plate
℄ 'FP' Ø Connection Bolt
See DETAIL 'B'
SINGLE ARM CONNECTION
℄ Pole Connection Plate
4" Ø Wiring Hole (Typ.)
℄ Mast Arm Extension
Center Of Pole
Typ.
℄ 'FP' Ø Connection Bolt
See DETAIL 'C'
SECTION B-B
Six 'FP' Ø Connection Bolts
(May Vary for Special Design)
℄ Mast Arm Extension and 4" Ø Wiring Hole
℄ Pole
SECTION C-C
'FB', 'FF', 'UC' - Tip Diameters
'FC', 'FG', 'UD' - Base Diameters
Measured Flat To Flat
Center of Arm or Pole
Wall Thickness 'FD', 'FH', 'UE'
Inside Radius Measured Center to Flat
Inside Bend Radius (Min. Inside Bend Radius = Larger of Five Times Wall Thickness or 1 Inch)
0.6 x Wall Thickness
Seam Weld (Typ.) (See Note 3)
SECTION D-D
Mast Arm Extension Base Plate
Edge of Mast Arm Extension
Pole Connection Plate
℄ 'FP' Ø Connection Bolt
Typ. Top and Bottom Plates
Bottom Connection Plate (Top Conn. Plate Similar)
DETAIL 'B'
Opening
Backing Ring
See DETAIL 'A' (See Sheet 2)
Edge of Mast Arm Extension
Edge of Top Connection Plate
Provide Ultrasonic Testing for Lamellar Tearing in Connection Plate When 'FR' Exceeds 1"
℄ 'FP' Ø Connection Bolt
Pole Connection Plate
Mast Arm Extension Base Plate
DETAIL 'C'
NOTE:
1. Install the 'Slip Joint' splice with a tight fit and no change in the Mast Arm taper due to the splice.
2. Details shown on this sheet are for 12 sided pole sections. However, sections with more than 12 sides and round sections are permitted provided outside diameter and wall thickness are not reduced.
3. Match mark the Arm and Connection Plates to ensure proper assembly and the seam weld is in the proper location (seam located at the bottom side of the Arm).
SINGLE ARM CONNECTIONS & SPLICE DETAILS
LAST REVISION 11/01/21
REVISION
DESCRIPTION:
FDOT FY 2022-23 STANDARD PLANS
MAST ARM ASSEMBLIES
INDEX 649-031
SHEET 3 of 6

- Final sheet


MAST ARM ASSEMBLY
Arm Splice
Double Arm Connection
ARM SPLICE
Splice = 3'-0" (Nominal) (2'-0" Min.)
(See Note 1)
℄ Mast Arm
DOUBLE ARM CONNECTION
Center Of Second Mast Arm Extension
℄ First Mast Arm Extension
Six 'SP' Ø Connection Bolts
(May Vary For Special Design)
SECTION E-E
℄ Of Pole
Face Of Arm Base Plate At ℄ Arm
℄ 'SP' Dia. Connection Bolt
℄ Second Mast Arm Extension
Second Arm Camber Angle
Center Of First Arm Extension
See DETAIL 'D'
SECTION F-F
4" Ø Wiring Hole Offset to Avoid Side Connection Plates (Typ.)
2" Min. (See Note 5)
1" Min. (Typ.)
Center Of Pole
See DETAIL 'F'
'SL' Plates (Typ.)
'UF' (Angle Between Arms) (See Note 4)
2" Min. (Typ.) (See Note 5)
See DETAIL 'E'
℄ Second Mast Arm Extension
SECTION G-G
'SB', 'SF' - Tip Diameters
'SC', 'SG' - Base Diameters
Measured Flat To Flat
Center of Arm
Wall Thickness 'SD', 'SH'
Inside Radius Measured Center To Flat
Minimum Internal Bend Radius = 5x Wall Thickness (1" Min.)
Seam Weld (Typ.) (See Note 3)
0.6 x Wall Thickness
DETAIL 'D'
Mast Arm Extension Base Plate
Pole Connection Plate
℄ 'SP' Ø Conn. Bolt
Bottom Connection Plate (Top Conn. Plate Similar)
Top And Bottom Plates (Typ.)
DETAIL 'E'
Provide Ultrasonic Testing for Lamellar Tearing in Connection Plate when 'SR' exceeds 1"
Side Connection Plate
Edge Of Top Plate
Opening
See DETAIL 'A' (Sheet 2)
Backing Ring
Edge of Mast Arm Extension
Mast Arm Extension Base Plate
DETAIL 'F'
Full Penetration Weld (Typ.)
NOTE:
1. Install the 'Slip Joint' splice with a tight fit and no change in the Mast Arm taper due to the splice.
2. Details shown on this sheet are for 12 sided pole sections. However, sections with more than 12 sides and round sections are permitted provided outside diameter and wall thickness are not reduced.
3. Match mark the Arm and Connection Plates to ensure proper assembly and the seam weld is in the proper location (seam located at the bottom side of the Arm).
4. 'UF' measured counter clockwise from ℄ First Mast Arm Extension.
5. Adjust width of top and bottom Connection Plates to maintain minimum clearance shown.
DOUBLE ARM CONNECTIONS & SPLICE DETAILS
LAST REVISION 11/01/21
REVISION
DESCRIPTION:
FDOT
FY 2022-23 STANDARD PLANS
MAST ARM ASSEMBLIES
INDEX 649-031
SHEET 4 of 6

- Added notes for pole cap to allow for both dome and flat top
- Added a note to allow an option for fabricating the terminal compartment at a constant depth.



Standards

- 450-199 Prestressed I-Beams Build-Up & Deflection Data
- 515-052 Pedestrian/Bicycle Railing (Steel)
- 515-062 Pedestrian/Bicycle Railing (Aluminum)
- 521-660 Light Pole Pedestal - Bridge
- 548-020 MSE Retaining Wall Systems - Permanent
- 649-031 Mast Arm Assemblies
- 700-091 Catwalk Details

- Added language about the finish of the self closing gate.

GENERAL NOTES:

1. Work this Index with Specification 700.

2. Shop Drawings are required:

   A. Provide length as shown in the Plans
   B. Design in accordance with AISC, AASHTO, and OSHA requirements
   B. Do not start fabrication until the shop drawings are approved

3. Catwalk hangers must be positioned to avoid conflicts with the sign structure truss and gusset plates. Place walkway close to the sign with a maximum open distance from walkway grate to DMS sign of ½".

4. Maximum spacing of Catwalk hanger supports is 5'-0". Cantilever ends of grating is 8".

5. Galvanized steel catwalk grating meeting the requirements of Specification 504-2.3. Must Support a 90 psf load and have a 3½" minimum toe kick. Attach grating in accordance with the manufacturer's instructions using stainless steel or galvanized fasteners.

6. Supply and install an OSHA 1910 compliant, self closing, ~~corrosion resistant safety gate~~.

7. Chain link fabric options (2" mesh with knuckled selvage top and bottom for all options):

   A. AASHTO M181 Type I – Zinc Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 1.8 oz/ft². (M181 Class D 2.0 oz./ft², modified to 1.8 oz./ft².).
   B. AASHTO M181 Type II –Aluminum Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 0.40 oz./ft².

8. Install 2" NPS (Sch. 40) guiderail and posts: ASTM A53 Grade B for standard weight pipe.

9. Welding:

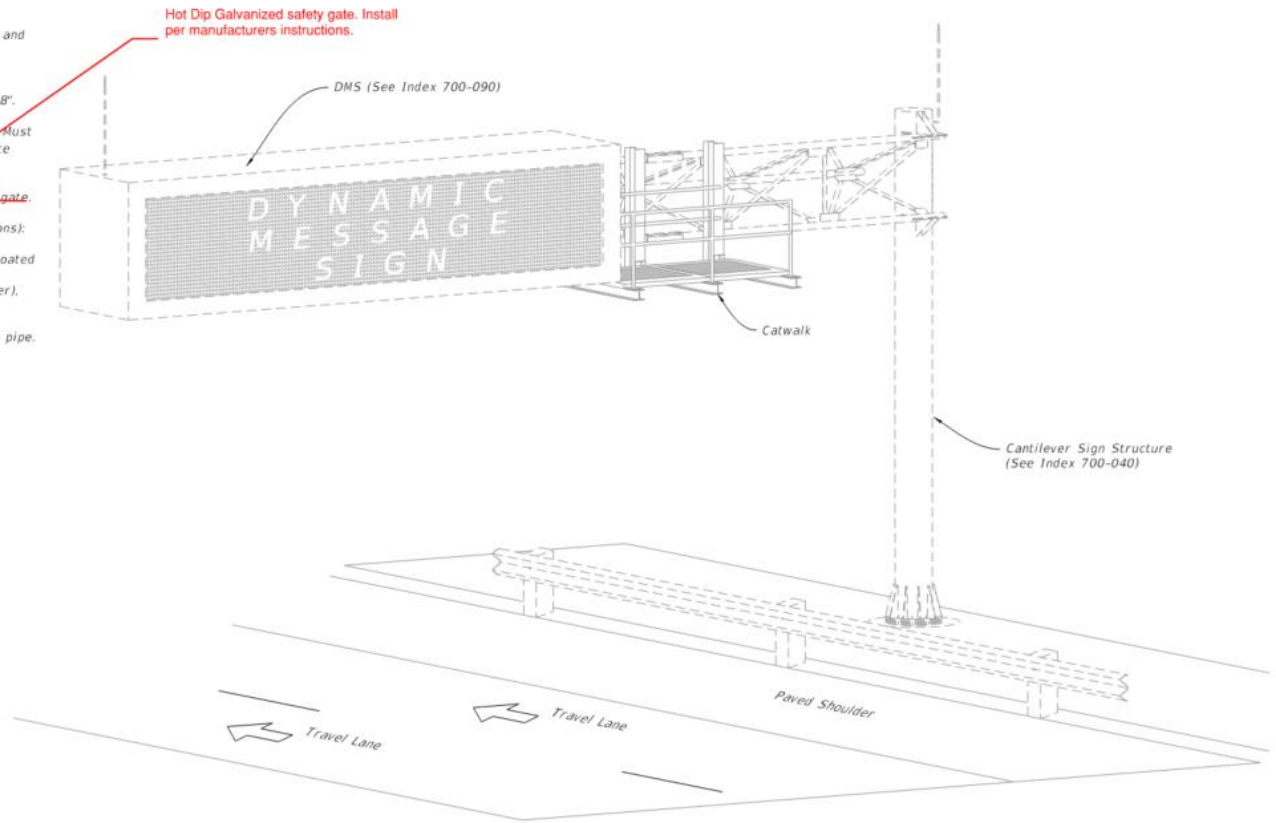
   E70XX

10. Materials:

    A. Steel Plates ASTM A 36 or A709 Grade 36.
    B. W- Sections: ASTM A572 Grade 36 or 50.
    C. Steel Pipe Railings or Structural Tubing: Specification 962
    D. High Strength Bolts, Nuts and Washers: Specification 962
    E. U-Bolts, nuts and washers: Specification 962

11. Coatings/Galvanizing:

    Hot dip galvanize support frame after fabrication and galvanize non-stainless steel fasteners in accordance with Specification 962.



CATWALK ASSEMBLY
(Cantilever Shown, Span Similar)

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11/01/19						700-091	1 of 3

- Final sheet

GENERAL NOTES:

1. Work this Index with Specification 700.

2. Shop Drawings are required:

   A. Provide length as shown in the Plans
   B. Design in accordance with AISC, AASHTO, and OSHA requirements
   B. Do not start fabrication until the shop drawings are approved

3. Catwalk hangers must be positioned to avoid conflicts with the sign structure truss and gusset plates. Place walkway close to the sign with a maximum open distance from walkway grate to DMS sign of ½".

4. Maximum spacing of Catwalk hanger supports is 5'-0". Cantilever ends of grating is 8".

5. Galvanized steel catwalk grating meeting the requirements of Specification 504-2.3. Must Support a 90 psf load and have a 3½" minimum toe kick. Attach grating in accordance with the manufacturer's instructions using stainless steel or galvanized fasteners.

6. Supply and install an OSHA 1910 compliant, self closing, hot dip galvanized safety gate. Install per manufactures instructions.

7. Chain link fabric options (2" mesh with knuckled selvage top and bottom for all options):

   A. AASHTO M181 Type I – Zinc Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 1.8 oz/ft². (M181 Class D 2.0 oz./ft², modified to 1.8 oz./ft².).
   B. AASHTO M181 Type II –Aluminum Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 0.40 oz./ft².

8. Install 2" NPS (Sch. 40) guiderail and posts: ASTM A53 Grade B for standard weight pipe.

9. Welding:

   E70XX

10. Materials:

    A. Steel Plates ASTM A 36 or A709 Grade 36.
    B. W- Sections: ASTM A572 Grade 36 or 50.
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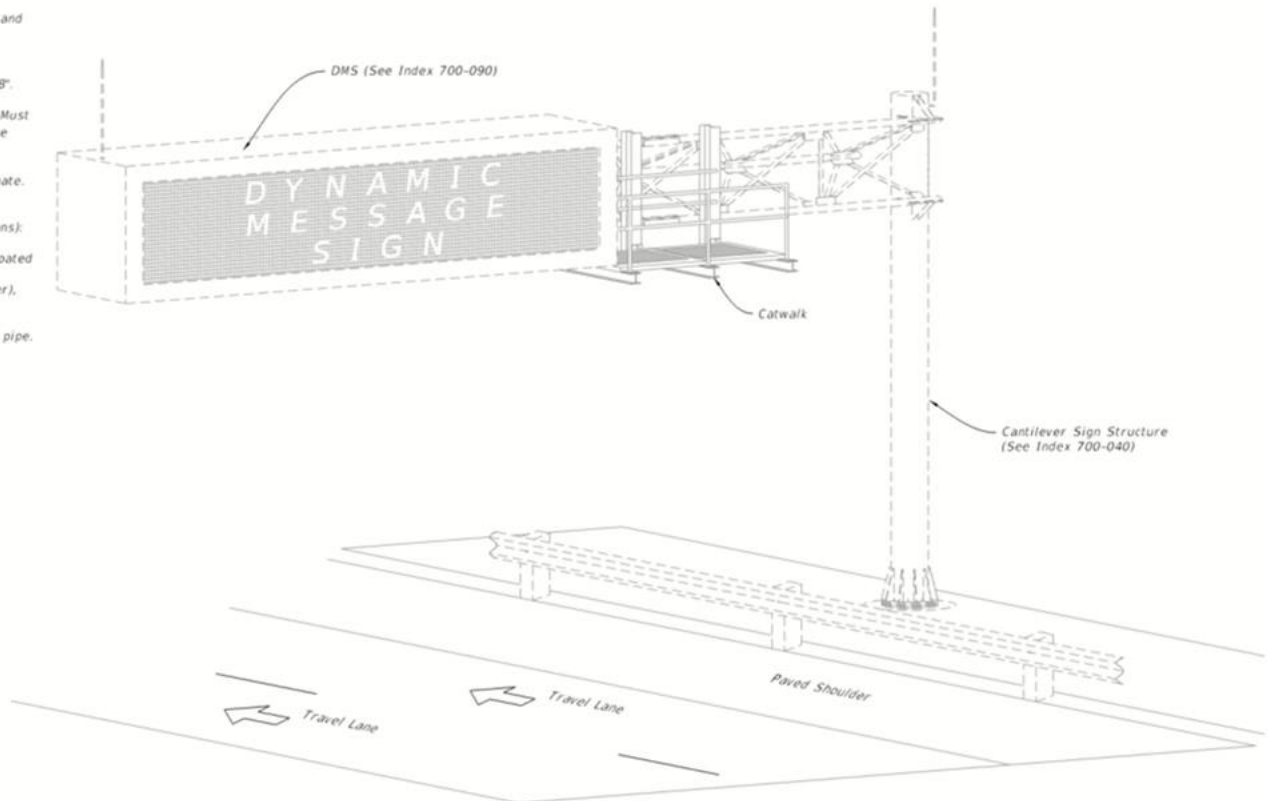
    D. High Strength Bolts, Nuts and Washers: Specification 962
    E. U-Bolts, nuts and washers: Specification 962

11. Coatings/Galvanizing:

    Hot dip galvanize support frame after fabrication and galvanize non-stainless steel fasteners in accordance with Specification 962.



CATWALK ASSEMBLY
(Cantilever Shown, Span Similar)

TABLE OF CONTENTS:

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	CATWALK DETAILS	INDEX	SHEET
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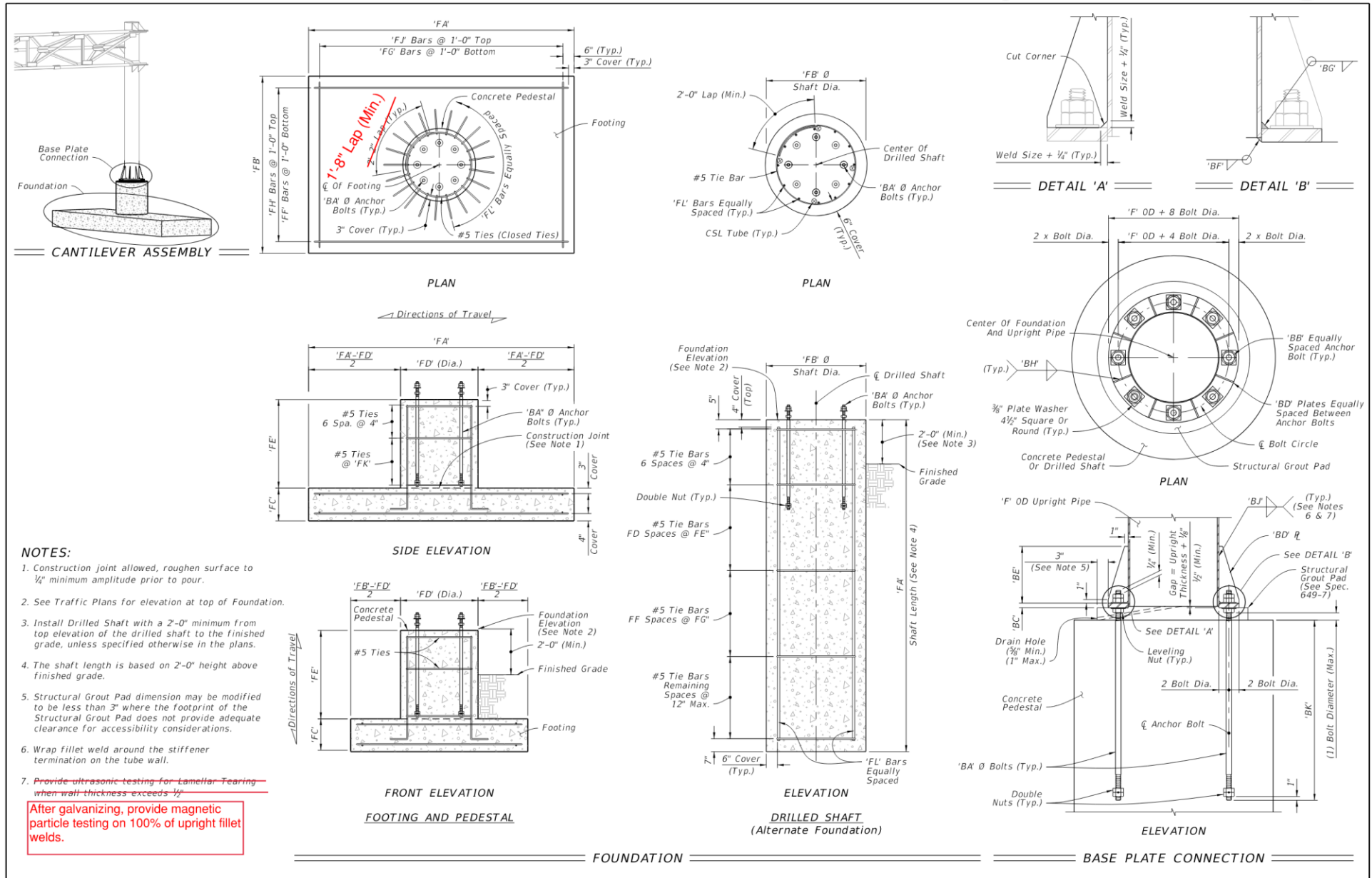
Standards

- 450-199 Prestressed I-Beams Build-Up & Deflection Data
- 515-052 Pedestrian/Bicycle Railing (Steel)
- 515-062 Pedestrian/Bicycle Railing (Aluminum)
- 521-660 Light Pole Pedestal - Bridge
- 548-020 MSE Retaining Wall Systems - Permanent
- 649-031 Mast Arm Assemblies
- 700-091 Catwalk Details
- 700-040 Cantilever Sign Structure
- 700-041 Span Sign Structure

Standard Plans – Update Training

- Corrected lap distance for the higher strength concrete used here
- In order to prevent cracking arising during fabrication from making its way to the field we instituted a 100% mag particle testing requirement



NOTES:

1. Construction joint allowed, roughen surface to ¼" minimum amplitude prior to pour.
2. See Traffic Plans for elevation at top of Foundation.
3. Install Drilled Shaft with a 2'-0" minimum from top elevation of the drilled shaft to the finished grade, unless specified otherwise in the plans.
4. The shaft length is based on 2'-0" height above finished grade.
5. Structural Grout Pad dimension may be modified to be less than 3" where the footprint of the Structural Grout Pad does not provide adequate clearance for accessibility considerations.
6. Wrap fillet weld around the stiffener termination on the tube wall.
7. ~~Provide ultrasonic testing for Lamellar Tearing when wall thickness exceeds ½"~~

After galvanizing, provide magnetic particle testing on 100% of upright fillet welds.

FOUNDATION — BASE PLATE CONNECTION

LAST REVISION	REVISION	DESCRIPTION:	FDOT			INDEX	SHEET
~~11/01/20~~		11/01/21		FY ~~2021-22~~ 2022-23 STANDARD PLANS	CANTILEVER SIGN STRUCTURE	700-040	2 of 5

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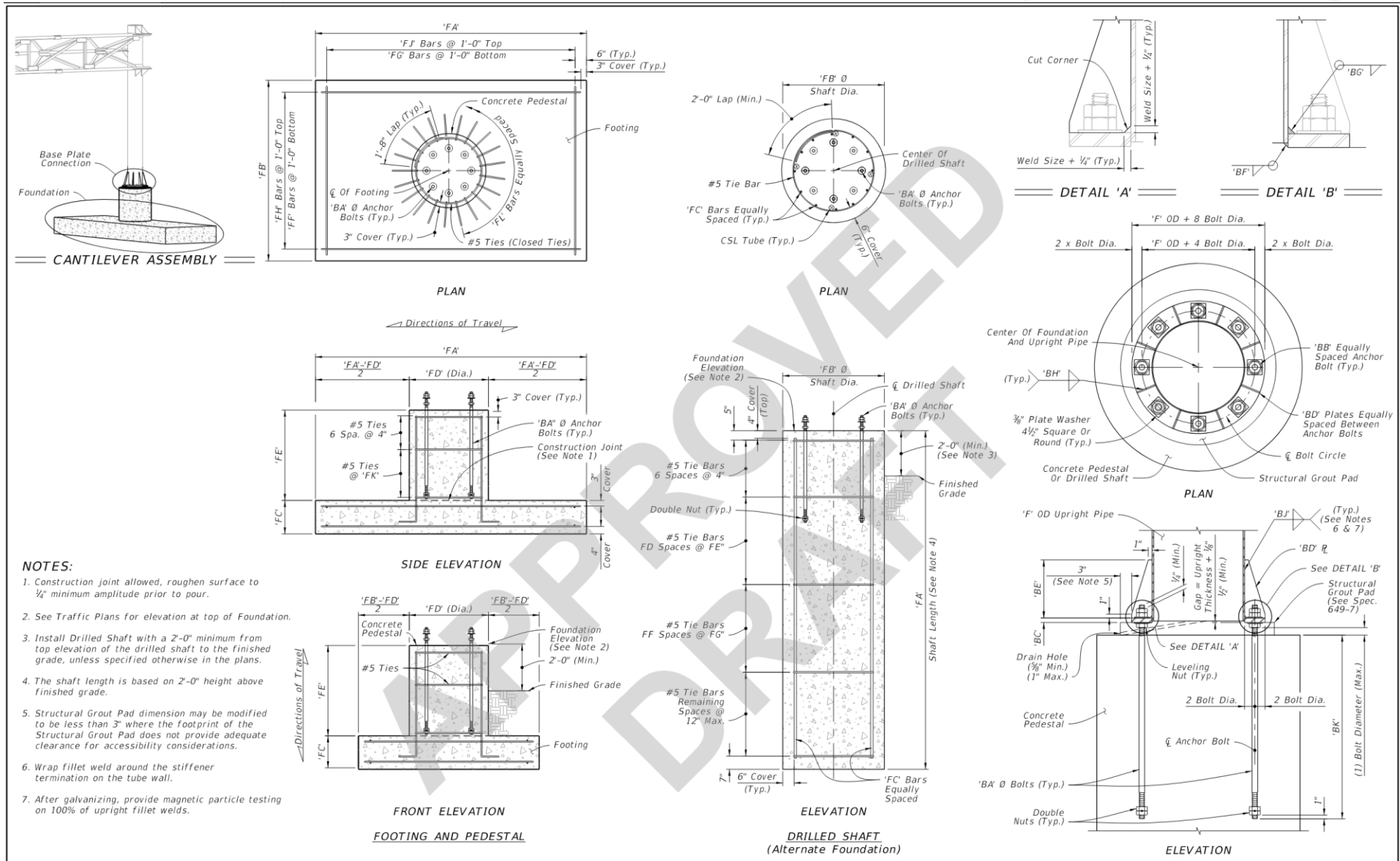

NOTES:

1. Construction joint allowed, roughen surface to ¼" minimum amplitude prior to pour.
2. See Traffic Plans for elevation at top of Foundation.
3. Install Drilled Shaft with a 2'-0" minimum from top elevation of the drilled shaft to the finished grade, unless specified otherwise in the plans.
4. The shaft length is based on 2'-0" height above finished grade.
5. Structural Grout Pad dimension may be modified to be less than 3" where the footprint of the Structural Grout Pad does not provide adequate clearance for accessibility considerations.
6. Wrap fillet weld around the stiffener termination on the tube wall.
7. After galvanizing, provide magnetic particle testing on 100% of upright fillet welds.

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	CANTILEVER SIGN STRUCTURE	INDEX	SHEET
11/01/21						700-040	2 of 5

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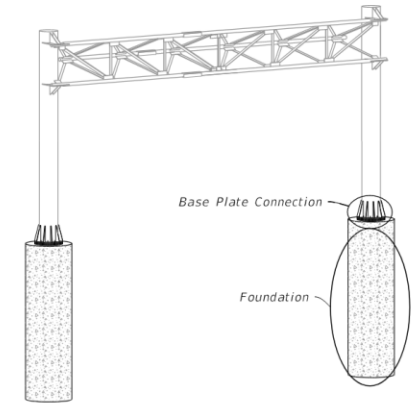
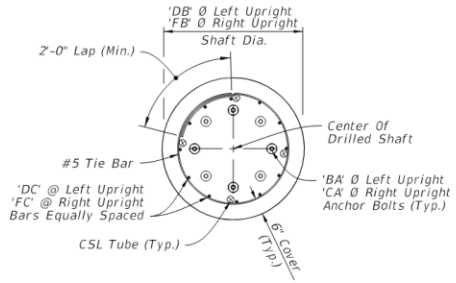
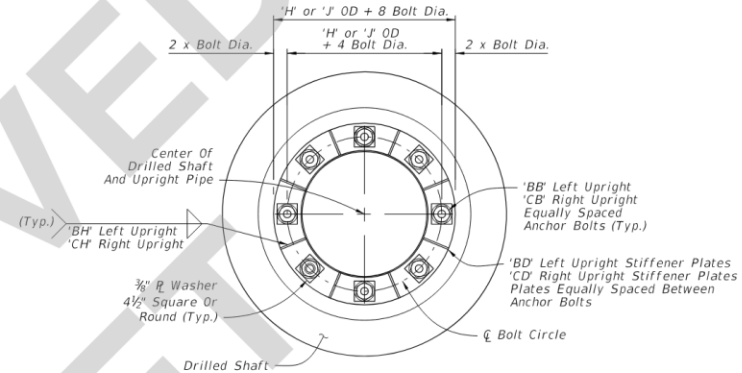


SPAN SIGN ASSEMBLY

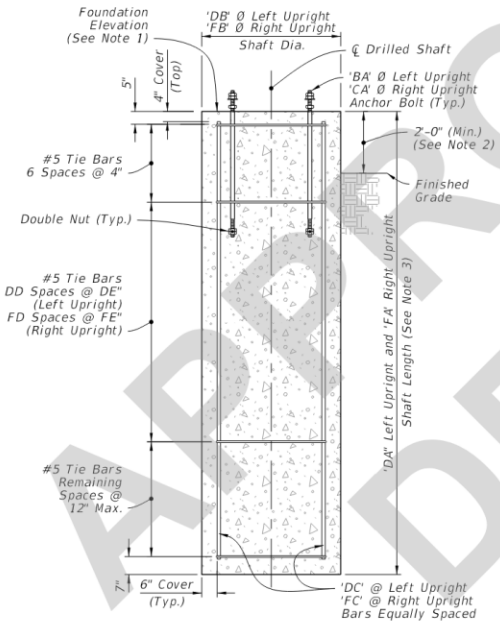


PLAN

DETAIL "A" DETAIL "B"



PLAN



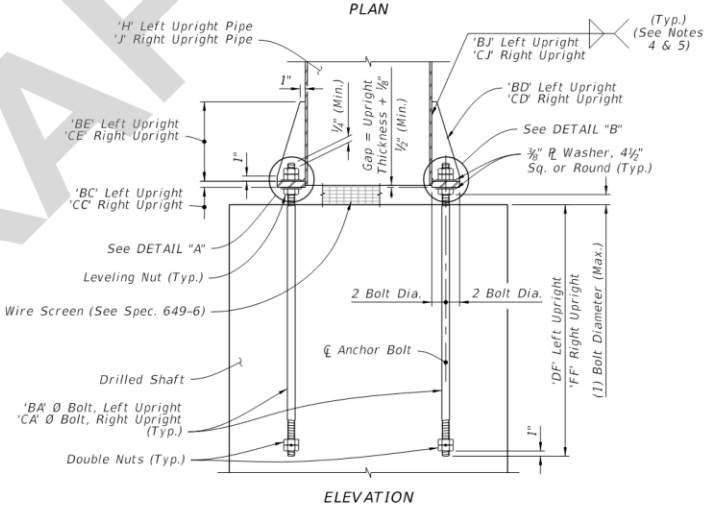
ELEVATION

DRILLED SHAFT

FOUNDATION

NOTES:

1. See Traffic Plans for elevation at top of Foundation.
2. Install Drilled Shaft with a 2'-0" minimum from top elevation of the drill shaft to the finished grade, unless specified otherwise in the plans.
3. The shaft length is based on 2'-0" height above finished grade.
4. Wrap fillet weld around the stiffener termination on the tube wall (Typ).
5. After galvanizing, provide magnetic particle testing on 100% of upright fillet welds.



ELEVATION

BASE PLATE CONNECTION

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	SPAN SIGN STRUCTURE	INDEX 700-041	SHEET 2 of 5

Questions

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