Origination Form Proposed Revisions to a Standard Plans Index

Originator:	Turley, Joshua	Index Number:	550-012
Date:	5/7/2024	Sheet Number(s):	2
E-mail:	Joshua.Turley@dot.state.fl.us	Index Title:	BRIDGE FENCING (ENCLOSED)

Summary of the changes:

Sheet 2: Added shim info to the TABLE OF POST ATTACHMENT COMPONENTS

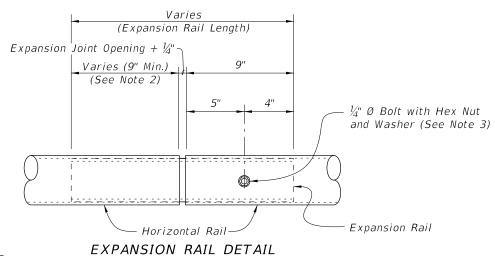
Commentary/Background:

We needed to add some limiting parameters to edges shims so that they get installed correctly.

Other Affected Documents/Offices	Person Contacted	Affected (Yes/No)
Other Standard Plans		No
FDOT Design Manual		No
Standard Specifications		No
Basis of Estimates Manual		No
Approved Product List		No
Construction Office		No
Maintenance Office		No

Implementation	
["FY-Standard Plans (Next Release)"]	

	TAB	LE OF CHAIN LINK FENCE COMPONENTS	TA	BLE OF POST ATT
COMPONENT	ASTM DESIGNATION	COMPONENT INFORMATION	COMPONENT INFORMATION COMPONENT DESIGNAT	
Posts	F1083	Galvanized Steel Pipe – 3" NPS, Schedule 40 Regular Grade	Pipe Clamps	A36 or A709 Grade 36
Horizontal Rails and Internal Sleeves	F1083	Galvanized Steel Pipe – $2\frac{1}{2}$ " NPS, Schedule 40 Regular Grade	Base Plates	A36 or A709 Grade 36
Expansion Rails	F1083	Galvanized Steel Pipe – 2" NPS, Schedule 40 Regular Grade	Chim Distant	A36 or A709 Grade 36 or
	A392	Zinc Coated Steel – 9 gage (coated wire diameter), Class 2 Coating	Shim Plates	B209 Alloy 6061-T6 or B221 Alloy 6063-T
Chain Link Fabric (2" mesh with knuckled	A491	Aluminum Coated Steel – 9 gage (coated wire diameter)	Spacers	- Ę
bottom selvages)	F668	Polyvinyl Chloride (PVC) Coated Steel – 9 gage Class 2b Zinc Coated Wire	d g men Adhesive Anchor Rods	F1554 Grade 36
Tension Wire	A824 & A817	Type II (Zinc Coated Steel Wire) – 7 gage, Class 4 Coating	Adhesive Anchor Rods	F1554 Grade 36
		Type I (Aluminum Coated Steel Wire) - 7 gage	Adhesive Anchor Rods	F1554 Grade 36
Tie Wires	F626	Zinc Coated Steel Wire – 9 gage	inect	
Hog Rings	F626	Zinc Coated Steel Wire - 12 gage	C-I-P Anchor Rods	F1554 Grade 36
Brace Bands	F626	12 gage (Min. thickness) x $\frac{3}{4}$ " (Min. width) Steel Bands (Beveled or Heavy)	Bolts	A307
Tension Bars	F626	$\frac{3}{16}$ " (Min. thickness) x $\frac{3}{4}$ " (Min. width) x Variable Height Steel Bars ~ Height = Tangent or Hoop Length - Barrier or Parapet Height - 2" max.	Nuts	A563
Tension Bands	F626	14 gage (Min. thickness) x $\frac{3}{4}$ " (Min. width) Steel Bands	Washers	F 436
Miscellaneous Fence Components	F626	Zinc Coated Steel \sim (includes horizontal rail ends, combination rail ends, boulevard clamps and all other miscellaneous fittings and hardware)	Bearing Pads (Plain)	-
Bolts	A307	$\frac{3}{6}$ " Ø x $4\frac{1}{4}$ " Hex Head Bolts for Internal Sleeve connections $\frac{1}{4}$ " Ø x $4\frac{1}{4}$ " Hex Head Bolts for Expansion Rail connections		I
Nuts	A563	Hex Nuts for Internal Sleeve and Expansion Rail connections		DDED: For edge shima ase plate with a min. w
Washers	F436	Flat Washers for Internal Sleeve and Expansion Rail connections		onding material bed of



NOTES:

- 1. Expansion Rails are required at expansion joint locations where the total movement exceeds 1". Install expansion rails midway between the fence posts spanning the expansion joint.
- 2. An Expansion Assembly is required where the total joint movement exceeds 6". Expansion Assembly includes Expansion Rails and two pull posts (see Sheet 3). When the Expansion Joint Opening is greater than 9" add an additional length to the free end of the Expansion Rail equal to the difference between the Expansion Joint Opening and 9".
- 3. Install nut for the expansion rail finger-tight. The nut will fully engage bolts with a minimum of one bolt thread extending beyond the nuts. Distort the first thread on the outside of the nut to prevent loosening.

FY 2024-25

STANDARD PLANS

BRIDGE FENCING (ENCL





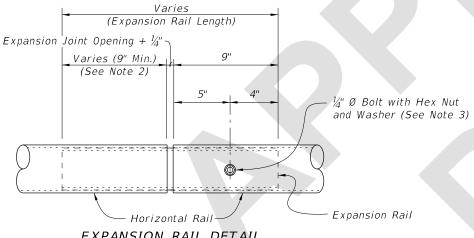
- ANCHOR RODS, NUTS AND WASH After the nuts have been tight removal of the nuts. Coat dist with a galvanizing compound in COATINGS:
- Hot-dip galvanize all Nuts, Wa and Fence Framework (Posts, Clamps and Spacers) in accord galvanize Fence Framework af
- ADHESIVE-BONDED ANCHORS AN Adhesive Bonding Material Sys Specification Section 937 and Section 416. Cutting of reinfor installation.
- WELDING:

ΤΤΑ	CHMENT COMPONENTS		
v	COMPONENT INFORMATION		
	¼" Steel P		
~~~~	³ ∕₄" Steel ₽		(
r 76 8-75	Plate thicknesses as required; Holes in shim plates will be $\frac{3}{4}$ " Ø		
Eu	Flate thickness varies based on Traffic Railing type.	·····	3
	Fully threaded Headless Anchor Rods ~ 5%" Ø x 6" (no spacer) or 5%" Ø x (6" + spacer thickness)		
	Hex Head Anchor Rods ~ ½" Ø x 6" (no spacer) or ½" Ø x (6" + spacer thickness)		
	Fully threaded Headless Anchor Rods ~ $\frac{7}{8}$ " Ø x 14½"		
	Hex Head Anchor Rods ~ $\frac{7}{8}$ " Ø x 14½"		
	¾" Ø x 4¾" Hex Head Bolts for Pipe Clamp Connections to Posts		
	Hex Nuts for Pipe Clamp and Base Plate Connections		
	Flat Washers for Pipe Clamp and Base Plate Connections		
	In accordance with Specification Section 932 for Ancillary Structures		
widtl	natch the edge length of the h of 3/4". Apply adhesive		
of 1-1	1/2" (Min.) wide		
TES			
tortea	, distort the Anchor Rod threads to prevent I threads and exposed trimmed ends of anchors ordance with Specification Section 562.		
Inter dance fter f ND D stems	s, Bolts, C-I-P Anchor Rods, Adhesive Anchors nal Sleeves, Shim Plates, Base Plates, Pipe with Specification Section 962. Hot-dip fabrication. OWELS: for Anchors and Dowels will comply with		
	nstalled in accordance with Specification steel is permitted for drilled hole		

All welding will be in accordance with the American Welding Society Structural Welding Code (Steel) ANSI/AWS D1.1 (current edition). Weld metal will be E60XX or E70XX. Nondestructive testing of welds is not required.

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	TABI	E OF CHAIN LINK FENCE COMPONENTS	TA	BLE OF POST ATTA	CHMENT COMPONENTS
COMPONENT	ASTM DESIGNATION	COMPONENT INFORMATION	COMPONENT	ASTM DESIGNATION	COMPONENT INFORMATION
Posts	F1083	Galvanized Steel Pipe – 3" NPS, Schedule 40 Regular Grade	Pipe Clamps	A36 or A709 Grade 36	¼" Steel R
Horizontal Rails and Internal Sleeves	F1083	Galvanized Steel Pipe – $2\frac{1}{2}$ " NPS, Schedule 40 Regular Grade	Base Plates	A36 or A709 Grade 36	¾" Steel P
Expansion Rails	F1083	Galvanized Steel Pipe – 2" NPS, Schedule 40 Regular Grade	Shim Plates	A36 or A709 Grade 36 or	Plate thicknesses as required. Holes in shim plates will be $\frac{3}{4}$ " Ø. For edge shims match the edge length
	A392	Zinc Coated Steel – 9 gage (coated wire diameter), Class 2 Coating	Shim Plates	B209 Alloy 6061-T6 or B221 Alloy 6063-T5	of the base plate with a min. width of $3/4$ ". Apply adhesive bonding material bed of $1-1/2$ " (Min.) wide
Chain Link Fabric (2" mesh with knuckled	A491	Aluminum Coated Steel – 9 gage (coated wire diameter)	Spacers	-	Plate thickness varies based on Traffic Railing type (See Detail "A")
bottom selvages)	F668	Polyvinyl Chloride (PVC) Coated Steel - 9 gage Class 2b Zinc Coated Wire	Adhesive Anchor Rods	F1554 Grade 36	Fully threaded Headless Anchor Rods ~ ½" Ø x 6" (no spacer) or ½" Ø x (6" + spacer thickness)
Tension Wire	A824 & A817	Type II (Zinc Coated Steel Wire) – 7 gage, Class 4 Coating	o edia C-I-P Anchor Rods	F1554 Grade 36	Hex Head Anchor Rods ~ $\frac{5}{8}$ " Ø x 6" (no spacer) or $\frac{5}{8}$ " Ø x (6" + spacer thickness)
		Type I (Aluminum Coated Steel Wire) – 7 gage		F1554 Grade 36	Fully threaded Headless Anchor Rods ~
Tie Wires	F626	Zinc Coated Steel Wire – 9 gage	Adhesive Anchor Rods C-I-P Anchor Rods	F1554 Grade 36	$\frac{7}{8}$ " Ø x 14½" Hex Head Anchor Rods ~ $\frac{7}{8}$ " Ø x 14½"
Hog Rings	F626	Zinc Coated Steel Wire - 12 gage	Bolts	A307	$\frac{3}{8}$ " Ø x $4\frac{3}{4}$ " Hex Head Bolts for Pipe Clamp
Brace Bands	F626	12 gage (Min. thickness) x $\frac{3}{4}$ " (Min. width) Steel Bands (Beveled or Heavy)	Nuts	A563	Connections to Posts Hex Nuts for Pipe Clamp and Base Plate
Tension Bars	F626	$\frac{3}{16}$ " (Min. thickness) x $\frac{3}{4}$ " (Min. width) x Variable Height Steel Bars ~ Height = Tangent or Hoop Length - Barrier or Parapet Height - 2" max.	Washers	F436	Connections Flat Washers for Pipe Clamp and Base Plate
Tension Bands	F626	14 gage (Min. thickness) x ${3\!\!\!/}_4$ " (Min. width) Steel Bands		F 430	Connections In accordance with Specification Section 932 for
Miscellaneous Fence Components	F626	Zinc Coated Steel $\sim$ (includes horizontal rail ends, combination rail ends, boulevard clamps and all other miscellaneous fittings and hardware)	Bearing Pads (Plain)	-	Ancillary Structures
Bolts	A307	$\frac{3}{8}$ " Ø x 4 $\frac{1}{4}$ " Hex Head Bolts for Internal Sleeve connections $\frac{1}{4}$ " Ø x 4 $\frac{1}{4}$ " Hex Head Bolts for Expansion Rail connections			
Nuts	A563	Hex Nuts for Internal Sleeve and Expansion Rail connections			
Washers	F436	Flat Washers for Internal Sleeve and Expansion Rail connections			
	-	Varies			
	Expansion 3	(Expansion Rail Length) oint Opening + ¼"			
	-	Varies (9" Min.) 9" (See Note 2)			
		$5'' 4'' = \frac{1}{4}'' $ Bolt with Hex Nut	POST AT	TACHMENT NOTES	
	<u> </u>	and Washer (See Note 3)	After the removal o	of the nuts. Coat distorte	l, distort the Anchor Rod threads to prevent d threads and exposed trimmed ends of anchors cordance with Specification Section 562.
		Horizontal Rail	COATINGS: Hot-dip g and Fenc Clamps a	alvanize all Nuts, Washer e Framework (Posts, Inter	s, Bolts, C-I-P Anchor Rods, Adhesive Anchors nal Sleeves, Shim Plates, Base Plates, Pipe with Specification Section 962. Hot-dip
	NOTES:	EXPANSION RAIL DETAIL	ADHESIVE-	BONDED ANCHORS AND D	



DESCRIPTION:

- Install expansion rails midway between the fence posts spanning the expansion joint. 2. An Expansion Assembly is required where the total joint movement exceeds 6". Expansion
- Assembly includes Expansion Rails and two pull posts (see Sheet 3). When the Expansion Joint Opening is greater than 9" add an additional length to the free end of the Expansion Rail equal to the difference between the Expansion Joint Opening and 9".
- 3. Install nut for the expansion rail finger-tight. The nut will fully engage bolts with a minimum of one bolt thread extending beyond the nuts. Distort the first thread on the outside of the nut to prevent loosening.

	FY 2025-26
FDOT	STANDARD PLANS

- Section 416. Cutting of reinforcing steel is permitted for drilled hole installation.
- WELDING:
- or E70XX. Nondestructive testing of welds is not required.
- BRIDGE FENCING (ENCLO

LAST REVISION

11/01/24

All welding will be in accordance with the American Welding Society Structural Welding Code (Steel) ANSI/AWS D1.1 (current edition). Weld metal will be E60XX

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