



# *DESIGN STANDARDS*

*FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY  
OPERATIONS ON THE STATE HIGHWAY SYSTEM*

*FISCAL YEAR 2012/2013*

*TOPIC NO. 625-010-003*

*Approved For Use On Federal Aid Projects*

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*I hereby certify that these Design Standards were compiled under my responsible charge from designs prepared, examined, adopted, and implemented by the Florida Department of Transportation in accordance with established procedures, and as approved by the Federal Highway Administration.*

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## REVISIONS

Index Number	Sheet Number	Description	Index Number	Sheet Number	Description	Index Number	Sheet Number	Description
1		Updated STANDARD ABBREVIATIONS	289	6	Added Notes 5 & 6 and Type I Connection to title, and clarified details.	414	1	Changed specification reference from "6-8" to "105" and Added "or MASH 2009 Test Level 3 criteria" to ALTERNATE DESIGN note.
2	2	Rotated line types and changed "Silt Fence" to "Sediment Barrier". Removed symbol for synthetic bales. Deleted the word Attenuator from Crash Cushion (Attenuator)	289	7	New Sheet with Type II Connection details.	414	4	Added language to TRANSITIONS note for QPL Barrier
100		Index deleted, For details formerly contained on these deleted Indexes see the "Florida Erosion and Sediment Control Manual".	289	8	Re-number from Sheet 7.	414	6	Corrected weld symbol and added optional modifications to top of Stake.
101		Index deleted, For details formerly contained on these deleted Indexes see the "Florida Erosion and Sediment Control Manual".	291	1	Added "for Type I Connection to DETAIL E callout. Changed Reinforcing Steel note.	414	7	Added Flowable Fill option to BACK FILLED ROADWAY INSTALLATIONS
102		Index deleted, For details formerly contained on these deleted Indexes see the "Florida Erosion and Sediment Control Manual".	291	3	Clarified SECTION E-E title, and changed callouts to refer to Index 289 C-I-P Transition details. Added "or Joint Sealant" to the 1/2" horizontal joint detail in SECTION B-B.	415	1	Deleted 415 barrier wall drawings and text, replaced with new sheet depicting a parallel Barrier with anchors layout. Revised notes.
103		Index deleted, For details formerly contained on these deleted Indexes see the "Florida Erosion and Sediment Control Manual".	292	1 & 7	Added subtitle "(Option 1 Reinforcing Configuration Shown)" to TYPICAL BOX SECTIONS.	415	3	Deleted 415 barrier wall drawings and text, replaced with new sheet depicting a parallel Barrier with anchors layout. Revised notes.
105	1	Revised "GENERAL NOTES", Note 1. B.	292	2	Added GENERAL NOTE 7 & 11, and SCHEMATIC OF LAP SPLICE LOCATIONS FOR OPTION 2 & 3 REINFORCING CONFIGURATIONS.	415	4	Revised NOTES FOR WALL SHIELDING and moved to page 7, revised notes
106		Index deleted, For details formerly contained on these deleted Indexes see the "Florida Erosion and Sediment Control Manual".	302	2	Added skewed treatment from Index No. 490.	415	5	"TEMPORARY CONCRETE BARRIER", note at the crash cushion in the upper left corner and the fourth diagram down, add the following text to the end of the note: "or when shown on the crash cushion manufacturer's drawings". Added anchors to the four end Barrier units abutting crash cushions, renumbered to sheet 4
199	1	Table 1, under Test Column replaced "Wide With Tensile Strength" with "Wide Width Tensile Strength"	302	3	Changed note reference for skewed bridges to "Sheet 2".	415	7	Added anchors to the four end Barrier units abutting crash cushions, renumbered to sheet 5
200	1	Revised details to show grout underneath pipes	303	1	Updated direction of Flow Arrows	415	8	Added anchors to the four end Barrier units abutting crash cushions, renumbered to sheet 6
200	2	Updated SQUARE & RECTANGULAR STRUCTURES (ALTERNATE B)-TABLE 2 to include up to 20' walls.	303	1	Deleted the 2' level landing requirement throughout Index. Revised Notes 4, 5 and 8	415	9	Deleted sheet
200	5	Updated WALL DESIGNS - RECTANGULAR STRUCTURES (TABLE 8) to include up to 20' walls.	304	1	Deleted the text "Ramp Widths For Curb Ramps CR 1, CR 2, CR 6, CR 7, And CR 8 May Be Reduced To 3' Min. In Restricted Conditions When Approved By The Engineer."	415	10	Added NOTES FOR WALL SHIELDING. Removed propriety names, renumbered to sheet 7
201	1	Added detail for Adjustable Manholes	304	2	Deleted the text "Ramp Widths For Curb Ramps CR 10, CR 11, CR 15, CR 16, And CR 17 May Be Reduced To 3' Min. In Restricted Conditions When Approved By The Engineer."	417	1	Index deleted
201	2	"NOTES (TOPS)", Note 4 changed sheet reference from "...Sheet 3 of 4." to "...Sheet 3." Also from TEMPORARY DRAINS FOR SUBGRADE AND BASE detail note deleted the last sentence.	304	3	Deleted the text "Ramp Widths For Curb Ramps CR 20, CR 21, CR 22, CR 24, CR 25 and CR 26 May Be Reduced To 3' Min. In Restricted Conditions When Approved By The Engineer."	420	1	Changed CROSS REFERENCE to Detail "B". Changed JOINTS note reference for treatment on skewed bridges to Sheet 3. Changed MARKERS and JOINTS notes.
201	3	MINIMUM DIMENSIONS FOR BOX AND RISER SEGMENTS, COMPARATIVE SIDE VIEWS, SEGMENTS FOR SLAB TO WALL DOWEL CONSTRUCTION JOINTS OR MONOLITHICALLY CAST SEGMENTS note changed "h <sub>i</sub> >= zero" to "h <sub>i</sub> >= 2' "	304	6	PLAN VIEW, Changed "3' Min." to "4' Min." Deleted the text "Ramp Widths For Curb Ramps CR 20, CR 21, CR 22, CR 24, CR 25 and CR 26 May Be Reduced To 3' Min. In Restricted Conditions When Approved By The Engineer."	420	3	Added new sheet for skew details from Index No. 490.
201	4	"GENERAL NOTES", revised Note 7.	305	2	VIEWES, Deleted the 2' detectable warning extensions up the ramps.	420	4	Changed Sheet No. and DETAIL "B" to pre-cured silicone sealant
201	5	Modified RECTANGULAR SEGMENT WITH PIPE OPENING AT CORNER, PICTORIAL VIEW detail and notes.	307	1	Replacing missing values in table BACKER ROD BOND BREAKER (CONCRETE-CONCRETE JOINTS)	421	1	Changed CROSS REFERENCE for Detail "B". Changed JOINTS note reference for treatment on skewed bridges to Sheet 3. Changed JOINTS note.
206	1	Revised "GENERAL NOTES", Notes 1 and 4	307	2	MISCELLANEOUS UTILITY DETAILS, under GENERAL NOTES, revised Note 6, and under PAVEMENT REMOVAL AND REPLACEMENT replaced second paragraph with "The replacement asphalt shall match the existing structural and friction courses for type and thickness in accordance with current FDOT asphalt mix specifications."	421	3	Added new sheet for skew details from Index No. 490.
211	1	Added Center of Box Location Reference point on multiple details	307	2	"MISCELLANEOUS UTILITY DETAILS, NOTES FOR UTILITY CONFLICT PIPE", revised Note 5	421	4	Changed Sheet No. and DETAIL "B" to pre-cured silicone
211	2	Revised Inlet bottom/riser details	308	1	Extended Bond Breaker leader to include Transverse Joints in Figures 10.3, 10.4 and 10.5 and deleted from FIGURE 10.4-PARTIAL SLAB FULL DEPTH REPLACEMENT, Saw Cut Existing Tie Bars from leader note.	422	1	Changed CROSS REFERENCE to Detail "A". Changed JOINTS note reference for treatment on skewed bridges to Index No. 420. Changed MARKERS and JOINTS note.
211	3	Revised Inlet bottom/riser details	308	2	In the JOINT DEFICIENCIES, both Spall Nonwheel Path and Spall Wheel Path, Moderate added < in front of the 1/3 slab depth	422	2	Deleted INSTRUCTIONS TO DESIGNER. Added 3/4" V-Groove to VIEW B-B.
212	1	Revised "GENERAL NOTES", Note 1	310	1	Revised notes and offset driveway taper 1 foot from the back of curb. Deleted the text, "4', May Be Reduced To 3' In Restricted Conditions When Approved By The Engineer."	422	3	Changed DETAIL "B" to pre-cured silicone sealant.
213	1	Revised "GENERAL NOTES", Note 1	310	1	Revised Notes 4, 6, 7 and 16, and changed VECP (Value Engineering Change Proposal) to CSIP (Cost Savings Initiative Proposal).	423	1	Add tapered end detail for Bullet Railing attachment (similar to Interim Index 821). Revised post offse dimensions. Changed JOINTS note reference for treatment on skewed bridges to Index No. 420. Changed MARKERS and JOINTS notes.
215	1	"CURB INLET TOP TYPE 10", GENERAL NOTES, Note 6 deleted "...slab opening adjusted to 24" x 36"." and substituted the text "...slab opening adjusted to 22" x 24".	400	1	Revised Notes 4, 6, 7 and 16, and changed VECP (Value Engineering Change Proposal) to CSIP (Cost Savings Initiative Proposal).	423	3	Changed DETAIL "B" to pre-cured silicone sealant (Sheet 3).
217	1	Revised "GENERAL NOTES", Note 2	400	13	Revised the "Guardrail Transition and Connection" information as noted in the ELEVATION view	424	1	Added CROSS REFERENCE to DETAIL "A". Changed MARKERS note.
218	1	Revised "GENERAL NOTES", Note 1	400	16	Revised Note 2	424	3	Added DETAIL "A" (Pre-cured Silicone Sealant) for curbed sections
219	all	Index completely revised/reorganized	400	17	Changed 2" Nom. Diameter to NPS 2 Sch. 40 Galv. Pipe Rail Per ASTM F1083. Revised REFLECTOR SPACING and NOTES based on Specification verbiage changes.	425	1	Changed JOINTS note reference for treatment on skewed bridges to Index No. 420. Changed MARKERS and JOINTS notes
220	1	Revised SECTION AA detail and notes	400	22	Corrected referenced sheet number from sheet 23 to sheet 21 in Notes #2.	425	2	Deleted INSTRUCTIONS TO DESIGNER.
221	1	Revised GENERAL NOTES, Note 1	400	23	Added onto Steel Tube leader in FRONT VIEW detail.	425	3	Changed DETAIL "B" to pre-cured silicone sealant.
231	2	Revised GENERAL NOTES, Note 1a	400	24	"GUARDRAIL", MODIFIED ECCENTRIC LOADER TERMINAL NOTES, Note 7 changed "VECP" to "CSIP".	430	1	Revised Index and deleted sheet 2
232	3	Revised GENERAL NOTES, Note 2	400	25	"GUARDRAIL", "CONTROLLED RELEASE RETURN NOTES", Note 3, deleted the text: "the 32' radius return is to be used only highway speed of 60 mph or less".	470	1	REFLECTIVE RAILING MARKERS, note change note from calling for the reflector to be mounted in the upper groove to mounting on top of the rail per spec 993.
233	1	To PLAN View added Center of Box Location Reference point	402	24	Added Note for Bridge Name Plates.	480	1	Changed ELEVATION MARKERS note.
233	2	To PLAN View added Center of Box Location Reference point	403	3	Changed Concrete Class to "NS". Changed payment for Transition Block to "Concrete Curb (Special), LF".	481	1	Changed * and ** notes.
245	1	In Detail TYPICAL TOP AND APRON the dimension to the top of the rebar in the wall changed from 1" to 2" and to TOP VIEW detail added Center of Box Location Reference point	410	1	Index completely revised/organized	482	1	Changed * and ** notes.
261	2	SECTION AA, moved the dimension arrow down to include the pipe wall thickness	411	1	Revised GENERAL NOTES, Notes 3 and 7.	483	1	Changed * and ** notes.
272	6	Combined notes 1 & 2 and added new note 2	412	2	Added Notes on LIMITATION OF USE and ASPHALT PAD. Added a table in reference to DEFLECTION SPACE AT DROP-OFFS, and made revisions to the detail. Added text to "Type 1 Object Marker" leader in PLAN VIEW OF APPROACH END OFFSET.	490		Index deleted, separate details moved to Indexes 302, 420 & 421.
280	1	"CONCRETE COLLAR FOR JOINING MAINLINE AND STUB PIPE detail", changed Leader Note to "Max. Diameter = 1/2 of Main Line Pipe Diameter (or 1/2 Height of Elliptical Main Line Pipe)" and changed Concrete Collars from Class I Concrete to NS Concrete	410	1	Index completely revised/organized			
280	3	Updated table of Railroad Companies and numbered note and added note 2.	411	1	Revised GENERAL NOTES, Notes 3 and 7.			
282	1	Changed rebar cover in slab from 1 1/2" to 2"	412	2	Added Notes on LIMITATION OF USE and ASPHALT PAD. Added a table in reference to DEFLECTION SPACE AT DROP-OFFS, and made revisions to the detail. Added text to "Type 1 Object Marker" leader in PLAN VIEW OF APPROACH END OFFSET.			
285	1	"FRENCH DRAIN, GENERAL NOTES", Note 9 deleted "...following the typical cross section..." from the first sentence and delete the second paragraph including bulleted items.						
289	5	Added weep hole and underdrain details. Added 1 3/4" offset to base of traffic railing at coping in DETAIL I.						

## REVISIONS

Index Number	Sheet Number	Description	Index Number	Sheet Number	Description	Index Number	Sheet Number	Description
501		Sheet 5 - Corrected "MARAFL" to "MIRAFI" Sheet 6 - Added Application Usage 2 for SYNTEEN SF 11& SF 12 Sheet 7 - Added FORNIT 30 and Added Creep Resistance, Creep Reduction Factor and Usage Application 4 to FORNIT 20 New Sheet 8 Added, Sheets 8 & 9 renumbered to 9 & 10 Sheet 1 - Added "RFLT" to Note 2 Added new Sheets 5 & 10 for TENCATE geotextiles. Renumber all sheets. Sheets 3-12 -Deleted ASTM D3083 & G22 from Biological Durability Property requirements.	600	12	"CHANNELIZING AND LIGHTING DEVICE NOTES", deleted notes 1 and 2 and renumbered remaining notes. Added MODULAR DEFORMABLE DEVICE detail.	5210	1	Deleted INSTRUCTIONS TO DESIGNER; Change spacing of V-Grooves and Intermediate Open Joints. Changed Mortar Plug to Pre-cured Silicone Sealant joint.
			602	1	Deleted Note 2 "WORKERS sign to be removed or fully covered when no work is being performed."	5210	2	Changed Mortar Plug to Pre-cured Silicone Sealant joint.
			603	2	Added new notes #1 and 5	5210	5	Changed Mortar Plug to Pre-cured Silicone Sealant joint.
			607	1	Updated signing and arrow panel display in accordance with 2009 MUTCD changes.	5212	1	Changed Junction Slab detail.
			612	1	Corrected SYMBOLS text for Sign with 18" X 18" (Min.) Orange Flag	5212	2	Changed Junction Slab detail.
			613	1	Revised Duration Notes	5300		Index Deleted.
			616	1	Revised Duration Notes	5301		Moved to Index No. 6030.
510	1	In the heading to the notes for "SUPERELEVATION TRANSITIONS", deleted the second occurrence of "IN ALL". Corrected placement of arrows showing Profile Grade Point, in details 2-LANE, 4-LANE OR 6-LANE PAVEMENT, NO MEDIAN	619	1	Added ADVANCED WARNING ARROW BOARD to drawing. Revised sheet layout, and moved details to new sheet 2.	6010		New Index No. & Title (Previously Index No. 5100).
			619	2	New sheet	6011		New Index No. & Title (Previously Index No. 520) Completely revised.
515	2	Updated offset Driveway Taper to be 1 foot from the back of curb.	623	1	New Index	6020		New Index (Previously Index No. 5300, Sheets 1 & 2) Completely revised.
515	4	Updated offset Driveway Taper to be 1 foot from the back of curb.	628	1	Changed Detail so that there is nothing within the Buffer zone	6030		New Index No. & Title (Previously Index No. 5301) Completely revised.
			635	1	Added Table for Buffer Space	6040		New Index No. & Title (Previously Index No. 20400 - 20440) Completely revised.
515	6	Changed detail titles for LOW VOLUME and LARGE COMMERCIAL OR PUBLIC ROAD OR STREET.	642	1	Corrected offset in detail TWO OR MORE LANES ONE WAY LANE DROP AND LANE SHIFTS -PLAN SHOWN FOR RIGHT LANE MERGE LEFT- INVERTED PLAN FOR LEFT LANE MERGE RIGHT	6100		New Index No. & Title (Previously Index No. 5300, Sheets 3 & 4) Completely revised.
520		Index Deleted Now Index 6011, "C-I-P GRAVITY WALL"				6110		New Index No. & Title (Previously Index No. 5300 Sheets 5-10) Completely revised.
530		Changed Index Title from Rest Area Equipment to Rest Area Pavilion, made changes to general notes, added dimensions to details.	667	1	Revised note on sheets 1 thru 5 - "Aerial work requires the use of a truck mounted attenuator" to "A truck/trailer mounted attenuator is required." (Note 4 on sheets 1 & 2; Note 5 on sheets 3 & 4; and note 3 on sheet 5.)	6120		New Index No. & Title (Previously Index No. 5300 Sheets 11-13) Completely revised.
546		New policy on Sight Distance at Intersections, sheets 1-6	667	6	Corrected labeling of taper location.	6130		New Index No. & Title (Previously Index No. 5300 Sheets 14 & 15) Completely revised.
560	1	Split into 2 sheets, a notes page (sheet 1) and a details sheet (sheet 2) and added new note 7. Added Timber/Asphalt surface type to CROSSING SURFACES table	670	1	Corrected reference to note 6 in detail	6200		New Index No. & Title (Previously Index No. 5300 Sheets 16-18) Completely revised.
			801	1	Under General Notes note 7 requirements for recycled plastic post were revised.	6201		New Index No. & Title (Previously Index No. 5300 Sheet 19) Completely revised.
560	2	New Sheet	802	1	TYPE B FENCE, Note F, in title deleted "operations" and substituted "options"	11200	1	GENERAL NOTES, moved SIGN FACE note to be under ALTERNATE MATERIAL note, and added "BRASS SHIM: Provide shim plate per ASTM B36." where SIGN FACE note was (under FUSE PLATE note). Changed Bolt size from 3/8" to 1/2" in note under Z TYPE WIND Welding note, Base Connection note, Fuse Plate note and Shop Drawings note were revised. Tolerances note was deleted. Deleted SINGLE COLUMN GROUND SIGN NOTES, Note 11.
591	1	New Index	803	1	Deleted from General Note 1 "When approved by the Engineer the Contractor may substitute any cantilever slide gate from the fencing systems on the Qualified Products List."			Modified Height in Typical Elevation to read "7'-0" (Min.), 8'-0" (Max.)
600	1	Index reorganized. "GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES", "ABBREVIATIONS", changed description of "TMA" to read: "Truck/Trailer Mounted Attenuator", and changed "VECP Value Engineering Change Proposal" to "CSIP Cost Savings Initiative Proposal", also changed throughout Index 600 series.	810	1	All Sheets changed cut at bottom of post to 45 degree angle. Modified TYPICAL SECTION ON CONCRETE PARAPET to show Traffic Railing and to clarify fencing shall not attach to top of Traffic Railing.			Weld symbol revised. Detail B revised. Brass Shims added to Shim Detail. Added Section W 8x18 and added "w" column in BASE CONNECTION DATA table and changed leader from 3/4" to w in BASE CONNECTION and SECTION A-A details. Configuration revised and S3x5.7 post added.
600	3	Rearranged notes, HIGH VISIBILITY SAFETY APPAREL and REGULATORY SPEEDS IN WORK ZONES were moved over from sheet 4. Removed detail of TYPICAL PLACEMENT OF TEMPORARY RAISED RUMBLE STRIPS and TEMPORARY RAISED RUMBLE STRIP SET to sheet 4. Under the heading SUPERELEVATION replaced the term normal "cross slope" in both the text description and in the heading of the table with the term normal "crown".	810	2	Added 4" anchor bolt embedment dimension to DETAIL "A".	11200	2	Added U-Bolt material specifications to TYPICAL DETAIL OF SIGN & TRUSS CONNECTION detail.
			811	1	Added Traffic Railing and * note. Deleted or changed "Barrier" to "Parapet" where appropriate.	11310	1	Deleted payment note.
			812	3	Added 4" anchor bolt embedment dimension to PIPE CLAMP CONNECTION DETAIL.	11310	2	Changed plate washer size from 1/4" to 3/8" in Base Plate Plan View and modified gap dimension from 1/2" to Upright Thickness + 1/8" (1/2" Min.) in Section B-B.
600	4	HIGH VISIBILITY SAFETY APPAREL and REGULATORY SPEEDS IN WORK ZONES notes moved to sheet 3. FLAGGER CONTROL and SURVEY WORK ZONES moved to sheet 5. Added the following details: TYPICAL PLACEMENT OF TEMPORARY RAISED RUMBLE STRIPS, TEMPORARY PORTABLE RUMBLE STRIP SET.	820	1	Changed post offset dimensions to joints. Added "Bullet" to title and PAYMENT note. Added "Bridge" and "Bullet" to title; Changed * note reference for Skew Treatment to Index No. 420, and changed DETAIL "A".	11310	3	Added limitation of (For trusses longer than 36') to Truss Plate Connection Detail.
			821	1	Changed post offset dimensions to joints. Added tapered end detail. Added "BRIDGE" to title. Changed NOTES to CROSS REFERENCES and Added Note 1.	11310	5	Changed dimensions A & B to EA & EB in Detail L, M and P.
600	5	Revised INTERSECTING ROAD SIGNING note. Removed SIGN PLACEMENT note, added FLAGGER CONTROL and SURVEY WORK ZONES notes, revised standard sign number for the END ROAD WORK SIGN from G20-2A to G20-2.	822	1	Added "BRIDGE" to title.	11320	1	Added Notes 4j and 14.
			822	2	Moved RAILING NOTES to Sheet 3 and changed RAIL INSTALLATION, RAIL SPLICES and SHOP DRAWING notes.	11320	2	Changed plate washer size from 1/4" to 3/8" in Plan View Base Plate and modified gap dimension from 1/2" to Upright Thickness + 1/8" (1/2" Min.) in Section A-A.
600	6	Revised Details and notes	825	3	Added Sheet 3 with Tapered End Details	11320	4	Changed dimensions A & B to EA & EB in Details H, I and K.
600	7	Added new smaller PROJECT INFORMATION SIGN DETAIL 45 MPH OR LESS. Added reference to Index 11200 for splicing of panel and sheeting. New note 3, Payment for Project Information sign shall be included in Lump Sum MOT.	826		New Index	11860	3	Added Stub Length to POST AND FOUNDATION TABLE and Note 3.
			850		Index Deleted			Changed 12" dia. PVC to 18" dia. In DRIVEN POST DETAIL IN CONCRETE. Also, added "2" Asphalt or Grout" note around post. Revised galvanizing portion of Note 3 of Slip Base Notes from ASTM B633 to ASTM F2329.
			851		Index Deleted			New Index
600	8	Added RUMBLE STRIPS AHEAD (MOT-18-10) and BE PREPARED TO STOP (W3-4) signs, changed designation of WORKERS sign to (W21-1) for the symbol sign and (W21-1A) for the word message sign; and added Graphic sign with motorcycle (W8-15P) under GROOVED PAVEMENT AHEAD (MOT-15-06) and LOOSE GRAVEL (W8-7) sign.	852		Sheets 1-3 - Changed railing to match Index No. 852.	11870		Gauge and dimension lines removed from SECTION AA
			860		Changed post spacing to match 852 and corrected references to "Sheet 3" for Detail "B" in ELEVATION OF INSIDE FACE OF	13417	1	Revised Height from "7" Std." to "7" Min. - 8" Max. CASE IX (MILE POST MARKER) Mounting height of MILE POST MARKERS changed from 5' to the center of the marker to 4' to the bottom of the MILE POST MARKER, and CASE IX (MILE POST MARKER) note revised with reference to Section 2H of the
			861		New Index replaces Index No. 850	17302	1	Revised note for crosswalk widths by adding that "The width is measured from inside of line to inside of line."
			862		Index Deleted			Crosswalk marking revised and Sheet numbers removed from SCHOOL CROSSWALK note at bottom of sheet.
600	9	Added note that Standard Orange Flags are not to be used on portable sign supports. Added note to clarify that Type B lights are not required on portable sign supports and revised REMOVING PAVEMENT MARKINGS note. Changed "ADVANCED WARNING ARROW PANEL " to "ADVANCED WARNING ARROW BOARD".	862		Index Deleted			
			870	1	Removed Alternate Design notes			
			880	1	Removed Alternate Design notes			
			5100		Index Deleted; replaced with Index No. 6010, "C-I-P CANTILEVER RETAINING WALL".			
600	10	Added "PEDESTRIAN AND/OR BICYCLIST WAY DROP-OFF CONDITION NOTES" to sheet. Added criteria for bike and sidewalk drop-off to match PPM ch 8.8 criteria.	5200		Sheets 1 - 16: Merged Index 5201-5207. Changed Design Specification to LRFD and added 110, 130 & 150 mph Wind Foundation Designs. Revised, combined and deleted redundant notes. Changed dimensions of Bars P5 & P6, and radius of Bar P3 in the BAR BENDING DETAILS. Deleted all foundation options except previous Option "E". Added LOW CLEARANCE OPTION. Added 45 degree post details. Added option for texture surface on back of panels. Added designs for Loose Granular Soil (N = 4 to 9).	17344	1	
600	11	Added new Note 5, and changed "should" to "shall" in note No. 2 under PLACEMENT OF BUSINESS ENTRANCE SIGNS.				17344	2	

## REVISIONS

Index Number	Sheet Number	Description	Index Number	Sheet Number	Description	Index Number	Sheet Number	Description
17344	3	Crosswalk marking revised and sheet numbers removed from SCHOOL CROSSWALK note at bottom of sheet. Also Asterisk Symbol added to note condition 7 under example 7 new sign symbol and asterisk added to detail.	17501	1	Deleted Notes 6, 7, 15, 21 and 24. Deleted Surge Protector Specifications.	17745	3	Revised weld attachment of arm to base plate in Detail 'J' to provide a more fatigue resistant attachment. Change last sentence of note for Section H-H to "Up to a maximum of two longitudinal seam welds are permitted."
17344	5	Deleted 3/8" from Wire Rope Clamp leader on MOUNTING DETAIL.	17502	1	Deleted sheet 1 and moved into Standard Specifications Book also moved last paragraph from notes to sheet 2 and renumbered remaining sheets	17745	4	Revised weld attachment of arm to base plate in Detail 'O' to provide a more fatigue resistant attachment. Change last sentence of note for section M-M to "Up to a maximum of two longitudinal seam welds are permitted."
17345	2	Marking width changed	17502	2	Added HIGHMAST POLE WIRING DIAGRAM detail to sheet and Moved note from sheet 1 over, renumbered sheet as sheet 1	17745	5	Revised the leader description for Top View and Cut-Away View for option 'a' from 5/16" hole to 13/16" hole and 3/8" nut to 3/4" nut and revised J hook detail, removed grout pad, changed cap bolt size and revised 'LL' definition.
17345	3	Revised Acceleration and Deceleration Lanes with 12" Solid White Lines, And 6" or 12" White 3'-9' Skip Line to Comply With The 2009 M.U.T.C.D.	17502	3	Renumbered to Sheet No. 1, and revised note No. 9 and deleted note No. 10.	17745	5	Revised the leader description for Top View and Cut-Away View for option 'a' from 5/16" hole to 13/16" hole and 3/8" nut to 3/4" nut and revised J hook detail, removed grout pad, changed cap bolt size and revised 'LL' definition.
17345	4	Changed dimension of RPM spacing from 2'-6" to 2'-4" on WRONG WAY ARROW detail.	17502	4	Renumbered to Sheet No. 2	17764	1	Changed pedestal on Transformer base from Steel to Aluminum. Changed pedestrian signal faces to indicate Count
17346	1	Changed dimension of 3' Skip markings from 8" to 6"-12".	17502	5	Renumbered to Sheet No. 3	17784	1	Revised Notes by adding note No. 1. Changed "Steel" to "Aluminum" in FIGURE B. Revised 5' to 5'-6" in FIGURE C.
17346	2	LINE BEGINS OPPOSITE RADIUS POINT was deleted form PAVEMENT MARKINGS FOR INTERSECTIONS WITH MAJOR AND MINOR ROADS detail. Revision Date 01/01/10 was added.	17502	6	Renumbered to Sheet No. 4. Revised leader notes to conform with specifications. Deleted ground wire and conduit from WIRING DETAILS.	17784	1	Changed Pedestal on Transformer base from Steel to "PEDESTRIAN DETECTOR ASSEMBLY INSTALLATION DETAILS", "CASE I", changed "FIGURE F", to "FIGURE E". "CASE II", added "ALTERNATE TO FIGURE E".
17346	3	Dimensions of arrows modified	17502	7	Renumbered to Sheet No. 6, and revised pull box detail measurements to 24" x 13". Deleted REINFORCEMENT LAYOUT detail. Deleted dimension leaders and rebar detail in SECTION C-C. Added cross-section detail to SLAB DIMENSIONS, and revised spacing dimension	17784	2	"CASE I", changed "FIGURE F", to "FIGURE E". "CASE II", added "ALTERNATE TO FIGURE E".
17346	4	Changed standard crosswalks to special emphasis	17504	1	"SERVICE POINT DETAILS", "DETAIL B", drawing on the left; deleted "(See Detail Index 17503)".	17882	1	MUTCD updated markings on all gate arms to be vertical, replaced all 45 degree markings with vertical striping.
17346	7	Added Detail B, for Detail A changed layout distance from beginning of numbers to the beginning of the taper from 117' - 8" to 120' and removed the 50' dimension following the first letter to the beginning of the taper.	17505	1	Revised Notes and Detail in lower left PLAN OVERHEAD POWER SUPPLY.	17882	2	MUTCD updated markings on all gate arms to be vertical, replaced all 45 degree markings with vertical striping.
17346	8	Changed dimensions on TYPICAL PAVEMENT MARKINGS FOR R/R CROSSING detail from 20' to 15' outside to outside.	17515	2	Removed QPL Language from Index. Revised note 8 to read part (a.) and added note 9 to read part (b.). Deleted part (c.) from note 8. Added note 10 as well.	17882	3	RAILROAD CROSSING AT MULTILANE ROADWAY detail, changed leader note from "" to "See Note 5".
17346	10	Deleted last row in APPROACH SPEED table. Changed "high" to "special" in note 3. Rotated all signs 90 degrees and added "100' of 6" Solid White" to all details. Deleted SCHEME 2 Crosswalk with Yield Signing.	17515	3	Added 15' to Fixture Arm Length on ARM ELEVATION detail and added dimensions in Section AA	17882	4	MUTCD updated markings on all gate arms to be vertical, replaced all 45 degree markings with vertical striping.
17346	14	Revised Note 2	17515	4	Changed ASTM Specification in note 1 and added "yield strength and tensile strength" to note 1 (d)	17890	2	"FIGURE-G", Deleted note describing DRAW BRIDGE AHEAD sign and replaced with FTP-84-09.
17347	1	Sheet completely revised.	17600	1	Type II ** removed from Call Box/Mile Marker note.	17900	5	Sheet completely revised
17347	2	Reorganized sheet details and revised details to comply with notes from sheet 1.	17700	1	New Index	17900	6	Changed the pole offset dimension from 15' (Min) to "Varies". Changed the unit mounting height from 16' - 23', to "Varies". Changed sheet subtitle to TYPE II WIRELESS SENSOR MICROWAVE RADAR.
17347	3	Reorganized sheet details and revised sheet details to comply with notes from sheet 1.	17721	1	Deleted "AND UNDER DRIVEWAYS" from FIGURE A. Revised note 2 under FIGURE B. Added "OR DIRECT BORING" to FIGURE C, and extended Base hatch across "Flowable Fill." Changed hatch to Finished Surface Of Roadway in FIGURE D, and took "CURB" out of subtitle	17900	7	SOLAR POWER POLE WITH POLE MTD. CABINET & SOLAR POWER POLE WITH BASE MTD. CABINET details, changed leader note "Pull box (Ref. Index 17721)" to "Pull box (Ref. Index 17700)" and removed references to the Telco Service Box and Service Line from both Solar Power Pole details.
17347	4	Reorganized sheet details and revised sheet details to comply with notes from sheet 1. Added new details for "bike lane and on-ramps".	17721	1	Deleted "AND UNDER DRIVEWAYS" from FIGURE A. Revised note 2 under FIGURE B. Added "OR DIRECT BORING" to FIGURE C, and extended Base hatch across "Flowable Fill." Changed hatch to Finished Surface Of Roadway in FIGURE D, and took "CURB" out of subtitle	18101		Took out Grout pad in details
17349	1	Added/deleted sign details to CASE I Yellow Reflectors "Nose Widths 30' and Greater" and "Nose Widths less than 30' ".	17723	1	Added "Fy of steel and base wall thickness" to the end of note 6. Changed Information required on the aluminum identification tag revised note 9 and deleted note 8 and 6d and added Note 10	18110	1	Sheet revised
17352	1	"TYPICAL PLACEMENT OF REFLECTIVE PAVEMENT MARKERS", "Note 3", insert "longitudinal" between "solid" and "lines".	17723	2	Deleted columns BD & BE in Table of Strain Pole Variables. Revised weld attachment of pole to base plate in Detail C to provide more fatigue resistant attachment.	18110	2	Sheet revised
17352	2	Raised Reflective Pavement Markers moved to Center of Chevrons in details and added note 2.	17723	3	Revised the leader description for Top View and Cut-Away View for option 'a' from 5/16" hole to 13/16" hole and 3/8" nut to 3/4" nut.	18111	1	FOUNDATION AND HANDHOLE DETAIL, Changed Plate Washer requirements and added leader 1 1/2" diameter Anchor Bolt (typ); and dimension lines for Bolt embedment into the foundation
17354	1	New Index	17723	3	Revised the leader description for Top View and Cut-Away View for option 'a' from 5/16" hole to 13/16" hole and 3/8" nut to 3/4" nut.	18111	2	Modified Design Notes and Pole General Notes.
17355	2	Revised FTP-16-10 per the Turnpike's request. Deleted FTP-16-06 DETAIL. Moved FTP-17-06 to Sheet No. 3, and added the following: FTP-19-06, FTP-20-06, FTP-21-06, and added detail FTP-17-06.	17727	1	Deleted second catenary wire on plan view detail for oval eye bolt. Changed Schedule "40" to Schedule "80" throughout the sheet also revised the vertical clearance note to reference the Standard Specifications and not the MUTCD.	18113	1	Revised location of couplings
17355	3	Added detail FTP-17-06.	17727	2	Revised note in Signal Detail to read "1 1/2" Stainless Steel Pipe Or Schedule 80 Aluminum Pipe (T6061) With NPSM Threads" also revised the vertical clearance note to reference the Standard Specifications and not the MUTCD.	18113	2	Revised pole burial depth table.
17355	4	Changed sheet layout to adjust scale for details FTP-23-06 and FTP-24-06. Moved details FTP-19-06, FTP-20-06, FTP-21-06, and FTP-22-06 to Sheet No. 2. Changed Message on Sign No. FTP-22-06.	17727	2	Revised note in Signal Detail to read "1 1/2" Stainless Steel Pipe Or Schedule 80 Aluminum Pipe (T6061) With NPSM Threads" also revised the vertical clearance note to reference the Standard Specifications and not the MUTCD.	18202	1	Deleted "PULL BOX AND" from sheet title.
17355	5	Changed note on detail FTP-31-06 to read "Optional Location of 12" Yellow Signal".	17743	1	Deleted columns FM/SM and FQ/SQ from Arm Design Table - All Cases. Deleted columns BD and BE from the Pole, Connection and Shaft Design Table - Single and Double Arm. Changed column RC values for rows S1, S2, S21 Lum and S22 Lum from 10 to 9.	18202	1	Sheet revised
17355	7	FTP-54-06 and FTP-55-06 were changed to FTP-54L-06 and FTP-55L-06 for (Left Turn) and Note FTP-54R-06 and FTP-55R-06 for (Right Turn) added.	17743	2	Deleted columns FM/SM and FQ/SQ from the Arm Design Table - All Cases, and changed the values for column FJ/SJ and row E1 from 22 to 23. Deleted columns BD and BE from the Pole, Connections and Shaft Design Table - Single & Double Arm. Changed column FJ/SJ values	18300	1	Index renamed to DYNAMIC MESSAGE SIGN WALK-IN (Sheet 1) Revised and added sheet from Index 18302 as sheet 1. Changed Drilled Shaft height and revised clearance
17355	8	FTP-70-06 sign detail revised, dimensions and text size in line 3.	17743	3	Deleted entire sheet. "F" Mast Arms incorporated into "E" Mast Arms.	18300	2	Revised and added sheet from Index 18303 sheet 2 as sheet
17355	9	Added detail FTP-84-09. Changed note to read "Yellow Background" for the following details: FTP-79-06, FTP-80-06, and FTP-81-06.	17743	1	Deleted columns FM/SM and FQ/SQ from Arm Design Table - All Cases. Deleted columns BD and BE from the Pole, Connection and Shaft Design Table - Single and Double Arm. Changed column FJ/SJ values	18300	3	Added sheet from Index 18303 sheet 1 as sheet 3, revised conduit and cabling details and conduit sizes. Added Note 3 and adjusted drilled shaft. Deleted "POLE TOP CUT-AWAY"
17355	11	Added sign details FTP-18-10, MOT-18-10 and MOT-19-11.	17743	2	Deleted columns FM/SM and FQ/SQ from the Arm Design Table - All Cases, and changed the values for column FJ/SJ and row E1 from 22 to 23. Deleted columns BD and BE from the Pole, Connections and Shaft Design Table - Single & Double Arm. Changed column FJ/SJ values	18300	4	New Sheet
17357	1	Changed notes 2 and 4 to start by reading "Location of Sign No." and changed Sign R12-5 size from 30"x36" to 24"x36".	17745	1	Modified Notes 1, 4, 8, 15 and deleted note 17. Modified 'UB' dimension and Standard Design and Special Design Notes	18300	5	New Sheet
17500	1	Revised METAL POLE WIRING DETAIL, WIRING DIAGRAM, and METAL POLE leaders and drawing. Deleted ground conduit and ground wire from METAL POLE WIRING DIAGRAM. Deleted "FNQ" from leader text.	17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	18300	6	Added sheet from Index 18305 sheet 2 as sheet 6, revised notes and details.
17500	2	Deleted REINFORCEMENT LAYOUT detail. Deleted/changed several dimension leaders and notes on SLAB DIMENSIONS and SECTION A-A details. Revised notes 1, 6, and 7. Deleted notes 2 and 8.	17745	3	Deleted entire sheet. "F" Mast Arms incorporated into "E" Mast Arms.	18300	7	Added sheet from Index 18305 sheet 1 as sheet 7, revised notes and details.
17500	3	Deleted REINFORCEMENT LAYOUT detail. Deleted/changed several dimension leaders and notes on SLAB DIMENSIONS and SECTION B-B details. Revised notes 1, 6, 7, and 8. Deleted note 2.	17745	1	Modified Notes 1, 4, 8, 15 and deleted note 17. Modified 'UB' dimension and Standard Design and Special Design Notes	18300	8	Sheet moved from sheet 1 to sheet 8, revised notes and
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	18300	9	Added sheet from Index 18301 sheet 1 as sheet 9, revised notes and details.
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	18301	10	New Sheet
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	18301	1	Deleted Index and moved to Index 18300 (sheet 9)
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	18302	1	Deleted Index and moved to Index 18300 (sheet 1)
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	18303		Deleted Index and moved to Index 18300 (sheets 2 & 3)
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	18305		Deleted Index and moved to Index 18300 (sheets 6 & 7)
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	20005		New Index
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	20010		New Index
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	20036		New Index
			17745	2	Deleted "F" Mast Arms incorporated into "E" Mast Arms.	20045		New Index

**REVISIONS**

Index Number	Sheet Number	Description	Index Number	Sheet Number	Description
20054		New Index	21110	2	Added note requiring Sleeve Anchors at fixed side corners of sidewalk cover plate.
20063		New Index	21200	1	Sheets 1 - 3: Changed "Pilaster" to "Pedestal". Deleted 1" PVC Weep Hole.
20072		New Index			Sheets 1: Revised TYPICAL SECTIONS and "Slip Forming note. Changed** note to include concrete curb and raised sidewalk; Added "or Curb" to Pedestrian/Bicycle Railing callouts on PLAN VIEW and TYPICAL SECTIONS.
20078		New Index			
20084		New Index			
20096		New Index			
20199	1	Added Florida-I Beams and changed the 3rd sentence in BEAM CAMBER AND BUILD-UP NOTES. Data Table Updated (See FDOT2008 MRI or later). Deleted INSTRUCTIONS TO DESIGNER"; Added SECTION A-A location to BUILD-UP DIAGRAMS; Changed note at CL Beam in SECTION A-A. Changed title and deleted reference to AASHTO and Bulb-T beams.	21200	2	New sheet.
			21200	3	Added Load Case 1 & 2 to note 4, "Varies" to anchor dimension on DETAIL "A"; Changed REINFORCING STEEL NOTES a & b to include 8" wide concrete curb. Added Bars 4J, REINFORCING STEEL NOTE d, TABLE 1, and changed the number of Bars 4G and anchor bolt notes. Deleted Grout Pad.
20210	2	Changed Notes 2, 5 & 12 and "Timber Blocking" to "Temporary Blocking" in TEMPORARY BLOCKING detail.	21210	1	Changed Index title to "Conduit Details", and added dimensioning for location of steel pipe; Changed reference for Note 6 to Note 7.
20248	3	Changed number of Bars D1 & D2 in BILL OF REINFORCING STEEL.	21210	2	Added Note 6 and renumbered Notes 6-8; Changed Notes 3, 7 (previously Note 6) & 9.
20254	3	Changed number of Bars D1 & D2 in BILL OF REINFORCING STEEL.	21220	1	Added angle of visibility to RFL, RCL and GCL in LEGEND.
20263	3	Changed number of Bars D1 & D2 in BILL OF REINFORCING STEEL.	21220	2	Added 2" nominal dimension between RCL or GCL and Bottom of Girder, and changed "Install Light Fixture..." callout in ELEVATION VIEW.
20299	1	Added SECTION A-A location to BUILD-UP DIAGRAMS; Changed note at CL Flanges in SECTION A-A.	21240		Changed pay item Note 18
20310		Deleted Index	21250		New Index
20320		Deleted Index	21251		New Index
20400		Deleted Index and moved to Index 6040 (Sheet 1)	21300	1	Added dimension "H" to Bar TYPE 25.
20410		Deleted Index and moved to Index 6040 (Sheet 2) and merged.	21600	1	Added Payment and Applicability notes.
20412		Deleted Index and moved to Index 6040 (Sheet 2) and merged.	21802	1	Renumbered and revised ANCHOR PROTECTION TYPES. Added 4 1/2" cover for footings. Changed ANCHOR PROTECTION FOR PT BARS details.
20430		Deleted Index and moved to Index 6040 (Sheet 3)			
20440		Deleted Index and moved to Index 6040 (Sheet 4)			
20500		Deleted with AASHTO Beam Sheet (Index 20110 - 20178)			
20501		Deleted Index	21803	1	Revised Top Inspected Anchor with Grout details.
20502		Added material specifications to Note 3.	21803	2	Added Grout Outlet to PT Bar Inlet Detail & revised PT Bar Grouting Details.
20510		New Index			
20511		New Index	21803	3	Added title "GROUTING FOR SPAN BY SPAN CONSTRUCTION".
20512		New Index	21930	4	Added "Tightly blocked and securely wrapped" to Wire Rope callout in SECTION C-C.
20600		Changed "High Capacity Piles" to "High Moment Capacity Piles (Index 20631)" in CONCRETE CLASS and CONCRETE STRENGTH notes. Added strand end protection requirements for permanently exposed pile head. Deleted Stress Relieved Strand (SR) option.			
20601		Changed Note 4 to allow S-I-P corrugated galvanized steel duct for dowel holes.			
20602		Changed NOTE.			
20612		Added '@ 6" pitch, full length' to W3.4 Spiral Ties callout in SECTION D-D. Changed ALTERNATE STRAND PATTERNS.			
20614		Added '@ 6" pitch, full length' to W3.4 Spiral Ties callout in SECTION D-D. Changed ALTERNATE STRAND PATTERNS.			
20618		Added '@ 6" pitch, full length' to W3.4 Spiral Ties callout in SECTION D-D. Changed ALTERNATE STRAND PATTERNS.			
20620		Added '@ 6" pitch, full length' to W3.4 Spiral Ties callout in SECTION D-D. Changed ALTERNATE STRAND PATTERNS.			
20624		Consider adding "@ 6" spacing" to W3.4 Spiral Ties in SECTION D-D for Nondrivable pile splice. Changed ALTERNATE STRAND PATTERNS.			
20630		Added '@ 6" pitch, full length' to W3.4 Spiral Ties callout in SECTION D-D. Changed ALTERNATE STRAND PATTERNS.			
20631		Changed "HIGH CAPACITY" to "HIGH MOMENT CAPACITY" in PILE SPLICE DETAIL.			
20654	1	Deleted DESIGN PARAMETERS note.			
20654	2	Added epoxy thickness dimensions to DETAIL "A".			
20660	1	Deleted DESIGN PARAMETERS note.			
20660	2	Added epoxy thickness dimensions to DETAIL "A".			
20900	1	Deleted Note 9.			
20900	2	Added COPING TRANSITION DETAIL FOR RETAINING WALLS WITH 2'-3" COPING HEIGHT.			
20910	1	Deleted Note 9. Added Bars 5B2 (Top) & Bars 5B3 (Bottom) for skewed end.			
20910	2	Added COPING TRANSITION DETAIL FOR RETAINING WALLS WITH 2'-3" COPING HEIGHT.			
21100	1	Revised and Deleted redundant notes. Changed "Direction of Movement" angle measurement and corrected skew angle details in MOVEMENT SCHEMATIC.			
21100	2	Moved MOVEMENT SCHEMATIC to Sheet 1			
21110	1	Deleted Notes 2, 3 & 5.			