DESIGN STANDARDS

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

2013

TOPIC NO. 625-010-003

Approved For Use On Federal Aid Projects

For Martin Knopp, Division Administrator

State of Florida, Department Of Transportation
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CERTIFICATION STATEMENT

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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As To Planning
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17900

As To Roadway
Design Standards Nos.

001-105
199-288
293-415
430, 461
500
505-535
546, 560
600-803
870-880
11200-11860
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As To ITS
Design Standards Nos.

18100-18300

As To Structures
Design Standards Nos.

289-292
420-425
470-484
501, 540
810-862
5200-6201
11870
20005-21930

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Design Standards Nos.

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REVISIONS

Index No	Sheet No	Description
Abbreviations and Symbols		
1		Added PPP for Polypropylene pipe. Added CJP for Complete Joint Penetration weld. Added LCD for Longitudinal Channelizing Device.
Drainage		
199	1	Removed reference to deleted "Index 102" from the STANDARD CRITERIA table.
201	2	Added to the end of leader note in EYEBOLT AND CHAIN FOR LOCKING GRATES TO INLETS detail "or Precaster QCP Approved Connector".
	5	RECTANGULAR SEGMENT WITH PIPE OPENING AT CORNER, Note 1 revised to say "1. Submit Shop Drawings of corner openings for approval by the engineer of record."
211	2	Clarified lapping of vertical legs in the back wall of the Precast/WWR inlet option.
	3	Added 4 1/2" bend to Bar 4E.
	4	Added 4 1/2" bend to Bar 4E and changed length in BILL OF REINFORCING STEEL table. Clarified lapping of vertical legs in the back wall of the Precast/WWR inlet option.
261	2	Corrected font mismatch.
272	6	GENERAL NOTES, Note 2 "...pipe (PVC) side drain.." should be "...pipe (PVC) and polypropylene pipe (PPP) for cross drain.."
273	7	GENERAL NOTES, Note 2 "...pipe (PVC) side drain.." should be "...pipe (PVC) and polypropylene pipe (PPP) for side drain.."
289	7	Clarified 2'-0" additional length in SECTION A-A and SECTION B-B for Payment of Type II Connection.
Curbs, Concrete Pavement and Sidewalks		
304	6	Removed the 2' Level Landing from PICTORIAL VIEW A in upper lefthand corner of sheet.
307	1	Deleted GENERAL NOTE 10.
Traffic Railings		
400	13	Deleted "Guardrail Transition Cost" note from the ELEVATION view detail.
	17	Revised Note 1 to better clarify the criteria associated with implementing PEDESTRIAN SAFETY TREATMENTS, Deleted cost information note (Note 3). Changed "Pedestrian Ways" to "Sidewalks". Changed "Bikeways" to "Shared Use Paths".
	18	Revised "See Note 1" to "See PEDESTRIAN SAFETY TREATMENTS " on PLAN view detail. Deleted Note 1, renamed Note 2 to Note 1 and renamed Note 3 to Note 2. Revised the renumbered Note 2 for clarity. Deleted dimensions based on proprietary products for SECTION BB and SECTION CC.
	22	Revised the "Class 1 " concrete label to read "Class NS" concrete on SECTION detail.
	23	Changed "Pedestrian Ways" to "Sidewalks". Changed "Bikeways" to "Shared Use Paths".
	26	Deleted last sentence from Note 1 of the LATERAL PLACEMENT ON SLOPES table.
414	1	Corrected Specification Section from "6.8" to "105" in FABRICATION NOTES, added "ALTERNATE DESIGN" notes.

Index No	Sheet No	Description
415	2 thru 7	Revised Dot pattern note within sheet legend
	2	Deleted star note from Legend, and changed ALIGNMENT AND LENGTH OF NEED notes to state "bolts or stakes. See sheet 3 through 6...".
	3	Changed "Design Speed" to "Work Zone Speed" for Length of Advancement table.
	4	Changed "Near Lane Line Or Near Traffic Lane" to read "Edge Of Travel Way". Broke barrier system with line to illustrate actual length.
	5 & 6	Changed "Traffic Lane" to "Travel Way".
	7	Added note 4, and flipped "Redirective Option" with "Temporary"
420	2	Corrected 10 3/4" dimension at top of railing in SECTION A-A.
470	1	Renamed "Pedestrian Safety Pipe Rail" to "Pedestrian Safety Treatments". Removed "The Pedestrian Safety Pipe Rail," from the "PAYMENT: " note.
General		
514	1	Revised GENERAL NOTES, Notes 1 and 3; also revised symbol notes for calirity.
	2	Revised symbol to match Sheet 1.
515	1	Added missing Return Radius Points to SKETCH ILLUSTRATING DEFINITIONS plan view.
	2, 3 & 4	Deleted text and associated leader note "4' Min., May be reduced to 3' Min. in restricted conditions when approved by the Engineer." and replaced with "4' Min."
	5	Changed "Edge of Pavt" to "Edge of Travel Way". Changed "Rdwy. Pavt." to "Travel Way". Added Return Radius Points on PLAN views. Added notes for Intersections. Renamed "LONGITUDINAL SECTION" to "DRAINAGE SECTION". Added "TURNOUT" to "PROFILE AND END VIEW" title.
	6	Changed "roadway pavement" to "travel way pavement thickness".
	7	Deleted text "4' Std.; 3' Min." replaced with "4' Min." Changed "Roadway Pavt." to "Travel Way".
516	1	Changed "Edge of Pavt." to "Edge of Travel Way".
Traffic Control Through Work Zones		
600	2	Added a sentence to end of SIGHT DISTANCE note in reference to "Construction equipment".
	3	Added "107/2004 or " to HIGH-VISIBILITY SAFETY APPAREL.
	4	Deleted the flashing light and flag from the ONE LANE ROAD AHEAD signs.
	6	Added note No. 2 under GENERAL NOTES. Changed note No. 7 under POST MOUNTED SIGN NOTES, from "3 ft^2 " to "5 ft^2" and removed "for single post... post mounting".
	11	Added to TEMPORARY LANE SEPARATOR notes. Revised BUSINESS ENTRANCE SIGN notes and deleted note No. 5.
	12	Added Longitudinal Channelizing Device (LCD). Added note 11 and note 12 to the GENERAL NOTES.
602	1	Added " * Midway between signs" under the DISTANCE BETWEEN SIGNS table.
615	1	Corrected merging traffic sign direction.
616	3	Changed "significant right turning" to "significant left turning" in note No. 1.

Index No	Sheet No	Description
619	1	Added New Note 2, Notes 3, 4, 5 and 8 revised. Revised detail for Work on Shoulder and Work Within Travel Lane.
	2	Deleted detail for Work Within Travel Lane, Outside or Inside Lane. Revised detail for Work Within Travel Lane, Center Lane and detail for Work Within Travel Lane.
642	1	Deleted "6" Min., 4' Std." and replaced with "See Index 415". Changed 1:20 to 1:15 for barrier system transition angle.
651	1 & 2	Changed 1:20 to 1:15 for barrier system transition angle.
660	1	Added Pedestrian LCD to SYMBOLS and MID-BLOCK SIDEWALK CLOSURE WITH TEMPORARY WALKWAY.
Roadside Safety		
700	2	GENERAL NOTES, Note 1 now begins "When shielding an object and sidewalks..." Note 2, Updated reference to the Utility Accommodation Manual.
Fencing and Pedestrian Railings		
801	1	Added to note No. 2 and added Type IIB to note No. 11.
852	1	Changed size of Post "A" and Post "B" in TABLE 1 - RAILING MEMBERS.
	3	Changed Top Rail overhang to 1 5/8" in DETAIL "J".
	4	Changed Base Plate post spacing in SECTION G-G.
	8	Clarified intent of 3' Min. dimension for Case I.
862	4	Corrected Base Plate post spacing edge dimensions in SECTION G-G.
	8	Clarified intent of 3' Min. dimension for Case I.
870	5	Clarified intent of 3' Min. Dimension for TYPICAL SECTION ON CONCRETE SIDEWALK.
880	5	Clarified intent of 3' Min. Dimension for TYPICAL SECTION ON CONCRETE SIDEWALK.
Sound Barrier Systems		
5200	1	Removed Note K; Changed Note E (title only), H, and J.
	2	Clarified Note 1.
	3	Changed Min. dimension of Top Panel; other minor clarification changes to notes and call-outs.
	4 thru 13	Completely reorganized details; clarified labels; removed unnecessary information and redundant information; drainage hole spacing redefined; eliminated C-I-P collar details where possible; developed new C-I-P collar for 90 degree corner typical piles.
	15	Modified Bar Bending Details to match changes on Sheets 4 thru 13; Removed redundant notes; made Pile/Post Elevation and View A-A generic.
	16	Added Table Note.
Wall Systems		
6040	1, 3 & 4	Clarified orientations of tongue and groove for fabrication of Types "B" and Types "C" with new designations of Types "B1", "B2", "C1" and "C2".
6110	2	Changed Concrete (Precast Coping Only) and (Precast Barrier & Coping) quantities in ESTIMATED QUANTITIES table.
	3	Added Note 9 to REINFORCING STEEL NOTES. Added missing Bar 5S or 8S1 in TYPICAL SECTION. Changed Concrete quantity in ESTIMATED QUANTITIES table.

REVISIONS

Index No	Sheet No	Description
6120	1	Corrected spacing of Bars 5B2 in PARTIAL PLAN VIEW.
	2	Changed Concrete (Precast Coping), Reinforcing Steel (Precast Coping) and (C-I-P Raised Sidewalk) quantities in ESTIMATED QUANTITIES table. Changed edge spacing of Bars 5B1, 5B2 and 1" Dowels in TYPICAL SECTION.
	3	Changed vertical leg dimension on Bar 5A to 1'-10", horizontal leg dimension for Precast Coping to 3'-11" and total lengths of Bars 5A; and corrected size of Bars 4C in REINFORCING STEEL BENDING DIAGRAM. Changed Concrete and Reinforcing Steel (Typical) quantities in ESTIMATED QUANTITIES table. Changed edge spacing of Bars 5B2 and 1" Dowels in TYPICAL SECTION. Changed REINFORCING STEEL NOTES 3, 4 & 7.
Signing and Markings		
11200	2	Corrected Elevation view of BASE CONNECTION drawing for bolt detail.
11310	2	Changed base of upright-to-gusset plate weld.
11320	2	Changed base of upright-to-gusset plate weld.
11860	4	Changed YIELD sign detail and added ** note. Revised * note for BRACKET DETAIL.
11870	1 & 2	Made minor note clarifications.
11871		New Index
17347	1	Added ** note to Lane Width Sharrow table.
	2	Changed "SKIP" to "DOTTED". in sheets 2, 3, and 4.
17349	1	Revised bottom CASE I details for signs to read correctly.
17355	10	Changed the dimensions to BUSINESS ENTRANCE SIGN.
Roadway Lighting		
17500	1	Added #6 Copper Ground Wire to METAL POLE WIRING DETAIL.
	3	Changed note No. 7 in reference to joint sealer.
17502	6	Changed note No. 7 in reference to joint sealer.
Traffic Signal and Equipment		
17700	1	Added a note to the FIBER OPTIC BOX.
17745	2	Deleted plate on detail SECTION EE and changed note from "Full Penetration" to "Partial Penetration".
17784	2	Changed "figure 2B-18" to "figure 2B-26" in note No. 1.
Intelligent Transportation Systems (ITS)		
18204	1	Index deleted, replaced by Index 17700.
Prestressed Concrete Beams		
20010	1	Changed Notes 4 and 5 to clarify applicability of notes; Changed Note 5 to refer to Specifications; Changed Note 8 to remove generic details for Safety Sleeve and require following shop drawings.
	2	Removed obsolete references to Bars 4L.
20036	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20045	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20054	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20063	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20072	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20078	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20084	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20096	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20210	2	Changed Note 5 to remove generic details for Safety Sleeve and require following shop drawings.
20248	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20254	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20263	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
20272	1	Changed call out of "Safety Sleeve with Cap" to "Safety Line Anchorage Device" and modified detail to remove dimensions showing generic representation in END VIEW only.
Square and Round Concrete Piles		
20602	1	Clarified applicability of 3/4" vent hole and changed location; Changed distance of EDC at tip from D to 2D.
Approach Slabs		
20900	1	Added 2" (Typ.) cover to sides in SECTION A-A.
20910	1	Added 2" (Typ.) cover to sides in SECTION A-A.
Structures Access and Lighting		
21210	2	Changed Note 3 to exclude the use of galvanized steel pull boxes in extremely aggressive environments.