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## **CHAPTER 5 - LIST OF CURRENT STANDARD DRAWINGS**

### **SECTION 1 - STANDARD ROADWAY DRAWINGS**

#### **5-100.00 ROADWAY DESIGN STANDARDS**

##### **5-100.01 STANDARD ABBREVIATIONS AND LEGENDS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	03-16-17	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	03-16-17	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-8		STANDARD LEGEND FOR NATURAL STREAM DESIGN

##### **5-100.02 TYPICAL SECTIONS AND DESIGN CRITERIA**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RD01-TS-1	02-05-16	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS
RD01-TS-1A	02-05-16	DESIGN STANDARDS FOR LOW-VOLUME LOCAL ROADS (ADT≤400)

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RD01-TS-2	03-16-17	DESIGN STANDARDS FOR COLLECTOR ROADS AND STREETS
RD01-TS-2A	10-15-02	DESIGN STANDARDS 4 AND 6 LANE COLLECTOR HIGHWAYS WITH DEPRESSED MEDIANS
RD01-TS-2B	10-15-02	DESIGN STANDARDS 4 AND 6 LANE COLLECTOR HIGHWAYS WITH FLUSH MEDIANS
RD01-TS-3	10-15-02	DESIGN STANDARD FOR 2-LANE ARTERIAL HIGHWAYS
RD01-TS-3A	10-15-02	DESIGN STANDARDS 4 AND 6 LANE ARTERIAL HIGHWAYS WITH DEPRESSED MEDIANS
RD01-TS-3B	10-15-02	DESIGN STANDARDS 4 AND 6 LANE ARTERIALS WITH INDEPENDENT ROADWAYS
RD01-TS-3C	10-15-02	DESIGN STANDARDS 4 AND 6 LANE ARTERIAL HIGHWAYS WITH FLUSH MEDIANS
RD01-TS-4	07-23-13	DESIGN STANDARDS 1 AND 2 LANE RAMPS
RD01-TS-5	10-15-02	DESIGN STANDARDS FREEWAYS WITH DEPRESSED MEDIANS
RD01-TS-5A	10-15-02	DESIGN STANDARDS FREEWAYS WITH INDEPENDENT ROADWAYS
RD01-TS-5B	10-15-02	DESIGN STANDARDS FREEWAYS WITH MEDIAN BARRIER
RD01-TS-5W		TYPICAL DETAIL FOR INSIDE LANE WIDENING OF FREEWAYS
RD01-TS-6	10-10-16	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER
RD01-TS-6B		TYPICAL CURB AND GUTTER FOR HIGH SPEED SUBURBAN ROADWAYS
RD01-TS-7	10-15-02	DESIGN STANDARDS 2-LANE HIGHWAY WITH CONTINUOUS 2-WAY LEFT-TURN LANE
RD01-TS-7A	10-15-02	DESIGN STANDARDS 2-LANE CURB AND GUTTER WITH CONTINUOUS 2-WAY LEFT-TURN LANE
RD01-TS-8	03-16-17	SHARED USE PATH TYPICAL SECTIONS
RD01-TS-9	06-15-12	DESIGN STANDARDS FOR SINGLE LANE URBAN AND RURAL ROUNDABOUTS

RD01-TS-10	06-15-12	DESIGN STANDARDS FOR MULTI-LANE URBAN AND RURAL ROUNDABOUTS
RD01-SE-2	10-15-02	URBAN SUPERELEVATION DETAILS
RD01-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS

### **5-100.03 SLOPE DEVELOPMENT**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-S-11B	10-15-02	DESIGN AND CONSTRUCTION DETAILS FOR ROCK CUT SLOPE AND CATCHMENT
RD01-SA-1	10-15-02	SAFETY APPROACH TO UNDERPASSES GRADING DESIGN AND SLOPE PROTECTION

### **5-100.04 INTERSECTION SIGHT DISTANCE**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RD01-SD-1		INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES
RD01-SD-2		INTERSECTION SIGHT DISTANCE LANDSCAPE AND OBSTRUCTION
RD01-SD-3		INTERSECTION SIGHT DISTANCE 2-LANE ROADWAYS
RD01-SD-4		INTERSECTION SIGHT DISTANCE 5-LANE AND 4- LANE UNDIVIDED ROADWAYS
RD01-SD-5		INTERSECTION SIGHT DISTANCE 4-LANE DIVIDED HIGHWAYS
RD01-SD-6		INTERSECTION SIGHT DISTANCE 6-LANE DIVIDED HIGHWAYS

RD01-SD-7 INTERSECTION SIGHT DISTANCE FOR PASSIVE RAILROAD  
HIGHWAY GRADE CROSSINGS

**5-100.05 UNDERDRAINS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD-UD-4	01-25-16	UNDERDRAIN LATERAL DETAILS
RD-UD-6	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 1:1 & 2:1 SLOPES
RD-UD-7	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 3:1 & 4:1 SLOPES
RD-UD-8		LATERAL UNDERDRAIN ENDWALL DETAIL FOR 5:1 SLOPES
RD-UD-9	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 6:1 SLOPES

**5-110.00 PIPE CULVERTS AND ENDWALLS**

**5-110.01 PIPE CULVERTS AND FLUME**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
D-FLU-1		FLUME DETAILS
D-PB-1	03-16-17	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PB-2	01-29-14	STANDARD DETAILS FOR FLEXIBLE PIPE INSTALLATION
D-PB-3		INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PG-3	04-15-97	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-PG-4	07-29-94	FERROUS AND ALUMINUM CORR. METAL PIPE- ARCHES
D-PO-1	05-27-01	STANDARD OVAL & FLAT BASE CONCRETE CULVERT PIPE
D-PS-1	03-15-76	STRUTTING DETAILS FOR CORR. METAL & STRUCTURAL PLATE ROUND PIPE

**5-110.02 SAFETY CROSS DRAIN ENDWALLS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
D-PE-15A	06-14-13	15" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-15B		15" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-18A	01-06-15	18" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-18B		18" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-24A	01-21-16	24" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-30A	10-10-16	30" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-30B		30" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-36A	06-14-13	36" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-36B		36" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-42A	06-14-13	42" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-42B		42" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-48A	06-14-13	48" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-48B		48" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-99	11-01-13	PIPE GRATE & SKEWED CONNECTION DETAILS FOR "U" ENDWALLS (FOR 3:1, 4:1 & 6:1 SLOPES)

**5-110.03 SAFETY SIDE DRAIN ENDWALLS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
D-SEW-1A	03-16-17	SIDE DRAIN CONCRETE ENDWALL WITH STEEL PIPE GRATE FOR 15" THRU 48" PIPES – 6:1 SLOPE
D-SEW-12D	06-14-13	CONCRETE ENDWALL TYPE "SD" WITH STEEL PIPE GRATE FOR 15" THRU 48" PIPES – 12:1 SLOPE

**5-110.04 PROTECTED ENDWALLS\***

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
D-PE-1	02-12-76	TYPE "A" CONCRETE ENDWALL 2:1 SLOPE, 36" TO 78"
D-PE-4	10-10-16	STRAIGHT CONCRETE ENDWALL
D-PE-5	05-27-01	STANDARD WINGWALLS HORIZONTAL OVAL CONCRETE PIPES
D-PE-7	05-27-01	STANDARD STRAIGHT ENDWALLS FLATBASE CONCRETE PIPES
D-PE-7A	05-27-01	STANDARD WINGWALLS FLATBASE CONCRETE PIPES
D-PE-8	01-19-97	DETAIL OF STANDARD PIPE AND PIPE-ARCH CULVERT WITH BEVELED ENDS AND RIP-RAP
D-PE-9	04-25-90	CONCRETE ENDWALLS TYPE "B" (FOR ROUND & SIDE TAPERED INLETS, PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 AND 4:1 SLOPES) 1976
D-PE-9A	10-25-82	GENERAL DIMENSION QUANTITIES ROUND PIPE CONCRETE ENDWALLS TYPE "B" (PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 AND 4:1 SLOPES) 1976
D-PE-9B		GEN. DIMENSIONS AND QUANTITIES SIDE TAPER INLETS CONCRETE ENDWALLS - TYPE "B" (PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 AND 4:1 SLOPES) 1976
D-PE-9C		BILL OF STEEL (SHEET 1 OF 4) CONCRETE ENDWALLS TYPE "B" (FOR CONCRETE ROUND AND SIDE TAPERED INLET, PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 SLOPE) 1976



D-PE-9D	BILL OF STEEL (SHEET 2 OF 4) CONCRETE ENDWALLS TYPE "B" (FOR CONCRETE ROUND AND SIDE TAPERED INLET, PIPE SIZES 15" TO 78", ALL SKEWS, 4:1 SLOPE) 1976
D-PE-9E	BILL OF STEEL (SHEET 3 OF 4) CONCRETE ENDWALLS TYPE "B" (FOR STEEL ROUND AND SIDE TAPERED INLET, PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 SLOPE) 1976
D-PE-9F	BILL OF STEEL (SHEET 4 OF 4) CONCRETE ENDWALLS TYPE "B" (FOR STEEL ROUND AND SIDE TAPERED INLET, PIPE SIZES 15" TO 78", ALL SKEWS, 4:1 SLOPE) 1976

\*NOTE: THE PROTECTED ENDWALLS MAY NOT BE USED INSIDE THE CLEAR ZONE  
UNLESS SHIELDED BY GUARDRAIL OR OTHER SAFETY DEVICE.

## **5-120.00 CATCH BASINS AND MANHOLES**

### **5-120.01 CATCH BASINS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
D-CB-10LPC	08-01-12	LOW PROFILE LOWERED CURB 32" X 26" RECTANGULAR CONCRETE NO. 10LPC CATCH BASIN
D-CB-10RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 10 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-10S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 10 CATCH BASIN
D-CB-10SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 10 CATCH BASIN
D-CB-12LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 12LP CATCH BASIN (FOR USE WITH 6" NON-MOUNTABLE CURB)
D-CB-12P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO.12 CATCH BASIN
D-CB-12RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RB	03-11-14	STANDARD PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RC	03-11-14	STANDARD PRECAST 84" THRU 120" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)

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D-CB-12S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SC	03-11-14	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-13P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 13 CATCH BASIN
D-CB-13RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 13 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-13RB	03-11-14	STANDARD PRECAST 60" AND 72" CIRCULAR NO. 13 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-13RC	03-11-14	STANDARD PRECAST 84" THRU 120" CIRCULAR NO. 13 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-13S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 13 CATCH BASIN
D-CB-14P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 14RB CATCH BASIN
D-CB-14S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 14 CATCH BASIN
D-CB-16S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 16 CATCH BASIN
D-CB-17S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 17 CATCH BASIN
D-CB-25LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 25LP CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)

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D-CB-25P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25RA	01-27-16	STANDARD PRECAST 48" CIRCULAR NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25RB	01-27-16	STANDARD PRECAST CIRCULAR NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25SC	03-11-14	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-26P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 26 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-26S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 26 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-27S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 27 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-28LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 28LP CATCH BASIN (FOR USE WITH 4" MOUNTABLE CURB)
D-CB-28P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 28 CATCH BASIN (FOR USE WITH 4" MOUNTABLE CURB)
D-CB-28RA	04-12-16	STANDARD PRECAST 48" CIRCULAR NO. 28 CATCH BASIN (FOR USE WITH 4" SLOPING CURB)
D-CB-28RB	04-12-16	STANDARD PRECAST CIRCULAR NO. 28 CATCH BASIN (FOR USE WITH 4" SLOPING CURB)
D-CB-28S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 28 CATCH BASIN (FOR USE WITH 4" MOUNTABLE CURB)
D-CB-29P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 29 CATCH BASIN (FOR USE WITH 4" MOUNTABLE CURB)

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D-CB-29S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 29 CATCH BASIN (FOR USE WITH 4" MOUNTABLE CURB)
D-CB-31R	03-11-14	STANDARD PRECAST CIRCULAR NO. 31 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-31SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 31 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-31SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 31 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-32LP	08-01-12	STANDARD 80" X 32" RECTANGULAR CONCRETE NO. 32 CATCH BASIN (FOR USE UNDER CONCRETE MEDIUM BARRIER WALL)
D-CB-38RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 38 CATCH BASIN
D-CB-38S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-38SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-38SC	03-11-14	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-39RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 39 CATCH BASIN
D-CB-39S	08-01-12	STANDARD 4' X 4' SQUARE CONCRETE NO. 39 CATCH BASIN
D-CB-39SC	03-11-14	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 39 CATCHBASIN
D-CB-39SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 39 CATCH BASIN
D-CB-39SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 39 CATCH BASIN
D-CB-40S	08-01-12	STANDARD 4' X 8' RECTANGULAR CONCRETE NO. 40 CATCH BASIN
D-CB-40SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 40. CATCH BASIN

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D-CB-41LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 41LP CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41P	03-11-14	STANDARD 4' X 3' PRECAST RECTANGULAR CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41S	03-11-14	STANDARD 4' X 3' RECTANGULAR CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SC	03-11-14	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-42RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 42 CATCH BASIN
D-CB-42S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SC	03-11-14	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-43R	03-11-14	STANDARD PRECAST CIRCULAR NO. 43R CATCH BASIN
D-CB-43SB	03-11-14	STANDARD 8' X 4' RECTANGULAR CONCRETE NO. 43SB CATCH BASIN

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English

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D-CB-43SC	03-11-14	STANDARD 8' X 5' 2" RECTANGULAR CONCRETE NO. 43SC CATCH BASIN
D-CB-44SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 44 CATCH BASIN
D-CB-45S	03-11-14	STANDARD 8' X 4' RECTANGULAR CONCRETE NO. 45 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-46SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 46 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-51SC	03-11-14	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 51 CATCH BASIN (FOR USE IN FRONT OF CONCRETE RETAINING WALL)
D-CB-51SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 51 CATCH BASIN (FOR USE IN FRONT OF CONCRETE RETAINING WALL)
D-CB-51SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 51 CATCH BASIN
D-CB-52SE	03-11-14	STANDARD 9' x 9' SQUARE CONCRETE NO. 52 CATCH BASIN
D-CB-99	05-20-14	MISCELLANEOUS DETAILS FOR RECTANGULAR STRUCTURES
D-CB-99R	03-11-14	MISCELLANEOUS DETAILS FOR ROUND STRUCTURES
D-CB-99RA	03-19-14	BILL OF STEEL FOR ROUND CATCH BASIN LIDS
D-CB-99RB		ROUND JUNCTION BOX SPRING DRAIN BOX
D-CBB-12A	05-27-01	TYPE 'B' CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NOS. 10, 12, 14, 16, & 17 TYPE CATCH BASINS
D-CBB-12B	05-27-01	TYPE 'B' CAST IRON FRAME, GRATE & 6" MOUNTABLE INLET DETAILS FOR NOS. 25, 26 & 27 TYPE CATCH BASINS
D-CBB-12C	05-27-01	TYPE 'B' CAST IRON FRAME, GRATE & 4" MOUNTABLE INLET DETAILS FOR NOS. 28 & 29 TYPE CATCH BASINS
D-CBB-13	05-27-01	TYPE 'B' CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NO. 13 TYPE CATCH BASINS

D-CBB-31	05-27-01	TYPE 'B' CAST IRON FRAME, GRATE & INLET DETAILS FOR NOS. 31, 41, 45, 46, & 51 TYPE CATCH BASINS
D-CBB-42	05-27-01	CAST IRON GRATE DETAILS FOR NOS. 42, 43 & 44 TYPE CATCH BASINS

## 5-120.02 JUNCTION BOXES

DRAWING	REVISION DATE	DESCRIPTION
D-JBS-1	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 1 JUNCTION BOX
D-JBS-2	08-01-12	STANDARD 4' X 4' SQUARE CONCRETE NO. 2 JUNCTION BOX
D-JBS-3	08-01-12	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 3 JUNCTION BOX
D-JBS-4	08-01-12	STANDARD 7' X 7' SQUARE CONCRETE NO. 4 JUNCTION BOX
D-JBS-5	08-01-12	STANDARD 9' X 9' SQUARE CONCRETE NO. 5 JUNCTION BOX

## 5-120.03 MANHOLES

DRAWING	REVISION DATE	DESCRIPTION
D-MH-2	02-02-16	STANDARD MASONRY & PRECAST NO. 3 MANHOLE
D-MH-3	04-21-14	TYPICAL DESIGN OF LIDS FOR NO. 3 MANHOLE
D-MH-4	08-01-12	STANDARD NO. 3 MANHOLE CASTINGS AND STEPS
D-MH-5	04-01-14	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 3 MANHOLE
D-MH-6	04-01-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 3 MANHOLE
D-MH-7	04-01-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 3 MANHOLE
D-RF-1	02-02-16	STANDARD PRECAST RISER

**5-120.04 SPRING DRAIN BOXES**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
D-SDS-1	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 1 SPRING DRAIN BOX
D-SDS-2A	08-01-12	STANDARD 4' X 4' SQUARE CONCRETE NO. 2A SPRING DRAIN BOX
D-SDS-2B	08-01-12	STANDARD 4' X 4' SQUARE CONCRETE NO. 2B SPRING DRAIN BOX
D-SDS-3A	08-01-12	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 3A SPRING DRAIN BOX

**5-120.05 SLOTTED AND TRENCH DRAINS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
D-SLD-1	02-02-16	SLOTTED DRAINS
D-SLD-2	05-27-01	SLOTTED DRAINS
D-SLD-3	02-02-16	SLOTTED DRAINS
D-TD-1		TRENCH DRAIN

**5-130.00 NATURAL STREAM DESIGN**

**5-130.01 DEFLECTORS, VANES & ENERGY DISSIPATORS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
D-NSD-13	11-01-16	LONGITUDINAL STONE TOE
D-NSD-21		BOULDER CLUSTERS
D-NSD-22		BOULDER CROSS VANE
D-NSD-23		BOULDER CROSS VANE WITH STEP



D-NSD-24	BOULDER W-WEIR
D-NSD-25	BOULDER VANES AND J-HOOK
D-NSD-26	LOG VANES, ROOT WADS, AND BOULDER J-HOOK
D-NSD-27	LOG AND BOULDER STEP POOLS
D-NSD-28	LOG AND BOULDER RIFFLES
D-NSD-28A	LOG AND BOULDER RIFFLES
D-NSD-29	CONSTRUCTED ALLUVIAL RIFFLE
D-NSD-30	SUBSTRATE RESTORATION
D-NSD-31	CLAY CHANNEL PLUG
D-NSD-32	WOOD AND BOULDER TOE WITH GEO-LIFTS
D-NSD-32A	WOOD AND BOULDER TOE WITH GEO-LIFTS
D-NSD-33	COIR FIBER EROSION CONTROL BLANKET AND COIR FIBER ROLLS
D-NSD-34	LIVE STAKES AND LIVE SILTATION
D-NSD-35	LIVE FASCINES
D-NSD-36	BRUSH MATTRESS
D-NSD-37	SPECIAL NOTES FOR NATURAL STREAM DESIGN

## **5-140.00 ROADWAY AND PAVEMENT APPURTENANCES**

### **5-140.01 CONCRETE PAVEMENT**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RP-CS-1	09-29-10	CONCRETE SHOULDER RUMBLE STRIP DETAIL (FOR 4- LANE DIVIDED HIGHWAY)
RP-CS-2	09-29-10	CONCRETE SHOULDER RUMBLE STRIP DETAIL (FOR 6- LANE OR WIDER DIVIDED HIGHWAY)

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English

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RP-J-1	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
RP-J-3	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
RP-J-5	07-01-01	TYPICAL ACCELERATION AND DECELERATION LANE JOINT TYPES AND SPACING FOR CONCRETE RAMPS
RP-J-7	07-14-14	CONCRETE RAMP JOINT TYPES AND SPACING
RP-J-9	02-02-12	CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT
RP-J-11	07-29-96	3/4" AND 1 3/4" EXPANSION AND EDGE PAVEMENT JOINTS
RP-J-13	03-20-91	3/4" AND 1 3/4" ELASTOMERIC COMPRESSION JOINT SEALS
RP-J-15	01-19-02	LONGITUDINAL CONTRACTION AND CONSTRUCTION JOINTS
RP-J-17	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-18	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-19	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-23	07-25-12	CONCRETE PAVEMENT REPAIR DETAILS
RP-J-24	05-27-01	CONCRETE PAVEMENT SPALL AND RANDOM CRACK REPAIR DETAILS
RP-J-25	05-27-01	CONCRETE PAVEMENT JOINT REPAIR DETAILS

**5-140.02 INTERSECTIONS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RP-D-15	04-08-16	DETAILS OF STANDARD CONCRETE DRIVEWAYS
RP-D-16	04-08-16	DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
RP-DHO-1	10-26-93	MEDIAN OPENINGS ON 4-LANE DIVIDED HIGHWAY
RP-I-5	12-18-96	EXAMPLES OF STREET & ALLEY INTERSECTIONS

RP-R-1	05-27-01	STANDARD RAMPS TO SIDE ROADS
RP-PMR-1	05-27-01	STANDARD DETAILS FOR PROPOSED PERMANENT MAINTENANCE RAMP

**5-140.03 CURBS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RP-MC-1	02-28-02	STANDARD 4" SLOPING (MOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-MC-2	02-28-02	STANDARD 6" SLOPING (MOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	02-28-02	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-R-2		STANDARD CONSTRUCTION DETAILS FOR ROUNDABOUTS

**5-140.04 SIDEWALKS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
RP-H-3	10-10-16	CURB RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-4	10-10-16	PERPENDICULAR CURB RAMP
RP-H-5	10-10-16	PARALLEL CURB RAMP
RP-H-6	10-10-16	PEDESTRIAN REFUGE
RP-H-7	10-10-16	PERPENDICULAR CURB RAMP IN CURVE
RP-H-8	10-10-16	PERPENDICULAR CURB RAMP PLACED OUTSIDE CURVE
RP-H-9	10-10-16	PARALLEL CURB RAMP IN CURVE
RP-S-7	02-05-16	DETAILS FOR CONCRETE SIDEWALKS

RP-S-8	02-05-16	DETAILS FOR STANDARD CONCRETE STEPS AND PIPE HANDRAILS
RP-S-9		ALTERNATE DETAILS FOR PEDESTRIAN FACILITIES

## **5-140.05 WALLS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
W-CIP-1		ROADWAY FEATURES AT CAST IN PLACE RETAINING WALL
W-MSE-1		ROADWAY FEATURES FOR MSE SEGMENTAL PRECAST FACING RETAINING WALL
W-MSE-2		ROADWAY FEATURES FOR MSE MODULAR BLOCK FACING RETAINING WALL
W-SG-1		STANDARD GRAVITY-TYPE RETAINING WALLS
W-SP-1		ROADWAY FEATURES AT SOLDIER PILE AND SOIL ANCHORED RETAINING WALLS
W-TW-1		DETAILS OF TREE WALLS

## **5-150.00 SAFETY DESIGN AND FENCES**

### **5-150.01 CLEAR ZONE AND SAFETY PLANS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-CZ-1		CLEAR ZONE CRITERIA
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2	10-10-16	SAFETY PLAN AT SIDEROADS OR PRIVATE DRIVES
S-PL-3	10-10-16	SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS
S-PL-4	10-10-16	SAFETY PLAN FOR BRIDGE PIERS IN CLEAR ZONE
S-PL-5	10-10-16	SAFETY PLAN FOR BRIDGE ENDS IN MEDIANS
S-PL-6	10-10-16	SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE

S-PL-6A SAFETY PLAN SAFETY HARDWARE PLACEMENT IN MEDIAN

**5-150.02 CABLE BARRIER**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-CB-1		CABLE BARRIER PLACEMENT

**5-150.03 CRASH CUSHIONS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-CC-1	03-28-17	CRASH CUSHION
S-CC-2		CRASH CUSHION (GATING) BARREL ARRAY

**5-150.04 GUARDRAIL DETAILS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-GR31-1	03-28-17	W-BEAM GUARDRAIL
S-GR31-1A		W-BEAM BARRIER FASTENING HARDWARE
S-GRS-1	03-28-17	SPECIAL CASE LONG SPAN GUARDRAIL ONE POST OMITTED
S-GRS-2	05-25-16	SPECIAL CASE: GUARDRAIL ATTACHMENT TO CONCRETE DECKS
S-GRS-3	03-28-17	SPECIAL CASE: GUARDRAIL FOOTING
S-GRS-4	03-16-17	SPECIAL CASE GUARDRAIL HEIGHT TRANSITION DETAIL
S-GRC-1	10-10-16	GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRC-2	10-10-16	GUARDRAIL CONNECTION TO BRIDGE END FOR LOCAL ROADS (ADT < 2000)

S-GRC-3	10-10-16	MEDIAN DIVIDER GUARDRAIL TRANSITION TO CONCRETE MEDIAN BARRIER
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#### **5-150.05 GUARDRAIL TERMINALS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-GRT-1	03-16-17	TYPE 12 GUARDRAIL TERMINAL BURIED-IN-BACKSLOPE
S-GRT-2	03-28-17	TYPE 38 GUARDRAIL END TERMINAL
S-GRT-2P	10-10-16	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL
S-GRT-2R	10-10-16	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL (RETROFIT)
S-GRT-3	03-28-17	TYPE 21 GUARDRAIL END TERMINAL

#### **5-150.06 GUARDRAIL ANCHORS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-GRA-1	10-10-16	TYPE 12 GUARDRAIL ANCHOR
S-GRA-1A		GUARDRAIL ANCHOR FOR TYPE 12 TERMINAL (ALTERNATIVE)
S-GRA-3	03-28-17	TYPE 13 GUARDRAIL ANCHOR
S-GRA-4	03-28-17	IN-LINE GUARDRAIL ANCHOR
S-GRA-5	03-28-17	FLARED GUARDRAIL ANCHOR

#### **5-150.07 CONCRETE MEDIAN BARRIERS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-SSMB-1	08-19-13	32" SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-2	08-19-13	51" SINGLE SLOPE CONCRETE BARRIER WALL

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English

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S-SSMB-3	07-16-13	51" HALF SIZE SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-4	04-12-16	FLARED SINGLE SLOPE CONCRETE MEDIAN BARRIER WALL (VERTICAL BACK)
S-SSMB-5		SINGLE SLOPE MEDIAN BARRIER WALL CATCH BASIN DETAIL
S-SSMB-6	10-10-16	GUARDRAIL ATTACHMENT TO SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-7	05-10-14	FOOTING DETAILS FOR OVERHEAD SIGN STRUCTURE 32" MEDIAN BARRIER WALL
S-SSMB-8	05-20-14	FOOTING DETAILS FOR OVERHEAD SIGN STRUCTURE 51" MEDIAN BARRIER WALL
S-SSMB-9	07-16-13	SINGLE SLOPE BARRIER WALL FOR GRADE SEPARATED MEDIAN

**5-150.08 BICYCLE/PEDESTRIAN RAIL**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-BPR-1	02-05-16	BIKE/PEDESTRIAN SAFETY RAIL

**5-150.09 FENCE AND RIGHT-OF-WAY MARKERS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-F-10	06-01-09	STANDARD RIGHT-OF-WAY STOCK FENCE
S-F-10A	06-01-09	STANDARD RIGHT-OF-WAY STOCK FENCE WITH TIMBER POSTS
S-F-10B	05-14-10	STANDARD RIGHT-OF-WAY CHAIN LINK FENCE
S-F-10C	05-14-10	RIGHT-OF-WAY FENCE AT BRIDGES AND BOX CULVERTS
S-F-10D		RIGHT-OF-WAY FENCE LOCATIONS AT INTERCHANGES
S-FG-11	05-14-10	STANDARD STOCK FENCE GATE

S-FG-2	01-24-08	EXAMPLES OF WATER GATES AND WATER CROSSINGS
S-RP-2	02-08-16	STANDARD CONCRETE RIGHT-OF-WAY MARKERS

## **5-160.00 DESIGN - TRAFFIC CONTROL**

### **5-160.01 PAVEMENT MARKINGS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	10-10-16	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	07-24-14	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	10-10-16	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-5	04-23-13	MARKING DETAILS FOR EXPRESSWAYS & FREEWAYS
T-M-6	06-22-12	MARKING DETAIL FOR EXPRESSWAY & FREEWAY INTERCHANGES
T-M-7	01-12-12	GORE MARKING DETAILS FOR EXPRESSWAY & FREEWAY INTERCHANGES
T-M-8	01-12-12	MARKING DETAILS FOR EXPRESSWAYS & FREEWAYS
T-M-9	11-01-11	PAVEMENT MARKING AND SIGNING DETAILS FOR RAMP INTERSECTIONS
T-M-10	06-15-12	SIGNING AND PAVEMENT MARKINGS FOR SHARED- USE PATHS
T-M-11	10-10-16	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANE OR ROUTES
T-M-12	01-30-15	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES ON URBAN ROADWAYS
T-M-13		SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES
T-M-14	11-01-11	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES



AT INTERSECTIONS

T-M-15		ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR INTERSTATE AND ACCESS CONTROLLED ROUTES
T-M-15A	01-30-15	ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-M-16	01-30-15	ASPHALT SHOULDER RUMBLE STRIPE INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-M-16A	07-24-14	ASPHALT CENTER LINE RUMBLE STRIPE
T-M-17	02-20-14	PAVEMENT MARKING DETAILS FOR ROUNDABOUTS

**5-160.02 WORK ZONES**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-PBR-1	03-16-17	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	03-16-17	DETAILS FOR FLEXIBLE DELINEATORS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-11	03-05-17	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	03-05-17	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-13	03-05-17	TWO-OUTSIDE LANE CLOSURE ON FREEWAY OR EXPRESSWAY
T-WZ-14	03-05-17	TWO-OUTSIDE LANE CLOSURE ON INTERSTATES AND EXPRESSWAYS (PORTABLE BARRIER RAIL)
T-WZ-15	03-05-17	INTERIOR LANE CLOSURE ON FREEWAYS OR EXPRESSWAYS
T-WZ-16	03-05-17	LANE SHIFT ON DIVIDED HIGHWAYS AND FREEWAYS
T-WZ-18	03-05-17	SHOULDER CLOSURE DETAIL FOR FREEWAYS AND DIVIDED HIGHWAYS

T-WZ-19	03-05-17	MEDIAN CROSS-OVER DETAIL ON DIVIDED HIGHWAYS
T-WZ-20	12-18-99	GEOMETRIC MEDIAN CROSS-OVER DETAIL ON DIVIDED HIGHWAYS
T-WZ-21	03-05-17	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT
T-WZ-30	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (40 MPH OR LESS)
T-WZ-31	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (GREATER THAN 40 MPH)
T-WZ-32	03-05-17	TRAFFIC CONTROL PLAN SIGNAL LAYOUT FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-33	05-27-98	TRAFFIC CONTROL PLAN FOR CLOSE INTERSECTION CONDITIONS USING TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-34	09-01-05	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-35	04-02-12	TRAFFIC CONTROL PLAN PAY ITEM AND SIGN DETAILS FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-36	03-05-17	LANE CLOSURE ON LOW-VOLUME 2-LANE HIGHWAY
T-WZ-40	03-05-17	RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-41	03-05-17	LEFT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-42	03-05-17	CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-50	04-02-12	TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 2 OR 3 LANE MAJOR ROUTES
T-WZ-51	04-02-12	TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 4 OR 5 LANE MAJOR ROUTES
T-WZ-52	04-02-12	TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 4 OR 5 LANE MAJOR AND MINOR ROUTES
T-WZ-53	04-02-12	TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 4 OR MORE LANE DIVIDED MAJOR ROUTES
T-WZ-54	04-02-12	TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 4 OR MORE LANE DIVIDED MAJOR ROUTES AND 4 OR MORE

LANE MINOR ROUTES

T-WZ-55      10-10-16      SIDEWALK TRAFFIC CONTROL

**5-170.00      EROSION PREVENTION AND SEDIMENT CONTROL**

**5-170.01      DEWATERING DEVICES**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
EC-STR-1	08-01-12	DEWATERING STRUCTURE
EC-STR-2	08-01-12	SEDIMENT FILTER BAG

**5-170.02      SLOPE DEVICES**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
EC-STR-3B	03-16-17	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3D	04-01-08	ENHANCED SILT FENCE
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-8	06-10-14	FILTER SOCK
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-29	08-01-12	PERMANENT SLOPE DRAIN PIPE
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-35	08-01-12	FILTER BERMS
EC-STR-37	06-10-14	SEDIMENT TUBE

**5-170.03      DITCH DEVICES**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
EC-STR-4	08-01-12	ENHANCED SILT FENCE CHECK (TRAPEZOIDAL DITCH)
EC-STR-4A	08-01-12	ENHANCED SILT FENCE CHECK (V-DITCH)
EC-STR-4B	08-01-12	ENHANCED SILT FENCE CHECK DETAILS
EC-STR-6	05-06-16	ROCK CHECK DAM
EC-STR-6A	05-06-16	ENHANCED ROCK CHECK DAM
EC-STR-7	08-01-12	SEDIMENT TRAP WITH CHECK DAM
EC-STR-55	08-01-12	GABION CHECK DAM
EC-STR-56	04-01-08	GABION CHECK DAM DESIGN TABLES
EC-STR-57	04-01-08	GABION ASSEMBLY DETAILS
EC-STR-58	04-01-08	GABION ASSEMBLY DETAILS
EC-STR-59	08-01-12	GABION CHECK DAM GENERAL NOTES AND COMPONENT PROPERTIES
EC-STR-61	03-16-17	LEVEL SPREADERS

**5-170.04 INLET PROTECTION**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
EC-STR-11	03-16-17	CULVERT PROTECTION TYPE 1
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-39	08-01-12	CURB INLET PROTECTION TYPE 1 & 2
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4
EC-STE-40		CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES
EC-STR-41 EC-STR-41A		CATCH BASIN FILTER ASSEMBLY (TYPE 1) CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS

EC-STR-42	CATCH BASIN FILTER ASSEMBLY (TYPE 2)
EC-STR-42A	CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS
EC-STR-43	CATCH BASIN FILTER ASSEMBLY (TYPE 3)
EC-STR-43A	CATCH BASIN FILTER ASSEMBLY (TYPE 3) SLIPCOVER DETAILS
EC-STR-44	CATCH BASIN FILTER ASSEMBLY (TYPE 4)
EC-STR-44A	CATCH BASIN FILTER ASSEMBLY (TYPE 4) SLIPCOVER DETAILS
EC-STR-45	CATCH BASIN FILTER ASSEMBLY (TYPE 5)
EC-STR-45A	CATCH BASIN FILTER ASSEMBLY (TYPE 5) SLIPCOVER DETAILS
EC-STR-46	CATCH BASIN FILTER ASSEMBLY (TYPE 6)
EC-STR-46A	CATCH BASIN FILTER ASSEMBLY (TYPE 6) SLIPCOVER DETAILS
EC-STR-47	CATCH BASIN FILTER ASSEMBLY (TYPE 7)
EC-STR-47A	CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS
EC-STR-48	CATCH BASIN FILTER ASSEMBLY (TYPE 8)
EC-STR-48A	CATCH BASIN FILTER ASSEMBLY (TYPE 8) SLIPCOVER DETAILS
EC-STR-49	CATCH BASIN FILTER ASSEMBLY (TYPE 9)
EC-STR-49A	CATCH BASIN FILTER ASSEMBLY (TYPE 9) SLIPCOVER DETAILS
EC-STR-50	CATCH BASIN FILTER ASSEMBLY (TYPE 10)
EC-STR-50A	CATCH BASIN FILTER ASSEMBLY (TYPE 10) SLIPCOVER DETAILS
EC-STR-51	CATCH BASIN FILTER ASSEMBLY (TYPE 11)
EC-STR-51A	CATCH BASIN FILTER ASSEMBLY (TYPE 11) SLIPCOVER DETAILS

**5-170.05 DETAINING DEVICES**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
EC-STR-12	08-01-12	ROCK SEDIMENT DAM
EC-STR-13	08-01-12	ROCK AND EARTH SEDIMENT EMBANKMENT
EC-STR-15	08-01-12	SEDIMENT BASIN
EC-STR-16	08-01-12	SEDIMENT BASINS RISER AND COLLAR APPURTENANCES
EC-STR-17	08-01-12	SEDIMENT BASIN EMBANKMENT DETAILS
EC-STR-18		SEDIMENT BASIN FLOATING OUTLET STRUCTURE
EC-STR-21	08-01-12	PERMANENT RIPRAP BASIN ENERGY DISSIPATORS

**5-170.06 IN-STREAM DEVICES**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
EC-STR-11A	08-01-12	CULVERT PROTECTION TYPE 2
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-30		INSTREAM DIVERSION (WITHOUT TRAFFIC)
EC-STR-30A		INSTREAM DIVERSION (WITH TRAFFIC)
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNEL
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSION (DOWNSTREAM)
EC-STR-33A	08-01-12	SUSPENDED PIPE DIVERSION (UPSTREAM)
EC-STR-36	08-01-12	TURF REINFORCEMENT MAT FOR CHANNEL INSTALLATION
EC-STR-38	08-01-12	FLOATING TURBIDITY CURTAIN



## **SECTION 2 – STANDARD TRAFFIC OPERATIONS DRAWINGS**

### **5-200.00 SIGNS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
T-S-6	02-12-91	STANDARD MOUNTING DETAILS - BOLTED EXTRUDED PANELS
T-S-7	02-12-91	HIGHWAY SHIELDS USED ON INTERSTATE AND U.S. NUMBERED ROUTES
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS
T-S-9	06-10-14	STANDARD LAYOUT - GROUND MOUNTED SIGNS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS - FLAT SHEET SIGNS, ALUMINUM-STEEL DESIGN
T-S-11	06-06-11	DELINEATOR AND MILEPOST DETAILS
T-S-12	07-02-15	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, SQUARE TUBES
T-S-13	07-20-12	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, I-BEAMS
T-S-14	08-17-12	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, WF-BEAMS
T-S-15	12-07-90	STANDARD CONDUIT & GROUND DETAILS FOR OVERHEAD & CANTILEVER SIGN STRUCTURES
T-S-16	07-02-15	GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS
T-S-16A	07-02-15	GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS
T-S-17	07-02-15	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-18	02-14-14	END OF ROADWAY, DEAD END SIGNS, AND METAL BARRICADES (TYPE III)
T-S-19	07-19-15	STANDARD STEEL SIGN SUPPORTS
T-S-20	11-01-11	SIGN DETAILS



T-S-21	07-02-15	DETAILS FOR SIGNS MOUNTS ON CONCRETE MEDIAN BARRIERS
T-S-22	09-12-13	SIGN LAYOUT FOR HOV LANES
T-S-23A	07-02-15	MULTI-DIRECTIONAL SLIP BASE BREAKAWAY P-POST SIGN SUPPORT
T-S-23B	07-19-13	MULTI-DIRECTIONAL SLIP BASE BREAKAWAY STRUCTURAL PIPE SIGN SUPPORT
T-S-23C	07-02-15	BREAKWAY POST SIGN SUPPORTS
T-S-24	08-02-13	DETAILS OF SIGN WITH SOLAR FLASHING ASSEMBLY

## **5-210.00 SIGNALS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
T-SG-1	06-27-16	WOOD POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-2	06-27-16	LOOP LEAD-INS, CONDUIT, AND PULL BOXES
T-SG-3	06-27-16	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-3A	06-27-16	ALTERNATE DETECTION DETAILS
T-SG-4	06-27-16	SPAN WIRE AND MESSENGER CABLE DETAILS
T-SG-5	06-27-16	CONTROLLER CABINET DETAILS
T-SG-6		PEDESTRIAN SIGNAL DETAILS
T-SG-7	06-27-16	SIGNAL HEAD ASSEMBLIES
T-SG-7A		TYPICAL SIGNAL HEAD PLACEMENT APPROACHES WITH NO THROUGH MOVEMENTS
T-SG-7B		TYPICAL SIGNAL HEAD PLACEMENT APPROACHES WITH NO THROUGH MOVEMENTS
T-SG-7C		TYPICAL SIGNAL HEAD PLACEMENT ONE-LANE AND TWO-LANE APPROACHES
T-SG-7D		TYPICAL SIGNAL HEAD PLACEMENT TWO-LANE APPROACHES

T-SG-7E		TYPICAL SIGNAL HEAD PLACEMENT THREE-LANE APPROACHES
T-SG-7F		TYPICAL SIGNAL HEAD PLACEMENT THREE-LANE APPROACHES
T-SG-7G		TYPICAL SIGNAL HEAD PLACEMENT THREE-LANE APPROACHES
T-SG-7H		TYPICAL SIGNAL HEAD PLACEMENT THREE-LANE AND FOUR-LANE APPROACHES
T-SG-7I		TYPICAL SIGNAL HEAD PLACEMENT FOUR-LANE APPROACHES
T-SG-7J		TYPICAL SIGNAL HEAD PLACEMENT FOUR-LANE APPROACHES
T-SG-7K		TYPICAL SIGNAL HEAD PLACEMENT FOUR-LANE APPROACHES
T-SG-7L		TYPICAL SIGNAL HEAD PLACEMENT FOUR-LANE APPROACHES
T-SG-7M		TYPICAL SIGNAL HEAD PLACEMENT FIVE-LANE APPROACHES
T-SG-7N		TYPICAL SIGNAL HEAD PLACEMENT FIVE-LANE APPROACHES
T-SG-7O		TYPICAL SIGNAL HEAD PLACEMENT FIVE-LANE APPROACHES
T-SG-7P		TYPICAL SIGNAL HEAD PLACEMENT FIVE-LANE APPROACHES
T-SG-7Q		TYPICAL SIGNAL HEAD PLACEMENT FIVE-LANE APPROACHES
T-SG-7R		TYPICAL SIGNAL HEAD PLACEMENT SIX-LANE APPROACHES
T-SG-7S		TYPICAL SIGNAL HEAD PLACEMENT SIX-LANE AND SEVEN-LANE APPROACHES
T-SG-8	06-27-16	STRAIN POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-9	06-27-16	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-9A	06-27-16	MISCELLANEOUS SIGNAL DETAILS

T-SG-10	06-27-16	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-11	06-27-16	MAINTENANCE OF EXISTING SIGNALS DURING HIGHWAY CONSTRUCTION
T-SG-12	06-27-16	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
T-SG-13	06-27-16	FLASHING BEACON DETAIL

## 5-220.00 LIGHTING AND UTILITY POLES

DRAWING	REVISION DATE	DESCRIPTION
T-FO-1		FIBER OPTIC AERIAL ENTRANCE DETAILS
T-FO-2		FIBER OPTIC UNDERGROUND ENTRANCE DETAILS
T-FO-3		FIBER OPTIC AERIAL CONNECTION DETAILS
T-FO-4		FIBER OPTIC PULL BOX, CABINET & POLE DETAILS
T-L-1	12-04-13	STANDARD LIGHTING FOUNDATION DETAILS
T-L-1SA	09-11-13	STANDARD LIGHTING DETAILS FOR SINGLE ARM SUPPORTS
T-L-1TM		STANDARD LIGHTING DETAILS TENON MOUNTED OFFSET LIGHTING SUPPORTS
T-L-2	12-04-13	FOUNDATION DETAIL FOR LUMINAIRE MOUNTED ON CONCRETE MEDIAN BARRIER
T-L-3	04-15-96	STANDARD LIGHTING DETAILS PULL BOXES
T-L-4	05-25-11	STANDARD LIGHTING DETAILS CONDUIT, CABLE INSTALLATION

**5-230.00 RAILROAD CROSSING**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
T-RR-1	11-01-11	TYPICAL PAVEMENT MARKING AT RAILROAD ACTIVE HIGHWAY GRADE CROSSINGS AND RAILROAD ADVANCE WARNING SIGN
T-RR-2	11-01-11	STANDARD DRAWING FOR RAILROAD AND HIGHWAY CROSSING SIGNAL WITH GATE
T-RR-3	11-01-11	STANDARD DRAWING FOR RAILROAD-HIGHWAY CROSSING SIGNAL
T-RR-4	11-01-11	STANDARD DRAWING FOR TYPICAL CURB & GUTTER PLAN FOR RAILROAD-HIGHWAY CROSSING WITH OR WITHOUT GATES
T-RR-5	11-01-11	RAILROAD-HIGHWAY CROSSING SIGNAL WITH CANTILEVER SPAN
T-RR-6	10-25-13	TYPICAL SIGNING AND MARKING AT PASSIVE RAILROAD HIGHWAY GRADE CROSSINGS

## **SECTION 3 – STANDARD STRUCTURE DRAWINGS**

### **5-300.00 NEW STRUCTURES**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
STD-1-1	05-01-14	BRIDGE RAILING CONCRETE PARAPET
STD-1-1SS	05-01-14	BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET
STD-1-2	03-28-08	SLIDER PLATE AND DECK DRAIN
STD-1-2SS		SLIDER PLATES FOR SINGLE SLOPE PARAPETS AND DECK DRAINS
STD-1- 3	07-31-00	STD. CONCRETE MEDIAN BARRIER
STD-1-3SS	11-01-10	STD. SINGLE SLOPE CONCRETE MEDIAN BARRIER
STD-1-4	01-05-01	SLIDER PLATES FOR MEDIAN BARRIER
STD-1-4SS		SLIDER PLATE ASSEMBLIES FOR SINGLE SLOPE MEDIAN BARRIER
STD-1-5	03-26-14	PAVEMENT AT BRIDGE ENDS
STD-1-6	04-28-97	BRIDGE END DRAIN W/ PAVEMENT AT BRIDGE ENDS
STD-1-7	08-24-11	BRIDGE END DRAIN W/ PAVEMENT AT BRIDGE ENDS
STD-1-8	05-01-95	BRIDGE END DRAIN 2' X 8' 7" W/PAVEMENT AT BRIDGE ENDS
STD-1-9	05-01-95	BRIDGE END DRAIN 4' X 7" W/PAVEMENT AT BRIDGE ENDS
STD-1-10	03-28-94	BRIDGE END DRAIN W/O PAVEMENT AT BRIDGE ENDS
STD-1-11	08-24-11	BRIDGE END DRAIN W/O PAVEMENT AT BRIDGE ENDS
STD-1-12	03-28-94	BRIDGE END DRAIN 2'x8'7" W/O PAVEMENT AT BRIDGE ENDS
STD-1-13	03-28-94	BRIDGE END DRAIN 4'x8'7" W/O PAVEMENT AT BRIDGE ENDS
STD-2-1	11-01-10	BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-2-2		VERTICAL PANEL DETAILS
STD-3-1	11-01-10	STRIPSEAL EXPANSION JOINT
STD-3-2	11-01-10	STRIPSEAL EXPANSION JOINT
STD-4-1	04-08-05	STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS
STD-4-2	04-08-05	STD. PRECAST PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA
STD-4-3	03-02-02	STD.PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS
STD-4-4	06-10-96	STD. PRECAST PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS
STD-5-1	10-25-93	STD. PILE DETAILS
STD-5-2	05-01-14	STD. PILE DETAILS
STD-6-1	11-01-10	STANDARD SEISMIC DETAILS
STD-6-2	11-07-94	STANDARD SEISMIC DETAILS
STD-7-1	06-02-14	STD. CONCRETE RAIL
STD-8-2	11-01-10	LIGHT STANDARD SUPPORT DETAILS
STD-8-2SS		SINGLE SLOPE PARAPET STANDARD LIGHT SUPPORT DETAILS
STD-8-3	09-01-91	MEDIAN BARRIER LIGHT STANDARD SUPPORT DETAILS
STD-8-3SS		SINGLE SLOPE MEDIAN BARRIER STANDARD LIGHT SUPPORT DETAILS
STD-8-4		SIGN, LUMINAIRE, AND TRAFFIC SIGNAL SUPPORTS
STD-9-1	10-07-08	REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS
STD-10-1	04-08-05	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS
STD-11-1	05-01-14	BRIDGE RAILING W/ STRUCTURAL TUBING
STD-11-2	05-01-14	STANDARD CONCRETE CLASSIC RAIL
STD-14-1	05-01-14	STD. DETAILS AND INT. DIAPH.DETAILS FOR BULB - TEE BEAMS

STD-14-2	11-01-10	STD. DETAILS AND INT. DIAPH.DETAILS FOR I-BEAMS
STD-14-3	10-15-08	STD. DETAILS FOR PRESTRESSED BOX BEAMS

### **5-310.00 LRFD BOX CULVERTS**

(See Section 4-604.00)

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
STD-17-1		INDEX OF DRAWINGS
STD-17-2		TERMINOLOGY
STD-17-3		GENERAL NOTES
STD-17-4		DESIGN SECTION LIMITS
STD-17-5		TYPICAL SECTION AND DETAILS
STD-17-6		TYPICAL ELEVATIONS
STD-17-7		CURB, RAIL & EDGE BEAM DETAILS - SKEW NOT LESS THAN 45 DEG.
STD-17-8		EDGE BEAM DETAILS FOR FILLS GREATER THAN 3' - 6"
STD-17-9		INTERIOR WALL END TREATMENTS
STD-17-10		TYPICAL WINGWALL DETAILS AND NOTES
STD-17-11		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-12		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-13		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-14		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-15		WINGWALL & SPECIAL RETAINING WALL DESIGN SECTION
STD-17-16		WINGWALL DESIGN SECTION
STD-17-17	06-01-11	BACKFILL AND DRAINAGE DETAILS
STD-17-18		BACKFILL DETAILS
STD-17-19		PAVED OUTLET DETAIL

STD-17-20		LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET
STD-17-21		DEBRIS DEFLECTION WALL FOR BOX BRIDGE
STD-17-22		DEBRIS DEFLECTION WALL FOR SLAB BRIDGE
STD-17-23		SIDEWALK AND MISCELLANEOUS DETAILS
STD-17-24		WARPED SLOPE DETAIL
STD-17-25		STAGE CONSTRUCTION JOINT DETAIL (FILL ABOVE TOP OF SLAB NOT GREATER THAN 3'-6")
STD-17-26		EXTENSION DETAILS
STD-17-27		EXTENSION DETAILS FOR SCoured OUTLET
STD-17-28		END SECTION DETAILS
STD-17-29		PRECAST BOX CULVERT DETAILS
STD-17-34		INTERNAL ENERGY DISSIPATOR FOR BOX AND PIPE CULVERTS
STD-17-51	05-01-14	BOX BRIDGE, 1 BARREL AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-17-52		BOX BRIDGE, 1 BARREL AT 8', CLEAR HTS. 3' - 5', 0 - 60' FILL
STD-17-53		BOX BRIDGE, 1 BARREL AT 8', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-54		BOX BRIDGE, 1 BARREL AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-55		BOX BRIDGE, 1 BARREL AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-17-56		BOX BRIDGE, 1 BARREL AT 12', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-57		BOX BRIDGE, 1 BARREL AT 12', CLEAR HTS. 7' - 9', 0 - 60' FILL
STD-17-58		BOX BRIDGE, 1 BARREL AT 12', CLEAR HTS. 10' - 12', 0 - 60' FILL
STD-17-59		BOX BRIDGE, 1 BARREL AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL



STD-17-60		BOX BRIDGE, 1 BARREL AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-17-61		BOX BRIDGE, 1 BARREL AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-62		BOX BRIDGE, 1 BARREL AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-63		BOX BRIDGE, 1 BARREL AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-17-64		BOX BRIDGE, 1 BARREL AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-17-65		BOX BRIDGE, 1 BARREL AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-66		BOX BRIDGE, 1 BARREL AT 18', CLEAR HTS. 9' - 11', 0 - 60' FILL
STD-17-67		BOX BRIDGE, 1 BARREL AT 18', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-68		BOX BRIDGE, 1 BARREL AT 18', CLEAR HTS. 15' - 18', 0 - 60' FILL
STD-17-71	05-01-14	BOX BRIDGE, 2 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-17-72		BOX BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 3' - 5', 0 - 60' FILL
STD-17-73		BOX BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-74		BOX BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-75		BOX BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-17-76		BOX BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-77		BOX BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 7' - 9', 0 - 60' FILL
STD-17-78		BOX BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 10' - 12', 0 - 60' FILL

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-17-79	BOX BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-17-80	BOX BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-17-81	BOX BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-82	BOX BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-83	BOX BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-17-84	BOX BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-17-85	BOX BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-86	BOX BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 9' - 11', 0 - 60' FILL
STD-17-87	BOX BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-88	BOX BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 15' - 18', 0 - 60' FILL
STD-17-91	BOX BRIDGE, 3 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-17-92	BOX BRIDGE, 3 BARRELS AT 8', CLEAR HTS. 3' - 5', 0 - 60' FILL
STD-17-93	BOX BRIDGE, 3 BARRELS AT 8', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-94	BOX BRIDGE, 3 BARRELS AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-95	BOX BRIDGE, 3 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-17-96	BOX BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-97	BOX BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 7' - 9', 0 - 60' FILL

TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-17-98	BOX BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 10' - 12', 0 - 60' FILL
STD-17-99	BOX BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-17-100	BOX BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-17-101	BOX BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-102	BOX BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-103	BOX BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-17-104	BOX BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-17-105	BOX BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-106	BOX BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 9' - 11', 0 - 60' FILL
STD-17-107	BOX BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-108	BOX BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 15' - 18', 0 - 60' FILL
STD-17-111	SLAB BRIDGE, 1 BARREL AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-17-112	SLAB BRIDGE, 1 BARREL AT 8', CLEAR HTS. 3' - 5', 0 - 60' FILL
STD-17-113	SLAB BRIDGE, 1 BARREL AT 8', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-114	SLAB BRIDGE, 1 BARREL AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-115	SLAB BRIDGE, 1 BARREL AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-17-116	SLAB BRIDGE, 1 BARREL AT 12', CLEAR HTS. 4' - 6', 0 - 60' FILL

STD-17-117	SLAB BRIDGE, 1 BARREL AT 12', CLEAR HTS. 7' - 9', 0 - 60' FILL
STD-17-118	SLAB BRIDGE, 1 BARREL AT 12', CLEAR HTS. 10' - 12', 0 - 60' FILL
STD-17-119	SLAB BRIDGE, 1 BARREL AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-17-120	SLAB BRIDGE, 1 BARREL AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-17-121	SLAB BRIDGE, 1 BARREL AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-122	SLAB BRIDGE, 1 BARREL AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-123	SLAB BRIDGE, 1 BARREL AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-17-124	SLAB BRIDGE, 1 BARREL AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-17-125	SLAB BRIDGE, 1 BARREL AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-126	SLAB BRIDGE, 1 BARREL AT 18', CLEAR HTS. 9' - 11', 0 - 60' FILL
STD-17-127	SLAB BRIDGE, 1 BARREL AT 18', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-128	SLAB BRIDGE, 1 BARREL AT 18', CLEAR HTS. 15' - 18', 0 - 60' FILL
STD-17-131	SLAB BRIDGE, 2 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-17-132	SLAB BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 3' - 5', 0 - 60' FILL
STD-17-133	SLAB BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-134	SLAB BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-135	SLAB BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-17-136	SLAB BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-137	SLAB BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 7' - 9', 0 - 60' FILL
STD-17-138	SLAB BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 10' - 12', 0 - 60' FILL
STD-17-139	SLAB BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-17-140	SLAB BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-17-141	SLAB BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-142	SLAB BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-143	SLAB BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-17-144	SLAB BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-17-145	SLAB BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-146	SLAB BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 9' - 11', 0 - 60' FILL
STD-17-147	SLAB BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-148	SLAB BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 15' - 18', 0 - 60' FILL
STD-17-151	SLAB BRIDGE, 3 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-17-152	SLAB BRIDGE, 3 BARRELS AT 8', CLEAR HTS. 3' - 5', 0 - 60' FILL
STD-17-153	SLAB BRIDGE, 3 BARRELS AT 8', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-154	SLAB BRIDGE, 3 BARRELS AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-17-155	SLAB BRIDGE, 3 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-17-156	SLAB BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-157	SLAB BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 7' - 9', 0 - 60' FILL
STD-17-158	SLAB BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 10' - 12', 0 - 60' FILL
STD-17-159	SLAB BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-17-160	SLAB BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-17-161	SLAB BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-162	SLAB BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-163	SLAB BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-17-164	SLAB BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-17-165	SLAB BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-166	SLAB BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 9' - 11', 0 - 60' FILL
STD-17-167	SLAB BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-17-168	SLAB BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 15' - 18', 0 - 60' FILL

**5-320.00 BRIDGE REPAIRS**

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
SBR-2-115	06-15-16	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT CONSTRUCTION TYPES "A" THRU "J" – 1991
SBR-2-116	01-04-96	GENERAL DETAILS FOR STRIPSEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPES "A" THRU "J" – 1991
SBR-2-117	05-30-96	STRIPSEAL EXPANSION JOINTS - REPLACEMENT CONSTRUCTION DETAILS TYPE "A" AND TYPE "B" – 1991
SBR-2-118	05-30-96	STRIPSEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPE "C" AND TYPE "D" – 1991
SBR-2-119	05-30-96	STRIPSEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPE "E" AND TYPE "F" – 1991
SBR-2-120	05-30-96	STRIPSEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPE "G" AND "H" – 1991
SBR-2-121	01-04-96	STRIPSEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPE "J" – 1991
SBR-2-122	01-04-96	DETAILS FOR PRECAST SLAB BRIDGE CHANNELS, SPANS 16' - 0" THRU 34' - 0", DEGREE OF SKEW 90 - 75 - 60 - 45 – 1992
SBR-2-123	01-04-96	DETAILS FOR PRECAST SLAB BRIDGE CHANNELS, SPANS 16' - 0" THRU 34' - 0", DEGREE OF SKEW 90 - 75 - 60 - 45 – 1992
SBR-2-124	01-04-96	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10' -2" ENDPOST – 1988
SBR-2-125	11-05-01	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10' -2" ENDPOST – 1988
SBR-2-126	01-04-96	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10' -2" ENDPOST – 1988
SBR-2-127	11-05-01	DETAILS SHOWING PIER PROTECTION WITH NEW CONCRETE BARRIER WALL – 1988

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

SBR-2-128	01-04-96	DETAILS SHOWING PIER PROTECTION WITH NEW CONCRETE BARRIER WALL – 1988
SBR-2-129	11-05-01	DETAILS SHOWING PIER PROTECTION WITH NEW VERTICAL CONCRETE BARRIER – 1988
SBR-2-130	01-04-96	DETAILS SHOWING PIER PROTECTION WITH NEW VERTICAL CONCRETE BARRIER – 1988
SBR-2-131	01-22-02	DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS TO EXISTING CONCRETE SLOPE FACE ENDPOST – 1989
SBR-2-132	01-04-96	DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS EXISTING CONCRETE SLOPE FACE ENDPOST – 1989
SBR-2-133	01-22-02	DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS TO EXISTING CONCRETE VERTICAL FACE ENDPOST – 1989
SBR-2-134	01-04-96	DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS TO EXISTING CONCRETE VERTICAL FACE ENDPOST – 1989
SBR-2-135	01-22-02	GUARDRAIL ATACHMENT TO EXISTING PIER PROTECTION – 1991
SBR-2-136	11-05-01	STANDARD DRAWING FOR REPLACING EXISTING CONCRETE ENDPOST AND GUARDRAIL AT EXISTING BRIDGE ENDS – 1992
SBR-2-137	11-05-01	STANDARD SHOWING DETAILS FOR ATTACHING NEW GUARDRAIL TO EXISTING END OF BRIDGE – 1992
SBR-2-138	11-05-01	STANDARD SHOWING DETAILS FOR ATTACHING NEW GUARDRAIL AT EXISTING BRIDGE END AND ALONG EXISTING BRIDGE RAIL – 1992
SBR-2-140	11-05-01	STANDARD SHOWING DETAILS FOR ATTACHING NEW GUARDRAIL ALONG EXISTING BRIDGE RAILS – 1992
SBR-2-144	01-22-02	STANDARD SHOWING DETAILS OF ATTACHING GUARDRAIL BRIDGERAIL TO TOP OF EXISTING CURBS – 1992



**5-330.00 BOX CULVERTS (Previous)**

(See Section 4-604.00)

<b>DRAWING</b>	<b>REVISION DATE</b>	<b>DESCRIPTION</b>
STD-15-1	11-06-08	INDEX OF DRAWINGS AND TERMINOLOGY
STD-15-2	03-28-08	GENERAL NOTES
STD-15-3	02-28-03	DESIGN SECTION LIMITS
STD-15-4	12-07-01	TYPICAL SECTION AND DETAILS
STD-15-5	02-28-03	TYPICAL ELEVATION
STD-15-6	03-28-08	CURB AND RAIL DETAILS SKEW NOT LESS THAN 45 DEG.
STD-15-7	03-02-02	STANDARD EDGE BEAM DETAILS FOR FILLS GREATER THAN 3' - 8"
STD-15-8	12-07-01	INTERIOR WALL END TREATMENTS
STD-15-9	02-28-03	TYPICAL WINGWALL DETAILS AND NOTES
STD-15-10	11-06-08	WINGWALL DIMENSIONS AND QUANTITIES
STD-15-11		WINGWALL DIMENSIONS AND QUANTITIES
STD-15-12	03-28-08	WINGWALL & SPECIAL RETAINING WALL DESIGN SECTION
STD-15-13		WINGWALL DESIGN SECTION
STD-15-14	06-01-11	BACKFILL AND DRAINAGE DETAILS
STD-15-15		BACKFILL AND DRAINAGE DETAILS
STD-15-16	12-07-01	PAVED OUTLET DETAIL
STD-15-16A		LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET
STD-15-17		DEBRIS DEFLECTION WALL
STD-15-18		DEBRIS DEFLECTION WALL
STD-15-19		SIDEWALK AND MISCELLANEOUS DETAILS
STD-15-20		WARPED SLOPE DETAIL

TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-15-21	03-02-02	STAGE CONSTRUCTION JOINT DETAIL (FILL ABOVE TOP OF SLAB NOT GREATER THAN 3'-8")
STD-15-22	02-28-03	EXTENSION DETAILS
STD-15-23	12-07-01	EXTENSION DETAILS FOR SCoured OUTLET
STD-15-24	12-07-01	END SECTION DETAILS
STD-15-25	11-01-10	PRECAST BOX CULVERT DETAILS
STD-15-26		PRECAST BOX CULVERT DETAILS
STD-15-27		PRECAST BOX CULVERT DETAILS
STD-15-28		PRECAST BOX CULVERT DETAILS
STD-15-29		PRECAST BOX CULVERT DETAILS
STD-15-30		STANDARD INTERNAL ENERGY DISSIPATOR FOR BOX AND PIPE CULVERTS
STD-15-35		BOX BRIDGE, 1 BARREL AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-15-36		BOX BRIDGE, 1 BARREL AT 8', CLEAR HTS. 3' - 4', 0 - 60' FILL
STD-15-37	05-01-14	BOX BRIDGE, 1 BARREL AT 8', CLEAR HTS. 5' - 8', 0 - 60' FILL
STD-15-38	09-19-06	BOX BRIDGE, 1 BARREL AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-15-39		BOX BRIDGE, 1 BARREL AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-15-40		BOX BRIDGE, 1 BARREL AT 12', CLEAR HTS. 4' - 7', 0 - 60' FILL
STD-15-41		BOX BRIDGE, 1 BARREL AT 12', CLEAR HTS. 8' - 12', 0 - 60' FILL
STD-15-42		BOX BRIDGE, 1 BARREL AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-15-43		BOX BRIDGE, 1 BARREL AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-15-44		BOX BRIDGE, 1 BARREL AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-15-45		BOX BRIDGE, 1 BARREL AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-46		BOX BRIDGE, 1 BARREL AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-15-47		BOX BRIDGE, 1 BARREL AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-15-48		BOX BRIDGE, 1 BARREL AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-49		BOX BRIDGE, 1 BARREL AT 18', CLEAR HTS. 9' - 13', 0 - 60' FILL
STD-15-50		BOX BRIDGE, 1 BARREL AT 18', CLEAR HTS. 14' - 18', 0 - 60' FILL
STD-15-55		BOX BRIDGE, 2 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-15-56		BOX BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 3' - 4', 0 - 60' FILL
STD-15-57		BOX BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 5' - 8', 0 - 60' FILL
STD-15-58	06-01-11	BOX BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-15-59		BOX BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-15-60		BOX BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 4' - 7', 0 - 60' FILL
STD-15-61		BOX BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 8' - 12', 0 - 60' FILL
STD-15-62		BOX BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-15-63		BOX BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-15-64		BOX BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-15-65		BOX BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-15-66		BOX BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-15-67		BOX BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-15-68		BOX BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-69		BOX BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 9' - 13', 0 - 60' FILL
STD-15-70		BOX BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 14' - 18', 0 - 60' FILL
STD-15-75		BOX BRIDGE, 3 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-15-76		BOX BRIDGE, 3 BARRELS AT 8', CLEAR HTS. 3' - 4', 0 - 60' FILL
STD-15-77	12-07-01	BOX BRIDGE, 3 BARRELS AT 8', CLEAR HTS. 5' - 8', 0 - 60' FILL
STD-15-78	12-07-01	BOX BRIDGE, 3 BARRELS AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-15-79	12-07-01	BOX BRIDGE, 3 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-15-80		BOX BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 4' - 7', 0 - 60' FILL
STD-15-81		BOX BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 8' - 12', 0 - 60' FILL
STD-15-82		BOX BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-15-83		BOX BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-15-84		BOX BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-15-85		BOX BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-86		BOX BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-15-87		BOX BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-15-88		BOX BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-89		BOX BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 9' - 13', 0 - 60' FILL
STD-15-90		BOX BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 14' - 18', 0 - 60' FILL
STD-15-95		SLAB BRIDGE, 1 BARREL AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-15-96		SLAB BRIDGE, 1 BARREL AT 8', CLEAR HTS. 3' - 4', 0 - 60' FILL
STD-15-97		SLAB BRIDGE, 1 BARREL AT 8', CLEAR HTS. 5' - 8', 0 - 60' FILL
STD-15-98		SLAB BRIDGE, 1 BARREL AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-15-99	02-28-03	SLAB BRIDGE, 1 BARREL AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-15-100	02-28-03	SLAB BRIDGE, 1 BARREL AT 12', CLEAR HTS. 4' - 7', 0 - 60' FILL
STD-15-101	02-28-03	SLAB BRIDGE, 1 BARREL AT 12', CLEAR HTS. 8' - 12', 0 - 60' FILL
STD-15-102		SLAB BRIDGE, 1 BARREL AT 14', CLEAR HTS. 5' - 9', 0 - 60' FILL
STD-15-103		SLAB BRIDGE, 1 BARREL AT 14', CLEAR HTS. 10' - 14', 0 - 60' FILL
STD-15-104		SLAB BRIDGE, 1 BARREL AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-105		SLAB BRIDGE, 1 BARREL AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-15-106		SLAB BRIDGE, 1 BARREL AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-15-107		SLAB BRIDGE, 1 BARREL AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL

TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-15-108		SLAB BRIDGE, 1 BARREL AT 18', CLEAR HTS. 9' - 13', 0 - 60' FILL
STD-15-109		SLAB BRIDGE, 1 BARREL AT 18', CLEAR HTS. 14' - 18', 0 - 60' FILL
STD-15-115	02-28-03	SLAB BRIDGE, 2 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-15-116	02-28-03	SLAB BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 3' - 4', 0 - 60' FILL
STD-15-117	06-01-11	SLAB BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 5' - 8', 0 - 60' FILL
STD-15-118	02-28-03	SLAB BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-15-119	02-28-03	SLAB BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-15-120	02-28-03	SLAB BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 4' - 7', 0 - 60' FILL
STD-15-121	02-28-03	SLAB BRIDGE, 2 BARRELS AT 12', CLEAR HTS. 8' - 12', 0 - 60' FILL
STD-15-122	02-28-03	SLAB BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-15-123	02-28-03	SLAB BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-15-124	02-28-03	SLAB BRIDGE, 2 BARRELS AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-15-125	02-28-03	SLAB BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-126	02-28-03	SLAB BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-15-127	02-28-03	SLAB BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-15-128	02-28-03	SLAB BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-129	02-28-03	SLAB BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 9' - 13', 0 - 60' FILL

# TDOT ROADWAY DESIGN GUIDELINES

English

Revised: 06/30/17

STD-15-130	02-28-03	SLAB BRIDGE, 2 BARRELS AT 18', CLEAR HTS. 14' - 18', 0 - 60' FILL
STD-15-135		SLAB BRIDGE, 3 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-15-136		SLAB BRIDGE, 3 BARRELS AT 8', CLEAR HTS. 3' - 4', 0 - 60' FILL
STD-15-137		SLAB BRIDGE, 3 BARRELS AT 8', CLEAR HTS. 5' - 8', 0 - 60' FILL
STD-15-138		SLAB BRIDGE, 3 BARRELS AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-15-139		SLAB BRIDGE, 3 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL
STD-15-140		SLAB BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 4' - 7', 0 - 60' FILL
STD-15-141		SLAB BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 8' - 12', 0 - 60' FILL
STD-15-142		SLAB BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 5' - 7', 0 - 60' FILL
STD-15-143		SLAB BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 8' - 11', 0 - 60' FILL
STD-15-144		SLAB BRIDGE, 3 BARRELS AT 14', CLEAR HTS. 12' - 14', 0 - 60' FILL
STD-15-145		SLAB BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-146		SLAB BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL
STD-15-147		SLAB BRIDGE, 3 BARRELS AT 16', CLEAR HTS. 13' - 16', 0 - 60' FILL
STD-15-148	12-07-01	SLAB BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-15-149	12-07-01	SLAB BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 9' - 13', 0 - 60' FILL
STD-15-150	12-07-01	SLAB BRIDGE, 3 BARRELS AT 18', CLEAR HTS. 14' - 18', 0 - 60' FILL