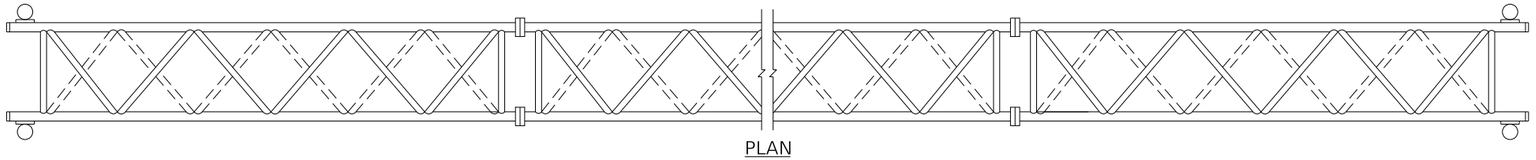
Illinois Tollway Base Sheet Revisions

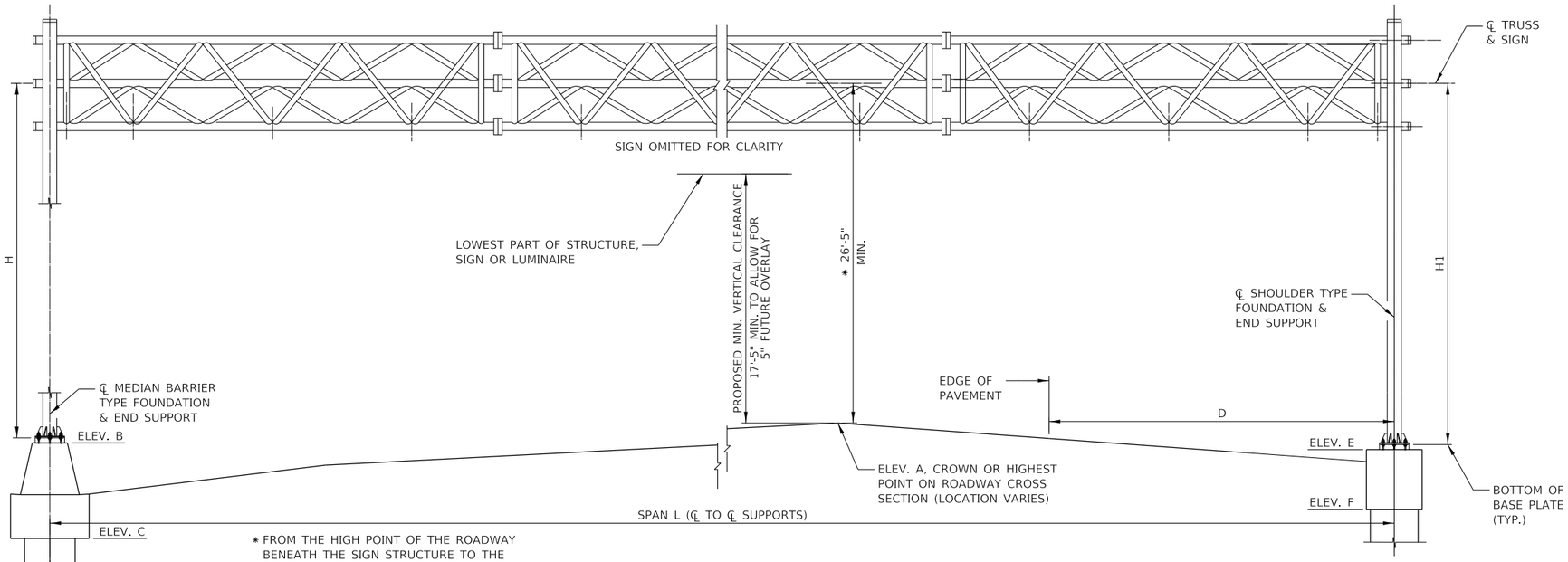
Section M	Base Sheet Drawings	
	Drawing	**Modification Summary** **Effective: 03-01-2024**
	Overhead Sign (OHS)-Series 720	
	M-OHS-722	**OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND BILL OF MATERIAL**
		Added pay item details for double face barrier to the bill of materials.
	M-OHS-723	**OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND BILL OF MATERIAL**
		Added pay item details for double face barrier to the bill of materials.
	M-OHS-729	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS**
	Sheet 1	Changed the material specification of HSS from ASTM A618 Grade III to ASTM A1065 Grade 50 with additional Charpy V-Notch Impact Energy Requirements.
	Sheet 3	Revised the connection "Detail A" and eliminated the diagonal stiffener.
		Revised the welding details shown for the beam to column connection.
		Revised Section G-G to account for new connection details.
		Section A-A is drawn to clarify the new connection details.
	Sheet 6	Revised the orientation and number of anchor bolts to match with base plate in Shoulder Foundation Type II Plan.
	M-OHS-730	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS**
	Sheet 1	Changed the material specification of HSS from ASTM A618 Grade III to ASTM A1065 Grade 50 with additional Charpy V-Notch Impact Energy Requirements.
	Sheet 3	Revised the connection "Detail A" and eliminated the diagonal stiffener.
		Revised the welding details shown for the beam to column connection.
		Revised Section G-G to account for new connection details.
		Section A-A is drawn to clarify the new connection details.
	Sheet 7	Revised the orientation and number of anchor bolts to match with base plate in Shoulder Foundation Type II Plan.

New Sheet

Retired Standard



PLAN



* FROM THE HIGH POINT OF THE ROADWAY BENEATH THE SIGN STRUCTURE TO THE CENTERLINE OF TRUSS, WHICH INCLUDES AN ALLOWANCE FOR 9' FROM CENTERLINE OF TRUSS TO BOTTOM OF AN 18' TALL SIGN PANEL.

ELEVATION

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

PAY ITEM USED IS BASED ON THE DESIGN LENGTH, NOT THE CONSTRUCTED LENGTH.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-OHS-732)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	SHEET 1 OF STANDARD F1		ELEVATIONS					PROPOSED MINIMUM VERTICAL CLEARANCE	D	MEDIAN BARRIER END SUPPORT		SHOULDER END SUPPORT		HEIGHT OF TALLEST SIGN	TOTAL SIGN AREA (SQ FT)	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ. YD.)
			SPAN L	P	A	B	C	E	F			H	PIPE COLUMN (NOMINAL DIAMETER) (INCH)	H_1	PIPE COLUMN (NOMINAL DIAMETER) (INCH)			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
																	TOTAL				

TOTAL BILL OF MATERIAL

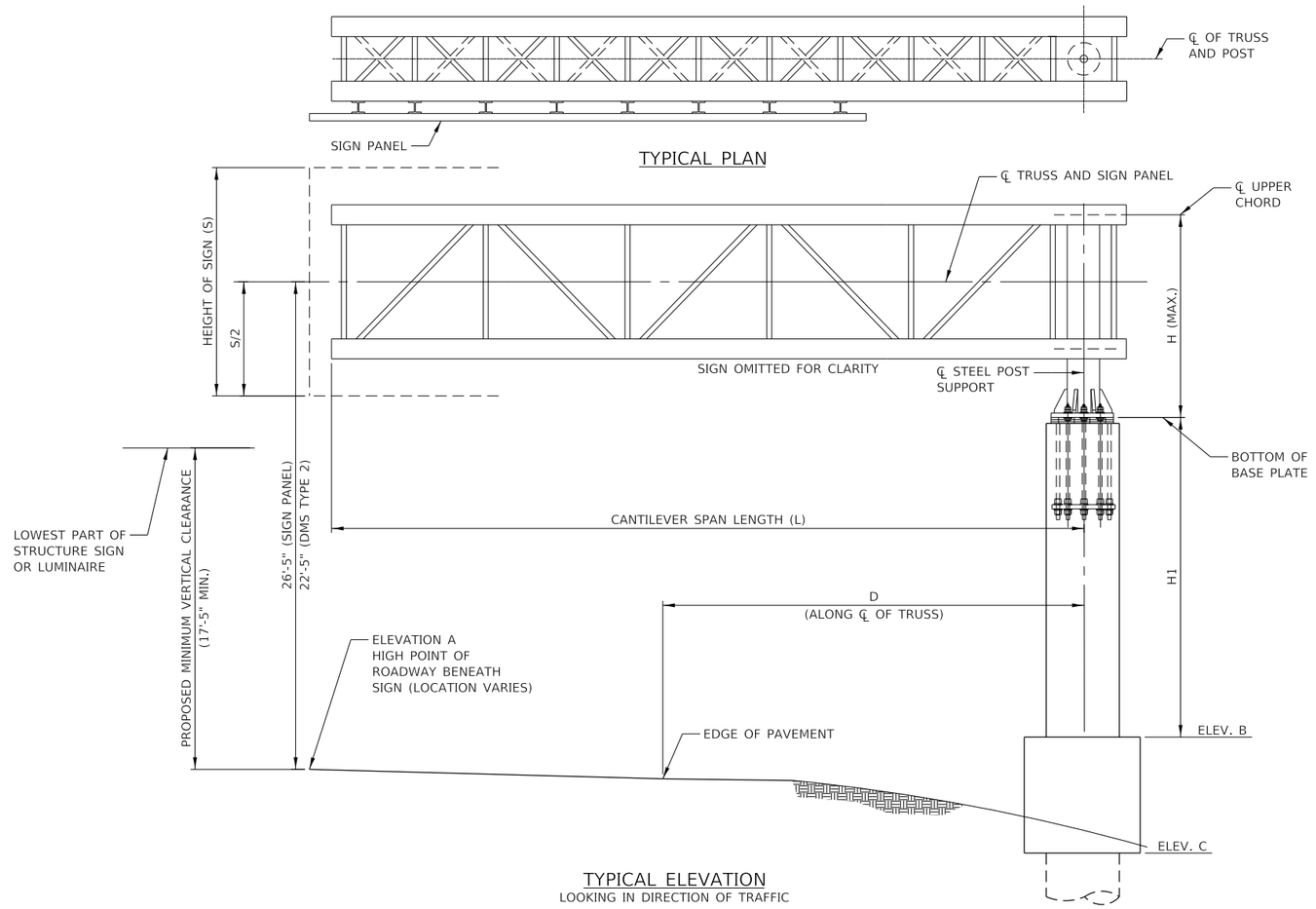
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733XXX	OVERHEAD SIGN STRUCTURE, SPAN TYPE (ALUMINUM)	FOOT	XXX'-XX"
JS734A10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

NOTE:
WORK THIS SHEET WITH STANDARD F1

Illinois Tollway

OVERHEAD SIGN STRUCTURE SPAN TYPE SUMMARY AND BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2022-03	M-OHS-720	1 OF 1



TYPICAL ELEVATION
LOOKING IN DIRECTION OF TRAFFIC

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1105 OR M-OHS-733)

INSTALLATIONS NOT WITHIN DIMENSIONAL LIMITS SHOWN REQUIRE SPECIAL ANALYSIS FOR ALL COMPONENTS.

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	SPAN L	ELEVATIONS			PROPOSED MINIMUM VERTICAL CLEARANCE	D	H	H_1	HEIGHT OF TALLEST SIGN	TOTAL SIGN AREA (SQ FT)	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ. YD.)
				A	B	C							CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
												TOTAL				

TOTAL BILL OF MATERIAL

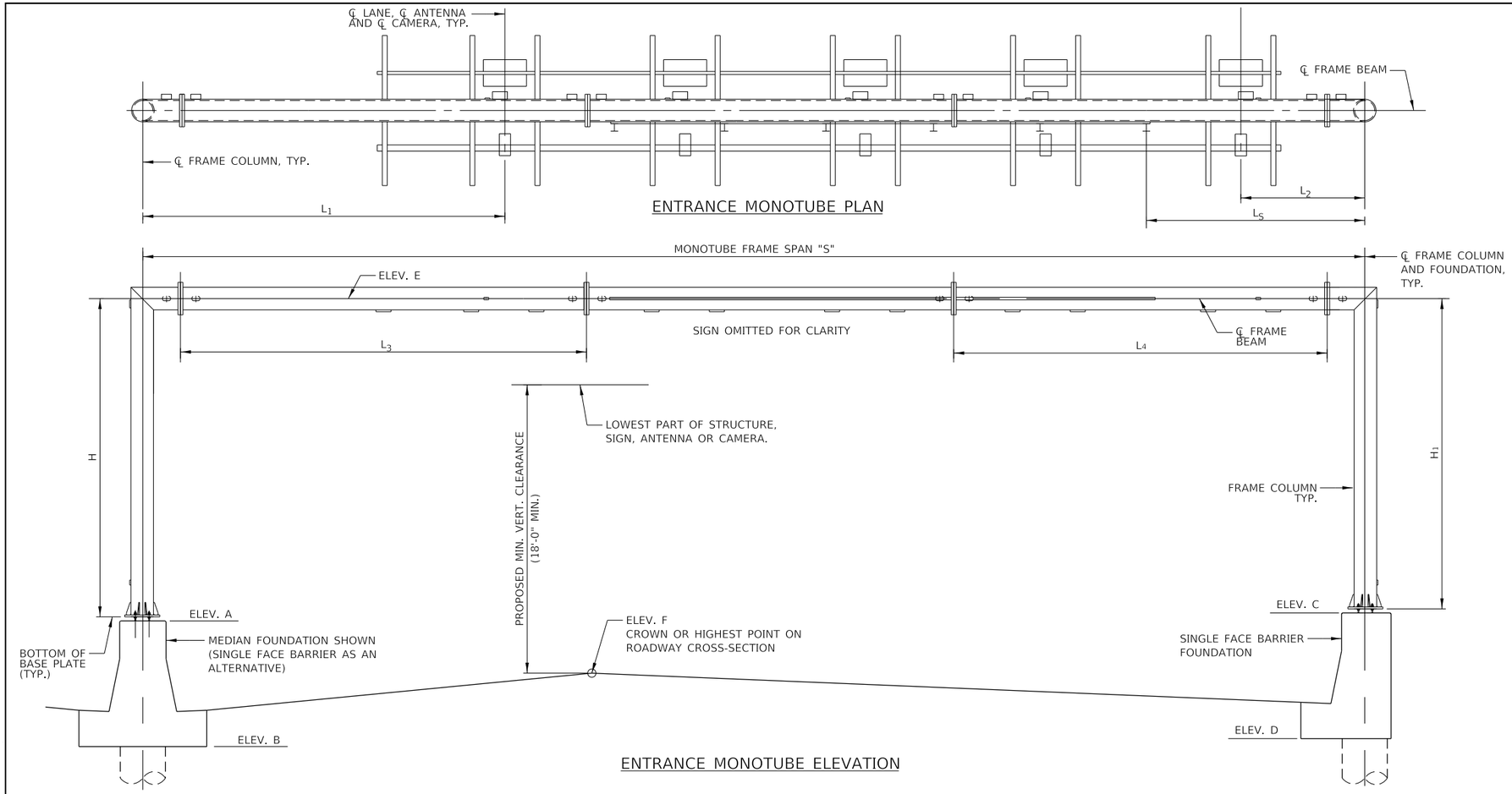
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733BXX	OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE (STEEL)	FOOT	XXX'-XX"
JS734B10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

NOTE:
WORK THIS SHEET WITH STANDARD F4

Illinois Tollway

OVERHEAD SIGN STRUCTURE CANTILEVER TYPE SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2021-03	M-OHS-721	1 OF 1



ENTRANCE MONOTUBE PLAN

ENTRANCE MONOTUBE ELEVATION

NOTE TO DESIGNER

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	MONOTUBE FRAME TYPE	SPAN "S"	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F13							SHEETS 6 AND 7 OF STANDARD F13	SIGN AREA (SQ FT)	SIGN LENGTH	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		OUTSIDE CONCRETE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUND)	MEDIAN BARRIER (FOOT)	MEDIAN BARRIER TRANSITION (FOOT)	PROTECTIVE COAT (SQ YD)
				A	B	C	D	E	F		L_S	L_1	L_2	L_3	L_4	H	H_1	"C"			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	CONCRETE STRUCTURES (CU YD)				
TOTAL																											

TOTAL BILL OF MATERIAL

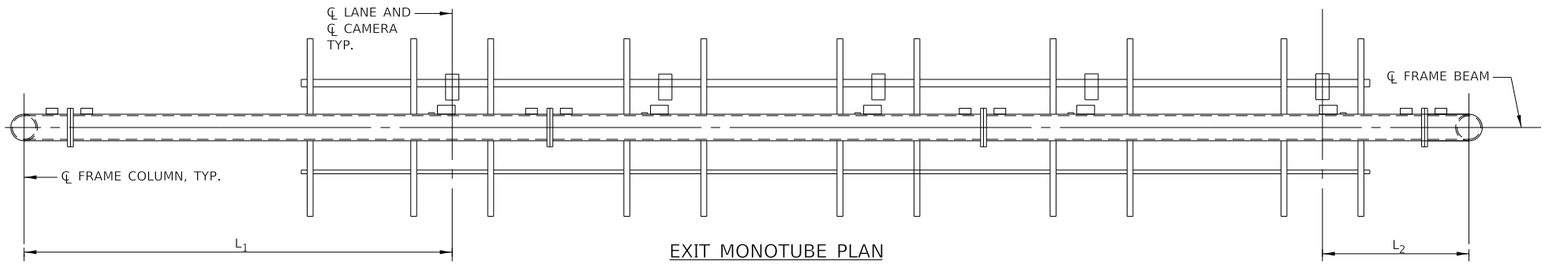
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733710	OVERHEAD SIGN STRUCTURE, MAINLINE ENTRANCE MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
JS734E10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, MAINLINE MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X
JT637550	CONCRETE BARRIER MEDIAN TRANSITION, DOUBLE FACE, AT PLAZA MONOTUBE	FOOT	XX'-XX"
JT637554	CONCRETE BARRIER MEDIAN, DOUBLE FACE, AT PLAZA MONOTUBE	FOOT	XX'-XX"

NOTE:
WORK THIS SHEET WITH STANDARD F13

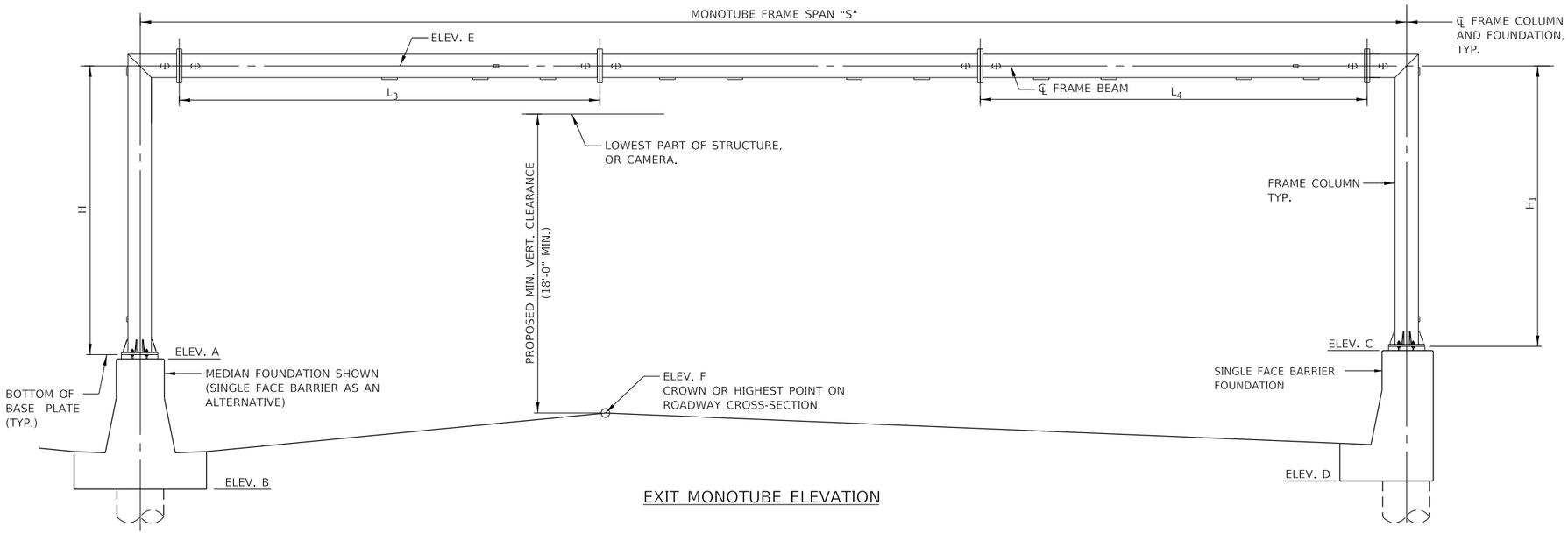
Illinois Tollway

OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-722	1 OF 1



EXIT MONOTUBE PLAN



EXIT MONOTUBE ELEVATION

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	MONOTUBE FRAME TYPE	SPAN "S"	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F13							SHEETS 6 AND 7 OF STANDARD F13	SIGN AREA (SQ FT)	SIGN LENGTH	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		OUTSIDE CONCRETE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUND)	MEDIAN BARRIER (FOOT)	MEDIAN BARRIER TRANSITION (FOOT)	PROTECTIVE COAT (SQ YD)
				A	B	C	D	E	F		L_S	L_1	L_2	L_3	L_4	H	H_1	"C"			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	CONCRETE STRUCTURES (CU YD)				
TOTAL																											

TOTAL BILL OF MATERIAL

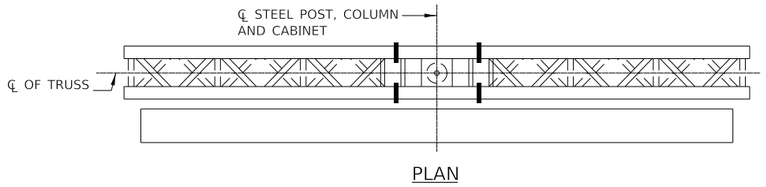
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733750	OVERHEAD SIGN STRUCTURE, MAINLINE EXIT MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
JS734E10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, MAINLINE MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X
JT637550	CONCRETE BARRIER MEDIAN TRANSITION, DOUBLE FACE, AT PLAZA MONOTUBE	FOOT	XX'-XX"
JT637554	CONCRETE BARRIER MEDIAN, DOUBLE FACE, AT PLAZA MONOTUBE	FOOT	XX'-XX"

NOTE:
WORK THIS SHEET WITH STANDARD F13

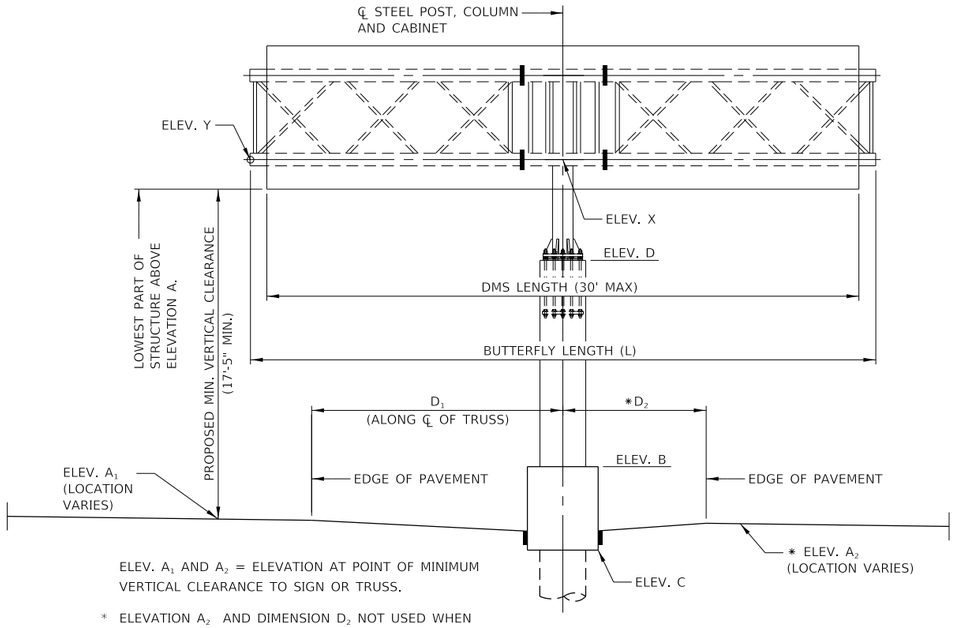
Illinois Tollway

OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-723	1 OF 1



PLAN



ELEV. A_1 AND A_2 = ELEVATION AT POINT OF MINIMUM VERTICAL CLEARANCE TO SIGN OR TRUSS.

* ELEVATION A_2 AND DIMENSION D_2 NOT USED WHEN BUTTERFLY STRUCTURE IS MOUNTED ON RIGHT SIDE OF THE SHOULDER.

ELEVATION

NOTE TO DESIGNER

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1105 OR M-OHS-733)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733460	OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE (STEEL)	FOOT	XXX'-XX"
JS734C10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

SUMMARY

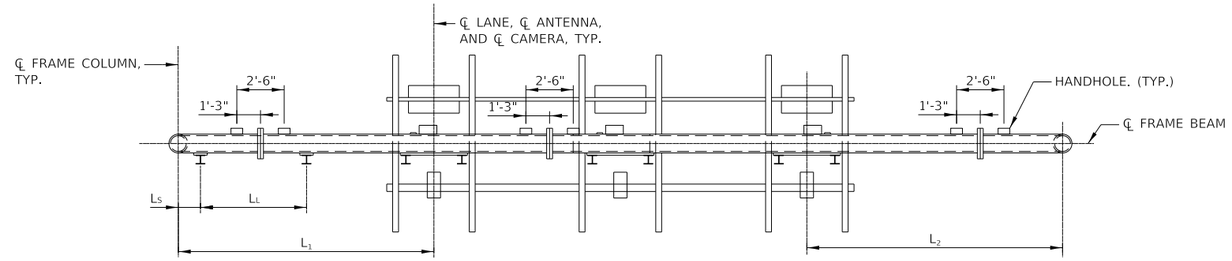
STRUCTURE NUMBER	STATION	ELEVATIONS							PROPOSED MINIMUM VERTICAL CLEARANCE	D_1	D_2	L	SHEET 2 OF STANDARD F14				SHEET 8 OF STANDARD F14			DMS CABINET		FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
		A_1	A_2	B	C	D	X	Y					L_1	L_2	P_1	P_2	I	J	K	TOTAL AREA (SQ FT)	TOTAL WEIGHT (POUND)	CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
XXX-XXXX	XXXXX+XX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XX.XX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX"	X'-XX"	X'-XX"	X,XXX.XX	X,XXX	XXX.XX	XXX.XX	X,XXX	XXX.XX
																					TOTAL				

NOTE:
WORK THIS SHEET WITH STANDARD F14

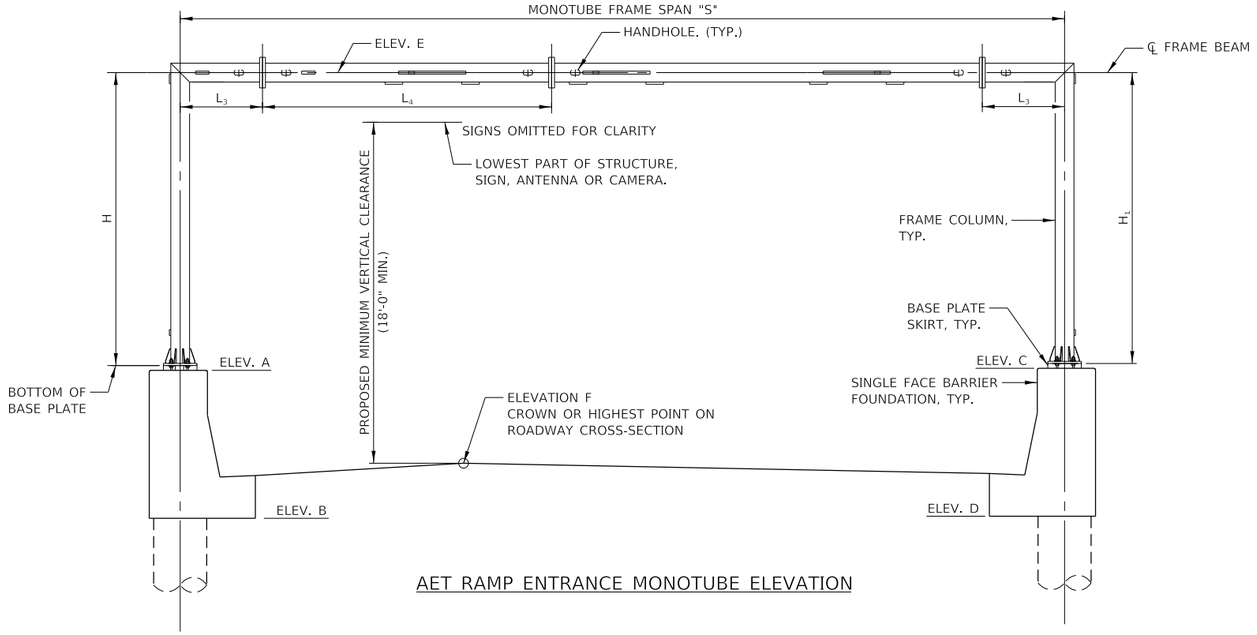
Illinois Tollway

OVERHEAD SIGN STRUCTURE BUTTERFLY TYPE (STEEL) SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2021-03	M-OHS-724	1 OF 1



AET RAMP ENTRANCE MONOTUBE PLAN



AET RAMP ENTRANCE MONOTUBE ELEVATION

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REPLACE THIS "NOTE TO DESIGNER" WITH SITE GROUNDING ELECTRODE SYSTEM DETAIL.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F15								SHEET 6 OF STANDARD F15	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ. YD.)
			A	B	C	D	E	F		L_S	L_L	L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
																		TOTAL					

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733610	OVERHEAD SIGN STRUCTURE, AET RAMP ENTRANCE MONOTUBE TYPE (STEEL))	FOOT	XXX'-XX"
JS734F10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

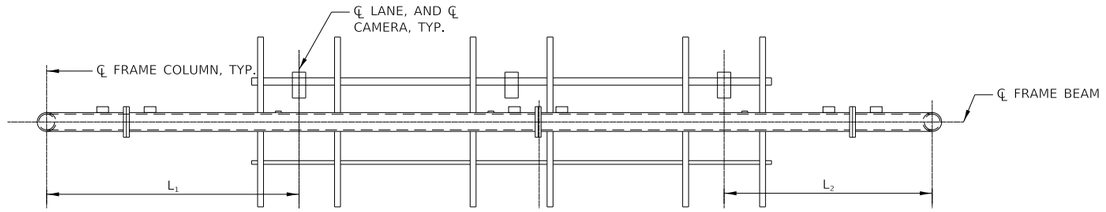
NOTE:

WORK THIS SHEET WITH STANDARD F15

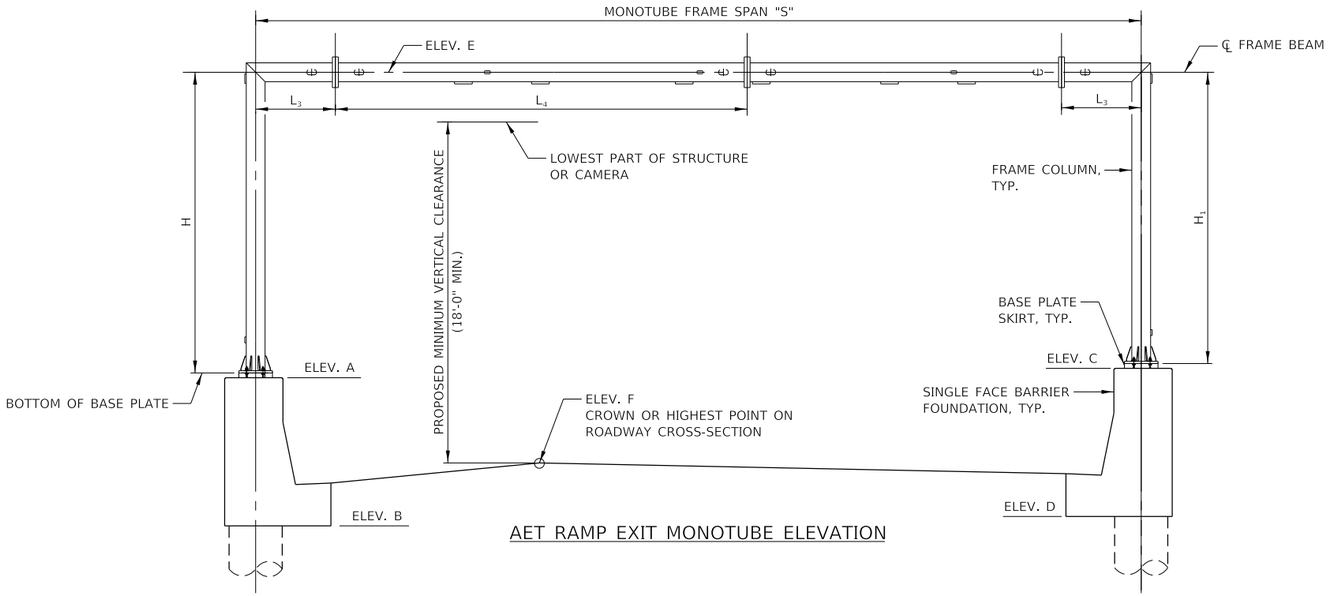
Illinois Tollway

OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2020-03	M-OHS-725	1 OF 1



AET RAMP EXIT MONOTUBE PLAN



AET RAMP EXIT MONOTUBE ELEVATION

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F15						SHEET 6 OF STANDARD F15	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ. YD.)
			A	B	C	D	E	F		L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
																TOTAL					

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733630	OVERHEAD SIGN STRUCTURE, AET RAMP EXIT MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
JS734F10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

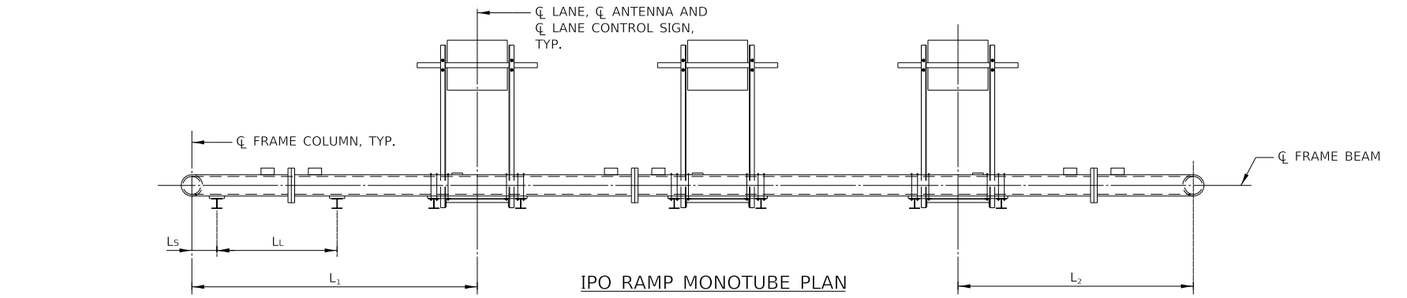
NOTE:

WORK THIS SHEET WITH STANDARD F15

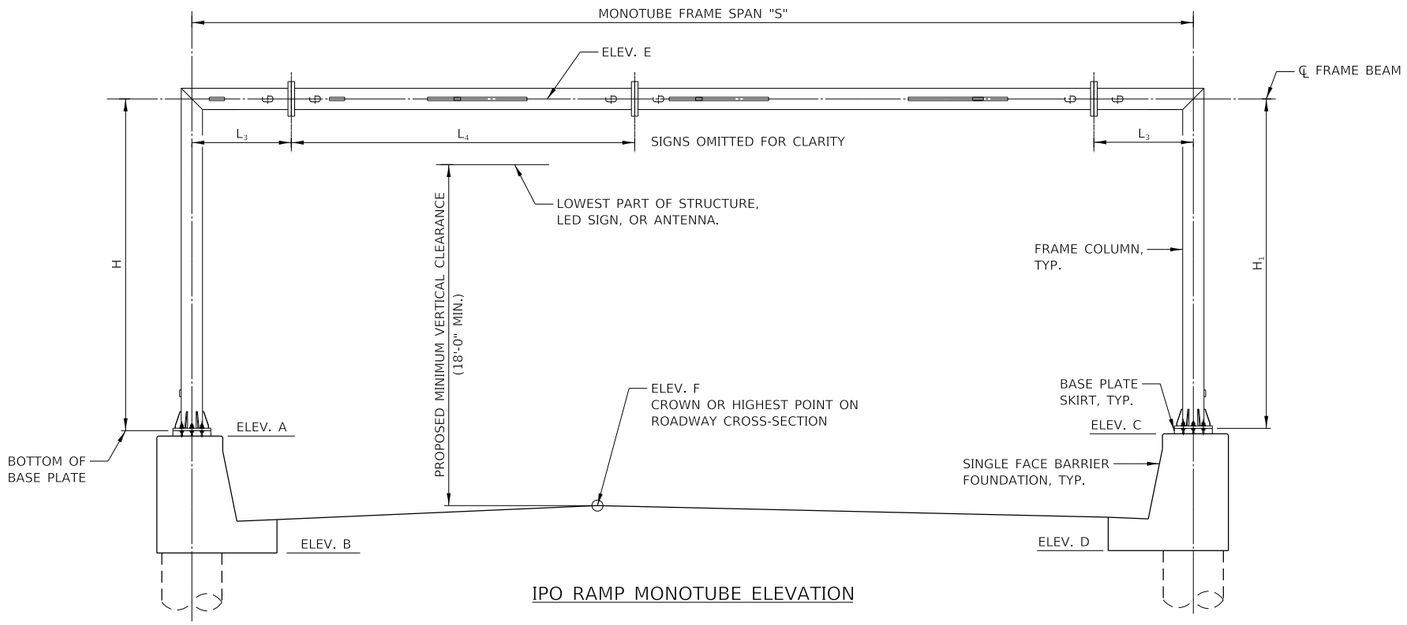
Illinois Tollway

OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2022-03	M-OHS-726	1 OF 1



IPO RAMP MONOTUBE PLAN



IPO RAMP MONOTUBE ELEVATION

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SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F16								SHEET 6 OF STANDARD F16	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ. YD.)
			A	B	C	D	E	F		L_S	L_L	L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
TOTAL																							

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733650	OVERHEAD SIGN STRUCTURE, CASH-IPO RAMP MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
JS734F10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

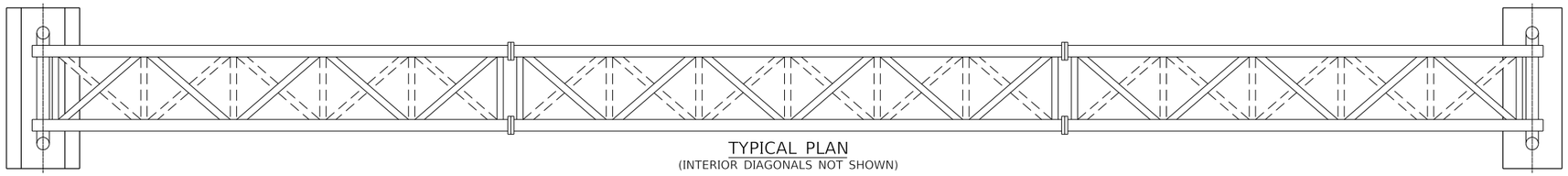
NOTE:

WORK THIS SHEET WITH STANDARD F16

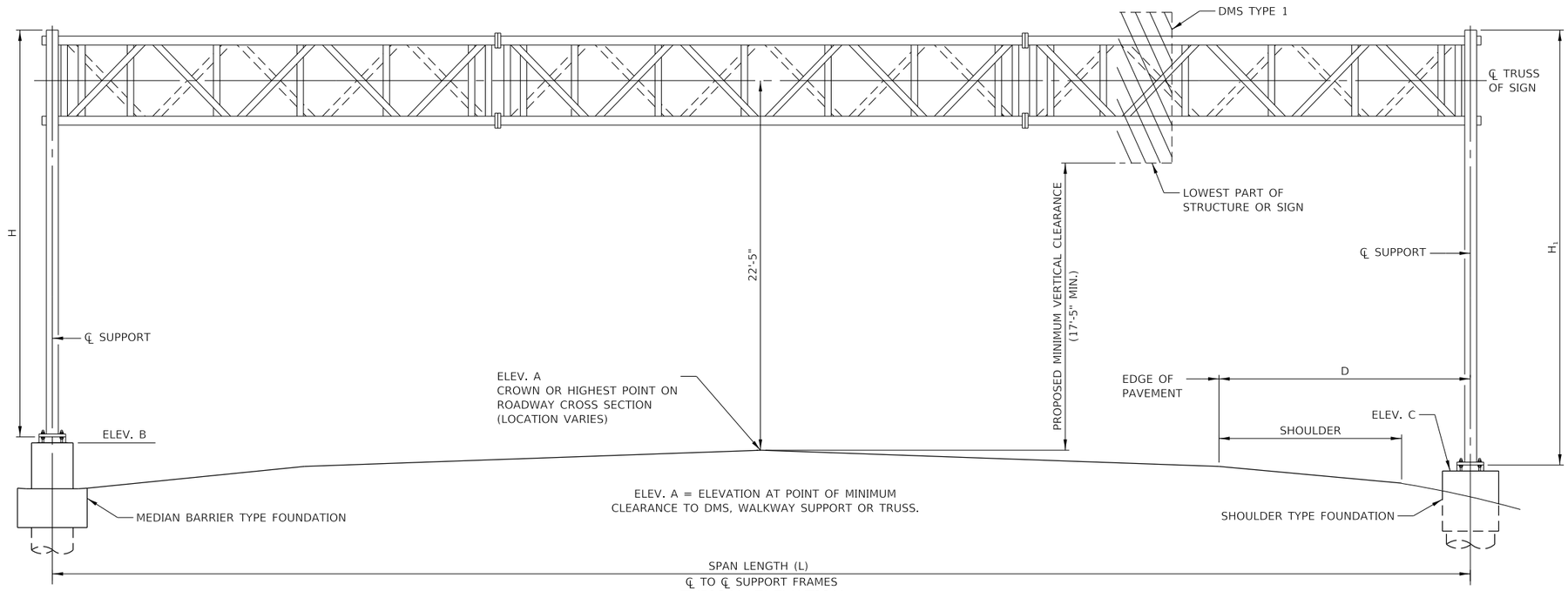
Illinois Tollway

OVERHEAD SIGN STRUCTURE MONOTUBE TYPE (STEEL) CASH-IPO RAMP SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2020-03	M-OHS-727	1 OF 1



TYPICAL PLAN
(INTERIOR DIAGONALS NOT SHOWN)



TYPICAL ELEVATION
(LOOKING AT FACE OF SIGN)

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

PAY ITEM USED IS BASED ON THE DESIGN LENGTH, NOT THE CONSTRUCTED LENGTH.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	SPAN LENGTH (FT)	ELEVATIONS			PROPOSED MINIMUM VERTICAL CLEARANCE	FOUNDATION TYPE		D	H	H_1	SHEET 2 OF STANDARD F17		SHEET 5 OF STANDARD F17	SHEET 10 OF STANDARD F17				SHEET 11 OF STANDARD F17		DMS TYPE 1		FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (CU YD)
				A	B	C		LT.	RT.				F	P	A	a	b	c	L_S	B	C	TOTAL AREA (SQ. FT.)	TOTAL WEIGHT (LBS.)	CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
TOTAL																											

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS7338XX	OVERHEAD SIGN STRUCTURE, SPAN TYPE (STEEL)	FOOT	XXX'-XX"
JS734A10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

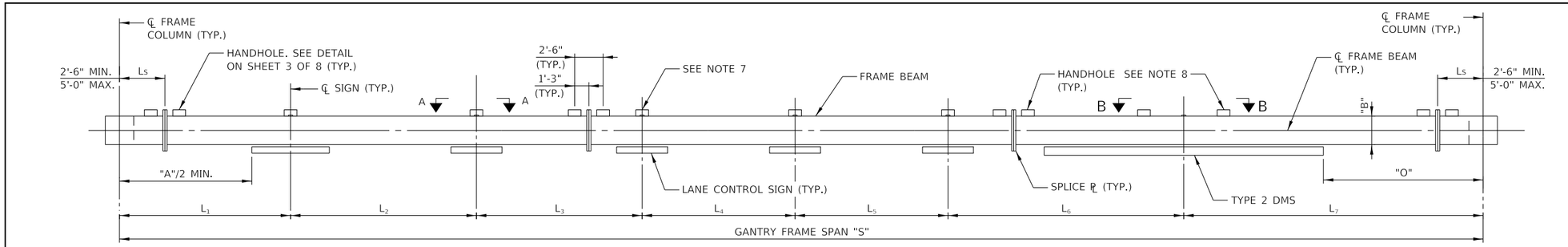
NOTE:

WORK THIS SHEET WITH STANDARD F17

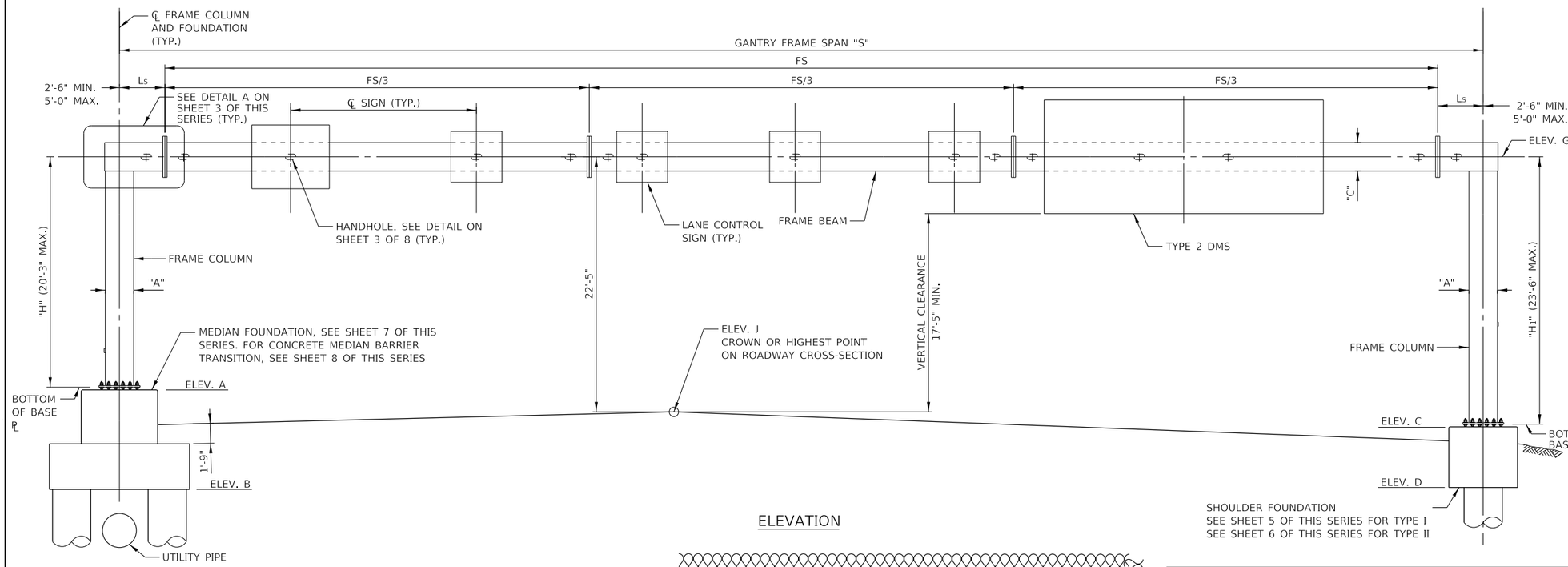
Illinois Tollway

OVERHEAD SIGN STRUCTURE SPAN TYPE (STEEL) SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2020-03	M-OHS-728	1 OF 1



PLAN



ELEVATION

MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS

ELEMENT OF STRUCTURE	SPECIFICATION	F_y(ksi)	F_u(ksi)
STRUCTURAL STEEL TUBE FRAME (HSS)	*ASTM A1065 GRADE 50	50	60
STRUCTURAL STEEL TUBE MOUNTING BEAMS (HSS)	ASTM A500 GRADE B	46	58
STEEL SHAPES	ASTM A709, GRADE 50	50	65
STEEL PLATES	ASTM A572 GR. 50 OR ASTM A709 GR. 50	50	65
STEEL BOLTS	ASTM 325 TYPE 1	--	105
SIGN BRACKET RODS	ASTM A307	--	60
LOCK NUTS	ASTM A194 GR. 8F OR ASTM A194 GR. 2H	--	--
NUTS	ASTM A563 GRADE DH	--	--
STEEL WASHERS	ASTM F436	--	--
STAINLESS STEEL WASHERS	ASTM A240, TYPE 302	--	--
ANCHOR BOLTS	AASHTO M 314 OR ASTM F1554	55	75

* SHALL CONFORM TO THE CHARPY-V-NOTCH IMPACT ENERGY REQUIREMENT, ZONE 2

NOTES:

1. SEE SHEET 2 OF THIS SERIES FOR VIEW A-A, VIEW B-B AND DESIGN SUMMARY TABLE.
2. CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
3. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L_1 THROUGH L_7)
4. FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 2 COLUMNS AND 3 FIELD SECTIONS.
5. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EACH FOUNDATION, ANCHOR BOLTS AND DETAILS AFFECTING GANTRY FRAME FABRICATION AND CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS FROM CONTRACT PLANS AND MAKE NECESSARY APPROVED ADJUSTMENTS. SUCH VARIATIONS DO NOT CONSTITUTE ADDITIONAL COMPENSATION FOR CHANGE IN SCOPE OF WORK. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
6. WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO ¼" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.
7. IF THE DISTANCE BETWEEN AN LCS TYPE 1 OR LCS TYPE 2 CENTERLINE HANDHOLE AND THE HANDHOLD ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SPLICE HANDHOLE SHALL BE ELIMINATED.
8. IF THE DISTANCE BETWEEN A TYPE 2 DMS SIGN HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SIGN HANDHOLD SHALL BE ELIMINATED, AND THE HANDHOLE ADJACENT TO THE SPLICE SHALL BE USED INSTEAD. THE CONDUIT COUPLERS SHALL BE INCLUDED AT THE HANDHOLE ADJACENT TO THE SPLICE IF THE TYPE 2 DMS SIGN HANDHOLE IS ELIMINATED.
9. LIMIT DMS TO THE FACE OF COLUMN WITH 1'-0" MAXIMUM OVERHANG FROM THE SUPPORT BRACKET. MAINTAIN 9" MINIMUM DISTANCE BETWEEN SPLICE AND SUPPORT BRACKET.

NOTE TO DESIGNER

PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION.

USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED IN LINE WITH SINGLE FACE CONCRETE BARRIER. THIS FOUNDATION REQUIRES MINIMUM 35 FT OF BARRIER ON EACH SIDE OF THE FOUNDATION TO RESIST LONGITUDINAL FORCE FROM THE GANTRY COLUMN.

USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED OUTSIDE CLEAR ZONE OR BEHIND GUARDRAIL.

PROVIDE SITE GROUNDING ELECTRODE SYSTEM DETAIL ACCORDING TO THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 734.

REFERENCE BASE SHEET M-ITS-1101.

DIFFERENCE BETWEEN ELEV. A AND ELEV. C SHOULD NOT EXCEED 5'-0".

NOTE TO DESIGNER

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TOTAL BILL OF MATERIAL

PAY ITEM	ITEM	UNIT	TOTAL
JS734G10	FOUNDATION FOR ITS GANTRY FRAME	CU YD	XXX.X
JS740110	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	XXX'-XX"
JS740130	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	XXX'-XX"
JS740150	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	XXX'-XX"
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	XXXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE

SPAN "S"	FRAME COLUMN	FRAME BEAM	CAMBER	"A"	"B"	"C"	"O"
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	3½"	2'-0"	2'-4"	2'-0"	1'-0"
110'<"S"<=130'	HSS 28x28x0.625	HSS 28x24x0.625	5"	2'-4"	2'-4"	2'-0"	1'-2"
130'<"S"<=150'	HSS 30x30x0.625	HSS 30x30x0.625	5½"	2'-6"	2'-6"	2'-6"	1'-3"

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-729	1 OF 8

GENERAL NOTES:

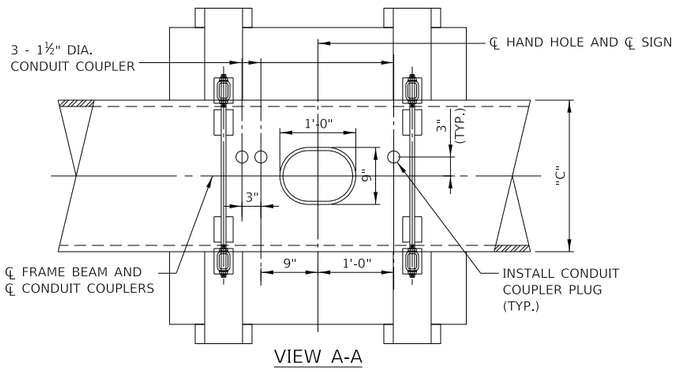
1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A ¾" x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS:

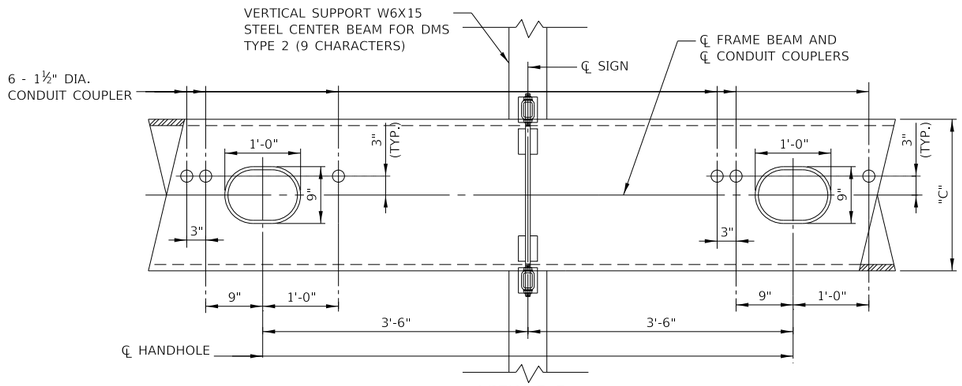
1. REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

CONSTRUCTION SPECIFICATIONS:

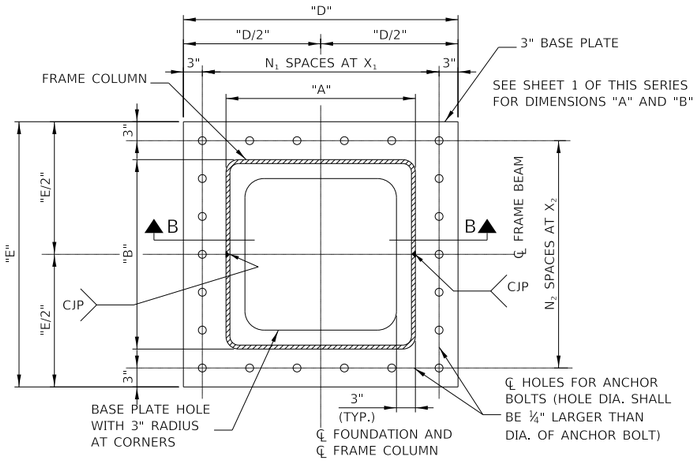
1. ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS ISSUED MARCH, 2015 TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2015.
3. ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012.



VIEW A-A



VIEW B-B



BASE PLATE PLAN

DESIGN LOADING:

WIND LOAD CRITERIA

SIGN PANEL	60.7 P.S.F.	BASIC WIND SPEED	120 M.P.H.
COLUMN/BEAM	60.7 P.S.F.	G	1.14
TYPE 2 DMS	62 P.S.F.	I_F (FATIGUE IMPORTANCE FACTOR)	1.0
		K_Z	1.0

TL-5 DESIGN REQUIREMENTS, WHERE APPLICABLE FOR FOUNDATION ONLY, PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION WITH CURRENT INTERIMS

ICE = 3 P.S.F. (APPLIED WITH A FACTOR OF 1.0 FOR STRENGTH I ONLY)

EQUIPMENT LOADS:

LANE CONTROL SIGNS	220 LB. MAX. (4'-0" H. X 4'-0" W. X 1'-2" D. MAX.)
TYPE 2 DMS	2,700 LB. MAX. (7'-9" H. X 25'-10" W. X 1'-2" D. MAX.)

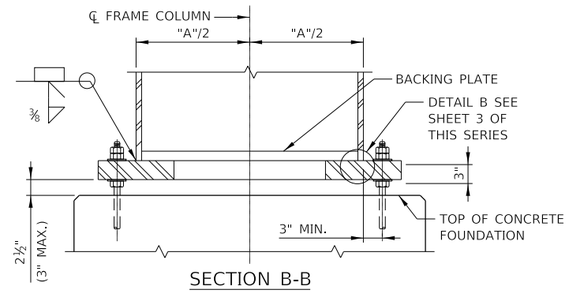
ITS GANTRY FRAMES AND FOUNDATIONS ARE DESIGNED FOR MAX. LOADING OF 2-TYPE 2 DMS (ONE OVER EACH SHOULDER) AND 1-LANE CONTROL SIGN IN EACH ADDITIONAL 12' LANE.

DESIGN STRESSES FOR REINFORCED CONCRETE:

f'c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS BS)	= 4,000 P.S.I.
f'c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS DS)	= 4,000 P.S.I.
fy = YIELD STRENGTH OF REINFORCEMENT BARS (GRADE 60)	= 60,000 P.S.I.

DESIGN SPECIFICATIONS:

1. ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, LATEST EDITION.
2. AASHTO LRFD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION WITH CURRENT INTERIMS
3. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION, 2020.
4. ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012.
5. ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL, LATEST EDITION.



SECTION B-B

DESIGN SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT)	ELEVATIONS A	B	C	D	J	G	FOUNDATION TYPE	PROPOSED MINIMUM VERTICAL CLEARANCE	F_S	L_S	L_1	L_2	L_3	L_4	L_5	L_6	L_7	H	H_1	FOUNDATION CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
XXX-XXXX	XXXXX+XX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXXX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XXX.XX	XXX.XX	X,XXX	XXX.XX
																						TOTAL				

NOTE TO DESIGNER

1. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
2. NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESION LESS SOIL CONDITIONS. REGARDLESS, THE DESIGNER MUST CONDUCT A SUBSURFACE INVESTIGATION AT EACH OVERHEAD SIGN STRUCTURE FOUNDATION TO DETERMINE THE ACTUAL SOIL PROPERTIES. SHOULD THE INVESTIGATION REVEAL THE PRESENCE OF COHESION LESS SOIL OR COHESIVE SOILS WITH PROPERTIES LESS THAN THE AVERAGES INDICATED IN THIS STANDARD, THE DESIGNER SHALL DESIGN AND DETAIL THE DRILLED SHAFT FOUNDATIONS TO MEET THE ACTUAL SOIL CONDITIONS.
3. DESIGN AND CONSTRUCTION SPECIFICATIONS: THE DESIGNER IS RESPONSIBLE FOR UPDATING THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION TO THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION USED IN DESIGN.
4. DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
5. DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.

NOTE TO DESIGNER

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NOTE:

WHERE THE DISTANCE BETWEEN SIGN ACCESS HOLE(S) AND THE ACCESS HOLES ADJACENT TO THE SPLICE ARE LESS THAN 6'-0", THE SIGN ACCESS HOLE SHALL BE ELIMINATED AND THE HOLE ADJACENT TO THE SPLICE IS USED INSTEAD. CONDUIT COUPLERS SHALL BE INCLUDED AT THE ACCESS HOLE ADJACENT TO THE SPLICE IF SIGN ACCESS HOLE IS ELIMINATED.

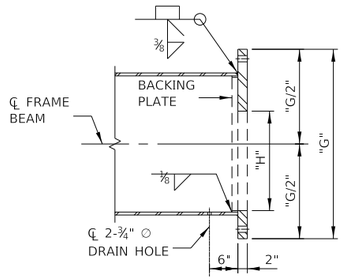
BASE PLATE TABLE - TYPE N

SPAN "S"	"D"	"E"	N_1	X_1	N_2	X_2	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
<=110'	3'-2"	3'-5"	4	8"	5	7"	1¾"	18
110'<"S"<=130'	3'-5"	3'-6"	5	7"	6	6"	1¾"	22
130'<"S"<=150'	3'-7½"	3'-6"	5	7½"	6	6"	1¾"	22

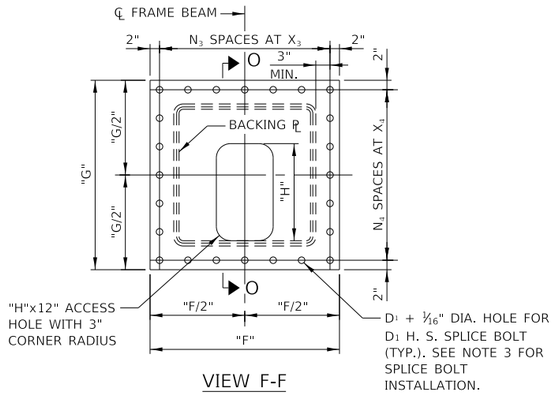
Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

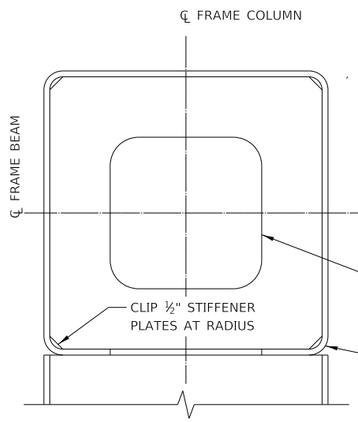
VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-729	2 OF 8



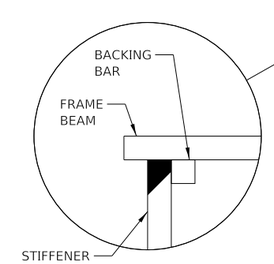
SECTION O-O
SPLICE PLATE DETAIL

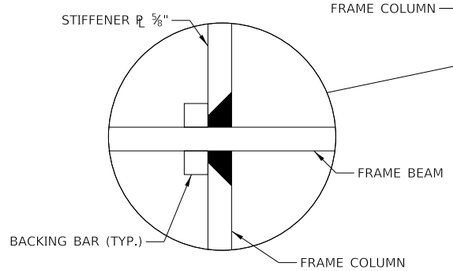


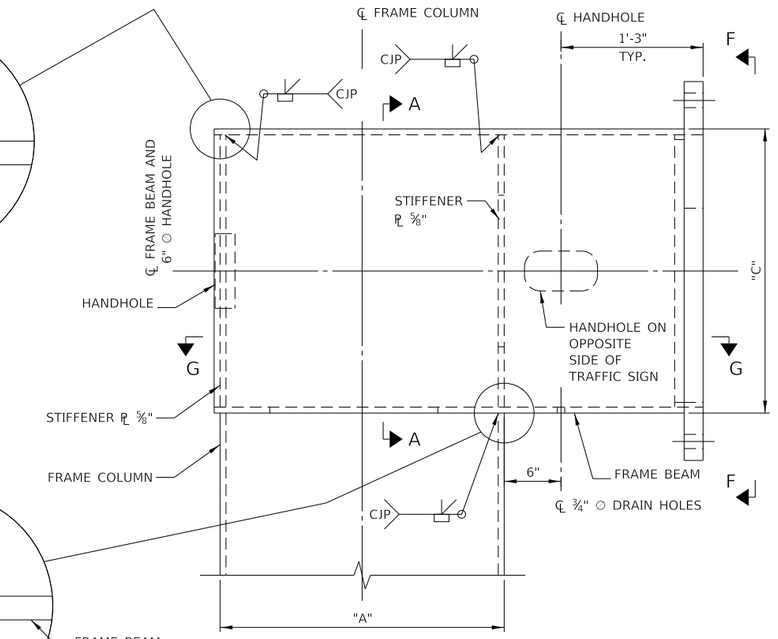
VIEW F-F



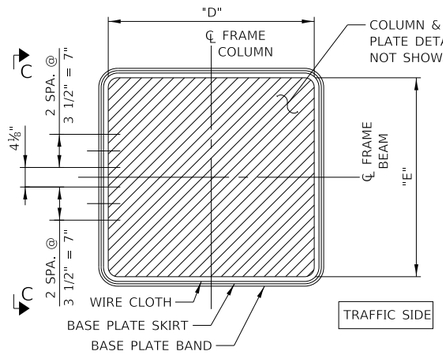
SECTION A-A



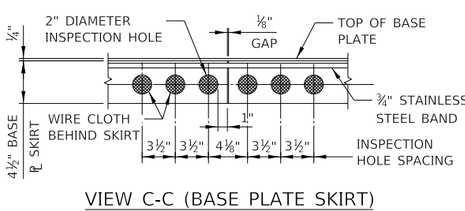




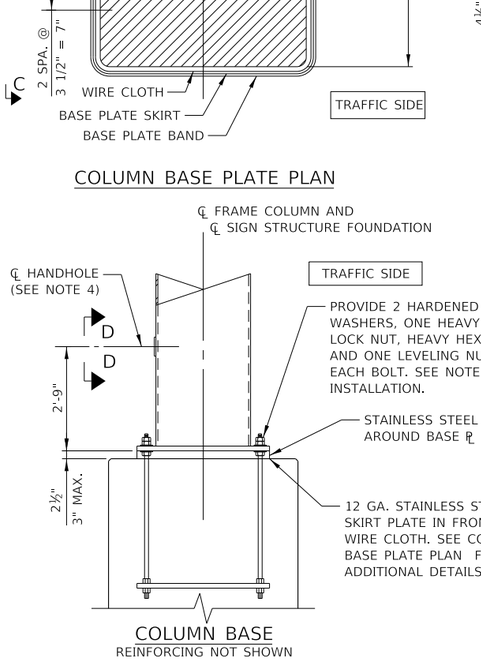
DETAIL A



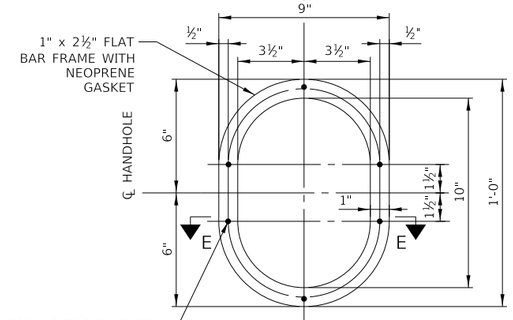
COLUMN BASE PLATE PLAN



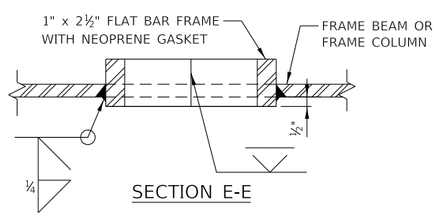
VIEW C-C (BASE PLATE SKIRT)



COLUMN BASE
REINFORCING NOT SHOWN



VIEW D-D
HANDHOLE DETAIL

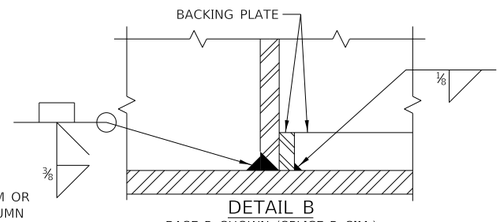


SECTION E-E

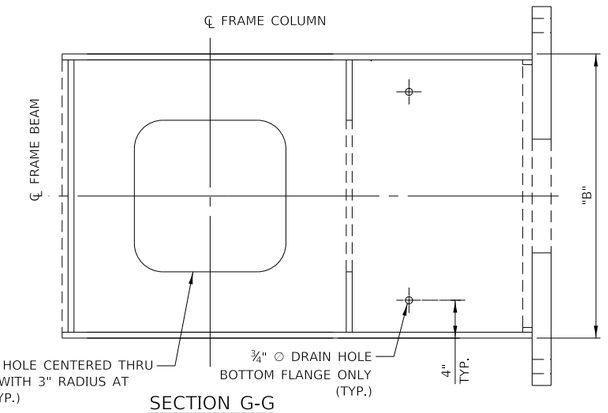
NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.



DETAIL B
BASE ℄ SHOWN (SPLICE ℄ SIM.)



SECTION G-G

NOTE:

1. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
2. SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
3. INSTALLATION AND INSPECTION OF SPLICE BOLTS AND ANCHOR BOLTS SHALL COMPLY WITH ILLINOIS TOLLWAY SPECIAL PROVISION "INTELLIGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.

SPLICE PLATE TABLE

SPAN "S"	F	G	H	J	N_3	X_3	N_4	X_4	SPLICE BOLT DIAMETER (D_1)	NO. SPLICE BOLT
<=110'	3'-1"	2'-8½"	1'-6"	2⅛"	6	5½"	6	4¾"	1"	24
110'<"S"<=130'	3'-0½"	2'-10"	1'-6"	2⅛"	5	6½"	5	6"	1¼"	20
130'<"S"<=150'	3'-4"	3'-4"	1'-9"	2⅜"	6	6"	6	6"	1¼"	24

Illinois Tollway

OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN STRUCTURE
DETAILS

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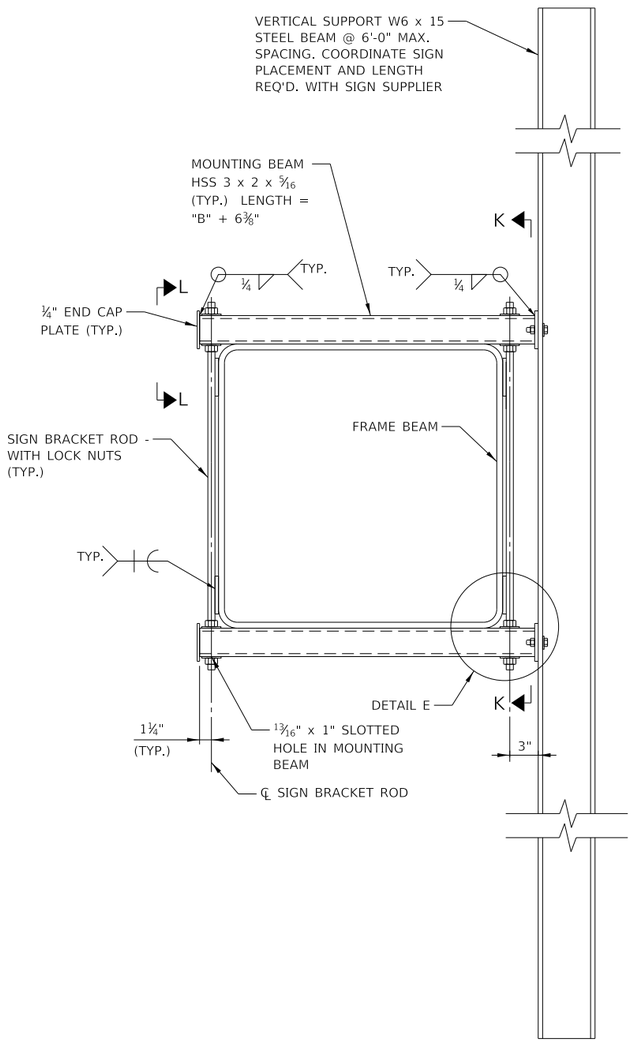
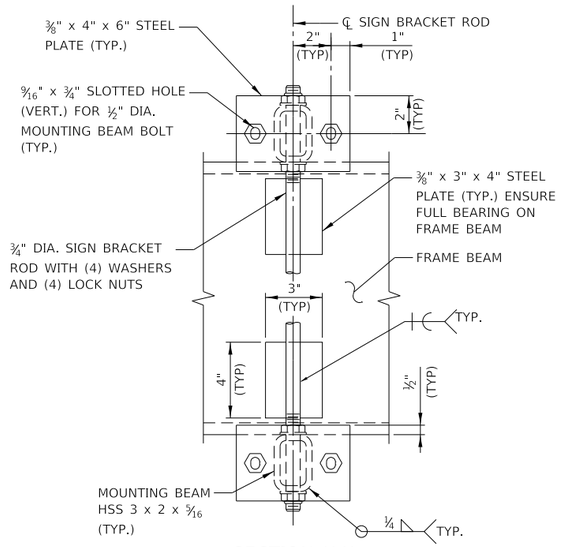
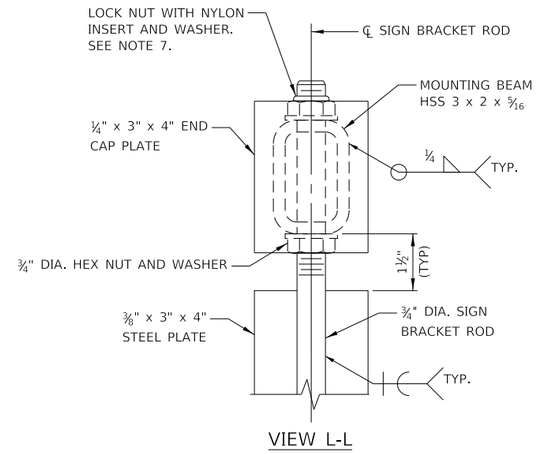


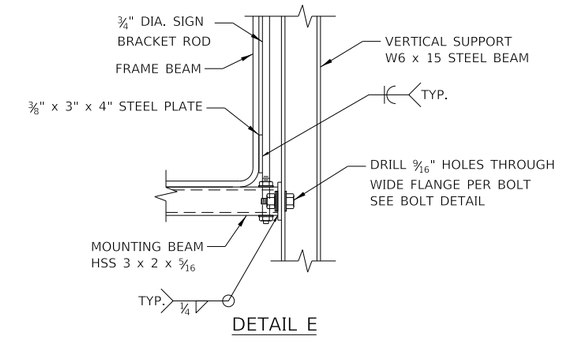
CONNECTION SIDE VIEW



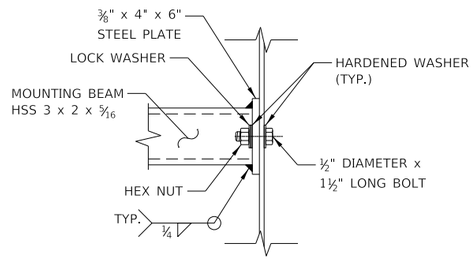
SECTION K-K



VIEW L-L



DETAIL E



BOLT DETAIL
SIGN BRACKET ROD NOT SHOWN FOR CLARITY

VERTICAL SUPPORT TABLE		
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5

NOTES:

1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED BY MANUFACTURER. VERIFY VERTICAL SPACING WITH HOLES ON W6x15 VERTICAL SUPPORT.
4. PROVIDE HIGH STRENGTH BOLTS WITH WASHERS AND LOCK NUTS TO FASTEN DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
5. GALVANIZE ALL NON-STAINLESS STEEL PARTS.
6. SIGN BRACKET RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307.
7. LOCK NUTS SHALL BE STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8F OR ASTM A194 GRADE 2H.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

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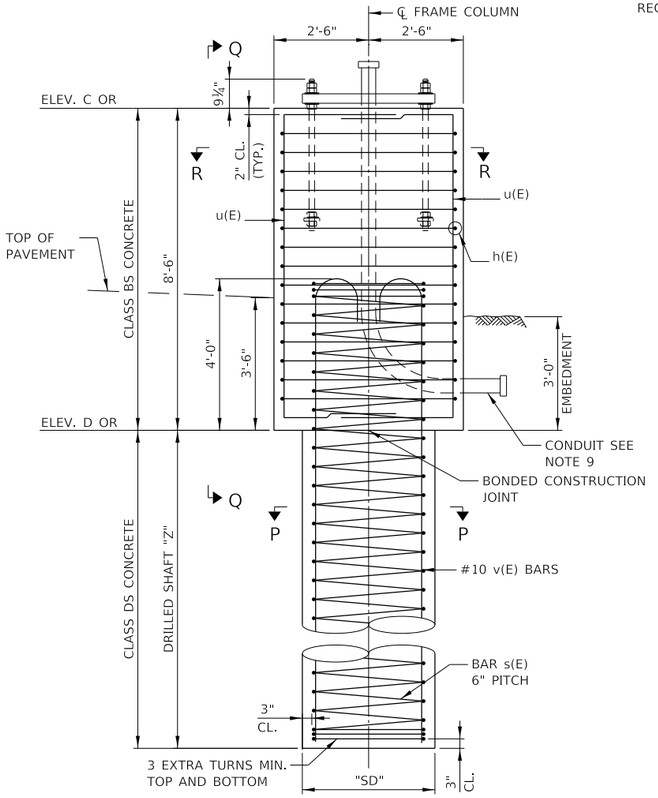
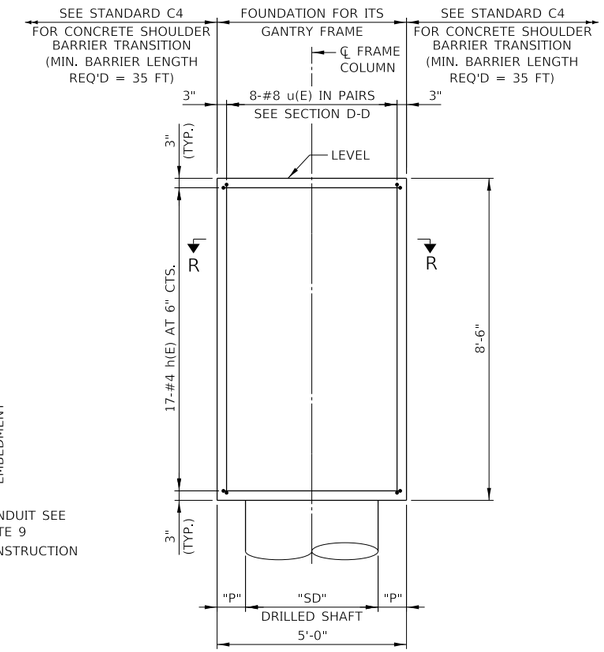
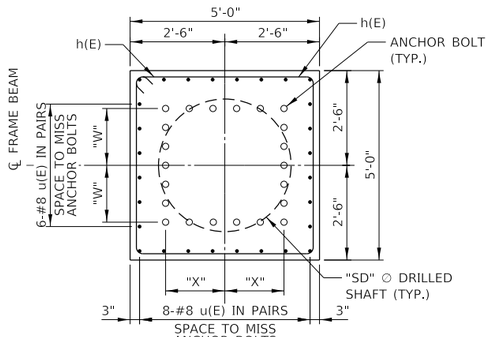


ELEVATION
SHOULDER FOUNDATION TYPE I



VIEW Q-Q



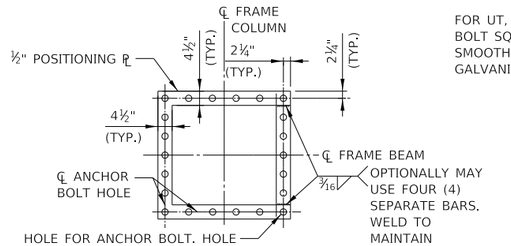
SECTION R-R

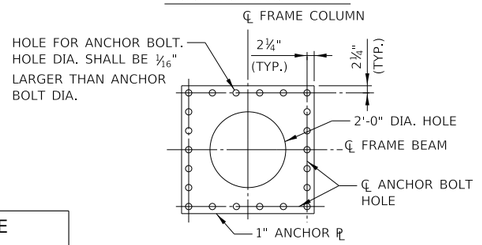
NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOBSITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D. COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

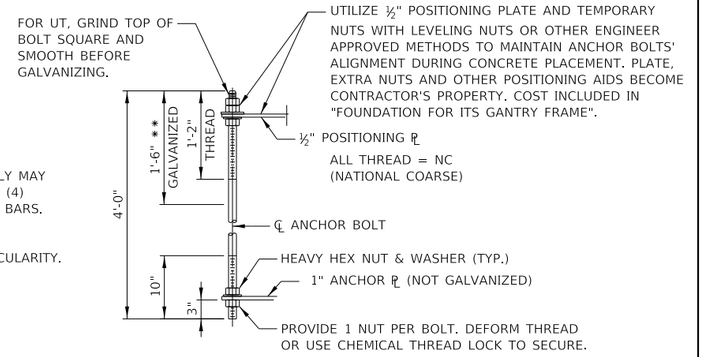
NOTE TO DESIGNER

DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.





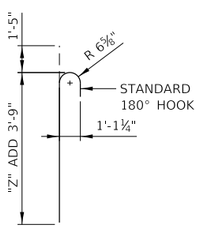
ANCHOR PLATE DETAIL



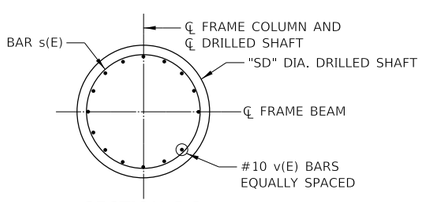
ANCHOR BOLT DETAIL

ANCHOR BOLTS SHALL CONFORM TO AASHTO M314 OR ASTM F1554 GRADE 55 AND MEET CHARPY V-NOTCH (CVN) ENERGY OF 15 LB.-FT. AT 40° F. GALVANIZE UPPER 18" PER AASHTO M 232. NO WELDING SHALL BE PERMITTED ON ANCHOR BOLTS.

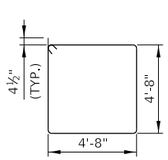
** 18" IS MINIMUM TO BE GALVANIZED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.



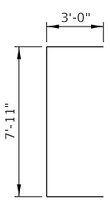
BAR v(E)



SECTION P-P



BAR h(E)



BAR u(E)

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION						
SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE	
<=110'	h(E)	17	#4	19'-5"		
	h_1(E)	17	#4	12'-9"		
	s(E)	1	#4	31'-9"		*
	v(E)	16	#10	33'-2"		
	u(E)	28	#8	13'-11"		
110'<"S"<=130'	h(E)	17	#4	19'-5"		
	h_1(E)	17	#4	12'-9"		
	s(E)	1	#6	31'-9"		*
	v(E)	16	#10	37'-2"		
	u(E)	28	#8	13'-11"		
130'<"S"<=150'	h(E)	17	#4	19'-5"		
	h_1(E)	17	#4	12'-9"		
	s(E)	1	#6	38'-9"		*
	v(E)	19	#10	40'-2"		
	u(E)	28	#8	13'-11"		

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

SHOULDER FOUNDATION TYPE I SCHEDULE			
SPAN "S"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	8.0	10.0	4,130
110'<"S"<=130'	8.0	11.4	4,900
130'<"S"<=150'	8.0	16.3	6,010

NOTE TO DESIGNER

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SHOULDER FOUNDATION TYPE I TABLE							
SPAN "S"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5½"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-6"	1'-5½"	32'-0"	3'-6"	9"	6"	22
130'<"S"<=150'	1'-6"	1'-6¾"	35'-0"	4'-0"	6"	6"	22

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

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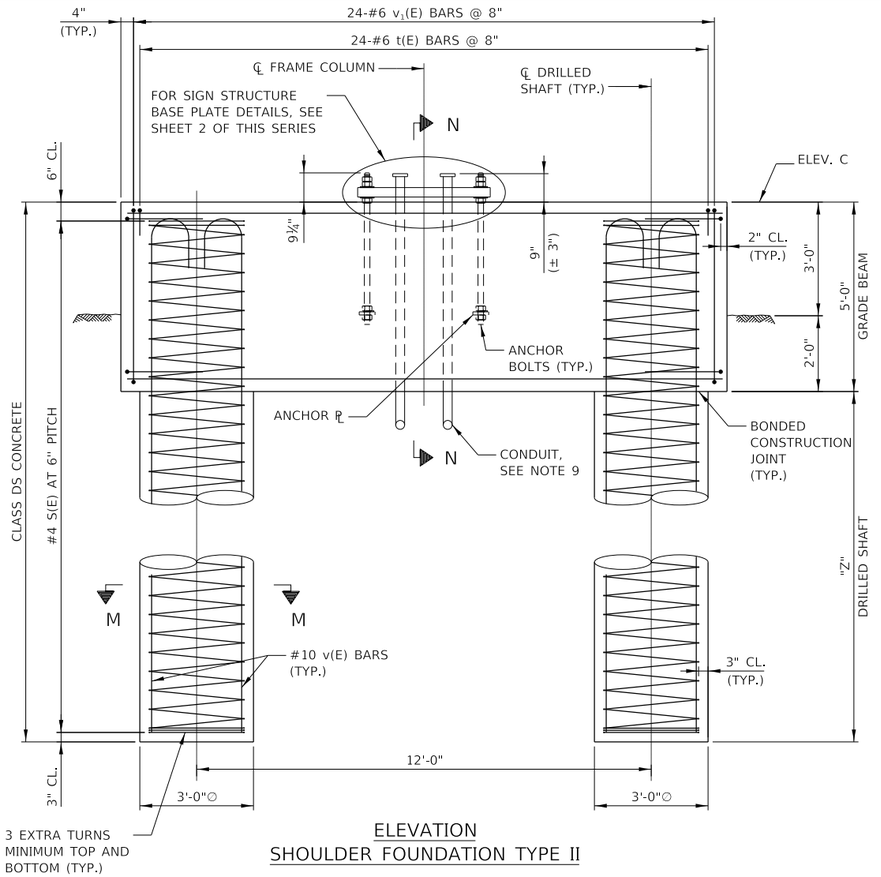
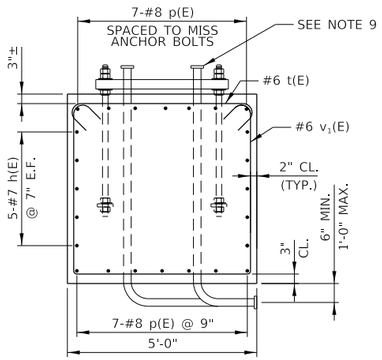
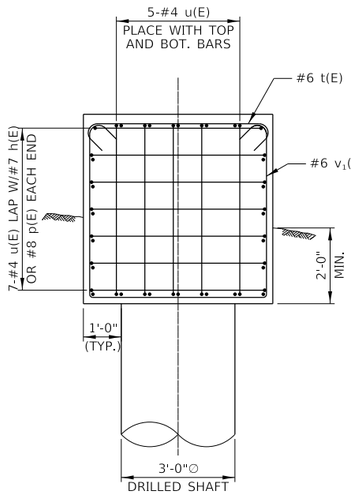


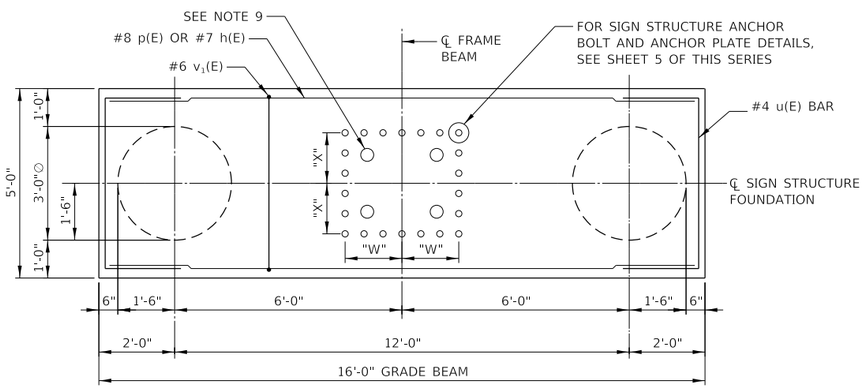
ELEVATION
SHOULDER FOUNDATION TYPE II



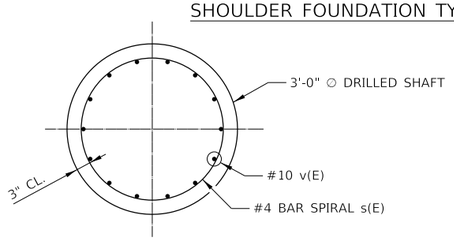
SECTION N-N



END VIEW



PLAN
SHOULDER FOUNDATION TYPE II



SECTION M-M
(TYPICAL BOTH SHAFTS)

SHOULDER FOUNDATION TYPE II SCHEDULE					
SPAN "S"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5½"	1'-4"	35.0	8,020
110'<"S"<=130'	42'-0"	1'-6"	1'-5½"	37.0	8,590
130'<"S"<=150'	46'-0"	1'-6"	1'-6¾"	39.0	9,150

NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOB SITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
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3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D. COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

NOTE TO DESIGNER

DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.

NOTE TO DESIGNER

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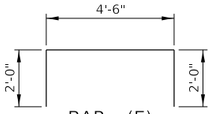
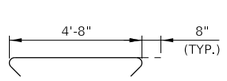
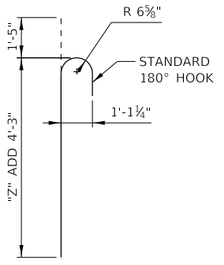


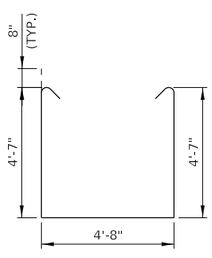
BAR u(E)



BAR t(E)



BAR v(E)



BAR v_1(E)

REINFORCEMENT BAR SCHEDULE (2 DRILLED SHAFTS AND 1 GRADE BEAM)					
SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
"S"<=110'	h(E)	10	#7	15'-8"	
	p(E)	14	#8	15'-8"	
	t(E)	24	#6	6'-0"	
	s(E)	2	#4	42'-3"	*
	v(E)	28	#10	43'-8"	
	v_1(E)	24	#6	15'-2"	
	u(E)	24	#4	8'-6"	
110'<"S"<=130'	h(E)	10	#7	15'-8"	
	p(E)	14	#8	15'-8"	
	t(E)	24	#6	6'-0"	
	s(E)	2	#4	46'-3"	*
	v(E)	28	#10	47'-8"	
	v_1(E)	24	#6	15'-2"	
	u(E)	24	#4	8'-6"	
130'<"S"<=150'	h(E)	10	#7	15'-8"	
	p(E)	14	#8	15'-8"	
	t(E)	24	#6	6'-0"	
	s(E)	2	#4	50'-3"	*
	v(E)	28	#10	51'-8"	
	v_1(E)	24	#6	15'-2"	
	u(E)	24	#4	8'-6"	

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

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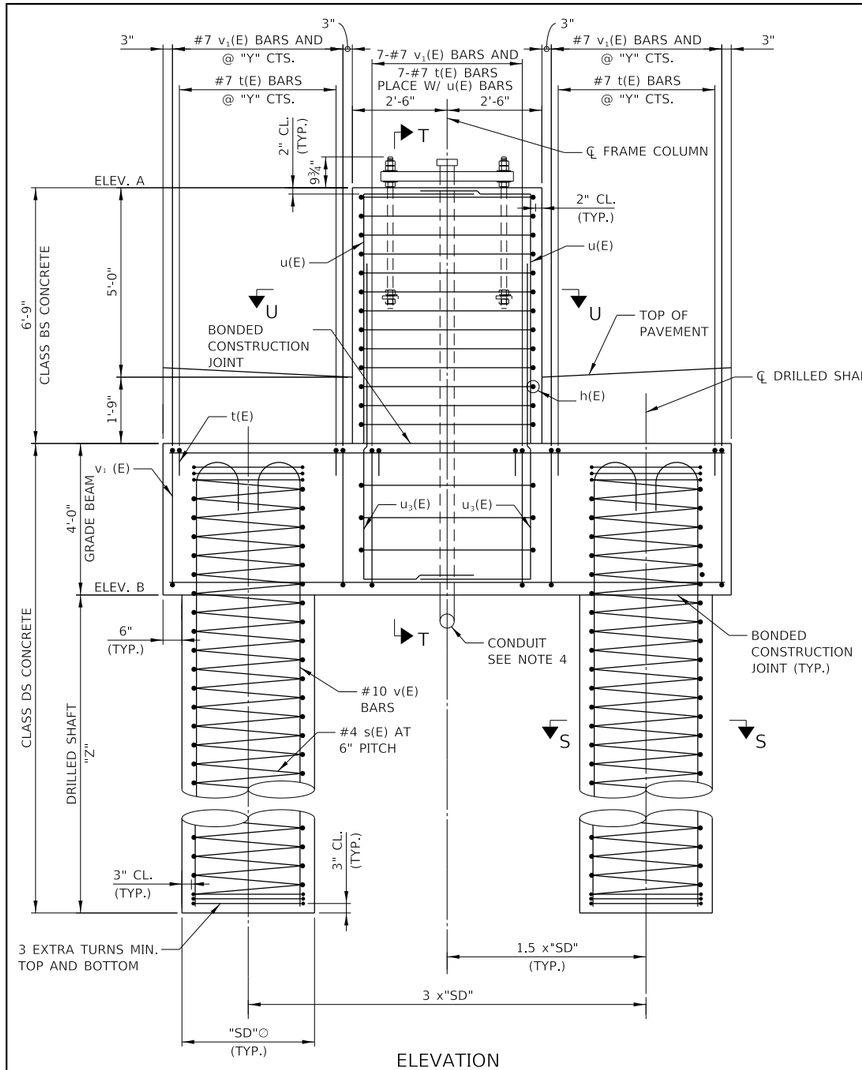
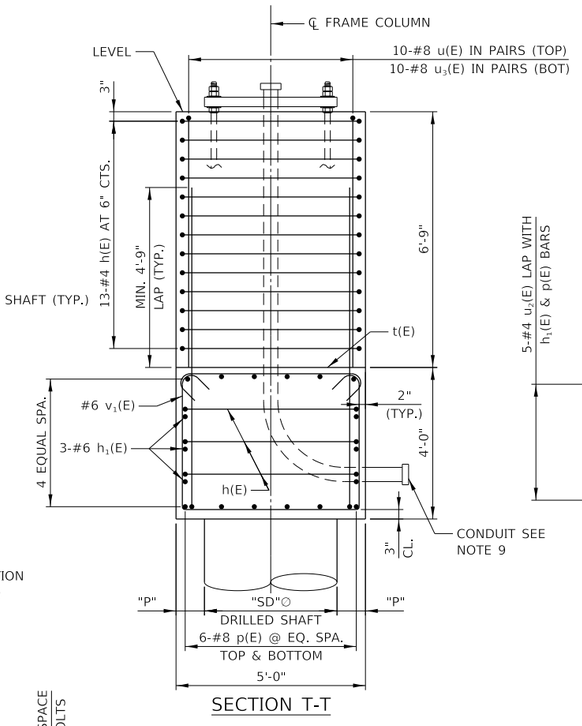
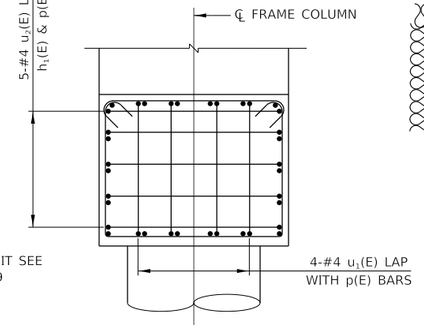


ELEVATION
MEDIAN FOUNDATION



SECTION T-T



END VIEW

NOTES:

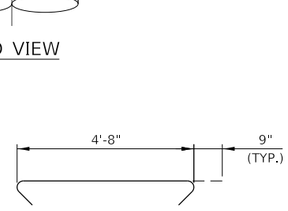
1. SEE SHEET 5 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
2. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM.
3. SEE SHEET 8 OF THIS SERIES FOR CONCRETE MEDIAN BARRIER TRANSITION. COST OF BARRIER TRANSITION INCLUDED IN COST OF "CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F".
4. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.
5. PROTECTIVE COAT SHALL BE APPLIED TO TRAFFIC AND TOP FACES OF CONCRETE CRASH WALL.

NOTE TO DESIGNER

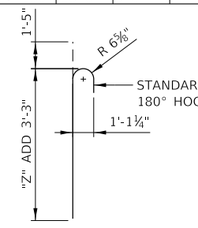
DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.

MEDIAN FOUNDATION TABLE

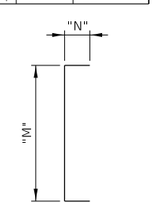
SPAN "S"	"Z"	"SD"	"P"	"W"	"X"	"Y"	NO. ANCHOR BOLT
<=110'	30'-0"	3'-0"	1'-0"	1'-5½"	1'-4"	6"	18
110'<"S"<=130'	28'-0"	3'-6"	9"	1'-6"	1'-5½"	6"	22
130'<"S"<=150'	28'-0"	3'-6"	9"	1'-6"	1'-6¾"	5"	22



BAR t(E)

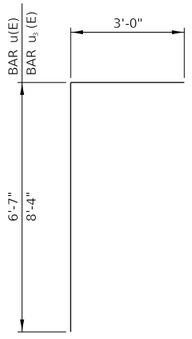


BAR v(E)

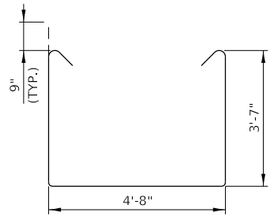


BAR u_1(E)
BAR u_2(E)

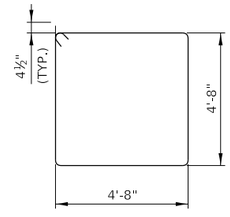
BAR	"M"	"N"
u_1(E)	3'-7"	8"
u_2(E)	4'-6"	8"



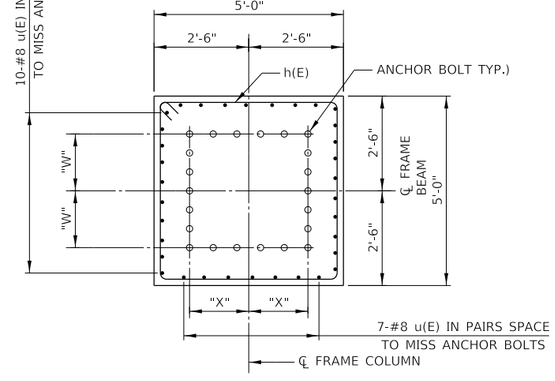
BAR u(E)
BAR u_3(E)



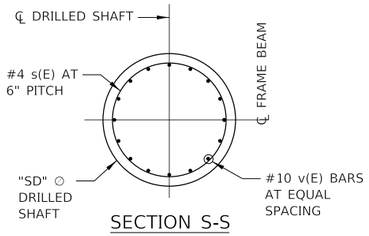
BAR v_1(E)



BAR h(E)



SECTION U-U



SECTION S-S

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION

SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
"S"<=110'	h_1(E)	6	#6	12'-8"	
	p(E)	12	#8	12'-8"	
	t(E)	23	#7	6'-2"	
	s(E)	2	#4	33'-3"	*
	v(E)	28	#10	34'-8"	
	v_1(E)	23	#7	13'-4"	
110'<"S"<=130'	h_1(E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	27	#7	6'-2"	
	s(E)	2	#4	31'-3"	*
	v(E)	32	#10	32'-8"	
	v_1(E)	27	#7	13'-4"	
130'<"S"<=150'	h_1(E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	31	#7	6'-2"	
	s(E)	2	#4	31'-3"	*
	v(E)	34	#10	32'-8"	
	v_1(E)	31	#7	13'-4"	

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	19'-5"	
u(E)	34	#8	9'-7"	
u_1(E)	8	#4	4'-11"	
u_2(E)	10	#4	5'-10"	
u_3(E)	34	#8	11'-4"	

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

MEDIAN FOUNDATION SCHEDULE

SPAN "S"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)	PROTECTIVE COAT (SQ YD)
<=110'	6.3	25.3	8,540	8.3
110'<"S"<=130'	6.3	31.1	9,220	8.3
130'<"S"<=150'	6.3	31.1	9,650	8.3

Illinois Tollway

OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN STRUCTURE
DETAILS

VERSION:	STANDARD:	SHEET:
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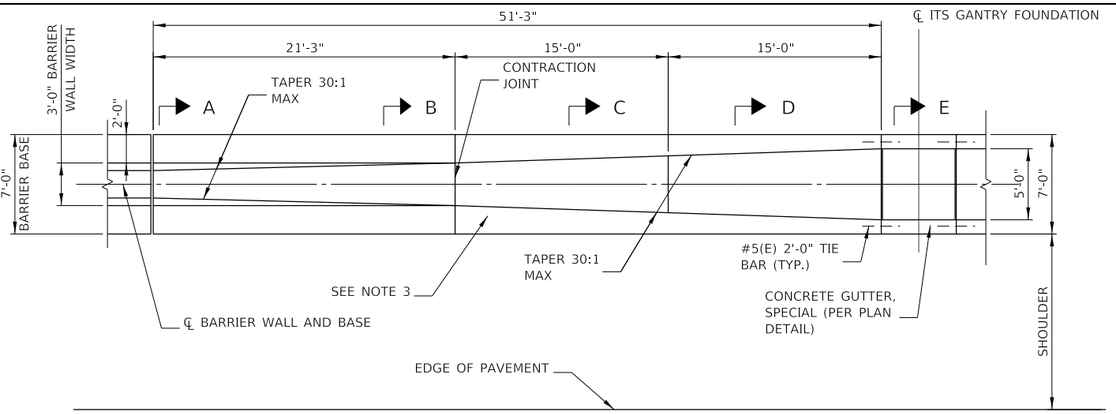
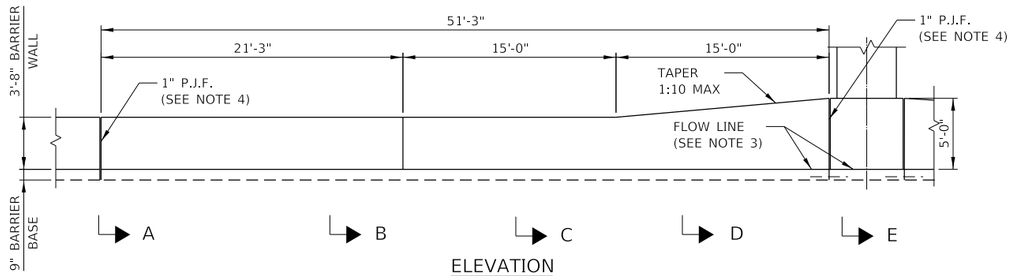
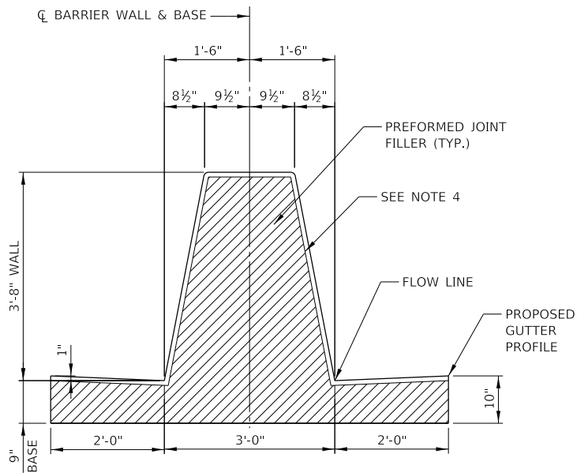


PLAN

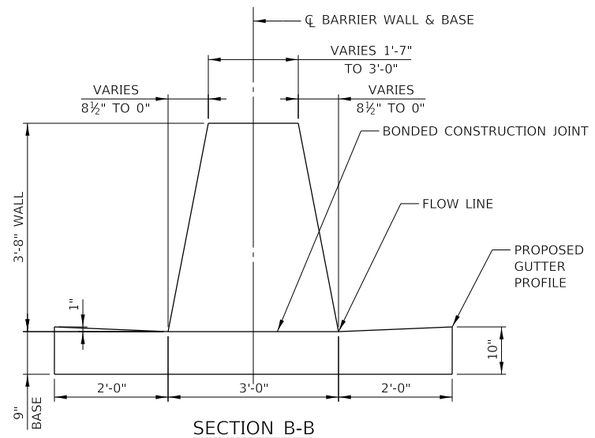


ELEVATION

CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY



SECTION A-A



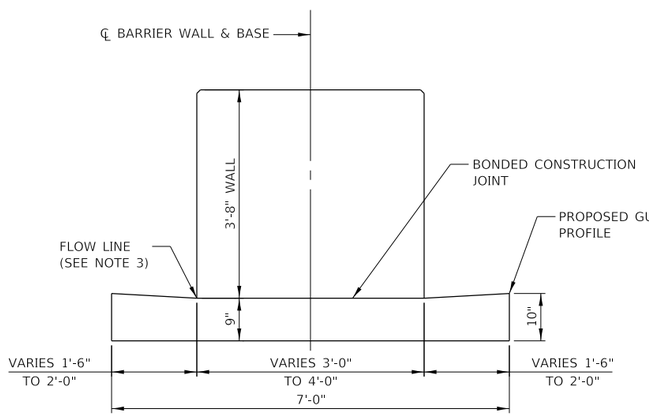
SECTION B-B

NOTE TO DESIGNER

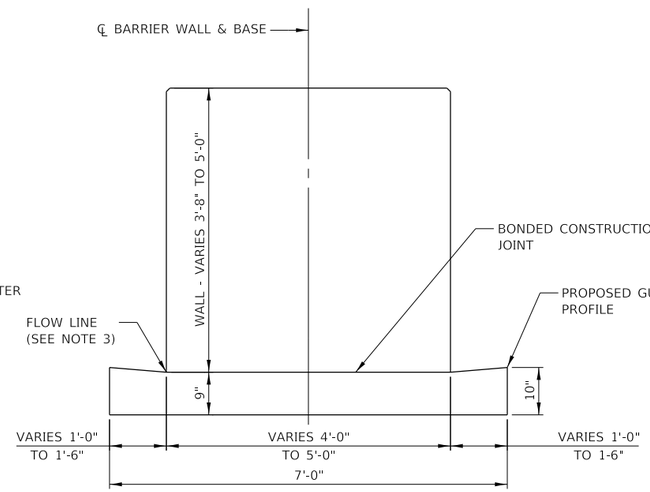
1. WITHIN SECTION B-B, THE GUTTER PORTION OF THE BARRIER BASE REMAINS 2'-0"; HERETOFORE, STANDARD TYPE 20A F&G SHALL BE USED.
2. WITHIN SECTION C-C & D-D, THE GUTTER PORTION OF THE BARRIER BASE IS LESS THAN 2'-0"; THEREFORE, NON-ILLINOIS TOLLWAY STD. F&G SHALL BE USED.
3. WITHIN SECTION B-B & C-C, THE BARRIER HEIGHT REMAINS 44", THIS ALLOWS THE PLACEMENT OF LIGHT POLE FOUNDATIONS WITHIN THIS AREA.
4. WITHIN SECTION D-D, THE BARRIER HEIGHT IS INCREASING FROM 44" TO 60", THE LIGHT POLE FOUNDATIONS SHALL NOT BE PLACED WITHIN THIS AREA.

NOTES:

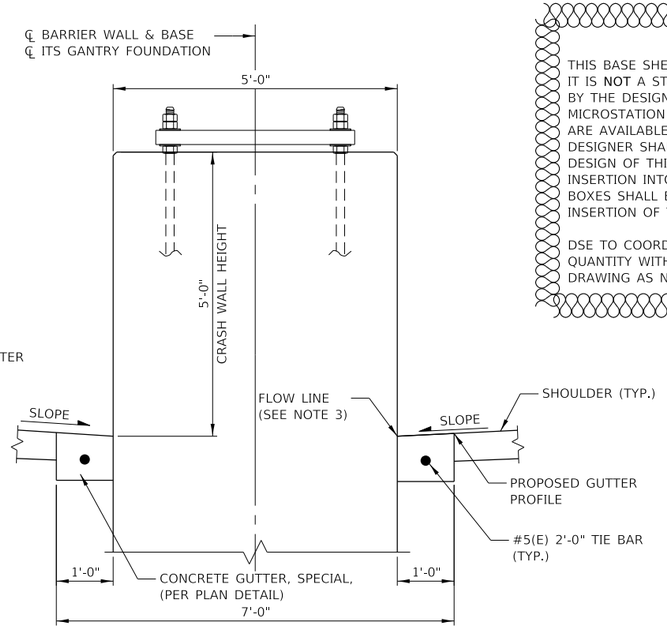
1. 2" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL AND IN THE CONCRETE BARRIER BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30'.
2. THE FORMING OF CONTRACTION JOINTS SHALL BE DONE BY SAWING.
3. GUTTER PROFILE IN THE VICINITY OF SAG VERTICAL CURVES, ALONG FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING GUTTER, SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
4. PROVIDE NON-STAINING GRAY ONE COMPONENT NON-SAG ELASTOMERIC GUN GRADE POLYURETHANE SEALANT WITH BACKER ROD.



SECTION C-C



SECTION D-D



SECTION E-E

NOTE TO DESIGNER

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DSE TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

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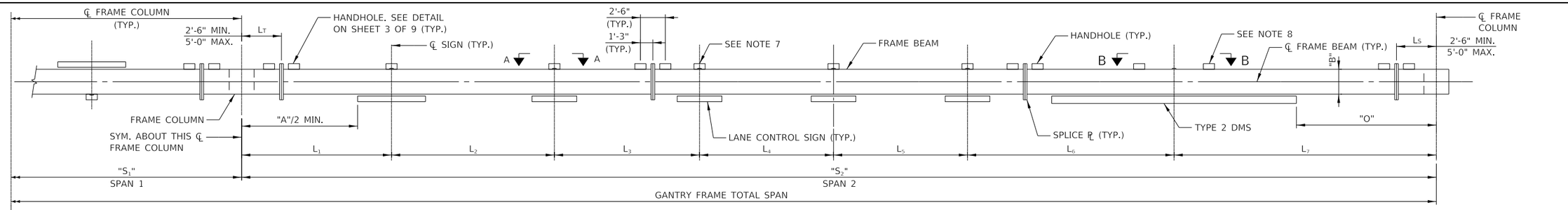
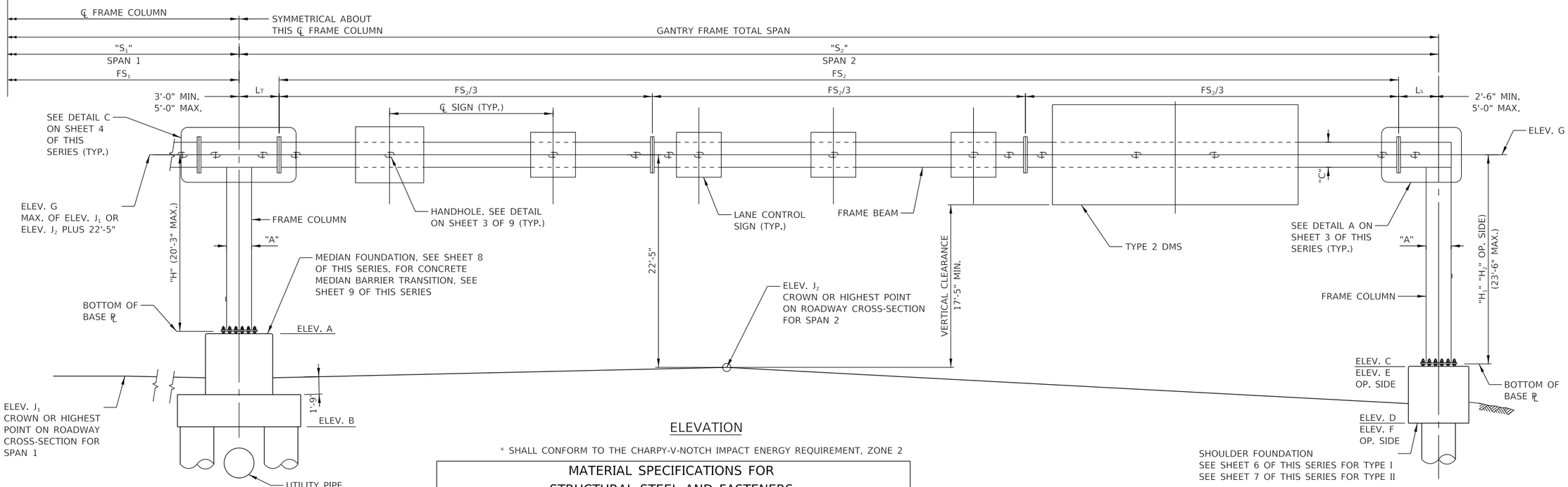


PLAN



ELEVATION

NOTES:

1. SEE SHEET 2 OF THIS SERIES FOR VIEW A-A, VIEW B-B AND DESIGN SUMMARY TABLE.
2. CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
3. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L_1 THROUGH L_7)
4. FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 3 COLUMNS AND 6 FIELD SECTIONS.
5. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EACH FOUNDATION, ANCHOR BOLTS AND DETAILS AFFECTING GANTRY FRAME FABRICATION AND CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS FROM CONTRACT PLANS AND MAKE NECESSARY APPROVED ADJUSTMENTS. SUCH VARIATIONS DO NOT CONSTITUTE ADDITIONAL COMPENSATION FOR CHANGE IN SCOPE OF WORK. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
6. WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO ¼" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.
7. IF THE DISTANCE BETWEEN AN LCS TYPE 1 OR LCS TYPE 2 CENTERLINE HANDHOLE AND THE HANDHOLD ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SPLICE HANDHOLE SHALL BE ELIMINATED.
8. IF THE DISTANCE BETWEEN A TYPE 2 DMS SIGN HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SIGN HANDHOLD SHALL BE ELIMINATED, AND THE HANDHOLE ADJACENT TO THE SPLICE SHALL BE USED INSTEAD. THE CONDUIT COUPLERS SHALL BE INCLUDED AT THE HANDHOLE ADJACENT TO THE SPLICE IF THE TYPE 2 DMS SIGN HANDHOLE IS ELIMINATED.
9. LIMIT DMS TO THE FACE OF COLUMN WITH 1'-0" MAXIMUM OVERHANG FROM THE SUPPORT BRACKET. MAINTAIN 9" MINIMUM DISTANCE BETWEEN SPLICE AND SUPPORT BRACKET.

* SHALL CONFORM TO THE CHARPY-V-NOTCH IMPACT ENERGY REQUIREMENT, ZONE 2

MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS

ELEMENT OF STRUCTURE	SPECIFICATION	F_y(ksl)	F_u(ksl)
STRUCTURAL STEEL TUBE FRAME (HSS)	*ASTM A1065 GRADE 50	50	60
STRUCTURAL STEEL TUBE MOUNTING BEAMS (HSS)	ASTM A500, GRADE B	46	58
STEEL SHAPES	ASTM A709, GRADE 50	50	65
STEEL PLATES	ASTM A572 GR. 50 OR ASTM A709 GR. 50	50	65
STEEL BOLTS	ASTM 325 TYPE 1	--	105
SIGN BRACKET RODS	ASTM A307	--	60
LOCK NUTS	ASTM A194 GR. 8F OR ASTM A194 GR. 2H	--	--
NUTS	ASTM A563 GRADE DH	--	--
STEEL WASHERS	ASTM F436	--	--
STAINLESS STEEL WASHERS	ASTM A240, TYPE 302	--	--
ANCHOR BOLTS	AASHTO M 314 OR ASTM F1554	55	75

NOTE TO DESIGNER

PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION.
USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED IN LINE WITH SINGLE FACE CONCRETE BARRIER. THIS FOUNDATION REQUIRES MINIMUM 35 FT OF BARRIER ON EACH SIDE OF THE FOUNDATION TO RESIST LONGITUDINAL FORCE FROM THE GANTRY COLUMN.
USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED OUTSIDE CLEAR ZONE OR BEHIND GUARDRAIL.
PROVIDE SITE GROUNDING ELECTRODE SYSTEM DETAIL ACCORDING TO THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 734.
REFERENCE BASE SHEET M-ITS-1101.
DIFFERENCE BETWEEN ELEV. A AND ELEV. C (OR ELEV. E) SHOULD NOT EXCEED 5'-0".

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE

MAX. SPAN "S1" OR "S2"	FRAME COLUMN	FRAME BEAM	"A"	"B"	"C"	"O"	SPAN "S1" OR "S2"	CAMBER
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	2'-0"	2'-4"	2'-0"	1'-0"	<=110'	3¼"
110'<"S"<=130'	HSS 28x28x0.625	HSS 28x24x0.625	2'-4"	2'-4"	2'-0"	1'-2"	110'<"S"<=130'	4½"
130'<"S"<=150'	HSS 30x30x0.625	HSS 30x30x0.625	2'-6"	2'-6"	2'-6"	1'-3"	130'<"S"<=150'	5"

TOTAL BILL OF MATERIAL

PAY ITEM	ITEM	UNIT	TOTAL
JS734G10	FOUNDATION FOR ITS GANTRY FRAME	CU YD	XXX.X
JS740110	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	XXX'-XX"
JS740130	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	XXX'-XX"
JS740150	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	XXX'-XX"
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	XXXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

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Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

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GENERAL NOTES:

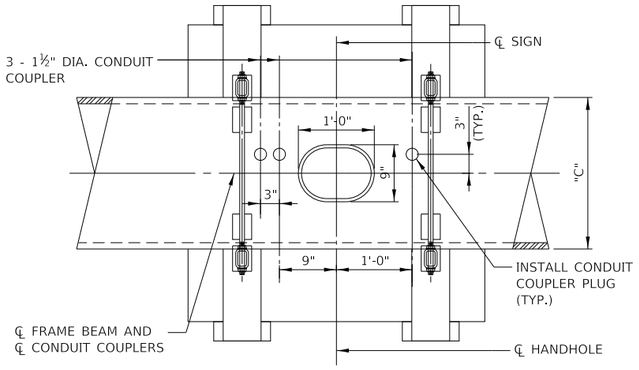
1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A ¾" x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS:

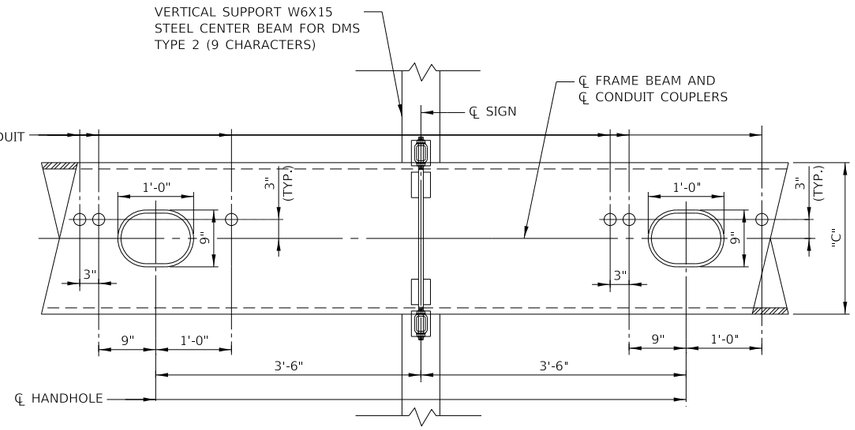
1. REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

CONSTRUCTION SPECIFICATIONS:

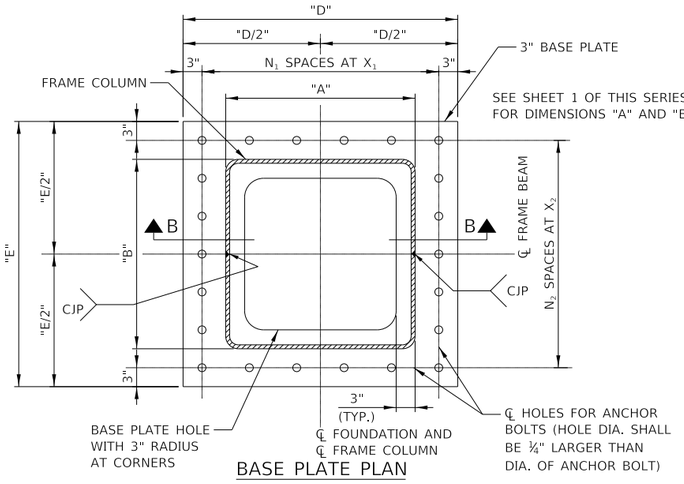
1. ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS ISSUED MARCH, 2015 TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2015.
3. ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012.



VIEW A-A



VIEW B-B



BASE PLATE PLAN

DESIGN LOADING:

WIND LOAD CRITERIA

SIGN PANEL	60.7 P.S.F.	BASIC WIND SPEED	120 M.P.H.
COLUMN/BEAM	60.7 P.S.F.	G	1.14
TYPE 2 DMS	62 P.S.F.	I_F (FATIGUE IMPORTANCE FACTOR)	1.0
		K_Z	1.0

TL-5 DESIGN REQUIREMENTS, WHERE APPLICABLE FOR FOUNDATION ONLY, PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION WITH CURRENT INTERIMS

ICE = 3 P.S.F. (APPLIED WITH A FACTOR OF 1.0 FOR STRENGTH I ONLY)

EQUIPMENT LOADS:

LANE CONTROL SIGNS	220 LB. MAX. (4'-0" H. X 4'-0" W. X 1'-2" D. MAX.)
TYPE 2 DMS	2,700 LB. MAX. (7'-9" H. X 25'-10" W. X 1'-2" D. MAX.)

ITS GANTRY FRAMES AND FOUNDATIONS ARE DESIGNED FOR MAX. LOADING OF 2-TYPE 2 DMS PER SPAN (ONE OVER EACH SHOULDER) AND 1-LANE CONTROL SIGN IN EACH ADDITIONAL 12' LANE.

DESIGN STRESSES FOR REINFORCED CONCRETE:

f'_c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS BS) = 4,000 P.S.I.
f'_c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS DS) = 4,000 P.S.I.
f_y = YIELD STRENGTH OF REINFORCEMENT BARS (GRADE 60) = 60,000 P.S.I.

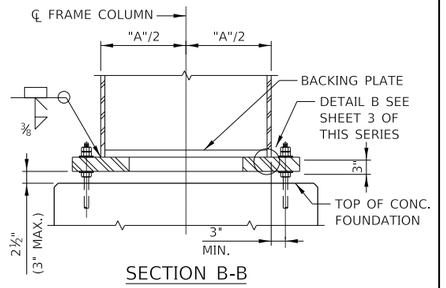
DESIGN SPECIFICATIONS:

1. ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, LATEST EDITION.
2. AASHTO LRFD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION WITH CURRENT INTERIMS
3. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION, 2020.
4. ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012.
5. ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL, LATEST EDITION.

BASE PLATE TABLE - TYPE N

MAX. SPAN "S_1" OR "S_2"	"D"	"E"	N_1	X_1	N_2	X_2	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
<=110'	3'-2"	3'-5"	4	8"	5	7"	1¾"	18
110'<"S"<=130'	3'-5"	3'-6"	5	7"	6	6"	1¾"	22
130'<"S"<=150'	3'-7½"	3'-6"	5	7½"	6	6"	1¾"	22

NOTE:
WHERE THE DISTANCE BETWEEN SIGN ACCESS HOLE(S) AND THE ACCESS HOLES ADJACENT TO THE SPLICE ARE LESS THAN 6'-0", THE SIGN ACCESS HOLE SHALL BE ELIMINATED AND THE HOLE ADJACENT TO THE SPLICE IS USED INSTEAD. CONDUIT COUPLERS SHALL BE INCLUDED AT THE ACCESS HOLE ADJACENT TO THE SPLICE IF SIGN ACCESS HOLE IS ELIMINATED.



SECTION B-B

DESIGN SUMMARY

STRUCTURE NUMBER	STATION	SPANS "S_1" (FT)	SPANS "S_2" (FT)	TOTAL SPAN (FT)	ELEVATIONS A	B	C	D	E	F	G	J_1	J_2	FOUNDATION TYPE	PROPOSED MINIMUM VERTICAL CLEARANCE	F_{S_1}	FS_2	L_S	L_T	H	H_1	H_2	FOUNDATION CLASS BS CONCRETE (CU YD)	FOUNDATION CLASS DS CONCRETE (CU YD)	REINF. BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
XXX-XXXX	XXXXX+XX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXXX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXX-XX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XXX.XX	XXX.XX	X,XXX	XXX.XX
																						TOTAL				

NOTE TO DESIGNER

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1. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
2. NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESION LESS SOIL CONDITIONS. REGARDLESS, THE DESIGNER MUST CONDUCT A SUBSURFACE INVESTIGATION AT EACH OVERHEAD SIGN STRUCTURE FOUNDATION TO DETERMINE THE ACTUAL SOIL PROPERTIES. SHOULD THE INVESTIGATION REVEAL THE PRESENCE OF COHESION LESS SOIL OR COHESIVE SOILS WITH PROPERTIES LESS THAN THE AVERAGES INDICATED IN THIS STANDARD, THE DESIGNER SHALL DESIGN AND DETAIL THE DRILLED SHAFT FOUNDATIONS TO MEET THE ACTUAL SOIL CONDITIONS.
3. DESIGN AND CONSTRUCTION SPECIFICATIONS: THE DESIGNER IS RESPONSIBLE FOR UPDATING THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION TO THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION USED IN DESIGN.
4. DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
5. DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.

STRUCTURE NUMBER	STATION	SPAN 1 L_7	L_6	L_5	L_4	L_3	L_2	L_1	SPAN 2 L_1	L_2	L_3	L_4	L_5	L_6	L_7
XXX-XXXX	XXXXX+XX.XX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
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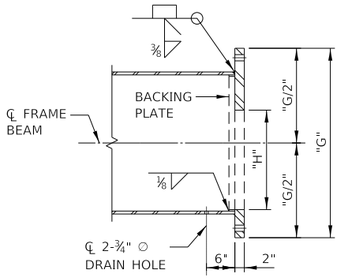
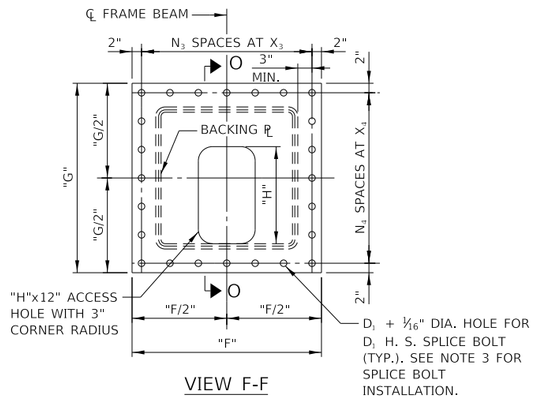
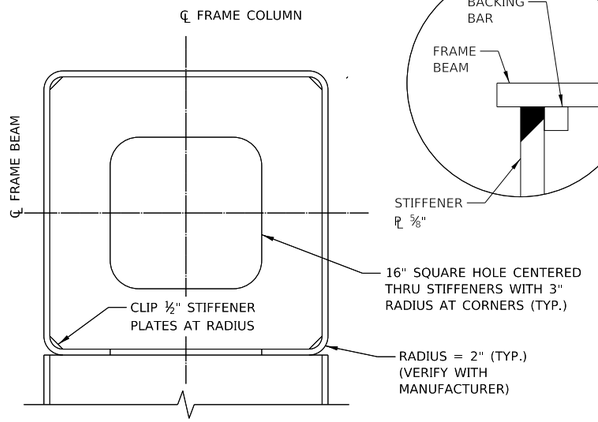


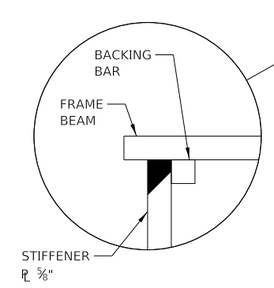
SECTION O-O
SPLICE PLATE DETAIL

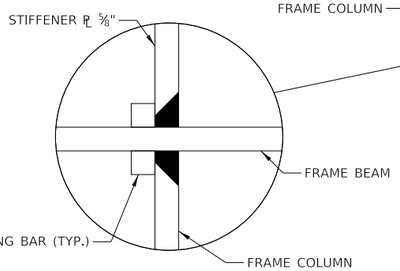


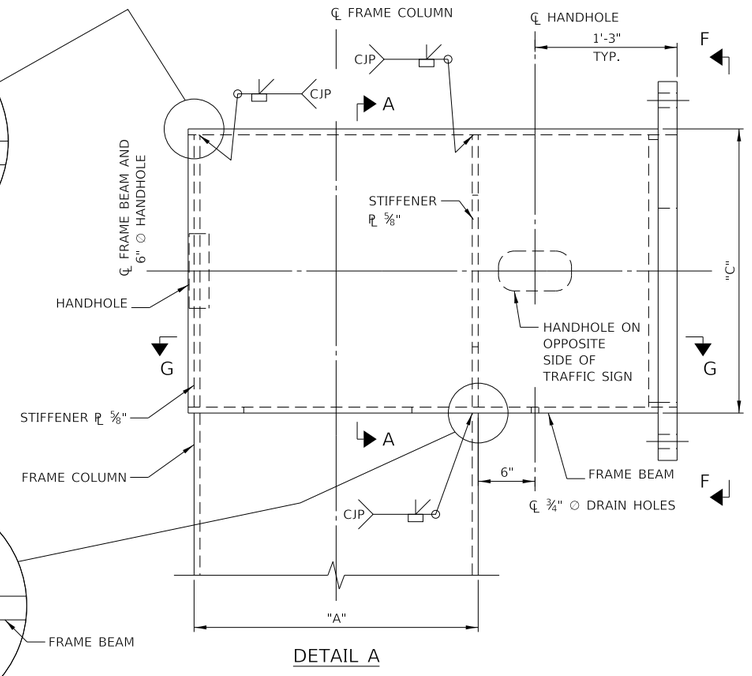
VIEW F-F



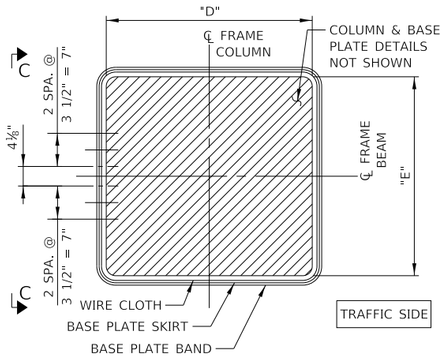
SECTION A-A



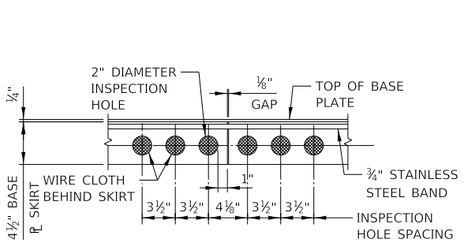




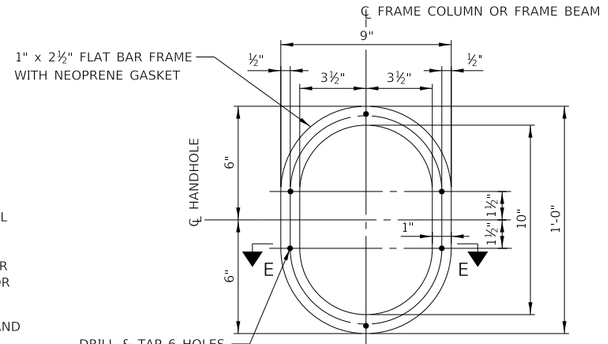
DETAIL A



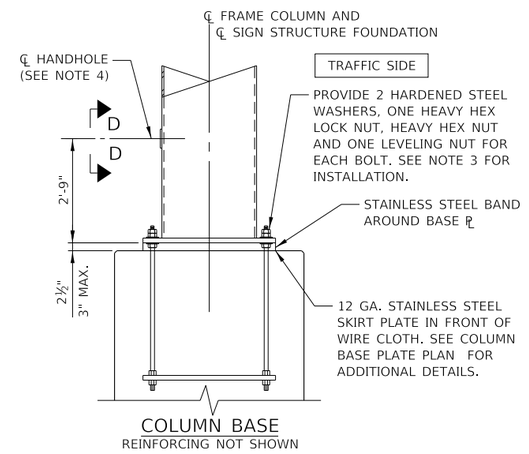
COLUMN BASE PLATE PLAN



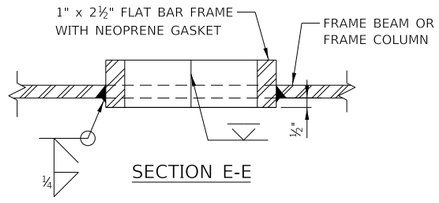
VIEW C-C (BASE PLATE SKIRT)



VIEW D-D
HANDHOLE DETAIL



COLUMN BASE
REINFORCING NOT SHOWN



SECTION E-E

NOTE TO DESIGNER

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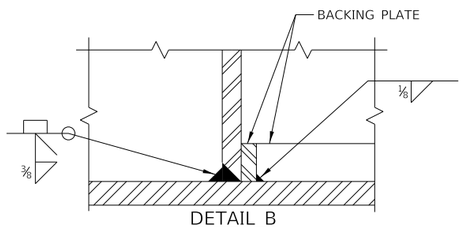
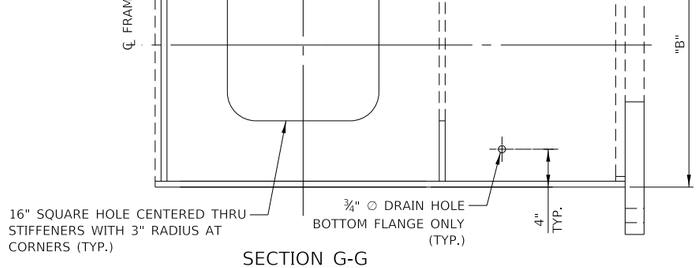
VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.



DETAIL B
BASE PL SHOWN (SPLICE PL SIM.)



SECTION G-G

NOTE:

1. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
2. SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
3. INSTALLATION AND INSPECTION OF SPLICE BOLTS AND ANCHOR BOLTS SHALL COMPLY WITH ILLINOIS TOLLWAY SPECIAL PROVISION "INTELLIGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.

SPLICE PLATE TABLE

MAX. SPAN "S_1" OR "S_2"	"F"	"G"	"H"	"J"	N_3	X_3	N_4	X_4	SPLICE BOLT DIAMETER (D_1)	NO. SPLICE BOLT
<=110'	3'-1"	2'-8½"	1'-6"	2¼"	6	5½"	6	4¾"	1"	24
110'<"S"<=130'	3'-0½"	2'-10"	1'-6"	2¼"	5	6½"	5	6"	1¼"	20
130'<"S"<=150'	3'-4"	3'-4"	1'-9"	2⅜"	6	6"	6	6"	1¼"	24

Illinois Tollway

OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN STRUCTURE
DETAILS

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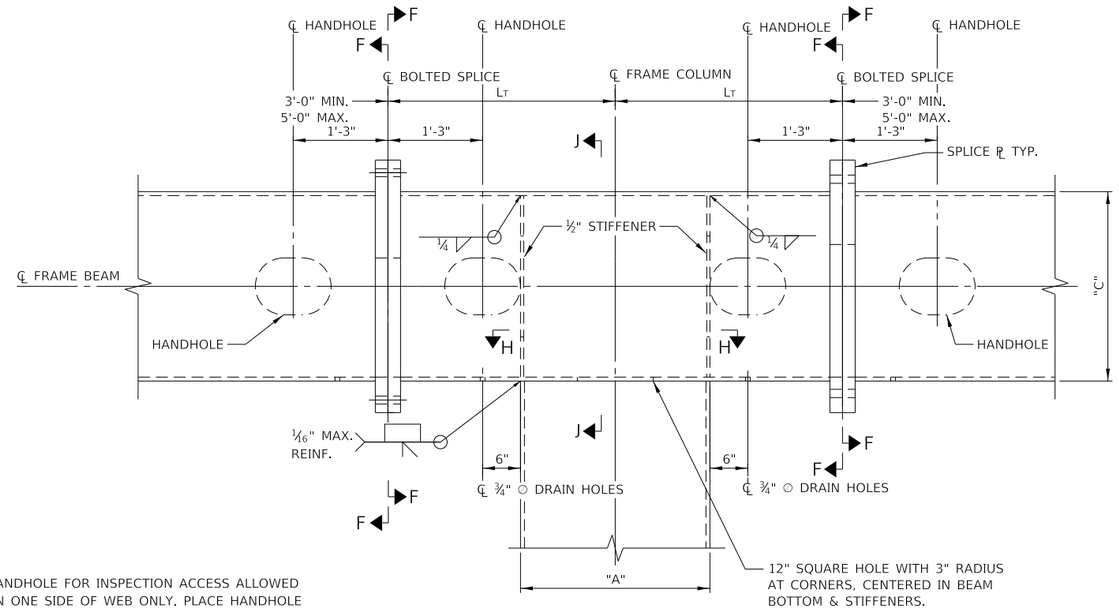
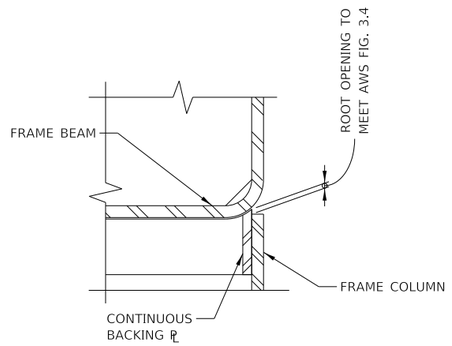


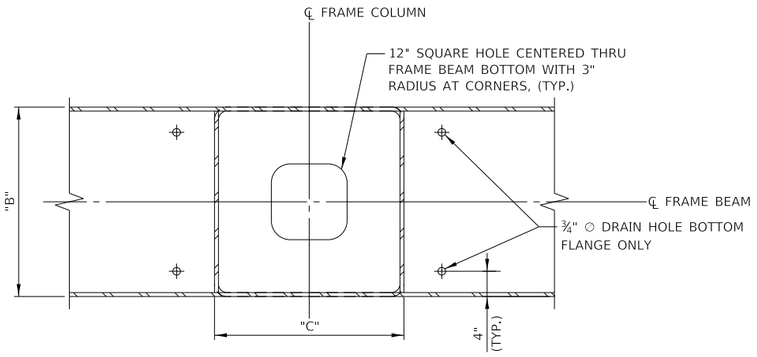
DETAIL C

NOTE

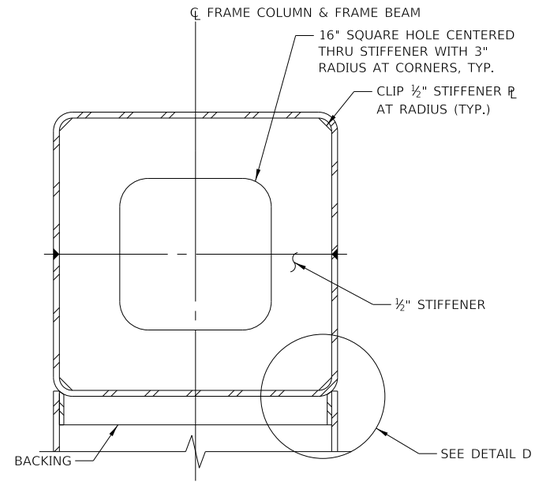
1. HANDHOLE FOR INSPECTION ACCESS ALLOWED ON ONE SIDE OF WEB ONLY. PLACE HANDHOLE ON SAME SIDE AS OTHER HANDHOLES.
2. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
3. SEE SHEET 3 OF THIS SERIES FOR SECTION F-F.



DETAIL D



SECTION H-H



SECTION J-J

AWS FIG. 3.6 MAY BE USED AT THE FABRICATOR'S OPTION.

WELDING SHALL NOT BEGIN UNTIL THE ENGINEER HAS INSPECTED AND APPROVED FIT-UP OF THE JOINT.

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Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

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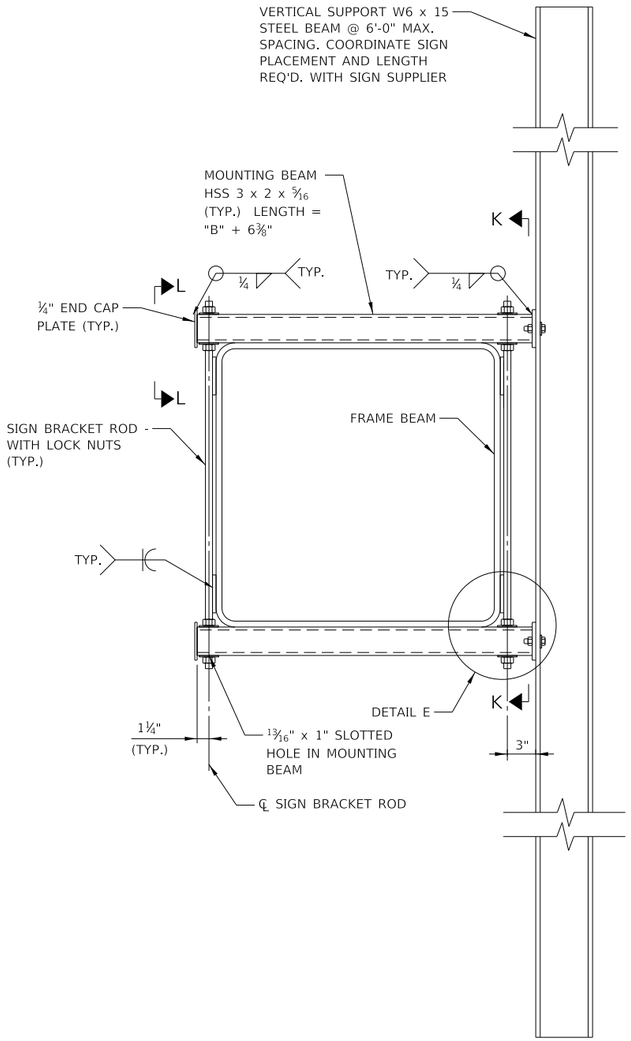
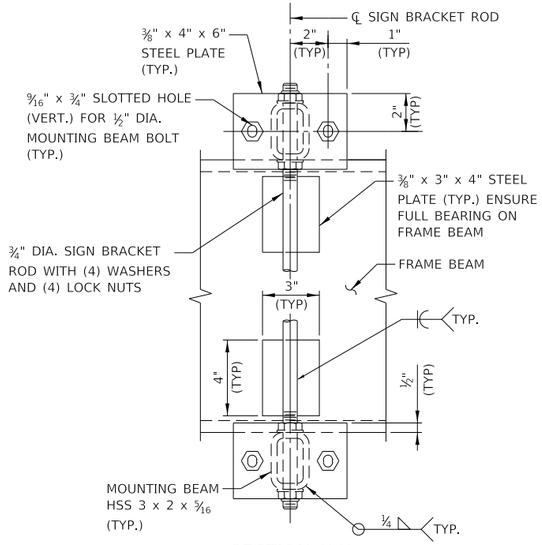
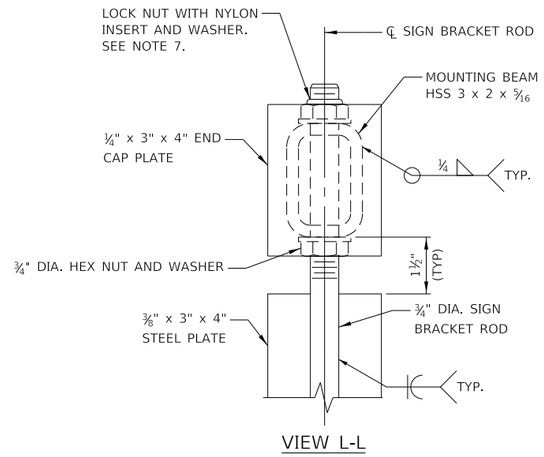


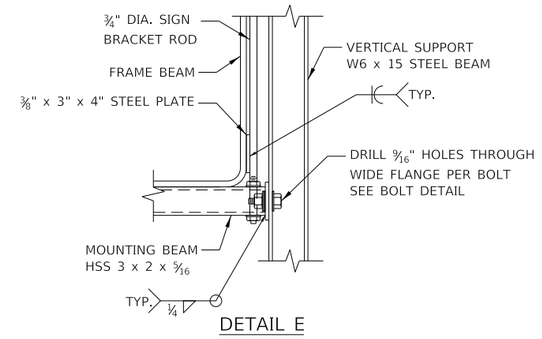
CONNECTION SIDE VIEW



SECTION K-K

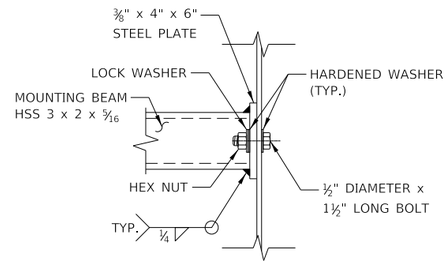


VIEW L-L



DETAIL E

VERTICAL SUPPORT TABLE		
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5



BOLT DETAIL

SIGN BRACKET ROD NOT SHOWN FOR CLARITY

NOTES:

1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED BY MANUFACTURER. VERIFY VERTICAL SPACING WITH HOLES ON W6x15 VERTICAL SUPPORT.
4. PROVIDE HIGH STRENGTH BOLTS WITH WASHERS AND LOCK NUTS TO FASTEN DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
5. GALVANIZE ALL NON-STAINLESS STEEL PARTS.
6. SIGN BRACKET RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307.
7. LOCK NUTS SHALL BE STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8F OR ASTM A194 GRADE 2H.

NOTE TO DESIGNER

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Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
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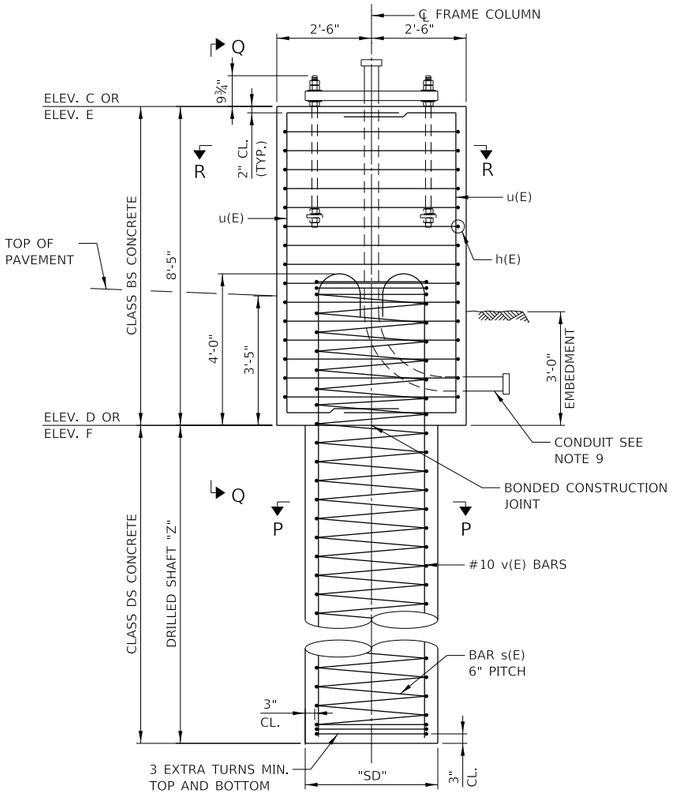
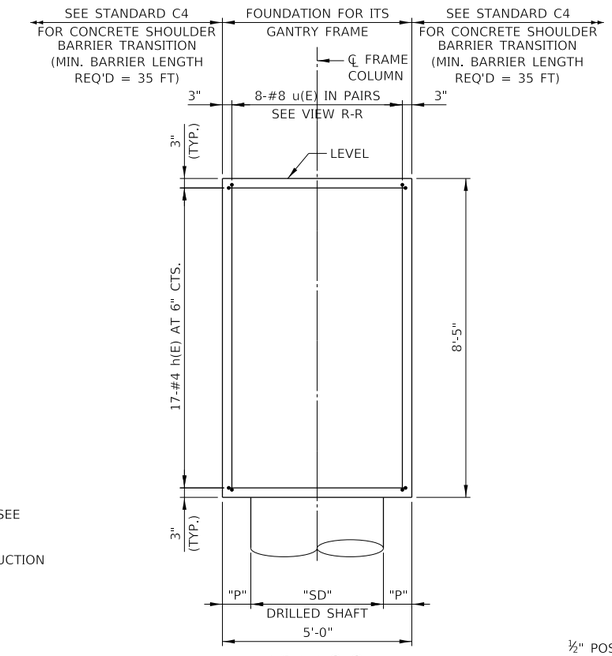
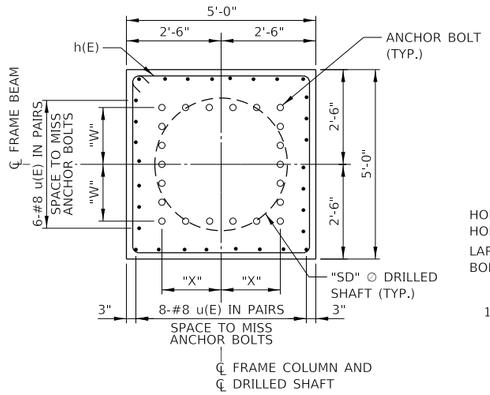


ELEVATION
SHOULDER FOUNDATION TYPE I

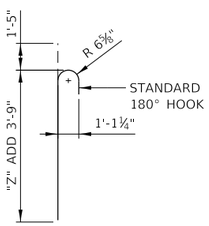


VIEW Q-Q

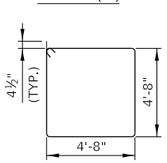


SECTION R-R

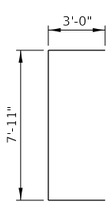
SECTION P-P



BAR v(E)



BAR h(E)



BAR u(E)

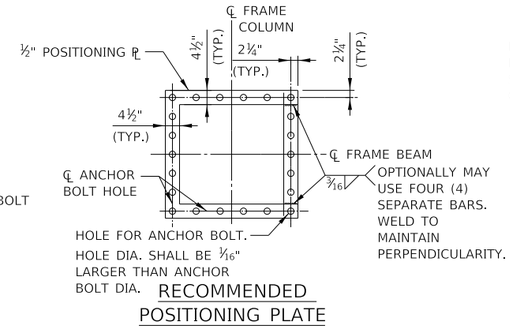
SHOULDER FOUNDATION
TYPE I SCHEDULE

MAX. SPAN "S_1" OR "S_2"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	7.8	10.0	4,120
110'<"S"<=130'	7.8	10.0	4,630
130'<"S"<=150'	7.8	16.3	5,850

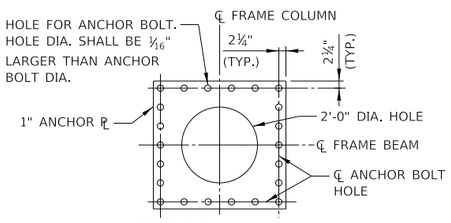
REINFORCEMENT BAR SCHEDULE
FOR ONE FOUNDATION

SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
<=110'	h(E)	17	#4	19'-5"	
	s(E)	1	#4	31'-9"	∗
	v(E)	17	#10	33'-2"	
	u(E)	28	#8	13'-11"	
110'<"S"<=130'	h(E)	17	#4	19'-5"	
	s(E)	1	#5	31'-9"	∗
	v(E)	16	#10	37'-2"	
	u(E)	28	#8	13'-11"	
130'<"S"<=150'	h(E)	17	#4	19'-5"	
	s(E)	1	#5	38'-9"	∗
	v(E)	20	#10	40'-2"	
	u(E)	28	#8	13'-11"	

∗ THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.



RECOMMENDED
POSITIONING PLATE



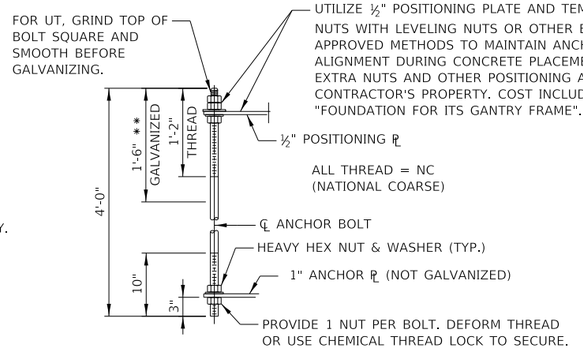
ANCHOR PLATE DETAIL

NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOBSITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D (OR ELEV. F). COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

NOTE TO DESIGNER

DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.



ANCHOR BOLT DETAIL

ANCHOR BOLTS SHALL CONFORM TO AASHTO M314 OR ASTM F1554 GRADE 55 AND MEET CHARPY V-NOTCH (CVN) ENERGY OF 15 LB.-FT. AT 40° F. GALVANIZE UPPER 18" PER AASHTO M 232. NO WELDING SHALL BE PERMITTED ON ANCHOR BOLTS.

** 18" IS MINIMUM TO BE GALVANIZED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.

SHOULDER FOUNDATION TYPE I TABLE

MAX. SPAN "S1" OR "S2"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5½"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-6"	1'-5½"	28'-0"	3'-6"	9"	5"	22
130'<"S"<=150'	1'-6"	1'-6¾"	35'-0"	4'-0"	6"	5"	22

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
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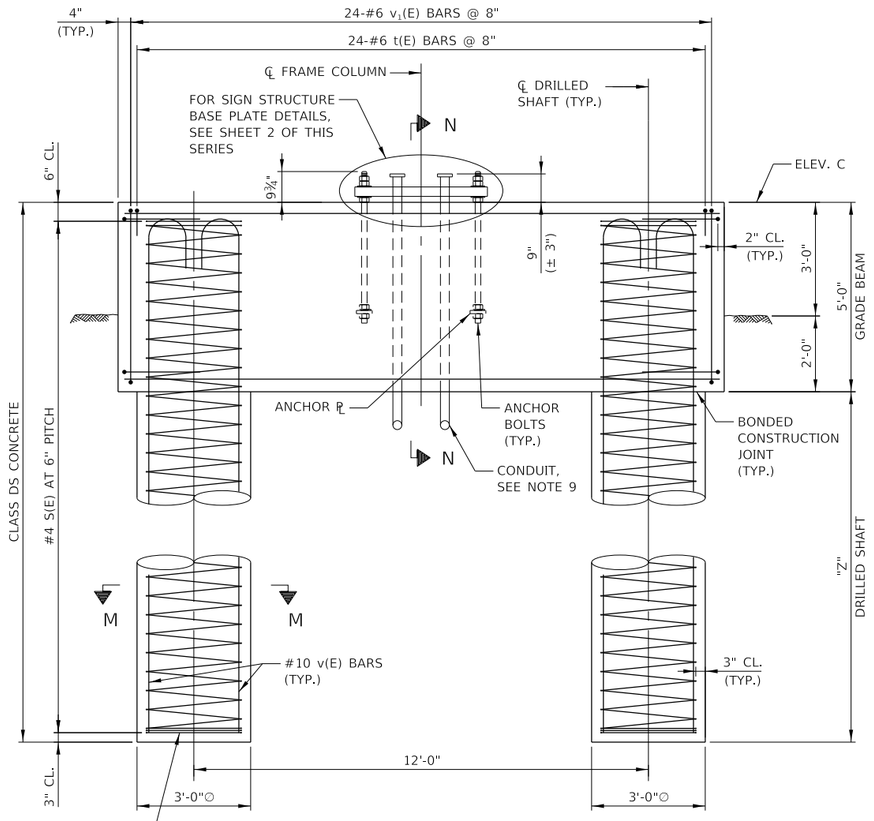
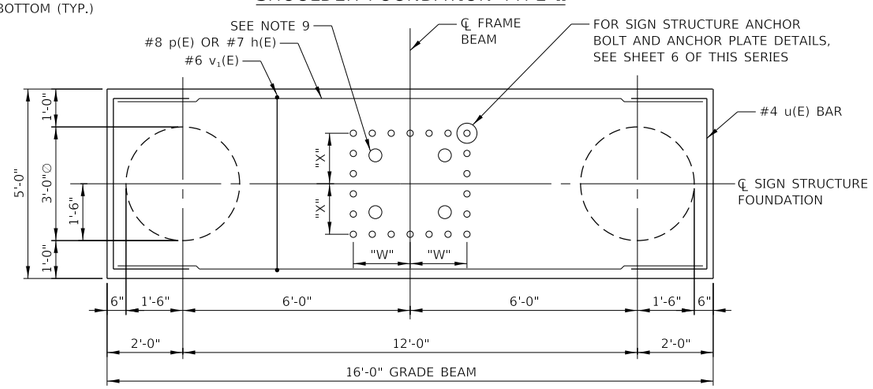
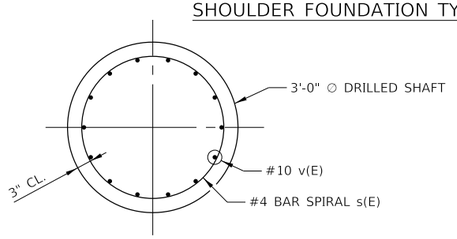


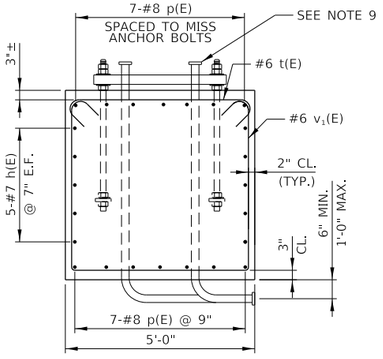
ELEVATION
SHOULDER FOUNDATION TYPE II



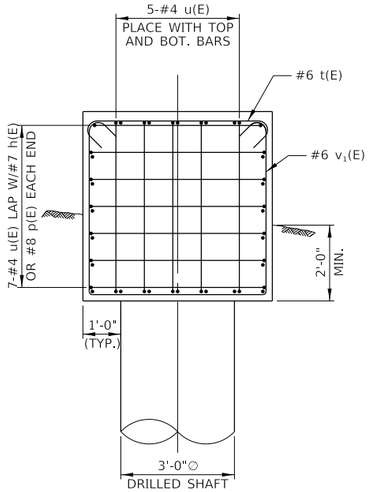
PLAN
SHOULDER FOUNDATION TYPE II



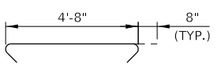
SECTION M-M
(TYPICAL BOTH SHAFTS)



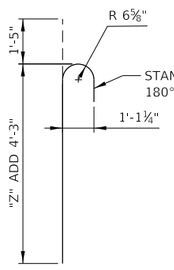
SECTION N-N



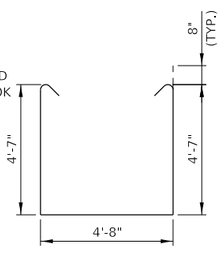
END VIEW



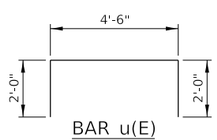
BAR t(E)



BAR v(E)



BAR v_1(E)



BAR u(E)

NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOB SITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D (OR ELEV. F). COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

NOTE TO DESIGNER

DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.

SHOULDER FOUNDATION TYPE II SCHEDULE

MAX. SPAN "S1" OR "S2"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5½"	1'-4"	34.7	7,990
110'<"S"<=130'	42'-0"	1'-6"	1'-5½"	36.8	8,570
130'<"S"<=150'	46'-0"	1'-6"	1'-6¾"	39.0	9,130

NOTE TO DESIGNER

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REINFORCEMENT BAR SCHEDULE
(2 DRILLED SHAFTS AND 1 GRADE BEAM)

SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE	
"S"<=110'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	t(E)	24	#6	6'-0"		
	s(E)	2	#4	42'-3"		*
	v(E)	28	#10	43'-8"		
	v_1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		
110'<"S"<=130'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	t(E)	24	#6	6'-0"		
	s(E)	2	#4	46'-3"		*
	v(E)	28	#10	47'-8"		
	v_1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		
130'<"S"<=150'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	t(E)	24	#6	6'-0"		
	s(E)	2	#4	50'-3"		*
	v(E)	28	#10	51'-8"		
	v_1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
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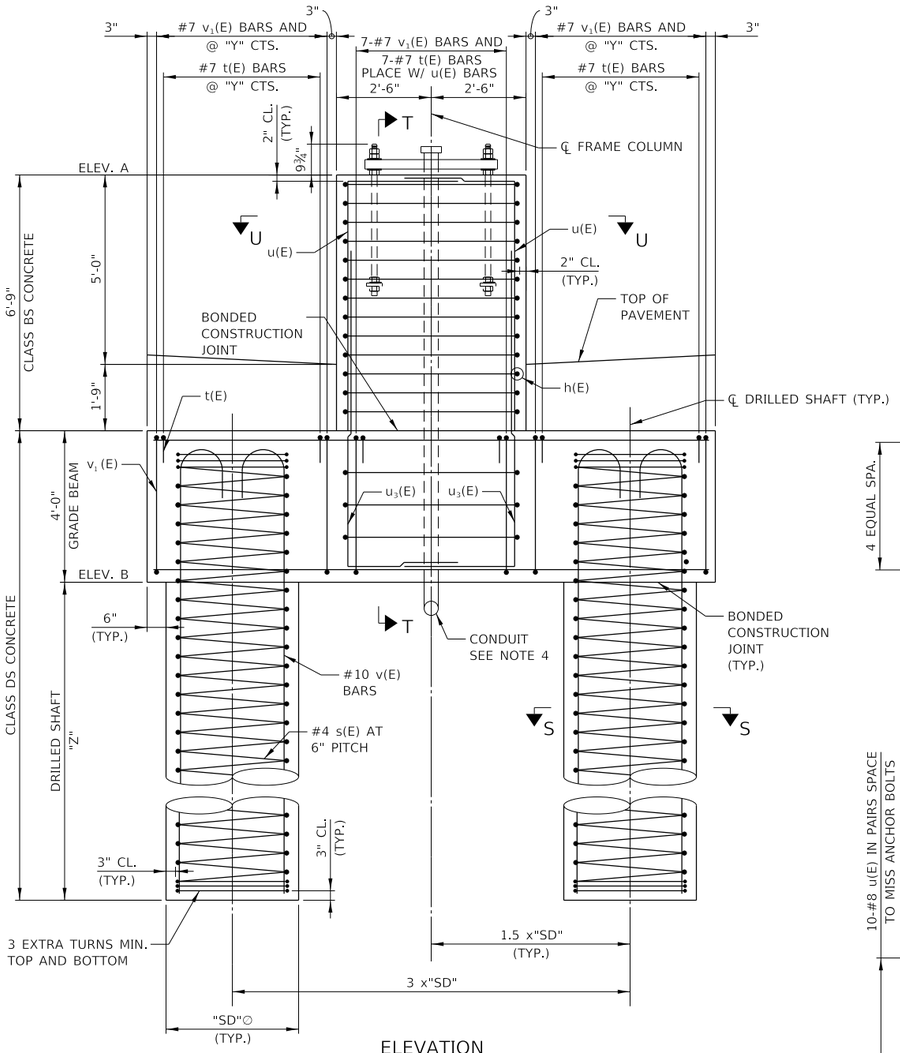
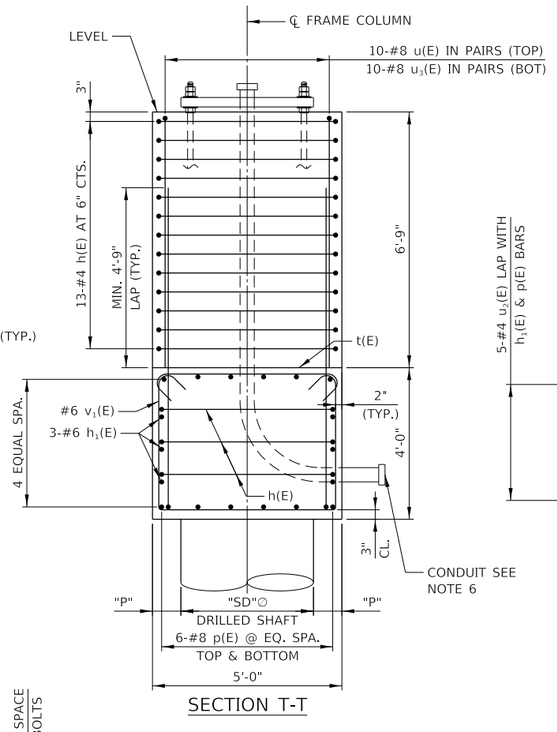
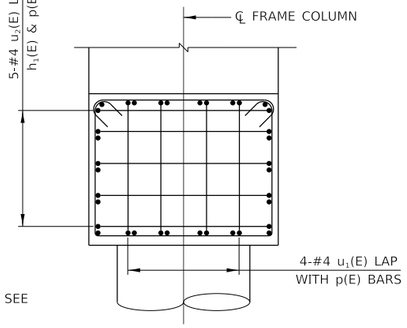


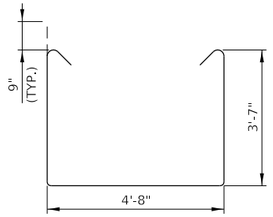
ELEVATION
MEDIAN FOUNDATION



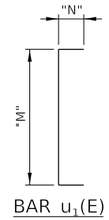
SECTION T-T



END VIEW

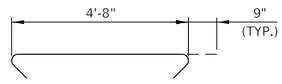


BAR v1(E)

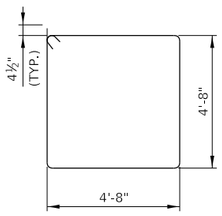


BAR u1(E)
BAR u2(E)

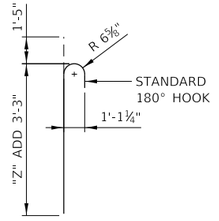
BAR	"M"	"N"
u1(E)	3'-7"	8"
u2(E)	4'-6"	8"



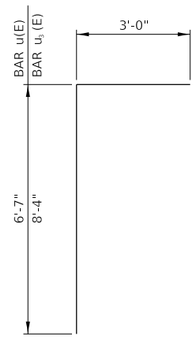
BAR t(E)



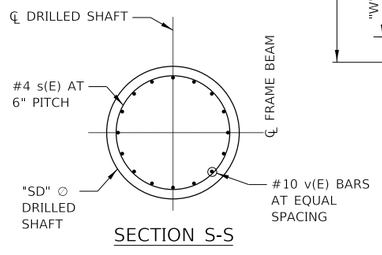
BAR h(E)



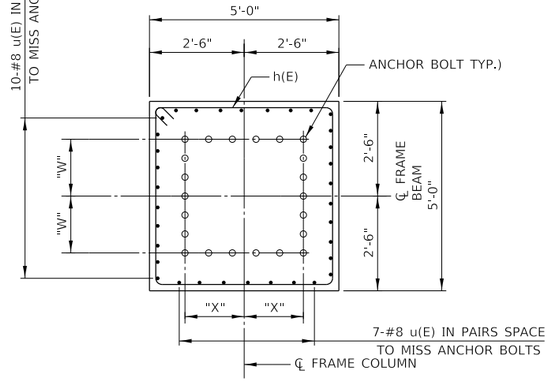
BAR v(E)



BAR u(E)
BAR u3(E)



SECTION S-S



SECTION U-U

NOTES:

1. SEE SHEET 6 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
2. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM.
3. SEE SHEET 9 OF THIS SERIES FOR CONCRETE MEDIAN BARRIER TRANSITION. COST OF BARRIER TRANSITION INCLUDED IN COST OF "CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F".
4. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.
5. PROTECTIVE COAT SHALL BE APPLIED TO TRAFFIC AND TOP FACES OF CONCRETE CRASH WALL.
6. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION

MAX. SPAN "S1" OR "S2"	BAR	NO.	SIZE	LENGTH	SHAPE
"S"<=110'	h1(E)	6	#6	12'-8"	
	p(E)	12	#8	12'-8"	
	t(E)	23	#7	6'-2"	
	s(E)	2	#4	33'-3"	*
	v(E)	28	#10	34'-8"	
	v1(E)	23	#7	13'-4"	
110'<"S"<=130'	h1(E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	27	#7	6'-2"	
	s(E)	2	#4	31'-3"	*
	v(E)	32	#10	32'-8"	
	v1(E)	27	#7	13'-4"	
130'<"S"<=150'	h1(E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	31	#7	6'-2"	
	s(E)	2	#4	31'-3"	*
	v(E)	34	#10	32'-8"	
	v1(E)	31	#7	13'-4"	

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	19'-5"	
u(E)	34	#8	9'-7"	
u1(E)	8	#4	4'-11"	
u2(E)	10	#4	5'-10"	
u3(E)	34	#8	11'-4"	

MEDIAN FOUNDATION SCHEDULE

MAX. SPAN "S1" OR "S2"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)	PROTECTIVE COAT (SQ YD)
<=110'	6.3	25.3	8,540	8.3
110'<"S"<=130'	6.3	31.1	9,220	8.3
130'<"S"<=150'	6.3	31.1	9,650	8.3

MEDIAN FOUNDATION TABLE

MAX. SPAN "S1" OR "S2"	"Z"	"SD"	"P"	"W"	"X"	"Y"	NO. ANCHOR BOLT
<=110'	30'-0"	3'-0"	1'-0"	1'-5½"	1'-4"	6"	18
110'<"S"<=130'	28'-0"	3'-6"	9"	1'-6"	1'-5½"	6"	22
130'<"S"<=150'	28'-0"	3'-6"	9"	1'-6"	1'-6¾"	5"	22

NOTE TO DESIGNER

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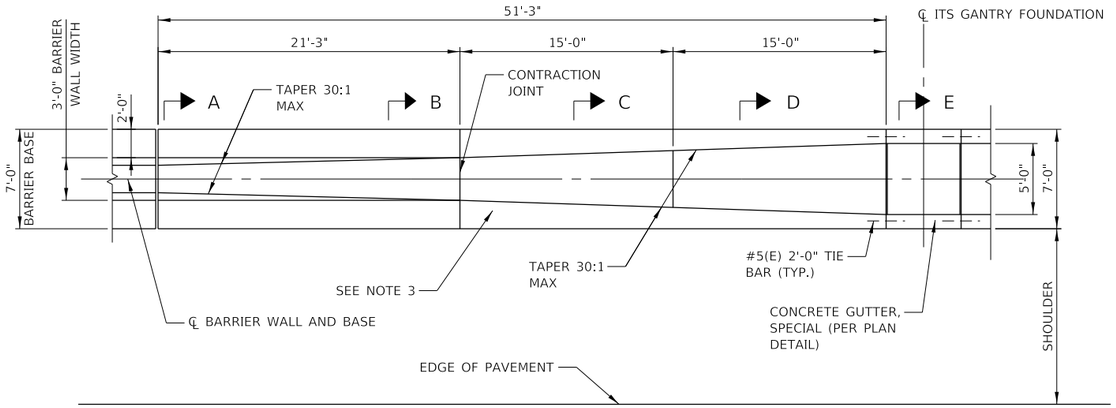
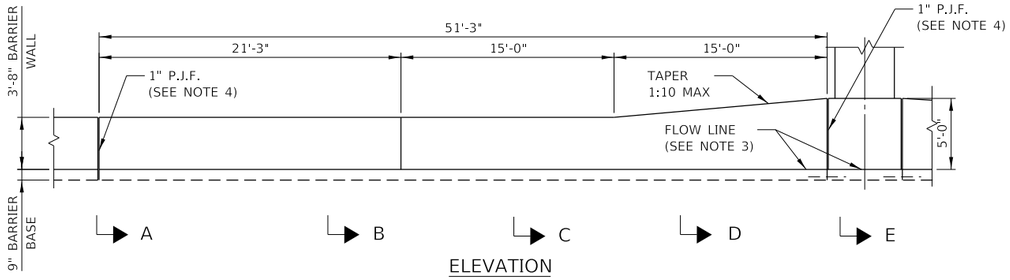
Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION: 2024-03 | STANDARD: M-OHS-730 | SHEET: 8 OF 9

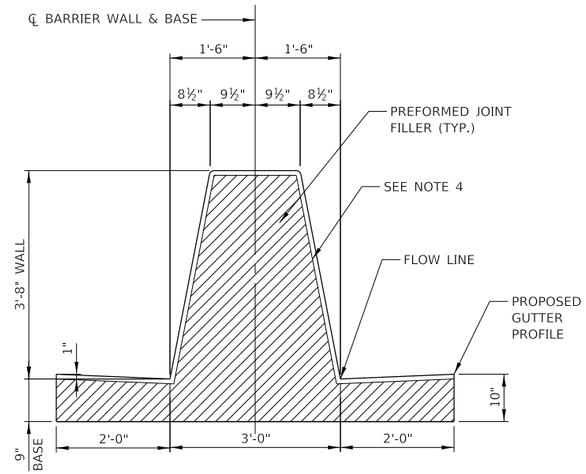


PLAN

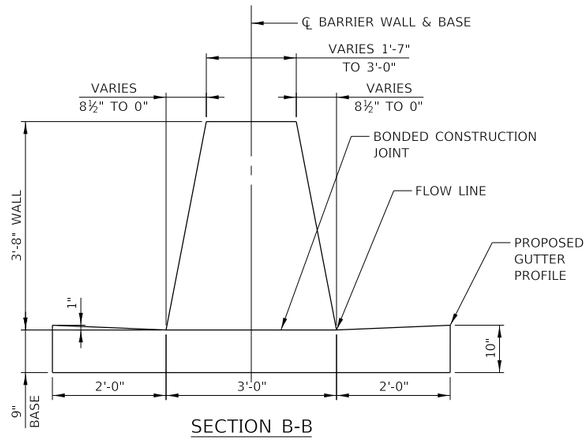


ELEVATION

CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY



SECTION A-A



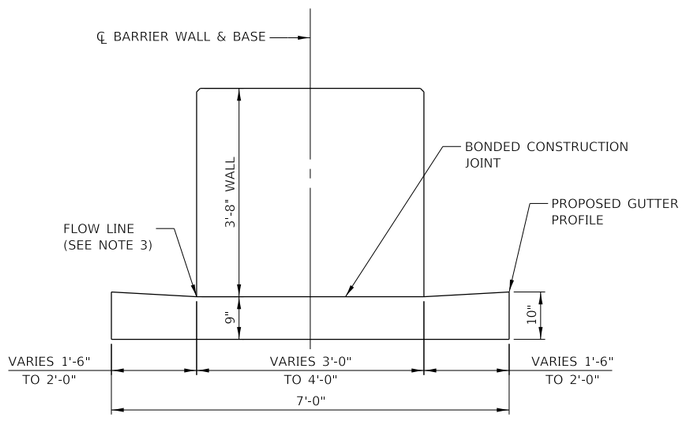
SECTION B-B

NOTE TO DESIGNER

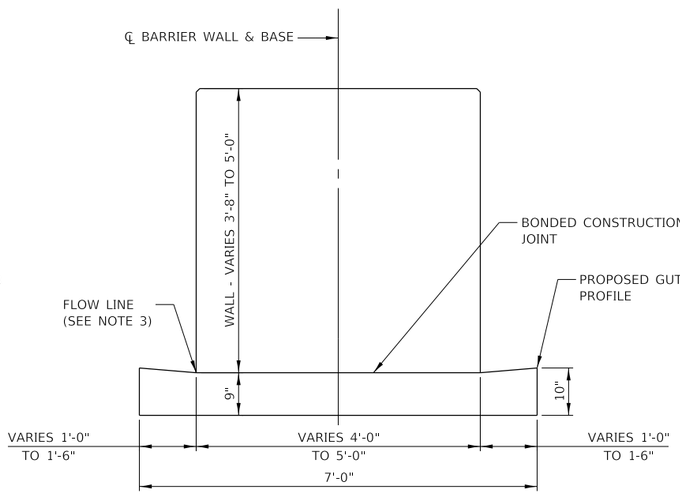
1. WITHIN SECTION B-B, THE GUTTER PORTION OF THE BARRIER BASE REMAINS 2'-0";HERETOFORE, STANDARD TYPE 20A F&G SHALL BE USED.
2. WITHIN SECTION C-C & D-D, THE GUTTER PORTION OF THE BARRIER BASE IS LESS THAN 2'-0"; THEREFORE, NON-ILLINOIS TOLLWAY STD. F&G SHALL BE USED.
3. WITHIN SECTION B-B & C-C, THE BARRIER HEIGHT REMAINS 44", THIS ALLOWS THE PLACEMENT OF LIGHT POLE FOUNDATIONS WITHIN THIS AREA.
4. WITHIN SECTION D-D, THE BARRIER HEIGHT IS INCREASING FROM 44" TO 60", THE LIGHT POLE FOUNDATIONS SHALL NOT BE PLACED WITHIN THIS AREA.

NOTES:

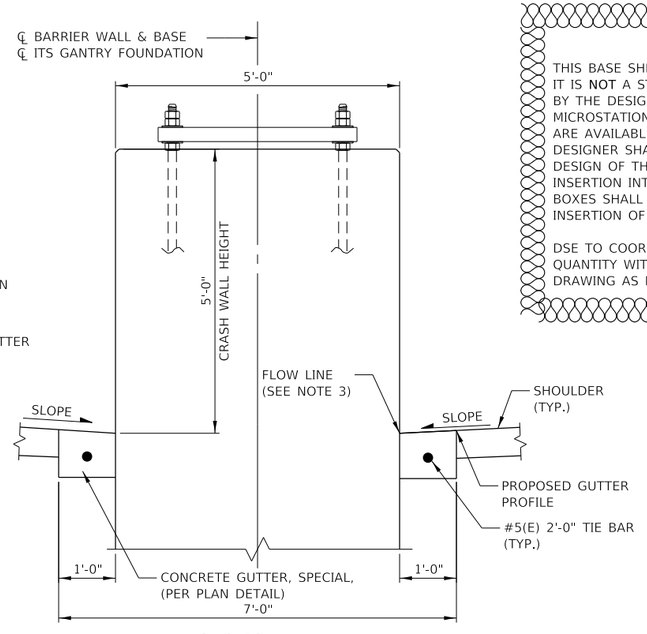
1. 2" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL AND IN THE CONCRETE BARRIER BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30'.
2. THE FORMING OF CONTRACTION JOINTS SHALL BE DONE BY SAWING.
3. GUTTER PROFILE IN THE VICINITY OF SAG VERTICAL CURVES, ALONG FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING GUTTER, SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
4. PROVIDE NON-STAINING GRAY ONE COMPONENT NON-SAG ELASTOMERIC GUN GRADE POLYURETHANE SEALANT WITH BACKER ROD.



SECTION C-C



SECTION D-D



SECTION E-E

NOTE TO DESIGNER

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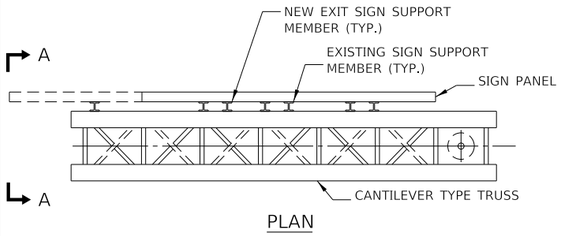
DSE TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY.

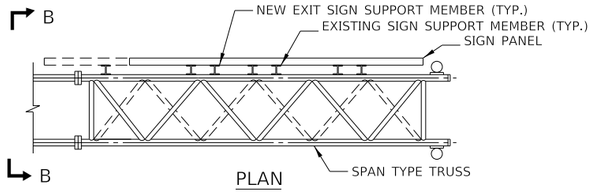
Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-730	9 OF 9



PLAN



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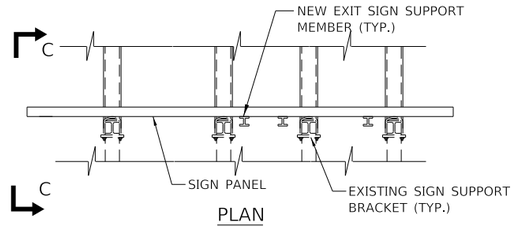

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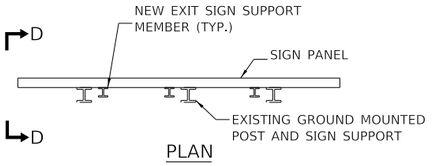

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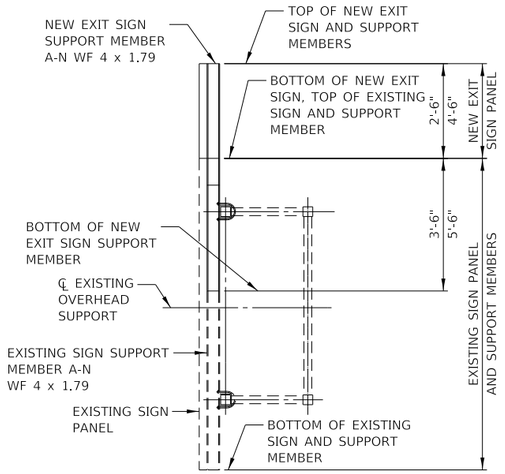
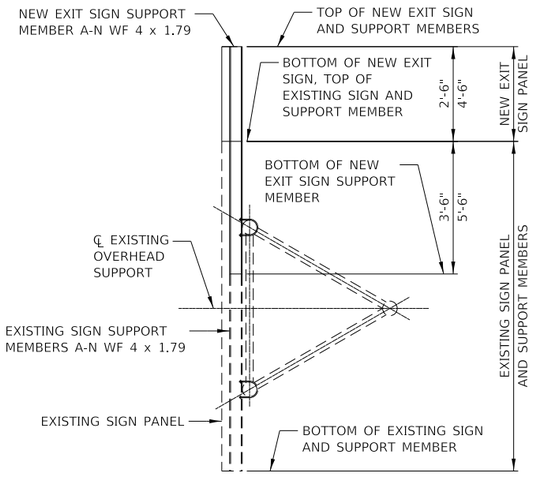
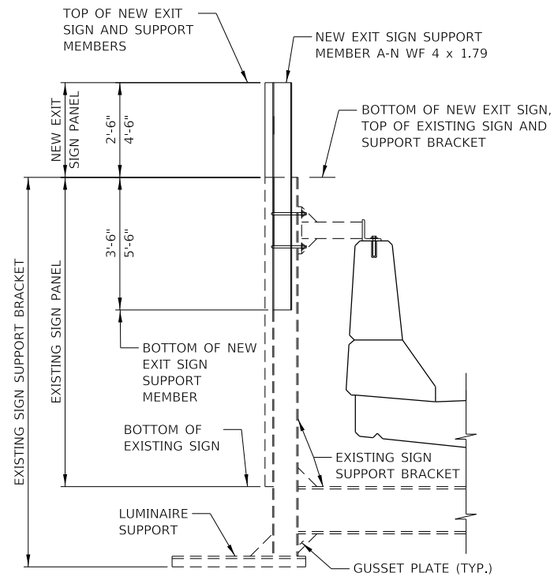


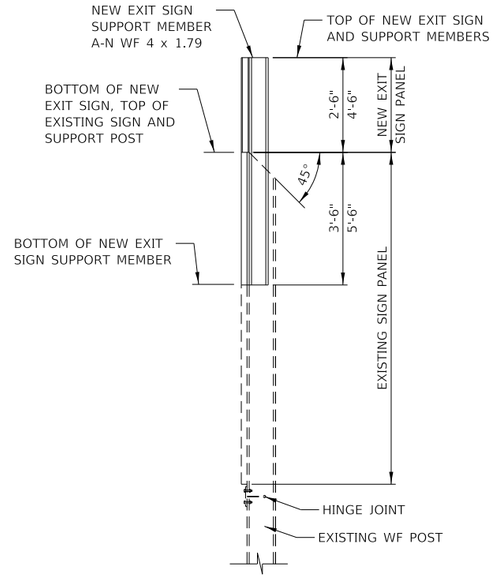
SECTION A-A
OVERHEAD CANTILEVER TYPE SIGN SUPPORT



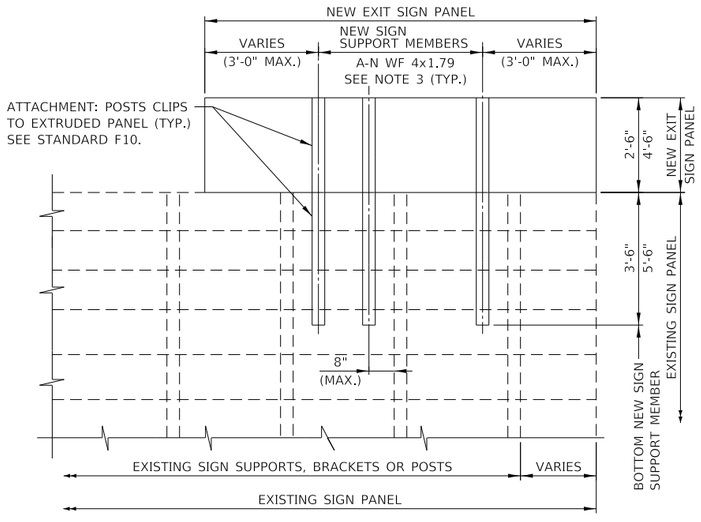
SECTION B-B
OVERHEAD SPAN TYPE SIGN SUPPORT



SECTION C-C
BRIDGE MOUNTED SIGN SUPPORT



SECTION D-D
GROUND MOUNTED SIGN SUPPORT



PARTIAL REAR ELEVATION OF SIGN PANELS AND SUPPORT MEMBERS

DETAILS FOR RETROFITTING NEW EXIT SIGN

NOTES:

1. ALL MATERIAL IS ALUMINUM IN ACCORDANCE WITH SECTION 733 OF THE LATEST IDOT STANDARD SPECIFICATIONS. (UNLESS OTHERWISE NOTED).
2. NEW SIGN SUPPORT MEMBERS SHALL BE SPACED WITH EXISTING SIGN SUPPORTS. SPACING SHALL NOT EXCEED 6'-0".
3. STANDARD SHALL ALSO BE UTILIZED FOR RETROFITTING OTHER SIGN PANELS WITH EXISTING SIGN SUPPORTS THAT DO NOT CONFORM TO STANDARD F8. NEW SIGN SUPPORT MEMBERS SHALL BE TWICE THE UNSUPPORTED HEIGHT PLUS ONE FOOT.

NOTE TO DESIGNER

EXISTING TRUSS AND SUPPORT MEMBERS SHALL BE CHECKED FOR STRUCTURAL ADEQUACY TO SUPPORT THE ADDITIONAL SIGN PANEL AREA.

Illinois Tollway

MOUNTING DETAILS FOR RETROFITTING NEW EXIT SIGN PANELS

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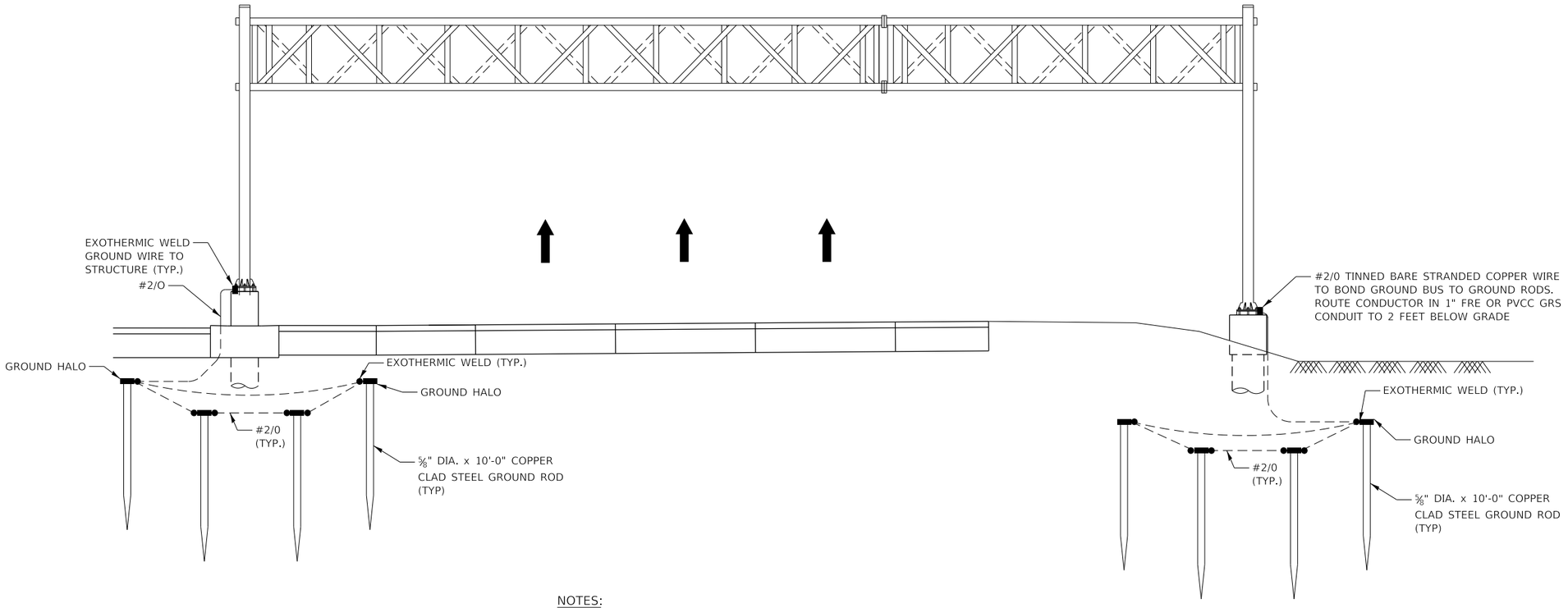
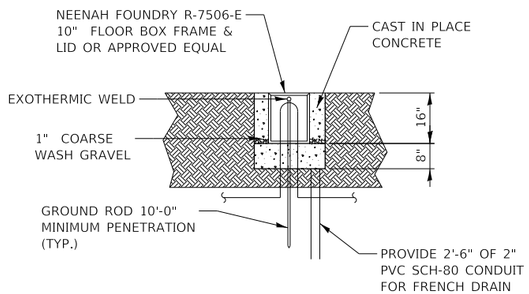
2022-03	M-OHS-731	1 OF 1

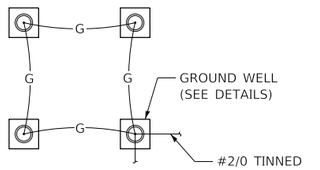


NOTES:

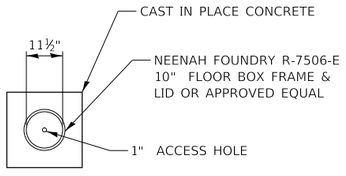
1. GROUNDING SYSTEM SHALL BE PLACED WITHIN ILLINOIS TOLLWAY RIGHT-OF-WAY.
2. INSTALL MARKER TAPE DIRECTLY ABOVE GROUNDING ELECTRODE CONDUCTORS.
3. THE COST OF ALL MATERIALS, EXOTHERMIC WELDING, GROUND WELL, GROUND RODS AND ALL OTHER ITEMS TO COMPLETE THE GROUNDING ELECTRODE SYSTEM SHALL BE INCLUDED IN THE COST OF THE SIGN STRUCTURE.
4. GROUND RODS SHALL BE INSTALLED IN GROUND WELLS IN FINISHED GRADE UNLESS INSTALLED UNDER SHOULDERS OR PAVEMENT.
5. CA-11, A QUALITY, IN ACCORDANCE WITH SSRBC 1004.



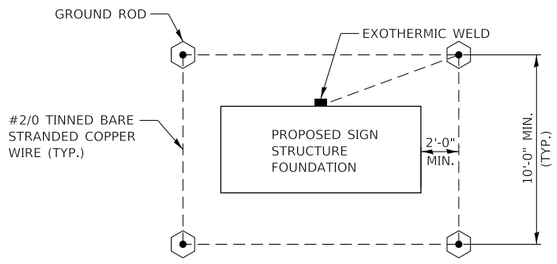
GROUND WELL ELEVATION DETAIL
(NOT TO SCALE, NOTE 3)



GROUND HALO DETAIL
(NOT TO SCALE)



GROUND WELL PLAN DETAIL
(NOT TO SCALE, NOTE 3)



GROUNDING SCHEMATIC
(NOT TO SCALE)

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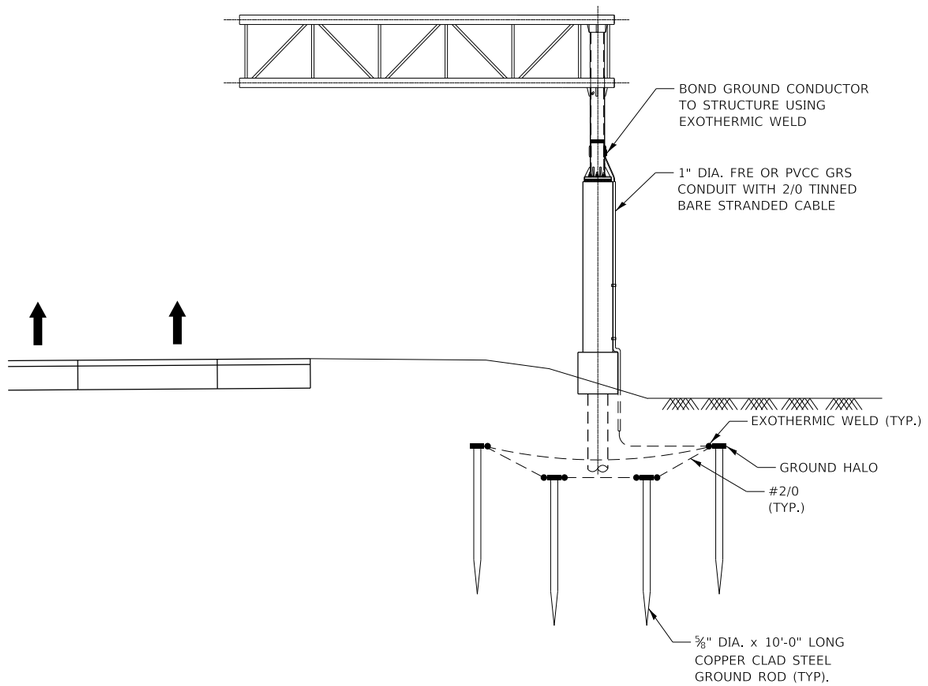
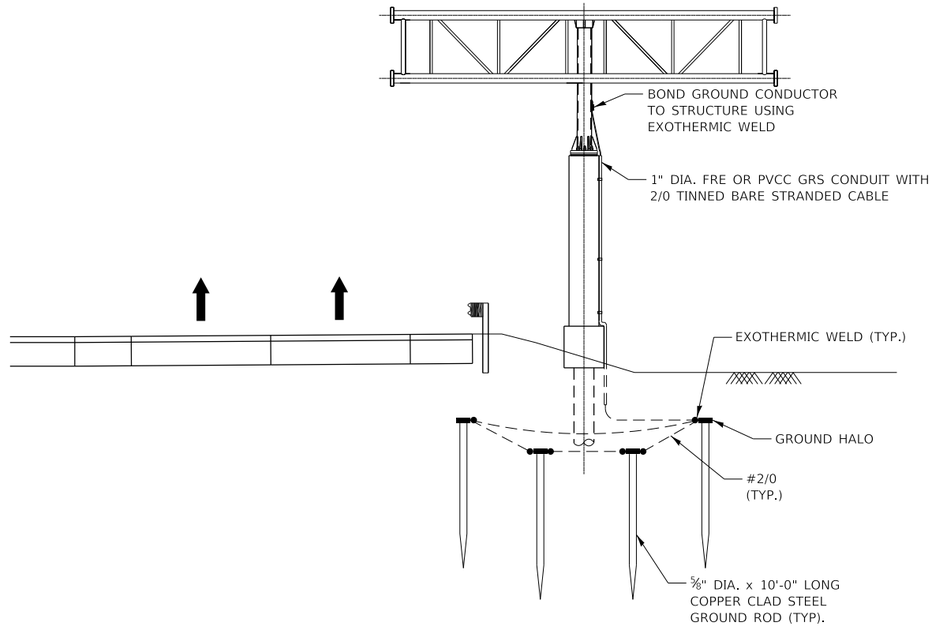
Illinois Tollway

SIGN STRUCTURE SPAN SITE GROUNDING PLAN

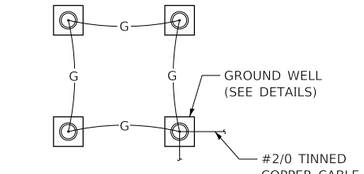
VERSION:	STANDARD:	SHEET:
2021-03	M-OHS-732	1 OF 1



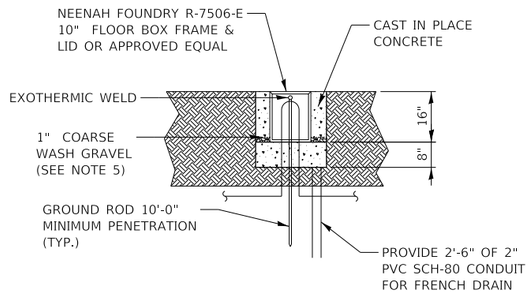
CANTILEVER ELEVATION



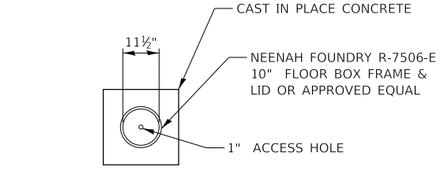
BUTTERFLY ELEVATION



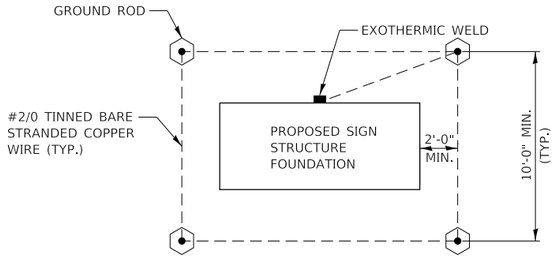
GROUND HALO DETAIL
(NOT TO SCALE)



GROUND WELL ELEVATION DETAIL
(NOT TO SCALE, NOTE 3)



GROUND WELL PLAN DETAIL
(NOT TO SCALE, NOTE 3)



GROUNDING SCHEMATIC
(NOT TO SCALE)

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Illinois Tollway

SIGN STRUCTURE CANTILEVER AND BUTTERFLY SITE GROUNDING PLANS

VERSION:	STANDARD:	SHEET:
2021-03	M-OHS-733	1 OF 1