DEPARTMENT OF TRANSPORTATION

Division of Operations
Mitchell Region Design Office
Better Lives Through Better Transportation
1300 S Ohlman St - PO Box 1206, Mitchell, SD 57301
Phone: 605-995-8129 | Fax: 605-995-8135
dot.sd.gov

July 19, 2022

TO: Interested Bidders

ADDENDUM 2

RE: 000I-289, McCook County – PCN I6VD
Sign Repair along I90 from MRM 356.00 to 367.00

The following addenda to the contract proposal and plans will be inserted and made a part of your contract proposal and plans for the above referenced project:

PROPOSAL

Remove and discard the existing DOT-123 Contract Proposal form and replace it with the enclosed revised DOT-123 Contract Proposal form.

The quantity for Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity was decreased to 758.5 SqFt.
The bid item and quantity for Remove Sign For Reset 2 Each were deleted.
The bid item and quantity for Reset Sign 2 Each were deleted.
The quantity for Remove Traffic Sign was increased to 8 Each.
The quantity for 2.25' Diameter Fixed Support Concrete Footing was decreased to 82.0 Ft.
The quantity for W6x20 Steel Post was increased to 301.8 Ft.

PLANS

Remove and discard existing Sheet 2 of 11 and replace it with the enclosed revised Sheet 2 of 11.

The quantity for Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity was decreased to 758.5 SqFt.
The bid item and quantity for Remove Sign For Reset 2 Each were deleted.
The bid item and quantity for Reset Sign 2 Each were deleted.
The quantity for Remove Traffic Sign was increased to 8 Each.
The quantity for 2.25' Diameter Fixed Support Concrete Footing was decreased to 82.0 Ft.
The quantity for W6x20 Steel Post was increased to 301.8 Ft.

Remove and discard existing Sheet 4 of 11 and replace it with the enclosed revised Sheet 4 of 11.

The column for Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity was revised, and the total is now 758.5 SqFt.
The column for Remove Sign For Reset 2 Each was deleted.
The column for Reset Sign 2 Each was deleted.
The column for Remove Traffic Sign was revised and the total is now 8 Each.
The column for 2.25' Diameter Fixed Support Concrete Footing was revised, and the total is now 82.0 Ft.
The column for W6x20 Steel Post was revised, and the total is now 301.8 Ft.
The column for Remove Concrete Footing was revised, and the informational total is now 16 Each.
The Distance from Edgeline for the sign assembly at MRM 359.00+0.946 was revised to 30'.
The Current Type of Post description was revised to Fixed.

Remove and discard existing Sheet 7 of 11 and replace it with the enclosed revised Sheet 7 of 11.

The Footing Diameter was revised to 1'-9" in the table.

Remove and discard existing Sheet 9 of 11 and replace it with the enclosed revised Sheet 9 of 11.

In the Fixed Sign Support Table, at I90 WB MRM 359.00+0.395, the text was revised from as reads: "EXIT 357 / Bridgewater / Canova Arr." to read: "EXIT 357 / Bridgewater / Canova 1 MI".

Three interstate sign assemblies had posts changed from reuse to new posts. Related post and footing information was revised for these sign assemblies.

Proposal and Plans (and Addenda, when applicable) can be accessed at the following link: https://apps.sd.gov/HC65BidLetting/RegionDefault.aspx Prior to submitting a bid, it is the bidder's responsibility to examine the project in accordance with Section 2.5 of the specifications. It is also the bidder's responsibility to acknowledge and account for any addenda issued prior to bid opening.

Please verify that all required information is complete prior to mailing bid documents.

Very truly yours,

DEPARTMENT OF TRANSPORTATION
Travis Dressen, Region Engineer

_____
Monte Rice, Region Design Engineer

cc: Bennett – Construction and Maintenance
Hansen – Civil Rights
Peppel/Holthaus/Brandner – Mitchell Area
Weisz – Operations/Materials
Pinkley/Brosz – Region Traffic

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

CONTRACT PROPOSAL

CODE	PROJECT PRE	PROJECT ROUTE	PROJECT AGR	MAINT UNIT	CONTROL REFERENCE	AFE	FUNCTION	BEGIN MRM	END MRM
		000I		289		I6VD			

CITY AND/OR COUNTY: McCook County **BUDGET SOURCE:** Contract Maintenance

REGION MATERIALS CERTIFICATION REQUIRED: ☑ YES ☐ NO **WIP #:**
CERTIFIED INSPECTORS/TESTERS REQUIRED: ☑ YES ☐ NO
TO BE INSTALLED ON CM&P: ☑ YES ☐ NO

TYPE, PURPOSE AND LOCATION OF WORK: Sign Repair along I90 from MRM 356.00 to MRM 367.00.

ESTIMATE OF QUANTITIES AND COST

BID ITEM NUMBER	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
009E0010	Mobilization	Lump Sum	LS	Lump Sum	
110E0100	Remove Concrete Footing(s)	Lump Sum	LS	Lump Sum	
110E0130	Remove Traffic Sign	8	Each		
632E0014	1.75' Diameter Breakaway Support Concrete Footing	12	Ft		
632E0058	2.25' Diameter Fixed Support Concrete Footing	82	Ft		
632E1235	W6x20 Steel Post	301.8	Ft		
632E3113	Extruded Aluminum Sign, Nonremovable Copy High Intensity	234.3	SqFt		
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	758.5	SqFt		
634E0110	Traffic Control Signs	32	SqFt		
634E0120	Traffic Control Miscellaneous	Lump Sum	LS	Lump Sum	
634E0420	Type C Advance Warning Arrow Board	1	Each		
				TOTAL	

CONTRACTOR'S PROPOSAL STATEMENT

The undersigned agrees to offer the labor and material in the quantities, at the unit price, for the purpose, in the place, and in accordance with attached provisions. The Contractor will provide services in compliance with the Americans with Disabilities Act of 1990 and any amendments.

SUBSTANTIAL COMPLETION DATE N/A
FIELD WORK COMPLETION DATE December 2, 2022
SUBSCRIBED AND SWORN TO BEFORE ME THE _____ **DAY OF** _____, 20__
NOTARY _____
My Commission Expires:

DATE _____ _____ **(SEAL)**

PROPOSED START DATE _____
SIGNATURE _____
PRINTED NAME _____
COMPANY _____
STR. ADDRESS _____
CITY, STATE, ZIP _____
PHONE NUMBER _____
FEDERAL TAX ID NUMBER _____

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

CONTRACT PROPOSAL

	PROJECT			MAINT	CONTROL			BEGIN	END
CODE	PRE	ROUTE	AGR	UNIT	REFERENCE	AFE	FUNCTION	MRM	MRM
		000I		289		I6VD			

TO BE FILLED OUT BY STATE PERSONNEL:

The parties agree that the Department of Transportation may execute this contract by electronic signature.

RECOMMENDED FOR APPROVAL:

CONSTRUCTION & MAINTENANCE ENGINEER **DATE**

AREA / REGION / OPS ENGINEER **DATE**

DIRECTOR OF OPERATIONS **DATE**

INTERNAL SERVICES / AUDITS **DATE**

ACCEPTED BY SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

NAME _____ **TITLE** _____ **DATE** _____

IF FEDERAL FUNDS WILL BE EXPENDED UNDER THIS AGREEMENT, ACCEPTANCE BY PROJECT DEVELOPMENT IS REQUIRED

PROJECT DEVELOPMENT ENGINEER **DATE**

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0100	Remove Concrete Footing(s)	Lump Sum	LS
110E0130	Remove Traffic Sign	8	Each
632E0014	1.75' Diameter Breakaway Support Concrete Footing	12.0	Ft
632E0058	2.25' Diameter Fixed Support Concrete Footing	82.0	Ft
632E1235	W6x20 Steel Post	301.8	Ft
632E3113	Extruded Aluminum Sign, Nonremovable Copy High Intensity	234.3	SqFt
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	758.5	SqFt
634E0110	Traffic Control Signs	32.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Board	1	Each

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking

GENERAL PERMANENT SIGNING

New sign installations will be staked in the field by the Contractor and checked by the Engineer. The Contractor will give the Engineer a minimum of one week to check staked locations prior to signpost installation. Lateral offset of signs will be as shown in the plans or as directed by the Engineer.

The Contractor will be responsible for contacting South Dakota One Call to locate the utilities at the staked sign installation locations.

Prior to ordering signs, the Contractor will verify dimensions, background, border, and legend of the signs.

Prior to use, the Contractor will provide documentation for the sign support devices showing they meet the applicable NCHRP 350 or MASH requirements.

REMOVE CONCRETE FOOTINGS

Concrete footings that are to be removed will be removed by the Contractor to a minimum of two feet below the ground level. Restoration of the disturbed area will be to the satisfaction of the Engineer.

All costs for removing the concrete footings will be incidental to the contract lump sum price for Remove Concrete Footing(s).

REMOVE TRAFFIC SIGN

Existing signs that are shown as being removed in the Permanent Signing Table will become the property of the Contractor. Existing signposts and bases will be removed in their entirety. All existing signs, posts, and/or hardware removed will not be reused.

All costs associated with the removal of existing signs, posts, hardware, and backfilled holes will be incidental to the contract unit price per each for Remove Traffic Sign. Quantities will be per assembly at the contract unit price per each.

REMOVE SIGN FOR RESET AND RESET SIGN

Signs that are scheduled for reset will be dismantled and reassembled to the extent needed by the Contractor to properly reset the sign. Signs will be handled with care so that the existing signs, posts, and bases are not damaged during the relocation process. The Contractor will replace and pay for any reset signs damaged in their care. The Contractor will remove and dispose of any existing posts for all reset signs that require use of new posts as shown in the Table of Permanent Signing.

All costs for removing, dismantling, and disposing of any existing posts will be incidental to the contract unit price per each for “Remove Sign for Reset”. All costs for resetting the existing signs will be incidental to the contract unit price per each for “Reset Sign”. All quantities for Remove Sign for Reset and Reset Sign will be per assembly at the contract unit price per each.

NEW PERMANENT SIGNING

All signs will be manufactured in accordance with the sheeting manufacturer’s recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films.

All costs associated with furnishing and installing the new permanent signs, and with furnishing and installing stiffeners and hardware will be incidental to the contract unit price per square foot for Extruded Aluminum Sign, Nonremovable Copy High Intensity or Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity.

LOGO SIGNS

The Contractor will remove and reset the existing logos to match the existing signs.

All costs associated with removing and resetting existing logos will be incidental to the contract unit price per square foot for “Extruded Aluminum Sign, Nonremovable Copy High Intensity”.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	0001-289	4	11

Revised 7/18/22 JP

SIGN TABLE

						632E3113	632E3115	632E1235	632E0014	632E0058	110E0130	110E0100				DOT USE	
MRM	Distance from Edgeline	Description	Sign Code	Width (Inches)	Height (Inches)	Extruded Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Ext. Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	W6x20 Steel Post	1.75' Diameter Breakaway Support Concrete Footing (Ft)	2.25' Diameter Fixed Support Concrete Footing (Ft)	Remove Traffic Sign (Each)	Remove Concrete Footing	Direction Sign Faces	Remarks	*Current Type of Post*		
I90 EB																	
356.00+0.589	55'	EXIT 357 Bridgewater Canova 1 MILE	E1-5P SPEC.	132 186	30 96		27.5 124.0	37.1		12.0'	1	2	WEST	New inside post is 17.5 ft. and outside post is 19.6 ft..	*2x Fixed Steel W8x28*		
357.00+0.601	55'	EXIT 357 Bridgewater Canova Up-Diag. Arrow	E1-5P SPEC.	132 228	30 72		27.5 114.0	35.7		12.0'	1	2	WEST	New inside post is 19.3 ft. and outside post is 16.4 ft..	*2x Fixed Steel W8x31*		
359.00+0.946	30'	REST AREA 2 MILES	D5-1	132	60	55.0		34.7	12.0'		1	2	WEST	New inside post is 16.5 ft. and outside post is 18.2 ft..	*2x Fixed Steel W6x15*		
363.48+0.024	55'	EXIT 364 GAS [LOGO Panel]	SPEC.	156	132	143.0		47.9		10.0'	1	2	WEST	New inside post is 23.3 ft. and outside post is 24.6 ft..	*2x Fixed Steel W12x22*		
363.48+0.117	55'	EXIT 364 US81 Salem / Yankton Up-Diag. Arrow Gas/ Food/ Lodging/ Camper	E1-5P SPEC. SPEC.	132 174 174	30 120 30	36.3	27.5 145.0	39.0		12.0'	1	2	WEST	New inside post is 19.5 ft. and outside post is 19.5 ft..	*2x Fixed Steel W6x15*		
366.06+0.605	55'	EXIT 368 Canistota 1 MILE Gas/ Food/ Lodging	SPEC. SPEC. SPEC.	*132* *156* *156*	*30* *72* *30*			42.1		12.0'	1	2	WEST	New inside post is 19.8 ft. and outside post is 22.3 ft..	*2x Fixed Steel W8x18*		
I90 WB																	
358.30+0.084	55'	EXIT 357 Bridgewater Canova Up-Diag. Arrow	E1-5P SPEC.	132 228	30 72		27.5 114.0	27.7		12.0'	1	2	EAST	New inside post is 16.3 ft. and outside post is 11.4 ft.. Move new sign assembly 620 ft. east of existing location.	*2x Fixed Steel W8x31*		
359.00+0.395	55'	EXIT 357 Bridgewater Canova 1 MILE	E1-5P SPEC.	132 186	30 96		27.5 124.0	37.6		12.0'	1	2	EAST	New inside post is 17.5 ft. and outside post is 20.1 ft..	*2x Fixed Steel W8x28*		
					TOTAL	**234.3**	**758.5**	**301.8**	**12.0'**	**82.0'**	**8**	**16**					

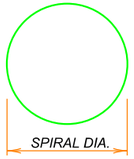
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	0001-289	7	11

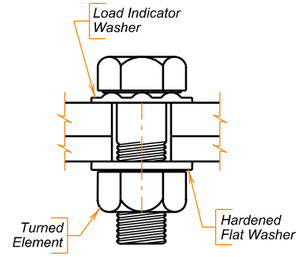
Plotting Date: 07/18/2022
Revised 7/18/22 JP

MRM	SIGN DESCRIPTION	SITE LOCATION	POST SIZE	FOOTING DIMENSIONS		STUB POST LENGTH	LONGITUDINAL STEEL QUANTITIES			# SPIRAL STEEL QUANTITIES	
				DIA.	DEPTH		NO	SIZE	LENGTH	DIA.	LENGTH
359.00+0.946	REST AREA 2 MILES	I90 EB EXIT 357	W 6 x 20	1' - 9"	6' - 0"	2' - 3"	8 - #6 Bars		5'- 8"	1'- 5"	37.75'

 # Spirals - Use 12" pitch and 1 ½ extra turns at each end. Use 1 ½ turns for lap at splice as required, or weld as approved by the Office of Bridge Design, Spirals may be smooth bars, Bar length shown does not include Splices. Dimensions are out to out of bars.

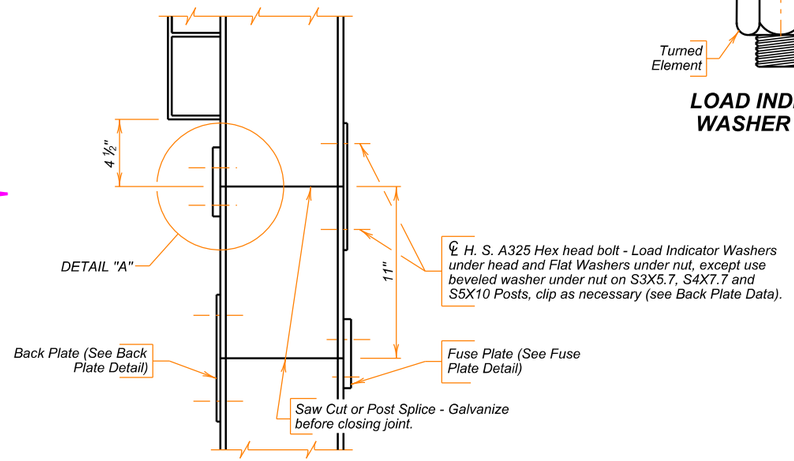
NOTE:
The above is a Site Specific data entry table and the inserted information is the responsibility of the Region Traffic Engineer.



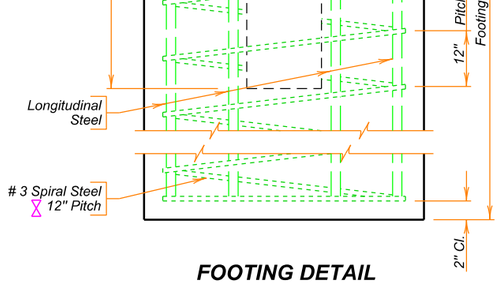


LOAD INDICATOR WASHER DETAIL

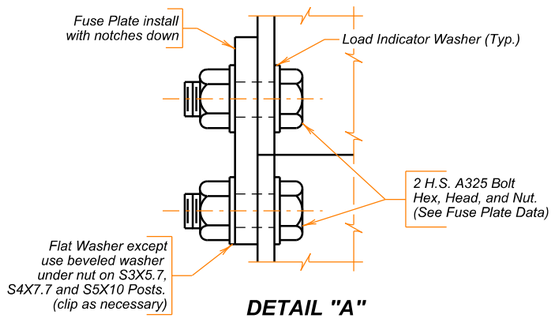
TRAFFIC DIRECTION



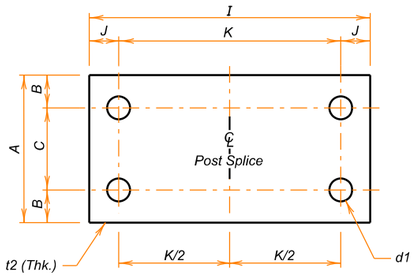
FUSE & BACK PLATE INSTALLATION



FOOTING DETAIL



DETAIL "A"



BACK PLATE DETAIL

NOTES

1. *Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 2001 Edition with 2003 Interims.*
2. *Concrete Footings shall be Class M6 - fc = 4000 p. s. i.*
3. *Structural Steel shall comform to ASTM A36.*
4. *All Reinforcing Steel, except spirals, shall conform to ASTM 615 Grade 60.*
5. *Spiral Reinforcing Steel may be fabricated from cold drawn wire ASTM A1064, or hot rolled plain or deformed bars conforming to the strength requirements of ASTM A615, Grade 60.*
6. *All Bolts and Nuts shall conform to ASTM A325 except that ½" diameter bolts may conform to either ASTM A325 or ASTM A449. Washers shall conform to ASTM F436. All hardware shall be galvanized in accordance with ASTM F2329.*
7. *All structural steel including Posts and Post Stubs shall be galvanized in accordance with ASTM A123.*
8. *All Bolt Holes shall be drilled. All plate cuts shall preferably be saw cuts. However, Flame Cutting will be permitted providing all edges are ground smooth (metal projecting beyond the plane of the plate face will NOT be allowed).*
9. *All welding and weld inspection shall be in accordance with the latest edition of AWS D 1.5 Structural Welding Code.*

PROCEDURE FOR ASSEMBLING SLIP BASE

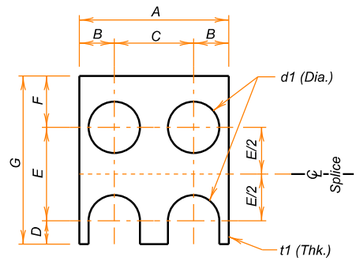
1. *Place galvanized Sheet Metal Diaphrams on top of the lower slip plate.*
2. *Connect main post to Stub Post with clean unlubricated bolts and nuts with one Hardened Washer on each bolt between slip plates.*
3. *Plumb post by adding shims between slip plates.*
4. *Tighten bolts to a practical maximum, using a 12" - 15" wrench in order to bed surfaces and clean threads. DO NOT TIGHTEN TO PROOF LOAD.*
5. *Loosen all bolts and retighten in increments, using a systematic order, until each bolt has been tightened to the specified torque corresponding to the post size used (See Slip Base Plate Data). Tighten bolts only to the torque specified. DO NOT OVERTIGHTEN. Check torque on each bolt after entire sign has been erected.*

ASSEMBLY OF FRICTION FUSE PLATES, BACK PLATES AND STIFFENERS

High strength bolts shall be tightened so as to obtain a residual tension by the use of load indicator washers.

SHOP PLANS

The fabricator shall submit shop plans in accordance with the Specifications or in Adobe PDF format. Shop plan submittals shall be sent to the Office of Bridge Design. Include design and check design, if applicable, with initial submittal.



FUSE PLATE DETAIL

TABLE 1 - FUSE PLATE DATA

Post Size	A	B	C	D	E	F	G	d1	t1	Bolt Size
S3X5.7	2 5/8"	9/16"	1 1/2"	1/2"	1 1/2"	1 1/8"	3 1/8"	5/8" ∅	1/4"	1/2" ∅
S4X7.7	2 5/8"	9/16"	1 1/2"	1/2"	1 1/2"	1 1/8"	3 1/8"	5/8" ∅	1/4"	1/2" ∅
S5X10	3"	11/16"	1 5/8"	5/8"	2 1/4"	1 1/8"	4"	3/4" ∅	3/8"	5/8" ∅
W6X12	4"	13/16"	2 1/8"	3/8"	2 1/2"	1 3/8"	4 1/2"	3/4" ∅	3/8"	5/8" ∅
W6X15	6"	1 3/8"	3 1/4"	5/8"	2 1/2"	1 3/8"	4 1/2"	3/4" ∅	3/8"	5/8" ∅
W6X20	6"	1 3/8"	3 1/4"	5/8"	2 1/2"	1 3/8"	4 1/2"	3/4" ∅	3/8"	5/8" ∅
W8X18	5 1/4"	1 3/16"	2 3/8"	3/4"	2 1/2"	1 3/8"	4 5/8"	7/8" ∅	1/2"	3/4" ∅
W8X21	5 1/4"	1 5/16"	2 5/8"	3/4"	2 1/2"	1 3/8"	4 5/8"	7/8" ∅	1/2"	3/4" ∅
W8X24	6 1/2"	1 1/2"	3 1/2"	7/8"	3"	1 5/8"	5 1/2"	1"∅	9/16"	7/8" ∅
W8X28	6 1/2"	1 9/16"	3 3/8"	7/8"	3"	1 3/4"	5 5/8"	1"∅	1/2"	7/8" ∅
W8X31	8"	1 5/8"	4 3/4"	1"	3 1/2"	2"	6 1/2"	1 1/8" ∅	5/8"	1" ∅
W10X33	8"	1 7/8"	4 1/4"	1 1/8"	4 1/2"	2 1/4"	7 1/8"	1 1/4" ∅	3/4"	1 1/8" ∅

TABLE 5 - BACK PLATE DATA

Post Size	A	B	C	J	K	I	d1	t2	Bolt Size
S3X5.7	2 5/8"	9/16"	1 1/2"	1 1/4"	4 1/2"	7"	5/8" ∅	1/4"	1/2" ∅
S4X7.7	2 5/8"	9/16"	1 1/2"	1 1/4"	4 1/2"	7"	5/8" ∅	1/4"	1/2" ∅
S5X10	3"	11/16"	1 5/8"	1 1/4"	4 3/4"	7 1/4"	3/4" ∅	1/4"	5/8" ∅
W6X12	4"	13/16"	2 1/8"	1 1/4"	4 3/4"	7 1/2"	3/4" ∅	1/4"	5/8" ∅
W6X15	6"	1 3/8"	3 1/4"	1 1/4"	5 1/4"	7 3/4"	3/4" ∅	1/4"	5/8" ∅
W6X20	6"	1 3/8"	3 1/4"	1 1/4"	5 1/4"	7 3/4"	3/4" ∅	1/4"	5/8" ∅
W8X18	5 1/4"	1 5/16"	2 3/8"	1 3/8"	5 3/4"	8 1/2"	7/8" ∅	1/4"	3/4" ∅
W8X21	5 1/4"	1 5/16"	2 5/8"	1 3/8"	5 3/4"	8 1/2"	7/8" ∅	1/4"	3/4" ∅
W8X24	6 1/2"	1 1/2"	3 1/2"	1 5/8"	6"	9 1/4"	1"∅	5/16"	7/8" ∅
W8X28	6 1/2"	1 9/16"	3 3/8"	1 3/4"	6"	9 1/2"	1"∅	3/8"	1/8" ∅
W8X31	8"	1 5/8"	4 3/4"	2"	6 1/2"	10 1/2"	1 1/8" ∅	3/8"	1" ∅
W10X33	8"	1 7/8"	4 1/4"	2 1/2"	7"	1' - 0"	1 1/4" ∅	7/16"	1 1/8" ∅

ERECTION DETAILS
FOR
TWO-POST TWO-DIRECTION BREAKAWAY SIGN SUPPORTS
S. D. DEPT. OF TRANSPORTATION
DECEMBER 2016

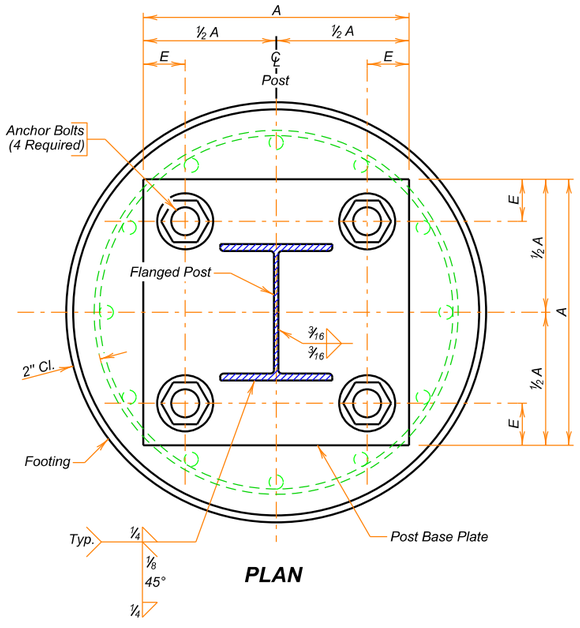
DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	RH/TB/MDG	RH/DM/PW	BRIDGE ENGINEER
CNTYPCNX	PCNXDSPG	BSTDBS2C	

MRM	SIGN DESCRIPTION	SITE LOCATION	POST SIZE	FOOTING DIMENSIONS		POST BASE PLATE DIMENSIONS (in.)			ANCHOR BOLT SIZE DIMENSIONS		✠ MINIMUM EMBEDMENT	LONGITUDINAL STEEL QUANTITIES			# SPIRAL STEEL QUANTITIES	
				DIA.	DEPTH	A x A	E	THICK	DIA. (in.)	LENGTH		NO	SIZE	LENGTH	DIA.	LENGTH
356.00+0.589	EXIT 357 / Bridgewater / Canova 1 MI	I90 EB MAINLINE	W 6 x 20	2' - 3"	6' - 0"	15 x 15	2.50	3/4	1 1/4	39"	25"	8 - #8 Bars		5'- 8"	1'- 11"	51'
357.00+0.601	EXIT 357 / Bridgewater / Canova Arr.	I90 EB MAINLINE	W 6 x 20	2' - 3"	6' - 0"	15 x 15	2.50	7/8	1 1/4	39"	25"	8 - #8 Bars		5'- 8"	1'- 11"	51'
359.00+0.395	EXIT 357 / Bridgewater / Canova 1 MI	I90 WB MAINLINE	W 6 x 20	2' - 3"	6' - 0"	15 x 15	2.50	3/4	1 1/4	39"	25"	8 - #8 Bars		5'- 8"	1'- 11"	51'
358.30+0.084	EXIT 357 / Bridgewater / Canova Arr.	I90 WB MAINLINE	W 6 x 20	2' - 3"	6' - 0"	15 x 15	2.50	3/4	1	33"	20"	8 - #8 Bars		5'- 8"	1'- 11"	51'
363.48+0.024	EXIT 364 / GAS/ [PANEL]	I90 EB MAINLINE	W 6 x 20	2' - 3"	5' - 0"	15 x 15	2.50	1	1 1/2	45"	30"	8 - #8 Bars		4'- 8"	2'- 2"	45'
363.48+0.117	EXIT 364/ US81/ Salem/ Yankton A.	I90 EB MAINLINE	W 6 x 20	2' - 3"	6' - 0"	15 x 15	2.50	1	1 1/2	45"	30"	8 - #8 Bars		5'- 8"	1'- 11"	51'
366.06+0.605	EXIT 368 / Canistota / 1 MILE/ GAS…	I90 EB MAINLINE	W 6 x 20	2' - 3"	6' - 0"	15 x 15	2.50	3/4	1 1/4	39"	25"	8 - #8 Bars		5'- 8"	1'- 11"	51'

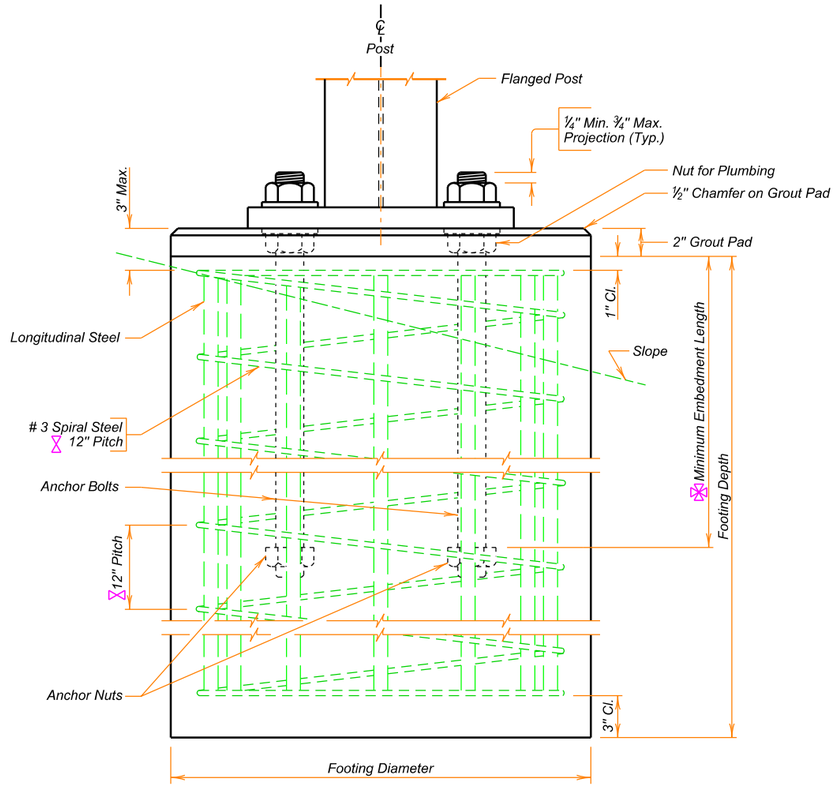
NOTE:
The above is a Site Specific data entry table and the inserted information is the responsibility of the Region Traffic Engineer.

⧖ *# Spirals - Use 12" pitch and 1 ½ extra turns at each end. Use 1 ½ turns for lap at splice as required, or weld as approved by the Office of Bridge Design, Spirals may be smooth bars, Bar length shown does not include Splices.*

Dimensions are out to out of bars.



PLAN



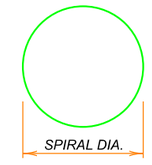
FOOTING DETAIL

NOTES

1. *Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 2001 Edition with 2003 Interims.*
2. *Concrete Footings shall be Class M6 - fc = 4000 p.s.i.*
3. *Structural Steel shall comform to ASTM A36.*
4. *All Reinforcing Steel, except spirals, shall conform to ASTM A615 Grade 60.*
5. *Spiral Reinforcing Steel may be fabricated from cold drawn wire ASTM A1064, or hot rolled plain or deformed bars conforming to the strength requirements of ASTM A615, Grade 60.*
6. *All Anchor Rods shall conform to ASTM F1554, Grade 36 having a minimum yield stress of 36000 p.s.i. Anchor Bolts shall be cleaned to remove any oil from the threading process before galvanizing.*
7. *Anchor Rods shall have 7" thread length on both ends.*
8. *All nuts shall conform to ASTM A563, DH. All nuts shall be heavy hex. All washers shall conform to ASTM F436.*
9. *All structural steel including the Steel Posts shall be galvanized according to ASTM A123. The Nuts, Washers and 10" of one end of the Anchor Rods shall be galvanized according to ASTM F2329.*
10. *All Rod Holes shall be drilled. All plate cuts shall preferably be Saw Cuts, however, Flame Cutting will be permitted providing all edges are ground smooth (metal projecting beyond the plane of the plate face will NOT be allowed).*
11. *All welding and weld inspection shall be in accordance with the latest edition of AWS D 1.5 Structural Welding Code.*

SHOP PLANS

The fabricator shall submit shop plans in accordance with the Specifications or in Adobe PDF format. Shop plan submittals shall be sent to the Office of Bridge Design. Include design and check design, if applicable, with initial submittal.



ERECTION DETAILS
FOR
FIXED SIGN SUPPORTS
S. D. DEPT. OF TRANSPORTATION
DECEMBER 2016

DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	RH/TB/MDG	RH/DM/PW	Steve A Johnson BRIDGE ENGINEER
CNTYPCNX	PCNXDSPG	BSTDFSSA	