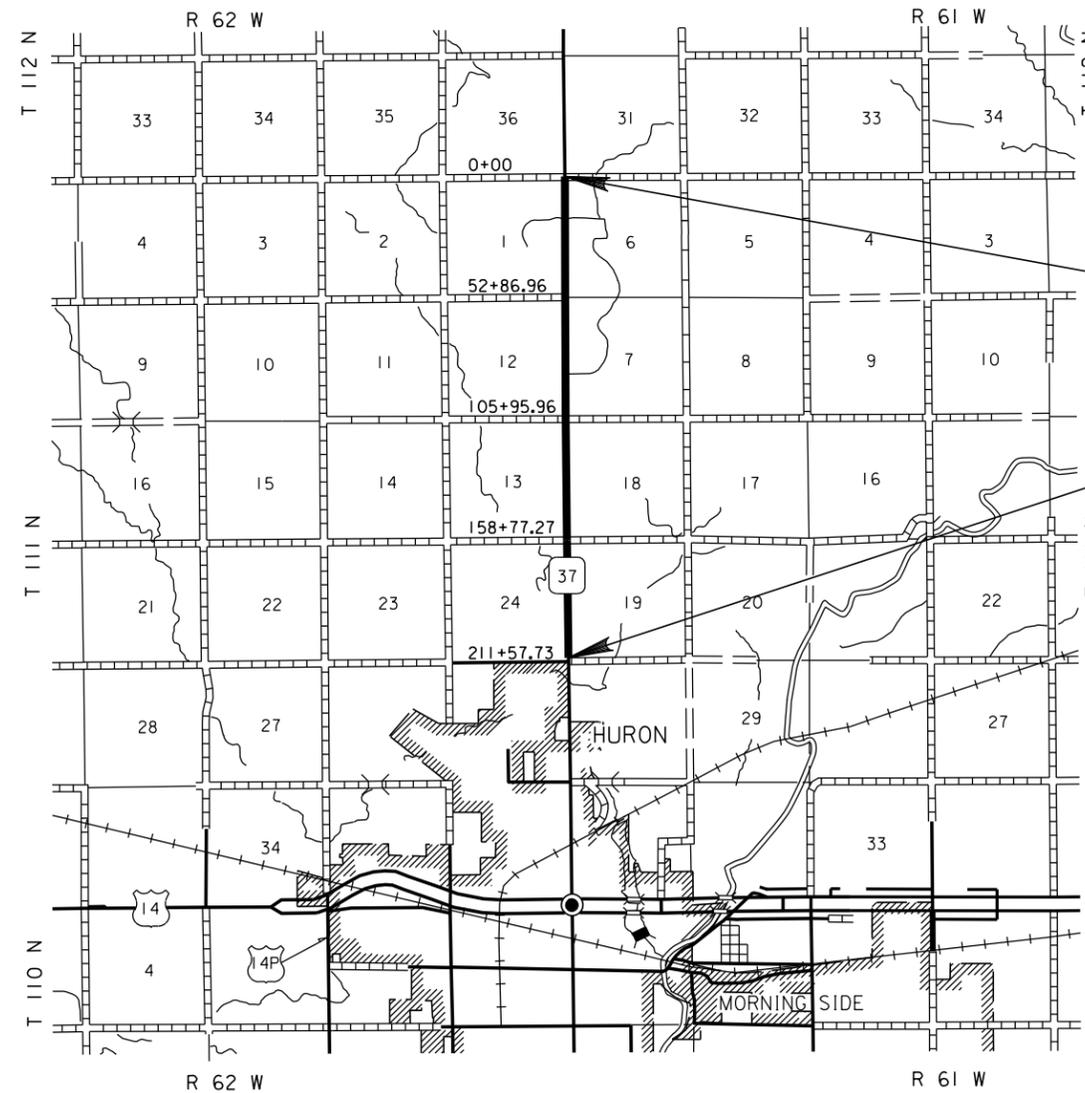


STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0037(119)129	S1	S10
Plotting Date: 09/18/2015			

SECTION S: PERMANENT SIGNING PLANS

INDEX OF SHEETS

- S1 Layout Map and Index
- S2 Estimate of Quantities
W/Plan Notes & Delineation Table
- S3 SD 37 Permanent Sign Table
- S4 SD 37 Sign Summary
- S5-S9 Sign Post Install Details
- S10 Standard Plate



BEGIN P 0037(119)129
STA. 0+00
MRM 133.00 +0.721

END P 0037(119)129
STA. 203+00.42
MRM 129.70 +0.132



PLOT SCALE - 1:7981.91

PLOTTED FROM - TRAB10100

PLOT NAME - 1

FILE - ... \SECTION S TITLE SHEET NEW.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0037(119)129	S2	S10

SECTION S – ESTIMATE OF QUANTITIES – P 0037(119)129, PCN 0232

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	6	Each
110E7150	Remove Sign for Reset	3	Each
632E1320	2.0"x2.0" Perforated Tube Post	127.0	Ft
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	77	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	6.0	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	53.5	SqFt
632E3500	Reset Sign	3	Each

PERMANENT SIGNING

The Contractor shall give the Engineer a minimum of one week to check staked locations prior to sign/post installation.

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

Prior to ordering sign posts, the Contractor shall verify post lengths. The height of the post shall not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign shall be cut off. No separate payment will be made for cutting the post or for that length cut off.

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

REMOVE EXISTING SIGNS

Existing signs within the project limits are summarized in the Sign Table. This table provides the approximate Station or MRM location for each sign. Existing signs in the table are indicated to be removed and not reused.

All existing signs and hardware listed to be removed shall become the property of the Contractor.

Holes remaining from the removal of 4"x6" wood posts shall be backfilled and compacted with material placed in layers not to exceed 6 inches in depth.

All costs associated with the removal of existing signs, posts, hardware, and backfilling holes shall be incidental to the contract unit price per each for Remove Traffic Sign.

All existing sign posts and/or sign bases shall be removed in their entirety.

NEW PERMANENT SIGNING

New signs for installation are summarized in the Sign Table.

Sign Design

Signs shall be constructed as required per the Manual on Uniform Traffic Control Devices (MUTCD), the latest edition of "Standard Highway Signs", and as specified on the Special Sign Design sheets.

All upper/lower case letters and numerals shall be as required per the MUTCD, the latest edition of "Standard Highway Signs", and as illustrated on the Special Sign Design sheets.

The Contractor shall furnish the Aberdeen Region Traffic Engineer (P.O. Box 1767; Aberdeen, SD 57402) with a detailed sign layout sheet for each sign shown. These detailed sign layouts shall be approved by the Region Traffic Engineer prior to ordering the signs.

Sign Sheeting

All signs shall be manufactured in accordance with the sheeting manufacturer's recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films. Digitally printed signs will not be accepted.

Sign Installation Hardware

Aluminum U-Channel stiffeners shall be used on all standard highway signs greater than 36 inches in width and shall conform to Alloy 6063-T6 or 6061-T6. The U-Channel shall be 2 inches in width and free of holes. The U-Channel stiffeners shall also be used to connect various signs together so that an entire sign assembly can be erected on a single installation.

Stiffeners may be fastened to signs by use of 1/4 inch diameter drive rivets.

Refer to the Breakaway Sign Supports diagram for typical sign and stiffener details.

The Contractor shall use 3/8 inch diameter rust proof machine sign bolts, flat metal washers, neoprene washers (against the sign sheeting), lock washers, and nuts to fasten the sign to the channel aluminum and posts. A minimum of two bolts shall extend through each post.

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

SQUARE TUBE ANCHOR SLEEVE

The Contractor shall furnish and install new square tube anchor sleeve as follows:

2.5" x 18", 12 Gauge square tube anchor sleeve, (or equivalent components as approved by the Engineer).

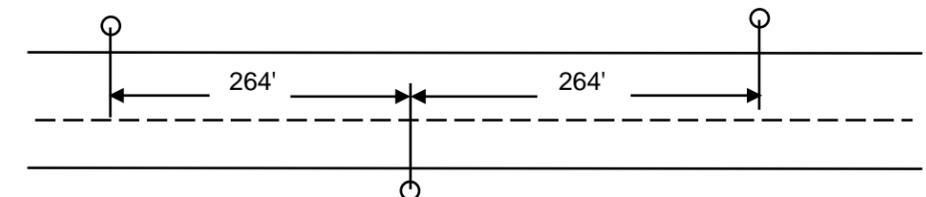
A 2.25" x 2.25" x 4' perforated tube post (12 Gauge) shall be used as the anchor post for installation with the square tube anchor sleeve.

MILEAGE REFERENCE MARKERS

MRMs (Mileage Reference Markers) are not to be disturbed. If a MRM is attached to a sign listed for replacement it shall be salvaged and reattached to the new sign in the same location. Payment for this work shall be incidental to the various signing contract items.

DELINEATION

All delineators shall be removed and shall become property of the Contractor. New delineators shall be installed at 528 Ft intervals. Payment for removal and installation of delineators shall be paid for at the contract unit price per each for "4"X4" White Delineator Back to Back with 1.12 Lb/Ft Post." The top of all delineators shall be 4 feet above the road surface.



SD 37, PCN 0232 Delineation Table

MRM	to	MRM	Distance	Spacing	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post (Each)	Description
129.00 + 0.881		133.00 + 0.721	20275	528	77	Both Sides of Road/Staggered Spacing
Totals					77	

P 0037(119)129, PCN 0232, SD 37 Permanent Sign Installation Table

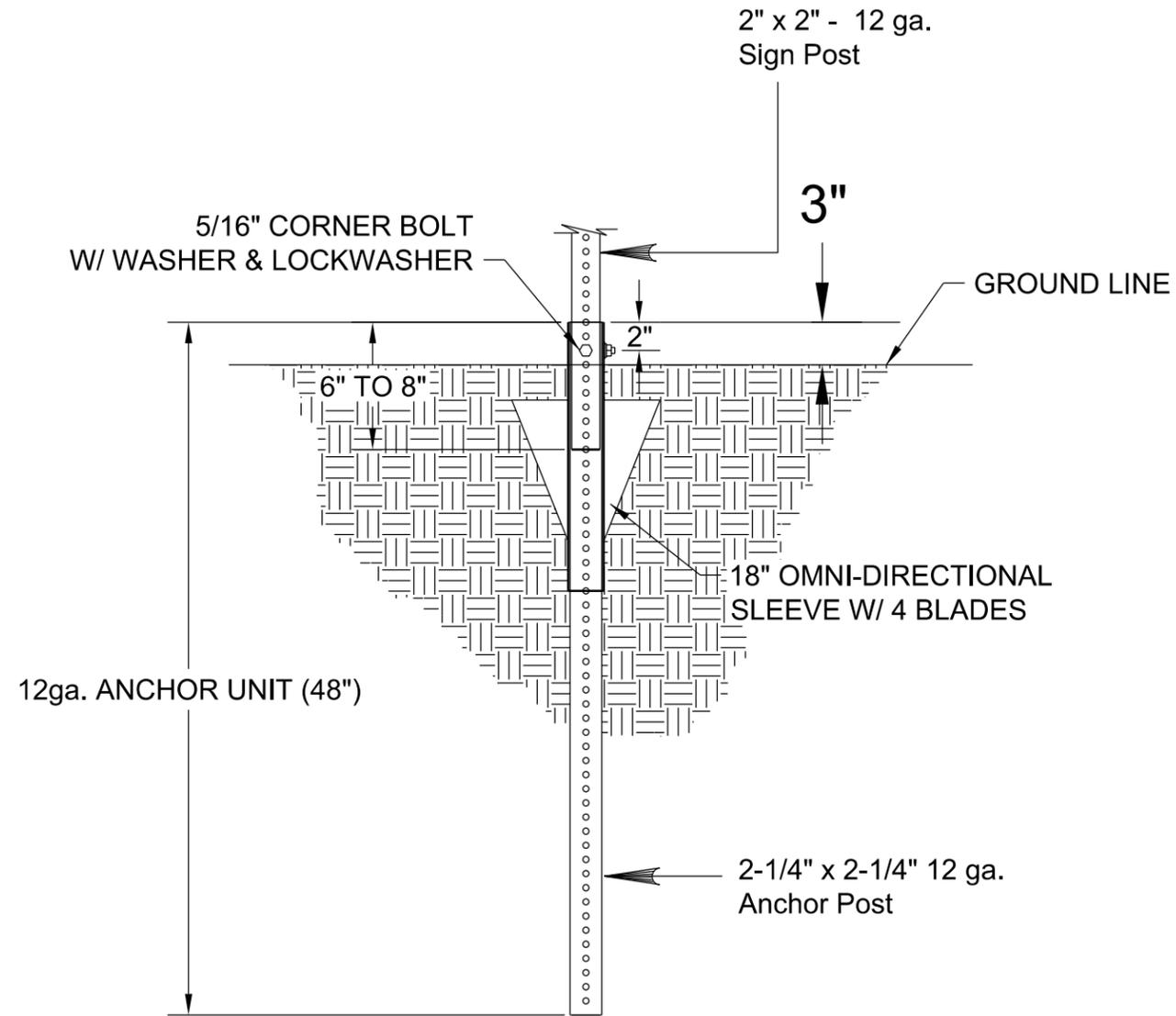
MRM	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
129.00 + 0.824	Lt.	Dynamic Engine Breaking Prohibited											N	Telespar	Do Not Disturb
		By City Ordinance											N		
129.00 + 0.950	Lt.	Reduced Speed Ahead 55 MPH	W3-5	36	36		9.0	11	1	1			N	4" X6" Wood	Replace Existing "SPEED ZONE AHEAD" Sign with New Sign on New Post
129.00 + 0.984	Rt.	Deer Crossing	W11-3	30	30		6.3	11	1	1			S	U-Channel	Replace Existing Sign Assembly with New Sign Assembly on New Post
		Next 2 Miles	W7-3aP	24	18		3.0						S		
130.00 + 0.017	Rt.	No Passing Zone											N	Telespar	Do Not Disturb
130.00 + 0.710	Lt.	Stop	R1-1	30	30		5.2	10	1				W	4" X6" Wood	Replace Existing Sign with New Sign on New Post
130.00 + 0.717	Rt.	Stop	R1-1	30	30		5.2	10	1				E	4" X6" Wood	Replace Existing Sign with New Sign on New Post
130.00 + 0.987	Rt.	Adopt a Highway	ADO-5					11	1		1	1	S	4" X6" Wood	Reset Existing Sign Assembly on New Post
		Broadland Buddies 4H Club	ADO-1										S		
		Litter Crew Ahead	ADO-6										S		
130.00 + 0.988	Lt.	Adopt a Highway	ADO-5					11	1		1	1	N	4" X6" Wood	Reset Existing Sign Assembly on New Post
		Sertoma Club of Huron	ADO-1										N		
		Litter Crew Ahead	ADO-6										N		
131.00 + 0.679	Lt.	Do Not Drive on Shoulder								1			N	Telespar	Remove Do Not Replace
131.00 + 0.711	Lt.	Stop	R1-1	30	30		5.2	10	1				W	4" X6" Wood	Replace Existing Sign with New Sign on New Post
131.00 + 0.717	Rt.	Stop	R1-1	30	30		5.2	10	1				E	4" X6" Wood	Replace Existing Sign with New Sign on New Post
132.00 + 0.396	Lt.	Deer Crossing	W11-3	30	30		6.3	11	1	1			N	U-Channel	Replace Existing Sign Assembly with New Sign Assembly on New Post
		Next 2 Miles	W7-3aP	24	18		3.0						N		
132.00 + 0.722	Lt.	Stop	R1-1	30	30		5.2	10	1				W	4" X6" Wood	Replace Existing Sign with New Sign on New Post
132.00 + 0.988	Lt.	Adopt a Highway	ADO-5					11	1		1	1	N	4" X6" Wood	Reset Existing Sign Assembly on New Post
		Broadland Buddies 4H Club	ADO-1										N		
		Litter Crew Ahead	ADO-6										N		
133.00 + 0.632	Lt.	Do Not Drive on Shoulder	R4-17							1			N	Telespar	Remove Do Not Replace
133.00 + 0.713	Lt.	South	M3-3	24	12	2.0		11	1	1			N	4" X6" Wood	Replace Existing Sign Assembly with New Sign Assembly on New Post
		SD 37	M1-5	24	24	4.0					N				
					TOTAL	6.0	53.5	127.0	12	6	3	3			

P 0037(119)129, PCN 0232, Sign Summary SD 37

Sign Code	Description	Width (Inches)	Height (Inches)	Sq. Ft.	No.	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super or Very High Intensity (SQFT)	Text / Background
M1-5	SD 37	24	24	4.0	1	4.0		See Standard Plate 632.20
M3-3	South	24	12	2.0	1	2.0		Black on White with Green Border
R1-1	Stop	30	30	5.2	5		26.0	White on Red
W3-5	Reduced Speed Ahead 55 MPH	36	36	9.0	1		9.0	Black on Fluorescent Yellow
W11-3	Deer Crossing	30	30	6.3	2		12.5	Black on Fluorescent Yellow
W7-3aP	Next 2 Miles	24	18	3.0	2		6.0	Black on Fluorescent Yellow
Totals						6.0	53.5	

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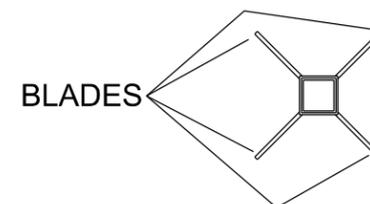
SQUARE TUBE 4 BLADE ANCHOR DETAIL



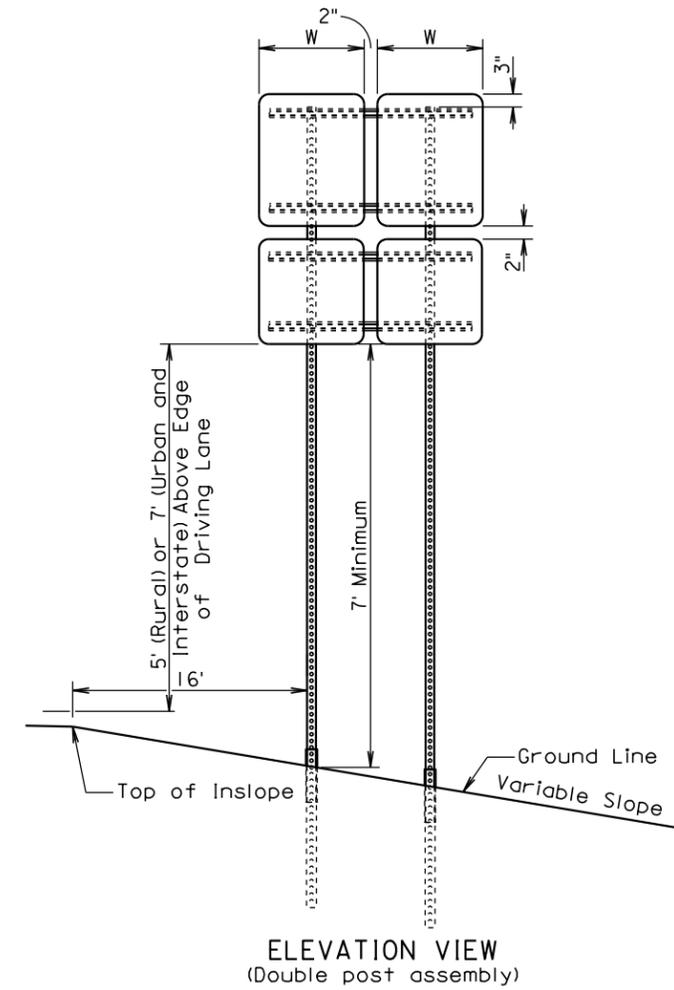
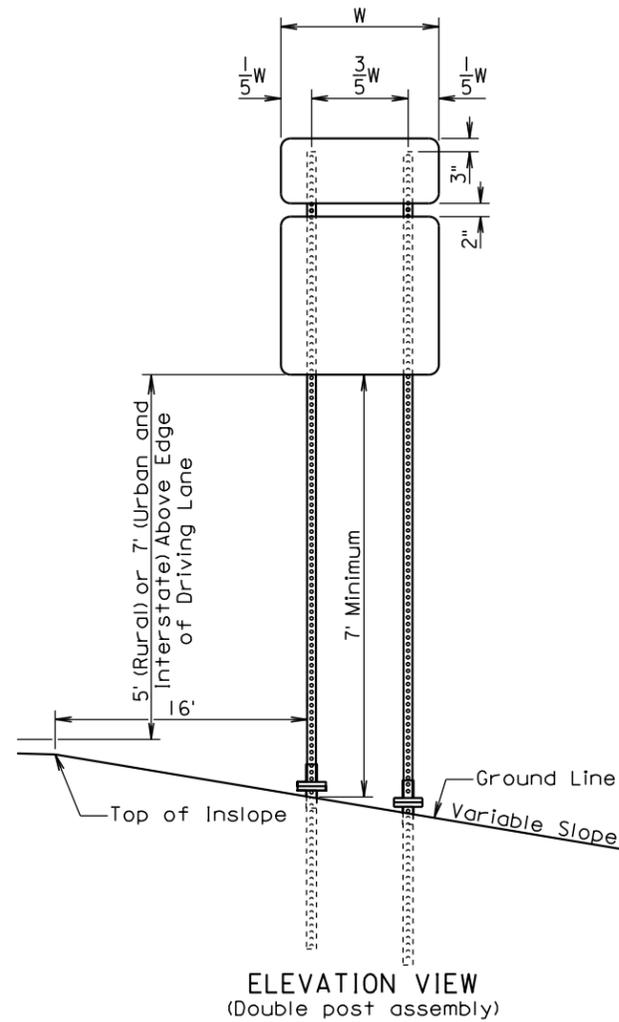
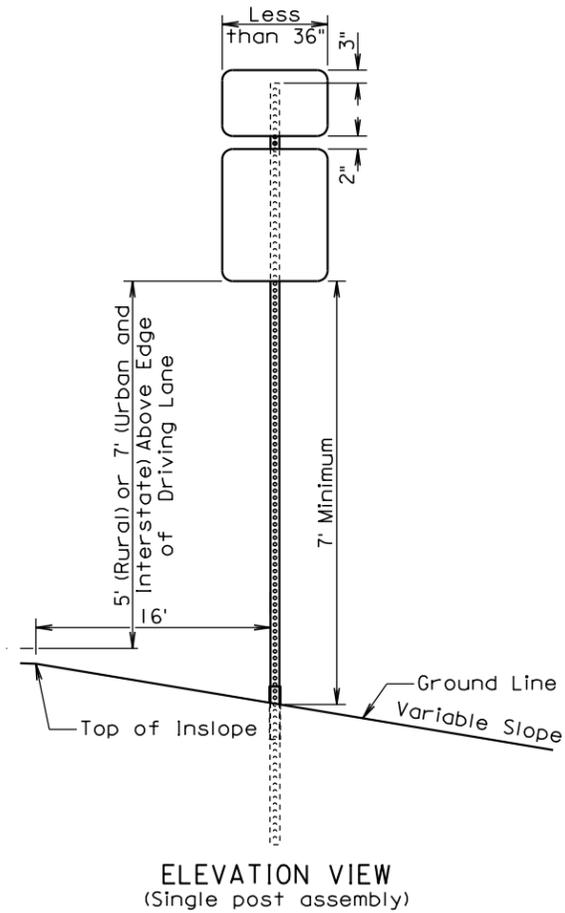
2-1/2" x 18" OMNI-ANCHOR SLEEVE
FOR SOIL STABILIZATION.

ANCHOR SLEEVE
TOP VIEW

2-1/2" x 18" 12 ga. Omni-Sleeve



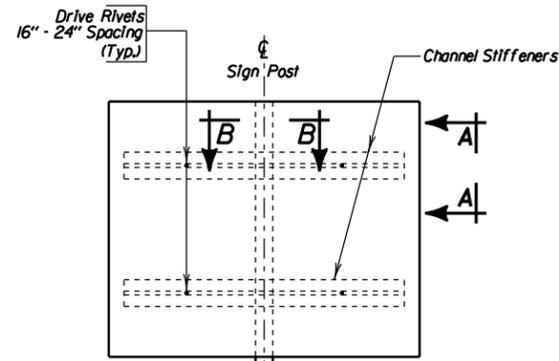
INSTALLATION DETAILS FOR MULTIPLE SIGN ASSEMBLIES



GENERAL NOTES:

The sign posts and bases shown are for illustrative purpose. The post type required shall be the type specified in the plans.

ONE POST BREAKAWAY SIGN SUPPORTS

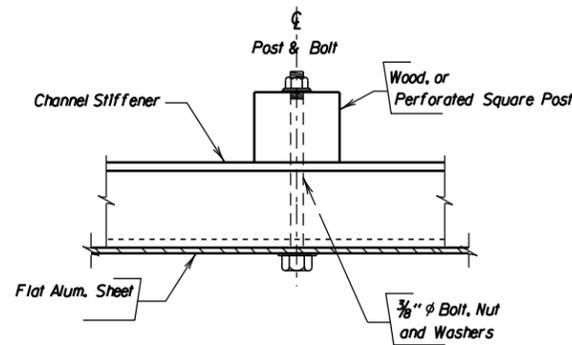
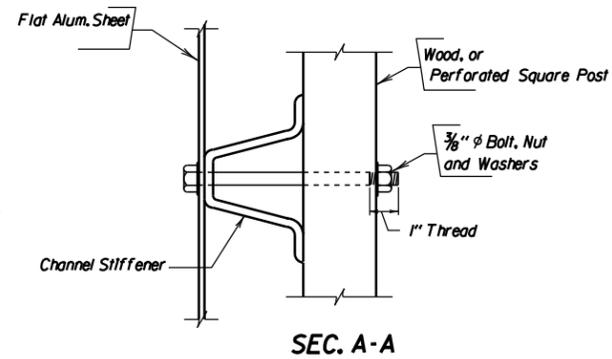
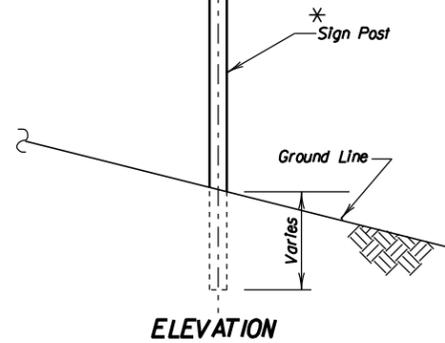


∅ A plastic washer, as recommended by the sheeting manufacturer, shall be installed between the sign face and the metal washer shown.

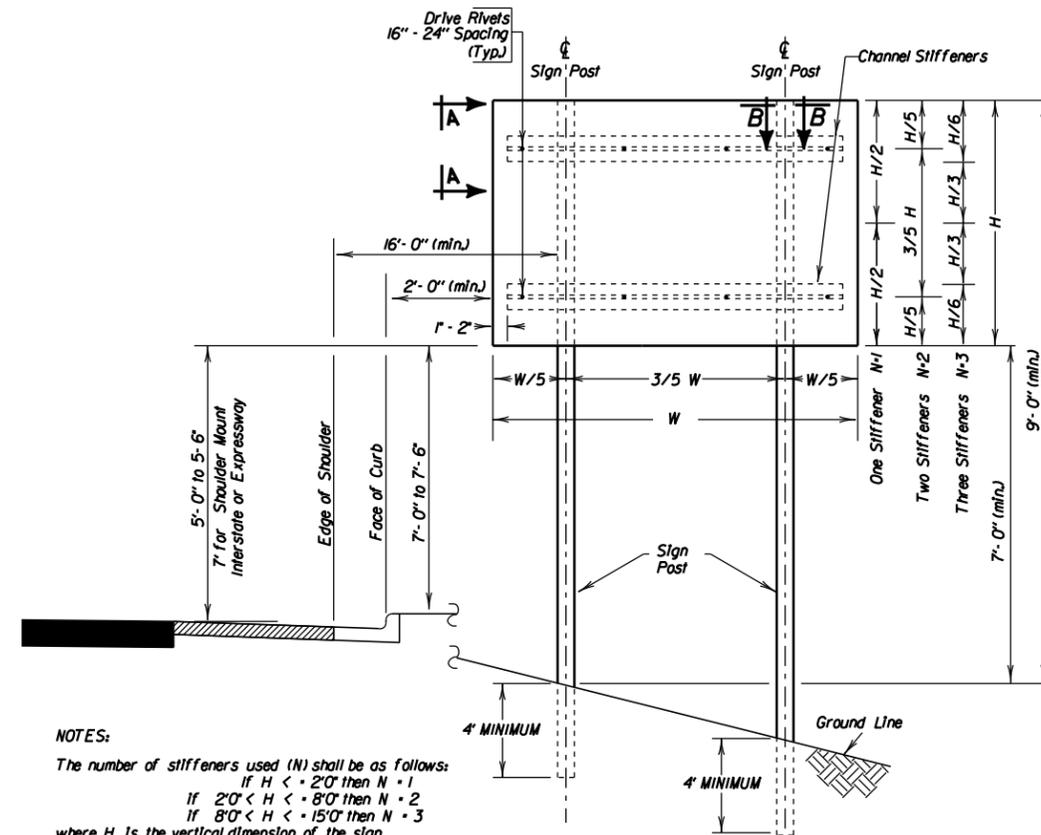
Height and lateral distance as recommended by latest edition of MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

* Single post installation shown. (See applicable Details or Standard Plates shown in these plans for multiple post spacing requirements.)

(Typical Sign and Stiffener Details)



TWO POST BREAKAWAY SIGN SUPPORTS



NOTES:

The number of stiffeners used (N) shall be as follows:

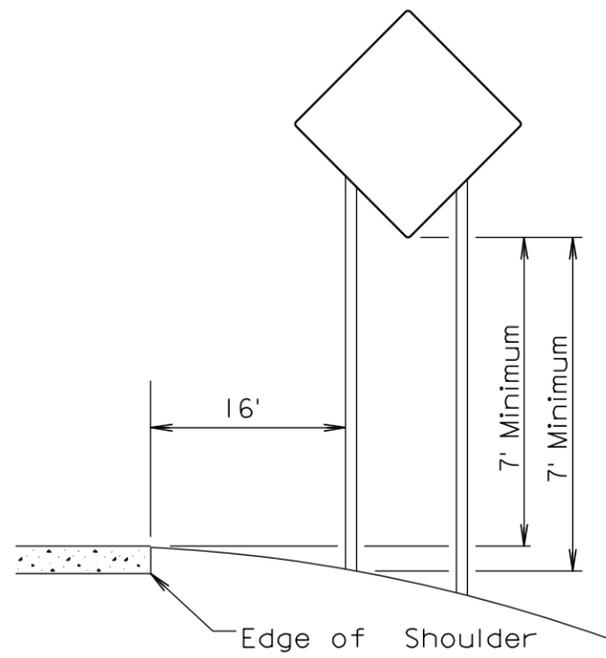
- If $H < 2'0"$ then $N = 1$
- If $2'0" < H < 8'0"$ then $N = 2$
- If $8'0" < H < 15'0"$ then $N = 3$

where H is the vertical dimension of the sign.

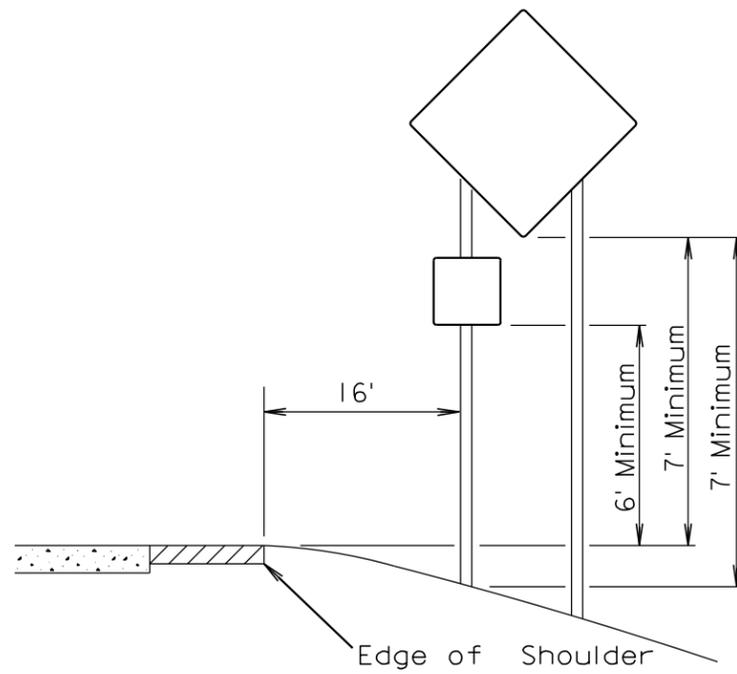
A minimum of two bolts shall be required to fasten the sign to each post.

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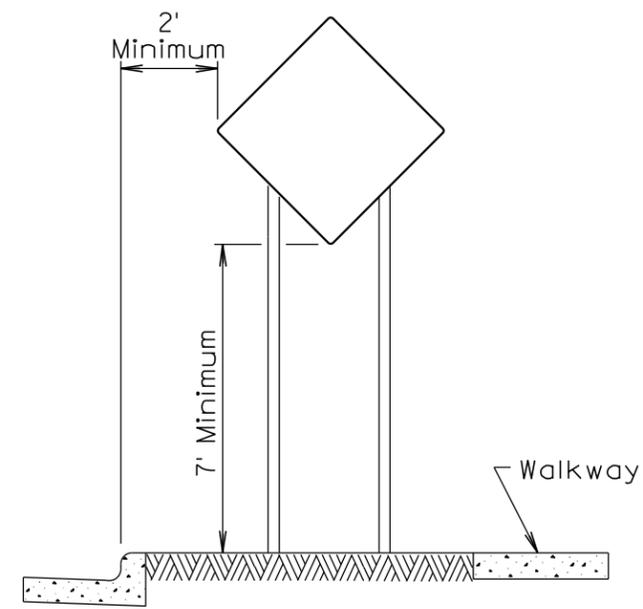
SIGN SUPPORTS (Lateral Off-Sets)



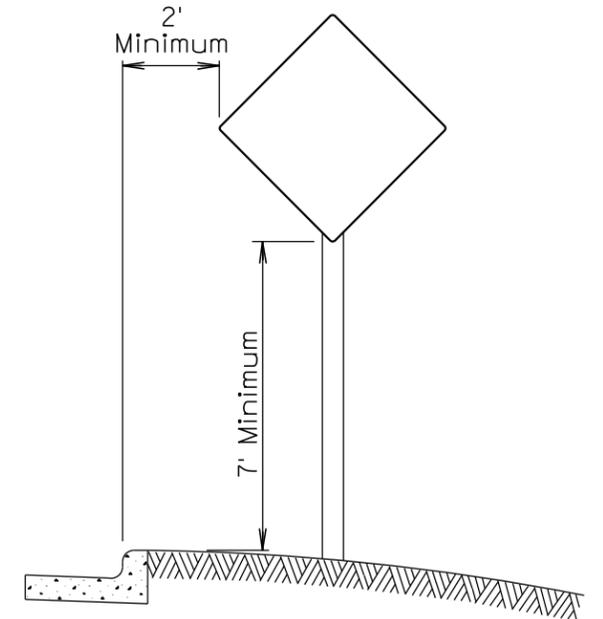
RURAL DISTRICT



RURAL DISTRICT WITH
SUPPLEMENTAL PLATE



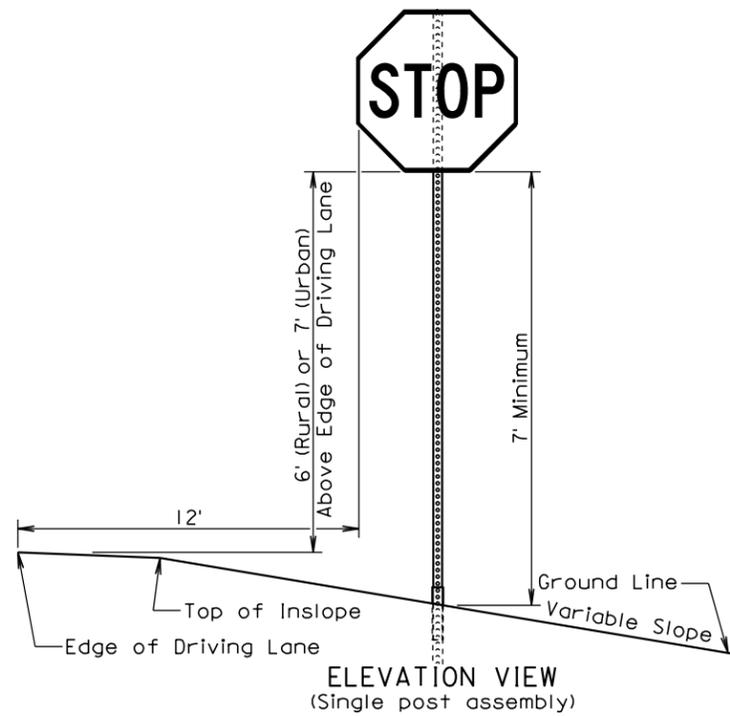
URBAN DISTRICT



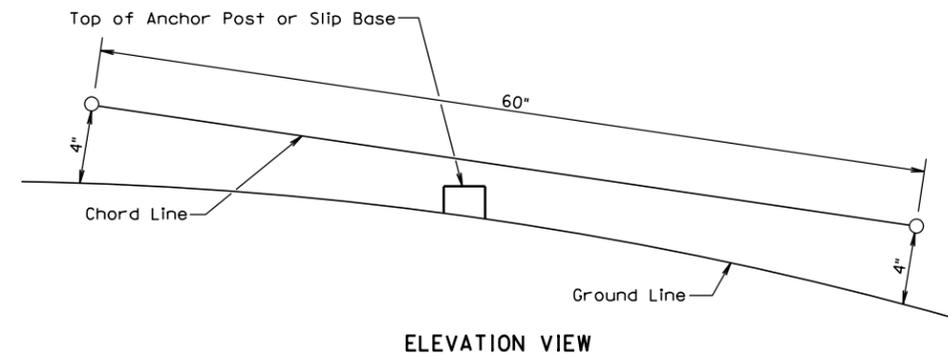
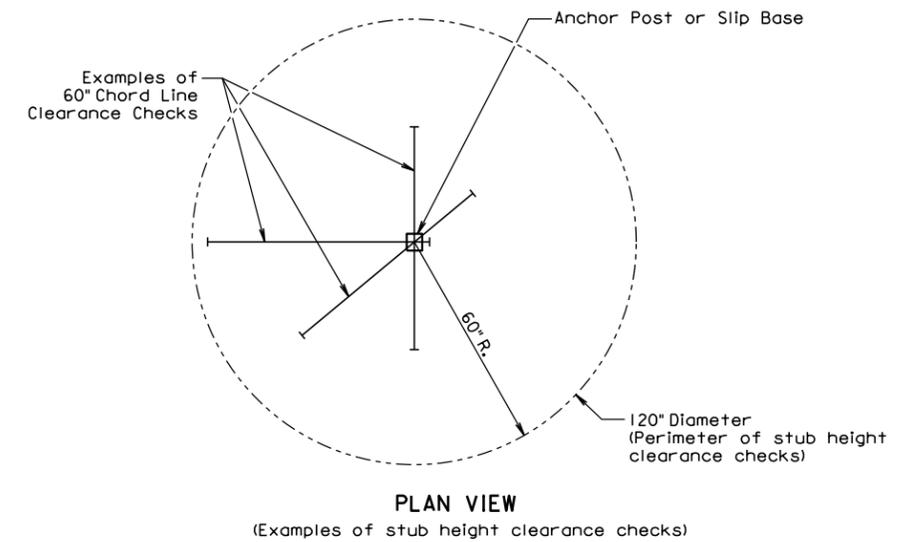
URBAN DISTRICT

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INSTALLATION DETAILS FOR STOP SIGNS



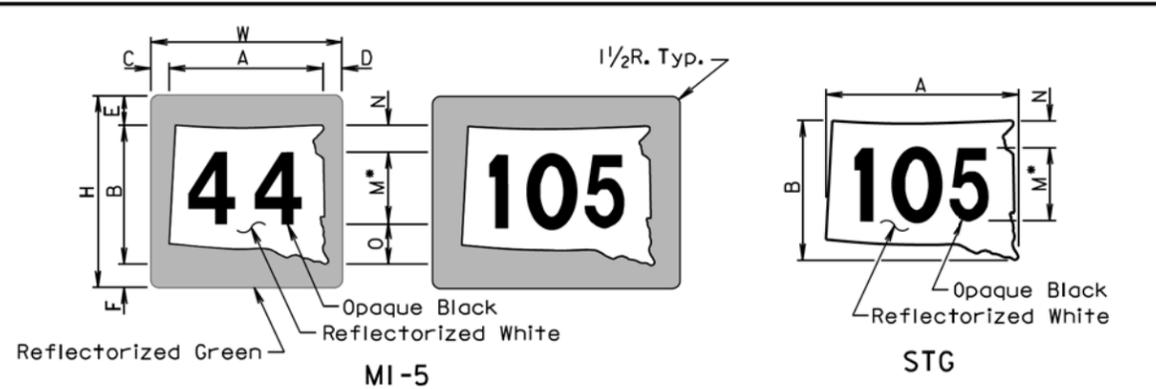
BREAKAWAY SUPPORT STUB CLEARANCE



GENERAL NOTES:

The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height shall be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

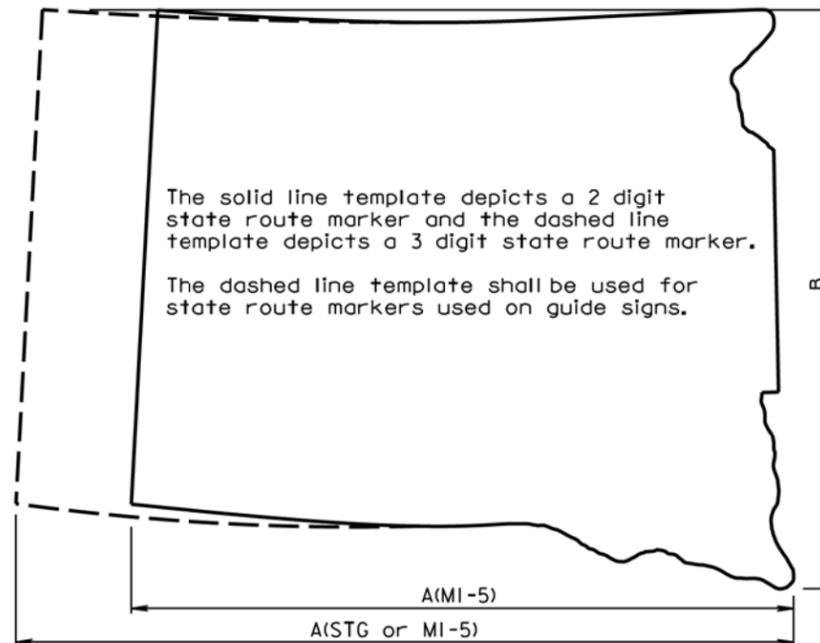


SIGN CODE	WxH	A	B	C	D	E	F	M*	N	O
MI-5	24x24	20 1/2	18	2	1 1/2	3 1/2	2 1/2	12D	2	4
MI-5**	30x24	24	18	2 1/4	1 3/4	3 1/2	2 1/2	12D	2	4
MI-5	30x30	25 5/8	22 1/2	2 1/2	1 7/8	4 3/8	3 1/8	15D	2 1/2	5
MI-5	36x36	30 3/4	27	3	2 1/4	5 1/4	3 3/4	18D	3	6

SIGN CODE	AxB	M*	N
STG-24	24x18	10D	4
STG-32	32x24	12D	4 3/4
STG-48	48x36	18D	7
STG-64	64x48	24D	9 1/2

*In the few cases where there is not enough space for the numerals, the standard "D" series font may be replaced with "C" series font if approved by the Engineer.

** 3 Digits



TEMPLATE FOR STATE ROUTE MARKER

GENERAL NOTES:

The unit for all dimensions shown is inches.

Numerals shall be "D" series font for all state route markers except as noted above.

December 23, 2003

Published Date: 3rd Qtr. 2015	S D D O T	STATE ROUTE MARKERS	PLATE NUMBER 632.20
			Sheet 1 of 1