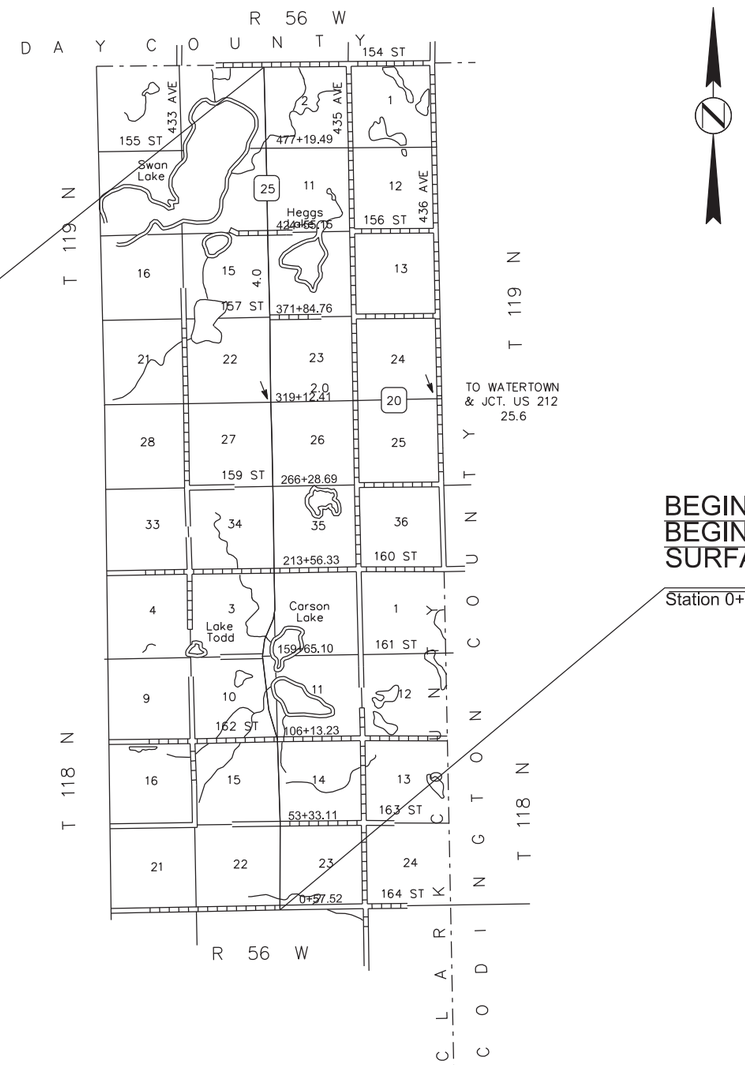
SECTION S: PERMANENT SIGN PLANS

INDEX OF SHEETS



END P-PH 0025(81)158
END GRADING AND INTERIM SURFACING

Station 529+20

BEGIN P-PH 0025(81)158
BEGIN GRADING AND INTERIM SURFACING

Station 0+50

PLOT SCALE - 1:42.75

PLOT NAME - 1

FILE - ...\BLUEBEAM REVIEW\TITLES.DGN

PLOTTED FROM - TRAB10100

SECTION S – ESTIMATE OF QUANTITIES – PCN 04EW

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	103	Each
110E0135	Remove Delineator	88	Each
110E7150	Remove Sign for Reset	1	Each
632E1320	2.0"x2.0" Perforated Tube Post	935.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	50.0	Ft
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	91	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	22	Each
632E2510	Type 2 Object Marker Back to Back	232	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	321.3	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	198.5	SqFt
632E3500	Reset Sign	1	Each

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.

When signs are mounted in an assembly, they will be 1-2 inches apart vertically and horizontally.

The height of the post must not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign will be cut off. No separate payment will be made for cutting the post or for that length cut off.

Aluminum U-Channel stiffeners will be used on all signs 36 inches or greater in width and will conform to ASTM B221 Alloy 6063-T6 or 6061-T6. The U-Channel will be 2 inches in width and free of holes. The U-Channel stiffeners will 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.

The Contractor will 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 will extend through each post.

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 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. Holes remaining from the removal of wood posts will 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 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.

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 Flat Aluminum Signs, Nonremovable Copy High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type IV. All Flat Aluminum Signs, Nonremovable Copy Super/Very High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type XI.

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 “Flat Aluminum Sign, Nonremovable Copy High Intensity” or “Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity”.

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.

Any 911 Emergency Number signs within the project work limits will not be stockpiled but temporarily repositioned at a location outside the work limits but within the immediate proximity of the existing location. To complete the project sign work, the 911 Emergency Number signs will be permanently installed at their original locations, or as near as practicable where entrances have been reconfigured by the project. The existing supports will be reused. Cost for removing, temporarily repositioning, and permanently resetting 911 Emergency Number signs will be included in the contract unit price per each for “Remove Sign for Reset” and “Reset Sign”.

DIGITALLY PRINTED SIGNS

Digitally printed signs will be allowed on this project. If the Contractor elects to provide digitally printed signs, such signs will adhere to the following specifications.

PROTECTIVE OVERLAY FILM

Permanent traffic signs printed with digital ink systems will be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlaminate will comply with the retroreflective sheeting manufacturer’s recommendations to ensure proper adhesion and transparency and will also meet the reflective film durability as identified in Table 1.

Table 1: Retroreflective Film Minimum Durability Requirements

ASTM D4956 Type	Full Sign Replacement Term (years)	Sheeting Replacement Term (years)
I	0	7
III	7	10
IV	7	10
VIII	7	10
IX	7	12
XI	7	12

FABRICATION

Retroreflective sheeting will be applied to a properly cleaned and prepared aluminum sign blank in accordance with the retroreflective sheeting manufacturer’s recommendations. Sign legend will be applied using digital print technologies and systems in accordance with the retroreflective sheeting manufacturer’s recommendations and the requirements of these plans.

Finished signs will be free of ragged edges and must be supplied clean and free of scratches, grease, oil, lubricants or other contaminants. Minor blemishes (dirt speck, dust, etc.) may settle on the fresh ink surface or become entrapped between the sheeting surface and transparent overlay film due to static charge within the sign shop environment. Any blemish must be minor and not interfere with the communication of the sign message to the motorist. The blemish must not be visible to the naked eye when viewed from 30 feet or greater.

After application of the retroreflective sheeting, sign blanks will be stacked and packaged face to face, back to back, and protected in accordance with the sheeting manufacturer’s recommendations. Finished signs will be securely packaged to prevent damage during transit or storage according to the sheeting manufacturer’s recommendations.

TRAFFIC SIGN PERFORMANCE WARRANTY PROVISIONS

Based on the ASTM Type of sheeting specified, traffic control signs will be warranted for the duration shown in Table 1. Full product terms and conditions are as established by each sheeting manufacturer and may contain certain limitations based on sheeting and ink colors, and geographic exposure of the sign. A copy of the warranty document with complete details of terms and conditions will be supplied if requested by the Engineer.

CERTIFIED DIGITAL SIGN FABRICATOR

Sign fabricators using digital imaging methods to produce regulated traffic signs must be certified by the reflective sheeting manufacturer whose materials are used to produce the delivered signs.

DIGITALLY PRINTED SIGNS (CONTINUED)

DATE TAGGING SIGNS WITH PERTINENT INFORMATION

All digitally printed signs are required to be date-tagged with the following 2 components:

1. Date tags on the back of signs
   Tags will have the following information and be fabricated with material and printing system that are as durable as the warranted sign.
   - Name of Sign Fabricator
   - Date the sign was fabricated (month and year)
   - Process that was used for sign fabrication (digitally printed)
   - Supplier of sheeting that was used for fabricating the sign.

2. Border date

The month and year (mm/yyyy) of sign fabrication will be printed in the border of the sign in 3/8" sans serif font. Border date will be printed with the same warranted printed system as the sign face. The date should be printed in the locations indicated below.

SQUARE TUBE ANCHOR SLEEVE

The Contractor will furnish and install new 2.5" x 2.5" x 18", 12 Gauge square tube anchor sleeve or equivalent components as approved by the Engineer for 2.0" x 2.0" perforated tube posts. A 2.25" x 2.25" x 4', 12 Gauge perforated tube post will be used as the anchor post for installation with the square tube anchor sleeve.

SQUARE TUBE POST SLEEVE

All 2.5" x 2.5", 10 Gauge perforated tube post will be sleeved with a 2-3/16" x 2-3/16" x 4', 10 Gauge perforated tube post.

WINGED SLIP BASE ANCHOR

The Contractor will furnish and install new winged slip base anchors for 2.5" x 2.5" perforated tube posts as required in the Permanent Signing Table. Winged slip base anchors will be installed using the direct drive method. Winged slip base anchors will consist of a slip base (upper), a 48-inch long winged anchor (lower), and a hardware kit.

TYPE 2 OBJECT MARKERS

All costs associated with the removal of object markers including posts and hardware and the installation of the new back-to-back object markers will be incidental to the contract unit price per each for "type 2 object marker back-to-back".

DELINEATION

Delineation installation and spacing will be done according to Standard Plates 632.42, 632.44, and 632.46.

In accordance to Standard Plate 632.44, 4 tubular white delineators will be installed at each radius of SD 20, and 3 white tubular delineators will be installed at each radius of 155 Street.

Approaches for the junction of SD20 and SD25 will have 3 white delineators each.

Per the discretion of the Engineer, 79 delineators will be installed from Station 320+44 to Station 530+87.

MILEAGE REFERENCE MARKERS

SDDOT will be notified to do Mileage Reference Markers (MRMs) locates prior to project completion by calling the Aberdeen Region Traffic Engineer at (605)626-2245. Payment for this work will be incidental to the various signing contract items.

NO PASSING ZONE SIGNS

SDDOT will be notified to contact the Aberdeen Region Traffic Engineer to do NO PASSING ZONE sign locates a minimum of the 3 weeks prior to project completion. Payment for this work will be incidental to the various signing contract items.

Object Marker Table

Station	Type 2 Object Marker Back-to-Back (Each)	Description
6+52	2	1 Each Side of Road
6+70	2	1 Each Side of Road
11+53	2	2 Right Side of Road
11+60	1	1 Left Side of Road
11+63	1	1 Right Side of Road
12+11	1	1 Right Side of Road
12+14	1	1 Left Side of Road
12+17	2	2 Right Side of Road
19+05	2	1 Each Side of Road
19+15	2	1 Each Side of Road
20+22	1	1 Right Side of Road
20+94	1	1 Right Side of Road
32+22	1	1 Left Side of Road
32+88	1	1 Left Side of Road
39+59	2	1 Each Side of Road
39+97	1	1 Right Side of Road
39+99	1	1 Left Side of Road
40+59	1	1 Left Side of Road
40+61	1	1 Right Side of Road
43+54	2	1 Each Side of Road
43+63	2	1 Each Side of Road
53+01	1	1 Left Side of Road
53+05	2	2 Right Side of Road
53+61	2	2 Right Side of Road
53+65	1	1 Left Side of Road
64+59	2	1 Each Side of Road
73+95	1	1 Left Side of Road
74+60	1	1 Right Side of Road
89+34	2	1 Each Side of Road
89+63	1	1 Right Side of Road
89+68	1	1 Left Side of Road
90+32	1	1 Left Side of Road
90+37	1	1 Right Side of Road
96+86	2	1 Each Side of Road
105+81	1	1 Left Side of Road
106+45	1	1 Left Side of Road
108+38	2	1 Each Side of Road
114+68	2	1 Each Side of Road
118+42	2	1 Each Side of Road

Object Marker Table

Station	Type 2 Object Marker Back-to-Back (Each)	Description
138+35	2	1 Each Side of Road
141+88	1	1 Left Side of Road
142+68	1	1 Left Side of Road
145+63	2	1 Each Side of Road
146+06	1	1 Left Side of Road
146+56	1	1 Right Side of Road
147+06	1	1 Left Side of Road
147+56	1	1 Right Side of Road
148+06	1	1 Left Side of Road
148+56	1	1 Right Side of Road
149+06	1	1 Left Side of Road
149+56	1	1 Right Side of Road
150+06	1	1 Left Side of Road
150+56	1	1 Right Side of Road
151+06	1	1 Left Side of Road
151+56	1	1 Right Side of Road
152+06	1	1 Left Side of Road
152+56	1	1 Right Side of Road
153+06	1	1 Left Side of Road
153+56	1	1 Right Side of Road
154+06	1	1 Left Side of Road
154+56	1	1 Right Side of Road
155+06	1	1 Left Side of Road
155+56	1	1 Right Side of Road
156+06	1	1 Left Side of Road
156+56	1	1 Right Side of Road
157+06	1	1 Left Side of Road
157+56	1	1 Right Side of Road
158+06	1	1 Left Side of Road
159+24	1	1 Left Side of Road
160+06	1	1 Left Side of Road
160+89	1	1 Right Side of Road
161+39	1	1 Left Side of Road
161+89	1	1 Right Side of Road
162+39	1	1 Left Side of Road
162+89	1	1 Right Side of Road
163+39	1	1 Left Side of Road
163+89	1	1 Right Side of Road
164+39	1	1 Left Side of Road

Object Marker Table

Station	Type 2 Object Marker Back-to-Back (Each)	Description
164+89	1	1 Right Side of Road
165+39	1	1 Left Side of Road
165+89	1	1 Right Side of Road
166+39	1	1 Left Side of Road
166+89	1	1 Right Side of Road
167+39	1	1 Left Side of Road
167+89	1	1 Right Side of Road
168+39	1	1 Left Side of Road
168+89	1	1 Right Side of Road
169+39	1	1 Left Side of Road
169+89	1	1 Right Side of Road
170+39	1	1 Left Side of Road
170+76	2	1 Each Side of Road
170+89	1	1 Right Side of Road
171+08	2	1 Each Side of Road
171+39	1	1 Left Side of Road
171+89	1	1 Right Side of Road
172+39	1	1 Left Side of Road
172+89	1	1 Right Side of Road
173+39	1	1 Left Side of Road
173+89	1	1 Right Side of Road
174+39	1	1 Left Side of Road
174+89	1	1 Right Side of Road
175+39	1	1 Left Side of Road
175+89	1	1 Right Side of Road
176+39	1	1 Left Side of Road
176+61	2	1 Each Side of Road
176+89	1	1 Right Side of Road
177+39	1	1 Left Side of Road
177+89	1	1 Right Side of Road
178+39	1	1 Left Side of Road
178+89	1	1 Right Side of Road
179+39	1	1 Left Side of Road
179+89	1	1 Right Side of Road
180+39	1	1 Left Side of Road
180+89	1	1 Right Side of Road
181+39	1	1 Left Side of Road
181+89	1	1 Right Side of Road
182+39	1	1 Left Side of Road

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-PH-PT 0025(81)158	S5	S23
Plotting Date: 12/22/2023			

PLOT SCALE - 1:200

PLOT NAME - 1

FILE ...\04HL_STANDARD PLATES.DGN

-PLOTTED FROM - TRAB10100

Object Marker Table

Station	Type 2 Object Marker Back-to-Back (Each)	Description
182+89	1	1 Right Side of Road
183+39	1	1 Left Side of Road
183+89	1	1 Right Side of Road
184+39	1	1 Left Side of Road
184+89	1	1 Right Side of Road
185+39	1	1 Left Side of Road
185+89	1	1 Right Side of Road
186+39	1	1 Left Side of Road
186+89	1	1 Right Side of Road
186+97	2	1 Each Side of Road
187+39	1	1 Left Side of Road
187+89	1	1 Right Side of Road
194+27	1	1 Right Side of Road
194+36	1	1 Left Side of Road
194+94	1	1 Left Side of Road
195+03	1	1 Right Side of Road
200+87	2	1 Each Side of Road
213+27	1	1 Right Side of Road
213+85	1	1 Right Side of Road
219+21	2	1 Each Side of Road
239+37	1	1 Left Side of Road
240+25	1	1 Left Side of Road
253+30	2	1 Each Side of Road
255+53	1	1 Left Side of Road
256+47	1	1 Left Side of Road
265+89	1	1 Right Side of Road
266+69	1	1 Right Side of Road
271+06	2	1 Each Side of Road
272+94	1	1 Right Side of Road
273+86	1	1 Right Side of Road
275+27	1	1 Left Side of Road
275+89	1	1 Left Side of Road
289+49	2	1 Each Side of Road
292+23	1	1 Left Side of Road
293+15	1	1 Left Side of Road
299+09	2	1 Each Side of Road
308+22	2	1 Each Side of Road
316+21	1	1 Right Side of Road
317+03	1	1 Right Side of Road

Object Marker Table

Station	Type 2 Object Marker Back-to-Back (Each)	Description
318+37	2	1 Each Side of Road
325+12	2	1 Each Side of Road
335+94	2	1 Each Side of Road
353+45	1	1 Left Side of Road
354+55	1	1 Left Side of Road
355+07	2	1 Each Side of Road
364+16	2	1 Each Side of Road
380+30	2	1 Each Side of Road
396+63	2	1 Each Side of Road
410+97	1	1 Right Side of Road
410+97	1	1 Left Side of Road
411+77	1	1 Right Side of Road
411+77	1	1 Left Side of Road
418+40	2	1 Each Side of Road
424+25	1	1 Left Side of Road
424+85	1	1 Left Side of Road
438+85	2	1 Each Side of Road
451+76	2	1 Each Side of Road
464+62	2	1 Each Side of Road
476+06	2	1 Each Side of Road
482+67	2	1 Each Side of Road
482+85	2	1 Each Side of Road
485+75	1	1 Left Side of Road
486+51	1	1 Left Side of Road
497+89	2	1 Each Side of Road
506+64	2	1 Each Side of Road
516+61	2	1 Each Side of Road
525+62	2	1 Each Side of Road
Total	**232**	

SD 25 Permanent Sign Installation Table

Station	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)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
0+37	Rt.	164 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
0+53	Lt.	Stop	R1-1	30	30		5.2	12.5		1		1			W	Telespar	Replace Existing Sign with New Signs on New Post
7+64	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
10+97	Rt.	Mile Marker 159 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	U Channel	Replace Existing Sign with New Sign on New Post at Existing MRM Location
18+79	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
42+24	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
53+00	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1		1			S	Telespar	Replace Existing Sign with New Sign on New Post
53+15	Rt.	163 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
53+54	Rt.	Stop	R1-1	30	30		5.2	12.5		1		1			E	Telespar	Replace Existing Sign with New Signs on New Post
53+57	Lt.	DEAD END	W14-1	30	30			12.5		1		1			E	Telespar	Remove and Reset Existing Signs and Post (Locate out of DOT ROW)
62+22	Rt.	Mile Marker 160 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	U Channel	Replace Existing Sign with New Sign on New Post at Existing MRM Location
72+23	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
73+60	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					N	Telespar	Place New Sign on New Post
74+78	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
85+82	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
89+73	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
98+33	Rt.	Left Curve Arrow	W1-2L	30	30		6.3	12.5		1					S	Telespar	Place New Sign on New Post
99+05	Rt.	Left Curve Arrow	W1-2L	30	30							1			S	Telespar	Remove Existing Sign
104+84	Lt.	South	M3-3	24	12	2.0		12.0		1		1			N	Telespar	Replace Existing Sign with New Signs on New Post
		SD 25	M1-5	24	24	4.0											
105+74	Rt.	162 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
106+06	Lt.	Stop	R1-1	30	30		5.2	12.5		1		1			W	Telespar	Replace Existing Sign with New Signs on New Post
106+27	Rt.	Stop	R1-1	30	30		5.2	12.5		1		1			E	Telespar	Replace Existing Sign with New Signs on New Post
106+48	Rt.	North	M3-1	24	12	2.0		12.0		1		1			S	Telespar	Replace Existing Sign with New Signs on New Post
		SD 25	M1-5	24	24	4.0											
	Rt.	No Passing Zone	W14-3	48X48X36											N		Remove Existing Sign
110+78	Lt.	Right Curve Arrow	W1-2R	30	30		6.3	12.5		1					N	Telespar	Place New Sign on New Post
111+28	Lt.	Right Curve Arrow	W1-2R	30	30							1			N	Telespar	Remove Existing Sign
115+00	Rt.	Mile Marker 161 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	U Channel	Replace Existing Sign with New Sign on New Post at Existing MRM Location
118+80	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
134+66	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
137+11	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign

SD 25 Permanent Sign Installation Table

Station	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)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
154+00	Rt.	Right Curve Arrow	W1-2R	30	30							1			S	Telespar	Remove Existing Sign
154+25	Rt.	Right Curve Arrow	W1-2R	30	30		6.3	12.5		1					S	Telespar	Place New Sign on New Post
159+59	Lt.	161 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
159+89	Lt.	MINIMUM MAINTENANCE								2		1			E	Telespar	Remove and Reset Existing Signs and Post (Locate out of DOT ROW)
		TRAVEL AT YOUR OWN RISK															
		30 MPH	W13-1P	18	18												
168+57	Rt.	Mile Marker 162 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	U Channel	Replace Existing Sign with New Sign on New Post at Existing MRM Location
174+28	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
174+95	Lt.	Left Curve Arrow	W1-2L	30	30		6.3	12.5		1					N	Telespar	Place New Sign on New Post
175+57	Lt.	Left Curve Arrow	W1-2L	30	30							1			N	Telespar	Remove Existing Sign
176+71	Rt.	Left Curve Arrow	W1-2L	30	30							1			N	Telespar	Remove Existing Sign
179+00	Rt.	Left Curve Arrow	W1-2L	30	30		6.3	12.5		1					N	Telespar	Place New Sign on New Post
187+01	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
196+70	Lt.	Right Curve Arrow	W1-2R	30	30		6.3	12.5		1					N	Telespar	Place New Sign on New Post
198+20	Lt.	Right Curve Arrow	W1-2R	30	30							1			N	Telespar	Remove Existing Sign
204+44	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
206+79	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
213+34	Rt.	160 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
213+38	Lt.	Stop	R1-1	30	30		5.2	12.5		1		1			W	Telespar	Replace Existing Sign with New Signs on New Post
213+76	Rt.	Stop	R1-1	30	30		5.2	12.5		1		1			E	Telespar	Replace Existing Sign with New Signs on New Post
220+78	Rt.	Mile Marker 163 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	U Channel	Replace Existing Sign with New Sign on New Post at Existing MRM Location
222+63	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
224+85	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
245+43	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
252+43	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
272+40	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					S	Telespar	Place New Sign on New Post
266+10	Rt.	159 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
269+40	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
272+29	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
273+83	Rt.	Mile Marker 164 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	U Channel	Replace Existing Sign with New Sign on New Post at Existing MRM Location
290+90	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
291+40	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					N	Telespar	Place New Sign on New Post
292+06	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign

SD 25 Permanent Sign Installation Table

Station	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)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
303+35	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
310+40	Rt.	JCT	M2-1	21	15	2.2		12.5		1		1			S	Telespar	Replace Existing Sign with New Signs on New Post
		SD 20	M1-5	24	24	4.0											
311+80	Lt.	Speed Limit 65	R2-1X	24	30	5.0		12.0		1		1			N	Telespar	Replace Existing Sign with New Sign on New Post
312+38	Rt.	^ Webster 17 <-- Bradley 5 Wallace 3 -->	D1-2	72	42	21.0			25.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Post
314+44	Rt.	SD 20	M1-5	24	24	4.0		25.0		2		1			S	Telespar	Replace Existing Sign with New Sign on New Post
		Horizontal Double Arrow	M6-4	21	15	2.2											
		SD 25	M1-5	24	24	4.0											
		Vertical Arrow	M6-3	21	15	2.2											
316+11	Lt.	South	M3-3	24	12	2.0		12.0		1		1			N	Telespar	Replace Existing Sign with New Signs on New Post
		SD 25	M1-5	24	24	4.0											
317+81	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
318+45	Rt.	SD Hwy 20 (Two Signs)	D3-1	40	12	6.7		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
318+61	Rt.	SD 25	M1-5	24	24	4.0		25.0		2		1			W	Telespar	Replace Existing Sign with New Sign on New Post
		Horizontal Double Arrow	M6-4	21	15	2.2											
		SD 20	M1-5	24	24	4.0											
		Vertical Arrow	M6-3	21	15	2.2											
318+86	Lt.	Stop	R1-1	36	36		7.5	25.0		2		1			W	Telespar	Replace Existing Sign with New Signs on New Post
319+49	Rt.	Stop	R1-1	36	36		7.5	25.0		2		1			W	Telespar	Replace Existing Sign with New Signs on New Post
319+78	Lt.	SD 25	M1-5	24	24	4.0		25.0		2		1			E	Telespar	Replace Existing Sign with New Sign on New Post
		Horizontal Double Arrow	M6-4	21	15	2.2											
		SD 20	M1-5	24	24	4.0											
		Vertical Arrow	M6-3	21	15	2.2											
320+46	Lt.	THINK SIGN WHY DIE?										1			S	Telespar	Remove Existing Sign
320+89	Rt.	North	M3-1	24	12	2.0		12.0		1		1			S	Telespar	Replace Existing Sign with New Signs on New Post
		SD 25	M1-5	24	24	4.0											
322+56	Lt.	SD 20	M1-5	24	24	4.0		25.0		2		1			N	Telespar	Replace Existing Sign with New Sign on New Post
		Horizontal Double Arrow	M6-4	21	15	2.2											
		SD 25	M1-5	24	24	4.0											
		Vertical Arrow	M6-3	21	15	2.2											
323+84	Lt.	^Jct US 212 16 <-- Watertown 28 Bradley 5 -->	D1-2	102	54	38.3			25.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Post
326+04	Rt.	Mile Marker 165 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
328+18	Lt.	JCT	M2-1	21	15	2.2		12.5		1		1			S	Wood	Replace Existing Sign with New Signs on New Post
		SD 20	M1-5	24	24	4.0											

SD 25 Permanent Sign Installation Table

Station	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)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
336+63	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Wood	Remove Existing Sign
337+40	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					S	Telespar	Place New Sign on New Post
364+80	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					N	Telespar	Place New Sign on New Post
375+00	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					S	Telespar	Place New Sign on New Post
366+28	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
371+55	Rt.	157 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
371+60	Lt.	Stop	R1-1	30	30		5.2	12.5		1		1			W	Telespar	Replace Existing Sign with New Signs on New Post
371+63	Rt.	DEAD END	W14-1	30	30			12.5		1		1			W	Telespar	Remove and Reset Existing Signs and Post (Locate out of DOT ROW)
372+03	Lt.	DEAD END	W14-2	30	30			12.5		1		1			E	Telespar	Remove and Reset Existing Signs and Post (Locate out of DOT ROW)
372+08	Rt.	Stop	R1-1	30	30		5.2	12.5		1		1			E	Telespar	Replace Existing Sign with New Signs on New Post
376+38	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
397+40	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					S	Telespar	Place New Sign on New Post
379+22	Rt.	Mile Marker 166 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
395+67	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
398+80	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					N	Telespar	Place New Sign on New Post
399+36	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
416+20	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					N	Telespar	Place New Sign on New Post
416+68	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
417+25	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
419+40	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					S	Telespar	Place New Sign on New Post
424+26	Rt.	156 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
424+31	Rt.	DEAD END	W14-1	30	30			12.5		1		1			W	Telespar	Remove and Reset Existing Signs and Post (Locate out of DOT ROW)
424+35	Lt.	Stop	R1-1	30	30		5.2	12.5		1		1			E	Telespar	Replace Existing Sign with New Signs on New Post
424+70	Lt.	Stop	R1-1	30	30		5.2	12.5		1		1			W	Telespar	Replace Existing Sign with New Signs on New Post
424+75	Lt.	DEAD END	W14-2	30	30			12.5		1		1			E	Telespar	Remove and Reset Existing Signs and Post (Locate out of DOT ROW)
431+93	Rt.	Mile Marker 167 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
440+40	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					N	Telespar	Place New Sign on New Post
441+23	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
476+88	Rt.	155 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
477+38	Rt.	Stop	R1-1	30	30		5.2	12.5		1		1			E	Telespar	Replace Existing Sign with New Signs on New Post
484+51	Rt.	Mile Marker 168 (Two Signs)	D10-6	4.5	18	1.1		5.0		1		1			N/S	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
490+87	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign

SD 25 Permanent Sign Installation Table

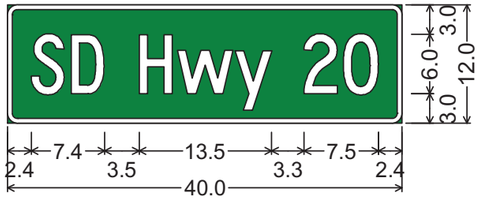
Station	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
492+60	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					S	Telespar	Place New Sign on New Post
493+19	Rt.	PUBLIC WATER ACCESS <--		38	42	11.1		12.5		1		1			S	Telespar	Replace Existing Sign with New Signs on New Post
510+20	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					N	Telespar	Place New Sign on New Post
511+18	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
513+13	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
514+04	Lt.	PUBLIC WATER ACCESS -->		38	42	11.1		12.5		1		1			S	Telespar	Replace Existing Sign with New Signs on New Post
527+07	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Wood	Remove Existing Sign
528+74	Lt.	CLARK COUNTY		30	18	3.8		12.5		1		1			N	Telespar	Replace Existing Sign with New Signs on New Post
529+39	Lt.	Stop	R1-1	30	30		5.2	12.5		1		1			W	Telespar	Replace Existing Sign with New Signs on New Post
529+75	Rt.	Stop	R1-1	30	30		5.2	12.5		1		1			E	Telespar	Replace Existing Sign with New Signs on New Post
528+85	Rt.	154 St (Two Signs)	D3-1	30	12	5.0		12.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD Hwy 25 (Two Signs)	D3-1	40	12	6.7									E/W		
530+09	Rt.	DAY COUNTY		30	18	3.8		12.5		1		1			S	Telespar	Replace Existing Sign with New Signs on New Post
		Day County A Purple Heart County		36	24								1	1			Reset Sign
					TOTAL	**321.2**	**198.5**	**935.0**	**50**	**84.0**	**4**	**103**	**1**	**1**			

Sign Summary SD 25

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
D10-6	Mile Markers 159-168 (Two Signs for Each)	4.5	18	0.56	20	11.3		White on Green
D1-2	^ Webster 17 <-- Bradley 5 Wallace 3 -->	72	42	21.0	1	21.0		White on Green
D1-2	^ Jct US 212 16 <-- Watertown 28 Bradley 5 -->	102	54	38.3	1	38.3		White on Green
D3-1	Street Sign SD Hwy 25 (Two Signs for Each)	40	12	3.3	22	73.3		White on Green
D3-1	Street Sign SD Hwy 20 (Two Signs for Each)	40	12	3.3	2	6.7		White on Green
D3-1	Street Signs 154 St - 157 St, 159 St - 164 St (Two Signs for Each)	30	12	2.5	20	50.0		White on Green
M1-5	SD 20	24	24	4.0	6	24.0		See Standard Plate 632.20
M1-5	SD 25	24	24	4.0	8	32.0		See Standard Plate 632.20
M1-6	CLARK COUNTY	30	18	3.8	1	3.8		White on Green
M1-6	DAY COUNTY	30	18	3.8	1	3.8		White on Green
M2-1	Junction Marker	21	15	2.2	2	4.4		Black on White/Green Border
M3-1	North	24	12	2.0	2	4.0		Black on White/Green Border
M3-3	South	24	12	2.0	2	4.0		Black on White/Green Border
M6-3	Vertical Arrow	21	15	2.2	4	8.8		Black on White/Green Border
M6-4	Horizontal Double Arrow	21	15	2.2	4	8.8		Black on White/Green Border
R1-1	Stop	30	30	5.2	13		67.6	White on Red
R1-1	Stop	36	36	7.5	2		15.0	White on Red
R2-1X	Speed Limit 65	24	30	5.0	1	5.0		Black on White
W1-2L	Left Curve Arrow	30	30	6.3	3		18.8	Black on Fluorescent Yellow
W1-2R	Right Curve Arrow	30	30	6.3	3		18.8	Black on Fluorescent Yellow
W14-3	No Passing Zone	48X48X36		5.6	14		78.4	Black on Fluorescent Yellow
	PUBLIC WATER ACCESS -->	38	42	11.1	1	11.1		White on Brown
	<-- PUBLIC WATER ACCESS	38	42	11.1	1	11.1		White on Brown
					Totals	**321.3**	**198.5**	

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-PH-PT 0025(81)158	S12	S23
Plotting Date: 12/22/2023			

SPECIAL SIGN LAYOUT



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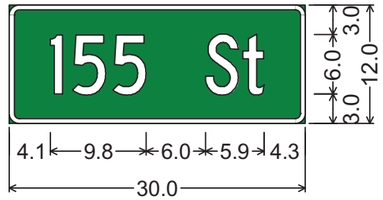
"SD", C 2K 70% spacing;
"Hwy", C 2K 70% spacing;
"20", C 2K 70% spacing;



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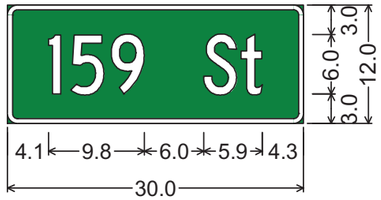

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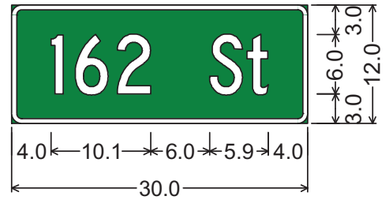

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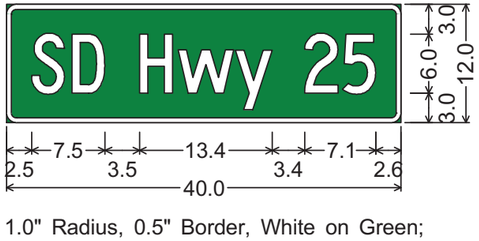
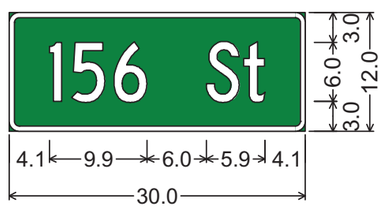


1.0" Radius, 0.5" Border, White on Green;
"SD", C 2K 70% spacing;
"Hwy", C 2K 70% spacing;
"25", C 2K 70% spacing;



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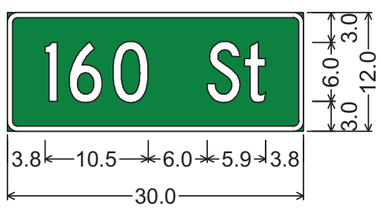

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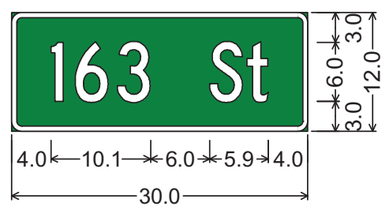

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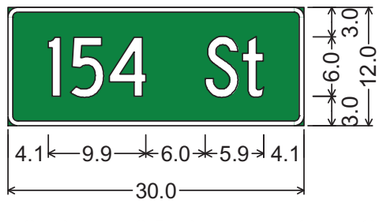
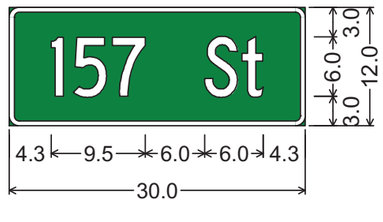
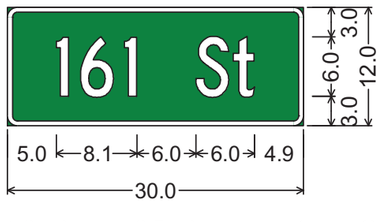


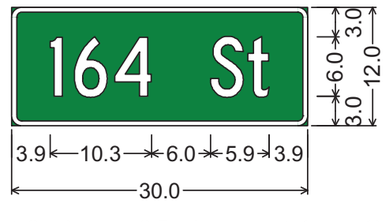
1.0" Radius, 0.5" Border, White on Green;
"154 St", C 2K;



1.0" Radius, 0.5" Border, White on Green;
"157 St", C 2K;



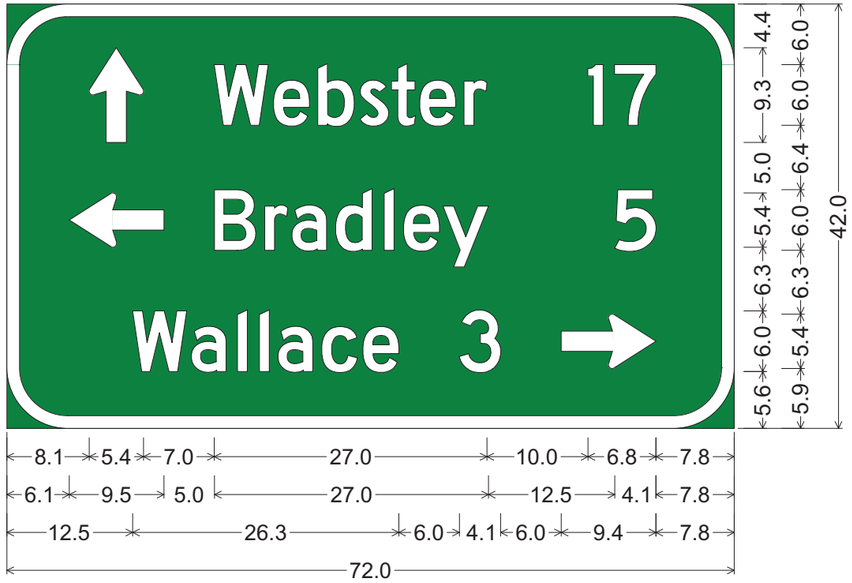
1.0" Radius, 0.5" Border, White on Green;
"161 St", C 2K;



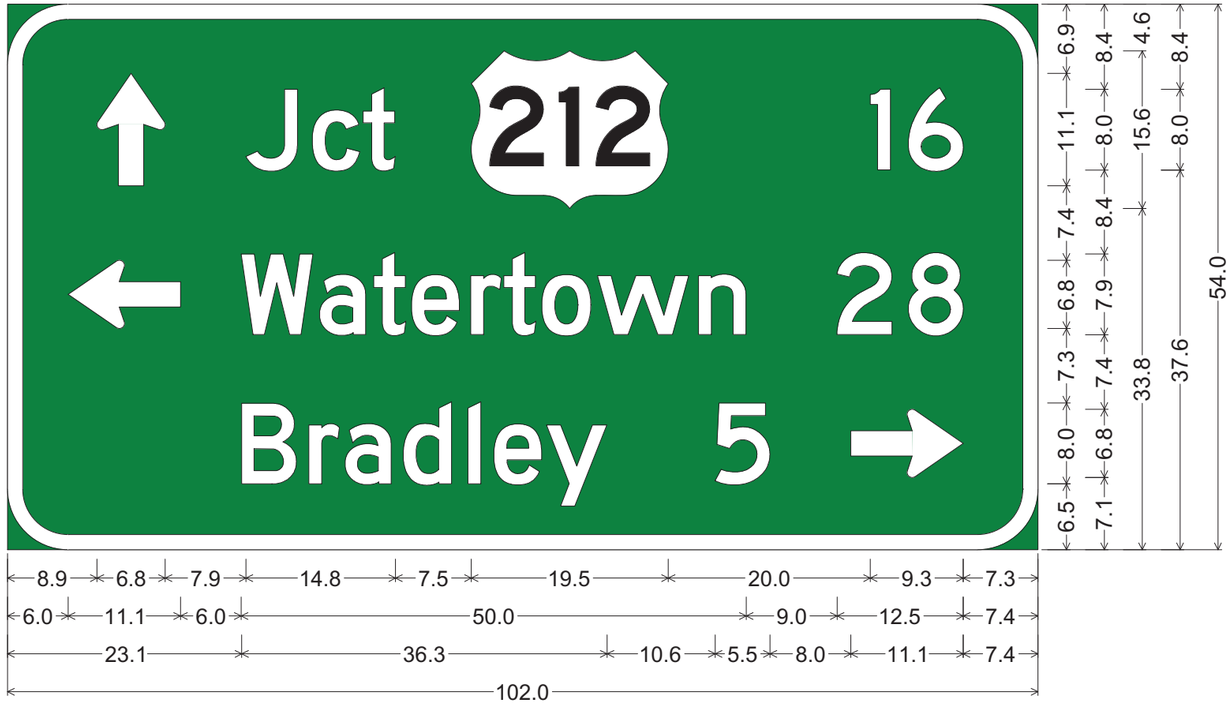
1.0" Radius, 0.5" Border, White on Green;
"164 St", C 2K;

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-PH-PT 0025(81)158	S13	S23
Plotting Date: 12/22/2023			

SPECIAL SIGN LAYOUT



6.0" Radius, 1.3" Border, White on Green;
Standard Arrow 2 9.4" X 5.4" 90°; "Webster", D 2K; "17", D 2K;
Standard Arrow 2 9.4" X 5.4" 180°; "Bradley", D 2K; "5", D 2K;
"Wallace", D 2K; "3", D 2K; Standard Arrow 2 9.4" X 5.4" 0°;



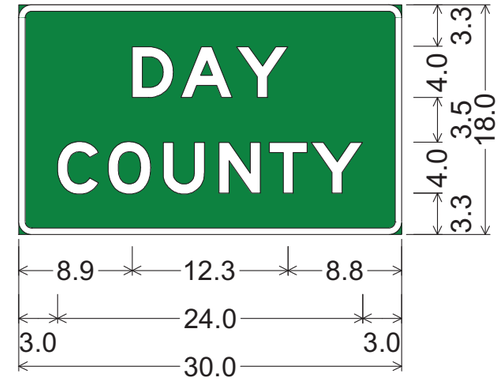
6.0" Radius, 1.5" Border, White on Green;
Standard Arrow 2.5 11.1" X 6.8" 90°; "Jct", D 2K; "16", D 2K;
Standard Arrow 2.5 11.1" X 6.8" 180°; "Watertown", D 2K; "28", D 2K; "Bradley", D 2K;
"5", D 2K; Standard Arrow 2.5 11.1" X 6.8" 0°;

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-PH-PT 0025(81)158	S14	S23
Plotting Date: 12/22/2023			

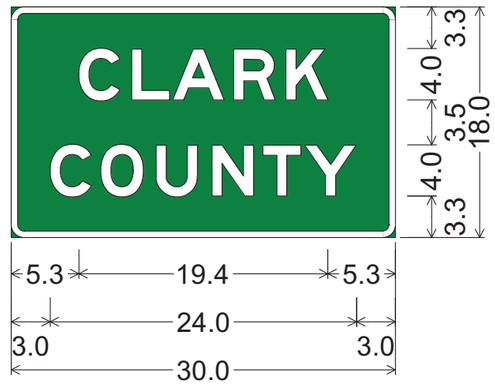
SPECIAL SIGN LAYOUT

3.0" Radius, 1.0" Border, White on Brown;
"PUBLIC", D 2K; "WATER", D 2K;
"ACCESS", D 2K;
Standard Arrow 2.25 9.9" X 6.1" 0°;

3.0" Radius, 1.0" Border, White on Brown;
"PUBLIC", D 2K; "WATER", D 2K;
"ACCESS", D 2K;
Standard Arrow 2.25 9.9" X 6.1" 180°;



1.0" Radius, 0.5" Border, White on Green;
"DAY", E Mod 2K;
"COUNTY", E Mod 2K;



1.0" Radius, 0.5" Border, White on Green;
"CLARK", E Mod 2K;
"COUNTY", E Mod 2K;

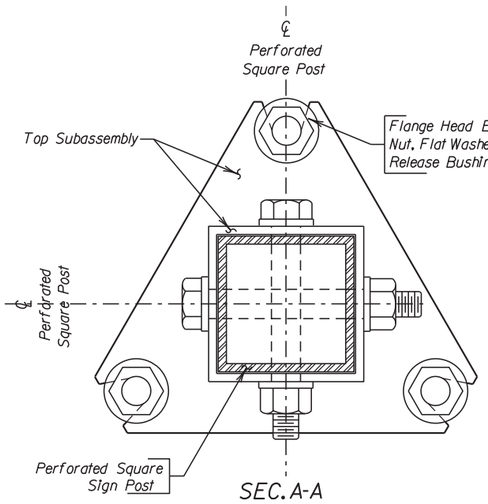
PLOT SCALE - 1:200

PLOT NAME - 1

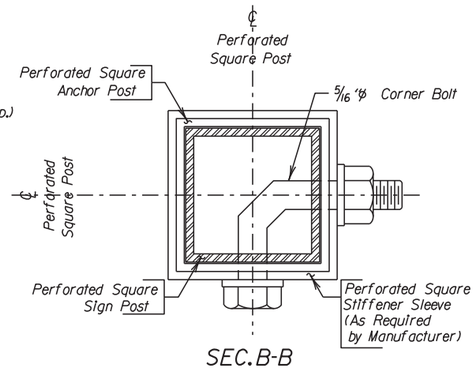
FILE - ...\04HL_STANDARD PLATES.DGN

-PLOTTED FROM - TRAB10100

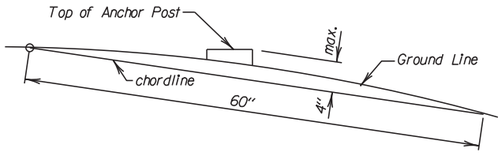
BREAKAWAY SIGN SUPPORTS



SEC. A-A



SEC. B-B



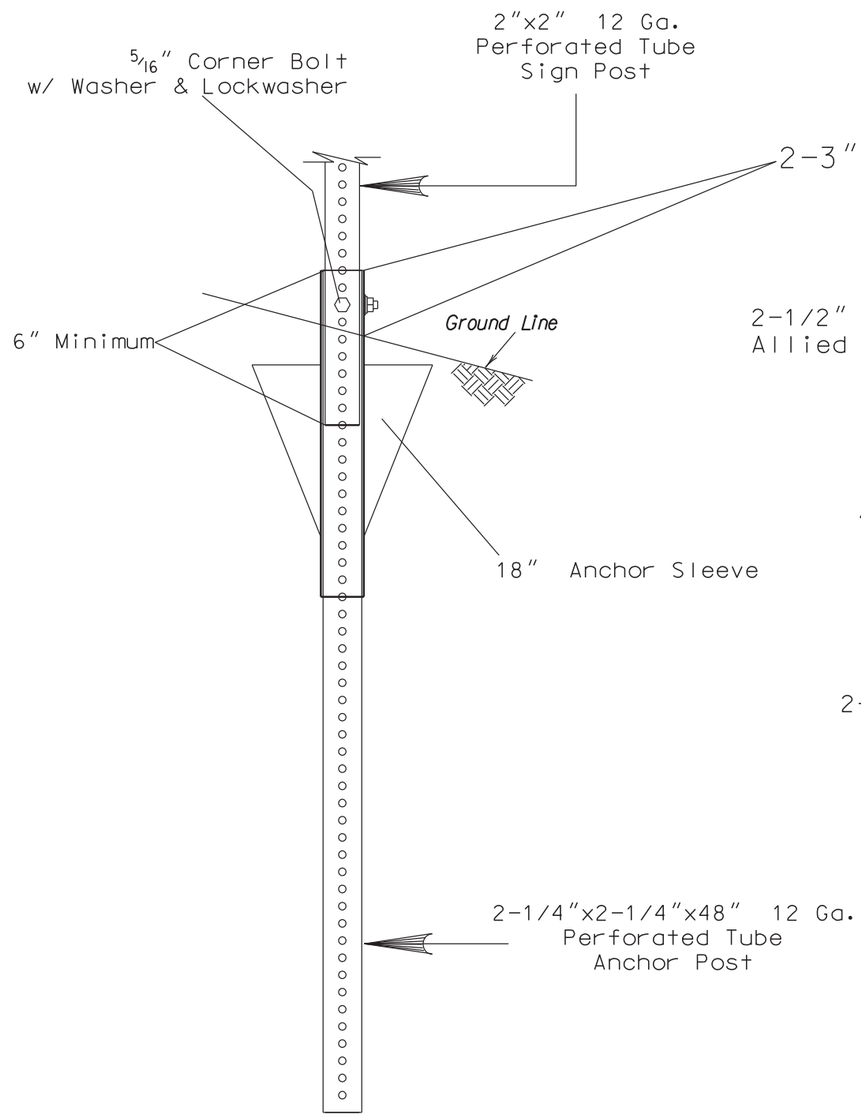
BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM

NOTE: The top of anchor post will NOT extend more than 4" max. above the chordline within a 60" chord.

GENERAL NOTES-

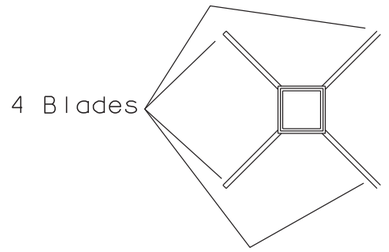
1. Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Latest Edition.
2. The manufacturer will provide certification that the posts and hardware furnished have essentially the same chemistry, mechanical properties and geometry as that used in the FHWA tests, and that it will meet the FHWA change in velocity requirements.
3. The manufacturer will also provide certification that the breakaway system furnished will develop the full shear and bending yield strength of the sign post section being spliced.
4. All posts will be galvanized in accordance with ASTM A653, Des. G-90.
5. All hardware will be galvanized in accordance with ASTM A153.

SIGN BASE DETAILS FOR A 2" SIGN POST



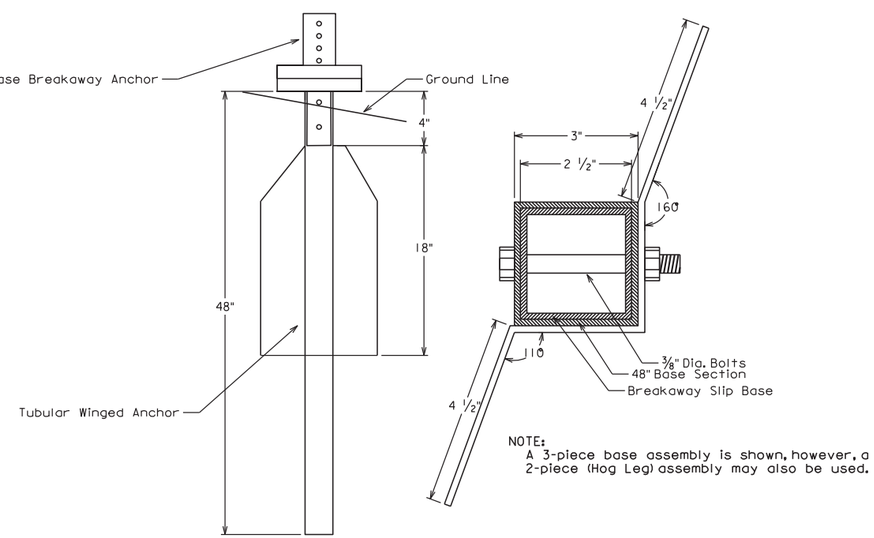
Anchor Sleeve
Top View

2-1/2" x 18" 12 Ga. Anchor Sleeve
Allied Tube - Part No. 739199



2-1/2" x 18" Anchor Sleeve
For Soil Stabilization

SIGN BASE DETAILS FOR A 2½" SIGN POST



NOTE:
A 3-piece base assembly is shown, however, a 2-piece (Hog Leg) assembly may also be used.

PLOT SCALE - 1:200

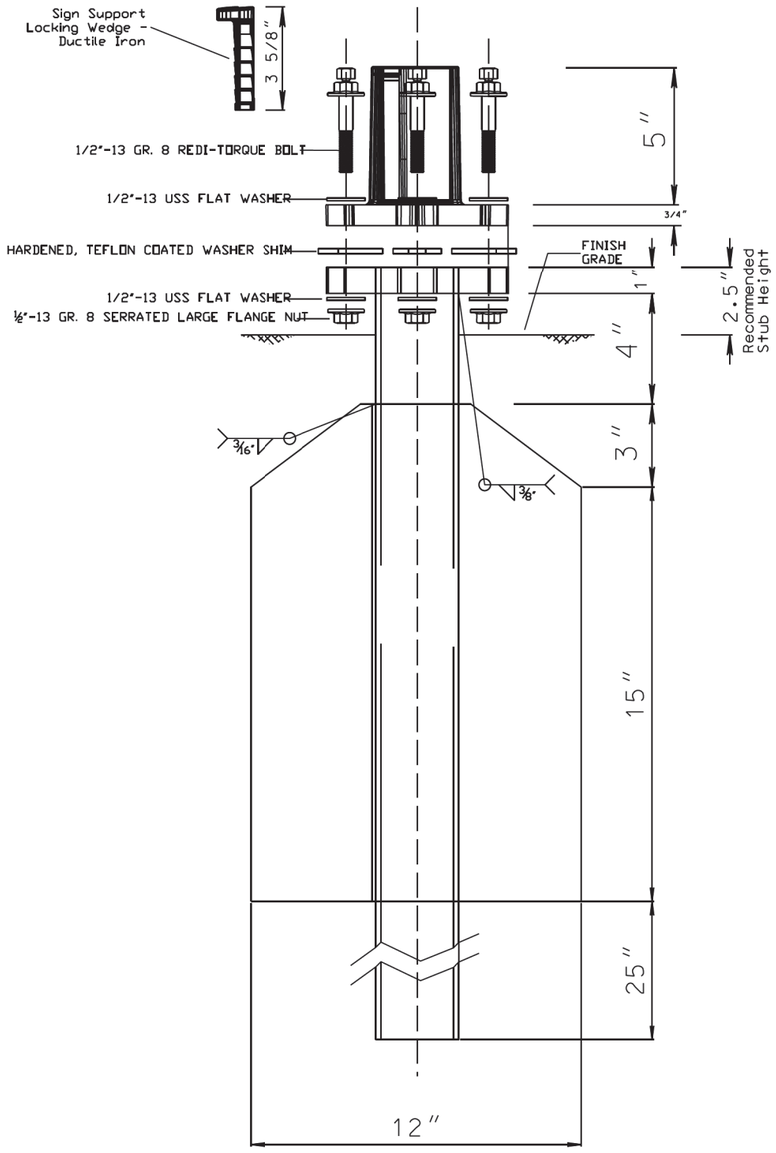
PLOT NAME - 1

FILE - ...\04HL_STANDARD PLATES.DGN

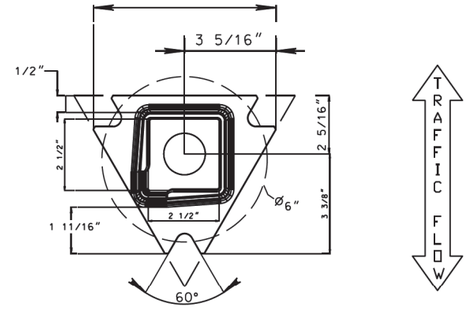
-PLOTTED FROM - TRAB10100

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-PH-PT 0025(81)158	S16	S23
Plotting Date: 10/30/2024			

48" WINGED ANCHOR SLIP BASE



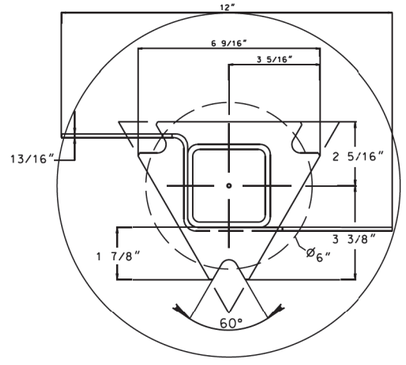
TOP POST RECEIVER for 2-½" SQUARE POST



MATERIAL:
DUCTILE IRON CASTING, CLASS 65-45-12

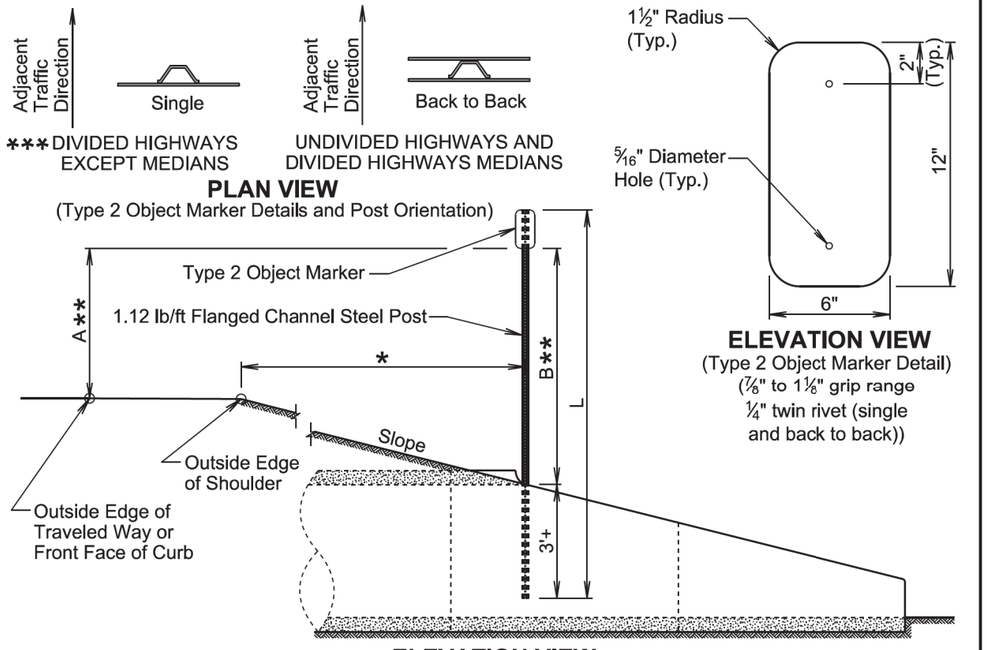
TRAFFIC FLOW

BOTTOM UNIBASE SOIL STUB



MATERIALS:
Tube - 3" x 3" x 7 ga. ASTM A500 Grade B tube
Stabilizing Wing - 7 ga. H.R.P.O. ASTM A 569
Plate - ASTM A572 grade 50

PLOT SCALE - 1:200
PLOT NAME - 1
FILE - ...\WINGEDANCHORSLIPBASEDETAIL.DGN
PLOTTED FROM - TRAB10100



TYPE 2 OBJECT MARKER POST LENGTHS									
OFFSET (*)		1'	2'	3'	4'	5'	6'	7'	8'	Greater Than 8'
		POST LENGTH (L)								
SLOPE	3:1	8'-6"	8'-9"	9'-3"	9'-6"	9'-9"	10'-3"	10'-6"	10'-9"	8'-0"
	4:1	8'-6"	8'-9"	9'-0"	9'-3"	9'-9"	9'-9"	10'-0"	10'-3"	8'-0"
	5:1	8'-3"	8'-6"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	9'-9"	8'-0"
	6:1	8'-3"	8'-6"	8'-9"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	8'-0"

GENERAL NOTES:

*** The type 2 object marker may be installed back to back when specified in the plans.

Post Length L was calculated based on a shoulder width of 6 feet at a crosslope of 4 percent and L was rounded up to the nearest 3 inches.

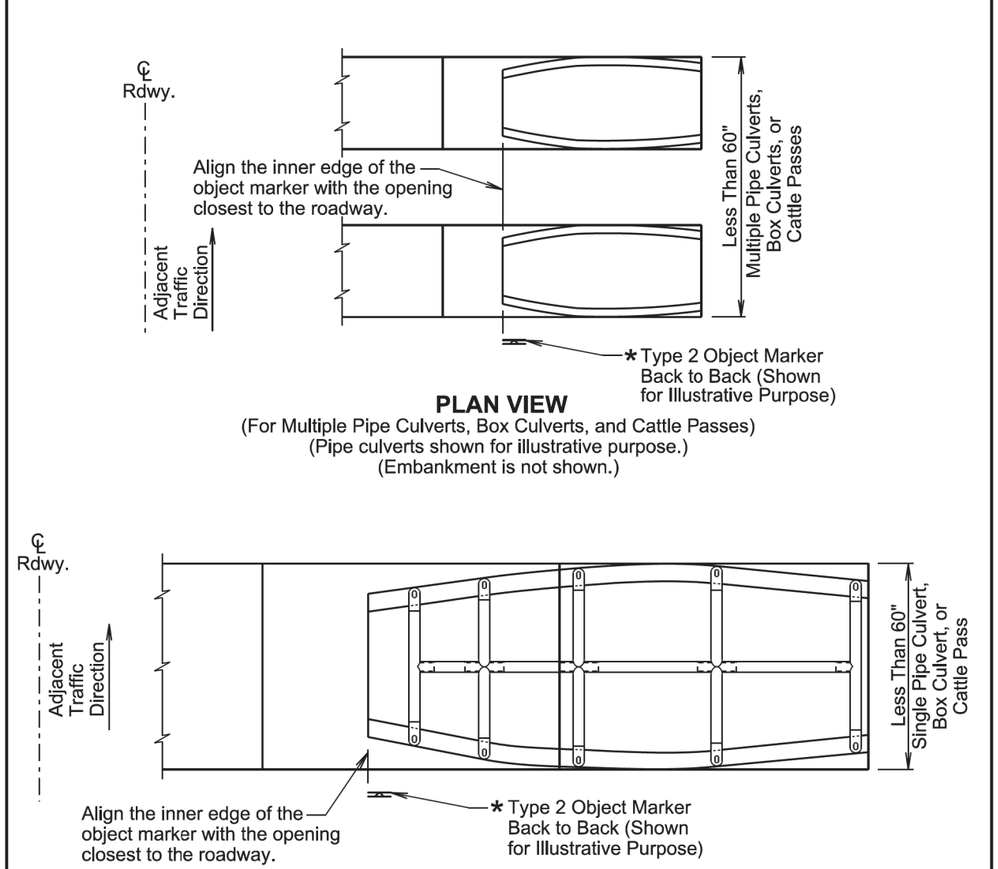
** Dimension A is 4 feet when the Offset * is 8 feet and less. Dimension B is 4 feet when Offset * is greater than 8 feet.

The type 2 object marker and the 1.12 lb/ft flanged channel steel post will be in conformance with Specifications Section 982.2 J.

Payment for the type 2 object marker will be in conformance with Specification Section 632.5 B.

December 23, 2019

Published Date: 2024	SDDOT	TYPE 2 OBJECT MARKER (DIRECT DRIVE)	PLATE NUMBER 632.01
			Sheet 1 of 1



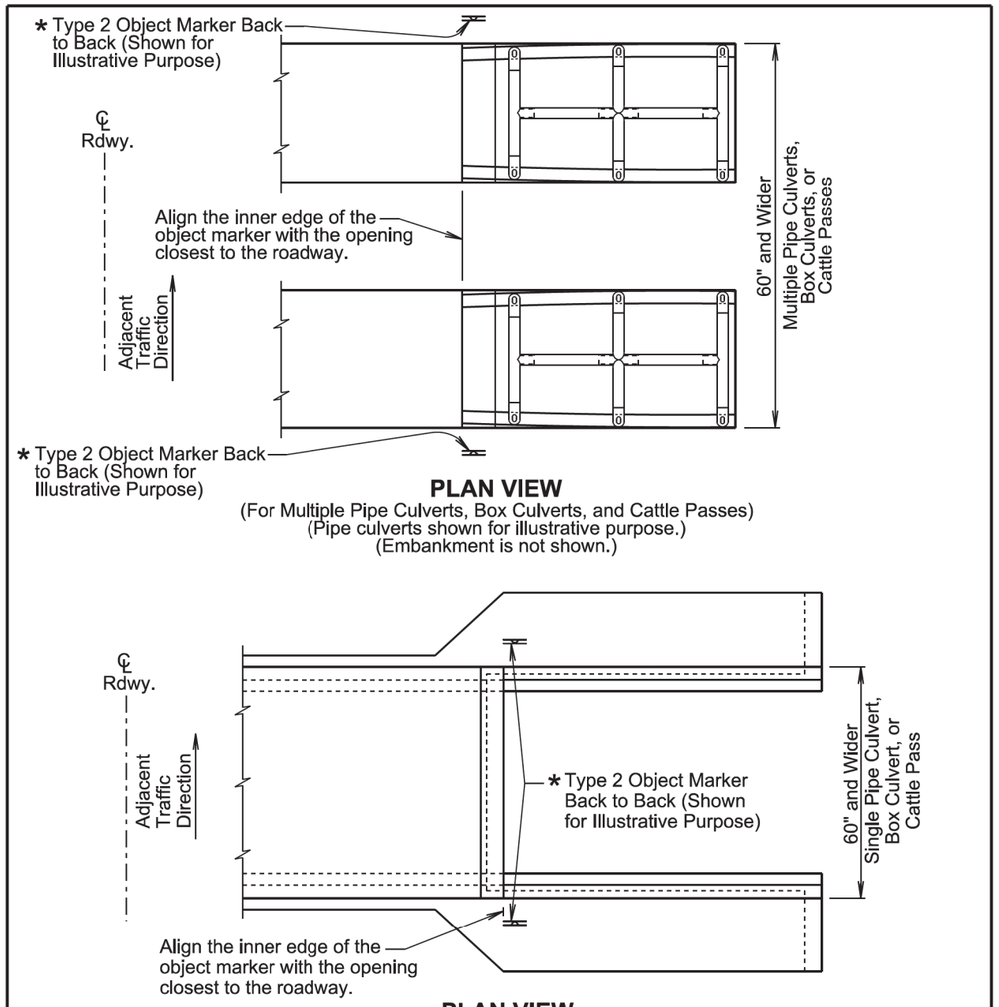
GENERAL NOTES:

This standard plate will be used in conjunction with standard plate 632.01.

* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2024	SDDOT	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (Less than 60" Overall Width)	PLATE NUMBER 632.03
			Sheet 1 of 1



PLAN VIEW
(For Multiple Pipe Culverts, Box Culverts, and Cattle Passes)
(Pipe culverts shown for illustrative purpose.)
(Embankment is not shown.)

PLAN VIEW
(For Single Pipe Culvert, Box Culvert, and Cattle Pass)
(Box culvert shown for illustrative purpose.)
(Embankment is not shown.)

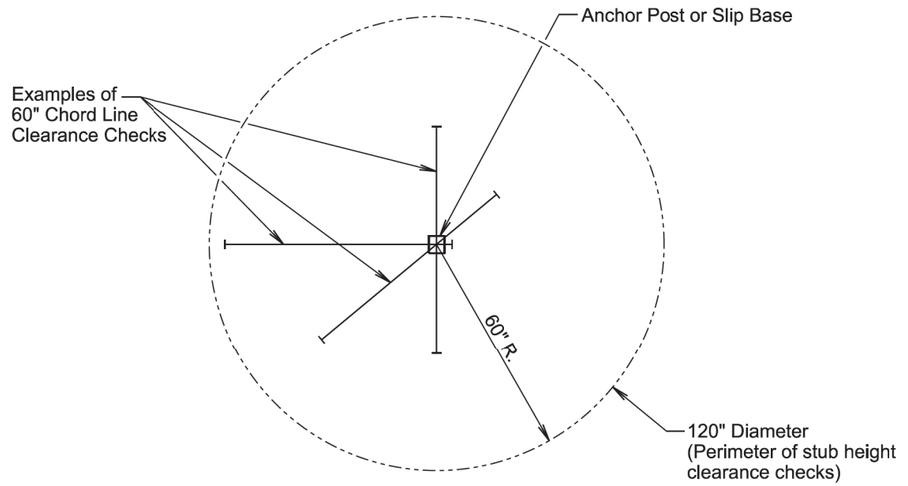
GENERAL NOTES:

This standard plate will be used in conjunction with standard plate 632.01.

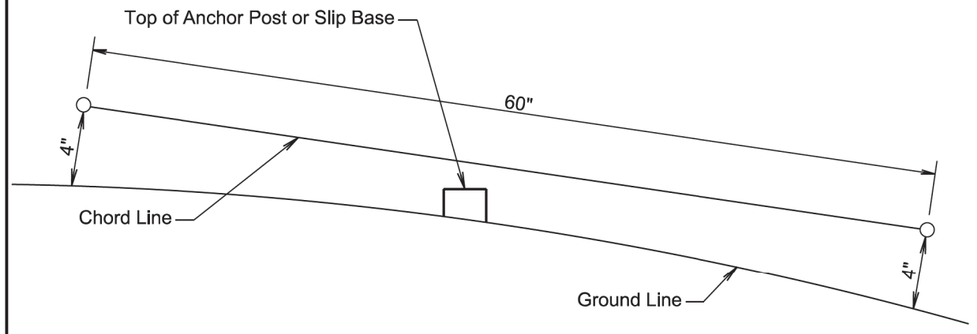
* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2024	SDDOT	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (60" and Greater Overall Width)	PLATE NUMBER 632.04 Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

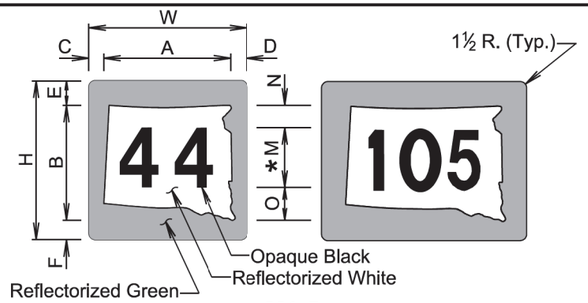
GENERAL NOTES:

The top of anchor posts and slip bases WILL 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 will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

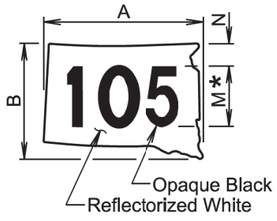
January 22, 2021

Published Date: 2024	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 632.18 Sheet 1 of 1



M1-5

SIGN CODE	WxH	A	B	C	D	E	F	M*	N	O
M1-5	24x24	20½	18	2	1½	3½	2½	12D	2	4
M1-5 **	30x24	24	18	2¼	1¾	3½	2½	12D	2	4
M1-5	30x30	25⅝	22½	2½	1⅞	4⅜	3⅛	15D	2½	5
M1-5	36x36	30¾	27	3	2¼	5¼	3¾	18D	3	6

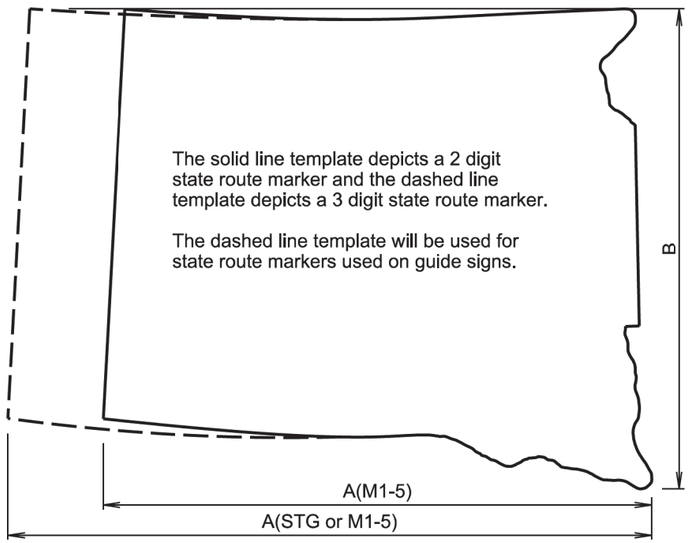


STG

SIGN CODE	AxB	M*	N
STG-24	24x18	10D	4
STG-32	32x24	12D	4¾
STG-48	48x36	18D	7
STG-64	64x48	24D	9½

* 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

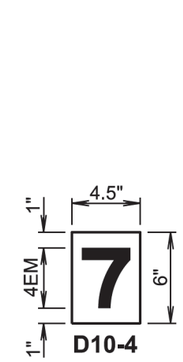
GENERAL NOTES:

The unit for all dimensions shown is inches.

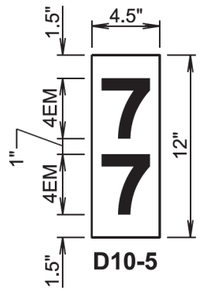
Numerals will be D series font for all state route markers except as noted above.

December 23, 2019

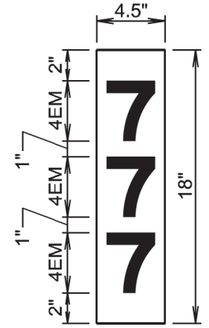
Published Date: 2024	SDDOT	STATE ROUTE MARKERS	PLATE NUMBER 632.20
			Sheet 1 of 1



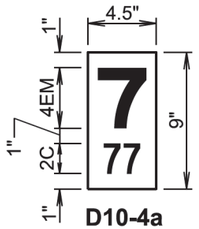
D10-4



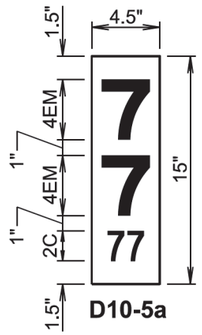
D10-5



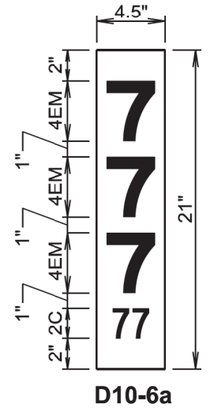
D10-6



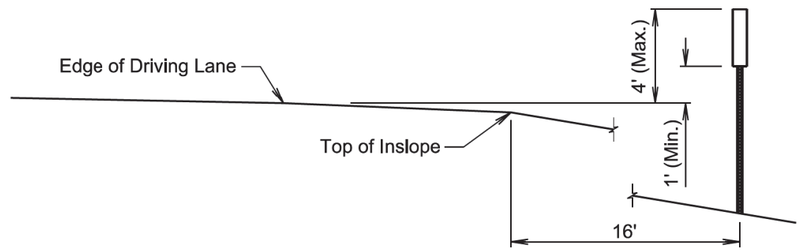
D10-4a



D10-5a



D10-6a



ELEVATION VIEW

GENERAL NOTES:

Background will be high intensity green.

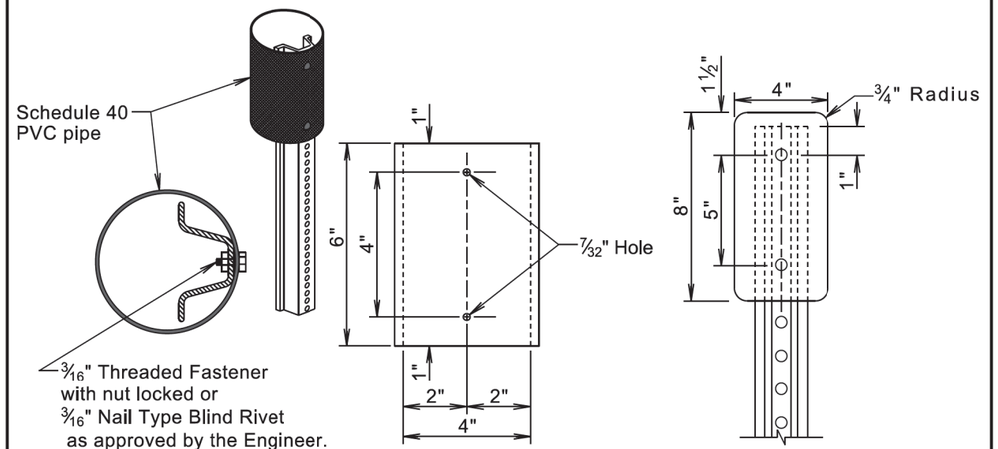
Legend will be high intensity white.

Signs will have squared corners with no border.

Sign locations will be staked by the Engineer.

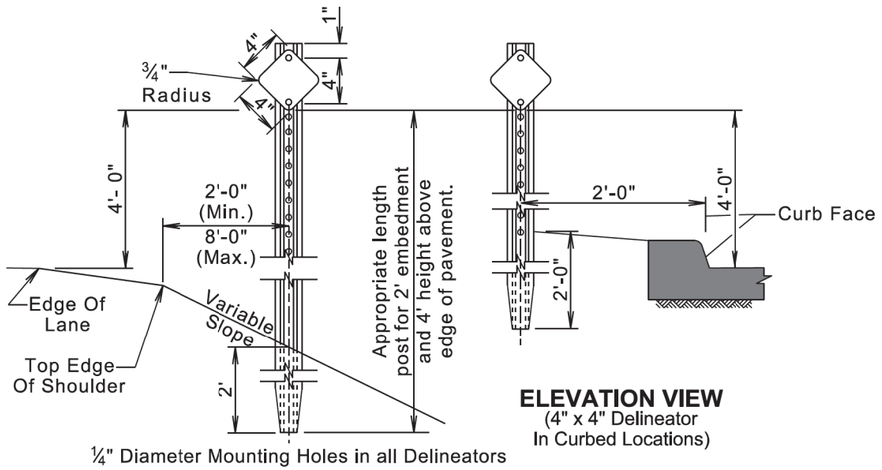
December 23, 2019

Published Date: 2024	SDDOT	NON-INTERSTATE MILEAGE REFERENCE MARKERS	PLATE NUMBER 632.30
			Sheet 1 of 1



ELEVATION VIEW
(4" Tubular delineator
mounted on post)

ELEVATION VIEW
(4" x 8" Delineator)



ELEVATION VIEW
(4" x 4" Delineator
In Curbed Locations)

¼" Diameter Mounting Holes in all Delineators

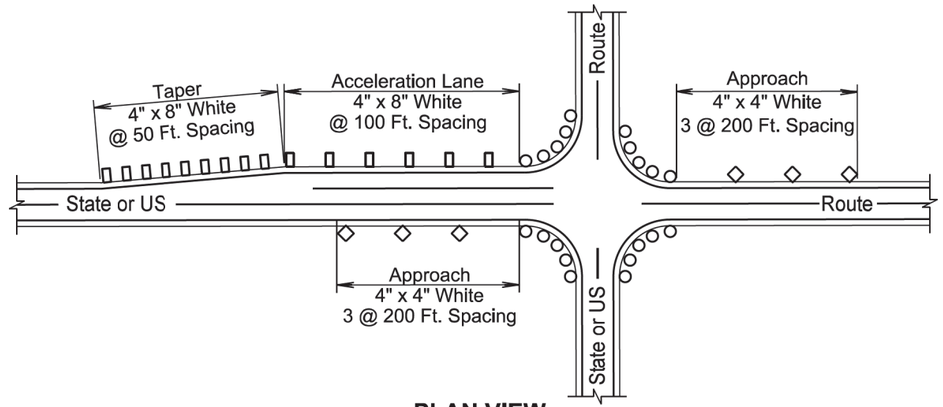
ELEVATION VIEW
(4" x 4" Delineators)

GENERAL NOTES:

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

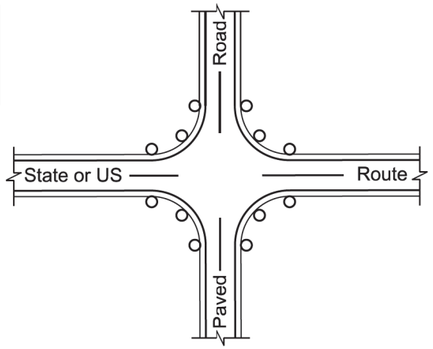
March 31, 2024

Published Date: 2025	SDDOT	DELINEATOR INSTALLATION DETAIL	PLATE NUMBER 632.42
			Sheet 1 of 1



PLAN VIEW
(State or US Highway Intersection)

LEGEND
◇ 4" x 4" White Delineator
▯ 4" x 8" White Delineator
○ 4" x 6" White Tubular Delineator



PLAN VIEW
(Paved County Crossroad)

GENERAL NOTES:

At all intersections with State or US highways and paved county roads:

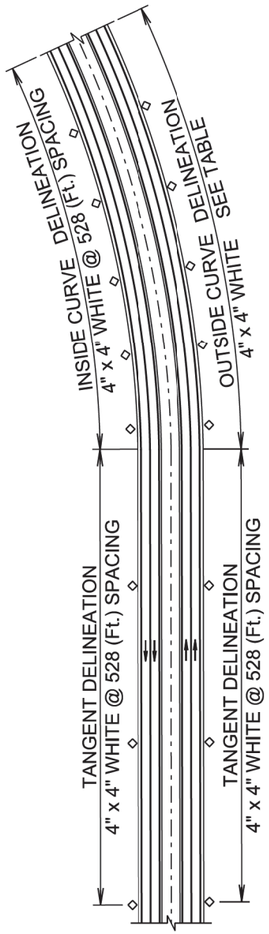
For radii greater than 100 feet, place 5 tubular white delineators on equally spaced posts around the turning radius.

For radii greater than 50 feet up to 100 feet, place 4 tubular white delineators on equally spaced posts around the turning radius.

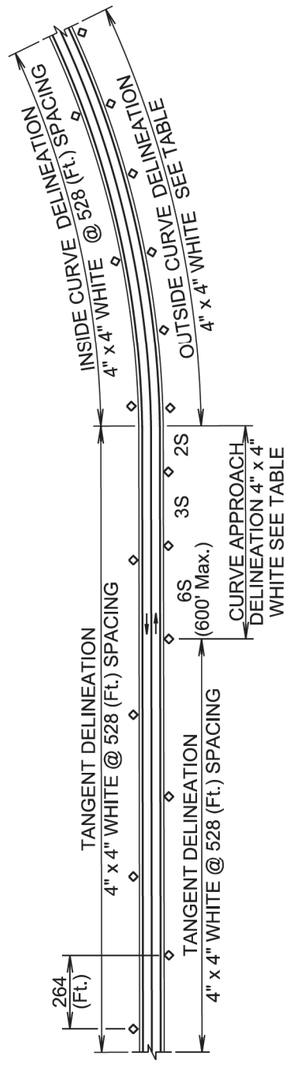
For radii of 50 feet or less, place 3 tubular white delineators on equally spaced posts around the turning radius.

November 19, 2020

Published Date: 2025	SDDOT	DELINEATOR AT INTERSECTIONS	PLATE NUMBER 632.44
			Sheet 1 of 1



PLAN VIEW
(Divided Roadway)



PLAN VIEW
(Undivided Roadway)

March 31, 2024

Published Date: 2025	SDDOT	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
			Sheet 1 of 2

GENERAL NOTES:

Delineators will be located from 2 to 8 feet outside of the outer edge of shoulder. When a roadside barrier or other obstruction intrudes into the space between the pavement edge and the extension of the line of delineators, the delineators should be in line with the barrier or in line with the innermost edge of the obstruction.

When normal spacing is interrupted by driveways, crossroads, or approaches, delineators falling within such areas may be moved in either direction a distance not exceeding one-quarter of the standard spacing. Delineators still falling within such areas should be eliminated.

The spacing for specific radii may be interpolated from the table. The minimum spacing should be 20 feet. The spacing on curves should not exceed 300 feet. In advance of or beyond a curve, and proceeding away form the end of the curve, the spacing of the first delineator is 2S, the second 3S, and the third 6S, but not to exceed 300 feet. S refers to the delineator spacing for specific radii computed from the formula $S = 3\sqrt{R - 50}$. The distances for S shown in the table were rounded to the nearest 5 feet.

Curve approach delineation is not required if curve delineation spacing exceeds 100 ft.

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

DELINEATOR SPACING OUTSIDE CURVE				
Radius of Curve (Ft.)	Curve Delineator Spacing (Ft.)	Curve Approach Spacing (Ft.)		
		A	B	C
50	20	40	65	125
115	25	50	75	150
150	30	60	90	180
180	35	70	110	215
250	40	85	125	250
300	45	95	140	285
400	55	110	170	300
500	65	125	190	300
600	70	140	210	300
700	75	150	230	300
800	80	165	245	300
900	85	175	260	300
1000	90	185	275	300

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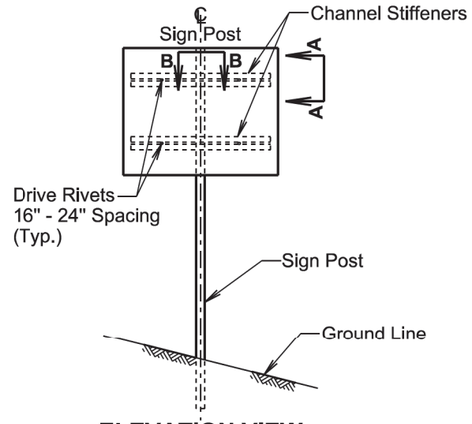
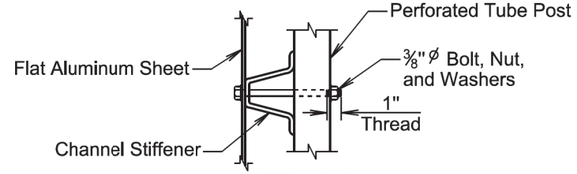
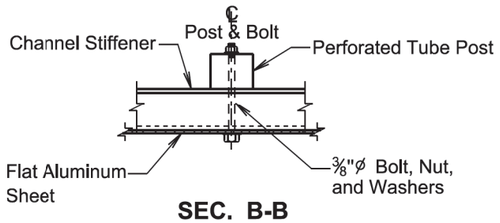
Published Date: 2025	SDDOT	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
			Sheet 2 of 2



ELEVATION VIEW
(One post breakaway sign supports.)



SEC. A-A



SEC. B-B
(Typical sign and stiffener details.)

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

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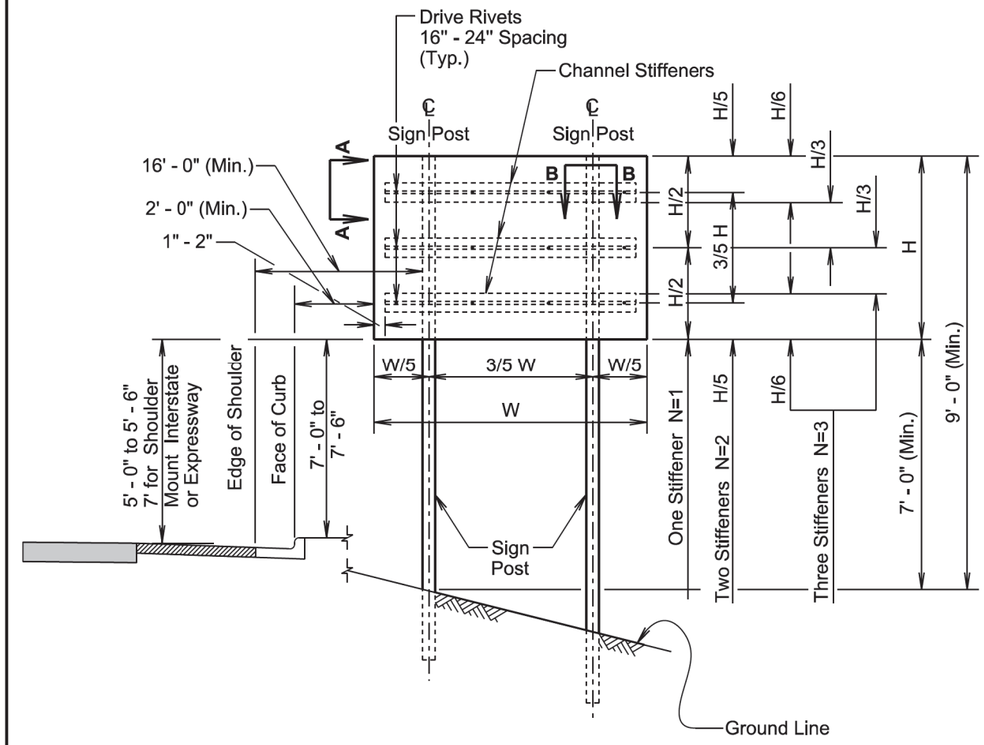
			Sheet 1 of 2



TWO POST BREAKAWAY SIGN SUPPORTS

GENERAL NOTES:

The number of stiffeners used (N) will 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 will be required to fasten the sign to each post.

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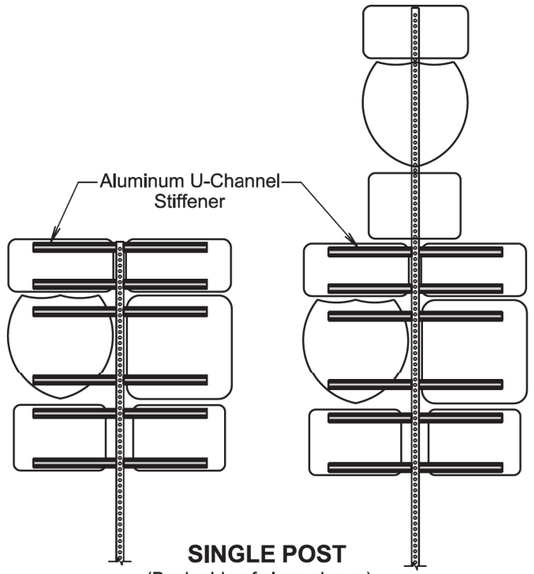
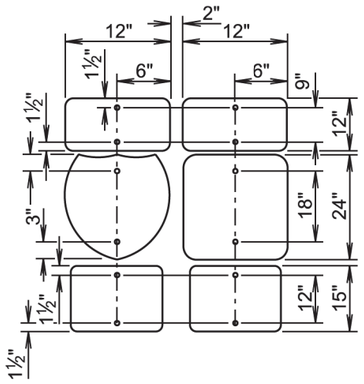
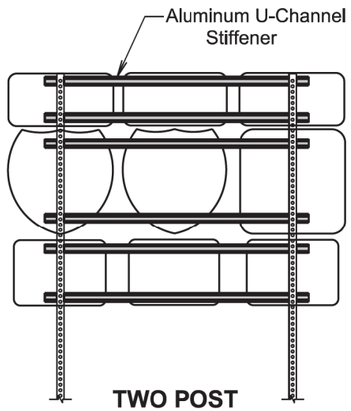
			Sheet 2 of 2



SINGLE POST
(Back-side of signs shown)



TYPICAL ROUTE MARKER BOLT HOLE LOCATIONS



TWO POST
(Back-side of signs shown)

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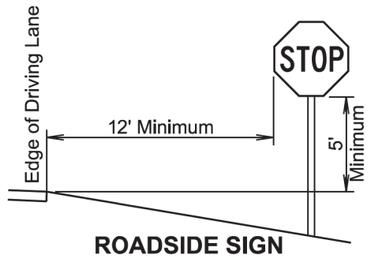
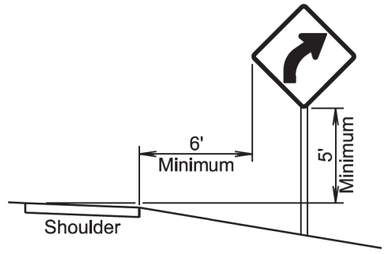
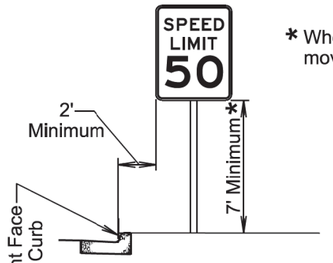
Published Date: 2024	SDDOT	MULTIPLE ROUTE MARKER SIGN STIFFENER INSTALLATION DETAILS	PLATE NUMBER 632.62
			Sheet 1 of 1



ROADSIDE SIGN IN RURAL AREA

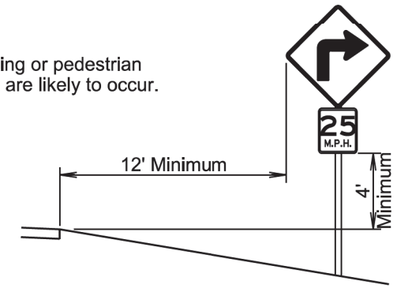


ROADSIDE SIGN IN RURAL AREA
(If shoulder width is greater than 6 foot)

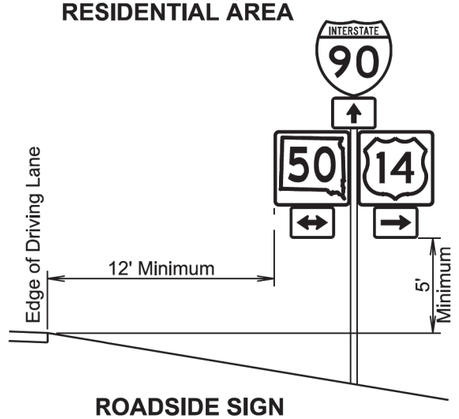


ROADSIDE SIGN IN BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA

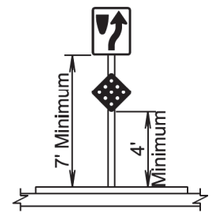
* Where parking or pedestrian movements are likely to occur.



WARNING SIGN ADVISORY SPEED PLAQUE IN RURAL AREA



ROADSIDE SIGN IN RURAL AREA



SIGN ON NOSE OF MEDIAN

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Published Date: 2024	SDDOT	OFFSETS FOR SIGN INSTALLATION	PLATE NUMBER 632.90
			Sheet 1 of 1