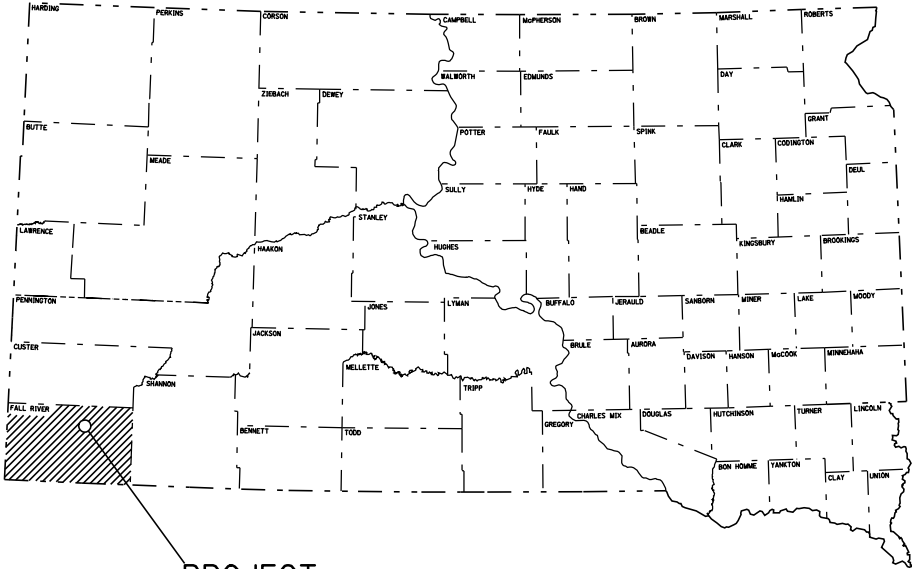


PLOT SCALE - 7666.56000011.000000

PLOTTED FROM - TRRC11625



PROJECT

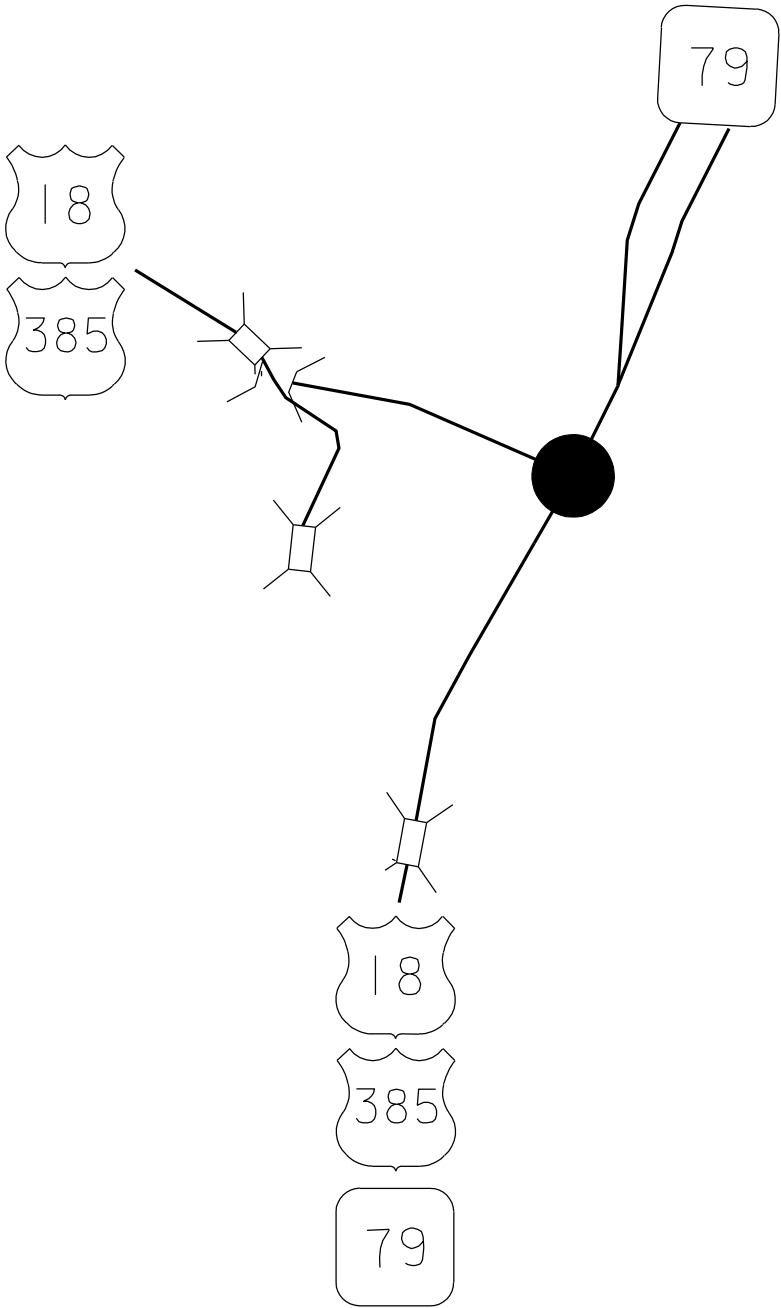
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
000P-492
US18, US385 & SD79
FALL RIVER COUNTY
GUIDE SIGN UPGRADE
PCN 12JU

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	000P-492	1	21

Plotting Date: 29-MAY-2012

INDEX OF SHEETS

Sheet	1	General Layout w/ Index
Sheets	2-3	Estimate w/ General Notes & Tables
Sheet	4	Sign Installation Table
Sheets	5-8	Layout
Sheets	9-14	Post & Footing Details
Sheets	15-17	Sign Design
Sheets	18-19	Typical's
Sheets	20-21	Standard Plates



DESIGN DESIGNATION US18

ADT (2011)	3075
ADT (2031)	3552
DHV	742
d	50%
T DHV	10.1%
T ADT	22.3

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ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
110E5020	Salvage Traffic Sign	6	Each
632E0014	1.75' Diameter Breakaway Support Concrete Footing	138.0	Ft
632E1235	W6x20 Steel Post	424.3	Ft
632E3103	Extruded Aluminum Sign, Removable Copy High Intensity	861.5	SqFt
634E0100	Traffic Control	221	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	1	Each

WORK DESCRIPTION

Work on this project consists of the Contractor removing existing signs and furnishing and installing new guide signs.

SPECIFICATIONS

Standard Specifications for Roads & Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

PERMANENT SIGNING

The Contractor shall provide all labor and equipment necessary to install permanent signing and remove existing signs as detailed in these plans and/or as required by the Engineer. Payment for furnishing and installing permanent signs will be paid for the contract unit price for each sign based on sheeting requirements per square foot of sign. All signs shall have ASTM D4956-04Type IV (High Intensity) sheeting as noted on the sign detail sheets. Payment for new signposts, hardware, bases, and labor will be made at the contract unit price per foot for W6x20 Steel Post. The lengths of the posts in the Sign and Post Details are approximate lengths only. The post lengths shall be verified by the Contractor.

The Contractor shall stake the signs and the Engineer will verify the location prior to installation. The lateral distance from the roadway and the height of the sign shall be established by the Contractor according to the Sign and Post Details, as well as the current edition of the Manual on Uniform Traffic Control Devices (MUTCD).

FURNISH & INSTALL EXTRUDED ALUMINUM SIGN, REMOVABLE COPY HIGH INTENSITY

Measurement of sign areas will include payment for the entire extruded aluminum sign backing. This payment for signs designated as Extruded Aluminum Sign shall include all labor (including installing date decals), equipment, and materials to complete the work, and shall be paid for at the contract unit price per square foot for Extruded Aluminum Sign, Removable Copy High Intensity.

SHEETING REQUIREMENTS

All legend and border utilizing the color black shall be vinyl or screen printed black, non-reflectorized material. All other legend and border shall be of same type of sheeting as the background of the same sign.

The side trim moldings shall be painted with a color that matches the color of the sign background sheeting. The color coat shall be preceded by a zinc chromatic primer. Paints shall be approved by the Engineer prior to use.

Adhesive copy applied directly to sheeted extruded aluminum sign panel background may be substituted for removable copy, if approved by the Engineer. Direct applied adhesive copy located on panel seams shall be neatly cut at the seams and securely adhered to the panels.

SIGN POSTS

The plan post lengths are estimated for bidding purposes only and should be field verified by the Contractor prior to fabrication. All breakaway sign supports shall comply with FHWA NCHRP 350 or MASH crash-worthy requirements

ACCEPTANCE OF SIGN INSTALLATIONS

Final acceptance of completed signs will be considered on a sign by sign basis in accordance with Section 5.16 of the Standard Specifications.

CONCRETE FOOTINGS

Footings for breakaway signs shall be below ground as shown in the Typical Sheets and need not be formed. The amount of exposed concrete footings, anchor bolts, or slip bases on the up-slope side of the footing shall not be greater than 4 inches as shown on the footing details.

SALVAGE TRAFFIC SIGN

The Contractor shall remove signs, posts, and bases for removal and stockpile as listed in the Installation Table. All existing signs, posts, and hardware removed as per these plans remain property of the State of South Dakota and shall be transported to the SDDOT Hot Springs maintenance yard by the Contractor. The Contractor shall notify the Engineer two days prior to time of delivery to the maintenance yard so correct placement for storage and inventory of materials can be made upon receipt.

All bolts, nuts, and washers shall be placed in individual 5-gallon pails and backing materials shall be separated from the signs. Non-threaded connections (rivets) shall be cut when necessary to reduce sign sections to a 4' x 6' maximum size.

Any post assembly including sign, post, or bases that call for being salvaged in the remarks column in the Installation Table shall be included in the contract unit price per each for "Salvage Traffic Sign." These payments shall include all cost for labor and equipment necessary to remove, dismantle, and deliver signs to the SDDOT Hot Springs maintenance yard.

DATE DECALS

The Contractor shall affix a state furnished date decal to each new sign installed. Date decals are self-adhesive weather resistant stickers with removable paper backing, approximately 2" X 2" in size. The date decal displays the last two digits of the year the sign was manufactured (as illustrated) with white numerals on a green and white background.

12

One decal shall be placed in the extreme lower left corner of the front of each extruded aluminum panel sign.

Sign supports or other obstructions shall not block the view of the date decal upon completion of the sign installation.

All costs for installing of date decals on new signs shall be incidental to the contract unit price per square foot for Extruded Aluminum Sign, Removable Copy High Intensity.

MAINTENANCE OF TRAFFIC

Location of signs on traffic control layouts is diagrammatic. Nonfixed location signs may be mounted on portable supports. The portable supports shall comply with FHWA NCHRP 350 and/or MASH crash worthy requirements and shall be constructed to yield upon impact to minimize hazards to motorists. The bottom of all signs on portable or temporary supports shall not be less than seven feet above the pavement in urban areas and one foot above the pavement in rural areas. Portable sign supports may be used as long as the duration is less than 3 days. If the duration is more than 3 days, the signs shall be on fixed location, ground mounted, breakaway supports during the time of initial installation, except portable sign supports will be allowed where surfacing prohibits installation.

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP Report 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

Each construction work area shall be individually signed and channelized continuously with channelizing devices throughout the entire length of the construction work area.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492	2	21

MAINTENANCE OF TRAFFIC (CONTINUED)

Equipment and vehicles entering or exiting the roadway working within the right-of-way shall display a flashing amber light visible for a minimum distance of 1/4 mile in all directions. Hazard lights alone are not acceptable.

At the end of each day's work all traffic control devices shall be pulled off the roadway and taken down and traffic shall be opened to all lanes of traffic. Applicable signing shall remain in place, i.e. "Road Work Ahead" etc.

Unless otherwise stated in these plans, no work will be allowed during hours of darkness. Hours of darkness are defined, as ½ hour after sunset until ½ hour before sunrise.

Storage of vehicles and equipment shall be as near the right-of-way as possible. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work. Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage of the vegetation, surfacing, embankment, delineators, and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

TRAFFIC CONTROL

The quantity of signs paid for, will be for the greatest number of installations per sign in place at any one time.

The contract unit price per unit for Traffic Control shall include all labor, equipment and materials necessary to furnish, erect and maintain the traffic control devices for the duration of the entire project. Payment will be made only once for each traffic control device even if the device is used more than once on the project.

SIGN TABULATION

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	3	17	51
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	1	34	34
W20-1	48" x 48"	ROAD WORK #### FT. OR AHEAD	3	34	102
W20-5	48" x 48"	LT. OR RT. LANE CLOSED #### FT. OR AHEAD	1	34	34
W21-5	48" x 48"	SHOULDER WORK	3	34	102
TOTAL UNITS					221

TRAFFIC CONTROL MISCELLANEOUS

The Contractor shall maintain traffic in accordance with applicable MUTCD Standards, Section 4.4 and 634 of the Standard Specifications, and the details shown in these plans.

Cost of equipment and traffic control devices on equipment, including arrow panels and signs, will be paid for at the contract lump sum price for Traffic Control, Miscellaneous.

Resetting, temporary relocation and/or covering of existing or conflicting traffic control devices as necessary to adequately maintain traffic or perform the work, shall be the responsibility of the Contractor. This work shall be included in the contract lump sum price for Traffic Control, Miscellaneous.

Temporary pavement marking used in transition tapers shall be Temporary Road Markers. The temporary pavement marking shall be placed in accordance with Section 634 of the Standard Specifications, and shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

SIGN INSTALLATION TABLE

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492	4	21

EXISTING STA.	NEW STA.	FACING TRAFFIC	SIGNING				POST			REMARKS
			REMOVE EXISTING SIGN	INSTALL NEW SIGN	WIDTH (FT.)	HEIGHT (FT.)	NEW POST	LENGTH (FT.)		
								Inside Post	Outside Post	
29+00	21+00	NB	YES	YES	10	9	YES	18.74	19.60	SALVAGE EXISTING SIGN & INSTALL NEW SIGN AT NEW LOCATION
N/A	24+00	NB	N/A	YES	12	9	YES	18.82	19.84	INSTALL NEW SIGN AT NEW LOCATION
N/A	27+00	NB	N/A	YES	12	9	YES	19.14	20.00	INSTALL NEW SIGN AT NEW LOCATION
31+00	30+00	NB	YES	YES	10	5	YES	15.32	16.24	SALVAGE EXISTING SIGN & INSTALL NEW SIGN AT NEW LOCATION
33+00	SAME	NB	YES	YES	12	3	YES	13.30	13.93	SALVAGE EXISTING SIGN & INSTALL NEW SIGN AT SAME LOCATION
48+00	SAME	NB	YES	YES	10	3	YES	12.96	14.00	SALVAGE EXISTING SIGN & INSTALL NEW SIGN AT SAME LOCATION
SD79 - MRM 27.220		SB	N/A	YES	8	7	YES	18.50	19.66	INSTALL NEW SIGN AT NEW LOCATION
N/A	52+00	SB	N/A	YES	12	9	YES	20.14	21.19	INSTALL NEW SIGN AT NEW LOCATION
N/A	49+00	SB	N/A	YES	12	9	YES	20.66	21.69	INSTALL NEW SIGN AT NEW LOCATION
39+00	43+00	SB	YES	YES	12	3	YES	13.42	14.33	SALVAGE EXISTING SIGN & INSTALL NEW SIGN AT NEW LOCATION
40+00	SAME	SB	YES	YES	11	5	YES	15.50	16.69	SALVAGE EXISTING SIGN & INSTALL NEW SIGN AT SAME LOCATION
US18/385 - MRM 40.512		WB	N/A	YES	8.5	9	YES	19.60	20.98	INSTALL NEW SIGN AT NEW LOCATION

PERMANENT SIGNING LAYOUT

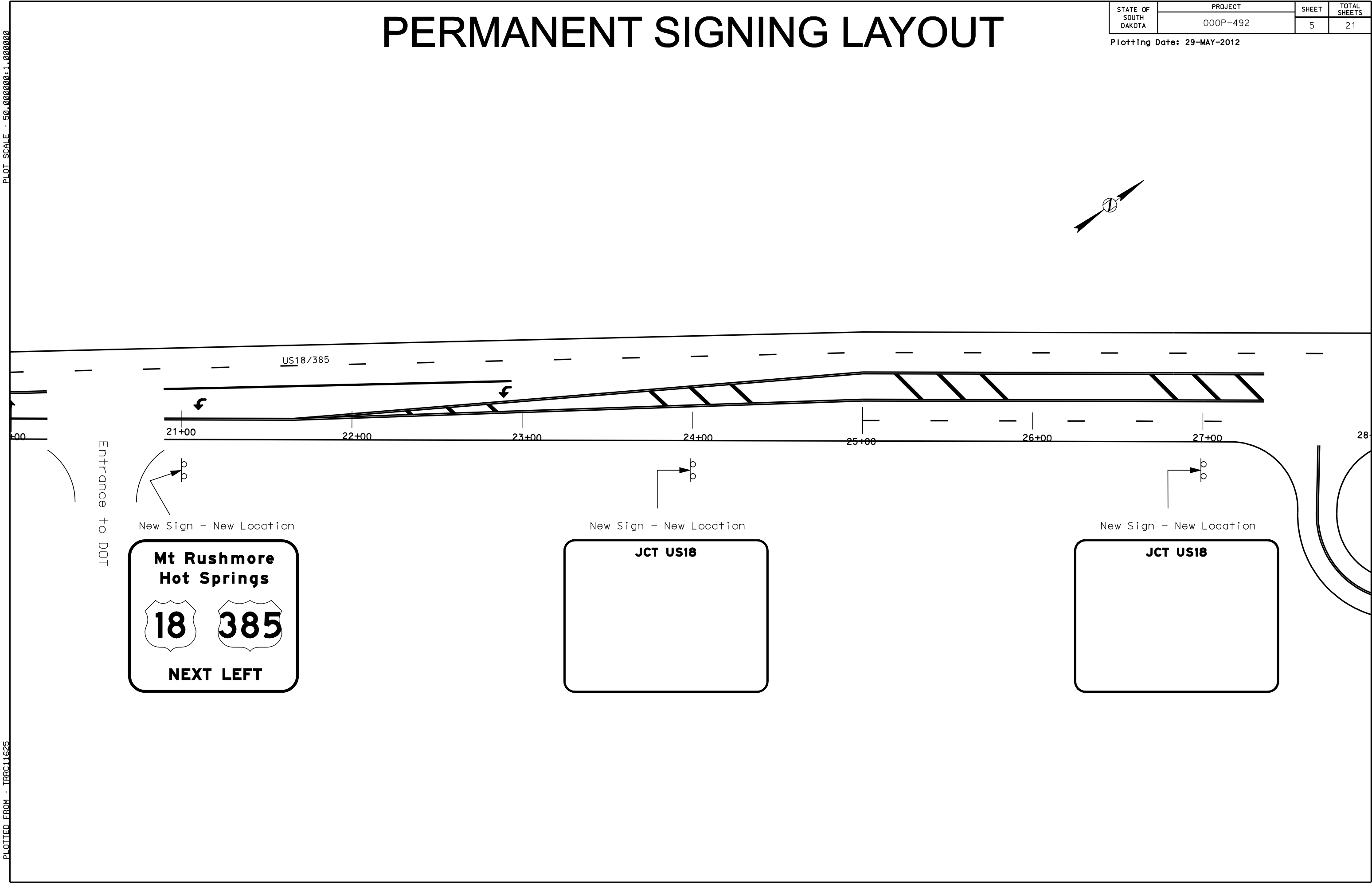
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	000P-492	5	21

Plotting Date: 29-MAY-2012

PLOT SCALE - 50.000000:1.000000

PLOTTED FROM - TRRC11625

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PERMANENT SIGNING LAYOUT

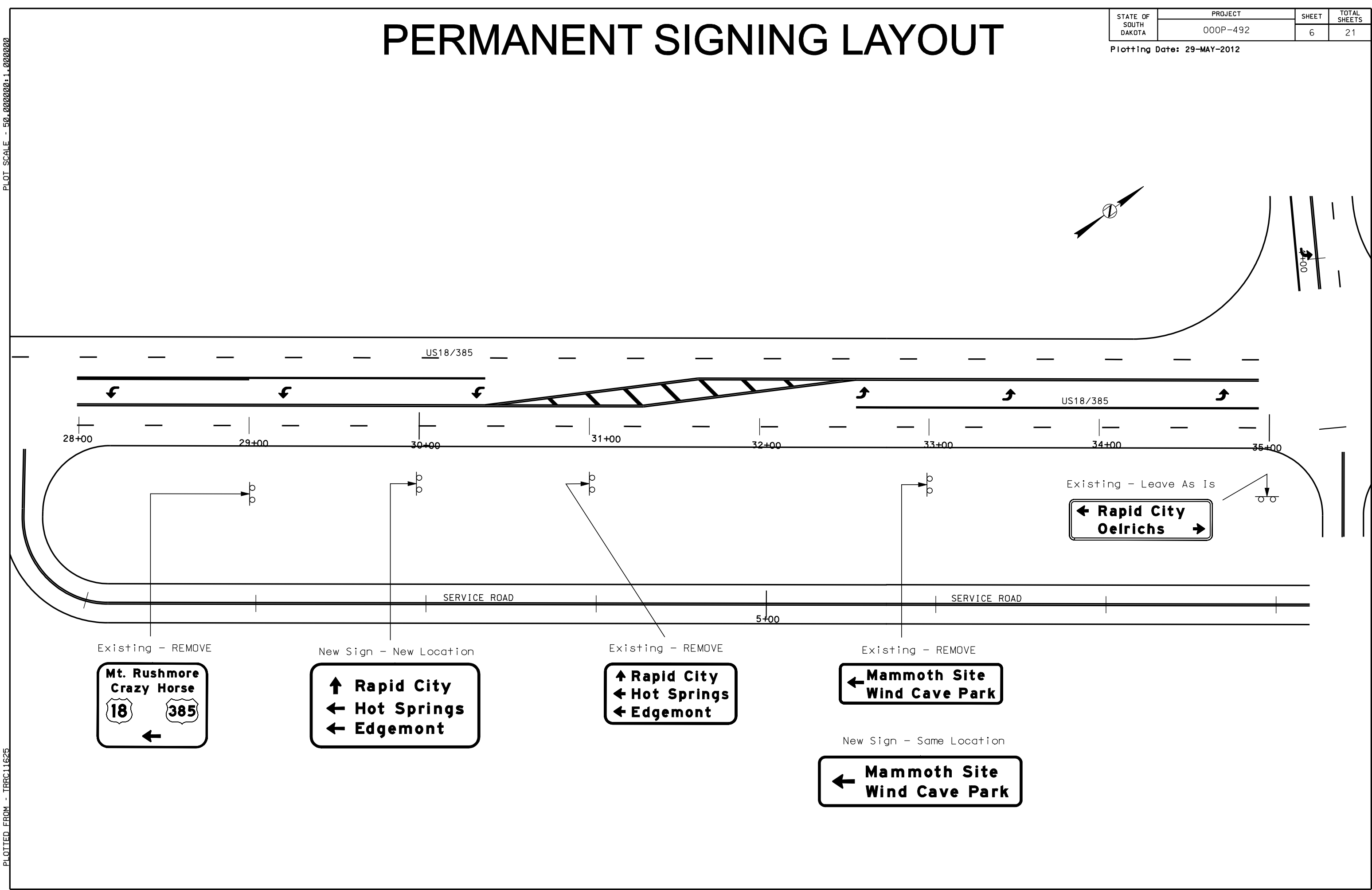
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Plotting Date: 29-MAY-2012

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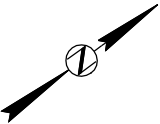
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	000P-492		
		7	21

Plotting Date: 29-MAY-2012

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PLOTTED FROM - TRRC11625

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New Sign - Same Location



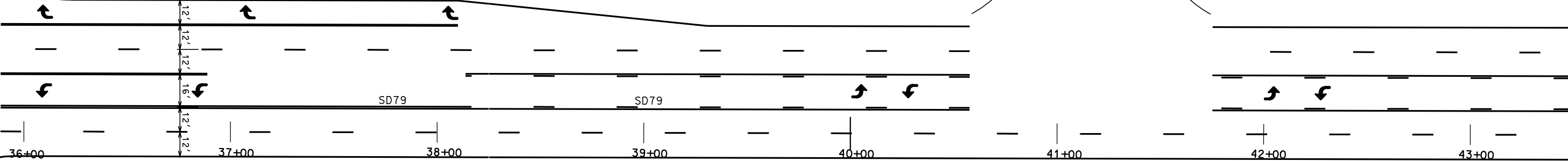
Existing - REMOVE



Existing - REMOVE



New Sign - New Location



PERMANENT SIGNING LAYOUT

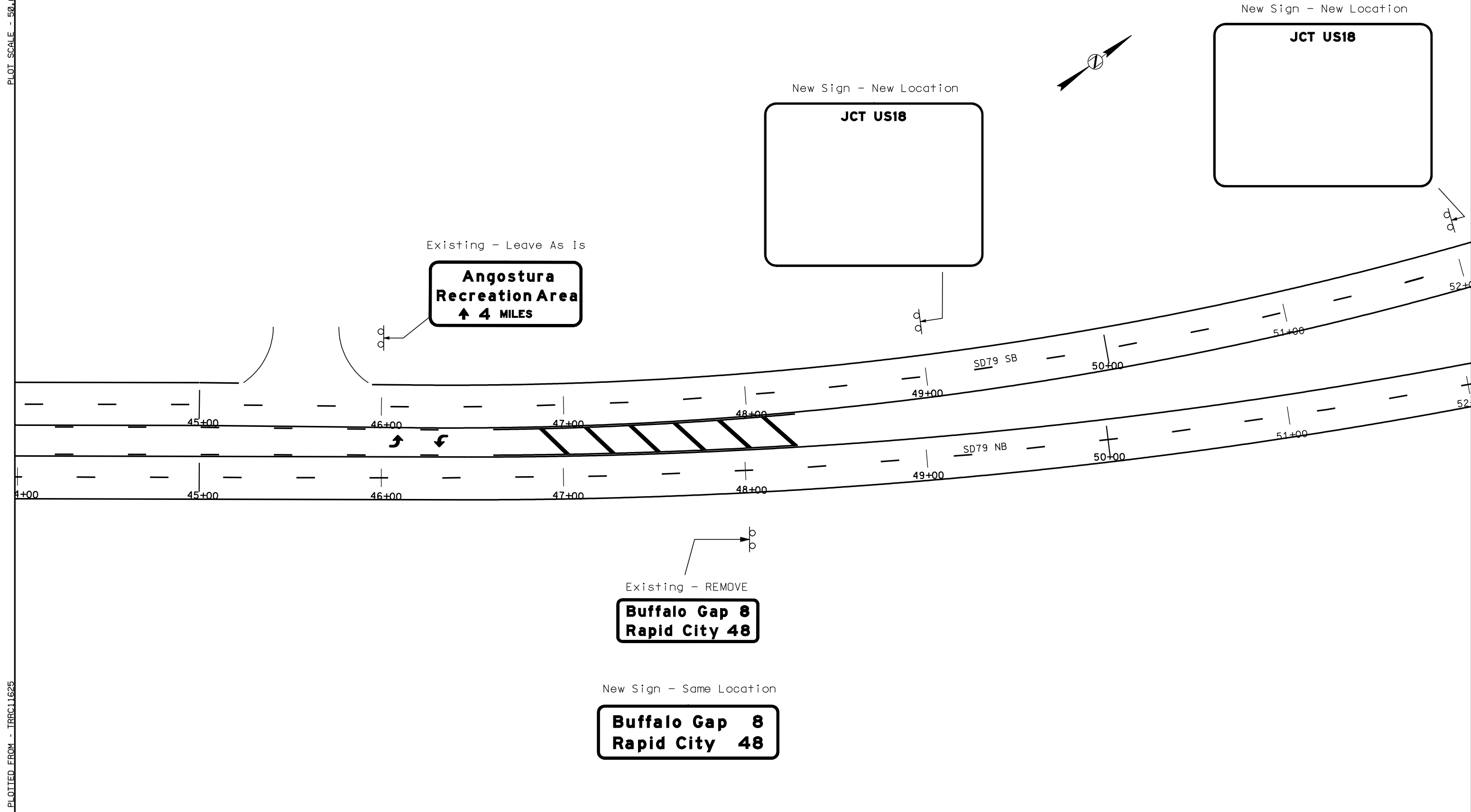
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	000P-492	8	21

Plotting Date: 29-MAY-2012

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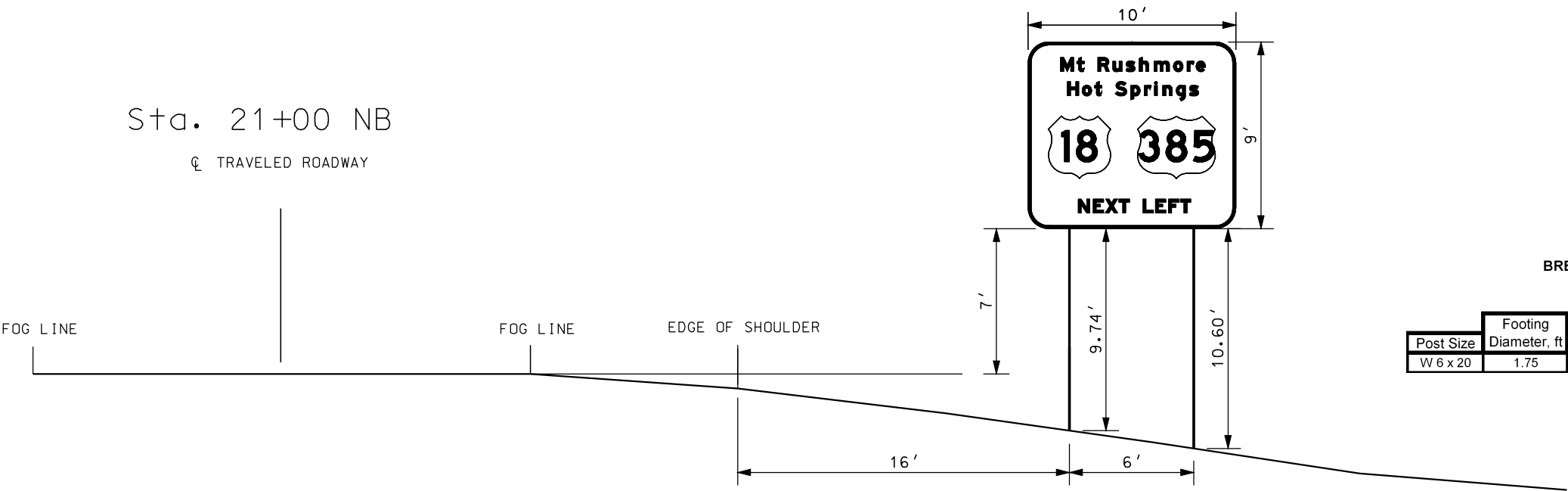
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POST & FOOTING DETAILS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492		

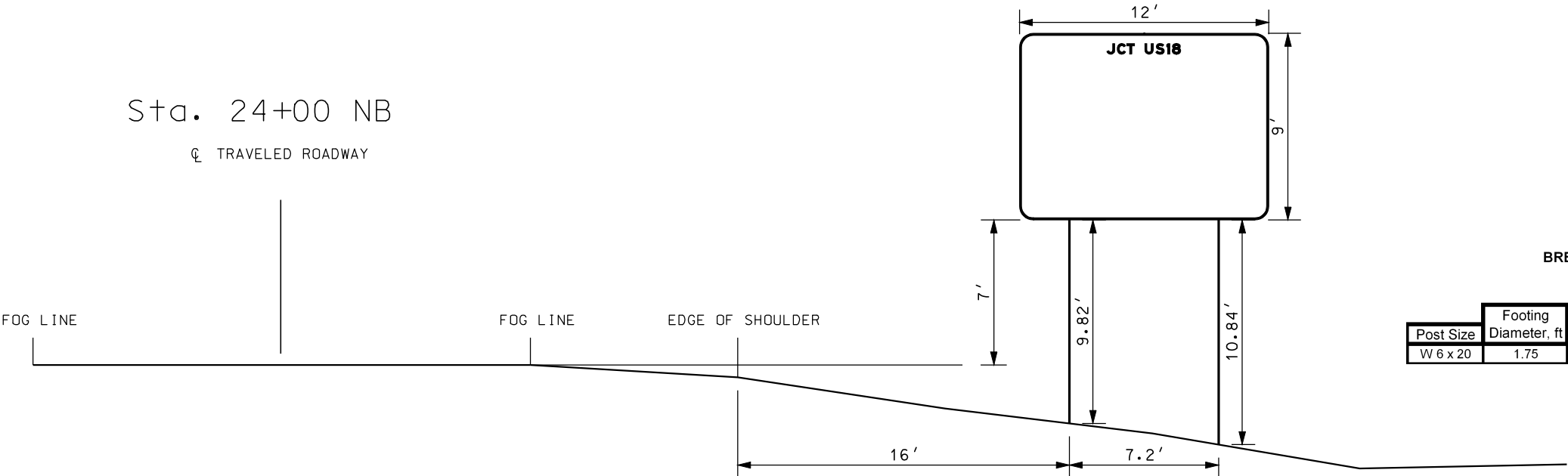
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BREAKAWAY SIGN POSTS & FOOTING INFORMATION

				Footing Steel				
Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	6	2.25	8 - #6 Bars	5.6667	1.4167	40	68.09



BREAKAWAY SIGN POSTS & FOOTING INFORMATION

Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Footing Steel				
				Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	6	2.25	8 - #6 Bars	5.6667	1.4167	40	68.09

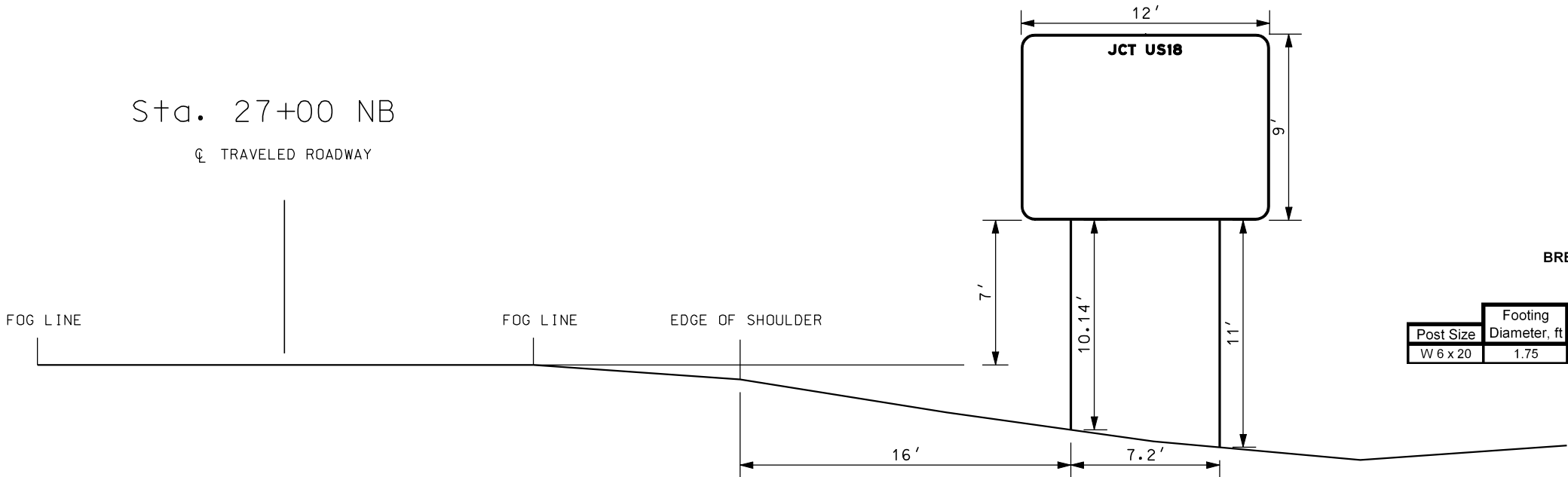
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POST & FOOTING DETAILS

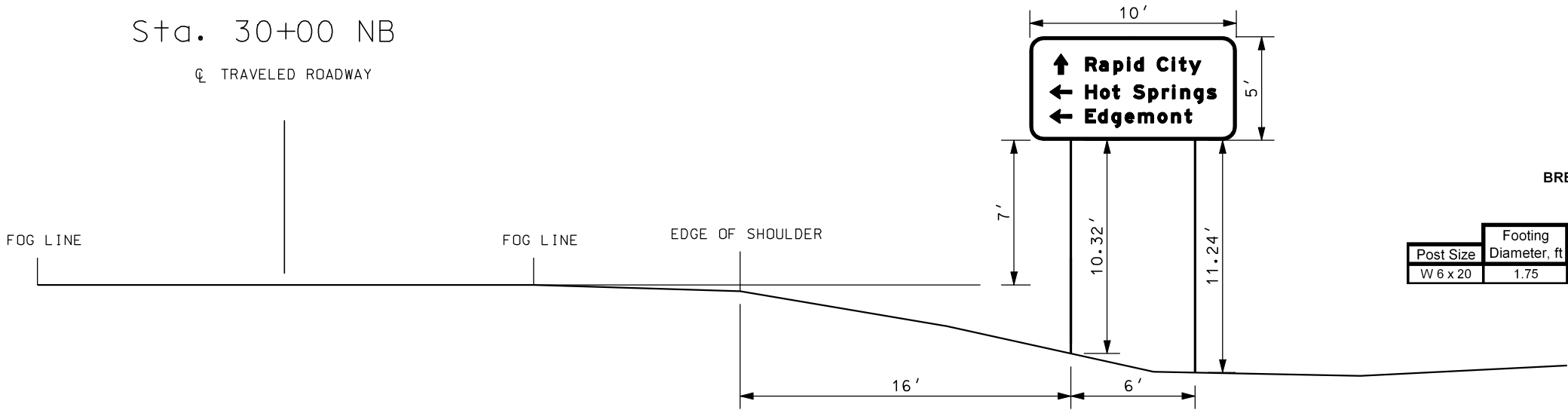
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	000P-492	10	21

Plotting Date: 29-MAY-2012



BREAKAWAY SIGN POSTS & FOOTING INFORMATION

				Footing Steel				
Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	6	2.25	8 - #6 Bars	5.6667	1.4167	40	68.09



BREAKAWAY SIGN POSTS & FOOTING INFORMATION

Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Footing Steel				
				Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	6	2.25	8 - #6 Bars	5.6667	1.4167	40	68.09

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POST & FOOTING DETAILS

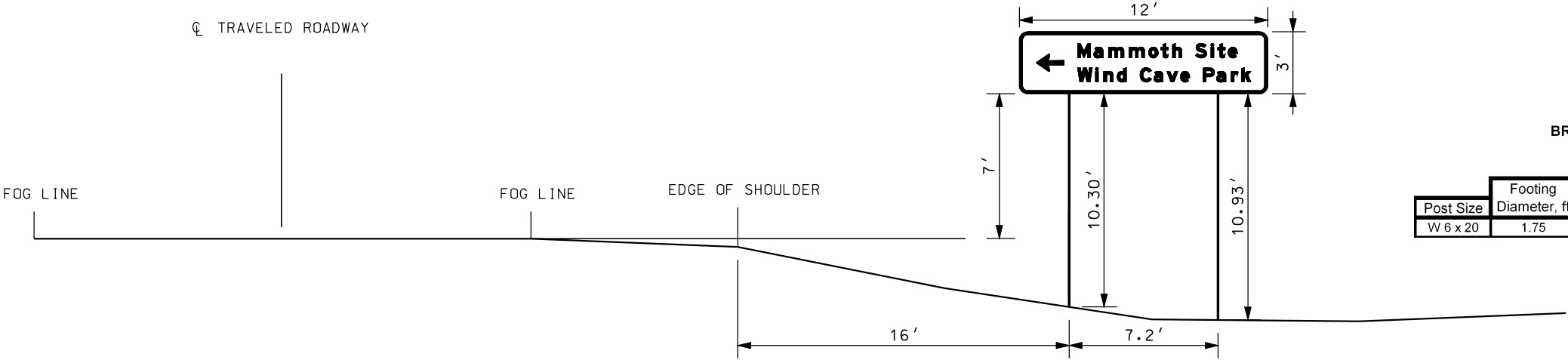
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	000P-492		
		11	21

Plotting Date: 29-MAY-2012

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Sta. 33+00 NB

CL TRAVELED ROADWAY

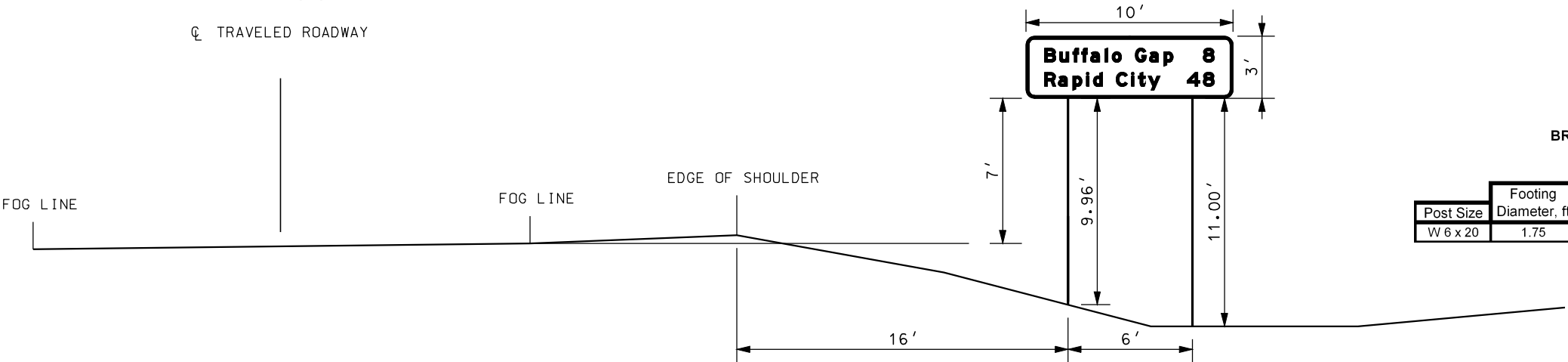


BREAKAWAY SIGN POSTS & FOOTING INFORMATION

				Footing Steel				
Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	7	2.25	8 - #6 Bars	6.6667	1.4167	44.5	80.11

Sta. 48+00 NB

CL TRAVELED ROADWAY



BREAKAWAY SIGN POSTS & FOOTING INFORMATION

				Footing Steel				
Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	7	2.25	8 - #6 Bars	6.6667	1.4167	44.5	80.11

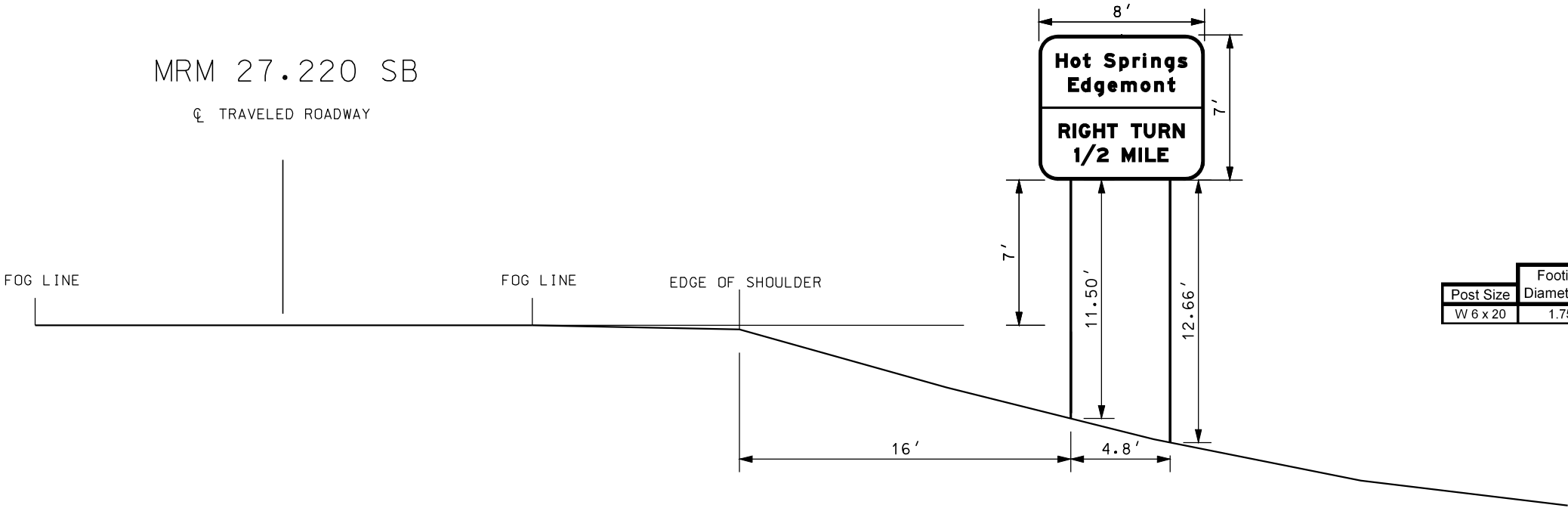
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492		

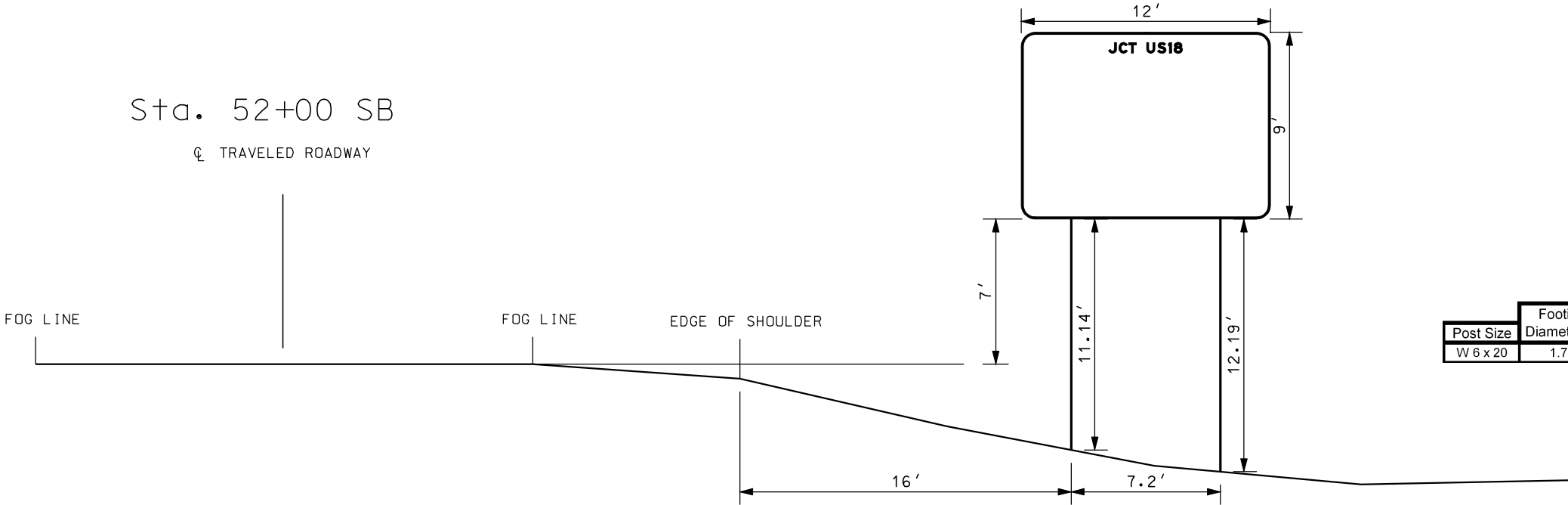
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Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Footing Steel				
				Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	6	2.25	8 - #6 Bars	5.6667	1.4167	40	68.09



BREAKAWAY SIGN POSTS & FOOTING INFORMATION								
Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Footing Steel				
				Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
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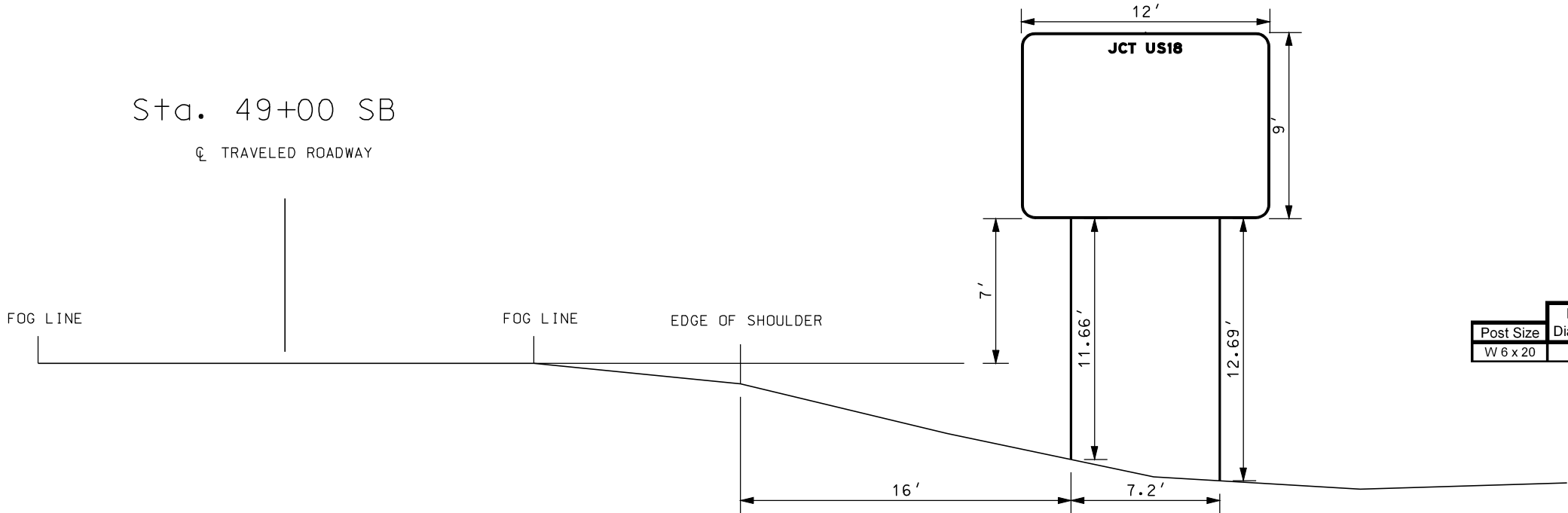
POST & FOOTING DETAILS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492		

Plotting Date: 29-MAY-2012

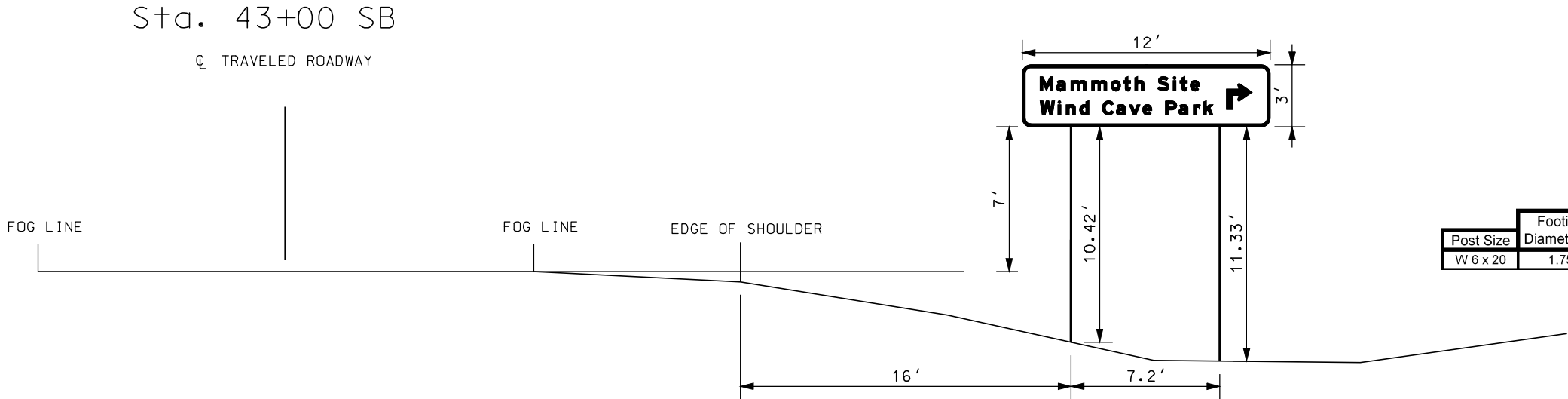
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BREAKAWAY SIGN POSTS & FOOTING INFORMATION

				Footing Steel				
Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	6	2.25	8 - #6 Bars	5.6667	1.4167	40	68.09



BREAKAWAY SIGN POSTS & FOOTING INFORMATION

Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Footing Steel				
				Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	7	2.25	8 - #6 Bars	6.6667	1.4167	44.5	80.11

PLOTTED FROM - TRRC11625

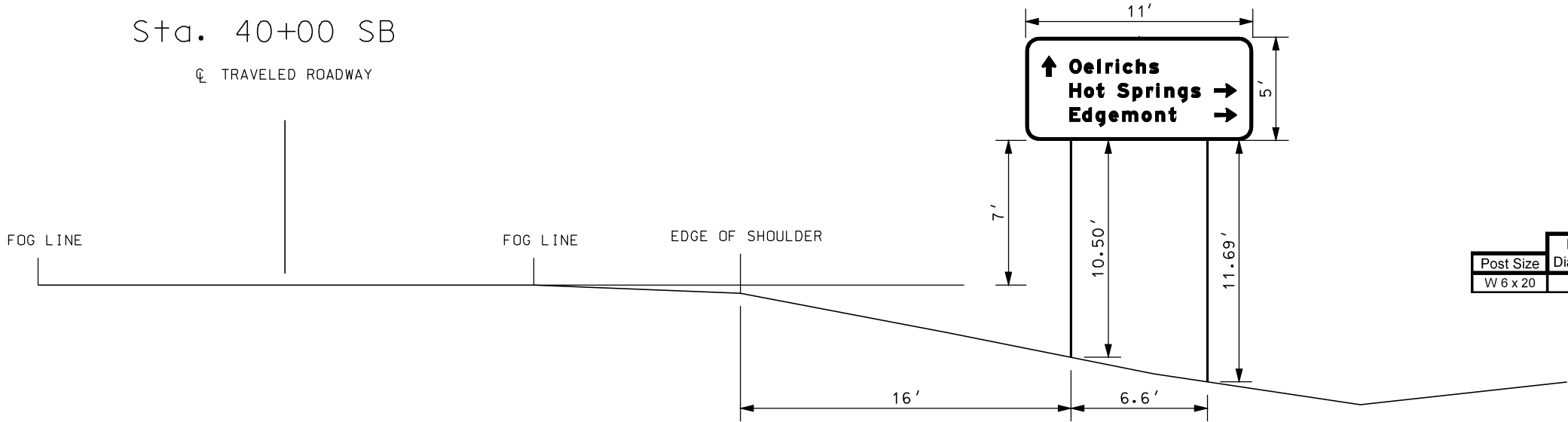
POST & FOOTING DETAILS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492		

Plotting Date: 29-MAY-2012

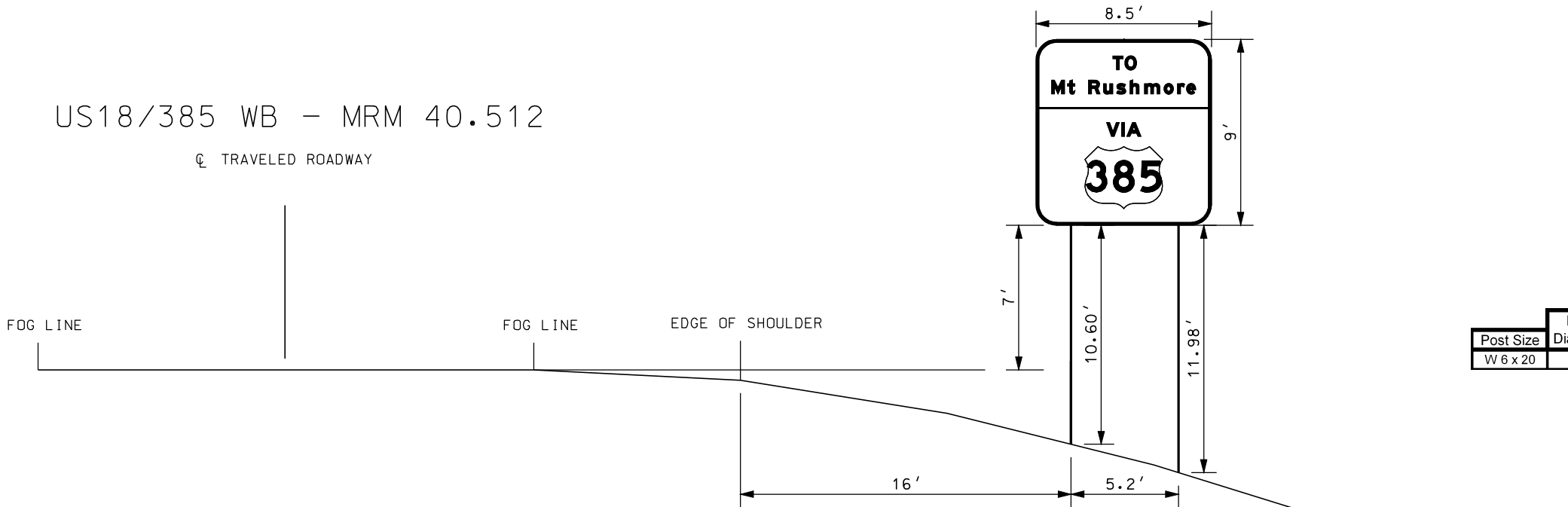
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BREAKAWAY SIGN POSTS & FOOTING INFORMATION

Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Footing Steel				
				Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
W 6 x 20	1.75	6	2.25	8 - #6 Bars	5.6667	1.4167	40	68.09



BREAKAWAY SIGN POSTS & FOOTING INFORMATION

Post Size	Footing Diameter, ft	Footing Depth, ft	Stub Post Length, ft	Footing Steel				
				Longitudinal Steel		Spiral, ft		Quantity, lb
				Qty and Size	Length, ft	Diameter	Length	
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PLOTTED FROM - TRRC11625

PLOT SCALE - 5.00000011.000000

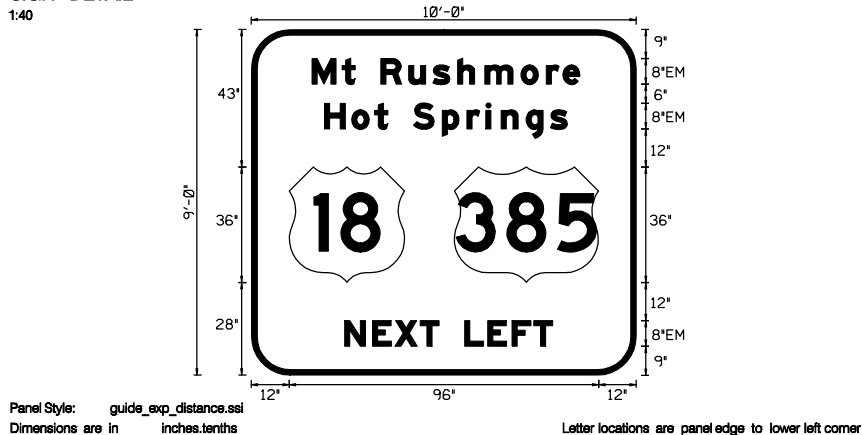
PLOTTED FROM - TRRC11625

SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492		

Plotting Date: 29-MAY-2012

SIGN DETAIL
1:40



SIGN NUMBER	Sta. 24+00 NB
WIDTH x HGHT.	10'-0" x 9'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: IV COLOR: Green
LEGEND/BORDER	TYPE: IV COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	11.8	29	36.1	36.1
M1_4	0	63.4	29	45.1	36.1

LETTER POSITIONS (X)																LENGTH	SERIES/SIZE
M	t		R	u	s	h	m	o	r	e							EM 2000
19	28.3	32.5	40.5	49.1	56.7	64.5	73	84.3	92.2	97.4						83.7	85.8
H	o	t		S	p	r	i	n	g	s							EM 2000
22.9	31.4	38.5	42.7	50.7	59.6	67.4	73.3	78.1	85.9	93.5						75.9	85.8
N	E	X	T		L	E	F	T									EM 2000
29.1	37.9	44.9	52.7	58.7	66.7	73.9	81.5	88.3								65.1	8

SIGN DETAIL
1:40

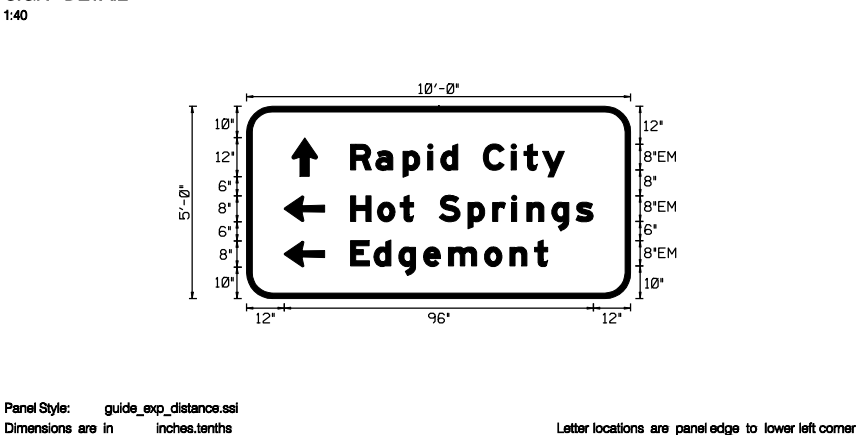


SIGN NUMBER	Sta. 33+00 NB
WIDTH x HGHT.	12'-0" x 3'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	5"
MOUNTING	Ground
BACKGROUND	TYPE: IV COLOR: Brown
LEGEND/BORDER	TYPE: IV COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
ARMED	180	10.1	13	10.1	15.8

LETTER POSITIONS (X)																LENGTH	SERIES/SIZE
M	a	m	m	o	t	h		S	i	t	e						EM 2000
33.9	43.3	51.8	63.8	75.1	82.2	88.9	94.2	102.2	111.2	115.2	121.2					92.6	85.8
W	i	n	d		C	a	v	e		P	a	r	k				EM 2000
33.9	44.3	49.1	56.8	62.1	70.1	78.1	85.7	93.5	98.8	106.8	114.4	122.9	128.8			100.3	85.8

SIGN DETAIL
1:40

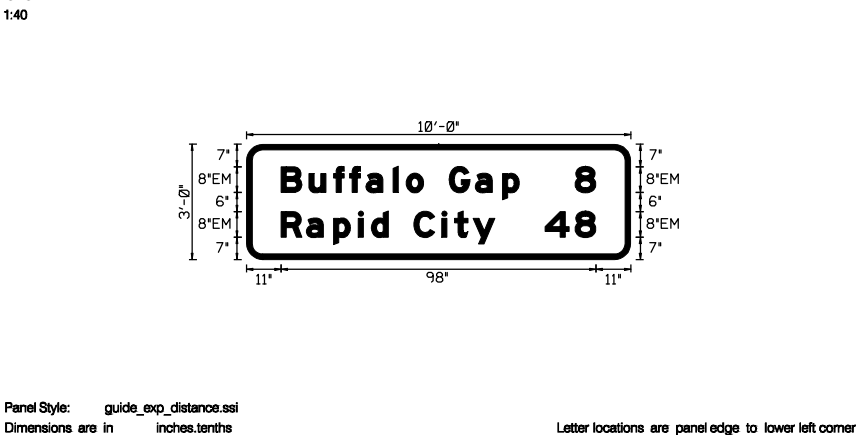


SIGN NUMBER	Sta. 30+00 NB
WIDTH x HGHT.	10'-0" x 5'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: IV COLOR: Green
LEGEND/BORDER	TYPE: IV COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
ARUP	0	14.2	38.3	8	12.1
ARMED	180	11.8	24.1	8.2	12.7
ARMED	180	11.8	10	8.2	12.7

LETTER POSITIONS (X)																LENGTH	SERIES/SIZE
R	a	p	i	d		C	i	t	y								EM 2000
32.5	40.4	48.9	56.6	60.7	66	74	82.7	86.7	92.6							67	85.8
H	o	t		S	p	r	i	n	g	s							EM 2000
32.5	40.9	48.1	52.2	60.2	69.2	76.9	82.9	87.7	95.4	103						75.9	85.8
E	d	g	e	m	o	n	t										EM 2000
32.5	39.8	47.6	55.3	63.1	74.4	82.3	90									61.7	85.8

SIGN DETAIL
1:40



SIGN NUMBER	Sta. 48+00 NB
WIDTH x HGHT.	10'-0" x 3'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	5"
MOUNTING	Ground
BACKGROUND	TYPE: IV COLOR: Green
LEGEND/BORDER	TYPE: IV COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

LETTER POSITIONS (X)																LENGTH	SERIES/SIZE
B	u	f	f	a	i	o		G	a	p							EM 2000
10.8	19.6	27.2	32.3	37.4	45.9	50	55.4	63.4	71.6	80						74.6	85.8
8																	EM 2000
102.8																6.6	8
R	a	p	i	d		C	i	t	y								EM 2000
10.8	18.8	27.2	35	39.1	44.4	52.4	61.1	65.1	70.9							66.9	85.8
4	8																EM 2000
93.4	102.8															15.9	8

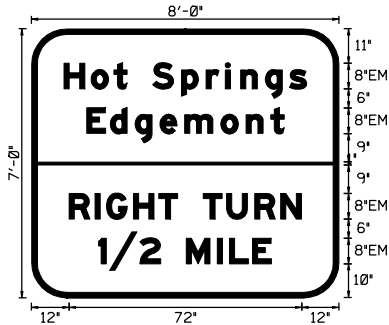
PLOT SCALE - 5.00000011.000000

PLOTTED FROM - TRRC11625

SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492		
Plotting Date: 29-MAY-2012		16	21

SIGN DETAIL
1:40



Panel Style: guide_exp_distance.ssi
Dimensions are in inches.tenths

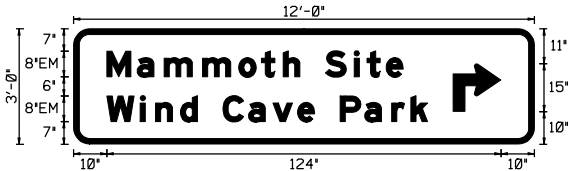
Letter locations are panel edge to lower left corner

SIGN NUMBER	SD79 SB - MRM 27.220
WIDTH x HGHT.	8'-0" x 7'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	11"
MOUNTING	Ground
BACKGROUND	TYPE: IV COLOR: GreenGreen
LEGEND/BORDER	TYPE: IV COLOR: WhiteWhite

SYMBOL	ROT	X	Y	WID	HT

LETTER POSITIONS (X)																		LENGTH	SERIES/SIZE
H	o	t		S	p	r	i	n	g	s								75.9	EM 2000
10.1	18.6	25.7	29.9	37.9	46.9	54.6	60.5	65.3	73.1	80.7								85.8	
E	d	g	e	m	o	n	t											61.7	EM 2000
17.3	24.6	32.4	40.1	47.9	59.2	67.1	74.8											85.8	
R	i	g	H	T		T	U	R	N									72.7	EM 2000
11.7	19.9	23.4	31.8	39.7	45.7	53.7	61	69.7	77.9									8	
1	/	2		M	I	L	E											54.1	EM 2000
20.9	24.4	33.9	40.4	48.4	58	61.9	69.1											8	

SIGN DETAIL
1:40



Panel Style: guide_exp_recreational.ssi
Dimensions are in inches.tenths

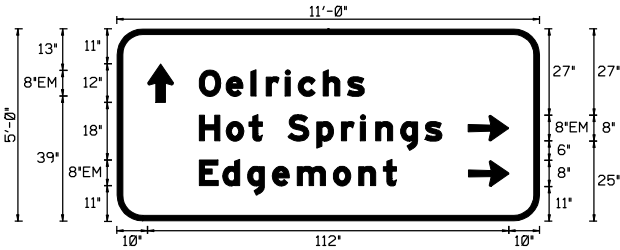
Letter locations are panel edge to lower left corner

SIGN NUMBER	Sta. 44+50 SB
WIDTH x HGHT.	12'-0" x 3'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	5"
MOUNTING	Ground
BACKGROUND	TYPE: IV COLOR: Brown
LEGEND/BORDER	TYPE: IV COLOR: WhiteWhite

SYMBOL	ROT	X	Y	WID	HT
AR90R1	0	118.7	10.2	14.9	15

LETTER POSITIONS (X)																		LENGTH	SERIES/SIZE
M	a	m	m	o	t	h		S	i	t	e							82.6	EM 2000
10.5	19.9	28.4	40.4	51.7	58.8	65.5	70.8	78.8	87.8	91.8	97.8							86.8	
W	i	n	d		C	a	v	e		P	a	r	k					100.3	EM 2000
10.5	20.9	25.7	33.4	38.7	46.7	54.7	62.3	70.1	75.4	83.4	91	99.5	105.4					86.8	

SIGN DETAIL
1:40



Panel Style: guide_exp_distance.ssi
Dimensions are in inches.tenths

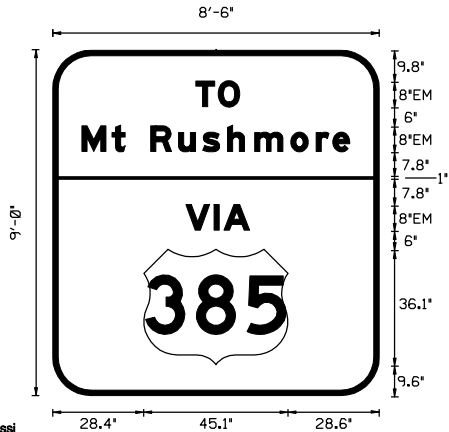
Letter locations are panel edge to lower left corner

SIGN NUMBER	Sta. 40+00 SB
WIDTH x HGHT.	11'-0" x 5'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: IV COLOR: Green
LEGEND/BORDER	TYPE: IV COLOR: WhiteWhite

SYMBOL	ROT	X	Y	WID	HT
ARUP	0	9.6	37.1	8	12.1
ARMED	0	109.7	25	8.2	12.7
ARMED	0	109.8	10.8	8	12.7

LETTER POSITIONS (X)																		LENGTH	SERIES/SIZE
O	e	i	r	i	c	h	s											51.7	EM 2000
25.7	34.1	41.9	46.7	52.6	58.7	64.4	72											85.8	
H	o	t		S	p	r	i	n	g	s								75.9	EM 2000
25.7	34.2	41.3	45.5	53.5	62.4	70.2	78.1	80.9	88.7	96.3								85.8	
E	d	g	e	m	o	n	t											61.8	EM 2000
25.7	33.1	40.8	48.6	56.3	67.6	75.5	83.2											85.8	

SIGN DETAIL
1:40



Panel Style: guide_exp_distance.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

SIGN NUMBER	US10385 - MRM 40.512
WIDTH x HGHT.	8'-6" x 9'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: IV COLOR: GreenGreen
LEGEND/BORDER	TYPE: IV COLOR: WhiteWhite

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	28.4	9.6	45.1	36.1

LETTER POSITIONS (X)																		LENGTH	SERIES/SIZE
T	O																	13.8	EM 2000
44.7	51.8																	8	
M	t		R	u	s	h	m	o	r	e								83.7	EM 2000
9.2	18.5	22.7	30.7	39.3	46.9	54.7	63.2	74.5	82.4	87.6								85.8	
V	I	A																20	EM 2000
41.7	50.5	53.5																8	

PLOT SCALE - 5.06000011.000000

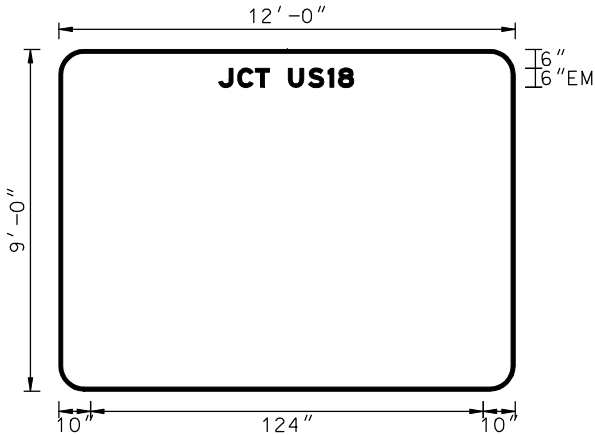
PLOTTED FROM - TRRC11625

SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-492	17	21

Plotting Date: 29-MAY-2012

SIGN DETAIL
1:50



Panel Style: guide_exp_general-services.ssi
Dimensions are in inches, tenths

Letter locations are panel edge to lower left corner

SIGN NUMBER	See Notes Below
WIDTH x HGHT.	12'-0" x 9'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: IV
	COLOR: Blue
LEGEND/BORDER	TYPE: IV
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

LETTER POSITIONS (X)																		LENGTH	SERIES/SIZE
J	C	T		U	S	1	8											42.8	EM 2000
50.7	56.7	62.3	66.7	72.7	79.1	85.3	88.6												6

- * A total of 4 are needed for the above sign.
- * Locations:
 - Sta. 24 + 00 NB
 - Sta. 27 + 00 NB
 - Sta. 49 + 00 SB
 - Sta. 52 + 00 SB
- * The DOT will affix appropriate logo panels and mileage after the signs are installed.

FILE - U:\REGIONRC\CONTRACTMAINTENANCE\FY2012\PLANS\12JU_MAYERICK JCT. SIGN\070916\12JU_SIGNDESIGN.DGN

SEE SHEETS 9 THRU 14

Dimensions are out to out of bars.

TRAFFIC
DIRECTION



FUSE & BACK PLATE INSTALLATION



TABLE 1-FUSE PLATE DATA

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

TABLE 5 - BACK PLATE DATA

Post Size	A	B	C	J	K	I	dI	12	Bolt Size
S3X5.7	2 5/8"	9/16"	1 1/2"	1 1/4"	4 1/2"	7"	5/8" φ	1/4"	1/2" φ
S4X7.7	2 5/8"	9/16"	1 1/2"	1 1/4"	4 7/8"	7"	5/8" φ	1/4"	1/2" φ
S5X10	3"	1 1/8"	1 5/8"	1 1/4"	4 3/4"	7 1/4"	3/4" φ	1/4"	5/8" φ
W6X12	4"	1 1/8"	2 1/8"	1 1/4"	4 3/4"	7 1/4"	3/4" φ	1/4"	5/8" φ
W6X15	4"	1 3/8"	3 1/4"	1 1/4"	5 1/4"	7 3/4"	3/4" φ	1/4"	5/8" φ
W6X20	6"	1 3/8"	3 1/4"	1 1/4"	5 1/4"	7 3/4"	3/4" φ	1/4"	5/8" φ
W8X18	5 1/4"	1 5/8"	2 5/8"	1 3/8"	5 3/4"	8 1/2"	7/8" φ	1/4"	3/4" φ
W8X21	5 1/4"	1 5/8"	2 5/8"	1 3/8"	5 3/4"	8 1/2"	7/8" φ	1/4"	3/4" φ
W8X24	6 1/8"	1 7/8"	3 1/2"	1 5/8"	6"	9 1/4"	1" φ	3/16"	7/8" φ
W8X28	6 1/2"	1 3/8"	3 3/8"	1 3/4"	6"	9 1/2"	1" φ	3/8"	7/8" φ
W8X31	8"	1 5/8"	4 3/4"	2"	6 1/2"	10 1/2"	1 1/8" φ	3/8"	1" φ
W10X33	8"	1 7/8"	4 1/2"	2 1/8"	7"	11-0"	1 1/8" φ	7/16"	1 1/8" φ

- * 1. Design Specifications: 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 - $f_c = 4000$ p.s.i.
3. Structural Steel shall conform 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 A82, 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 $1/2"$ 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 A153.
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 1.1 Structural Welding Code.


1. Place galvanized Sheet Metal Diaphragms on top of the lower silp plate.
2. Connect main post to Stub Post with clean unlubricated bolts and nuts with one Hardened Washer on each bolt between silp plates.
3. Plumb post by adding shims between silp 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 Silp Base Plate Data). Tighten bolts only to the torque specified. DO NOT OVERTIGHTEN. Check torque on each bolt after entire sign has been erected.

1. High strength bolts shall be tightened so as to obtain a residual tension by the use of load indicator washers.
2. High strength bolts may be tightened by the "Turn of the Nut" method as provided in Section 11.5.6.4.4 of the AASHTO Standard Specifications for Highway Bridges in lieu of #1 above.

The fabricator shall initially submit two (2) copies of the shop plans to the Office of Bridge Design for review. One reviewed copy will be sent back to the fabricator who will then make changes, if any, and then send the Office of Bridge Design six (6) final approved copies for distribution.

TWO-POST ONE-DIRECTION BREAKAWAY SIGN SUPPORTS

1 OF 2

✕	Pitch Correction	3/24/11	DM
*	Specification Update	7/11/05	AV
MK	REVISION	DATED	BY
DESIGNED BY RH/DM CNTYPCNX	DRAWN BY TB PCNXDSPG	CHECKED BY RH/DM RSTDRS2A	 BRIDGE ENGINEER

Plotting Date: 29-MAY-2012

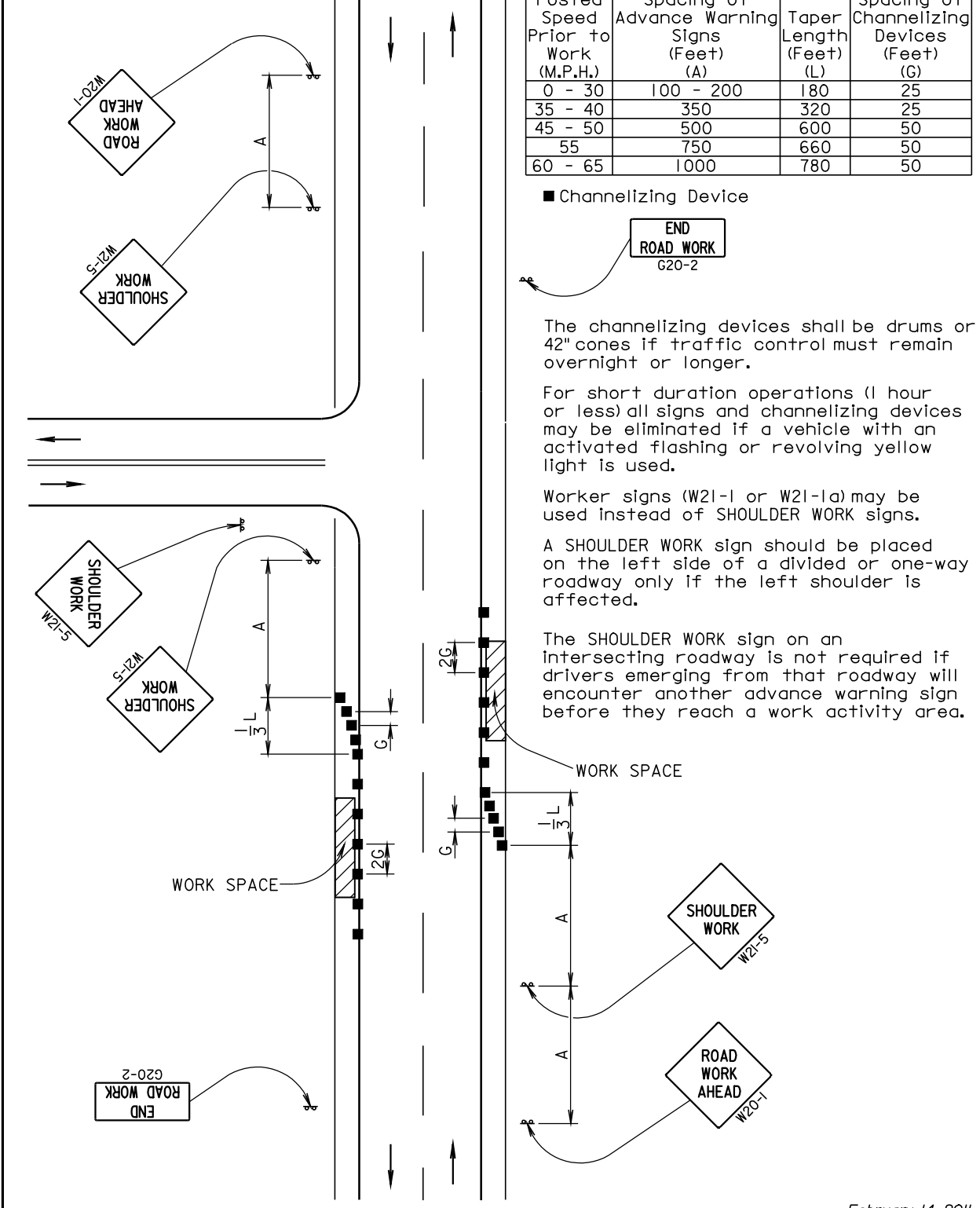
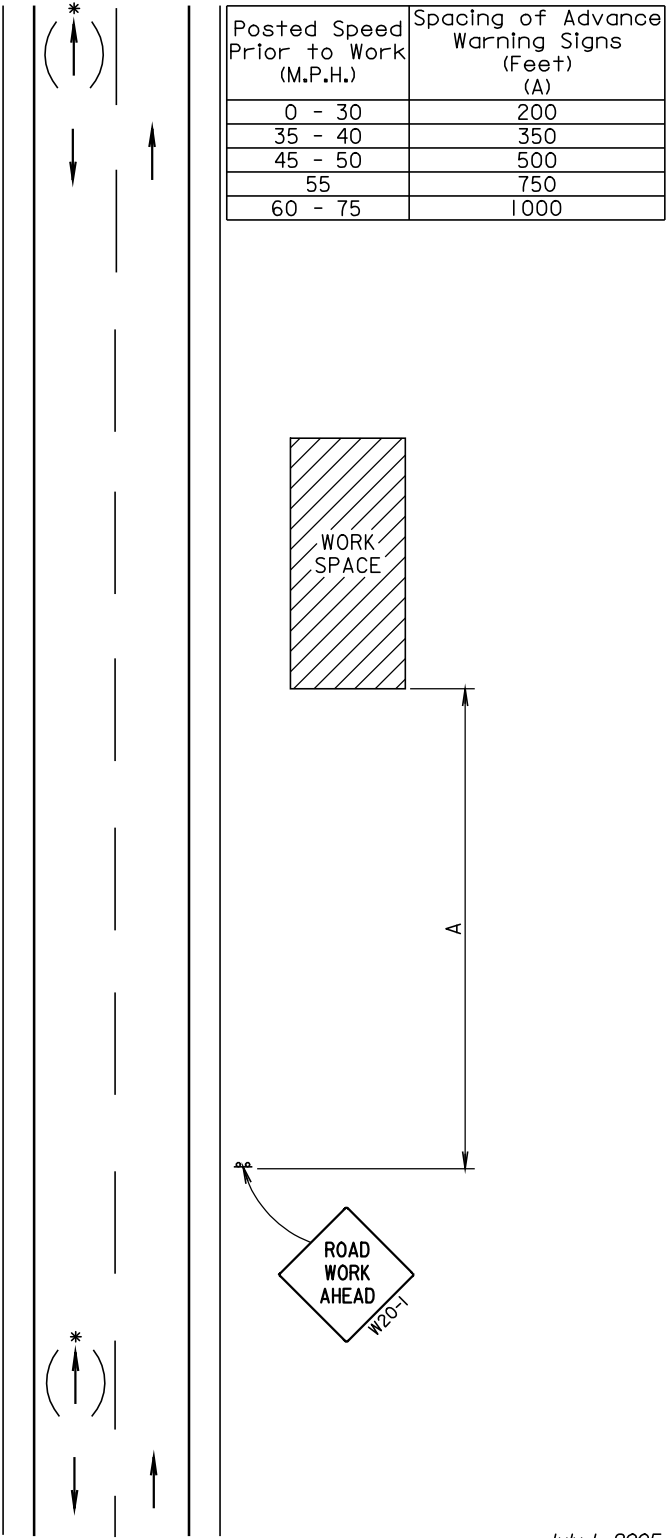
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

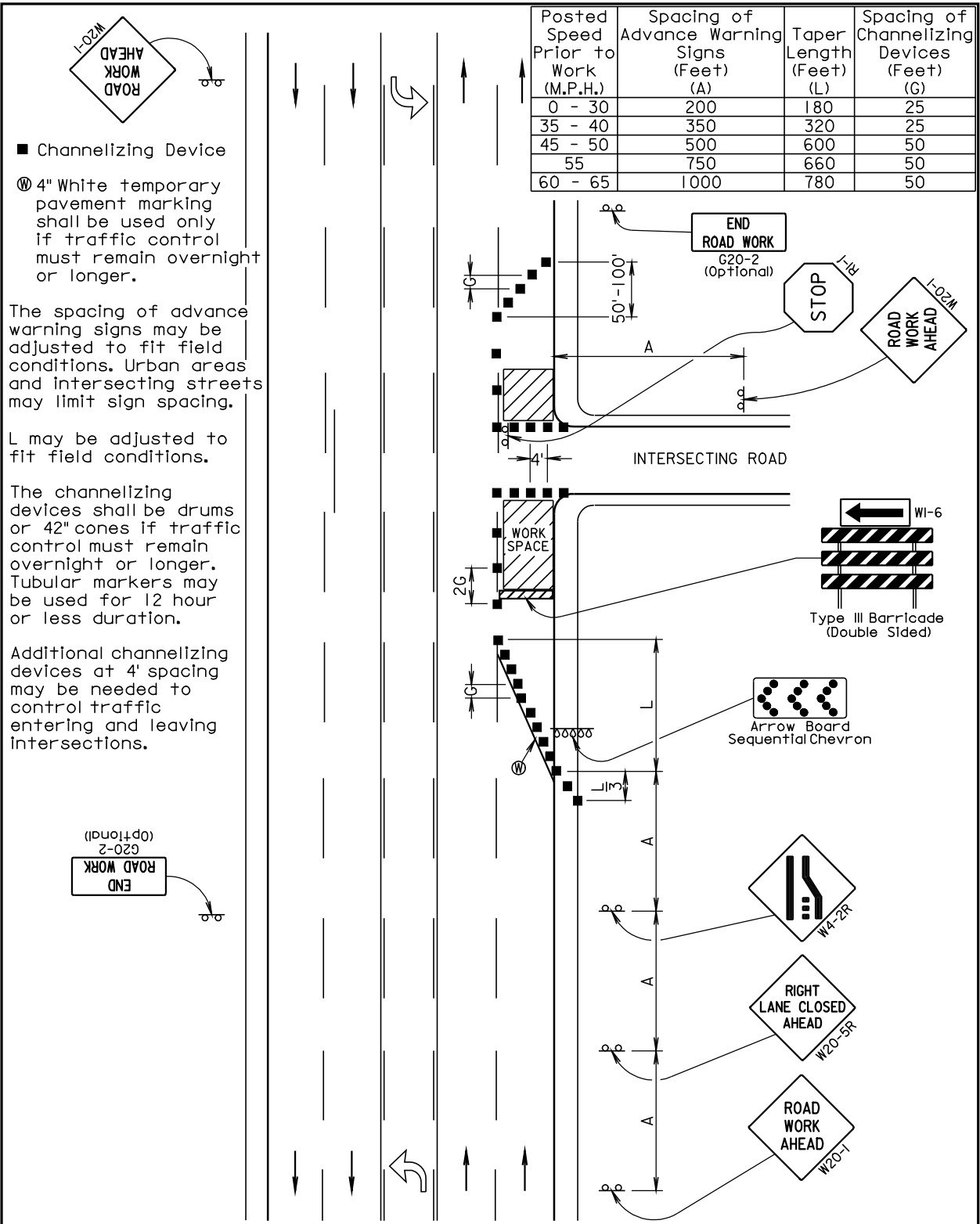
The signs illustrated shall be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.





September 14, 2011