

# SECTION C: TRAFFIC CONTROL PLANS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0908(105)349	C1	C17

Plotting Date: 07/01/2024

## INDEX OF SHEETS

- C1: General Layout with Index
- C2-C4: Estimate of Quantities and Plan Notes
- C5-C7: Overwidth Detour
- C8: 257th Off-Site Detour
- C9-C12: Special Sign Details
- C13-C17: Standard Plates

### BEGIN PT 0908(105)349

**BEGIN DRAINAGE MODIFICATIONS**  
 Station 36+12.00 = Station 765+83.56  
 on I-90-8(15)347 located 200.12 feet South and 579.58 feet East of the Interior 1/4 corner of Section 4 - Township 102 North - Range 57 West of the 5th P.M.  
 MRM 349.00+0.673

### END PT 0908(105)349

**END GRADING**  
 Station 570+00.00 = Station 355+17.75  
 on I-90-8(16)356 located 462.95 feet South and 1068.43 feet West of the East 1/4 corner of Section 6 - Township 102 North - Range 55 West of the 5th P.M.  
 MRM 359.00+0.801

**Construct Crossover**  
 Station 434+55

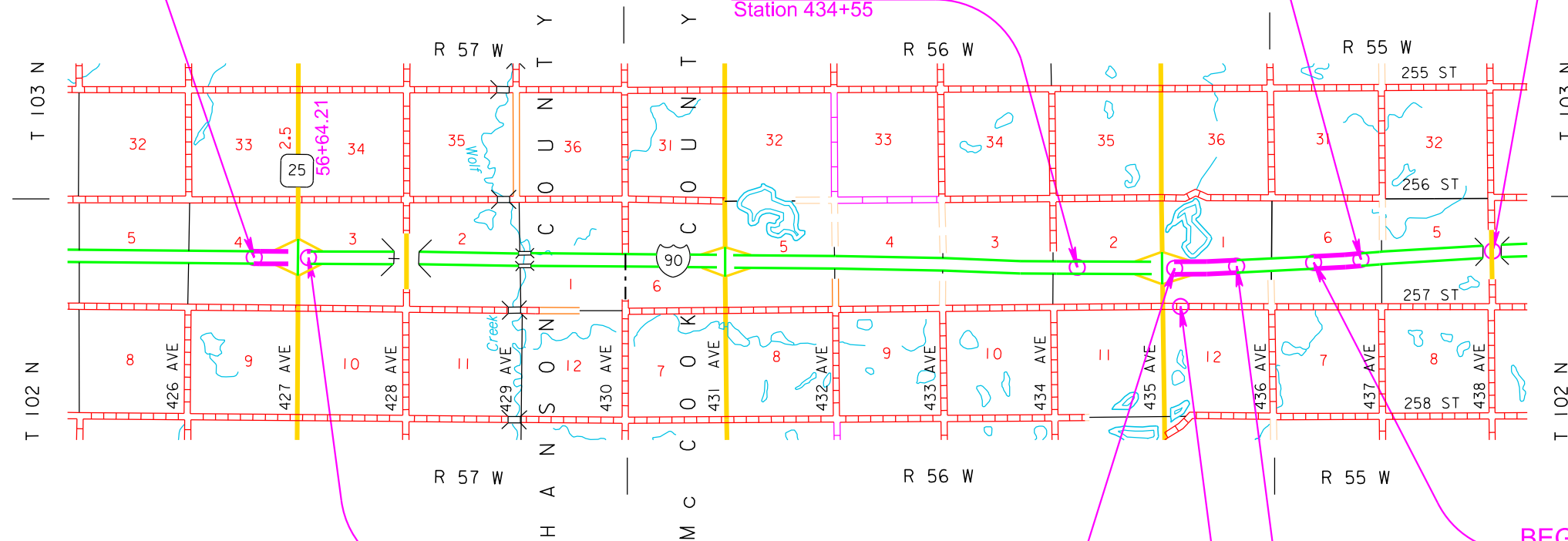
**Temporary Guardrail**  
 Station 633+60

### DESIGN DESIGNATION

AADT (2023)	12740
AADT (2048)	20842
DHV	2856
DHV T%	10.1%
AAAT T%	22.1%
V	80 mph

### STORM WATER PERMIT

Major Receiving Body of Water: Tributaries to James River  
 Area Disturbed: 33 acres  
 Total Project Area: 46 acres  
 Approx. Begin Lat,Long: 43.6656, -97.6741



Gross Length	6918.00 Feet	1.310 Miles
Length of Exceptions	0 Feet	0 Miles
Net Length	6918.00 Feet	1.310 Miles

**Replace Culvert**  
 Station 1+81.00

PLOT SCALE - 1:196.85

PLOTTED FROM - TRM113314

PLOT NAME - 28

FILE - ... \07W6 TC-MARKING.DGN

**ESTIMATE OF QUANTITIES**

PT 0908(105)349

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	60.0	Hour
634E0110	Traffic Control Signs	1,657.7	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	25	Each
634E0380	Tubular Marker	200	Each
634E0390	Replace Tubular Marker	20	Each
634E0420	Type C Advance Warning Arrow Board	4	Each
634E0630	Temporary Pavement Marking	14.5	Mile
634E1002	Detour and Restriction Signing	1,325.4	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	4	Each
634E1260	Truck/Trailer Mounted Attenuator	2	Each

**SEQUENCE OF OPERATIONS**

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

The Contractor will be allowed to work on any or all of the sites at one time. If working on multiple sites requires an increase in quantities of any traffic control items and truck mounted attenuators, those increases will be at the Contractor's expense.

**Site 1 – Drainage Modifications Sta 36+12 to 58+00 (I90 Exit 350)**

1. Install traffic control for lane closures with truck mounted attenuators on both I90 eastbound and westbound mainline driving lanes at 56+50.
2. Remove mainline guardrail to bore and jack pipe under mainline.
3. Install new pipe along mainline at 56+50.
4. Install guardrail after pipe installation is complete.
5. Remove traffic control on mainline.
6. Install traffic control for ditch work on ramps.
7. Bore and jack pipe under ramp and SD Hwy 25.
8. Remove traffic control for shoulder work on ramps.

**Site 2 – Grading 479+55 to 507+30, 548+45 to 570+00 (I90 Exit 357)**

1. Install width restriction signing as detailed in these plans.
2. Install traffic control for both the I90 westbound and eastbound lane closures with truck mounted attenuators on at the installation of the median crossover at 434+55.
3. Construct Crossover at 434+55
4. Install traffic control for lane closures with truck mounted attenuators on both I90 eastbound and westbound mainline driving lanes at 633+60.
5. Install temporary guardrail at 633+60 and 674+50 on I90 mainline.
6. Install traffic control for two-lane two-way in the eastbound lanes from the crossover near 434+55 to the crossover near I90 MRM 362.070.
7. Move all I-90 traffic to eastbound lanes.
8. Perform all pipe, grading, and surfacing work in the WB lanes of I90 and Ramp A of Exit 357
9. Install traffic control for two-lane two-way in the WB lanes from the crossover near 434+55 to the crossover near I90 MRM 362.070.
10. Move all I-90 traffic to WB lanes.

**SEQUENCE OF OPERATIONS (CONTINUED)**

11. Perform all pipe, grading, and surfacing work in the EB lanes of I90 and Ramp A and Ramp B of Exit 357.
12. Install permanent signing and pavement marking in eastbound lanes.
13. Move all traffic to appropriate lanes.
14. Install permanent signing and pavement marking in the westbound lanes.
15. Remove temporary traffic control devices.

**Site 3 – 257<sup>th</sup> St.**

1. Install traffic control on 257<sup>th</sup> St. & 435<sup>th</sup> Ave. and 257<sup>th</sup> St. and 436<sup>th</sup> Ave. for off-site detour per Standard Plate 634.29.
2. Remove existing culvert and install new culvert on 257<sup>th</sup> St.
3. Remove traffic control on 257<sup>th</sup> St. & 435<sup>th</sup> Ave. and 257<sup>th</sup> St. and 436<sup>th</sup> Ave.

**GENERAL TRAFFIC CONTROL**

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

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

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

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

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

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

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

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans. Additional Type 3 Barricades will be installed facing traffic within the closed lane at a spacing of ¼ mile.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

**GENERAL TRAFFIC CONTROL (CONTINUED)**

Lane closures will be limited to 5 miles in length. The distance between the closest points of any two-lane closures will be at least 3 miles, excluding tapers.

On Interstate projects with more than one construction site, slow moving equipment that operates at a speed less than 40 MPH may mobilize between sites if the equipment travels on the shoulder. The slow-moving equipment will also display a flashing amber light and a slow-moving sign.

Construction vehicles will exit or enter the construction work zone at locations identified by the Engineer. At no time will construction vehicles utilize the maintenance crossovers or the Interstate median to exit or enter Interstate traffic.

On Interstate projects with more than one construction site, slow moving equipment that operates at a speed less than 40 MPH may mobilize between sites if the equipment travels on the shoulder. The slow-moving equipment will also display a flashing amber light and a slow-moving sign.

**LANE CLOSURES**

Interstate lane closures shorter than 5 miles will be used if 5 miles is greater than the length of work that can be accomplished in one day's production. More than one lane closure may be permitted; however, there will be a minimum of a three-mile section between lane closures, excluding the tapers.

Interstate lane closures will be removed when work will not be occurring for a period of 3 or more calendar days. Activities that do not involve workers being present, such as curing time for concrete, constitute work. Lane closures will not be set up on a Friday if no work will be occurring on Saturday or Sunday. In these cases, the lane closure will be installed on Monday.

**OVERWIDTH RESTRICTION AND DETOUR SIGNING**

The Contractor will furnish and install the overwidth restriction and detour signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Overwidth restriction and detour signs will be installed on fixed location, ground mounted, breakaway supports. It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by the construction progress. Upon completion of the project, the Contractor will remove the overwidth restriction and detour signs.

All costs for furnishing the signs, posts, and mounting hardware, and for installing, maintaining, covering, and removing the overwidth restriction and detour signs will be incidental to the contract unit price per square foot for "Detour and Restriction Signing".

**FLAGGERS**

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours.

It is required that the flaggers be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

### WORK ZONE SPEED REDUCTION

The Department is required to obtain a speed reduction resolution prior to the installation of any SPEED LIMIT (R2-1) signs shown on standard plate 634.63. To provide adequate time for the resolution to be enacted, the Contractor will inform the Engineer a minimum of 3 weeks prior to the scheduled installation of any work zone speed reduction signs on the project. The information provided by the Contractor will include the anticipated date of sign installation, the newly reduced speed limit, the location of the work zone, and the anticipated completion date of work requiring the speed reduction.

### CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

One week prior to starting work affecting the traveling public, portable changeable message signs (PCMS) will be installed at locations detailed in the plans to notify drivers of the upcoming construction. The Contractor will install one message sign at each end of the two-way taper and have two extra signs to place at the Engineers request. The Contractor will program the portable changeable message signs with the following message:

REDUCE SPEED  
TWO WAY TRAFFIC AHEAD

REDUCE SPEED  
LANE CLOSURE AHEAD

REDUCE SPEED  
CURVE AHEAD

When work begins that will affect traffic patterns, the Contractor will re-program the PCMS with the messages as detailed in the plans.

### TEMPORARY PAVEMENT MARKING

On I90 lanes, temporary pavement marking (paint) will be used to mark applicable lane lines. The Contractor will paint white 4" edge line over the existing yellow 4" edge line prior to installation of two-way traffic control.

Temporary Pavement Marking Paint will be used on milled and leveling surfaces for centerlines, lane lines, skips, and as directed by the Engineer. The Temporary Pavement Marking Paint will be placed at the location of the existing pavement markings except that centerline will be double yellow the entire project length and will be offset 6-inches from centerline of the roadway. It will be the Contractor's responsibility to determine which direction to offset so that the markings do not get covered up when the first half of the roadway is paved. Any markings that get covered by the paving operation will be reestablished as directed by the Engineer at the Contractor's expense. The Contractor will be responsible for marking out those exact locations.

Temporary Flexible Vertical Markers (Tabs) will be used on the top lift of PCC concrete surfacing for the Interstate on exit ramps, and as directed by the Engineer. Tabs will be offset 6-inches from the location shown for permanent pavement markings. Centerline will be double yellow lines with tabs spaced at 5' the entire project length.

Covers on the tabs will be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers will be properly disposed of. The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

### TEMPORARY PAVEMENT MARKING (CONTINUED)

Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs after each installation as detailed below at no additional cost to the State.

No adjustment in the contract unit price for "Temporary Pavement Marking" will be made because of a variation in quantities.

Route No.	Temporary Pavement Marking Location	Length	
		Feet	Miles
I90 WB	Two-Way Traffic - Tangent Section Edgeline	30,841	5.841
I90 WB	Exit 357 Ramp A (Off Ramp) - Radius [Tabs]	850	0.161
I90 WB	Exit 357 Ramp A (Off Ramp) - Taper	300	0.057
I90 WB	Exit 357 Ramp D (On Ramp) - Radius [Tabs]	850	0.161
I90 WB	Exit Ramp D (On Ramp) - Taper	300	0.057
I90 WB	Exit Ramp D (On Ramp) - Parallel [Tabs]	300	0.057
I90 EB	Two-Way Traffic - Tangent Section Edgeline	30,841	5.841
I90 EB	Exit 357 Ramp B (On Ramp) - Radius [Tabs]	850	0.161
I90 EB	Exit 357 Ramp B (On Ramp) - Taper	300	0.057
I90 EB	Exit 357 Ramp B (On Ramp) - Parallel [Tabs]	300	0.057
I90 EB	Exit 357 Ramp C (Off Ramp) - Radius [Tabs]	850	0.161
I90 EB	Exit 357 Ramp C (Off Ramp) - Taper	300	0.057
I90 WB	Crossover - WB On (MRM 357.217)	1,000	0.190
I90 WB	Crossover - EB On (MRM 363.057)	1,000	0.190
I90 WB	Crossover - WB Entering Taper	1,125	0.214
I90 EB	Crossover - EB Entering Taper	1,125	0.214
I90 EB	Lane Closure - Taper (2 Sets)	1,920	0.364
I90 WB	Lane Closure - Driving Lane (2 Sets)	1,920	0.364
SD38/S D25/US 81	Standard Plate 634.25	1,296	0.246
<b>Total</b>		<b>76268</b>	<b>14.5</b>

### INCIDENTS

An incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic such as a crash, hazardous materials spill, or other event.

The Contractor will set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite the Department of Transportation, the South Dakota Highway Patrol, the Hanson & McCook County Sheriffs and local emergency response entities to the meeting.

The Contractor will assist to maintain traffic as required by these plan notes and as agreed to at that meeting.

Emergency vehicle access through the project will be considered and discussed at the meeting.

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs, and to provide flaggers to direct or detour traffic. The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

### INCIDENTS (CONTINUED)

No additional payment will be made for the modification of portable changeable message sign messages or the relocation of portable changeable message signs. Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate. Flaggers will be paid for at the contract unit price per hour for "Flagging".

### PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

### TRUCK/TRAILER MOUNTED ATTENUATOR

The Contractor will furnish truck or trailer mounted attenuator(s) to be used for the duration of the project. Truck or trailer mounted attenuators (TMAs) will meet the crashworthy requirements of NCHRP 350 or MASH Test Level 3. TMAs will be used and maintained in accordance with the manufacturers' recommendations.

The TMAs should be utilized on the project where workers and/or equipment are working next to the centerline of the roadway with live traffic in the adjacent lane, or as directed by the Engineer. The TMAs will be removed from the roadway at the end of each working day. The TMAs will remain the property of the Contractor at the end of the project.

The TMAs will be paid for at the contract unit price per each for Truck/Trailer Mounted Attenuator. Payment will be full compensation for furnishing, maintaining, relocating and removing as many times as required by the Engineer and the Contractor's operations.

In the event a TMA is hit while in service, the manufacturer will assess the TMA and make a recommendation as to whether it can be repaired or needs to be replaced. The Department will reimburse the Contractor for repairs as documented by invoices or pay for another TMA to be deployed to the project as needed.

### TUBULAR MARKERS

The color of the tubular markers on centerline will be predominately orange. The color of the tubular markers installed on the shoulders will be predominately white. The white tubular markers will be installed 2.0 feet from the existing edge line at intervals of approximately 480 feet.

All tubular markers will be a minimum of 28 inches in height. The base of the tubular marker should be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface after use. The pin used to connect the marker to the base will be of a type that will not puncture a vehicle tire if it should become dislodged from the base.

All costs for furnishing, installing, maintaining, and removing the tubular markers will be incidental to the contract unit price per each for "Tubular Marker".

**TRAFFIC CONTROL SIGNS**

**ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS**

SIGN CODE	SIGN DESCRIPTION	EXPRESSWAY / INTERSTATE			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	2	36"	7.5	15.0
R1-2	YIELD	2	36"	3.9	7.8
R2-1	SPEED LIMIT 45	4	36" x 48"	12.0	48.0
R2-1	SPEED LIMIT 65	12	36" x 48"	12.0	144.0
R2-1	SPEED LIMIT 80	4	36" x 48"	12.0	48.0
R2-6aP	FINES DOUBLE (plaque)	10	36" x 24"	6.0	60.0
R4-1	DO NOT PASS	2	36" x 48"	12.0	24.0
R4-7	KEEP RIGHT (symbol)	1	36" x 48"	12.0	12.0
R5-1	DO NOT ENTER	2	36" x 36"	9.0	18.0
R11-2	ROAD CLOSED	2	48" x 30"	10.0	20.0
W1-4	REVERSE CURVE (L or R)	5	48" x 48"	16.0	80.0
W1-6	LARGE ARROW (one direction)	2	60" x 30"	12.5	25.0
W3-1	STOP AHEAD (symbol)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (65 MPH)	8	48" x 48"	16.0	128.0
W4-1	MERGE (symbol)	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	8	48" x 48"	16.0	128.0
W6-3	TWO WAY TRAFFIC (symbol)	4	48" x 48"	16.0	64.0
W13-1P	ADVISORY SPEED "45 MPH" (plaque)	3	30" x 30"	6.3	18.9
W20-1	ROAD WORK AHEAD	10	48" x 48"	16.0	160.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	8	48" x 48"	16.0	128.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
W13-2	EXIT 45 MPH	2	36" x 48"	12.0	24.0
W13-3	RAMP 45 MPH	2	36" x 48"	12.0	24.0
W20-5	LEFT OR RIGHT LANE CLOSED 1/2 MILE	8	48" x 48"	16.0	128.0
G20-1	ROAD WORK NEXT 10 MILES	4	48" x 24"	8.0	32.0
G20-2	END ROAD WORK	3	48" x 24"	8.0	24.0
SPECIAL	EXIT 357 Bridgewater (45° ARROW)	1	60" x 42"	17.5	17.5
SPECIAL	EXIT 357 Bridgewater 1000 FT	1	60" x 42"	17.5	17.5
SPECIAL	EXIT 350, 353, 357, 364 (3 digits) (45° ARROW)	4	60" x 42"	17.5	70.0
		<b>EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT 1657.7</b>			

**DETOUR AND RESTRICTION SIGNS**

**ITEMIZED LIST FOR DETOUR AND RESTRICTION SIGNING**

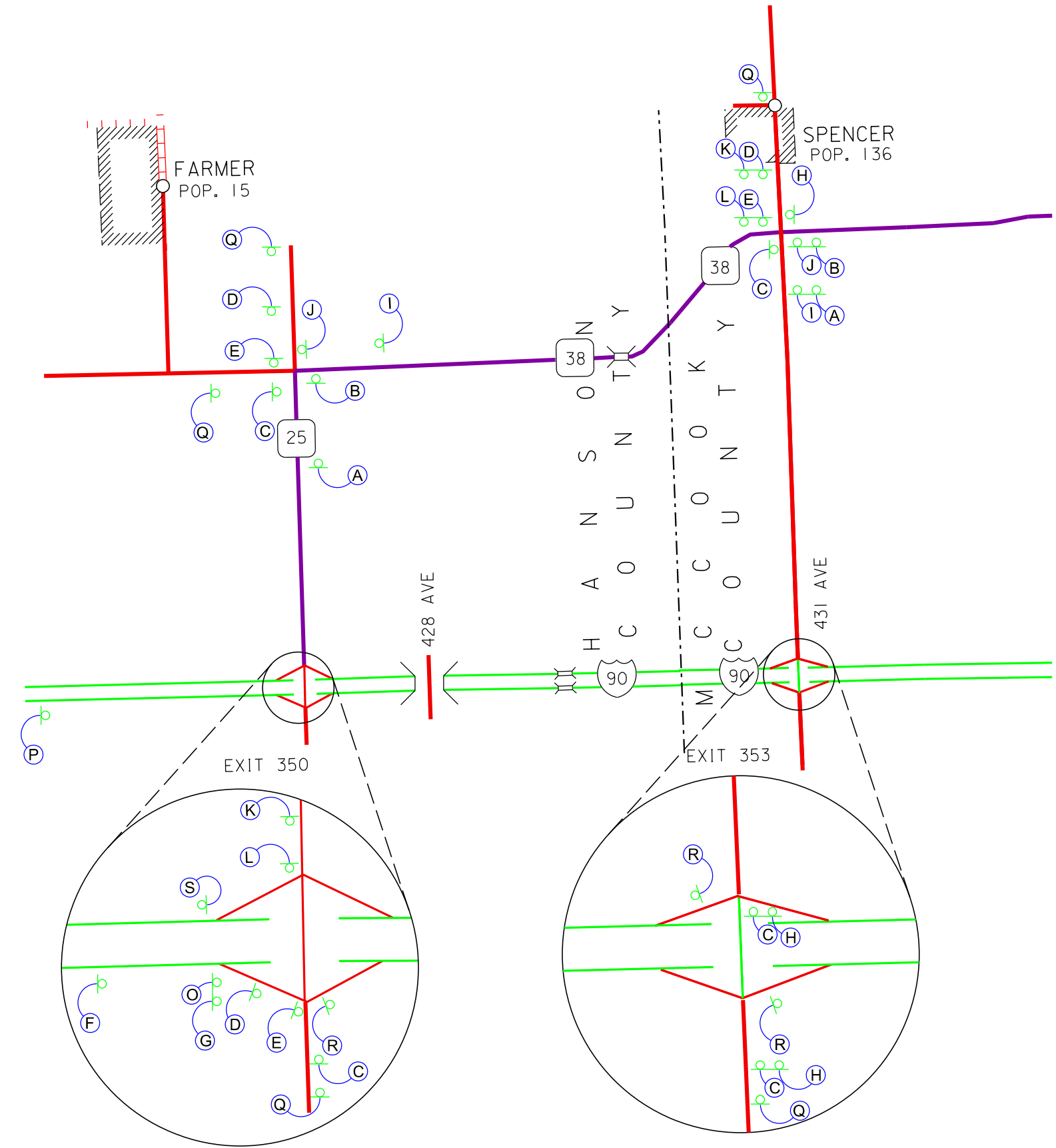
SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD				EXPRESSWAY / INTERSTATE			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	NO VEHICLES OVER 12 FT WIDE		" x "			8	72" x 24"	12.0	96.0
SPECIAL	VEHICLES OVER 12 FT WIDE EXIT HERE		" x "			2	120" x 48"	40.0	80.0
R11-2	ROAD CLOSED	2	48" x 30"	10.0	20.0		48" x 30"	10.0	
R11-3a	ROAD CLOSED 1/4 MILE AHEAD LOCAL TRAFFIC ONLY	1	60" x 30"	12.5	12.5				
R11-3a	ROAD CLOSED 3/4 MILE AHEAD LOCAL TRAFFIC ONLY	1	60" x 30"	12.5	12.5				
W20-2	DETOUR AHEAD	2	48" x 48"	16.0	32.0		48" x 48"	16.0	
W20-3	ROAD CLOSED 500 FT	2	48" x 48"	16.0	32.0		48" x 48"	16.0	
W20-3	ROAD CLOSED 1000 FT	1	48" x 48"	16.0	16.0		48" x 48"	16.0	
M1-1	INTERSTATE ROUTE MARKER (2 digits, 90)	47	24" x 24"	4.0	188.0	8	36" x 36"	9.0	72.0
M3-2	DIRECTION MARKER - EAST	27	24" x 12"	2.0	54.0	4	36" x 18"	4.5	18.0
M3-4	DIRECTION MARKER - WEST	26	24" x 12"	2.0	52.0	4	36" x 18"	4.5	18.0
M4-8	DETOUR	69	24" x 12"	2.0	138.0	8	30" x 15"	3.1	24.8
M4-8a	END DETOUR		24" x 18"	3.0		2	36" x 24"	6.0	12.0
M4-10	DETOUR ARROW (L or R)	2	48" x 18"	6.0	12.0		48" x 18"	6.0	
M5-1	ADVANCE TURN ARROW 90° (L or R)	24	21" x 15"	2.2	52.8	2	30" x 21"	4.4	8.8
M5-2	ADVANCE TURN ARROW 45° (L or R)		21" x 15"	2.2		2	30" x 21"	4.4	8.8
M6-1	DIRECTION ARROW - Horizontal Single Head (L or R)	26	21" x 15"	2.2	57.2		30" x 21"	4.4	
M6-3	DIRECTION ARROW - Vertical Single Head	9	21" x 15"	2.2	19.8	8	30" x 21"	4.4	35.2
SPECIAL	OVERWIDTH VEHICLES	47	24" x 18"	3.0	141.0	8	24" x 18"	3.0	24.0
M1-6	MCCOOK 14A COUNTY	22	24" x 24"	4.0	88.0		" x "		
		<b>CONVENTIONAL ROAD DETOUR AND RESTRICTION SIGNING SQFT 927.8</b>				<b>EXPRESSWAY / INTERSTATE DETOUR AND RESTRICTION SIGNING SQFT 397.6</b>			

# I90 OVERWIDTH DETOUR (I90 EXIT 350)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0908(105)349	C5	C17

Plotting Date: 06/28/2024

PLOT SCALE - 1:3627.49



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)			Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
	(A)	(B)	(C)		
0 - 30	200			180	25
35 - 40	350			320	25
45	500			600	25
50	500			600	50*
55	500			660	50*
	(A)	(B)	(C)		
60 - 65	500	1000	1300	780	50*
70 - 80	500	1000	1300	1125	50*

\* Spacing to be every 40' for 42" cones.

Notes:

1. Construction signs will not obscure existing signs and must be installed a minimum of 200' from an existing sign.
2. Signs will be placed 100'-200' from intersection. Exact location to be approved by the engineer.

PLOTTED FROM - TRM113314

FILE - ... \07W6 TC-MARKING.DGN PLOT NAME - 4

# I90 OVERWIDTH DETOUR (I90 EXIT 357)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0908(105)349	C6	C17

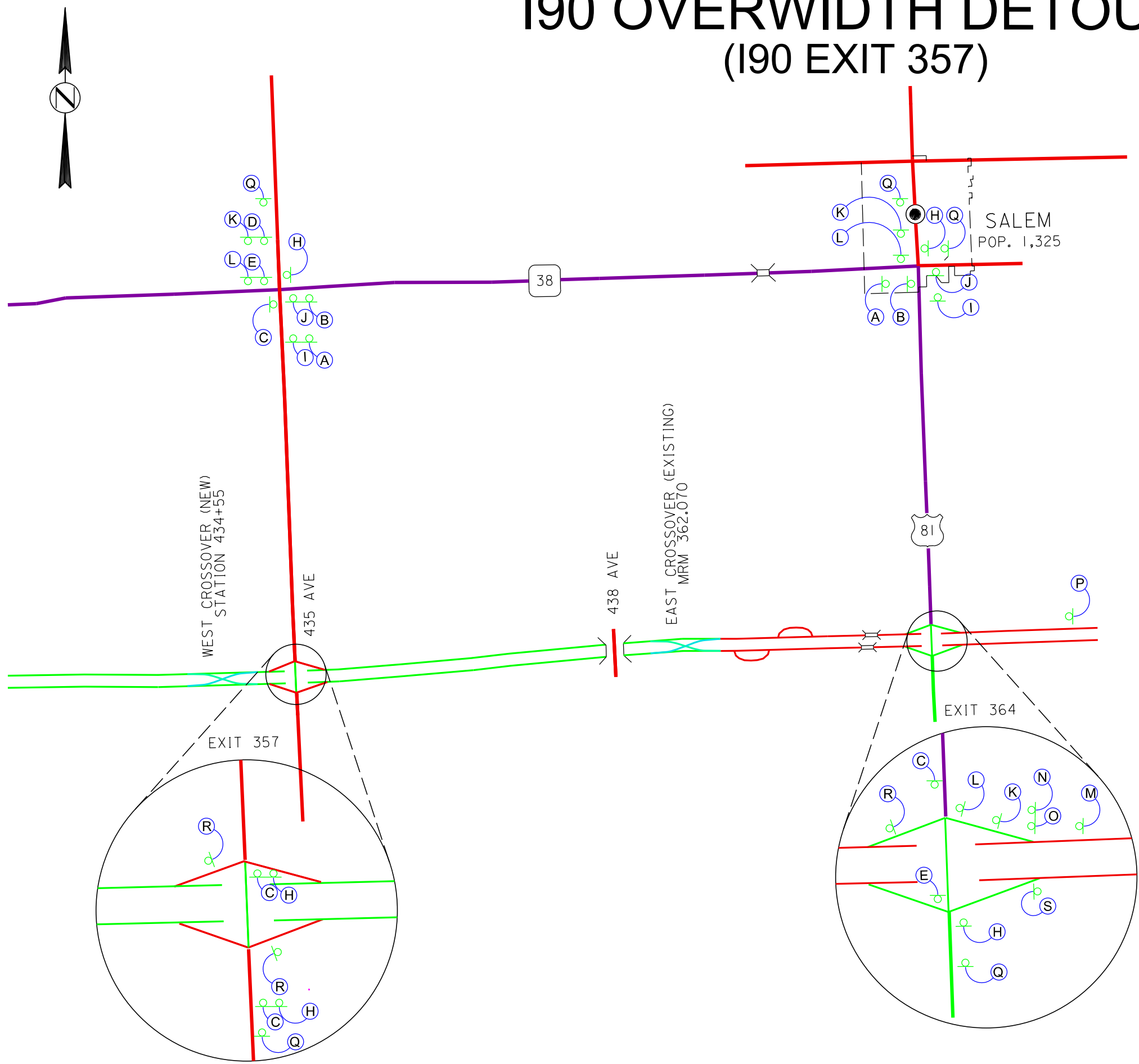
Plotting Date: 06/28/2024

PLOT SCALE - 1"=3627.49'

PLOTTED FROM - TRM113314

PLOT NAME - 5

FILE - ... \07W6 TC-MARKING.DGN



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)			Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
	(A)	(B)	(C)		
0 - 30	200			180	25
35 - 40	350			320	25
45	500			600	25
50	500			600	50*
55	500			660	50*
	(A)	(B)	(C)		
60 - 65	500	1000	1300	780	50*
70 - 80	500	1000	1300	1125	50*

\* Spacing to be every 40' for 42" cones.

Notes:

1. Construction signs will not obscure existing signs and must be installed a minimum of 200' from an existing sign.

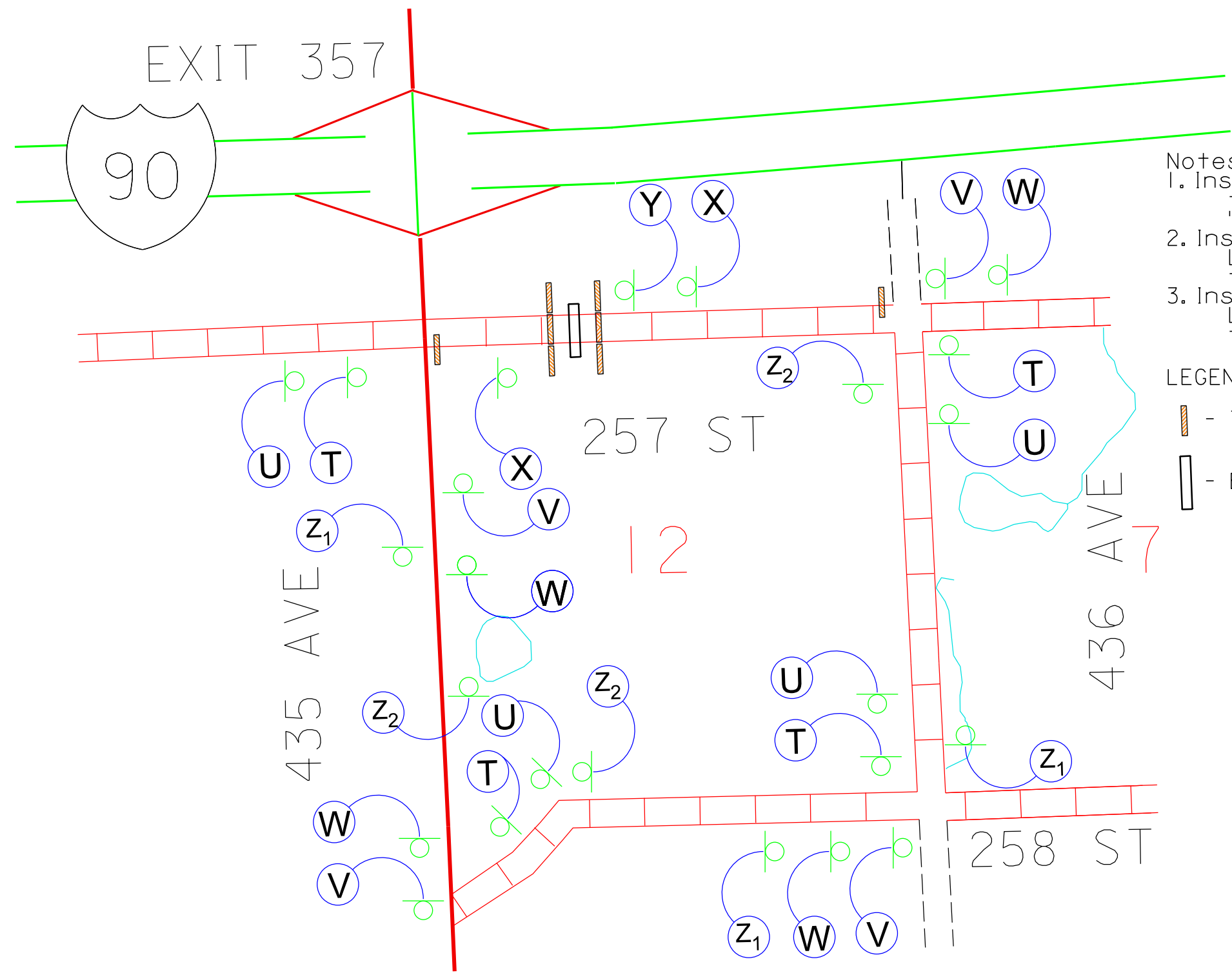
2. Signs will be placed 100'-200' from intersection. Exact location to be approved by the engineer.

# 257TH ST OFF-SITE DETOUR (438TH AVE : I90 EXIT 357 CROSSROAD)

STATE OF SOUTH DAKOTA	PROJECT PT 0908(105)349	SHEET C7	TOTAL SHEETS C17
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Plotting Date: 06/28/2024

PLOT SCALE - 1:3627.49



- Notes:
1. Install Traffic Control items according to Standard Plate 634.29  
"ROAD CLOSED WITH OFF-SITE DETOUR"
  2. Install "ROAD CLOSED 1/4 MILE AHEAD LOCAL TRAFFIC ONLY" (R11-3) sign at the intersection of 435th Ave. and 257th St..
  3. Install "ROAD CLOSED 3/4 MILE AHEAD LOCAL TRAFFIC ONLY" (R11-3) sign at the intersection of 436th Ave. and 257th St..

- LEGEND
- TYPE 3 BARRICADE
  - BOX CULVERT

PLOTTED FROM - TRM113314

PLOT NAME - 6

FILE - ... \07W6 TC-MARKING.DGN

# SIGN DETAILS (I90 DETOUR LEGEND)

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**EAST** M3-2  
INTERSTATE M1-1  
**90**  
M5-1 R  
**A**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**EAST** M3-2  
INTERSTATE M1-1  
**90**  
M6-1 R  
**B**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**EAST** M3-2  
INTERSTATE M1-1  
**90**  
M6-3  
**C**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**EAST** M3-2  
INTERSTATE M1-1  
**90**  
M5-1 L  
**D**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**EAST** M3-2  
INTERSTATE M1-1  
**90**  
M6-1 L  
**E**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**EAST** M3-2  
INTERSTATE M1-1  
**90**  
M5-2 R  
**F**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**EAST** M3-2  
INTERSTATE M1-1  
**90**  
M6-2 R  
**G**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**WEST** M3-4  
INTERSTATE M1-1  
**90**  
M6-3  
**H**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**WEST** M3-4  
INTERSTATE M1-1  
**90**  
M5-1 L  
**I**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**WEST** M3-4  
INTERSTATE M1-1  
**90**  
M6-1 L  
**J**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**WEST** M3-4  
INTERSTATE M1-1  
**90**  
M5-1 R  
**K**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**WEST** M3-4  
INTERSTATE M1-1  
**90**  
M6-1 R  
**L**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**WEST** M3-4  
INTERSTATE M1-1  
**90**  
M5-2 R  
**M**

**DETOUR** M4-8  
OVERWIDTH VEHICLES SPECIAL  
**WEST** M3-4  
INTERSTATE M1-1  
**90**  
M6-2 R  
**N**

PLOT SCALE - L3627.49

PLOTTED FROM - TRM113314

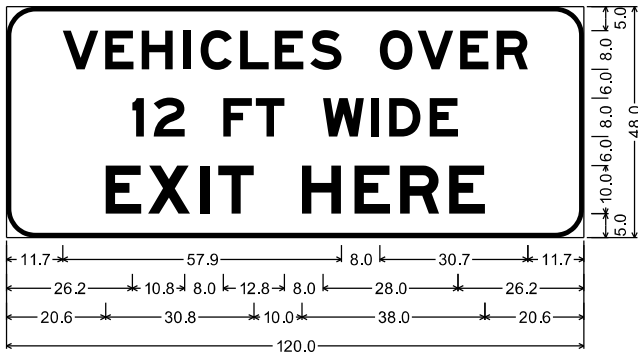
PLOT NAME - 7

FILE - ... \07W6 TC-MARKING.DGN



# SPECIAL SIGN DETAILS (I90 DETOUR LEGEND)

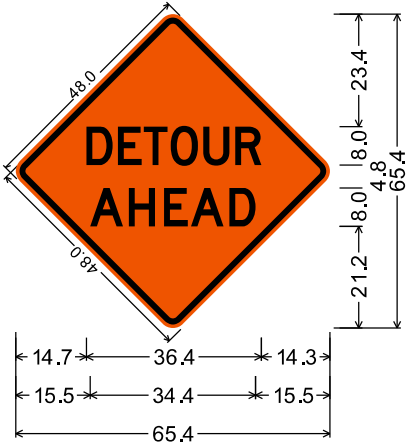
O



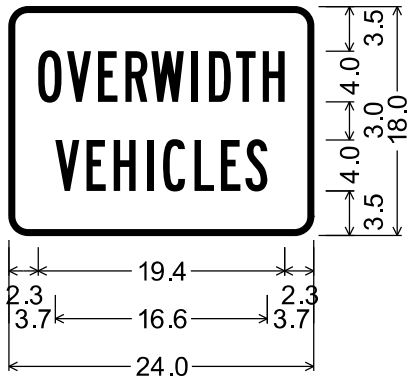
6.0" Radius, 1.0" Border, Black on White;  
 "VEHICLES OVER", E Mod 2K; "12 FT WIDE", E Mod 2K;  
 "EXIT HERE", E Mod 2K;  
 Table of letter and object lefts

V	E	H	I	C	L	E	S	O	V	E	R
11.7	20.5	28.1	36.8	40.3	48.6	55.8	63.1	77.6	85.4	94.2	101.8
I	Z	F	T	W	I	D	E				
26.2	30.6	45.0	51.8	65.8	75.7	79.5	87.9				
E	X	I	T	H	E	R	E				
20.6	29.4	40.2	44.0	61.4	72.3	81.8	92.0				

Q



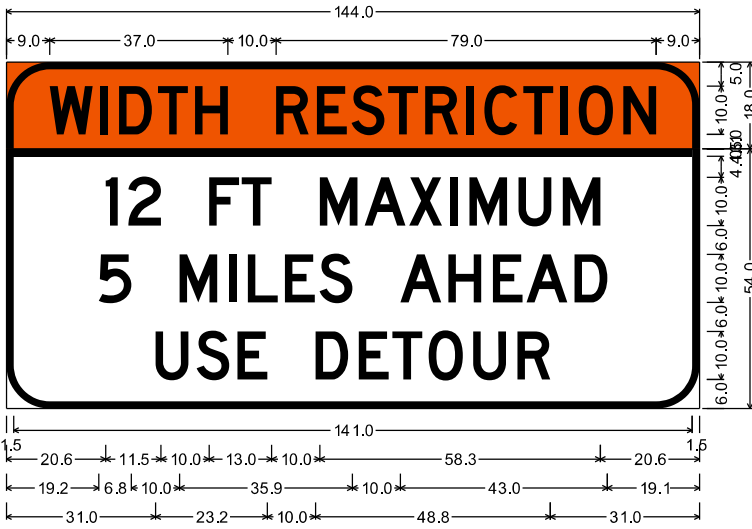
48.0" across sides 3.0" Radius, 1.3" Border, 0.8" Indent, Black on Orange;  
 "DETOUR", D 2K 63% spacing;  
 "AHEAD", D 2K;  
 Table of letter and object lefts



1.5" Radius, 0.5" Border, Black on White;  
 "OVERWIDTH", B 2K;  
 "VEHICLES", B 2K;  
 Table of letter and object lefts

SPECIAL SIGN FOR  
SIGN ASSEMBLIES  
A THROUGH N

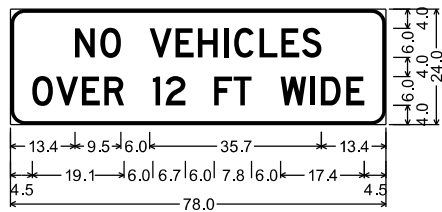
P



9.0" Radius, 1.5" Border, Black on Orange;  
 "WIDTH RESTRICTION", D 2K;  
 9.0" Radius, 1.5" Border, Black on White;  
 "12 FT MAXIMUM", D 2K; "5 MILES AHEAD", D 2K; "USE DETOUR", D 2K;  
 Table of letter and object lefts

W	I	D	T	H							
9.0	19.4	23.4	31.5	39.2							
R	E	S	T	R	I	C	T	I	O	N	
56.0	64.5	71.7	79.3	87.0	95.5	99.3	107.4	115.1	118.9	128.2	
1.5											
I	Z	F	T	M	A	X	I	M	U	M	
20.6	25.3	42.1	48.9	65.1	74.4	83.7	92.2	96.2	106.4	115.6	
S	M	I	L	E	S	A	H	E	A	D	
19.2	36.0	46.2	50.2	57.9	65.1	81.9	91.9	101.1	108.1	118.1	
U	S	E	D	E	T	O	U	R			

R



3.0" Radius, 0.8" Border, Black on White;  
 "NO VEHICLES", D 2K 90% spacing;  
 "OVER 12 FT WIDE", D 2K 90% spacing;  
 Table of letter and object lefts

N	O									
13.4	18.7									
V	E	H	I	C	L	E	S			
28.9	34.3	38.9	44.3	46.5	51.7	56.3	60.5			
O	V	E	R	I	Z	F	T			
4.5	9.5	14.8	19.5	29.6	32.3	42.3	46.4			
W	I	D	E							
56.1	62.2	64.5	69.8							

S



M4-8a

# SIGN DETAILS

(257TH ST OFF-SITE DETOUR)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0908(105)349	C10	C17

Plotting Date: 06/28/2024

PLOT SCALE - 1:3627.49

PLOT NAME - 9

FILE - ... \07W6 TC-MARKING.DGN

**DETOUR** M4-8  
**MCCOOK COUNTY 14A** M1-6  
**→** M6-1 R  
**T**

**DETOUR** M4-8  
**MCCOOK COUNTY 14A** M1-6  
**↗** M5-1 R  
**U**

**DETOUR** M4-8  
**MCCOOK COUNTY 14A** M1-6  
**←** M6-1 L  
**V**

**DETOUR** M4-8  
**MCCOOK COUNTY 14A** M1-6  
**↖** M5-1 L  
**W**

**DETOUR** M4-8  
**EAST** M3-2  
**MCCOOK COUNTY 14A** M1-6  
**Z<sub>1</sub>**

**DETOUR** M4-8  
**WEST** M3-4  
**MCCOOK COUNTY 14A** M1-6  
**Z<sub>2</sub>**

**ROAD CLOSED 500 FT** W20-3  
**X**

**ROAD CLOSED 1000 FT** W20-3  
**Y**

PLOTTED FROM - TRM113314

# SPECIAL SIGN DETAILS



5.0" Radius, 1.3" Border, White on Green;  
 "EXIT 357", E Mod 2K 80% spacing;  
 "Bridgewater", E Mod 2K 80% spacing;  
 "1000 FT", E Mod 2K;

Table of letter and object lefts

<b>E</b>	<b>X</b>	<b>I</b>	<b>T</b>	<b>3</b>	<b>5</b>	<b>7</b>
3.2	10.0	18.3	21.0	35.0	42.8	50.4

—
0.0

<b>B</b>	<b>r</b>	<b>i</b>	<b>d</b>	<b>g</b>	<b>e</b>	<b>w</b>	<b>a</b>	<b>t</b>	<b>e</b>	<b>r</b>
3.0	9.2	13.4	16.1	21.5	27.0	31.9	39.0	44.3	48.5	54.0

<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>F</b>	<b>T</b>
5.8	10.1	18.4	26.8	41.5	48.3



5.0" Radius, 1.3" Border, White on Green;  
 "EXIT 357", E Mod 2K 80% spacing;  
 "Bridgewater", E Mod 2K 80% spacing;  
 Standard Arrow 2.625 11.5" X 7.0" 45°;

Table of letter and object lefts

<b>E</b>	<b>X</b>	<b>I</b>	<b>T</b>	<b>3</b>	<b>5</b>	<b>7</b>
3.2	10.0	18.3	21.0	35.0	42.8	50.4

—
0.0

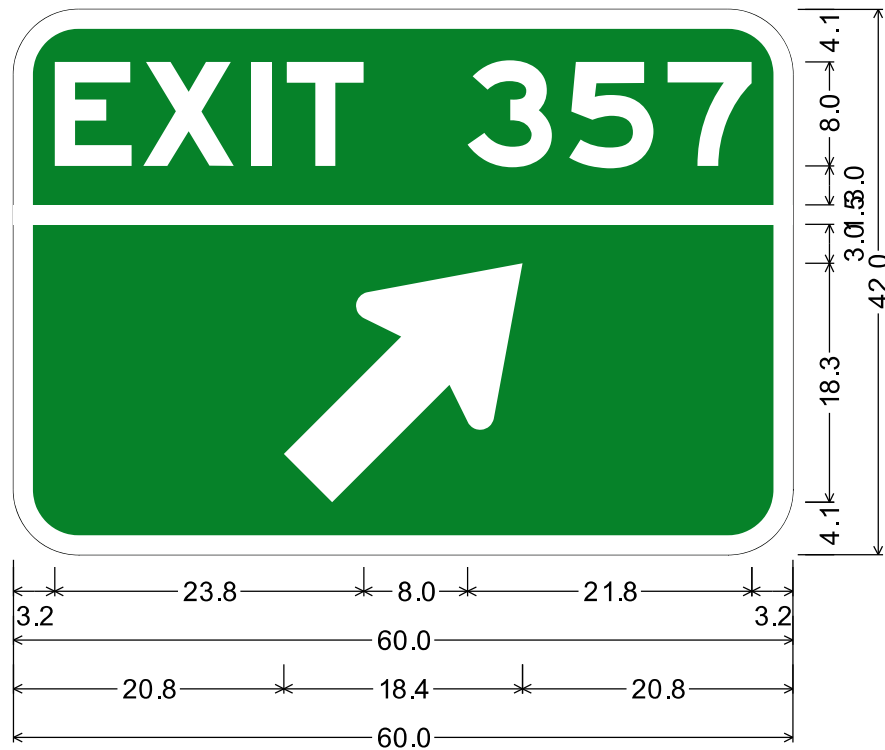
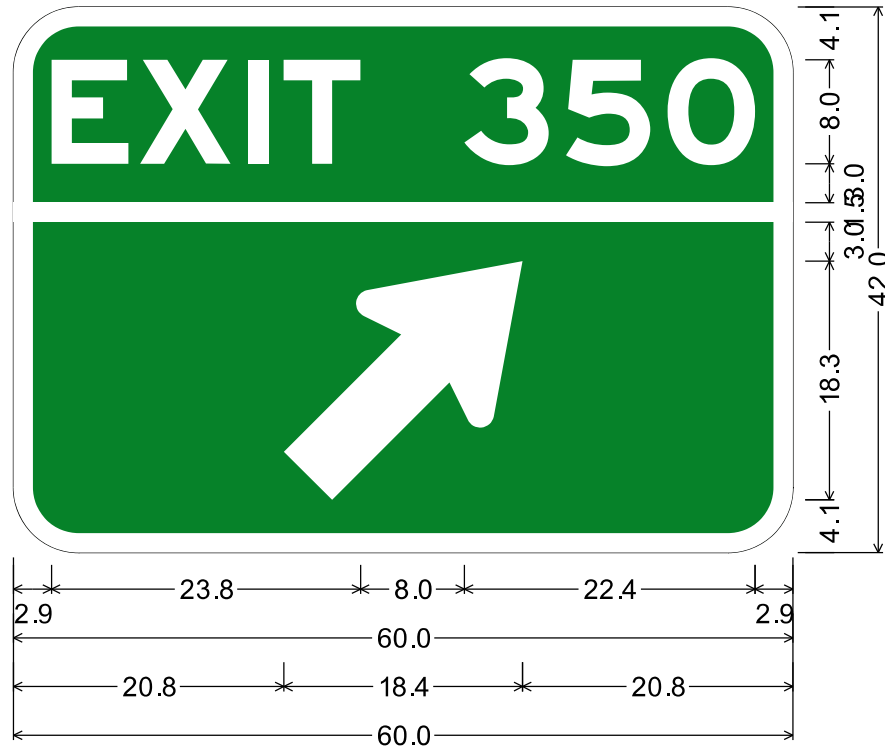
<b>B</b>	<b>r</b>	<b>i</b>	<b>d</b>	<b>g</b>	<b>e</b>	<b>w</b>	<b>a</b>	<b>t</b>	<b>e</b>	<b>r</b>
3.0	9.2	13.4	16.1	21.5	27.0	31.9	39.0	44.3	48.5	54.0

↗
25.5

# SPECIAL SIGN DETAILS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0908(105)349	C12	C17

Plotting Date: 06/28/2024



PLOT SCALE - 1:3627.49

PLOTTED FROM - TRM113314

PLOT NAME - 11

FILE - ... \07W6 TC-MARKING.DGN

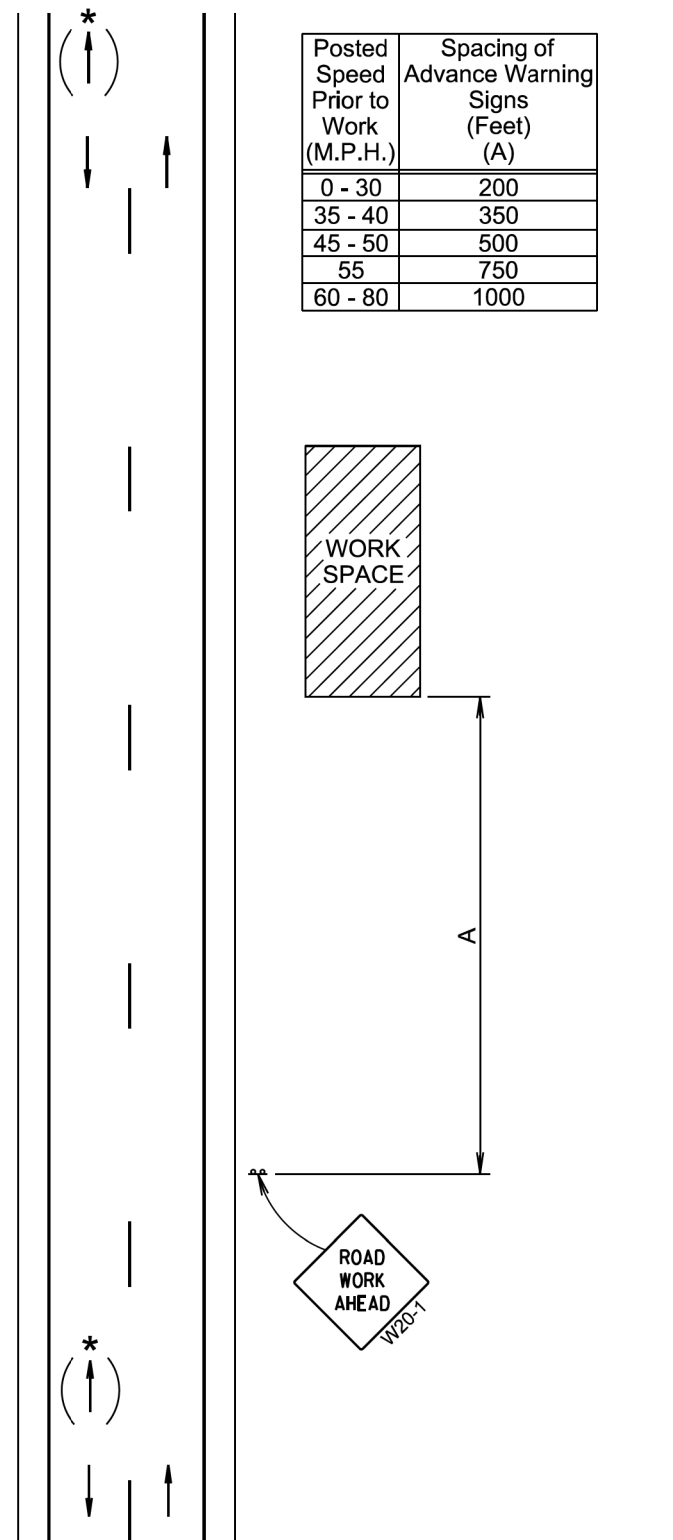
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will 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.



January 22, 2021

Published Date: 2025

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**WORK BEYOND THE SHOULDER**

PLATE NUMBER  
634.01

Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

- Flagger
- Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

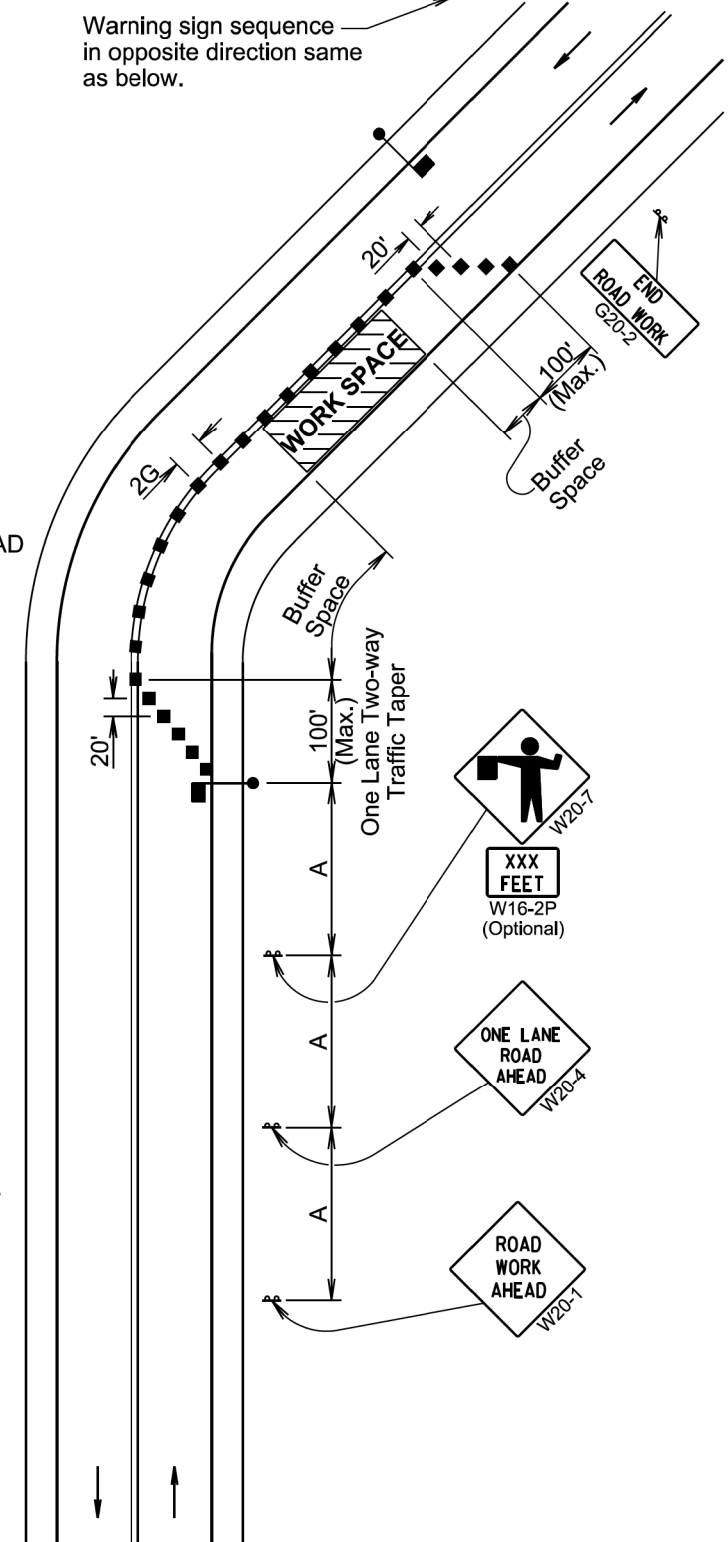
The channelizing devices will be drums or 42" cones.

Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.



January 22, 2021

Published Date: 2025

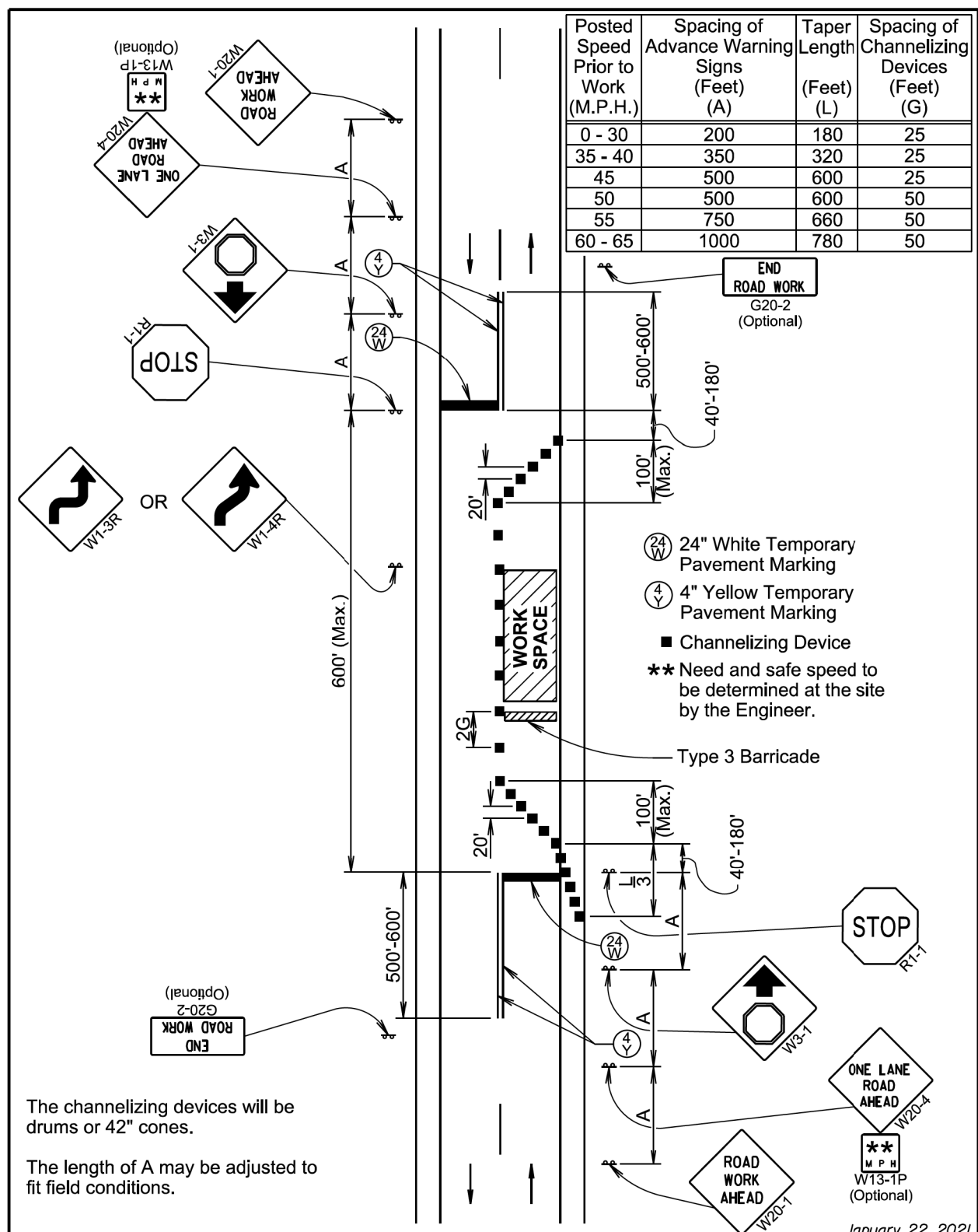
S  
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**LANE CLOSURE WITH FLAGGER PROVIDED**

PLATE NUMBER  
634.23

Sheet 1 of 1

PLOT SCALE - 1:199,992



The channelizing devices will be drums or 42" cones.

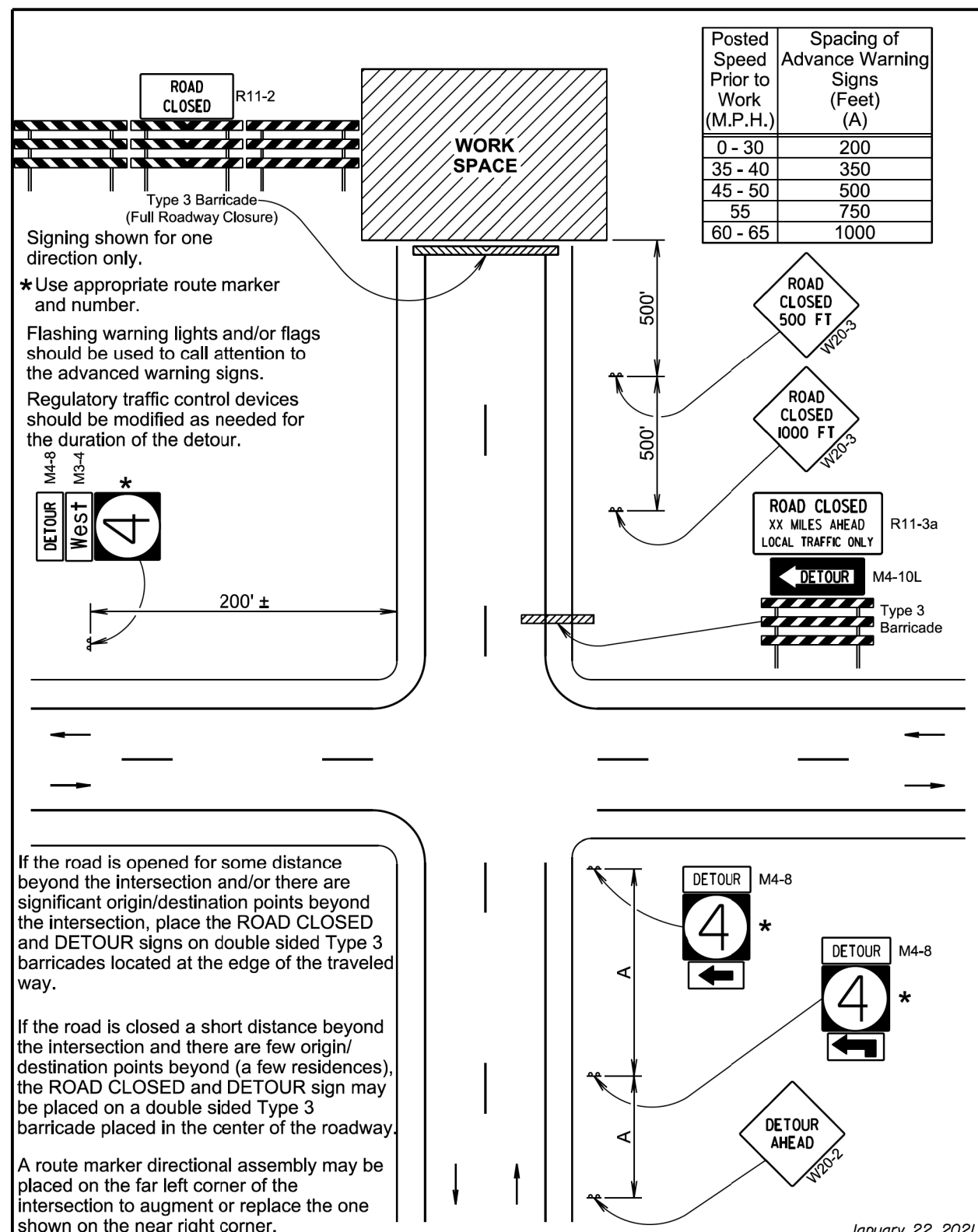
The length of A may be adjusted to fit field conditions.

January 22, 2021

<b>S D D O T</b>	<b>LANE CLOSURE USING STOP SIGNS</b>	PLATE NUMBER <b>634.25</b>
		Sheet 1 of 1

Published Date: 2025

PLOT NAME - 15  
FILE - ... \07W6 TC-MARKING.DGN



If the road is opened for some distance beyond the intersection and/or there are significant origin/destination points beyond the intersection, place the ROAD CLOSED and DETOUR signs on double sided Type 3 barricades located at the edge of the traveled way.

If the road is closed a short distance beyond the intersection and there are few origin/destination points beyond (a few residences), the ROAD CLOSED and DETOUR sign may be placed on a double sided Type 3 barricade placed in the center of the roadway.

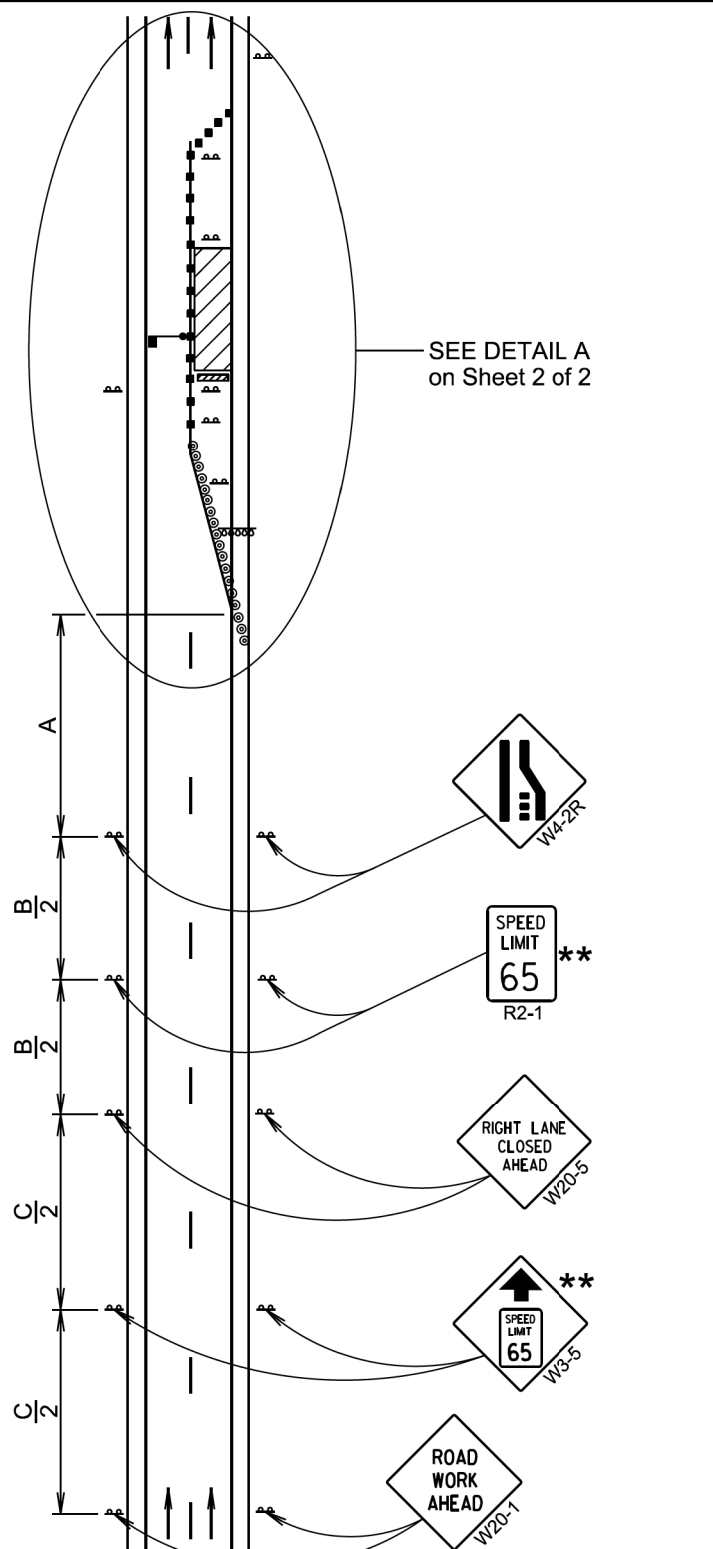
A route marker directional assembly may be placed on the far left corner of the intersection to augment or replace the one shown on the near right corner.

January 22, 2021

<b>S D D O T</b>	<b>ROAD CLOSED WITH OFF-SITE DETOUR</b>	PLATE NUMBER <b>634.29</b>
		Sheet 1 of 1

Published Date: 2025

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)		
	(A)	(B)	(C)
0 - 30	200		
35 - 40	350		
45 - 50	500		
55	750		
60 - 65	1000		
70 - 80	1000	1500	2640



\*\* Speed appropriate for location.

⊙ ReflectORIZED Drum

■ Channelizing Device

ROAD WORK AHEAD sign is only required in advance of the first lane closure.

High speed is defined as having a posted speed limit greater than 45 mph.

September 22, 2021

**S  
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**WORK ZONE SPEED REDUCTION  
FOR INTERSTATE AND HIGH  
SPEED MULTI-LANE HIGHWAYS**

PLATE NUMBER  
**634.63**

Sheet 1 of 2

Published Date: 2025

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Taper Length (Feet) (L)
0 - 30	25	180
35 - 40	25	320
45	25	600
50	50 *	600
55	50 *	660
60 - 65	50 *	780
70 - 80	50 *	960

\* Spacing is 40' for 42" cones.

\*\* Speed appropriate for location.

\*\*\* Use speed limit designated for the condition when workers are present in the work space. Signs will be covered or removed when workers are not present.

● Flagger (As Necessary)

⊙ ReflectORIZED Drum

■ Channelizing Device

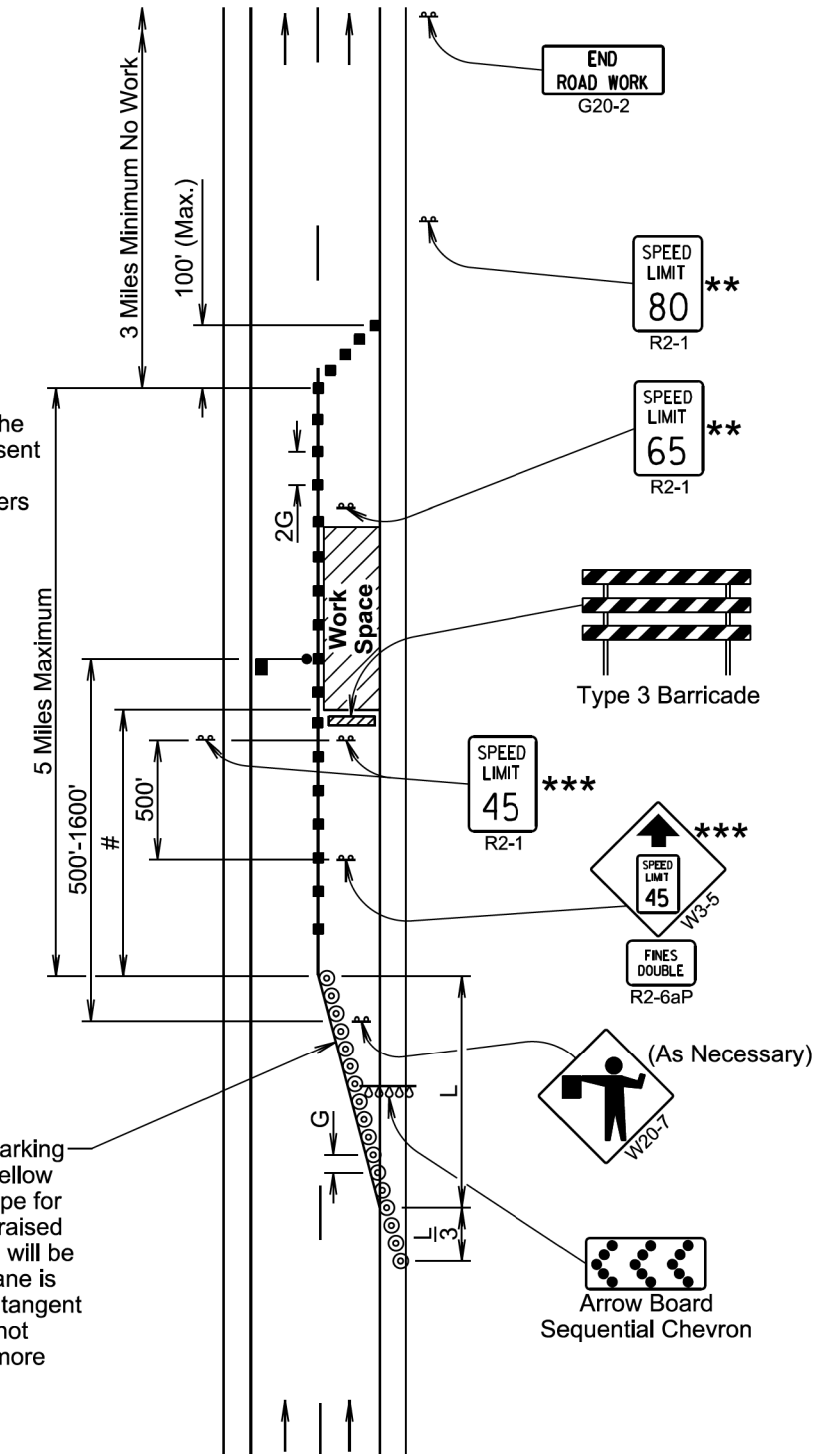
# The Work Space will be a minimum of 500' from the end of the taper.

The FLAGGER sign will be used whenever there is a Flagger present.

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary raised pavement markers at 5' spacing will be installed in the taper when the lane is closed overnight, and along the tangent section where the skip lines do not exist and the lane is closed for more than 3 days.



DETAIL A

September 22, 2021

**S  
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T**

**WORK ZONE SPEED REDUCTION  
FOR INTERSTATE AND HIGH  
SPEED MULTI-LANE HIGHWAYS**

PLATE NUMBER  
**634.63**

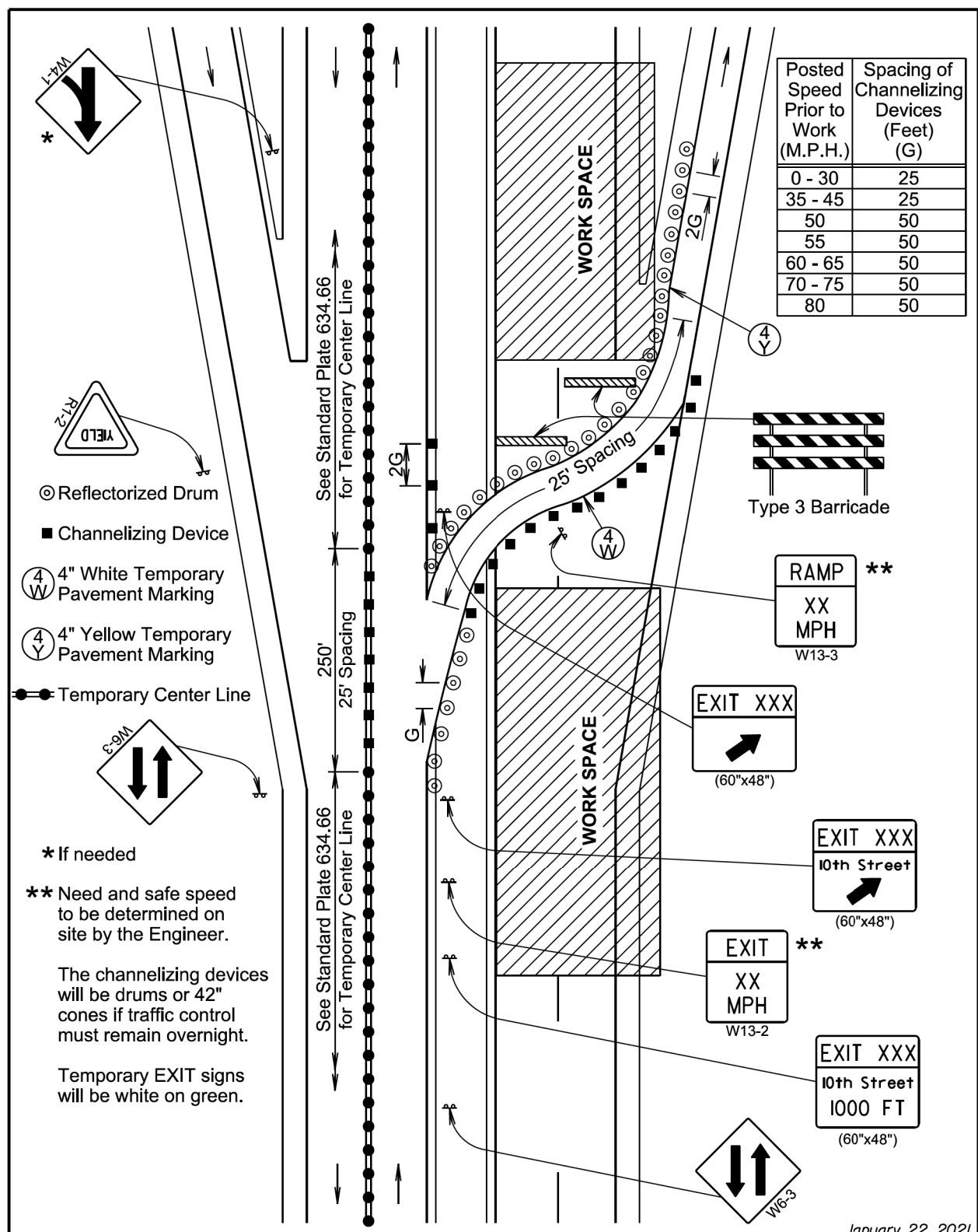
Sheet 2 of 2

Published Date: 2025





PLOT SCALE - 1:199,992



January 22, 2021

**SD DOT**

**MEDIAN CROSSOVER FOR EXIT RAMP**

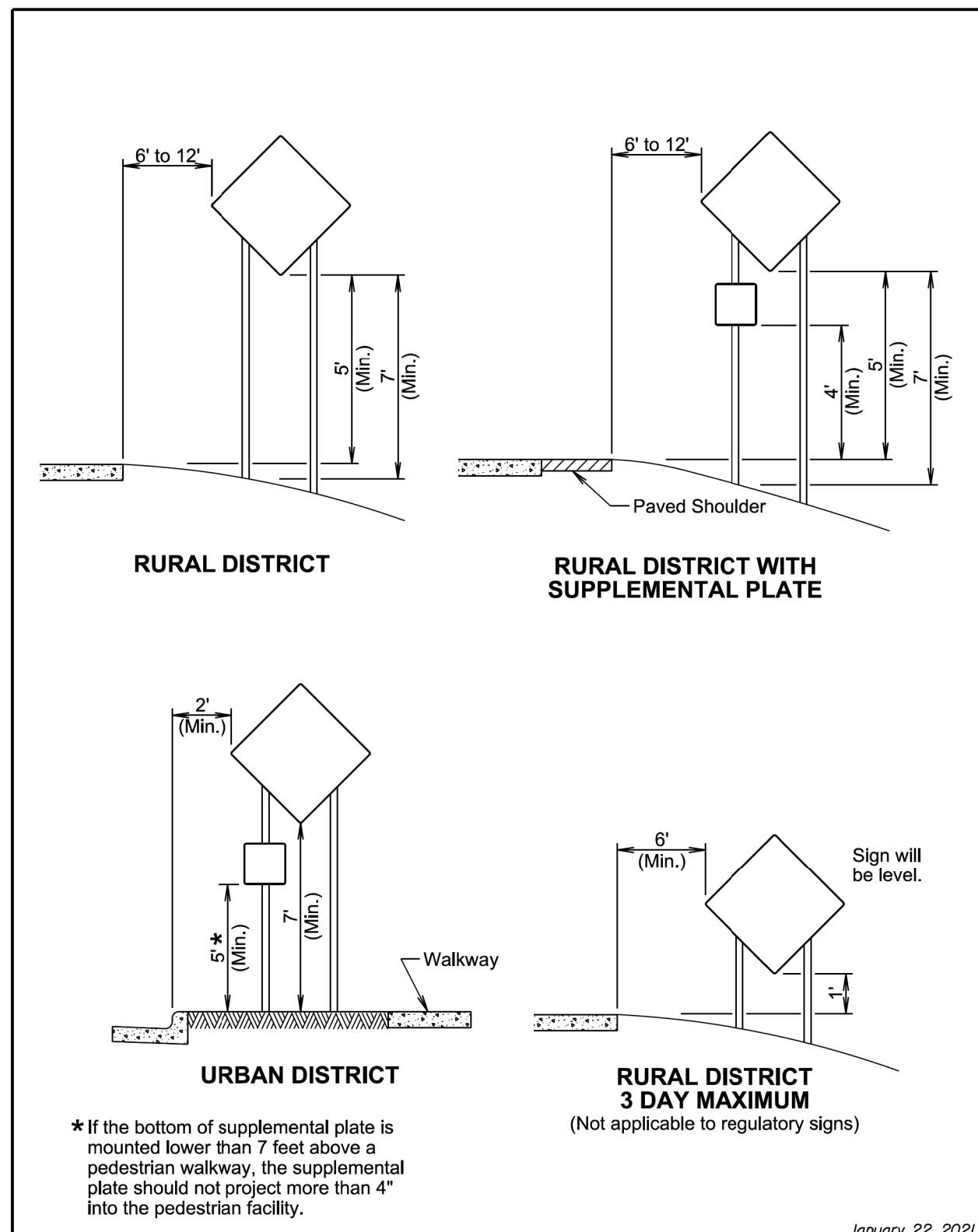
PLATE NUMBER  
**634.67**

Sheet 1 of 1

Published Date: 2025

- \* If needed
- \*\* Need and safe speed to be determined on site by the Engineer.
- The channelizing devices will be drums or 42" cones if traffic control must remain overnight.
- Temporary EXIT signs will be white on green.

PLOT NAME - 18  
FILE - ... \07W6 TC-MARKING.DGN



January 22, 2021

**SD DOT**

**CRASHWORTHY SIGN SUPPORTS  
(Typical Construction Signing)**

PLATE NUMBER  
**634.85**

Sheet 1 of 1

Published Date: 2025

\* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.