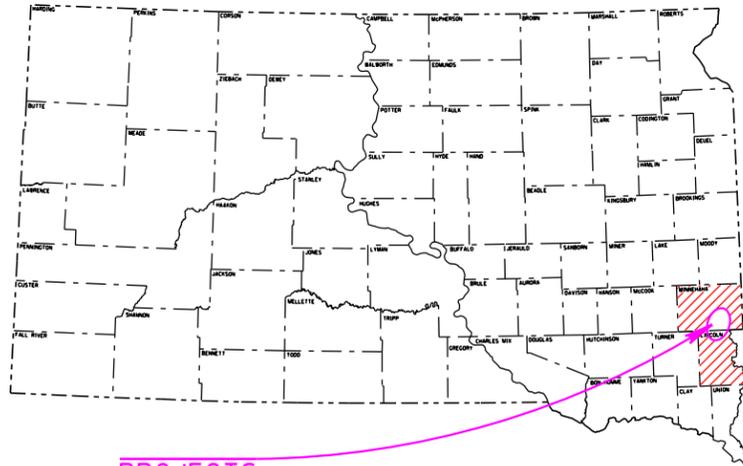


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(125)	1	11

Plotting Date: 02/20/2015 REVISED 2/20/15 GB

PLOT SCALE - 1:200



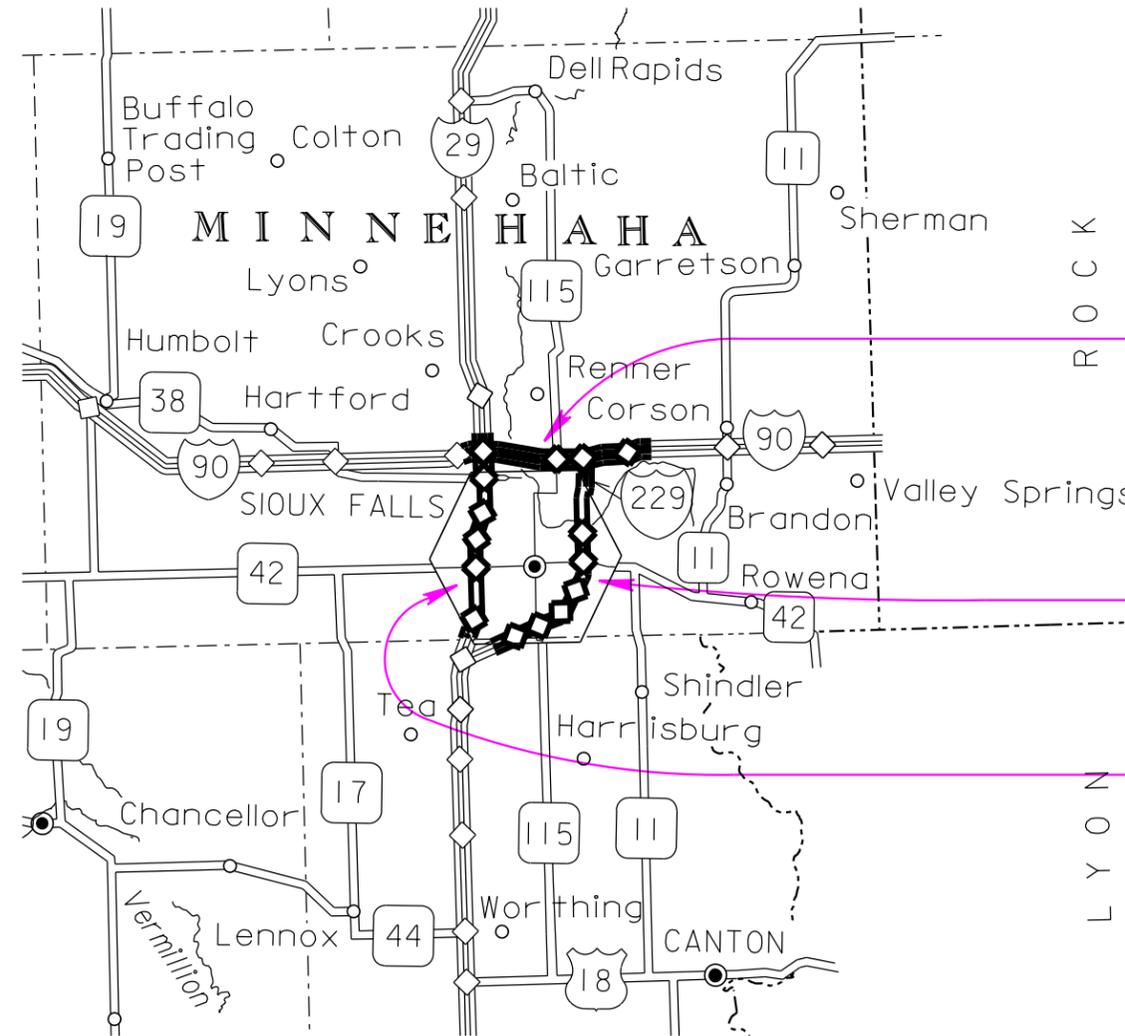
PROJECTS

STATE OF SOUTH DAKOTA
 DEPARTMENT OF TRANSPORTATION
 PLANS FOR PROPOSED
PROJECT PH 0020(125)
INTERSTATES 29, 90 & 229
MINNEHAHA and LINCOLN COUNTIES

INDEX OF SHEETS

Sheet 1	Title Sheet
Sheets 2 thru 3	Quantities & Notes
Sheets 5 thru 8	Pavement Marking Layouts
Sheets 8 thru 10	Standard Plates
Sheet 11	Ramp Traffic Control

DURABLE PAVEMENT MARKING
 PCN 02MQ



ADT's

I29 (MRM 76.19+0.383 - 84.92)	-	45,957
I229 (MRM 0.84+0.523 - 10.84)	-	36,697
I90 (MRM 394.72 - 404.00)	-	16,544

STORM WATER PERMIT
 (None Required)

I29 (MRM 76.19+0.383 - 84.92)	I229 (MRM 0.84+0.523 - 10.84)
GROSS LENGTH 44072.2 FEET	GROSS LENGTH 52800.0 FEET
NET LENGTH 44072.2 FEET	NET LENGTH 52800.0 FEET
I90 (MRM 394.72 - 404.00)	
GROSS LENGTH 48998.4 FEET	
NET LENGTH 48998.4 FEET	

I-90
 BEGIN MRM 394.72
 END MRM 404.00
 EXCEPTION MRM 397.262 - 401.468

I-229
 BEGIN MRM 0.84+0.523
 END MRM 10.84

I-29
 BEGIN MRM 76.19+0.383
 END MRM 84.92

9

PLOTTED FROM - TRM11119

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ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
633E3000	Durable Pavement Marking, 4" White	395,757	Ft
633E3005	Durable Pavement Marking, 4" Yellow	281,143	Ft
633E3010	Durable Pavement Marking, 8" White	740	Ft
633E3020	Durable Pavement Marking, 12" White	52,274	Ft
633E5050	Surface Preparation for Pavement Marking	760,016	Ft
633E5100	Grooving for Durable Pavement Marking, 4"	66,816	Ft
633E9200	Mobile Retroreflector Measurements	138,240	Mile
634E0010	Flagging	40	Hour
634E0100	Traffic Control	1,668	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	2	Each

SPECIFICATIONS

South Dakota Department of Transportation Standard Specifications for Roads and Bridges, 2004 Edition, Required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the State ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

- Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".
- Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all designated option borrow sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0020(125)	3	11

REVISED 2/20/15 GB

DESCRIPTION WORK

The project is broken down into 3 sections:

Section 1 – I-90 Minnehaha County (mrm 394.72 – 404.0 exception mrm 397.262 – 401.468). Work shall include grooving, surface prep and applying durable pavement marking on edgelines, center lines and turn lanes.

Section 2 – I-29 Minnehaha County (mrm 76.19+0.294 – 84.94). Work shall include surface prep and applying durable pavement marking on edgelines, mainline skip lines, skip lines across ramps and gore markings on both mainline and ramps.

Section 3 – I-229 Minnehaha and Lincoln Counties (mrm 0.84+0.523 – 10.84). Work shall include surface prep and applying durable pavement marking on edgelines, mainline skip lines, skip lines across ramps and gore markings on both mainline and ramps. A high friction surface treatment was applied in 2014 between mrm 5.95 +0.026 – 5.52 +0.098. No grooving or surface preparation will be allowed in this area. Markings applied to the high friction surface treatment shall be surface applied.

Grooving will only be required on I-90 from mrm 401.468 – 404.0.

All other locations previously grooved shall have surface preparation.

No grooving or surface preparation will be allowed on bridges. All markings applied to bridges shall be surface applied.

All work shall be completed on a section prior to taking retroreflectivity readings.

SURFACE PREPARATION

The durable markings to be provided and installed shall have any existing groove prepared.

The preparation shall result with the existing pavement marking being removed from the existing groove to reveal 90% of the pavement surface below the old marking.

The depth of preparation shall be adequate to inlay the durable marking below the pavement surface equivalent to the sum of the pavement marking thickness (including reflective media) +15 mils ± 5 mils clear coat.

All costs associated with preparation of the existing groove shall be incidental to the contract unit price per foot for Surface Preparation for Pavement Marking. Surface preparation shall be measured as 4" equivalent.

No grooving or surface preparation will be allowed on bridge decks. All pavement markings on bridge decks shall be surface applied.

GENERAL MAINTENANCE OF TRAFFIC

Lane closures shall be installed per standard plate 634.63 & 634.64 between 6:00 am and 6:30 pm. Interstate lane closures shall be manned. No un-manned lane closure shall be left in place.

Mobile works operations will only be allowed between the hours of 6:30 pm and 6:00 am.

No work will be allowed during peak hours of the day. The peak hours of the day are specified to be 7:00 am – 9:00 am and 3:45 pm – 6:00 pm.

Work on the white skip lines on the 2 and 3 lane roadway sections shall be done with the outside lane closure traffic control.

GENERAL MAINTENANCE OF TRAFFIC (CONTINUED)

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. 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 to 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.

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

Sufficient quantities and units for Traffic Control have been included to sign for two lane closures on a multi-lane highway. If the Contractor elects to use additional traffic control, the cost for additional traffic control devices or equipment shall be incidental to the contract unit price per Unit for Traffic Control.

Cost of equipment and traffic control devices on equipment for a mobile work operation, including arrow panels and signs, shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

Type 3 barricades shown on standard plate 634.63 Sheet 2 of 2, Work Zone Speed Reduction for Interstate and High Speed Multi-Lane Highways, will not be required.

COORDINATION OF PROJECTS

Project IM-P 0022(56) PCN 052K, Joint and Spall Repair on I-229 MRM 0.92 -0.529 – 10.00 -0.023 will be completed by another Contractor in 2015. Contact Travis Dressen (605-367-5680) The Sioux Falls Area Engineer for completion date.

The durable pavement markings shall be installed on the roadway after completion of the work on IM-P 0022(56) PCN 052K.

MOBILE RETROREFLECTIVITY MEASUREMENTS

All retroreflectivity measurements will be taken by an Independent Consultant hired by the Contractor. A retroreflectivity report of the measurements from the Independent Consultant shall be provided to the Engineer.

The Independent Consultant shall take measurements using a vehicle-mounted mobile retroreflectometer. The mobile retroreflectometer shall utilize 30 meter CEN geometry in accordance with ASTM E 1710 (Standard Test Method for Measurement of Retroreflective Pavement Markings Materials with CEN-Prescribed Geometry Reflectometers).

MOBILE RETROREFLECTIVITY MEASUREMENTS (CONTINUED)

The retroreflectometer shall be calibrated no less than twice a day in accordance with the operating manual and calibration guide for the particular machine and vehicle.

Measurement shall consist of the average retroreflective readings and standard deviations for pavement marking placed under this Contract. Retroreflectivity measurements shall be taken on each edgeline, mainline and ramp gore marking, and skip centerline marking. Measure each line type separately. Measurement units shall be mcd/m²/lux. Retroreflectivity shall be measured by taking a minimum 40 retroreflectivity readings within 528' (1/10 mile) on solid lines and a minimum 20 retroreflectivity readings within 528' (1/10 mile) on skip lines. Gore markings shall have a minimum of two retroreflectivity readings taken on each marking.

The average retroreflectivity readings for each individual 4" wide line shall be obtained at 528' (1/10 mile) intervals.

Payment will be made for the actual length of retroreflectivity measured. This is based on one laser instrument on one van that reads one line with each pass. Four passes are required for each mile of three-lane interstate in one direction; LEL – Left Edgeline, REL – Right Edgeline and all gore markings along right edgeline, LCL- Left Centerline and RCL Right Centerline. Three passes are required for each mile of two-lane interstate in one direction; LEL – Left Edgeline, REL – Right Edgeline and all gore markings along right edgeline, CL- Centerline. One additional pass per the length of the gore marking on the left side of the ramp will be required.

Measurements shall be obtained no sooner than 3 days and no later than 30 days after the completion of all the line applications required for an individual highway route. Excess beads or reflective elements must not be visible when the retroreflectivity testing is conducted.

Measurements shall be collected when pavement and markings are dry, clean and no visible moisture is on the road surface. These criteria define initial pavement marking retroreflectivity values. Markings shall be measured in the direction of intended vehicular travel. The Independent Consultant should expect to retest failed segments after the markings have been replaced at no additional cost to the State.

The averaged 528' (1/10 mile) retroreflectivity reading shall meet the requirements for retroreflectivity as specified in the Special Provision for Durable Markings. Any retroreflectivity readings not meeting the Special Provision shall be considered failed. Failed markings will be removed and remarked by the Contractor in 528' lengths.

The Contractor shall mark the begin and end of the length of line to be removed and remarked that is represented by the failed 528' (1/10 mile) averaged reading.

MOBILE RETROREFLECTIVITY MEASUREMENTS (CONTINUED)

The measurement report will be in the form of an electronic database file, or delimited text file, and contain all raw data collected. The electronic file must also contain a summary of findings. The retroreflectivity report, including the summary and a copy of the electronic file with all data, shall be provided to the Engineer. The measurement report will include:

- State Project number
- Trunk Highway number
- Date the measurements were taken
- Geographical location the measurements were taken including a distance from the nearest permanent site identification, such as a mile reference marker. The beginning and ending reference points of data collection rounded to the nearest thousandths of a mile and the beginning and ending coordinates determined by a Global Positioning System receiver with 3 meter accuracy, including the direction of travel in terms of increasing or decreasing reference points
- Identification of the pavement marking material including line type, color, age, and transverse location on the road. Identification of the marking to be included in the format; (LEL – Left Edgeline, REL – Right Edgeline, CL – Centerline, LL – Lane Line Skip, 1LL – left most LL in multilane, 2LL – second to left most LL in multilane, etc)
- Identification of the retroreflector
- A summary of the average retroreflective readings for each continuous length of 0.1 mile measured
- A separate summary of the gore marking retroreflectivity reading

Should another mobile unit be available, the maximum acceptable deviation for measurements made by the two different instruments of the same manufacturer and for the same roadway length shall be ± 10%.

Repeatability for the given mobile unit shall be ± 6%.

The locations of the measurements shall be randomly selected.

No final payment for pavement markings shall be made until the retroreflectivity measurements are taken and the retroreflectivity report is provided to the Engineer.

Cost for all mobile retroreflectivity measurements, reports, marking of failed lengths, equipment, materials and labor shall be included in the contract unit price per Mile for Mobile Retroreflectivity Measurements.

QUALITY ASSURANCE

A concrete pavement test deck site will be agreed upon. A 500' white and a 500' yellow stripe shall be marked by the Contractor on the test deck site. The Department and the Independent Consultant will conduct joint evaluations of both yellow and white longitudinal markings within the test site using the Department's handheld retroreflector and the Independent Consultant's mobile retroreflector. Five readings will be taken on the white marking and five readings will be taken on the yellow marking. The evaluation will be deemed successful if the mean average obtained by the Independent Consultant's mobilehigh traffic volumn retroreflector differs by less than 10% to the mean average obtained by the Department's handheld retroreflector for each color.

Cost for Quality Assurance shall be included in the contract unit price per Mile for Mobile Retroreflectivity Measurements.

ITEMIZED LIST FOR TRAFFIC CONTROL

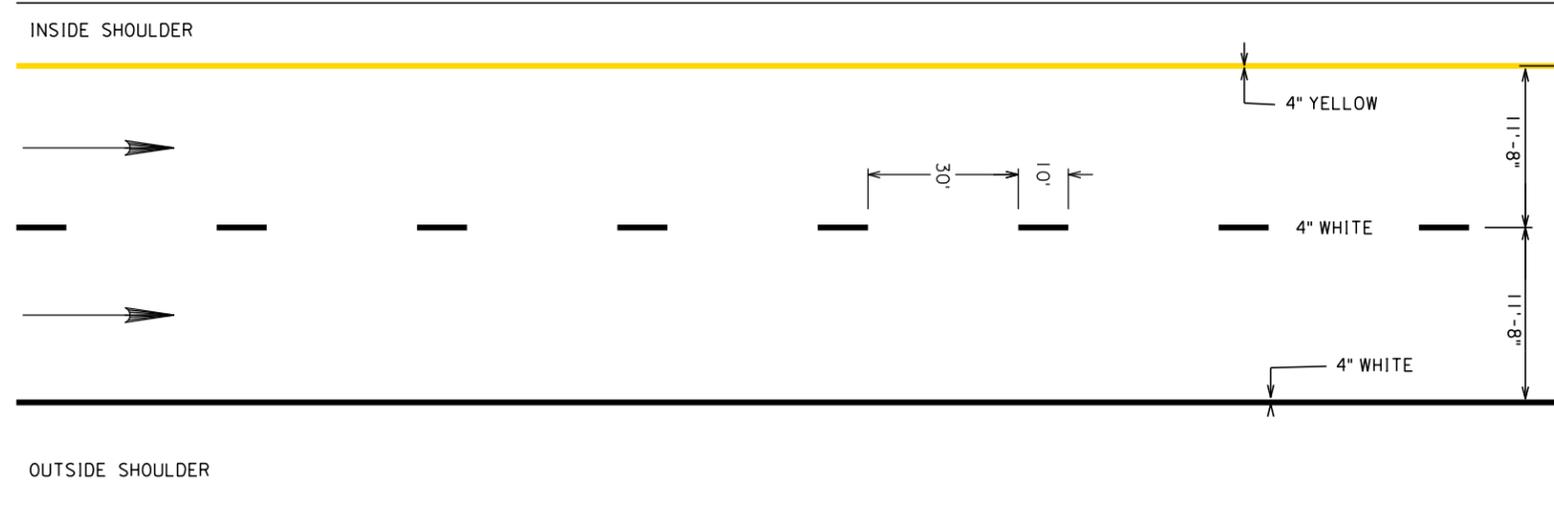
SIGN CODE	DESCRIPTION	EXPRESSWAY / INTERSTATE			
		NUMBER	SIGN SIZE	UNITS PER SIGN	UNITS
R1-1	STOP		36" x 36"	27	
R1-2	YIELD	4	48" x 48"	34	136
R2-1	SPEED LIMIT __	16	36" x 48"	29	464
R2-6aP	FINES DOUBLE (plaque)	2	36" x 24"	20	40
R4-7	KEEP RIGHT (symbol)		36" x 48"	29	
R5-1	DO NOT ENTER		36" x 36"	27	
R5-1a	WRONG WAY		42" x 30"	25	
R11-2	ROAD CLOSED		48" x 30"	27	
W1-1	LEFT or RIGHT TURN ARROW		48" x 48"	34	
W1-2	LEFT or RIGHT CURVE ARROW		48" x 48"	34	
W1-3	REVERSE TURN (L or R)		48" x 48"	34	
W1-4	REVERSE CURVE (L or R)		48" x 48"	34	
W3-1	STOP AHEAD (symbol)		48" x 48"	34	
W3-2	YIELD AHEAD (symbol)		48" x 48"	34	
W3-3	SIGNAL AHEAD (symbol)		48" x 48"	34	
W3-4	BE PREPARED TO STOP		48" x 48"	34	
W3-5	SPEED REDUCTION AHEAD (__ MPH)	6	48" x 48"	34	204
W4-1	MERGE (symbol)		48" x 48"	34	
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	34	136
W4-3	ADDED LANE (symbol)	2	48" x 48"	34	68
W5-3	ONE LANE BRIDGE		48" x 48"	34	
W7-3aP	NEXT __ MILES (plaque)		36" x 30"	23	
W8-1	BUMP		48" x 48"	34	
W8-6	TRUCK CROSSING		48" x 48"	34	
W8-7	LOOSE GRAVEL		48" x 48"	34	
W8-11	UNEVEN LANES		48" x 48"	34	
W8-17	SHOULDER DROP-OFF (symbol)		48" x 48"	34	
W8-17P	SHOULDER DROP-OFF (plaque)		30" x 24"	18	
W13-1P	ADVISORY SPEED (plaque)		30" x 30"	21	
W20-1	ROAD WORK AHEAD	8	48" x 48"	34	272
W20-2	DETOUR AHEAD		48" x 48"	34	
W20-3	ROAD CLOSED AHEAD		48" x 48"	34	
W20-4	ONE LANE ROAD AHEAD		48" x 48"	34	
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	34	136
W20-7	FLAGGER (symbol)	2	48" x 48"	34	68
W21-1	WORKERS (symbol)		48" x 48"	34	
W21-2	FRESH OIL		48" x 48"	34	
W21-3	ROAD MACHINERY AHEAD		48" x 48"	34	
W21-5	SHOULDER WORK		48" x 48"	34	
W21-5a	LEFT or RIGHT SHOULDER CLOSED		48" x 48"	34	
W21-5b	LEFT or RIGHT SHOULDER CLOSED AHEAD		48" x 48"	34	
G20-1	ROAD WORK NEXT __ MILES		48" x 24"	24	
G20-2	END ROAD WORK	2	48" x 24"	24	48
G20-5aP	WORK ZONE (plaque)		36" x 24"	20	
SPECIAL	EXIT GORE	4	36" x 32"	24	96
-	TYPE III OBJECT MARKER		12" x 36"	15	
-	TYPE 3 BARRICADE - 8' single sided			40	
-	TYPE 3 BARRICADE - 8' double sided			56	
TOTAL UNITS					1668

LAYOUT FOR APPLICATION OF DURABLE MARKINGS (TYPICAL)

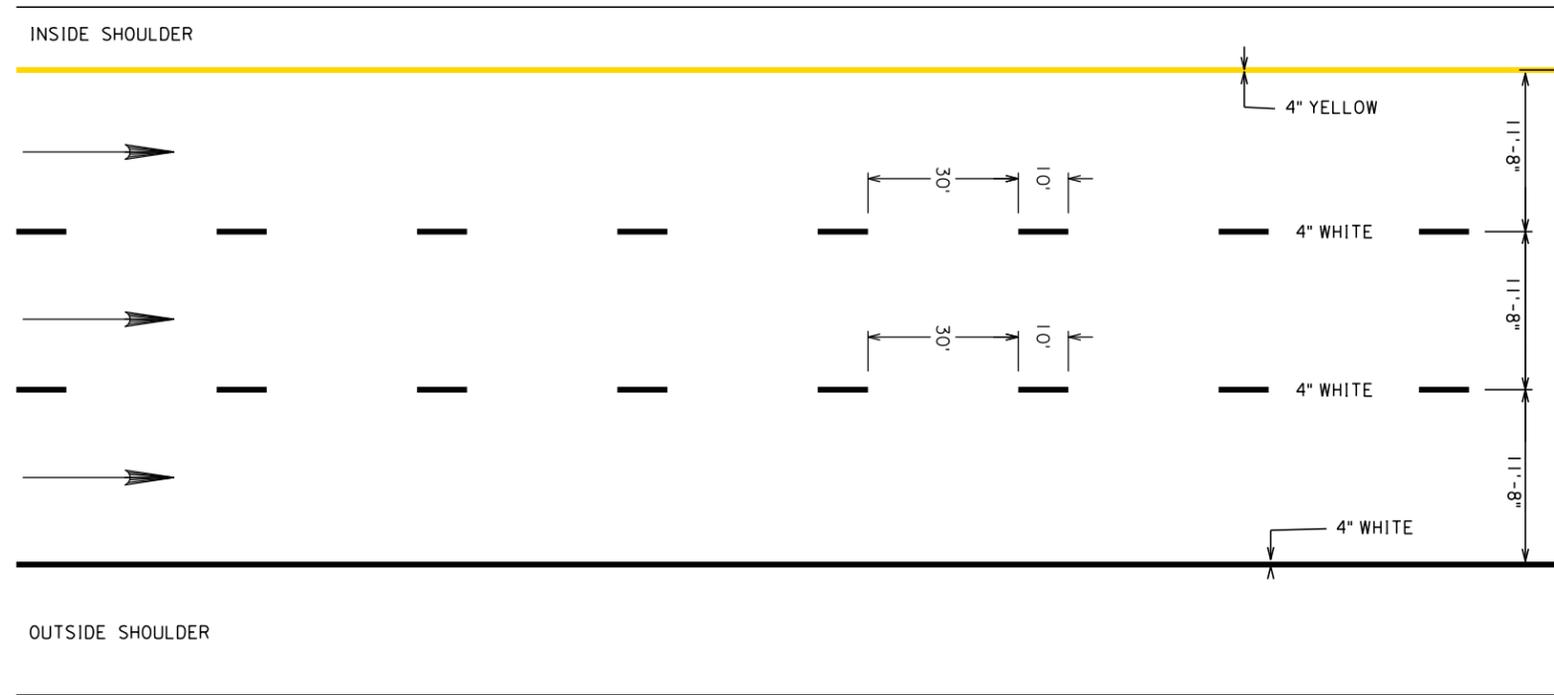
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(125)	5	11

Plotting Date: 02/09/2015

DIVIDED ROADWAY-TWO LANE SECTION (One direction shown)



DIVIDED ROADWAY-THREE LANE SECTION (One direction shown)



NOTE:
EDGELINES AND LANELINES SHALL MATCH THE EXISTING MARKINGS AT THE BEGIN AND END OF THE PROJECT.

PLOT SCALE - 1:45.6

PLOTTED FROM - TRM11119

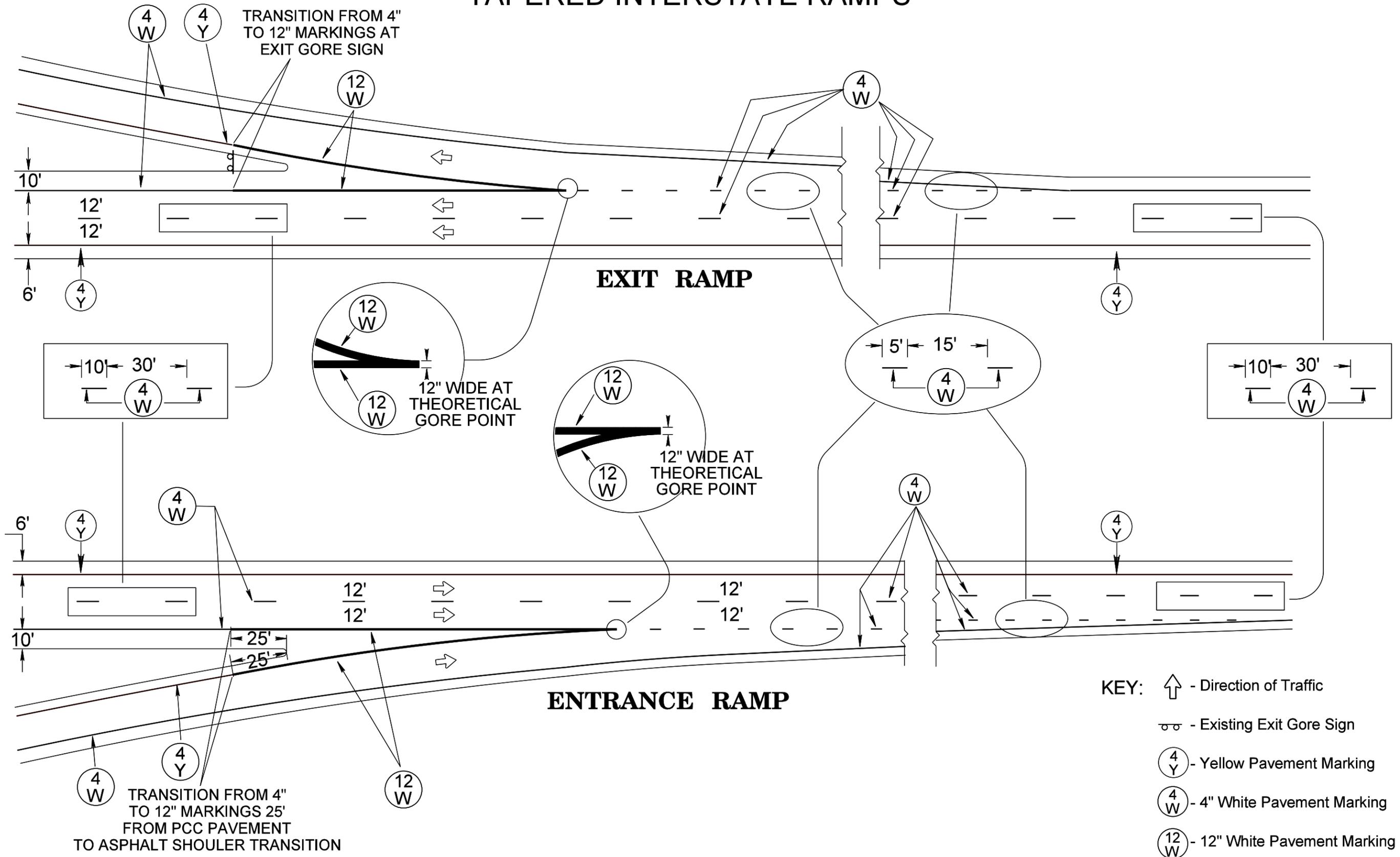
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PAVEMENT MARKING LAYOUT

TAPERED INTERSTATE RAMPS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(125)	6	11

Plotting Date: 02/09/2015



PLOT SCALE - 1:50.6667

PLOT NAME - 3

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PAVEMENT MARKING LAYOUT

(TYPICAL)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(125)	7	11

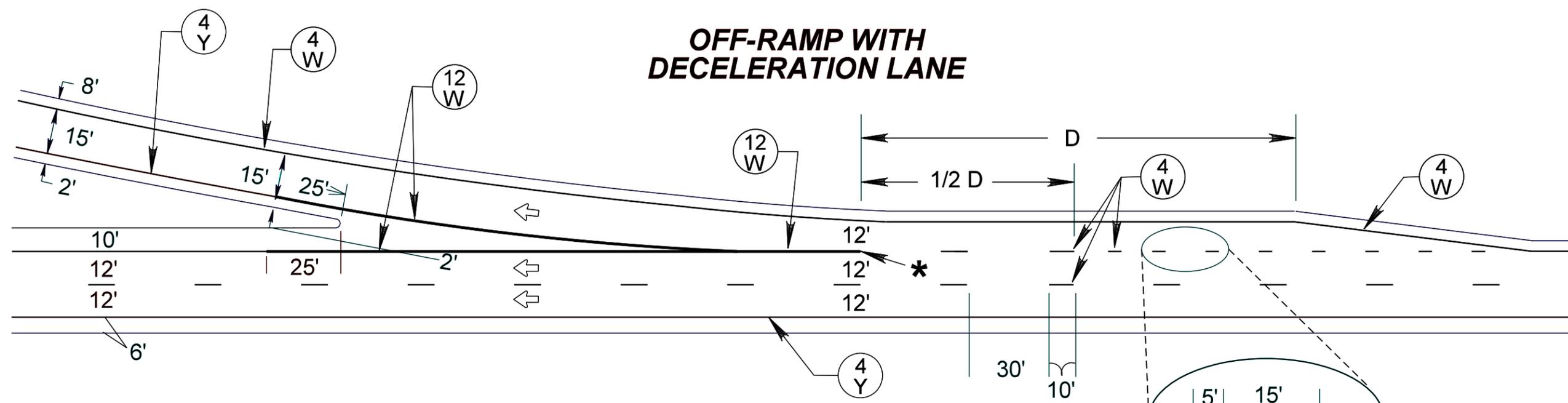
Plotting Date: 02/09/2015

PLOT SCALE - 1:50.6667

PLOT NAME - 4

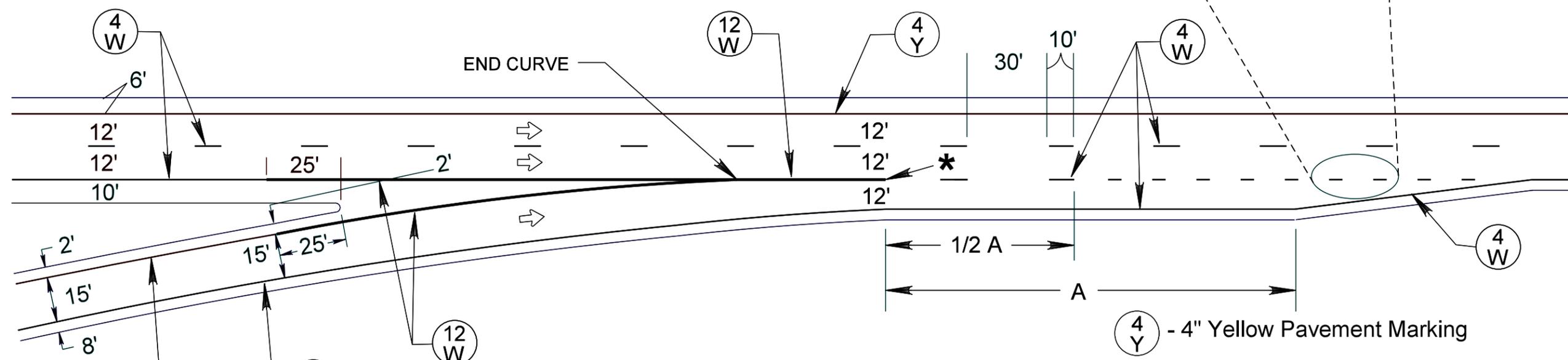
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OFF-RAMP WITH DECELERATION LANE



* GORE POINT

ON-RAMP WITH ACCELERATION LANE



← - DIRECTION OF TRAFFIC

- (4 Y) - 4" Yellow Pavement Marking
- (4 W) - 4" White Pavement Marking
- (12 W) - 12" White Pavement Marking

A = LENGTH OF PARALLEL ACCELERATION LANE
 D = LENGTH OF PARALLEL DECELERATION LANE

PLOTTED FROM - TRM11119

Plotting Date: 02/09/2015

PLOT SCALE - 1:206.452

PLOT NAME - 5

FILE - ... \STD PLATE RASTERS.DGN

WITHOUT BARRIER

** Shall be used for overnight and long term operations.

Posted Speed Prior to Work (M.P.H.) | Length of Longitudinal Buffer Space (Feet)

20	35
25	55
30	85
35	120
40	170
45	220
50	280
55	335
60	415
65	485
70	535
75	585

Posted Speed Prior to Work (M.P.H.) | Spacing of Advance Warning Signs (Feet) (A) (B) (C) | Taper Length (Feet) (L)

0 - 30	200		180	
35 - 40	350		320	
45 - 50	500		600	
55	750		660	
60 - 65	1000		780	
	(A) (B) (C)			
70 - 75	1000	1600	2600	900

Posted Speed Prior to Work (M.P.H.) | Spacing of Channelizing Devices (Feet) (G)

0 - 30	25
35 - 40	25
45 - 50	50 *
55	50 *
60 - 65	50 *
75	50 *

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

** 4" White Temporary Pavement Marking

Legend:
 ⊙ Reflectorized Drum
 ■ Channelizing Device
 (4 W) 4" White Temporary Pavement Marking

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

December 23, 2012

SDDOT GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITHOUT BARRIER PLATE NUMBER 634.64 Sheet 1 of 1

Published Date: 1st Qtr. 2015

Posted Speed Prior to Work (M.P.H.) | Spacing of Advance Warning Signs (Feet) (A) (B) (C) | Taper Length (Feet) (L)

0 - 30	200		180	
35 - 40	350		320	
45 - 50	500		600	
55	750		660	
60 - 65	1000		780	
	(A) (B) (C)			
70 - 75	1000	1500	2640	1125

Posted Speed Prior to Work (M.P.H.) | Spacing of Channelizing Devices (Feet) (G)

0 - 30	25
35 - 40	25
45 - 50	50 *
55	50 *
60 - 65	50 *

* Spacing is 40' for 42" cones.
 ⊙ Reflectorized Drum
 ■ Channelizing Device
 (4 W) 4" White Temporary Pavement Marking

Temporary pavement markings shall be used if traffic control must remain overnight.

The channelizing devices shall be drums or 42" cones if traffic control must remain overnight.

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

September 22, 2014

SDDOT GUIDES FOR TRAFFIC CONTROL DEVICES WORK IN VICINITY OF ENTRANCE RAMP PLATE NUMBER 634.70 Sheet 1 of 1

Published Date: 1st Qtr. 2015

Plotting Date: 02/09/2015

PLOT SCALE - 1:206.452

PLOT NAME - 6

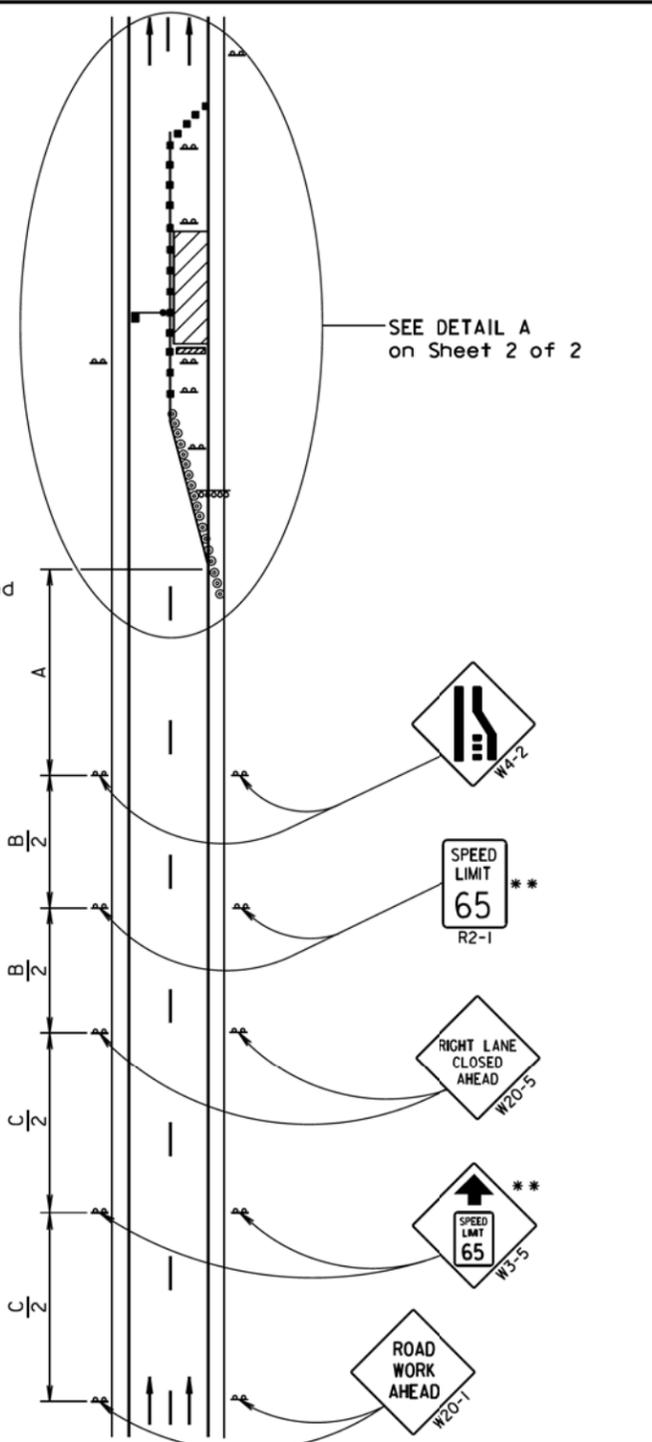
FILE - ... \STD PLATE RASTERS.DGN

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		
	(A)	(B)	(C)
70 - 75	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.



SEE DETAIL A on Sheet 2 of 2

December 16, 2014

S D D O T	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63
		Sheet 1 of 2

Published Date: 1st Qtr. 2015

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet)	
	(G)	(L)
0 - 30	25	180
35 - 40	25	320
45 - 50	50 *	600
55	50 *	660
60 - 65	50 *	780
70 - 75	50 *	900

- * 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 shall be covered or removed when workers are not present.

- Flagger (As Necessary)
- ⊙ Reflectorized Drum
- Channelizing Device

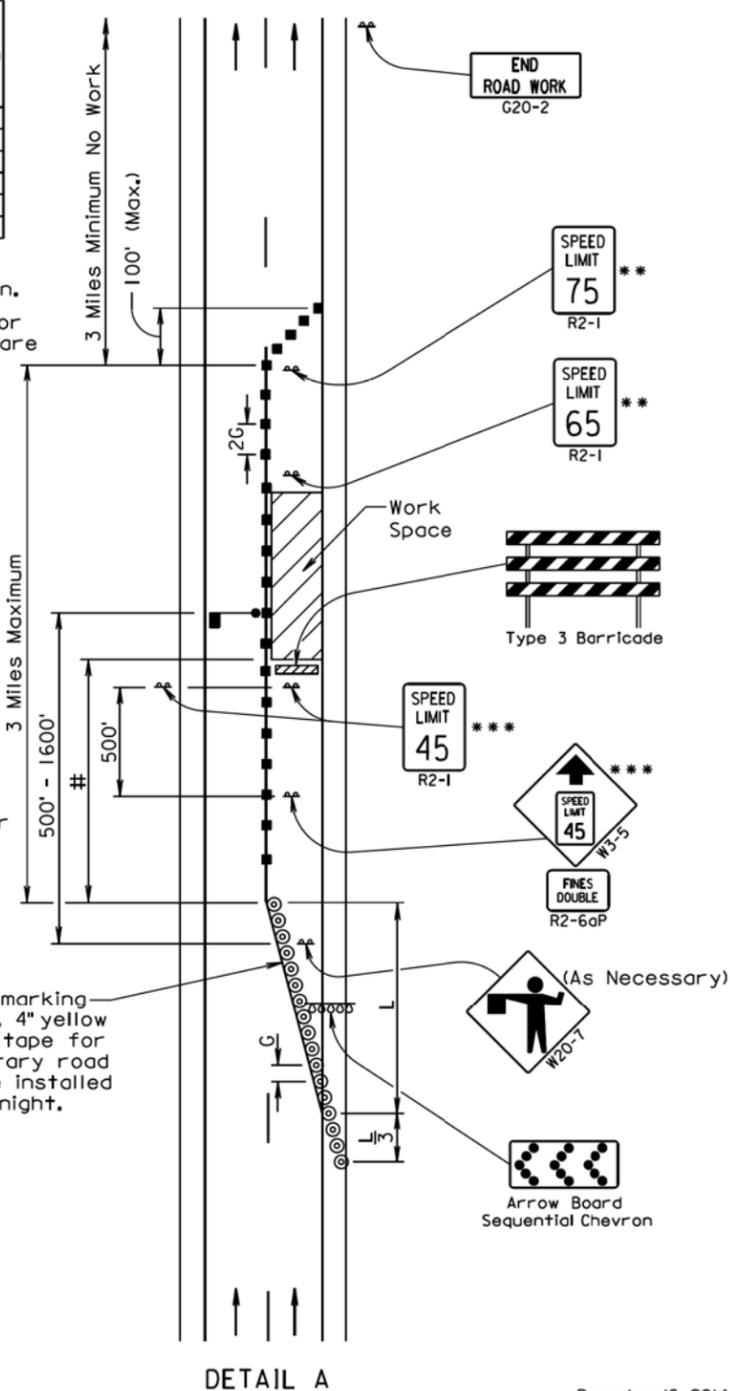
The Work Space shall be a minimum of 500' from the end of the taper.

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

The channelizing devices shall 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 road markers at 5' spacing shall be installed when the lane is closed overnight.



DETAIL A

December 16, 2014

S D D O T	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63
		Sheet 2 of 2

Published Date: 1st Qtr. 2015

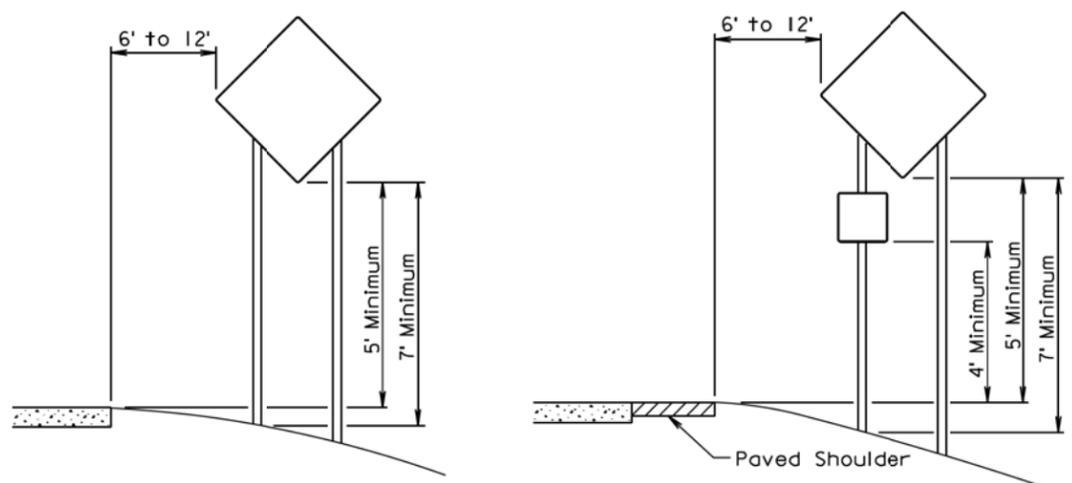
PLOTTED FROM - TRW11119

Plotting Date: 02/09/2015

PLOT SCALE - 1:206.452

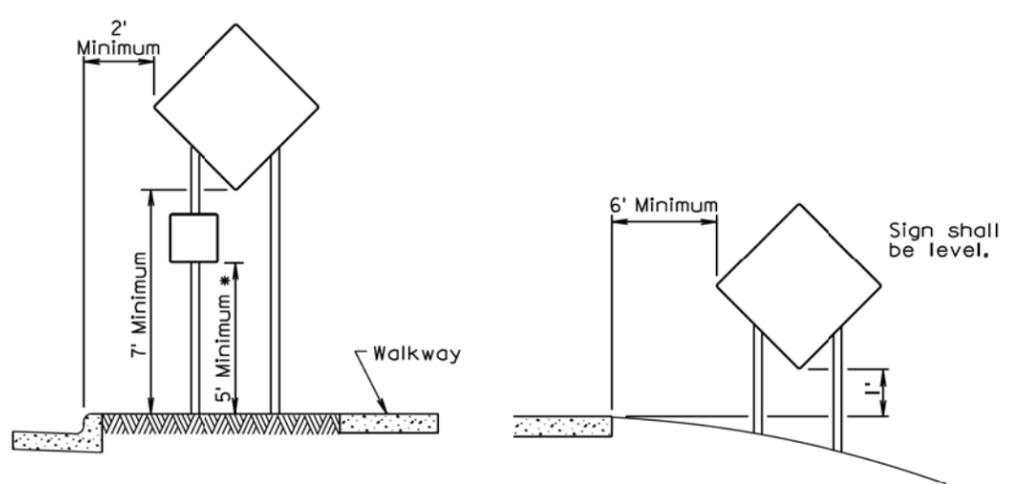
PLOT NAME - 7

FILE - ... \STD PLATE RASTERS.DGN



RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

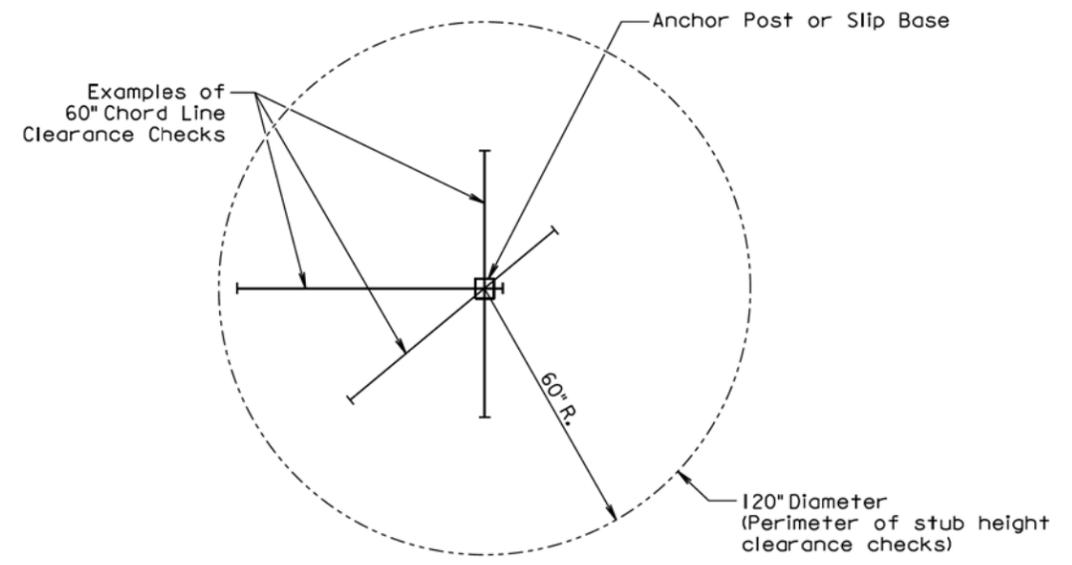
RURAL DISTRICT 3 DAY MAXIMUM

* 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.

(Not applicable to regulatory signs)

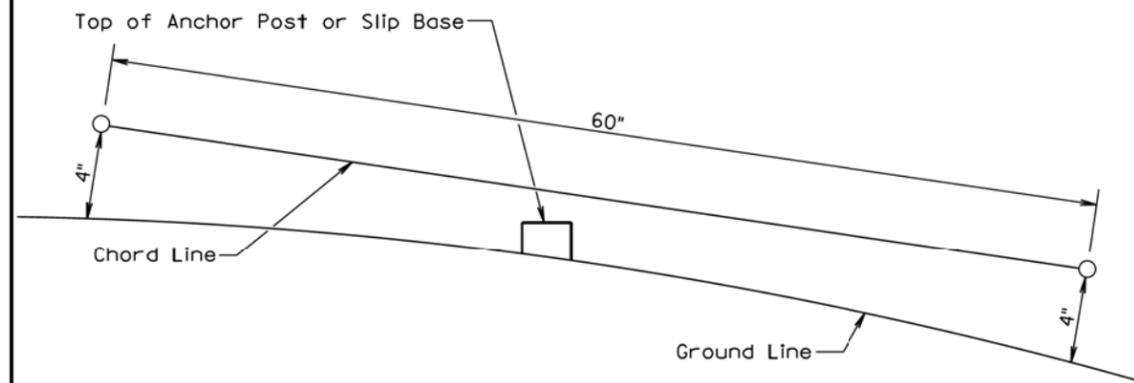
September 22, 2014

Published Date: 1st Qtr. 2015	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW

(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

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

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

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

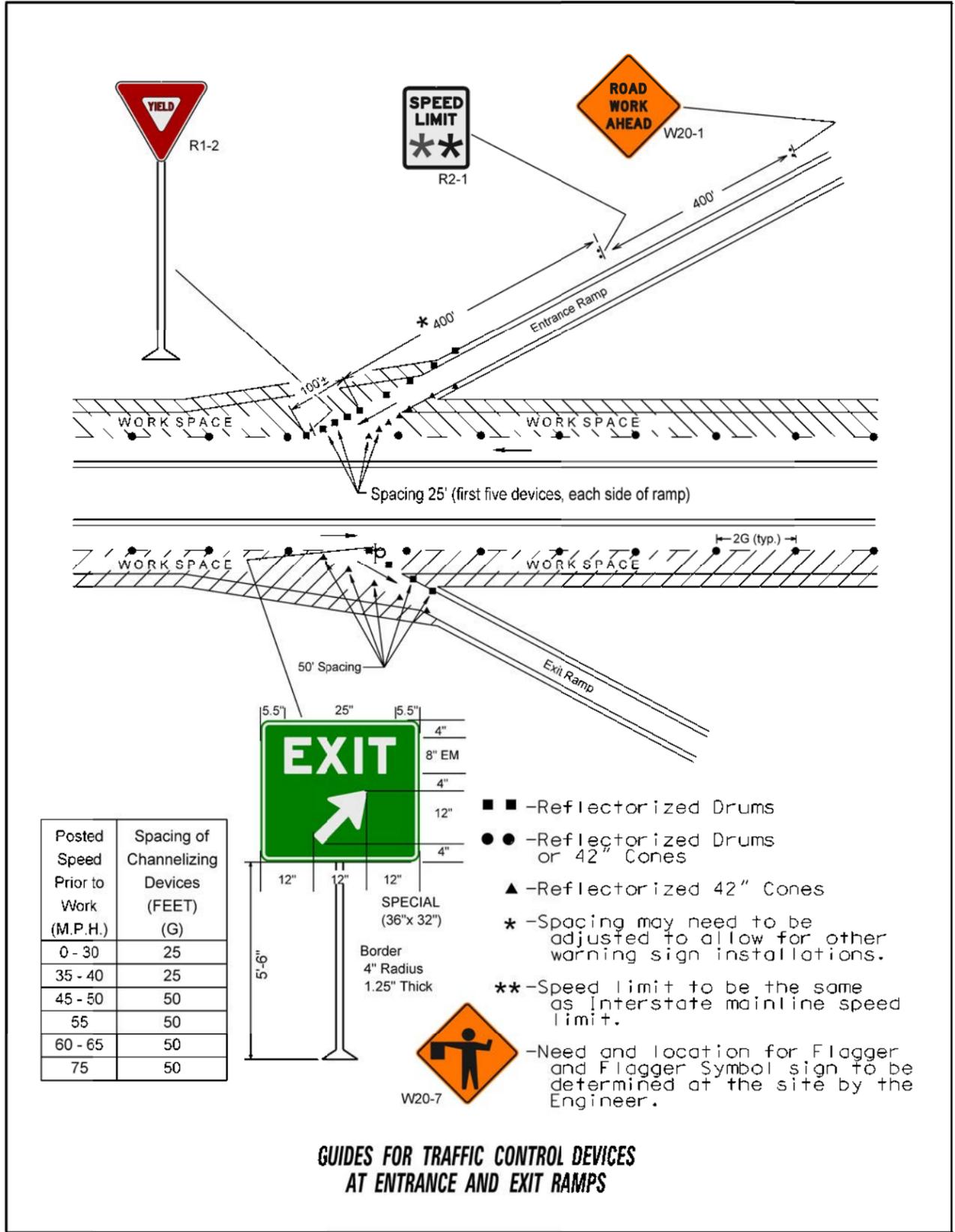
July 1, 2005

Published Date: 1st Qtr. 2015	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

PLOT SCALE - 1:7000

PLOT NAME - 8

FILE - ... \TC RAMP 2014.DGN



GUIDES FOR TRAFFIC CONTROL DEVICES AT ENTRANCE AND EXIT RAMP