

PLOT SCALE - 1:200

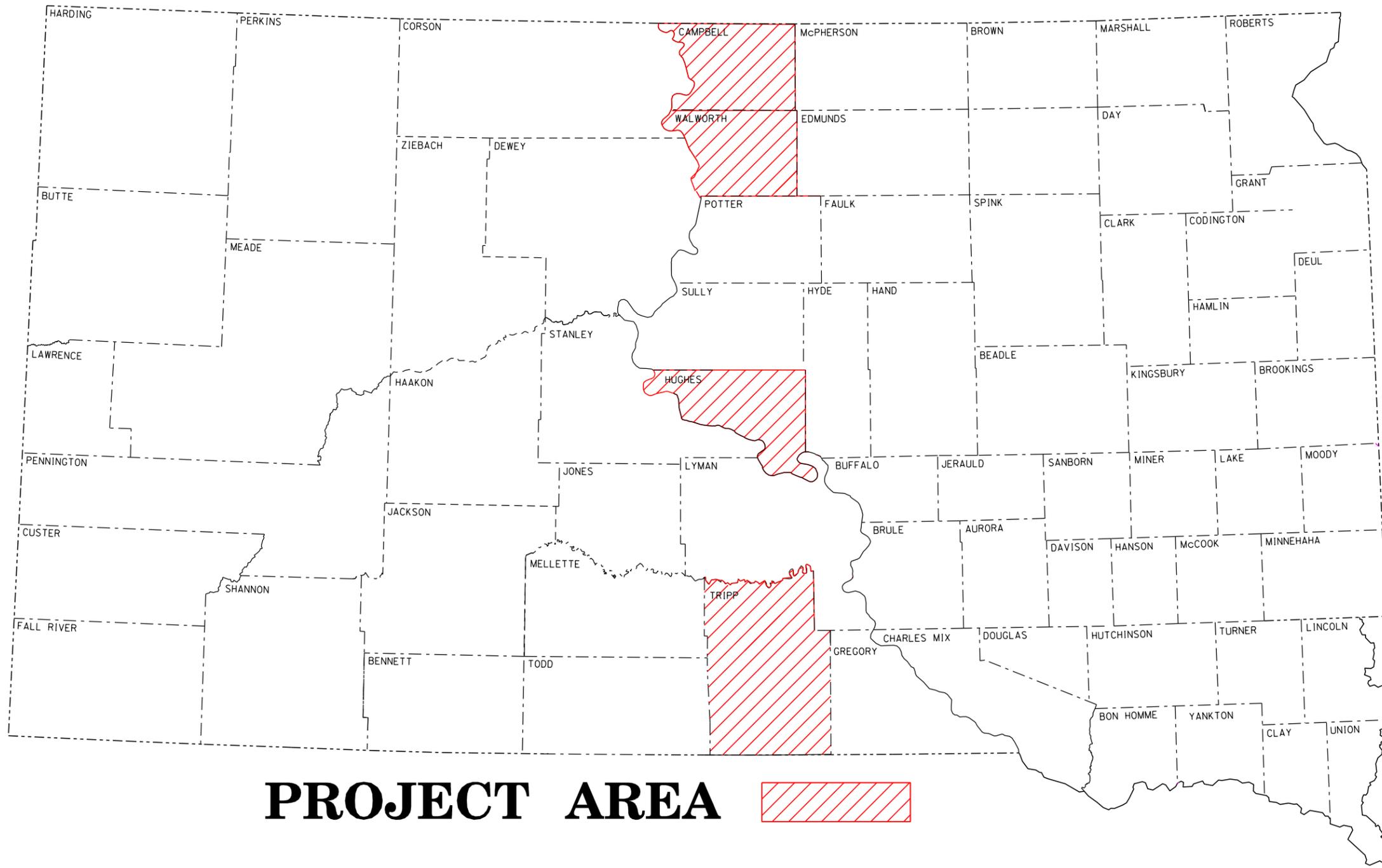
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR
PROJECT P 000S(00)019
COUNTY PAVEMENT MARKING
PIERRE REGION
PCN 02DS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 000S(00)019	1	10

Plotting Date: 03/05/2014

INDEX OF SHEETS

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- 2-3 ESTIMATE & PLAN NOTES
- 4 CAMPBELL COUNTY
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- 9 MOBILE OPERATIONS DETAIL
- 10 STANDARD PLATES



12

FILE ...PIERRE\TITLEP.DGN

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 000S(00)019	2	10

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
633E1300	Pavement Marking Paint, White	3,546.8	Gal
633E1305	Pavement Marking Paint, Yellow	1,262.4	Gal
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

SPECIFICATIONS

1. South Dakota Department of Transportation Standard Specifications for Roads and Bridges, 2004 Edition, Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.
2. U.S. Department of Transportation Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition and current Revisions.

GENERAL NOTES

The Contractor will be required to repaint all existing pavement marking including centerline, edge line, lane lines and word messages. This list is approximate.

The in-place pavement markings shall be duplicated when striping. The Contractor shall take the necessary action to retain widths and location of tapers, hash marks, arrows, etc., to be able to reproduce those that are in-place. Quantities of paint are included in the Estimate of Quantities and the cost of this work shall be incidental to the contract unit price per gallon for "Pavement Marking Paint, White" and "Pavement Marking Paint, Yellow".

Pavement edge lines shall be marked 10 to 12 feet from centerline, as directed by the County Highway Superintendent. Driving surfaces less than 20 feet wide for 2 lanes of traffic, shall not require edgelines. Edgelines on 2-lane roads 20 feet wide or greater, shall be located as shown on the details in these plans. The pavement shall be cleaned of dirt, loose stones, and other foreign material before the paint is applied.

Some of the miles shown in these plans are scheduled to be resealed or overlaid prior to painting. The Contractor shall provide written notice to the Engineer and County Highway Superintendent at least 20 calendar days in advance of the begin work day for that county. **The Contractor shall also give the County Highway Superintendent a verbal 48 hour notice, before beginning work in that County.**

When the Contractor starts work in a County he shall pursue the work in that County to completion before commencing work available in another County. Routes that are continuous from one County to another may be marked in one operation.

The Contractor shall limit his operation so that no more than 2 crews are working in one county at any one time. Personnel operating the painting equipment shall demonstrate competence in this type of work and provide evidence of previous striping experience before commencing work on this project.

The Contractor must inform the Engineer weekly of the quantity of paint applied and the location of where the Contractor will be working.

GENERAL NOTES Continued

The Contractor shall provide a detailed list showing route, length of route and gallons of paint applied on each route in each county. This list shall be signed by a representative of the County and the Contractor before submittal to the State for payment. Payment will not be made until the State receives a detailed and signed list of paint applied. **There shall be no payment made to the Contractor until the Certificate(s) of Compliance for the Pavement Marking Paint has been received by the Engineer.**

The Contractor shall have a satisfactory calibrated meter on each color of paint to measure the quantity of paint used.

Due to annual surfacing or sealing projects it may be necessary to delete a small amount of the total miles to be marked in some or all of the counties.

It is expected that some of the roads will not be ready for striping until after September 15, 2014. The Contractor will be required to return after September 15, 2014 to complete the project if any roads are not ready due to sealing operations.

All materials shall be applied as per manufacturer's recommendations.

COUNTY RESPONSIBILITIES

If a portion of the total miles are to be deleted due to scheduled surfacing or sealing operations, the County Highway Superintendent shall notify the Contractor and the Engineer upon receipt of the Contractor's written notice.

Excess material on resealed roads shall be removed by brooming full width, including edgeline locations, and will be accomplished by County forces in advance of the Contractor's operations.

The County shall provide a representative on the project to coordinate, observe and document quantities for the striping operations. The County shall coordinate with the Engineer for acceptance sampling for paint and beads. The County Highway Superintendent shall provide the Contractor all the information needed for No Passing Zones and Railroad Crossings as noted in the following paragraphs.

NO PASSING ZONES

No Passing Zones shall be established under the direction of the County Highway Superintendent. The County Highway Superintendent shall verify the No Passing Zones have been checked at an eye height of 3.5 feet prior to painting by the Contractor.

The County shall be responsible to establish or re-establish "No Passing Zones" at its own expense.

Beginning and ending of No Passing Zones shall be marked by each County Highway Department prior to the start of work under this contract. The exact starting point for each route to be marked will be determined by the County Highway Superintendent. The County shall mark the center of the road. When there is a seam that does not fall on the center of the road, the center of the road shall be marked every 100 feet to establish the center of the road.

If a No Passing Zone is painted incorrectly, it shall be the Contractor's responsibility to completely remove the incorrect markings and paint correctly at no cost to the State or County. Pavement marking edgelines, centerlines or No Passing Zone lines painted in a non-straight manner, with excessive overspray, in a poor workmanship like manner or not conforming within the tolerances stated in Section 633.3C of the Standard Specifications or as shown in the typical marking details in the plans shall be removed and repainted at no cost to the State or County.

RAILROAD CROSSINGS

The County Highway Superintendents shall check the location of Advance Warning Signs and adjust their location as per the MUTCD prior to painting the new markings on the roadway. See Plate Number 633.10.

Pavement marking for each Railroad Crossing shall consist of marking both approaches - crossing symbol and 24" bars before and after each crossing symbol in accordance with the details shown in Plate Number 633.10.

All costs for traffic control devices, signs and flaggers used for Railroad Crossing pavement markings shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

NOTE: Paint quantities for Railroad Crossing pavement markings are included in the Bid Item "Pavement Marking Paint, White." (Rate = 4 gallons per crossing and 8 pounds of beads per gallon)

RATES OF MATERIALS

- 4" Edgeline - 17 Gallons per Mile of White Paint
- 4" Centerline - 12 Gallons per Pass Mile of Yellow Paint (Includes Average No Passing Zones)
- Beads - 8 Pounds per Gallon of Paint

Note: If applied on a fresh chip seal, rates are:

- 4" Edgeline - 22 Gallons per Mile of White Paint
- 4" Centerline - 16 Gallons per Pass Mile of Yellow Paint (Includes Average No passing Zones)
- Beads - 8 Pounds per Gallon of Paint

TRAFFIC CONTROL

Mobile operations shall have appropriate traffic control devices and appropriate warning devices on the vehicle. See notes shown in detail for "Mobile Operations On Two-Lane Road".

A lead vehicle is optional if the striper operates in its own lane. A trail vehicle, in the same position as the striper, and displaying a sign with the legend "WET PAINT AHEAD" and an arrow panel operating in the caution mode, or an alternative acceptable to the Engineer, shall be used at all times. PASS WITH CARE signs shall also be used.

All other equipment shall display flashing amber lights visible to traffic in all directions as a minimum.

Painting will be allowed only during the hours from 1/2 hour after sunrise to 1/2 hour before sunset.

Cost of traffic control, including arrow panel and any flagging necessary shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

TABLE OF QUANTITIES

The following table is for information only.

County	County Roads (Mile)	NABI Railroad Crossings (Qty)	NABI Turn Lanes (Qty)	Paint White (Gal)	Paint Yellow (Gal)	NABI Glass Beads (Lb)
CAMPBELL	32.7	0	0	1131.8	400.4	12258
HUGHES	10.5	0	0	447.0	162.0	4872
TRIPP	39.0	0	0	1326.0	468.0	14352
WALWORTH	14.5	1	0	642.0	232.0	6992
	96.7	1	0	3546.8	1262.4	38474

NABI = Not A Bid Item

COUNTY CONTACTS

County	Name	Address	Phone No.	Cell No.
Campbell	Patti Pudwill	PO Box 167, Mound City 57646 campbellcountyhwydept@yahoo.com	(605)-955-3575	848-0389
Hughes	Mike Myers	2401 – 293 RD Ave, Pierre 57501 hwysupt@co.hughes.sd.us	(605)-773-7486	220-4080
Tripp	Roger Sund	PO Box 548, Winner 57580 tchd@gwtc.net	(605)-842-3661	840-2139
Walworth	Penny Goetz	PO Box 242, Selby 57472 walcohwy@sbtc.net	(605)-649-7982	848-0115

DEPARTMENT OF TRANSPORTATION CONTACT

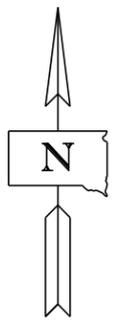
John Villbrandt, Mobridge Area Engineer, South Dakota Department of Transportation, PO Box 488, Mobridge, SD 57601, phone # (605)-845-3844

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 000S(00)019	4	10

Plotting Date: 01/10/2014

SOUTH DAKOTA COUNTY PAVEMENT MARKING 2014

CAMPBELL COUNTY

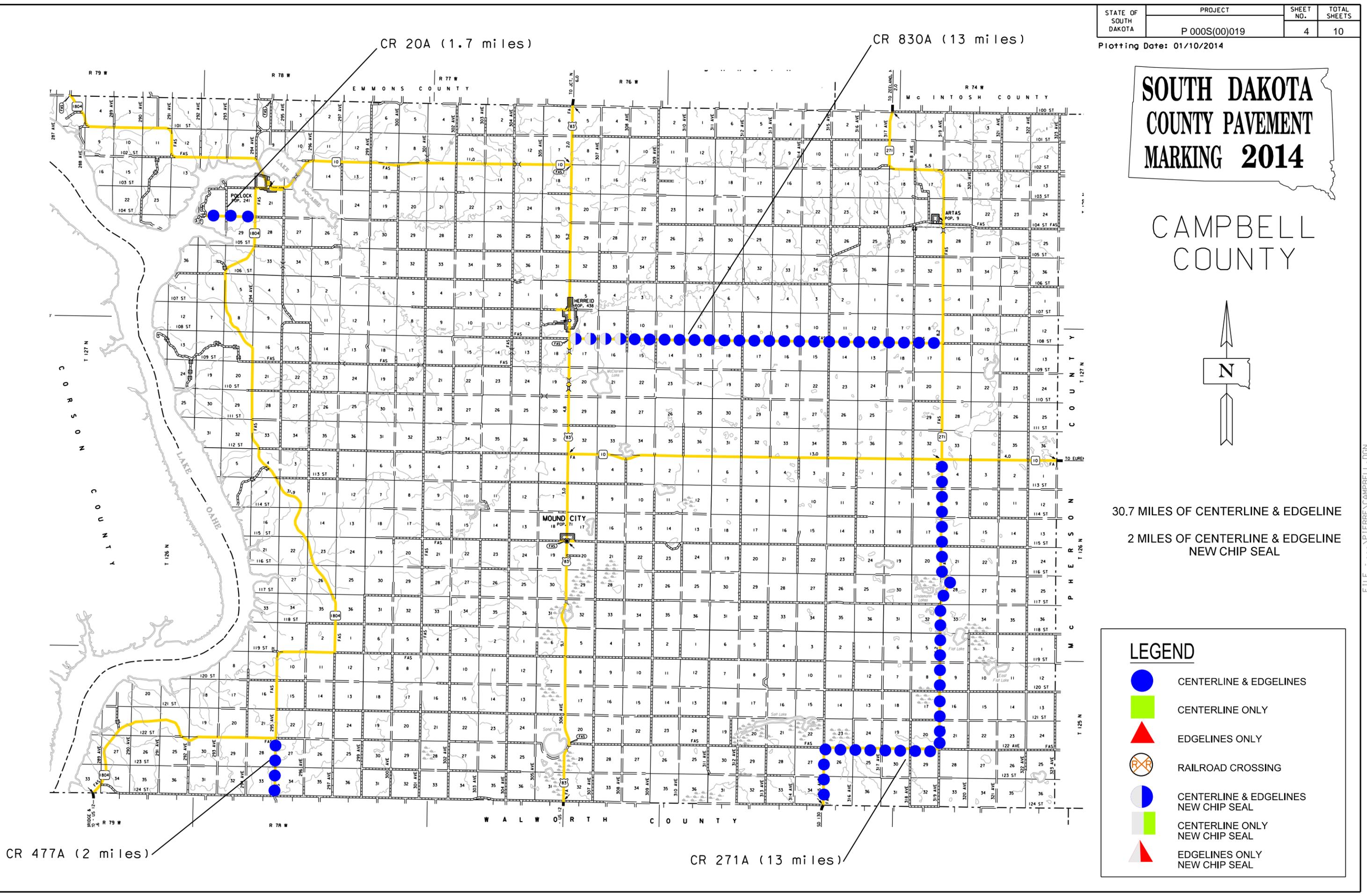


30.7 MILES OF CENTERLINE & EDGELINE
2 MILES OF CENTERLINE & EDGELINE
NEW CHIP SEAL

LEGEND

-  CENTERLINE & EDGELINES
-  CENTERLINE ONLY
-  EDGELINES ONLY
-  RAILROAD CROSSING
-  CENTERLINE & EDGELINES
NEW CHIP SEAL
-  CENTERLINE ONLY
NEW CHIP SEAL
-  EDGELINES ONLY
NEW CHIP SEAL

PLOT SCALE - 1:200



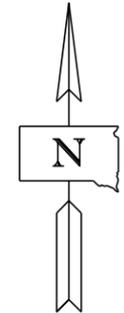
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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 000S(00)019	5	10

Plotting Date: 01/10/2014

SOUTH DAKOTA COUNTY PAVEMENT MARKING 2014

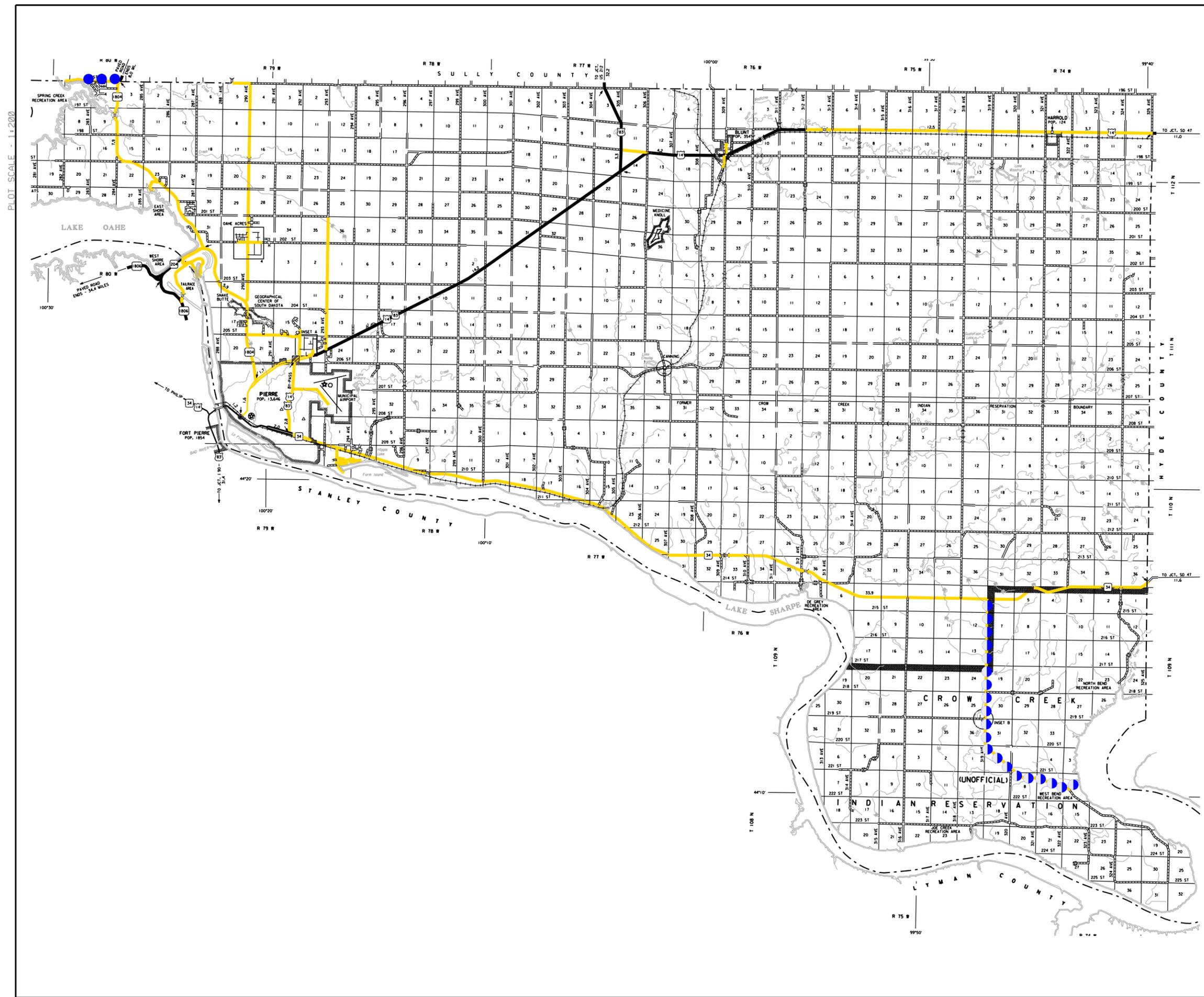
HUGHES COUNTY



1.5 MILE OF CENTERLINE & EDGELINE
 9 MILES OF CENTERLINE & EDGELINE
 NEW CHIP SEAL

LEGEND

-  CENTERLINE & EDGELINES
-  CENTERLINE ONLY
-  EDGELINES ONLY
-  RAILROAD CROSSING
-  CENTERLINE & EDGELINES
NEW CHIP SEAL
-  CENTERLINE ONLY
NEW CHIP SEAL
-  EDGELINES ONLY
NEW CHIP SEAL



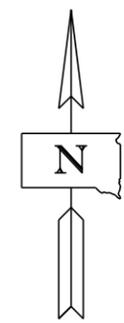
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Plotting Date: 01/10/2014

SOUTH DAKOTA COUNTY PAVEMENT MARKING 2014

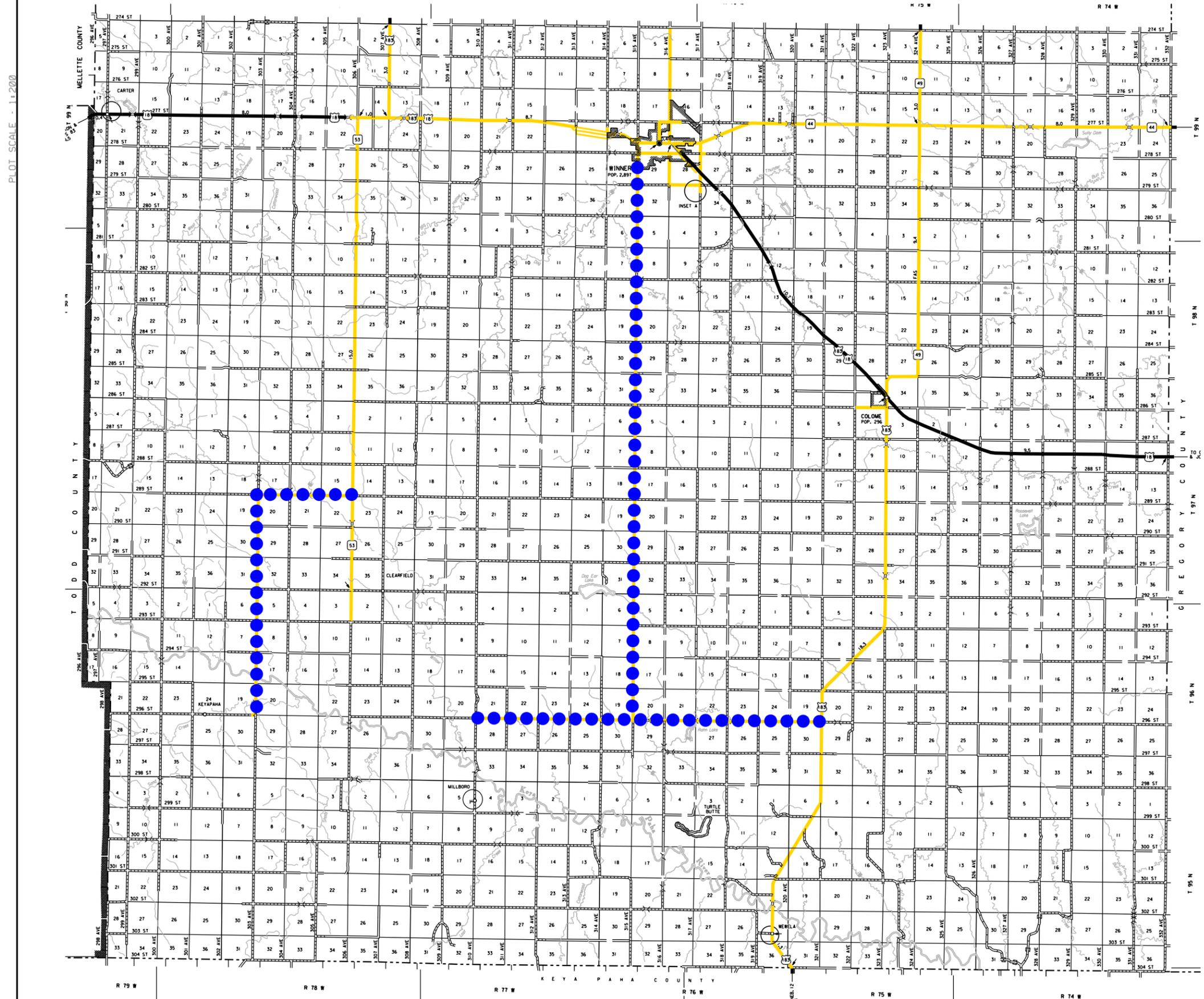
TRIPP COUNTY



39 MILES OF CENTERLINE & EDGELINE

LEGEND

- CENTERLINE & EDGELINES
- CENTERLINE ONLY
- EDGELINES ONLY
- X RAILROAD CROSSING
- CENTERLINE & EDGELINES
NEW CHIP SEAL
- CENTERLINE ONLY
NEW CHIP SEAL
- EDGELINES ONLY
NEW CHIP SEAL



PLOT SCALE - 1"=200'

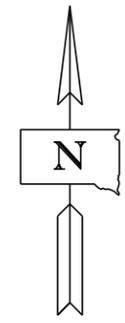
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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 000S(00)019	7	10

Plotting Date: 01/10/2014

SOUTH DAKOTA COUNTY PAVEMENT MARKING 2014

WALWORTH COUNTY

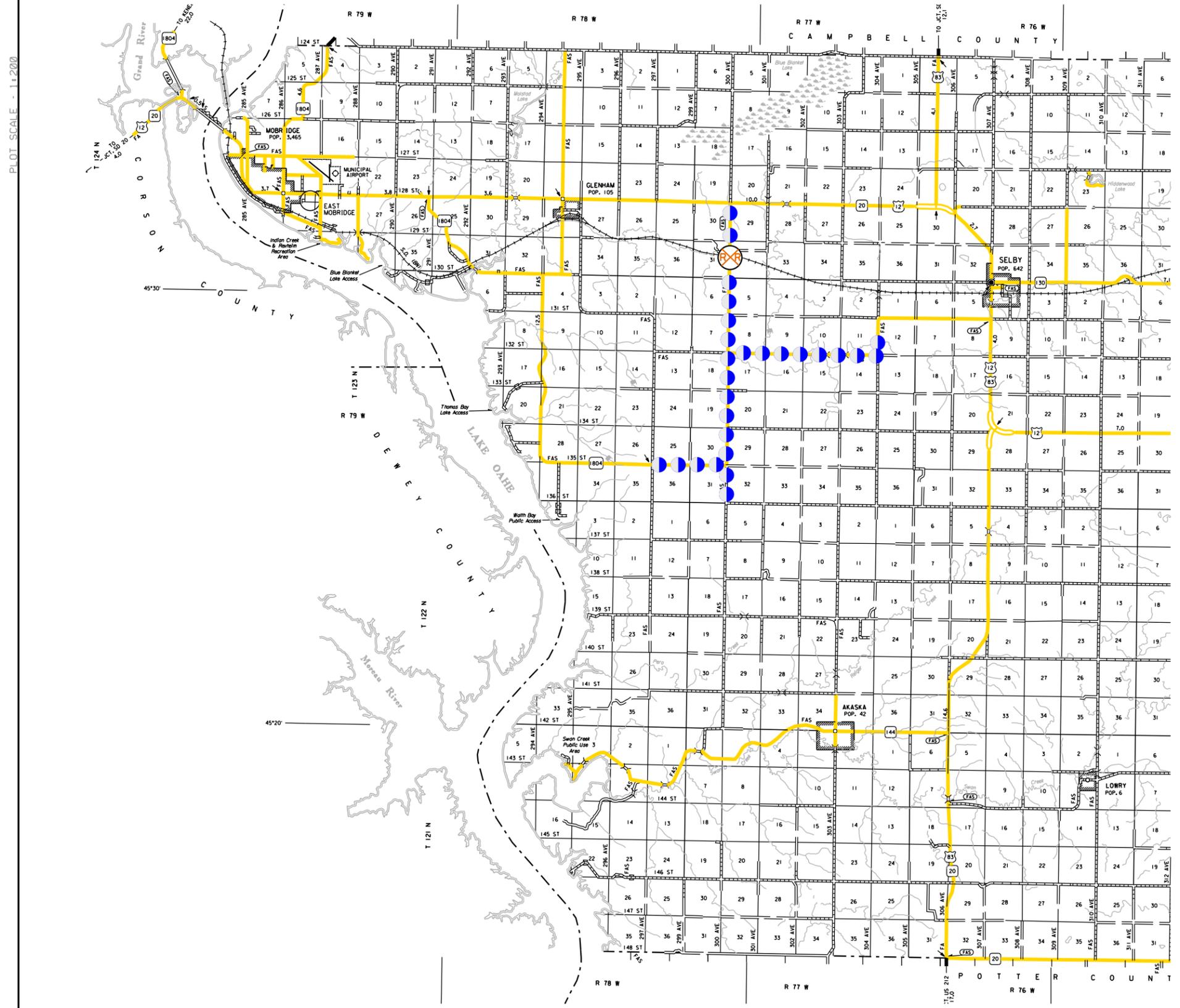


14.5 MILES OF CENTERLINE & EDGELINE
NEW CHIP SEAL

1 RAILROAD CROSSING

LEGEND

- CENTERLINE & EDGELINES
- CENTERLINE ONLY
- EDGELINES ONLY
- RAILROAD CROSSING
- CENTERLINE & EDGELINES
NEW CHIP SEAL
- CENTERLINE ONLY
NEW CHIP SEAL
- EDGELINES ONLY
NEW CHIP SEAL



PLOT SCALE - 1:200

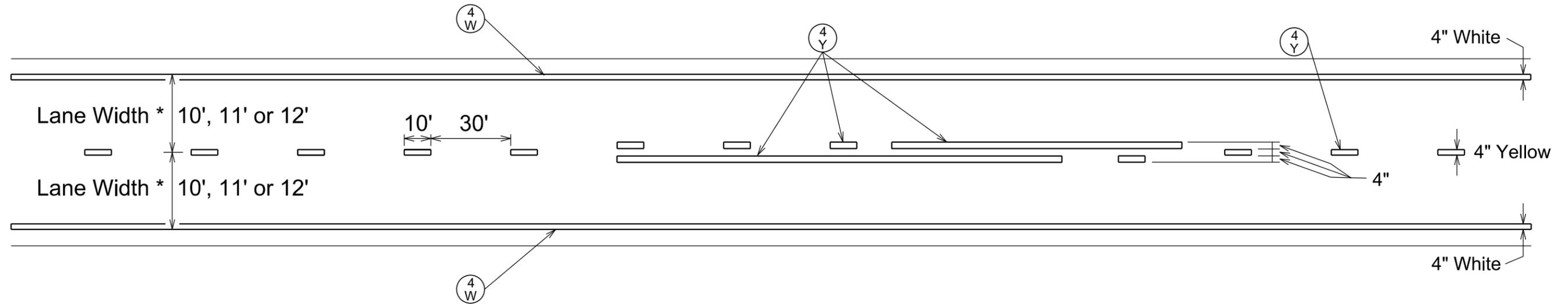
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PAVEMENT MARKING DETAIL FOR COUNTY ROADS

STATE OF SOUTH DAKOTA	PROJECT P 000S(00)019	SHEET NO. 8	TOTAL SHEETS 10
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Plotting Date: 09/27/2013

PLOT SCALE - 1:200



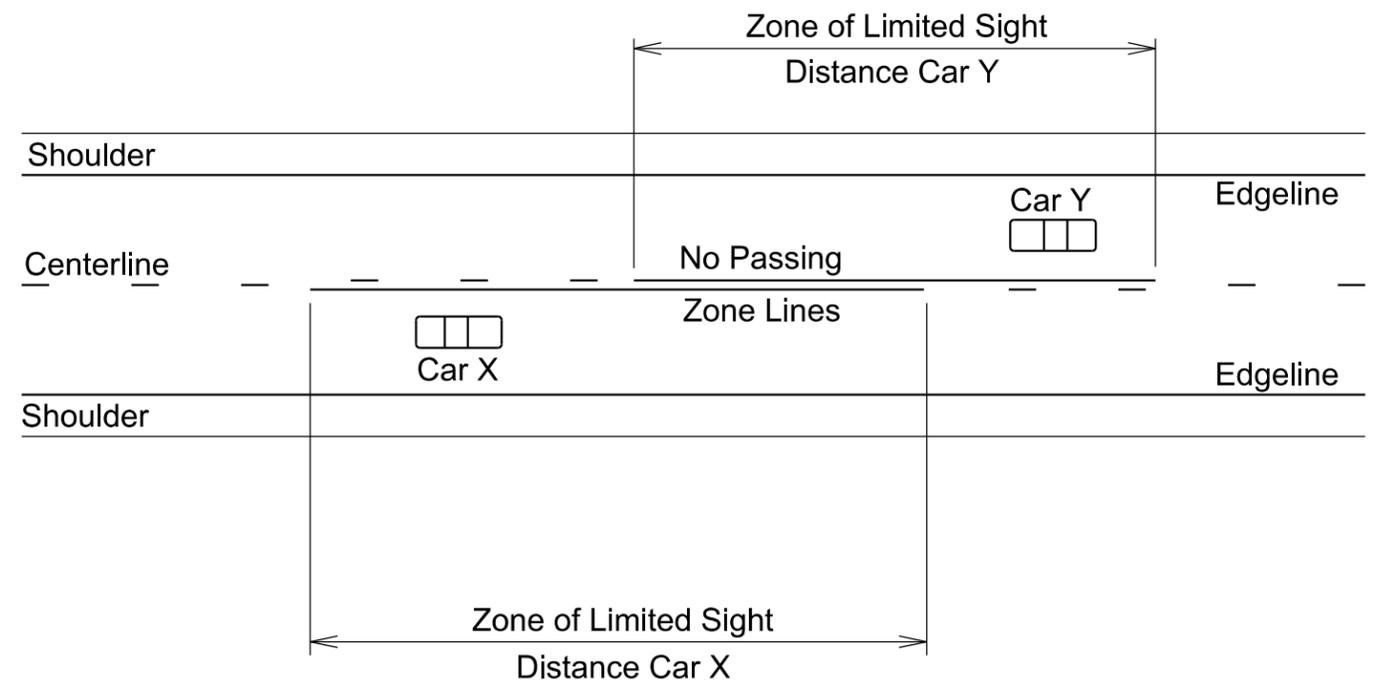
KEY	ITEM
(4W)	4" White
(4Y)	4" Yellow

GENERAL NOTES:

Project centerline marking shall be applied using a three gun system.

The typical pavement marking as shown on this sheet is to be applied on the county roads of this project.

* Lane Width as specified elsewhere in these plans.



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Plot Scale - 1:200

Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies.

Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.

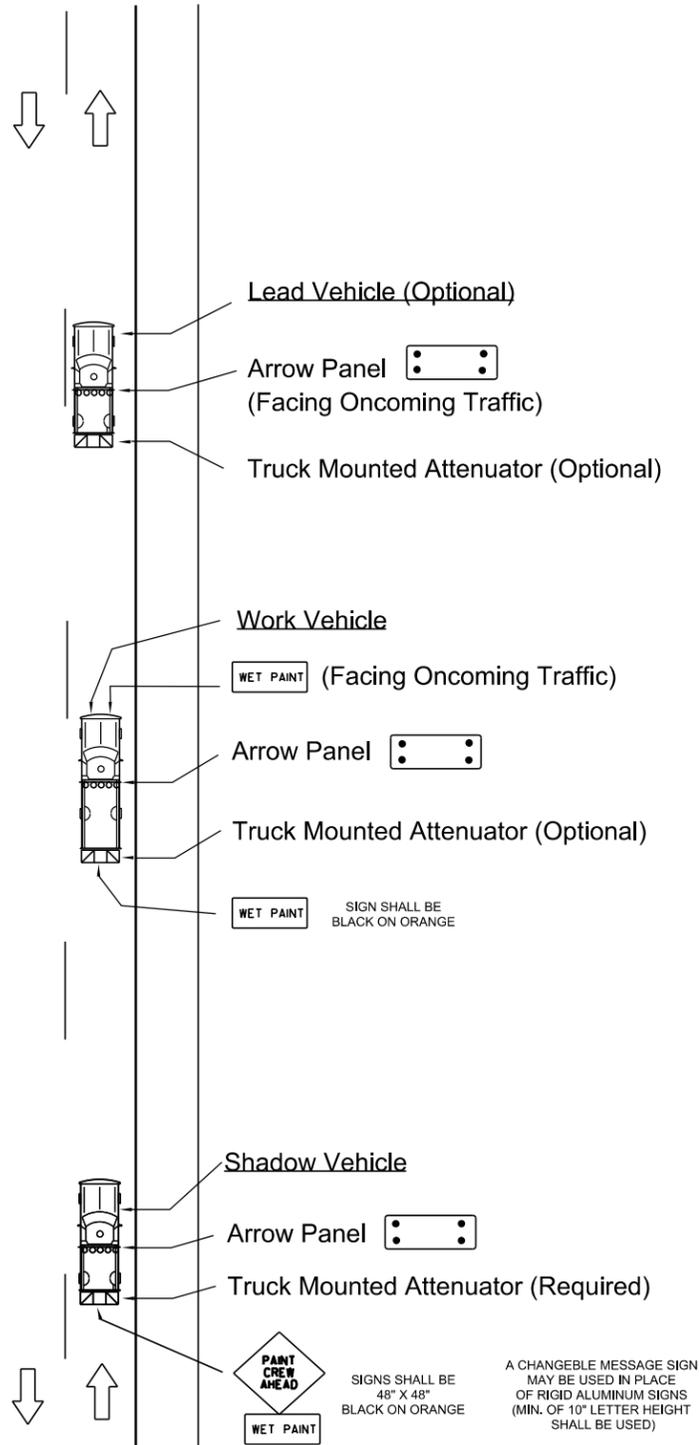
Shadow and Work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow panels.

Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights

When an arrow panel is used, it shall be used in the caution mode.

Marching Diamonds are acceptable.

Arrow panels shall, as a minimum, be Type B, with a size of 60" x 30".



GUIDES FOR TRAFFIC CONTROL DEVICES MOBILE OPERATIONS ON 2-LANE ROAD

MOBILE: Intermittent & Continuous Moving

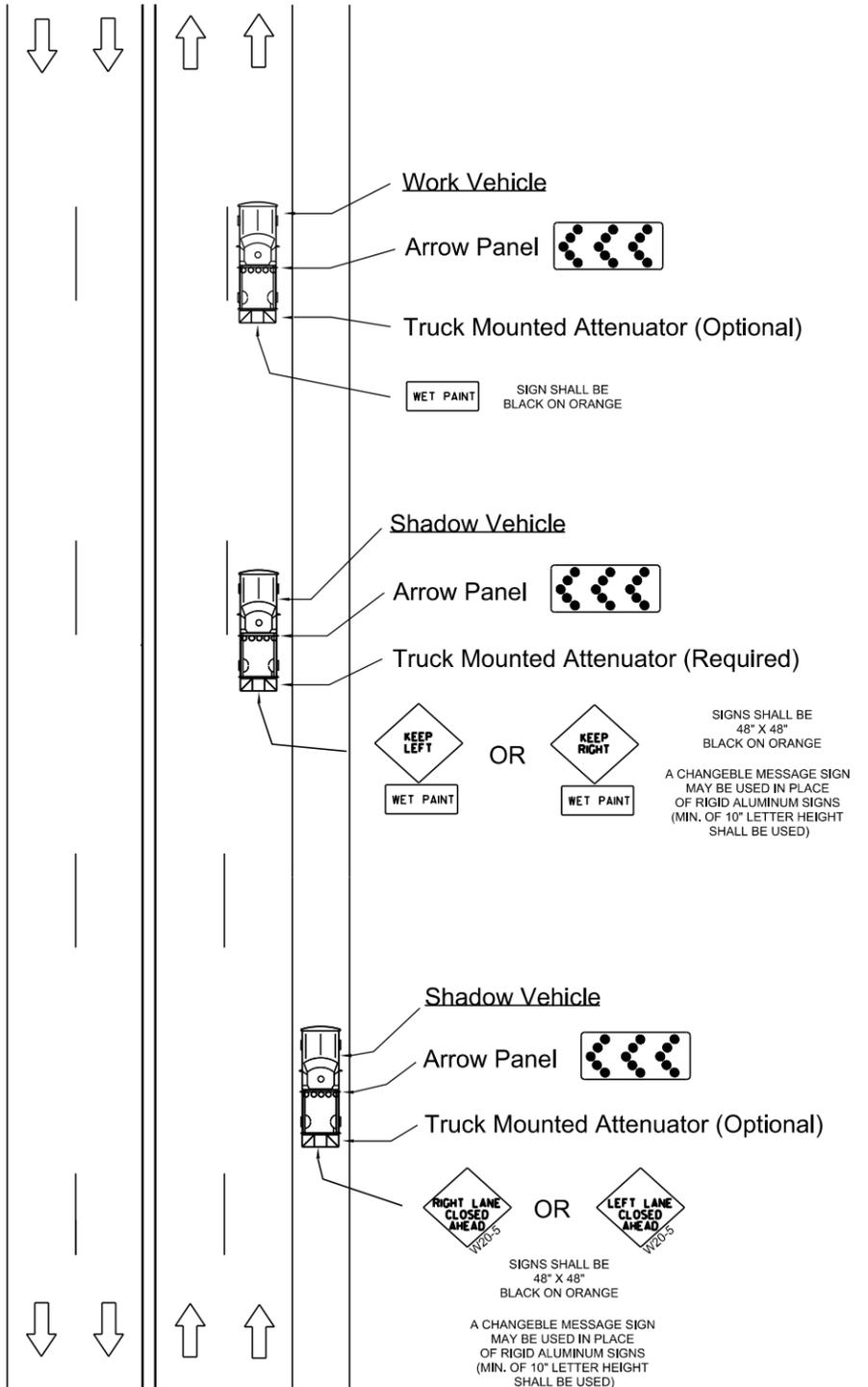
Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies.

Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.

Shadow and Work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow panels.

Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights

Arrow panels shall, as a minimum, be Type B, with a size of 60" x 30".



GUIDES FOR TRAFFIC CONTROL DEVICES MOBILE OPERATIONS ON 4-LANE DIVIDED

MOBILE: Intermittent & Continuous Moving

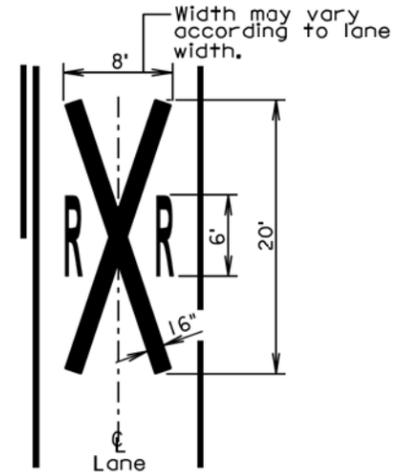
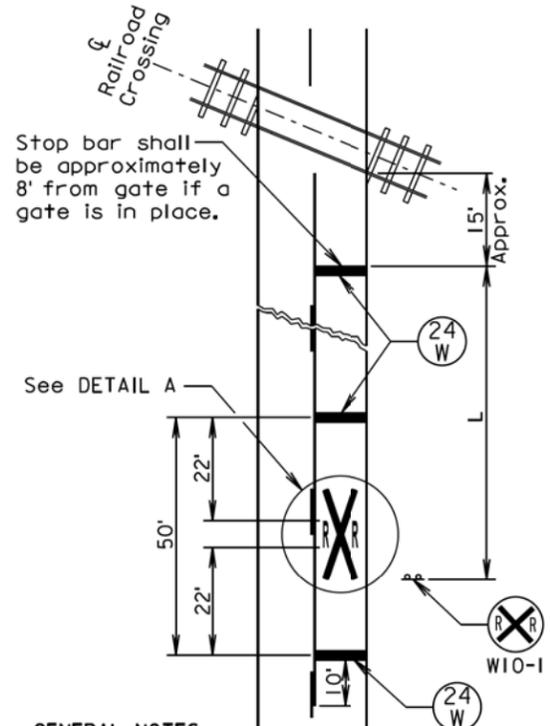
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1:200 Plot Scale

KEY	ITEM
	24" White
	White

Posted Speed Limit (M.P.H.)	L (Ft.)
≤ 30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550



DETAIL A

GENERAL NOTES:

- The railroad crossing pavement markings shall be placed symmetrically about the centerline of the railroad crossing.
- When pavement markings are used, a portion of the RXR symbol shall be placed directly opposite of the advance warning sign W10-1.
- On multi-lane roads the transverse bands shall extend across all approach lanes and individual RXR symbols shall be placed in each approach lane.
- The railroad crossing pavement markings shall consist of all the transverse bands, stop bars, and RXR symbols.
- When pavement marking paint is used for marking the railroad crossing, all costs for furnishing and painting the markings, materials, labor, and necessary equipment shall be incidental to the contract unit price per gallon for "Pavement Marking Paint, White".
- When pavement marking tape is used for marking the railroad crossing, all costs for furnishing and placing the markings, materials, labor, and necessary equipment shall be incidental to the contract unit price per each for "Cold Applied Plastic Pavement Marking, Railroad Crossing".

June 26, 2013

S D D O T	PAVEMENT MARKINGS AT RAILROAD CROSSING	PLATE NUMBER 633.10
	<i>Published Date: 1st Qtr. 2014</i>	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 - 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) shall be displayed in advance of the liquid asphalt areas.

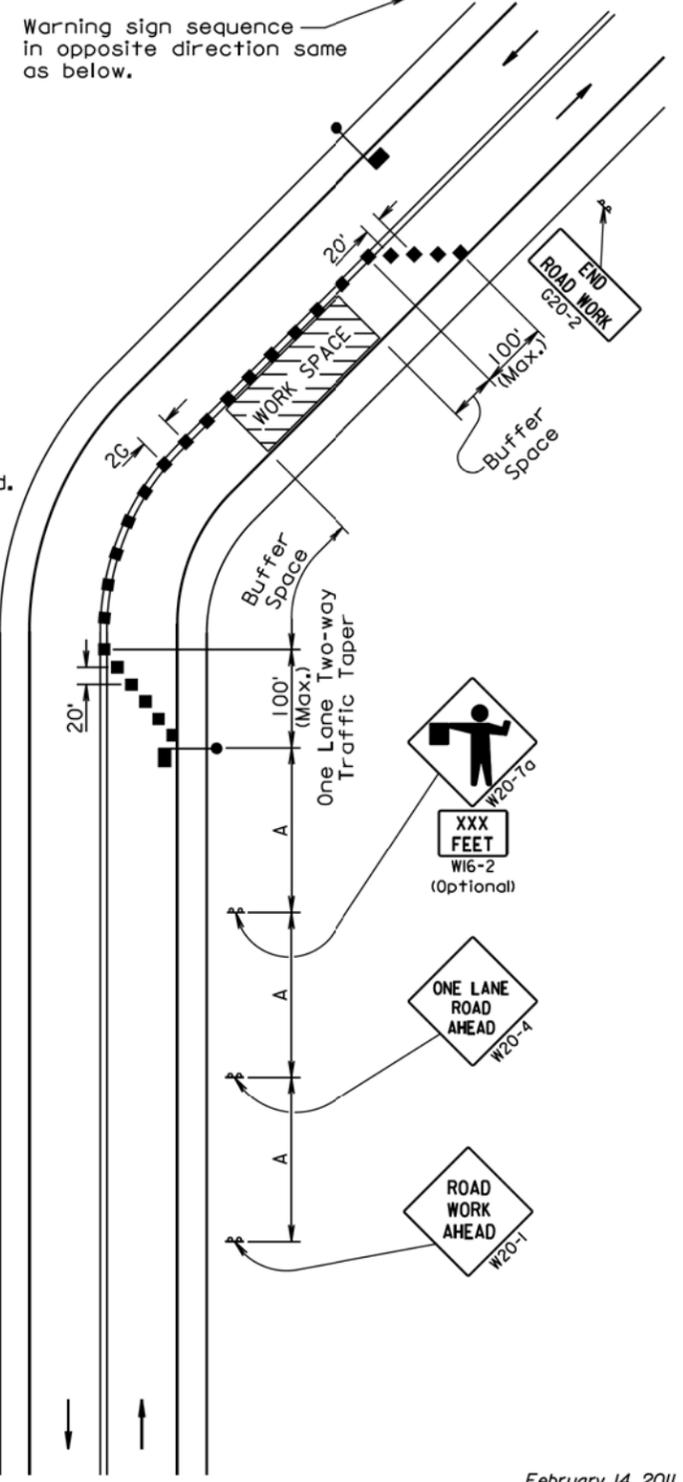
Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices shall 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 shall 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.



Warning sign sequence in opposite direction same as below.

G20-2 ROAD WORK END

February 14, 2011

S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
	<i>Published Date: 1st Qtr. 2014</i>	Sheet 1 of 1

-Plotted From- tpr13315

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