STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	1	24

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

IM-P 0021(153)
(045-253, 047-251, 050-253, 050-251, 090W-253, 090E-253, 090P-253, 090L-252 & 262-252)
SD HIGHWAYS 45, 47, 50 & 262
INTERSTATES 90, 90P & 90L
AURORA, BRULE, CHARLES MIX, DAVISON, GREGORY, HANSON & McCOOK COUNTIES

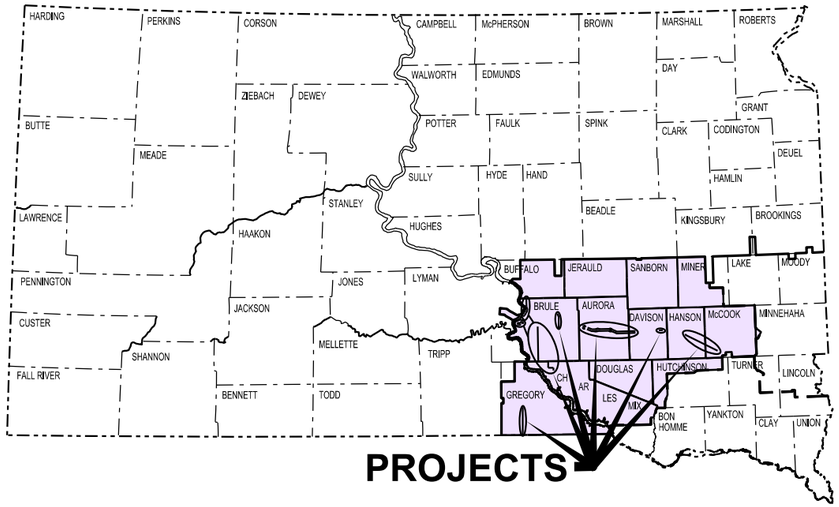
MITCHELL AREA
ASPHALT CONCRETE CRACK SEALING

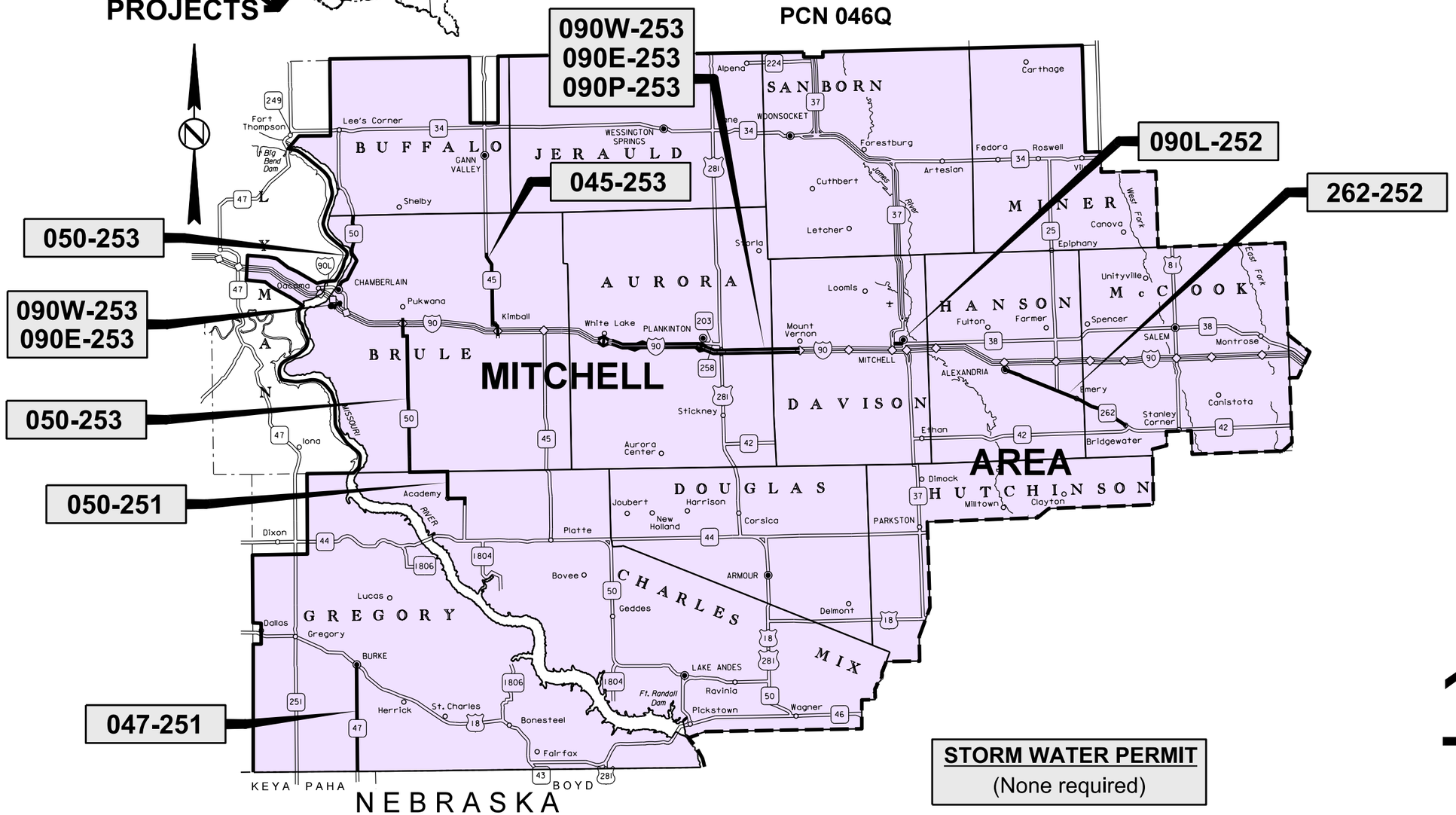
PCN 046Q

Plotting Date: 01/13/2014

INDEX OF SHEETS

Sheet 1	Title Sheet
Sheets 2 - 10	Layout Maps
Sheets 11 & 12	Estimate of Quantities
Sheet 13	Plan Notes
Sheet 14	Typical Reservoir Section
Sheets 15 - 24	Traffic Control





STORM WATER PERMIT
(None required)

PLOT SCALE - 1:7000
PLOTTED FROM - TRMIINT06
PLOT NAME - 10
FILE - ...\2014 MIT AREA CRACK TITL046Q.DGN

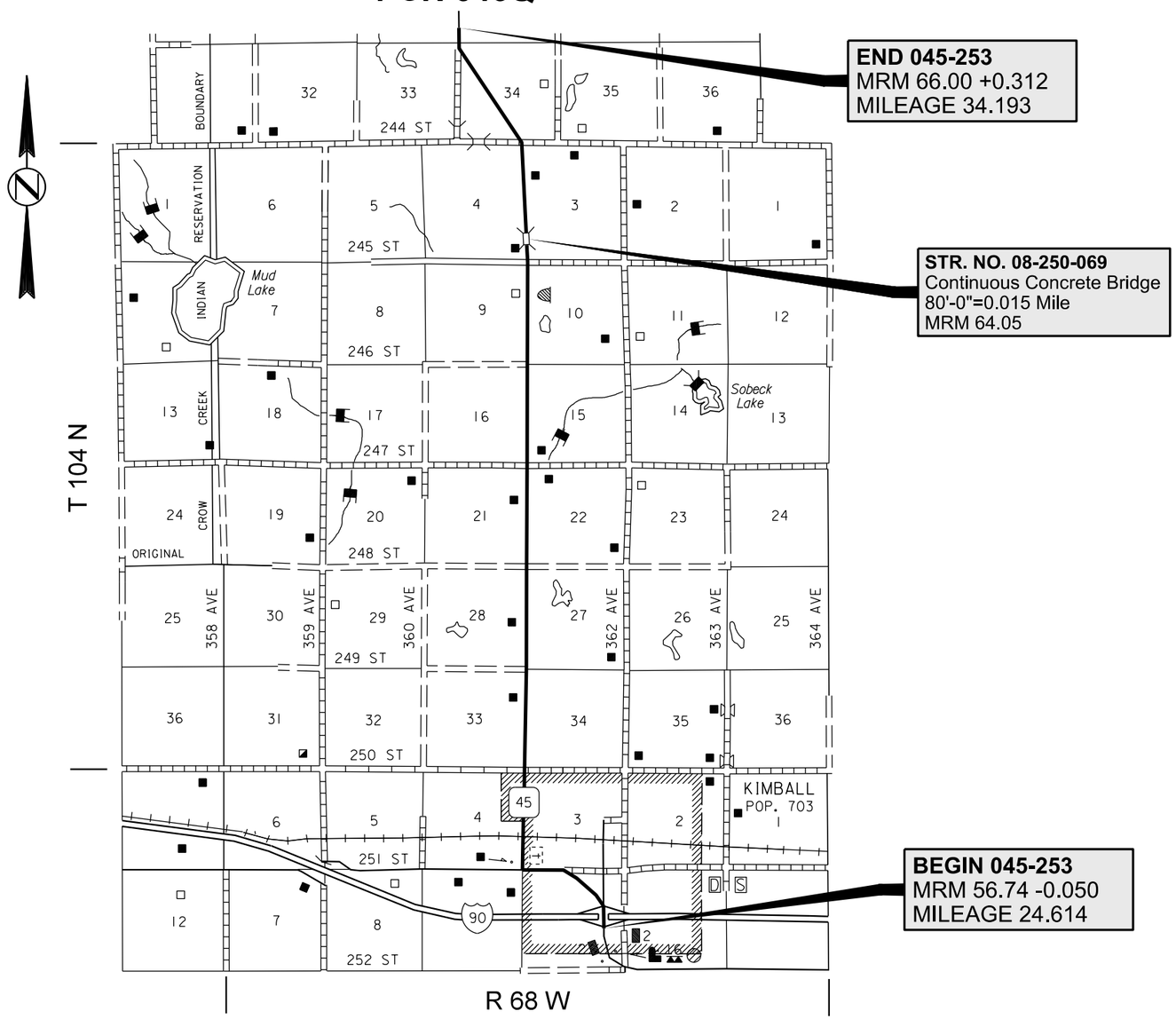
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	2	24

Plotting Date: 01/13/2014

P 0021(153)

(045-253)
BRULE COUNTY
ASPHALT CONCRETE CRACK SEALING
GROSS LENGTH: 9.579 MILES
BRIDGE LENGTH: 0.015 MILE
NET LENGTH: 9.564 MILES

PCN 046Q



ADT (2012) 1010

PLOT SCALE - 1:7000

PLOTTED FROM - TRMIINT06

PLOT NAME - 10

FILE - ...\2014 MIT AREA CRACK TITL046Q.DGN

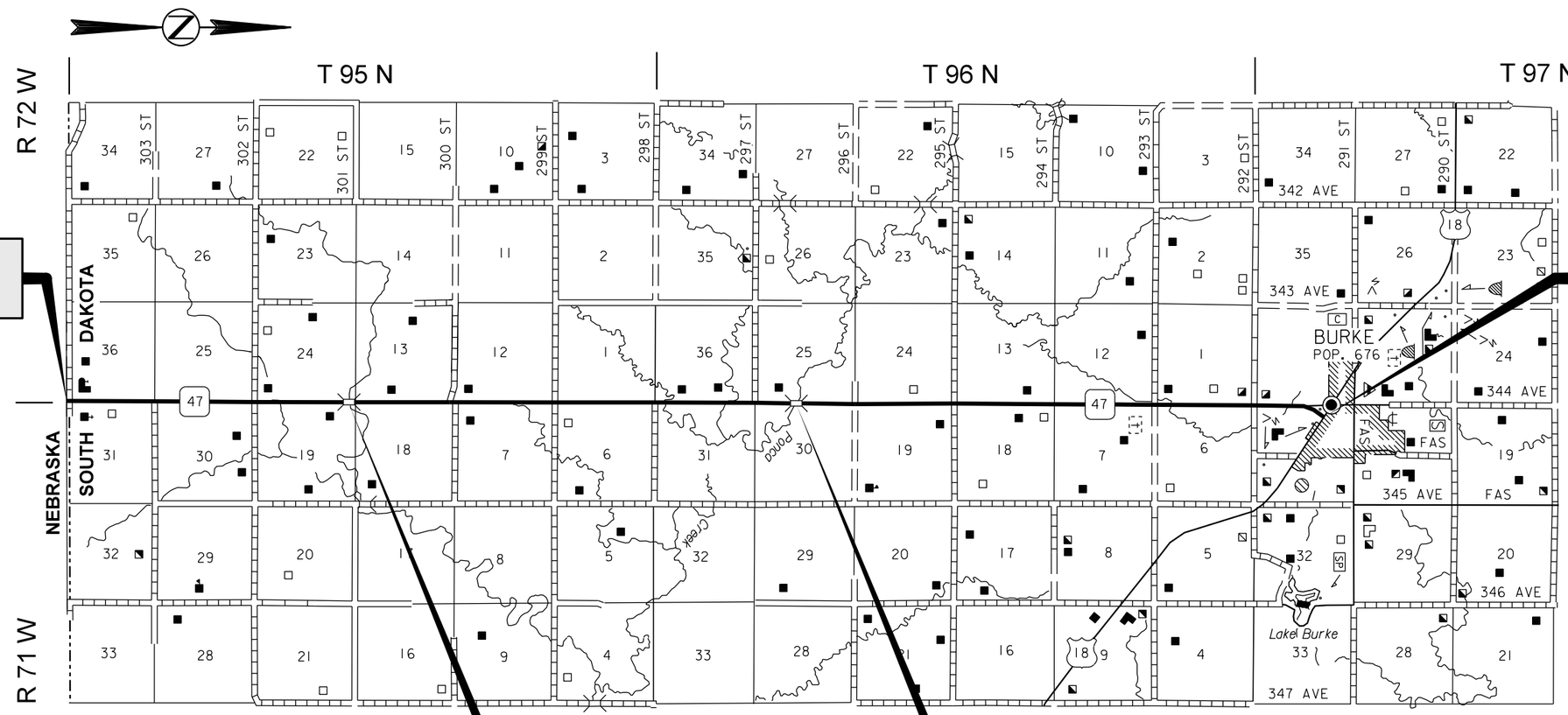
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	3	24

Plotting Date: 01/13/2014

P 0021(153)

(047-251)
GREGORY COUNTY
ASPHALT CONCRETE CRACK SEALING
GROSS LENGTH: 12.556 MILES
BRIDGES LENGTH: 0.051 MILE
NET LENGTH: 12.505 MILES

PCN 046Q



BEGIN 047-251
MRM 0.00 +0.000
MILEAGE 0.000

END 047-251
MRM 12.56 +0.000
MILEAGE 12.556

STR. NO. 27-120-321
Continuous Concrete Bridge
86'-6"=0.016 Mile
MRM 2.80

STR. NO. 27-120-276
Cont. Comp. Girder Bridge
184'-9¾"=0.035 Mile
MRM 7.29

ADT (2012) 403

PLOT SCALE - 1:7000
PLOT NAME - 10
FILE -...\2014 MIT AREA CRACK TITL046Q.DGN
PLOTTED FROM - TRM1INT06

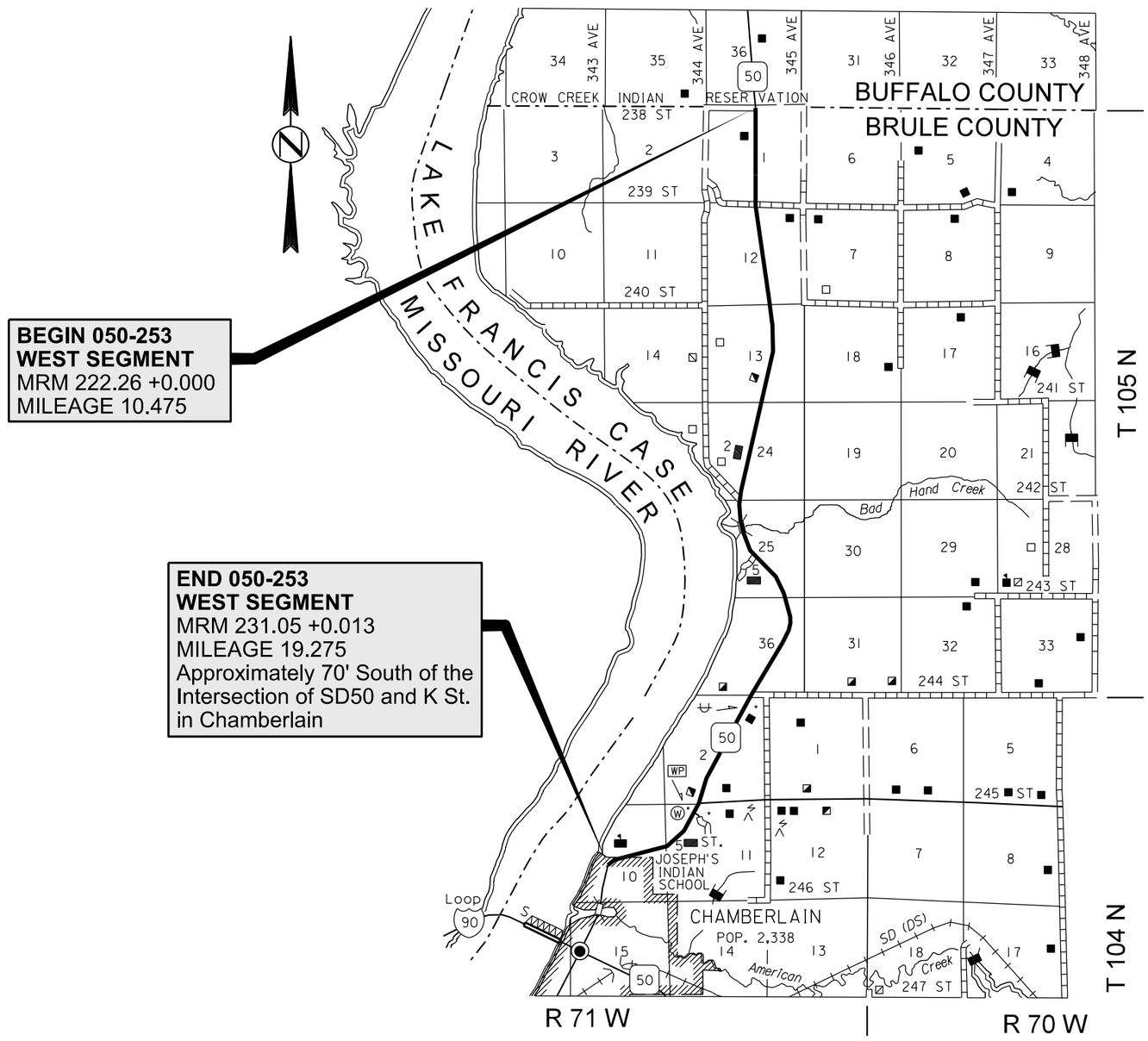
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	4	24

Plotting Date: 01/13/2014

P 0021(153)

(050-253 - SD50 WEST SEGMENT)
BRULE COUNTY
ASPHALT CONCRETE CRACK SEALING
LENGTH: 8.800 MILES

PCN 046Q



ADT (2012) 987

PLOT SCALE - 1:7000

PLOTTED FROM - TRM11INT06

PLOT NAME - 10

FILE - ...\2014 MIT AREA CRACK TITL046Q.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	5	24

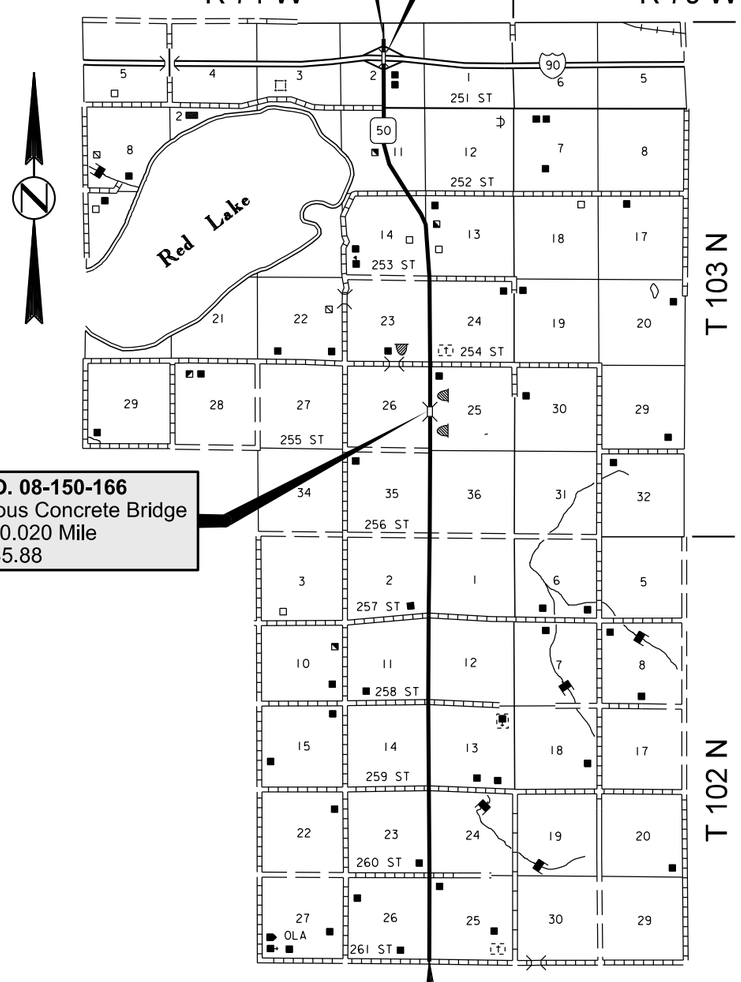
Plotting Date: 01/13/2014

P 0021(153) PCN 046Q

(050-253 SD50 EAST SEGMENT)
BRULE COUNTY
ASPHALT CONCRETE CRACK SEALING
GROSS LENGTH: 15.682 MILES
BRIDGES & APRROACH/SLEEPER SLABS LENGTH: 0.077 MILE
NET LENGTH: 15.605 MILES

BEGIN 050-253
EAST SEGMENT
MRM 241.50 -0.192
MILEAGE 23.314

STR. NO. 08-145-124
Cont. Composite Girder Bridge
254'-0"=0.048 Mile and
Two Appr/Slpr Slabs = 0.009 Mile
MRM 241.61

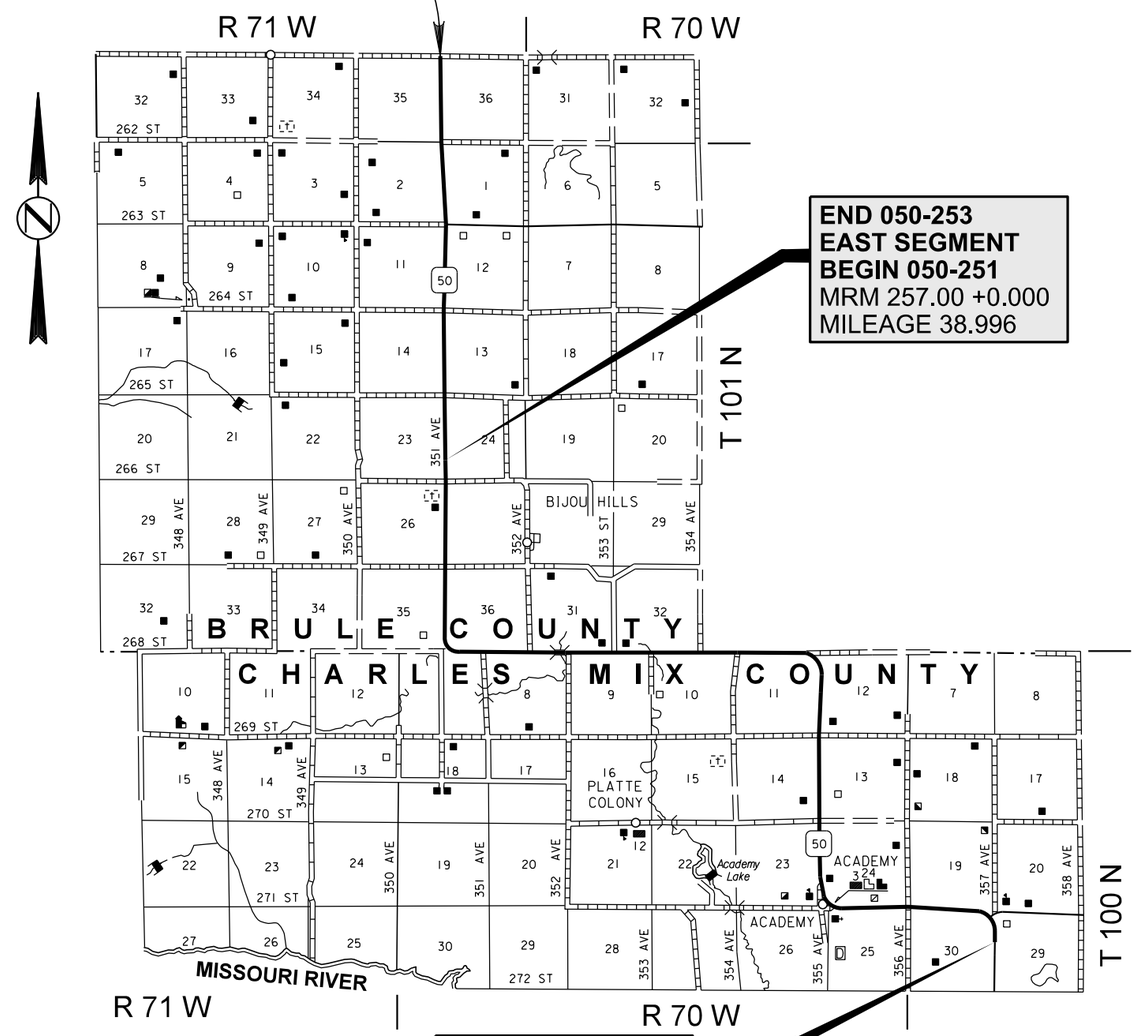


STR. NO. 08-150-166
Continuous Concrete Bridge
106'-0"=0.020 Mile
MRM 245.88

ADT (2012) 221

IDENTICAL POINTS

(050-251)
BRULE & CHARLES MIX COUNTIES
ASPHALT CONCRETE CRACK SEALING
LENGTH: 11.557 MILES



END 050-253
EAST SEGMENT
BEGIN 050-251
MRM 257.00 +0.000
MILEAGE 38.996

END 050-251
MRM 268.00 +0.762
MILEAGE 50.553

PLOT SCALE - 1:7000
PLOTTED FROM - TRM11NT06
PLOT NAME - 10
FILE -...\2014 MIT AREA CRACK TITL046Q.DGN

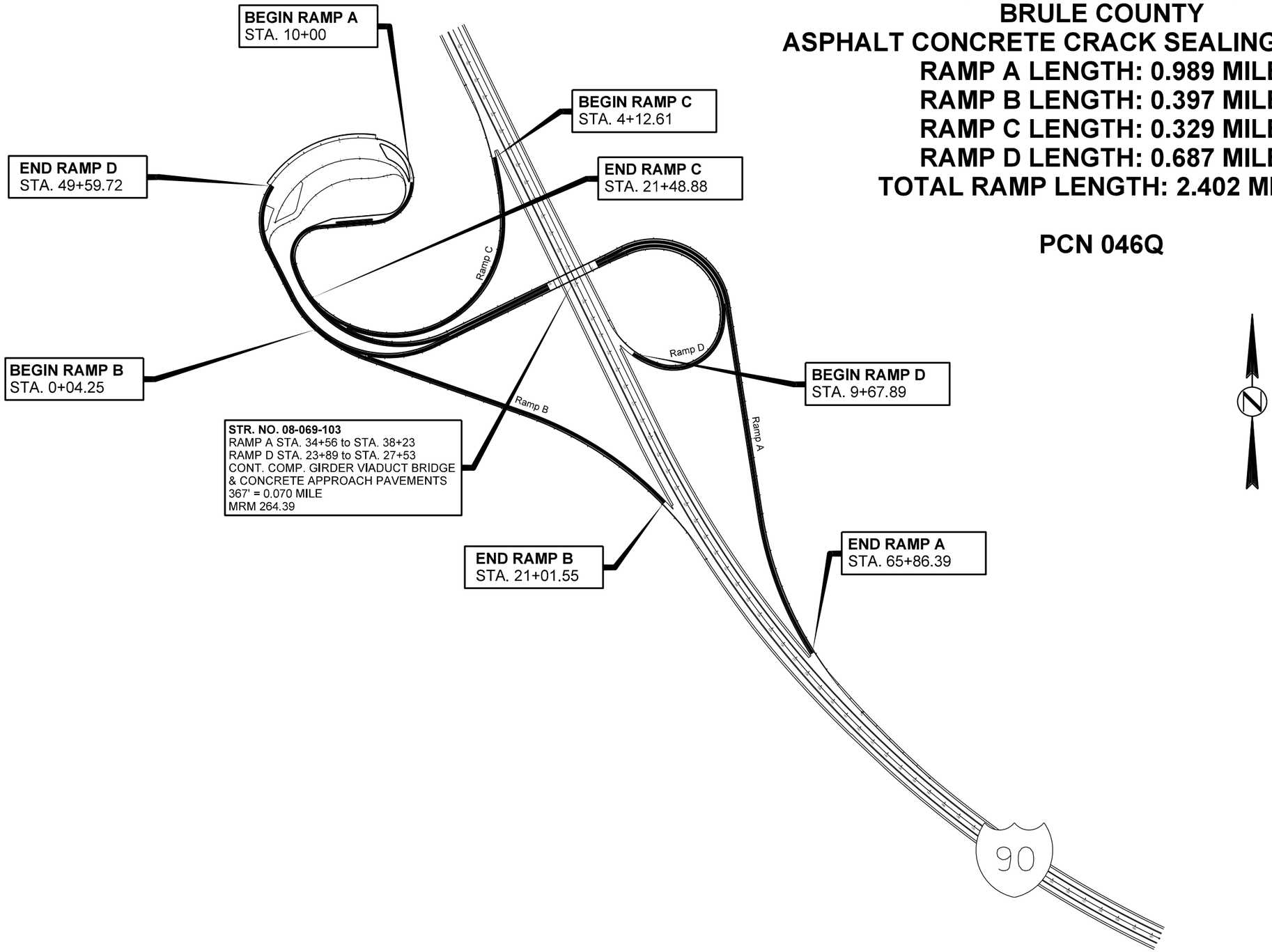
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	6	24

Plotting Date: 01/13/2014

IM 0021(153)

(090W-253 & 090E-253)
BRULE COUNTY
ASPHALT CONCRETE CRACK SEALING OF RAMPS
RAMP A LENGTH: 0.989 MILE
RAMP B LENGTH: 0.397 MILE
RAMP C LENGTH: 0.329 MILE
RAMP D LENGTH: 0.687 MILE
TOTAL RAMP LENGTH: 2.402 MILES

PCN 046Q



PLOT SCALE - 1:7000

PLOT NAME - 10

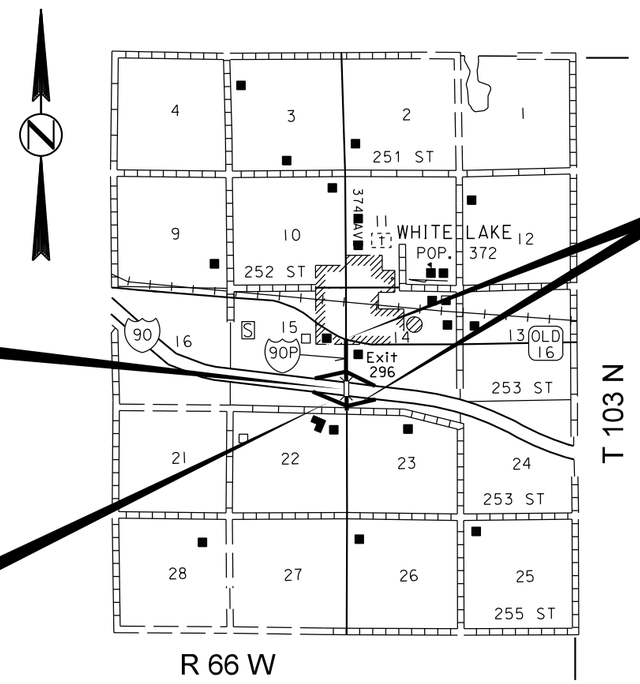
FILE - ...\2014 MIT AREA CRACK TITL046Q.DGN

PLOTTED FROM - TRMIINT06

IM 0021(153)
(090W-253 & 090E-253)
AURORA COUNTY
ASPHALT CONCRETE CRACK SEALING OF RAMPS
EXIT 296 RAMPS
090W-253 WB RAMPS LENGTH: 0.437 MILE
090E-253 EB RAMPS LENGTH: 0.418 MILE

P 0021(153)
(090P-253)
AURORA COUNTY
ASPHALT CONCRETE CRACK SEALING OF CROSSROAD
EXIT 296 CROSSROAD
GROSS LENGTH: 0.564 MILE
BRIDGE LENGTH: 0.056 MILE
NET LENGTH: 0.508 MILE

PCN 046Q



STR. NO. 02-040-149
Cont. Composite Girder Bridge
252'-4 1/8"=0.047 Mile and
Two Appr/Slpr Slabs = 0.009 Mile
MRM 296.72

EXIT 296 RAMPS
090W-253
WB On Ramp = 0.212 Mile
WB Off Ramp = 0.224 MIle
090E-253
EB On Ramp = 0.203 Mile
EB Off Ramp = 0.215 Mile

EXIT 296 CROSSROAD (090P-253)
MRM 296.62 -0.029 to 297.14
MILEAGE -0.042 to 0.522
From 50' N of Jct Old Hwy 16, S to
253rd St, just S of Exit 296 EB Ramps

I90 EXIT 296 ADT (2010)
WB On Ramp 66
WB Off Ramp 53
EB On Ramp 45
EB Off Ramp 62
Crossroad (I90P) 429

PLOT SCALE - 1:7000
PLOT NAME - 10
FILE - ...\2014 MIT AREA CRACK TITL046Q.DGN
PLOTTED FROM - TRMIINT06

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	8	24

Plotting Date: 01/13/2014

IM 0021(153) PCN 046Q

(090W-253 & 090E-253)
AURORA & DAVISON COUNTIES
ASPHALT CONCRETE CRACK SEALING OF SHOULDERS, REST AREA RAMPS/PARKING LOT, EXIT 308 RAMPS & CROSSROAD

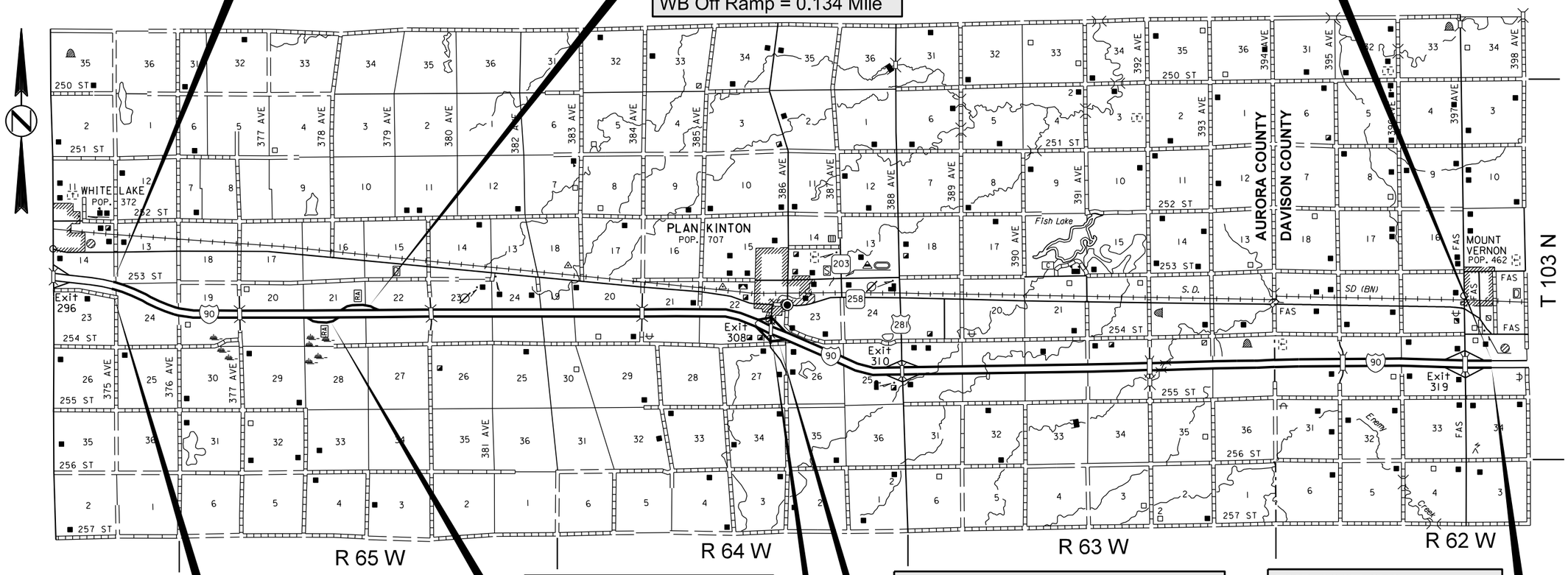
WB LENGTH: 22.140 MILES **WB RAMPS/LOT LENGTH: 0.814 MILE** **N CROSSROAD LENGTH: 0.135 MILE**

EB LENGTH: 22.125 MILES **EB RAMPS/LOT LENGTH: 0.814 MILE** **S CROSSROAD LENGTH: 0.135 MILE**

BEGIN 090W-253
WB MRM 297.00 +0.673
WB MILEAGE 298.162

090W-253 REST AREA
WB Parking Lot = 0.064 Mile
WB On Ramp = 0.133 Mile
WB Off Ramp = 0.134 Mile

END 090W-253
WB MRM 319.43 +0.350
WB MILEAGE 320.302



BEGIN 090E-253
EB MRM 297.00 +0.673
EB MILEAGE 297.989

090E-253 REST AREA
EB Parking Lot = 0.064 Mile
EB On Ramp = 0.133 Mile
EB Off Ramp = 0.134 Mile

EXIT 308 RAMPS & CROSSROAD
090W-253
N Crossroad = 0.135 Mile
WB On Ramp = 0.218 Mile
WB Off Ramp = 0.265 Mile
090E-253
S Crossroad = 0.135 Mile
EB On Ramp = 0.218 Mile
EB Off Ramp = 0.265 Mile

END 090E-253
EB MRM 319.43 +0.342
EB MILEAGE 320.114

I90 EXIT 308 ADT (2010)
WB On Ramp 120
WB Off Ramp 66
EB On Ramp 57
EB Off Ramp 110
Crossroad 653

I90W ADT (2012) 4166
I90E ADT (2012) 4166

STR. NO. 02-15C-158
Cont. Composite Girder Bridge
268' - 3" = 0.050 Mile
MRM 308.26

PLOT SCALE - 1:7000
PLOT NAME - 10
FILE - ...\2014 MIT AREA CRACK TITL046Q.DGN
PLOTTED FROM - TRMI1NT06

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	9	24

Plotting Date: 01/13/2014

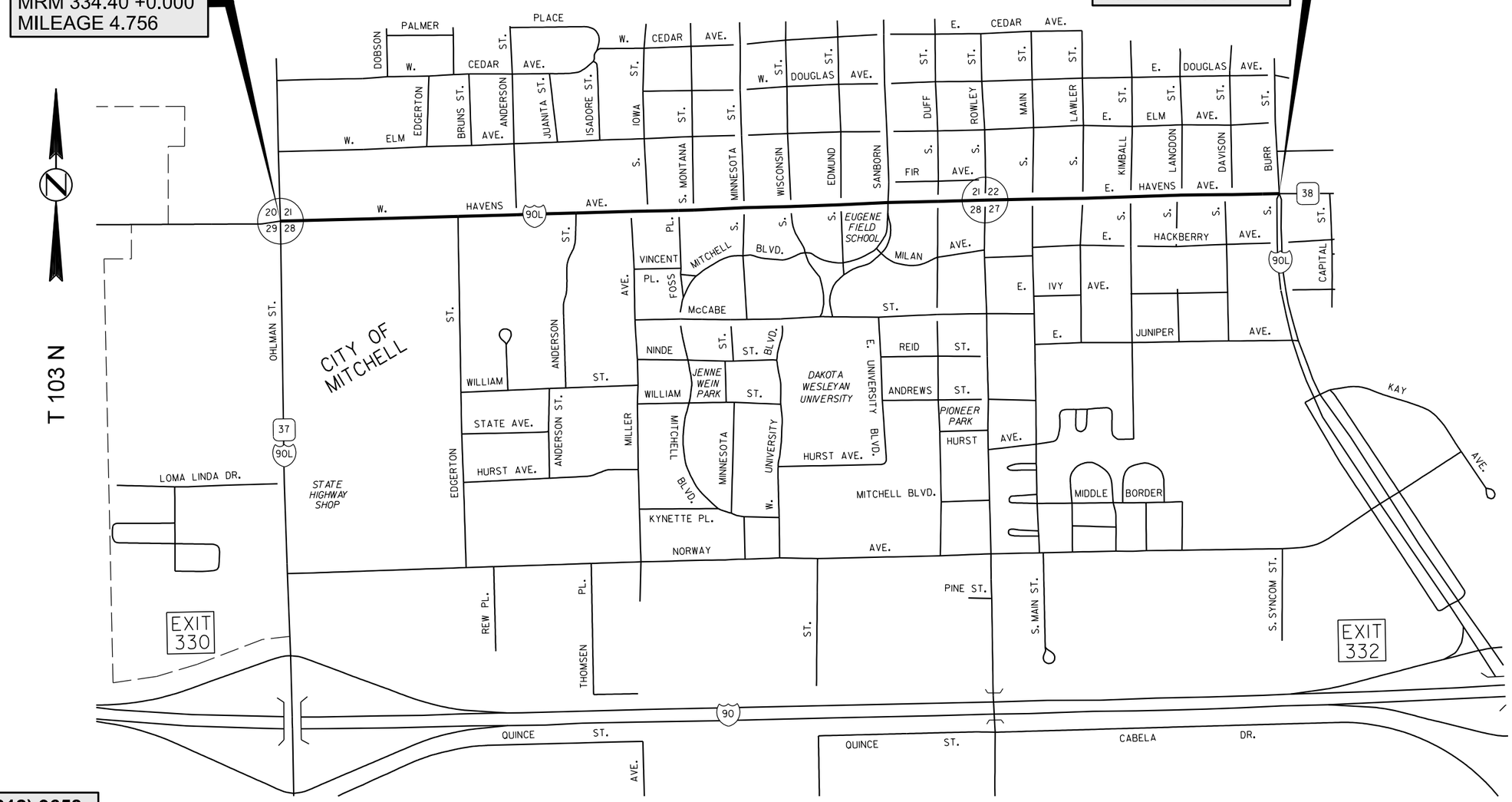
P 0021(153)

(090L-252)
DAVISON COUNTY
ASPHALT CONCRETE CRACK SEALING
LENGTH: 1.424 MILES

PCN 046Q

END 090L-252
MRM 334.40 +0.000
MILEAGE 4.756

BEGIN 090L-252
MRM 332.97 +0.000
MILEAGE 3.332



ADT (2012) 9658

PLOT SCALE - 1:7000
PLOTTED FROM - TRMI1INT06
PLOT NAME - 10
FILE - ...\2014 MIT AREA CRACK TITL046Q.DGN

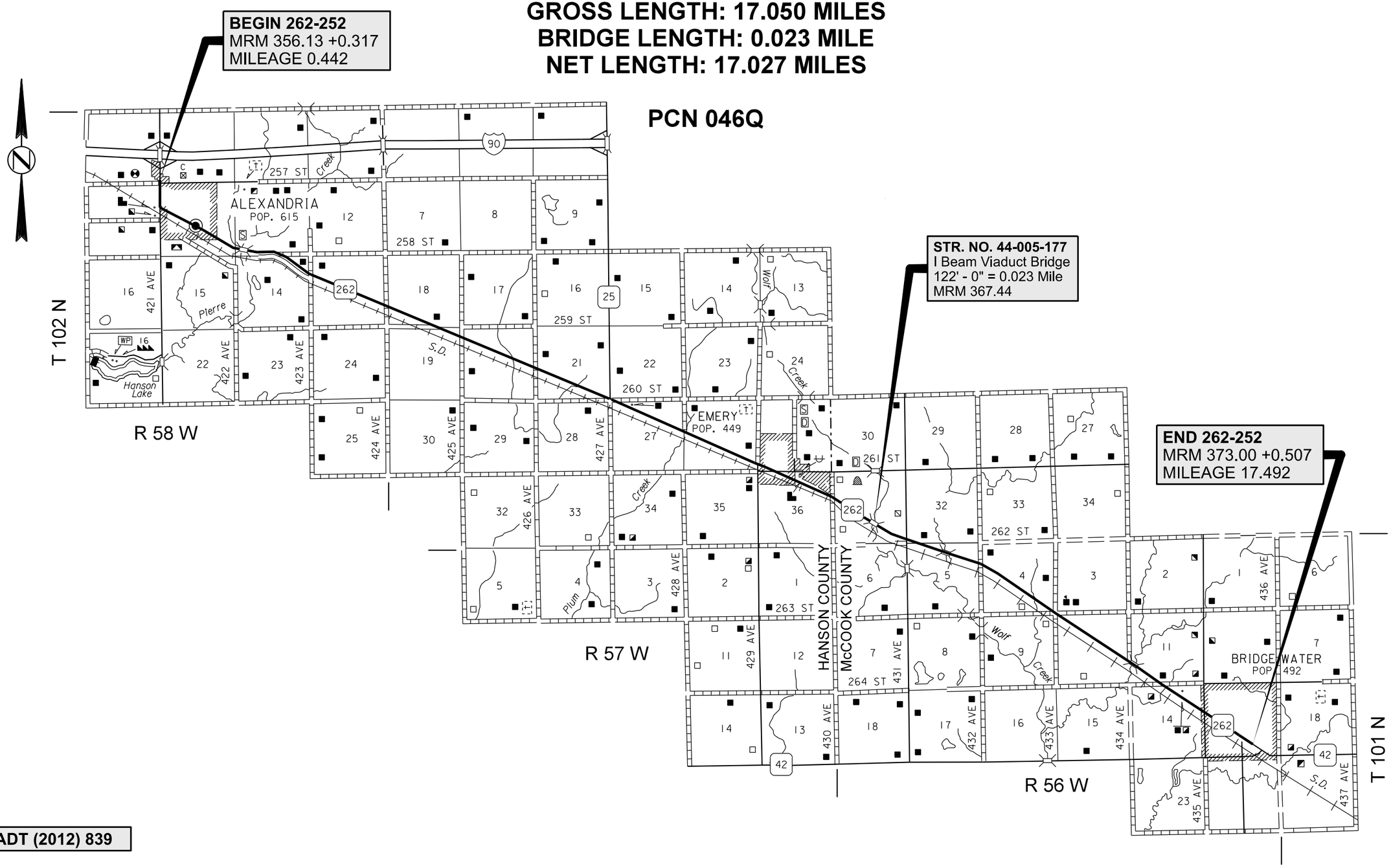
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	10	24

Plotting Date: 01/13/2014

P 0021(153)

(262-252)
HANSON & McCOOK COUNTIES
ASPHALT CONCRETE CRACK SEALING
GROSS LENGTH: 17.050 MILES
BRIDGE LENGTH: 0.023 MILE
NET LENGTH: 17.027 MILES

PCN 046Q



ADT (2012) 839

PLOT SCALE - 1:7000

PLOTTED FROM - TRM11NT06

PLOT NAME - 10

FILE - ...\2014 MIT AREA CRACK TITL046Q.DGN

ESTIMATE OF QUANTITIES

IM-P 0021(153)
(045-253, 047-251, 050-253, 050-251, 090W-253, 090E-253, 090P-253, 090L-252 & 262-252)
AURORA, BRULE, CHARLES MIX, DAVISON, GREGORY, HANSON & McCOOK COUNTIES
PCN 046Q

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
350E0010	Asphalt Concrete Crack Sealing	153,601	Lb
634E0010	Flagging	1,480	Hour
634E0020	Pilot Car	685	Hour
634E0100	Traffic Control	6,359	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	6	Each
998E0100	Railroad Protective Insurance	Lump Sum	LS

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

ESTIMATE OF QUANTITIES
(FOR INFORMATION ONLY)

BID ITEM	ITEM	P 0021(153) 045-253	P 0021(153) 047-253	P 0021(153) 050-253	P 0021(153) 050-251	IM 0021(153) 090W-253	IM 0021(153) 090E-253	P 0021(153) 090P-253	P 0021(153) 090L-252	P 0021(153) 262-252	TOTAL QUANTITY
009E0010	Mobilization	◄ LUMP SUM ►									Lump Sum
350E0010	Asphalt Concrete Crack Sealing	30,634	24,976	23,667	10,218	20,386	9,251	1,549	8,238	24,682	153,601 Lb
634E0010	Flagging	400	290	270	120	20	20	10	60	290	1,480 Hour
634E0020	Pilot Car	175	145	135	60	10	10	5	----	145	685 Hour
634E0100	Traffic Control	442	374	442	442	1,348	1,324	442	1,103	442	6,359 Unit
634E0120	Traffic Control, Miscellaneous	◄ LUMP SUM ►									Lump Sum
634E0420	Type C Advance Warning Arrow Panel	----	----	----	----	1	1	----	4	----	6 Each
998E0100	Railroad Protective Insurance	LS	----	----	----	----	----	----	----	----	Lump Sum

COORDINATION BETWEEN CONTRACTORS

A separate contract for Project IM-NH-P 0021(152) 045V Brule, Gregory, Aurora and Davison Counties will be awarded to another Contractor for Asphalt Concrete Surface Treatment on SD 45, SD 47, I 90 WB/EB and I 90P.

The Contractor shall schedule his work so as to complete the asphalt concrete crack sealing on projects 045-253 Brule, 047-251 Gregory, 090W-253 Aurora & Davison, 090E-253 Aurora & Davison and 090P-253 Aurora before completion of the above asphalt surface treatment projects.

A separate contract for Project IM 0020(00)135 04AW Aurora has been awarded to another Contractor for Rest Area Lagoon Improvements on I 90 WB/EB.

A separate contract for Project IM 0906(68)289 03VT Aurora has been awarded to another Contractor for Fence Replacement on I 90 EB.

A separate contract for Project P 0042(49)327 037F & P 0262(07)373 04QR has been awarded to another Contractor for asphalt concrete resurfacing on SD 42 and SD 262.

The Contractor shall schedule his work so as not to interfere with or hinder the progress of the work performed by other contractors on the above projects.

ASPHALT CONCRETE CRACK SEALING

The Typical Reservoir Section shall be 3/4 inch wide x 3/4 inch deep as shown on the sheet titled Typical Reservoir Section, NOT 3/4 to 7/8 inch wide and deep as noted in Section 350.3 of the Standard Specifications.

Cracks less than 3/4 inch in width or depth will require routing to a width and depth of 3/4 inch.

Cracks 3/4 inch or greater in width and depth will not require routing, but shall be thoroughly cleaned of foreign materials to a depth equal to the width of the crack.

Cleaning shall be accomplished with an air compressor producing a minimum of 125 CFM output and equipped with a maximum 3/4 inch nozzle.

The tool used to level the sealant shall be a maximum of three inches wide.

A blotting material such as toilet tissue shall be placed over the sealant material immediately after placement on all sealed cracks.

Only the top of the road shall be routed and sealed. No routing and sealing shall be done on the Asphalt Concrete bevel.

On projects with curb and gutter, the asphalt concrete will typically be sealed gutter to gutter.

The width of crack sealing will vary but the typical roadway widths for information only are as follows:

Project 045-253 the typical width is 32 and 24 feet.

Project 047-251 the typical width is 32 feet

ASPHALT CONCRETE CRACK SEALING (CONTINUED)

Project 050-253 (West Segment) the typical width is 32, 28 and 36 feet.

Project 050-253 (East Segment) the typical width is 32, 30 & 28 feet.

Project 050-251 the typical width is 24 feet.

Project 090W-253 (Chamberlain WB Rest Area ramps and crossroad) the typical width is 18 feet to 26 feet.

Project 090E-253 (Chamberlain EB Rest Area ramps and crossroad) the typical width is 18 feet to 26 feet.

Project 090P-253 the typical width is 28 feet.

Project 090W-253 (WB Shoulders) the typical width is 8 feet on the outside shoulder and 4 feet on the median shoulder.

Project 090E-253 (EB Shoulders) the typical width is 8 feet on the outside shoulder and 4 feet on the median shoulder.

Project 090W-253 (WB Rest Area) the typical width is 18 feet to 123 feet.

Project 090E-253 (EB Rest Area) the typical width is 18 feet to 122 feet.

Project 090W-253 (WB Exit 308 ramps and crossroad) the typical width is 24 and 25 feet on the ramps and 40 feet on the crossroad.

Project 090E-253 (EB Exit 308 ramps and crossroad) the typical width is 24 and 25 feet on the ramps and 40 feet on the crossroad.

Project 090L-252 the typical width is 48 feet on Havens Ave. and 36 feet on Rowley Ave.

Project 262-252 the typical width is 28, 32, 36, 37, and 30 feet.

All other requirements stated in Section 350 of the Standard Specifications shall apply.

Cost for routing, cleaning, furnishing and installing blocking medium and furnishing and placing blotting material shall be incidental to the contract unit price per pound for Asphalt Concrete Crack Sealing.

TABLE OF LONGITUDINAL AND TRANSVERSE CRACKS

PROJECT	LONGITUDINAL	TRANSVERSE
045-253	18%	82%
047-251	1%	99%
050-253	7%	93%
050-251	3%	97%
090W-253	5%	95%
090E-253	7%	93%
090P-253	38%	62%
090L-252	52%	48%
262-252	9%	91%

GENERAL MAINTENANCE OF TRAFFIC

Flaggers and a pilot car shall be used when traffic must be routed out of its normal lane for a distance greater than the two flaggers are able to communicate with each other.

Removing, relocating, covering, salvaging and resetting of permanent 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.

Work activities shall be confined to one-half roadway or ramp width, leaving the adjoining lane open to traffic. Routing traffic onto gravel or asphalt shoulders during any phase of the construction will not be allowed. Damage to the shoulders due to the Contractor's operations shall be repaired by the Contractor, to the satisfaction of the Engineer, at no expense to the State.

Overnight lane closures will not be allowed.

Sufficient traffic control devices have been included in these plans to sign one workspace for each route. Details for each route are shown elsewhere in the plans. If the Contractor elects to work on additional sites simultaneously, the cost for additional traffic control devices shall be incidental to the contract unit price per unit for Traffic Control.

MAINTENANCE OF TRAFFIC (INTERSTATE HIGHWAYS)

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

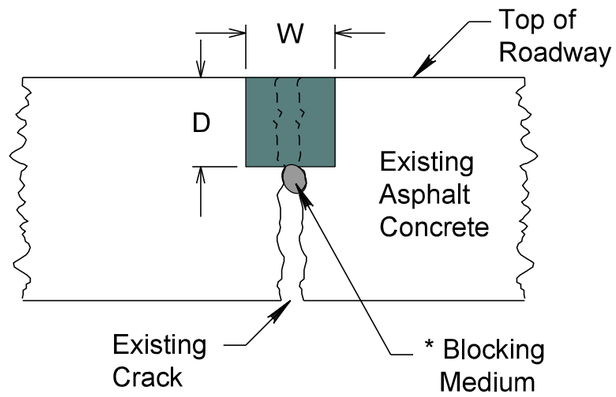
Work activities shall not be conducted simultaneously on the median and outside shoulders of the same directional set of lanes.

The use of interstate maintenance crossovers will not be permitted.

Traffic will be permitted on the ramp shoulders when necessary to allow traffic around a workspace.

Each Rest Area shall be allowed to be closed for one day from sunrise to sunset. Only one Rest Area shall be closed at a time.

TYPICAL RESERVOIR SECTION



* Inert compressible material required for cracks 3/8" or more in width. The backer rod shall be a nonmoisture absorbing, resilient material approximately 25 percent larger in diameter than the width of the joint to be sealed. The backer rod shall be compatible with the sealant and no bond or reaction shall occur between the rod and the sealant.

D & W = 3/4"

Recommended Backer Rod Diameter for Joint Width	
Joint Width	Rod Diameter
3/16" - 1/4"	3/8"
1/4" - 3/8"	1/2"
3/8" - 1/2"	5/8"
5/8" - 3/4"	7/8"
3/4" - 7/8"	1"
7/8" - 1"	1 1/4"
1" - 1 1/4"	1 1/2"
1 1/4" - 1 1/2"	2"

PLOT SCALE - 1:7000
PLOTTED FROM - TRM11NT06
PLOT NAME - 1
FILE ...\TYPICAL RESERVOIR SECTION 2014.DGN

TRAFFIC CONTROL

LANE CLOSURE WITH FLAGGER PROVIDED

045-253, 047-251, 050-253, 050-251, 090P-253 & 262-252

BRULE, GREGORY, CHARLES MIX, AURORA, HANSON & McCOOK COUNTIES

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.

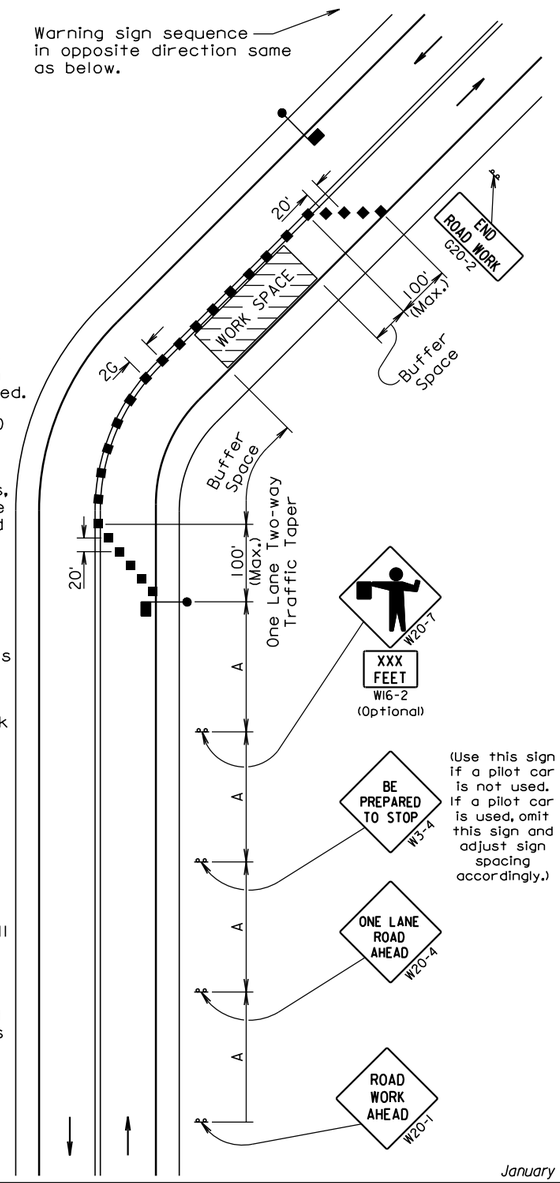
The channelizing devices shall be drums or 42" cones.

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

END ROAD WORK
G20-2

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 verical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.



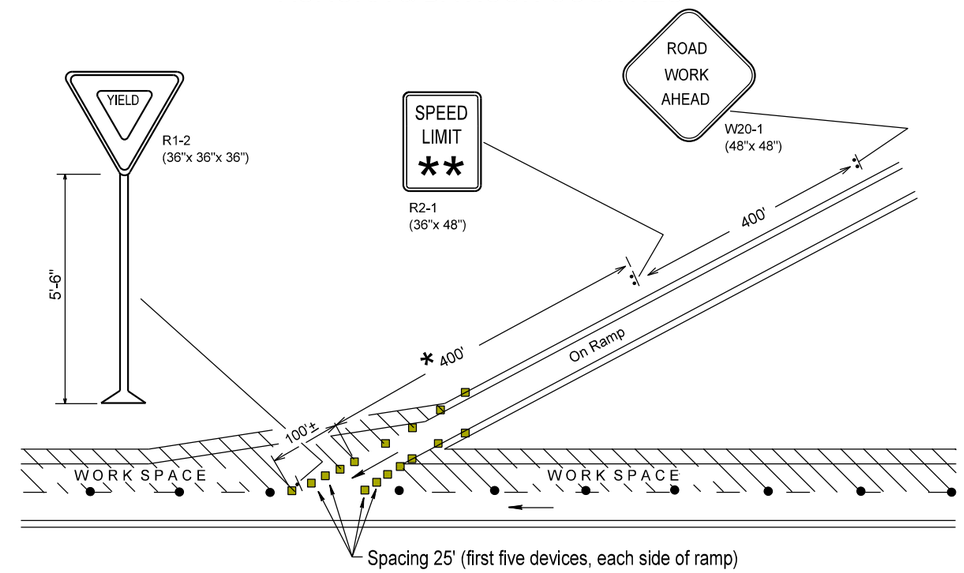
January 7, 2014

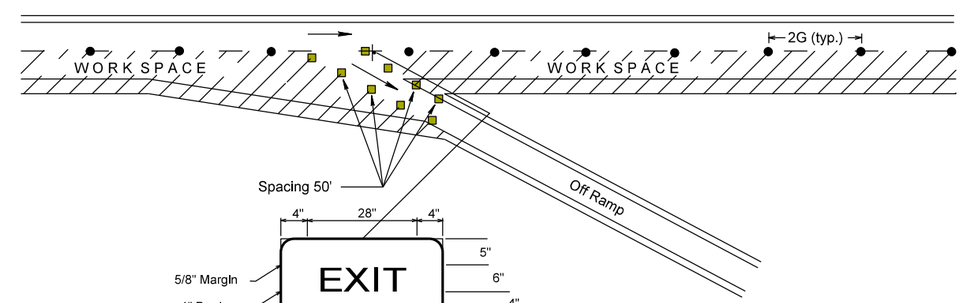
TRAFFIC CONTROL

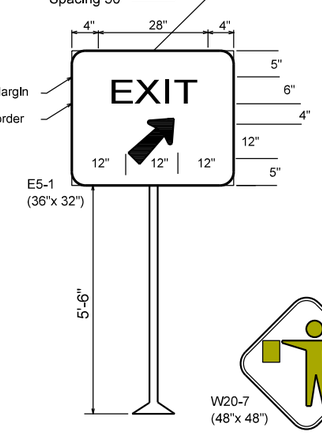
ENTRANCE RAMP AND EXIT RAMP DETAILS

090W-253 & 090E-253

AURORA & DAVISON COUNTIES







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

Reflectorized Drums

Reflectorized Drums or 42" Cones

* Spacing may need to be adjusted to allow for other warning sign installations.

** Speed limit to be the same as interstate mainline speed limit.

Need and location for Flagger and Flagger Symbol sign to be determined at the site by the Engineer.

PLOT SCALE - 1:7000

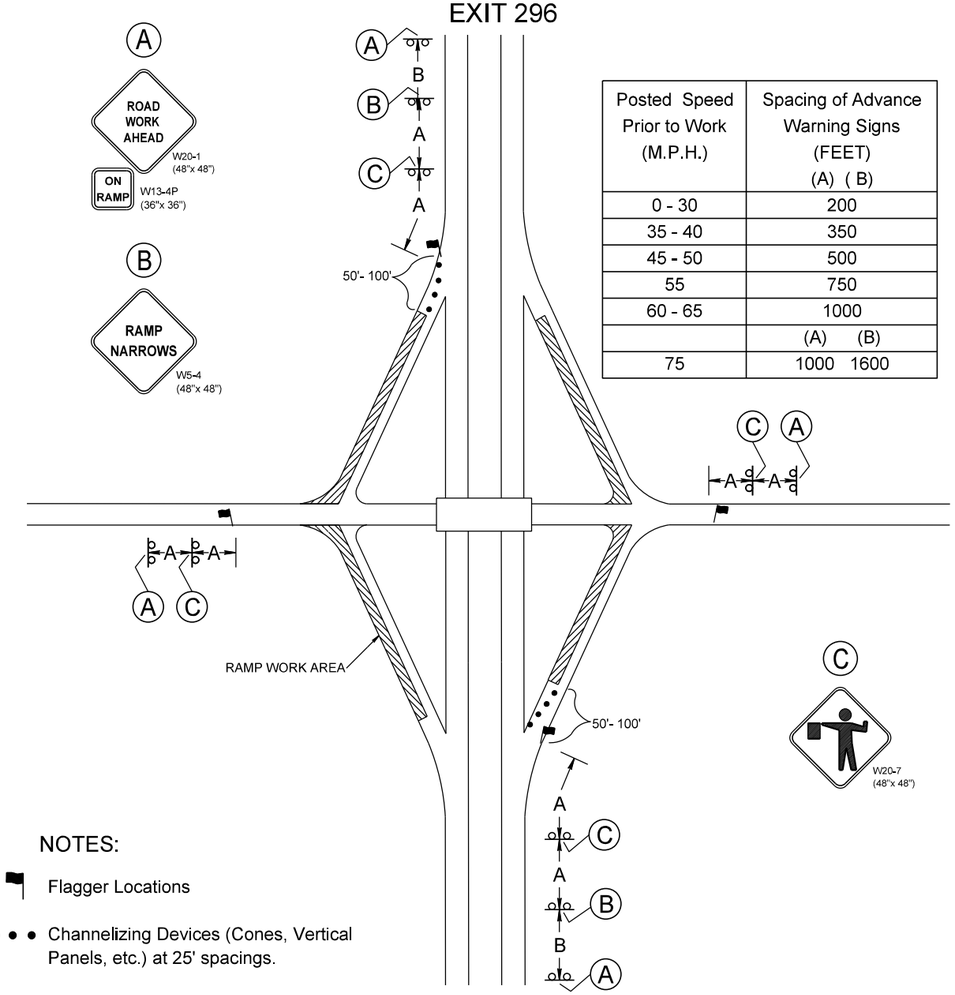
PLOTTED FROM - TRM11NT06

PLOT NAME - 2

FILE - ...\TC RAMP & 634.23 SPECIAL 2014.DGN

TRAFFIC CONTROL

ENTRANCE RAMP AND EXIT RAMP DETAILS
090W-253 & 090E-253
AURORA COUNTY
EXIT 296



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (FEET) (A) (B)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
	(A) (B)
75	1000 1600

NOTES:

Flagger Locations

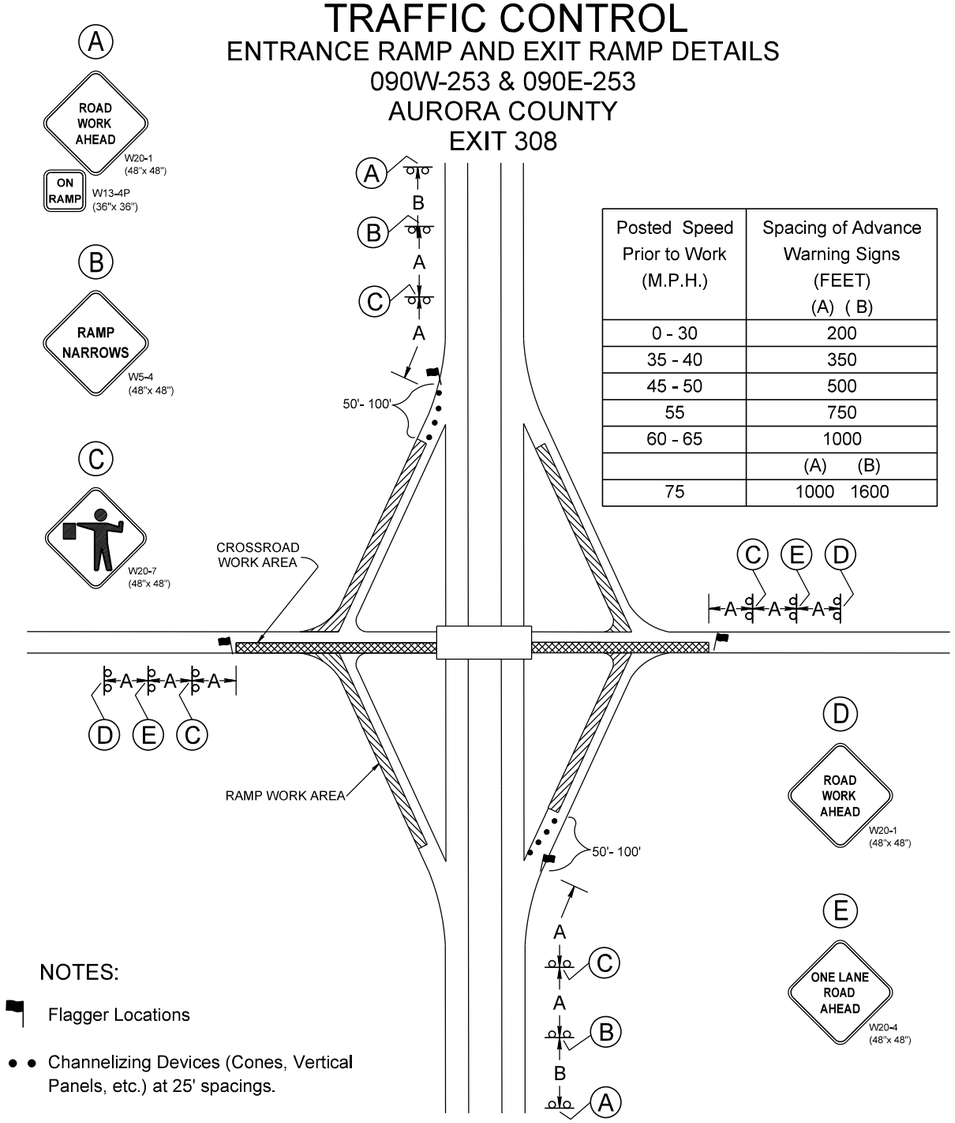
• • • Channelizing Devices (Cones, Vertical Panels, etc.) at 25' spacings.

All signs for this project may be portable and may be removed as soon as sealing has been completed.

Construction signs shall not obscure existing signs and must be installed a minimum of 100' from an existing sign.

TRAFFIC CONTROL

ENTRANCE RAMP AND EXIT RAMP DETAILS
090W-253 & 090E-253
AURORA COUNTY
EXIT 308



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (FEET) (A) (B)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
	(A) (B)
75	1000 1600

NOTES:

Flagger Locations

• • • Channelizing Devices (Cones, Vertical Panels, etc.) at 25' spacings.

All signs for this project may be portable and may be removed as soon as sealing has been completed.

Construction signs shall not obscure existing signs and must be installed a minimum of 100' from an existing sign.

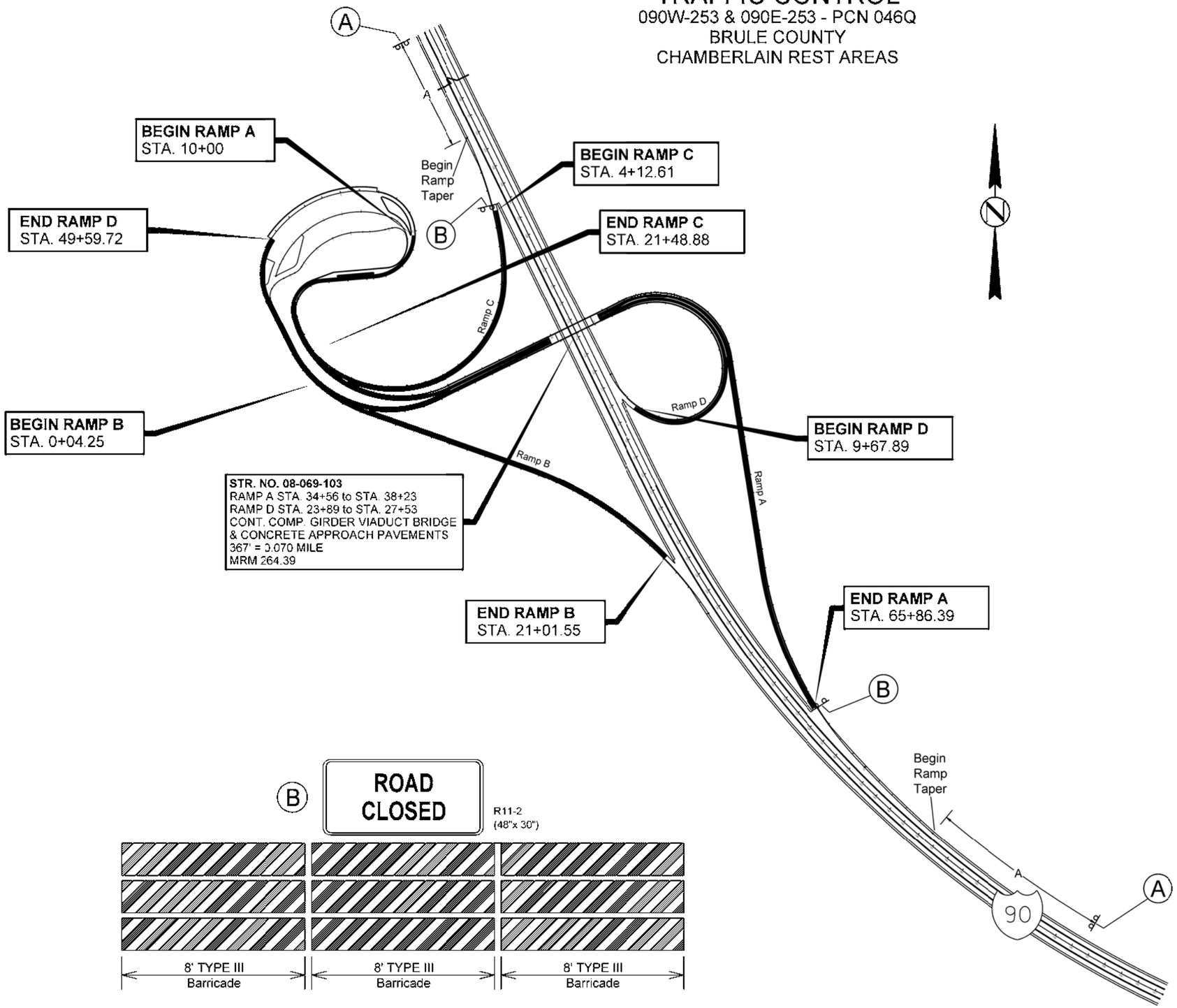
PLOT SCALE - 1:7000
PLOTTED FROM - TRM1INT06
PLOT NAME - 2
FILE - ...\TC RAMP & 634.23 SPECIAL 2014.DGN

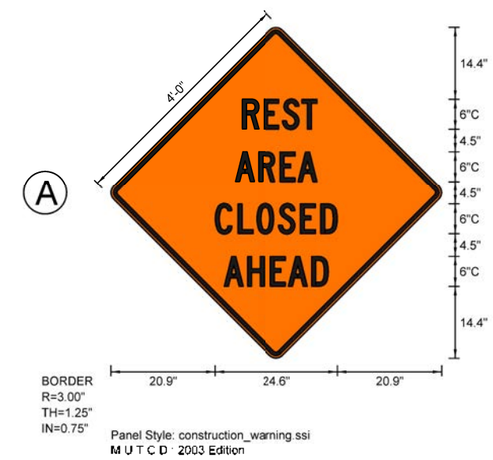
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	17	24

Plotting Date: 01/13/2014

TRAFFIC CONTROL

090W-253 & 090E-253 - PCN 046Q
BRULE COUNTY
CHAMBERLAIN REST AREAS





Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (FEET) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	1000

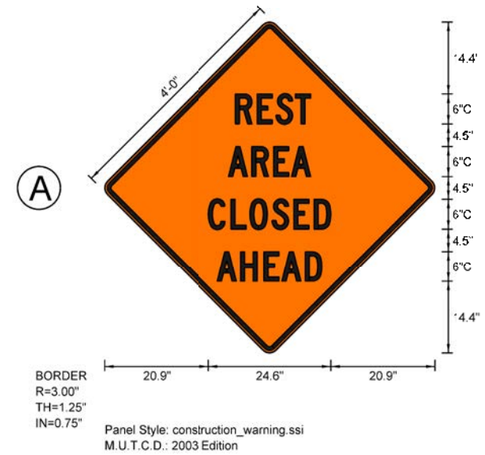
PLOT SCALE - 1:7000
PLOTTED FROM - TRMLINT06
PLOT NAME - 2
FILE - ...\TC REST AREAS 0460.DGN

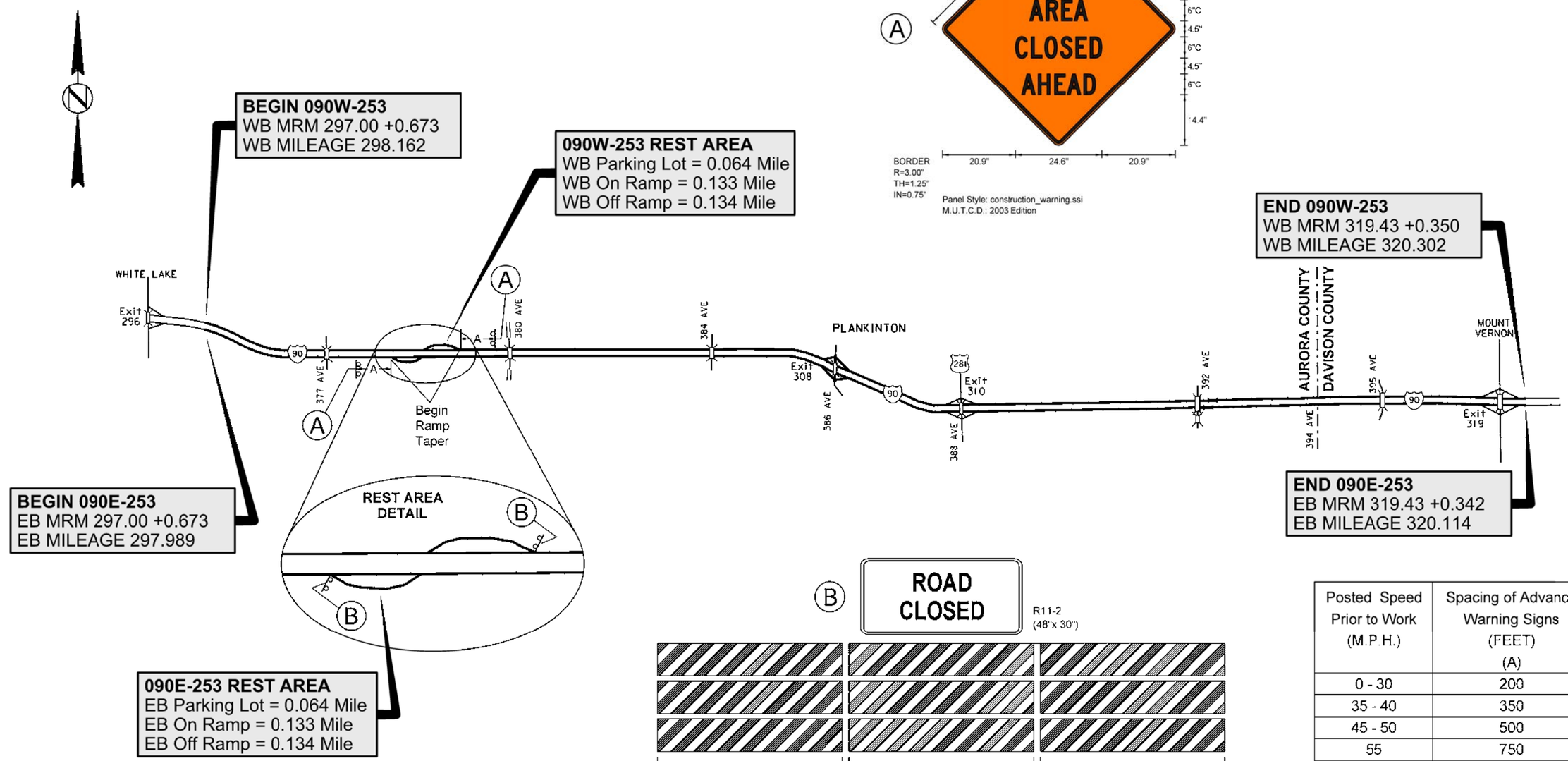
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	18	24

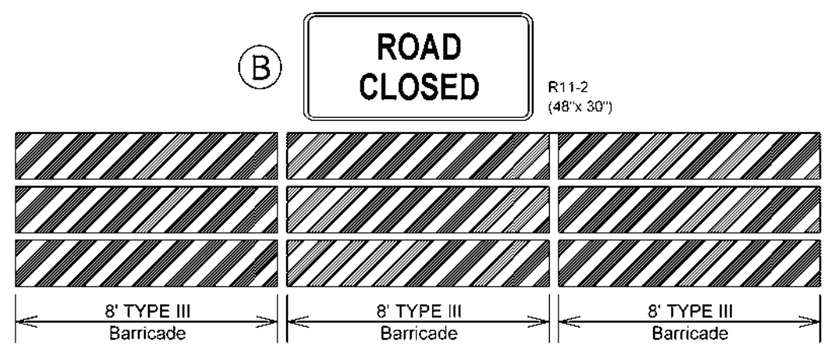
Plotting Date: 01/13/2014

TRAFFIC CONTROL

090W-253 & 090E-253 - PCN 046Q
AURORA & DAVISON COUNTIES
WHITE LAKE REST AREAS







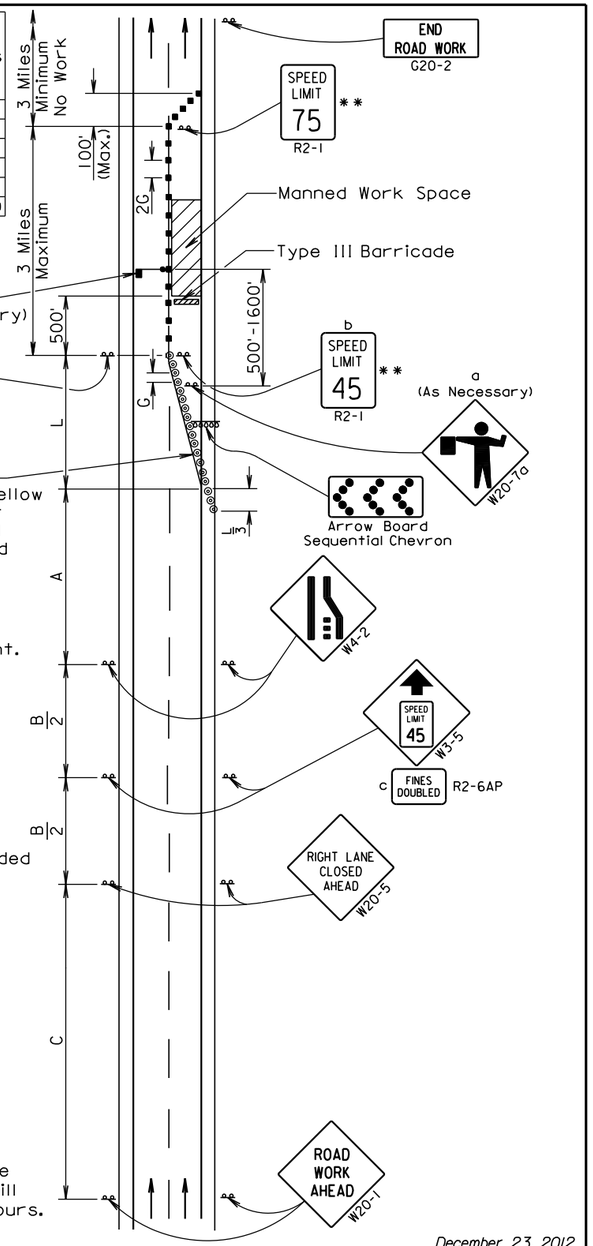
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (FEET) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	1000

PLOT SCALE - 1:7000
PLOT NAME - 2
FILE ...\TC REST AREAS 0460.DGN
PLOTTED FROM - TRM11NT06

TRAFFIC CONTROL
090W-253 & 090E-253 SHOULDERS

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Taper Length (Feet) (L)	Spacing of Advanced Warning Signs (Feet) (ABC)
0 - 30	25	180	200
35 - 40	25	320	350
45 - 50	50 *	600	500
55	50 *	660	750
60 - 65	50 *	780	1000
70 - 75	50 *	900	1000 1500 2640

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



4" white temporary pavement marking tape for right lane closures and 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 or longer.

Signs a, b, and c shall be removed or covered when workers are not present.

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

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

Left mounted advance signs on undivided highways are not required.

** Speed appropriate for location.

◎ Reflectorized Drum

■ Channelizing Device 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 any night time hours.

December 23, 2012

Published Date: 1st Qtr. 2014

SDDOT

MANNED WORK SPACE SIGNING FOR DIVIDED AND UNDIVIDED HIGHWAYS

PLATE NUMBER 634.63

Sheet 1 of 1

PLOT SCALE - 1:7000

PLOTTED FROM - TRM1INT06

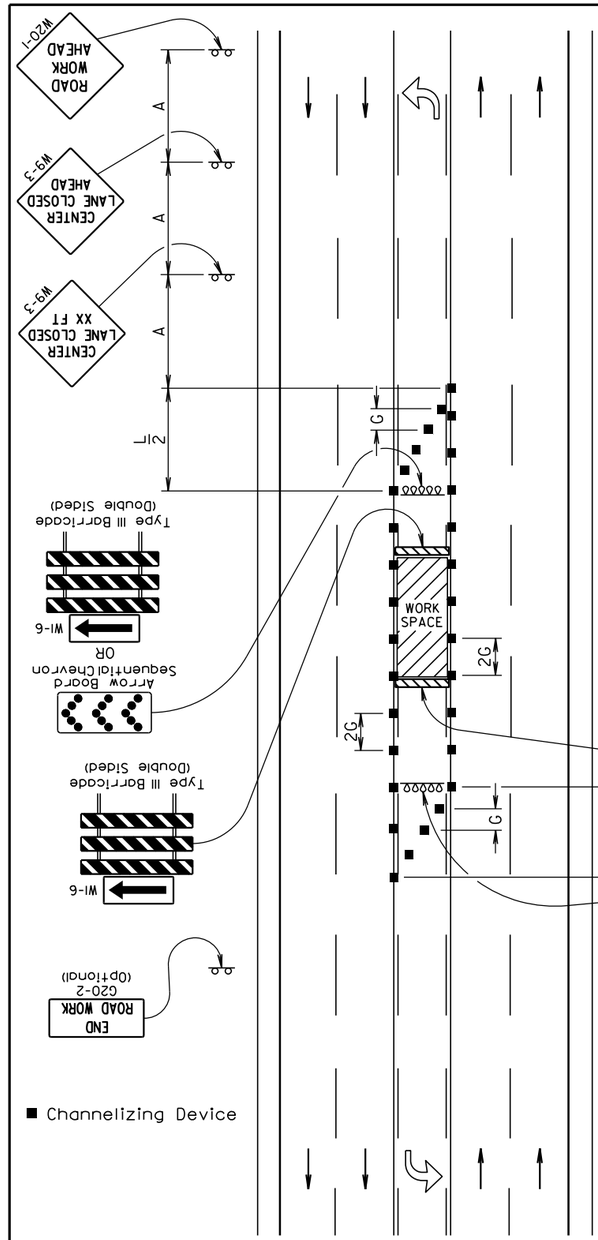
PLOT NAME - 4

FILE - ...\BLANK BORDER 63463.DGN

TRAFFIC CONTROL
090L-252

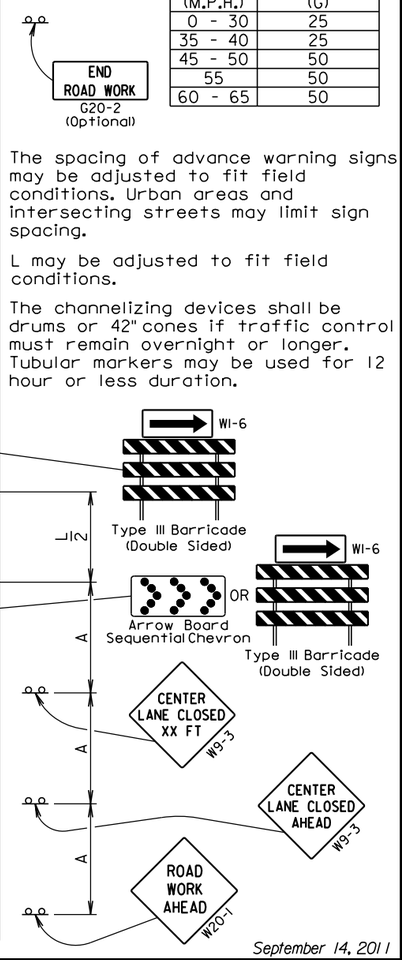
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	20	24

Plotting Date: 01/13/2014



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

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



The spacing of advance warning signs may be adjusted to fit field conditions. Urban areas and intersecting streets may limit sign spacing.

L may be adjusted to fit field conditions.

The channelizing devices shall be drums or 42" cones if traffic control must remain overnight or longer. Tubular markers may be used for 12 hour or less duration.

September 14, 2011

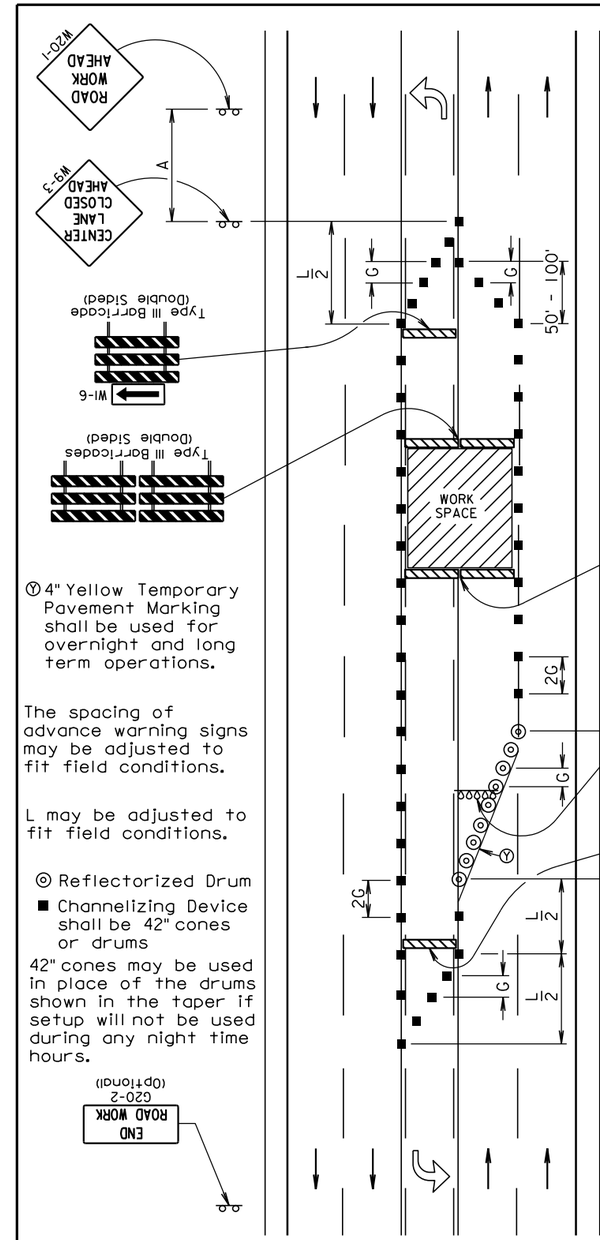
Published Date: 1st Qtr. 2014

SDDOT

GUIDES FOR TRAFFIC CONTROL DEVICES
5-LANE, CENTER LANE CLOSED

PLATE NUMBER 634.55

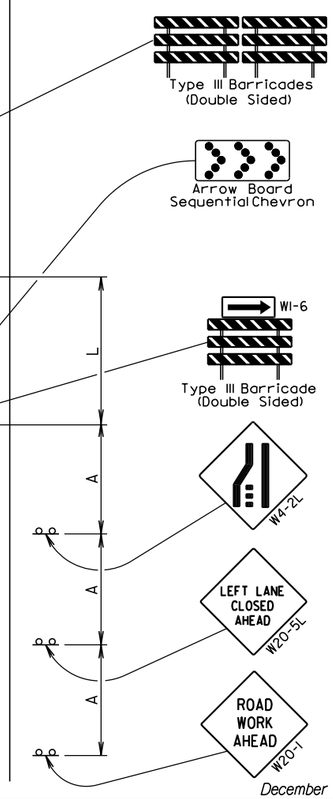
Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

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 to be every 40' for 42" cones.



Ⓨ 4" Yellow Temporary Pavement Marking shall be used for overnight and long term operations.

The spacing of advance warning signs may be adjusted to fit field conditions.

L may be adjusted to fit field conditions.

◎ Reflectorized Drum

■ Channelizing Device 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 any night time hours.

December 23, 2012

Published Date: 1st Qtr. 2014

SDDOT

GUIDES FOR TRAFFIC CONTROL DEVICES
5-LANE, INSIDE 2 LANES CLOSED

PLATE NUMBER 634.56

Sheet 1 of 1

PLOT SCALE - 1:7000

PLOTTED FROM - TRM11NT06

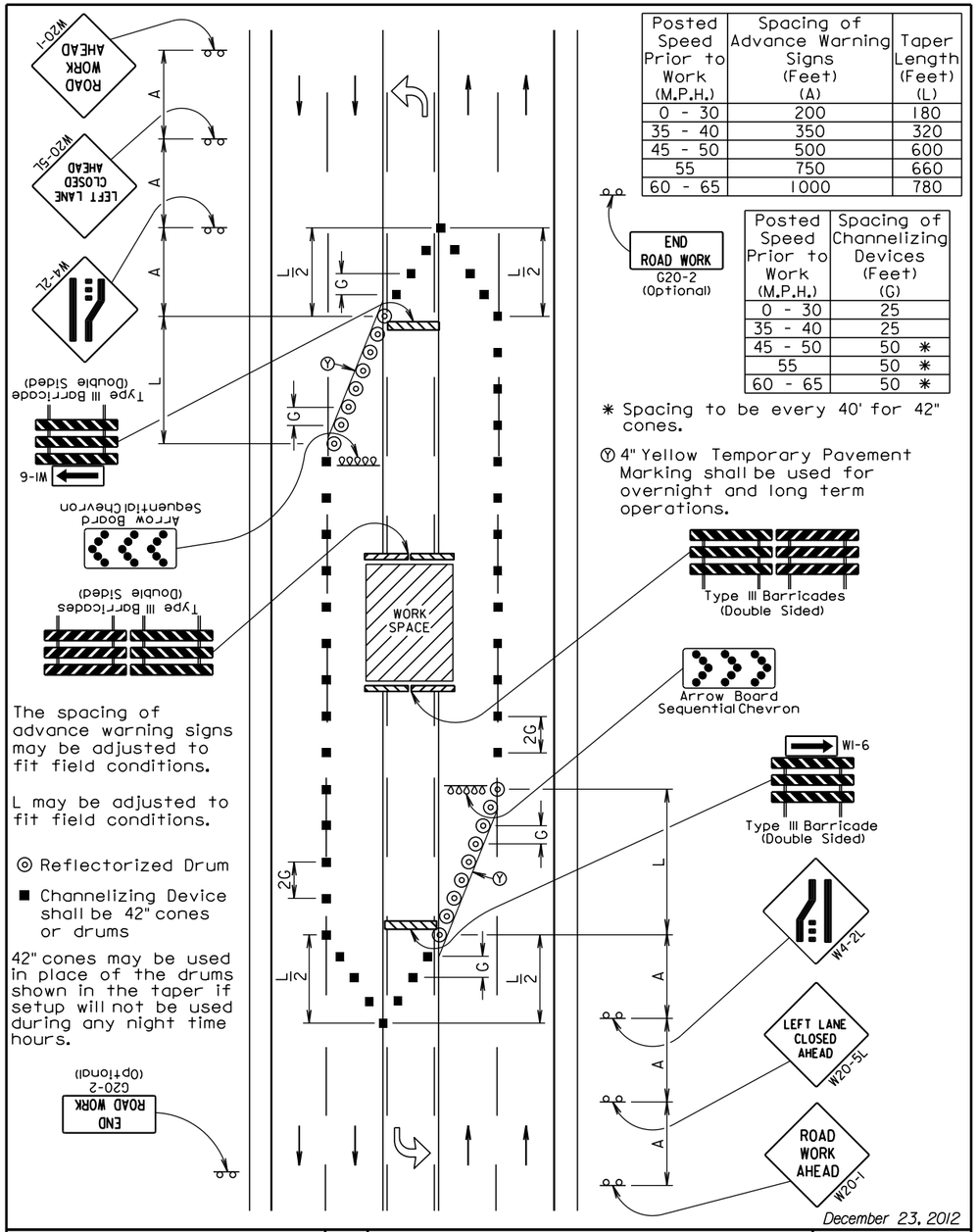
PLOT NAME - 4

FILE -...\BLANK BORDER 63455 & 63456.DGN

TRAFFIC CONTROL
090L-252

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	21	24

Plotting Date: 01/13/2014



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

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 *

END ROAD WORK
G20-2
(Optional)

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

Ⓨ 4" Yellow Temporary Pavement Marking shall be used for overnight and long term operations.

The spacing of advance warning signs may be adjusted to fit field conditions.

L may be adjusted to fit field conditions.

◎ Reflectorized Drum

■ Channelizing Device 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 any night time hours.

END ROAD WORK
G20-2
(Optional)

December 23, 2012

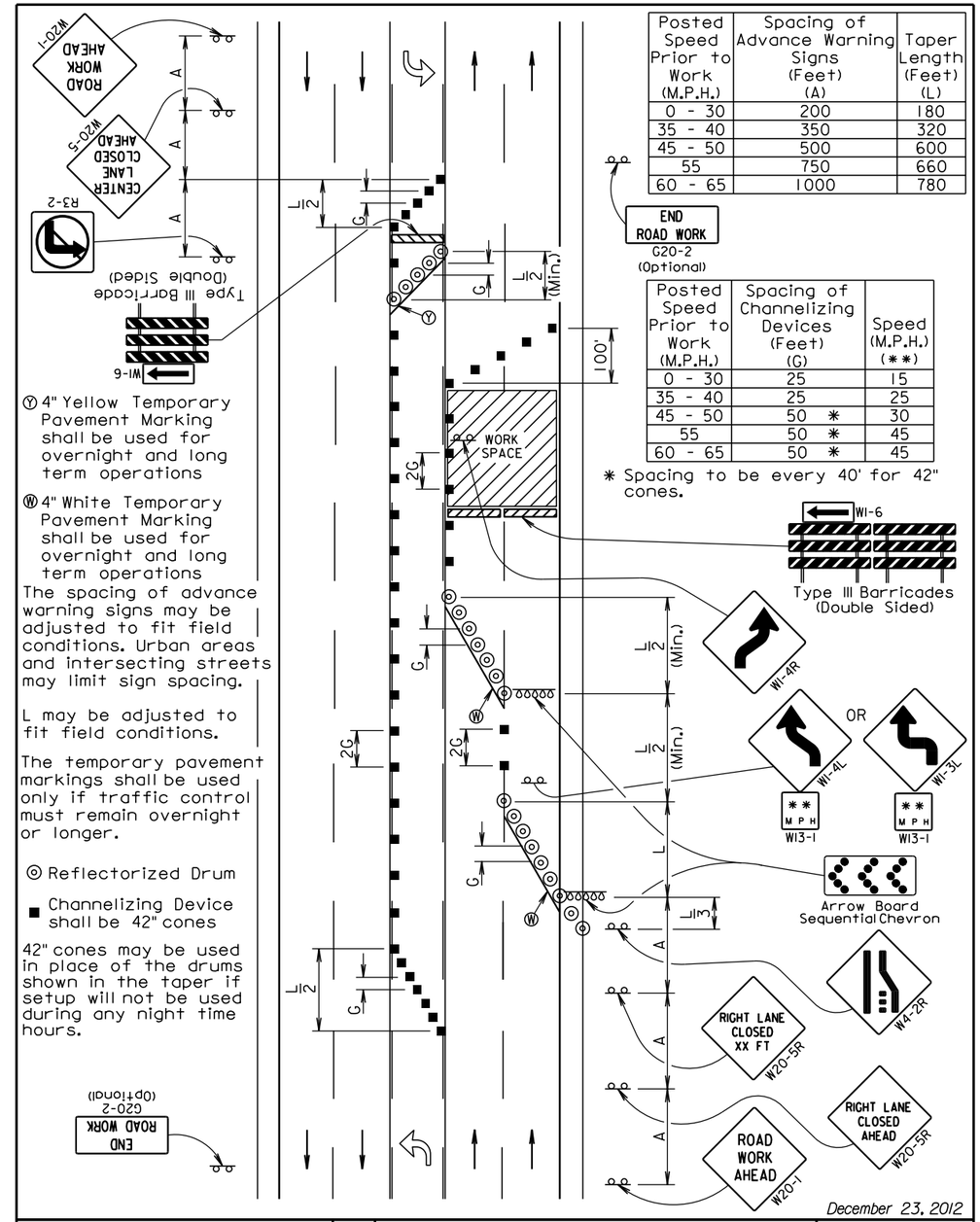
Published Date: 1st Qtr. 2014

SDDOT

GUIDES FOR TRAFFIC CONTROL DEVICES
5-LANE, CENTER 3 LANES CLOSED

PLATE NUMBER
634.57

Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

END ROAD WORK
G20-2
(Optional)

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Speed (M.P.H.) (**)
0 - 30	25	15
35 - 40	25	25
45 - 50	50 *	30
55	50 *	45
60 - 65	50 *	45

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

Ⓨ 4" Yellow Temporary Pavement Marking shall be used for overnight and long term operations

Ⓦ 4" White Temporary Pavement Marking shall be used for overnight and long term operations

The spacing of advance warning signs may be adjusted to fit field conditions. Urban areas and intersecting streets may limit sign spacing.

L may be adjusted to fit field conditions.

The temporary pavement markings shall be used only if traffic control must remain overnight or longer.

◎ Reflectorized Drum

■ Channelizing Device shall be 42" cones

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.

END ROAD WORK
G20-2
(Optional)

December 23, 2012

Published Date: 1st Qtr. 2014

SDDOT

GUIDES FOR TRAFFIC CONTROL DEVICES
5-LANE, 2 LANES CLOSED ONE SIDE

PLATE NUMBER
634.58

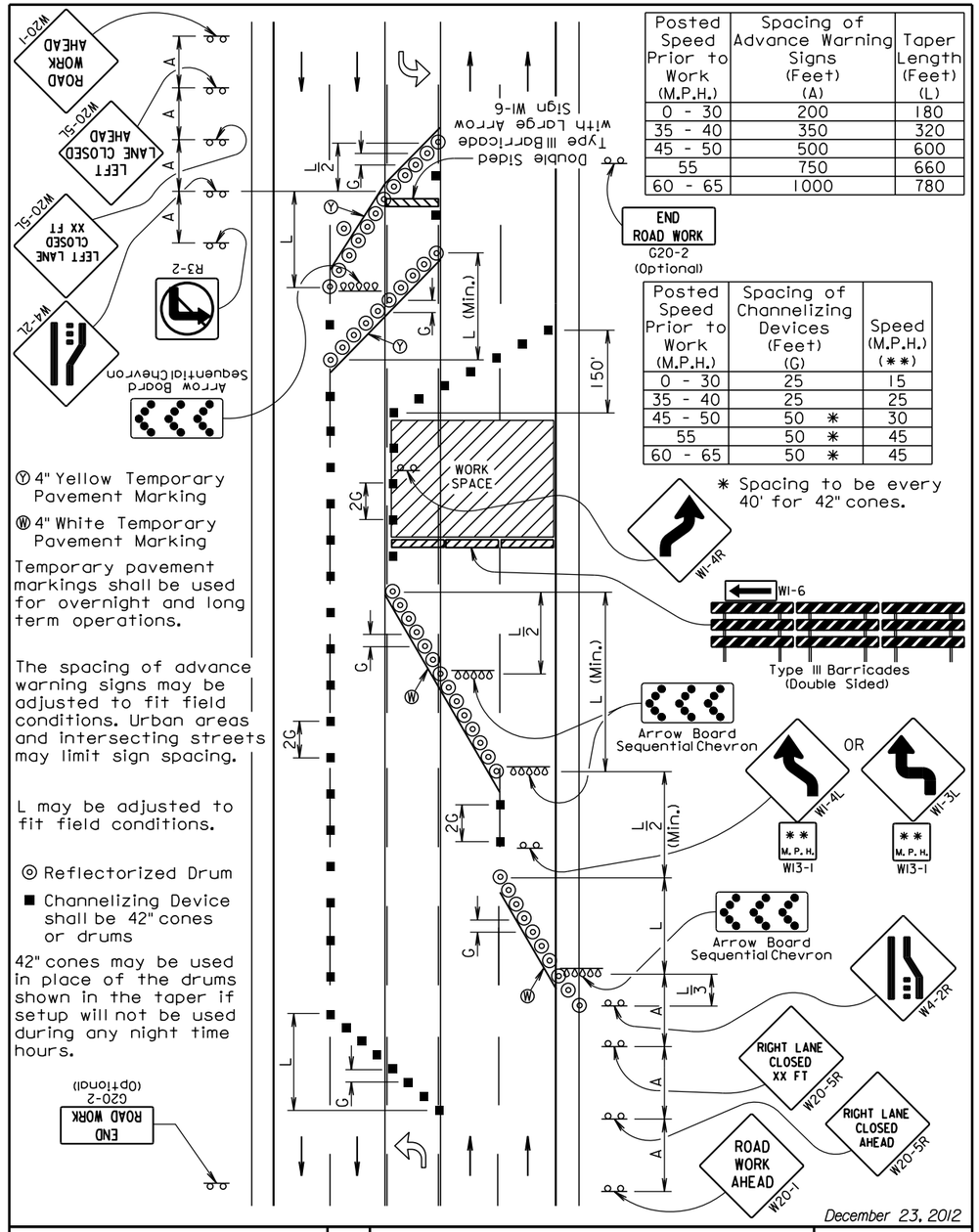
Sheet 1 of 1

PLOT SCALE - 1:7000
PLOTTED FROM - TRM11NT06
PLOT NAME - 4
FILE ...\BLANK BORDER 63457 & 63458.DGN

TRAFFIC CONTROL
090L-252

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-P 0021(153)	22	24

Plotting Date: 01/13/2014



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Speed (M.P.H.) (**)
0 - 30	25	15
35 - 40	25	25
45 - 50	50 *	30
55	50 *	45
60 - 65	50 *	45

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

Ⓨ 4" Yellow Temporary Pavement Marking

Ⓦ 4" White Temporary Pavement Marking

Temporary pavement markings shall be used for overnight and long term operations.

The spacing of advance warning signs may be adjusted to fit field conditions. Urban areas and intersecting streets may limit sign spacing.

L may be adjusted to fit field conditions.

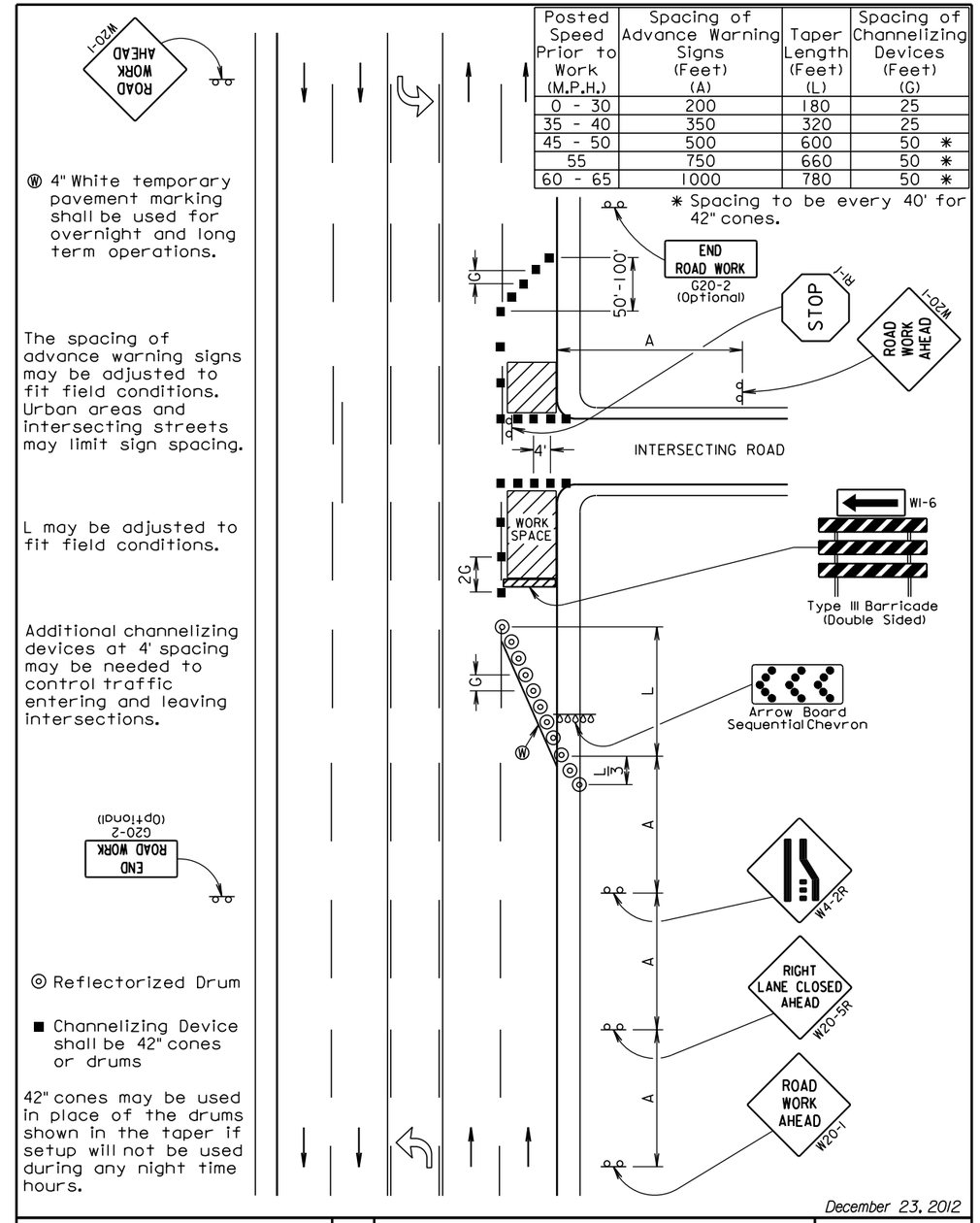
◎ Reflectorized Drum

■ Channelizing Device 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 any night time hours.

December 23, 2012

Published Date: 1st Qtr. 2014 | SDDOT | **GUIDES FOR TRAFFIC CONTROL DEVICES 5-LANE, 3 LANES CLOSED ONE SIDE** | PLATE NUMBER 634.59 | Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45 - 50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

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

Ⓦ 4" White temporary pavement marking shall be used for overnight and long term operations.

The spacing of advance warning signs may be adjusted to fit field conditions. Urban areas and intersecting streets may limit sign spacing.

L may be adjusted to fit field conditions.

Additional channelizing devices at 4' spacing may be needed to control traffic entering and leaving intersections.

◎ Reflectorized Drum

■ Channelizing Device 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 any night time hours.

December 23, 2012

Published Date: 1st Qtr. 2014 | SDDOT | **GUIDES FOR TRAFFIC CONTROL DEVICES 5-LANE, OUTSIDE LANE CLOSED** | PLATE NUMBER 634.60 | Sheet 1 of 1

PLOT SCALE - 1:7000

PLOT NAME - 4

FILE ...\BLANK BORDER 63459 & 63460.DGN

PLOTTED FROM - TRMI1NT06

ITEMIZED LIST FOR TRAFFIC CONTROL

045-253 BRULE COUNTY PCN 046Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
W3-4	48" x 48"	BE PREPARED TO STOP	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-4	48" x 48"	ONE LANE ROAD AHEAD	2	34	68
W20-7	48" x 48"	FLAGGER	4	34	136
				TOTAL UNITS	**442**

047-251 GREGORY COUNTY PCN 046Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
W3-4	48" x 48"	BE PREPARED TO STOP	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	3	34	102
W20-4	48" x 48"	ONE LANE ROAD AHEAD	2	34	68
W20-7	48" x 48"	FLAGGER	3	34	102
				TOTAL UNITS	**374**

050-253 BRULE COUNTY PCN 046Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
W3-4	48" x 48"	BE PREPARED TO STOP	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-4	48" x 48"	ONE LANE ROAD AHEAD	2	34	68
W20-7	48" x 48"	FLAGGER	4	34	136
				TOTAL UNITS	**442**

050-251 CHARLES MIX COUNTY PCN 046Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
W3-4	48" x 48"	BE PREPARED TO STOP	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-4	48" x 48"	ONE LANE ROAD AHEAD	2	34	68
W20-7	48" x 48"	FLAGGER	4	34	136
				TOTAL UNITS	**442**

090W-253 BRULE COUNTY PCN 046Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
E5-1	36" x 32"	EXIT GORE SIGN	1	24	24
G20-2	48" x 24"	END ROAD WORK	1	24	24
R1-2	36" x 36"	YIELD	1	27	27
R2-1	36" x 48"	SPEED LIMIT 45	2	29	58
R2-1	36" x 48"	SPEED LIMIT 75	1	29	29
R2-1	36" x 48"	SPEED LIMIT **	1	29	29
R11-2	48" x 30"	ROAD CLOSED	1	27	27
W3-5	48" x 48"	SPEED LIMIT 45 AHEAD (SYMBOL)	2	34	68
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	2	34	68
W5-4	48" x 48"	RAMP NARROWS	1	34	34
W13-4P	36" x 36"	ON RAMP	2	27	54
W20-1	48" x 48"	ROAD WORK AHEAD	3	34	102
W20-4	48" x 48"	ONE LANE ROAD AHEAD	1	34	34
W20-5	48" x 48"	LEFT OR RIGHT LANE CLOSED AHEAD	2	34	68
W20-7	48" x 48"	FLAGGER	2	34	68
SPECIAL	48" x 48"	REST AREA CLOSED AHEAD	1	34	34
*****	*****	TYPE III BARRICADE - 8 FT. SINGLE SIDED	15	40	600
				TOTAL UNITS	**1348**

090E-253 BRULE COUNTY PCN 046Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
E5-1	36" x 32"	EXIT GORE SIGN	1	24	24
R1-2	36" x 36"	YIELD	1	27	27
R2-1	36" x 48"	SPEED LIMIT 45	2	29	58
R2-1	36" x 48"	SPEED LIMIT 75	1	29	29
R2-1	36" x 48"	SPEED LIMIT **	1	29	29
R11-2	48" x 30"	ROAD CLOSED	1	27	27
W3-5	48" x 48"	SPEED LIMIT 45 AHEAD (SYMBOL)	2	34	68
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	2	34	68
W5-4	48" x 48"	RAMP NARROWS	1	34	34
W13-4P	36" x 36"	ON RAMP	2	27	54
W20-1	48" x 48"	ROAD WORK AHEAD	3	34	102
W20-4	48" x 48"	ONE LANE ROAD AHEAD	1	34	34
W20-5	48" x 48"	LEFT OR RIGHT LANE CLOSED AHEAD	2	34	68
W20-7	48" x 48"	FLAGGER	2	34	68
SPECIAL	48" x 48"	REST AREA CLOSED AHEAD	1	34	34
*****	*****	TYPE III BARRICADE - 8 FT. SINGLE SIDED	15	40	600
				TOTAL UNITS	**1324**

090P-253 AURORA COUNTY PCN 046Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
W3-4	48" x 48"	BE PREPARED TO STOP	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-4	48" x 48"	ONE LANE ROAD AHEAD	2	34	68
W20-7	48" x 48"	FLAGGER	4	34	136
				TOTAL UNITS	**442**

ITEMIZED LIST FOR TRAFFIC CONTROL (CONTINUED)

090L-252 DAVISON COUNTY PCN 46Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
R1-1	36" x 36"	STOP	1	27	27
R3-2	24" x 24"	NO LEFT TURN (SYMBOL)	1	16	16
W1-4	48" x 48"	REVERSE CURVE SIGN (LEFT OR RIGHT)	2	34	68
W1-6	48" x 24"	LARGE ARROW	4	24	96
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	2	34	68
W9-3	48" x 48"	CENTER LANE CLOSED AHEAD OR XXX FT.	4	34	136
W13-1P	24" x 24"	ADVISORY SPEED PLAQUE (5 M.P.H.)	1	16	16
W20-1	48" x 48"	ROAD WORK AHEAD	3	34	102
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD OR XXX FT.	4	34	136
W20-7	48" x 48"	FLAGGER	2	34	68
*****	*****	TYPE III BARRICADE - 8 Ft. DOUBLE SIDED	6	56	336
				TOTAL UNITS	**1103**

262-252 HANSON & McCOOK COUNTIES PCN 046Q

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
W3-4	48" x 48"	BE PREPARED TO STOP	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-4	48" x 48"	ONE LANE ROAD AHEAD	2	34	68
W20-7	48" x 48"	FLAGGER	4	34	136
				TOTAL UNITS	**442**