SECTION M: PAVEMENT MARKING PLANS

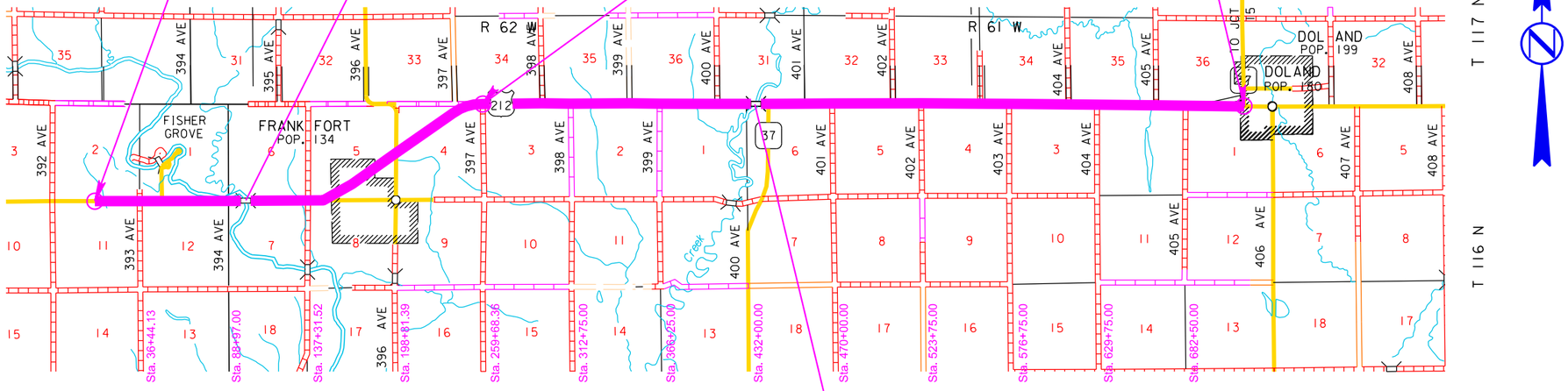
INDEX OF SHEETS

BEGIN SURFACING NH 0212(200)313
Station 10+00.00 = 10+00.00 on NH 212(206)313
located 1644.88 feet west and 43.10 feet south
from theNorthwest 1/4 corner of Section 11-
Township 116 north - Range 63 West of the
5th P.M
MRM 313.00+0.896

Bridge Exception
Str. No. 58-183-250
Sta. 98+88.61 to Sta. 101+42.32

END SURFACING/
BEGIN RESURFACING
Station 277+71.00
MRM 319.00+0.018

END RESURFACING NH 0212(200)313
Station 713+71
MRM 327.00+0.256



Bridge
Str. No. 58-242-240
Sta. 424+21 to Sta. 425+51

PLOT SCALE - 1:9000
PLOT NAME - 1
FILE - ...\06PO_TITLEM.DGN
PLOTTED FROM - TRAB10100

SECTION M ESTIMATE OF QUANTITIES – PCN 06PQ

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0030	Cold Applied Plastic Pavement Marking, 24"	737	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	17	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	634	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	116	Gal
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	737	Ft
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	17	Each

PAVEMENT MARKING PAINT

The Contractor will advise the Engineer a minimum of 3 weeks prior to the application of the permanent pavement marking to allow the State to check and mark the location of no passing zones.

Cold weather waterborne paint will not be required after October 15th per Supplemental Specification Section 633.3 B.

The application of permanent pavement marking will begin no sooner than 7 calendar days following completion of the fog or flush seal. Application of permanent pavement marking will be completed within 14 calendar days following completion of the final surfacing.

COLD APPLIED PLASTIC PAVEMENT MARKING

All materials will be applied as per the manufacturer's recommendations.

Cold Applied Plastic Pavement Markings will be 3M Series 380 AW or an approved equal.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer's recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads. Reflective media will require a Certificate of Compliance for Certification for each source and lot. Acceptance sampling will not be required.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4" line = 22.5 Gals/Mile
Dashed 4" line = 6.2 Gal/Mile
Glass Beads = 8 Lbs/Gal.

All cost for materials, labor, and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

RETROREFLECTIVITY FOR PAVEMENT MARKING PAINT

The Department may take retroreflectivity readings on the pavement marking lines after 14 days and within 42 days of the line application using either a portable or mobile retroreflectometer that conforms to 30-meter geometry. If the Department chooses to take retroreflectivity readings, three retroreflectivity readings will be taken on each line at each test location. The three readings will be averaged and become the reading for that test location.

If the Department chooses to take retroreflectivity readings, three readings will be taken on the edge lines and lane lines in the direction of application. For combination solid yellow and skip yellow lines for turn lanes and for centerline markings on two-way roadways, three readings will be taken in one direction, the reflectometer will be turned 180 degrees and three more readings will be taken. The six readings for the centerline markings will be averaged and become the test reading for that test location.

If the Department chooses to take readings, the minimum retroreflectivity values will be 275 mc/m^2/lux for white and 170 mc/m^2/lux for yellow.

MARKINGS WITHIN SINUSOIDAL CENTERLINE RUMBLE STRIPES

Sinusoidal rumble stripes will be installed on US212. See Section F for placement locations.

The sinusoidal centerline rumble stripes are recessed below the pavement surface, so pavement marking grooving will not be required at these locations.

Sinusoidal rumble stripes will receive an asphalt surface treatment to seal the centerline joint and minimize the depth of water held on centerline.

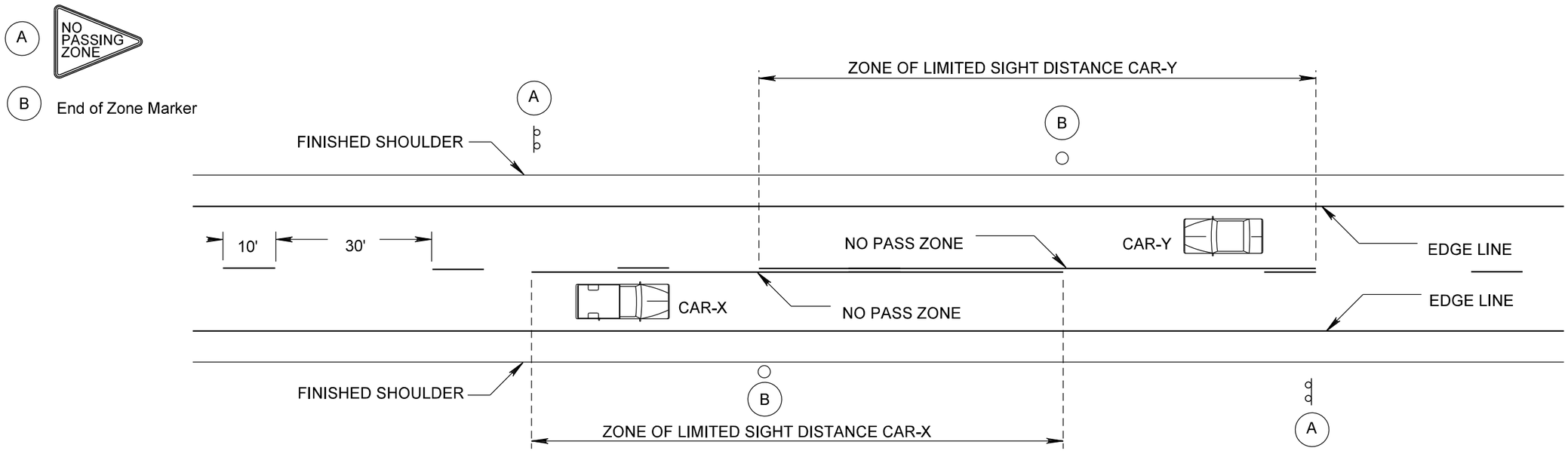
Retroreflectivity readings will not be taken for pavement markings within the sinusoidal rumble stripe. Restriping of pavement markings to meet the specified application rate requirements and to provide a quality retroreflective line will be at the expense of the Contractor with no additional cost to the Department. Sections to be restriped will be determined by the Engineer.

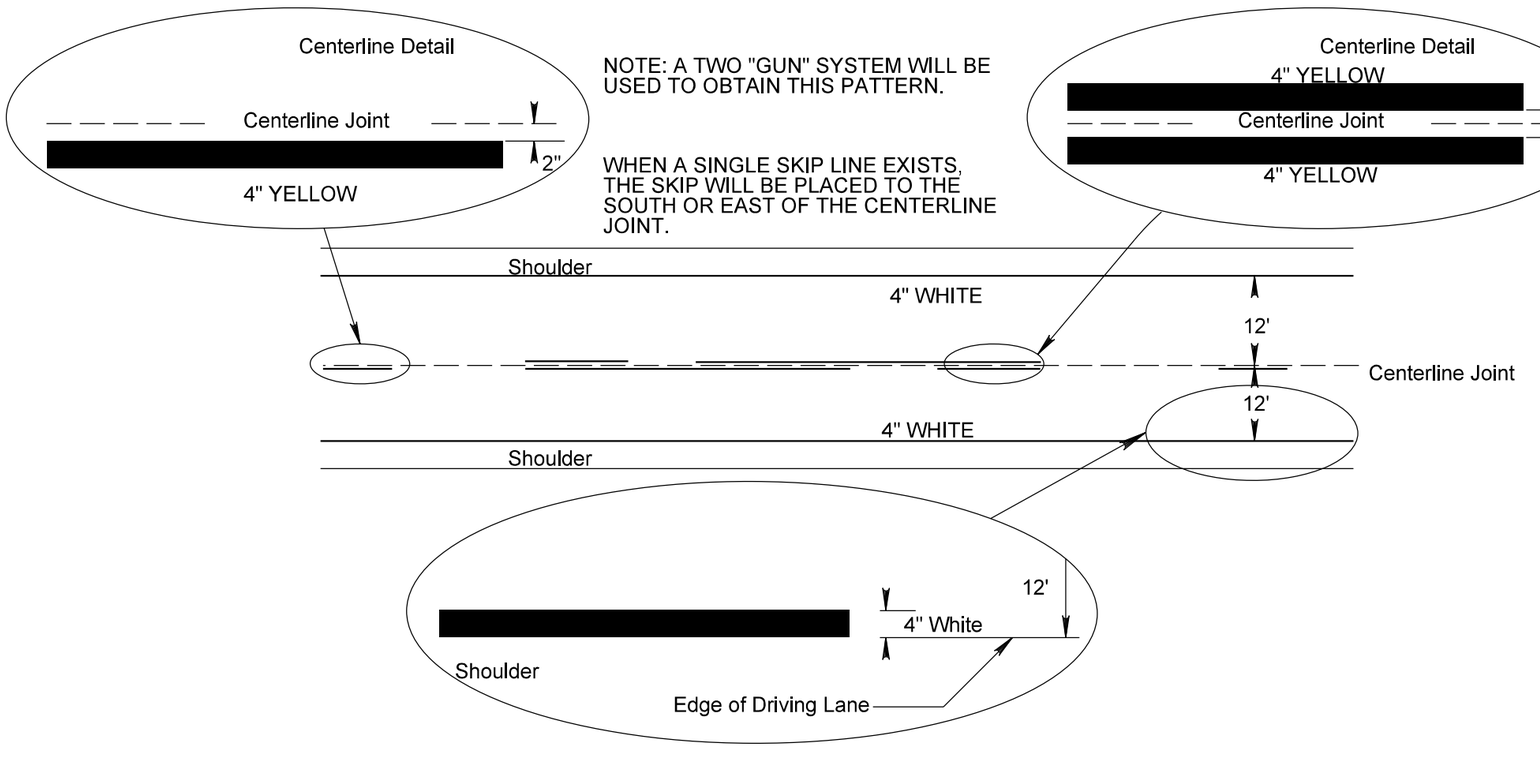
GROOVING FOR COLD APPLIED PLASTIC PAVEMENT MARKING

The Contractor will establish a positive means for the removal of the grinding and/or grooving residue. Residue from dry grooving will be vacuumed. Solid residue will be removed from the pavement surfaces before being blown by traffic action or wind. The Contractor will conduct this work to control and minimize airborne dust and similar debris that may become a hazard to motor vehicle operation or nuisance to property owners. Residue from wet grooving will not be permitted to flow across lanes being used by public traffic or into gutter or drainage facilities. Residue, whether in solid or slurry form, will be disposed of in a manner that will prevent it from reaching any waterway in a concentrated state. The cleaning of the residue for grooving will be to the satisfaction of the Engineer and may require more than one pass to adequately remove material. All costs for removal of grinding and/or grooving residue will be included in the contract unit price per foot and each for "Grooving for Cold Applied Plastic Pavement Marking" contract items.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(200)313	M3	M8
Plotting Date: 04/14/2025			

TYPICAL PAVEMENT MARKING DETAIL





PLOT SCALE - 1:22

PLOTTED FROM - TRAB10100

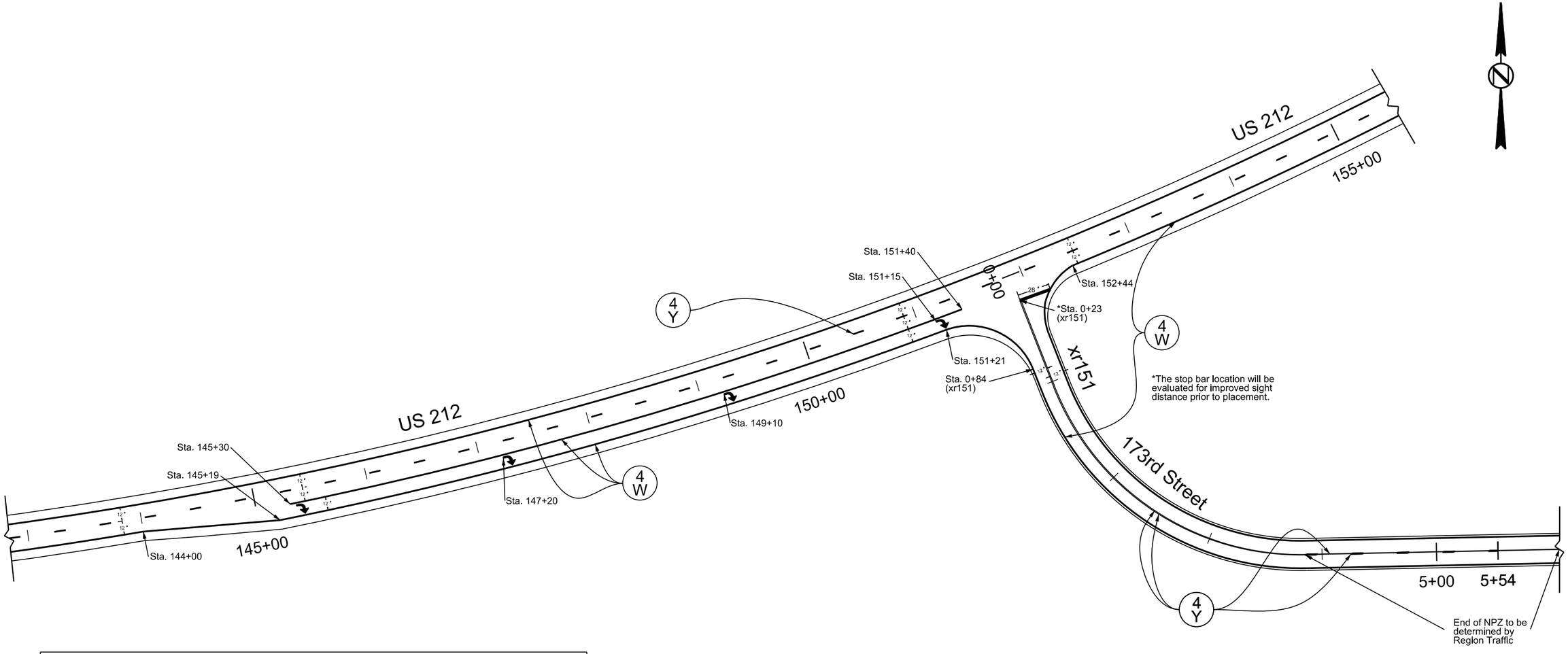
PLOT NAME - 1

FILE - ...\PAVEMENTMARKINGDETAILSNEW.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(200)313	M4	M8
Plotting Date: 04/16/2025			

PAVEMENT MARKING LAYOUT

US 212 & 173rd St



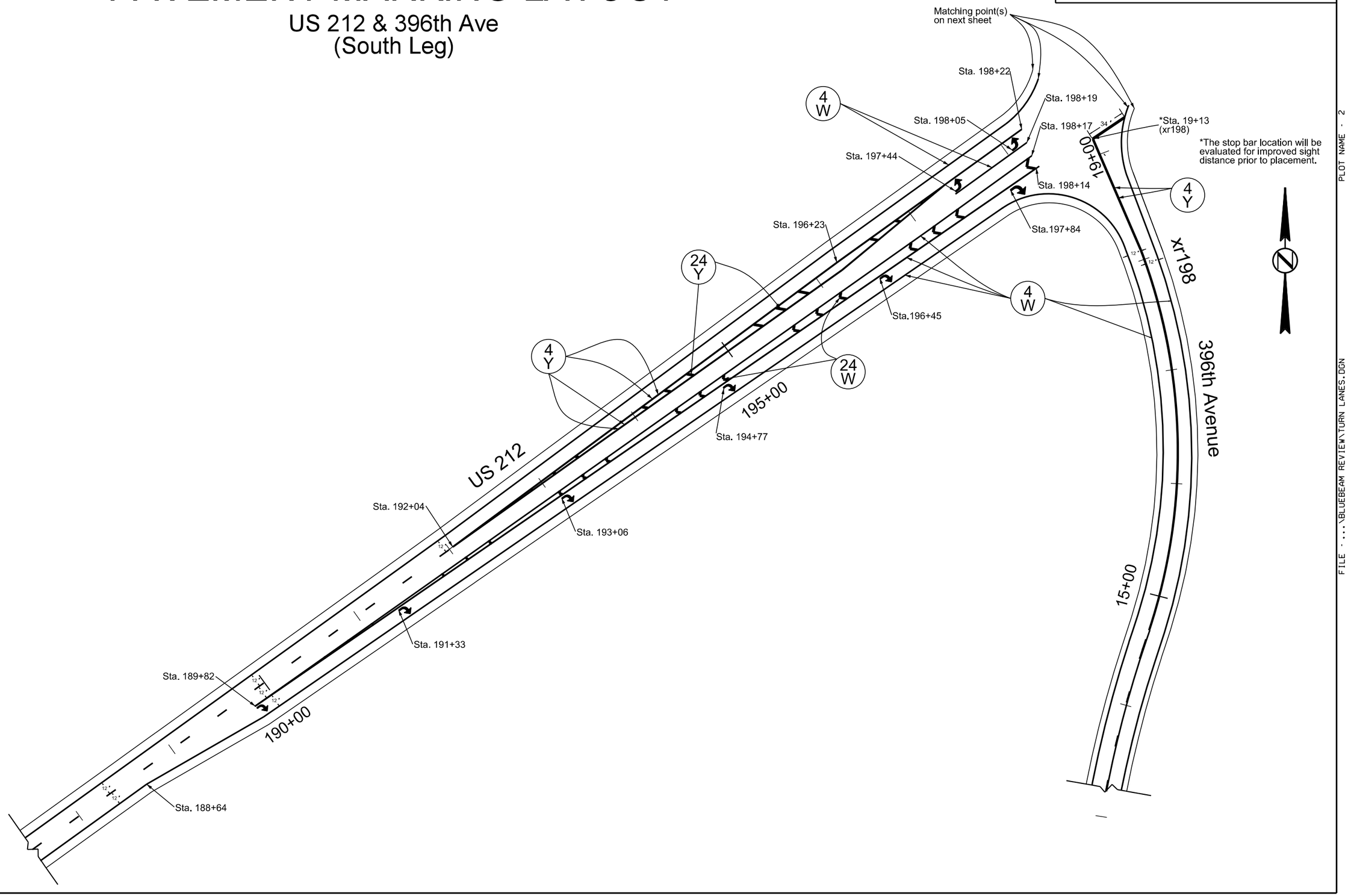
Symbol Key

KEY	ITEM
(4 W)	High Build Waterborne Pavement Marking, White
(4 Y)	High Build Waterborne Pavement Marking, Yellow
	Cold Applied Plastic Pavement Marking, Arrow
	Cold Applied Plastic Pavement Marking, Arrow
(24 Y)	Cold Applied Plastic Pavement Marking, 24" Yellow
(24 W)	Cold Applied Plastic Pavement Marking, 24" White

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(200)313	M5	M8
Plotting Date: 04/16/2025			

PAVEMENT MARKING LAYOUT

US 212 & 396th Ave
(South Leg)



PLOT SCALE - 1:80

PLOT NAME - 2

FILE ....\BLUEBEAM REVIEW\TURN LANES.DGN

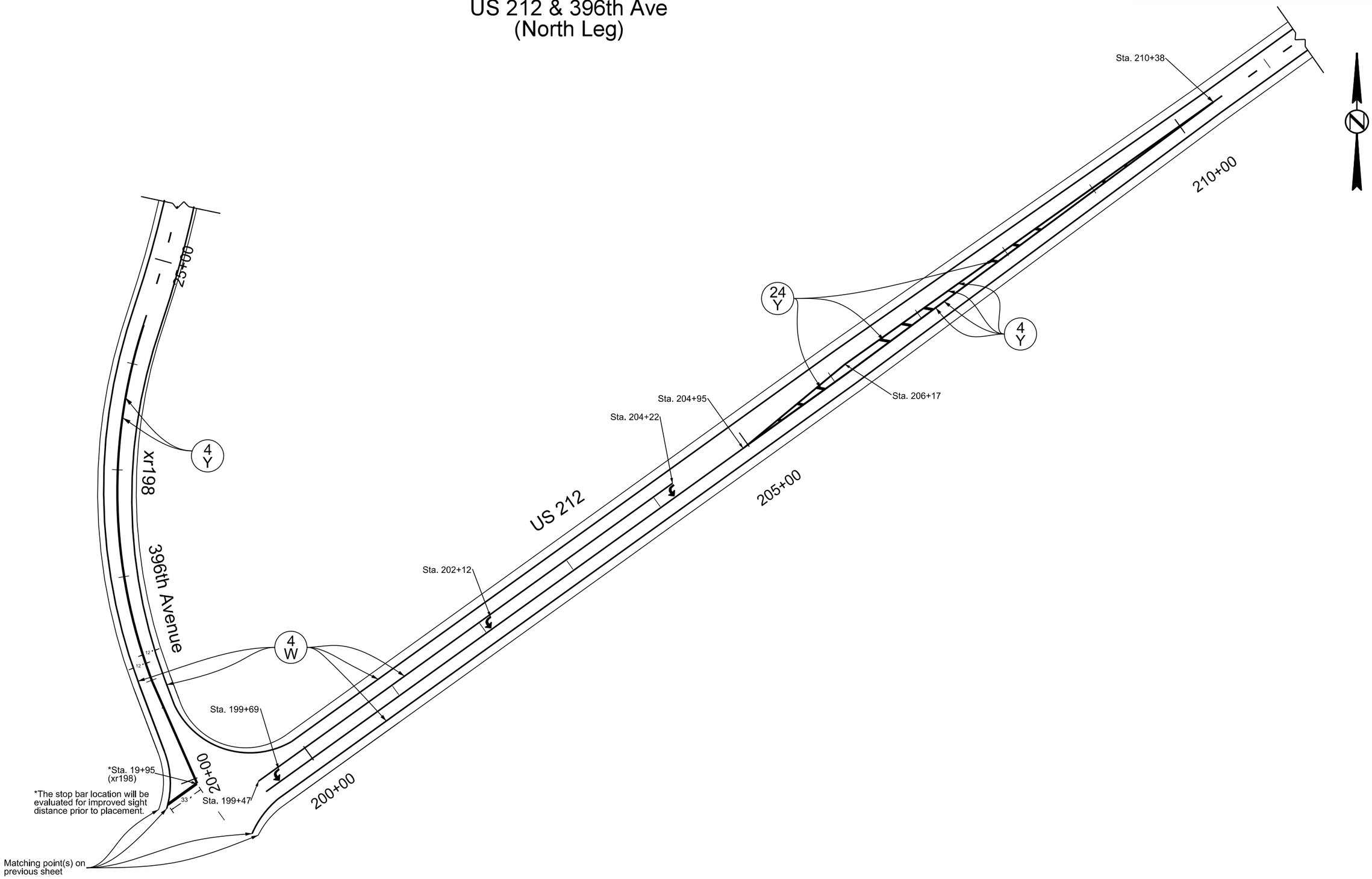
PLOTTED FROM - TRAB10100

PAVEMENT MARKING LAYOUT

US 212 & 396th Ave
(North Leg)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(200)313	M6	M8

Plotting Date: 04/16/2025



PLOT SCALE - 1:85

PLOT NAME - 1

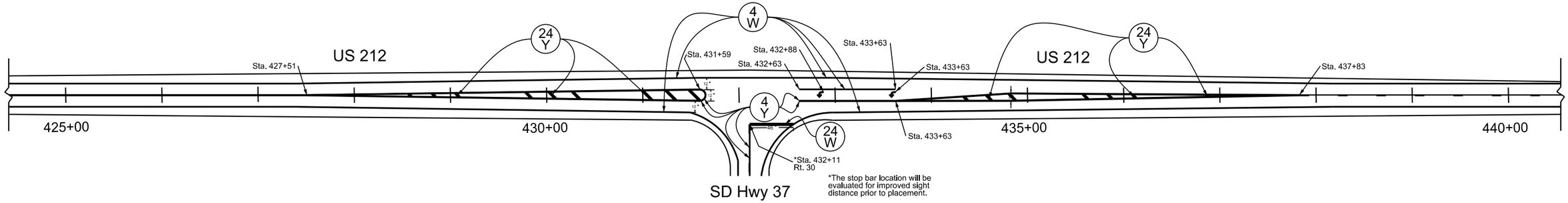
FILE - ...\BLUEBEAM REVIEW\TURN LANES.DGN

PLOTTED FROM - TRAB1000

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(200)313	M7	M8
Plotting Date: 04/16/2025			

PAVEMENT MARKING LAYOUT

US 212 & SD 37



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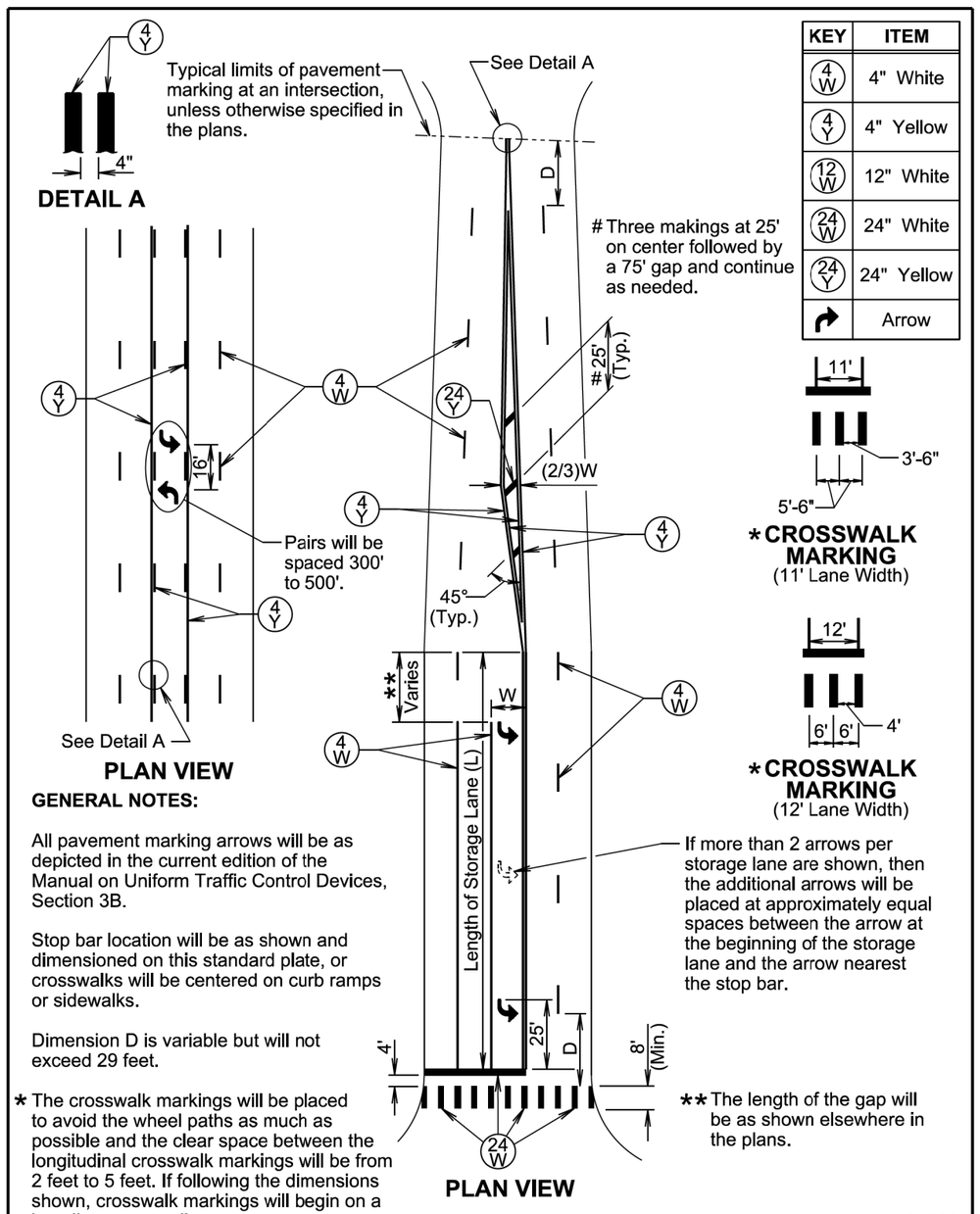
PLOT NAME - 3

FILE - ...\BLUEBEAM REVIEW\TURN LANES.DGN

PLOTTED FROM - TRAB10100

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(200)313	M8	M8

Plotting Date: 04/14/2025



GENERAL NOTES:

All pavement marking arrows will be as depicted in the current edition of the Manual on Uniform Traffic Control Devices, Section 3B.

Stop bar location will be as shown and dimensioned on this standard plate, or crosswalks will be centered on curb ramps or sidewalks.

Dimension D is variable but will not exceed 29 feet.

* The crosswalk markings will be placed to avoid the wheel paths as much as possible and the clear space between the longitudinal crosswalk markings will be from 2 feet to 5 feet. If following the dimensions shown, crosswalk markings will begin on a lane line or centerline.

** The length of the gap will be as shown elsewhere in the plans.

March 31, 2024

Published Date: 2025

SDDOT

PAVEMENT MARKINGS FOR ADJACENT INTERSECTIONS AND CENTER TURN LANE

PLATE NUMBER 633.01

Sheet 1 of 1