

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)		

Plotting Date: 03/10/2026

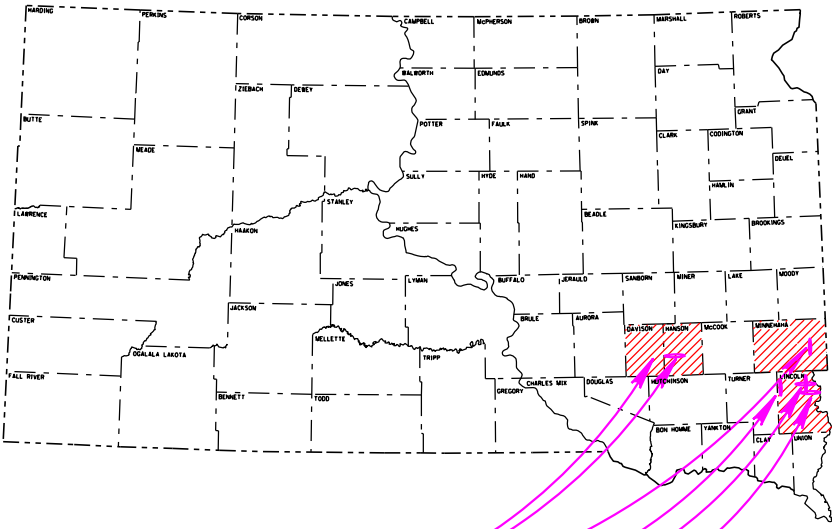
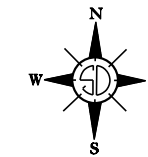
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PLANS FOR PROPOSED
**PROJECTS PH 0020(230)
& PH 0020(233)**
**INTERSTATES 90 & 90L
SD HIGHWAYS 37 & 11
LINCOLN COUNTY HIGHWAYS
DAVISON, HANSON, MINNEHAHA,
& LINCOLN COUNTIES**
REGION WIDE

DURABLE PAVEMENT MARKING

PCN 06TH & 07XD



PROJECTS

DESIGN DESIGNATION I-90L (MRM 332.25 - 332.97)	DESIGN DESIGNATION I-90 (MRM 334.54+0.146 - 344.02+0.834)
ADT (2025) 8,370	ADT (2025) 6,910
ADT (2045) 11,844	ADT (2045) 11,029
DHV 1,592	DHV 1,511
D 50	D 50
T-DHV 1.4%	T-DHV 20.9%
T ADT 3.0%	T ADT 9.5%

DESIGN DESIGNATION SD 37 (MRM 72.00+0.289 - 73.06)	DESIGN DESIGNATION SD 11 (77.00 - 80.32+0.060)
ADT (2025) 4,098	ADT (2025) 7,081
ADT (2045) 5,602	ADT (2045) 11,222
DHV 646	DHV 1,295
D 51	D 51
T-DHV 11.6%	T-DHV 4.2%
T ADT 5.3%	T ADT 1.9%

LINCOLN COUNTY 466TH AVE (268TH ST - 278TH ST)
GROSS LENGTH 49,104 FEET
NET LENGTH 49,104 FEET

LINCOLN COUNTY 273RD ST (476TH AVE - 480TH AVE)
GROSS LENGTH 21,120 FEET
NET LENGTH 21,120 FEET

LINCOLN COUNTY 271ST ST (471ST AVE - 480TH AVE)
GROSS LENGTH 47,920 FEET
NET LENGTH 47,920 FEET

LINCOLN COUNTY 475TH AVE (0.5 MILES SOUTH OF 271ST ST - 0.6 MILES NORTH OF 271ST ST)
GROSS LENGTH 5,808 FEET
NET LENGTH 5,808 FEET

I90 L PROJECT
MRM 332.25
MRM 332.97
SD 37 PROJECT
MRM 72.0 +0.299 -
MRM 73.06

I 90 PROJECT
MRM 334.54 +0.146 -
MRM 344.02 + 0.834

SD11 PROJECT
MRM 77.00 -
MRM 80.32+0.060

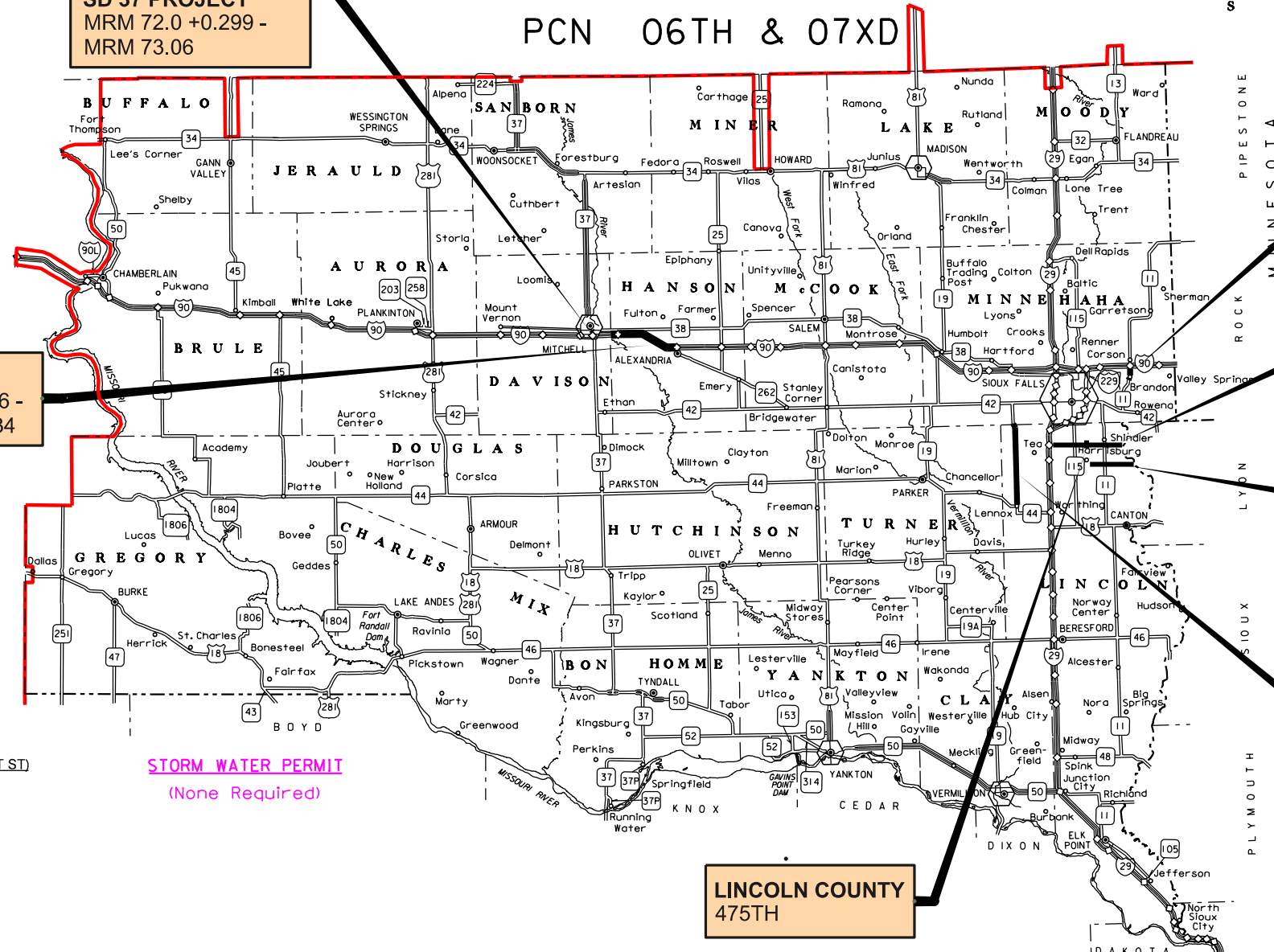
LINCOLN COUNTY
271ST ST

LINCOLN COUNTY
273RD ST

LINCOLN COUNTY
466TH AVE

LINCOLN COUNTY
475TH

STORM WATER PERMIT
(None Required)



10
May 20, 2026

PLOT SCALE - 1"=194.117'

PLOTTED FROM - TRM111119

FILE - ... \REGION\IDE2026\TITLE26.DGN

ESTIMATE OF QUANTITIES - 06TH

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
633E3000	Durable Pavement Marking, 4" White	153,302	Ft
633E3005	Durable Pavement Marking, 4" Yellow	185,164	Ft
633E3010	Durable Pavement Marking, 8" White	537	Ft
633E3020	Durable Pavement Marking, 12" White	6,402	Ft
633E3025	Durable Pavement Marking, 12" Yellow	46	Ft
633E3030	Durable Pavement Marking, 24" White	4,800	Ft
633E3035	Durable Pavement Marking, 24" Yellow	1,163	Ft
633E3045	Durable Pavement Marking, Arrow	127	Each
633E3060	Durable Pavement Marking, Message	10	Word
633E5050	Surface Preparation for Pavement Marking	394,662	Ft
633E5052	Surface Preparation for Pavement Marking	137	Each
633E9200	Mobile Retroreflector Measurements	78.172	Mile
634E0010	Flagging	80.0	Hour
634E0110	Traffic Control Signs	112.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Board	2	Each

ESTIMATE OF QUANTITIES - 07XD

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
633E1201	High Build Waterborne Pavement Marking Paint with Reflective Elements, White	1,344	Gal
633E1206	High Build Waterborne Pavement Marking Paint with Reflective Elements, Yellow	410	Gal
633E5100	Grooving for Durable Pavement Marking, 4"	409,160	Ft
633E5115	Grooving for Durable Pavement Marking, 24"	400	Ft
633E5125	Grooving for Durable Pavement Marking, Arrow	17	Each
633E5130	Grooving for Durable Pavement Marking, Combination Arrow	10	Each
633E5140	Grooving for Durable Pavement Marking, Railroad Crossing	2	Each
633E9200	Mobile Retroreflector Measurements	74.300	Mile
634E0010	Flagging	40.0	Hour
634E0110	Traffic Control Signs	169.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	2	Each
634E0420	Type C Advance Warning Arrow Board	2	Each

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified 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. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/doing-business/environmental/about-environmental/>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

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 pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT C: WATER SOURCE

If a Contractor needs access to state waters for extraction, the Contractor must obtain a water right, through the application of a Temporary Permit to Use Public Waters before work begins.

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥ 140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (SDDANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Temporary permit to use public waters for highway construction purposes application can be found on the SDDANR website:

<https://danr.sd.gov/OfficeOfWater/WaterRights/PermitForms/default.aspx>

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:

< <https://sdeastwanted.sd.gov/maps/default.aspx> >

South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species:

< <https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04> >

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.

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REVISED 03/16/26 GB

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will 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 Public ROW.

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

The waste disposal site(s) will 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 Environmental Office and the Project Engineer.

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

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

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. 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 if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in 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 will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. 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.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery 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 Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

WORK DESCRIPTION

SD 11 – Work will include surface prep and applying durable pavement marking on edgelines, center lines, lane lines, turn lanes, cross hatches, turn arrows, crosswalks and stop lines.

SD 37 and Burr St – Work will include surface prep and applying durable pavement marking on edgelines, center lines, lane lines, turn lanes, cross hatches, turn arrows, crosswalks and stop lines.

COUNTY MARKINGS – Work will include grooving, applying high build pavement marking with elements, on edgelines, center lines, lane lines, turn lanes, turn arrows and RR Xing.

GENERAL MAINTENANCE OF TRAFFIC

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

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

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

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

The work will be done by mobile work operations for the long lines and lane closures for the hand work.

Sufficient quantities for Traffic Control signs have been included to sign for two lane closures for multi-lane highway. If the Contractor elects to use additional traffic control, the cost for additional traffic control devices or equipment will be incidental to the contract unit price per square foot for Traffic Control Signs.

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 Section 980.1 B.

Reflective media consisting of glass beads as well as wet-reflective optics will be adhered to the paint.

The wet-reflective optics will contain either clear, white, amber, or yellow tinted beads composed of glass or a composite consisting of a core made from ceramic or glass with an outer layer of microcrystalline ceramic or glass beads. The wet-reflective optics will provide a 50/50 blend of dry to wet ratio of optics. All beads bonded to wet-reflective optics will have a minimum index of refraction of 1.8 for dry retroreflectivity and 2.4 for wet retroreflectivity when tested using the liquid oil immersion method.

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

The Department will take retroreflectivity readings on the pavement marking lines no sooner than 3 days and no later than 30 days after the completion of all line applications required for an individual highway route using a portable retroreflectometer conforming to 30-meter geometry. Retroreflectivity readings will be taken on a test location with cleaning being limited to light hand brooming.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT (CONTINUED)

Pavement markings not conforming to the retroreflectivity requirements will be removed and replaced. If replacement of markings cannot be applied within the same year, the Contractor will schedule subject work to be completed no later than June 15th in the following year. Upon replacement, the retroreflectivity testing process will be done again requiring new readings.

The Department will randomly select one test location per mile of each edge line including ramps and one test location per mile of centerline (solid and/or skip line will be considered as one centerline). Three retroreflectivity readings will be taken at each test location. The three readings will be averaged and become the reading for that test location.

Initial readings:

Pavement Marking Color	Minimum Value
White	350 mc/m ² /lux
Yellow	275 mc/m ² /lux

All pavement markings not conforming to the requirements provided in these plans will be considered deficient and will be removed and replaced. Additional retroreflectivity readings will be taken by the Department to determine the limits of removal. The removal will be accomplished using suitable sand blasting or grinding equipment unless the Engineer authorizes other means. The removal process will remove at least 90% of the deficient line, with no excessive scarring of the existing pavement. The removal width will be one inch wider all around the nominal width of the pavement marking to be removed. Removal and replacement of the pavement markings will be at the Contractor's expense, with no cost incurred by the State.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4" line = 27.8 Gals/Mile
Dashed 4" line = 7.6 Gal/Mile
Glass Beads = 5.3 Lbs/Gal.
Wet-Reflective Optics = 2.1 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.

DATA LOGGING SYSTEM

The Contractor will provide striper computerized data logging system files as described below. The pavement marking device will have an onboard monitoring system for the purpose of managing the amount of pavement marking materials being applied to the pavement surface.

DATA LOGGING SYSTEM (CONTINUED)

The following will be included in the documentation from the data logging system:

- State project number and PCN
- Highway number
- Beginning and end MRMs of the section marked rounded to the nearest hundredth of a mile, including direction of travel
- Beginning and ending coordinates determined by a Global Positioning System receiver with 3-meter accuracy, including direction of travel
- Date and beginning and ending time of application
- Product applied
- Lot number(s) of product (binder and reflective material) applied
- Striping Contractor (striper code)
- Designation of the marking being applied (LEL – Left Edgeline, REL – Right Edgeline, CL – Centerline, LL – Lane Line Broken or Dotted, 1LL – leftmost LL in multilane, 2LL – second to leftmost LL in multilane, etc.)
- Width of marking being applied
- Presence of recess or rumble strip
- Presence of contrast
- Average material application rate and film thickness calculated for the section striped

The following data will be included in the documentation from the data logging system reported as an average for each drive mile (or other segment approved by the Engineer) installed:

- Application vehicle speed rounded to the nearest tenth of a mile per hour
- Weight (Lbs) and/or volume (Gal) as measured through a positive displacement pump (mechanism or flow meter) of liquid material used by color
- Weight (Lbs) of reflective material used
- Ratio of reflective material used (weight) per liquid material used (volume) reported as Lbs/Gal
- Ambient air temperature (in degrees Fahrenheit)
- Road surface temperature (in degrees Fahrenheit)
- Humidity (percent)
- Dew point (in degrees Fahrenheit)

Provide the measurement report in the form of an electronic database file, or delimited text file, containing raw data collected. Provide the Engineer with a printed summary and submit the electronic data to the Region Traffic Engineer at the e-mail below and copy the Engineer.

corey.pinkley@state.sd.us

The data logging system equipment will be operational, calibrated, and in use during pavement marking operations. Pavement marking installation without the use of a data logging system may not be accepted.

Upon request, provide to the Engineer the data logging system manufacturer's recommendations for equipment calibration frequency and provide certification that the equipment meets manufacturer's recommended calibration.

Verify that the physical and electronic measurement of distance travelled is consistent by travelling a 100-foot distance prior to the start of pavement marking operations.

All cost for materials, labor, and equipment necessary to provide the pavement marking data as described will be incidental to the contract unit price for the respective pavement marking items.

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, each, or word for "Grooving for Cold Applied Plastic Pavement Marking" contract items.

GROOVING FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

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. All costs for removal of grinding and/or grooving residue will be included in the contract unit price per foot, each, or word for "Grooving for Durable Pavement Marking" contract items.

Unless otherwise specified in the plans, the Contractor will groove the surface for High Build Waterborne Pavement Marking Paint as specified in these plans and as per the manufacturer's instructions.

The grooving will be completed within the following tolerances:

Description	Specification	Tolerance
Depth of Groove	Marking Thickness ¹ + 15 mils	+ 5 mils
Width of Groove	5 to 6 inches	
Length of Skip Lines ²	10 foot 6 inches	± 3 inch
Tapers at ends of lines	6 to 9 inches	
Between Double Lines	4 inches	± 1/2 inch

¹ Marking thickness will include the thickness of marking material and reflective media.

² Additional length may be required as specified in the plans.

The equipment will be capable of the following:

- Grooving the total width of the groove in one pass or uniform depths with multiple passes.
- Grooving without causing damage to the pavement joints or joint sealant material.
- Provide uniform alignment and depth.
- Moving continuously to permit a mobile traffic work operation.

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GROOVING FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT (CONTINUED)

If damage occurs, including, but not limited to, joints, joint sealant material, and backer rod, the grooving operation will be stopped and modifications will be made to the grooving operation to prevent further damage. The Contractor will be required to use specially prepared circular diamond blade cutting heads to prevent damage at the joints. Damage caused will be repaired or replaced by the Contractor, as directed by the Engineer. No additional payment will be made for the repair work or any reapplication of the pavement marking in the area of the repair.

Grooving on bridge decks will start and stop a sufficient distance from the expansion joints so no damage occurs in these areas. Markings on bridge decks will be surface applied.

MOBILE RETRO-REFLECTIVITY MEASUREMENTS

Retro-reflectivity measurements will be taken by an Independent Consultant hired by the Contractor. Measurements will be taken in accordance with the ASTM testing methods E1710 and E2177.

A retro-reflectivity report of the measurements from the Independent Consultant will be provided to the Engineer.

The Independent Consultant will take measurements using a vehicle-mounted mobile retro-reflectometer. The mobile retro-reflectometer will 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).

The retro-reflectometer will be calibrated no less than twice a day in accordance with the operating manual and calibration guide for the particular machine and vehicle.

Measurement will consist of the average retro-reflective readings and standard deviations for pavement marking placed under this Contract. Retro-reflectivity measurements will be taken on each mainline edgeline, centerline and gore marking. Measure each line type separately. Measurement units will be mcd/m²/lux.

Retro-reflectivity will be measured by taking a minimum 40 retro-reflectivity readings within 528' (1/10 mile) on solid lines and a minimum 20 retro-reflectivity readings within 528' (1/10 mile) on skip lines. Gore markings will have a minimum of two retro-reflectivity readings taken on each marking. The average retro-reflectivity readings for each individual 4" wide line will be obtained at 528' (1/10 mile) intervals.

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

Additional passes will be required for wet recovery retro-reflectivity.

Measurements will be obtained no sooner than 7 days and no later than 30 days after the completion of all the line applications required for an individual highway route. Excess reflective media must not be visible when the retro-reflectivity testing is conducted.

Retro-reflectivity measurements will be collected when pavement and markings are dry, clean and no visible moisture is on the road surface. These criteria define initial pavement marking retro-reflectivity values. Markings will be measured in the direction of intended vehicular travel.

MOBILE RETRO-REFLECTIVITY MEASUREMENTS (CONTINUED)

The Independent Consultant should expect to retest failed segments after the markings have been replaced at no additional cost to the State.

The averaged retro-reflectivity measurements must meet the requirements for retro-reflectivity as specified. Any retro-reflectivity readings not meeting the minimum average dry and wet retro-reflectivity requirements for pavement markings will be considered failed. Failed markings will be removed and remarked by the Contractor in 528' lengths.

The Contractor will mark the begin and end of the length of line to be removed and remarked that is represented by the failed averaged reading.

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, will 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, RCL – Right Centerline, LCL – Left Centerline)
- Identification of the retroreflectometer
- A summary of the dry average retroreflective measurements for each continuous length of 0.1 mile measured

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 will be ± 10%.

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

The locations of the measurements will be randomly selected.

No final payment for pavement markings will 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 will be included in the contract unit price per mile for Mobile Retroreflectometer Measurements.

QUALITY ASSURANCE

A concrete pavement test deck site will be agreed upon. A 500' white and a 500' yellow stripe will 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 retro-reflectometer and the Independent Consultant's mobile retro-reflectometer. 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 mobile retro-reflectometer differs by less than 10% to the mean average obtained by the Department's handheld retro-reflectometer for each color. Quality assurance will be completed before mobile reflectivity measurements begin.

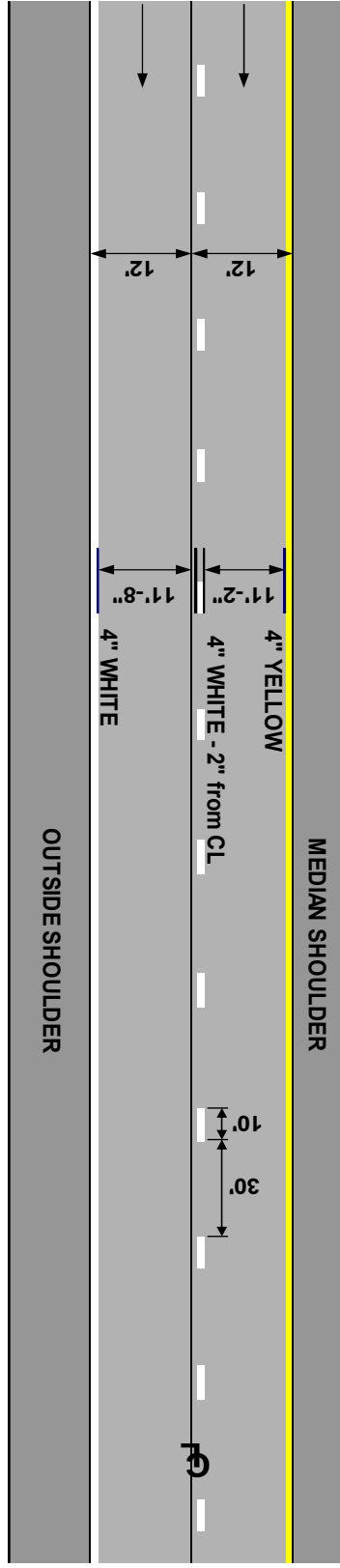
Cost for Quality Assurance will be included in the contract unit price per mile for Mobile Retroreflectometer Measurements.

**ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS
PCN 06TH**

SIGN CODE	SIGN DESCRIPTION	EXPRESSWAY / INTERSTATE			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	2	48" x 24"	8.0	16.0
EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT					112.0

**ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS
PCN 07XD**

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W9-3	CENTER LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT, RIGHT OR CENTER LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					169.0



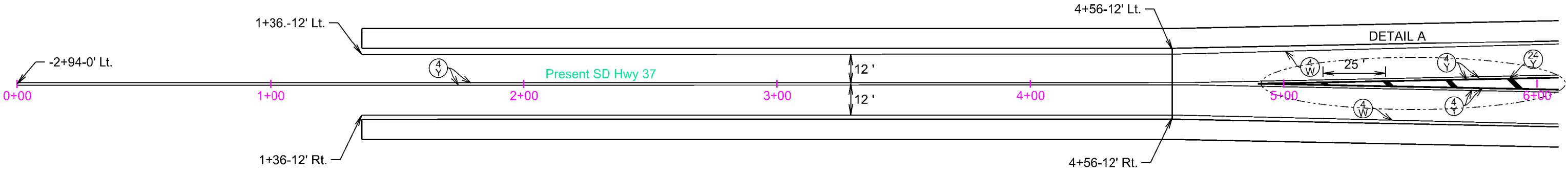
DIVIDED ROADWAY
(ONE DIRECTION SHOWN)

ESTIMATED QUANTITIES 1-90	
DURABLE PAVEMENT MARKING	QUANTITY
4" WHITE	109,299 FEET
12" WHITE	3,074 FEET
4" YELLOW	134,218 FEET
SURFACE PREPERATION	
4" EQUIVALENT	252,738 FEET
QUANTITY	

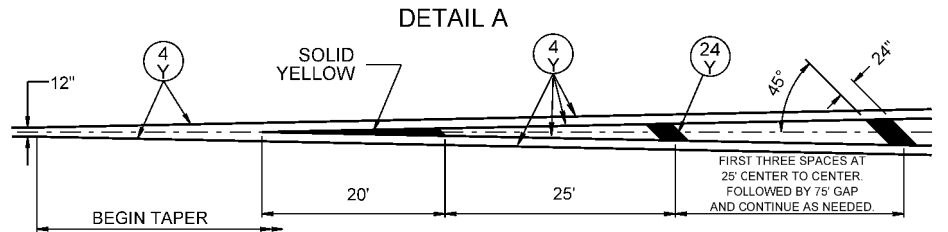
PAVEMENT MARKING LAYOUT PRESENT SD HWY 37

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)	8	42

Plotting Date: 03/16/2026



KEY	ITEM	QUANTITY	UNIT
(24) W	Durable Pavement Marking, 24" White	1,820	Ft
(24) Y	Durable Pavement Marking, 24" Yellow	256	Ft
↩	Durable Pavement Marking, Arrow (Left 23, Right 7)	30	Each
	Durable Pavement Marking, Message	2	Word
(4) W	Durable Pavement Marking, 4" White	7,634	Ft
(4) Y	Durable Pavement Marking, 4" Yellow	6,858	Ft
(12) W	Durable Pavement Marking, 12" White	2,300	Ft
(12) Y	Durable Pavement Marking, 12" Yellow	28	Ft
	Surface Prep for Durable Pavement Marking, 24"	2,076	SqFt
	Surface Prep for Durable Pavement Marking, Arrow (Left 23, Right 7)	30	Each
	Surface Prep for Durable Pavement Marking, Message	2	Word
	Surface Prep for Durable Pavement Marking, 4"	14,492	Ft
	Surface Prep for Durable Pavement Marking, 12"	2,328	Ft



PLOT SCALE - 1:38,8235

PLOTTED FROM - TRM111119

FILE - ... \MITCHELL \000PM.DGN

PLOT NAME - 1

PAVEMENT MARKING LAYOUT

PRESENT SD HWY 37

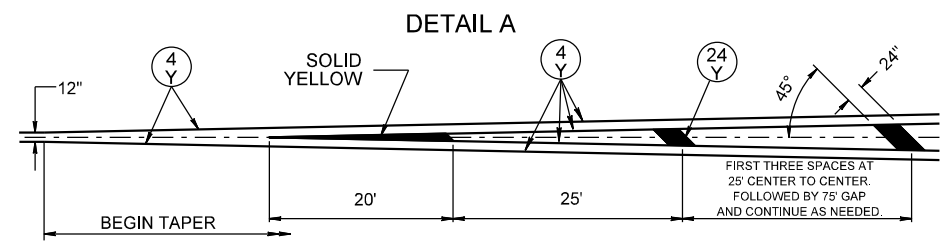
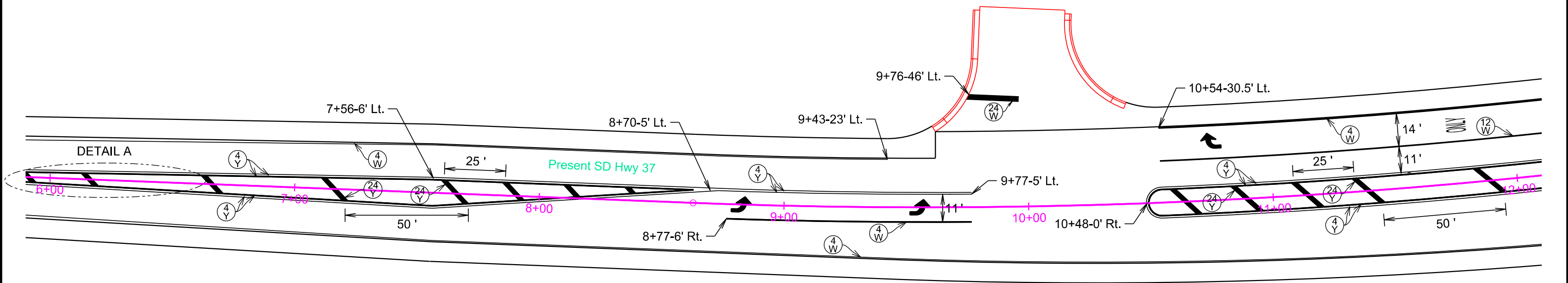
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL
	PH 0020(230) PH 0020(233)	9	42

Plotting Date: 03/16/2026



PLOT SCALE - 1"=38.8235'

PLOT NAME -



FILE - ... \MITCHELL \006PM.DGN

PLOTTED FROM - TRM111119

PAVEMENT MARKING LAYOUT PRESENT SD HWY 37

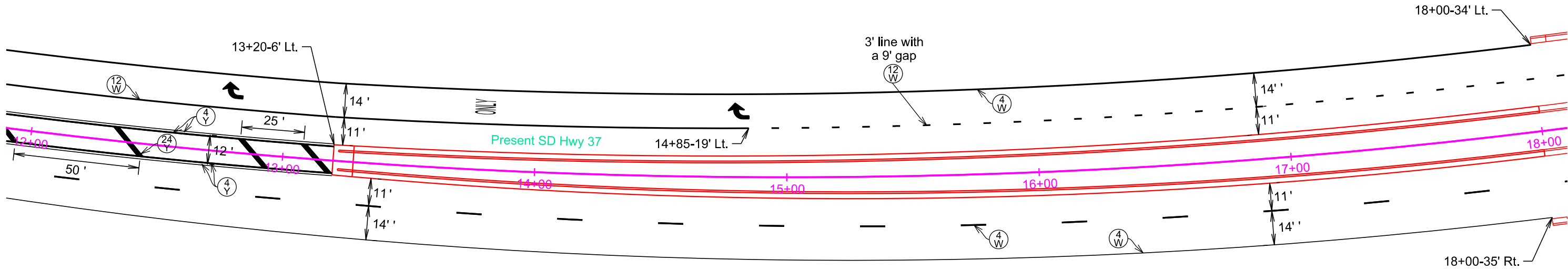
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)	10	42

Plotting Date: 03/10/2026



PLOT SCALE - 1:40

PLOT NAME - 3



PLOTTED FROM - TRM111119

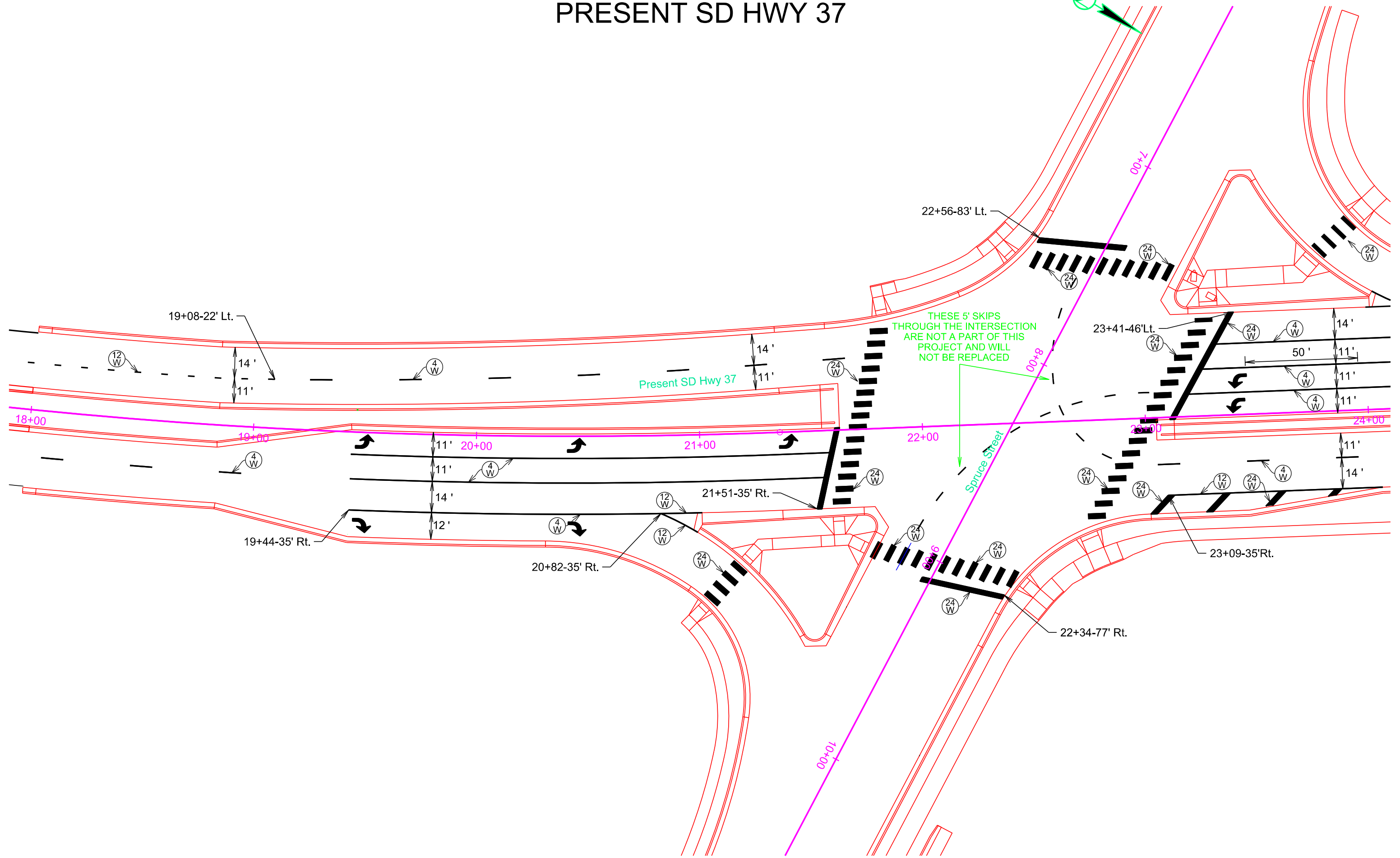
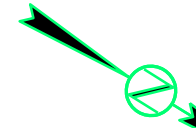
FILE - ... \M1TCHELL\012PM.DGN

PAVEMENT MARKING LAYOUT

PRESENT SD HWY 37

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL
	PH 0020(230) PH 0020(233)	11	42

Plotting Date: 03/16/2026



PLOT SCALE - 1:38,8235

PLOTTED FROM - TRW111119

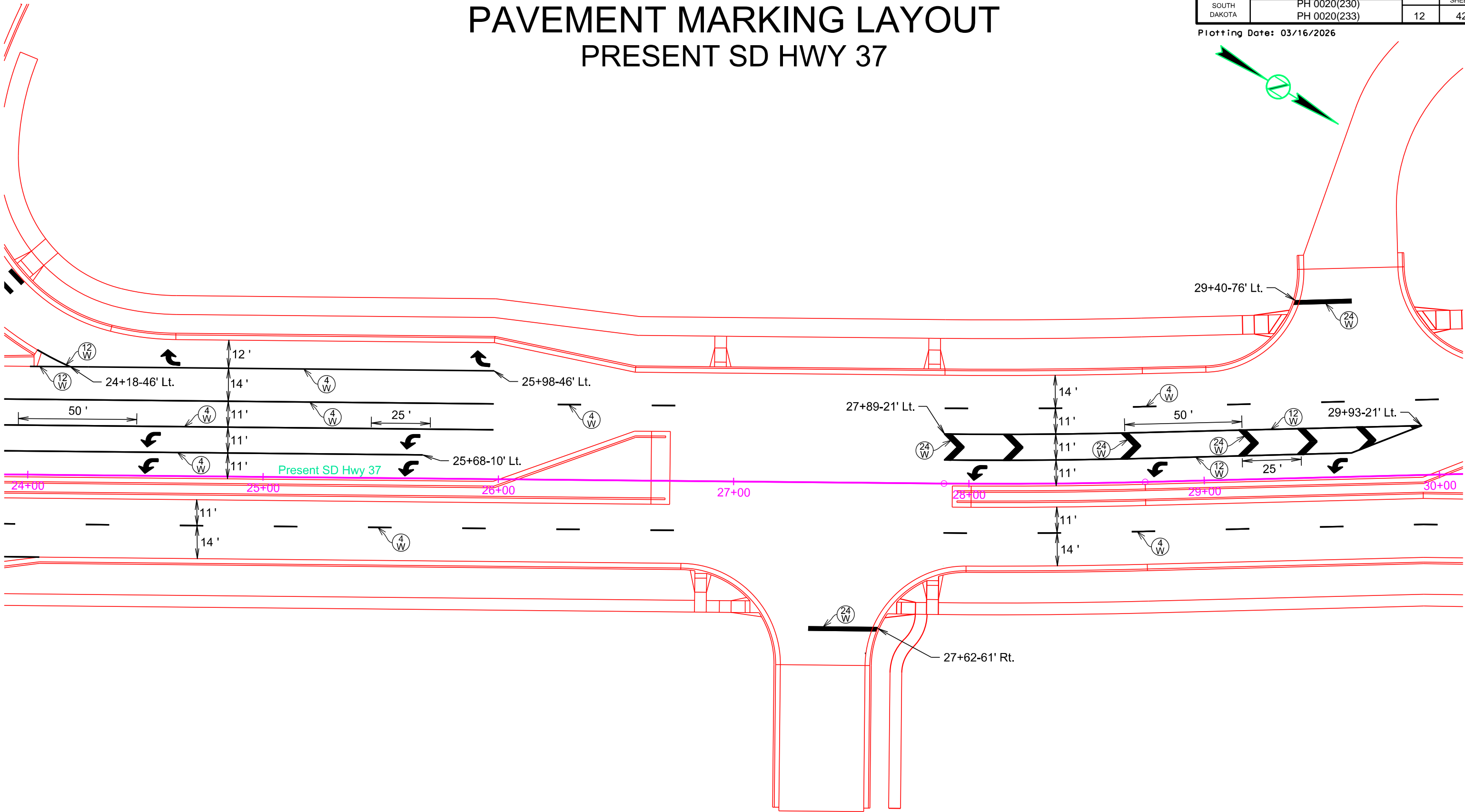
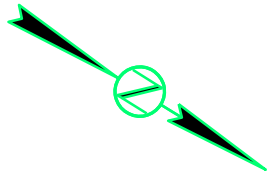
PLOT NAME - 1

FILE - ...AMITCHELL\018PM.DGN

PAVEMENT MARKING LAYOUT PRESENT SD HWY 37

STATE OF SOUTH DAKOTA	PROJECT PH 0020(230) PH 0020(233)	SHEET 12	TOTAL SHEETS 42
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Plotting Date: 03/16/2026



PLOT SCALE - 1:38,8235

PLOT NAME - 1

PLOTTED FROM - TRW111119

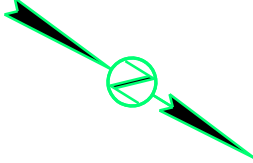
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PAVEMENT MARKING LAYOUT

PRESENT SD HWY 37

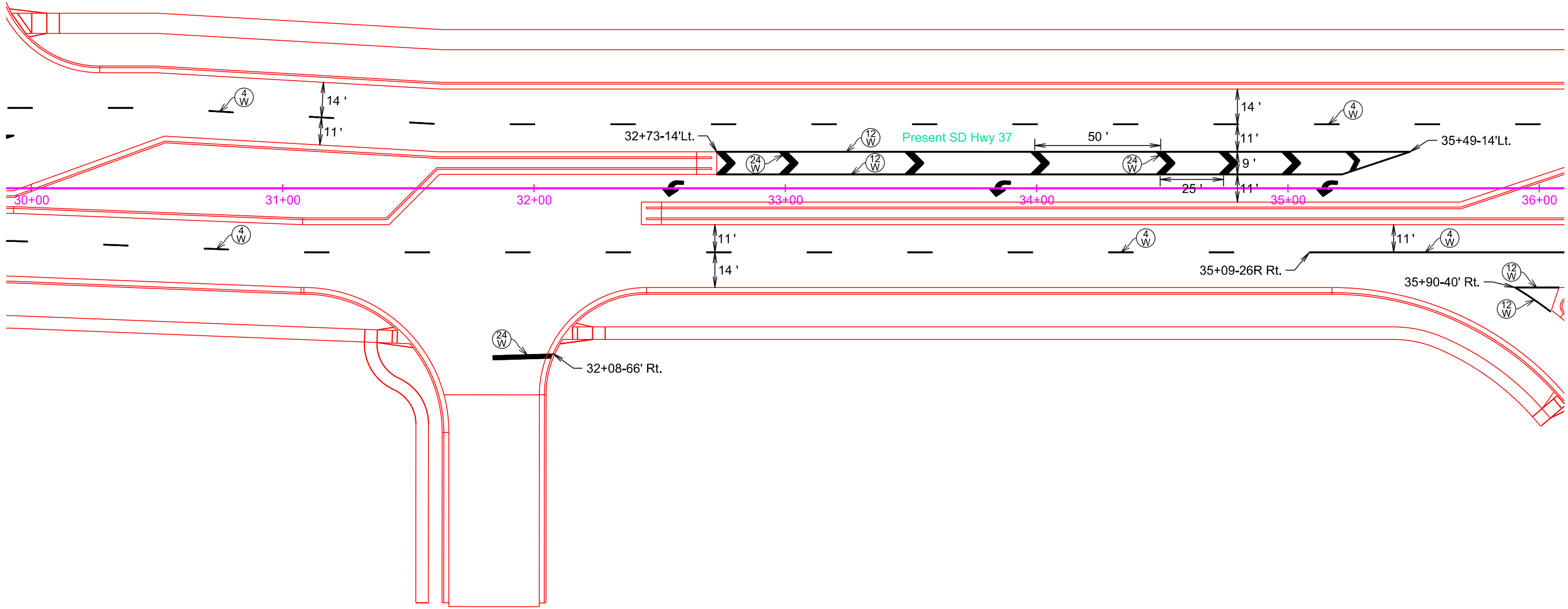
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)	13	42

Plotting Date: 03/10/2026



PLOT SCALE - 1:40

PLOT NAME - 6



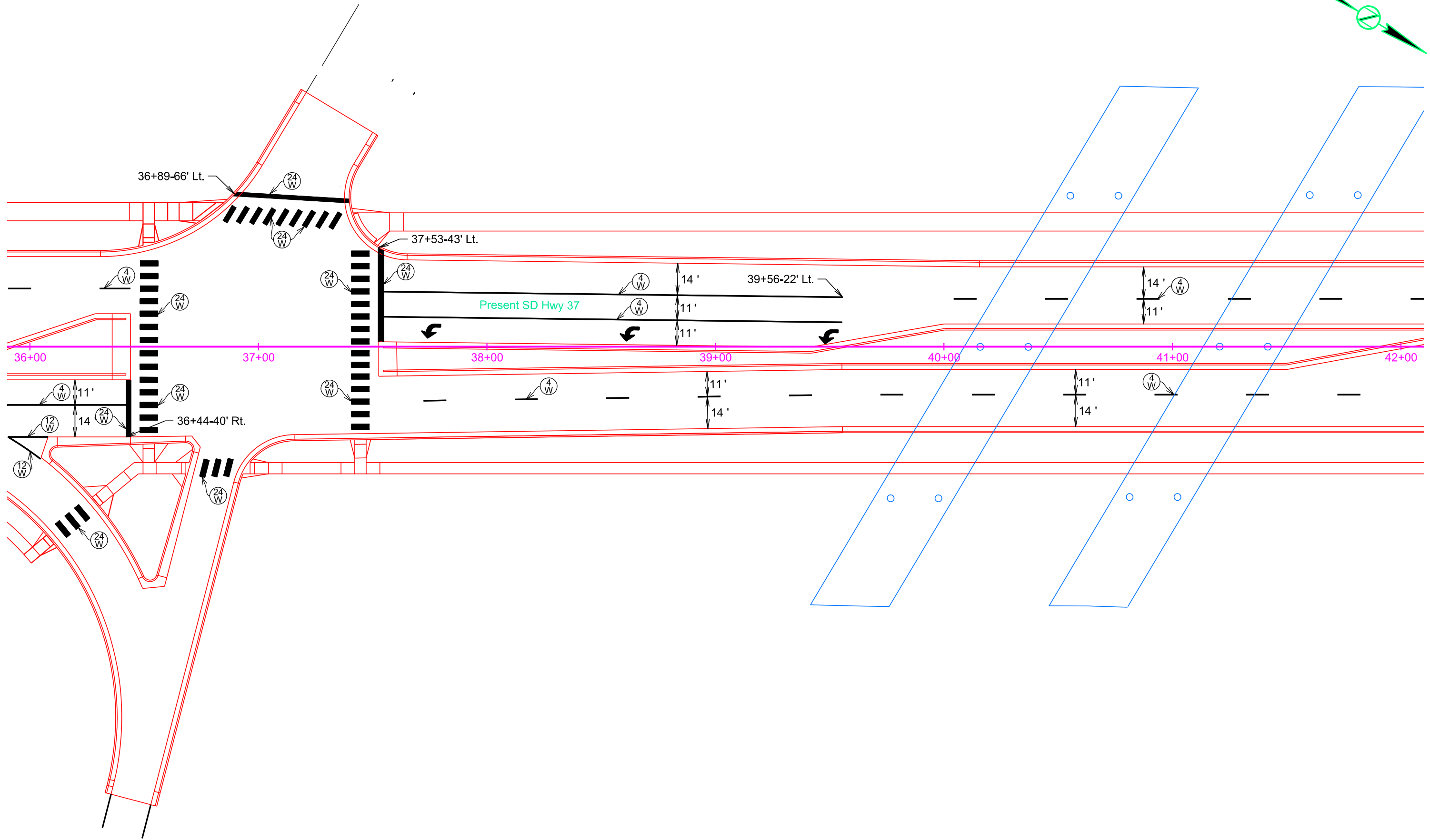
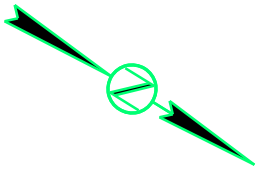
PLOTTED FROM - TRM111119

FILE - ... \M1TCHELL\030PM.DGN

PAVEMENT MARKING LAYOUT PRESENT SD HWY 37

STATE OF SOUTH DAKOTA	PROJECT PH 0020(230) PH 0020(233)	SHEET 14	TOTAL SHEETS 42
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Plotting Date: 03/10/2026



PLOT SCALE - 1:40

PLOT NAME - 7

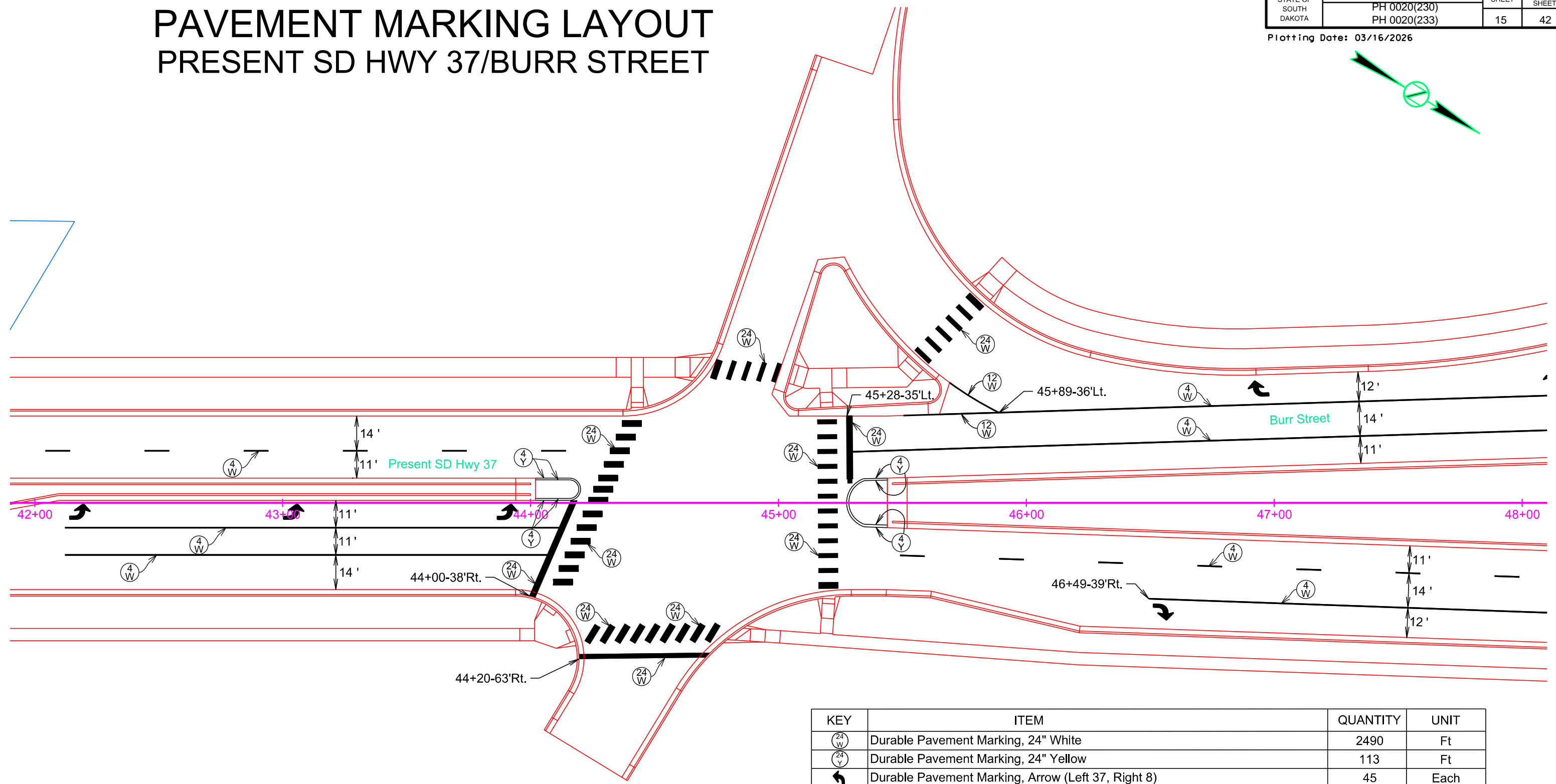
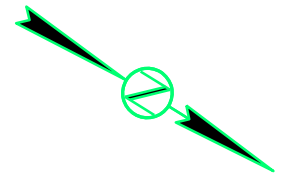
FILE - ... \M1TCHELL\036PM.DGN

PLOTTED FROM - TRM111119

PAVEMENT MARKING LAYOUT PRESENT SD HWY 37/BURR STREET

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)	15	42

Plotting Date: 03/16/2026



KEY	ITEM	QUANTITY	UNIT
(24 W)	Durable Pavement Marking, 24" White	2490	Ft
(24 Y)	Durable Pavement Marking, 24" Yellow	113	Ft
↩	Durable Pavement Marking, Arrow (Left 37, Right 8)	45	Each
(4 W)	Durable Pavement Marking, 4" White	5,250	Ft
(4 Y)	Durable Pavement Marking, 4" Yellow	5,225	Ft
(12 W)	Durable Pavement Marking, 12" White	898	Ft
(12 Y)	Durable Pavement Marking, 12" Yellow	18	Ft
	Surface Prep for Durable Pavement Marking, 24"	2,603	SqFt
	Surface Prep for Durable Pavement Marking, Arrow (Left 37, Right 8)	45	Each
	Surface Prep for Durable Pavement Marking, 4"	10,475	Ft
	Surface Prep for Durable Pavement Marking, 12"	916	Ft

PLOT SCALE - 1:38.8235

PLOT NAME -

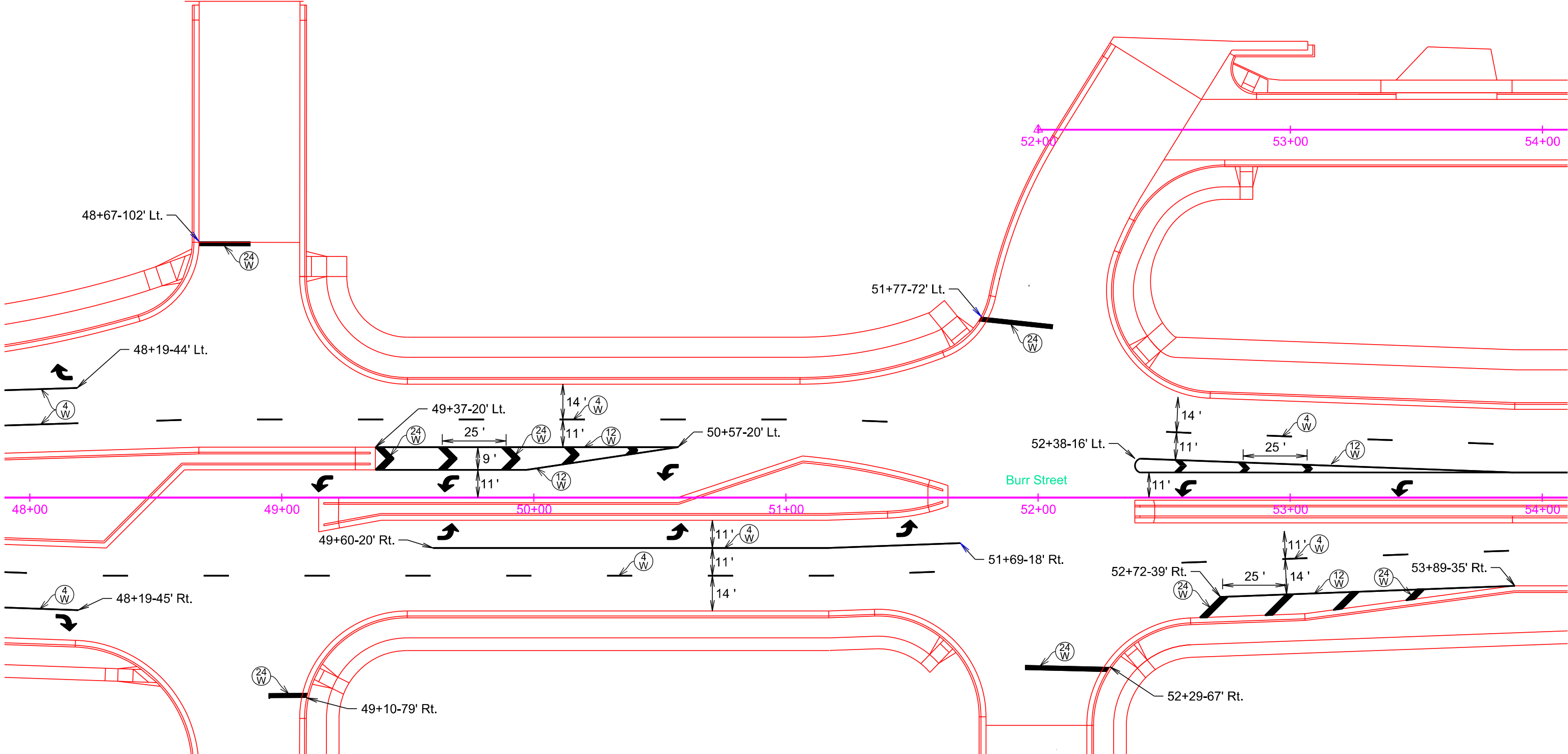
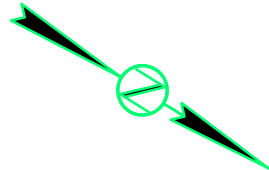
PLOTTED FROM - TRW111119

FILE - ... \M1TICHELL\042PM.DGN

PAVEMENT MARKING LAYOUT BURR STREET

STATE OF SOUTH DAKOTA	PROJECT PH 0020(230) PH 0020(233)	SHEET 16	TOTAL SHEETS 42
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Plotting Date: 03/16/2026



PLOTTED FROM - TRW11119

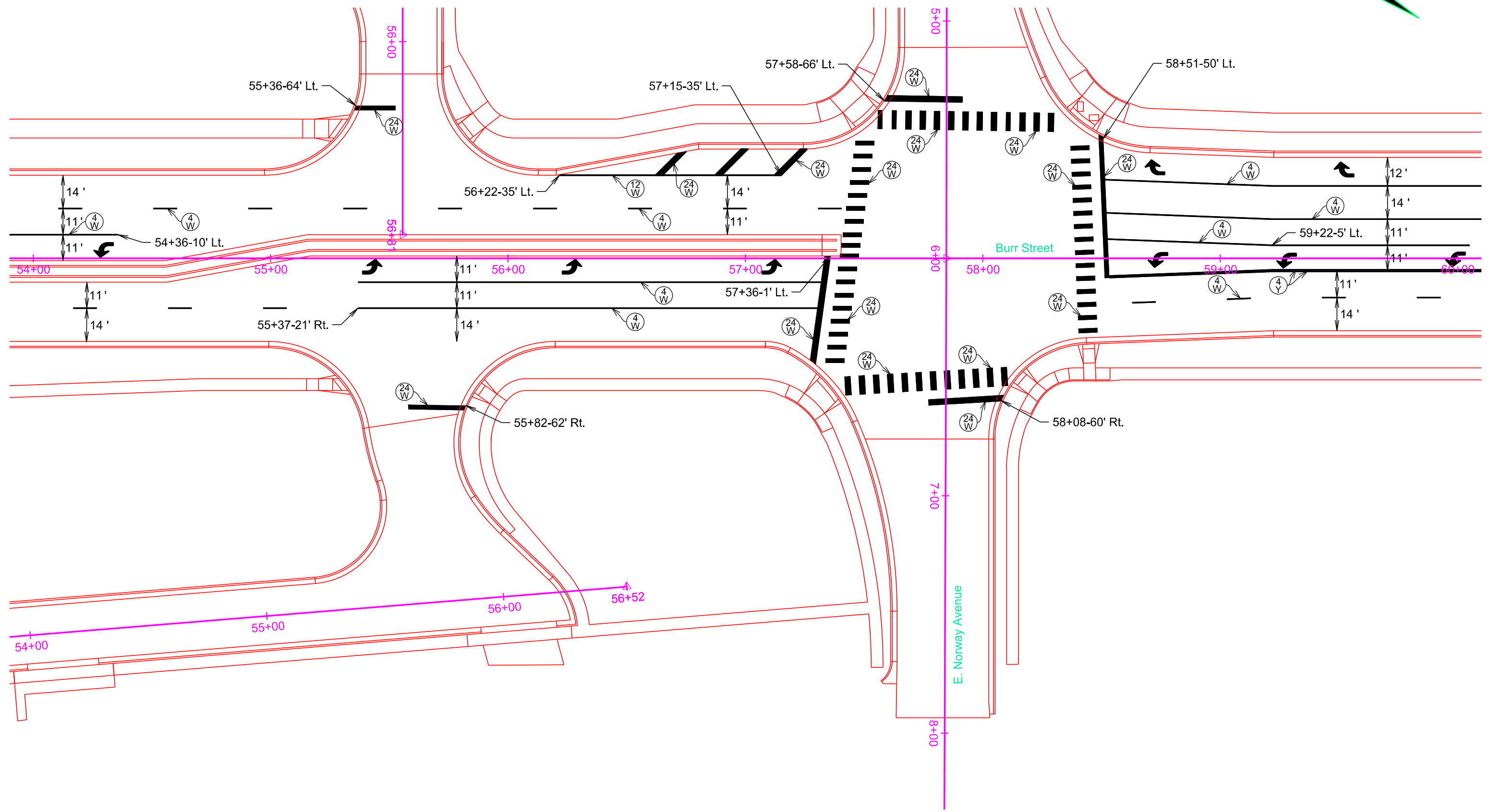
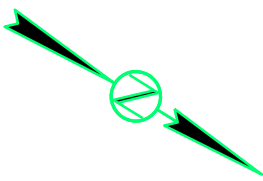
PLOT NAME -

FILE - ... \M1TICHELL\048LPM.DGN

PAVEMENT MARKING LAYOUT BURR STREET

STATE OF SOUTH DAKOTA	PROJECT PH 0020(230) PH 0020(233)	SHEET 17	TOTAL SHEETS 42
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Plotting Date: 03/16/2026



PLOT SCALE - 1"=38.8235'

PLOT NAME - 1

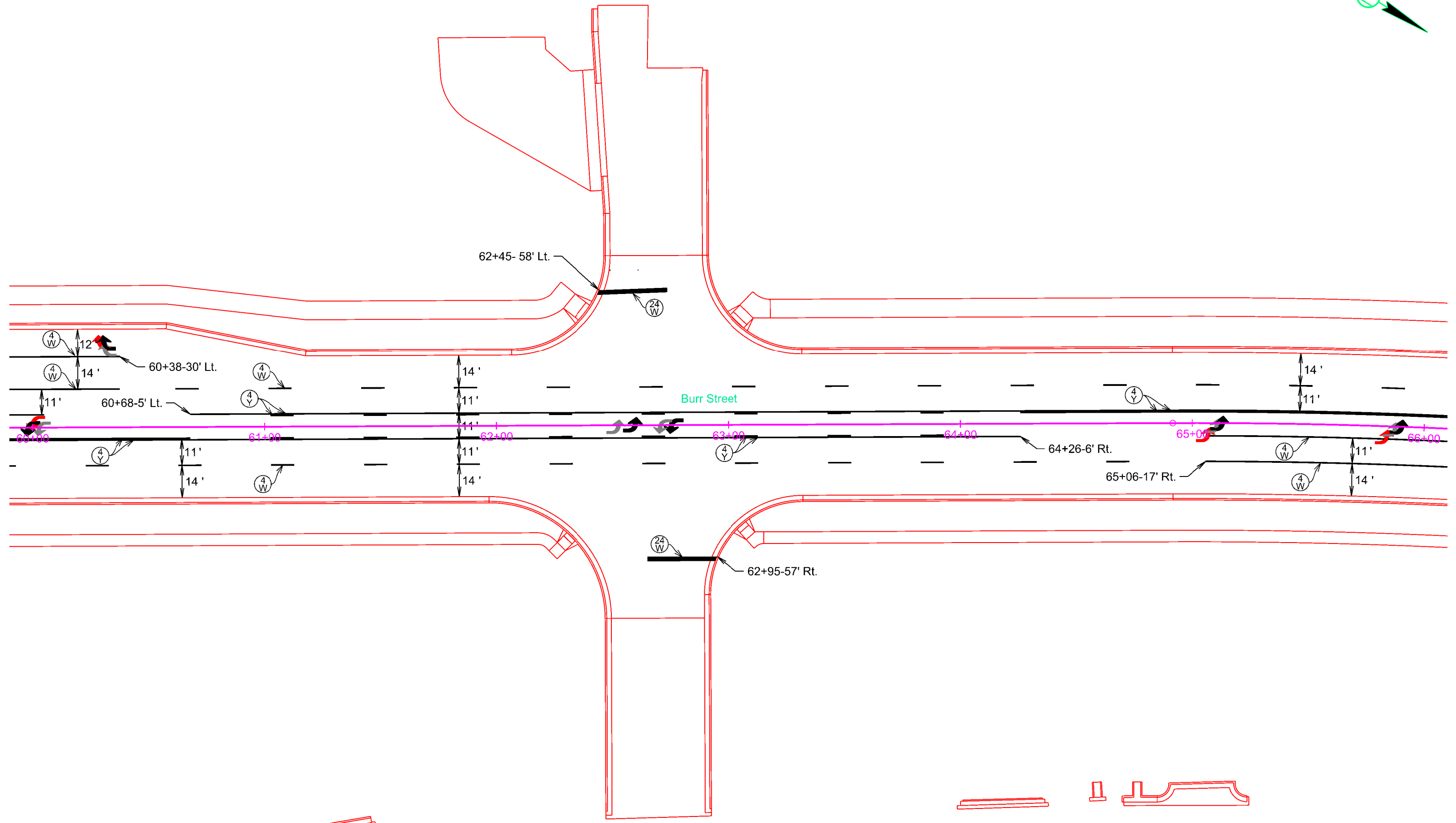
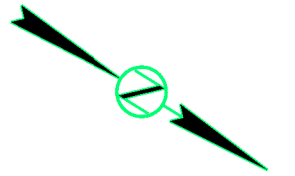
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PLOTTED FROM - TRM111119

PAVEMENT MARKING LAYOUT BURR STREET

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)	18	42

Plotting Date: 03/16/2026 Revised 03/16/26 GB



PLOT SCALE - 1:38,8235

PLOTTED FROM - TRW11119

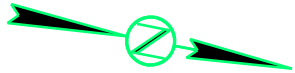
PLOT NAME - 1

FILE - ... MITCHELL \060PM.DGN

PAVEMENT MARKING LAYOUT BURR STREET

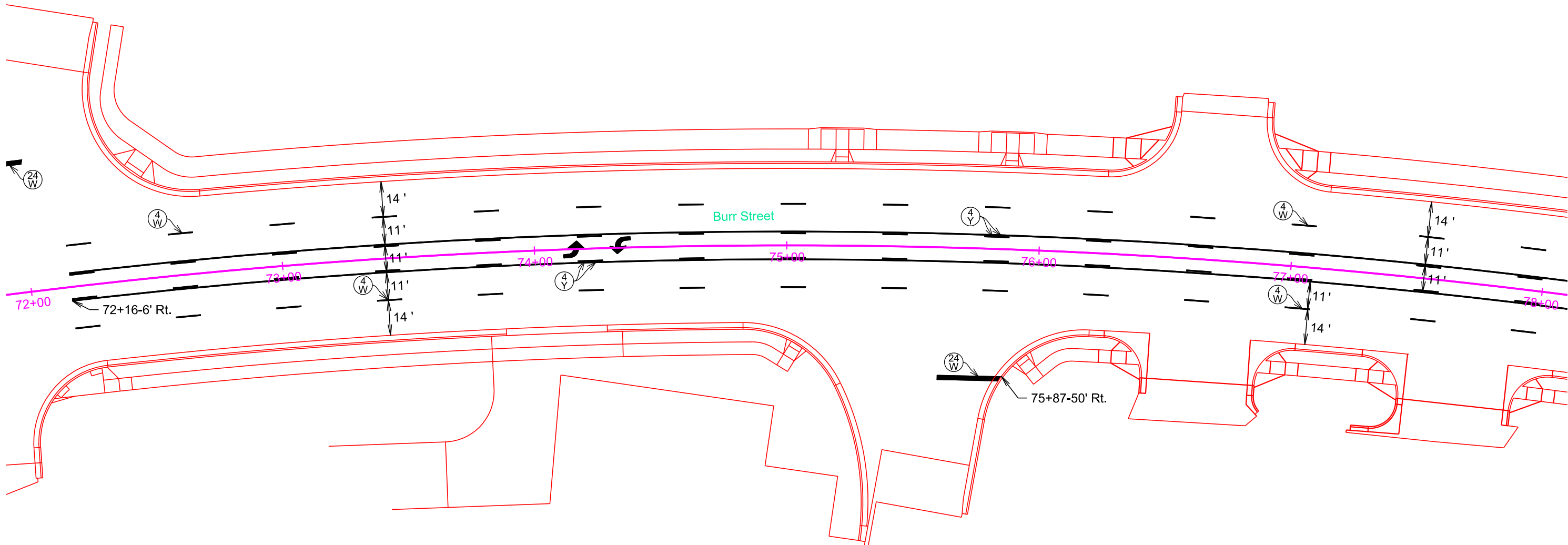
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL
	PH 0020(230) PH 0020(233)	20	SHEETS 42

Plotting Date: 03/10/2026



PLOT SCALE - 1:40

PLOT NAME - 13



PLOTTED FROM - TRM111119

FILE - ... \MITCHELL\072PM.DGN

PAVEMENT MARKING LAYOUT BURR STREET

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)	21	42

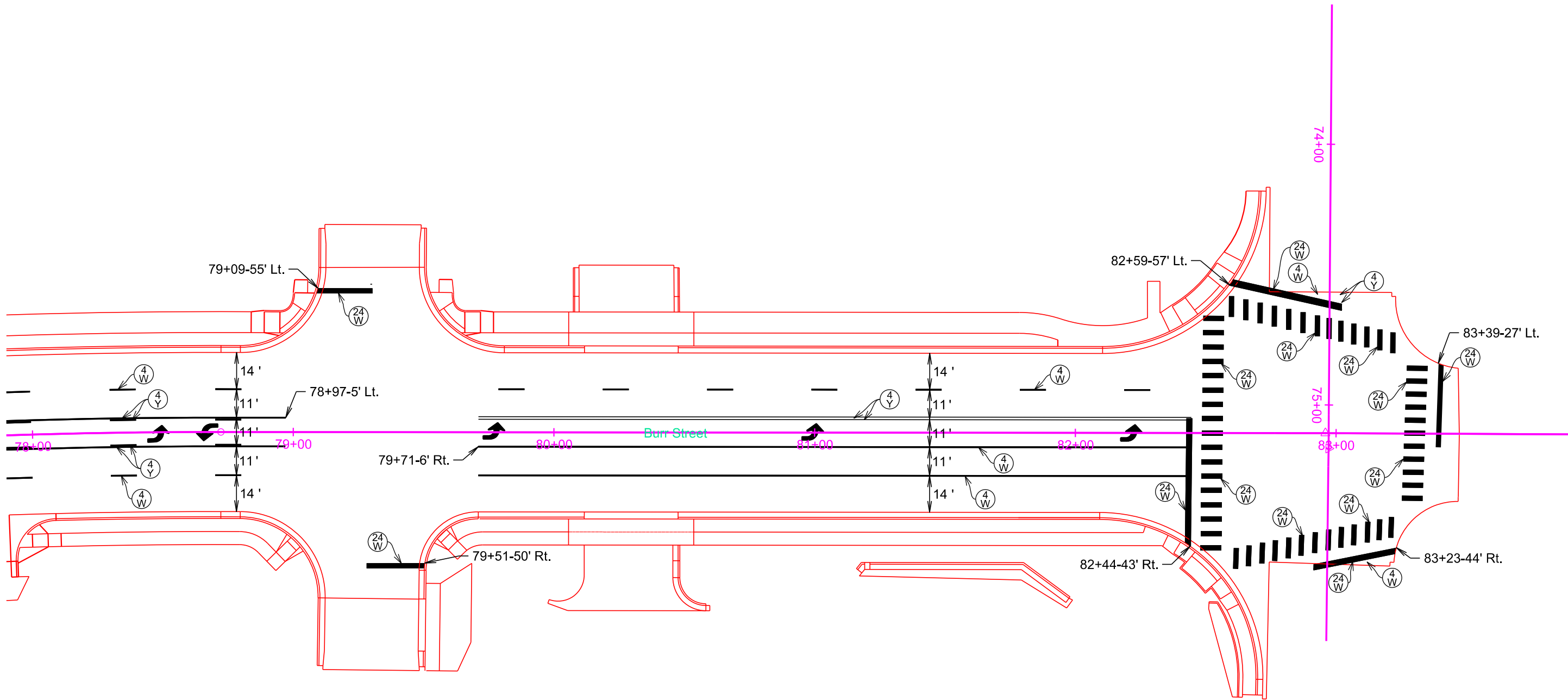
Plotting Date: 03/10/2026



PLOT SCALE - 1:40

PLOT NAME - 14

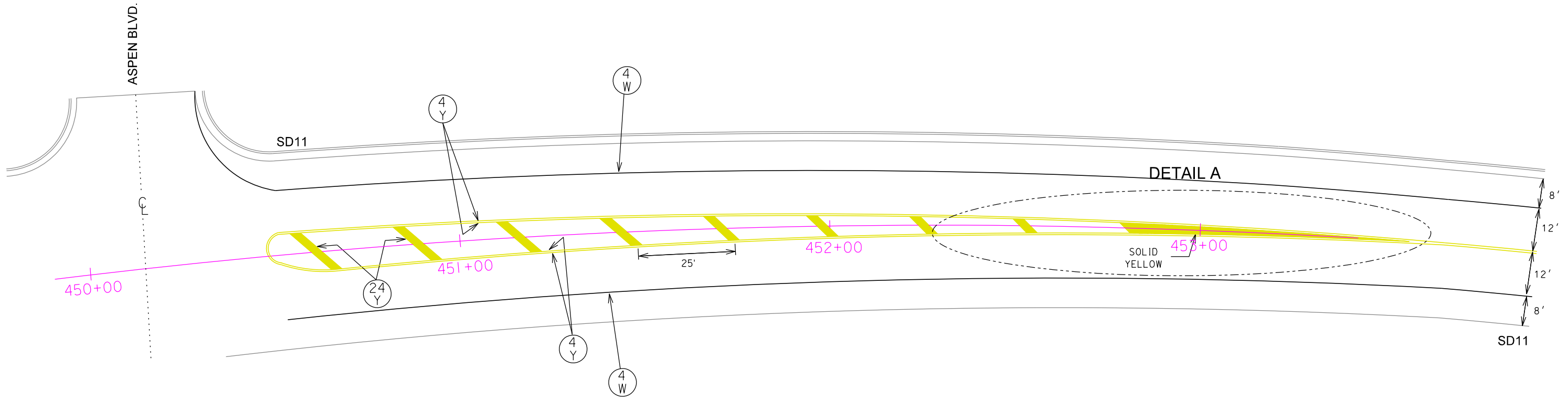
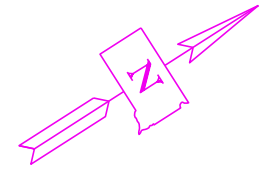
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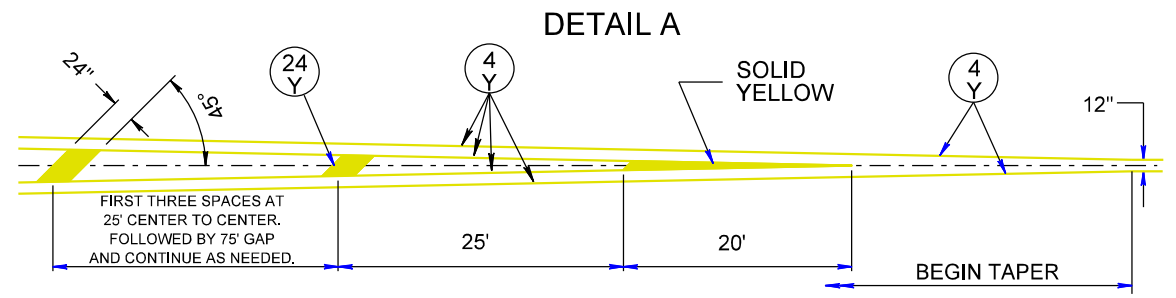
PLOTTED FROM - TRM111119

PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON



KEY	ITEM	QUANTITY	UNIT
(24 W)	Durable Pavement Marking, 24" White	490	Ft
(24 Y)	Durable Pavement Marking, 24" Yellow	794	Ft
	Durable Pavement Marking, Arrow (Left 43, Right 3, Straight 6)	52	Each
	Durable Pavement Marking, Message	8	Word
(4 W)	Durable Pavement Marking, 4" White	31,119	Ft
(4 Y)	Durable Pavement Marking, 4" Yellow	38,863	Ft
(8 W)	Durable Pavement Marking, 8" White	537	Ft
(12 W)	Durable Pavement Marking, 12" White	130	Ft
	Surface Prep for Durable Pavement Marking, 24"	1,284	Ft
	Surface Prep for Durable Pavement Marking, Arrow (Left 43, Right 3, Straight 6)	52	Each
	Surface Prep for Durable Pavement Marking, Message	8	Word
	Surface Prep for Durable Pavement Marking, 4"	69,982	Ft
	Surface Prep for Durable Pavement Marking, 12"	130	Ft
	Surface Prep for Durable Pavement Marking, 8"	537	Ft



PLOT SCALE - 1:27,1765

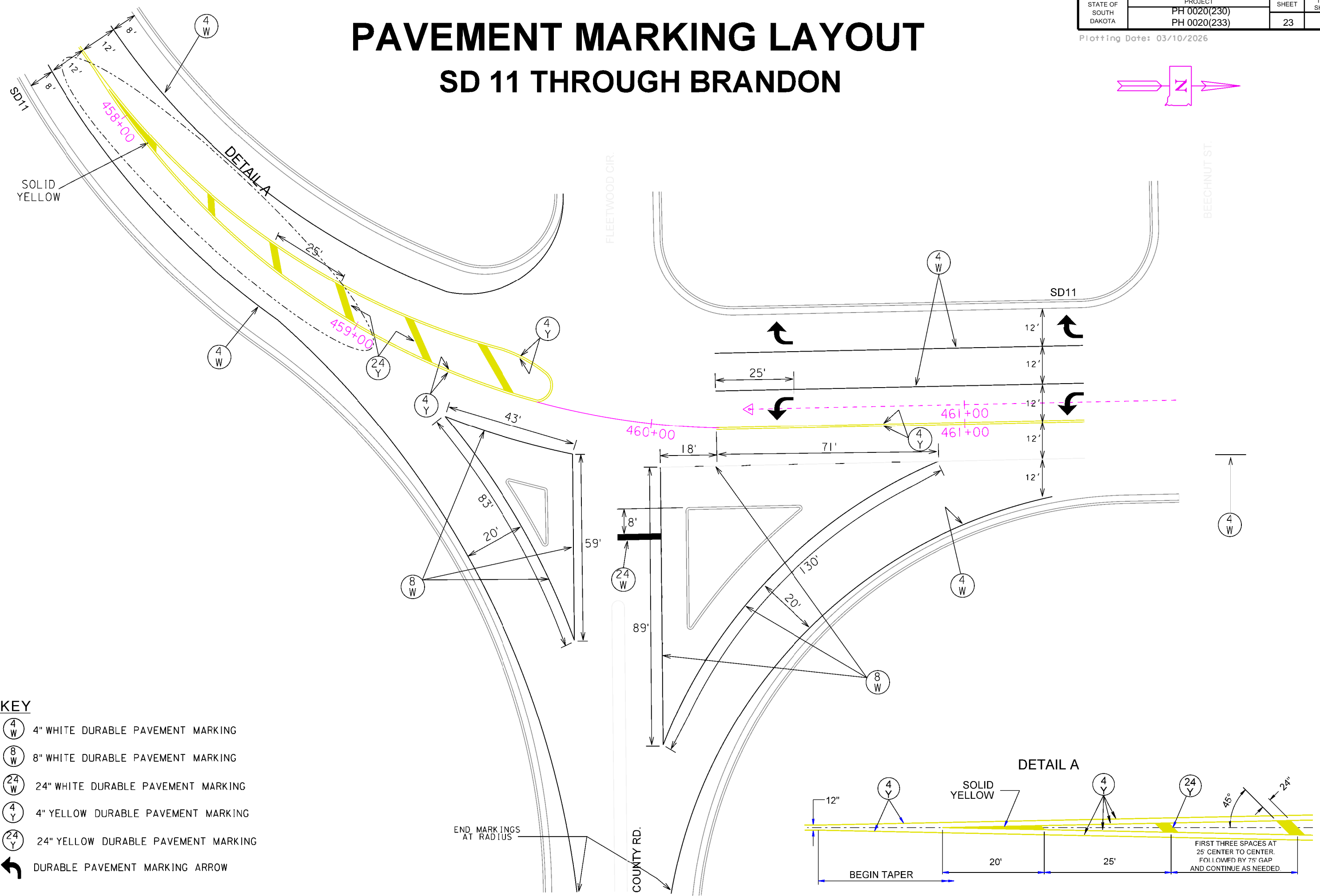
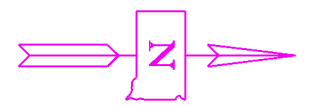
PLOTTED FROM - TRM111119

PLOT NAME - 1

FILE - ... \BRANDON\MARK01BH.DGN

PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON



- KEY**
- 4" WHITE DURABLE PAVEMENT MARKING
 - 8" WHITE DURABLE PAVEMENT MARKING
 - 24" WHITE DURABLE PAVEMENT MARKING
 - 4" YELLOW DURABLE PAVEMENT MARKING
 - 24" YELLOW DURABLE PAVEMENT MARKING
 - DURABLE PAVEMENT MARKING ARROW

PLOT SCALE - 1:27,1765

PLOTTED FROM - TRW11119

PLOT NAME -

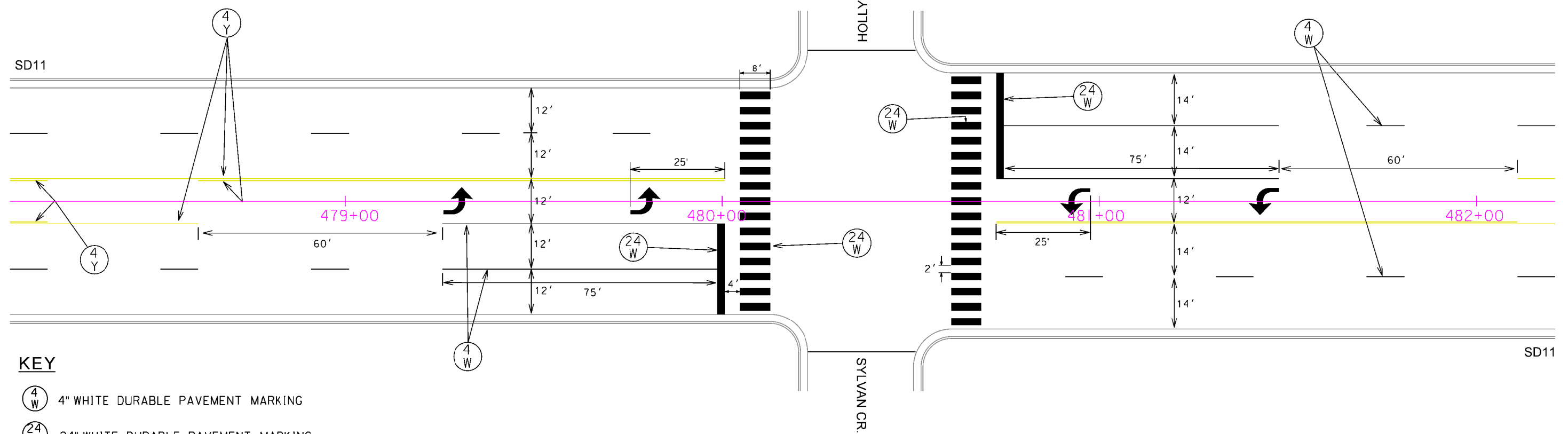
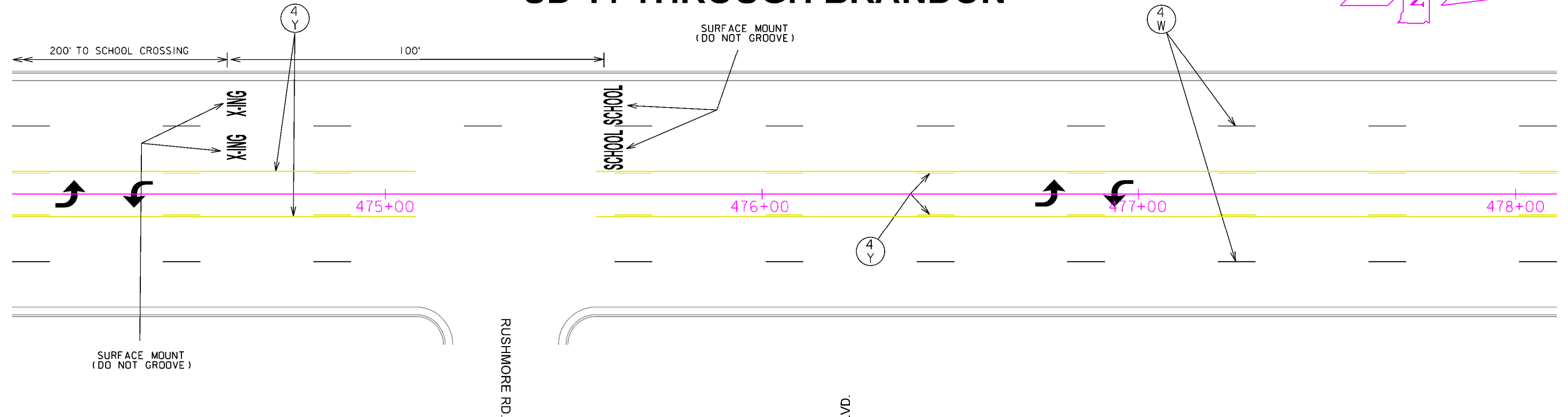
FILE - ... \BRANDON\MARK01BH.DGN





PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON

PLOT SCALE - 1:27,1765

PLOT NAME -



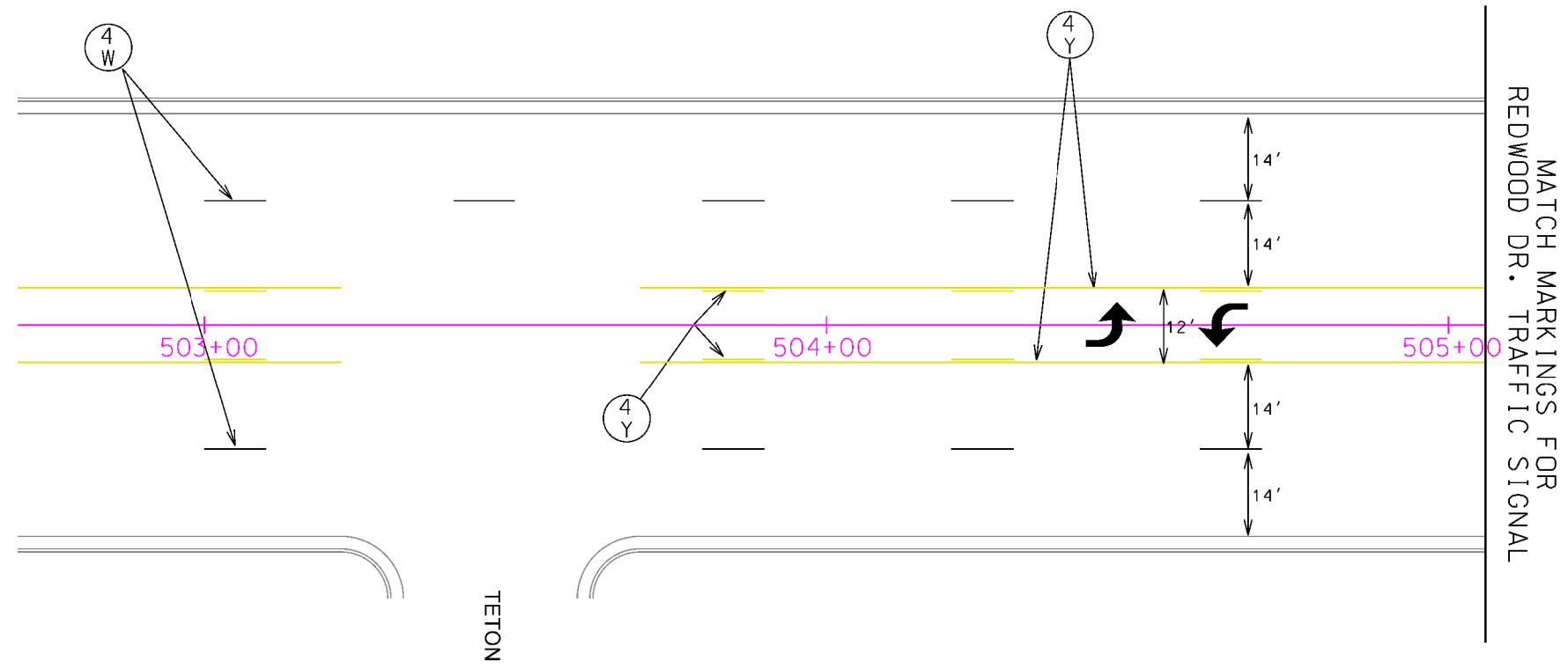
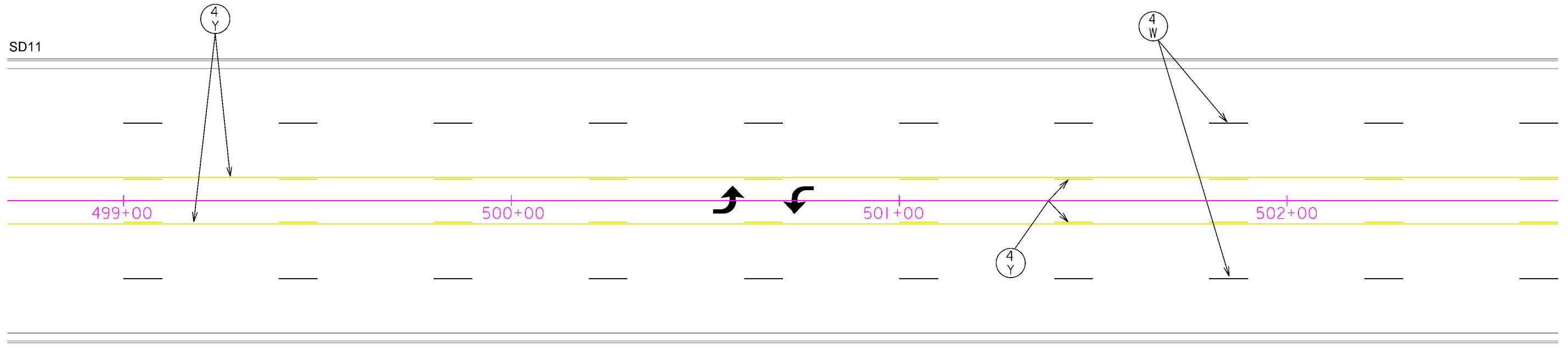
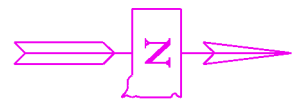
- KEY**
-  4" WHITE DURABLE PAVEMENT MARKING
 -  24" WHITE DURABLE PAVEMENT MARKING
 -  4" YELLOW DURABLE PAVEMENT MARKING
 -  DURABLE PAVEMENT MARKING ARROW




PLOTTED FROM - TRW111119

FILE - ... \BRANDON\MARK01BH.DGN

PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON



- KEY**
-  4" WHITE DURABLE PAVEMENT MARKING
 -  4" YELLOW DURABLE PAVEMENT MARKING
 -  DURABLE PAVEMENT MARKING ARROW

TETON

PLOT SCALE - 1:27,1765

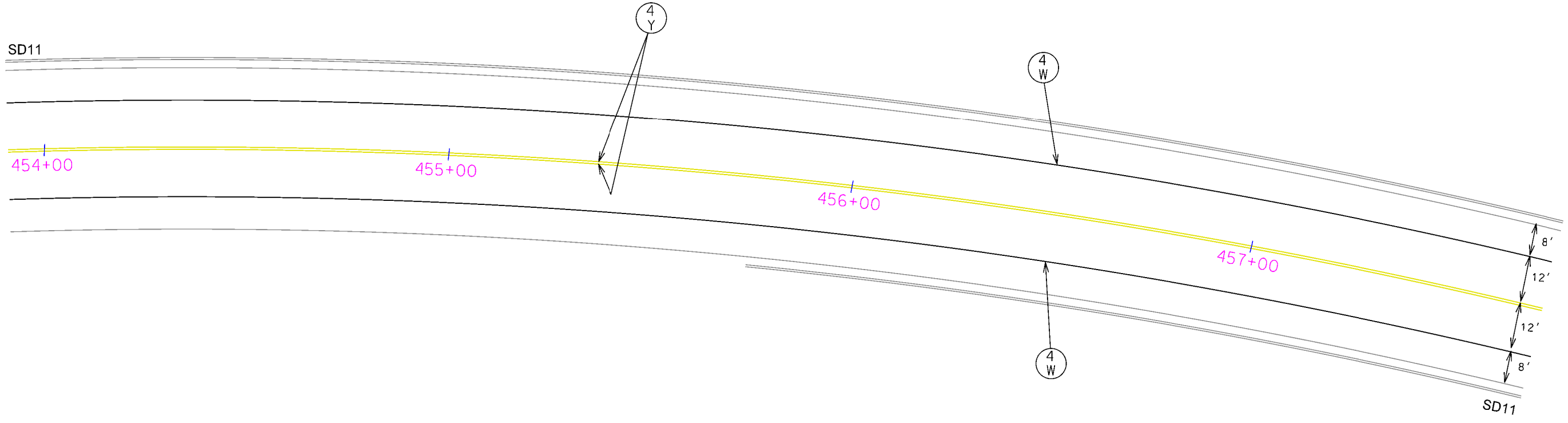
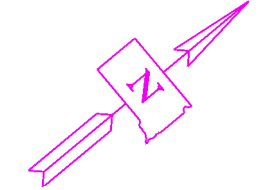
PLOT NAME - 1

FILE - ... \BRANDON\MARK01BH.DGN




PLOTTED FROM - TRW11119

PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON



KEY

-  4" WHITE DURABLE PAVEMENT MARKING
-  4" YELLOW DURABLE PAVEMENT MARKING
-  DURABLE PAVEMENT MARKING ARROW

PLOT SCALE - 1:27,1765

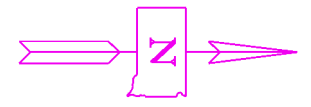
PLOTTED FROM - TRW11119

PLOT NAME - 1

FILE - ... \BRANDON\MARK01BH.DGN

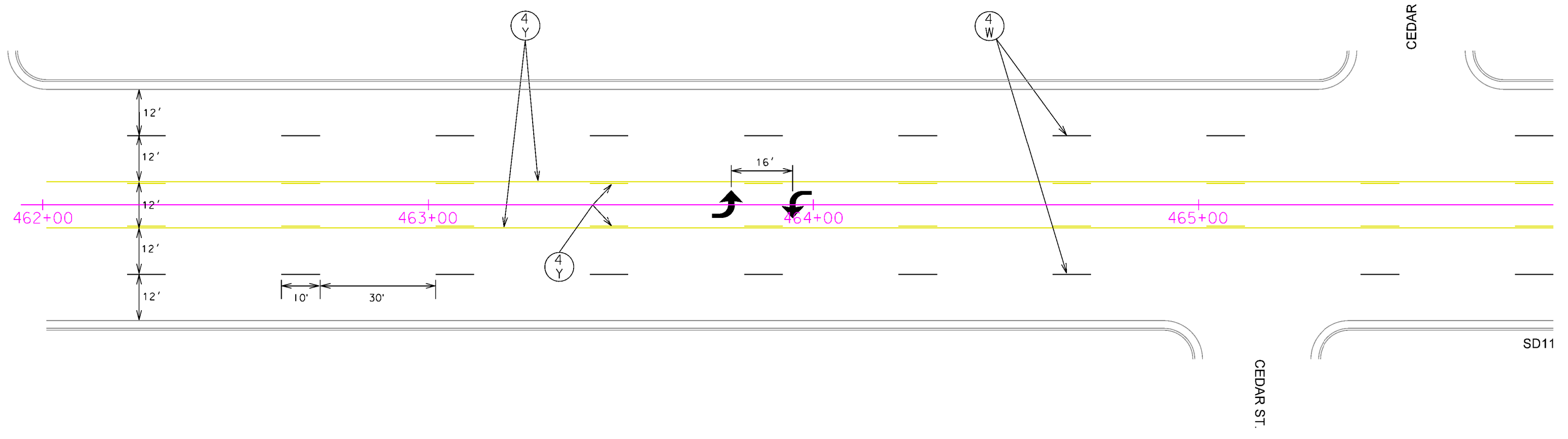
PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON






BEECHNUT ST.

CEDAR ST.



KEY

-  4" WHITE DURABLE PAVEMENT MARKING
-  4" YELLOW DURABLE PAVEMENT MARKING
-  DURABLE PAVEMENT MARKING ARROW

PLOT SCALE - 1:27.1765

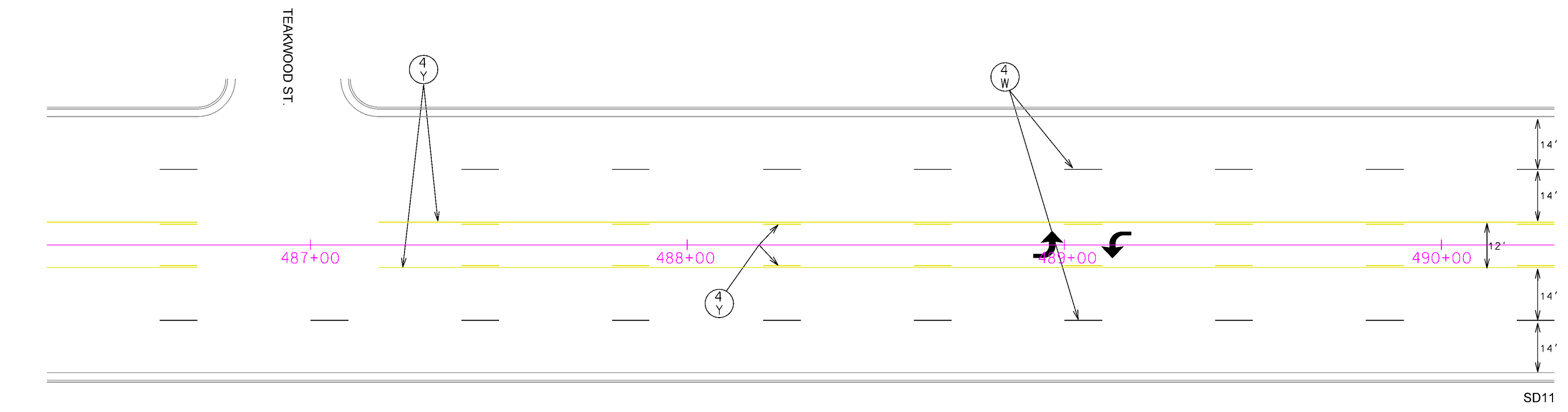
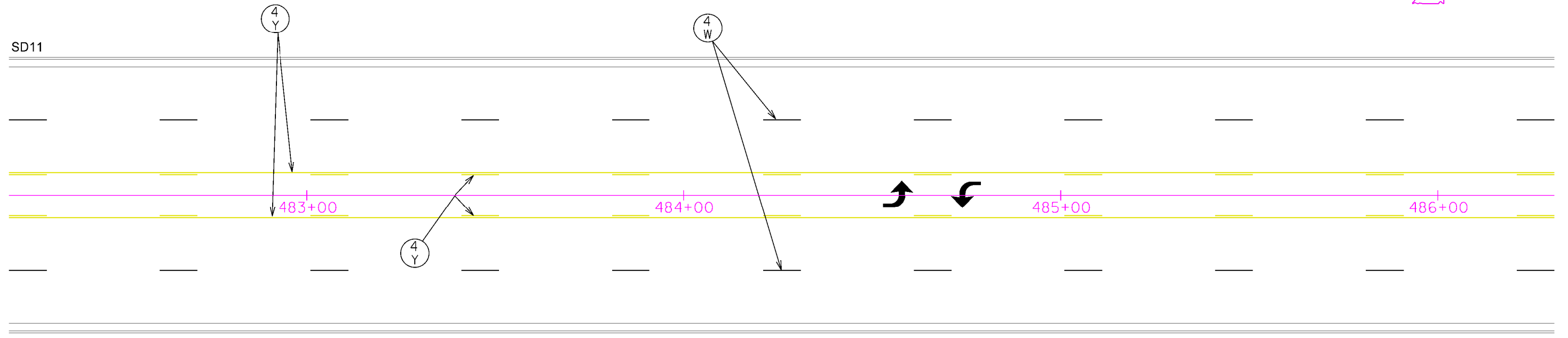
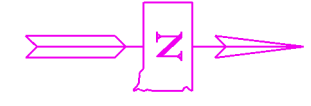
PLOTTED FROM - TRW11119

PLOT NAME - 1




FILE - ... \BRANDON\MARK01BH.DGN

PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON



KEY

-  4" WHITE DURABLE PAVEMENT MARKING
-  4" YELLOW DURABLE PAVEMENT MARKING
-  DURABLE PAVEMENT MARKING ARROW

PLOT SCALE - 1:27,1765

PLOT NAME -

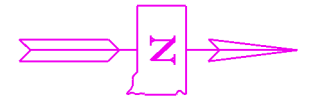
FILE - ... \BRANDON\MARK01BH.DGN

PLOTTED FROM - TRW11119

Plotting Date: 03/10/2026

PAVEMENT MARKING LAYOUT

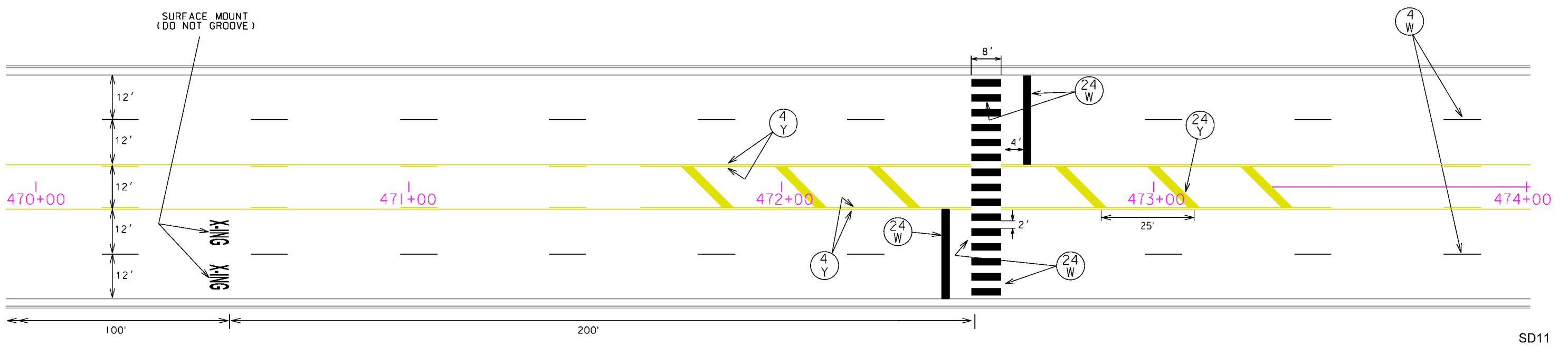
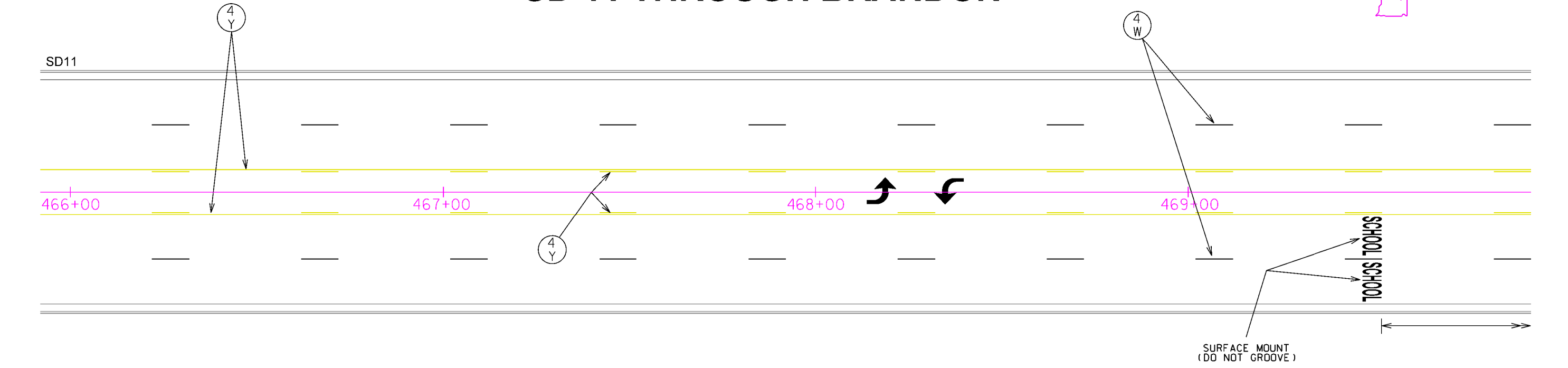
SD 11 THROUGH BRANDON







PLOT SCALE - 1:27,1765

PLOT NAME -

FILE - ... \BRANDON\MARK01BH.DGN



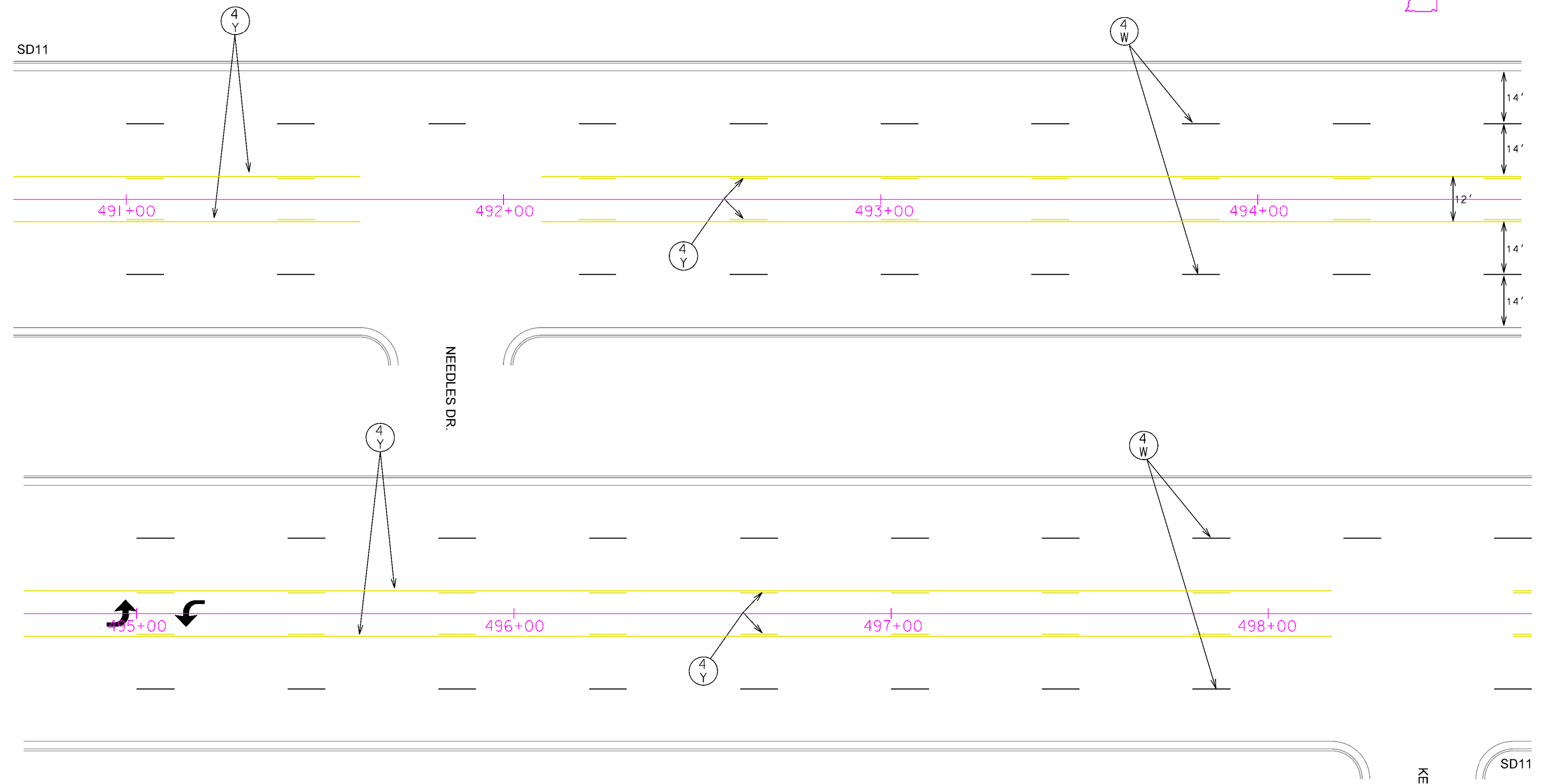
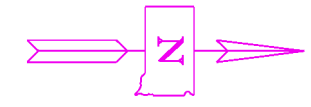
- KEY**
-  4" WHITE DURABLE PAVEMENT MARKING
 -  24" WHITE DURABLE PAVEMENT MARKING
 -  4" YELLOW DURABLE PAVEMENT MARKING
 -  DURABLE PAVEMENT MARKING ARROW

PLOTTED FROM - TRW111119




SD11

PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON



KEY

-  4" WHITE DURABLE PAVEMENT MARKING
-  4" YELLOW DURABLE PAVEMENT MARKING
-  DURABLE PAVEMENT MARKING ARROW

PLOT SCALE - 1:27,1765

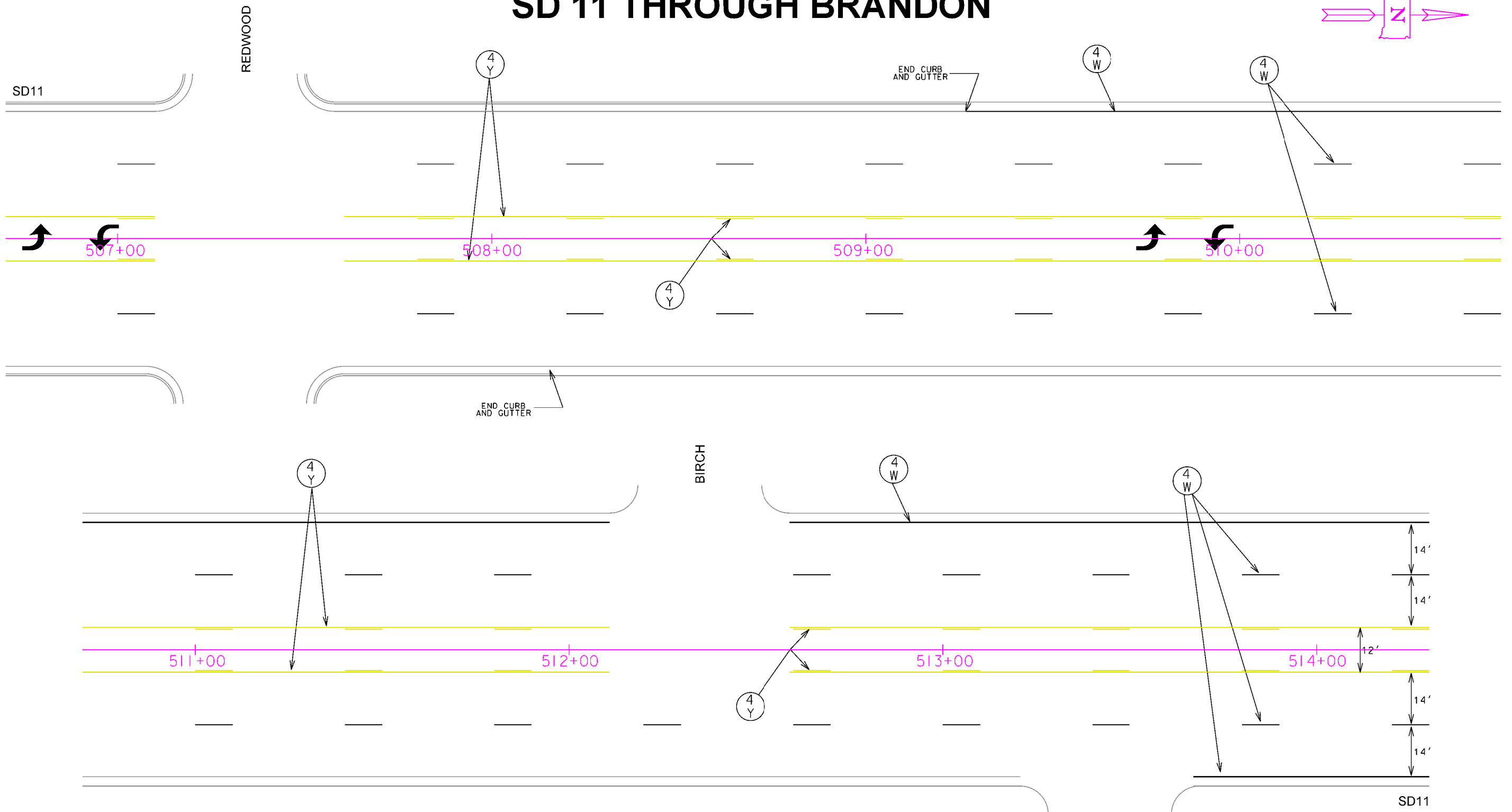
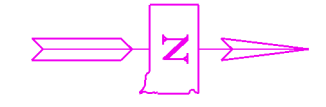
PLOTTED FROM - TRW11119




PLOT NAME -

FILE - ... \BRANDON\MARK01BH.DGN

PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON



- KEY**
-  4" WHITE DURABLE PAVEMENT MARKING
 -  4" YELLOW DURABLE PAVEMENT MARKING
 -  DURABLE PAVEMENT MARKING ARROW

PLOT SCALE - 1:27,1765

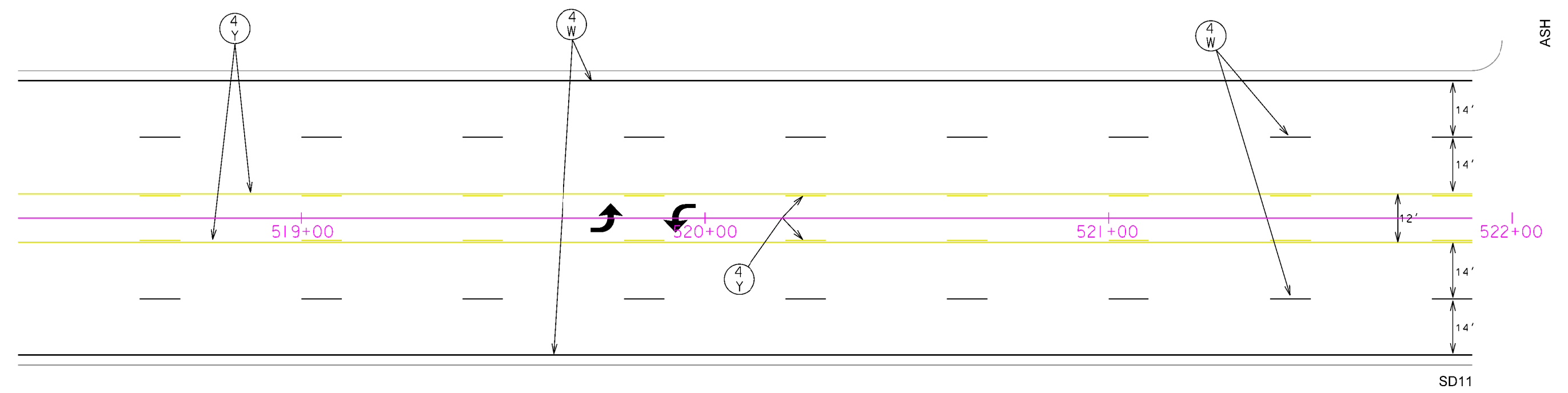
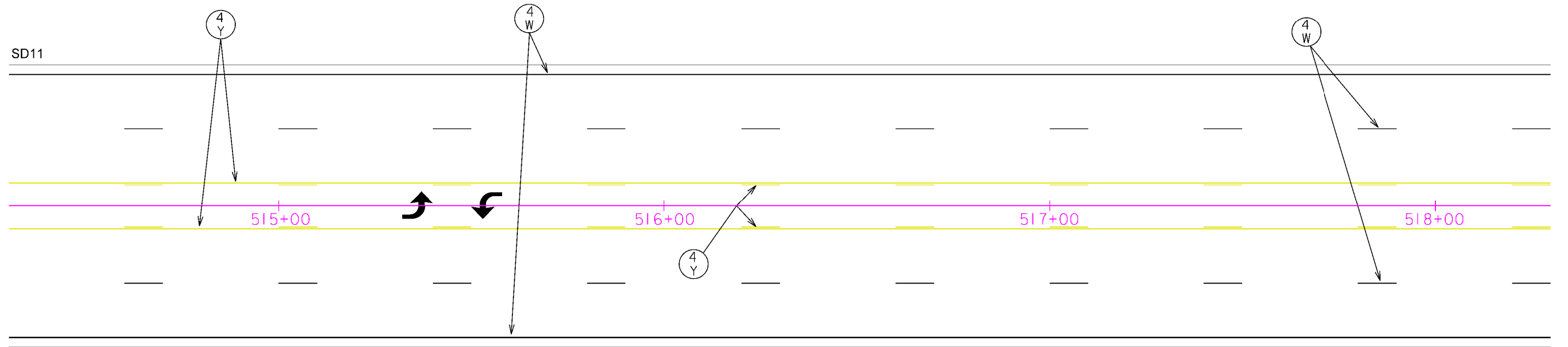
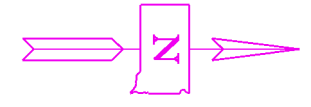
PLOTTED FROM - TRW11119

PLOT NAME -




FILE - ... \BRANDON\MARK01BH.DGN

PAVEMENT MARKING LAYOUT

SD 11 THROUGH BRANDON



KEY

-  4" WHITE DURABLE PAVEMENT MARKING
-  4" YELLOW DURABLE PAVEMENT MARKING
-  DURABLE PAVEMENT MARKING ARROW

PLOT SCALE - 1:27,1765

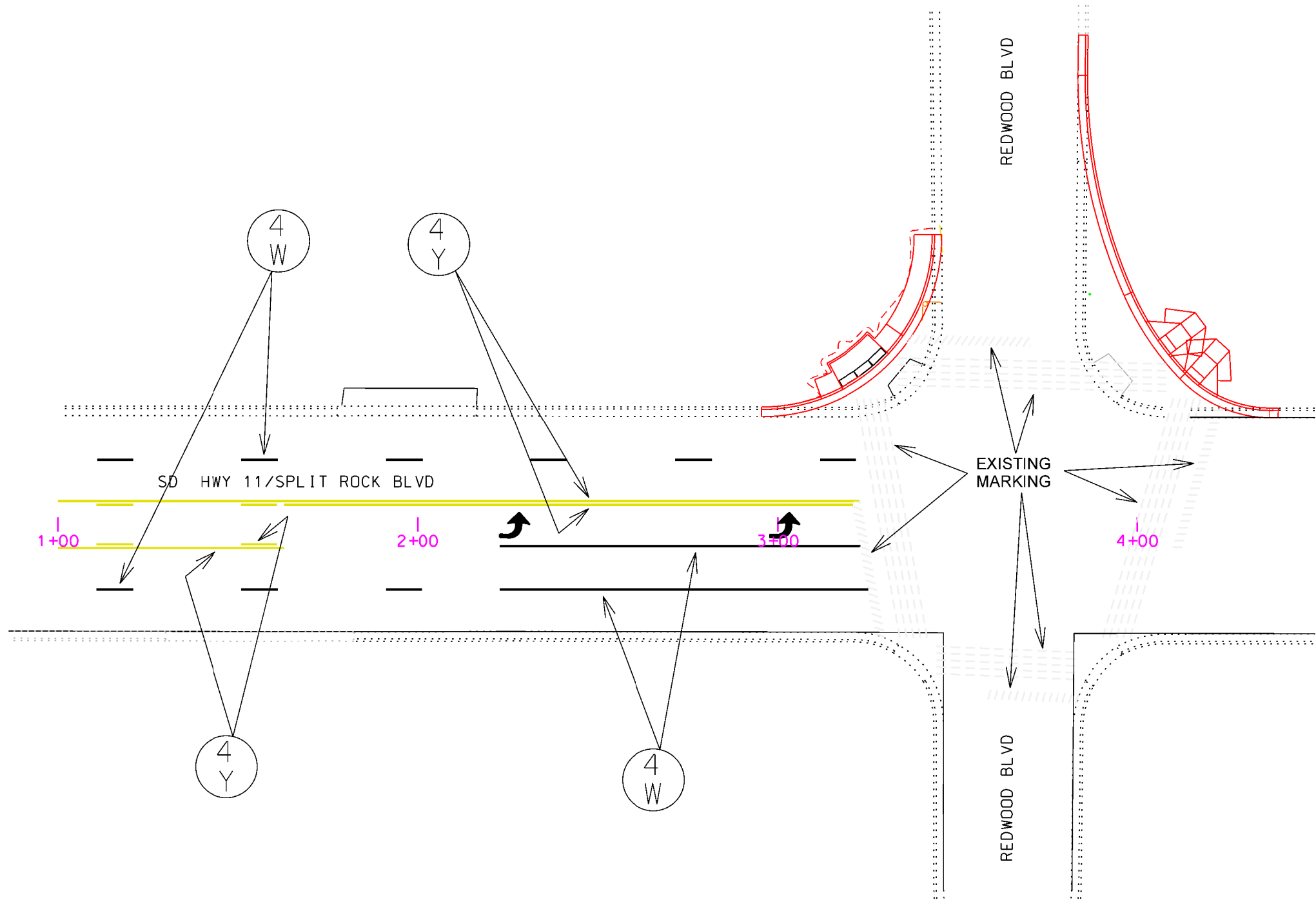
PLOT NAME - 1

FILE - ... \BRANDON\MARK01BH.DGN




PLOTTED FROM - TRW11119

DURABLE MARKINGS

SD HWY 11 & REDWOOD BLVD



KEY

-  4" WHITE DURABLE PAVEMENT MARKING
-  4" YELLOW DURABLE PAVEMENT MARKING
-  DURABLE PAVEMENT MARKING ARROW

PLOT SCALE - 1:10,4824

PLOT NAME - 1

FILE - ... \BRANDON\MARK01BH.DGN

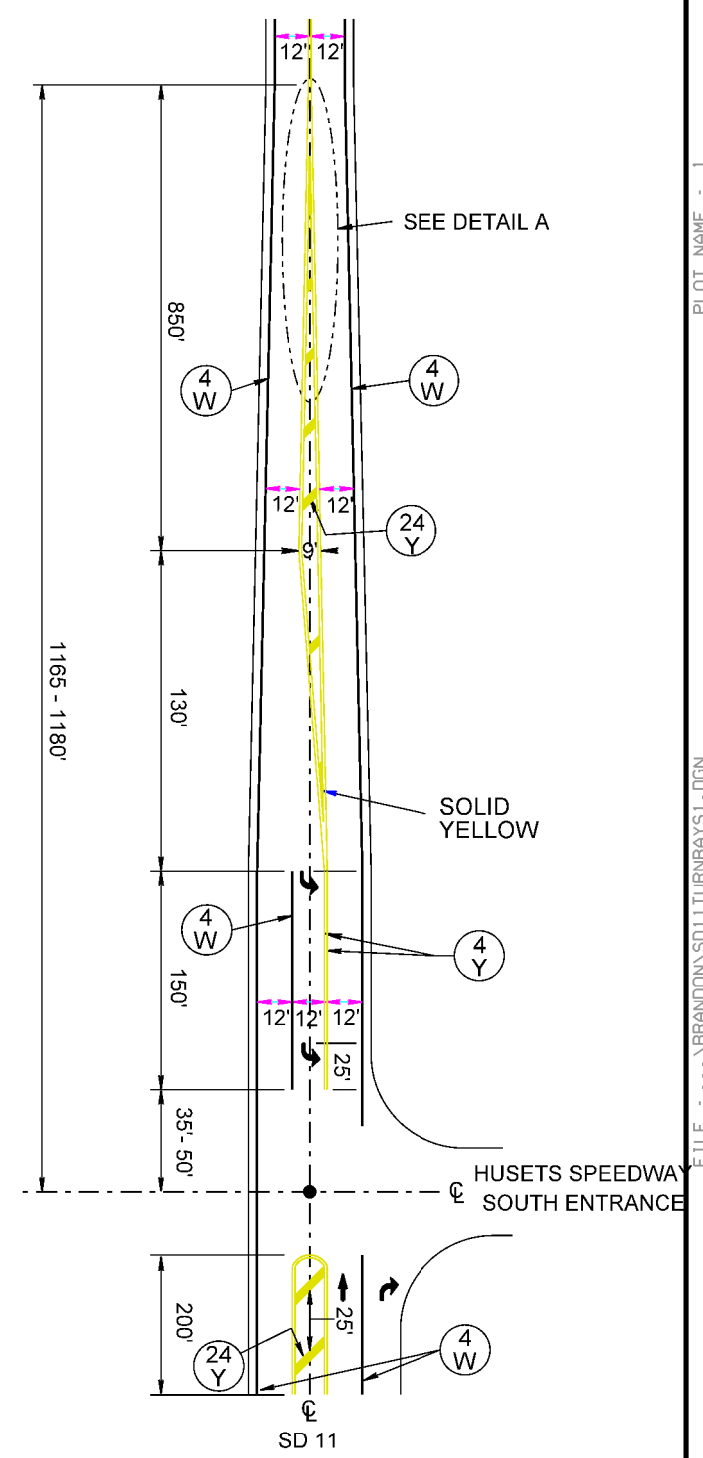
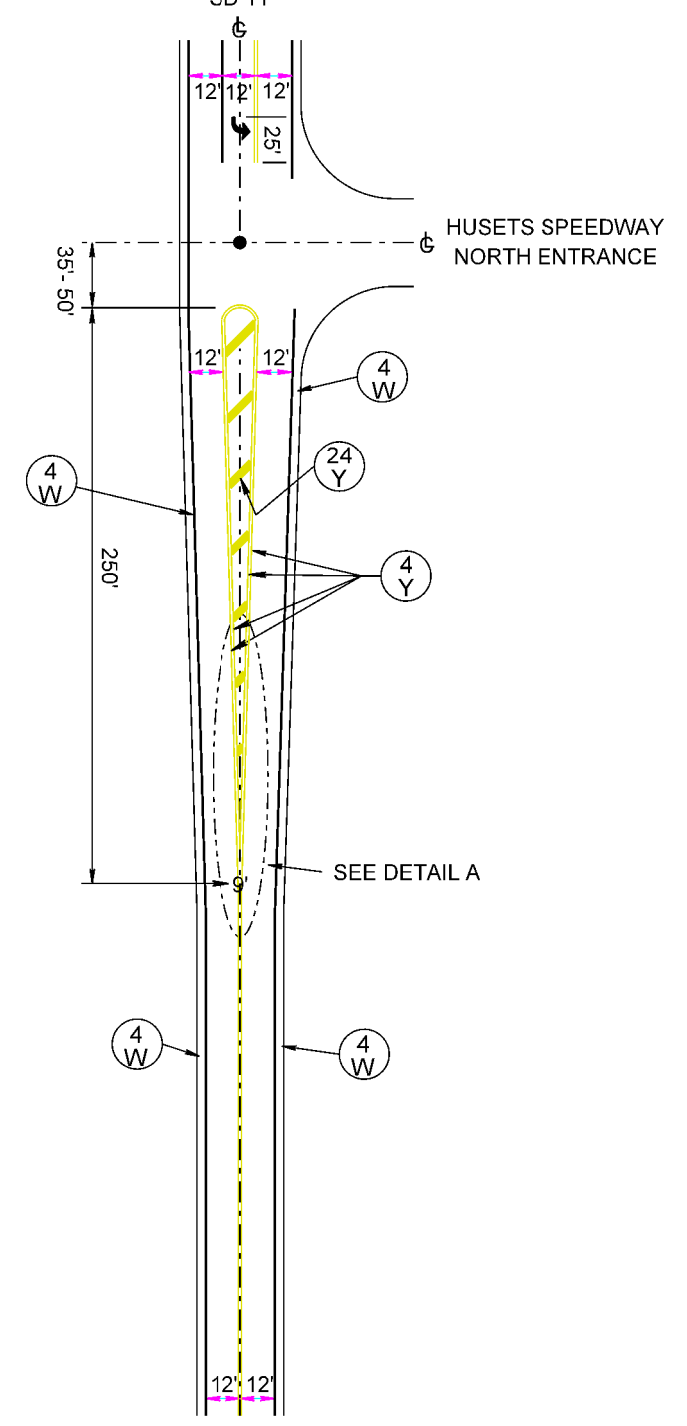
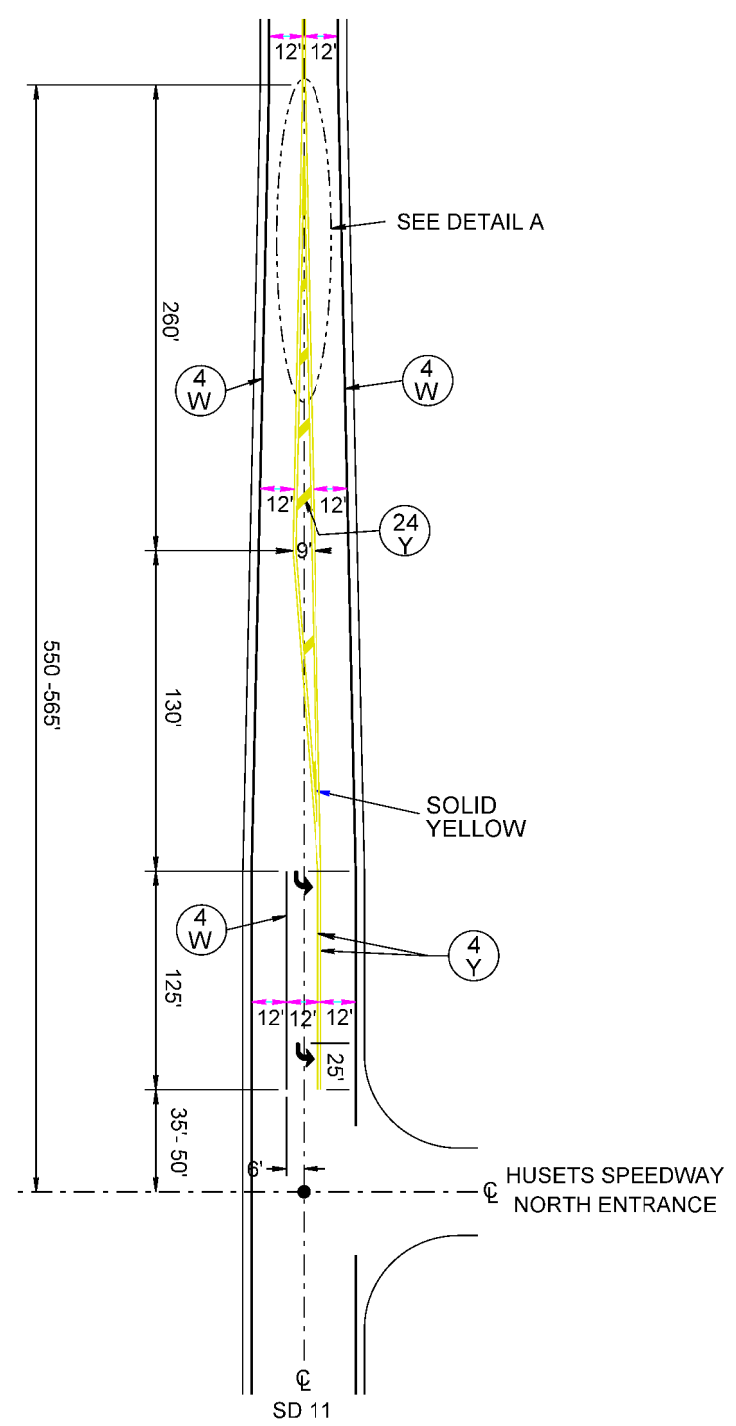
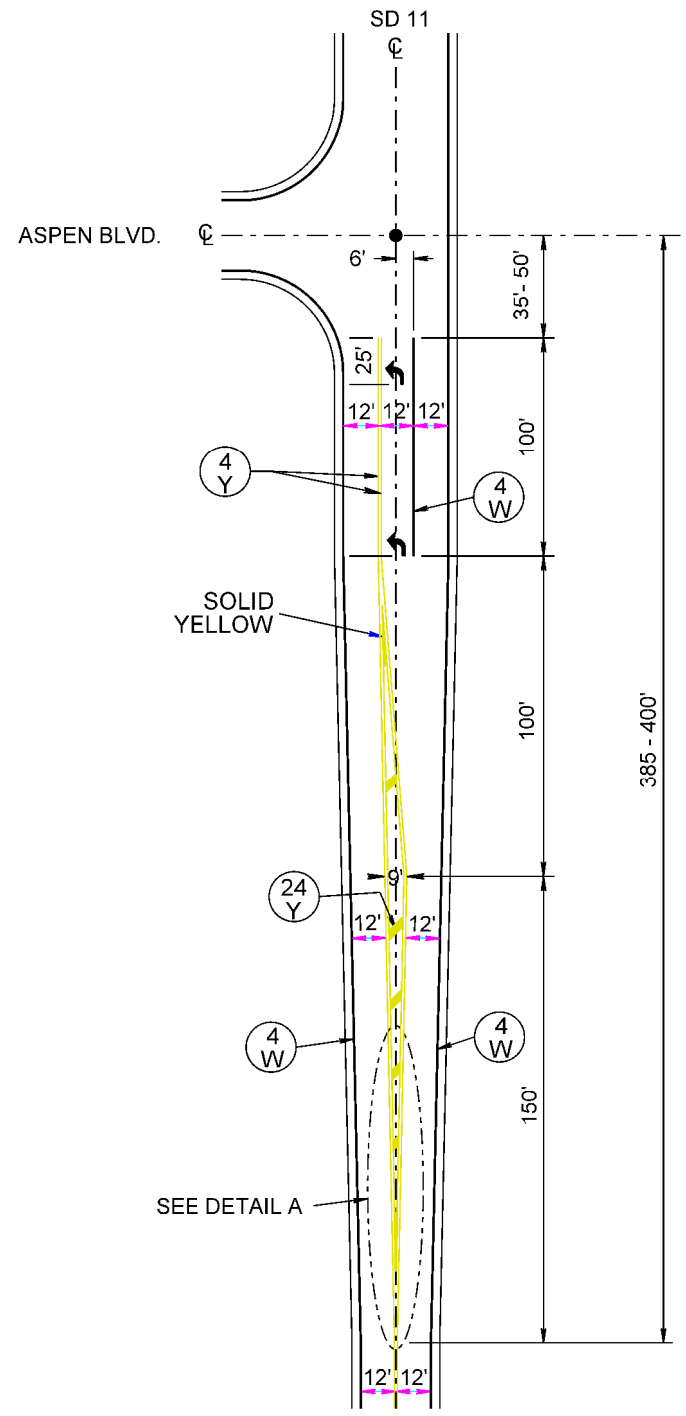
PLOTTED FROM - TRW11119

DURABLE PAVEMENT MARKING

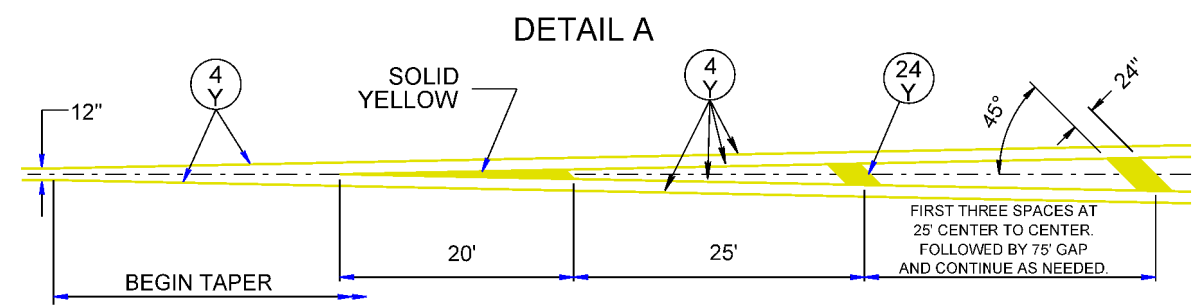
TURNBAY LAYOUTS-SD II

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)	34	42

Plotting Date: 03/10/2026



KEY	ITEM
(4 W)	4" White
(4 Y)	4" Yellow
(24 Y)	24" Yellow
↷	Arrow



PLOT SCALE - 1:43.6765

PLOTTED FROM - TRW11119

PLOT NAME -

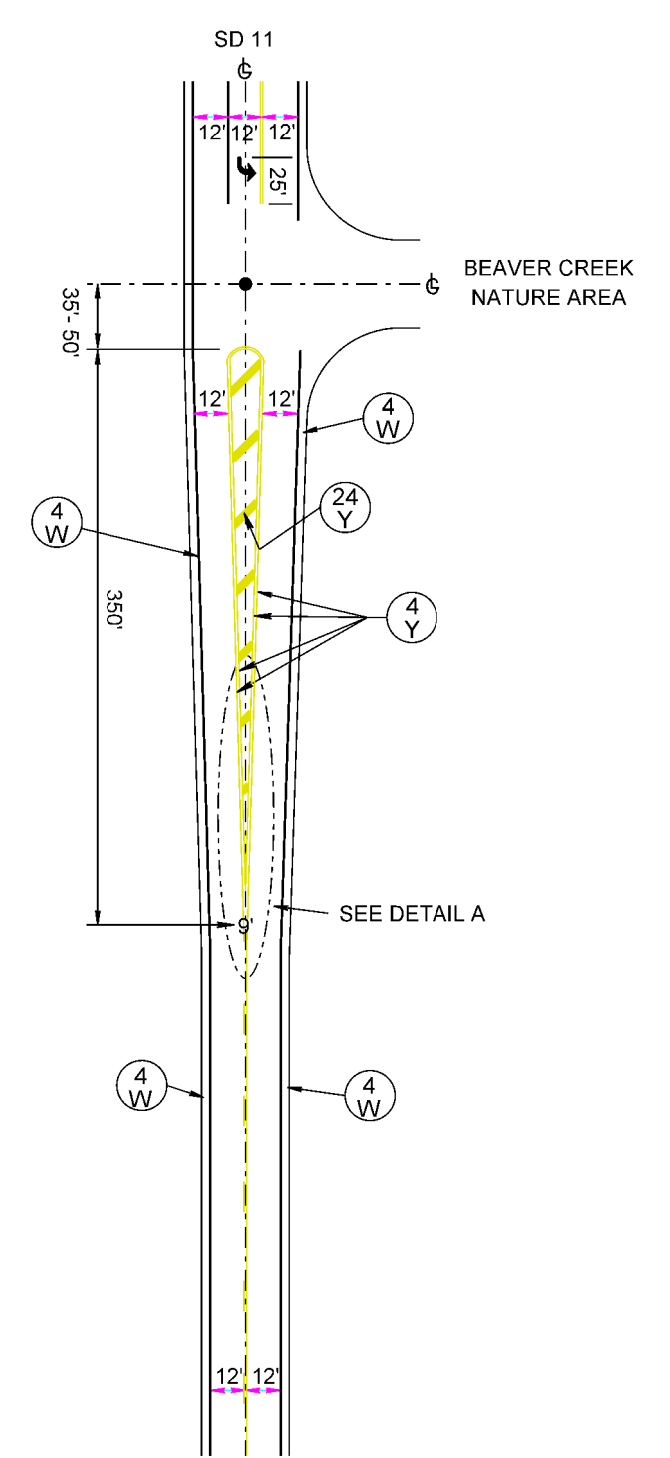
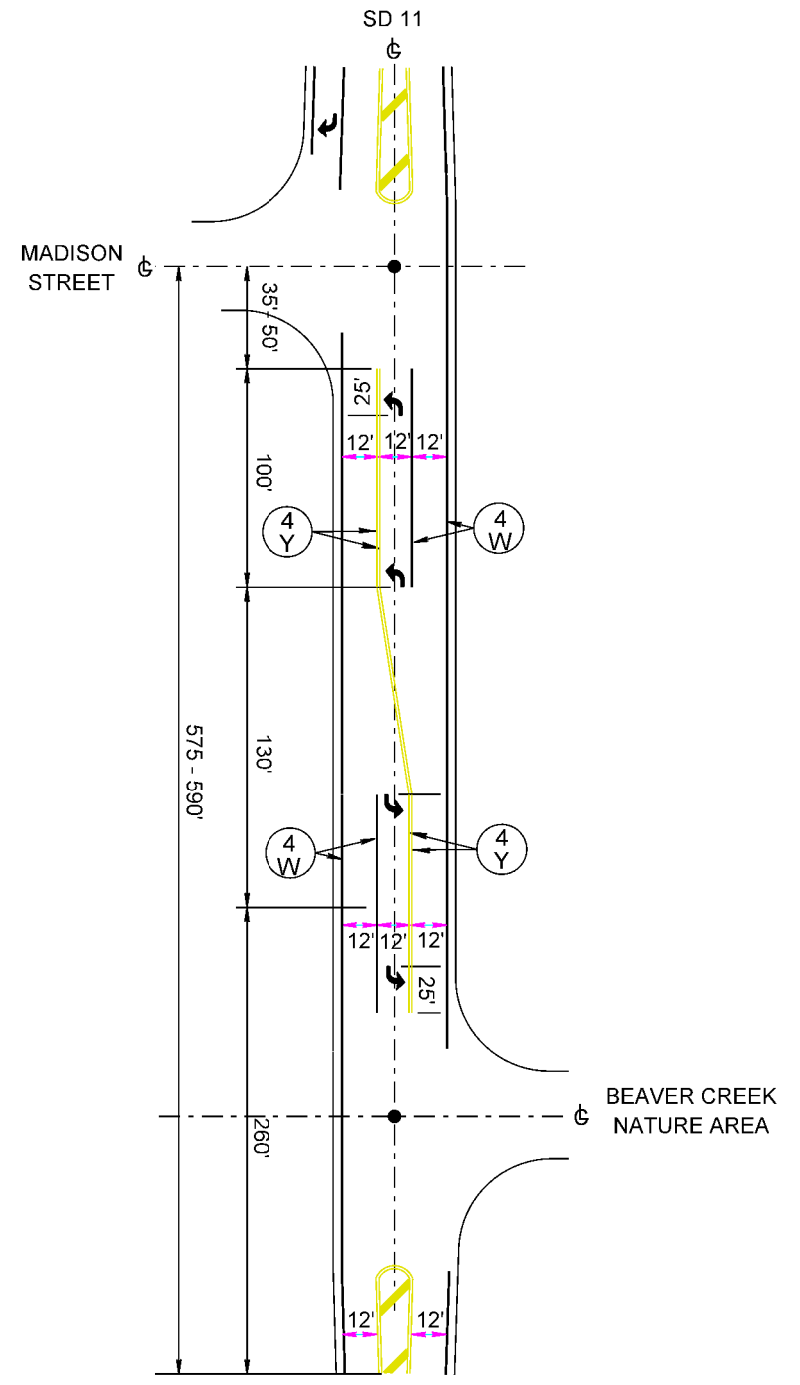
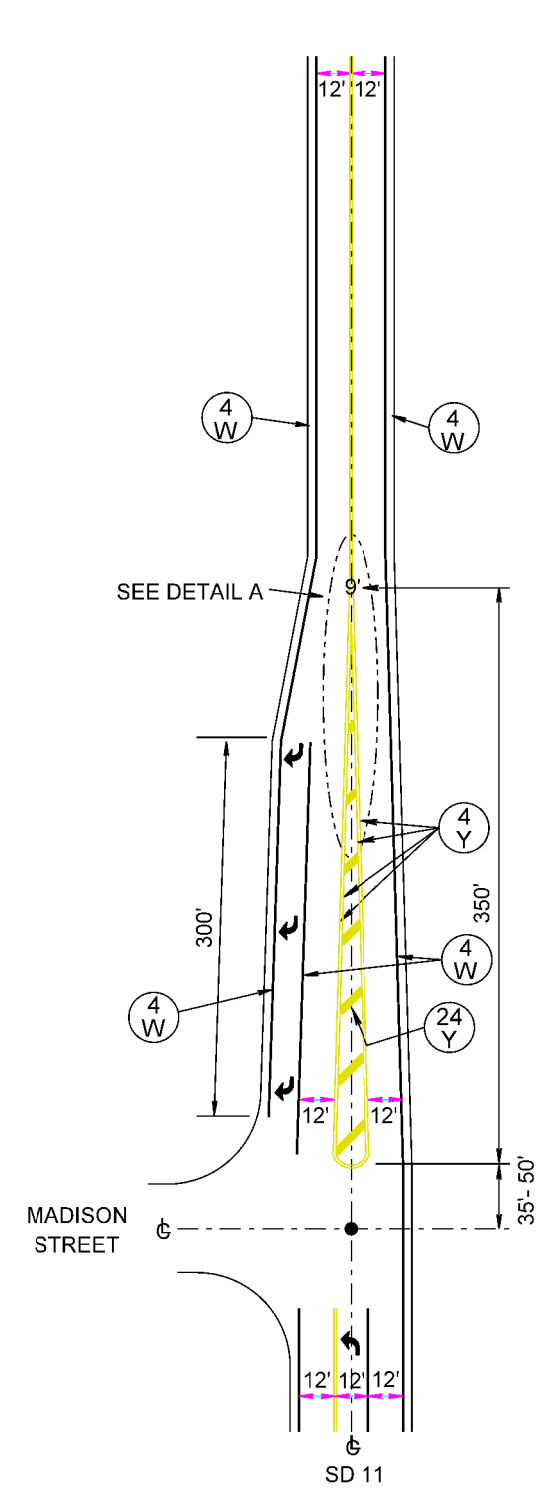
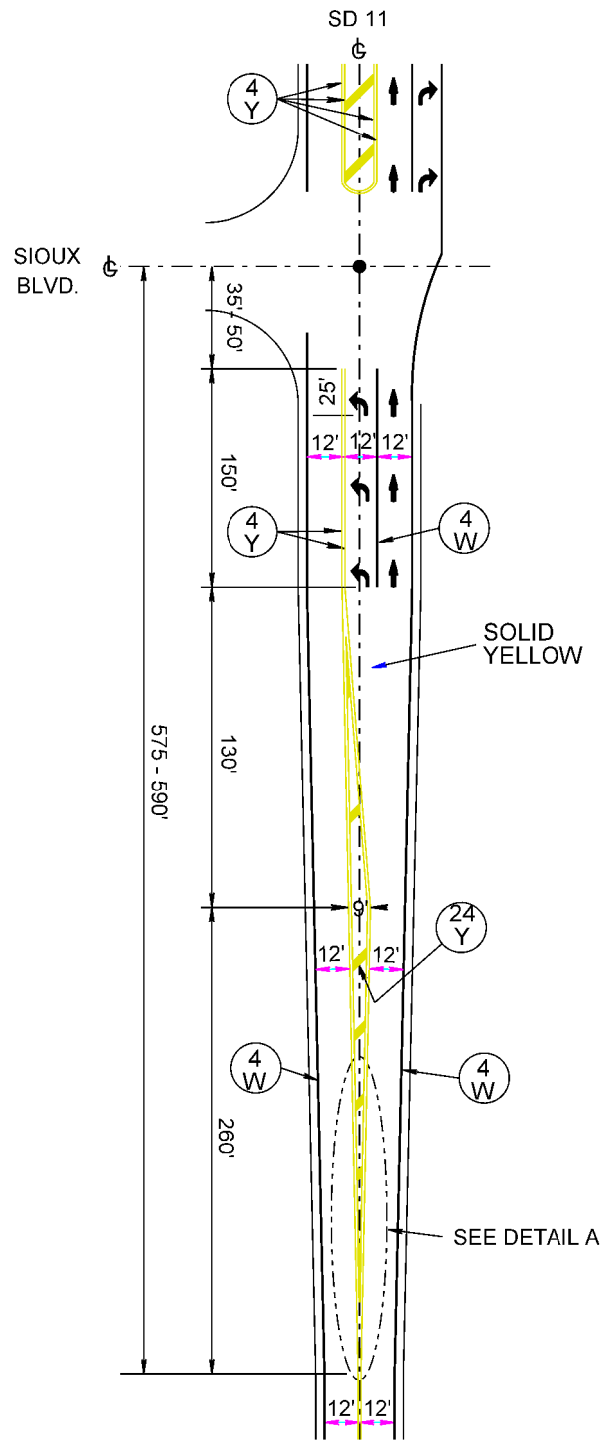
FILE - ... \BRANDON\SD11\TURNBAYS1.DGN

DURABLE PAVEMENT MARKING

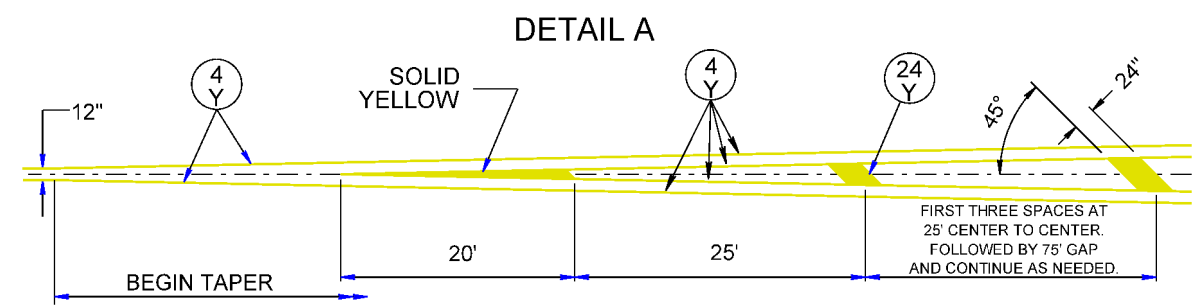
TURNBAY LAYOUTS-SD 11

STATE OF SOUTH DAKOTA	PROJECT PH 0020(230) PH 0020(233)	SHEET 35	TOTAL SHEETS 42
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Plotting Date: 03/10/2026



KEY	ITEM
(4 W)	4" White
(4 Y)	4" Yellow
(24 Y)	24" Yellow
↶	Arrow
↑	Arrow



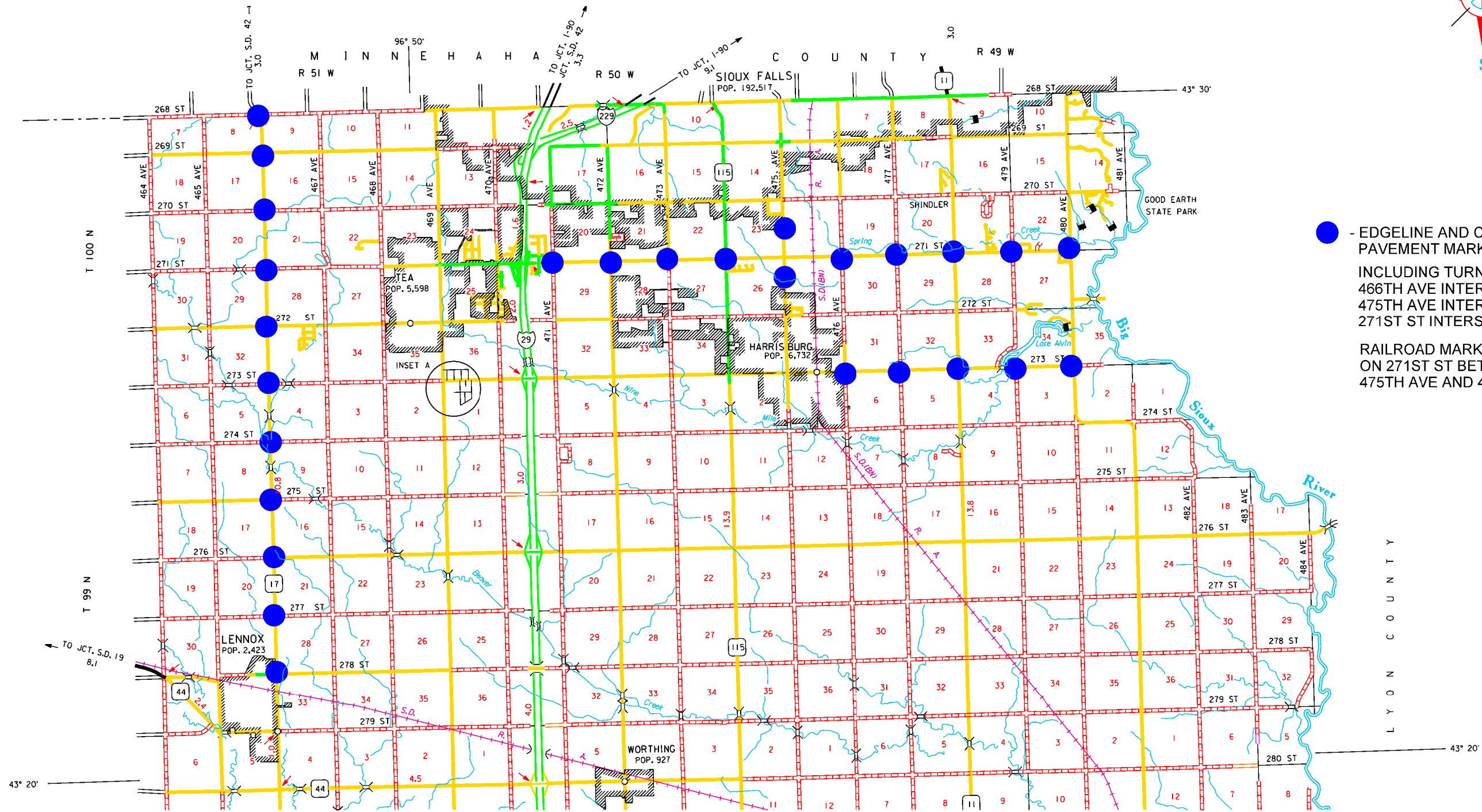
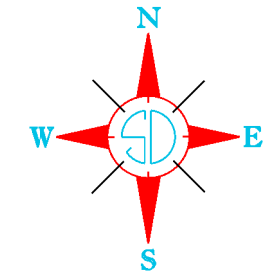
PLOT SCALE - 1:43.6765

PLOT NAME - ... \BRANDON\SD11TURNBAYS1.DGN

PERMANENT PAVEMENT MARKING LINCOLN COUNTY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0020(230) PH 0020(233)	36	42

Plotting Date: 02/04/2026



- - EDGELINE AND CENTERLINE PAVEMENT MARKING INCLUDING TURN LANES AT 466TH AVE INTERSECTION WITH 286TH ST 475TH AVE INTERSECTION WITH 271ST ST 271ST ST INTERSECTION WITH 475TH AVE
- - RAILROAD MARKINGS ON 271ST ST BETWEEN 475TH AVE AND 476TH AVE

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PAVEMENT MARKING

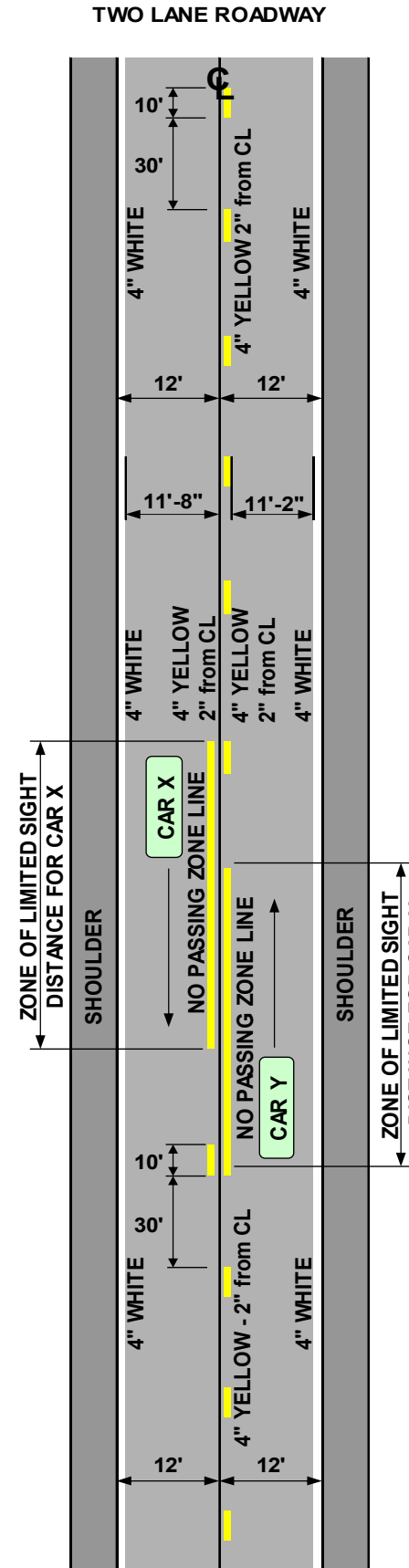
Typical pavement marking as shown on this sheet will be applied throughout the entire length of two lane roadway.

Traffic Control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights and advance warning arrow board.

Application rates will be as follows:

Two Lane Roadway (Rates for one line)	
Dashed Yellow Centerline	Rate = 7.6 Gals./Pass-Mile
Solid Yellow Centerline	Rate = 27.8 Gals./Pass-Mile
Solid White Edgeline	Rate = 27.8 Gals./Pass-Mile

4" Yellow Skip Centerline (when not adjacent to a 4" Yellow No Passing Zone) will be placed consistently to the south or east side of centerline.

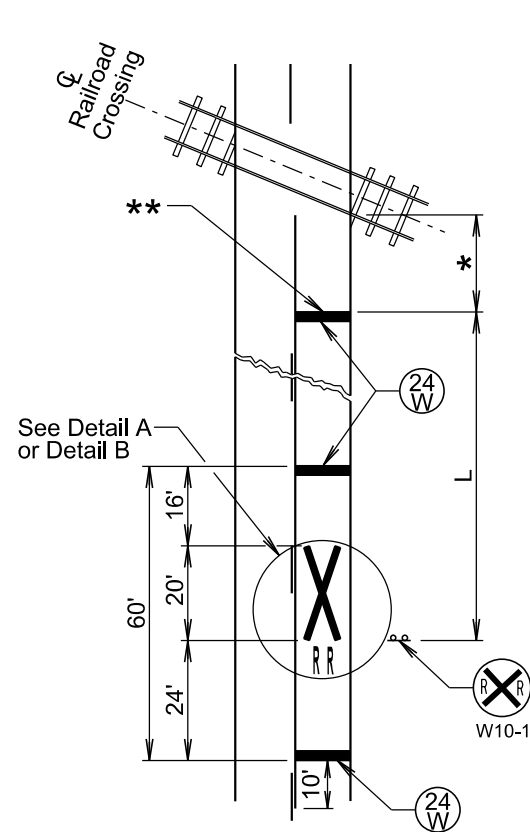


ESTIMATED QUANTITIES (BASED ON ONE APPLICATION)	
HIGH BUILD WITH REFLECTIVE ELEMENTS	QUANTITY
WHITE	1344 GALLONS
YELLOW	410 GALLONS

Included in the above quantities are:					
Additional White (1 Application)		Additional Yellow (1 Application)			
Description	Gallons	Description	Gallons		
4" Lines	475'	4	Transitions 7 Ea 5460'	36	
8" Lines	-	-	4" Skip Lines	-	
12" Gore Lines	-	-	8" Lines	-	
Crosswalks	-	-	12" Lines	-	
24" Stop Lines	-	-	24" Hatches	400'	26
24" Hatches	-	-	Solid Areas	-	-
Solid Areas	-	-	Additional Yellow: 62		
Arrows					
Left Arrows	19 Ea	15	Additional Quantities		
Right Arrows	2 Ea	2	Rates of Coverage: SqFt/Gal		
Straight Arrows	-	-	4", 8" & 12" Lines	50	
Combo Arrows	8 Ea	10	24" Lines & Hatches	30	
Lane Drop Arrows	-	-	Arrows, Messages and Solid Areas	20	
Messages					
STOP	-	-	All pavement marking dimensions are based on 12' driving lanes.		
STOP AHEAD	-	-			
R X R w/ Stop Lines	2 Ea	13			
SCHOOL X-ING	-	-			
Additional White: 44					

PAVEMENT MARKINGS AT RAILROAD CROSSING

Sheet 1 of 2



PLAN VIEW

KEY	ITEM
(24 W)	24" White
X	White

Posted Speed Limit (M.P.H.)	L (Ft.)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730

* Stop line will be no closer than 15' in advance of the nearest rail when no gate or flashing-light signal is present.

** Stop line will be approximately 8' in advance of gate or flashing-light signal (if present), whichever is furthest from the tracks, but no closer than 15' in advance of the nearest rail.

GENERAL NOTES:

The railroad crossing pavement markings will be placed symmetrically about the centerline of the railroad crossing. DETAIL A should be used unless the railroad crossing pavement markings are installed in existing grooves that match DETAIL B.

When pavement markings are used, a portion of the RXR symbol will be placed directly opposite of the advance warning sign W10-1.

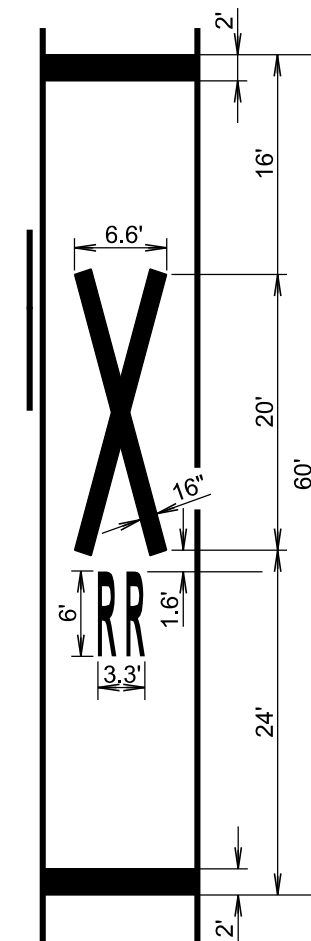
On multi-lane roads the transverse bands will extend across all approach lanes and individual RXR symbols will be placed in each approach lane.

The railroad crossing pavement markings will consist of all the transverse bands, stop lines, and RXR symbols.

All costs for furnishing and installing the markings, materials, labor, and necessary equipment for the railroad crossing markings will be paid for at the contract unit price per gallon or per each for the type of marking material specified in the plans.

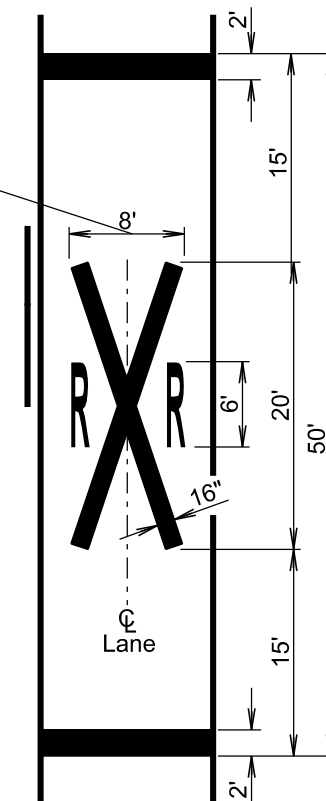
PAVEMENT MARKINGS AT RAILROAD CROSSING

Sheet 2 of 2



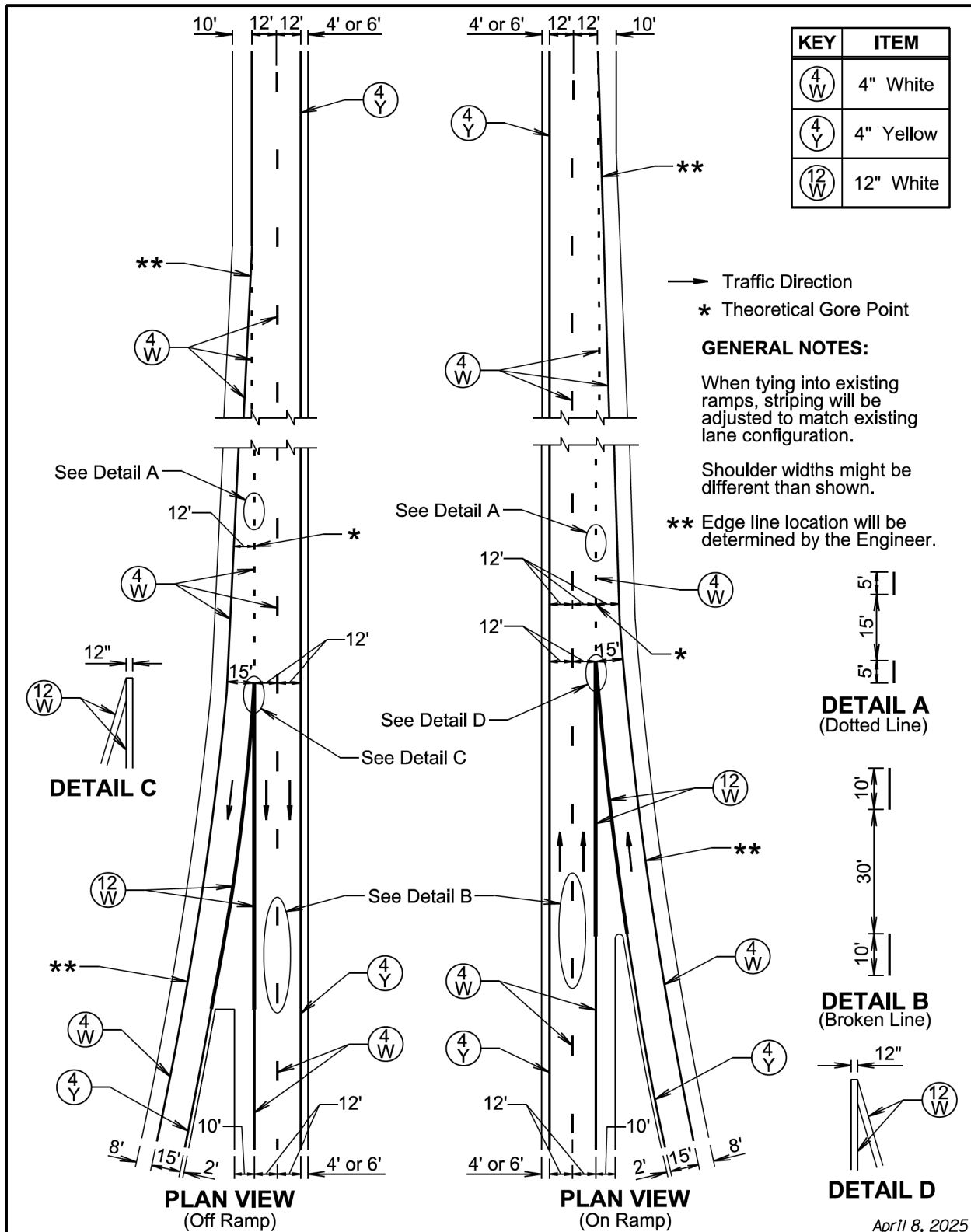
DETAIL A

Width may vary according to lane width.



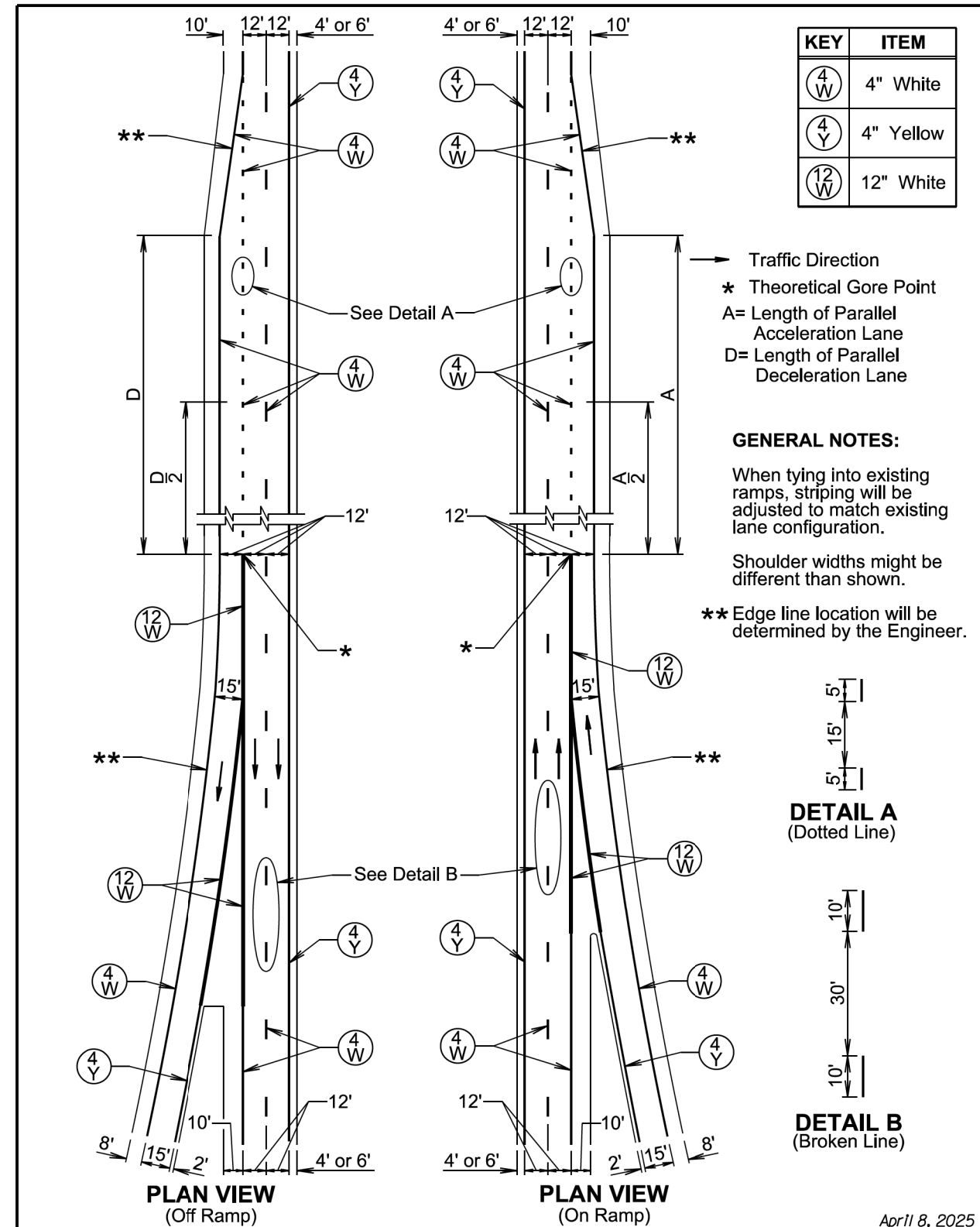
DETAIL B

PLOT SCALE - 1:199,992



Published Date: 2026	SDDOT	PAVEMENT MARKING LAYOUT FOR TAPERED INTERSTATE RAMPS	PLATE NUMBER 633.05
			Sheet 1 of 1

April 8, 2025



Published Date: 2026	SDDOT	PAVEMENT MARKING LAYOUT FOR PARALLEL INTERSTATE RAMPS	PLATE NUMBER 633.06
			Sheet 1 of 1

April 8, 2025

PLOTTED FROM - TRM111119

FILE - ... \REGION\IDE2026\STD PLATES.DGN PLOT NAME - 2

PLOT SCALE - 1:199,992

* Messages on signs will vary depending on the operation being conducted.

Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

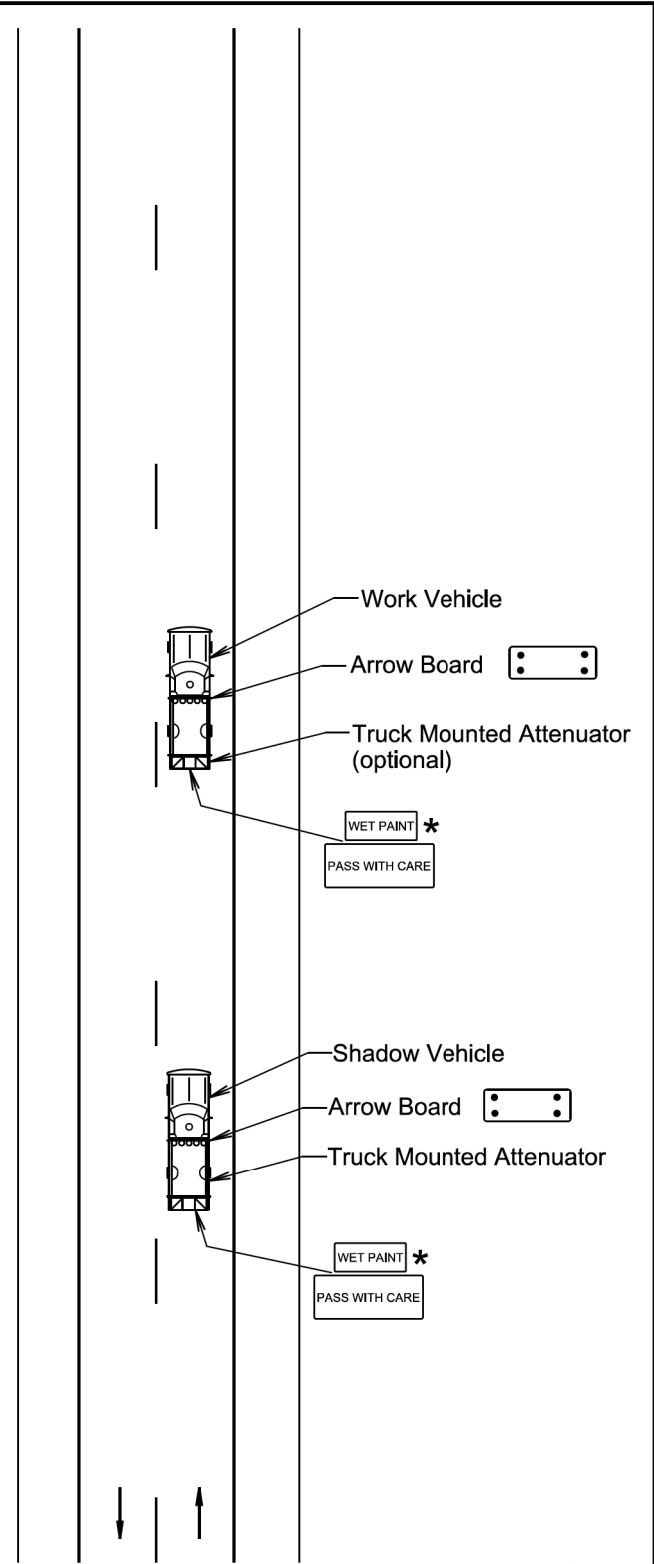
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

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

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

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

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2026	S D D O T	MOBILE OPERATIONS ON 2-LANE ROAD	PLATE NUMBER 634.06
			Sheet 1 of 1

* Messages on signs will vary depending on the operation being conducted.

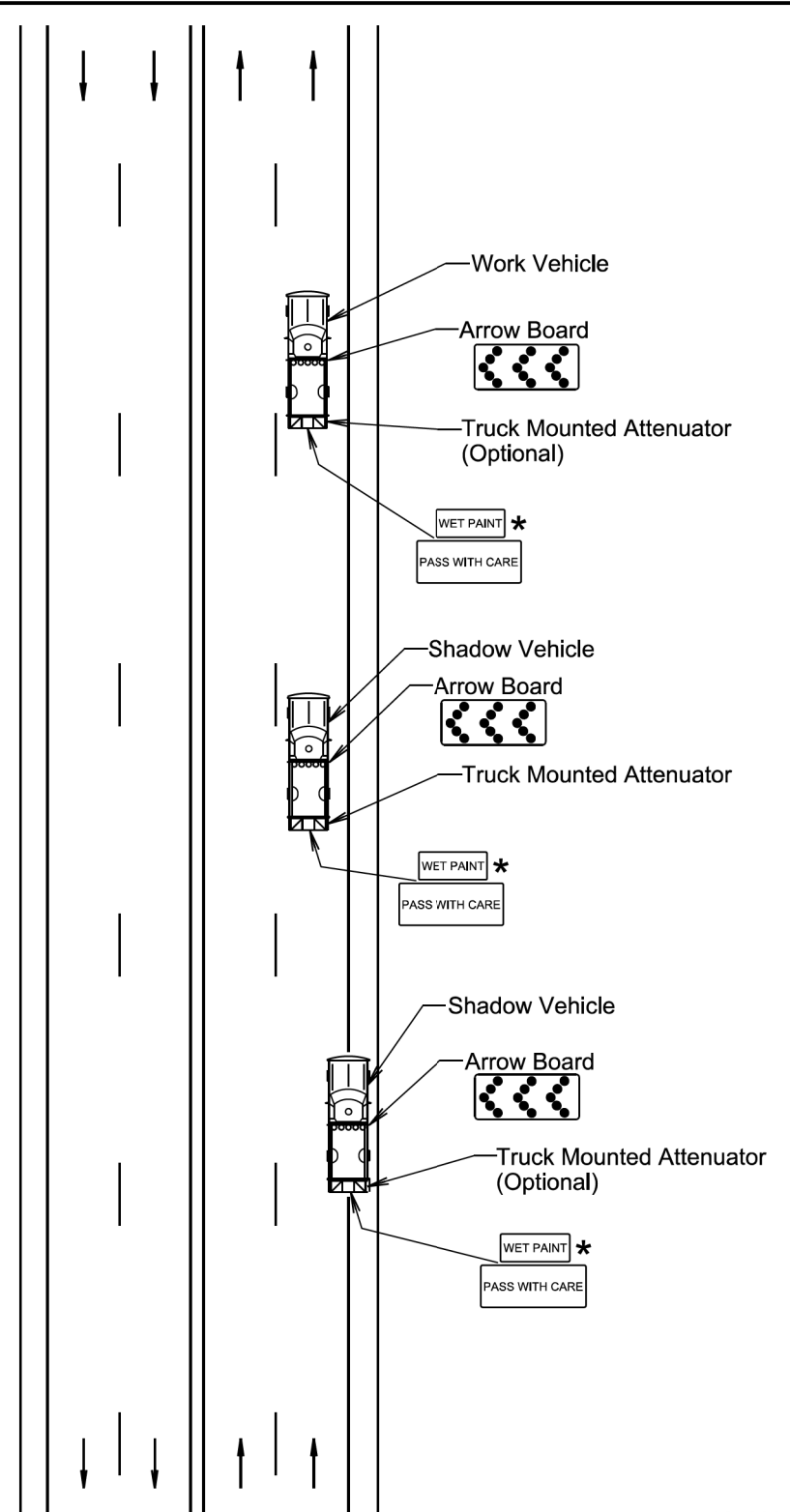
Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

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

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

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

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2026	S D D O T	MOBILE OPERATIONS ON MULTI-LANE HIGHWAYS	PLATE NUMBER 634.08
			Sheet 1 of 1

PLOTTED FROM - TRM111119

PLOT NAME - 3

FILE - ... \REGION\IDE2026\STD PLATES.DGN

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

- Flagger
- Channelizing Device

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

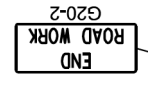
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

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

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

The channelizing devices will be drums or 42" cones.

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

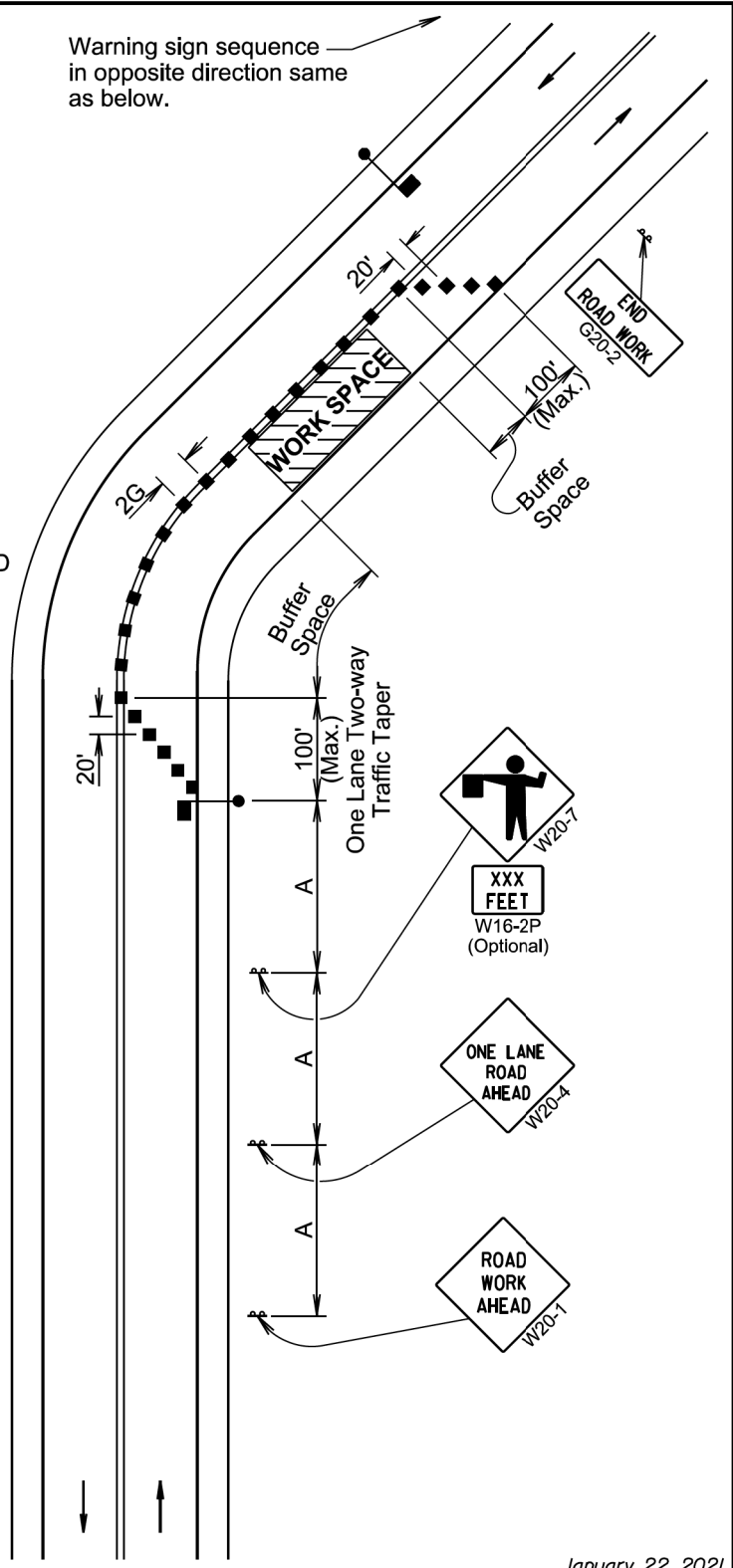


Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

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

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

Warning sign sequence in opposite direction same as below.



January 22, 2021

S D D O T	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
	Published Date: 2026	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	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

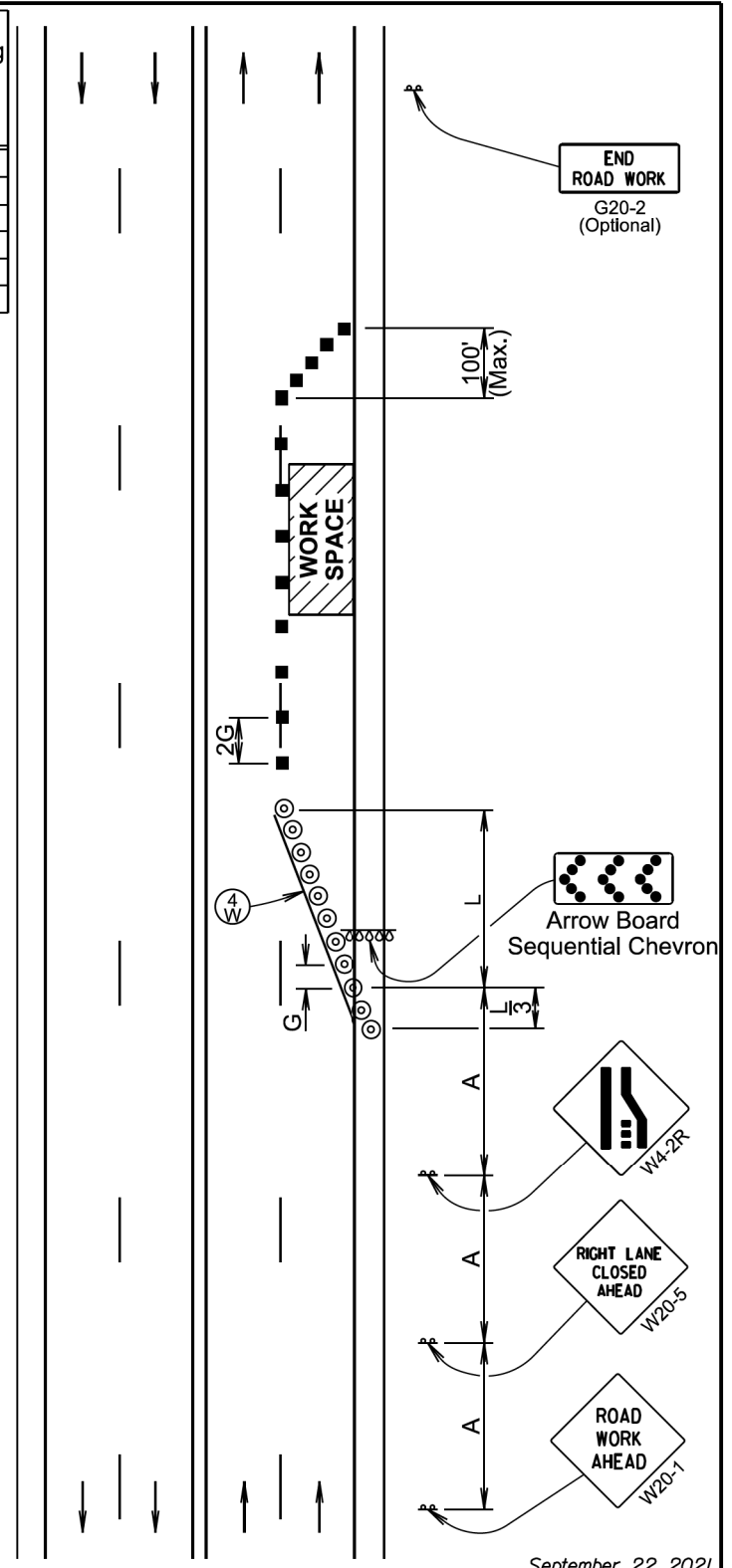
- ⊙ ReflectORIZED Drum
- Channelizing Device
- Ⓞ 4" White Temporary Pavement Marking

The channelizing devices will be 42" cones or drums.

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

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

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



September 22, 2021

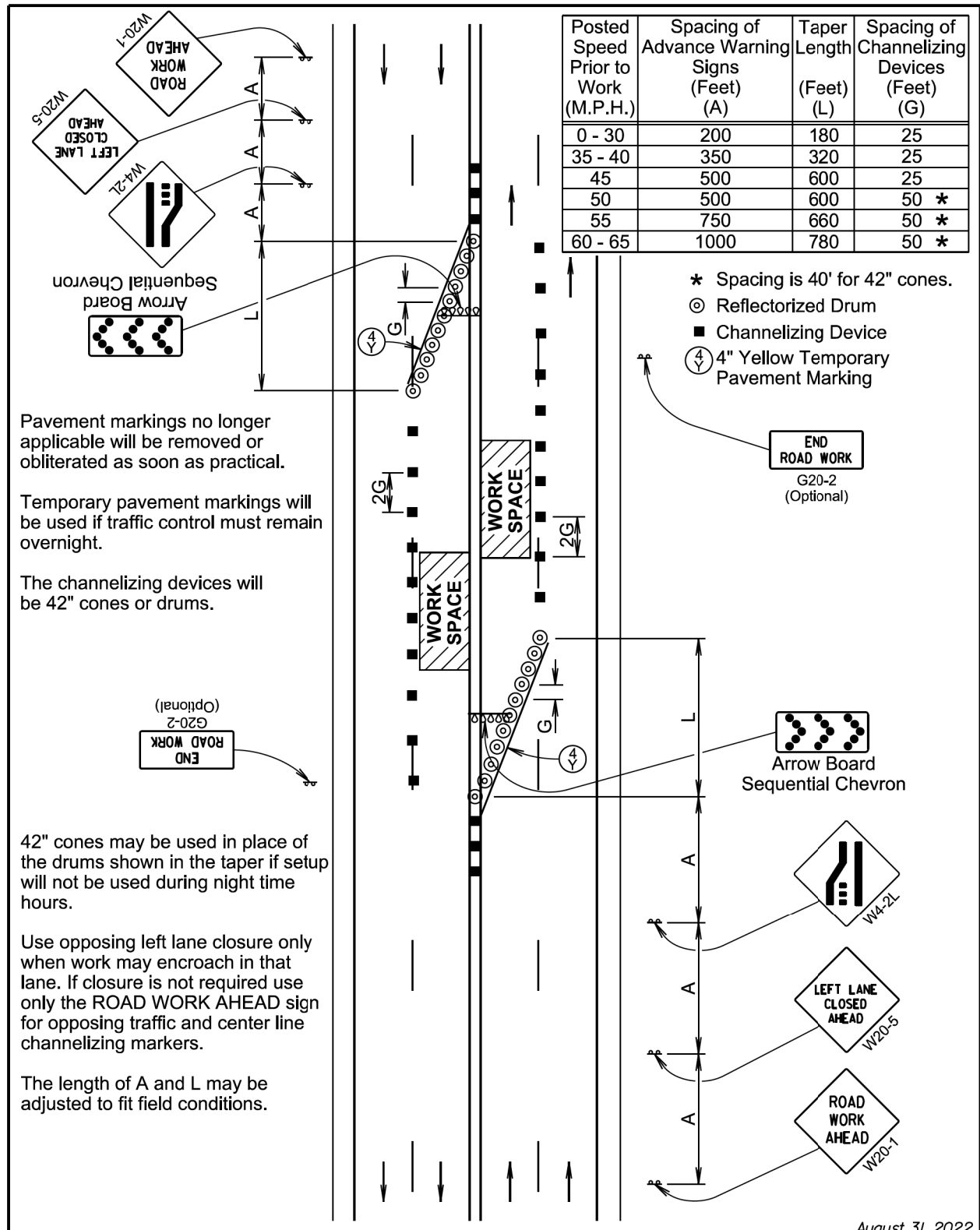
S D D O T	4-LANE UNDIVIDED, RIGHT LANE CLOSED	PLATE NUMBER 634.47
	Published Date: 2026	Sheet 1 of 1

Plotting Date: 03/10/2026

PLOT SCALE - 1:199,992

PLOT NAME - 5

FILE - ... \REGION\IDE2026\STD PLATES.DGN



Pavement markings no longer applicable will be removed or obliterated as soon as practical.

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

The channelizing devices will be 42" cones or drums.

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

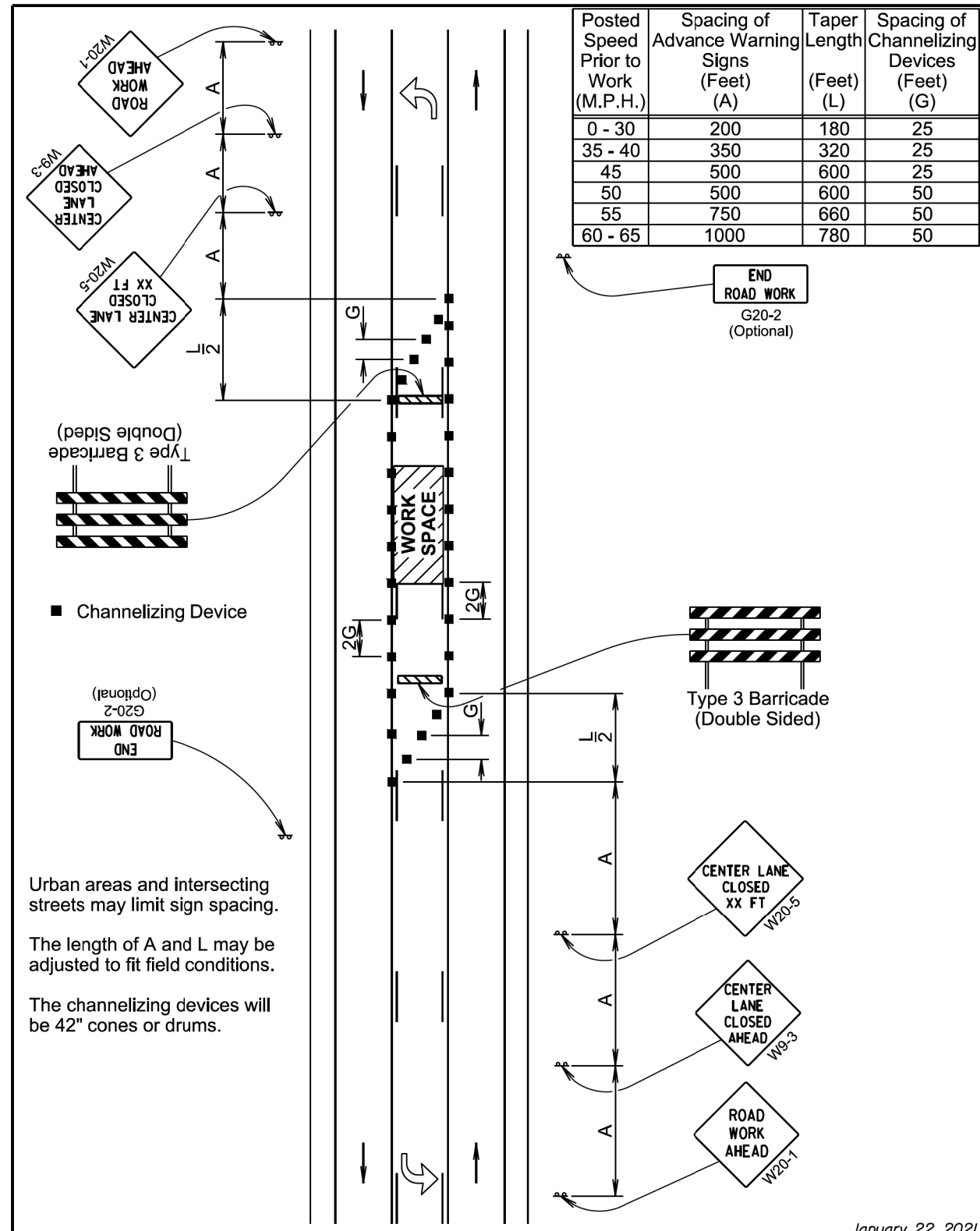
Use opposing left lane closure only when work may encroach in that lane. If closure is not required use only the ROAD WORK AHEAD sign for opposing traffic and center line channelizing markers.

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

S D D O T	4-LANE UNDIVIDED, LEFT LANE CLOSED	PLATE NUMBER 634.48
		Sheet 1 of 1

Published Date: 2026

August 31, 2022



Urban areas and intersecting streets may limit sign spacing.

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

The channelizing devices will be 42" cones or drums.

S D D O T	3-LANE, CENTER LANE CLOSED	PLATE NUMBER 634.52
		Sheet 1 of 1

Published Date: 2026

January 22, 2021