

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 000S(436)	1	39

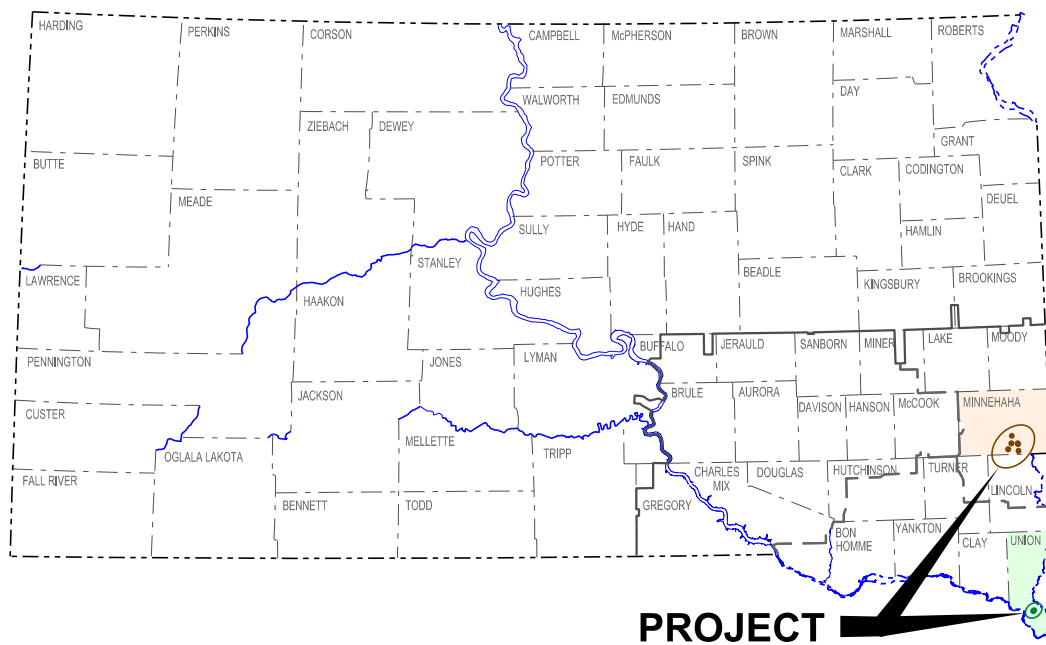
Plotting Date: 05/18/2026

PLANS FOR PROPOSED
PROJECT PH 000S(436)
**INTERSTATES 29, 90 &
VARIOUS CITY STREETS
IN SIOUX FALLS**
MINNEHAHA & UNION COUNTIES
HIGH FRICTION SURFACE TREATMENT (HFST),
PCC PAVEMENT REPAIR AND PAVEMENT MARKING
PCN 06U4

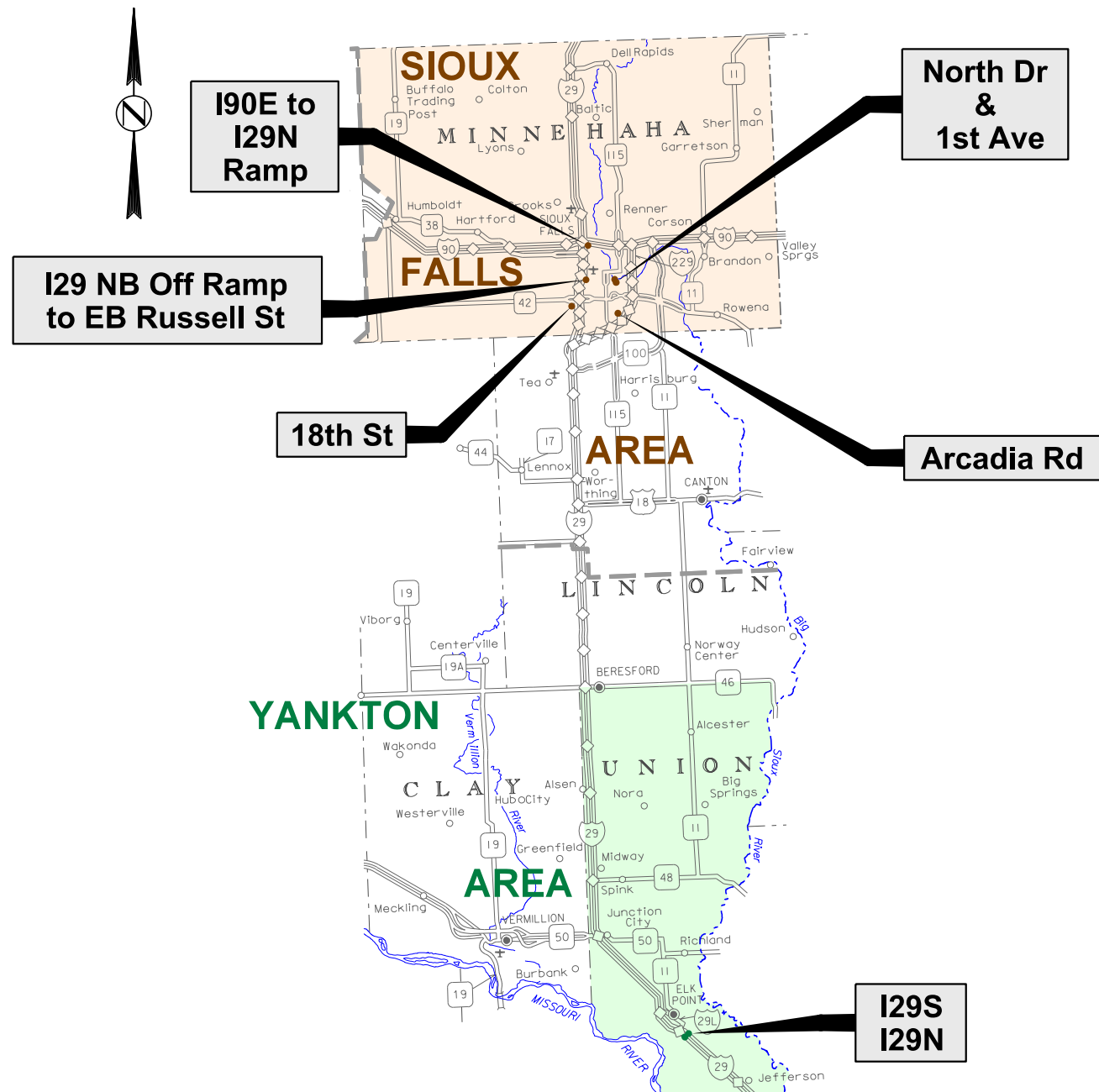
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PLOT SCALE - 1" = 7000'



PROJECT



STORM WATER PERMIT
(None required)

PLOTTED FROM - TRM111118

FILE - ... \PRJ2026\REG06U4\TTL06U4.DGN

**I90E TO I29N RAMP
MINNEHAHA COUNTY
LENGTH: 0.239 MILE**

**I29N OFF RAMP CURVE TO EB RUSSELL ST
MINNEHAHA COUNTY
LENGTH: 0.095 MILE**

**NORTH DR CURVE FROM
MAIN AVE TO RR BRIDGE
MINNEHAHA COUNTY
LENGTH: 0.049 MILE**

**1ST AVE CURVE TO PHILLIPS
AVE AT JCT RIVERSIDE AVE
MINNEHAHA COUNTY
LENGTH: 0.025 MILE**

DESIGN DESIGNATION		
ROUTE	I90E	Ramp
ADT(2024/2)	13,208	2,313
ADT(2044/2)	20,816	3,645
DHV	2,406	-
D	51%	99%
T DHV	6.2%	4.6%
T ADT	13.6%	10.0%
V	65 MPH	25 MPH

I90E TO I29N RAMP
Length: 1,264'

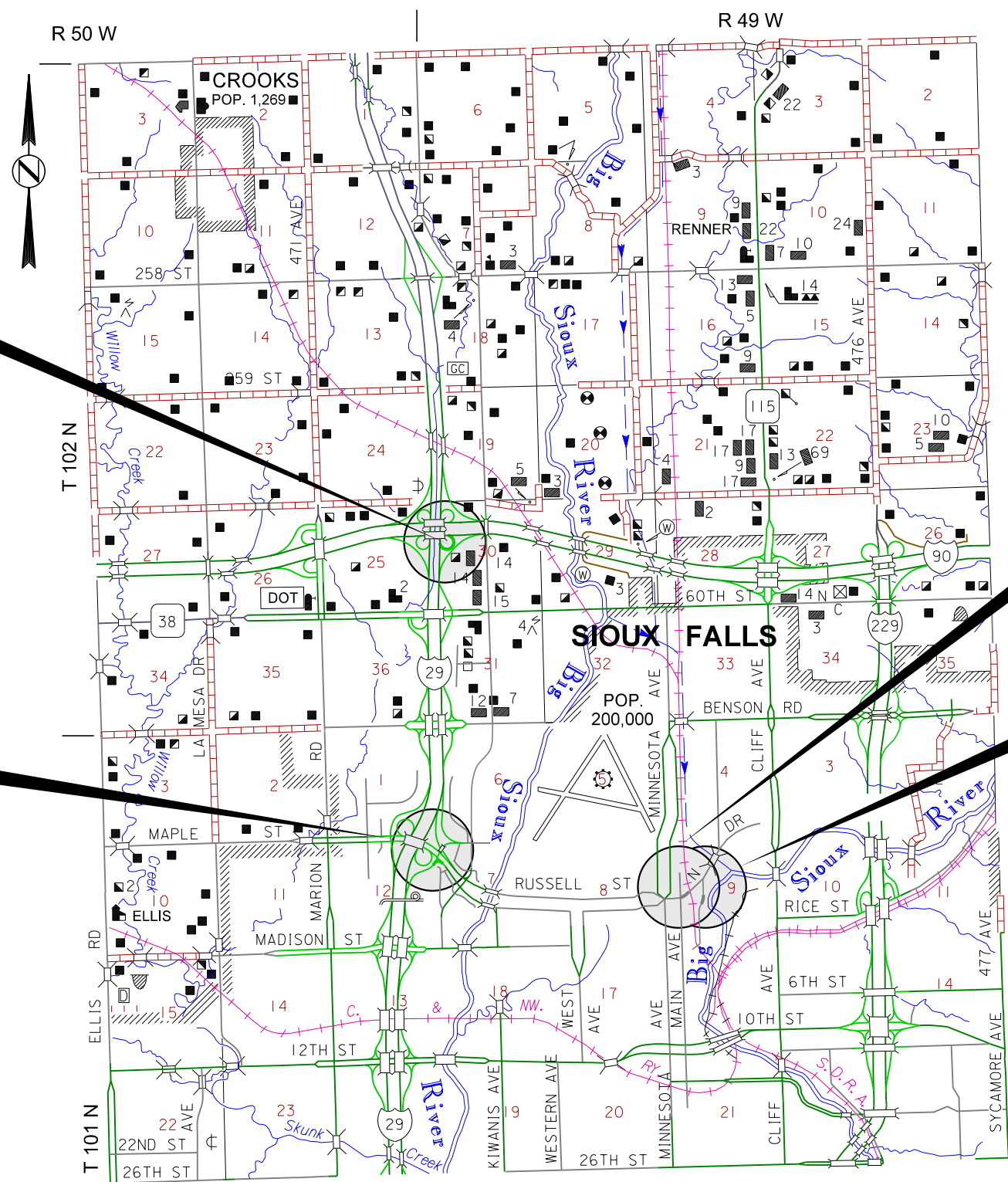
DESIGN DESIGNATION		
ROUTE	NB Off Ramp	EB Russell St
ADT(2022)	5,476	5,150
ADT(2042)	8,630	-
DHV	-	-
D	99%	100%
T DHV	4.6%	-
T ADT	10.0%	-
V	50 MPH	45 MPH

**I29 NB OFF RAMP CURVE
TO EB RUSSELL ST**
Length: 500'

DESIGN DESIGNATION	
ROUTE	North Dr
ADT(2024)	12,000
V	35 MPH

**NORTH DR CURVE FROM
MAIN AVE TO RR BRIDGE**
Length: 260'

**1ST AVE CURVE TO
PHILLIPS AVE AT
JCT RIVERSIDE AVE**
Length: 130'



PLOT SCALE - 1:7000

PLOTTED FROM - TRM111118

PLOT NAME - 2

FILE - ... \APR2026\REG0604\T110604.DGN

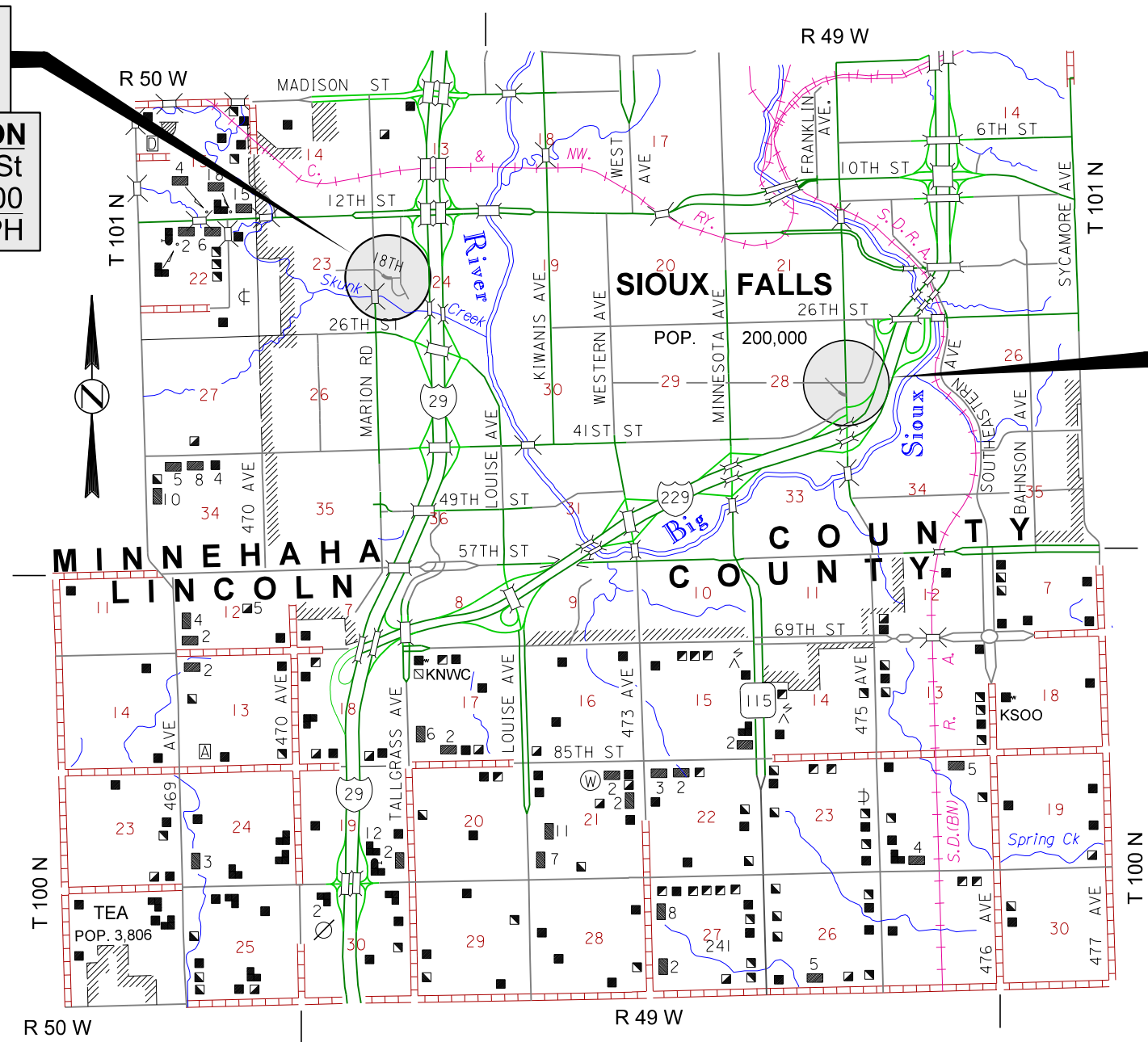
**18TH ST CURVE W OF EQUESTRIAN PL
MINNEHAHA COUNTY
LENGTH: 0.024 MILE**

**ARCADIA RD CURVE AT JCT CLIFF AVE
MINNEHAHA COUNTY
LENGTH: 0.030 MILE**

**18TH ST CURVE W
OF EQUESTRIAN PL**
Length: 126'

DESIGN DESIGNATION	
ROUTE	18th St
ADT(2024)	3,300
V	30 MPH

**ARCADIA RD CURVE
AT JCT CLIFF AVE**
Length: 160'



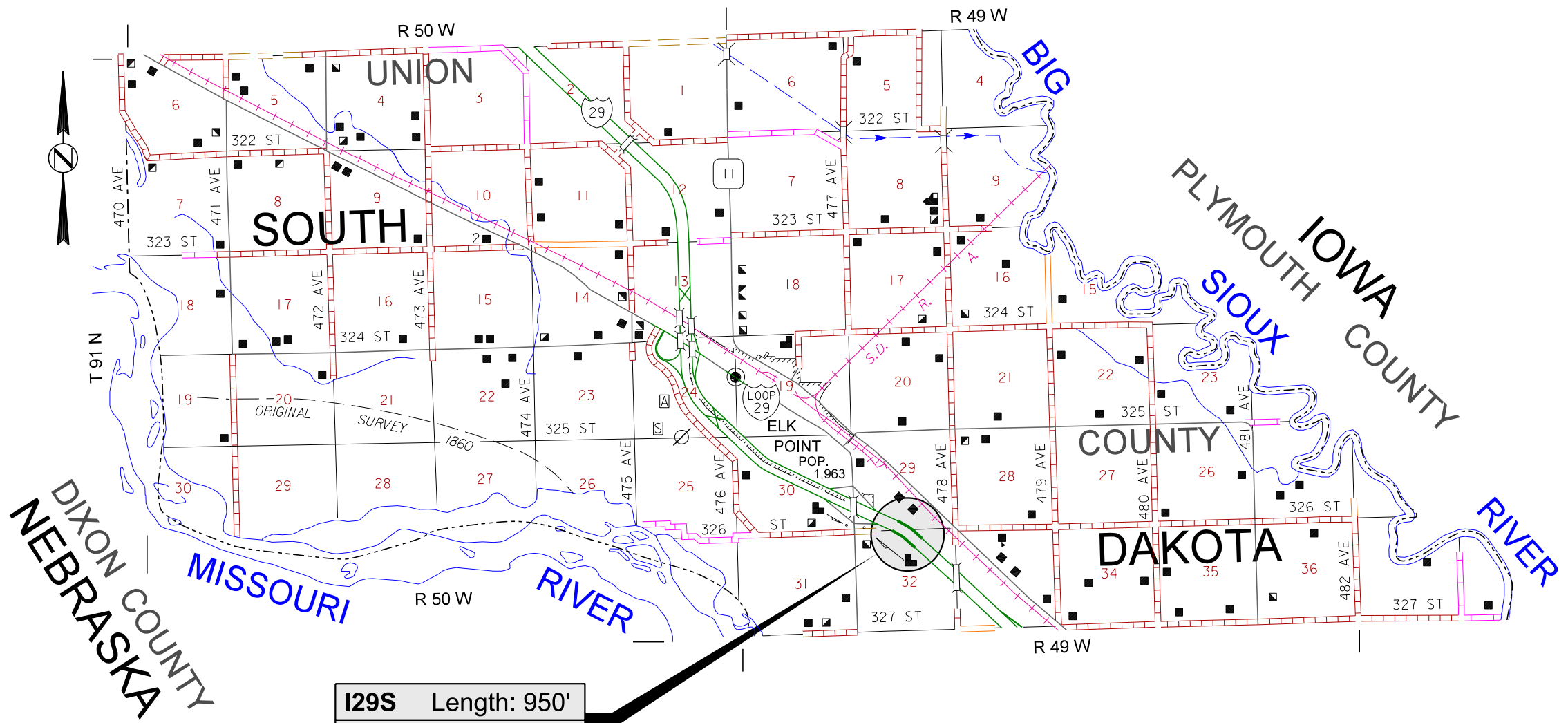
PLOT SCALE - 1"=7000'

PLOTTED FROM - TRM111118

PLOT NAME - 3

FILE - ... \PRJ2026\REG0604\T1110604.DGN

**I29S&N
UNION COUNTY
YANKTON AREA
I29S LENGTH: 0.180 MILE
I29N LENGTH: 0.180 MILE**



I29S	Length: 950'	
I29N	Length: 950'	
DESIGN DESIGNATION		
ROUTE	I29S	I29N
ADT(2024)	7,845	7,845
ADT(2044)	12,913	12,913
DHV	1,439	1,439
D	50%	50%
T DHV	16.2%	16.2%
T ADT	35.6%	35.6%
V	80 MPH	80 MPH

PLOT SCALE - 1:7000

PLOTTED FROM - TRM111118

FILE - ... \PRJ\2026\REC0604\T110604.dgn PLOT NAME - 4

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 000S(436)	5	39

Rev. 06/03/26 GAW

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
380E5030	Nonreinforced PCC Pavement Repair	50.0	SqYd
380E6000	Dowel Bar	90	Each
380E6110	Insert Steel Bar in PCC Pavement	145	Each
633E1000	Epoxy Pavement Marking Paint, White	1	Gal
633E1100	Epoxy Pavement Marking Paint, 4" White	4,322	Ft
633E1105	Epoxy Pavement Marking Paint, 4" Yellow	3,630	Ft
633E1110	Epoxy Pavement Marking Paint, 8" White	156	Ft
633E1120	Epoxy Pavement Marking Paint, 12" White	144	Ft
633E1130	Epoxy Pavement Marking Paint, 24" White	52	Ft
633E1145	Epoxy Pavement Marking Paint, Arrow	3	Each
634E0010	Flagging	800.0	Hour
634E0110	Traffic Control Signs	577.1	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	4	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0640	Temporary Pavement Marking	17,083	Ft
634E1002	Detour and Restriction Signing	426.6	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each
634E1255	Contractor Furnished Vehicle Speed Feedback Sign	2	Each
634E2000	Longitudinal Pedestrian Barricade	18	Ft
900E1250	High Friction Surface Treatment	10,172.0	SqYd
900E1256	Abrasive Blasting of PCC Pavement	8,686.0	SqYd
900E1258	Abrasive Blasting of AC Pavement	1,486.0	SqYd

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 C: WATER SOURCE

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://sdleastwanted.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.

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.

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	PH 000S(436)	7	39

SCOPE OF WORK

This project consists of placing a High Friction Surface Treatment (HFST) in locations shown in these plans.

PCC Pavement Repair will be required before the placement of HFST at I29N Exit 81 Off Ramp & Russell St. The repair locations will be marked by the Engineer.

EXISTING NRC PAVEMENT

I29N Exit 81 Off Ramp & Russell St. in Sioux Falls:

The existing pavement is 9.5" NRC Pavement.

Existing contraction joints are spaced at approximately 20'. Longitudinal joints are reinforced with No. 5 x 30" deformed tie bars spaced 48" center to center. Transverse joints are reinforced with 1 1/4" x 18" plain round dowel bars spaced 12" center to center.

The aggregate in the existing NRC Pavement is quartzite.

RESTORATION OF GRAVEL CUSHION

An inspection of the gravel cushion will be made after removing concrete from each pavement replacement area. Areas of excess moisture will be dried to the satisfaction of the Engineer. Loose material will be removed. Each replacement area will be leveled and compacted to the satisfaction of the Engineer.

Cost for this work will be incidental to the contract unit price per square yard for Nonreinforced PCC Pavement Repair.

GRAVEL CUSHION

If quarried ledge rock is used in the Gravel Cushion, a maximum blend of 40% quarried ledge rock will be allowed.

NONREINFORCED PCC PAVEMENT REPAIR - GENERAL

NRC Pavement Repair will be done prior to the High Friction Surface Treatment.

New pavement thickness will equal existing pavement thickness ($T_N = T$).

Locations and size (length or width) of concrete repair areas are subject to change in the field, at the discretion of the Engineer, at no additional cost to the state. Payment will be based on actual area replaced.

Existing concrete pavement will be sawed full depth at the beginning and end of the NRCP repair areas. When either the beginning or end of a NRCP repair area falls close to an existing joint or crack, the NRCP repair area will be extended to eliminate the existing joint or crack. Where possible, new working joints will be adjacent to existing working joints.

Saw cuts that extend beyond the repair area will be minimized and filled with a non-shrinkage mortar mix at the Contractor's expense.

Existing concrete pavement in the replacement areas will be removed by the lift out method or by means that minimize damage to the base and sides of remaining in place concrete. Removed material will be removed from within the right-of-way by the end of the workday. Damage to adjacent concrete caused by the Contractor's operations will be removed and replaced at the Contractor's expense.

If the pavement replacement area is entirely on either side of the existing contraction joint, the location of one of the working joints will be at the original location. Any existing dowel bar assemblies/steel bars will be sawed off and removed.

At full roadway width repairs and when specified, a working joint will be reconstructed at both ends of each pavement replacement area as shown in these plans.

Concrete placed adjacent to gravel and asphalt concrete shoulders will be formed full depth to match the width of existing concrete pavement.

At repair locations where the new working joint is not opposite the existing working joint, the Contractor will place a 1/4" preformed asphalt expansion joint material along the longitudinal joint from the existing working joint to the new working joint. The expansion joint material will meet the requirements of AASHTO M33. Cost for this material will be incidental to the contract unit price per square yard for Nonreinforced PCC Pavement Repair.

The initial contraction joint sawing will be performed as soon as practical after placement to avoid random cracking.

Joints (longitudinal and transverse) through and around the repair areas will be sawed and sealed in accordance with the details shown in these plans. Refer to Saw and Seal Joints notes.

NONREINFORCED PCC PAVEMENT REPAIR

Concrete will meet the requirements stated in Section 380 of the specifications, except as modified by the following notes:

The fine aggregate will be screened over a one-inch square-opening screen just prior to introduction into the concrete paving mix if required by the Engineer.

The slump requirement will be limited to 3" maximum after water reducer is added and the concrete will contain 4.5% to 7.0% entrained air. The concrete will contain a minimum of 50% coarse aggregate by weight. Coarse aggregate will be crushed ledge rock, Size No. 1 unless an alternative gradation is approved by the Concrete Engineer as part of the mix design submittal. The mix design will contain at least 650 lbs of Type I or II cement or 600 lbs of Type III cement per cubic yard. The minimum 28 day compressive strength will be 4,000 psi. The Contractor is responsible for the mix design used. The Contractor will submit a mix design and supporting documentation for approval at least 2 weeks prior to use.

The use of a water reducer at manufacturer's recommended dosage will be required.

Concrete will be cured with white pigmented curing compound (AASHTO M148, Type 2) applied as soon as practical at a rate of 125 square feet per gallon. Concrete will be cured for a minimum of 48 hours before opening to traffic. The 48 hours is based upon a concrete surface temperature of 60°F or higher throughout the cure period. If the concrete temperature falls below 60°F, the cure time will be extended, or other measures taken, at no additional cost to the State. A strength of 2,500 psi must be attained prior to opening to traffic.

Upon placement of the concrete, repair areas will be straight edged to ensure a smooth riding surface and will be textured longitudinally with the pavement by finishing with a stiff broom. Repair areas will then be checked with a 10' foot straight edge. The permissible longitudinal and transverse surface deviation will be 1/8" in 10'.

Concrete will be covered with suitable insulation blanket consisting of a layer of closed cell polystyrene foam protected by at least one layer of plastic. Insulation blanket will have an R-value of at least 0.5, as rated by the manufacturer. Insulation blanket will be left in place, except for joint sawing operations, until the 2,500 psi is attained. Insulation blanket will be overlapped on to the existing concrete by 4'. This requirement for covering repair areas with insulation blankets may be waived during periods of hot weather upon approval of the Engineer.

Cost for performing the aforementioned work including sawing and removing concrete, furnishing and placing concrete, sawing and sealing joints, repairing gravel and asphalt concrete shoulders, labor, tools and equipment will be included in the contract unit price per square yard for Nonreinforced PCC Pavement Repair.

STEEL BAR INSERTION (NRCP)

Steel bars will conform to Section 1010.

Locations and quantities of concrete repair are subject to change in the field at the discretion of the Engineer. The Contractor will be responsible for ordering the actual quantity of steel bars necessary to complete the work.

For existing pavement thickness greater than or equal to 10.5" (T >= 10.5"):

The Contractor will insert the steel bars (1½" x 18" epoxy coated plain round dowel bars and No. 11 x 18" epoxy coated deformed tie bars for transverse joints and No. 5 x 24" epoxy coated deformed tie bars for longitudinal joints) into drilled holes in the existing concrete pavement. An epoxy resin adhesive must be used to anchor the steel bar in the drilled hole as per Section 380.3 C.1.

For existing pavement thickness greater than or equal to 8.5" and less than 10.5" (T >= 8.5" and T < 10.5"):

The Contractor will insert the steel bars (1¼" x 18" epoxy coated plain round dowel bars and No. 9 x 18" epoxy coated deformed tie bars for transverse joints and No. 5 x 24" epoxy coated deformed tie bars for longitudinal joints) into drilled holes in the existing concrete pavement. An epoxy resin adhesive must be used to anchor the steel bar in the drilled hole as per Section 380.3 C.1.

For existing pavement thickness less than 8.5" (T < 8.5"):

The Contractor will insert the steel bars (1" x 18" epoxy coated plain round dowel bars and No. 8 x 18" epoxy coated deformed tie bars for transverse joints and No. 5 x 24" epoxy coated deformed tie bars for longitudinal joints) into drilled holes in the existing concrete pavement. An epoxy resin adhesive must be used to anchor the steel bar in the drilled hole as per Section 380.3 C.1.

Steel bars will be inserted in the transverse joint on 18" centers. The first steel bar in the transverse joint will be placed 9" from the edge of the slab closest to centerline. Steel bars will be inserted in the longitudinal joint on 30" centers and will be a minimum of 15" from either transverse joint. A typical one-lane patch 12' wide and 6' long will require 18 steel bars (8 in each transverse joint and 2 in the longitudinal joint). It will be necessary to laterally adjust the location of some of the inserted steel bars when the dimensions above interfere with existing steel bar locations.

A rigid frame or mechanical device will be required to guide the drill to ensure proper horizontal and vertical alignment of the steel bars in the drilled holes.

SAW AND SEAL JOINTS

Longitudinal and transverse joints at concrete repair areas will be sawed and sealed.

Joint sealing will conform to Section 380.3 P.

Longitudinal and transverse joints in urban sections will be sealed with Hot Poured Elastic Joint Sealer. Transverse joints in rural sections will be sealed with Low Modulus Silicone Sealant. Longitudinal joints in rural sections may be sealed with either Hot Poured Elastic Joint Sealer or Low Modulus Silicone Sealant.

Acceptance of the Low Modulus Silicone Sealant and Hot Poured Elastic Joint Sealer will be based on visual inspection by the Engineer.

Cost for sawing and sealing of the longitudinal construction joint and both transverse joints will be incidental to the contract unit price per square yard for Nonreinforced PCC Pavement Repair.

HIGH FRICTION SURFACE TREATMENT

High Friction Surface Treatment shall be provided in accordance with the Special Provision for High Friction Surface Treatment.

The limits of the High Friction Surface Treatment areas will be marked in the field by the Engineer.

High Friction Surface Treatment shall be applied at the following locations:

I90E/I29N Ramp	I90E MRM 396.55 +0.008 to I29N MRM 84.00 +0.182 Refer to High Friction Surface Treatment Detail
I29N	MRM 15.00 +0.117 to MRM 15.00 +0.297 Refer to High Friction Surface Treatment Detail
I29S	MRM 15.00 +0.115 to MRM 15.00 +0.295 Refer to High Friction Surface Treatment Detail
SIOUX FALLS	I29N Exit 81 Off Ramp & Russell St. Refer to High Friction Surface Treatment Detail North Dr. (East of Main Ave.) Refer to High Friction Surface Treatment Detail 1st Ave. & Phillips Ave. Refer to High Friction Surface Treatment Detail 18th St. (West of Equestrian Pl.) Refer to High Friction Surface Treatment Detail Arcadia Rd. (West of Cliff Ave.) Refer to High Friction Surface Treatment Detail

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work.

GENERAL TRAFFIC CONTROL

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.

Pedestrian traffic on the crossroad and ramps will be maintained for the duration of the project. The sidewalk on the south side of North Dr. and the east side of Main St. will be closed until milling and high friction surface treatment work are complete.

All temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

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.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans.

COORDINATION BETWEEN CONTRACTORS**I29N MRM 15.00 +0.117 to MRM 15.00 +0.297:**

In the northbound I29 lanes, PCC Pavement Repair will be required before the placement of High Friction Surface Treatment. The Pavement Repair (PCN I83P) has been awarded by another Contractor (BX CIVIL & CONSTRUCTION, INC.). Coordinate with the SDDOT Yankton Area Office on timing of the PCC Pavement Repair and the High Friction Surface Treatment.

North Dr. (East of Main Ave.) in Sioux Falls:

On North Dr., PCC Pavement Repair will be required before the placement of High Friction Surface Treatment. The Pavement Repair will be completed by another Contractor. Coordinate with the City of Sioux Falls Public Works Department on timing of the PCC Pavement Repair and the High Friction Surface Treatment.

I29N MRM 80.86+0.413 to MRM 81.37

In the northbound I29 lanes, PCC Pavement Repair will be required before the placement of High Friction Surface Treatment. The median cable barrier installation (PCN 08Q8) has been awarded by another Contractor (BX CIVIL & CONSTRUCTION, INC.). Coordinate with the SDDOT Sioux Falls Area Office on timing of the PCC Pavement Repair and the High Friction Surface Treatment.

LANE CLOSURES

Interstate lane closures shorter than 5 miles will be used if 5 miles is greater than the length of work that can be accomplished in one day's production. More than one lane closure may be permitted; however, there will be a minimum of a three-mile section between lane closures, excluding the tapers.

Interstate lane closures will be removed when work will not be occurring for a period of 3 or more calendar days. Activities that do not involve workers being present, such as curing time for concrete, constitute work. Lane closures will not be set up on a Friday if no work will be occurring on Saturday or Sunday. In these cases, the lane closure will be installed on Monday.

Sufficient traffic control devices have been included in these plans to sign four lane closures. 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.

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours.

If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

WORK ZONE SPEED REDUCTION

The Department is required to obtain a speed reduction resolution prior to the installation of any SPEED LIMIT (R2-1) signs shown on standard plate 634.63 or as shown in the plans. To provide adequate time for the resolution to be enacted, the Contractor will inform the Engineer a minimum of 3 weeks prior to the scheduled installation of any work zone speed reduction signs on the project. The information provided by the Contractor will include the anticipated date of sign installation, the newly reduced speed limit, the location of the work zone, and the anticipated completion date of work requiring the speed reduction.

TEMPORARY PAVEMENT MARKING

17,083 feet of temporary pavement markings have been included for Traffic Control Layouts and standard plate 634.53, 634.60, 634.63 and 634.70.

Temporary flexible vertical markers (tabs) will be used to mark dashed centerline, No Passing Zones, and applicable lane lines. Paint will not be allowed for temporary pavement marking on the asphalt concrete wear course or after application of the flush seal.

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

One week prior to starting work affecting the traveling public, portable changeable message signs (PCMS) will be installed at locations detailed in the plans to notify drivers of the upcoming construction. The Contractor will program the portable changeable message signs with the following message:

ROAD WORK
STARTS (Date)

CONSIDER
ALT
ROUTE

Exit 396A, Interstate 29

EXIT
396

RAMP
CLOSED
AHEAD

Exit 81, Russell St.

EXIT 81
RAMP WORK
AHEAD

When work begins that will affect traffic patterns, the Contractor will re-program the PCMS with the messages as detailed in the plans.

INCIDENTS

An incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic such as a crash, hazardous materials spill, or other event.

The Contractor will set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite the Department of Transportation, the South Dakota Highway Patrol, the Minnehaha County Sheriff and local emergency response entities to the meeting.

The Contractor will assist to maintain traffic as required by these plan notes and as agreed to at that meeting.

Emergency vehicle access through the project will be considered and discussed at the meeting.

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs, and to provide flaggers to direct or detour traffic. The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

INCIDENTS (CONTINUED)

No additional payment will be made for the modification of portable changeable message sign messages or the relocation of portable changeable message signs. Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate. Flaggers will be paid for at the contract unit price per hour for "Flagging".

PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

LONGITUDINAL PEDESTRIAN BARRICADE

Longitudinal pedestrian barricades should not be used to provide positive protection for pedestrians.

To prevent any tripping hazard to pedestrians, ballast will be located behind or internal to the device.

When longitudinal pedestrian barricades are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock will be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. When used as a sidewalk closure mechanism, longitudinal pedestrian barricade must run the entire width of the sidewalk. Longitudinal pedestrian barricade should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Section 6F.68 of the MUTCD.

Longitudinal pedestrian barricade will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing. Both upper and lower surfaces will share a common vertical plane.

All costs will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barricade".

DETOUR SIGNING

The Contractor will furnish and install the detour signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Detour signs will be installed on fixed location, ground mounted, breakaway supports. It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by the construction progress. Upon completion of the project, the Contractor will remove the detour signs.

All costs for furnishing the signs, posts, and mounting hardware, and for installing, maintaining, covering, and removing the detour signs will be incidental to the contract unit price per square foot for "Detour and Restriction Signing".

PERMANENT PAVEMENT MARKING

The Contractor will be required to repaint all existing pavement marking including centerline, edgeline, lane lines, arrows, stop bars, and a bicycle symbol. This list is approximate. Additional quantities are included in the estimate of quantities to paint the additional pavement marking.

DETOUR AND RESTRICTION SIGNING

ITEMIZED LIST FOR DETOUR AND RESTRICTION SIGNING

SIGN CODE	SIGN DESCRIPTION	EXPRESSWAY / INTERSTATE			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
SPECIAL	RAMP WORK AHEAD	1	48" x 48"	16.0	16.0
W20-2	DETOUR AHEAD	1	48" x 48"	16.0	16.0
W20-3	ROAD CLOSED AHEAD	1	48" x 48"	16.0	16.0
SPECIAL	I29 NORTH DETOUR USE FAR LEFT TURN LANE	1	96" x 54"	36.0	36.0
SPECIAL	RAMP CLOSURE EXIT 396B TO I29 USE EXIT 399	1	126" x 72"	63.0	63.0
SPECIAL	I29 NORTH DETOUR MAKE U-TURN	1	96" x 36"	24.0	24.0
E5-2a	EXIT CLOSED (Overlay)	3	48" x 36"	12.0	36.0
M1-2	INTERSTATE BUSINESS LOOP ROUTE MARKER (1 or 2 digits)	6	36" x 36"	9.0	54.0
M3-1	DIRECTION MARKER - NORTH	6	36" x 18"	4.5	27.0
M4-8	DETOUR	6	30" x 15"	3.1	18.6
M4-8a	END DETOUR	1	36" x 24"	6.0	6.0
M5-2	ADVANCE TURN ARROW 45° (L or R)	2	30" x 21"	4.4	8.8
M6-2	DIRECTION ARROW - 45° Single Head (L or R)	2	30" x 21"	4.4	8.8
M6-3	DIRECTION ARROW - Vertical Single Head	1	30" x 21"	4.4	4.4
SPECIAL	FOLLOW DETOUR (Overlay)	3	120" x 24"	20.0	60.0
EXPRESSWAY / INTERSTATE DETOUR AND RESTRICTION SIGNING SQFT					426.6

TRAFFIC CONTROL SIGNS

Traffic control signs have been included in a table for each site.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD				EXPRESSWAY / INTERSTATE				
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	
R1-1	STOP	1	30"	5.2	5.2					
R2-1	SPEED LIMIT 45		24" x 30"	5.0		2	36" x 48"	12.0	24.0	
R2-1	SPEED LIMIT 65		24" x 30"	5.0		3	36" x 48"	12.0	36.0	
R2-1	SPEED LIMIT 80		24" x 30"	5.0		1	36" x 48"	12.0	12.0	
R2-6aP	FINES DOUBLE (plaque)		24" x 18"	3.0		1	36" x 24"	6.0	6.0	
R3-2	LEFT TURN PROHIBITION (symbol)	2	24" x 24"	4.0	8.0		36" x 36"	9.0		
R3-7R	RIGHT LANE MUST TURN RIGHT	2	30" x 30"	6.3	12.6					
R4-7c	(Narrow) KEEP RIGHT (symbol)	2	18" x 30"	3.8	7.6					
R9-9	SIDEWALK CLOSED	1	24" x 12"	2.0	2.0					
R9-10	SIDEWALK CLOSED (ARROW L or R) USE OTHER SIDE	2	24" x 12"	2.0	4.0					
R9-11	SIDEWALK CLOSED AHEAD (ARROW L or R) CROSS HERE	1	24" x 18"	3.0	3.0					
R9-11a	SIDEWALK CLOSED (ARROW L or R) CROSS HERE	1	24" x 12"	2.0	2.0					
W1-4	REVERSE CURVE (L or R)	2	48" x 48"	16.0	32.0		48" x 48"	16.0		
W3-5	SPEED REDUCTION AHEAD (45 MPH)		48" x 48"	16.0		1	48" x 48"	16.0	16.0	
W3-5	SPEED REDUCTION AHEAD (65 MPH)		48" x 48"	16.0		2	48" x 48"	16.0	32.0	
W4-2	LEFT or RIGHT LANE ENDS (symbol)	1	48" x 48"	16.0	16.0	2	48" x 48"	16.0	32.0	
W4-3	ADDED LANE (symbol)		48" x 48"	16.0		1	48" x 48"	16.0	16.0	
W9-2	LANE ENDS MERGE LEFT	1	48" x 48"	16.0	16.0		48" x 48"	16.0		
W9-3	CENTER LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0		48" x 48"	16.0		
W11-2	PEDESTRIAN (symbol)	4	36" x 36"	9.0	36.0					
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6.3	12.6		30" x 30"	6.3		
W16-7P	DOWNWARD DIAGONAL ARROW (plaque)	2	24" x 12"	2.0	4.0					
W16-9P	AHEAD (plaque)	2	30" x 18"	3.8	7.6		30" x 18"	3.8		
W20-1	ROAD WORK AHEAD	3	48" x 48"	16.0	48.0	2	48" x 48"	16.0	32.0	
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0		48" x 48"	16.0		
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0	2	48" x 48"	16.0	32.0	
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0		48" x 48"	16.0		
G20-2	END ROAD WORK	3	36" x 18"	4.5	13.5	1	48" x 24"	8.0	8.0	
R3-5 R	RIGHT TURN LANE ONLY	1	24" x 30"	5.0	5.0		24" x 18"	3.0		
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					331.1	EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT				246.0

PAVEMENT MARKING

Typical pavement marking as shown on this sheet will be applied throughout the entire length of divided 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:

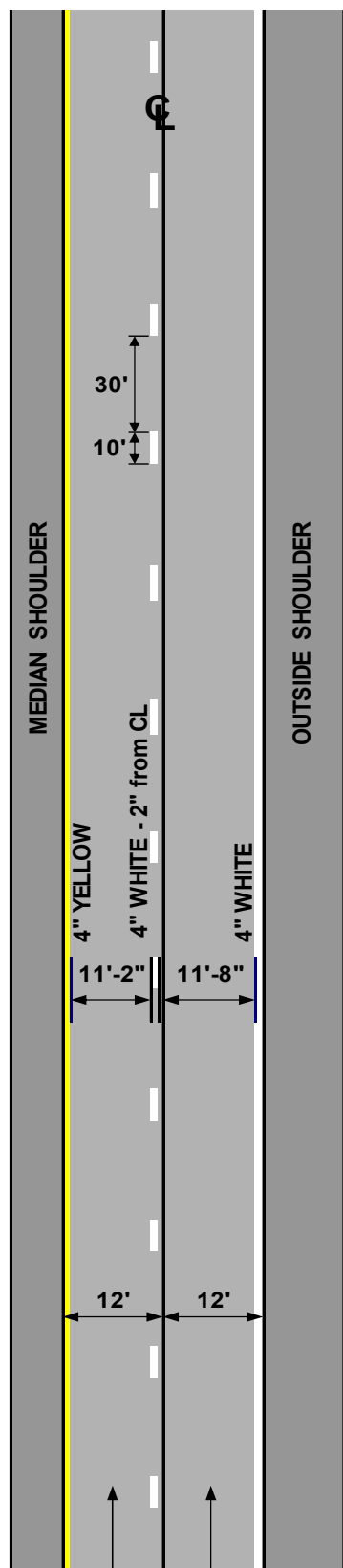
DIVIDED ROADWAY (Rates for one line)	
Solid Yellow Edgeline	Rate = 22.5 Gals./Pass-Mile
Dashed White Centerline	Rate = 6.2 Gals./Pass-Mile
Solid White Edgeline	Rate = 22.5 Gals./Pass-Mile

ESTIMATED QUANTITIES (BASED ON ONE APPLICATION)	
EPOXY	QUANTITY
WHITE	28 GALLONS
YELLOW	17 GALLONS

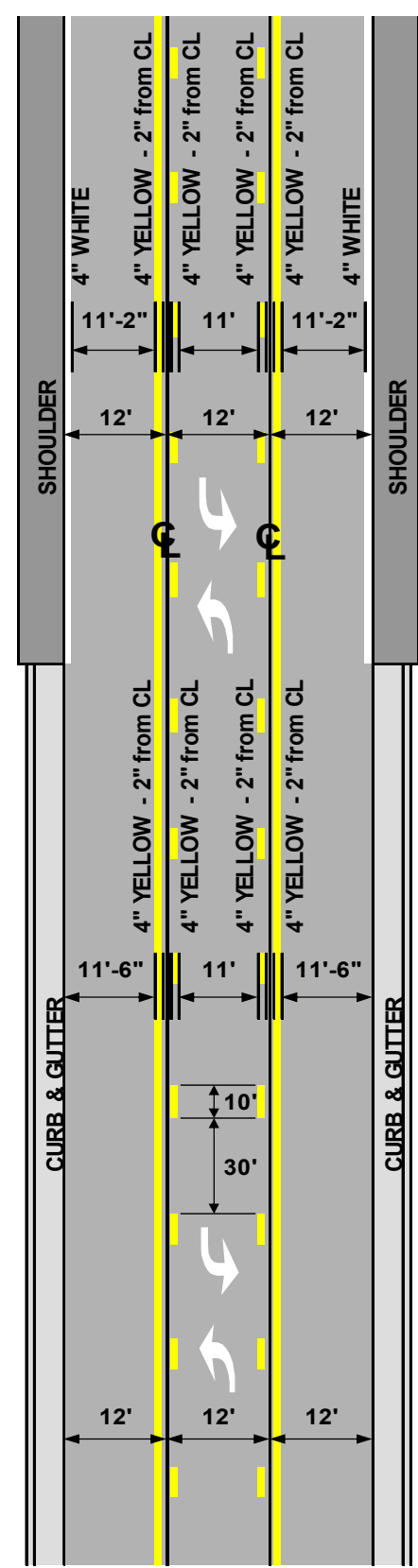
Included in the above quantities are:					
Additional White (1 Application)		Additional Yellow (1 Application)			
Description	Gallons	Description	Gallons		
4" Lines	743'	3	Transitions 3 Ea 1390'	8	
8" Lines	156'	2	4" Skip Lines	20'	-
12" Gore Lines	144'	2	8" Lines	-	-
Crosswalks	-	-	12" Lines	-	-
24" Stop Lines	17'	1	24" Hatches	-	-
24" Hatches	35'	2	Solid Areas	-	-
Solid Areas	28sf	1	Additional Yellow:	8	
Arrows					
Left Arrows	2 Ea	1	Additional Quantities		
Right Arrows	-	-	Rates of Coverage:	SqFt/Gal	
Straight Arrows	1 Ea	1	4", 8" & 12" Lines	60	
Combo Arrows	-	-	24" Lines & Hatches	40	
Lane Drop Arrows	-	-	Arrows, Messages and Solid Areas	25	
Messages					
STOP	-	-	All pavement marking dimensions are based on 12' driving lanes.		
STOP AHEAD	-	-			
R XR w/ Stop Lines	-	-			
SCHOOL X-ING	-	-			
Additional White:	13				

Pavement marking at On Ramps and at Off Ramps will be applied as detailed in these plans.

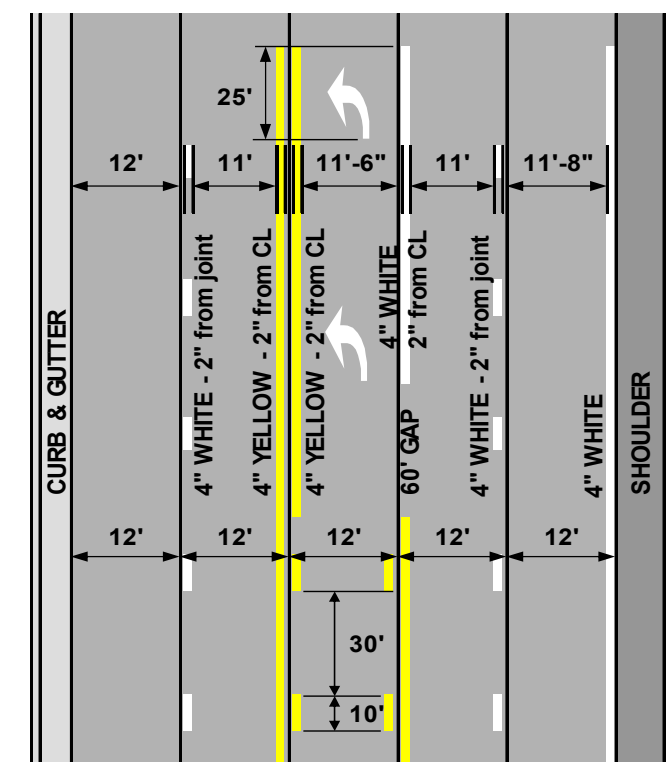
**DIVIDED ROADWAY
(ONE DIRECTION SHOWN)**



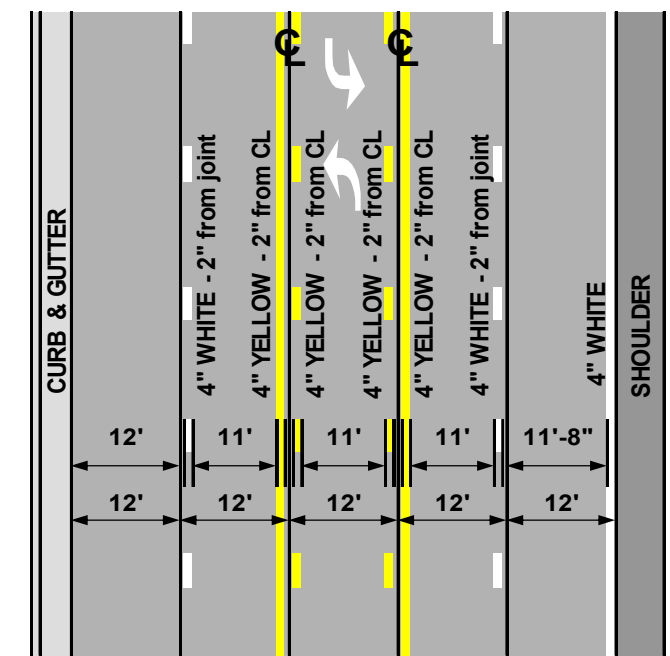
**TWO LANE ROADWAY
WITH CENTER TURN LANE**



**FOUR LANE ROADWAY
WITH LEFT TURN LANE
AT INTERSECTING ROADS
AND STREETS**



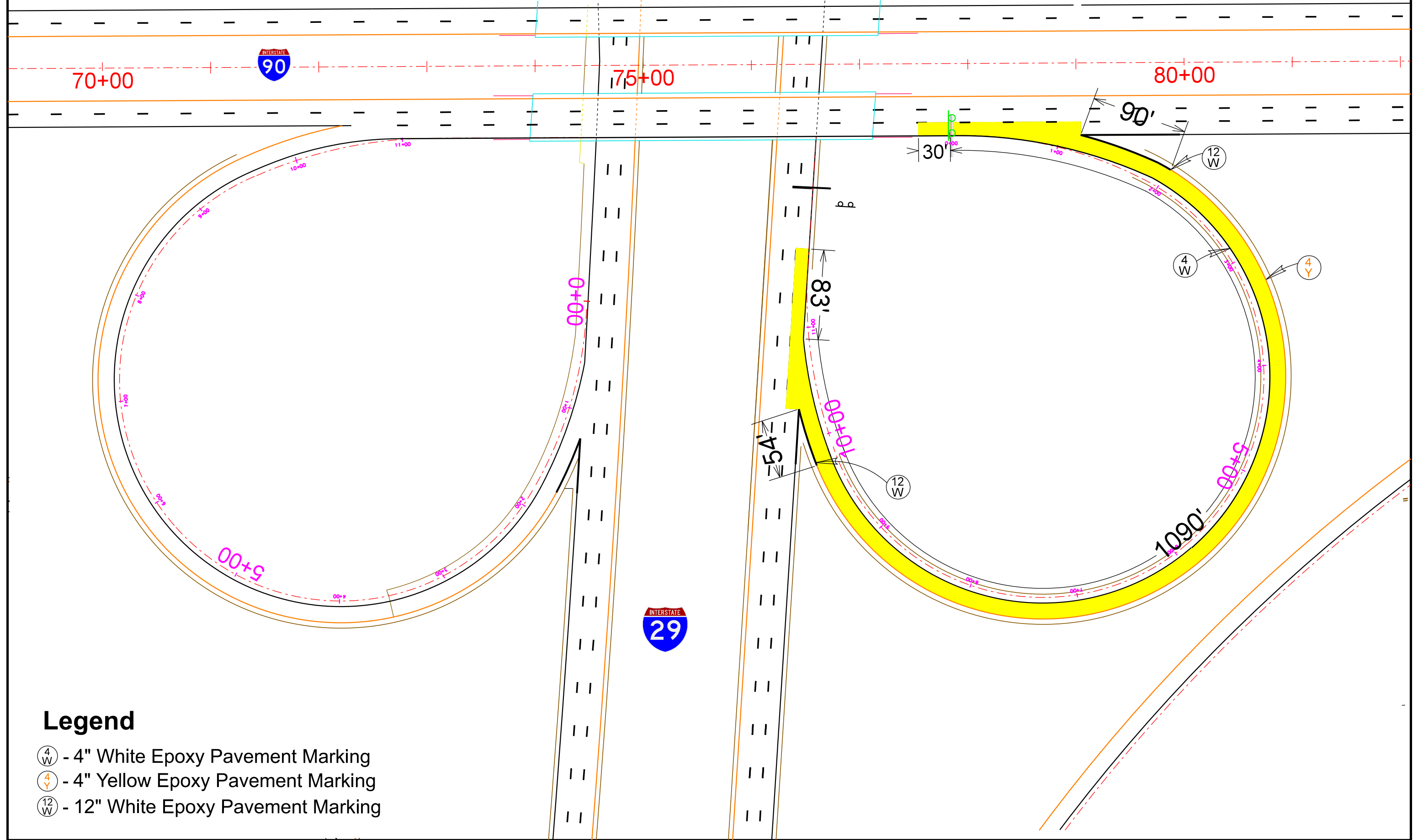
**FOUR LANE ROADWAY
WITH CENTER TURN LANE
AT ENTRANCES**



PAVEMENT MARKING LAYOUT

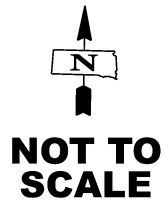
I90 EBL Exit 396 and I29 NBL Exit 83

STATE OF SOUTH DAKOTA	PROJECT PH 000S(436)	SHEET 12	TOTAL SHEETS 39
Plotting Date: 5/18/2026			



Legend

- Ⓞ_{4W} - 4" White Epoxy Pavement Marking
- Ⓞ_{4Y} - 4" Yellow Epoxy Pavement Marking
- Ⓞ_{12W} - 12" White Epoxy Pavement Marking







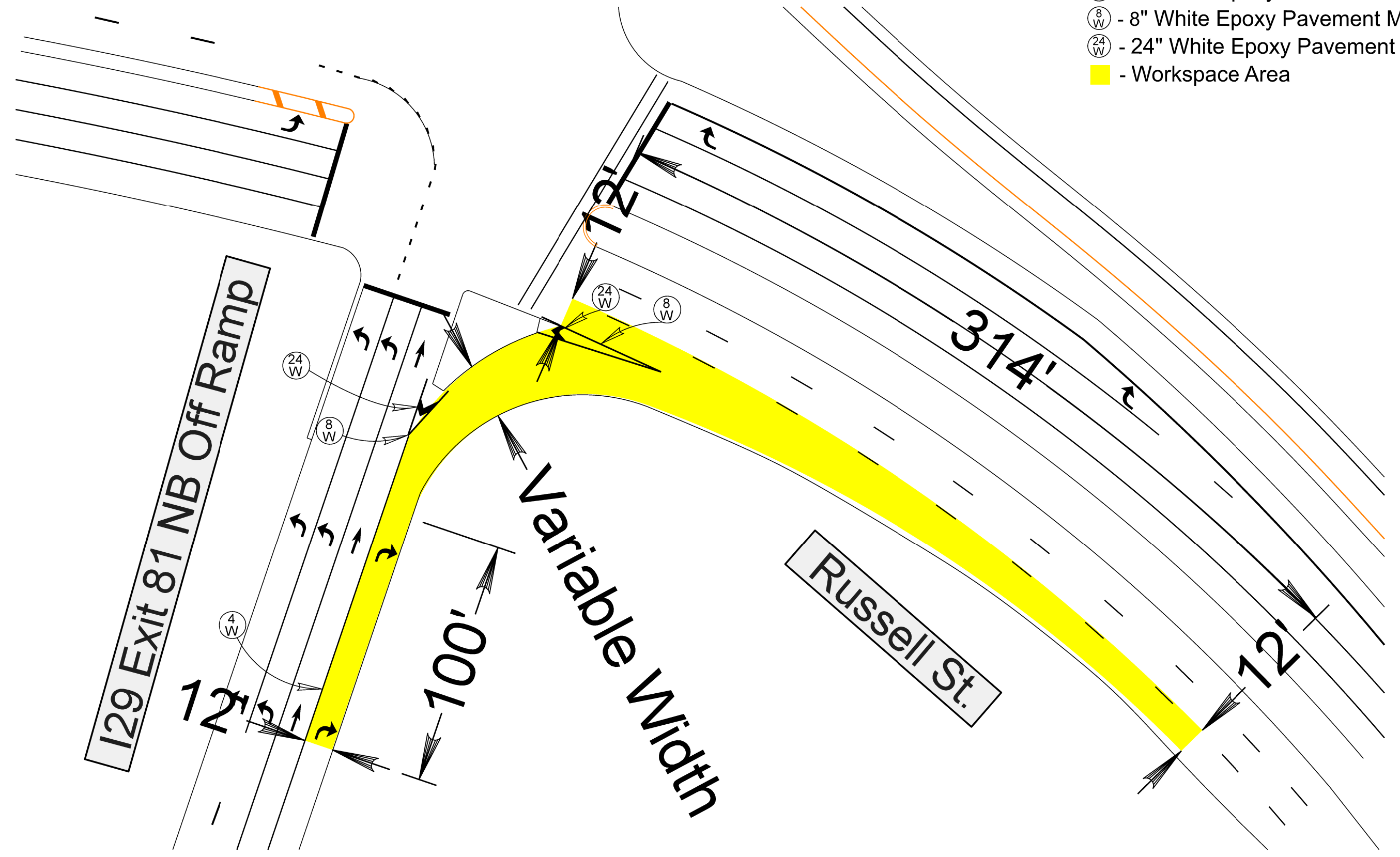
PAVEMENT MARKING LAYOUT I29 NBL Exit 81 Off Ramp and Russell St

STATE OF SOUTH DAKOTA	PROJECT PH 000S(436)	SHEET 13	TOTAL SHEETS 39
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Plotting Date: 5/18/2026

Legend

-  - 4" White Epoxy Pavement Marking
-  - 8" White Epoxy Pavement Marking
-  - 24" White Epoxy Pavement Marking
-  - Workspace Area

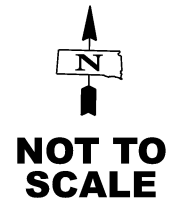


PAVEMENT MARKING LAYOUT

North Dr Curve and Main St

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 000S(436)	14	39

Plotting Date: 5/18/2026



N. Main Ave.

North Dr.

4
W

4
Y

12'

250'

125'

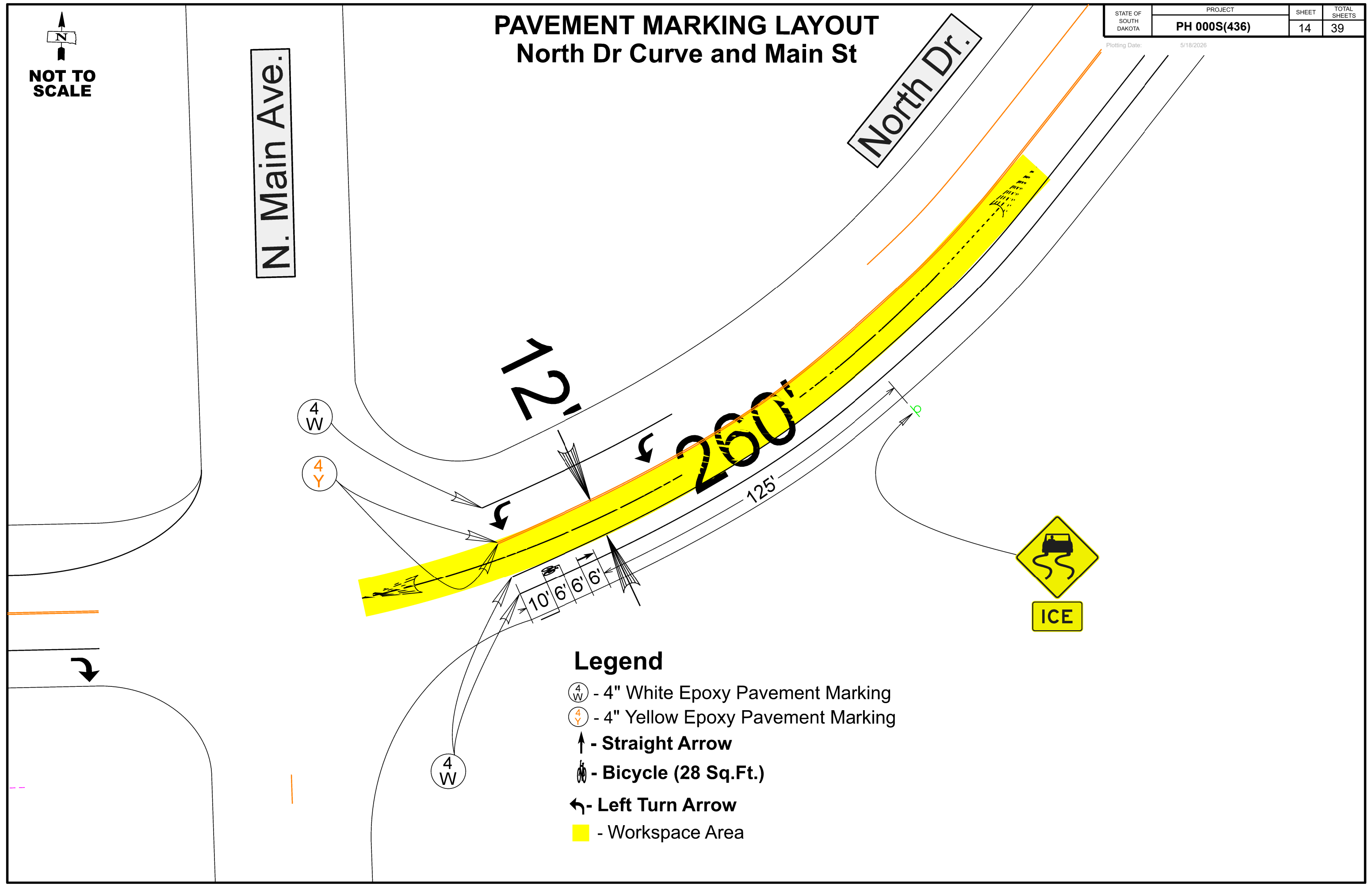
10' 6' 6' 6'

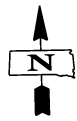
4
W



Legend

- ④ - 4" White Epoxy Pavement Marking
- ④ - 4" Yellow Epoxy Pavement Marking
- ↑ - Straight Arrow
- 🚲 - Bicycle (28 Sq.Ft.)
- ↩ - Left Turn Arrow
- - Workspace Area









PAVEMENT MARKING LAYOUT N 1st Ave and N Riverside Ave

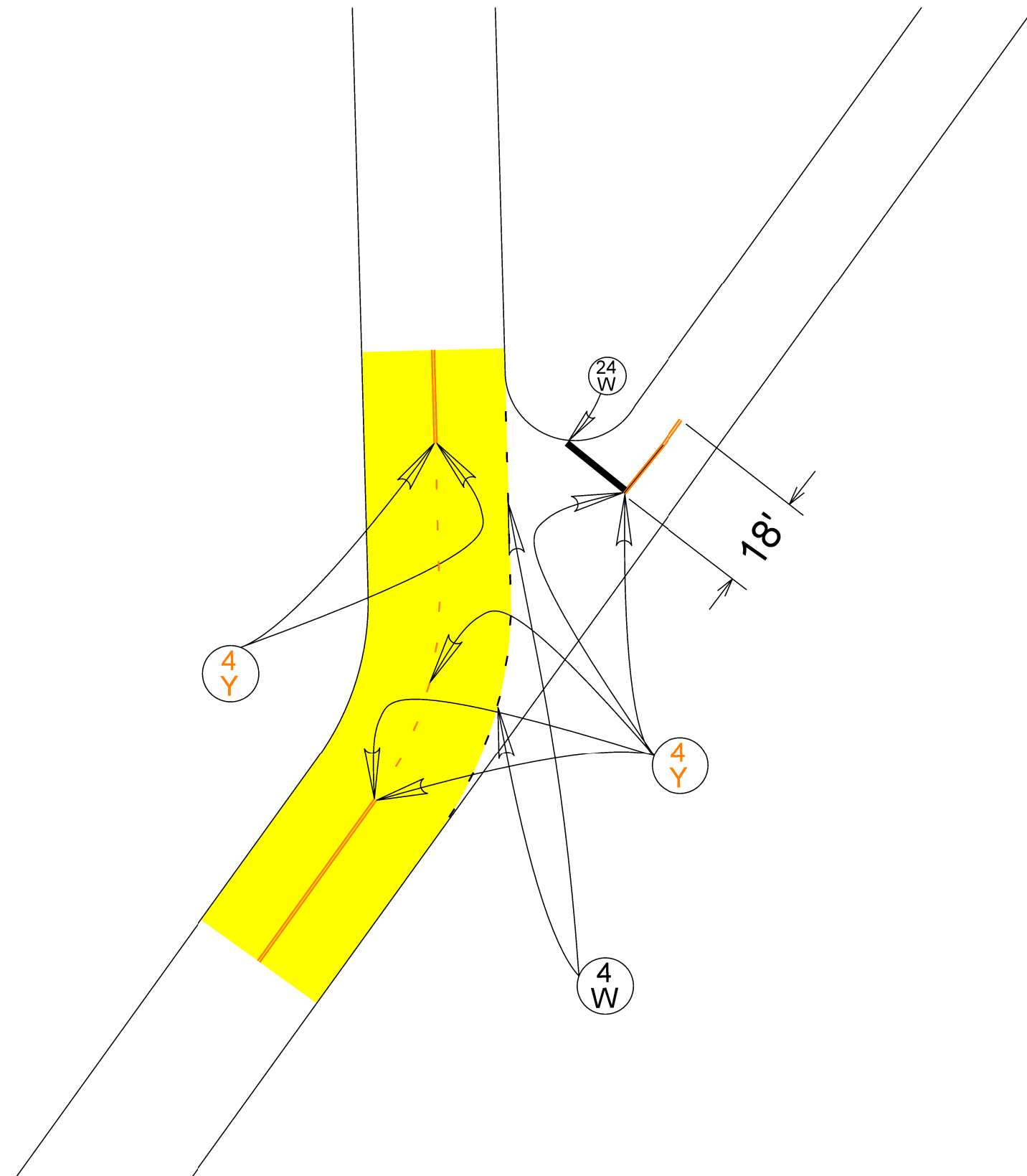
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 000S(436)	15	39

Plotting Date: 5/18/2026

NOT TO SCALE

Legend

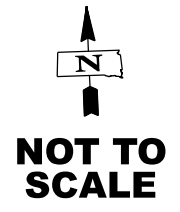
-  - 4" White Epoxy Pavement Marking
-  - 4" Yellow Epoxy Pavement Marking
-  - 24" White Epoxy Pavement Marking
-  - Workspace Area



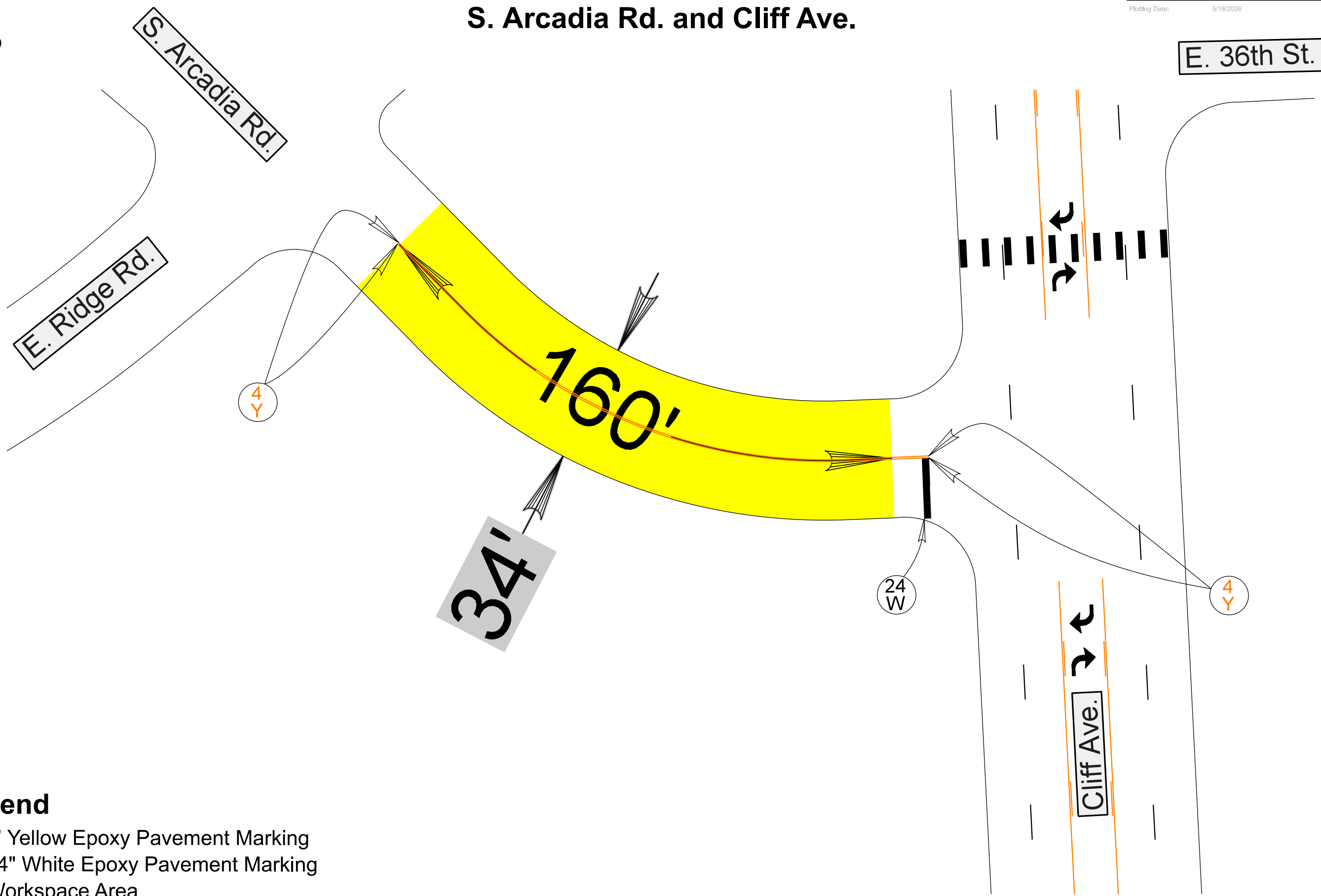
PAVEMENT MARKING LAYOUT S. Arcadia Rd. and Cliff Ave.

STATE OF SOUTH DAKOTA	PROJECT PH 000S(436)	SHEET 16	TOTAL SHEETS 39
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Plotting Date: 5/18/2026

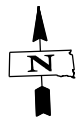


E. 36th St.



Legend

- 4" Yellow Epoxy Pavement Marking
- 24" White Epoxy Pavement Marking
- Workspace Area

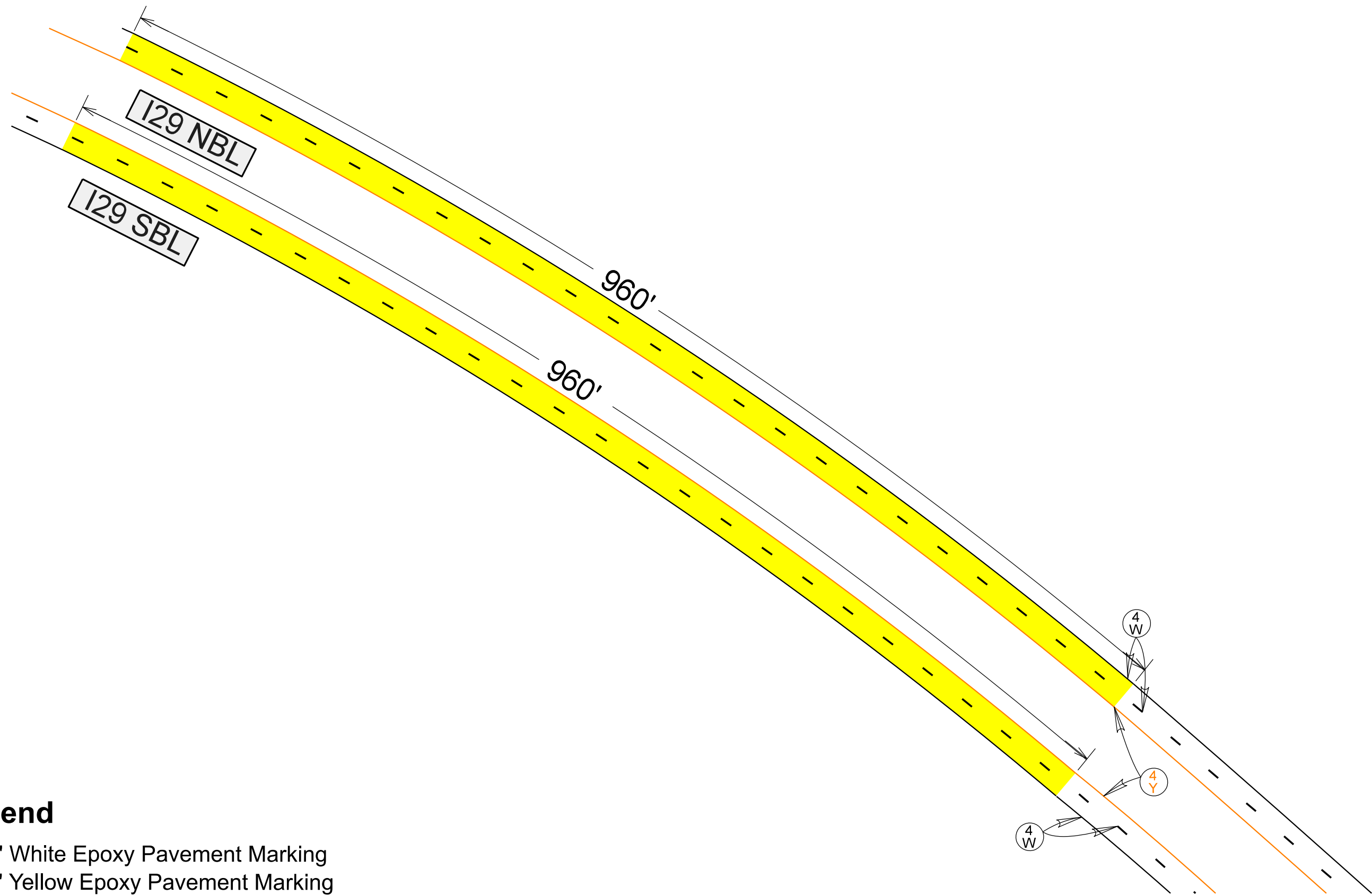


PAVEMENT MARKING LAYOUT I29 UNION COUNTY




STATE OF SOUTH DAKOTA	PROJECT PH 000S(436)	SHEET 17	TOTAL SHEETS 39
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Plotting Date: 5/18/2026

**NOT TO
SCALE**

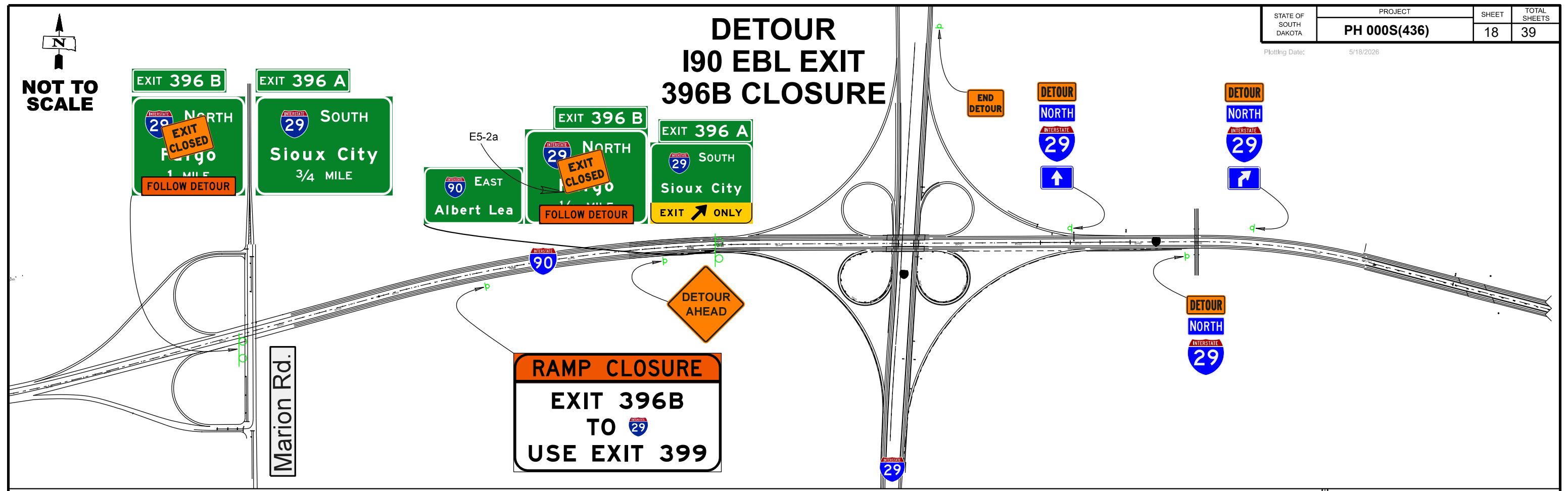


Legend

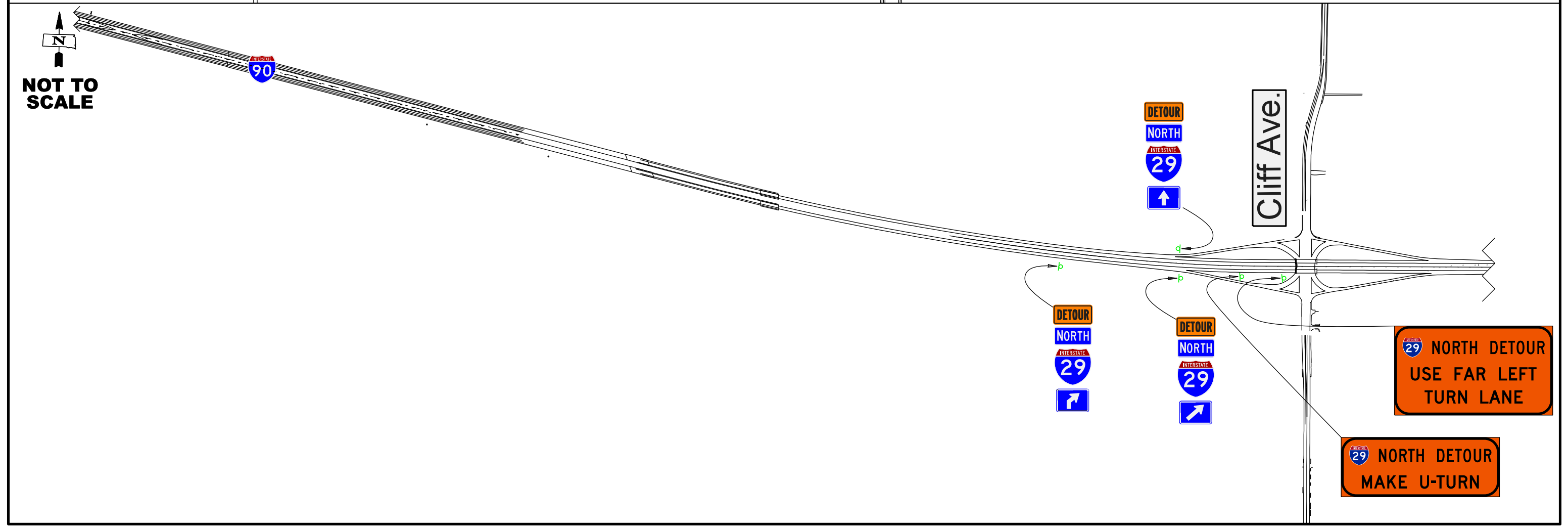
-  - 4" White Epoxy Pavement Marking
-  - 4" Yellow Epoxy Pavement Marking
-  - Workspace Area

DETOUR I90 EBL EXIT 396B CLOSURE

NOT TO SCALE



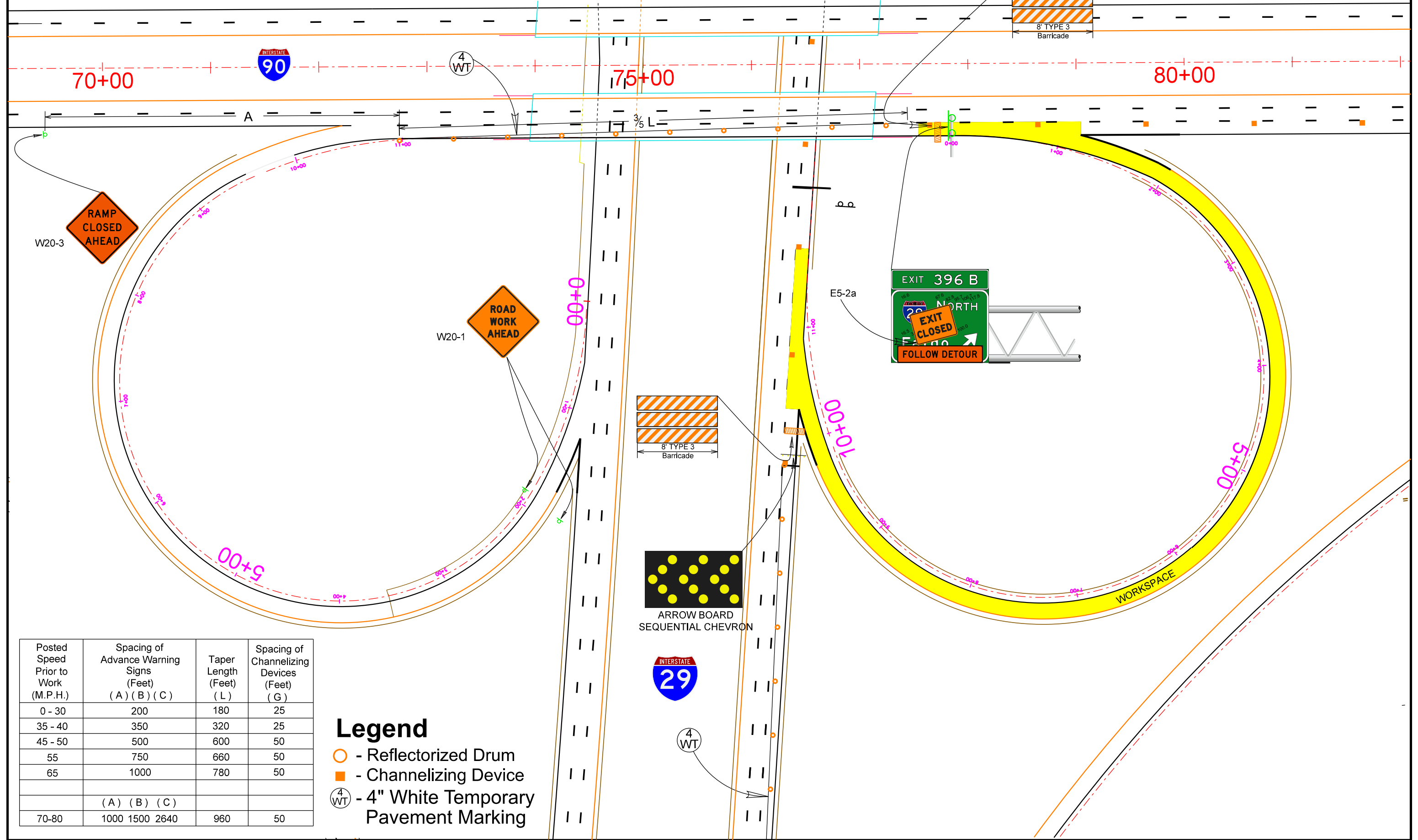
NOT TO SCALE



TRAFFIC CONTROL LAYOUT

I90 EBL Exit 396 and I29 NBL Exit 83

STATE OF SOUTH DAKOTA	PROJECT PH 000S(436)	SHEET 19	TOTAL SHEETS 39
Plotting Date: 5/18/2026			



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)			Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
	(A)	(B)	(C)		
0 - 30	200			180	25
35 - 40	350			320	25
45 - 50	500			600	50
55	750			660	50
65	1000			780	50
	(A)	(B)	(C)		
70-80	1000	1500	2640	960	50

- Legend**
- - Reflectorized Drum
 - - Channelizing Device
 - ⓪ - 4" White Temporary Pavement Marking






TRAFFIC CONTROL LAYOUT

North Dr. and Main St.



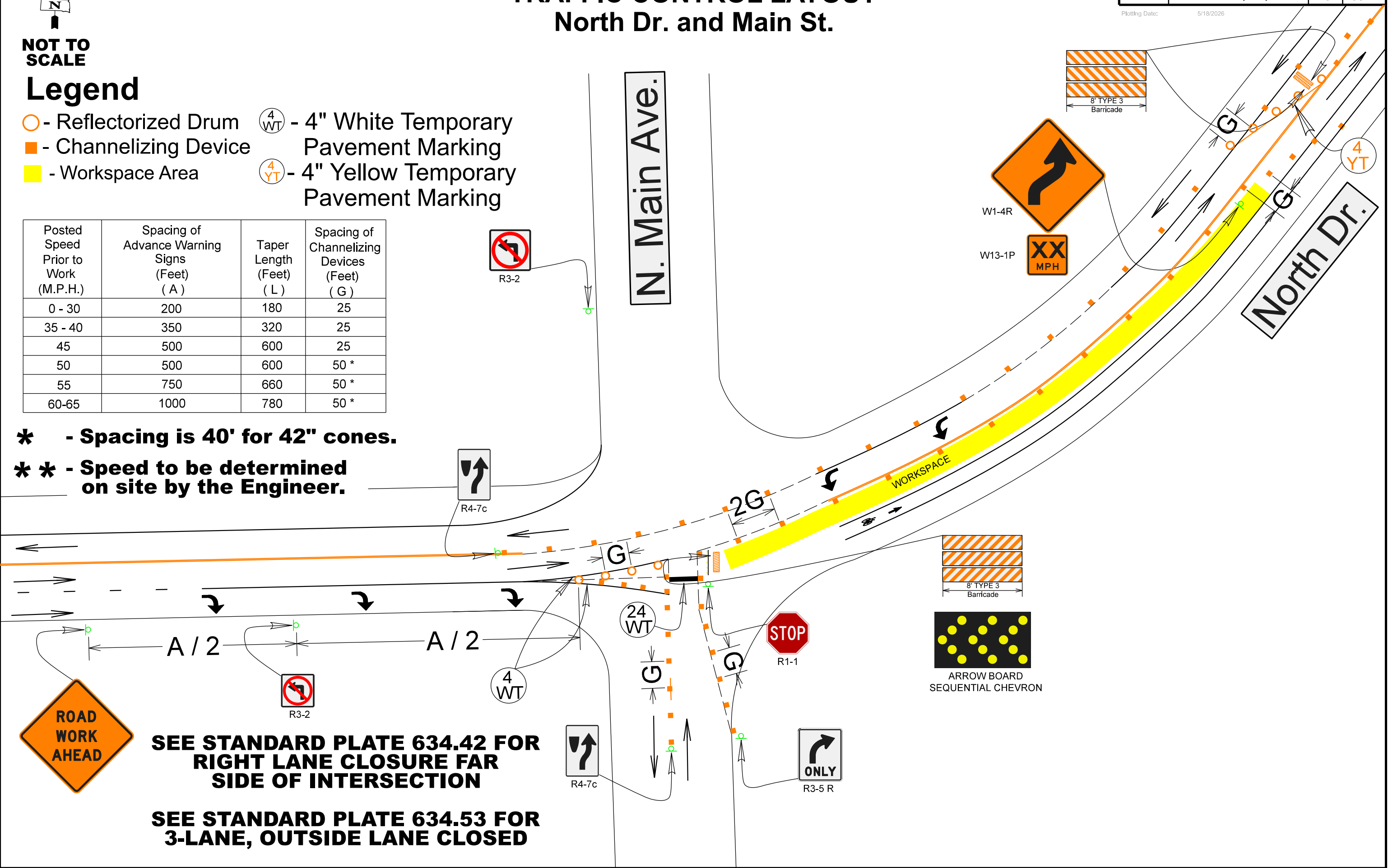
NOT TO SCALE

Legend

-  - Reflectorized Drum
-  - Channelizing Device
-  - Workspace Area
-  - 4" White Temporary Pavement Marking
-  - 4" Yellow Temporary Pavement Marking

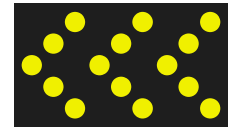
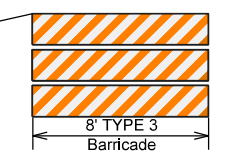
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60-65	1000	780	50 *

- * - Spacing is 40' for 42" cones.
- ** - Speed to be determined on site by the Engineer.



SEE STANDARD PLATE 634.42 FOR RIGHT LANE CLOSURE FAR SIDE OF INTERSECTION

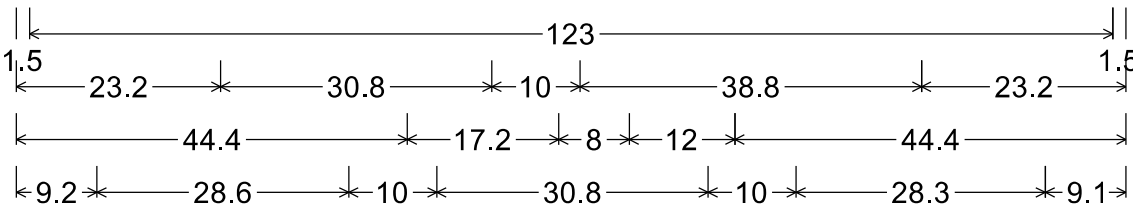
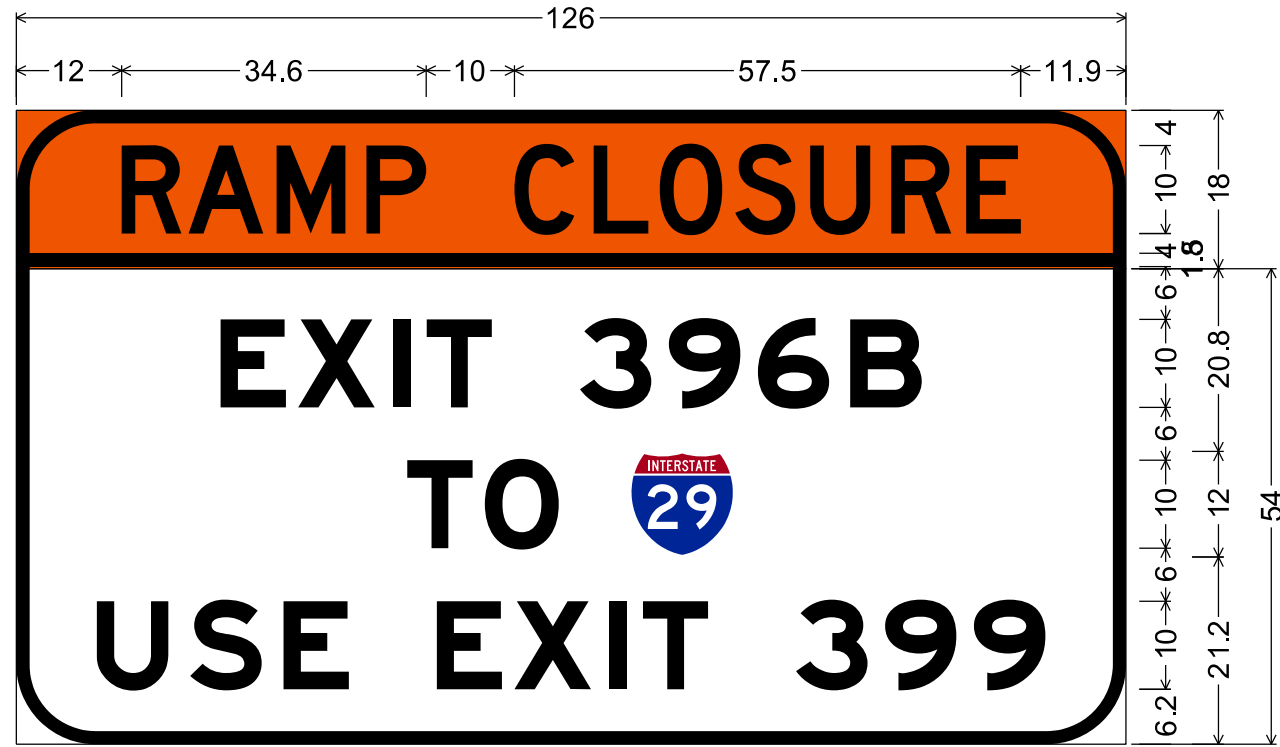
SEE STANDARD PLATE 634.53 FOR 3-LANE, OUTSIDE LANE CLOSED



ARROW BOARD SEQUENTIAL CHEVRON

SPECIAL SIGN DETAIL

Plotting Date: 5/18/2026



9.0" Radius, 1.5" Border, Black on Orange;
"RAMP CLOSURE", D 2K;

9.0" Radius, 1.5" Border, Black on White;
"EXIT 396B", E Mod 2K; "TO", E Mod 2K; "USE EXIT 399", E Mod 2K;

Table of letter and object lefts

R	A	M	P	C	L	O	S	U	R	E
12.0	19.6	29.6	39.8	56.6	65.6	73.1	81.7	90.2	99.4	107.9

1.5

E	X	I	T	3	9	6	B
23.2	32.0	42.8	46.6	64.0	74.1	84.2	94.7

T	O	INTERSTATE 29
44.4	53.2	69.6

U	S	E	E	X	I	T	3	9	9
9.2	19.8	30.4	47.8	56.6	67.4	71.2	88.6	98.7	108.8

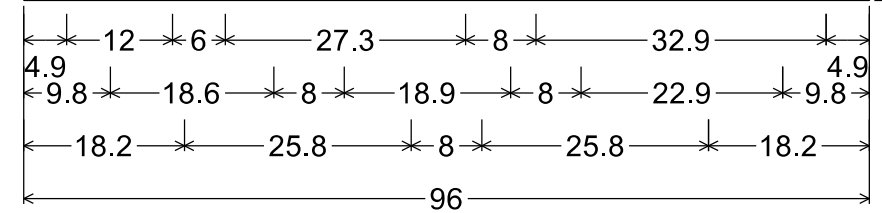
9.0" Radius, 1.5" Border, Black on Orange;
"NORTH DETOUR", C 2K specified length;
"MAKE U-TURN", D 2K;

Table of letter and object lefts

INTERSTATE 29	N	O	R	T	H
4.9	22.9	29.0	35.3	40.5	45.7

D	E	T	O	U	R
58.2	64.2	69.0	74.1	80.4	86.6

M	A	K	E	U	-	T	U	R	N
12.5	19.9	27.9	34.9	47.8	54.5	57.8	63.9	71.3	78.1



9.0" Radius, 1.5" Border, Black on Orange;
"NORTH DETOUR", C 2K specified length;
"USE FAR LEFT", D 2K; "TURN LANE", D 2K;

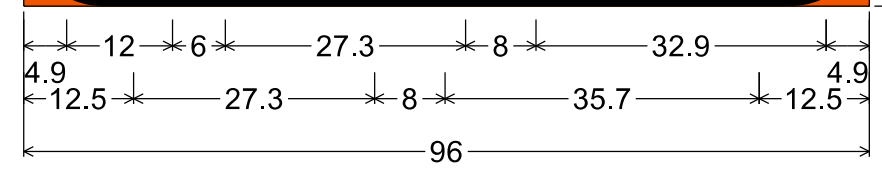
Table of letter and object lefts

INTERSTATE 29	N	O	R	T	H
4.9	22.9	29.0	35.3	40.5	45.7

D	E	T	O	U	R
58.2	64.2	69.0	74.1	80.4	86.6

U	S	E	F	A	R	L	E	F	T
9.8	16.6	23.4	36.4	41.8	49.8	63.3	69.4	75.8	81.2

T	U	R	N	L	A	N	E
18.2	24.4	31.8	38.6	52.0	57.4	65.4	72.8



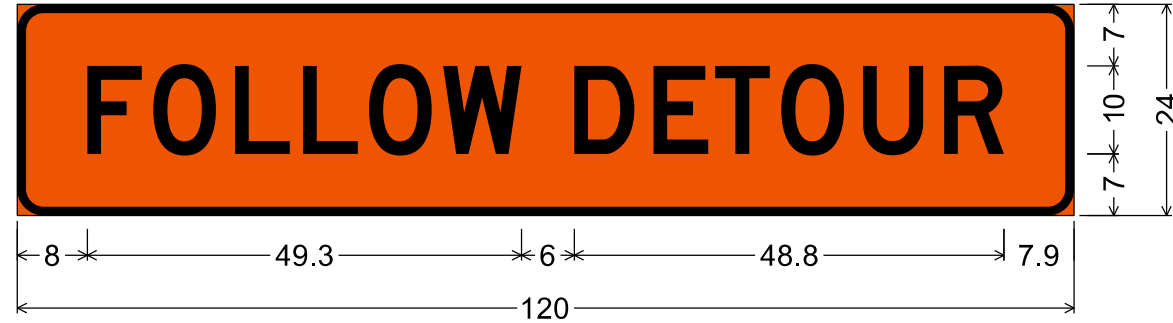
SPECIAL SIGN DETAIL

OVERLAY, ASTM 4956 TYPE XI SHEETING

STATE OF SOUTH DAKOTA	PROJECT PH 000S(436)	SHEET 22	TOTAL SHEETS 39
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Plotting Date: 5/18/2026

E5-2a



3.0" Radius, 1.0" Border, Black on Orange;

"FOLLOW DETOUR", D 2K;

Table of letter and object lefts

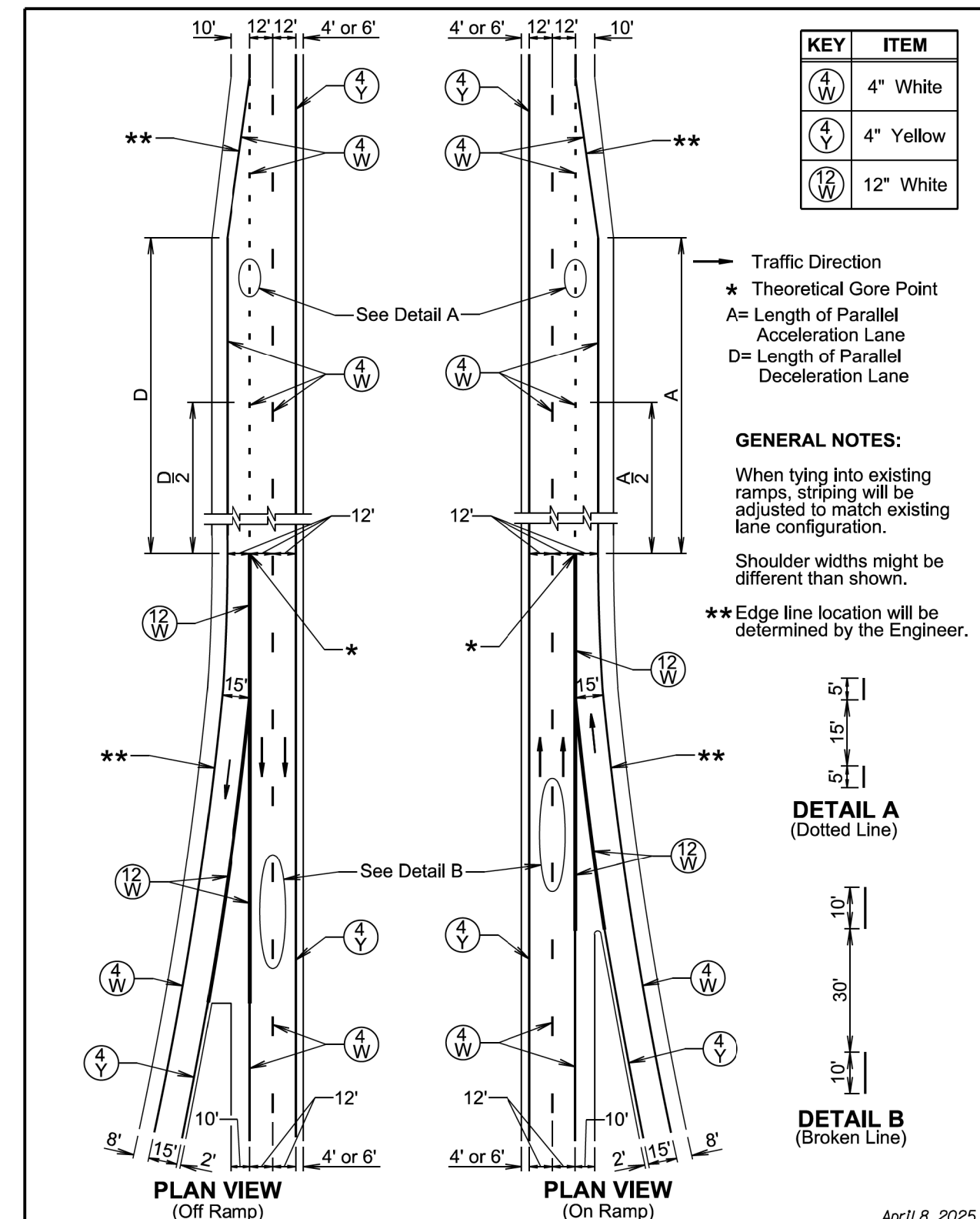
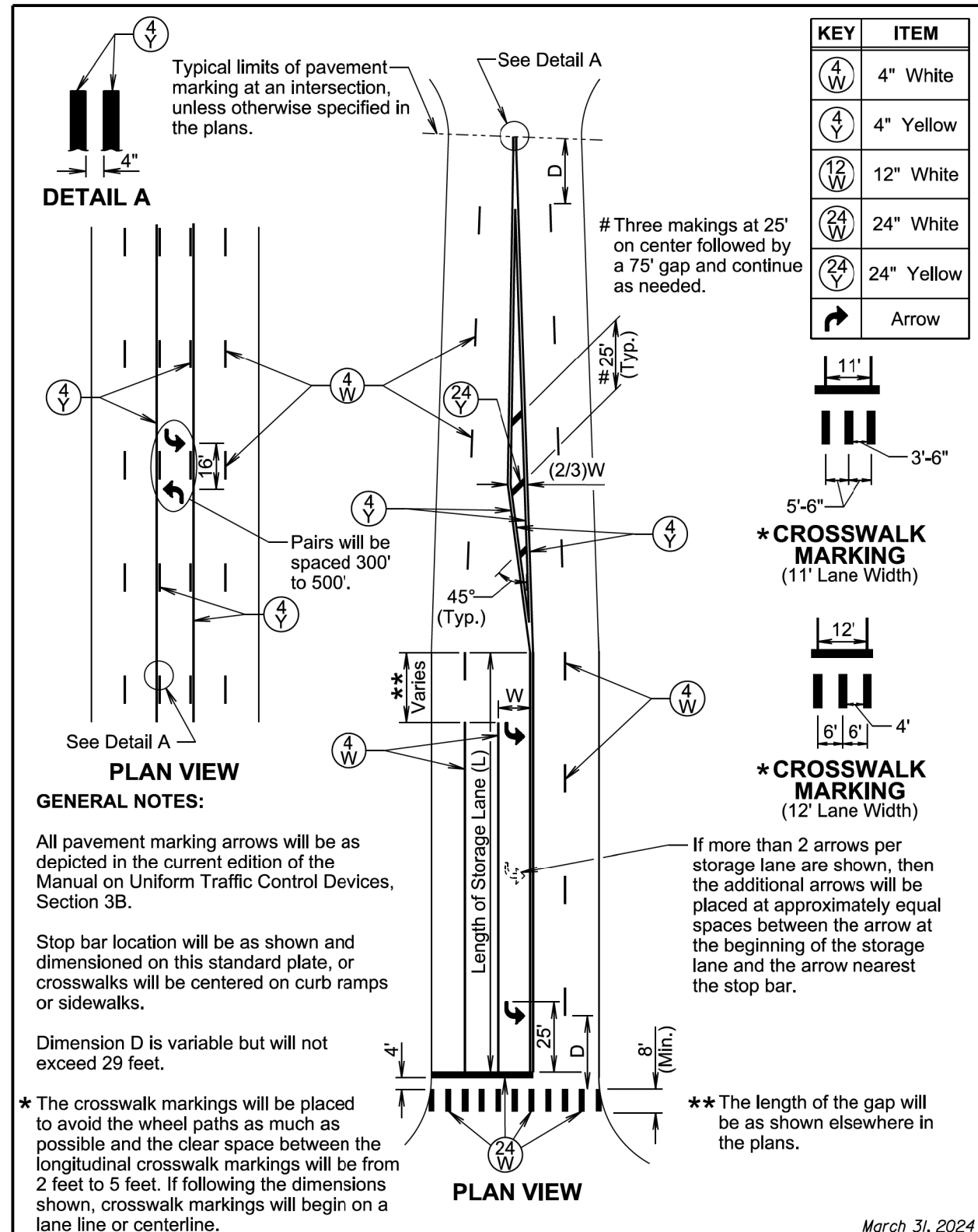
F	O	L	L	O	W	D	E	T	O	U	R
8.0	15.5	24.8	32.5	40.0	48.4	63.3	72.3	79.3	86.8	96.1	105.3



1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"EXIT", E 2K; "CLOSED", D 2K;

Table of letter and object lefts

E	X	I	T		
11.8	18.9	27.4	30.2		
C	L	O	S	E	D
4.7	11.9	17.9	24.8	31.6	37.9



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.

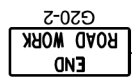
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

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.

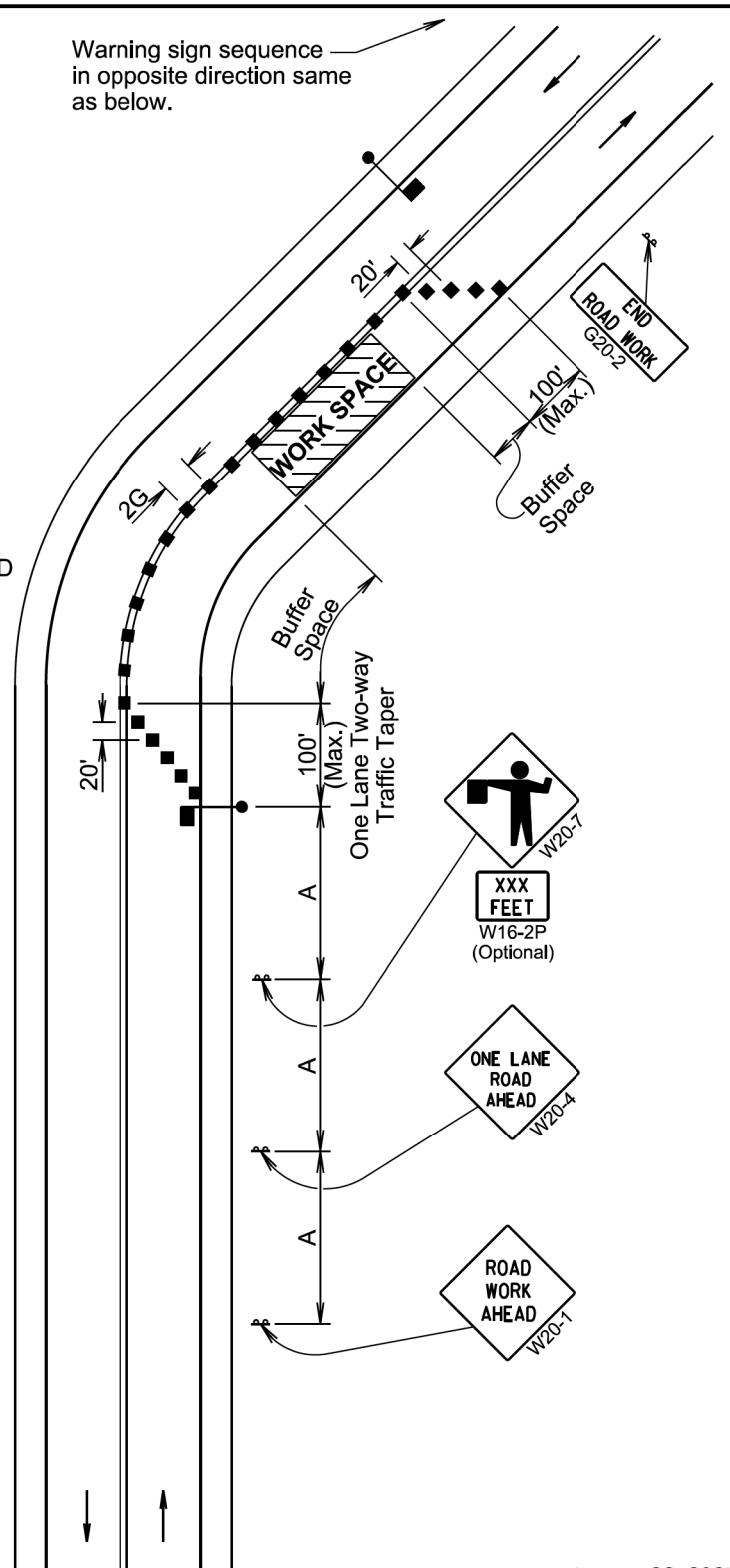


Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

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.

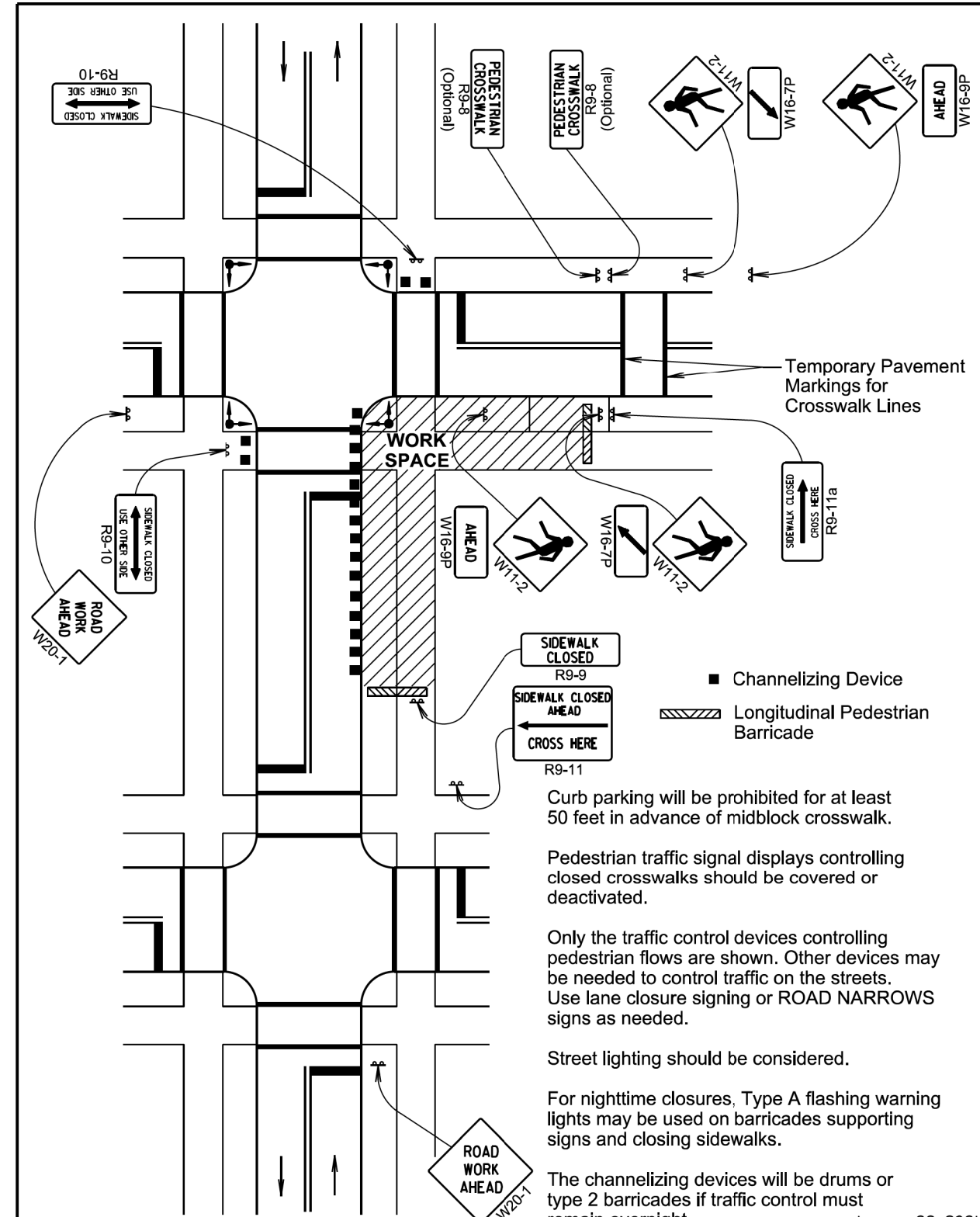
The length of A may be adjusted to fit field conditions.

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



January 22, 2021

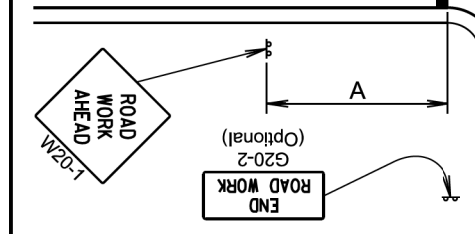
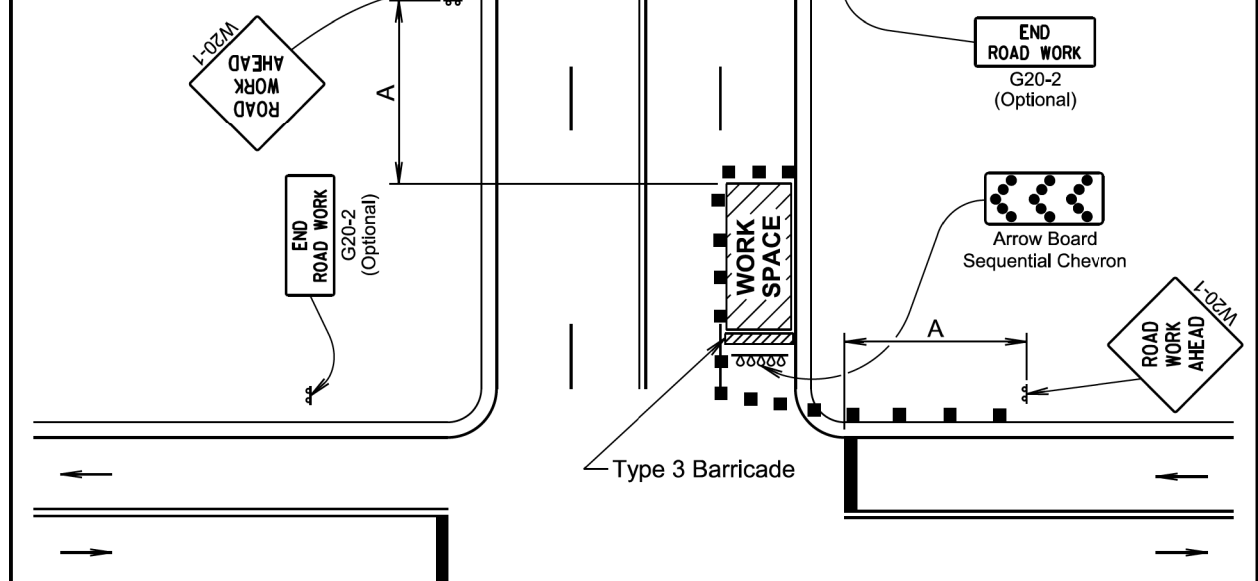
S D D O T	SIDEWALK CLOSURES AND PEDESTRIAN DETOURS	PLATE NUMBER 634.33
	Published Date: 2026	Sheet 1 of 1

TRAFFIC CONTROL

Plotting Date: 5/12/2026

For intersection approaches reduced to a single lane, left-turning movements may be prohibited to maintain capacity for through traffic.

The standard procedure is to close on near side of the intersection any lane that is not carried through the intersection. However, when this results in the closing of a right lane having significant right-turning movements, then the right lane may be restricted to right turns only, as shown.



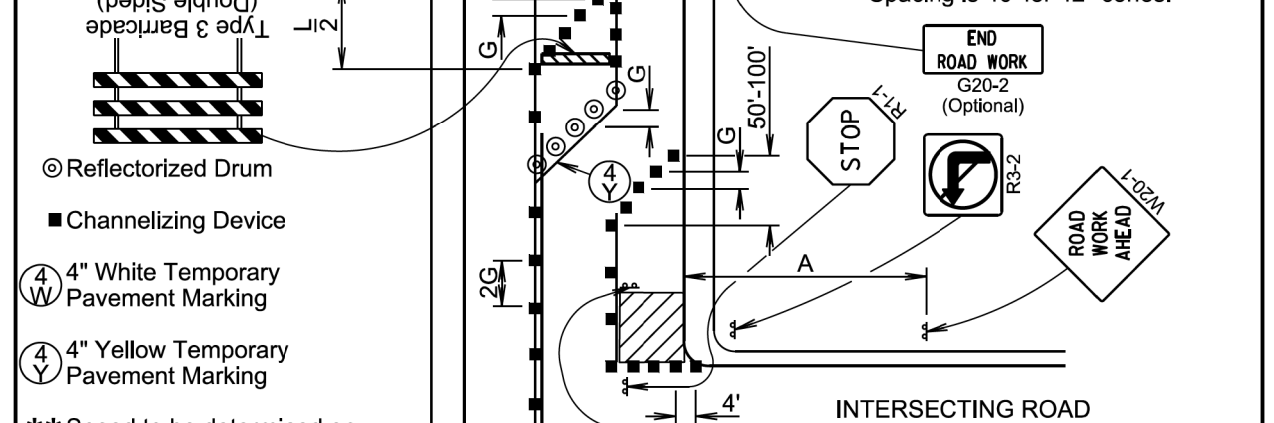
Where the turning radius is large, it may be possible to create a right turn island using channelizing devices, as shown. This procedure reinforces the nature of the temporary exclusive right-turn lane and enables a second RIGHT LANE MUST TURN RIGHT sign to be placed in the island.

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

The channelizing devices will be drums or type 2 barricades if traffic control must remain overnight.

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.



** Speed to be determined on site by the Engineer.

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

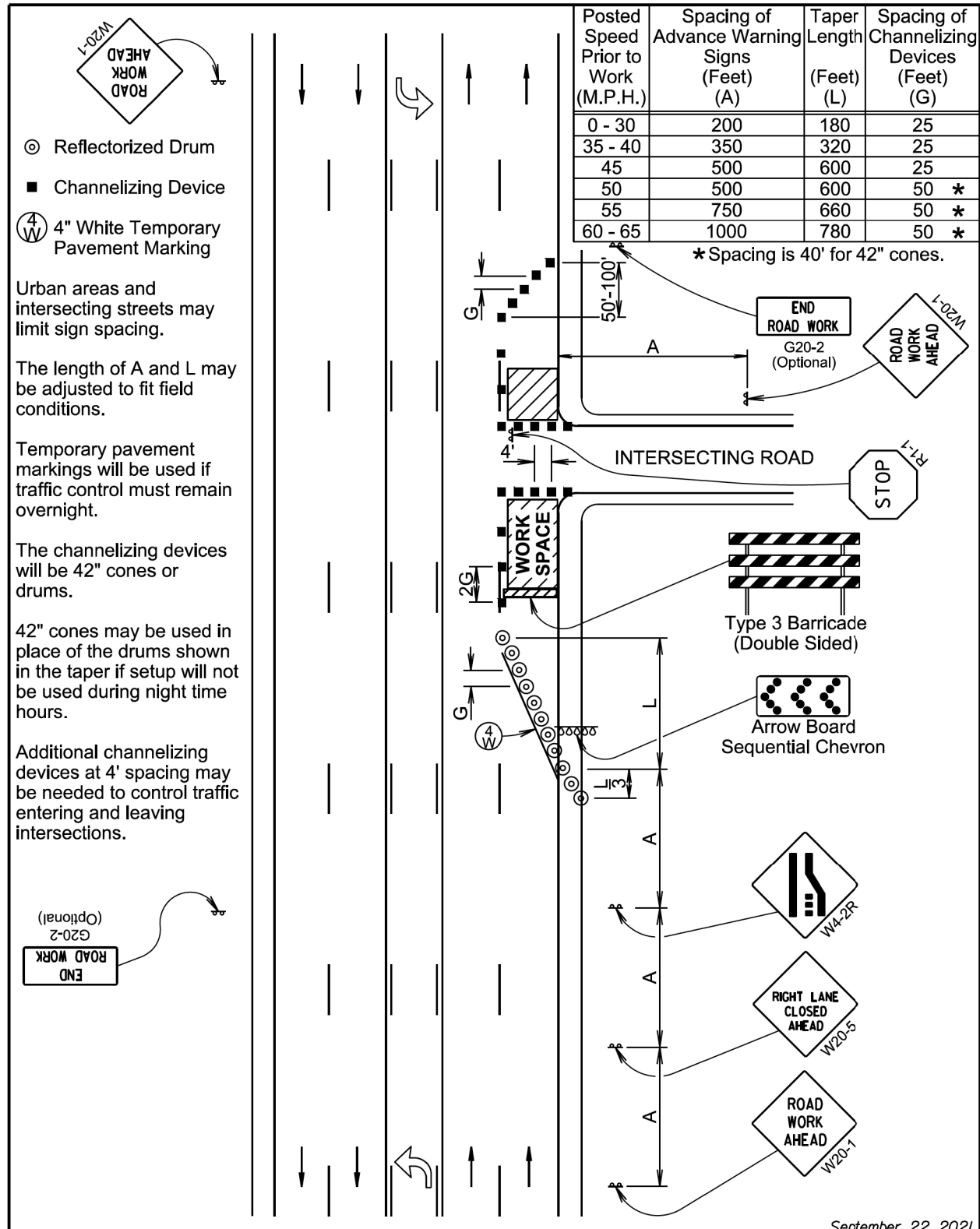
Urban areas and intersecting streets may limit sign spacing.

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

The channelizing device 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.

The channelization must be made dominant by using a device spacing of G/2 for intermediate-term, up to 3 days, when it is not feasible to remove and restore pavement markings.



◎ Reflectorized Drum
 ■ Channelizing Device
 ④ 4" White Temporary Pavement Marking

Urban areas and intersecting streets may limit sign spacing.

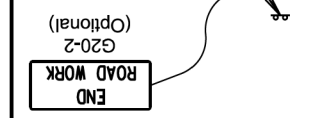
The length of A and L may be adjusted to fit field conditions.

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

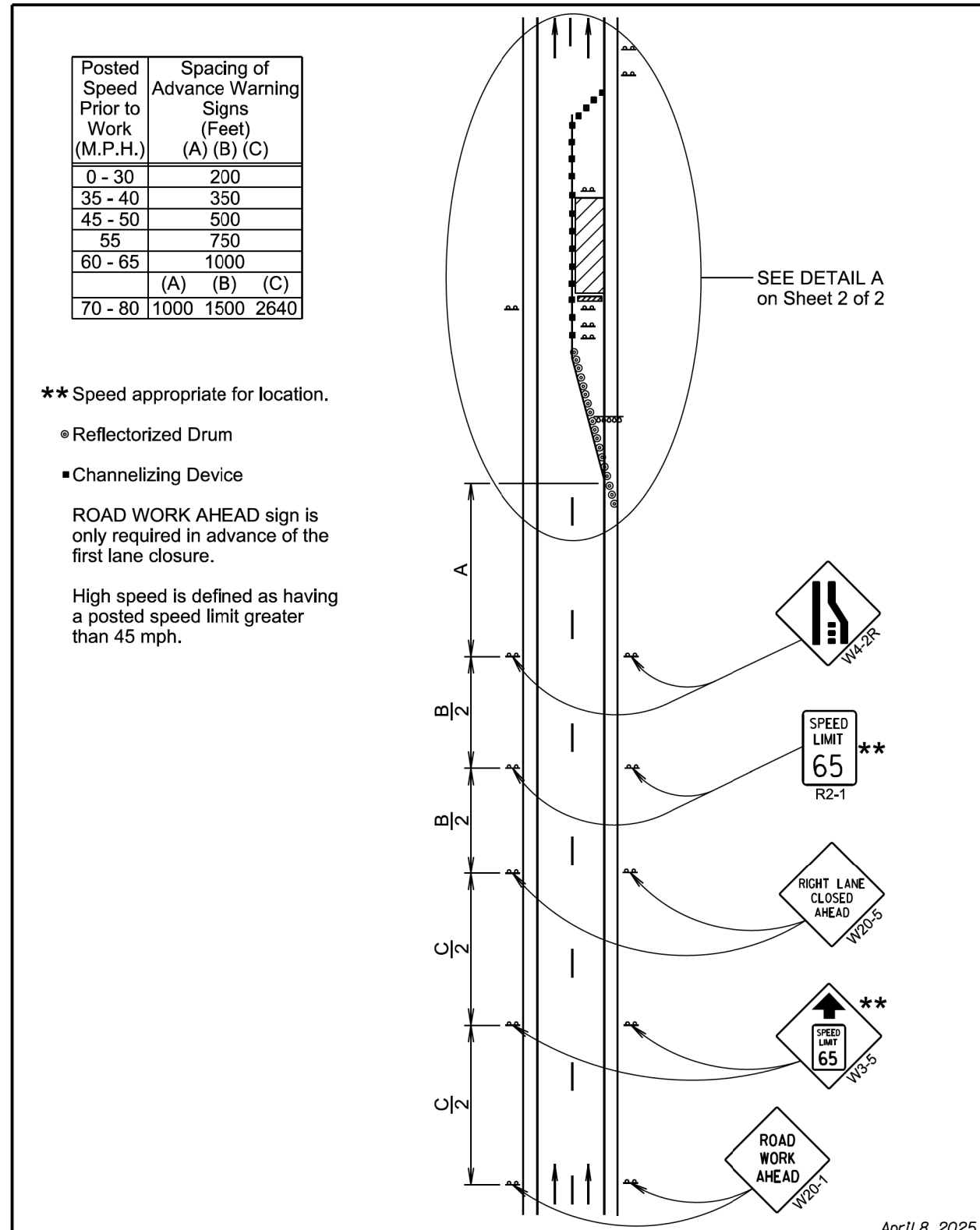
The channelizing devices will be 42" cones or drums.

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

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



September 22, 2021



** Speed appropriate for location.

◎ Reflectorized Drum

■ Channelizing Device

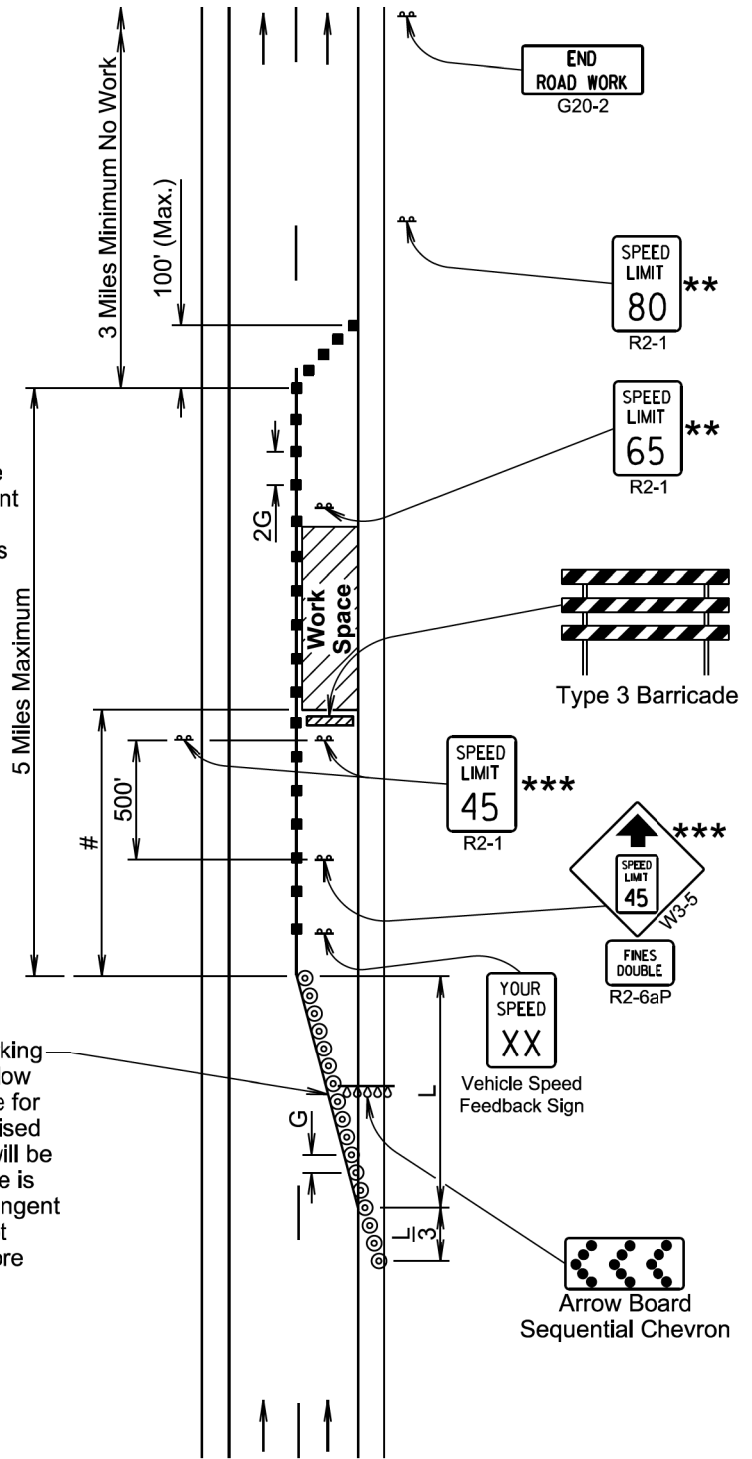
ROAD WORK AHEAD sign is only required in advance of the first lane closure.

High speed is defined as having a posted speed limit greater than 45 mph.

April 8, 2025

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Taper Length (Feet) (L)
0 - 30	25	180
35 - 40	25	320
45	25	600
50	50 *	600
55	50 *	660
60 - 65	50 *	780
70 - 80	50 *	960

- * Spacing is 40' for 42" cones.
 - ** Speed appropriate for location.
 - *** Use speed limit designated for the condition when workers are present in the work space. Signs will be covered or removed when workers are not present.
 - ⊙ Reflectorized Drum
 - Channelizing Device
 - # The Work Space will be a minimum of 500' from the end of the taper.
- 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.



DETAIL A

April 8, 2025

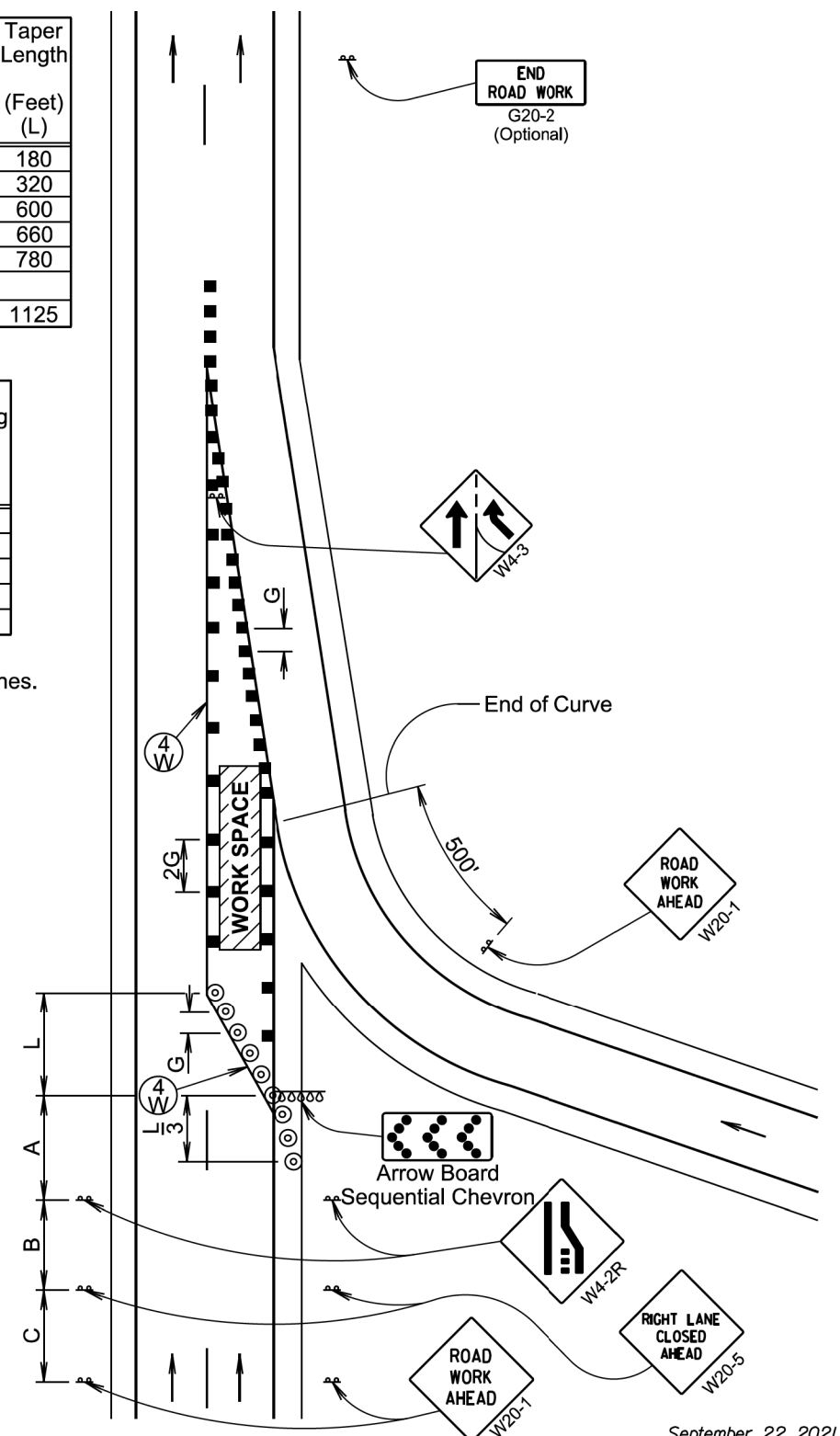
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)			Taper Length (Feet) (L)
	(A)	(B)	(C)	
0 - 30	200			180
35 - 40	350			320
45 - 50	500			600
55	750			660
60 - 65	1000			780
70 - 80	1000	1500	2640	1125

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 80	50 *

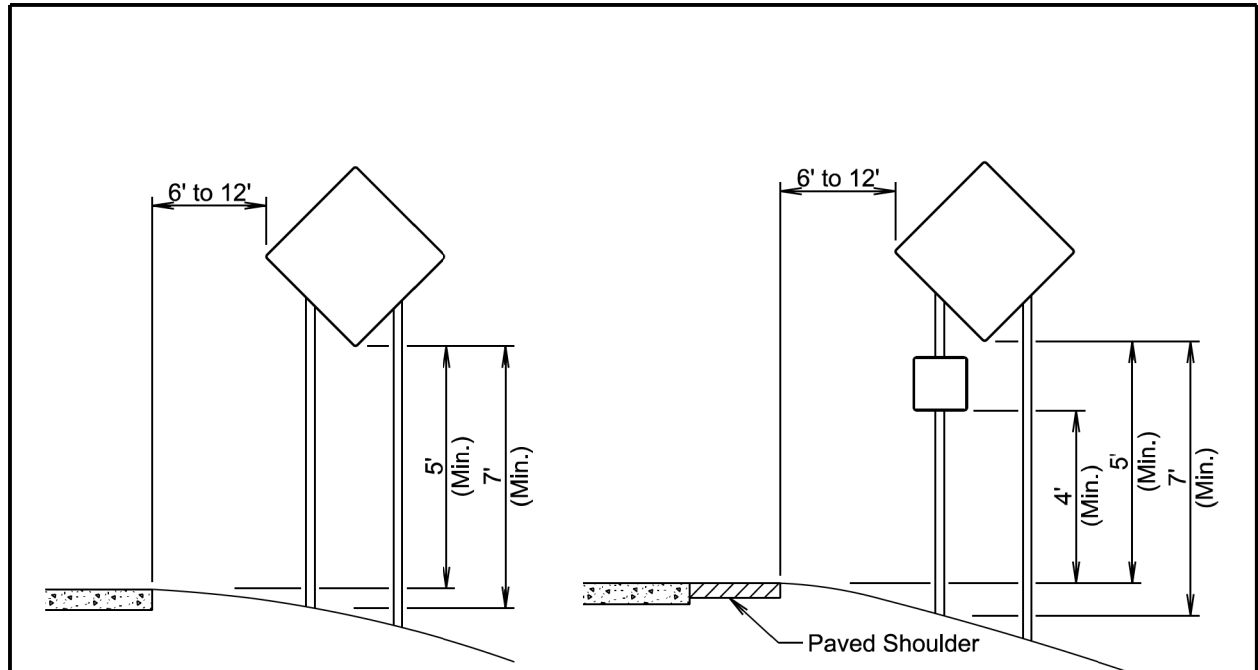
- * Spacing is 40' for 42" cones.
 - ⊙ Reflectorized Drum
 - Channelizing Device
 - ④ 4" White Temporary Pavement Marking
- Temporary pavement markings will be used if traffic control must remain overnight.

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

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

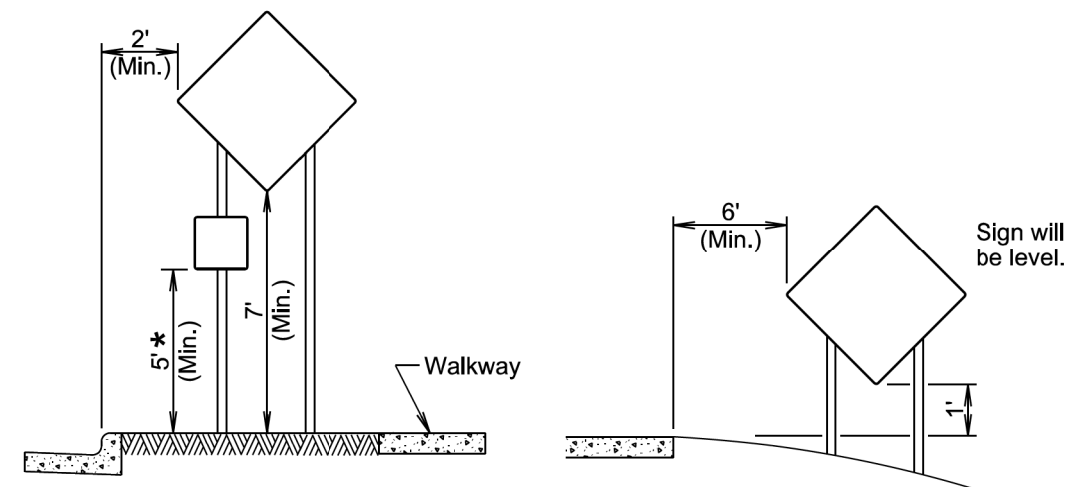


September 22, 2021



RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



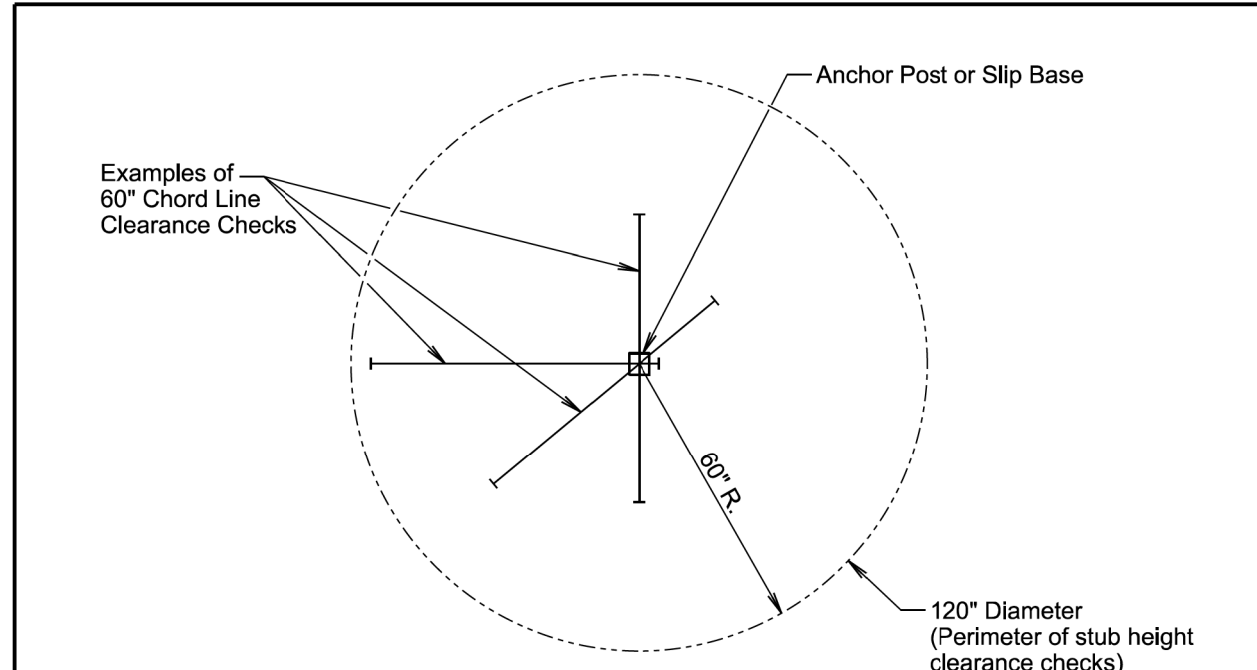
URBAN DISTRICT

RURAL DISTRICT 3 DAY MAXIMUM

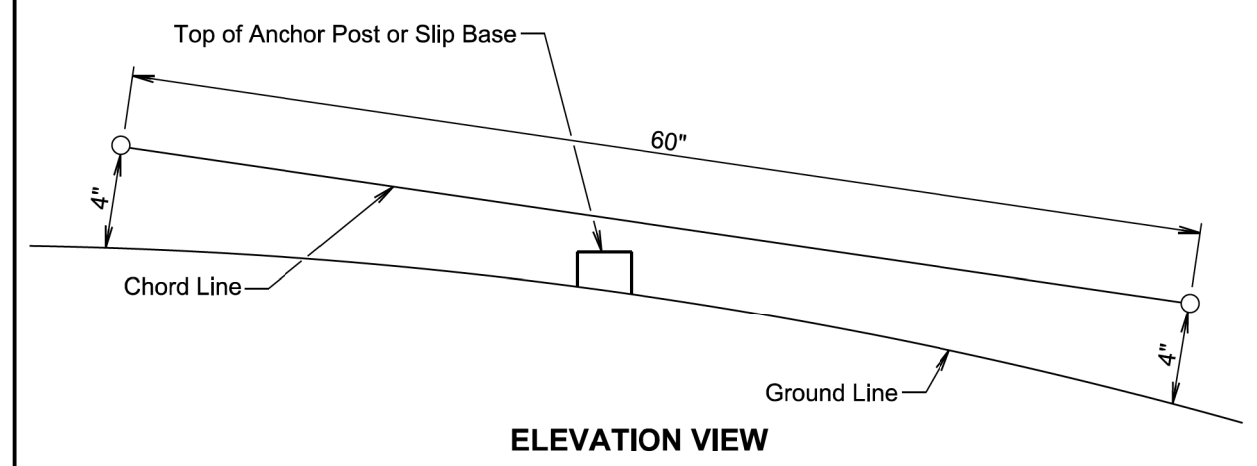
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2026	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

- The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.
- At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.
- The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2026	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

HIGH FRICTION SURFACE TREATMENT LAYOUT



PLOT SCALE - 1:80

PLOT NAME - 5

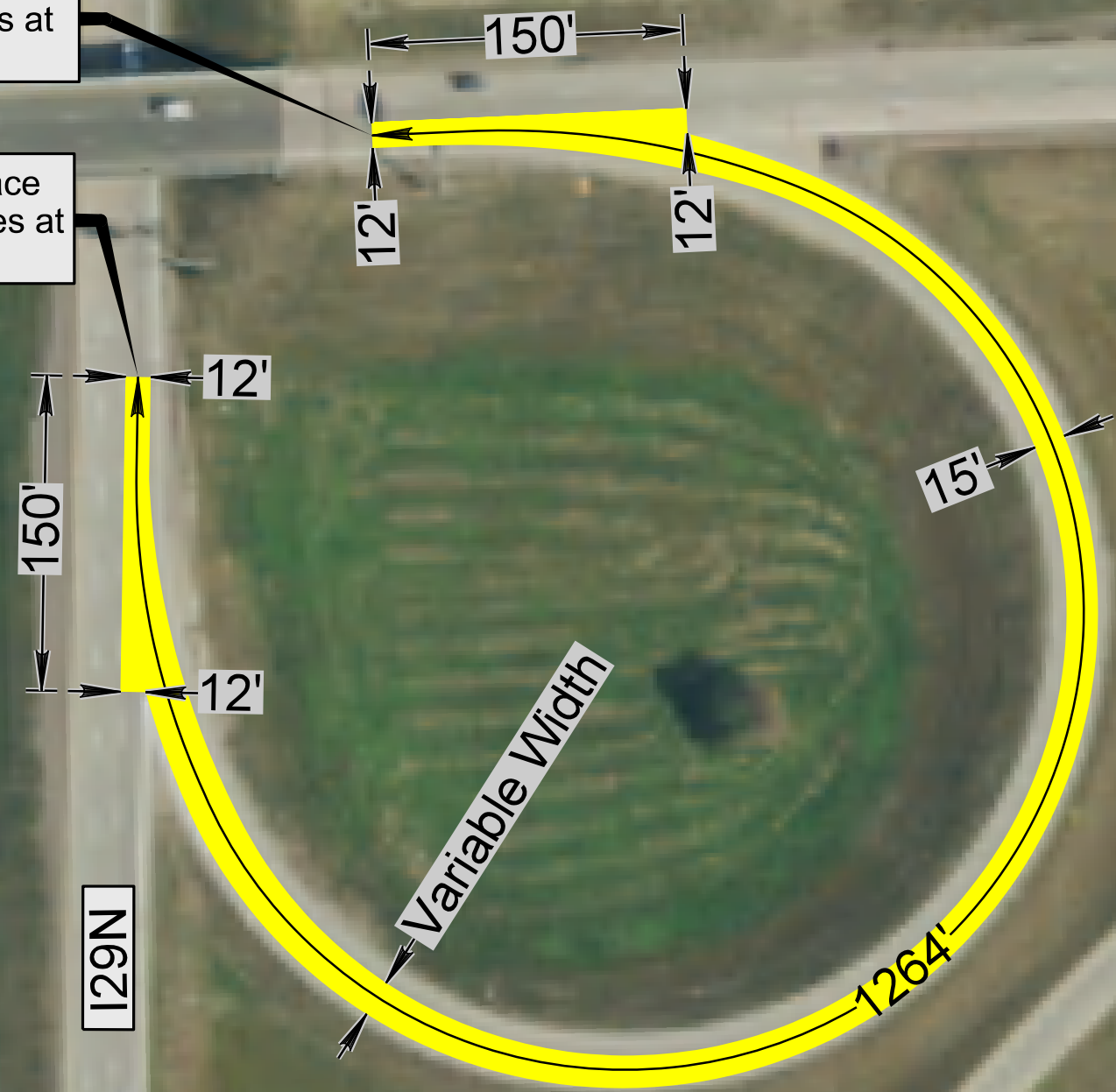
FILE - ... \PRJ2026\REC0604\190ANDI29.DGN

I90W

I90E

Begin High Friction Surface in I90 Eastbound Lanes at MRM 396.55 +0.008

End High Friction Surface in I29 Northbound Lanes at MRM 84.00 +0.182



I29S

I29N

Bid Item	Quantity
Abrasive Blasting of PCC Pavement	2278 SqYd
High Friction Surface Treatment	2278 SqYd

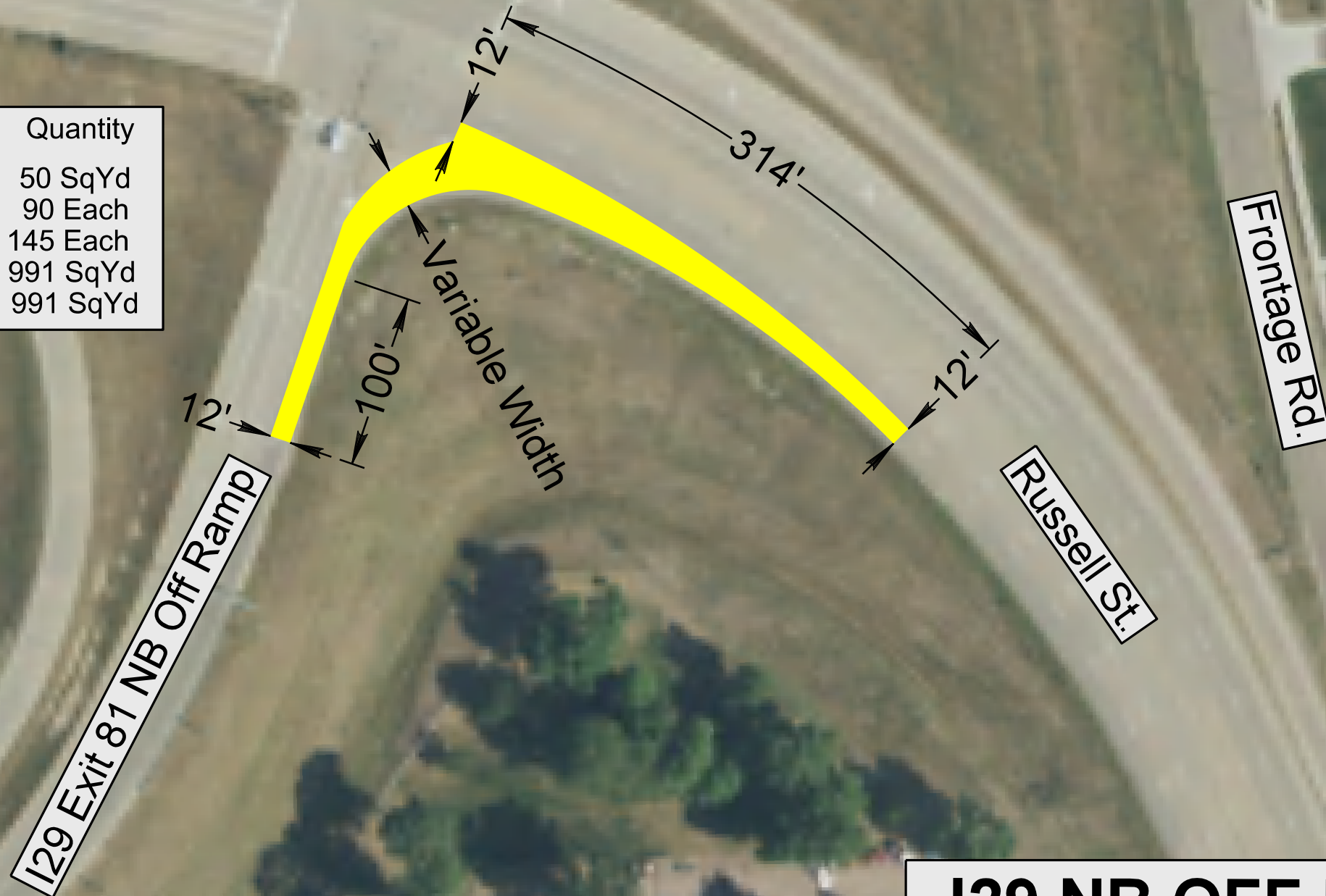
**I90E TO I29N RAMP
IN
MINNEHAHA COUNTY**

PLOTTED FROM - TRM111118

HIGH FRICTION SURFACE TREATMENT LAYOUT



Bid Item	Quantity
Nonreinforced PCC Pavement Repair	50 SqYd
Dowel Bars	90 Each
Insert Steel Bar in PCC Pavement	145 Each
Abrasive Blasting of PCC Pavement	991 SqYd
High Friction Surface Treatment	991 SqYd



**I29 NB OFF RAMP TO
EB RUSSELL ST IN
MINNEHAHA COUNTY**

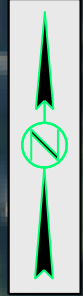
PLOT SCALE - 1:80

PLOTTED FROM - TRM111118

FILE - ... \PRJ2026\REC060604\RUSSELL ST.DGN PLOT NAME - 6

HIGH FRICTION SURFACE TREATMENT LAYOUT

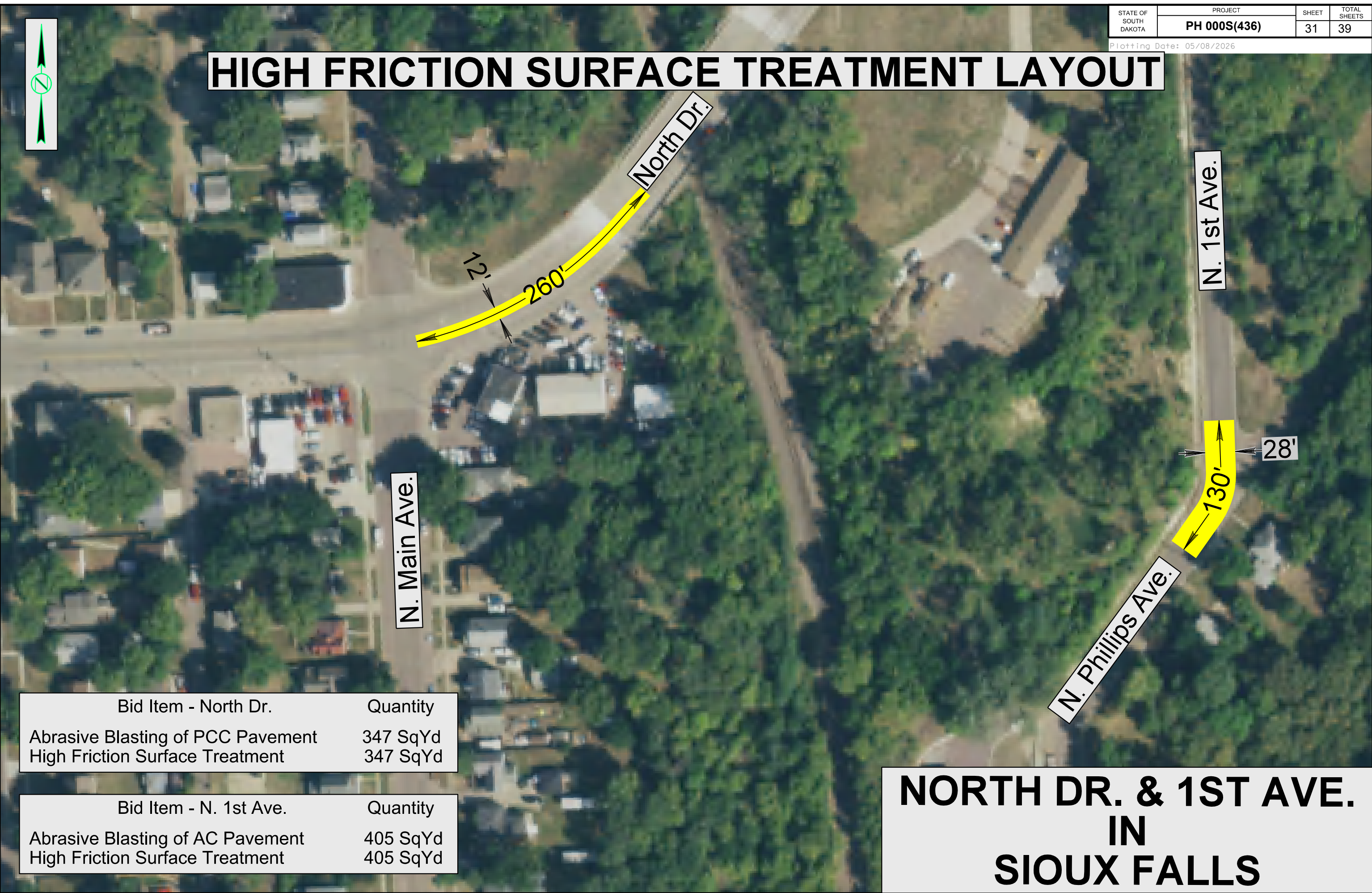
PLOT SCALE - 1:80



PLOTTED FROM - TRM11118

PLOT NAME - 7

FILE - ... \NORTHDRR1VERSIDEAVE.DGN



Bid Item - North Dr.	Quantity
Abrasive Blasting of PCC Pavement	347 SqYd
High Friction Surface Treatment	347 SqYd

Bid Item - N. 1st Ave.	Quantity
Abrasive Blasting of AC Pavement	405 SqYd
High Friction Surface Treatment	405 SqYd

NORTH DR. & 1ST AVE. IN SIOUX FALLS

HIGH FRICTION SURFACE TREATMENT LAYOUT



PLOT SCALE - 1:80

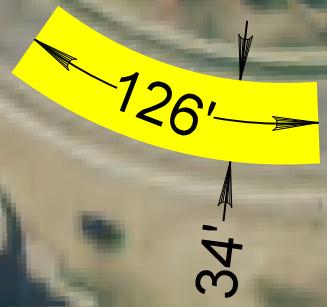
PLOT NAME - 8

FILE - ... \PRJ2026\REC0604\W18THST.DGN

W. 18th St.

S. Marion Rd.

W. Equestrian Pl.



Bid Item	Quantity
Abrasive Blasting of AC Pavement	476 SqYd
High Friction Surface Treatment	476 SqYd

**18TH ST.
IN
SIOUX FALLS**

PLOTTED FROM - TRM111118

HIGH FRICTION SURFACE TREATMENT LAYOUT



PLOT SCALE - 1:80

PLOT NAME - 9



FILE - ... \RECH0604\ARCADIA\HANDCLIFF.DGN

E. Ridge Rd.

E. 36th St.

160'

34'

Cliff Ave.

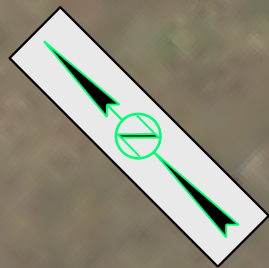
E. 38th St.

Bid Item	Quantity
Abrasive Blasting of AC Pavement	605 SqYd
High Friction Surface Treatment	605 SqYd

**ARCADIA RD.
IN
SIOUX FALLS**

PLOTTED FROM - TRM111118

HIGH FRICTION SURFACE TREATMENT LAYOUT



PLOT SCALE - 1:80

PLOT NAME - 10

FILE - ... \PRJ2026\REC0604\129MR15.DGN

Begin High Friction Surface in I29 Northbound Lanes at MRM 15.00 +0.117

I29N

I29S

End High Friction Surface in I29 Northbound Lanes at MRM 15.00 +0.297

950'

24'

950'

24'

Begin High Friction Surface in I29 Northbound Lanes at MRM 15.00 +0.115

End High Friction Surface in I29 Northbound Lanes at MRM 15.00 +0.295

**I29S & I29N
IN
UNION COUNTY**

Bid Item	Quantity
Abrasive Blasting of PCC Pavement	5070 SqYd
High Friction Surface Treatment	5070 SqYd

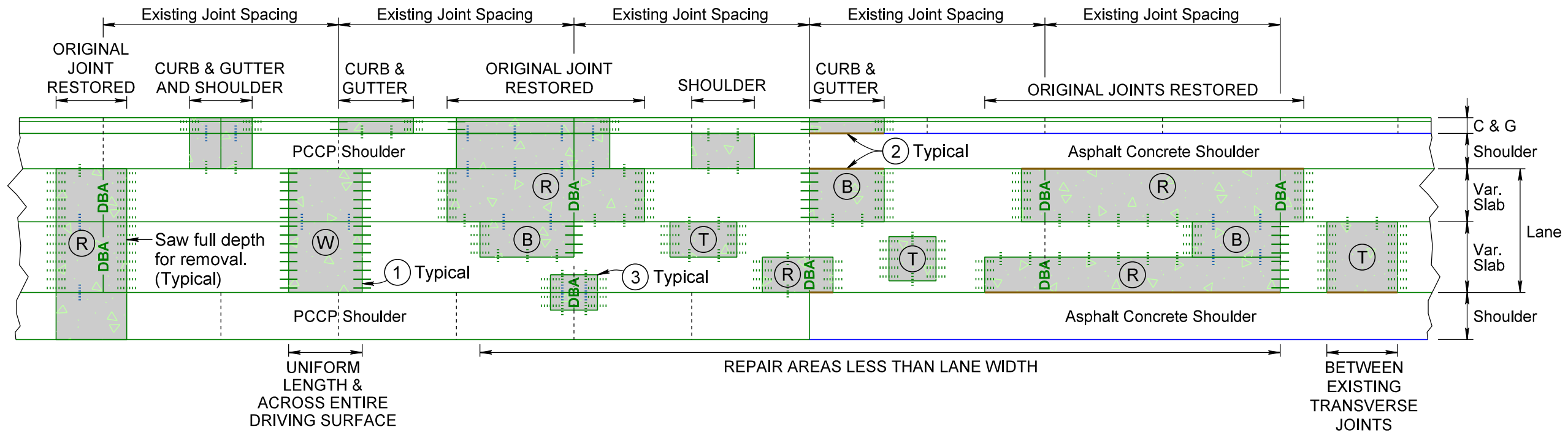
PLOTTED FROM - TRM111118

NONREINFORCED PCC PAVEMENT REPAIR

ANY SINGLE LANE ROADWAY (RAMPS, ETC.) TYPICAL REPAIR AREAS

STATE OF SOUTH DAKOTA	PROJECT PH 000S(436)	SHEET 35	TOTAL SHEETS 39
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Plotting Date: 05/06/2026



KEY:

 PCC Pavement Repair Area

PCC PAVEMENT REPAIR AREA TYPES:

- (W) Two Working Joints (Use only if repair is full roadway width and uniform length (across entire driving surface))
- (T) Two Tied Joints
- (B) One Working & One Tied Joint
- (R) Two Tied Joints with Original Joint Restored with Dowel Bar Assembly

Steel Bars for Transverse Joints

Pavement Thickness ≥ 10.5 "

— Drilled in $1\frac{1}{2}$ " x 18" epoxy coated plain round dowel bars spaced 18" center to center.

..... Drilled in No. 11 x 18" epoxy coated deformed tie bars spaced 18" center to center.

Pavement Thickness ≥ 8.5 " and < 10.5 "

— Drilled in $1\frac{1}{4}$ " x 18" epoxy coated plain round dowel bars spaced 18" center to center.

..... Drilled in No. 9 x 18" epoxy coated deformed tie bars spaced 18" center to center.

Pavement Thickness < 8.5 "

— Drilled in 1" x 18" epoxy coated plain round dowel bars spaced 18" center to center.

..... Drilled in No. 8 x 18" epoxy coated deformed tie bars spaced 18" center to center.

DBA Dowel Bar Assembly

Steel Bars for Longitudinal Joints

..... No. 5 x 30" epoxy coated deformed tie bars. Sawn Joint - spaced 48" center to center. Construction Joint - spaced 48" center to center.

..... No. 5 x 24" epoxy coated deformed tie bars. Drilled In - spaced 30" center to center.

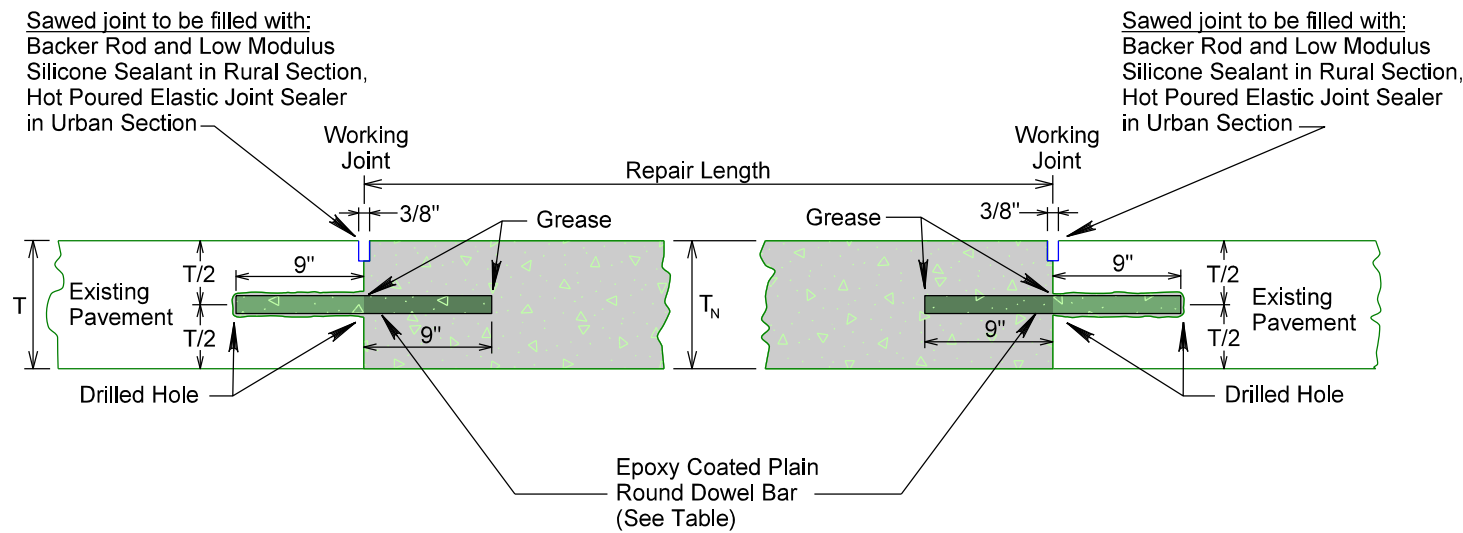
NOTES: Saw around repair areas full depth for removal.

- ① Where possible, transverse joints will be constructed/maintained full roadway width.
- ② Edges of repair areas will be formed to match the width of the existing concrete pavement.
- ③ Need for bars in small repair areas on/near the shoulder to be determined on a case-by-case basis, on construction by the Engineer.

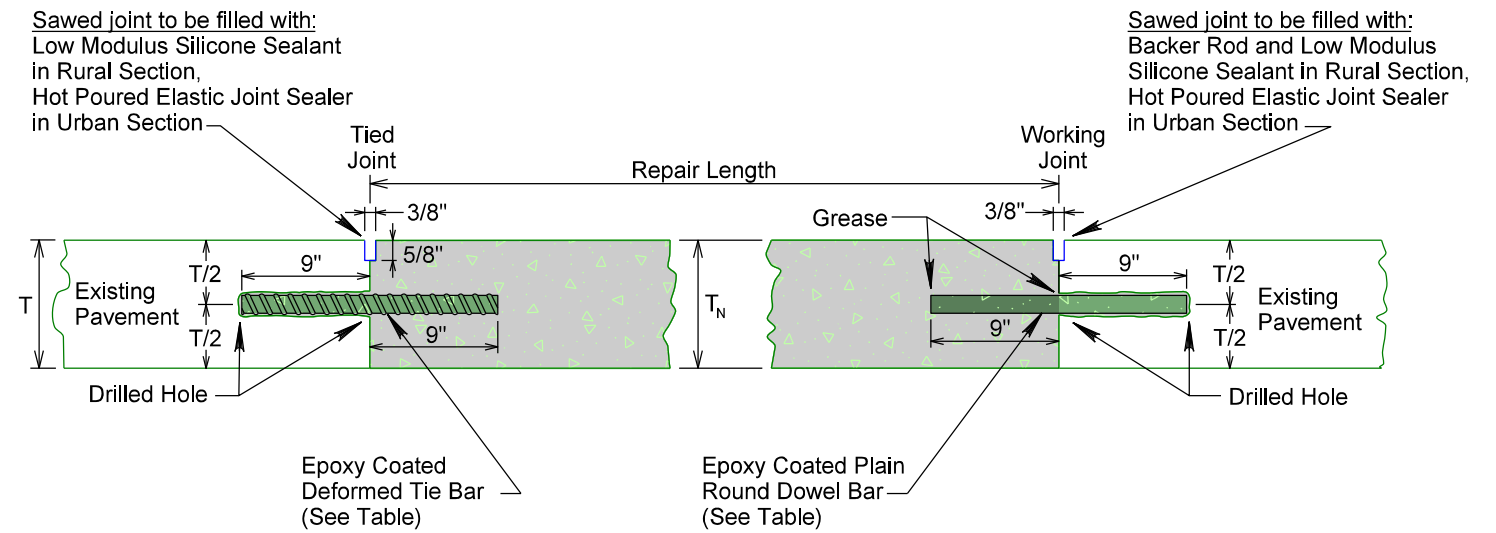
NONREINFORCED PCC PAVEMENT REPAIR

Plotting Date: 05/06/2026

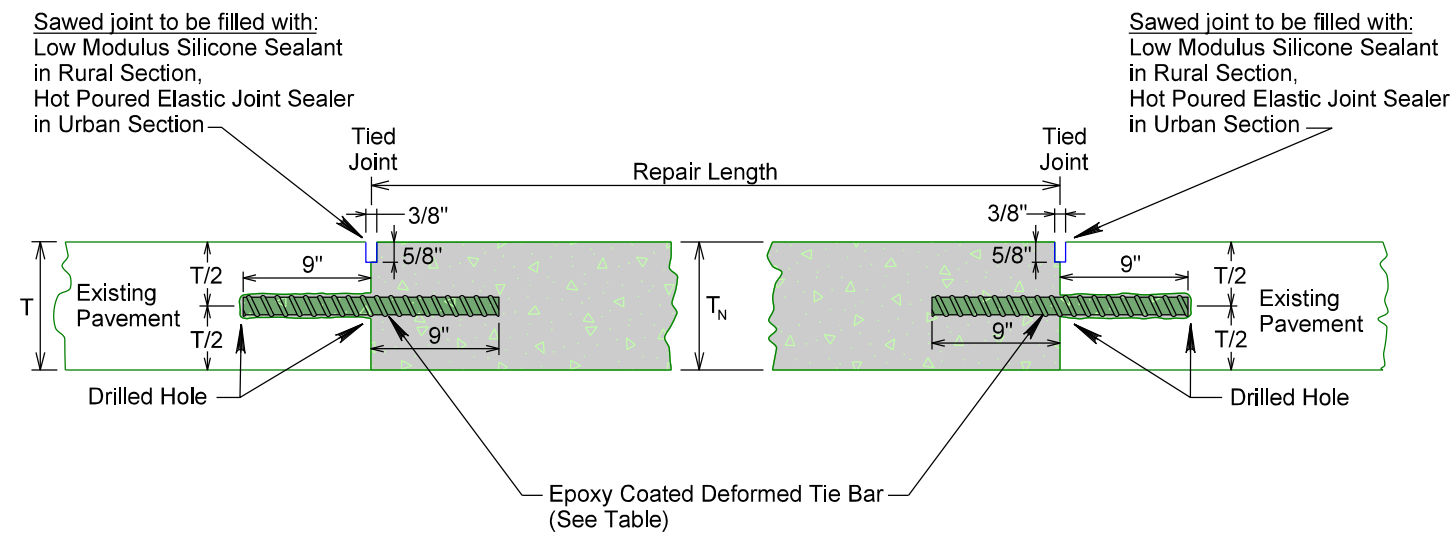
**PLAIN ROUND DOWEL BAR INSERTION
TYPE W - (TWO WORKING JOINTS)**



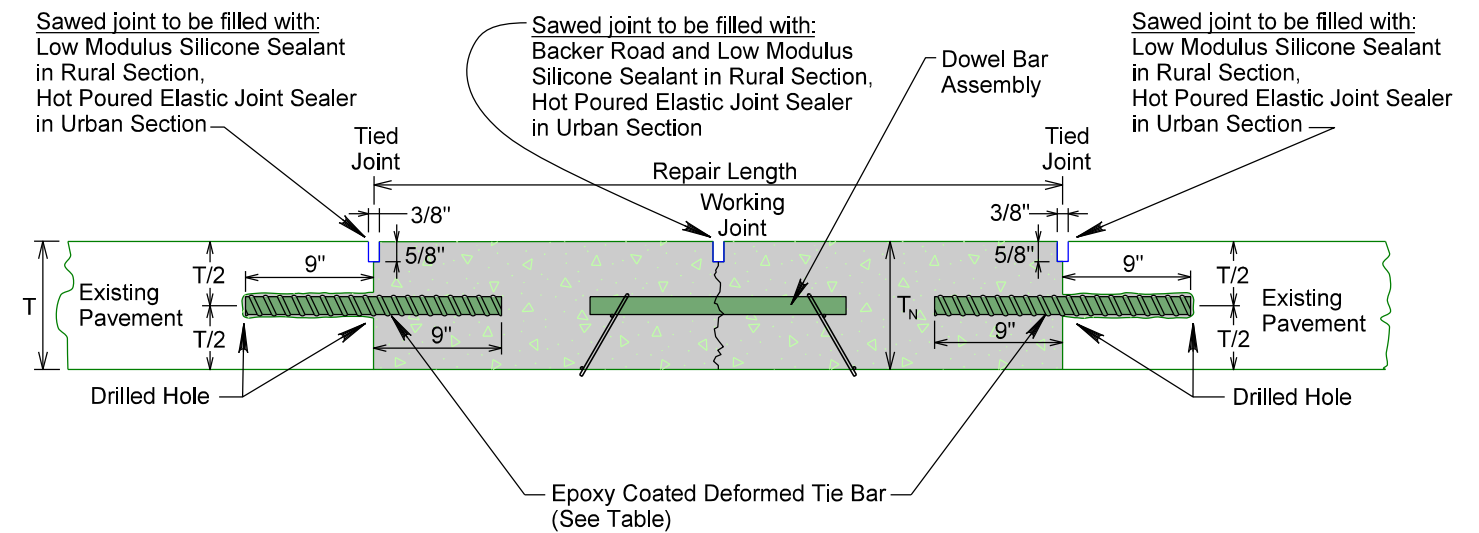
**DEFORMED TIE BAR AND PLAIN ROUND DOWEL BAR INSERTION
TYPE B - (ONE TIED JOINT AND ONE WORKING JOINT)**



**DEFORMED TIE BAR INSERTION
TYPE T - (TWO TIED JOINTS)**



**DEFORMED TIE BAR INSERTION WITH DOWEL BAR ASSEMBLY
TYPE R - (TWO TIED JOINTS AND ONE WORKING JOINT - ORIGINAL JOINT RESTORED)**



Existing Pavement Thickness	Epoxy Coated Deformed Tie Bar Size	Epoxy Coated Plain Round Dowel Bar Size
$T \geq 10.5"$	No. 11 x 18"	1½" x 18"
$T \geq 8.5"$ & $T < 10.5"$	No. 9 x 18"	1¼" x 18"
$T < 8.5"$	No. 8 x 18"	1" x 18"

T = Existing pavement thickness.
T_N = New pavement thickness.

Bar embedded to a minimum depth of 9 inches into the existing pavement by utilizing an epoxy resin adhesive.

Cost for furnishing and inserting steel bars (deformed tie and plain round dowel) will be included in the contract unit price per each for Insert Steel Bar in PCC Pavement.

Cost for furnishing and installing dowel bar assembly will be included in the contract unit price per each for Dowel Bar.

T_N = T
(top of new pavement will be flush with top of existing pavement)

PLOT SCALE - 1/4"=1'-0"

PLOTTED FROM - TRM111118

PLOT NAME - 12

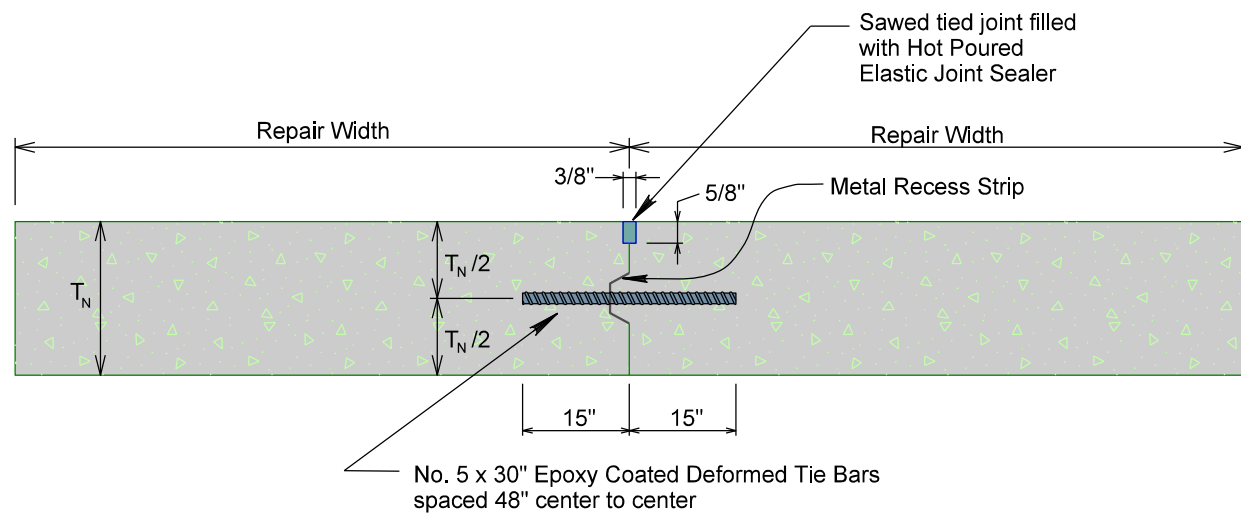
FILE - ... \PRJ2026\REC0604\BARS.DGN

NONREINFORCED PCC PAVEMENT REPAIR

STATE OF SOUTH DAKOTA	PROJECT PH 00S(436)	SHEET 37	TOTAL SHEETS 39
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Plotting Date: 05/06/2026

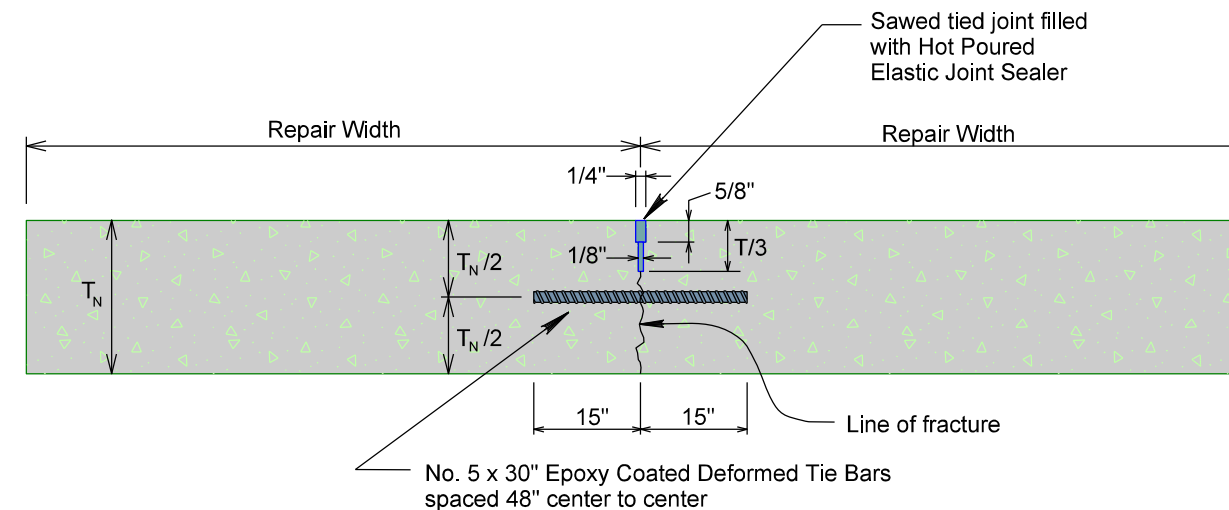
LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS & KEYWAY



T_N = New pavement thickness.

Cost for furnishing and inserting tie bars will be incidental to the contract unit price per square yard for Nonreinforced PCC Pavement Repair.

SAWED LONGITUDINAL JOINT

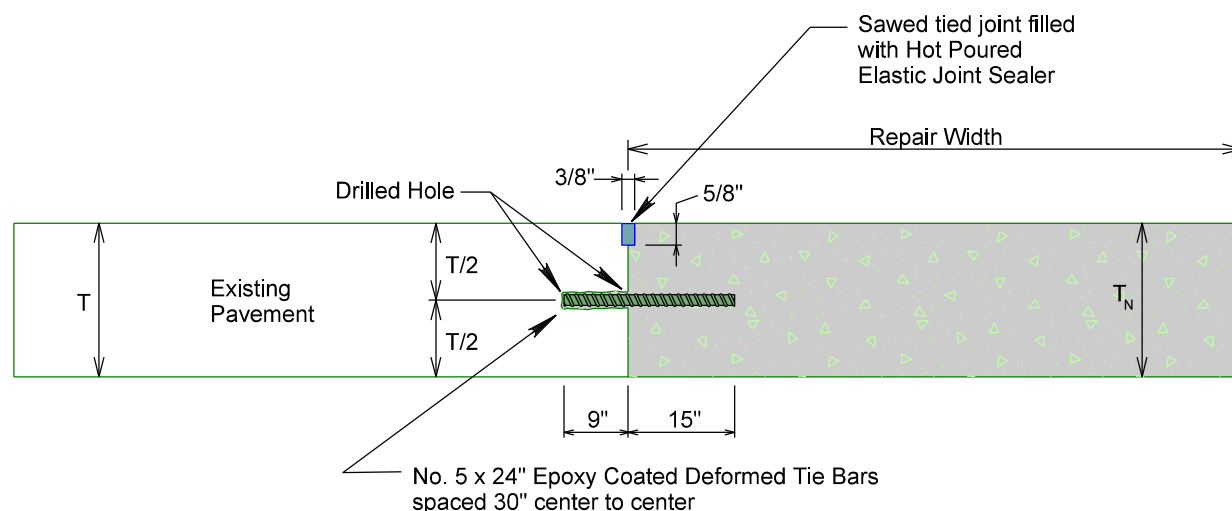


T_N = New pavement thickness.

The first saw cut to control cracking will be a minimum of 1/3 the depth of the pavement. Additional sawing for widening the saw cut will be necessary.

Cost for furnishing and inserting tie bars will be incidental to the contract unit price per square yard for Nonreinforced PCC Pavement Repair.

LONGITUDINAL CONSTRUCTION JOINT WITH DRILLED IN TIE BARS



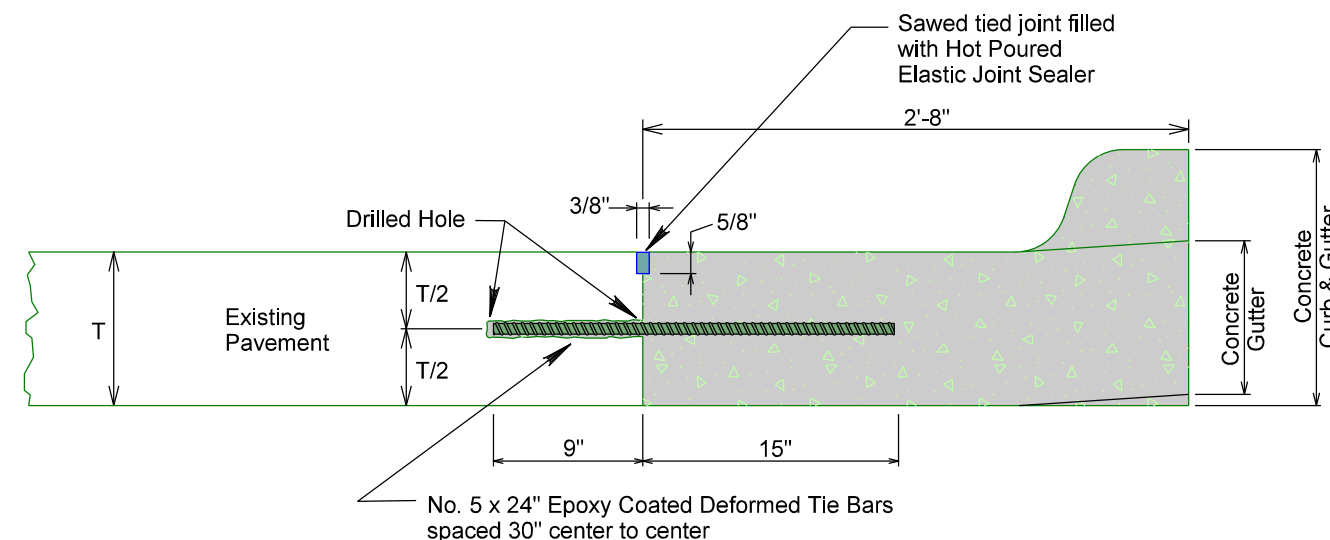
T = Existing pavement thickness.
 T_N = New pavement thickness.

Bar embedded a minimum depth of 9 inches into the existing pavement by utilizing an epoxy resin adhesive.

Bars will be placed a minimum of 15 inches from existing transverse contraction joints.

Cost for furnishing and inserting drilled in tie bars will be included in the contract unit price per each for Insert Steel Bar in PCC Pavement.

LONGITUDINAL CONSTRUCTION JOINT WITH DRILLED IN TIE BARS



T = Existing pavement thickness.

Bar embedded a minimum depth of 9 inches into the existing pavement by utilizing an epoxy resin adhesive.

Bars will be placed a minimum of 15 inches from existing transverse contraction joints.

Cost for furnishing and inserting drilled in tie bars will be included in the contract unit price per each for Insert Steel Bar in PCC Pavement.

PLOT SCALE - 1:11.25

PLOTTED FROM - TRM111118

PLOT NAME - 13

FILE - ... \PRJ2026\REC0604\BARS.DGN

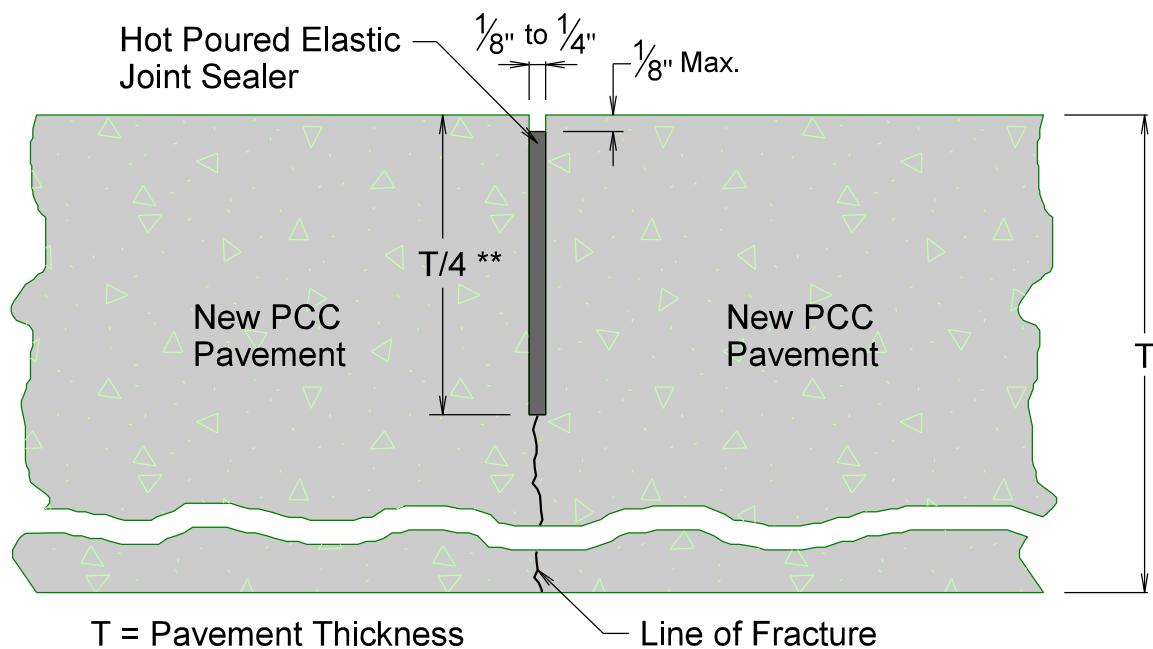
NONREINFORCED PCC PAVEMENT REPAIR

SAW & SEAL TRANSVERSE JOINTS

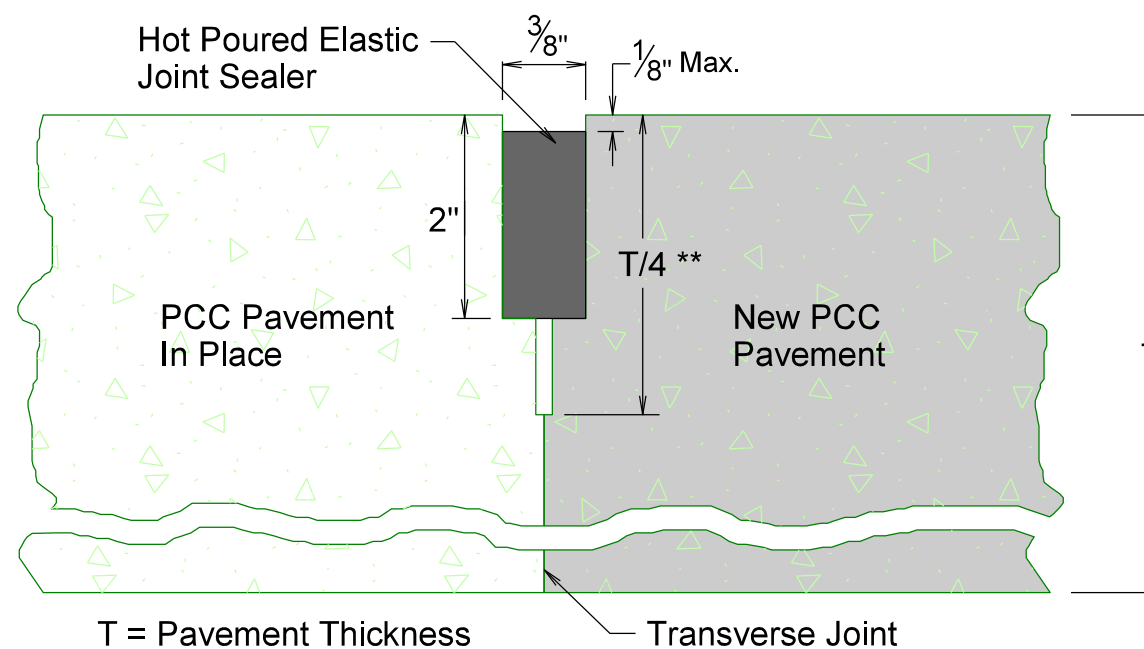
STATE OF SOUTH DAKOTA	PROJECT PH 00S(436)	SHEET 38	TOTAL SHEETS 39
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Plotting Date: 05/06/2026

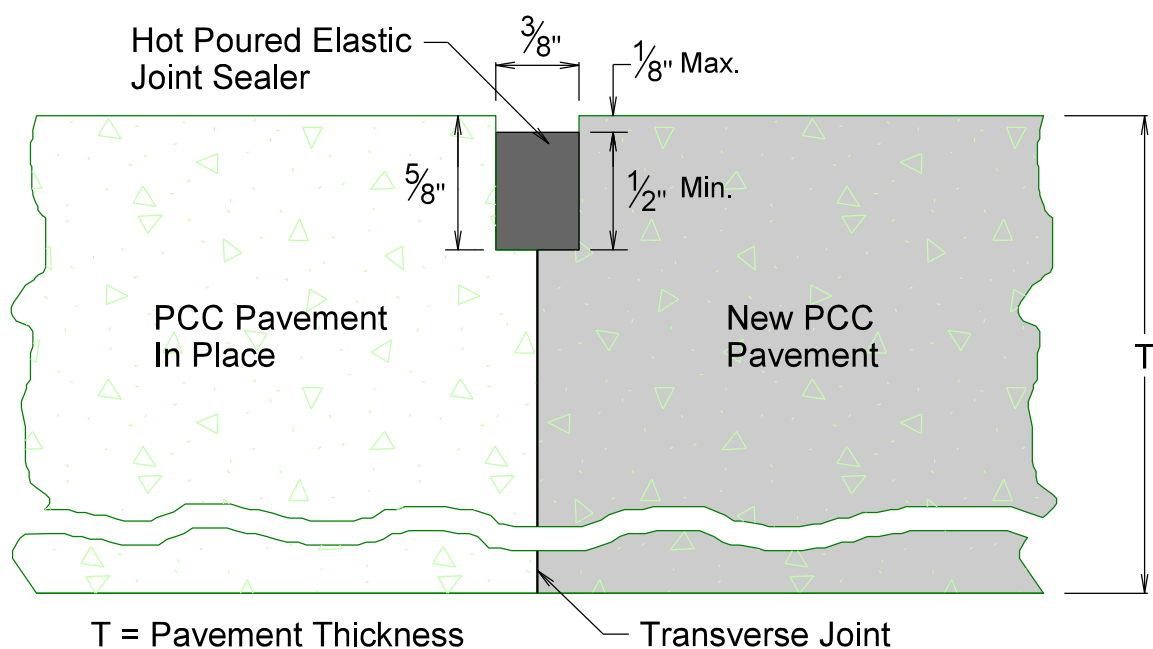
WITH HOT POURED ELASTIC JOINT SEALER AT WORKING JOINTS ENTIRELY WITHIN REPAIR AREAS



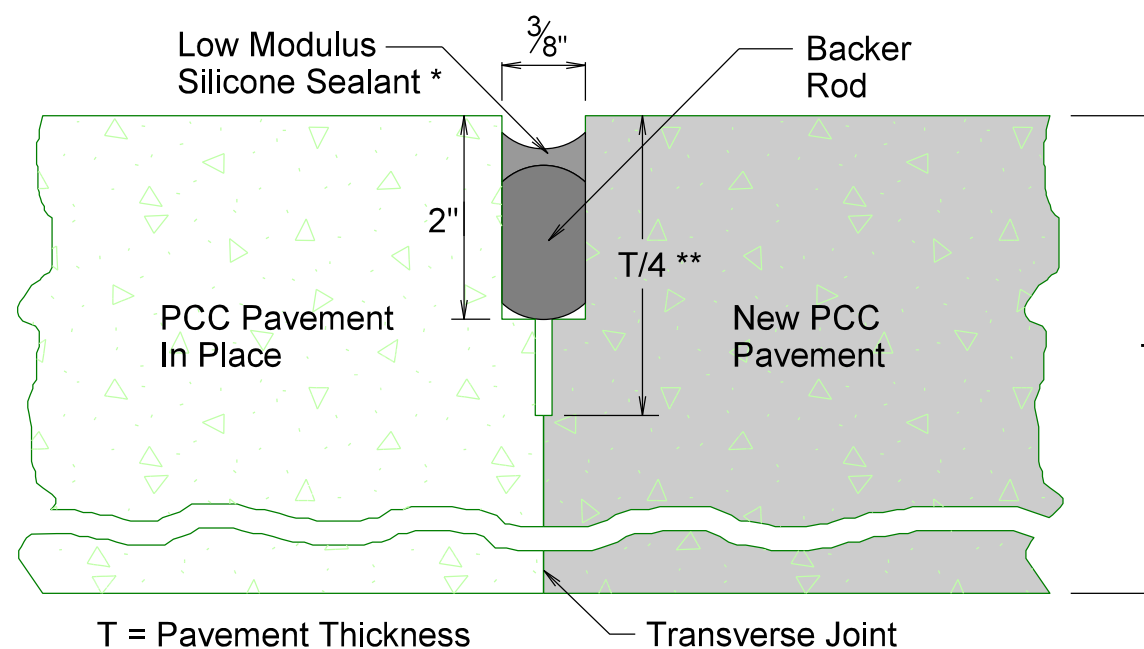
WITH HOT POURED ELASTIC JOINT SEALER AT WORKING JOINTS (TYPICALLY URBAN)



WITH HOT POURED ELASTIC JOINT SEALER AT TIED JOINTS



WITH LOW MODULUS SILICONE SEALANT AT WORKING JOINTS (TYPICALLY RURAL)



* Refer to Standard Plate 380.13 for installation details using Joint Width J=3/8".

** The saw cut to control cracking will be a minimum of 1/4 the thickness of the pavement.

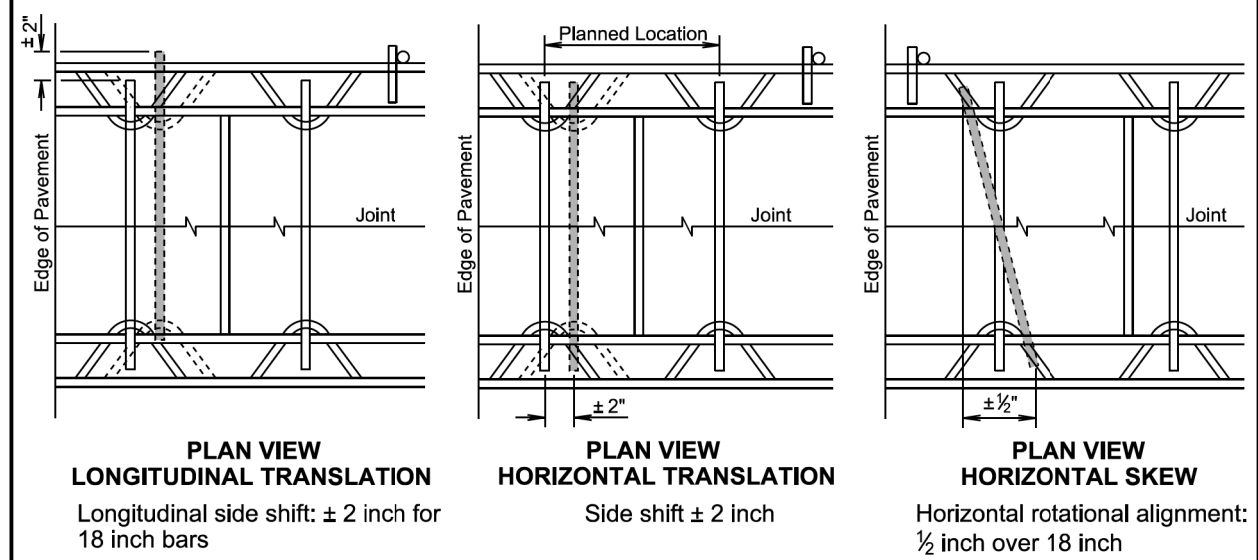
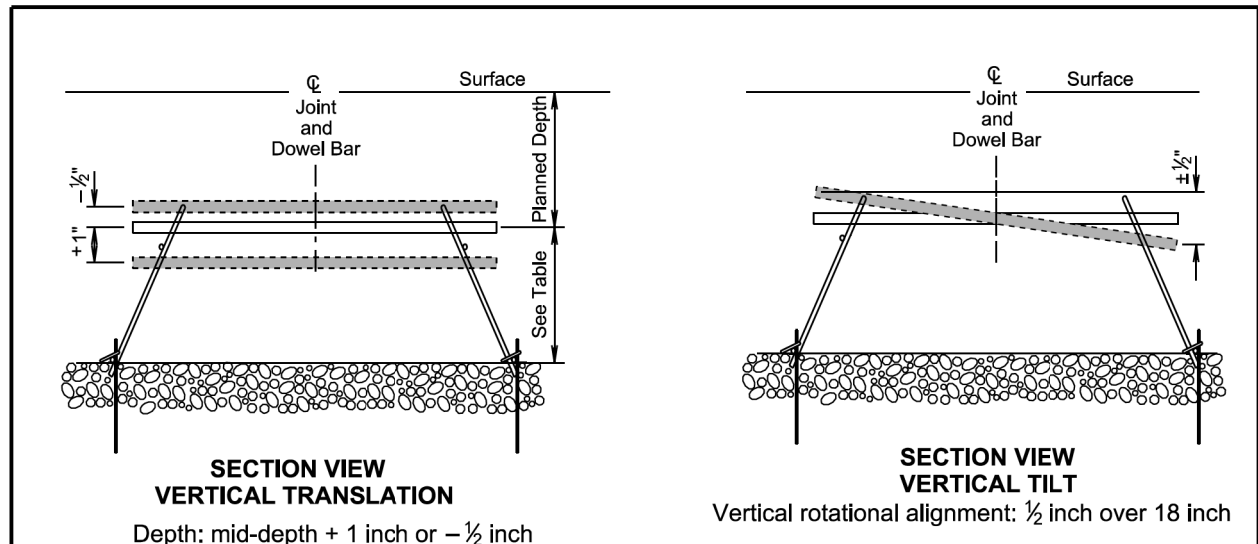
PLOT SCALE - 1:0.12

PLOTTED FROM - TRM11118

PLOT NAME - 14

FILE - ... \REPAIR AREA - TRANSVERSE JOINT DETAILS.DGN

Plotting Date: 05/06/2026



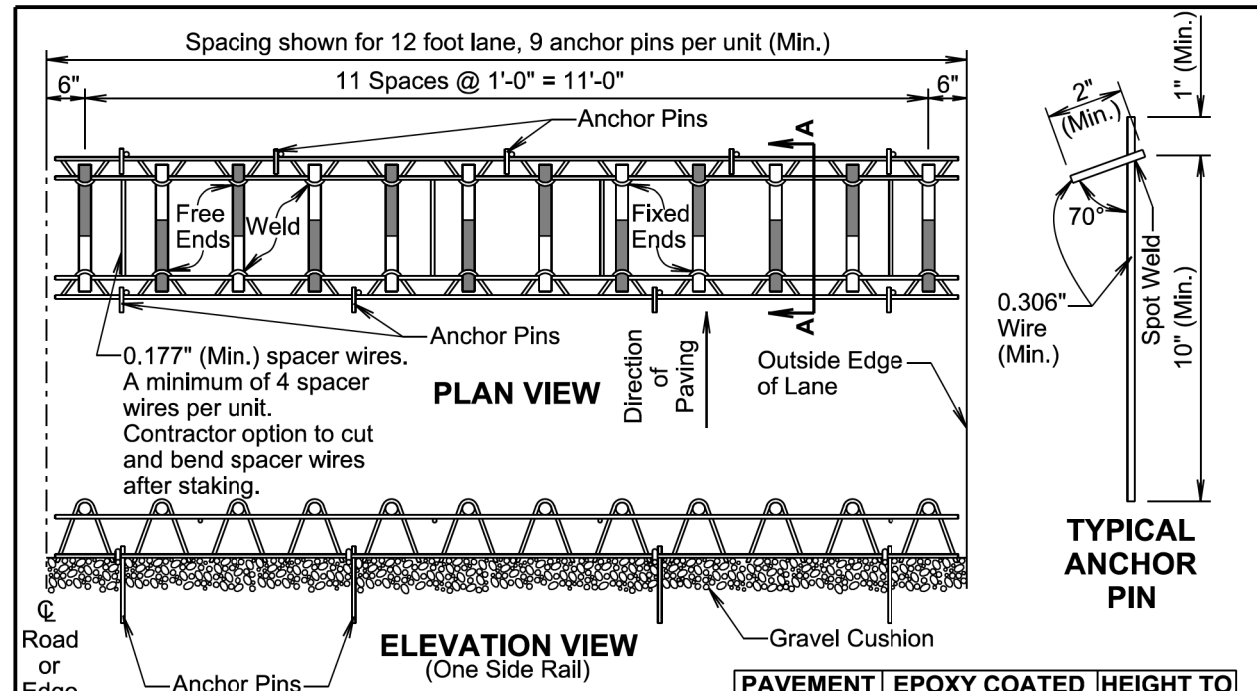
PAVEMENT THICKNESS	EPOXY COATED DOWEL BAR SIZE	HEIGHT TO CENTER
7" to 7 1/2"	1" x 18"	3.0"
8" to 10"	1 1/4" x 18"	4.0"
10 1/2" to 13"	1 1/2" x 18"	5.0"

GENERAL NOTE:
The tolerances shown above represent the maximum deviation for acceptance of dowel bar placement.

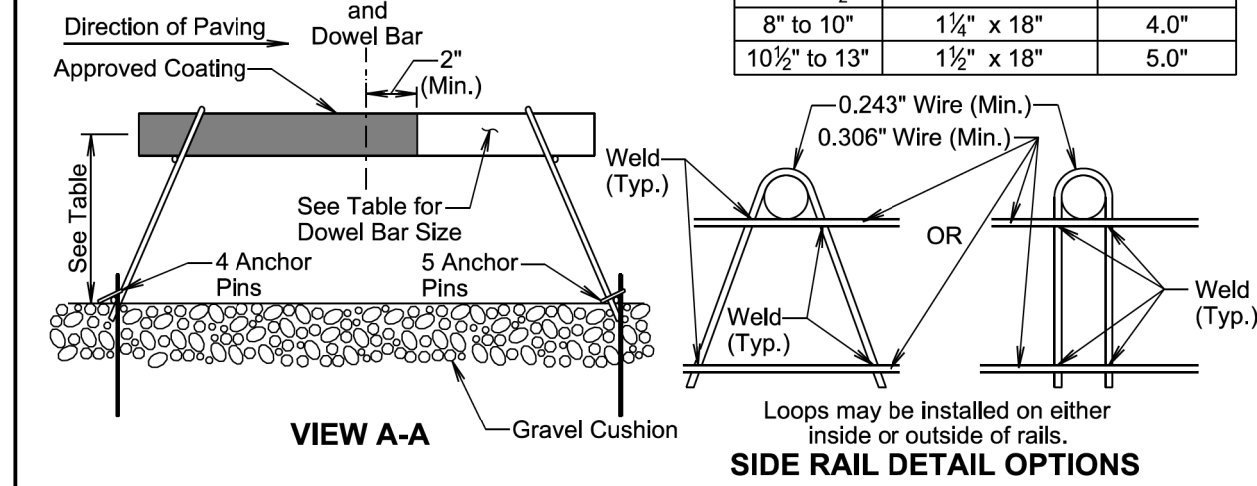
November 19, 2022

S D D O T	PCC PAVEMENT DOWEL BAR ALIGNMENT TOLERANCES	PLATE NUMBER 380.01
		Sheet 1 of 1

Published Date: 2026



PAVEMENT THICKNESS	EPOXY COATED DOWEL BAR SIZE	HEIGHT TO CENTER
7" to 7 1/2"	1" x 18"	3.0"
8" to 10"	1 1/4" x 18"	4.0"
10 1/2" to 13"	1 1/2" x 18"	5.0"



GENERAL NOTES:

Longitudinal joint tie bars will be placed a minimum of 15 inches from the transverse contraction joint.

The transverse contraction joints will be sawed perpendicular to the centerline of the roadway. The transverse sawed joint will be centered over the dowel bars.

Supporting devices as shown on this sheet, or equivalent as approved by the Engineer, will be used to maintain proper horizontal and vertical alignment of the dowel bars.

All dowel bar alignment tolerances will be as shown in the PCC Pavement Dowel Bar Alignment Tolerances standard plate.

November 19, 2022

S D D O T	PCC PAVEMENT DOWEL BAR ASSEMBLY FOR TRANSVERSE CONTRACTION JOINTS 12 Bar Assembly on Granular Base Material	PLATE NUMBER 380.04
		Sheet 1 of 1

Published Date: 2026

PLOT SCALE - 1:200

PLOTTED FROM - TRM111118

PLOT NAME - 15

FILE - ... \STANDARDPLATES_0604.DGN