

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	029N-291	1	24

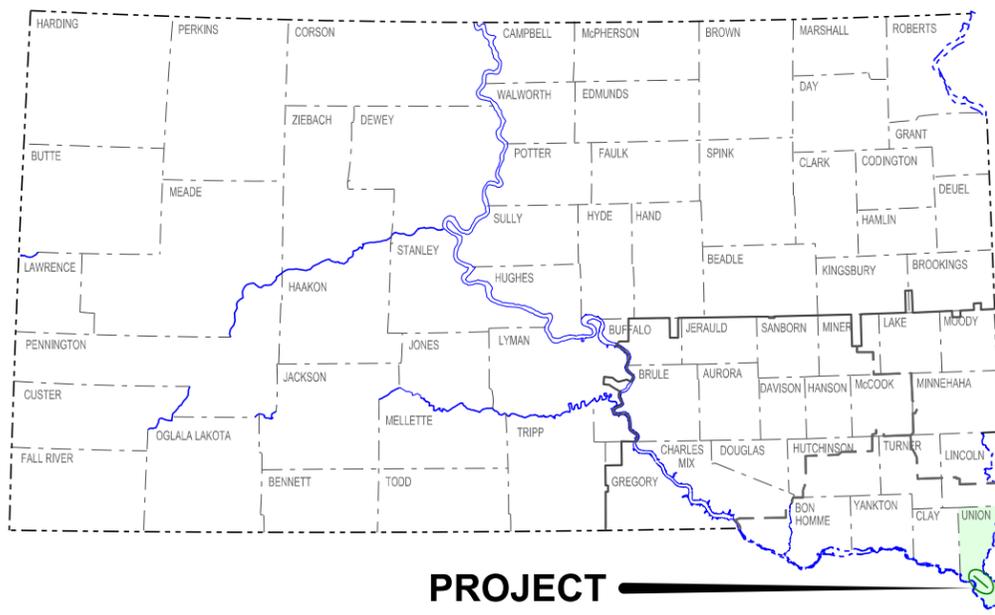
Plotting Date: 03/13/2026

PLANS FOR PROPOSED
PROJECT 029N-291
INTERSTATE 29 NBL
UNION COUNTY

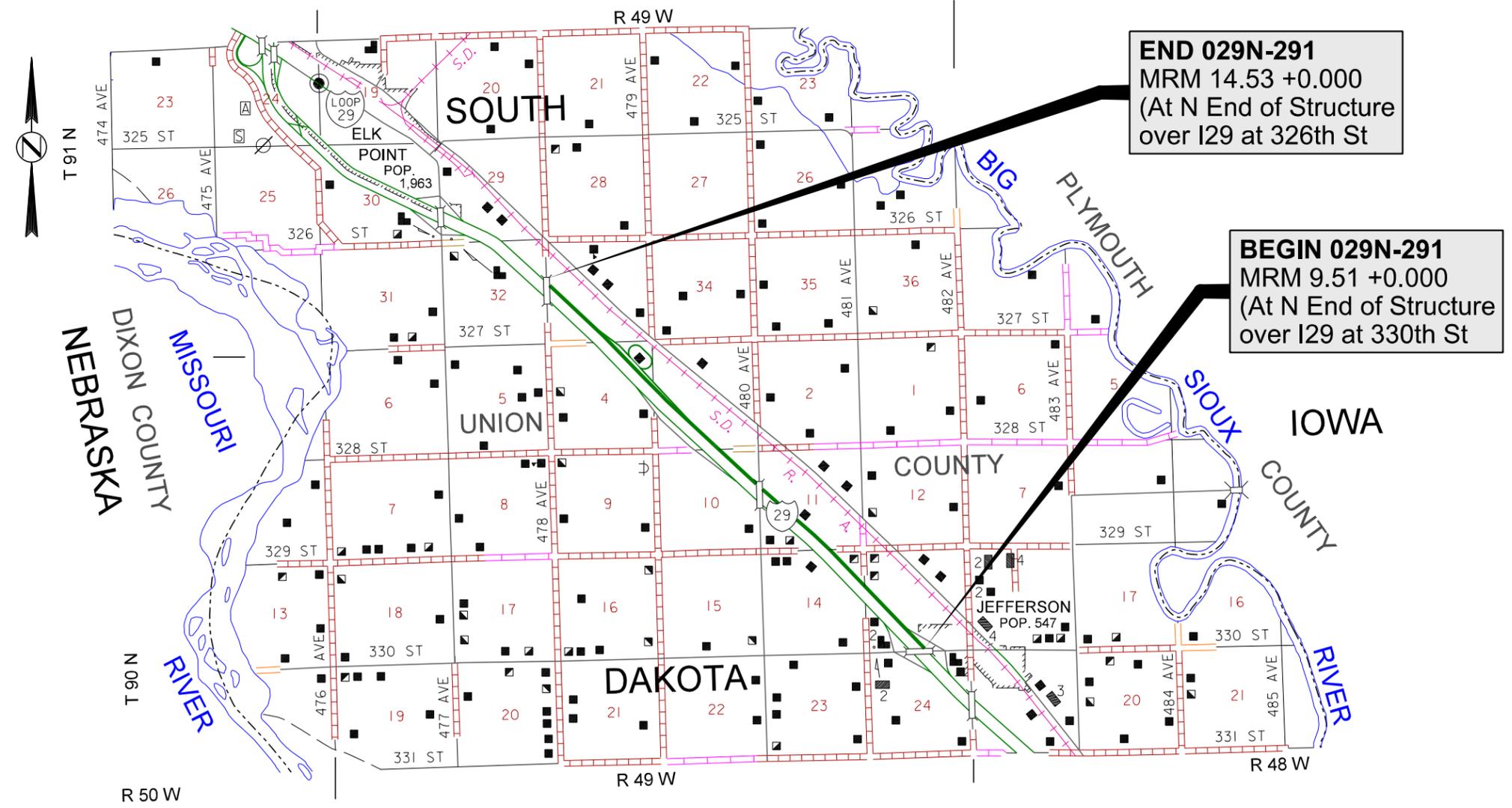
CRC PAVEMENT REPAIR
PCN I83P

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PROJECT



DESIGN DESIGNATION
(I29N)

ADT(2025)	8,070
ADT(2045)	13,283
DHV	1,480
D	50%
T DHV	15.2%
T ADT	33.3%
V	80 MPH

STORM WATER PERMIT
(None required)

LENGTH
Length: 5.039 Miles

PLOT SCALE = 1" = 7000'

PLOTTED FROM: TRMLINT15

FILE: \\...\\I83P - 01 - TITLE.DGN

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029N-291	2	24

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
380E5100	Continuously Reinforced PCC Pavement Repair	192.0	SqYd
380E6110	Insert Steel Bar in PCC Pavement	75	Each
634E0010	Flagging	20.0	Hour
634E0110	Traffic Control Signs	246.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	2	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0640	Temporary Pavement Marking	1,920	Ft
634E1255	Contractor Furnished Vehicle Speed Feedback Sign	1	Each

ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	029N-291	3	24

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 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

State Historic Preservation Office (SHPO or THPO) concurrence has not been obtained for this project.

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.

The Contractor is responsible 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.

TABLES FOR PAVEMENT REPAIR

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	029N-291	4	24

TABLE FOR CRC PAVEMENT REPAIR ON 029N-291 - PCN I83P

MRM	DISP	PASSING LANE		DRIVING LANE		CRCP REPAIR SqYds
		L Ft	W Ft	L Ft	W Ft	
9.00	0.883			5.5	2	1.2
9.00	0.887			4	4	1.8
9.00	0.890			5	2	1.1
9.00	0.894	4	2			0.9
10.00	0.153			11	2	2.4
10.00	0.480			9	2	2.0
10.00	0.502	8.5	2			1.9
10.00	0.898			25	2	5.6
10.00	0.919			13	2	2.9
10.00	0.959			4.5	2	1.0
10.00	0.963			4	2	0.9
11.00	0.232			11	2	2.4
11.00	0.272			4	2	0.9
11.00	0.344	4	2			0.9
11.00	0.362			5.5	2	1.2
11.00	0.535			13.5	2	3.0
11.00	0.578	8	2			1.8
11.00	0.718			5	2	1.1
11.00	0.844	10.5	2			2.3
11.00	0.848	8.5	2			1.9
11.00	0.855			5	2	1.1
11.00	0.931	4.5	2			1.0
11.00	0.981			10	2	2.2
11.00	0.985			4	2	0.9
12.00	0.078	6	2			1.3
12.00	0.096	7	2			1.6
12.00	0.269			20	2	4.4
12.00	0.294			6	2	1.3
12.00	0.298			4.5	2	1.0
12.00	0.301	5	2			1.1
13.00	0.100			4	2	0.9
13.00	0.118			40	3	13.3
13.00	0.125	5	2			1.1
13.00	0.136			68	14	105.8
13.00	0.679			15	2	3.3
13.00	0.766			6	2	1.3
13.00	0.798			19	2	4.2
13.00	0.870			19	2	4.2
14.00	0.043			7	2	1.6
14.00	0.075	6	2			1.3
14.00	0.090	8.5	2			1.9
TOTALS:						192.0

TABLES FOR PAVEMENT REPAIR

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	029N-291	5	24

TABLE FOR CRC PAVEMENT REPAIR ON 029N-291 - PCN I83P

REINFORCING STEEL (CRCP) FOR DRIVING LANE (STEEL FOR CRCP IS NOT A BID ITEM - ACTUAL STEEL QUANTITIES WILL VARY DUE TO LOCATION AND SIZE OF INDIVIDUAL REPAIR AREAS)																	INSERT STEEL BAR IN PCC PAVEMENT (CRCP) DRIVING LANE				
MRM	DISP	No. 5 Longitudinal Bars to be lap spliced with existing bars				No. 5 Longitudinal Bars to be spliced together between every other existing longitudinal bar				No. 5 Longitudinal Bars to be spliced together between every other existing longitudinal bar				No. 4 Transverse Bars to be lap spliced with No. 5 x 24" bars		New Trans Bar	Reinforcing Steel	INSERT LONG. BARS Each	INSERT No. 5 x 24" TIE BARS Each	INSERT BAR TOTAL Each	INSERT STEEL BAR IN CRCP TOTAL Each
		# bars @ length	Length	Lap Splice Length	Stagger & Cutoff	# bars @ length	Length	Lap Splice Length	Stagger & Cutoff	# bars @ length	Length	Lap Splice Length	Stagger & Cutoff	# bars @ length	Length						
13.00	0.136	37 bars @ 794" =	2448.17'	30"	14"	19 bars @ 432" * =	684.00'	30"	Var.	19 bars @ 432" * =	684.00'	30"	Var.	37 bars @ 162" =	499.50'	1.75'	4313.931	38	37	75	75
TOTALS:		37 bars	2448'			19 bars	684'			19 bars	684'			37 bars	500'		4314 Lbs	38	37	75	75
ADDITIONAL																					

NOTES

* In Full Width CRCP Repair Areas, where the repair area length L is greater than or equal to 16', the inserted longitudinal bars shall be of variable length to facilitate random staggering of the lap splices. The length given here is an average and does not represent the actual bar length (it is used only for establishing the total bar length needed). Refer to the details for CRC PAVEMENT REPAIR for actual bar lengths.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25; the Contractor will contact the Project Engineer to determine if project changes are necessary to avoid utility impacts.

SCOPE OF WORK

This project consists of full depth replacement of Continuously Reinforced Concrete Pavement (CRCP) in areas where concrete pavement blowups or major failures have occurred.

Full depth CRCP areas vary in length and width. However, CRCP, the minimum length is typically 4 feet for partial lane width repair areas, and the minimum length is typically 4.5 feet for full lane width repair areas. Minimum size for small repair areas – existing steel maintained, is 1 foot x 1 foot.

EXISTING CRC PAVEMENT

I29N (MRM 4.813 to MRM 17.406): The existing pavement is 11.5" x 26' CRC Pavement. The longitudinal reinforcing steel consists of No. 5 deformed bars spaced 4½" center to center, and the transverse reinforcing steel consists of No. 4 deformed bars spaced 42" center to center.

The aggregate in the existing CRC Pavement is quartzite.

The SDDOT Office of Inventory Management & Research has a permanent Weigh in Motion (WIM) located on I 29 N&S, MRM 12.00 + 0.217.

The Contractor will not damage the existing loops, plates, scales, pull boxes, conduit, or electronics cabinet. Any pull boxes, conduit, plates, scales, cabinet, or loops damaged during the construction project will be replaced by the Contractor at the Contractor's expense. The WIM array is visible on the roadway. If necessary, SDDOT Office of Inventory Management & Research will aide in locating the WIM. Contact 605-773-6644, or 605-773-3278 to notify the office and request assistance to locate the WIM.

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.

If additional gravel cushion material is required, the Contractor will place and compact gravel cushion to the satisfaction of the Engineer at no additional cost to the State. Additional gravel cushion can be obtained from the Department of Transportation Maintenance shops located throughout the area. Contact the Project Engineer for direction.

Cost for this work will be incidental to the contract unit prices per square yard for Continuously Reinforced PCC Pavement Repair.

CONTINUOUSLY REINFORCED PCC PAVEMENT REPAIR

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

Locations and size (length or width) of pavement 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.

The Engineer will mark the location of the area to be repaired on construction. Where repair crosses both lanes, the passing lane should be repaired first.

Full Lane Width Repair and Partial Lane Width Repair

The Contractor will saw the in place concrete transversely at four locations for each repair area. Two saw cuts will be full depth. The other two saw cuts will be partial depth saw cuts and will be made to a depth just above the in place reinforcing steel and be placed outside of the previous full depth saw cuts. The outside cuts will be a minimum of 6" from the nearest tight crack outside of the patch.

The Contractor will lift out or break out the center section (including reinforcing steel). In the salvaged rebar sections of the repair areas, the use of 30 or 60 pound hammers will be allowed outside of one foot from the newly created header joint. To prevent damage to the joint and surrounding concrete, only light chipping hammers (not exceeding 15 pounds) will be allowed within the last foot adjacent to the newly created header joint to remove the remaining concrete at each end of the repair area, leaving the reinforcing steel in place.

Small Repair – Existing Steel Retained

The Contractor will saw the in place concrete around the periphery of each repair area to a depth of 2" (above the in place reinforcing steel). The cuts will be a minimum of 6" from the nearest tight crack outside of the patch.

Light chipping hammers (not exceeding 15 pounds) will be used to remove the concrete from the repair area, leaving the reinforcing steel in place.

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

Care will be taken not to cut, bend or otherwise damage the in place reinforcing steel. Damage to in place reinforcing steel or to in place concrete beyond the repair area will be replaced at the Contractor's expense, to the satisfaction of the Engineer.

The Contractor will remove and dispose of the in place concrete and in place asphalt concrete.

Existing exposed reinforcing steel and concrete faces will be cleaned by sandblasting and compressed air to remove dirt and debris prior to placement of concrete.

Place reinforcing steel according to the notes for REINFORCING STEEL (CRCP) and STEEL BAR INSERTION (CRCP).

Concrete placed adjacent to asphalt concrete shoulders will be formed full depth to match the width of existing concrete pavement. The excavated area of the asphalt concrete shoulder adjacent to repair areas will be filled with asphalt concrete.

Concrete will not be placed in the repair areas before 12:00pm and should be placed in the late afternoon. Temperature of the concrete at the time of placement will be between 50°F and 90°F. The temperature of the concrete will be maintained above 40°F during the curing period.

CONTINUOUSLY REINFORCED PCC PAVEMENT REPAIR (CONTINUED)

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 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.

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 3,000 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.

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'.

Cost for performing the aforementioned work including sawing, chipping and removing concrete, sandblasting, cleaning, furnishing and placing concrete and reinforcing steel, finishing and curing, replacing asphalt concrete shoulders, labor and equipment will be included in the contract unit price per square yard for Continuously Reinforced PCC Pavement Repair.

REINFORCING STEEL (CRCP)

Reinforcing steel will conform to Section 1010.

After removal of the in place concrete and repair of the gravel cushion, new reinforcing steel will be installed. Refer to the CRC Pavement Repair Area layouts for details.

At full lane and partial lane width repair areas:

New longitudinal bars will be lap spliced with the preserved in place longitudinal bars (New bar diameter to match in place bar diameter).

Additional transverse bars will be centered between the in place transverse bars throughout the length of the repair area. The spacing of transverse bars in the completed repair area should be half the spacing of the in place transverse reinforcing steel.

The additional transverse bars will be lap spliced with No. 5 x 24" epoxy coated deformed tie bars inserted 9" into the existing concrete. Drilled holes will be required. Tie bars will be inserted according to the notes for STEEL BAR INSERTION (CRCP).

At full lane width repair areas:

Additional longitudinal bars will be centered between every other set of two spliced longitudinal bars throughout the width of the repair area. These additional bars will extend 9" into the existing concrete on both sides of the repair area. Drilled holes will be required and the additional longitudinal bars will be inserted in accordance with the notes for STEEL BAR INSERTION (CRCP). The additional longitudinal bars will then be lap spliced.

Cost for this work, including reinforcing steel, ties, labor and equipment will be incidental to the contract unit price per square yard for Continuously Reinforced PCC Pavement Repair.

STEEL BAR INSERTION (CRCP)

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.

Longitudinal deformed tie bars will be inserted 9 inches into the in place concrete at the transverse joint and centered between every other set of two spliced longitudinal bars throughout the width of the repair area. Transverse deformed bars will be lap spliced with deformed tie bars which are inserted 9 inches into the in place concrete at the longitudinal joint throughout the length of the repair area. Refer to the notes for REINFORCING STEEL (CRCP). An epoxy resin adhesive must be used to anchor the steel bar in the drilled hole as per Section 380.3 C.1.

Holes drilled into the existing concrete pavement will be located at mid-depth of the slab and true and normal except that in transverse joints, the drilled in longitudinal steel bar angle will be slightly under 90° to allow for centering of the lap splice between existing longitudinal steel.

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.

Cost for reinforcing steel (except the inserted No. 5 x 24" epoxy coated deformed tie bars) will be incidental to the contract unit price per square yard for Continuously Reinforced PCC Pavement Repair.

STEEL BAR INSERTION (CRCP) (CONTINUED)

Cost for drilling holes, furnishing and applying epoxy resin adhesive, furnishing and inserting No. 5 x 24" epoxy coated deformed tie bars into the drilled holes and inserting reinforcing steel bars into the drilled holes, and any incidentals necessary to complete the work will be included in the contract unit price per each for Insert Steel Bar in PCC Pavement.

SAW AND SEAL LONGITUDINAL JOINTS (CRCP)

Longitudinal joints (in line with existing longitudinal joints) at concrete repair areas will be sawed and sealed.

Joint sealing will conform to Section 380.3 P.

Longitudinal joints will be sealed with Low Modulus Silicone Sealant or Hot Poured Elastic Joint Sealer.

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 will be incidental to the contract unit price per square yard for Continuously Reinforced PCC Pavement Repair.

TEMPORARY PAVEMENT MARKING

Temporary pavement marking on lane closure tapers will consist of temporary flexible vertical markers (tabs). Estimate two workspaces with 960' tapers on I29N

Temporary flexible vertical markers (tabs) may be used as detailed in the specifications.

Cost will be included in the contract unit price per foot for Temporary Pavement Marking.

TRAFFIC CONTROL FOR PCCP REPAIR

Each mainline concrete repair location, from which the in-place concrete has been removed, will be marked with a minimum of two reflectorized drums.

Construction workspaces on divided roadways will be limited to 5 miles in length. The distance between the closest points of any two construction workspaces, including channeling devices, will not be less than 3 miles. Only two workspaces will be allowed to be in place simultaneously per project.

Holes adjacent to centerline in the lane open to traffic created during removal and replacement of PCC pavement repair areas will be filled with gravel cushion material and cold-mix asphalt concrete prior to opening the lane to traffic. Gravel cushion material and cold-mix asphalt concrete can be obtained from the Department of Transportation Maintenance shops located throughout the area. Contact the Project Engineer for direction.

Holes in the asphalt concrete shoulders created during removal and replacement of PCC pavement repair areas will be filled with gravel cushion material and hot-mix asphalt concrete (to match the shoulder surfacing) prior to opening the lane to traffic. Additional gravel cushion can be obtained from the Department of Transportation Maintenance shops located throughout the area. Contact the Project Engineer for direction. Hot-mix asphalt concrete will be furnished by the Contractor.

All costs for furnishing, hauling, and placing gravel cushion material and asphalt concrete will be incidental to the contract unit price per square yard for "Continuously Reinforced PCC Pavement Repair".

TRAFFIC CONTROL FOR PCCP REPAIR (CONTINUED)

Routing traffic onto the mainline shoulders during any phase of the construction will not be allowed.

Damage to the shoulders, median, or ditch due to the Contractor's operations will be repaired by the Contractor to the satisfaction of the Engineer at no expense to the State. This includes the apparent routing of traffic onto the shoulders around the work zones.

Extra care will be taken to protect the in-place asphalt concrete shoulders on Interstate 29. In all workspaces in these areas, the same channelizing devices and spacing used on centerline, will also be required on the shoulders. These channelizing devices will be placed in locations to adequately keep traffic completely off these shoulders. Continuous maintenance will be required to keep them in place.

While Interstate 29 repairs are being performed in the driving lane, the channelizing devices will be placed on the driving lane side of the centerline skips to encourage traffic to stay off the asphalt shoulders.

Type 3 Barricades will be used in front of the first repair area approached by traffic at all locations until concrete has achieved adequate strength to be open to traffic.

The Contractor may use Flaggers when working along the centerline of the roadway. Advance warning Flagger signs will be required when Flaggers are present and removed when no Flaggers are present.

TRAFFIC CONTROL

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	029N-291	8	24

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	EXPRESSWAY / INTERSTATE			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT 45	2	36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 65	3	36" x 48"	12.0	36.0
R2-1	SPEED LIMIT 80	1	36" x 48"	12.0	12.0
R2-6aP	FINES DOUBLE (plaque)	1	36" x 24"	6.0	6.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	1	48" x 48"	16.0	16.0
W3-5	SPEED REDUCTION AHEAD (65 MPH)	2	48" x 48"	16.0	32.0
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
W20-7	FLAGGER (symbol)	1	48" x 48"	16.0	16.0
G20-2	END ROAD WORK	1	48" x 24"	8.0	8.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			246.0

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

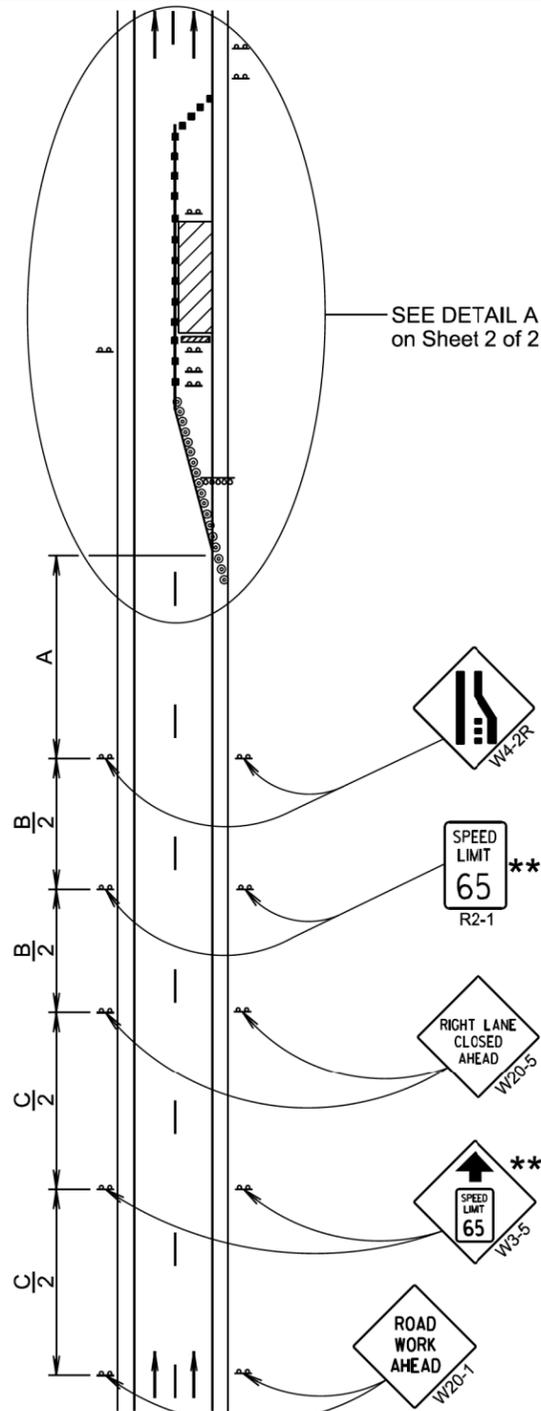
** Speed appropriate for location.

● 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

Published Date: 2026

S
D
D
O
T

**WORK ZONE SPEED REDUCTION
FOR INTERSTATE AND HIGH
SPEED MULTI-LANE HIGHWAYS**

PLATE NUMBER
634.63

Sheet 1 of 2

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

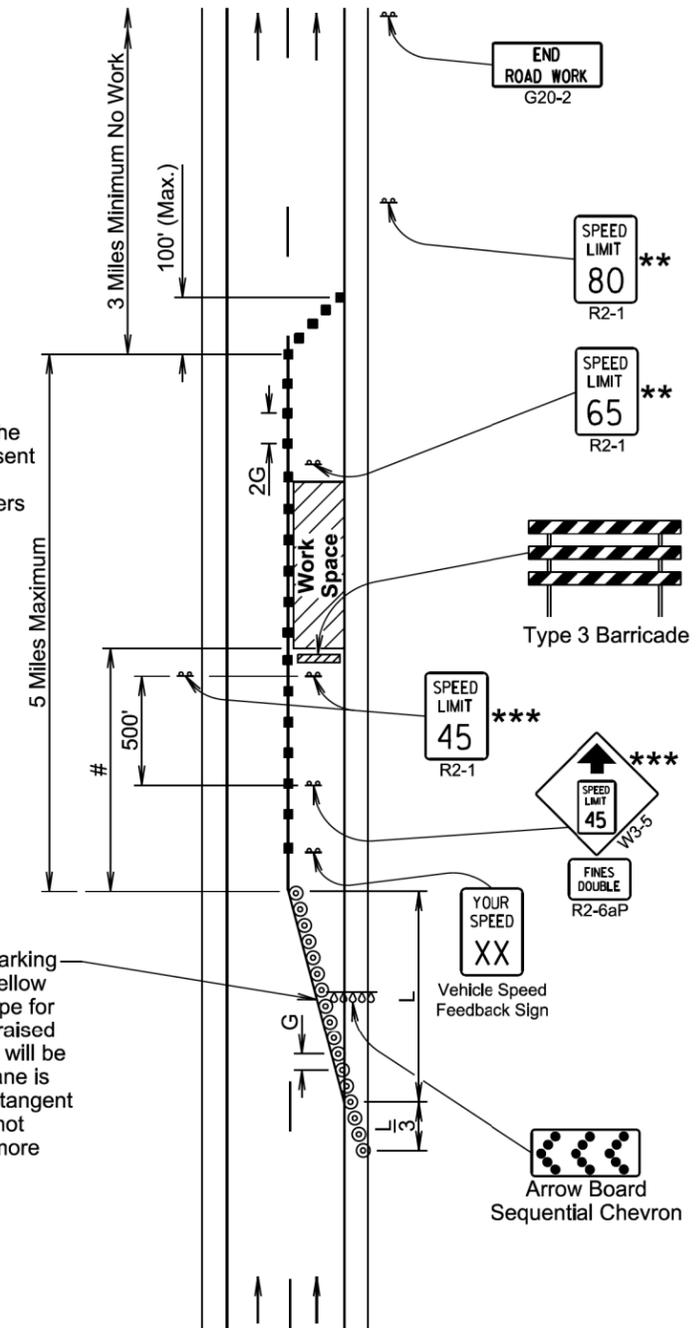
■ Channelizing Device

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.

4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary raised pavement markers at 5' spacing will be installed in the taper when the lane is closed overnight, and along the tangent section where the skip lines do not exist and the lane is closed for more than 3 days.



DETAIL A

April 8, 2025

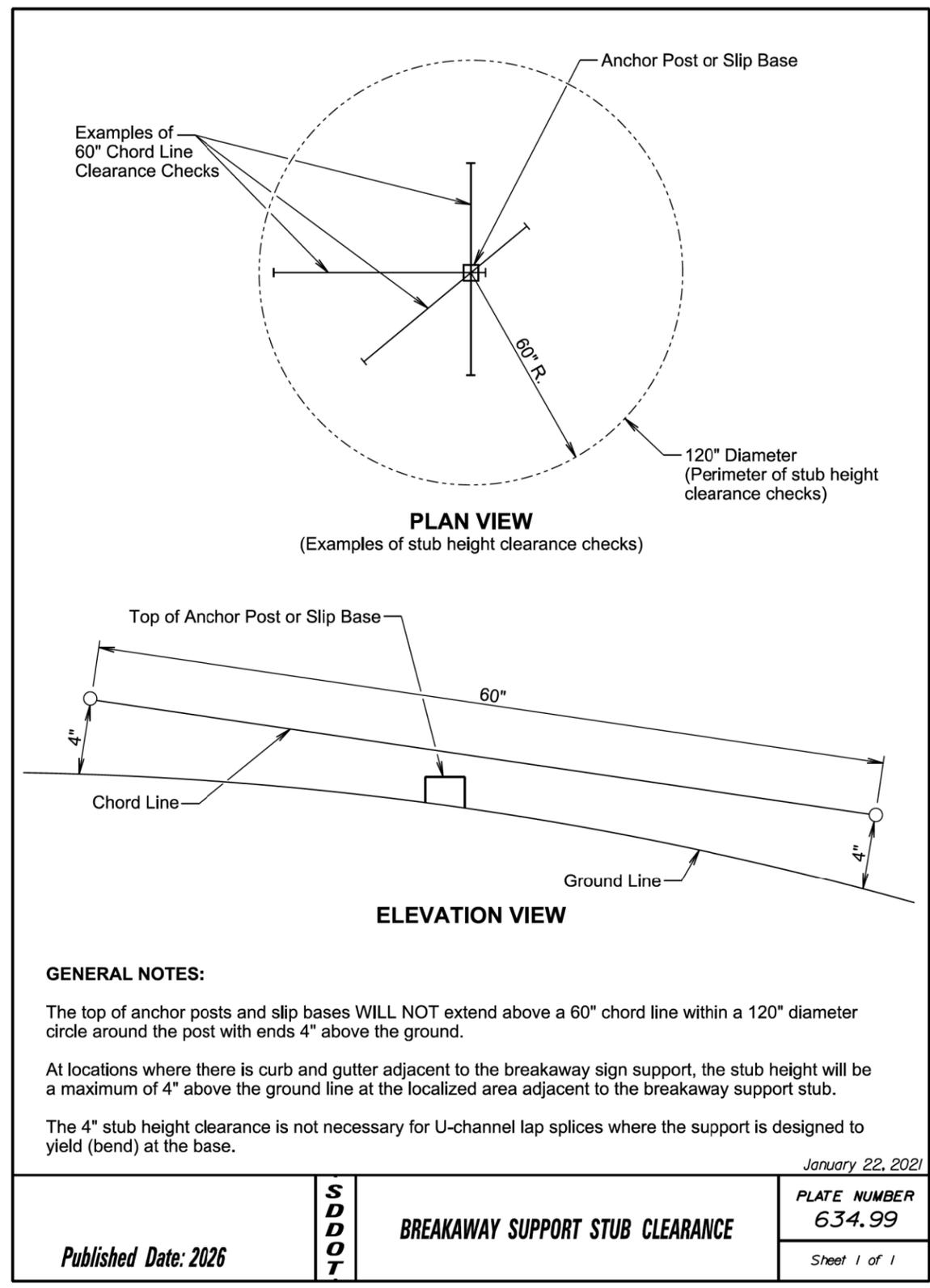
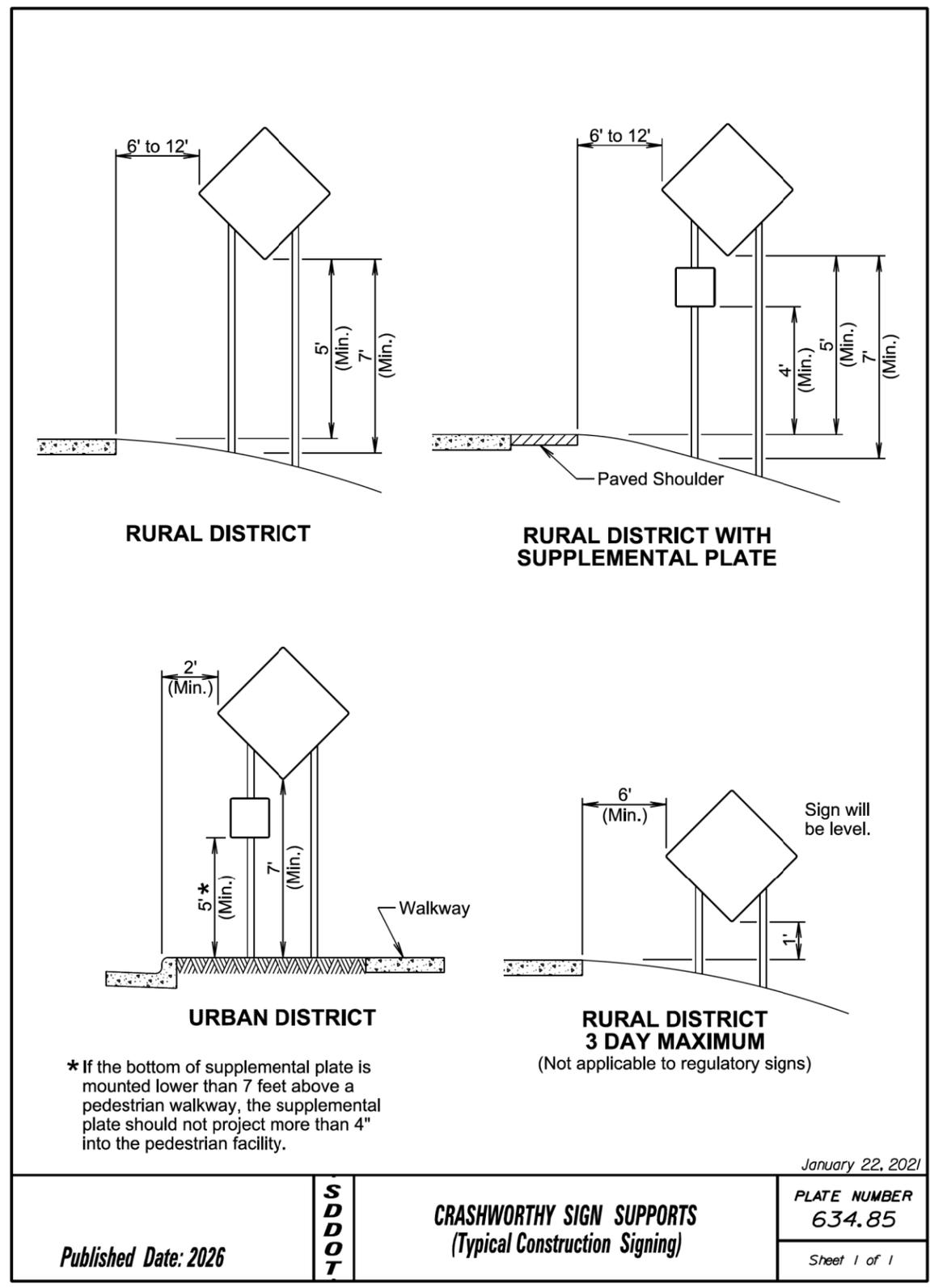
Published Date: 2026

S
D
D
O
T

**WORK ZONE SPEED REDUCTION
FOR INTERSTATE AND HIGH
SPEED MULTI-LANE HIGHWAYS**

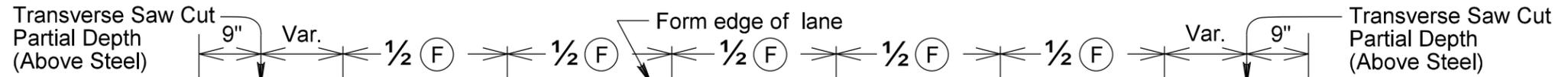
PLATE NUMBER
634.63

Sheet 2 of 2



CRC PAVEMENT REPAIR (FULL LANE WIDTH) - TYPICAL

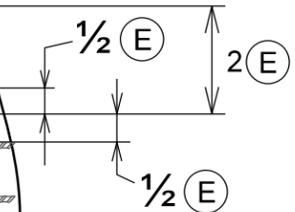
Plotting Date: 03/11/2026



Traffic Lane Width W (12' Shown)

Place No. (C) Longitudinal Deformed Tie Bar (Place bars into drilled holes in existing concrete on both sides of the repair area and tie the bars to each other and to in place No. (L) Transverse Bars)

(E)

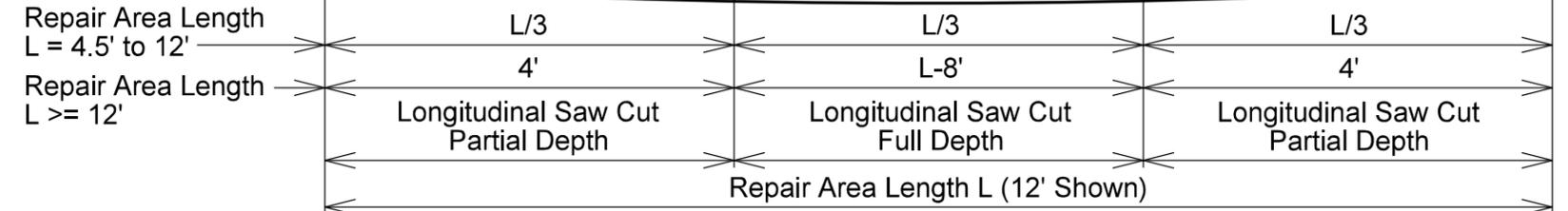
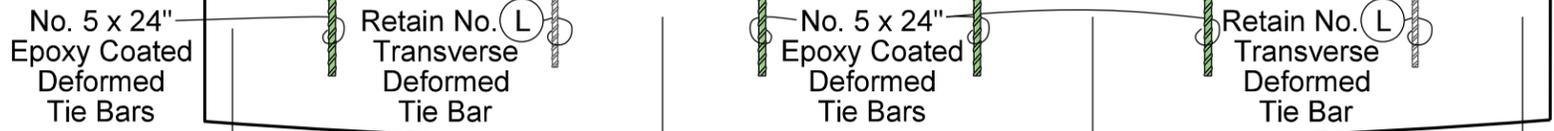


No. (C) Longitudinal Deformed Tie Bars In Place

Place No. (C) Longitudinal Deformed Tie Bars (Lap splice to In Place No. (C) Longitudinal Bars).

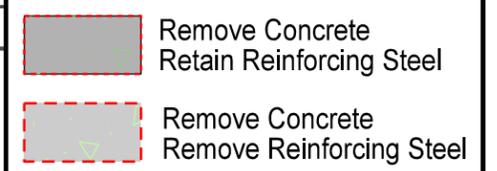
For Repair Area Length L = 8' or more - every other in place No. (C) Longitudinal Deformed Tie Bar will be cut off and lap splices will be staggered.

Place No. (L) Transverse Deformed Tie Bars



DEFORMED TIE BAR DIMENSIONS KEY					
Underlying Plans	CRC Depth	Longitudinal Steel		Transverse Steel	
		Size	Spacing	Size	Spacing
PCN	T	(C)	(E)	(L)	(F)
6176	11.5"	5	4 1/2"	4	42"

CRC REPAIR AREA KEY



PLOT SCALE - 1:1.7

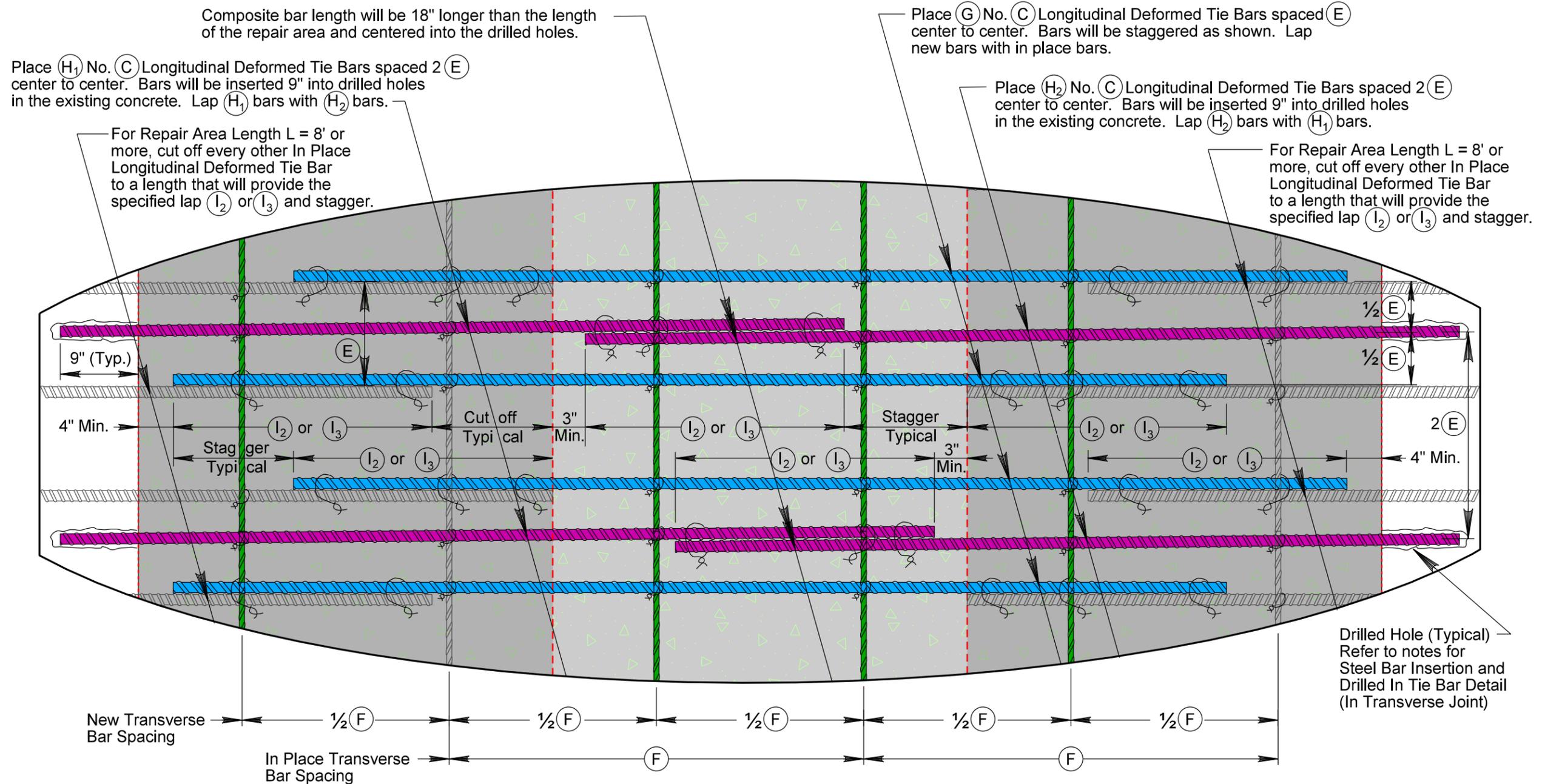
FILE - ... \CRC\CRC FULL WIDTH REPAIR.DGN

PLOTTED FROM - TRYPRINT54

CRC PAVEMENT REPAIR (FULL LANE WIDTH)

Detail A

Plotting Date: 03/11/2026



DEFORMED TIE BAR KEY

	No. (C) Longitudinal Deformed Tie Bar In Place (Retain)		No. (L) Transverse Deformed Tie Bar In Place (Retain)
	Place No. (C) Longitudinal Deformed Tie Bar (Tie to In Place No. (C) Longitudinal Bars)		Place No. (L) Transverse Deformed Tie Bar (Tie to No. (C) Longitudinal Bars)
	Place No. (C) Longitudinal Deformed Tie Bar (Place bars into drilled holes in existing concrete on both sides of the repair area and tie the bars to each other and to No. (L) Transverse Bars)		

DEFORMED TIE BAR DIMENSIONS KEY

Underlying Plans	CRC Depth	Longitudinal Steel		Transverse Steel	
		Size	Spacing	Size	Spacing
PCN	T	(C)	(E)	(L)	(F)
6176	11.5"	5	4 1/2"	4	42"

Note: All lapped bars will have a minimum of two ties per lap.

LAP SPLICE LENGTH KEY

- (I_1) Lap Splice length for Repair Area Length $L < 4.5'$ (Not Available).
- (I_2) Lap Splice length for Repair Area Length $L = 4.5'$ to $8'$.
- (I_3) Lap Splice length for Repair Area Length $L > 8'$.

See CRC Pavement Repair - Reinforcing Steel Details for Longitudinal Bar Counts:

(G) , (H_1) & (H_2)

CRC REPAIR AREA KEY

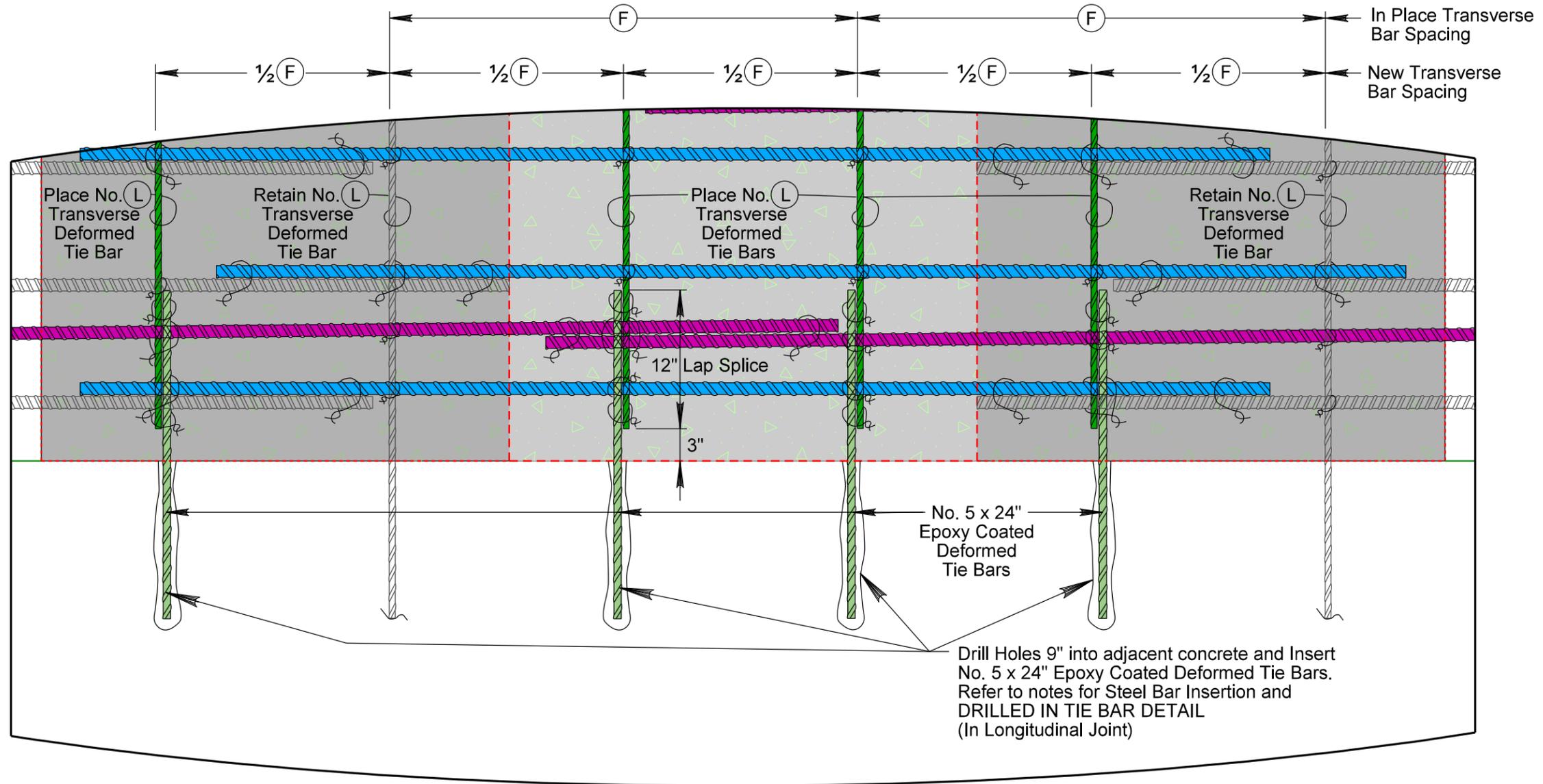
- Remove Concrete Retain Reinforcing Steel
- Remove Concrete Remove Reinforcing Steel

CRC PAVEMENT REPAIR (FULL LANE WIDTH)

Detail B

STATE OF SOUTH DAKOTA	PROJECT 029N-291	SHEET 14	TOTAL SHEETS 24
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Plotting Date: 03/11/2026



DEFORMED TIE BAR KEY

<p> No. (C) Longitudinal Deformed Tie Bar In Place (Retain)</p> <p> Place No. (C) Longitudinal Deformed Tie Bar (Tie to In Place No. (C) Longitudinal Bars)</p> <p> Place No. (C) Longitudinal Deformed Tie Bar (Place bars into drilled holes in existing concrete on both sides of the repair area and tie the bars to each other and to No. (L) Transverse Bars)</p>	<p> No. (L) Transverse Deformed Tie Bar In Place (Retain)</p> <p> Place No. (L) Transverse Deformed Tie Bar (Tie to No. (C) Longitudinal Bars)</p>
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DEFORMED TIE BAR DIMENSIONS KEY

Underlying Plans	CRC Depth	Longitudinal Steel		Transverse Steel	
		Size	Spacing	Size	Spacing
PCN	T	(C)	(E)	(L)	(F)
6176	11.5"	5	4 1/2"	4	42"

CRC REPAIR AREA KEY

	Remove Concrete Retain Reinforcing Steel
	Remove Concrete Remove Reinforcing Steel

Note: All lapped bars will have a minimum of two ties per lap.

PLOT SCALE - 1:1.07

PLOTTED FROM - TRYPRINT54

FILE - ... \CRC\CRC FULL WIDTH REPAIR.DGN PLOT NAME - 7

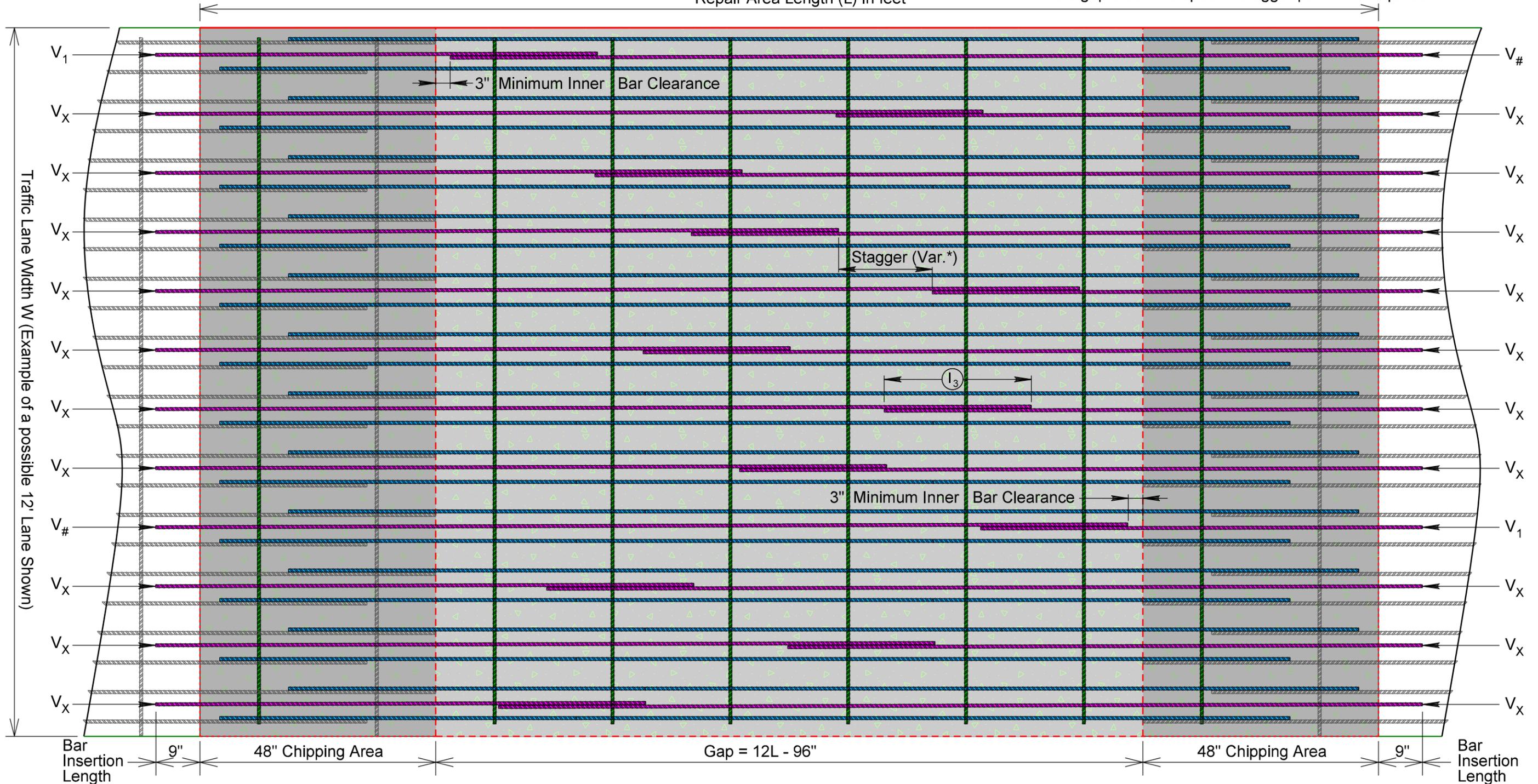
CRC PAVEMENT REPAIR - INSERTED LONGITUDINAL BAR LENGTHS

(For Full Width Repair Area Length L ≥ 16') - TYPICAL

Plotting Date: 03/11/2026

* In order to minimize concentration of steel, bar lengths will be cut to the lengths specified and lap splices will be randomly staggered in the gap area. No specific stagger pattern is required.

Repair Area Length (L) in feet



PLOT SCALE - 1:1.7

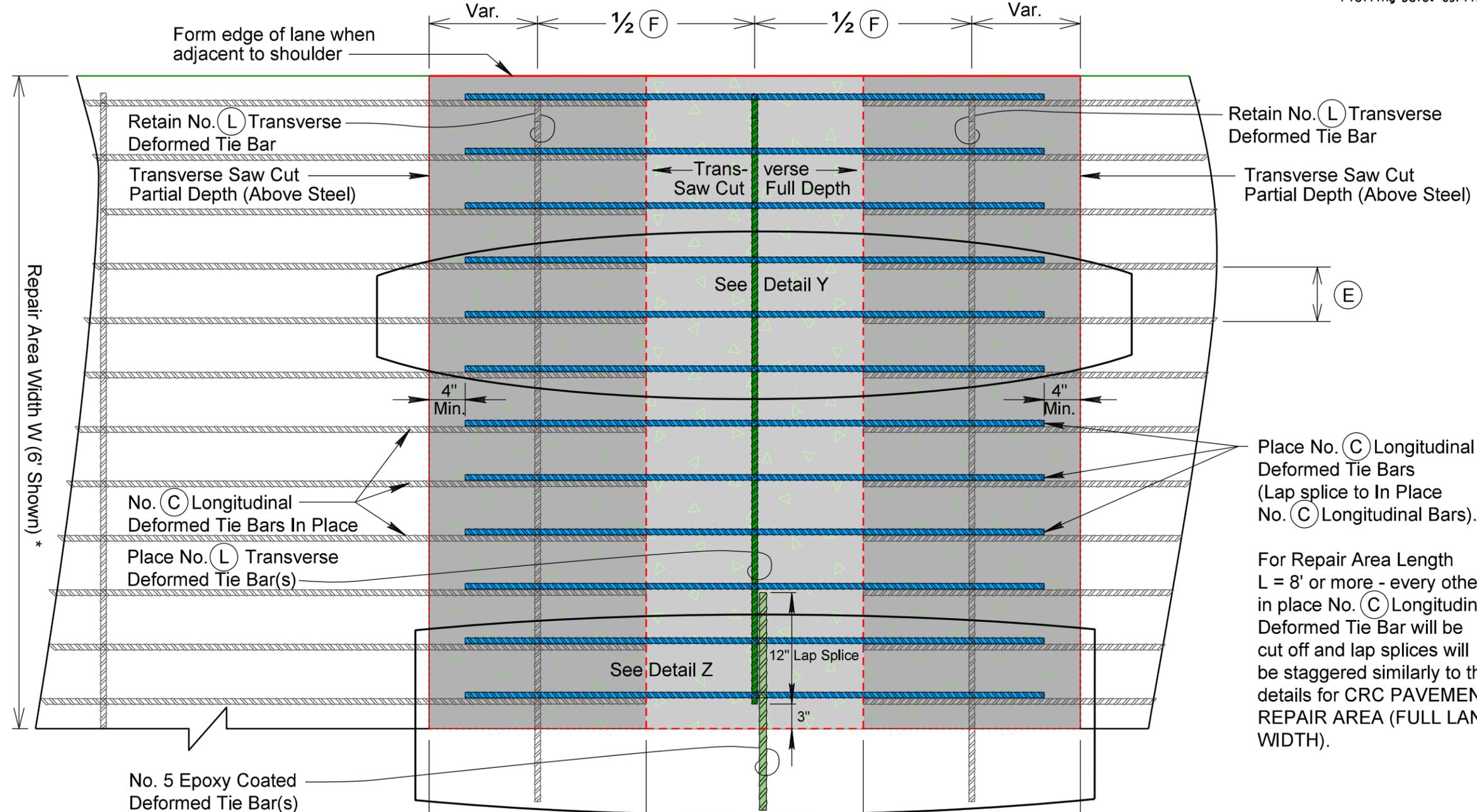
PLOT NAME - 4

FILE - ... \CRC FULL WIDTH LONG REPAIR.DGN

PLOTTED FROM - TRYPRINT54

V_1 = Shortest Bar Length	$V_{\#}$ = Longest Bar Length	V_x = Any Other Inserted Longitudinal Bar Length	LAP SPLICE LENGTH KEY	CRC REPAIR AREA KEY
V_1 = Bar Insertion Length +9" + Chipping Area +48" + Inner Bar Clearance +3" + Lap Splice Length + (I_3) $V_1 = 60" + (I_3)$	$V_{\#}$ = Bar Insertion Length +9" + Chipping Area +48" + Gap +12L - 96" - Inner Bar Clearance - 3" $V_{\#} = 12L - 42"$	$V_x = V_1 + \frac{(X - 1) \times (V_{\#} - V_1)}{(\# - 1)}$ where X is the number of any bar from the shortest to the longest, and where # is the number of bars required on each side of the repair area.	(I_3) Lap Splice Length For CRC Depth < 11" $(I_3) = 25"$ For CRC Depth ≥ 11" $(I_3) = 30"$	[Solid Grey Box] Remove Concrete Retain Reinforcing Steel [Dashed Red Box] Remove Concrete Remove Reinforcing Steel

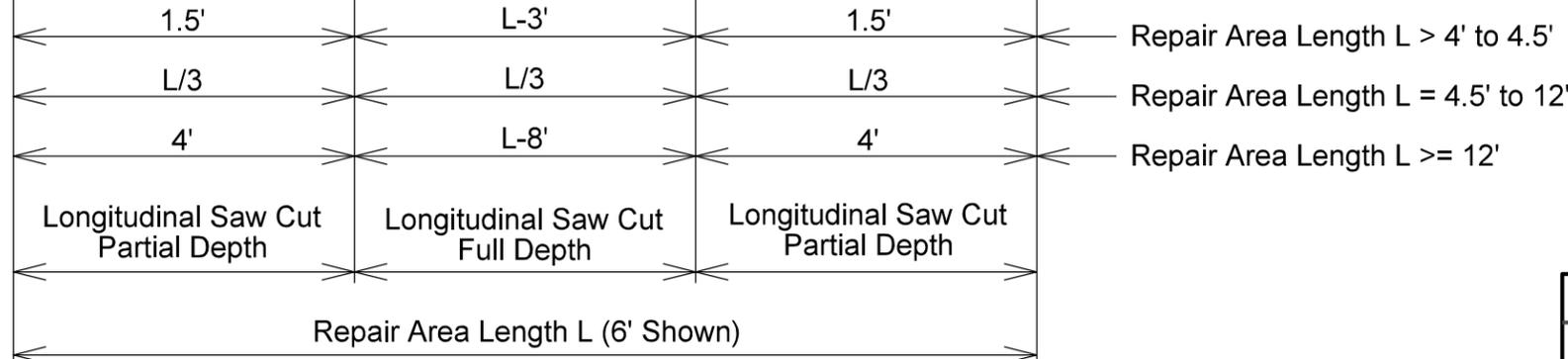
CRC PAVEMENT REPAIR (PARTIAL LANE WIDTH) - TYPICAL



Place No. (C) Longitudinal Deformed Tie Bars (Lap splice to In Place No. (C) Longitudinal Bars).

For Repair Area Length $L = 8'$ or more - every other in place No. (C) Longitudinal Deformed Tie Bar will be cut off and lap splices will be staggered similarly to the details for CRC PAVEMENT REPAIR AREA (FULL LANE WIDTH).

* When the Repair Area Width W exceeds half the lane width, use full lane width repair.



DEFORMED TIE BAR DIMENSIONS KEY					
Underlying Plans	CRC Depth	Longitudinal Steel		Transverse Steel	
		Size	Spacing	Size	Spacing
PCN	T	(C)	(E)	(L)	(F)
6176	11.5"	5	4 1/2"	4	42"

CRC REPAIR AREA KEY	
	Remove Concrete Retain Reinforcing Steel
	Remove Concrete Remove Reinforcing Steel

PLOT SCALE - 1:1.06

PLOT NAME - 8

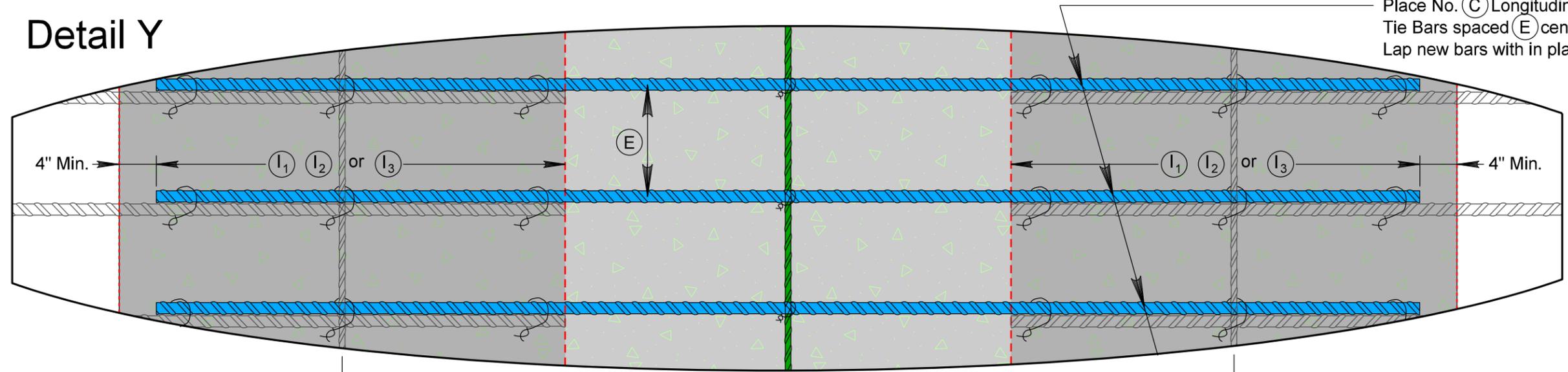
FILE - ... \CRC PARTIAL WIDTH REPAIR.DGN

CRC PAVEMENT REPAIR (PARTIAL LANE WIDTH)

STATE OF SOUTH DAKOTA	PROJECT 029N-291	SHEET 17	TOTAL SHEETS 24
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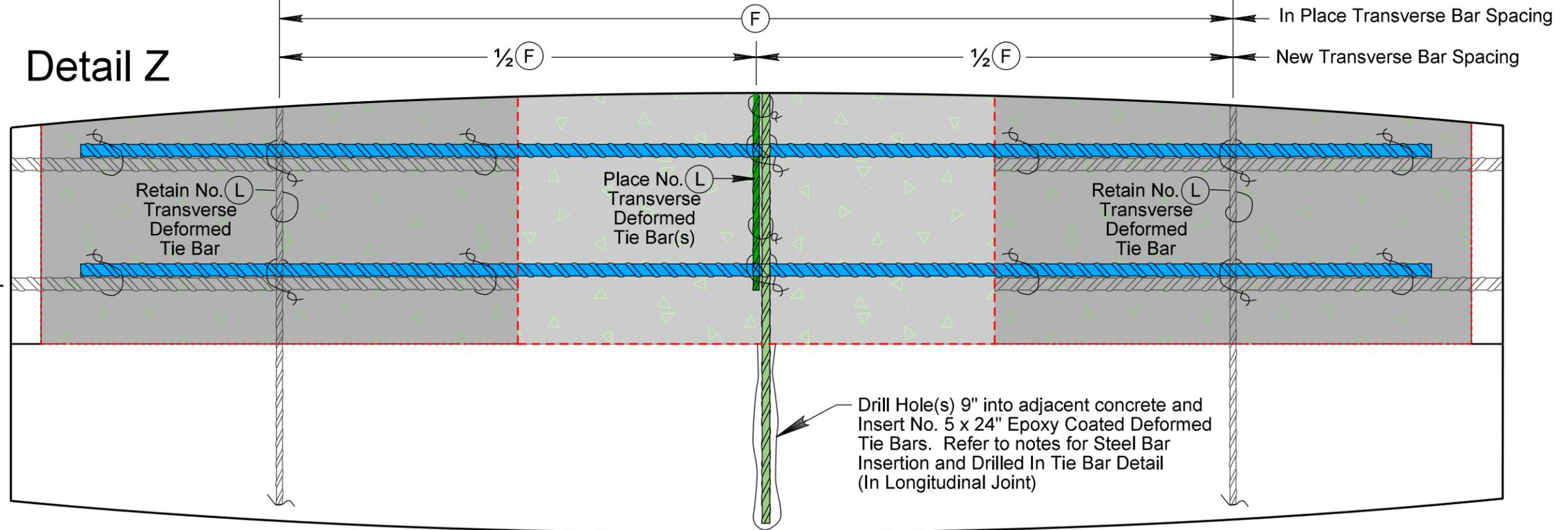
Plotting Date: 03/11/2026

Detail Y



Place No. (C) Longitudinal Deformed Tie Bars spaced (E) center to center. Lap new bars with in place bars.

Detail Z



For Repair Area Length L = 8' or more every other in place No. (C) Longitudinal Deformed Tie Bar will be cut off and lap splices will be staggered similarly to the details for CRC PAVEMENT REPAIR AREA (FULL LANE WIDTH).

DEFORMED TIE BAR DIMENSIONS KEY

No. (L) Transverse Deformed Tie Bar In Place (Retain)	Place No. (C) Longitudinal Deformed Tie Bar In Place (Retain)
Place No. (L) Transverse Deformed Tie Bar (Tie to No. (C) Longitudinal Bars)	Place No. (C) Longitudinal Deformed Tie Bar (Tie to In Place No. (C) Longitudinal Bars)

Underlying Plans	CRC Depth	Longitudinal Steel		Transverse Steel	
		Size	Spacing	Size	Spacing
PCN	T	(C)	(E)	(L)	(F)
6176	11.5"	5	4 1/2"	4	42"

LAP SPLICE LENGTH KEY

(I ₁)	Lap Splice length for Repair Area Length L = 4' to 4.5'.
(I ₂)	Lap Splice length for Repair Area Length L = 4.5' to 8'.
(I ₃)	Lap Splice length for Repair Area Length L > 8'.

Note: All lapped bars will have a minimum of two ties per lap.

CRC REPAIR AREA KEY

	Remove Concrete Retain Reinforcing Steel
	Remove Concrete Remove Reinforcing Steel

PLOT SCALE - 1:1.06

PLOTTED FROM - TRYAIN154

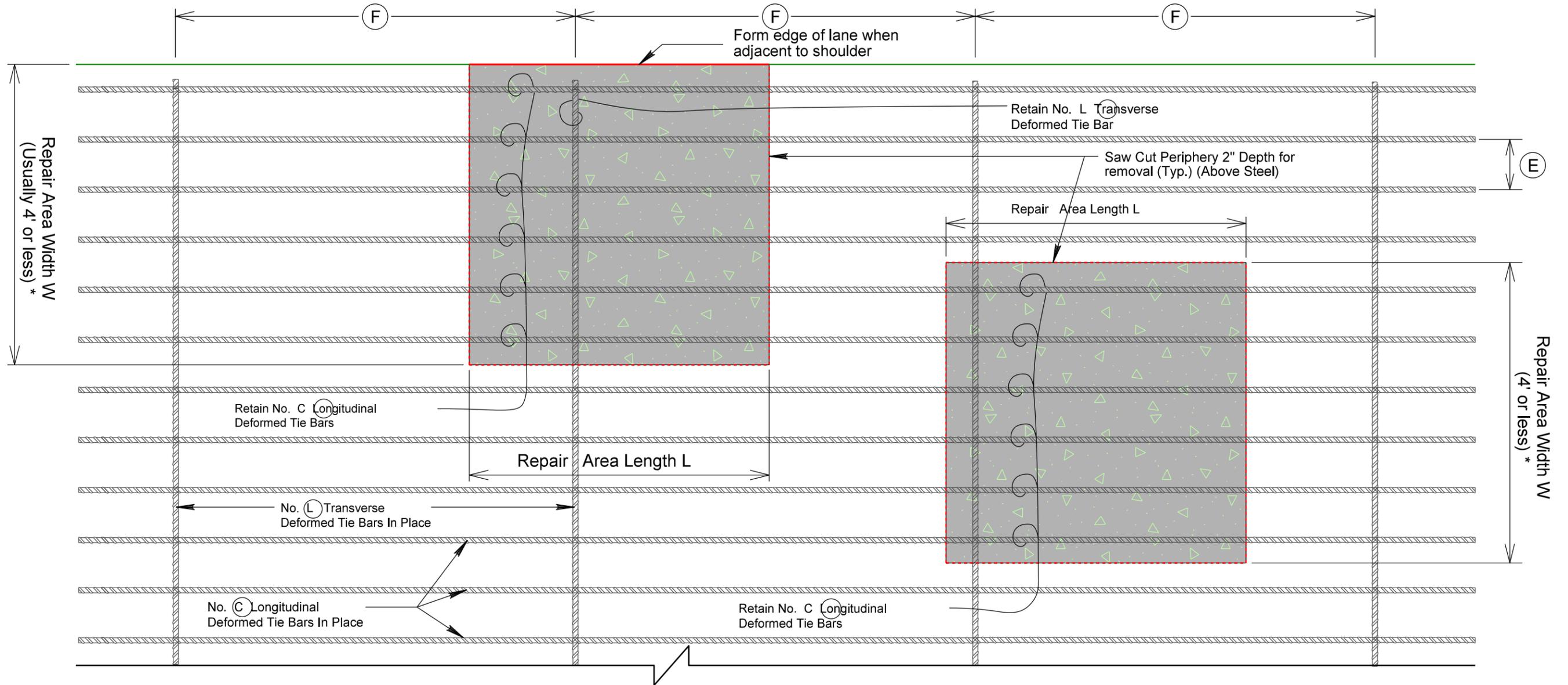
PLOT NAME - 9

FILE - ... \CRC PARTIAL WIDTH REPAIR.DGN

CRC PAVEMENT REPAIR - EXISTING STEEL RETAINED (TYPICAL)

Plotting Date: 03/11/2026

PLAN VIEW



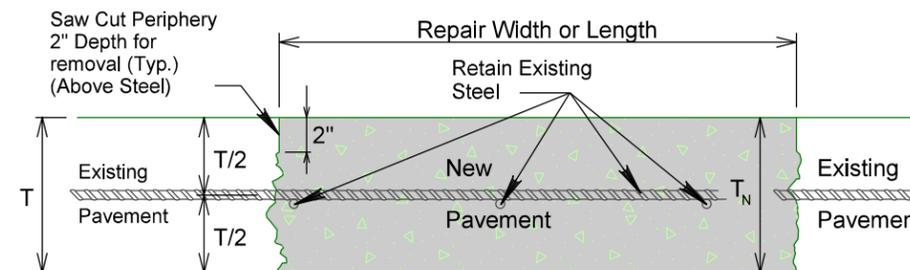
* When Repair Width W exceeds 4', usually use partial lane width repair.
When Repair Width W exceeds half the lane width, usually use full lane width repair.

However, a Repair Width W exceeding 4' might be used when doing a small repair adjacent to an existing repair, in order to match the width of the existing repair.

DEFORMED TIE BAR DIMENSIONS KEY

	Underlying Plans	CRC Depth	Longitudinal Steel		Transverse Steel	
			Size	Spacing	Size	Spacing
No. \textcircled{L} Transverse Deformed Tie Bar In Place (Retain)	PCN	T	\textcircled{C}	\textcircled{E}	\textcircled{L}	\textcircled{F}
	6176	11.5"	5	4 1/2"	4	42"
No. \textcircled{C} Longitudinal Deformed Tie Bar In Place (Retain)						

PROFILE VIEW



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

CRC REPAIR AREA KEY



PLOT SCALE - 1:1.06

PLOTTED FROM - TRYPRINT54

PLOT NAME - 10

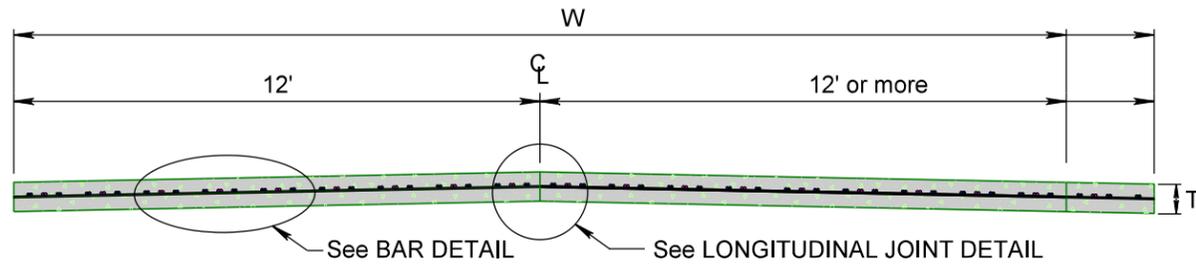
FILE - ... \CRC\CRC SMALL REPAIR.DGN

CRC PAVEMENT REPAIR - REINFORCING STEEL DETAILS

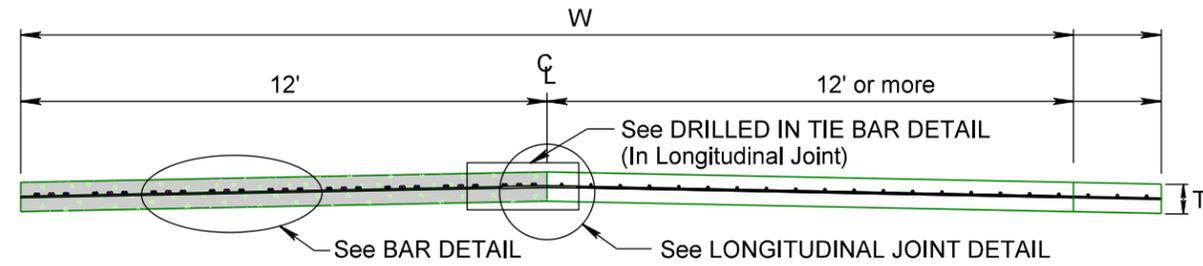
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	029N-291	19	24

Plotting Date: 03/11/2026

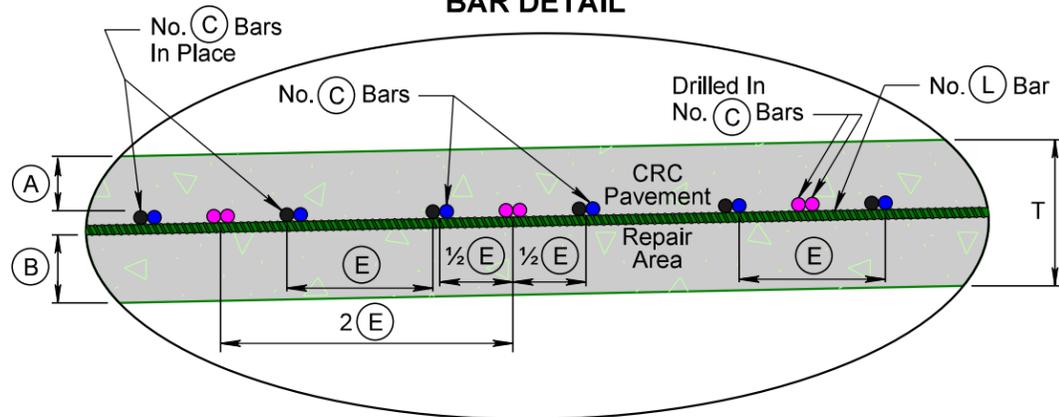
TRANSVERSE SECTION SHOWING STEEL PLACEMENT



TRANSVERSE SECTION SHOWING STEEL PLACEMENT



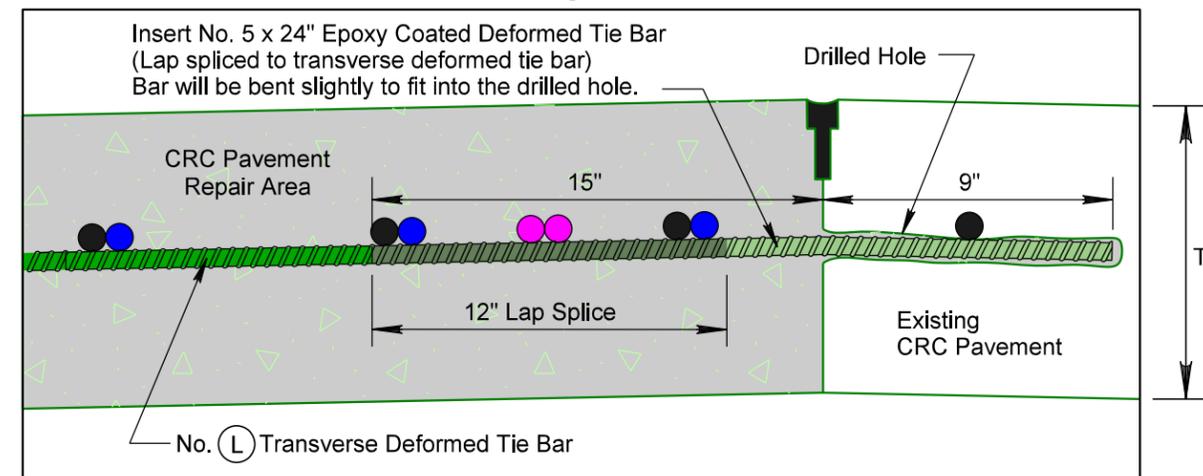
BAR DETAIL



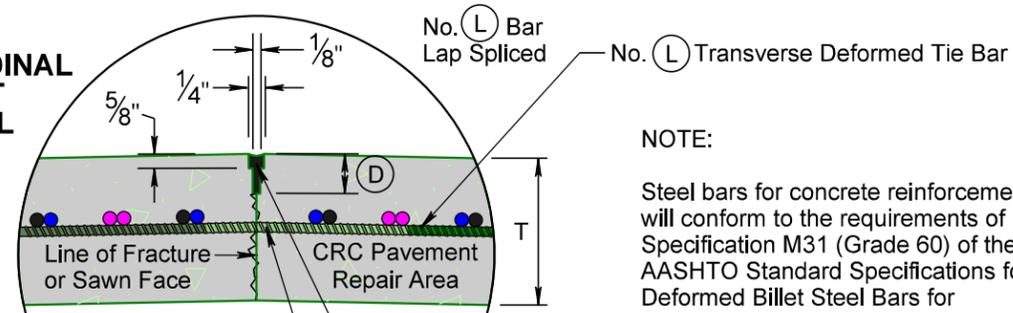
Placement of longitudinal steel bars may vary from +1/2" to -1/2" vertically and 3/4" horizontally. Placement of transverse steel bars may vary from +1/2" to -1/2" vertically and 2" horizontally.

The transverse deformed steel bars will be positioned on acceptable chairs.

DRILLED IN TIE BAR DETAIL (In Longitudinal Joint)



LONGITUDINAL JOINT DETAIL



NOTE:

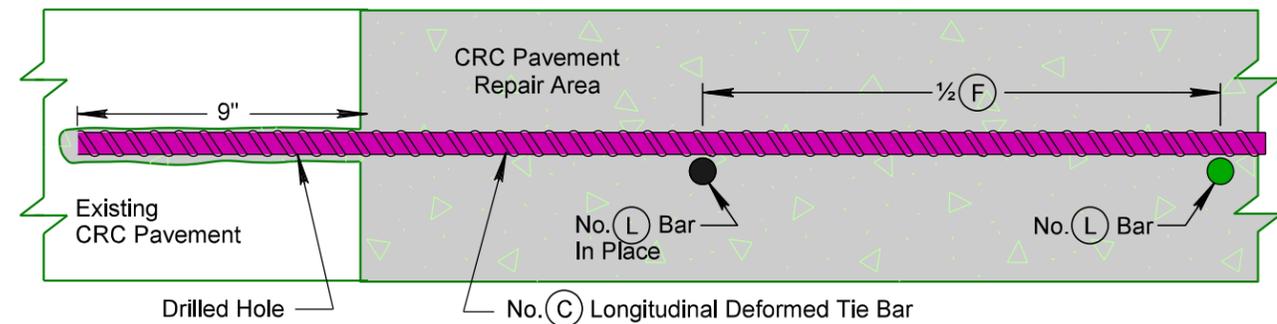
Steel bars for concrete reinforcement will conform to the requirements of Specification M31 (Grade 60) of the AASHTO Standard Specifications for Deformed Billet Steel Bars for Concrete Reinforcement.

Insert No. 5 x 24" Epoxy Coated Deformed Tie Bar (Lap spliced to transverse deformed tie bar) Bar will be bent slightly to fit into the drilled hole.

Sawed joint filled with Hot Poured Elastic Joint Sealer

See DRILLED IN TIE BAR DETAIL (In Longitudinal Joint)

LONGITUDINAL SECTION SHOWING STEEL PLACEMENT DRILLED IN TIE BAR DETAIL (In Transverse Joint)



CRC PAVEMENT IN PLACE & CRC PAVEMENT REPAIR KEY & DIMENSIONS

Location	Underlying Plans	CRC Depth	CRC Width	Clearance		Longitudinal Steel		Saw Cut Depth	Transverse Steel		Longitudinal Bar Count (full lane width repair)						Lap Splice Length (for Repair Length L)			Not Assigned	Perimeter Bar Spacing				Chair Width
				Top	Bottom	Size	Spacing		Size	Spacing	12' Wide Slab		14' Wide Slab		L < 4.5'	L = 4.5' to 8'9"	L >= 8'9"	K	M		N	P			
				(A)	(B)	(C)	(E)		(D)	(L)	(F)	(G)	(H ₁)	(H ₂)	(G)	(H ₁)	(H ₂)	(I ₁)	(I ₂)		(I ₃)	(R)			
I29N MRM 4.35 +0.463 to MRM 17.00 +0.406	6176	11.5"	26'	3 1/2"	6 7/8"	5	4 1/2"	2 7/8"	4	42"	32	16	16	37	18	18	14"	14" to 30"	30"	-	3"	3"	4 1/2"	4 1/2"	5"

PLOT SCALE - 1/8"=33.3333

PLOTTED FROM - TRYPRINT54

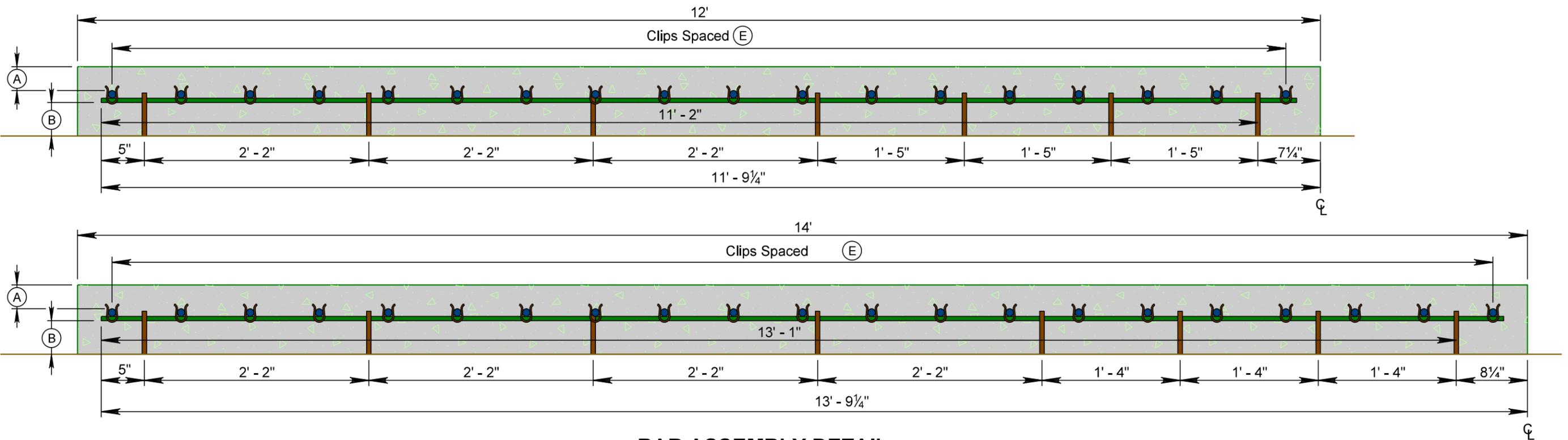
PLOT NAME - 1

FILE - ... \CRC\CRC BARS.DGN

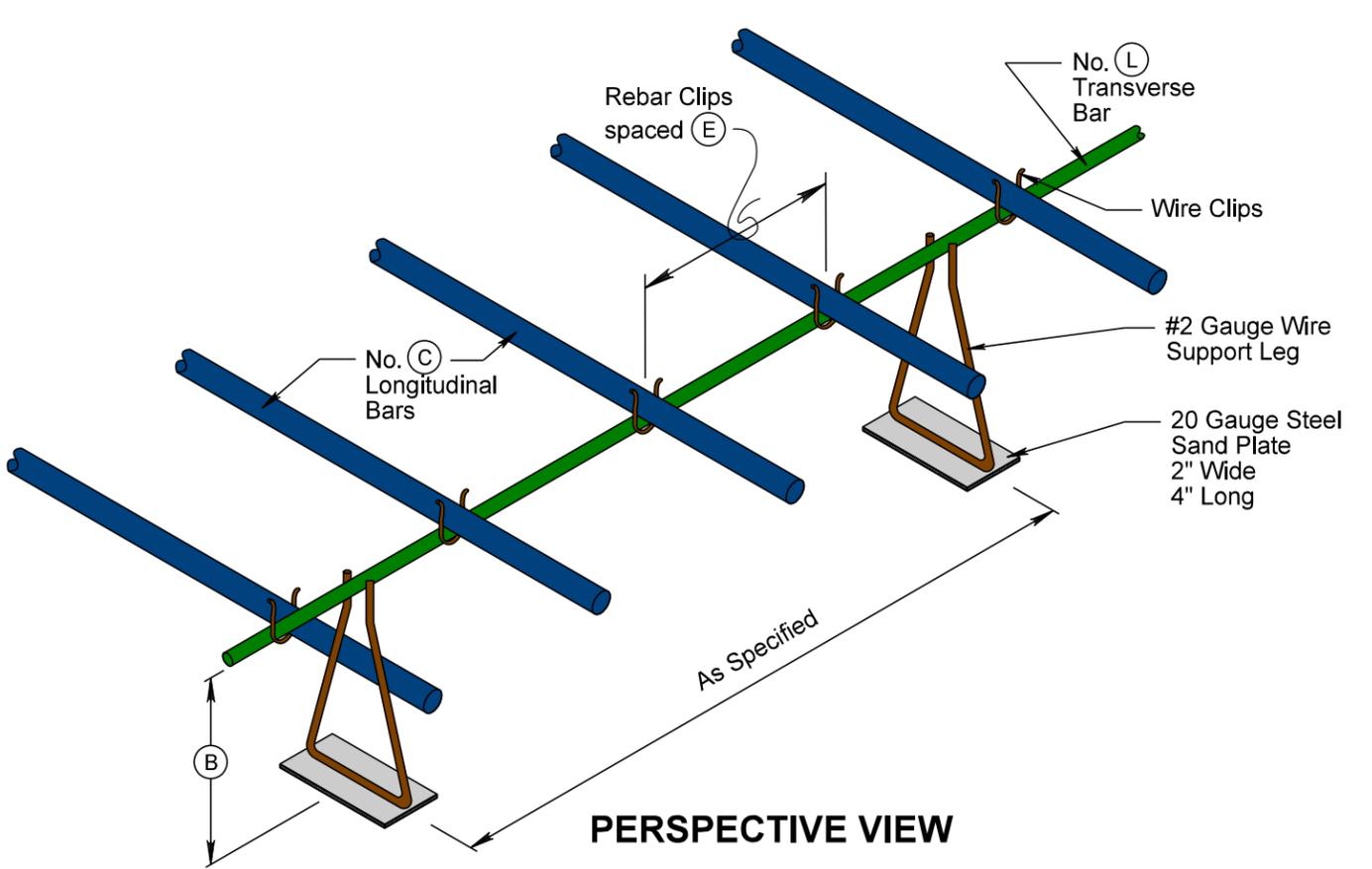
CRC PAVEMENT CHAIR DETAILS

STATE OF SOUTH DAKOTA	PROJECT 029N-291	SHEET 20	TOTAL SHEETS 24
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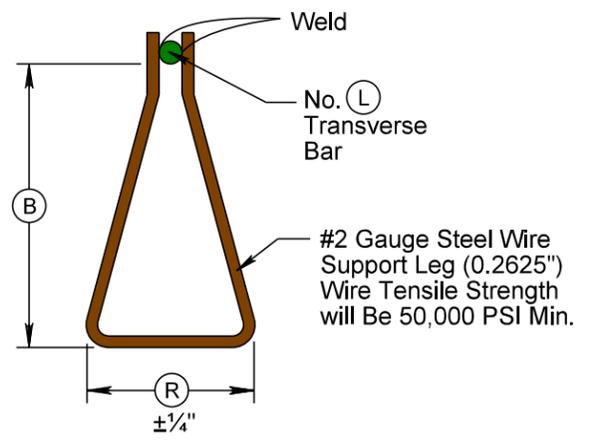
Plotting Date: 03/11/2026



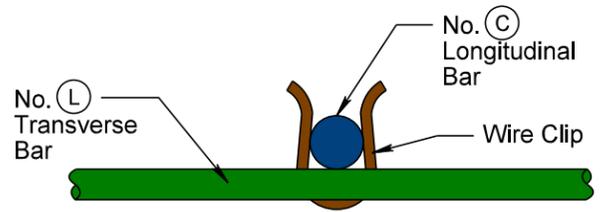
BAR ASSEMBLY DETAIL



PERSPECTIVE VIEW



CHAIR DETAIL



CLIP DETAIL

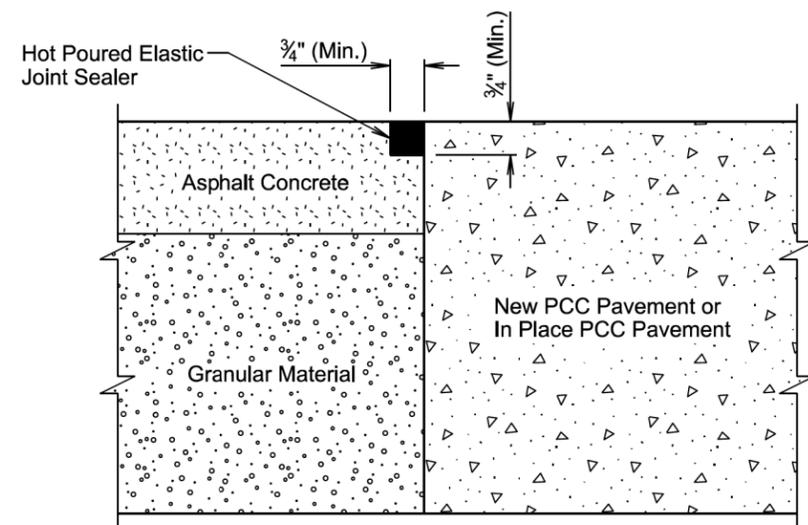
DEFORMED TIE BAR DIMENSIONS KEY										
Underlying Plans	CRC Depth	CRC Width	Clearance		Longitudinal Steel		Saw Cut Depth	Transverse Steel		Chair Width
			Top	Bottom	Size	Spacing		Size	Spacing	
PCN	T	W	(A)	(B)	(C)	(E)	(D)	(L)	(F)	(R)
6176	11.5"	26'	3 1/2"	6 7/8"	5	4 1/2"	2 7/8"	4	42"	5"

PLOT SCALE - 1:1

PLOTTED FROM - TRYPRINT54

PLOT NAME - 2

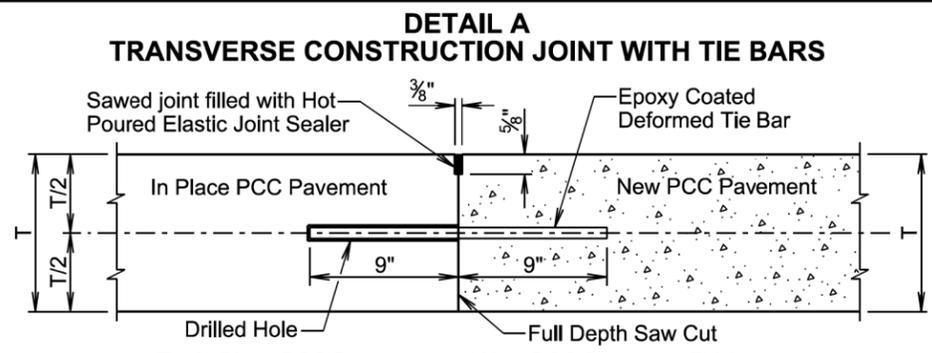
FILE - ... \CRC\CRC CHAIR DETAILS.DGN



TRANSVERSE SECTION
(Asphalt Concrete Shoulder Joint)

September 14, 2019

Published Date: 2026	S D D O T	ASPHALT CONCRETE SHOULDER JOINT ADJACENT TO PCC PAVEMENT	PLATE NUMBER 320.15
			Sheet 1 of 1



GENERAL NOTES:

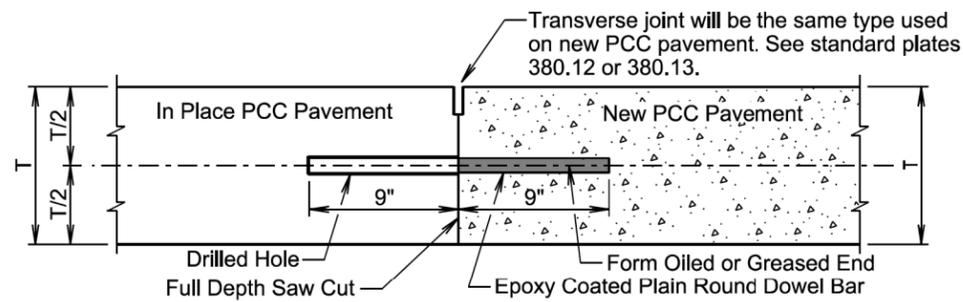
The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project.

See sheet 2 of 2 of this standard plate to determine if Detail A will be used.

The tie bars will be embedded a minimum depth of 9 inches into the in place PCC pavement and anchored with an epoxy resin adhesive or a non-shrink grout.

No. 9 epoxy coated deformed tie bars will be used in 10 inch thickness and less PCC Pavement and No. 11 epoxy coated deformed tie bars will be used in 10.5 inch thickness and greater PCC Pavement. The tie bar spacing will be 18 inches center to center and will be a minimum of 3 inches and a maximum of 9 inches from the pavement edges.

**DETAIL B
TRANSVERSE CONSTRUCTION JOINT WITH DOWEL BARS**



GENERAL NOTES:

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project or current project.

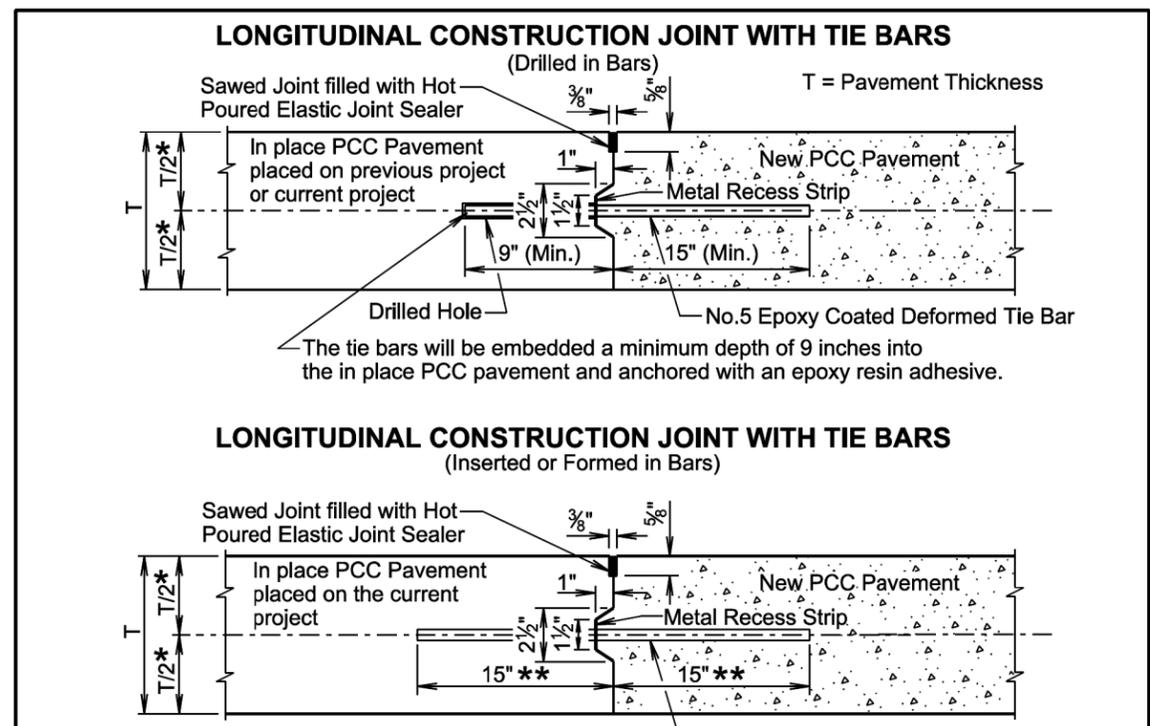
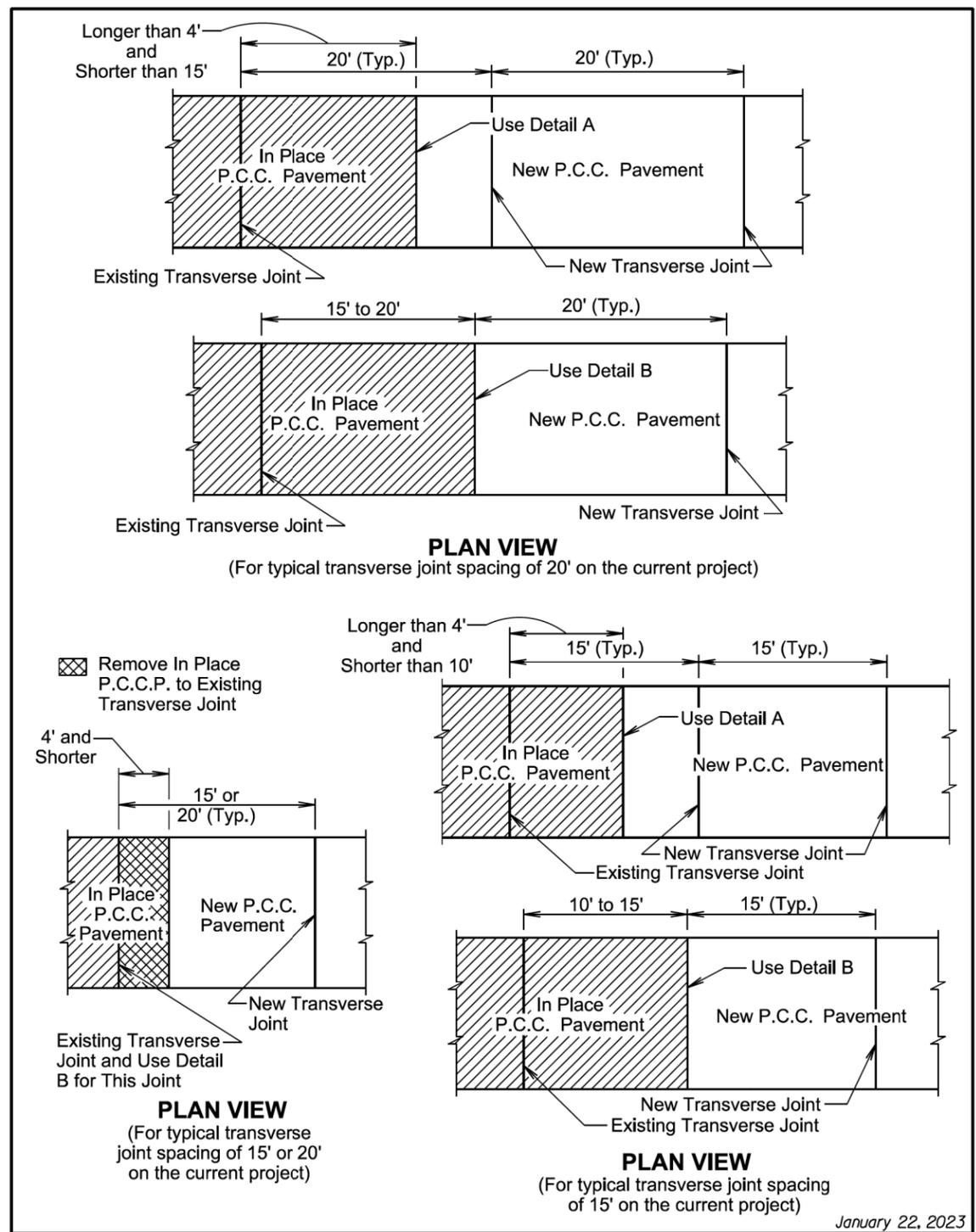
See sheet 2 of 2 of this standard plate to determine if Detail B will be used.

The plain round dowel bars will be embedded a minimum depth of 9 inches into the in place PCC pavement and anchored with an epoxy resin adhesive or a non-shrink grout.

The epoxy coated plain round dowel bar size, number, and spacing will be the same as detailed on the corresponding dowel bar assembly standard plate (380.04, 380.05, 380.06, or 380.07). The epoxy coated plain round dowel bars will be a minimum of 3 inches and a maximum of 6 inches from the pavement edges.

January 22, 2023

Published Date: 2026	S D D O T	PCC PAVEMENT TRANSVERSE CONSTRUCTION JOINTS WITH TIE BARS OR DOWEL BARS	PLATE NUMBER 380.15
			Sheet 1 of 2



GENERAL NOTES (For the details above):

The epoxy coated deformed tie bars will be spaced in accordance with the following tables:

TIE BAR SPACING 48" MAXIMUM		TIE BAR SPACING 30" MAXIMUM	
Transverse Contraction Joint Spacing	Number of Tie Bars	Transverse Contraction Joint Spacing	Number of Tie Bars
6.5' to 10'	2	5' to 7'	2
10.5' to 14'	3	7.5' to 9.5'	3
14.5' to 18'	4	10' to 12'	4
18.5' to 22'	5	12.5' to 14.5'	5
		15' to 17'	6
		17.5' to 19.5'	7
		20' to 22'	8

The tie bars will be placed a minimum of 15 inches from transverse contraction joints.

The required number of tie bars as shown in the table will be uniformly spaced within each panel. The uniformly spaced tie bars will be spaced a maximum of 48 inches center to center for a female keyway and will be spaced a maximum of 30 inches center to center for a vertical face and male keyway. The maximum tie bar spacing will apply to tie bars within each panel.

The keyway illustrated in the above details depict a female keyway.

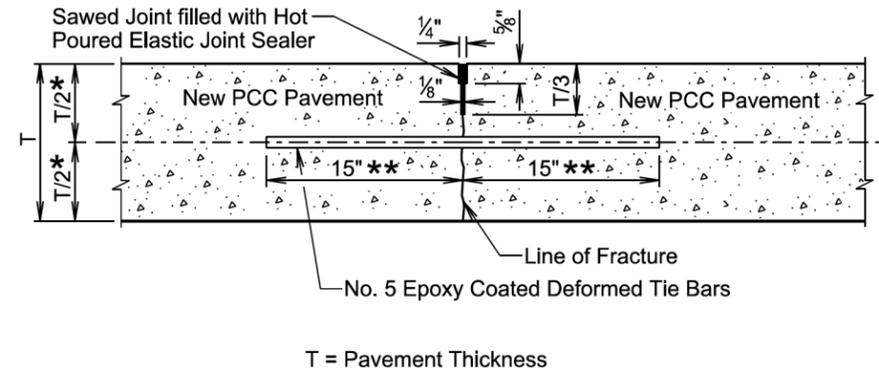
The keyway is optional and is not required. When concrete pavement is formed and a keyway is provided, a metal recess strip will be used. When concrete pavement is slip formed, a metal recess strip is not required.

* The vertical placement tolerance for any part of the tie bar will be $\pm T/6$.

** The transverse placement (side shift) tolerance will be ± 3 inches when measured perpendicular to the longitudinal joint line.

November 19, 2022

SAWED LONGITUDINAL JOINT WITH TIE BARS (Poured Monolithically)



GENERAL NOTES (For the detail above):

The epoxy coated deformed tie bars will be spaced in accordance with the following table:

TIE BAR SPACING 48" MAXIMUM	
Transverse Contraction Joint Spacing	Number of Tie Bars
6.5' to 10'	2
10.5' to 14'	3
14.5' to 18'	4
18.5' to 22'	5

The tie bars will be placed a minimum of 15 inches from the transverse contraction joints.

The required number of tie bars as shown in the table will be uniformly spaced within each panel with a maximum space of 48 inches center to center. The maximum tie bar spacing will apply to tie bars within each panel.

The first saw cut to control cracking will be a minimum of 1/3 the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the hot poured elastic joint sealer is necessary.

- * The vertical placement tolerance for any part of the tie bar will be $\pm T/6$.
- ** The transverse placement (side shift) tolerance will be ± 3 inches when measured perpendicular to the longitudinal joint line.

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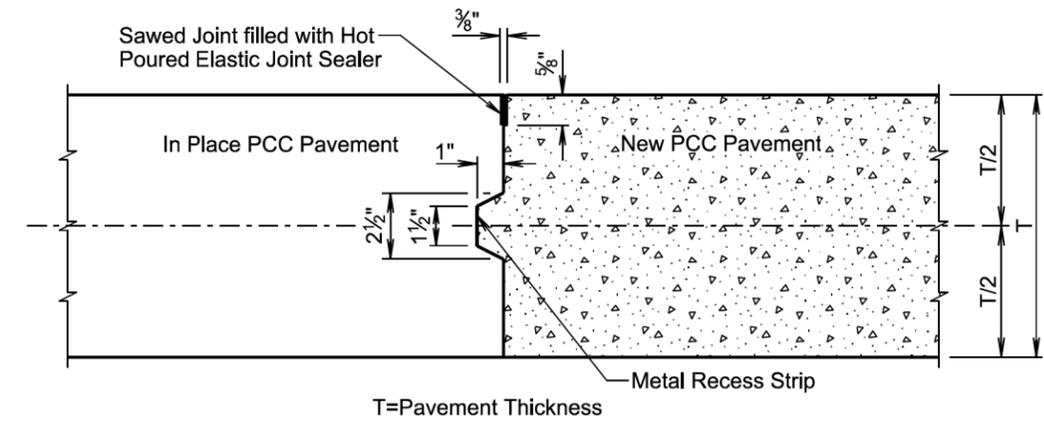
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**PCC PAVEMENT LONGITUDINAL
JOINTS WITH TIE BARS**

PLATE NUMBER
380.20

Sheet 2 of 2

LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS

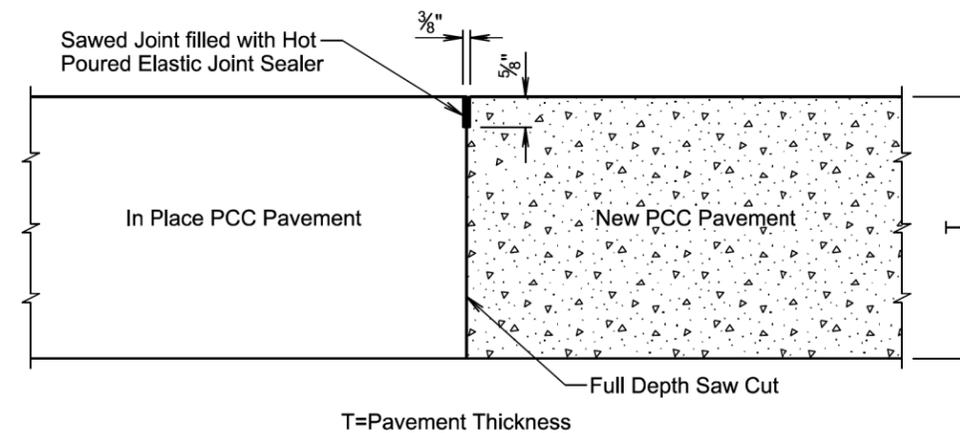


GENERAL NOTES:

When concrete pavement is formed and a keyway is provided, a metal recess strip will be used. When concrete pavement is slip formed, a metal recess strip is not required.

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on the current project.

LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS



GENERAL NOTE:

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project.

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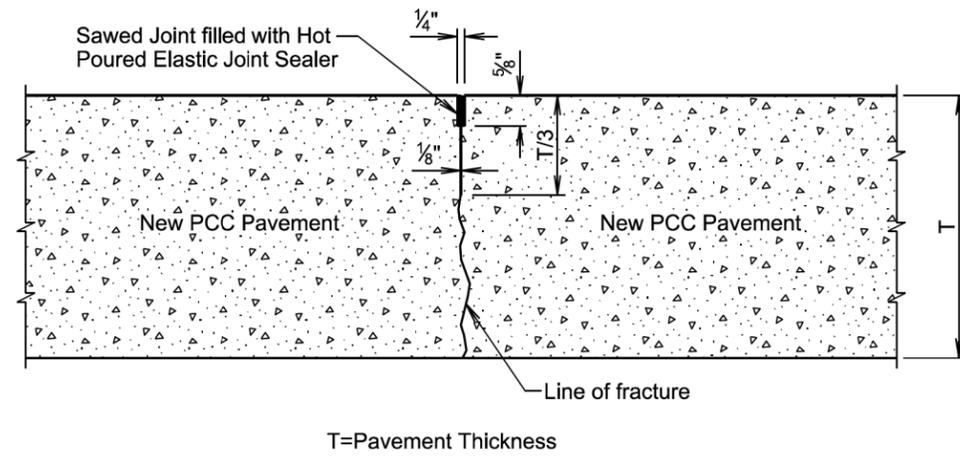
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**PCC PAVEMENT LONGITUDINAL
JOINTS WITHOUT TIE BARS**

PLATE NUMBER
380.22

Sheet 1 of 2

SAWED LONGITUDINAL JOINT WITHOUT TIE BARS



GENERAL NOTE:

The first saw cut to control cracking will be a minimum of $\frac{1}{3}$ the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the hot poured elastic joint sealer will be necessary.

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**PCC PAVEMENT LONGITUDINAL
JOINTS WITHOUT TIE BARS**

PLATE NUMBER
380.22

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