SECTION C: TRAFFIC CONTROL PLANS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C1	C39

Plotting Date: 05/24/2024

INDEX OF SHEETS

C1	General Layout with Index
C2-C8	Estimate with General Notes and Tables
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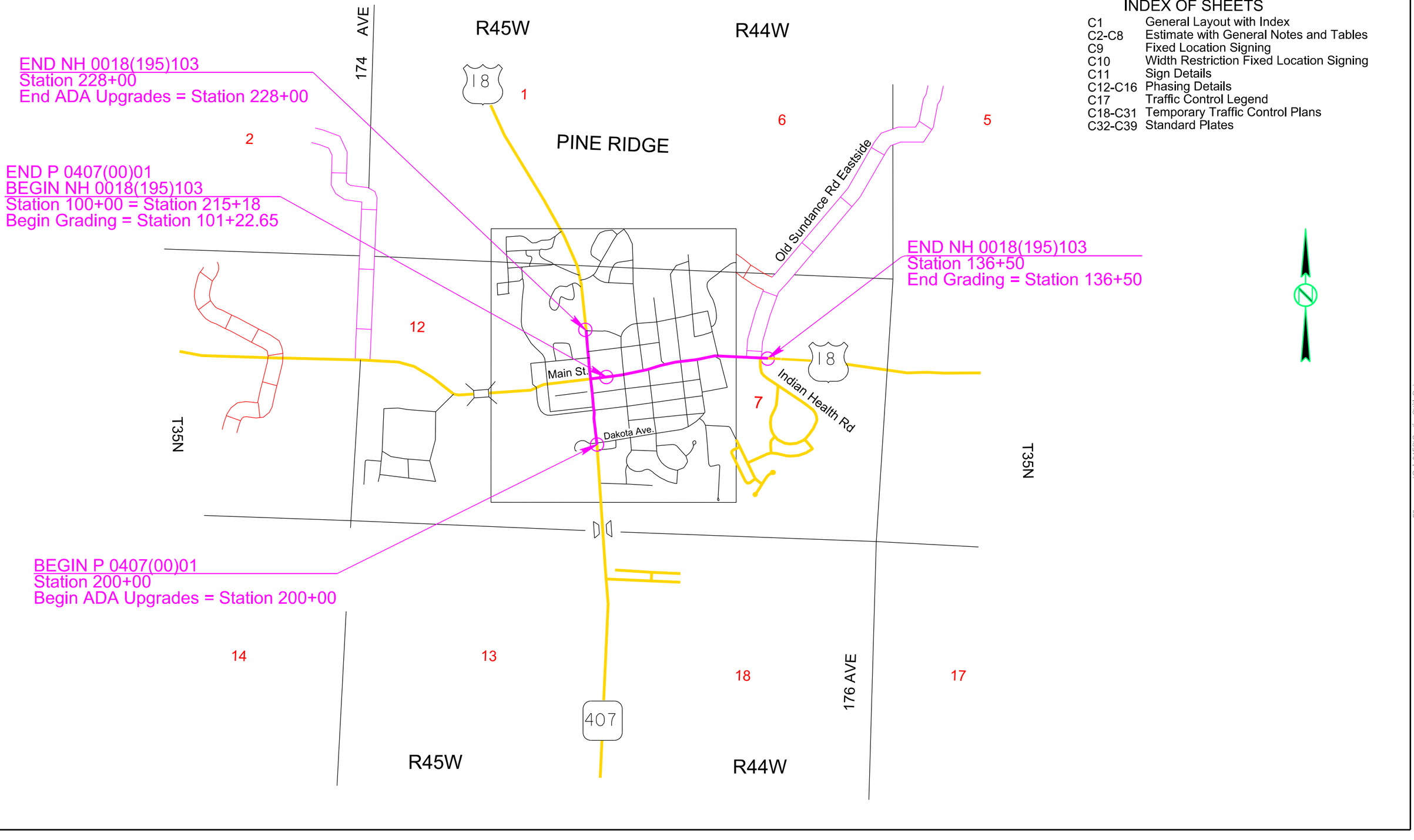
C10	Width Restriction Fixed Location Signing
C11	Sign Details
C12-C16	Phasing Details
C17	Traffic Control Legend
C18-C31	Temporary Traffic Control Plans
C32-C39	Standard Plates



SECTION C ESTIMATE OF QUANTITIES

PCN 04FC

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
004E0010	Blading	100	Hour
260E2030	Gravel Cushion, Salvaged	2,000.0	Ton
320E1200	Asphalt Concrete Composite	300.0	Ton
634E0010	Flagging	800.0	Hour
634E0110	Traffic Control Signs	1,633.8	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	70	Each
634E0330	Temporary Raised Pavement Markers	21,220	Ft
634E0380	Tubular Marker	835	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	20	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	9,505	Ft
634E0565	Remove Pavement Marking, Arrow	16	Each
634E0600	4" Temporary Pavement Marking Tape Type I	17,460	Ft
634E0640	Temporary Pavement Marking	8,489	Ft
634E0700	Traffic Control Movable Concrete Barrier	20	Each
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	40	Each
634E0750	Temporary Concrete Barrier End Protection	4	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	4	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	1	Each
634E1002	Detour and Restriction Signing	1,062.4	SqFt
634E1020	Temporary Business Signing	126.0	SqFt
634E2000	Longitudinal Pedestrian Barricade	5,000	Ft
634E2015	Temporary Pedestrian Access Route	Lump Sum	LS
634E2020	Temporary Curb Ramp	8	Each
634E2025	Longitudinal Pedestrian Barrier	700	Ft
634E2050	Temporary Sidewalk	5,000	SqFt
634E2052	Temporary Flexible Sidewalk	5,000	SqFt
634E2054	Reset Temporary Flexible Sidewalk	5,000	SqFt
734E5010	Sweeping	150	Hour

PCN 06N3

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
260E2030	Gravel Cushion, Salvaged	550.0	Ton
320E1200	Asphalt Concrete Composite	125.0	Ton
634E0010	Flagging	300.0	Hour
634E0110	Traffic Control Signs	487.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	11	Each
634E0330	Temporary Raised Pavement Markers	1,920	Ft
634E0380	Tubular Marker	160	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	1,840	Ft
634E0565	Remove Pavement Marking, Arrow	2	Each
634E0600	4" Temporary Pavement Marking Tape Type I	1,200	Ft
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	20	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	2	Each
634E1002	Detour and Restriction Signing	254.4	SqFt
634E1020	Temporary Business Signing	84.0	SqFt
634E2000	Longitudinal Pedestrian Barricade	650	Ft
634E2020	Temporary Curb Ramp	3	Each
634E2025	Longitudinal Pedestrian Barrier	75	Ft
634E2050	Temporary Sidewalk	150	SqFt
634E2052	Temporary Flexible Sidewalk	150	SqFt
634E2054	Reset Temporary Flexible Sidewalk	150	SqFt
734E5010	Sweeping	50	Hour

SEQUENCE OF OPERATIONS

See Section-C Phasing Details for Sequence of Operations.

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate 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. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

The Contractor will phase construction so all utility work will be started at the lowest point and working "uphill" in direction.

The Contractor will always maintain access to all businesses throughout construction. Consecutive intersecting city streets will not be closed.

The Contractor will not close sidewalks without having alternative routes constructed and operational. All routes will be ADA compliant.

Individual phases will be considered completed when all concrete mainline, curb and gutter, and sidewalk have been completed.

GENERAL TRAFFIC CONTROL

The subsequent Section C sheets show examples and expectations of the traffic control, TPAR and related traffic control devices. The actual traffic control and TPAR setup through the duration of the project will be dependent on the actual field conditions.

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.

All temporary speed limit signs will have a minimum mounting height of 7 feet in urban 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.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, or 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, signposts, 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.

A vertical drop-off of 8.5 inches or the thickness of the PCC Pavement will be allowed overnight only when dowel bar assembly installations prohibit construction of a wedge adjacent to the existing pavement and paving operations will be performed the following calendar day. Otherwise, no vertical drop-off including pipe and utility excavations of greater than 3 inches will be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 3:1 within 30 feet of the traveled way. No separate payment will be made for constructing these slopes.

FOR BIDDING PURPOSES ONLY

Revised 07-15-24 DJO

GENERAL TRAFFIC CONTROL, CONTINUDED

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs outside of the work limits daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

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.

Hauling materials to and from the project site will be conducted in a safe manner by utilizing flaggers and appropriate traffic control devices to control traffic.

Construction materials and equipment will not be unloaded from lanes open to traffic.

Parking of equipment during non-working hours will be in locations that do not hinder the visibility of or access to adjacent businesses.

The Contractor will coordinate with the Engineer prior to any driveway, sidewalk, or utility replacement work that will affect access and will minimize disruptions. This may require grading and temporary gravel surfacing.

TRAFFIC CONTROL SIGNING IN NEBRASKA

All traffic control signing installed in the state of Nebraska will be installed on breakaway perforated tube posts. All costs associated with furnishing, installing, and removing these perforated tube posts will be incidental to the contract unit price per square foot for "Detour and Restriction Signing".

TRAFFIC CONTROL, MISCELLANEOUS

On unfinished grades, reflectorized devices (drums or grabber cones) defining the outside edges of the roadway will be placed every 25' (minimum) during the hours of darkness and during the daytime hours at inactive locations where grading work is not being performed. Centerline at these locations will be defined by reflectorized devices (grabber cones) placed at 25' intervals. (minimum)

Minimum width for one-way operations is 11'; two-way operations is 22' or as specified.

Driveways, streets, and roadways that enter the project will be delineated such that they are clearly visible during all hours. Freestanding, reflective traffic control drums and/or grabber cones will be used. Cost for this delineation will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

WEEKLY PROJCET MEETINGS

The Contractor will schedule weekly project meetings to discuss scheduling/coordination, impacts, and issues while work is in progress. Additional meetings may be required during periods of inactivity.

TEMPORARY SURFACING

It is anticipated that existing surfacing will need to be removed in areas that are being used to accommodate traffic. Typical surfacing removal activities may include but not limited to construction of utilities, storm sewer, and phased surfacing tie-ins to areas required to accommodate the traffic adequately and safely.

An estimated quantity of 250 Tons of Asphalt Concrete Composite and 2000 tons Gravel Cushion, Salvaged have been added to the Estimate of Quantities. This quantity may be adjusted according to field conditions and Contractor operations.

Temporary Surfacing (Asphalt Concrete Composite) will be used as shown in the Temporary Traffic Control Plans and as directed by the Engineer. Temporary Surfacing (Asphalt Concrete Composite) will consist of 6" of Gravel Cushion, Salvaged and 4" of Asphalt Concrete Composite. Virgin Gravel Cushion will be substituted when Gravel Cushion, Salvaged is not available.

Temporary Surfacing (Gravel Cushion, Salvaged) may be used in pavement removal areas that are being used to accommodate traffic, maintain access and at the direction of the Engineer.

All costs associated with the installation, maintenance, and removal of the Temporary Surfacing will be incidental to the contract unit price for Unclassified Excavation (refer to Section B), Gravel Cushion, Salvaged (or Gravel Cushion), and Asphalt Concrete Composite (refer to Section F – Table of Quantities under Traffic Control Surfacing).

TEMPORARY PAVEMENT MARKING TAPE TYPE 1

Temporary Pavement Marking for stop bars will consist of 4" Temporary Pavement Marking Tape Type I. Placement of each 24" white stop bar will be accomplished by placing six pieces of 4" x 12' tape adjacent to one another. Each workspace requires two stop bars which is an equivalent of approximately 144' of 4" tape (2 workspaces at 144' - 288').

Temporary Pavement Marking for white crosswalk bars will consist of 4" Temporary Pavement Marking Tape Type I. Placement of each 8" crosswalk bar will be accomplished by placing two pieces of 4" tape adjacent to one another. Each crosswalk requires two parallel 8" bars. Length of each bar will be determined by the field conditions and actual placement of each crosswalk.

All costs to furnish, install, maintain (including replacement as required by the Engineer at no added cost to the Department), and remove the temporary pavement marking tape Type 1 will be included in the contract price per foot per 4" line or equivalent for "4" Temporary Pavement Marking Tape Type 1".

PCN 04FC - TEMPORARY PAVEMENT MARKING TAPE TYPE 1	
	ESTIMATED QUANTITY (Ft)
PHASE	WHITE
Phase 1	660
Phases 2, 3A &3B	5,000
Phase 4	6,500
Phase 5	4,500
Phase 6	800
TOTAL=	17,460

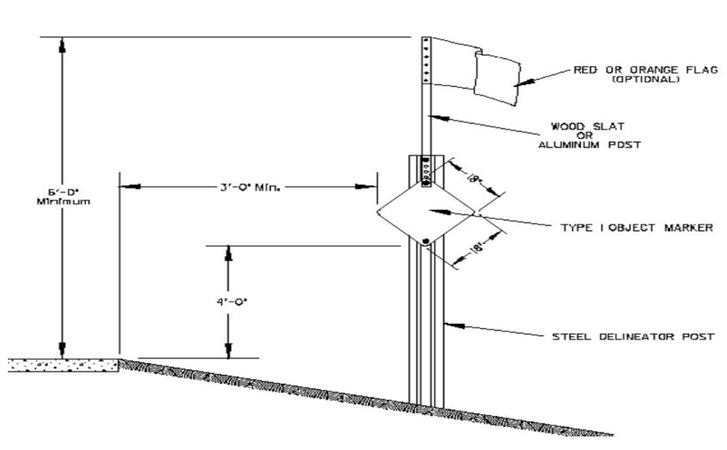
PCN 06N3 - TEMPORARY PAVEMENT MARKING TAPE TYPE 1	
	ESTIMATED QUANTITY (Ft)
PHASE	WHITE
Phase 2	600
Phase 6	600
TOTAL=	1,200

BUMP MARKERS

Orange bump markers will be placed adjacent to the bump location. The bump marker details are shown in the following drawing. The steel delineator post will be a 1.12 lb/ft flanged channel steel post for ground mounted installation. If the duration is less than 3 days, the Type 1 Object Marker can be installed on temporary supports. Type 1 Object Markers need to be back-to-back for two-way traffic operations.

BUMP (W8-1) signs with appropriate ADVISORY SPEED (W13-1P) plaques will be placed 500 feet in advance of the bump or as approved by the Engineer for adequate sight distance.

All costs for bump markers, bump signs, and advisory speed plaques will be incidental to the contract unit price per square foot for "Traffic Control Signs".



FLAGGING

Traffic will not be delayed for a cumulative period longer than 10 minutes throughout the length of the project.

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.

It is required that the flaggers be able to communicate with one another. 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.

BLADING

The Contractor will be required to blade granular road surfaces as needed to keep surfaces smooth and free of potholes. All costs associated with this work shall be incidental to the Contract Unit Price for Blading.

OVERWIDTH RESTRICTION SIGNING

The Contractor will furnish and install the overwidth restriction signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Overwidth restriction 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 overwidth restriction signs. Signs will need to be removed or covered during extended periods of inactivity.

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

TEMPORARY BUSINESS SIGNING

The Contractor will provide business access signing during construction. The Engineer and Contractor will coordinate with businesses to determine sign legend and placement within the project limits. Business access signs shall be placed where they will be visible while travelling in both directions along the roadway. All costs for the Contractor’s coordination efforts and activities will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

All costs for furnishing, installing, maintaining, relocating, and removal of business access signing and supports shall be paid for by the contract unit price per square foot for Temporary Business Signing.

TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS

Concrete barriers will be provided by the State and are available for pickup from the SDDOT Maintenance Yard located adjacent to Hwy 79 approximately two miles south of Rapid City and returned to the same location when they are no longer needed on the project.

Barriers to be adjusted or moved will be disconnected from adjacent barriers to minimize damage to connecting pins. Pins damaged by the Contractor will be replaced at no cost to the Department.

Concrete barrier sections will be placed as depicted in the plans to comply with clear zone requirements and as required by the Engineer. The barriers will be pinned and bolted together as directed by the Engineer.

All costs associated with picking the barriers up from the SDDOT Maintenance Yard, transporting, setting, connecting, and hauling them back to the SDDOT Maintenance Yard will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier.

After the initial placement, the concrete barriers may need to be adjusted. Adjustment of the barriers, where they do not need to be loaded on a truck for transport, will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier. All costs associated with removing, loading, unloading, and resetting of the barriers at a new site, will be incidental to the contract unit price per each for Remove and Reset Traffic Control Movable Concrete Barrier. No additional payment will be made for barriers that are not immediately reset at a new location on the project and stored on-site until they are either reset on the project or returned to the SDDOT as indicated in these plans.

TEMPORARY CONCRETE BARRIER END PROTECTION

Crash attenuators meeting the requirements of NCHRP 350 or MASH TL-3 will be furnished and installed by the Contractor. Attachment of the attenuators to the concrete barriers will be by approved methods.

All costs associated with furnishing, transporting, initial setup, connecting, maintaining, and removing the crash attenuators will be incidental to the contract unit price per each for Temporary Concrete Barrier End Protection.

All costs associated with moving and resetting crash attenuators to accommodate traffic flows after initial set-up will be paid for at the contract unit price per each for Remove & Reset Temporary Concrete Barrier End Protection. All costs associated with removing from initial placement and resetting at a new location will be incidental to the contract unit price per each. No additional payment will be made for crash attenuators that are not immediately reset at a new location on the project and stored on-site until they are either reset or removed from the project as determined by the Engineer. No additional payment will be made for minor adjustments.

The Contractor will have replacement hardware available so that in the event the crash attenuator is hit and made unusable, the crash attenuator can be made functional within 24 hours. The cost of replacement will be incidental to the contract unit price per each for Temporary Concrete Barrier Module Set or Repair Kit. No payment will be made for the Temporary Concrete Barrier Module Set or Repair Kit if no repairs are necessary. Upon completion of the project, crash attenuators will remain the property of the Contractor.

BARRIER MOUNTED LINEAR DELINEATION SYSTEM PANELS

A linear delineation system (LDS) panel will be attached to each barrier section. The color will be the same as the nearest pavement marking, white along outside edge lines or yellow for the left side on one way traffic sections. The LDS will be 34 inches long and 6 inches in height and be constructed of aluminum formed into a shape to provide retroreflective properties across a wide range of angles. It will be sheeted with sheeting meeting the requirements of ASTM D4956 Type XI. The panels will be evenly spaced, with the top of the panel 4 inches below the top of the barrier. Installation will be as per the manufacturer’s recommendations. This will allow for easy removal for replacement of damaged panels or to replace with an alternate color. The Contractor will furnish and install one panel along each side of the barrier if any panels are missing from the barriers. Replacement of damaged linear delineation system panels will be furnished and replaced by the Contractor. All costs associated with furnishing, installing, and replacing, if needed, will be incidental to the contract unit price per each for Linear Delineation System Panel, Barrier Mounted.

All LDS panels will remain attached to the barrier sections and will become the property of the State of South Dakota upon completion of the project.

The Contractor will verify the number of LDS panels that will need to be installed or replaced on the Traffic Control Movable Concrete Barriers. The contract amount of LDS panels is an estimate, and the full contract amount may not be needed.

Maintaining the linear delineation system, including moving LDS panels from one side of the barrier to the other side of the barrier to match the applicable color of the nearest pavement marking will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

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Revised 07-15-24 DJO

PAVEMENT MARKING REMOVAL (4" or Equivalent)			
Route/Phase	**Location**	**Description**	**Estimated Quantity (Ft.)**
Phase 1			
US 18	215+50 to 228+50	All Pavement Markings	3660
West Main St.	See Phase 1 Temporary Traffic Control Plan sheet	All Pavement Markings	750
Phase 2			
US 18	100+00 to 102+25	Double Yellow Centerline, WB Left Turn Lane Lines, Merging Lane Lines, Merging Lane Edge Lines, & EB Channelizing Line with White Slash Lines.	1195
US 18	102+25 to 126+00	EB Skip Dash Lines and EB Lane Lines	1000
US 18	126+00 to 136+50	EB Skip Dash Lines and EB Edge Line	1500
US 18	136+50 to 140+00	All Pavement Markings	1400
		TOTAL=	**9505**

PCN 04FC - PAVEMENT MARKING REMOVAL (Arrows)			
Route/Phase	**Location**	**Description**	**Estimated Quantity**
Phase 1			
US 18	215+50 to 228+50	Arrows	12
West Main St.	See Phase 1 Temporary Traffic Control Plan sheet	Arrows	2
Phase 2			
US 18	100+00 to 102+25	Arrows	2
		TOTAL=	**16**

PCN 06N3 - PAVEMENT MARKING REMOVAL (4" or Equivalent)			
Route/Phase	**Location**	**Description**	**Estimated Quantity (Ft.)**
Phase 2			
SD 407	209+75 to 214+75	All Pavement Markings	1840
		TOTAL=	**1840**

PCN 06N3 - PAVEMENT MARKING REMOVAL (Arrows)			
Route/Phase	**Location**	**Description**	**Estimated Quantity**
Phase 2			
SD 407	209+75 to 214+75	Arrows	2 Each
		TOTAL=	**2 EACH**

PCN 04FC - TRAFFIC CONTROL SIGNS

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	11	30"	5.2	57.2
R1-3P	ALL WAY (plaque)	3	18" x 6"	0.8	2.4
R2-1	SPEED LIMIT 25	5	24" x 30"	5.0	25.0
R2-1	SPEED LIMIT 55	2	24" x 30"	5.0	10.0
R2-1	SPEED LIMIT 45	1	24" x 30"	5.0	5.0
R2-6aP	FINES DOUBLE (plaque)	2	24" x 18"	3.0	6.0
R3-1	RIGHT TURN PROHIBITION (symbol)	4	24" x 24"	4.0	16.0
R3-2	LEFT TURN PROHIBITION (symbol)	4	24" x 24"	4.0	16.0
R3-7R	RIGHT LANE MUST TURN RIGHT	1	30" x 30"	6.3	6.3
R4-7c	(Narrow) KEEP RIGHT (symbol)	21	18" x 30"	3.8	79.8
R8-3	NO PARKING (symbol)	4	24" x 24"	4.0	16.0
R9-8	PEDESTRIAN CROSSWALK	6	36" x 18"	4.5	27.0
R9-9	SIDEWALK CLOSED	6	24" x 12"	2.0	12.0
R9-10	SIDEWALK CLOSED (ARROW L or R) USE OTHER SIDE	6	24" x 12"	2.0	12.0
R9-11	SIDEWALK CLOSED AHEAD (ARROW L or R) CROSS HERE	6	24" x 18"	3.0	18.0
R9-11a	SIDEWALK CLOSED (ARROW L or R) CROSS HERE	6	24" x 12"	2.0	12.0
R11-2	ROAD CLOSED	6	48" x 30"	10.0	60.0
R11-4	ROAD CLOSED TO THRU TRAFFIC	3	60" x 30"	12.5	37.5
W1-4	REVERSE CURVE (L or R)	6	48" x 48"	16.0	96.0
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (25 MPH)	1	48" x 48"	16.0	16.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-1	BUMP	5	48" x 48"	16.0	80.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W9-3	CENTER LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W11-2	PEDESTRIAN (symbol)	20	36" x 36"	9.0	180.0
W13-1P	ADVISORY SPEED (plaque)	7	30" x 30"	6.3	44.1
W16-7P	DOWNWARD DIAGONAL ARROW (plaque)	10	24" x 12"	2.0	20.0
W16-9P	AHEAD (plaque)	10	30" x 18"	3.8	38.0
W20-1	ROAD WORK AHEAD	20	48" x 48"	16.0	320.0
W20-3	ROAD CLOSED AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT or RIGHT LANE CLOSED XX FT	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	20	36" x 18"	4.5	90.0
-	TYPE 1 OBJECT MARKER BACK TO BACK	5	18" x 18"	2.3	11.5
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			1633.8

PCN 04FC - DETOUR AND RESTRICTION SIGNING

ITEMIZED LIST FOR DETOUR AND RESTRICTION SIGNING

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	NO VEHICLES OVER 10 FT WIDE	3	120" x 36"	30.0	90.0
SPECIAL	WIDTH RESTRICTION 10 FT WIDE XX MILES AHEAD	13	138" x 78"	74.8	972.4
		CONVENTIONAL ROAD DETOUR AND RESTRICTION SIGNING SQFT			1062.4

Signs will need to be removed or covered during extended periods of inactivity.

PCN 04FC – TEMPORARY BUSINESS SIGNING

ITEMIZED LIST FOR TEMPORARY BUSINESS SIGNING

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	BUSINESS ACCESS SIGN	12	36" x 12"	3.0	36.0
SPECIAL	BUSINESS ACCESS SIGN	6	36" x 24"	6.0	36.0
SPECIAL	BUSINESS ACCESS SIGN	6	36" x36"	9.0	54.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			126.0

PCN 06N3 - TRAFFIC CONTROL SIGNS

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	1	30"	5.2	5.2
R1-3P	ALL WAY (plaque)	1	18" x 6"	0.8	0.8
R2-1	SPEED LIMIT 25	1	24" x 30"	5.0	5.0
R2-1	SPEED LIMIT 40	1	24" x 30"	5.0	5.0
R2-6aP	FINES DOUBLE (plaque)	1	24" x 18"	3.0	3.0
R4-7c	(Narrow) KEEP RIGHT (symbol)	9	18" x 30"	3.8	34.2
R8-3	NO PARKING (symbol)	2	24" x 24"	4.0	8.0
R9-8	PEDESTRIAN CROSSWALK	3	36" x 18"	4.5	13.5
R9-9	SIDEWALK CLOSED	2	24" x 12"	2.0	4.0
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	2	24" x 18"	3.0	6.0
R9-11a	SIDEWALK CLOSED (ARROW L or R) CROSS HERE	2	24" x 12"	2.0	4.0
R11-2	ROAD CLOSED	2	48" x 30"	10.0	20.0
R11-4	ROAD CLOSED TO THRU TRAFFIC	1	60" x 30"	12.5	12.5
W3-5	SPEED REDUCTION AHEAD (25 MPH)	1	48" x 48"	16.0	16.0
W3-5	SPEED REDUCTION AHEAD (40 MPH)	1	48" x 48"	16.0	16.0
W11-2	PEDESTRIAN (symbol)	12	36" x 36"	9.0	108.0
W16-7P	DOWNWARD DIAGONAL ARROW (plaque)	6	24" x 12"	2.0	12.0
W16-9P	AHEAD (plaque)	6	30" x 18"	3.8	22.8
W20-1	ROAD WORK AHEAD	6	48" x 48"	16.0	96.0
W20-3	ROAD CLOSED AHEAD	4	48" x 48"	16.0	64.0
G20-2	END ROAD WORK	6	36" x 18"	4.5	27.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			487.0

PCN 06N3 – TEMPORARY BUSINESS SIGNING

ITEMIZED LIST FOR TEMPORARY BUSINESS SIGNING

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	BUSINESS ACCESS SIGN	8	36" x 12"	3.0	24.0
SPECIAL	BUSINESS ACCESS SIGN	4	36" x 24"	6.0	24.0
SPECIAL	BUSINESS ACCESS SIGN	4	36" x36"	9.0	36.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			84.0

PCN 06N3 - DETOUR AND RESTRICITON SIGNING

ITEMIZED LIST FOR DETOUR AND RESTRICTION SIGNING

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	NO VEHICLES OVER 10 FT WIDE	1	120" x 36"	30.0	30.0
SPECIAL	WIDTH RESTRICTION 10 FT WIDE XX MILES AHEAD	3	138" x 78"	74.8	224.4
		CONVENTIONAL ROAD DETOUR AND RESTRICTION SIGNING SQFT			254.4

Signs will need to be removed or covered during extended periods of inactivity.

TEMPORARY PAVEMENT MARKING

Included in the Estimate of quantities is 8489 feet of Temporary Pavement Marking (Temporary Pavement Marking Paint).

All costs to furnish and install Temporary Pavement Marking Paint will be included in the contract price per foot ”Temporary Pavement Marking”.

PCN 04FC - TEMPORARY PAVEMENT MARKING PAINT			
Route	**Location**	**Description**	**Estimated Quantity (Ft)**
US 18	101+22 to 136+50	Double 4" Yellow (Temporary Centerline)	7056
US 18	122+17 to 136+50	4" White (Temporary Edge Line)	1433
		Total=	**8489**

TEMPORARY RAISED PAVEMENT MARKERS

Temporary raised pavement markers will be used for marking edge lines, lane lines, centerlines and traffic control tapers and as shown in the Temporary Traffic Control Plans. Temporary raised pavement markers will be used on all new permanent surfacing sections of roadway and on existing surfacing where temporary marking locations are different than existing marking locations, and as shown in the Temporary Traffic Control Plans.

Temporary raised pavement markers will be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface or with an adhesive approved by the Engineer.

All costs to furnish, install, replace if necessary, and remove the markers will be incidental to the contract unit price per foot for “Temporary Raised Pavement Markers”.

PCN 04FC - RAISED PAVEMENT MARKERS		
PHASE	**ESTIMATED QUANTITY (Ft)**	
	WHITE	**YELLOW**
Phase 1	220	3000
Phase 2, 3A & 3B	1400	4900
Phase 4	800	800
Phase 5	1000	8000
Phase 6	550	550
SUB TOTAL=	*3970*	*17250*
TOTAL=	**21220**	

PCN 06N3 - RAISED PAVEMENT MARKERS		
PHASE	**ESTIMATED QUANTITY (Ft)**	
	WHITE	**YELLOW**
Phase 2	480	480
Phase 6	480	480
SUB TOTAL=	*960*	*960*
TOTAL=	**1920**	

TUBULAR MARKERS

Tubular markers will be placed at locations where traffic is using existing, new, or a combination of paved surfaces, for periods exceeding 1 week. Modifications may be necessary and will be approved by the Engineer.

The color of the tubular markers on centerline will be predominately orange. The color of the tubular markers installed on the shoulders will be predominately white.

All tubular markers will be a minimum of 28 inches in height. The base of the tubular marker should be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface after use. The pin used to connect the marker to the base will be of a type that will not puncture a vehicle tire if it should become dislodged from the base.

All costs for furnishing, installing, maintaining, replace if necessary, and removing the tubular markers will be incidental to the contract unit price per each for “Tubular Marker”.

PCN 04FC - TUBULAR MARKERS		
PHASE	**ESTIMATED QUANTITY**	
	WHITE	**ORANGE**
Phase 1	60	60
Phases 2, 3A &3B	150	145
Phase 4	55	50
Phase 5	85	170
Phase 6	30	30
SUB TOTAL=	*380*	*455*
TOTAL=	**835**	

PCN 06N3 – TUBULAR MARKERS		
PHASE	**ESTIMATED QUANTITY**	
	WHITE	**YELLOW**
Phase 2	20	60
Phase 6	20	60
SUB TOTAL=	*40*	*120*
TOTAL=	**160**	

STATE FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

The Contractor will inform the DOT two weeks prior to the road closure goes into effect so portable message signs (PCMS) will be installed to notify drivers of the upcoming construction and closure. The PCMS will be furnished, modified, maintained, and transported by the DOT.

When work begins that will affect traffic patterns, the State will remove the PCMS.

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 Oglala Lakota 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 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.

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 BARRIER

When used to separate pedestrians from vehicular traffic for TPARs in the roadway, longitudinal pedestrian barrier must meet or exceed the crashworthy requirements of NCHRP 350 or MASH Test Level 1 [for posted speeds less than 35 mph] 2 or 3 [for posted speeds of 35 mph or greater]. The bottom and top surfaces of the traffic side of devices will have retroreflective sheeting or delineation for improved nighttime visibility.

When longitudinal pedestrian barriers are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock should be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. Channelizing devices 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 Chapter 6F of the MUTCD.

Longitudinal pedestrian barriers will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing.

The maximum length of Longitudinal Pedestrian Barrier in use on the project at one time will be the final quantity paid for the project. All costs including but not limited to relocation and maintenance of Longitudinal Pedestrian Barrier will be incidental to the contract unit price per foot for “Longitudinal Pedestrian Barrier”.

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.

The maximum length of Longitudinal Pedestrian Barricade in use on the project at one time will be the final quantity paid for the project. All costs including but not limited to relocation and maintenance of Longitudinal Pedestrian Barricade will be incidental to the contract unit price per foot for “Longitudinal Pedestrian Barricade”.

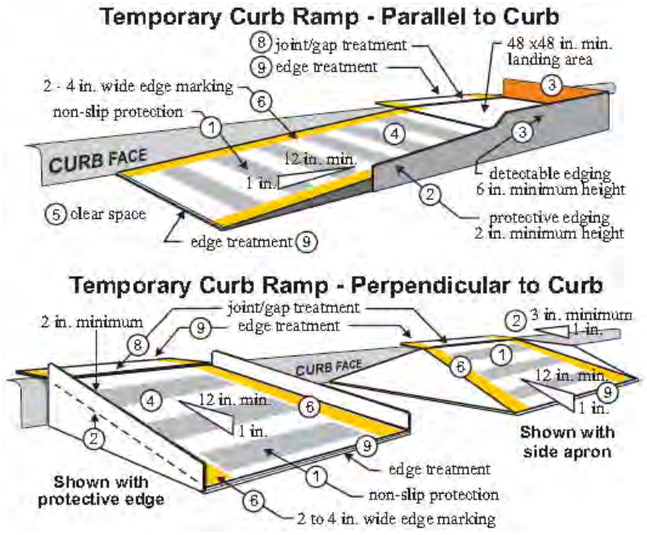
TEMPORARY CURB RAMP

Temporary curb ramps should be firm, stable, and have a non-slip surface. They will not warp or buckle and should be made of materials strong enough to support a weight of 800 pounds. Temporary curb ramps will be yellow or color contrasting and contain marked edges, so they are noticeable by pedestrians who have visual impairments. Lateral joints or gaps between surfaces will be a maximum of 0.5 inches in width. Temporary curb ramps will include detectable warning panels.

Temporary curb ramps will be the same width as the temporary pedestrian access route, with a recommended width of 60 inches and a minimum width of 48 inches. Temporary curb ramps will have a maximum slope of 8.3% and have free draining surfaces with a maximum cross slope of 2%. Handrails on temporary curb ramps are not required unless the curb ramp has a rise exceeding 6 inches and a length exceeding 72 inches.

All costs will be incidental to the contract unit price per each for “Temporary Curb Ramp”. Every location a ramp is installed will be paid per each and ramps may be reused at multiple locations.

TEMPORARY CURB RAMP DETAILS



1. Curb ramps will be 48-inch minimum width with a firm, stable, and non-slip surface.

2. Protective edging with a 2-inch minimum height will be installed when the curb ramp or landing platform has a vertical drop of 6 inches or greater or has a side apron slope steeper than 33:1 (33%). Protective edging should be considered when curb ramps or landing platforms have a vertical drop of 3 inches or more.

3. Detectable edging with 6 inches minimum height and contrasting color will be installed on all curb ramp landings where the walkway changes direction (turns).

TEMPORARY CURB RAMP DETAILS (Continued)

4. Curb ramps and landings should have a 50:1 (2%) maximum cross slope.

5. A minimum clear space of 48 inch x 48 inch minimum will be provided above and below the curb ramp, with a 60 inch x 60 inch clear space preferred.

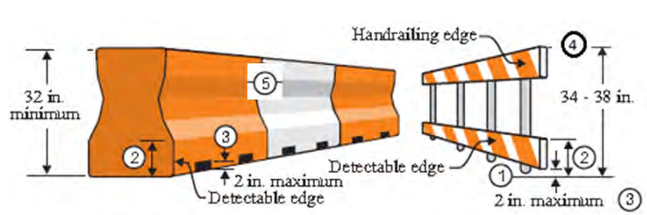
6. The curb ramp walkway edge will be marked with a contrasting color 2 to 4 inch wide marking. The marking is optional where color contrasting edging is used.

7. Water flow in the gutter system will have minimal restriction.

8. Lateral joints or gaps between surfaces will be less than 0.5 inches in width.

9. Changes between surface heights should not exceed 0.5 inches. Lateral edges between 0.25 inches and 0.5 inches in height, should be vertical up to 0.25 inches in height and beveled at 2:1 between 0.25 inches and 0.5 inches in height.

PEDESTRIAN CHANNELIZING DEVICE DETAILS



Longitudinal Pedestrian Barrier Longitudinal Pedestrian Barricade

1. Barricade rail supports may not extend into the pedestrian walkway more than 4 inches from the face of the barricade.

2. The top edge of the bottom portion will be a minimum of 8 inches above the walkway.

3. Devices will not block water drainage from the walkway. A gap height or opening from the walkway surface up to a maximum of 2 inches in height is allowed for drainage purposes.

4. The top edge of the longitudinal pedestrian barricade is to be used as a guiderail to provide visual and tactile guidance to pedestrians along a designated route. The top surface should have a minimum width of 0.5 inches to allow the hand to feel the surface. The surface should be smooth and free of any sharp or abrasive elements to allow safe hand trailing.

5. Longitudinal pedestrian barrier used to provide positive protection from traffic to pedestrians should be crashworthy.

TEMPORARY SIDEWALK

Temporary sidewalk will be a smooth, continuous, non-slip, hard surface. There should be no curbs or abrupt changes in grade or terrain that could cause tripping or be a barrier to wheelchair use.

Granular surfaces will NOT be allowed. Exceptions may be needed for small/ irregular areas (less than 10' in length).

Asphalt Concrete and/ or Portland Cement Concrete used for Temporary Sidewalk will be a minimum thickness of 2 Inches with 4 inches of compacted gravel cushion or gravel cushion, salvaged. If used, Asphalt Concrete will comply with Asphalt Concrete Composite requirements and/or Portland Cement Concrete will comply with M6 Concrete requirements.

Temporary sidewalk will have a minimum width of 48 inches, with 60 inches recommended. The Contractor will try to provide boulevard sidewalk, whenever possible, for Temporary sidewalk that is 48 inches wide. Temporary sidewalk less than 60 inches wide will provide for a 60-inch x 60-inch passing space at intervals not to exceed 200 feet. Temporary sidewalk will have a maximum cross slope of 2%. The maximum grade will be 5% where the Temporary sidewalk does not follow the grade of the road.

All costs associated with installing, maintaining and removing temporary sidewalk, including all materials, labor, and incidental work, will be included in the contract unit price per square foot for "Temporary Sidewalk".

TEMPORARY FLEXIBLE SIDEWALK

These crossings are typically utilized in an urban setting under partial width construction to facilitate frequent removal and resetting to accommodate utility and road work.

Temporary Flexible sidewalk (TFS) will be contrasting in color to clearly indicate the pedestrian walk path. Colors like the surrounding work area ground or disturbed ground will not be allowed.

TFS will be wide enough to accommodate the placement of pedestrian barricades and devices required to adequately install the TFS in place as per the manufacture installation recommendations or as approved by the Engineer. A minimum of width of 5.0' will be maintained that is clear of obstructions for pedestrian traffic.

The Contractor will provide TFS from the list below. The Contractor may submit an equivalent type of temporary flexible sidewalk mat for approval by the Department.

1. Mobi-Mats (Rec Path) AFX Blue Jay
   Deschamps Mats Systems
   218 Little Falls Road, Unit 12
   Cedar Grove, NJ 07009
   PH# 1-973-928-3040

In addition, Temporary Flexible Sidewalk will require the following:

1. TFS will be installed as per the manufactures installation recommendations or as approved by the Engineer. The TFS needs to result in a taut and secure surface.

2. TFS placed directly on existing ground will meet all requirements for grade and cross slope as listed under "Temporary Sidewalk".

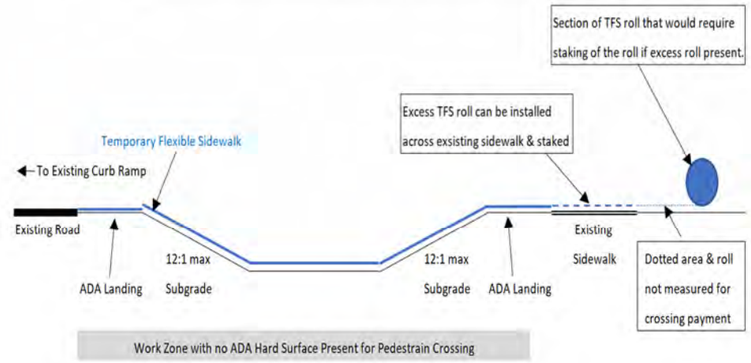
3. TFS placed directly on existing vegetation may result in damage to the vegetation. The vegetation will be repaired or replaced; to its original condition as approved by the Engineer, by the contractor at no cost to the State.

4. Flexible sidewalk will be used in conjunction with other traffic control and pedestrian traffic control items to best meet ADA compliance and as approved by the Engineer to best fit field conditions.

Measurement of the TFS will be to the nearest square foot of actual installed and utilized TFS on the project at one time (per PCN#). Excess TFS that is not used in a roll for each location/ installation will not be measured for payment.

All costs associated with ground preparation, initial installation, maintaining, and removing TFS will be included in the contract unit price per square foot for "Temporary Flexible Sidewalk".

Typical Section for Pedestrian Crossing Across an Active Work Zone with Temporary Flexible Sidewalk for Partial Width Construction



Notes:

1. TFS is to be installed in accordance to manufacturer's reccomendations, or as approved by the Engineer.
2. ADA Landing will be placed as required and meet typical ADA standards described in the plans
3. Subsurface work will meet the required ADA typical slopes and cross slopes to support the TFS
4. Excess Length of TFS will require staking to prevent inadvertant moving of the roll by the public.

TEMPORARY FLEXIBLE SIDEWALK, RESET

"Resetting" of the Temporary Flexible Sidewalk (TFS) will be defined as installation in a new location, as approved by the Engineer.

Reinstallation in the same location, reinstalling due to maintenance, or removing and reinstalling due to construction operations will NOT be subject to payment.

Measurement for resetting of the TFS will be to the nearest square foot of actual TFS reset on the project at one time (per PCN#). Excess TFS that is not used in a roll for each location will not be measured for payment.

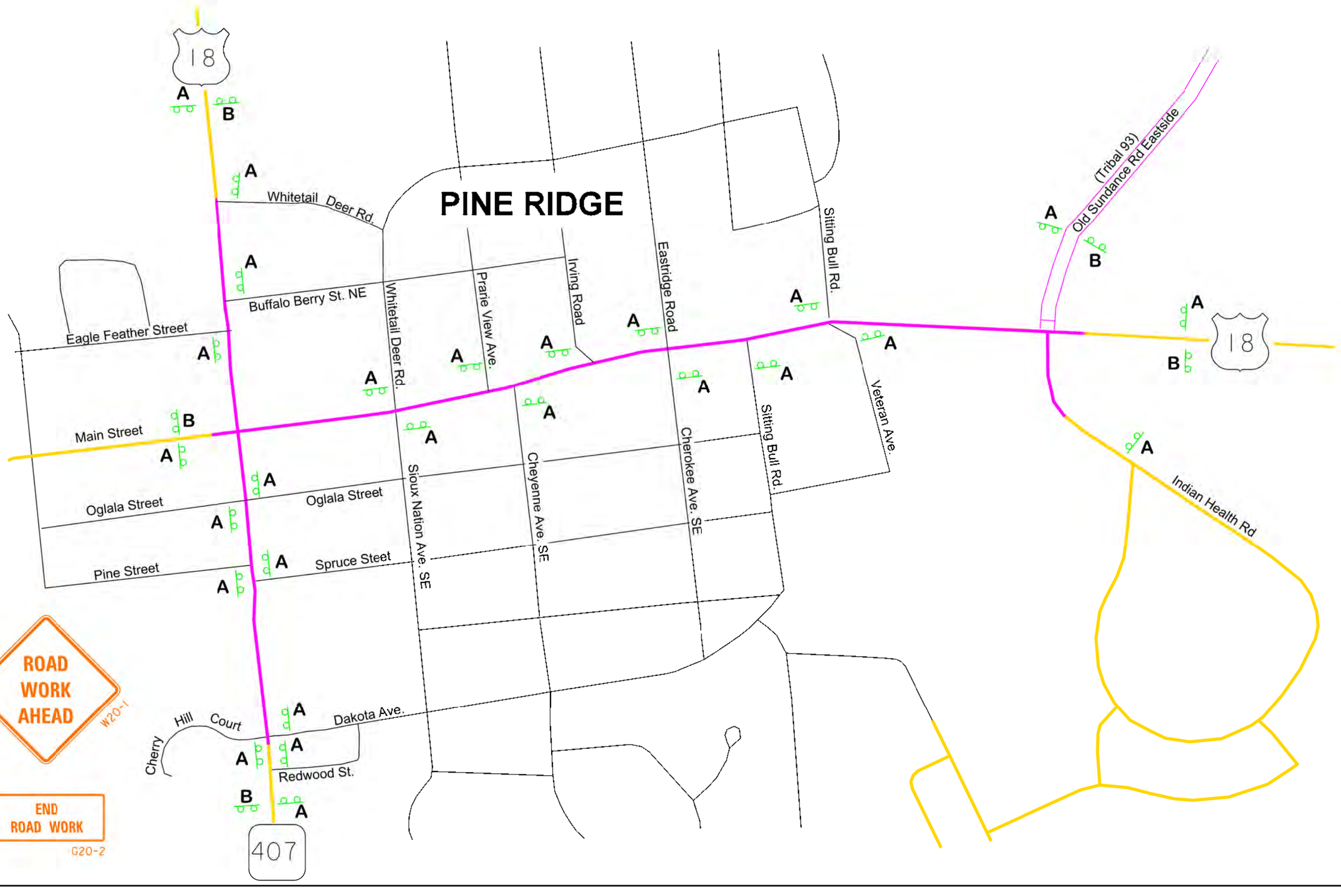
All cost associated with ground preparation, resetting, maintaining, removing the TFS will be included in the contract unit price per square foot for "Temporary Flexible Sidewalk, Reset".

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C9	C39

Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

FIXED LOCATION SIGNING



OVERWIDTH RESTRICTION
FIXED LOCATION SIGNING

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C10	C39

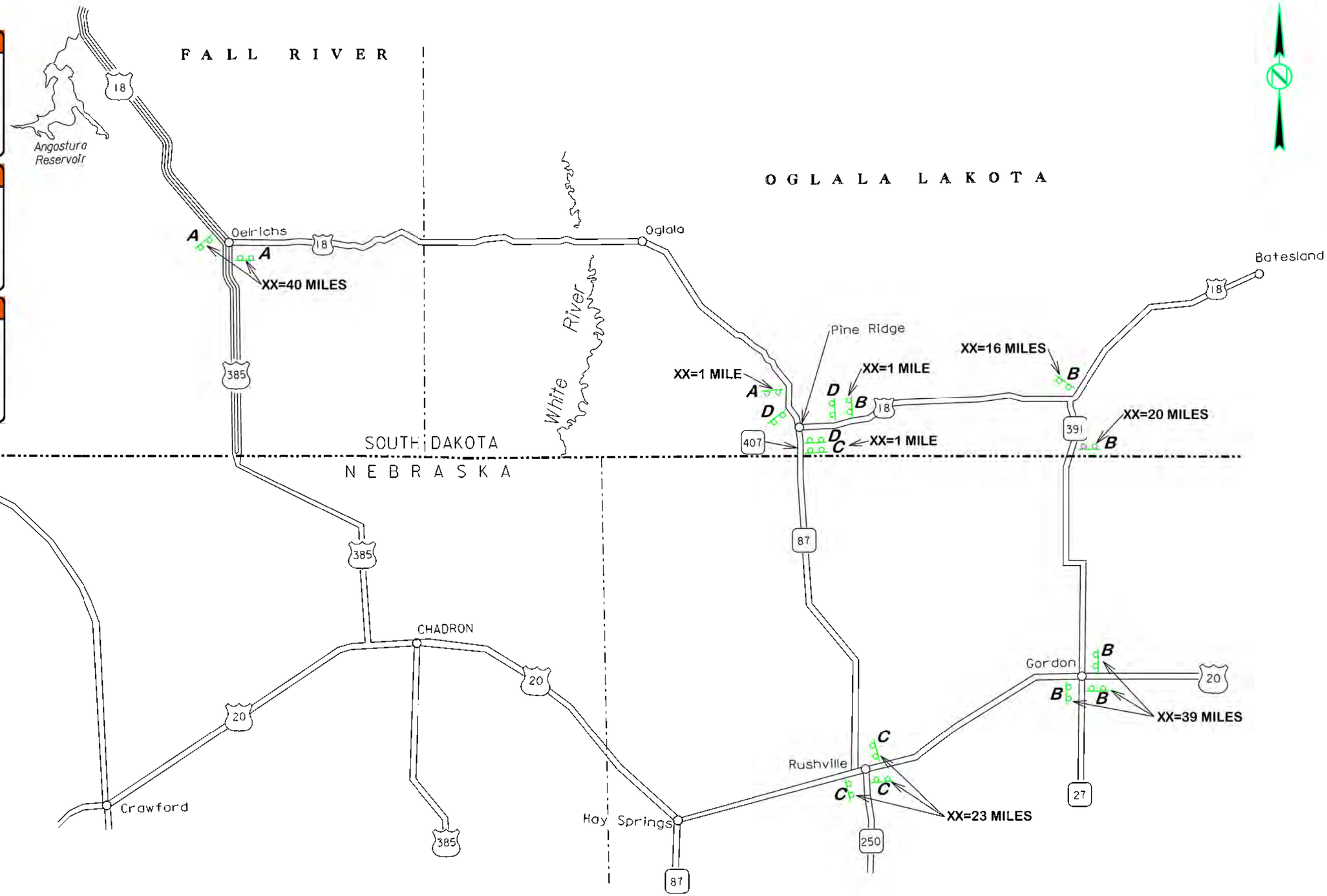
Plotting Date: 05/24/2024

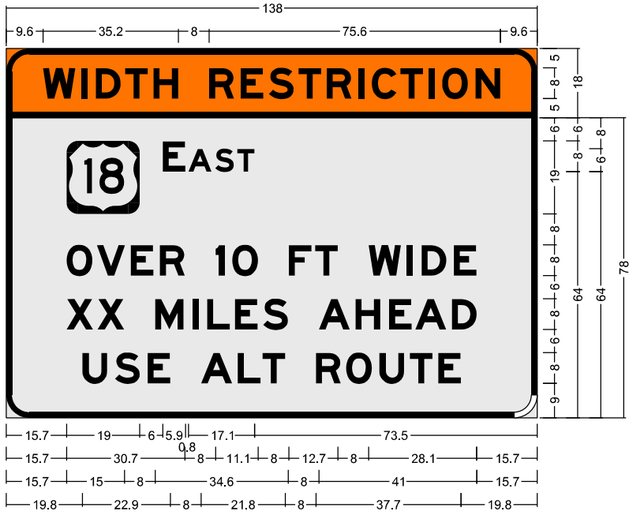
A= WIDTH RESTRICTION
18 EAST
OVER 10 FT WIDE
XX MILES AHEAD
USE ALT ROUTE

B= WIDTH RESTRICTION
18 WEST
OVER 10 FT WIDE
XX MILES AHEAD
USE ALT ROUTE

C= WIDTH RESTRICTION
18 EAST / WEST
OVER 10 FT WIDE
XX MILES AHEAD
USE ALT ROUTE

D= NO VEHICLES OVER 10 FT WIDE





FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C11	C39

Plotting Date: 04/21/2023

SIGN DETAILS

6.0" Radius, 1.5" Border, Black on Orange;
"WIDTH RESTRICTION", E Mod 2K;

6.0" Radius, 1.5" Border, Black on White;
Rounded Rectangle 3.0" Radius;
"EAST", E Mod 2K; "OVER 10 FT WIDE", E Mod 2K;
"XX MILES AHEAD", E Mod 2K; "USE ALT ROUTE", E Mod 2K;
Table of widths and spaces

	W		I		D		T		H
9.6	8.4	1.5	1.6	2.2	6.5	1.1	5.9	1.5	6.5

	R		E		S		T		R		I		C		T		I		O		N	
8.0	6.4	1.7	5.9	1.5	6.5	1.2	5.9	1.4	6.5	1.7	1.6	1.9	6.5	0.9	6.0	1.4	1.6	1.9	6.7	2.0	6.4	9.6

	■		E		A		S		T	
15.7	19.0	6.0	5.9	0.8	6.0	0.9	4.9	0.9	4.4	73.5

	O		V		E		R		1		0		F		T
15.7	6.7	1.2	7.3	1.5	5.9	1.7	6.4	8.0	2.4	2.0	6.7	8.0	5.9	0.9	5.9

	W		I		D		E	
8.0	8.5	1.4	1.6	2.3	6.4	2.0	5.9	15.7

	X		X		M		I		L		E		S
15.7	6.9	1.2	6.9	8.0	7.5	2.2	1.6	2.2	6.0	1.2	6.0	1.4	6.5

	A		H		E		A		D	
8.0	8.1	1.4	6.5	2.2	5.9	0.9	8.1	1.4	6.5	15.7

	U		S		E		A		L		T
19.8	6.5	2.0	6.5	2.0	5.9	8.0	8.1	1.4	5.9	0.5	5.9

	R		O		U		T		E	
8.0	6.5	1.4	6.7	1.9	6.5	1.4	5.9	1.5	5.9	19.8

6.0" Radius, 1.5" Border, Black on Orange;
"WIDTH RESTRICTION", E Mod 2K;

6.0" Radius, 1.5" Border, Black on White;
Rounded Rectangle 3.0" Radius;
"WEST", E Mod 2K; "OVER 10 FT WIDE", E Mod 2K;
"XX MILES AHEAD", E Mod 2K; "USE ALT ROUTE", E Mod 2K;
Table of widths and spaces

	W		I		D		T		H
9.6	8.4	1.5	1.6	2.2	6.5	1.1	5.9	1.5	6.5

	R		E		S		T		R		I		C		T		I		O		N	
8.0	6.4	1.7	5.9	1.5	6.5	1.2	5.9	1.4	6.5	1.7	1.6	1.9	6.5	0.9	6.0	1.4	1.6	1.9	6.7	2.0	6.4	9.6

	■		W		E		S		T	
15.7	19.0	6.0	8.5	1.2	4.5	1.0	4.9	0.9	4.4	71.9

	O		V		E		R		1		0		F		T
15.7	6.7	1.2	7.3	1.5	5.9	1.7	6.4	8.0	2.4	2.0	6.7	8.0	5.9	0.9	5.9

	W		I		D		E	
8.0	8.5	1.4	1.6	2.3	6.4	2.0	5.9	15.7

	X		X		M		I		L		E		S
15.7	6.9	1.2	6.9	8.0	7.5	2.2	1.6	2.2	6.0	1.2	6.0	1.4	6.5

	A		H		E		A		D	
8.0	8.1	1.4	6.5	2.2	5.9	0.9	8.1	1.4	6.5	15.7

	U		S		E		A		L		T
19.8	6.5	2.0	6.5	2.0	5.9	8.0	8.1	1.4	5.9	0.5	5.9

	R		O		U		T		E	
8.0	6.5	1.4	6.7	1.9	6.5	1.4	5.9	1.5	5.9	19.8

6.0" Radius, 1.5" Border, Black on Orange;
"WIDTH RESTRICTION", E Mod 2K;

6.0" Radius, 1.5" Border, Black on White;
Rounded Rectangle 3.0" Radius;
"EAST / WEST", E Mod 2K; "OVER 10 FT WIDE", E Mod 2K;
"XX MILES AHEAD", E Mod 2K; "USE ALT ROUTE", E Mod 2K;
Table of widths and spaces

	W		I		D		T		H
9.6	8.4	1.5	1.6	2.2	6.5	1.1	5.9	1.5	6.5

	R		E		S		T		R		I		C		T		I		O		N	
8.0	6.4	1.7	5.9	1.5	6.5	1.2	5.9	1.4	6.5	1.7	1.6	1.9	6.5	0.9	6.0	1.4	1.6	1.9	6.7	2.0	6.4	9.6

	■		E		A		S		T		/
15.7	19.0	6.0	5.9	0.8	6.0	0.9	4.9	0.9	4.4	6.0	4.7

	W		E		S		T	
6.0	8.5	1.2	4.5	1.0	4.9	0.9	4.4	31.4

	O		V		E		R		1		0		F		T
15.7	6.7	1.2	7.3	1.5	5.9	1.7	6.4	8.0	2.4	2.0	6.7	8.0	5.9	0.9	5.9

	W		I		D		E	
8.0	8.5	1.4	1.6	2.3	6.4	2.0	5.9	15.7

	X		X		M		I		L		E		S
15.7	6.9	1.2	6.9	8.0	7.5	2.2	1.6	2.2	6.0	1.2	6.0	1.4	6.5

	A		H		E		A		D	
8.0	8.1	1.4	6.5	2.2	5.9	0.9	8.1	1.4	6.5	15.7

	U		S		E		A		L		T
19.8	6.5	2.0	6.5	2.0	5.9	8.0	8.1	1.4	5.9	0.5	5.9

	R		O		U		T		E	
8.0	6.5	1.4	6.7	1.9	6.5	1.4	5.9	1.5	5.9	19.8

6.0" Radius, 1.5" Border, 0.4" Indent, Black on White;
"NO VEHICLES", E Mod 2K; "OVER 10 FT WIDE", E Mod 2K;
Table of widths and spaces

	N		O
19.5	6.5	1.9	6.7

	V		E		H		I		C		L		E		S	
8.0	7.4	1.4	5.9	1.7	6.5	2.2	1.6	1.9	6.5	1.8	5.9	1.3	5.9	1.4	6.5	19.5

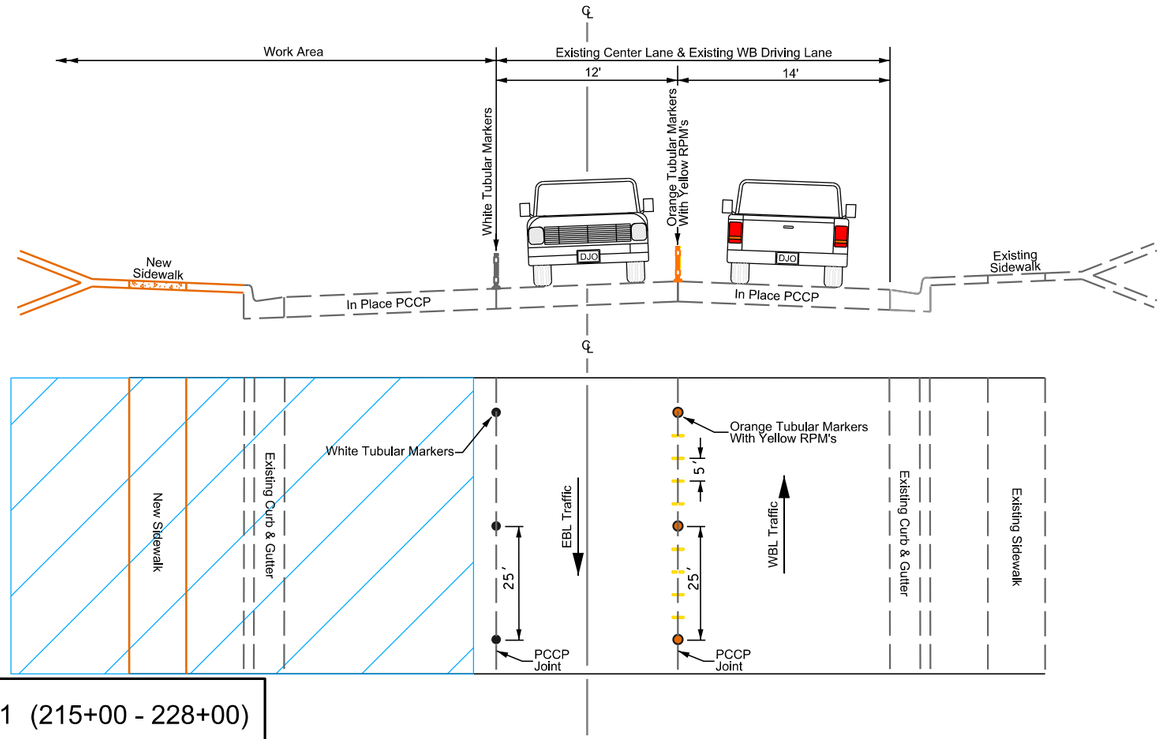
	O		V		E		R		1		0		F		T
6.7	6.7	1.2	7.3	1.5	5.9	1.7	6.4	8.0	2.4	2.0	6.7	8.0	5.9	0.9	5.9

	W		I		D		E	
8.0	8.5	1.4	1.6	2.3	6.4	2.0	5.9	6.7

3.0" Radius, 1.0" Border, White on, Blue;
"Typical", C 2K;
"Business", C 2K;
"Access", C 2K;
Standard Arrow Custom 9.4" X 5.7" 0';

1:1
Plot Scale -
trrc12216
Plotted From -
...\Sign Details.dgn
File -

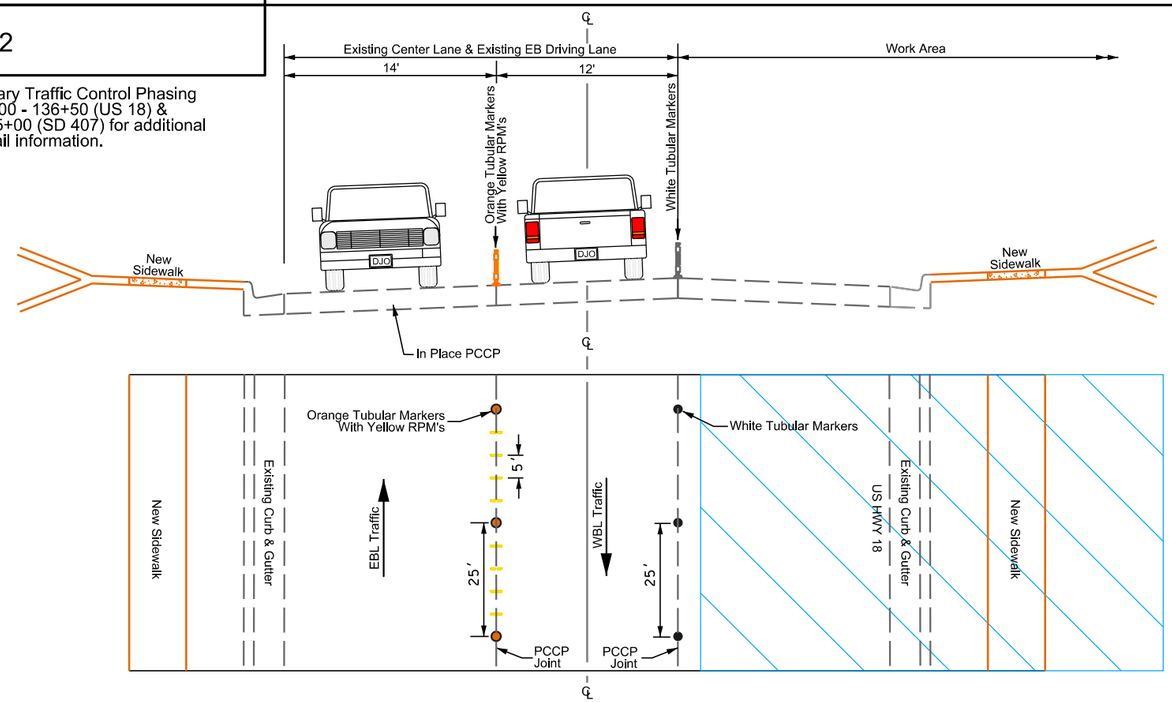
PHASING DETAILS (US HWY 18)



PHASE 1 (215+00 - 228+00)

PHASE 2

See Temporary Traffic Control Phasing Details 100+00 - 136+50 (US 18) & 210+00 - 215+00 (SD 407) for additional Phase 2 detail information.



NOTE:

CONSTRUCTION OF THE SW RADIUS (US 18 & SD 407) INTERSTECTION MUST BE COMPLETED NO EARLIER THAN PHASE 5 IN ORDER TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION.

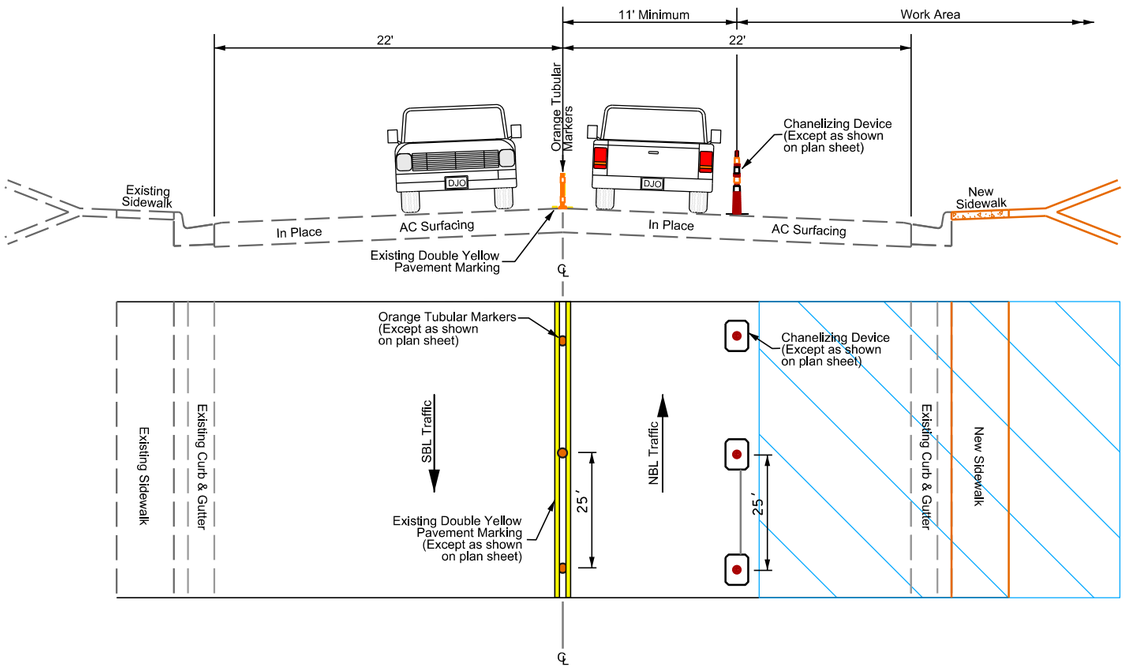
Phase 1 (215+00 to 228+00)

1. Set up traffic control. Remove existing pavement markings (215+00 to 228+00).
2. Set up Phase 1 traffic control.
3. 225+39.35 Lt. to 215+84.13 Lt. - Construct storm sewer.
4. 215+38.45 Lt to 228+00 Lt. - Construct curb & gutter, ADA improvements and private access aprons.

Phase 2

1. Set up traffic control at SD Hwy 407/US Hwy 18 intersection as a 4-way stop configuration. Remove existing traffic signals.
2. 100+50 Rt. - Remove existing traffic signals, existing right turn merging lane island curb & gutter, and curb ramps.
3. Install temporary surfacing as shown in Phase 2 Temporary Traffic Control Plan sheets and as needed to due to utility improvements.
4. Set up Phase 2 Traffic Control.
5. 216+70.02 Rt. to 103+87.65 Lt. -. Remove existing surfacing in the WB driving lane, WB right turn lane, WB merging lane. Remove existing curb & gutter, sidewalk, and curb ramps.
6. 215+84.13 Lt. to 136+50 Lt. - Construct storm sewer including lateral stub outs and incidental removals.
7. 216+70.02 Rt. to 103+87.65 Lt. - Install temporary surfacing over storm sewer excavation disturbance areas and locations where surfacing has been removed and must accommodate traffic and/ or as directed by the Engineer.
8. 215+84.13 Lt. to 136+50 Lt. - Construct WB driving lane, WB right turn lane, and WB right turn merging lane. Construct curb & gutter and ADA improvements.
9. 215+38.45 Lt to 228+00 Lt. - Construct curb & gutter, ADA improvements and private access aprons.

PHASING DETAILS (SD 407)



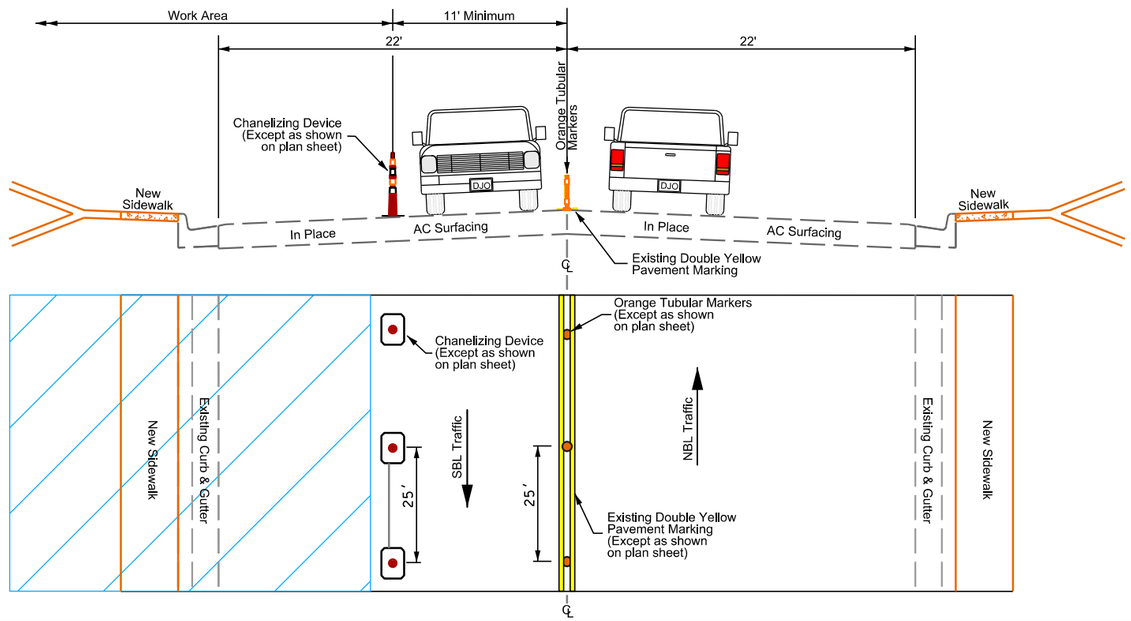
NOTE:

CONSTRUCTION OF THE SW RADIUS (US 18 & SD 407) INTERSTECTION MUST BE COMPLETED NO EARLIER THAN PHASE 5 IN ORDER TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION.

See Temporary Traffic Control Phasing Details 215+00 - 228+00 (US 18) & 100+00 - 136+50 (US 18) for additional Phase 2 detail information.

PHASE 2
(SD 407 - 210+00 - 215+00)

PHASE 6
(SD 407 - 210+00 - 215+00)



NOTE:

CONSTRUCTION OF THE SW RADIUS (US 18 & SD 407) INTERSTECTION MUST BE COMPLETED NO EARLIER THAN PHASE 5 IN ORDER TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION.

Phase 6

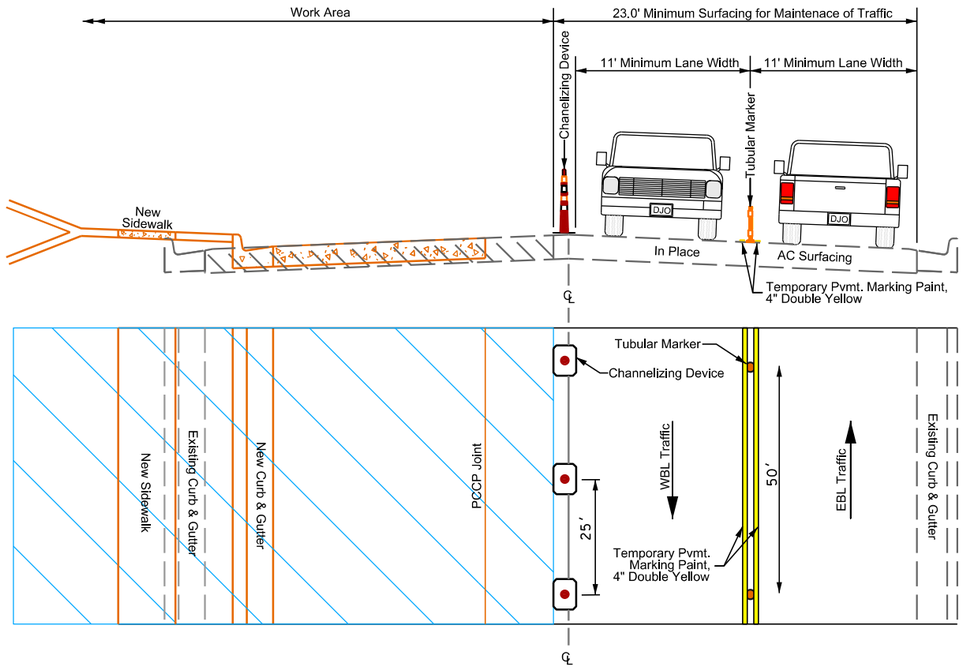
1. Set up Phase 6 traffic control. (Mirror Phase 2 (SD 407) traffic control.)
2. 215+38.45 Lt to 228+00 Lt. - Construct curb & gutter, ADA improvements and private access aprons.
3. Install permanent pavement markings. (SD 407)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C14	C39

Plotting Date: 05/24/2024

PHASING DETAILS (US HWY 18)

Phase 3B



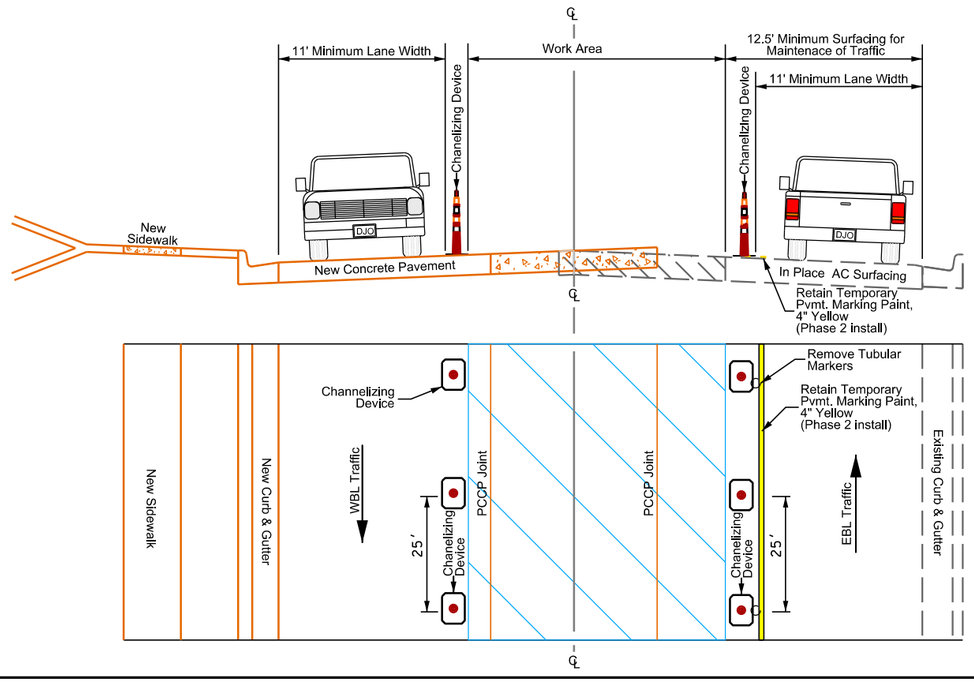
NOTE:

CONSTRUCTION OF THE SW RADIUS (US 18 & SD 407) INTERSTECTION MUST BE COMPLETED NO EARLIER THAN PHASE 5 IN ORDER TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION.

Phase 3B

1. Set up Phase 3B traffic control.
2. 103+87.65 to 136+50 - Remove existing surfacing to construct the WB driving lane and WB right turn lane.
3. 116+00 to 119+50 - Remove surfacing to construct the center lane/ WB left turn lane.
4. 103+87.65 to 136+50 - Construct the WB driving lane, WB right turn lanes.
5. 116+00 to 119+50 - Construct the center lane/ WB left turn lane.
6. 116+00 to 119+50 - Install temporary surfacing where needed due to utility and storm sewer imporvements or as directed by the engineer.

Phase 4



NOTE:

CONSTRUCTION OF THE SW RADIUS (US 18 & SD 407) INTERSTECTION MUST BE COMPLETED NO EARLIER THAN PHASE 5 IN ORDER TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION.

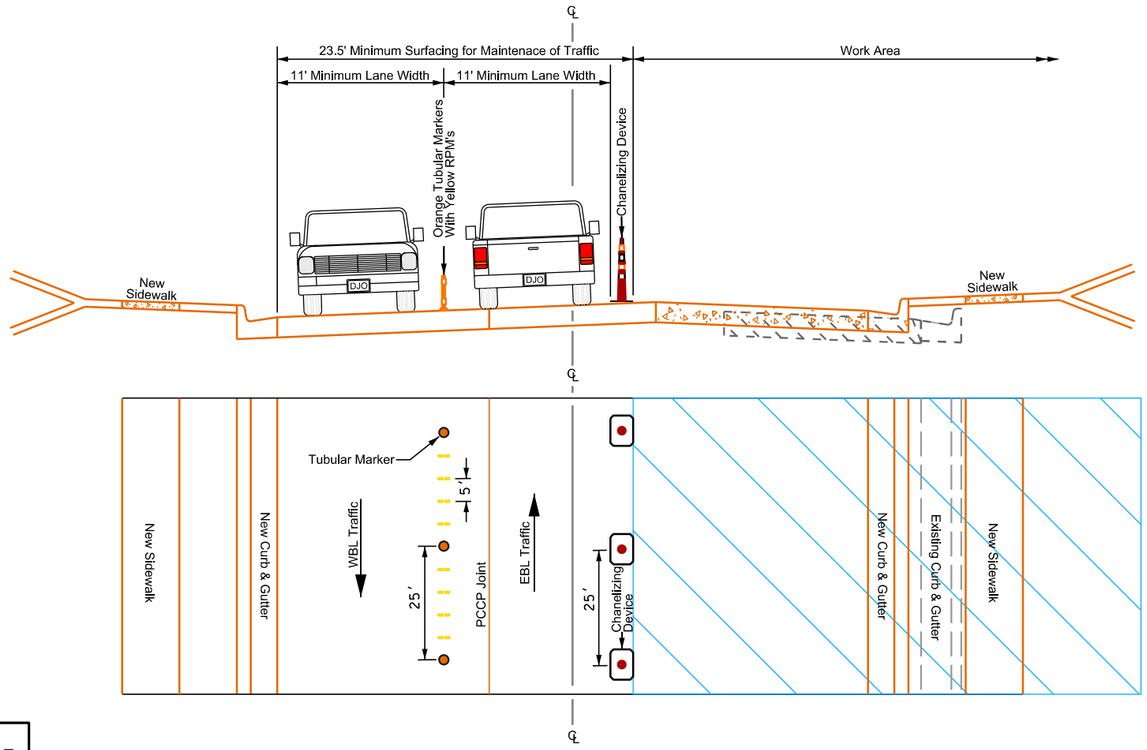
Phase 4

1. Set up Phase 4 traffic control to close the center turn lane and move traffic to the new WB drive lane and existing EB outside drive lane.
2. Extend storm sewer lateral lines to a point beyond Phase 4 surfacing..
3. 101+22.65 Lt. & Rt. to 136+50 Lt. & Rt. Construct center lane surfacing with exception of curb & gutter island (Near Cheyenne Ave. SE).

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C15	C39

Plotting Date: 05/24/2024

PHASING DETAILS (US HWY 18 & SD 407)



PHASE 5

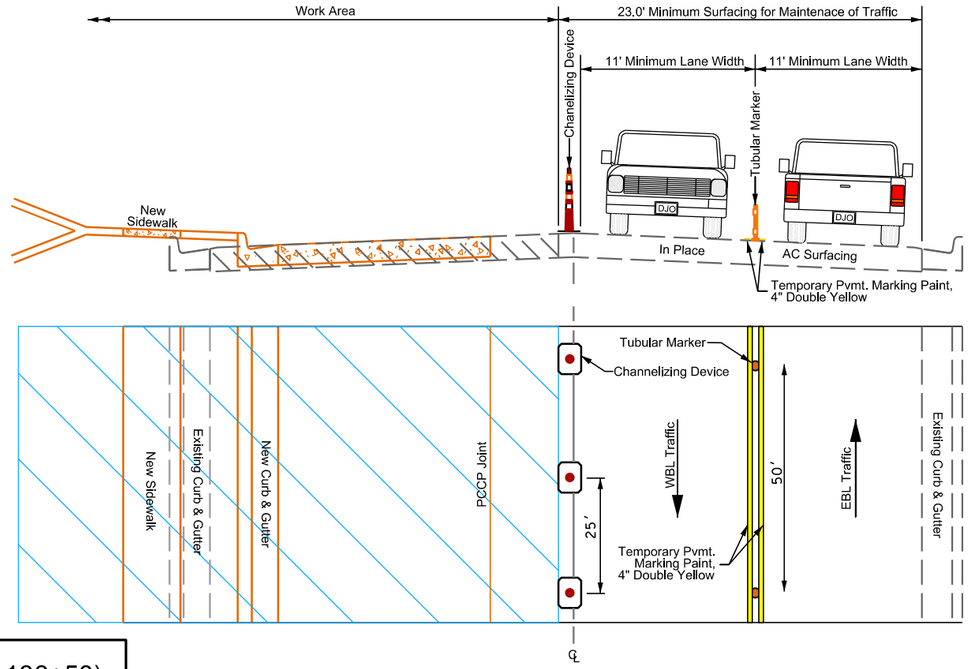
NOTE:

CONSTRUCTION OF THE SW RADIUS (US 18 & SD) 407 INTERSTECTION MUST BE COMPLETED NO EARLIER THAN PHASE 5 IN ORDER TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION.

Phase 5

1. Set up traffic control to close the existing EB drive lane and move traffic to new WB drive lane and new center turn lane.
2. 101+22.65 Rt. to 132+48.69 Rt Complete remaining storm sewer improvements.
3. 101+22.65 Rt. to 136+50 Rt - Construct EB driving lane including right turn lane (Indian Health Road), curb & gutter, PCCP surfacing, sidewalk, driveway access and intersecting road improvements.
4. Complete intersection (US 18, SD 407 & Main Street) improvements including surfacing, curb & gutter radi, ADA improvements and traffic siganal installation.
5. Complete surfacing installation in areas removed due to waterline utility work. (US 18, SD 407
6. Construct curb & gutter island (Near Cheyenne Ave. SE).
7. Install all permanent pavement markings. (US 18)

PHASING DETAILS (US HWY 18)



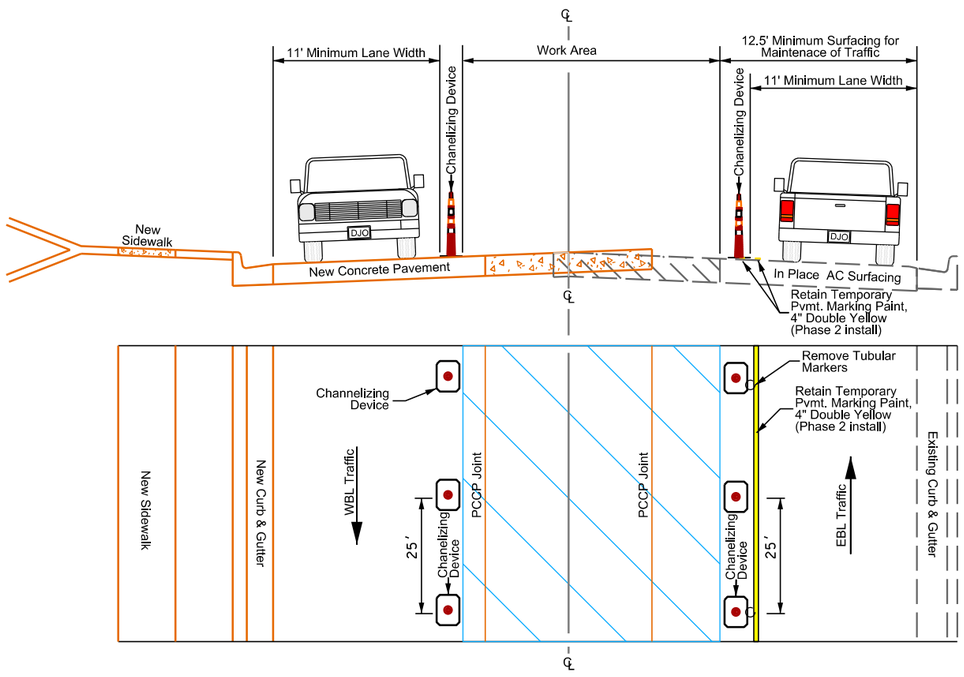
NOTE:

CONSTRUCTION OF THE SW RADIUS (US 18 & SD 407) INTERSTECTION MUST BE COMPLETED NO EARLIER THAN PHASE 5 IN ORDER TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION.

PHASE 2 (100+00 - 136+50)

See Temporary Traffic Control Phasing Details 215+00 - 228+00 (US 18) & 210+00 - 215+00 (SD 407) for additional Phase 2 detail information.

Phase 3A



NOTE:

CONSTRUCTION OF THE SW RADIUS (US 18 & SD 407) INTERSTECTION MUST BE COMPLETED NO EARLIER THAN PHASE 5 IN ORDER TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION.

Phase 3A

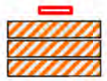
1. Set up Phase 3A traffic control.
2. 220+00 to 228+50 - Install permanent pavement markings.
3. 101+22.65 to 103+87.65 - Remove existing surfacing to allow construction of the new center lane/ WB left turn lane.
4. 101+22.65 to 103+87.65 - Construct center lane/ WB left turn lane.

TRAFFIC CONTROL LEGEND

①  LONGITUDINAL PEDESTRIAN BARRICADE

②  TEMPORARY CURB RAMP

③  TEMPORARY SIDEWALK / TEMPORARY FLEXIBLE SIDEWALK

④  TYPE 3 BARRICADE

⑤  W11-2G & W16-7P

⑥ 

W11-2G & W16-9P

⑦  LONGITUDINAL PEDESTRIAN BARRIER

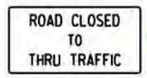
⑧  R4-7

⑨ 

R1-1

⑩ 

R1-3P

⑪ 

R11-4

⑫ 

R11-2

⑬ 

R1-2

⑭  R3-1

⑮  R3-2

⑯ 

R9-9

⑰ 

R9-10

⑱ 

R9-11

⑲ 

R9-11a

⑳ 

R9-8

㉑  W1-4

㉒ 

W20-3

㉓ 

R3-7R

㉔  W1-6RT

 EXSISTING PAVEMENT MARKING

 TRAFFIC FLOW DIRECTION

 8" WHITE CROSSWALK (TEMP. PAVEMENT MARKING TAPE TYPE 1 TAPE)

 24" WHITE STOP BAR (TEMP. PVMT. MARKING TYPE 1 TAPE)

 CHANNELIZING DEVICE

 TUBULAR MARKER

 WORK AREA

 TEMPORARY SURFACING

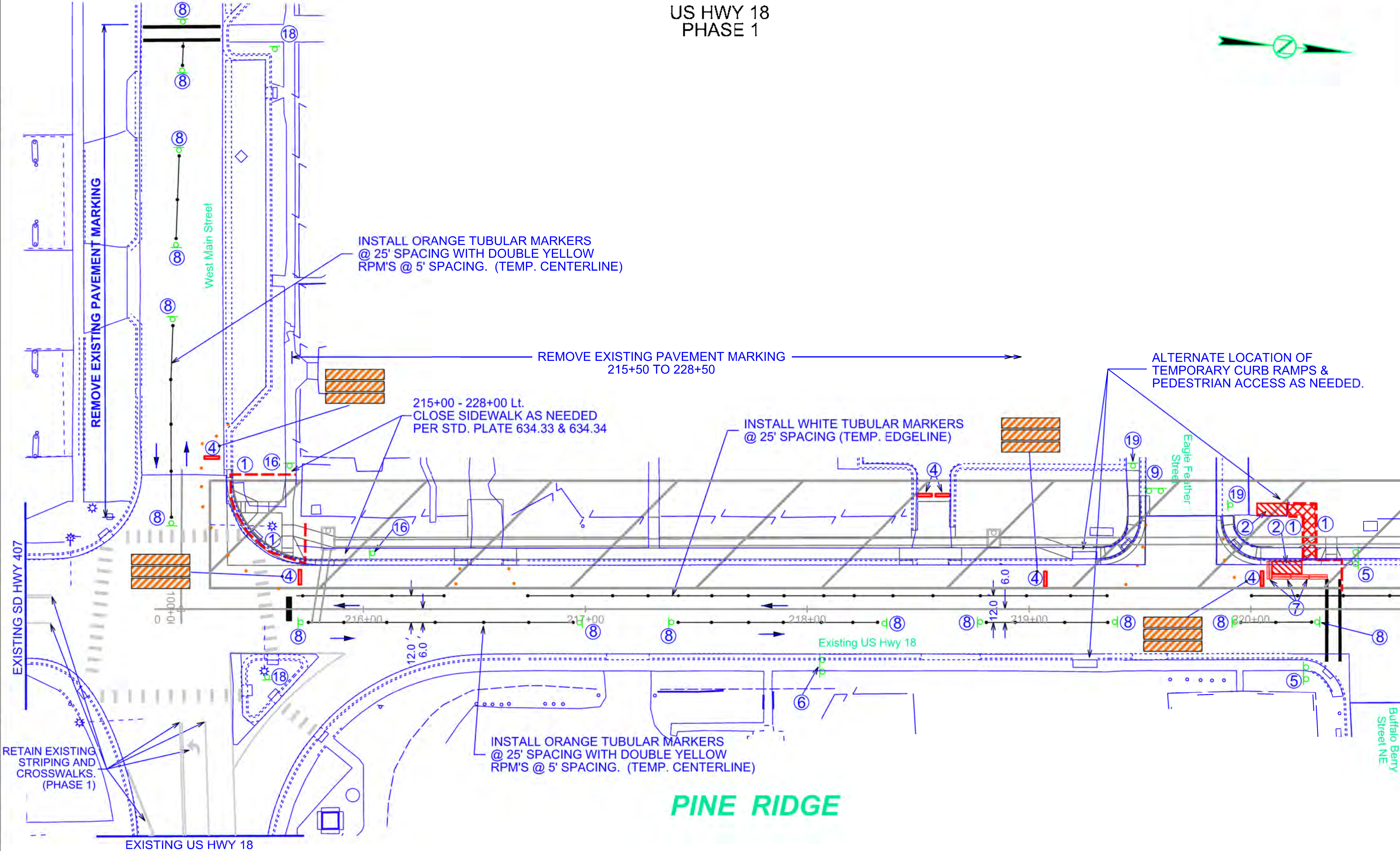
 TEMPORARY SURFACING

PAVEMENT REMOVAL LIMIT

STATE OF SOUTH DAKOTA | PROJECT NH-CR-EM 0018(195)103 P 0407(00)01 | SHEET C18 | TOTAL SHEETS C39
Plotting Date: 05/24/2024

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 1


INSTALL ORANGE TUBULAR MARKERS @ 25' SPACING WITH DOUBLE YELLOW RPM'S @ 5' SPACING. (TEMP. CENTERLINE)
REMOVE EXISTING PAVEMENT MARKING
West Main Street
REMOVE EXISTING PAVEMENT MARKING 215+50 TO 228+50
ALTERNATE LOCATION OF TEMPORARY CURB RAMPS & PEDESTRIAN ACCESS AS NEEDED.
215+00 - 228+00 Lt. CLOSE SIDEWALK AS NEEDED PER STD. PLATE 634.33 & 634.34
INSTALL WHITE TUBULAR MARKERS @ 25' SPACING (TEMP. EDGELINE)
Eagle Feather Street
EXISTING SD HWY 407
216+00
217+00
218+00
219+00
220+00
Existing US Hwy 18
RETAIN EXISTING STRIPING AND CROSSWALKS. (PHASE 1)
INSTALL ORANGE TUBULAR MARKERS @ 25' SPACING WITH DOUBLE YELLOW RPM'S @ 5' SPACING. (TEMP. CENTERLINE)
PINE RIDGE
Buffalo Berry Street NE
EXISTING US HWY 18

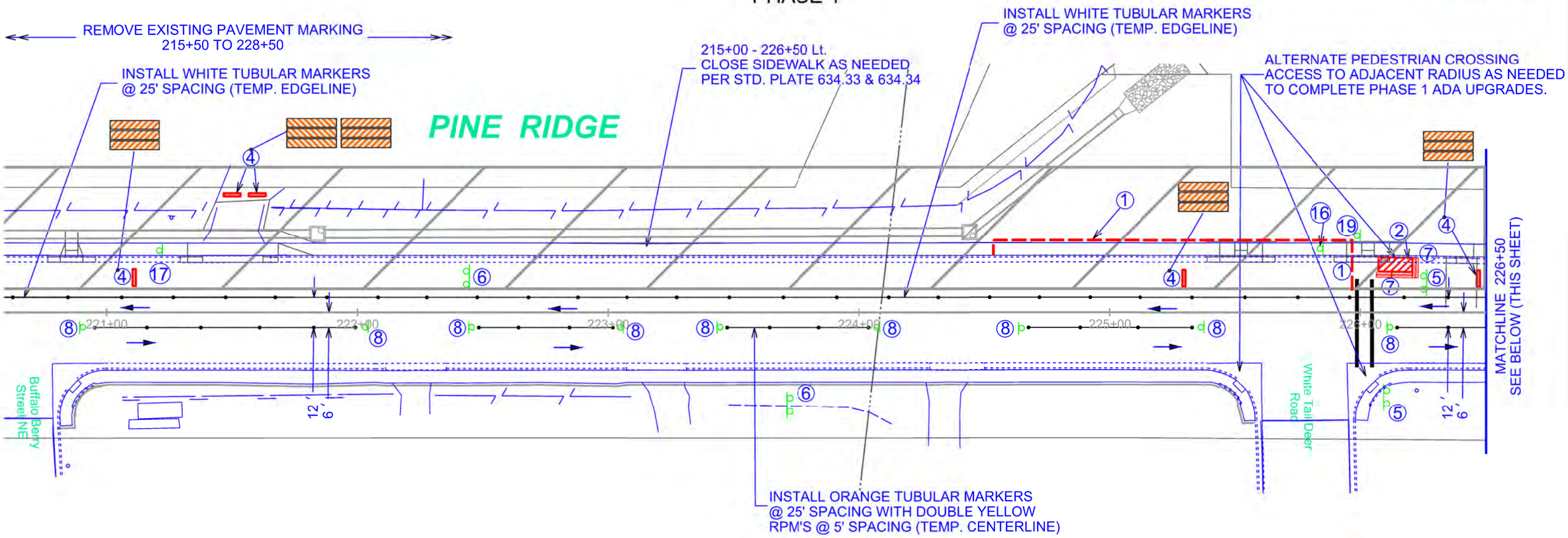
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C19	C39

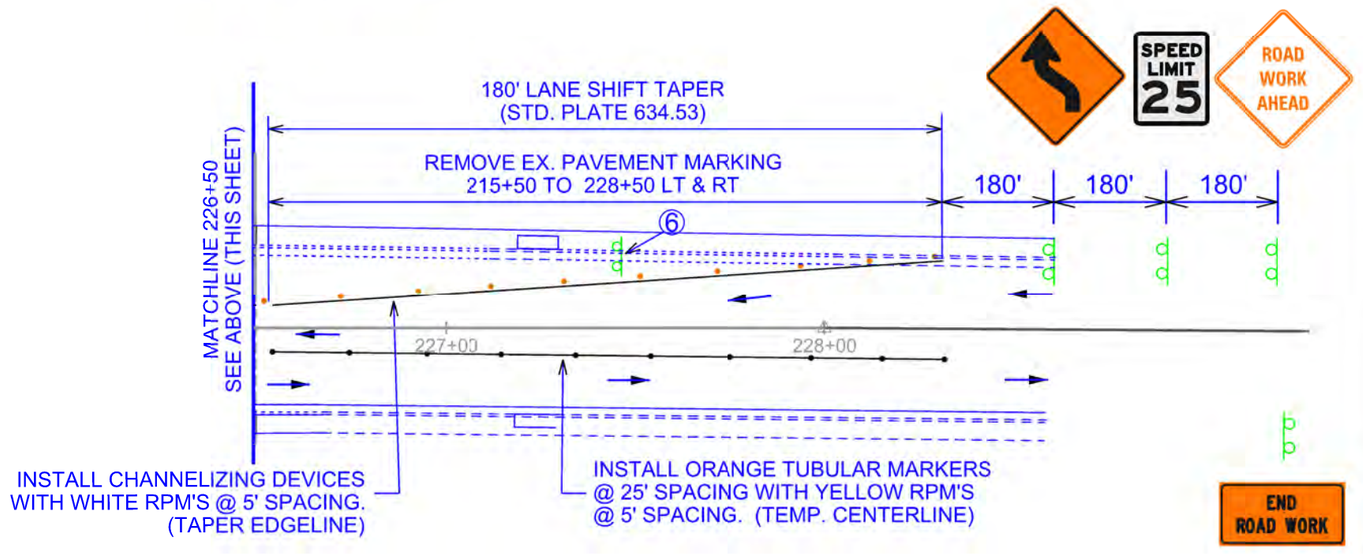
Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 1





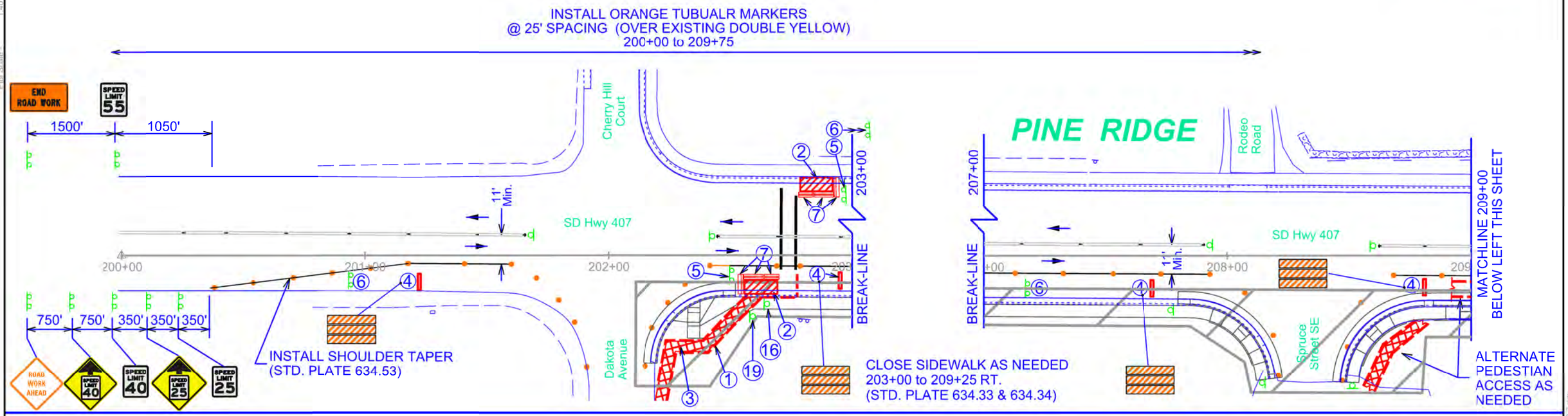
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C20	C39

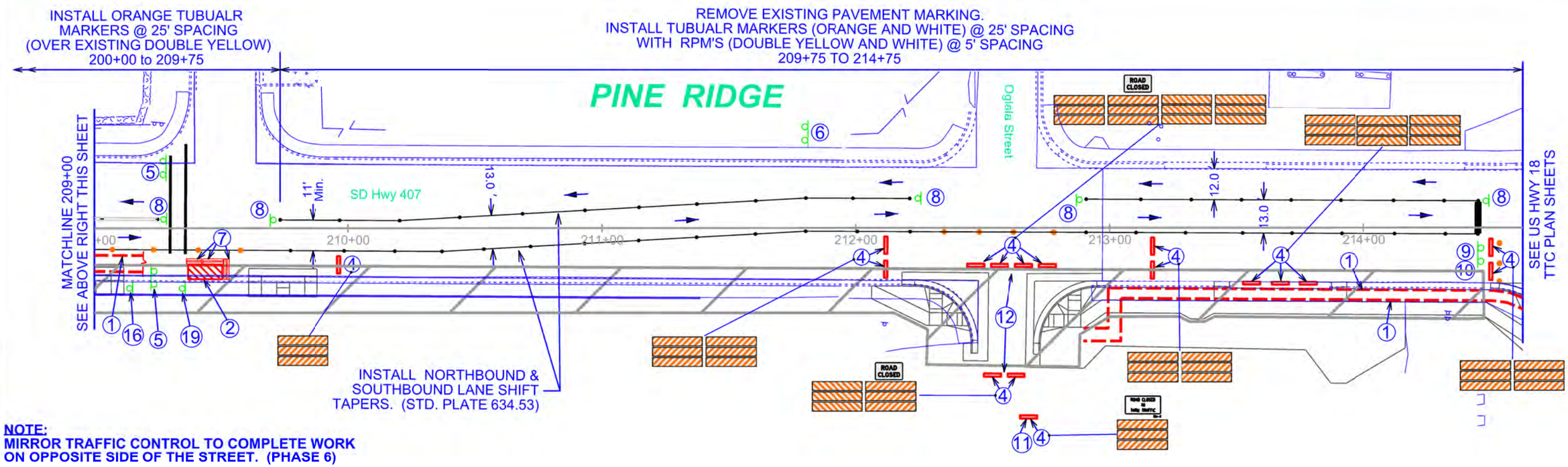
Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

SD HWY 407
PHASE 2





NOTE:
MIRROR TRAFFIC CONTROL TO COMPLETE WORK ON OPPOSITE SIDE OF THE STREET. (PHASE 6)

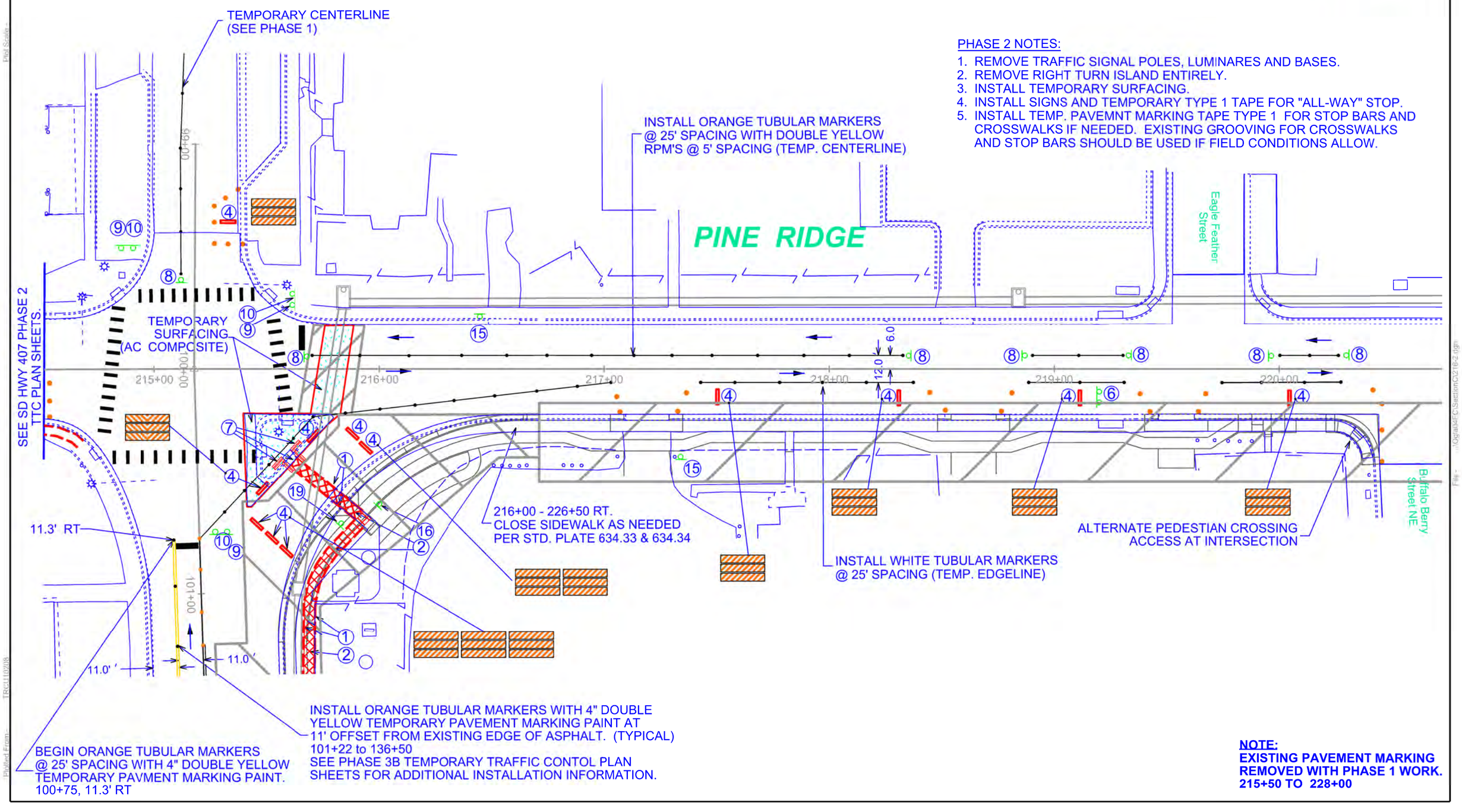
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C21	C39

Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 2



NOTE:
EXISTING PAVEMENT MARKING REMOVED WITH PHASE 1 WORK.
215+50 TO 228+00

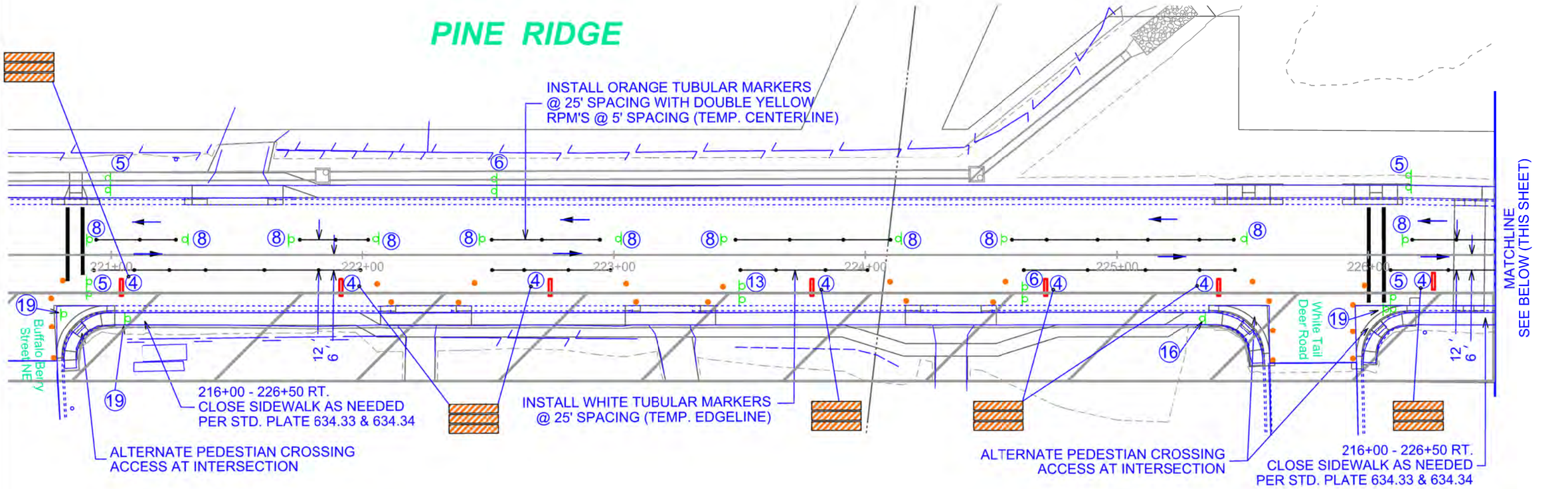
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C22	C39

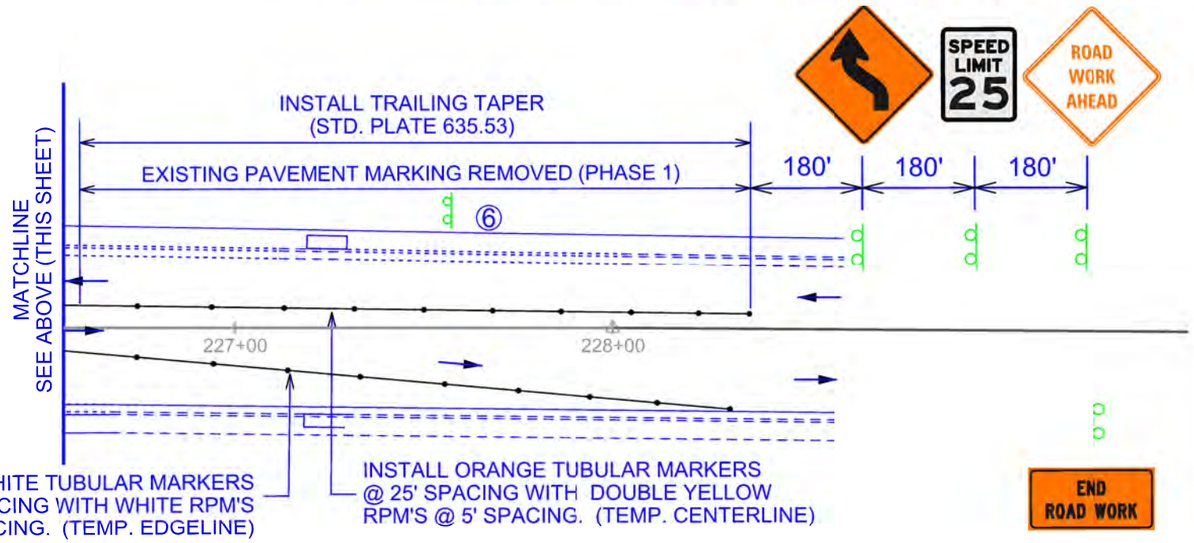
Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 2





NOTE:
EXISTING PAVEMENT MARKING REMOVED WITH PHASE 1 WORK.
215+50 TO 228+00

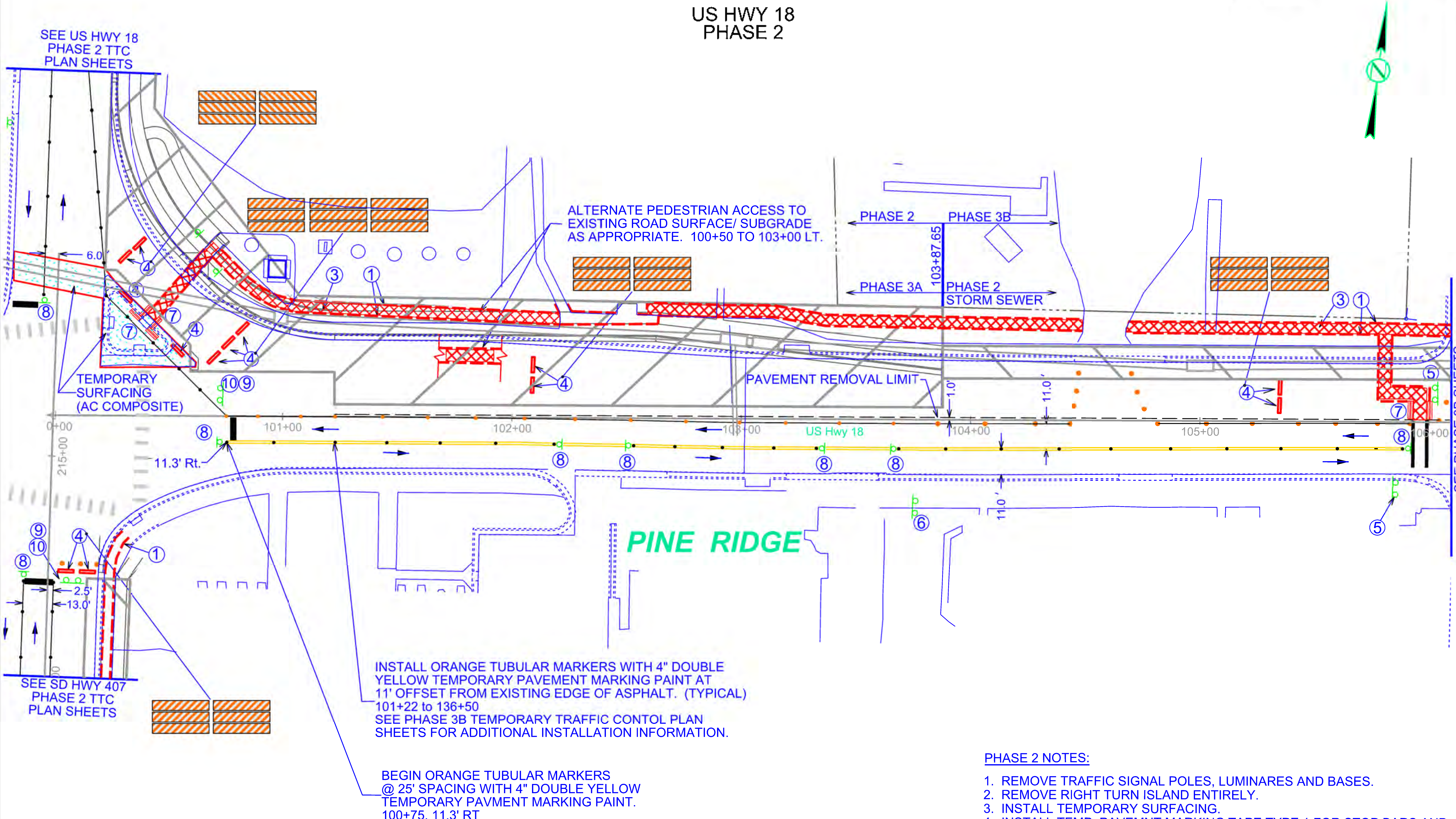
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C23	C39

Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 2



PHASE 2 NOTES:

1. REMOVE TRAFFIC SIGNAL POLES, LUMINARES AND BASES.
2. REMOVE RIGHT TURN ISLAND ENTIRELY.
3. INSTALL TEMPORARY SURFACING.
4. INSTALL TEMP. PAVEMNT MARKING TAPE TYPE 1 FOR STOP BARS AND CROSSWALKS IF NEEDED. EXISTING GROOVING FOR CROSSWALKS AND STOP BARS SHOULD BE USED IF FIELD CONDITIONS ALLOW.
5. REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C24	C39

Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 3A

PINE RIDGE

SEE BELOW - THIS SHEET

US Hwy 18

ORANGE TUBULAR MARKERS

WHITE TUBULAR MARKERS

WHITE TUBULAR MARKERS

WHITE TUBULAR MARKERS

CONSTRUCT CENTER LANE
101+22.65 TO 103+87.65
(PHASE 3A)

PHASE 2 | PHASE 3B

PHASE 3A | PHASE 2 STORM SEWER

103+87.65

INSTALL TEMPORARY SURFACING
(AC COMPOSITE)

16'

14'

12'

7.5'

11'

12'

100+00 | 101+00 | 102+00 | 103+00 | 104+00 | 105+00 | 106+00

215+00 | 216+00

SEE SD HWY 407
(PHASE 2)

TUBULAR MARKERS
AND TEMP.PAVEMENT
MARKING PAINT. INSTALLED
WITH PHASE 2 WORK.

REMOVE ASPHALT AS NEEDED TO
CONSTRUCT CENTER LANE. INSTALL
TEMPORARY SURFACING TO TRANSITION NEW
CONCRETE TO EXISTING ASPHALT.
(AC COMPOSITE)

EB

WB

INSTALL WESTBOUND
LANE SHIFT TAPER

SEE PHASE 3B SHEETS

PHASE 3 NOTES:

1. REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)
2. ALTERNATE LOCATIONS OF TPAR AS NEEDED TO MAINTAIN PEDESTRIAN ACCESS AS WORK ACTIVITIES EVOLVE. (TYPICAL ALL LOCATIONS)

Main Street

Eagle Feather Street

SD Hwy 407

100+00

215+00 | 216+00 | 217+00 | 218+00 | 219+00 | 220+00

CLOSE CENTER LANE FOR
PHASE 3A CONSTRUCTION
(STD. PLATE 634.52)

ORANGE TUBULAR MARKERS

US Hwy 18

ORANGE TUBULAR MARKERS

WHITE TUBULAR MARKERS

SEE ABOVE - THIS SHEET

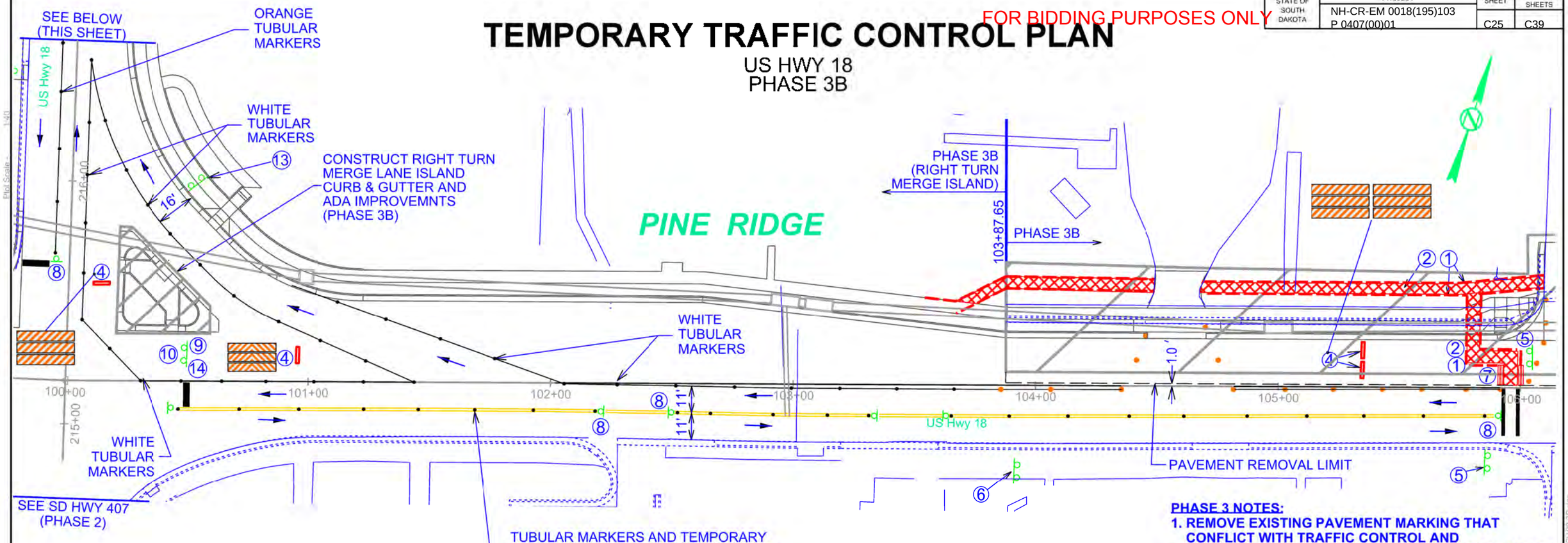
NOTE:
EXISTING PAVEMENT MARKING REMOVED WITH PHASE 1 WORK. 215+50 TO 228+00

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C25	C39

FOR BIDDING PURPOSES ONLY

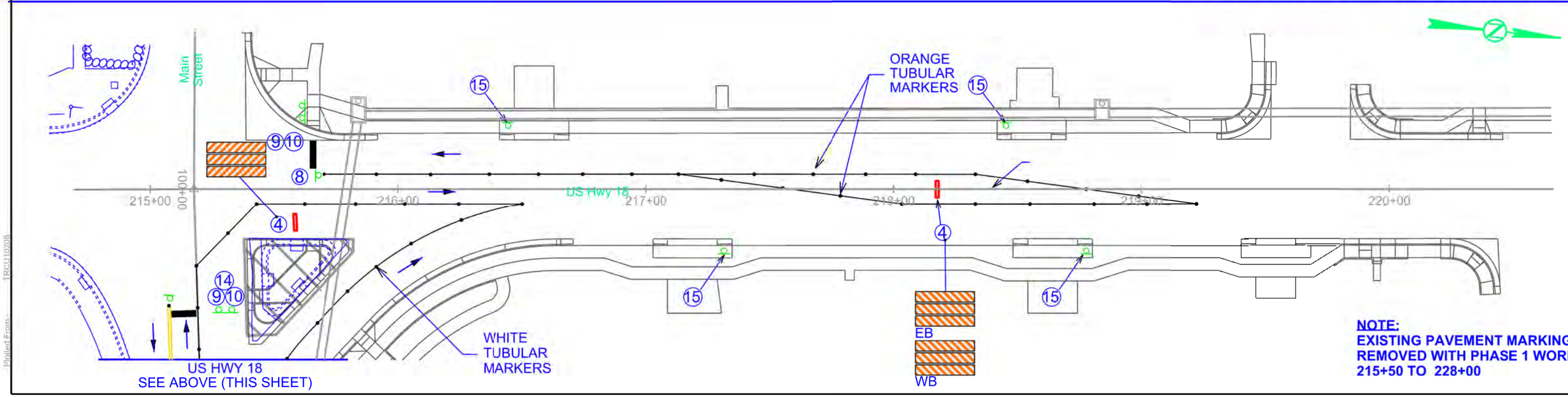
TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 3B



PHASE 3 NOTES:

1. REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)
2. ALTERNATE LOCATIONS OF TPAR AS NEEDED TO MAINTAIN PEDESTRIAN ACCESS AS WORK ACTIVITIES EVOLVE. (TYPICAL ALL LOCATIONS)



NOTE:
EXISTING PAVEMENT MARKING REMOVED WITH PHASE 1 WORK. 215+50 TO 228+00

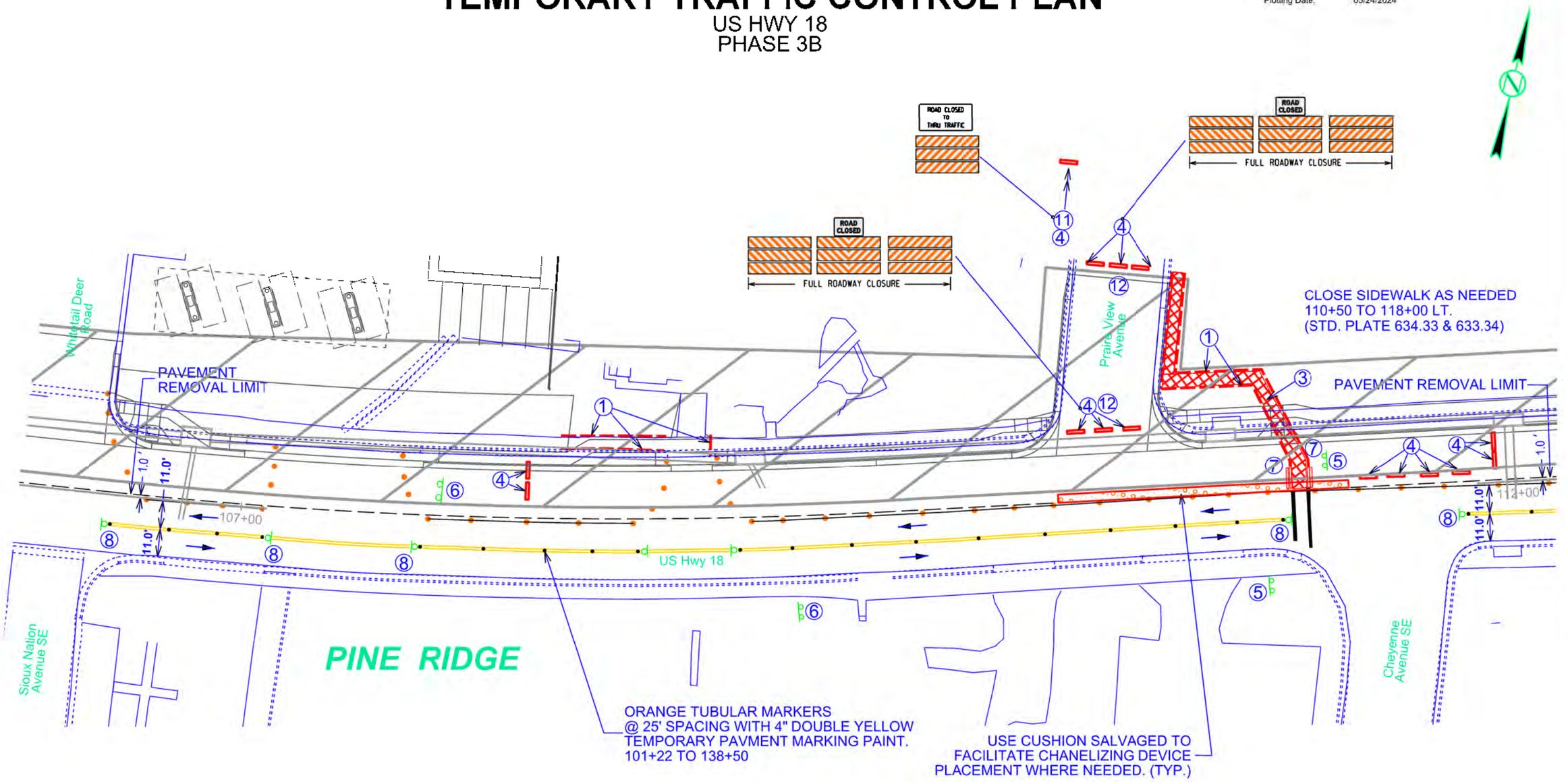
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C26	C39

Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 3B



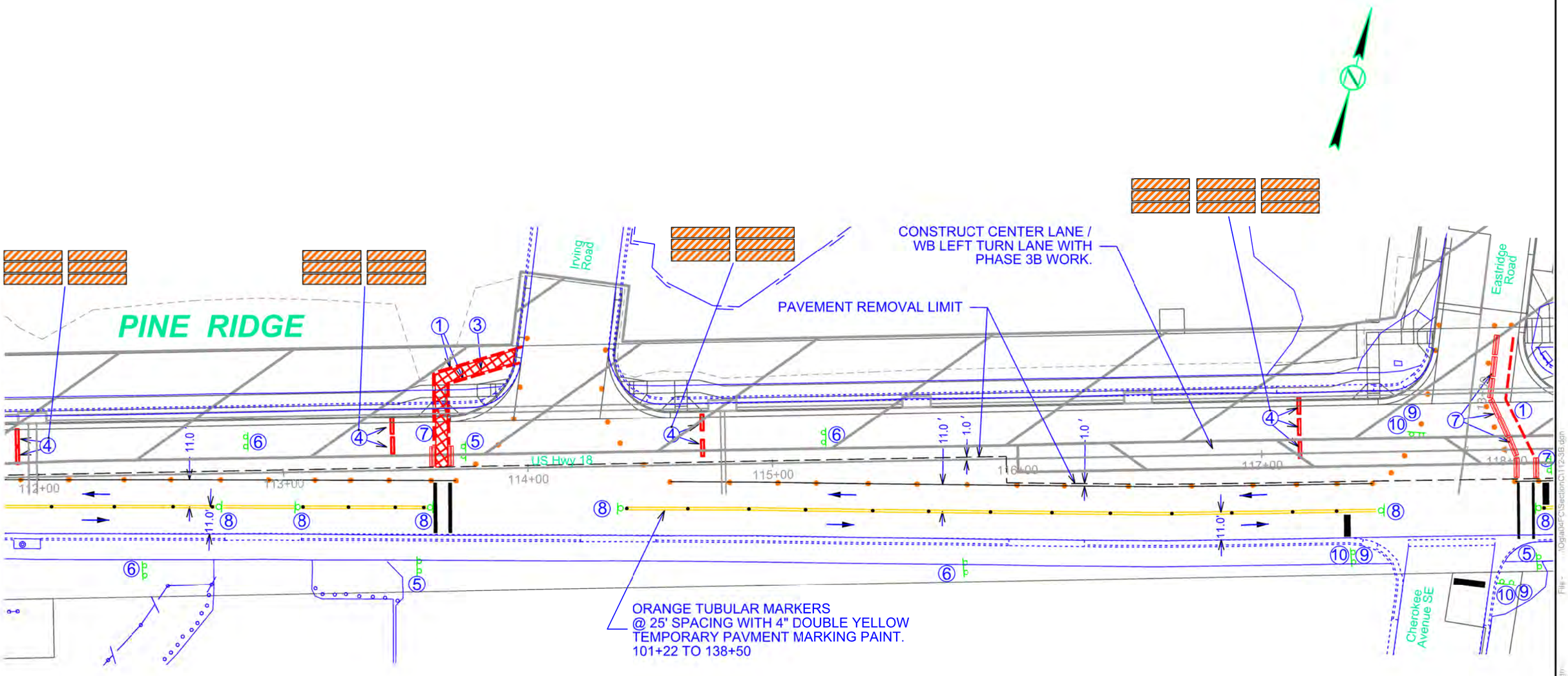
PHASE 3 NOTES:

1. REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)
2. ALTERNATE LOCATIONS OF TPAR AS NEEDED TO MAINTAIN PEDESTRIAN ACCESS AS WORK ACTIVITIES EVOLVE. (TYPICAL ALL LOCATIONS)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C27	C39

Plotting Date: 05/24/2024

TEMPORARY TRAFFIC CONTROL PLAN



PHASE 3 NOTES:

1. **REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)**
2. **ALTERNATE LOCATIONS OF TPAR AS NEEDED TO MAINTAIN PEDESTRIAN ACCESS AS WORK ACTIVITIES EVOLVE. (TYPICAL ALL LOCATIONS)**

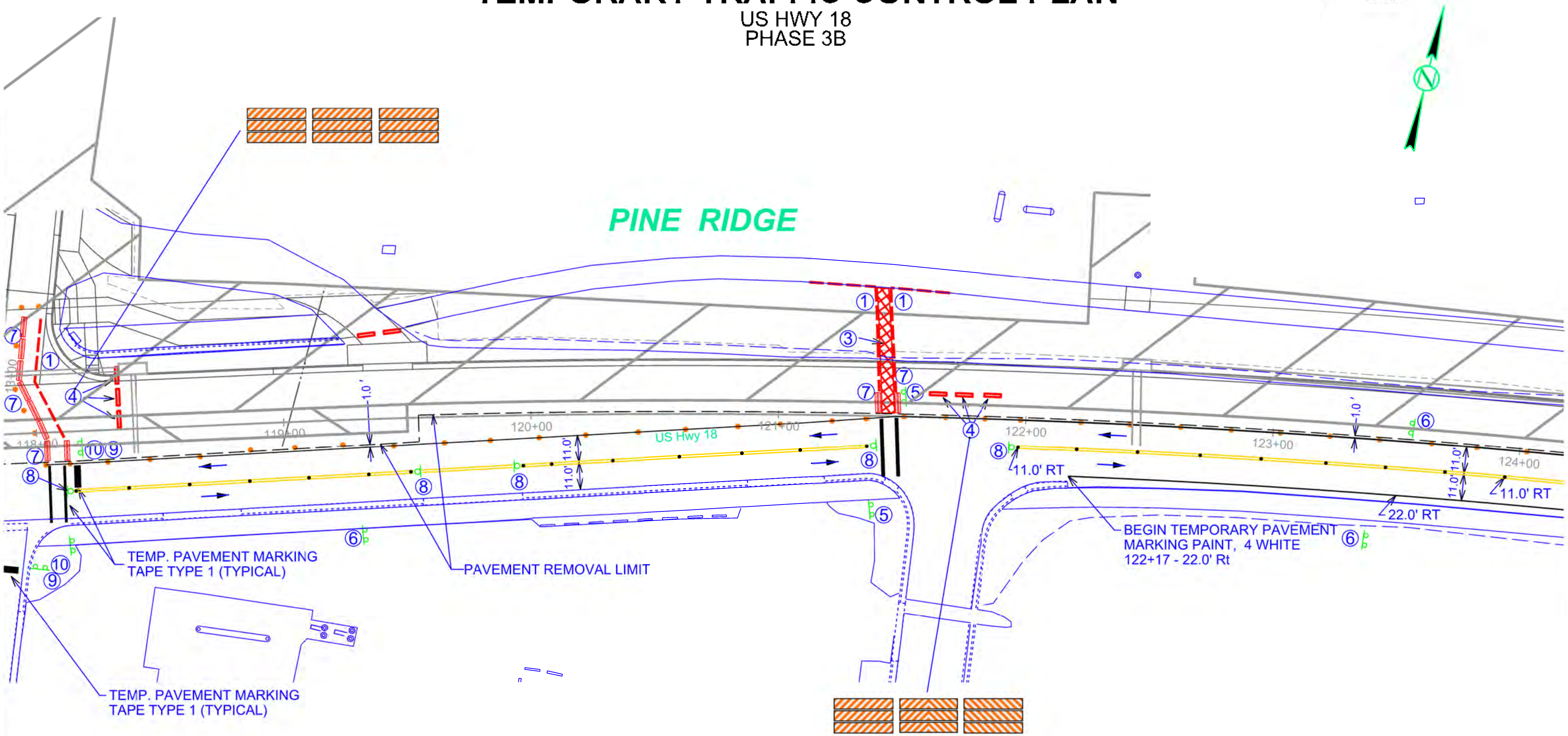
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C28	C39

Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 3B



PHASE 3 NOTES:

1. REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)
2. ALTERNATE LOCATIONS OF TPAR AS NEEDED TO MAINTAIN PEDESTRIAN ACCESS AS WORK ACTIVITIES EVOLVE. (TYPICAL ALL LOCATIONS)

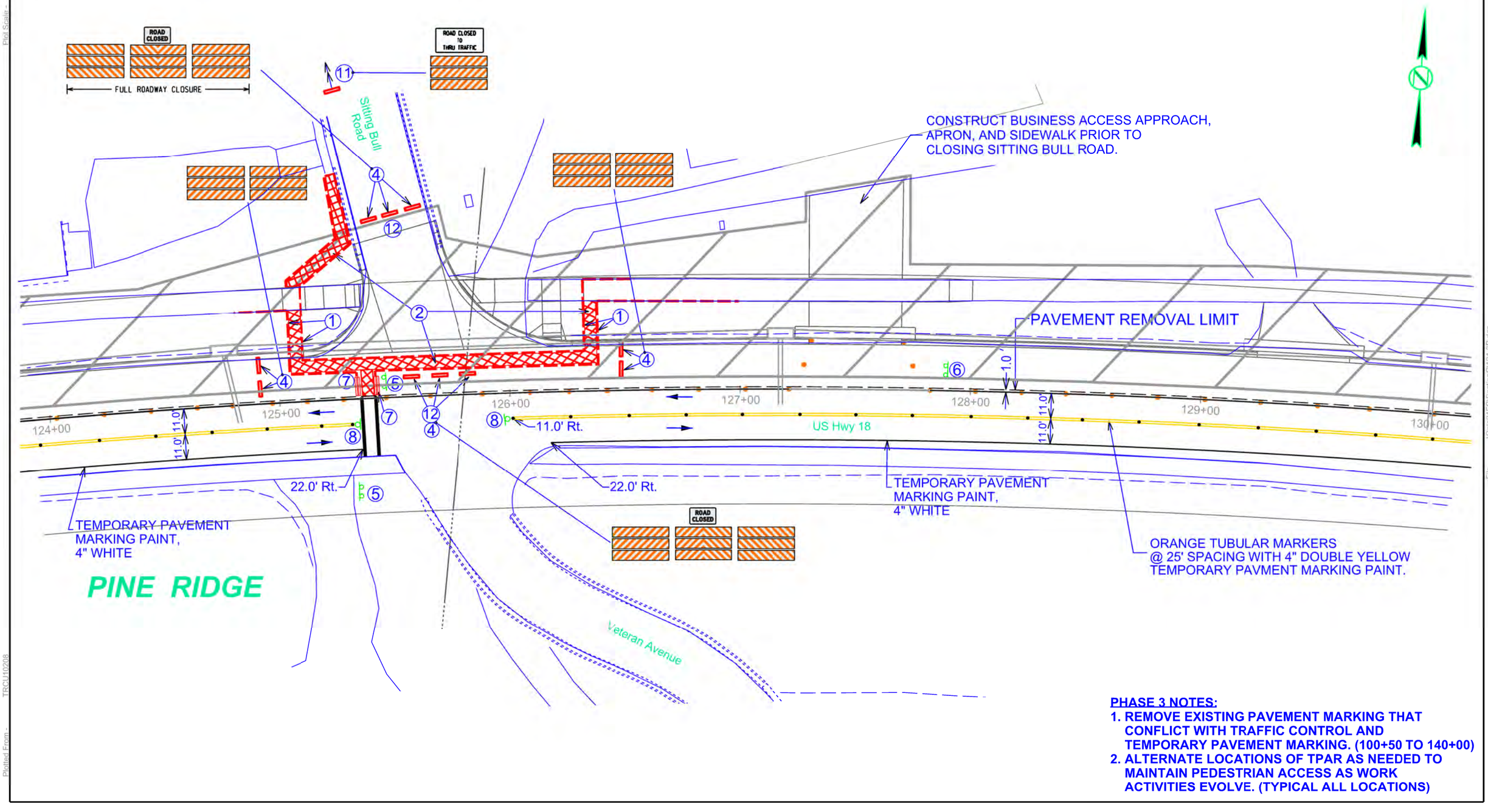
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C29	C39

Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 3B



PHASE 3 NOTES:

1. REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)
2. ALTERNATE LOCATIONS OF TPAR AS NEEDED TO MAINTAIN PEDESTRIAN ACCESS AS WORK ACTIVITIES EVOLVE. (TYPICAL ALL LOCATIONS)

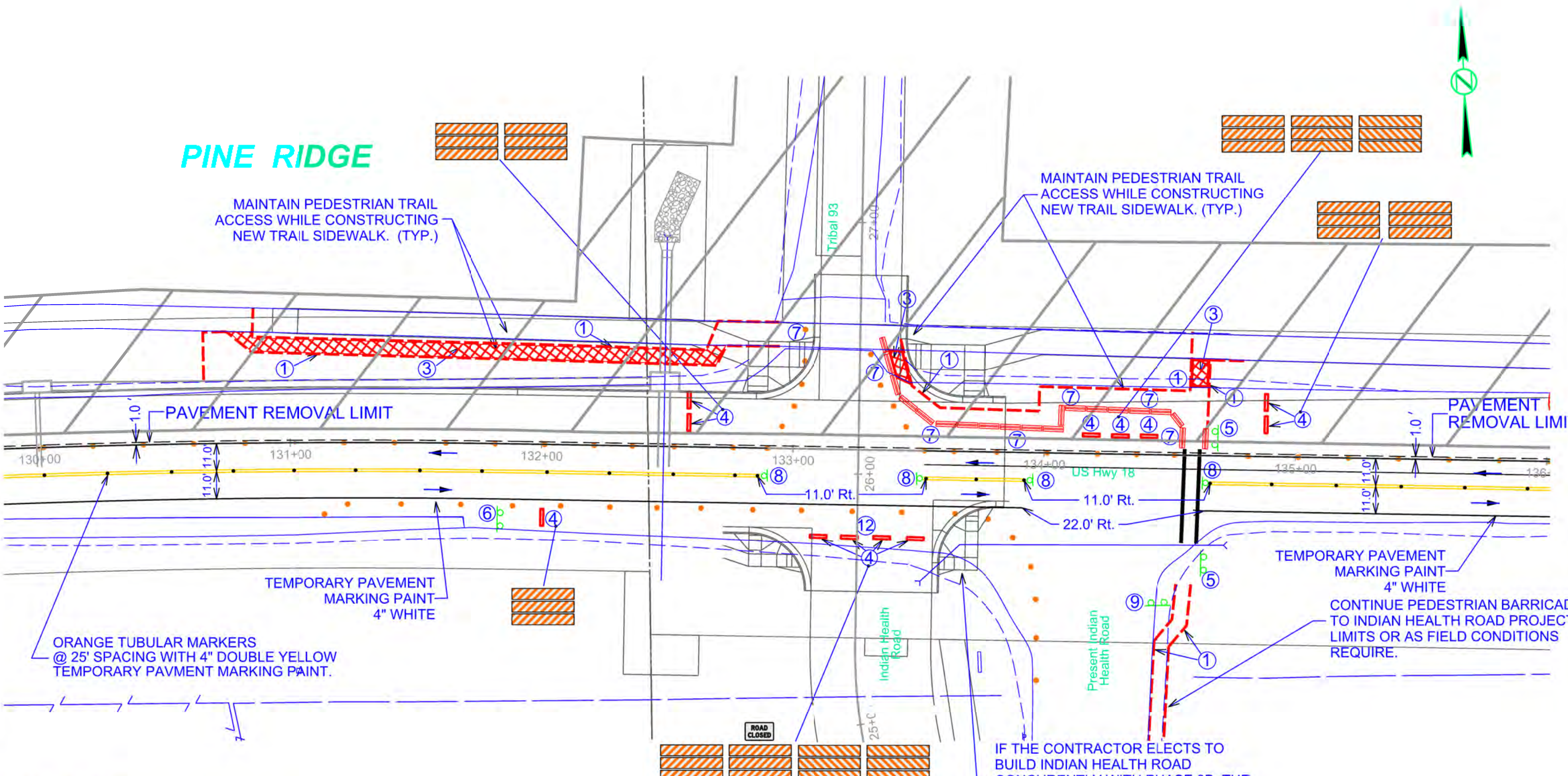
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C30	C39

Plotting Date: 05/24/2024

FOR BIDDING PURPOSES ONLY

TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 3B


PINE RIDGE
MAINTAIN PEDESTRIAN TRAIL ACCESS WHILE CONSTRUCTING NEW TRAIL SIDEWALK. (TYP.)
MAINTAIN PEDESTRIAN TRAIL ACCESS WHILE CONSTRUCTING NEW TRAIL SIDEWALK. (TYP.)
PAVEMENT REMOVAL LIMIT
PAVEMENT REMOVAL LIMIT
Tribal 93
27+00
130+00
131+00
132+00
133+00
134+00
135+00
US Hwy 18
26+00
25+00
11.0' Rt.
11.0' Rt.
22.0' Rt.
1.0'
11.0'
TEMPORARY PAVEMENT MARKING PAINT 4" WHITE
TEMPORARY PAVEMENT MARKING PAINT 4" WHITE
ORANGE TUBULAR MARKERS @ 25' SPACING WITH 4" DOUBLE YELLOW TEMPORARY PAVMENT MARKING PAINT.
Indian Health Road
Present Indian Health Road
ROAD CLOSED
FULL ROADWAY CLOSURE
CONTINUE PEDESTRIAN BARRICADE TO INDIAN HEALTH ROAD PROJECT LIMITS OR AS FIELD CONDITIONS REQUIRE.
IF THE CONTRACTOR ELECTS TO BUILD INDIAN HEALTH ROAD CONCURRENTLY WITH PHASE 3B, THE SOUTHEAST RADIUS & ADA IMPROVEMENTS MUST BE COMPLETED WITH PHASE 5.

PHASE 3 NOTES:

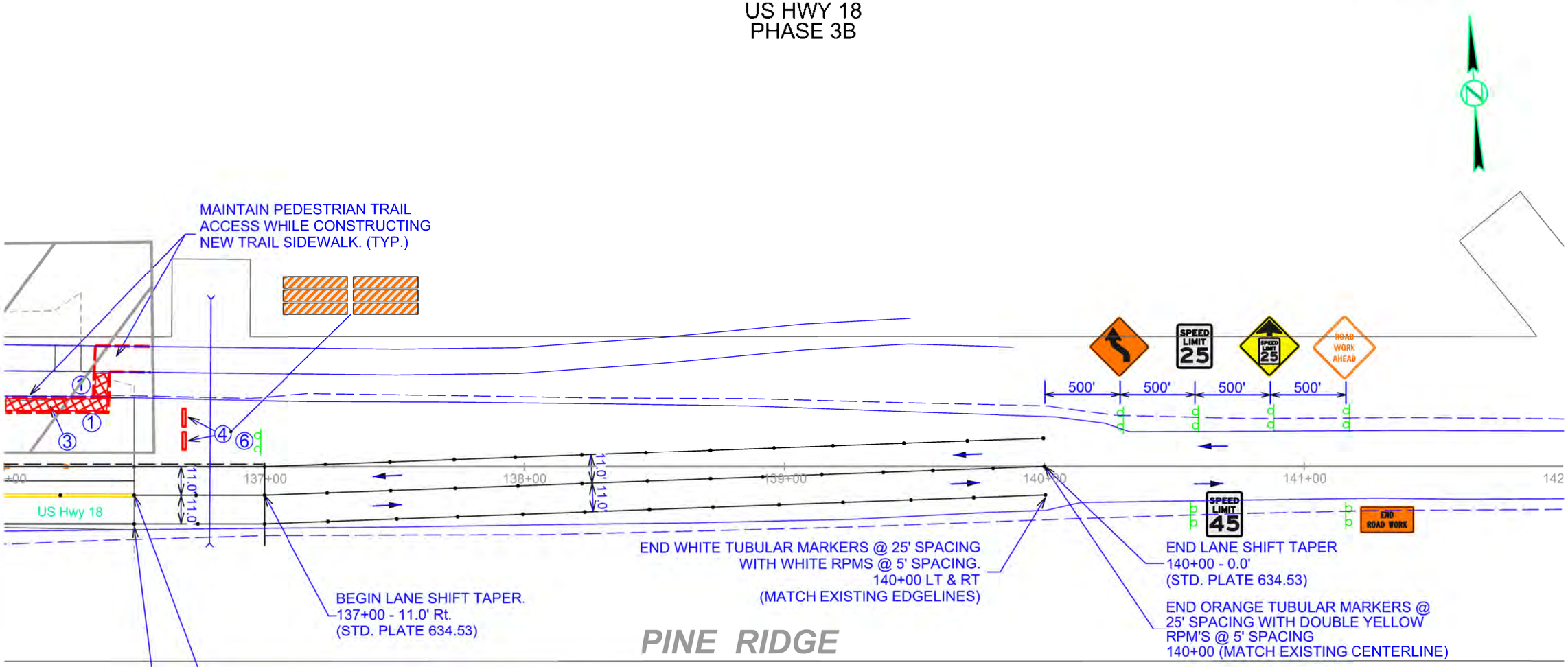
1. REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)
2. ALTERNATE LOCATIONS OF TPAR AS NEEDED TO MAINTAIN PEDESTRIAN ACCESS AS WORK ACTIVITIES EVOLVE. (TYPICAL ALL LOCATIONS)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR-EM 0018(195)103 P 0407(00)01	C31	C39

Plotting Date: 05/24/2024

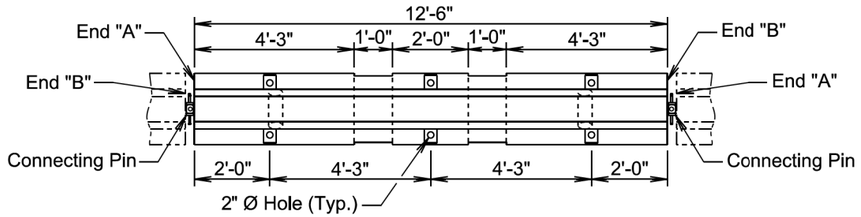
TEMPORARY TRAFFIC CONTROL PLAN

US HWY 18
PHASE 3B

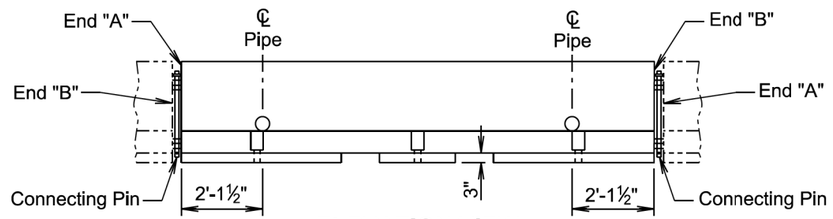


PHASE 3 NOTES:

1. **REMOVE EXISTING PAVEMENT MARKING THAT CONFLICT WITH TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKING. (100+50 TO 140+00)**
2. **ALTERNATE LOCATIONS OF TPAR AS NEEDED TO MAINTAIN PEDESTRIAN ACCESS AS WORK ACTIVITIES EVOLVE. (TYPICAL ALL LOCATIONS)**



PLAN VIEW



ELEVATION VIEW

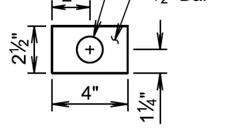
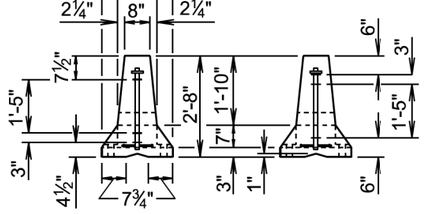
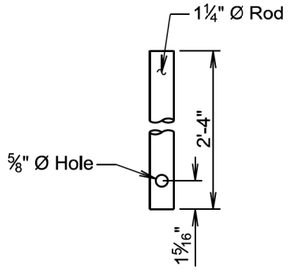


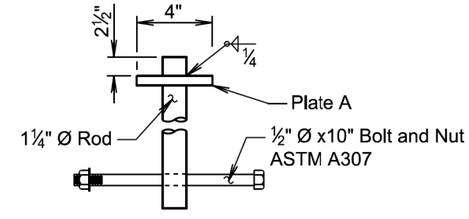
PLATE A



VIEW END A **VIEW END B**



CONNECTING PIN DETAIL



ASSEMBLED CONNECTING PIN

September 14, 2018

Published Date: 2025	SDDOT	TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE INTERIOR SECTION)	PLATE NUMBER 628.01 Sheet 1 of 2

GENERAL NOTES:

The detailed drawings are for illustrative purpose and depicts the current version of the F shape concrete barrier. If new movable concrete barriers are requested on a project, they will be constructed according to the F shape movable concrete barrier details on standard plate 628.10.

Each movable concrete barrier section weighs 5030 ± pounds.

Each movable concrete barrier section is detailed to provide end "A" to end "B" connection by insertion of a pin through steel loops.

The Jersey shape or any version of the F shape traffic control movable concrete barriers may be used on a project, however, only the same type or version will be used for each run of barriers.

Movable concrete barrier sections will be placed to provide uniform bearing of the sections with the paved surface as approved by the Engineer.

Movable concrete barrier sections will never be moved or lifted using the end loops.

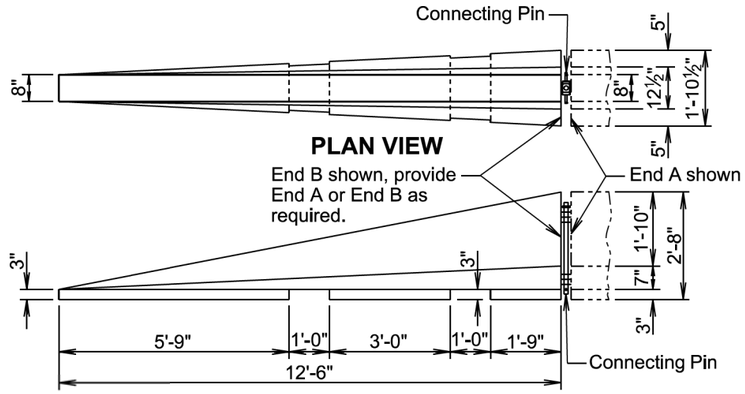
Movable concrete barrier sections that have been damaged will not be used. Barrier sections are considered damaged if the loops are end welded onto existing damaged loops, loops are fractured, or there is exposed rebar from fractured concrete.

All cost for transporting the barriers from the specified location to the project site, installing, and returning the barriers to the specified location will be incidental to the contract unit price per each for "Traffic Control Movable Concrete Barrier".

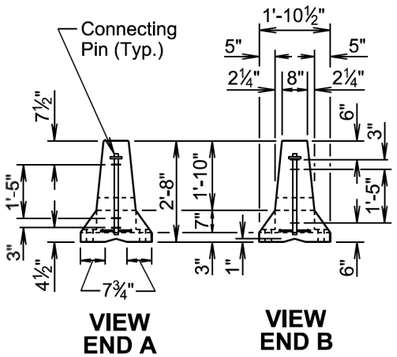
If the concrete barriers need to be moved and reset on the project, requiring the barriers to be transported by truck, all cost for removing, transporting, and resetting the barriers will be incidental to the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barrier". All cost for small shifts in alignment of the barriers, not requiring the barriers to be transported by truck, will be incidental to various contract items.

September 14, 2018

Published Date: 2025	SDDOT	TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE INTERIOR SECTION)	PLATE NUMBER 628.01 Sheet 2 of 2

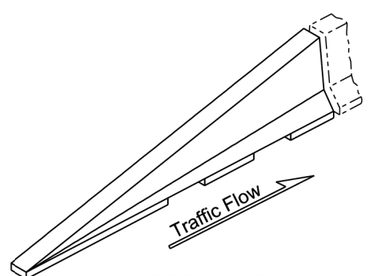


ELEVATION VIEW



VIEW END A

VIEW END B



ISOMETRIC VIEW

September 14, 2018

Published Date: 2025	SDDOT	TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE END SECTION)	PLATE NUMBER 628.02
			Sheet 1 of 2

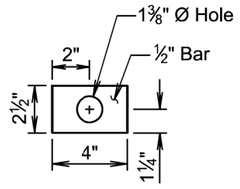
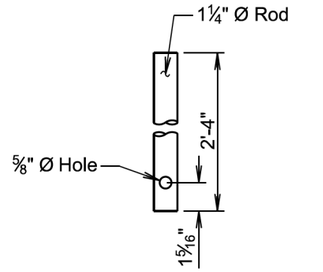
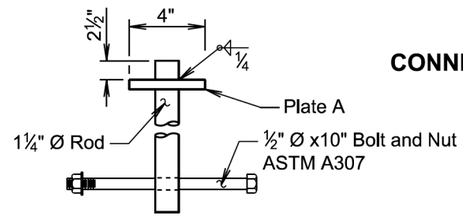


PLATE A



CONNECTING PIN DETAIL



ASSEMBLED CONNECTING PIN

GENERAL NOTES:

The detailed drawings are for illustrative purpose and depicts the current version of the F shape concrete barrier end section. If new concrete barrier end sections are requested on a project, they will be constructed according to the F shape movable concrete barrier end section details on standard plate 628.11.

Each movable concrete barrier end section weighs 2450 ± pounds.

Each movable concrete barrier end section is detailed to provide end "A" to end "B" connection by insertion of a pin through steel loops.

The Jersey shape or any version of the F shape traffic control movable concrete barriers may be used on a project, however, only the same type or version will be used for each run of barriers.

Movable concrete barrier sections will be placed to provide uniform bearing of the sections with the paved surface as approved by the Engineer.

Movable concrete barrier end sections will never be moved or lifted using the end loops.

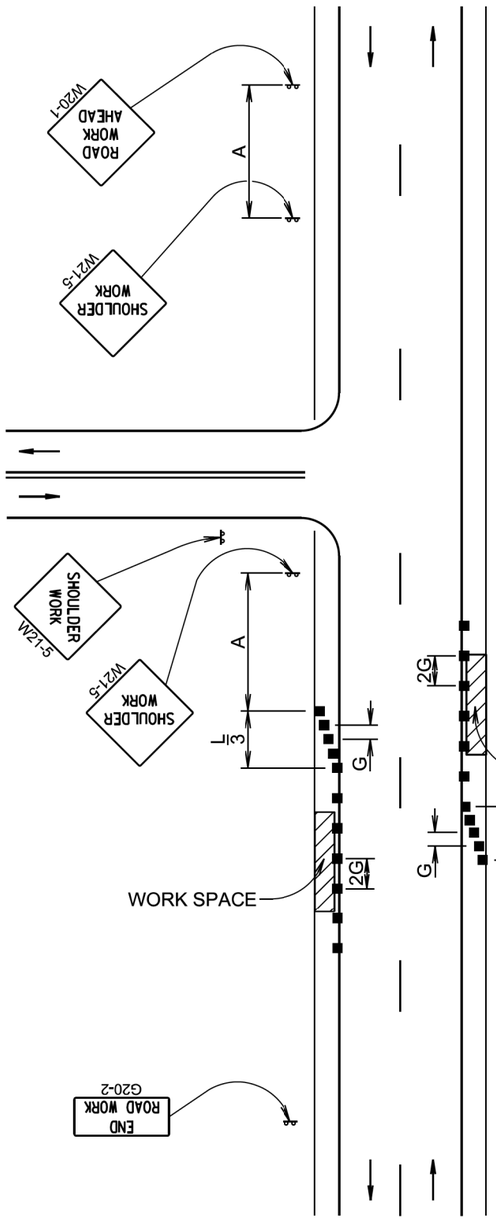
Movable concrete barrier end sections that have been damaged will not be used. Barrier sections are considered damaged if the loops are end welded onto existing damaged loops, loops are fractured, or there is exposed rebar from fractured concrete.

All cost for transporting the barriers from the specified location to the project site, installing, and returning the barriers to the specified location will be incidental to the contract unit price per each for "Traffic Control Movable Concrete Barrier".

If the concrete barriers need to be moved and reset on the project, requiring the barriers to be transported by truck, all cost for removing, transporting, and resetting the barriers will be incidental to the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barrier". All cost for small shifts in alignment of the barriers, not requiring the barriers to be transported by truck, will be incidental to various contract items.

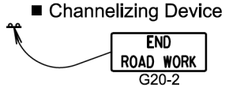
September 14, 2018

Published Date: 2025	SDDOT	TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE END SECTION)	PLATE NUMBER 628.02
			Sheet 2 of 2



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

■ Channelizing Device



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

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

January 22, 2021

Published Date: 2025

SDDOT

WORK ON SHOULDERS

PLATE NUMBER 634.03

Sheet 1 of 1

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

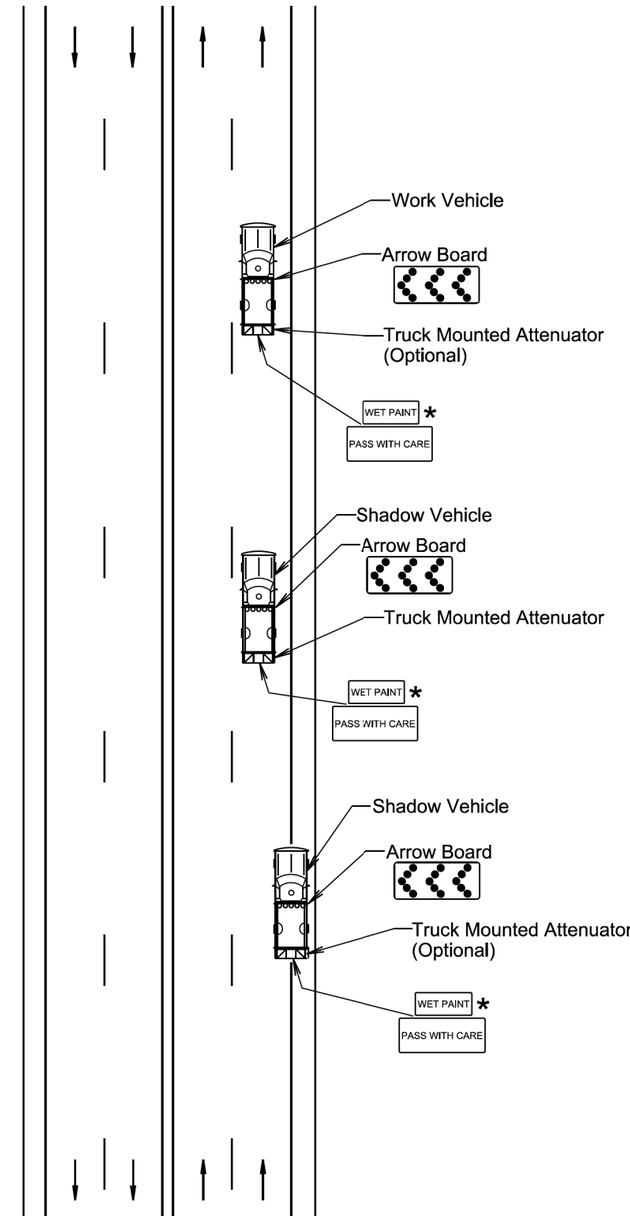
Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

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

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

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

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



January 22, 2021

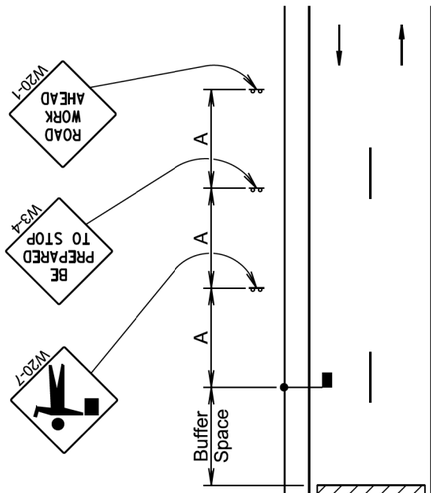
Published Date: 2025

SDDOT

MOBILE OPERATIONS ON MULTI-LANE HIGHWAYS

PLATE NUMBER 634.08

Sheet 1 of 1



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

Flagger

END ROAD WORK
G20-2
(Optional)

Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

Buffer space dependent on work site limitations.

Conditions represented are for work that requires closings during daytime hours only.

This application is intended for a planned temporary closing not to exceed 15 to 20 minutes.

January 22, 2021

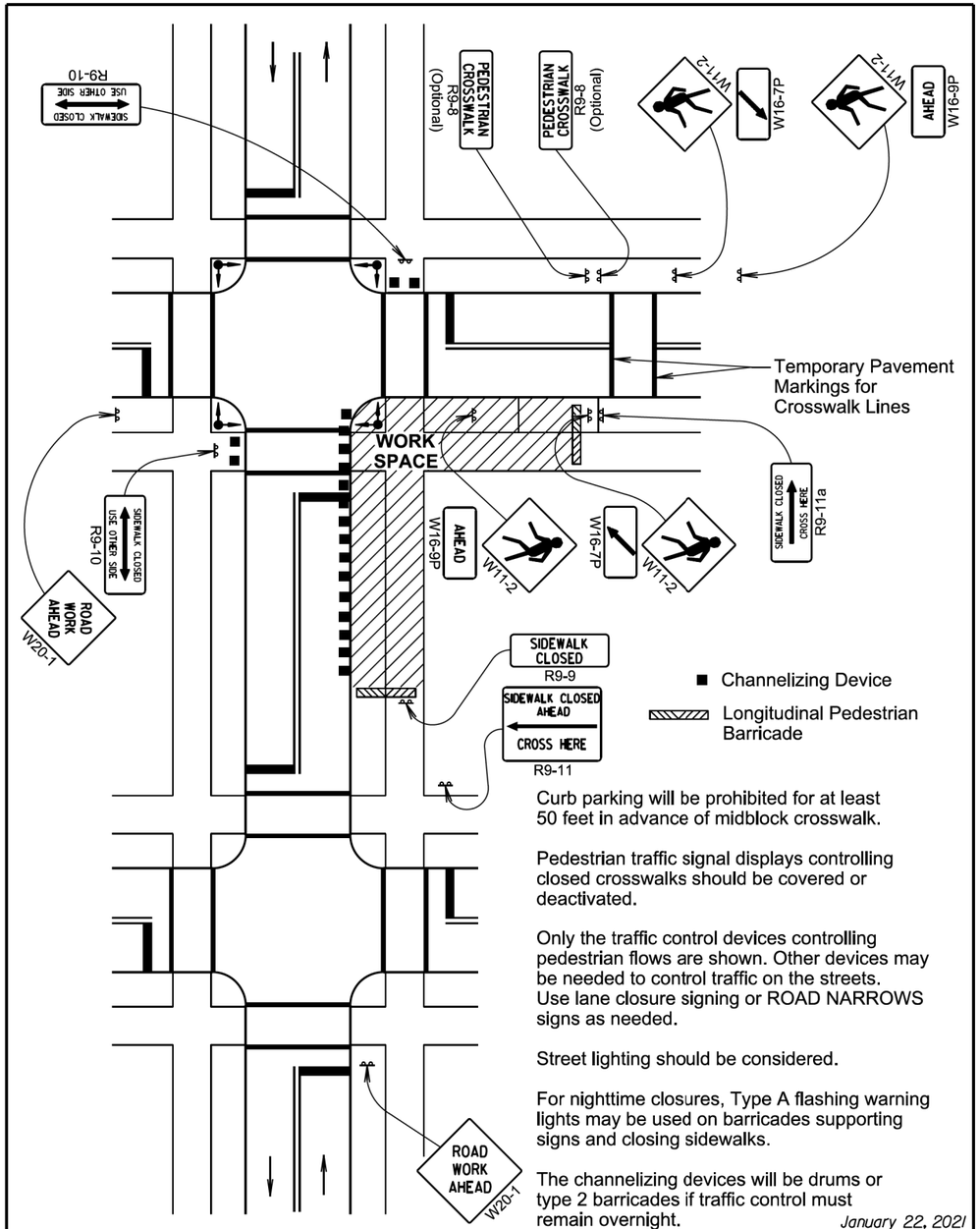
Published Date: 2025

SDDOT

TEMPORARY ROAD WORK

PLATE NUMBER 634.30

Sheet 1 of 1



Curb parking will be prohibited for at least 50 feet in advance of midblock crosswalk.

Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.

Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs as needed.

Street lighting should be considered.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks.

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

January 22, 2021

Published Date: 2025

SDDOT

SIDEWALK CLOSURES AND PEDESTRIAN DETOURS

PLATE NUMBER 634.33

Sheet 1 of 1

Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs, as needed.

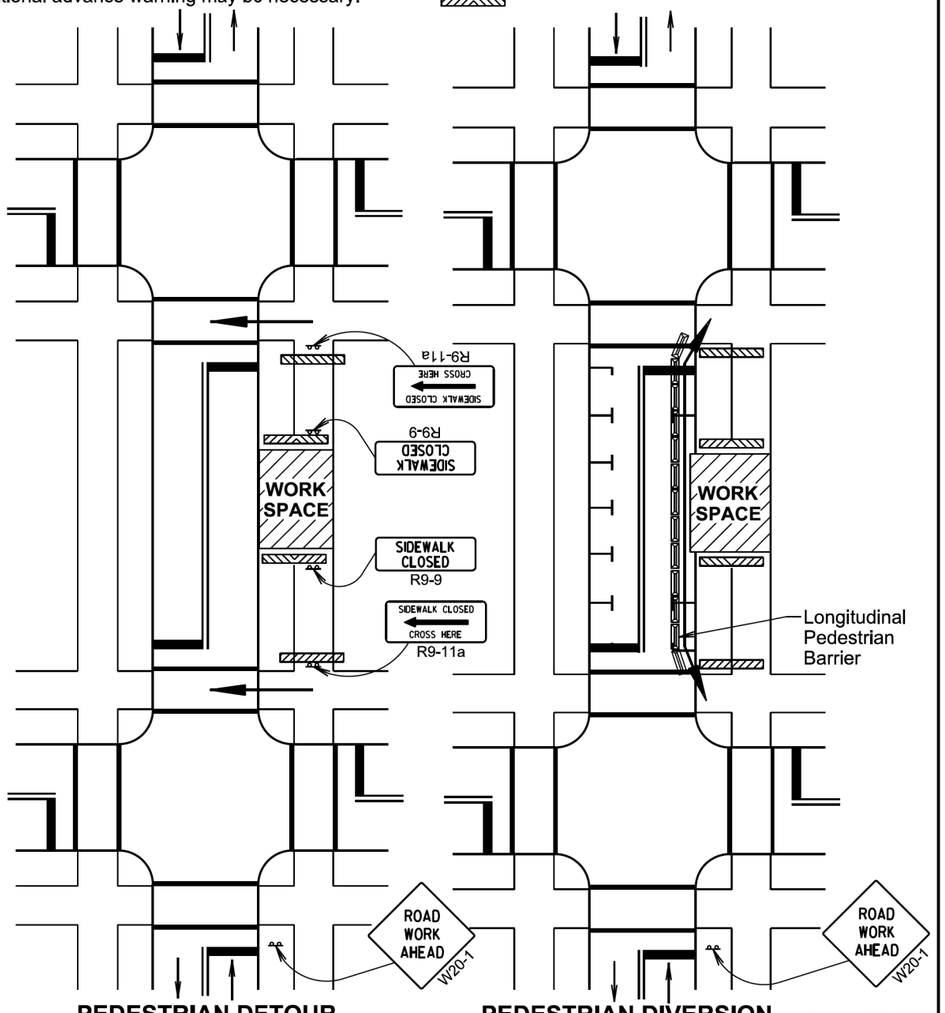
Signs may be placed along a temporary diversion to guide or direct pedestrians. Examples include KEEP RIGHT and KEEP LEFT signs.

Additional advance warning may be necessary.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks. Type C steady-burn lights may be used on channelizing devices separating the temporary pedestrian diversion from vehicular traffic.

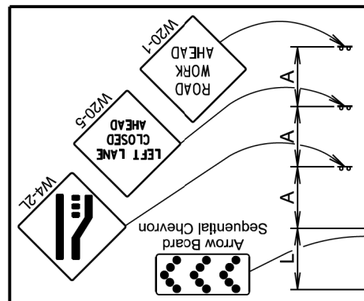
Street lighting should be considered.

Longitudinal Pedestrian Barricade and



January 22, 2021

Published Date: 2025	SDDOT	PEDESTRIAN DETOUR AND PEDESTRIAN DIVERSION	PLATE NUMBER 634.34 Sheet 1 of 1



- Reflectorized Drum
- Channelizing Device
- (4W) 4" White Temporary Pavement Marking
- (4Y) 4" Yellow Temporary Pavement Marking
- ** Speed to be determined on site by the Engineer.

The traffic control devices shown are appropriate for high-speed highway.

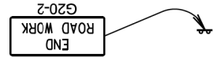
Pavement markings no longer applicable will be removed or obliterated as soon as practical.

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

The channelizing devices will be 42" cones or drums.

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

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.

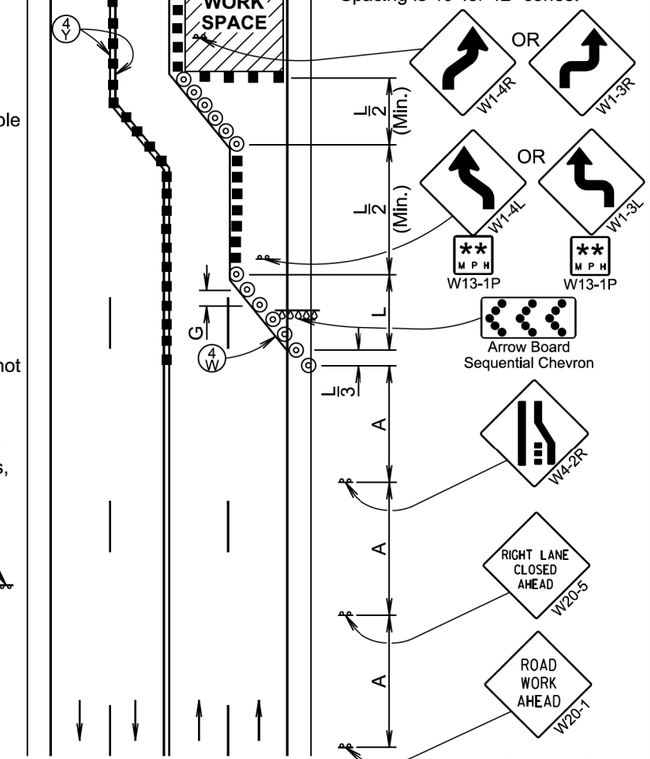


The length of A and L may be adjusted to fit field conditions.

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

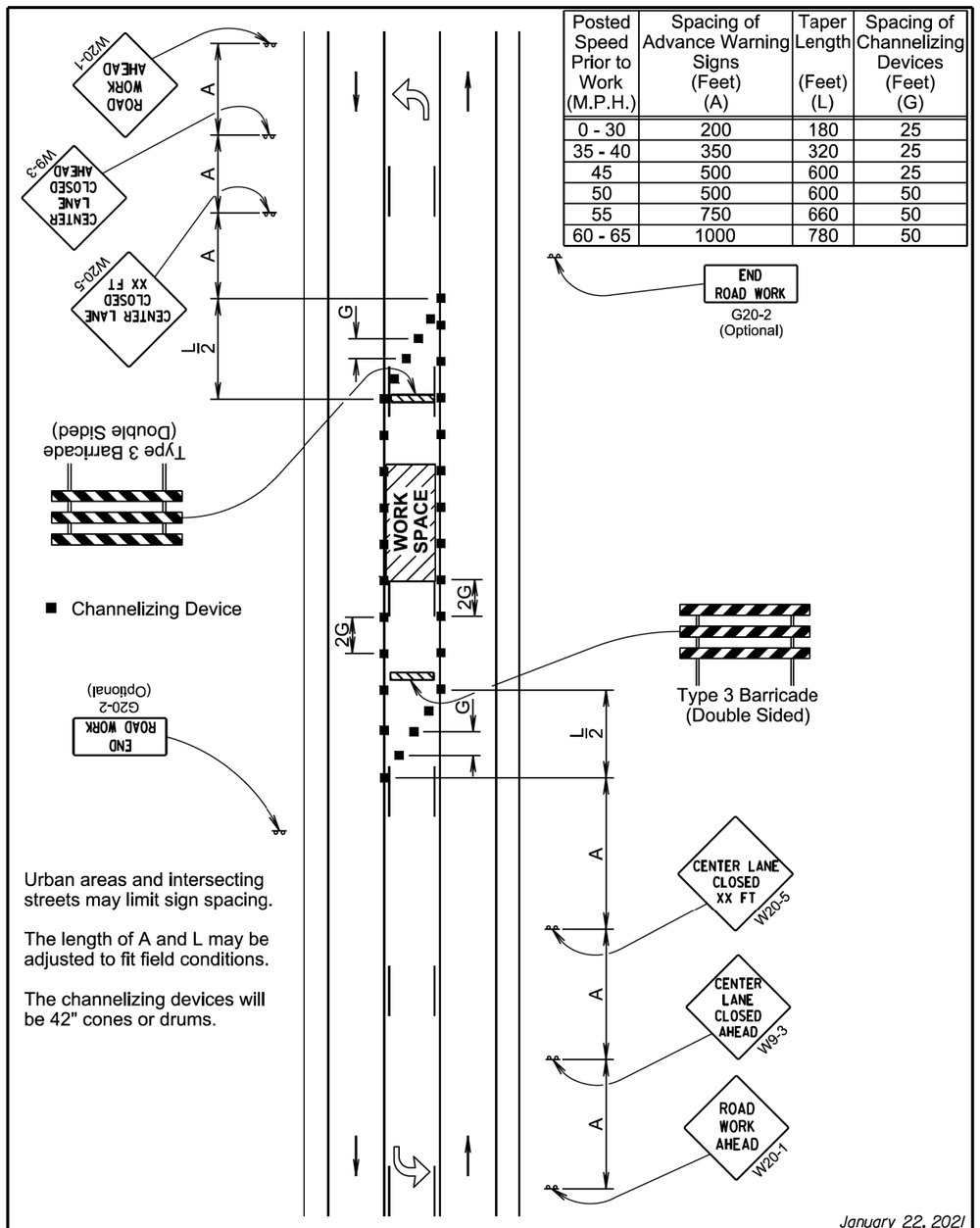
Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 65	50 *

* Spacing is 40' for 42" cones.



September 22, 2021

Published Date: 2025	SDDOT	HALF ROAD CLOSURE ON MULTILANE HIGHWAY	PLATE NUMBER 634.46 Sheet 1 of 1



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

END ROAD WORK
G20-2 (Optional)

END ROAD WORK G20-2 (Optional)

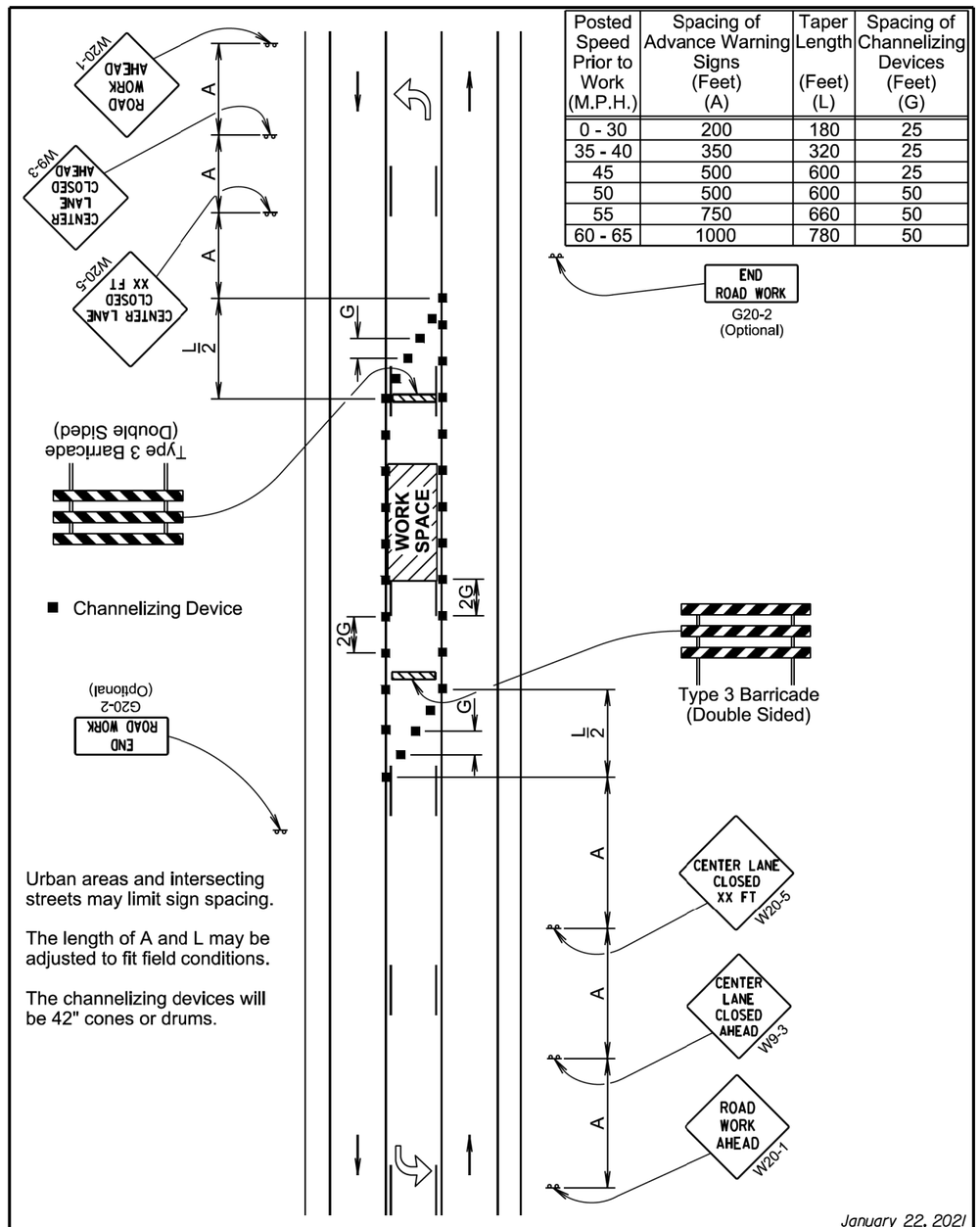
Urban areas and intersecting streets may limit sign spacing.

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

The channelizing devices will be 42" cones or drums.

January 22, 2021

Published Date: 2025	SDDOT	3-LANE, CENTER LANE CLOSED	PLATE NUMBER 634.52 Sheet 1 of 1



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

END ROAD WORK
G20-2 (Optional)

END ROAD WORK G20-2 (Optional)

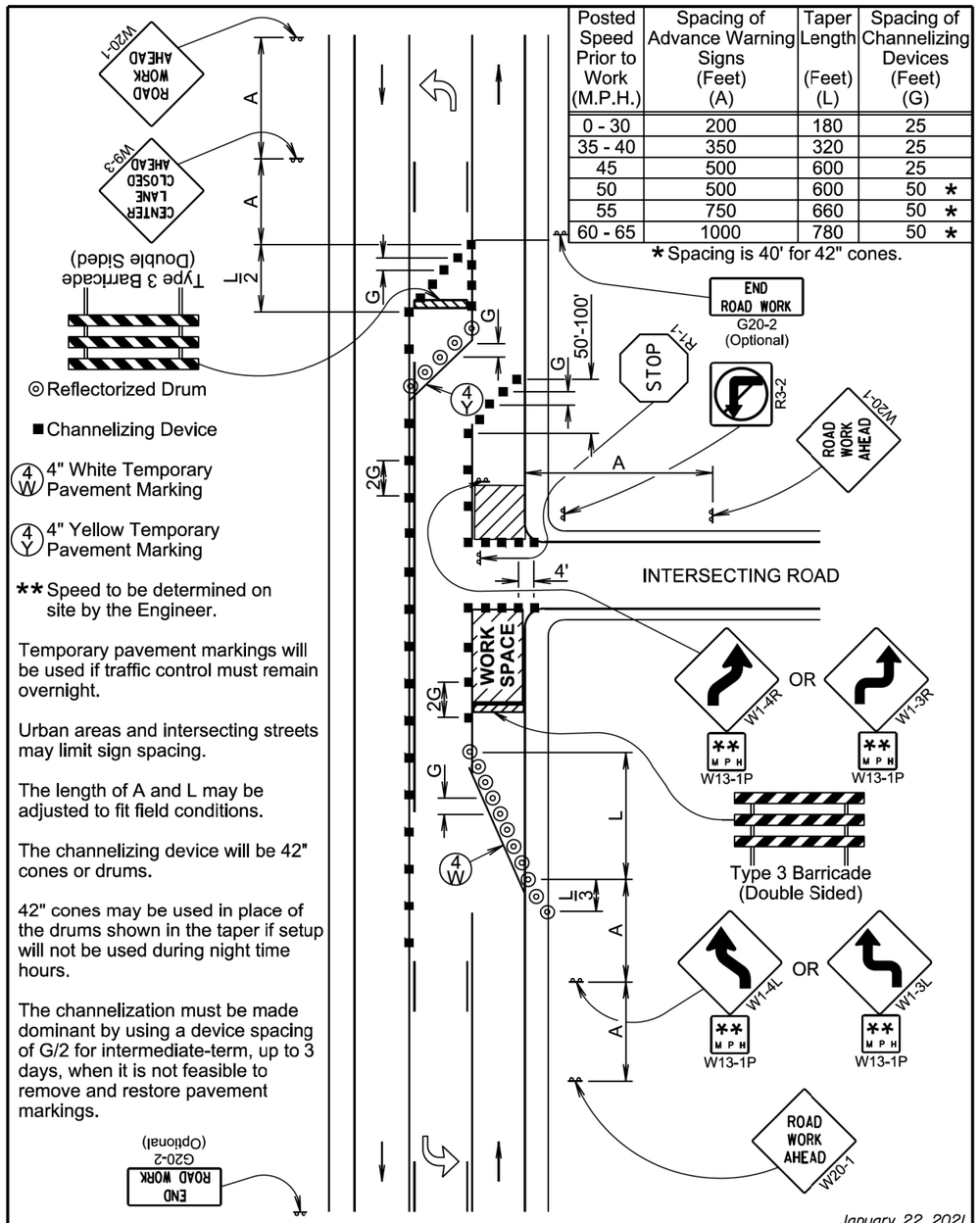
Urban areas and intersecting streets may limit sign spacing.

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

The channelizing devices will be 42" cones or drums.

January 22, 2021

Published Date: 2025	SDDOT	3-LANE, CENTER LANE CLOSED	PLATE NUMBER 634.52 Sheet 1 of 1

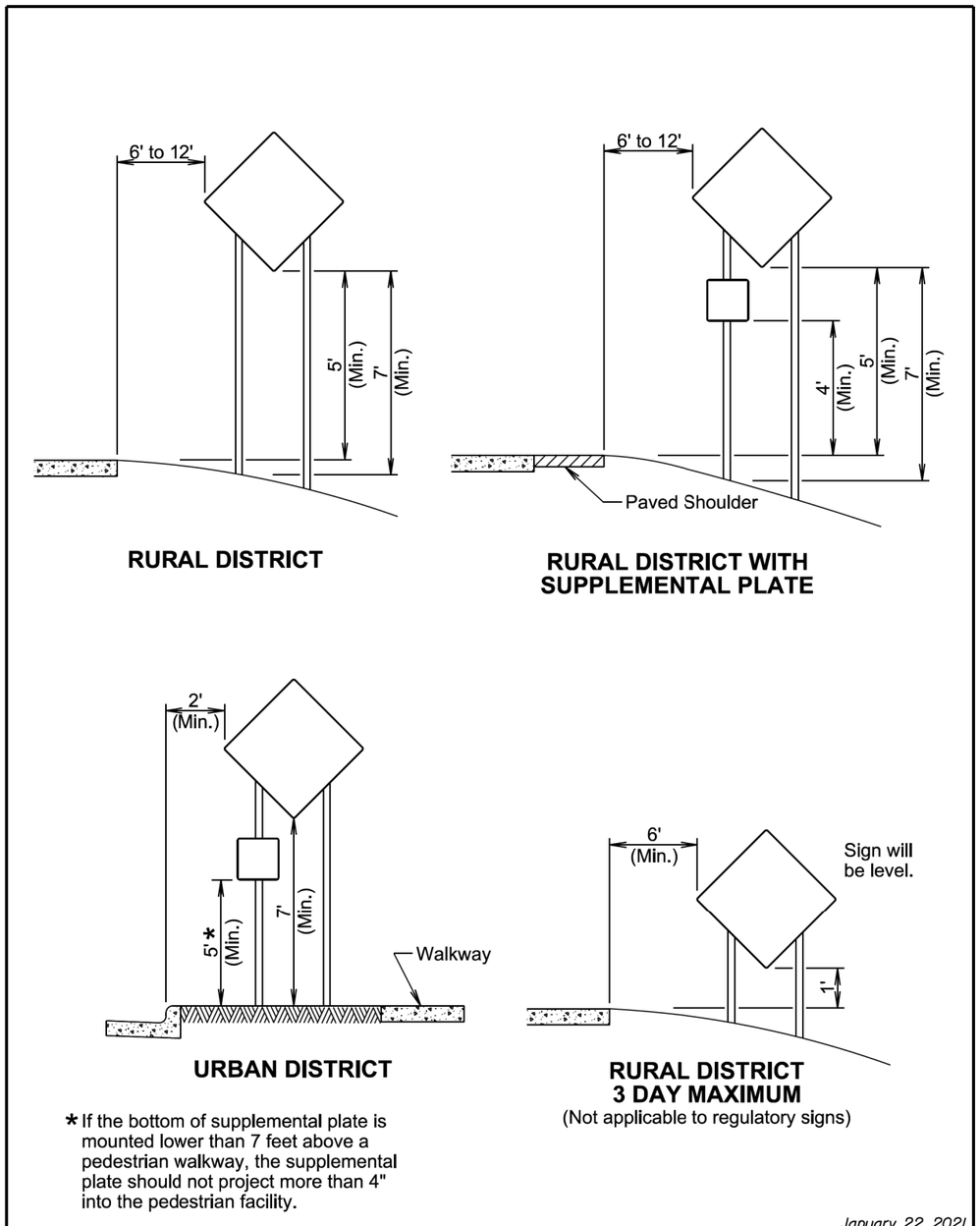


Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

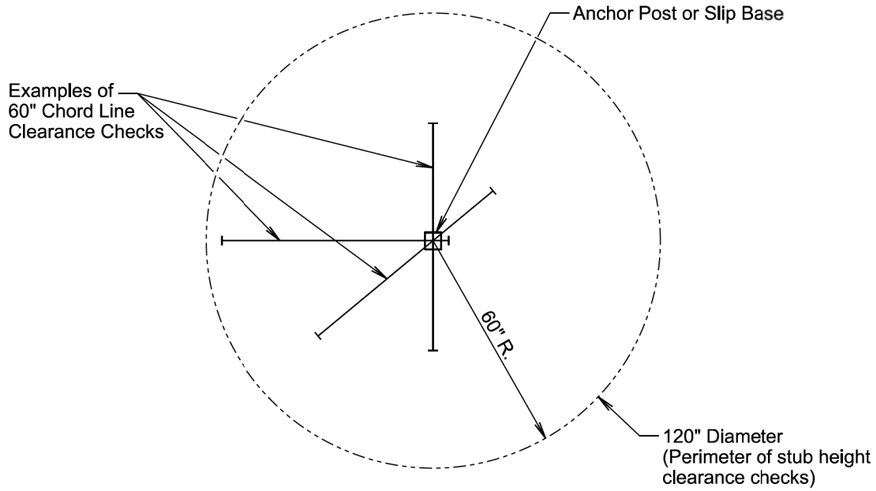
January 22, 2021

Published Date: 2025	SDDOT	3-LANE, OUTSIDE LANE CLOSED	PLATE NUMBER 634.53 Sheet 1 of 1

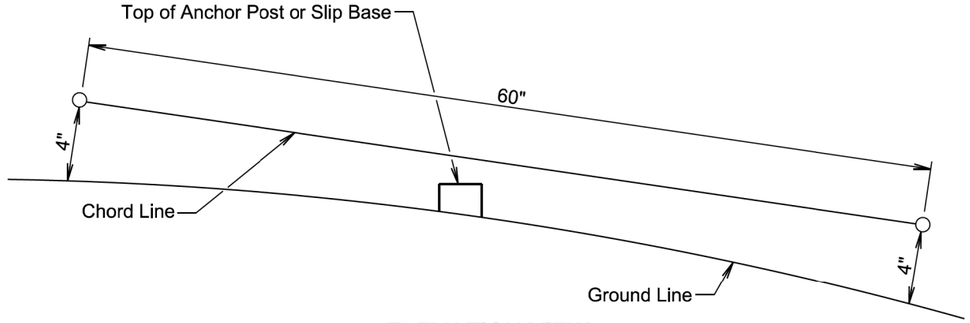


January 22, 2021

Published Date: 2025	SDDOT	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

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