

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
633E0010	Cold Applied Plastic Pavement Marking, 4"	46,925	Ft
633E0011	State Furnished Cold Applied Plastic Pavement Marking, 4"	67,500	Ft
633E0020	Cold Applied Plastic Pavement Marking, 8"	4,234	Ft
633E0025	Cold Applied Plastic Pavement Marking, 12"	1,620	Ft
633E0030	Cold Applied Plastic Pavement Marking, 24"	1,100	Ft
633E0035	Cold Applied Plastic Pavement Marking, Area	29	SqFt
633E0040	Cold Applied Plastic Pavement Marking, Arrow	284	Each
633E0050	Cold Applied Plastic Pavement Marking, Message	2	Word
633E0055	Cold Applied Plastic Pavement Marking, Railroad Crossing	14	Each
633E5050	Surface Preparation for Pavement Marking	134,353	Ft
633E5051	Surface Preparation for Pavement Marking	29	SqFt
633E5052	Surface Preparation for Pavement Marking	284	Each
633E5052	Surface Preparation for Pavement Marking	14	Each
633E5052	Surface Preparation for Pavement Marking	2	Each
634E0010	Flagging	25.0	Hour
634E0110	Traffic Control Signs	279.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	4	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0565	Remove Pavement Marking, Arrow	2	Each
634E0575	Remove Pavement Marking, Area	55.0	SqFt

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

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/media/documents/EnvironmentalProceduresManual.pdf >

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 K: RAPID CITY AREA AIR QUALITY CONTROL ZONE

Administrative Rule of South Dakota (ARSD) 74:36:18:03 states that "no state facility or state contractor may engage in any construction activity or continuous operation activity within the Rapid City air quality control zone which may cause fugitive emissions of particulate to be released into the ambient air without first obtaining a permit issued by the board or the secretary."

Construction activity is defined as any temporary activity which involves the removal or alteration of the natural or pre-existing cover of one acre or more of land. One acre of surface area is based on a cumulative area of disturbance to be completed for the entire project. Construction activity will include, but not be limited to, stripping of topsoil, drilling, blasting, excavation, dredging, ditching, grading, street maintenance and repair, or earth moving. It also includes stockpiles, access roads, and disposal areas. An off-site disposal area of excess material will require an additional permit.

Action Taken/Required:

To be considered eligible for authorization to conduct a construction activity under the terms and conditions of this permit, the owner operator must submit a Notice of Intent (NOI) form. The form must be submitted to the address below at least seven business days prior to the anticipated date of beginning the construction activity.

South Dakota Department of Agriculture and Natural Resources Air Quality Program, 523 East Capitol, Joe Foss Building, Pierre, SD 57501-3181, Phone: 605-773-3151.

The permit requires the Contractor to use reasonably available technology to control fugitive dust emissions. The Contractor is required to use control measures for track out, paved areas, unpaved roads, unpaved parking lots, disturbed areas, and for material handling and storage. The control measures that the Contractor is required to use are listed in the permit.

The Rapid City Air Quality Permit will need to be renewed annually by the Contractor until construction activities are completed.

The online form can be found at:

https://danr.sd.gov/Environment/AirQuality/PermitForms/Forms/NOIConstruction%2021.docx

SEQUENCE OF OPERATIONS

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

The Contractor will adhere to the following restrictions:

- The Contractor will not be allowed to work or close any lane during peak traffic hours. Peak hours are 7am to 9am and 3pm to 6pm.
- The Contractor will only work on one lane at a time.
- Lane closures will be limited to the length that the Contractor can surface prep and place during a working day.

GENERAL TRAFFIC CONTROL

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

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

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, as determined by the Engineer.

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

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

TRAFFIC CONTROL SIGNS

Traffic control signs have been included in a table for each route. Payment will only be for those signs used on each route.

TABLE FOR TRAFFIC CONTROL SIGNS - SD HWY 44

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD					
SIGN CODE	SIGN DESCRIPTION	NUM BER	SIGN SIZE	SQFT PER SIGN	SQFT		
R1-1	STOP	1	30"	5.2	5.2		
W4-2	LEFT or RIGHT LANE ENDS (symbol)	1	48" x 48"	16.0	16.0		
W9-3	CENTER LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0		
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0		
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0		
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5		
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 121.							

TABLE FOR TRAFFIC CONTROL SIGNS – US HWY 16B

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD				
SIGN CODE	SIGN DESCRIPTION	NUM BER	SIGN SIZE	SQFT PER SIGN	SQFT	
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0	
W4-3	ADDED LANE (symbol)	1	48" x 48"	16.0	16.0	
W5-4	RAMP NARROWS	1	48" x 48"	16.0	16.0	
W13-4P	ON RAMP (plaque)	1	36" x 36"	9.0	9.0	
W20-1	ROAD WORK AHEAD	3	48" x 48"	16.0	48.0	
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0	
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5	
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT						

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.

GENERAL PAVEMENT MARKING NOTES

Pavement markings to be replaced include edge lines, skips, lane dividing lines and turn arrows.

The solid white edge line on US 16B will not be replaced with this project.

The solid lane dividing lines at the intersection of US 16B and SD 79 will not be replaced with this project.

The solid lane dividing lines at the intersection of US 16B and 5th Street will not be replaced with this project.

Cross walk markings and stop bars will not be replaced with this project.

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DOT	PH 0040(325)	Non	3/20
Plotting Date:	05/03/2024		

COLD APPLIED PLASTIC PAVEMENT MARKING

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

Cold Applied Plastic Pavement Markings will be 3M Series 380 IES.

STATE FURNISHED MATERIAL

The state will furnish 225 boxes of 4" White Cold Applied Plastic Pavement Marking, totaling 67,500 feet. The Contractor will communicate with the Project Engineer one week before pickup to schedule a time to pick up the State Furnished materials.

All costs for labor and equipment needed to install State Furnished Material will be included in the cost for "State Furnished Cold Applied Plastic Pavement Marking, 4"".

SURFACE PREPARATION FOR PAVEMENT MARKING

The Contractor will prepare the pavement surface prior to applying the cold applied plastic pavement marking in accordance with the following.

In areas where the existing groove meets the required depth and existing markings are still in place, the Contractor will clean the existing groove without adding additional depth beyond the required depth for the new pavement marking, including reflective media as noted below.

Description	Specification	Tolerance		
Depth of Groove	Marking Thickness ¹ + 15 mils	+ 5 mils		

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

The cleaning will result in the existing pavement marking being adequately removed by light grinding or abrasive blasting or both to allow proper adhesion of the new cold applied plastic pavement marking as per the manufacturer's recommendations to comply with product warranties.

Existing grooves not meeting the required depth will be re-grooved to the required depth for the new pavement marking, including reflective media. Equipment for grooving will be capable of the following:

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

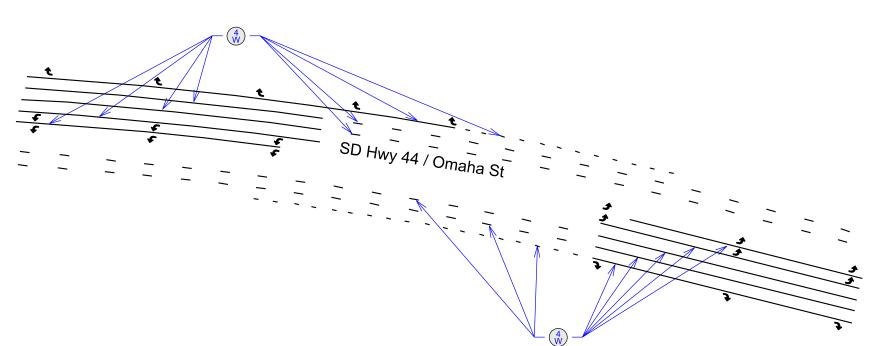
All costs associated with cleaning of the existing groove, including re-grooving, if needed, will be included in the contract unit price per foot, square foot, or each for "Surface Preparation for Pavement Marking". Surface preparation will be measured as 4" equivalent for the per foot bid item.

TABLE OF PAVEMENT MARKINGS

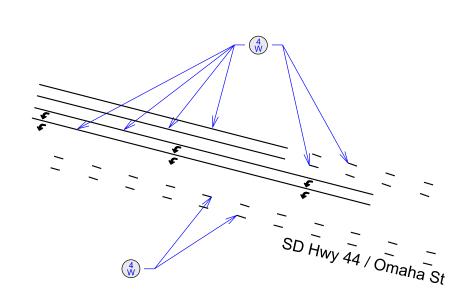
	Location	Cold Applied Plastic Pavement Marking, Arrow (each)	Cold Applied Plastic Pavement Marking, 4" White (ft)	Cold Applied Plastic Pavement Marking, 4" Yellow (ft)	Cold Applied Plastic Pavement Marking, 8" White (ft)	Cold Applied Plastic Pavement Marking, 12" White (ft)	Cold Applied Plastic Pavement Marking, 24" White (ft)	Cold Applied Plastic Pavement Marking, 24" Yellow (ft)	Cold Applied Plastic Pavement Marking, Railroad Crossing (each)	Cold Applied Plastic Pavement Marking, Word (each)	Cold Applied Plastic Pavement Marking, Area Yellow (SqFt)	Surface Preperation for Pavement Marking (each) Arrows	Surface Preperation for Pavement Marking (each) Railroad Crossing	Surface Preperation for Pavement Marking (each) Word	Surface Preperation for Pavement Marking (4" equilivent)	Surface Preperation for Pavement Marking (SqFt)
	Locution	(=====)	(1-7)	(1-7)	(1-7)	(1-7	()	(1-7)	(=====)	(====,	(1)				((= -1)
Hwy 44 (Omaha St)	EB - I190 to Mt Rushmore Rd WB - Mt Rushmore Rd to I190	9 11	1760 1720									9 11			1760 1720	
Hwy 44 (Omaha St)	EB - Mt Rushmore Rd to 5th St WB - 5th St to Mt Rushmore Rd	8 6	1900 1920									8 6			1900 1920	
Hwy 44 (Omaha St)	EB - 5th St to East Blvd WB - East Blvd to 5th St	14 9	2430 2970	1180	364 360			90	6 8	1		14 9	6 8	1	4878 3690	
Hwy 44 (Omaha St)	EB - East Blvd to LaCrosse St WB - LaCrosse St to East Blvd	11 11	1110 1170	3690 4040	280		60	110				11 11			4800 6790	
Hwy 44 (Omaha St)	EB - LaCrosse St to Cambell St WB - Cambell St to LaCrosse St	6 6	1670 1230	2405 3430								6 6			4075 4660	
Hwy 44 (Omaha St)	EB - Cambell St to St Patrick St WB - St Patrick St to Cambell St	21 24	9260 3330	9810 8280	1410		190 40	175		1	29	21 24		1	24080 11850	29
Hwy 44 (Omaha St)	EB - St Patrick St to Jolly Ln WB - Jolly Ln to St Patrick St	29 19	8280 2075	5740 5060	650 1170		120 210	70 35				29 19			16460 10945	
016B - EB 016B - WB	Homestead St to Interstate 90 Interstate 90 to Homestead St	17 17	4435 4030									17 17			4435 4030	
016B - EB 016B - WB	Minnesota St to Homestead St Homestead ST to Minnesota St	15 21	5565 6745			920 700						15 21			8325 8845	
016B - EB 016B - WB	Hwy 79 to Minnesota St Minnesota St to Hwy 79	11 5	2690 1820									11 5			2690 1820	
016B - EB 016B - WB	5th St to Hwy 79 Hwy 79 to 5th St	7 7	2430 2250									7 7			2430 2250	
	Totals:	284	70,790	43,635	4,234	1,620	620	480	14	2	29	284	14	2	134,353	29
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PAVEMENT MARKING LAYOUT





Mount Rushmore P.

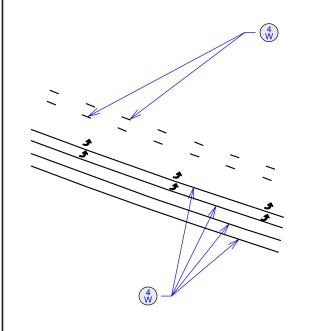


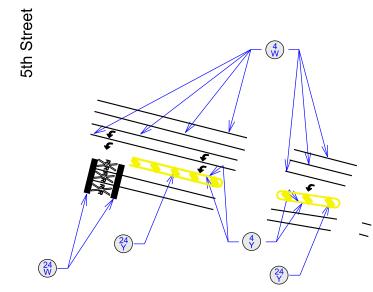
Interstate 190

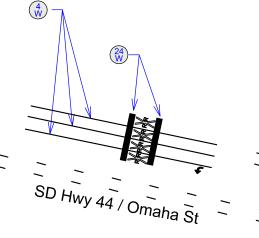
PAVEMENT MARKING LAYOUT

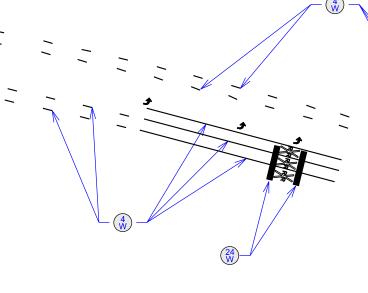
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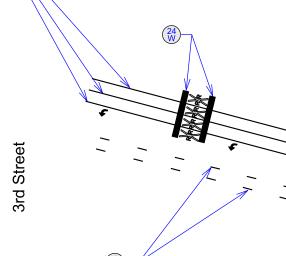
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 PH 0040(325)
 Non 6/20



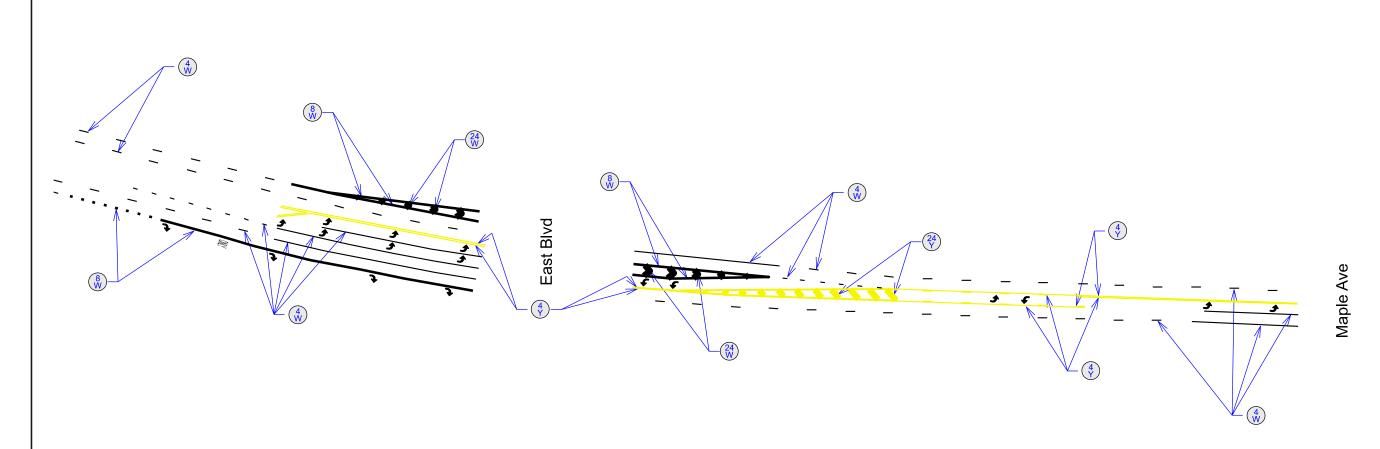


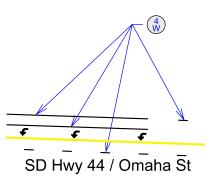






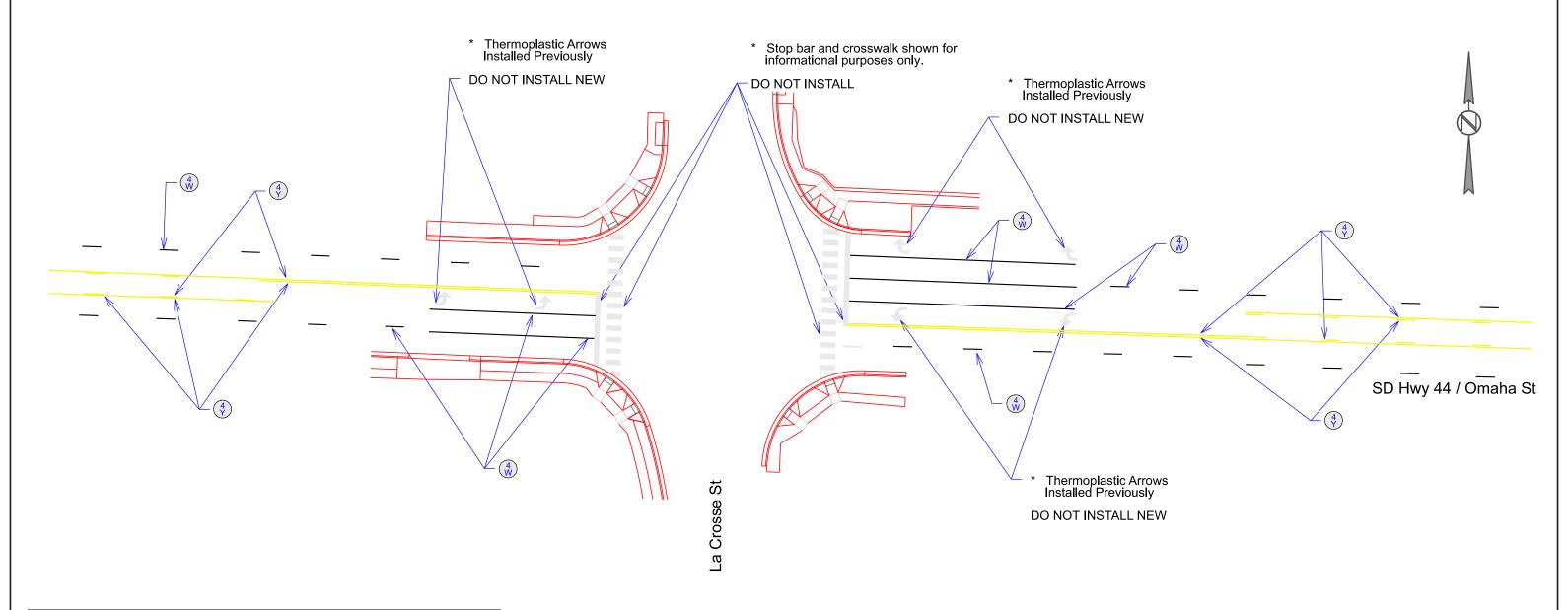
PAVEMENT MARKING LAYOUT



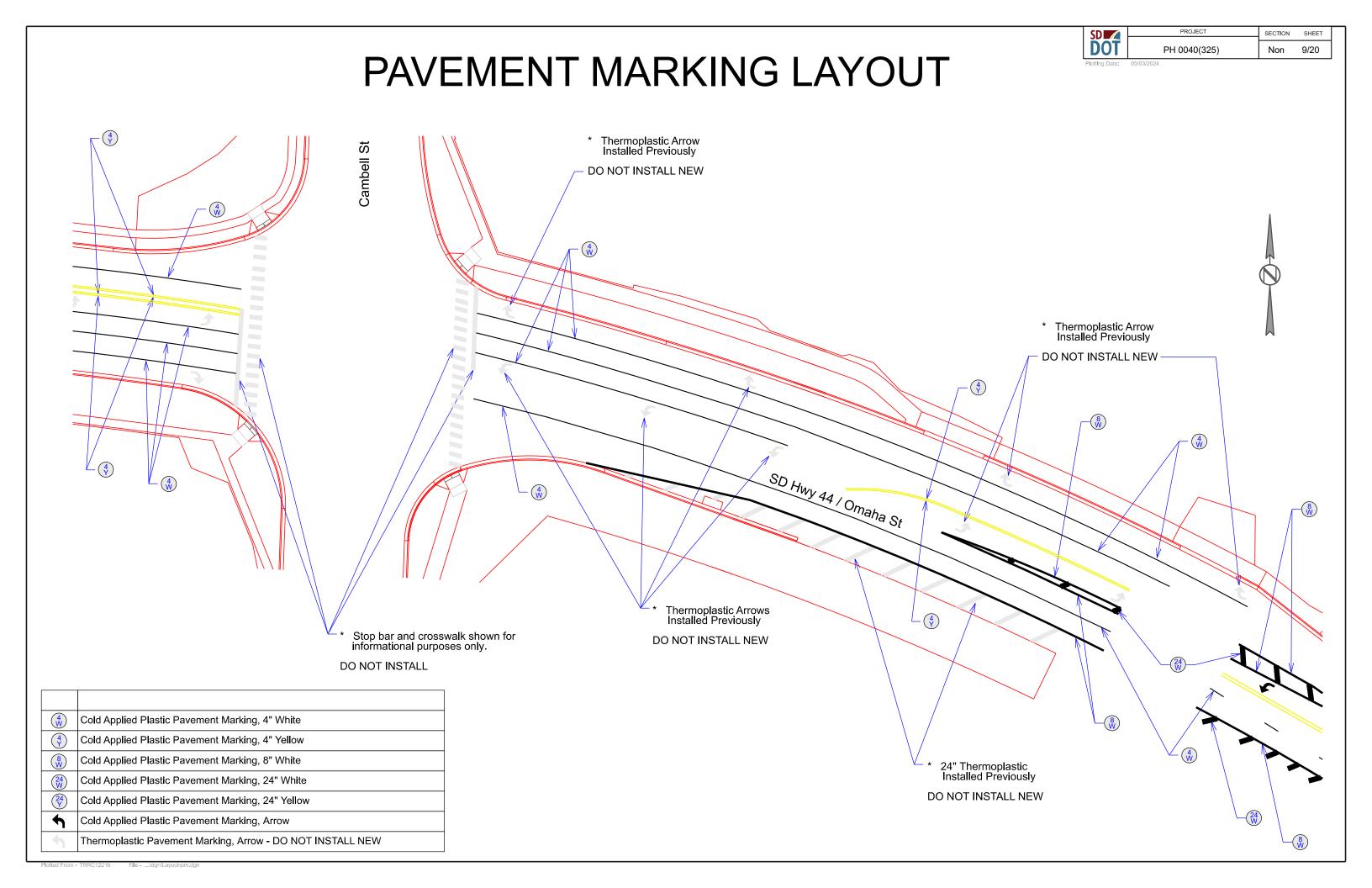


PROJECT SECTION SHEET PH 0040(325) Non 8/20

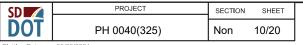
PAVEMENT MARKING LAYOUT



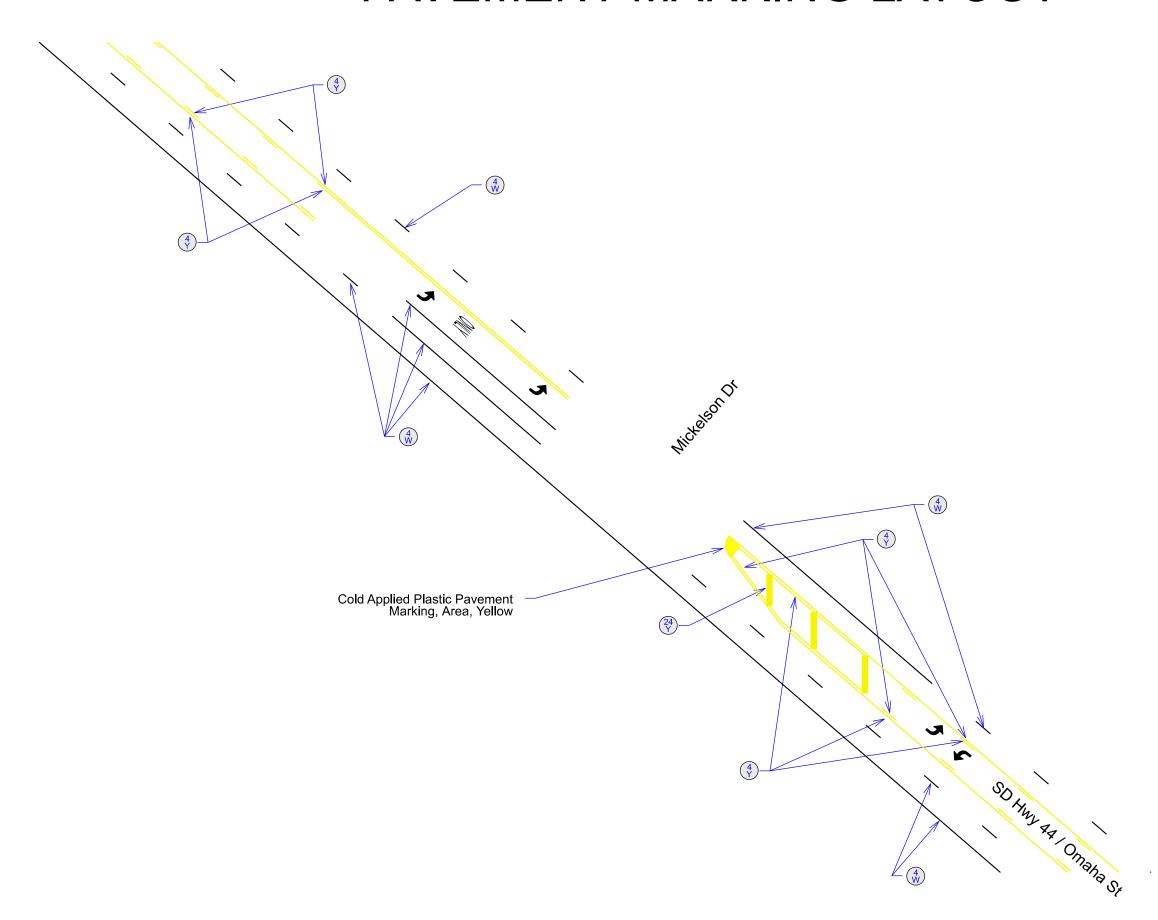
4 W	Cold Applied Plastic Pavement Marking, 4" White
4 Y	Cold Applied Plastic Pavement Marking, 4" Yellow
8 W	Cold Applied Plastic Pavement Marking, 8" White
(24 W)	Cold Applied Plastic Pavement Marking, 24" White
(24 Y	Cold Applied Plastic Pavement Marking, 24" Yellow
4	Cold Applied Plastic Pavement Marking, Arrow
4	Thermoplastic Pavement Marking, Arrow - DO NOT INSTALL NEW

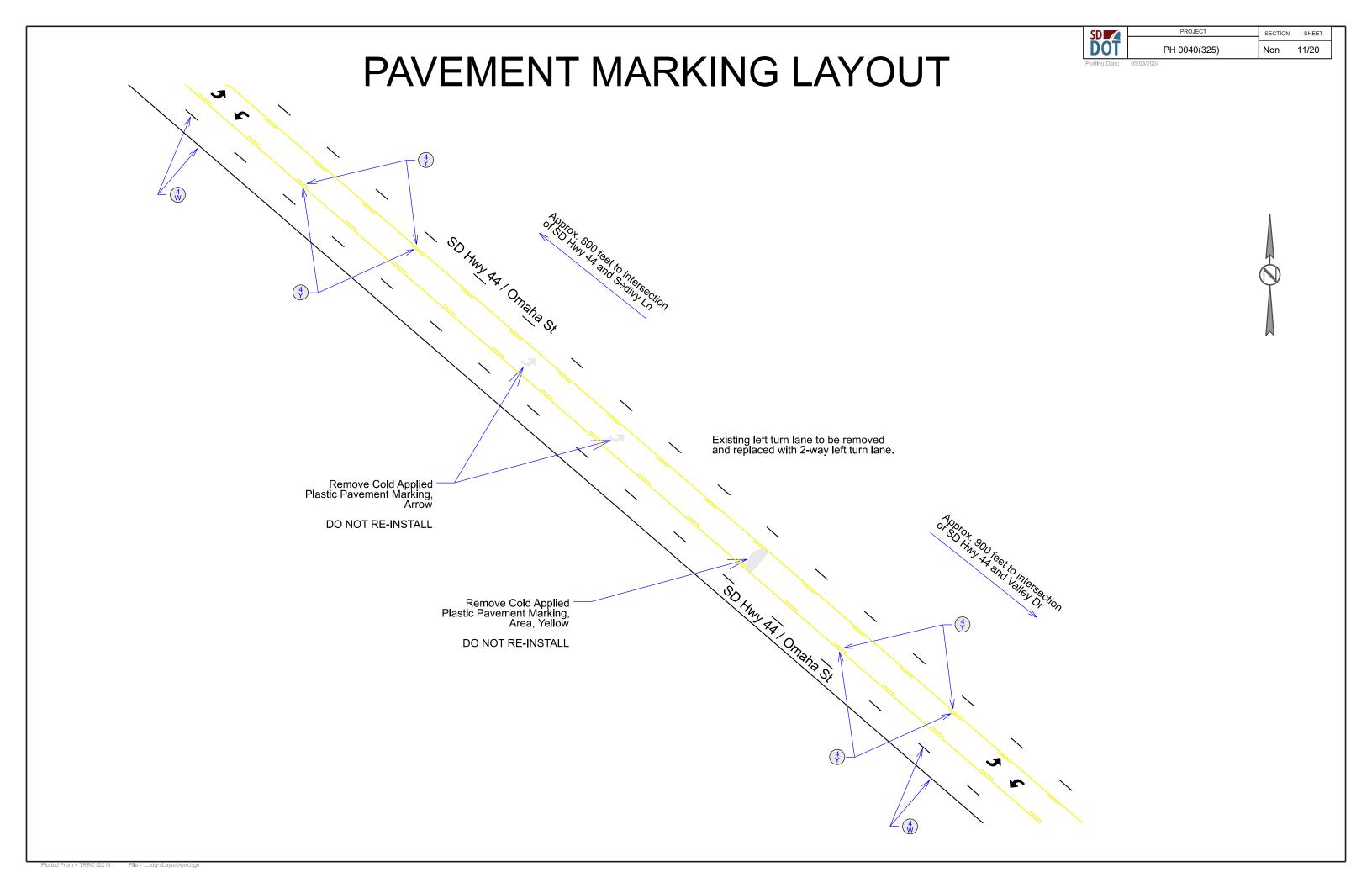


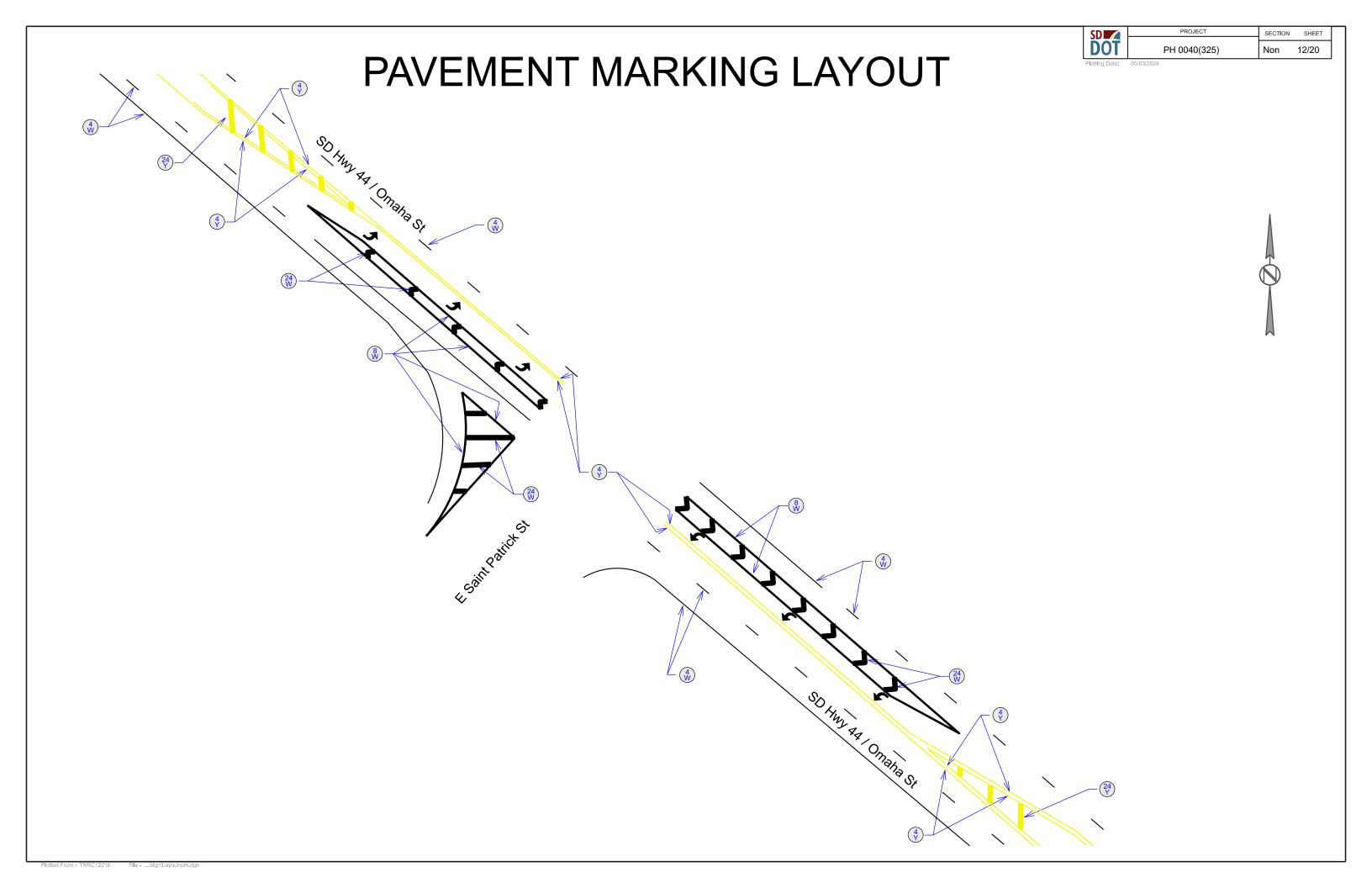
PAVEMENT MARKING LAYOUT

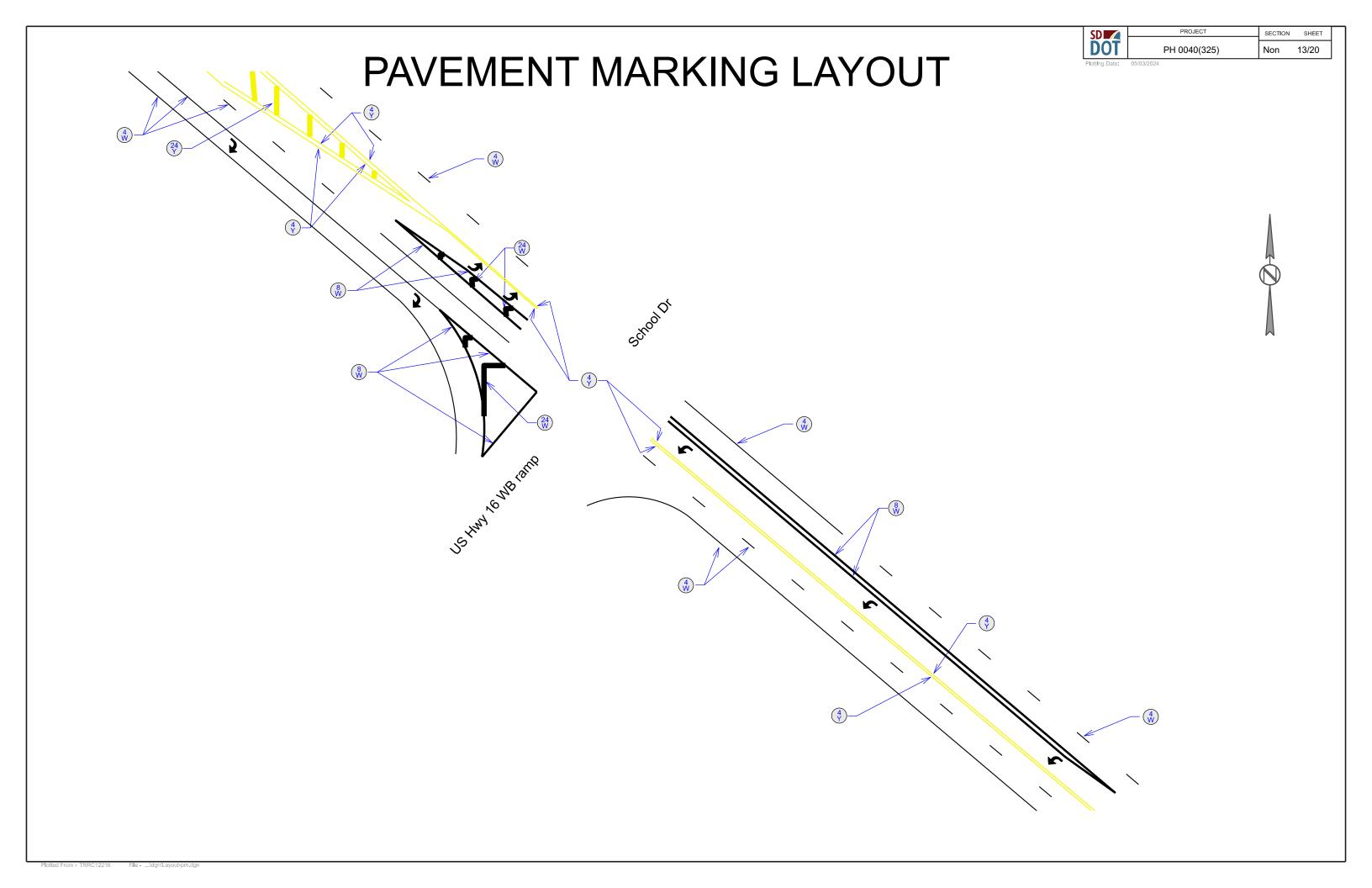


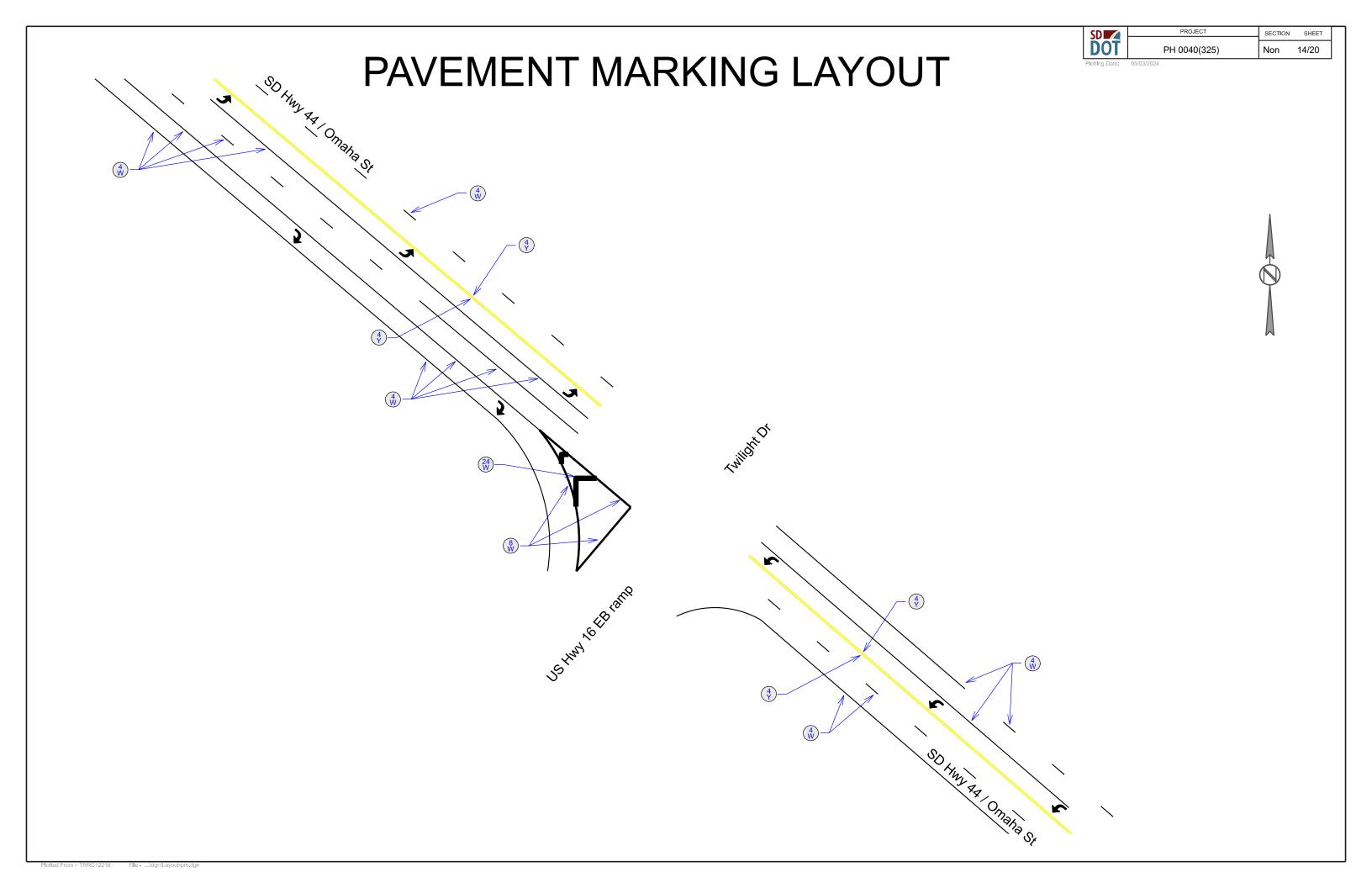


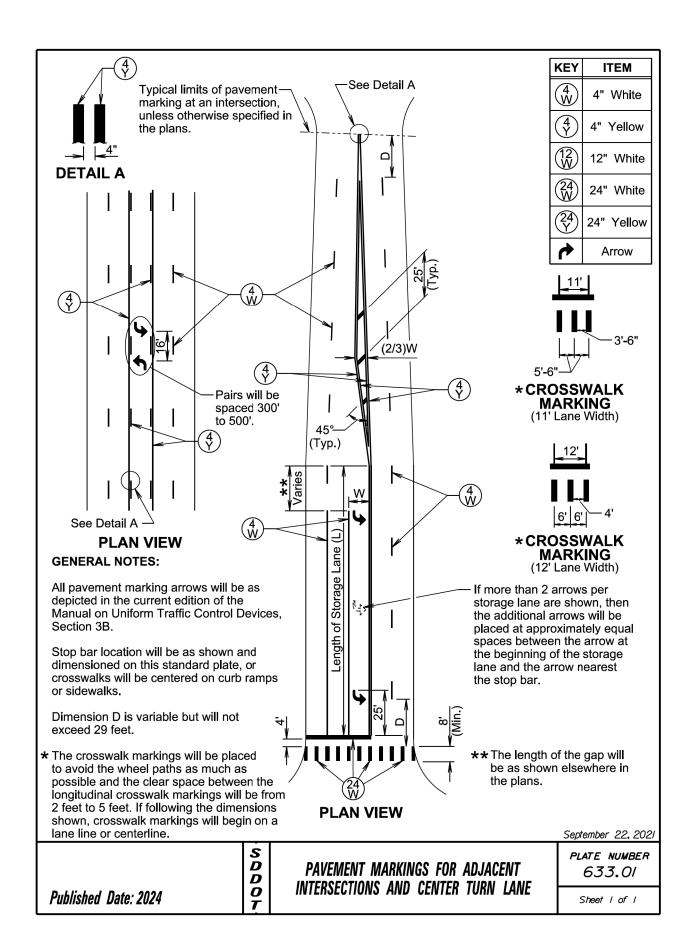


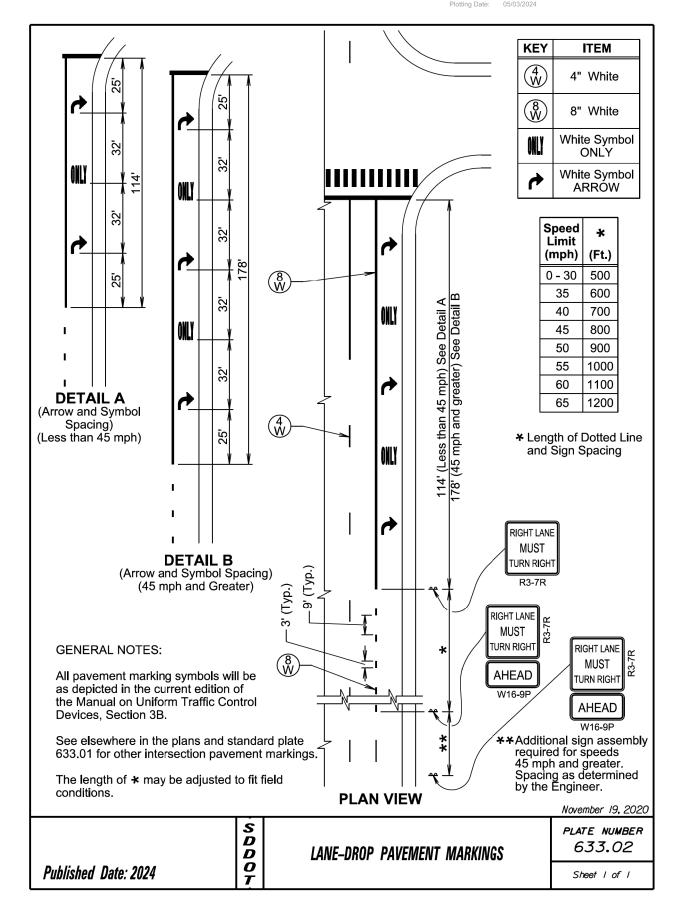


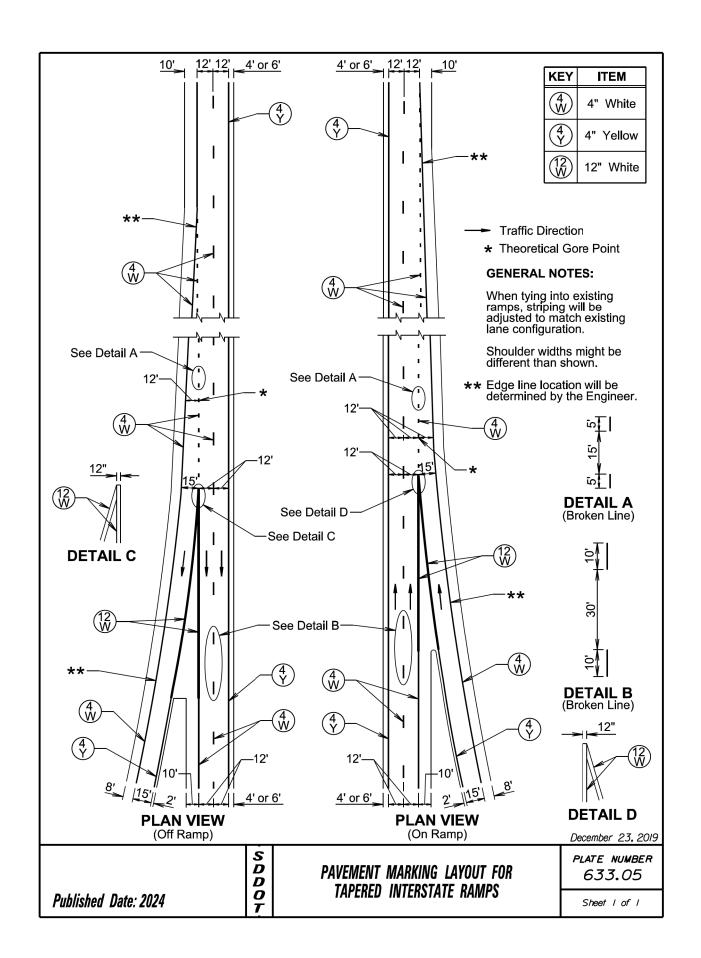


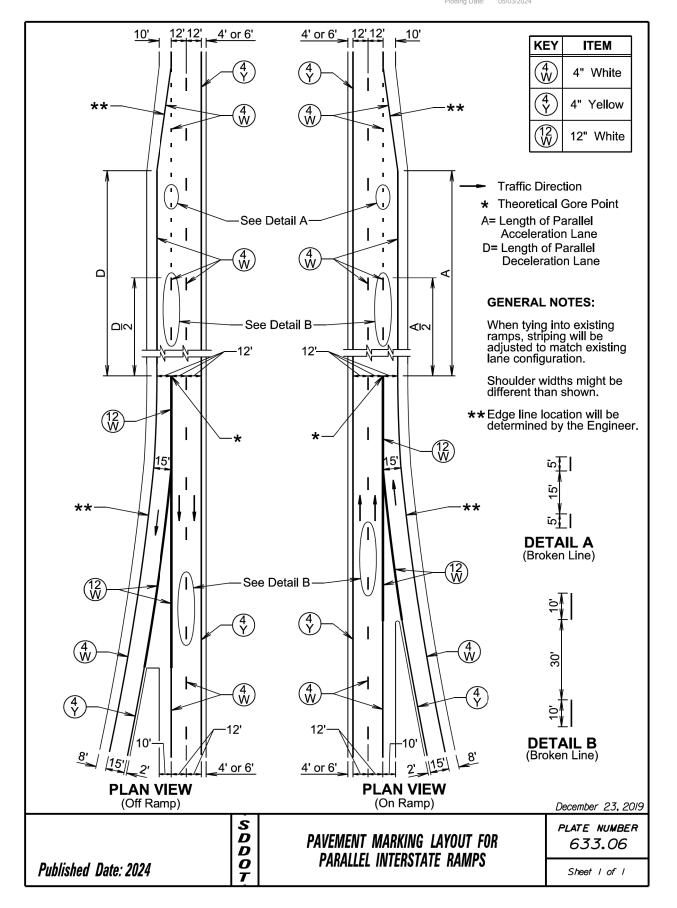


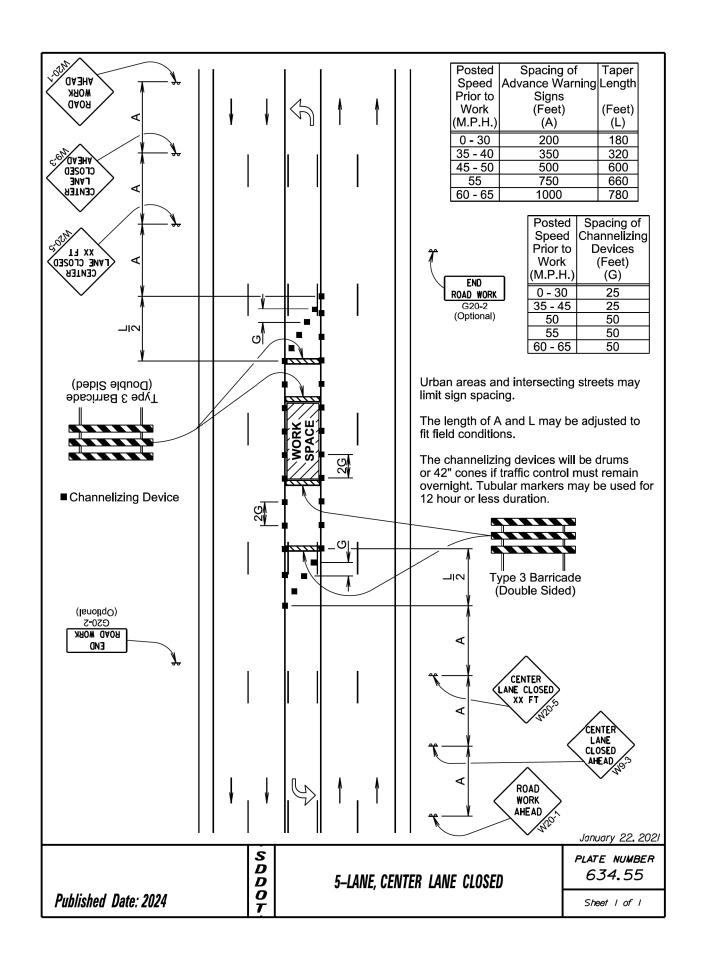


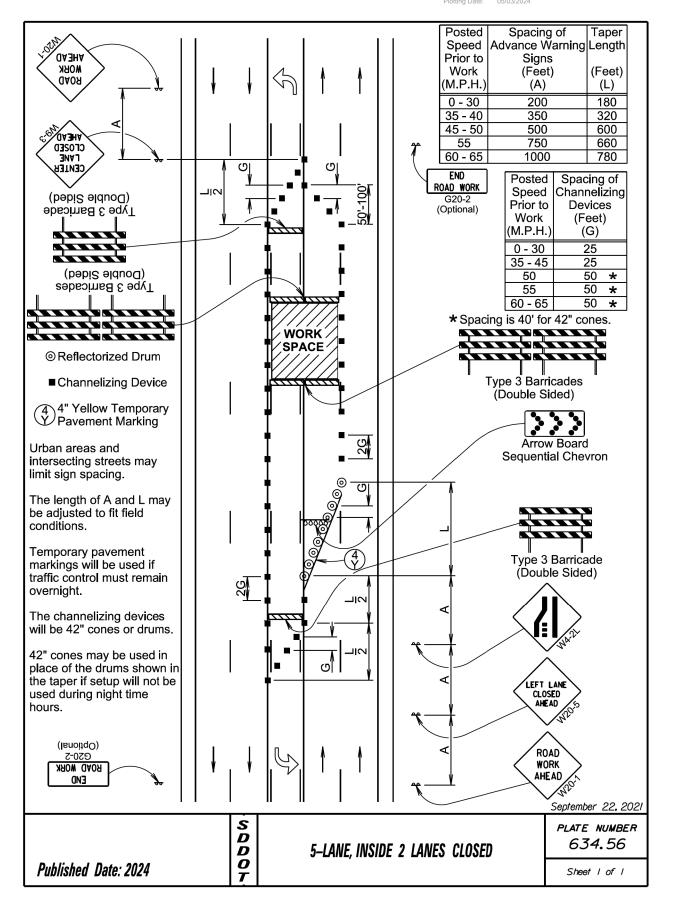


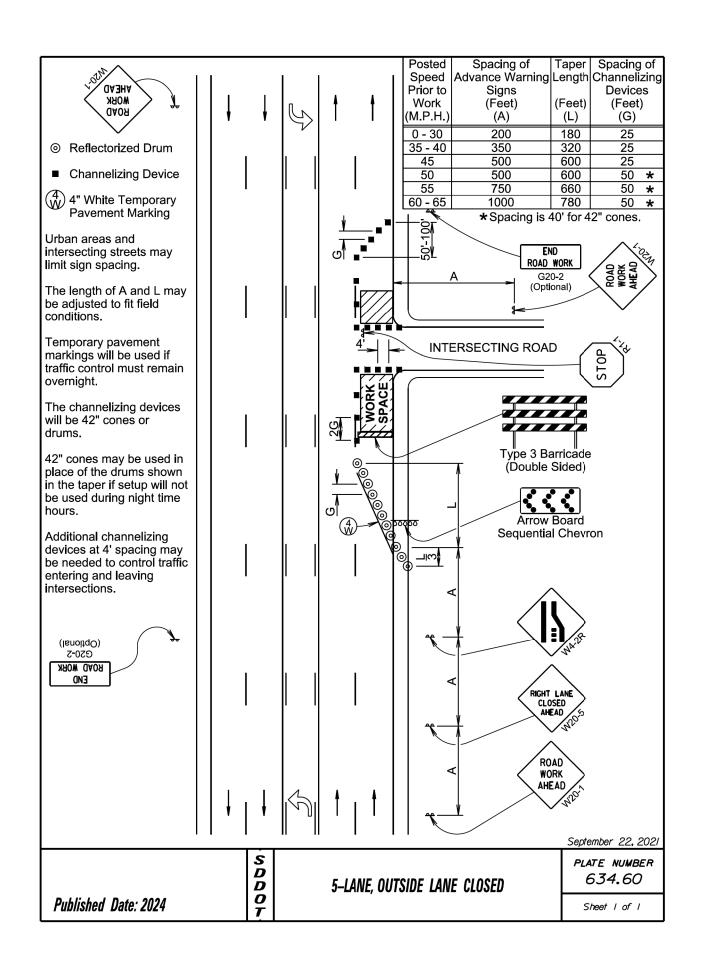


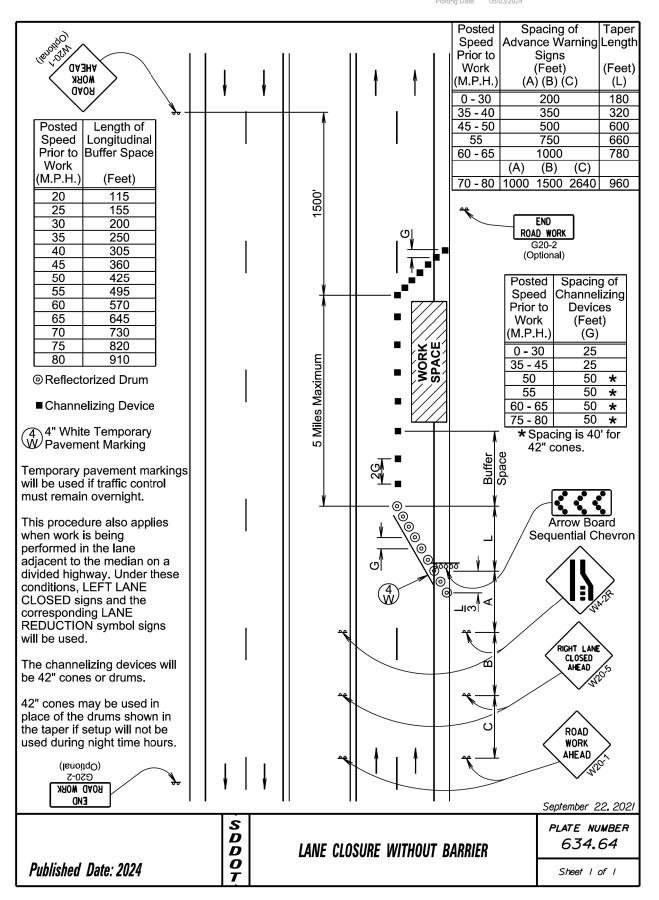












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DOT	PH 0040(325)	Non	19/20

