

EAU

NOVEMBER 2023

PROJECT ID: 7901-03-72  
WITH: N/A

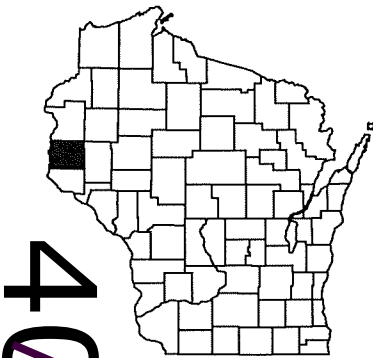
COUNTY:

ST. CROIX COUNTY

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 32



DESIGN DESIGNATION 7901-03-72

A.A.D.T.	2022	=	5,990
A.A.D.T.	2042	=	7,300
D.H.V.		=	50
D.D.		=	50/50
T.		=	1%
DESIGN SPEED		=	60
ESALS		=	120,000

CONVENTIONAL SYMBOLS

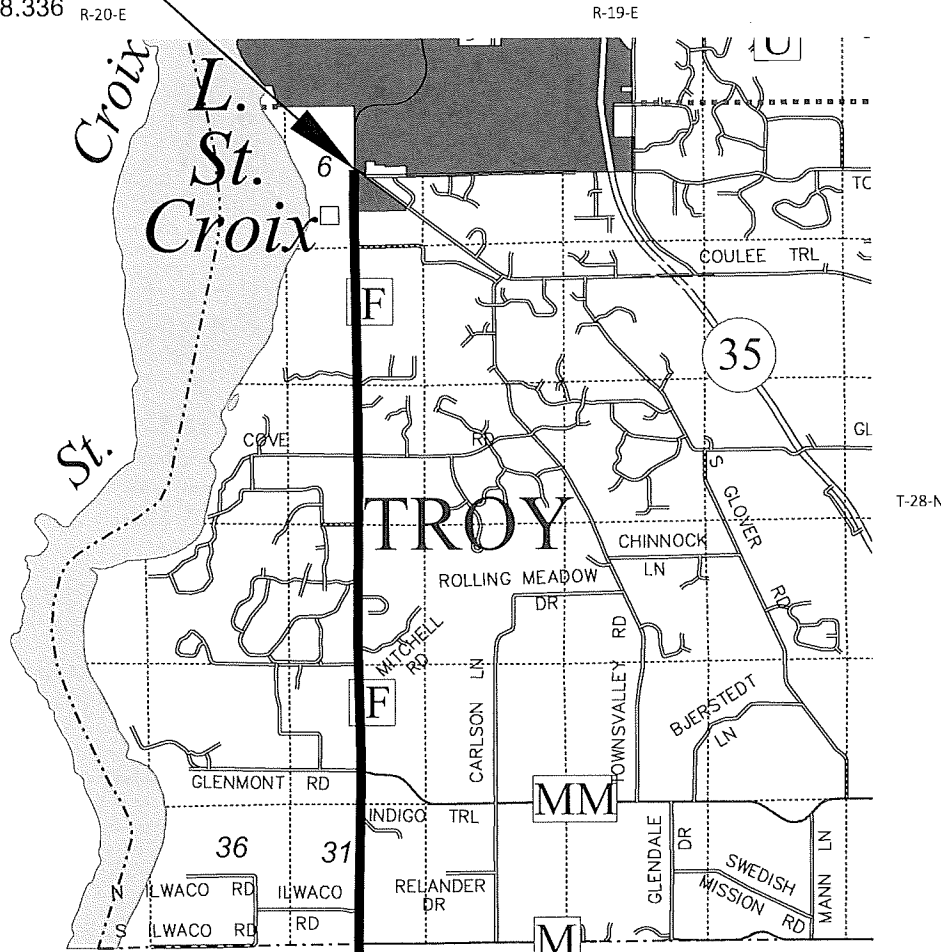
PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 PLAN OF PROPOSED IMPROVEMENT  
 PIERCE COUNTY LINE - HUDSON  
 PIERCE COUNTY LINE TO COULEE TRAIL  
 CTH F  
 ST. CROIX COUNTY

STATE PROJECT NUMBER  
 7901-03-72

END PROJECT  
 STA 392+33.82  
 N=330464.306  
 E=517608.336



BEGIN PROJECT  
 STA 95+70  
 N=300805.934  
 E=517635.641

LAYOUT  
 SCALE 0 1.33 MI  
 TOTAL NET LENGTH OF CENTERLINE = 5.62 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ST. CROIX COUNTY, NAD83 ( 1991 ), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 ( 1996 ). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7901-03-72	WISC 2024031	1

ACCEPTED FOR  
 ST. CROIX COUNTY  
 7/25/23  
 Date  
 Robbin Keyser  
 (Signature and Title of Official)

ORIGINAL PLANS PREPARED BY  
 ST. CROIX COUNTY HIGHWAY DEPARTMENT  
  
 DATE: 7/25/23  
 (Professional Engineer Signature)

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 PREPARED BY  
 Surveyor: Derek Tuttle  
 Designer: Greg Haig  
 Project Manager: Matthew Berg  
 Regional Examiner: Tou Yang  
 Regional Supervisor: Tyler Rongstad

APPROVED FOR THE DEPARTMENT  
 DATE: 7/31/2023  
 (Signature)

**GENERAL NOTES**

- THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
- HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 115 LB/SY/IN.
- CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

ELECTRIC

COMMUNICATIONS

AT&T  
 RICK PODOLACH  
 304 SOUTH DEWEY STREET  
 EAU CLAIRE, WI 54701  
 PHONE: 715-410-0656  
[rick.t.podolach@att.com](mailto:rick.t.podolach@att.com)

BALDWIN TELECOM  
 MATT KNEGENDORF  
 930 MAPLE STREET  
 BALDWIN, WI 54002  
 PHONE: 651-895-5892  
 PHONE: 715-760-0968  
[mknegendorf@lswi.net](mailto:mknegendorf@lswi.net)

COMCAST  
 BEN UILAND  
 4255 LEXINGTON AVE N. STE 100  
 ARDEN HILLS, MN 55026  
 PHONE: 612-462-7911  
[benjamin.ueland@comcast.com](mailto:benjamin.ueland@comcast.com)

MUNICIPAL

HUDSON WATER & SEWER  
 DEB ANDREWS  
 500 3RD STREET  
 HUDSON, WI 54016  
 PHONE: 715-386-4767  
[dandrews@ci.hudson.wi.us](mailto:dandrews@ci.hudson.wi.us)

SCHOOL DISTRICT OF HUDSON  
 DUSTIN HAYES  
 1501 VINE STREET  
 HUDSON, WI 54016  
 PHONE: 715-377-3708  
[hayesdustin@hudsonraiders.com](mailto:hayesdustin@hudsonraiders.com)



Dial **811** or (800)242-8511  
[www.DiggersHotline.com](http://www.DiggersHotline.com)

ST. CROIX ELECTRIC COOP  
 ROB DOOLEY  
 1925 RIDGEWAY STREET  
 HAMMOND, WI 54015  
 PHONE: 715-796-7000  
[communications@scecn.net](mailto:communications@scecn.net)

GAS

ST. CROIX VALLEY NATURAL GAS  
 GREG LEE  
 415 S. 2ND STREET  
 RIVER FALLS, WI 54022  
 PHONE: 715-425-6177  
[greg@stcroixgas.com](mailto:greg@stcroixgas.com)

PIPELINE

MAGELLEN MIDSTREAM PARTNERS  
 BRUCE KRECH  
 2728 PATTON RD  
 ROSEVILLE, MN 55130  
 PHONE: 612-257-4726  
[bruce.krech@megellanlp.com](mailto:bruce.krech@megellanlp.com)

DESIGN CONTACTS

GREGORY HAIG, P.E.  
 ST. CROIX COUNTY HIGHWAY ENGINEER  
 300 OAK RIDGE PKWY  
 BALDWIN, WI 54002  
 PHONE: 715-760-1912  
[greg.haig@sccwi.gov](mailto:greg.haig@sccwi.gov)

OWNER

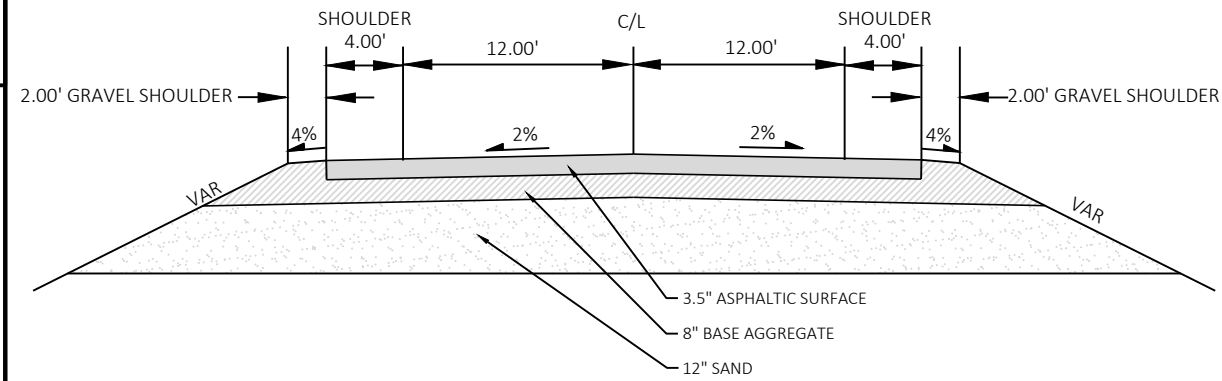
ST. CROIX COUNTY HIGHWAY DEPT.  
 ATTN: ROBBIE KREJCI  
 300 OAK RIDGE PKWY  
 BALDWIN, WI 54002  
 PHONE: 715-245-4201  
[robbie.krejci@sccwi.gov](mailto:robbie.krejci@sccwi.gov)

DNR LIASON

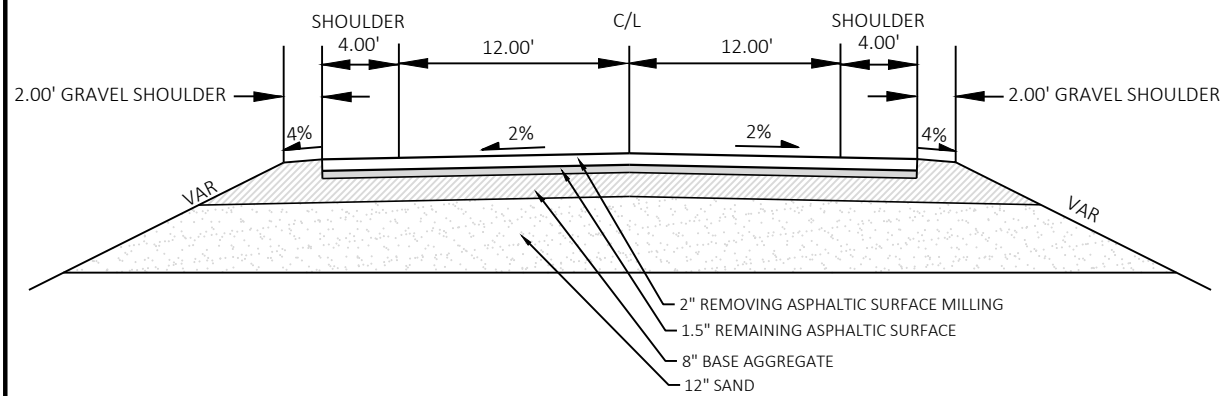
AMY LESIK  
 WISCONSIN DNR  
 1300 W. CLAIREMONT AVE  
 EAU CLAIRE, WI 54701  
 PHONE: 715-836-6571  
[amy.lesik@wisconsin.gov](mailto:amy.lesik@wisconsin.gov)

**STANDARD ABBREVIATIONS**

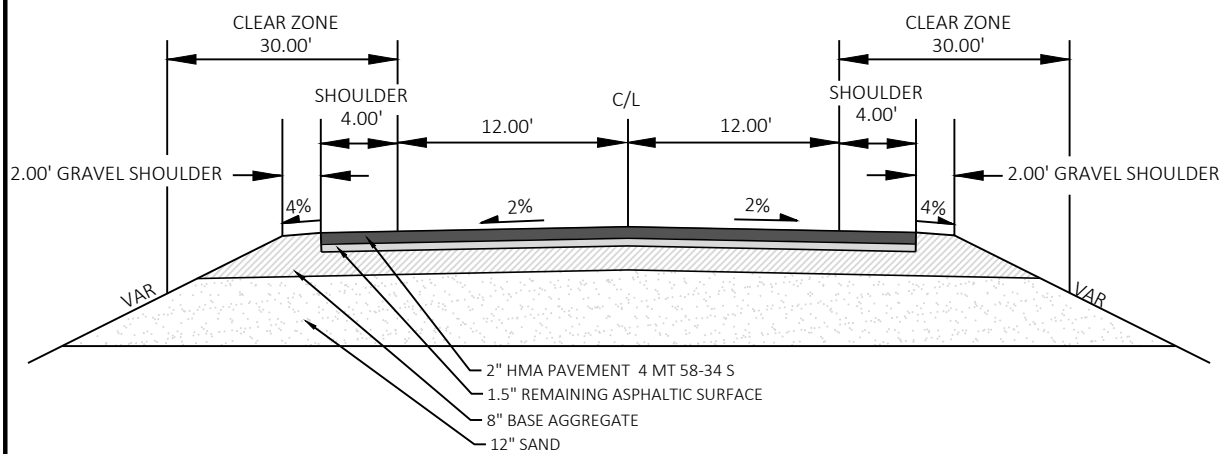
AC	ACRE	LC.	LONG CHORD
AGG	AGGREGATE	LS	LUMP SUM
<	ANGLE	M.P.	MARKER POST
AE, AEW	APRON ENDWALL	MGAL	1000 GALLONS
ASPH.	ASPHALTIC	N.C.	NORMAL CROWN
A.D.T.	AVERAGE DAILY TRAFFIC	N	NORTH
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC	NB	NORTHBOUND
B.F.	BACK FACE	NOR	NORMAL
BM	BENCHMARK	NO.	NUMBER
BTWN	BETWEEN	PAV'T	PAVEMENT
CTR.	CENTER	P.L.E.	PERMANENT LIMITED EASEMENT
C/L	CENTER LINE	P.C.	POINT OF CURVATURE
Δ	CENTRAL ANGLE OR DELTA	P.I.	POINT OF INTERSECTION
C.E.	COMMERCIAL ENTRANCE	P.T.	POINT OF TANGENCY
CONST.	CONSTRUCTION	PCC	PORTLAND CEMENT CONCRETE
CMCP	CORRUGATED METAL CULVERT PIPE	P.E.	PRIVATE ENTRANCE
CMP	CORRUGATED METAL PIPE	PGL	PROFILE GRADE LINE
CO.	COUNTY	P.L.	PROPERTY LINE
CTH	COUNTY TRUNK HIGHWAY	R	RADIUS OR RANGE
CR.	CREEK	R/L	REFERENCE LINE
CABC	CRUSHED AGGREGATE BASE COURSE	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
CY	CUBIC YARD	REQ'D	REQUIRED
CP	CONTROL POINT OR CULVERT PIPE	RT	RIGHT
C&G	CURB AND GUTTER	R.H.F.	RIGHT HAND FORWARD
D	DEGREE OF CURVE	R/W	RIGHT OF WAY
D.H.V.	DESIGN HOURLY VOLUME	RD.	ROAD
DIA.	DIAMETER	SHLD.	SHOULDER(S)
D.D.	DIRECTIONAL DISTRIBUTION	SHR.	SHRINKAGE
DISCH.	DISCHARGE	S	SOUTH
DMS	DYNAMIC MESSAGE SIGN	SB	SOUTHBOUND
EA	EACH	S.F.	SQUARE FOOT (FEET)
E	EAST	SDD	STANDARD DETAIL DRAWING(S)
EB	EASTBOUND	STH	STATE TRUNK HIGHWAY
ELEC.	ELECTRIC(AL), ELEC. CABLE	STA.	STATION
EL., ELEV.	ELEVATION	S.E.	SUPERELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	S/L	SURVEY LINE
EXC.	EXCAVATION	SYM	SYMMETRICAL
EXIST	EXISTING	T.	PERCENT TRUCKS
F.F.	FACE TO FACE	TEL.	TELEPHONE
FERT.	FERTILIZER	TEMP.	TEMPORARY
F.E.	FIELD ENTRANCE	T.L.E.	TEMPORARY LIMITED EASEMENT
F/L, F.L.	FLOW LINE	T.O.C.	TOP OF CURB
GALV.	GALVANIZE	TYP	TYPICAL
H.S.	HIGH STRENGTH	UNCL.	UNCLASSIFIED
CWT	HUNDRED WEIGHT	U.G.	UNDERGROUND (CABLE)
INL	INLET	VAR	VARIABLE
INTER.	INTERSECTION	V.C.	VERTICAL CURVE
IH	INTERSTATE HIGHWAY	V.P.C.	VERTICAL POINT OF CURVATURE
JT.	JOINT	V.P.I.	VERTICAL POINT OF INTERSECTION
LT	LEFT	V.P.T.	VERTICAL POINT OF TANGENCY
L.H.F.	LEFT HAND FORWARD	WT.	WEIGHT
L.	LENGTH OF CURVE	W	WEST
L.F.	LINEAR FOOT(FEET)	WB	WESTBOUND



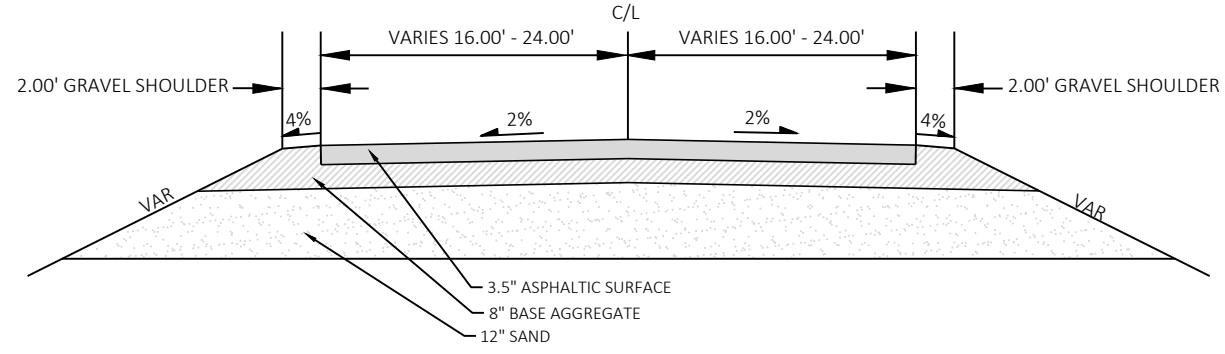
EXISTING TYPICAL SECTION



MILLED TYPICAL SECTION

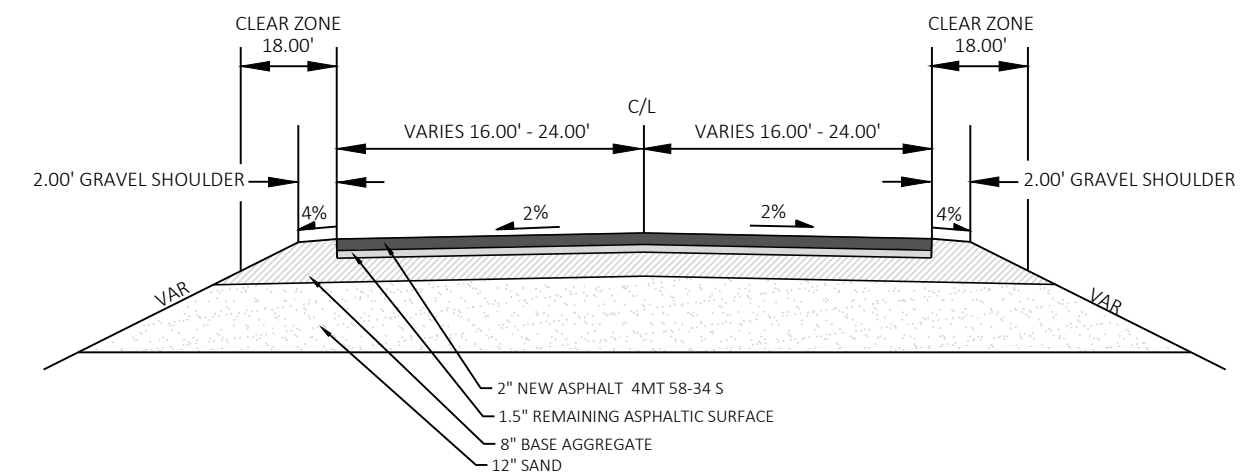


FINISHED TYPICAL SECTION



EXISTING TYPICAL SECTION FOR TURN AND BYPASS LANES

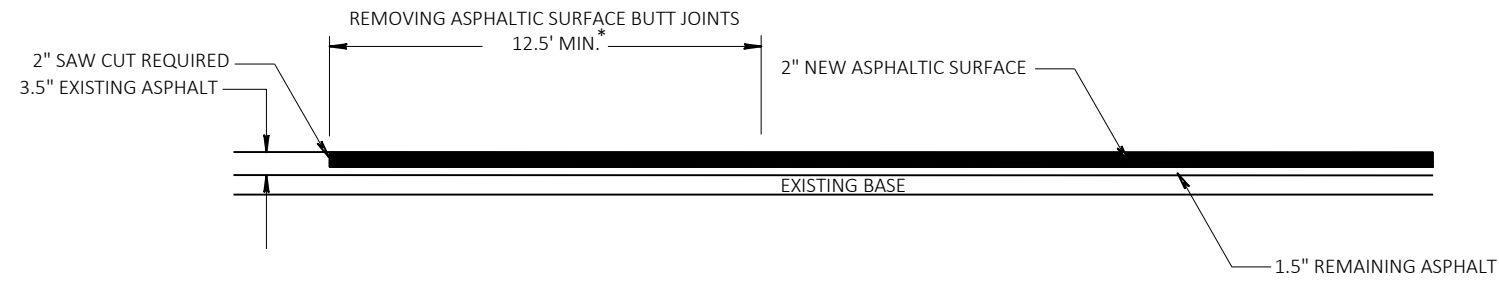
- STA. 96+75 - 103+00 LT (BYPASS LANE)
- STA. 96+75 - 101+80 RT (TURN LANE INTERSECTION)
- STA. 147+81 - 153+70 RT (TURN LANE INTERSECTION)
- STA. 202+29 - 212+60 RT (BYPASS LANE)
- STA. 205+62 - 214+41 LT (TURN LANE)
- STA. 226+40 - 232+12 RT (TURN LANE INTERSECTION)
- STA. 233+45 - 239+55 RT (BYPASS LANE)
- STA. 234+68 - 240+64 LT (TURN LANE INTERSECTION)
- STA. 254+35 - 261+36 RT (BYPASS LANE)
- STA. 256+30 - 262+04 LT (TURN LANE INTERSECTION)
- STA. 279+55 - 285+35 RT (TURN LANE INTERSECTION)
- STA. 282+16 - 287+65 LT (TURN LANE INTERSECTION)
- STA. 307+06 - 312+76 LT (BYPASS LANE)
- STA. 354+28 - 392+33.82 LT (ADD LANE SOUTHBOUND)
- STA. 358+51 - 364+03 RT (TURN LANE INTERSECTION)
- STA. 372+60 - 392+33.82 RT (TURN LANE INTERSECTION SCHOOL)



FINISHED TYPICAL SECTION FOR TURN AND BYPASS LANES

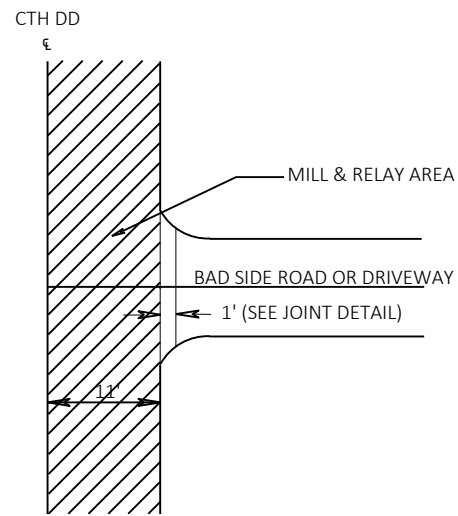
- STA. 96+75 - 103+00 LT (BYPASS LANE)
- STA. 96+75 - 101+80 RT (TURN LANE INTERSECTION)
- STA. 147+81 - 153+70 RT (TURN LANE INTERSECTION)
- STA. 202+29 - 212+60 RT (BYPASS LANE)
- STA. 205+62 - 214+41 LT (TURN LANE)
- STA. 226+40 - 232+12 RT (TURN LANE INTERSECTION)
- STA. 233+45 - 239+55 RT (BYPASS LANE)
- STA. 234+68 - 240+64 LT (TURN LANE INTERSECTION)
- STA. 254+35 - 261+36 RT (BYPASS LANE)
- STA. 256+30 - 262+04 LT (TURN LANE INTERSECTION)
- STA. 279+55 - 285+35 RT (TURN LANE INTERSECTION)
- STA. 282+16 - 287+65 LT (TURN LANE INTERSECTION)
- STA. 307+06 - 312+76 LT (BYPASS LANE)
- STA. 354+28 - 392+33.82 LT (ADD LANE SOUTHBOUND)
- STA. 358+51 - 364+03 RT (TURN LANE INTERSECTION)
- STA. 372+60 - 392+33.82 RT (TURN LANE INTERSECTION SCHOOL)

NOT TO SCALE

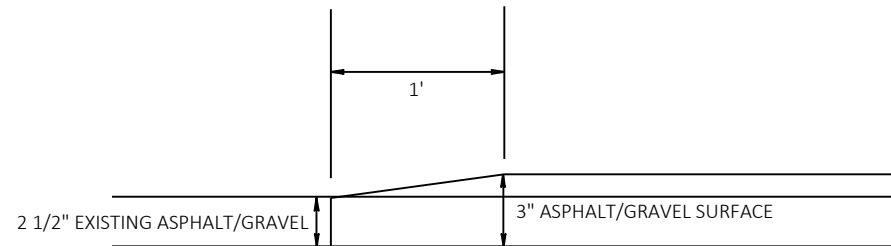


DETAIL OF MAINLINE OVERLAP BUTTED JOINT

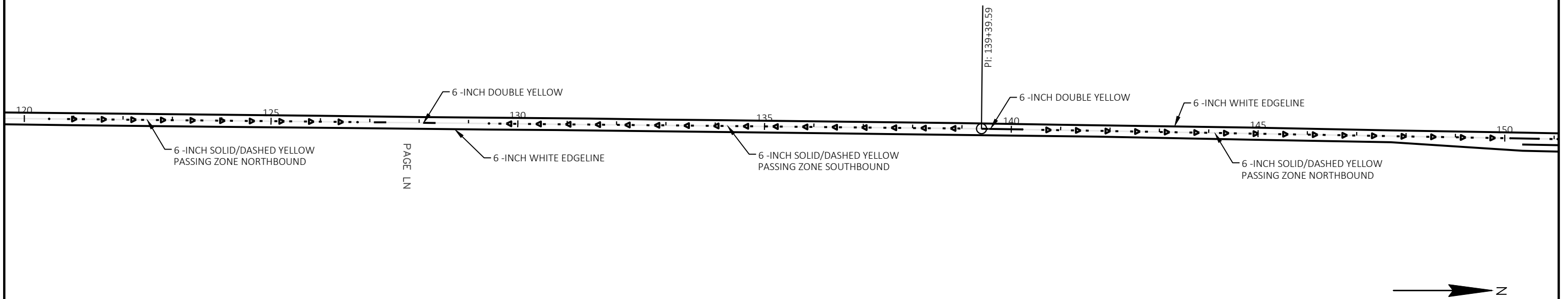
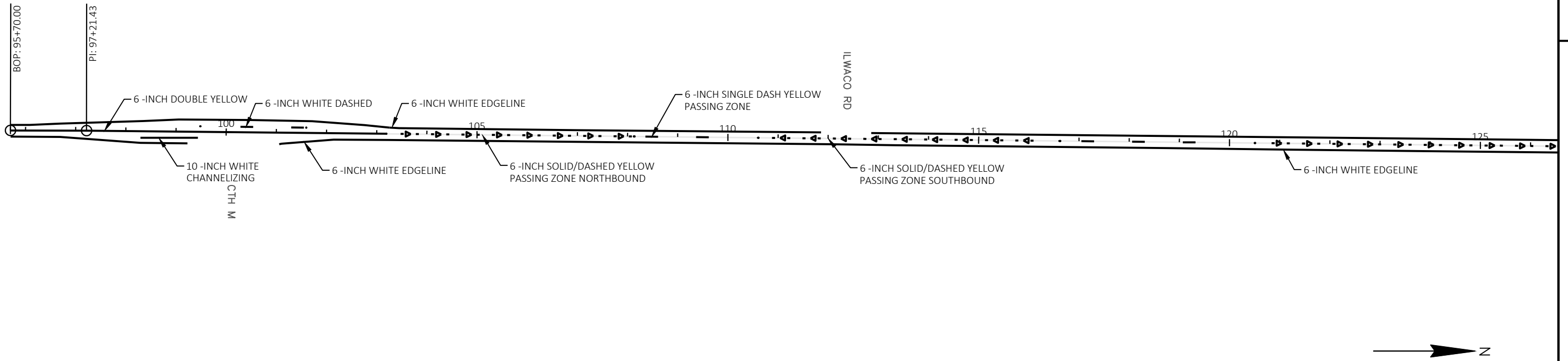
\* EXACT DIMENSIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.



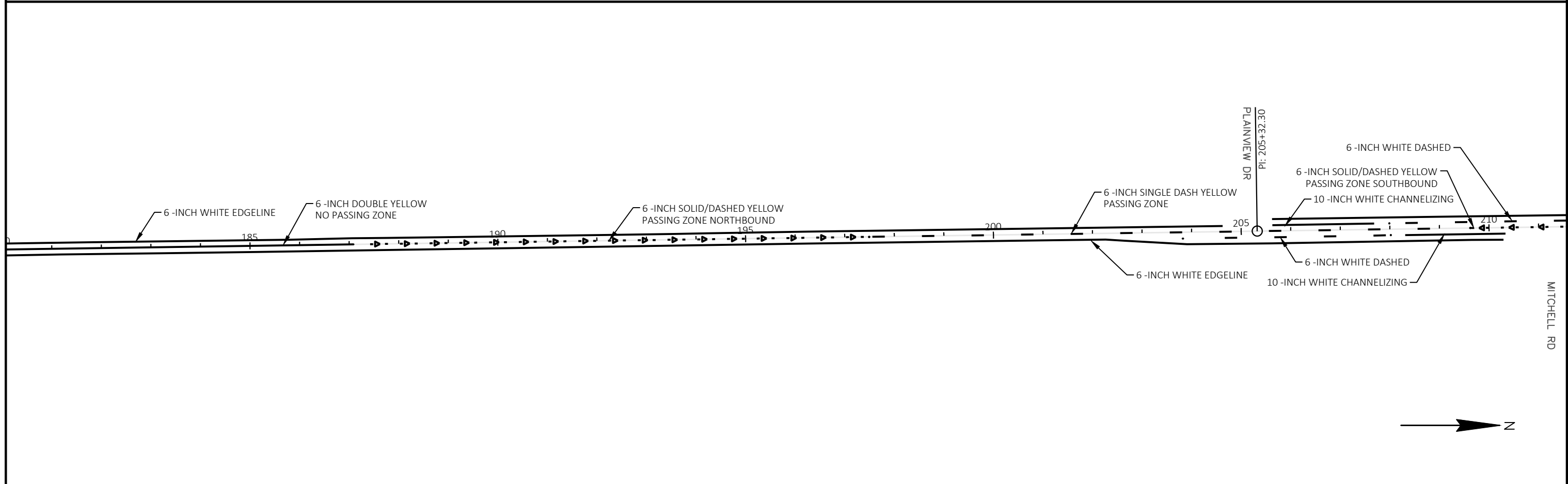
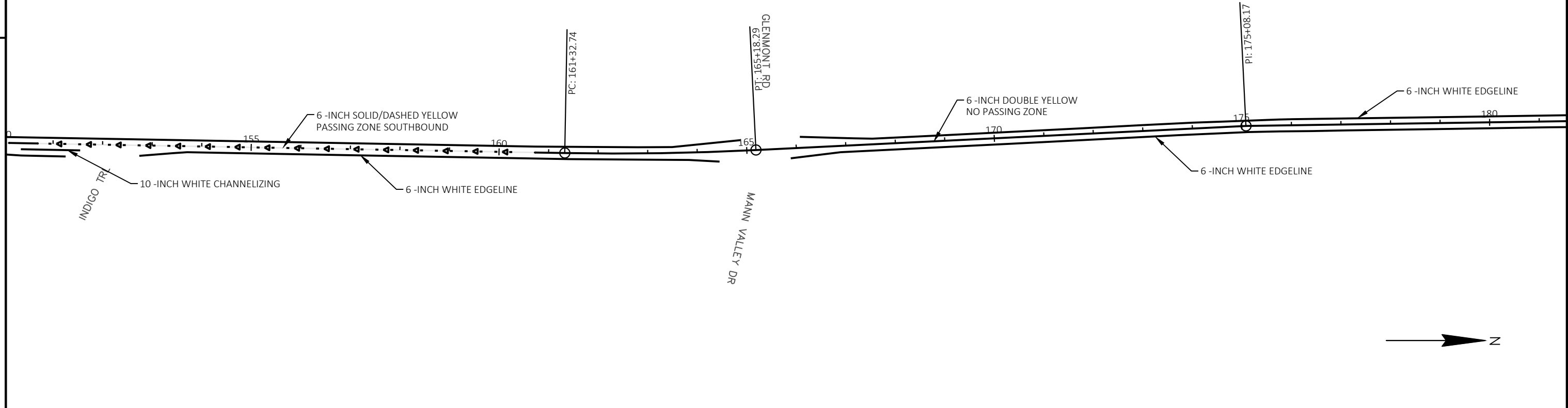
ASPHALT/GRAVEL SIDE ROAD AND DRIVEWAY DETAIL



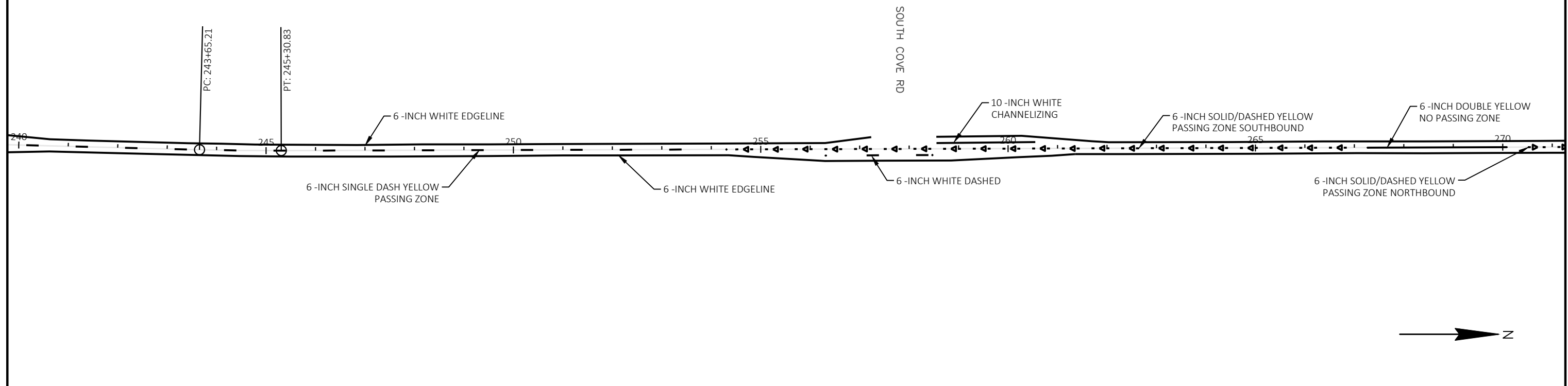
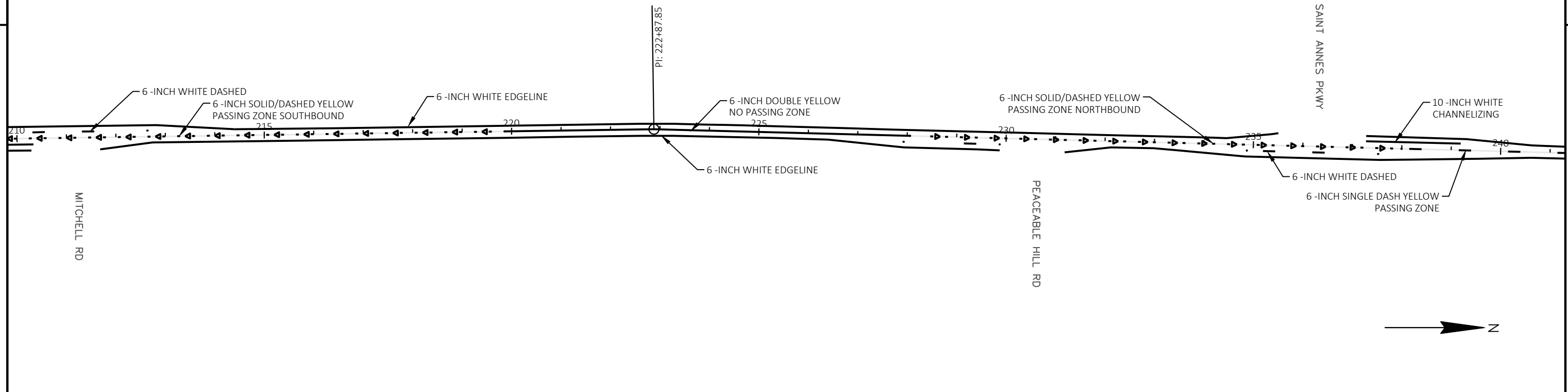
ASPHALT/GRAVEL JOINT



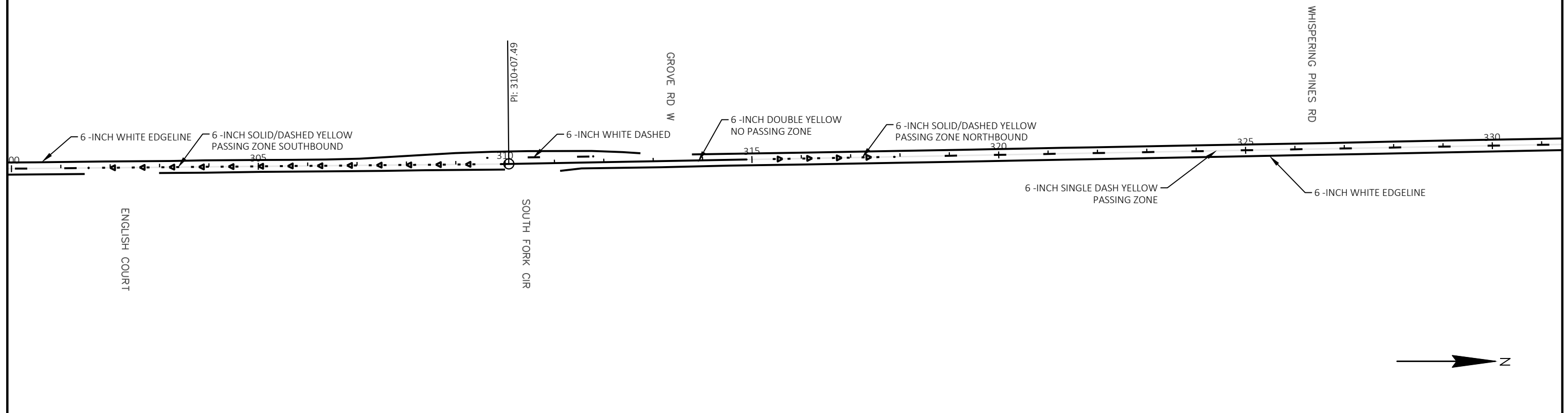
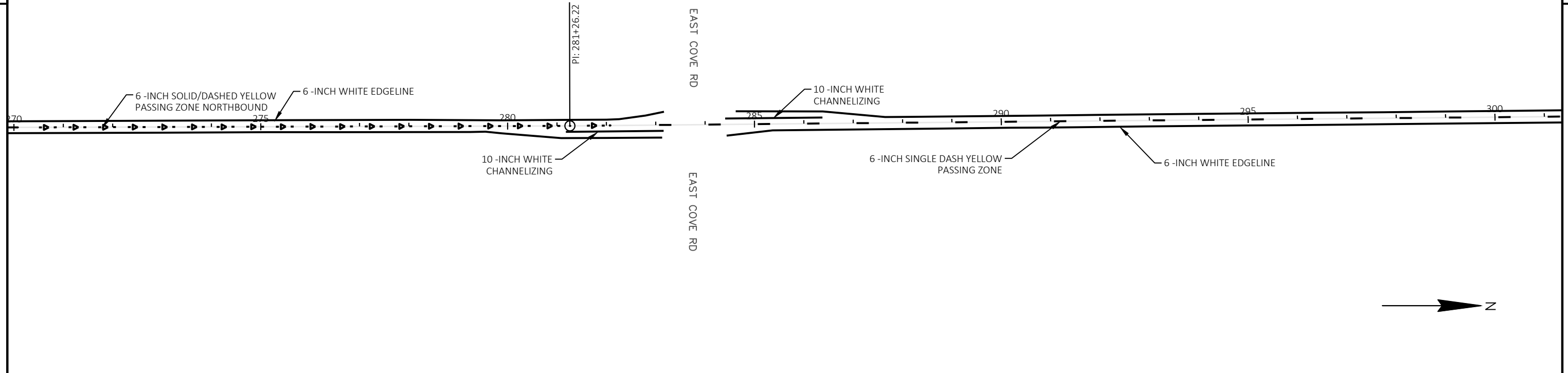
PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PAVEMENT MARKING	SHEET	E
------------------------	------------	-------------------	------------------	-------	---



PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PAVEMENT MARKING	SHEET	E
------------------------	------------	-------------------	------------------	-------	---

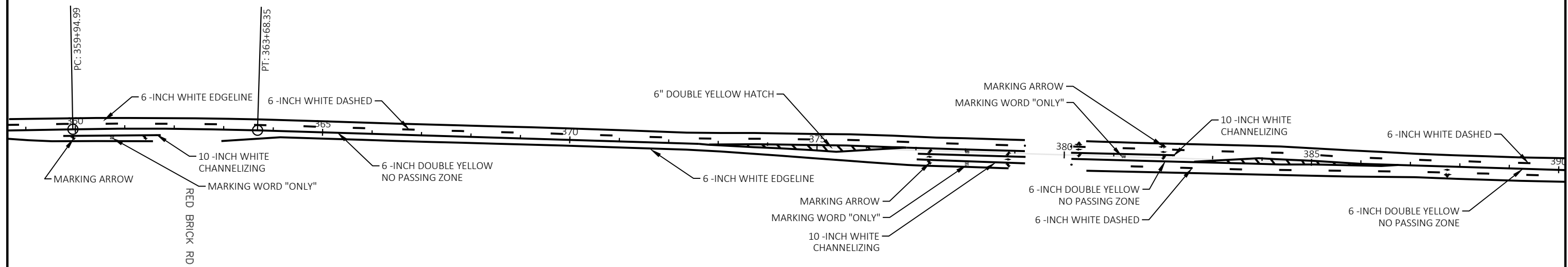
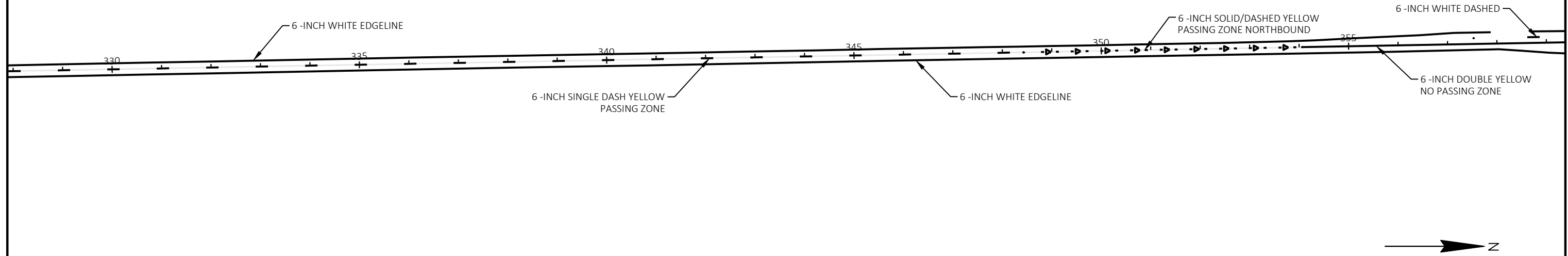


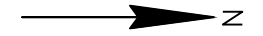
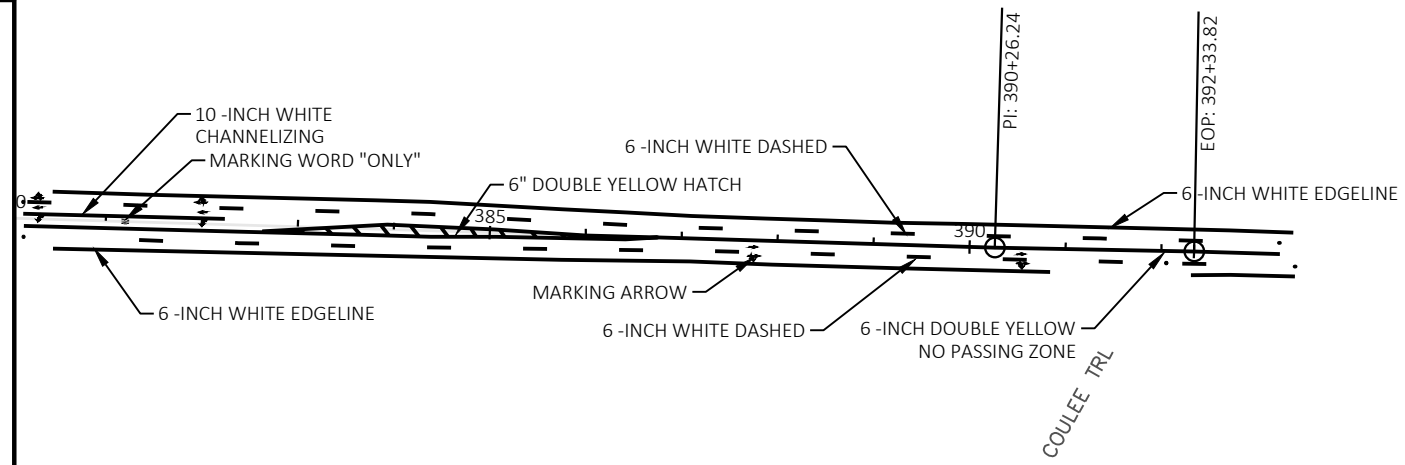
PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PAVEMENT MARKING	SHEET	E
------------------------	------------	-------------------	------------------	-------	---



PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PAVEMENT MARKING	SHEET	E
------------------------	------------	-------------------	------------------	-------	---







Estimate Of Quantities

7901-03-72

Line	Item	Item Description	Unit	Total	Qty
0002	204.0115	Removing Asphaltic Surface Butt Joints	SY	50.000	50.000
0004	204.0120	Removing Asphaltic Surface Milling	SY	130,812.000	130,812.000
0006	305.0110	Base Aggregate Dense 3/4-Inch	TON	50.000	50.000
0008	305.0500	Shaping Shoulders	STA	500.000	500.000
0010	455.0605	Tack Coat	GAL	7,950.000	7,950.000
0012	460.2000	Incentive Density HMA Pavement	DOL	9,540.000	9,540.000
0014	460.6244	HMA Pavement 4 MT 58-34 S	TON	14,893.000	14,893.000
0016	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7901-03-72	EACH	1.000	1.000
0018	619.1000	Mobilization	EACH	1.000	1.000
0020	624.0100	Water	MGAL	1.000	1.000
0022	642.5001	Field Office Type B	EACH	1.000	1.000
0024	643.0900	Traffic Control Signs	DAY	3,360.000	3,360.000
0026	643.5000	Traffic Control	EACH	1.000	1.000
0028	646.2005	Marking Line Paint 6-Inch	LF	104,177.000	104,177.000
0030	646.4005	Marking Line Paint 10-Inch	LF	2,580.000	2,580.000
0032	646.5005	Marking Arrow Paint	EACH	18.000	18.000
0034	646.5105	Marking Word Paint	EACH	4.000	4.000
0036	646.7105	Marking Diagonal Paint 12-Inch	LF	275.000	275.000
0038	648.0100	Locating No-Passing Zones	MI	5.600	5.600
0040	650.8000	Construction Staking Resurfacing Reference	LF	29,655.000	29,655.000
0042	650.9911	Construction Staking Supplemental Control (project) 01. 7901-03-72	EACH	1.000	1.000
0044	690.0150	Sawing Asphalt	LF	265.000	265.000
0046	740.0440	Incentive IRI Ride	DOL	22,000.000	22,000.000
0048	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0050	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

REMOVING ASPHALTIC SURFACE MILLING

STATION	TO	STATION	ITEM 204.0120 SY
CTH F			
95+70	-	392+33.82	120,812
UNDISTRIBUTED			10,000
ITEM TOTAL			130,812

ASPHALT BUTT JOINTS

STATION	SY	
CTH F		
95+70	20	
392+33.82	30	
ITEM TOTAL		50

HMA PAVEMENT 4 MT 58-34 S

STATION	TO	STATION	ITEM 460.6244 TON
CTH F			
95+70	-	392+33.82	13,893
UNDISTRIBUTED			1,000
ITEM TOTAL			14,893

MARKING LINE PAINT 6-INCH

STATION	TO	STATION	ITEM 646.2005 LF
CTH F			
95+70	-	392+33.82	94,177
UNDISTRIBUTED			10,000
ITEM TOTAL			104,177

SAWING ASPHALT

STATION	LF	
95+70	28	CTH F
112+39	22	ILWACORD
152+00	27	INDIGOTRL
165+27	32	MANN VALLEY DR
165+27	23	GLENMONT RD
205+32	22	PLAINVIEW DR
257+80	28	S. COVERD
362+25	29	RED BRICK RD
392+33.82	54	CTH F
ITEM TOTAL		265

Traffic Control

SIGN	NO. OF DAYS	SIGNS EACH	SIGNS (DAY)
TRAFFIC CONTROL SIGNS			
ITEM 643.0900			
TRAFFIC CONTROL SIGNS	40	76	3040
UNDISTRIBUTED	40	8	320
ITEM TOTAL		84	3360

PAVEMENT MARKING ARROWS

STATION	OFFSET	TYPE	EA
359+95	15' RT	TYPE 2	1
361+41	15' RT	TYPE 2	1
377+28	0	TYPE 2	1
377+28	12' RT	TYPE 1	1
377+28	24' RT	TYPE 2	1
378+86	0	TYPE 2	1
378+86	12' RT	TYPE 1	1
378+86	24' RT	TYPE 2	1
380+30	0	TYPE 2	1
380+30	12' LT	TYPE 1	1
380+30	24' LT	TYPE 3	1
382+00	0	TYPE 2	1
382+00	12' LT	TYPE 1	1
382+00	24' LT	TYPE 3	1
387+75	7' RT	TYPE 1	1
387+75	17' RT	TYPE 3	1
390+54	6' RT	TYPE 1	1
390+54	16' RT	TYPE 3	1
ITEM TOTAL			18

MARKING LINE PAINT 10-INCH

STATION	TO	STATION	ITEM 646.4005 LF
CTH F			
95+70	-	392+33.82	2,280
UNDISTRIBUTED			300
ITEM TOTAL			2,580

SHAPING SHOULDERS

STATION	TO	STATION	SHAPING ITEM 305.0500 STA	BASE AGG. ITEM 305.0110 TONS	WATER ITEM 624.0100 MGAL
CTH F					
95+70	-	392+33.82	500		
UNDISTRIBUTED				50	1
ITEM TOTAL			500	50	1

Marking Diagonal Paint 12-Inch

STATION	TO	STATION	ITEM 646.7105 LF
CTH F			
95+70	-	392+33.82	225
UNDISTRIBUTED			50
ITEM TOTAL			275

TACK COAT

STATION	TO	STATION	ITEM 455.0605 GAL
CTH F			
95+70	-	392+33.82	7,250
UNDISTRIBUTED			700
ITEM TOTAL			7,950

CONSTRUCTION STAKING

STATION	TO	STATION	ITEM 650.8000 LF
CTH F			
95+70	-	392+33.82	29,664
ITEM TOTAL			29,664

PAVEMENT MARKING WORD

STATION	OFFSET	WORD	EA
360+74	17' RT	ONLY	1
378+04	0	ONLY	1
378+04	24' RT	ONLY	1
381+20	0	ONLY	1
ITEM TOTAL			4



5

5



PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PLAN	SHEET	E
------------------------	------------	-------------------	------	-------	---

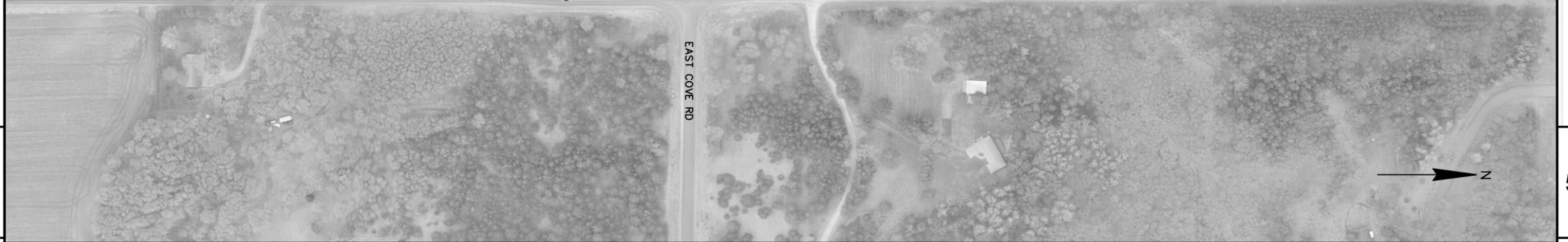
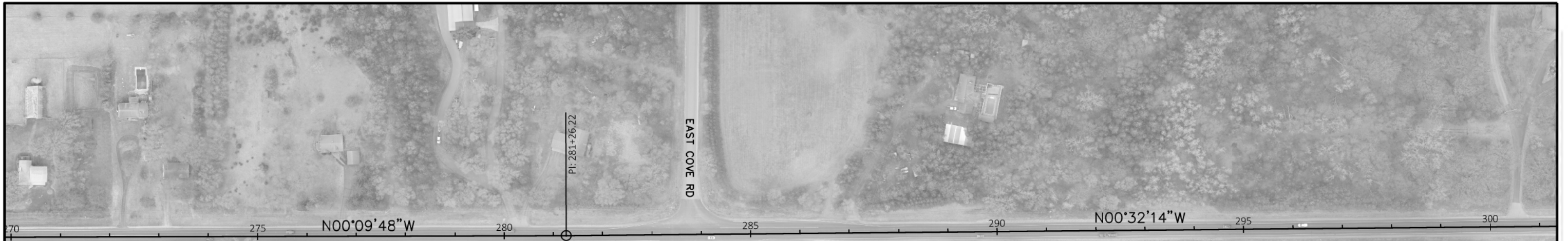


PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PLAN	SHEET	E
------------------------	------------	-------------------	------	-------	---



PI STA = 244+48.02  
 Y = 315680.797  
 X = 517652.003  
 DELTA = 1°39'22" LT  
 D = 1°00'00"  
 T = 82.82'  
 L = 165.62'  
 R = 5729.58'  
 PC STA = 243+65.21  
 PT STA = 245+30.83

PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PLAN	SHEET	E
------------------------	------------	-------------------	------	-------	---



PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PLAN	SHEET	<b>E</b>
------------------------	------------	-------------------	------	-------	----------





5

5



PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PLAN	SHEET	E
------------------------	------------	-------------------	------	-------	---



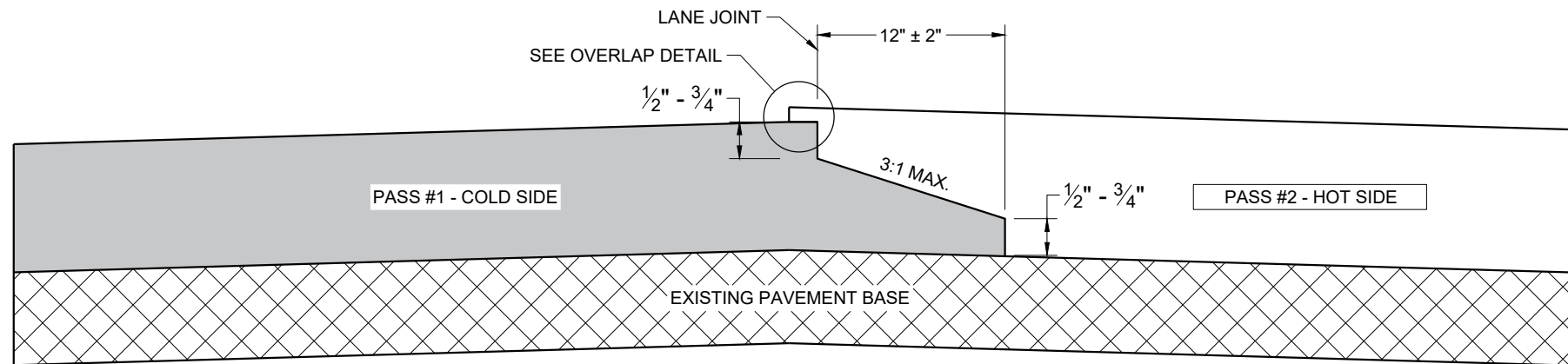
5

5

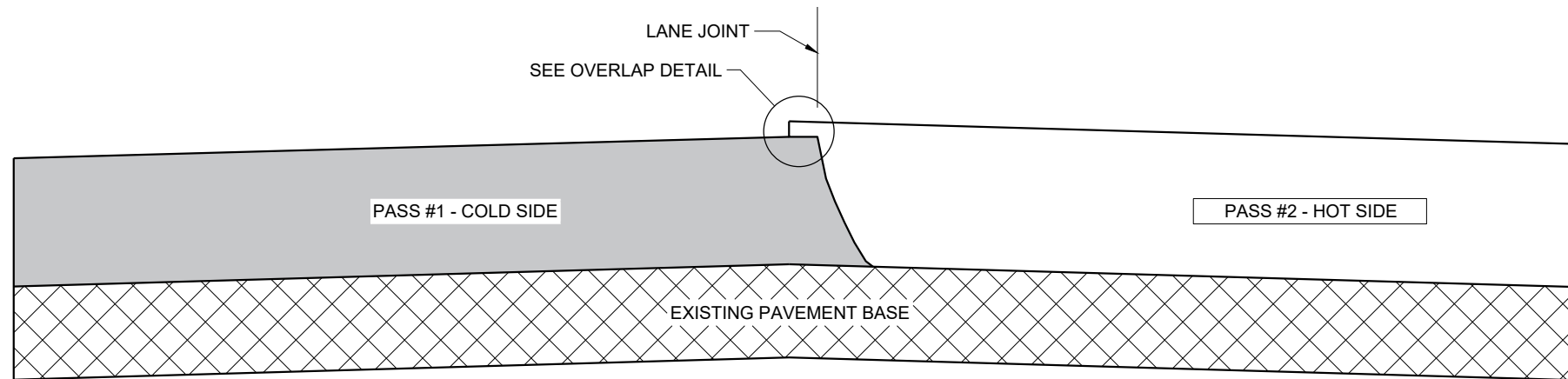
PROJECT NO: 7901-03-72	HWY: CTH F	COUNTY: ST. CROIX	PLAN	SHEET	E
------------------------	------------	-------------------	------	-------	---

## Standard Detail Drawing List

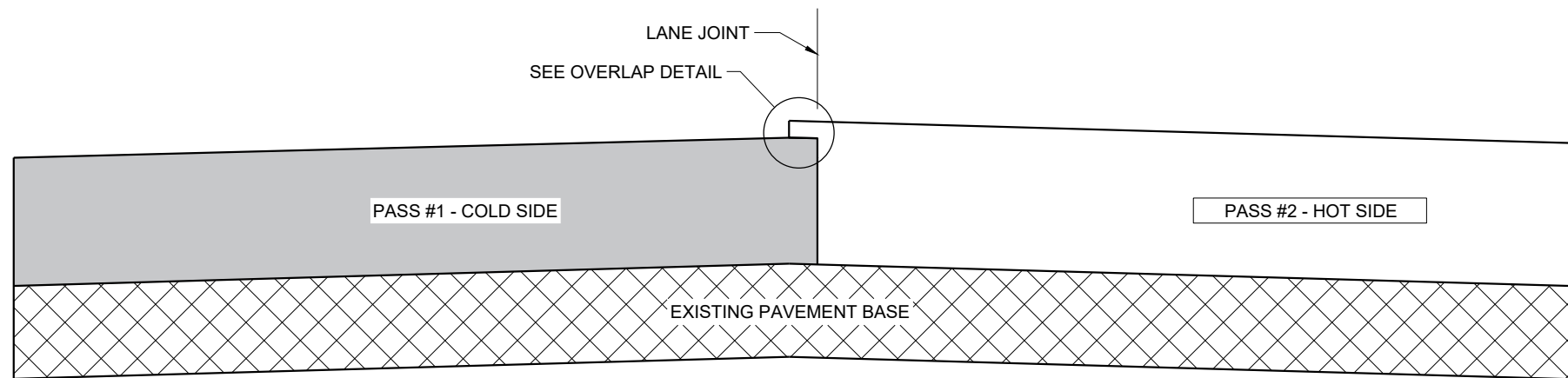
13C19-03	HMA LONGITUDINAL JOINTS
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-08B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

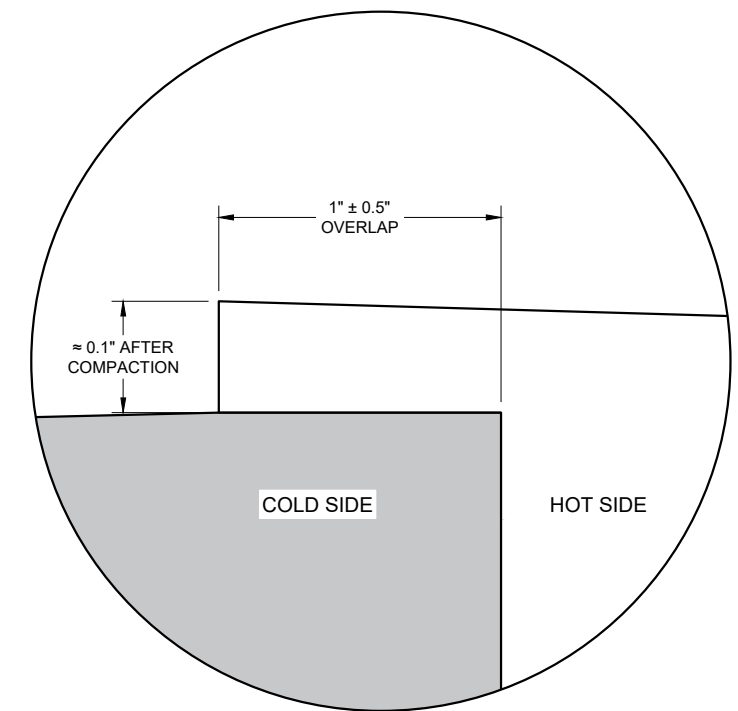
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY  $0.1"$  AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO  $2"$  FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



**OVERLAP DETAIL (TYPICAL)**

6

6

SDD 13C19 - 03

SDD 13C19 - 03

**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2020 /S/ Steven Hefel  
DATE HMA PAVEMENT ENGINEER  
FHWA

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

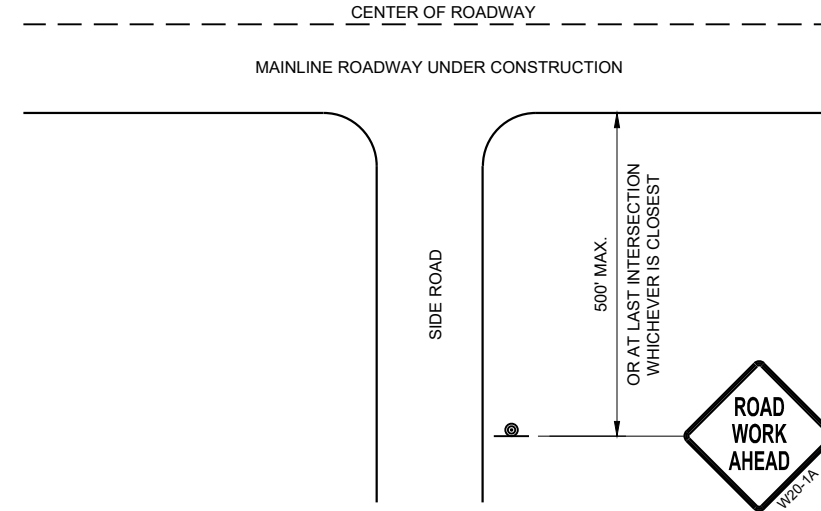
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

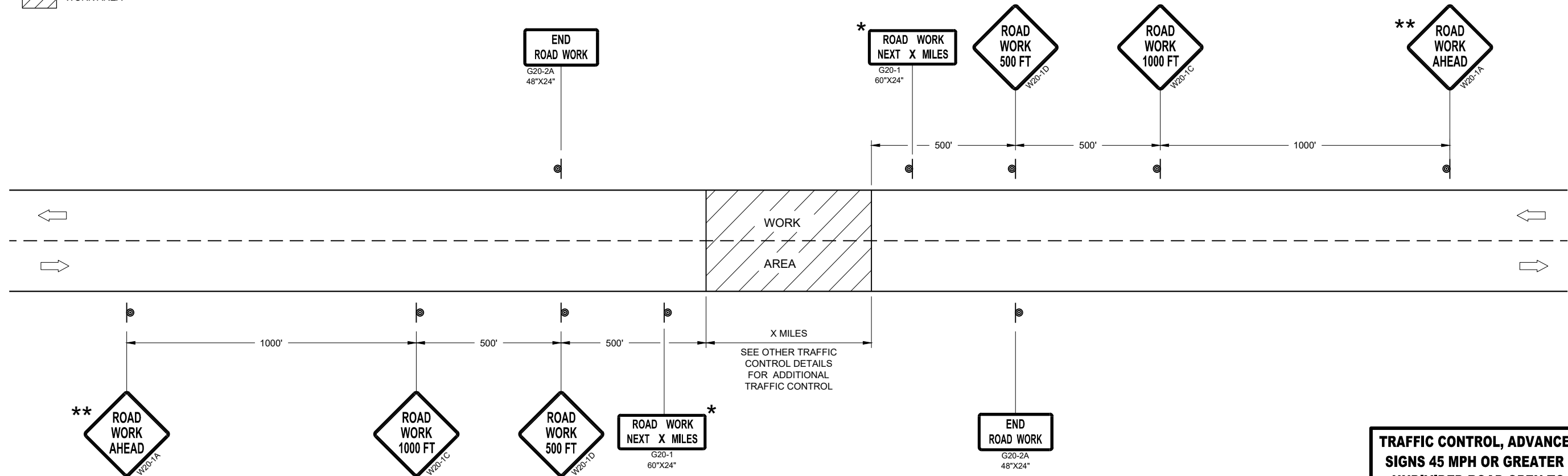
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



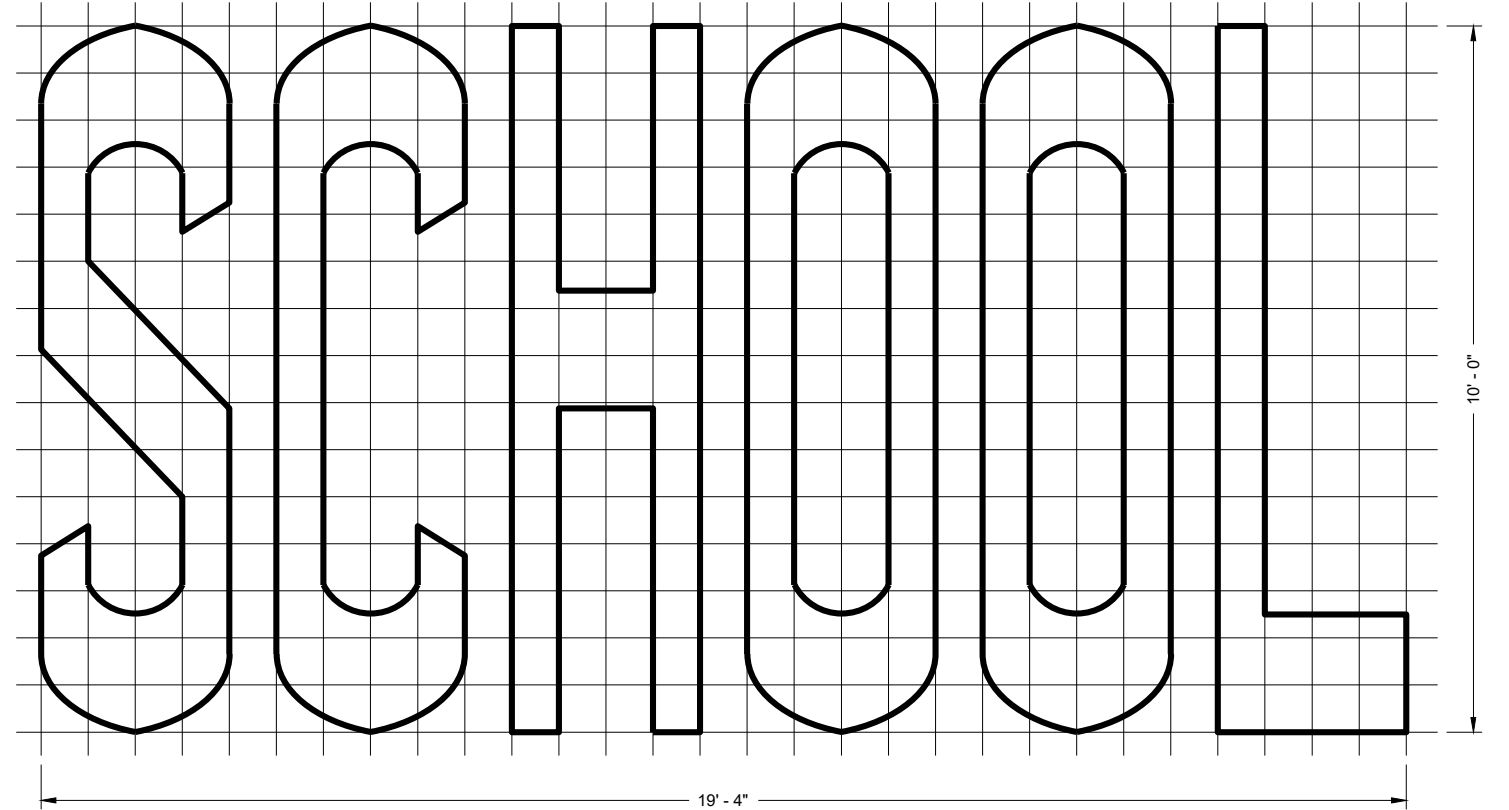
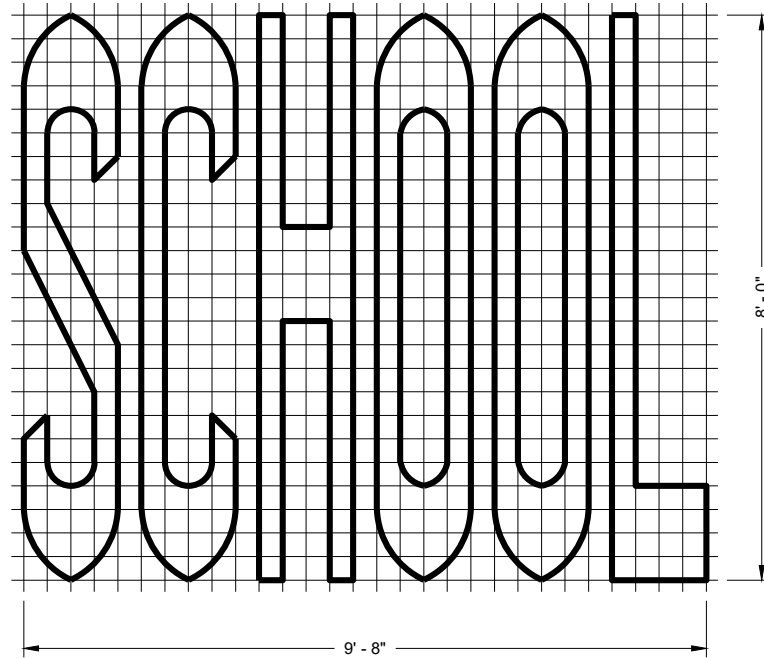
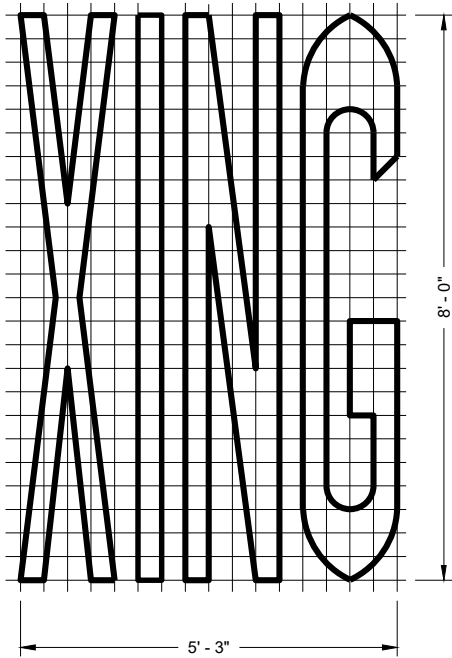
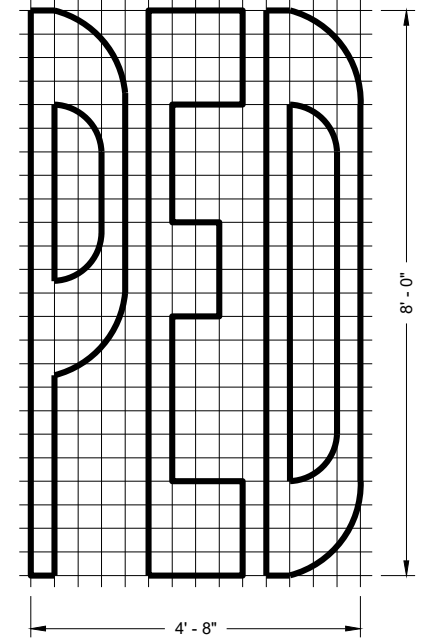
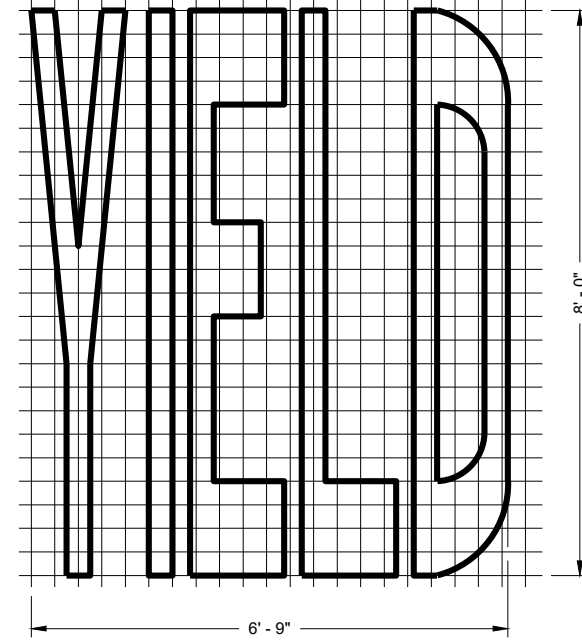
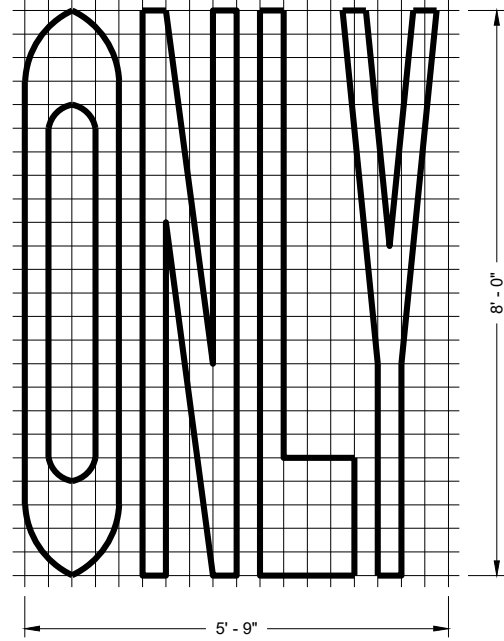
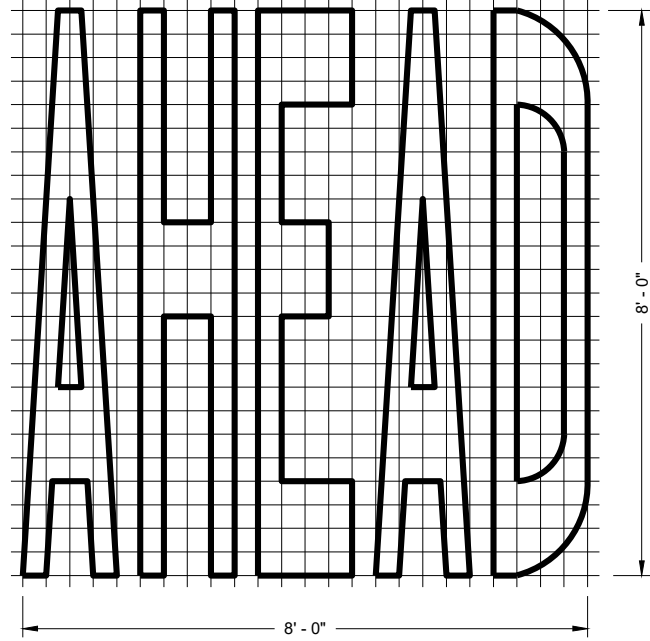
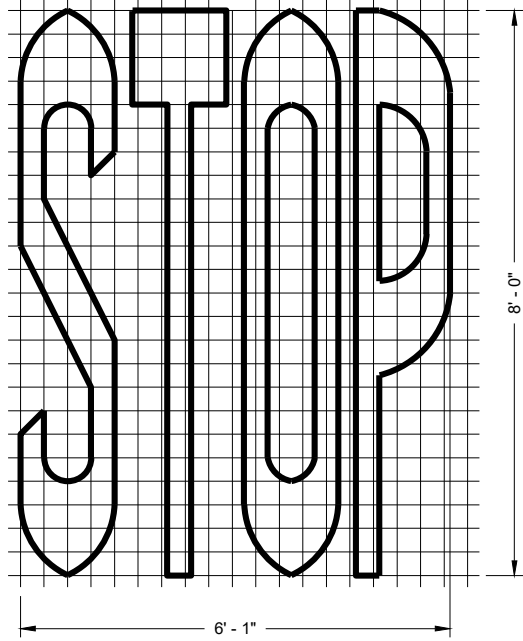
**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

**TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 45 MPH OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE July 2018 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA



SINGLE LANE

TWO - LANE

**GENERAL NOTES**

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

**PAVEMENT MARKING WORDS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

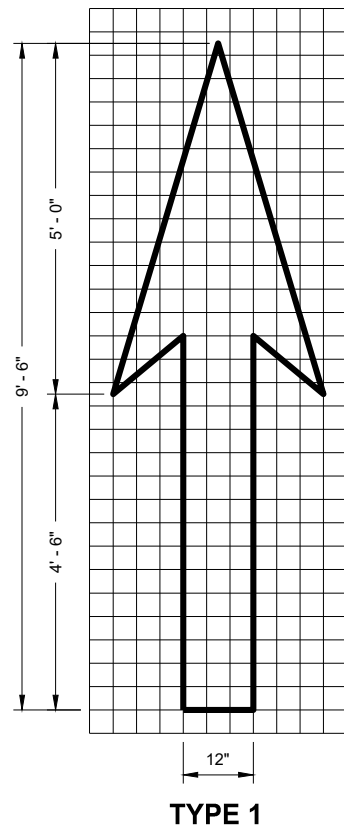
APPROVED

November 2019

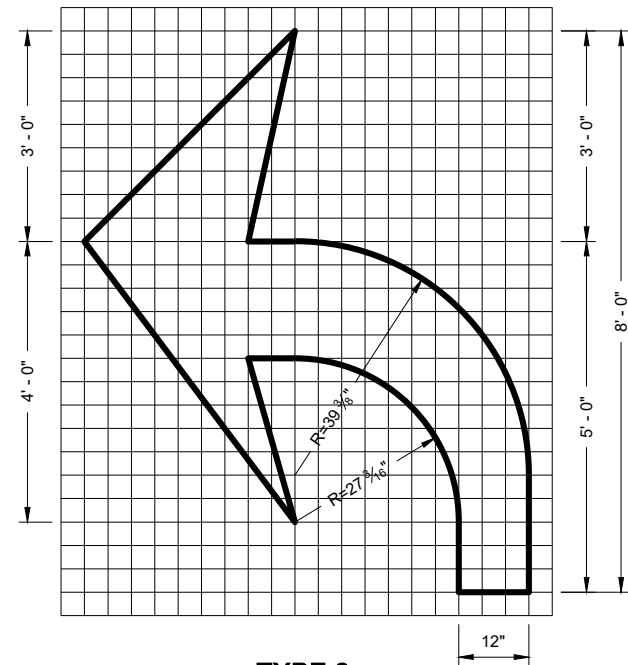
DATE

FHWA

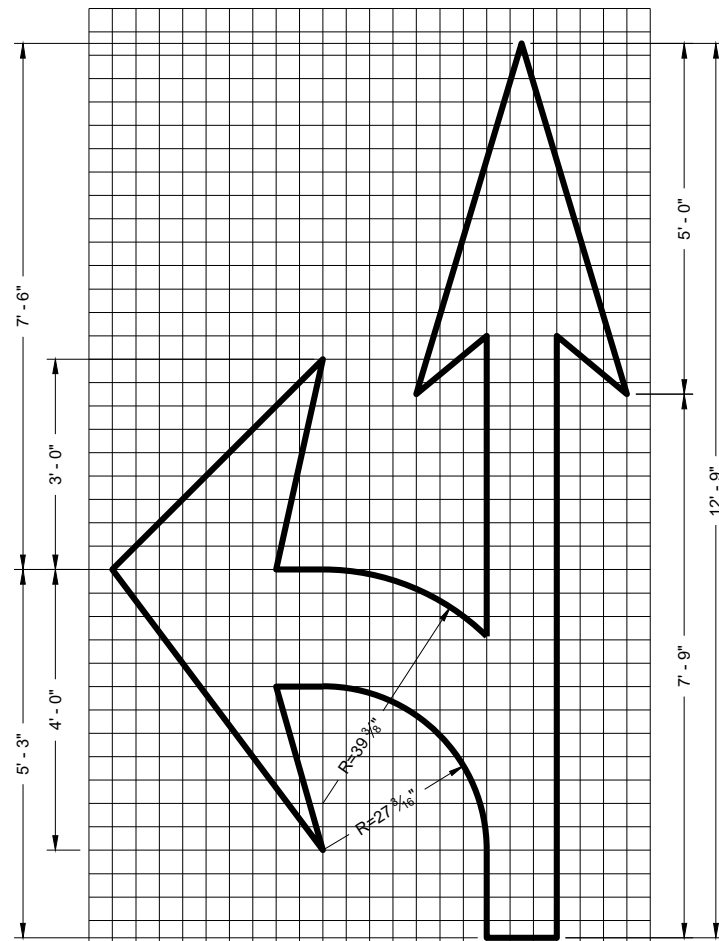
/S/ Matthew Rauch  
STATE SIGNING AND MARKING  
ENGINEER



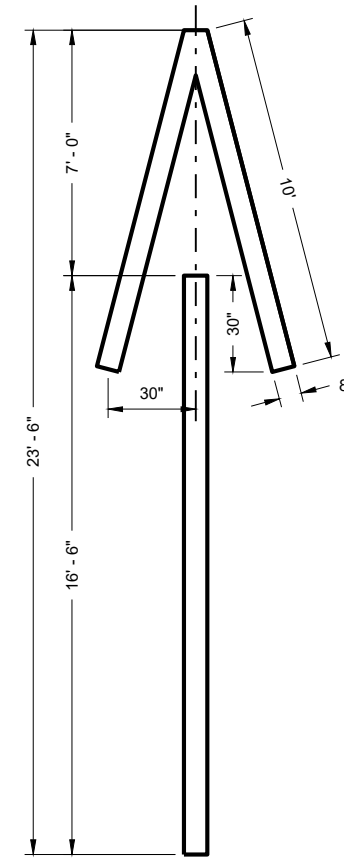
TYPE 1



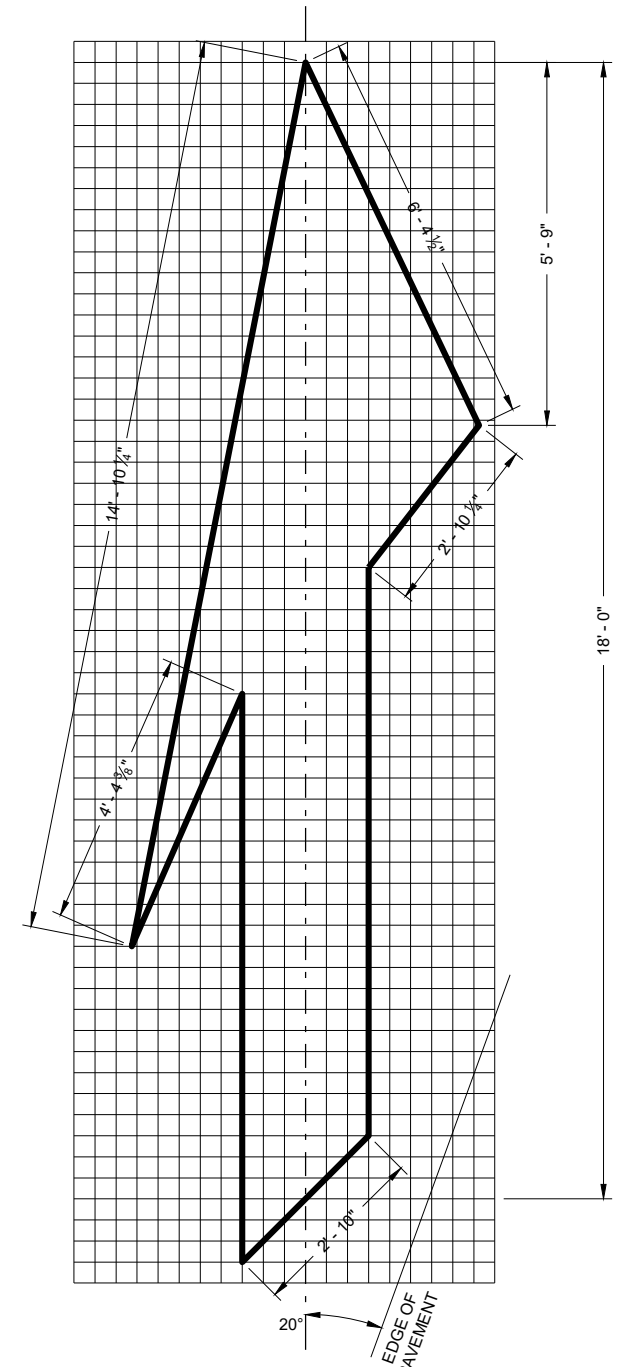
TYPE 2



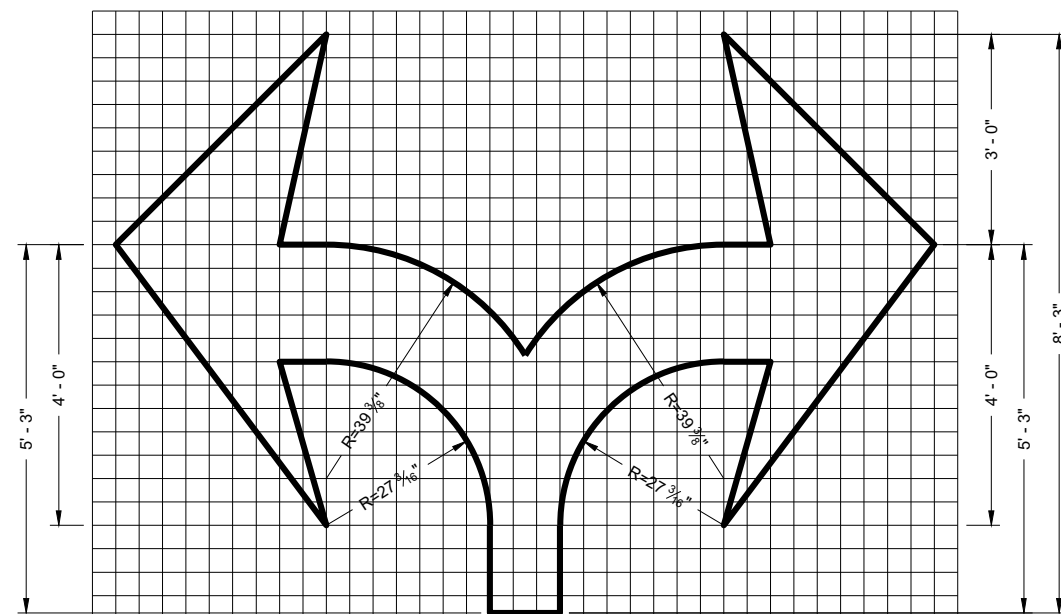
TYPE 3



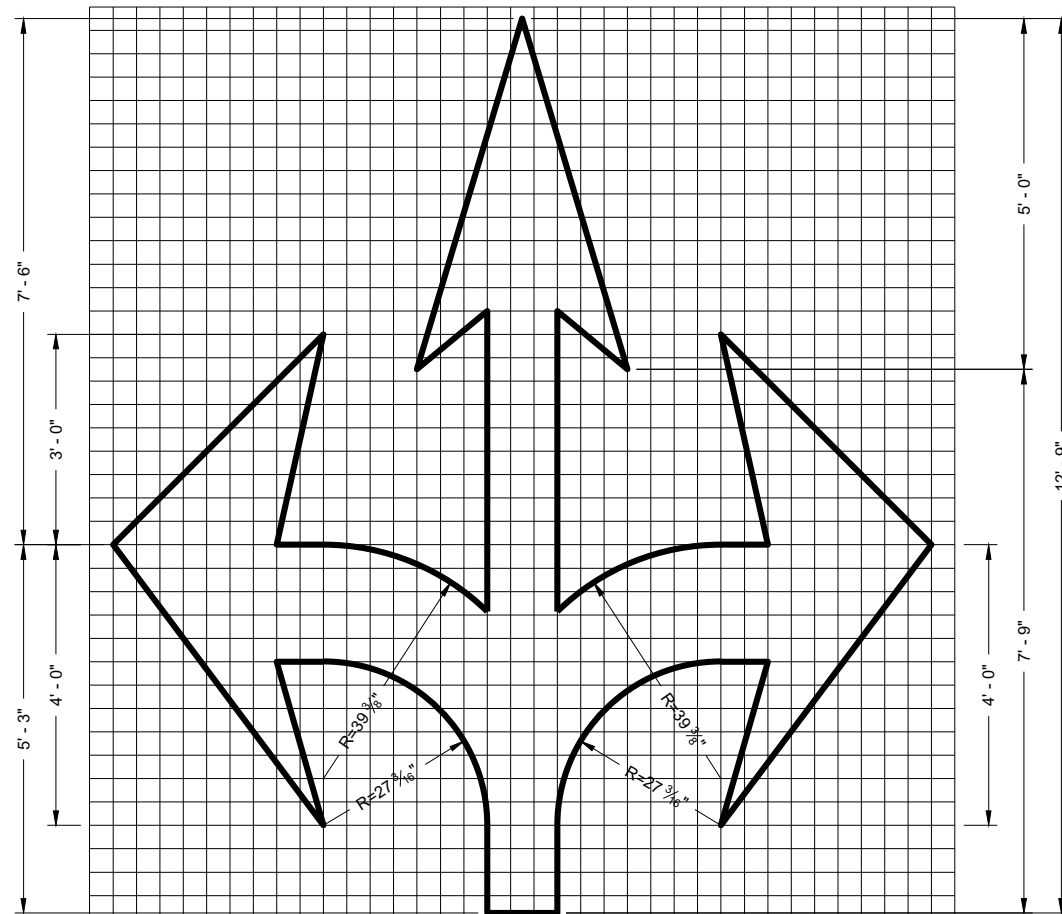
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 7



TYPE 6

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019  
DATE

/S/ Matthew Rauch  
STATE SIGNING AND MARKING  
ENGINEER




FHWA

**GENERAL NOTES**

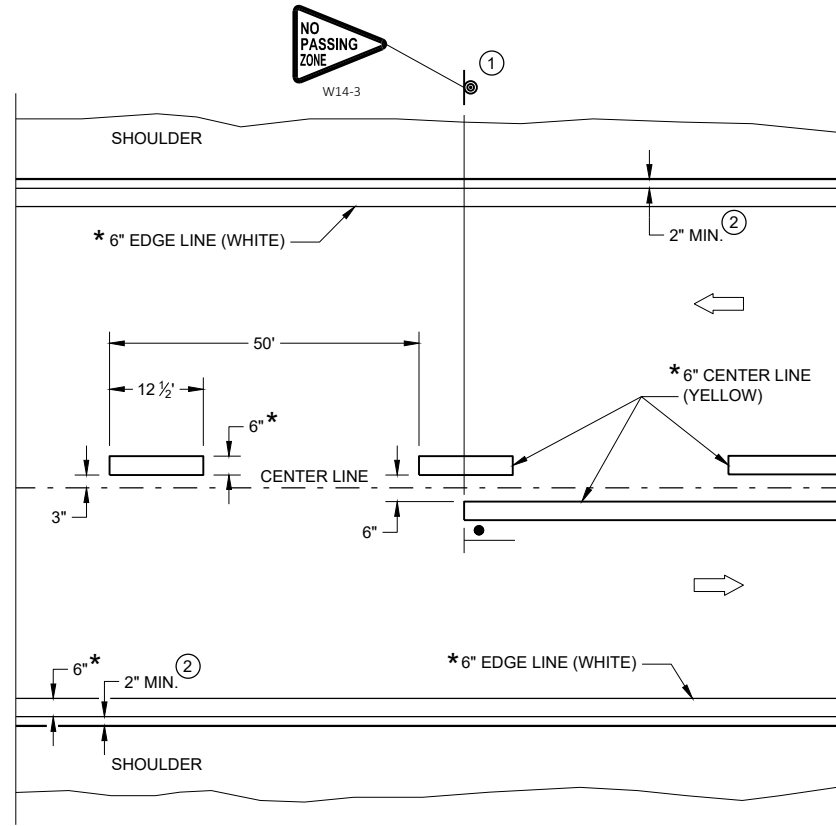
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

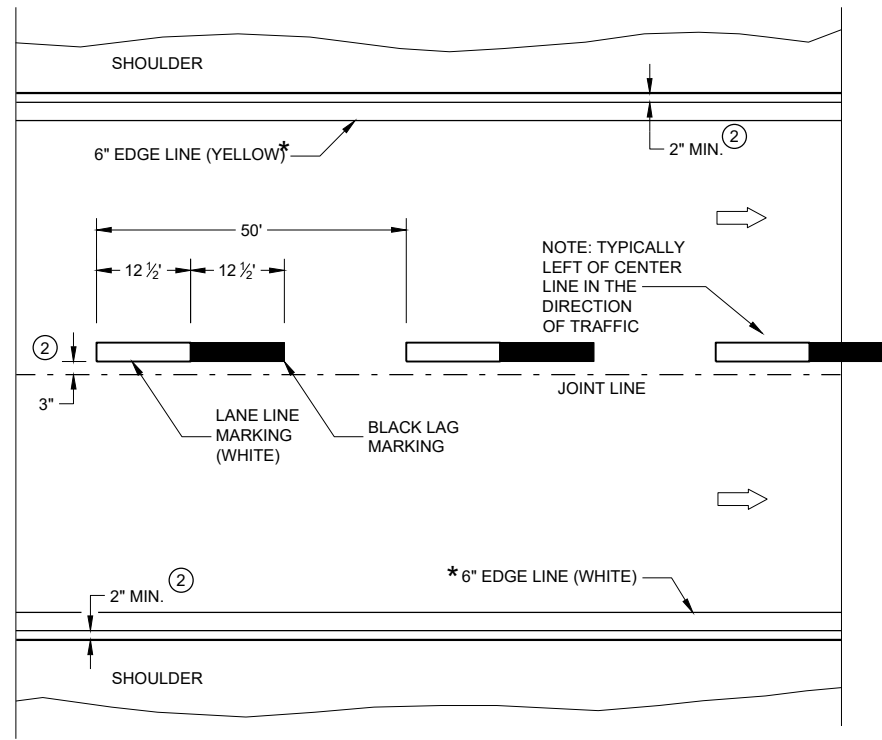
**LEGEND**

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

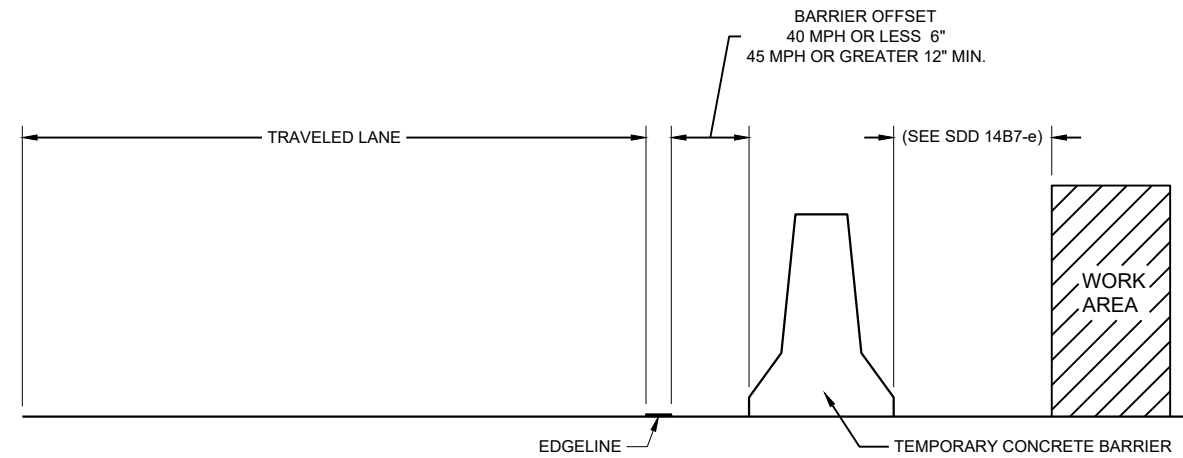
**PERMANENT PAVEMENT MARKING**

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Jeannie Silver  
DATE STATEWIDE SIGNING AND MARKING ENGINEER





**TEMPORARY BARRIER OFFSET FROM EDGELINE**

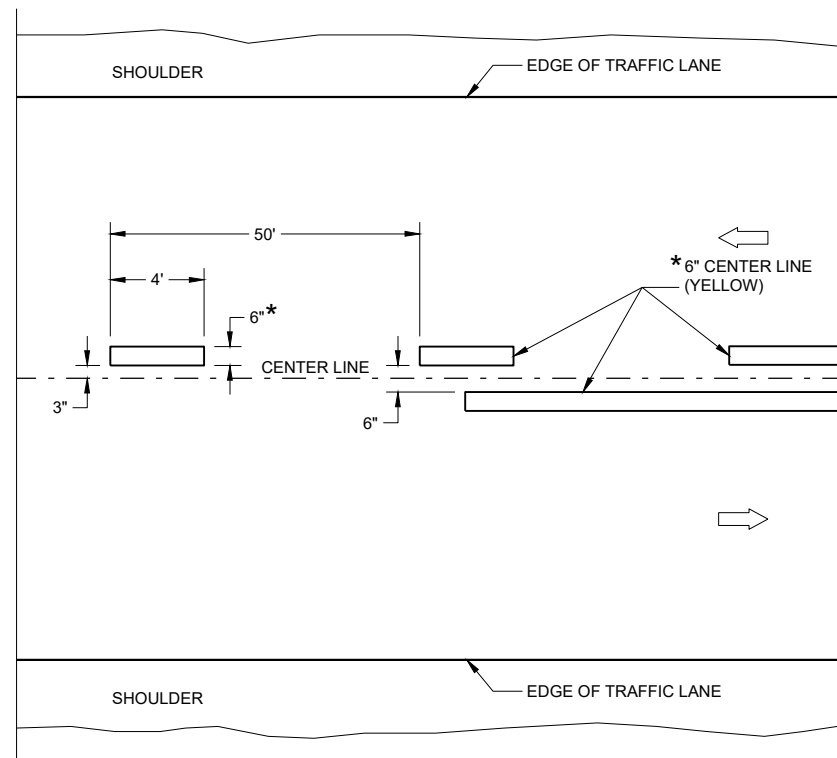
**GENERAL NOTES**

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

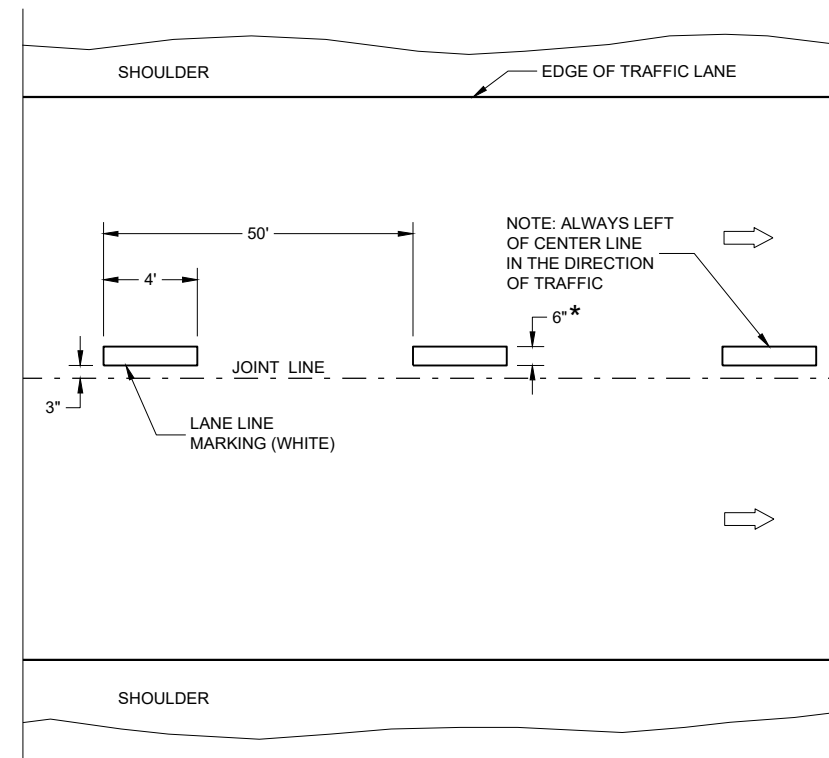
**LEGEND**

➡ DIRECTION OF TRAFFIC

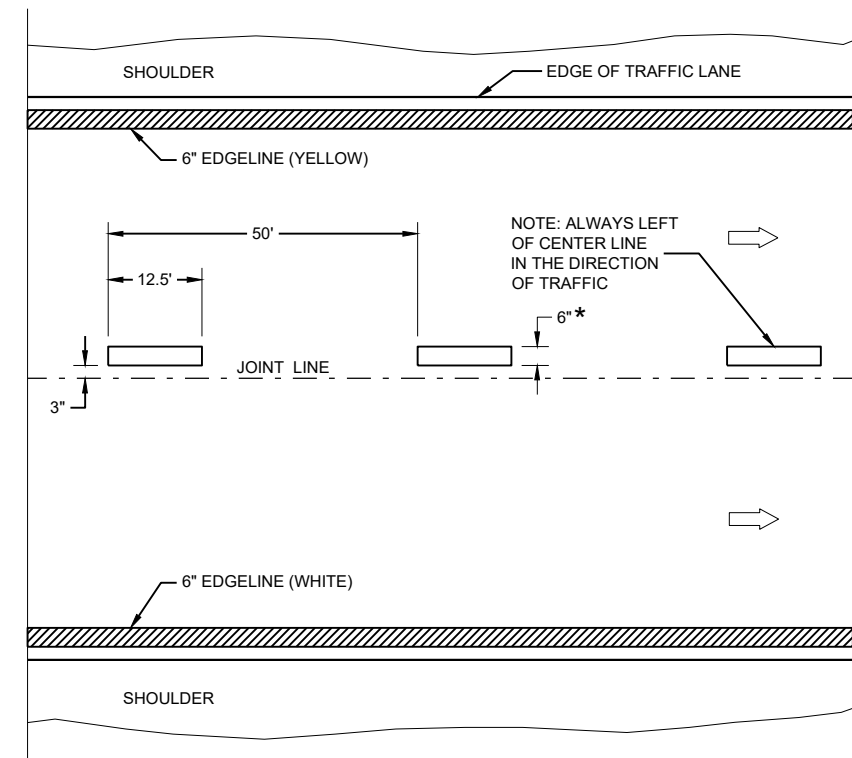
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**



**FREEWAYS AND EXPRESSWAYS**

**TEMPORARY PAVEMENT MARKING**






**TEMPORARY LONGITUDINAL PAVEMENT MARKING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2023 /S/ Jeannie Silver  
STATEWIDE SIGNING AND MARKING ENGINEER



**LEGEND**

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

**GENERAL NOTES**

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

**FLAGGING**

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

**TEMPORARY PORTABLE RUMBLE STRIPS**

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

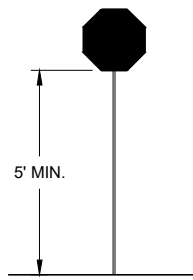
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



**STOP/SLOW PADDLE ON SUPPORT STAFF**

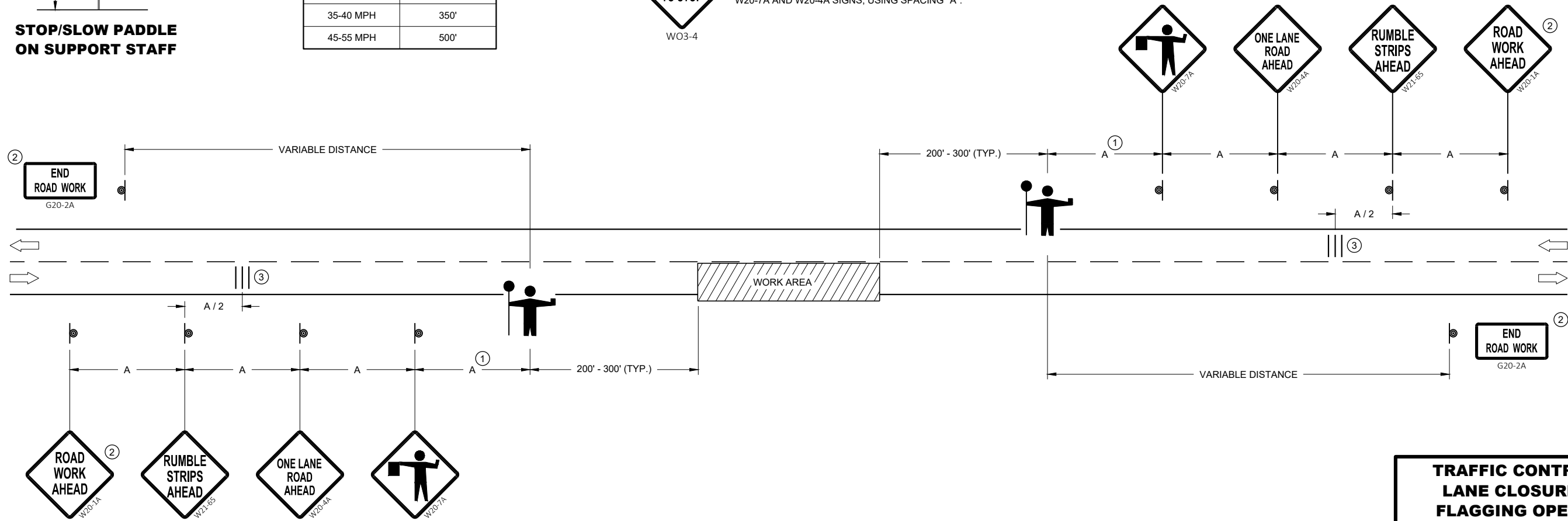
**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W03-4

USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



6

6

SDD 15C12 - 09a

SDD 15C12 - 09a





**TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

**LEGEND**

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

**GENERAL NOTES**

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

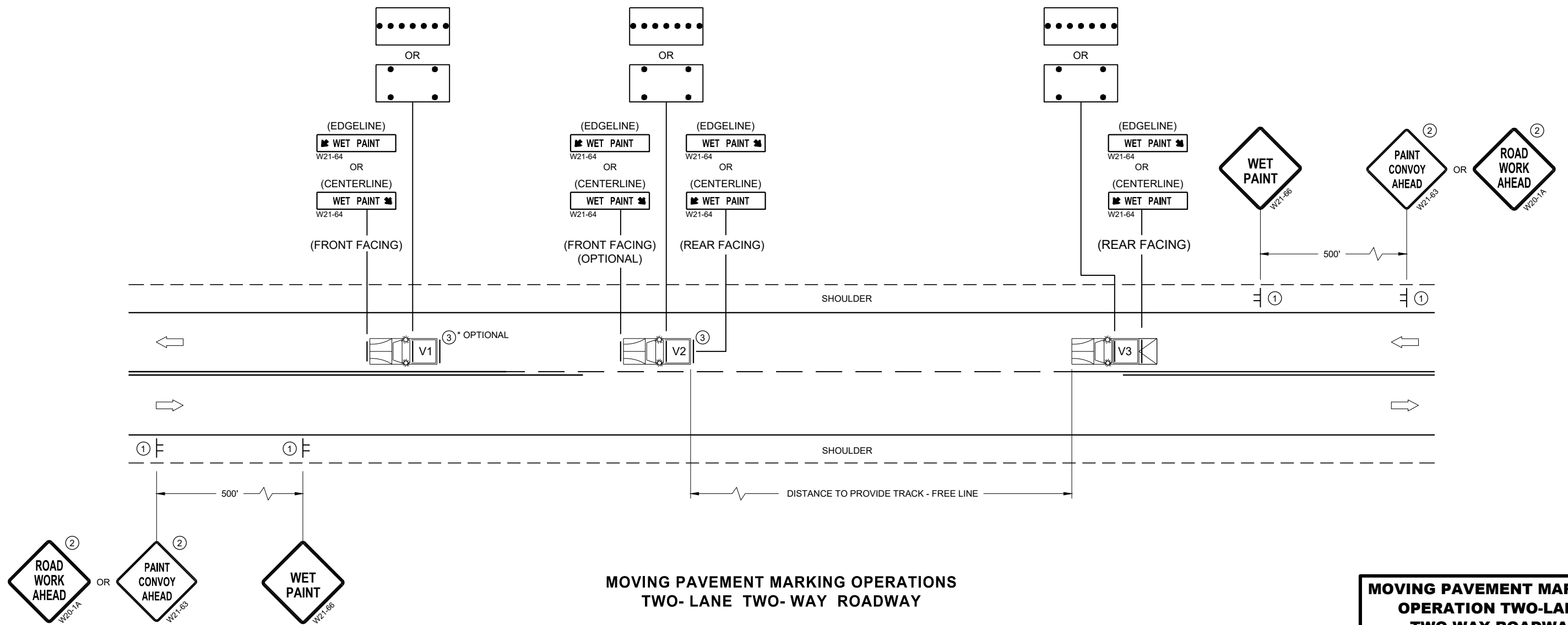
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

6

6








**MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19-08a

SDD 15C19-08a

<b>MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (MERGE)
-  FLASHING ARROW PANEL (CAUTION)

**GENERAL NOTES**

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

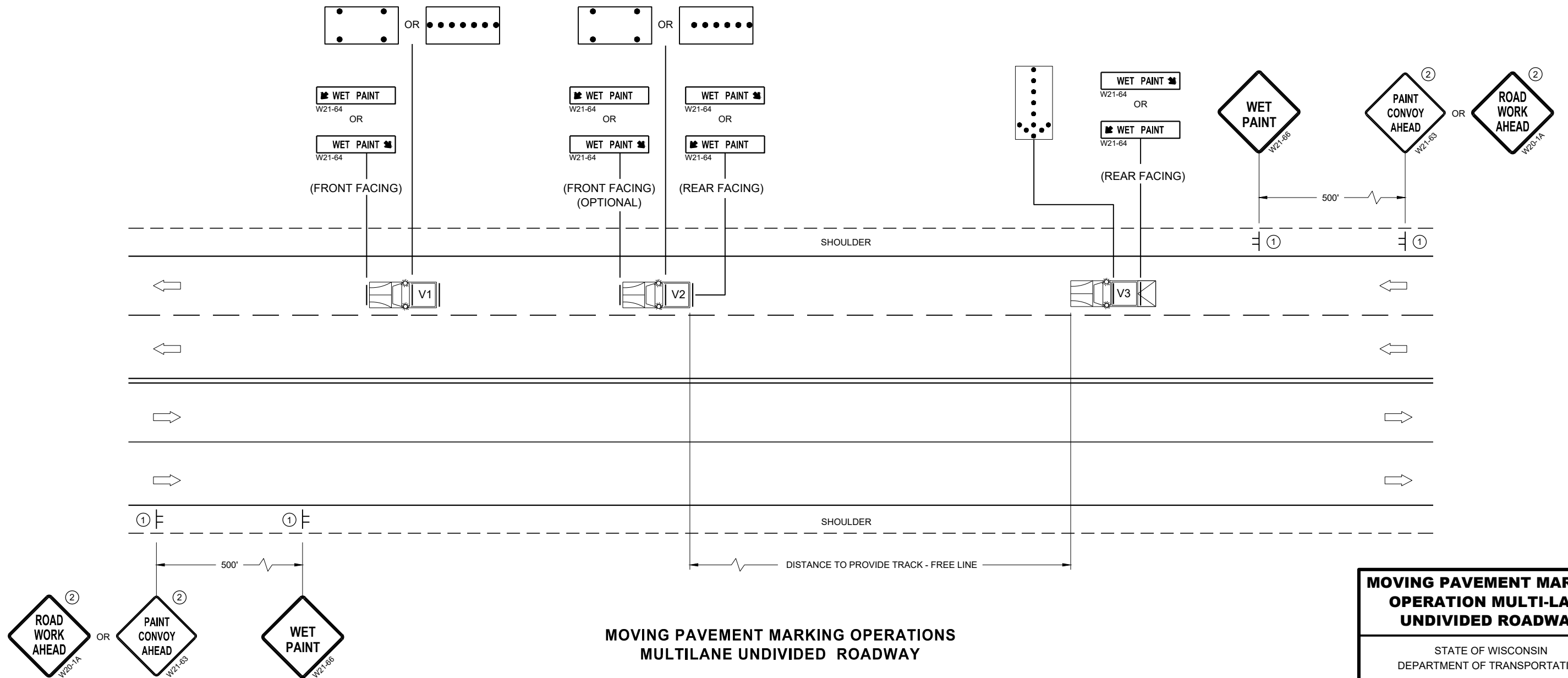
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

6

6



SDD 15C19-08b

SDD 15C19-08b

**MOVING PAVEMENT MARKING OPERATIONS  
MULTILANE UNDIVIDED ROADWAY**

<b>MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**GENERAL NOTES**

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.



THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

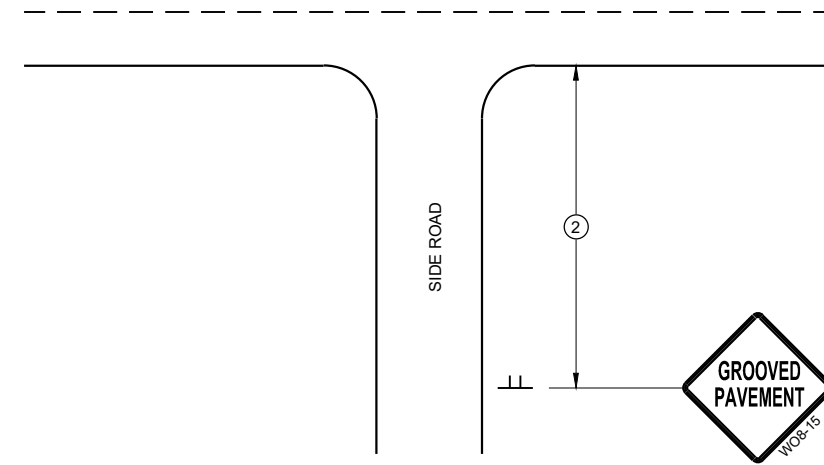
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

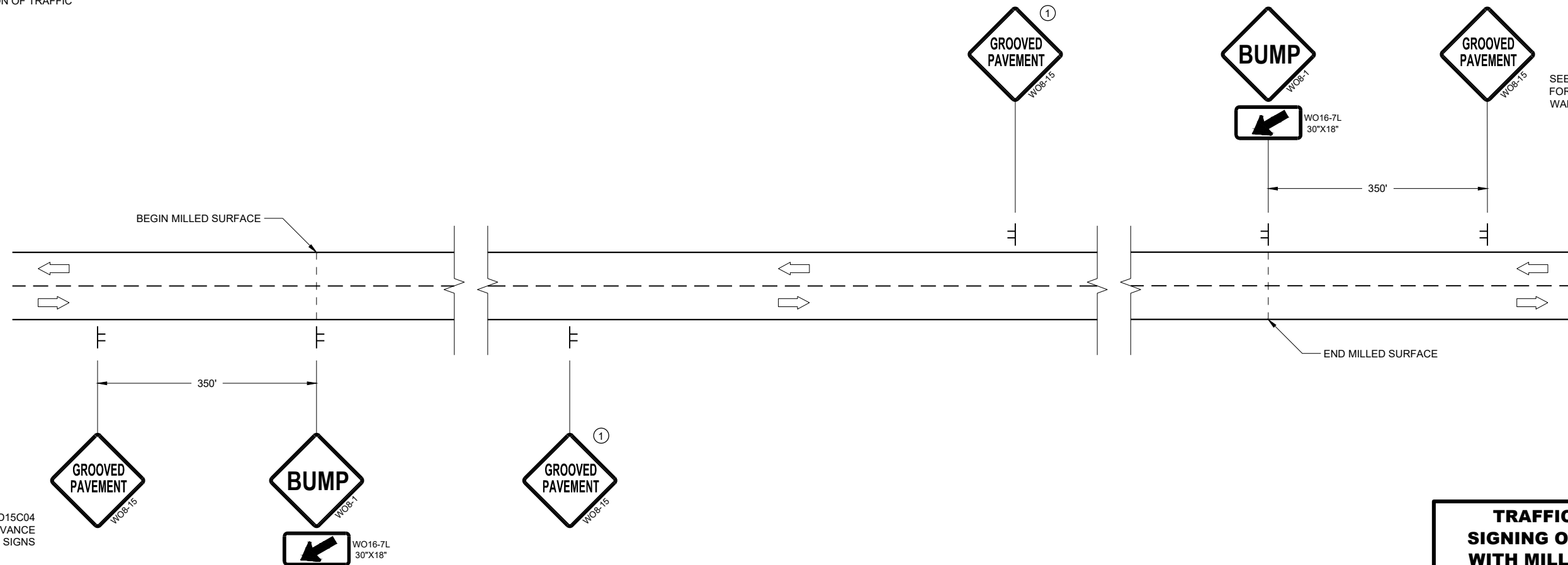
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

**LEGEND**

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



**TYPICAL SIDE ROAD APPROACH SIGN DETAIL**



**DETAIL FOR SIGNING ON MILLED SURFACES**

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

**TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

Notes



## ***Wisconsin Department of Transportation***

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>