



DNR LIAISON

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COUNTIES: Shawano

Runoff Coefficient Table

	Hydrologic Soil Group											
	A			B			C			D		
	Slope Range (Percent)											
Land Use	0 - 2	2 - 6	6 & Over	0 - 2	2 - 6	6 & Over	0 - 2	2 - 6	6 & Over	0 - 2	2 - 6	6 & Over
Row Crops	0.08	0.16	0.22	0.12	0.20	0.27	0.15	0.24	0.33	0.19	0.28	0.38
	0.22	0.30	0.38	0.26	0.34	0.44	0.30	0.37	0.50	0.34	0.41	0.56
Median Strip-Turf	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25	0.30
	0.24	0.26	0.30	0.25	0.28	0.33	0.26	0.30	0.37	0.27	0.32	0.40
Side Slope Turf			0.25			0.27			0.28			0.30
			0.32			0.34			0.36			0.38
Pavement												
Asphalt	0.70 - 0.95											
Concrete	0.80 - 0.95											
Brick	0.70 - 0.80											
Drives, Sidewalks	0.75 - 0.85											
Roofs	0.75 - 0.95											
Gravel Roads, Shoulders	0.40 - 0.60											

Total Project Area = 279 Acres  
Total Area Expected To Be Disturbed By Construction Activities = 0 Acres

GENERAL NOTES

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS.

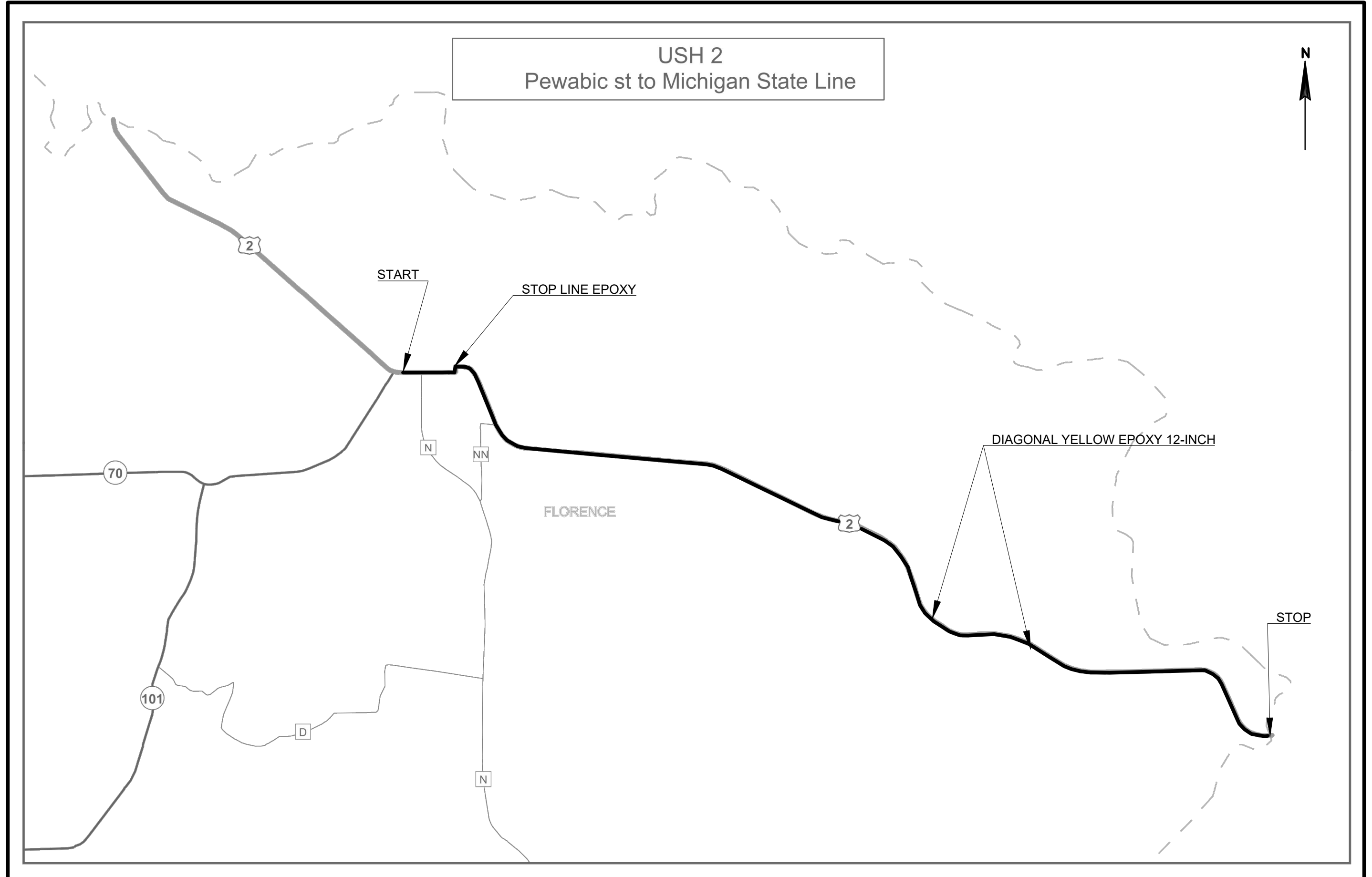
DIGGERS



HOTLINE

Dial  or (800)242-8511

[www.DiggersHotline.com](http://www.DiggersHotline.com)



PROJECT NO: 1009-42-49

HWY: USH 2

COUNTY: FLORENCE

USH 2 OVERVIEW

SHEET

E

FILE NAME : N:\PDS\C3D\10094248\SHEETPLAN\PLAN SHEETS WITH 2 AND 45\020202OLD\_PO.DWG  
LAYOUT NAME - USH 2 EAST

PLOT DATE : 11/21/2018 11:44 AM

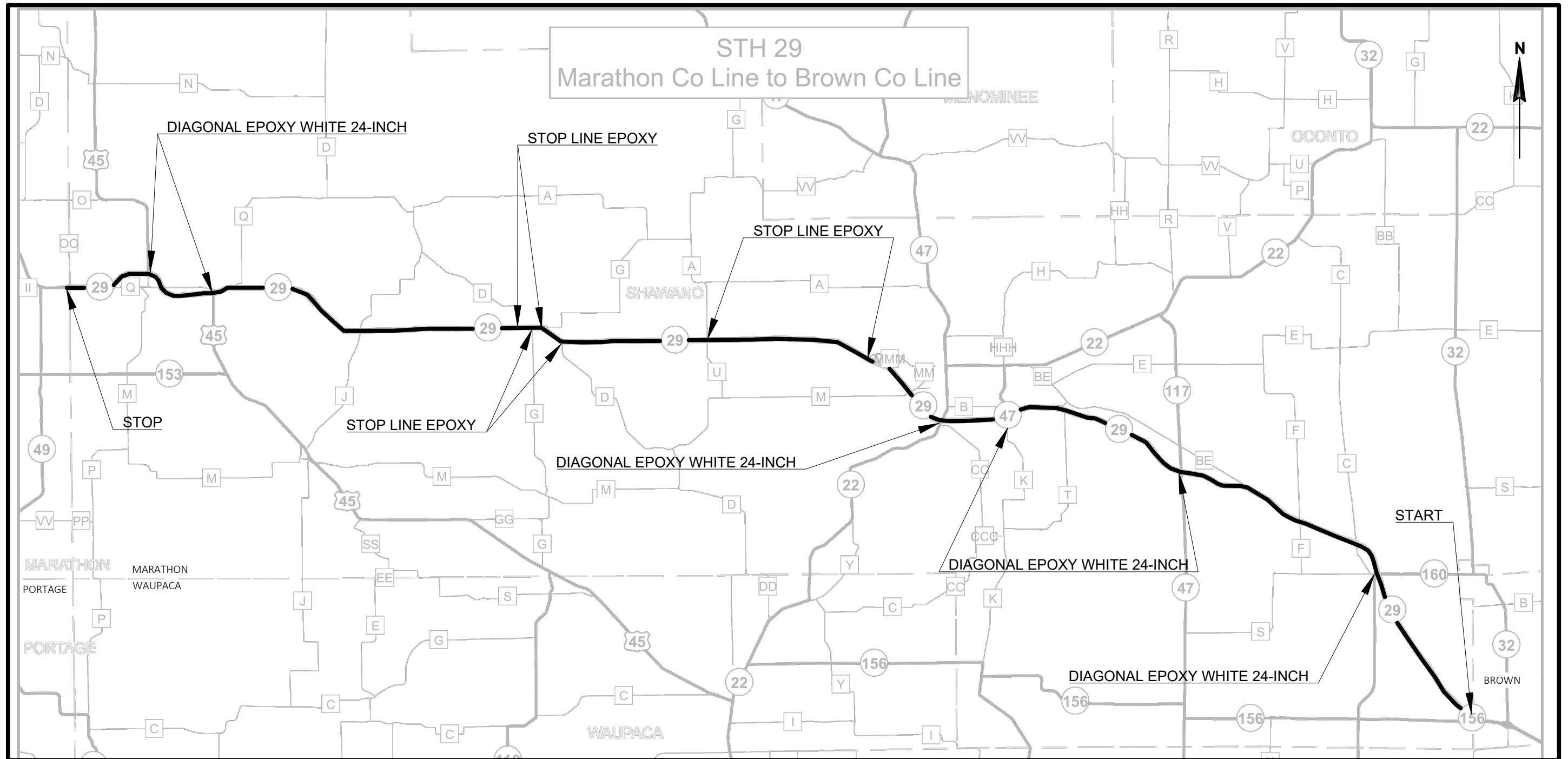
PLOT BY : SMITH, LYLE A

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42



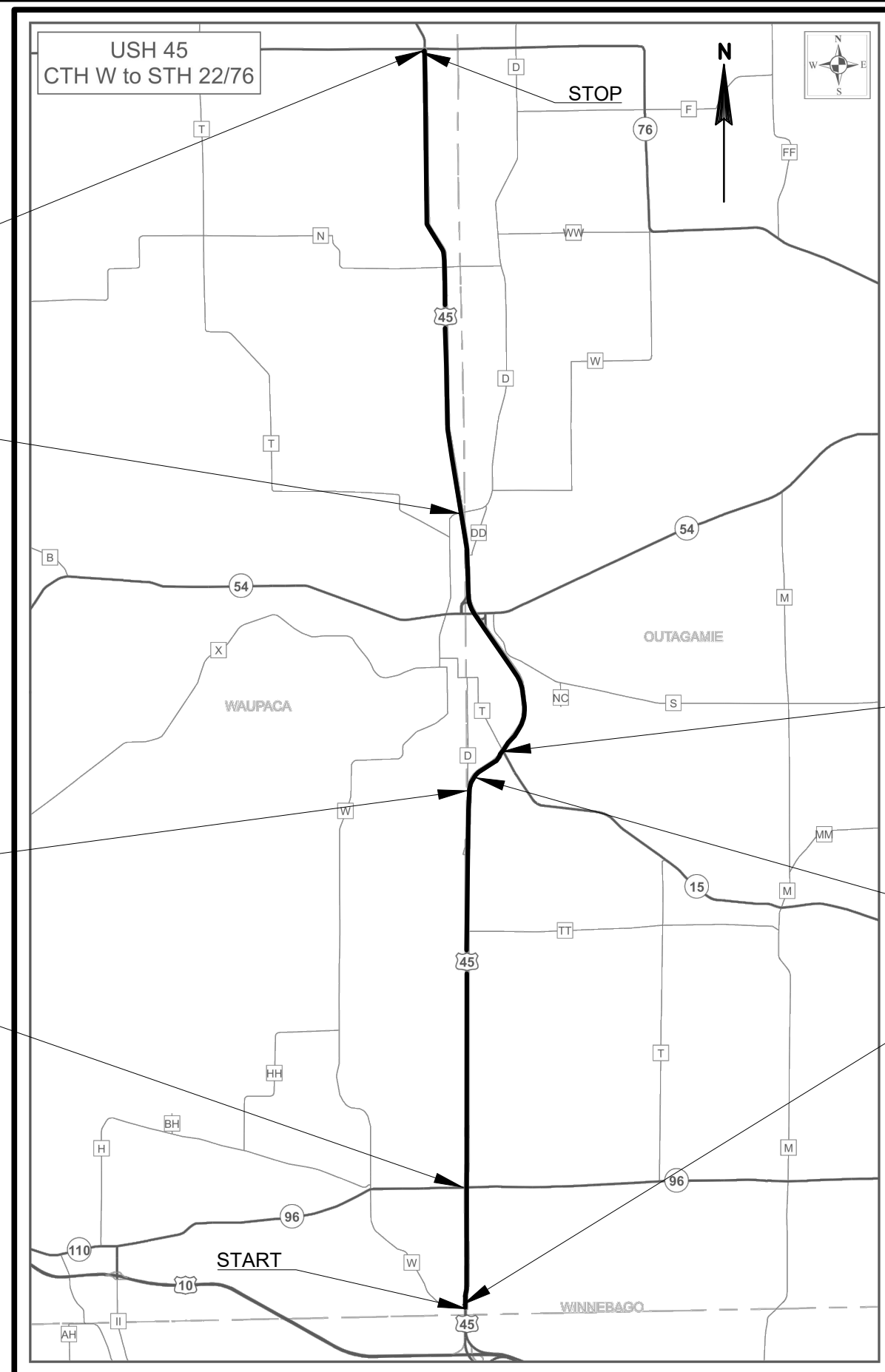


ARROWS EPOXY  
WORDS EPOXY  
ISLAND NOSE  
DIAGONAL YELLOW EPOXY 12-INCH

DIAGONAL YELLOW EPOXY 12-INCH

ARROW EPOXY  
WORD EPOXY  
ISLAND NOSE  
CORRUGATED MEDIAN EPOXY

STOP LINE EPOXY  
ISLAND NOSE  
CORRUGATED MEDIAN EPOXY



ARROWS EPOXY  
WORDS EPOXY  
RAILROAD CROSSING  
STOP LINE EPOXY  
DIAGONAL YELLOW EPOXY 12-INCH  
MARKING REMOVAL SPECIAL MARKING WATER BLASTING

ARROW EPOXY  
WORD EPOXY

DIAGONAL YELLOW EPOXY 12-INCH

Estimate Of Quantities

1009-42-49

Line	Item	Item Description	Unit	Total	Qty
0002	619.1000	Mobilization	EACH	1.000	1.000
0004	646.1020	Marking Line Epoxy 4-Inch	LF	2,725,559.000	2,725,559.000
0006	646.3020	Marking Line Epoxy 8-Inch	LF	59,822.000	59,822.000
0008	646.5020	Marking Arrow Epoxy	EACH	55.000	55.000
0010	646.5120	Marking Word Epoxy	EACH	19.000	19.000
0012	646.5320	Marking Railroad Crossings Epoxy	EACH	4.000	4.000
0014	646.6120	Marking Stop Line Epoxy 18-Inch	LF	723.000	723.000
0016	646.7120	Marking Diagonal Epoxy 12-Inch	LF	7,303.000	7,303.000
0018	646.7220	Marking Chevron Epoxy 24-Inch	LF	1,937.000	1,937.000
0020	646.8020	Marking Corrugated Median Epoxy	SF	725.000	725.000
0022	646.8220	Marking Island Nose Epoxy	EACH	8.000	8.000
0024	646.9310	Marking Removal Special Marking Water Blasting	EACH	6.000	6.000
0026	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0028	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

MARKING								
LOCATION		646.1020 LINE EPOXY 4-INCH		646.3020 LINE EPOXY 8-INCH WHITE LF	646.502 EPOXY ARROWS EPOXY TYPE 2 EACH	646.6120 STOP LINE EPOXY 18-INCH LF	647.7120. DIAGONAL EPOXY 12-INCH WHITE LF	REMARKS
		YELLOW LF	WHITE LF					
FLORENCE COUNTY	USH 2 (PEWABIC ST WEST TO MICHIGAN STATE LINE)	65,287	---	400	---	---	---	MAINLINE
FLORENCE COUNTY	USH 2 - FLORENCE AVE	---	---	---	---	33	---	INTERSECTION
FLORENCE COUNTY	USH 2 @ EAST TWIN FALLS RD - WASHINGTON LANE	---	---	---	10	---	342	MEDIAN
FLORENCE COUNTY	USH 2 @ EAST TALL PINE RD - LAKE ELLWOOD RD	---	---	---	24		339	MEDIAN
		---	---	---	---	---	---	---
	SUBTOTALS:	65287	0					
	FLORENCETOTALS:	65,287		400	34	33	681	



MARKING							
LOCATION		646.1020 LINE EPOXY 4-INCH		646.3020 LINE EPOXY 8-INCH	646.7120 DIAGONAL EPOXY 12-INCH		REMARKS
		YELLOW LF	WHITE LF	WHITE LF	WHITE LF	YELLOW LF	
ONEIDA, VILAS & IRON COUNTES	ROCKY RUN ROAD - USH 2	420,599	733,757	6,522	---	---	SKIP WEBER RD - CTH C INTERSECTION MEDIAN MEDIAN
ONEIDA COUNTY	USH 51 @ CTH D				460		
ONEIDA COUNTY	US 51 & CTH D TO MINOCQUA BRIDGE	---	---	---	---	3388	
ONEIDA COUNTY	US 51 & MINOCQUA LOOP	---	---	---	---	114	
ONEIDA COUNTY	US 51 NB & MINOCQUA LOOP - 3RD AVE	---	---	---	---	672	MEDIAN / MAINLINE
ONEIDA COUNTY	US 51 NB & ON STH 70 SOUTH JCT	---	---	---	928	---	INTERSECTION
		---	---	---	---	---	
	SUBTOTALS:	420,599	733,757		1,388	4,174	
	TOTALS:	1,154,356		6,522	5,562		

MARKING							
LOCATION		646.1020 LINE EPOXY 4-INCH		646.3020 LINE EPOXY 8-INCH WHITE LF	646.6120 STOP LINE EPOXY 18-INCH LF	646.7220 DIAGONAL EPOXY 24-INCH WHITE LF	REMARKS
		YELLOW LF	WHITE LF				
SHAWANO COUNTY	MARATHON CO LINE TO BROWN CO LINE	563,894	673,504	42,149	---	---	MAINLINE
SHAWANO COUNTY	STH 29 EB & 45 NORTH	---	---	---	52	---	INTERSECTION
SHAWANO COUNTY	STH 29 EB & CTH D	---	---	---	21	---	INTERSECTION
SHAWANO COUNTY	STH 29 EB & STH 22	---	---	---	30	390	INTERSECTION
SHAWANO COUNTY	STH 29 EB & STH 55N / 47S	---	---	---	30	132	INTERSECTION
SHAWANO COUNTY	STH 29 EB & STH 47 / 117	---	---	---	30	178	INTERSECTION
SHAWANO COUNTY	STH 29 EB & STH 55 / 160	---	---	---	30	186	INTERSECTION
SHAWANO COUNTY	STH 29 WB & STH 55 / 160	---	---	---	28	146	INTERSECTION
SHAWANO COUNTY	STH 29 WB & STH 47 / 117	---	---	---	30	155	INTERSECTION / MAINLINE
SHAWANO COUNTY	STH 29 WB & STH 47	---	---	---	28	182	INTERSECTION / MAINLINE
SHAWANO COUNTY	STH 29 WB & STH 22	---	---	---	30	168	INTERSECTION
SHAWANO COUNTY	STH 29 WB & STH 45 SOUTH	---	---	---	60	133	INTERSECTION
SHAWANO COUNTY	STH 29 WB & CTH Q	---	---	---	40	134	INTERSECTION
SHAWANO COUNTY	STH 29 WB & STH 45 NORTH	---	---	---	60	133	INTERSECTION
		---	---	---	---	---	
	SUBTOTALS:	563,894	673,504	42,149			
	TOTALS:	1,237,398		42,149	469	1,937	

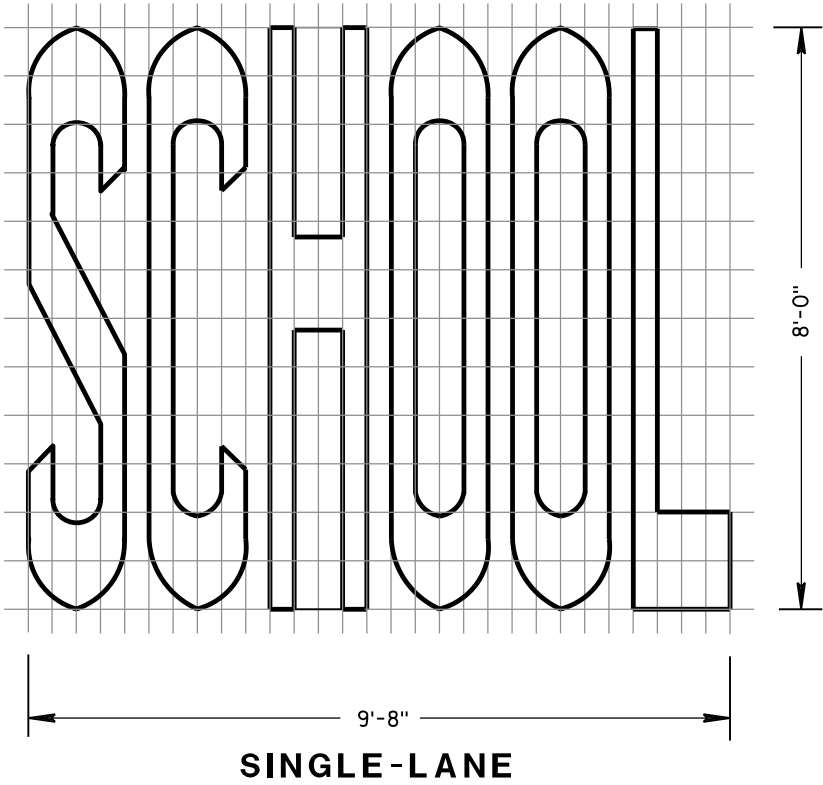
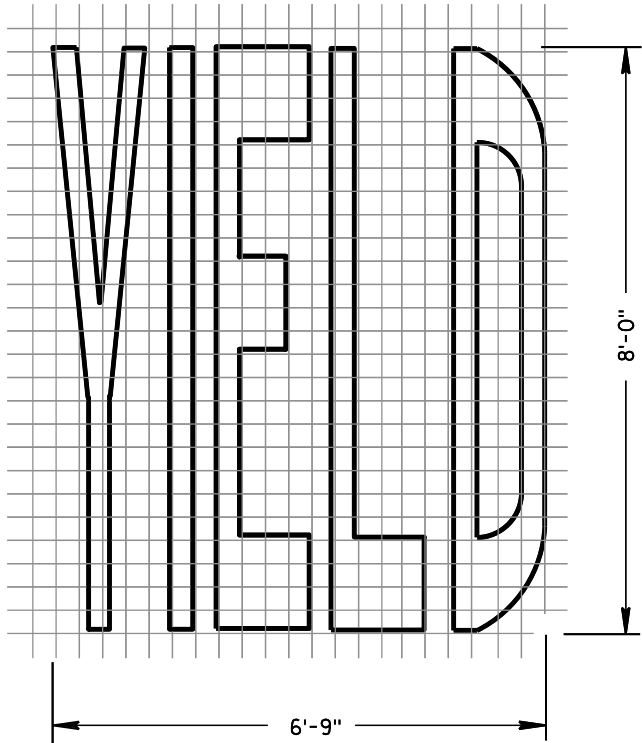
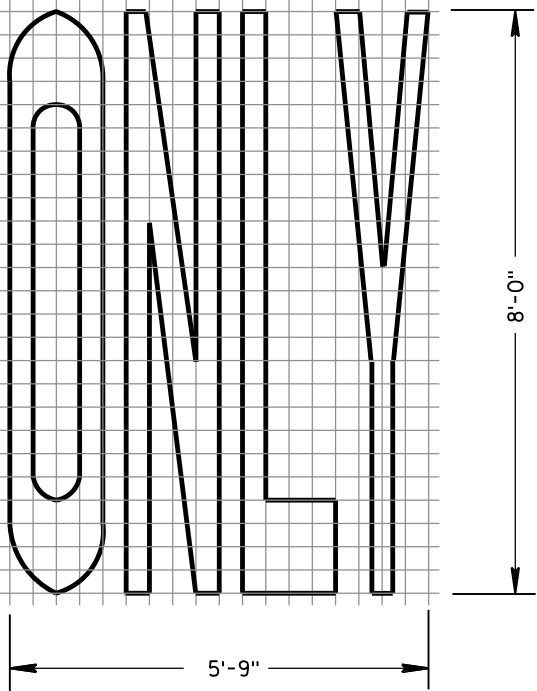
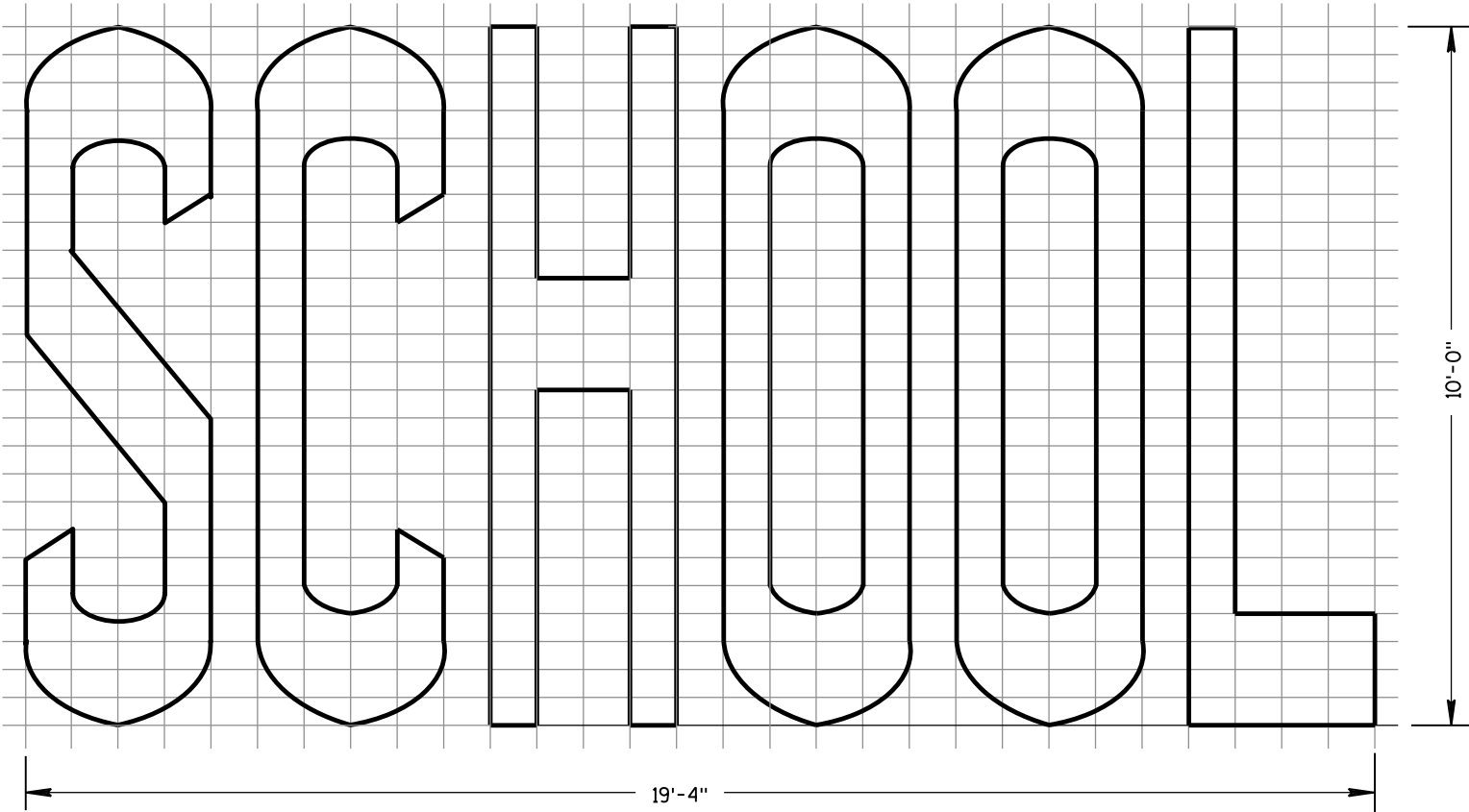
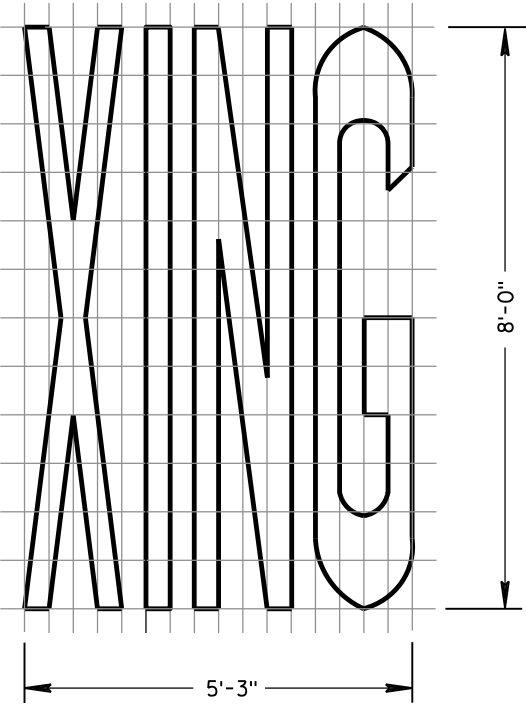
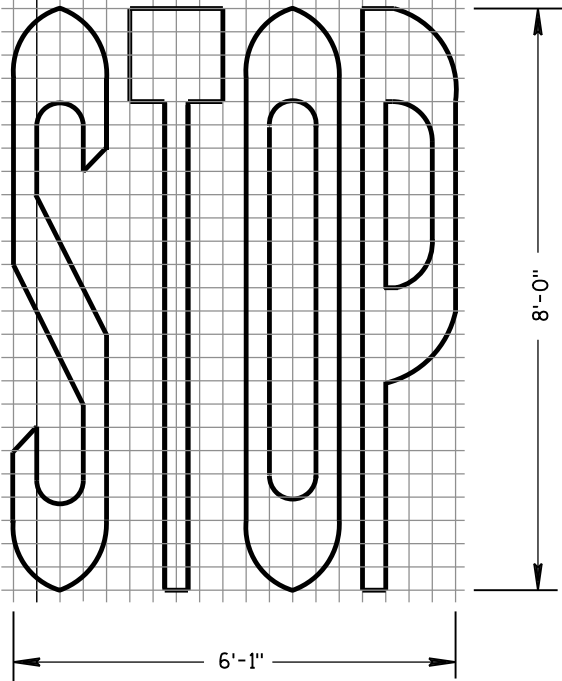
MARKING														
LOCATION		646.1020 EPOXY 4-INCH		646.3020 EPOXY 8-INCH	646.5020 ARROWS EPOXY TYPE 4 EACH	646.5020 ARROWS EPOXY TYPE 2 EACH	646.5120 WORDS EPOXY EACH	646.5320 RAILROAD CROSSING EPOXY EACH	646.6120 STOP LINE EPOXY 18-INCH LF	646.7120 DIAGONAL EPOXY 12-INCH YELLOW LF	646.8020 CONCRETE CORRUGATED MEDIAN EPOXY SF	646.8220 ISLAND NOSE EPOXY YELLOW EACH	646.9310 MARKING REMOVAL SPECIAL MARKING WATER BLASTING EACH	REMARKS
		YELLOW LF	WHITE LF	WHITE LF										
WAUPACA, COUNTY	CTH W - 450 SOUTH OF MANSKE / GIVENS OVERPASS	31,799	---	10,751	---	---	---	---	---	---	---	---	---	GAP STH 96 INTERSECTION
WAUPACA COUNTY	450' SOUTH MANSKE / GIVENS OVERPASS TO STH 22/76	74587	162132	---	---	---	---	---	---	---	---	---	---	MAINLINE
WAUPACA COUNTY	USH 45 & CTH W	---	---	---	---	---	---	---	---	125	---	---	---	INTERSECTION
WAUPACA COUNTY	USH 45 & CTH D SOUTH JCT.	---	---	---	---	4	4	---	---	---	725	4	---	INTERSECTION
WAUPACA COUNTY	USH 45 & CONCRETE PLANT	---	---	---	---	3	3	---	---	---	---	---	---	INTERSECTION
WAUPACA COUNTY	USH 45 & STH 15 / T	---	---	---	---	4	4	4	145	240	---	---	6	REMOVE OLD RR MARKING
WAUPACA COUNTY	USH 45 & CTH D	---	---	---	---	---	---	---	---	578	---	---	---	START OF ONE WAY
WAUPACA COUNTY	USH 45 & STH 76	---	---	---	---	8	8	---	---	117	---	4	---	INTERSECTION
WAUPACA COUNTY	USH 45 & STH 54	---	---	---	2	---	---	---	76	---	---	---	---	
	SUBTOTALS:	106,386	162,132											
	TOTALS:	268,518		10,751	2	19	19	4	221	1,060	725	8	6	

Standard Detail Drawing List

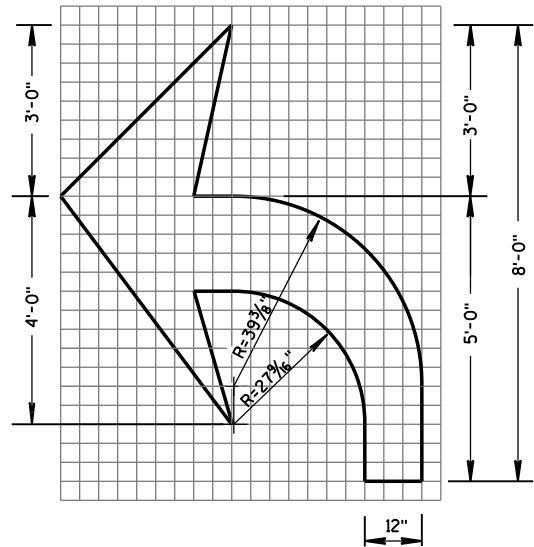
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C09-11A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-05B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-05C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-03A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-03B	PAVEMENT MARKING MAJOR SPLIT FREEWAY TO FREEWAY
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15C35-03B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-03C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)

GENERAL NOTES

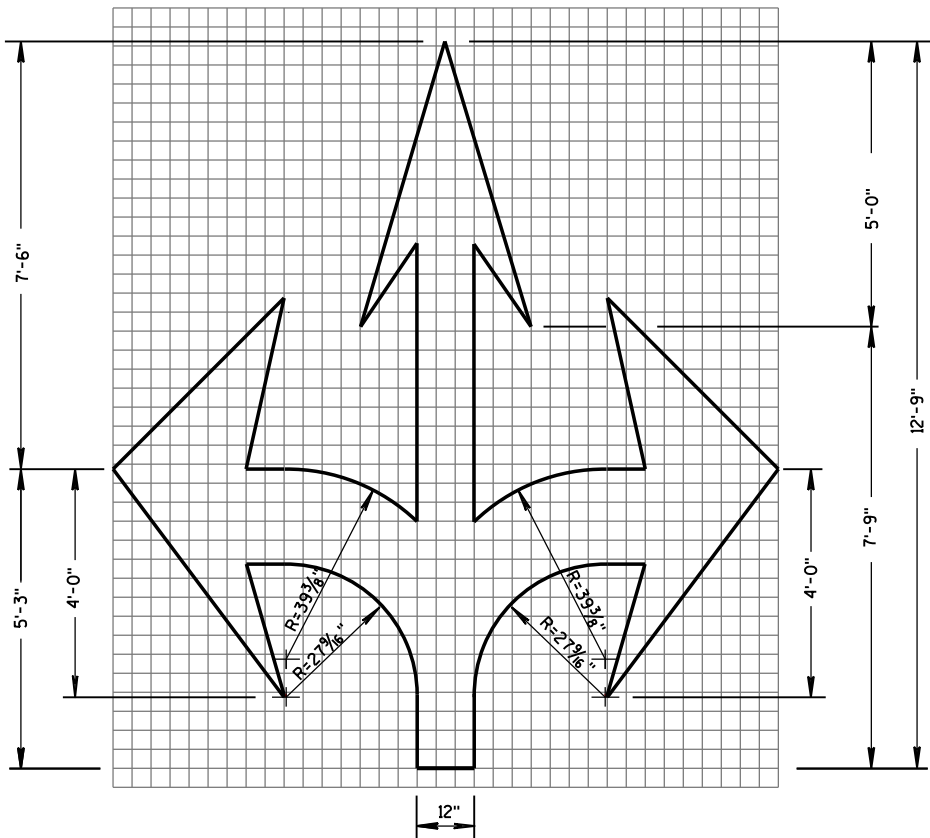
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



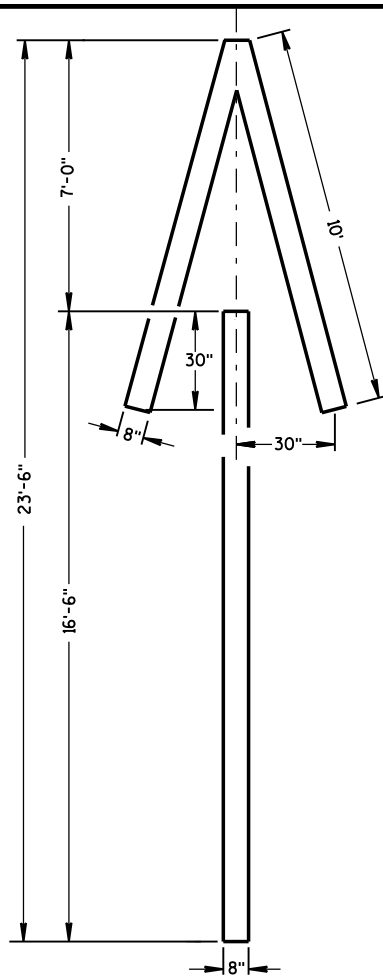
PAVEMENT MARKING WORDS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	



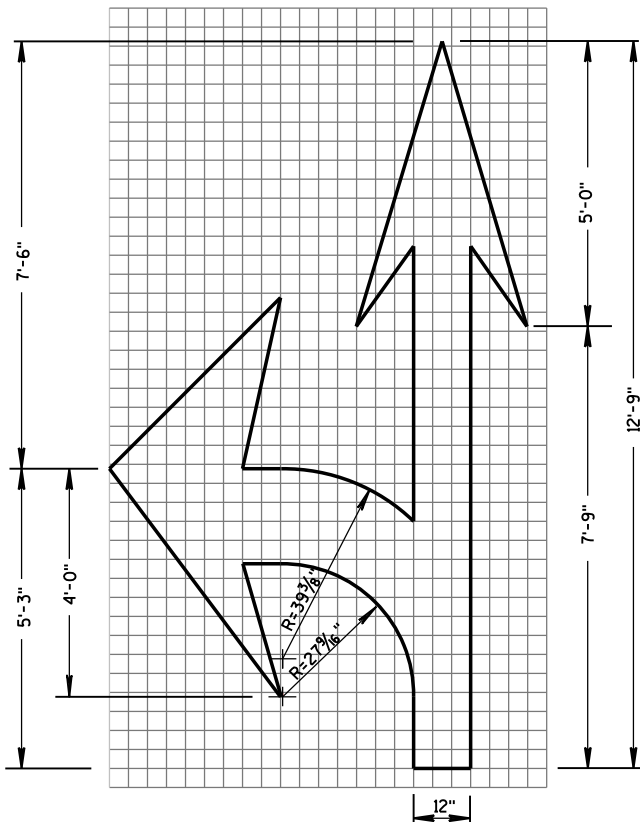
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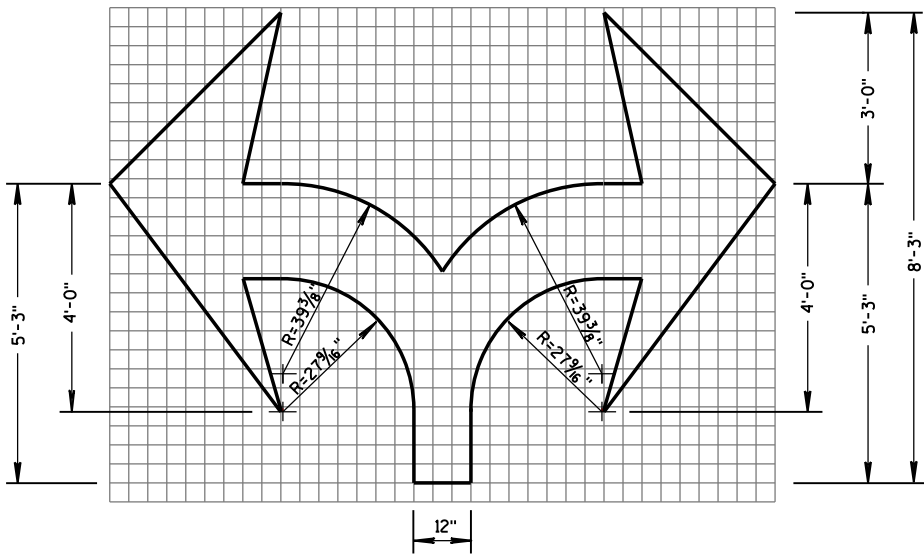
TYPE 6



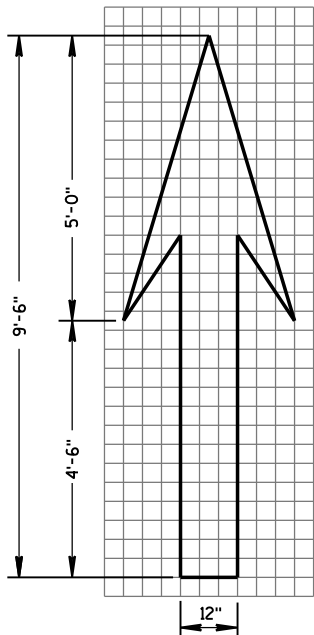
TYPE 4



TYPE 3



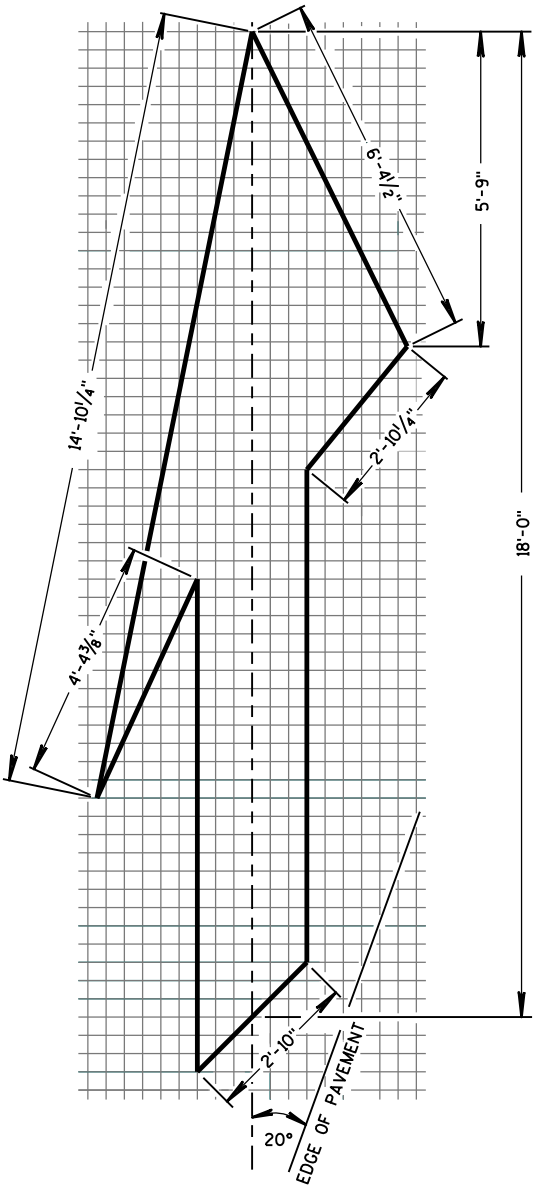
TYPE 7



TYPE 1

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.

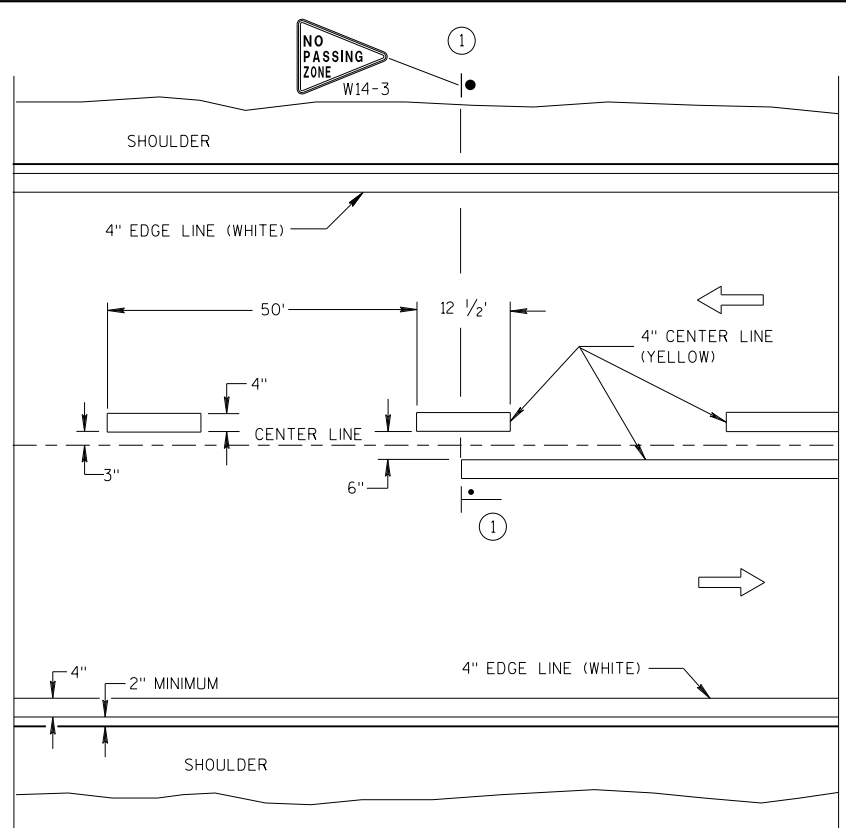


TYPE 5 LANE DROP ARROW

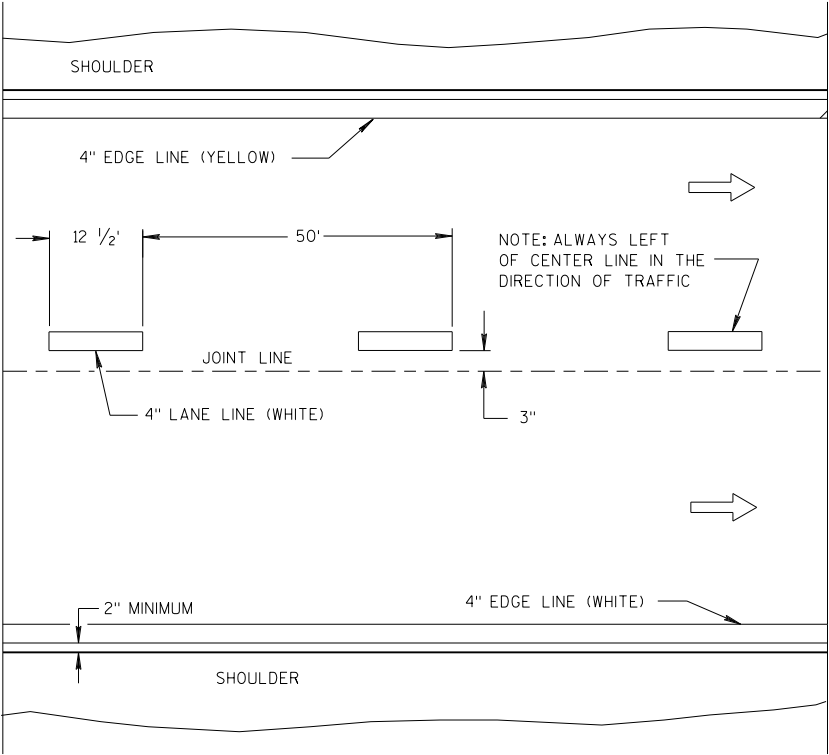
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2017 /S/ Matthew R. Rauch  
DATE STATE SIGNING AND MARKING ENGINEER  
FHWA

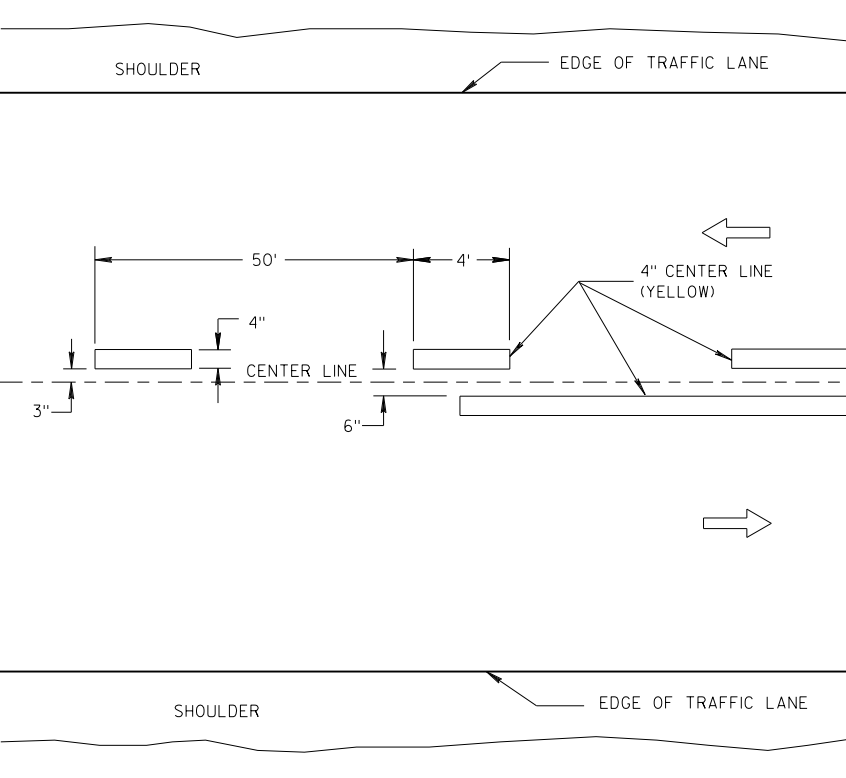


TWO WAY TRAFFIC

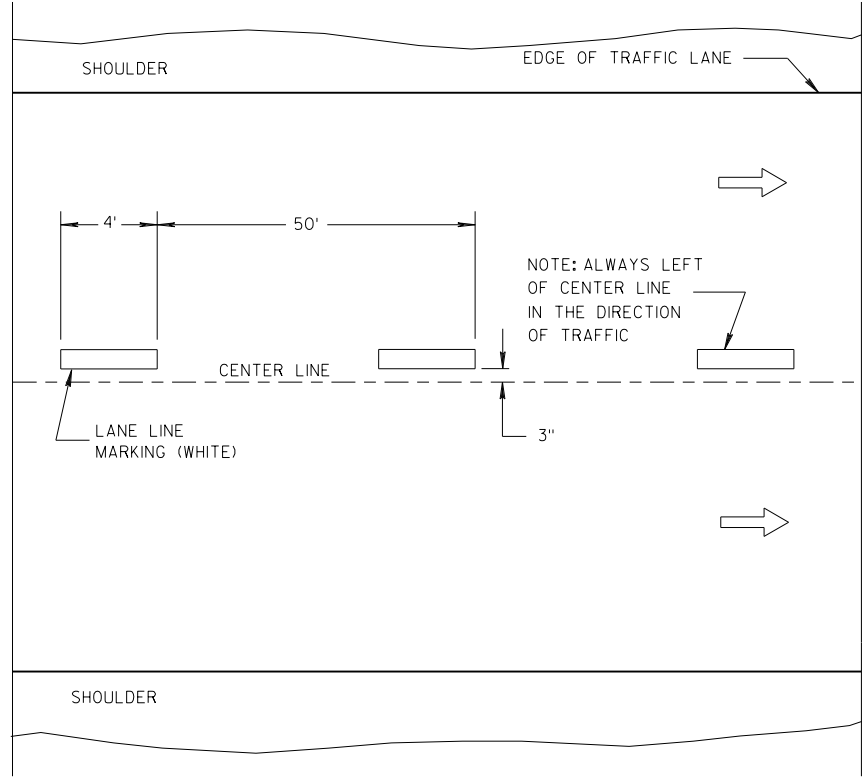


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

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.

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

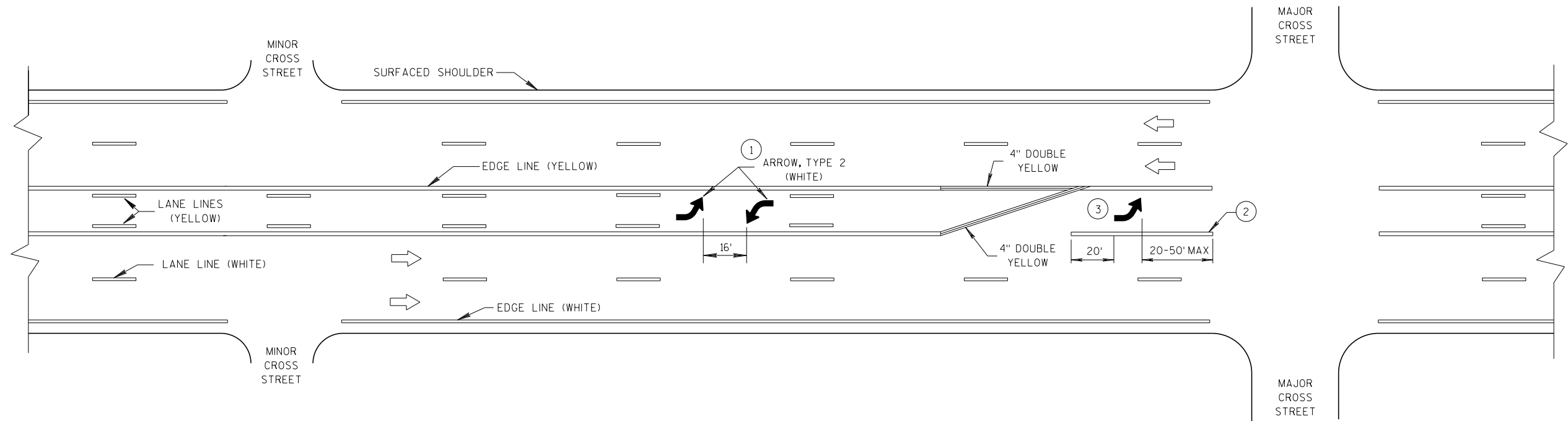
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
7/2018 /S/ Matthew R. Rauch  
DATE STATE SIGNING AND MARKING ENGINEER  
FHWA

GENERAL NOTES

- 1 A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- 2 8" WHITE
- 3 TURN BAY LENGTH OF LESS THAN 48'DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

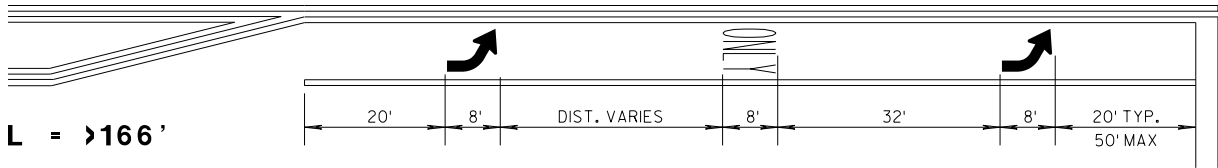
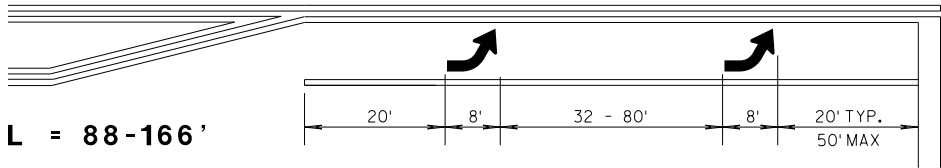
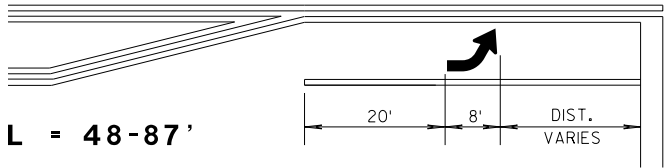
PAVEMENT MARKING  
(TURN LANES)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



\*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.
- ➡ DIRECTION OF TRAFFIC
- L = LENGTH OF TURN BAY

PAVEMENT MARKING  
(TURN LANES)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



W14-3

500' MIN.

NO-PASSING  
ZONE MARKING

PERPENDICULAR  
TO ROADWAY



W10-1

## PAVEMENT MARKING

### GENERAL NOTES

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

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

RETRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

- ① MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
- ② 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
- ③ FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

TABLE BASED UPON 2C-4 WISCONSIN  
SUPPLEMENT OF MANUAL ON UNIFORM  
TRAFFIC CONTROL DEVICES.

Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150*- 250
30	200*- 300
35	250*- 450
40	300*- 500
45	400*- 650
50	550*- 800
55	750*- 1000
60	1000*- 1250
65	1000*- 1250

\* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.

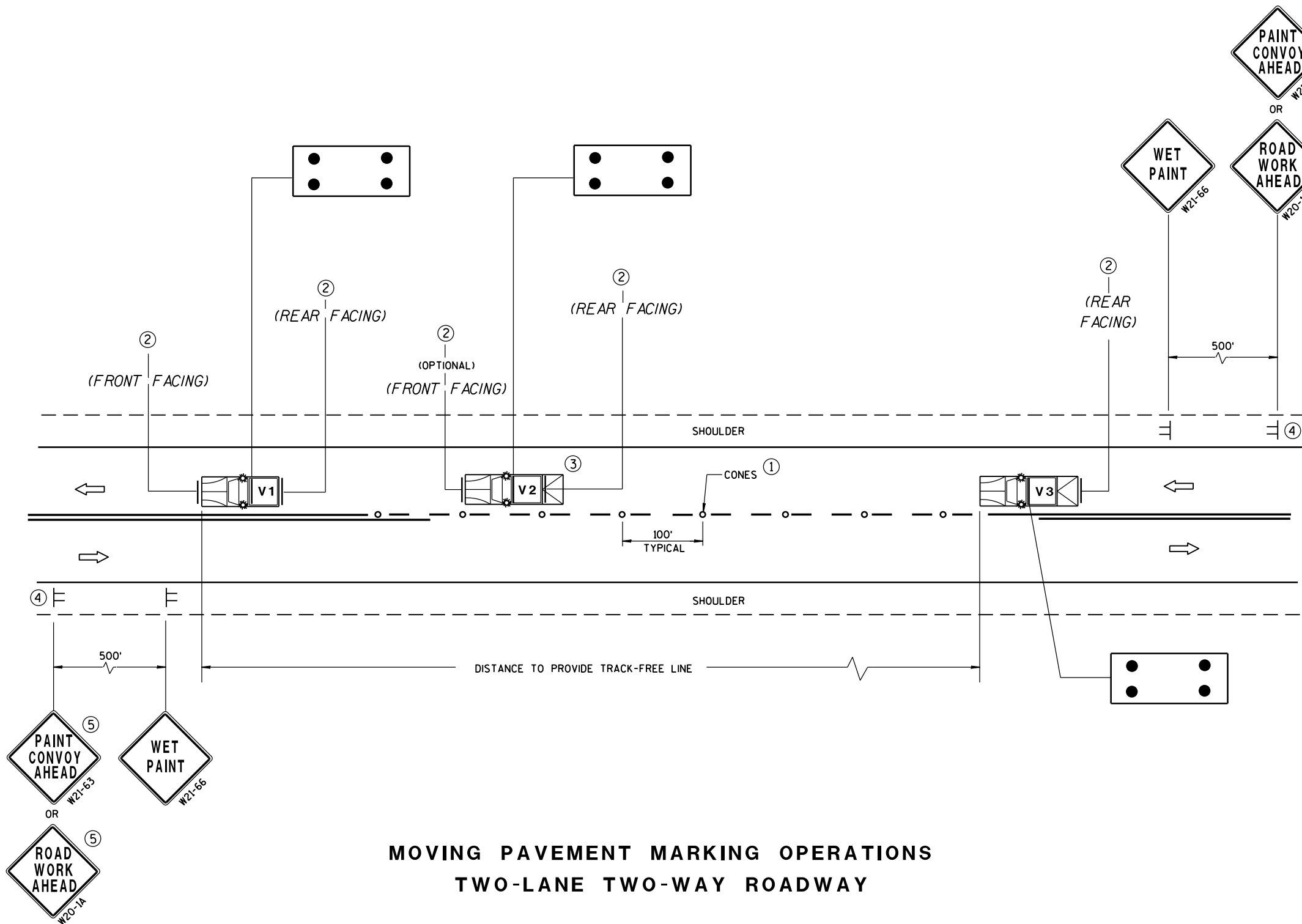
### SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017 /S/ Matthew R. Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

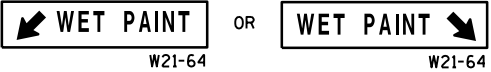
FHWA



MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY

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.
- 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.
- IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.
- ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.
- 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 OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.
- THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.
- WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.
- ① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- ② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.
- ③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.
- ④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.



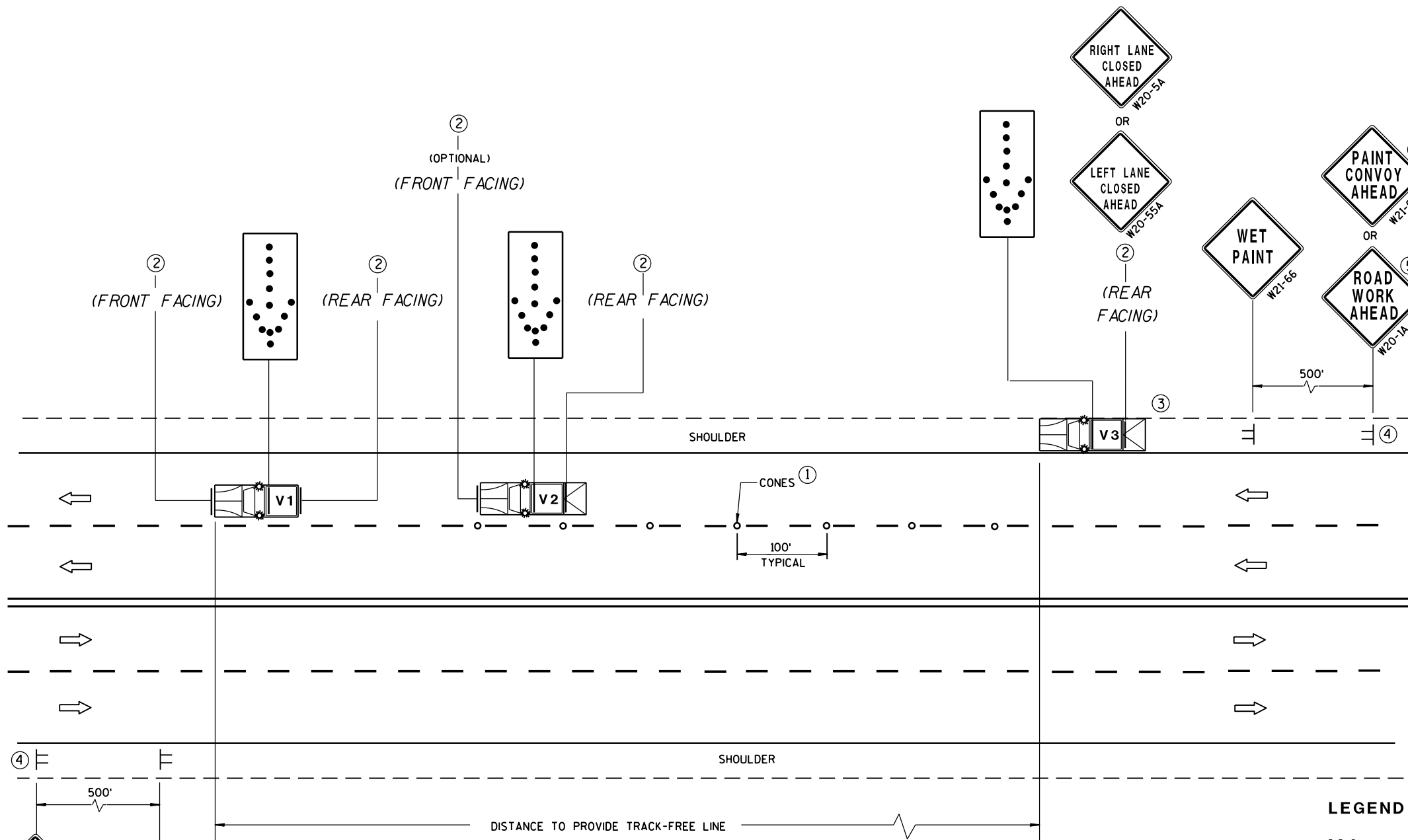
LEGEND

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

MOVING PAVEMENT MARKING  
OPERATION  
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sept., 2017 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



MOVING PAVEMENT MARKING OPERATIONS  
MULTI-LANE UNDIVIDED ROADWAY

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.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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 OR 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.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

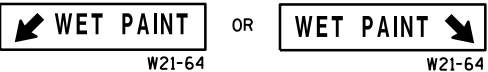
FOR EDGE LINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGE LINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED ROADWAYS.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

Sign on temporary support

Direction of traffic

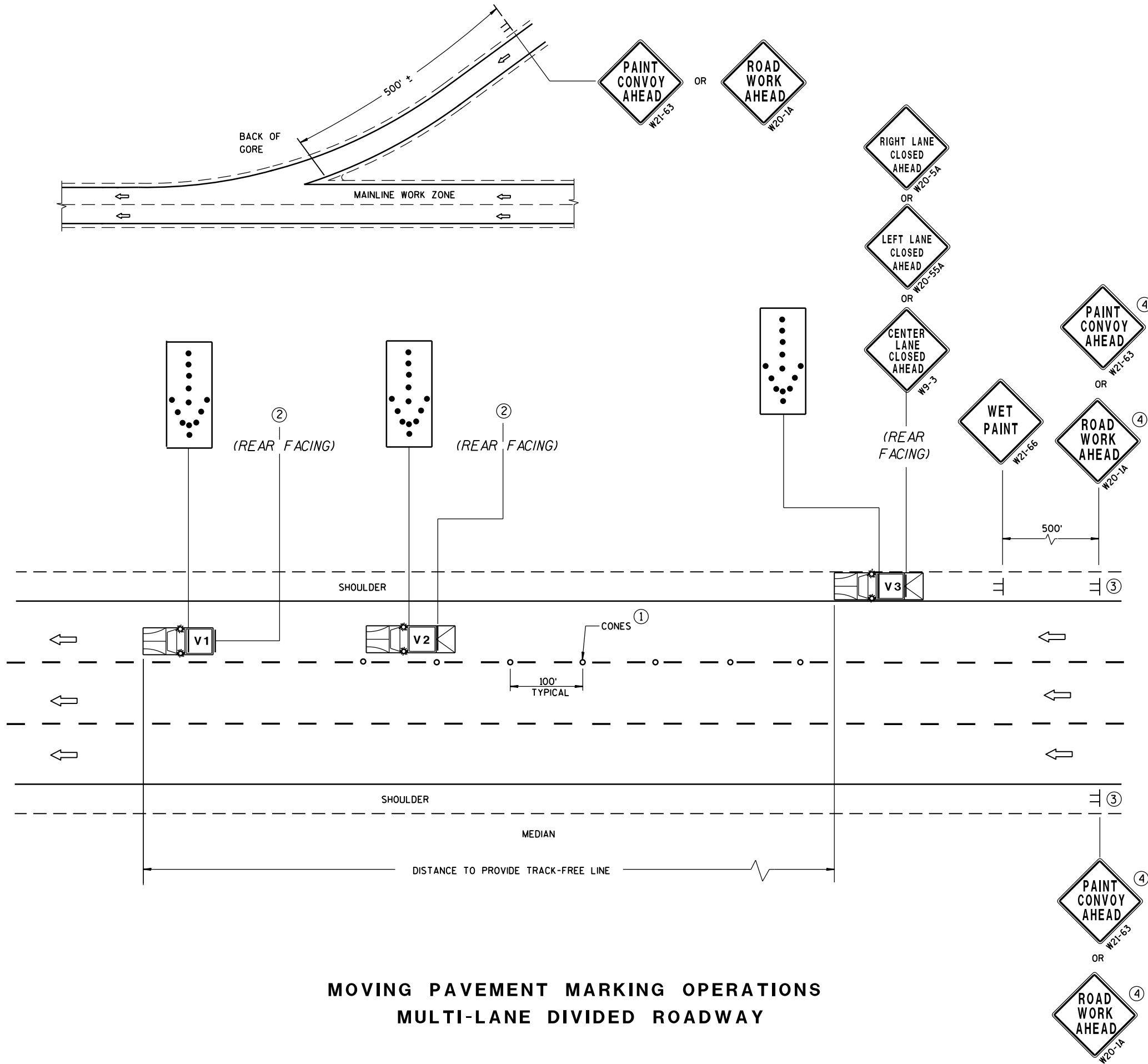
Cones

Flashing arrow panel (merge)

MOVING PAVEMENT MARKING  
OPERATION  
MULTI-LANE UNDIVIDED ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sept., 2017 /S/ Andrew Heldtke  
DATE WORK ZONE ENGINEER  
FHWA



MOVING PAVEMENT MARKING OPERATIONS  
MULTI-LANE DIVIDED ROADWAY

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.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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 OR 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.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGE LINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

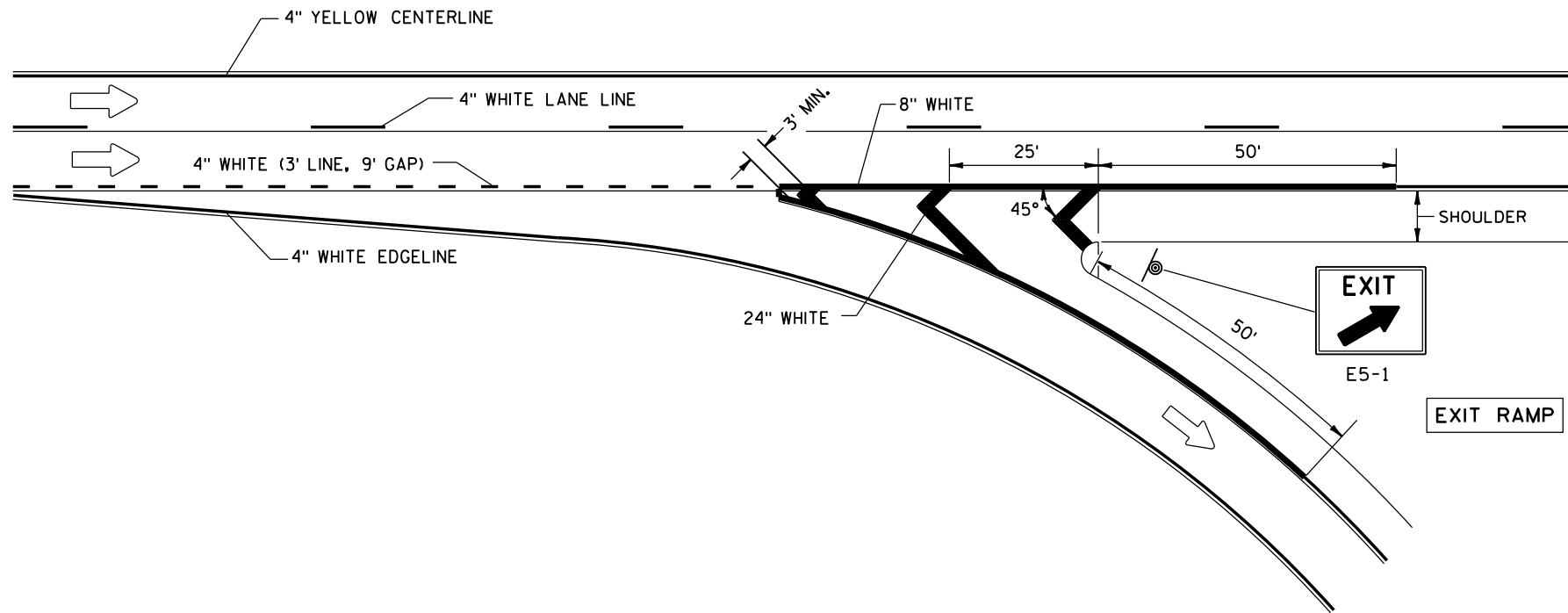
THIS DRAWING SHALL BE USED FOR EDGE LINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

- ① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- ② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.  
 OR   
W21-64 W21-64
- ③ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.
- ④ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

- V1 LEAD VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE WITH TMA
- TMA TRUCK-MOUNTED ATTENUATOR
- Sign on temporary support
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE Sept. 2017	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	



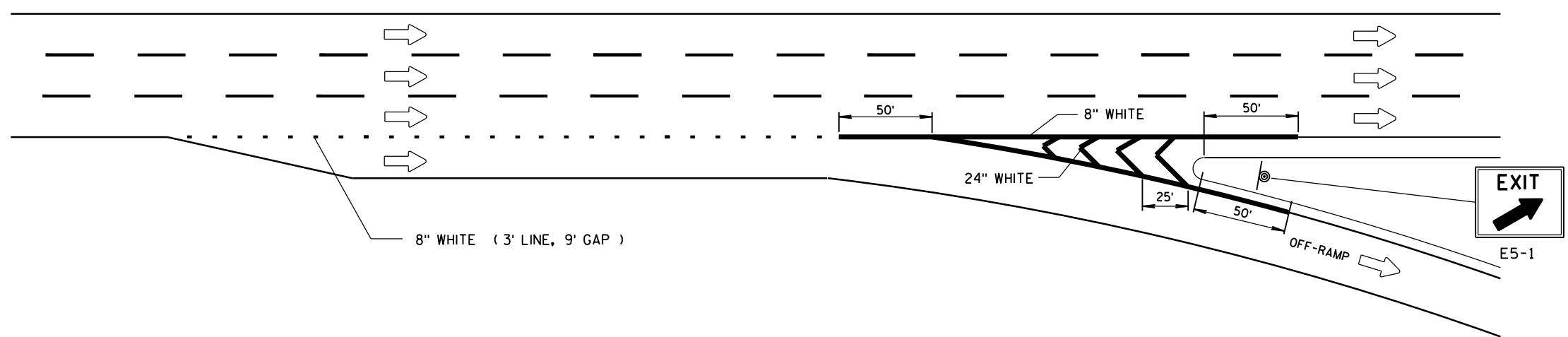
## GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

## LEGEND

- DIRECTION OF TRAVEL
- SIGN ON PERMANENT SUPPORT

## PAVEMENT MARKING FOR EXIT RAMP



## SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

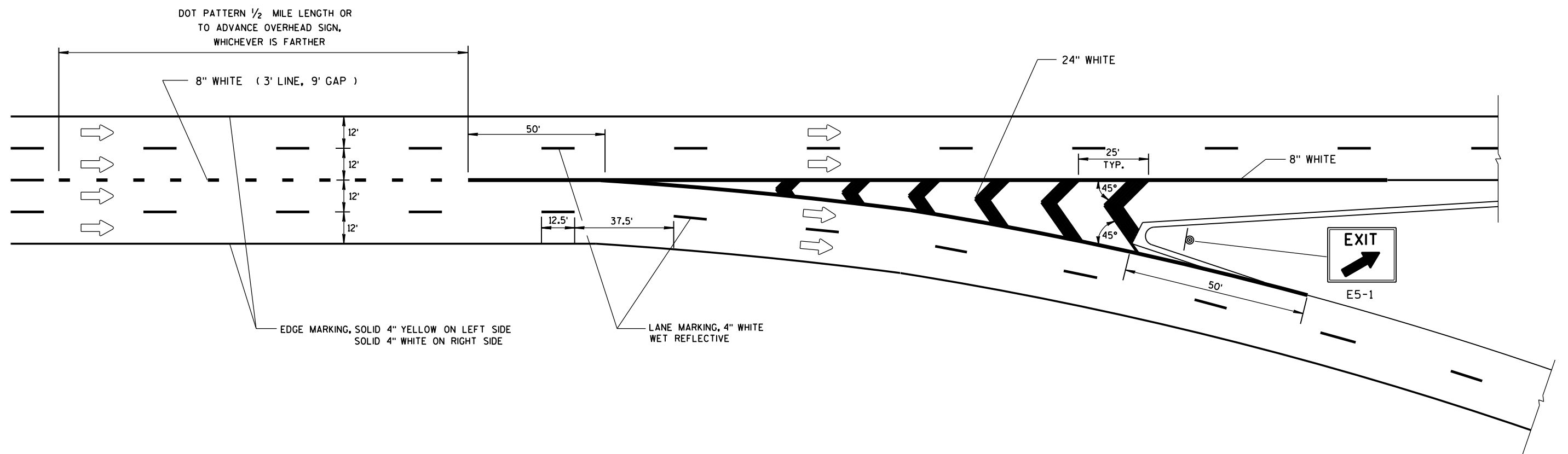
PAVEMENT MARKING  
(RAMPS AND GOES)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

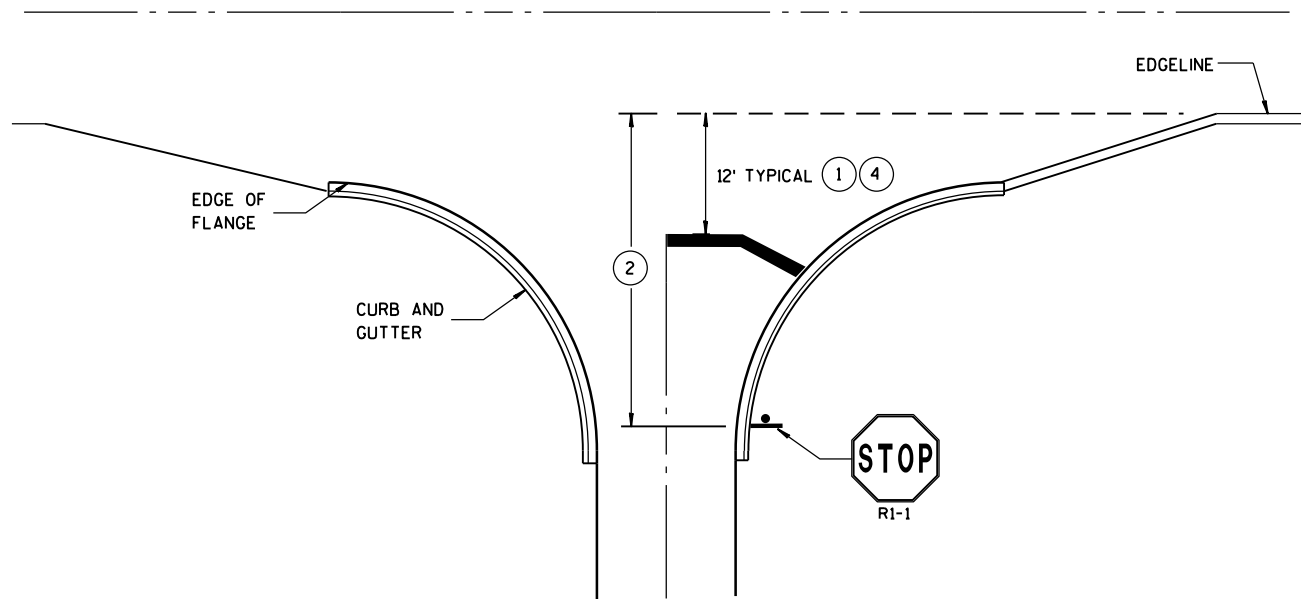
PLACE GROOVE 3 INCHES LEFT OF JOINT.

➡ DIRECTION OF TRAVEL

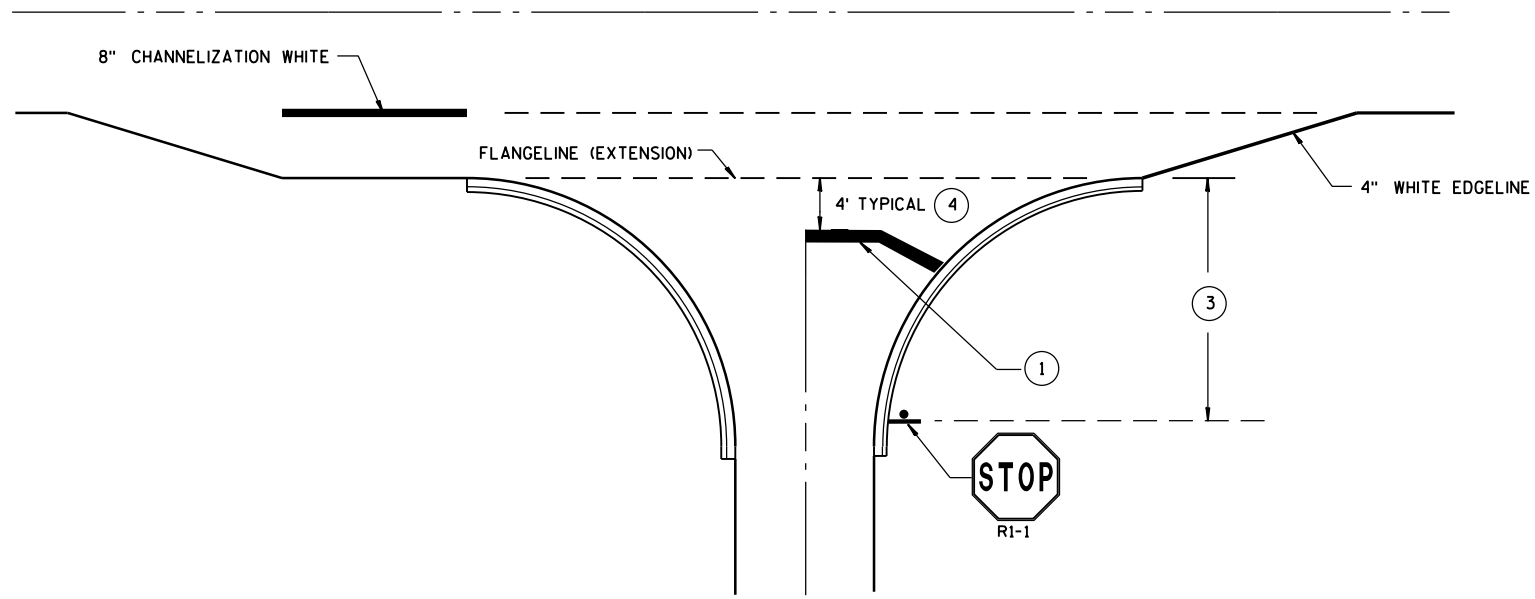
Ⓢ SIGN ON PERMANENT SUPPORT



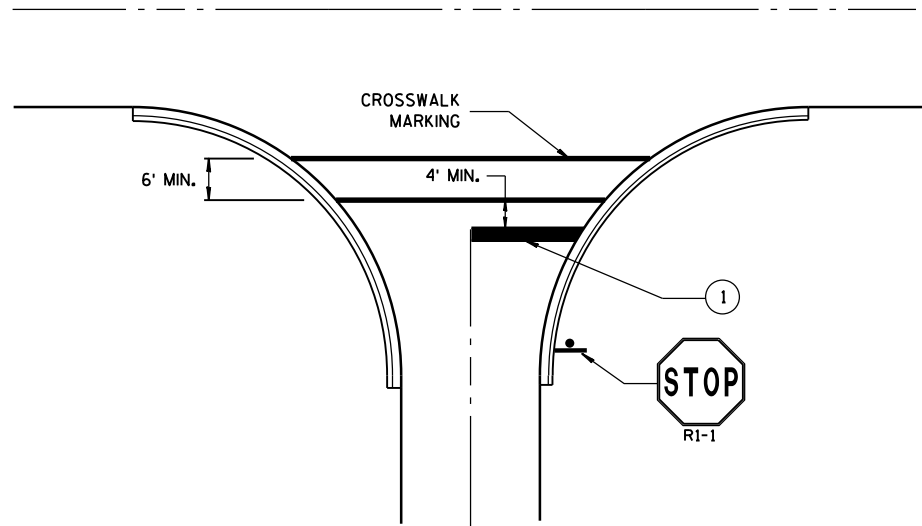
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



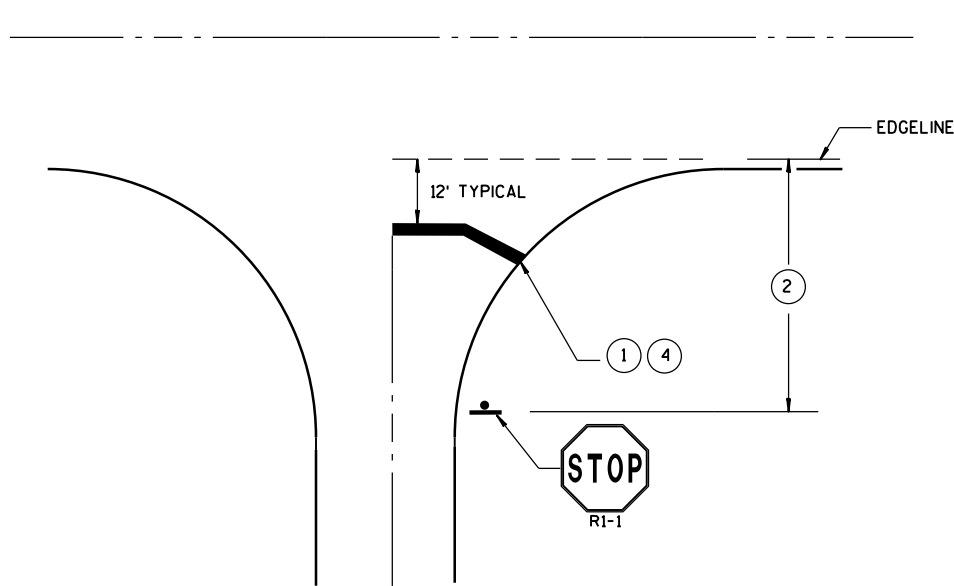
TYPICAL STOP LINE PAVEMENT MARKING  
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING  
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING  
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING  
WITHOUT CURB AND GUTTER

GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

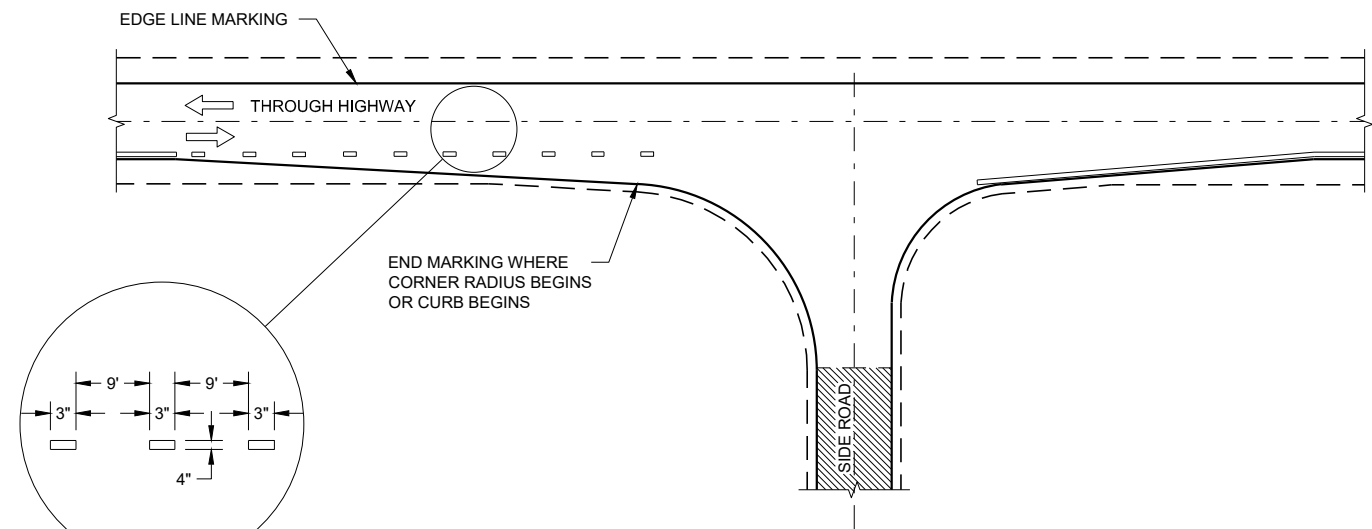
- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK  
PAVEMENT MARKING

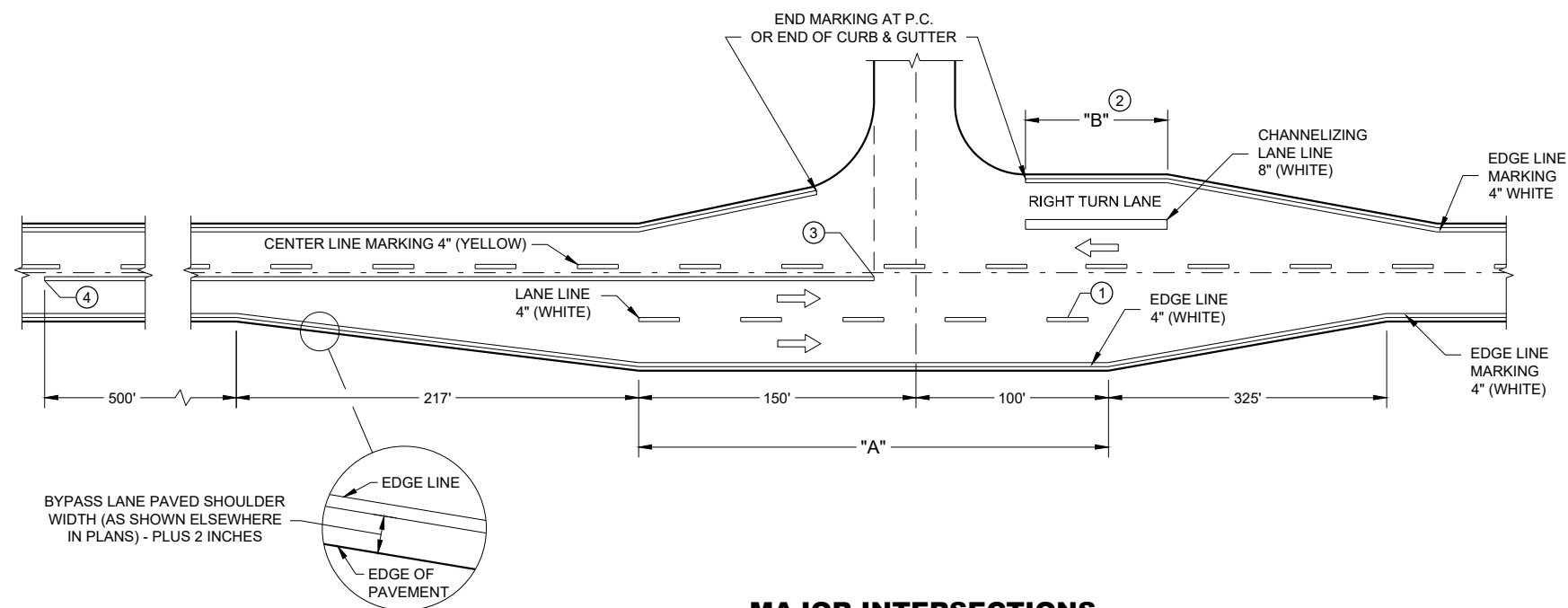
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE Sept., 2017 /S/ Matthew R. Rauch  
STATE SIGNING AND MARKING ENGINEER  
FHWA





MINOR INTERSECTION



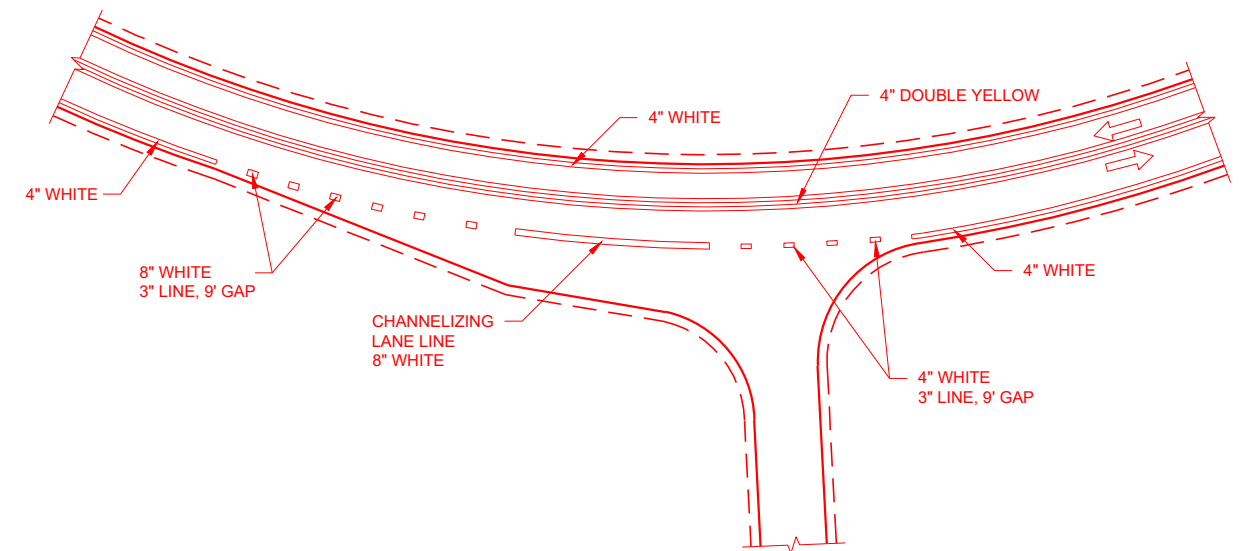
MAJOR INTERSECTIONS  
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER

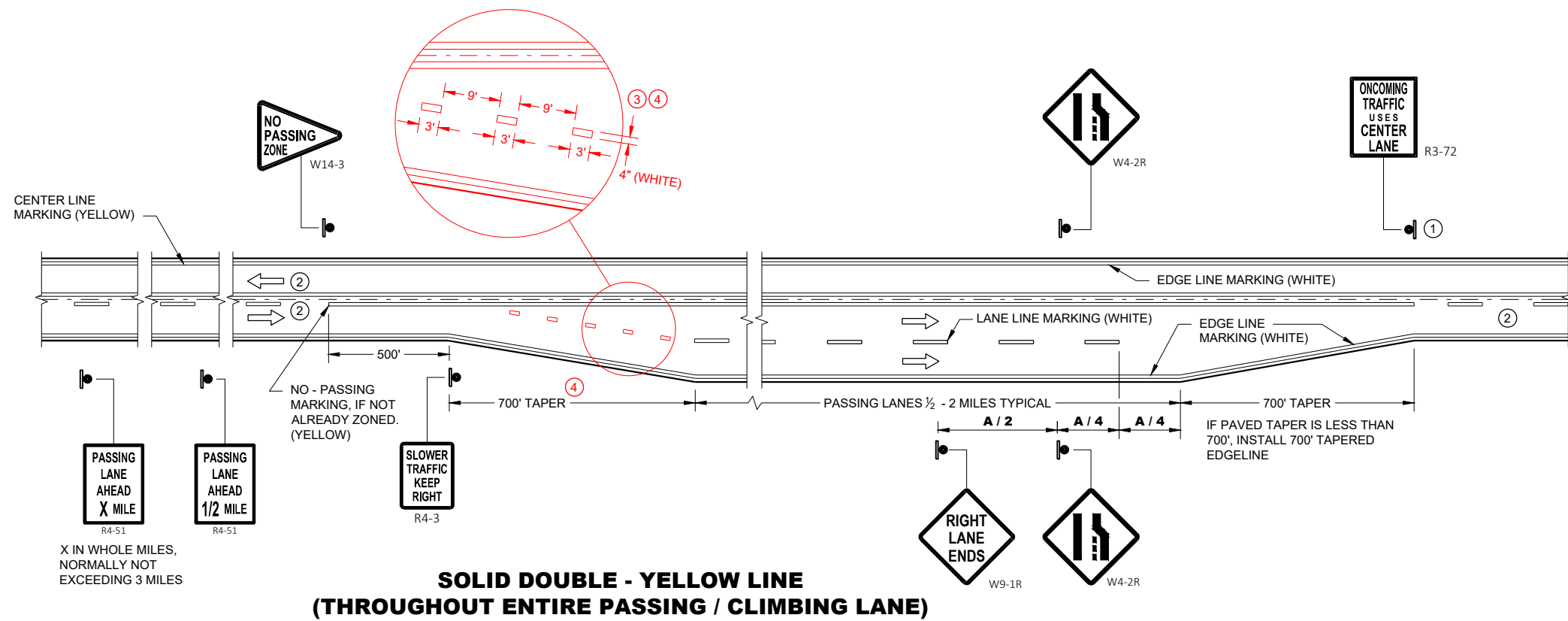
ARROW SYMBOL ( ➡ ) SHOWS DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING  
(INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

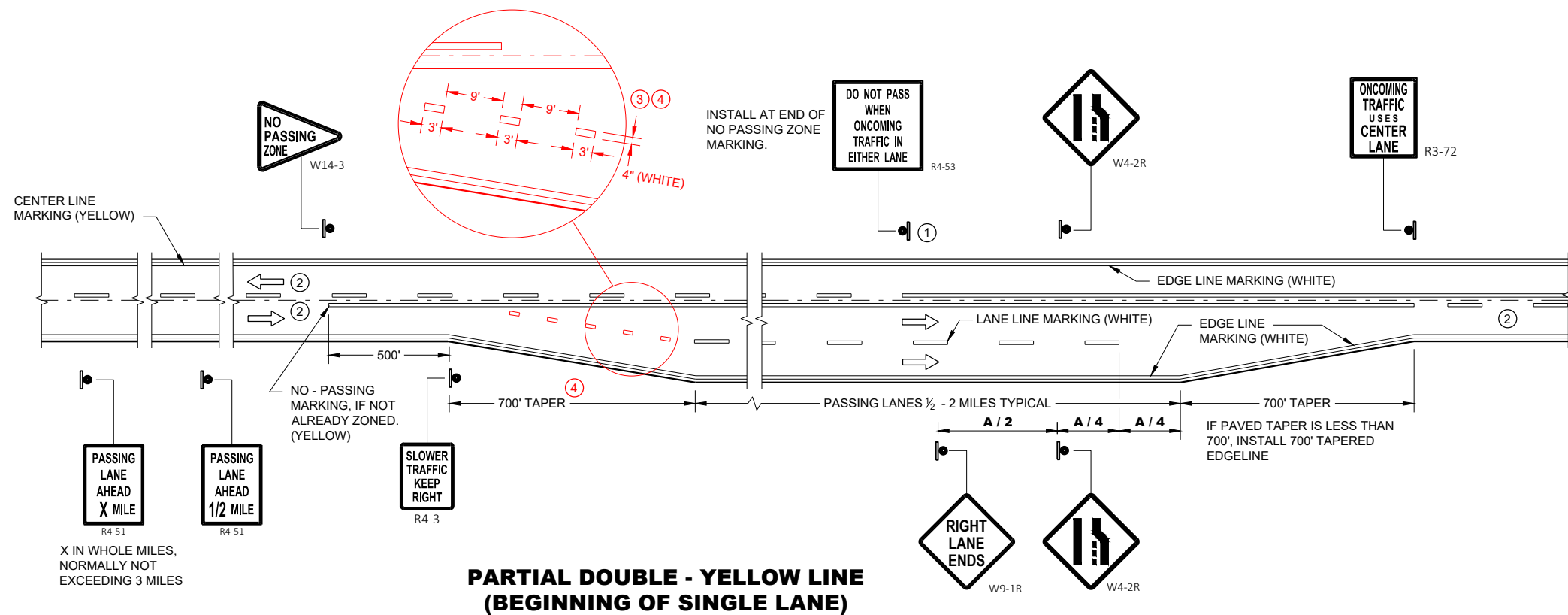


## GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

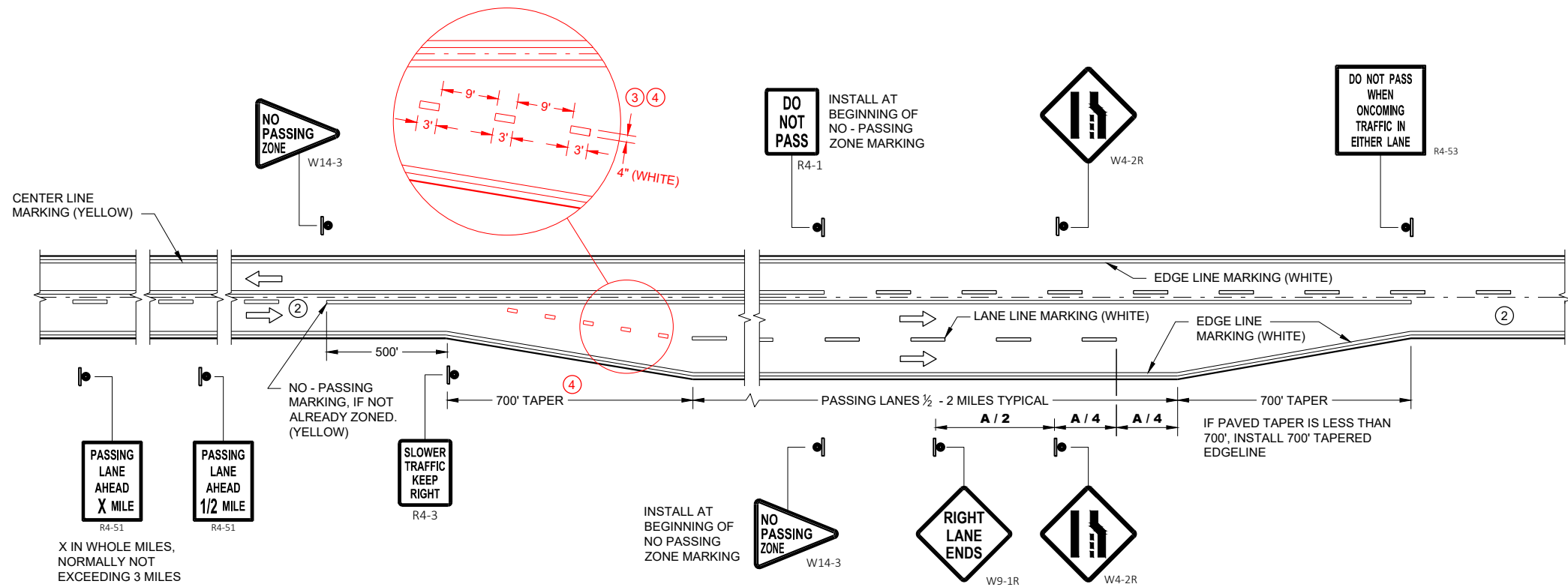
ARROW SYMBOL (  ) SHOWS DIRECTION OF TRAVEL

<b>POSTED OR 85th PERCENTILE SPEED</b>	<b>DISTANCE "A"</b>
45	775
50	850
55	950

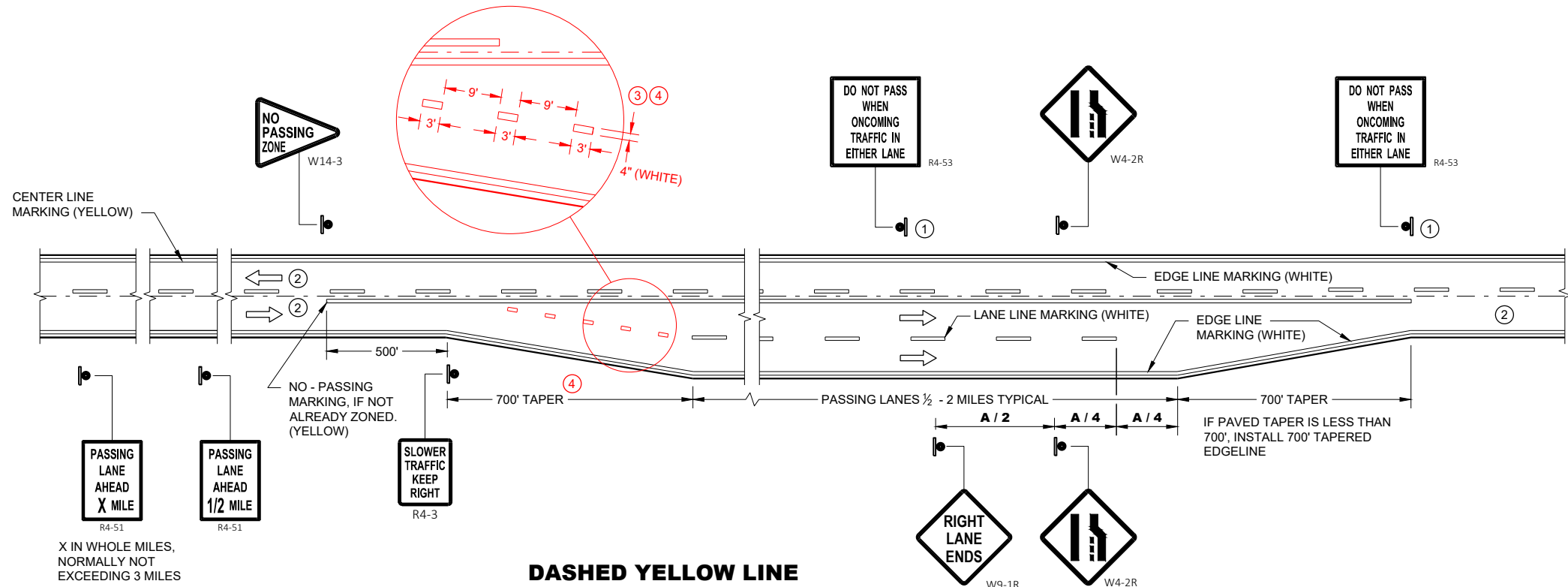


## PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE - YELLOW LINE  
(END OF SINGLE LANE)**



**DASHED YELLOW LINE  
(THROUGHOUT SINGLE LANE)**

**GENERAL NOTES**

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBLING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL ( → ) SHOWS DIRECTION OF TRAVEL

**DISTANCE TABLE**

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	850
55	950

**PAVEMNET MARKING & SIGNING  
(CLIMBLING LANE & PASSING LANE)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
00-00-00  
DATE  
/S/ <AUTHOR>  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA



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

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