

SUP
PROJECT ID:
WITH: N/A

MARCH 2022

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 = 36



DESIGN DESIGNATION

A.A.D.T. (2023)	=	2600
A.A.D.T. (2043)	=	2600
D.H.V.	=	N/A
D.D.	=	50/50
T.	=	13.6%
DESIGN SPEED	=	55 MPH
ESALS	=	540,000

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

STH 35 - CLEAR LAKE

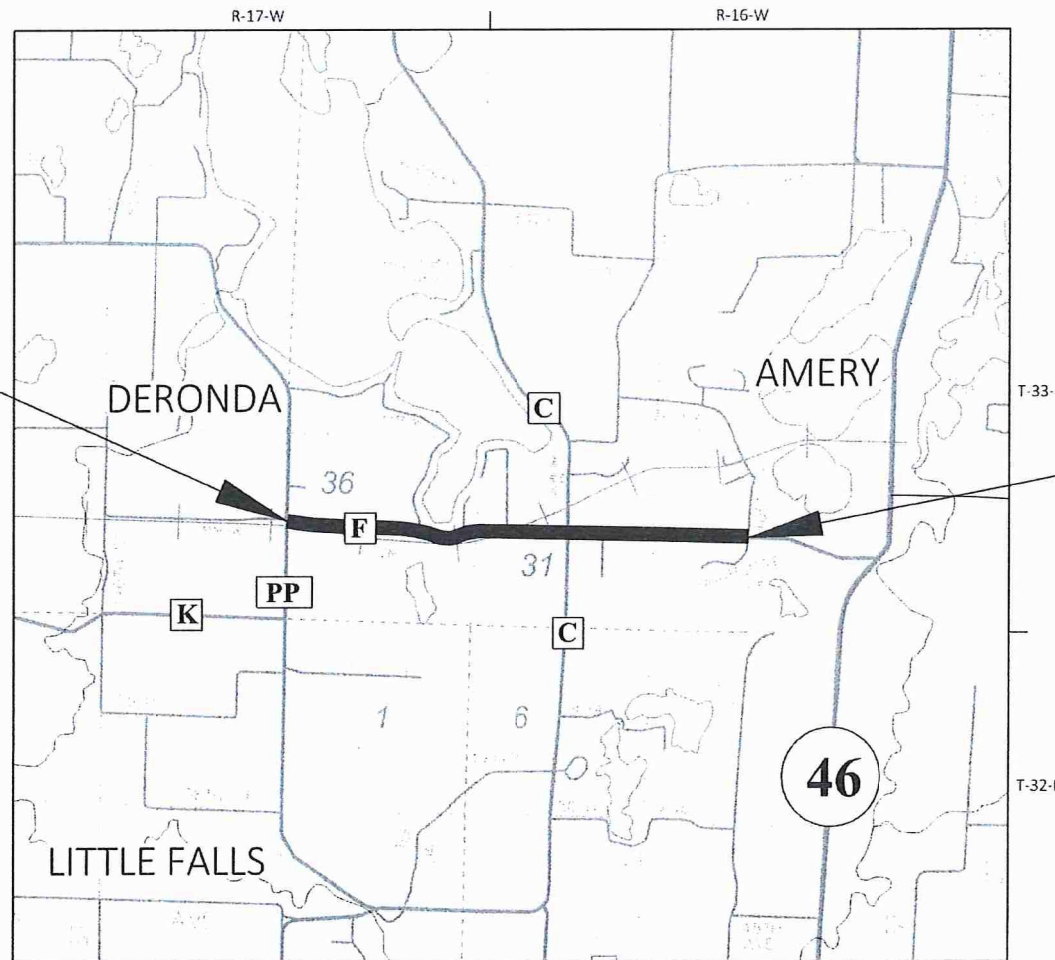
CTH PP TO PONDHURST DRIVE

CTH F

POLK COUNTY

STATE PROJECT NUMBER
8142-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8142-00-70	WISC 2022261	1



BEGIN PROJECT
STA 12+34.84
Y=234293.9545
X=517678.8946

END PROJECT
STA 143+04.02
Y=234250.919
X=530682.818

LAYOUT
SCALE 0 1.0 MI

TOTAL NET LENGTH OF CENTERLINE = 2.475 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), POLK COUNTY, NAD83 (2011), 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 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ACCEPTED FOR POLK COUNTY

DATE: 10/11/2021
Signature & Title of Official

ORIGINAL PLANS PREPARED BY



DATE: 10/8/2021
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JT ENGINEERING
Designer	JT ENGINEERING
Project Manager	TYLER RONGSTAD
Regional Examiner	TOU YANG
Regional Supervisor	TYLER RONGSTAD

APPROVED FOR THE DEPARTMENT

DATE: Tyler Rongstad
(Signature)

E

RUNOFF COEFFICIENT TABLE

LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	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	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 10.74 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.0 ACRES

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 DIGGER'S HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

MATCH EXISTING SUPERELEVATIONS ALONG HORIZONTAL CURVES. STAKING SUPERELEVATION TRANSITIONS IN THE FIELD SHALL BE INCIDENTAL TO THE PROJECT IF NEEDED.

WHEN THE QUANTITY OF BASE AGGREGATE IS MEASURED BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING PAVED DRIVEWAYS, SIDEROADS, AND MAINLINE PAVEMENT AT FULL DEPTH REMOVAL LIMITS.

THE LOCATION OF THE CONSTRUCTION MATCH POINTS ON THE SIDE ROADS SHALL BE AT THE FURTHEST OUT RADIUS RETURN POINT AS SHOWN IN THE DETAILS OR AS DETERMINED BY THE ENGINEER.

ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMUTCD), THE STANDARD DETAIL DRAWINGS (SDD), AND THE GENERAL NOTES LISTED IN THE SDD'S.

HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYER THICKNESSES:

PAVEMENT	LOWER	UPPER LAYER
THICKNESS (INCH)	LAYER (INCH)	(INCH)
5.00	2.75	2.25

UTILITY CONTACTS

DONALD DIETSCH
 WE ENERGIES - GAS
 104 W SOUTH ST
 RICE LAKE, WI 54868
 (715) 234-9604
 DON.DIETSCH@WE-ENERGIES.COM

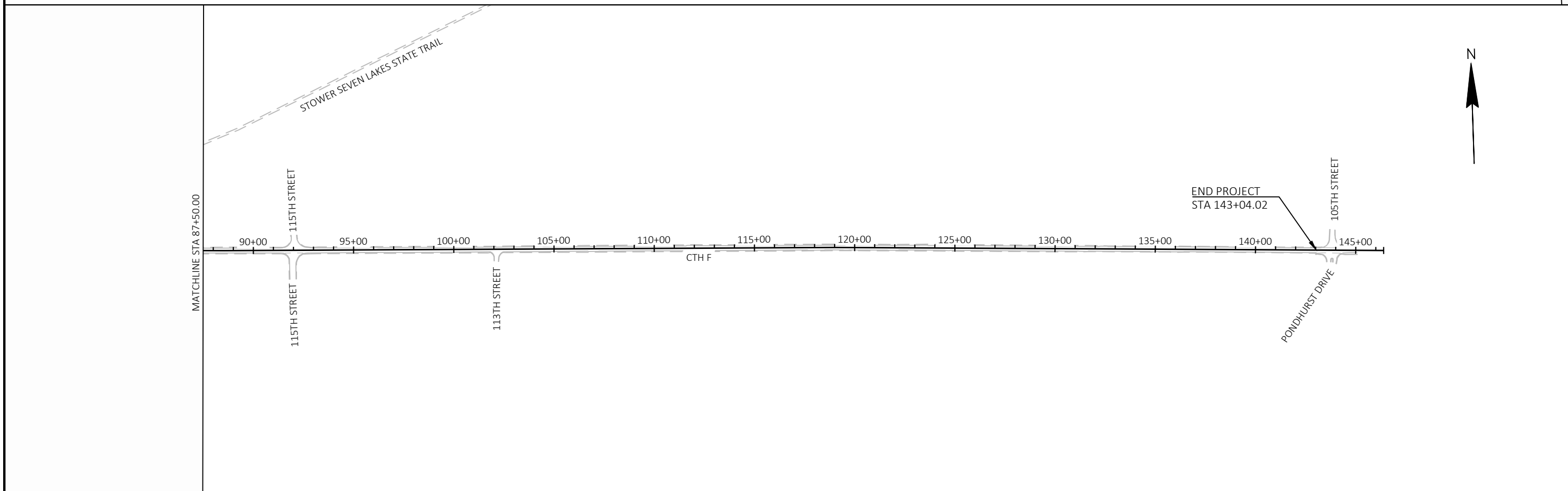
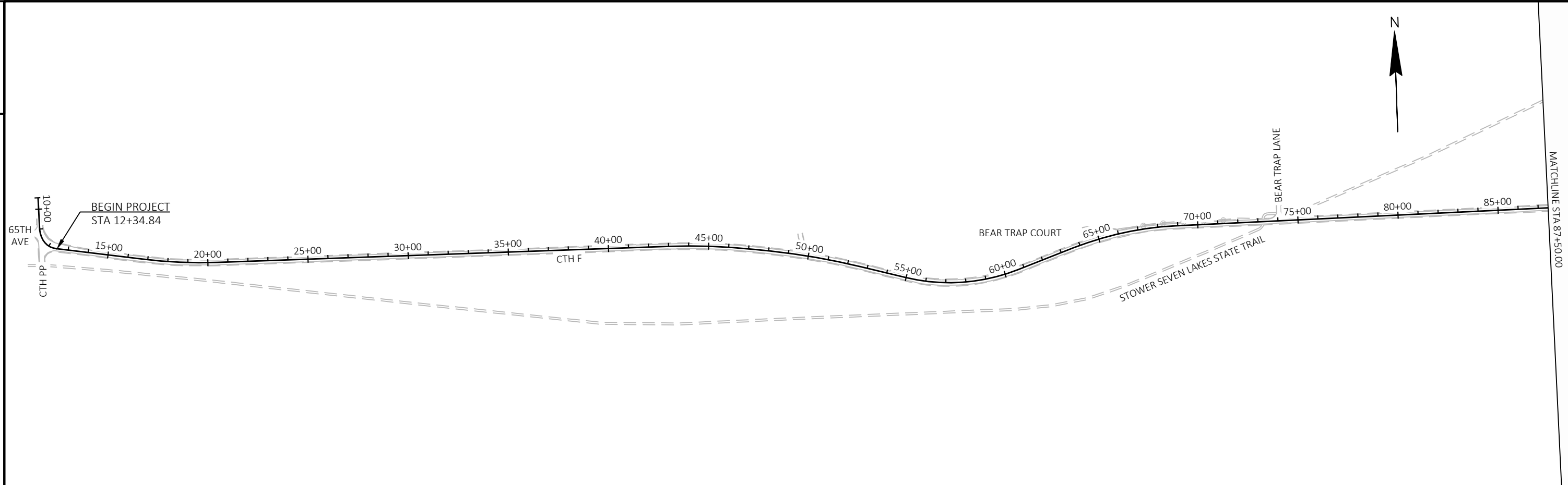
CHADWICK ERICKSON
 XCEL ENERGY - ELECTRICITY
 2911 SOUTH PIONEER AVENUE
 RICE LAKE, WI 54868
 (715) 651-0845
 CHADWICK.P.ERICKSON@XCELENERGY.COM

WISCONSIN DNR LIAISON

AMY CRONK
 DNR NORTHERN REGION HEADQUARTERS
 810 WEST MAPLE STREET
 SPOONER, WI 54801
 (715) 635-4229
 (715) 520-3976
 AMY.CRONK@WISCONSIN.GOV



Dial **811** or (800)242-8511
 www.DiggersHotline.com

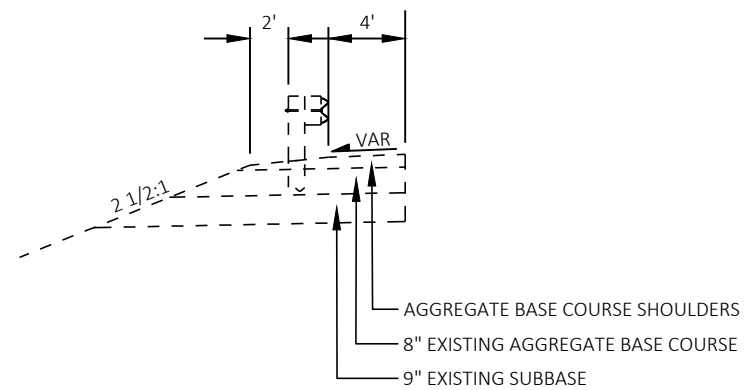
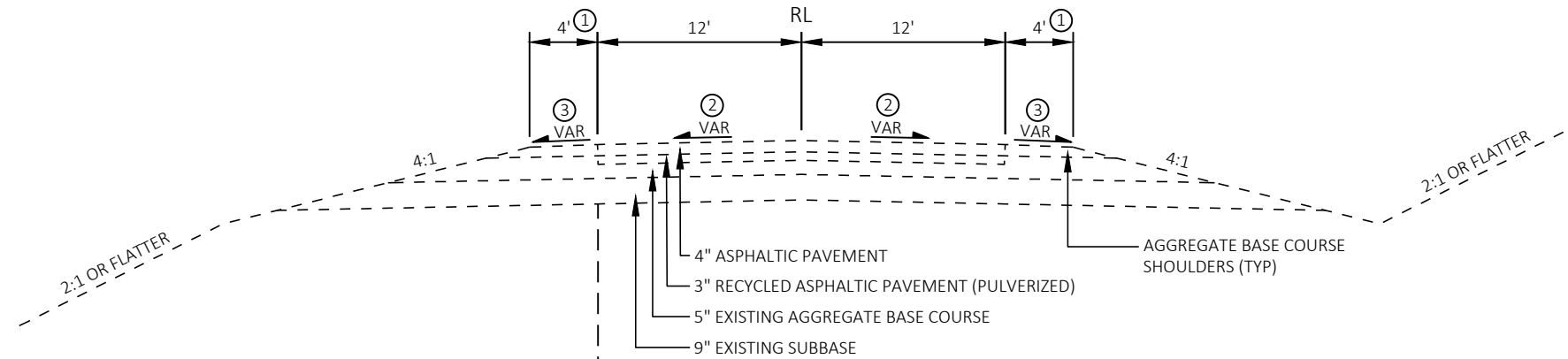


PROJECT NO: 8142-00-70	HWY: CTH F	COUNTY: POLK	PROJECT OVERVIEW	SHEET E
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NOTES:

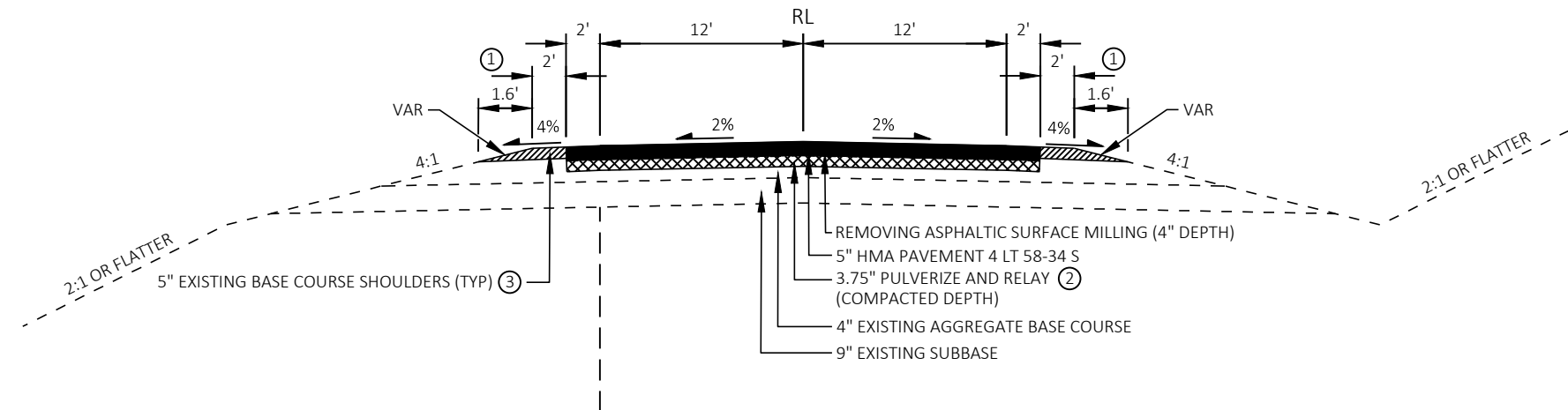
EXISTING LAYER DEPTHS BASED ON SOIL BORINGS AND AS-BUILTS. ACTUAL DEPTHS MAY VARY SLIGHTLY.

- ① AGGREGATE SHOULDER WIDTH = 2' STA 132+36 TO STA 143+09
- ② CROSS SLOPE VARIES 3% TO 10%
- ③ CROSS SLOPE VARIES 2% TO 4%

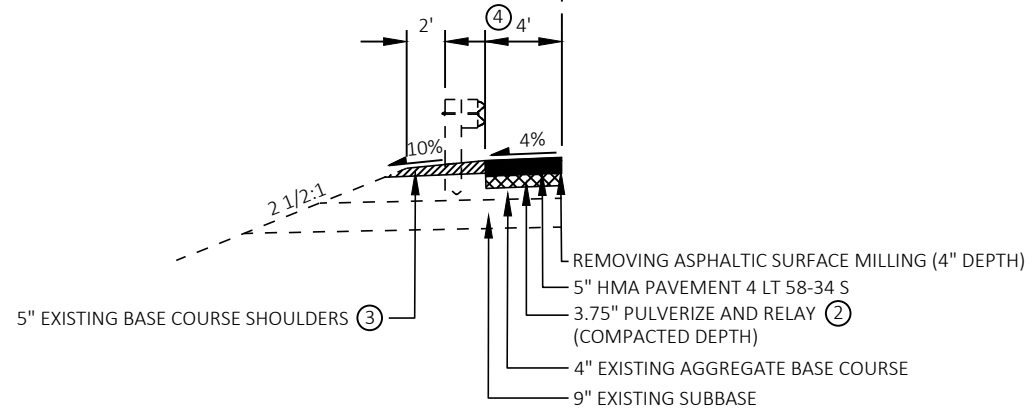


PAVEMENT CORE LOG

BORING	STATION	ASPHALT THICKNESS (INCHES)	BASE COURSE THICKNESS (INCHES)
B-1	25+50	7	5
B-2	51+52	7	5
B-3	77+48	7	5
B-4	103+47	7	5
B-5	130+00	8	5

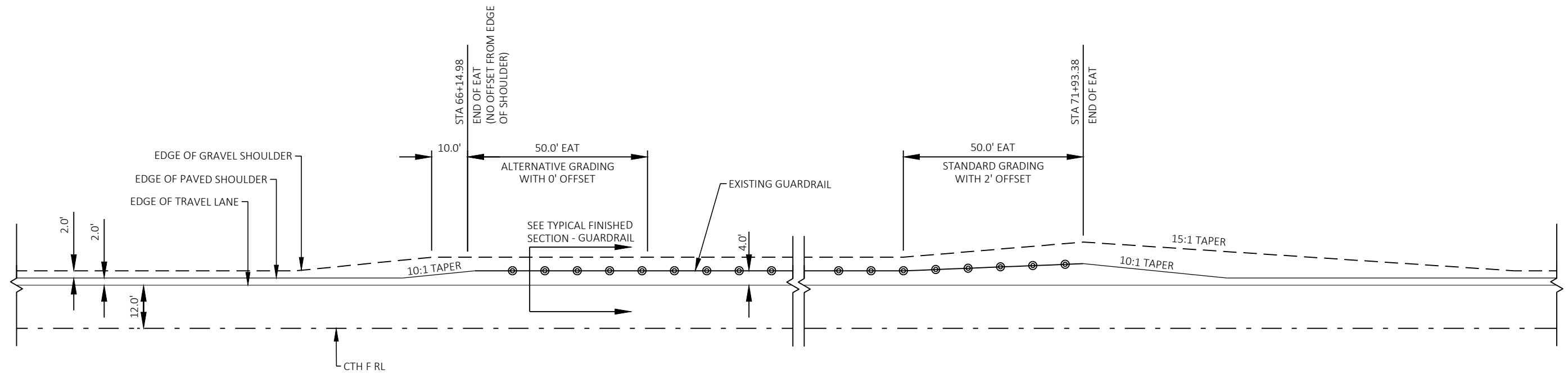


TYPICAL FINISHED SECTION
 CTH F
 STA 12+34.84 TO STA 143+04.02

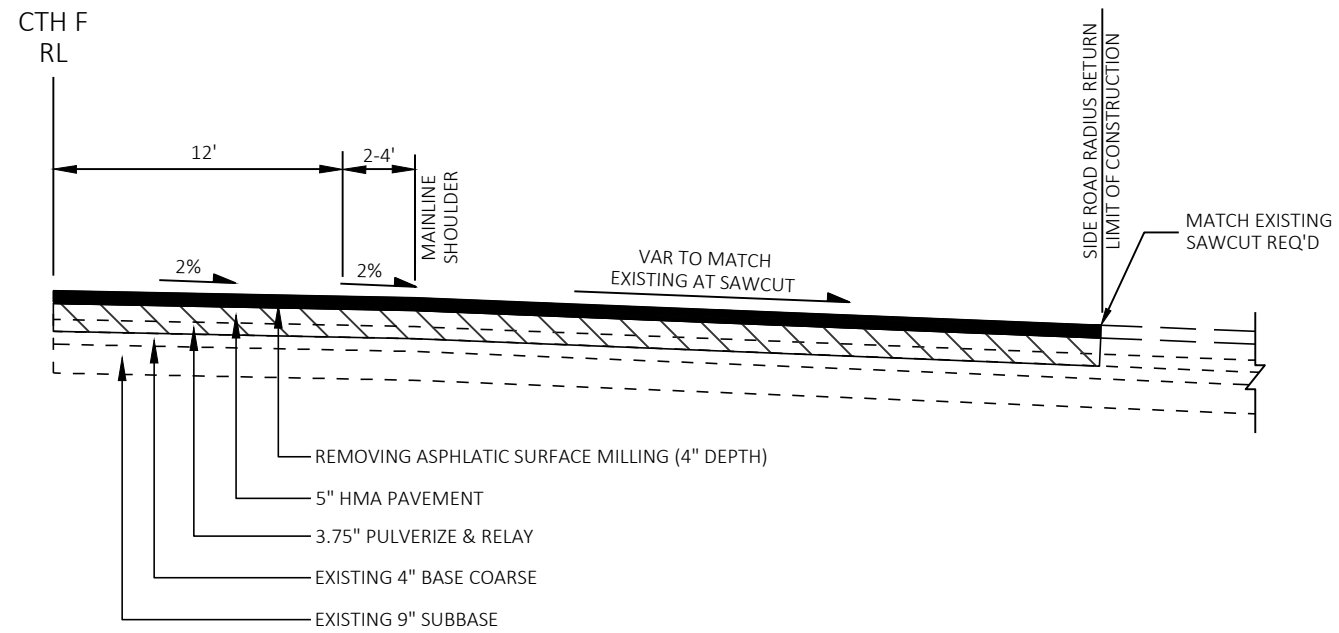


TYPICAL FINISHED SECTION - EXISTING GUARDRAIL
 CTH F
 STA 66+14.98 TO STA 71+93.38

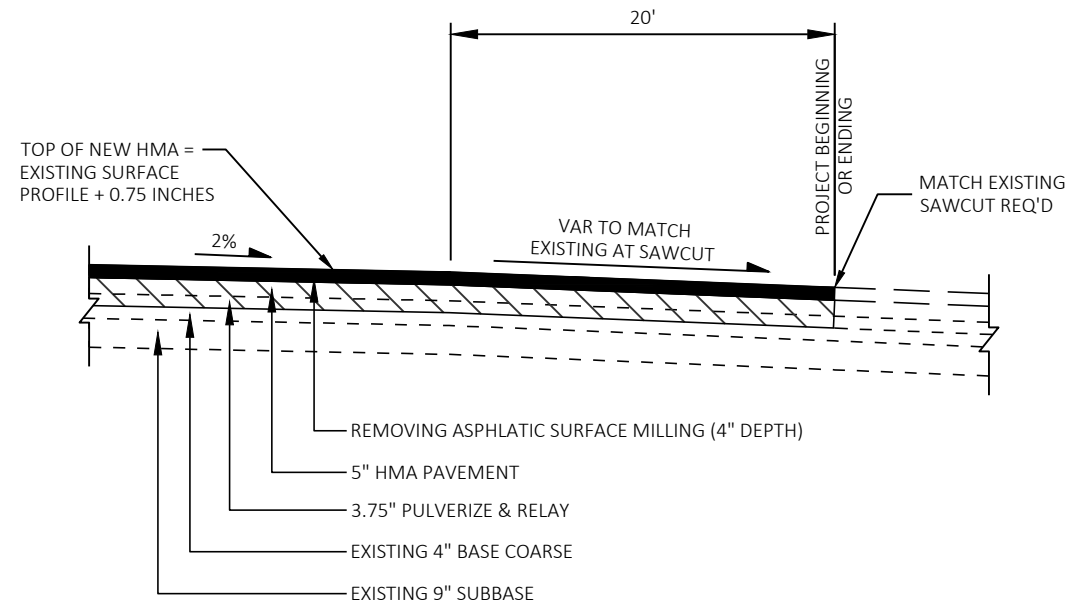
- NOTES:**
 EXISTING LAYER DEPTHS BASED ON SOIL BORINGS AND AS-BUILTS. ACTUAL DEPTHS MAY VARY SLIGHTLY.
- ① AGGREGATE SHOULDER WIDTH = 0' STA 132+36 TO STA 143+09
 - ② PULVERIZE EXISTING PAVEMENT, EXISTING PULVERIZED MATERIAL, AND EXISTING GRAVEL BASE TO A DEPTH OF 4" AND RELAY TO A COMPACTED DEPTH OF 3.75" (+/-) TO THE WIDTH SHOWN.
 - ③ SHAPING SHOULDERS. PAYMENT FOR THIS ITEM INCLUDES BLADING TO ALLOW WIDER PAVEMENT, SHAPING TO MATCH NEW PAVEMENT HEIGHT, AND COMPACTING THE EXISTING SHOULDER AGGREGATE ACCORDING TO THE STANDARD SPECS.
 - ④ WIDTH VARIES ALONG EATS TO MATCH RAIL FACE.



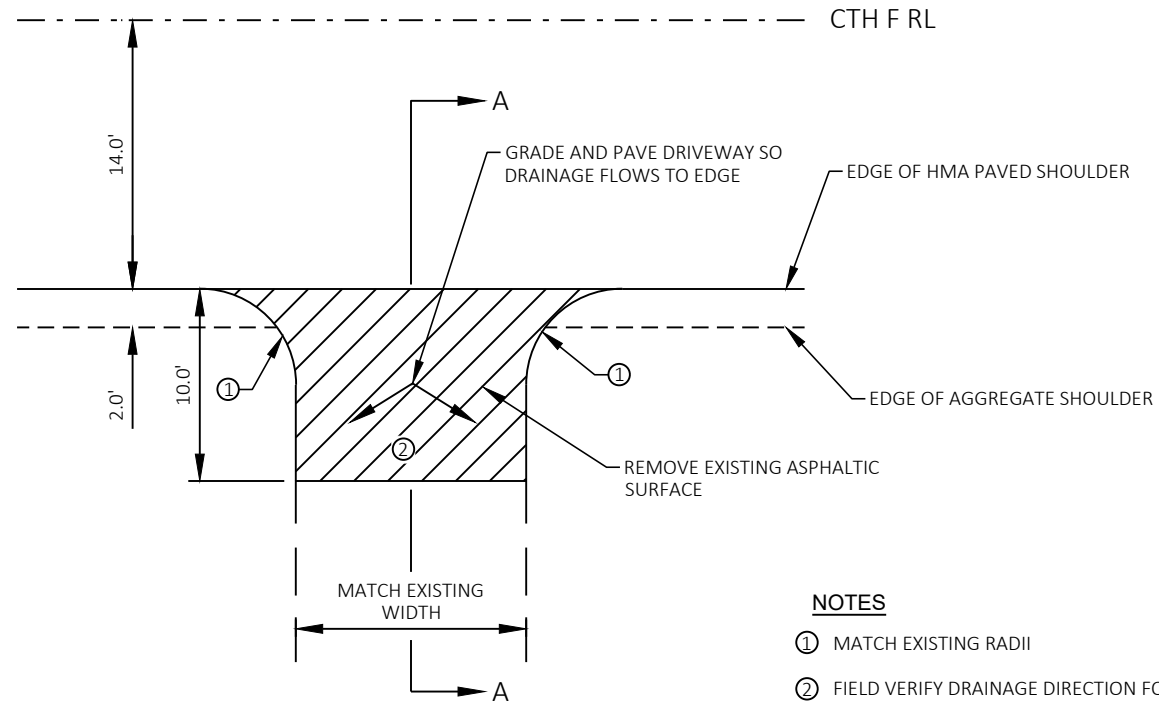
ASPHALTIC SHOULDER AT GUARDRAIL

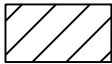


SIDE ROAD TIE-IN



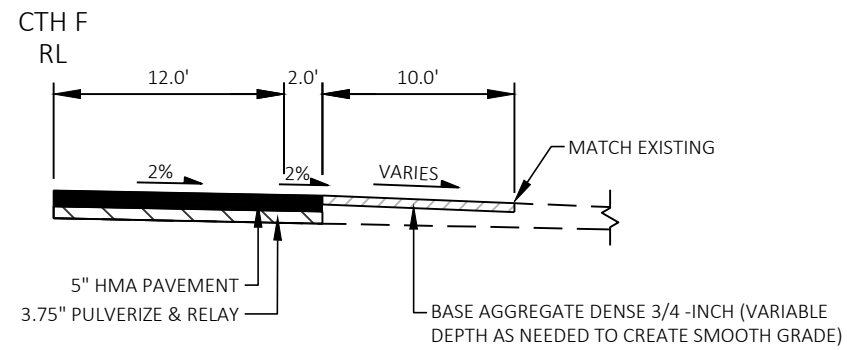
MAINLINE TIE-IN



LEGEND
 LIMITS OF BID ITEM "ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES" FOR ASPHALTIC DRIVEWAYS.

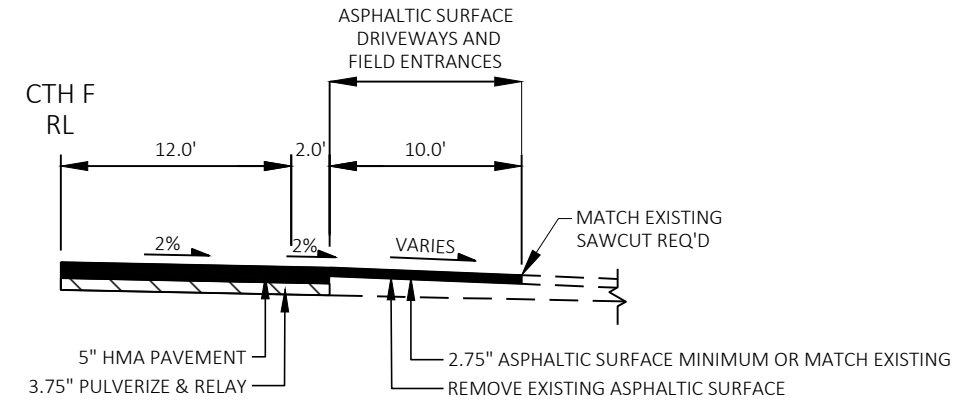
- NOTES**
- ① MATCH EXISTING RADII
 - ② FIELD VERIFY DRAINAGE DIRECTION FOR DRIVEWAY

DRIVEWAY



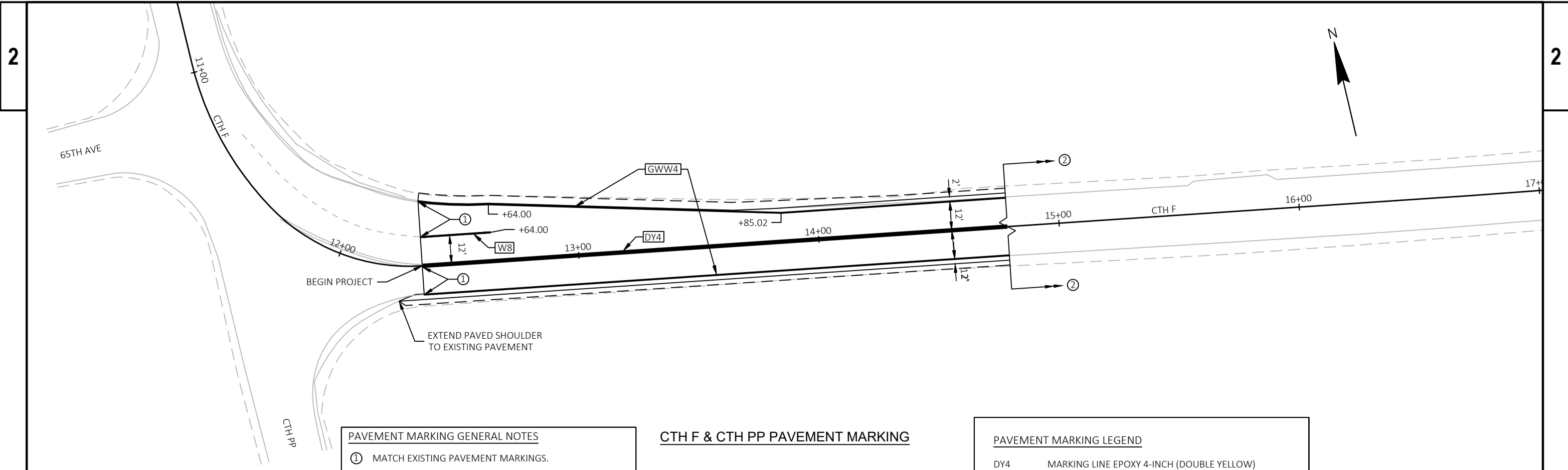
SECTIONS A-A DRIVEWAY PAVING - GRAVEL DRIVEWAY

STA 14+48 LT	STA 55+76 RT
STA 15+68 LT	STA 65+74 RT
STA 17+49 LT	STA 74+65 RT
STA 19+18 RT	STA 84+22 RT
STA 20+31 LT	STA 86+07 RT
STA 24+93 LT	STA 96+00 LT
STA 33+44 LT	STA 106+98 RT
STA 38+28 LT	STA 112+86 LT
STA 43+18 RT	STA 117+93 RT
STA 43+31 LT	STA 121+88 RT
STA 44+45 RT	STA 123+44 LT
STA 52+12 LT	STA 132+41 LT
STA 53+11 LT	STA 134+96 LT



SECTIONS A-A DRIVEWAY PAVING - ASPHALTIC DRIVEWAY

STA 56+15 LT
STA 111+78 LT
STA 119+66 LT
STA 131+35 RT
STA 135+90 LT
STA 135+93 RT



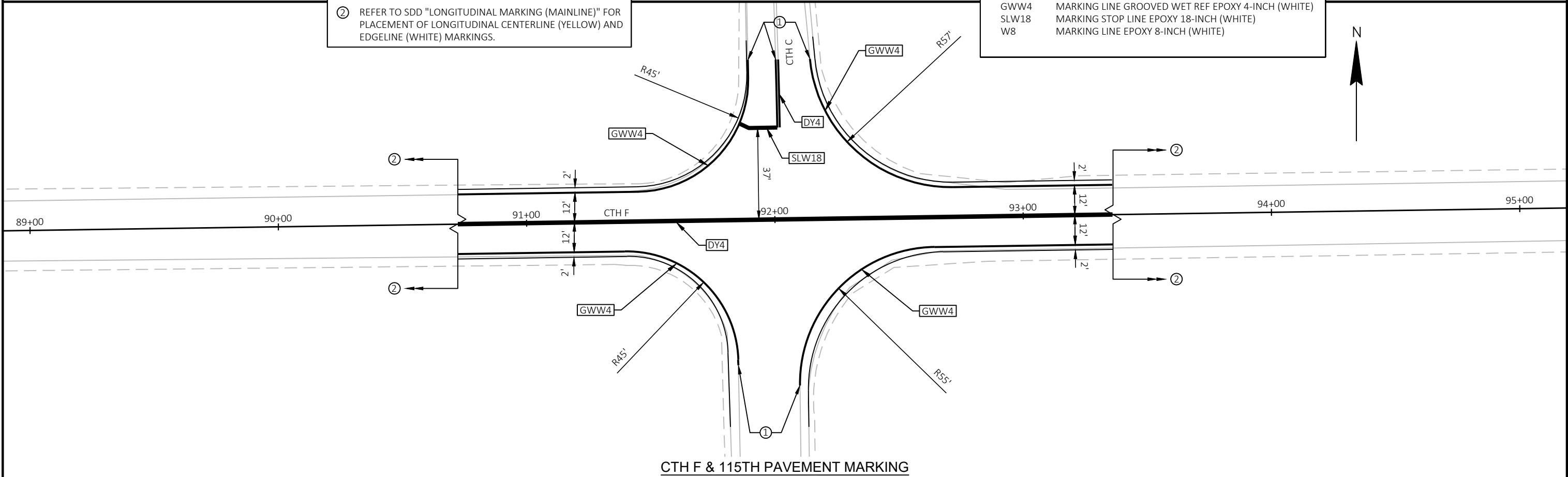
PAVEMENT MARKING GENERAL NOTES

- ① MATCH EXISTING PAVEMENT MARKINGS.
- ② REFER TO SDD "LONGITUDINAL MARKING (MAINLINE)" FOR PLACEMENT OF LONGITUDINAL CENTERLINE (YELLOW) AND EDGELINE (WHITE) MARKINGS.

CTH F & CTH PP PAVEMENT MARKING

PAVEMENT MARKING LEGEND

- DY4 MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
- GWW4 MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
- SLW18 MARKING STOP LINE EPOXY 18-INCH (WHITE)
- W8 MARKING LINE EPOXY 8-INCH (WHITE)



CTH F & 115TH PAVEMENT MARKING

TRAFFIC CONTROL GENERAL NOTES:

DRAWING IS NOT TO SCALE.

ALL TRAFFIC CONTROL SIGNS AND DEVICES AND THEIR LOCATIONS SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMUTCD), THE PLANS, STANDARD SPECIFICATIONS AND APPLICABLE STANDARD DETAIL DRAWINGS .

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

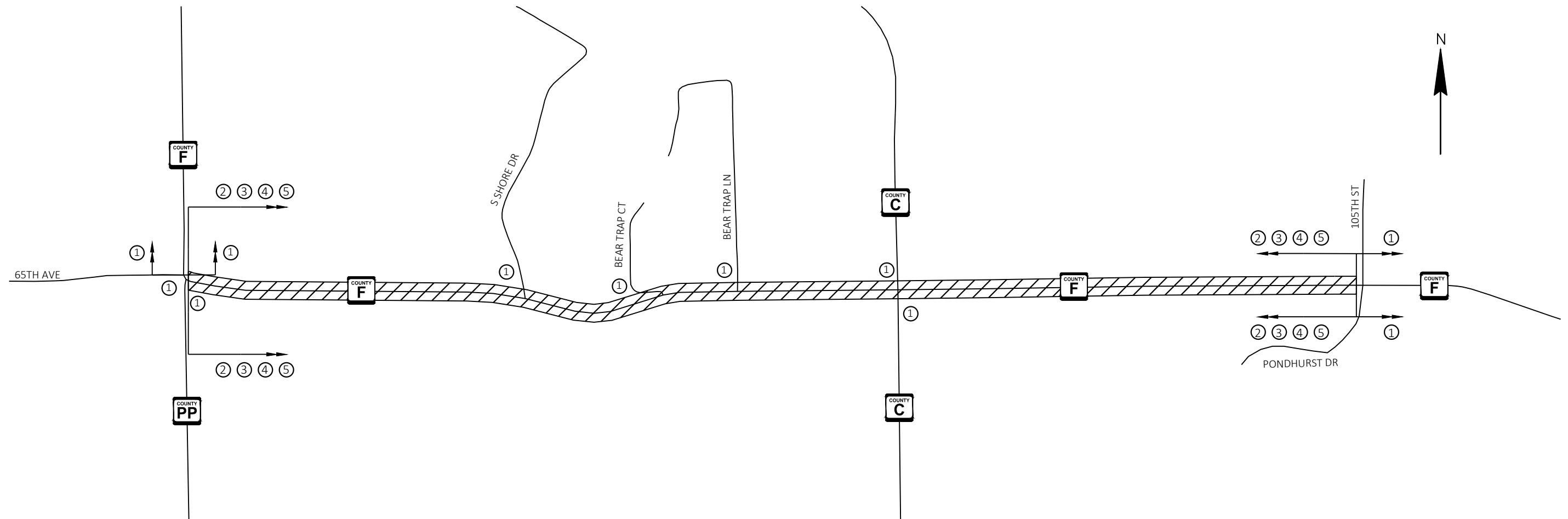
ALL W SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACK GROUND IS ORANGE.

- ① INSTALL ADVANCED WARNING SIGNS ON CTH F PRIOR TO THE WORK ZONE AND ON ALL SIDEROADS WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC".
- ② UTILIZE FLAGGING OPERATIONS IN ACCORDANCE WITH SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" AND CONFORMING TO THE STANDARD SPECIFICATIONS WHEN CLOSING A LANE FOR CONSTRUCTION OPERATIONS.
- ③ INSTALL TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH SDD "TRAFFIC CONTROL FOR DROP-OFF SIGNING" DURING WORK OPERATIONS THAT CREATE DROP-OFFS OR HAZARDS AS DEFINED BY STANDARD SPECIFICATIONS "DROP-OFF AND HAZARD PROTECTION".
- ④ INSTALL SIGNING IN ACCORDANCE WITH SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES" DURING THE MILLING OPERATIONS.
- ⑤ INSTALL SIGNING IN ACCORDANCE WITH SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL" DURING THE PULVERIZING AND RELAY OPERATIONS.

LEGEND:



Estimate Of Quantities

8142-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0120	Removing Asphaltic Surface Milling	SY	36,900.000	36,900.000
0004	213.0100	Finishing Roadway (project) 01. 8142-00-70	EACH	1.000	1.000
0006	305.0110	Base Aggregate Dense 3/4-Inch	TON	41.000	41.000
0008	305.0500	Shaping Shoulders	STA	264.000	264.000
0010	325.0100	Pulverize and Relay	SY	41,800.000	41,800.000
0012	374.1020.S	QMP Pulverize and Relay Compaction	SY	41,800.000	41,800.000
0014	455.0605	Tack Coat	GAL	3,000.000	3,000.000
0016	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0018	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0020	460.2005	Incentive Density PWL HMA Pavement	DOL	9,760.000	9,760.000
0022	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	6,540.000	6,540.000
0024	460.2010	Incentive Air Voids HMA Pavement	DOL	11,690.000	11,690.000
0026	460.5244	HMA Pavement 4 LT 58-34 S	TON	11,690.000	11,690.000
0028	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	28.000	28.000
0030	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8142-00-70	EACH	1.000	1.000
0032	619.1000	Mobilization	EACH	1.000	1.000
0034	624.0100	Water	MGAL	340.000	340.000
0036	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	8.000	8.000
0038	637.2230	Signs Type II Reflective F	SF	44.480	44.480
0040	642.5001	Field Office Type B	EACH	1.000	1.000
0042	643.0300	Traffic Control Drums	DAY	1,100.000	1,100.000
0044	643.0900	Traffic Control Signs	DAY	1,540.000	1,540.000
0046	643.5000	Traffic Control	EACH	1.000	1.000
0048	646.1020	Marking Line Epoxy 4-Inch	LF	19,870.000	19,870.000
0050	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	22,930.000	22,930.000
0052	646.3020	Marking Line Epoxy 8-Inch	LF	30.000	30.000
0054	646.6120	Marking Stop Line Epoxy 18-Inch	LF	20.000	20.000
0056	648.0100	Locating No-Passing Zones	MI	2.500	2.500
0058	650.5000	Construction Staking Base	LF	13,080.000	13,080.000
0060	650.8000	Construction Staking Resurfacing Reference	LF	13,080.000	13,080.000
0062	650.9910	Construction Staking Supplemental Control (project) 01. 8142-00-70	LS	1.000	1.000
0064	690.0150	Sawing Asphalt	LF	226.000	226.000
0066	740.0440	Incentive IRI Ride	DOL	10,000.000	10,000.000
0068	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0070	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

3

BASE AGGREGATE DENSE 3/4-INCH

STATION TO STATION		305.0110 TON	REMARKS
12+34	- 39+00	14	DRIVEWAYS
39+00	- 67+00	10	DRIVEWAYS
67+00	- 93+00	6	DRIVEWAYS
93+00	- 120+00	4	DRIVEWAYS
120+00	- 143+05	7	DRIVEWAYS
ITEM TOTAL		41	

ASPHALTIC ITEMS

STATION TO STATION		455.0605 TACK COAT GAL	460.5244 HMA PAVEMENT 4 LT TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
12+34	- 39+00	589	2,350	-
39+00	- 67+00	649	2,515	6
67+00	- 93+00	669	2,466	-
93+00	- 120+00	590	2,352	8
120+00	- 143+05	503	2,007	13
ITEM TOTAL		3,000	11,690	28

3

SHAPING SHOULDERS

STATION TO STATION		305.0500 STA
12+34	- 39+00	54
39+00	- 67+00	56
67+00	- 93+00	52
93+00	- 120+00	54
120+00	- 143+05	48
ITEM TOTAL		264

PWL MIXTURE USE TABLE

THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT:

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEMS	TONS	THICKNES S	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
24' DRIVING LANES	12+34 TO 143+04	LOWER LAYER	PULVERIZED AND RELAID BASE	4 LT 58-34 S	5,368	2 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
24' DRIVING LANES	12+34 TO 143+04	UPPER LAYER	4 LT 58-34 S	4 LT 58-34 S	4,392	2 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
2' SHOULDERS & SIDEROADS	12+34 TO 143+04	LOWER LAYER	PULVERIZED AND RELAID BASE	4 LT 58-34 S	1,062	2 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
2' SHOULDERS & SIDEROADS	12+34 TO 143+04	UPPER LAYER	4 LT 58-34 S	4 LT 58-34 S	868	2 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE

MILLING & PULVERIZING ITEMS

STATION TO STATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	325.0100 PULVERIZE AND RELAY SY	374.1020.S CMP PULVERIZE AND RELAY COMPACTION SY	REMARKS
	12+34 - 39+00	7,287	8,403	
39+00 - 67+00	8,327	8,990	8,990	QUANTITIES INCLUDE SIDE ROADS
67+00 - 93+00	7,826	8,817	8,817	QUANTITIES INCLUDE SIDE ROADS
93+00 - 120+00	7,268	8,411	8,411	QUANTITIES INCLUDE SIDE ROADS
120+00 - 143+05	6,192	7,179	7,179	QUANTITIES INCLUDE SIDE ROADS
ITEM TOTAL	36,900	41,800	41,800	

WATER

STATION TO STATION		624.0100 MGAL
12+34	- 39+00	68
39+00	- 67+00	73
67+00	- 93+00	72
93+00	- 120+00	68
120+00	- 143+05	59
ITEM TOTAL		340

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

PROJECT NO: 8142-00-70

HWY: CTH F

COUNTY: POLK

MISCELLANEOUS QUANTITIES

SHEET

E

3

3

PERMANENT SIGNING ITEMS

SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIZE	634.0614	637.2230
				POSTS WOOD 4X6-INCH X 14-FT EACH	SIGNS TYPE II REFLECTIVE F SF
1	W14-3	NO PASSING ZONE	48 X 36	1	5.56
2	W14-3	NO PASSING ZONE	48 X 36	1	5.56
3	W14-3	NO PASSING ZONE	48 X 36	1	5.56
4	W14-3	NO PASSING ZONE	48 X 36	1	5.56
5	W14-3	NO PASSING ZONE	48 X 36	1	5.56
6	W14-3	NO PASSING ZONE	48 X 36	1	5.56
7	W14-3	NO PASSING ZONE	48 X 36	1	5.56
8	W14-3	NO PASSING ZONE	48 X 36	1	5.56
ITEM TOTAL				8	44.48

LOCATING NO-PASSING ZONES

STATION TO	STATION	648.0100 MI
12+34	- 143+05	2.50
ITEM TOTAL		2.50

TRAFFIC CONTROL

STATION TO	STATION	643.0300	643.0900	643.5000
		DRUMS DAY	SIGNS DAY	EACH
12+34	- 143+05	-	1,540	1
UNDISTRIBUTED		1,100	-	-
ITEM TOTAL		1,100	1,540	1

CONSTRUCTION STAKING

STATION TO	STATION	650.5000	650.8000	650.9910.01
		BASE LF	RESURFACING REFERENCE LF	SUPPLEMENTAL CONTROL (8142-00-70) LS
12+34	- 143+05	13,080	13,080	1
ITEM TOTAL		13,080	13,080	1

PAVEMENT MARKING ITEMS

STATION TO	STATION	646.1020	646.1040	646.3020	646.6120
		MARKING LINE EPOXY 4-INCH LF	MARKING LINE GROOVED WET REF EPOXY 4-INCH LF	MARKING LINE EPOXY 8-INCH LF	MARKING STOP LINE EPOXY 18-INCH LF
12+34	- 39+00	5,491	2404	30	-
39+00	- 67+00	5,602	5603	-	-
67+00	- 93+00	3,712	5318	-	20
93+00	- 120+00	2,176	5402	-	-
120+00	- 143+05	2,889	4203	-	-
ITEM TOTAL		19,870	22,930	30	20

SAWING ASPHALT

STATION	LOCATION	690.0150 LF
12+34	BEGIN	40
49+63	LT	24
65+53	LT	24
74+07	LT	24
92+03	LT	28
92+03	RT	34
102+13	RT	24
143+05	END	28
ITEM TOTAL		226

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

PROJECT NO: 8142-00-70

HWY: CTH F

COUNTY: POLK

MISCELLANEOUS QUANTITIES

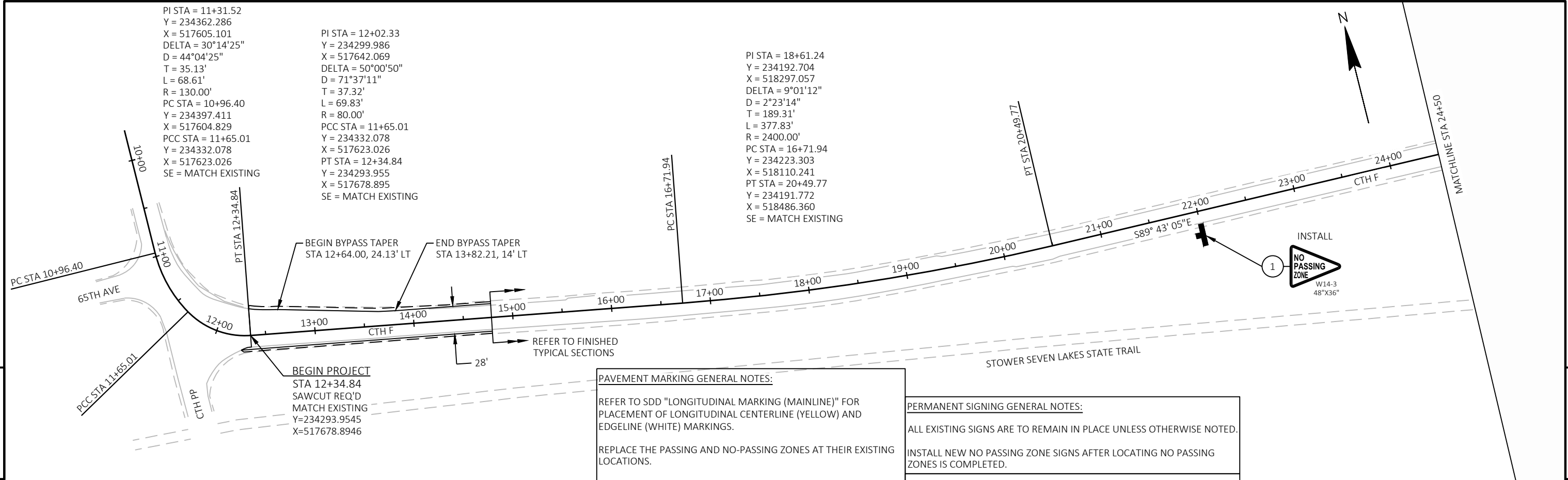
SHEET

E

PI STA = 11+31.52
 Y = 234362.286
 X = 517605.101
 DELTA = 30°14'25"
 D = 44°04'25"
 T = 35.13'
 L = 68.61'
 R = 130.00'
 PC STA = 10+96.40
 Y = 234397.411
 X = 517604.829
 PCC STA = 11+65.01
 Y = 234332.078
 X = 517623.026
 SE = MATCH EXISTING

PI STA = 12+02.33
 Y = 234299.986
 X = 517642.069
 DELTA = 50°00'50"
 D = 71°37'11"
 T = 37.32'
 L = 69.83'
 R = 80.00'
 PCC STA = 11+65.01
 Y = 234332.078
 X = 517623.026
 PT STA = 12+34.84
 Y = 234293.955
 X = 517678.895
 SE = MATCH EXISTING

PI STA = 18+61.24
 Y = 234192.704
 X = 518297.057
 DELTA = 9°01'12"
 D = 2°23'14"
 T = 189.31'
 L = 377.83'
 R = 2400.00'
 PC STA = 16+71.94
 Y = 234223.303
 X = 518110.241
 PT STA = 20+49.77
 Y = 234191.772
 X = 518486.360
 SE = MATCH EXISTING





5

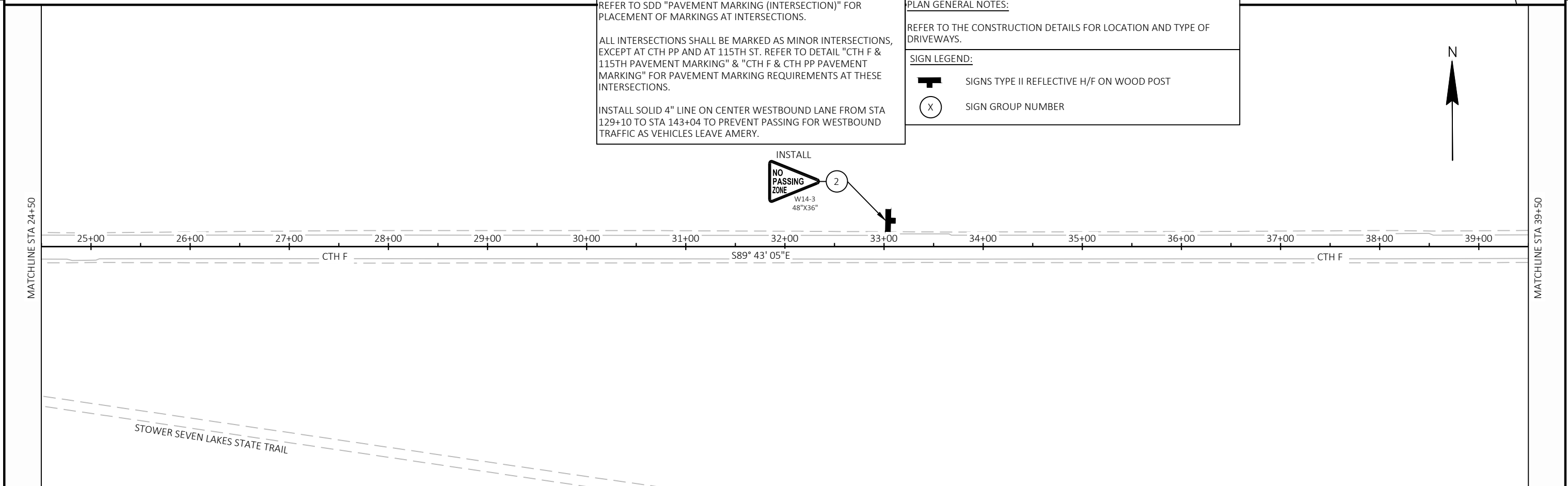
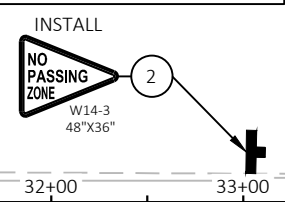
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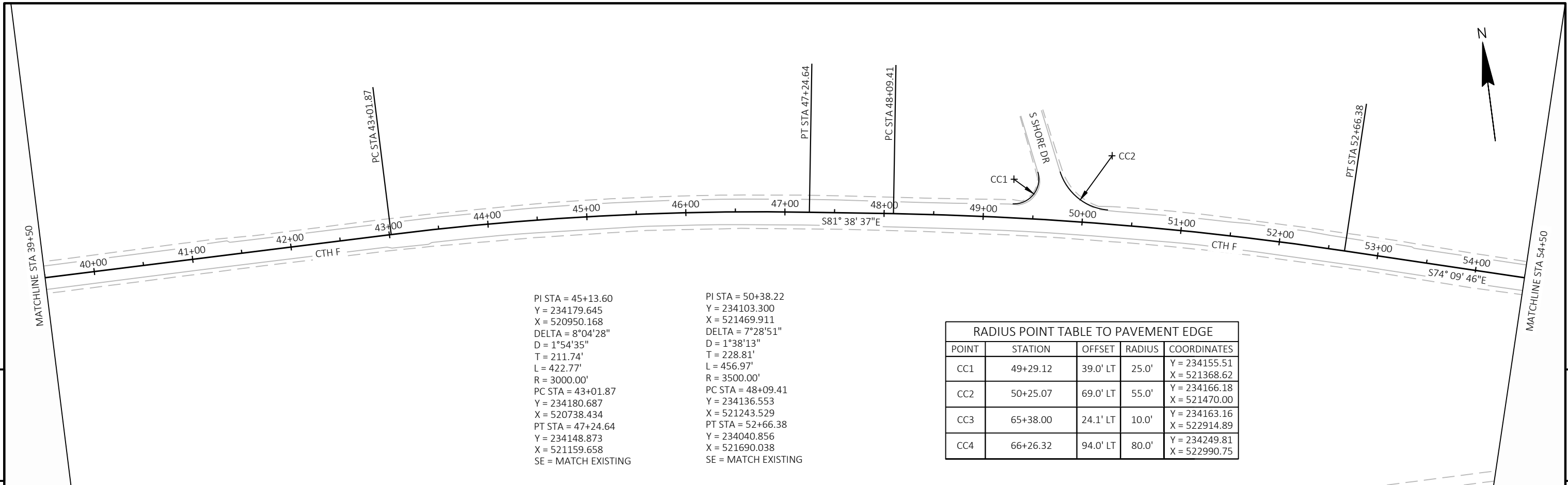
PAVEMENT MARKING GENERAL NOTES:
 REFER TO SDD "LONGITUDINAL MARKING (MAINLINE)" FOR PLACEMENT OF LONGITUDINAL CENTERLINE (YELLOW) AND EDGELINE (WHITE) MARKINGS.
 REPLACE THE PASSING AND NO-PASSING ZONES AT THEIR EXISTING LOCATIONS.
 REFER TO SDD "PAVEMENT MARKING (INTERSECTION)" FOR PLACEMENT OF MARKINGS AT INTERSECTIONS.
 ALL INTERSECTIONS SHALL BE MARKED AS MINOR INTERSECTIONS, EXCEPT AT CTH PP AND AT 115TH ST. REFER TO DETAIL "CTH F & 115TH PAVEMENT MARKING" & "CTH F & CTH PP PAVEMENT MARKING" FOR PAVEMENT MARKING REQUIREMENTS AT THESE INTERSECTIONS.
 INSTALL SOLID 4" LINE ON CENTER WESTBOUND LANE FROM STA 129+10 TO STA 143+04 TO PREVENT PASSING FOR WESTBOUND TRAFFIC AS VEHICLES LEAVE AMERY.

PERMANENT SIGNING GENERAL NOTES:
 ALL EXISTING SIGNS ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
 INSTALL NEW NO PASSING ZONE SIGNS AFTER LOCATING NO PASSING ZONES IS COMPLETED.

PLAN GENERAL NOTES:
 REFER TO THE CONSTRUCTION DETAILS FOR LOCATION AND TYPE OF DRIVEWAYS.

SIGN LEGEND:
 SIGNS TYPE II REFLECTIVE H/F ON WOOD POST
 SIGN GROUP NUMBER

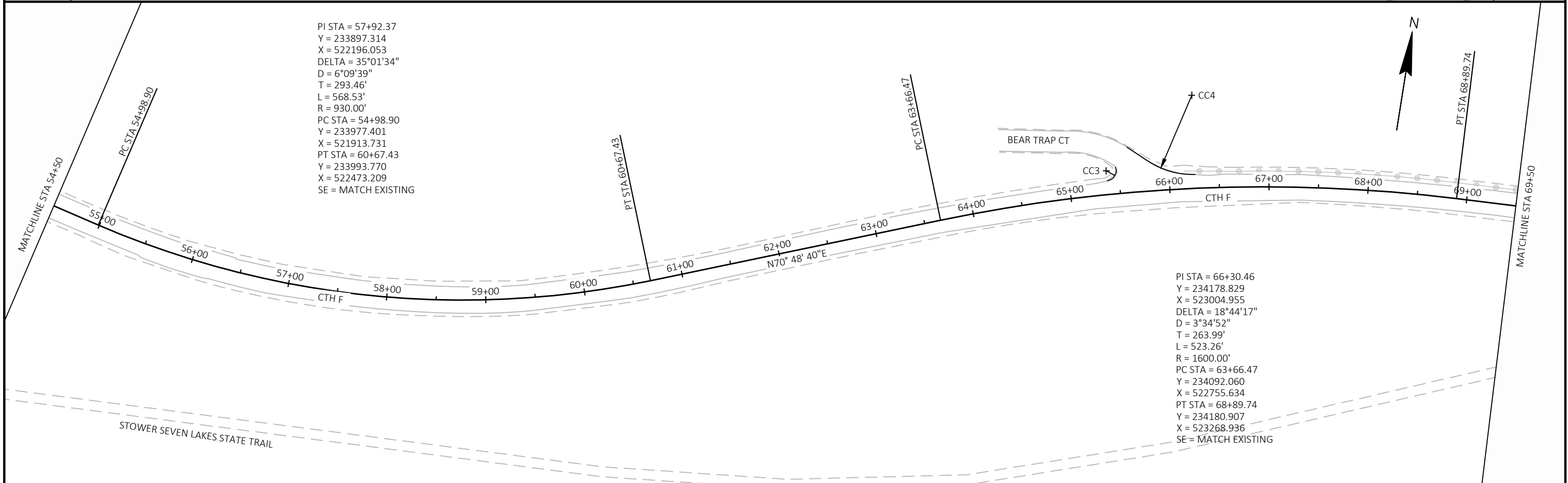




PI STA = 45+13.60
 Y = 234179.645
 X = 520950.168
 DELTA = $8^{\circ}04'28''$
 D = $1^{\circ}54'35''$
 T = 211.74'
 L = 422.77'
 R = 3000.00'
 PC STA = 43+01.87
 Y = 234180.687
 X = 520738.434
 PT STA = 47+24.64
 Y = 234148.873
 X = 521159.658
 SE = MATCH EXISTING

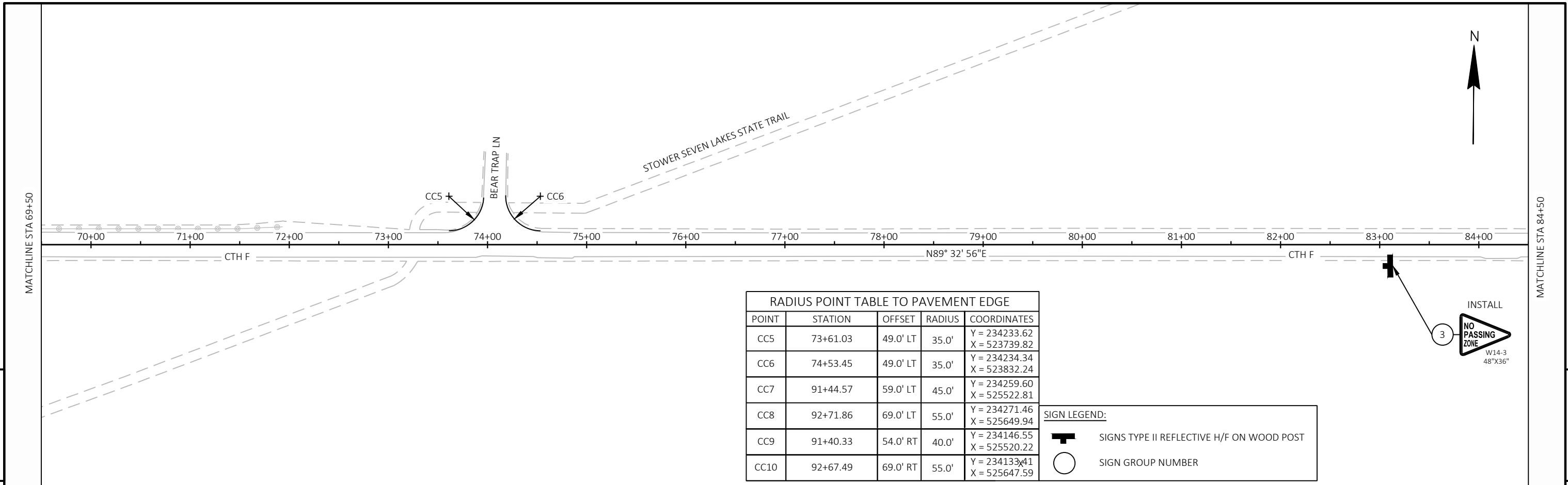
PI STA = 50+38.22
 Y = 234103.300
 X = 521469.911
 DELTA = $7^{\circ}28'51''$
 D = $1^{\circ}38'13''$
 T = 228.81'
 L = 456.97'
 R = 3500.00'
 PC STA = 48+09.41
 Y = 234136.553
 X = 521243.529
 PT STA = 52+66.38
 Y = 234040.856
 X = 521690.038
 SE = MATCH EXISTING

RADIUS POINT TABLE TO PAVEMENT EDGE				
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC1	49+29.12	39.0' LT	25.0'	Y = 234155.51 X = 521368.62
CC2	50+25.07	69.0' LT	55.0'	Y = 234166.18 X = 521470.00
CC3	65+38.00	24.1' LT	10.0'	Y = 234163.16 X = 522914.89
CC4	66+26.32	94.0' LT	80.0'	Y = 234249.81 X = 522990.75



PI STA = 57+92.37
 Y = 233897.314
 X = 522196.053
 DELTA = $35^{\circ}01'34''$
 D = $6^{\circ}09'39''$
 T = 293.46'
 L = 568.53'
 R = 930.00'
 PC STA = 54+98.90
 Y = 233977.401
 X = 521913.731
 PT STA = 60+67.43
 Y = 233993.770
 X = 522473.209
 SE = MATCH EXISTING

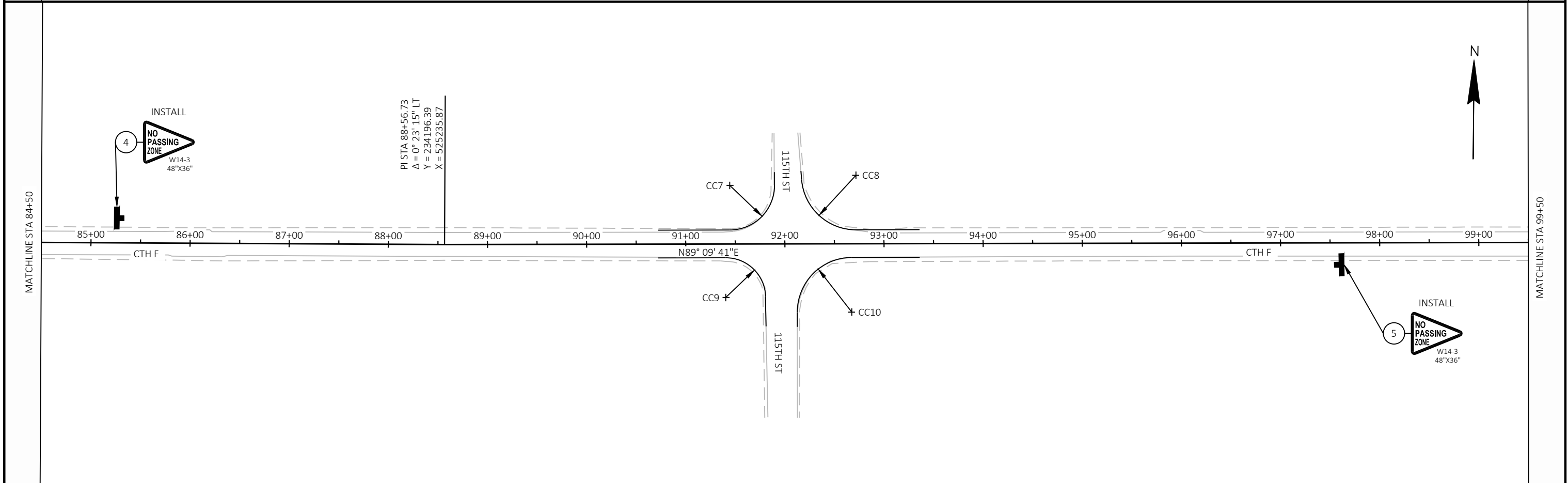
PI STA = 66+30.46
 Y = 234178.829
 X = 523004.955
 DELTA = $18^{\circ}44'17''$
 D = $3^{\circ}34'52''$
 T = 263.99'
 L = 523.26'
 R = 1600.00'
 PC STA = 63+66.47
 Y = 234092.060
 X = 522755.634
 PT STA = 68+89.74
 Y = 234180.907
 X = 523268.936
 SE = MATCH EXISTING

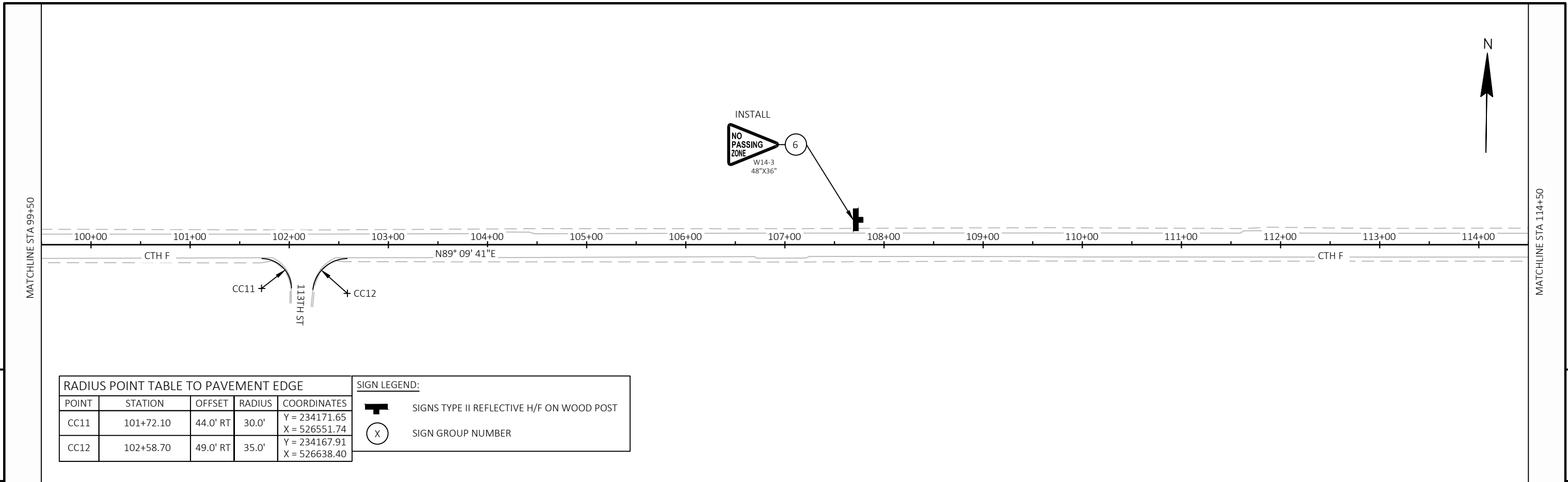


RADIUS POINT TABLE TO PAVEMENT EDGE				
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC5	73+61.03	49.0' LT	35.0'	Y = 234233.62 X = 523739.82
CC6	74+53.45	49.0' LT	35.0'	Y = 234234.34 X = 523832.24
CC7	91+44.57	59.0' LT	45.0'	Y = 234259.60 X = 525522.81
CC8	92+71.86	69.0' LT	55.0'	Y = 234271.46 X = 525649.94
CC9	91+40.33	54.0' RT	40.0'	Y = 234146.55 X = 525520.22
CC10	92+67.49	69.0' RT	55.0'	Y = 234133.41 X = 525647.59

SIGN LEGEND:

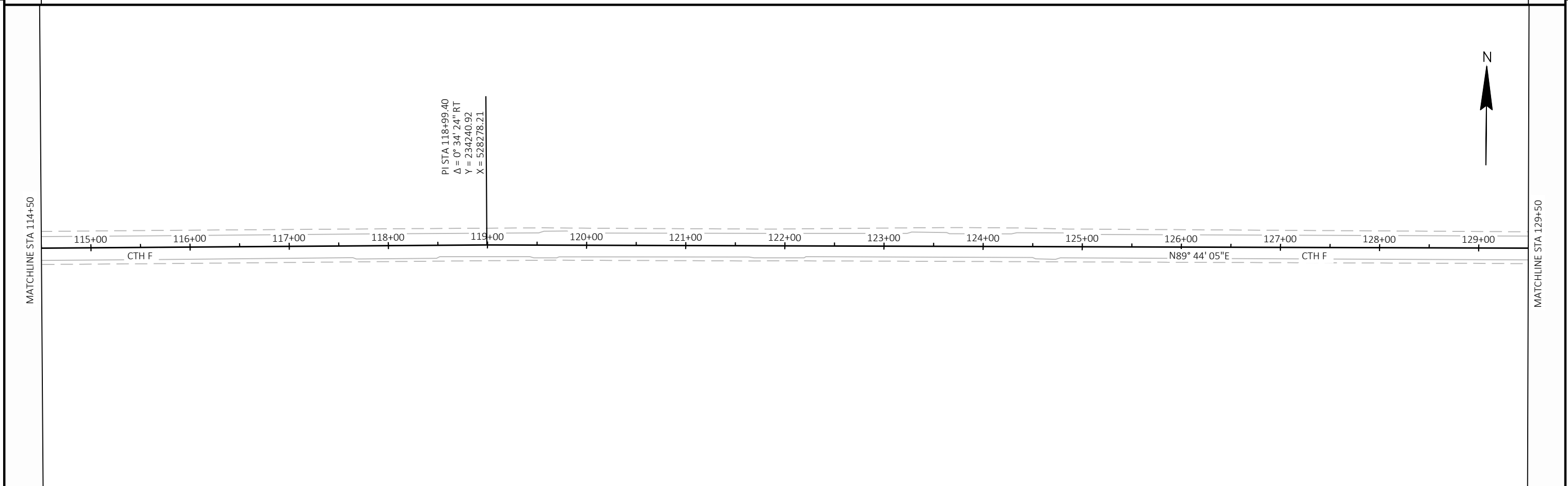
- SIGNS TYPE II REFLECTIVE H/F ON WOOD POST
- SIGN GROUP NUMBER





RADIUS POINT TABLE TO PAVEMENT EDGE				
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC11	101+72.10	44.0' RT	30.0'	Y = 234171.65 X = 526551.74
CC12	102+58.70	49.0' RT	35.0'	Y = 234167.91 X = 526638.40

SIGN LEGEND:	
	SIGNS TYPE II REFLECTIVE H/F ON WOOD POST
	SIGN GROUP NUMBER



PROJECT NO: 8142-00-70 HWY: CTH F COUNTY: POLK PLAN SHEET E

MATCHLINE STA 129+50



130+00 131+00 132+00 133+00 134+00 135+00 136+00 137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00

CTH F

N89° 48' 04"E

CTH F



W14-3
48"X36"

PI STA 133+37.32
Δ = 0° 3' 59" RT
Y = 234247.58
X = 529716.12



REFER TO FINISHED
TYPICAL SECTIONS

105TH ST



PONDHURST DR



W14-3
48"X36"

END PROJECT
STA 143+04.02
SAWCUT REQ'D
MATCH EXISTING
Y=234250.919
X=530682.818

SIGN LEGEND:

-  SIGNS TYPE II REFLECTIVE H/F ON WOOD POST
-  SIGN GROUP NUMBER

5

5

Standard Detail Drawing List

15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL

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. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

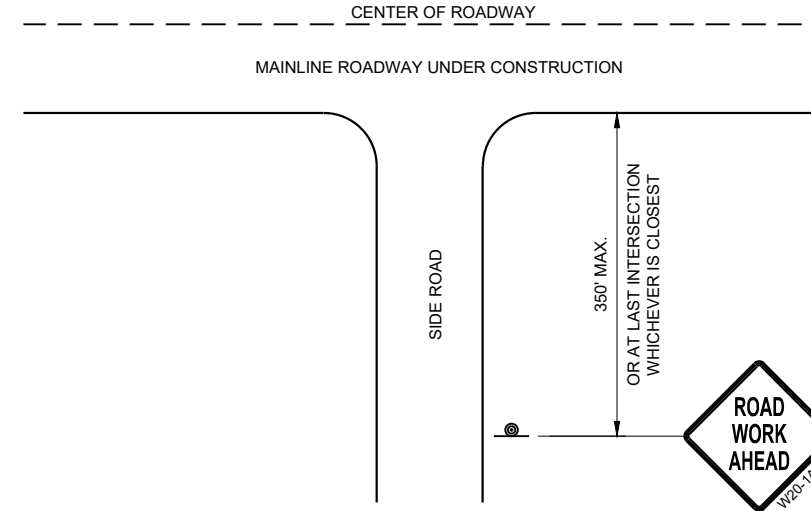
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

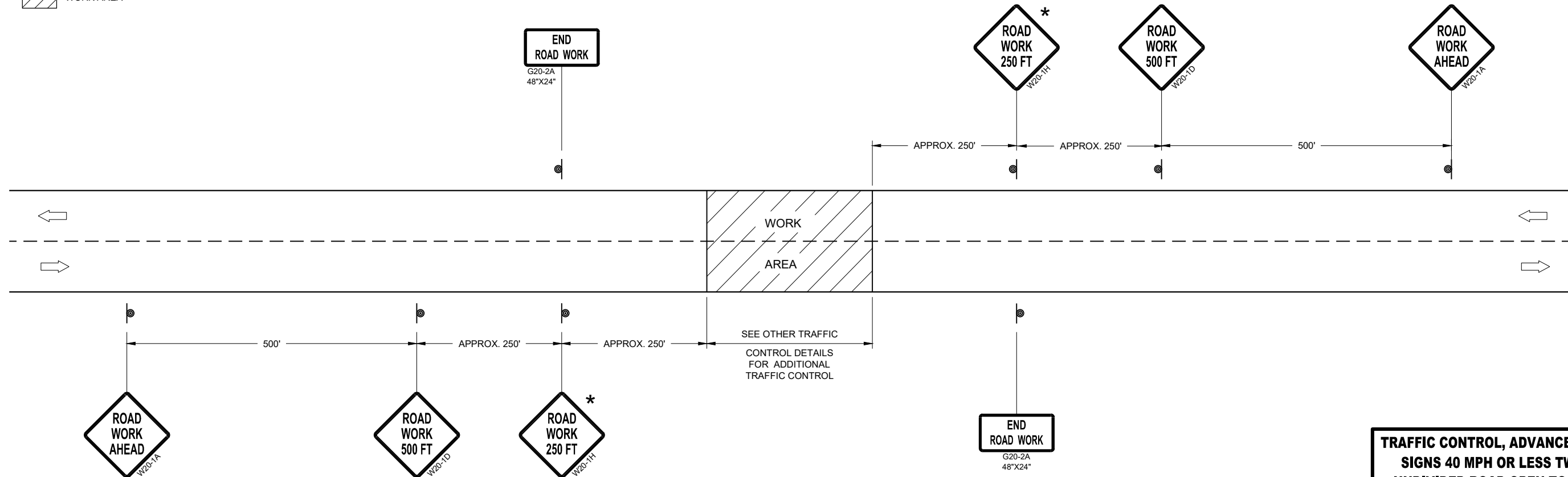
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



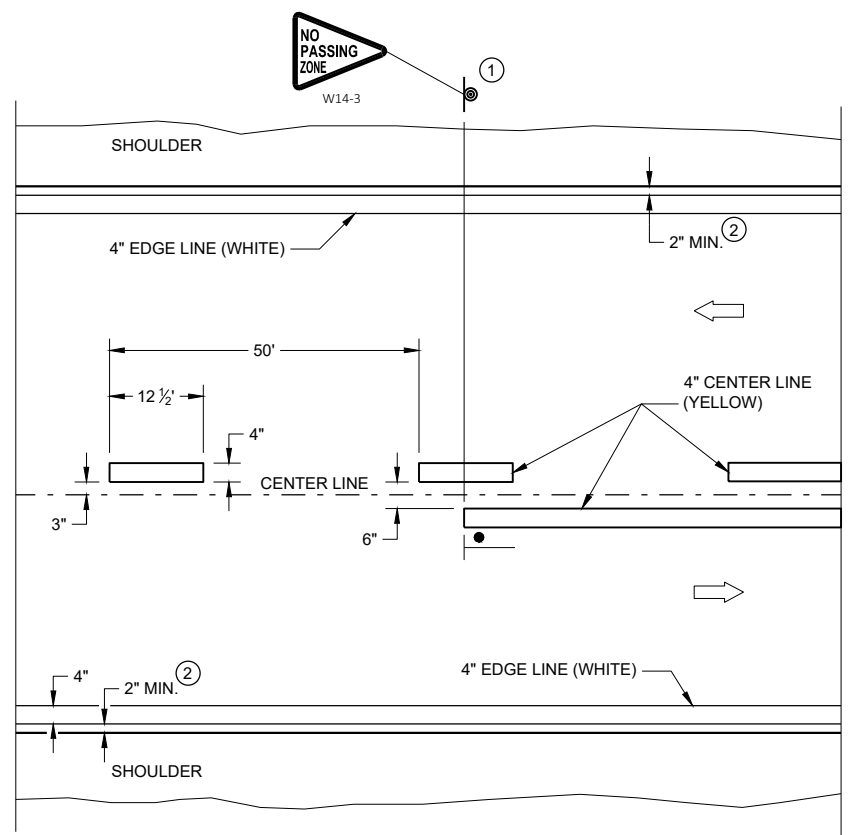
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

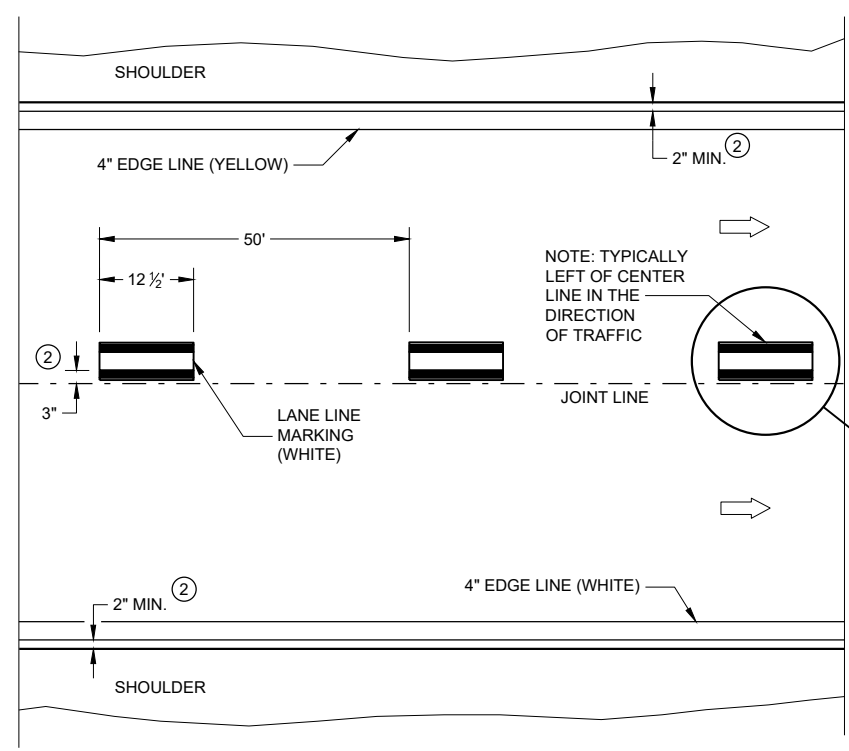
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

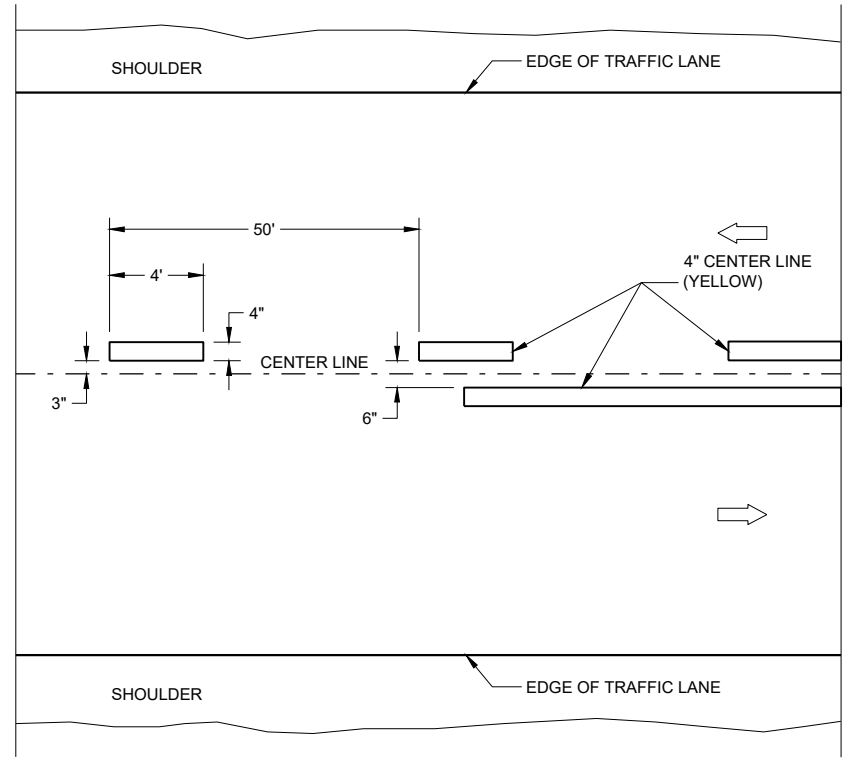


TWO WAY TRAFFIC

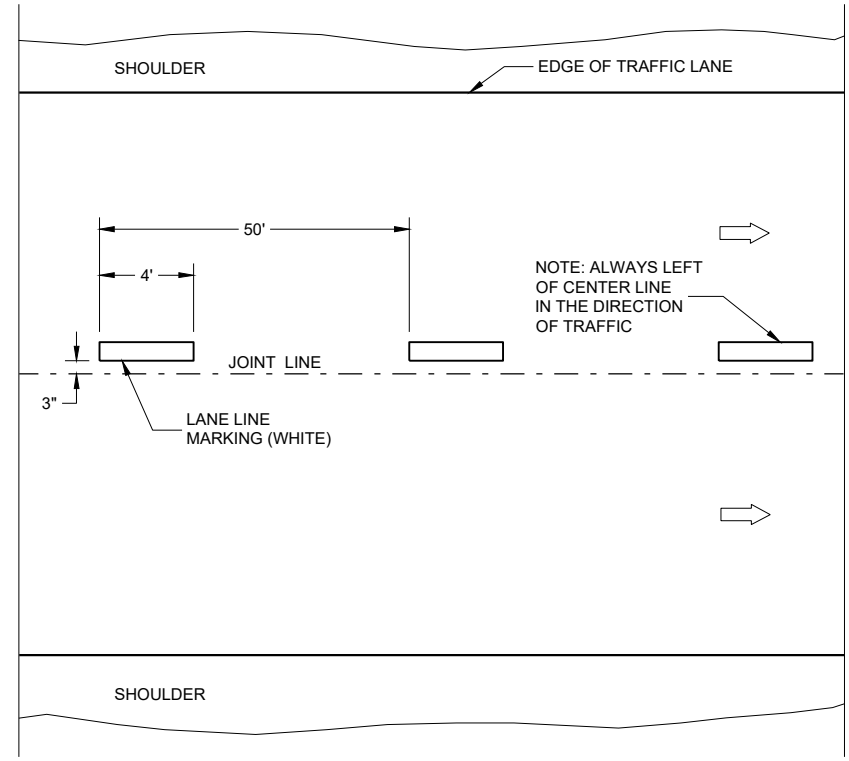


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

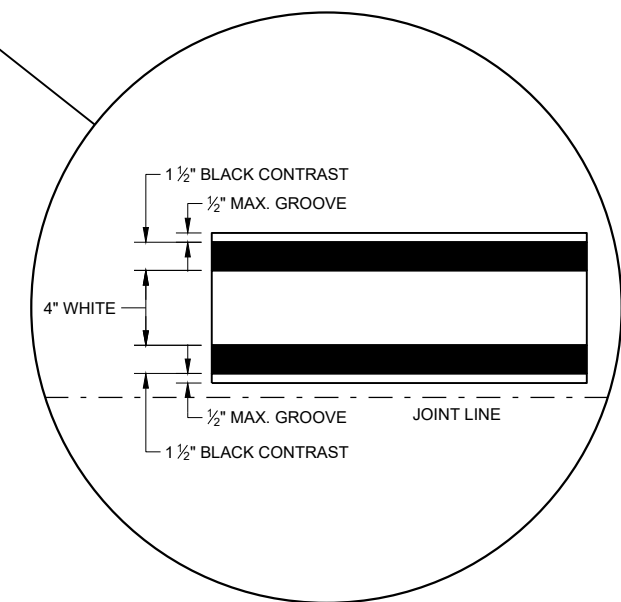
GENERAL NOTES

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
- 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








LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Matthew Rauch
DATE STATEWIDE SIGNING AND MARKING
ENGINEER

FHWA

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.

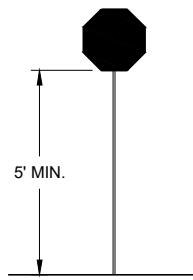
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

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 SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR 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

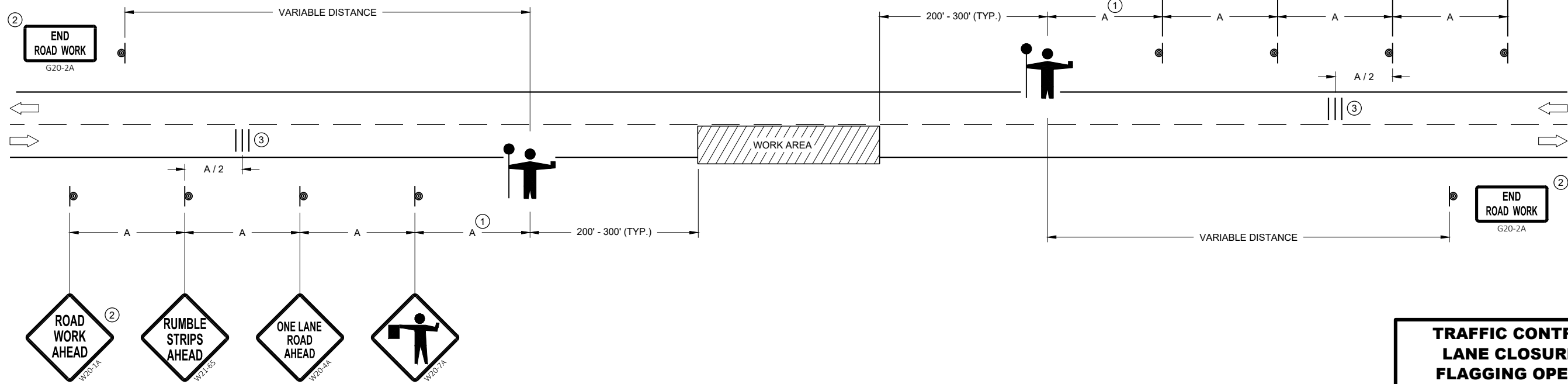
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

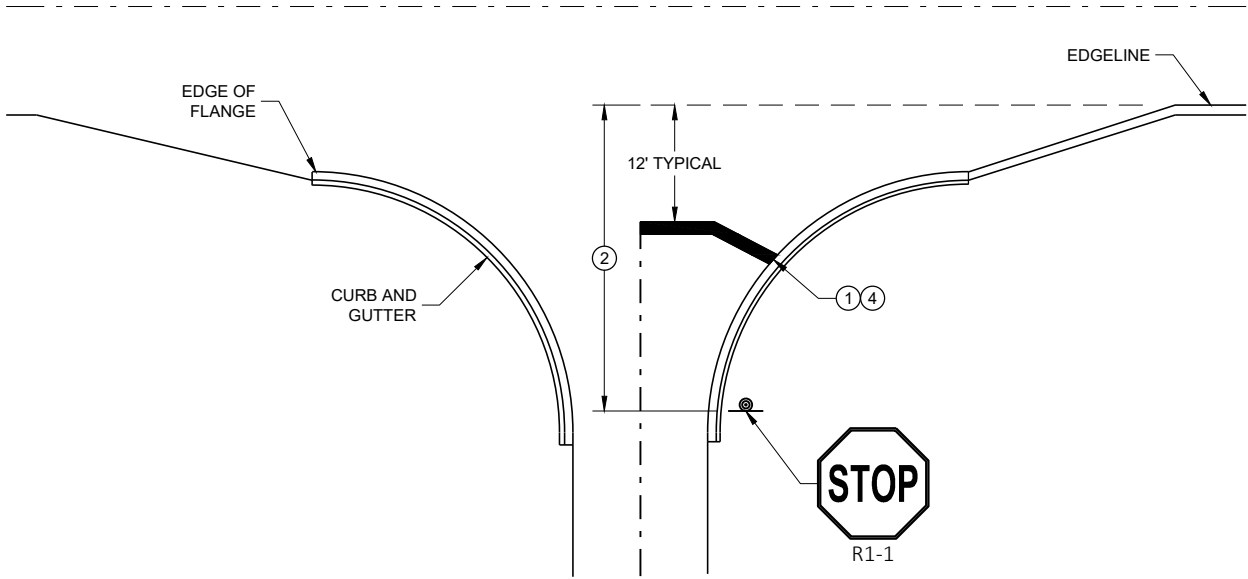
APPROVED
DATE May 2019 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

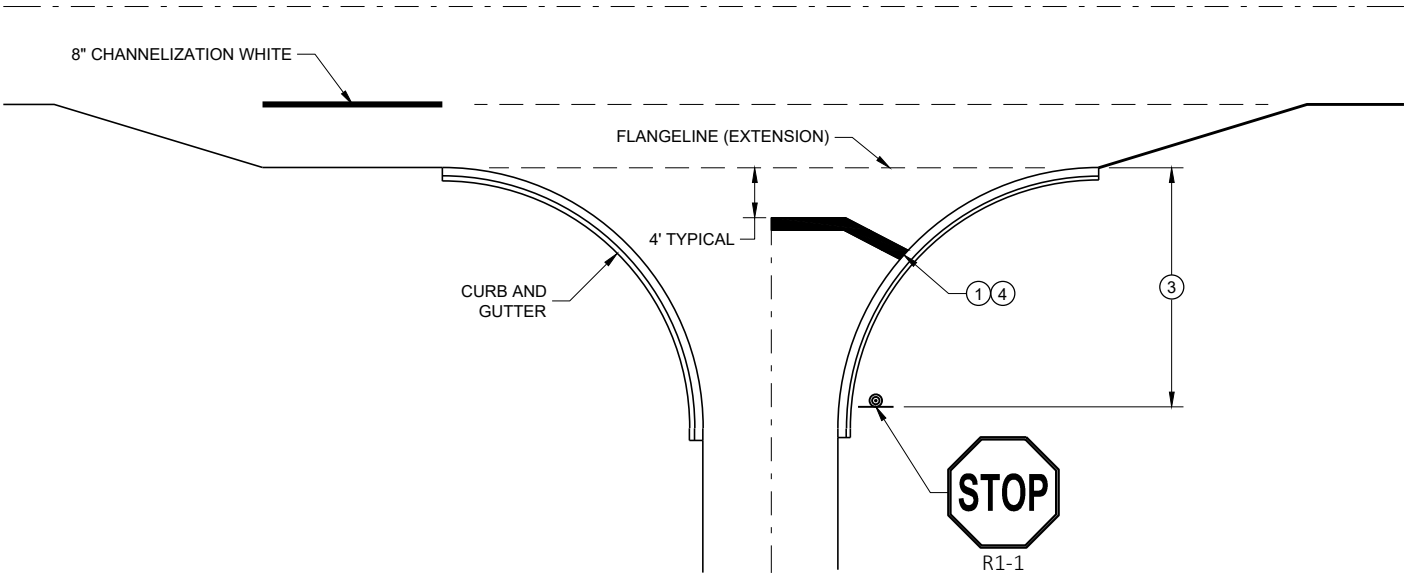
GENERAL NOTES

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

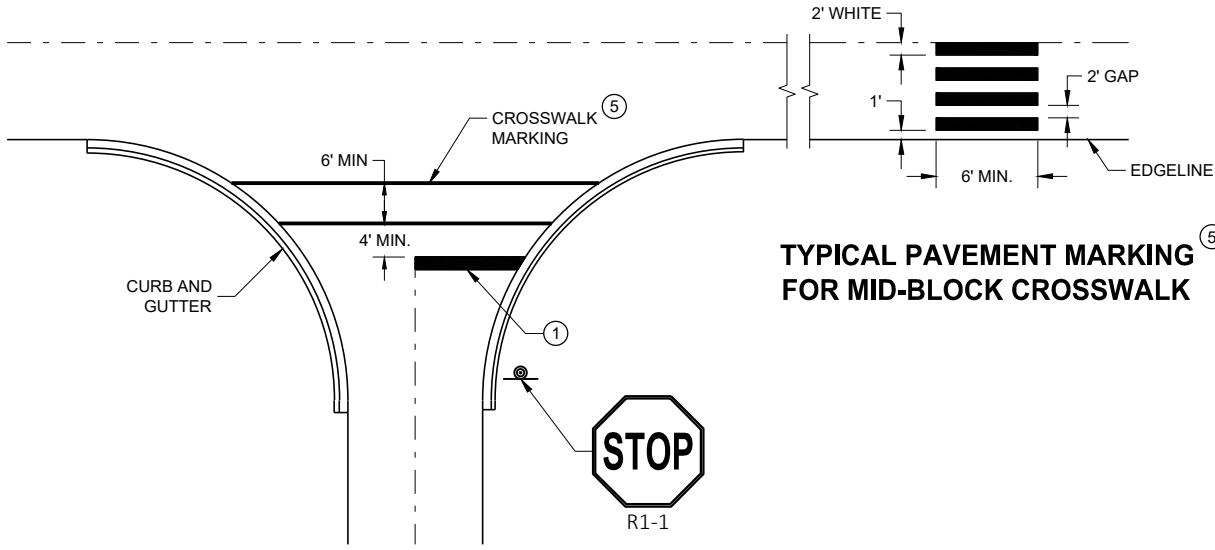
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



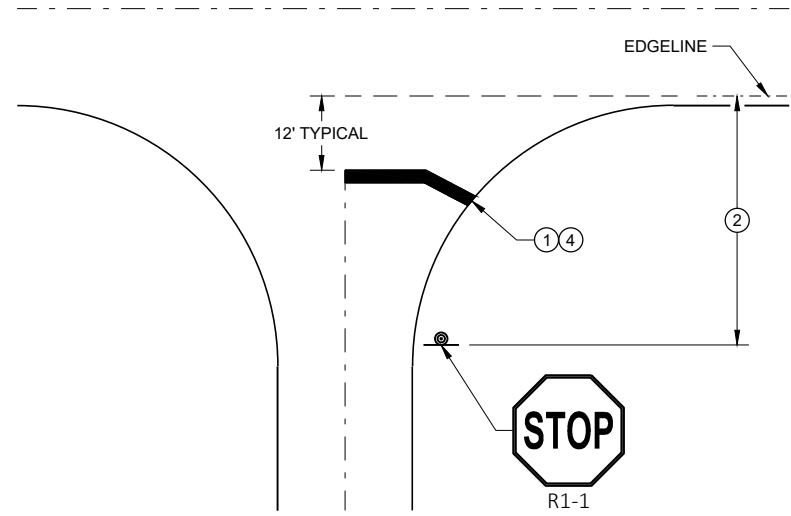
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

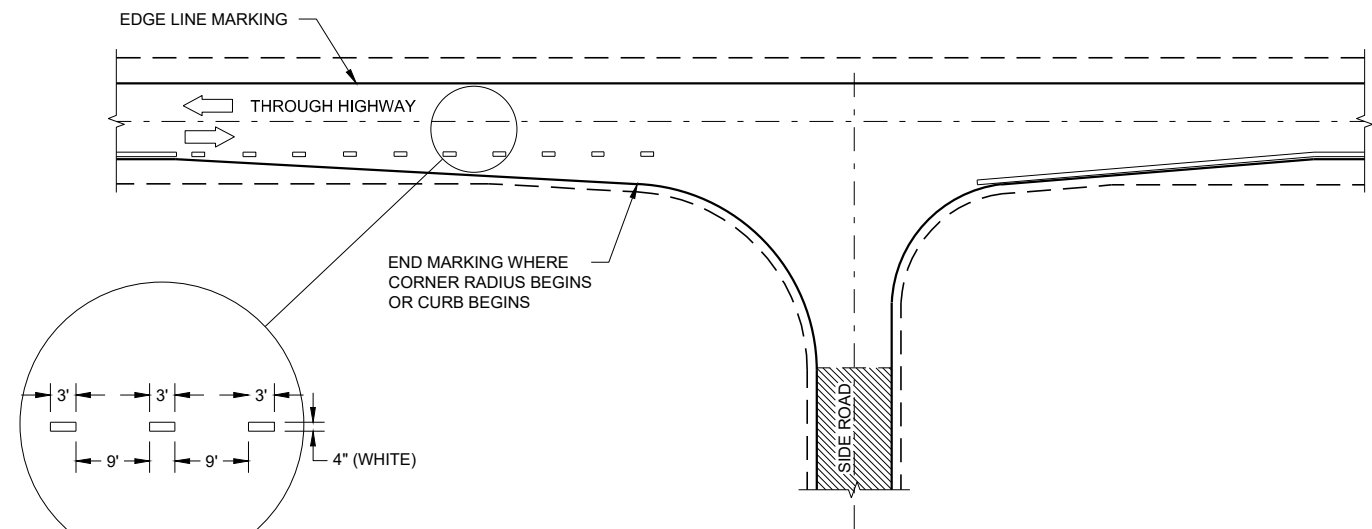
GENERAL NOTES

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

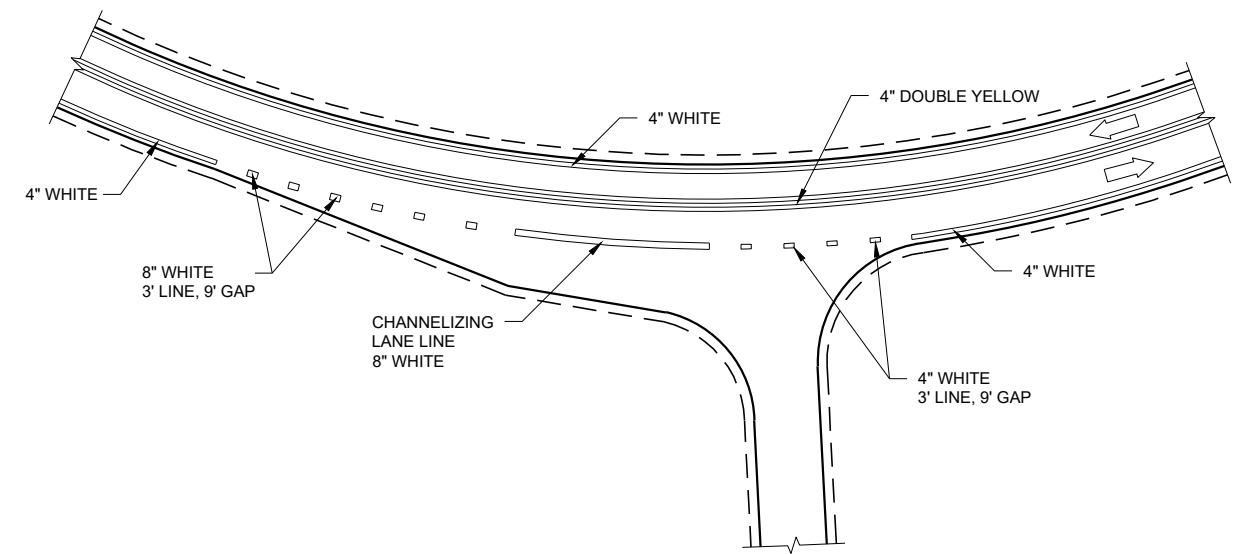
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

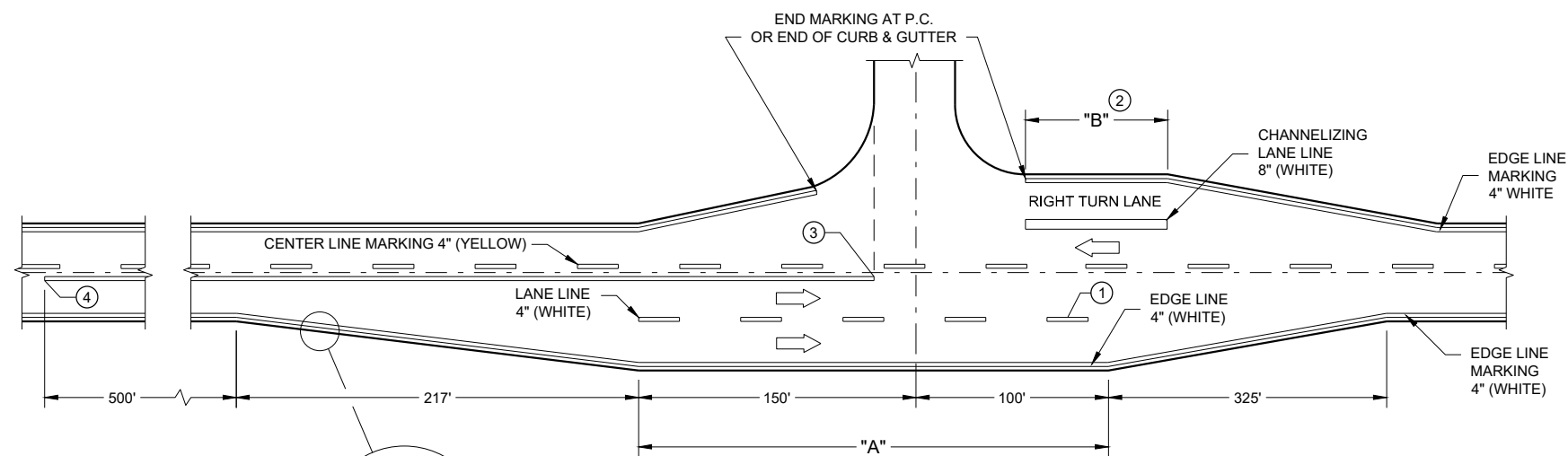
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION



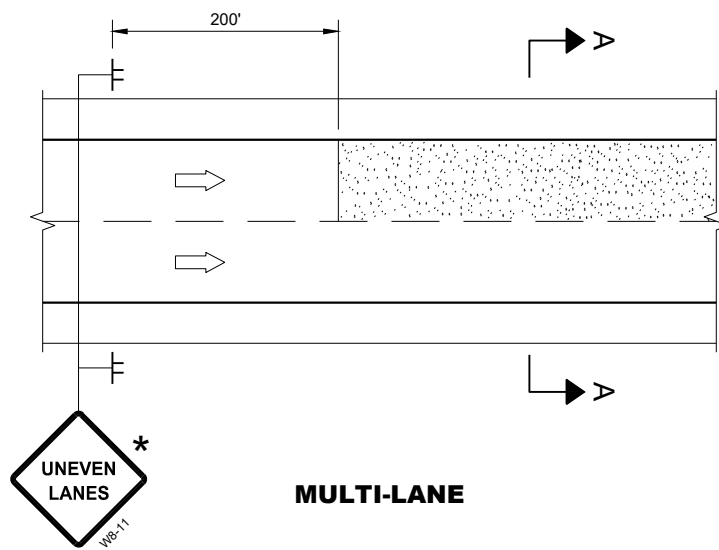
INTERSECTION ON OUTSIDE OF CURVE



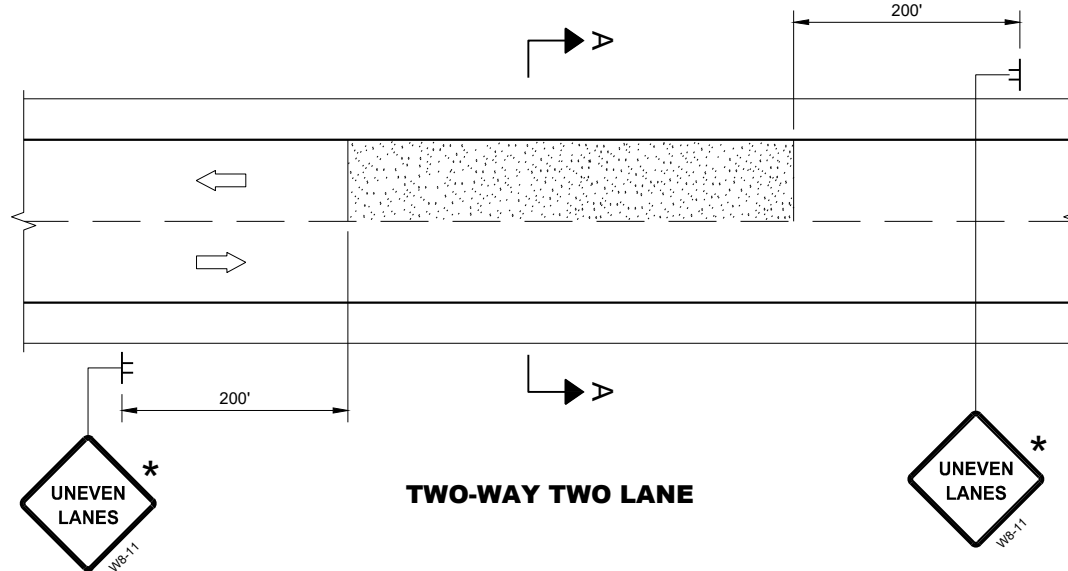
**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**

**PAVEMENT MARKING
(INTERSECTIONS)**

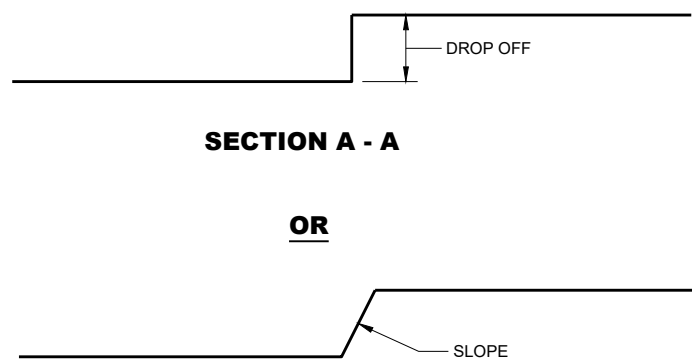
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MULTI-LANE



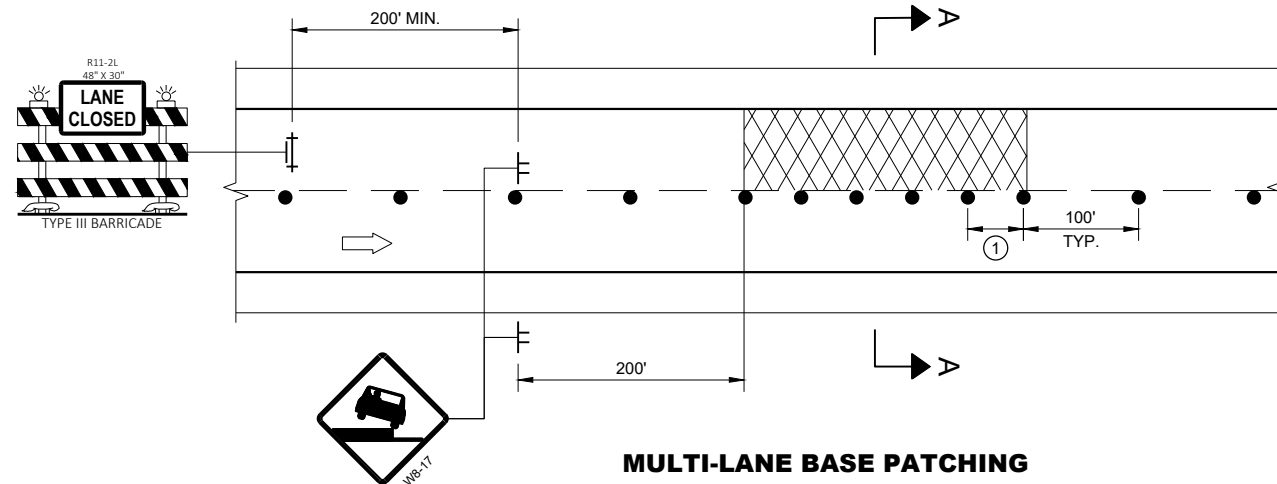
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

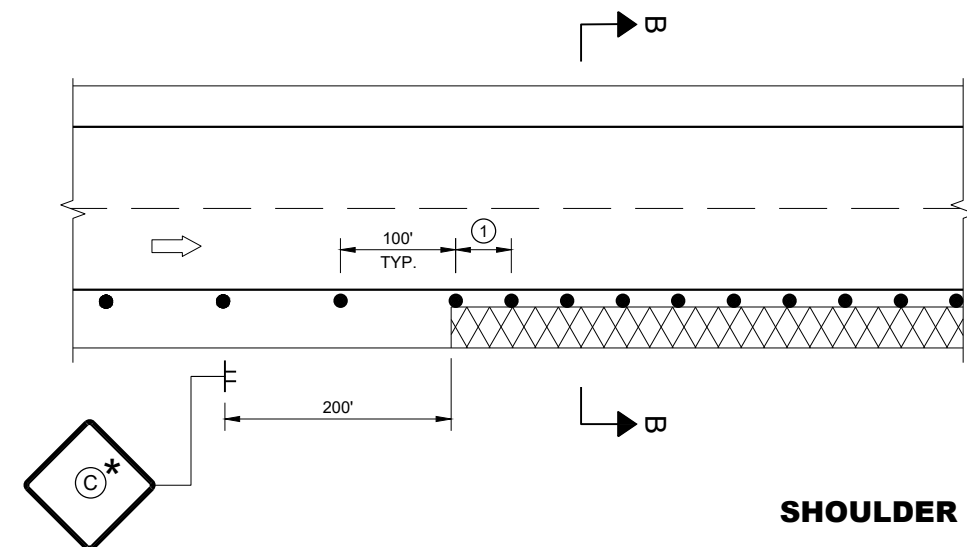
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

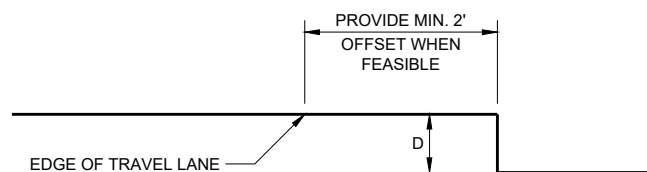
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE DATE 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.

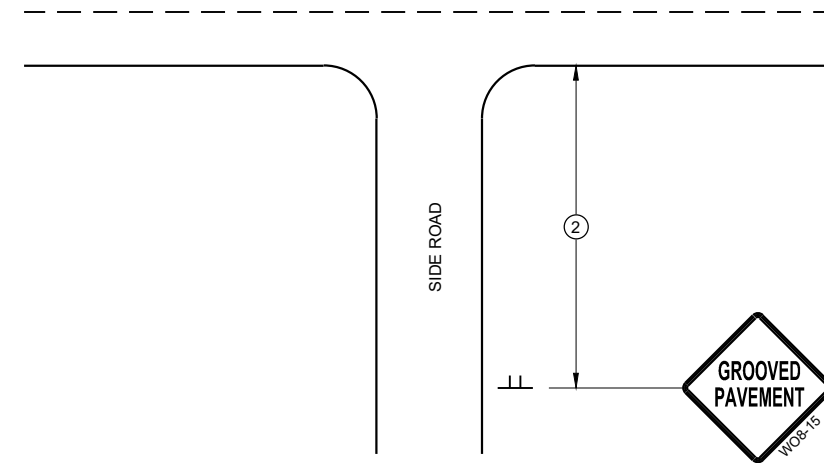
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

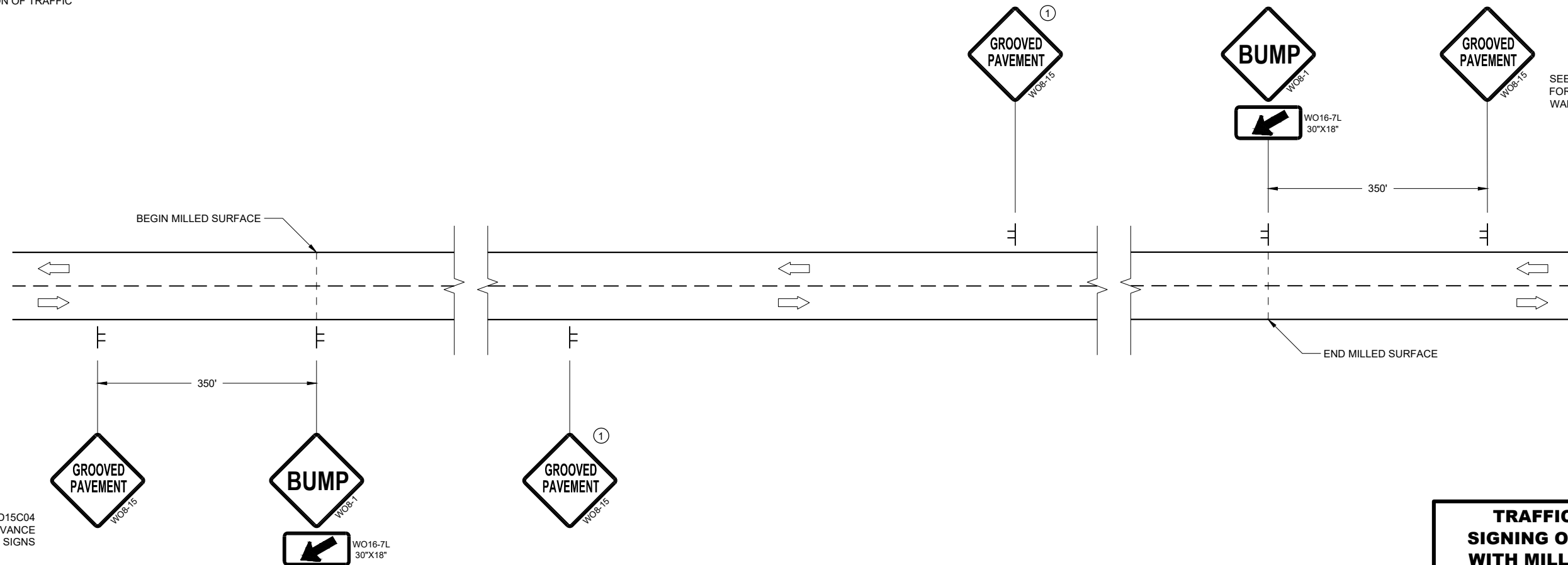
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

- ⌄ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

DETAIL FOR SIGNING ON MILLED SURFACES

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

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.

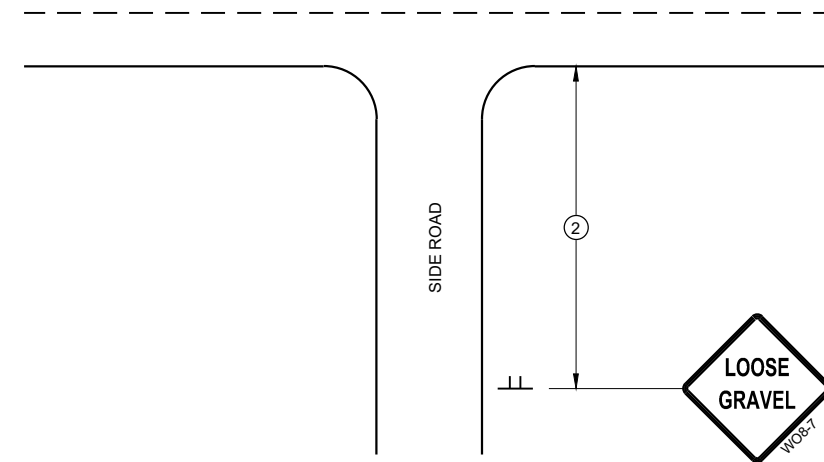
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

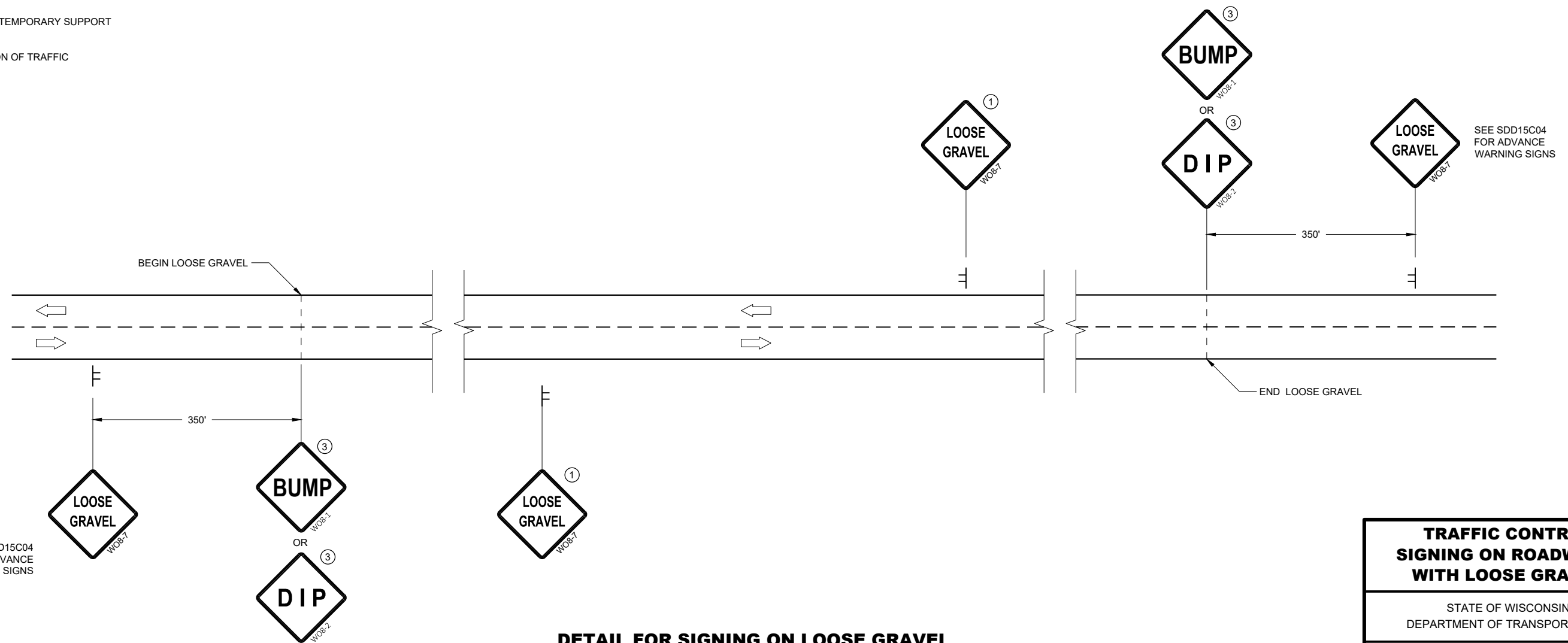
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

- ⊥ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

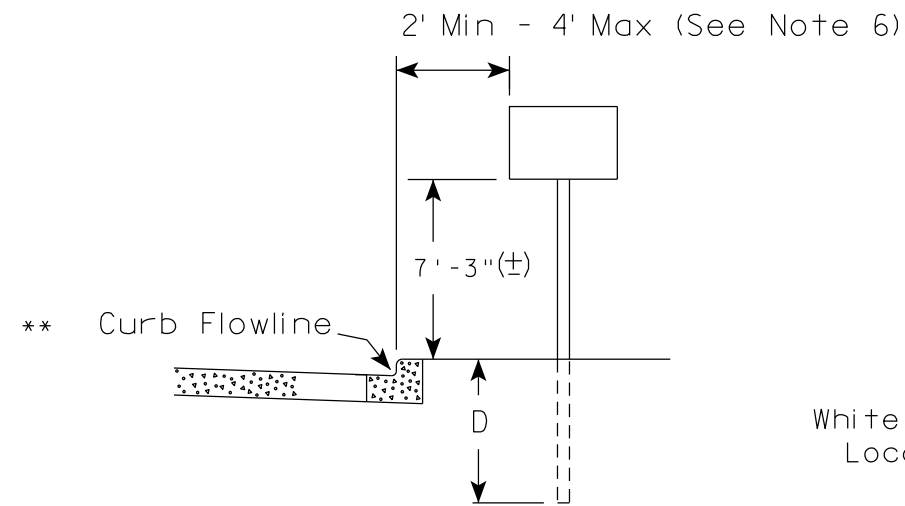
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

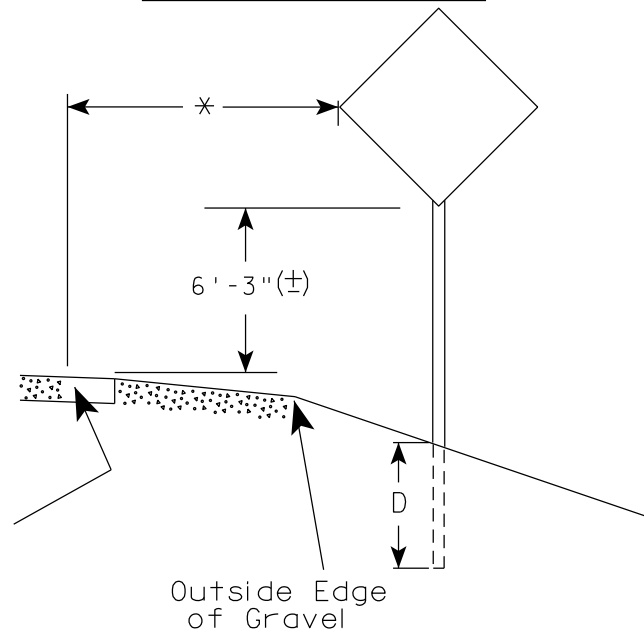
FHWA

URBAN AREA

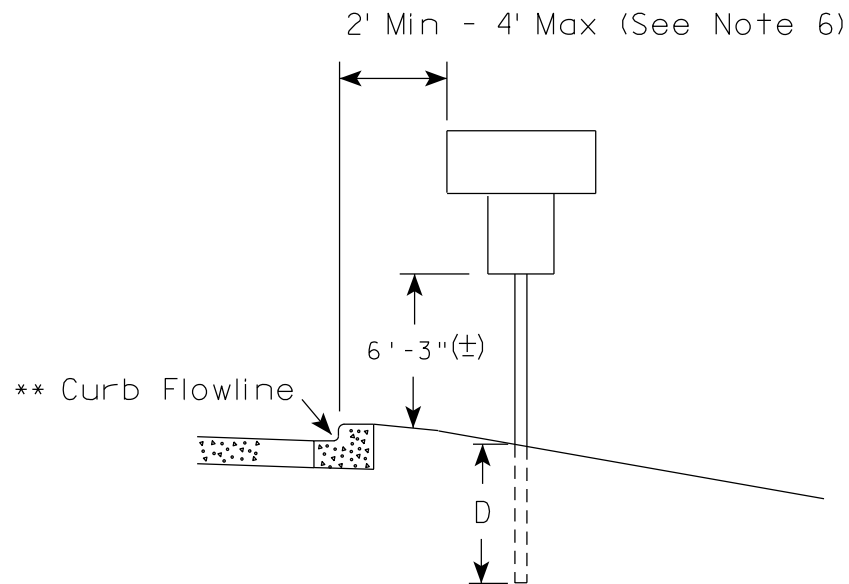
RURAL AREA (See Note 2)



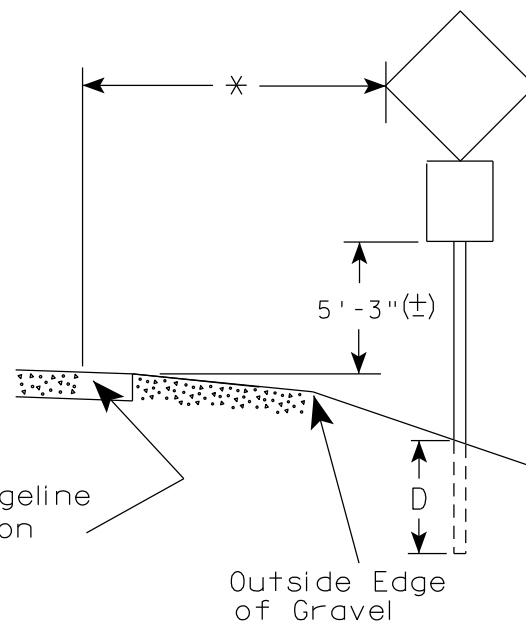
White Edgeline Location



Outside Edge of Gravel



White Edgeline Location



Outside Edge of Gravel

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

7

7

* * The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

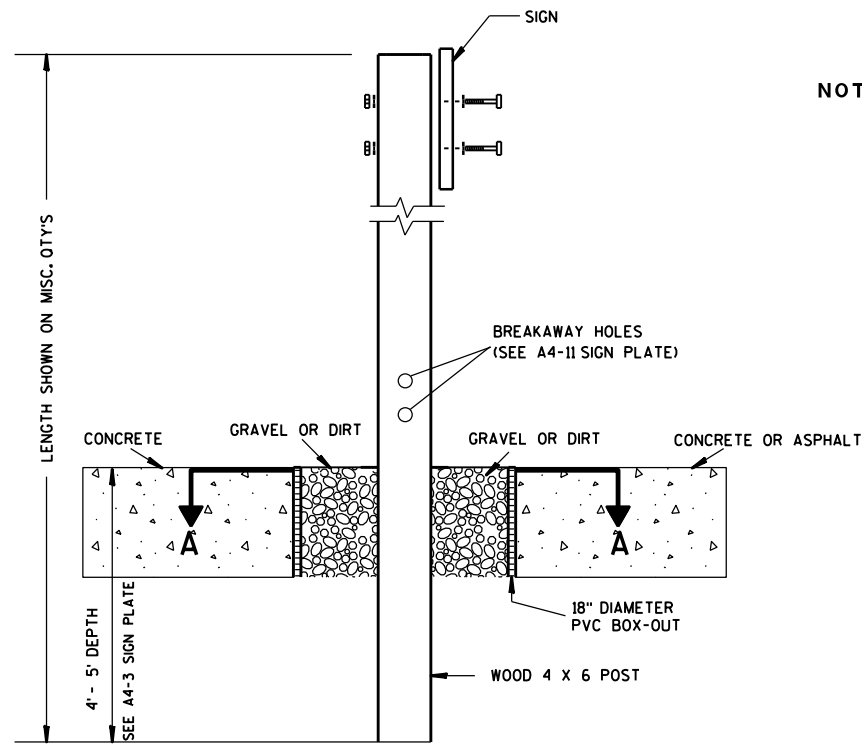
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

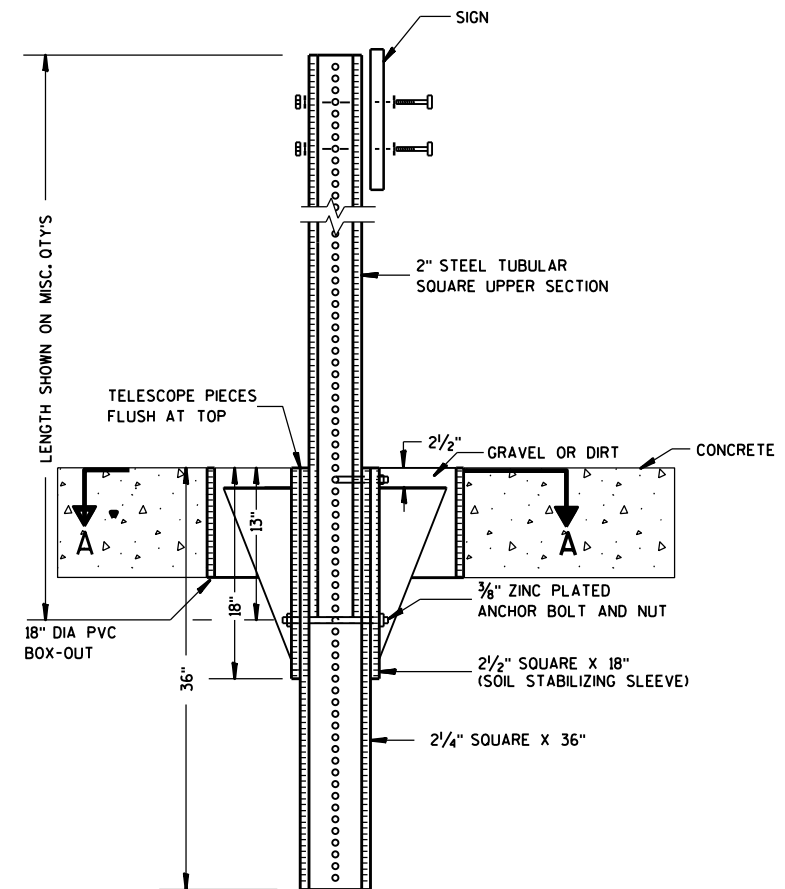
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

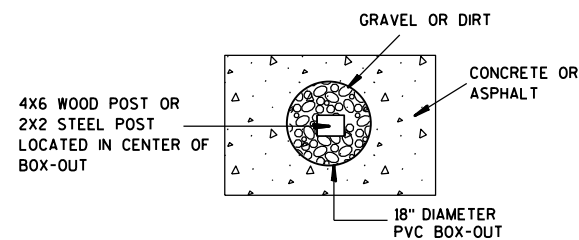
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

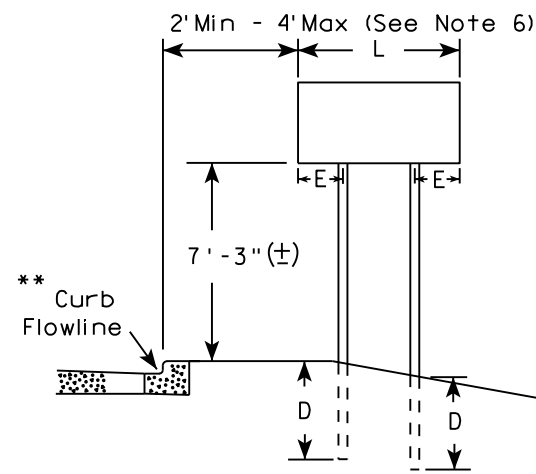
7

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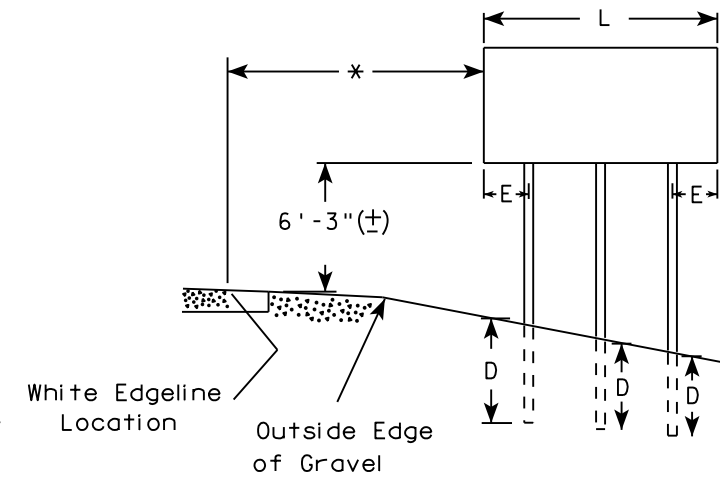
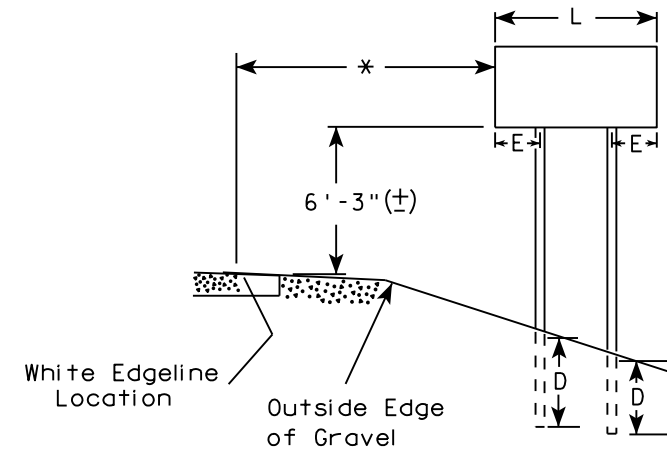
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

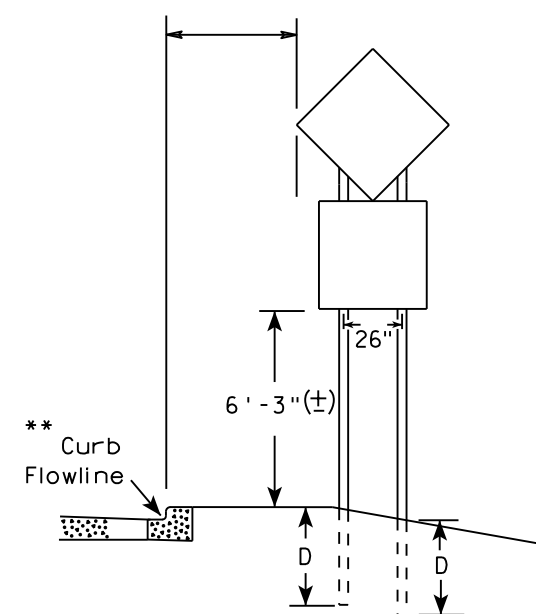
URBAN AREA



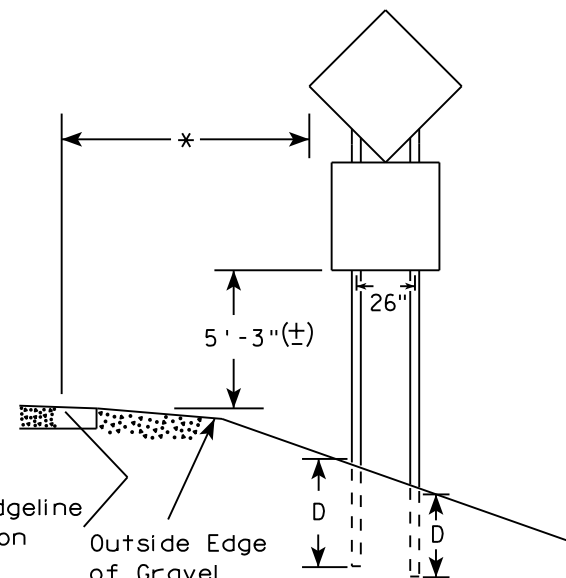
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

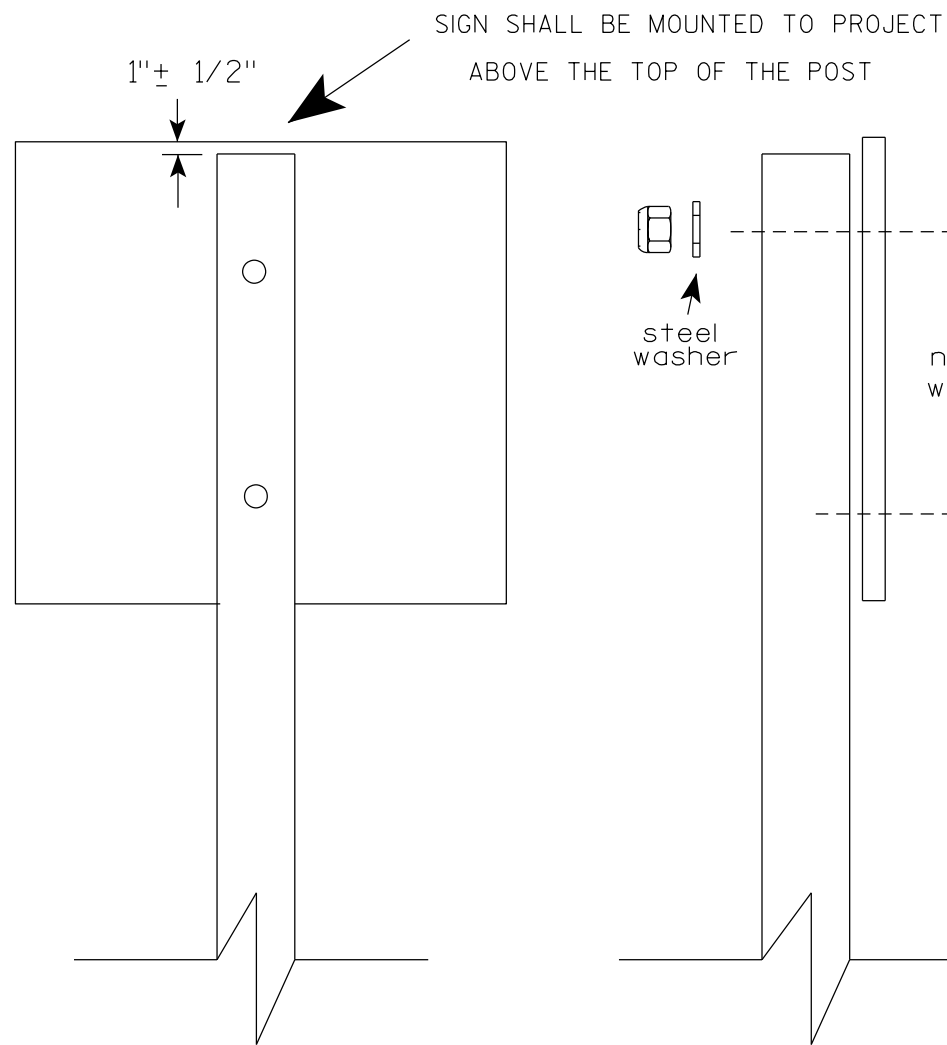
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS
TO POSTS

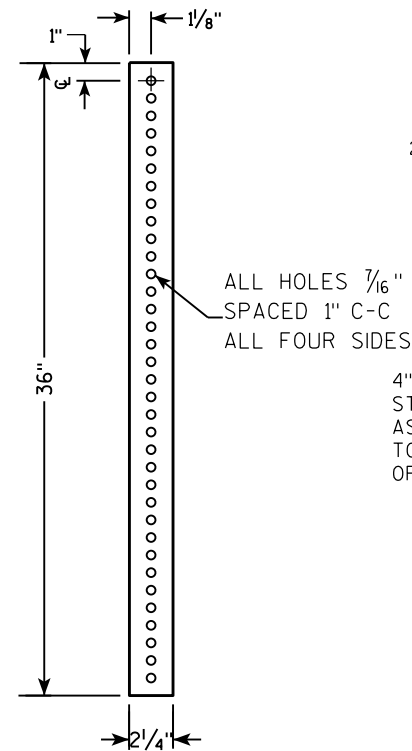
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

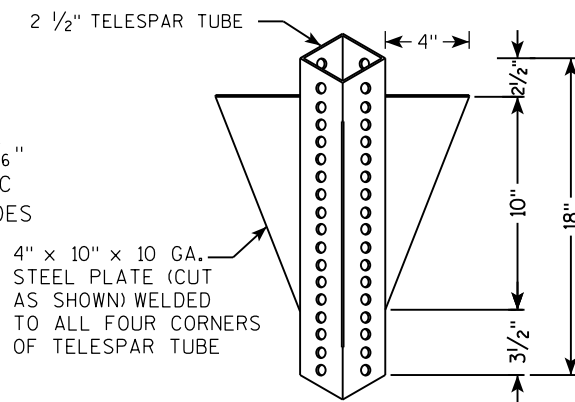
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

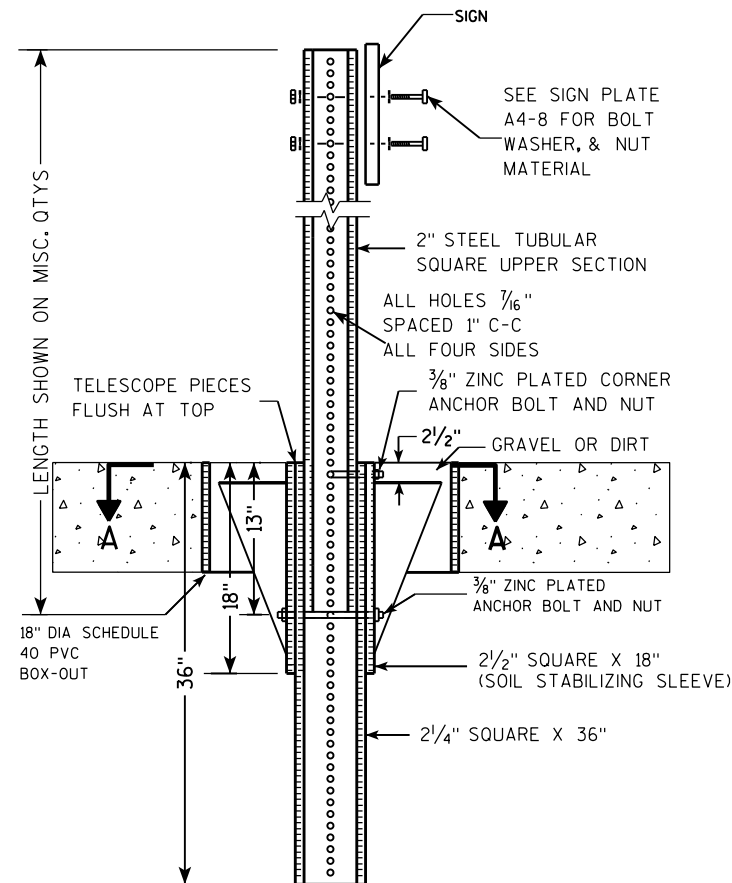
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



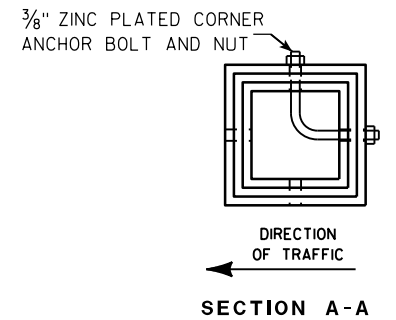
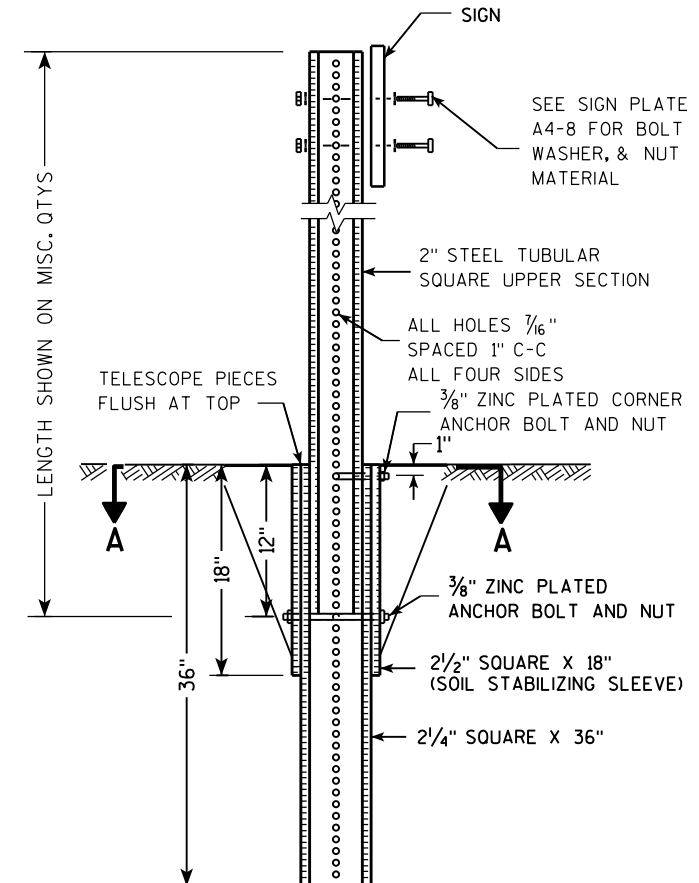
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

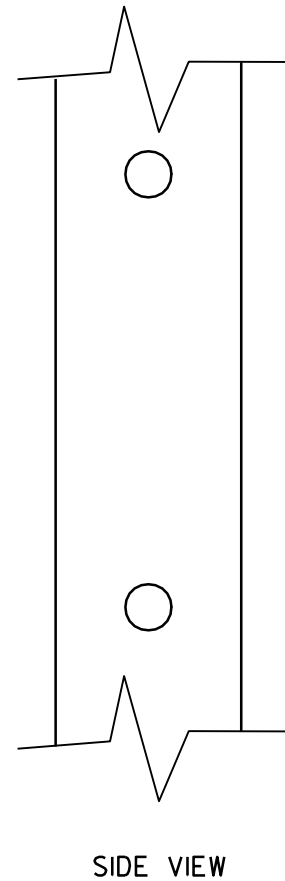
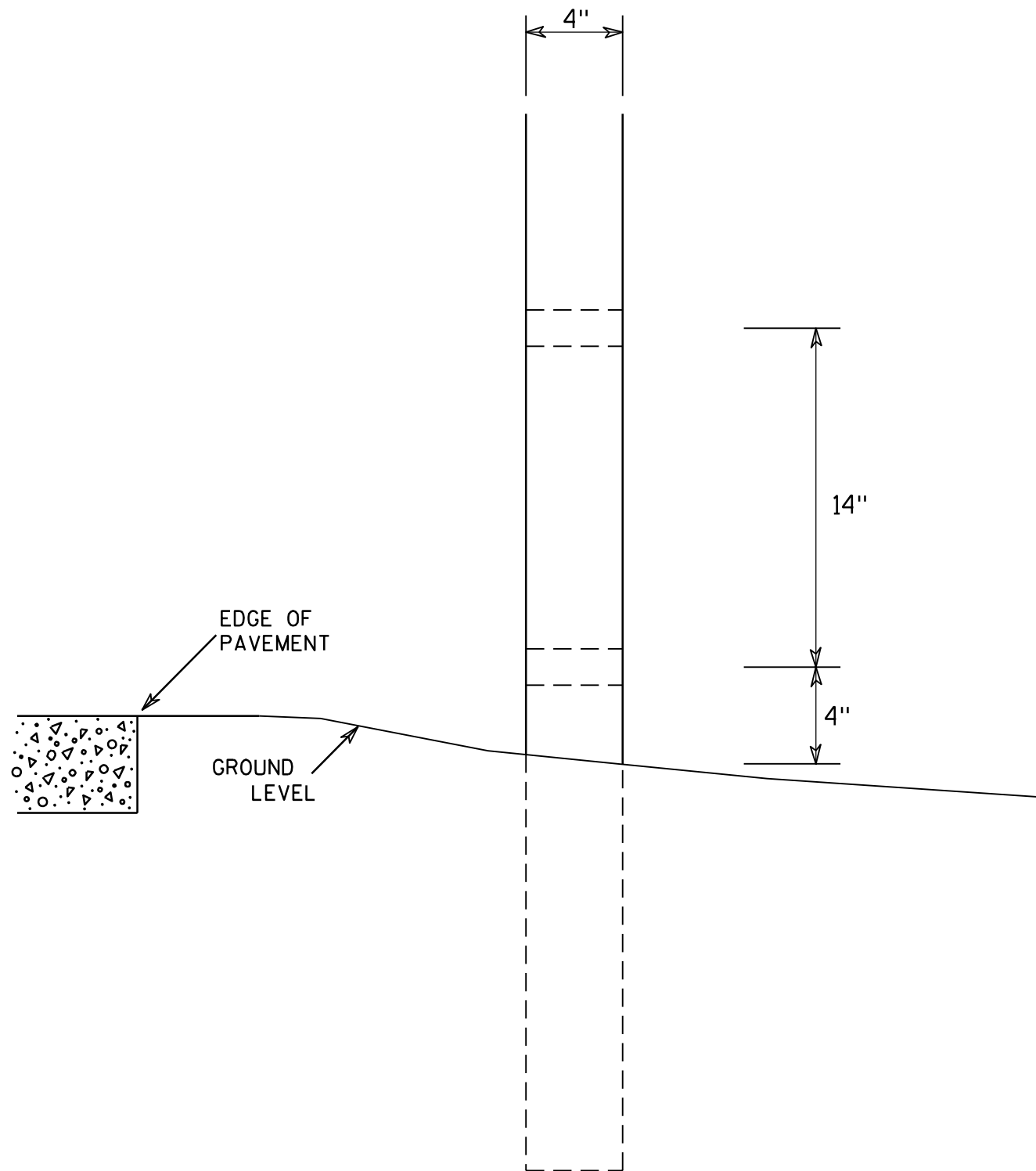
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

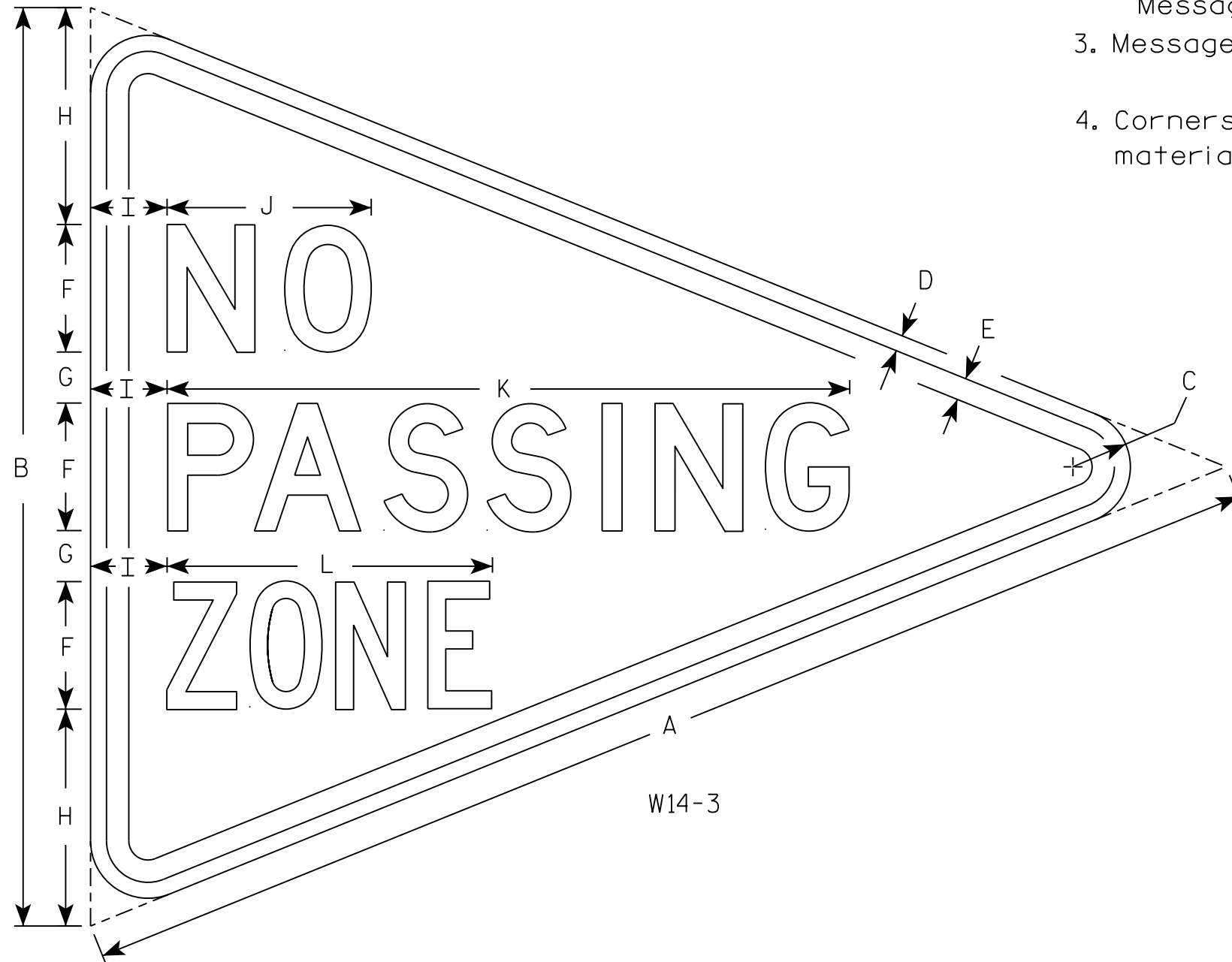
7

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4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

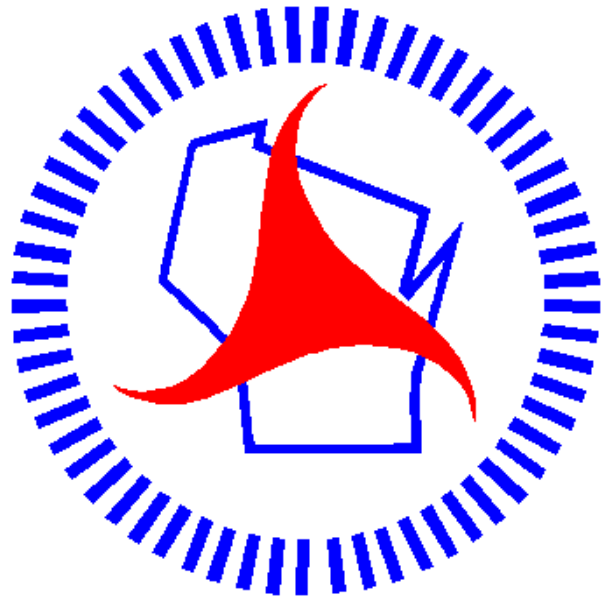
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

Notes



Wisconsin Department of Transportation

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