

WKE
PROJECT ID:
WITH: N/A

2722-09-70

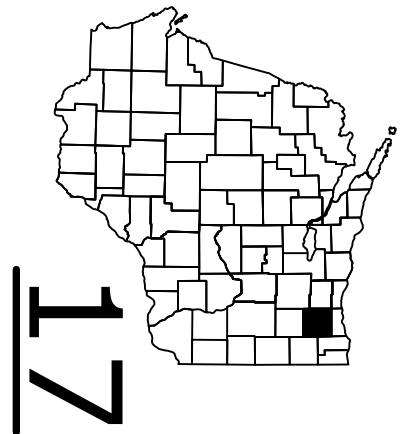
COUNTY:

WAUKESHA

MAR 14, 2023
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.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 88



DESIGN DESIGNATION 2722-09-00

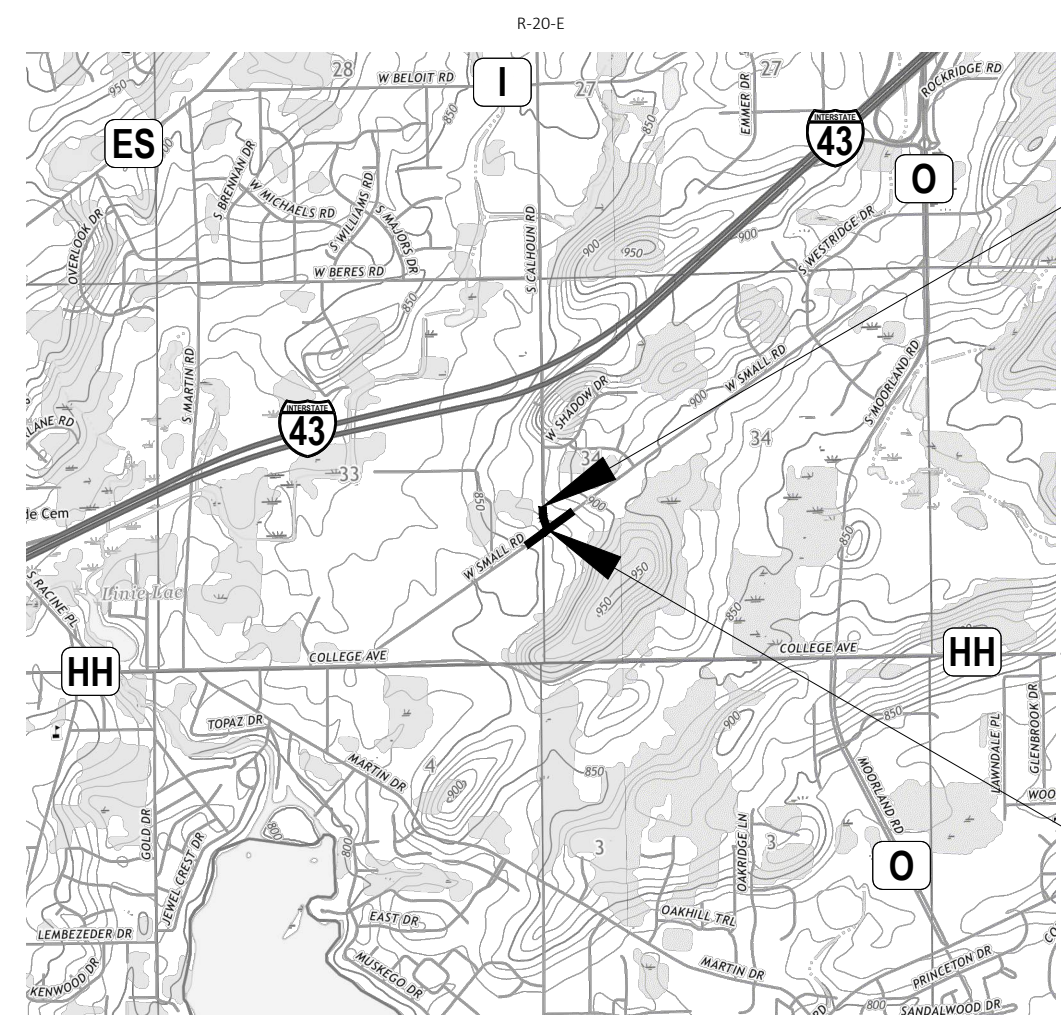
A.A.D.T. (2023)	=	4400
A.A.D.T. (2043)	=	5400
D.H.V.	=	620
D.D.	=	0.5
T.	=	5.0%
DESIGN SPEED	=	45 MPH
ESALS	=	423,400

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
C NEW BERLIN S CALHOUN ROAD
INTERSECTION WITH SMALL ROAD
LOCAL STREET
WAUKESHA COUNTY

STATE PROJECT NUMBER
2722-09-70



END PROJECT
STA 5+00

BEGIN PROJECT
STA 1+73.06
N = 346,385.61
E = 2,501,129.05

LAYOUT
SCALE 0 1/2 MI
TOTAL NET LENGTH OF CENTERLINE = 0.062 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN STATE PLANE COORDINATE SYSTEM (SPC), SOUTH ZONE, NAD 27, IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GROUND COORDINATES, GROUND BEARINGS, AND GROUND DISTANCES.

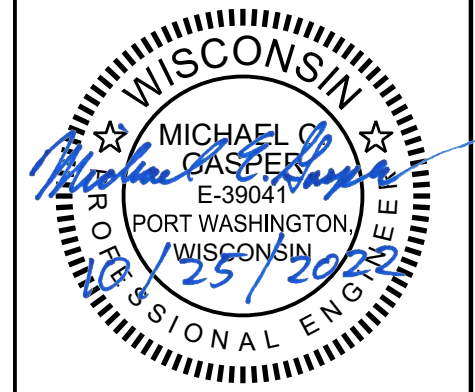
COORDINATES MAY BE CONVERTED FROM GROUND TO GRID BASED UPON THE GROUND TO GRID SCALE FACTOR OF 0.99991941, WITH THE NW CORNER OF THE SE 1/4 OF SECTION 33, T-6-N, R-20-E, HAVING COMMON GROUND AND GRID COORDINATES OF N=347,200.74, E=2,501,050.60.

ELEVATIONS ARE REFERENCED TO NGVD 29.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2722-09-70	WISC 2023285	

ACCEPTED FOR
CITY OF NEW BERLIN
10/25/22 [Signature]
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY
raSmith
CREATIVITY BEYOND ENGINEERING
W62 N588 Washington Ave., Ste. 201
Cedarburg, WI 53012-2074
(262) 781-1000
rasmith.com



DATE: _____ (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	raSMITH
Designer	raSMITH
Project Manager	MICHAEL J. BAIRD, PE
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	BRIAN BOOTHBY, PE

APPROVED FOR THE DEPARTMENT
DATE: 10/25/2022 *Michael J. Baird*
(Signature)

E

GENERAL NOTES

1. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
2. PRIOR TO ORDERING DRAINAGE PIPES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.
3. EXISTING PIPE CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR WILL BASE ITS BID ON THE ACTUAL FIELD CONDITIONS.
4. EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE EARTHWORK, EBS IS MEASURED AND PAID FOR AS EXCAVATION COMMON. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER.
5. SEED, INSTALL EROSION MAT, AND FERTILIZE ALL SALVAGED TOPSOILED AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETED.
6. SEED MIXTURE NO. 40 SHALL BE USED THROUGHOUT THE PROJECT.
7. DISTURBED AREAS SHALL BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER.
8. A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.
9. EXACT LOCATION OF ALL DRIVEWAY ENTRANCES TO BE REVIEWED AND APPROVED BY THE ENGINEER.
10. 6-INCH HMA PAVEMENT SHALL BE CONSTRUCTED WITH AN 2.5-INCH UPPER LAYER AND AN 3.5-INCH LOWER LAYER.
11. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
12. TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION OF 0.06 GAL./S.Y. AND SHALL BE PLACED BETWEEN THE LAYERS OF ASPHALTIC PAVEMENT.
13. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
14. STATIONING, DISTANCES, AND OFFSETS FOR SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.
15. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ORDER OF SECTION 2 SHEETS

- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- CROSS SECTION MATCHLINES
- EROSION CONTROL
- PERMANENT SIGNING & PAVEMENT MARKING
- DETOUR ROUTE
- ALIGNMENT DETAILS

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
CL	CENTERLINE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CLEAR	CLEARANCE
DISCH	DISCHARGE
DWY	DRIVEWAY
EB	EASTBOUND
ELEV	ELEVATION
EX	EXISTING
HE	HORIZONTAL ELLIPTICAL
K	RATE OF VERTICAL CURVATURE
MAX	MAXIMUM
NB	NORTHBOUND
NOR	NORMAL
PACS	PIPE ARCH CORRUGATED STEEL
PC	POINT OF CURVATURE
PCC	POINT OF CONTINUING CURVATURE
PI	POINT OF INFLECTION
PNT	POINT
PRC	POINT OF REVERSE CURVATURE
PROP	PROPOSED
PT	POINT OF TANGENCY
REQ'D	REQUIRED
RL	REFERENCE LINE
R/W	RIGHT OF WAY
SB	SOUTHBOUND
SI	SLOPE INTERCEPT
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VAR	VARIES
VCL	VERTICAL CURVE LENGTH
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INFLECTION
VPT	VERTICAL POINT OF TANGENCY
WB	WESTBOUND

DESIGN CONTACT

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 MICHAEL GASPER, PE
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 CEDARBURG, WI 53012-2074
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CITY CONTACT

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 CITY ENGINEER
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 NEW BERLIN, WI 53151
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 EMAIL: tsimonson@newberlin.org

WISDOT CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
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 SE REGION LOCAL PROGRAM PROJECT MANAGER
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 EMAIL: michael.baird@dot.wi.gov

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
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CITY CONTACT

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 EMAIL: lpichler@newberlin.org

UTILITIES

COMMUNICATIONS

AT&T
 NATHAN GILBERT
 411 7TH STREET
 RACINE, WI 53403
 PHONE: 262-720-8235
 EMAIL: ng952w@att.com

COMMUNICATIONS

CHARTER COMMUNICATIONS
 BEAU ABUYA
 1320 N DR MARTIN LUTHER KING JR DRIVE
 MILWAUKEE, WI 53212
 PHONE: 414-758-9241
 EMAIL: beau.abuya@charter.com
 EMAIL: wis.engineering@charter.com

COMMUNICATIONS

MCI COMMUNICATIONS
 RANDY CICATELLO
 15725 WEST RYERSON ROAD
 NEW BERLIN, WI 53151
 PHONE: 262-782-9836
 EMAIL: randy.cicatello@verizon.com

COMMUNICATIONS

MIDWEST FIBER NETWORKS
 CORY SCHMUKI
 6070 N FLINT ROAD
 GLENDALE, WI 53209
 PHONE: 414-459-3561
 EMAIL: cschmuki@midwestfibernetworks.com

ELECTRIC

WE ENERGIES – ELECTRICITY
 JASON T. DODGE
 500 S 116TH STREET
 WEST ALLIS, WI 53214
 PHONE: 414-944-5507
 EMAIL: jason.dodge@we-energies.com
 EMAIL: We-Utility-relocations@we-energies.com

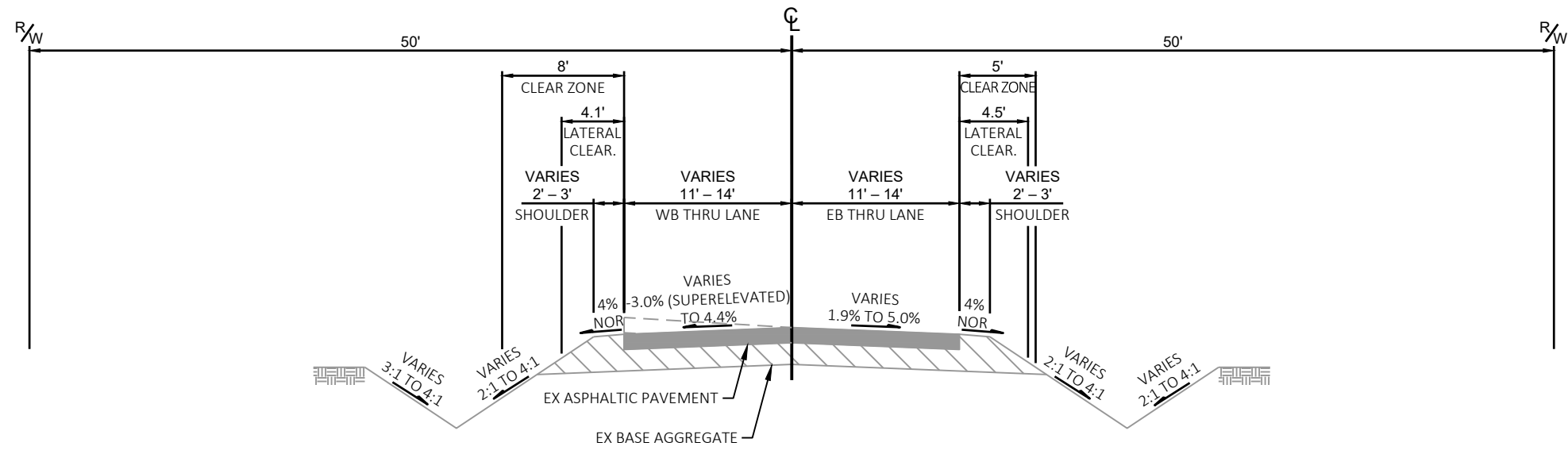
GAS

WE ENERGIES – GAS/PETROLEUM
 JACOB SPENCER
 S13 W33800 STH 18
 DELAFIELD, WI 53018
 PHONE: 262-968-7009
 EMAIL: jacob.spencer@we-energies.com

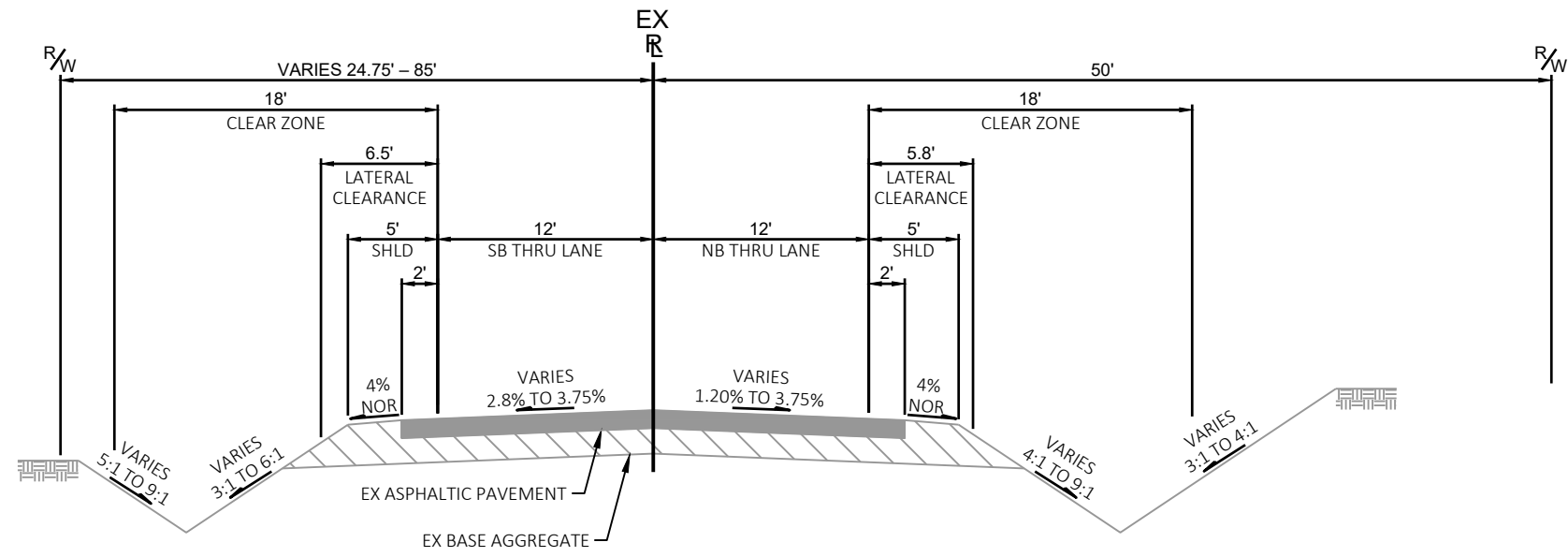


Dial **811** or (800)242-8511

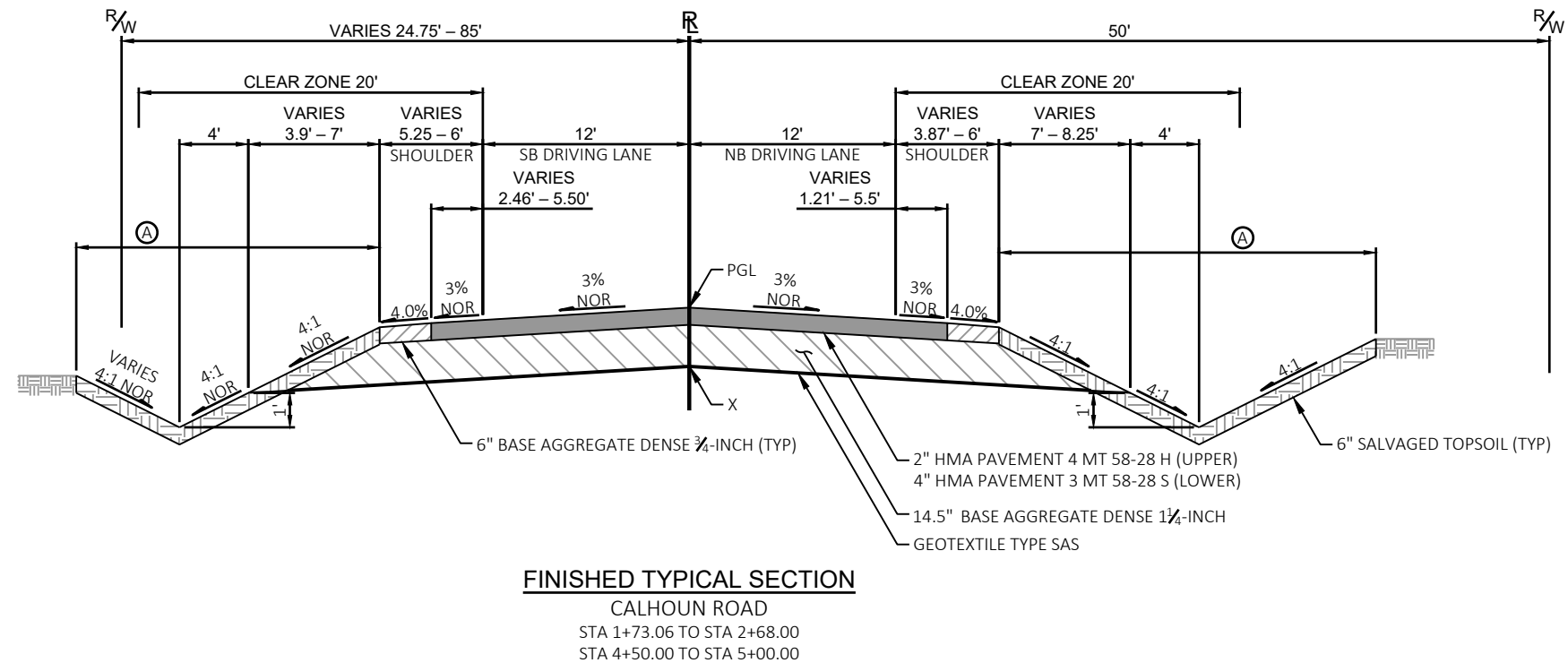
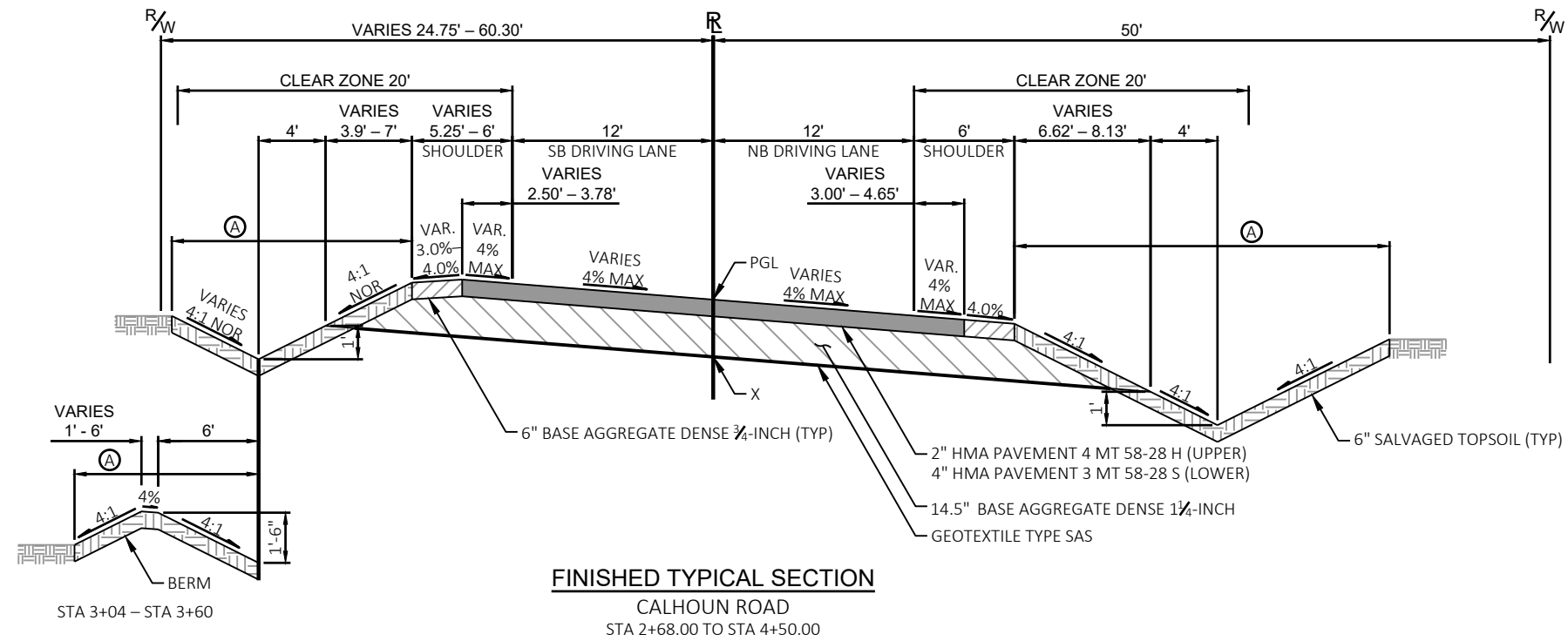
www.DiggersHotline.com



EXISTING TYPICAL SECTION
 SMALL ROAD
 STA 121+33 - STA 129+25



EXISTING TYPICAL SECTION
 CALHOUN ROAD
 STA 1+72 - STA 5+00



NOTES

(A) 6" SALVAGED TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE B.

SEE CROSS SECTIONS FOR SUPERELEVATION & DITCH SECTIONS.

DO NOT EXCEED ROLLOVER RATES GREATER THAN 7% BETWEEN PAVED AND AGGREGATE SHOULDERS.

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS SECTIONS

PROJECT NO: 2722-09-70

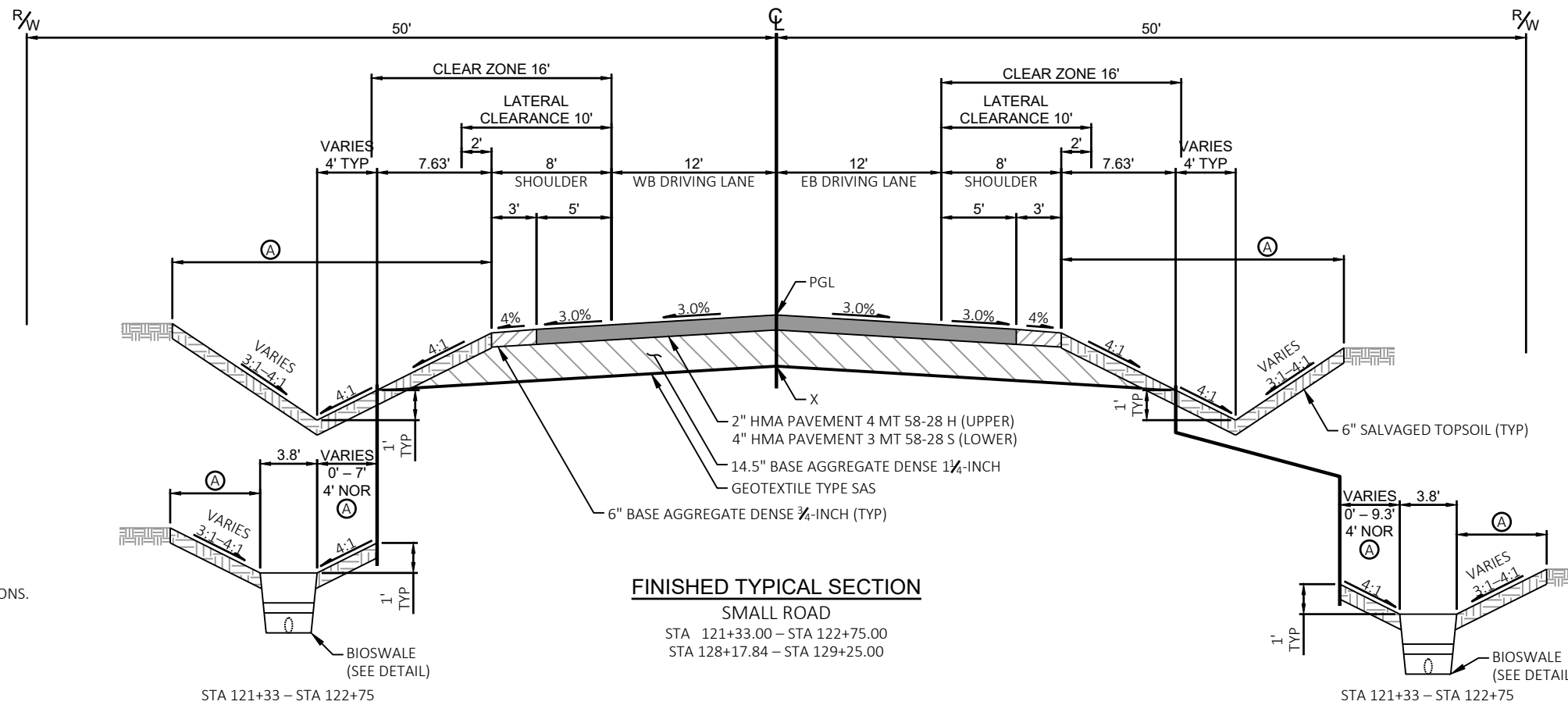
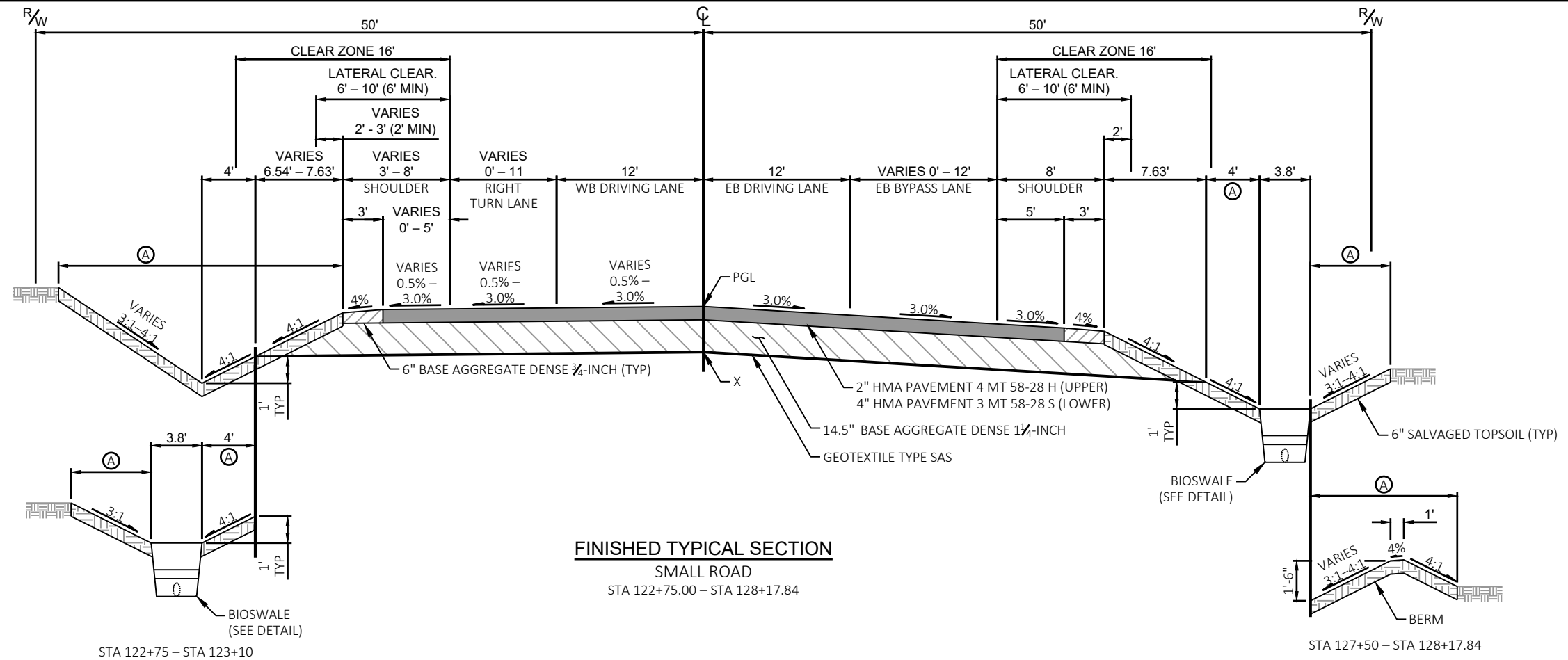
HWY: LOCAL STREET

COUNTY: WAUKESHA

FINISHED TYPICAL SECTIONS

SHEET

E



NOTES

(A) 6" SALVAGED TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE B.

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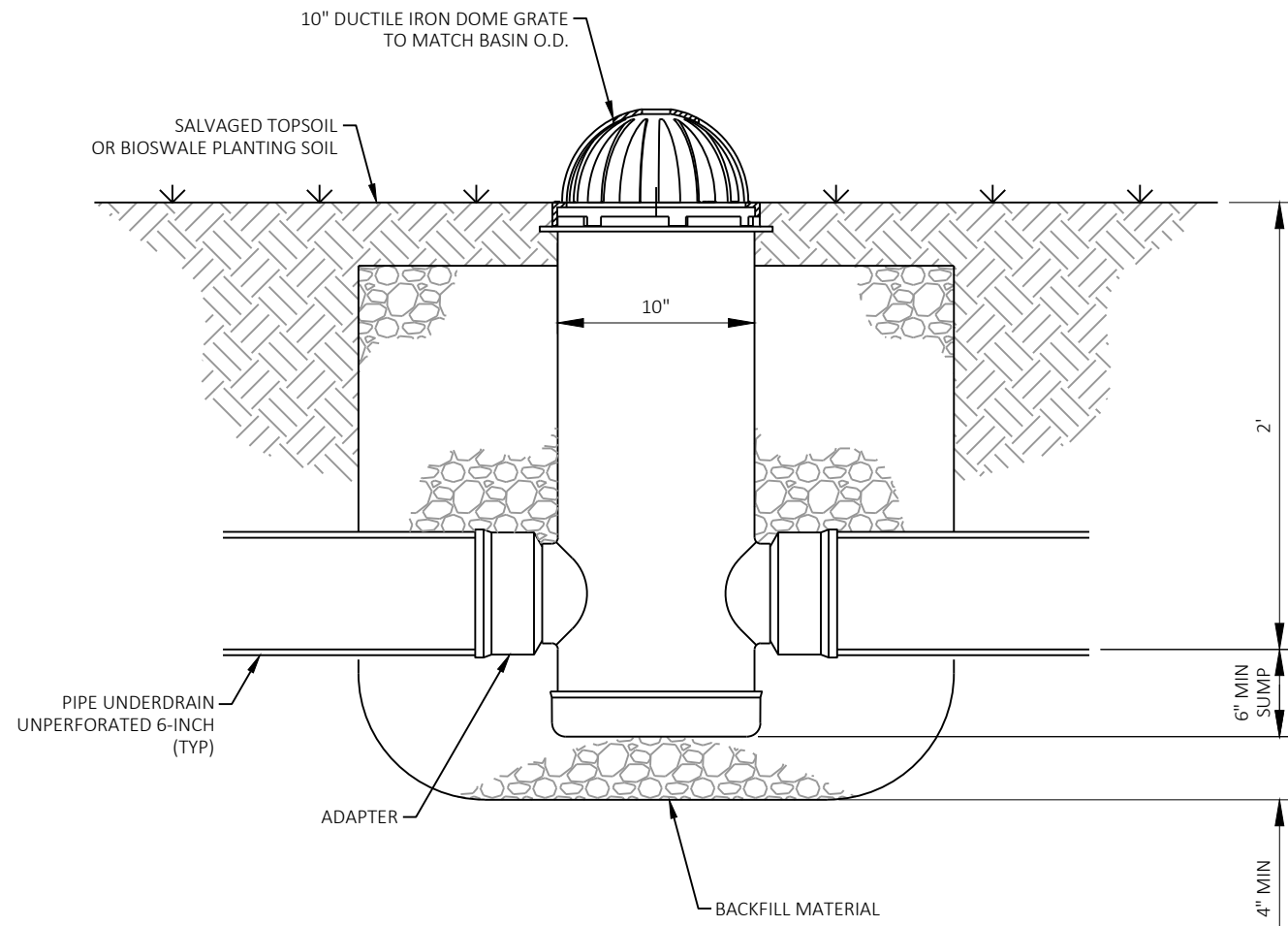
HWY: LOCAL STREET

COUNTY: WAUKESHA

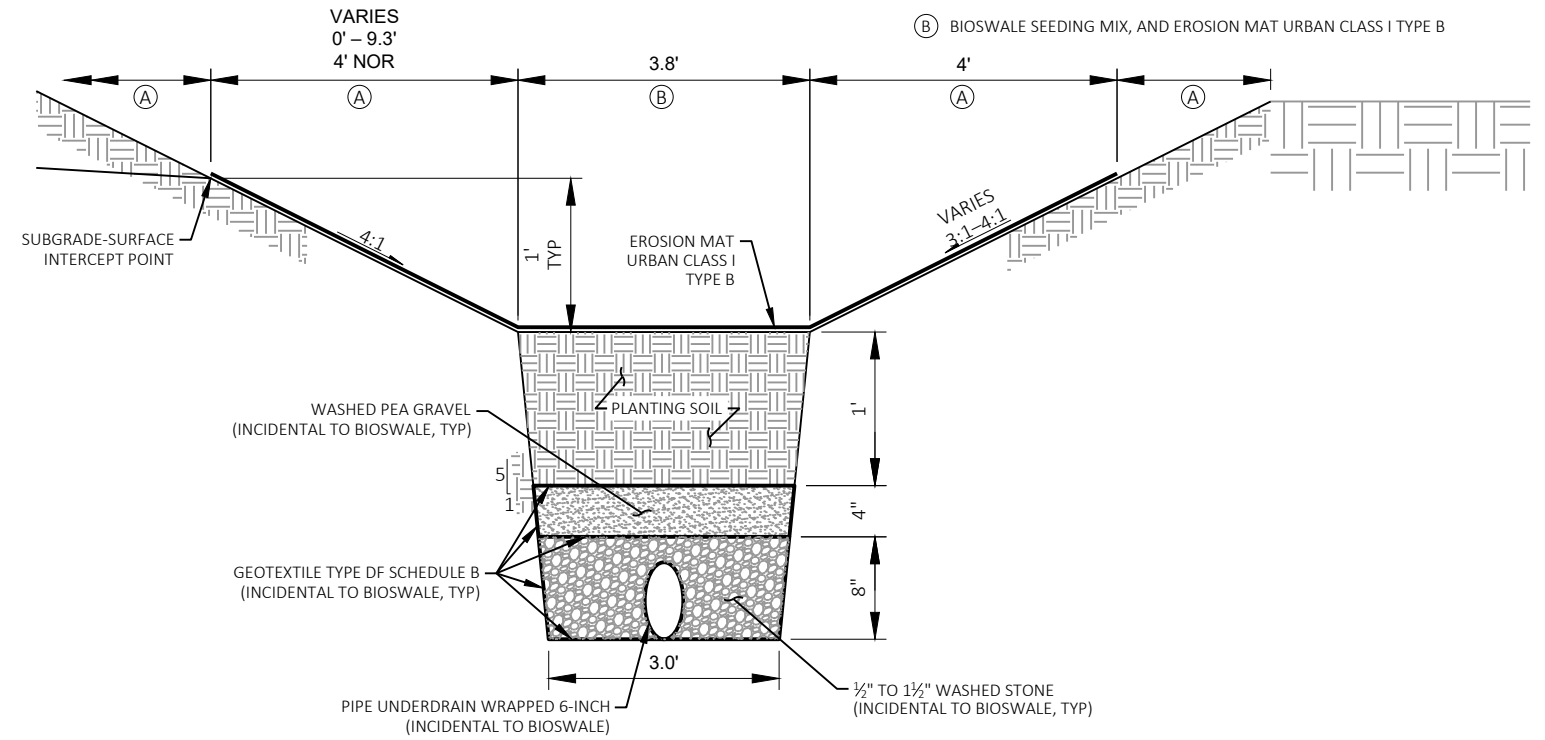
FINISHED TYPICAL SECTIONS

SHEET

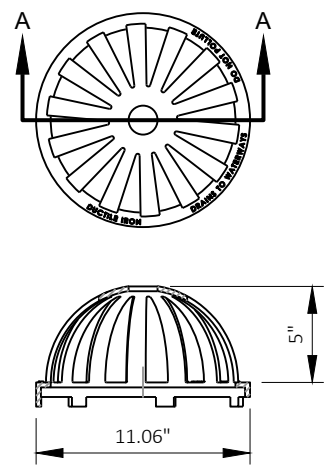
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UNDERDRAIN CLEANOUTS DETAIL

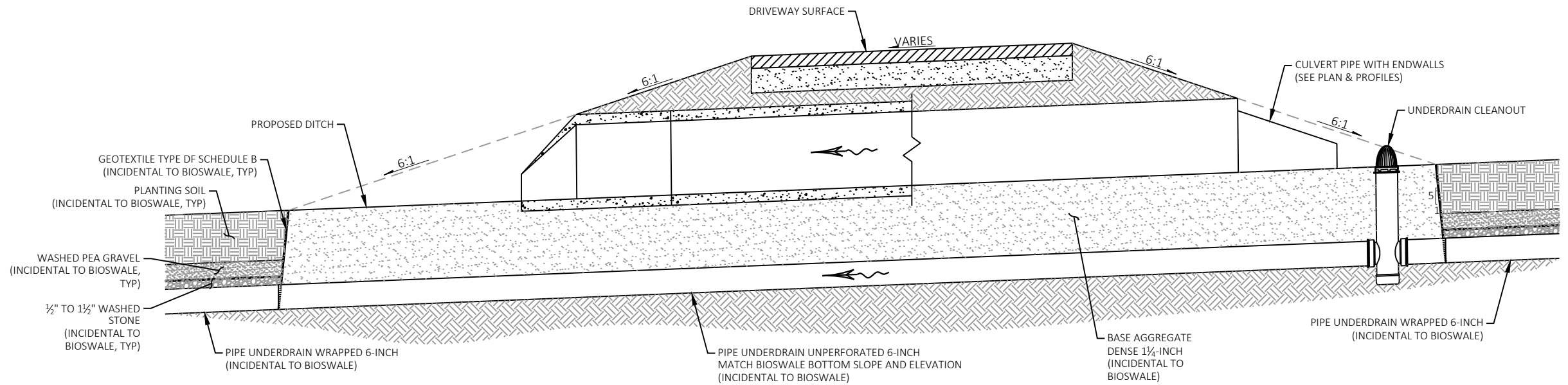


BIOSWALE TYPICAL SECTION



SECTION A-A

10" DUCTILE IRON DOME GRATE



BIOSWALE DRIVEWAY DETAIL

GENERAL NOTES

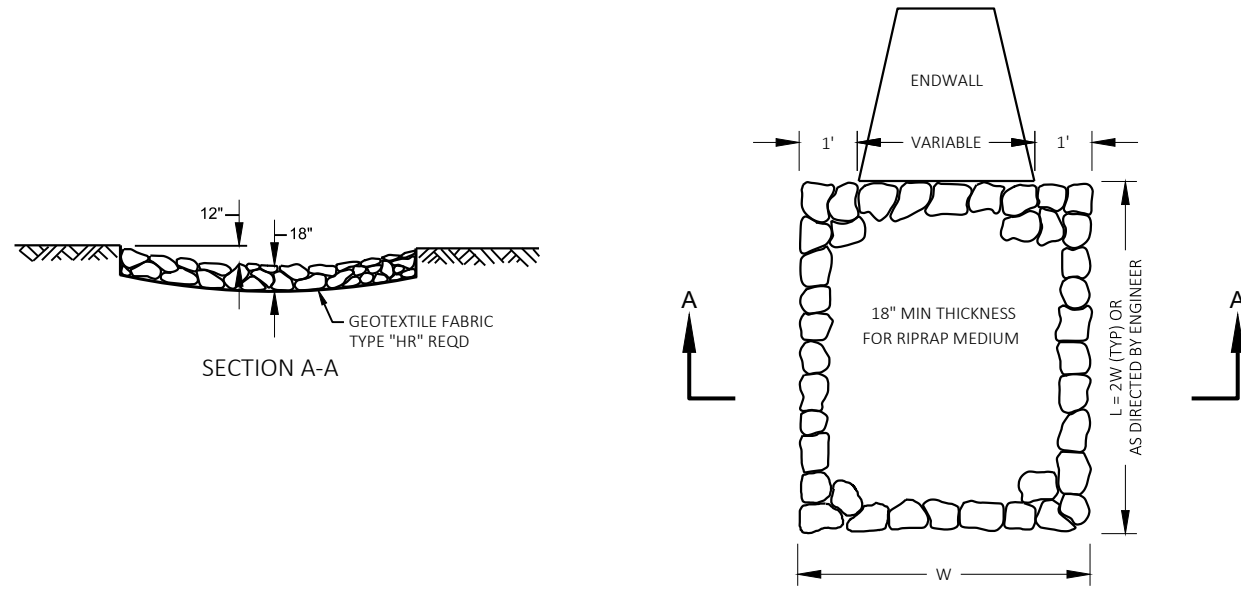
DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PIPE UNDERDRAIN WRAPPED 6-INCH, UNPERFORATED PIPE UNDERDRAIN 6-INCH, WASHED STONE, PEA GRAVEL, PLANTING SOIL, AND BIOSWALE SEEDING MIX SHALL BE INCIDENTAL TO THE BIOSWALE BID ITEM.

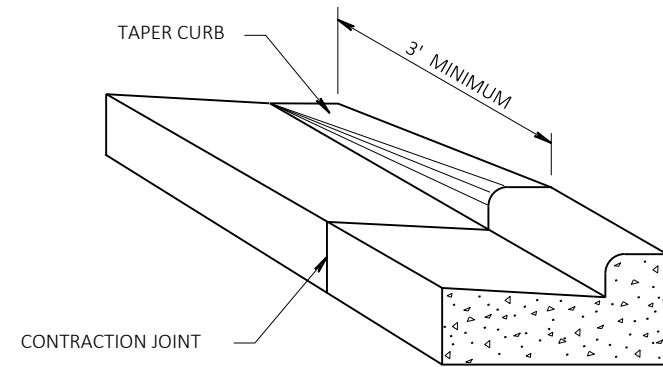
ALL OTHER ITEMS SHALL BE PAID UNDER THEIR APPROPRIATE BID ITEM, OR SHALL BE INCIDENTAL TO THE BIOSWALE BID ITEM.

(A) 6" SALVAGED TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE B.

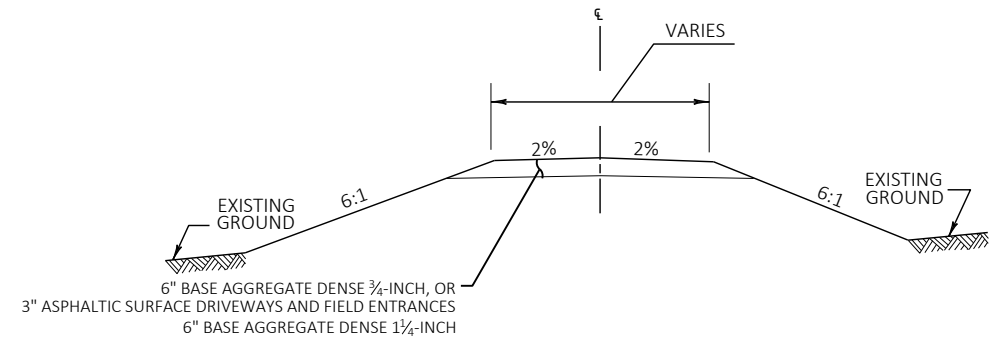
(B) BIOSWALE SEEDING MIX, AND EROSION MAT URBAN CLASS I TYPE B



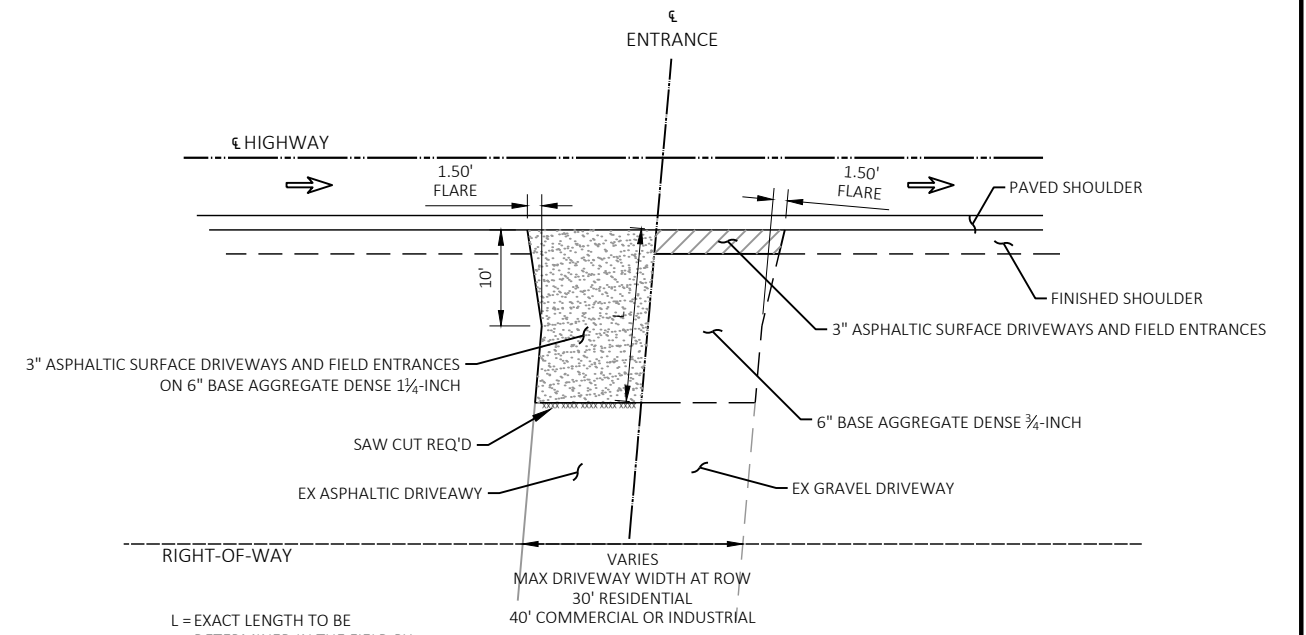
RIPRAP MEDIUM TREATMENT AT CULVERTS



DETAIL OF CURB & GUTTER TERMINI

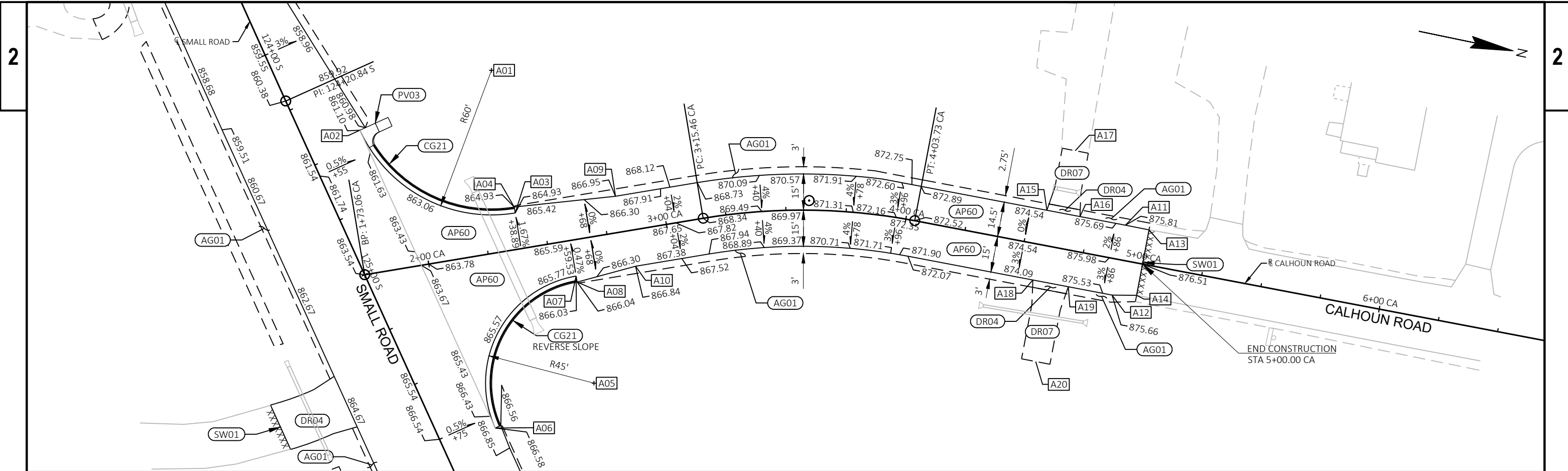


TYPICAL CROSS SECTION



PLAN VIEW

DRIVEWAY DETAIL



LEGEND

- AG01 BASE AGGREGATE DENSE ¾-INCH
- AP60 6.0" HMA PAVEMENT
- CG21 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- DR04 3.0" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- DR07 AGGREGATE DRIVEWAY, 6" BASE AGGREGATE DENSE ¾-INCH
- PV03 CONCRETE FLUMES
- SW01 SAWING ASPHALT
- Xxx STATION/OFFSET POINT
- XXX.xx PAVEMENT GRADE

STATION & OFFSET TABLE

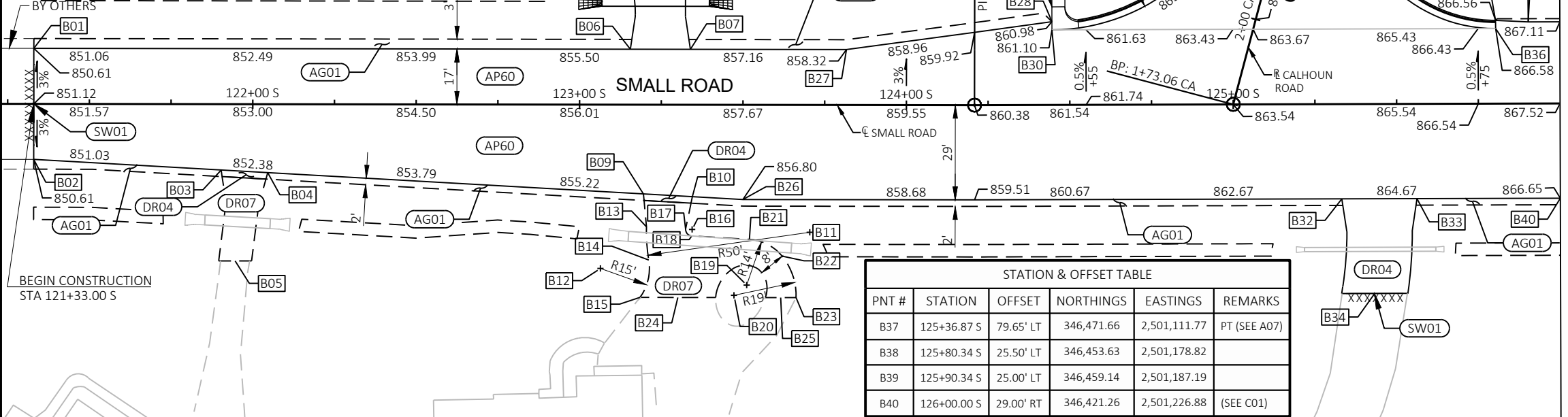
PNT #	STATION	OFFSET	NORTHINGS	EASTINGS	REMARKS
A01	2+38.89 CA	75.00' LT	346,419.87	2,501,035.32	R = 60' (SEE B29)
A02	1+80.93 CA	59.47' LT	346,371.45	2,501,070.76	PC (SEE B30)
A03	2+38.89 CA	15.00' LT	346,441.56	2,501,091.26	PT (SEE B31)
A04	2+38.89 CA	17.50' LT	346,440.66	2,501,088.93	
A05	2+59.53 CA	60.00' RT	346,487.93	2,501,153.72	R = 45' (SEE B35)
A06	2+16.07 CA	71.65' RT	346,451.62	2,501,180.30	PC (SEE B36)
A07	2+59.53 CA	15.00' RT	346,471.66	2,501,111.77	PT (SEE B37)
A08	2+59.53 CA	17.50' RT	346,472.56	2,501,114.10	
A09	2+81.09 CA	15.00' LT	346,480.91	2,501,076.00	
A10	2+84.53 CA	15.00' RT	346,494.97	2,501,102.73	
A11	4+90.00 CA	14.50' LT	346,690.57	2,501,044.72	
A12	4+90.00 CA	15.00' RT	346,691.06	2,501,074.22	
A13	5+00.00 CA	14.46' LT	346,700.57	2,501,044.59	MATCH EX
A14	5+00.00 CA	13.21' RT	346,701.03	2,501,072.26	MATCH EX
A15	4+56.81 CA	14.50' LT	346,657.38	2,501,045.28	DWY LT
A16	4+70.81 CA	14.50' LT	346,671.38	2,501,045.05	DWY RT
A17	4+63.81 CA	40.98' LT	346,663.93	2,501,018.69	DWY MATCH EX
A18	4+56.50 CA	15.00' RT	346,657.57	2,501,074.79	DWY RT
A19	4+71.50 CA	15.00' RT	346,672.57	2,501,074.53	DWY LT
A20	4+64.00 CA	48.00' RT	346,665.63	2,501,107.65	DWY MATCH EX

NOTES

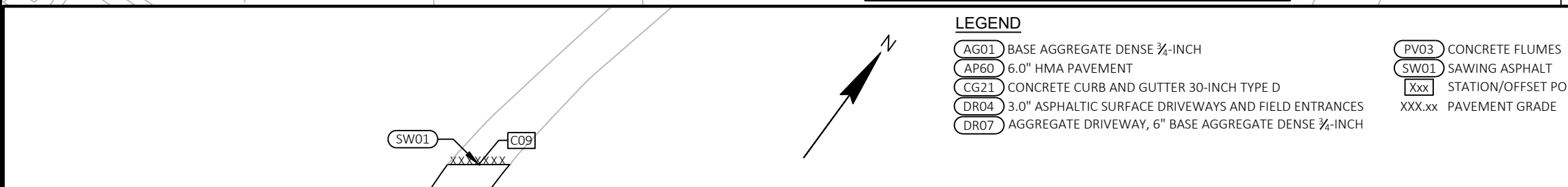
- ALL POINTS & RADII ARE TO THE CURB & GUTTER FLANGE LINE, OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
- SEE TYPICAL SECTIONS FOR "AP60" HMA PAVEMENT STRUCTURE.
- SEE DRIVEWAY DETAILS FOR DRIVEWAY LAYOUT AND STRUCTURE.

STATION & OFFSET TABLE					
PNT #	STATION	OFFSET	NORTHINGS	EASTINGS	REMARKS
B01	121+33.00 S	17.00' LT	346,183.64	2,500,822.18	
B02	121+33.00 S	17.00' RT	346,156.11	2,500,842.14	
B03	121+90.35 S	20.17' RT	346,187.22	2,500,890.43	DWY RT
B04	122+04.61 S	20.96' RT	346,194.95	2,500,902.43	DWY LT
B05	121+94.67 S	48.00' RT	346,167.22	2,500,910.26	DWY MATCH EX
B06	123+15.51 S	17.00' LT	346,290.79	2,500,969.92	DWY LT
B07	123+33.87 S	17.00' LT	346,301.57	2,500,984.79	DWY RT
B08	123+22.28 S	49.00' LT	346,320.67	2,500,956.62	DWY MATCH EX
B09	123+19.57 S	27.32' RT	346,257.29	2,500,999.23	DWY RT
B10	123+34.55 S	28.15' RT	346,265.42	2,501,011.84	DWY LT
B11	123+70.49 S	39.00' RT	346,277.73	2,501,047.31	DWY R = 50'
B12	123+06.45 S	50.14' RT	346,231.12	2,501,002.01	DWY R = 15'
B13	123+20.52 S	37.38' RT	346,249.70	2,501,005.90	DWY PC
B14	123+21.23 S	47.57' RT	346,241.87	2,501,012.46	DWY PRC
B15	123+18.56 S	59.00' RT	346,231.05	2,501,017.01	DWY PT
B16	123+34.50 S	38.16' RT	346,257.28	2,501,017.67	DWY R = 2'
B17	123+32.50 S	38.05' RT	346,256.20	2,501,015.99	DWY PC
B18	123+34.38 S	40.15' RT	346,255.59	2,501,018.75	DWY PT
B19	123+51.20 S	55.17' RT	346,253.32	2,501,041.18	DWY R = 14'
B20	123+47.33 S	58.33' RT	346,248.48	2,501,039.90	DWY R = 19'
B21	123+52.02 S	41.19' RT	346,265.11	2,501,033.64	DWY PC
B22	123+62.05 S	46.31' RT	346,266.85	2,501,044.76	DWY PCC
B23	123+66.32 S	59.00' RT	346,259.09	2,501,055.67	DWY PT
B24	123+30.13 S	59.00' RT	346,237.85	2,501,026.38	DWY MATCH EX
B25	123+61.61 S	59.00' RT	346,256.33	2,501,051.86	DWY MATCH EX
B26	123+50.00 S	29.00' RT	346,273.80	2,501,024.85	
B27	123+81.63 S	17.00' LT	346,329.60	2,501,023.45	
B28	124+44.59 S	25.50' LT	346,373.47	2,501,069.28	
B29	124+44.59 S	83.00' LT	346,419.87	2,501,035.32	R = 60' (SEE A01)
B30	124+44.59 S	23.00' LT	346,371.45	2,501,070.76	PC (SEE A02)

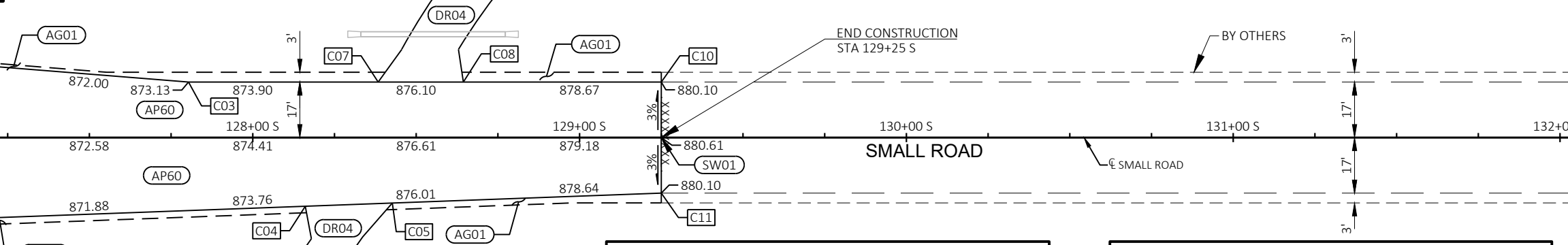
STATION & OFFSET TABLE					
PNT #	STATION	OFFSET	NORTHINGS	EASTINGS	REMARKS
B31	125+02.55 S	67.47' LT	346,441.56	2,501,091.26	PT (SEE A03)
B32	125+33.14 S	29.00' RT	346,381.78	2,501,172.92	DWY RT
B33	125+56.14 S	29.00' RT	346,395.36	2,501,191.48	DWY LT
B34	125+43.13 S	58.00' RT	346,364.28	2,501,198.11	DWY MATCH EXIST
B35	125+80.34 S	68.00' LT	346,487.93	2,501,153.72	R = 45' (SEE A05)
B36	125+80.34 S	23.00' LT	346,451.62	2,501,180.30	PC (SEE A06)



STATION & OFFSET TABLE					
PNT #	STATION	OFFSET	NORTHINGS	EASTINGS	REMARKS
B37	125+36.87 S	79.65' LT	346,471.66	2,501,111.77	PT (SEE A07)
B38	125+80.34 S	25.50' LT	346,453.63	2,501,178.82	
B39	125+90.34 S	25.00' LT	346,459.14	2,501,187.19	
B40	126+00.00 S	29.00' RT	346,421.26	2,501,226.88	(SEE C01)



- LEGEND**
- AG01 BASE AGGREGATE DENSE 3/4-INCH
 - AP60 6.0" HMA PAVEMENT
 - CG21 CONCRETE CURB AND GUTTER 30-INCH TYPE D
 - DR04 3.0" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
 - DR07 AGGREGATE DRIVEWAY, 6" BASE AGGREGATE DENSE 3/4-INCH
 - PV03 CONCRETE FLUMES
 - SW01 SAWING ASPHALT
 - XXX STATION/OFFSET POINT
 - XXX.xx PAVEMENT GRADE



STATION & OFFSET TABLE					
PNT #	STATION	OFFSET	NORTHINGS	EASTINGS	REMARKS
C01	126+00.00 S	29.00' RT	346,421.26	2,501,226.88	
C02	126+80.34 S	25.00' LT	346,512.29	2,501,259.82	
C03	127+80.34 S	17.00' LT	346,564.89	2,501,345.24	
C04	128+16.08 S	21.02' RT	346,555.32	2,501,396.54	DWY RT
C05	128+42.70 S	20.04' RT	346,571.83	2,501,417.44	DWY LT
C06	128+13.65 S	48.00' RT	346,532.10	2,501,410.51	DWY MATCH EX

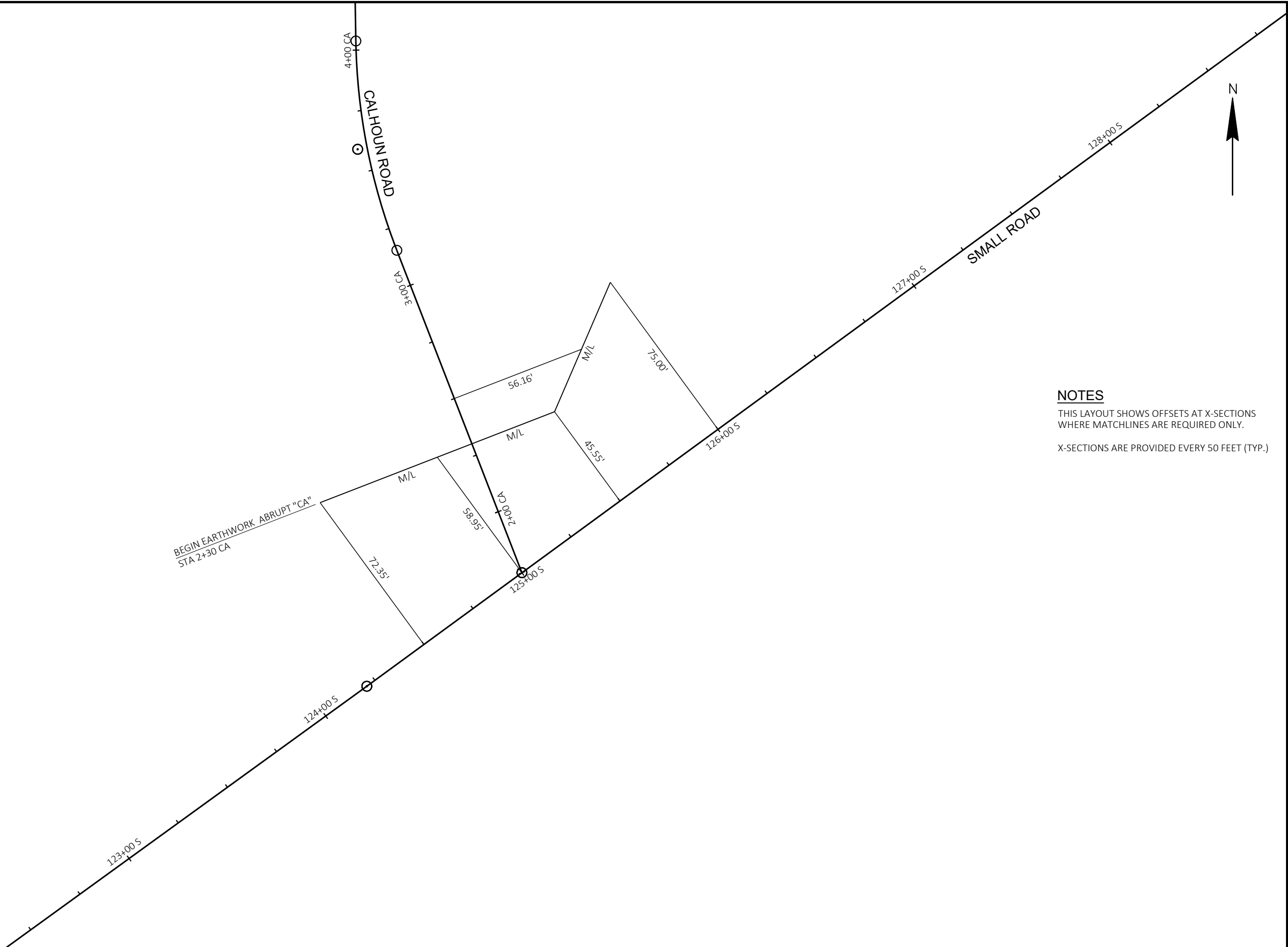
STATION & OFFSET TABLE					
PNT #	STATION	OFFSET	NORTHINGS	EASTINGS	REMARKS
C07	128+38.37 S	17.00' LT	346,599.16	2,501,392.07	DWY LT
C08	128+64.44 S	17.00' LT	346,614.56	2,501,413.11	DWY RT
C09	128+69.13 S	49.00' LT	346,643.15	2,501,398.00	DWY MATCH EX
C10	129+25.00 S	17.00' LT	346,650.32	2,501,461.98	
C11	129+25.00 S	17.00' RT	346,622.88	2,501,482.06	

NOTES

ALL POINTS & RADII ARE TO THE CURB & GUTTER FLANGE LINE, OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.

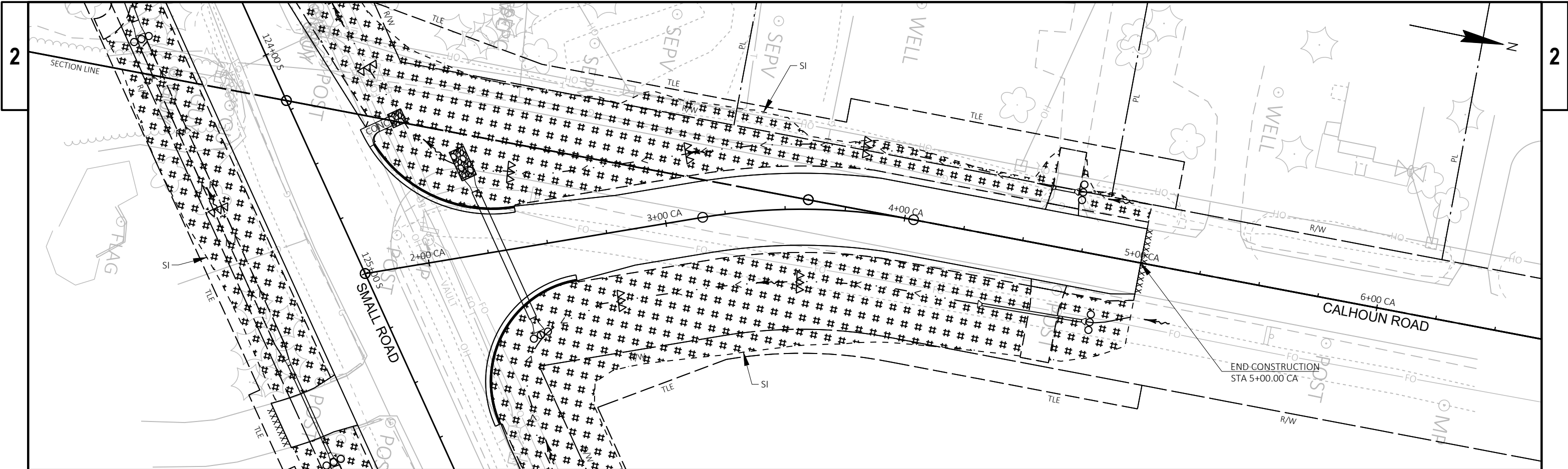
SEE TYPICAL SECTIONS FOR "AP60" HMA PAVEMENT STRUCTURE.

SEE DRIVEWAY DETAILS FOR DRIVEWAY LAYOUT AND STRUCTURE.



NOTES
 THIS LAYOUT SHOWS OFFSETS AT X-SECTIONS
 WHERE MATCHLINES ARE REQUIRED ONLY.
 X-SECTIONS ARE PROVIDED EVERY 50 FEET (TYP.)

PROJECT NO: 2722-09-70	HWY: LOCAL STREET	COUNTY: WAUKESHA	CROSS SECTION MATCHLINES	SHEET	E
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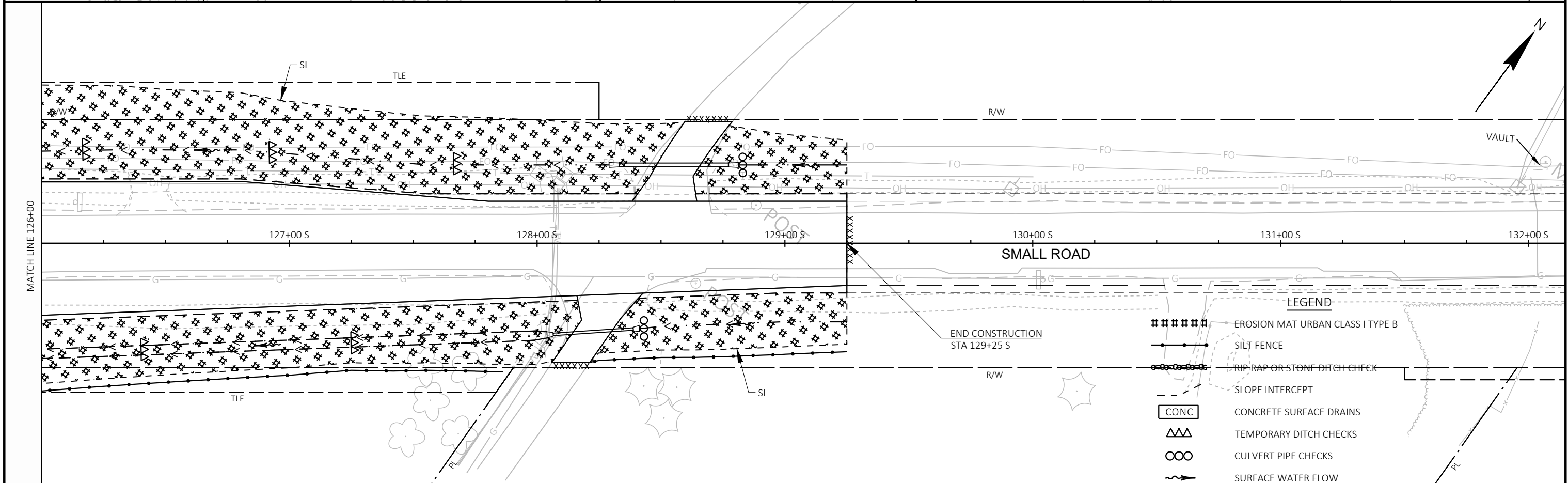
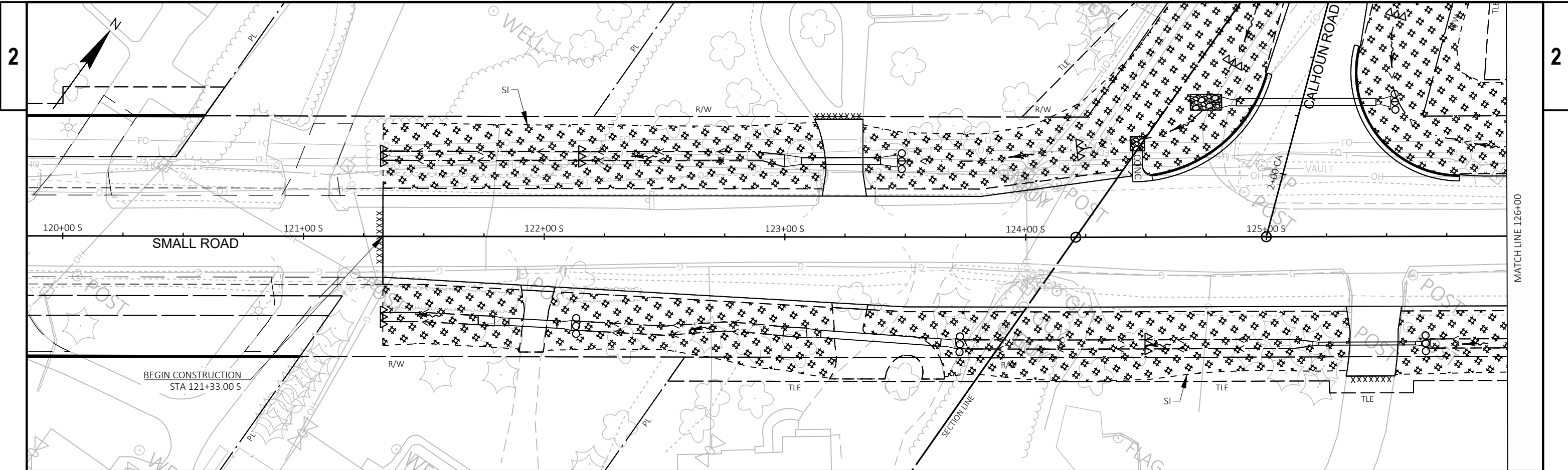


RUNOFF COEFFICIENT TABLE

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

- LEGEND**
- ##### EROSION MAT URBAN CLASS I TYPE B
 - SILT FENCE
 - RIP RAP OR STONE DITCH CHECK
 - - - SLOPE INTERCEPT
 - CONC CONCRETE SURFACE DRAINS
 - △△△ TEMPORARY DITCH CHECKS
 - CULVERT PIPE CHECKS
 - SURFACE WATER FLOW

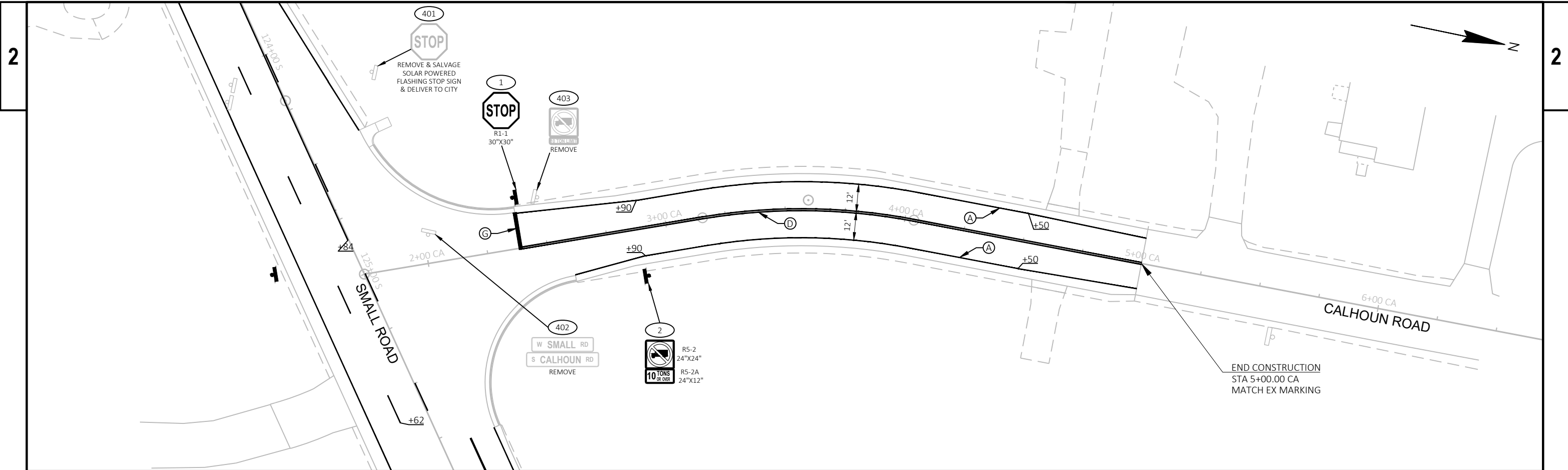
TOTAL PROJECT AREA = 2.79 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.46 ACRES



LEGEND

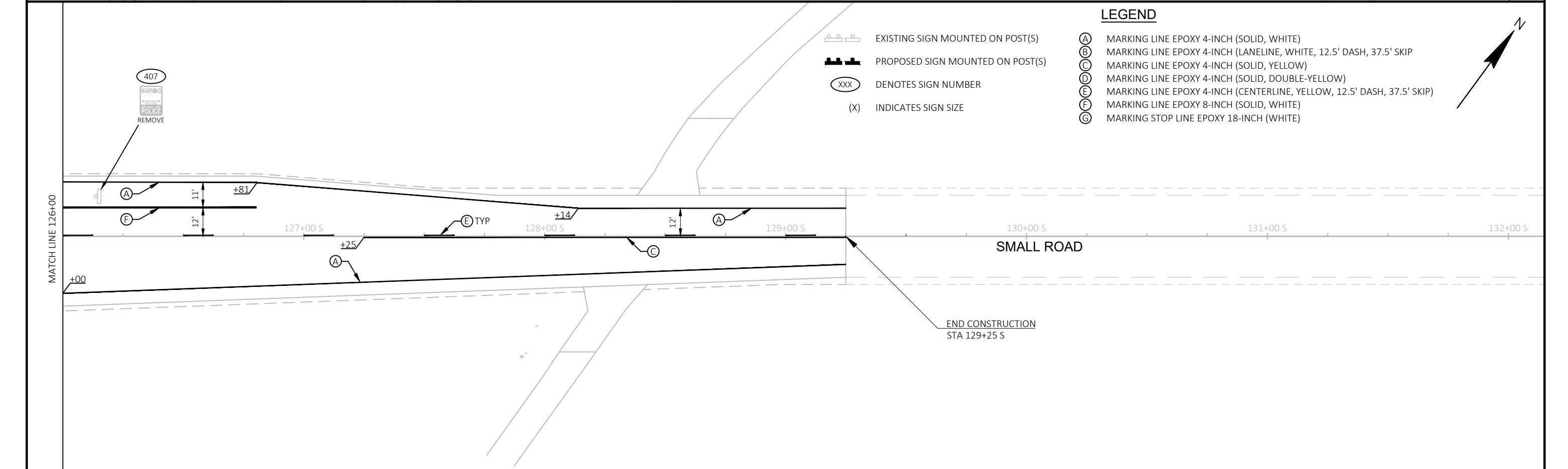
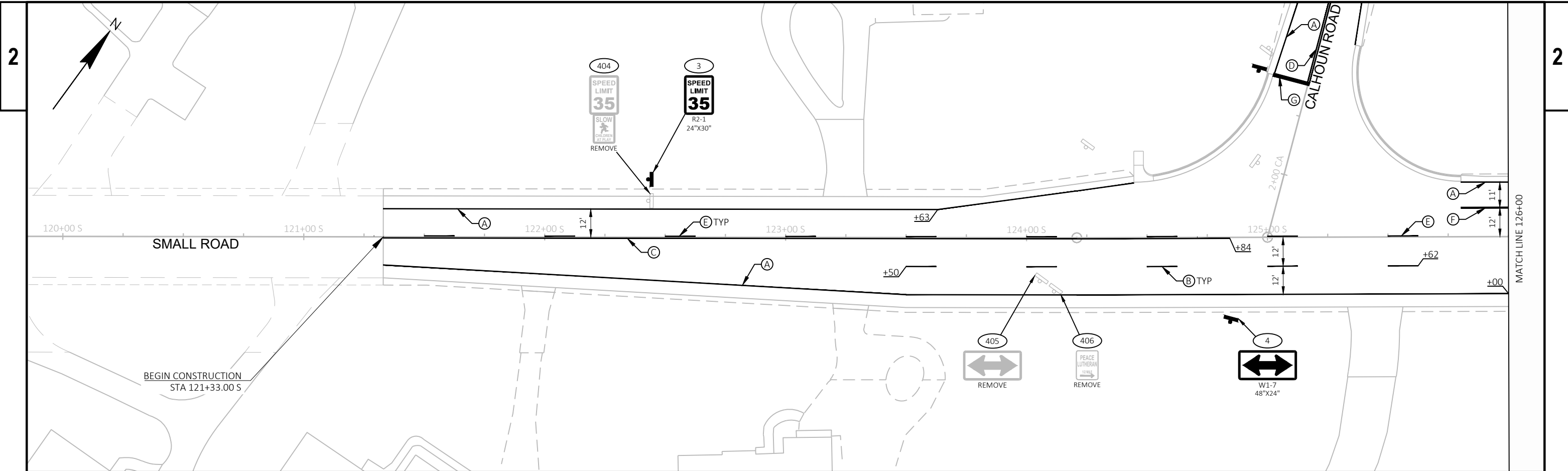
#####	EROSION MAT URBAN CLASS I TYPE B
- - - - -	SILT FENCE
o-o-o-o-o	RIP-RAP OR STONE DITCH CHECK
- - - - -	SLOPE INTERCEPT
CONC	CONCRETE SURFACE DRAINS
△△△	TEMPORARY DITCH CHECKS
○○○	CULVERT PIPE CHECKS
→	SURFACE WATER FLOW

PROJECT NO: 2722-09-70 HWY: LOCAL STREET COUNTY: WAUKESHA EROSION CONTROL SHEET E



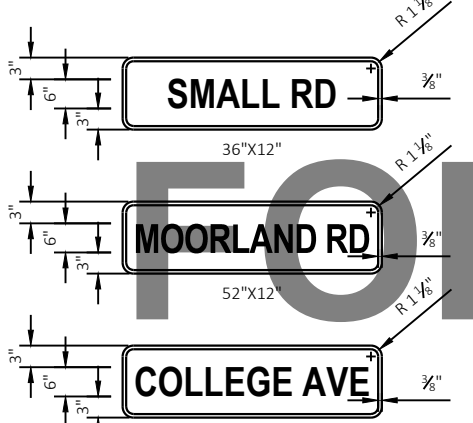
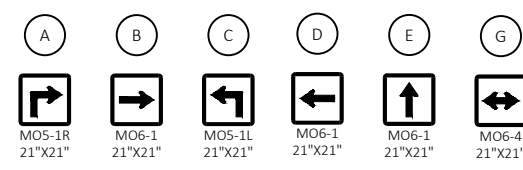
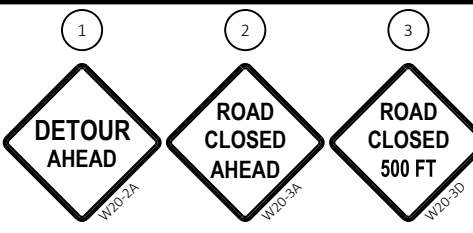
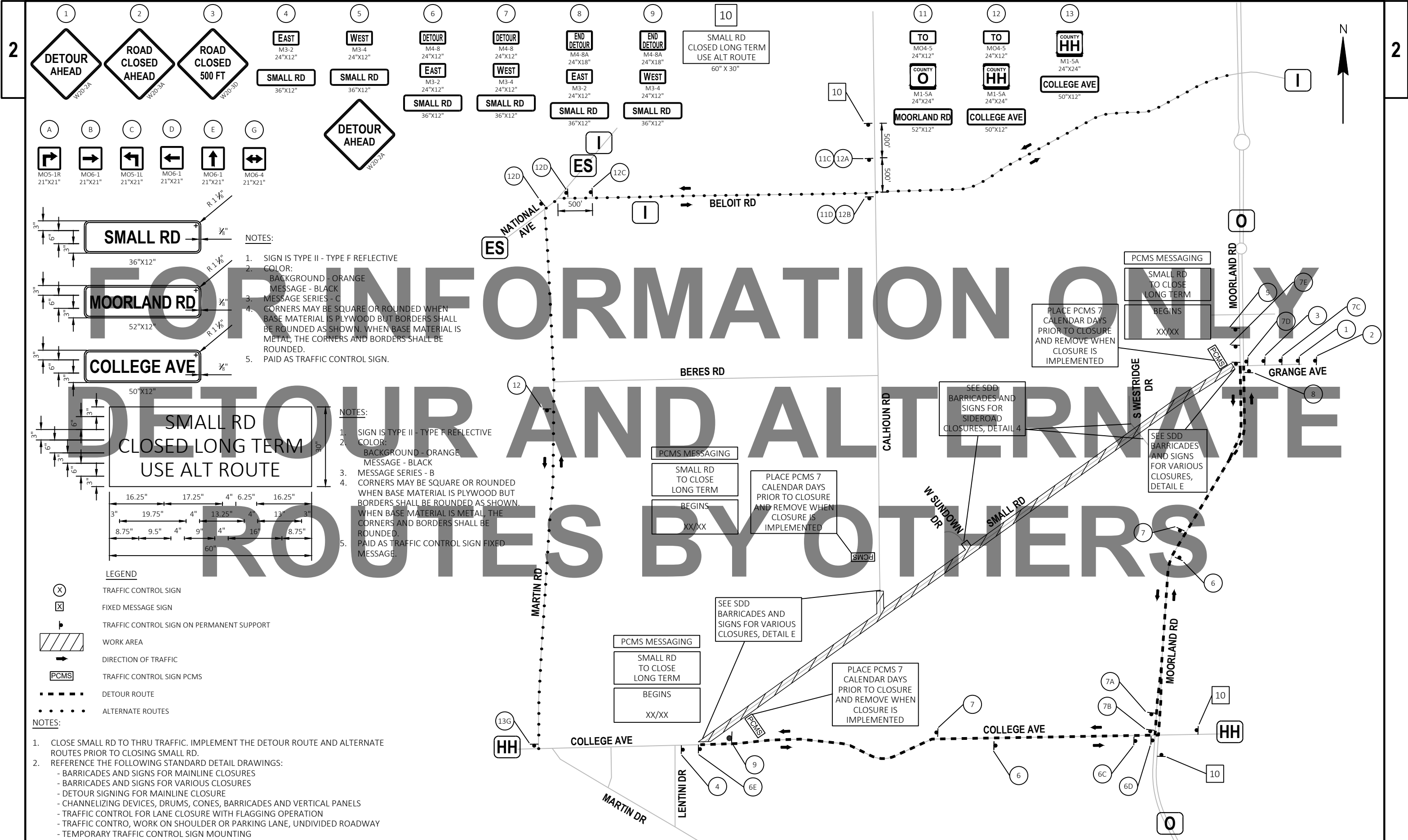
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE
- MARKING LINE EPOXY 4-INCH (SOLID, WHITE)
- MARKING LINE EPOXY 4-INCH (LANELINE, WHITE, 12.5' DASH, 37.5' SKIP)
- MARKING LINE EPOXY 4-INCH (SOLID, YELLOW)
- MARKING LINE EPOXY 4-INCH (SOLID, DOUBLE-YELLOW)
- MARKING LINE EPOXY 4-INCH (CENTERLINE, YELLOW, 12.5' DASH, 37.5' SKIP)
- MARKING LINE EPOXY 8-INCH (SOLID, WHITE)
- MARKING STOP LINE EPOXY 18-INCH (WHITE)

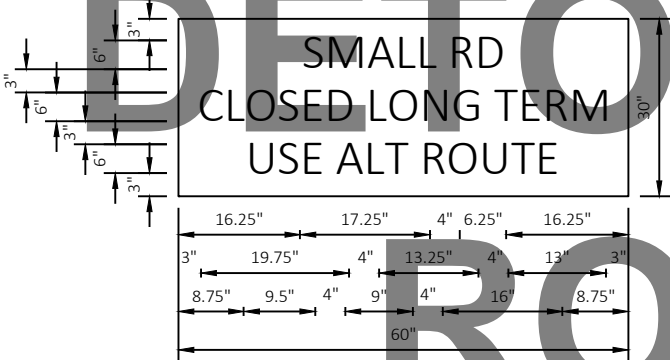


LEGEND

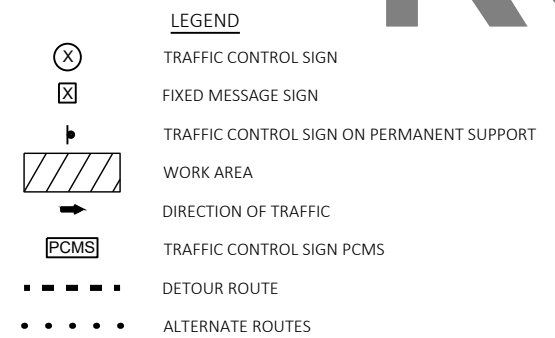
- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE
- MARKING LINE EPOXY 4-INCH (SOLID, WHITE)
- MARKING LINE EPOXY 4-INCH (LANELINE, WHITE, 12.5' DASH, 37.5' SKIP)
- MARKING LINE EPOXY 4-INCH (SOLID, YELLOW)
- MARKING LINE EPOXY 4-INCH (SOLID, DOUBLE-YELLOW)
- MARKING LINE EPOXY 4-INCH (CENTERLINE, YELLOW, 12.5' DASH, 37.5' SKIP)
- MARKING LINE EPOXY 8-INCH (SOLID, WHITE)
- MARKING STOP LINE EPOXY 18-INCH (WHITE)



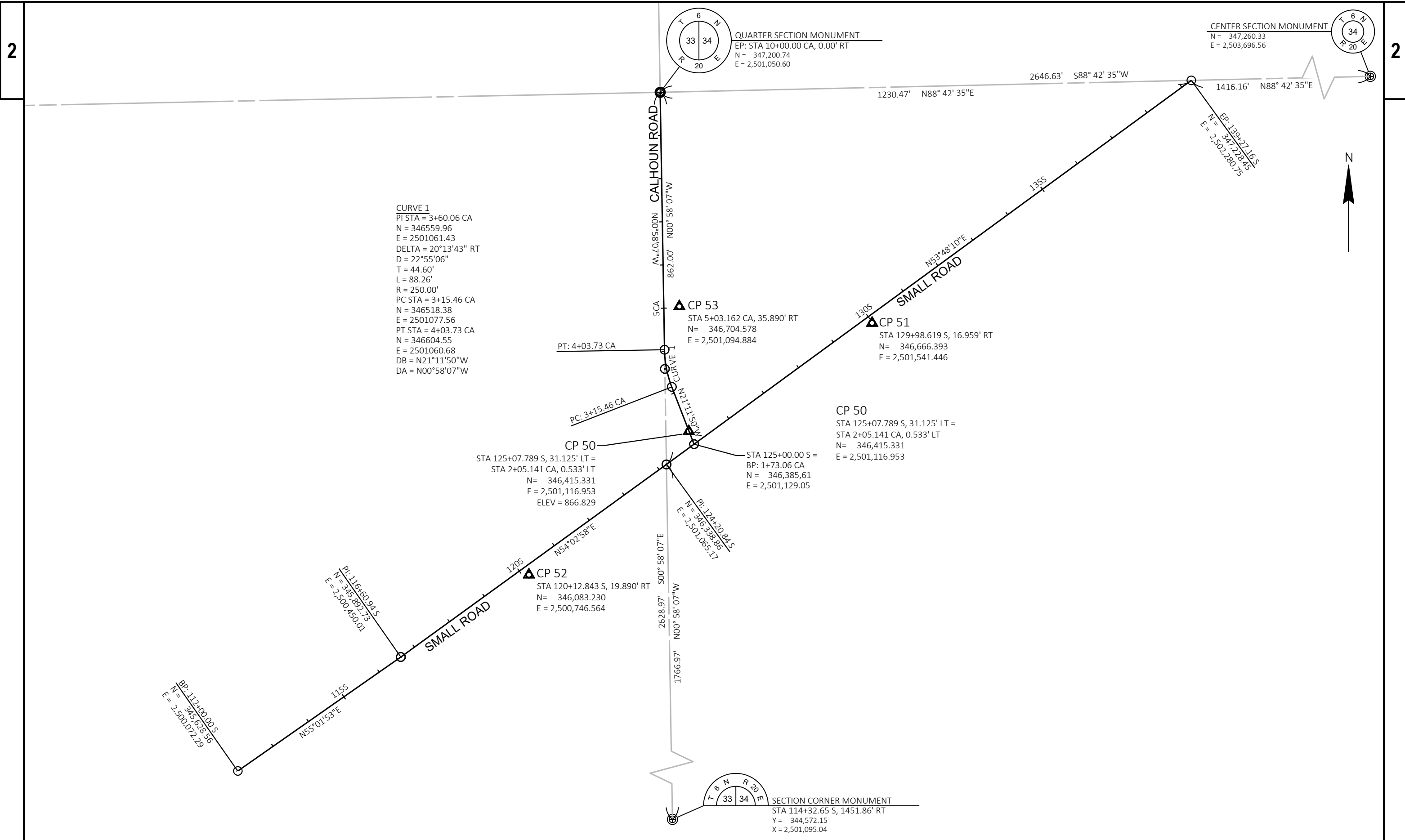
- NOTES:**
- SIGN IS TYPE II - TYPE F REFLECTIVE
 - COLOR: BACKGROUND - ORANGE MESSAGE - BLACK
 - MESSAGE SERIES - C
 - CORNERS MAY BE SQUARE OR ROUNDED WHEN BASE MATERIAL IS PLYWOOD BUT BORDERS SHALL BE ROUNDED AS SHOWN. WHEN BASE MATERIAL IS METAL, THE CORNERS AND BORDERS SHALL BE ROUNDED.
 - PAID AS TRAFFIC CONTROL SIGN.

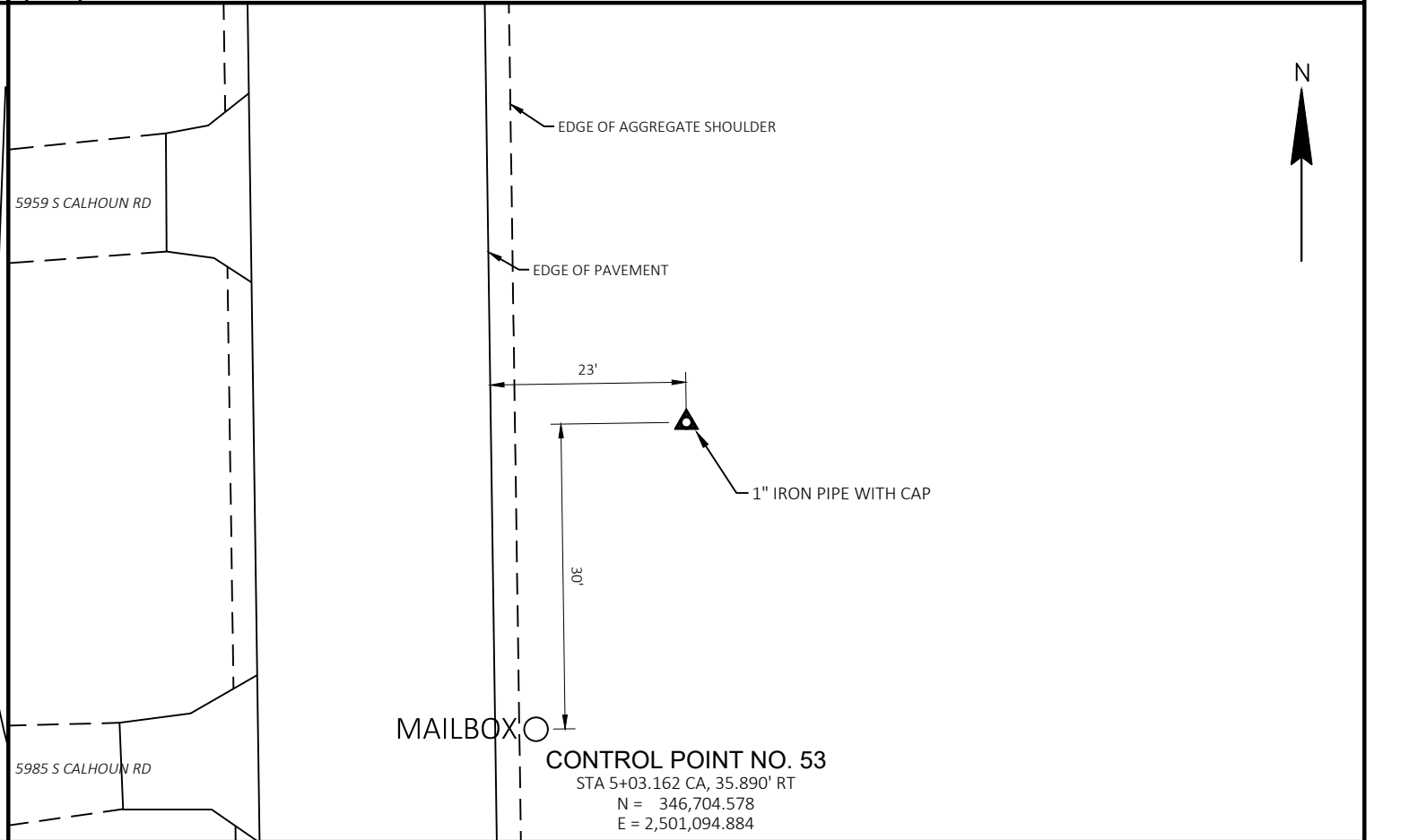
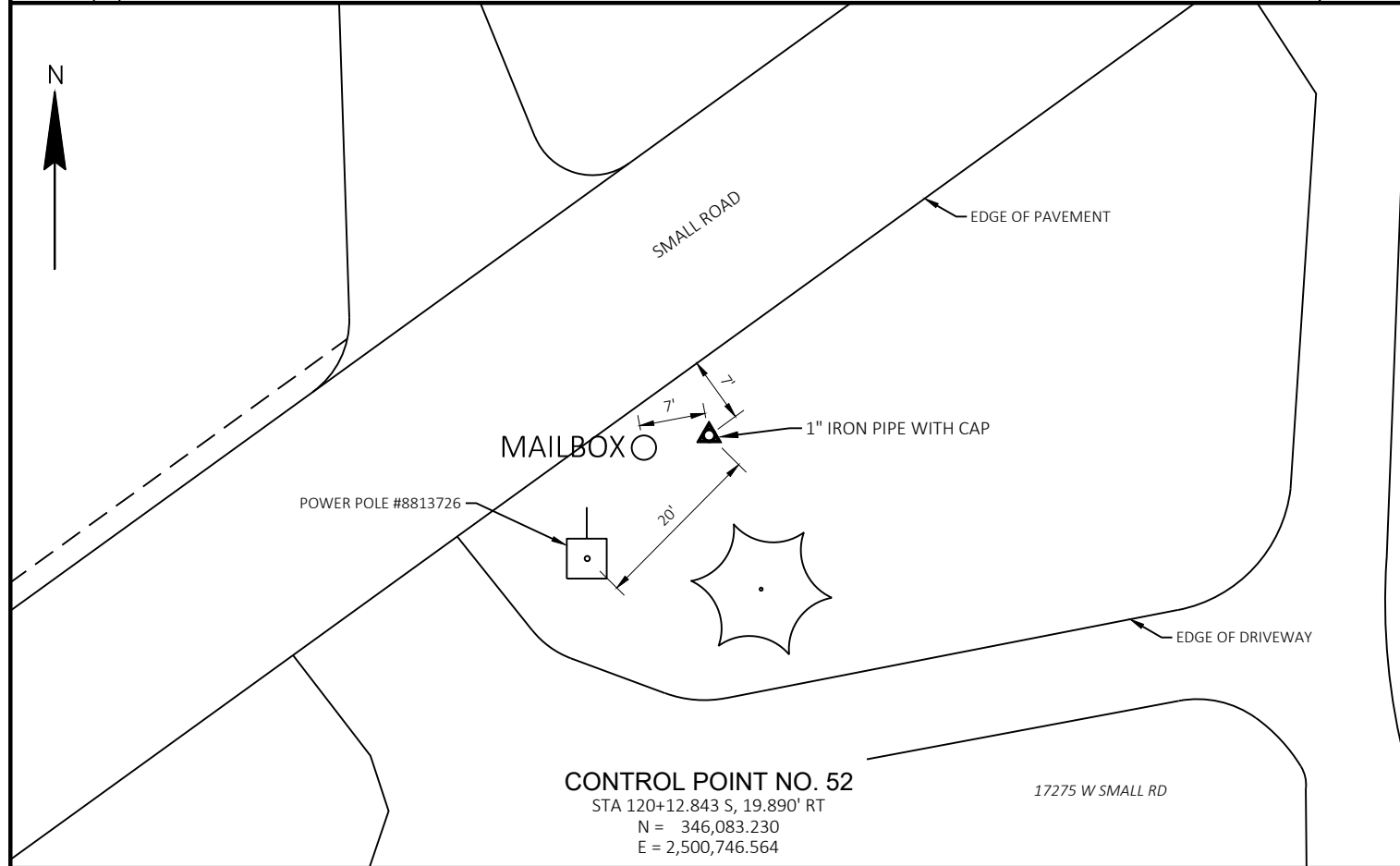
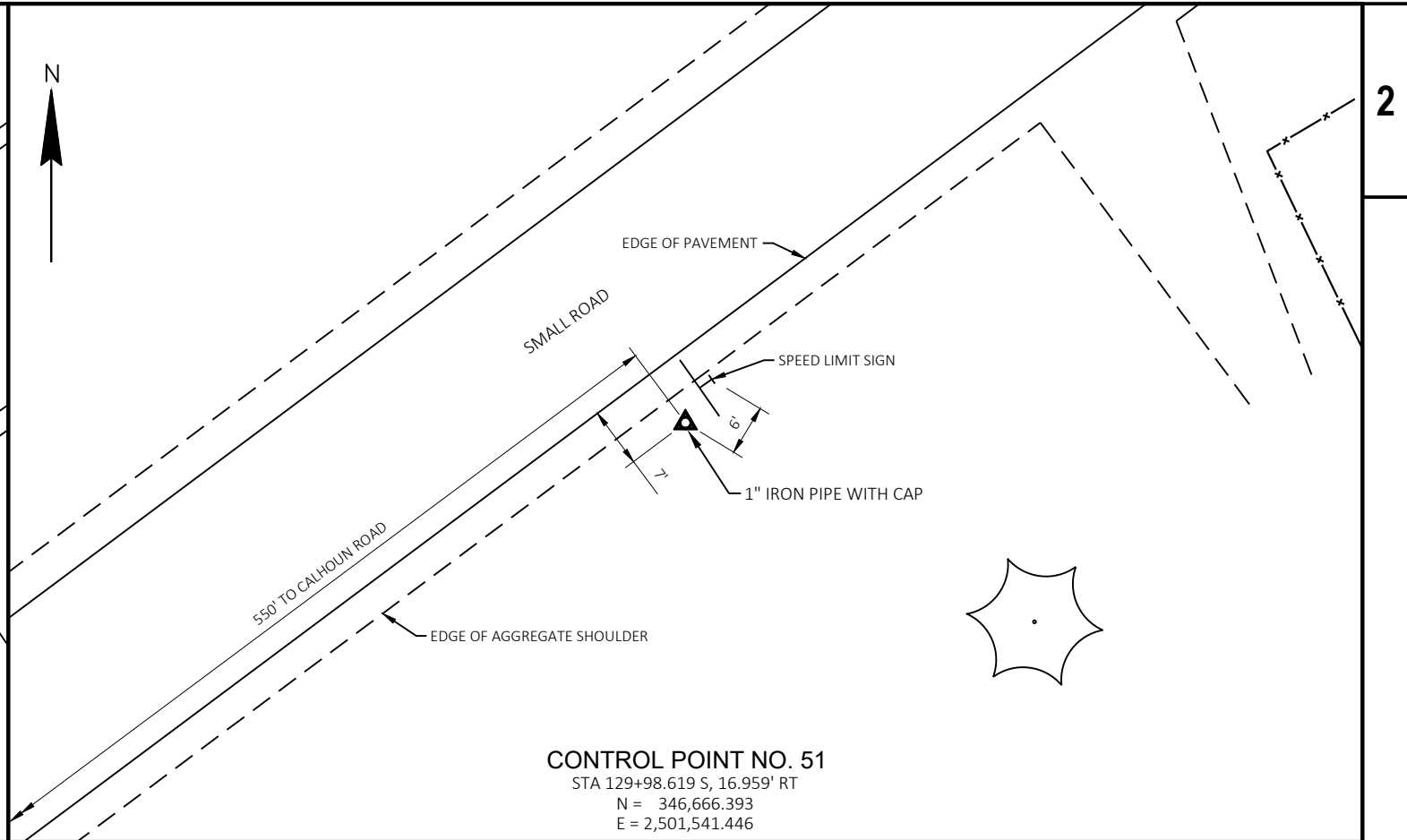
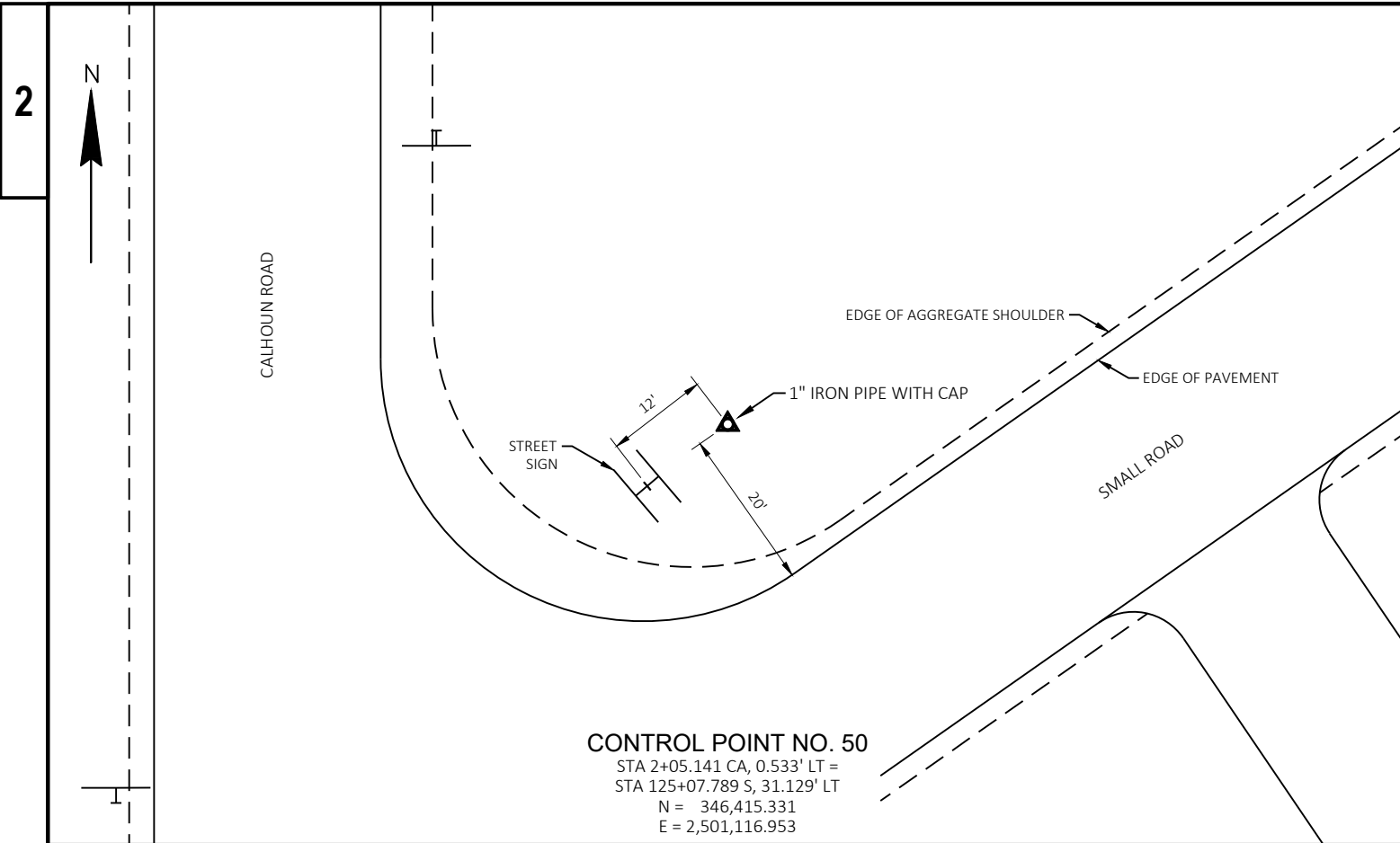


- NOTES:**
- SIGN IS TYPE II - TYPE F REFLECTIVE
 - COLOR: BACKGROUND - ORANGE MESSAGE - BLACK
 - MESSAGE SERIES - B
 - CORNERS MAY BE SQUARE OR ROUNDED WHEN BASE MATERIAL IS PLYWOOD BUT BORDERS SHALL BE ROUNDED AS SHOWN. WHEN BASE MATERIAL IS METAL, THE CORNERS AND BORDERS SHALL BE ROUNDED.
 - PAID AS TRAFFIC CONTROL SIGN FIXED MESSAGE.



- NOTES:**
- CLOSE SMALL RD TO THRU TRAFFIC. IMPLEMENT THE DETOUR ROUTE AND ALTERNATE ROUTES PRIOR TO CLOSING SMALL RD.
 - REFERENCE THE FOLLOWING STANDARD DETAIL DRAWINGS:
 - BARRICADES AND SIGNS FOR MAINLINE CLOSURES
 - BARRICADES AND SIGNS FOR VARIOUS CLOSURES
 - DETOUR SIGNING FOR MAINLINE CLOSURE
 - CHANNELIZING DEVICES, DRUMS, CONES, BARRICADES AND VERTICAL PANELS
 - TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
 - TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
 - TEMPORARY TRAFFIC CONTROL SIGN MOUNTING





PROJECT NO: 2722-09-70

HWY: LOCAL STREET

COUNTY: WAUKESHA

ALIGNMENT DETAILS

SHEET

E

Estimate Of Quantities

2722-09-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	201.0220	Grubbing	ID	250.000	250.000
0006	203.0100	Removing Small Pipe Culverts	EACH	9.000	9.000
0008	205.0100	Excavation Common	CY	4,955.000	4,955.000
0010	213.0100	Finishing Roadway (project) 01. 2722-09-70	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	230.000	230.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	5,100.000	5,100.000
0016	311.0110	Breaker Run	TON	1,160.000	1,160.000
0018	416.1010	Concrete Surface Drains	CY	1.000	1.000
0020	455.0605	Tack Coat	GAL	305.000	305.000
0022	460.2000	Incentive Density HMA Pavement	DOL	1,110.000	1,110.000
0024	460.6223	HMA Pavement 3 MT 58-28 S	TON	1,139.000	1,139.000
0026	460.6424	HMA Pavement 4 MT 58-28 H	TON	569.000	569.000
0028	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	45.000	45.000
0030	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	4.000	4.000
0032	521.1515	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 15-Inch 6 to 1	EACH	2.000	2.000
0034	521.1518	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 18-Inch 6 to 1	EACH	2.000	2.000
0036	521.1735	Apron Endwalls for Pipe Arch Sloped Side Drains Steel 35x24-Inch 6 to 1	EACH	2.000	2.000
0038	521.3112	Culvert Pipe Corrugated Steel 12-Inch	LF	74.000	74.000
0040	521.3115	Culvert Pipe Corrugated Steel 15-Inch	LF	40.000	40.000
0042	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	44.000	44.000
0044	521.3735	Pipe Arch Corrugated Steel 35x24-Inch	LF	33.000	33.000
0046	522.0412	Culvert Pipe Reinforced Concrete Class IV 12-Inch	LF	8.000	8.000
0048	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	2.000	2.000
0050	522.2419	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	128.000	128.000
0052	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	6.000	6.000
0054	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	155.000	155.000
0056	606.0200	Riprap Medium	CY	9.000	9.000
0058	618.0100	Maintenance And Repair of Haul Roads (project) 01. 2722-09-70	EACH	1.000	1.000
0060	619.1000	Mobilization	EACH	1.000	1.000
0062	624.0100	Water	MGAL	100.000	100.000
0064	625.0500	Salvaged Topsoil	SY	6,950.000	6,950.000
0066	628.1504	Silt Fence	LF	360.000	360.000
0068	628.1520	Silt Fence Maintenance	LF	360.000	360.000
0070	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0072	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0074	628.2008	Erosion Mat Urban Class I Type B	SY	7,290.000	7,290.000
0076	628.7504	Temporary Ditch Checks	LF	190.000	190.000
0078	628.7555	Culvert Pipe Checks	EACH	11.000	11.000
0080	629.0210	Fertilizer Type B	CWT	5.000	5.000
0082	630.0140	Seeding Mixture No. 40	LB	125.000	125.000
0084	630.0200	Seeding Temporary	LB	20.000	20.000
0086	630.0300	Seeding Borrow Pit	LB	20.000	20.000
0088	630.0500	Seed Water	MGAL	460.000	460.000
0090	633.5200	Markers Culvert End	EACH	2.000	2.000
0092	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	3.000	3.000
0094	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	1.000	1.000
0096	637.2210	Signs Type II Reflective H	SF	16.180	16.180
0098	637.2230	Signs Type II Reflective F	SF	8.000	8.000

Estimate Of Quantities

2722-09-70

Line	Item	Item Description	Unit	Total	Qty
0100	638.2602	Removing Signs Type II	EACH	10.000	10.000
0102	638.3000	Removing Small Sign Supports	EACH	7.000	7.000
0104	642.5001	Field Office Type B	EACH	1.000	1.000
0106	643.0300	Traffic Control Drums	DAY	545.000	545.000
0108	643.0420	Traffic Control Barricades Type III	DAY	654.000	654.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	1,308.000	1,308.000
0112	643.5000	Traffic Control	EACH	1.000	1.000
0114	645.0120	Geotextile Type HR	SY	18.000	18.000
0116	645.0140	Geotextile Type SAS	SY	6,600.000	6,600.000
0118	646.1020	Marking Line Epoxy 4-Inch	LF	3,290.000	3,290.000
0120	646.3020	Marking Line Epoxy 8-Inch	LF	100.000	100.000
0122	646.6120	Marking Stop Line Epoxy 18-Inch	LF	16.000	16.000
0124	650.4000	Construction Staking Storm Sewer	EACH	5.000	5.000
0126	650.4500	Construction Staking Subgrade	LF	1,095.000	1,095.000
0128	650.5000	Construction Staking Base	LF	1,095.000	1,095.000
0130	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	155.000	155.000
0132	650.6000	Construction Staking Pipe Culverts	EACH	9.000	9.000
0134	650.9911	Construction Staking Supplemental Control (project) 01. 2722-09-70	EACH	1.000	1.000
0136	650.9920	Construction Staking Slope Stakes	LF	1,095.000	1,095.000
0138	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	1.000	1.000
0140	690.0150	Sawing Asphalt	LF	110.000	110.000
0142	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	450.000	450.000
0144	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	900.000	900.000
0146	SPV.0060	Special 01. Underdrain Cleanouts	EACH	5.000	5.000
0148	SPV.0060	Special 02. Removing and Salvaging Private Light Poles	EACH	1.000	1.000
0150	SPV.0090	Special 01. Bioswale	LF	825.000	825.000
0152	SPV.0090	Special 02. Construction Staking Bioswales	LF	825.000	825.000

GRUBBING

CATEGORY	LOCATION	STATION TO STATION		201.0205	201.0220
		STA	ID	STA	ID
0010	CALHOUN ROAD	1+97 TO	5+00	--	--
	SMALL ROAD	121+33 TO	125+00	2	187
		125+00 TO	129+25	--	63
TOTALS				2	250

REMOVING SMALL PIPE CULVERTS

CATEGORY	LOCATION	STATION	DESCRIPTION	203.0100
				EACH
0010	CALHOUN ROAD	1+77 LT	CPCS 18-INCH (CROSS CULVERT)	1
		4+64 LT	CPCS 12-INCH	1
	SMALL ROAD	121+99 RT	CPCS 18-INCH	1
		123+26 LT	15"X18" OVAL	1
		123+61 RT	UNKNOWN	1
		125+46 RT	CPCS 18-INCH	1
		126+44 LT	CPCS 12-INCH	1
		128+25 RT	CPCS 18-INCH	1
		128+54 LT	CPCS 18-INCH	1
TOTALS				9

REMOVING ENCROACHMENTS

CATEGORY	LOCATION	STATION	SPV.0060.02	659.5000.S
			EACH	EACH
0010	SMALL ROAD	123+39 RT	1	1
TOTALS				1

FINISHING ROADWAY

CATEGORY	PROJECT	213.0100
		EACH
0010	2722-09-70	1
TOTAL		1

CONCRETE SURFACE DRAINS

CATEGORY	LOCATION	STATION TO STATION		416.1010
		STA	ID	CY
0010	CALHOUN ROAD	1+97 TO	5+00	--
	SMALL ROAD	121+33 TO	125+00	1
		125+00 TO	129+25	--
TOTALS				1

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	PROJECT	618.0110
		EACH
0020	2722-09-70	1
TOTAL		1

MOBILIZATION

CATEGORY	PROJECT	619.1000
		EACH
0010	2722-09-70	1
TOTAL		1

COMMON EXCAVATION

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	REDUCED EBS IN FILL (9)	EXPANDED EBS BACKFILL (11)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
		CUT (2)	EBS EXCAVATION (3)			FACTOR 0.80	FACTOR 1.00		FACTOR 1.25				
DIVISION 1													
SMALL	121+33.00/129+25.00	3,547	530	47	3,500	424	530	2	-528	4,028	4,028	0	
CALHOUN	2+30.00/5+00.00	761	117	16	745	94	117	0	-117	862	4,028	0	
DIVISION 1 SUBTOTAL		4,308	647	63	4,245	518	647	2	-645	4,890	8,055	0	
GRAND TOTAL		4,308	647	63	4,245	518	647	2	-645	4,890	8,055	0	
TOTAL COMMON EXC		4,955											

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (9) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = .80
- (11) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH BREAKER RUN. EBS BACKFILL FACTOR = 1.00. ITEM NUMBER 311.0110
- (13) EXPANDED FILL FACTOR = 1.25
- EXPANDED FILL = (UNEXPANDED FILL - REDUCED EBS) * FILL FACTOR
- (14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

BASE & PAVING ITEMS

CATEGORY	LOCATION	STATION TO STATION	305.0110	305.0120	311.0110	455.0605	460.6223	460.6424	645.0120	601.0411	624.0100	645.0140
			BASE AGGREGATE DENSE		BREAKER	TACK	PAVEMENT		DRIVEWAYS AND FIELD ENTRANCES	CONCRETE CURB & GUTTER	WATER	GEOTEXTILE
			3/4-INCH	1 1/4-INCH	RUN	COAT	3 MT 58-28 S	4 MT 58-28 H	TON	TYPE D	MGAL	TYPE SAS
			TON	TON	TON	GAL	TON	TON	TON	LF		SY
0010	CALHOUN ROAD	1+97 TO 5+00	80	1,200	--	69	256	128	2	155	20	1560
	SMALL ROAD	121+33 TO 125+00	100	1,800	--	108	403	201	11	--	29	2335
		125+00 TO 129+25	50	2,100	--	129	480	240	32	--	33	2705
UNDISTRIBUTED			--	--	1,160	--	--	--	--	--	18	--
TOTALS			230	5,100	1,160	305	1139	569	45	155	100	6600

CULVERT PIPE SUMMARY

CATEGORY	LOCATION	STATION	APRON ENDWALLS		FOR PIPE ARCH		CULVERT PIPE		PIPE ARCH		CULVERT PIPE		MARKERS	JOINT * TIES	STEEL THICKNESS	ELEVATION	
			FOR CULVERT PIPE	FOR PIPE ARCH	CORRUGATED	PIPE ARCH	REINFORCED CONCRETE	HORIZONTAL									
			SLOPED	SLOPED	STEEL	STEEL	ELLIPITICAL	ELLIPITICAL									
			SLOPED SIDE DRAINS	REINFORCED CONCRETE	SLOPED SIDE DRAINS	CULVERT PIPE	PIPE ARCH	HORIZONTAL									
0010	CALHOUN ROAD	2+31.44	--	--	2	--	--	--	--	58	2	2	0.064	862.61	861.09		
		4+59.30 RT	2	--	--	42	--	--	--	--	--	--	--	872.60	870.62		
		4+63.43 LT	--	--	2	--	--	--	8	--	--	2	--	873.24	872.97		
	SMALL ROAD	121+95.39 RT	--	--	--	--	--	--	--	--	20	--	2	849.53	848.98		
		123+23.21 LT	--	--	--	2	--	--	33	--	--	--	0.079	853.80	852.71		
		123+39.92 RT	--	--	--	2	--	--	--	50	--	2	--	854.47	853.22		
		125+41.78 RT	--	2	--	--	--	40	--	--	--	--	0.064	862.15	860.54		
		128+22.65 RT	2	--	--	--	32	--	--	--	--	--	0.064	872.53	870.96		
		128+55.17 LT	--	--	2	--	--	44	--	--	--	--	0.064	874.59	872.38		
TOTALS			4	2	2	2	6	2	74	40	44	33	8	128	2	8	

- *NON-BID ITEM: FOR INFORMATION ONLY
- **PIPE INVERT AT END OF PIPE FOR INFORMATION ONLY. FIELD VERIFY

EROSION CONTROL

CATEGORY	LOCATION	STATION TO STATION	606.0200	625.0500	628.1504	628.1520	628.1905	628.1910	628.2008	628.7504	628.7555	629.0210	630.0140	630.0200	630.0300	630.0500	645.0120	
			RIPRAP MEDIUM	SALVAGED TOPSOIL	SILT FENCE		EROSION CONTROL		EROSION MAT	TEMPORARY	CULVERT	FERTILIZER	MIXTURE	SEEDING	BORROW	SEED	GEOTEXTILE	
			CY	SY	LF	LF	EACH	EACH	CLASS I TYPE B	CHECKS	PIPE	CHECKS	TYPE B	NO. 40	TEMPORARY	PIT	WATER	TYPE HR
									SY	LF	SY	LF	CWT	LB	LB	LB	MGAL	SY
0010	CALHOUN ROAD	1+97 TO 5+00	5	1,660	--	--	--	--	1,660	50	3	1.0	30	--	--	37	10	
	SMALL ROAD	121+33 TO 125+00	2	1,750	--	--	--	--	1,920	50	3	1.2	32	--	--	43	4	
		125+00 TO 129+25	--	2,150	290	290	--	--	2,250	50	3	1.4	39	--	--	50	--	
UNDISTRIBUTED			2	1390	70	70	6	4	1,460	40	2	1.4	25	20	20	330	4	
TOTALS			9	6,950	360	360	6	4	7,290	190	11	5.0	125	20	20	460	18	

PROJECT NO: 2722-09-70

HWY: LOCAL STREET

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET

E

PERMANENT SIGNING

CATEGORY	LOCATION	STATION	SIGN #	DESCRIPTION	SIGN CODE	SIGN SIZE	SIZE		HEIGHT FT	637.2210 637.2230 SIGNS TYPE II REFLECTIVE		MOUNTING HEIGHT FT	POST EMBEDMENT DEPTH FT	POST HEIGHT FT	634.0811 634.0814 634.0816 POSTS TUBULAR STEEL 2X2-INCH			REMARKS / NEW SIGN LOCATION
							W	H		H	F				11-FT	14-FT	16-FT	
							IN	IN		EACH	EACH				EACH	EACH	EACH	
0010	CALHOUN ROAD	2+39 LT	1	STOP	R1-1	25	30	30	2.5	5.18	--	6.25	1	14.46	--	--	1	
		2+90 RT	2	NO TRUCKS SYMBOL 10 TONS OR OVER	R5-2	25	24	24	2.0	4.00	--	5.25	1	13.08	--	1	--	
						R5-2A	25	24	12	1.0	2.00	--						
SMALL ROAD	122+43 LT	3	SPEED LIMIT 35	R2-1	25	24	30	2.5	5.00	--	6.25	1	13.69	--	1	--		
	124+84 RT	4	TWO DIRECTION LARGE ARROW	W1-7	25	48	24	2.0	--	8.00	6.25	1	12.90	--	1	--	ANGLED TO FACE TRAFFIC ON CALHOUN ROAD	
TOTALS									16.18	8.00				--	3	1		

REMOVING SIGNS

CATEGORY	LOCATION	STATION	SIGN #	SIGN CODE	638.2602 638.3000 REMOVING		REMARKS	COMMENTS
					SIGN TYPE II	SMALL SIGN SUPPORTS		
					EACH	EACH		
0010	CALHOUN ROAD	1+90 LT	401	R1-1	1	1	SOLAR LED FLASHER	
		2+02 LT	402A	D3-1	1	1	W SMALL RD	SALVAGE AND DELIVER TO CITY
		402B	D3-1	1	--	S CALHOUN RD	SALVAGE AND DELIVER TO CITY	
		2+49 LT	403A	R5-2	1	1		
		403B	--	1	--	10 TON LIMIT		
SMALL ROAD	122+43 LT	404A	R2-1	1	1			
		404B	W9-12	1	--			
		124+05 RT	405	W1-7	1	1		
		124+11 RT	406	--	1	1	PEACE LUTHERAN 1/2 MILE	
		126+14 LT	407	--	1	1	NEIGHBORHOOD CRIVE WATCH	
TOTALS				10	7			

CONSTRUCTION STAKING

CATEGORY	LOCATION	STATION TO STATION	650.4000 650.4500 650.5000 650.5500 650.6000 650.9911 650.9920 SPV.0090.02		STORM SEWER EACH	SUBGRADE LF	BASE LF	CURB & GUTTER LF	PIPE CULVERTS EACH	SUPPLEMENTAL CONTROL 2722-09-70 EACH	SLOPE STAKES LF	BIOSWALES LF
			CURB GUTTER AND	PIPE								
			LF	EACH								
0010	CALHOUN ROAD	1+97 TO 5+00	--	303	303	155	3	--	303	--		
		SMALL ROAD	121+33 TO 125+00	3	367	367	--	3	--	367	525	
		125+00 TO 129+25	2	425	425	--	3	--	425	300		
	UNDISTRIBUTED		--	--	--	--	--	--	1	--	--	--
TOTALS			5	1,095	1,095	155	9	1	1,095	825		

FIELD OFFICE TYPE B

CATEGORY	PROJECT	642.5001 EACH
0010	2722-09-70	1
TOTAL		1

SAWING ASPHALT

CATEGORY	LOCATION	STATION TO STATION	690.0150 LF	
			LF	LF
0010	CALHOUN ROAD	1+97 TO 5+00	30	
		SMALL ROAD	121+33 TO 125+00	22
		125+00 TO 129+25	58	
TOTALS			110	

TRAFFIC CONTROL

CATEGORY	LOCATION	643.0300 DRUMS		643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.5000 TRAFFIC CONTROL EACH
		EACH	DAY	EACH	DAY	EACH	DAY	
0010	UNDISTRIBUTED	5	545	6	654	12	1,308	1
		TOTALS		545	654	1,308	1	

BIOSWALE

CATEGORY	LOCATION	STATION TO STATION	SPV.0060.01 UNDERDRAIN CLEANOUTS		SPV.0090.01 BIOSWALE LF	
			EACH	LF	LF	LF
0010	CALHOUN ROAD	1+97 TO 5+00	--	--	--	--
		SMALL ROAD	121+33 TO 125+00	3	525	
		125+00 TO 129+25	2	300		
TOTALS			5	825		

PAVEMENT MARKING

CATEGORY	LOCATION	STATION TO STATION	646.1020 MARKING LINE EPOXY		646.3020 MARKING STOP LINE		646.6120 MARKING STOP LINE EPOXY 18-INCH LF
			4-INCH (WHITE)		8-INCH (WHITE)		
			LF	LF	LF	LF	
0010	CALHOUN ROAD	1+97 TO 5+00	502	522	--	16	
		SMALL ROAD	121+33 TO 125+00	717	440	--	--
		125+00 TO 129+25	796	313	100	--	
	SUBTOTALS		2,015	1,275			
	TOTALS		3,290	100	16		

PROJECT NO: 2722-09-70

HWY: LOCAL STREET

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET

E

RA SMITH PROJECT NUMBER 1180567	SHEET NUMBER 1	TOTAL SHEETS 6
RA SMITH SURVEY NUMBER 5167743		
PLAT OF RIGHT OF WAY REQUIRED FOR CALHOUN ROAD WEST SMALL ROAD TO WEST NATIONAL AVENUE		
CALHOUN ROAD	WAUKESHA COUNTY	

CONVENTIONAL SYMBOLS

SECTION LINE		PARCEL NUMBER	UTILITY NUMBER
QUARTER LINE		SECTION CORNER	R/W MONUMENT NON-MONUMENTED R/W POINT
SIXTEENTH LINE		NOTATION FOR COMBUSTIBLE FLUIDS	FOUND IRON PIN
NEW REFERENCE LINE		NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES	VALVE (GAS, WATER, ETC.)
NEW R/W LINE		CAUTION	SIGN
EXISTING R/W LINE		OFF-PREMISE SIGN	
PROPERTY LINE			
LOT, TIE, AND OTHER MINOR LINES			
SLOPE INTERCEPT			
CORPORATE LIMITS			
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)			
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)			
TEMP. LIMITED EASEMENT AREA		ACCESS CONTROLLED BY ACQUISITION	
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)		NO ACCESS (BY STATUTORY AUTHORITY)	
TRANSMISSION STRUCTURES		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	
BUILDING		NO ACCESS (NEW HIGHWAY)	
BUILDING (TO BE REMOVED)		NATIONAL GEODETIC SURVEY MONUMENT	
BRIDGE		SIXTEENTH CORNER MONUMENT	
		PARALLEL OFFSETS	

CONVENTIONAL UTILITY SYMBOLS

WATER		UTILITY POLE	
GAS		TELEPHONE PEDESTAL	
TELEPHONE		CABLE TV PEDESTAL	
OVERHEAD TRANSMISSION LINES		ELECTRIC PEDESTAL	
ELECTRIC		ELECTRIC METER	
CABLE TELEVISION		LIGHT POLE	
FIBER OPTIC		TRAFFIC SIGNAL	
SANITARY SEWER		PULL BOX	
STORM SEWER		SANITARY MANHOLE	
		STORM INLET	
		GAS VALVE	
		HYDRANT	
		WATER VALVE	

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	OUTLOT	OL
ACRES	AC	PAGE	P
AHEAD	AH	POINT OF TANGENCY	PT
ALUMINUM	ALUM	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	(100')
BACK	BK	REEL / IMAGE	R/I
BLOCK	BLK	REFERENCE LINE	R/L
CENTERLINE	C/L	PERMANENT LIMITED EASEMENT	PLE
CERTIFIED SURVEY MAP	CSM	POINT OF BEGINNING	POB
CONCRETE	CONC	POINT OF CURVATURE	PC
COUNTY	CO	POINT OF COMPOUND CURVE	PCC
COUNTY TRUNK HIGHWAY	CTH	POINT OF INTERSECTION	PI
DISTANCE	DIST	REMAINING	REM
CORNER	COR	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
DOCUMENT NUMBER	DOC	RIGHT	RT
EASEMENT	EASE	RIGHT OF WAY	R/W
EXISTING	EX	SECTION	SEC
GAS VALVE	GV	SEPTIC VENT	SEPV
GRID NORTH	GN	SQUARE FEET	SF
HIGHWAY EASEMENT	HE	STATE TRUNK HIGHWAY	STH
IDENTIFICATION	ID	STATION	STA
LAND CONTRACT	LC	TELEPHONE PEDESTAL	TP
LEFT	LT	TEMPORARY LIMITED EASEMENT	TLE
MONUMENT	MON	TRANSPORTATION PROJECT PLAT	TPP
NATIONAL GEODETIC SURVEY NUMBER	NGS NO	UNITED STATES HIGHWAY VOLUME	USH V

CURVE DATA ABBREVIATIONS

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

END RELOCATION ORDER

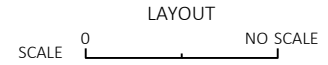
STA 152+97.39
WEST 1/4 CORNER OF SECTION 22, T 6 N, R 20 E

T-6-N
R-20-E



BEGIN RELOCATION ORDER SMALL RD

STA 19+50.00
1,138.3 FEET SOUTH AND 366.6 FEET WEST OF THE WEST 1/4 CORNER OF SECTION 34, T 6 N, R 20 E



TOTAL NET LENGTH OF CENTERLINE = 1.067 MI.

BEGIN RELOCATION ORDER

STA 1+72.86
815.3 FT SOUTH AND 78.5 FT EAST OF THE WEST 1/4 CORNER OF SECTION 34, T 6 N, R 20 E

END RELOCATION ORDER SMALL RD

STA 32+70.57
360.1 FT SOUTH AND 700.3 FT EAST OF THE WEST 1/4 CORNER OF SECTION 34, T 6 N, R 20 E

EXCEPTION TO PROJECT

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN STATE PLANE COORDINATES, SOUTH ZONE, NAD27 IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GROUND DISTANCES. GROUND DISTANCES MAY BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE GRID FACTOR SHOWN ON EACH RESPECTIVE DETAIL SHEET.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

CAUTION:
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.

ORIGINAL PLAT PREPARED BY

raSmith
CREATIVITY BEYOND ENGINEERING

16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.raSmithNational.com

WISCONSIN LAND SURVEYOR

SHANE M. ZODROW
S-2869
GREENDALE WI

DATE: 02/21/2020

LAND SURVEYOR

REVISION DATE
6/30/2020

CITY OF
NEW BERLIN

APPROVED FOR THE CITY OF NEW BERLIN

DATE: _____
(Signature)

SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO THE CITY OF NEW BERLIN.

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED ACRES			TOTAL REMAINING ACRES	T.L.E. TEMP. ACRES	P.L.E. PERM. ACRES	PARCEL NUMBER
					NEW	EXISTING	TOTAL				
1	4.04	SCOTT W. AND STACEY M. NELSON	FEE, TLE	1.121	0.119	0.151	0.270	0.851	0.042	-	1
2	4.04	NATALIE A. MCDONALD	FEE, TLE	9.564	0.572	1.050	1.622	7.942	0.150	-	2
3	4.04	EUGENE C. SCHWALBACH	FEE, TLE	1.006	0.074	0.072	0.146	0.860	0.029	-	3
4	4.04	SAMUEL AND KATARINA FISCHER	FEE	1.007	0.093	0.091	0.184	0.823	-	-	4
5	4.04	NEAL O. AND THERESE G. RANDALL	FEE	1.592	0.094	0.092	0.186	1.406	-	-	5
6	4.05	LLOYD M. AND AGNES A. SALENTINE REVOCABLE TRUST	FEE, TLE	16.957	0.284	0.551	0.835	16.122	0.209	-	6
7	4.05	COVENANT ORTHODOX PRESBYTERIAN CHURCH	FEE, TLE	0.380	0.039	0.076	0.115	0.265	0.033	-	7
8	4.05	COVENANT ORTHODOX PRESBYTERIAN CHURCH	FEE, TLE	10.590	0.153	0.298	0.451	10.139	0.095	-	8
9	4.05	LLOYD M. AND AGNES A. SALENTINE REVOCABLE TRUST	FEE, TLE	14.843	0.319	0.620	0.939	13.904	0.188	-	9
10	4.05	MARK A. AND CHERYL L. STUCZYNSKI REVOCABLE TRUST	FEE, TLE	1.324	0.087	0.170	0.257	1.067	0.051	-	10
11	4.05	JASON AND KAITLYN SHIELDS	FEE, TLE	1.322	0.087	0.170	0.257	1.065	0.051	-	11
12	4.05	KAREN L. LESLIE	FEE, TLE	0.503	0.039	0.076	0.115	0.388	0.023	-	12
13	4.05	KLUMB FAMILY LIMITED PARTNERSHIP	FEE, TLE	89.356	0.268	0.517	0.785	88.571	0.390	-	13
14	4.05	WALTER E. AND PATRICIA L. HART	FEE, TLE	10.015	0.221	0.429	0.650	9.365	0.095	-	14
15	4.06	ALLAN SALENTINE	FEE, TLE	38.121	0.439	0.816	1.255	36.866	0.264	-	15
16 (2)	4.06	KENNETH R. SIDELLO	FEE, TLE	3.465	0.131	0.291	0.422	3.043	0.168	-	16 (2)
17	4.06	CHRISTIE & MATTHEW WAGNER	TLE	0.510	-	-	-	0.510	0.032	-	17
18	4.06	TVNB, LLC	TLE	5.635	-	-	-	5.635	0.104	-	18
19	4.04	BEVERLY J. & DENNIS J. MCLAIN	TLE	10.281	-	-	-	10.281	0.097	-	19
20	4.04	KATHERINE A. & RONALD W. GRAEF	TLE	0.712	-	-	-	0.712	0.063	-	20
21	4.04	NATHAN D. SCHMITT	TLE	2.113	-	-	-	2.113	0.012	-	21
22	4.05	CHYLA JOINT REVOCABLE TRUST	TLE	6.563	-	-	-	6.563	0.099	-	22
23	4.05	CAROL L. & JAMES P. HOUSE	TLE	0.682	-	-	-	0.682	0.050	-	23
24	4.05	KEVIN E. HOFMANN	TLE	2.993	-	-	-	2.993	0.091	-	24
25	4.05	NEW BERLIN GRACE EVANGELICAL CHURCH	TLE	6.025	-	-	-	6.025	0.100	-	25
26	4.06	TERRY L. EHLEITER REVOCABLE TRUST	TLE	0.583	-	-	-	0.583	0.001	-	26
27	4.06	GAIL I. KOEHLER	TLE	0.535	-	-	-	0.535	0.001	-	27
28	4.06	MARTHA L. & STEVEN M. KALK	TLE	0.502	-	-	-	0.502	0.007	-	28
29	4.06	PATRICE M. & AARON W. SCARCE	TLE	0.516	-	-	-	0.516	0.037	-	29
30	4.06	LANA L. & DOUGLAS L. BAINBRIDGE	TLE	0.543	-	-	-	0.543	0.028	-	30
31	4.06	GARY F. LAVOTA	TLE	0.553	-	-	-	0.553	0.028	-	31
32	4.06	REBECCA E. & KEVIN M. HARRISON	TLE	0.515	-	-	-	0.515	0.028	-	32
33	4.06	LARRY KAMKE	TLE	0.482	-	-	-	0.482	0.028	-	33
34	4.06	DEBRA A. & HARRY M. PYNE	TLE	0.537	-	-	-	0.537	0.033	-	34
500	4.04,4.05&4.06	AT&T WISCONSIN	RELEASE OF RIGHTS								
501	4.04,4.05&4.06	WE ENERGIES - ELECTRIC	RELEASE OF RIGHTS								
502	4.05&4.06	WE ENERGIES - GAS	RELEASE OF RIGHTS								
503	4.05	TIME WARNER CABLE	RELEASE OF RIGHTS								

4

4

REVISION DATE
6/30/2020

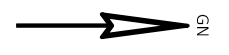
DATE 02/21/2020
GRID FACTOR N/A

SCALE, FEET
0 N/A N/A

HWY: CALHOUN ROAD
COUNTY: WAUKESHA

RA SMITH PROJECT NUMBER: 1180567
RA SMITH SURVEY NUMBER: 5167743

PLAT SHEET 4.02
PS&E SHEET E



T-6-N
T-5-N

T-6-N
R-20-E

END PROJECT
STA 152+97.39

BEGIN PROJECT
STA 1+73.06

SHEET 4.04
SE 1/4

SHEET 4.05
NE 1/4

SHEET 4.06
SE 1/4

CALHOUN ROAD

W. BERES RD
W. SHADOW DR
W. NATIONAL AVE
W. MARY ROSS DR.

W. BELOIT RD

W. SMALL RD

SW 1/4

NE 1/4

SE 1/4

NW 1/4

SW 1/4

CITY OF NEW BERLIN

4

4

REVISION DATE	DATE	SCALE, FEET	HWY:	RA SMITH PROJECT NUMBER:	PLAT SHEET
6/30/2020	02/21/2020	0 500 1000	CALHOUN ROAD	1180567	4.03
	GRID FACTOR		COUNTY:	RA SMITH SURVEY NUMBER:	PS&E SHEET
	N/A		WAUKESHA	5167743	

DATE	02/21/2020
GRID FACTOR	N/A



HWY:	CALHOUN ROAD
COUNTY:	WAUKESHA

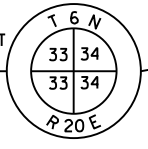
RA SMITH PROJECT NUMBER:	1180567
RA SMITH SURVEY NUMBER:	5167743

PLAT SHEET	4.03
PS&E SHEET	

E

- (500) AT&T WISCONSIN
 - 10' EASEMENT DOC.1612974 PARCEL 1
 - 10' EASEMENT DOC.1597962 R.1212, 1.151 PARCEL 2
 - 10' EASEMENT DOC.1606209 PARCEL 5
 - NO RECORD OF EASEMENT PARCEL 20
- (501) WE ENERGIES - ELECTRIC
 - NON DESCRIPT EASEMENT DOC.155313 PARCELS 1, 3, 4, 5 & 20
 - NON DESCRIPT EASEMENT DOC.402772 V.643, P.304 PARCEL 3
 - 5' EASEMENT DOC. 425911 PARCEL 5
 - 12' EASEMENT DOC.4193588 PARCEL 2

FOUND CONCRETE MONUMENT WITH BRASS CAP
Y=347200.74
X=2501050.60



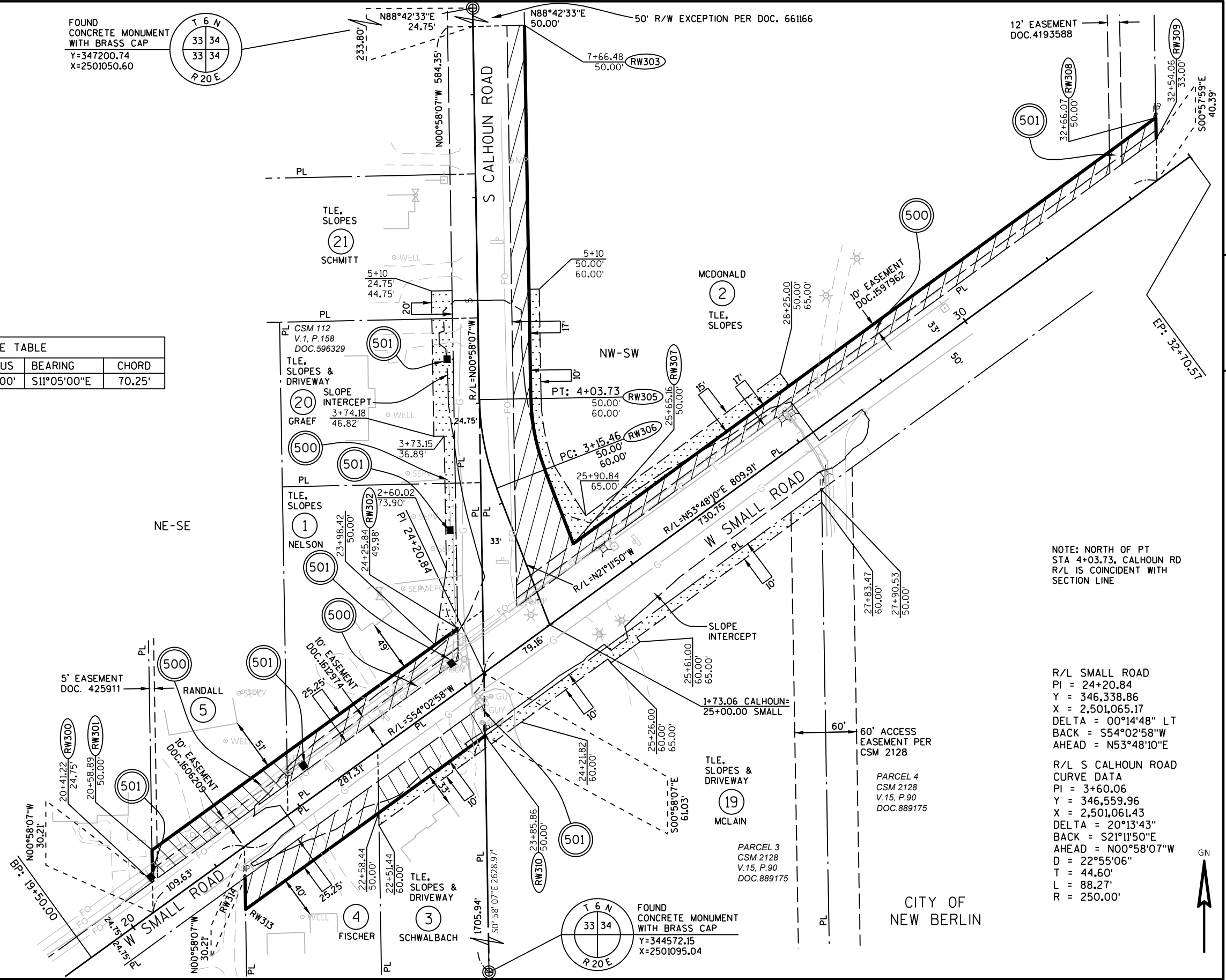
CURVE	LENGTH	RADIUS	BEARING	CHORD
305-306	70.61'	200.00'	S11°05'00"E	70.25'

300-301	N00°58'07"W	30.82'
301-302	N54°02'58"E	366.73'
303-305	S00°58'07"E	362.76'
305-306	SEE CURVE DATA	
306-307	S21°11'53"E	77.24'
307-308	N53°48'10"E	700.90'
308-309	S00°57'59"E	20.82'
310-313	S54°02'58"W	287.30'
313-314	N00°58'07"W	30.82'

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
SMALL ROAD	CSM 111	49.5'	1963
SMALL ROAD	CSM 2128	50'	1974
CALHOUN RD	CSM 112	24.75'	1963

PI	Y	X
19+50.00	346,062.44	2,500,684.02
25+00.00	346,338.86	2,501,065.17
32+70.57	346,840.69	2,501,750.90
1+73.06	346,385.61	2,501,129.05

RW313	20+98.55	50.00' RT
RW314	21+16.22	24.75' RT



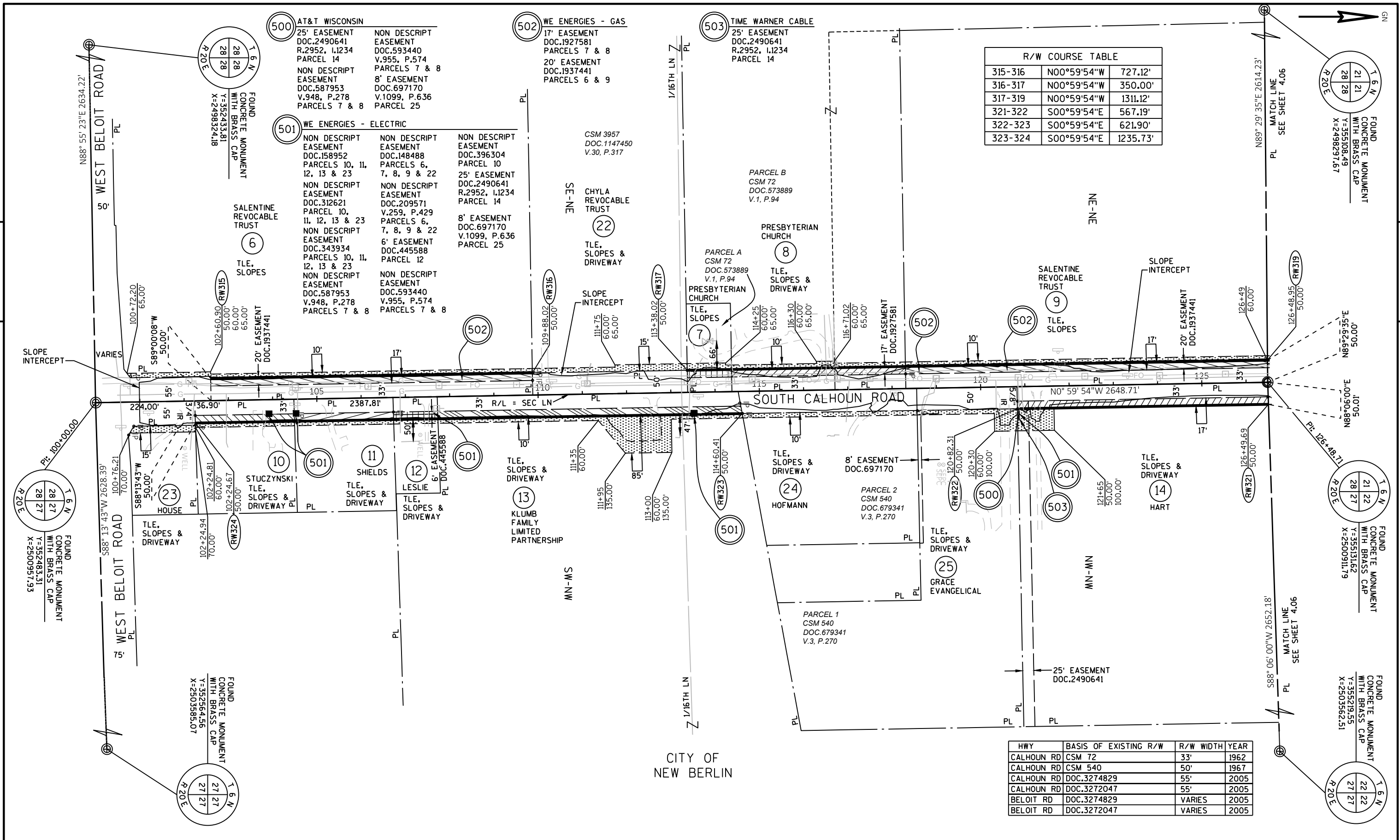
NOTE: NORTH OF PT STA 4+03.73, CALHOUN RD R/L IS COINCIDENT WITH SECTION LINE

R/L SMALL ROAD
PI = 24+20.84
Y = 346,338.86
X = 2,501,065.17
DELTA = 00°14'48" LT
BACK = S54°02'58"W
AHEAD = N53°48'10"E

R/L S CALHOUN ROAD
CURVE DATA
PI = 3+60.06
Y = 346,559.96
X = 2,501,061.43
DELTA = 20°13'43"
BACK = S21°11'50"E
AHEAD = N00°58'07"W
D = 22°55'06"
T = 44.60'
L = 88.27'
R = 250.00'



REVISION DATE 6/30/2020	DATE 02/21/2020	SCALE, FEET 0 50 100	HWY: CALHOUN ROAD	RA SMITH PROJECT NUMBER: 1180567	PLAT SHEET 4.04
	GRID FACTOR 0.99991637		COUNTY: WAUKESHA	RA SMITH SURVEY NUMBER: 5167743	PS&E SHEET



R/W COURSE TABLE		
315-316	N00°59'54"W	727.12'
316-317	N00°59'54"W	350.00'
317-319	N00°59'54"W	1311.12'
321-322	S00°59'54"E	567.19'
322-323	S00°59'54"E	621.90'
323-324	S00°59'54"E	1235.73'

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
CALHOUN RD	CSM 72	33'	1962
CALHOUN RD	CSM 540	50'	1967
CALHOUN RD	DOC.3274829	55'	2005
CALHOUN RD	DOC.3272047	55'	2005
BELOIT RD	DOC.3274829	VARIES	2005
BELOIT RD	DOC.3272047	VARIES	2005

500 AT&T WISCONSIN
 25' EASEMENT
 DOC.2490641
 R.2952, I.1234
 PARCEL 14
 NON DESCRIPT
 EASEMENT
 DOC.587953
 V.948, P.278
 PARCELS 7 & 8

502 WE ENERGIES - GAS
 17' EASEMENT
 DOC.1927581
 PARCELS 7 & 8
 20' EASEMENT
 DOC.1937441
 PARCELS 6 & 9

503 TIME WARNER CABLE
 25' EASEMENT
 DOC.2490641
 R.2952, I.1234
 PARCEL 14

501 WE ENERGIES - ELECTRIC
 NON DESCRIPT
 EASEMENT
 DOC.158952
 PARCELS 10, 11,
 12, 13 & 23
 NON DESCRIPT
 EASEMENT
 DOC.312621
 PARCEL 10,
 11, 12, 13 & 23
 NON DESCRIPT
 EASEMENT
 DOC.343934
 PARCELS 10, 11,
 12, 13 & 23
 NON DESCRIPT
 EASEMENT
 DOC.587953
 V.948, P.278
 PARCELS 7 & 8

CSM 3957
 DOC.1147450
 V.30, P.317

PARCEL B
 CSM 72
 DOC.573889
 V.1, P.94

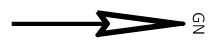
PARCEL A
 CSM 72
 DOC.573889
 V.1, P.94

PARCEL 1
 CSM 540
 DOC.679341
 V.3, P.270

PARCEL 2
 CSM 540
 DOC.679341
 V.3, P.270

PARCEL 1
 CSM 540
 DOC.679341
 V.3, P.270

REVISION DATE 6/30/2020	DATE 02/21/2020	SCALE, FEET 0 100 200	HWY: CALHOUN ROAD	RA SMITH PROJECT NUMBER: 1180567	PLAT SHEET 4.05
	GRID FACTOR 0.99991637		COUNTY: WAUKESHA	RA SMITH SURVEY NUMBER: 5167743	PS&E SHEET



R/W COURSE TABLE		
319-325	N00°46'52"W	1461.05'
325-326	N89°13'08"E	17.00'

1 AP PER DOC.1645777, REEL
1296, IMAGE 751
PARCEL 16

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
CALHOUN RD	HEARTHSIDE ACRES ADD 1	50'	1958
CALHOUN RD	DOC.2628674	33'	2001
NATIONAL AVE	DOC.4270678	60'	2017

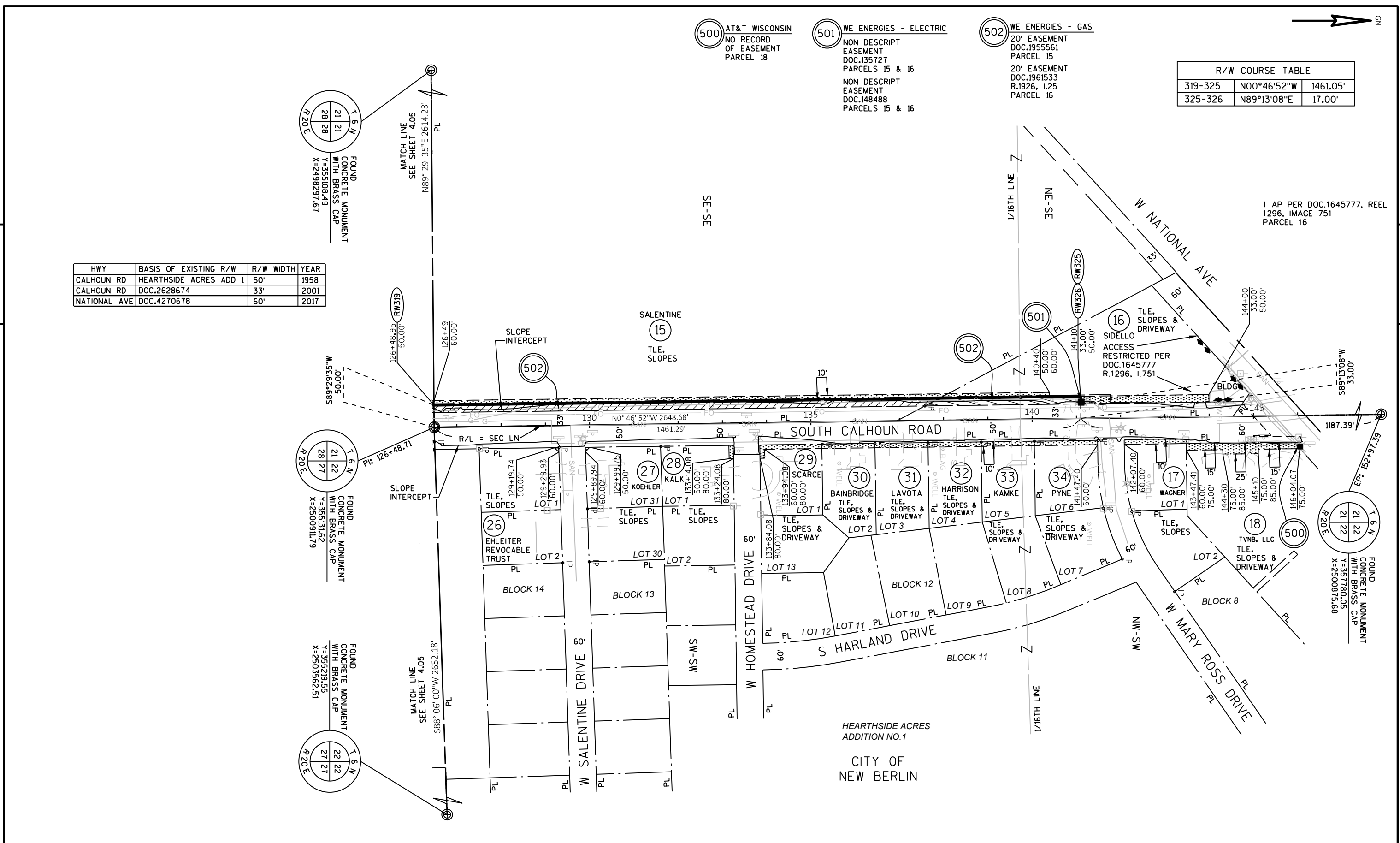
- (500) AT&T WISCONSIN
NO RECORD
OF EASEMENT
PARCEL 18
- (501) WE ENERGIES - ELECTRIC
NON DESCRIPT
EASEMENT
DOC.135727
PARCELS 15 & 16
- (502) WE ENERGIES - GAS
NON DESCRIPT
EASEMENT
DOC.148488
PARCELS 15 & 16

FOUND
CONCRETE MONUMENT
WITH BRASS CAP
Y=355108.49
X=2498297.67

FOUND
CONCRETE MONUMENT
WITH BRASS CAP
Y=355131.62
X=2500911.19

FOUND
CONCRETE MONUMENT
WITH BRASS CAP
Y=355219.55
X=2503562.51

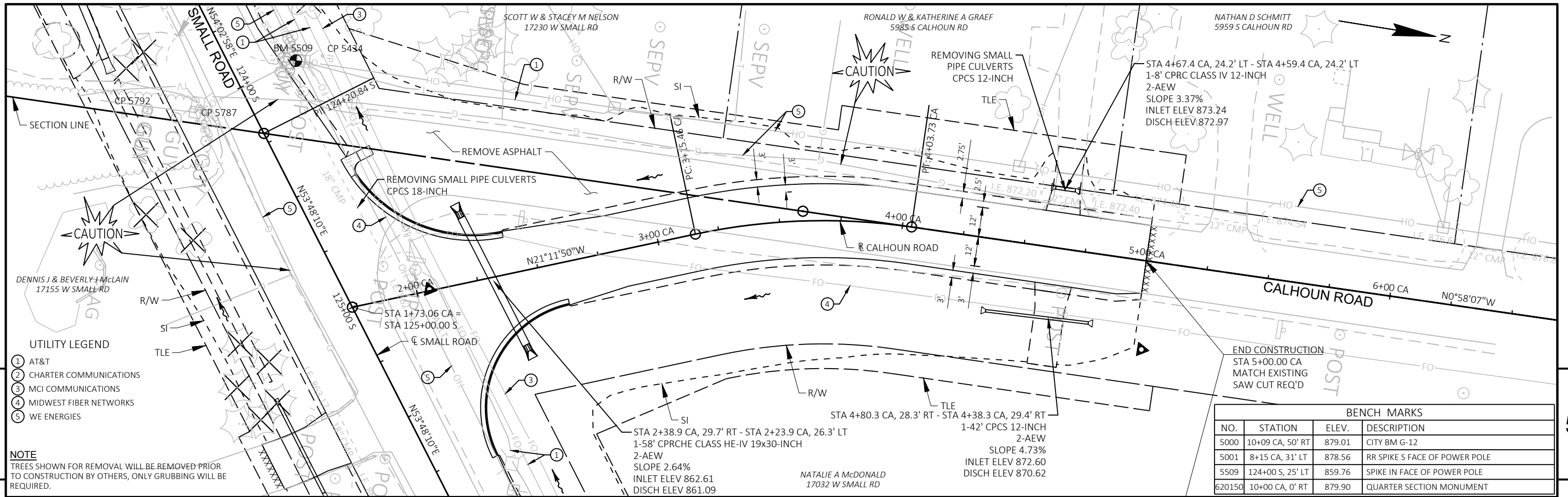
FOUND
CONCRETE MONUMENT
WITH BRASS CAP
Y=357780.05
X=2500875.68



4

4

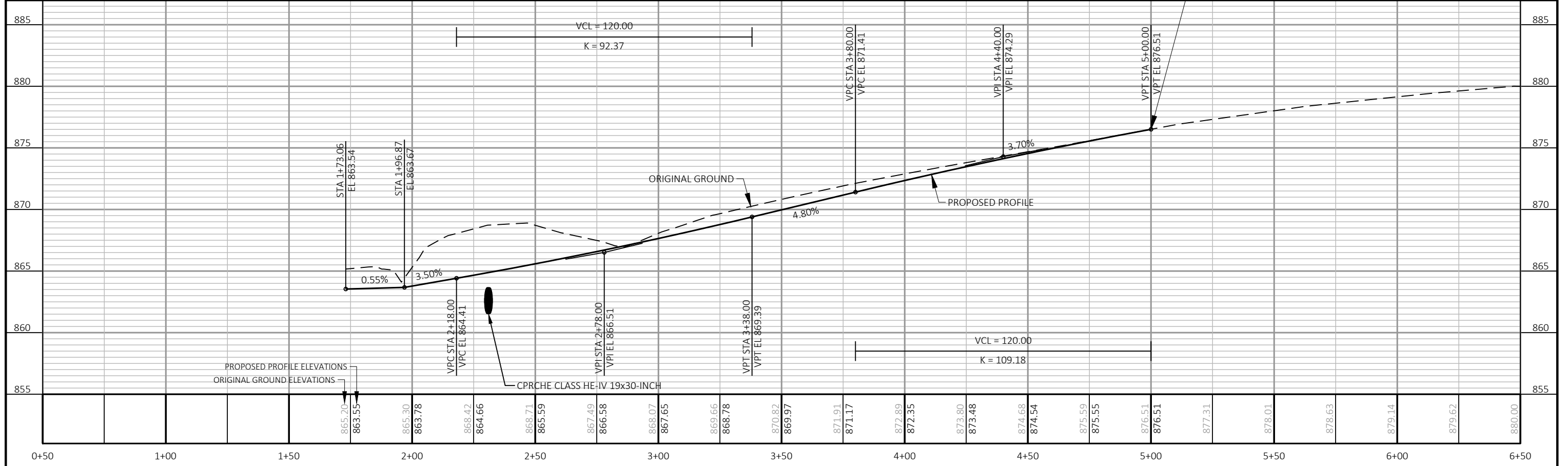
REVISION DATE	DATE	SCALE, FEET	HWY:	RA SMITH PROJECT NUMBER:	PLAT SHEET
6/30/2020	02/21/2020	0 100 200	CALHOUN ROAD	1180567	4.06
	GRID FACTOR		COUNTY:	RA SMITH SURVEY NUMBER:	PS&E SHEET
	0.99991678		WAUKESHA	5167743	



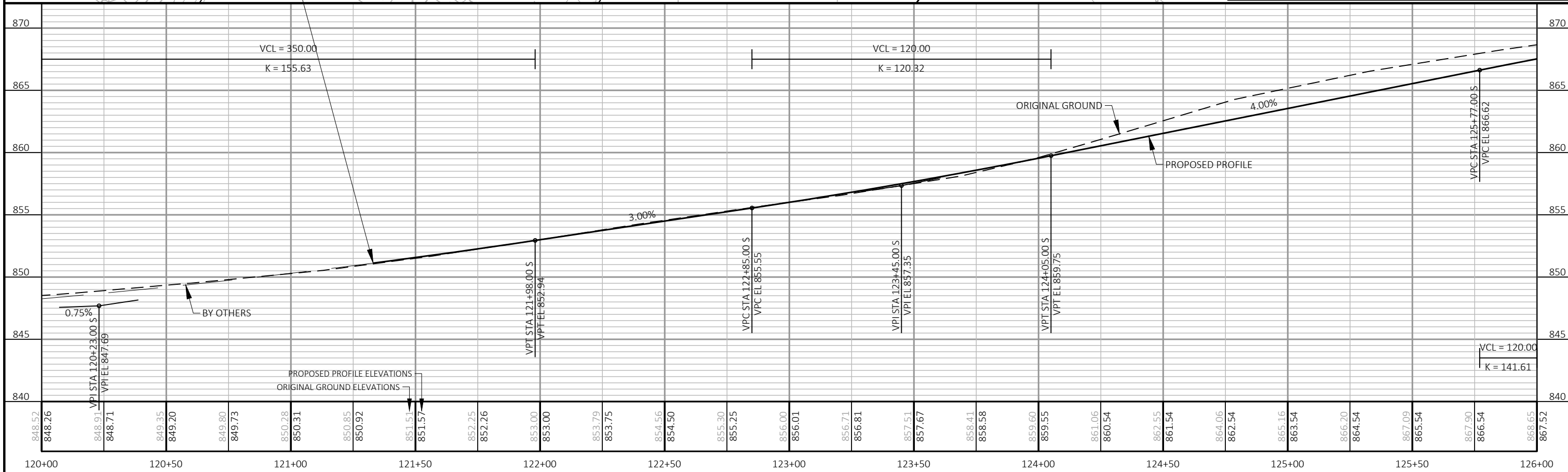
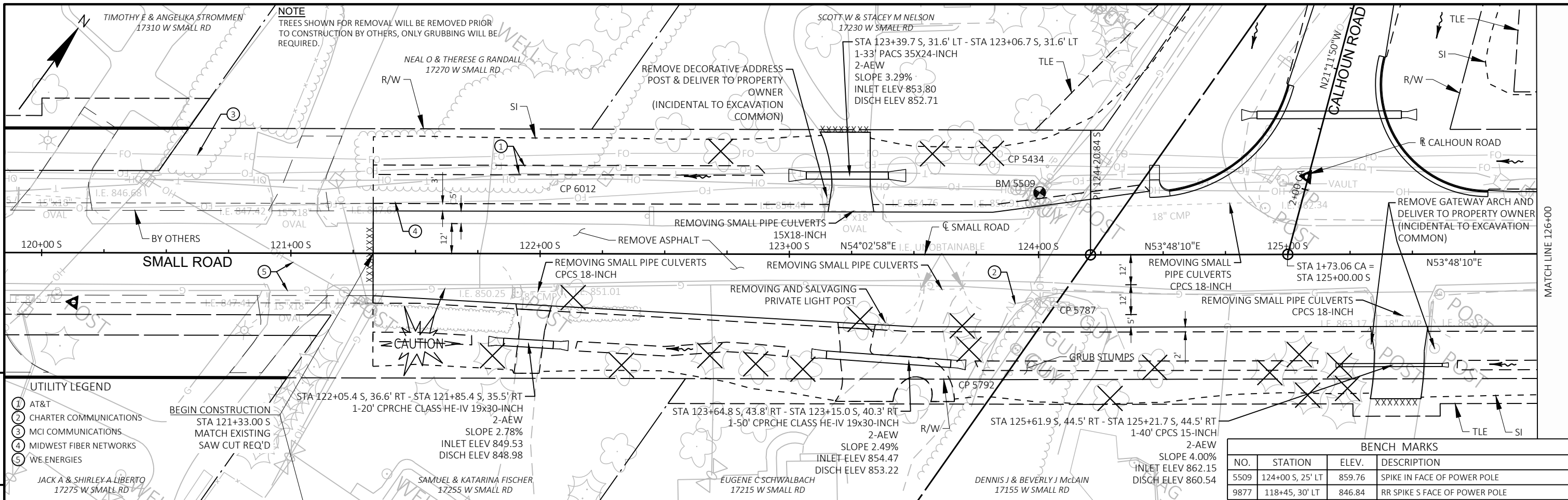
- UTILITY LEGEND**
- ① AT&T
 - ② CHARTER COMMUNICATIONS
 - ③ MCI COMMUNICATIONS
 - ④ MIDWEST FIBER NETWORKS
 - ⑤ WE ENERGIES

NOTE
 TREES SHOWN FOR REMOVAL WILL BE REMOVED PRIOR TO CONSTRUCTION BY OTHERS, ONLY GRUBBING WILL BE REQUIRED.

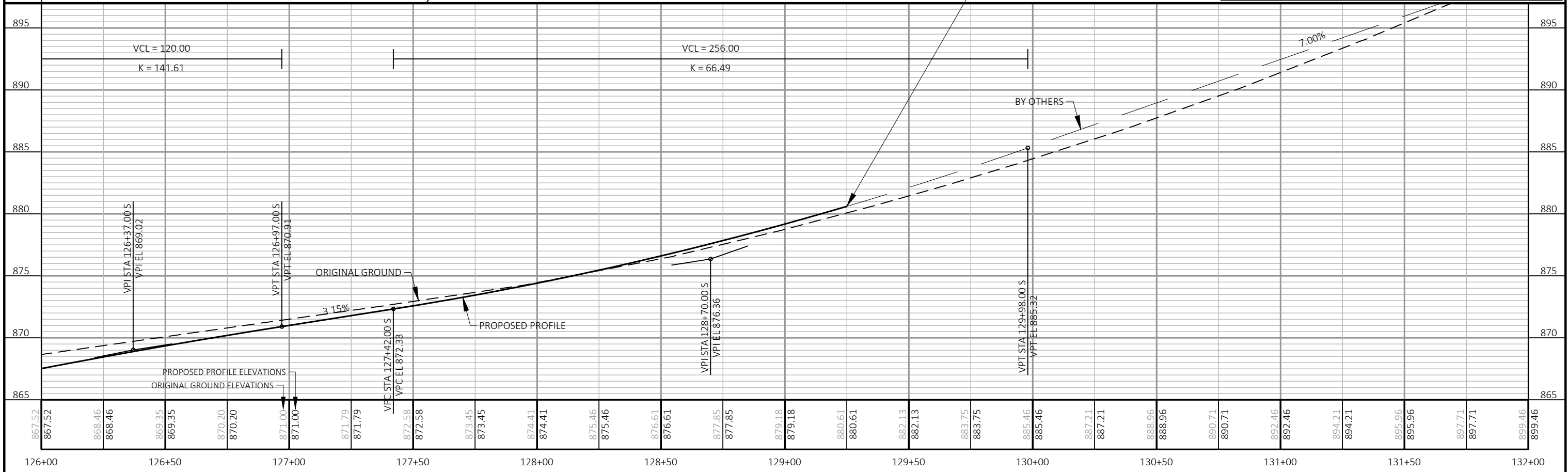
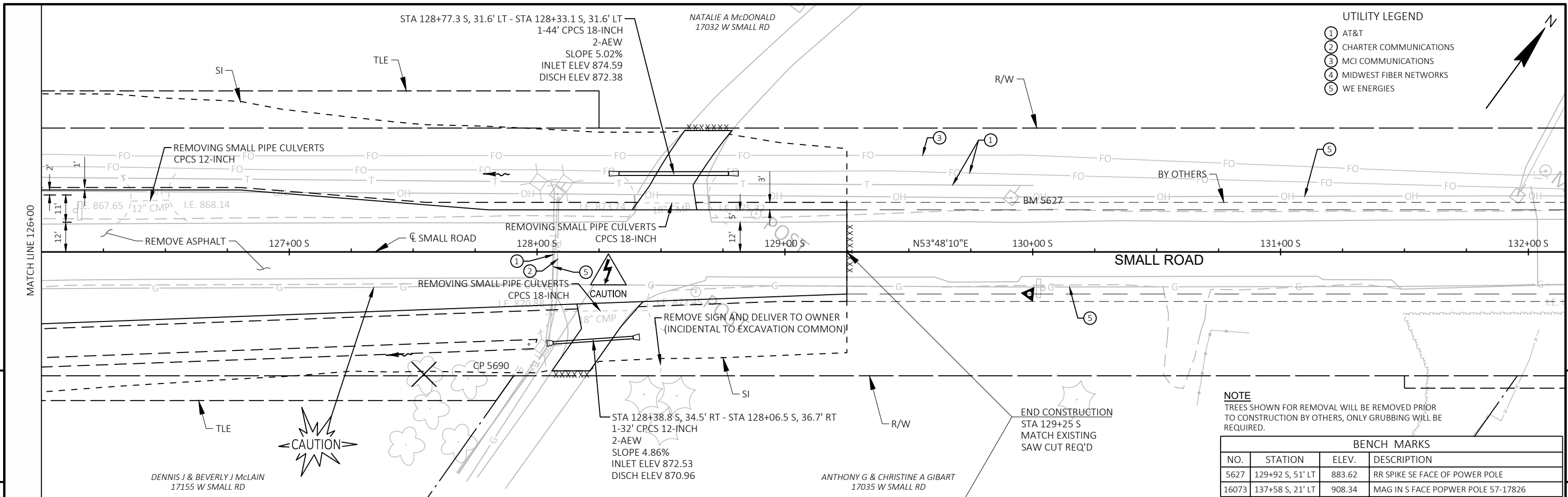
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
5000	10+09 CA, 50' RT	879.01	CITY BM G-12
5001	8+15 CA, 31' LT	878.56	RR SPIKE S FACE OF POWER POLE
5509	124+00 S, 25' LT	859.76	SPIKE IN FACE OF POWER POLE
620150	10+00 CA, 0' RT	879.90	QUARTER SECTION MONUMENT



PROJECT NO: 2722-09-70	HWY: LOCAL STREET	COUNTY: WAUKESHA	PLAN AND PROFILE: CALHOUN ROAD	SHEET	E
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PROJECT NO: 2722-09-70 HWY: LOCAL STREET COUNTY: WAUKESHA PLAN AND PROFILE: SMALL ROAD -- STA 121+33 TO STA 126+00 SHEET: E



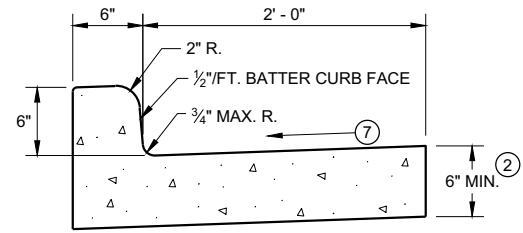
PROJECT NO: 2722-09-70 HWY: LOCAL STREET COUNTY: WAUKESHA PLAN AND PROFILE: SMALL ROAD -- STA 126+00 TO STA 129+25 SHEET: 5

Standard Detail Drawing List

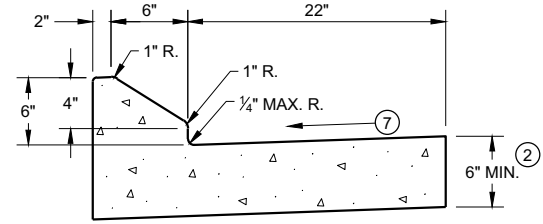
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-12	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-09A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-09C	TYPE 9 SPECIAL POLE 40' MONOTUBE ARM
09E08-09D	TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
09E08-09E	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-09G	TYPE 10 SPECIAL POLE 40' MONOTUBE ARM
09E08-09H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-09K	GENERAL NOTES, HARDWARE DETAILS FOR TYPE 9/10, 9/10 SPECIAL, 12 & 13 POLES W/MONOTUBE ARMS
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09H09-02	COMMUNICATION VAULT TYPE 1
10A01-04	ELECTRICAL HANDHOLE WIRING
10A18-05A	LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP
11B02-02	CONCRETE MEDIAN NOSE
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-10	URBAN DOWELED CONCRETE PAVEMENT
13C18-07A	CONCRETE PAVEMENT JOINTING
13C18-07B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-07C	CONCRETE PAVEMENT JOINT TYPES
13C18-07D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
13C19-03	HMA LONGITUDINAL JOINTS
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-22A	LONGITUDINAL MARKING (MAINLINE)

Standard Detail Drawing List

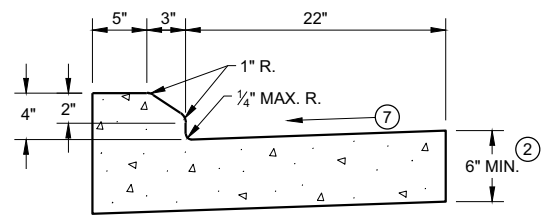
15C08-22BTEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-22CPAVEMENT MARKING (TURN LANES)
15C08-22DPAVEMENT MARKING (TURN LANES)
15C11-09A CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-09B CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-06A MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-06B MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-06C MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C33-04 STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-06A TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D20-06B TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-06C TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-07A TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07B TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-07C TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07D TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07F TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07G TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07H TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
16A01-07 LANDMARK REFERENCE MONUMENTS AND COVERS



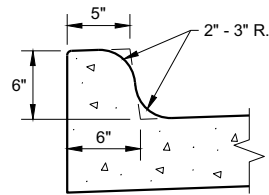
TYPES A^① & D



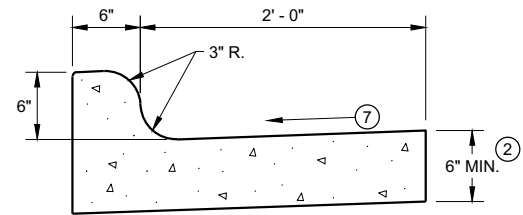
6" SLOPED CURB TYPES G^① & J



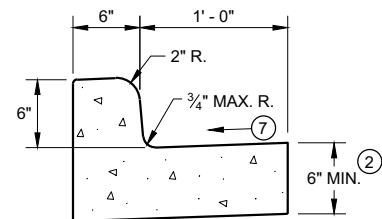
4" SLOPED CURB TYPES G^① & J



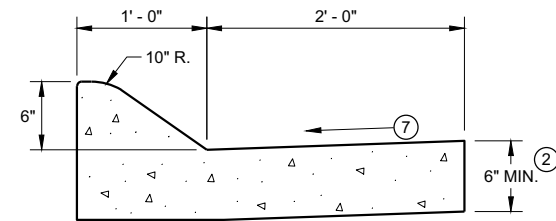
TYPES K^① & L
(OPTIONAL CURB SHAPE)



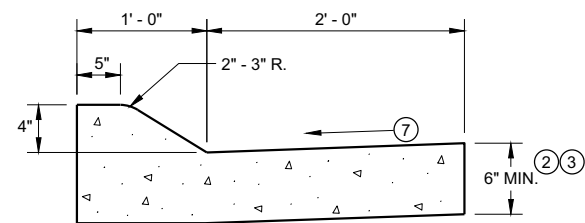
TYPES K^① & L
CONCRETE CURB AND GUTTER 30"



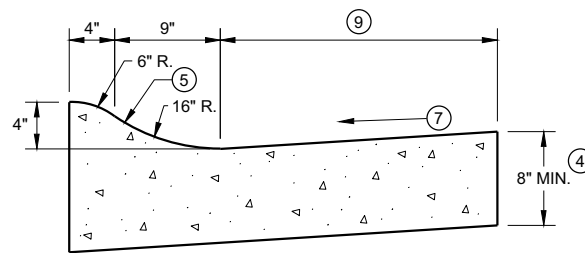
TYPES A^① & D
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

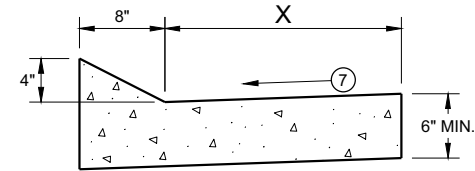


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

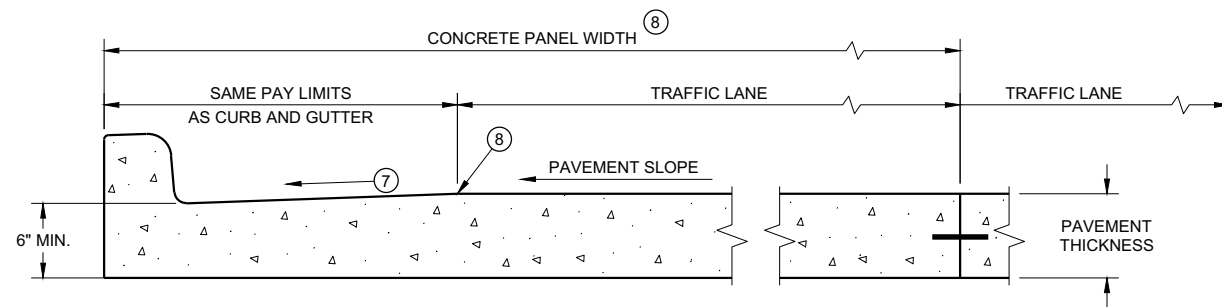
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT^①
CONCRETE CURB AND GUTTER

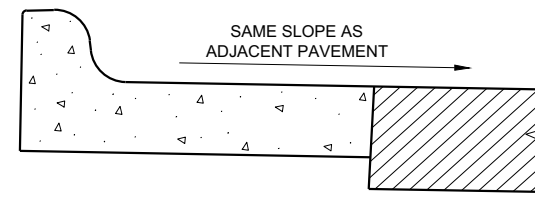
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

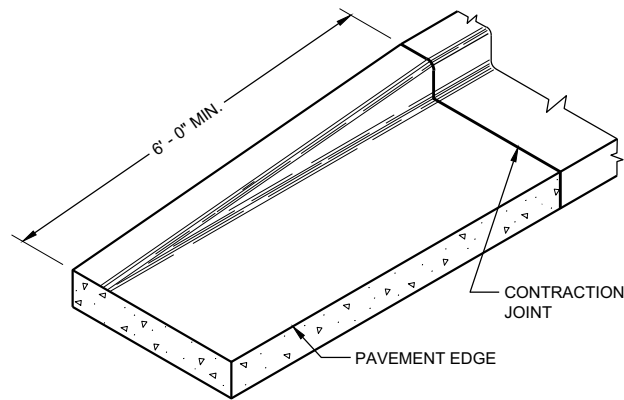
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

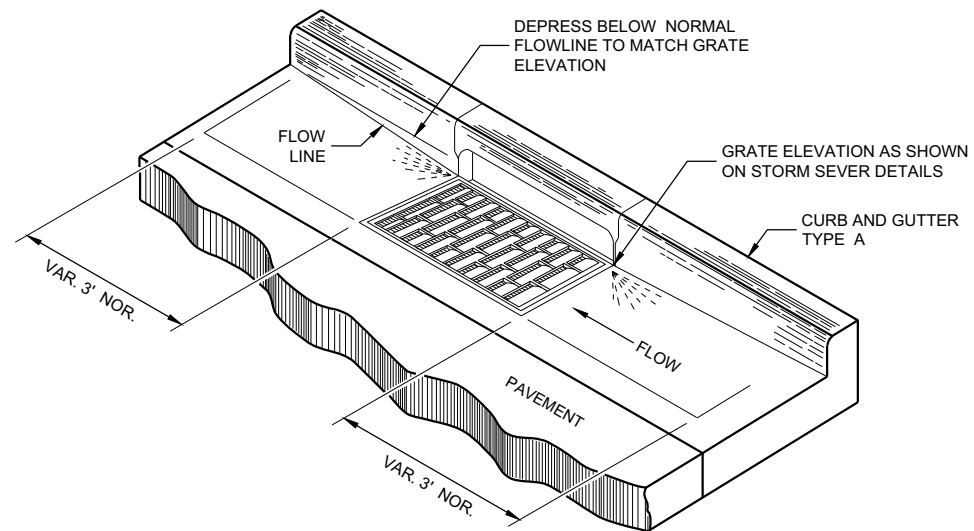
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

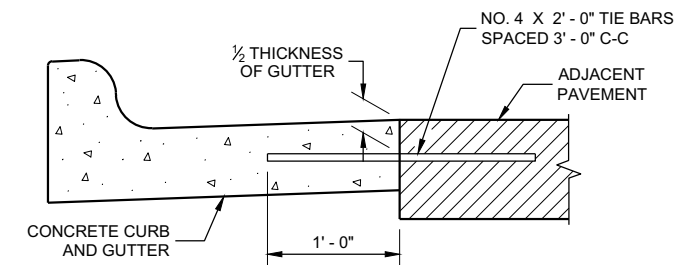
GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

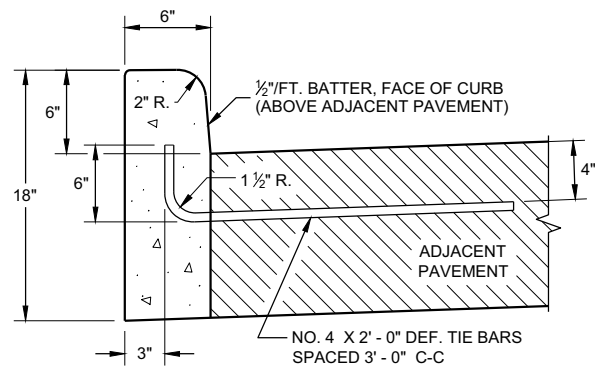
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

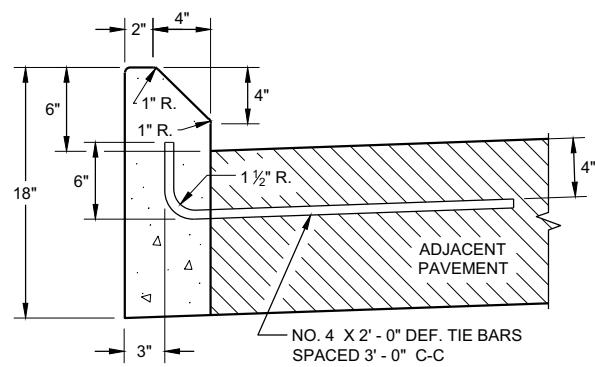
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION ①

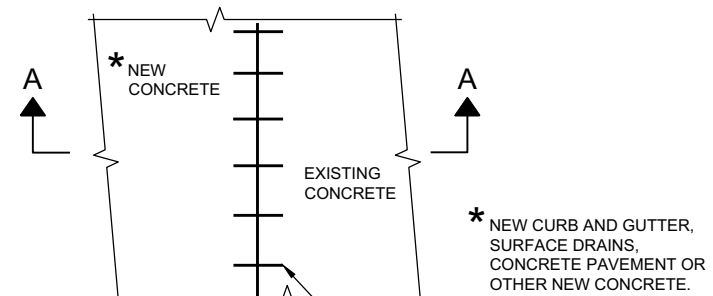


TYPES A ① & D

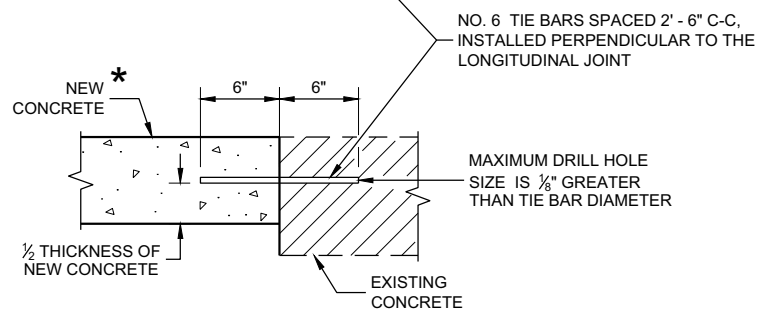


TYPES G ① & J

CONCRETE CURB

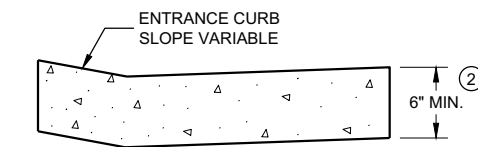


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB ⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

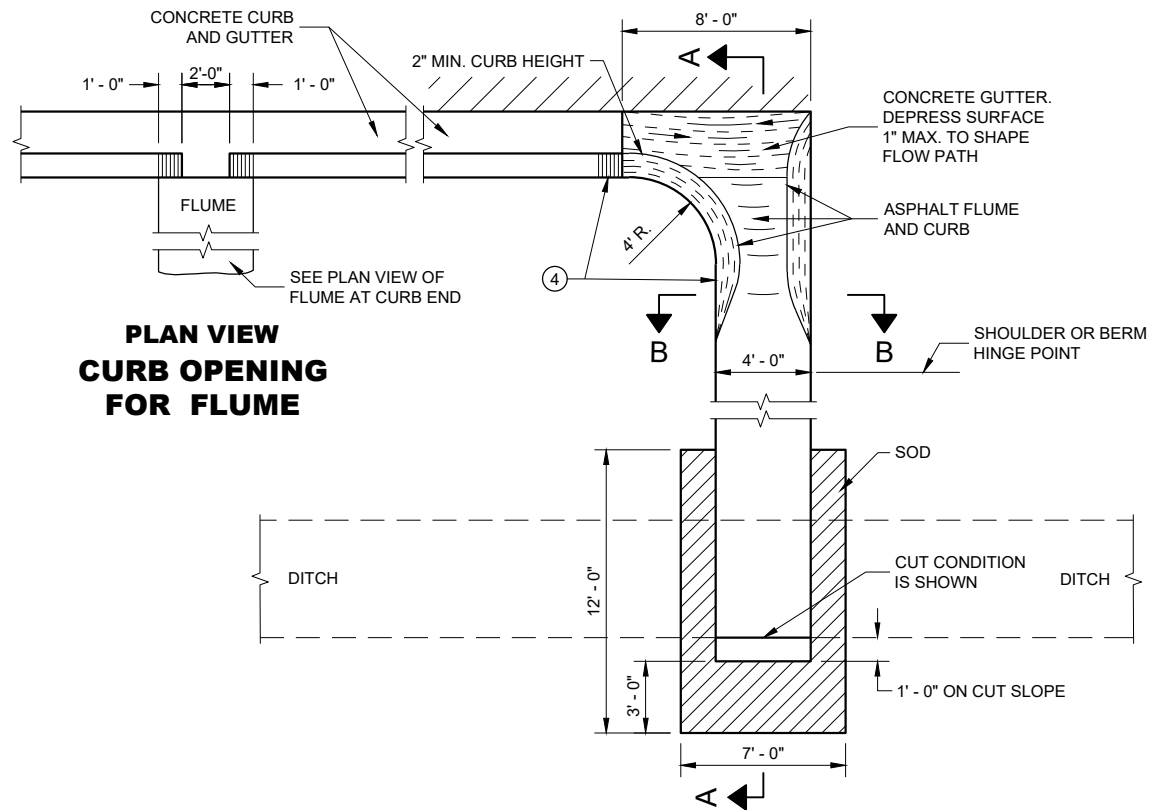
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

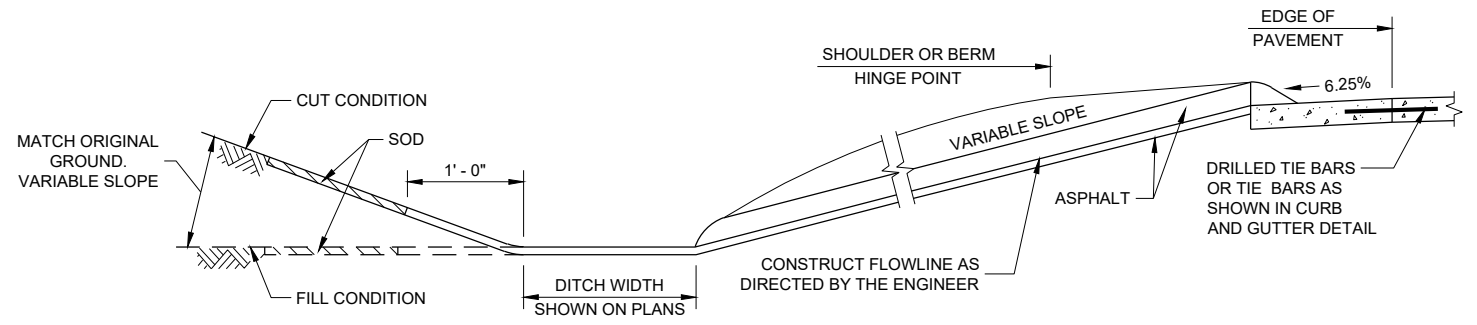
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

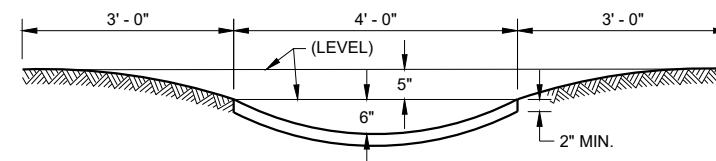
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

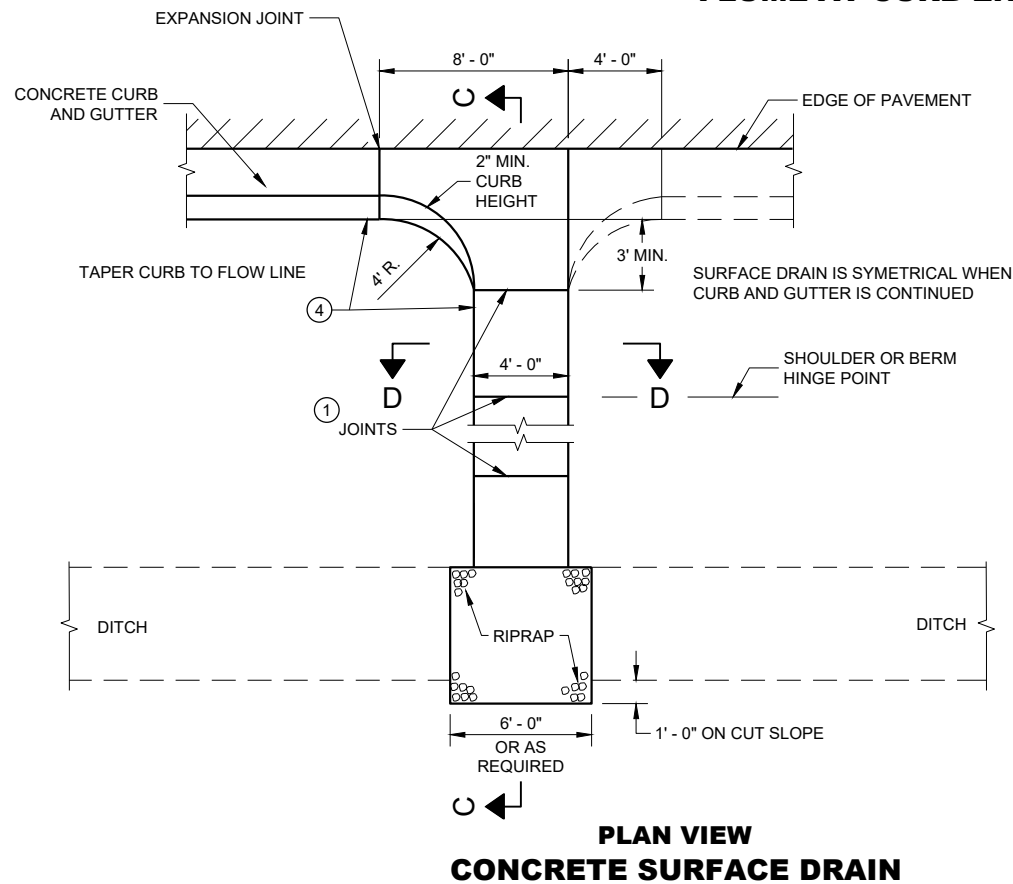
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



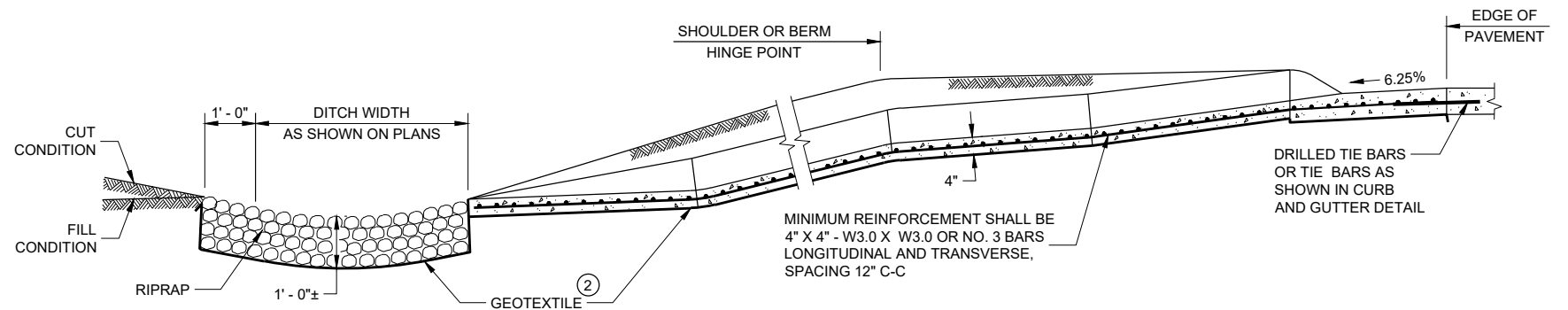
SECTION A - A



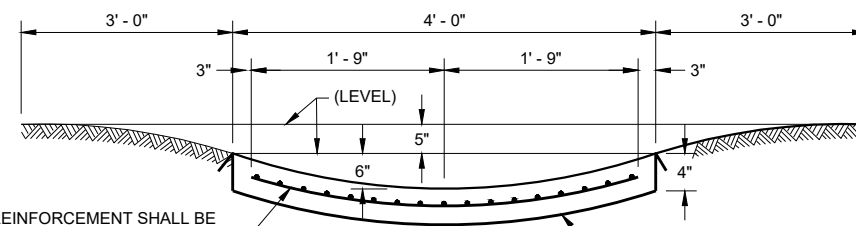
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



SECTION D - D

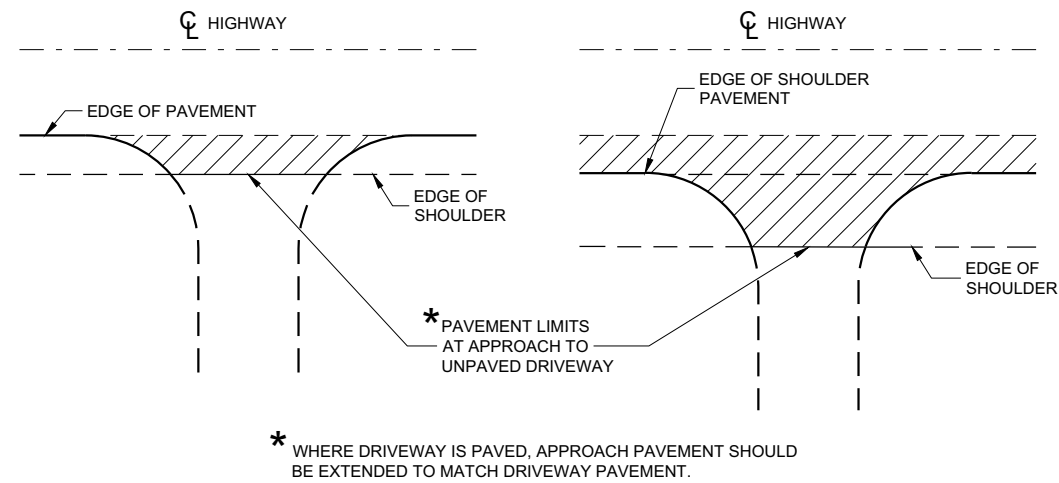
MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

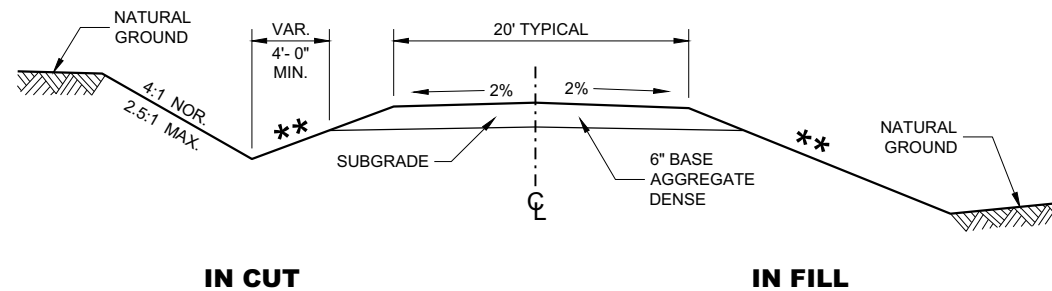
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

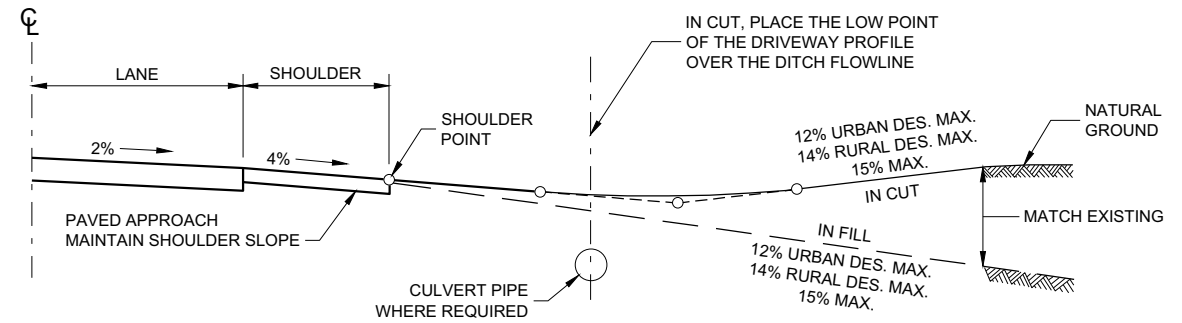
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



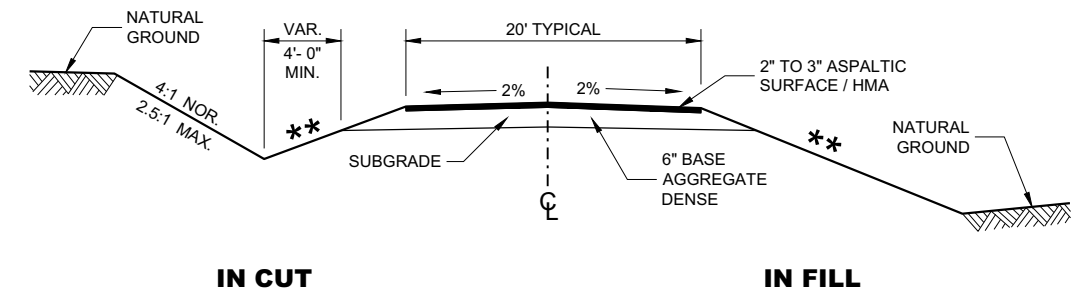
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



TYPICAL DRIVEWAY PROFILES



**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

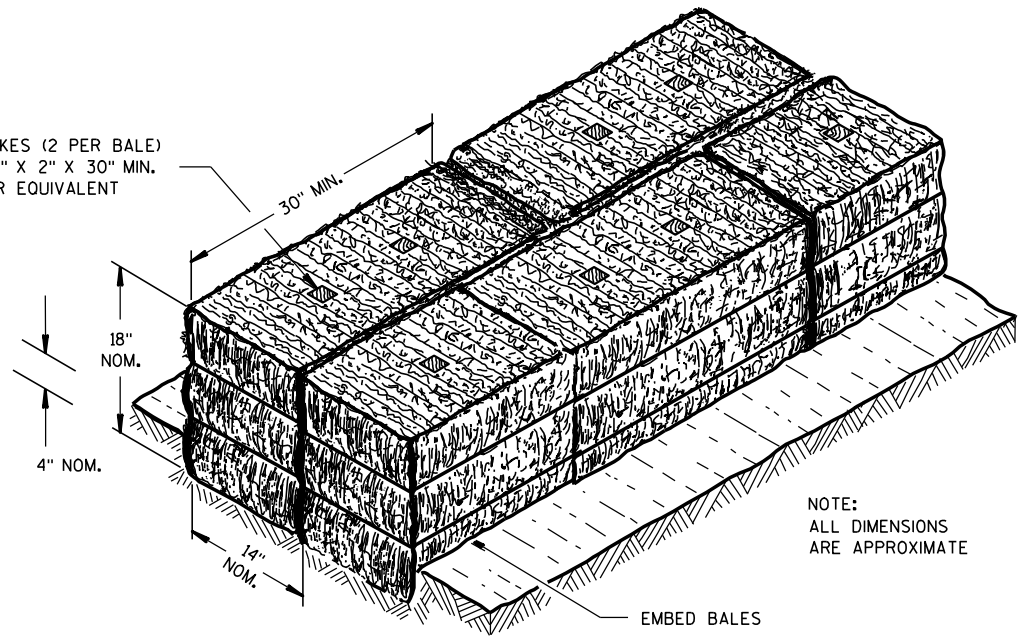
DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

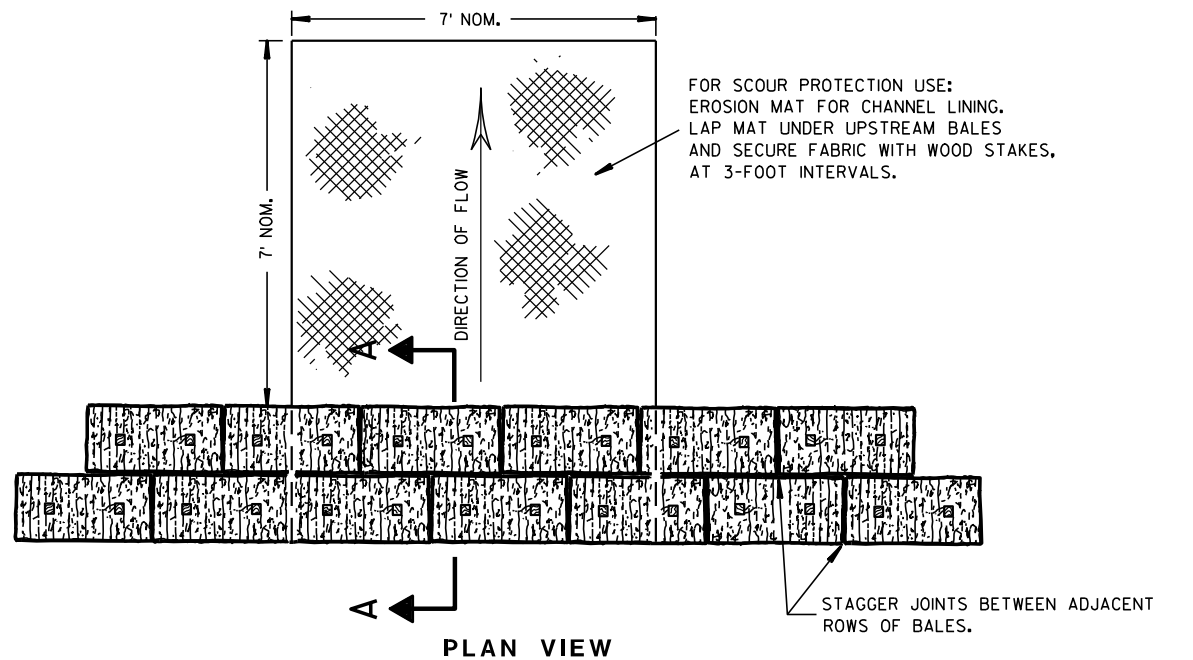
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

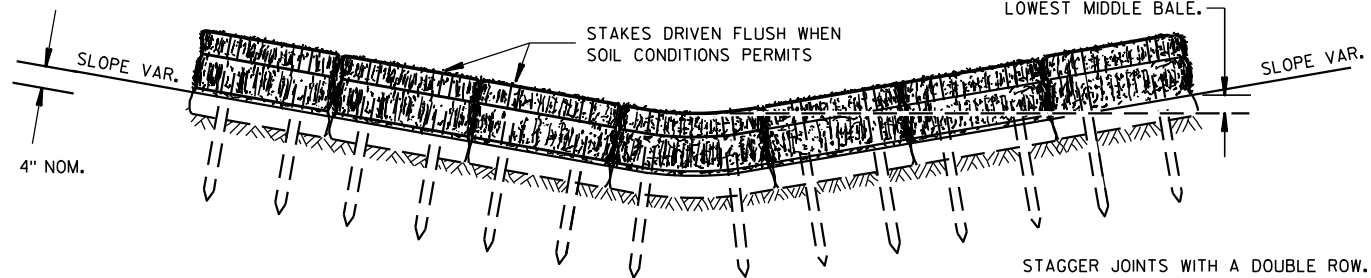
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



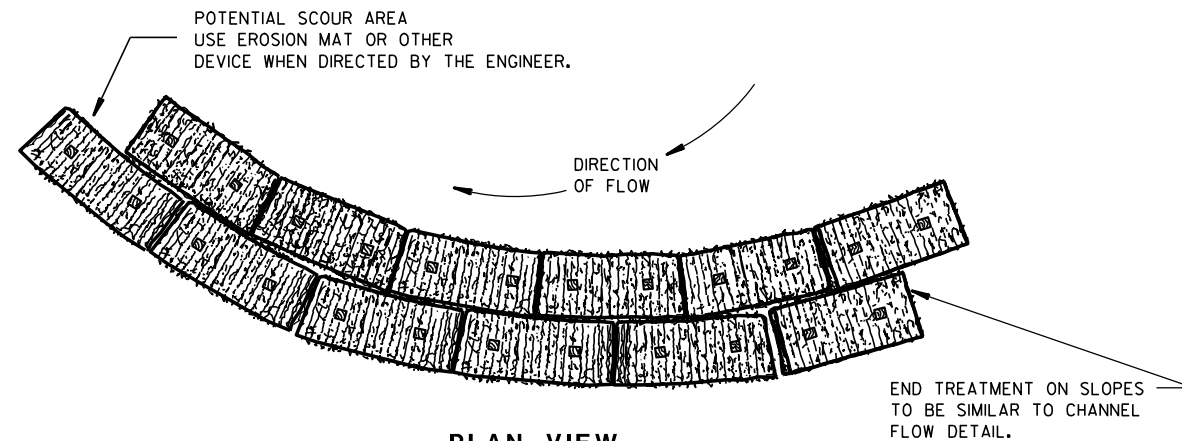
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

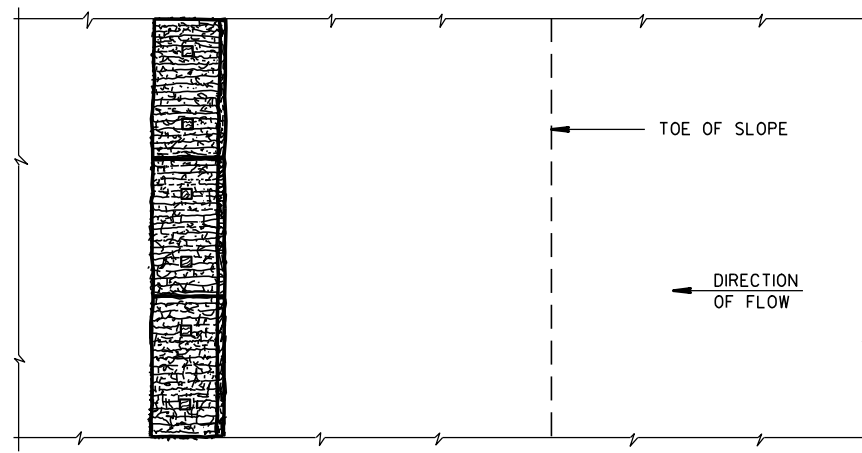
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

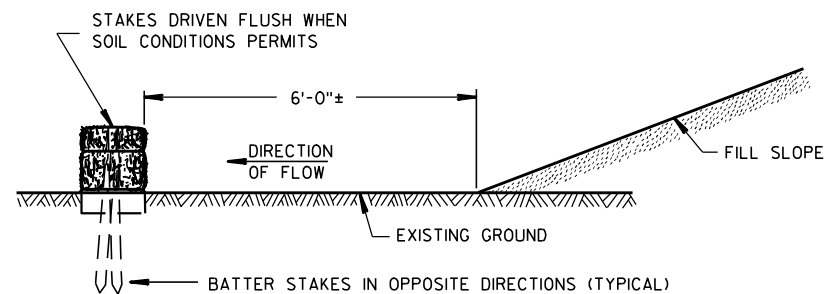


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

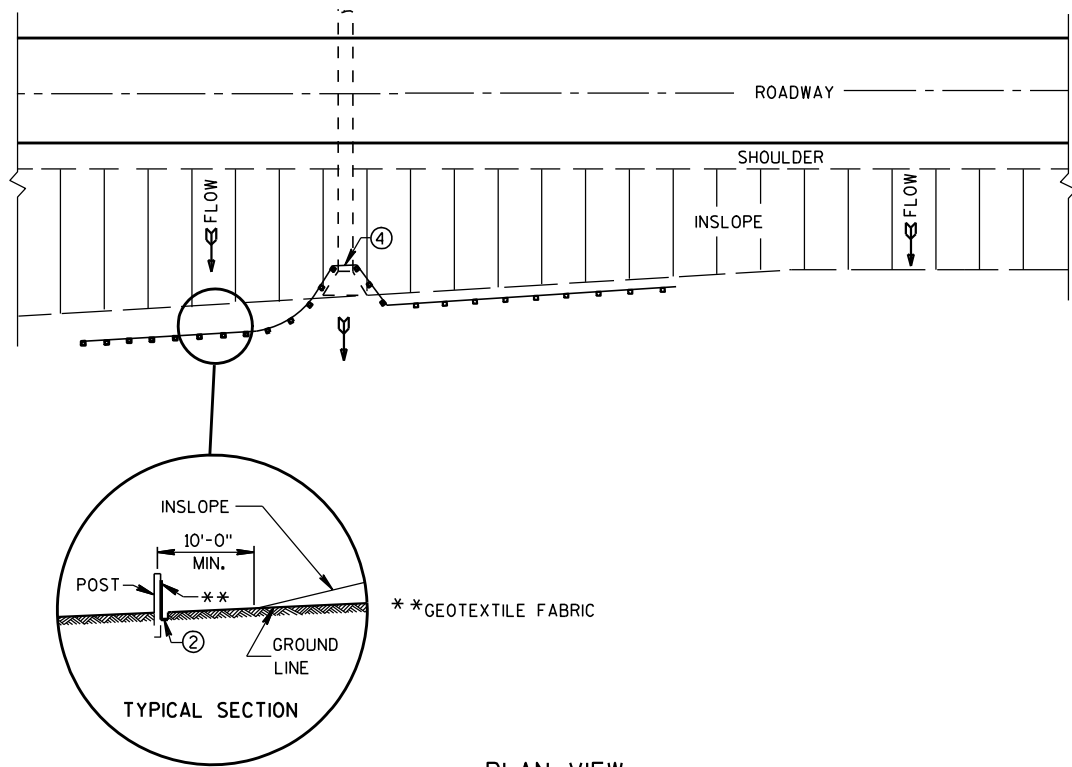
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

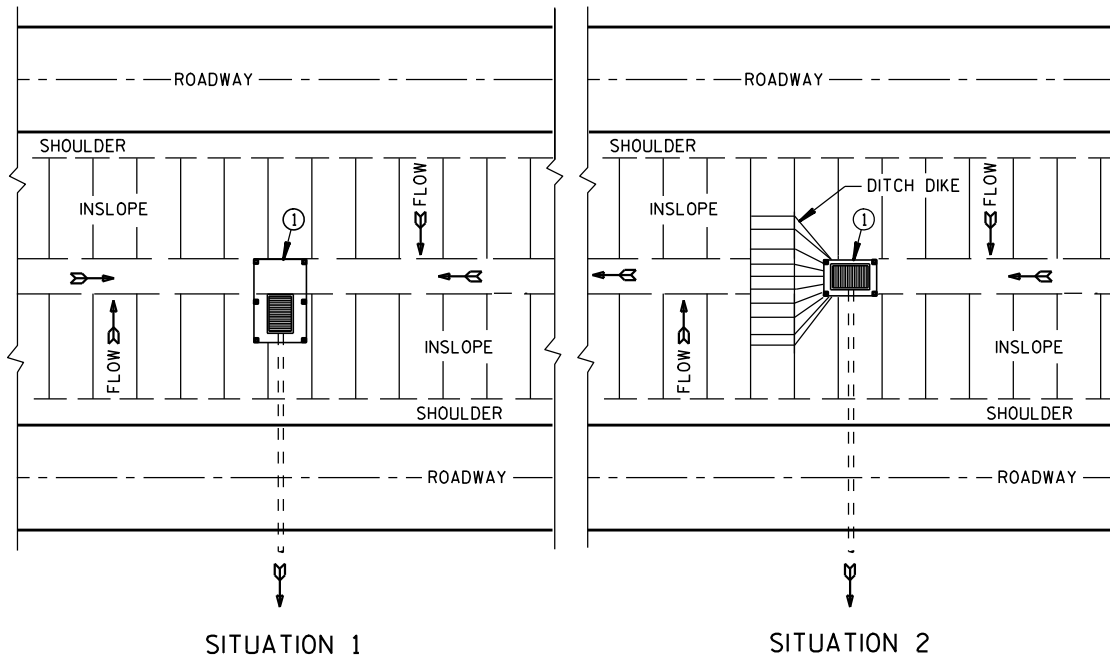
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

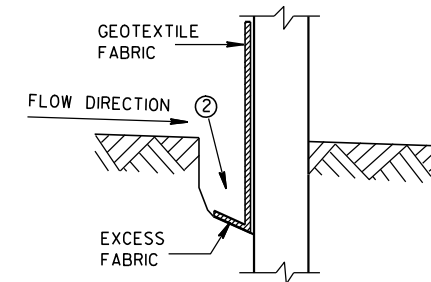


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

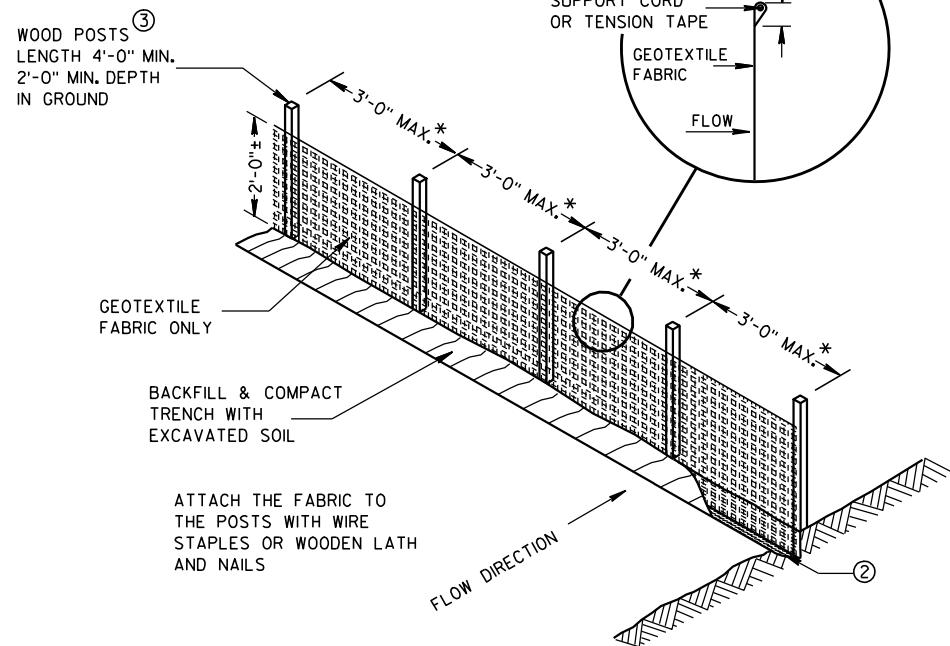
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



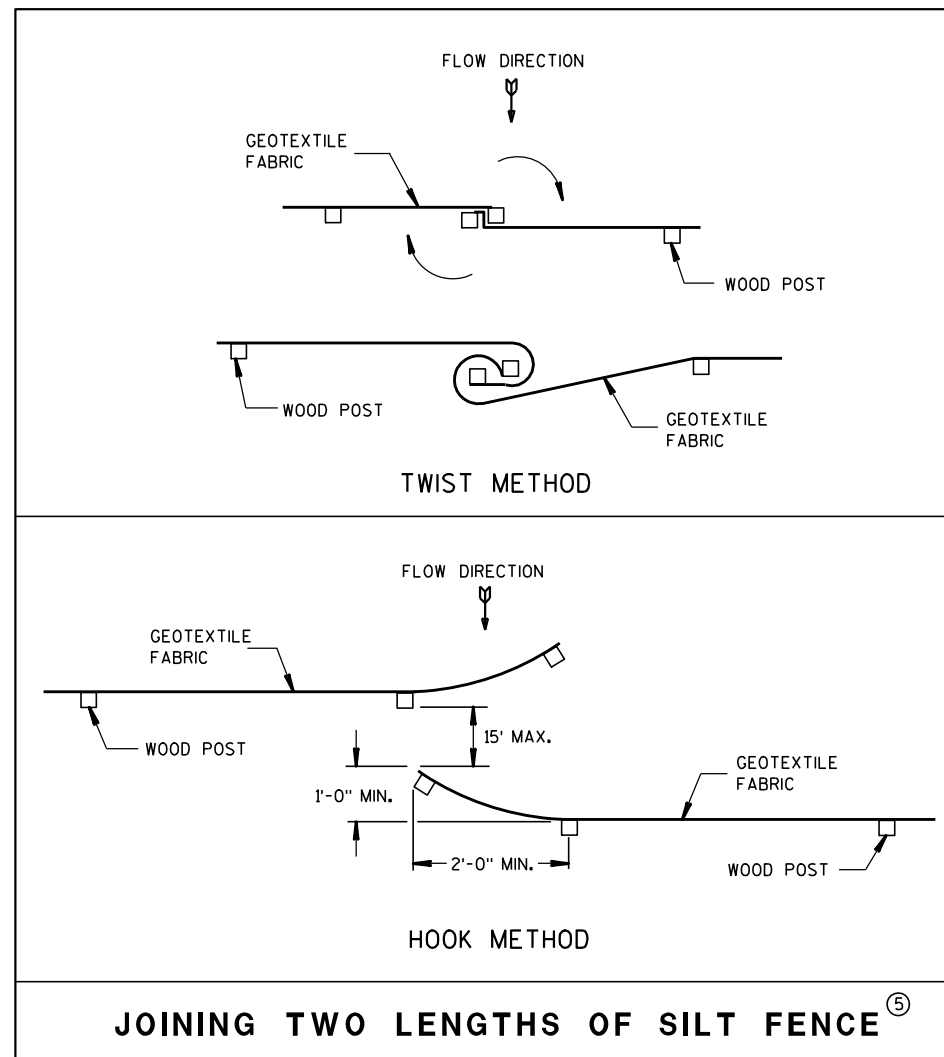
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

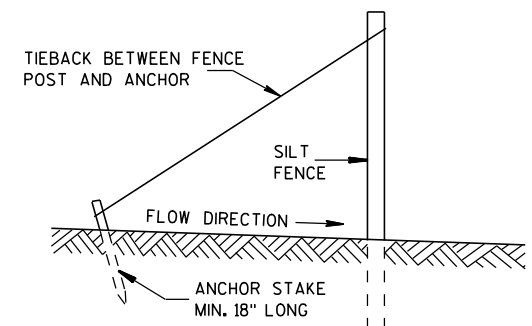


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

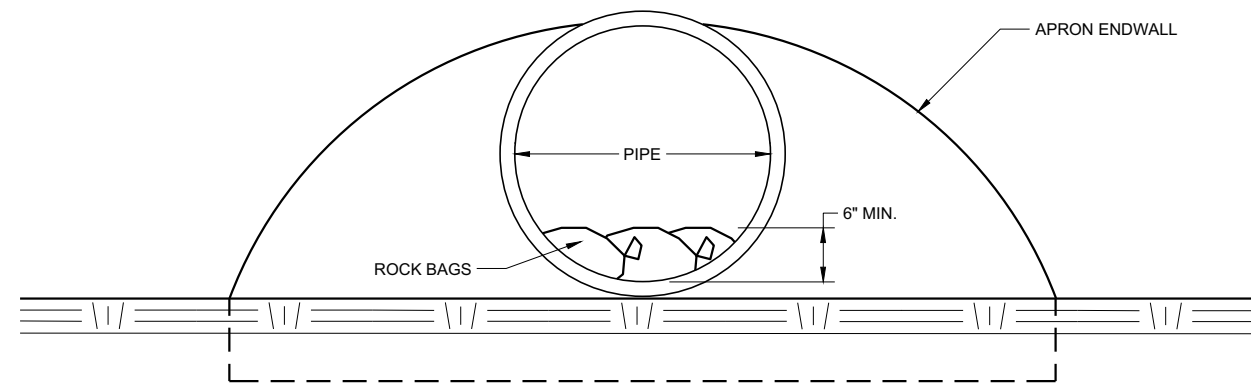


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

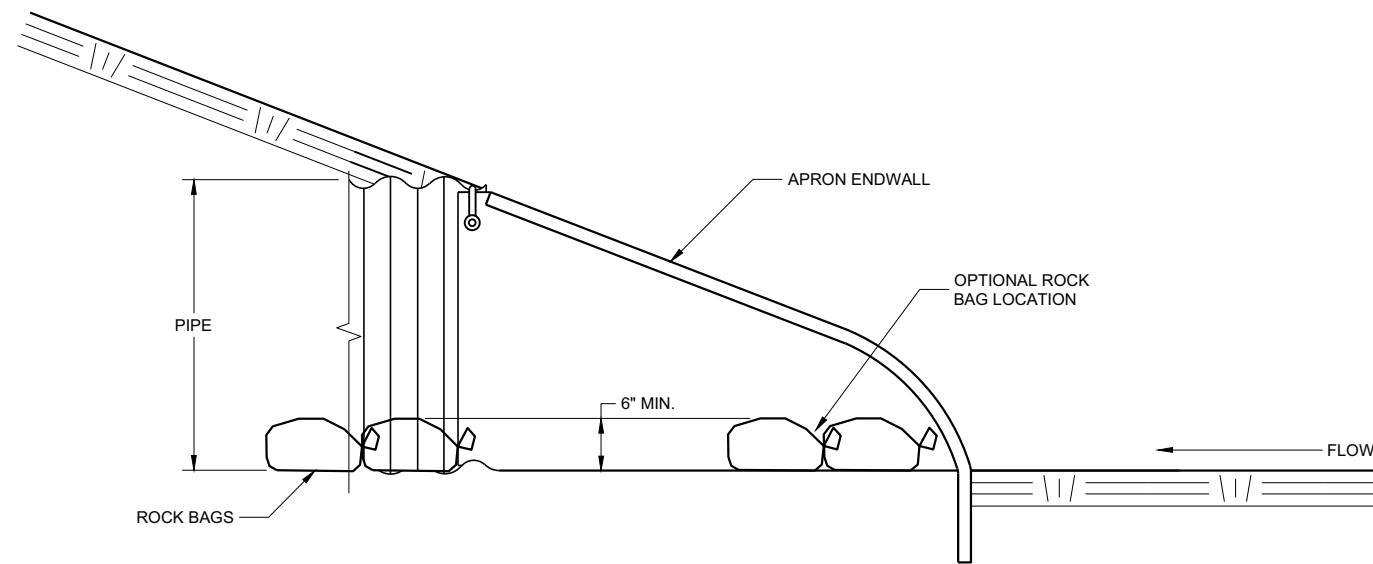
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

6

6

SDD 08E15 - 01

SDD 08E15 - 01

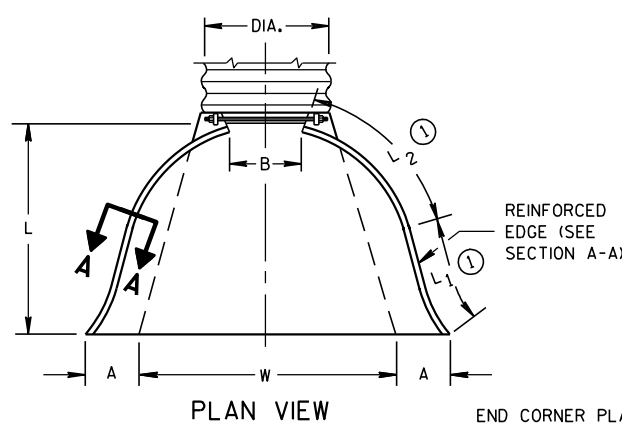
CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
<small>FHWA</small>	

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

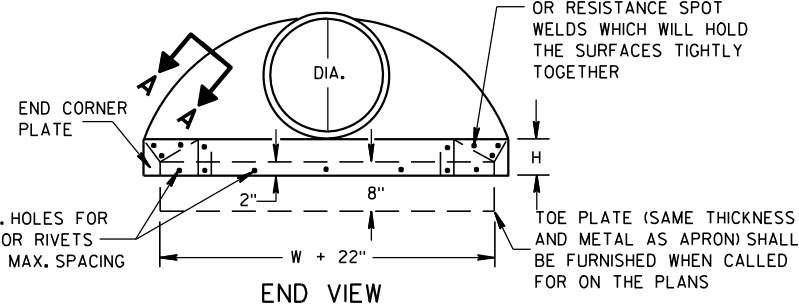
* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1	
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1	
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1	
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1	
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1	
48	5	24	72	26	98	84	5	3 to 1	
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	24-36	78	21	99	108	6	2 to 1	
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1	
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1	
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1	

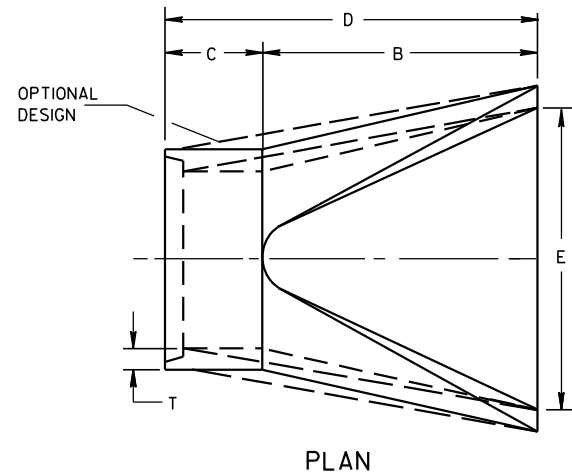
* MINIMUM
** MAXIMUM



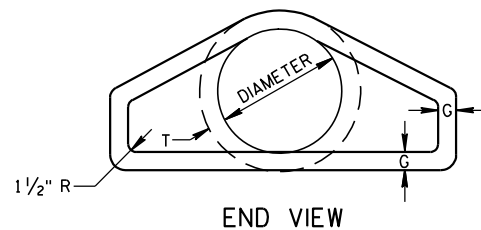
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



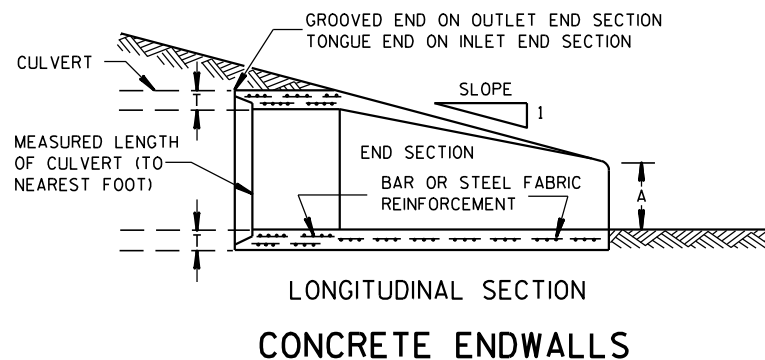
SIDE ELEVATION
METAL ENDWALLS



PLAN

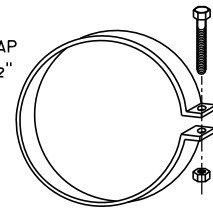


END VIEW

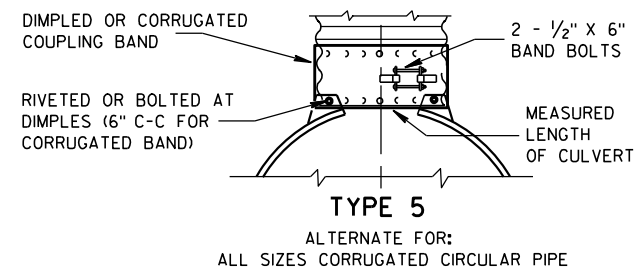
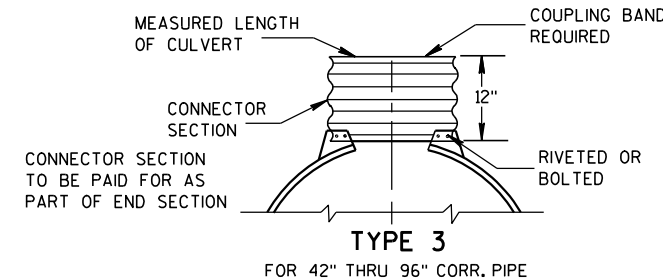
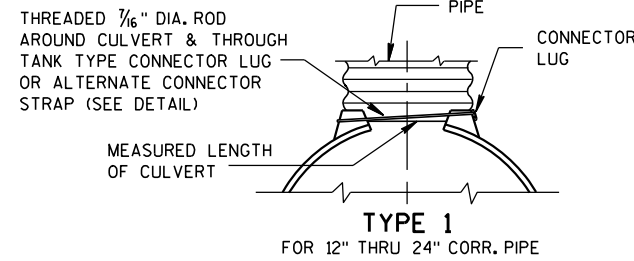


LONGITUDINAL SECTION
CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



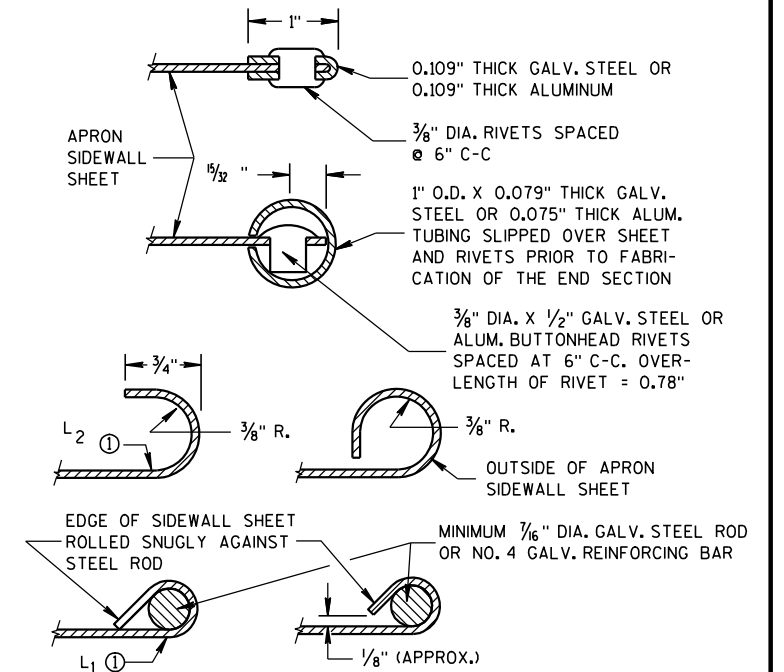
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

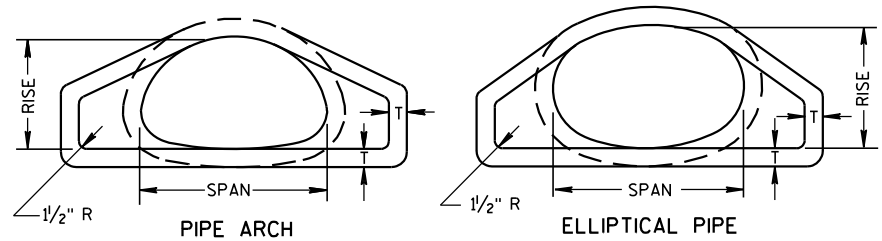
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

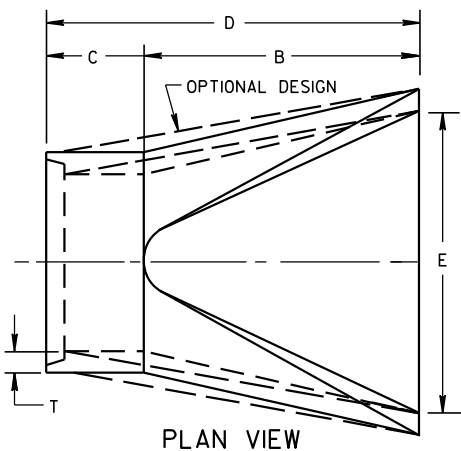
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

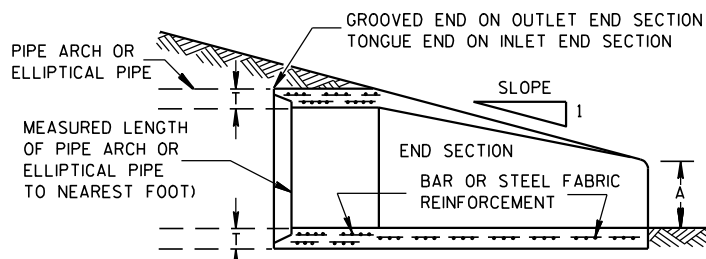
APPROVED
11/30/94 /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



END VIEW



PLAN VIEW



LONGITUDINAL SECTION

CONCRETE ENDWALLS

2- 2/3" X 1/2" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1/2")	L1 (⓪)	L2 (⓪)	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 3/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1/2")	L1 (⓪)	L2 (⓪)	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72 3/4	90	2 1/2 to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82 1/4	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1 1/2 to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1 1/2 to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1 1/2 to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1 1/2 to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1 1/2 to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1 1/2 to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED. * EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE PIPE ARCH										
EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE	
	**SPAN	**RISE	T	A	B	C	D	E		
24	29	18	3	8 1/2	39	33	72	48	3 to 1	
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1	
36	44	27	4	11 1/8	60	36	96	72	3 to 1	
42	51	31	4 1/2	15 5/16	60	36	96	78	3 to 1	
48	58	36	5	21	60	36	96	84	3 to 1	
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1	
60	73	45	6	31	60	36	96	96	3 to 1	
72	88	54	7	31	60	39	99	120	2 to 1	
84	102	62	8	28 1/2	83	19	102	144	2 to 1	

REINFORCED CONCRETE ELLIPTICAL PIPE										
EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE	
	**SPAN	**RISE	T	A	B	C	D	E		
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1	
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1	
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1	
42	53	34	5	15 3/4	60	36	96	78	2 1/2 to 1	
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1	
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1	
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1	

** NOMINAL SIZE

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.

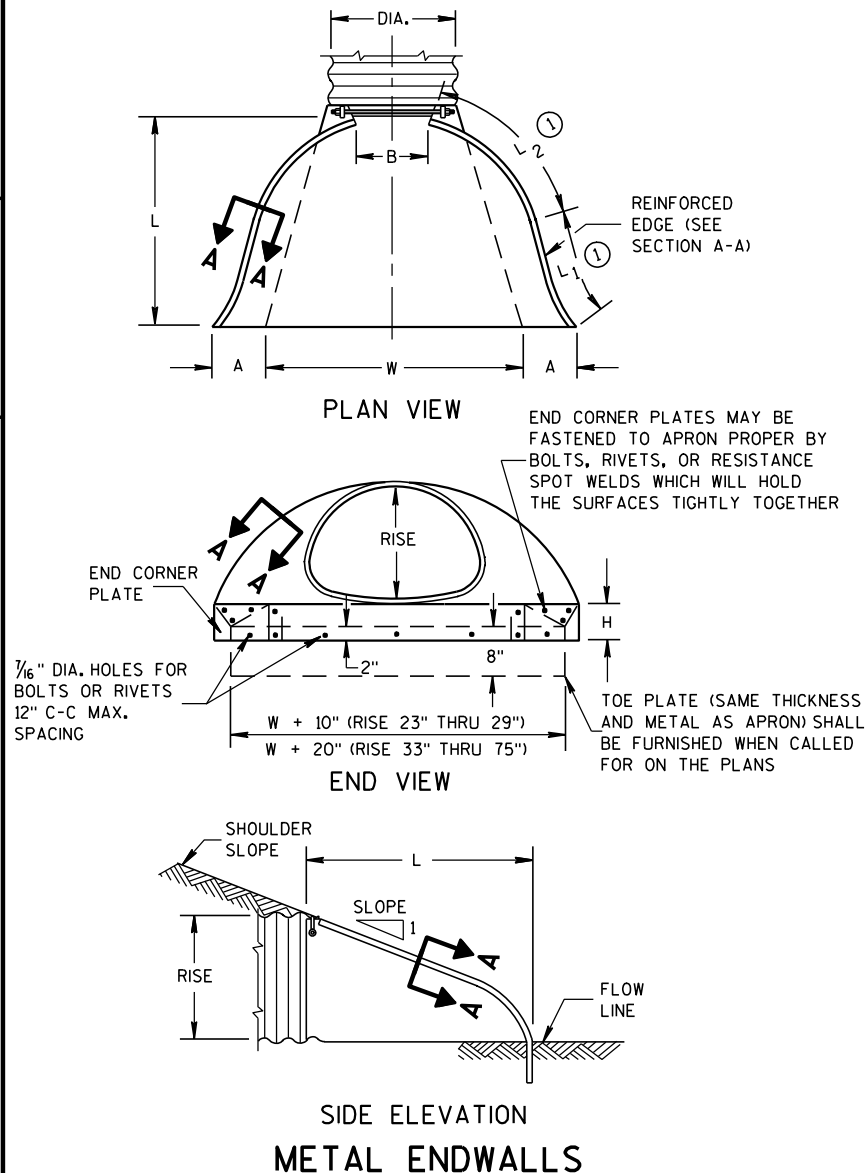
CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

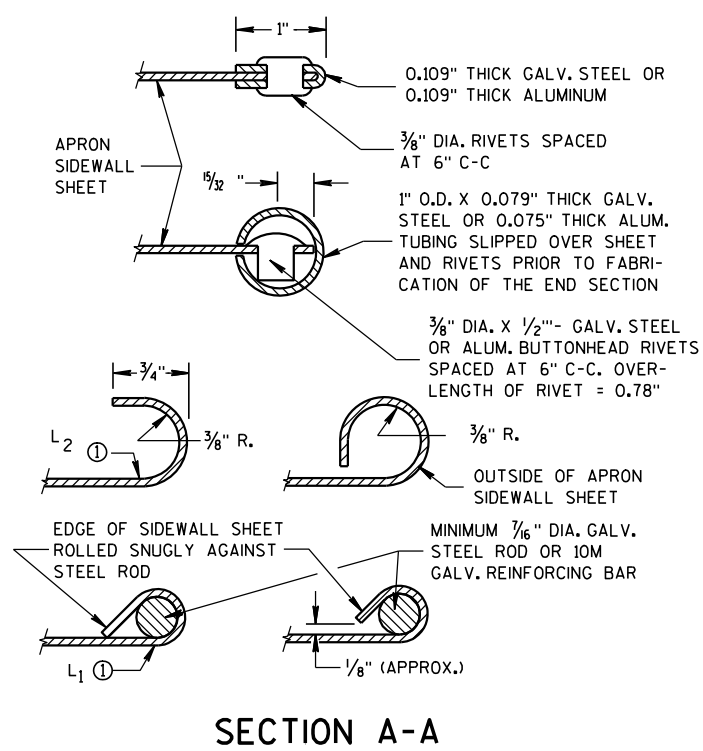
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

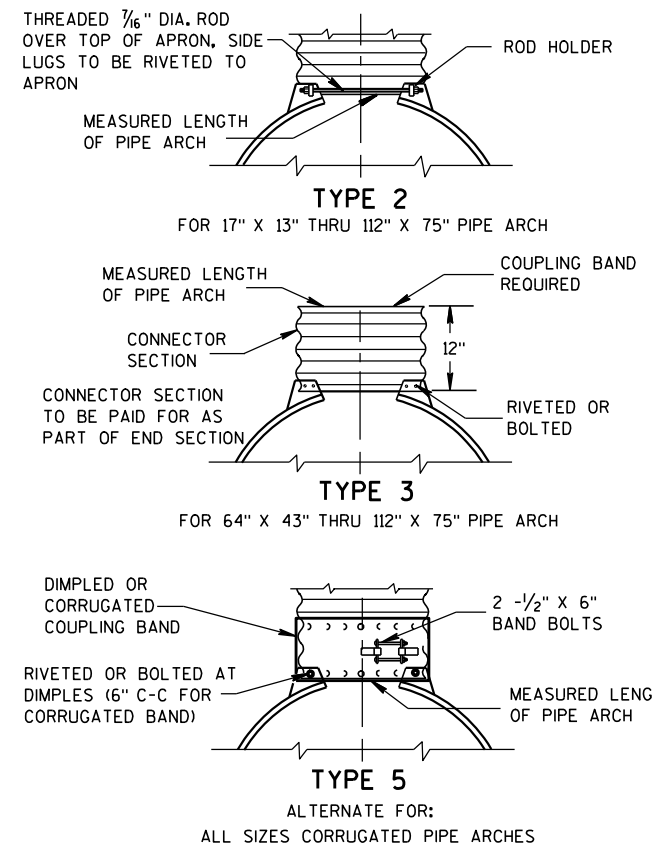
⓪ FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



SIDE ELEVATION METAL ENDWALLS



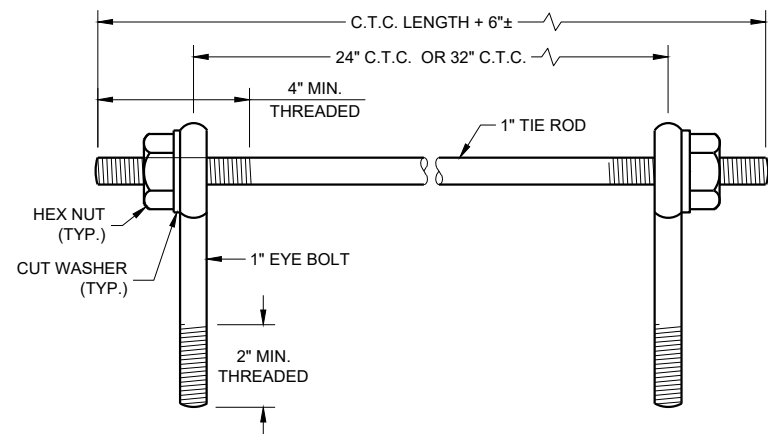
SECTION A-A



CONNECTION DETAILS

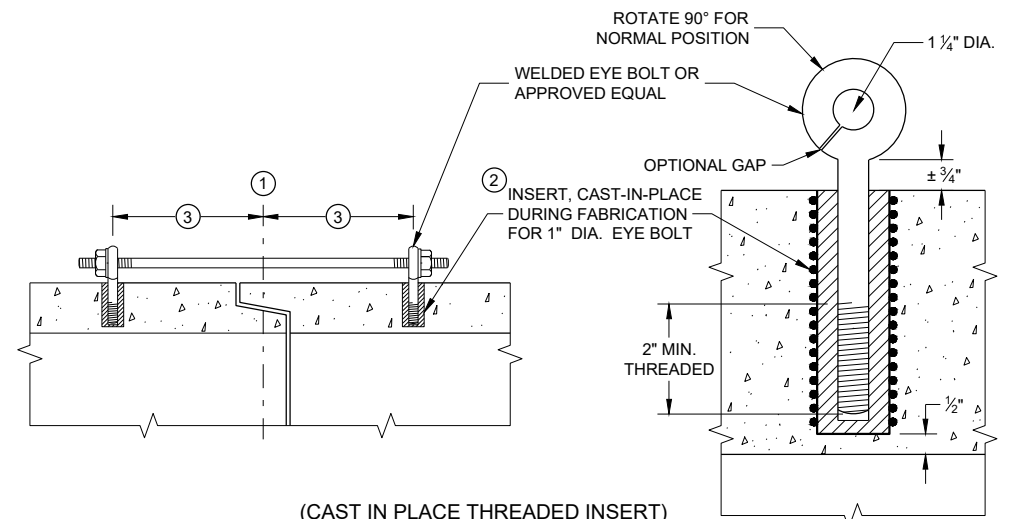
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/s/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

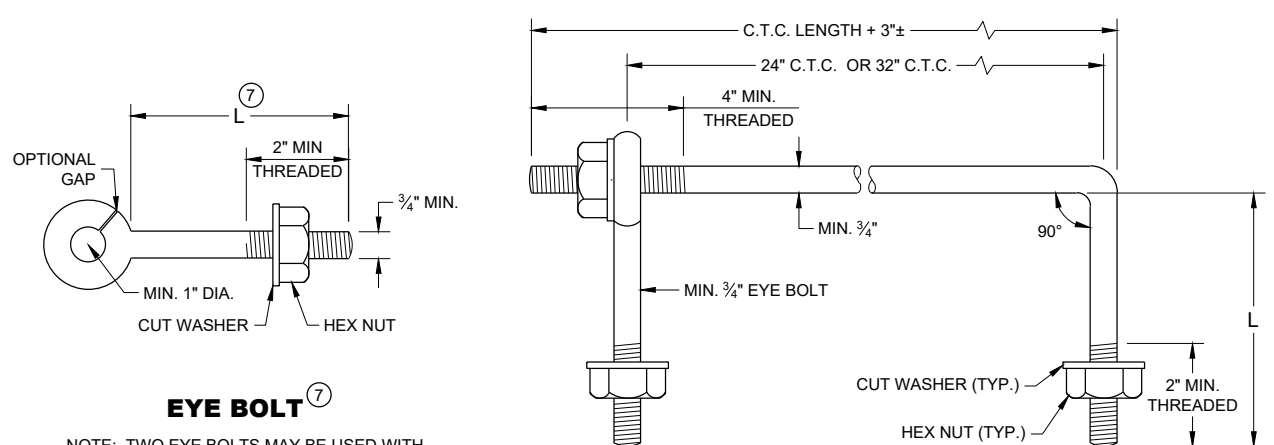
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

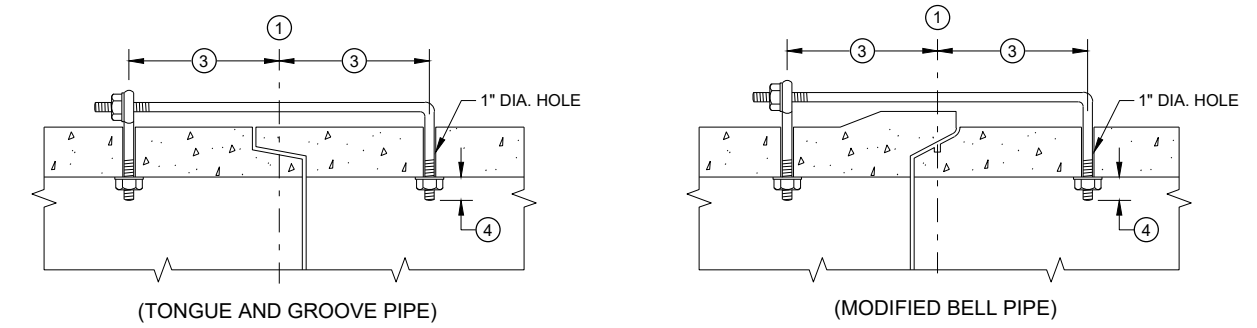
- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.

EYE BOLT AND TIE ROD



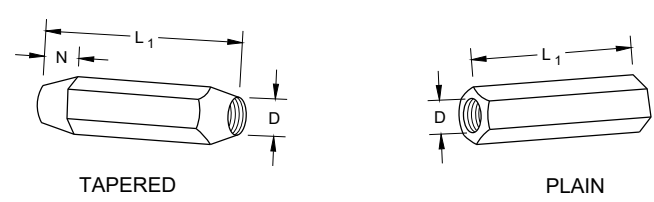
LONGITUDINAL SECTION
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

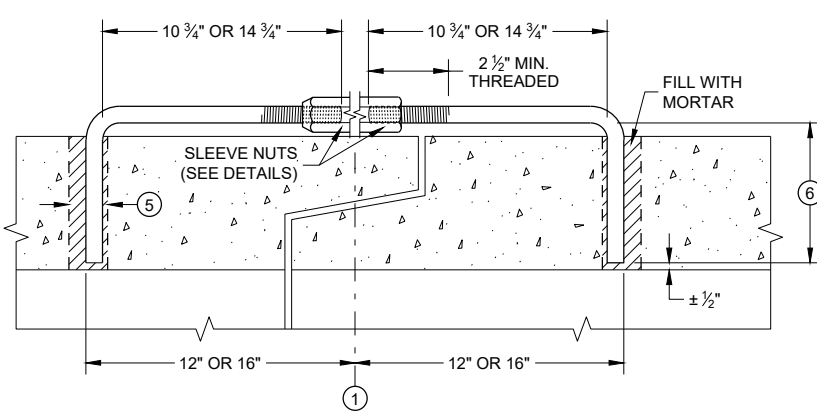
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

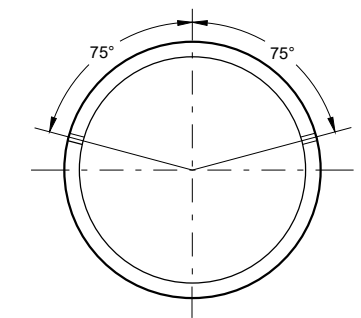


RIGHT AND LEFT THREADS SLEEVE NUTS



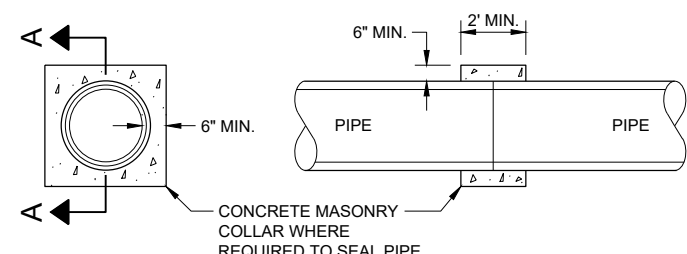
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION

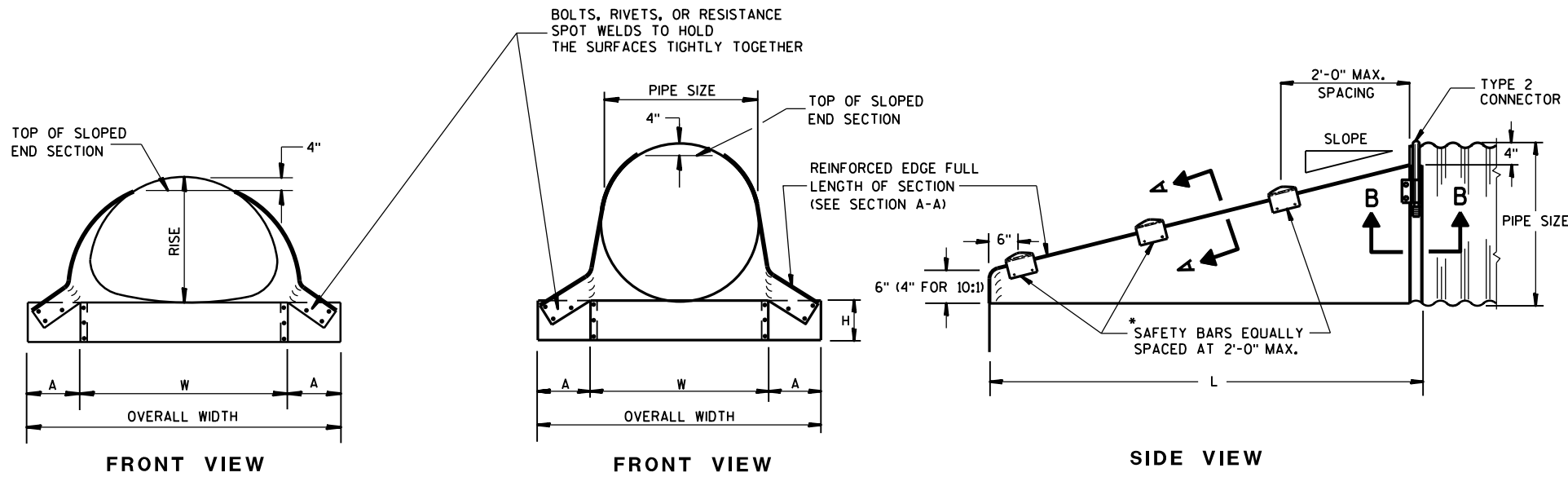


SECTION A - A
CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER



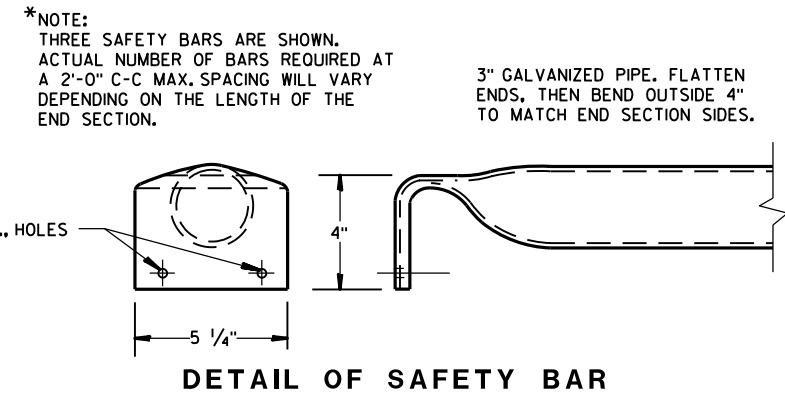
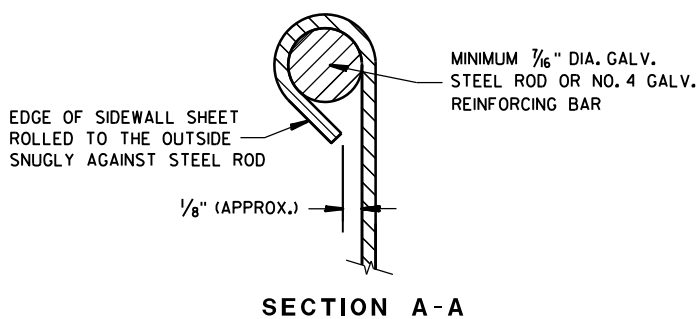
GENERAL NOTES

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.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

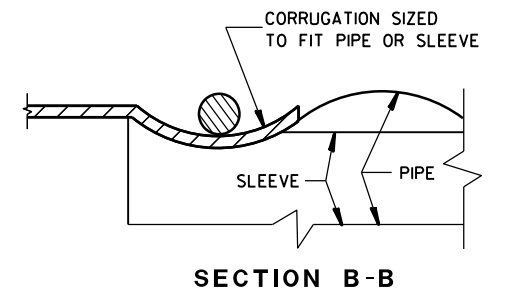
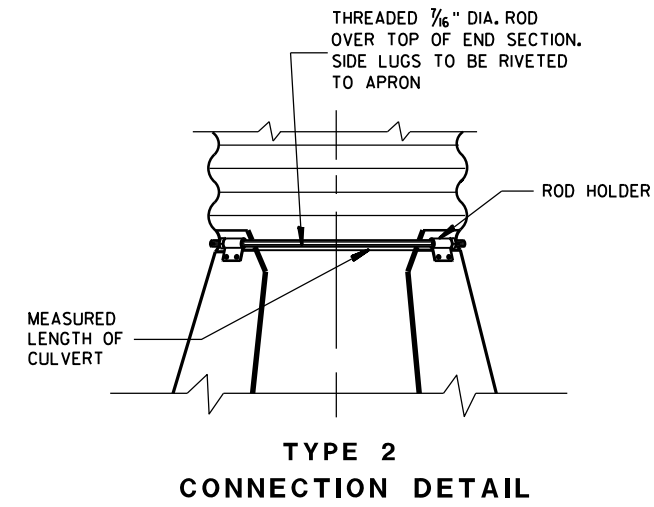
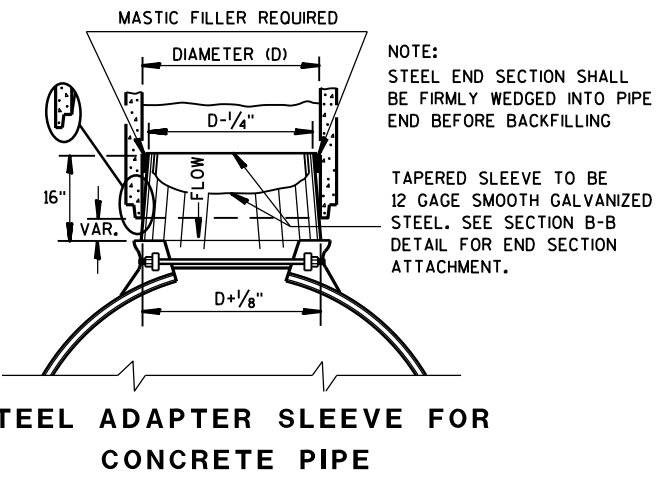
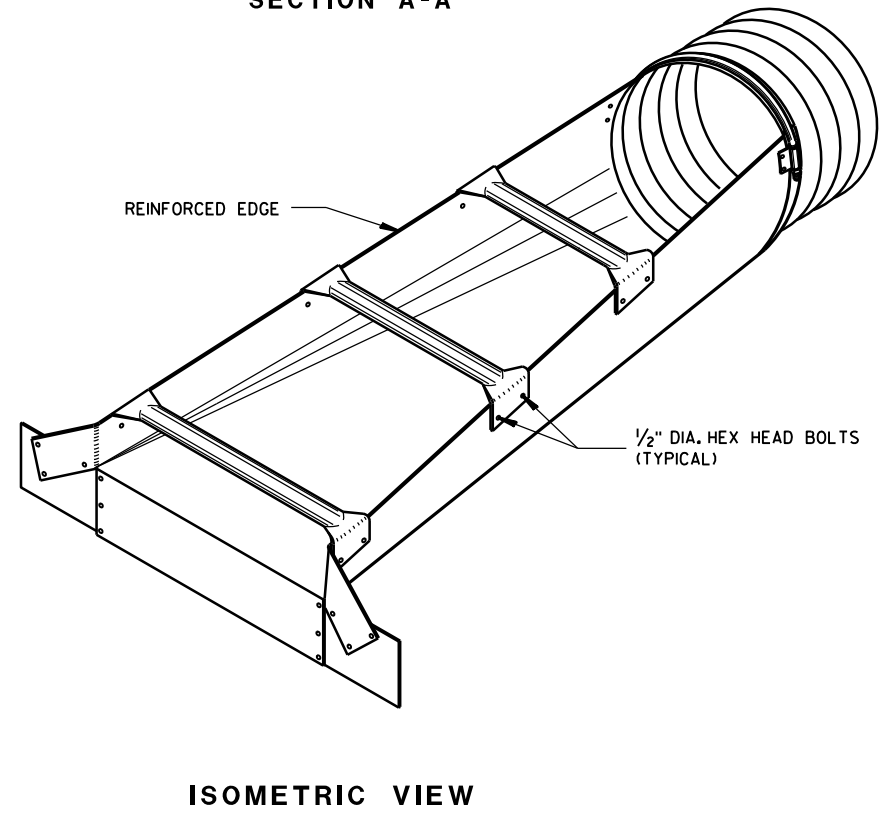
SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	—	—
48	.109	16	12	54	86	4:1	152	6:1	228	—	—
54	.109	16	12	60	92	4:1	176	6:1	264	—	—
60	.109	16	12	66	98	4:1	200	6:1	300	—	—



STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	—	—
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	—	—
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	—	—

① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
 ② ACTUAL SLOPE GREATER THAN 10:1.

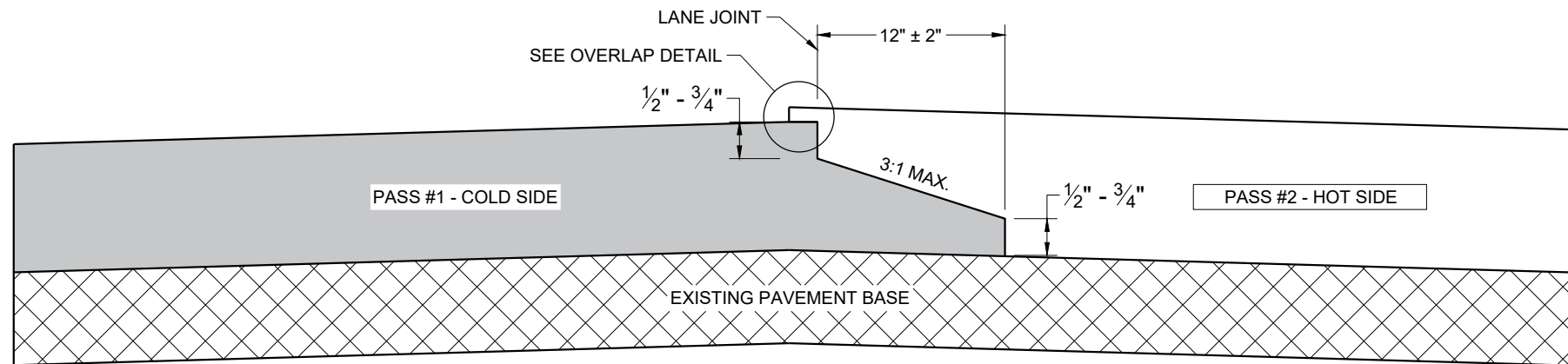


STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

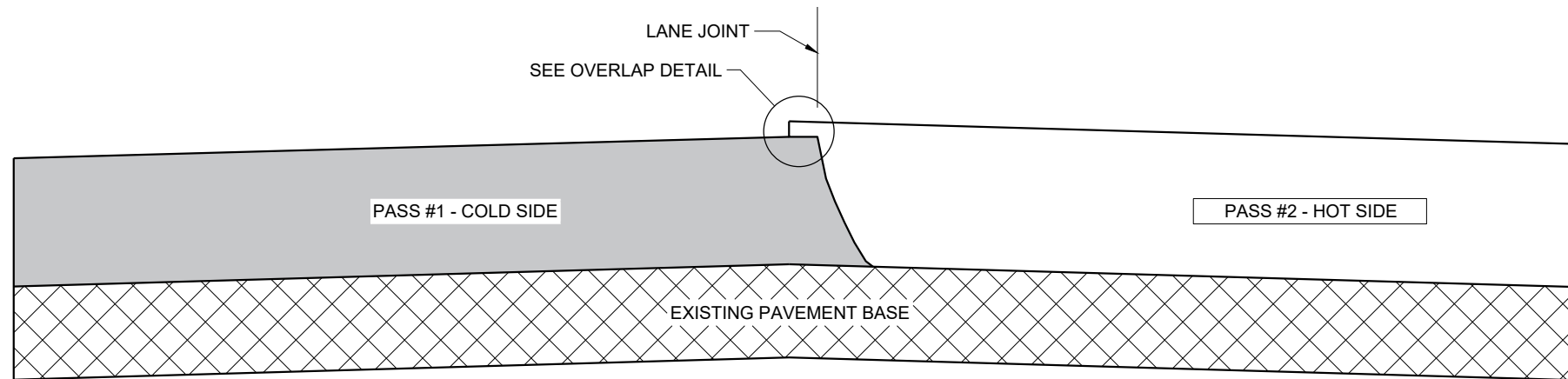
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 9/14/2012 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

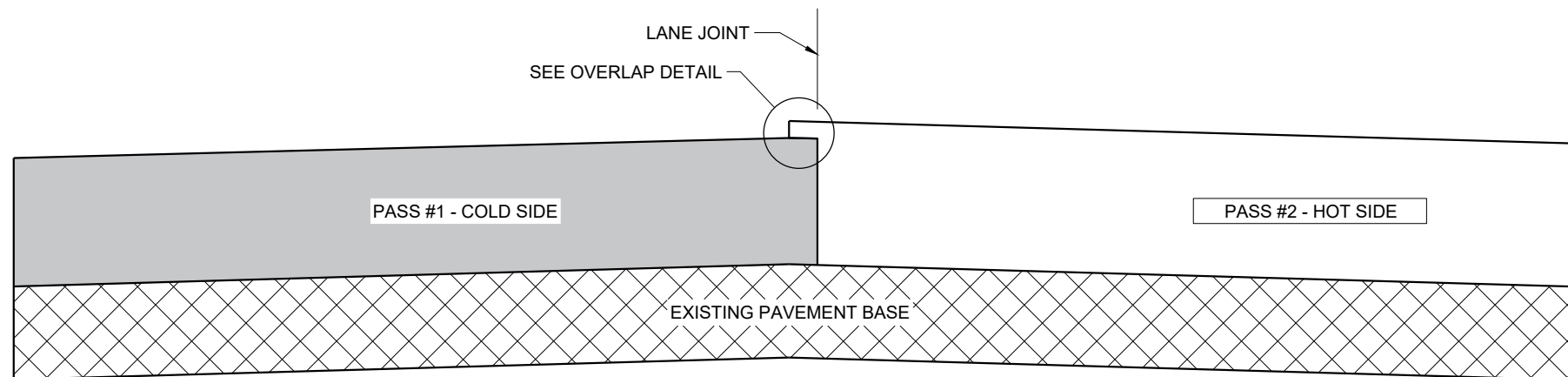
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



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

GENERAL NOTES

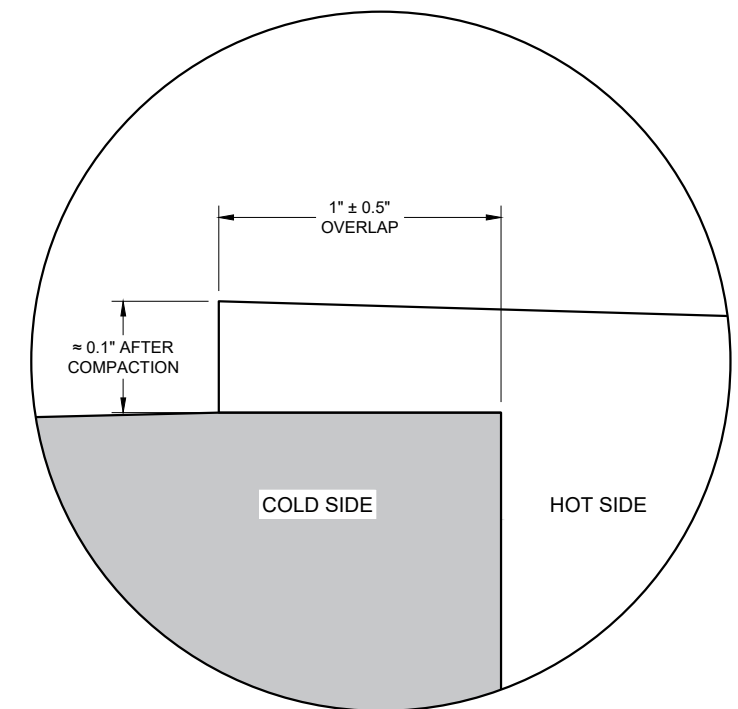
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

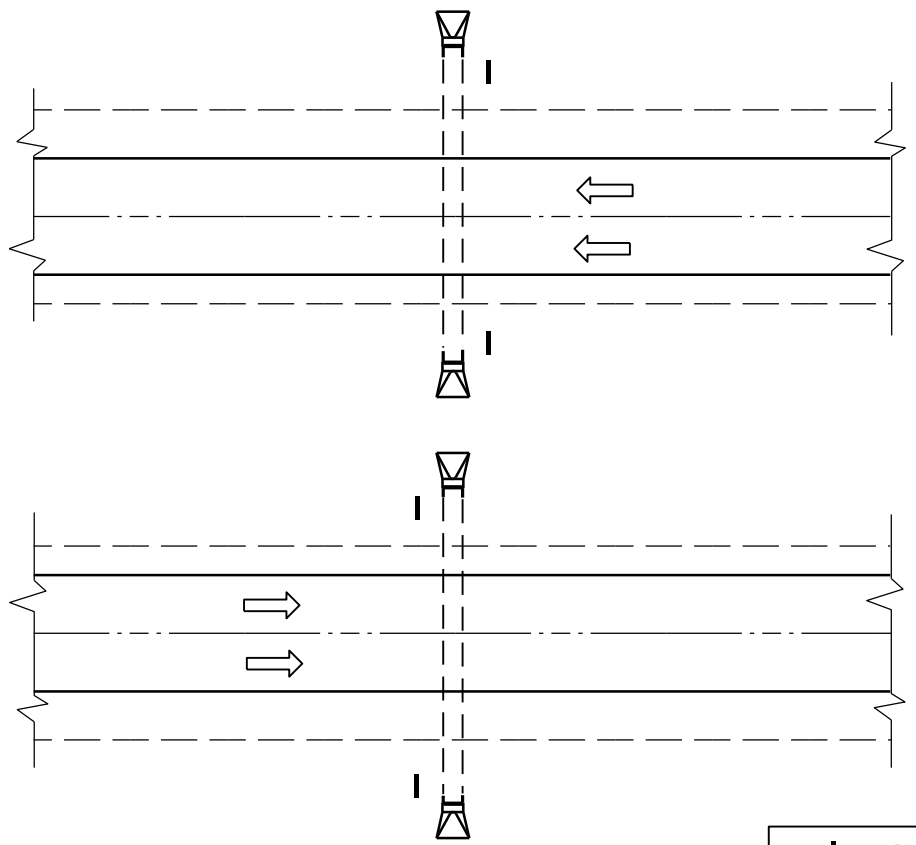
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6

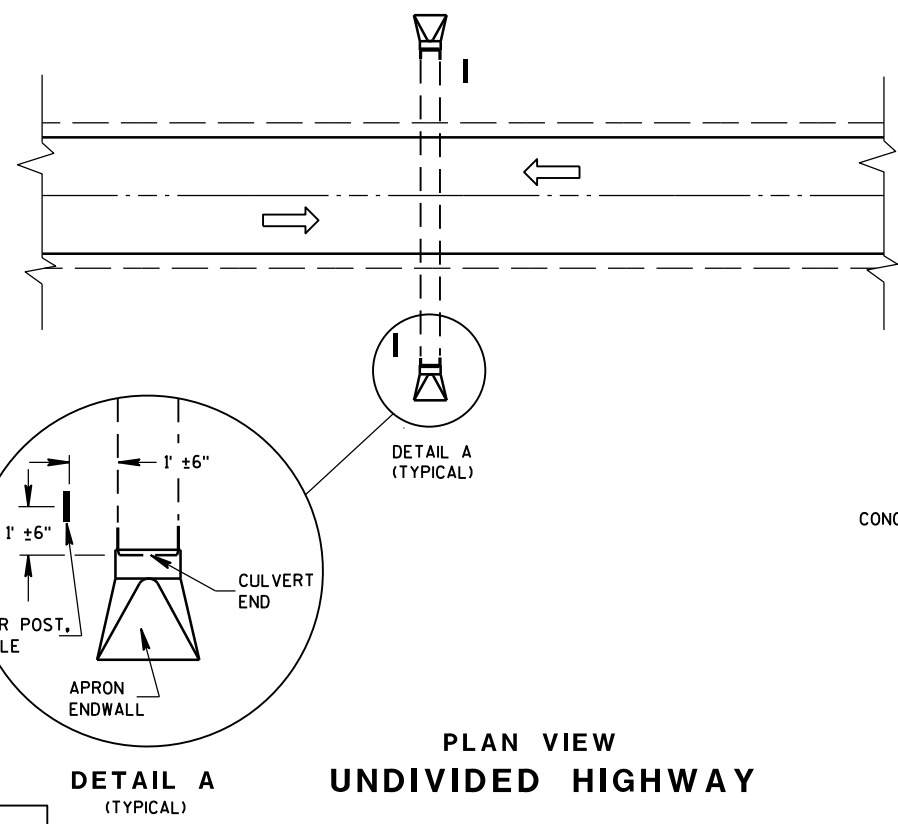
SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



PLAN VIEW
DIVIDED HIGHWAY

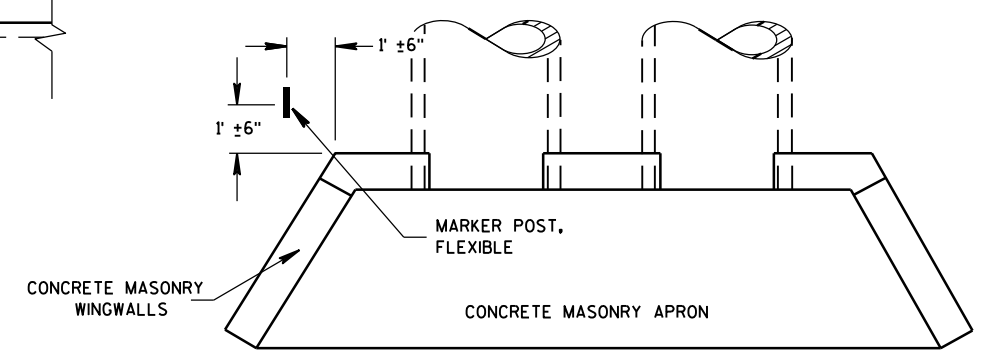


PLAN VIEW
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE
 DIRECTION OF TRAFFIC FLOW

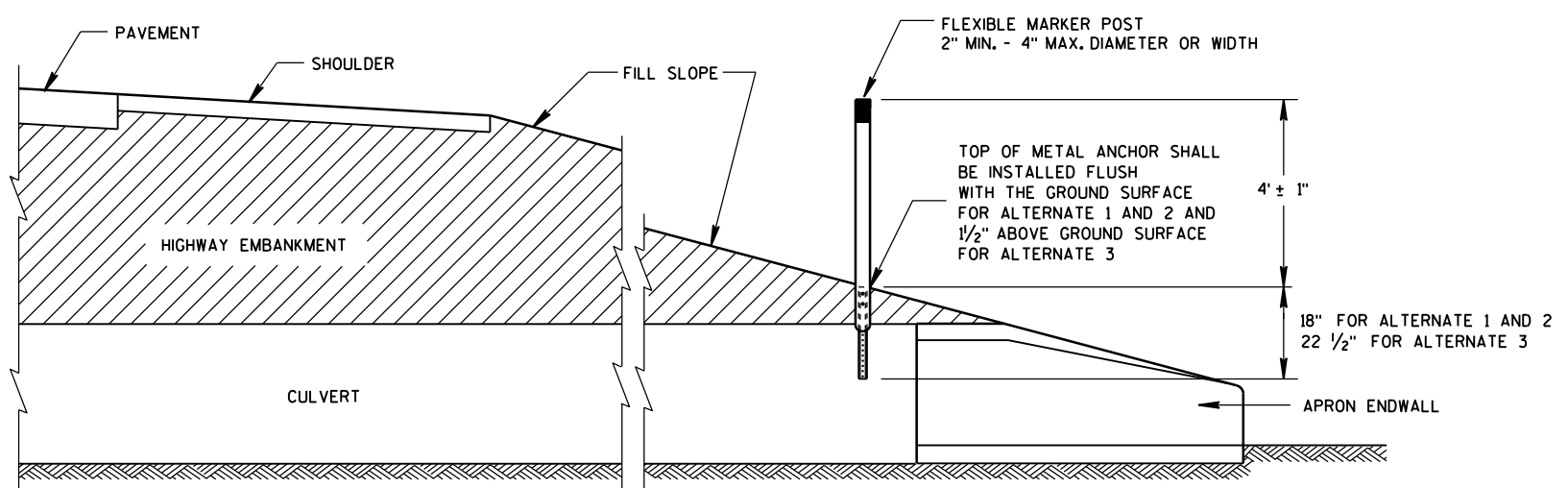
GENERAL NOTES

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.



PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION
FLEXIBLE MARKER POST

**FLEXIBLE MARKER POST
FOR CULVERT END**

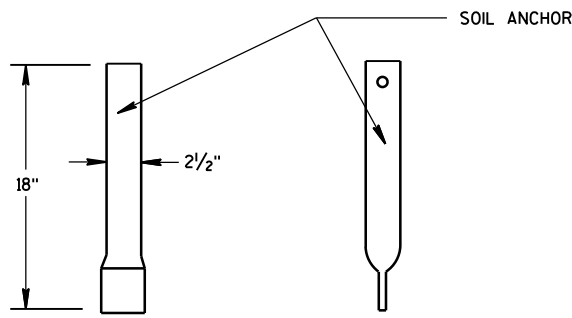
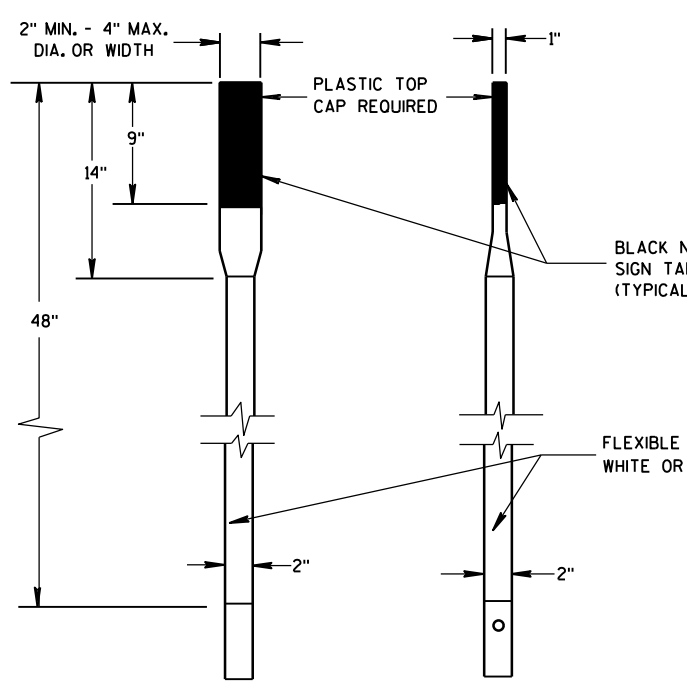
 STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

6

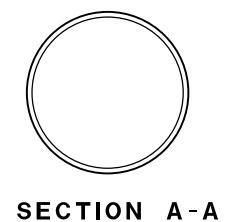
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S.D.D. 15 A 3-2a

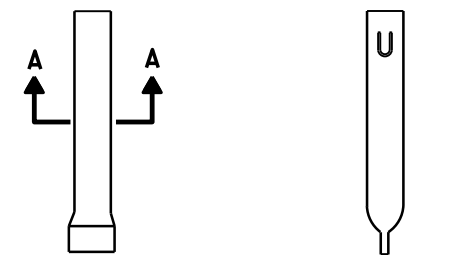
S.D.D. 15 A 3-2a



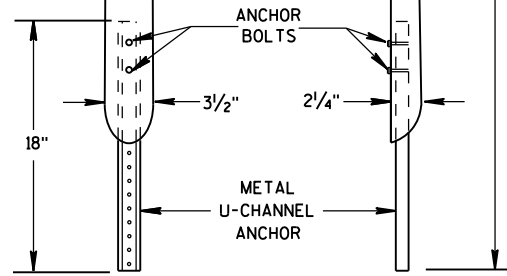
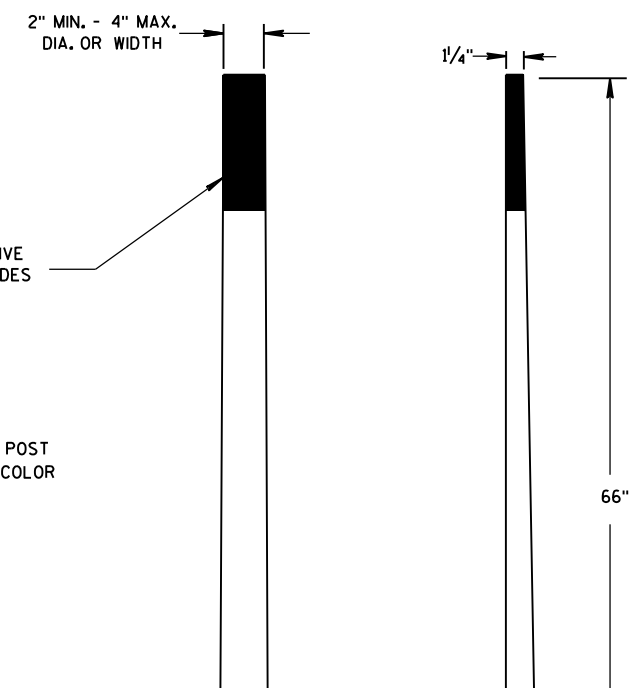
FRONT VIEW SIDE VIEW
ALTERNATE 1



SECTION A-A

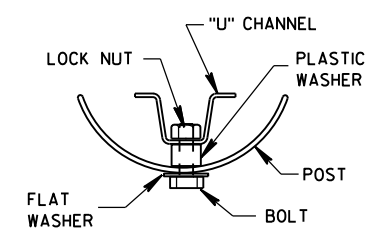


FRONT VIEW SIDE VIEW
ALTERNATE 1

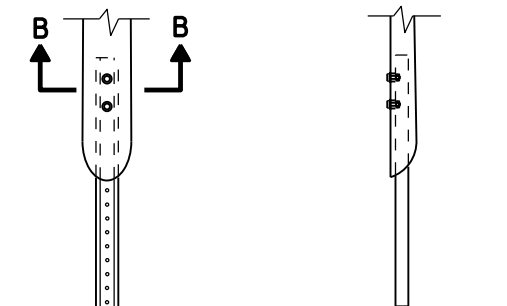


FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE MARKER POSTS

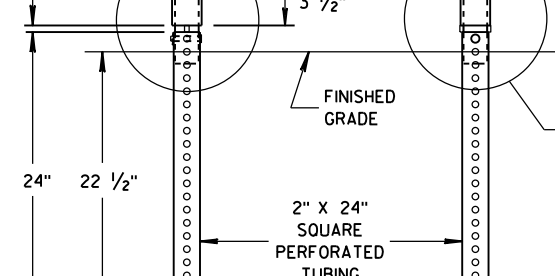
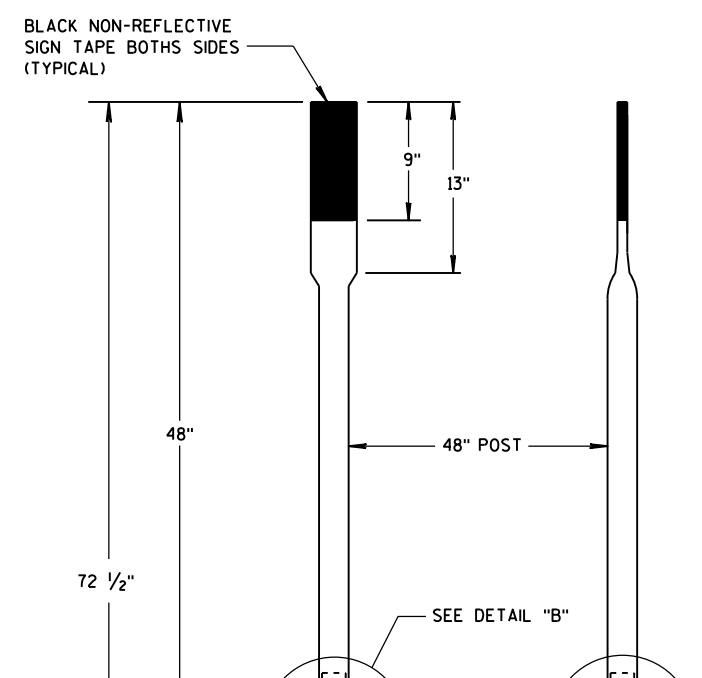


SECTION B-B

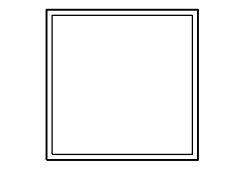


FRONT VIEW SIDE VIEW
ALTERNATE 2

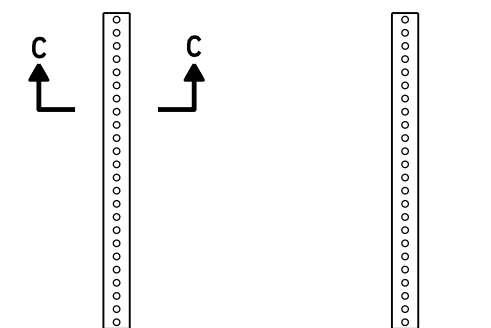
FLEXIBLE MARKER POST ANCHORS



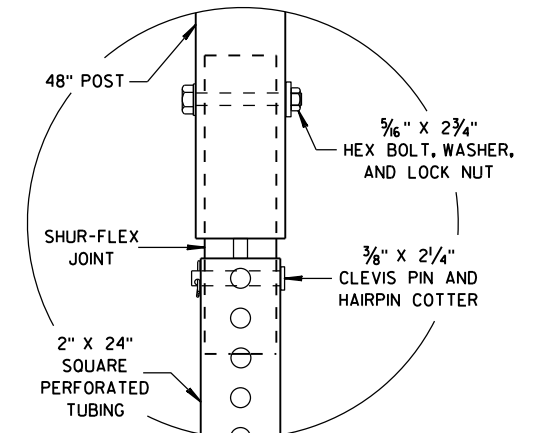
FRONT VIEW SIDE VIEW
ALTERNATE 3



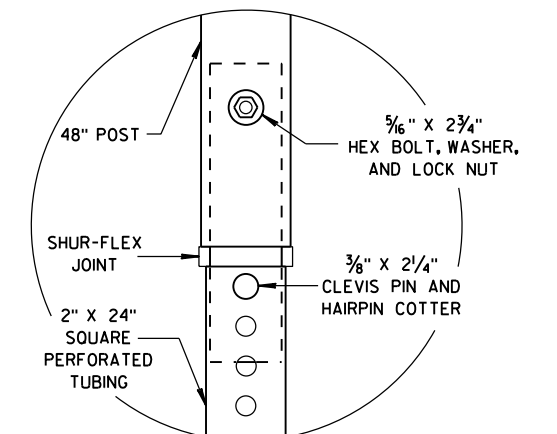
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 3



DETAIL B

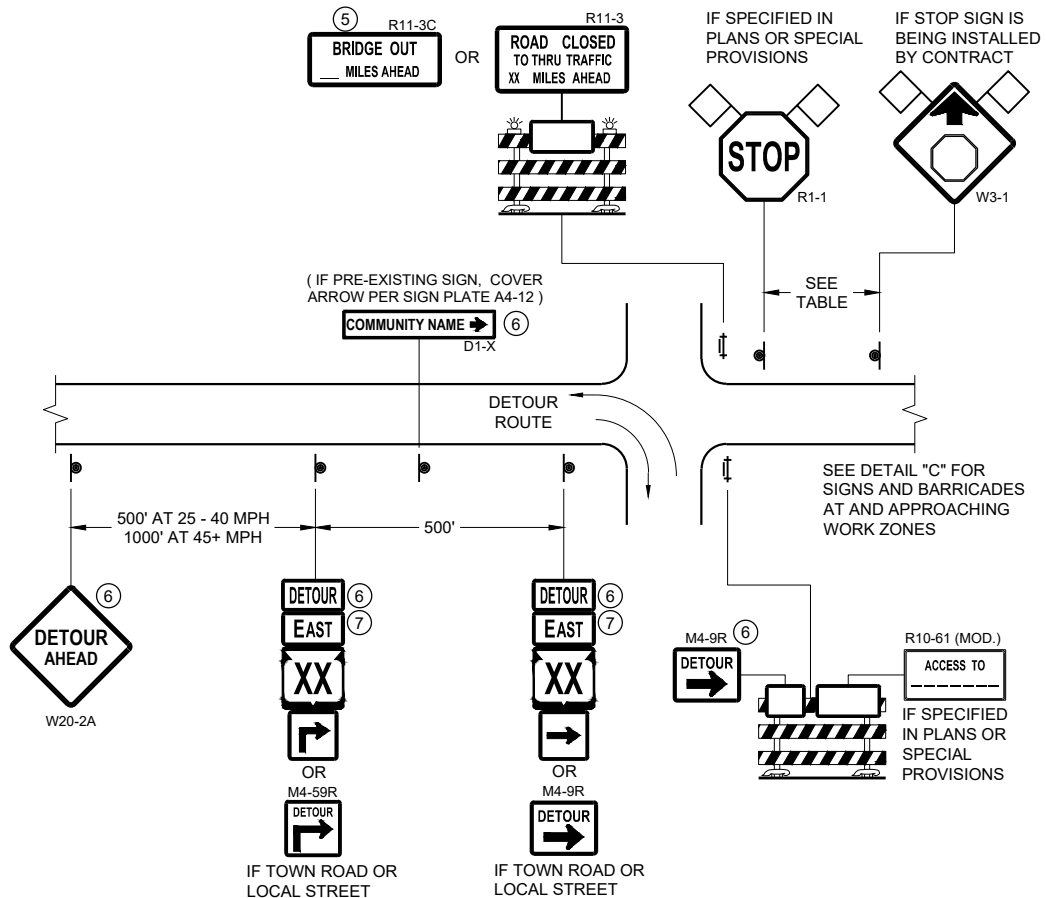


DETAIL C

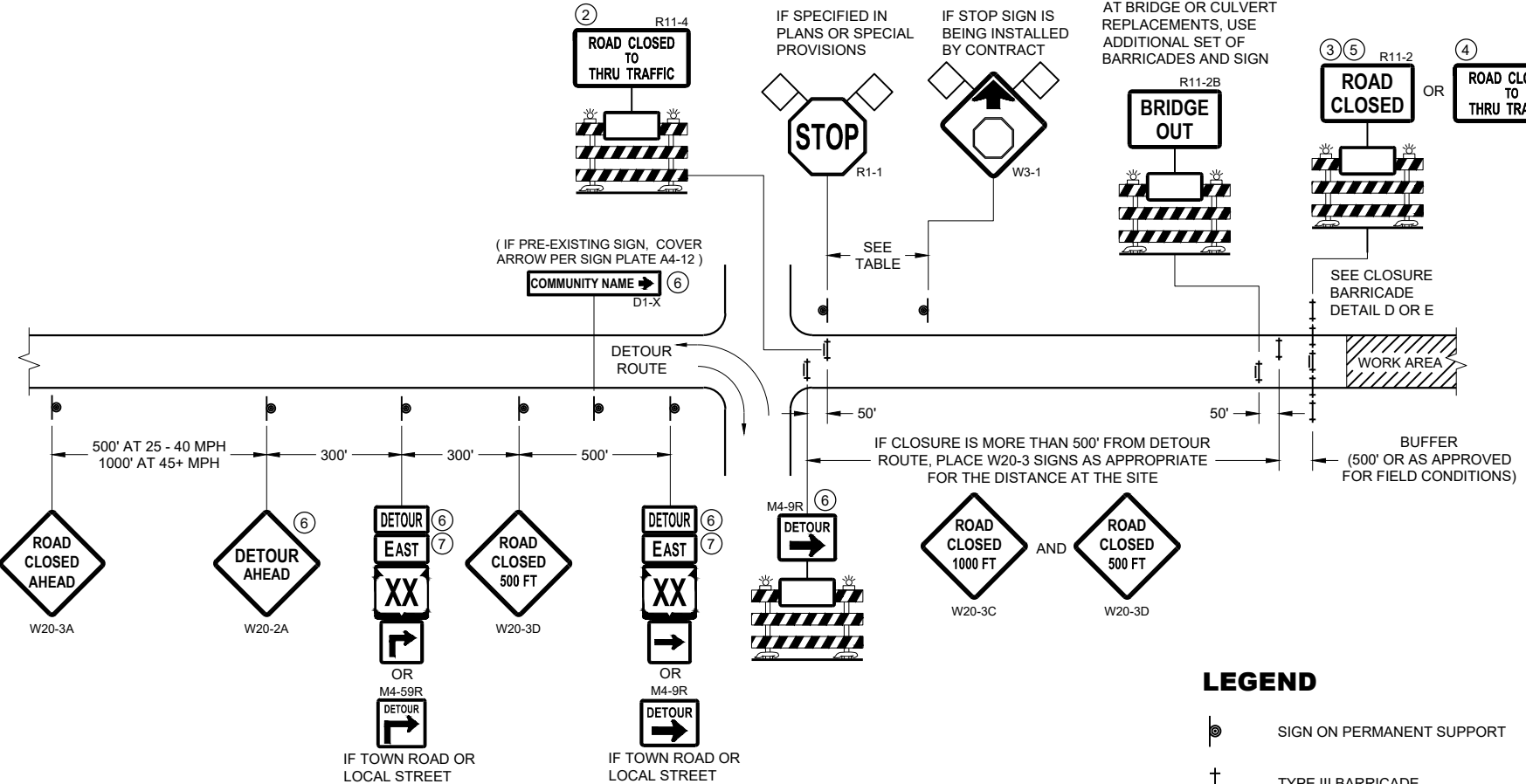
FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

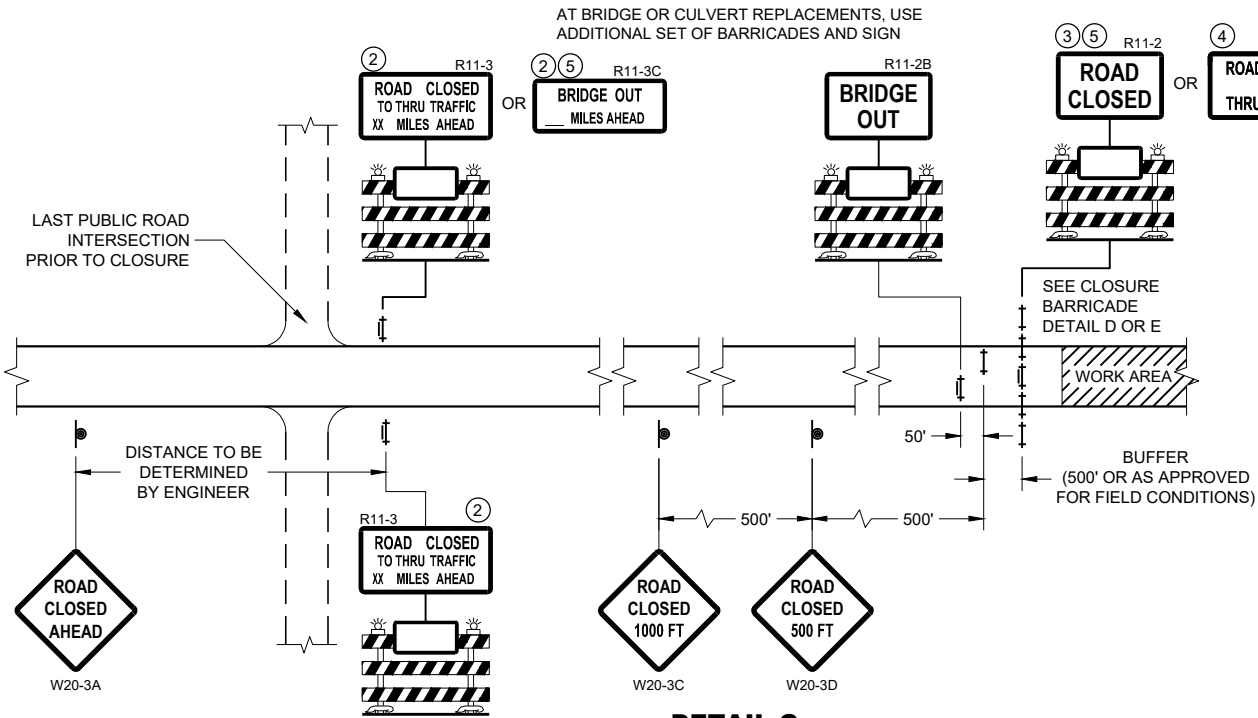
APPROVED
10/1/2012 DATE /S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
 DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE LESS THAN 1/2 MILE FROM
 DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- M4 - 8
- M3 - X
- M1 - 4 OR M1 - 6 OR M1 - 5A
- M05 - 1 OR M06 - 1

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

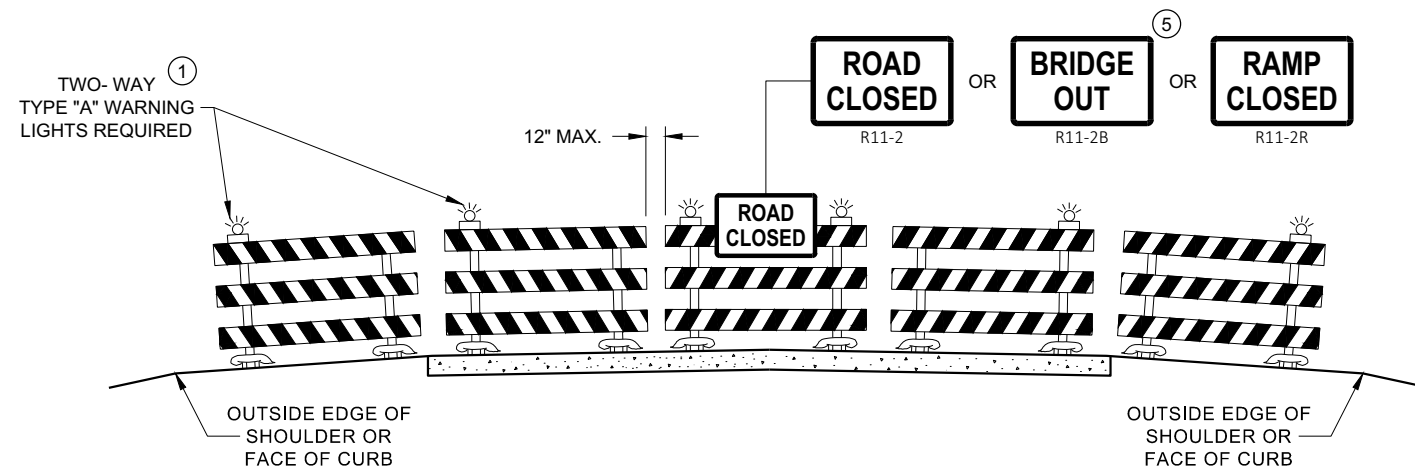
SEE SDD 15C2-SHEET "b"
 FOR GENERAL NOTES
 AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
 FOR MAINLINE CLOSURES**

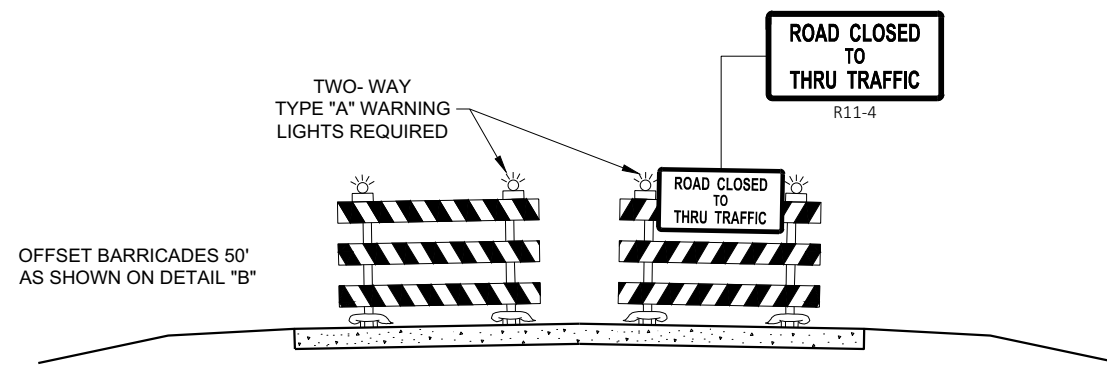
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

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

FHWA



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

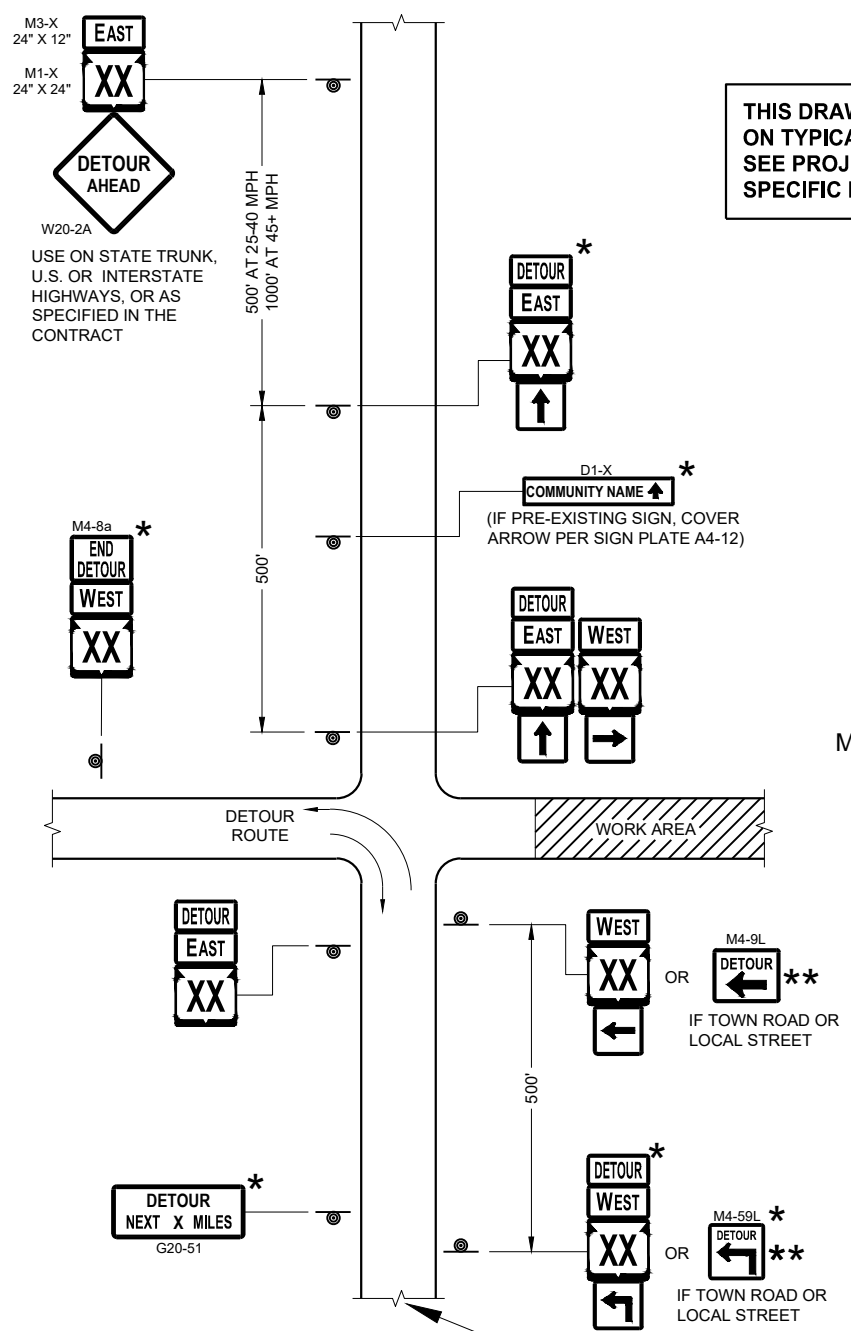
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

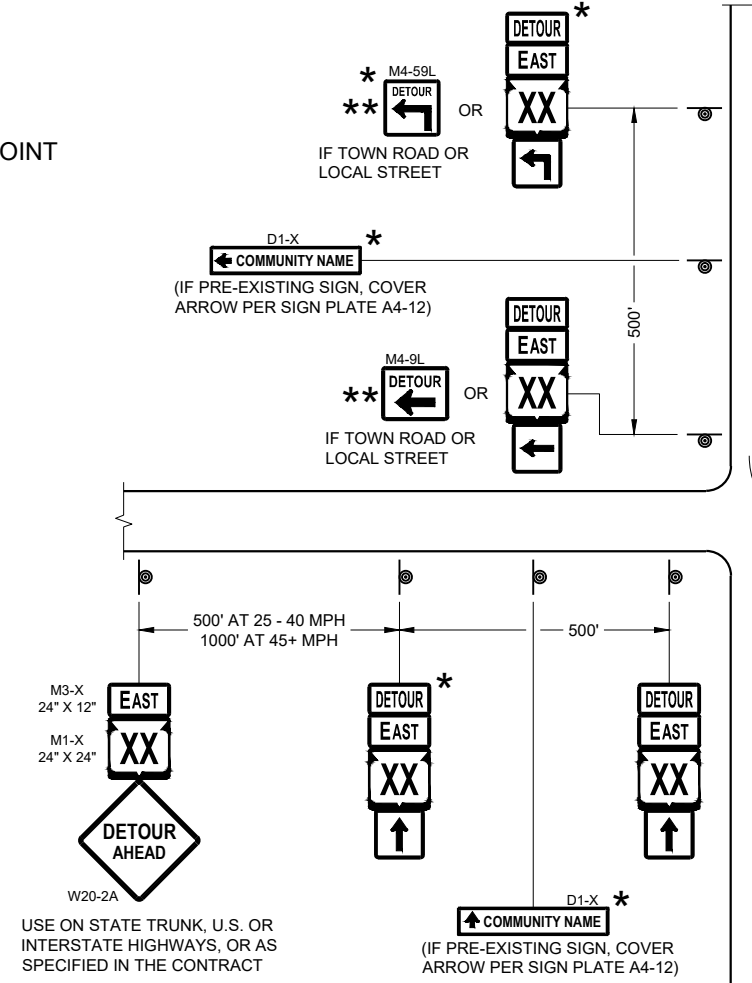
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

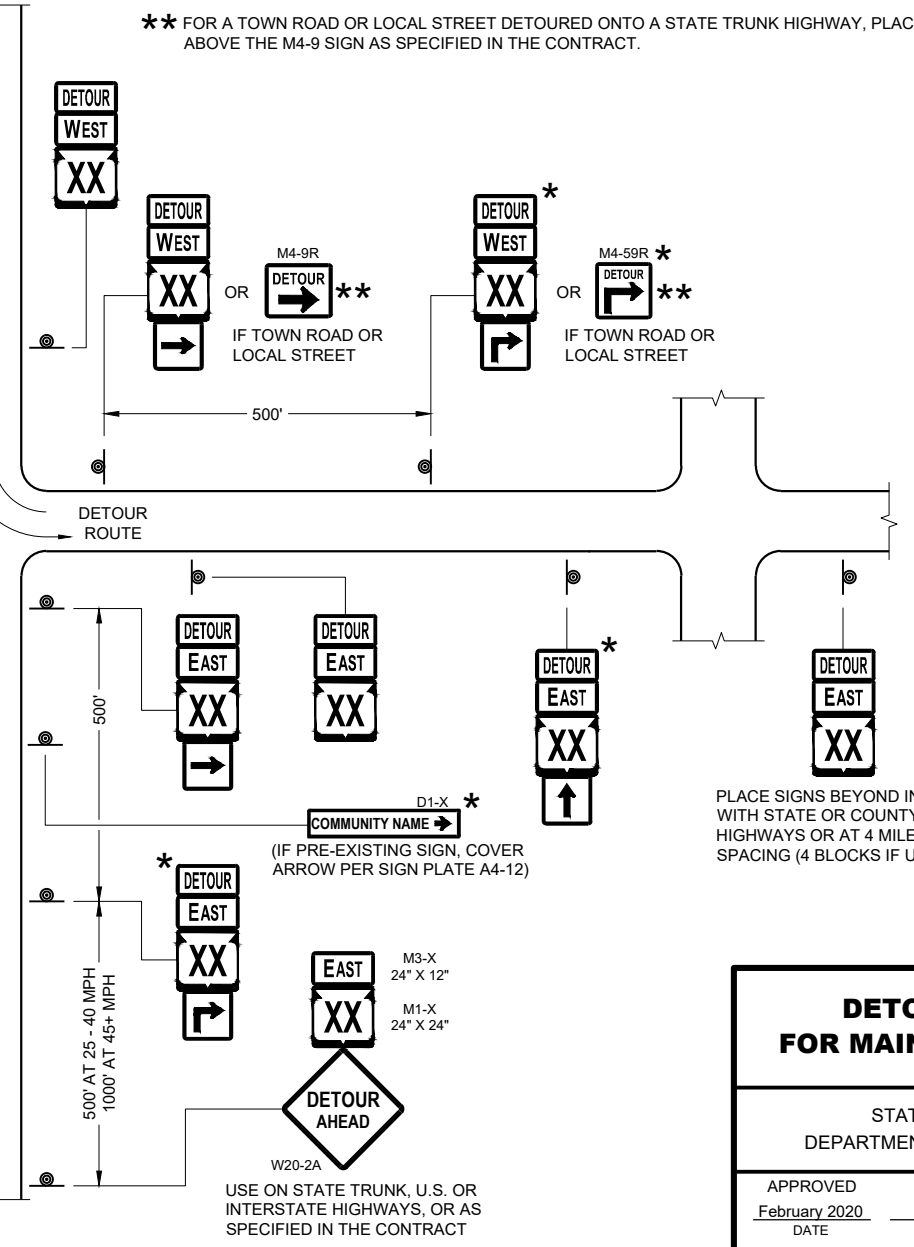
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

MATCH POINT



**DETAIL F
DETOUR SIGNING**

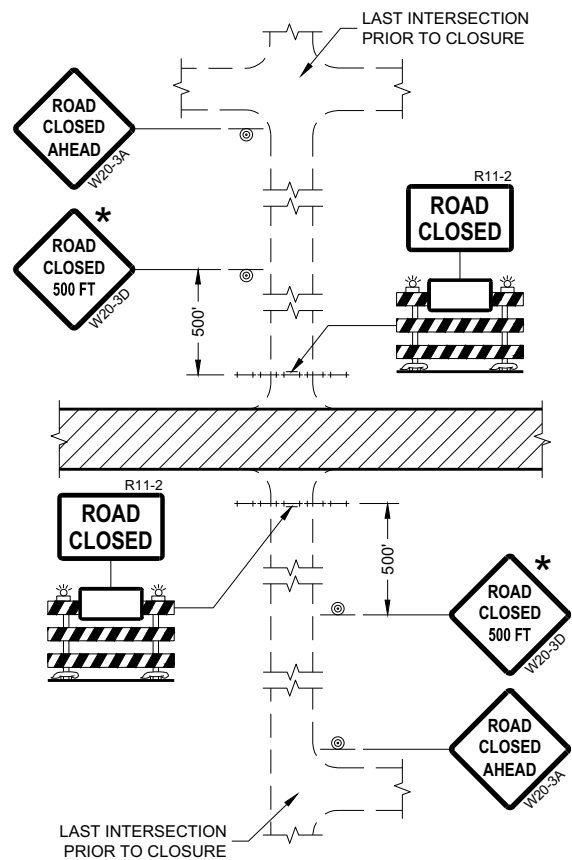


**DETOUR SIGNING
FOR MAINLINE CLOSURES**

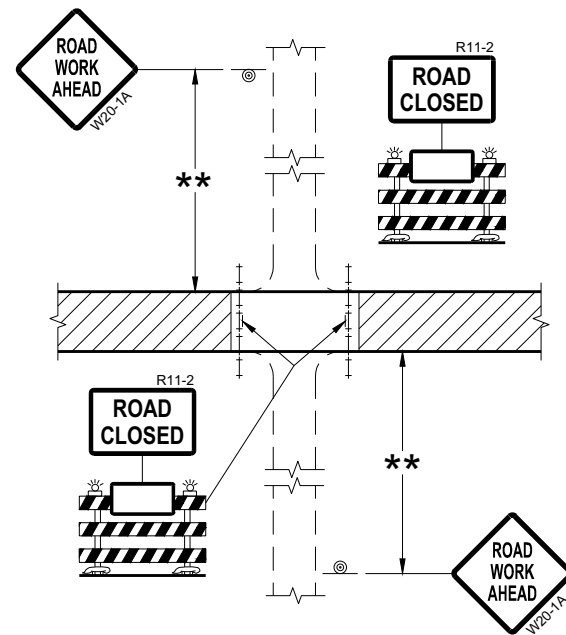
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

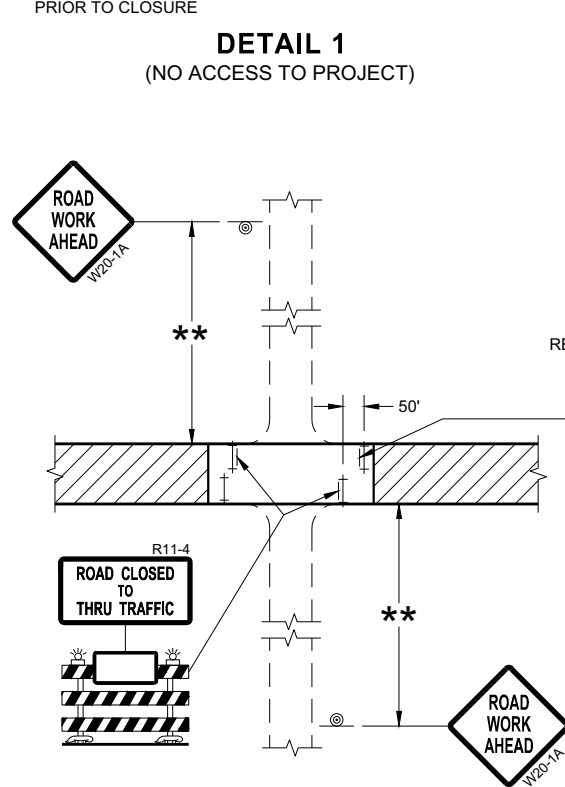
FHWA



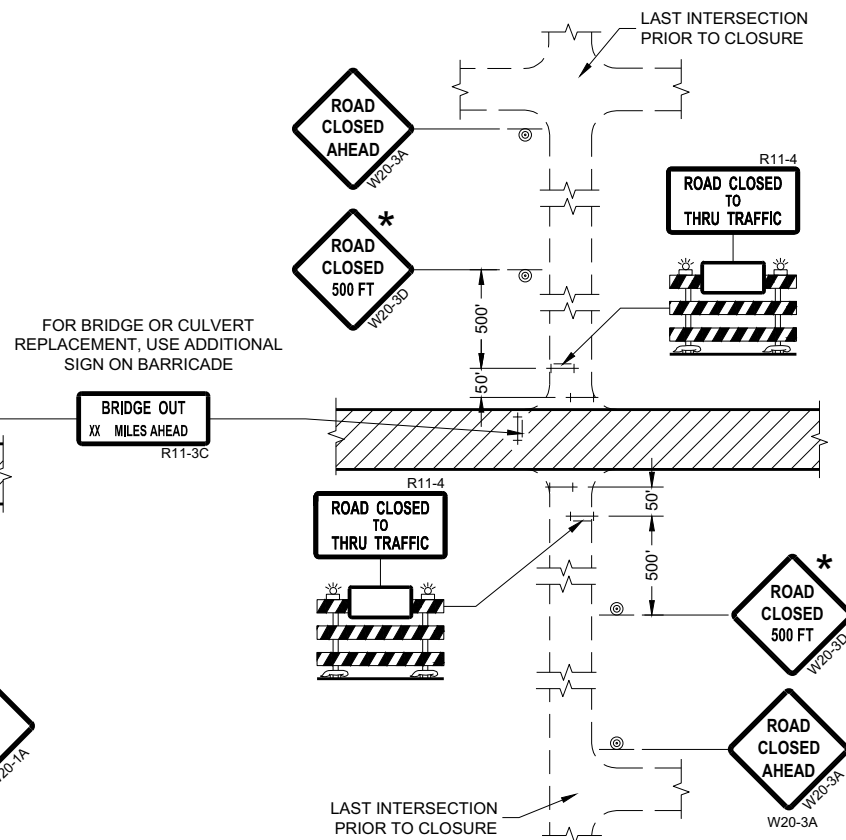
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




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

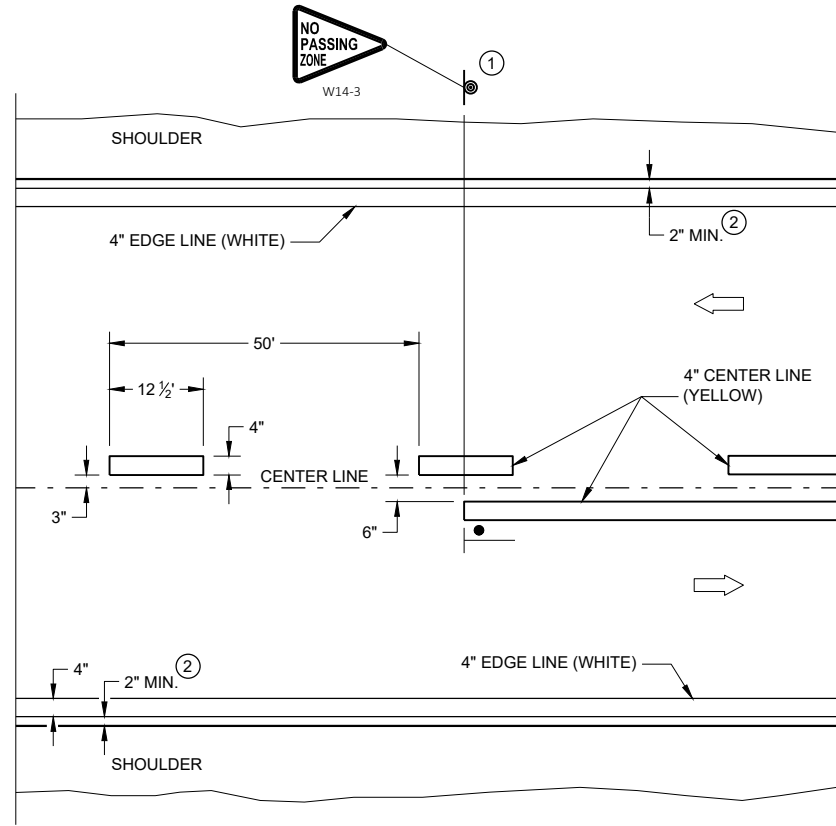
GENERAL NOTES

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

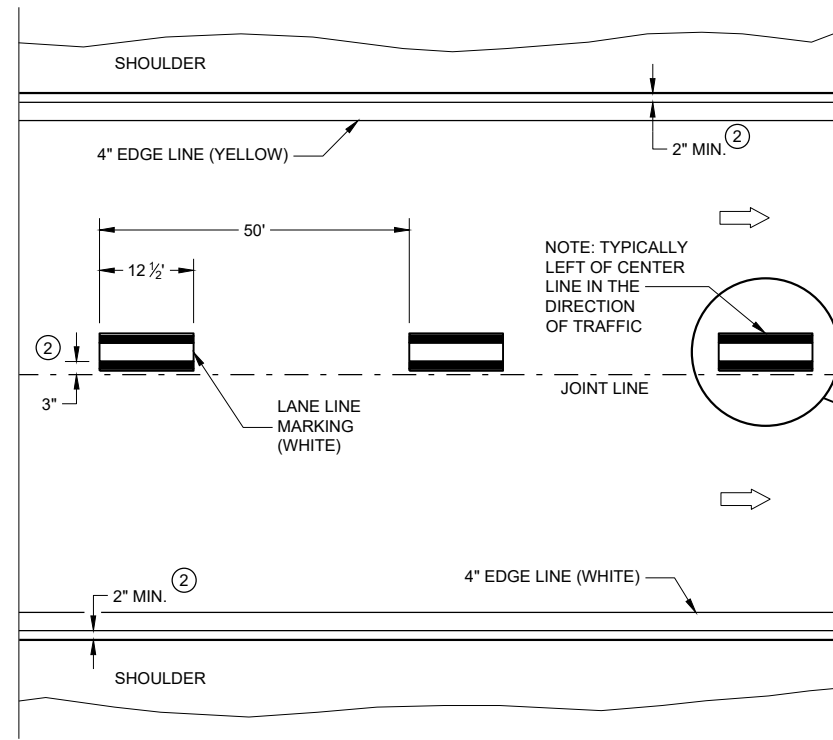
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

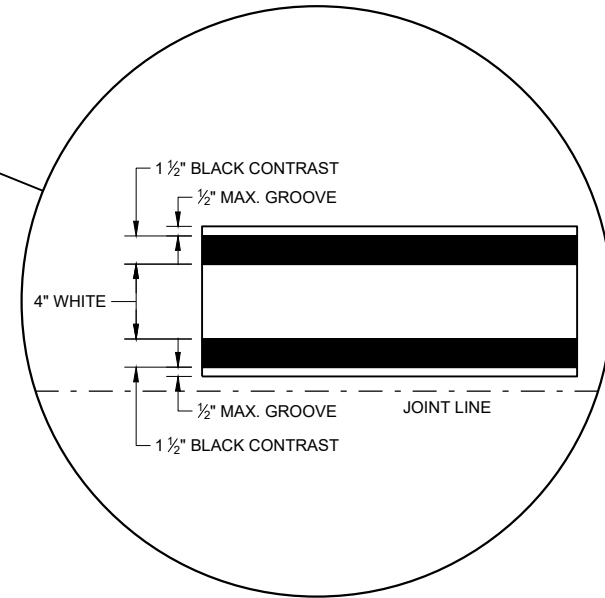


TWO WAY TRAFFIC



ONE WAY TRAFFIC

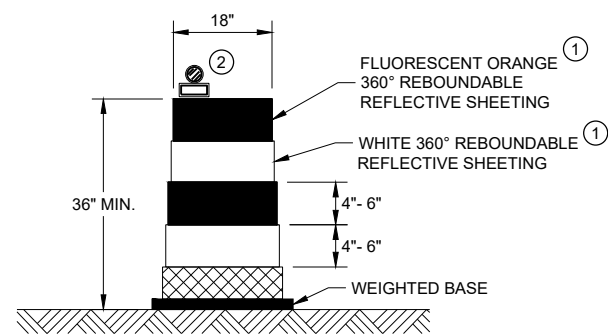
PERMANENT PAVEMENT MARKING



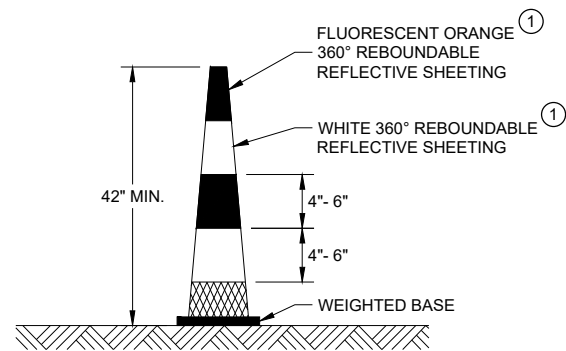
PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

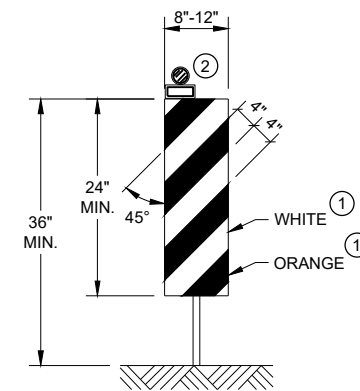


DRUM



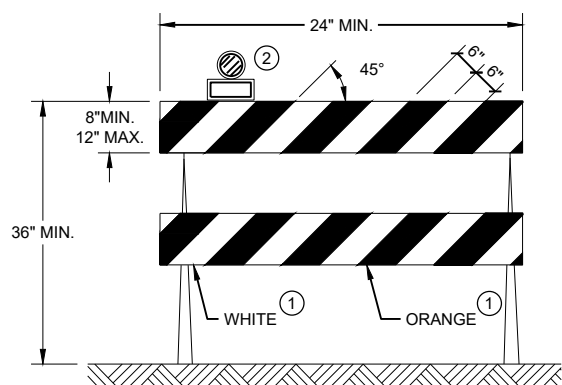
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



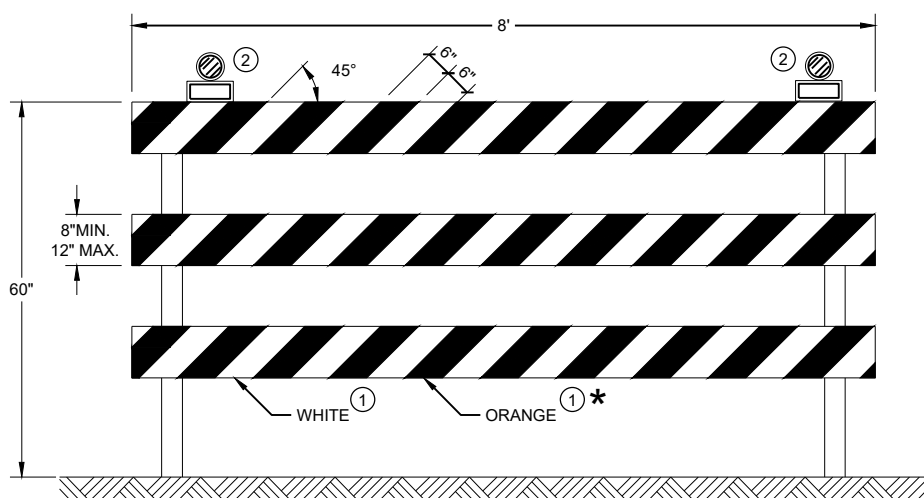
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

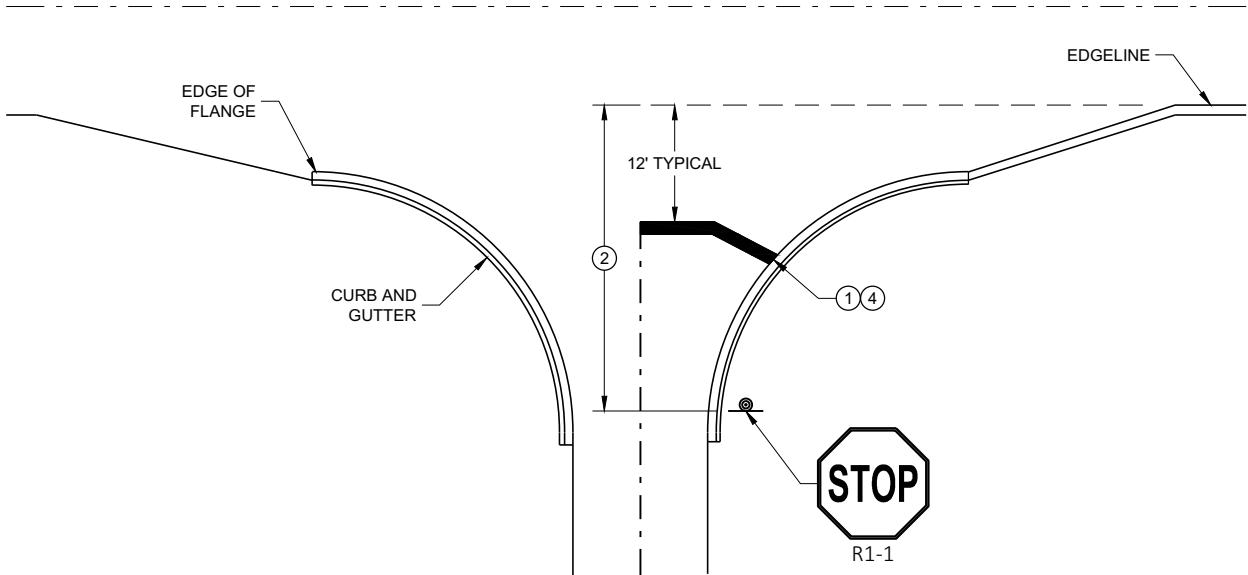
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

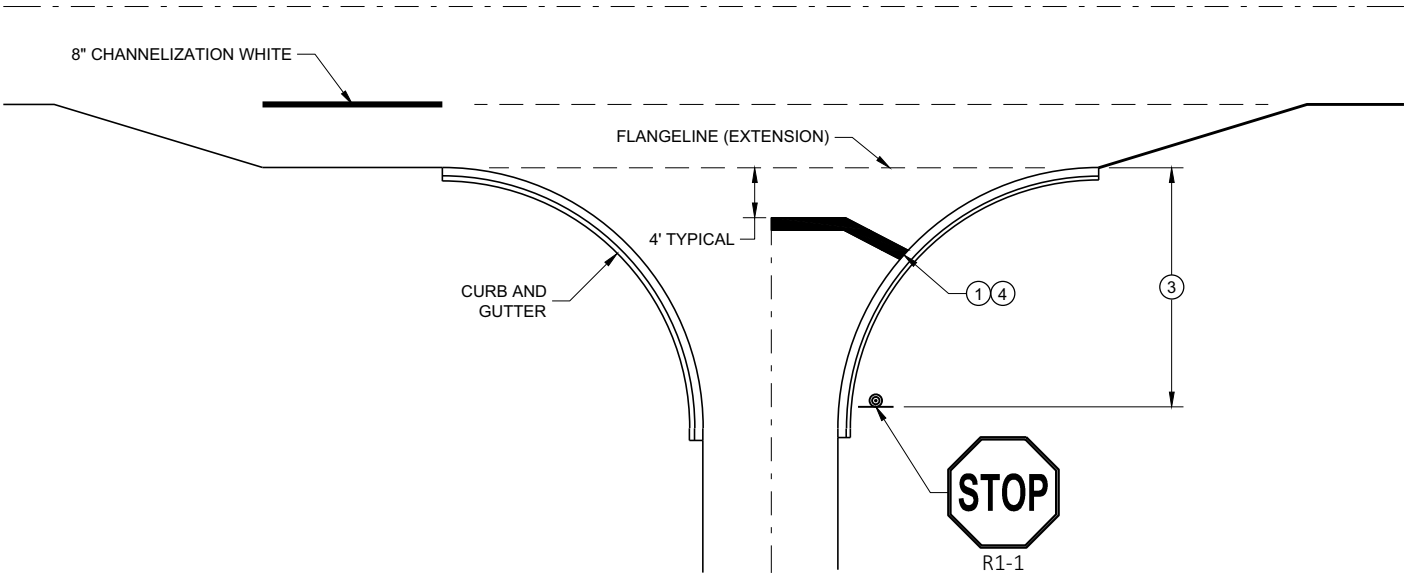
GENERAL NOTES

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

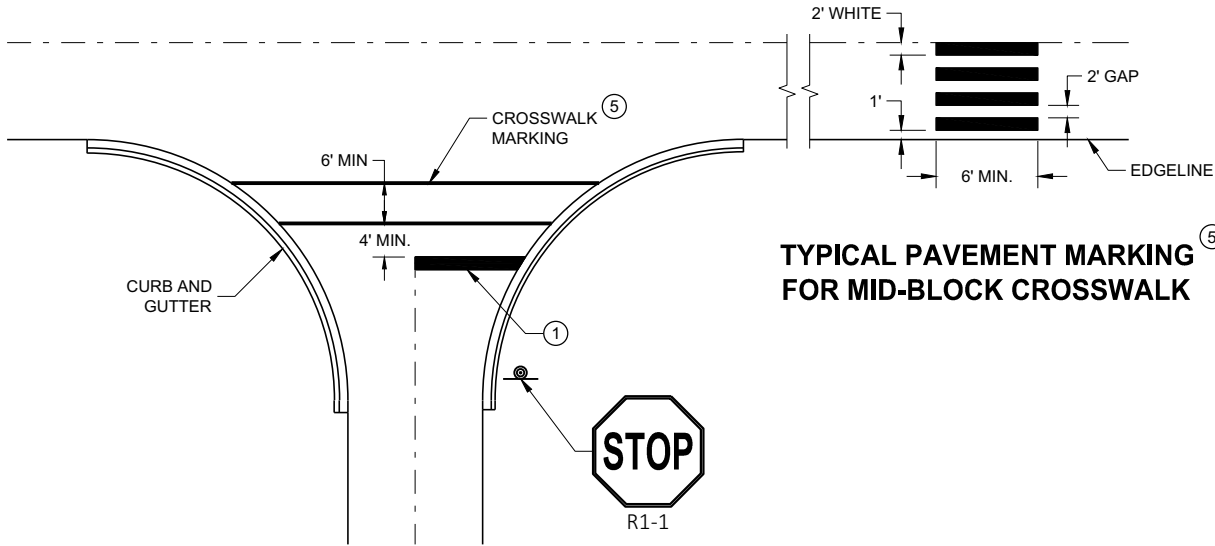
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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

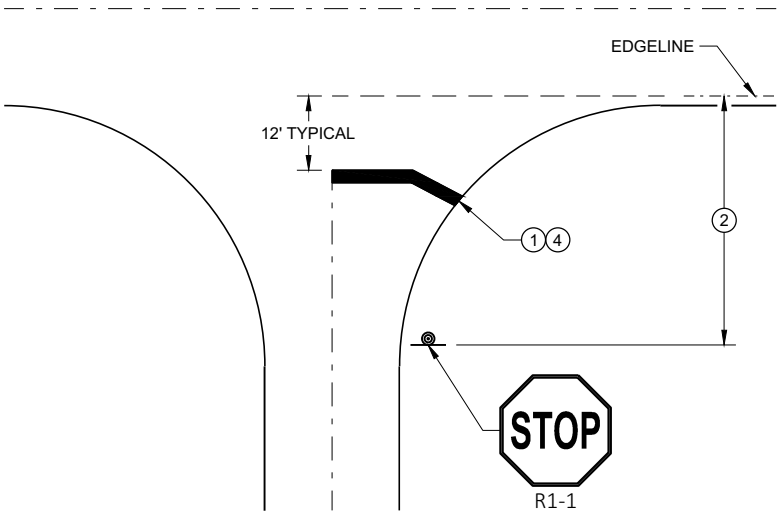


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



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

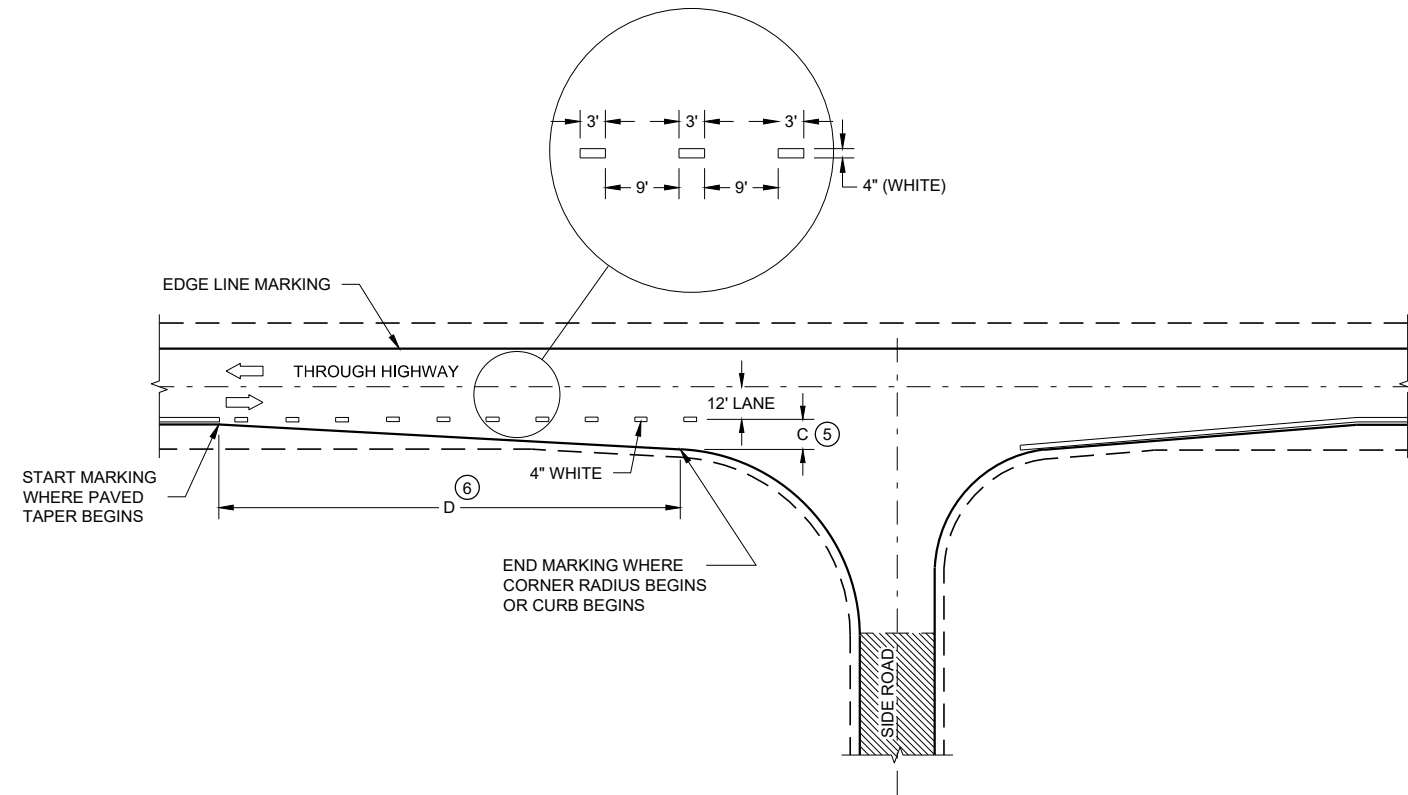
GENERAL NOTES

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

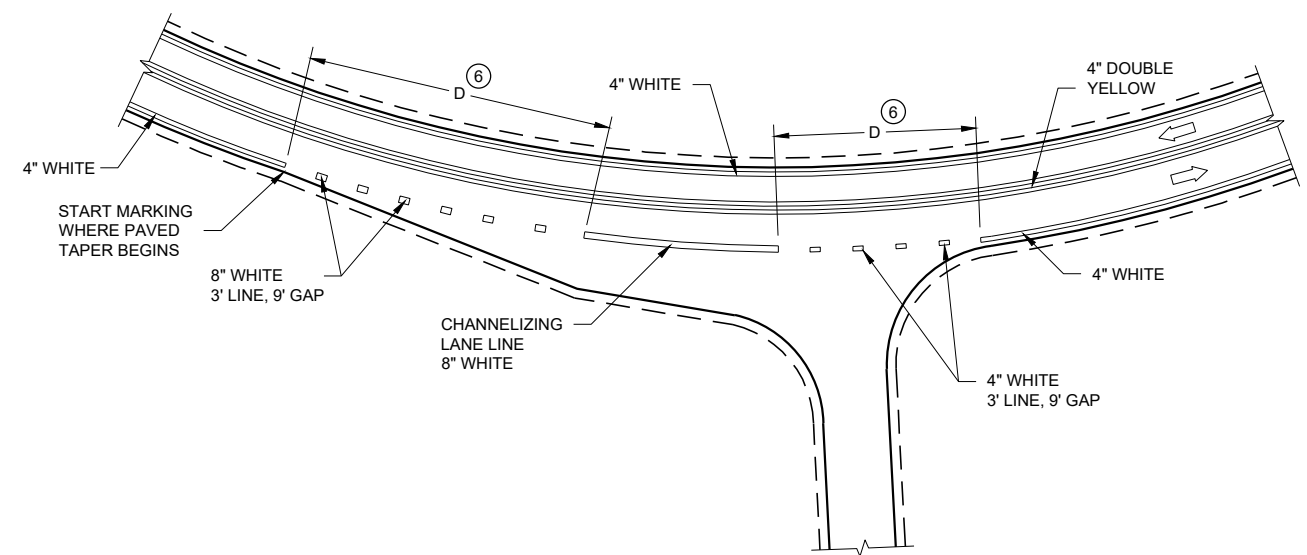
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

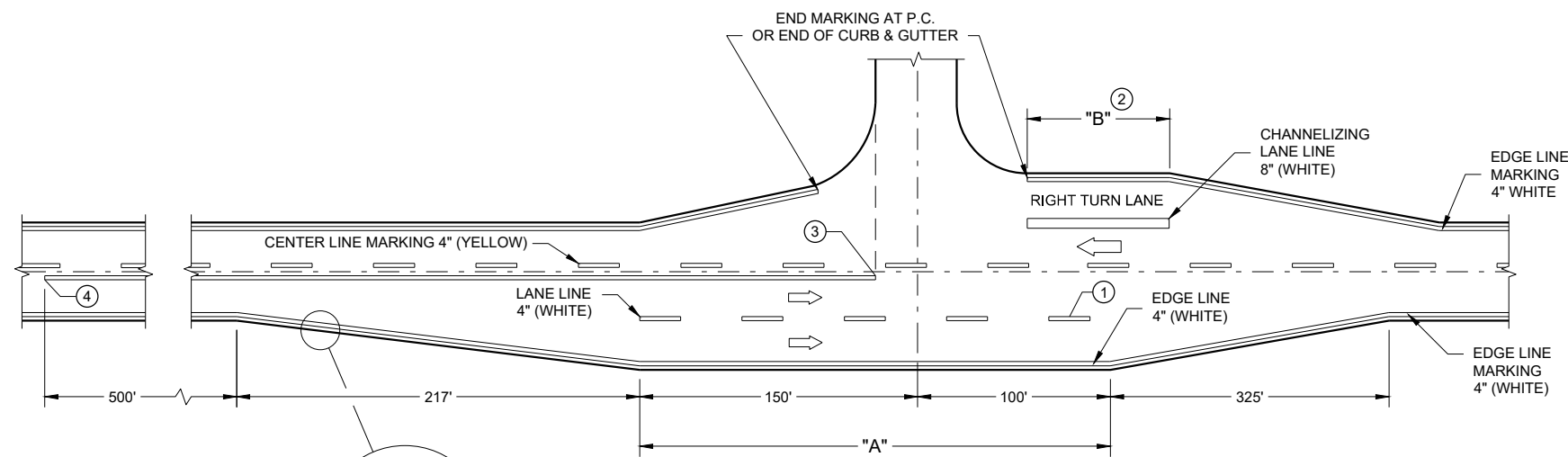
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION

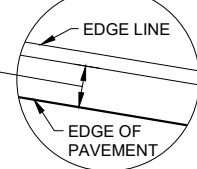


INTERSECTION ON OUTSIDE OF CURVE



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

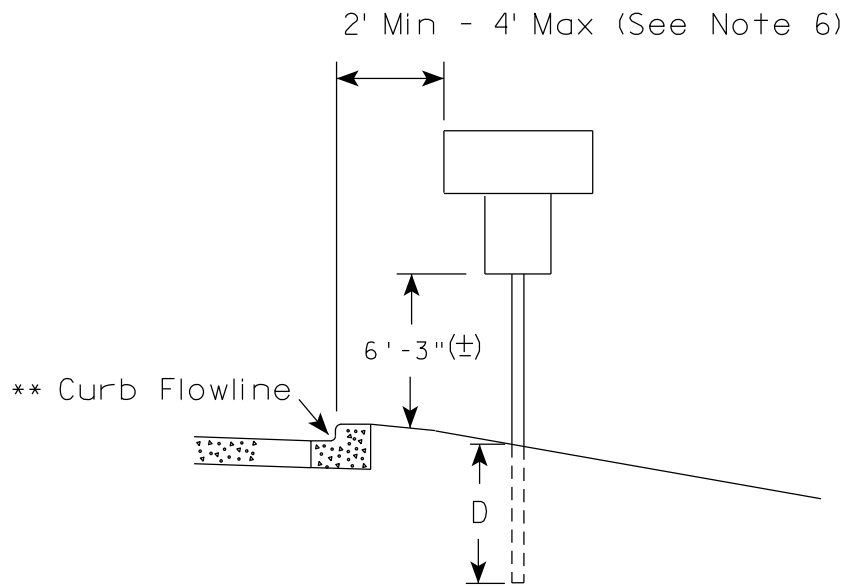
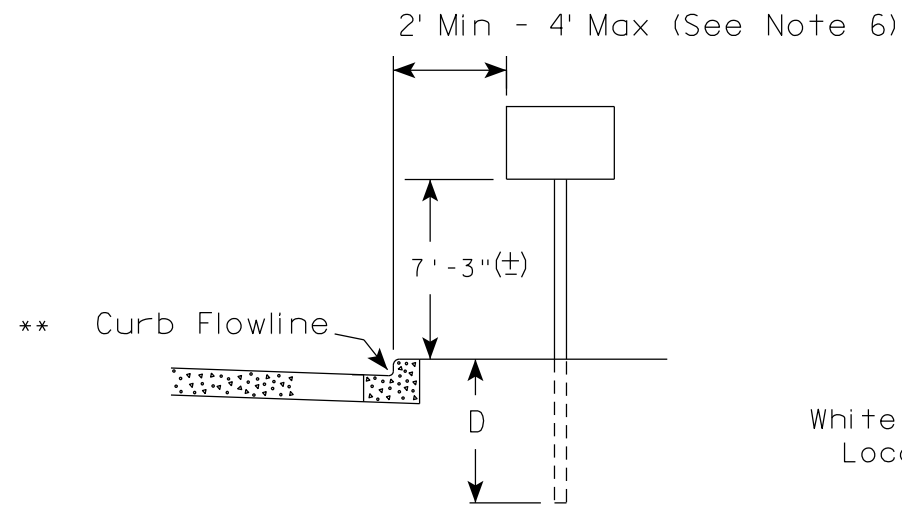
BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES



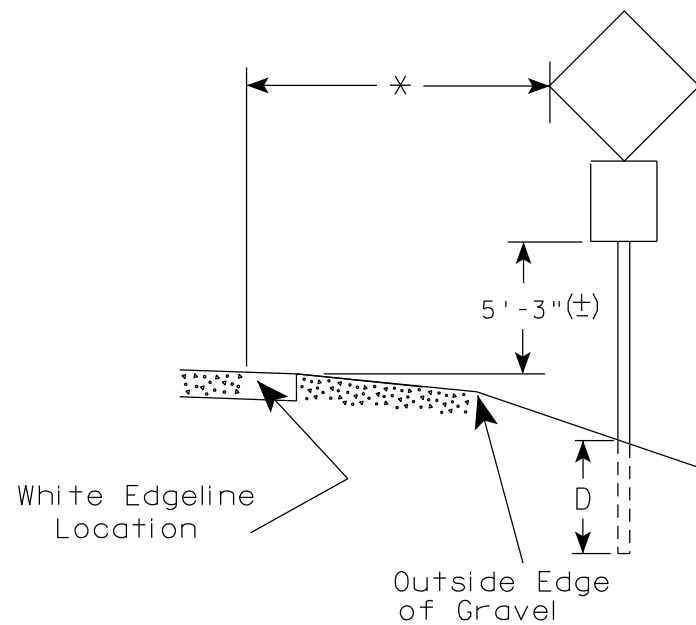
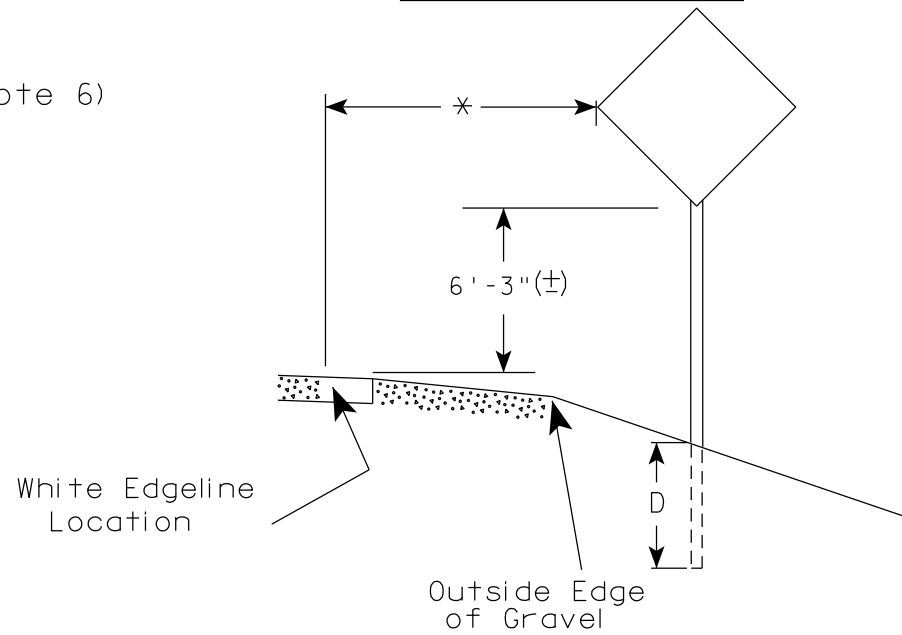
**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

URBAN AREA



RURAL AREA (See Note 2)



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.

POST EMBEDMENT DEPTH

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

* * 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.

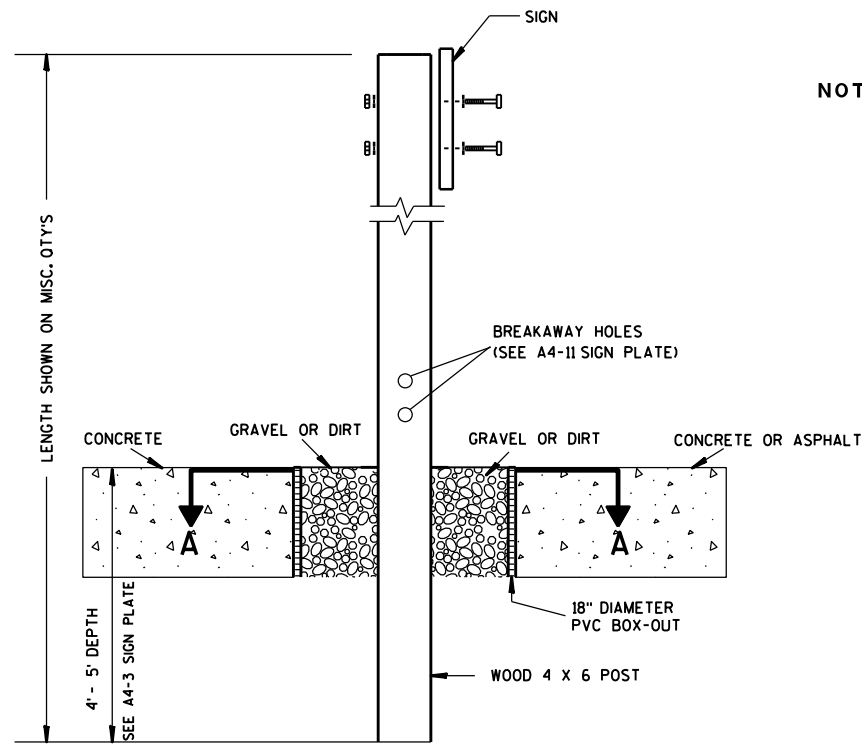
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

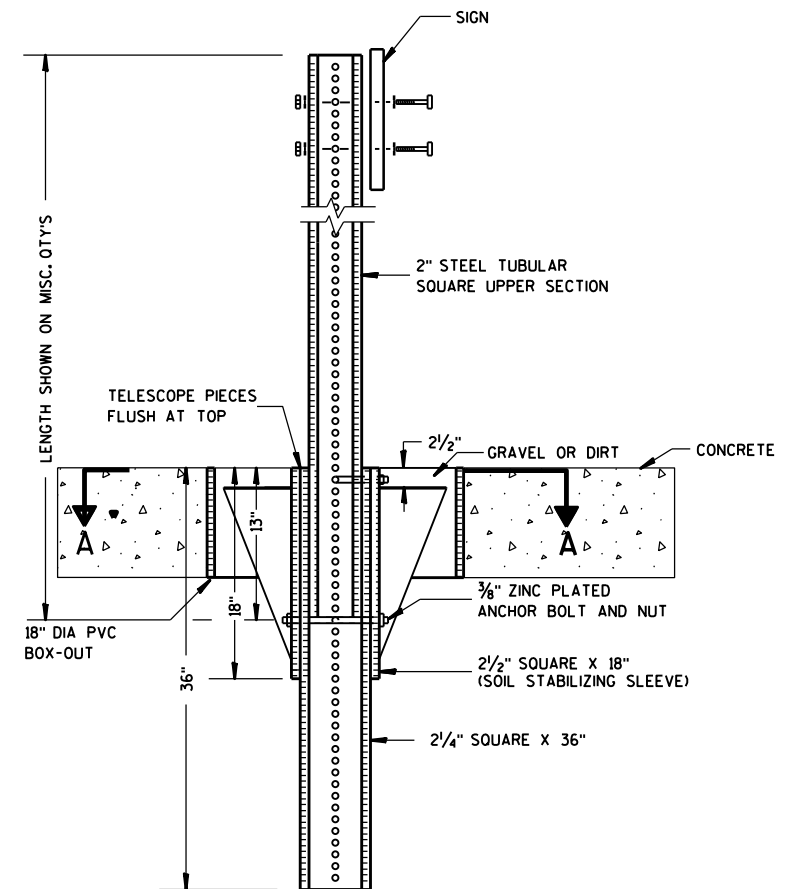
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

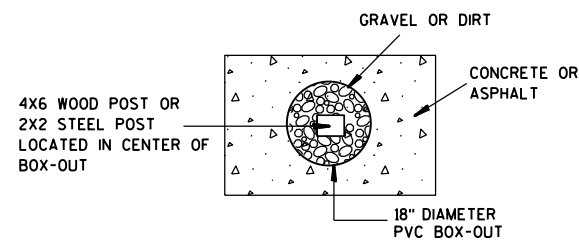
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

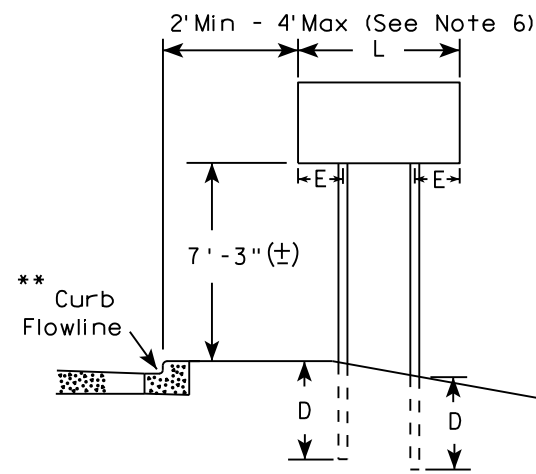
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

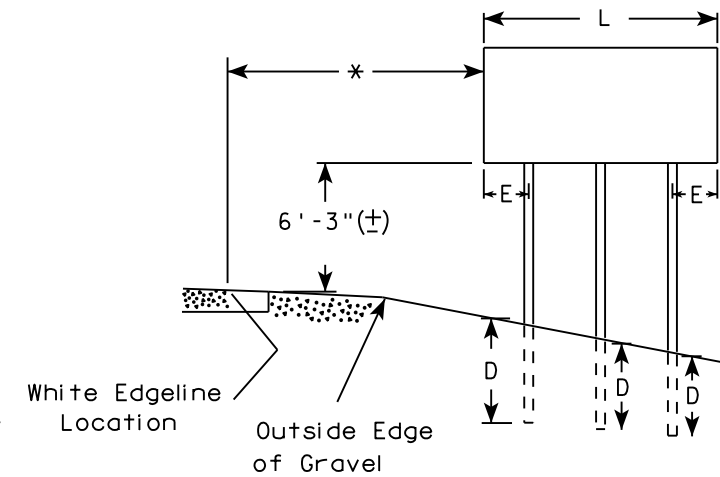
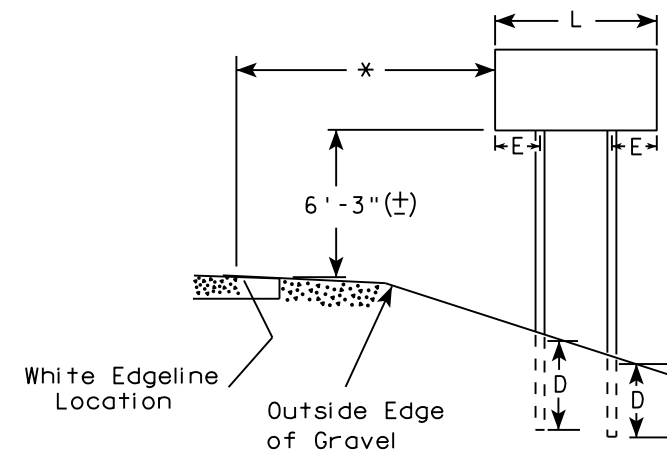
GENERAL NOTES

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" (±).

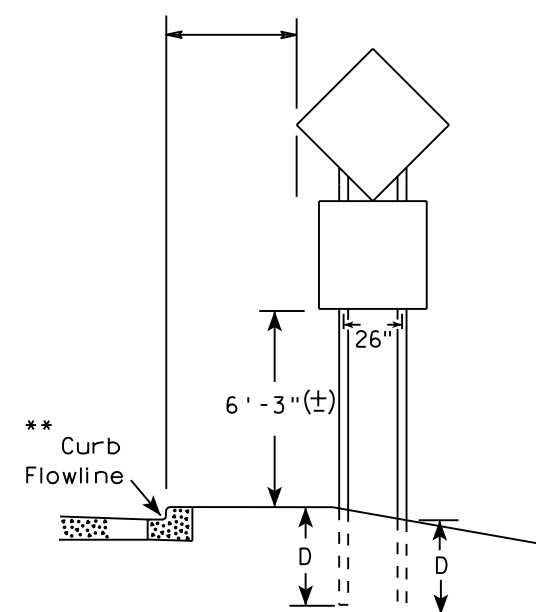
URBAN AREA



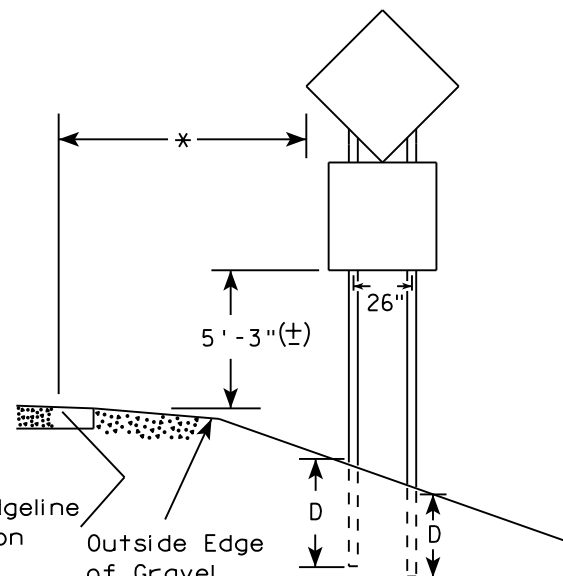
RURAL AREA (See Note 3)



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

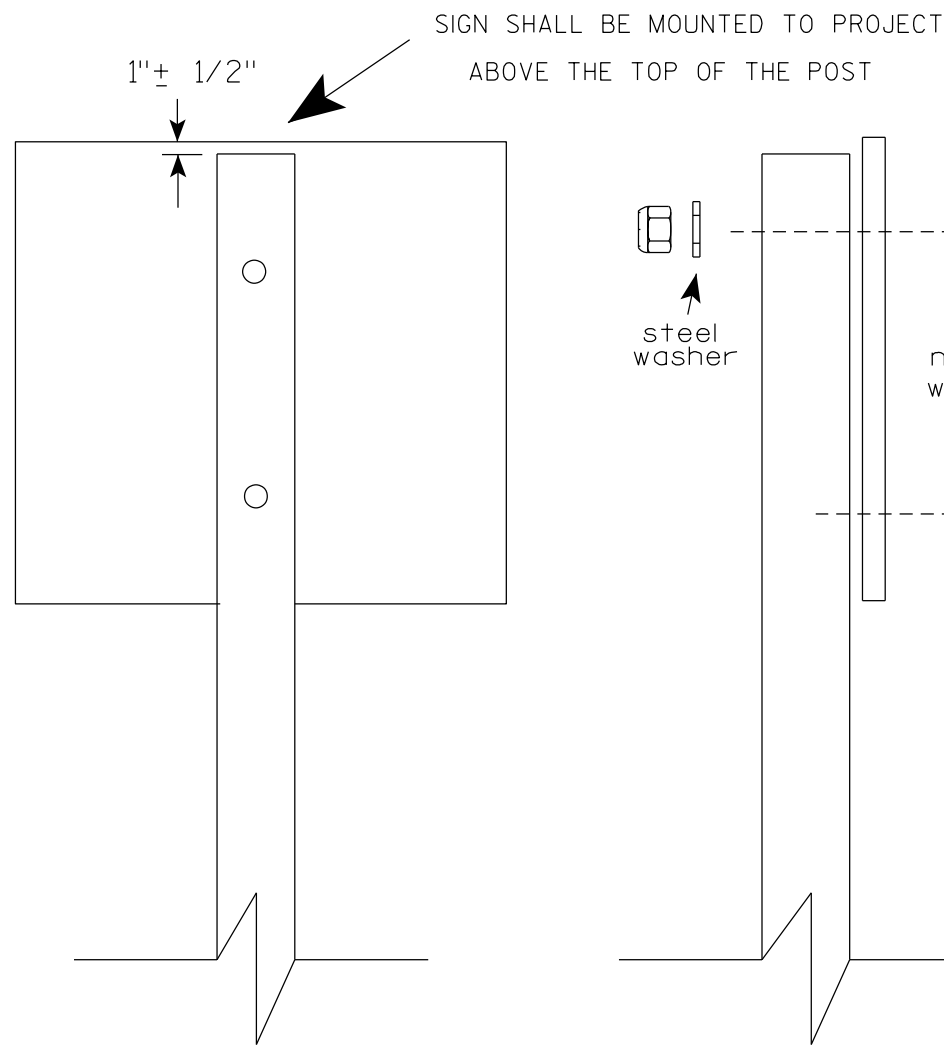
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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 :

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- 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.

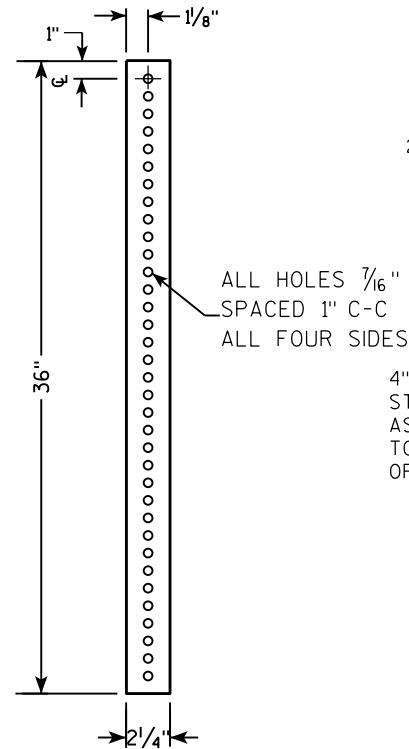
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X $\frac{3}{8}$ " 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.

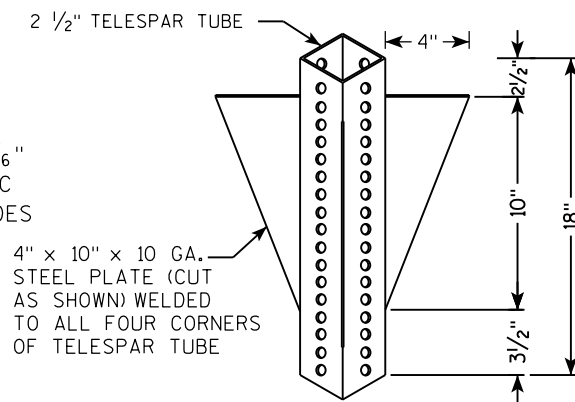
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

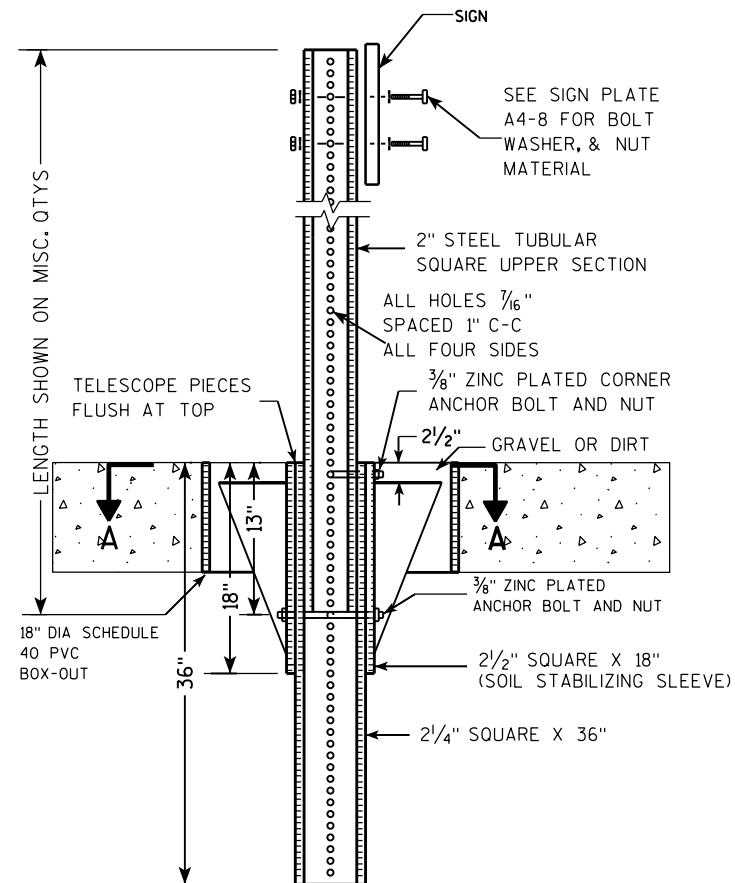
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



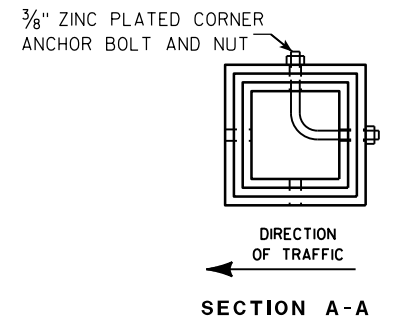
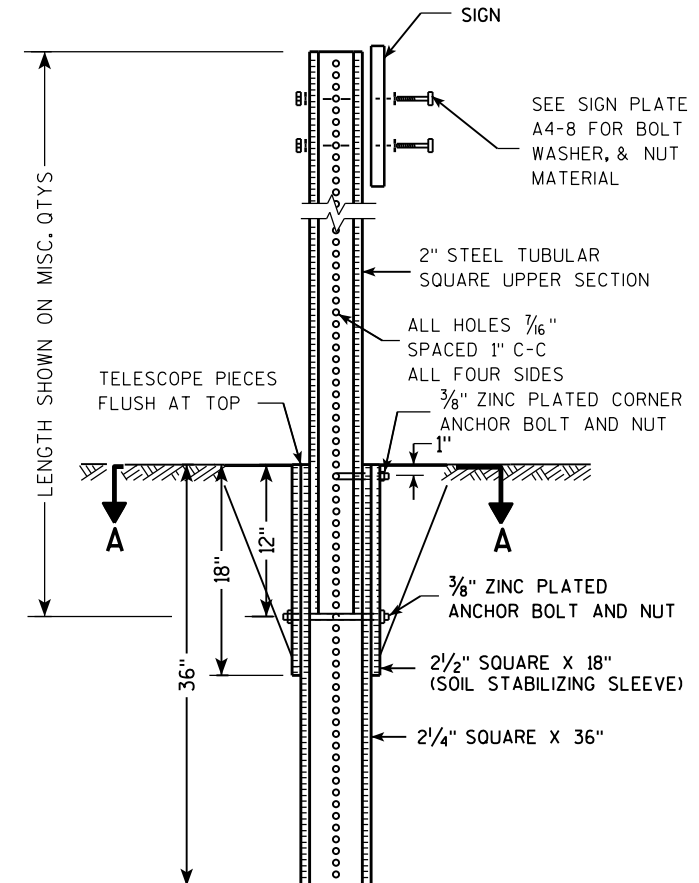
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**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

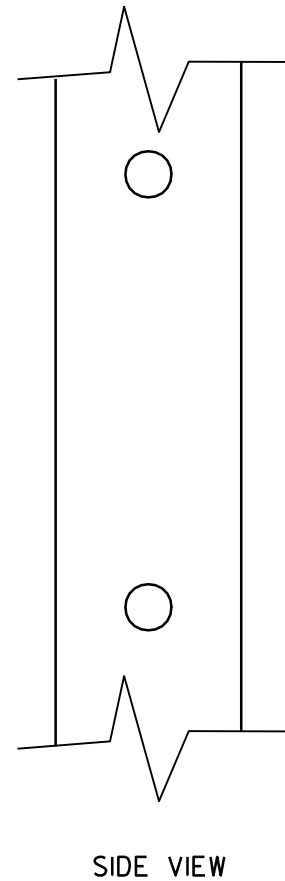
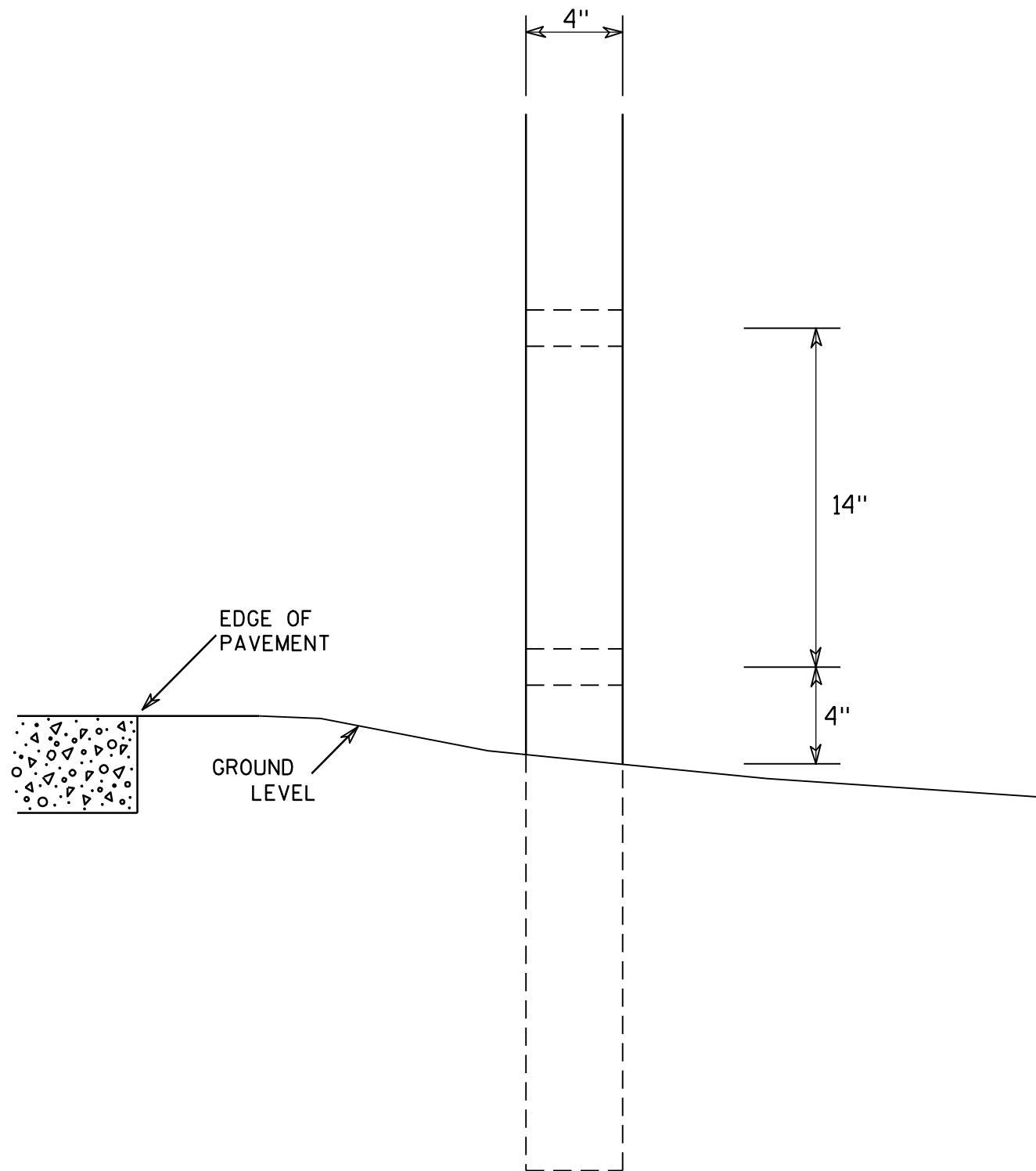
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**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.

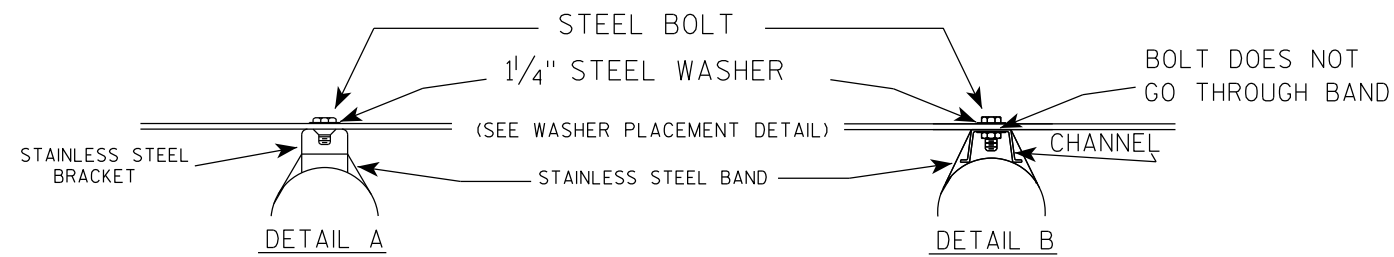
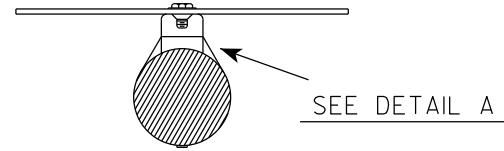
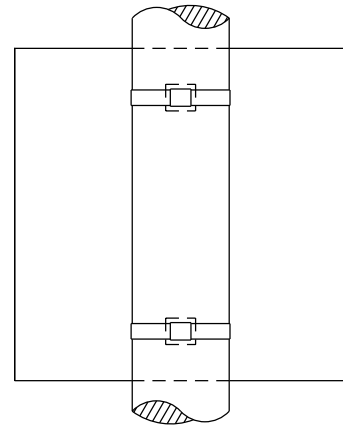
7

7

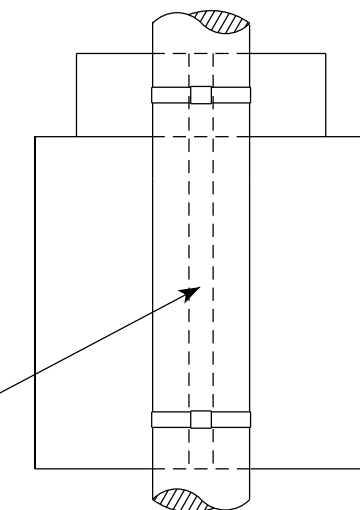
4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

BANDING

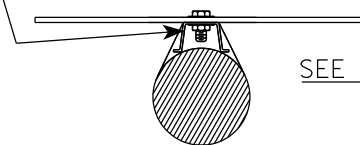
SINGLE SIGN



"J" ASSEMBLY

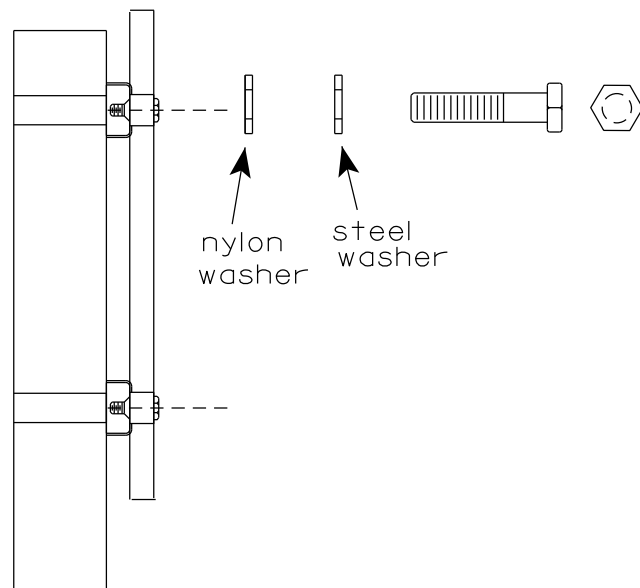


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



- GENERAL NOTES**
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
 2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
 3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.
 4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

WASHER PLACEMENT



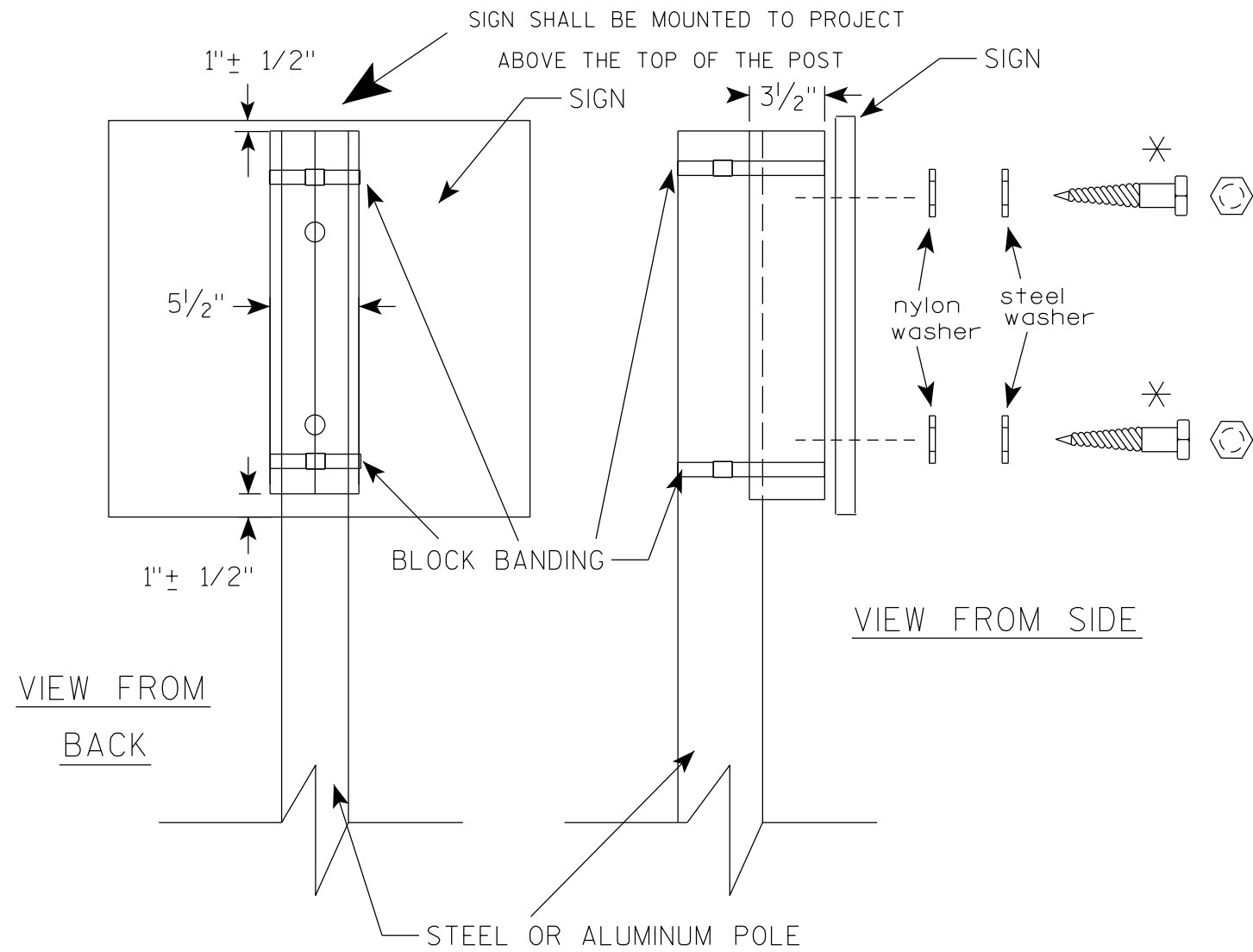
WASHERS (ALL POSTS) -
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON
 FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

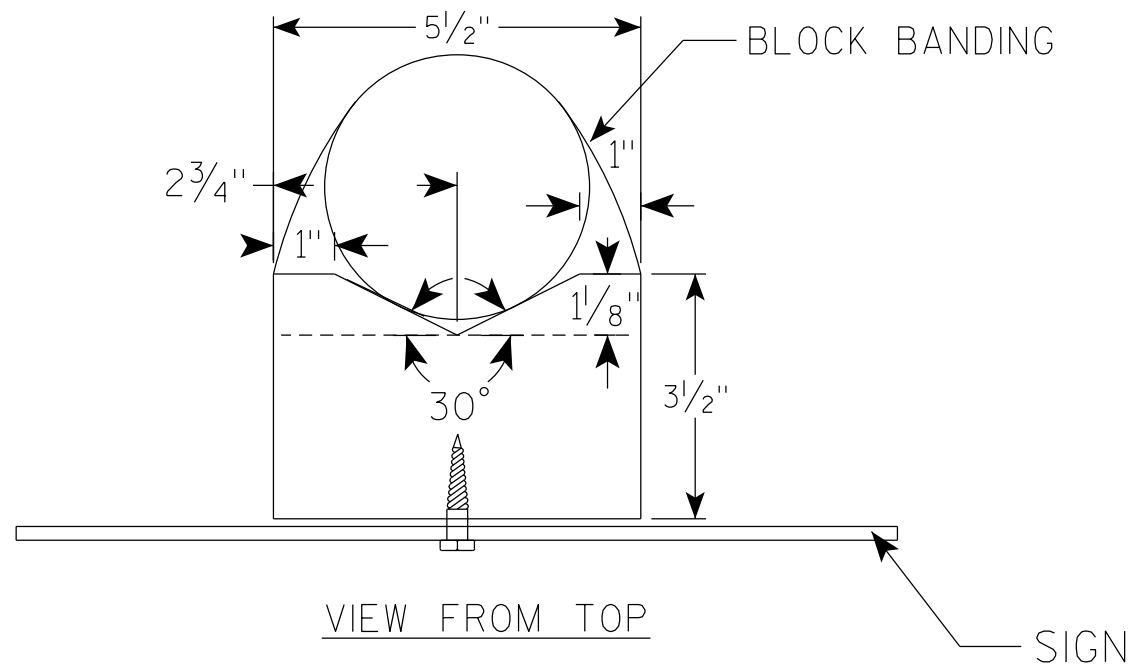
DATE 6/10/19 PLATE NO. A5-9.4



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

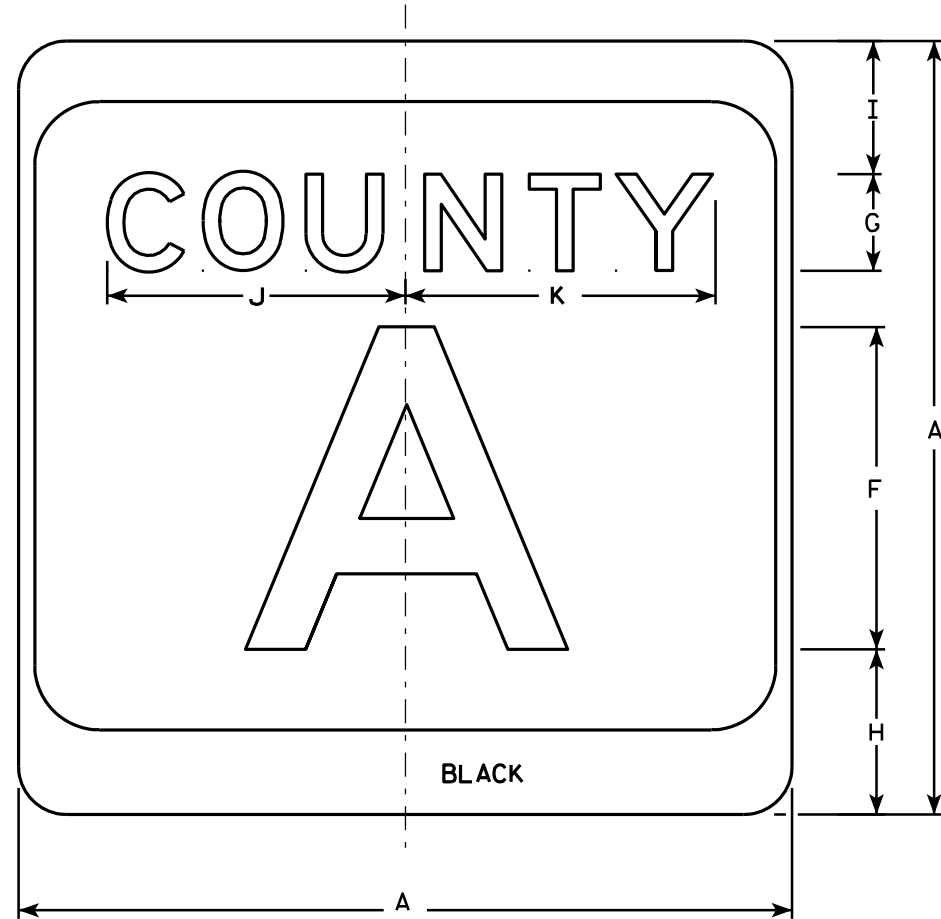
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



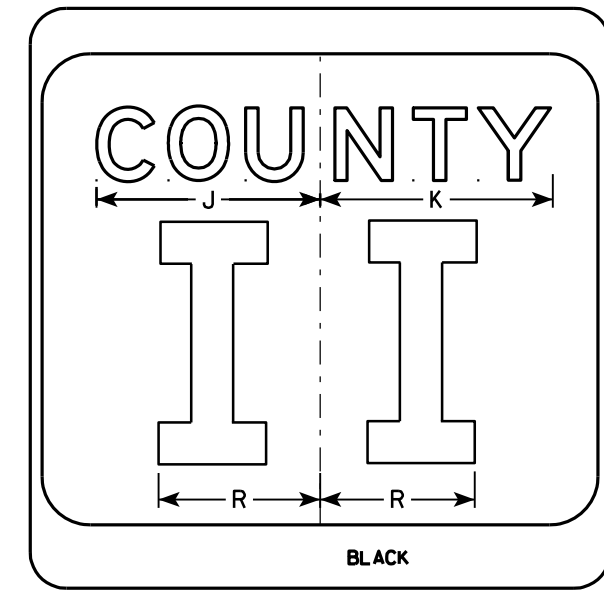
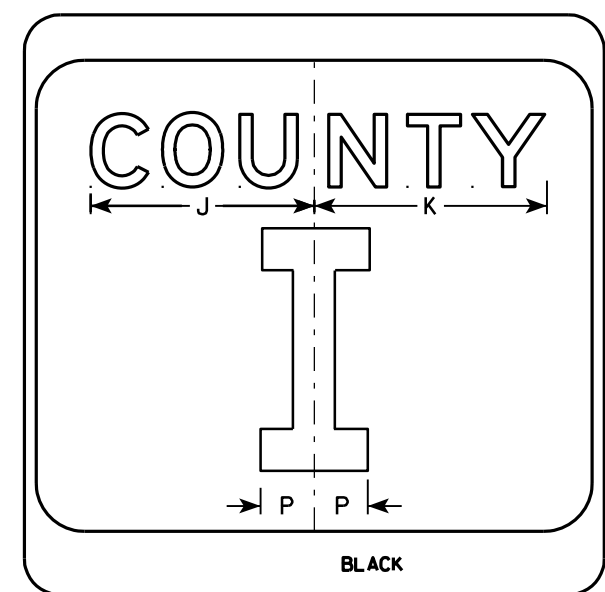
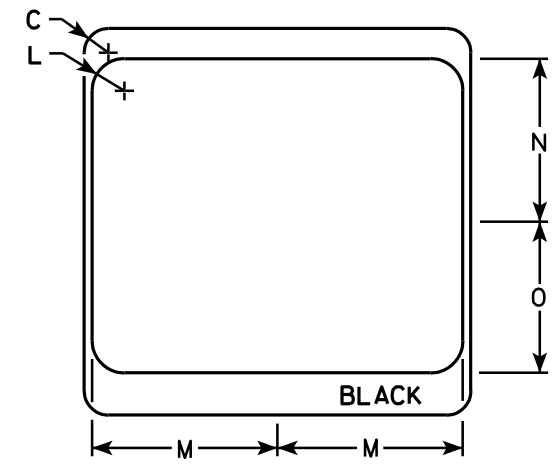
BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 4/19/2022	PLATE NO. A5-10.3

NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



M1-5A



7

7

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																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

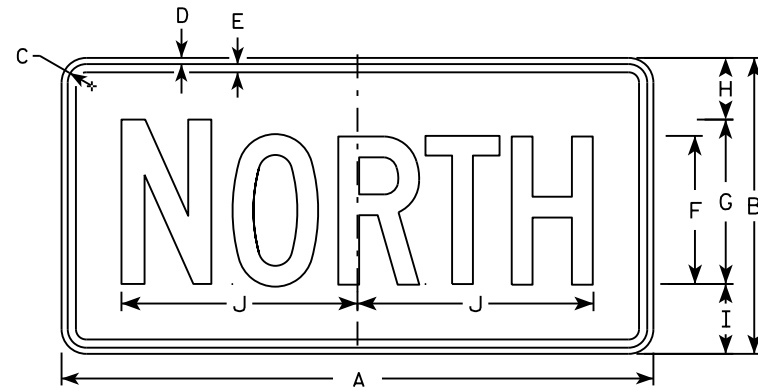
APPROVED *Matthew R. Raub*
For State Traffic Engineer

DATE 9/27/11 PLATE NO. MI-5A.8

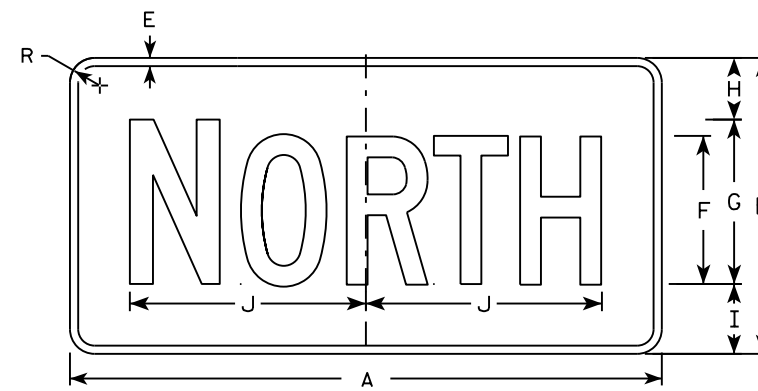
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

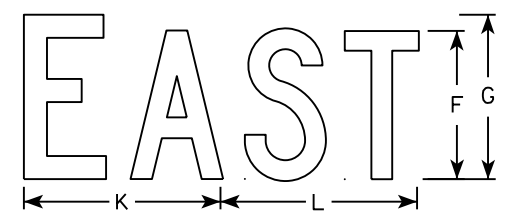
- All Signs Type II - Type H
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White
 Message - Black
 MB3-1 thru MB3-4 Background - Blue
 Message - White
 MK3-1 thru MK3-4 Background - Green
 Message - White
 MM3-1 thru MM3-4 Background - White
 Message - Green
 MN3-1 thru MN3-4 Background - Brown
 Message - White
 MP3-1 thru MP3-4 Background - White
 Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



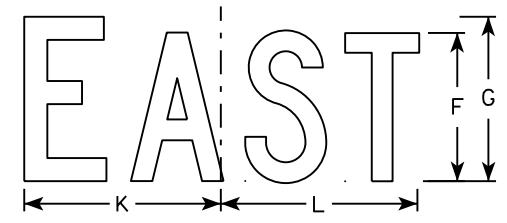
M3-1
MM3-1
MP3-1



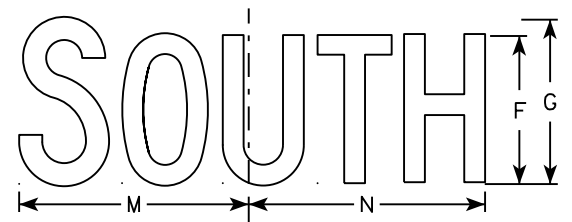
MB3-1
MK3-1
MN3-1



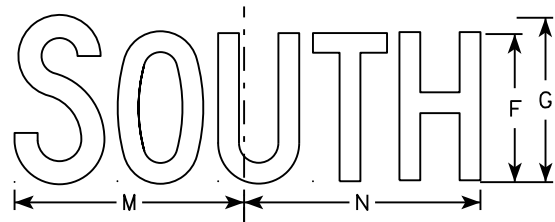
M3-2
MM3-2
MP3-2



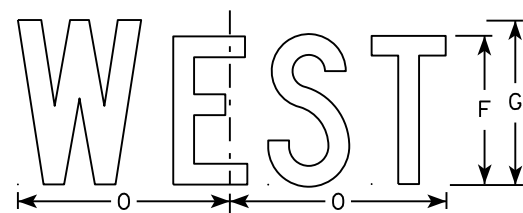
MB3-2
MK3-2
MN3-2



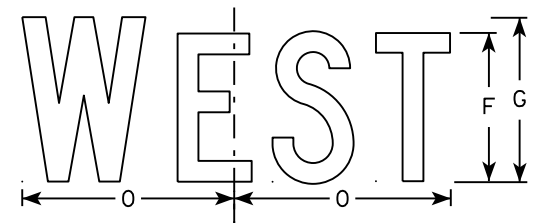
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

7

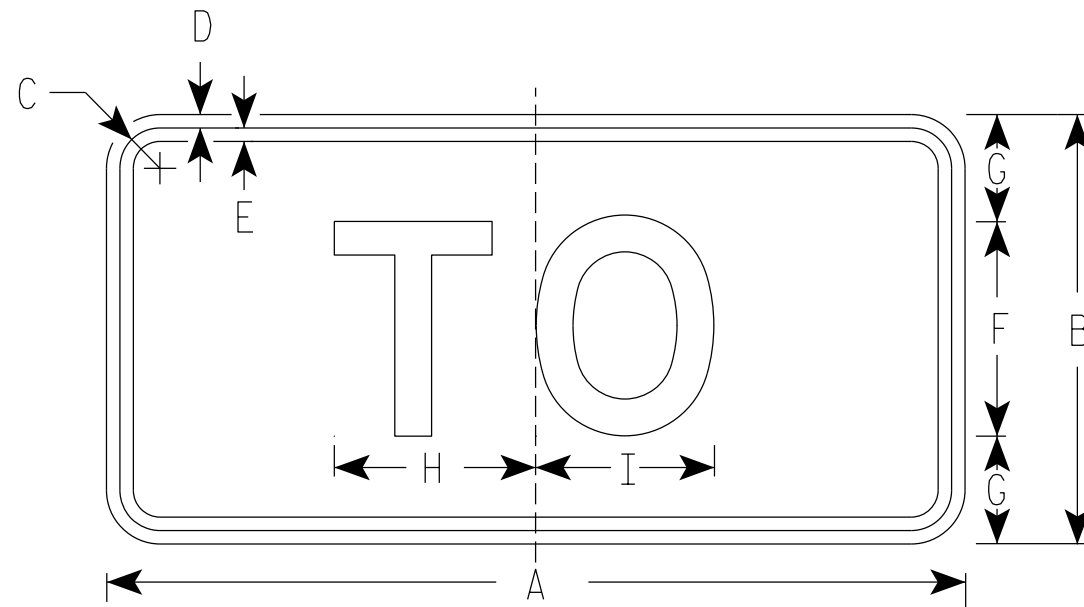
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

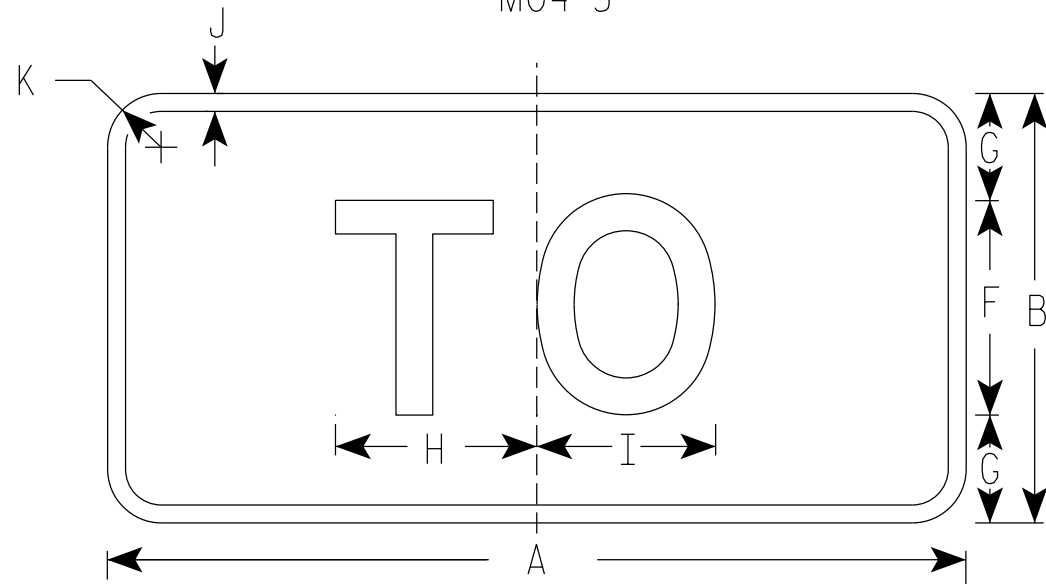
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
Message - Black
MB4-5 Background - Blue
Message - White
MK4-5 Background - Green
Message - White
MM4-5 Background - White
Message - Green
MN4-5 Background - Brown
Message - White
MP4-5 Background - White
Message - Blue
M04-5 Background - Orange Type F Reflective
Message - Black

7

7

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																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

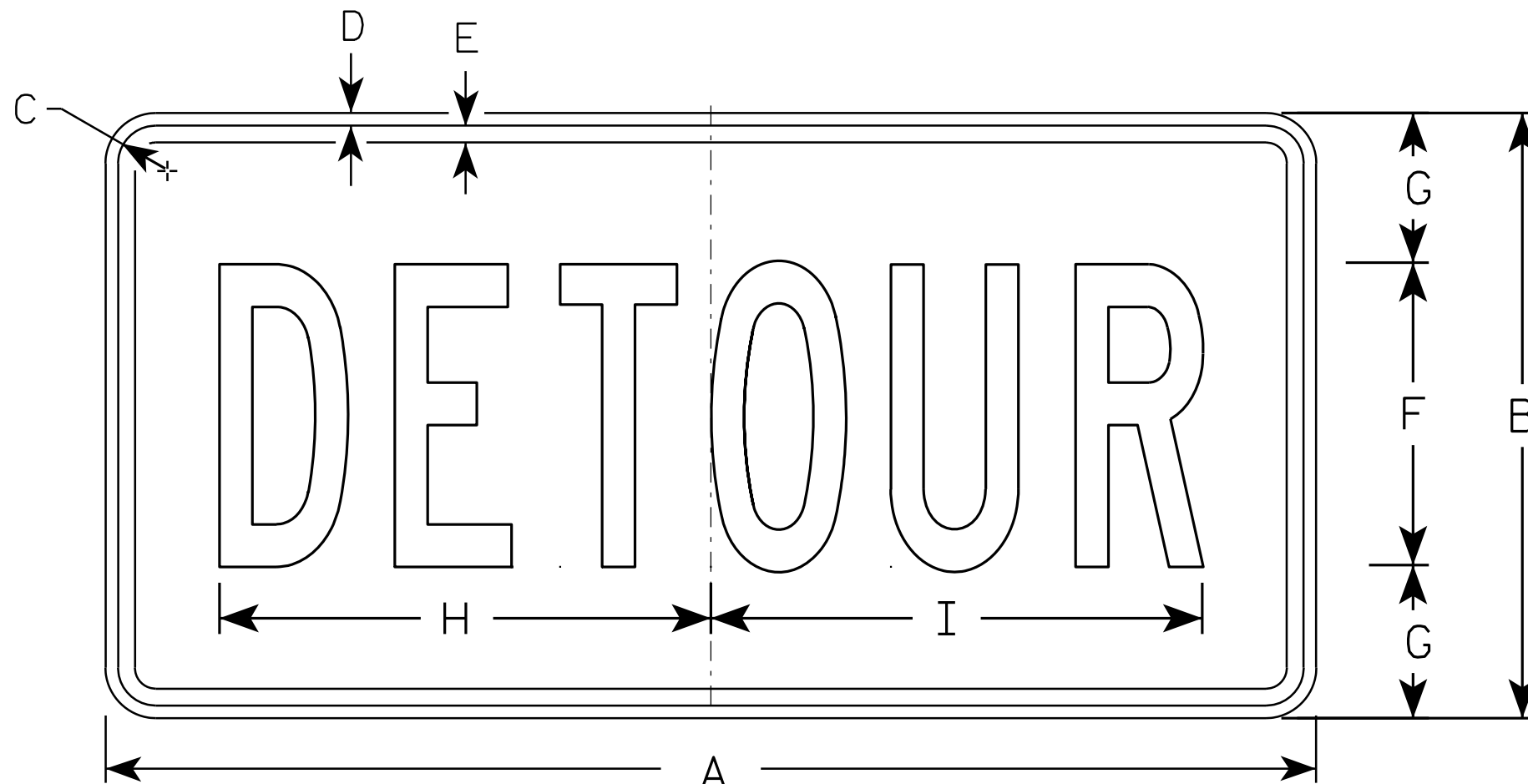
APPROVED *Matthew R. Rauch*
State Traffic Engineer

DATE 03/7/19 PLATE NO. M4-5.9

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

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



M4-8

7

7

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																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

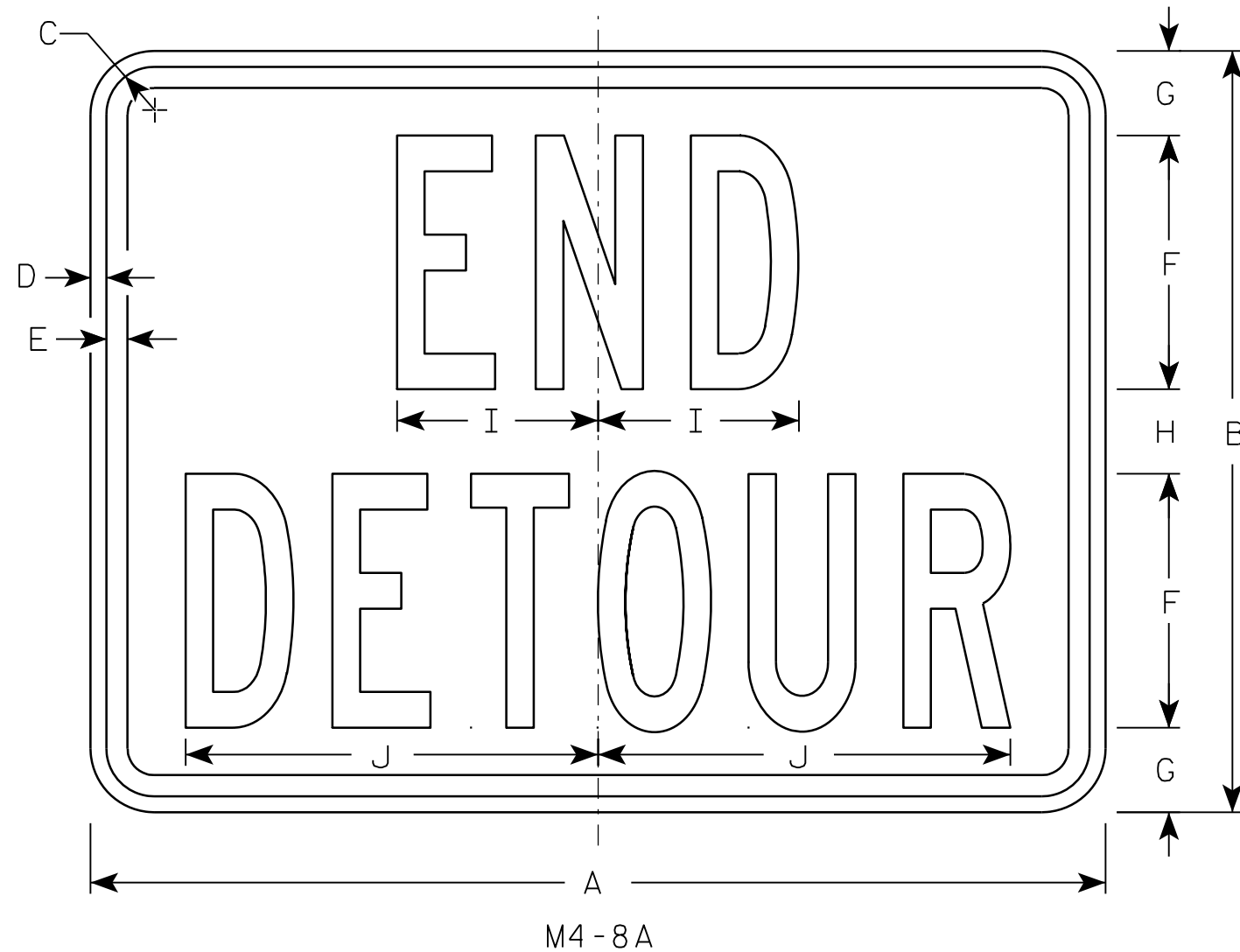
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

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

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

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																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

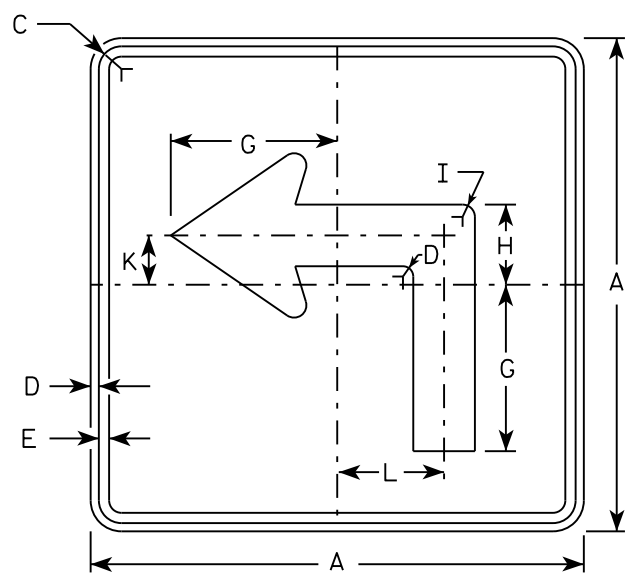
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

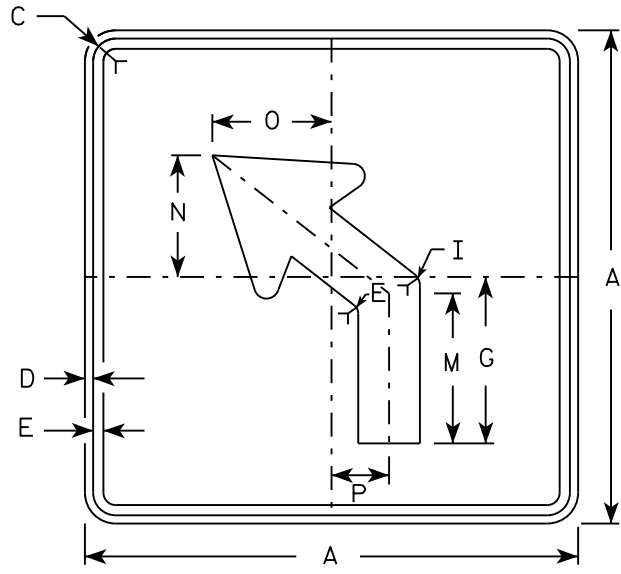
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

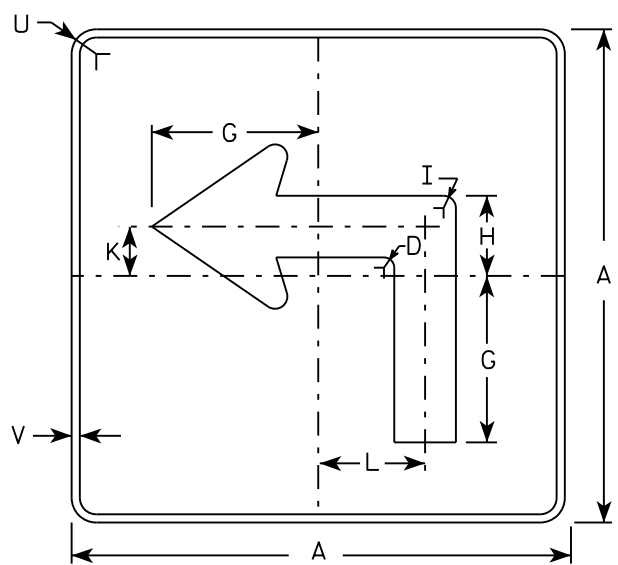
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



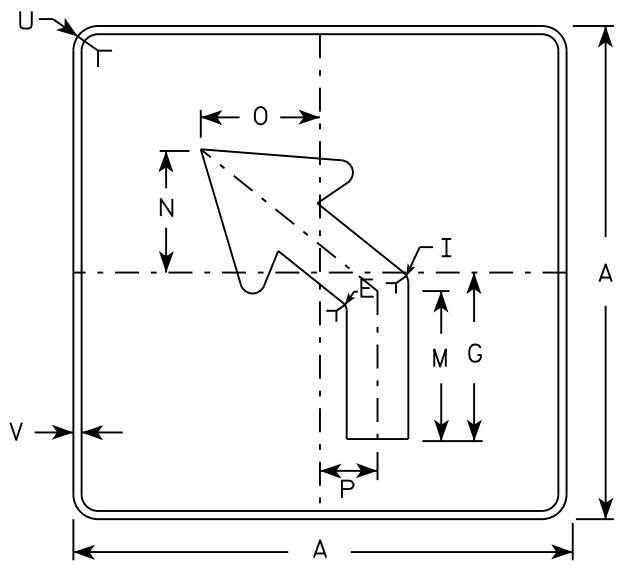
M5-1L
MM5-1L
M05-1L
MP5-1L



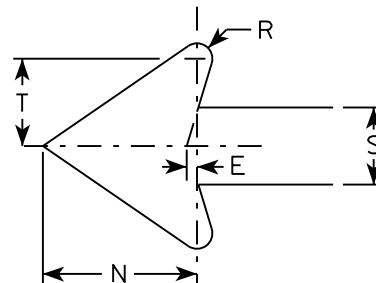
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
 - Background - See note 4
 - Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White
Message - Black
 - MB5-1 and MB5-2 Background - Blue
Message - White
 - MK5-1 and MK5-2 Background - Green
Message - White
 - MM5-1 and MM5-2 Background - White
Message - Green
 - MN5-1 and MN5-2 Background - Brown
Message - White
 - M05-1 and M05-2 Background - Orange - Type F Reflective
Message - Black
 - MP5-1 and MP5-2 Background - White - Type H Reflective
Message - Blue
 - MR5-1 and MR5-2 Background - Brown
Message - Yellow
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

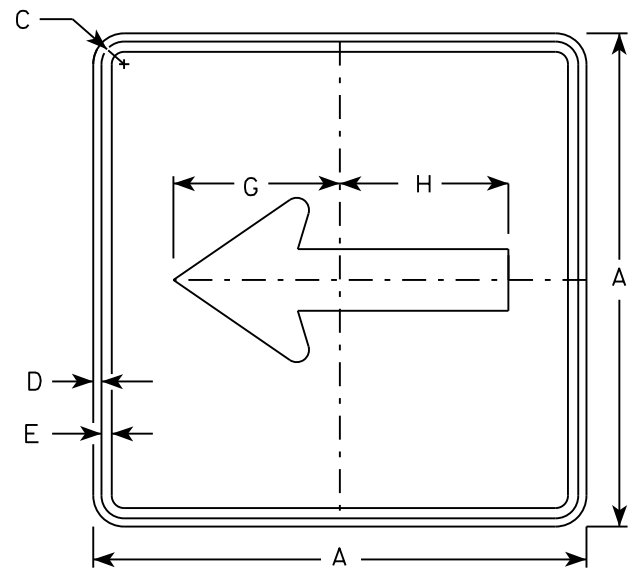
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

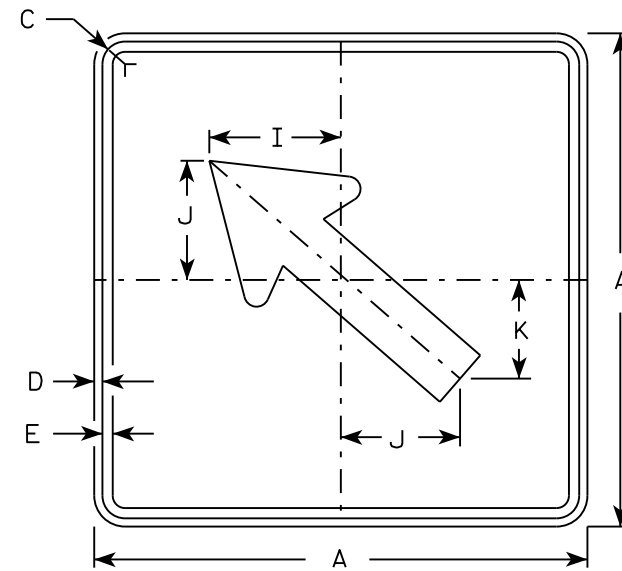
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

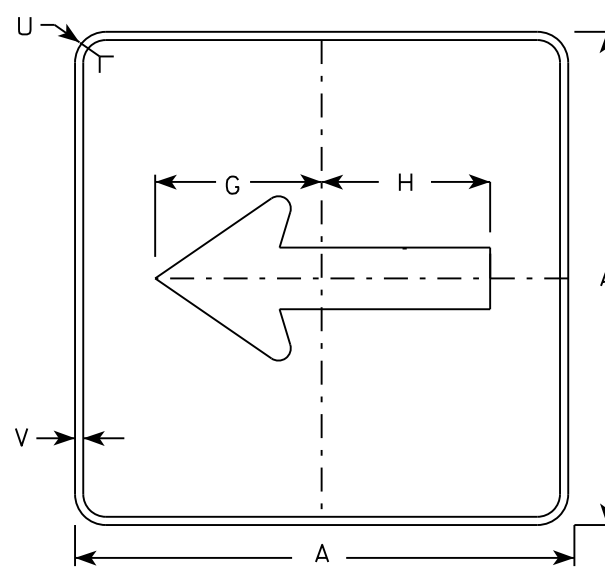
DATE 10/15/15 PLATE NO. M5-1.13



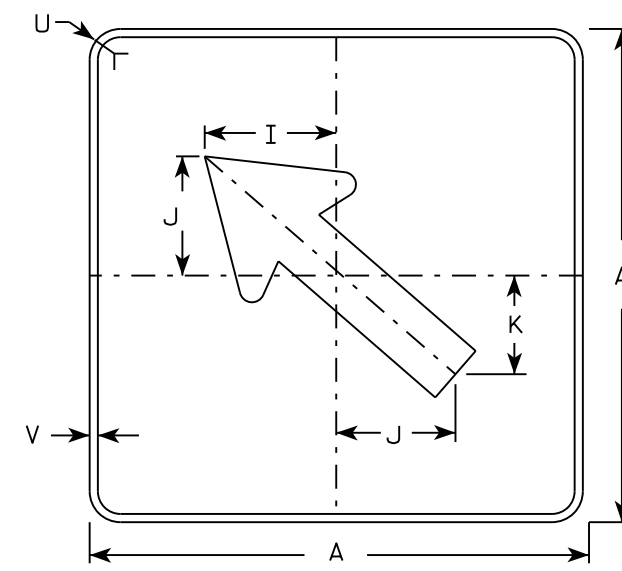
M6-1
MM6-1
M06-1
MP6-1



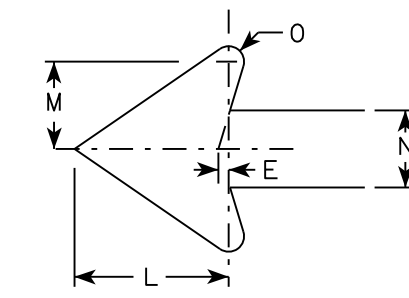
M6-2
MM6-2
M06-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

7

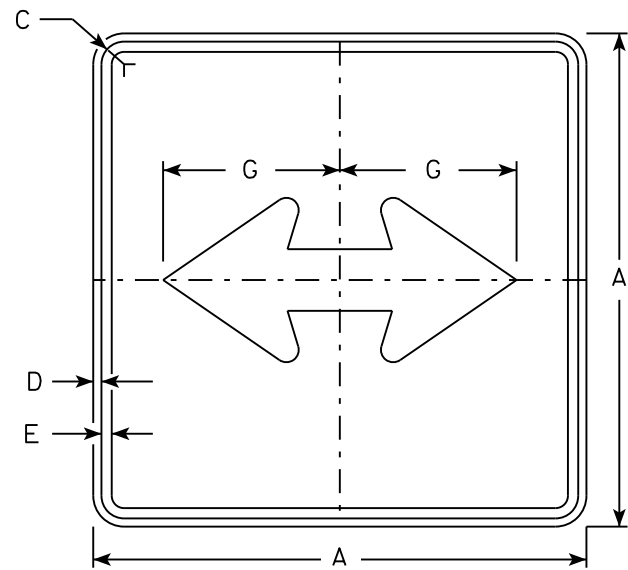
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

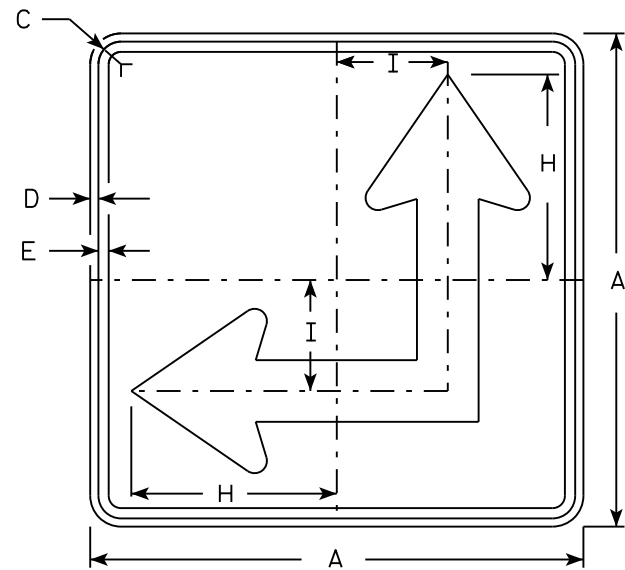
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

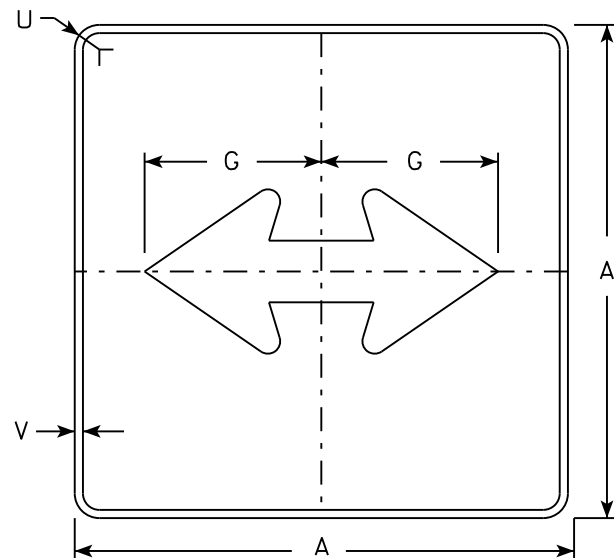
DATE 10/15/15 PLATE NO. M6-1.15



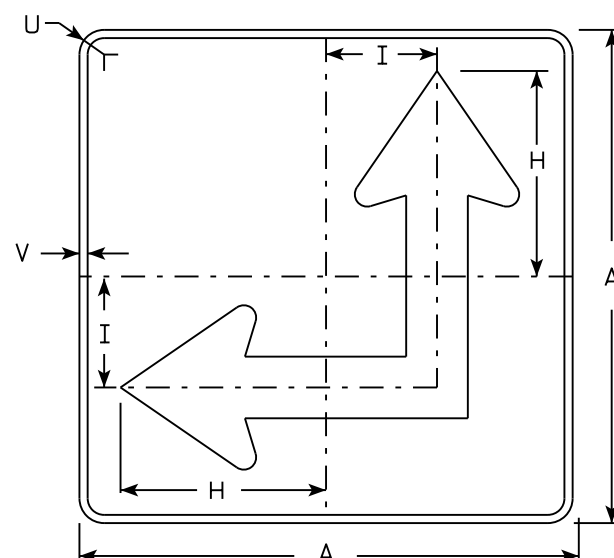
M6-4
MM6-4
M06-4
MP6-4



M6-6
MM6-6
M06-6
MP6-6



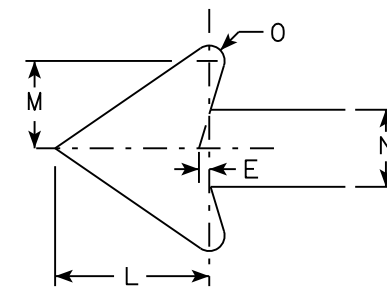
MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6

NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See Note 4
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
- M6-6R same as M6-6L except arrow points ahead and right.



7

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																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

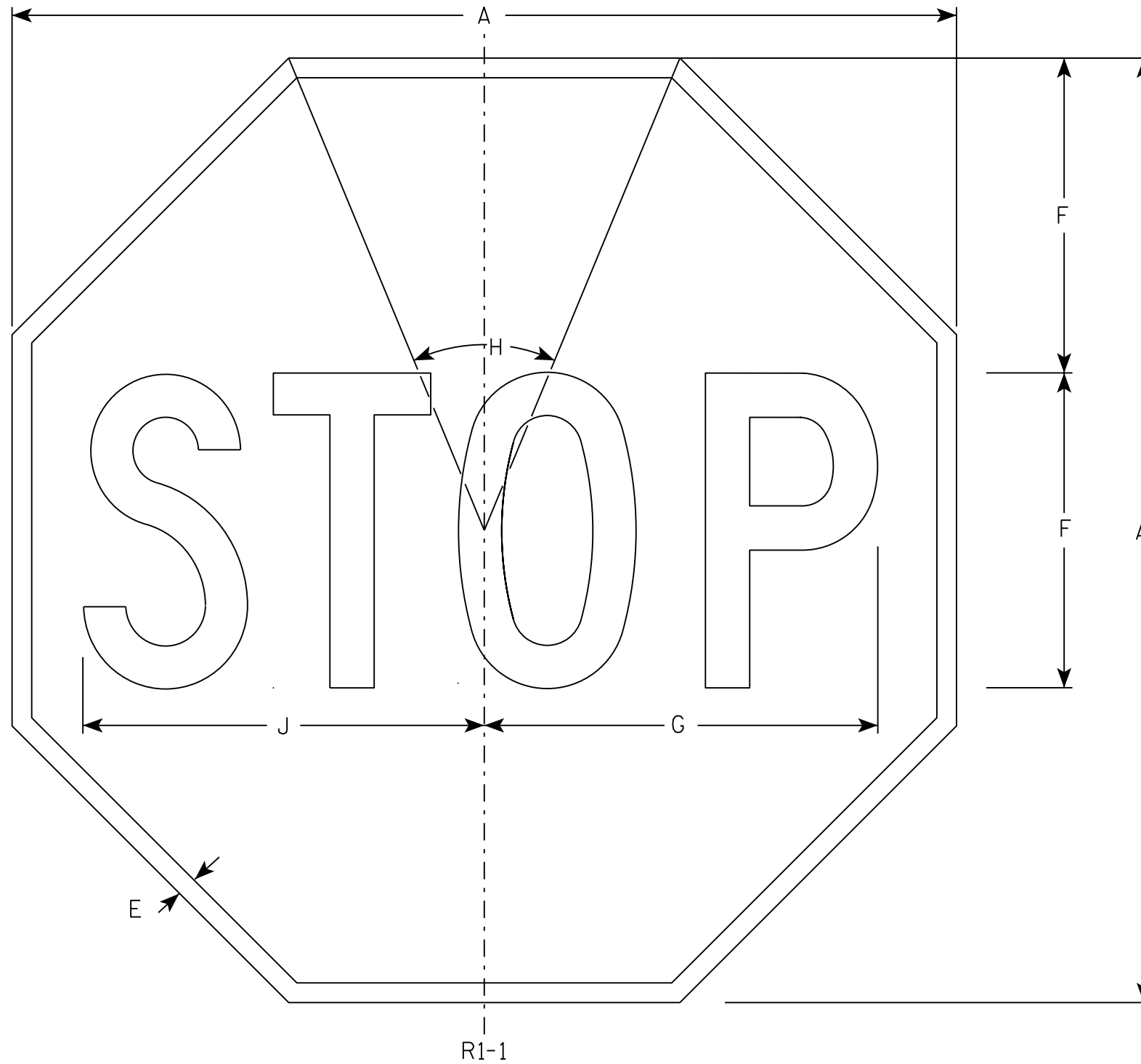
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - C



7

7

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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

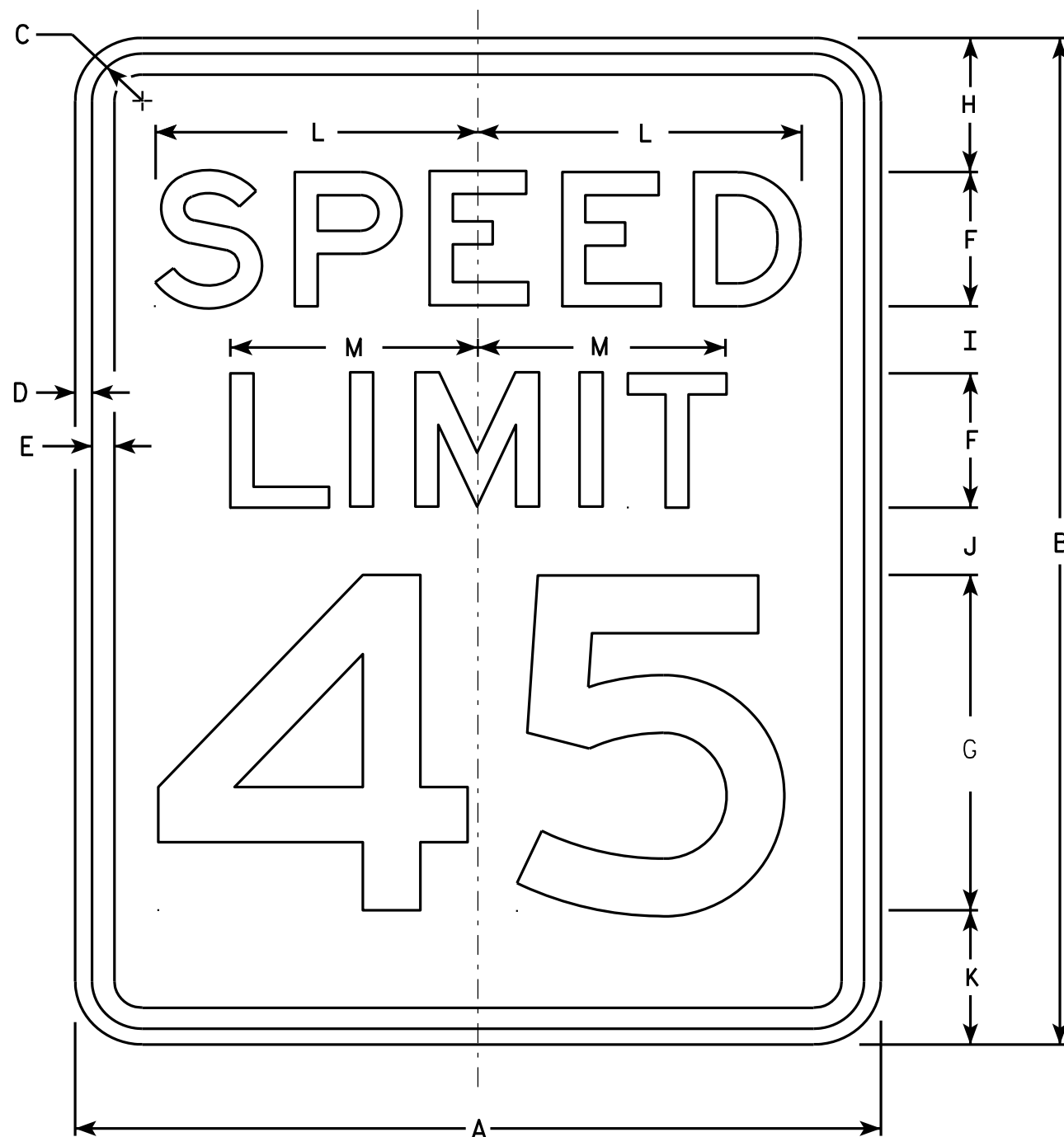
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

7

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	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

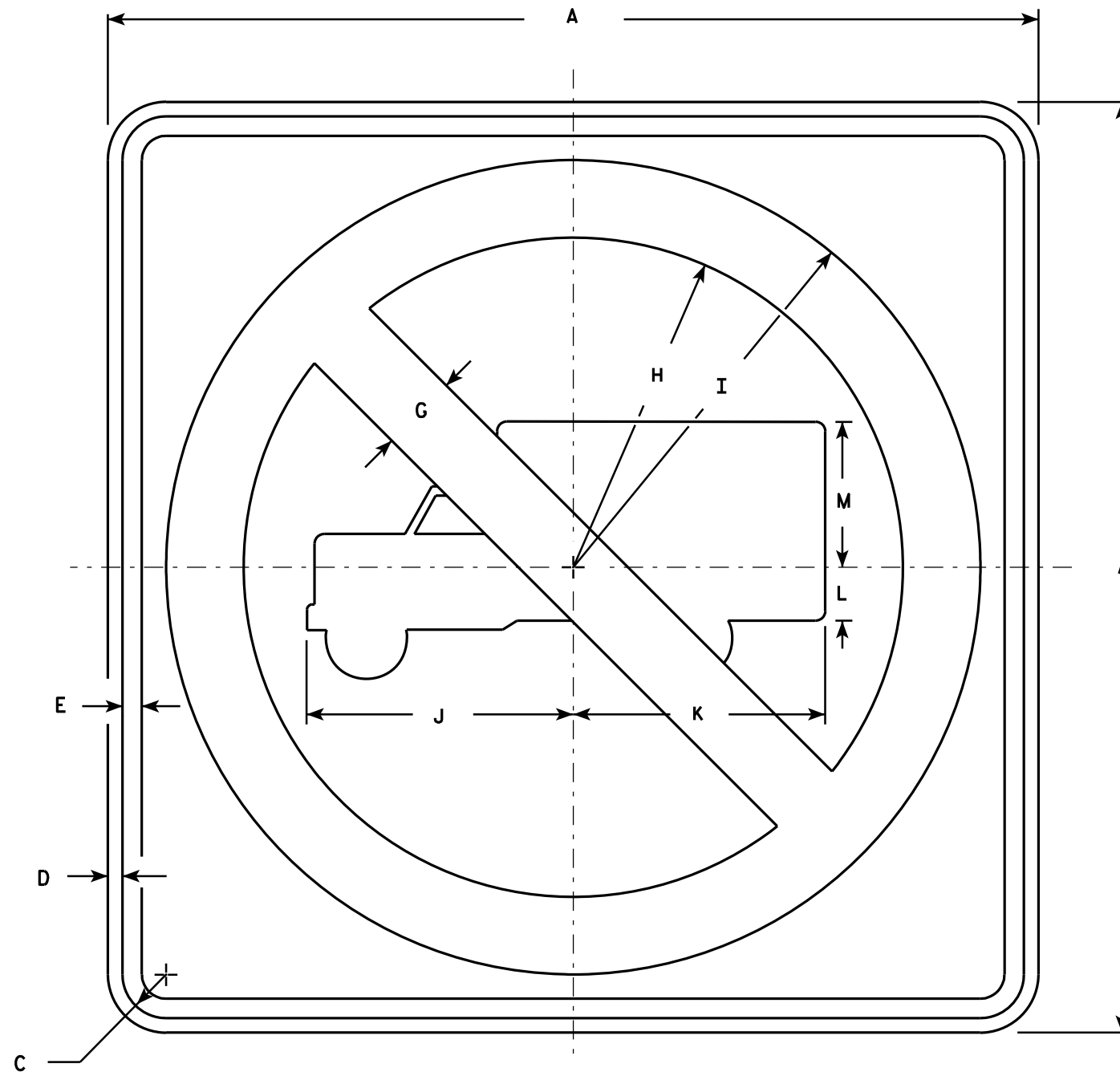
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

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

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Circle & Diagonal - Reflective red.
Truck Symbol & Border - Non-reflective black.



R5-2

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	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

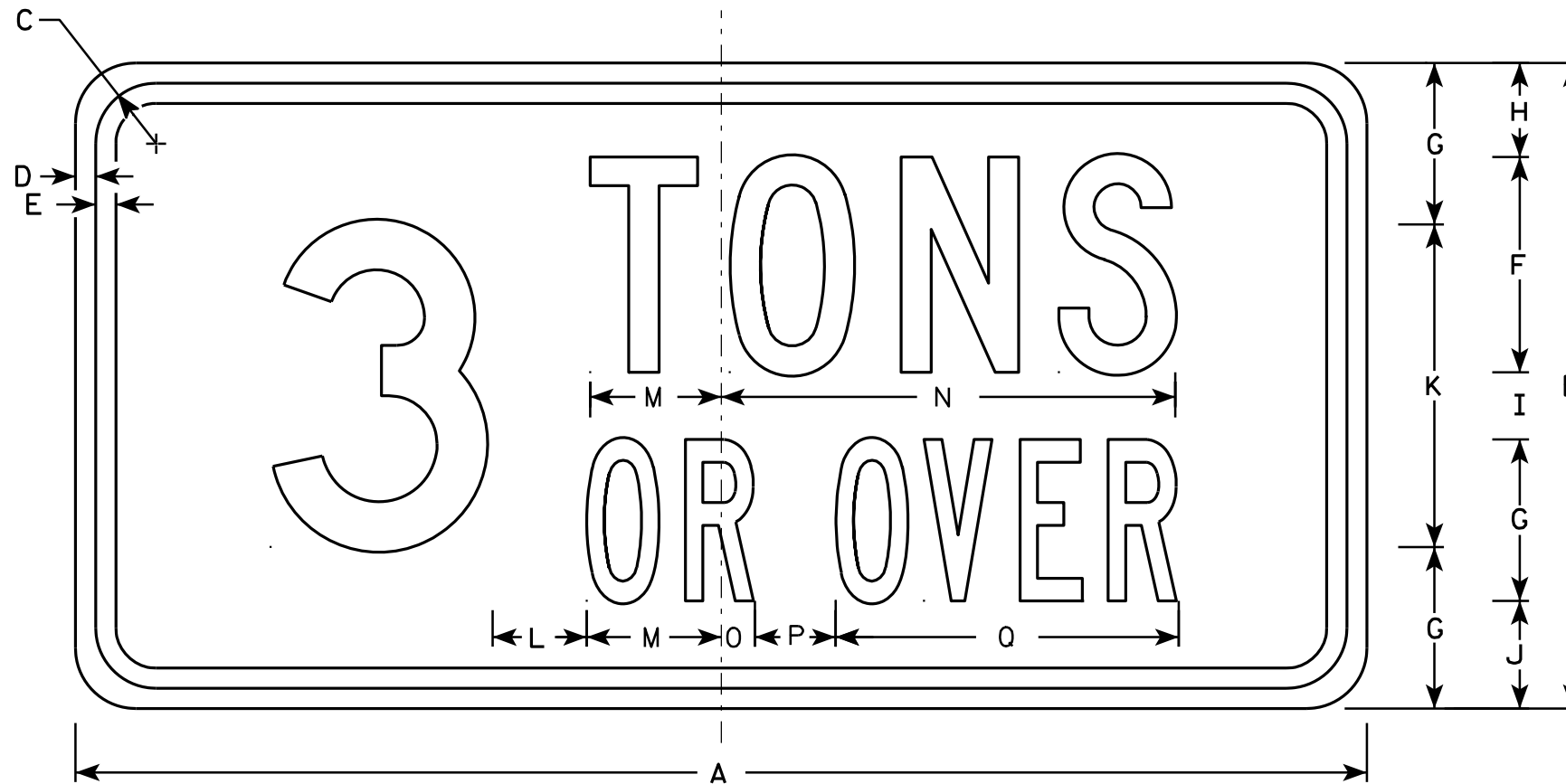
STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/29/2011 PLATE NO. R5-2.6

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

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series "C"
Line 2 is Series "B"
Numeral is Series "D"
6. Substitute appropriate numerals.



R5-2A

7

7

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	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
2M	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
3	30	15	1 1/8	3/8	1/2	5	4	2 1/8	1 3/8	2 1/2	7	2 1/4	3 1/8	10 1/2	1	2 3/8	8 1/2										2.25
4	36	18	1 1/8	3/8	1/2	6	5	2 5/8	1 3/8	3	9	2 1/2	3 3/4	12 5/8	1 3/8	3 1/8	10 1/2										4.5
5	48	24	1 3/8	3/8	5/8	8	6	3 1/2	2 1/2	4	12	3 1/2	4 7/8	16 7/8	1 1/4	3	12 3/4										8.0

STANDARD SIGN
R5-2A

WISCONSIN DEPT OF TRANSPORTATION

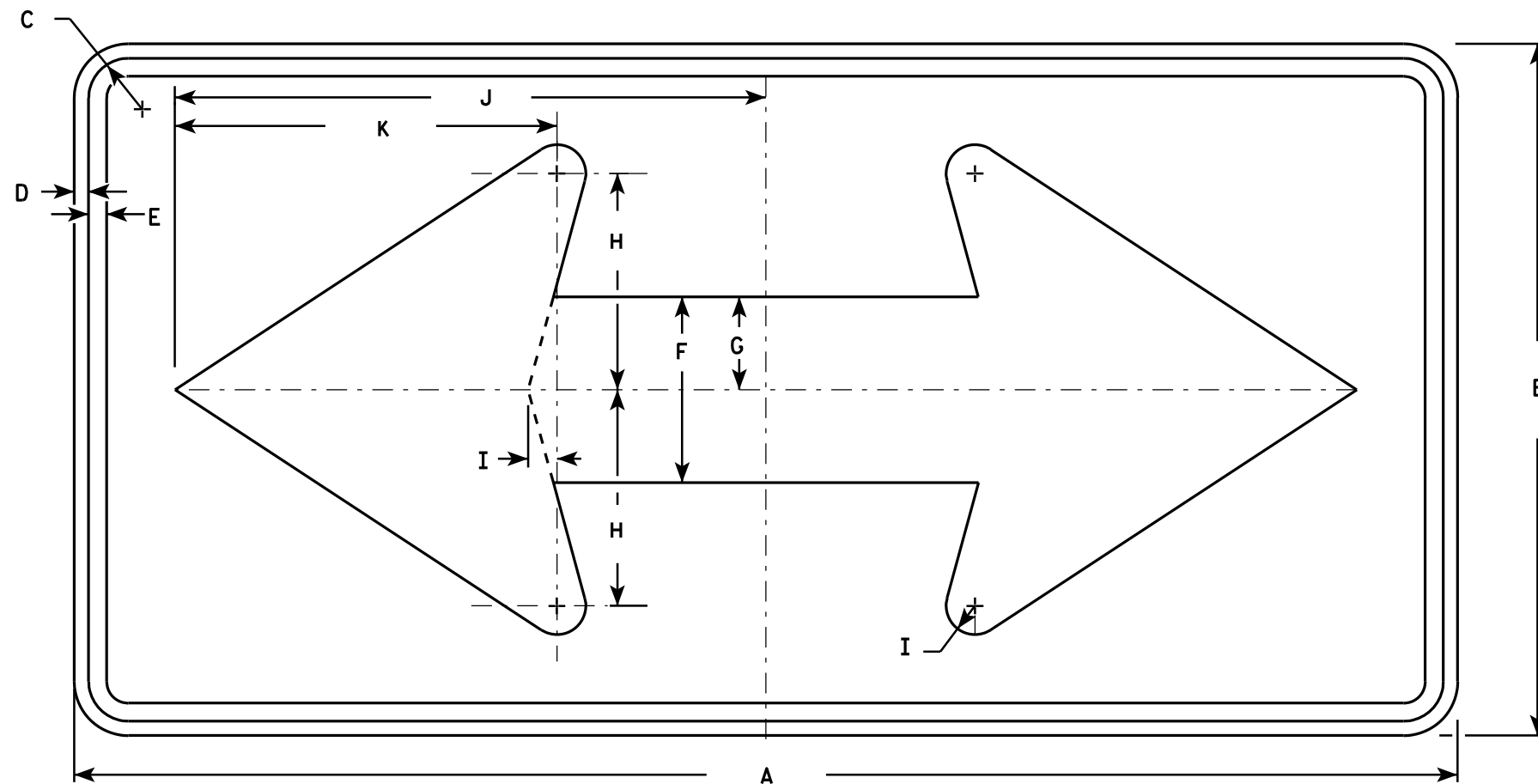
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2A.7

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

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W1-7

7

7

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	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

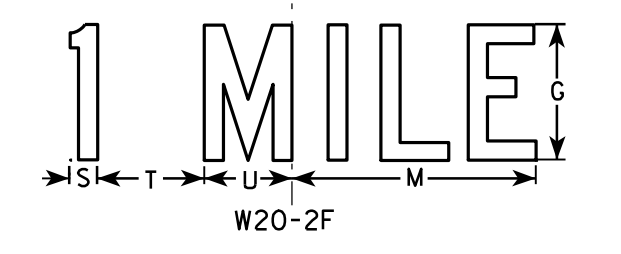
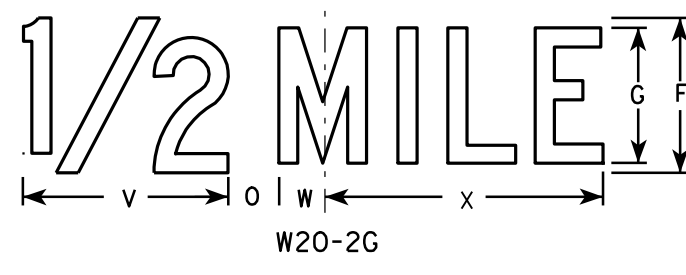
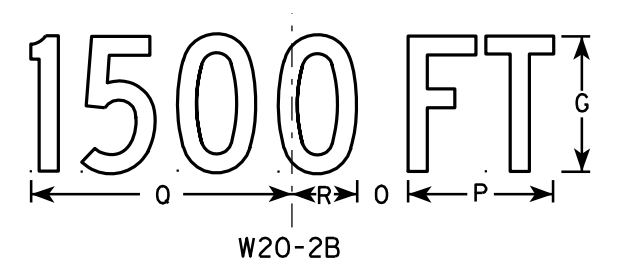
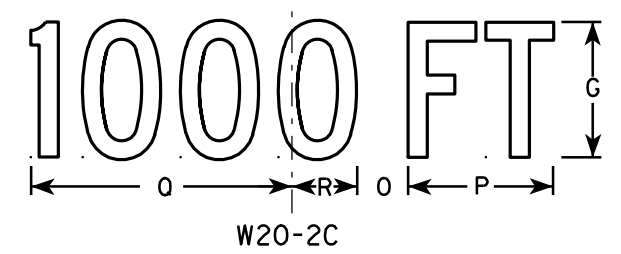
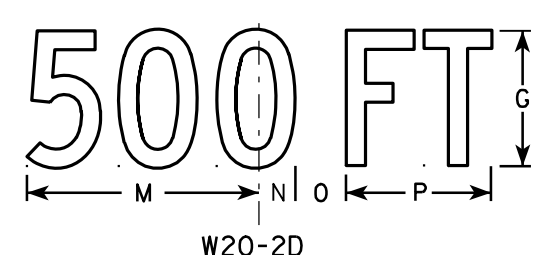
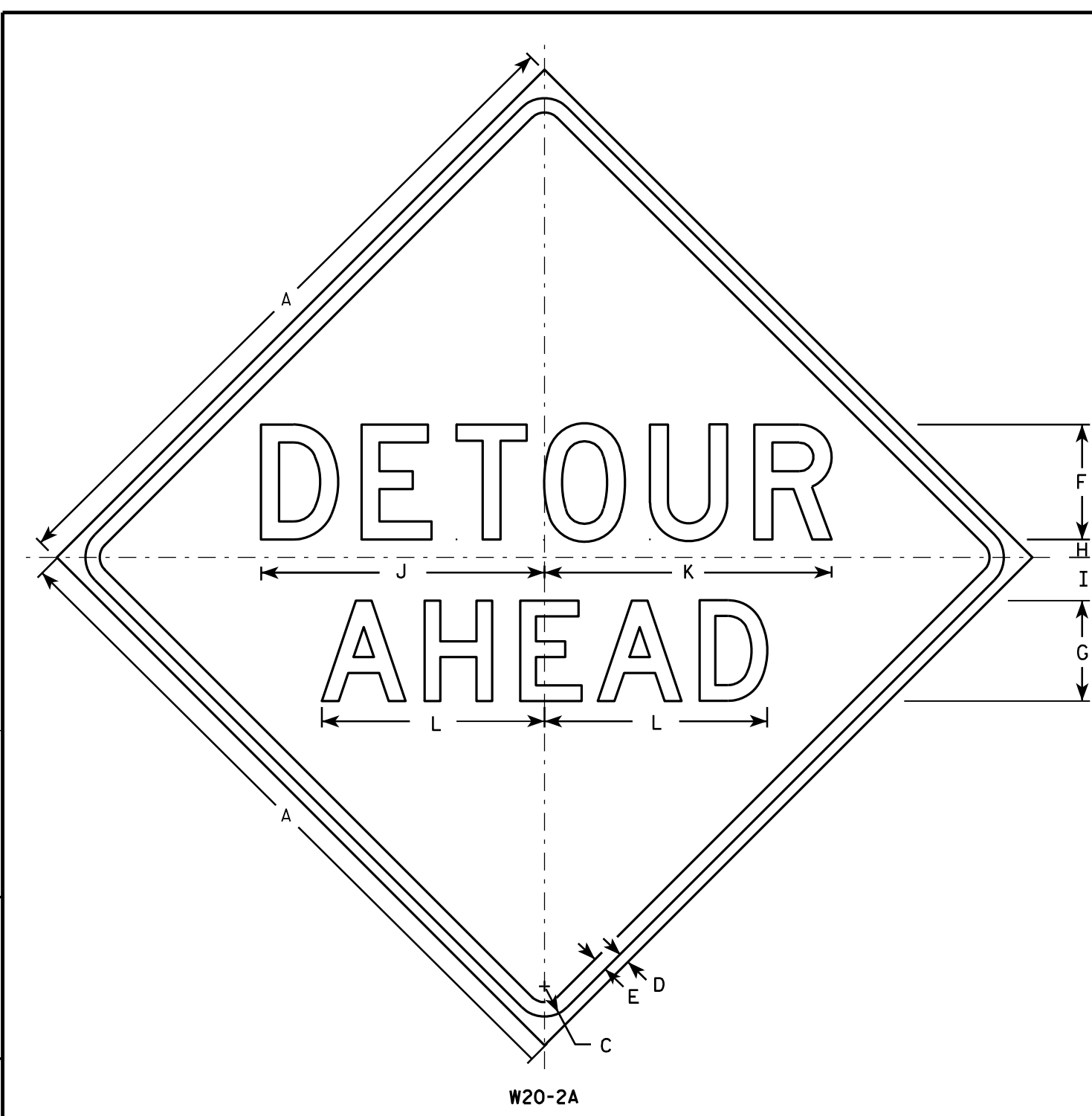
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

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



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

7

7

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	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

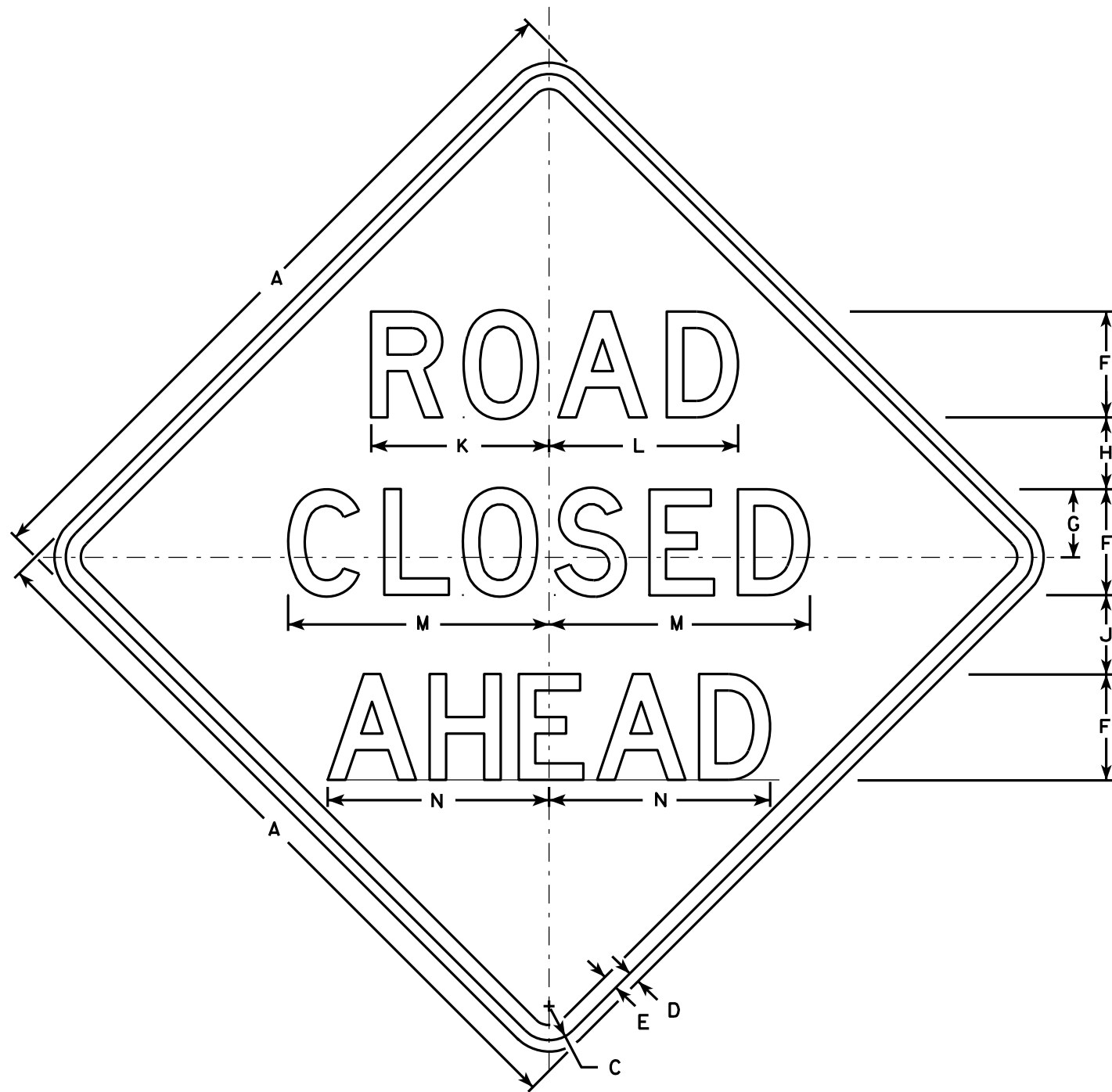
STANDARD SIGN
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

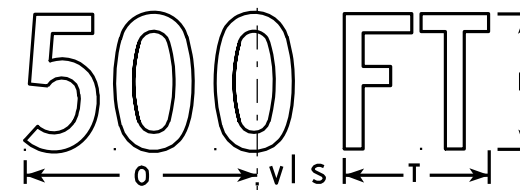
APPROVED *Matthew R. Raub*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

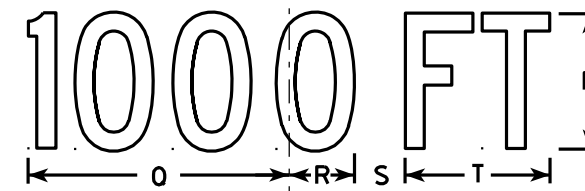
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



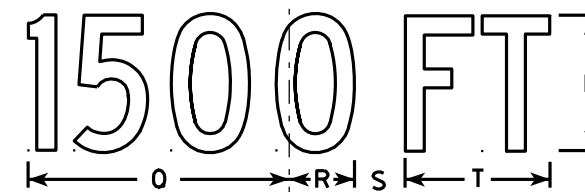
W20-3A



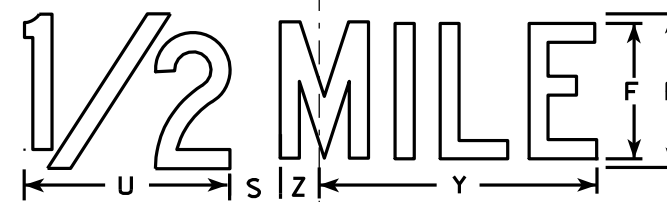
W20-3D



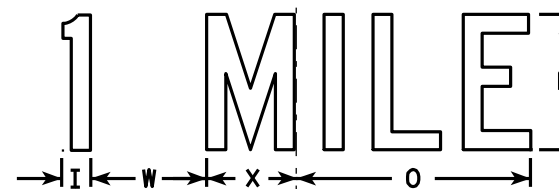
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

7

7

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	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

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

SMALL ROAD

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
121+33.00	0.00	94.65	1.37	0.00	12.75	0	0	0	0	0	0	0	0	0
121+50.00	17.00	94.74	1.36	0.00	13.10	60	1	0	8	60	-8	8	6	67
122+00.00	50.00	136.05	1.35	0.00	14.14	214	3	0	25	274	-33	33	26	303
122+50.00	50.00	104.09	1.24	0.00	15.18	222	2	0	27	496	-60	60	48	550
123+00.00	50.00	113.73	1.29	0.00	16.22	202	2	0	29	698	-89	89	71	779
123+50.00	50.00	173.79	1.32	0.00	17.25	266	2	0	31	964	-120	120	96	1,074
124+00.00	50.00	110.98	1.71	0.00	18.18	264	3	0	33	1,228	-153	153	122	1,368
124+50.00	50.00	111.42	4.41	0.00	20.54	206	6	0	36	1,434	-189	189	151	1,604
125+00.00	50.00	166.93	1.49	0.00	32.98	258	5	0	50	1,692	-239	239	191	1,907
125+50.00	50.00	175.77	2.59	0.00	25.22	317	4	0	54	2,009	-293	293	234	2,274
126+00.00	50.00	116.70	1.27	0.00	20.25	271	4	0	42	2,280	-335	335	268	2,583
126+50.00	50.00	114.03	1.25	0.00	19.56	214	2	0	37	2,494	-372	372	298	2,832
127+00.00	50.00	108.19	1.25	0.00	18.27	206	2	0	35	2,700	-407	407	326	3,071
127+50.00	50.00	98.20	1.24	0.00	16.08	191	2	0	32	2,891	-439	439	351	3,292
128+00.00	50.00	93.90	1.26	0.66	14.48	178	2	1	28	3,069	-466	467	374	3,495
128+50.00	50.00	130.12	2.15	0.00	13.79	207	3	1	26	3,276	-491	493	394	3,724
129+00.00	50.00	81.14	1.23	0.00	13.10	196	3	0	25	3,472	-516	518	414	3,942
129+25.00	25.00	81.05	1.25	0.00	12.75	75	1	0	12	3,547	-528	530	424	4,028

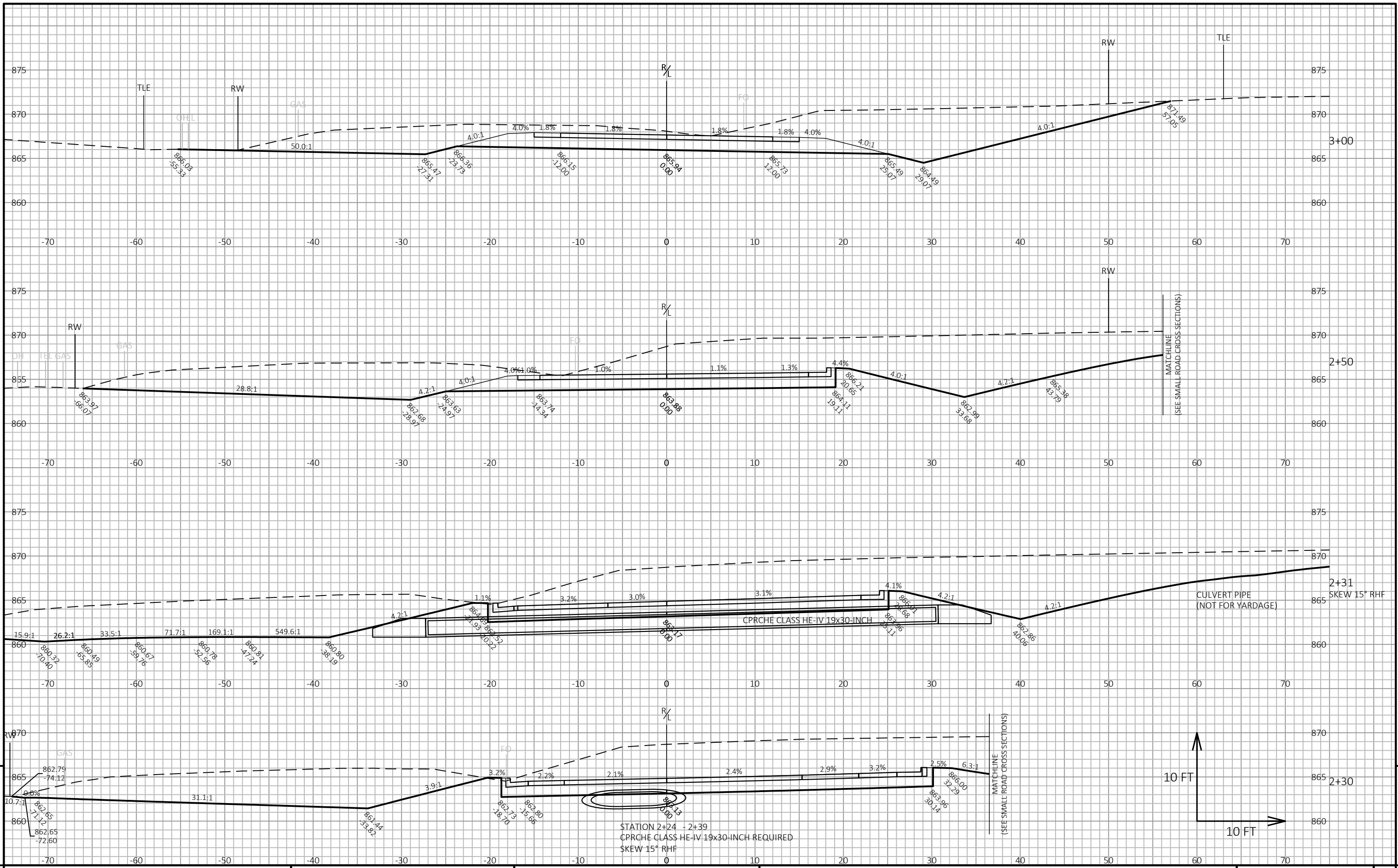
CALHOUN ROAD

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
2+30.00	0.00	84.28	1.66	0.00	17.86	0	0	0	0	0	0	0	0	0
2+50.00	20.00	69.71	1.66	0.00	13.29	57	1	0	12	57	-12	12	10	68
3+00.00	50.00	71.34	1.66	0.00	11.25	131	3	0	23	188	-35	35	28	219
3+50.00	50.00	72.00	1.58	0.00	11.25	133	3	0	21	321	-56	56	45	370
4+00.00	50.00	70.54	1.55	0.00	11.07	132	3	0	21	453	-77	77	62	520
4+50.00	50.00	98.44	1.54	0.00	11.06	156	3	0	20	609	-97	97	78	693
5+00.00	50.00	65.82	1.54	0.00	11.06	152	3	0	20	761	-117	117	94	862

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL OUTSIDE 1:1 IN FILL SLOPES
8 - MASS ORDINATE	CUT - SALVAGED PAVT - ((FILL - REDUCED EBS IN FILL) * FILL FACTOR)

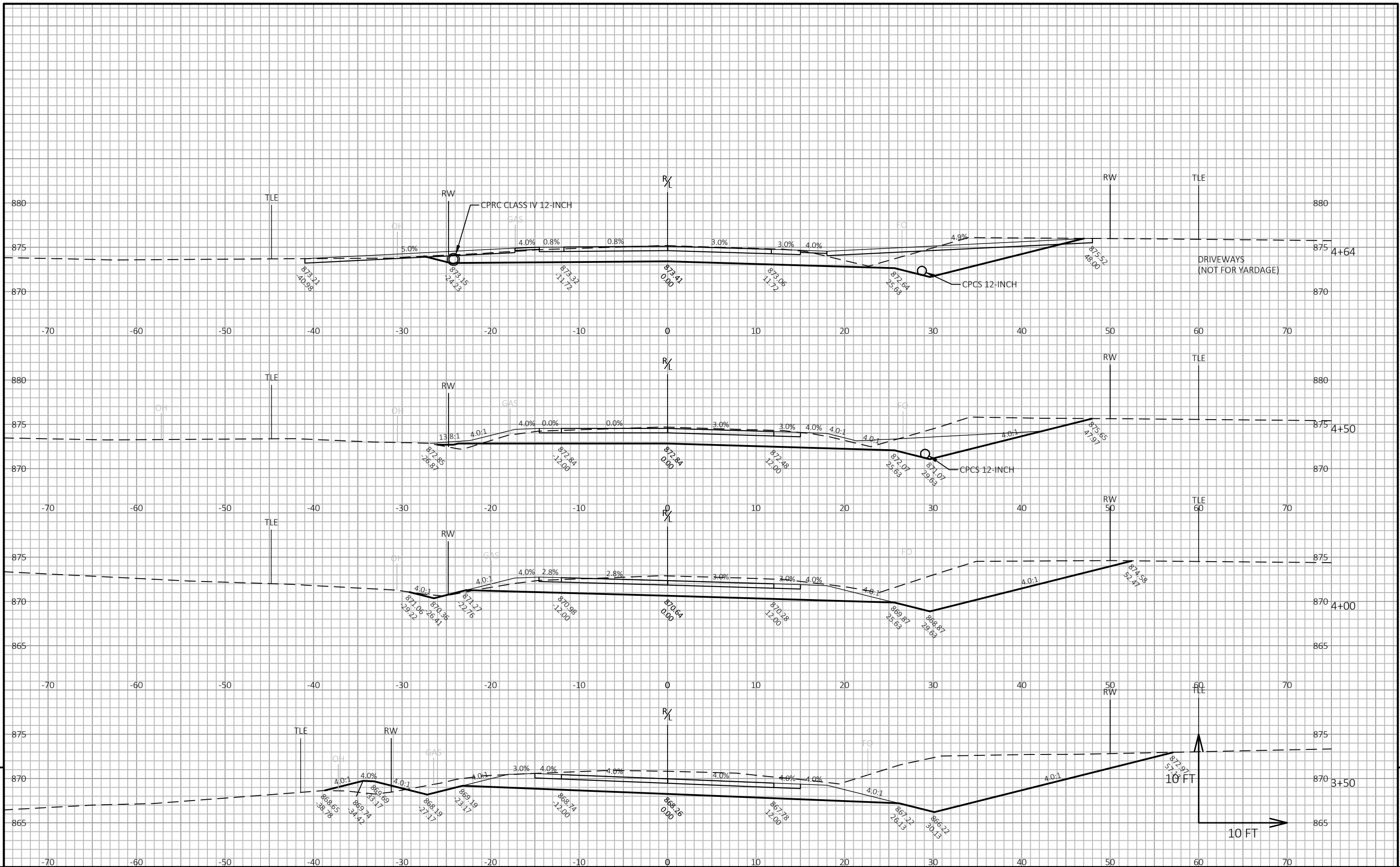
9

9



STATION 2+24 - 2+39
 CPRCHÉ CLASS HE-IV 19x30-INCH REQUIRED
 SKEW 15° RHF

PROJECT NO: 2722-09-70	HWY: LOCAL STREET	COUNTY: WAUKESHA	CROSS SECTIONS: CALHOUN ROAD	SHEET	E
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PROJECT NO: 2722-09-70

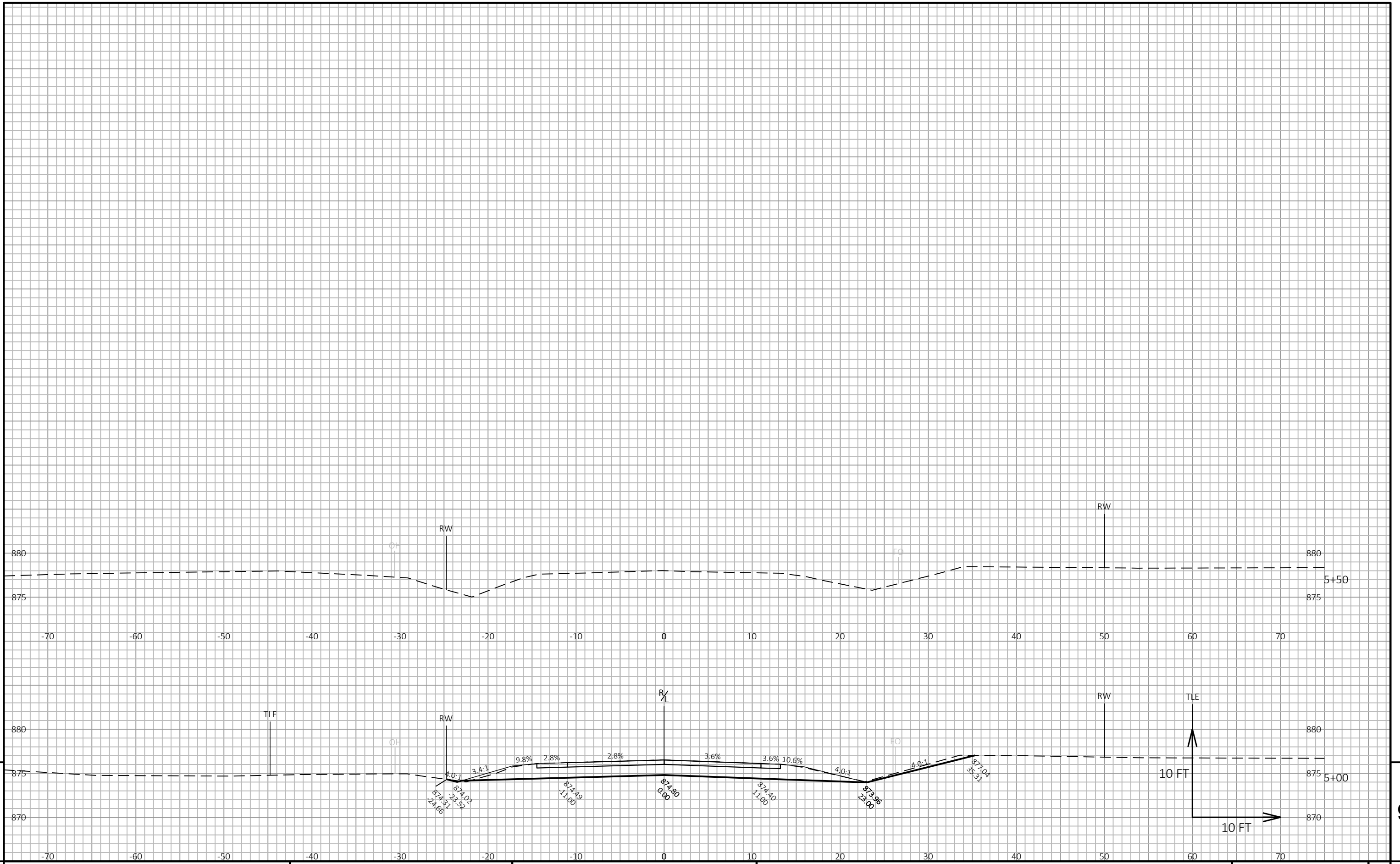
HWY: LOCAL STREET

COUNTY: WAUKESHA

CROSS SECTIONS: CALHOUN ROAD

SHEET

E



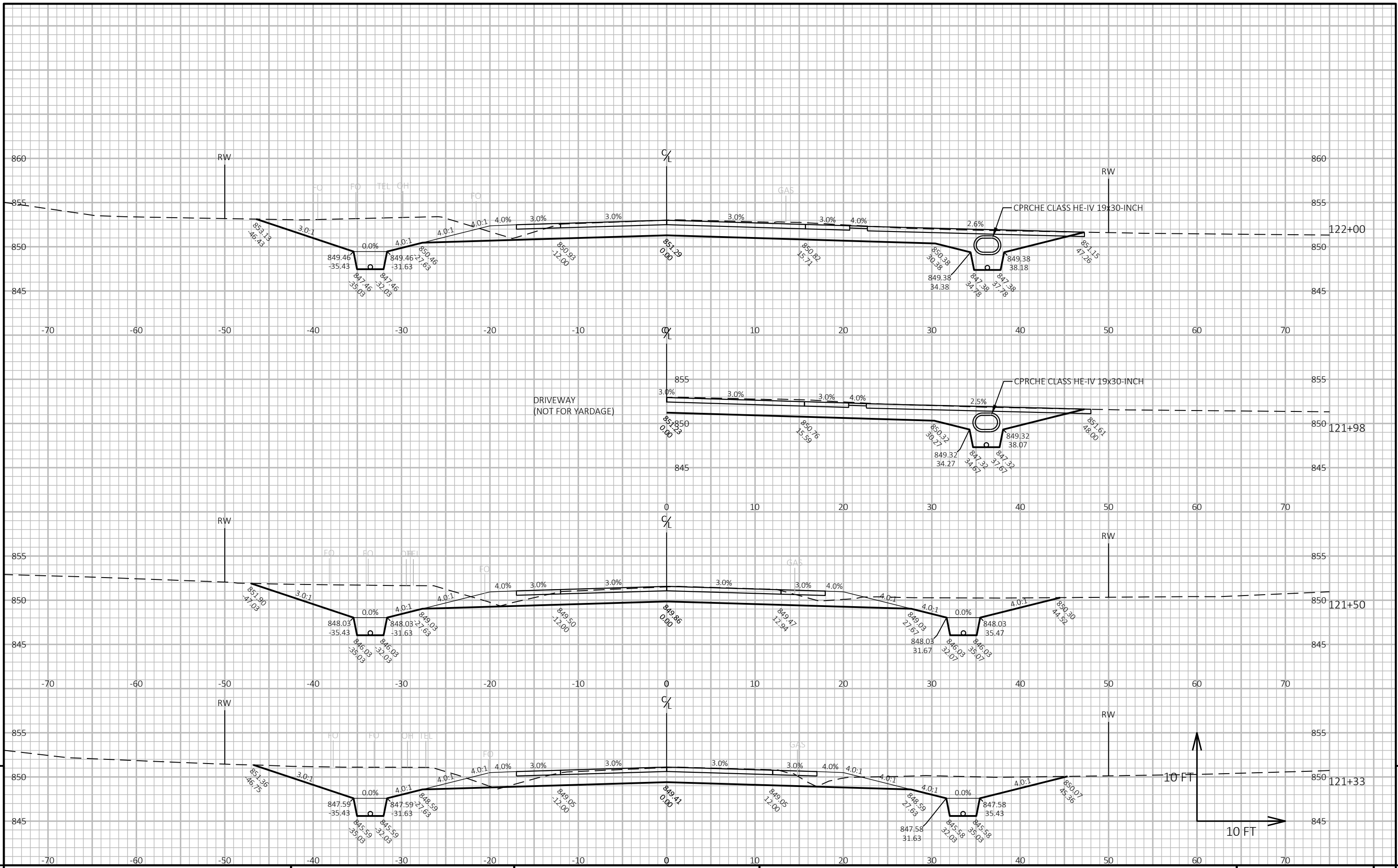
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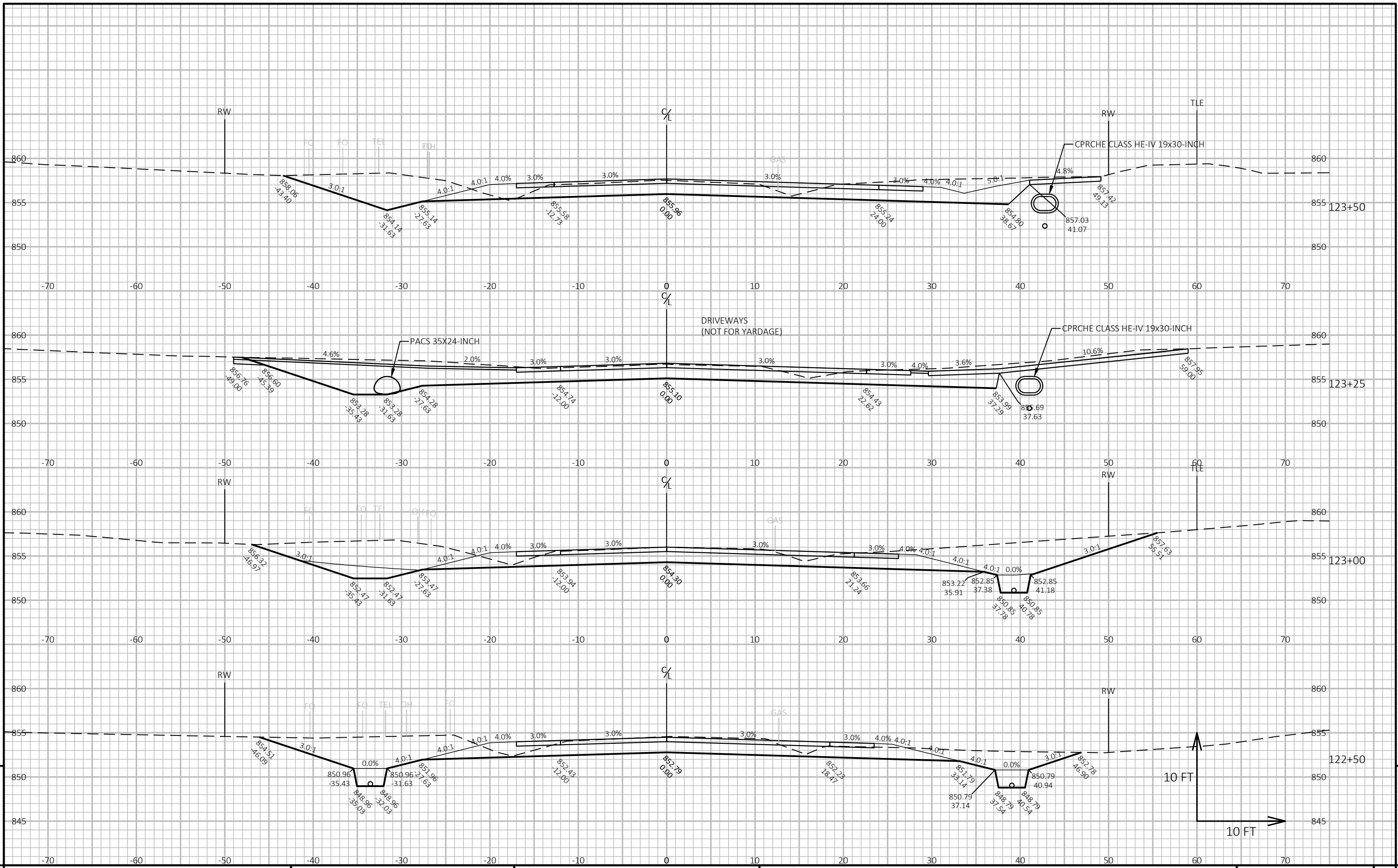
PROJECT NO: 2722-09-70	HWY: LOCAL STREET	COUNTY: WAUKESHA	CROSS SECTIONS: CALHOUN ROAD	SHEET	E
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FILE NAME : \\RSMITH.COM\CEDARBURG\MUNICIPAL\1200244\DWG\27220970\SHEETSPLAN\090201-XS_CA.DWG PLOT DATE : 1/12/2023 4:31 PM PLOT BY : GASPER, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 090203-xs



PROJECT NO: 2722-09-70 HWY: LOCAL STREET COUNTY: WAUKESHA CROSS SECTIONS: SMALL ROAD SHEET 9



PROJECT NO: 2722-09-70

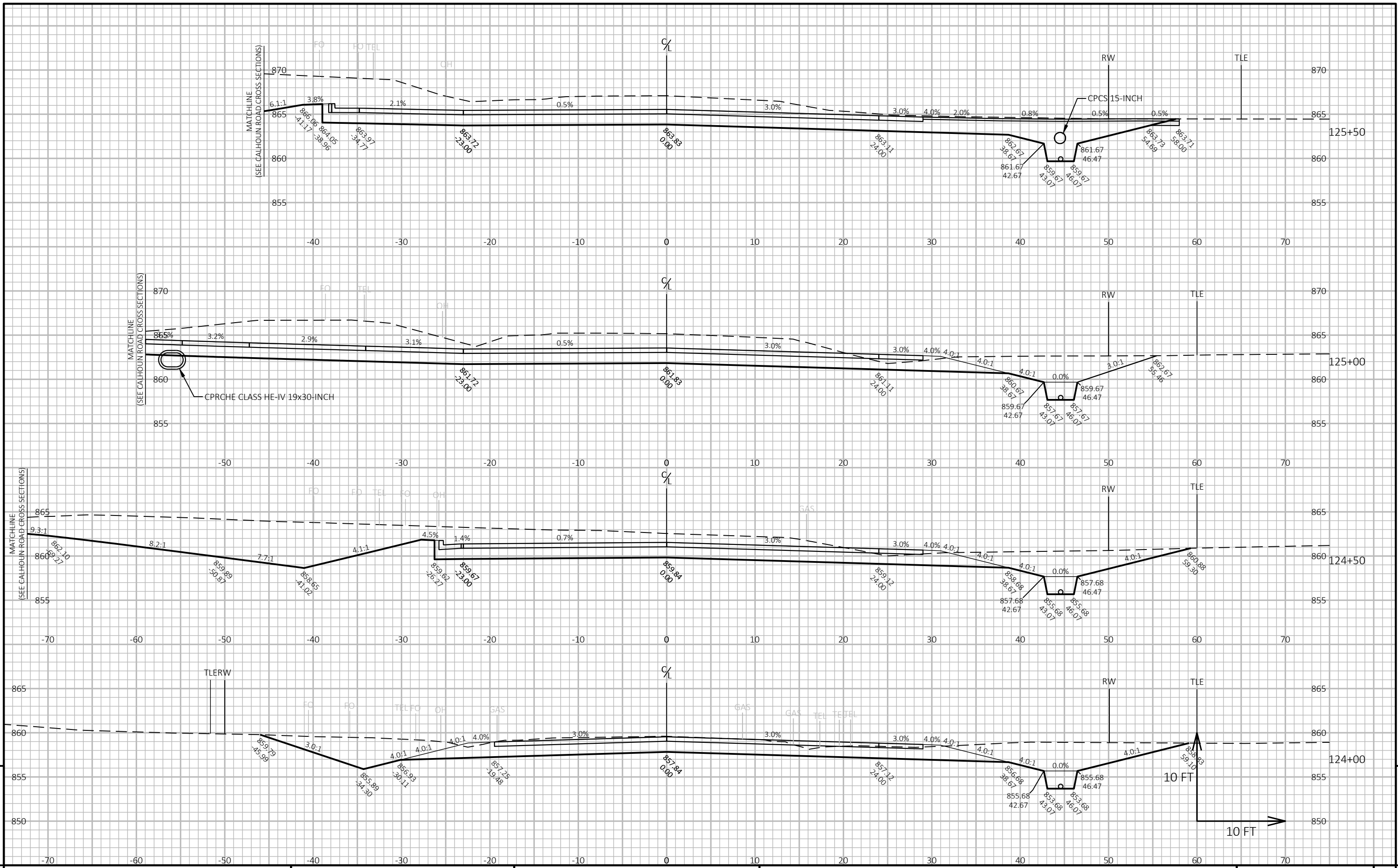
HWY: LOCAL STREET

COUNTY: WAUKESHA

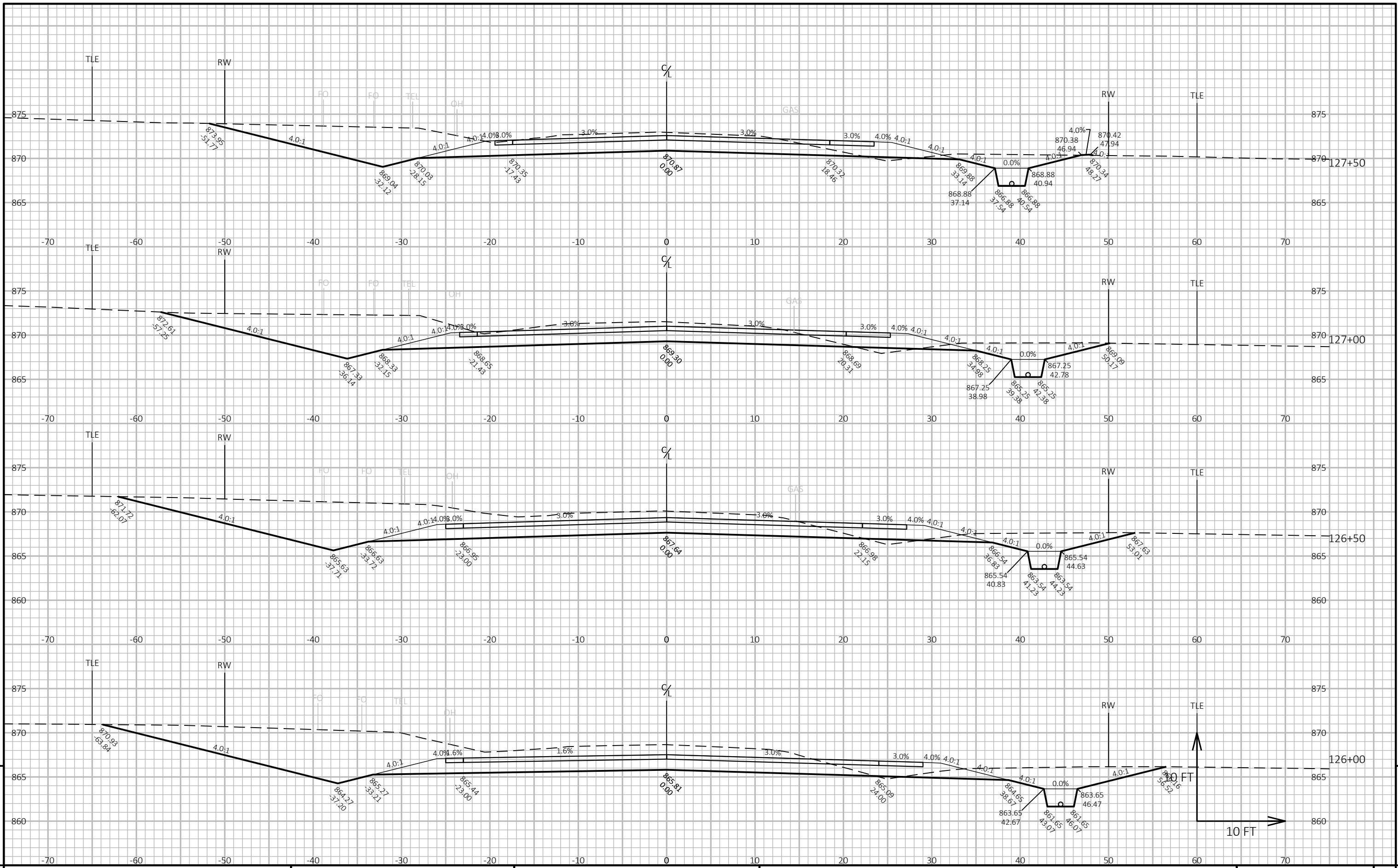
CROSS SECTIONS: SMALL ROAD

SHEET

E



PROJECT NO: 2722-09-70 HWY: LOCAL STREET COUNTY: WAUKESHA CROSS SECTIONS: SMALL ROAD SHEET 9



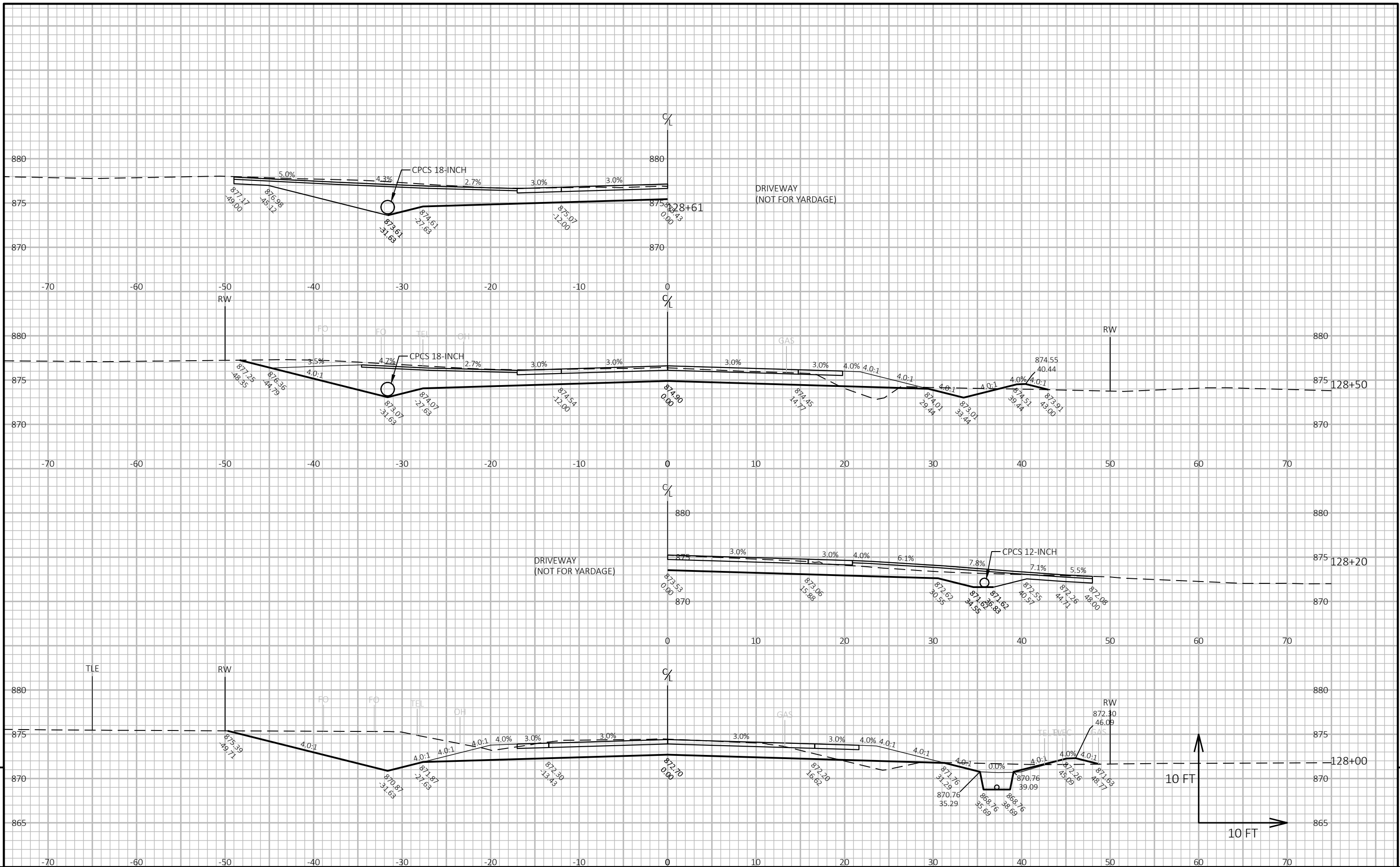
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9

PROJECT NO: 2722-09-70 HWY: LOCAL STREET COUNTY: WAUKESHA CROSS SECTIONS: SMALL ROAD SHEET E

FILE NAME: \\RASMITH.COM\CEDARBURG\MUNICIPAL\1200244\DWG\27220970\SHEETS\PLAN\090211-XS_5.DWG PLOT DATE: 1/12/2023 4:32 PM PLOT BY: GASPER, MICHAEL PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

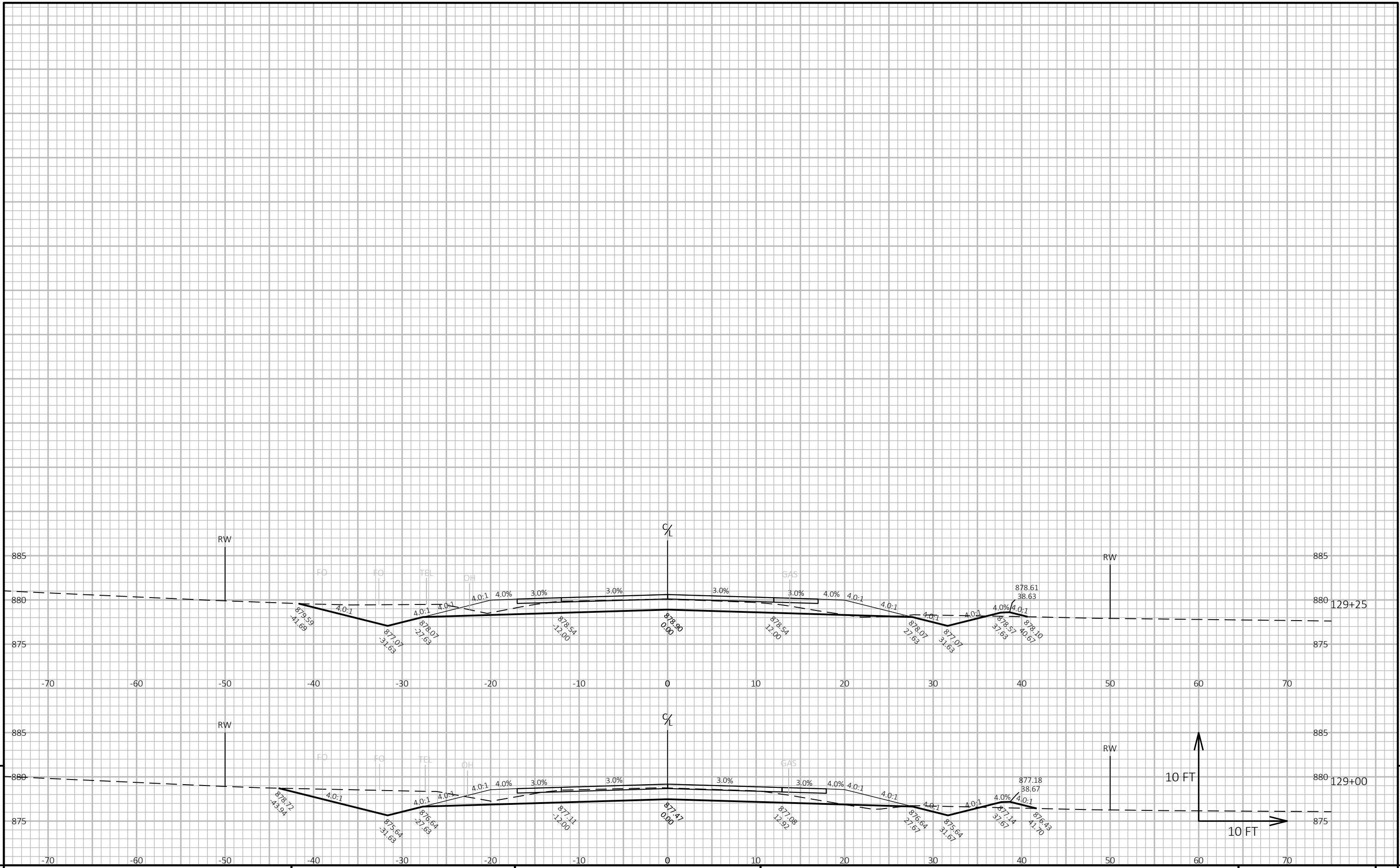
LAYOUT NAME - 04-xs



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PROJECT NO: 2722-09-70	HWY: LOCAL STREET	COUNTY: WAUKESHA	CROSS SECTIONS: SMALL ROAD	SHEET E
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PROJECT NO: 2722-09-70

HWY: LOCAL STREET

COUNTY: WAUKESHA

CROSS SECTIONS: SMALL ROAD

SHEET

E



Wisconsin Department of Transportation

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