

MAD

PROJECT ID: 5050-02-70

COUNTY: SAUK

WITH: 5050-02-71; 5050-02-72

MARCH 2021

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 Plan
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 170

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

REEDSBURG - WISCONSIN DELLS

REEDSBURG - WISCONSIN DELLS

REEDSBURG - BARABOO

N JCT STH 33 INTERSECTION

COPPER SPRINGS RD TO N JCT STH 33

N JCT STH 23 TO USH 12

STH 23

STH 23

STH 33

SAUK COUNTY

SAUK COUNTY

SAUK COUNTY

STATE PROJECT NUMBER

5050-02-70

STATE PROJECT NUMBER

5050-02-71

STATE PROJECT NUMBER

5050-02-72

END PROJECT 5050-02-71; BEGIN PROJECT 5050-02-70

STA 267+90.87

END PROJECT 5050-02-70; BEGIN PROJECT 5050-02-72

STA 291+27.74

BEGIN PROJECT 5050-02-71

STA 123+65.42

X = 595,619.49

Y = 260,002.50

DESIGN DESIGNATION

5050-02-01; 5050-02-02

A.A.D.T. 2021 = 12,400 (STH 23); 9,300 (STH 33)

A.A.D.T. 2041 = 13,600 (STH 23); 9,300 (STH 33)

D.H.V. = 898 (STH 23); 553 (STH 33)

D.D. = 60/40

T. = 8.7%

DESIGN SPEED = 60 MPH

ESALS = 2,900,000 (STH 23); 2,000,000 (STH 33)

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS

PROPERTY LINE

LOT LINE

LIMITED HIGHWAY EASEMENT

EXISTING RIGHT OF WAY

PROPOSED OR NEW R/W LINE

SLOPE INTERCEPT

REFERENCE LINE

EXISTING CULVERT

PROPOSED CULVERT (Box or Pipe)

COMBUSTIBLE FLUIDS

MARSH AREA

WOODED OR SHRUB AREA

PROFILE

GRADE LINE

ORIGINAL GROUND

MARSH OR ROCK PROFILE (To be noted as such)

SPECIAL DITCH

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC

FIBER OPTIC

GAS

SANITARY SEWER

STORM SEWER

TELEPHONE

WATER

UTILITY PEDESTAL

POWER POLE

TELEPHONE POLE

PLAN

ROCK

LABEL

95.36

OPEN VIEW

SCALE

0 2 MI

LAYOUT

R-4-E R-5-E R-5-E R-6-E

TOTAL NET LENGTH OF CENTERLINE = 0.443 MI (-70)

2.732 MI (-71)

5.652 MI (-72)

8.827 MI (TOTAL)

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, SAUK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCE MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012).

NET EXCEPTION TO CL LENGTH

STA 574+60 - STA 577+20

END PROJECT 5050-02-72

STA 592+28.37

ORIGINAL PLANS PREPARED BY

ENGINEERING, INC

Consultant Services

BRADLEY R. GROH

E-41411

MADISON

WI

PROFESSIONAL ENGINEER

DATE: 8/28/2020

(Professional Engineer Signature)

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor JT ENGINEERING, INC.

Designer BRADLEY R. GROH, PE

Project Manager DAVID SCHMIDT, PE

Regional Examiner SOUTHWEST REGION

Regional Supervisor KARLA KNORR, PE

APPROVED FOR THE DEPARTMENT

David Schmidt

DATE: 2020.10.12 07:46:19-05'00'

Digitally signed by David Schmidt

(Signature)

E

FILE NAME : X:\PROJECTS\SAUK\5050-02-01 STH 23\DESIGN\C3D\SHEETS\PLAN\010101_T1.DWG

PLOT DATE : 8/28/2020 10:50 AM

PLOT BY : BRAD GROH

PLOT NAME :

GENERAL NOTES

HMA PAVEMENT 4 MT 58-28 S SHALL BE PLACED IN EQUAL 1.75" LAYERS

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

TACK COAT APPLICATION RATES ARE BASED ON 0.07 GAL/SY ON MILLED SURFACES AND 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

EROSION CONTROL ITEMS IN THE MISCELLANEOUS QUANTITIES ARE SUGGESTED. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. MAINTAIN EROSION CONTROL ITEMS UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. PROTECT WETLANDS AND OTHER WATERWAYS THAT ARE PRESENT WITHIN THE PROJECT LIMITS.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

DO NOT STORE EQUIPMENT OR MATERIAL IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS, OR WATERWAYS.

PROTECT HMOD DH5386 AND ADJUST BACKSLOPES AND TIE-IN WITH EXISTING GROUND AS NECESSARY TO AVOID ANY DISTURBANCE DURING THE DURATION OF THE PROJECT. NOTIFY JACOB ROCKWEILER IMMEDIATELY IF DH5386 IS DISTURBED, BUMPED, OR MOVED DURING CONSTRUCTION OPERATIONS.

ENVIRONMENTAL CONTACTS

WISDOT - SW REGION
ERIN RIESER
2101 WRIGHT STREET
MADISON, WI 53704
PHONE: 608-242-8025
EMAIL: ERIN.RIESER@DOT.WI.GOV

DESIGN CONTACTS

WISDOT - SW REGION
DAVID SCHMIDT, PE
2101 WRIGHT STREET
MADISON, WI 53704
PHONE: 608-246-3867
EMAIL: DAVID2.SCHMIDT@DOT.WI.GOV

SURVEY CONTACTS

WISCONSIN HEIGHT MOD PROGRAM MANAGER
JACOB ROCKWEILER, PE
3502 KINSMAN BLVD
MADISON, WI 53704
PHONE: 608-516-6362
EMAIL: JACOB.ROCKWEILER@DOT.WI.GOV

ORDER OF DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
PERMANENT SIGNING
LIGHTING PLAN
PAVEMENT MARKING
TRAFFIC CONTROL
DETOUR PLAN
ALIGNMENT DIAGRAM

WISCONSIN DNR
ANDY BARTA
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: 608-275-3308
EMAIL: ANDREW.BARTA@WISCONSIN.GOV

JT ENGINEERING, INC.
BRAD GROH, PE
6325 ODANA ROAD, SUITE 2
MADISON, WI 53719
PHONE: 608-204-0909
EMAIL: BRADG@JT-ENGINEERING.COM

SAUK COUNTY SURVEYOR
PAT DEDERICH
WEST SQUARE BUILDING
505 BROADWAY ROOM #122
BARABOO, WI 53913
PHONE: 608-355-4474
EMAIL: PAT.DEDERICH@SAUKCOUNTYWI.GOV

DIGGERS

HOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

UTILITY CONTACTS

ALLIANT ENERGY - ELECTRICITY
MARY MONTGOMERY
200 FIRST STREET
CEDAR RAPIDS, IA 52401
PHONE: 319-786-4768
EMAIL: MARYMONTGOMERY@ALLIANTENERGY.COM
APPLICABLE PROJECT IDS: -70, -71, -72

FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICAITON
RUSS RYAN
118 DIVISION STREET
PLYMOUTH, WI 53073
PHONE: 920-583-3275
EMAIL: RUSSELL.W.RYAN@FTR.COM
APPLICABLE PROJECT IDS: -70, -71, -72

CENTURY LINK - COMMUNICATION LINE
KEVIN ZICKERT
224 INDUSTRIAL DRIVE
NORTH PRAIRIE, WI 53153
PHONE: 262-392-5200
EMAIL: KEVIN.ZICKERT@CENTURYLINK.COM
APPLICABLE PROJECT IDS: -72

ALLIANT ENERGY - GAS
MARY MONTGOMERY
200 FIRST STREET
CEDAR RAPIDS, IA 52401
PHONE: 319-786-4768
EMAIL: MARYMONTGOMERY@ALLIANTENERGY.COM
APPLICABLE PROJECT IDS: -71, -72

REEDSBURG UTILITY COMMISSION - COMMUNICATION
KEN LAS
501 UTILITY COURT
P.O. BOX 230
REEDSBURG, WI 53959
PHONE: 608-768-6450
EMAIL: KLAS@RUCLS.NET
APPLICABLE PROJECT IDS: -70, -71, -72

NORTHERN NATURAL GAS COMPANY - GAS
SERGIO GONZALEZ
8101 BIRCHWOOD COURT, SUITE F
JOHNSTON, IA 50131
PHONE: 402-530-2026
EMAIL: SERGIO.GONZALEZ@NNGCO.COM
APPLICABLE PROJECT IDS: -72

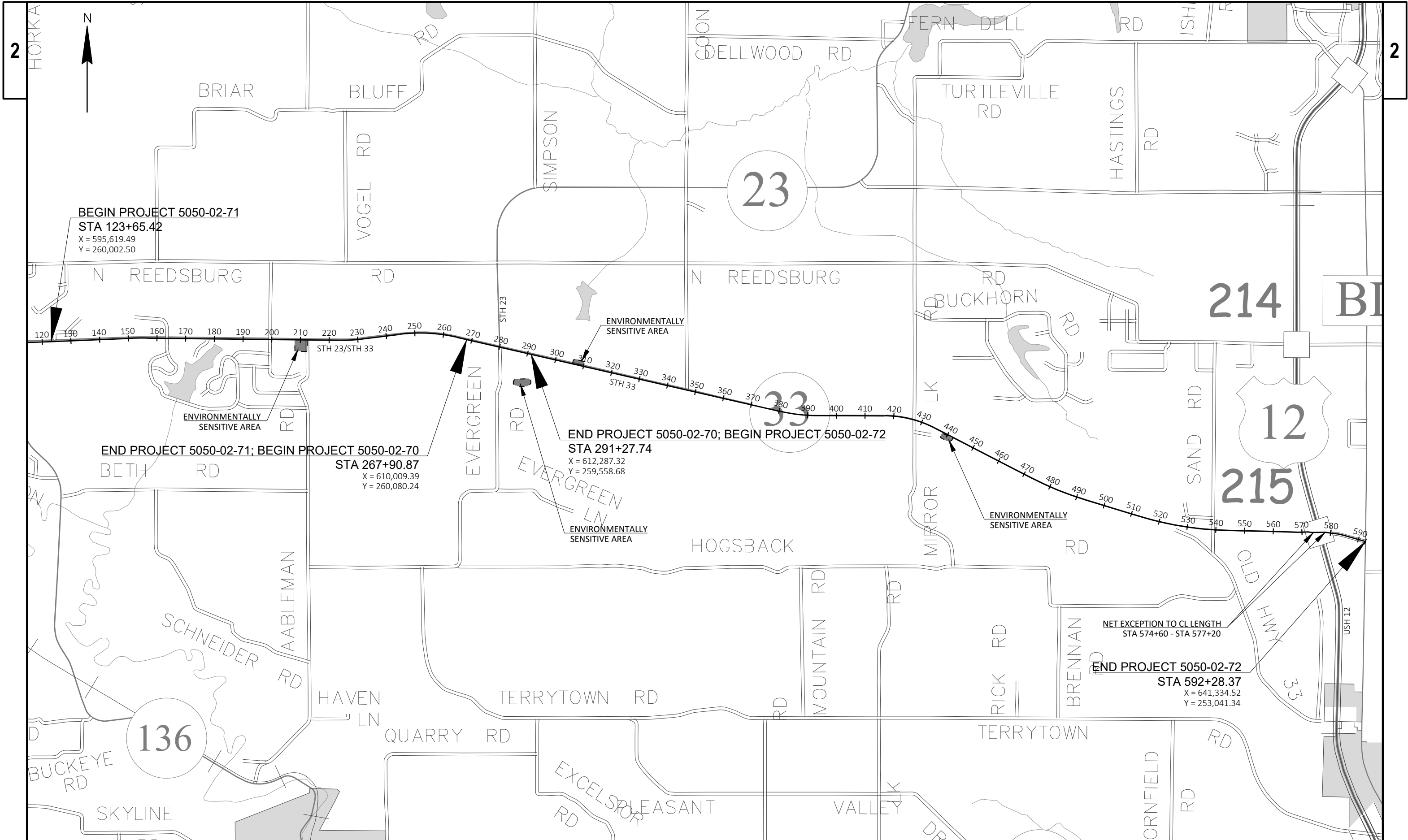
RUNOFF COEFFICIENT TABLE

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

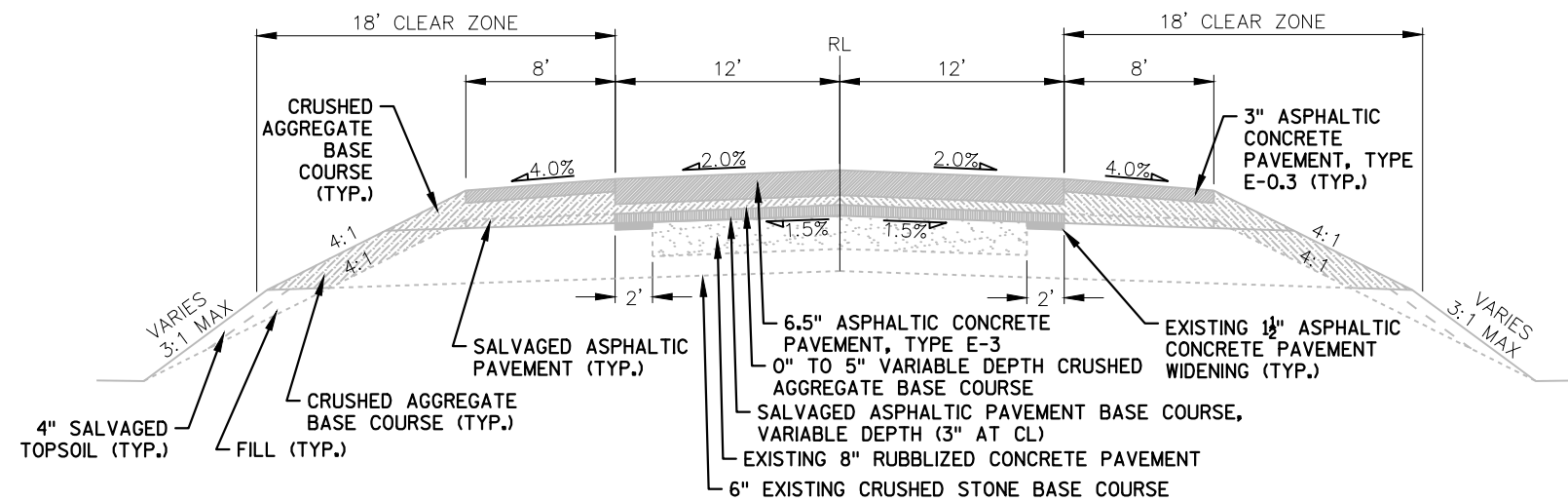
TOTAL PROJECT AREA = 166.83 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 3.39 ACRES

STANDARD ABBREVIATIONS

AC	ACRE	ESALS	EQUIVALENT SINGLE AXLE LOADS	R/L	REFERENCE LINE
AGG	AGGREGATE	EXC	EXCAVATION	RCCP	REINFORCED CONCRETE CULVERT PIPE
<	ANGLE	EXIST	EXISTING	REQ'D	REQUIRED
AE, AEW	APRON ENDWALL	FF	FACE TO FACE	RT	RIGHT
ASPH	ASPHALTIC	FERT	FERTILIZER	R/W	RIGHT OF WAY
ADT	AVERAGE DAILY TRAFFIC	FE	FIELD ENTRANCE	RD	ROAD
AADT	ANNUAL AVERAGE DAILY TRAFFIC	F/L, FL	FLOW LINE	SHLD	SHOULDER(S)
BAD	BASE AGGREGATE DENSE	GALV	GALVANIZE	S	SOUTH
BF	BACK FACE	HS	HIGH STRENGTH	SB	SOUTHBOUND
BM	BENCHMARK	CWT	HUNDRED WEIGHT	SF	SQUARE FOOT (FEET)
BTWN	BETWEEN	INL	INLET	SDD	STANDARD DETAIL DRAWING(S)
CTR	CENTER	INTER	INTERSECTION	STH	STATE TRUNK HIGHWAYS
C/L	CENTERLINE	JT	JOINT	SS	STORM SEWER
Δ	CENTRAL ANGLE OR DELTA	LT	LEFT	SSD	STOPPING SIGHT DISTANCE
CE	COMMERCIAL ENTRANCE	L	LENGTH OF CURVE	STA	STATION
CONST	CONSTRUCTION	LF	LINEAR FOOT (FEET)	SE	SUPERELEVATION
CMCP	CORRUGATED METAL CULVERT PIPE	LC	LONG CHORD	S/L	SURVEY LINE
CMP	CORRUGATED METAL PIPE	LS	LUMP SUM	SYM	SYMMETRICAL
CO	COUNTY	MP	MARKER POST	T	TRUCKS (PERCENT OF)
CTH	COUNTY TRUNK HIGHWAYS	MGAL	1000 GALLONS	TEL	TELEPHONE
CY	CUBIC YARD	NC	NORMAL CROWN	TEMP	TEMPORARY
CP	CONTROL POINT OR CULVERT PIPE	N	NORTH	TLE	TEMPORARY LIMITED EASEMENT
C&G	CURB AND GUTTER	NB	NORTH BOUND	TOC	TOP OF CURB
D	DEGREE OF CURVE	NOR	NORMAL	TYP	TYPICAL
DHV	DESIGN HOUR VOLUME	NO	NUMBER	UNCL	UNCLASSIFIED
DIA	DIAMETER	PAV'T	PAVEMENT	UG	UNDERGROUND
DD	DIRECTIONAL DISTRIBUTION	PLE	PERMANENT LIMITED EASEMENT	VAR	VARIABLE
DISCH	DISCHARGE	PC	POINT OF CURVATURE	VC	VERTICAL CURVE
DMS	DYNAMIC MESSAGE SIGN	PI	POINT OF INTERSECTION	VPC	VERTICAL POINT OF CURVATURE
EA	EACH	PT	POINT OF TANGENCY	VPI	VERTICAL POINT OF INTERSECTION
E	EAST	PCC	PORTLAND CEMENT CONCRETE	VPT	VERTICAL POINT OF TANGENCY
EB	EASTBOUND	PE	PRIVATE ENTRANCE	WT	WEIGHT
ELEC	ELECTRIC(AL), ELEC. CABLE	PGL	PROFILE GRADE LINE	W	WEST
EL, ELEV	ELEVATION	PL	PROPERTY LINE	WB	WEST BOUND
		R	RADIUS OR RANGE		

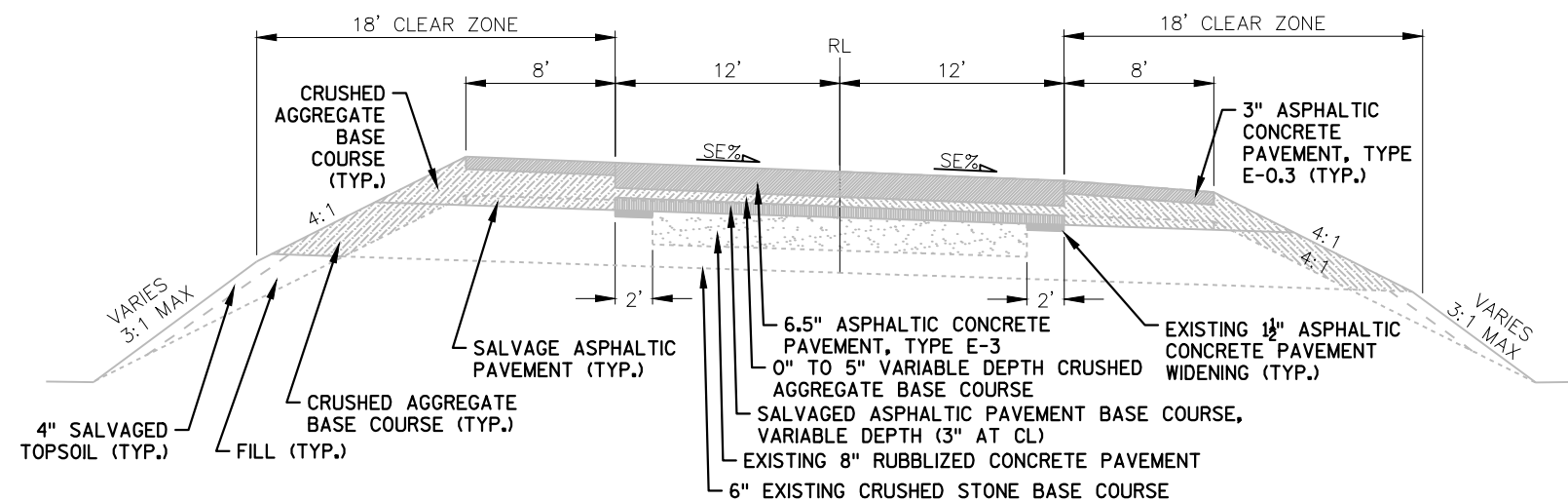


PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	PROJECT OVERVIEW	SHEET E
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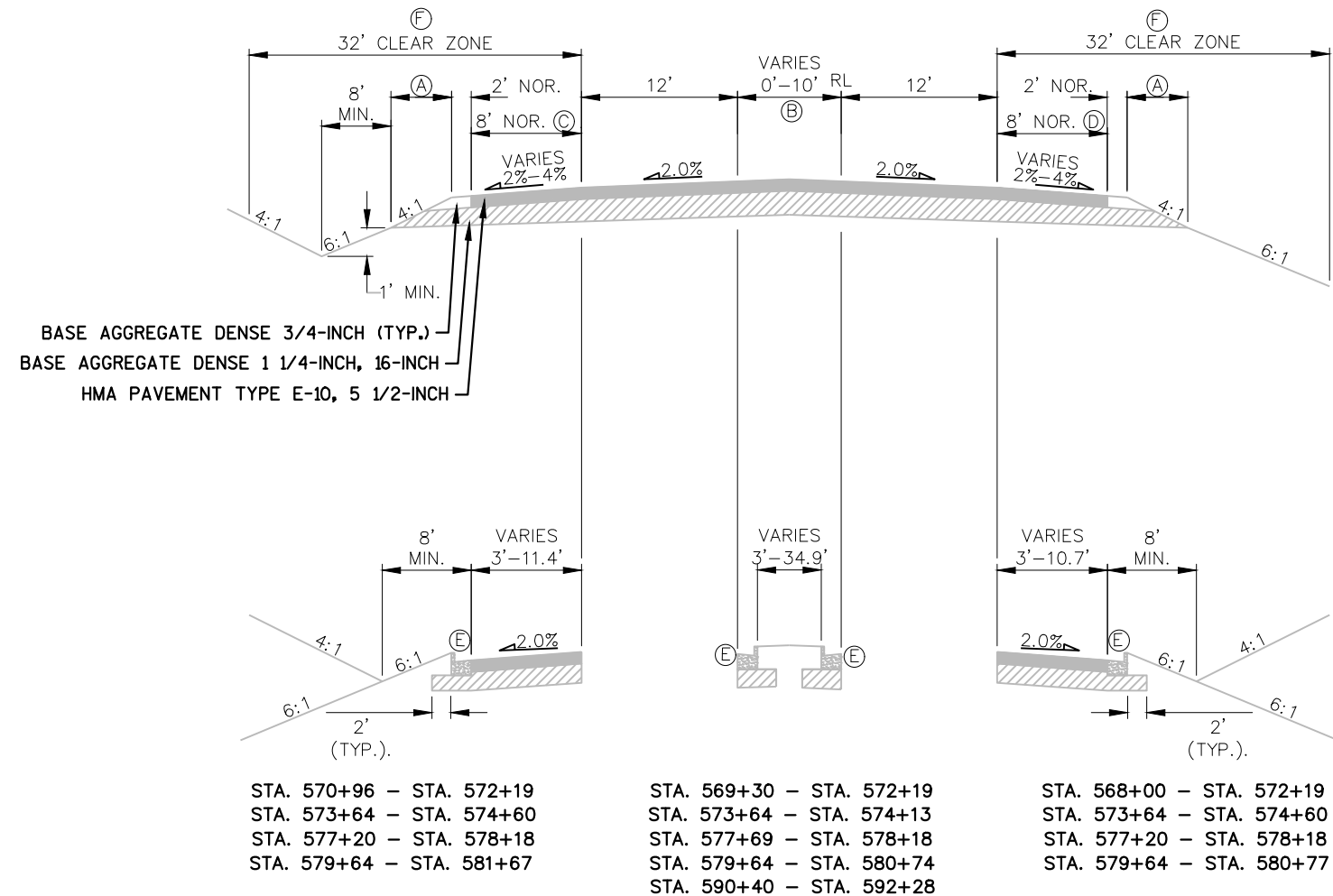
EXISTING TYPICAL SECTION - STH 23 / STH 33

STA. 123+65 - STA. 559+12



EXISTING SUPERELEVATED TYPICAL SECTION - STH 23 / STH 33

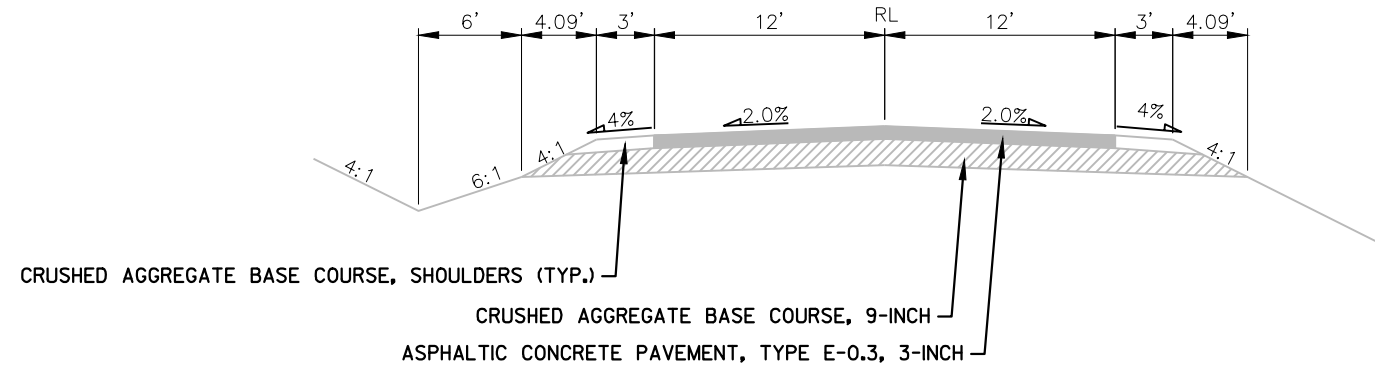
STA. 123+65 - STA. 559+12



EXISTING TYPICAL SECTION - STH 33

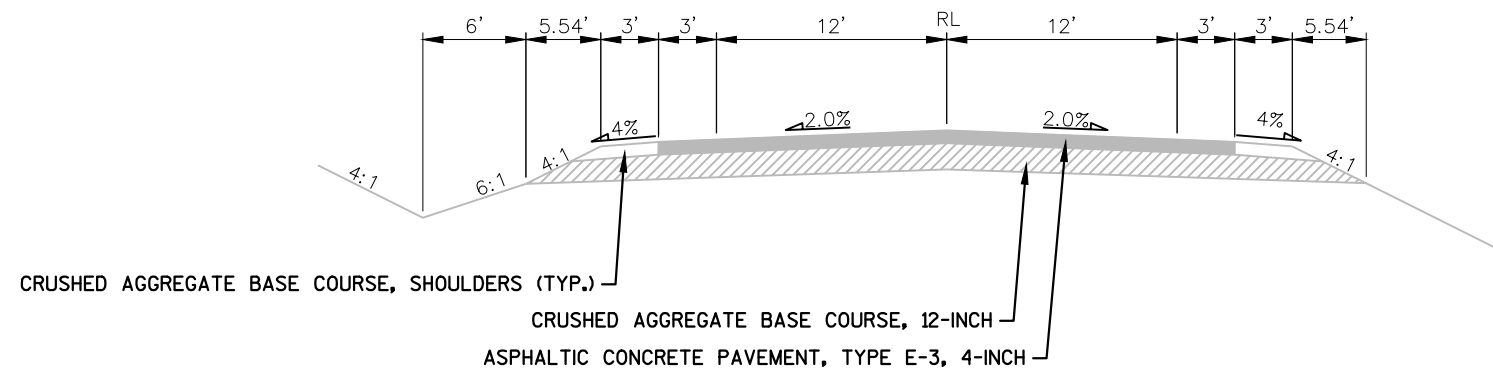
STA. 559+12 - STA. 572+19
STA. 573+64 - STA. 574+60
STA. 577+20 - STA. 578+18
STA. 579+64 - STA. 592+28

- (A) VARIES FROM 6.92' TO 7.79'
- (B) VARIES FROM 0' AT STA. 560+45 TO 10' AT STA. 569+30
VARIES FROM 0' AT STA. 583+11 TO 16' AT STA. 586+92
- (C) VARIES FROM 8' AT STA. 561+56 RT TO 13' AT STA. 562+36 RT
13' FROM STA. 562+36 RT TO STA. 564+89 RT
VARIES FROM 13' AT STA. 564+89 RT TO 8' AT STA. 565+72 RT
- (D) VARIES FROM 8' AT STA. 562+67 LT TO 12' AT STA. 563+34
12' FROM STA. 563+34 TO STA. 566+61
VARIES FROM 12' AT STA. 566+61 TO 8' AT STA. 567+16
- (E) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36" TYPE D STA. 568+00 TO STA. 569+91
CONCRETE CURB AND GUTTER 30-INCH TYPE D STA. 569+91 TO STA. 581+68
- (F) 20' CLEAR ZONE STA. 573+64 TO STA. 578+18



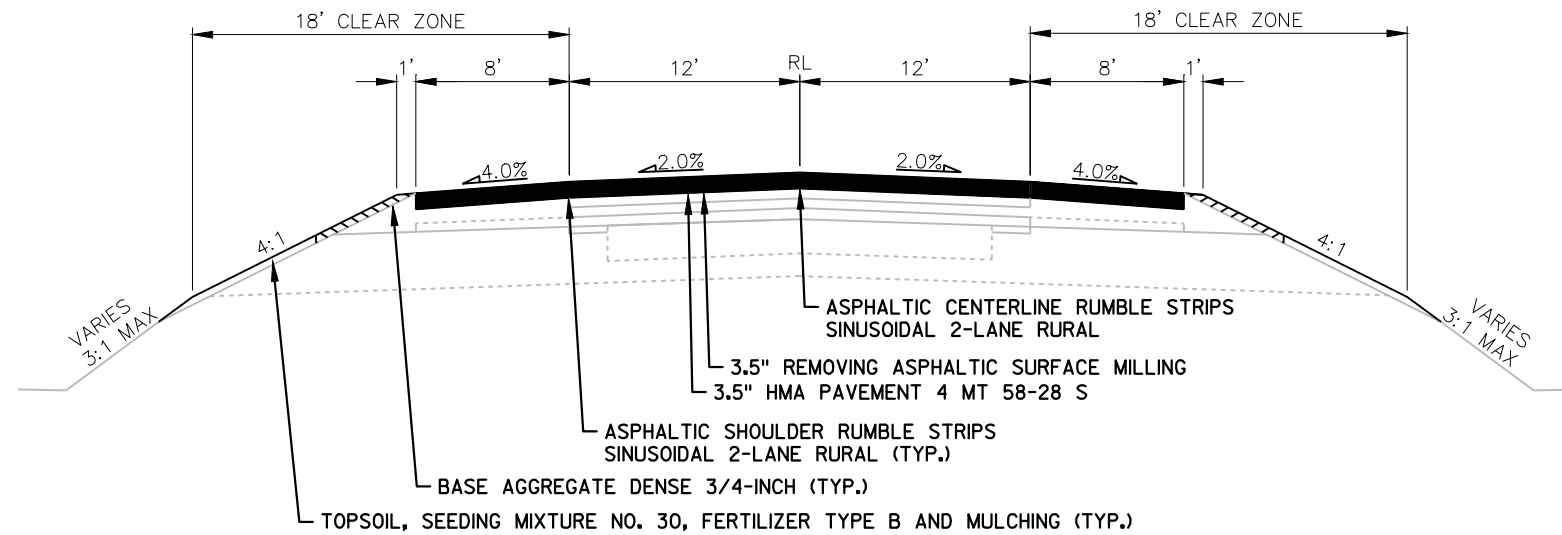
EXISTING TYPICAL SECTION – EVERGREEN ROAD

STA. 48'NB'+54.83 – STA. 50'NB'+00



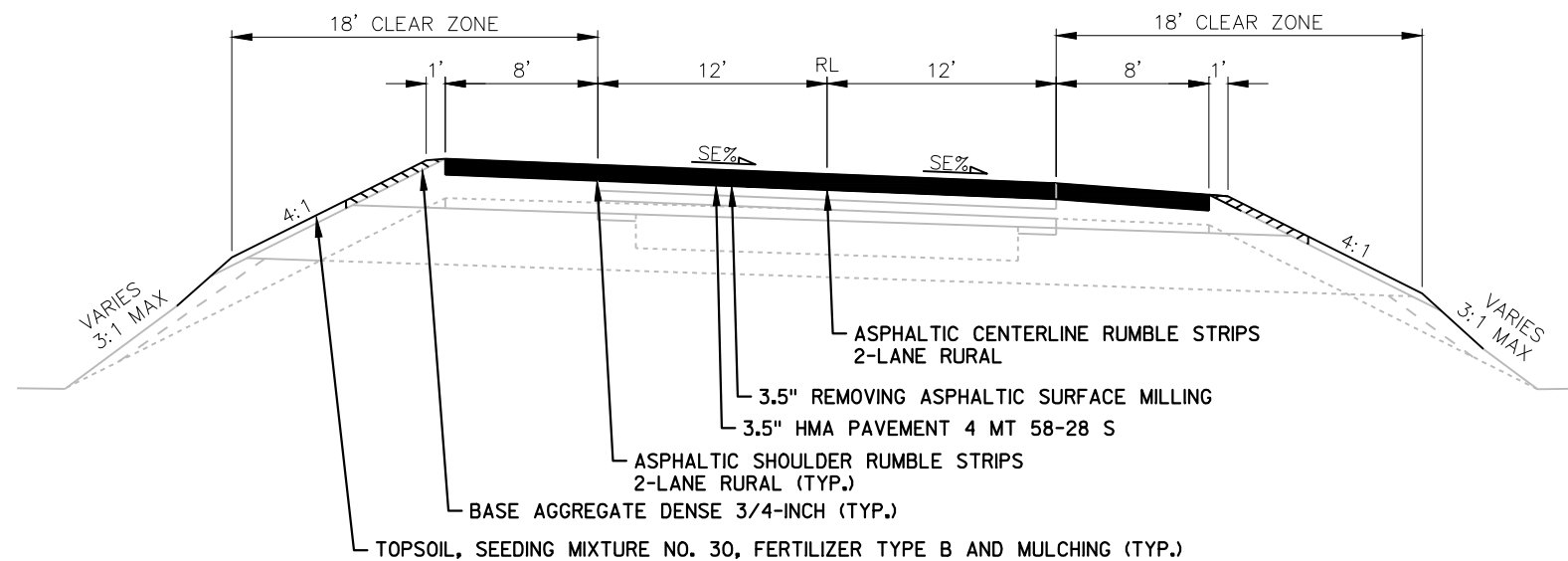
EXISTING TYPICAL SECTION – STH 23 NORTH

STA. 50'NB'+00 – STA. 52'NB'+30.64



PROPOSED TYPICAL SECTION – STH 23 / STH 33

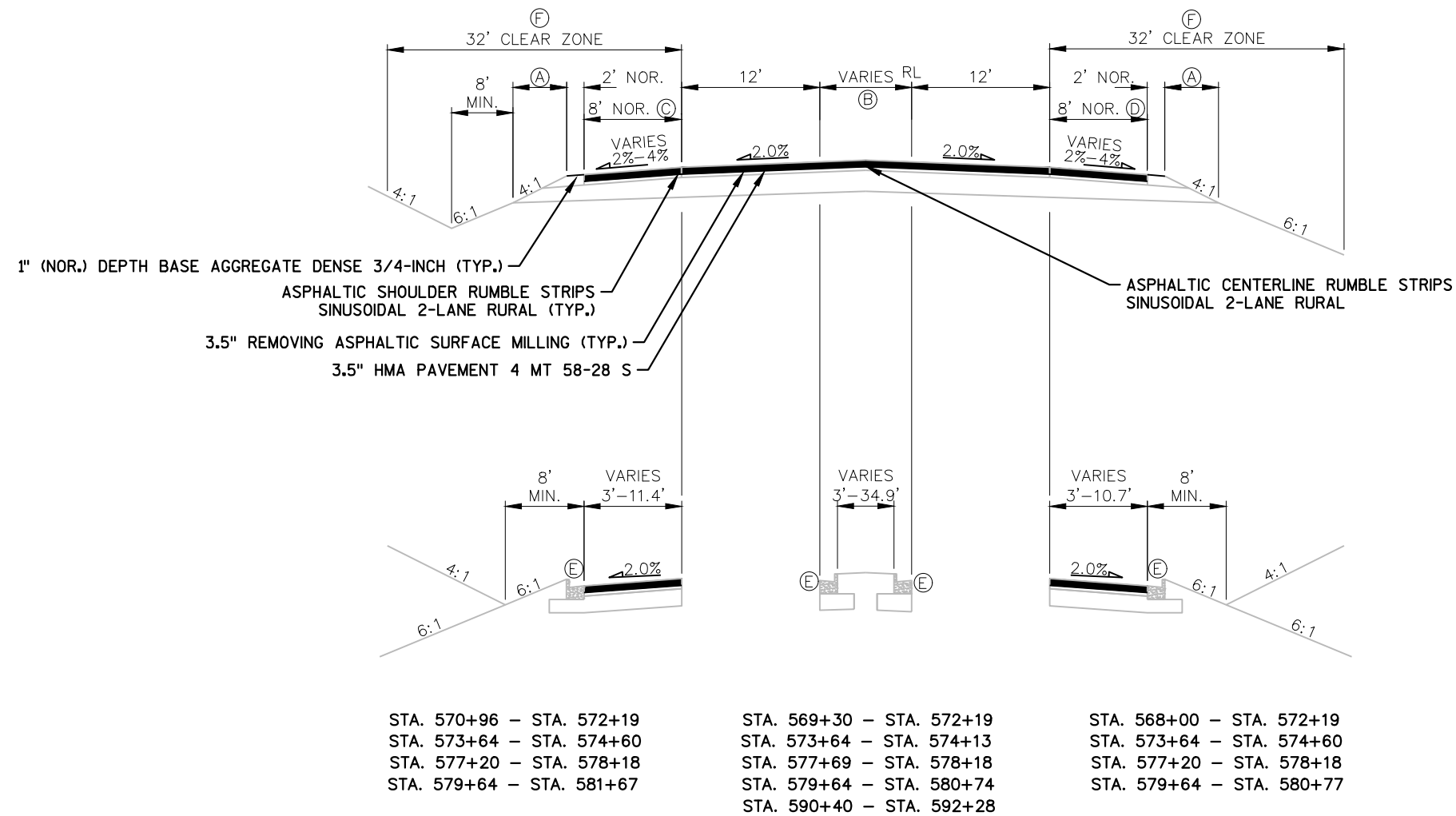
STA. 123+65 – STA. 267+90.87
STA. 290+27.81 – STA. 559+12



PROPOSED SUPERELEVATED TYPICAL SECTION – STH 23 / STH 33

STA. 123+65 – STA. 267+90.87
STA. 290+27.81 – STA. 559+12

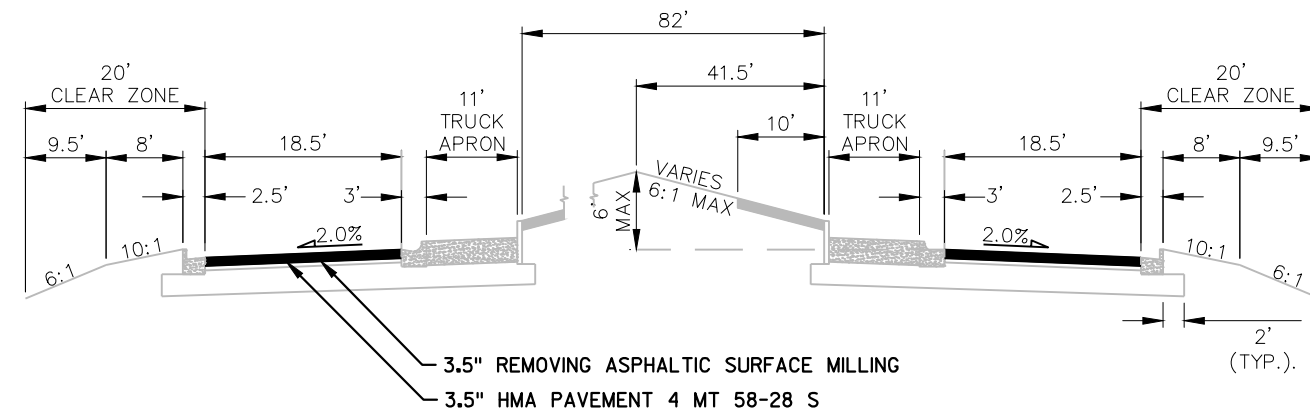




PROPOSED TYPICAL SECTION – STH 33

STA. 559+12 – STA. 572+19
STA. 573+64 – STA. 574+60
STA. 577+20 – STA. 578+18
STA. 579+64 – STA. 592+28

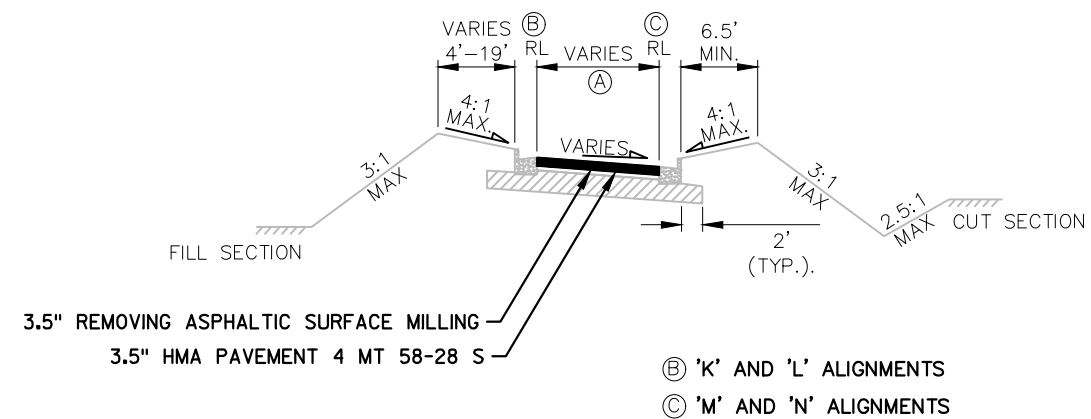
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- (E) EXISTING CONCRETE CURB AND GUTTER 4-INCH SLOPED 36" TYPE D STA. 568+00 TO STA. 569+91
EXISTING CONCRETE CURB AND GUTTER 30-INCH TYPE D STA. 569+91 TO STA. 581+68
- (F) 20' CLEAR ZONE STA. 573+64 TO STA. 578+18



PROPOSED TYPICAL SECTION – STH 33 (ROUNABOUT SECTION)

STA. 572+19 – STA. 573+64

STA. 578+18 – STA. 579+64



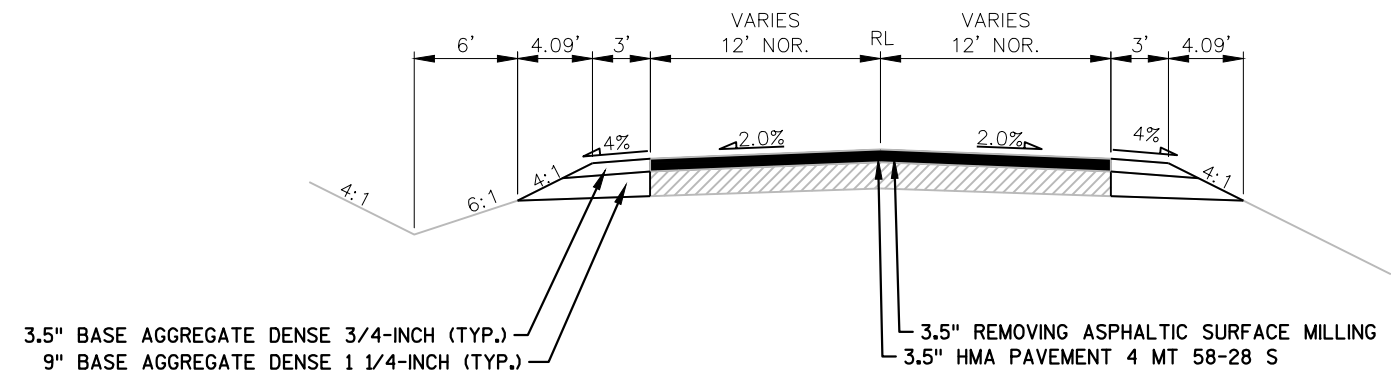
PROPOSED TYPICAL SECTION – USH 12 RAMPS

STA. 211'K'+30 – STA. 211'K'+94; ① = 15.0' – 16.9'

STA. 212'L'+81 – STA. 214'L'+01; ① = 18.7' – 23.0'

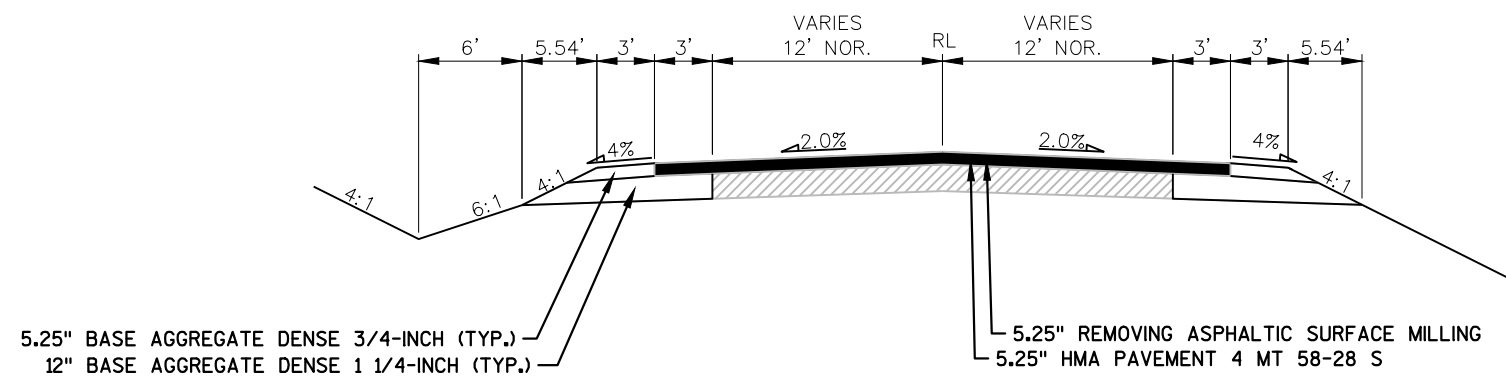
STA. 210'M'+70 – STA. 211'M'+19; ① = 15.0' – 15.7'

STA. 208'N'+62 – STA. 209'N'+81; ① = 18.5' – 23.0'



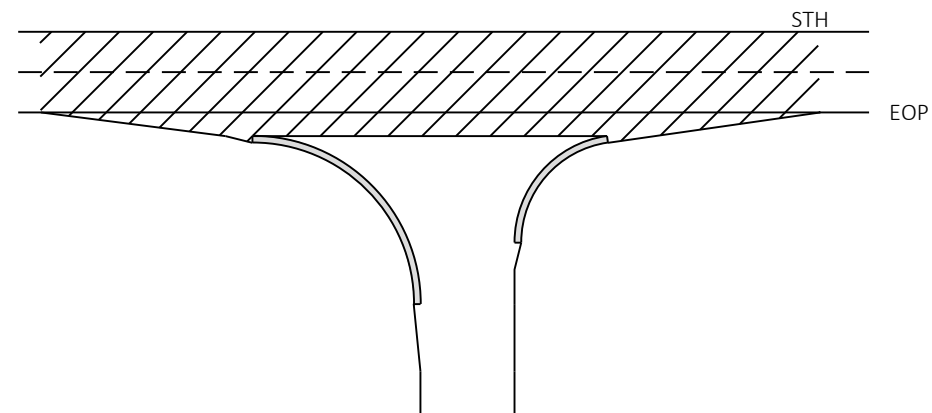
PROPOSED TYPICAL SECTION – EVERGREEN ROAD

STA. 48'NB'+54.83 – STA. 50'NB'+00



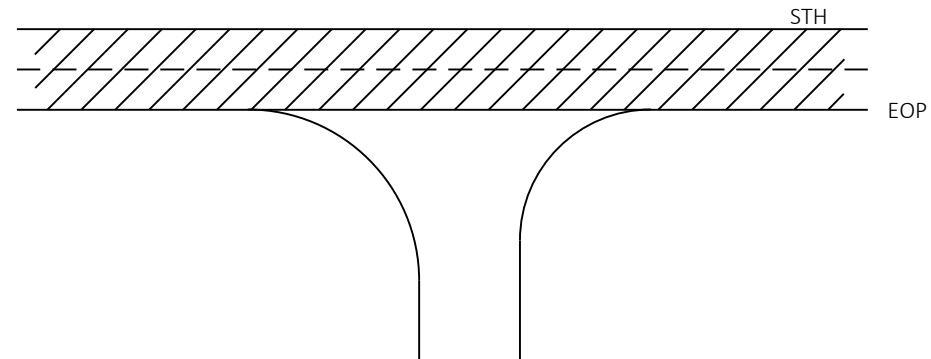
PROPOSED TYPICAL SECTION – STH 23 NORTH

STA. 50'NB'+00 – STA. 52'NB'+30.64



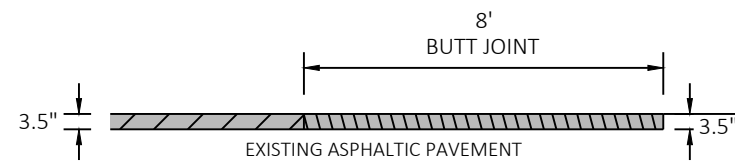
SIDE ROADS AND DRIVEWAYS

WITH CURB AND GUTTER
EXCEPT STH 23/STH 33/EVERGREEN RD.



SIDE ROADS AND DRIVEWAYS

WITHOUT CURB AND GUTTER



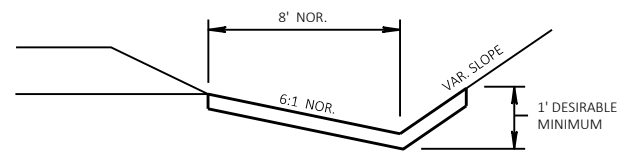
BUTT JOINT

MAINLINE, STH 23/STH 33/EVERGREEN RD, AND INTERCHANGE RAMPS

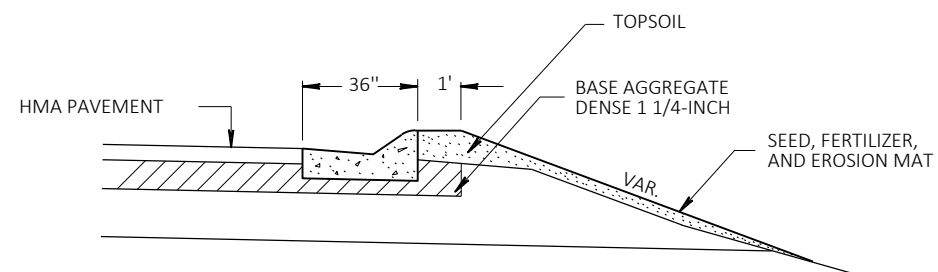
STA 123+65.42 - 123+73.42
STA 574+52.00 - 574+60.00
STA 577+20.00 - 577+28.00
STA 592+20.37 - 592+28.37
STA 48'NB'+54.83 - 48'NB'+62.83
STA 52'NB'+22.64 - 52'NB'+30.64
STA 211'K'+30.52 - 211'K'+38.52
STA 213'L'+93.27 - 214'L'+01.27
STA 211'M'+10.70 - 211'M'+18.70
STA 208'N'+62.39 - 208'N'+70.39

- HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS

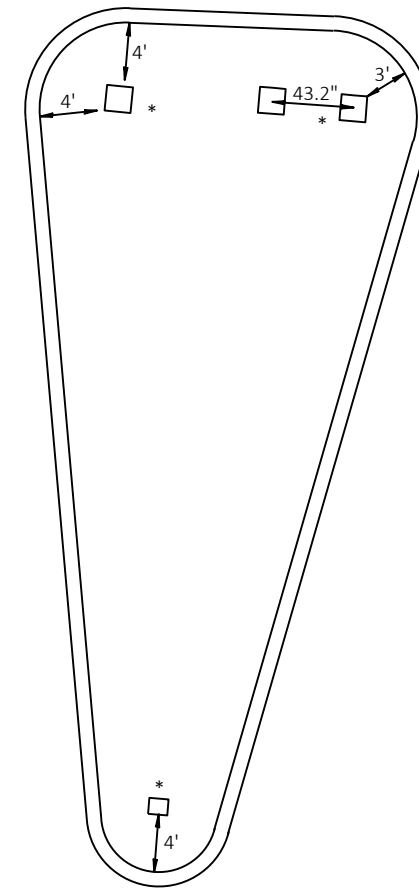
NOTE: ANY SAWCUT USED WILL BE CONSIDERED
INCIDENTAL TO REMOVING ASPHALTIC SURFACE BUTT
JOINTS OR REMOVING ASPHALTIC SURFACE MILLING



EROSION MAT DETAIL FOR DITCHES

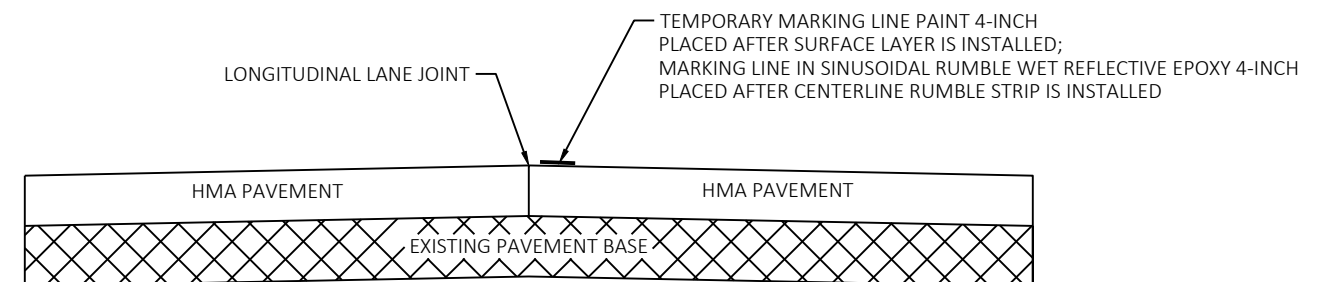


DETAIL OF CURB & GUTTER INSTALLATION

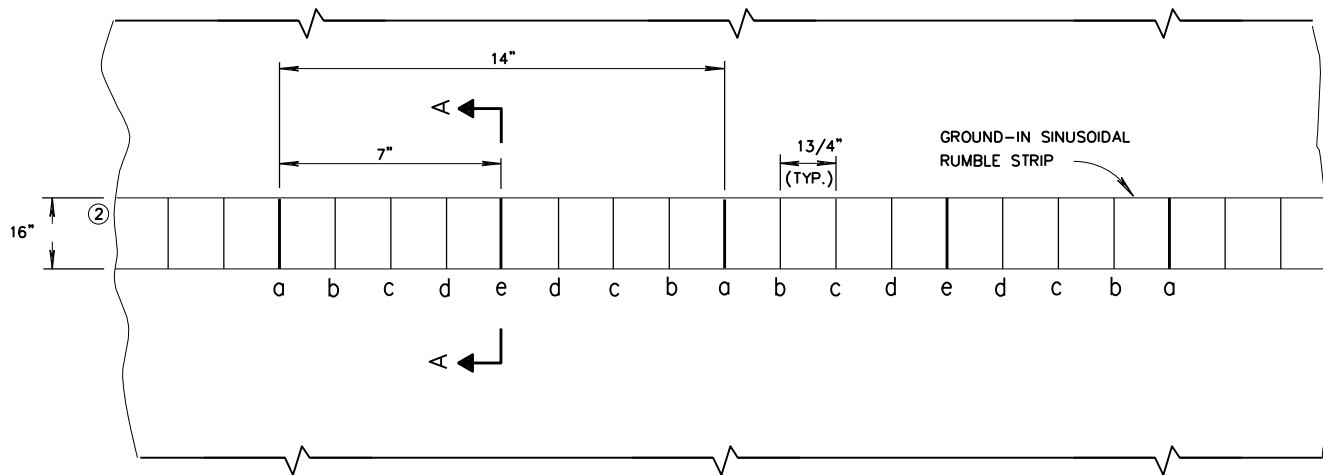


DETAIL OF OPENINGS IN ISLAND FOR SIGN PLACEMENT

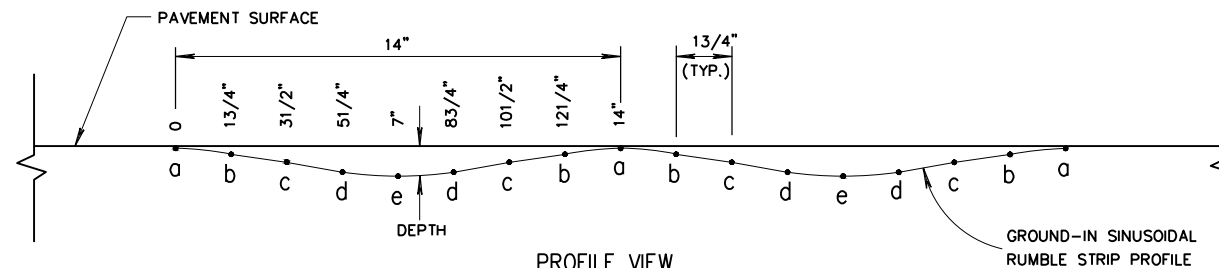
* NOTE: ALL SQUARED OPENINGS IN ISLAND FOR SIGN PLACEMENTS SHALL BE 18" SQUARE UNLESS REVISED BY PROJECT ENGINEER.



TEMPORARY PAVEMENT MARKING DETAIL

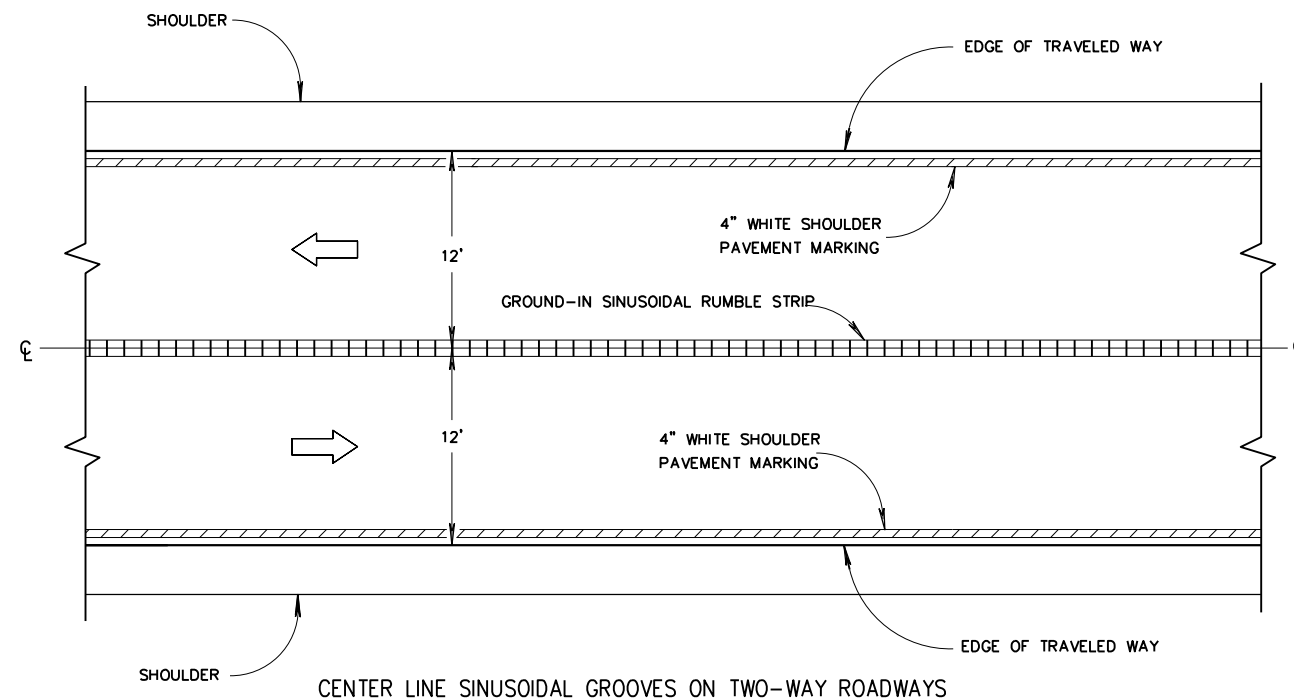


PLAN VIEW
CENTER LINE WITH GROUND-IN SINUSOIDAL RUMBLE STRIP



PROFILE VIEW
GROUND-IN SINUSOIDAL RUMBLE STRIP

LOCATION	DEPTH INCHES
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"



CENTER LINE SINUSOIDAL GROOVES ON TWO-WAY ROADWAYS

TWO-LANE RURAL CENTER LINE SINUSOIDAL RUMBLE STRIP, MILLING ALONG ASPHALTIC ROADWAYS

GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

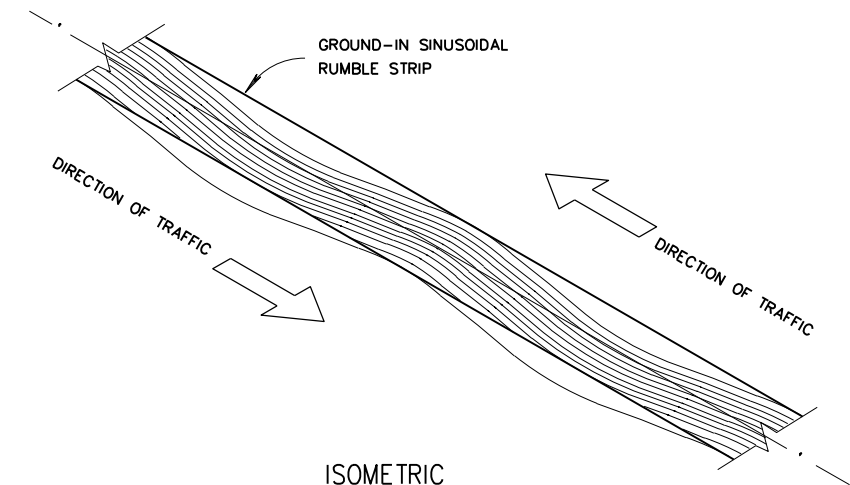
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

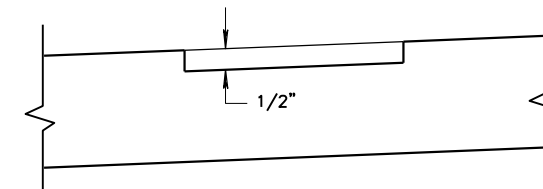
THE WIDTH OF THE GROOVE WILL BE 16 INCHES.

THE PAVEMENT MARKINGS WILL BE ENTIRELY INSIDE THE RUMBLE STRIP.

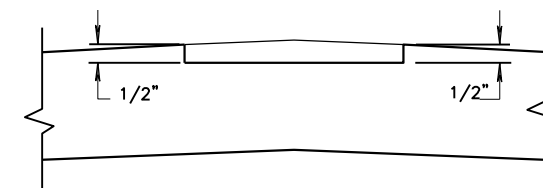
- CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.
- SEE CONTRACT PLANS FOR SINUSOIDAL STRIP WIDTH.



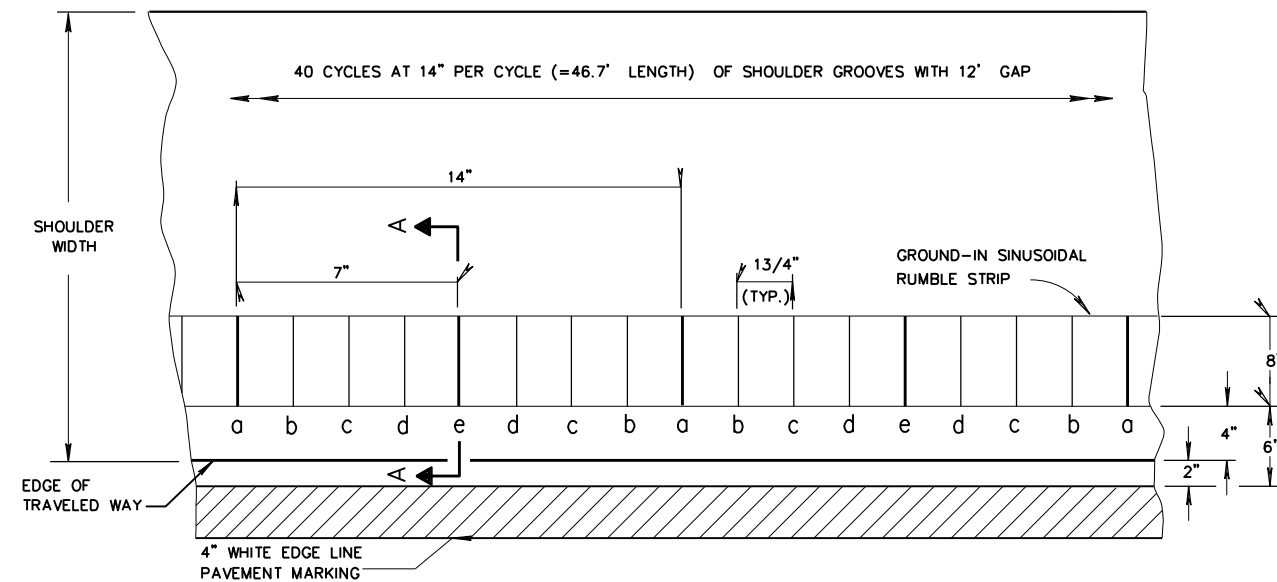
ISOMETRIC



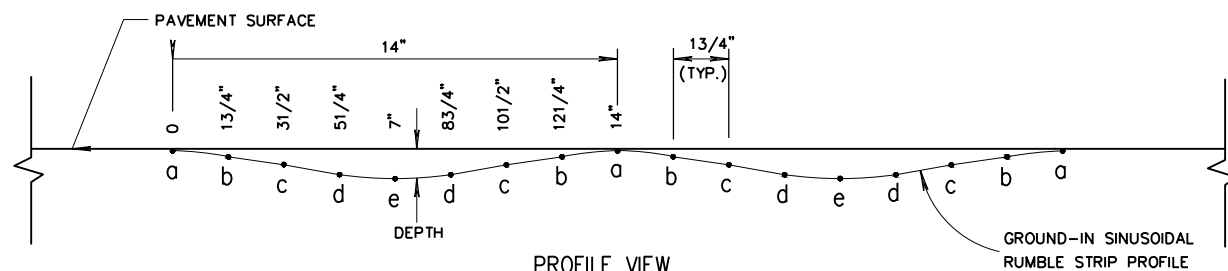
SECTION A-A
SUPERELEVATED ROADWAY



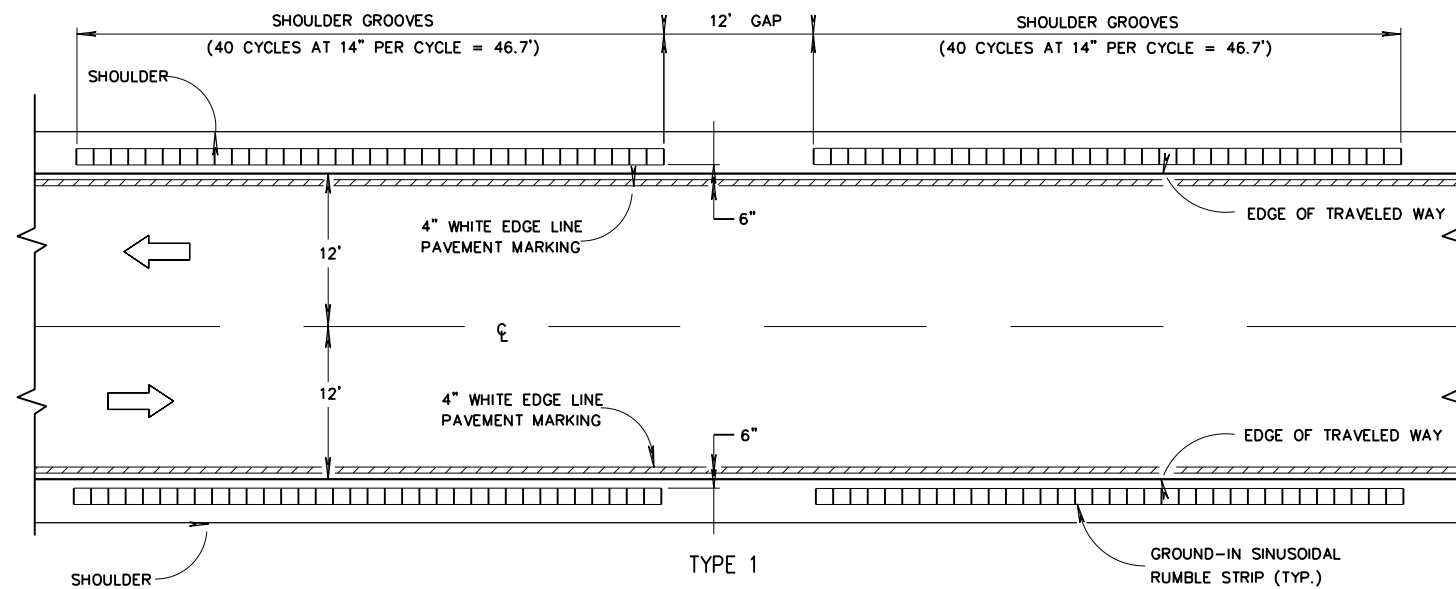
SECTION A-A
CROWNED ROADWAY



PLAN VIEW
SHOULDER WITH GROUND-IN SINUSOIDAL RUMBLE STRIP



PROFILE VIEW
GROUND-IN SINUSOIDAL RUMBLE STRIP



TYPE 1
TWO-LANE SHOULDER SINUSOIDAL RUMBLE STRIP

TWO-LANE RURAL SHOULDER SINUSOIDAL RUMBLE STRIP, MILLING ALONG ASPHALTIC ROADWAYS

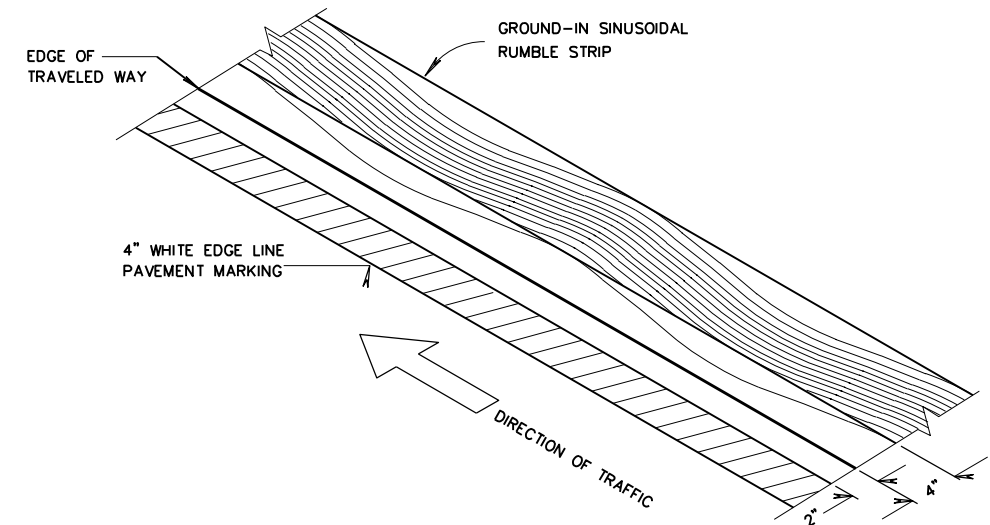
LOCATION	DEPTH INCHES
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"

GENERAL NOTES

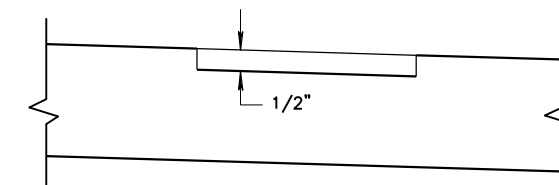
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

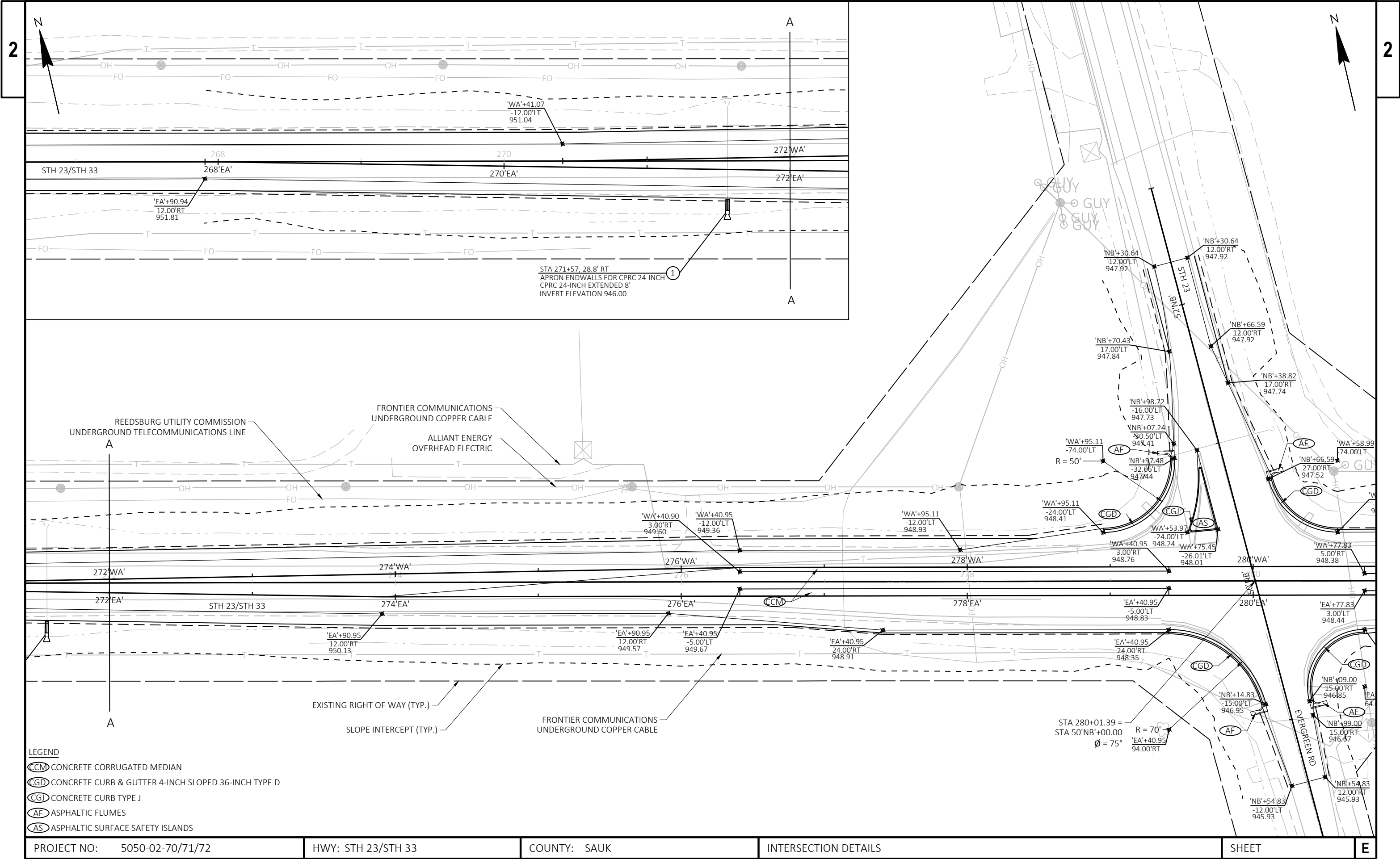
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC

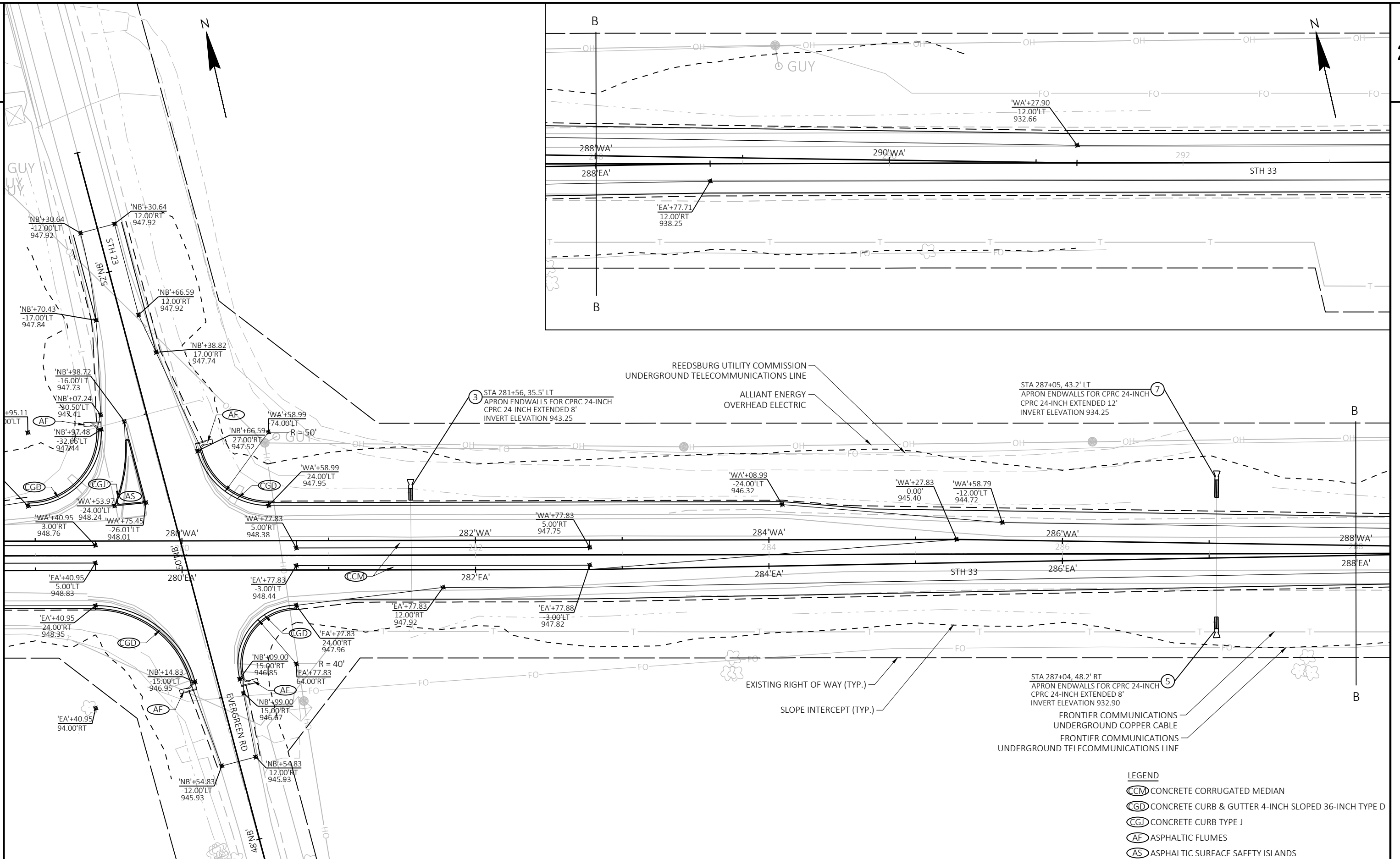


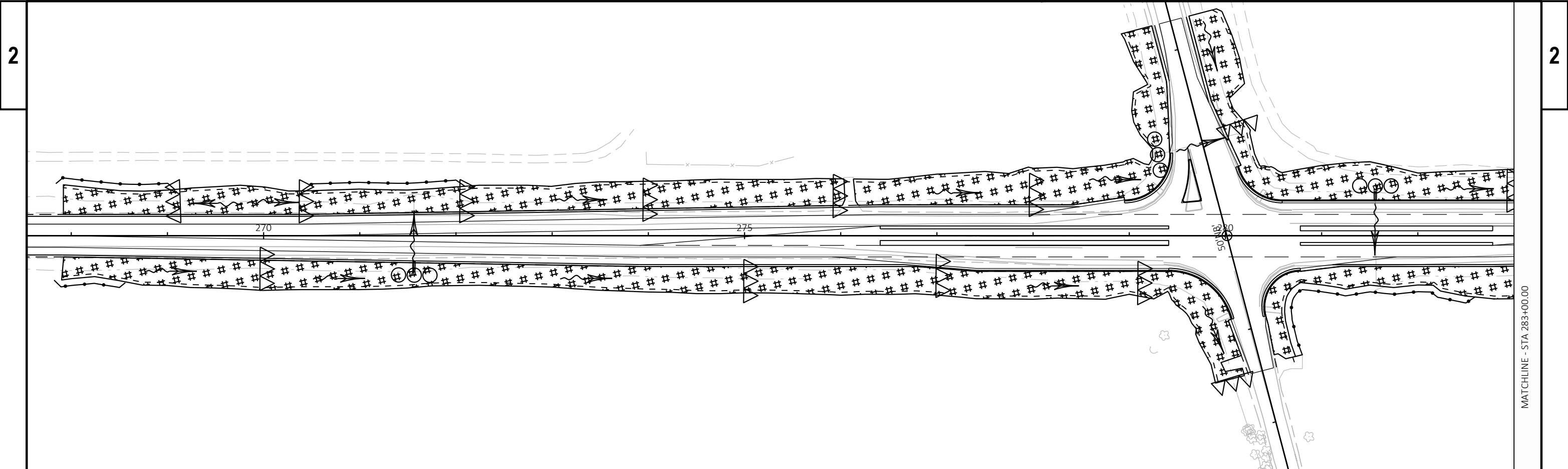
SECTION A-A



- LEGEND
- CCM CONCRETE CORRUGATED MEDIAN
 - CGD CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
 - CGI CONCRETE CURB TYPE J
 - AF ASPHALTIC FLUMES
 - AS ASPHALTIC SURFACE SAFETY ISLANDS

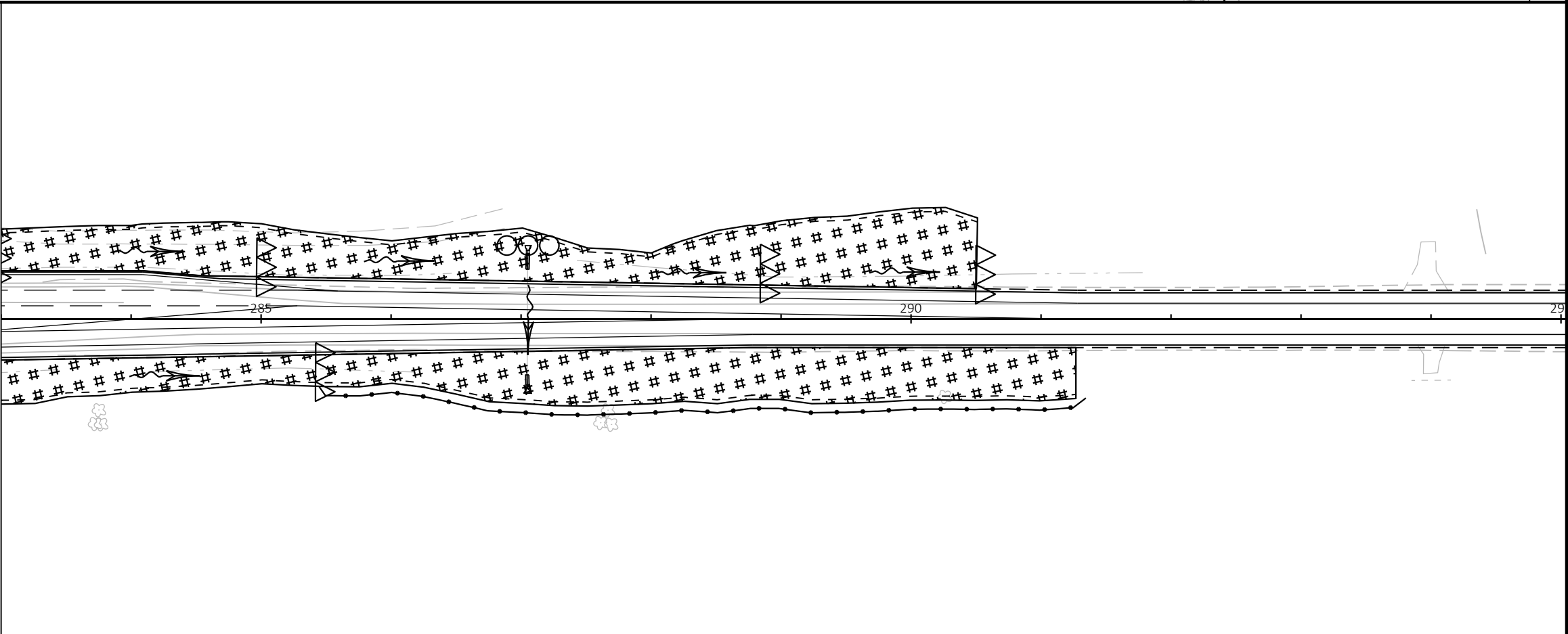
PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	INTERSECTION DETAILS	SHEET	E
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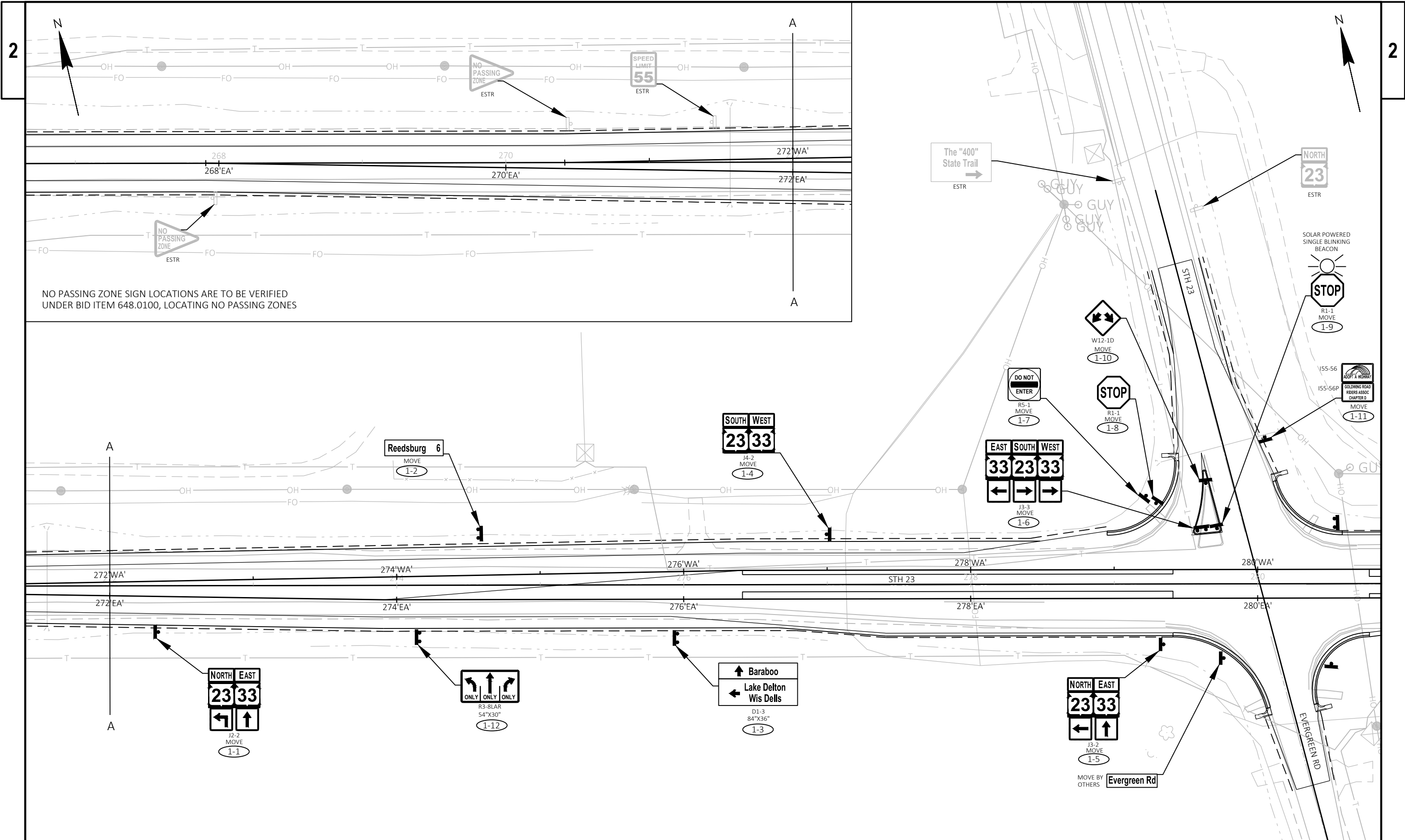


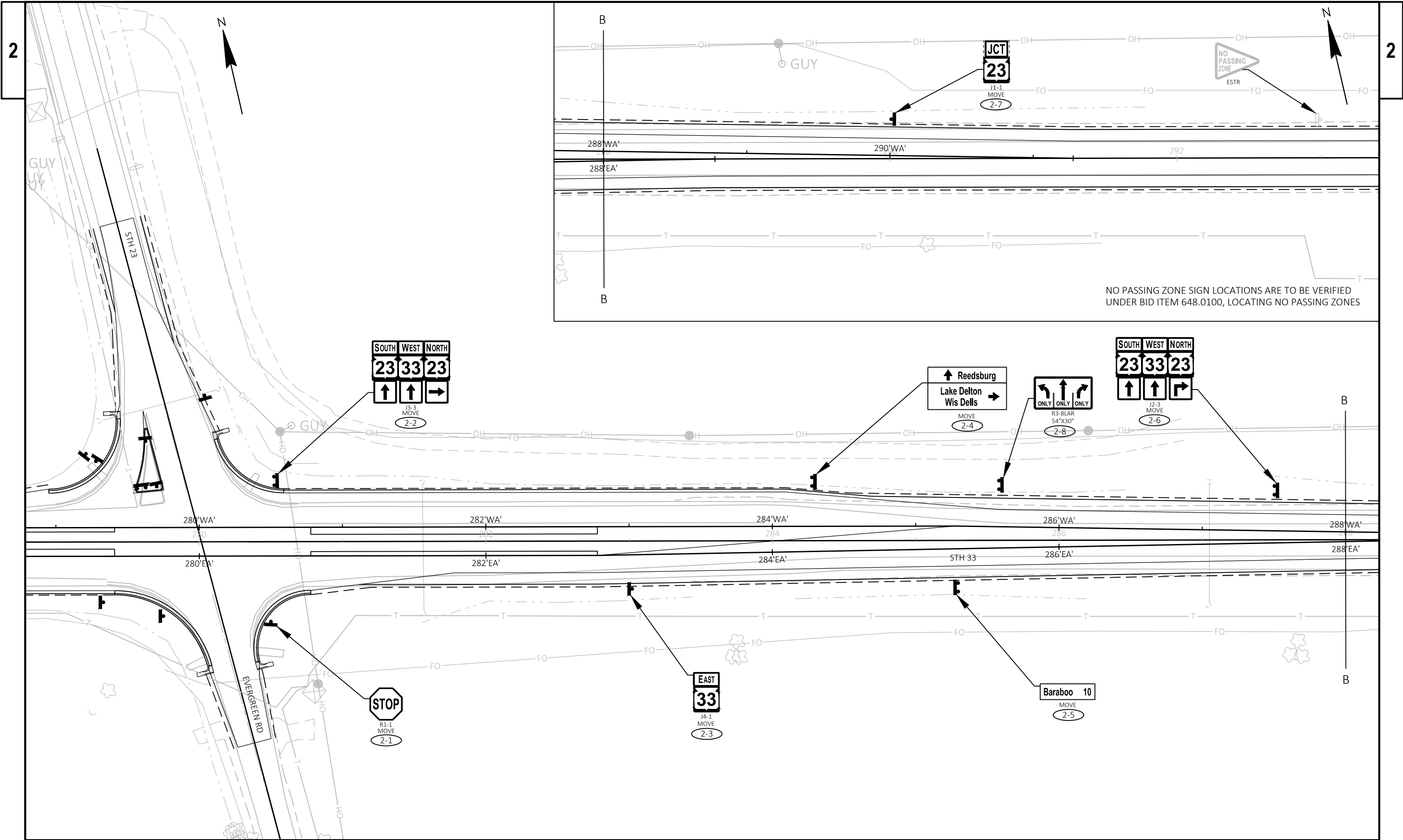


LEGEND

- ##### EROSION MAT CLASS I, TYPE A
- SILT FENCE
- - - SLOPE INTERCEPT
- △△△ TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- ~> SURFACE WATER FLOW



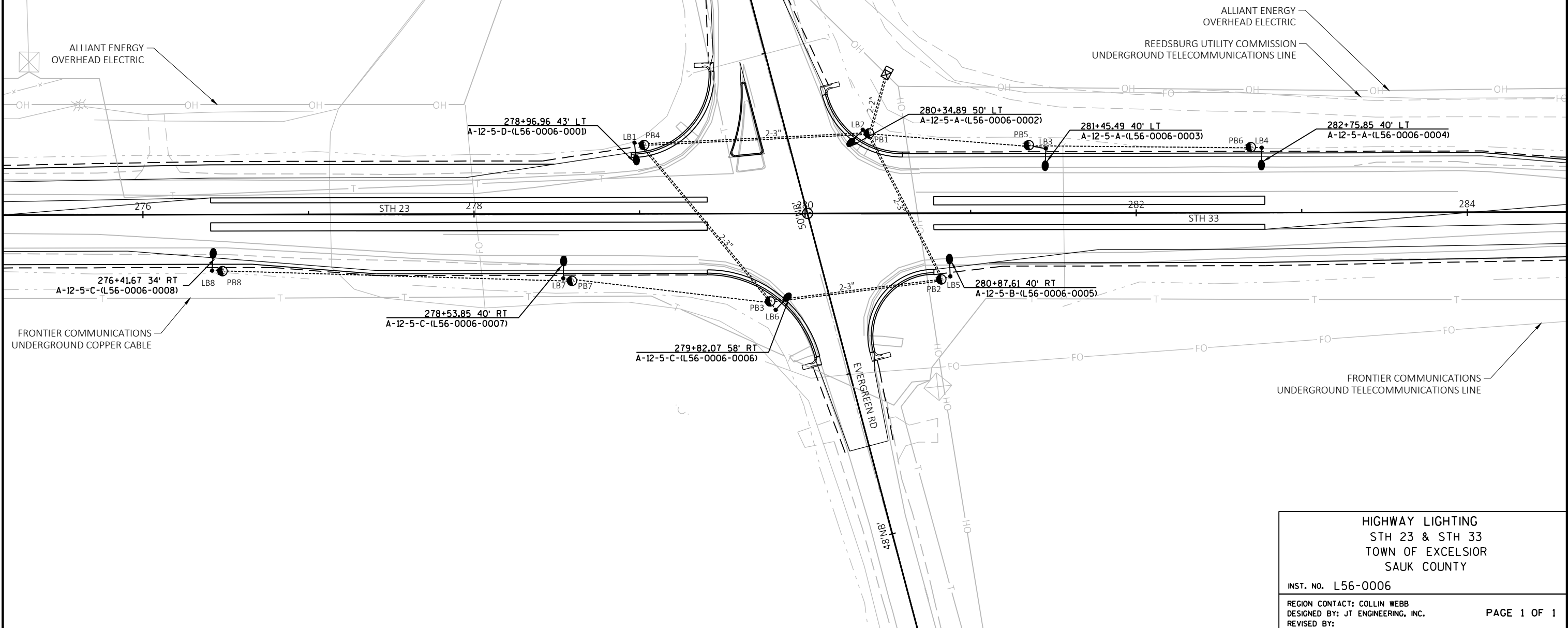
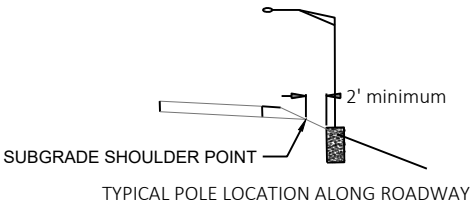
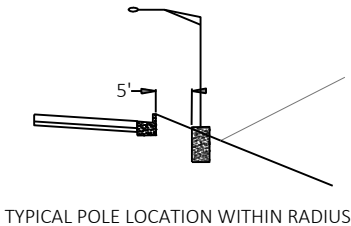




 DISTRIBUTION CENTER
 PULL BOX - 24" x 42" UNLESS OTHERWISE NOTED
 CONDUIT - 2" UNLESS OTHERWISE NOTED
 LIGHT POLE, ARM MOUNTED LUMINAIRE

276+41.67 34' RT
A-12-5-C-(L56-0006-0008)

POLE NUMBER
 CIRCUIT NUMBER
 BASE TYPE
 MAST ARM BRACKET LENGTH IN FEET
 LED LAMP TYPE



SEE SDD 15C8 SHEET A - LONGITUDINAL MARKING (MAINLINE),
SDD 15C8 SHEET B - PAVEMENT MARKING (TURN LANES),
SDD 15C8 SHEET C - PAVEMENT MARKING (TURN LANES),
SDD 15C27 SHEET A - DOUBLE ARROW WARNING SIGN PLACEMENT,
SDD 15C27 SHEET B - PAVEMENT MARKING (ISLANDS),
SDD 15C33 - STOP LINE AND CROSSWALK PAVEMENT MARKING,
AND SDD 15C35 SHEET A - PAVEMENT MARKING (INTERSECTIONS)

NOTE: CENTERLINE PAVEMENT MARKINGS ARE SHOWN IN LOCATIONS BASED ON
EXISTING CONDITIONS. CENTERLINE CALLOUTS ARE PROVIDED AT EXISTING
TRANSITION LOCATIONS. ACTUAL LOCATIONS OF CENTERLINE MARKING TRANSITIONS
ARE TO BE IDENTIFIED UNDER THE ITEM LOCATING NO-PASSING ZONES.

PAVEMENT MARKING LEGEND

A MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
B MARKING LINE EPOXY 4-INCH (YELLOW)
C MARKING LINE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 37.5'GAP)
D MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
E MARKING LINE EPOXY 4-INCH (WHITE SKIP)(12.5'SEG., 37.5'GAP)
F MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

G MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
H MARKING STOP LINE EPOXY 18-INCH (WHITE)
I MARKING WORD EPOXY
J MARKING LINE EPOXY 4-INCH (WHITE)
K MARKING ARROW EPOXY
L MARKING CURB EPOXY

M MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW)
N MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 35.7'GAP)
O MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (DOUBLE YELLOW)
P MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)(2'SEG., 2'GAP)
Q MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE DOTTED)(3'SEG., 9'GAP)
R MARKING CORRUGATED MEDIAN EPOXY (YELLOW)
S MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 5050-02-70/71/72

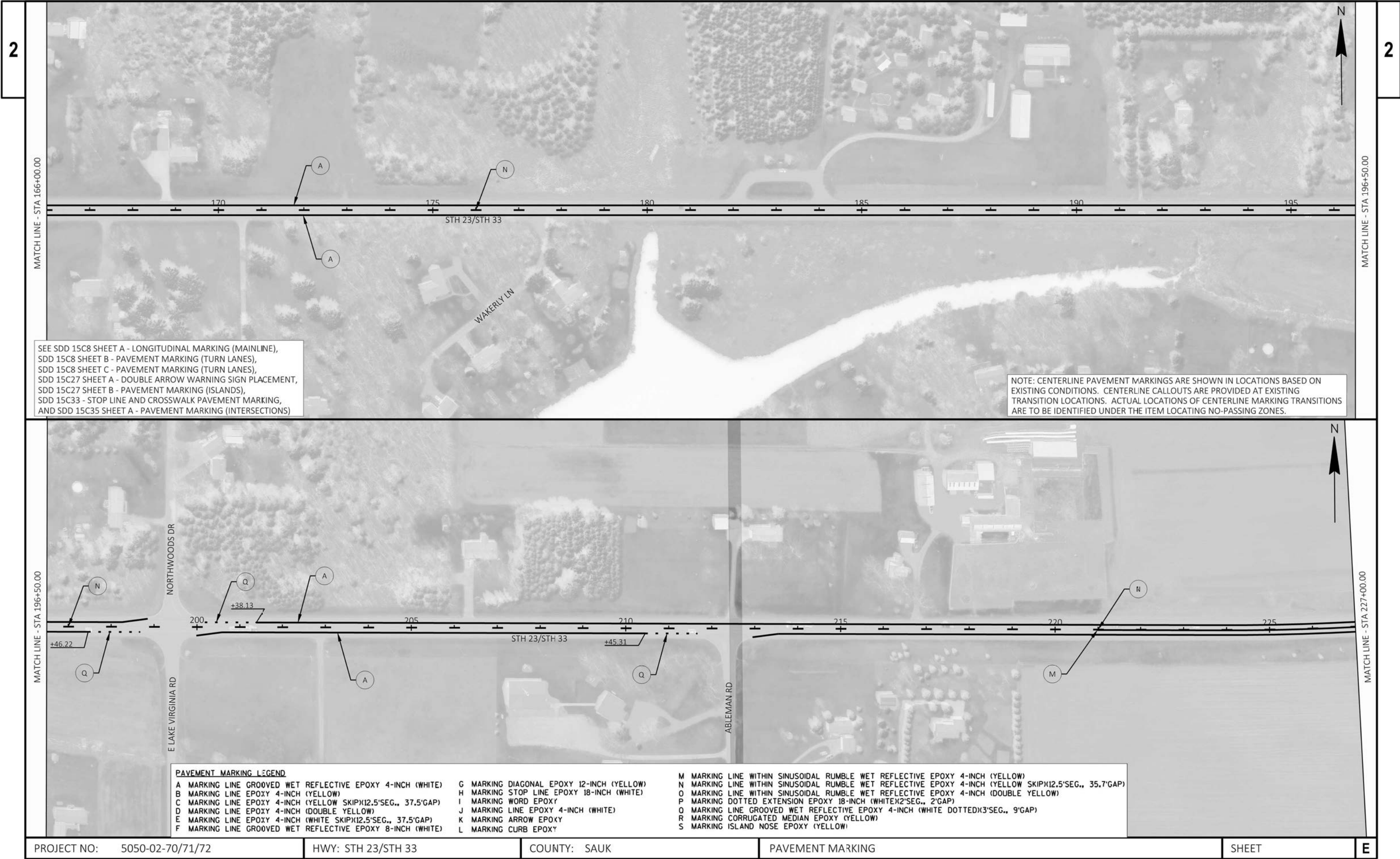
HWY: STH 23/STH 33

COUNTY: SAUK

PAVEMENT MARKING

SHEET

E



SEE SDD 15C8 SHEET A - LONGITUDINAL MARKING (MAINLINE),
SDD 15C8 SHEET B - PAVEMENT MARKING (TURN LANES),
SDD 15C8 SHEET C - PAVEMENT MARKING (TURN LANES),
SDD 15C27 SHEET A - DOUBLE ARROW WARNING SIGN PLACEMENT,
SDD 15C27 SHEET B - PAVEMENT MARKING (ISLANDS),
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AND SDD 15C35 SHEET A - PAVEMENT MARKING (INTERSECTIONS)

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PAVEMENT MARKING LEGEND

- | | | |
|--|---|--|
| A MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE) | G MARKING DIAGONAL EPOXY 12-INCH (YELLOW) | M MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW) |
| B MARKING LINE EPOXY 4-INCH (YELLOW) | H MARKING STOP LINE EPOXY 18-INCH (WHITE) | N MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 35.7'GAP) |
| C MARKING LINE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 37.5'GAP) | I MARKING WORD EPOXY | O MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (DOUBLE YELLOW) |
| D MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW) | J MARKING LINE EPOXY 4-INCH (WHITE) | P MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)(2'SEG., 2'GAP) |
| E MARKING LINE EPOXY 4-INCH (WHITE SKIP)(12.5'SEG., 37.5'GAP) | K MARKING ARROW EPOXY | Q MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE DOTTED)(3'SEG., 9'GAP) |
| F MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) | L MARKING CURB EPOXY | R MARKING CORRUGATED MEDIAN EPOXY (YELLOW) |
| | | S MARKING ISLAND NOSE EPOXY (YELLOW) |

MATCH LINE - STA 227+00.00

MATCH LINE - STA 257+50.00

SEE SDD 15C8 SHEET A - LONGITUDINAL MARKING (MAINLINE),
SDD 15C8 SHEET B - PAVEMENT MARKING (TURN LANES),
SDD 15C8 SHEET C - PAVEMENT MARKING (TURN LANES),
SDD 15C27 SHEET A - DOUBLE ARROW WARNING SIGN PLACEMENT,
SDD 15C27 SHEET B - PAVEMENT MARKING (ISLANDS),
SDD 15C33 - STOP LINE AND CROSSWALK PAVEMENT MARKING,
AND SDD 15C35 SHEET A - PAVEMENT MARKING (INTERSECTIONS)

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MATCH LINE - STA 257+50.00

MATCH LINE - STA 288+00.00

END PROJECT 5050-02-71; BEGIN PROJECT 5050-02-70
S+A 267+90.87

PAVEMENT MARKING LEGEND

A MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
B MARKING LINE EPOXY 4-INCH (YELLOW)
C MARKING LINE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 37.5'GAP)
D MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
E MARKING LINE EPOXY 4-INCH (WHITE SKIP)(12.5'SEG., 37.5'GAP)
F MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

G MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
H MARKING STOP LINE EPOXY 18-INCH (WHITE)
I MARKING WORD EPOXY
J MARKING LINE EPOXY 4-INCH (WHITE)
K MARKING ARROW EPOXY
L MARKING CURB EPOXY

M MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW)
N MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 35.7'GAP)
O MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (DOUBLE YELLOW)
P MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)(2'SEG., 2'GAP)
Q MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE DOTTED)(3'SEG., 9'GAP)
R MARKING CORRUGATED MEDIAN EPOXY (YELLOW)
S MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 5050-02-70/71/72

HWY: STH 23/STH 33

COUNTY: SAUK

PAVEMENT MARKING

SHEET

E



MATCH LINE - STA 349+00.00

SEE SDD 15C8 SHEET A - LONGITUDINAL MARKING (MAINLINE),
SDD 15C8 SHEET B - PAVEMENT MARKING (TURN LANES),
SDD 15C8 SHEET C - PAVEMENT MARKING (TURN LANES),
SDD 15C27 SHEET A - DOUBLE ARROW WARNING SIGN PLACEMENT,
SDD 15C27 SHEET B - PAVEMENT MARKING (ISLANDS),
SDD 15C33 - STOP LINE AND CROSSWALK PAVEMENT MARKING,
AND SDD 15C35 SHEET A - PAVEMENT MARKING (INTERSECTIONS)

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MATCH LINE - STA 379+50.00

MATCH LINE - STA 379+50.00

PAVEMENT MARKING LEGEND

A MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
B MARKING LINE EPOXY 4-INCH (YELLOW)
C MARKING LINE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 37.5'GAP)
D MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
E MARKING LINE EPOXY 4-INCH (WHITE SKIP)(12.5'SEG., 37.5'GAP)
F MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

G MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
H MARKING STOP LINE EPOXY 18-INCH (WHITE)
I MARKING WORD EPOXY
J MARKING LINE EPOXY 4-INCH (WHITE)
K MARKING ARROW EPOXY
L MARKING CURB EPOXY

M MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW)
N MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 35.7'GAP)
O MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (DOUBLE YELLOW)
P MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)(2'SEG., 2'GAP)
Q MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE DOTTED)(3'SEG., 9'GAP)
R MARKING CORRUGATED MEDIAN EPOXY (YELLOW)
S MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 5050-02-70/71/72

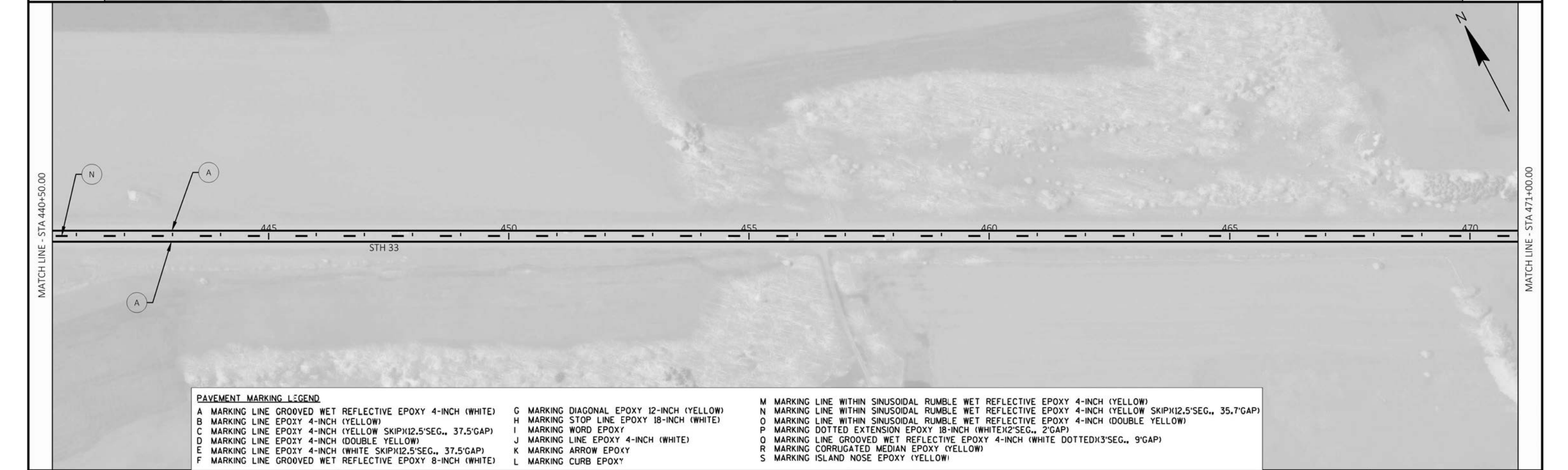
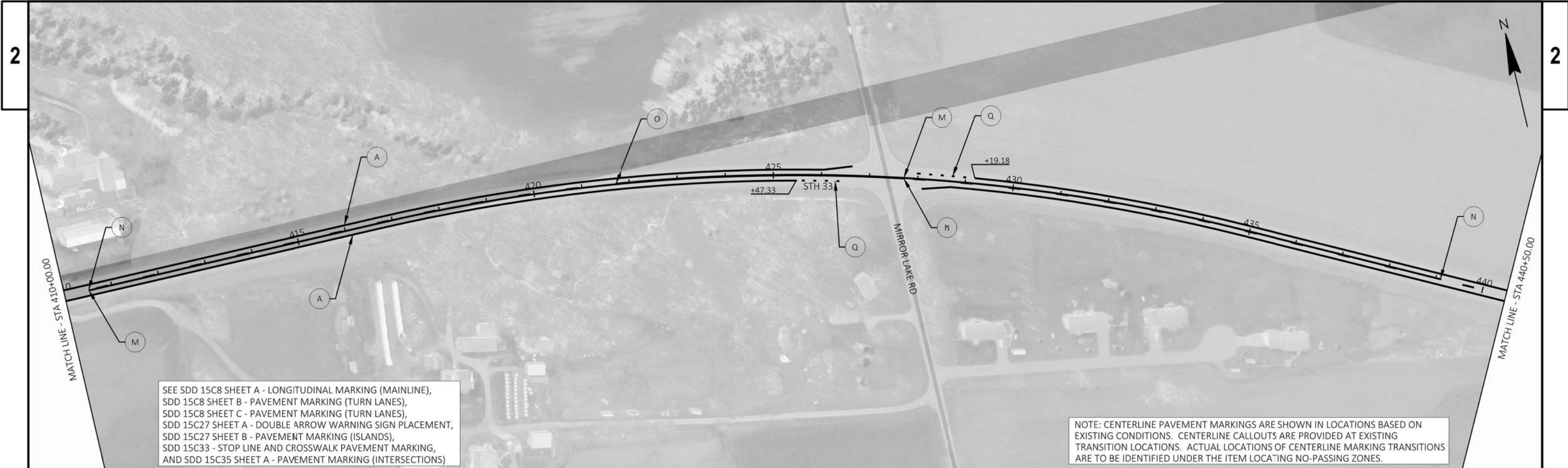
HWY: STH 23/STH 33

COUNTY: SAUK

PAVEMENT MARKING

SHEET

E





SEE SDD 15C8 SHEET A - LONGITUDINAL MARKING (MAINLINE),
SDD 15C8 SHEET B - PAVEMENT MARKING (TURN LANES),
SDD 15C8 SHEET C - PAVEMENT MARKING (TURN LANES),
SDD 15C27 SHEET A - DOUBLE ARROW WARNING SIGN PLACEMENT,
SDD 15C27 SHEET B - PAVEMENT MARKING (ISLANDS),
SDD 15C33 - STOP LINE AND CROSSWALK PAVEMENT MARKING,
AND SDD 15C35 SHEET A - PAVEMENT MARKING (INTERSECTIONS)

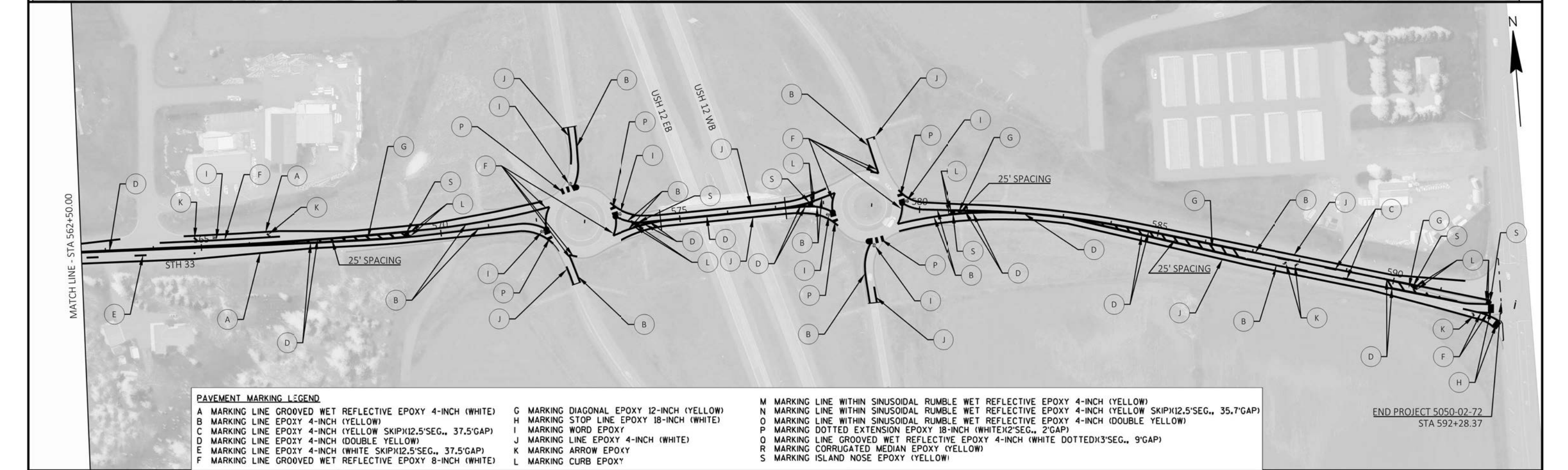
NOTE: CENTERLINE PAVEMENT MARKINGS ARE SHOWN IN LOCATIONS BASED ON
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ARE TO BE IDENTIFIED UNDER THE ITEM LOCATING NO-PASSING ZONES.

PAVEMENT MARKING LEGEND					
A	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)	G	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)	M	MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW)
B	MARKING LINE EPOXY 4-INCH (YELLOW)	H	MARKING STOP LINE EPOXY 18-INCH (WHITE)	N	MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 35.7'GAP)
C	MARKING LINE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 37.5'GAP)	I	MARKING WORD EPOXY	O	MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (DOUBLE YELLOW)
D	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)	J	MARKING LINE EPOXY 4-INCH (WHITE)	P	MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)(2'SEG., 2'GAP)
E	MARKING LINE EPOXY 4-INCH (WHITE SKIP)(12.5'SEG., 37.5'GAP)	K	MARKING ARROW EPOXY	Q	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE DOTTED)(3'SEG., 9'GAP)
F	MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)	L	MARKING CURB EPOXY	R	MARKING CORRUGATED MEDIAN EPOXY (YELLOW)
				S	MARKING ISLAND NOSE EPOXY (YELLOW)



SEE SDD 15C8 SHEET A - LONGITUDINAL MARKING (MAINLINE),
SDD 15C8 SHEET B - PAVEMENT MARKING (TURN LANES),
SDD 15C8 SHEET C - PAVEMENT MARKING (TURN LANES),
SDD 15C27 SHEET A - DOUBLE ARROW WARNING SIGN PLACEMENT,
SDD 15C27 SHEET B - PAVEMENT MARKING (ISLANDS),
SDD 15C33 - STOP LINE AND CROSSWALK PAVEMENT MARKING,
AND SDD 15C35 SHEET A - PAVEMENT MARKING (INTERSECTIONS)

NOTE: CENTERLINE PAVEMENT MARKINGS ARE SHOWN IN LOCATIONS BASED ON EXISTING CONDITIONS. CENTERLINE CALLOUTS ARE PROVIDED AT EXISTING TRANSITION LOCATIONS. ACTUAL LOCATIONS OF CENTERLINE MARKING TRANSITIONS ARE TO BE IDENTIFIED UNDER THE ITEM LOCATING NO-PASSING ZONES.



PAVEMENT MARKING LEGEND		
A MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)	G MARKING DIAGONAL EPOXY 12-INCH (YELLOW)	M MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW)
B MARKING LINE EPOXY 4-INCH (YELLOW)	H MARKING STOP LINE EPOXY 18-INCH (WHITE)	N MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 35.7'GAP)
C MARKING LINE EPOXY 4-INCH (YELLOW SKIP)(12.5'SEG., 37.5'GAP)	I MARKING WORD EPOXY	O MARKING LINE WITHIN SINUSOIDAL RUMBLE WET REFLECTIVE EPOXY 4-INCH (DOUBLE YELLOW)
D MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)	J MARKING LINE EPOXY 4-INCH (WHITE)	P MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)(2'SEG., 2'GAP)
E MARKING LINE EPOXY 4-INCH (WHITE SKIP)(12.5'SEG., 37.5'GAP)	K MARKING ARROW EPOXY	Q MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE DOTTED)(3'SEG., 9'GAP)
F MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)	L MARKING CURB EPOXY	R MARKING CORRUGATED MEDIAN EPOXY (YELLOW)
		S MARKING ISLAND NOSE EPOXY (YELLOW)

GENERAL TRAFFIC CONTROL NOTES

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR METHODS OR SEQUENCE OF OPERATIONS

ALL "W" AND "WO" SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED, OR AS PROVIDED FOR IN SDD'S, AND SHALL HAVE REFLECTIVE FLUORESCENT DIAMOND GRADE SHEETING.

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF TRAFFIC CONTROL, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

"WO" SIGNS ARE THE SAME AS "W" SIGNS, EXCEPT THE BACKGROUND SHALL BE ORANGE.

WARNING LIGHTS SHALL NOT BE WORKING ON "COVERED" OR "DOWNED" SIGNS OR BARRICADES.

DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" LIGHTS.

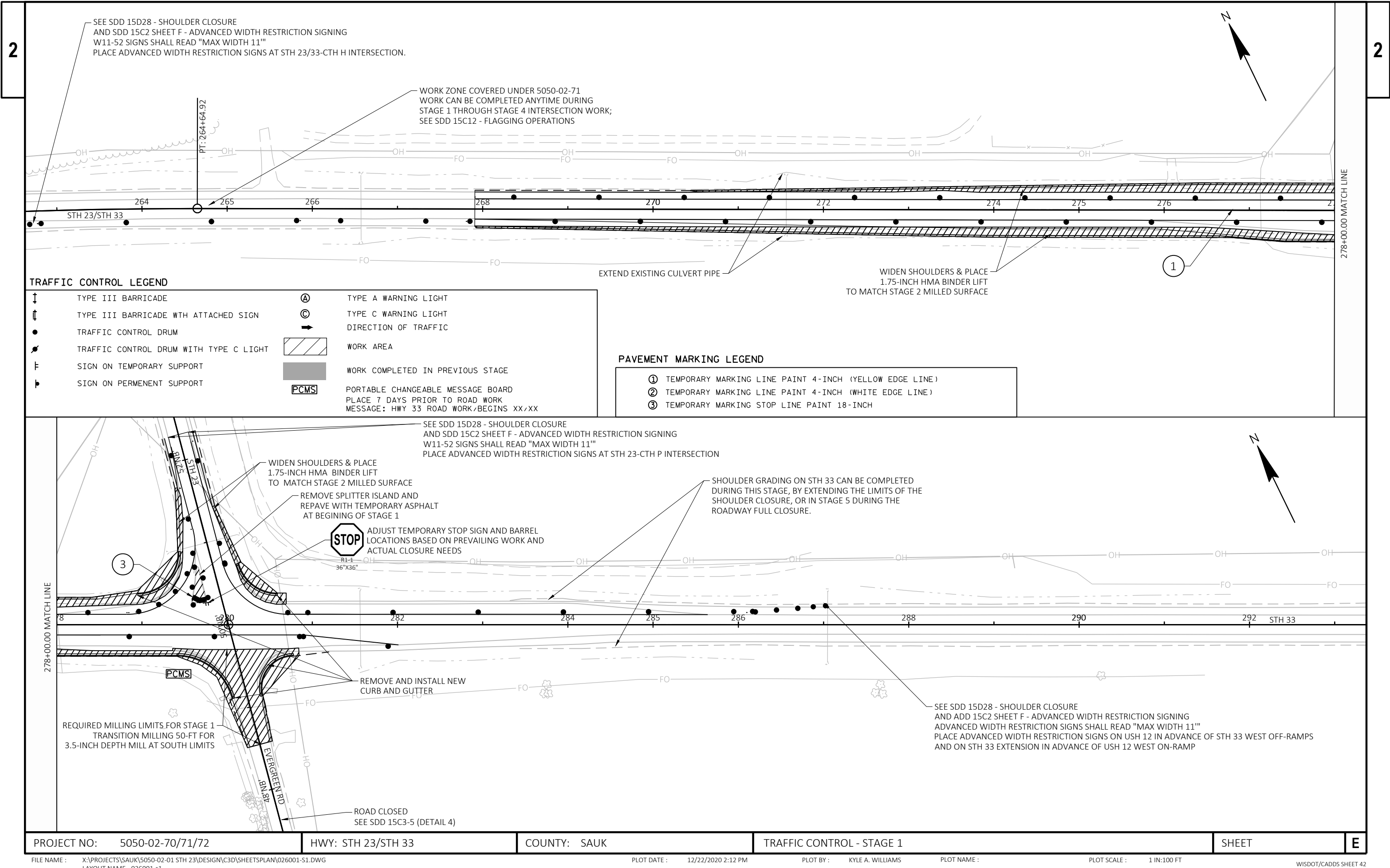
FOR NIGHTTIME OPERATION, ALL DRUMS IN TAPERS SHALL HAVE A TYPE "C" STEADY BURN WARNING LIGHT.

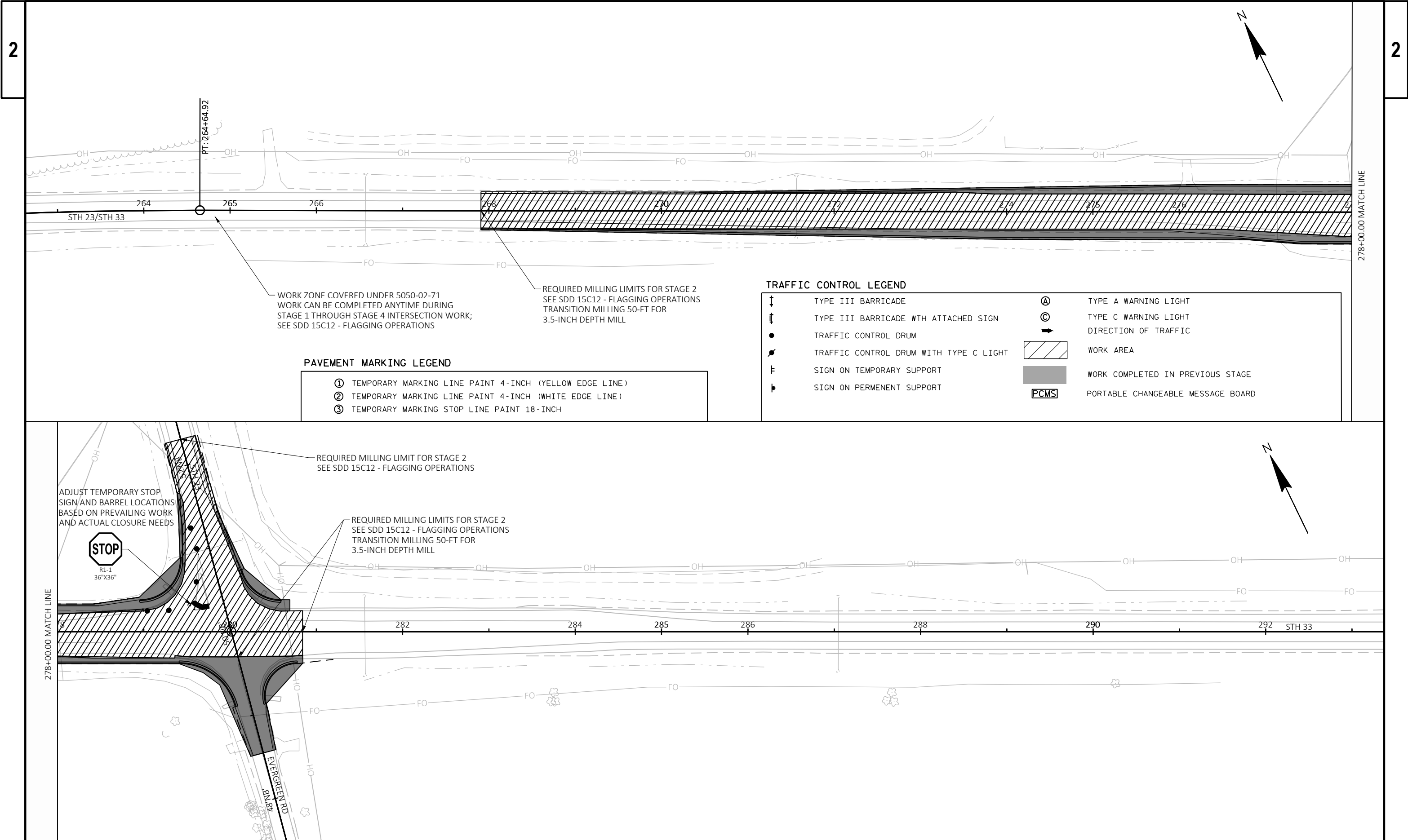
ALL R11-2, R11-3, AND R11-4 SIGNS SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE III BARRICADE. THE SIGNS SHALL NOT COVER THE MIDDLE RAIL.

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES AND ON R11-2, R11-3, AND R11-4 SIGNS.

ALL TYPE III BARRICADES SHALL HAVE AN EQUIVALENT WIDTH OF 8 FEET.

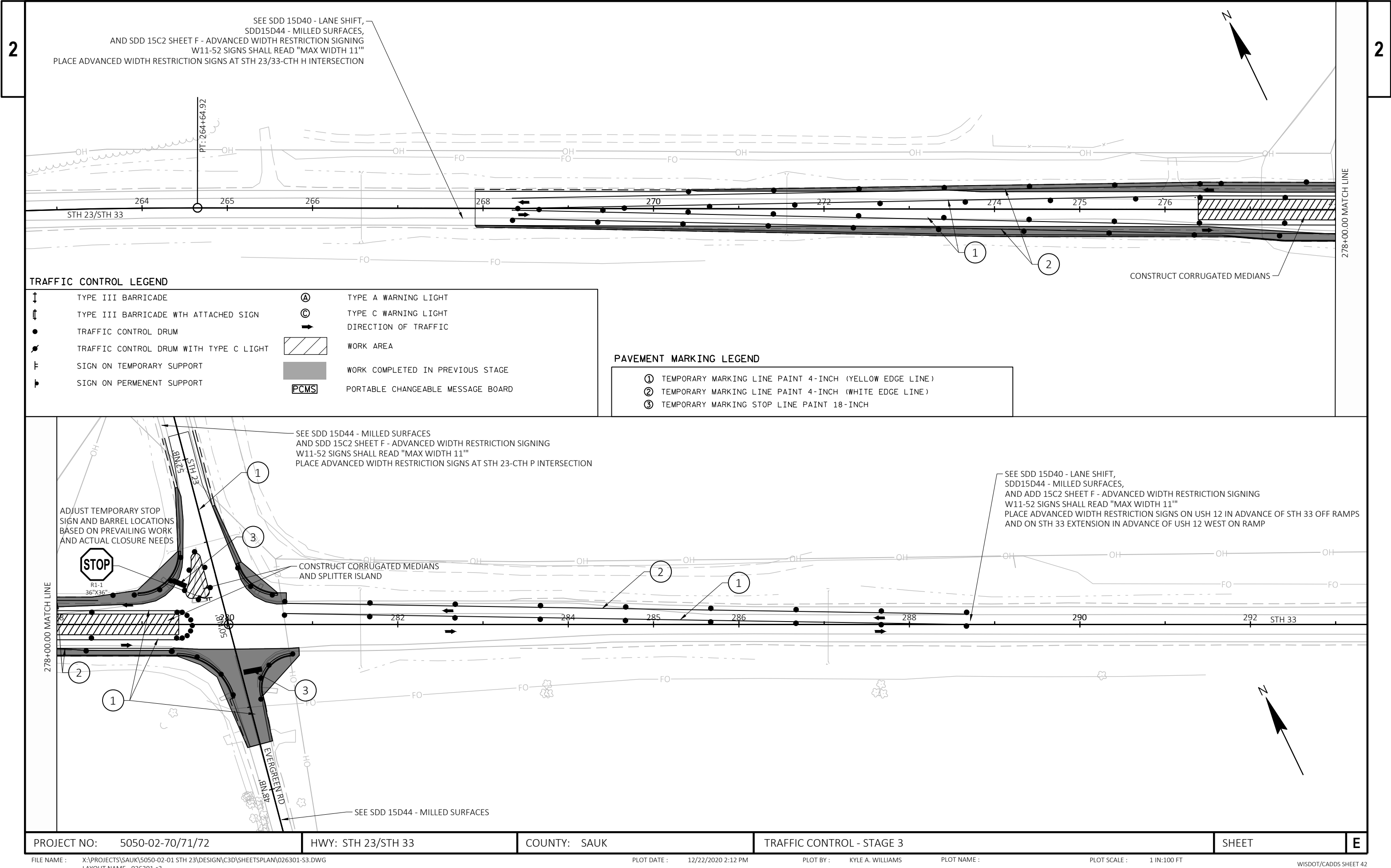
DETAILS OF TRAFFIC CONTROL DEVICES AND THEIR LOCATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS, AND CONTRACT.

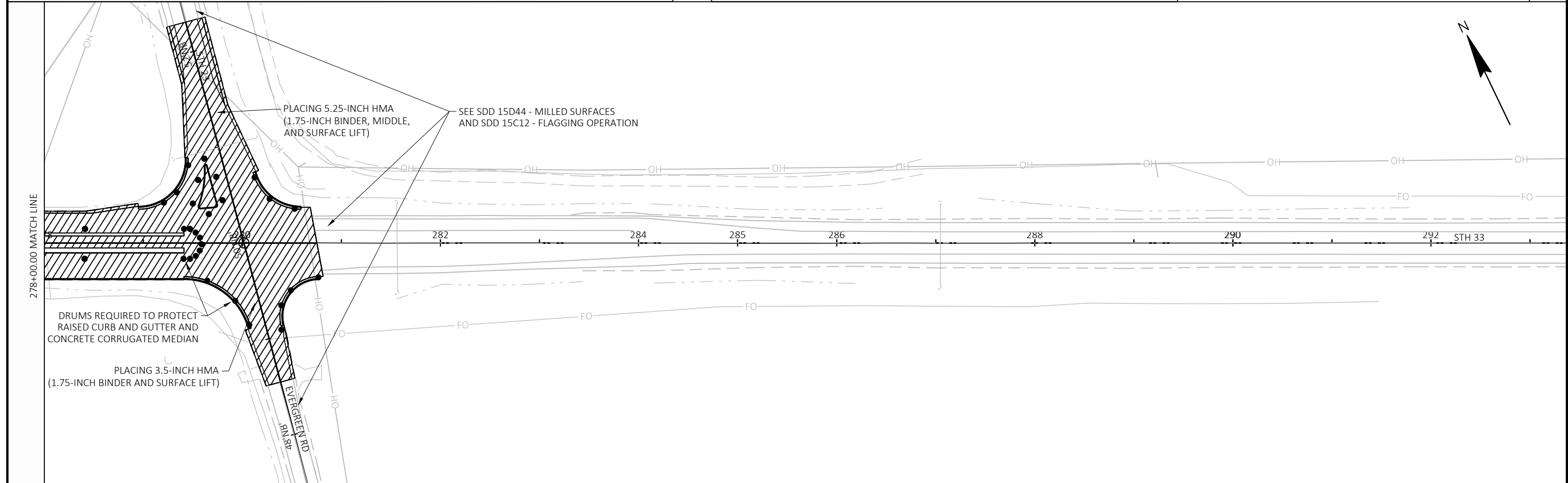
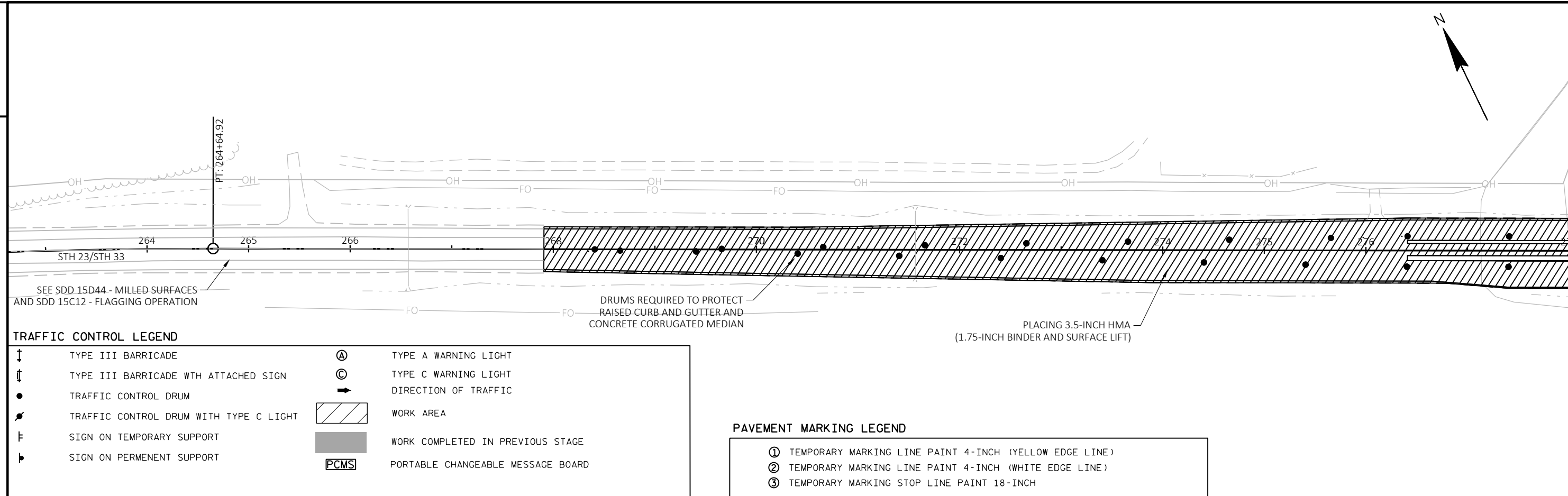




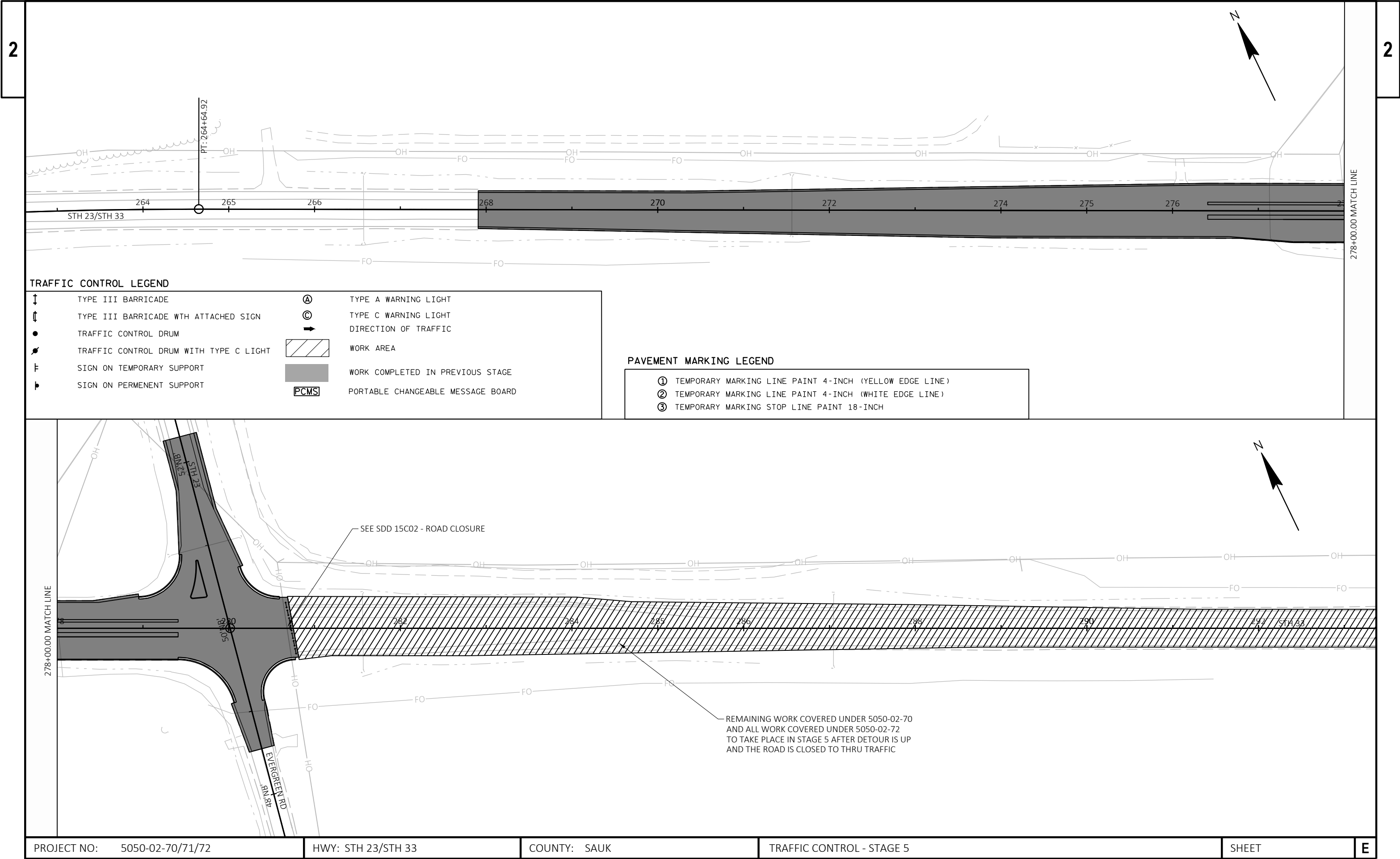
PAVEMENT MARKING LEGEND	
①	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW EDGE LINE)
②	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE EDGE LINE)
③	TEMPORARY MARKING STOP LINE PAINT 18-INCH

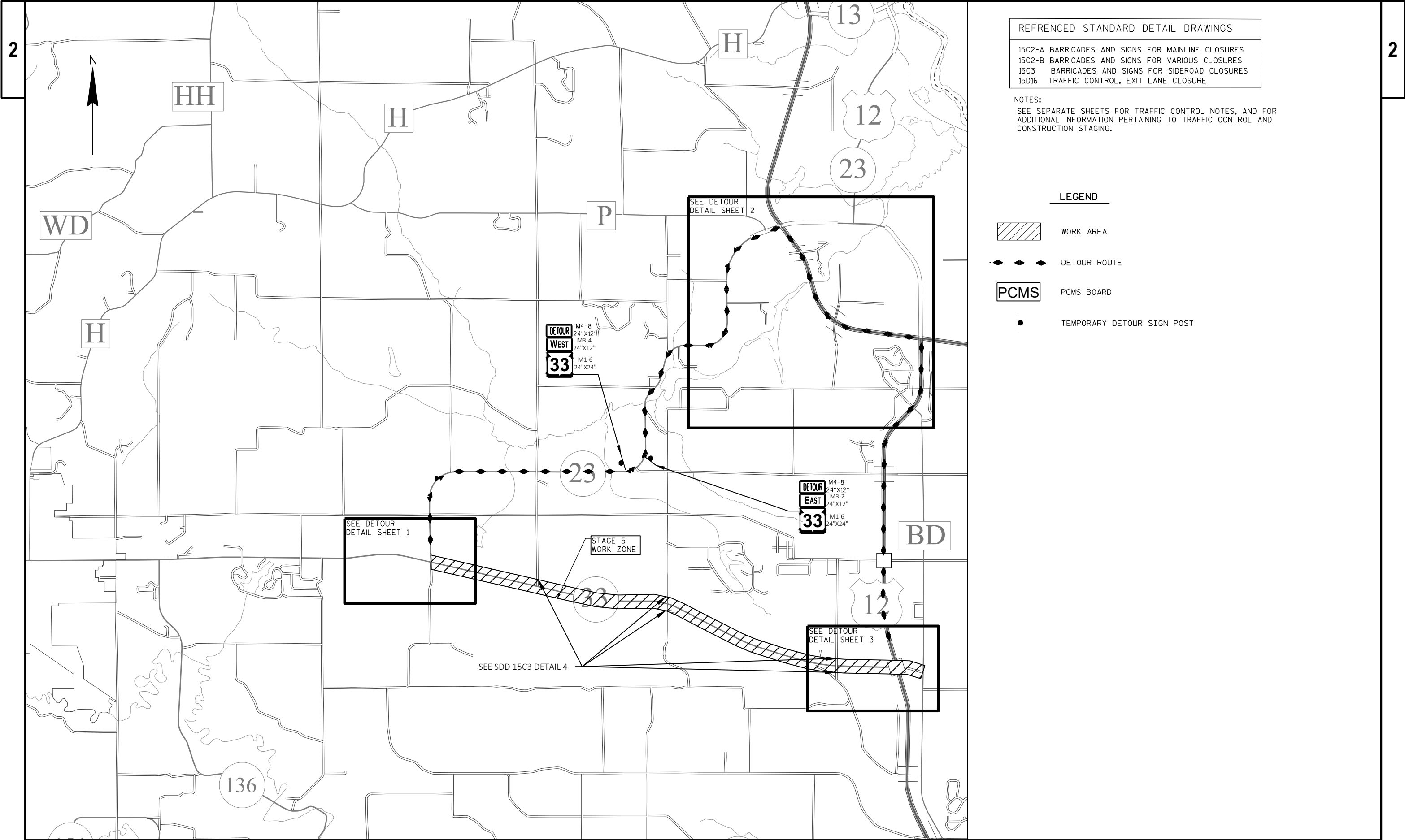
TRAFFIC CONTROL LEGEND			
↓	TYPE III BARRICADE	Ⓐ	TYPE A WARNING LIGHT
↓	TYPE III BARRICADE WITH ATTACHED SIGN	Ⓒ	TYPE C WARNING LIGHT
●	TRAFFIC CONTROL DRUM	→	DIRECTION OF TRAFFIC
⚡	TRAFFIC CONTROL DRUM WITH TYPE C LIGHT		WORK AREA
⌵	SIGN ON TEMPORARY SUPPORT		WORK COMPLETED IN PREVIOUS STAGE
⌵	SIGN ON PERMENENT SUPPORT		PORTABLE CHANGEABLE MESSAGE BOARD





PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	TRAFFIC CONTROL - STAGE 4	SHEET	E
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REFERENCED STANDARD DETAIL DRAWINGS
15C2-A BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-B BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C3 BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15D16 TRAFFIC CONTROL, EXIT LANE CLOSURE

NOTES:
SEE SEPARATE SHEETS FOR TRAFFIC CONTROL NOTES, AND FOR
ADDITIONAL INFORMATION PERTAINING TO TRAFFIC CONTROL AND
CONSTRUCTION STAGING.

LEGEND

-  WORK AREA
-  DETOUR ROUTE
-  PCMS BOARD
-  TEMPORARY DETOUR SIGN POST



REFERENCED STANDARD DETAIL DRAWINGS
15C2-A BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-B BARRICADES AND SIGNS FOR VARIOUS CLOSURES

15C2-A BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-B BARRICADES AND SIGNS FOR VARIOUS CLOSURES

NOTES:

SEE SEPARATE SHEETS FOR TRAFFIC CONTROL NOTES, AND FOR
ADDITIONAL INFORMATION PERTAINING TO TRAFFIC CONTROL AND
CONSTRUCTION STAGING.

PCMS BOARD MESSAGE TO READ "STH 33 TO CLOSE XX/XX/XX".

SEE SEPARATE SHEETS FOR TRAFFIC CONTROL NOTES, AND FOR
ADDITIONAL INFORMATION PERTAINING TO TRAFFIC CONTROL AND
CONSTRUCTION STAGING.

PCMS BOARD MESSAGE TO READ "STH 33 TO CLOSE XX/XX/XX".

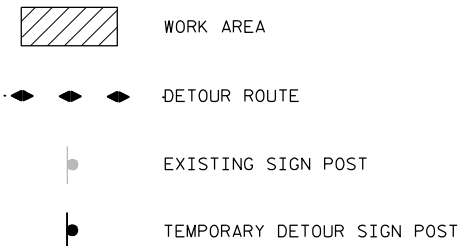
LEGEND

WORK AREA

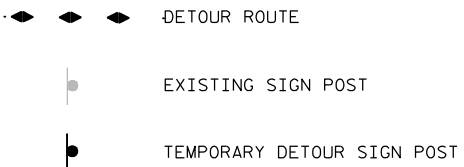
DETOUR ROUTE

EXISTING SIGN POST

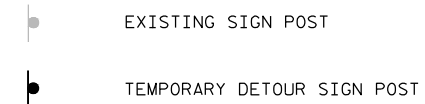
TEMPORARY DETOUR SIGN POST



	WORK AREA
	DETOUR ROUTE
	EXISTING SIGN POST
	TEMPORARY DETOUR SIGN POST



 DETOUR ROUTE
 EXISTING SIGN POST
 TEMPORARY DETOUR SIGN POST

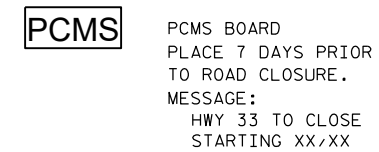


EXISTING SIGN POST

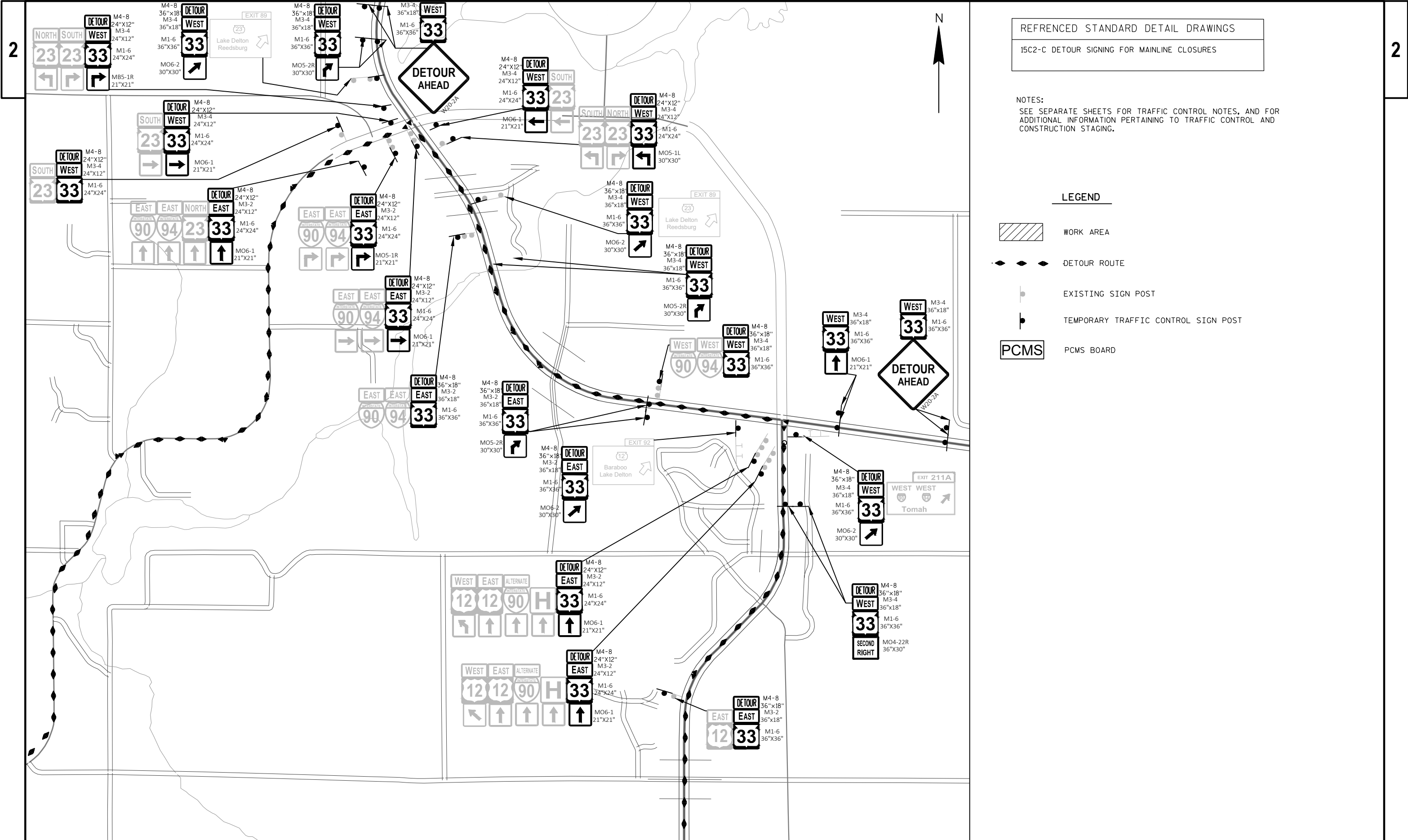
TEMPORARY DETOUR SIGN POST



TEMPORARY DETOUR SIGN POST



PCMS BOARD
PLACE 7 DAYS PRIOR
TO ROAD CLOSURE.
MESSAGE:
HWY 33 TO CLOSE
STARTING XX/XX



REFERENCED STANDARD DETAIL DRAWINGS

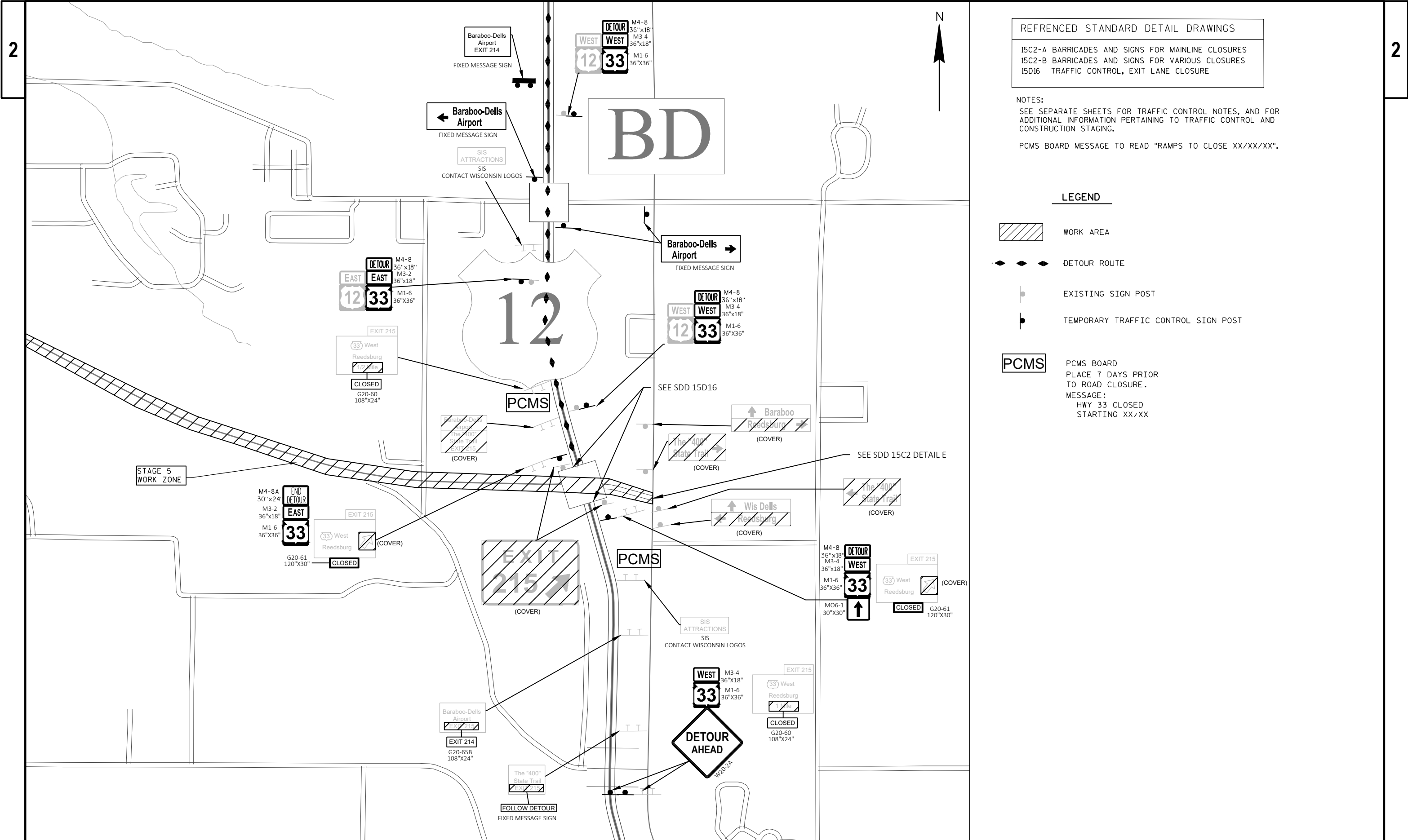
15C2-C DETOUR SIGNING FOR MAINLINE CLOSURES

NOTES:

SEE SEPARATE SHEETS FOR TRAFFIC CONTROL NOTES, AND FOR ADDITIONAL INFORMATION PERTAINING TO TRAFFIC CONTROL AND CONSTRUCTION STAGING.

LEGEND

- WORK AREA
- DETOUR ROUTE
- EXISTING SIGN POST
- TEMPORARY TRAFFIC CONTROL SIGN POST
- PCMS BOARD



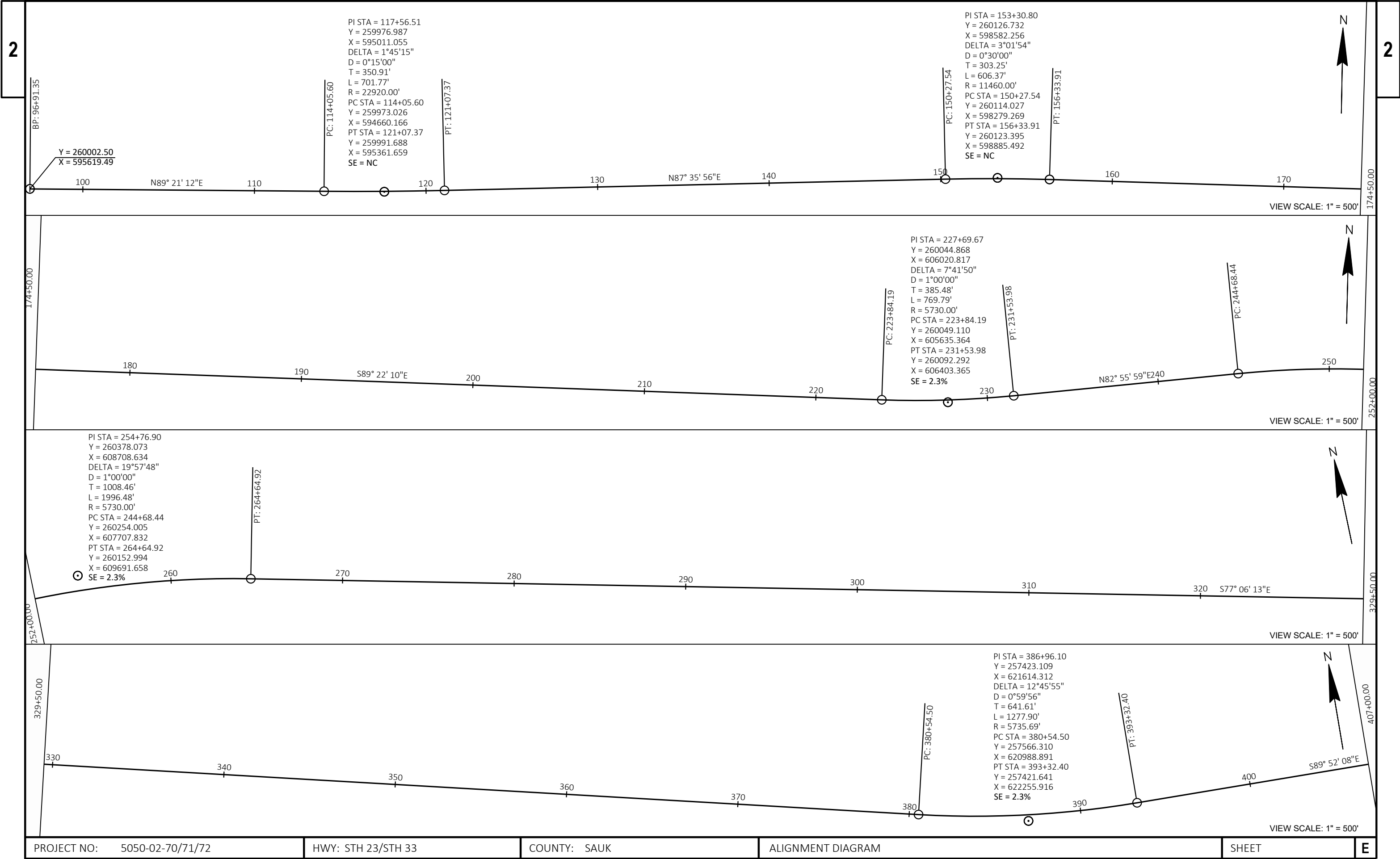
REFERENCED STANDARD DETAIL DRAWINGS
15C2-A BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-B BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15D16 TRAFFIC CONTROL, EXIT LANE CLOSURE

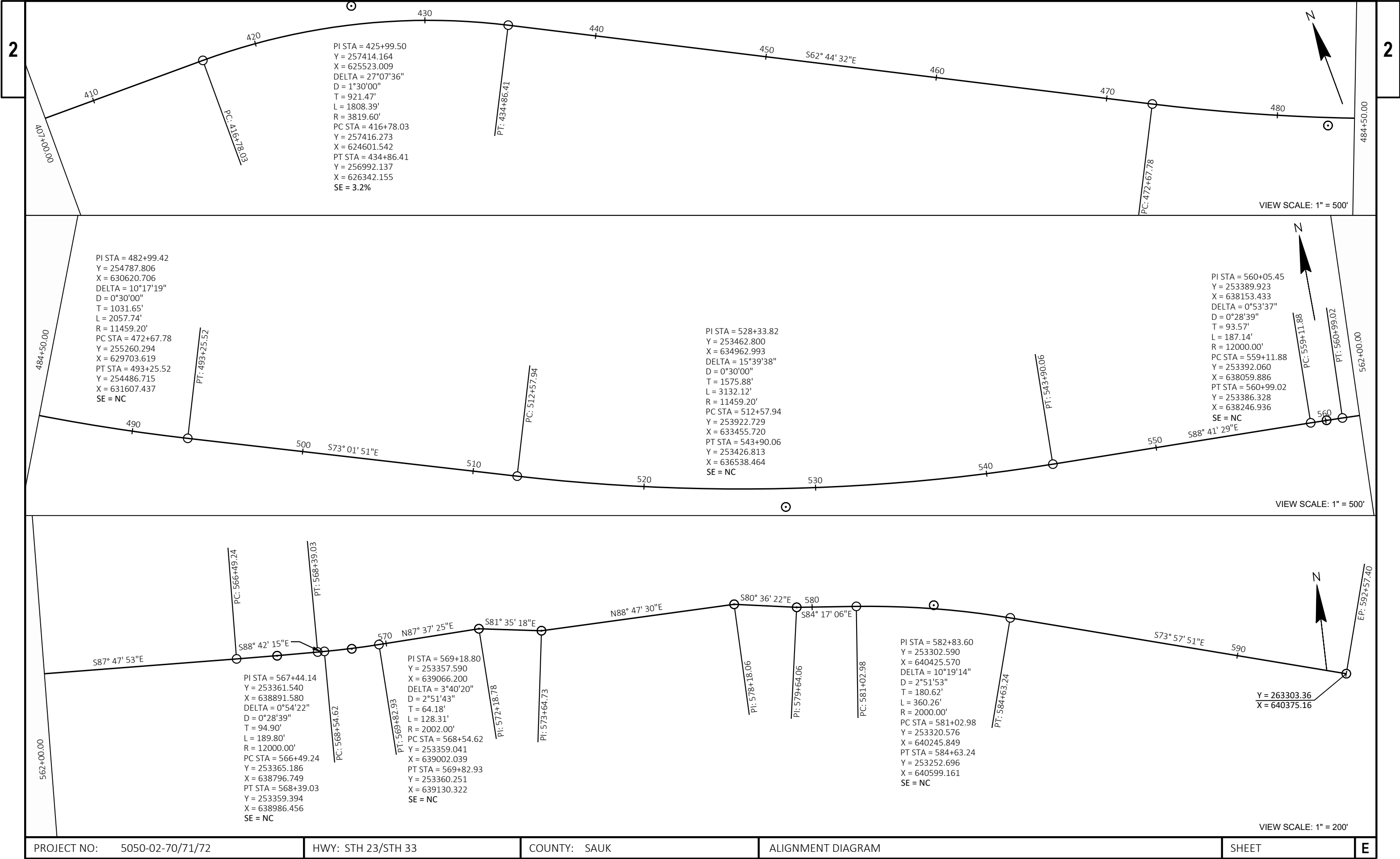
NOTES:
SEE SEPARATE SHEETS FOR TRAFFIC CONTROL NOTES, AND FOR ADDITIONAL INFORMATION PERTAINING TO TRAFFIC CONTROL AND CONSTRUCTION STAGING.
PCMS BOARD MESSAGE TO READ "RAMPS TO CLOSE XX/XX/XX".

LEGEND

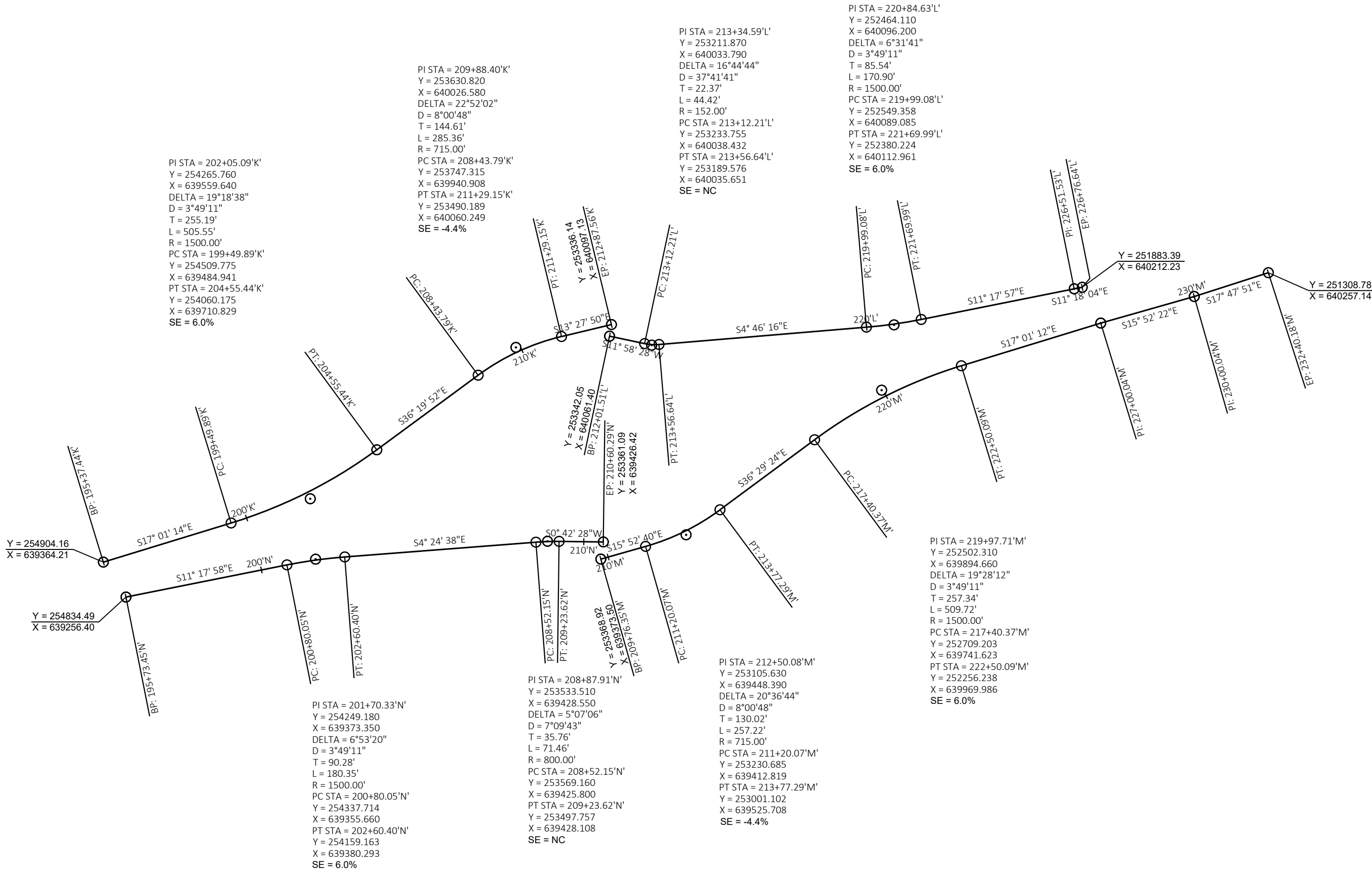
- WORK AREA
- DETOUR ROUTE
- EXISTING SIGN POST
- TEMPORARY TRAFFIC CONTROL SIGN POST

PCMS
PCMS BOARD
PLACE 7 DAYS PRIOR
TO ROAD CLOSURE.
MESSAGE:
HWY 33 CLOSED
STARTING XX/XX





PROJECT NO:	5050-02-70/71/72	HWY:	STH 23/STH 33	COUNTY:	SAUK	ALIGNMENT DIAGRAM	SHEET	E
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VIEW SCALE: 1" = 300'

PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	ALIGNMENT DIAGRAM	SHEET E
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Estimate Of Quantities

					5050-02-70	5050-02-71	5050-02-72
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	4.000	4.000		
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	306.000	94.000	36.000	176.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	214,925.000	15,090.000	63,799.000	136,036.000
0008	204.0150	Removing Curb & Gutter	LF	422.000	422.000		
0010	205.0100	Excavation Common	CY	6,058.000	6,058.000		
0012	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 5050-02-70	LS	1.000	1.000		
0014	211.0100	Prepare Foundation for Asphaltic Paving (project) 02. 5050-02-71	LS	1.000		1.000	
0016	211.0100	Prepare Foundation for Asphaltic Paving (project) 03. 5050-02-72	LS	1.000			1.000
0018	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	939.000	46.000	290.000	603.000
0020	213.0100	Finishing Roadway (project) 01. 5050-02-70	EACH	1.000	1.000		
0022	213.0100	Finishing Roadway (project) 02. 5050-02-71	EACH	1.000		1.000	
0024	213.0100	Finishing Roadway (project) 03. 5050-02-72	EACH	1.000			1.000
0026	305.0110	Base Aggregate Dense 3/4-Inch	TON	678.000	59.000	190.000	429.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,399.000	6,399.000		
0030	455.0605	Tack Coat	GAL	26,105.000	1,983.000	7,793.000	16,329.000
0032	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000		
0034	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	5.000	5.000		
0036	460.2005	Incentive Density PWL HMA Pavement	DOL	27,116.000	2,965.000	7,574.000	16,577.000
0038	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	98,714.000	9,072.000	28,970.000	60,672.000
0040	460.2010	Incentive Air Voids HMA Pavement	DOL	42,691.000	3,295.000	12,725.000	26,671.000
0042	460.6224	HMA Pavement 4 MT 58-28 S	TON	42,691.000	3,295.000	12,725.000	26,671.000
0044	465.0125	Asphaltic Surface Temporary	TON	5.000	5.000		
0046	465.0305	Asphaltic Surface Safety Islands	TON	9.000	9.000		
0048	465.0315	Asphaltic Flumes	SY	20.000	20.000		
0050	520.8000	Concrete Collars for Pipe	EACH	4.000	4.000		
0052	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	36.000	36.000		
0054	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000		
0056	601.0120	Concrete Curb Type J	LF	110.000	110.000		
0058	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	312.000	312.000		
0060	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5050-02-70	EACH	1.000	1.000		
0062	618.0100	Maintenance And Repair of Haul Roads (project) 02. 5050-02-71	EACH	1.000		1.000	
0064	618.0100	Maintenance And Repair of Haul Roads (project) 03. 5050-02-72	EACH	1.000			1.000
0066	619.1000	Mobilization	EACH	1.000	0.330	0.330	0.340
0068	620.0100	Concrete Corrugated Median	SF	4,000.000	4,000.000		

Estimate Of Quantities

					5050-02-70	5050-02-71	5050-02-72
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0070	624.0100	Water	MGAL	71.000	71.000		
0072	625.0100	Topsoil	SY	71,284.000	16,777.000	17,705.000	36,802.000
0074	627.0200	Mulching	SY	54,507.000		17,705.000	36,802.000
0076	628.1504	Silt Fence	LF	1,700.000	1,700.000		
0078	628.1520	Silt Fence Maintenance	LF	1,700.000	1,700.000		
0080	628.1905	Mobilizations Erosion Control	EACH	4.000	2.000	1.000	1.000
0082	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	2.000	1.000	1.000
0084	628.2002	Erosion Mat Class I Type A	SY	18,620.000	18,620.000		
0086	628.7504	Temporary Ditch Checks	LF	130.000	130.000		
0088	628.7555	Culvert Pipe Checks	EACH	12.000	12.000		
0090	629.0210	Fertilizer Type B	CWT	25.200	9.600	5.100	10.500
0092	630.0130	Seeding Mixture No. 30	LB	1,081.000	412.000	217.000	452.000
0094	630.0200	Seeding Temporary	LB	1,081.000	412.000	217.000	452.000
0096	630.0500	Seed Water	MGAL	795.000	187.000	198.000	410.000
0098	633.5200	Markers Culvert End	EACH	4.000	4.000		
0100	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	1.000	1.000		
0102	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	5.000	5.000		
0104	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	15.000	15.000		
0106	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	6.000	6.000		
0108	634.0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	1.000	1.000		
0110	634.0811	Posts Tubular Steel 2x2-Inch X 11-FT	EACH	1.000	1.000		
0112	637.2210	Signs Type II Reflective H	SF	43.500	43.500		
0114	638.2102	Moving Signs Type II	EACH	18.000	18.000		
0116	638.2602	Removing Signs Type II	EACH	1.000	1.000		
0118	638.3000	Removing Small Sign Supports	EACH	26.000	26.000		
0120	642.5201	Field Office Type C	EACH	1.000	1.000		
0122	643.0300	Traffic Control Drums	DAY	11,701.000	7,081.000		4,620.000
0124	643.0420	Traffic Control Barricades Type III	DAY	1,846.000	152.000		1,694.000
0126	643.0705	Traffic Control Warning Lights Type A	DAY	3,692.000	304.000		3,388.000
0128	643.0715	Traffic Control Warning Lights Type C	DAY	286.000	286.000		
0130	643.0900	Traffic Control Signs	DAY	17,393.000	4,721.000	891.000	11,781.000
0132	643.0910	Traffic Control Covering Signs Type I	EACH	3.000			3.000
0134	643.0920	Traffic Control Covering Signs Type II	EACH	9.000			9.000
0136	643.1000	Traffic Control Signs Fixed Message	SF	208.250			208.250
0138	643.1050	Traffic Control Signs PCMS	DAY	21.000	7.000		14.000
0140	643.5000	Traffic Control	EACH	1.000	0.330	0.330	0.340
0142	646.1020	Marking Line Epoxy 4-Inch	LF	19,687.000	7,400.000	79.000	12,208.000
0144	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	88,503.000	5,681.000	27,804.000	55,018.000
0146	646.3020	Marking Line Epoxy 8-Inch	LF	521.000	110.000		411.000
0148	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	2,366.000	1,915.000	200.000	251.000

Estimate Of Quantities

					5050-02-70	5050-02-71	5050-02-72
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0150	646.5020	Marking Arrow Epoxy	EACH	13.000	8.000		5.000
0152	646.5120	Marking Word Epoxy	EACH	11.000	4.000		7.000
0154	646.6120	Marking Stop Line Epoxy 18-Inch	LF	126.000	90.000		36.000
0156	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	107.000			107.000
0158	646.7120	Marking Diagonal Epoxy 12-Inch	LF	947.000	556.000		391.000
0160	646.8020	Marking Corrugated Median Epoxy	SF	600.000	600.000		
0162	646.8120	Marking Curb Epoxy	LF	60.000			60.000
0164	646.8220	Marking Island Nose Epoxy	EACH	6.000			6.000
0166	648.0100	Locating No-Passing Zones	MI	7.960		2.780	5.180
0168	649.0105	Temporary Marking Line Paint 4-Inch	LF	40,160.000	12,277.000	27,883.000	
0170	649.0805	Temporary Marking Stop Line Paint 18-Inch	LF	58.000	58.000		
0172	650.4500	Construction Staking Subgrade	LF	2,268.000	2,268.000		
0174	650.5000	Construction Staking Base	LF	2,268.000	2,268.000		
0176	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,453.000	2,453.000		
0178	650.6000	Construction Staking Pipe Culverts	EACH	4.000	4.000		
0180	650.8000	Construction Staking Resurfacing Reference	LF	46,863.000	2,268.000	14,485.000	30,110.000
0182	650.9910	Construction Staking Supplemental Control (project) 01. 5050-02-70	LS	1.000	1.000		
0184	650.9910	Construction Staking Supplemental Control (project) 02. 5050-02-71	LS	1.000		1.000	
0186	650.9910	Construction Staking Supplemental Control (project) 03. 5050-02-72	LS	1.000			1.000
0188	650.9920	Construction Staking Slope Stakes	LF	2,268.000	2,268.000		
0190	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	715.000	715.000		
0192	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	940.000	940.000		
0194	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	8.000	8.000		
0196	654.0105	Concrete Bases Type 5	EACH	8.000	8.000		
0198	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000		
0200	655.0610	Electrical Wire Lighting 12 AWG	LF	5,400.000	5,400.000		
0202	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. STH 23/STH 33 Intersection	LS	1.000	1.000		
0204	657.0322	Poles Type 5-Aluminum	EACH	8.000	8.000		
0206	657.0710	Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT	EACH	8.000	8.000		
0208	659.1115	Luminaires Utility LED A	EACH	8.000	8.000		
0210	659.2130	Lighting Control Cabinets 120/240 30-Inch	EACH	1.000	1.000		
0212	690.0150	Sawing Asphalt	LF	2,462.000	2,462.000		
0214	740.0440	Incentive IRI Ride	DOL	34,493.000	1,719.000	10,974.000	21,800.000
0216	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	2,400.000		
0218	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	2,160.000	2,160.000		
0220	SPV.0060	Special 01. Solar Powered Single Blinking Beacon	EACH	1.000	1.000		
0222	SPV.0060	Special 02. Verify Landmark Reference Monuments	EACH	3.000		2.000	1.000

Estimate Of Quantities

					5050-02-70	5050-02-71	5050-02-72
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0224	SPV.0090	Special 01. Asphaltic Centerline Rumble Strips Sinusoidal 2-Lane Rural	LF	38,411.000		12,685.000	25,726.000
0226	SPV.0090	Special 02. Asphaltic Shoulder Rumble Strips Sinusoidal 2-Lane Rural	LF	84,254.000	3,185.000	26,913.000	54,156.000
0228	SPV.0090	Special 03. Marking Line in Sinusoidal Rumble Wet Reflective Epoxy 4-Inch	LF	35,602.000		15,109.000	20,493.000

REMOVING ASPHALTIC SURFACE MILLING

					204.0120 REMOVING ASPHALTIC SURFACE MILLING	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	
STATION		STATION	HWY	LOCATION	SY	SY	REMARKS
5050-02-71							
123+65	-	162+98	STH 23	WEST PROJECT LIMIT TO AULT RD	18,009	36	
162+98	-	177+22	STH 23	AULT RD TO WAKERLY LN	6,329	--	
177+22	-	198+39	STH 23	WAKERLY LN TO E LAKE VIRGINIA RD	8,471	--	
198+39	-	211+56	STH 23	E LAKE VIRGINIA RD TO ABLEMAN RD	5,852	--	
211+56	-	268+50	STH 33	ABLEMAN RD TO EAST PROJECT LIMIT	25,138	--	
5050-02-71 SUBTOTAL					63,799	36	
5050-02-70							
268+50	-	291+18	STH 33	EVERGREEN RD INTERSECTION	15,090	94	
5050-02-70 SUBTOTAL					15,090	94	
5050-02-72							
291+18	-	346+11	STH 33	WEST PROJECT LIMIT TO COON BLUFF RD	24,415	--	
346+11	-	426+49	STH 33	COON BLUFF RD TO MIRROR LAKE RD	35,724	--	
426+49	-	560+44	STH 33	MIRROR LAKE RD TO WEST ROUNDABOUT	59,532	--	
560+44	-	574+60	STH 33	WEST ROUNDABOUT TO EAST ROUNDABOUT	7,459	69	
574+60	-	592+28	STH 33	EAST ROUNDABOUT TO EAST PROJECT LIMIT	8,906	107	
5050-02-72 SUBTOTAL					136,036	176	
TOTAL					214,925	306	

CONCRETE REMOVAL SUMMARY

					204.0150 REMOVING CURB & GUTTER	
STATION	STATION	HWY	LOCATION		LF	REMARKS
5050-02-70						
268+50	-	291+18	STH 33	EVERGREEN RD INTERSECTION	422	
TOTAL					422	

SAWING SUMMARY

				690.0150	
				SAWING	
				ASPHALT	
STATION	STATION		LF		REMARKS
5050-02-70					
276+40	to	282+78	2452		
UNDISTRIBUTED			10		
TOTAL			2462		

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EARTHWORK SUMMARY

STATION TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (2)	AVAILABLE MATERIAL (4)	REDUCED EBS IN FILL (5)	EBS BACKFILL (5)	205.0200 EXCAVATION ROCK (5)	EXPANDED ROCK (6)	UNEXPANDED FILL	EXPANDED FILL (7)	MASS ORDINATE +/- (8)	WASTE	208.0100 BORROW	REMARKS
		CUT (2)	EBS EXCAV. (3)			FACTOR 0.80	FACTOR 1.33		FACTOR 1.10		FACTOR 1.15				
		CY	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY	
267+90 - 291+27	STH 23/STH 33	6,058	0	1,467	4,591	0	0	0	0	2,611	3,003	1,588	1,588	0	
SUBTOTAL		6,058	0	1,467	4,591	0	0	0	0	2,611	3,003	1,588	1,588	0	
TOTAL		6,058		1,467	4,591	0	0	0	0	2,611	3,003	1,588	1,588	0	

- 1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS.
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- 3) EBS EXCAVATION IS TO BE BACKFILLED WITH 1-1/4 INCH BASE AGGREGATE DENSE. MATERIAL EXCAVATED FROM EBS IS NOT TO BE USED AS FILL ELSEWHERE ON THE PROJECT.
- 4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL.
- 5) ROCK EXCAVATION ITEM NUMBER 205.0200.
- 6) EXPANDED ROCK: FACTOR = 1.10
- 7) EXPANDED FILL: FACTOR = 1.15; EXPANDED FILL = (UNEXPANDED FILL - ROCK * ROCK FACTOR) * FILL FACTOR
- 8) 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.

PREPARE FOUNDATION

211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT)		211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	REMARKS
PROJECT	LS	STA	
5050-02-71	1	290	
5050-02-70	1	46	
5050-02-72	1	603	
TOTAL		3	939

FINISHING ROADWAY

213.0100 FINISHING ROADWAY (PROJECT)		REMARKS
PROJECT	EACH	
5050-02-70	1	
5050-02-71	1	
5050-02-72	1	
TOTAL		3

BASE AGGREGATE SUMMARY

					305.0110	305.0120	REMARKS
					BASE	BASE	
					AGGREGATE	AGGREGATE	
					DENSE	DENSE	
					3/4-INCH	1 1/4-INCH	
STATION	STATION	LOCATION			TON	TON	
5050-02-71							
123+65	-	162+98	STH 23	WEST PROJECT LIMIT TO AULT RD	51	--	
162+98	-	177+22	STH 23	AULT RD TO WAKERLY LN	19	--	
177+22	-	198+39	STH 23	WAKERLY LN TO E LAKE VIRGINIA RD	28	--	
198+39	-	211+56	STH 23	E LAKE VIRGINIA RD TO ABLEMAN RD	18	--	
211+56	-	268+50	STH 23	ABLEMAN RD TO EAST PROJECT LIMIT	74	--	
UNDISTRIBUTED					--	--	
5050-02-71 SUBTOTAL					190	--	
5050-02-70							
268+50	-	279+41	STH 33	EVERGREEN RD INTERSECTION	28	2,259	
279+41	-	291+18	STH 33	EVERGREEN RD INTERSECTION	31	3,073	
UNDISTRIBUTED					--	1,067	
5050-02-70 SUBTOTAL					59	6,399	
5050-02-72							
291+18	-	346+11	STH 33	WEST PROJECT LIMIT TO COON BLUFF RD	72	--	
346+11	-	426+49	STH 33	COON BLUFF RD TO MIRROR LAKE RD	105	--	
426+49	-	560+44	STH 33	MIRROR LAKE RD TO WEST ROUNDABOUT	176	--	
560+44	-	574+60	STH 33	WEST ROUNDABOUT TO EAST ROUNDABOUT	35	--	
574+60	-	592+28	STH 33	EAST ROUNDABOUT TO EAST PROJECT LIMIT	41	--	
UNDISTRIBUTED					--	--	
5050-02-72 SUBTOTAL					429	--	
TOTAL					678	6,399	

3

3

ASPHALT PAVEMENT SUMMARY

455.0605460.6224465.0305SPV.0090.02SPV.0090.01465.0315

HMAASPHALTICASPHALTICASPHALTICASPHALTIC

PAVEMENTSURFACE SHOULDERCENTER LINEFLUMES

4 MTSAFETY ISLANDSRUMBLE STRIPS SINUSOIDALRUMBLE STRIPS SINUSOIDAL

58-28 S2-LANE RURAL2-LANE RURAL

STATION	STATION	HWY	LOCATION	AREA SY	LOWER LAYER DEPTH IN	MIDDLE LAYER DEPTH IN	UPPER LAYER DEPTH IN	TACK COAT GAL	TON	TON	LF	LF	SY	REMARKS
5050-02-71														
123+65	-	162+98	STH 23	WEST PROJECT LIMIT TO AULT RD	18,010	1.75	--	1.75	2,162	3,530	--	7,299	3,733	--
162+98	-	177+22	STH 23	AULT RD TO WAKERLY LN	6,329	1.75	--	1.75	760	1,241	--	2,477	1,024	--
177+22	-	198+39	STH 23	WAKERLY LN TO E LAKE VIRGINIA RD	9,409	1.75	--	1.75	1,130	1,845	--	3,867	1,717	--
198+39	-	211+56	STH 23	E LAKE VIRGINIA RD TO ABLEMAN RD	5,853	1.75	--	1.75	703	1,148	--	2,451	517	--
211+56	-	268+50	STH 23	ABLEMAN RD TO EAST PROJECT LIMIT	25,311	1.75	--	1.75	3,038	4,961	--	10,819	5,694	--
5050-02-71 SUBTOTAL					64,912				7,793	12,725	--	26,913	12,685	--
5050-02-70														
268+50	-	291+18	STH 33	EVERGREEN RD INTERSECTION	11,657	1.75	--	1.75	1,399	2,285	9	1,733	--	20
268+50	-	291+18	STH 33	EVERGREEN RD INTERSECTION	3,432	1.75	1.75	1.75	584	1,010	--	1,452	--	--
5050-02-70 SUBTOTAL					15,089				1,983	3,295	9	3,185	--	20
5050-02-72														
291+18	-	346+11	STH 33	WEST PROJECT LIMIT TO COON BLUFF RD	24,413	1.75	--	1.75	2,930	4,786	--	10,886	5,493	--
346+11	-	426+49	STH 33	COON BLUFF RD TO MIRROR LAKE RD	35,724	1.75	--	1.75	4,287	7,002	--	15,821	7,638	--
426+49	-	560+44	STH 33	MIRROR LAKE RD TO WEST ROUNDABOUT	59,533	1.75	--	1.75	7,144	11,669	--	25,875	12,595	--
560+44	-	574+60	STH 33	WEST ROUNDABOUT TO EAST ROUNDABOUT	7,460	1.75	--	1.75	896	1,463	--	--	--	--
574+60	-	592+28	STH 33	EAST ROUNDABOUT TO EAST PROJECT LIMIT	8,931	1.75	--	1.75	1,072	1,751	--	1,574	--	--
5050-02-72 SUBTOTAL					136,062				16,329	26,671	--	54,156	25,726	--
TOTAL					216,064				26,105	42,691	9	84,254	38,411	20

TEMPORARY ASPHALT

465.0125
ASPHALTIC
SURFACE
TEMPORARY

STATION	STATION	HWY	LOCATION	TON	REMARKS
5050-02-70					
279+58	-	276+76	STH 23	EVERGREEN RD INTERSECTION	5

5

3

PWL MIXTURE USE TABLE								
THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT:								
LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEMS	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
FIRST LIFT								
WB 8' SHOULDER	123+65 TO 567+99	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	3,802	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
WB 12' DRIVING LANE	123+65 TO 567+99	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	5,702	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
WB 12' TURN/BYPASS LANE	140+88 TO 148+91 276+56 TO 285+68 560+42 TO 574+60	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	168	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 12' TURN/BYPASS LANE	140+88 TO 148+91 276+56 TO 285+68 560+42 TO 574+60	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	168	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 12' DRIVING LANE	123+65 TO 567+99	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	5,702	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 8' SHOULDER	123+65 TO 567+99	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	3,802	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
USH 12 WEST ROUNDABOUT TOTAL	560+42 TO 574+60	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	621	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
USH 12 EAST ROUNDABOUT TOTAL	577+21 TO 582+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	236	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 12' DRIVING LANE	582+00 TO 592+28	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	132	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 8' SHOULDER	582+00 TO 592+28	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	88	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
WB 12' DRIVING LANE	582+00 TO 592+28	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	132	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
WB 8' SHOULDER	582+00 TO 592+28	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	88	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
16' TURN LANE	582+00 TO 592+28	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	106	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000

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PWL MIXTURE USE TABLE (CONTINUED)								
THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT:								
LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEMS	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
SECOND LIFT								
WB 8' SHOULDER	123+65 TO 567+99	SURFACE LAYER	4 MT 58-28 S	4 MT 58-28 S	3,802	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
WB 12' DRIVING LANE	123+65 TO 567+99	SURFACE LAYER	4 MT 58-28 S	4 MT 58-28 S	5,702	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
WB 12' TURN/BYPASS LANE	140+88 TO 148+91 276+56 TO 285+68 560+42 TO 574+60	SURFACE LAYER	4 MT 58-28 S	4 MT 58-28 S	168	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 12' TURN/BYPASS LANE	140+88 TO 148+91 276+56 TO 285+68 560+42 TO 574+60	SURFACE LAYER	4 MT 58-28 S	4 MT 58-28 S	168	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 12' DRIVING LANE	123+65 TO 567+99	SURFACE LAYER	4 MT 58-28 S	4 MT 58-28 S	5,702	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 8' SHOULDER	123+65 TO 567+99	SURFACE LAYER	4 MT 58-28 S	4 MT 58-28 S	3,802	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
USH 12 WEST ROUNDABOUT TOTAL	560+42 TO 574+60	SURFACE LAYER	4 MT 58-28 S	4 MT 58-28 S	621	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
USH 12 EAST ROUNDABOUT TOTAL	577+21 TO 582+00	SURFACE LAYER	4 MT 58-28 S	4 MT 58-28 S	236	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 12' DRIVING LANE	582+00 TO 592+28	SURFACE LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	132	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
EB 8' SHOULDER	582+00 TO 592+28	SURFACE LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	88	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
WB 12' DRIVING LANE	582+00 TO 592+28	SURFACE LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	132	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000
WB 8' SHOULDER	582+00 TO 592+28	SURFACE LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	88	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
16' TURN LANE	582+00 TO 592+28	SURFACE LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	106	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2000

HMA PAVEMENT PWL, TEST STRIP

							460.0105.S	460.0110.S			
							HMA PAVEMENT PWL TEST STRIP VOLUMETRICS	HMA PAVEMENT PWL TEST STRIP DENSITY			
STATION	TO	STATION	LOCATION				EACH	EACH	REMARKS		
123 + 65 -		592 + 28	BINDER LIFT AT INTERSECTION WIDENING				--	1			
123 + 65 -		592 + 28	MIDDLE LIFT AT INTERSECTION WIDENING				--	1			
123 + 65 -		592 + 28	SURFACE LIFT AT INTERSECTION WIDENING				--	1			
123 + 65 -		592 + 28	BINDER LIFT ON MILLED SURFACE				1	1			
123 + 65 -		592 + 28	SURFACE LIFT ON MILLED SURFACE				--	1			
ITEM TOTALS							1	5			

PROJECT NO: 5050-02-70/71/72

HWY: STH 23/STH 33

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET:

E

CULVERT PIPE SUMMARY

	*203.0100	520.8000	522.0124	522.1024	633.5200	
	REMOVING	CONCRETE	CULVERT PIPE	APRON ENDWALLS		
	SMALL PIPE	COLLARS FOR	REINFORCED	FOR CULVERT PIPE		
	CULVERTS	PIPE	CONCRETE CLASS	REINFORCED	MARKERS	
			III 24-INCH	CONCRETE 24-INCH	CULVERT	
				24-INCH	END	
LOCATION	EACH	EACH	LF	EACH		REMARKS
5050-02-70						
271+56 RT	1	1	8	1	1	
281+56 LT	1	1	8	1	1	
287+05 LT	1	1	12	1	1	
287+05 RT	1	1	8	1	1	
TOTAL	4	4	36	4	4	

*NOTE: REMOVING SMALL PIPE CULVERTS IS FOR THE EXISTING ENDWALL REMOVAL ONLY.

CONCRETE CORRUGATED MEDIAN SUMMARY

					620.0100	
					CONCRETE	
					CORRUGATED	
					MEDIAN	
STATION	STATION		LOCATION		SF	REMARKS
			5050-02-70			
276+40.95	-	279+40.95	STH 23	EVERGREEN RD INTERSECTION	2,400	
280+77.83	-	282+77.83	STH 23	EVERGREEN RD INTERSECTION	1,600	
			TOTAL		4,000	

CURB AND GUTTER SUMMARY

				601.0553	601.0120	
				CONCRETE CURB	CONCRETE	
				AND GUTTER	CURB	
				4-INCH SLOPED	TYPE J	
				36-INCH TYPE D		
STATION	STATION	HWY	LOCATION	LF	LF	REMARKS
			5050-02-70			
268+50	-	291+18	STH 33	EVERGREEN RD INTERSECTION	312	110
			TOTAL	312	110	

MAINTENANCE AND REPAIR OF HAUL ROADS 618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) <table><tr><th>PROJECT</th><th>EACH</th><th>REMARKS</th></tr><tr><td>5050-02-71</td><td>1</td><td></td></tr><tr><td>5050-02-70</td><td>1</td><td></td></tr><tr><td>5050-02-72</td><td>1</td><td></td></tr><tr><td colspan="2">TOTAL</td><td>3</td></tr></table>			PROJECT	EACH	REMARKS	5050-02-71	1		5050-02-70	1		5050-02-72	1		TOTAL		3	MOBILIZATION 619.1000 MOBILIZATION <table><tr><th>PROJECT</th><th>EACH</th><th>REMARKS</th></tr><tr><td>5050-02-71</td><td>0.33</td><td></td></tr><tr><td>5050-02-70</td><td>0.33</td><td></td></tr><tr><td>5050-02-72</td><td>0.34</td><td></td></tr><tr><td colspan="2">TOTAL</td><td>1</td></tr></table>			PROJECT	EACH	REMARKS	5050-02-71	0.33		5050-02-70	0.33		5050-02-72	0.34		TOTAL		1	FIELD OFFICE 642.5201 FIELD OFFICE TYPE C <table><tr><th>PROJECT</th><th>EACH</th><th>REMARKS</th></tr><tr><td>5050-02-71</td><td>1</td><td></td></tr><tr><td colspan="2">TOTAL</td><td>1</td></tr></table>			PROJECT	EACH	REMARKS	5050-02-71	1		TOTAL		1
PROJECT	EACH	REMARKS																																													
5050-02-71	1																																														
5050-02-70	1																																														
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5050-02-72	0.34																																														
TOTAL		1																																													
PROJECT	EACH	REMARKS																																													
5050-02-71	1																																														
TOTAL		1																																													

EROSION CONTROL SUMMARY										
			627.0200	628.1504	628.1520	628.1905	628.1910	628.2002	628.7504	628.7555
					SILT	MOBILIZATIONS	MOBILIZATIONS	EROSION MAT	TEMPORARY	CULVERT
					FENCE	EROSION	EMERGENCY	CLASS 1	DITCH CHECKS	PIPE CHECKS
			MULCHING	FENCE	MAINTENANCE	CONTROL	EROSION CONTROL	TYPE A		
LOCATION			SY	LF	LF	EACH	EACH	SY	LF	EACH
5050-02-71										
123+65	-	268+50	16,095	--	--	1	1	--	--	--
UNDISTRIBUTED			1,610	--	--	--	--	--	--	--
5050-02-71 SUBTOTAL			17,705			1	1	--	--	--
5050-02-70										
268+50	-	280+00	--	300	300	2	2	8,068	73	6
280+00	-	291+18	--	847	847	--	--	8,859	47	6
UNDISTRIBUTED			--	553	553	--	--	1,693	10	--
5050-02-70 SUBTOTAL			--	1,700	1,700	2	2	18,620	130	12
5050-02-72										
291+18		592+28	33,456	--	--	1	1	--	--	--
UNDISTRIBUTED			3,346	--	--	--	--	--	--	--
5050-02-72 SUBTOTAL			36,802	--	--	1	1	--	--	--
TOTAL			54,507	1,700	1,700	4	4	18,620	130	12

WATER SUMMARY

		624.0100	
		WATER	
LOCATION	MGAL	REMARKS	
UNDISTRIBUTED	71		
TOTAL		71	

LANDSCAPING SUMMARY

		625.0100	629.0210	630.0130	630.0200	630.0500	
				SEEDING			
			FERTILIZER	MIXTURE	SEEDING	SEED	
		TOPSOIL	TYPE B	NO. 30	TEMPORARY	WATER	
LOCATION	SY	CWT	LB	LB	MGAL	REMARKS	
5050-02-71							
123+65 - 268+50	16,095	5.10	217	217	180		
UNDISTRIBUTED	1,610	--	--	--	18		
5050-02-71 SUBTOTAL		17,705	5.1	217	217	198	
5050-02-70							
268+50 - 280+00	7,268	4.60	196	196	81		
280+00 - 291+18	7,983	5.00	216	216	89		
UNDISTRIBUTED	1,526	--	--	--	17		
5050-02-70 SUBTOTAL		16,777	9.6	412	412	187	
5050-02-72							
291+18 - 592+28	33,456	10.50	452	452	373		
UNDISTRIBUTED	3,346	--	--	--	37		
5050-02-72 SUBTOTAL		36,802	10.5	452	452	410	
TOTAL		71,284	25.2	1,081	1,081	795	

SURVEY SUMMARY

			650.4500	650.5000	650.5500	650.6000	650.8000	650.9910	650.9920	SPV.0060.02	
			CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	VERIFY LANDMARK	
			STAKING	STAKING	STAKING CURB &	STAKING PIPE	STAKING	STAKING	STAKING SLOPE	REFERENCE	
			SUBGRADE	BASE	GUTTER	CULVERTS	RESURFACING	SUPPLEMENTAL	STAKES	MONUMENTS	
							REFERENCE	CONTROL (PROJECT)			
STATION	STATION	LOCATION	LF	LF	LF	EACH	LF	LS	LF	EACH	REMARKS
5050-02-71											
123+65 - 268+50	STH 23	--	--	--	--	14485	1	--	2		
5050-02-70											
268+50 - 291+18	STH 23/33	2268	2268	422	4	2268	1	2268	--		
5050-02-72											
291+18 - 592+28	STH 33	--	--	--	--	30110	1	--	1		
TOTAL			2,268	2,268	422	4	46,863	3	2,268	3	

PERMANENT SIGNS SUMMARY

CATEGORY	SIGN NO.	STATION	OFFSET	SIGN FACES	SIGN WORDING & PICTORIALS	CODE	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	637.2210	634.0612	634.0614	634.0616	634.0618	634.0810	634.0811	638.2102	638.2602	638.3000	SPV.0060.01		REMARKS
									SIGNS TYPE II	POSTS WOOD 4x6-IN x 12-FT EACH	POSTS WOOD 4x6-IN x 14-FT EACH	POSTS WOOD 4x6-IN x 16-FT EACH	POSTS WOOD 4x6-IN x 18-FT EACH	POSTS TUBULAR STEEL 2X2-INCH X 10-FT EACH	POSTS TUBULAR STEEL 2X2-INCH X 11-FT EACH	MOVING SIGNS TYPE II EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	SPECIAL 01. SOLAR POWERED SINGLE BLINKING BEACON		
	0010	1-1	272'EA'+33	25' RT	EB	STH 23 NORTH LEFT/STH 33 EAST STRAIGHT	J2-2	48	57	--	--	--	1	--	--	1	--	1	--		
	0010	1-2	274'WA'+59	29' LT	WB	REEDSBURG 6	D2-1	84	15	--	--	2	--	--	--	1	--	2	--		
	0010	1-3	275'EA'+76	27' RT	EB	BARABOO STRAIGHT/LAKE DELTON WIS DELLS LEFT	D1-3	84	36	21.00	--	--	--	2	--	--	1	2	--		
	0010	1-4	277'WA'+01	25' LT	WB	STH 23 SOUTH/STH 33 WEST	J4-2	48	36	--	--	--	1	--	--	1	--	1	--		
	0010	1-5	279'EA'+33	32' RT	EB	STH 23 NORTH LEFT/STH 33 EAST STRAIGHT	J3-2	48	57	--	--	--	1	--	--	1	--	1	--		
	0010	1-6	50'NB'+48	29' LT	SB	STH 33 EAST LEFT/STH 23 SOUTH RIGHT/STH 33 WEST RIGHT	J3-3	72	57	--	--	--	--	2	--	--	1	--	2	--	
	0010	1-7	50'NB'+79	62' LT	NB	DO NOT ENTER	R5-1	30	30	--	--	--	--	--	1	--	1	--	1	--	
	0010	1-8	50'NB'+73	55' LT	SB	STOP	R1-1	36	36	--	--	--	--	--	--	1	1	--	1	--	
	0010	1-9	50'NB'+47	19' LT	SB	STOP	R1-1	36	36	--	--	--	1	--	--	--	1	--	1	1	
	0010	1-10	50'NB'+78	18' LT	SB	DOUBLE DOWN ARROWS	W12-1D	24	24	--	1	--	--	--	--	--	1	--	1	--	
	0010	1-11	50'NB'+97	30' RT	NB	ADOPT-A-HIGHWAY	I55-56	30	18	--	--	1	--	--	--	--	1	--	1	--	
	0010	1-11	50'NB'+97	30' RT	NB	ADOPT-A-HIGHWAY SPONSOR	I55-56P	30	18	--	--	--	--	--	--	--	1	--	1	--	
	0010	1-12	273'EA'+91	26' RT	EB	LEFT ONLY/AHEAD ONLY/RIGHT ONLY	R3-8LAR	54	30	11.25	--	--	--	2	--	--	--	--	--	--	
	0010	2-1	49'NB'+33	32' RT	NB	STOP	R1-1	30	30	--	--	--	1	--	--	--	1	--	1	--	
	0010	2-2	280'WA'+53	33' LT	WB	STH 23 SOUTH STRAIGHT/STH 33 WEST STRAIGHT/STH 23 NORTH RIGHT	J3-3	72	57	--	--	--	2	--	--	--	1	--	2	--	
	0010	2-3	283'EA'+01	24' RT	EB	STH 33 EAST	J4-1	24	36	--	--	--	1	--	--	--	1	--	1	--	
	0010	2-4	284'WA'+29	31' LT	WB	REEDSBURG STRAIGHT/LAKE DELTON WIS DELLS LEFT	D1-3	84	45	--	--	--	2	--	--	--	1	--	2	--	
	0010	2-5	285'EA'+28	27' RT	EB	BARABOO 10	D2-1	84	15	--	--	2	--	--	--	--	1	--	2	--	
	0010	2-6	287'WA'+51	28' LT	WB	STH 23 SOUTH STRAIGHT/STH 33 WEST STRAIGHT/STH 23 NORTH RIGHT	J2-3	72	57	--	--	--	--	2	--	--	1	--	2	--	
	0010	2-7	290'WA'+02	26' LT	WB	JCT STH 23	J1-1	24	36	--	--	--	1	--	--	--	1	--	1	--	
	0010	2-8	285'WA'+59	26' LT	WB	LEFT ONLY/AHEAD ONLY/RIGHT ONLY	R3-8LAR	54	30	11.25	--	--	--	2	--	--	--	--	--	--	
5050-02-70 TOTAL										43.50	1	5	15	6	1	1	18	1	26	1	

3

TRAFFIC CONTROL																												
		EST.	643.0300		643.0420		649.0105		649.0105		643.0705		643.0715		649.0805		643.0900		642.0910		643.0920		643.1000		643.1050		643.5000	
		SERVICE			BARRICADES		TEMPORARY		TEMPORARY		WARNING		WARNING		TEMPORARY		TRAFFIC		TYPE I		TYPE II		SIGNS		TRAFFIC			
		PERIOD	DRUMS		TYPE III	PAINT	MARKING LINE	PAINT	MARKING LINE	LIGHTS	LIGHTS	STOP	LIGHTS	LIGHTS	STOP	CONTROL	SIGN	SIGN	FIXED	CONTROL	CONTROL	MESSAGE	SIGNS	PCMS	CONTROL			
STAGE	LOCATION	DAYS	NO	DAYS	NO	DAYS	LF	LF	LF	NO	DAYS	NO	DAYS	NO	DAYS	LF	NO	DAYS	CYCLE	EACH	CYCLE	EACH	SF	NO	DAYS	EACH	REMARKS	
5050-02-71																												
1	STH 23/33	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
1	STH 23/33 FLAGGING	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
2	STH 23/33	17	--	--	--	--	27,804	79	--	--	--	--	--	--	--	5	85	--	--	--	--	--	--	--	--	--		
2	STH 23/33 FLAGGING	17	--	--	--	--	--	--	--	--	--	--	--	--	--	6	102	--	--	--	--	--	--	--	--	--		
3	STH 23/33	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
3	STH 23/33 FLAGGING	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
4	STH 23/33	64	--	--	--	--	--	--	--	--	--	--	--	--	--	5	320	--	--	--	--	--	--	--	--	--		
4	STH 23/33 FLAGGING	64	--	--	--	--	--	--	--	--	--	--	--	--	--	6	384	--	--	--	--	--	--	--	--	--		
5	STH 23/33	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5	STH 23/33 FLAGGING	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5050-02-71 SUBTOTAL			--	--	--	--	27,883	--	--	--	--	--	--	--	--	891	--	--	--	--	--	--	--	--	0.33			
5050-02-70																												
1	STH 23/33	25	94	2,350	4	100	3,493	2,600	8	200	--	--	18	20	500	--	--	--	--	--	--	--	1	7	--	--		
1	STH 23/33 FLAGGING	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
2	STH 23/33	17	6	102	--	--	--	--	--	--	--	--	--	13	221	--	--	--	--	--	--	--	--	--	--	--		
2	STH 23/33 FLAGGING	17	--	--	--	--	--	--	--	--	--	--	--	9	153	--	--	--	--	--	--	--	--	--	--	--		
3	STH 23/33	13	105	1,365	4	52	2,928	3,256	8	104	22	286	40	35	455	--	--	--	--	--	--	--	--	--	--	--		
3	STH 23/33 FLAGGING	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
4	STH 23/33	64	51	3,264	--	--	--	--	--	--	--	--	--	44	2,816	--	--	--	--	--	--	--	--	--	--	--		
4	STH 23/33 FLAGGING	64	--	--	--	--	--	--	--	--	--	--	--	9	576	--	--	--	--	--	--	--	--	--	--	--		
5	STH 23/33	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5	STH 23/33 FLAGGING	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5050-02-70 SUBTOTAL			7,081		152		12,277	304	286	58			4,721	--	--	--	--	--	--	--	--	--	7	0.33				
5050-02-72																												
1	STH 23/33	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
2	STH 23/33	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
3	STH 23/33	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
4	STH 23/33	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5	STH 23/33	77	--	--	14	1078	--	--	28	2156	--	--	--	19	1463	--	--	--	--	--	--	--	2	14	--	--		
STAGE 5 DETOUR	STH 23/33	77	60	4,620	8	616	--	--	16	1,232	--	--	--	134	10,318	1	3	1	9	208.25	--	--	--	--	--	--		
5050-02-72 SUBTOTAL			4,620		1,694		--	3,388	--	--			11,781	3	9	208.25			14	0.34								
TOTAL			11,701		1,846		40,160	3,692	286	58			17,393	3	9	208.25			21	1								

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PAVEMENT MARKING SUMMARY

		646.1020	646.1020	646.1040	646.3020	646.3040	646.5020	646.5120	646.6120	646.6320	646.7120	646.8020	646.8120	646.8220	648.0100	SPV.0090.03	
		MARKING LINE	MARKING LINE	MARKING LINE	MARKING LINE	MARKING LINE	MARKING ARROW	MARKING WORD	MARKING STOP	MARKING DOTTED	MARKING	MARKING	MARKING	MARKING	LOCATING	MARKING LINE	
		EPOXY	EPOXY	GROOVED WET	EPOXY	GROOVED WET	EPOXY	EPOXY	LINE EPOXY	EXTENSION	DIAGONAL	CORRUGATED	CURB	ISLAND NOSE	NO PASSING	IN SINUSOIDAL RUMBLE	
		4-INCH	4-INCH	REFLECTIVE EPOXY	8-INCH	REFLECTIVE EPOXY			18-INCH	EPOXY 18-INCH	EPOXY 12-INCH	MEDIAN EPOXY	EPOXY	EPOXY	ZONES	REFLECTIVE EPOXY 4-INCH	
		(YELLOW)	(WHITE)	4-INCH (WHITE)	(WHITE)	8-INCH (WHITE)			(WHITE)	(WHITE)	(YELLOW)	(YELLOW)	(YELLOW)	(YELLOW)		(YELLOW)	
STATION	STATION	LF	LF	LF	LF	LF	EACH	EACH	LF	LF	LF	SF	LF	SF	MI	LF	REMARKS
5050-02-71																	
123+65	- 126+80	STH 23	79	--	630	--	--	--	--	--	--	--	--	--	0.06	--	
126+80	- 137+76	STH 23	--	--	2192	--	--	--	--	--	--	--	--	--	0.21	1370	
137+76	- 153+11	STH 23	--	--	3015	--	200	--	--	--	--	--	--	--	0.30	3070	
153+11	- 164+01	STH 23	--	--	1825	--	--	--	--	--	--	--	--	--	0.21	1363	
164+01	- 220+99	STH 23	--	--	10640	--	--	--	--	--	--	--	--	--	1.08	1425	
220+99	- 231+88	STH 23	--	--	2178	--	--	--	--	--	--	--	--	--	0.21	1361	
231+88	- 256+98	STH 23	--	--	5020	--	--	--	--	--	--	--	--	--	0.48	5020	
256+98	- 267+70	STH 23	--	--	2144	--	--	--	--	--	--	--	--	--	0.21	1340	
267+70	- 268+50	STH 23	--	--	160	--	--	--	--	--	--	--	--	--	0.02	160	
5050-02-71 SUBTOTAL			79		27804	--	200	--	--	--	--	--	--	--	2.78	15109	
5050-02-70																	
268+50	- 279+41	STH 23	3513	--	2738	--	988	4	2	--	--	261	360	--	--	--	--
279+41	- 280+78	STH 23/33	596	--	442	110	--	--	--	90	--	--	--	--	--	--	--
280+78	- 291+18	STH 33	3291	--	2501	--	927	4	2	--	--	295	240	--	--	--	--
5050-02-70 SUBTOTAL			7400		5681	110	1915	8	4	90	--	556	600	--	--	--	--
5050-02-72																	
291+18	- 292+71	STH 33	--	--	306	--	--	--	--	--	--	--	--	--	0.03	306	
292+71	- 295+80	STH 33	--	--	618	--	--	--	--	--	--	--	--	--	0.06	618	
295+80	- 303+01	STH 33	--	--	1442	--	--	--	--	--	--	--	--	--	0.14	901	
303+01	- 303+68	STH 33	--	--	134	--	--	--	--	--	--	--	--	--	0.02	17	
303+68	- 314+26	STH 33	--	--	2116	--	--	--	--	--	--	--	--	--	0.21	1323	
314+26	- 315+66	STH 33	--	--	280	--	--	--	--	--	--	--	--	--	0.03	35	
315+66	- 326+63	STH 33	--	--	2194	--	--	--	--	--	--	--	--	--	0.21	1371	
326+63	- 329+31	STH 33	--	--	536	--	--	--	--	--	--	--	--	--	0.06	536	
329+31	- 340+17	STH 33	--	--	2172	--	--	--	--	--	--	--	--	--	0.21	1358	
340+17	- 343+84	STH 33	--	--	734	--	--	--	--	--	--	--	--	--	0.07	92	
343+84	- 354+55	STH 33	--	--	1917	--	--	--	--	--	--	--	--	--	0.21	1339	
354+55	- 355+34	STH 33	--	--	158	--	--	--	--	--	--	--	--	--	0.02	158	
355+34	- 366+15	STH 33	--	--	2162	--	--	--	--	--	--	--	--	--	0.21	1351	
366+15	- 366+52	STH 33	--	--	74	--	--	--	--	--	--	--	--	--	0.01	9	
366+52	- 377+52	STH 33	--	--	2200	--	--	--	--	--	--	--	--	--	0.21	1375	
377+52	- 378+03	STH 33	--	--	102	--	--	--	--	--	--	--	--	--	0.01	102	
378+03	- 388+80	STH 33	--	--	2154	--	--	--	--	--	--	--	--	--	0.21	1346	
388+80	- 410+51	STH 33	--	--	4342	--	--	--	--	--	--	--	--	--	0.42	543	
410+51	- 421+68	STH 33	--	--	2234	--	--	--	--	--	--	--	--	--	0.22	1396	
421+68	- 428+03	STH 33	--	--	903	--	--	--	--	--	--	--	--	--	0.13	1270	
428+03	- 439+44	STH 33	--	--	2192	--	--	--	--	--	--	--	--	--	0.22	1426	
439+44	- 558+82	STH 33	--	--	23437	--	--	--	--	--	--	--	--	--	2.27	2985	
558+82	- 562+00	STH 33	--	--	636	--	--	--	--	--	--	--	--	--	--	636	
562+00	- 563+09	STH 33	218	--	218	--	--	--	--	--	--	--	--	--	--	--	--
563+09	- 569+29	STH 33	2480	--	1171	--	251	2	1	--	--	114	--	--	--	--	--
569+29	- 572+22	STH 33	586	--	586	--	--	--	--	--	--	--	10	1	--	--	--
572+22	- 573+66	EB ROUNDABOUT	161	117	--	154	--	3	--	57	--	--	--	--	--	--	--
573+66	- 574+07	STH 33	82	82	--	--	--	--	--	--	--	--	10	1	--	--	--
574+07	- 574+53	STH 33	184	92	--	--	--	--	--	--	6	--	--	--	--	--	--
574+53	- 577+32	STH 33	558	558	--	--	--	--	--	--	--	--	--	--	--	--	--
577+32	- 577+76	STH 33	176	88	--	--	--	--	--	--	5	--	--	--	--	--	--
577+76	- 578+21	STH 33	90	90	--	--	--	--	--	--	--	--	10	1	--	--	--
578+21	- 579+63	WB ROUNDABOUT	187	39	--	147	--	3	--	50	--	--	--	--	--	--	--
579+63	- 580+67	STH 33	208	208	--	--	--	--	--	--	--	--	10	1	--	--	--
580+67	- 581+62	STH 33	380	190	--	--	--	--	--	--	12	--	--	--	--	--	--
581+62	- 583+22	STH 33	320	320	--	--	--	--	--	--	--	--	--	--	--	--	--
583+22	- 586+87	STH 33	1460	730	--	--	--	--	--	--	183	--	--	--	--	--	--
586+87	- 589+79	STH 33	730	584	--	--	--	2	--	--	--	--	--	--	--	--	--
589+79	- 590+42	STH 33	252	126	--	--	--	--	--	--	71	--	--	--	--	--	--
590+42	- 591+37	STH 33	285	190	--	--	--	--	--	--	--	--	10	1	--	--	--
591+37	- 592+28	STH 33	182	255	--	110	--	1	--	36	--	--	10	1	--	--	--
5050-02-72 SUBTOTAL			12208		55018	411	251	5	7	36	107	391	--	60	6	5.18	20493
TOTAL			19,687		88,503	521	2,366	13	11	126	107	947	600	60	6	7.96	35,602

PROJECT NO: 5050-02-70/71/72

HWY: STH 23/STH 33

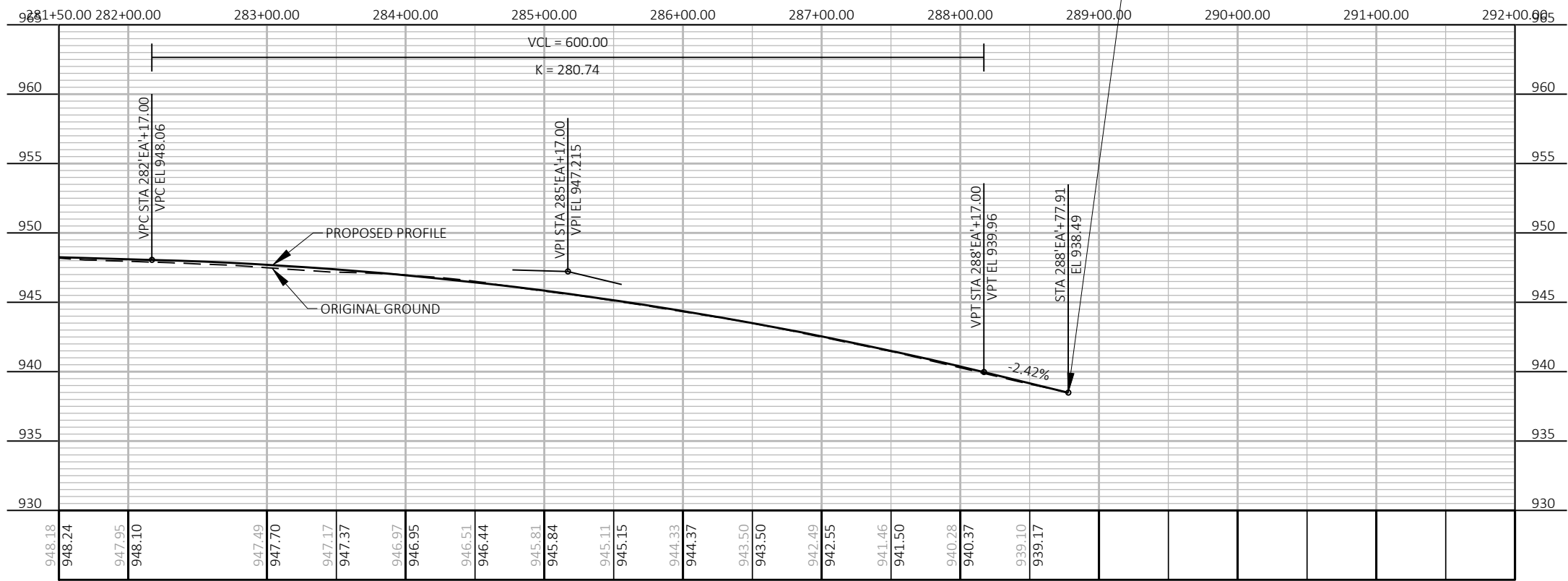
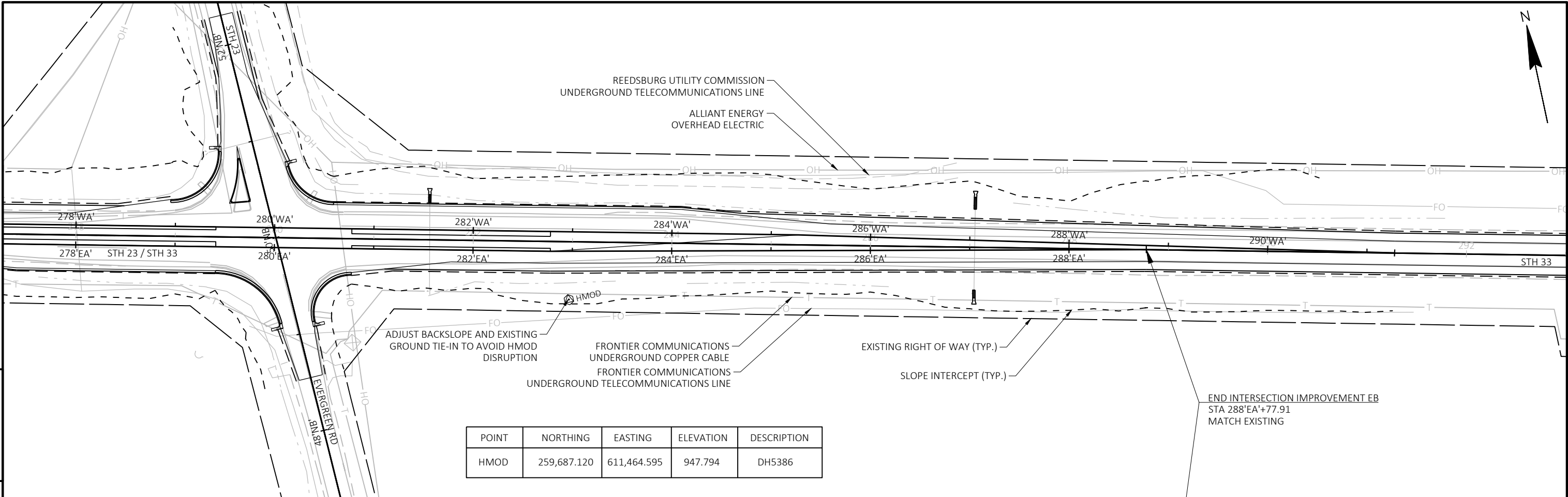
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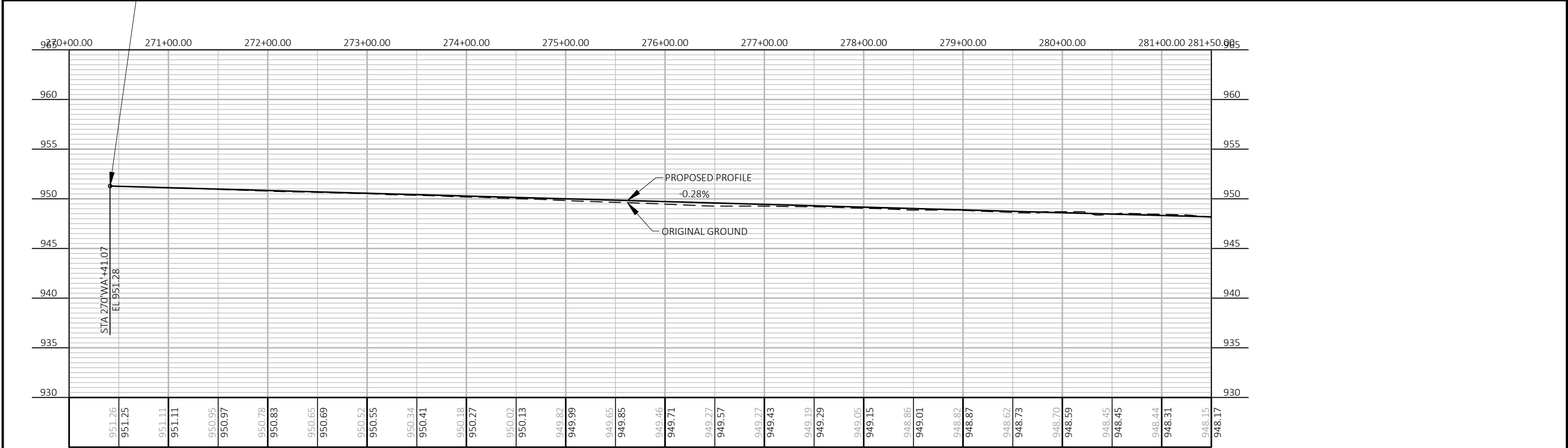
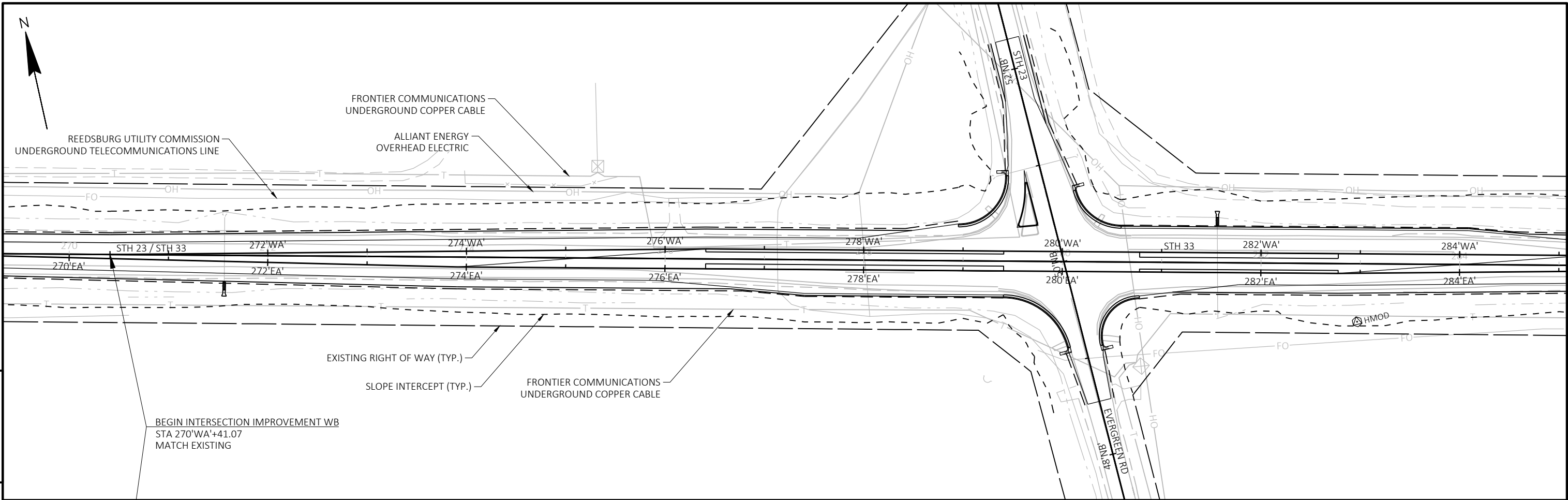
MISCELLANEOUS QUANTITIES

SHEET:

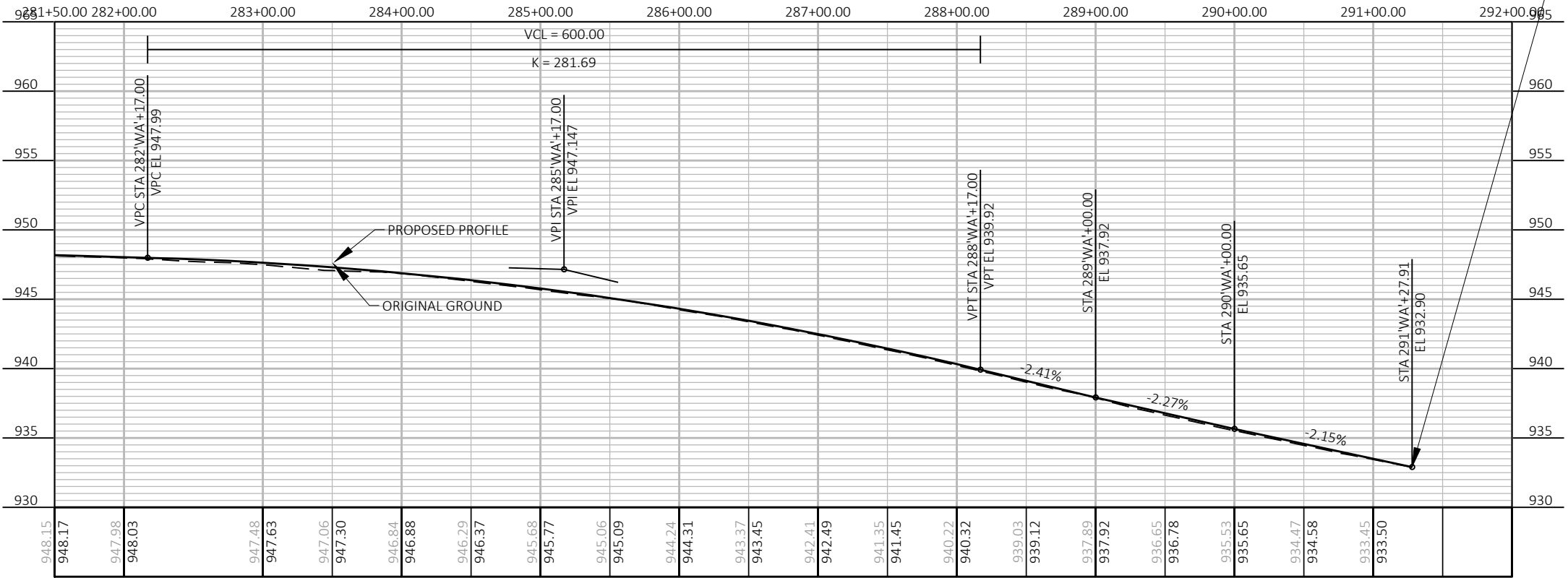
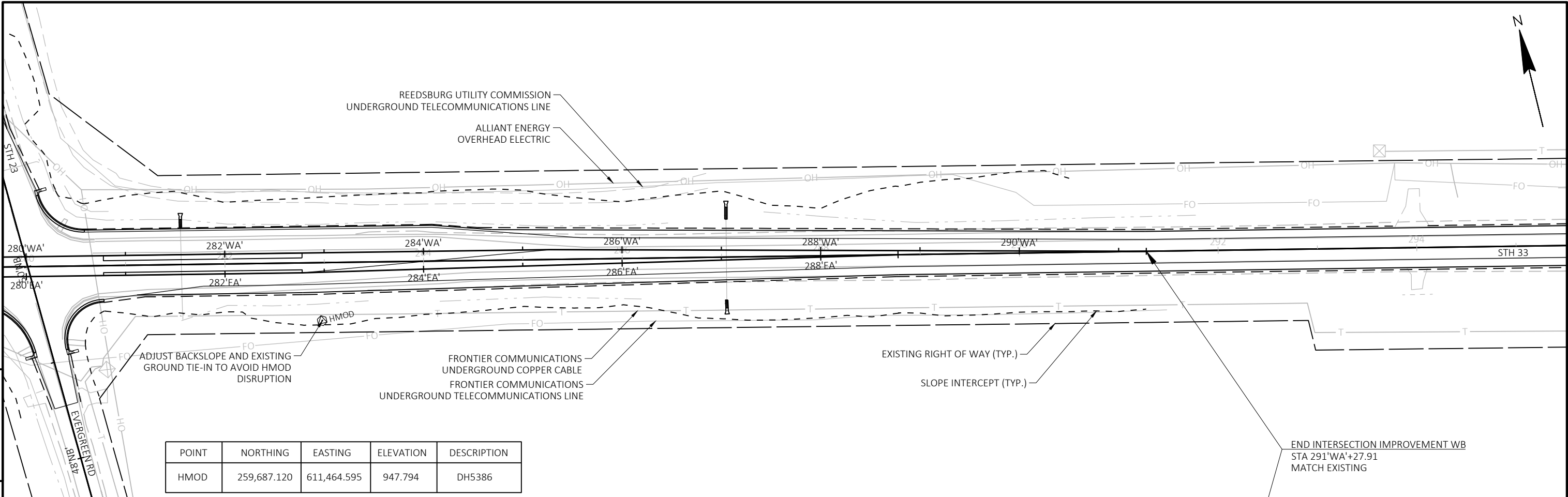
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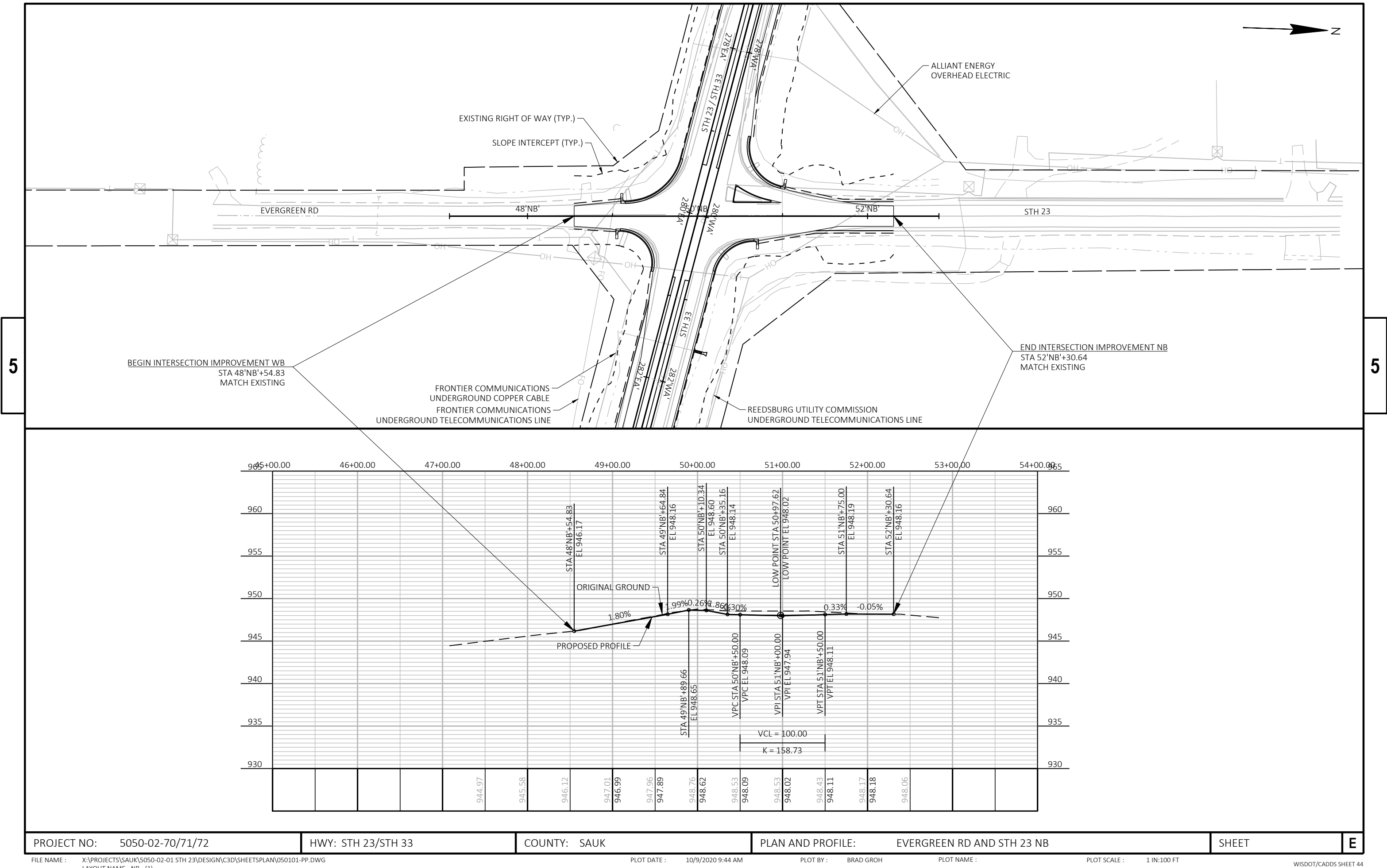
LIGHTING															
				652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	653.0164 PULL BOXES NON- CONDUCTIVE 24X42-INCH	654.0105 CONCRETE BASES TYPE 5	654.0230 CONCRETE CONTROL CABINET BASES TYPE L30	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG (GREEN)	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION)	657.0322 POLES TYPE 5-ALUMINUM	657.0710 LUMINAIRE ARMS TRUSS TYPE 4 1/2- INCH CLAMP 12-FT	659.1115 LUMINAIRES UTILITY LED A	659.2130 LIGHTING CONTROL CABINETS 120/240 30-INCH
STATION	STATION	OFFSET	LOCATION	LF	LF	EACH	EACH	LF	LF	LF	EACH	EACH	EACH	EACH	REMARKS
278+96.96	--	43' LT	LB1	--	--	--	1	--	--	135	--	1	1	1	--
280+34.89	--	50' LT	LB2	--	--	--	1	--	--	135	--	1	1	1	--
281+45.49	--	40' LT	LB3	--	--	--	1	--	--	135	--	1	1	1	--
282+75.85	--	40' LT	LB4	--	--	--	1	--	--	135	--	1	1	1	--
280+87.61	--	40' RT	LB5	--	--	--	1	--	--	135	--	1	1	1	--
279+82.07	--	58' RT	LB6	--	--	--	1	--	--	135	--	1	1	1	--
278+53.85	--	40' RT	LB7	--	--	--	1	--	--	135	--	1	1	1	--
276+41.67	--	34' RT	LB8	--	--	--	1	--	--	135	--	1	1	1	--
280+49.12	--	84' LT	CABINET	--	--	--	--	1	--	--	1	--	--	--	1
279+02.75	--	41' LT	PB4	--	--	1	--	--	--	--	--	--	--	--	--
280+38.93	--	48' LT	PB1	--	--	1	--	--	--	--	--	--	--	--	--
280+82.15	--	40' RT	PB2	--	--	1	--	--	--	--	--	--	--	--	--
279+78.72	--	53' RT	PB3	--	--	1	--	--	--	--	--	--	--	--	--
281+35.35	--	41' LT	PB5	--	--	1	--	--	--	--	--	--	--	--	--
282+69.44	--	39' LT	PB6	--	--	1	--	--	--	--	--	--	--	--	--
278+58.95	--	41' RT	PB7	--	--	1	--	--	--	--	--	--	--	--	--
276+47.72	--	35' RT	PB8	--	--	1	--	--	--	--	--	--	--	--	--
279+02.75	- 280+38.93	--	PB4-PB1	--	280	--	--	--	--	--	--	--	--	--	--
280+38.93	- 280+82.15	--	PB1-PB2	--	200	--	--	--	--	--	--	--	--	--	--
280+82.15	- 279+78.72	--	PB2-PB3	--	210	--	--	--	--	--	--	--	--	--	--
279+78.72	- 279+02.75	--	PB3-PB4	--	250	--	--	--	--	--	--	--	--	--	--
280+38.93	- 280+49.12	--	PB1-CABINET	75	--	--	--	--	--	--	--	--	--	--	--
280+38.93	- 281+35.35	--	PB1-PB5	100	--	--	--	--	--	--	--	--	--	--	--
281+35.35	- 281+45.49	--	PB5-LB3	10	--	--	--	--	--	--	--	--	--	--	--
281+35.35	- 282+69.44	--	PB5-PB6	130	--	--	--	--	--	--	--	--	--	--	--
282+69.44	- 282+75.85	--	PB6-LB4	10	--	--	--	--	--	--	--	--	--	--	--
280+38.93	- 280+34.89	--	PB1-LB2	10	--	--	--	--	--	--	--	--	--	--	--
280+82.15	- 280+87.61	--	PB2-LB5	10	--	--	--	--	--	--	--	--	--	--	--
279+78.72	- 279+82.07	--	PB3-LB6	10	--	--	--	--	--	--	--	--	--	--	--
279+78.72	- 278+58.95	--	PB3-PB7	120	--	--	--	--	--	--	--	--	--	--	--
278+58.95	- 278+53.85	--	PB7-LB7	10	--	--	--	--	--	--	--	--	--	--	--
278+58.95	- 276+47.72	--	PB7-PB8	210	--	--	--	--	--	--	--	--	--	--	--
276+47.72	- 276+41.67	--	PB8-LB8	10	--	--	--	--	--	--	--	--	--	--	--
279+78.72	- 278+96.96	--	PB4-LB1	10	--	--	--	--	--	--	--	--	--	--	--
280+49.12	- 280+34.89	--	CABINET-LB2	--	--	--	--	--	75	--	--	--	--	--	--
280+34.89	281+45.49	--	LB2-LB3	--	--	--	--	--	170	--	--	--	--	--	--
281+45.49	282+75.85	--	LB3-LB4	--	--	--	--	--	180	--	--	--	--	--	--
280+34.89	280+87.61	--	LB2-LB5	--	--	--	--	--	270	--	--	--	--	--	--
280+87.61	279+82.07	--	LB5-LB6	--	--	--	--	--	280	--	--	--	--	--	--
279+82.07	278+53.85	--	LB6-LB7	--	--	--	--	--	190	--	--	--	--	--	--
278+53.85	276+41.67	--	LB7-LB8	--	--	--	--	--	260	--	--	--	--	--	--
279+82.07	278+96.96	--	LB6-LB1	--	--	--	--	--	320	--	--	--	--	--	--
278+96.96	280+49.12	--	LB1-CABINET	--	--	--	--	--	365	--	--	--	--	--	--
280+49.12	280+34.89	--	CABINET-LB2	--	--	--	--	--	75	--	--	--	--	--	--
280+34.89	281+45.49	--	LB2-LB3	--	--	--	--	--	170	--	--	--	--	--	--
281+45.49	282+75.85	--	LB3-LB4	--	--	--	--	--	180	--	--	--	--	--	--
280+49.12	280+34.89	--	CABINET-LB2	--	--	--	--	--	75	--	--	--	--	--	--
280+34.89	280+87.61	--	LB2-LB5	--	--	--	--	--	270	--	--	--	--	--	--
280+49.12	280+34.89	--	CABINET-LB2	--	--	--	--	--	75	--	--	--	--	--	--
280+34.89	279+82.07	--	LB2-LB6	--	--	--	--	--	490	--	--	--	--	--	--
279+82.07	278+53.85	--	LB6-LB7	--	--	--	--	--	190	--	--	--	--	--	--
278+53.85	276+41.67	--	LB7-LB8	--	--	--	--	--	260	--	--	--	--	--	--
280+49.12	280+34.89	--	CABINET-LB2	--	--	--	--	--	75	--	--	--	--	--	--
280+34.89	278+96.96	--	LB2-LB1	--	--	--	--	--	350	--	--	--	--	--	--
SUBTOTAL									2,110	3,290					
5050-02-70 TOTAL				715	940	8	8	1	5,400	1	8	8	8	1	

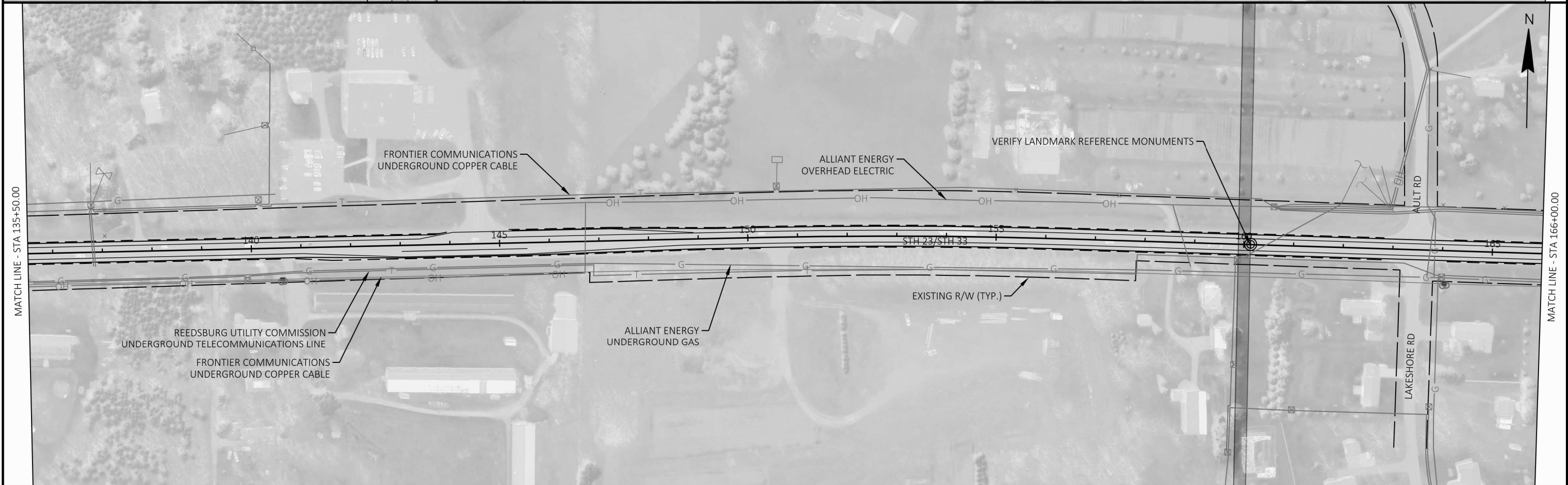
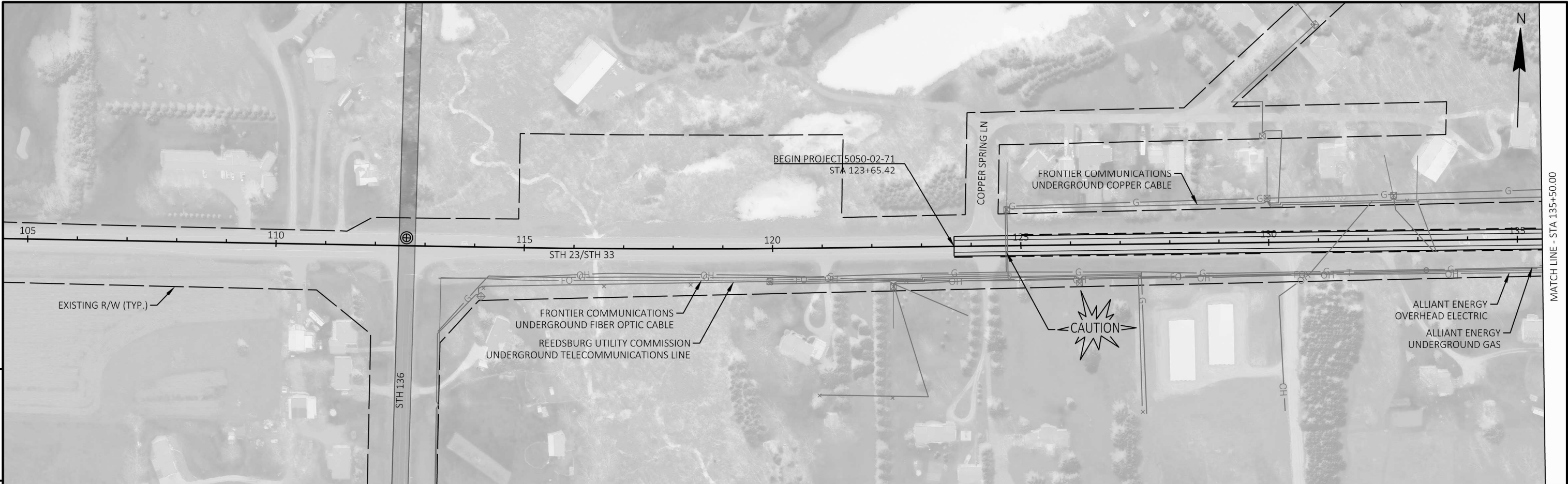




PROJECT NO:	5050-02-70/71/72	HWY:	STH 23/STH 33	COUNTY:	SAUK	PLAN AND PROFILE:	STH 23 AND STH 33 WB AUXILIARY ALIGNMENT	SHEET	E
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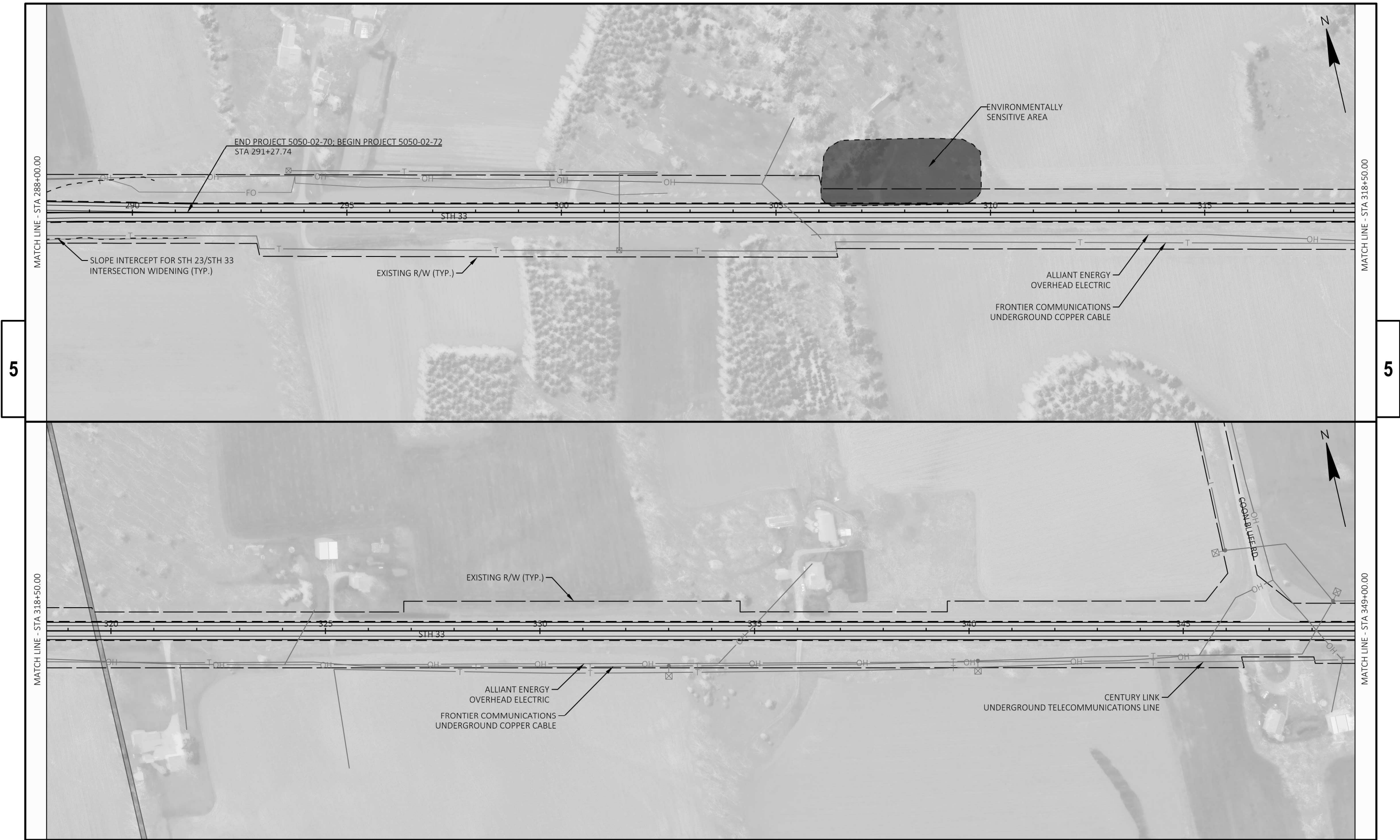




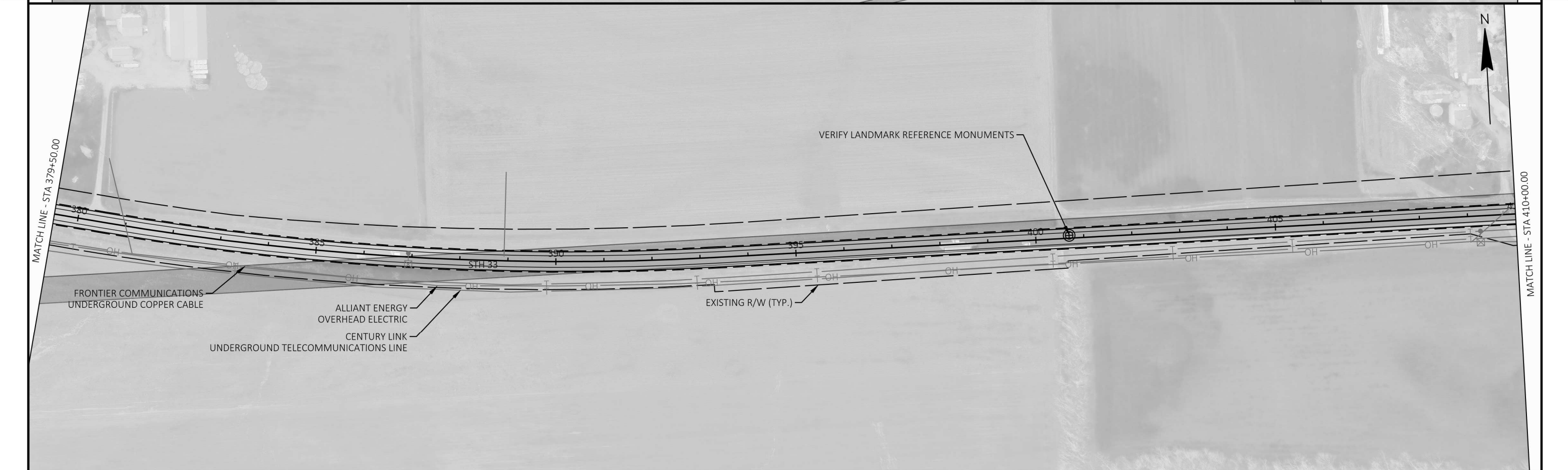
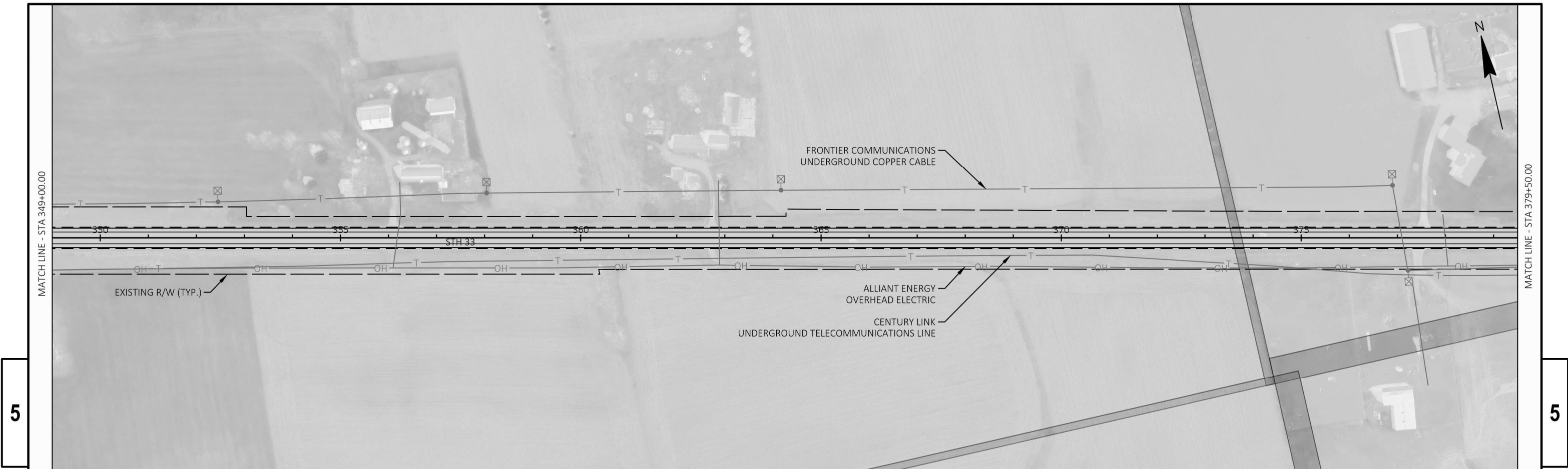
PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	PLAN DETAILS	SHEET	E
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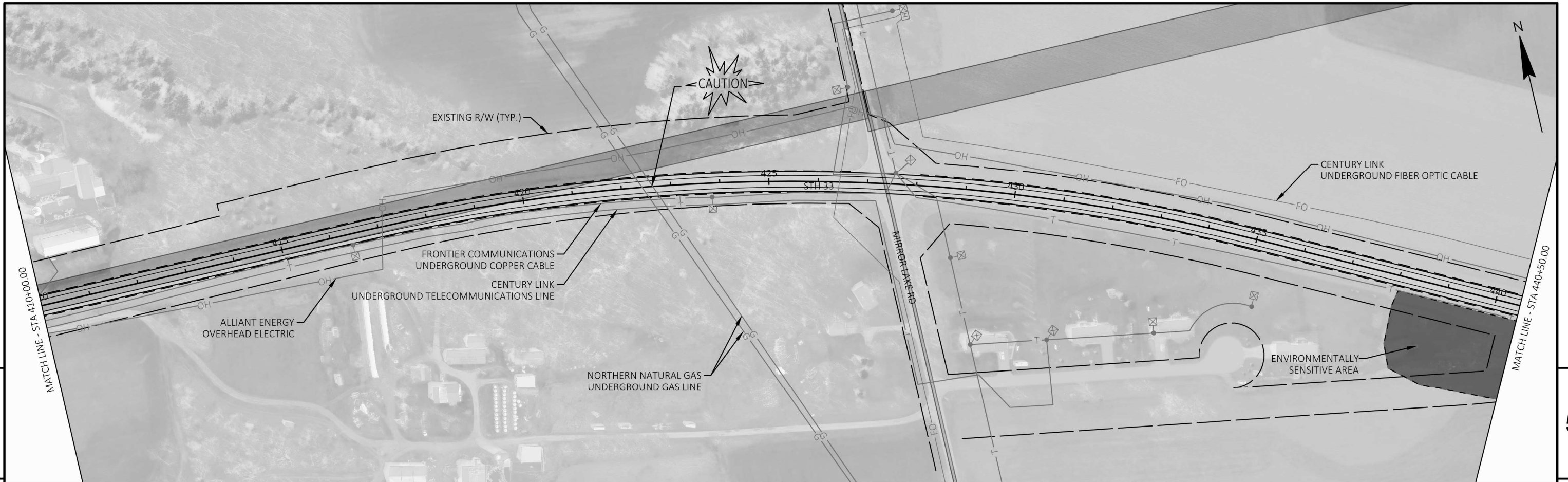


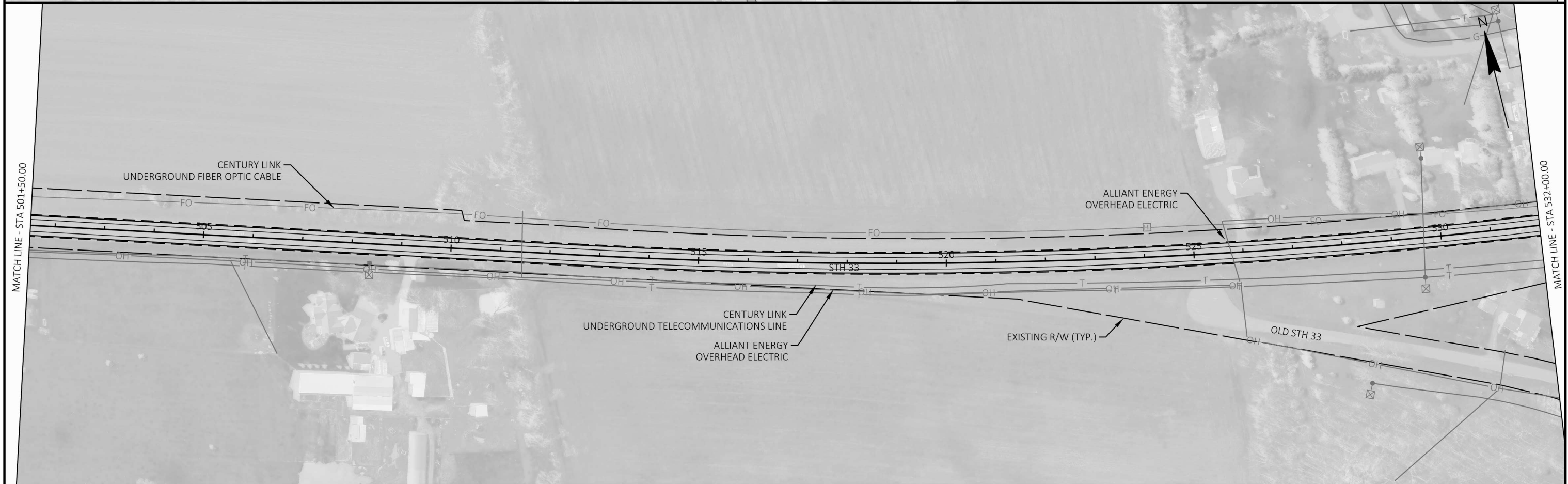


PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	PLAN DETAILS	SHEET	E
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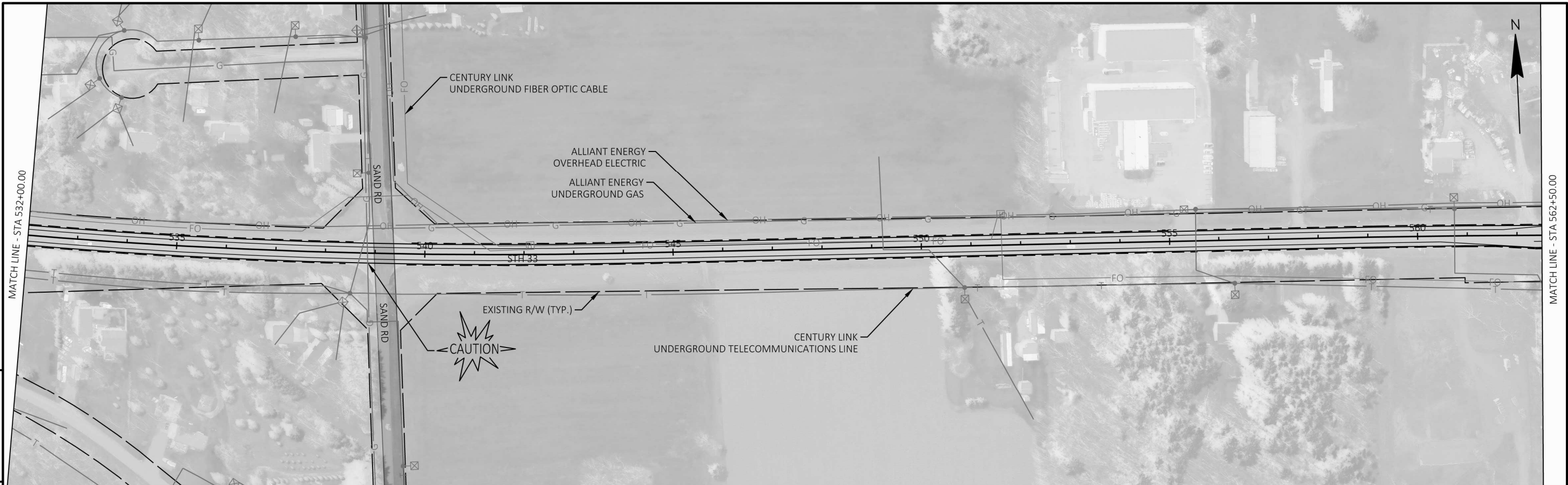


PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	PLAN DETAILS	SHEET	E
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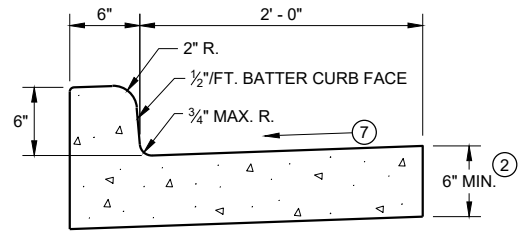
PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	PLAN DETAILS	SHEET	E
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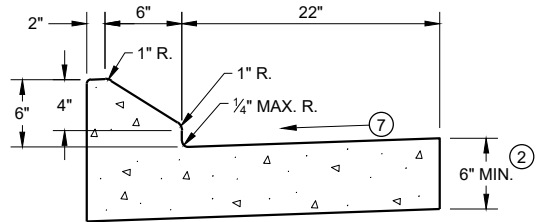
PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	PLAN DETAILS	SHEET 5
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Standard Detail Drawing List

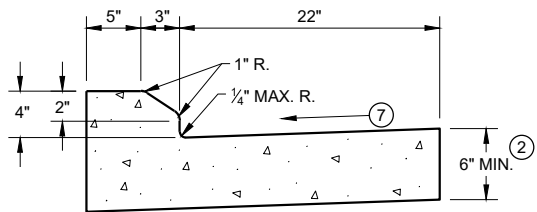
08D01-21A	CONCRETE CURB & GUTTER
08D01-21B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
09B02-10	CONDUIT
09B04-11	PULL BOX
09B16-01	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C05-10	CONCRETE CONTROL CABINET BASES
09C14-03	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D04-03	LIGHTING CONTROL CABINET 120/240 VOLT
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
11B01-05	CONCRETE CORRUGATED MEDIAN
13A10-02C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13C19-03	HMA LONGITUDINAL JOINTS
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-08D	ON RAMP LANE CLOSURE
15C02-08E	OFF RAMP LANE CLOSURE
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-04	MEDIAN ISLAND MARKING
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D40-01	TRAFFIC CONTROL, LANE SHIFT, MULTILANE DIVIDED OR ONE WAY ROAD
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



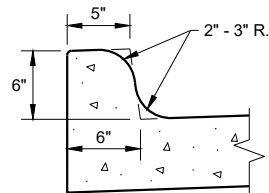
TYPES A^① & D



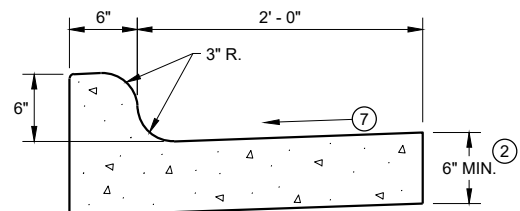
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

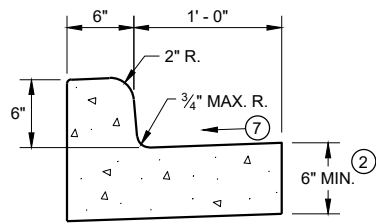


TYPES K^① & L
(OPTIONAL CURB SHAPE)



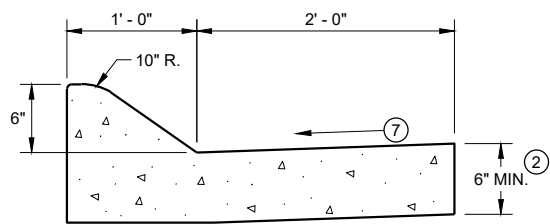
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

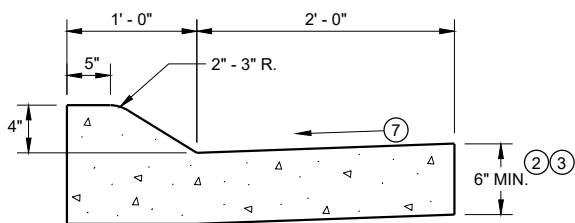


TYPES A^① & D

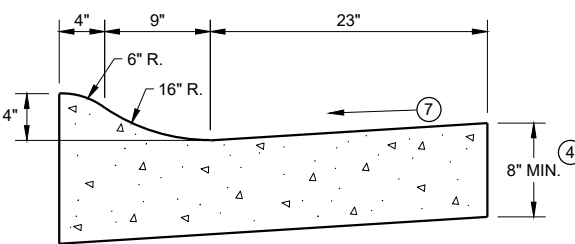
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D



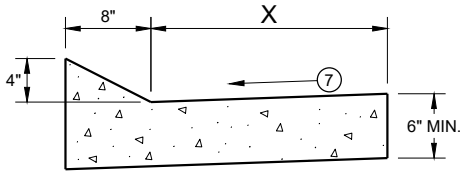
4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

CONCRETE CURB AND GUTTER 36"

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

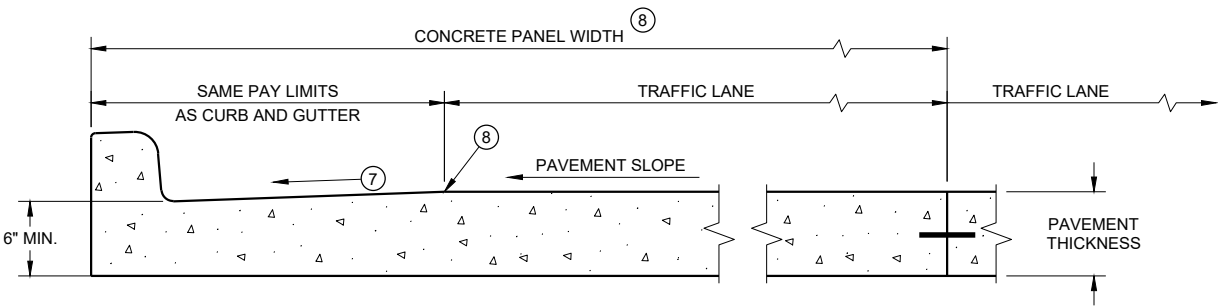


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

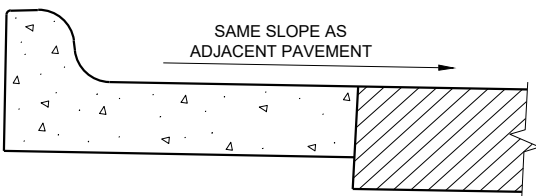
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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.

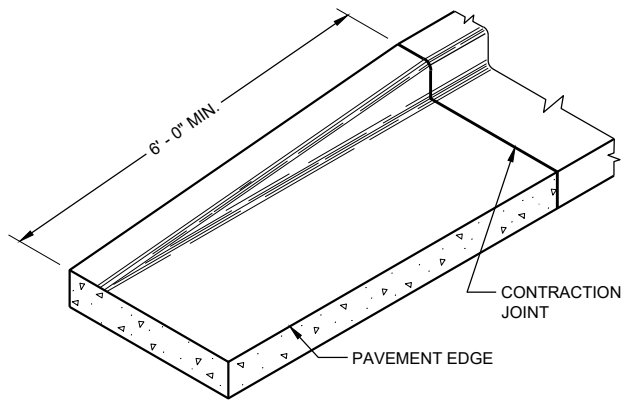
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

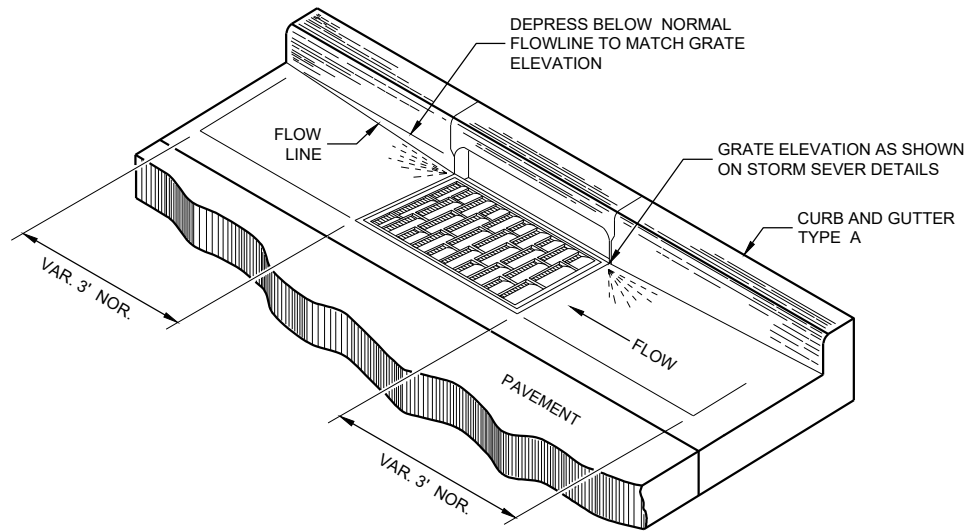
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH 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 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.

CONCRETE CURB AND GUTTER

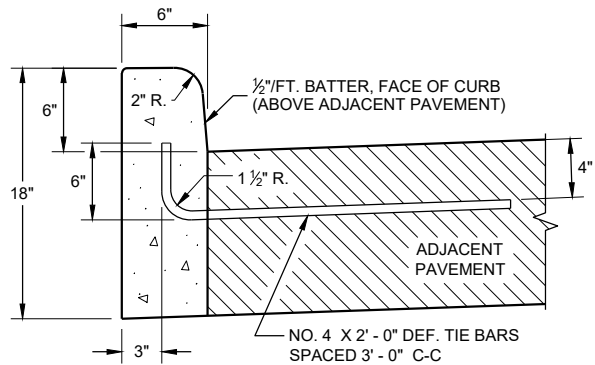
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



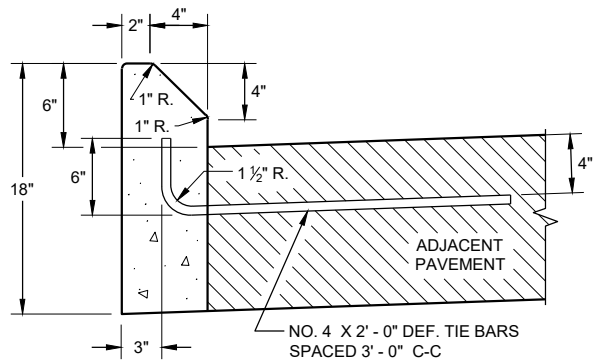
END SECTION CURB AND GUTTER



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

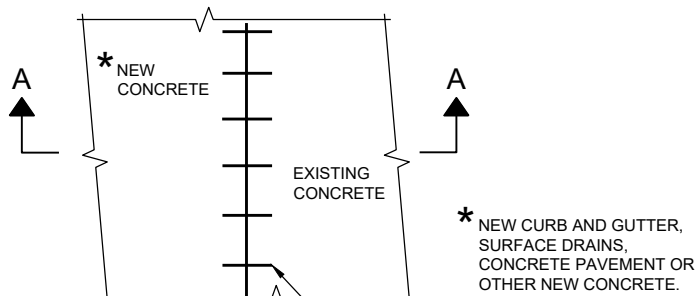


TYPES A^① & D

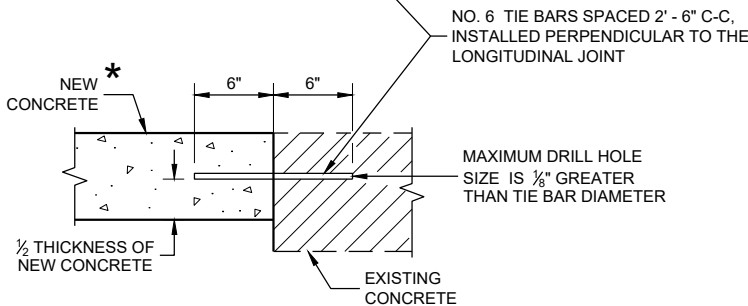


TYPES G^① & J

CONCRETE CURB



PLAN VIEW



SECTION A - A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

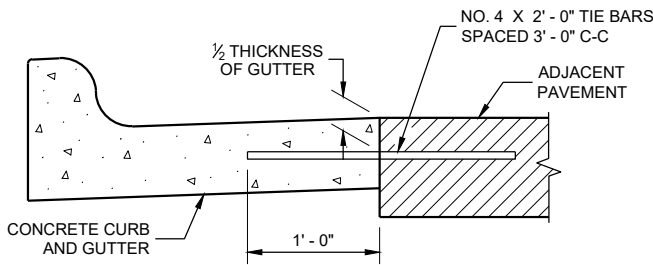
GENERAL NOTES

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

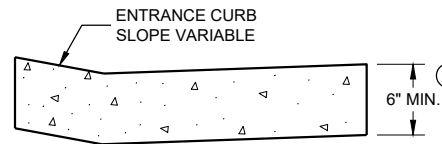
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

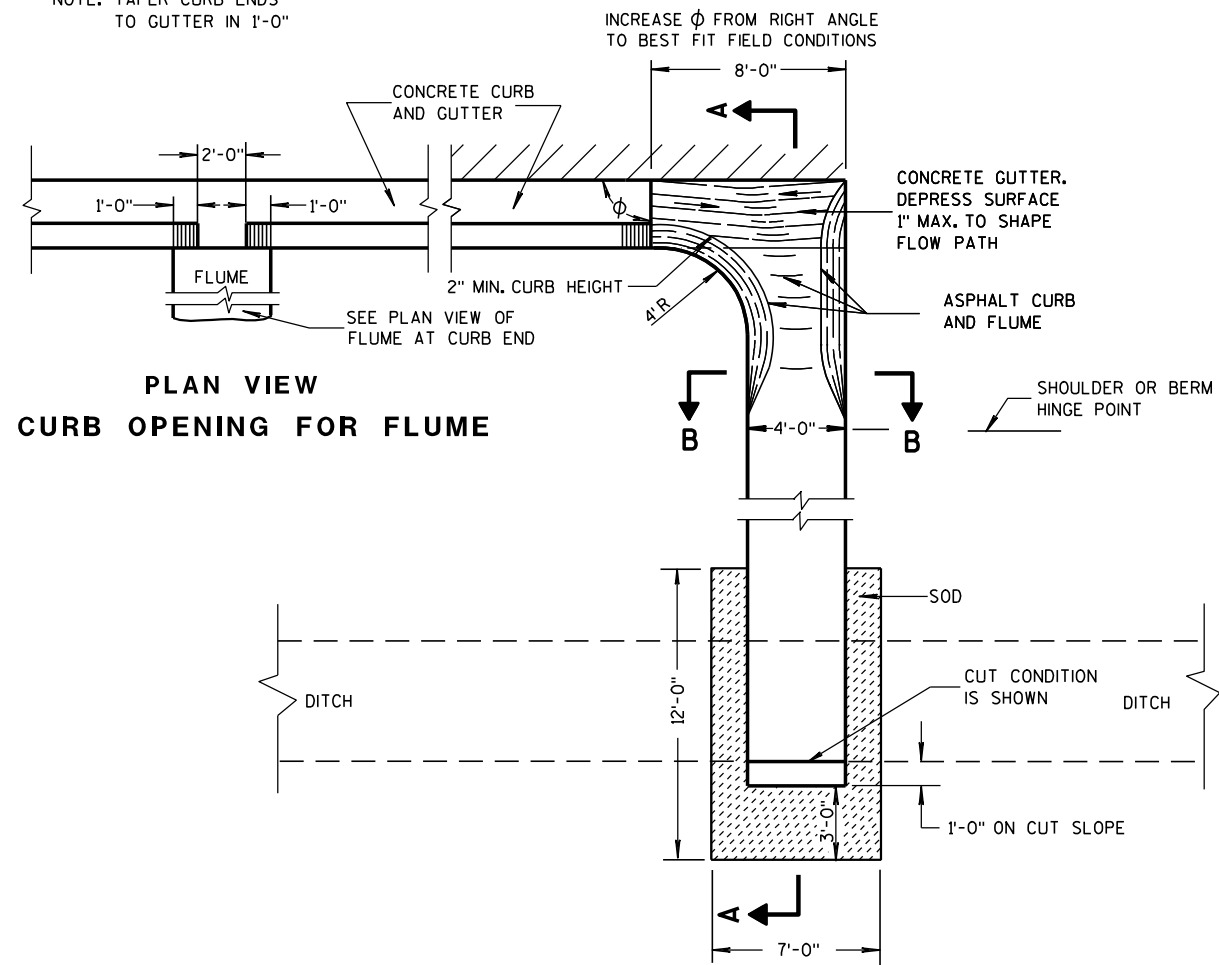
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

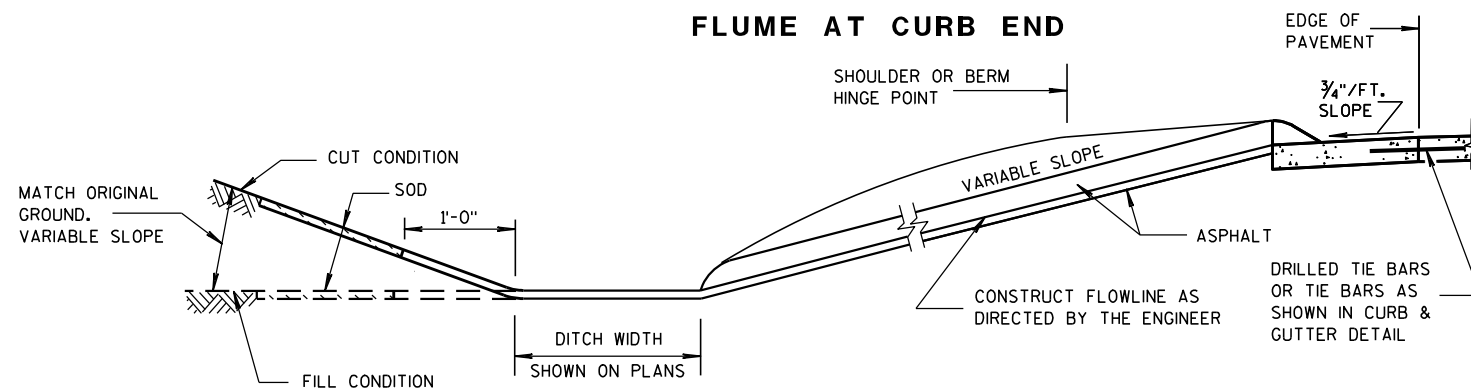
ASPHALTIC FLUME

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

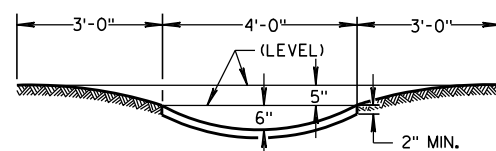


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

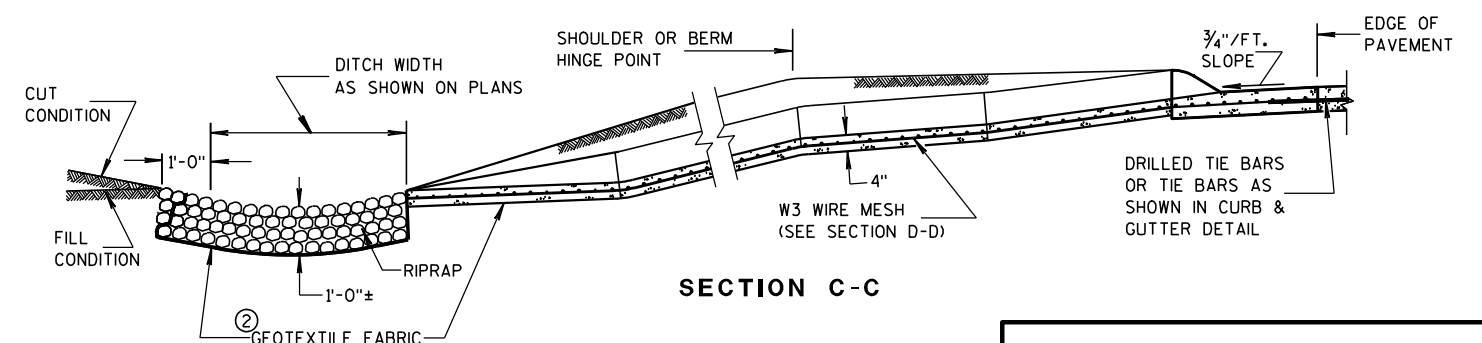
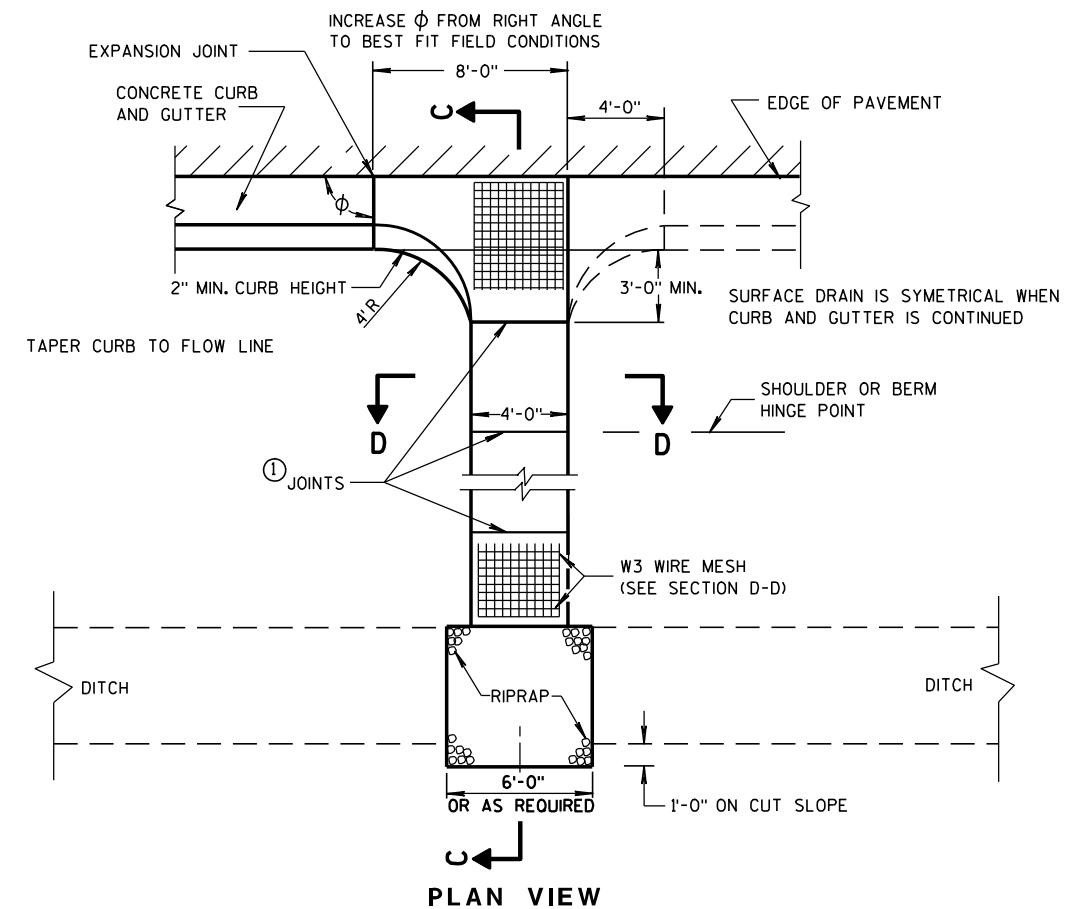
GENERAL NOTES

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

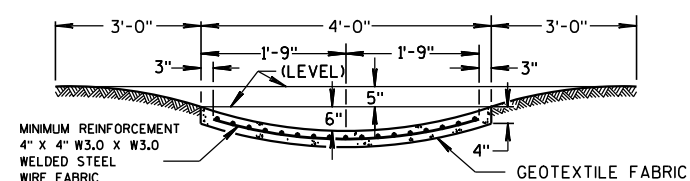
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC 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

③ CONCRETE SURFACE DRAIN



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

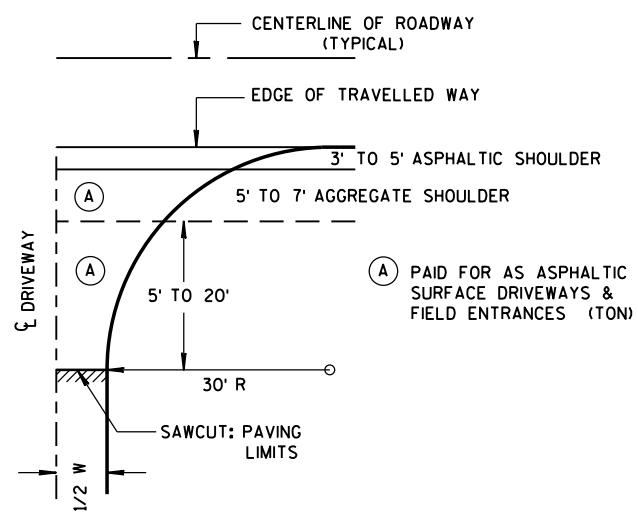
APPROVED

9-4-08

DATE

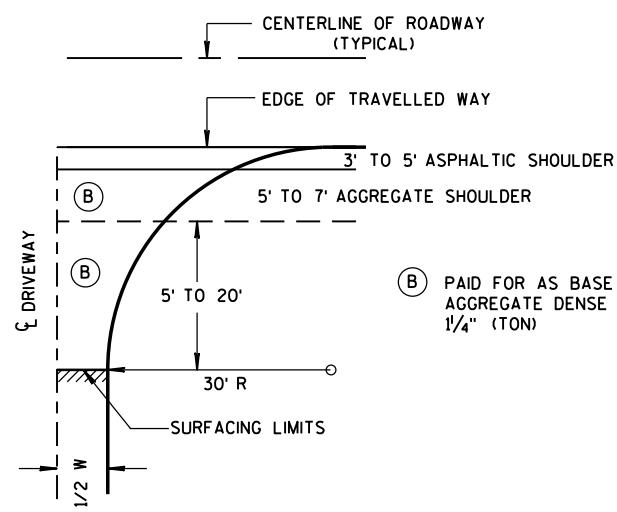
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

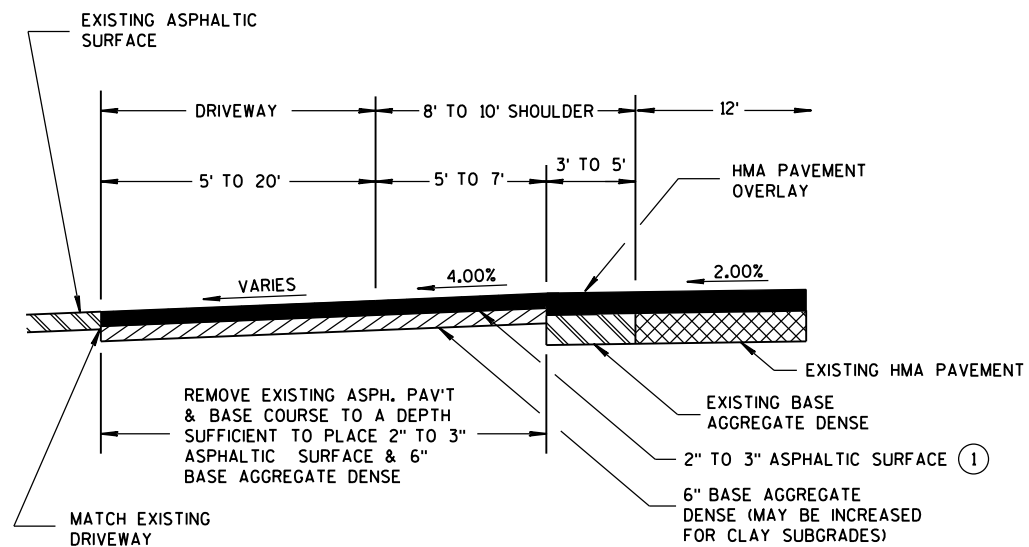


PLAN VIEW
HALF SECTION

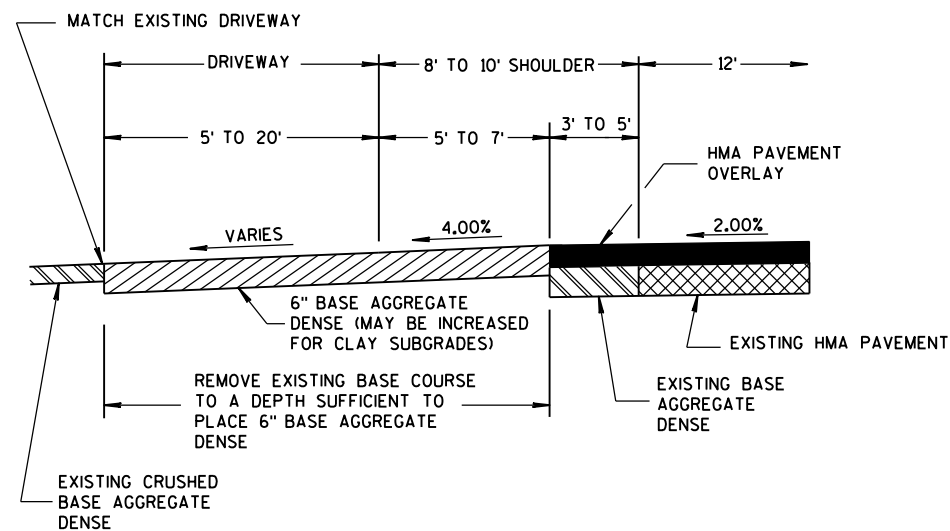
W MIN. = 16'
W MAX. = 24'



PLAN VIEW
HALF SECTION



PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS



PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

GENERAL NOTES

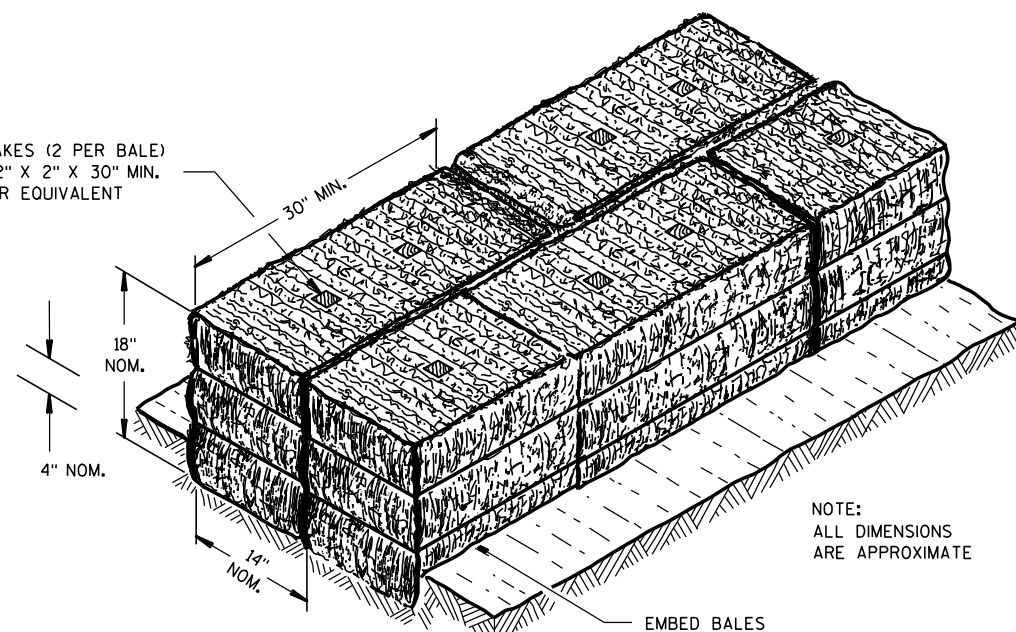
- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.

DRIVEWAYS WITHOUT
CURB & GUTTER
RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

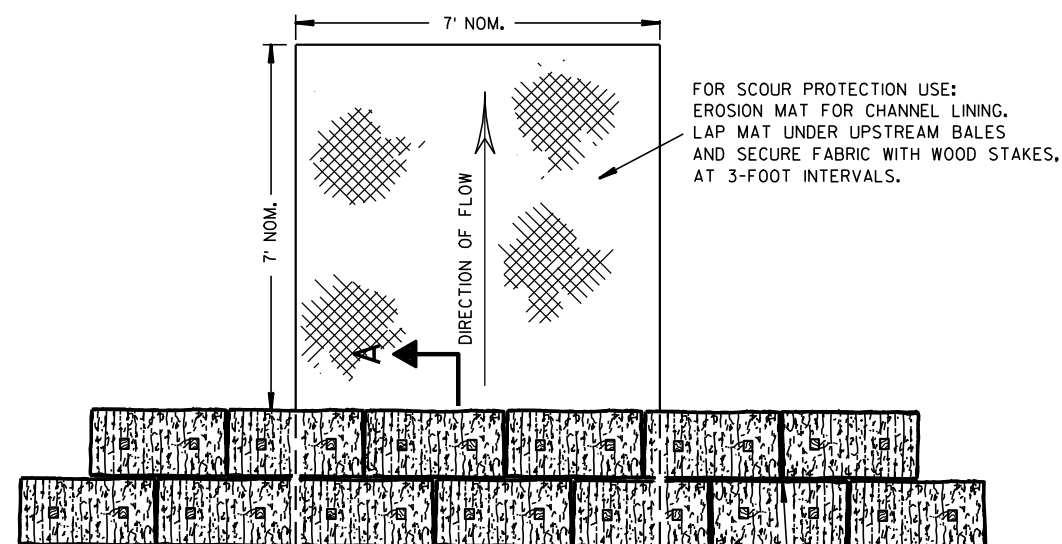
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

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



SECTION A-A

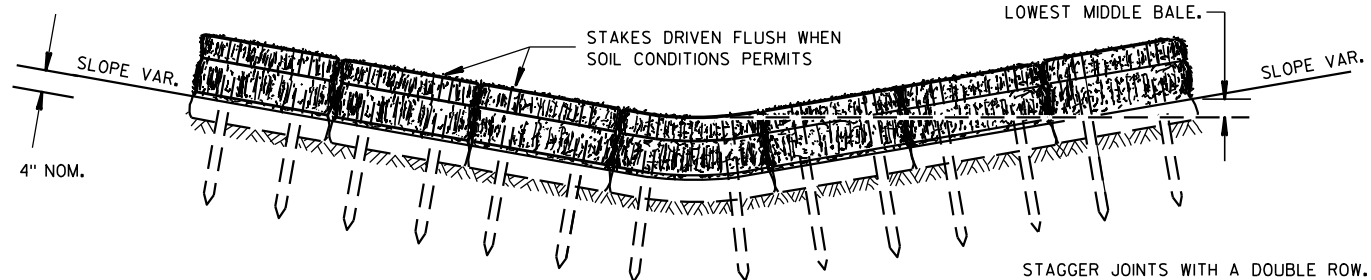
NOTE:
ALL DIMENSIONS
ARE APPROXIMATE



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.



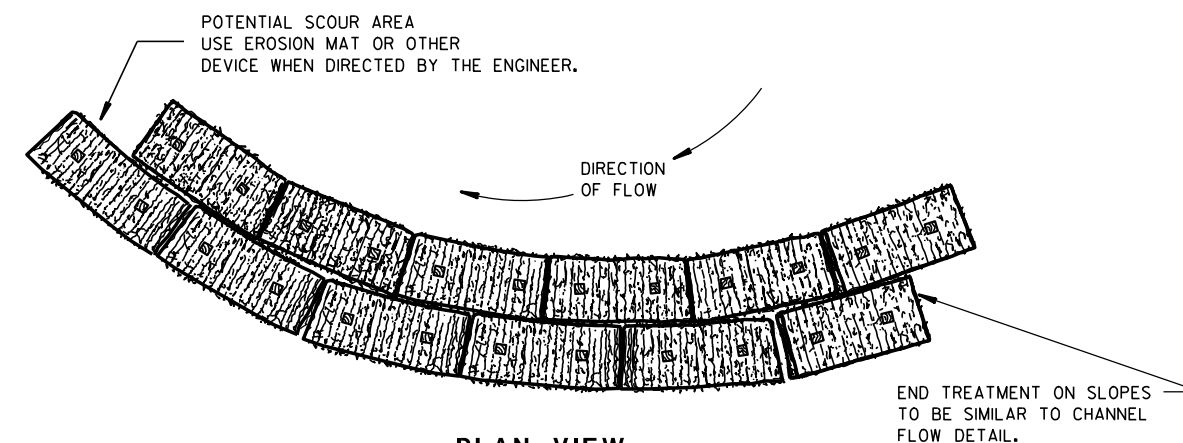
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

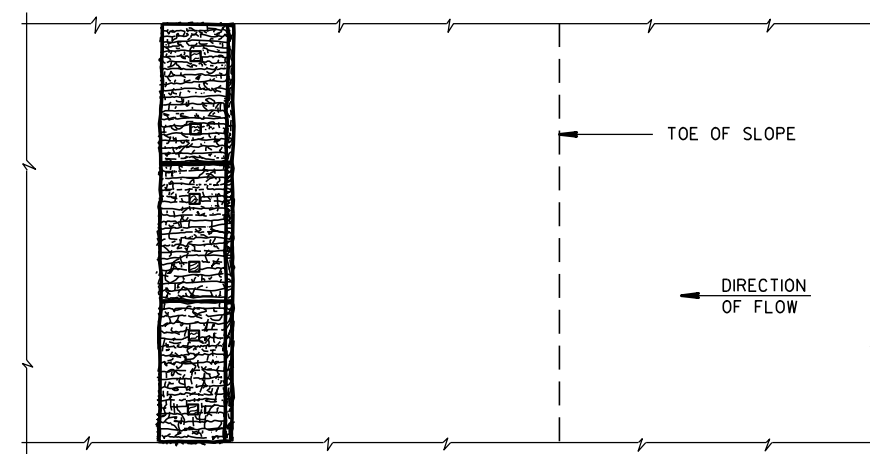
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

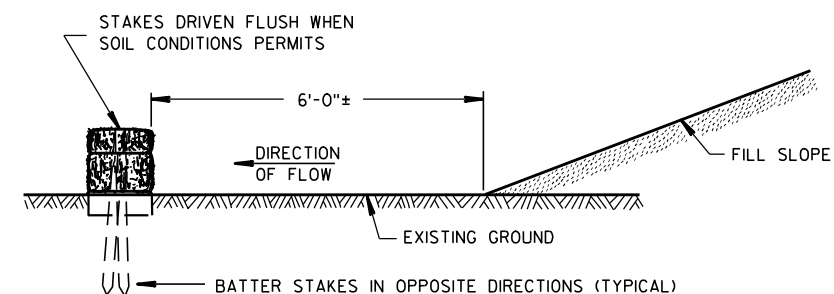


PLAN VIEW

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

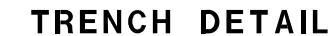
6/04/02
DATE

FHWA

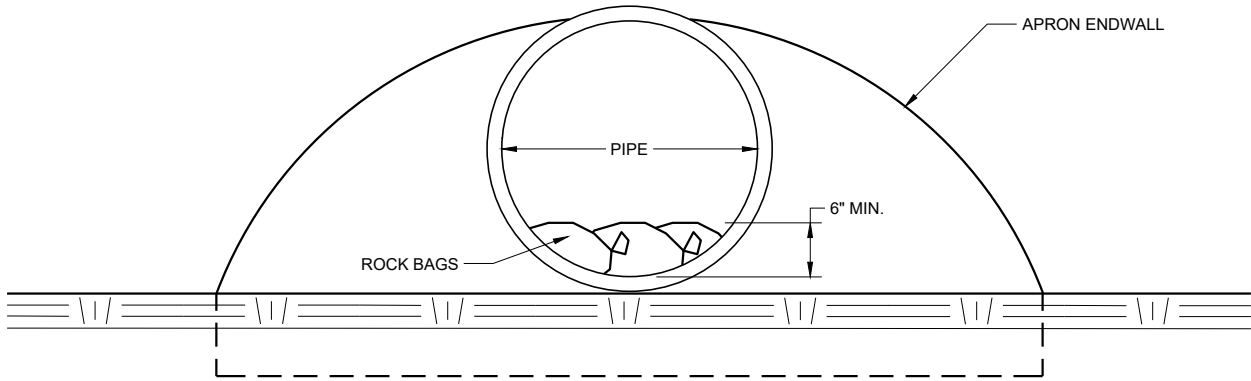
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



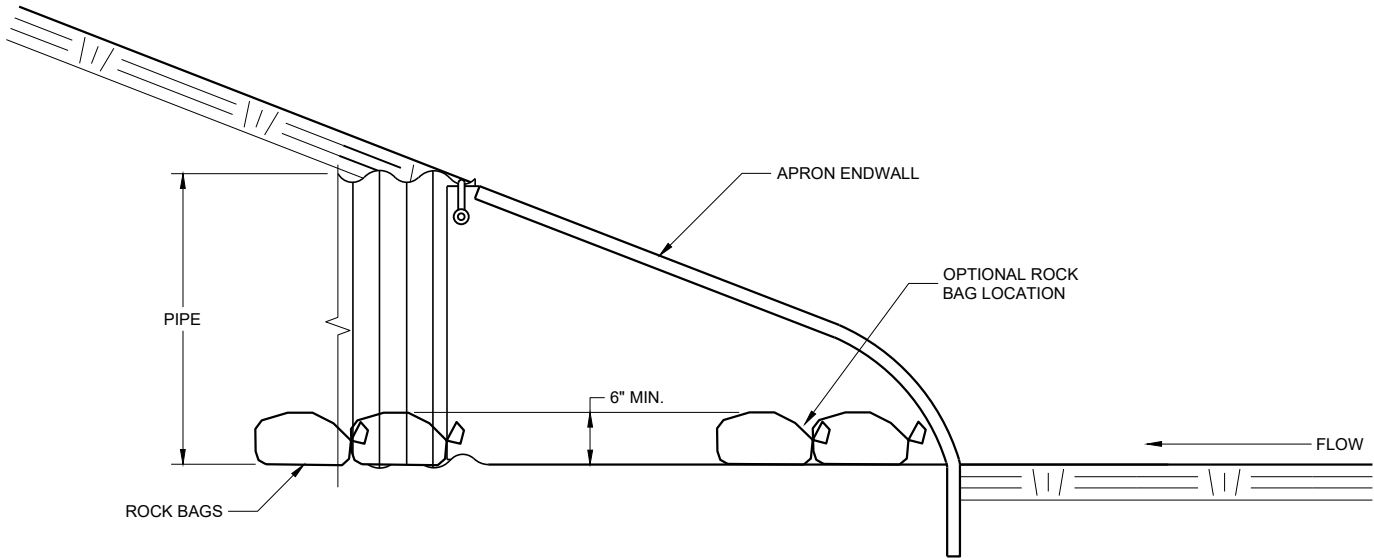
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" 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.



SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>4-29-05</u> <u>DATE</u>	<u>/S/ Beth Canestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER



END VIEW



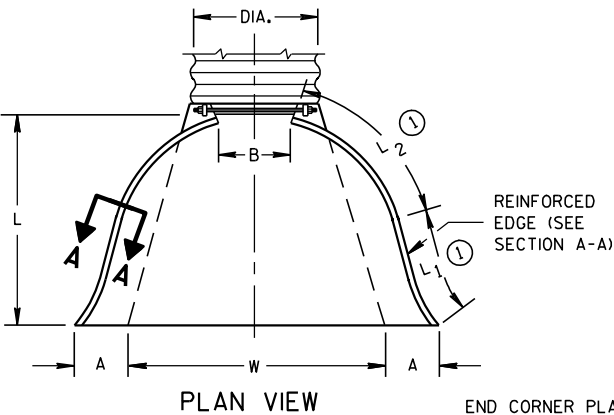
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

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

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 ①	L2 ①	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.

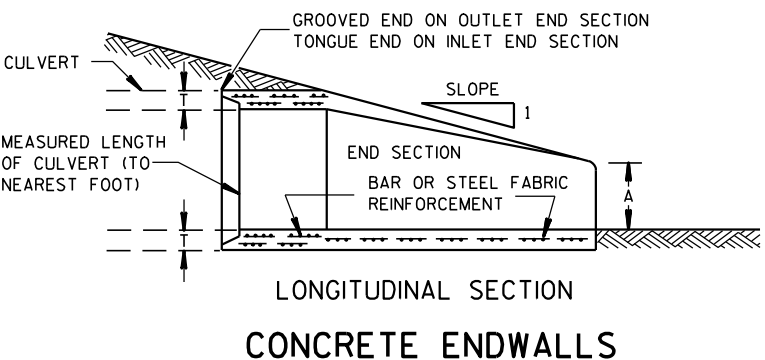
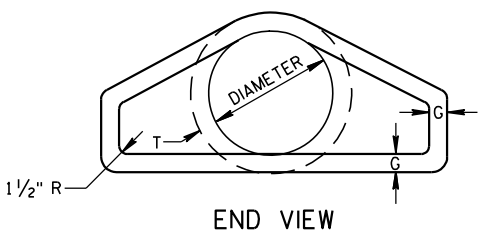
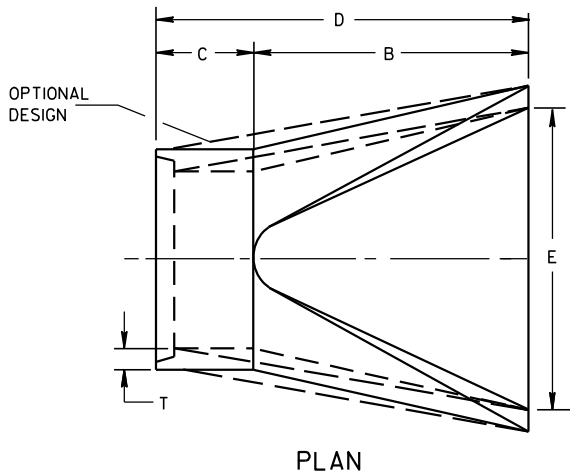
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



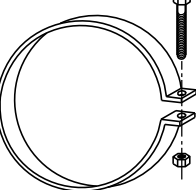
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 7/8	72 7/8	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	98 1/4	90	5 1/2	2 2/5 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			

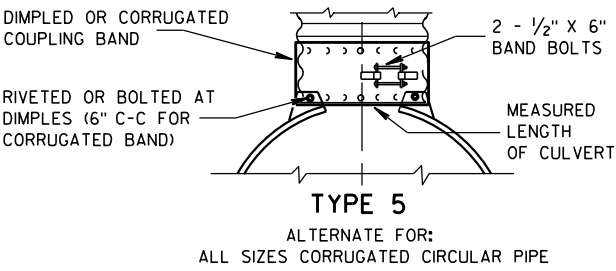
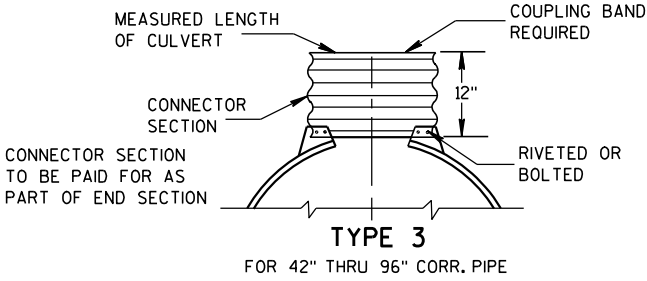
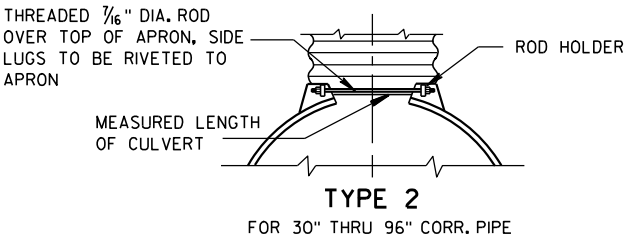
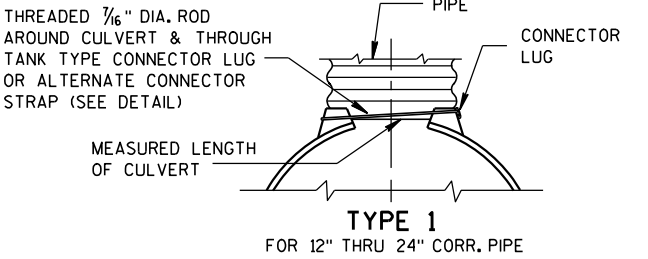
* MINIMUM
** MAXIMUM



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



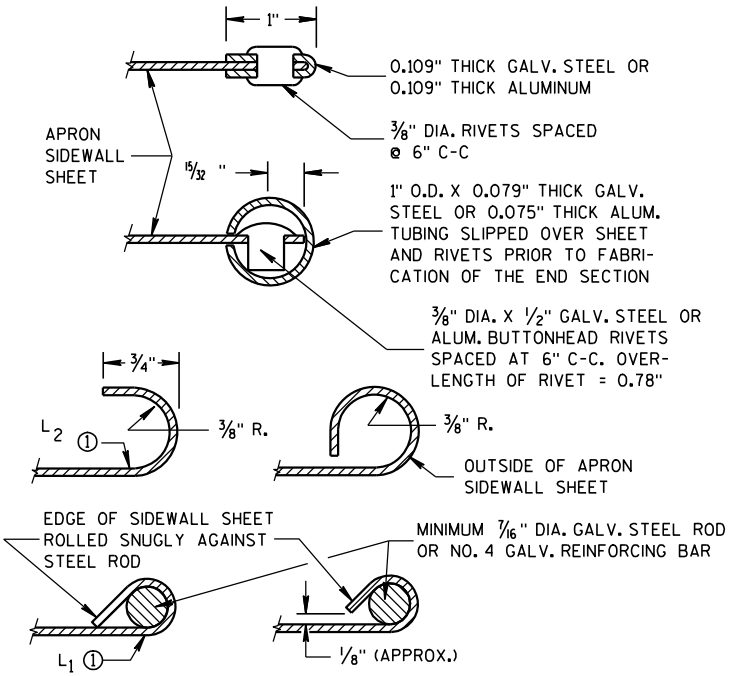
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VISE 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.

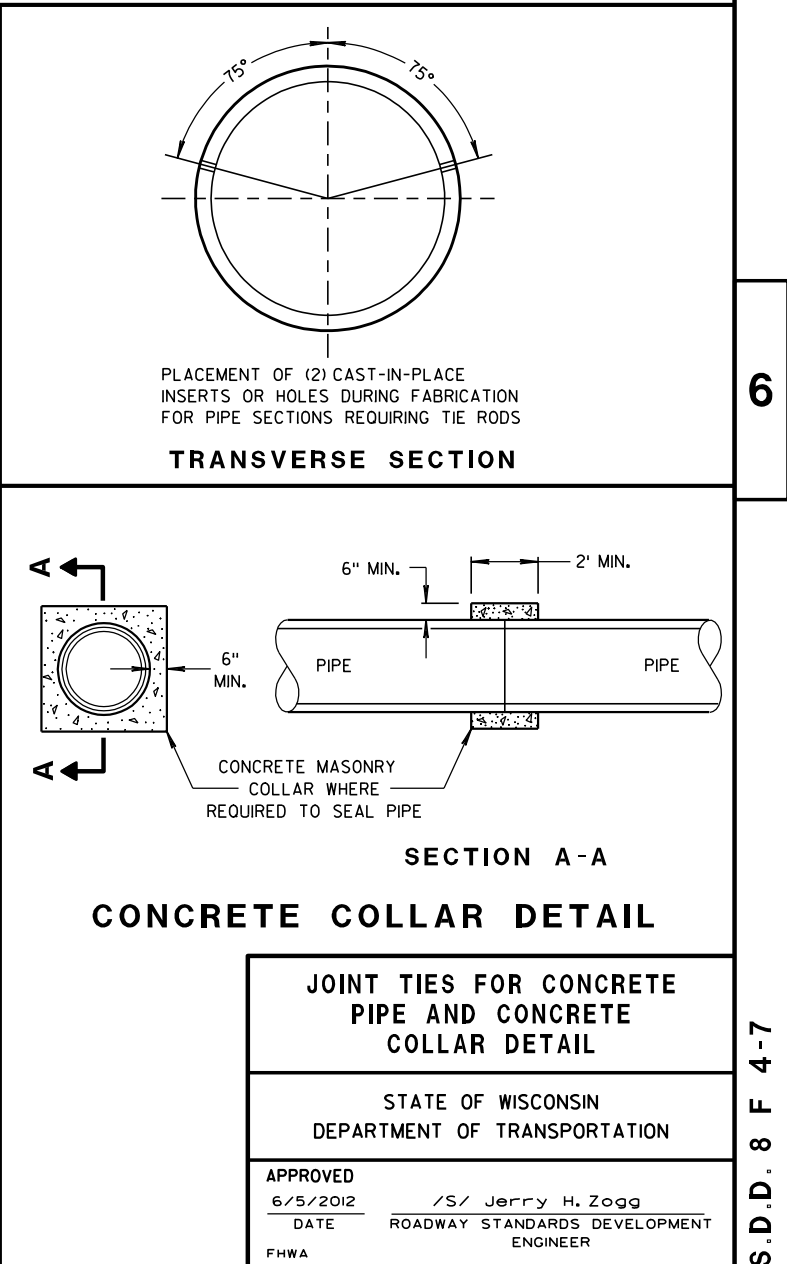
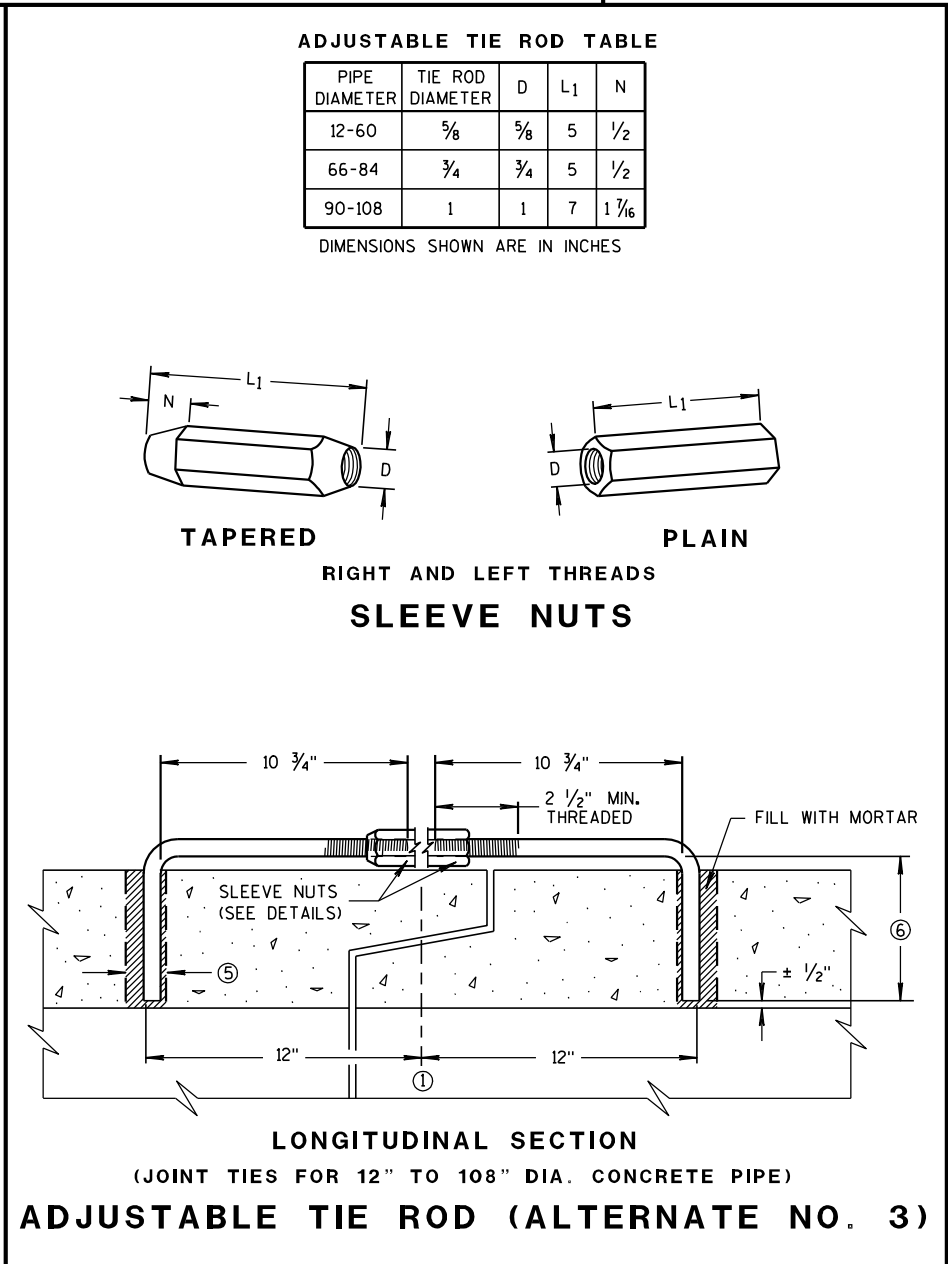
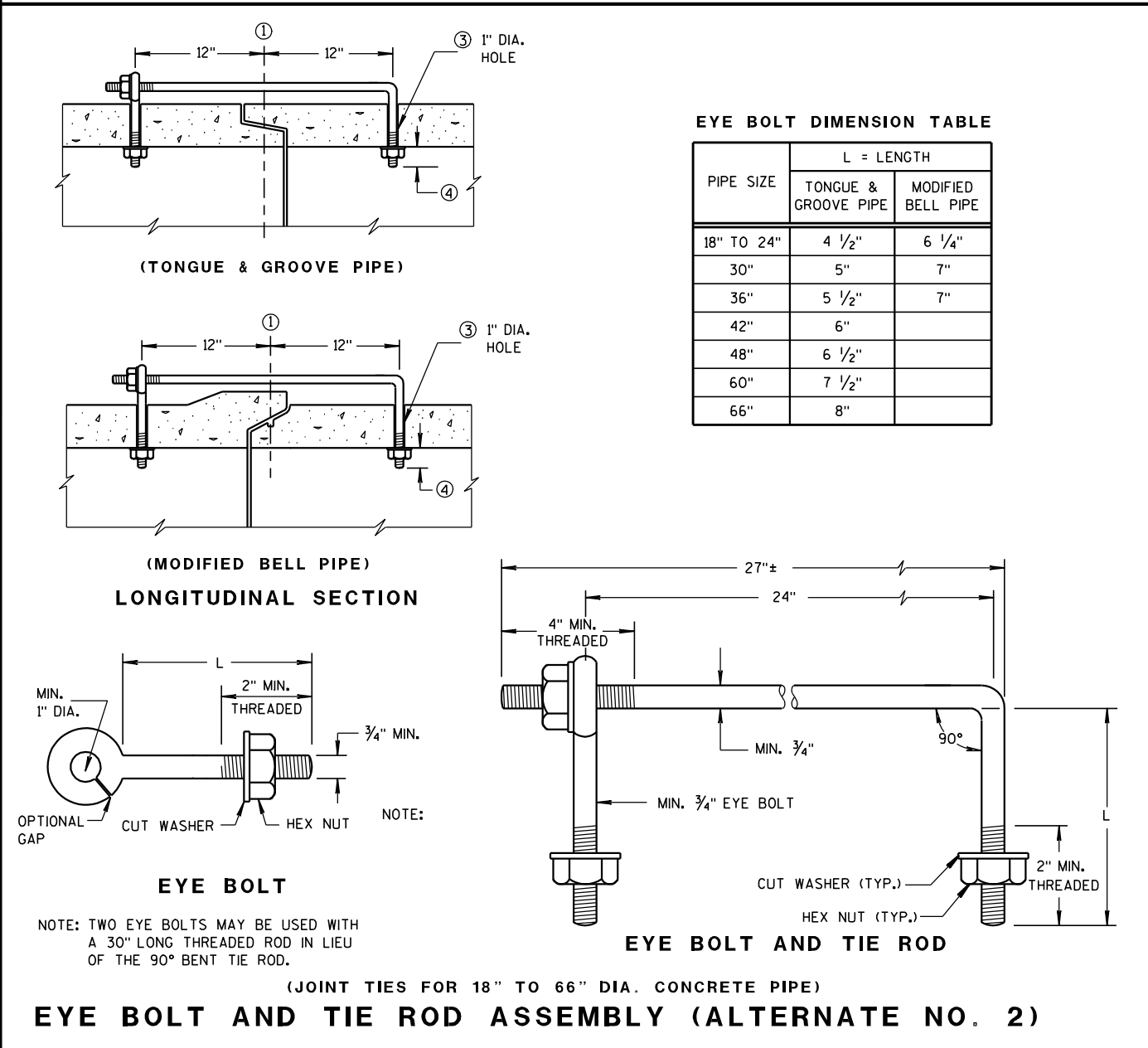
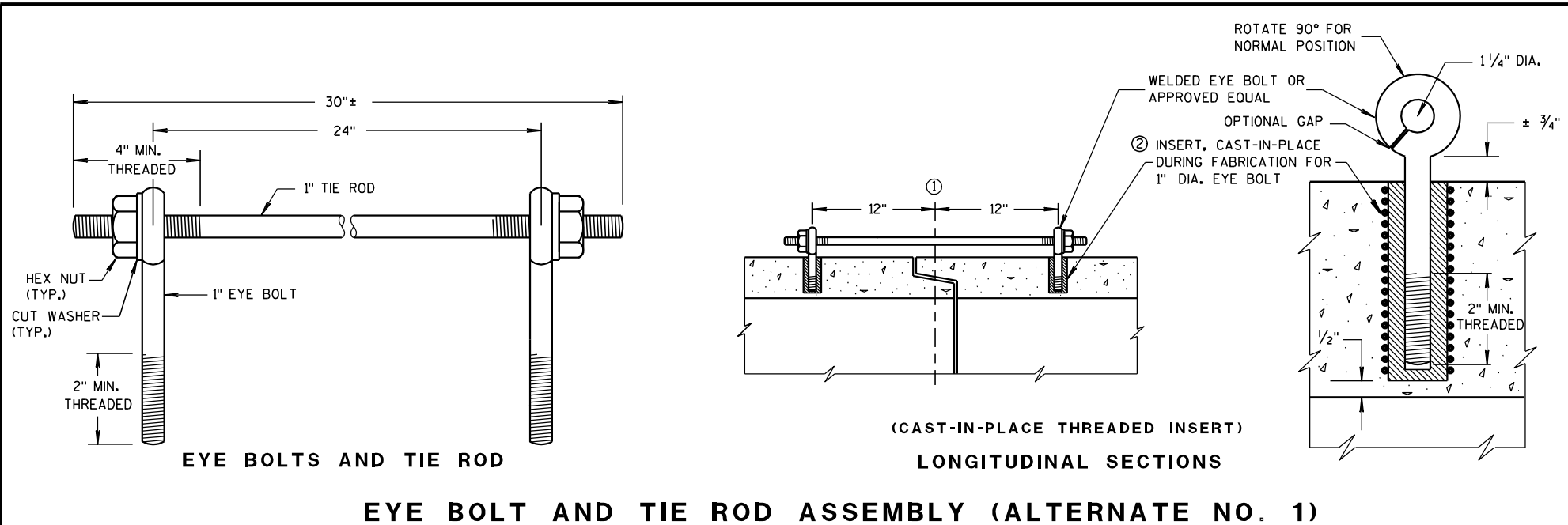
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

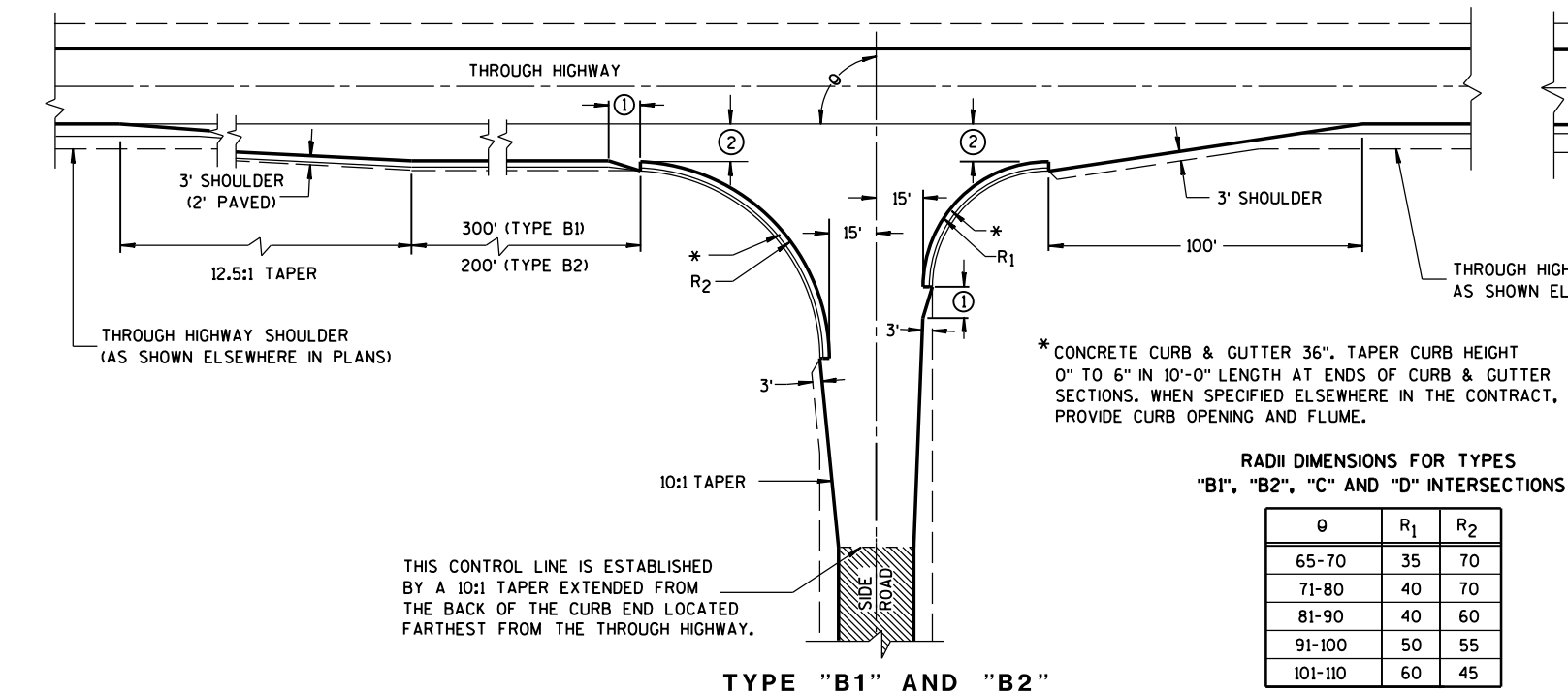
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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





RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R ₁	R ₂
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

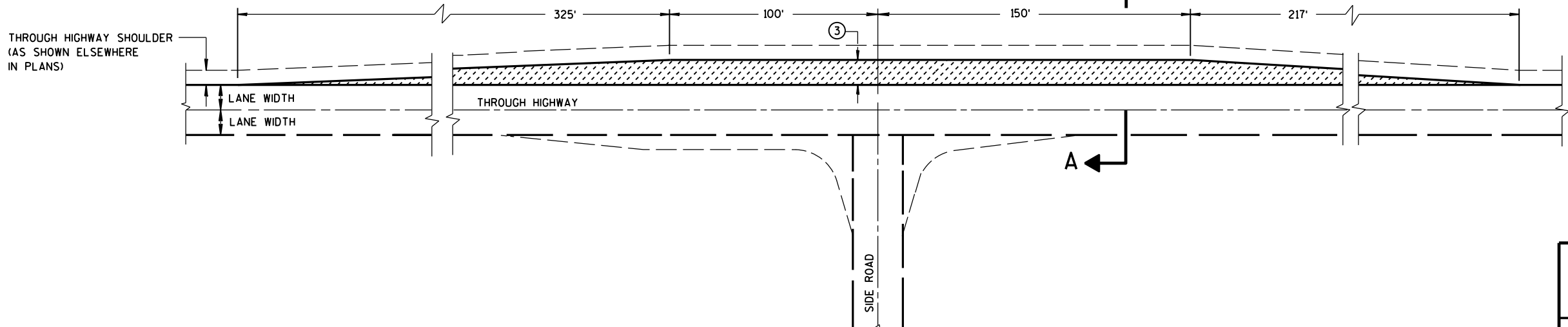
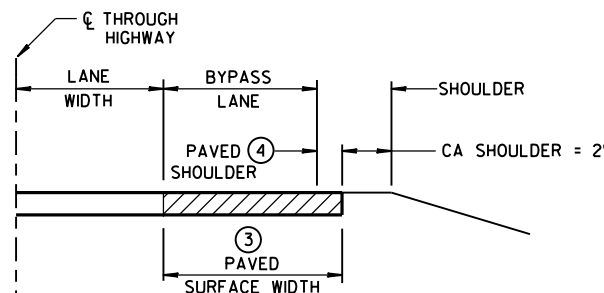
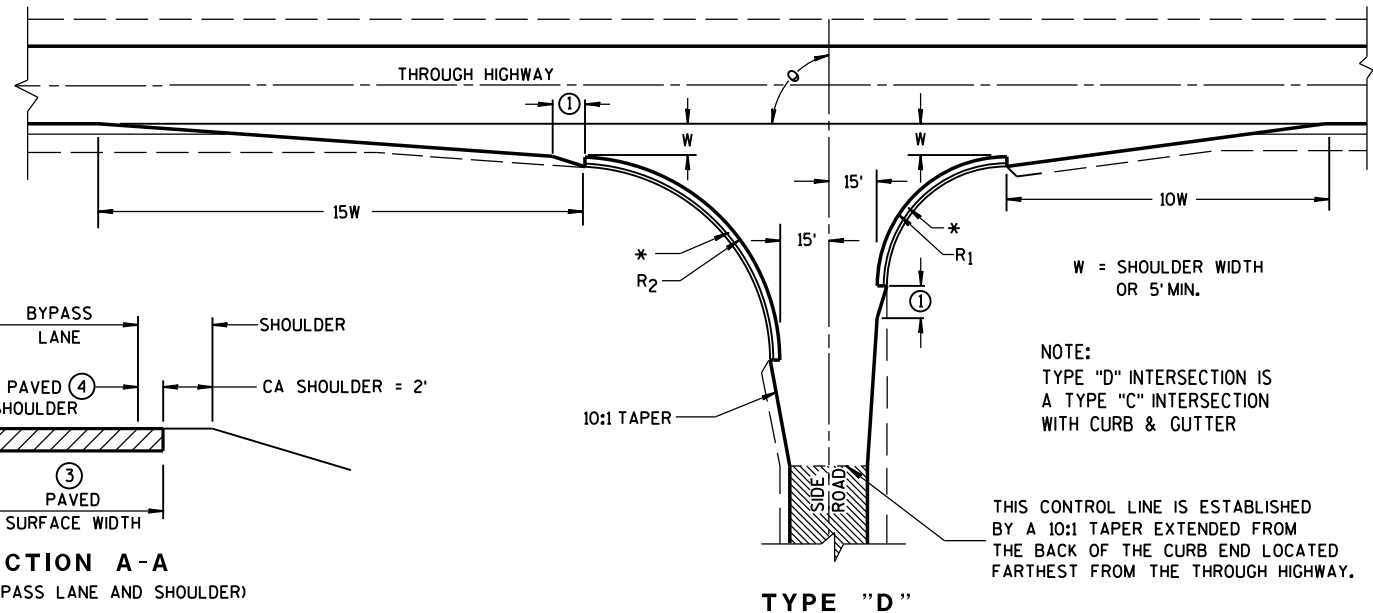
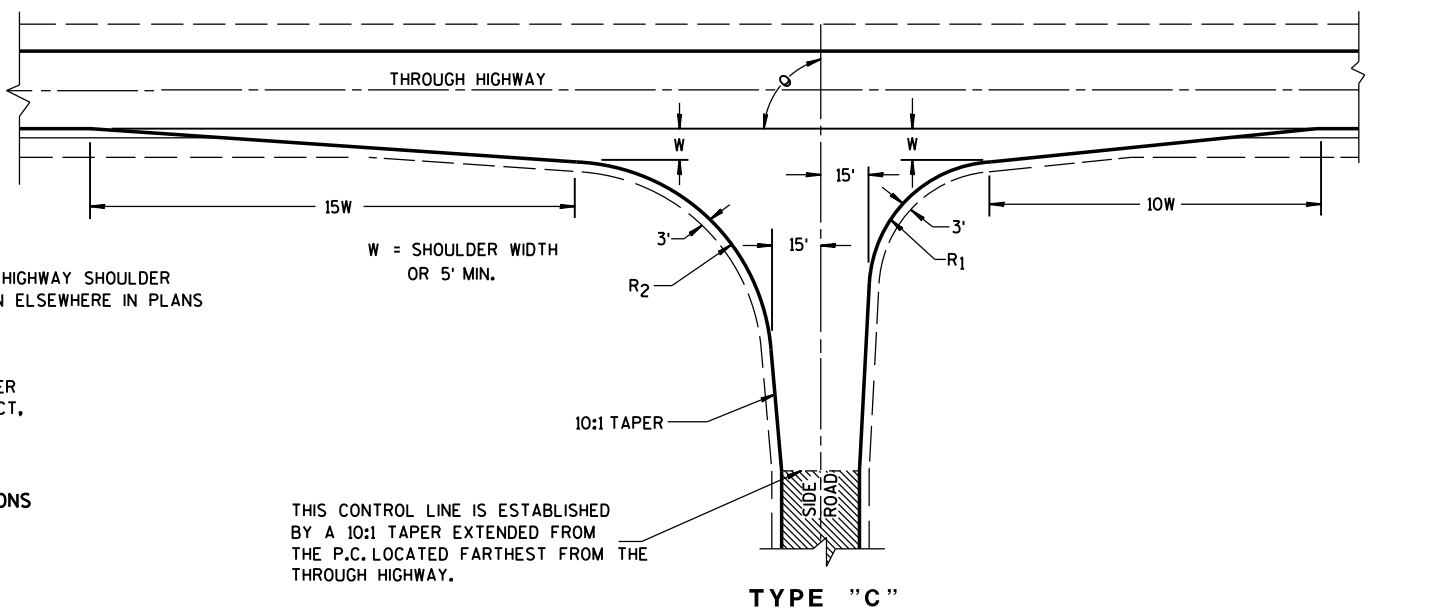
WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

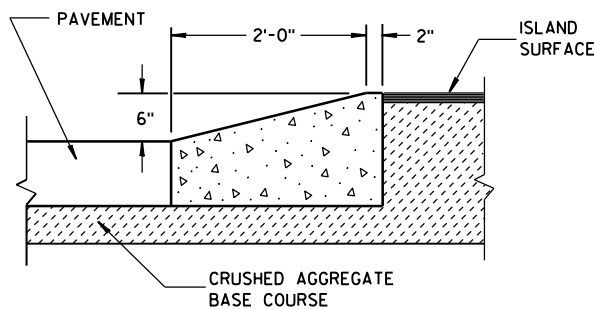
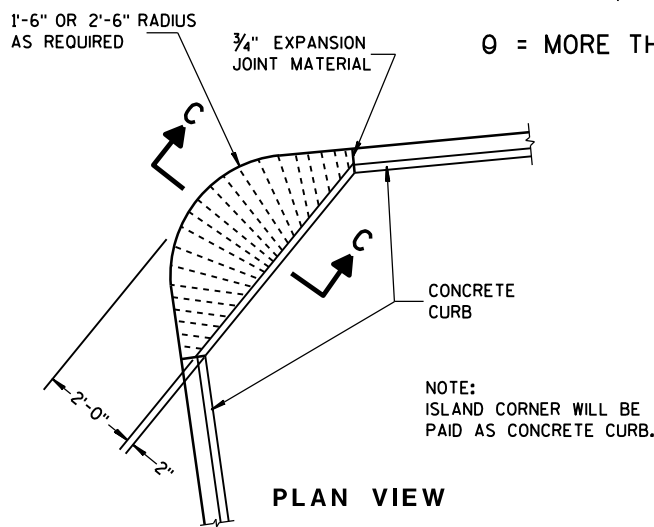
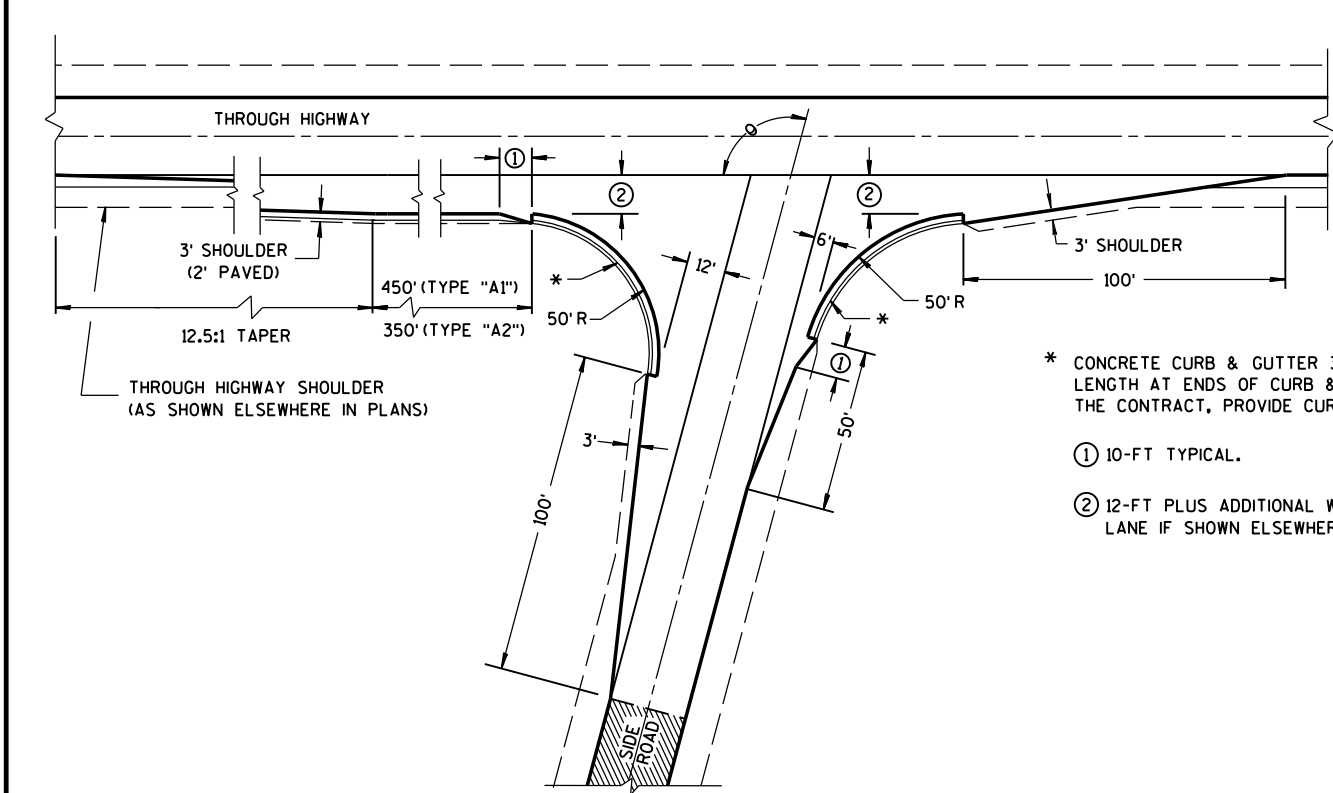
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

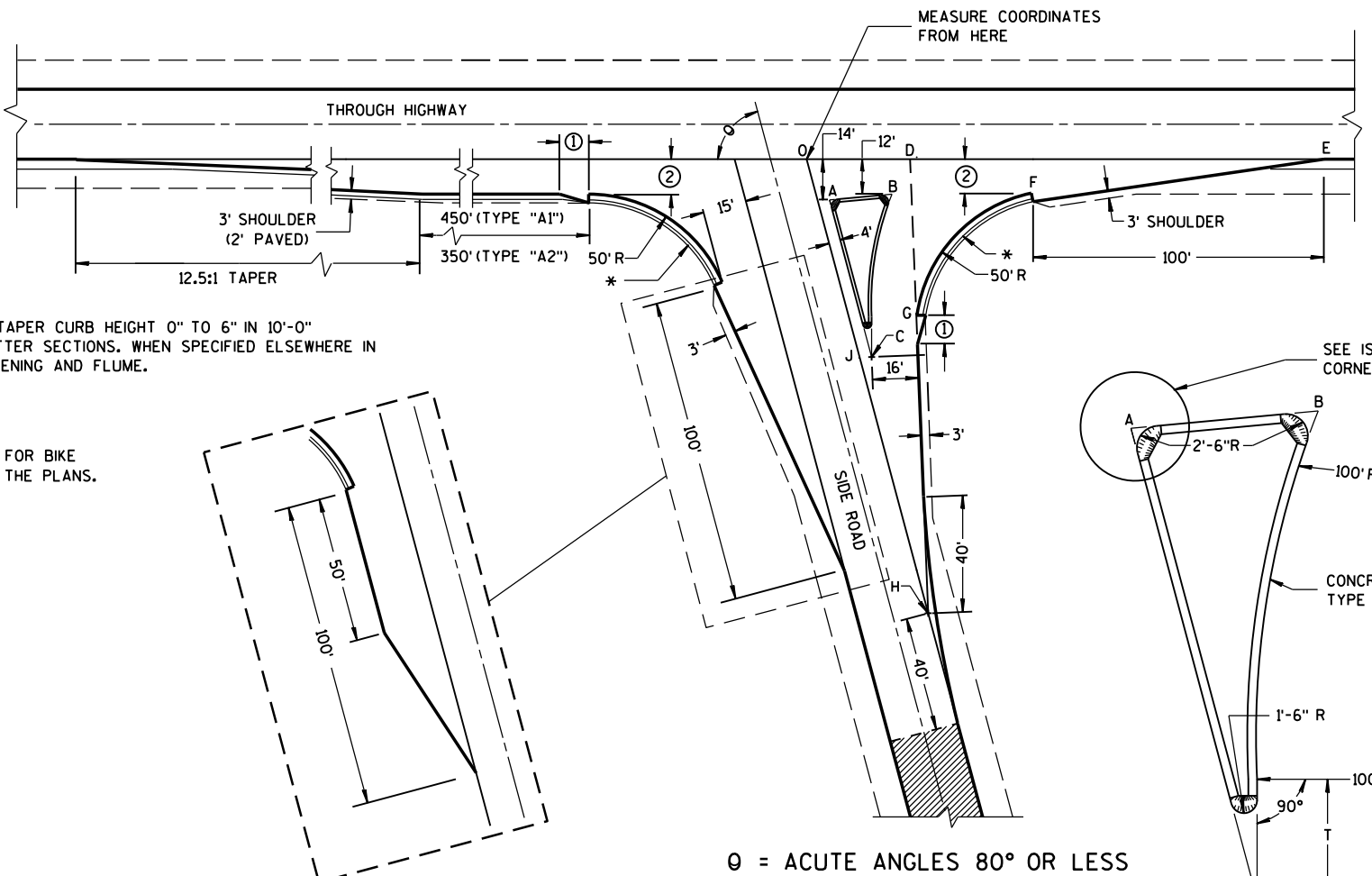
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SECTION C-C

ISLAND CORNER DETAIL
(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

- * CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.
- ① 10-FT TYPICAL.
- ② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.



SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 θ = ACUTE ANGLES 70° OR LESS

TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES
(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

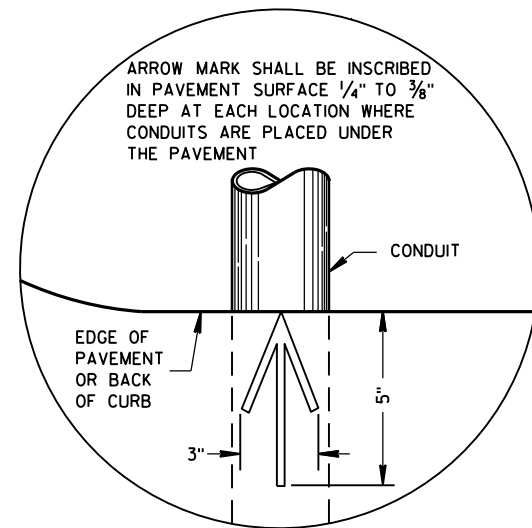
ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O")								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 -14.0	44.9 -12.0	46.4 -72.4	41.9 0.0	205.0 0.0	104.6 -12.0	64.0 -75.5	85.0 -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 -14.0	39.0 -12.0	37.8 -71.6	39.4 0.0	196.1 0.0	95.7 -12.0	54.1 -71.5	70.5 -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 -14.0	33.9 -12.0	29.8 -70.1	37.4 0.0	188.3 0.0	87.8 -12.0	45.6 -67.5	56.1 -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 -14.0	29.3 -12.0	22.3 -67.9	35.7 0.0	181.2 0.0	80.7 -12.0	38.2 -63.4	41.8 -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 -14.0	25.4 -12.0	15.6 -65.2	34.4 0.0	174.8 0.0	74.4 -12.0	31.8 -59.3	27.6 -156.5	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

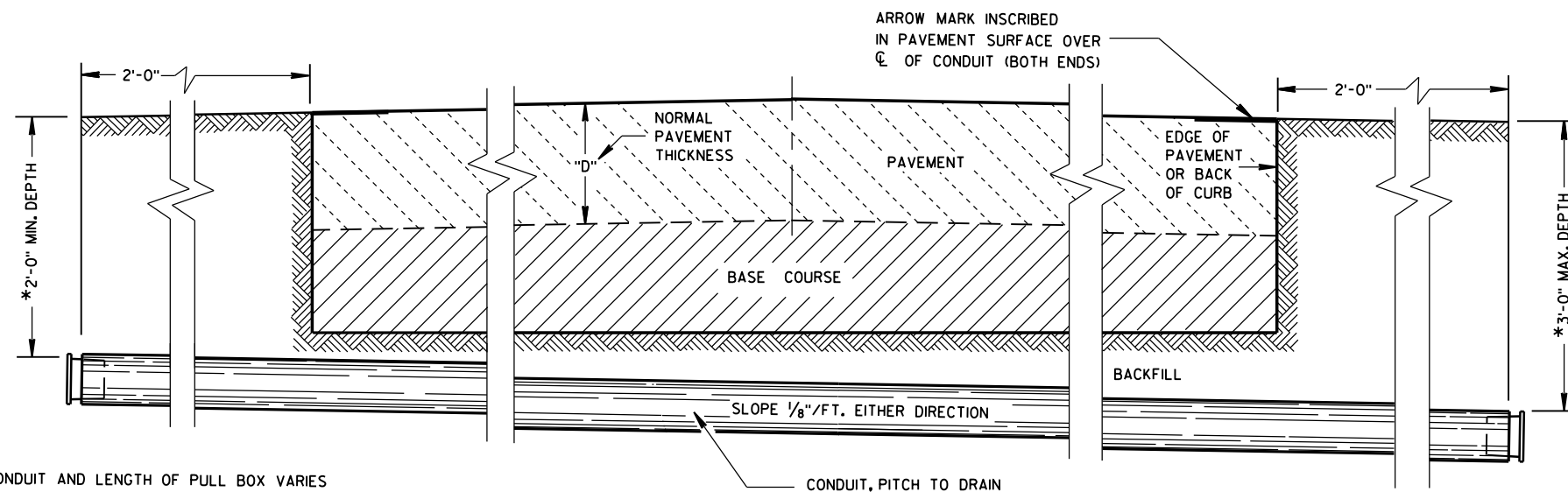
AT-GRADE SIDE ROAD
INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/12 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



PLAN VIEW
ARROW MARK



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES
WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

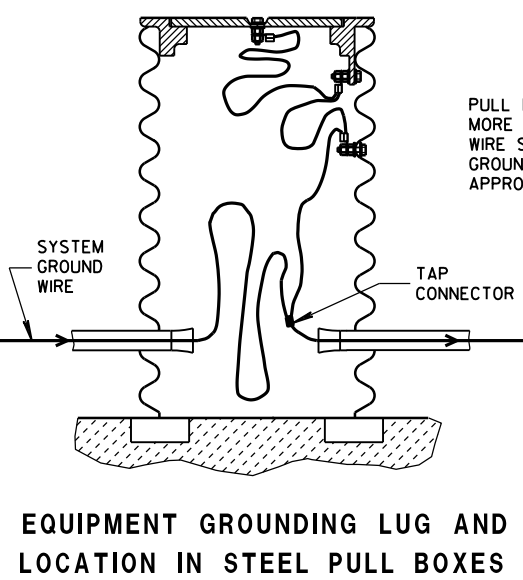
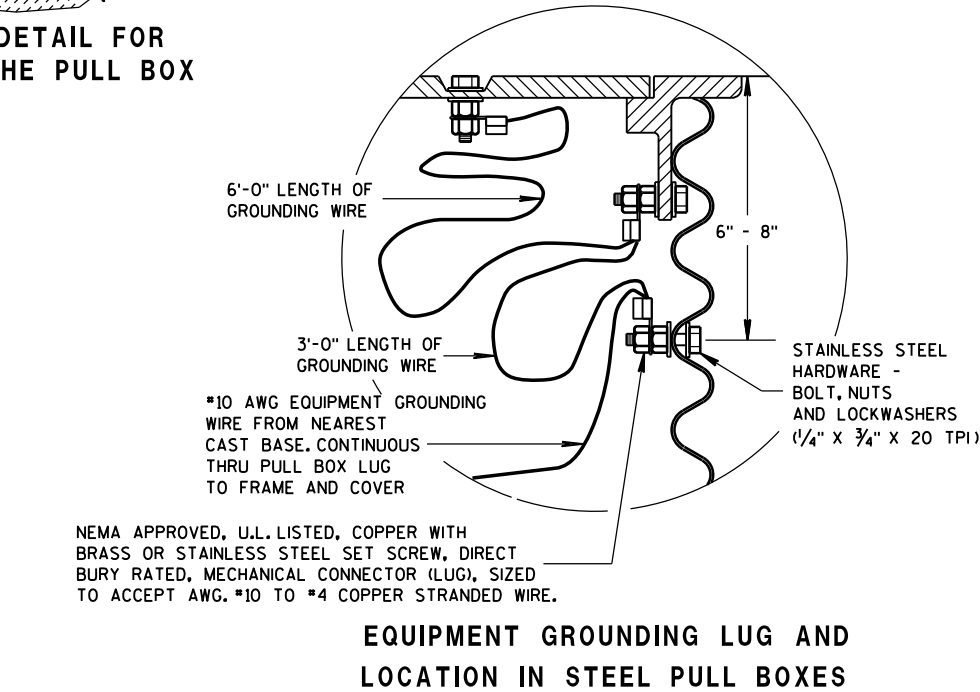
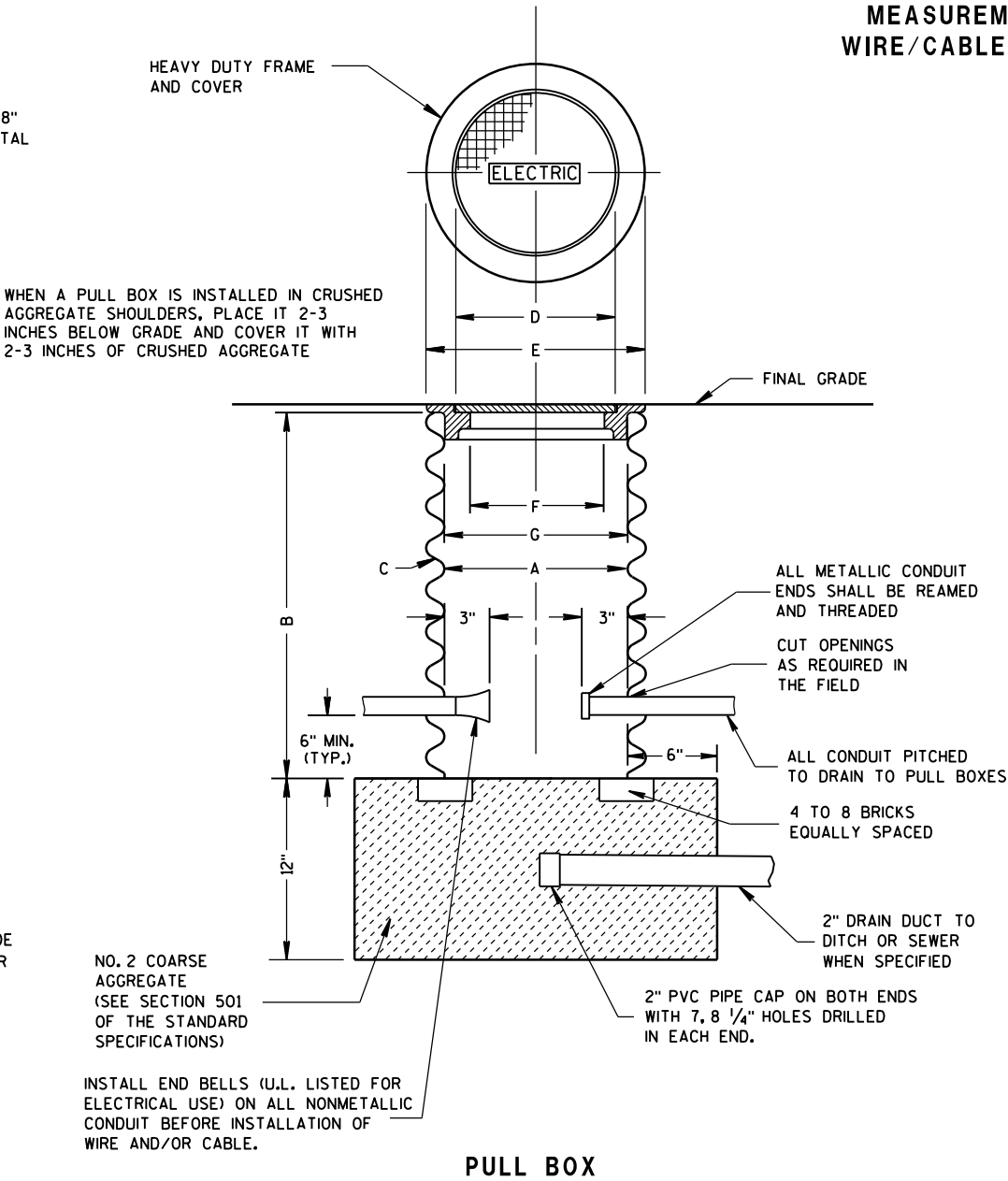
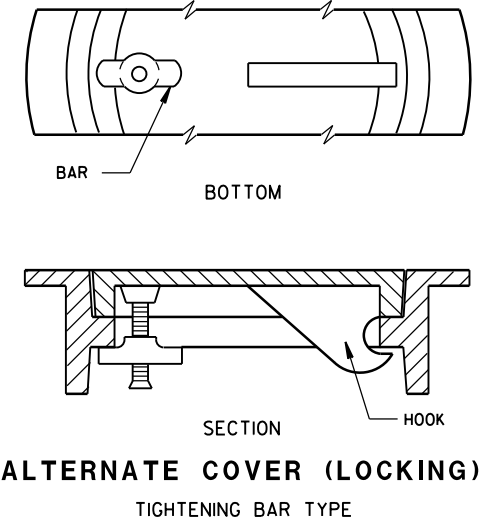
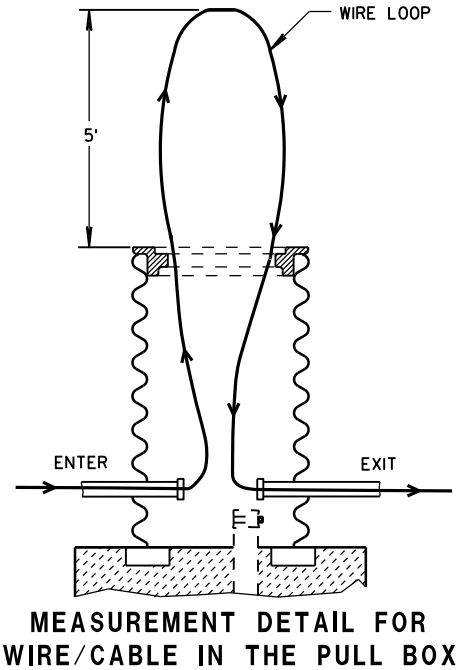
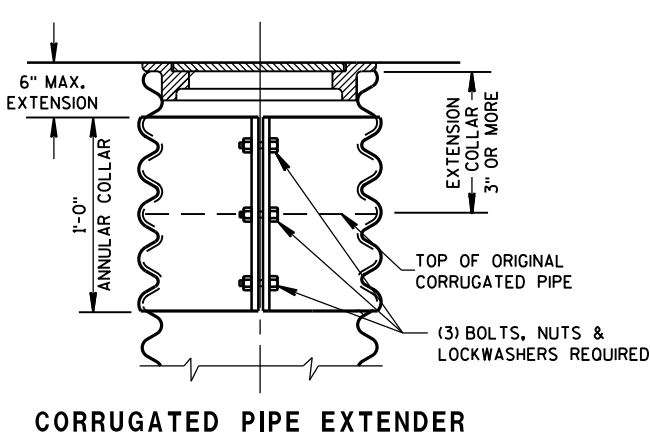
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

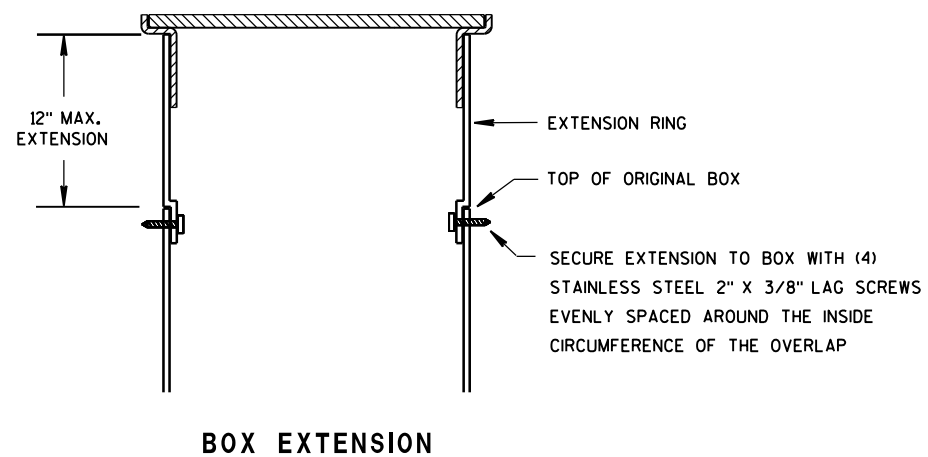
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

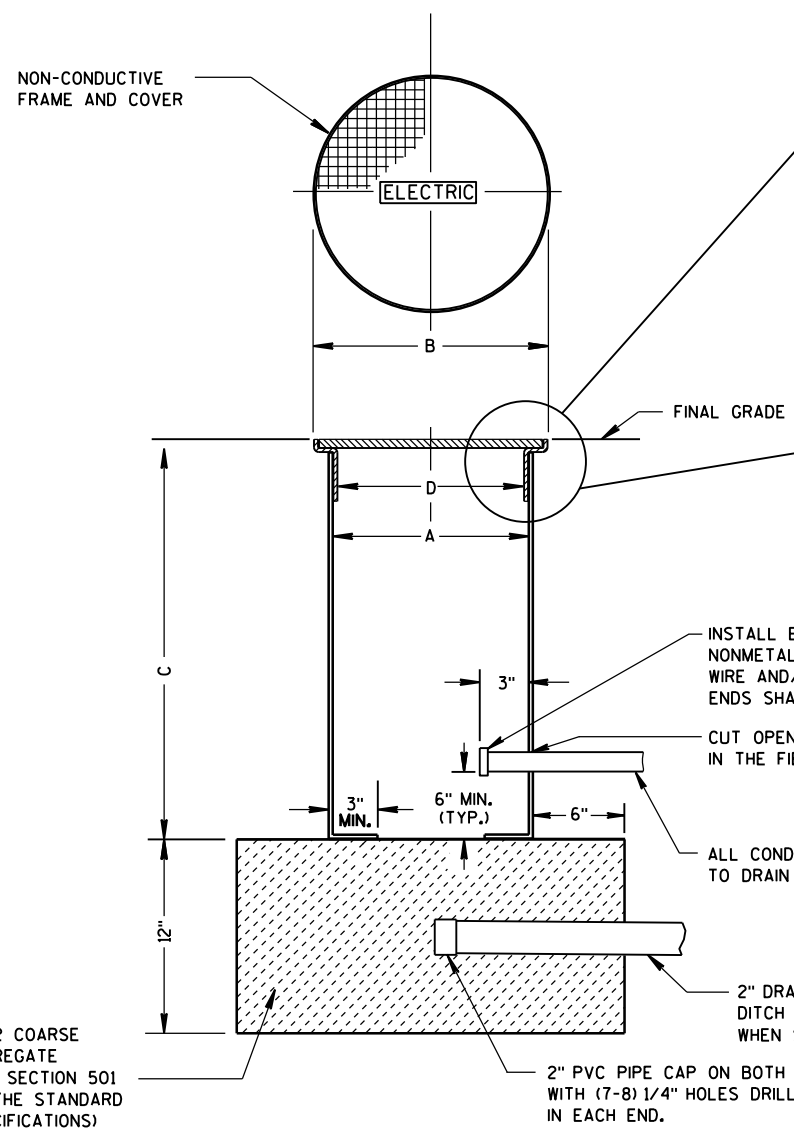
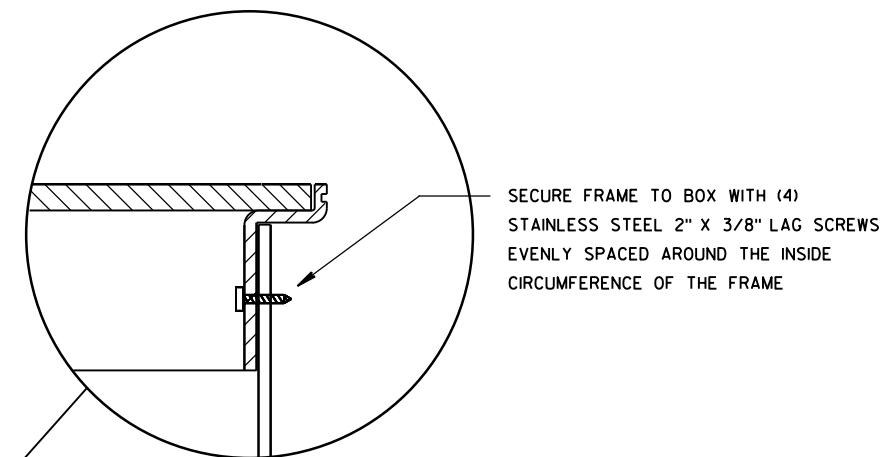
ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

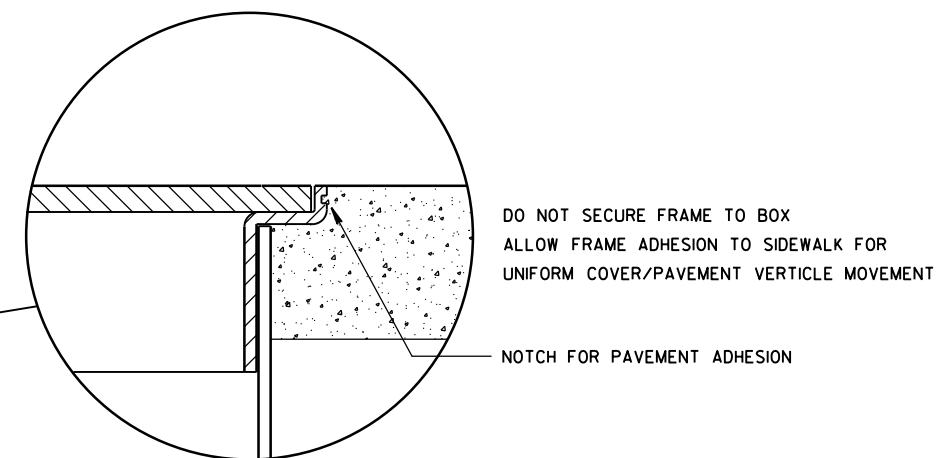
LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



NON-CONDUCTIVE PULL BOX

PULL BOX
NON-CONDUCTIVE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

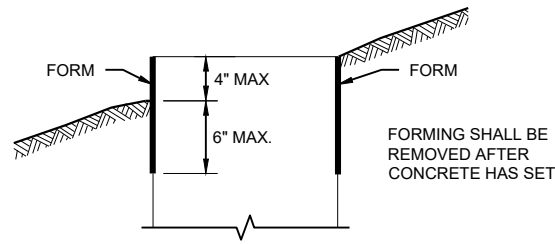
APPROVED

May 2017
DATE

FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

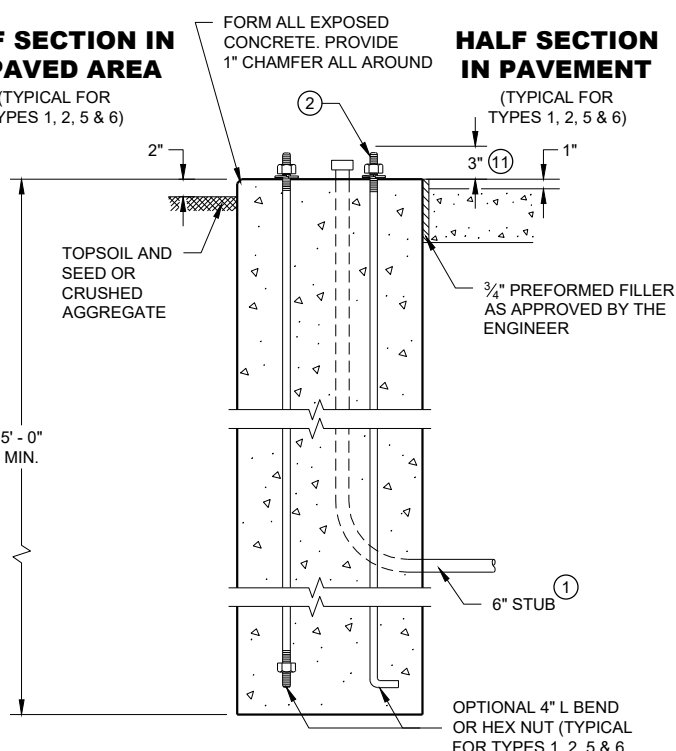
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

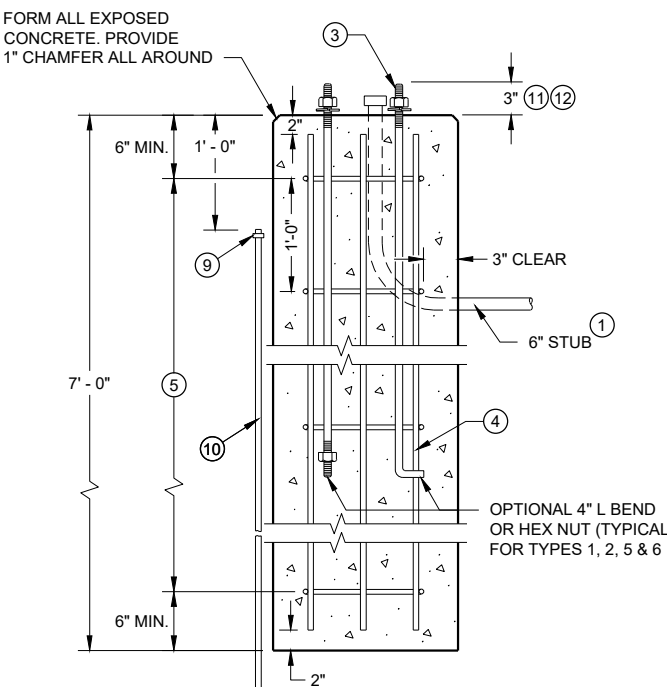
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- 4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA



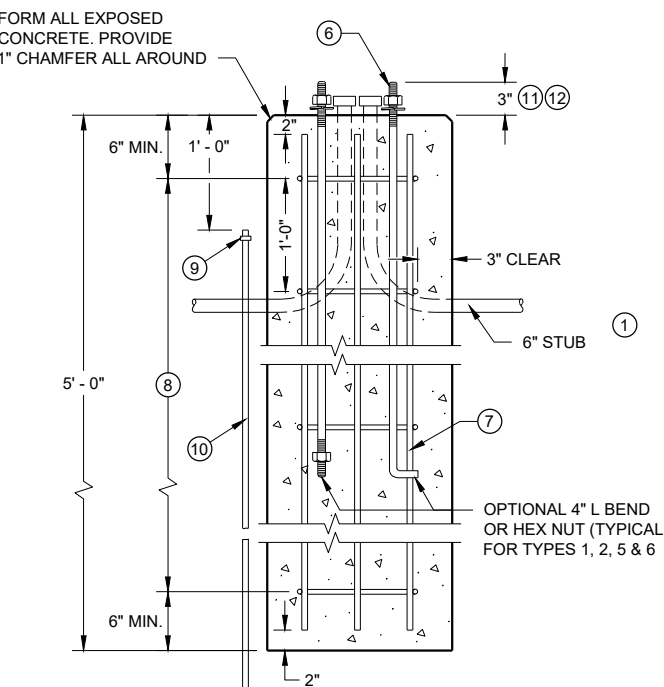
TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2

CONCRETE BASES

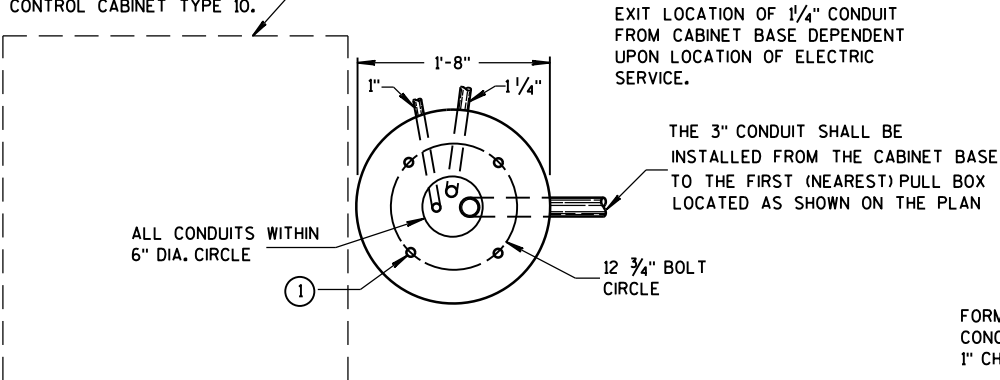


TYPE 5 & 6

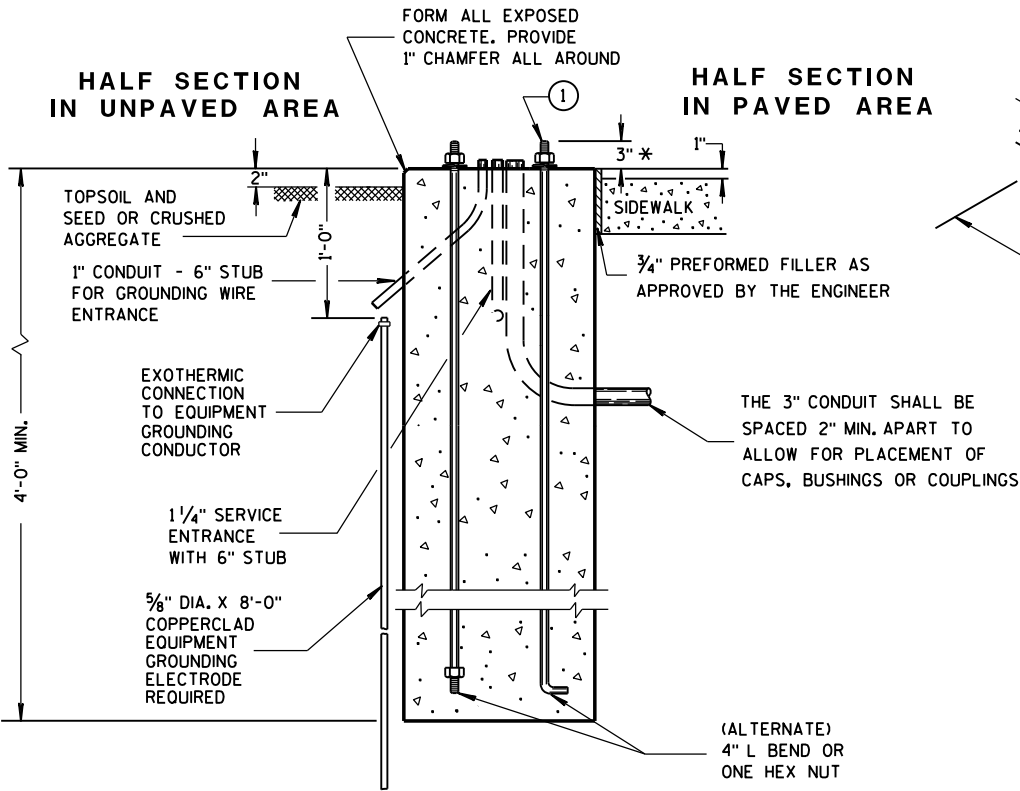
CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

* INCLUDES MAINTENANCE PLATFORM.

TYPICAL 3'-0" X 3'-0" X 4" THICK
MAINTENANCE PLATFORM.
LOCATION TO BE DETERMINED
IN THE FIELD. COST TO BE
INCLUDED UNDER CONCRETE
CONTROL CABINET TYPE 10.



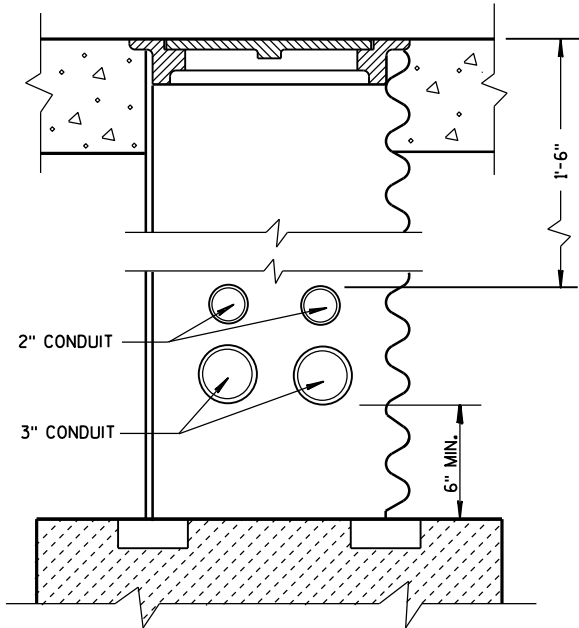
HALF SECTION IN UNPAVED AREA



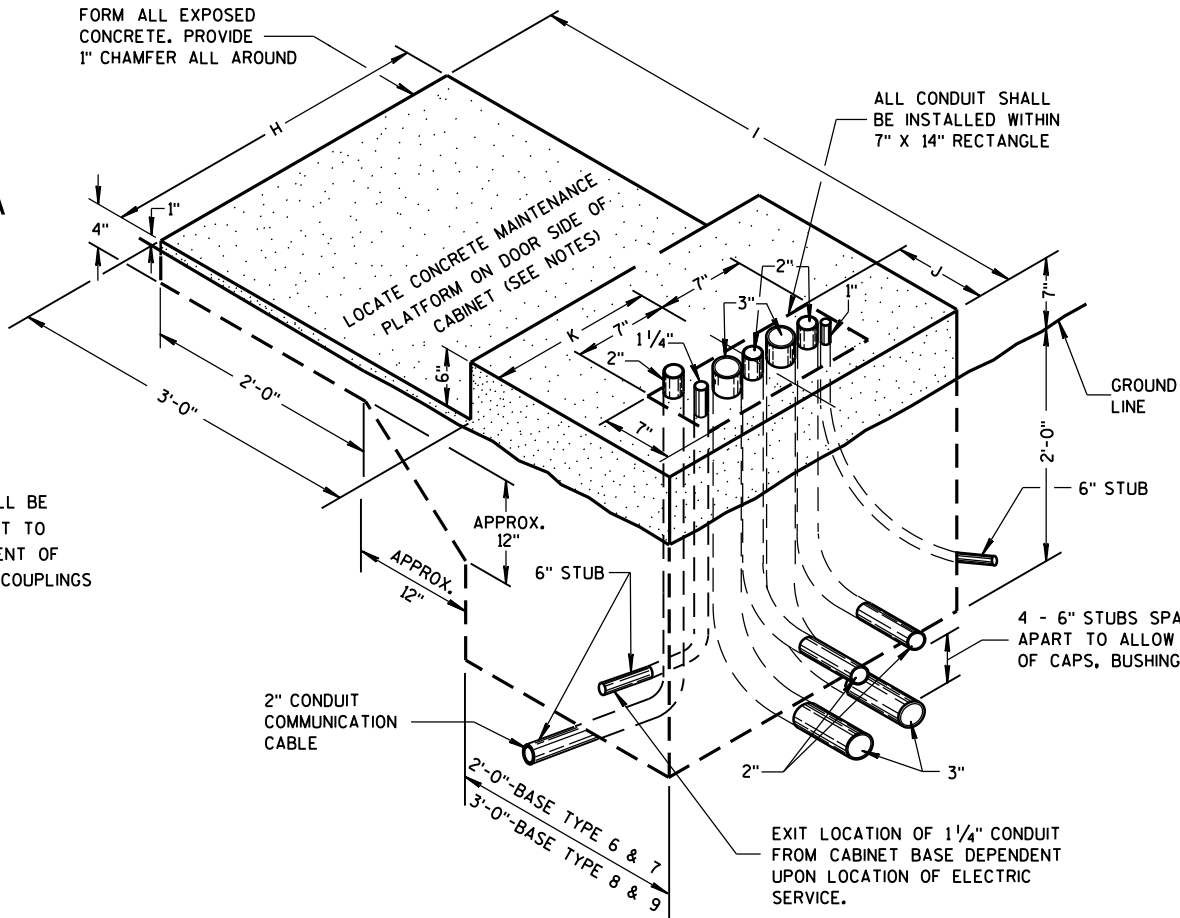
TYPE 10

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

CONCRETE CONTROL CABINET BASES



CONDUIT LOCATIONS IN 24" X 36" PULL BOX (LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

GENERAL NOTES

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

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST) PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

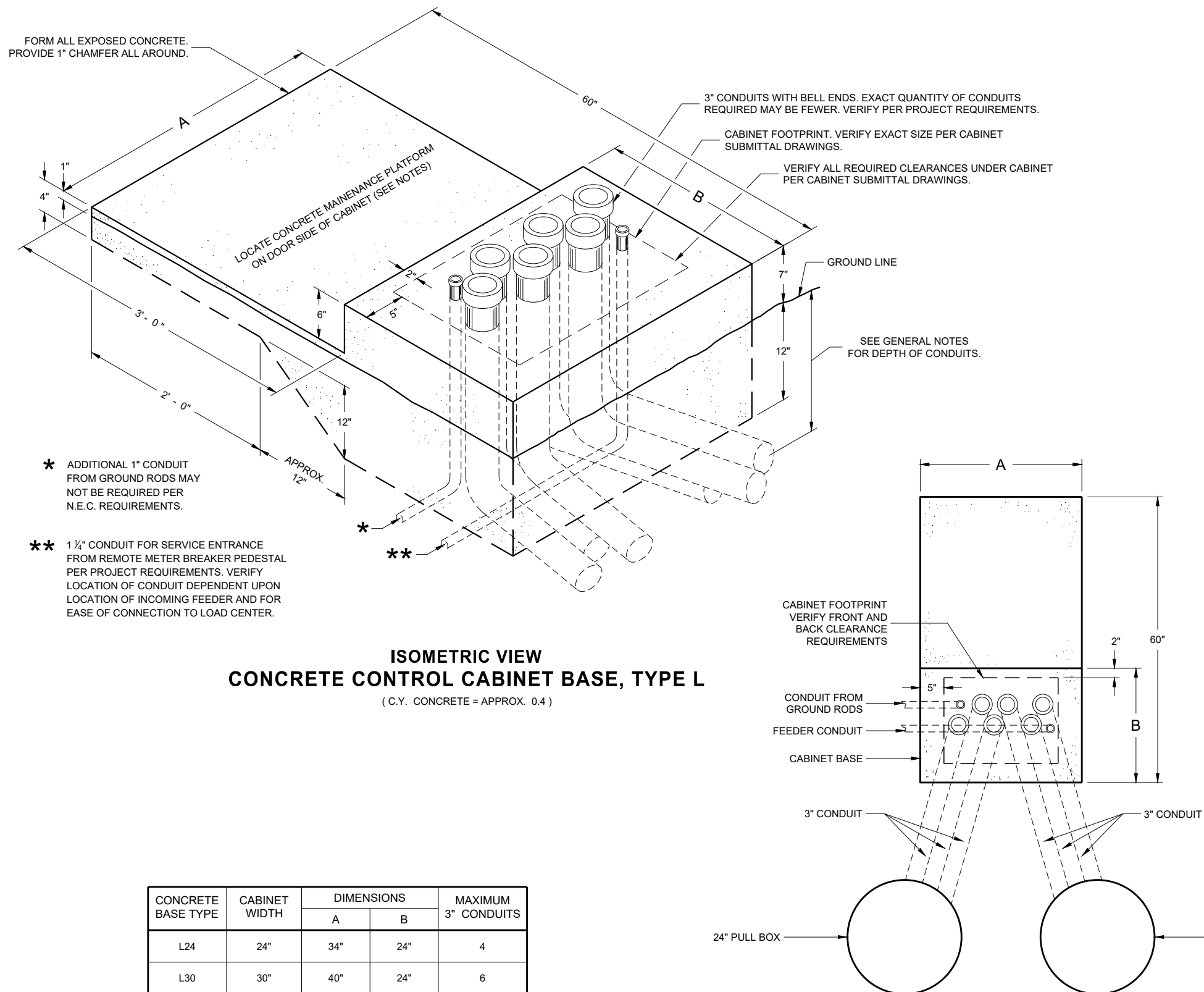
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

① FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2016 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA



**PLAN VIEW
CONCRETE CONTROL CABINET BASE, TYPE L**

GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS UNLESS DETERMINED BY THE ENGINEER IN THE FIELD.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE L

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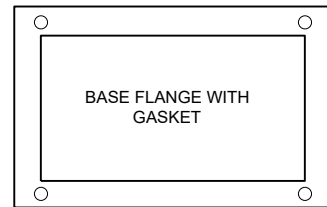
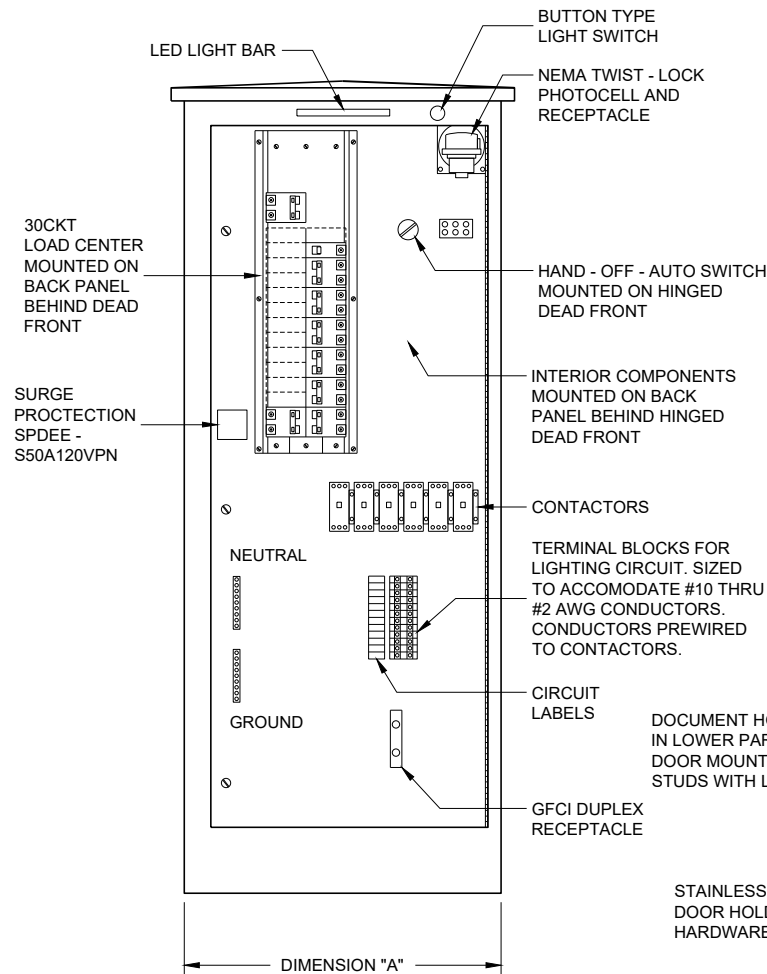
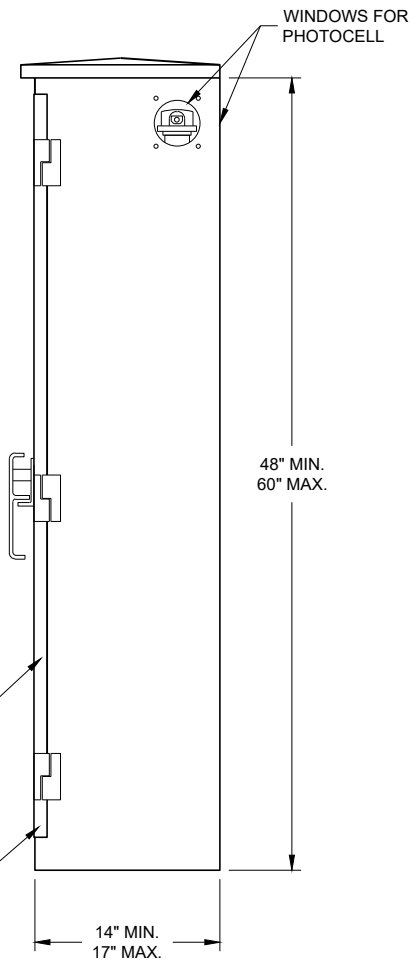
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November 2018 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA



* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

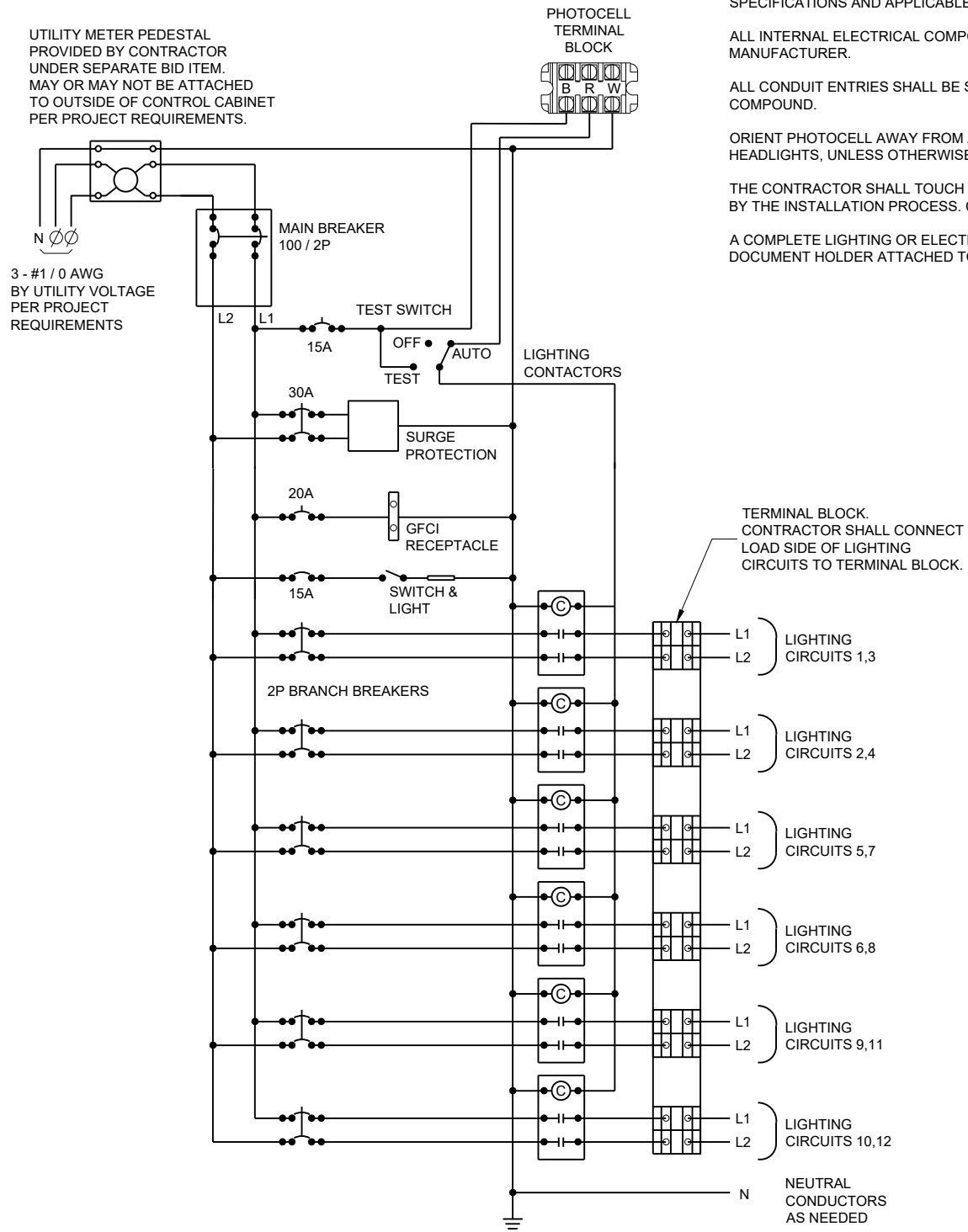
APPROVED
Sept. 2014
DATE
FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

**FRONT INTERIOR
ELEVATION****LIGHTING CONTROL CABINET****SIDE VIEW****TABLE OF DIMENSIONS (INCHES)**

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

UTILITY METER PEDESTAL PROVIDED BY CONTRACTOR UNDER SEPARATE BID ITEM. MAY OR MAY NOT BE ATTACHED TO OUTSIDE OF CONTROL CABINET PER PROJECT REQUIREMENTS.

**CONTROL CABINET SCHEMATIC****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.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE - WIRED BY THE CABINET MANUFACTURER.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS, UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISION.

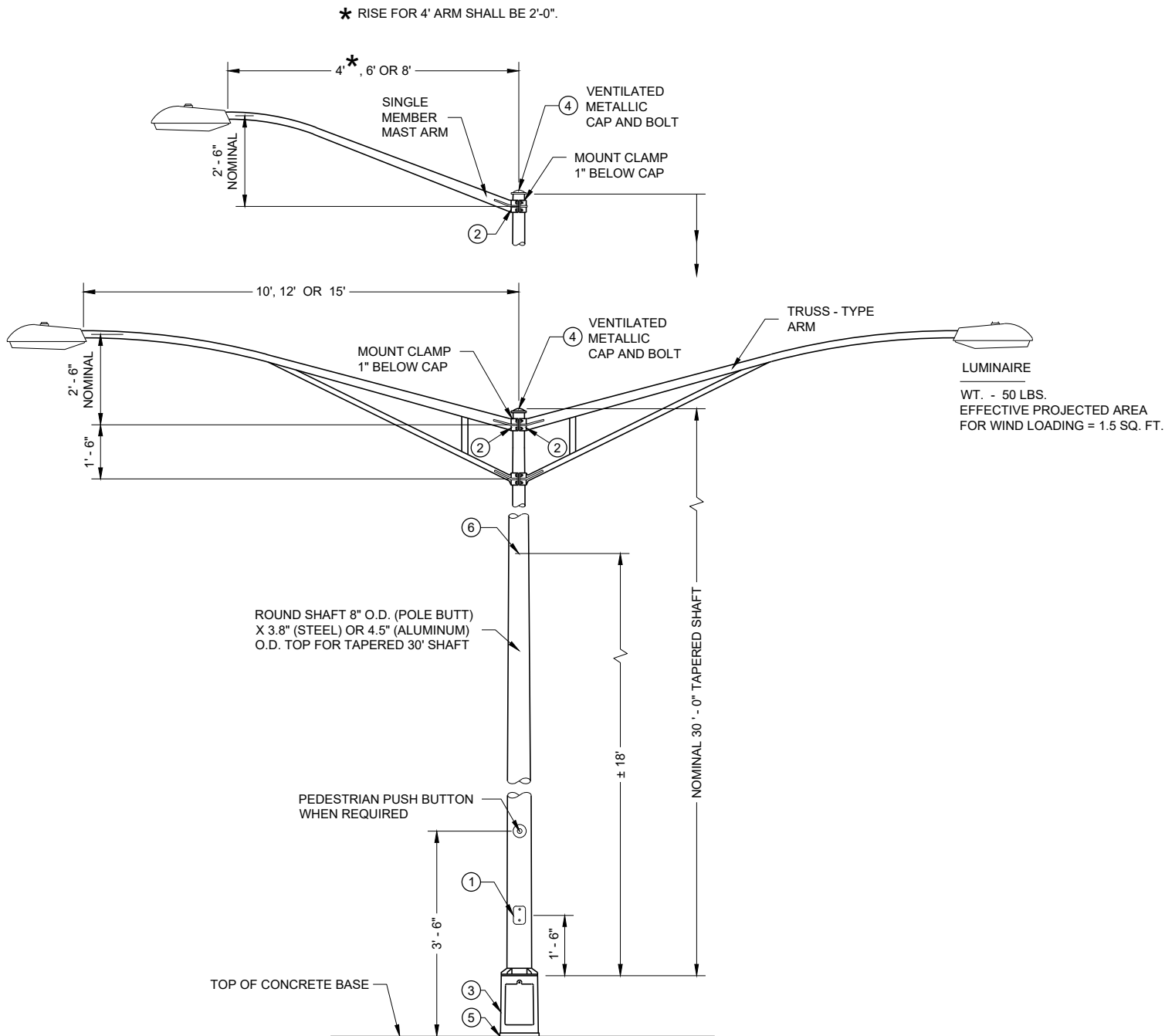
THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

**LIGHTING CONTROL CABINET
120 / 240 VOLT**

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**TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY**

GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVEING INSIDE THE POLE IS NOT ACCEPTABLE.

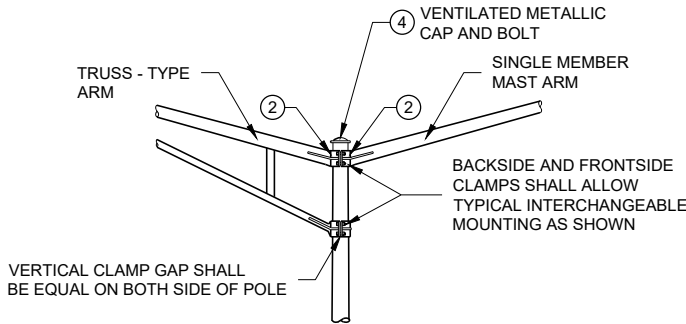
TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

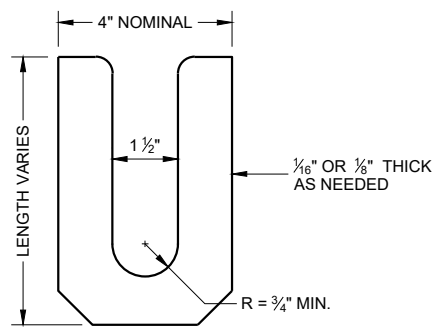
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 3/4" X 3/4" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 3/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



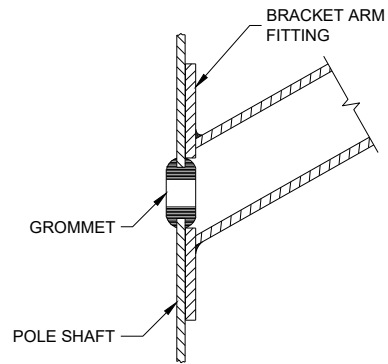
INTERCHANGEABLE MOUNTING DETAIL

**POLE MOUNTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)**

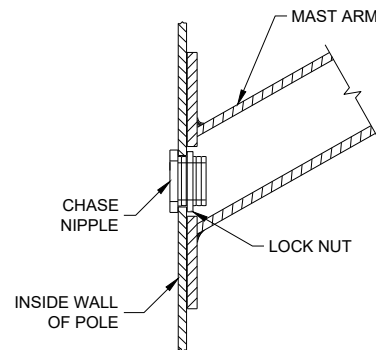
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LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



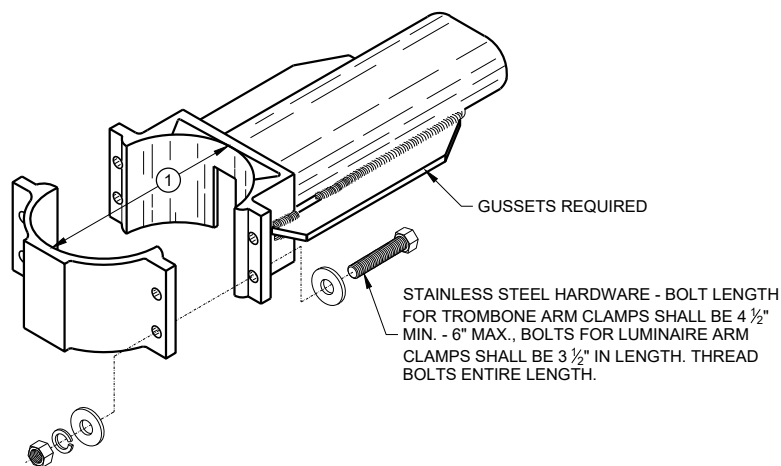
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

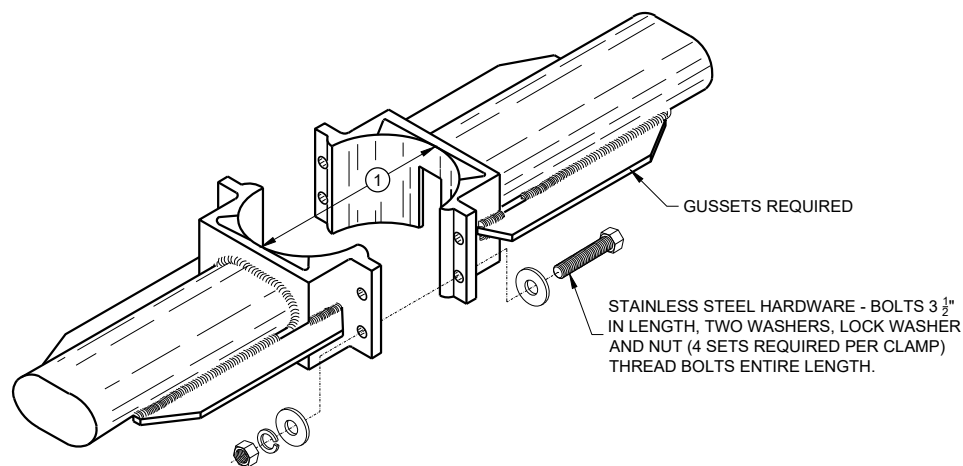
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

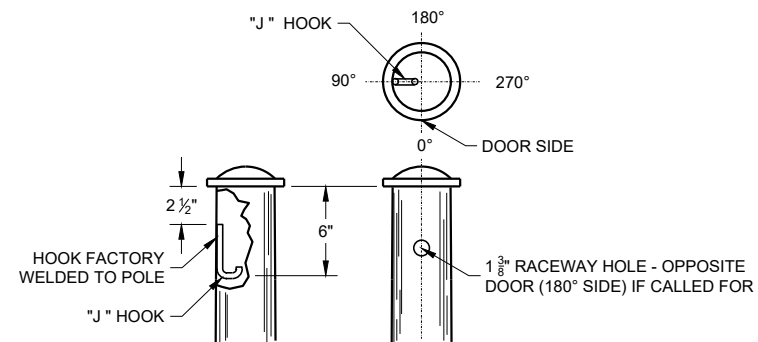
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



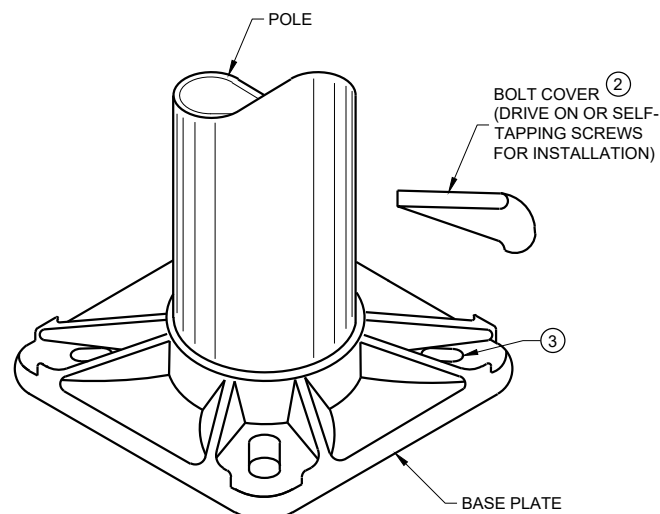
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



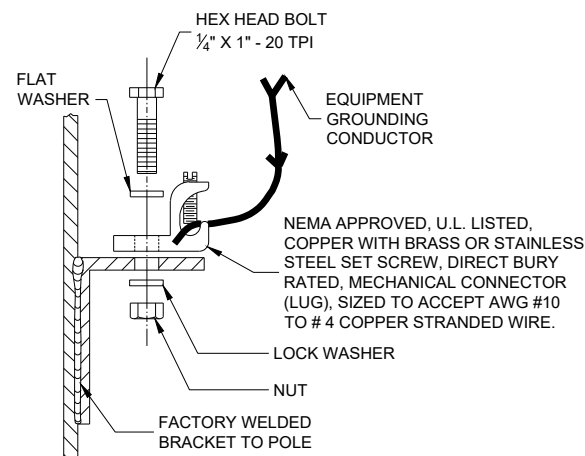
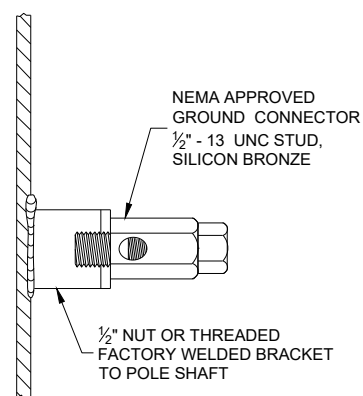
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



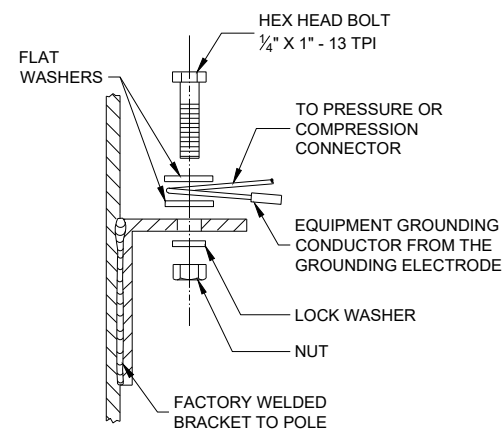
TYPICAL "J" HOOK LOCATION



BASE PLATE



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTING

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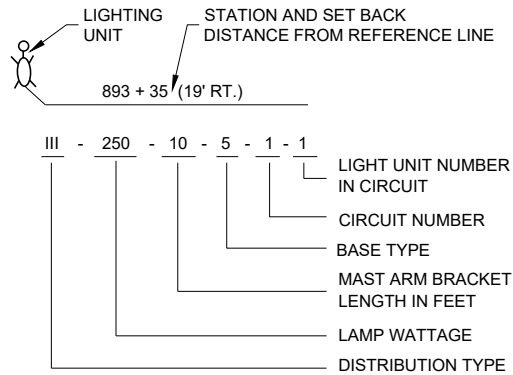
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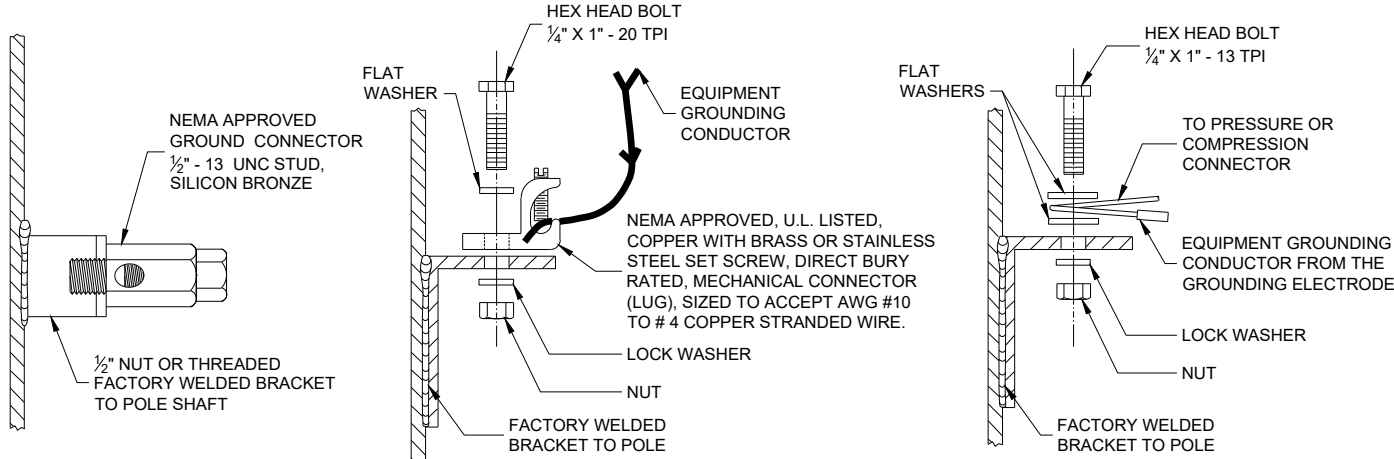
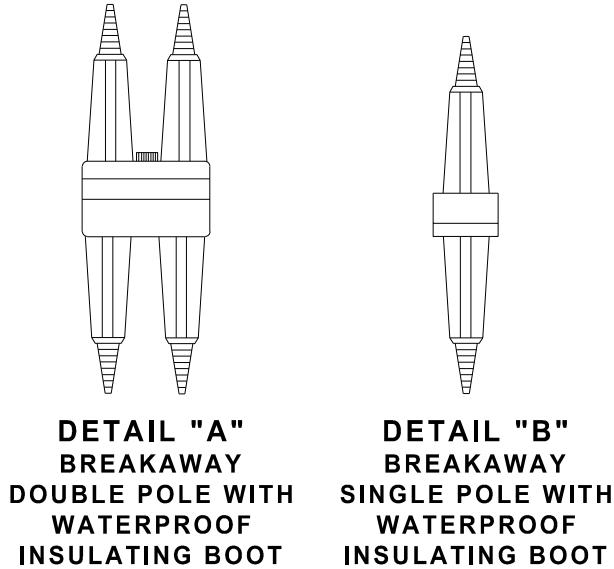
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

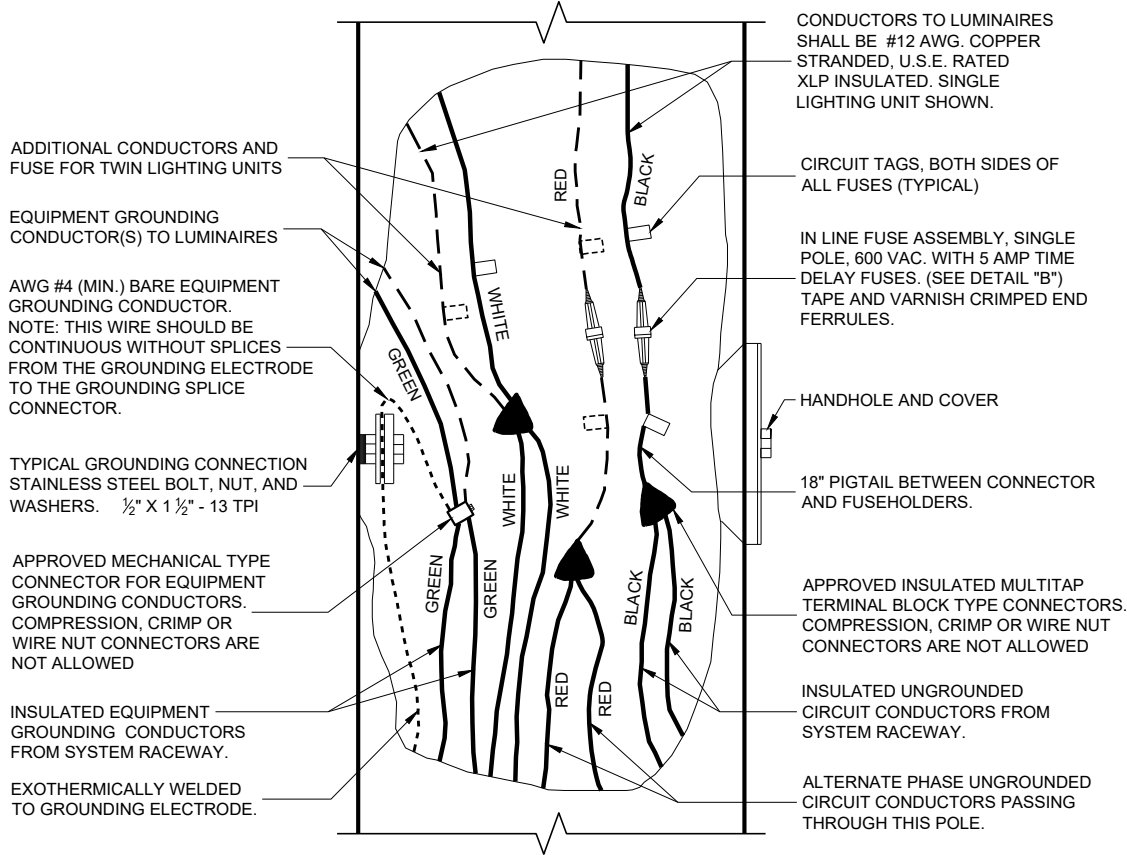
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



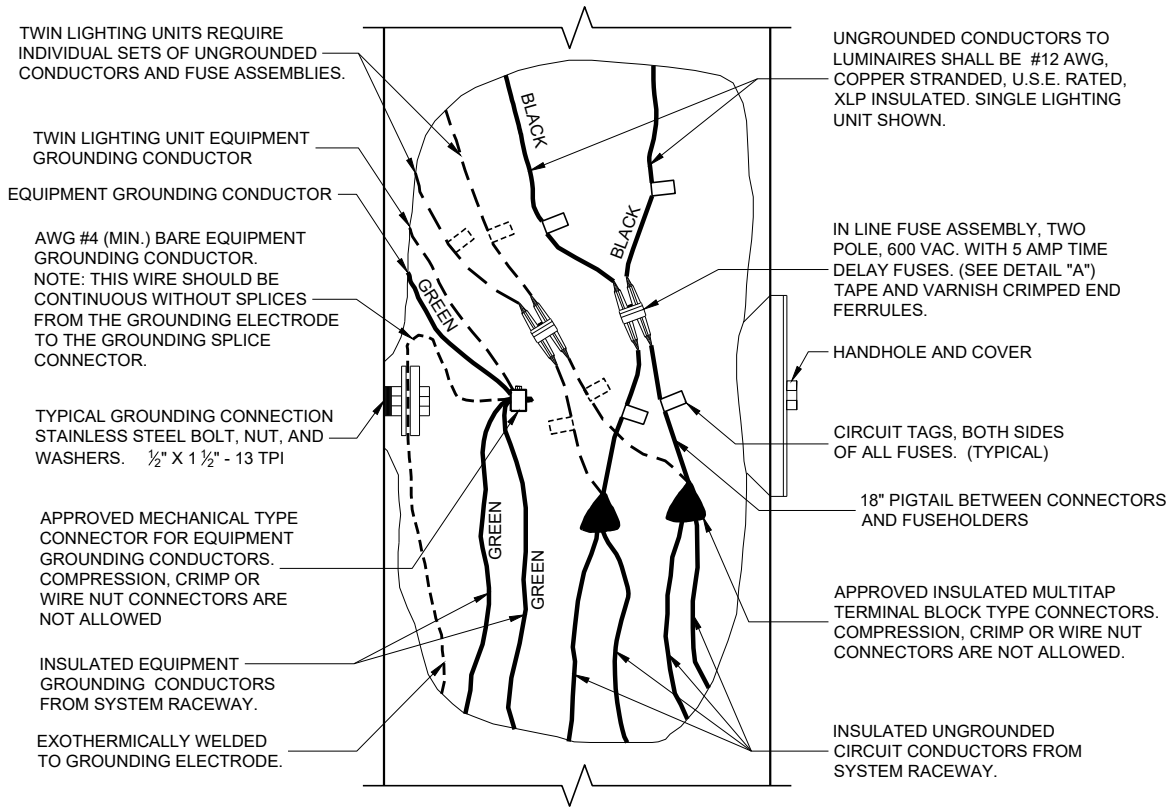
LIGHTING UNIT CODE
(TYPICAL)



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDING CONDUCTORS)
WITH GROUNDING CONDUCTOR AND
EQUIPMENT GROUNDING CONDUCTOR

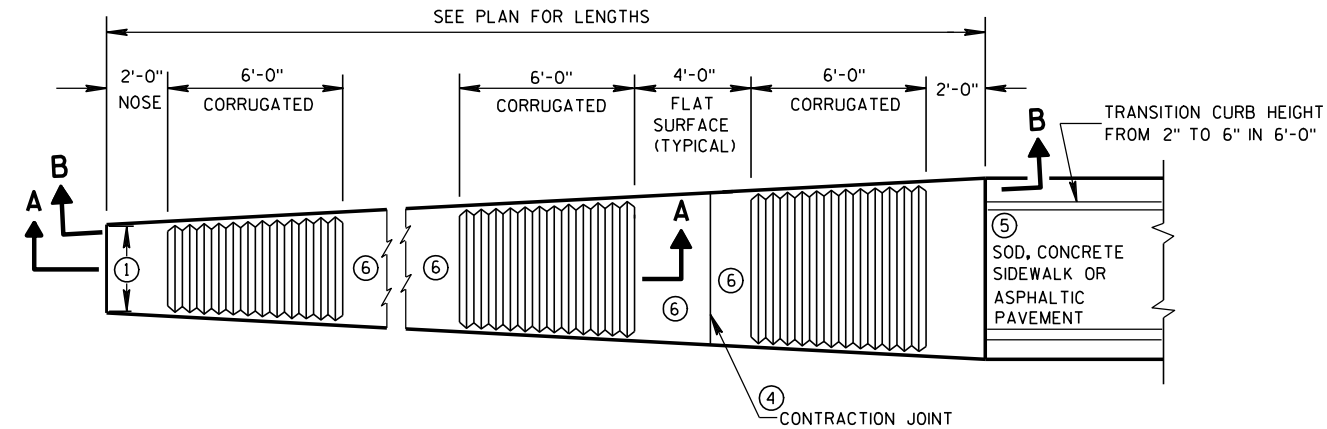


2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS)
WITH EQUIPMENT GROUNDING CONDUCTOR

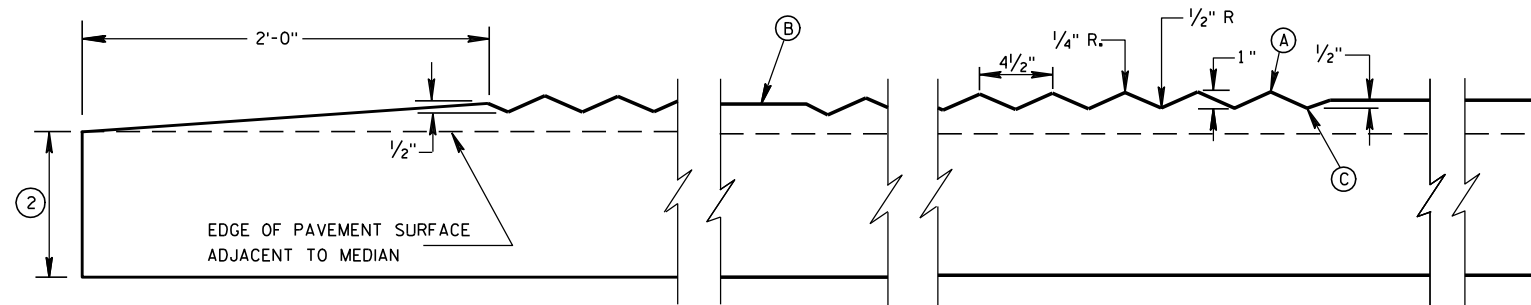
NON - FREEWAY LIGHTING UNIT
POLE WIRING

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DEPARTMENT OF TRANSPORTATION

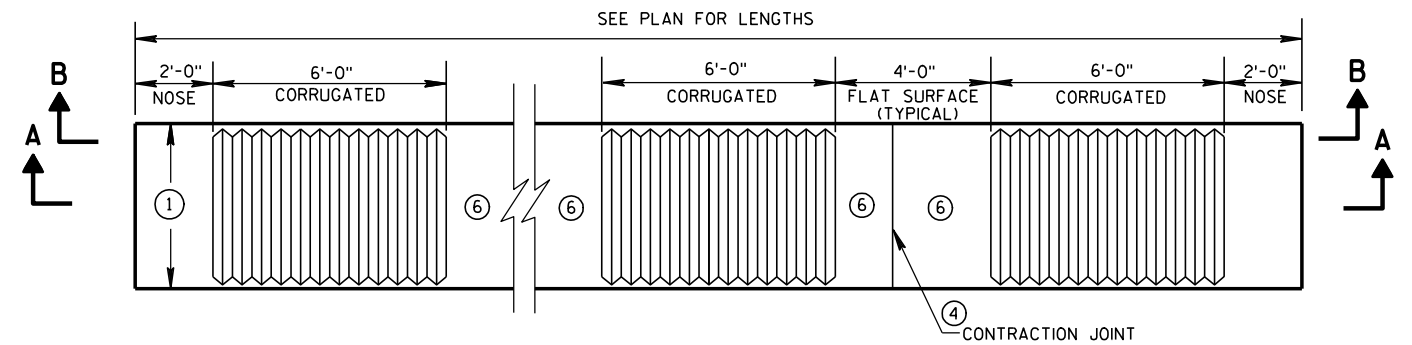
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DATE STATE ELECTRICAL ENGINEER
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PLAN VIEW
VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



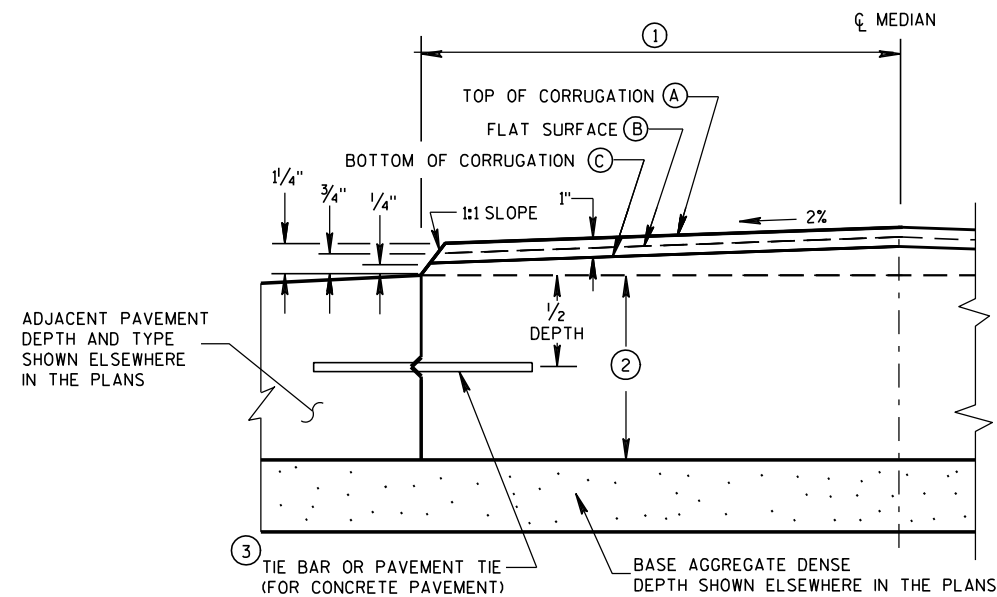
SECTION A-A
LONGITUDINAL SECTION



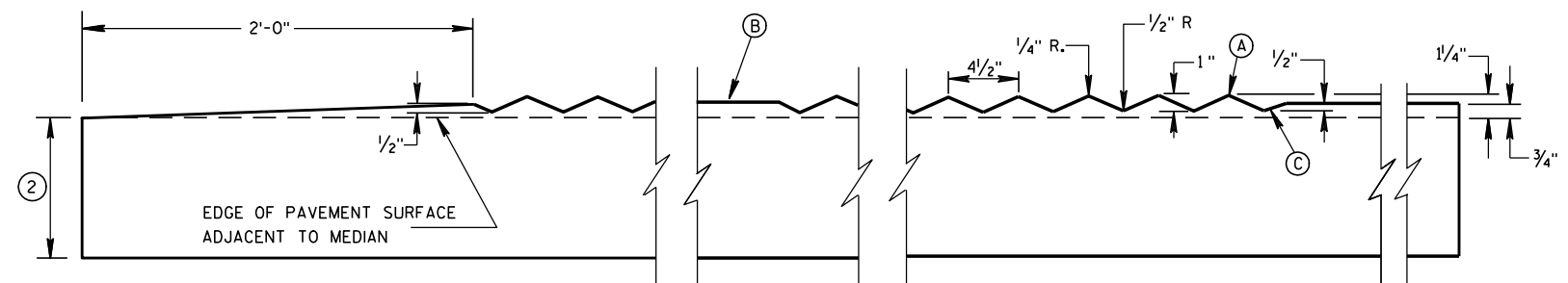
PLAN VIEW
UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN

GENERAL NOTES

- ① SEE PLANS FOR CONSTANT OR VARIABLE WIDTH.
- ② THE DEPTH OF THE CONCRETE CORRUGATED MEDIAN SHALL BE 9-INCHES UNLESS SHOWN OTHERWISE IN THE PLAN. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN IN THE PLAN. TYPICAL OPTIONS ARE:
(1) NEW OR EXISTING CONCRETE PAVEMENT.
(2) ASPHALTIC CONCRETE OVER NEW OR EXISTING CONCRETE BASE COURSE, OR PAVEMENT.
(3) ASPHALTIC PAVEMENT OVER BASE AGGREGATE DENSE.
- ③ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C. INSTALL TIE BARS TO MAINTAIN A MINIMUM OF 3-INCHES OF COVER BETWEEN THE TIE BAR AND THE CONCRETE SURFACE (BOTTOM AND TOP).
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE, PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ④ CONCRETE CORRUGATED MEDIAN CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH THE JOINTS IN ADJACENT CONCRETE PAVEMENT. WHERE ADJACENT PAVEMENT IS ASPHALT WITH BASE AGGREGATE DENSE, TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS.
- ⑤ SURFACE TYPE AND DETAILS ARE DEFINED ELSEWHERE IN THE PLAN.
- ⑥ YELLOW MARKING ON FLAT SURFACE WHEN MEDIAN SEPARATES OPPOSING TRAFFIC.



HALF CROSS SECTION
② CONCRETE CORRUGATED MEDIAN AND ADJACENT PAVEMENT



SECTION B-B
LONGITUDINAL SECTION

CONCRETE CORRUGATED MEDIAN

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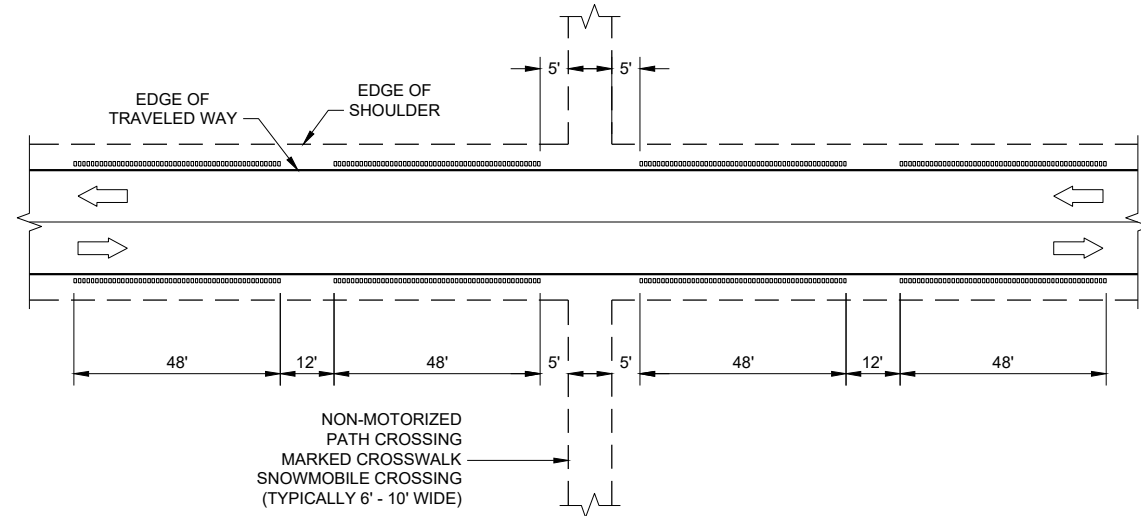
APPROVED

12/17/07

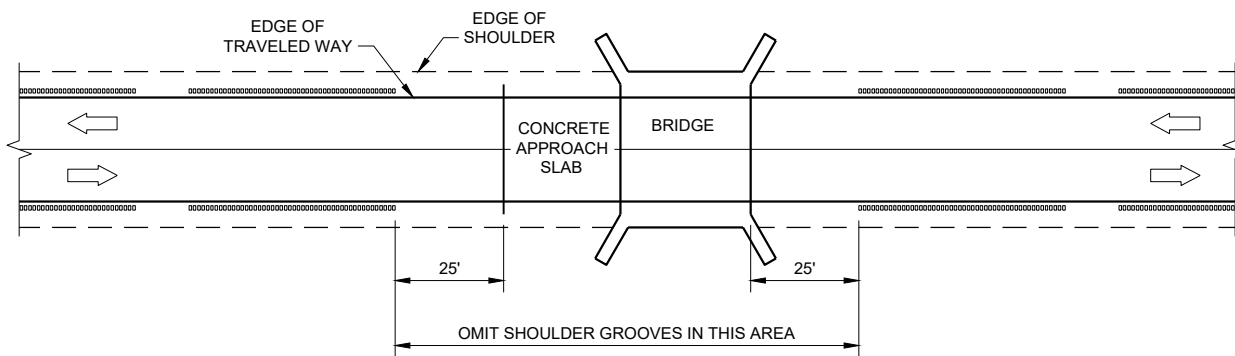
DATE

FHWA

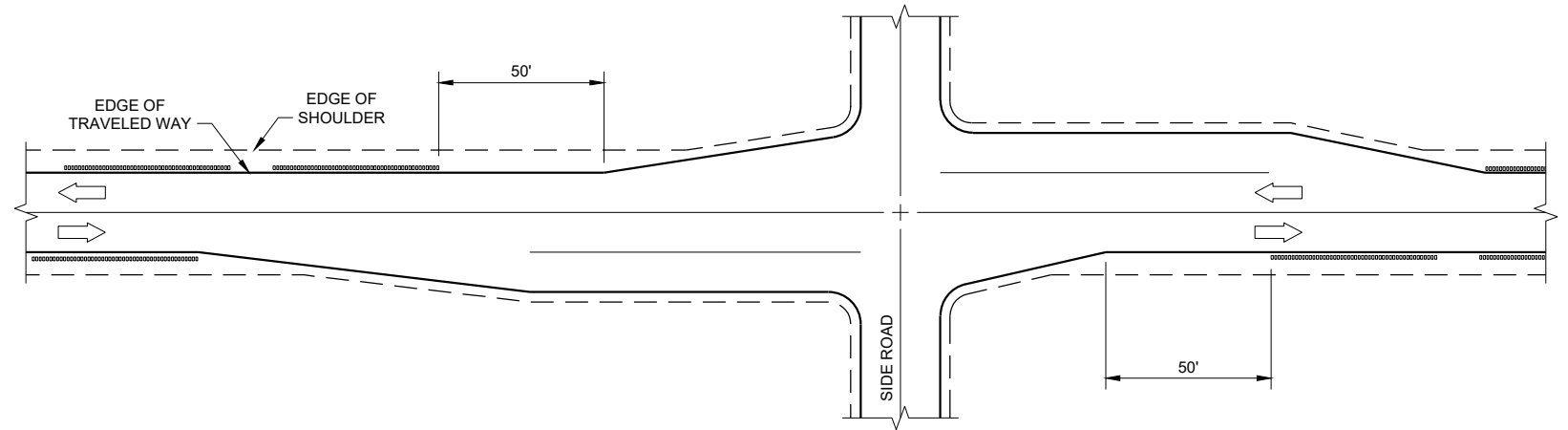
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



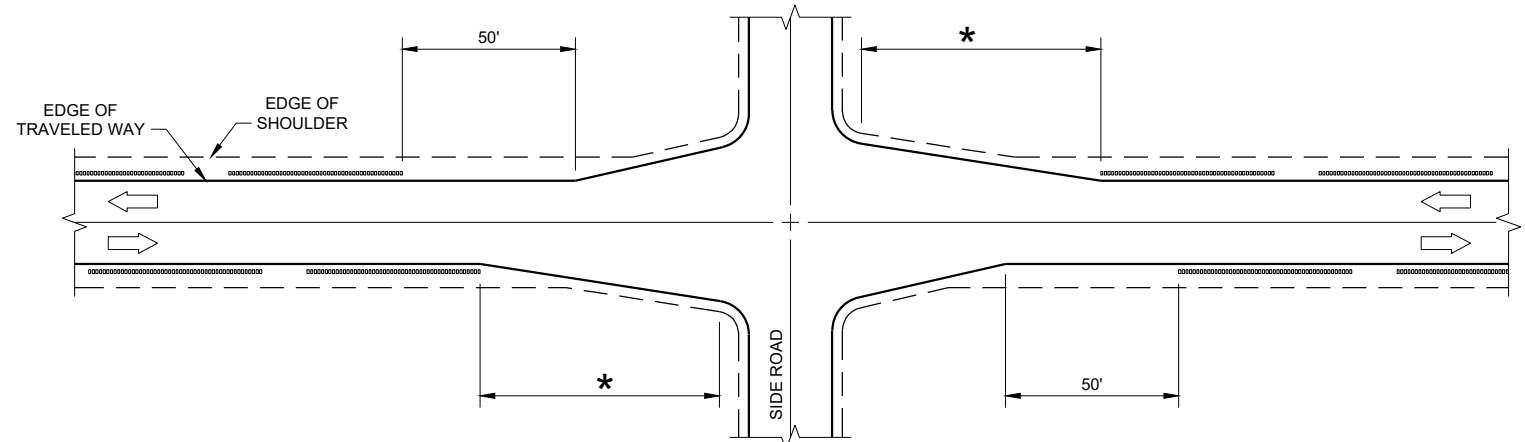
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



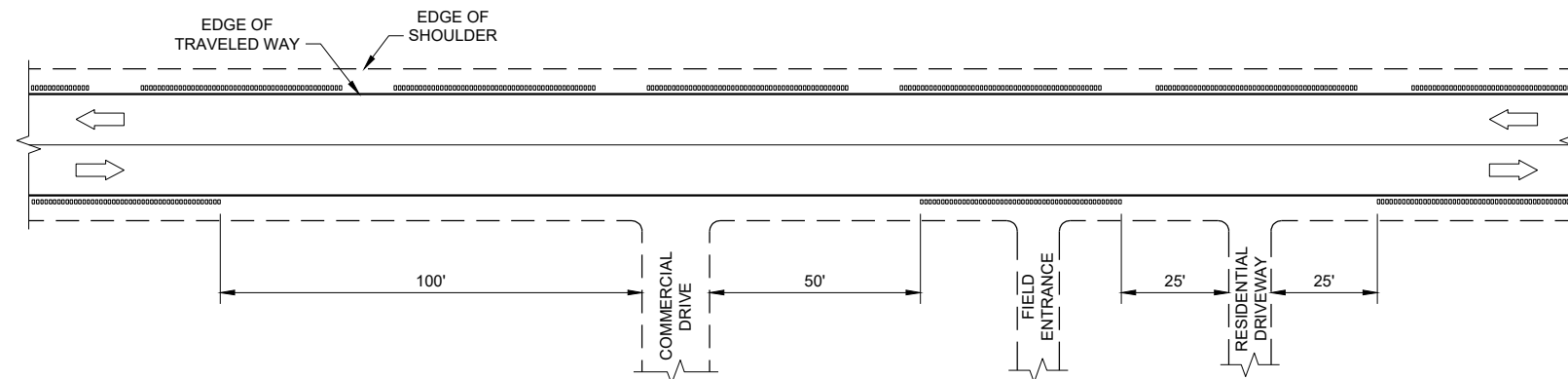
SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT RIGHT TURN LANE



SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER



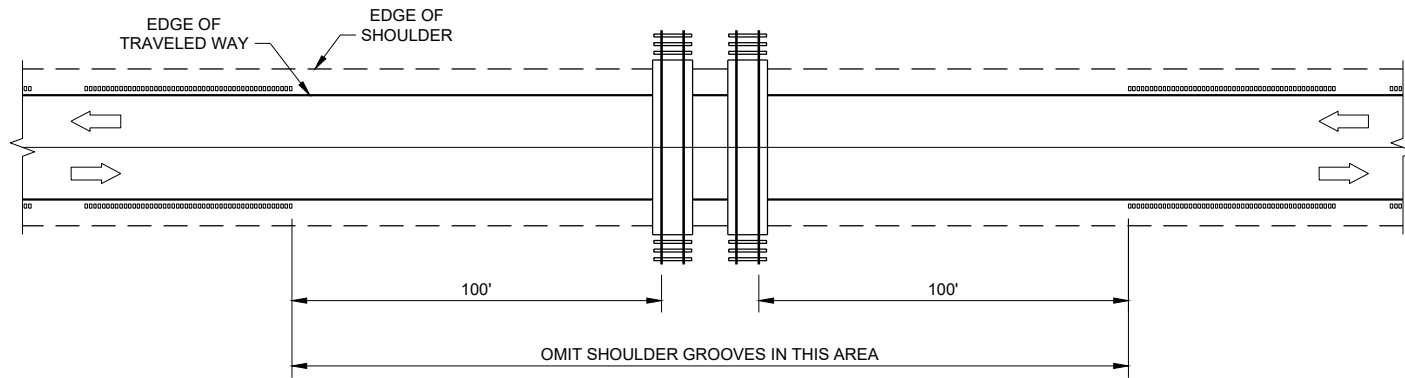
SHOULDER GROOVES AT DRIVEWAYS^①

GENERAL NOTES

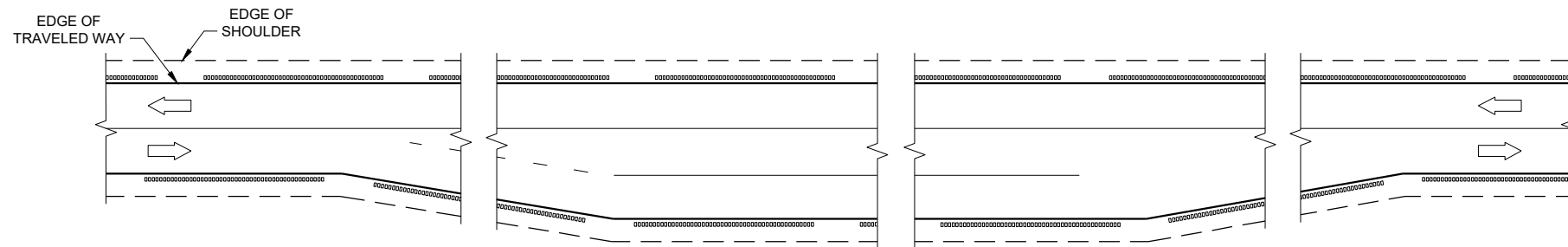
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING

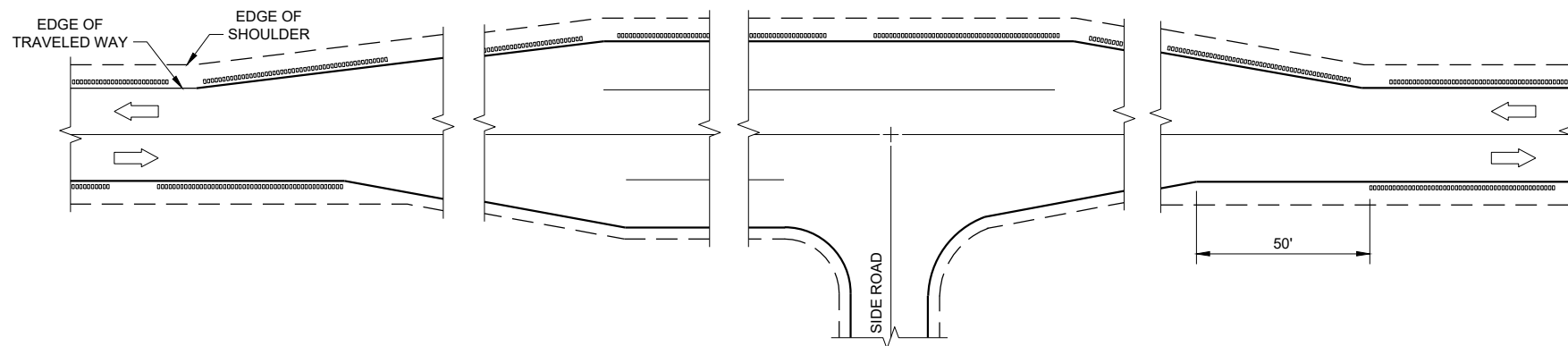
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SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



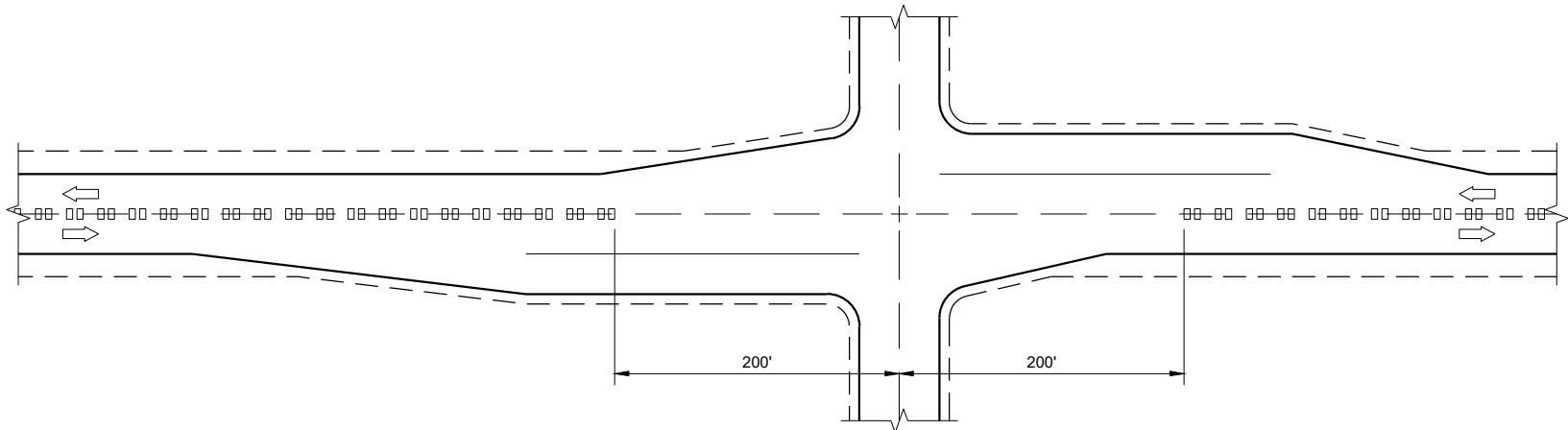
SHOULDER GROOVES AT BYPASS LANES

**2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING**

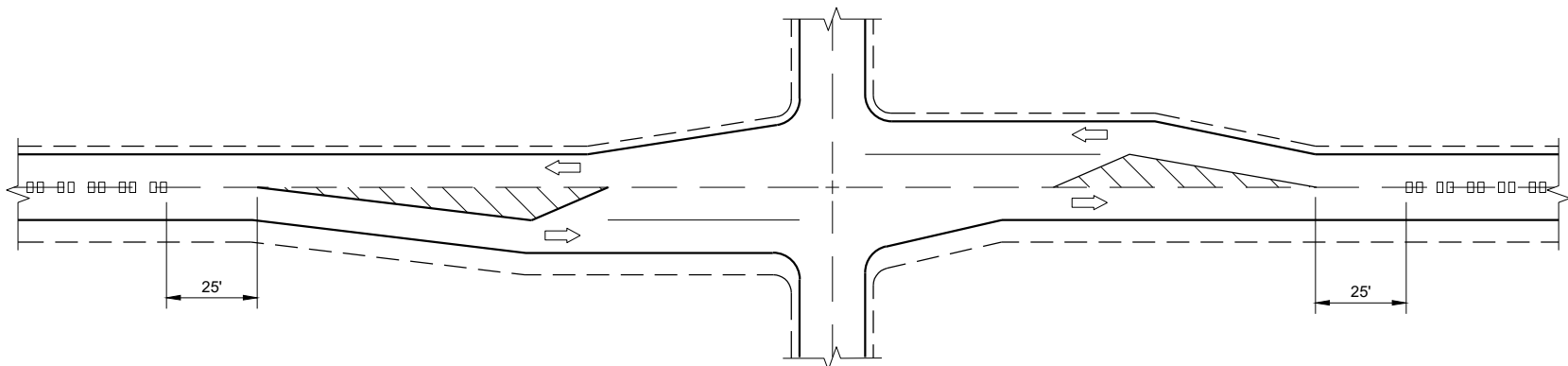
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

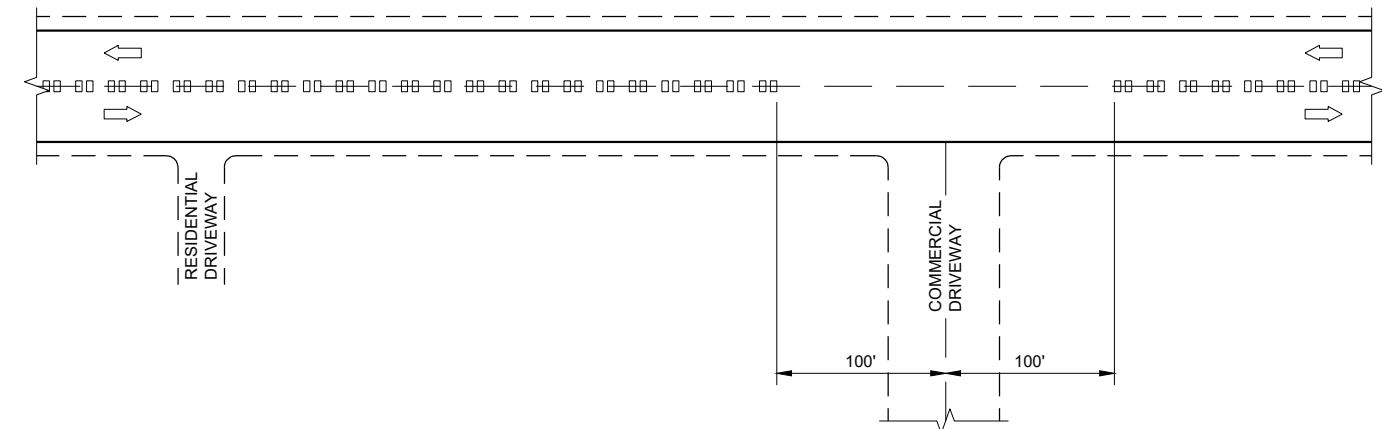
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CENTERLINE GROOVES AT INTERSECTIONS



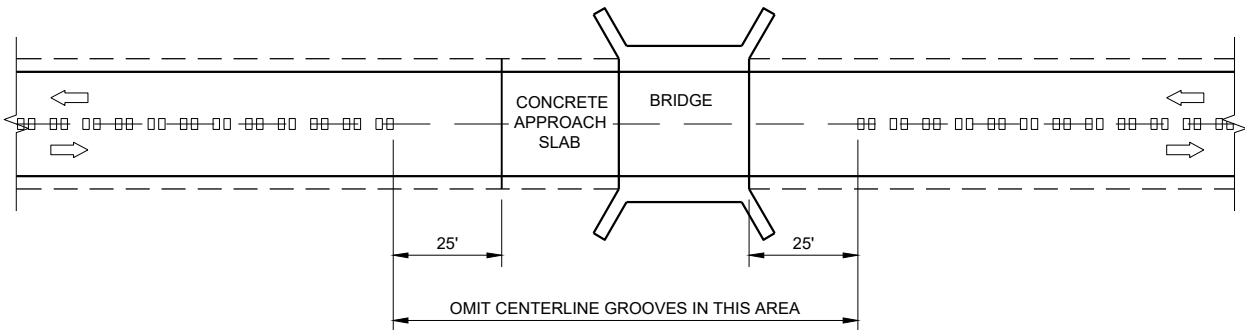
CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)



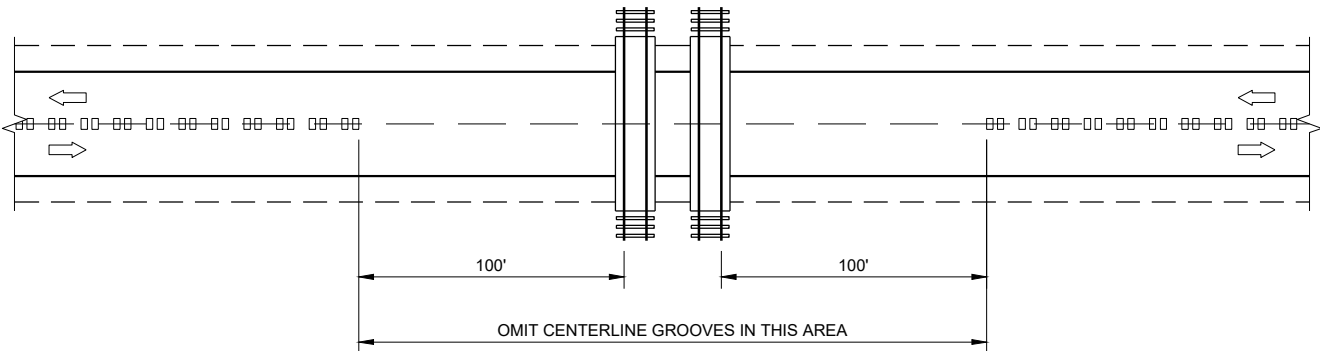
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



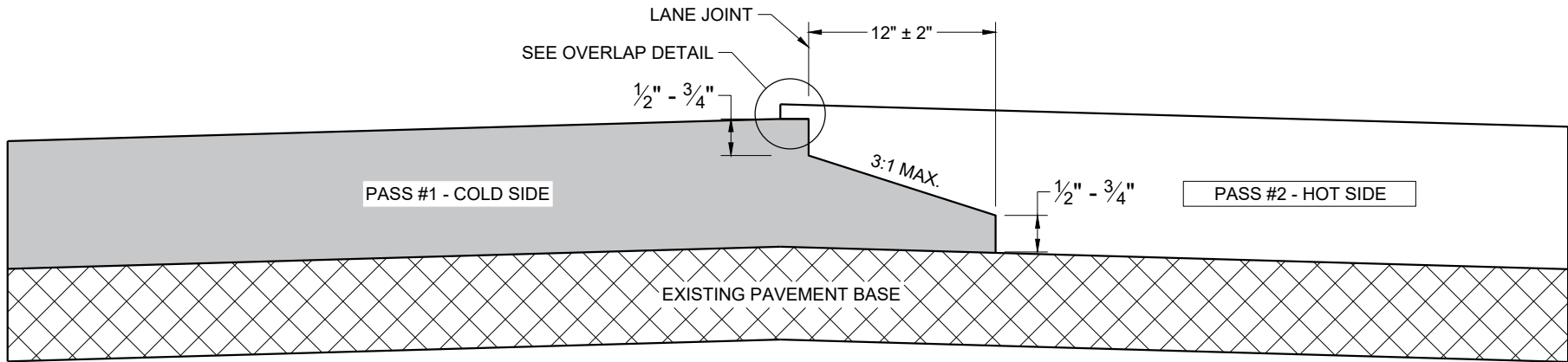
CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL
CENTERLINE RUMBLE STRIP,
MILLING

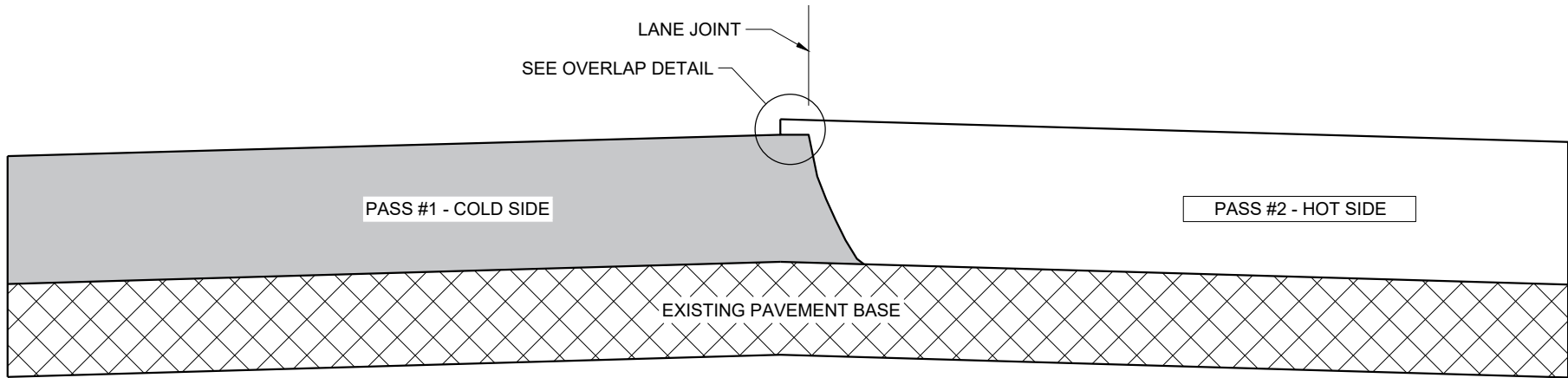
STATE OF WISCONSIN
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7/2018
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/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

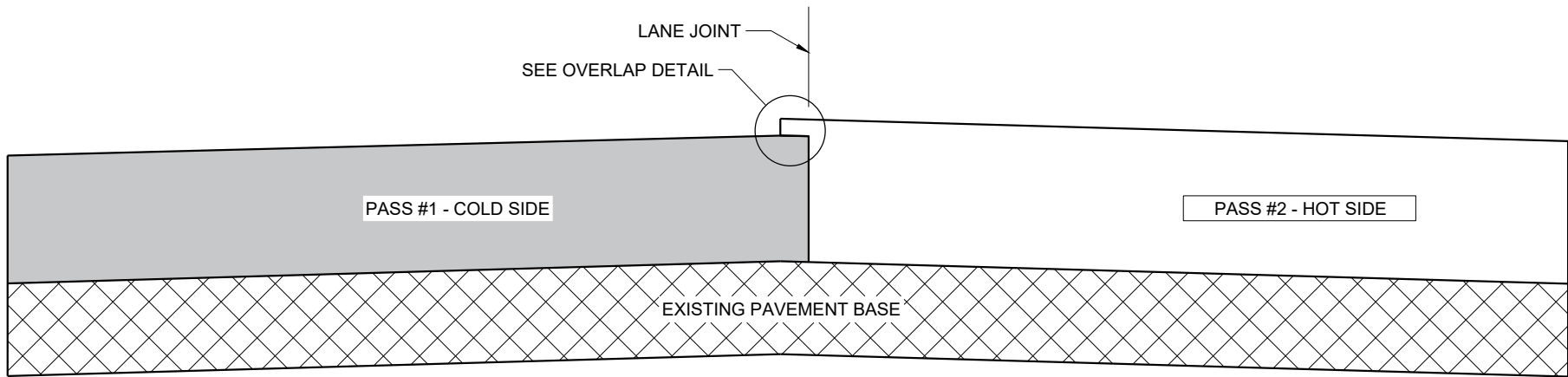
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TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

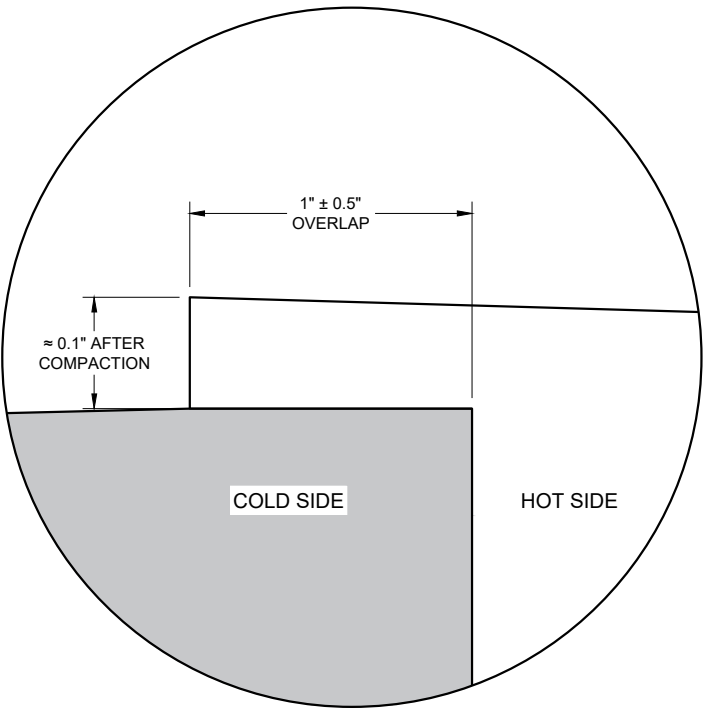
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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.

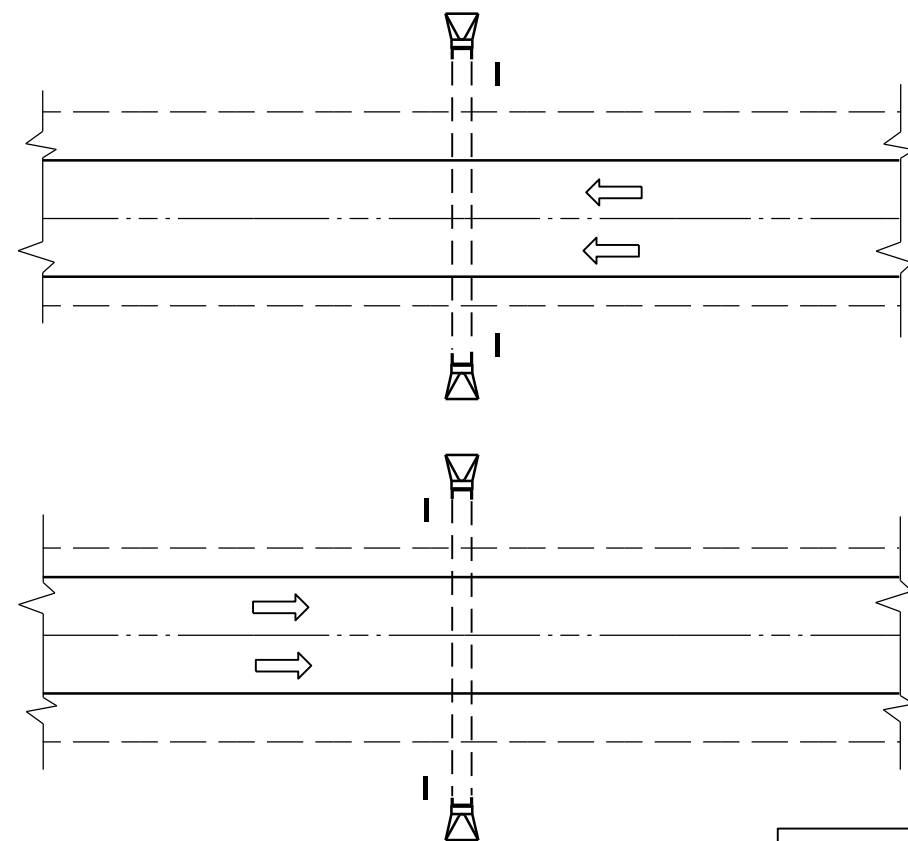


OVERLAP DETAIL (TYPICAL)

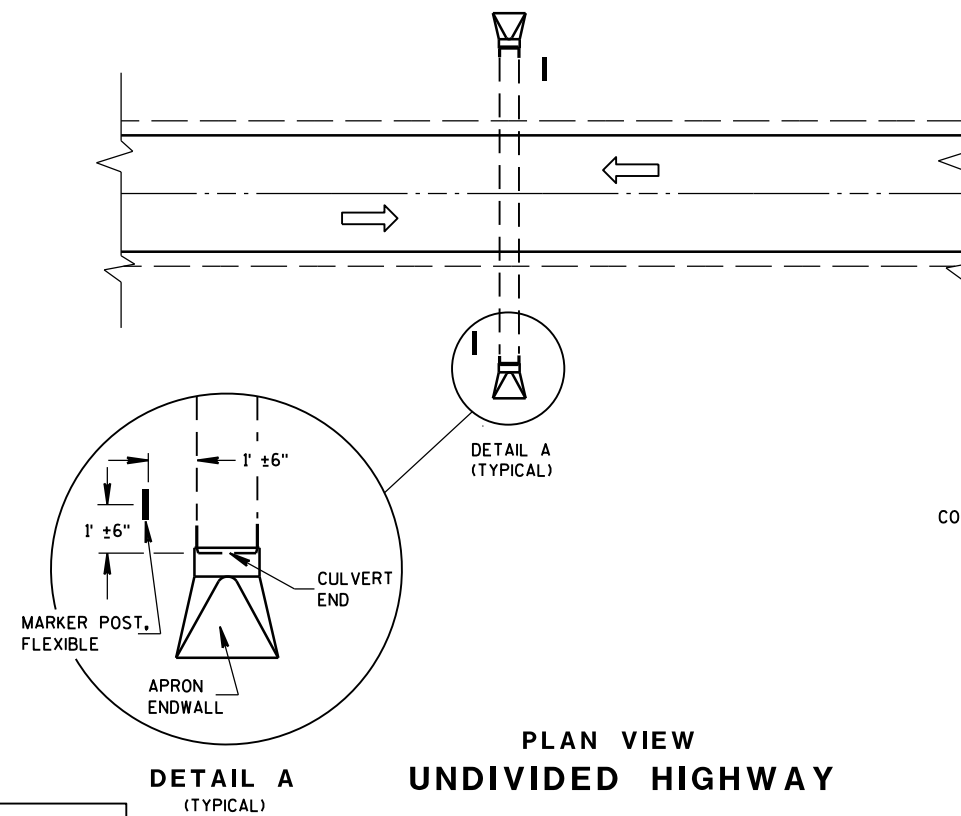
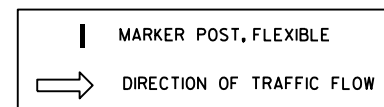
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
DIVIDED HIGHWAY

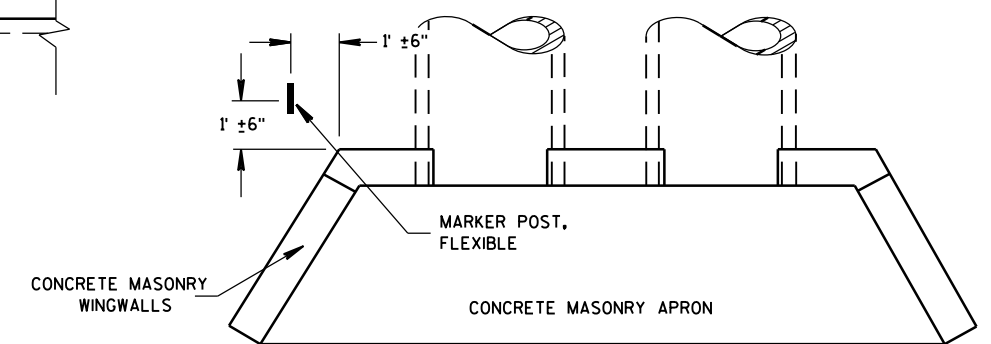


PLAN VIEW
UNDIVIDED HIGHWAY

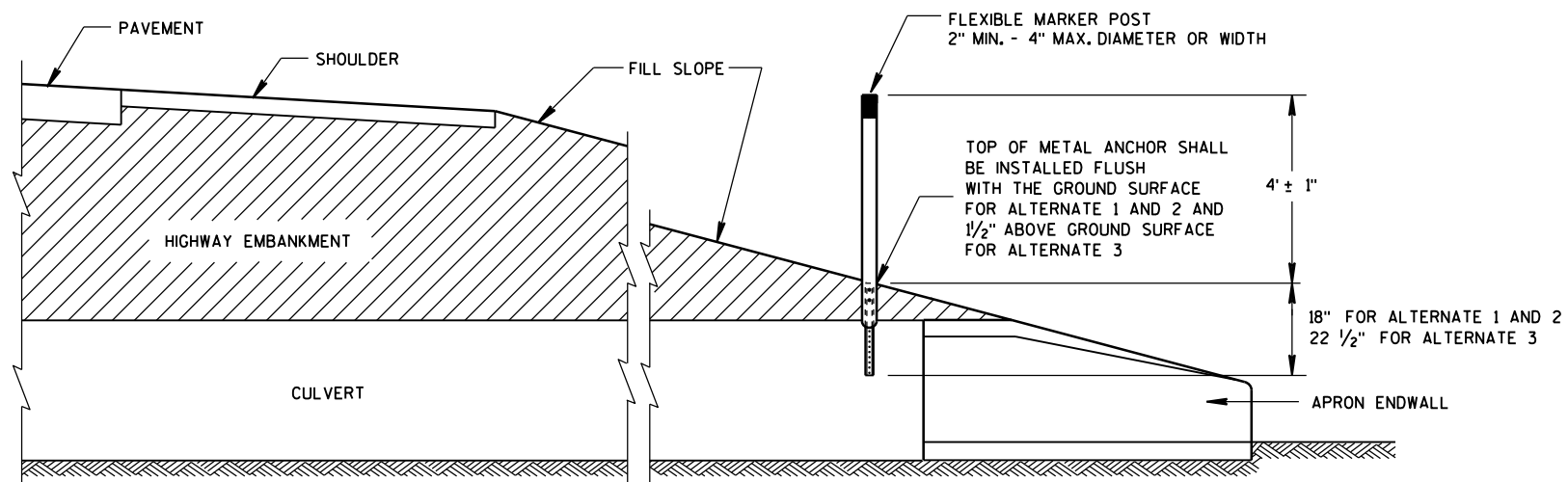
FLEXIBLE MARKER POST LOCATION

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.



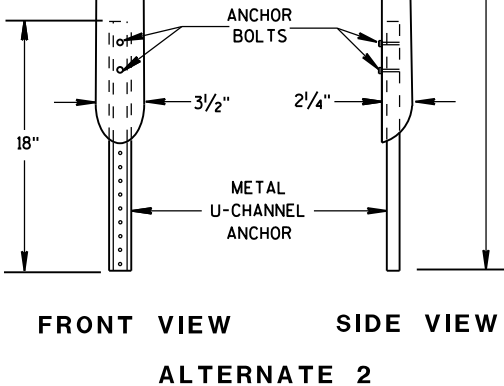
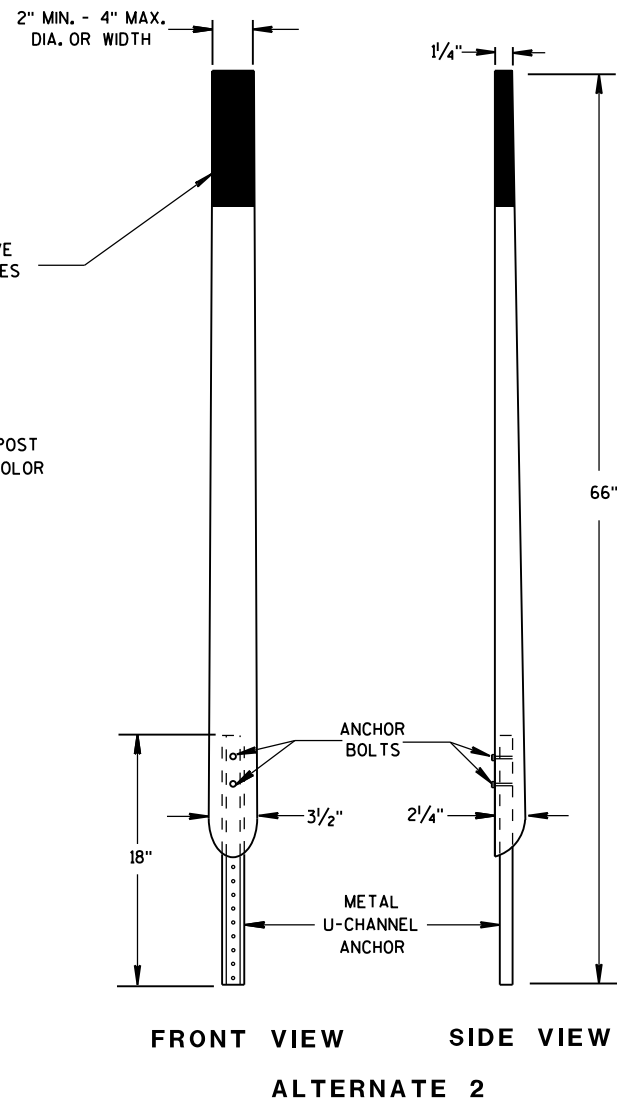
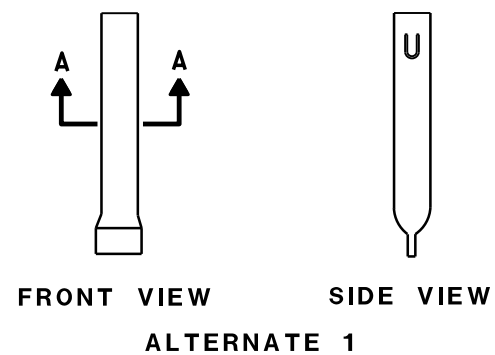
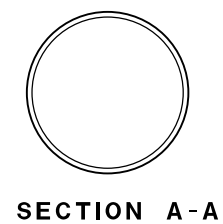
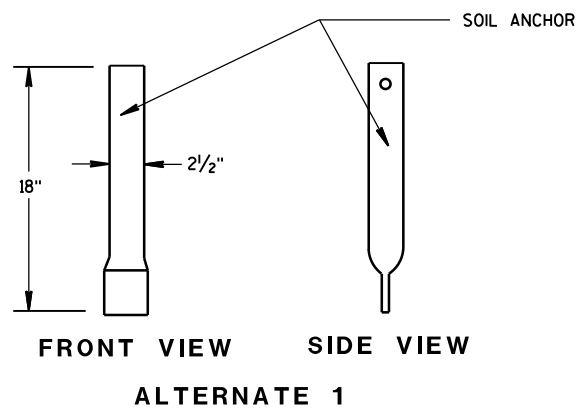
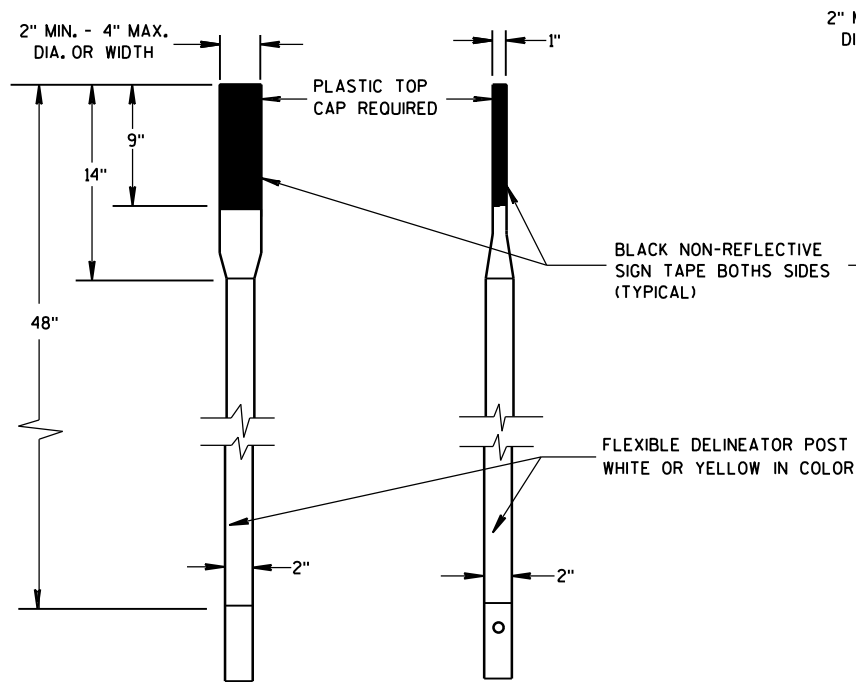
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



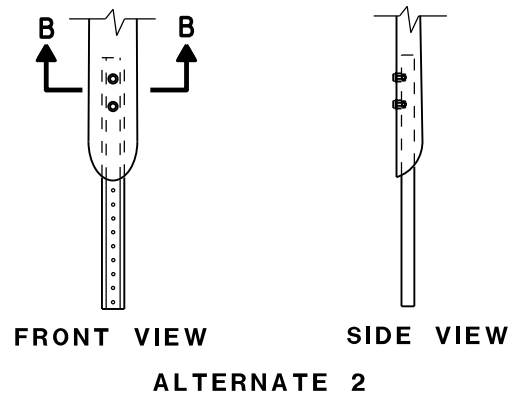
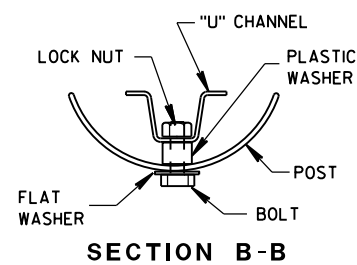
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

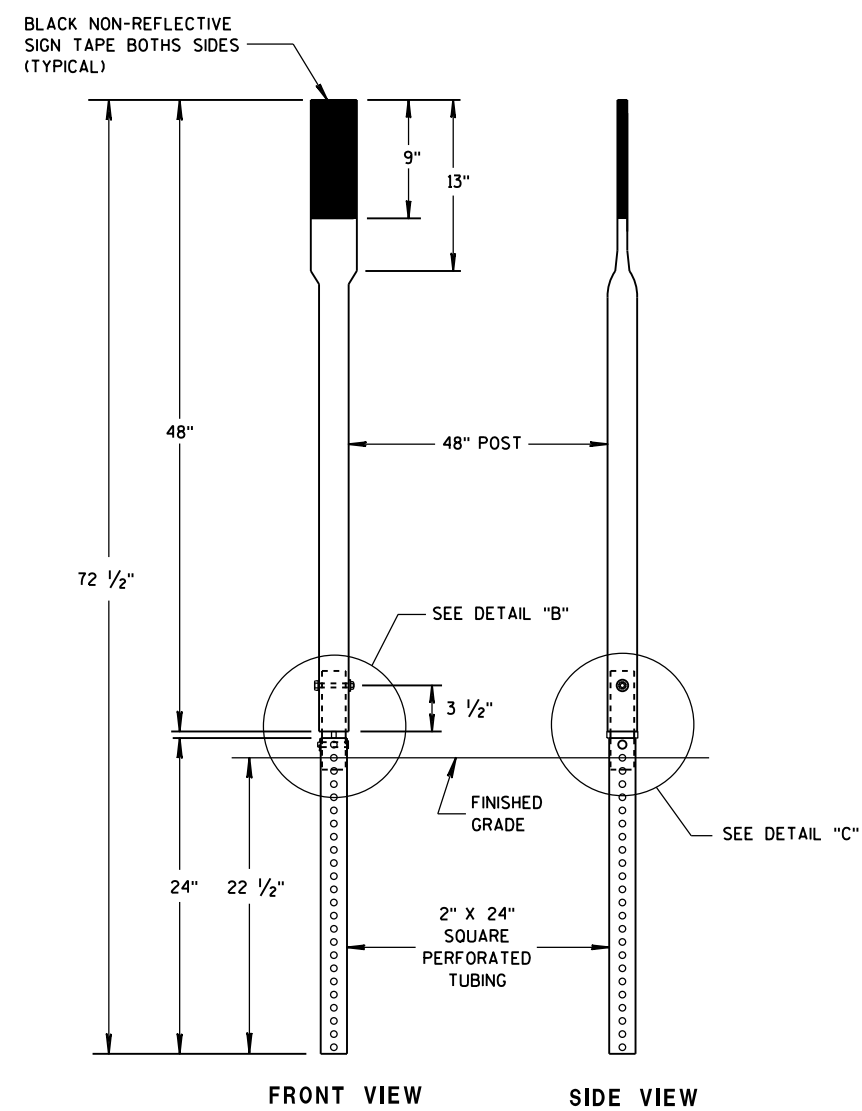
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



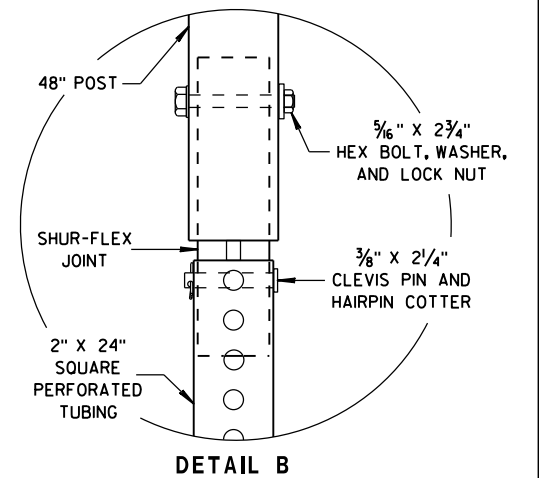
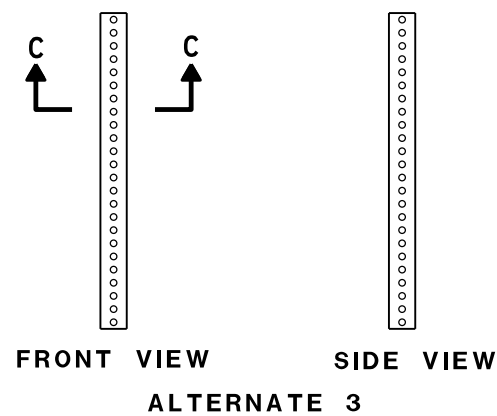
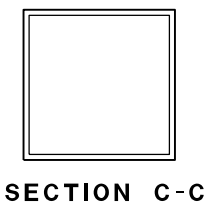
FLEXIBLE MARKER POSTS



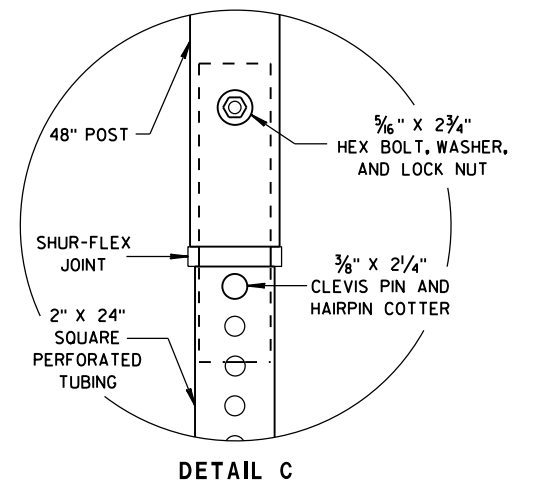
FLEXIBLE MARKER POST ANCHORS



FRONT VIEW SIDE VIEW
ALTERNATE 3



DETAIL B



DETAIL C

FLEXIBLE MARKER POST FOR CULVERT END

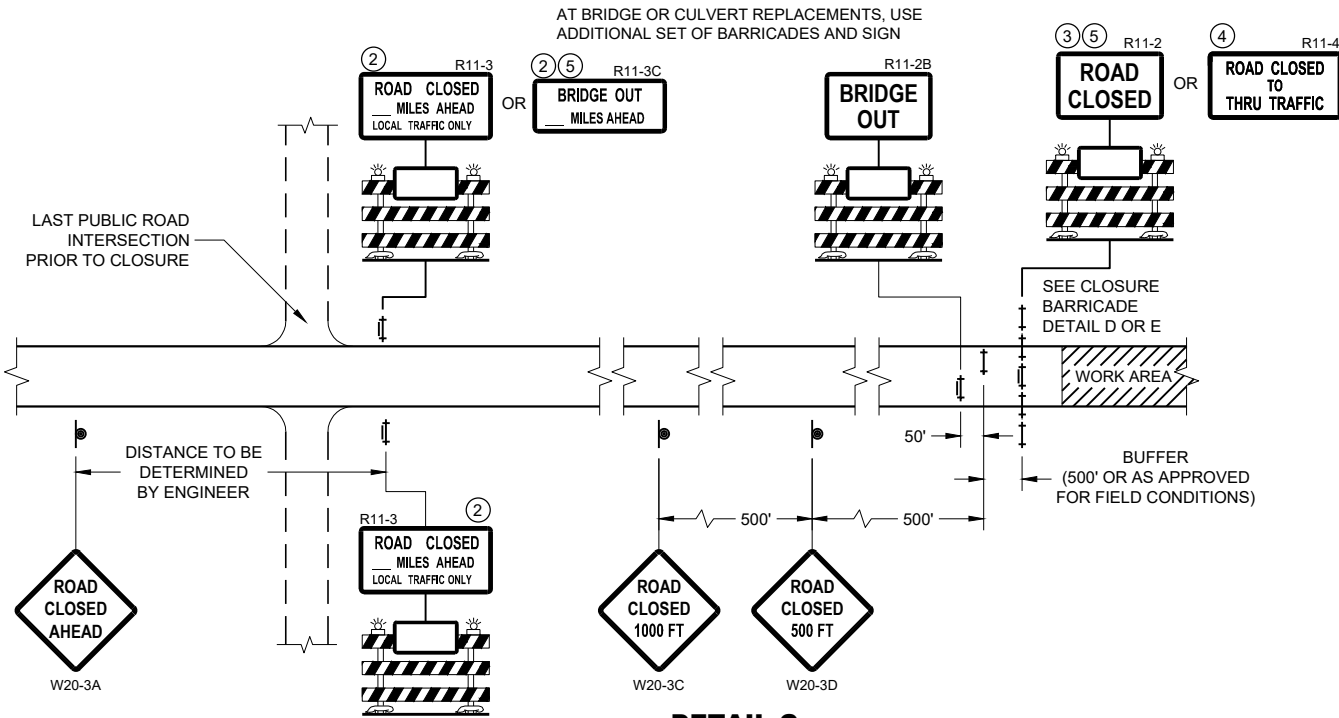
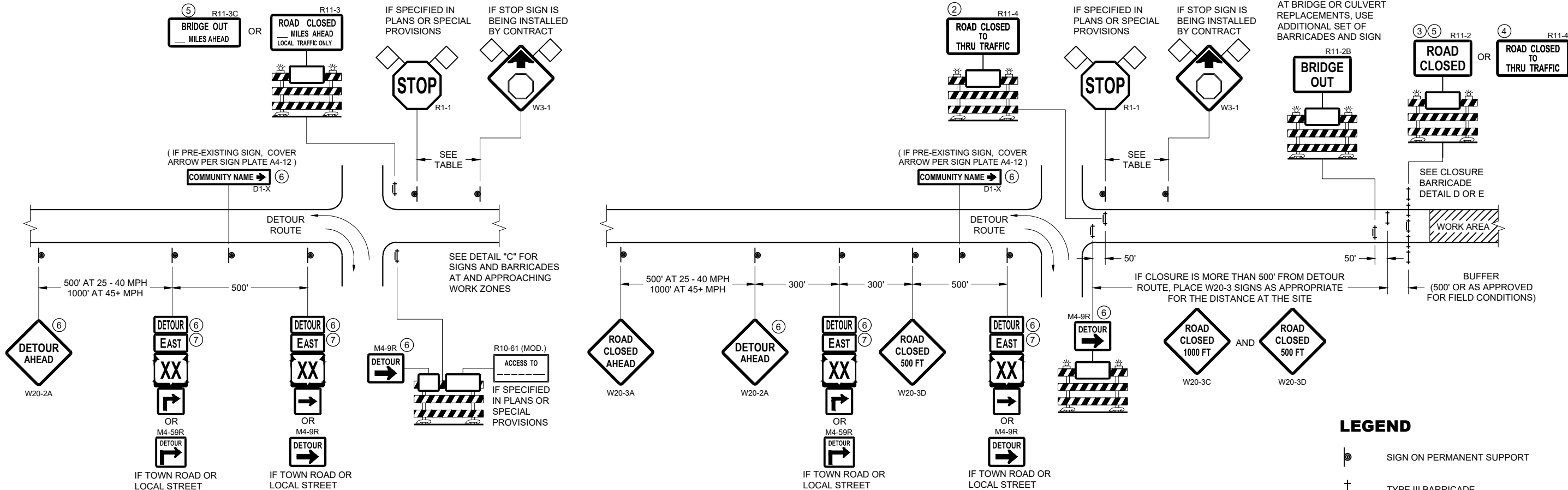
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/1/2012
DATE

FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN



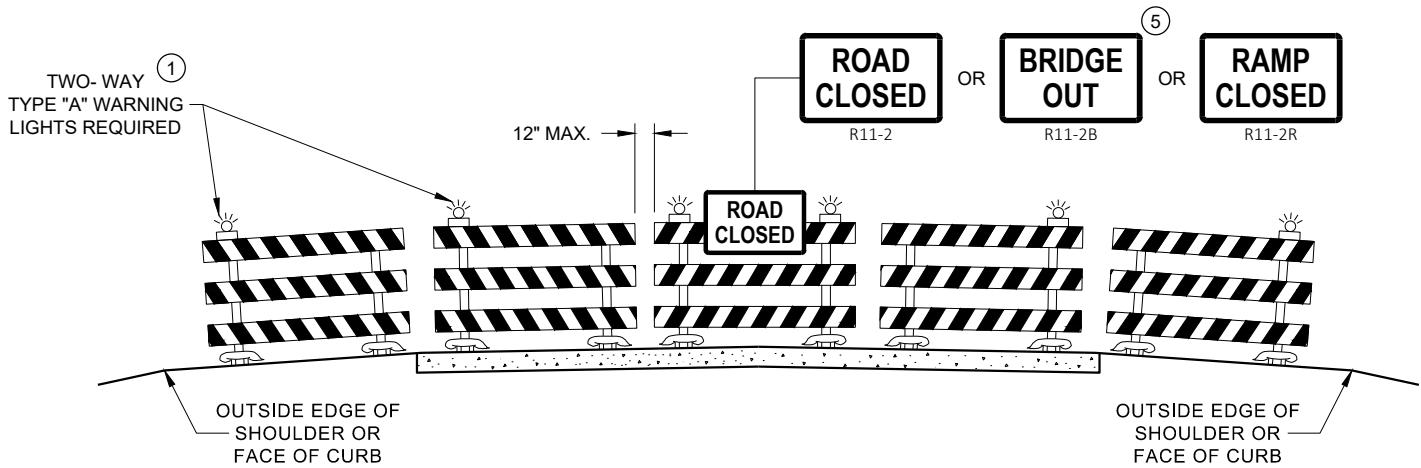
SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

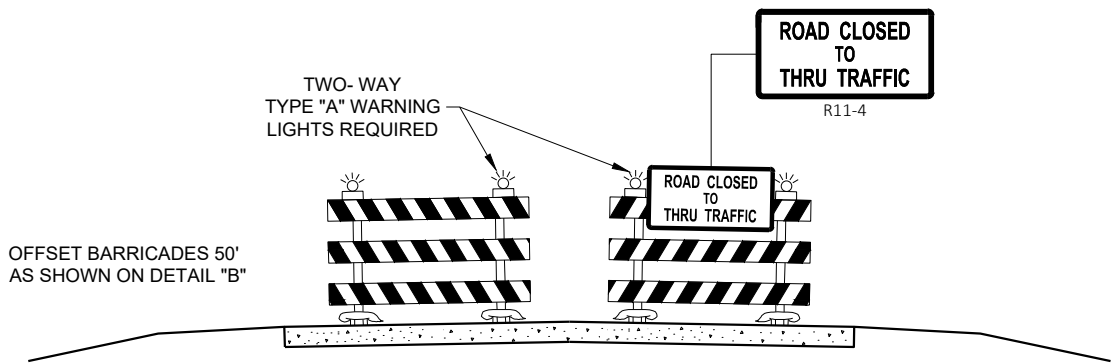
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE 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:

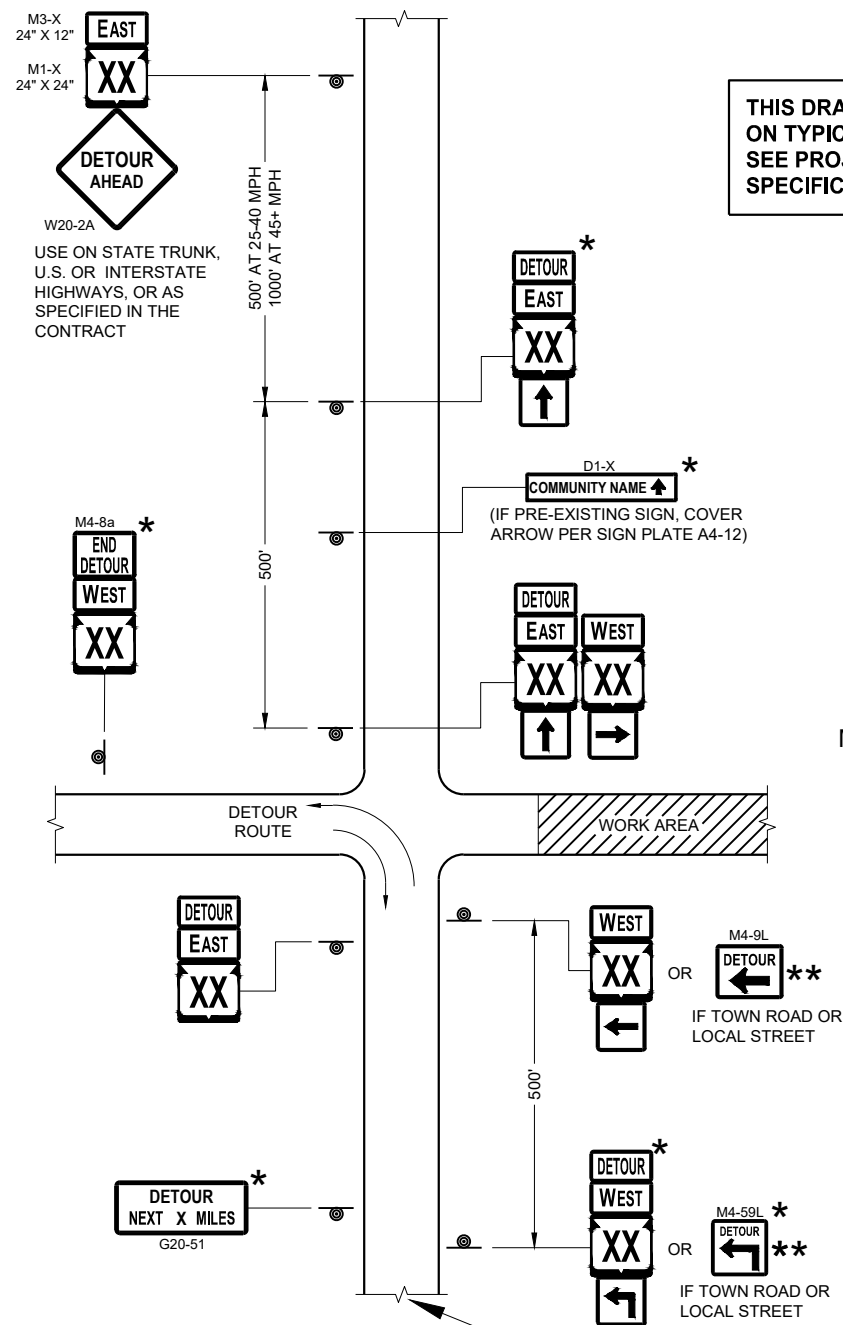
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 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.

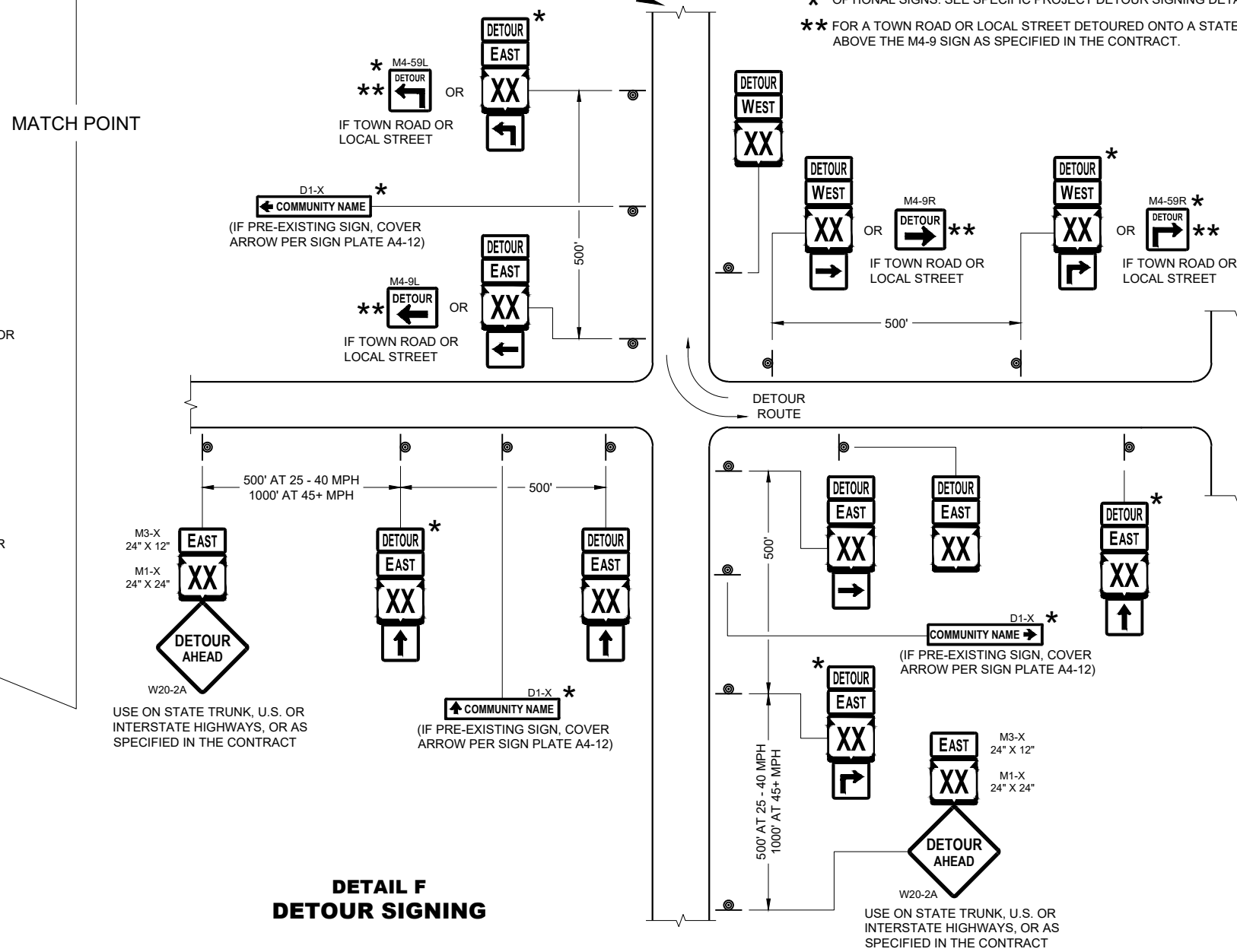
BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

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.**



DETAIL F DETOUR SIGNING

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.

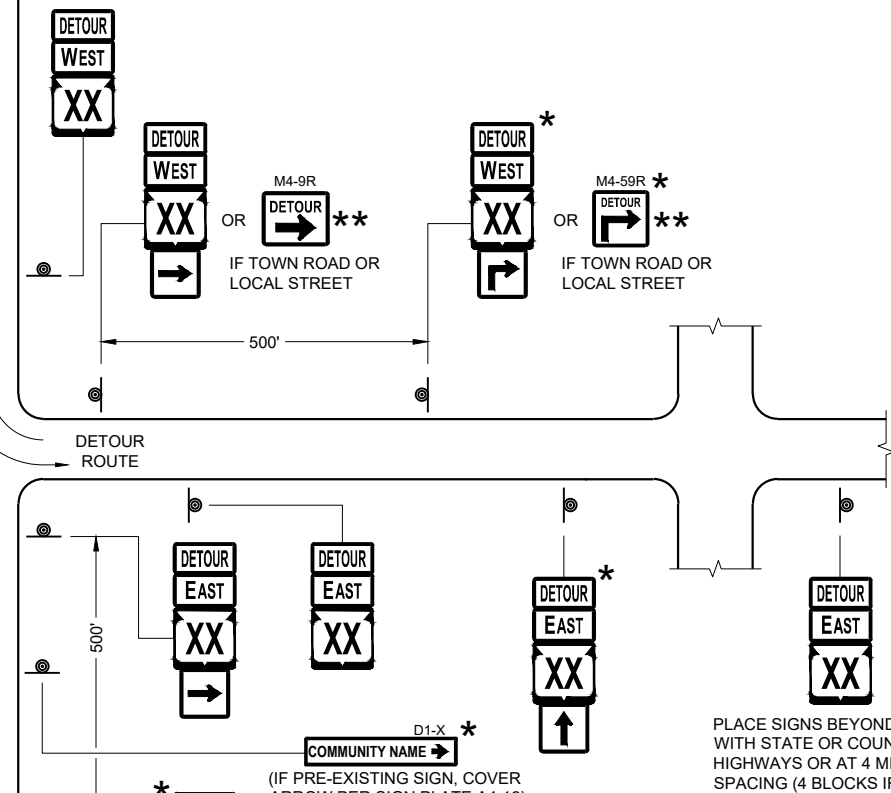
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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" (30" X 30" 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.**



PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

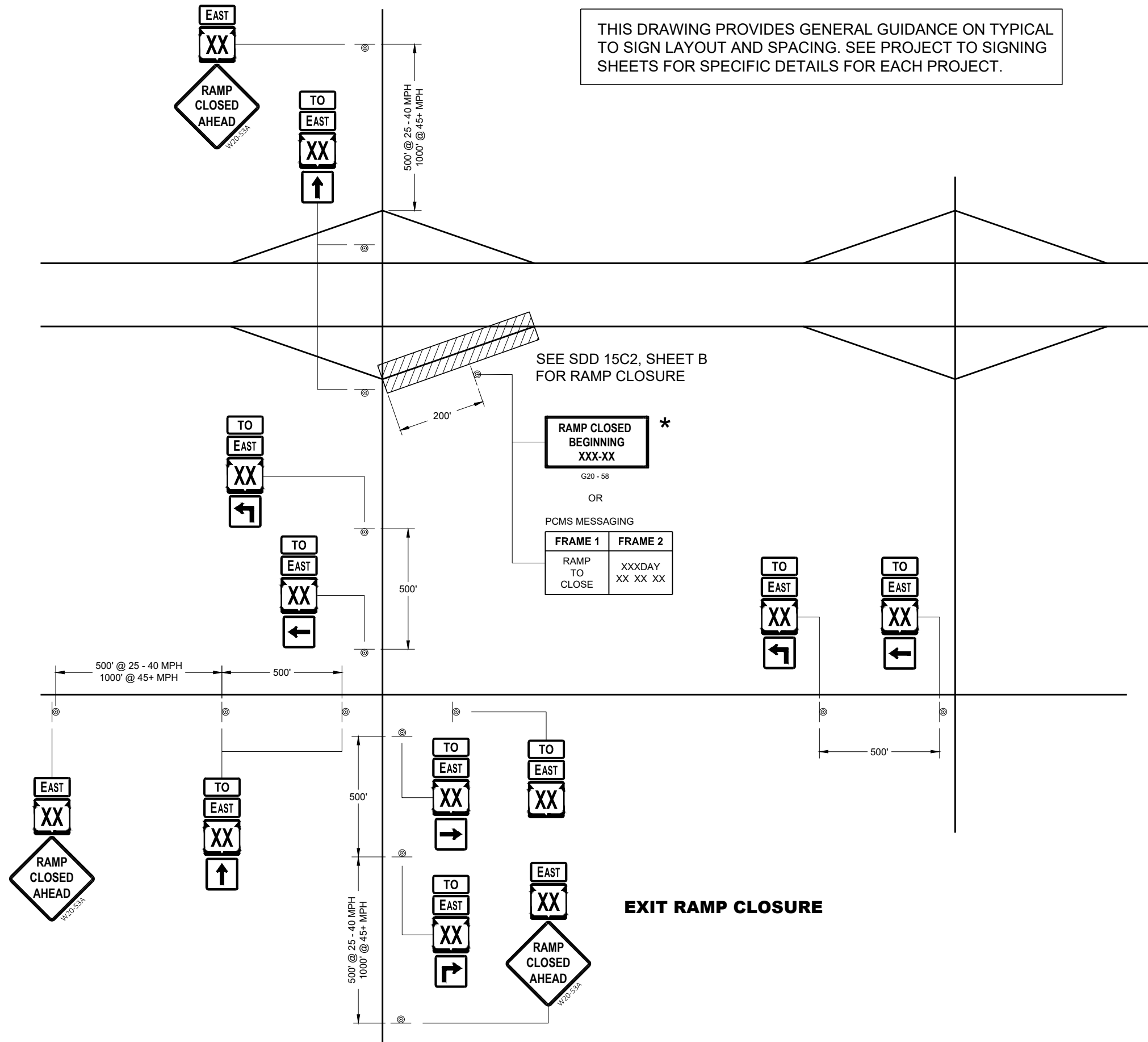
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

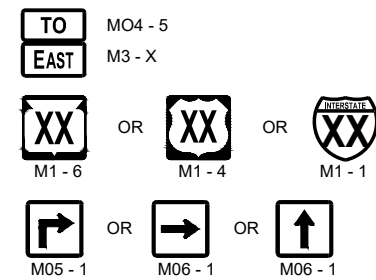
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

**LEGEND**

⊙ SIGN ON PERMANENT SUPPORT

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

THE SPACING BETWEEN TRAFFIC CONTROL AND TO 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 SHALL 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 FOLLOW:
M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
W20 - 53A SHALL BE 48" X 48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

**ON RAMP
LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

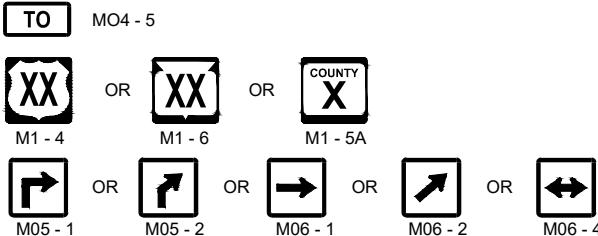
LEGEND



SIGN ON PERMANENT SUPPORT



PORTABLE CHANGEABLE MESSAGE SIGN



GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 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 SHALL 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 FOLLOW:
MO4 - 5 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, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

- ① ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

OFF RAMP LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

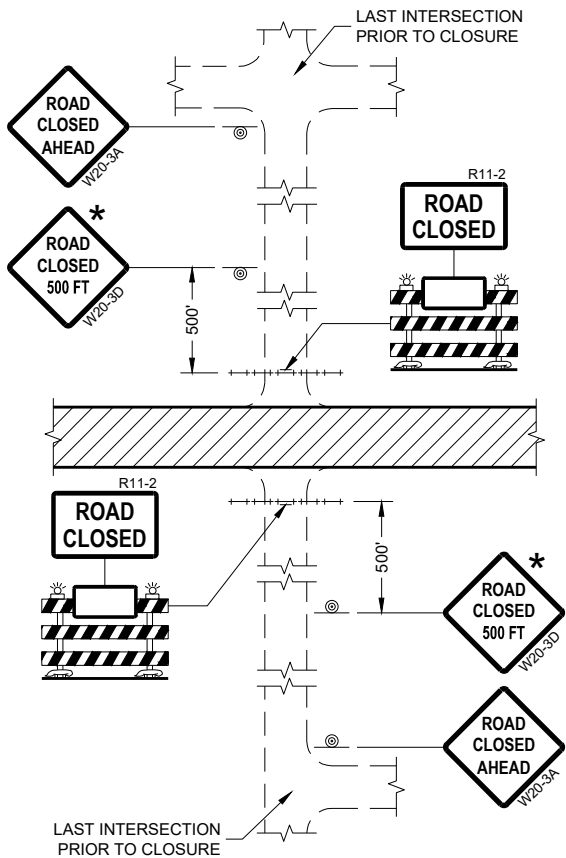
FHWA

6

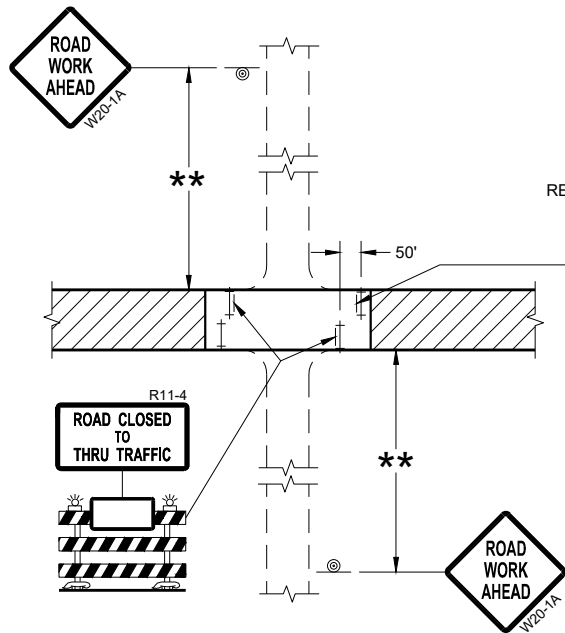
SDD 15C02 - 08e

6

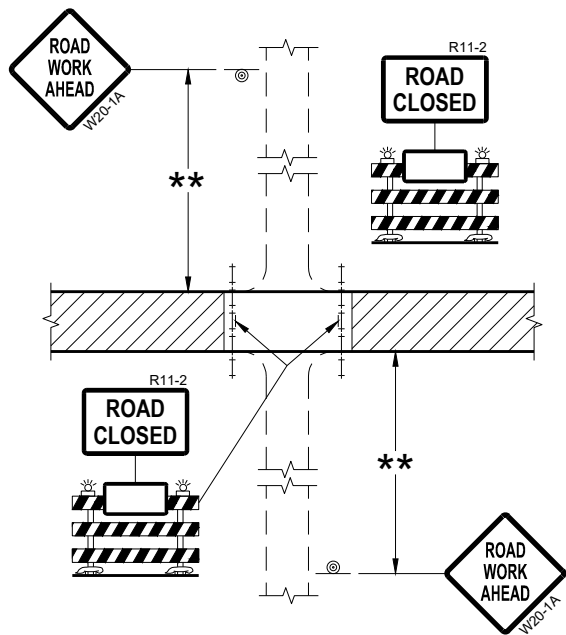
SDD 15C02 - 08e



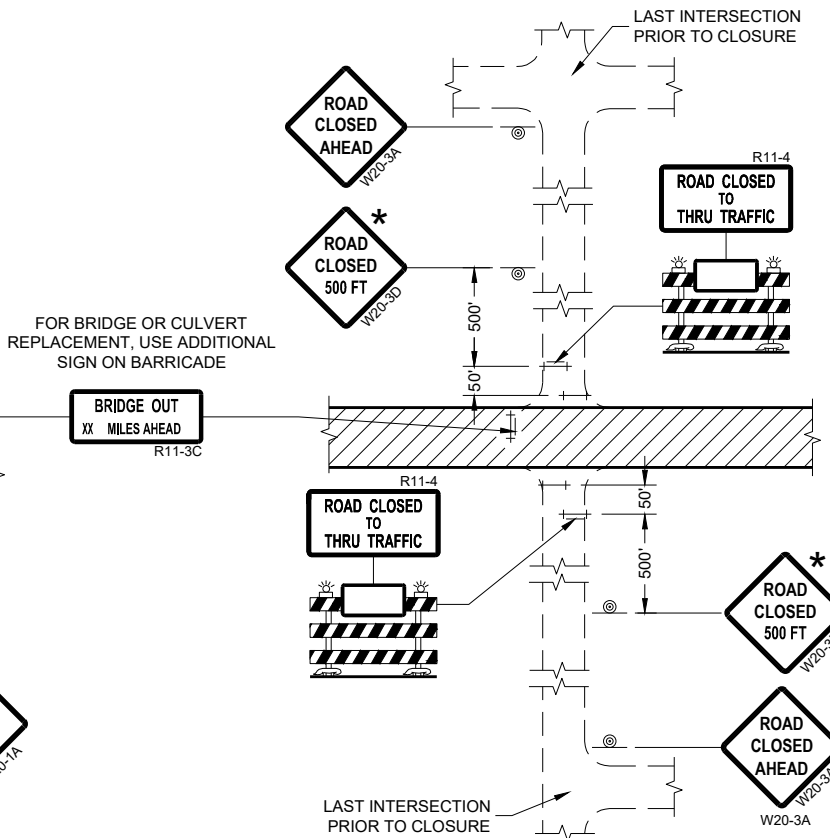
DETAIL 1
(NO ACCESS TO PROJECT)



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



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO 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

FHWA

GENERAL NOTES

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

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

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

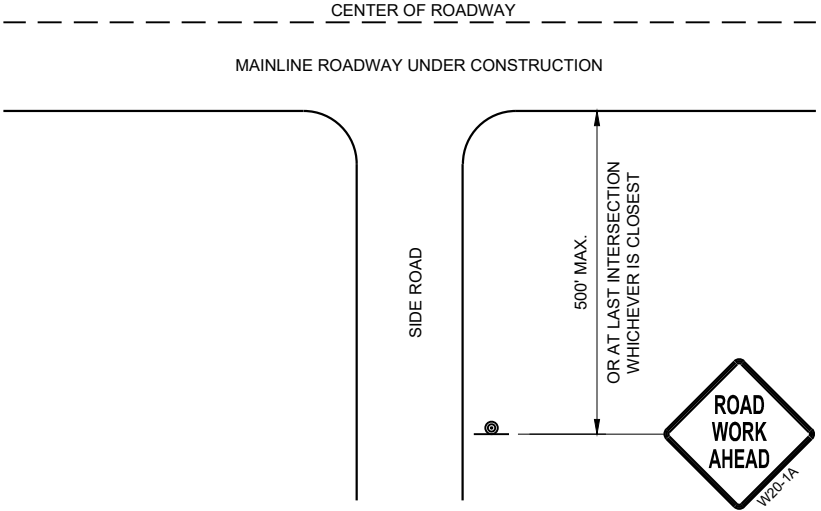
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

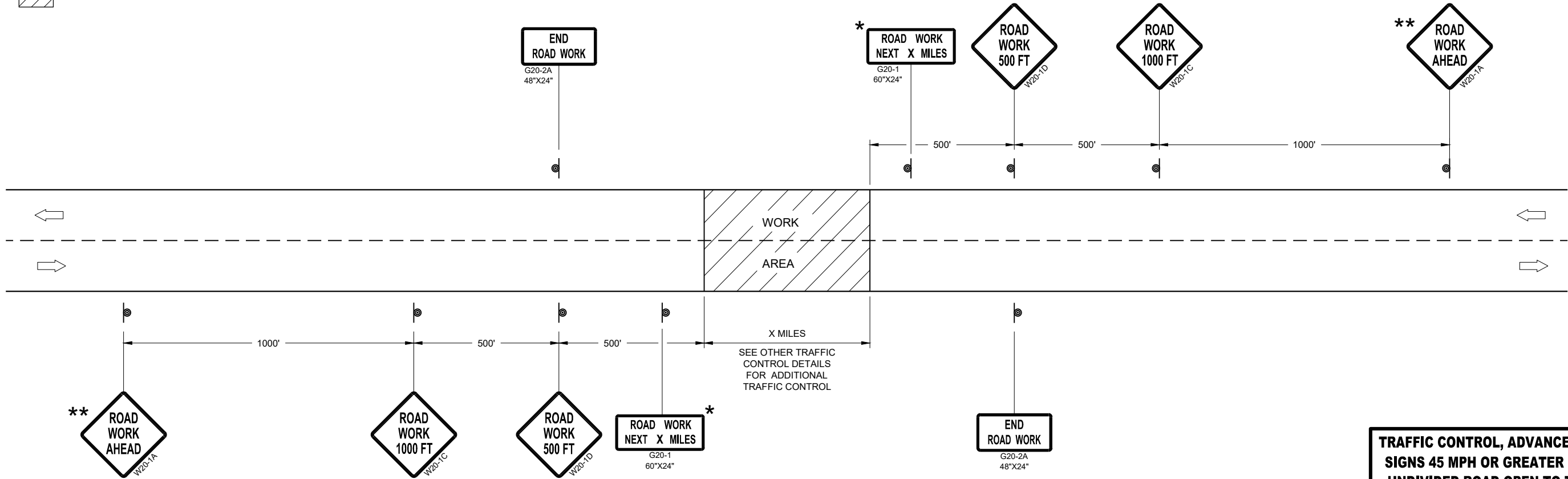
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

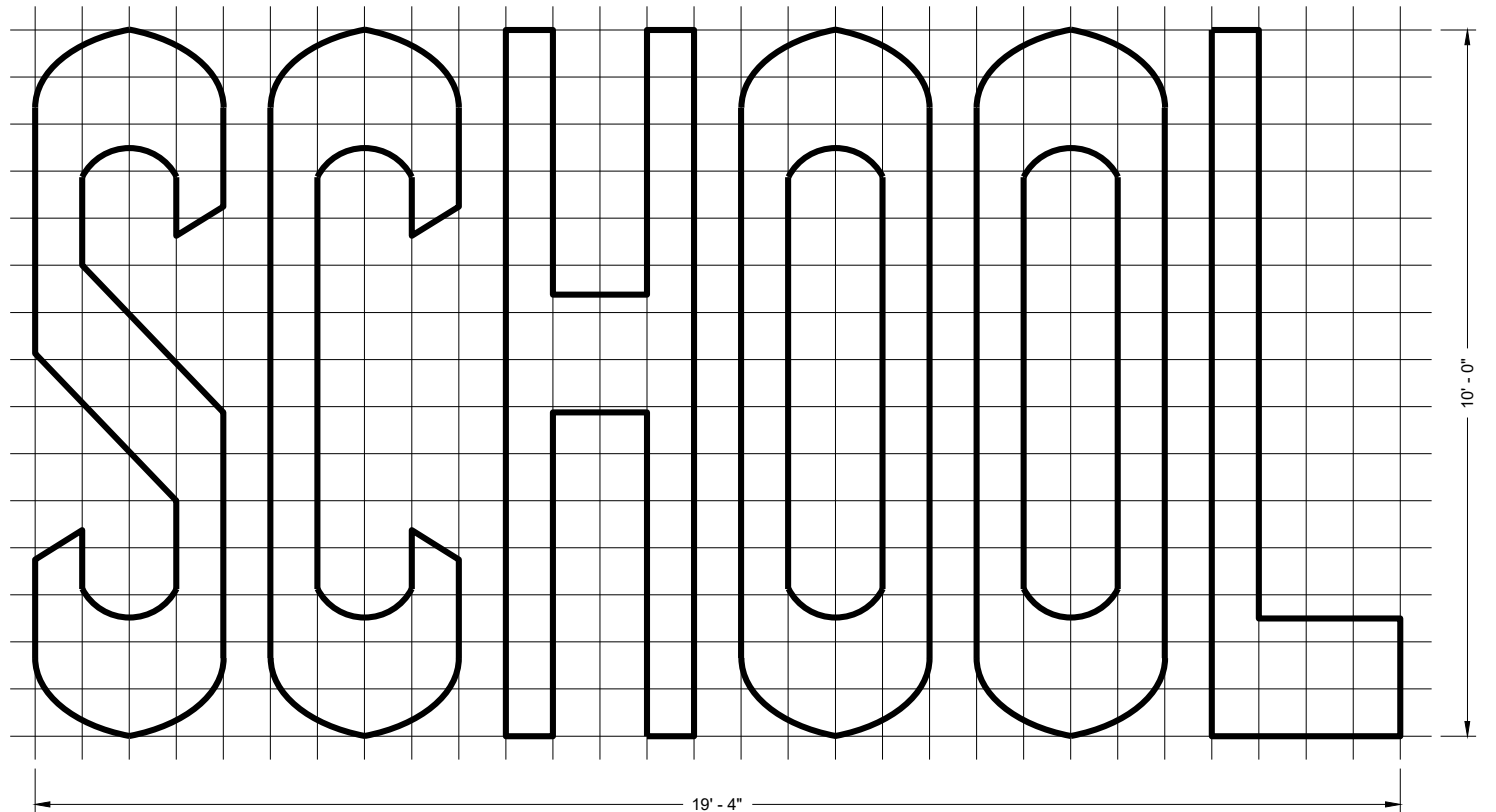
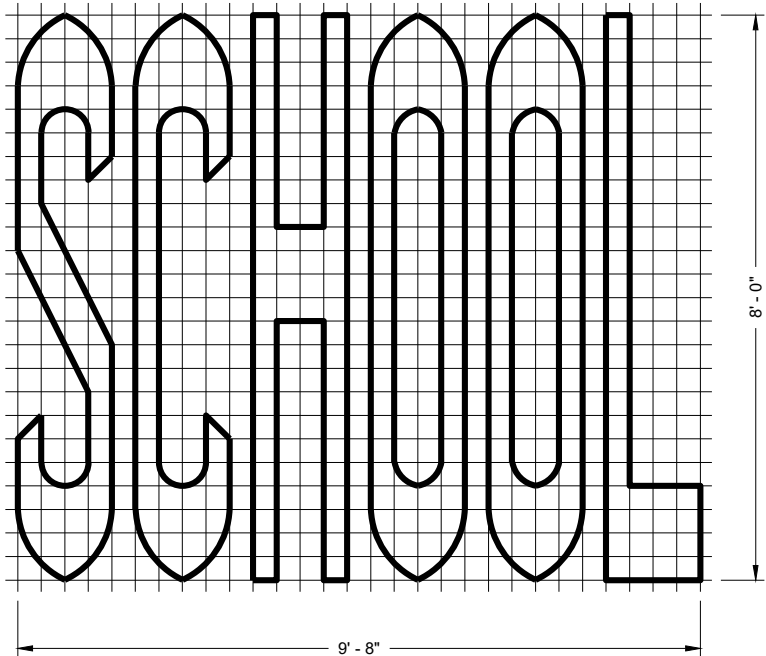
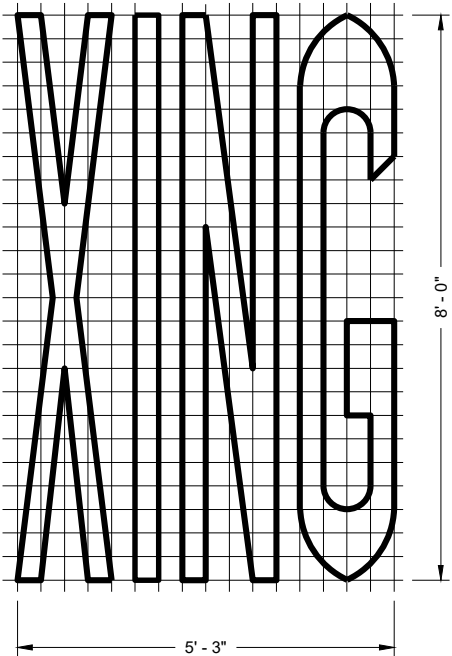
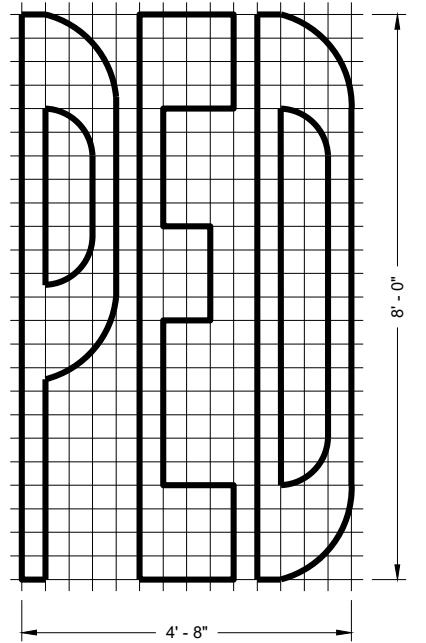
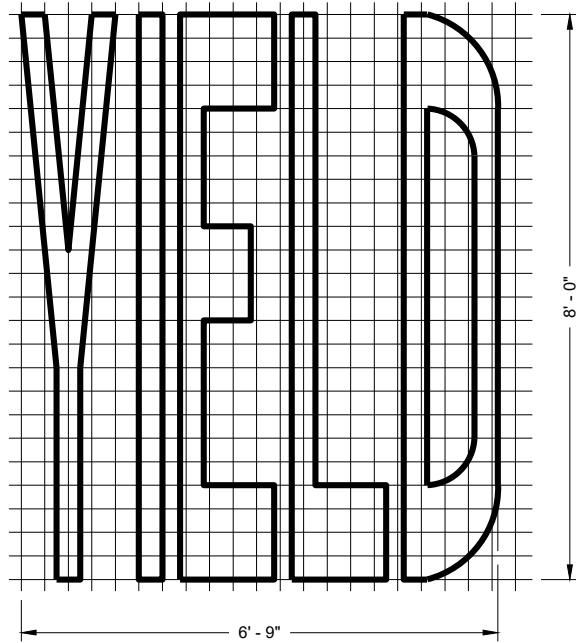
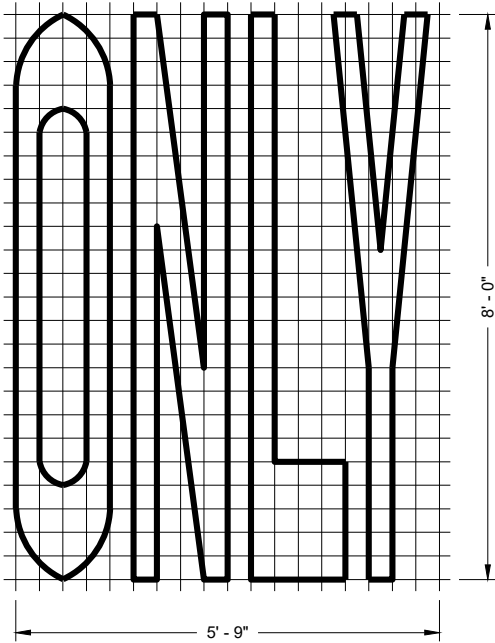
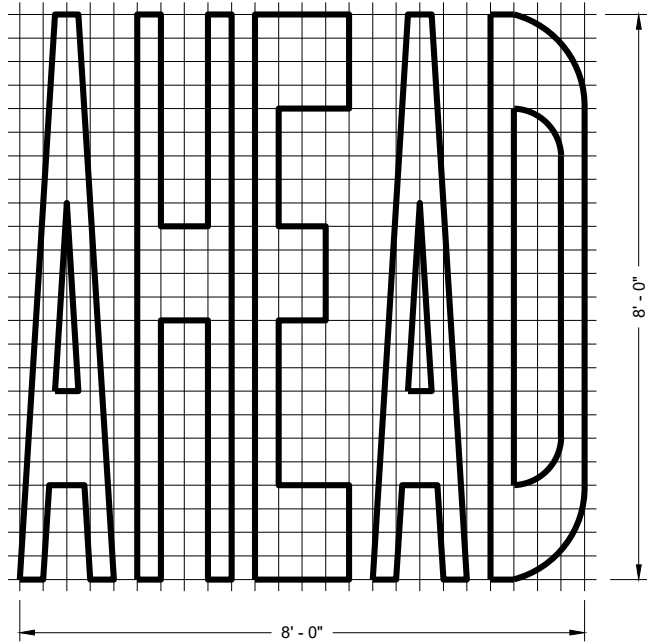
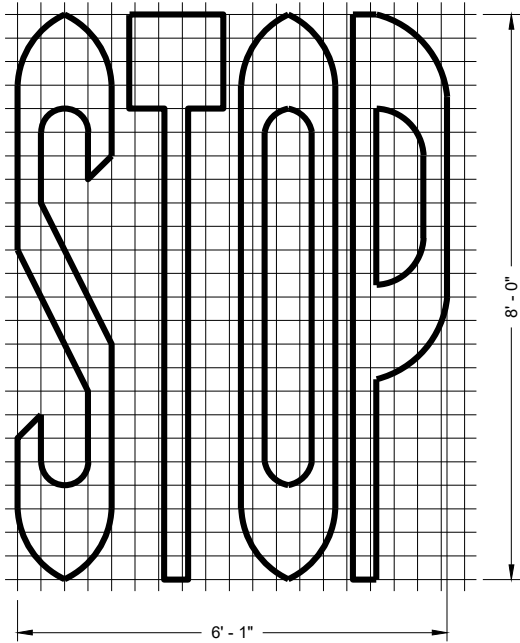


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

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DEPARTMENT OF TRANSPORTATION

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



SINGLE LANE

TWO - LANE

GENERAL NOTES

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

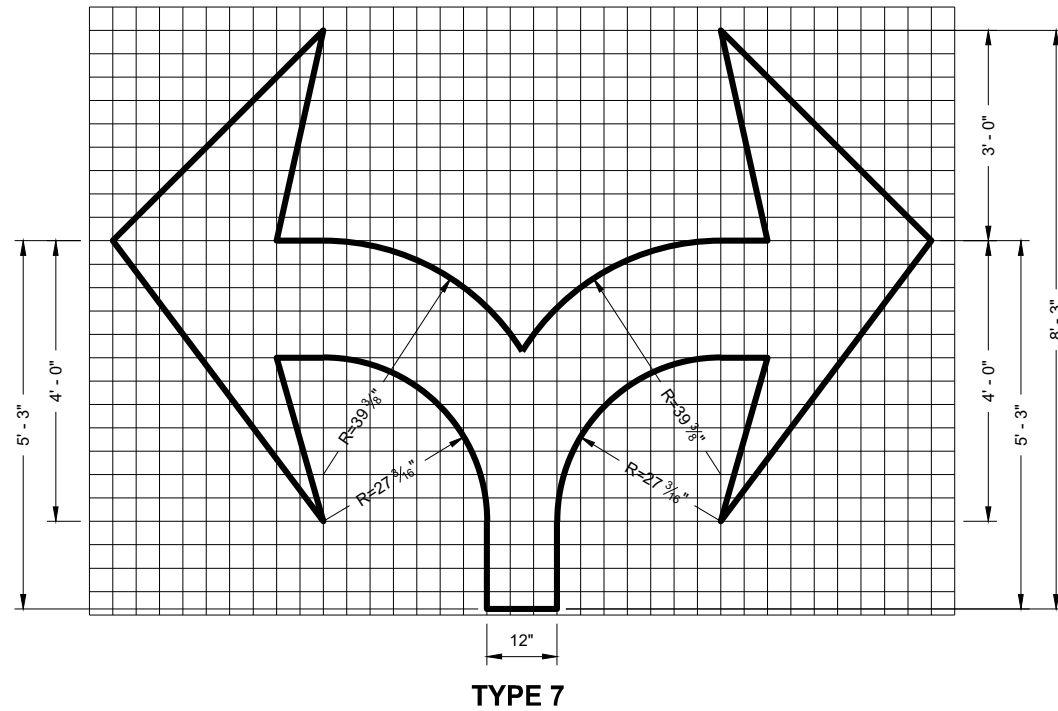
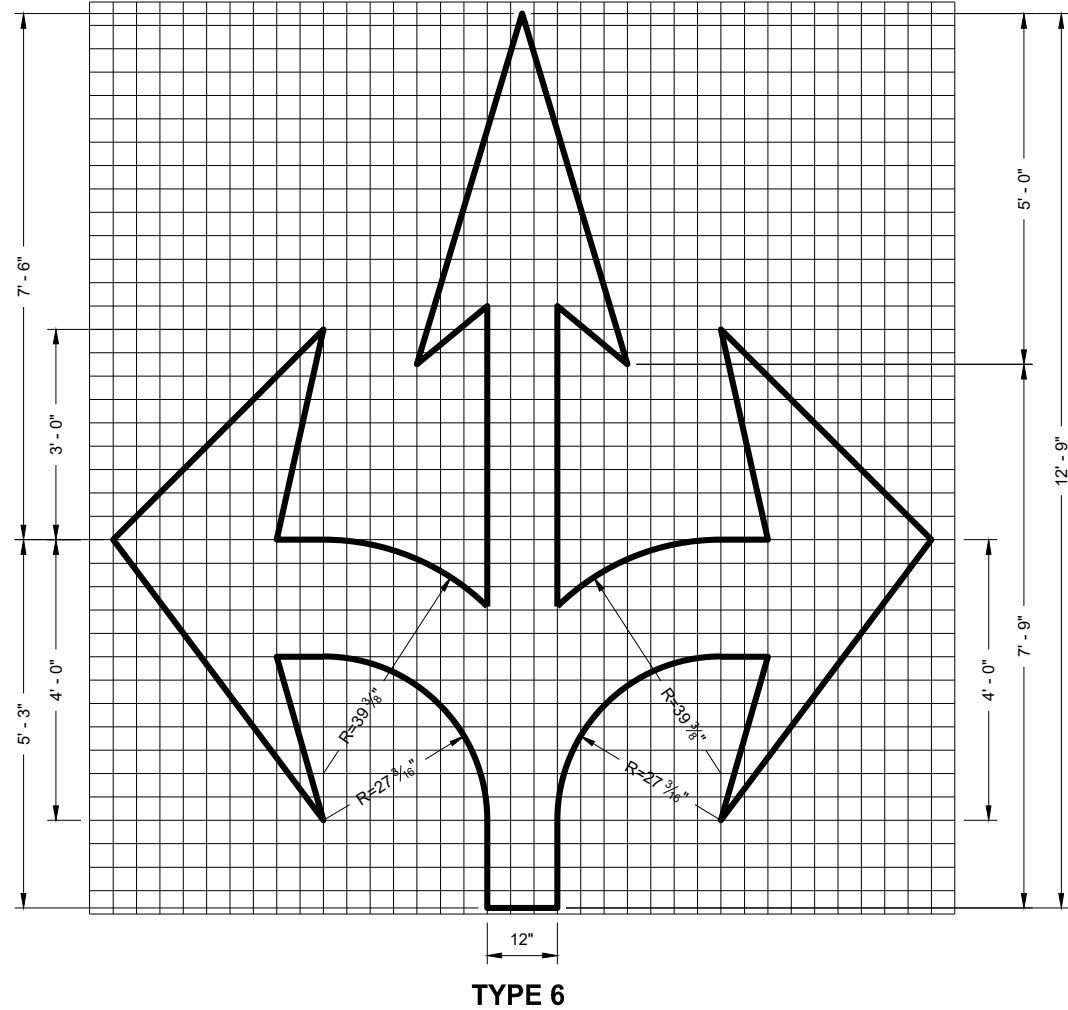
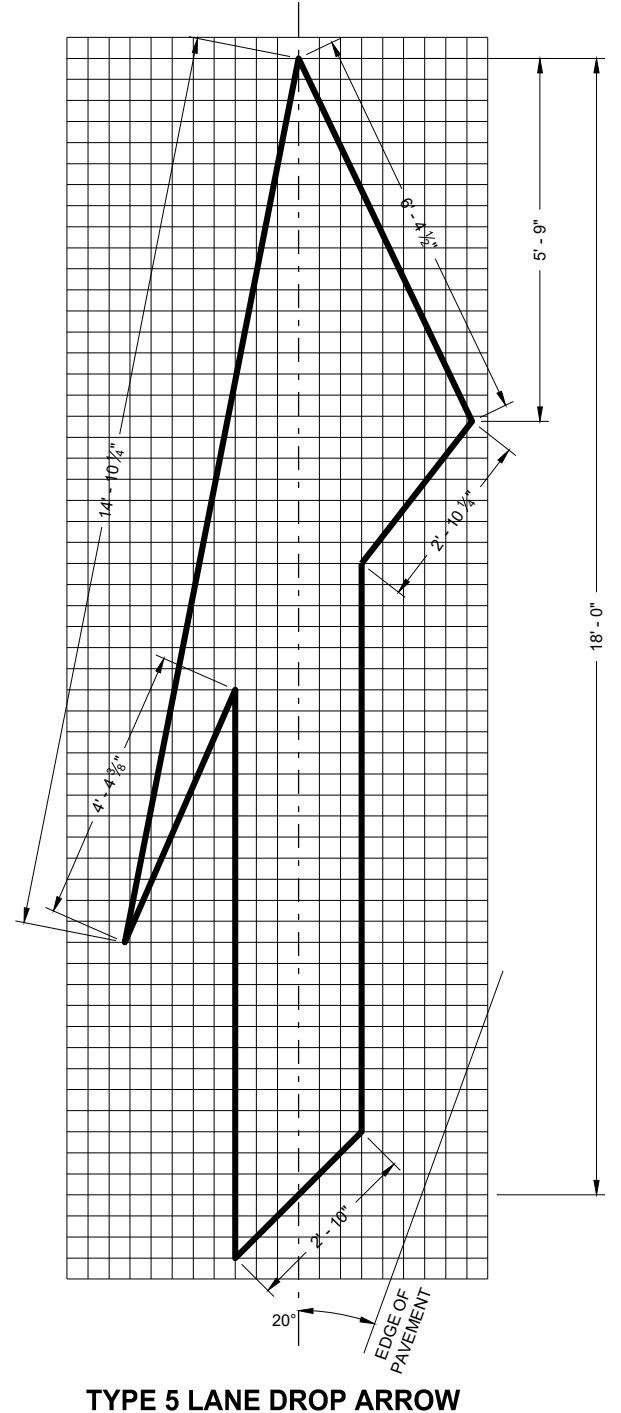
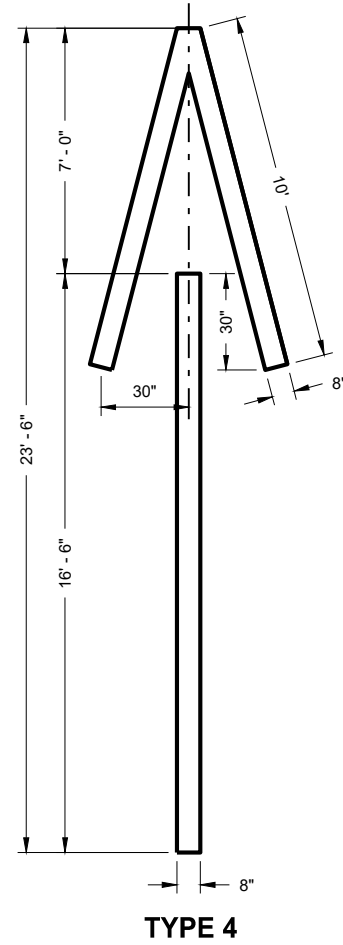
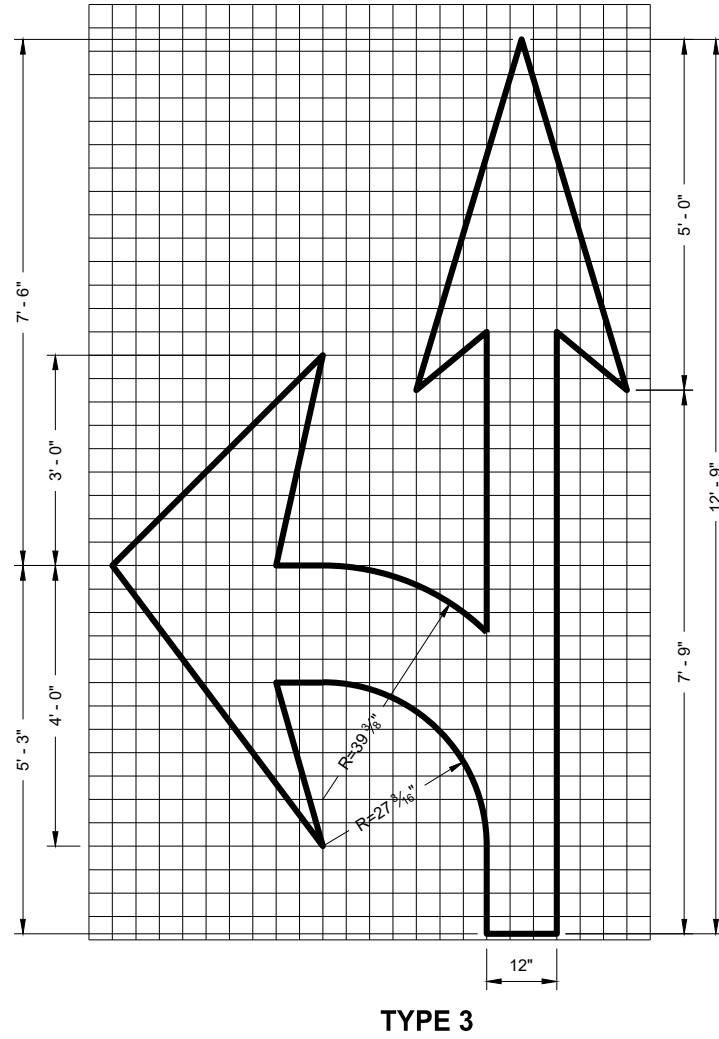
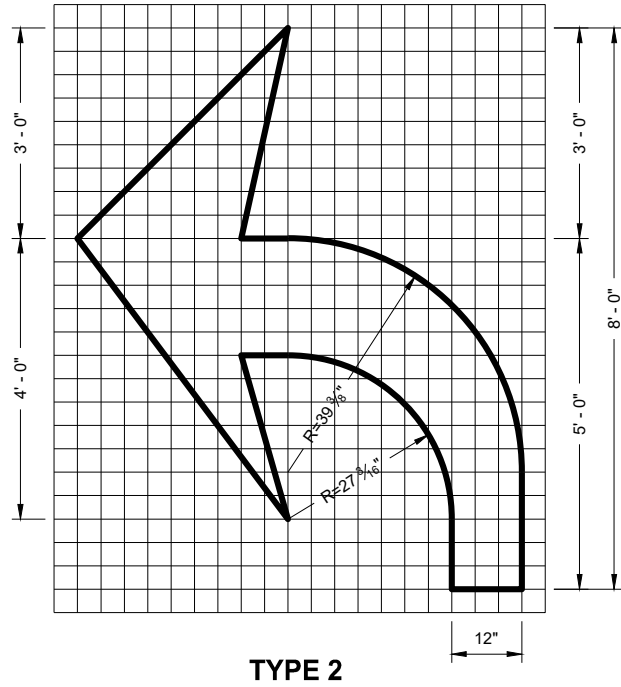
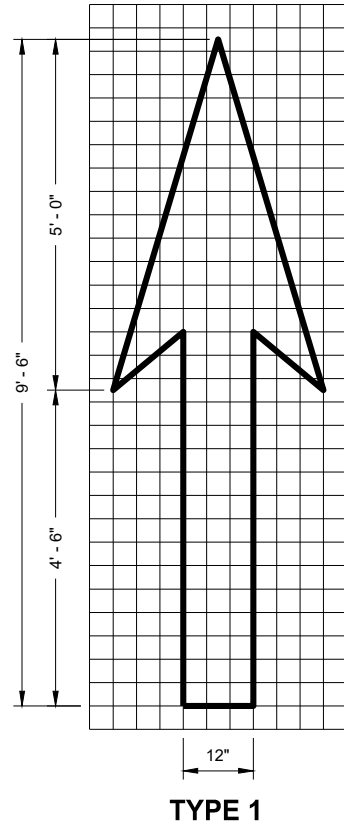
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

FHWA



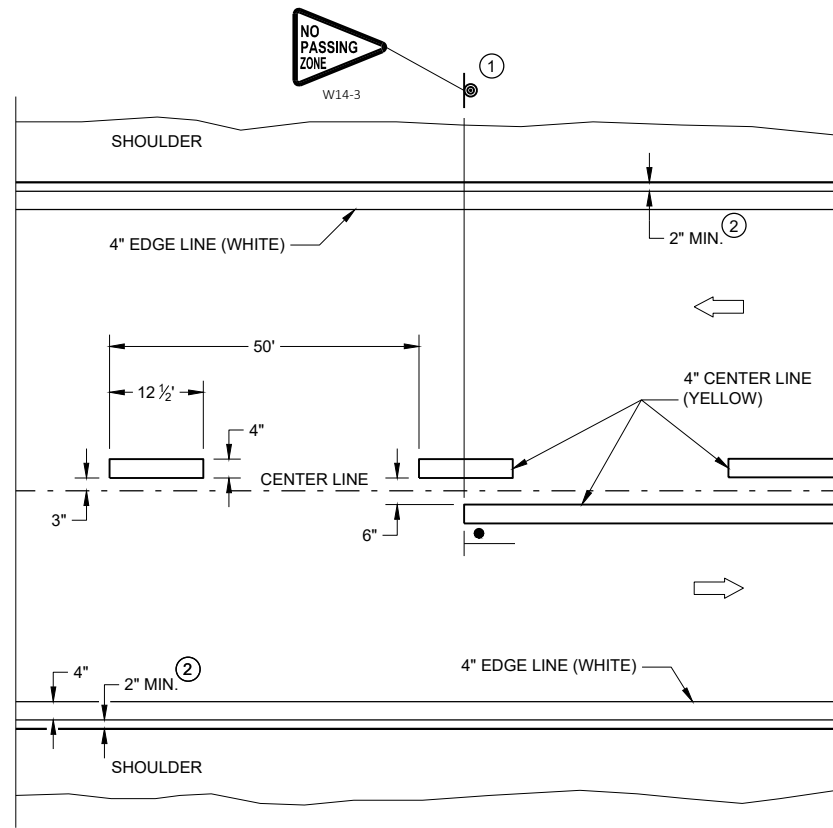
GENERAL NOTES

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

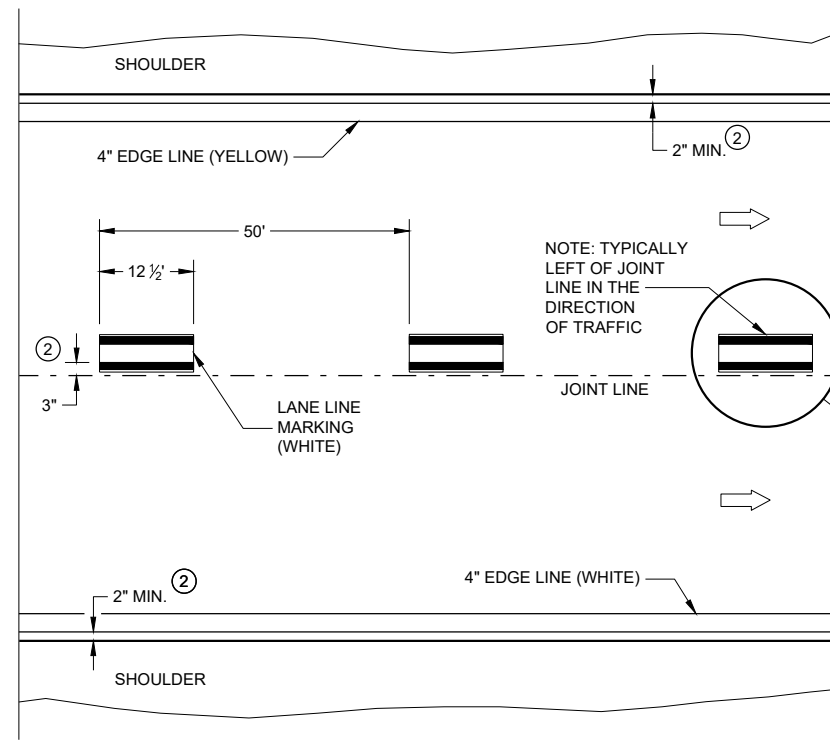
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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November 2019
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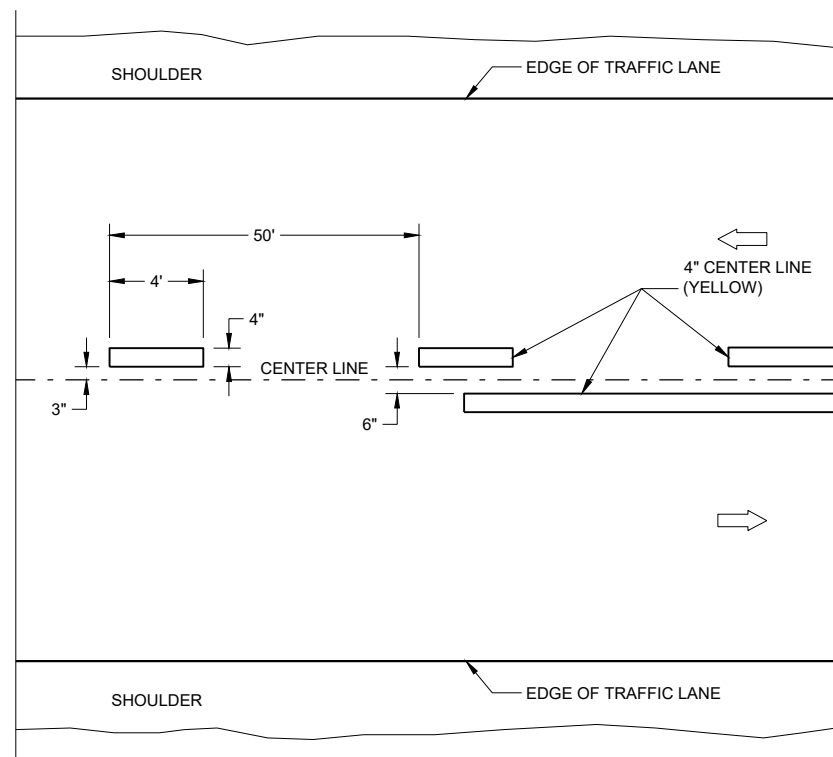


TWO WAY TRAFFIC

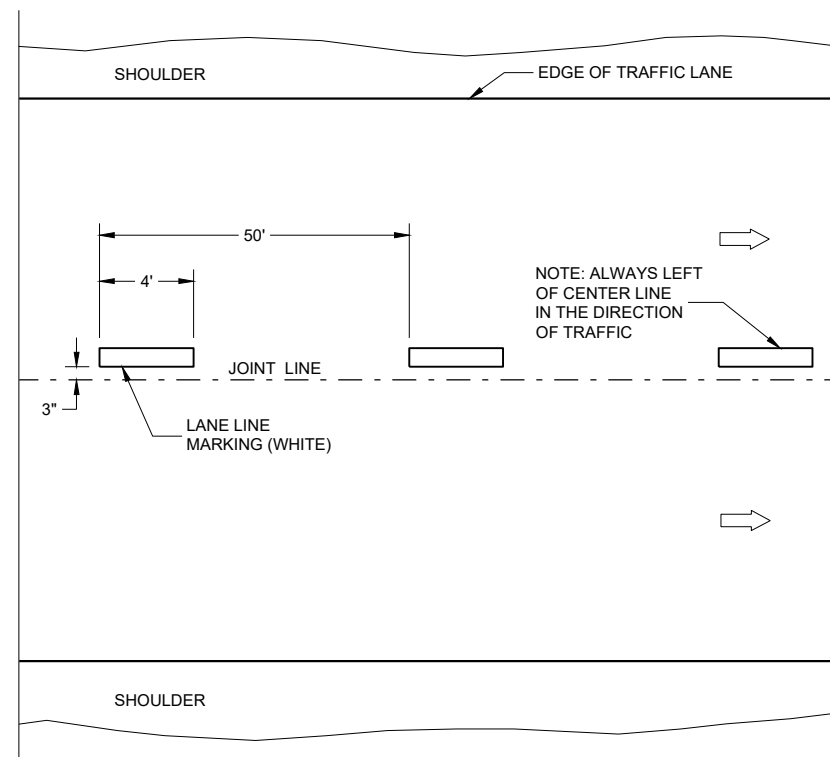


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

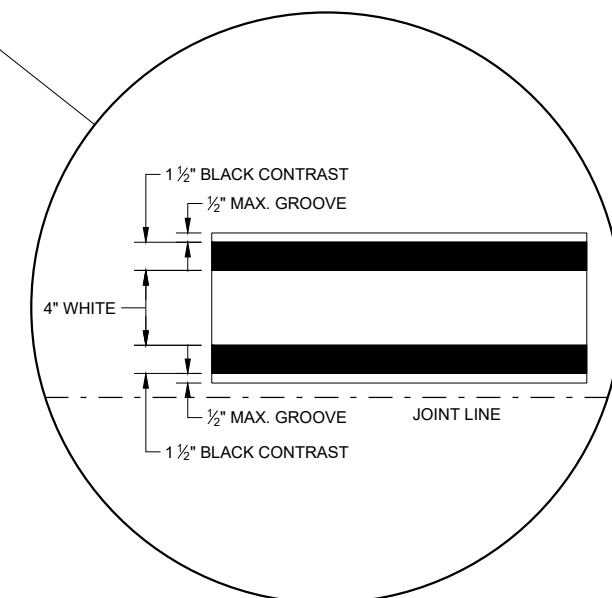
GENERAL NOTES

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

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

LEGEND

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

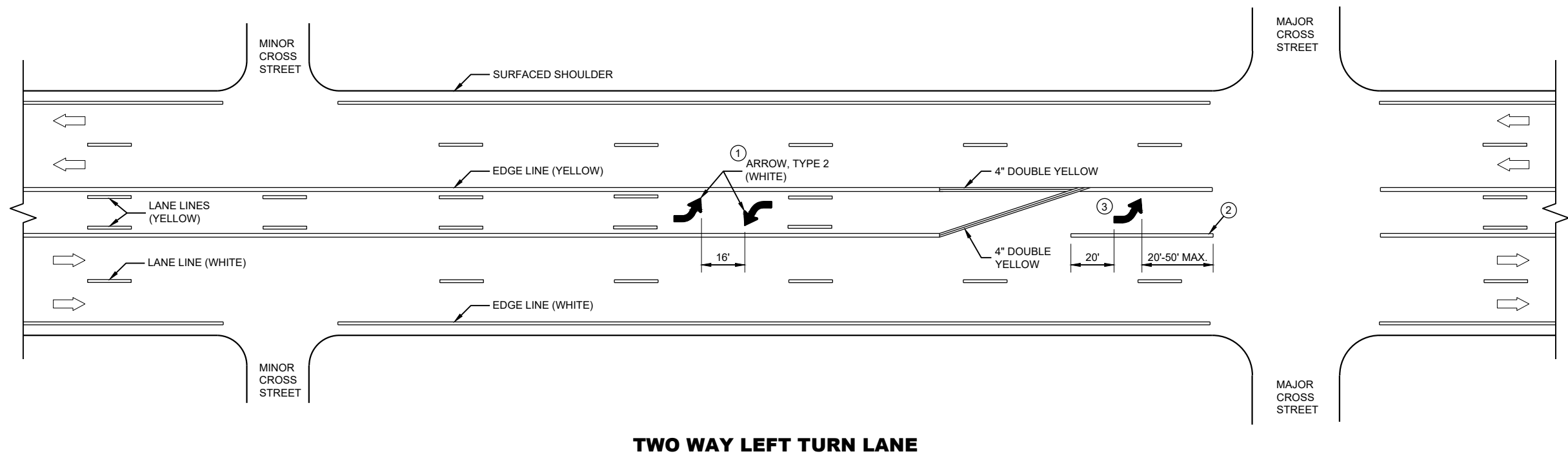


LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Matthew Rauch
STATEWIDE SIGNING AND MARKING
ENGINEER



GENERAL NOTES

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

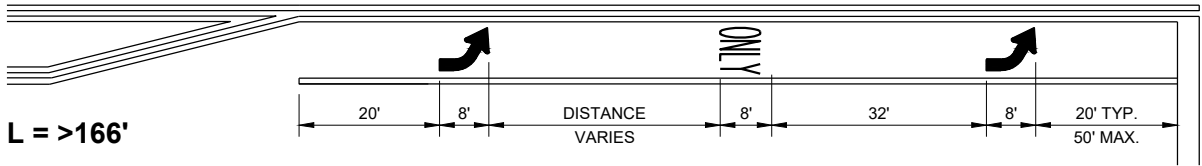
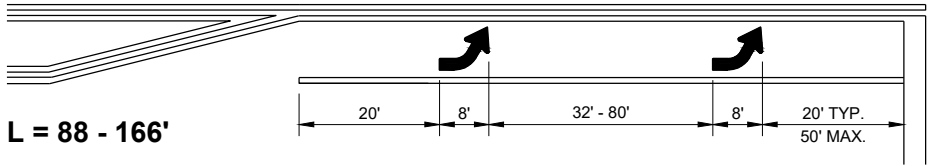
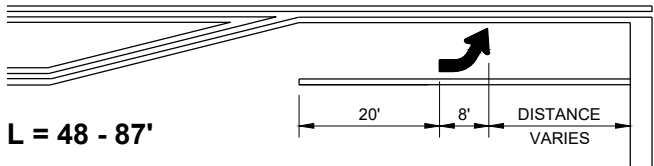
➡ DIRECTION OF TRAFFIC

**PAVEMENT MARKING
(TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TURN LANE OPTIONS

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



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

GENERAL NOTES

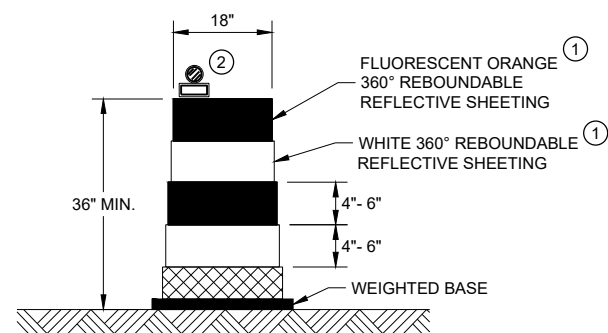
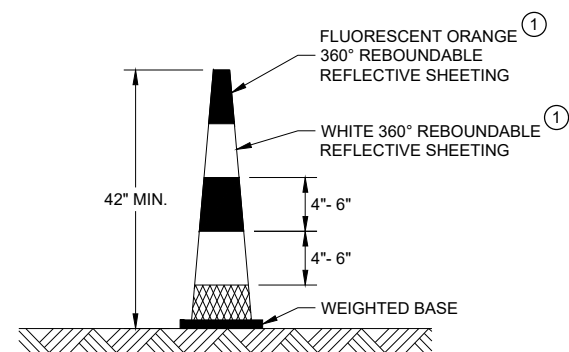
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

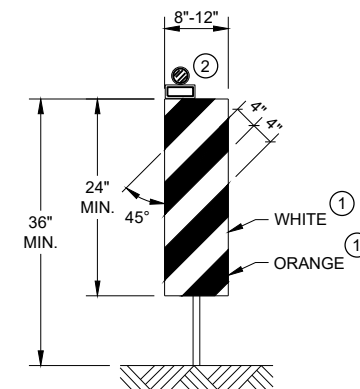
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

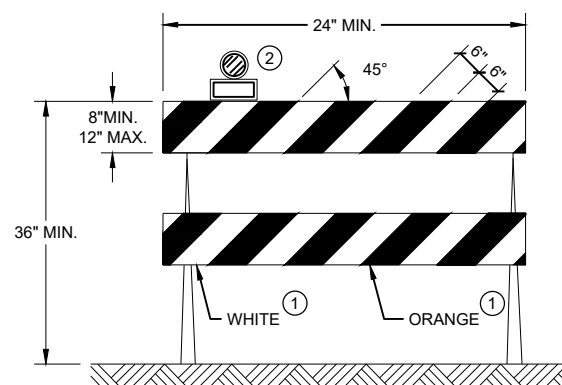
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**DRUM****42" CONE**

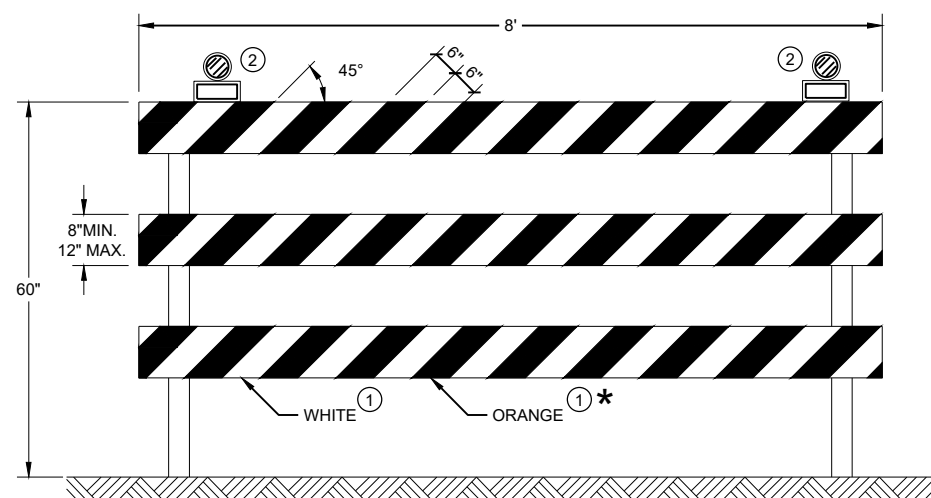
DO NOT USE IN TAPERS
 $\frac{1}{2}$ SPACING OF DRUMS

**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

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 June 2017 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

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

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

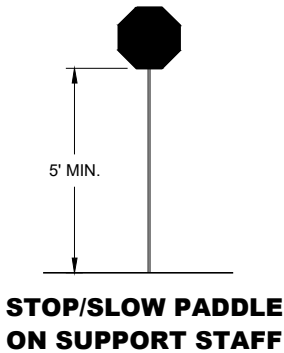
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

- FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
 - ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

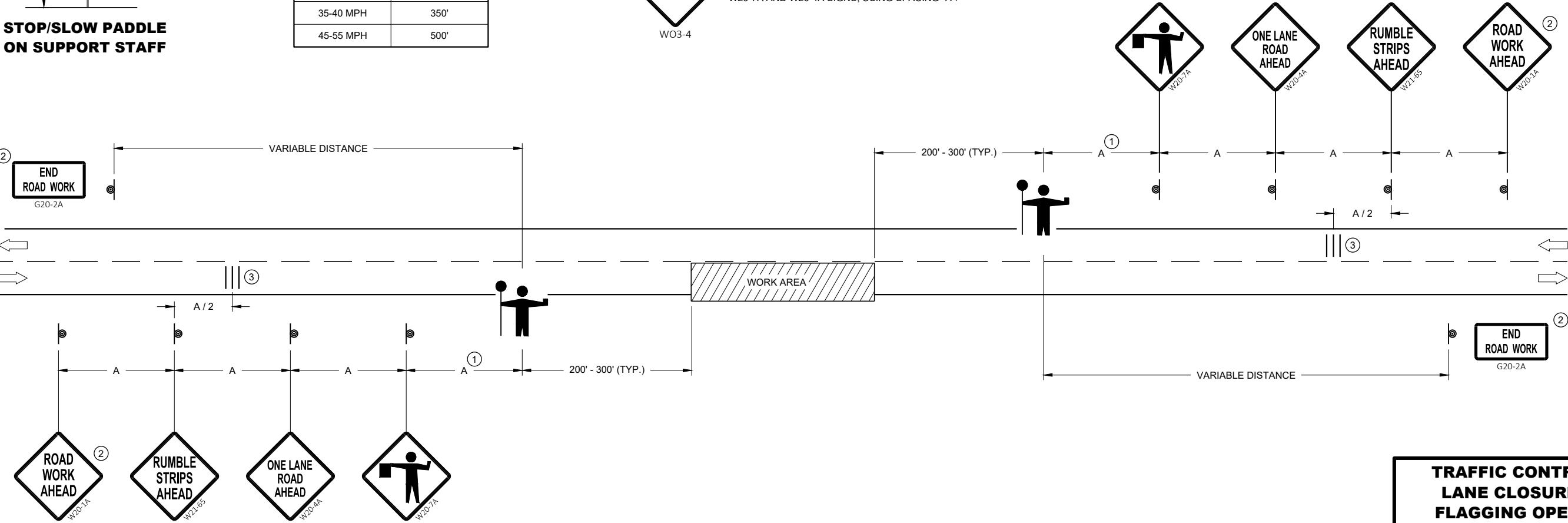


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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



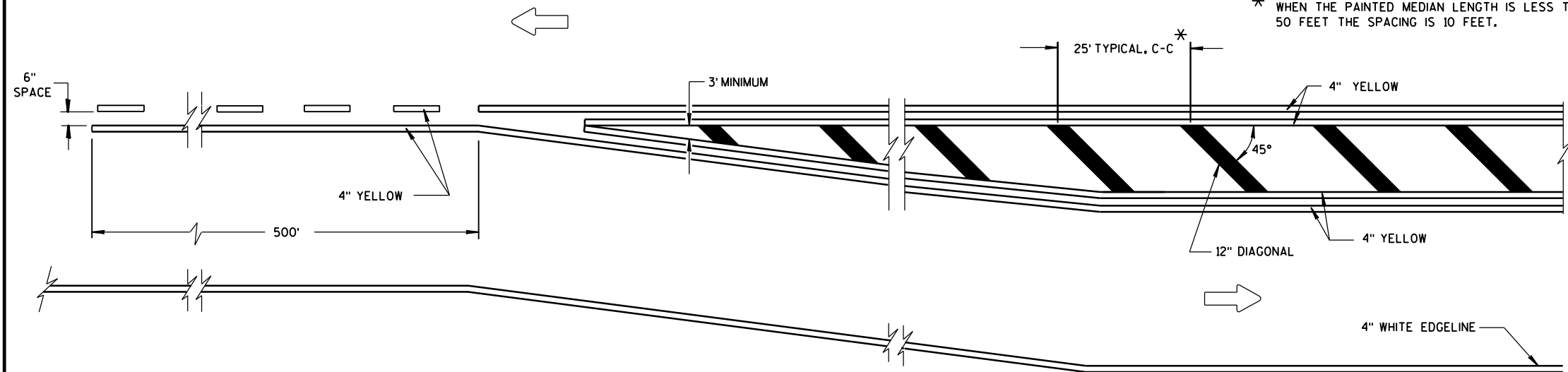
TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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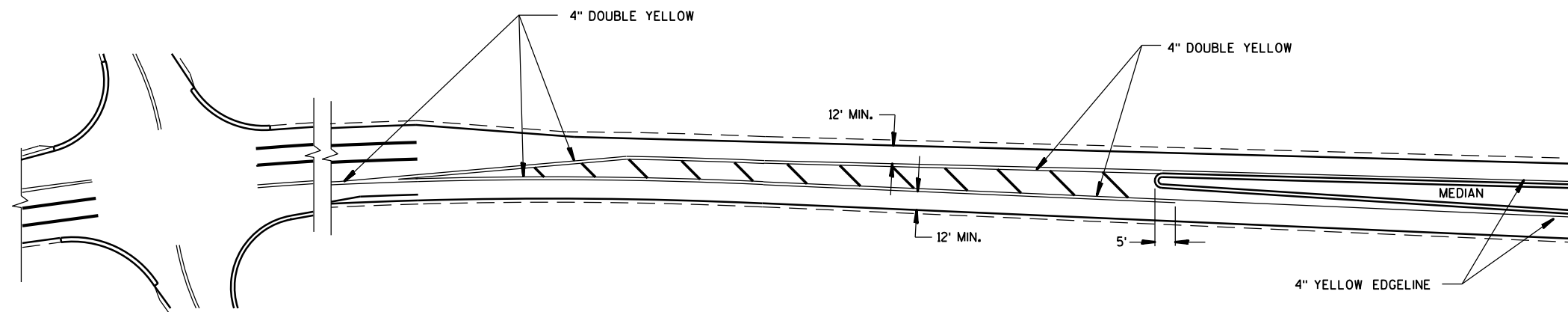


MEDIAN ISLAND DETAIL

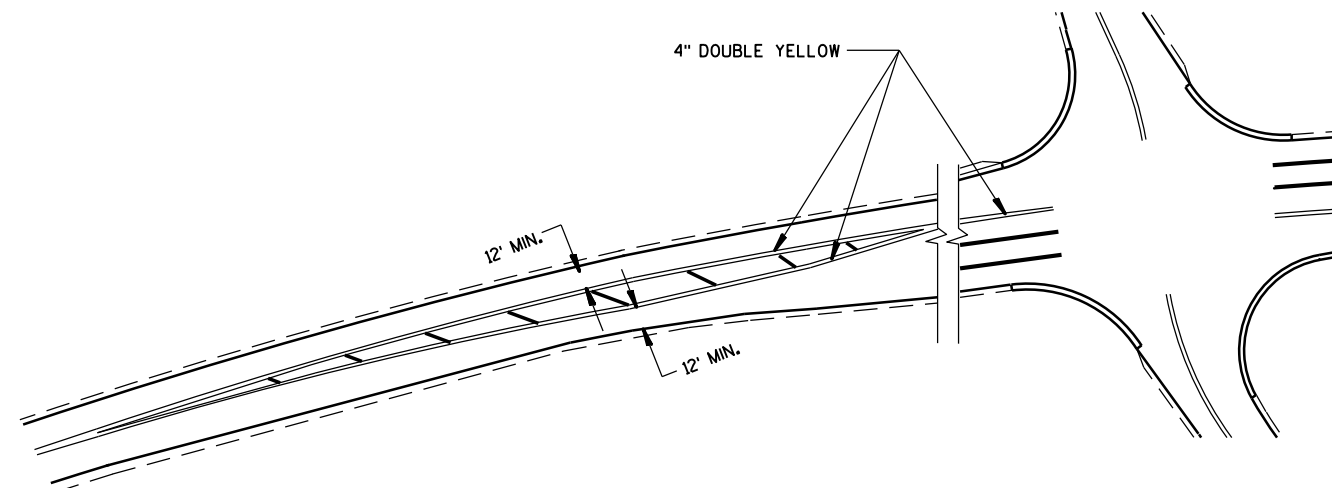
GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

➡ DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

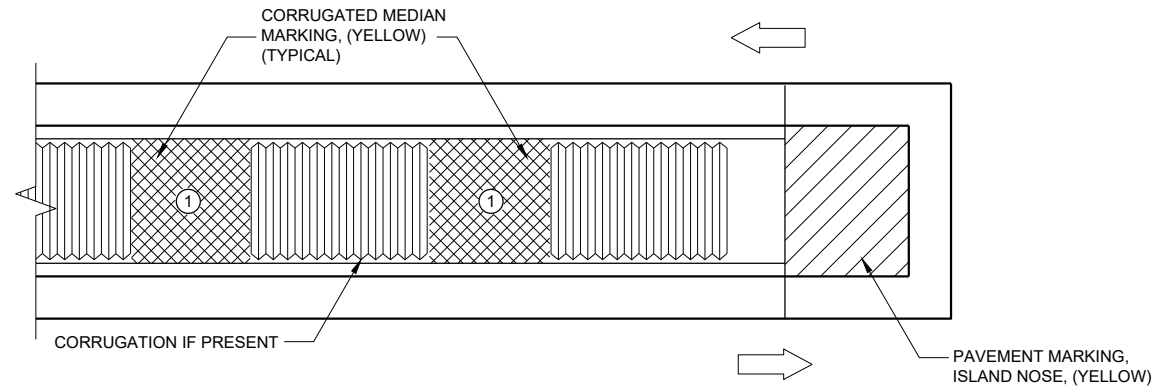


NON APPROACH MARKINGS

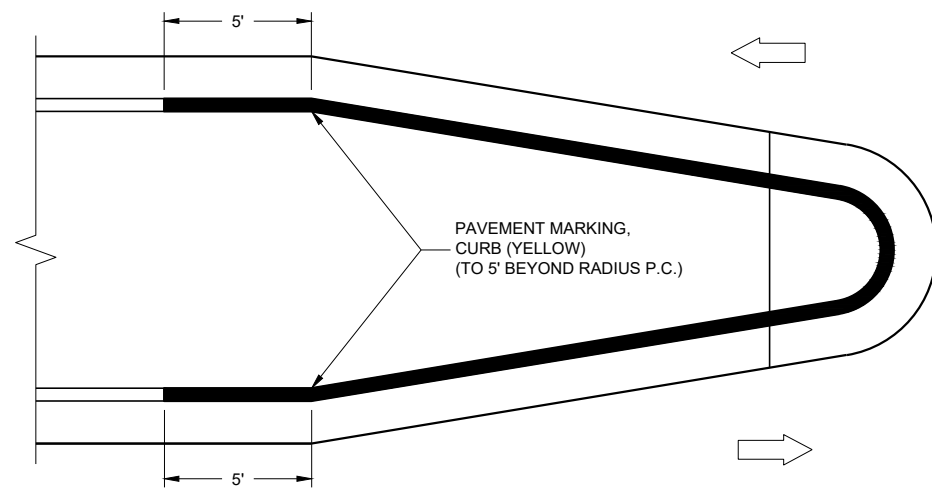
MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

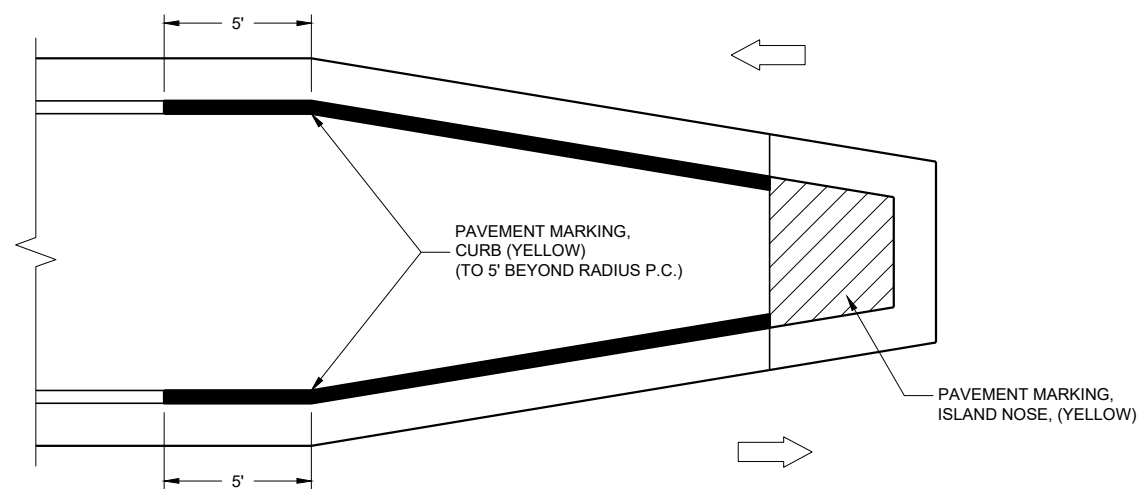
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DATE STATE SIGNING AND MARKING ENGINEER
FHWA



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL

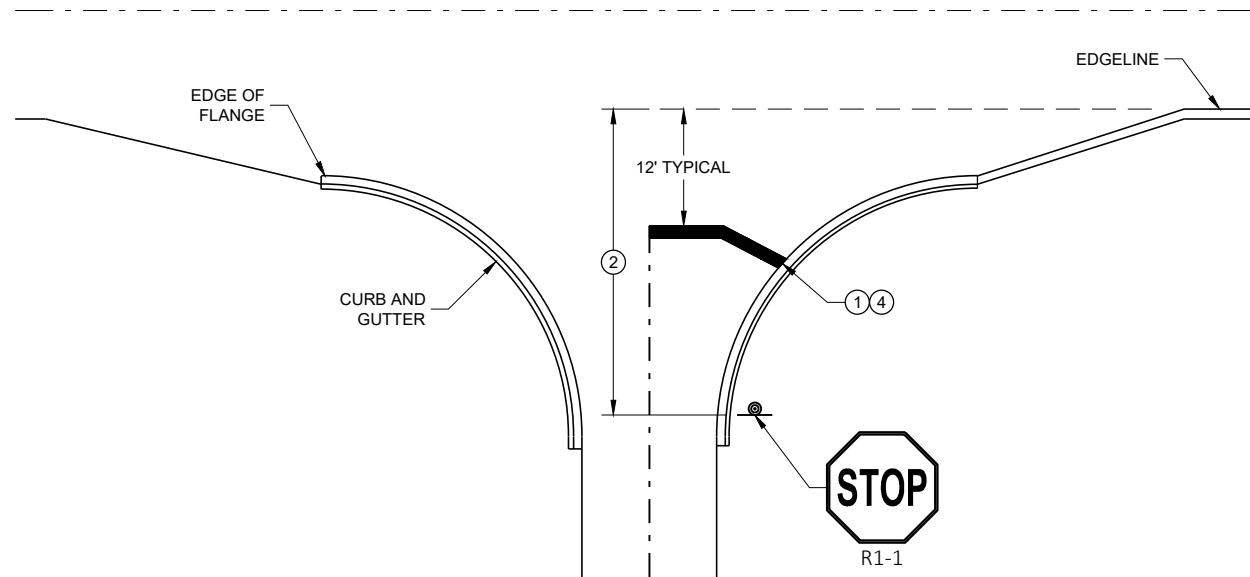
PAVEMENT MARKINGS
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

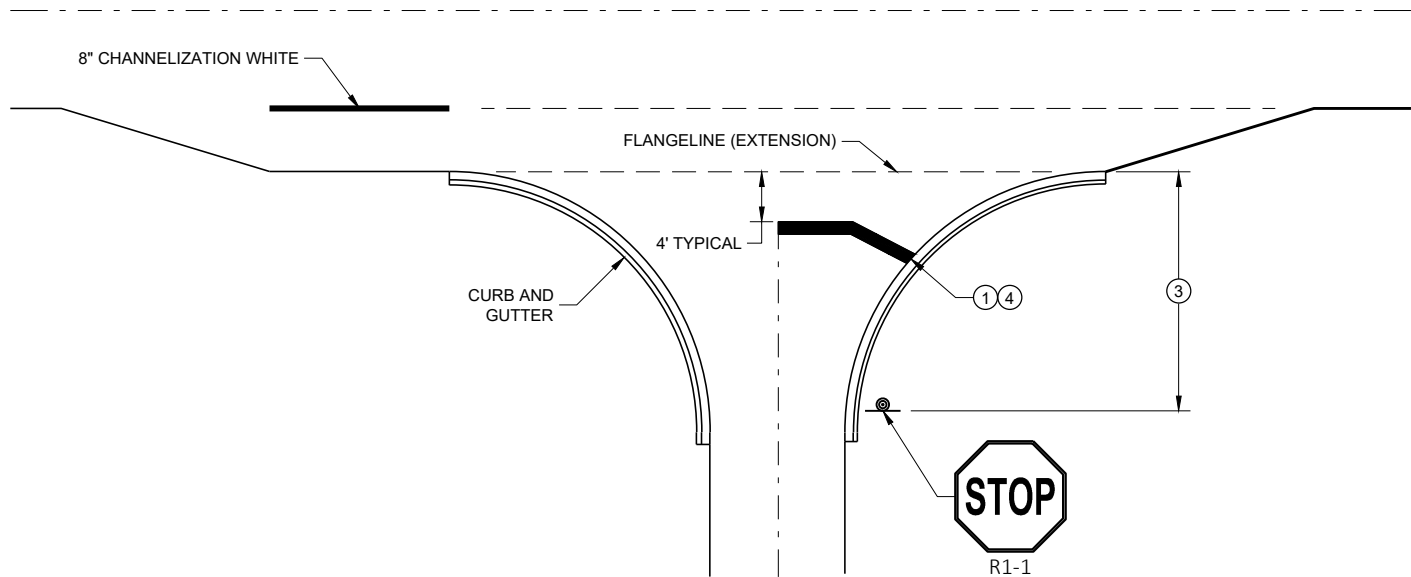
APPROVED
7/2018
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING
ENGINEER

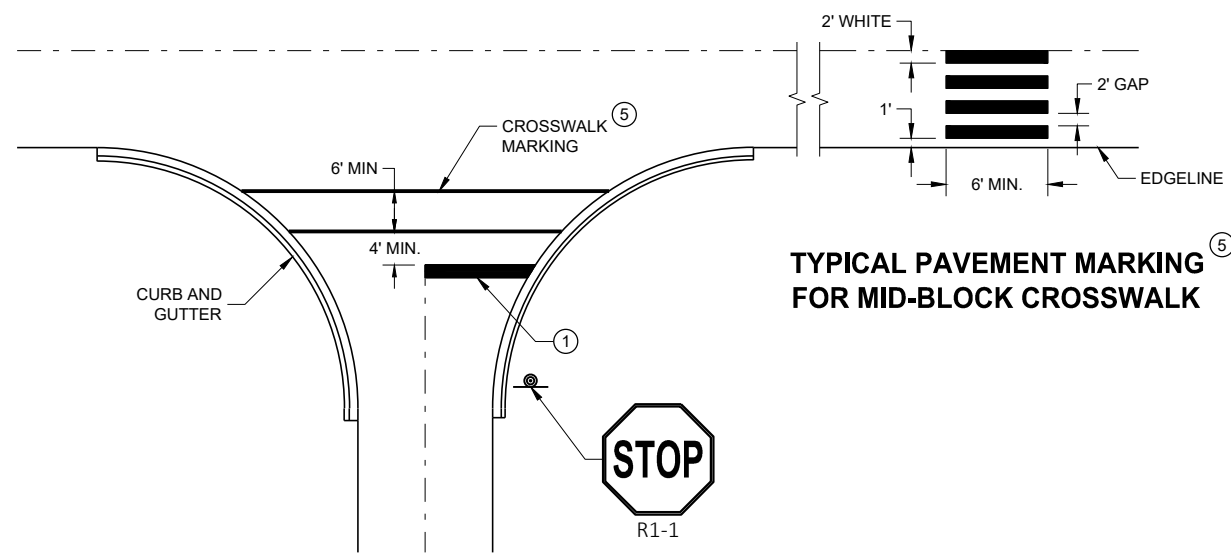
FHWA



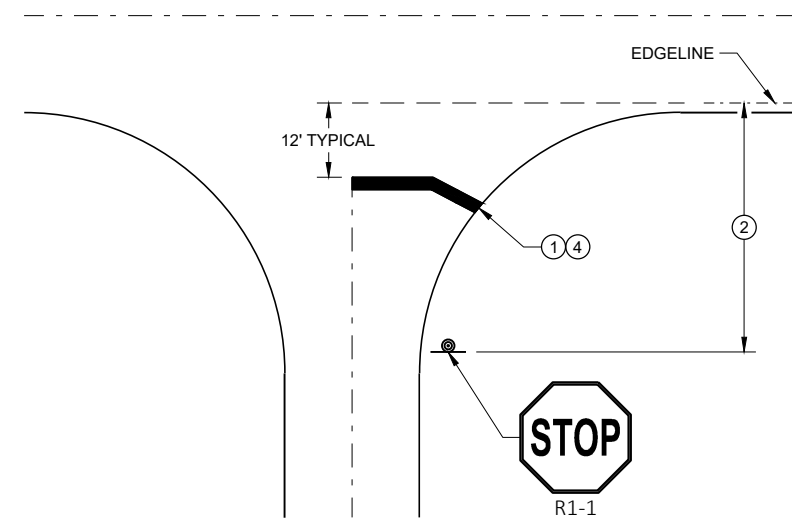
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR
SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

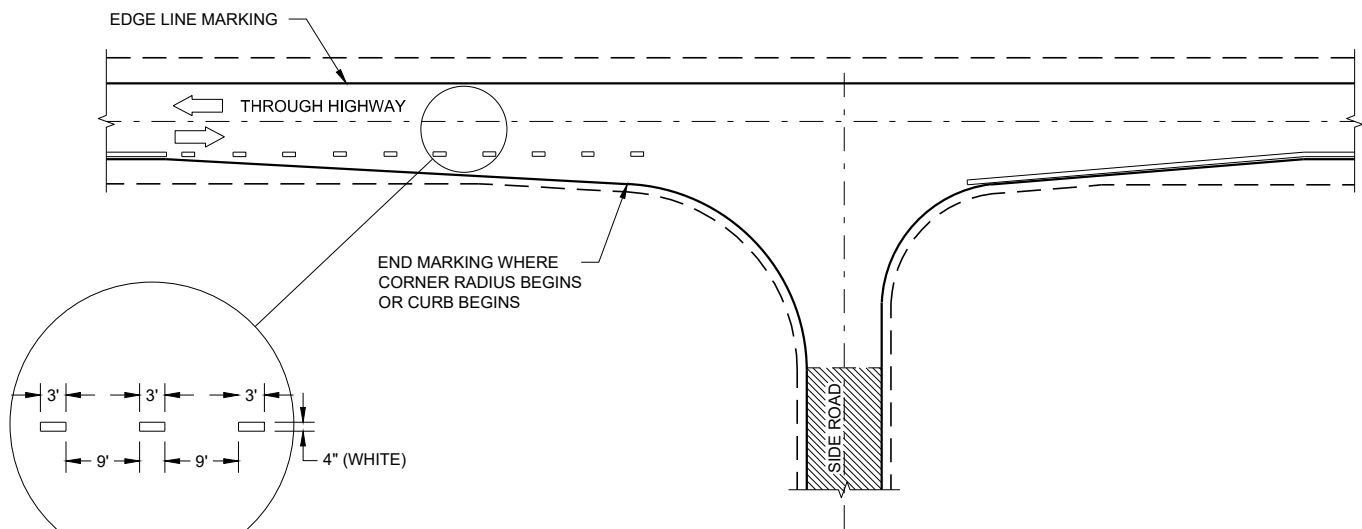
STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE 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 EDGE LINE.
- 3 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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.

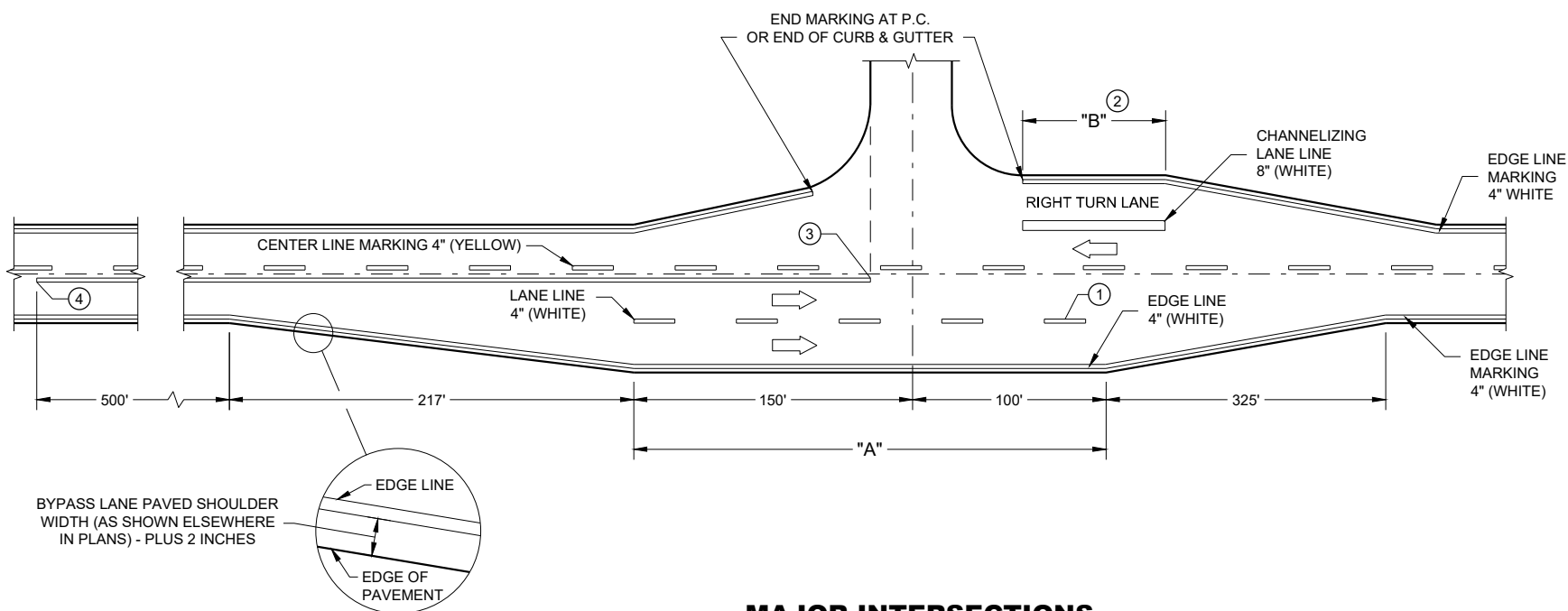
STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
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APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER
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MINOR INTERSECTION



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

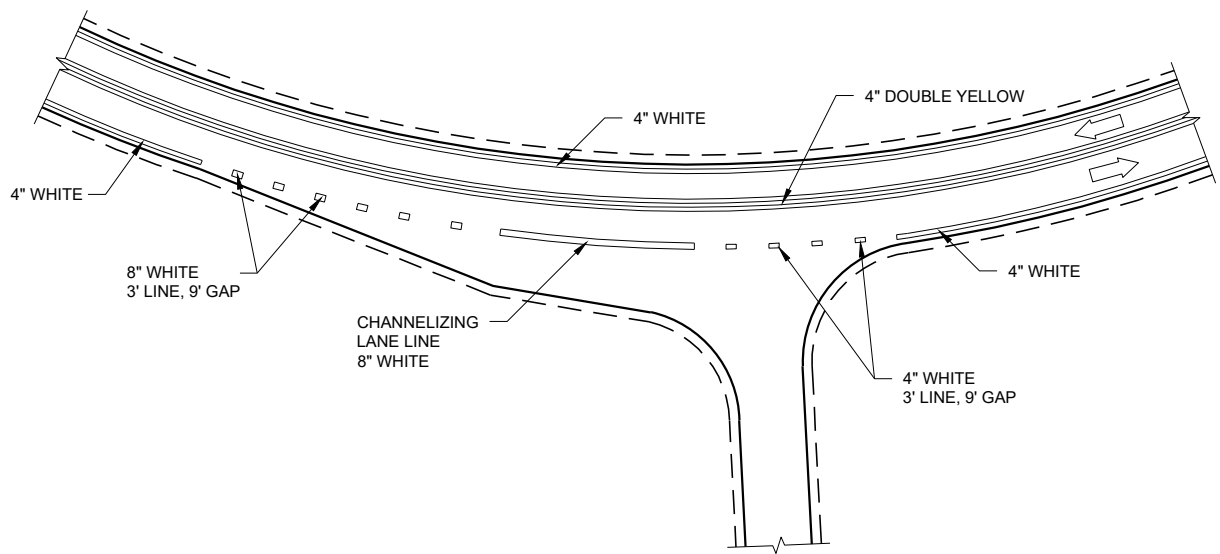
GENERAL NOTES

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

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

LEGEND

➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

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

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

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

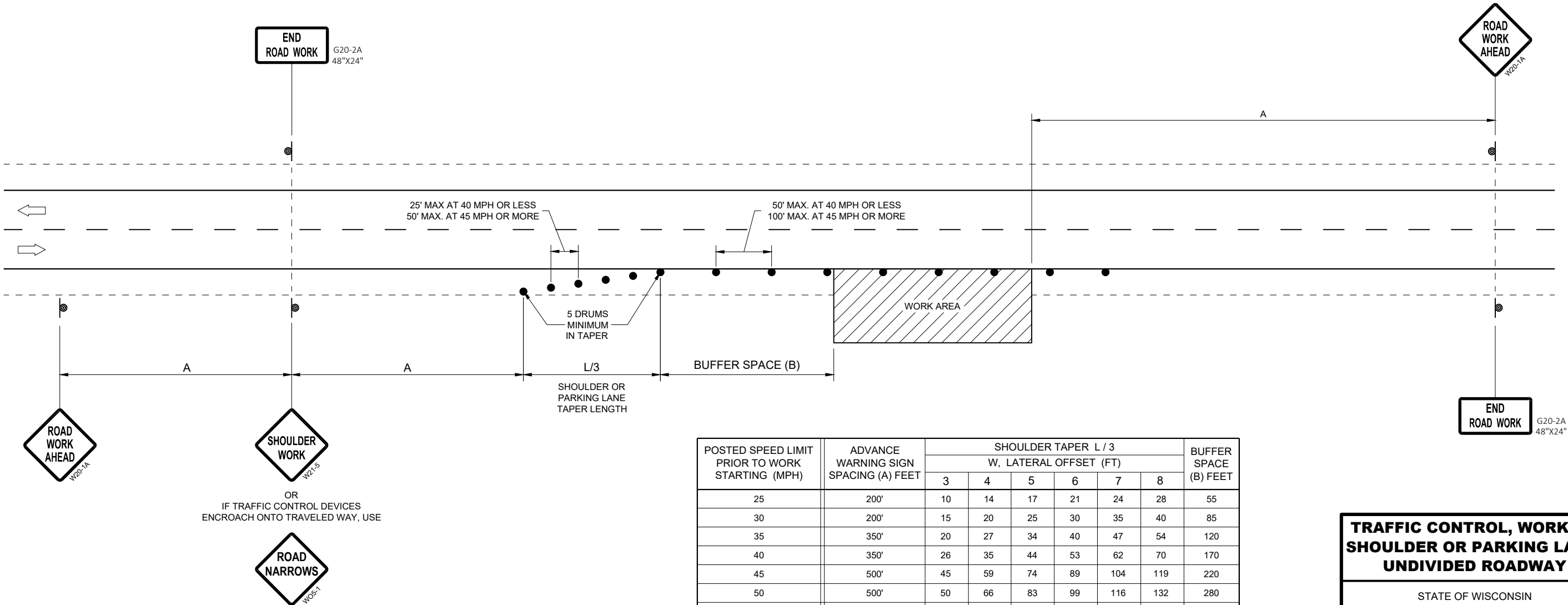
W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

6

6

SDD 15D28 - 04

SDD 15D28 - 04

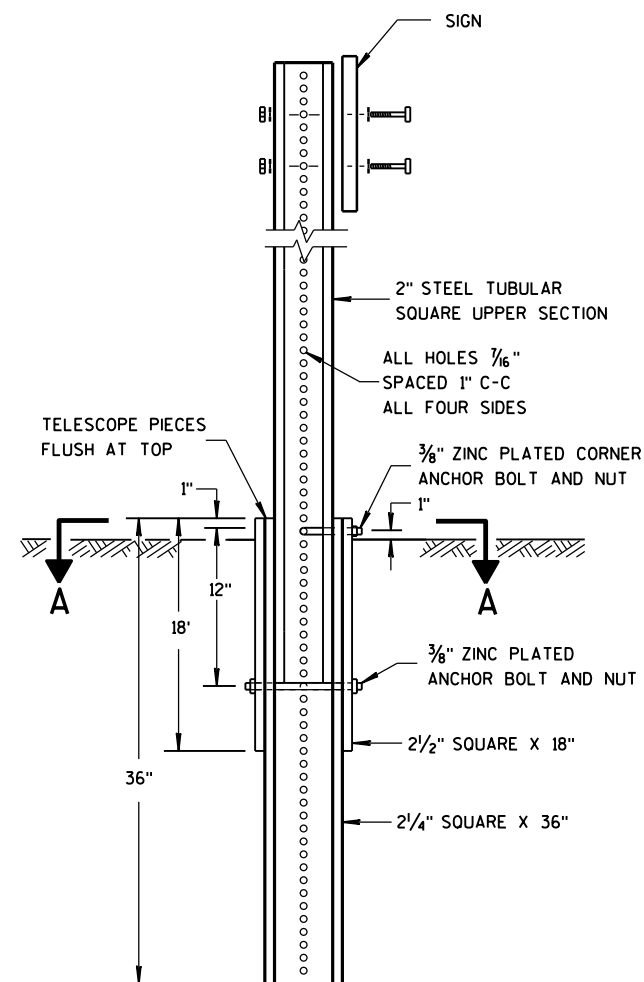


POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 DATE /S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER
FHWA

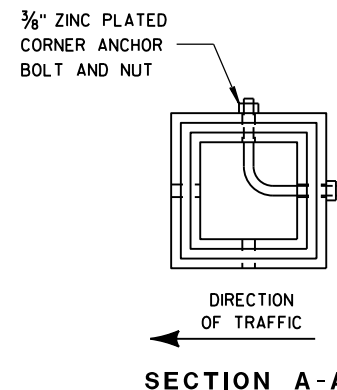


DETAIL OF TUBULAR
STEEL SIGN POST

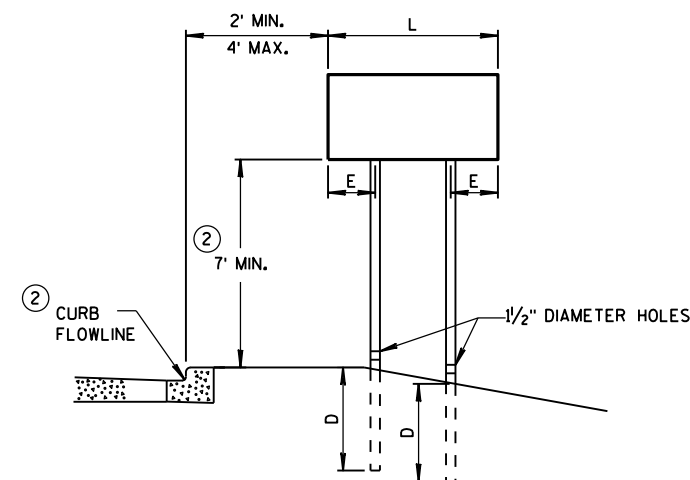
TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



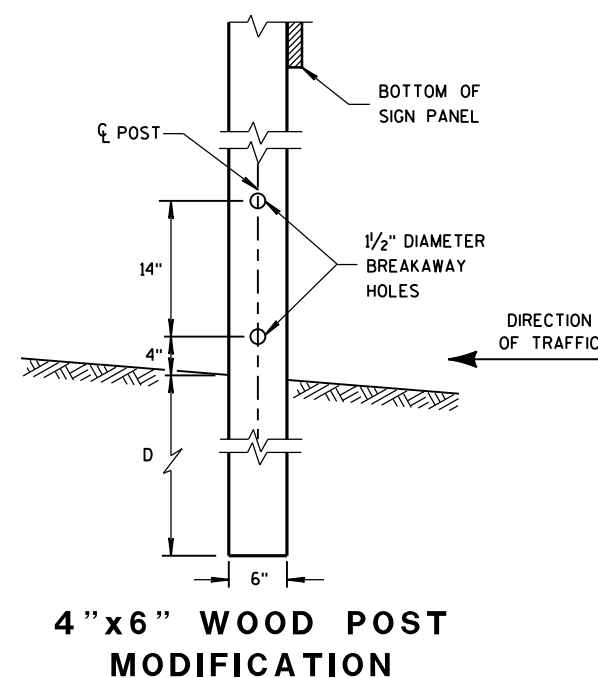
SECTION A-A



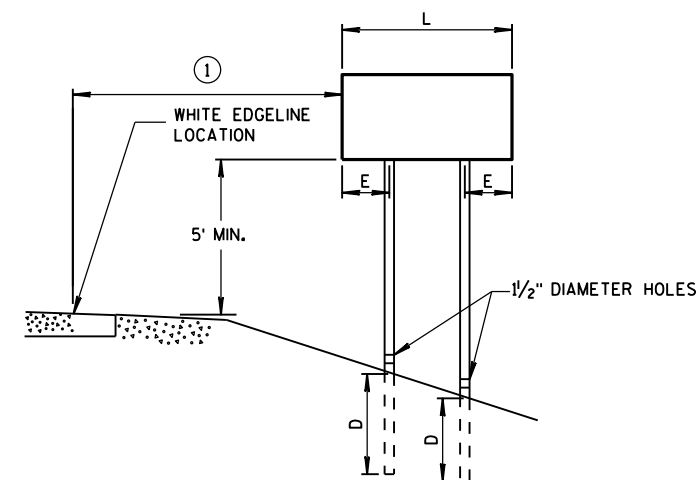
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH	
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

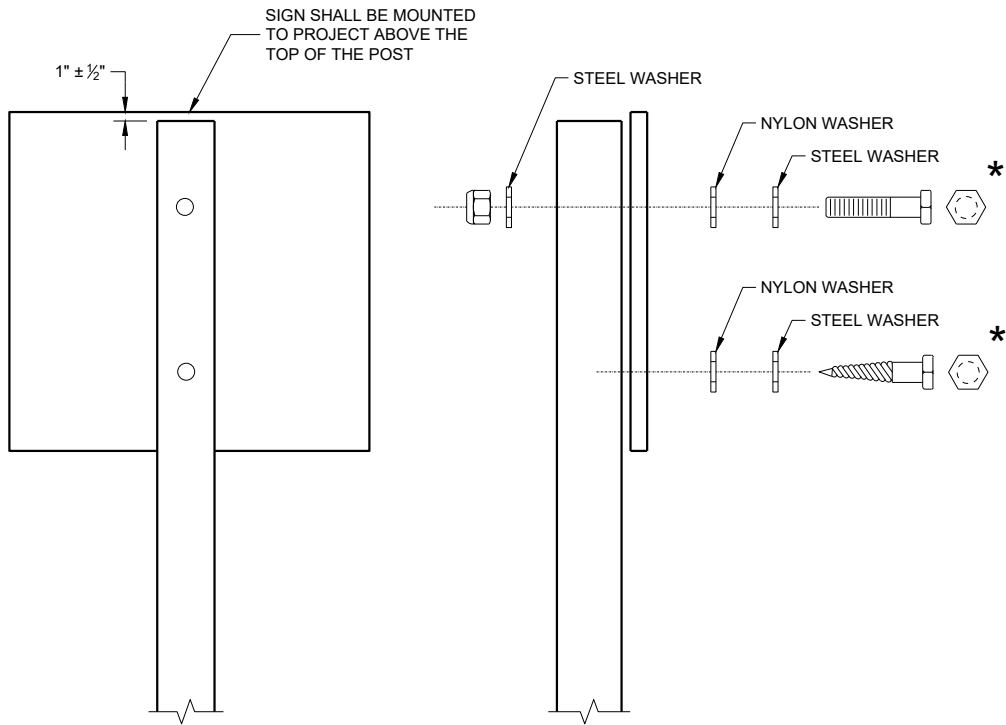
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS
SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM
DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM
DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH
SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED
COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POST (4" x 6")
LAG SCREWS - 3/8" x 3"
MACHINE BOLTS - 5/16" x 6 1/2" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - 3/8" x 3 1/4" LENGTH W/NUTS
RIVETS - 3/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 1/4" O.D. x 3/8" I.D. x 1/16" STEEL
1 1/4" O.D. x 3/8" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER
THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS
TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR SHIFTING RIGHT LANE - REVERSE FOR SHIFTING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

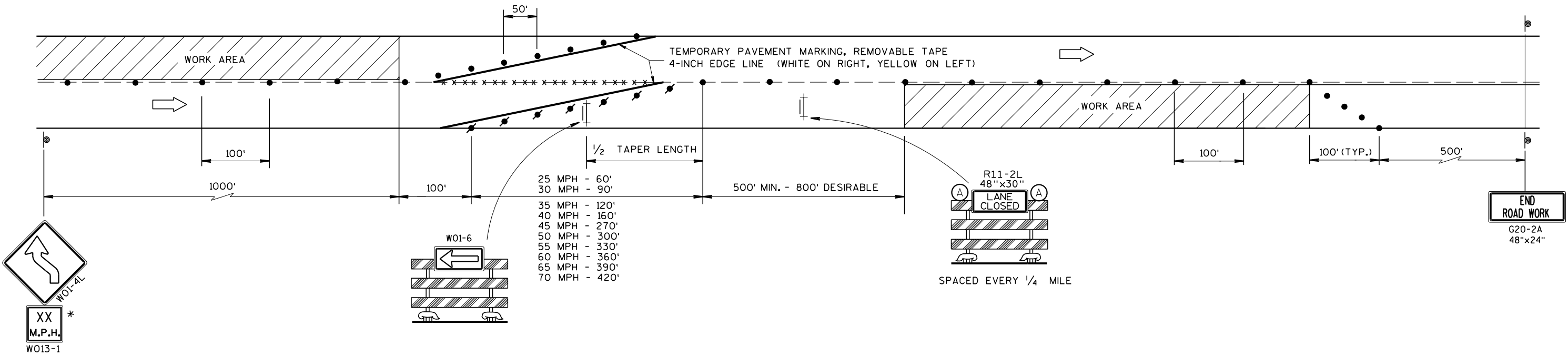
FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.



* USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED

LANE SHIFT MULTI-LANE DIVIDED OR ONE WAY ROAD

TRAFFIC CONTROL, LANE SHIFT, MULTI-LANE DIVIDED OR ONE WAY ROAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

GENERAL NOTES

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

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

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

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

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

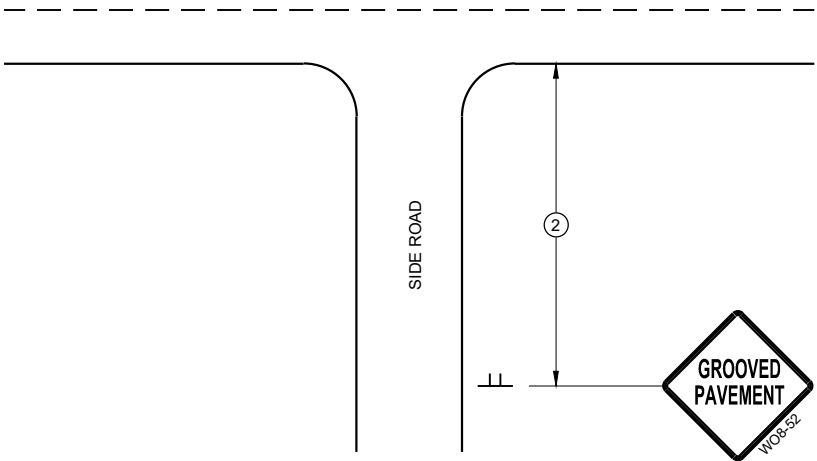
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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

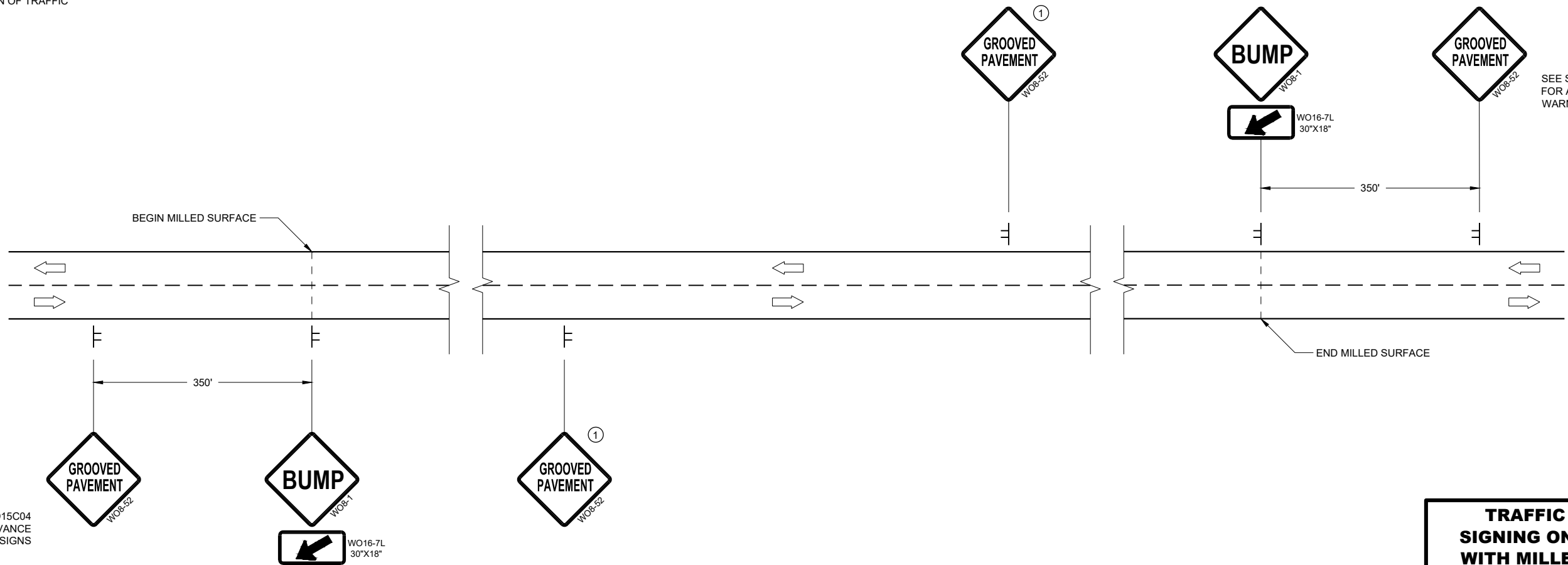
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

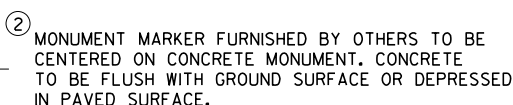
DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,
SIGNING ON ROADWAYS
WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

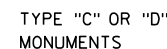
FHWA



PRECAST



(INCLUDES MARKER)



(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)



(APPROXIMATE WEIGHT 95 LBS)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

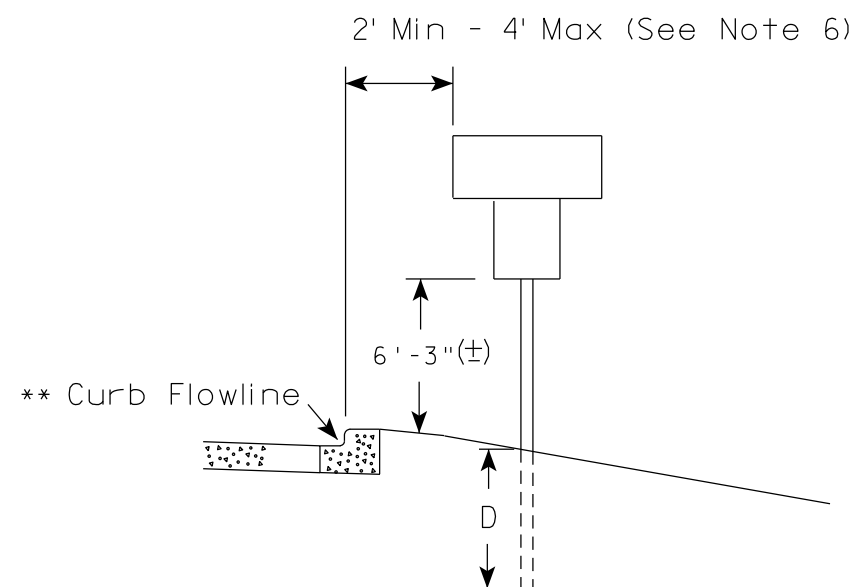
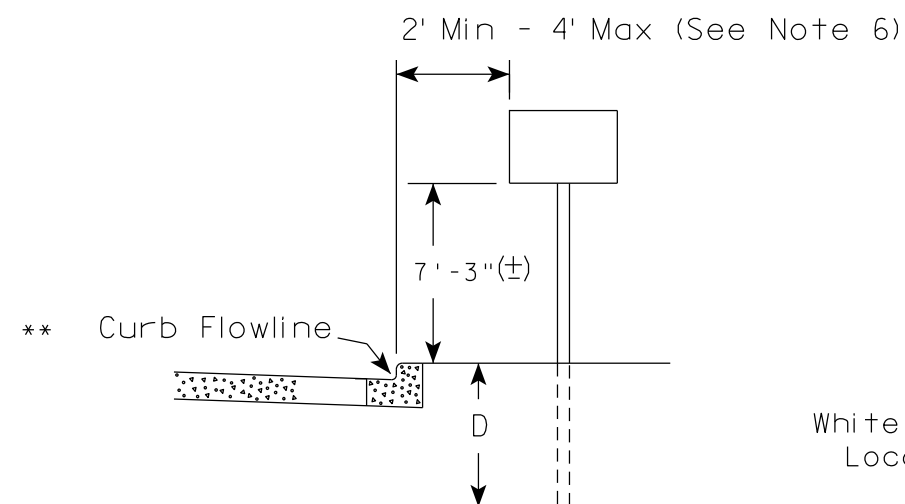
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER

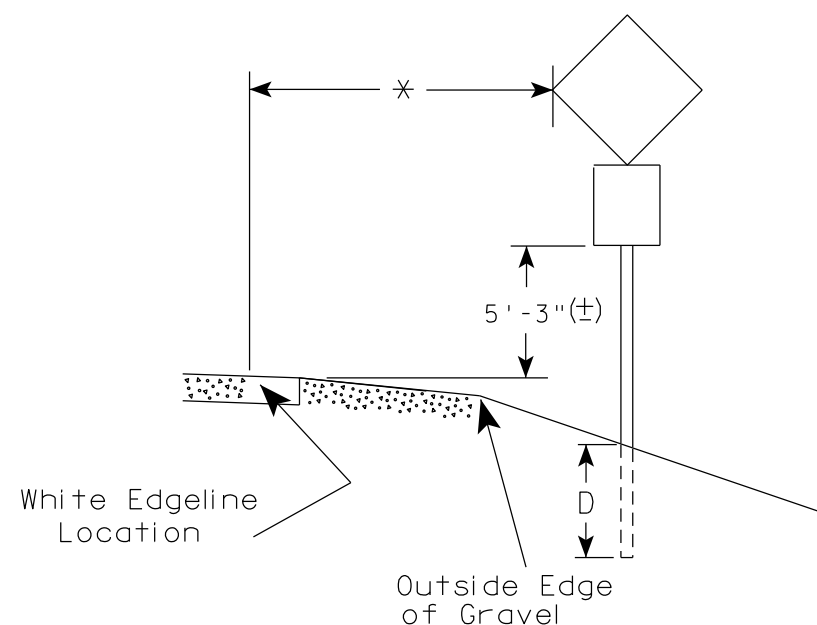
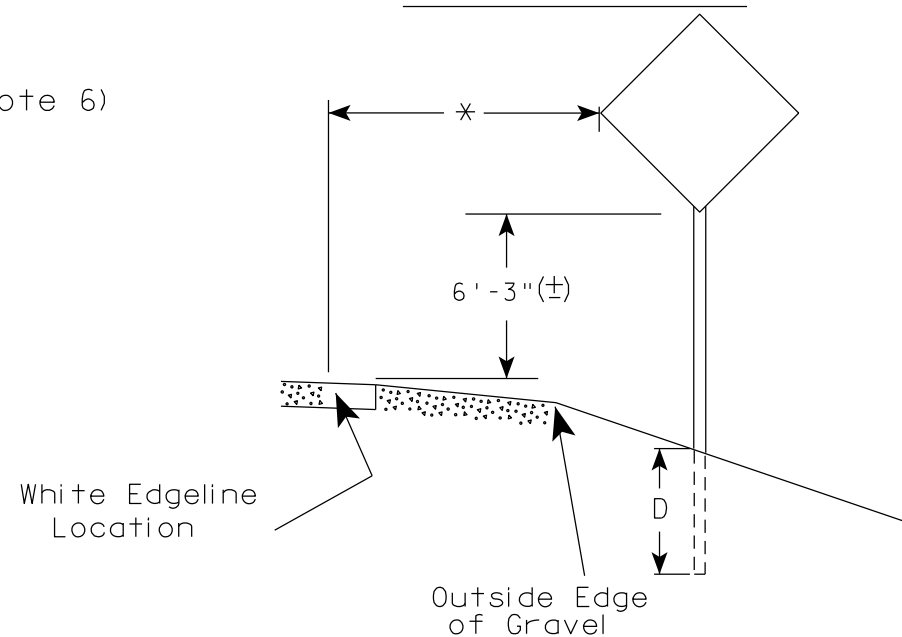
- ① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.
- ② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.

URBAN AREA



✱✱ 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.

RURAL AREA (See Note 2)



✱ 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.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 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" (±).
- For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- The (±) tolerance for mounting height is 3 inches.
- Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the 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

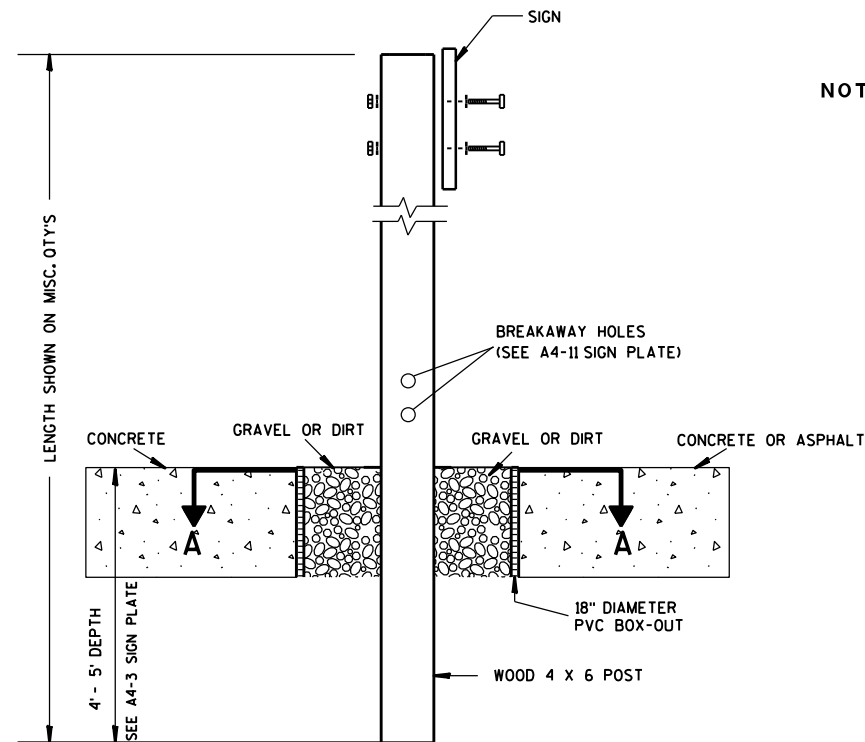
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

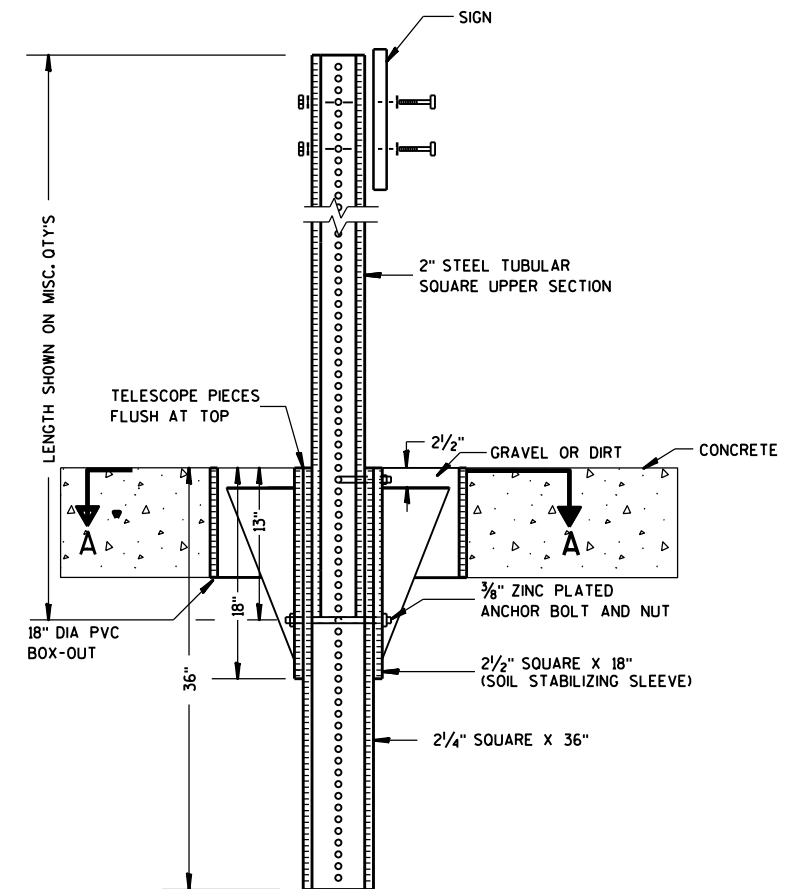
E



ELEVATION VIEW

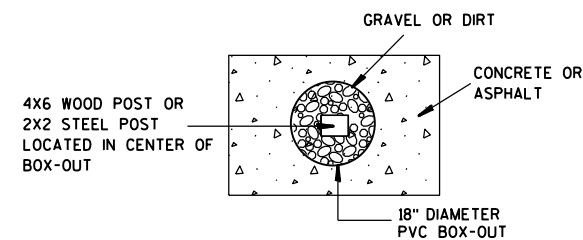
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

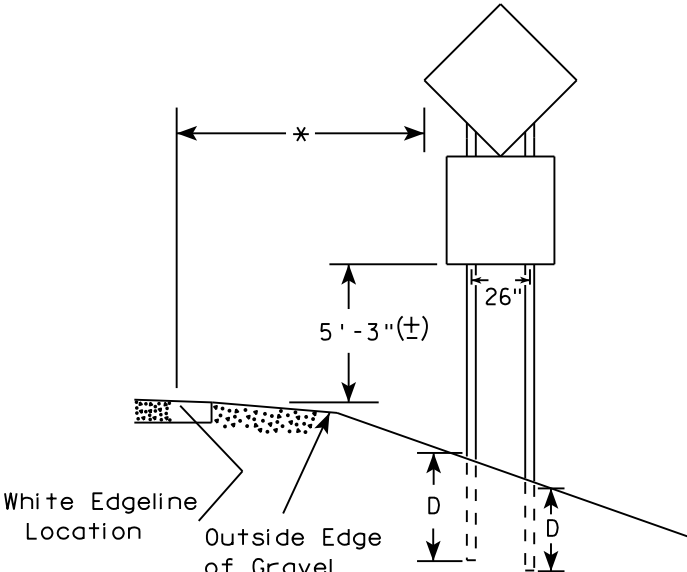
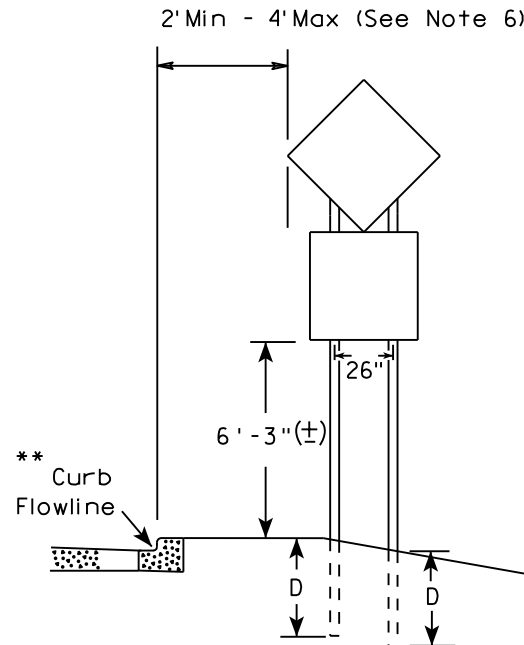
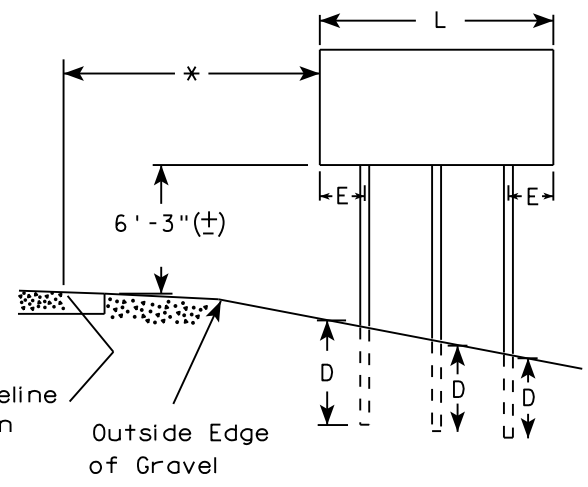
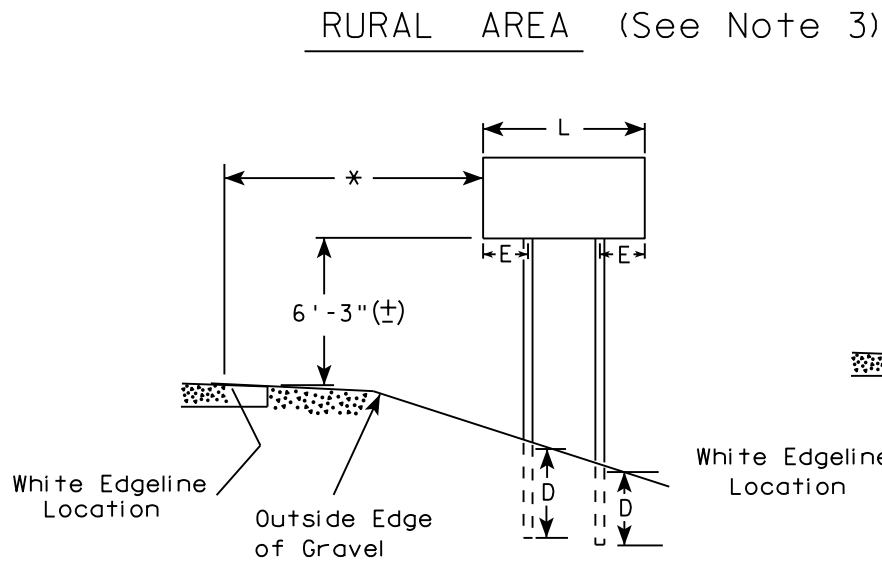
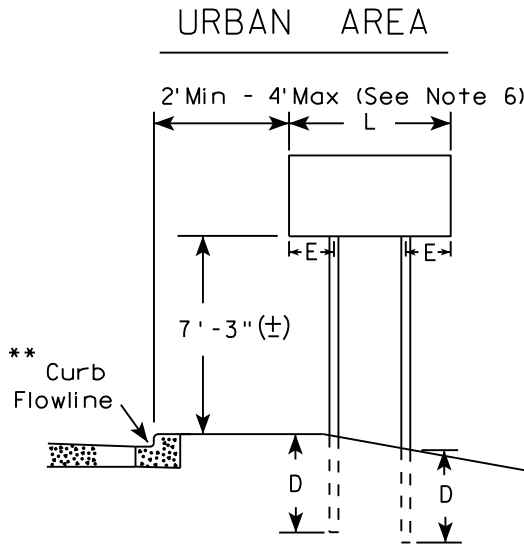
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

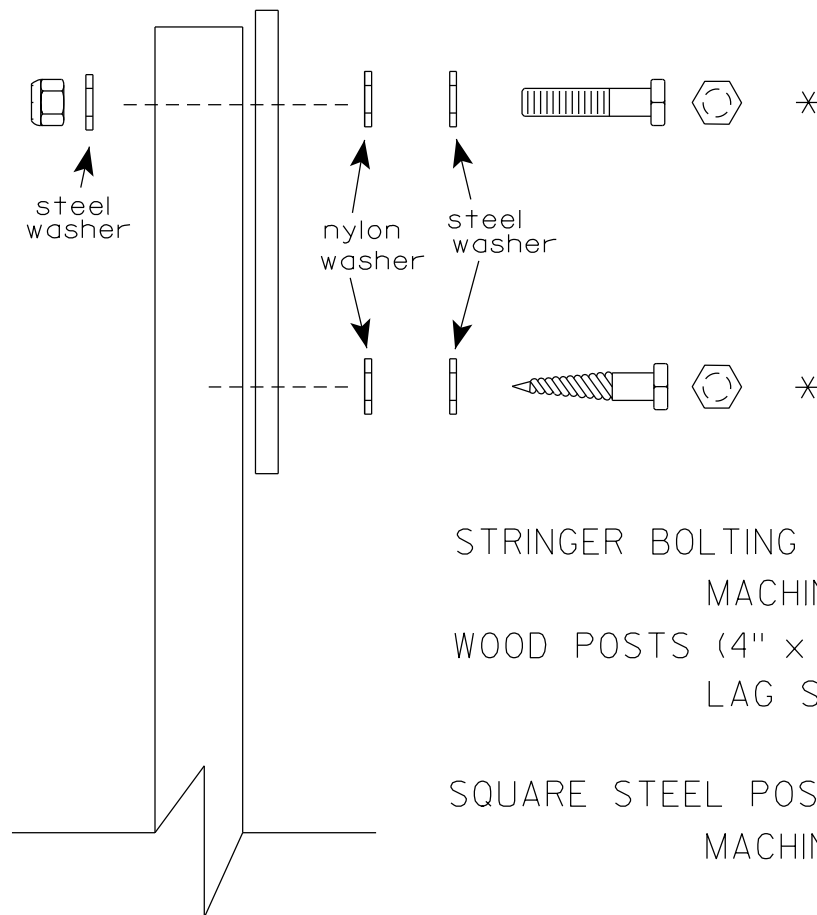
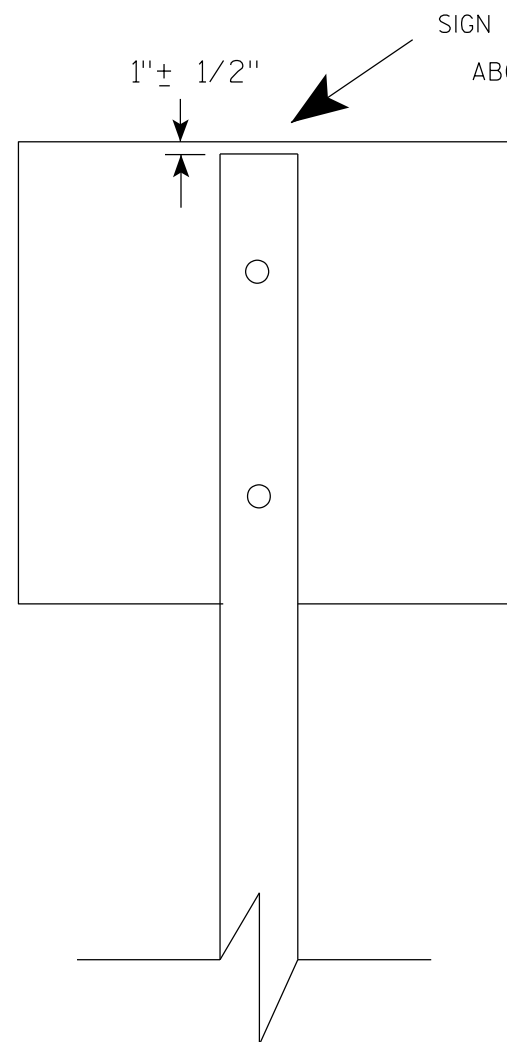
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 8/21/17	PLATE NO. A4-4.15

- 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" (±).

- * 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.



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

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

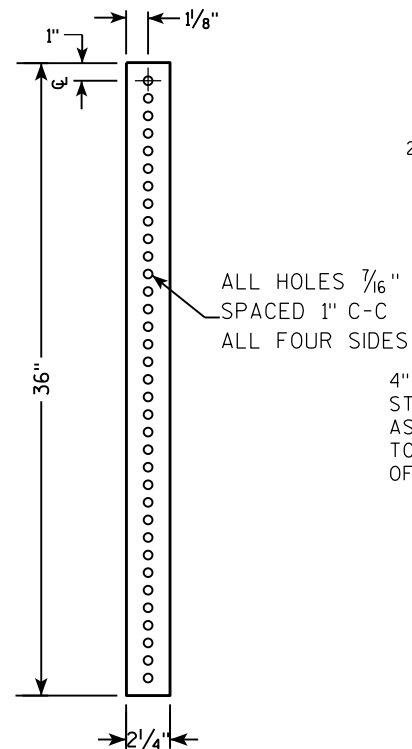
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " 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

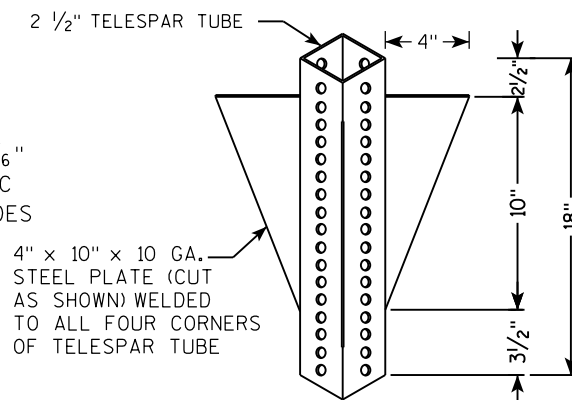
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



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



LENGTH SHOWN ON MISC. QTY'S

18" DIA SCHEDULE 40 PVC BOX-OUT

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

2 1/2" GRAVEL OR DIRT

13"

18"

36"

2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

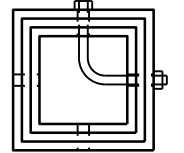
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

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

PROJECT NO:

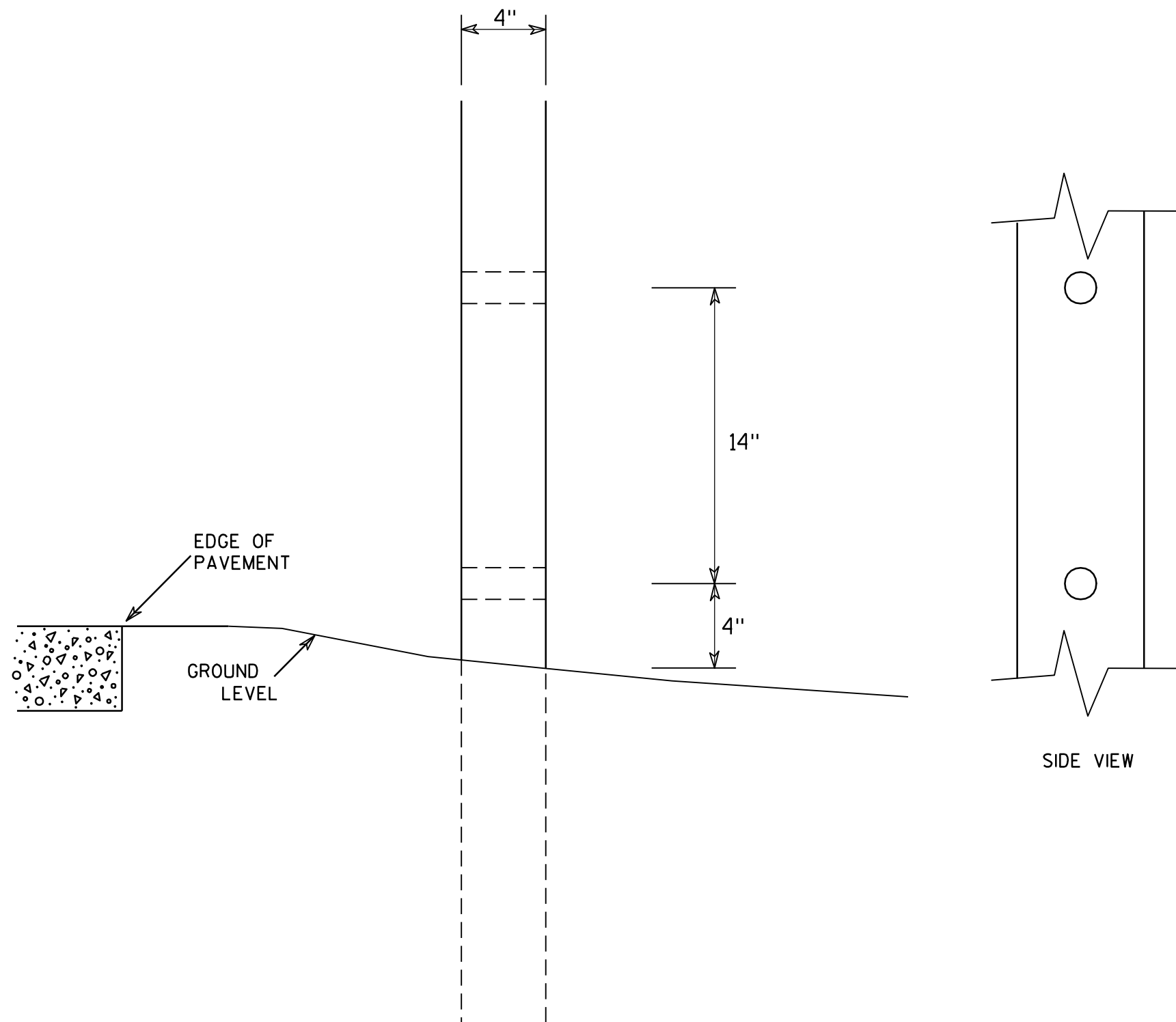
HWY:

COUNTY:

SHEET NO:

11

7

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

**4 X 6 WOOD POST
MODIFICATIONS**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

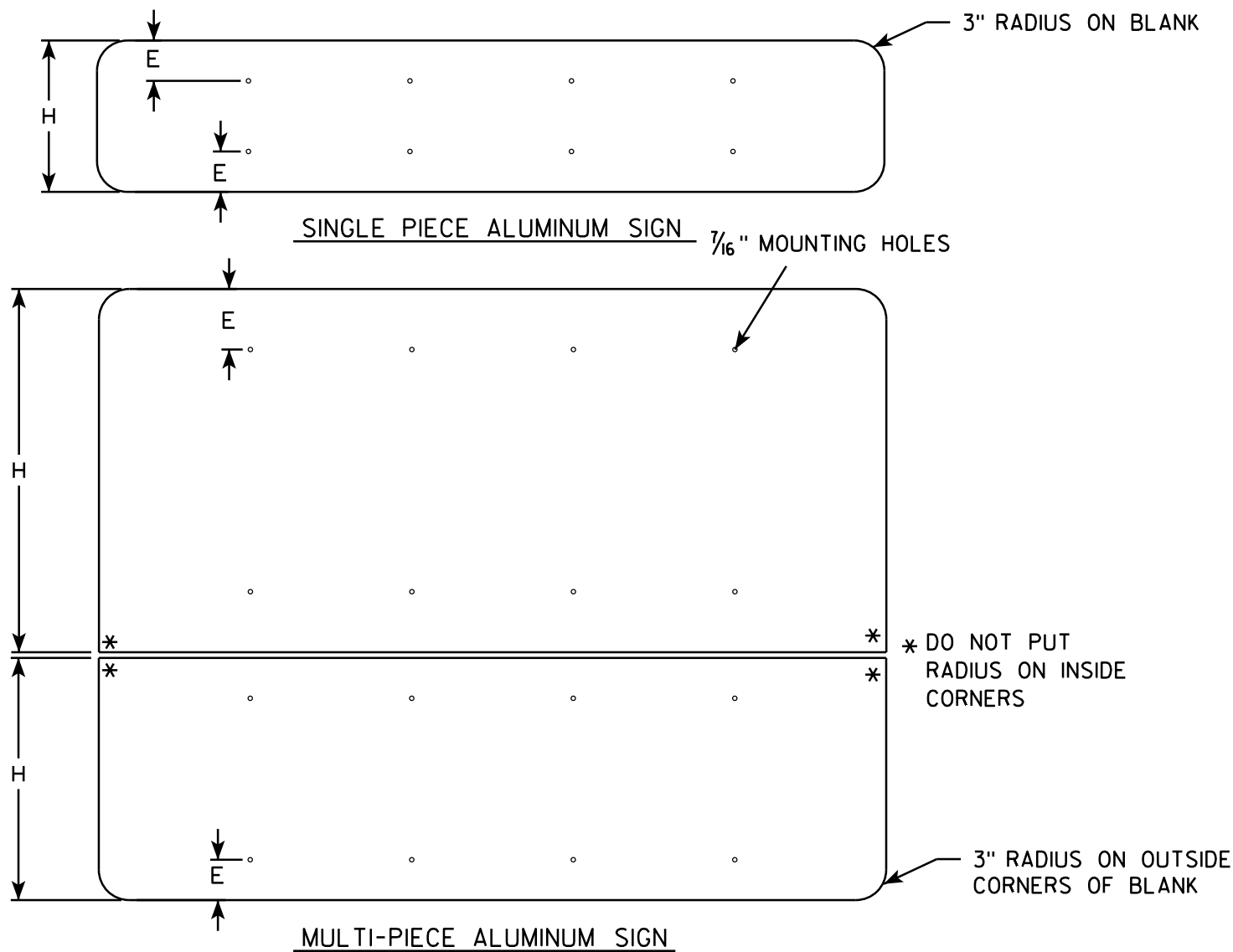
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

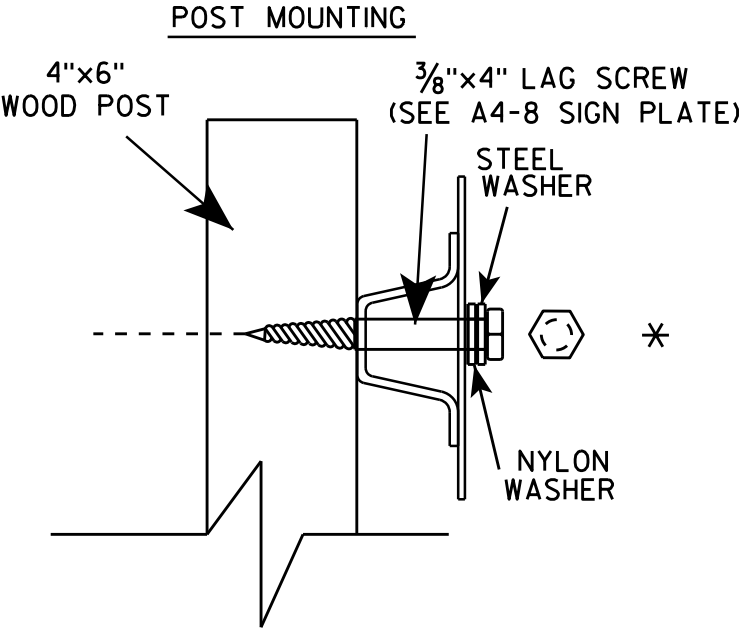
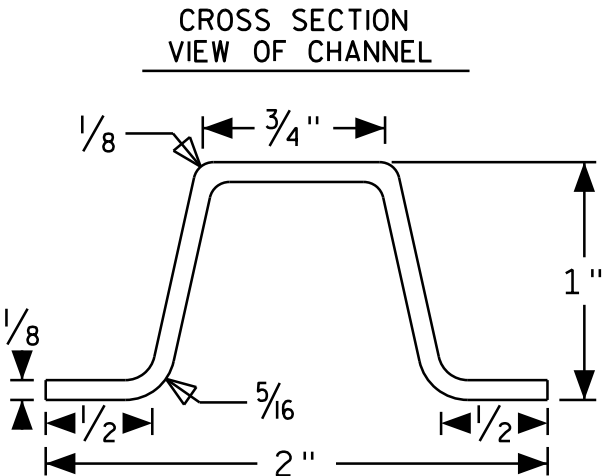
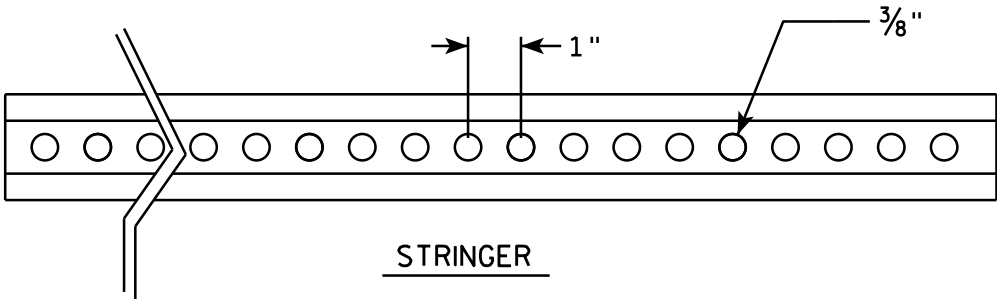
E



GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 1/2"	33 1/2"	50 1/2"	67 1/2"
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 1/2"	38 1/2"	57 1/2"	76 1/2"
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 1/2"	43 1/2"	64 1/2"	85 1/2"
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"



SIGN STRINGER
MOUNTING REQUIREMENTS

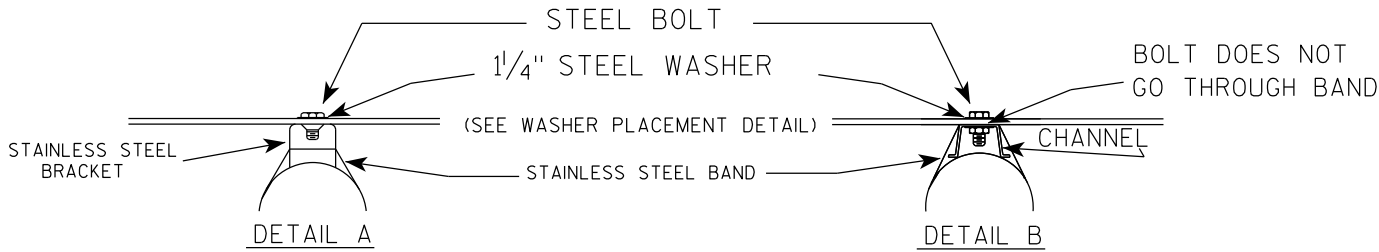
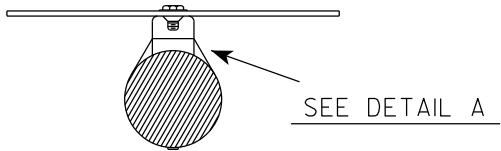
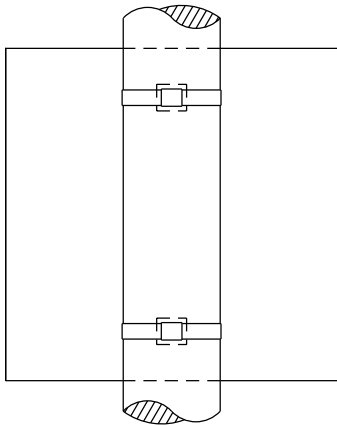
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1

BANDING

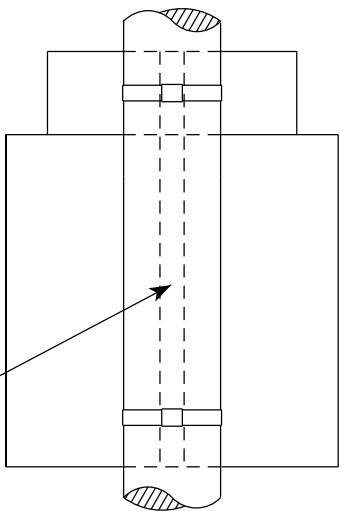
SINGLE SIGN



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

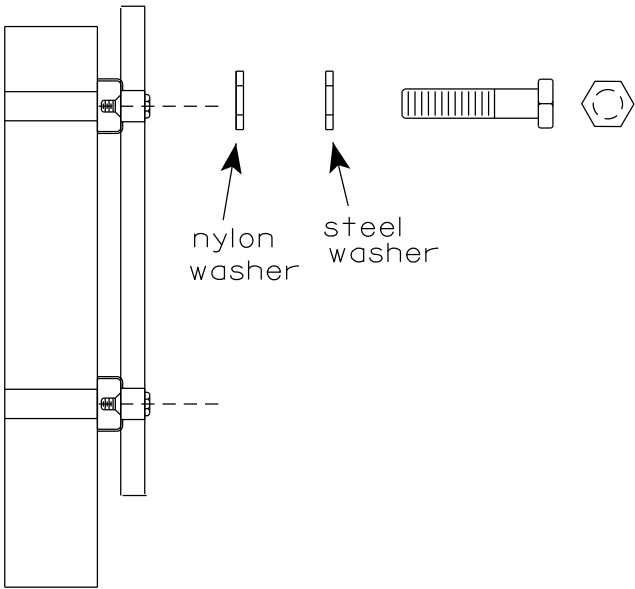
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT



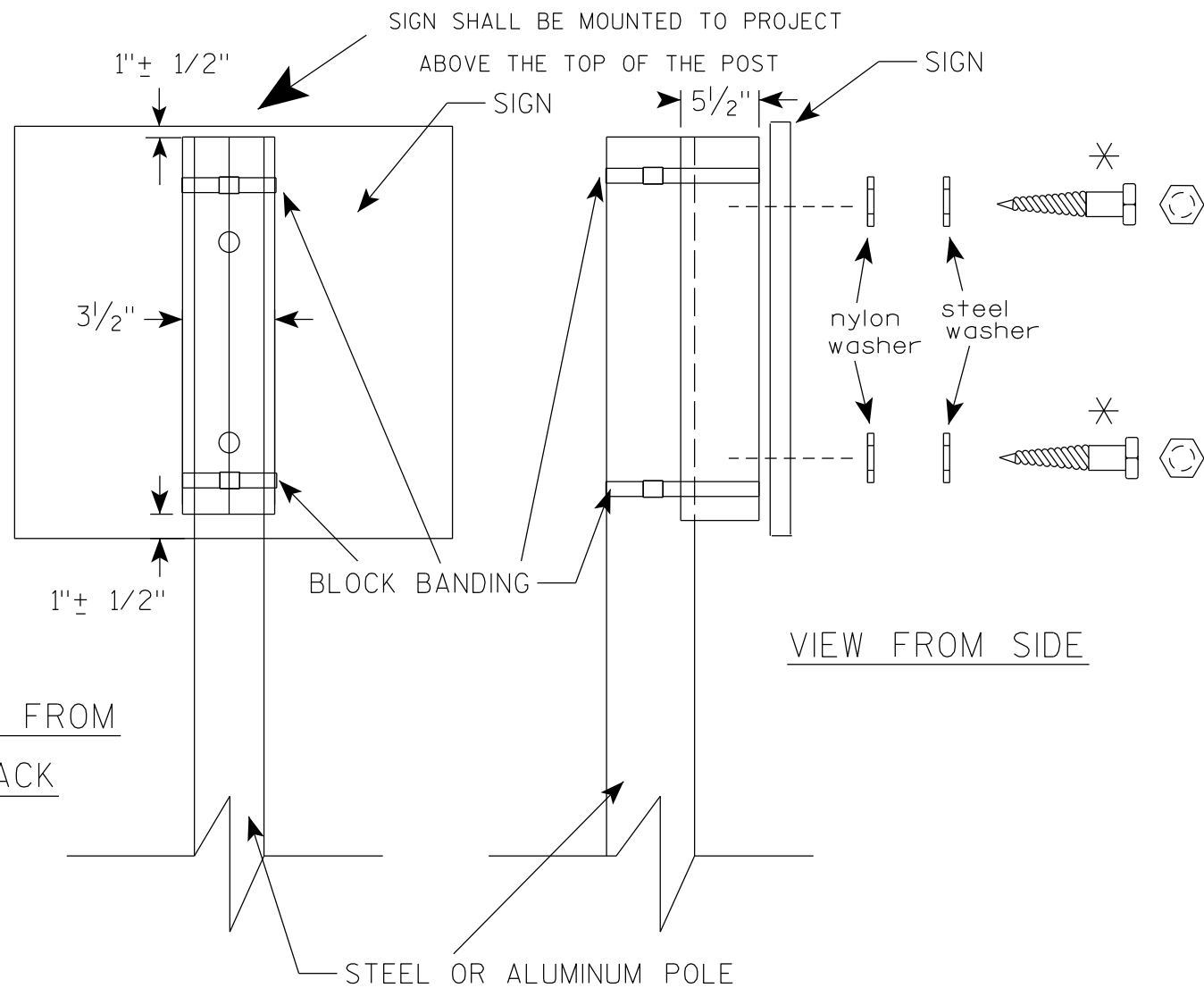
WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

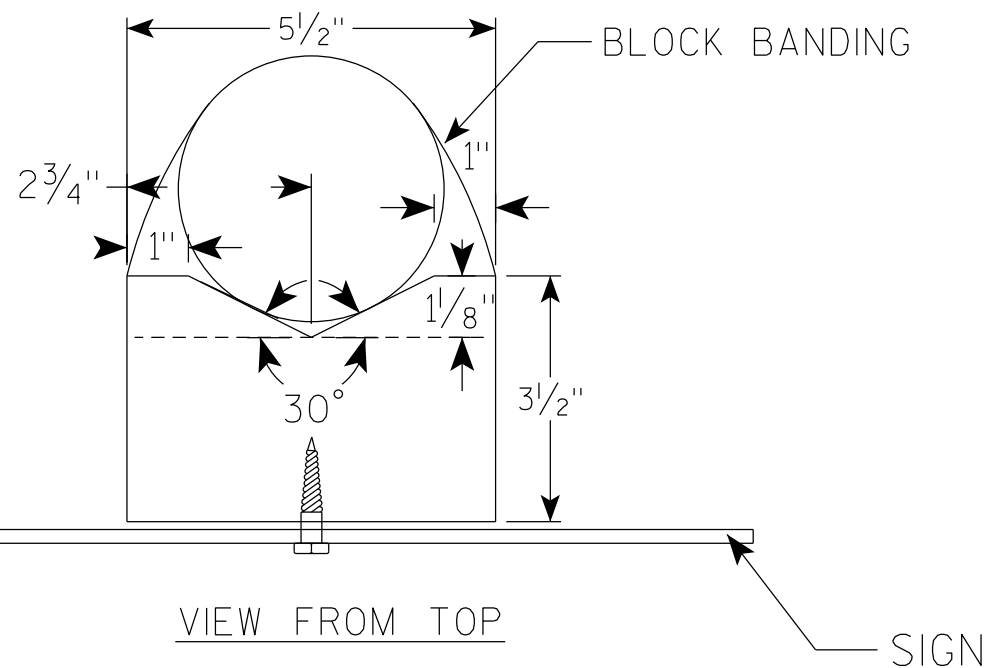
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM
BACK



VIEW FROM SIDE



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, $\frac{3}{4}$ " 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 $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

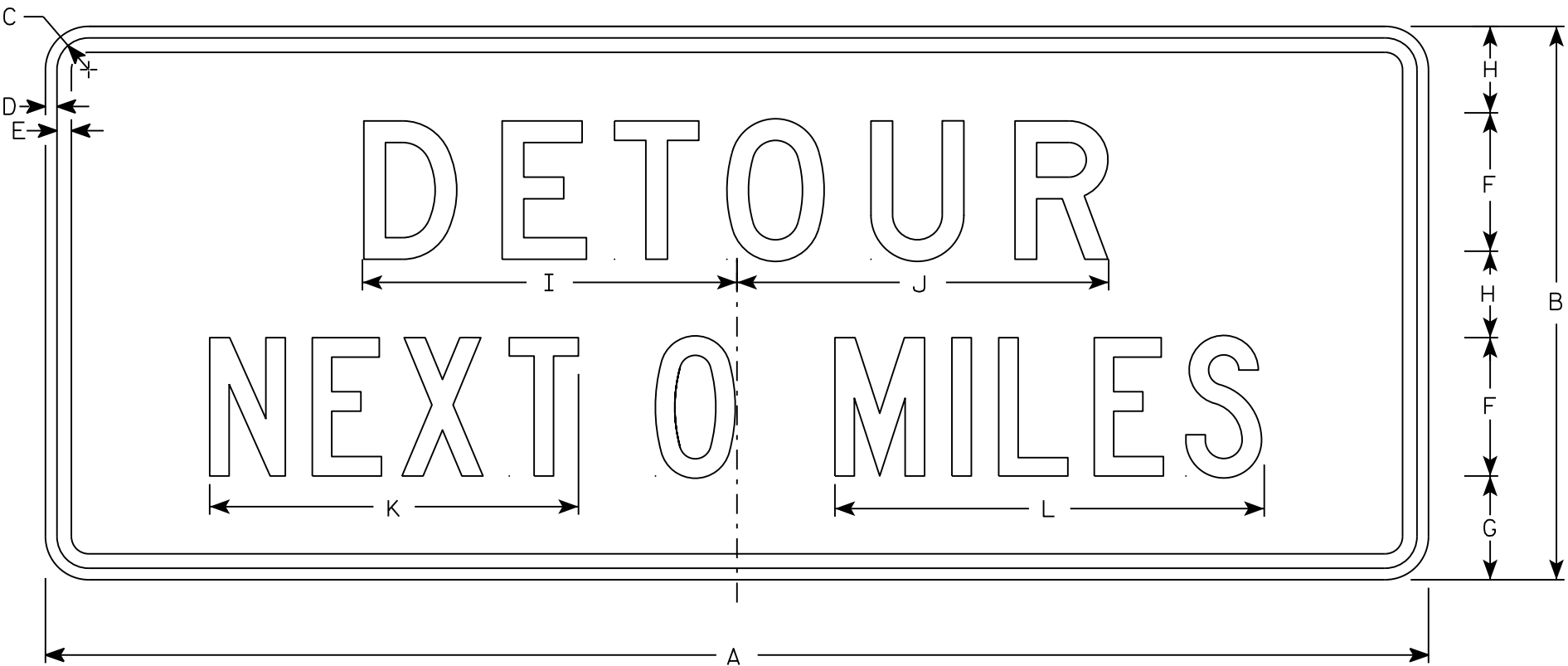
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - Line 1 is D and Line 2 is C
- 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. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-51

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	60	24	1 3⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10
3																											
4	60	24	1 3⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10
5																											

STANDARD SIGN
G20-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-51.2

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - E



G20-61

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																											
3																											
4	120	30	6		2	12	9	21	78 1/4	20 3/4																	25.0
5																											

STANDARD SIGN

G20-61

WISCONSIN DEPT OF TRANSPORTATION

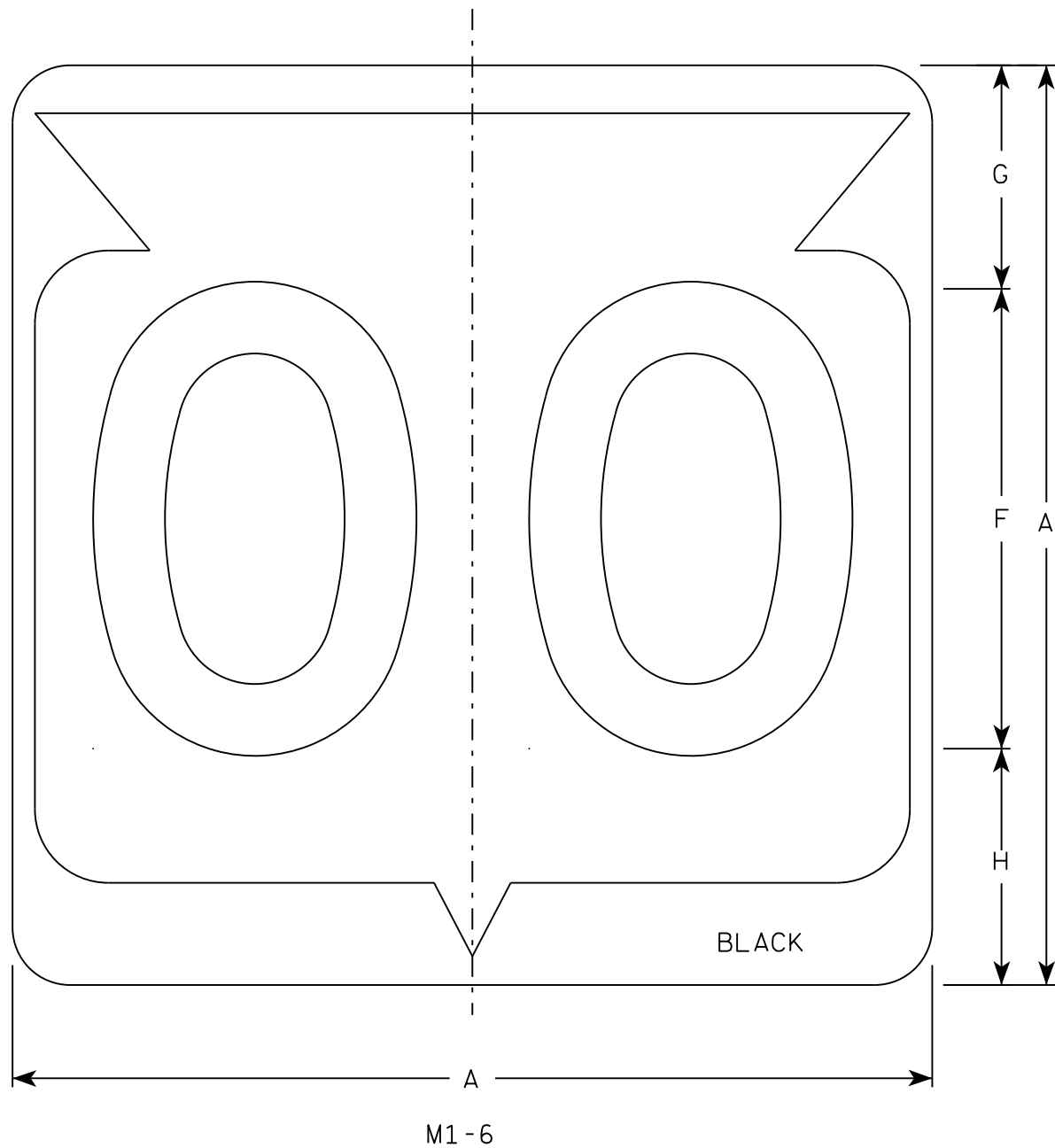
APPROVED

Matthew R. Rauch

for State Traffic Engineer

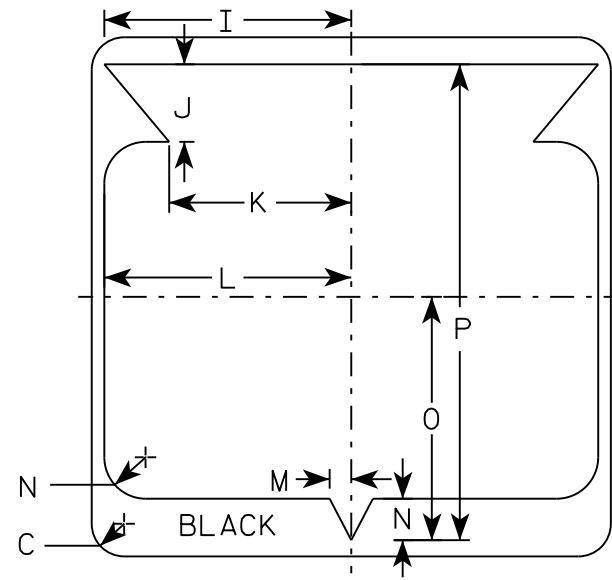
DATE 5/07/15PLATE NO. G20-61.1

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C
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

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			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

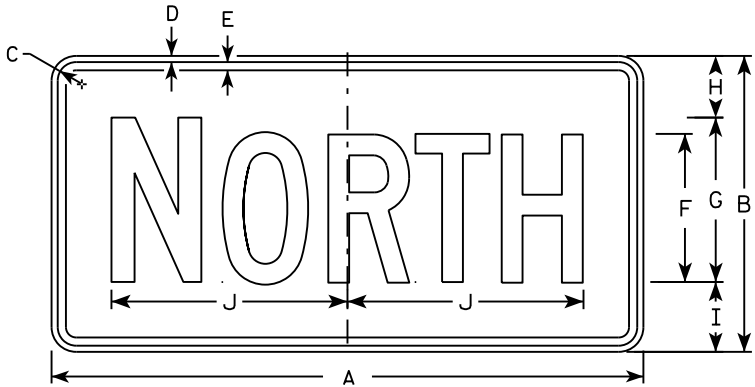
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

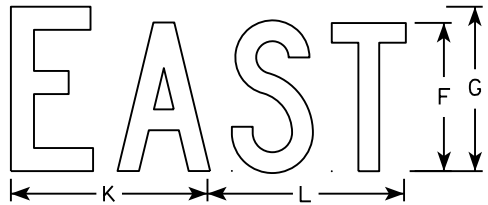
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

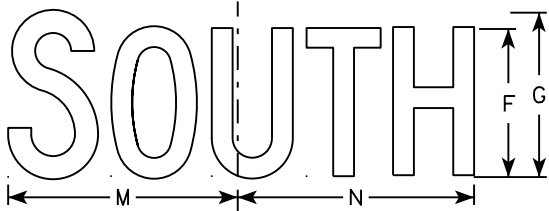
DATE 3/16/18 PLATE NO. M1-6.10



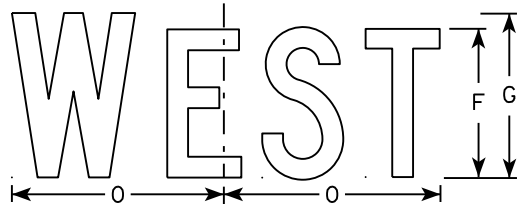
M3-1
MM3-1
MP3-1



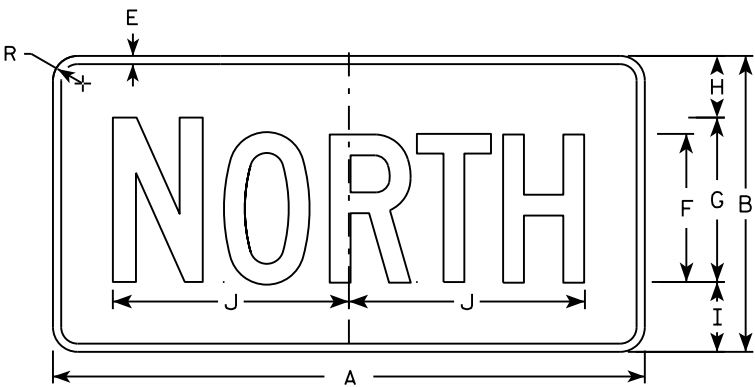
M3-2
MM3-2
MP3-2



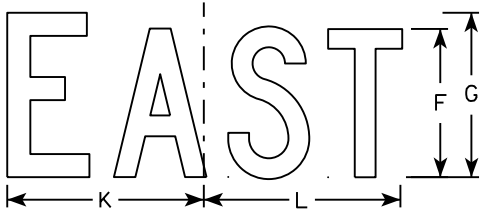
M3-3
MM3-3
MP3-3



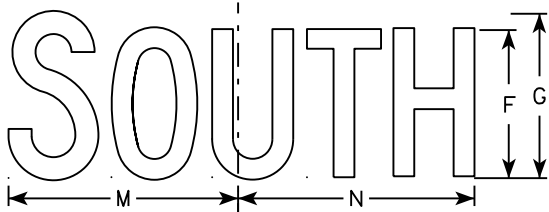
M3-4
MM3-4
MP3-4



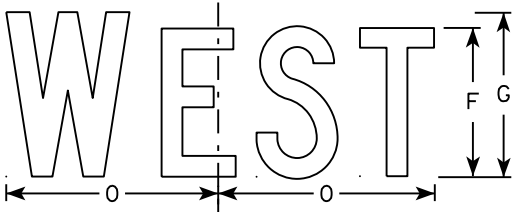
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
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. 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
6. Note the first letter of each direction is larger than the remainder of the message.

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

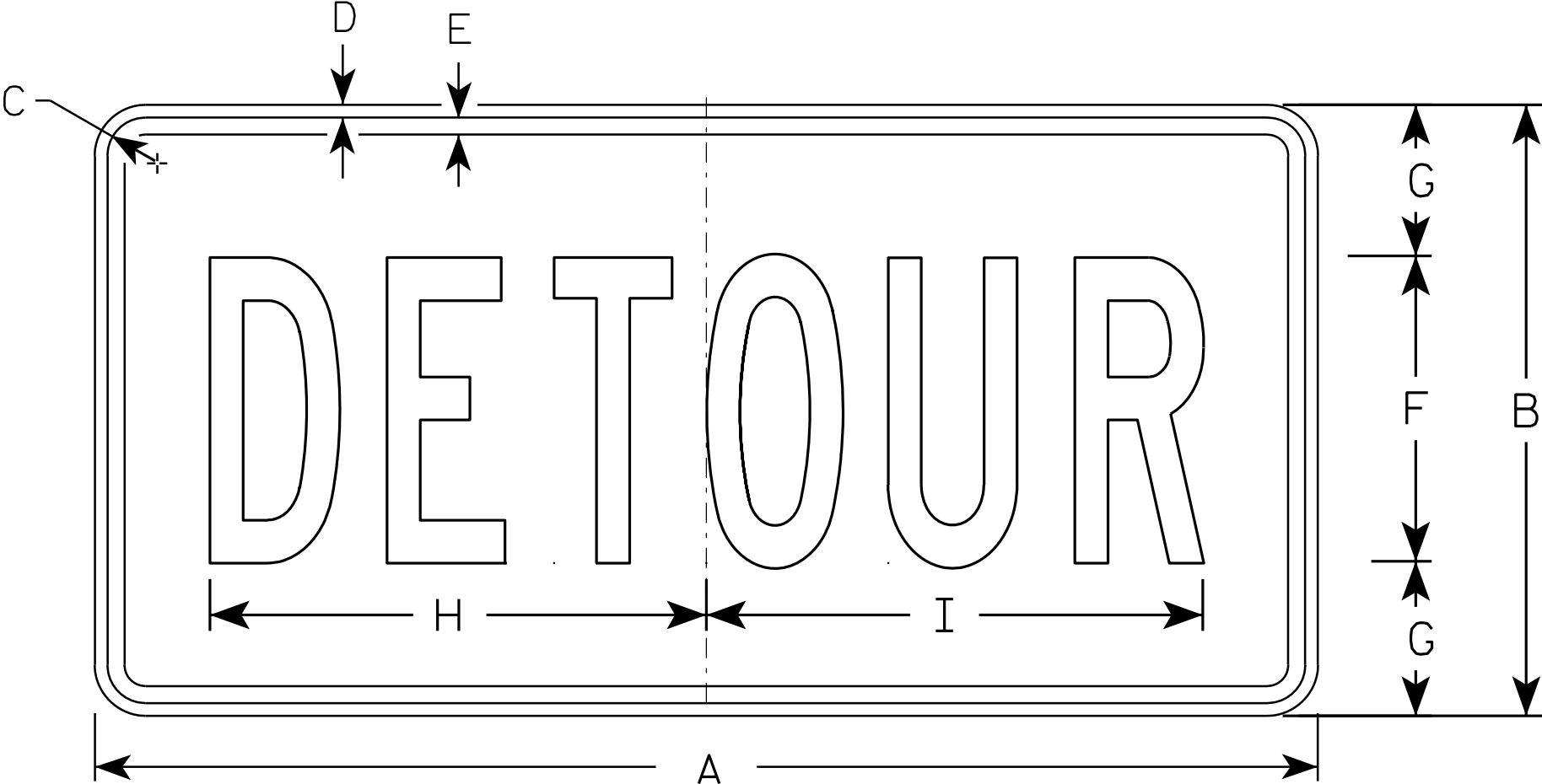
DATE 10/15/15 PLATE NO. M3-1.14

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

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	Areg 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

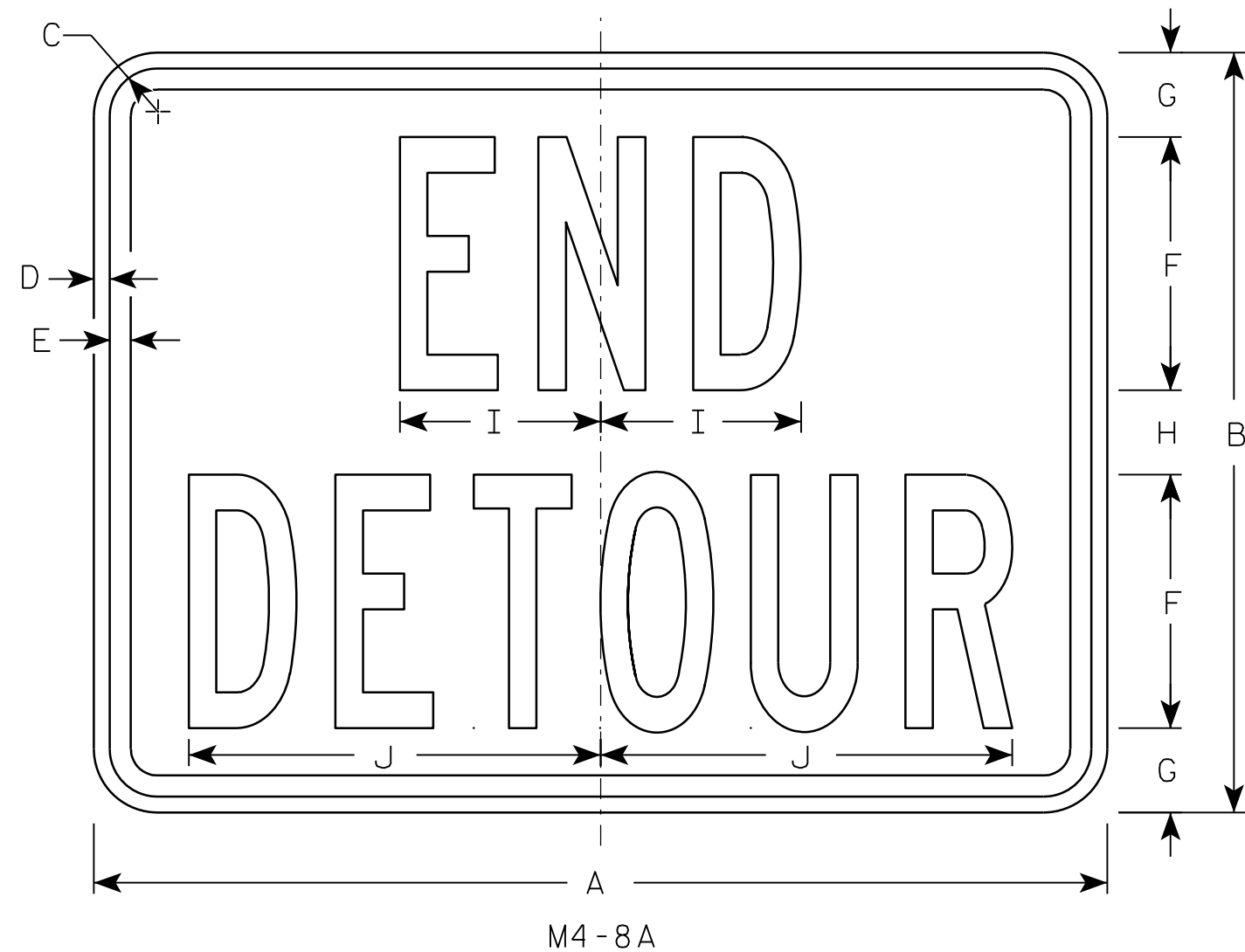
APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 11/10/10

PLATE NO. M4-8.2

7



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

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																											

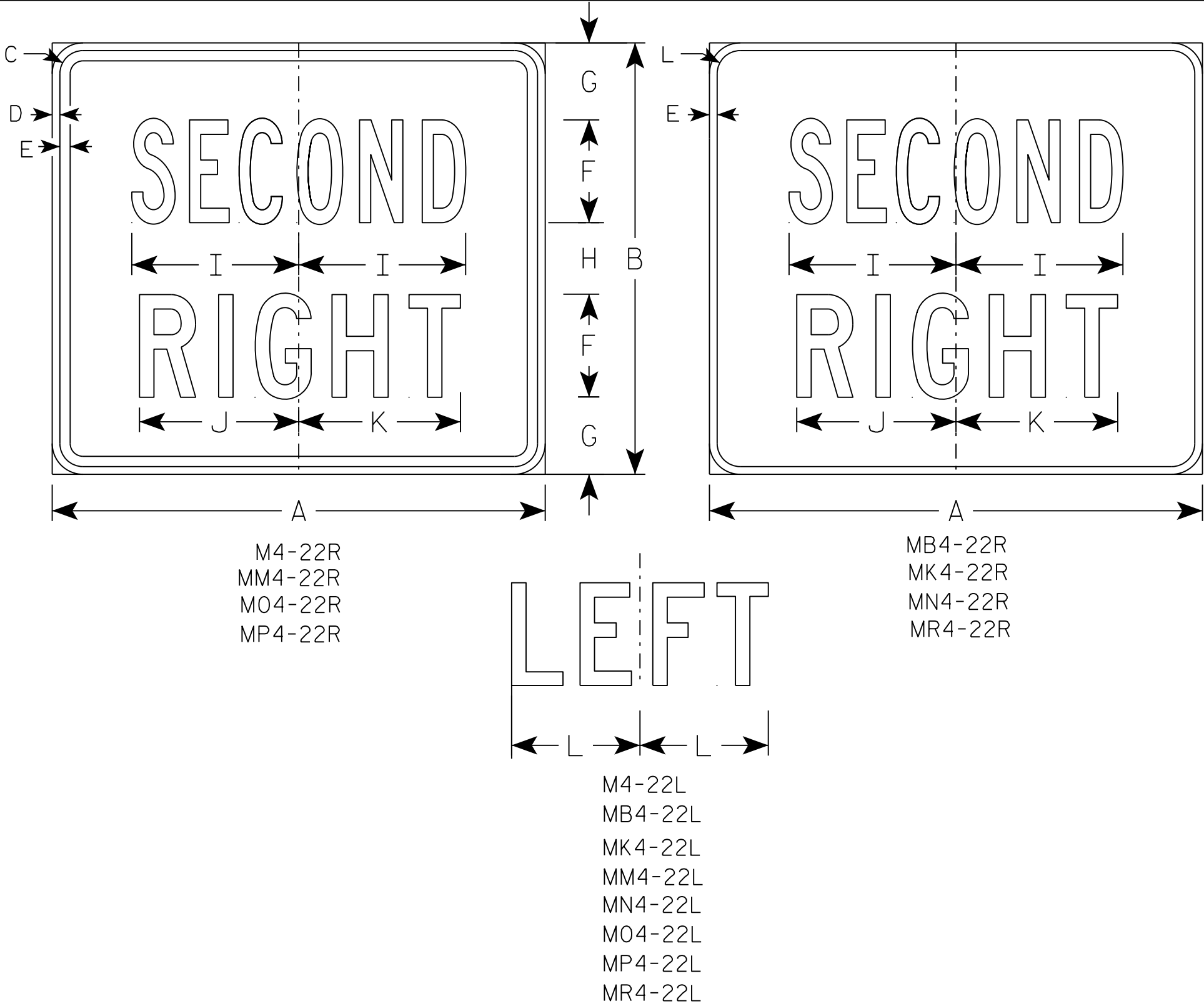
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



M4-22R
MM4-22R
M04-22R
MP4-22R

MB4-22R
MK4-22R
MN4-22R
MR4-22R

M4-22L
MB4-22L
MK4-22L
MM4-22L
MN4-22L
M04-22L
MP4-22L
MR4-22L

NOTES

- 1. Sign is Type II - Type H except as Shown
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - C
- 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. M4-22 Background - White
Message - Black
MB4-22 Background - Blue
Message - White
MK4-22 Background - Green
Message - White
MM4-22 Background - White
Message - Green
MN4-22 Background - Brown
Message - White
M04-22 Background - Orange - Type F Reflective
Message - Black
MP4-22 Background - White
Message - Blue
MR4-22 Background - Brown
Message - Yellow

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	21	1 1/8	3/8	1/2	5	3 3/4	3 1/2	8 1/8	7 3/4	7 7/8	1 1/2															3.5
3	36	30	1 5/8	5/8	3/4	8	4 3/4	4 1/2	13 1/8	12 5/8	12 1/2	1 7/8															7.5
4																											
5																											

STANDARD SIGN

M4-22

WISCONSIN DEPT OF TRANSPORTATION

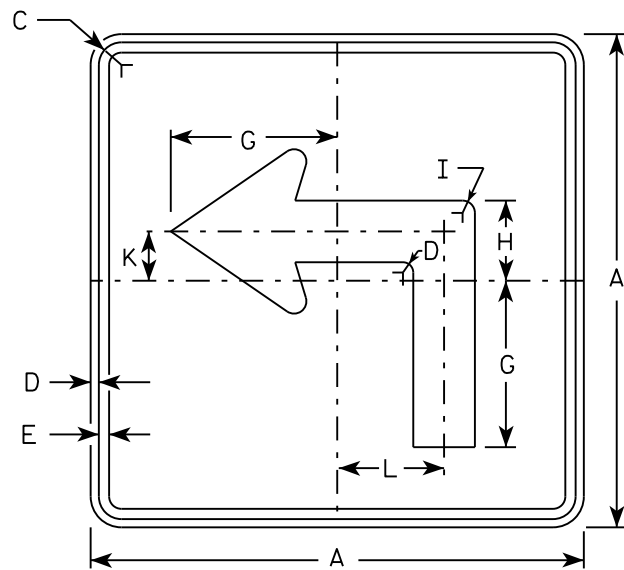
APPROVED

Matthew R. Rauch

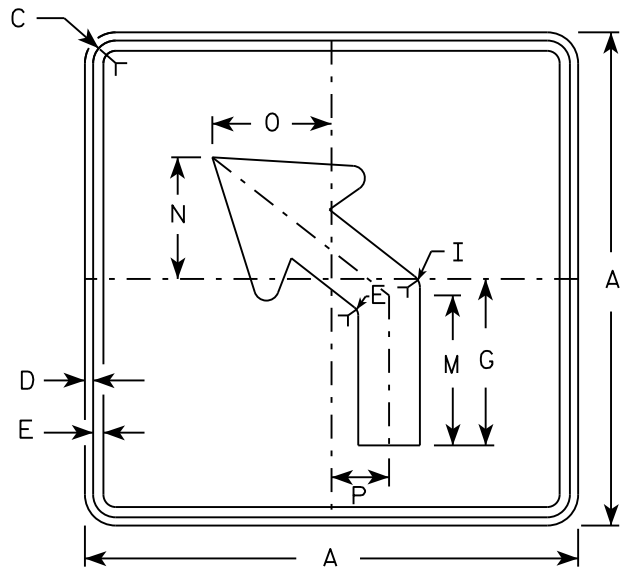
for State Traffic Engineer

DATE 10/15/15

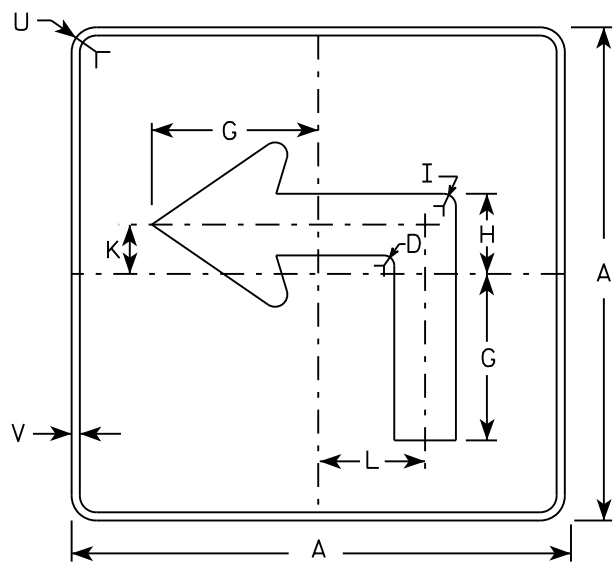
PLATE NO. M4-22.4



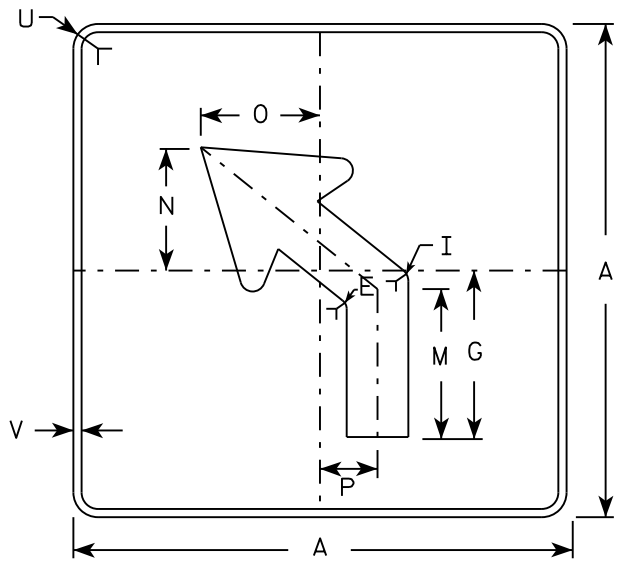
M5-1L
MM5-1L
M05-1L
MP5-1L



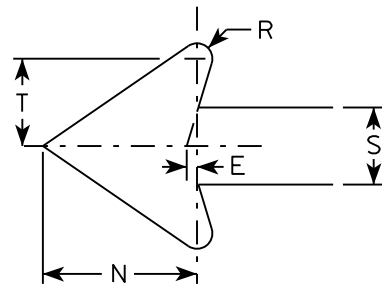
M5-2L
MM5-2L
M05-2L
MP5-2L



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



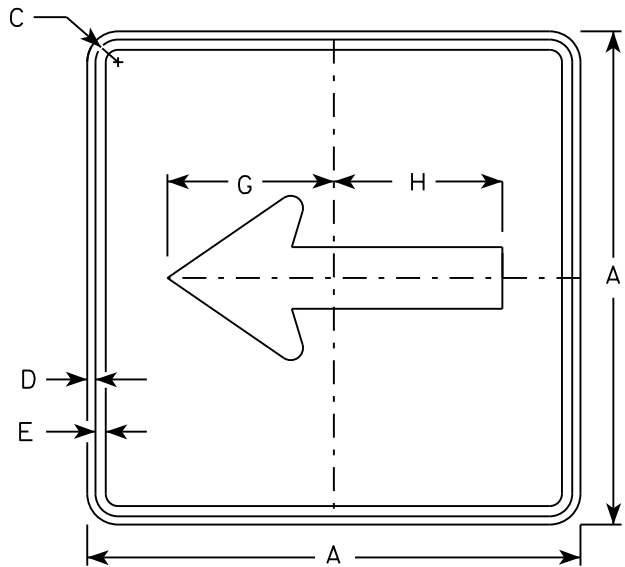
MB5-2L
MK5-2L
MN5-2L
MR5-2L



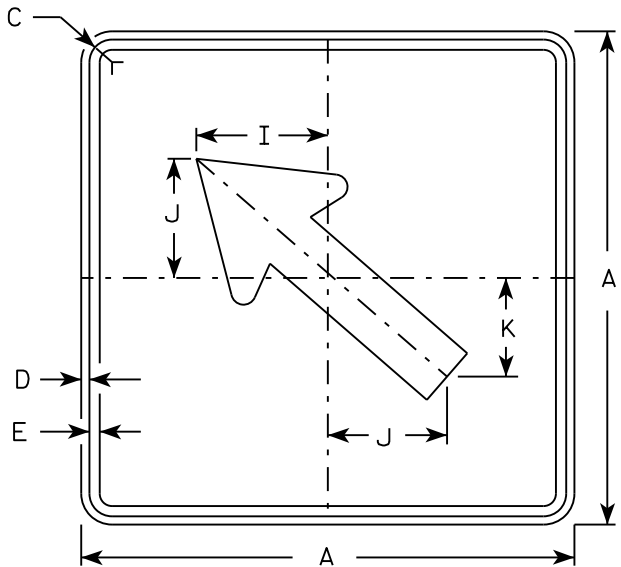
NOTES

- 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.

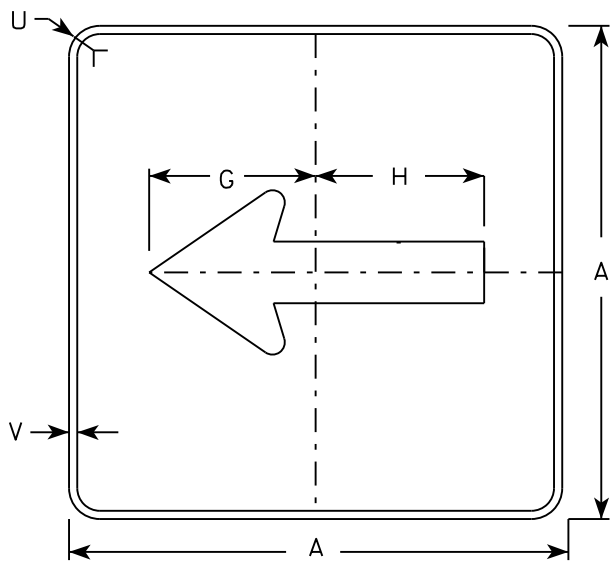
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25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



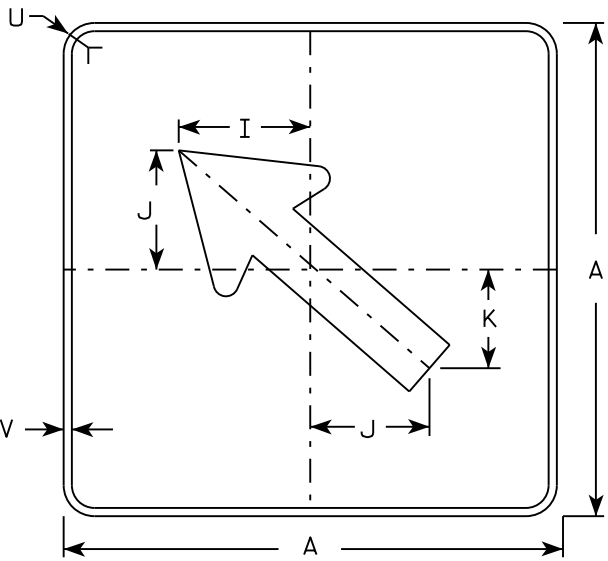
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



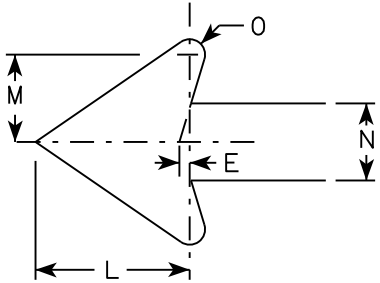
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

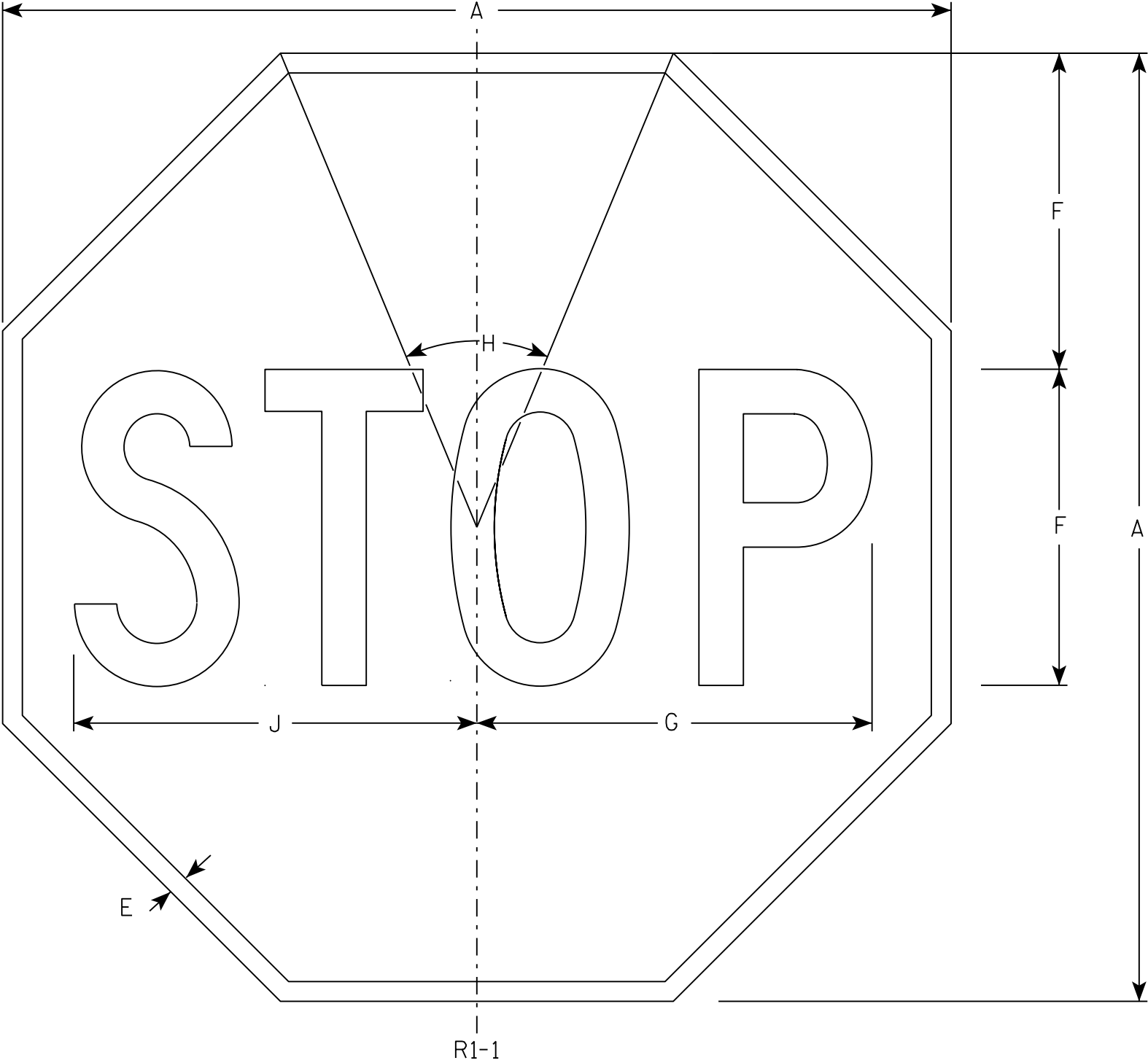
STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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

7



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

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

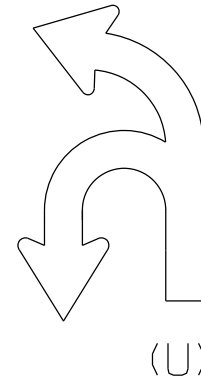
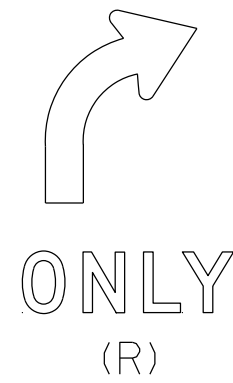
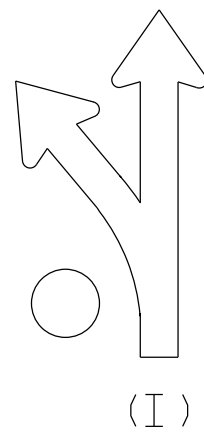
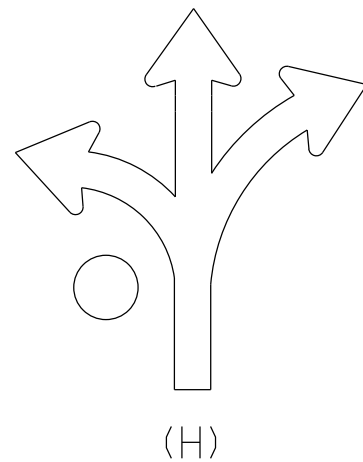
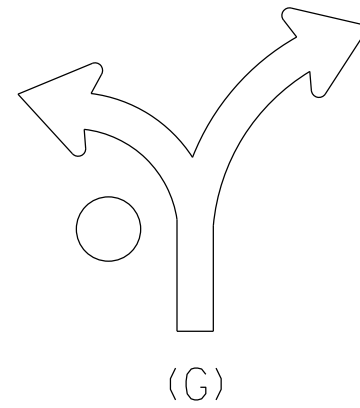
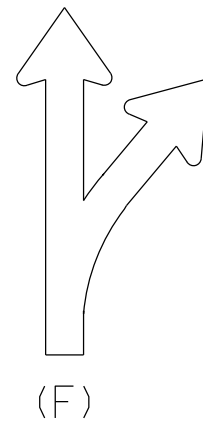
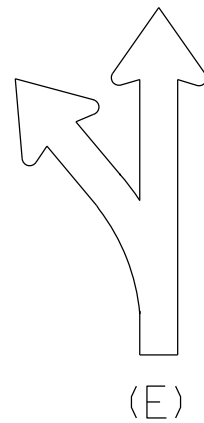
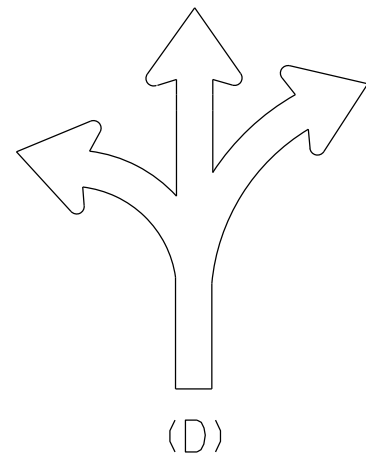
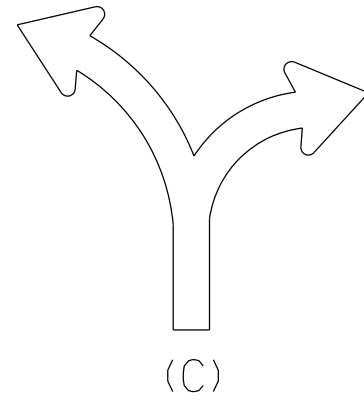
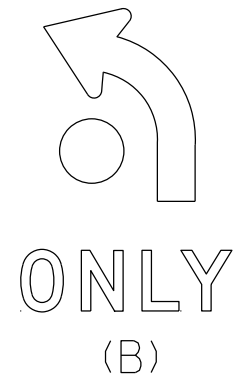
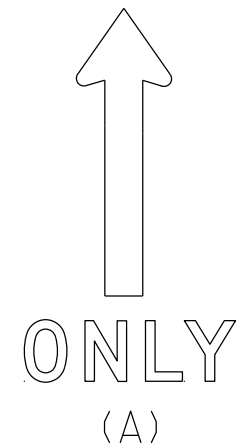
STANDARD SIGN

R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter = 3.75 sq ft for Size 2

6.0 sq ft for Size 3

10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2

12.0 sq ft for Size 3

20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2

18.0 sq ft for Size 3

30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2

24.0 sq ft for Size 3

40.0 sq ft for Size 4 or 5

5 Letters = 18.75 sq ft for Size 2

30.0 sq ft for Size 3

50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2

36.0 sq ft for Size 3

60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq.Ft. changes.

Add the amounts when these letters are used:

1.25 sq ft for Size 2

1.5 sq ft for Size 3

2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

SHEET NO:

E

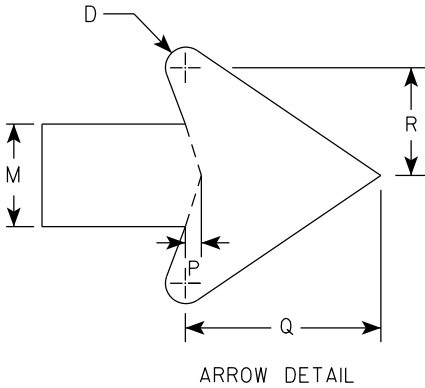
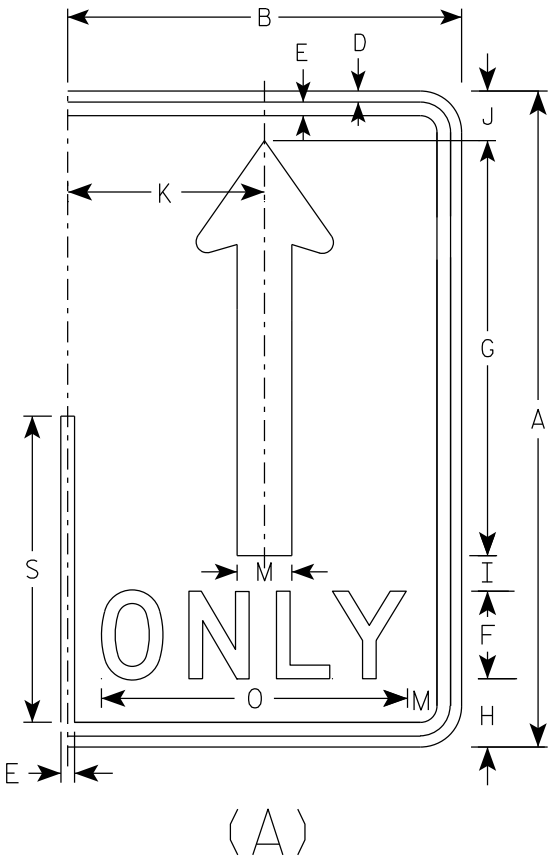
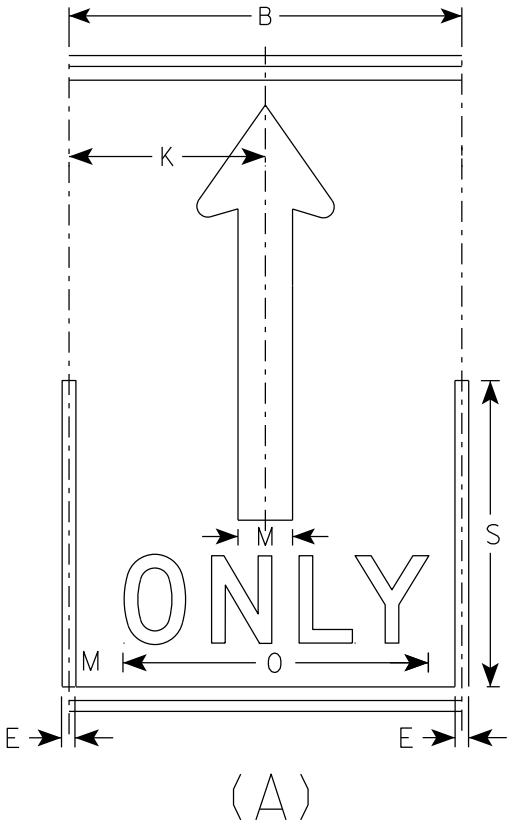
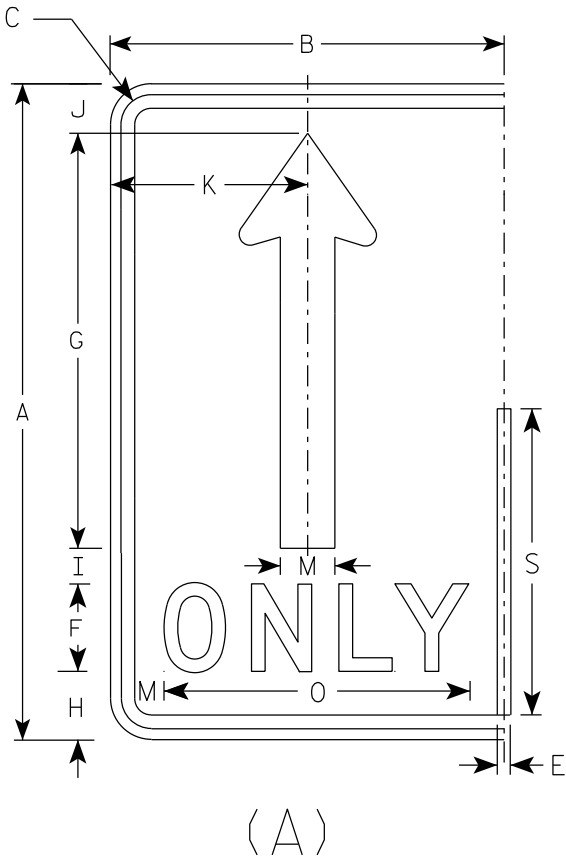
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - D



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	30	18	1 3⁄8	1⁄2	5⁄8	4	19	3 1⁄8	1 5⁄8	2 1⁄4	9		2 1⁄2		14	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	19	3 1⁄8	1 5⁄8	2 1⁄4	9		2 1⁄2		14	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	22 3⁄4	3 3⁄4	1 3⁄4	2 3⁄4	12		3		17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1	6	30 3⁄8	5 1⁄8	2 7⁄8	3 5⁄8	15		4		21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1	6	30 3⁄8	5 1⁄8	2 7⁄8	3 5⁄8	15		4		21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

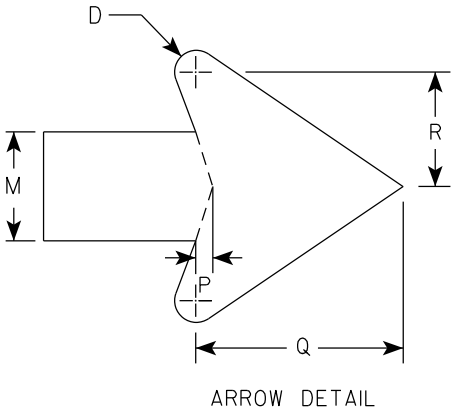
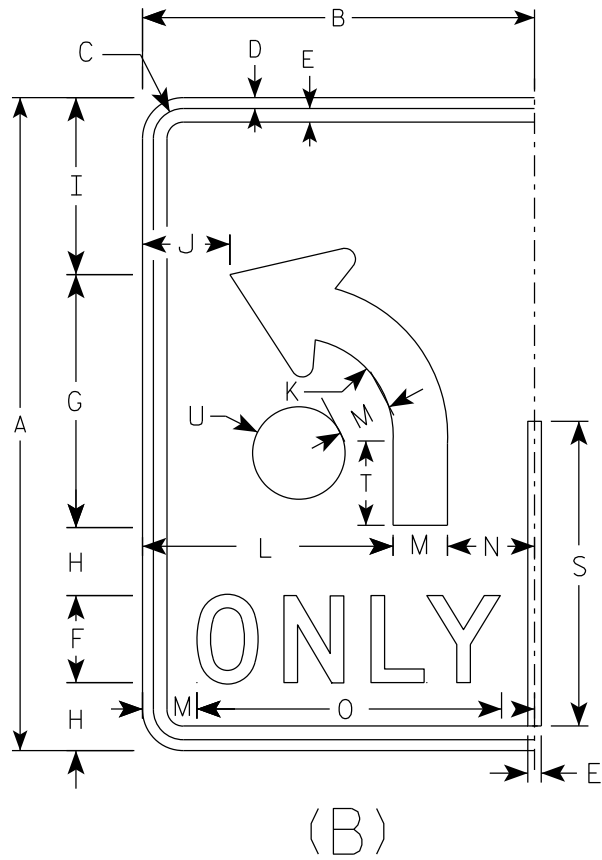
NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black

Message Series - D



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	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8	2 1⁄8						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8	2 1⁄8						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4	6	5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8	2 1⁄2						6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4	3 3⁄8						10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4	3 3⁄8						10.0

PROJECT NO:

SHEET NO:

E

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

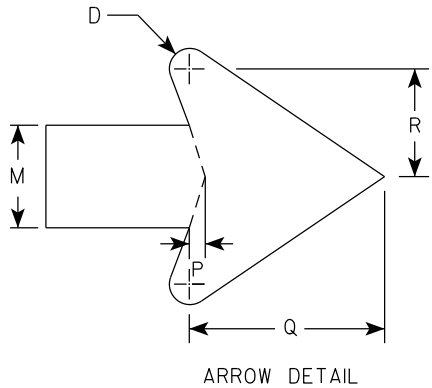
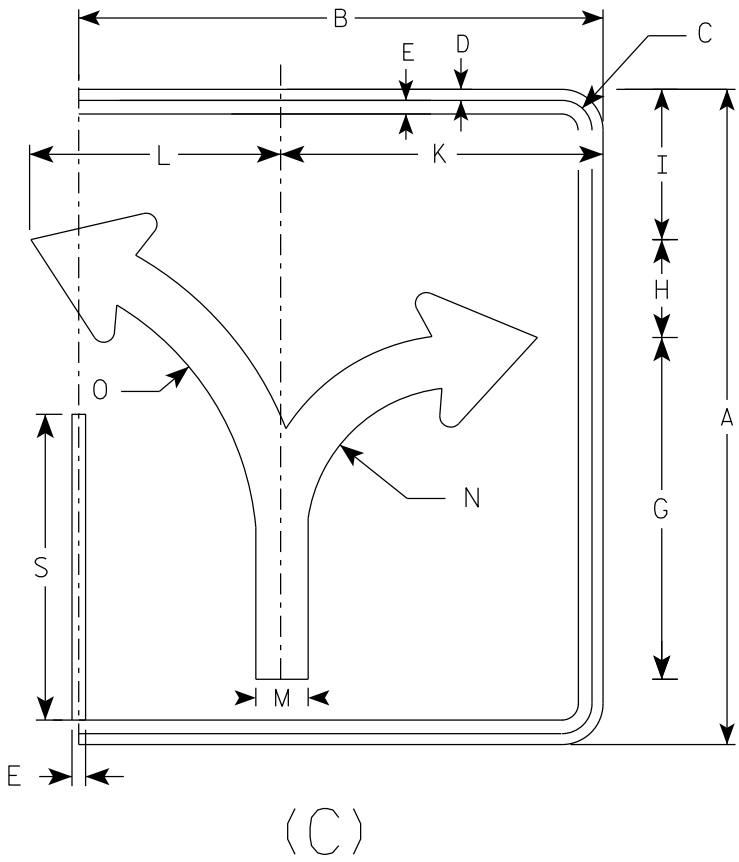
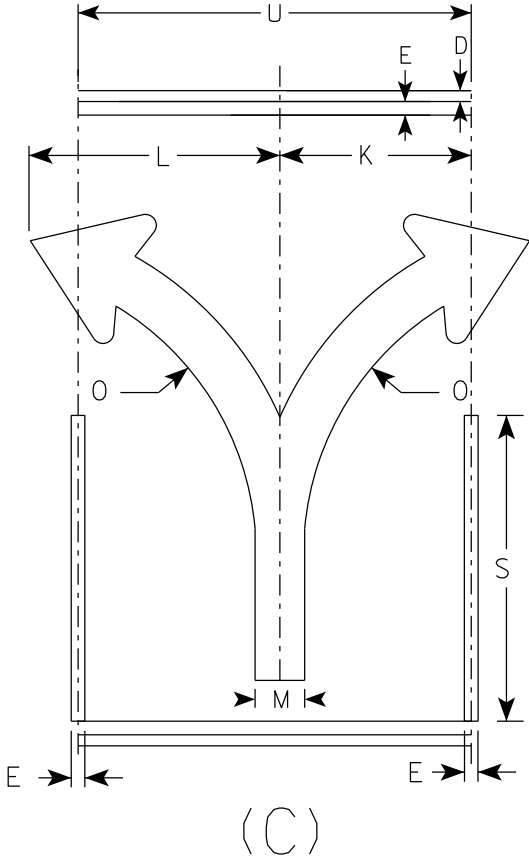
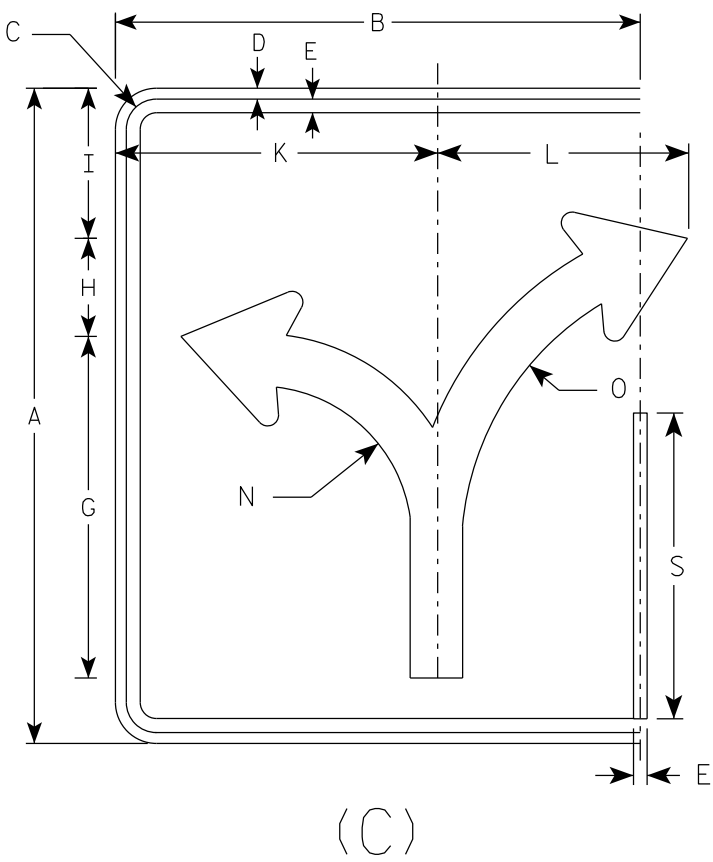
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



7

																											ENDS	MIDDLE
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.	Area sq. ft.
1																												
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	8 1⁄4		17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		24						7.5	6.0
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

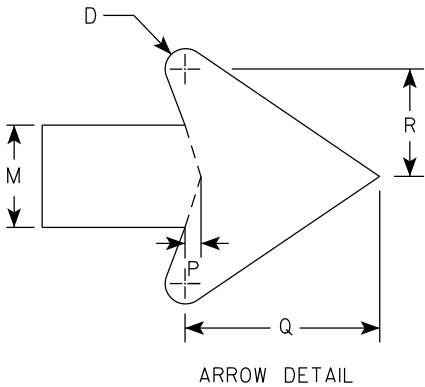
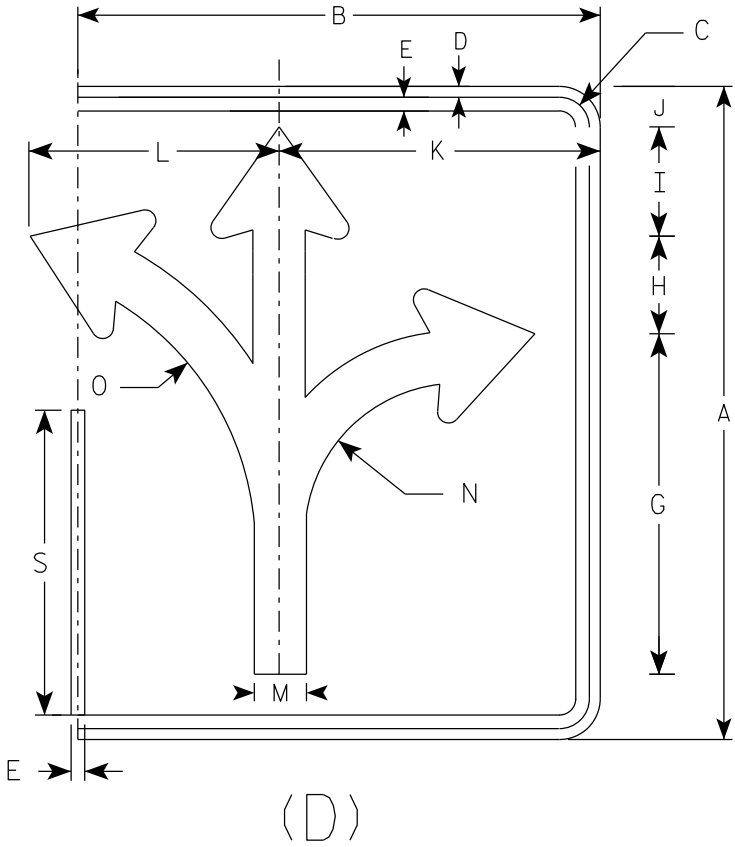
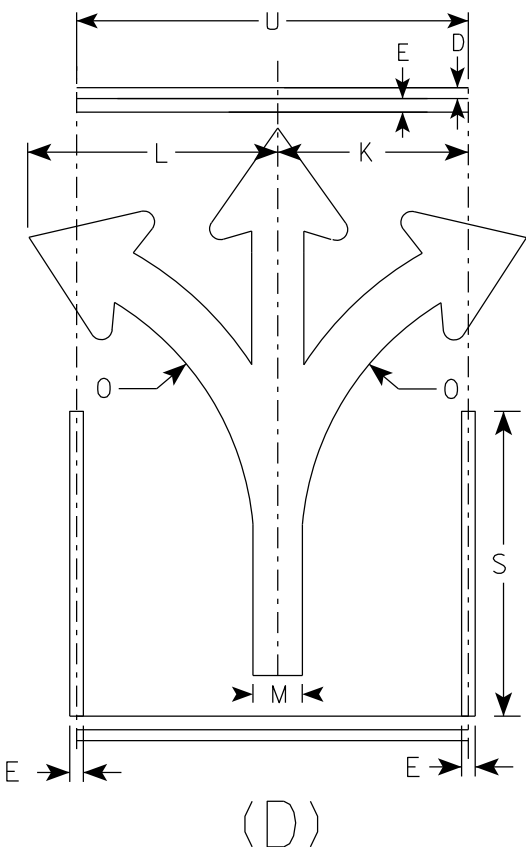
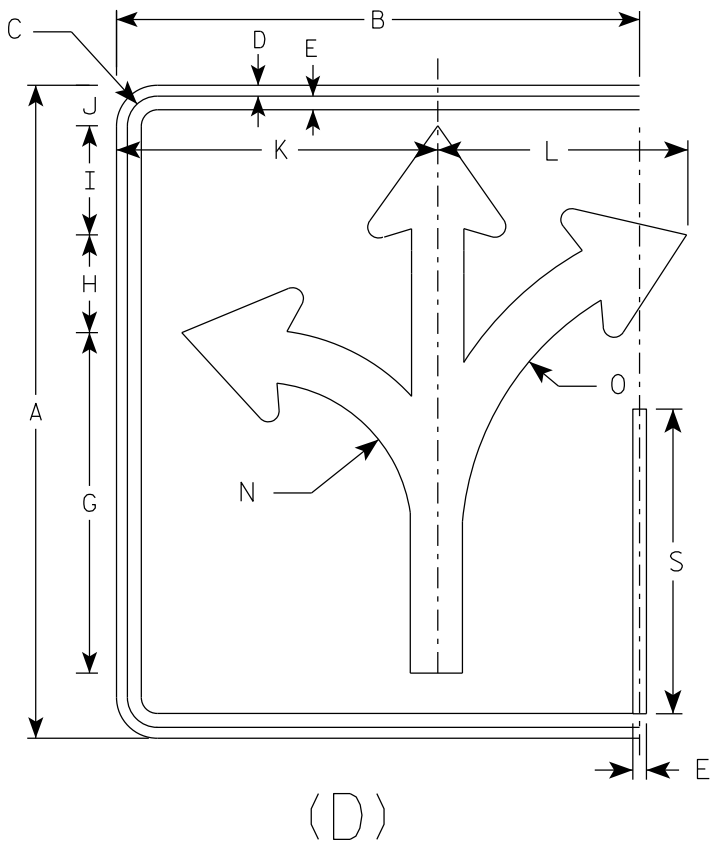
APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



																											ENDS	MIDDLE
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.	Area sq. ft.
1																												
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	2 1⁄4	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		24						7.5	6.0
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

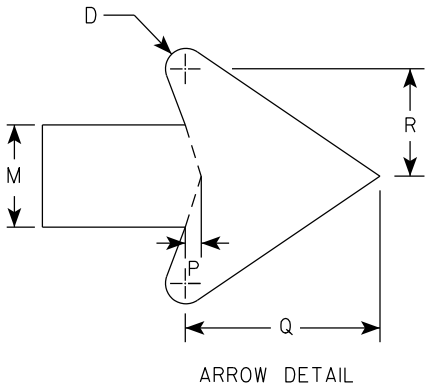
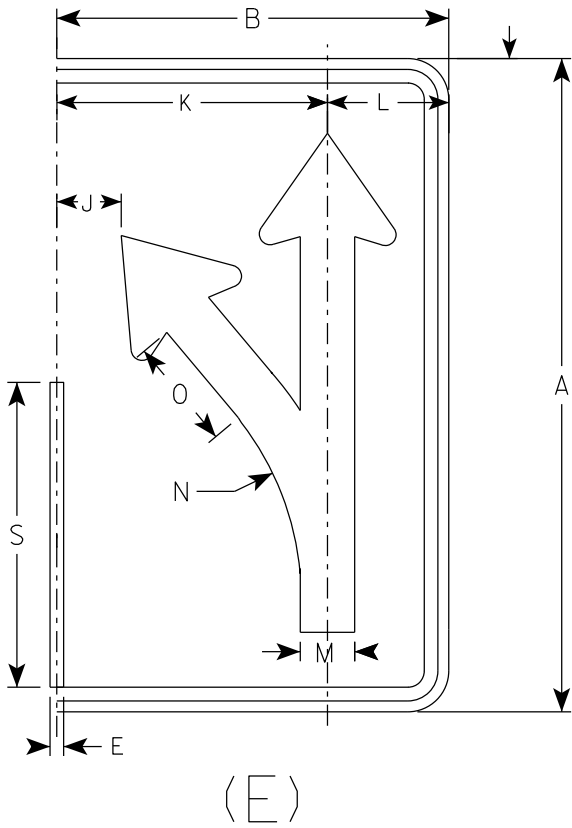
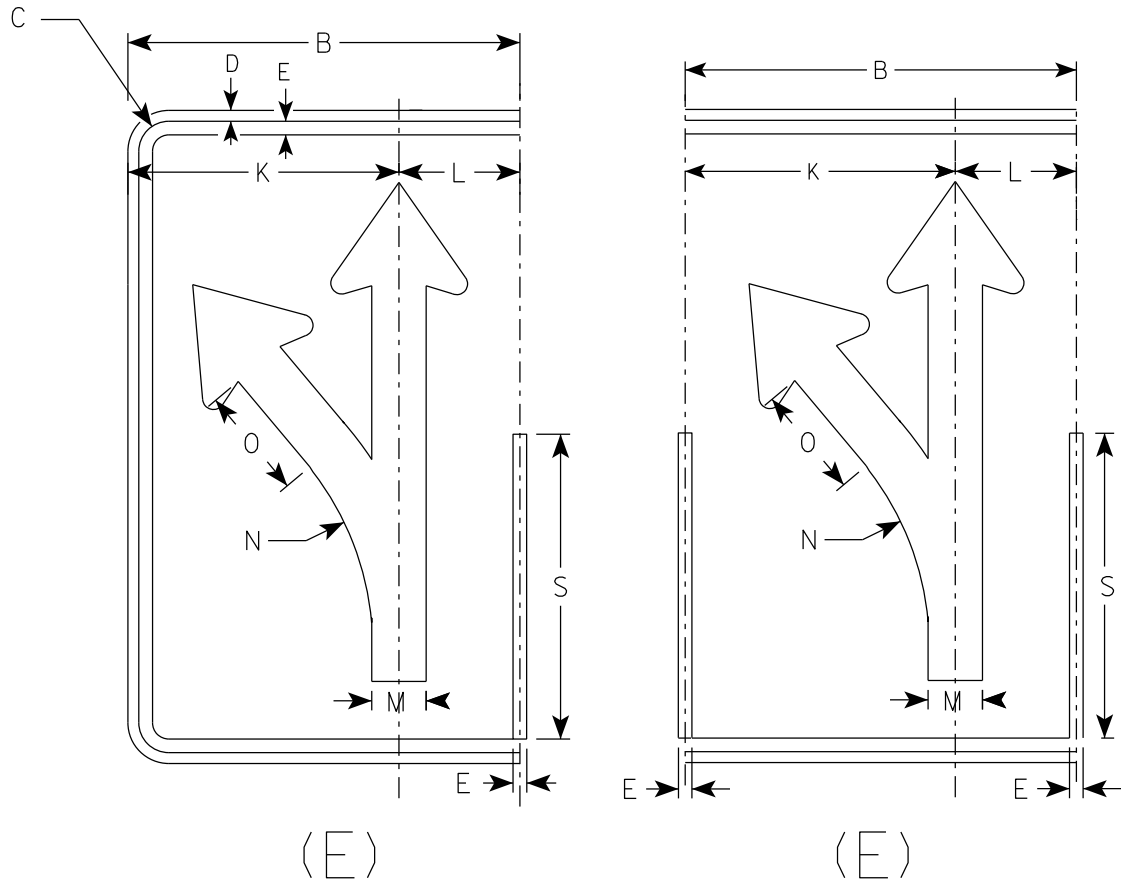
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



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	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

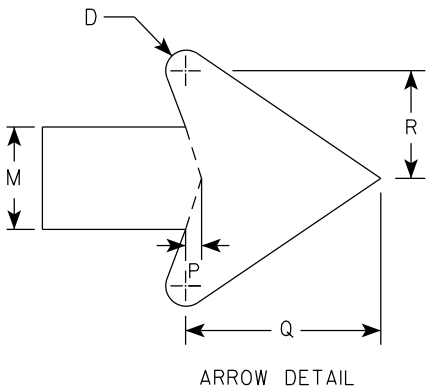
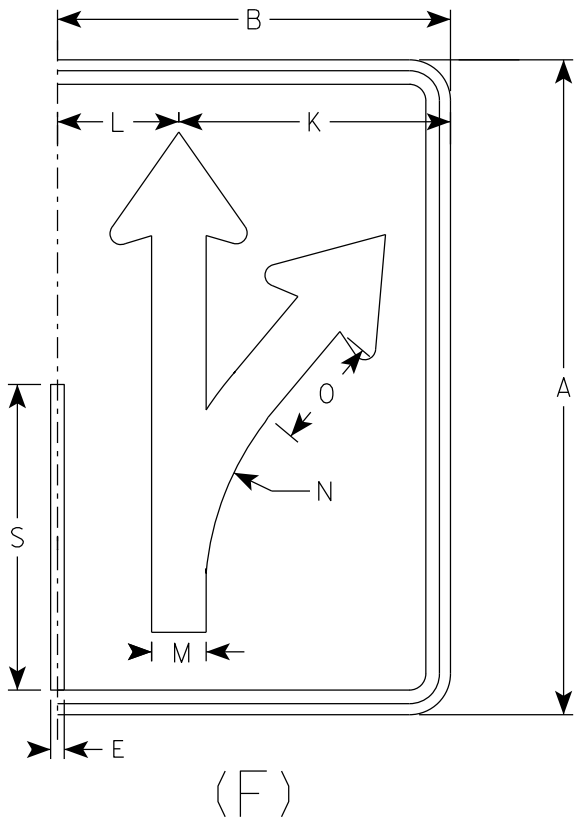
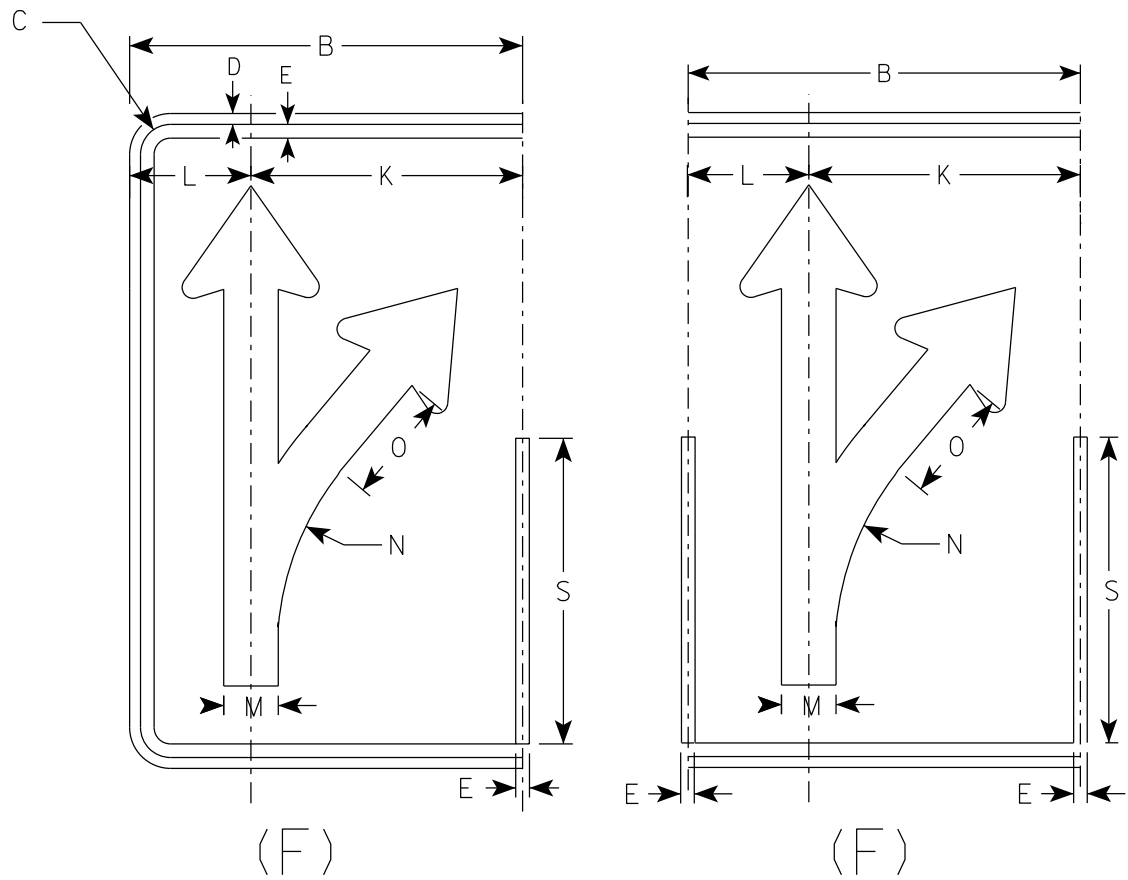
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



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	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

STANDARD SIGN

R3-8 (F) Arrow

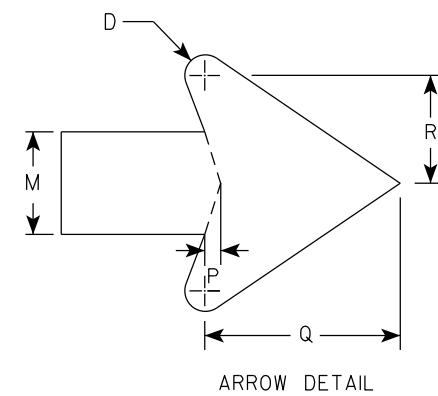
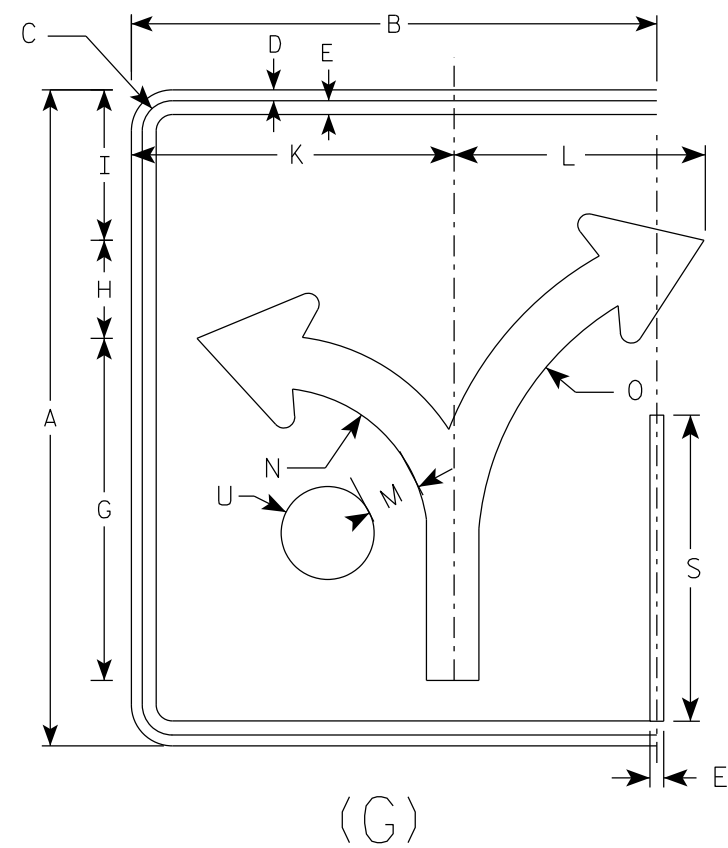
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



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	30	24	1 3⁄8	½	5⁄8		15 5⁄8	4 ½	6 7⁄8		14 ¾	11 ½	2 3⁄8	7	13 ¼	3⁄8	4 ½	2 ½	14		2 ⅛						5.0
2M	30	24	1 3⁄8	½	5⁄8		15 5⁄8	4 ½	6 7⁄8		14 ¾	11 ½	2 3⁄8	7	13 ¼	3⁄8	4 ½	2 ½	14		2 ⅛						5.0
3	36	30	1 3⁄8	½	5⁄8		18 ¾	5 ½	8 ¼		17 ¼	17 ¼	2 7⁄8	8 3⁄8	16	½	5 ½	3	16 ¾		2 ½						7.5
4	48	36	2 ¼	¾	1		24 7⁄8	7 ¼	11		23 ⅛	18	3 ¾	11 ⅛	21 ¼	5⁄8	7 ⅛	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 ¼	¾	1		24 7⁄8	7 ¼	11		23 ⅛	18	3 ¾	11 ⅛	21 ¼	5⁄8	7 ⅛	4	22 3⁄8		3 3⁄8						12.0

PROJECT NO:		HWY:		COUNTY:		SHEET NO:		E
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STANDARD SIGN
R3-8 (G) Arrow

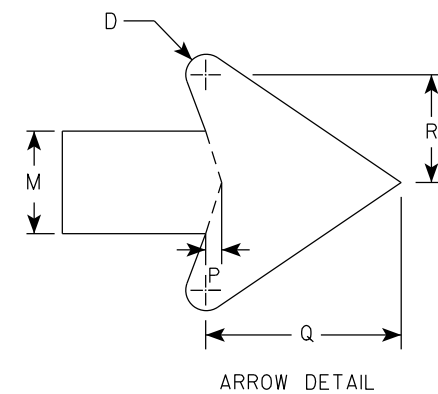
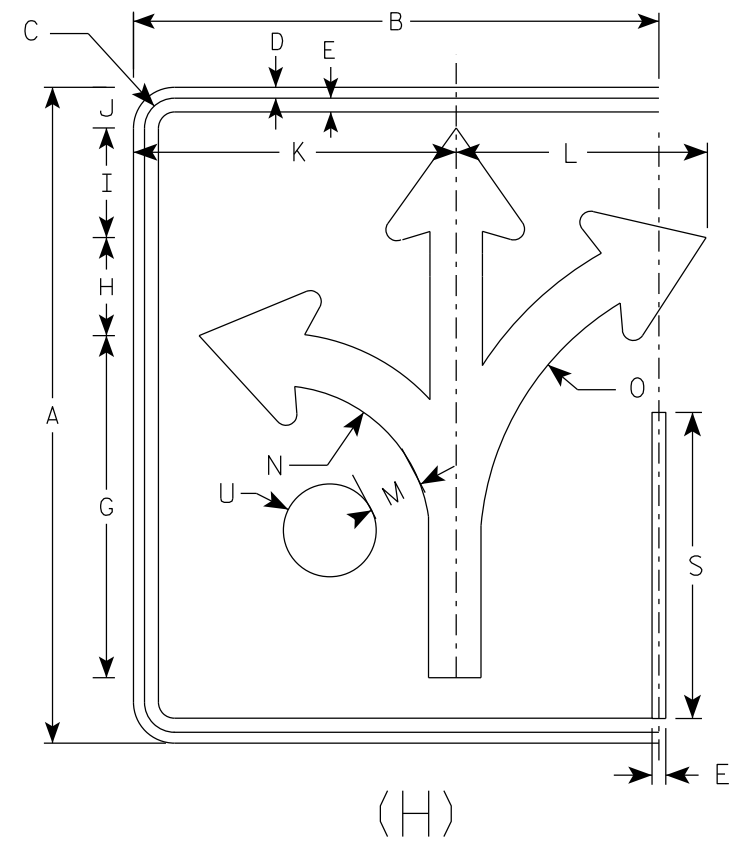
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



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	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	3 1⁄8	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		2 1⁄2						7.5
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

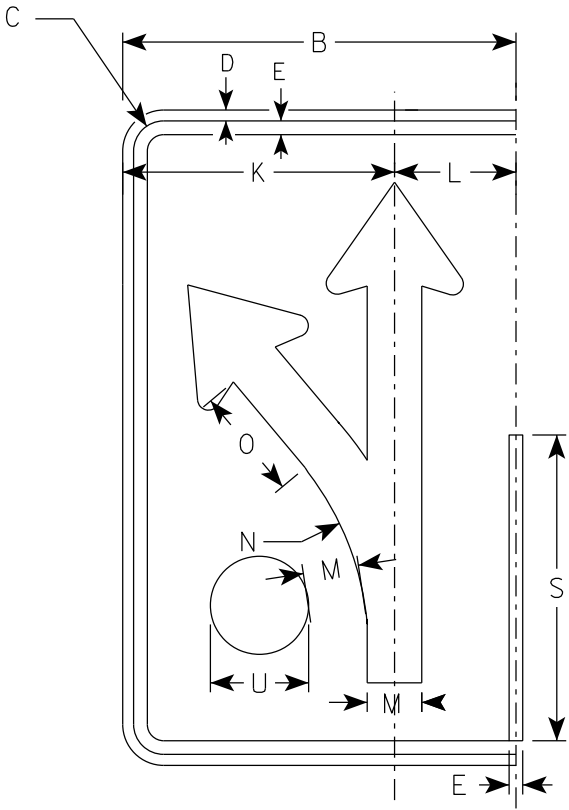
PROJECT NO:		HWY:		COUNTY:		SHEET NO:		E
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NOTES

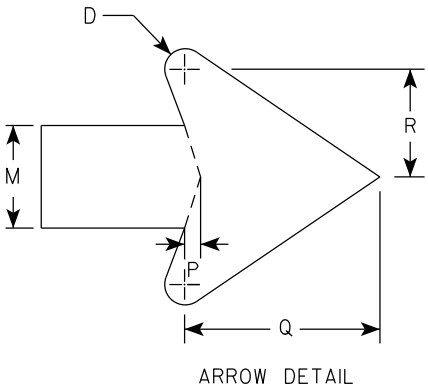
1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



(I)



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	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14		2 1⁄8						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14		2 1⁄8						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4		2 1⁄2						6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8		3 3⁄8						10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8		3 3⁄8						10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

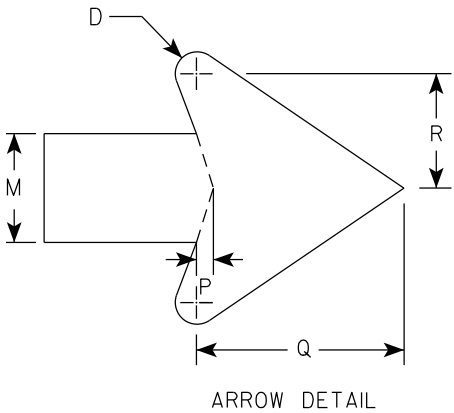
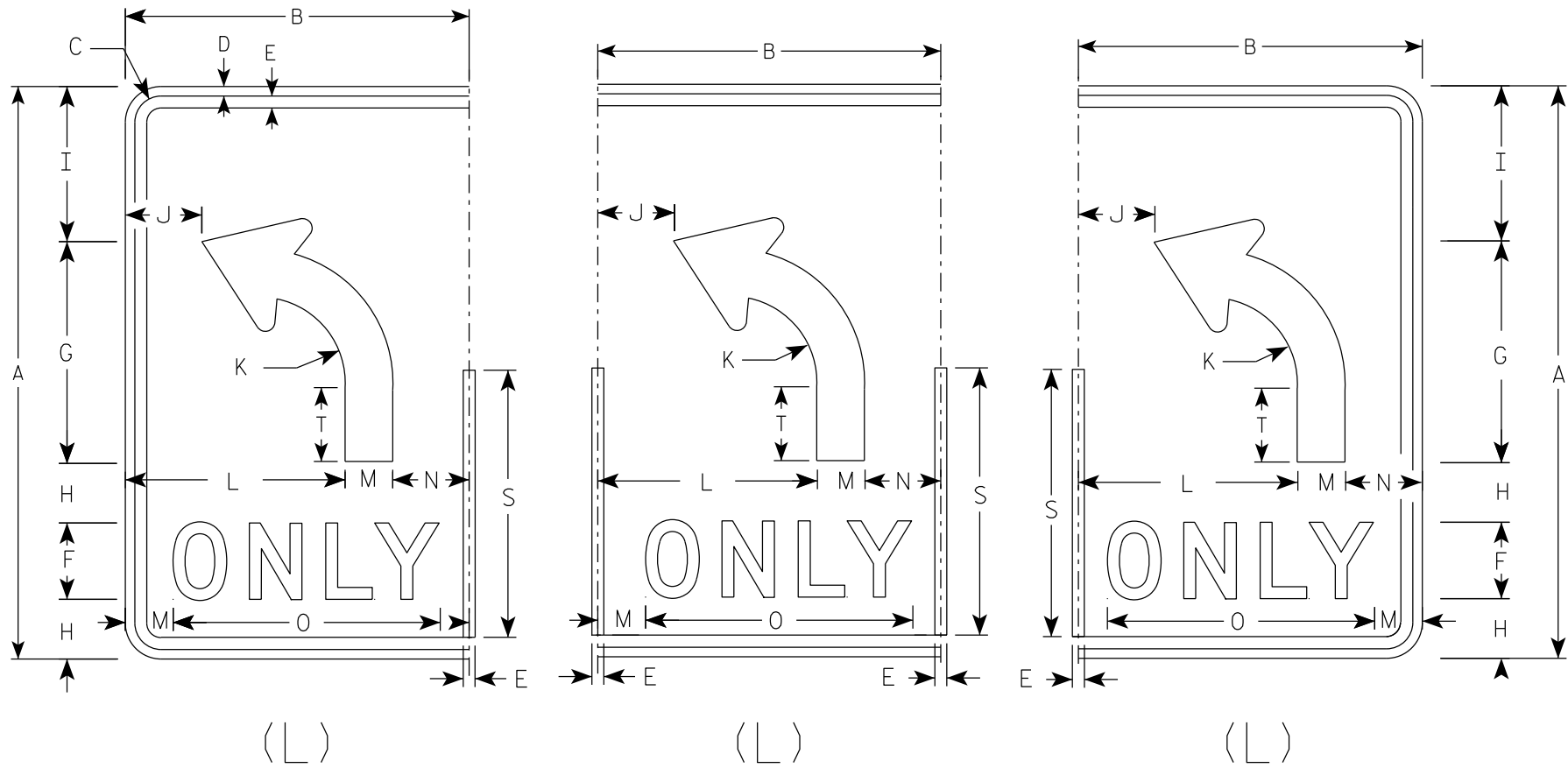
APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



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	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4		5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8							6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

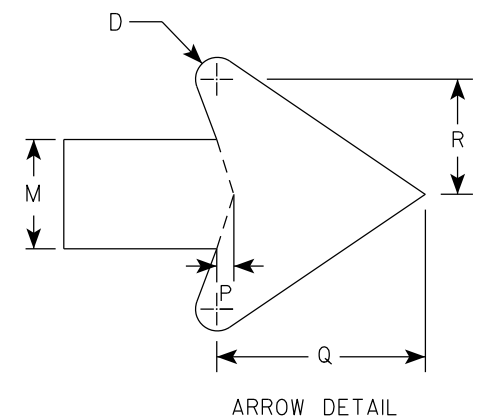
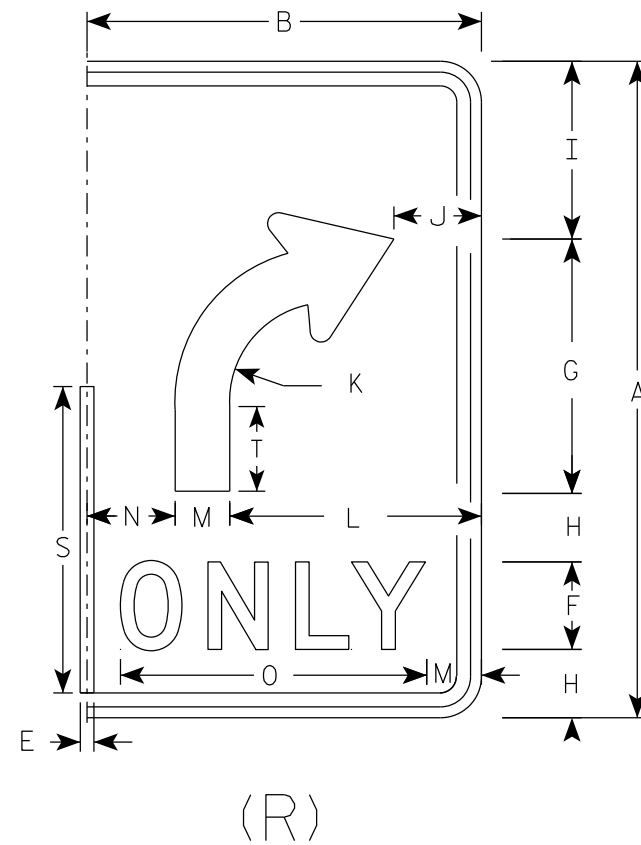
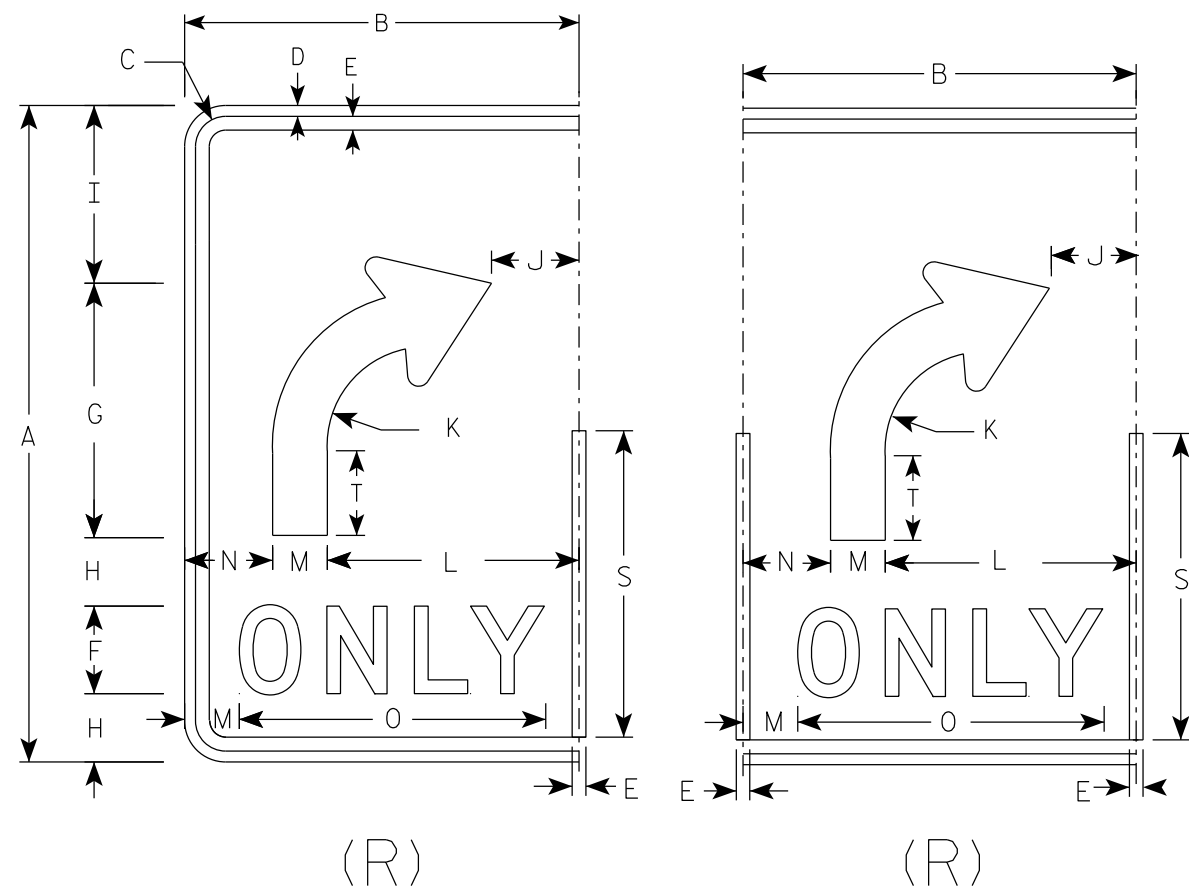
for State Traffic Engineer

DATE 5/21/19

PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



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	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4	6	5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8							6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0

STANDARD SIGN

R3-8 (R) Arrow

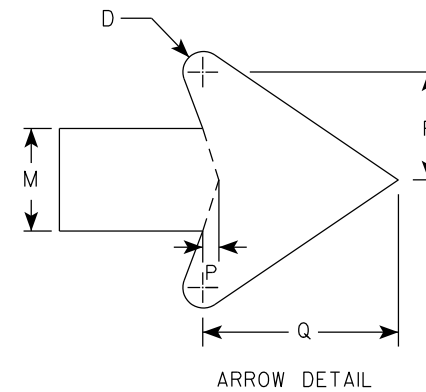
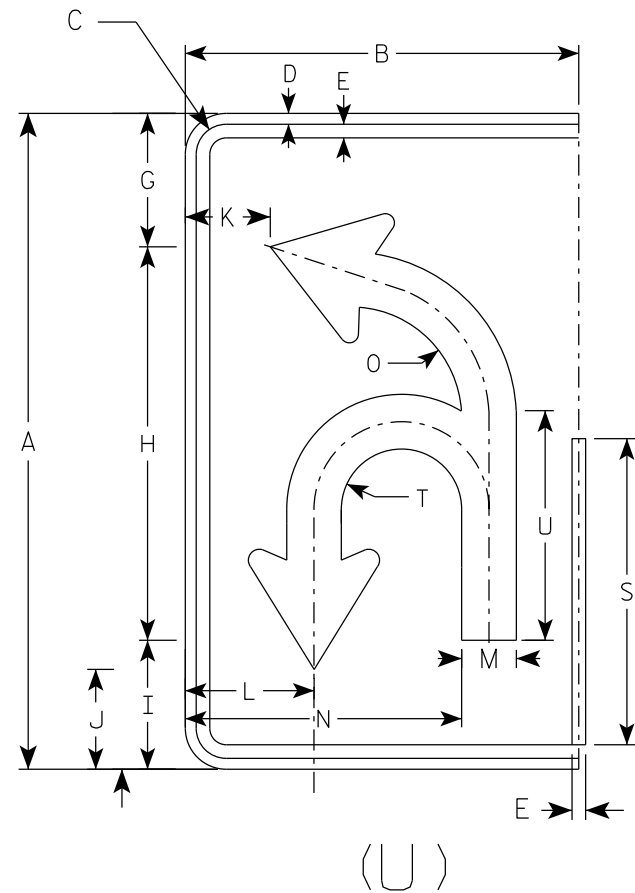
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



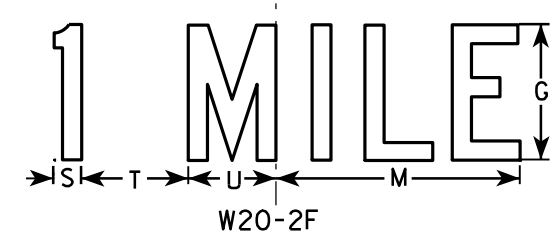
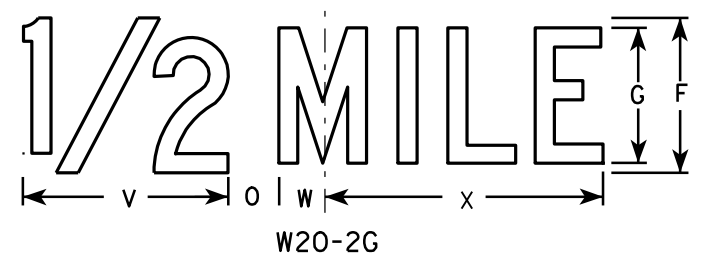
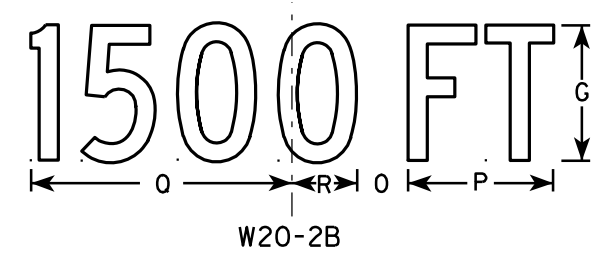
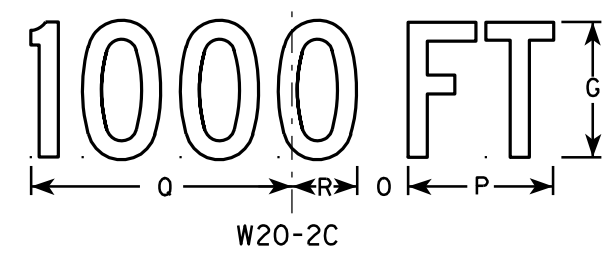
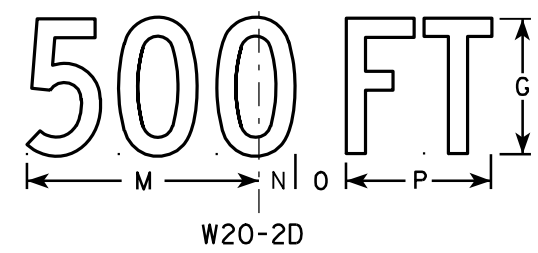
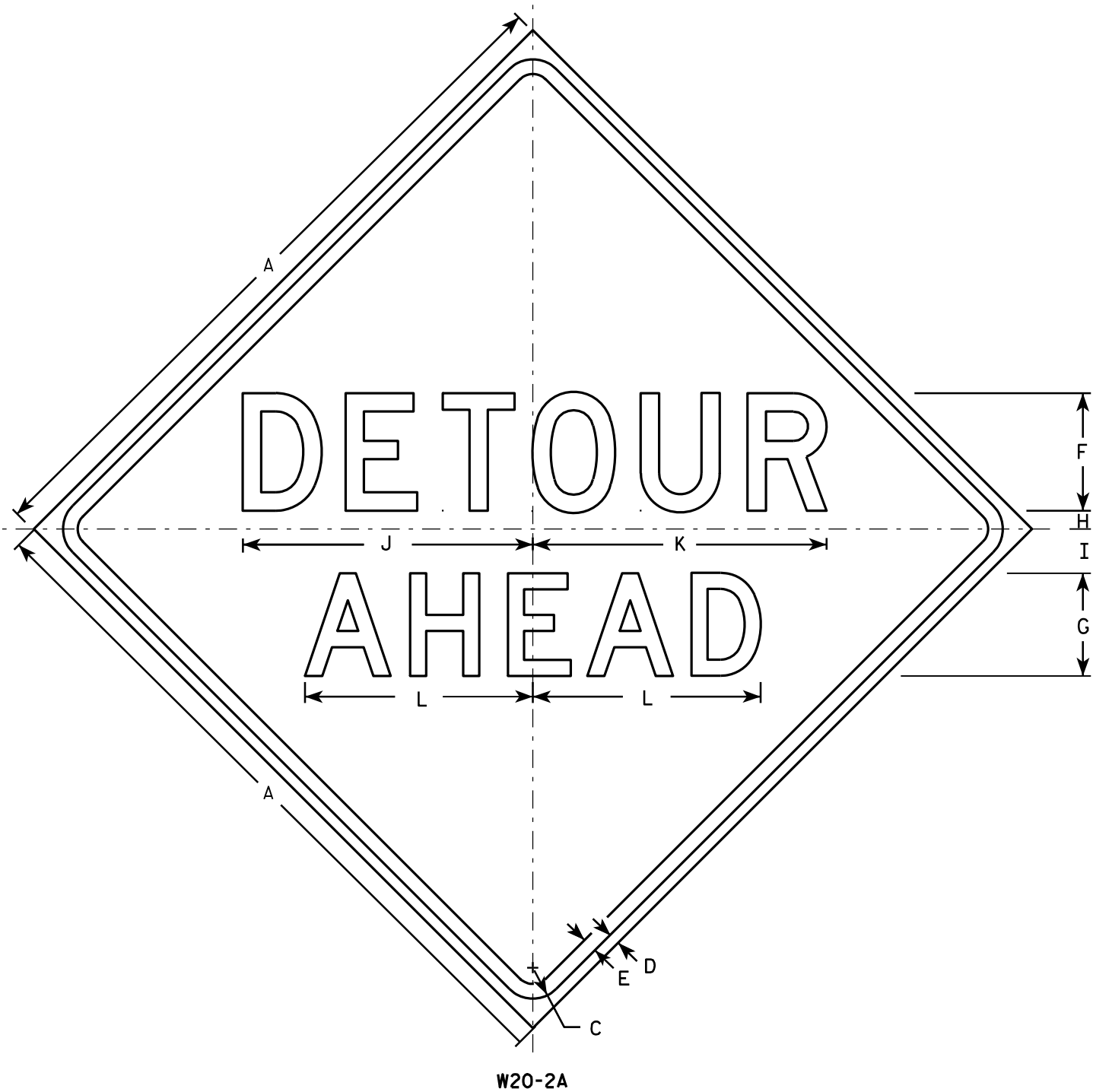
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 1⁄2	12 5⁄8	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14	2 3⁄4	10 1⁄2						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 1⁄2	12 5⁄8	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14	2 3⁄4	10 1⁄2						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	21 5⁄8	7 1⁄8	5 1⁄2	5 7⁄8	8 1⁄4	3	16 3⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	3 1⁄4	12 5⁄8						6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	28 3⁄4	9 3⁄8	7 1⁄4	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	4 3⁄8	16 3⁄4						10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	28 3⁄4	9 3⁄8	7 1⁄4	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	4 3⁄8	16 3⁄4						10.0

STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1



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.

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. Rauch* for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO:

HWY:

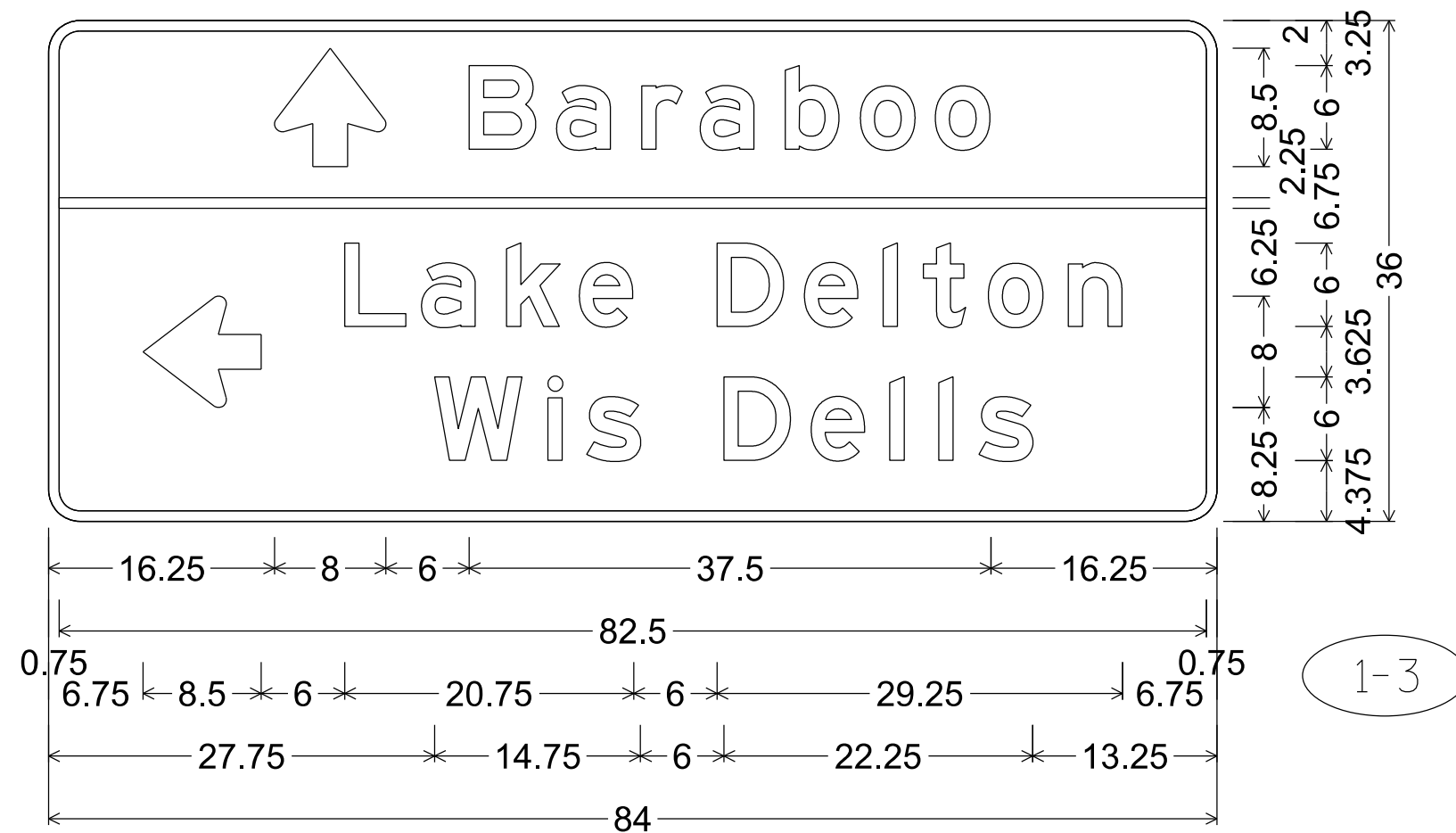
COUNTY:

SHEET NO:

E

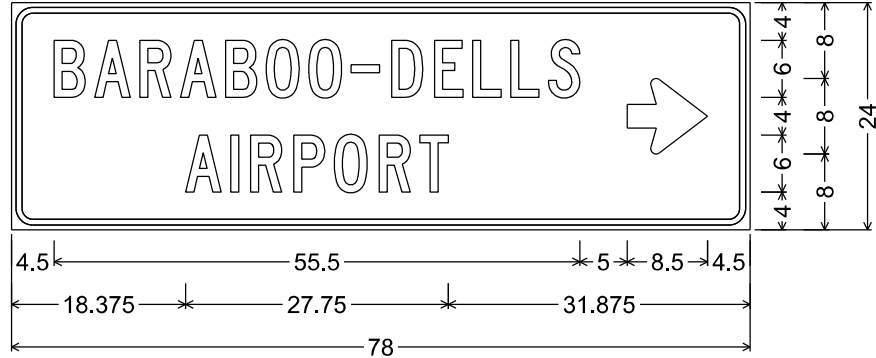
NOTES

1. All Signs Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - E



D1-3; 2.250" Radius, 0.750" Border

7



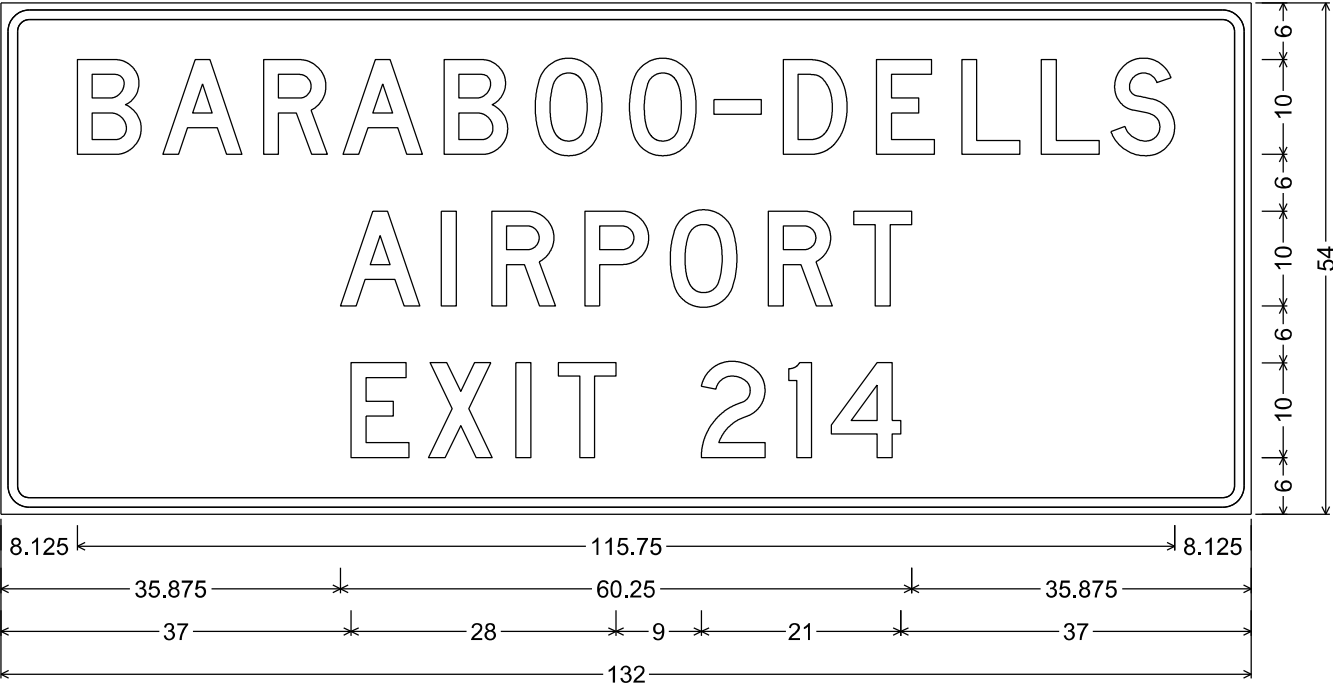
2.250" Radius, 0.625" Border, 0.500" Indent



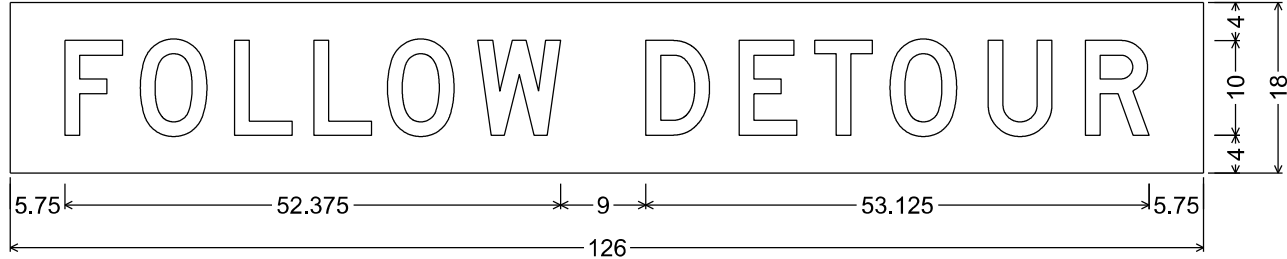
2.250" Radius, 0.625" Border, 0.500" Indent

NOTES

- 1. Fixed Message Signs Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - C except as noted



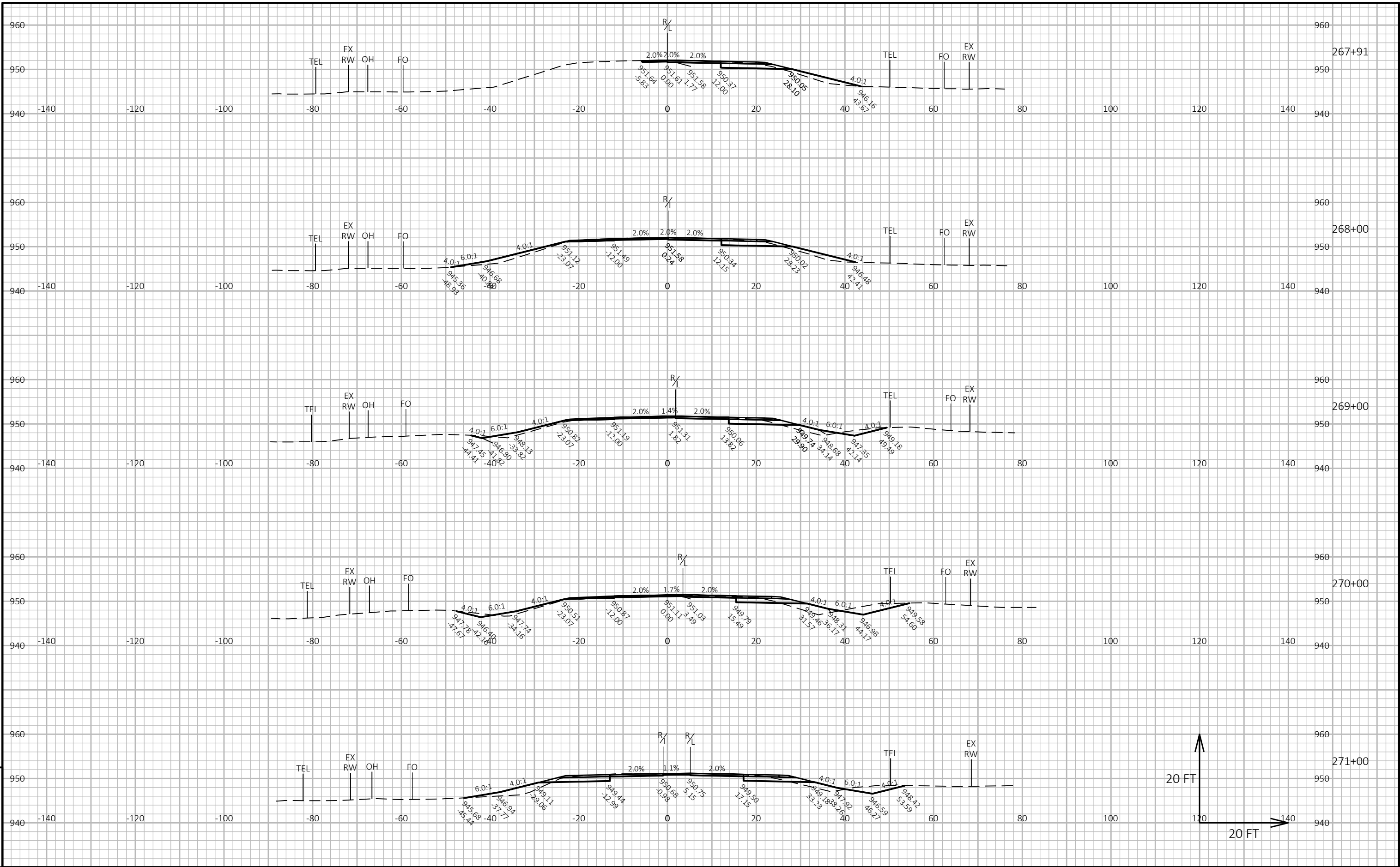
3.000" Radius, 1.000" Border, 0.750" Indent
"BARABOO-DELLS", D; "AIRPORT", D; "EXIT", D; "214", D;

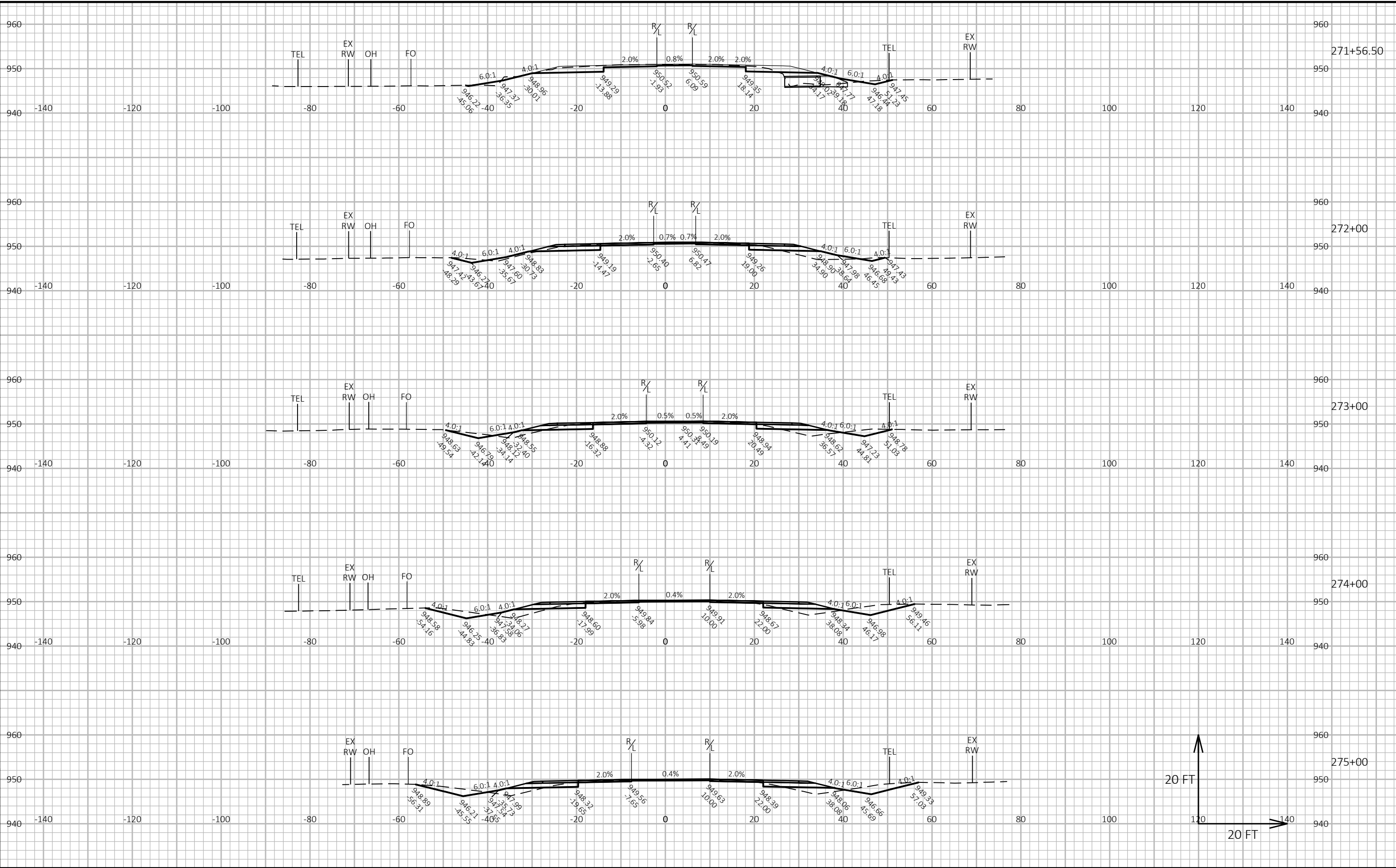


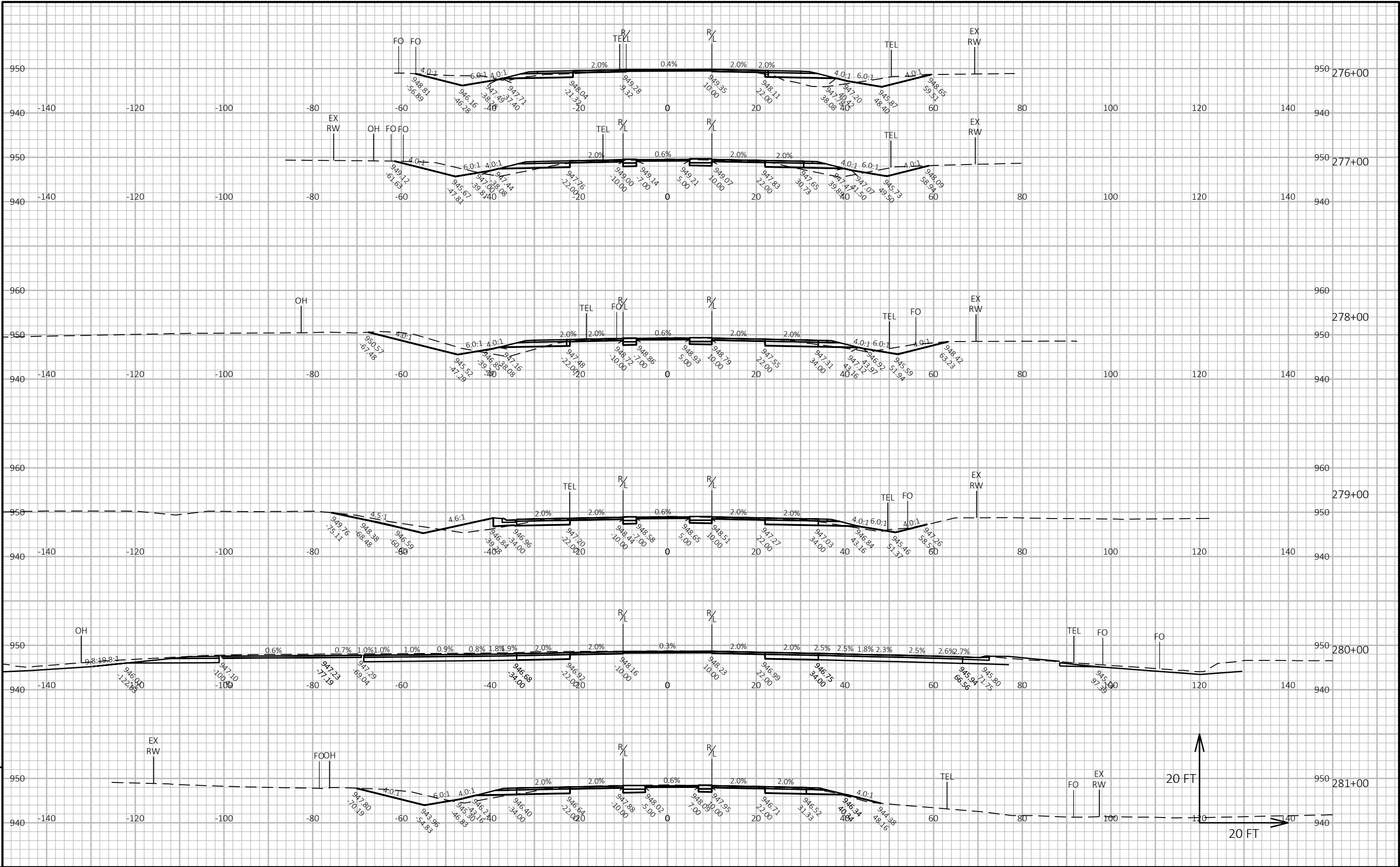
No border, Black on, Fluorescent orange;
"FOLLOW", D; "DETOUR", D;

7

LOCATION	CROSS SECTION VOLUMES			
	CUT (SF)	CUT (CY)	FILL (SF)	FILL (CY)
5050-02-70				
STA 267+91	32.1459		11.1639	
STA 268+00	37.86	8	24.04	7
STA 269+00	40.27	86	17.36	83
STA 270+00	50.62	112	20	74
STA 271+00	73.04	165	24.58	91
STA 272+00	56.64	153	18.58	90
STA 273+00	59.11	129	17.84	73
STA 274+00	66.41	150	23.89	81
STA 275+00	64.49	161	21.91	88
STA 276+00	73.77	169	22.29	85
STA 277+00	78.3	195	28.58	97
STA 278+00	105.83	262	19.67	92
STA 279+00	93.69	286	28.55	80
STA 280+00	291.76	516	5.2231	52
STA 281+00	97.98	534	13.78	35
STA 282+00	82.08	255	13.81	54
STA 283+00	101.36	255	13.49	55
STA 284+00	108.7	306	11.21	49
STA 285+00	103.64	310	22.01	64
STA 286+00	68.39	234	37.56	117
STA 287+00	60.05	152	101.32	276
STA 288+00	56.04	130	48.94	302
STA 289+00	94.11	227	51.16	191
STA 290+00	127.81	386	84.62	213
STA 291+00	14.69	325	71.74	207
STA 291+25	15.13	49	62.53	38
STA 49+00	92.13	101	0	0
STA 51+00	134.26		8.37	
STA 52+00	95.68	314	2.1	11
STA 52+30	72.49	79	5.8	6
5050-02-70 TOTAL		6,047		2,611



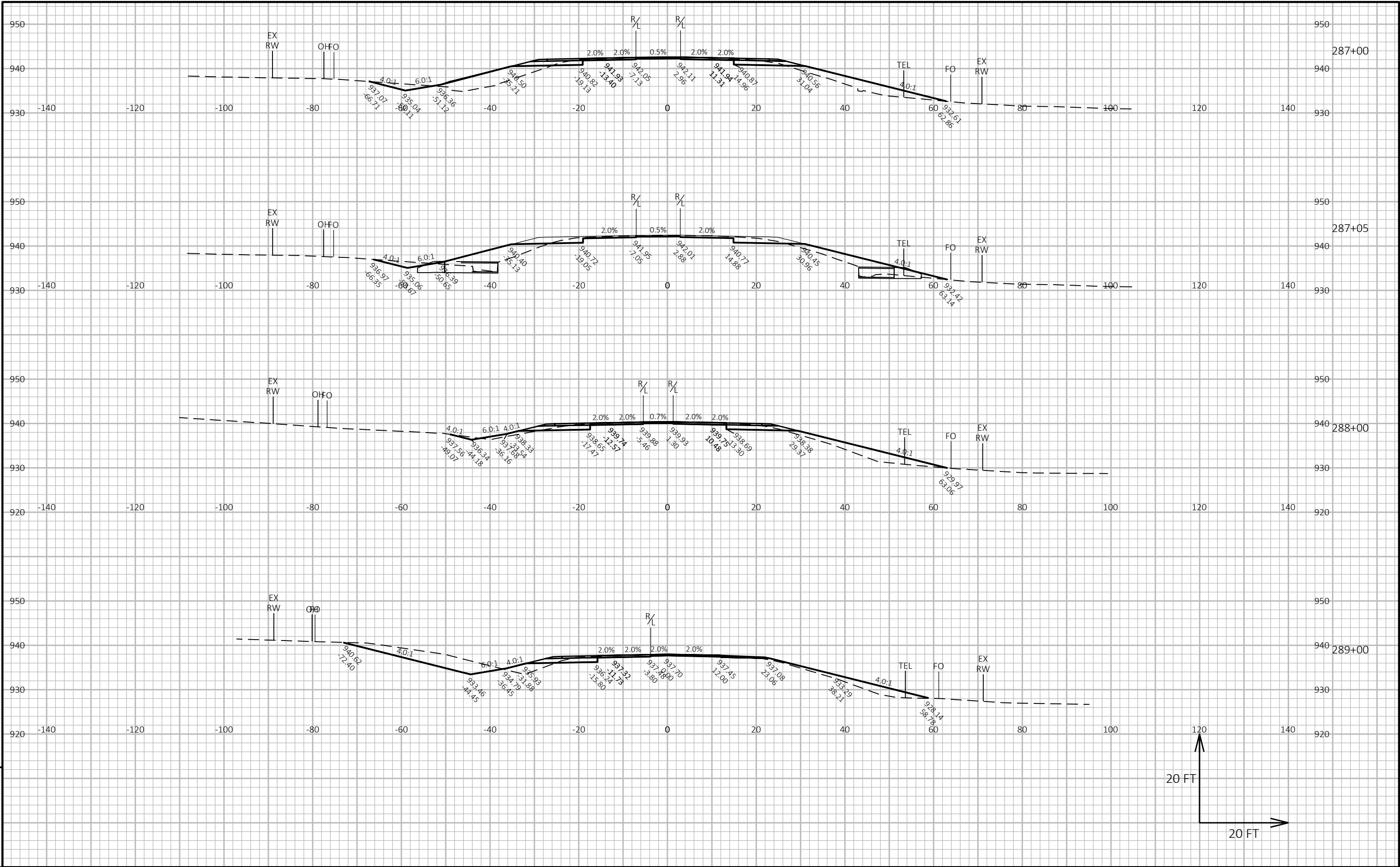


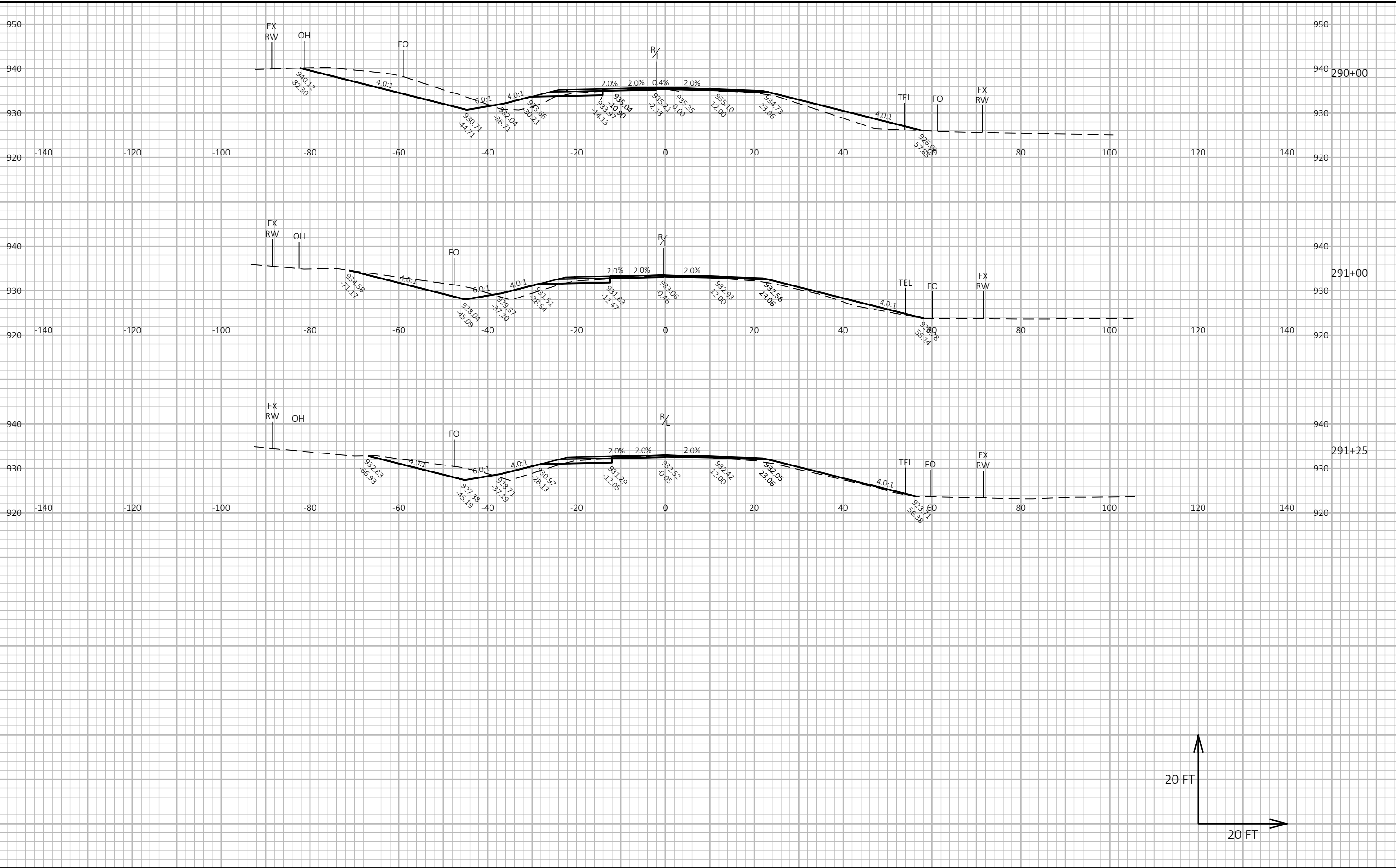


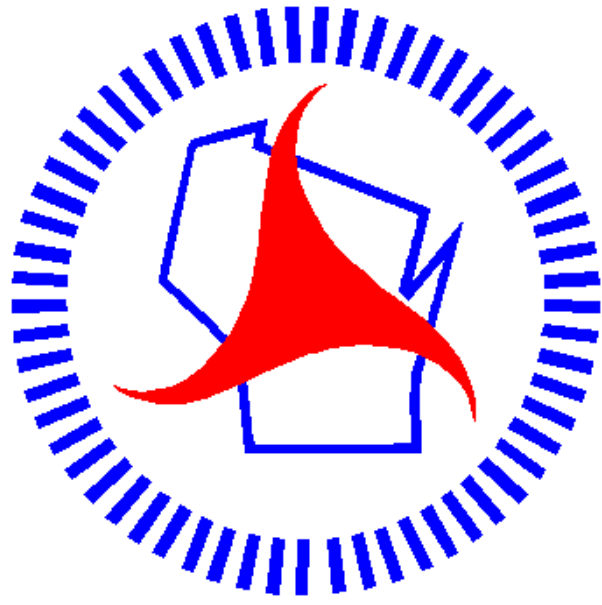
PROJECT NO: 5050-02-70/71/72	HWY: STH 23/STH 33	COUNTY: SAUK	CROSS SECTIONS: CROSS SECTIONS - STH 23 AND STH 33	SHEET	E
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PROJECT NO:	5050-02-70/71/72	HWY:	STH 23/STH 33	COUNTY:	SAUK	CROSS SECTIONS:	CROSS SECTIONS - STH 23 AND STH 33	SHEET	E
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