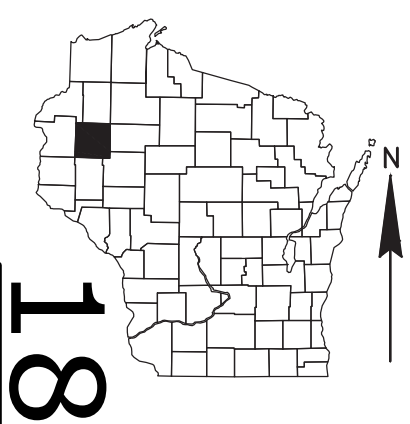


EAU PROJECT ID: 8120-04-73, 8120-04-74, 8120-04-75 WITH: N/A COUNTY: BARRON

APRIL 2018

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

TOTAL SHEETS = 264



DESIGN DESIGNATION		8120-04-73, -74, -75
A.A.D.T. (2011)	=	9,900
A.A.D.T. (2037)	=	14,500
D.H.V. (2037)	=	1,740
D.D.	=	58/42
T. (% ADT)	=	5.6%
DESIGN SPEED	=	40 MPH
ESALS	=	1,465,325

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

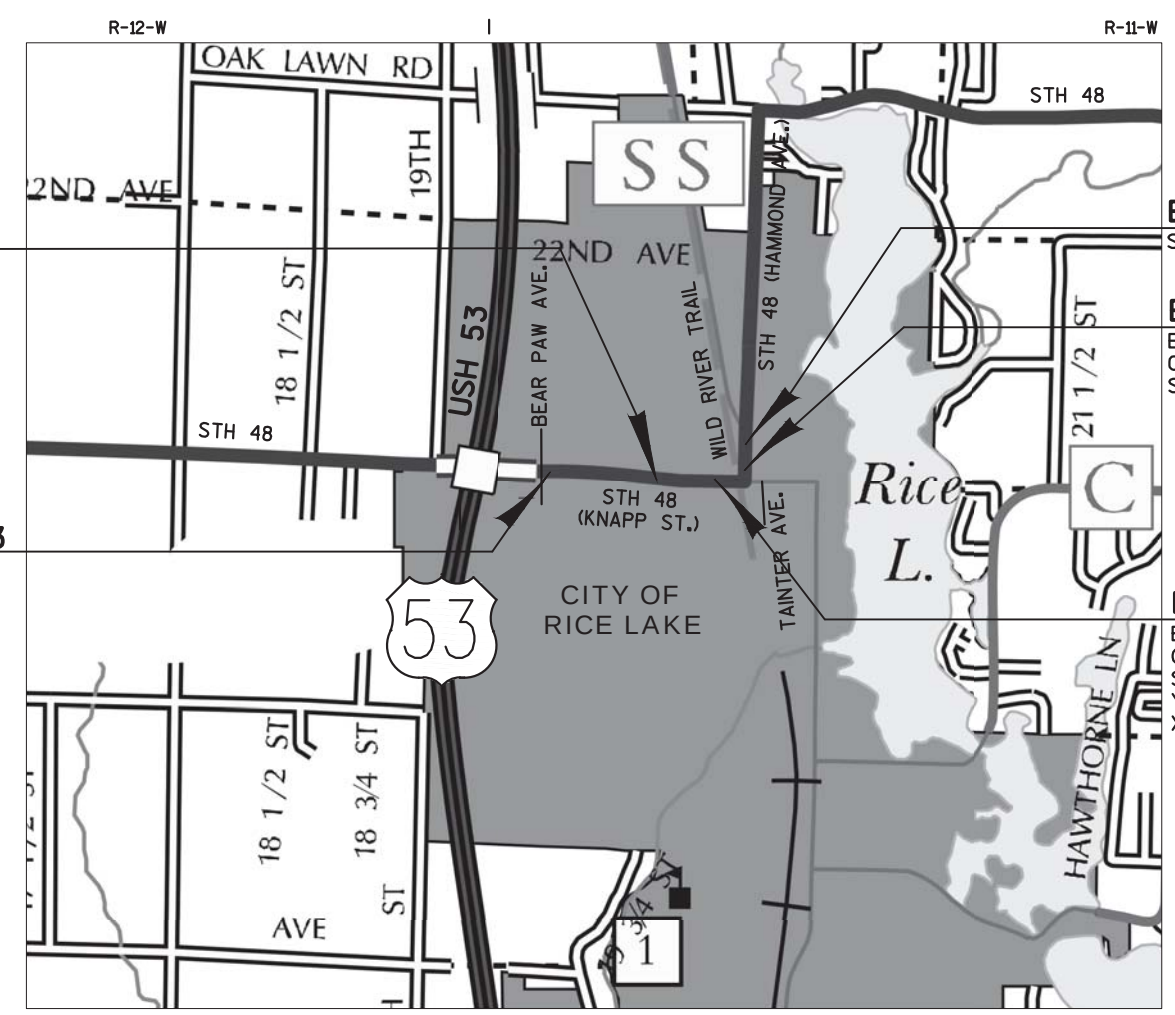
C RICE LAKE, KNAPP STREET

BEAR PAW AVENUE TO HAMMOND AVENUE CH SS EAST JUNCTION INTERSECTION WISCONSIN AVENUE INTERSECTION

STH 48 STH 48 STH 48

BARRON COUNTY BARRON COUNTY BARRON COUNTY

STATE PROJECT NUMBER	STATE PROJECT NUMBER	STATE PROJECT NUMBER
8120-04-73	8120-04-74	8120-04-75



LAYOUT
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE (8120-04-73) = 0.798 MI.
TOTAL NET LENGTH OF CENTERLINE (8120-04-74) = 0.039 MI.
TOTAL NET LENGTH OF CENTERLINE (8120-04-75) = 0.000 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) BARRON COUNTY, NAD 83(91). ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAV 88 (2007)

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8120-04-73	WISC 2018199	1
8120-04-74	WISC 2018200	1
8120-04-75	WISC 2018201	1

ACCEPTED FOR
CITY OF RICE LAKE
By: Michael M. Dierks, Mayor
DATE: October 27, 2017

ORIGINAL PLANS PREPARED BY
AECOM
AECOM
200 INDIANA AVENUE, STEVENS POINT, WI 54481
T 715.341.8110 www.aecom.com

10/30/17
(Date)
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor: AECOM
Designer: AECOM
Project Manager: Beth Cunningham, PE
Regional Examiner: Jennifer Oldenburg
Regional Supervisor: Andrew Stensland, PE
C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 10/27/17
(Signature)

E

GENERAL NOTES

THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

RADII, ELEVATIONS, AND DIMENSIONS ARE GIVEN AT THE PAVEMENT EDGES, UNLESS OTHERWISE NOTED IN THE PLANS.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH PLAN TYPICAL SECTIONS AND CONSTRUCTED SUCH THAT THE HMA LONGITUDINAL JOINTS LINE UP WITH THE EXISTING CONCRETE LONGITUDINAL JOINTS.

ADJUST TRAFFIC CONTROL DEVICE LOCATIONS TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

EROSION CONTROL ITEMS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS TO FIT FIELD CONDITIONS.

WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.

TOPSOIL, FERTILIZE, AND SEED ALL DISTURBED AREAS WITHIN THE RIGHT OF WAY WHERE PAVEMENT OR GRAVEL IS NOT BEING PLACED.

FOR DRIVEWAY RECONSTRUCTION REFER TO SDD "DRIVEWAY AND SIDEWALK RAMPS TYPE Z". USE 3-INCH ASPHALTIC SURFACE FOR ASPHALT DRIVEWAY THICKNESS.

REPLACE CURB AND GUTTER, AS SHOWN ON THE PLAN DETAILS, TO THE PROPOSED PAVEMENT ELEVATION. PROPOSED CURB AND GUTTER WILL NOT BE MILLED AND OVERLAID. SEE CONSTRUCTION DETAILS FOR "CURB HEIGHT TRANSITION" DETAIL.

ORDER OF SECTION 2

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
PLAN DETAILS
JOINTING DETAILS
EROSION CONTROL
STORM SEWER
SIGN REMOVALS
PERMANENT SIGNING
TRAFFIC SIGNAL PLAN
PAVEMENT MARKINGS
TRAFFIC CONTROL
DETOUR PLAN
ALIGNMENT DIAGRAM

UTILITIES

KYLE SCHLAMPP
CENTURYLINK
COMMUNICATION LINE
20 S WILSON AVE
RICE LAKE, WI 54868
(715) 234-5573 OFFICE
(715) 292-0082 CELL
KYLE.SCHLAMPP@CENTURYLINK.COM

TOM HAASE
CHARTER COMMUNICATIONS (SPECTRUM)
COMMUNICATION LINE
2304 S MAIN ST
RICE LAKE, WI 54868
(715) 236-5005
JAMEY.OLDEEN@CHARTER.COM

PAT MCMANUS
MOSAIC TELECOM
COMMUNICATION LINE
401 S 1ST ST
P.O. BOX 664
CAMERON, WI 54822
(715) 458-5352 OFFICE
(715) 642-3330 CELL
PMCMANUS@MOSAICTELECOM.COM

LEO DIEHL
RICE LAKE UTILITIES - MANAGER
320 W COLEMAN STREET
RICE LAKE, WI 54868
(715) 234-7004 OFFICE
(715) 651-0308 CELL
LEOD@RICELAKEUTILITIES.COM

COREY MARGETTA
RICE LAKE UTILITIES
SANITARY SEWER - FIELD CONTACT
1112 SOUTH WISCONSIN AVENUE
RICE LAKE, WI 54868
(715) 234-3681 OFFICE
COREYM@RICELAKEUTILITIES.COM

TIM AABY
RICE LAKE UTILITIES
ELECTRIC - FIELD CONTACT
320 W COLEMAN STREET
RICE LAKE, WI 54868
(715) 234-7004 OFFICE
(715) 651-0223 CELL
TIMA@RICELAKEUTILITIES.COM

CHAD PAULSON
RICE LAKE UTILITIES
WATER - FIELD CONTACT
320 W COLEMAN STREET
RICE LAKE, WI 54868
(715) 234-7004 OFFICE
(715) 651-3374 CELL
CHADP@RICELAKEUTILITIES.COM

BRYAN CUNNINGHAM, PE
WATERMAIN CONSULTANT
SHORT ELLIOTT HENDRICKSON, INC.
1701 WEST KNAPP STREET, SUITE B
RICE LAKE, WI 54868
(715)861-4987
BCUNNINGHAM@SEHINC.COM

LEWIS KNAPP
WE ENERGIES
GAS/PETROLEUM
104 W SOUTH STREET
RICE LAKE, WI 54868
(715) 234-9605 OFFICE
(715)419-2196 CELL
LEWIS.KNAPP@WE-ENERGIES.COM

ABBREVIATIONS

AP	ACCESS POINT/ DRIVEWAY CONNECTION
AR	ACCESS RIGHTS
AC.	ACRES
ET.AL.	AND OTHERS
℄ OR C/L	CENTERLINE
CMCP	CORRUGATED METAL CULVERT PIPE
CSM	CERTIFIED SURVEY MAP
COR.	CORNER
D	DEGREE OF CURVE
D.D.	DIRECTION DISTRIBUTION
D.H.V.	DESIGN HOUR VOLUME
DOC.	DOCUMENT
E.	EAST
EASE.	EASEMENT
EL OR ELEV	ELEVATION
E.S.A.L.	EQUIVALENT SINGLE AXLE LOAD
EXIST.	EXISTING
H.E.	HIGHWAY EASEMENT
HMA	HOT MIX ASPHALT
IP OR I.P.	IRON PIN
L	LENGTH OF CURVE
LN	LANE
LT. OR LT	LEFT
MAX.	MAXIMUM

ABBREVIATIONS CONT.

MIN.	MINIMUM
MON.	MONUMENT
MP	ROADWAY MILEAGE
N.	NORTH
P.	PAGE
PLE	PERMANENT LIMITED EASEMENT
PL	PROPERTY LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RD.	ROAD
(100')	RECORDED AS
R	RADIUS
℄ OR R/L	REFERENCE LINE
ROR	RELEASE OF RIGHTS
REM.	REMAINING
RT OR RT.	RIGHT
R/W	RIGHT-OF-WAY
S.	SOUTH
S.E.	SUPEREVELVATION
SEC.	SECTION
SF	SQUARE FEET
STA.	STATION
T	TANGENT
TLE	TEMPORARY LIMITED EASEMENT
T. %	TRUCK (PERCENT OF)
V.	VOLUME
W.	WEST

WISDOT CONTACT

BETH CUNNINGHAM, PE
W7102 GREEN VALLEY ROAD
SPOONER, WI 54801
PHONE: (715)635-4973
BETH.CUNNINGHAM@DOT.WI.GOV

CONSULTANT CONTACT

RYAN BARZ, PE
200 INDIANA AVENUE
STEVENS POINT, WI 54481
PHONE: (715)342-3012
RYAN.BARZ@AECOM.COM

WISDNR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
NORTHERN REGION HQ
AMY CRONK
810 W. MAPLE STREET
SPOONER, WI 54801
PHONE: (715)635-4229
AMY.CRONK@WISCONSIN.GOV

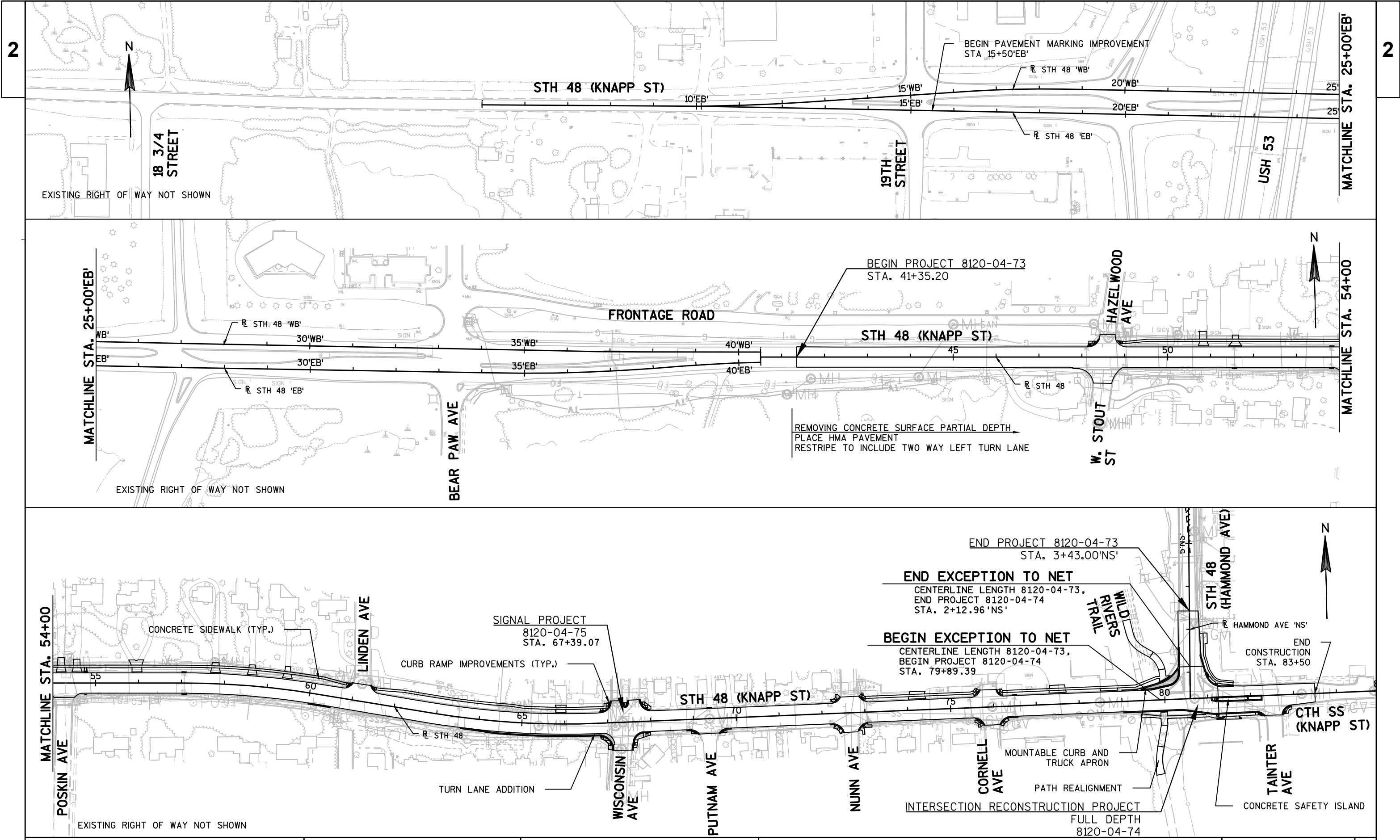
CITY OF RICE LAKE

COMMUNITY SERVICES DEPARTMENT DIRECTOR
JIM ANDERSON
326 S MAIN STREET
RICE LAKE, WI 54868
PHONE: (715)234-7402
JANDERSON@RICELAKEGOV.ORG

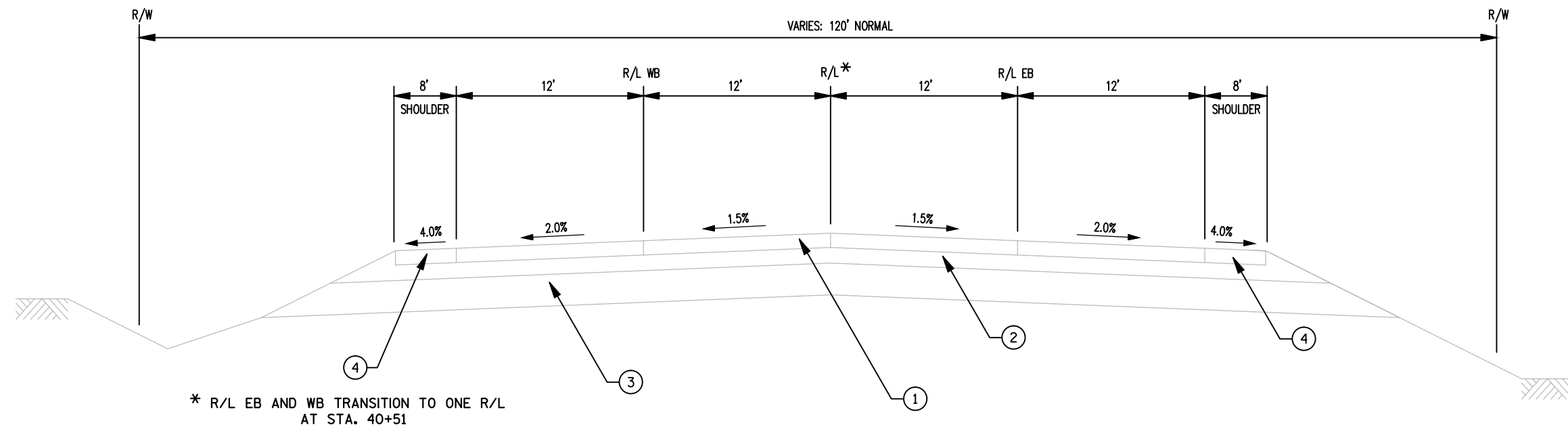
DIGGERSHOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com



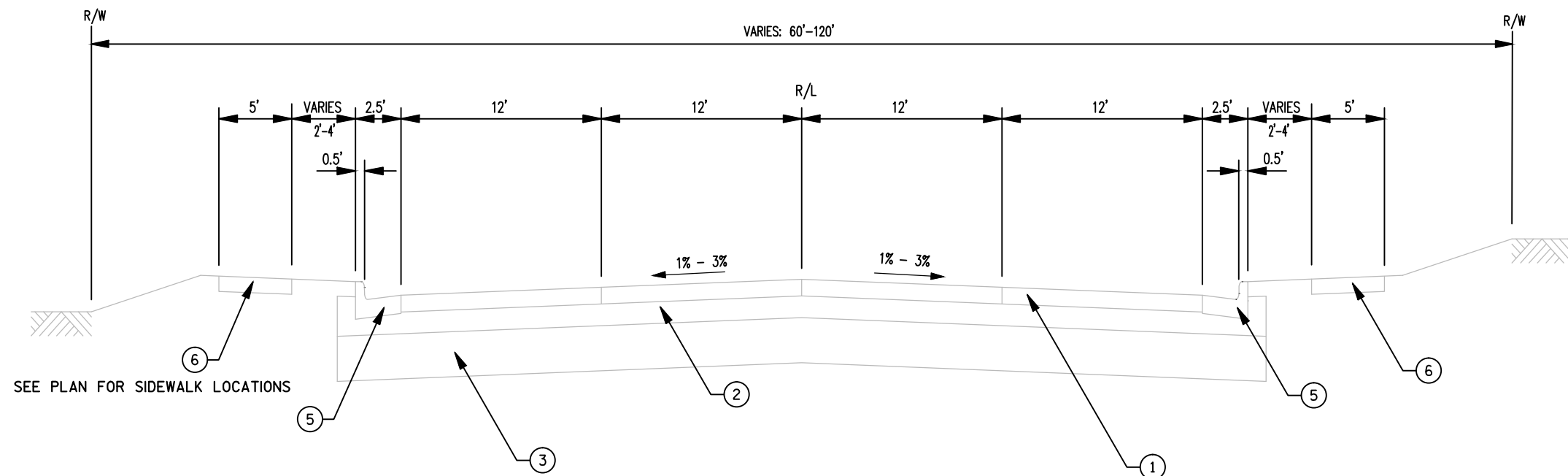
PROJECT NO: 8120-04-73/74	HWY: STH 48	COUNTY: BARRON	PROJECT OVERVIEW	SHEET 3	E
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**TYPICAL EXISTING SECTION - STH 48**

STA 41+35.20 TO STA 46+46

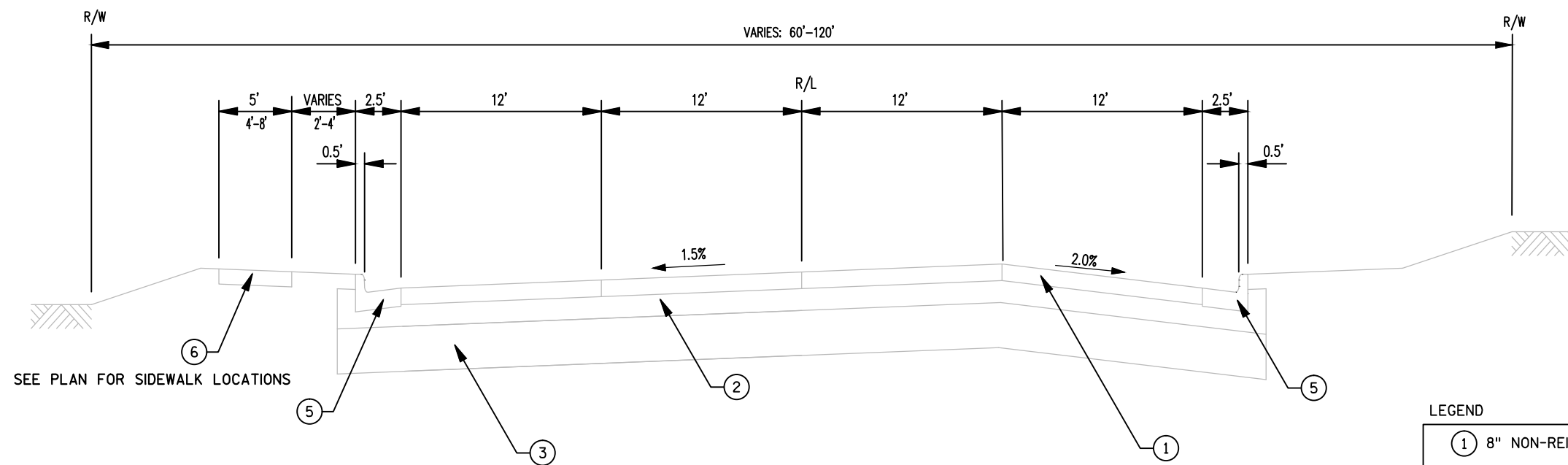
LEGEND

- ① 8" NON-REINFORCED CONCRETE PAVEMENT
- ② 6" BASE COURSE
- ③ 12" SELECT BORROW
- ④ ASPHALT SHOULDER



TYPICAL EXISTING SECTION - STH 48

STA 46+46 TO STA 57+03
STA 60+15 TO STA 62+89
STA 66+81 TO STA 83+50
STA 1+38'NS' TO STA 3+42'NS'

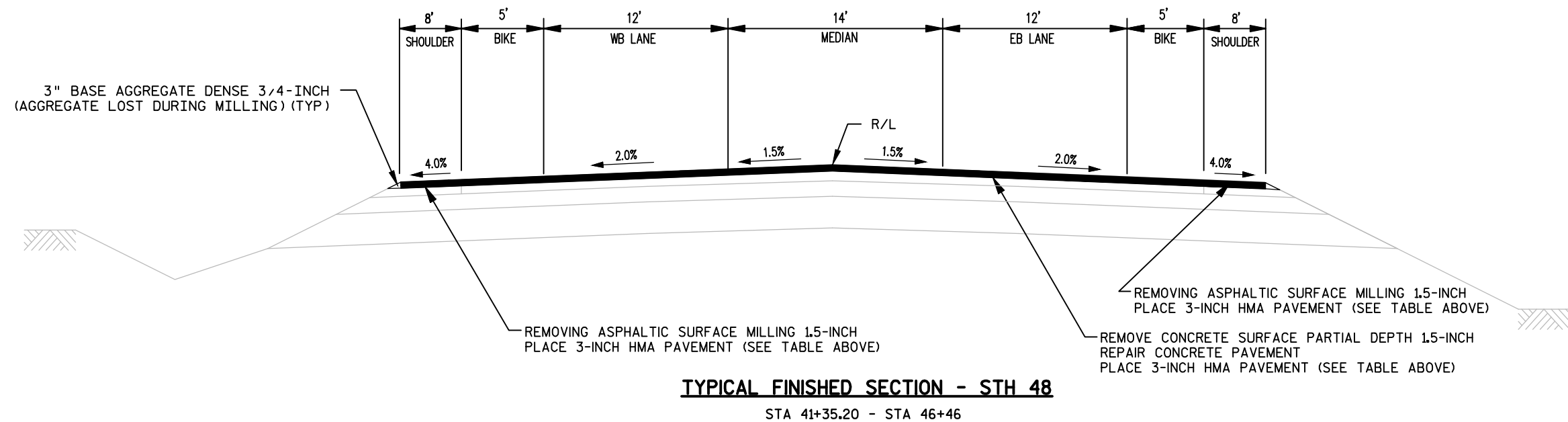


TYPICAL EXISTING SUPERELEVATED SECTION - STH 48

STA 57+03 TO STA 60+15
STA 62+89 TO STA 66+81

LEGEND

- ① 8" NON-REINFORCED CONCRETE PAVEMENT
- ② 6" BASE COURSE
- ③ 12" SELECT BORROW
- ⑤ CONCRETE CURB & GUTTER
- ⑥ 4" CONCRETE SIDEWALK



TOTAL LAYER PAVEMENT THICKNESS	LAYERS	HMA PAVEMENT SPECIFICATIONS
3"	1 1/2" UPPER LAYER 1 1/2" LOWER LAYER	HMA PAVEMENT 5 MT 58-34 H HMA PAVEMENT 5 MT 58-34 H

NOTE:
REMOVE CONCRETE SURFACE PARTIAL DEPTH AND REPAIR CONCRETE PAVEMENT, PAID FOR UNDER "PREPARATION OF FOUNDATION FOR ASPHALTIC PAVING SPECIAL", "ASPHALTIC SURFACE PATCHING", "CONCRETE PAVEMENT REPAIR", AND "CONCRETE PAVEMENT REPLACEMENT".

2



NOTE:
REMOVE CONCRETE SURFACE PARTIAL DEPTH AND REPAIR
CONCRETE PAVEMENT, PAID FOR UNDER "PREPARATION OF
FOUNDATION FOR ASPHALTIC PAVING SPECIAL", "ASPHALTIC
SURFACE PATCHING", "CONCRETE PAVEMENT REPAIR", AND
"CONCRETE PAVEMENT REPLACEMENT".

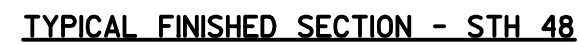
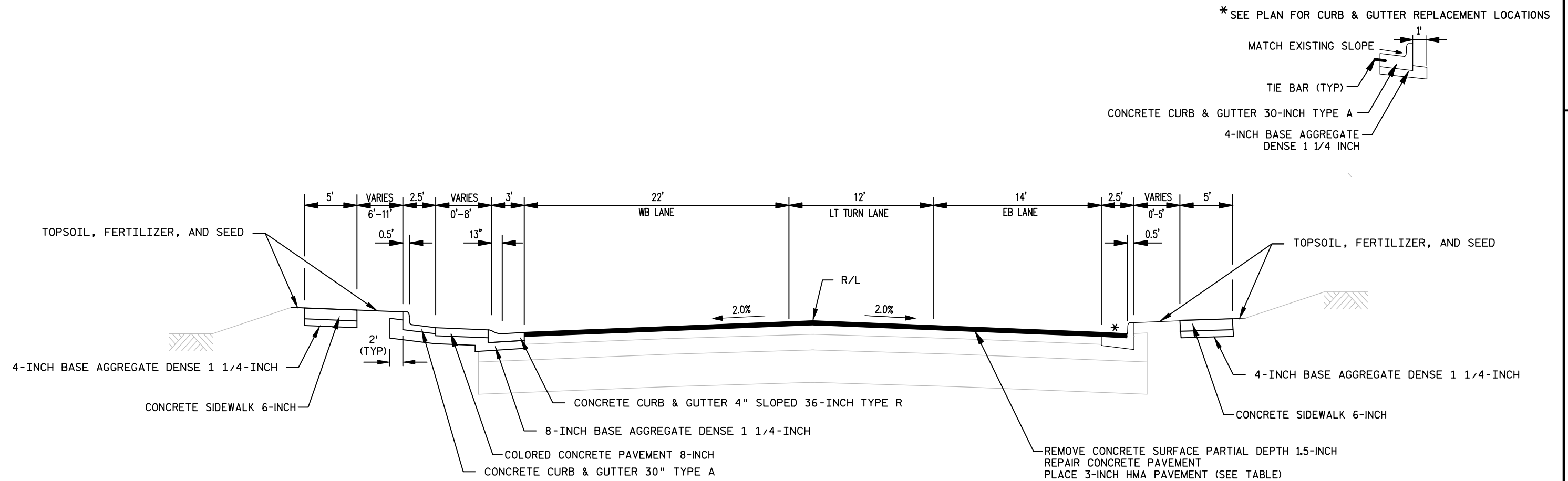


Diagram illustrating the cross-section of a road construction project, showing various layers and dimensions:

- Topsoil, Fertilizer, and Seed:** Indicated on the left side of the road.
- Dimensions (from left to right):**
 - 5'
 - VARIES
 - 5'-7'
 - 0.5'
 - 2.5'
 - 5' BIKE
 - 12' WB LANE
 - 14' TWLTL
 - 12' EB LANE
 - 5' BIKE
 - 2.5'
 - 0.5'
- Grades:**
 - 1.5% (downward slope on the left side)
 - 2% (upward slope on the right side)
- Structural Layers and Details:**
 - REMOVE CONCRETE SURFACE PARTIAL DEPTH 1.5-INCH**
 - REPAIR CONCRETE PAVEMENT**
 - PLACE 3-INCH HMA PAVEMENT (SEE TABLE)**
 - 4-INCH BASE AGGREGATE DENSE 1 1/4-INCH**
 - CONCRETE SIDEWALK 6-INCH**
SEE PLAN FOR SIDEWALK LOCATIONS
 - 3-INCH HMA PAVEMENT (SEE TABLE)**
 - CONCRETE CURB & GUTTER 30-INCH TYPE A**
 - 12-INCH SELECT BORROW**
 - 6-INCH BASE AGGREGATE DENSE 1 1/4 INCH**
 - CONCRETE BASE 6 1/2 -INCH**
- Other Labels:**
 - R/L (Right of Way Line)
 - * (Marker/Reference points)

TYPICAL FINISHED SUPERELEVATED SECTION - STH 48

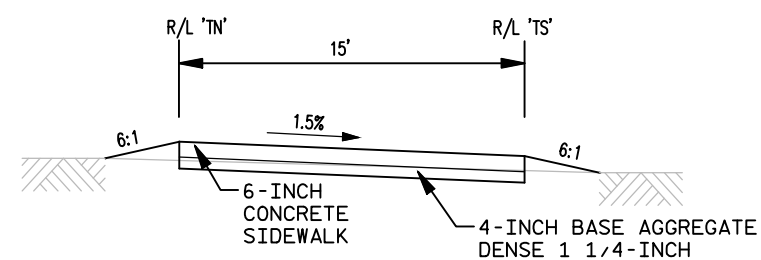
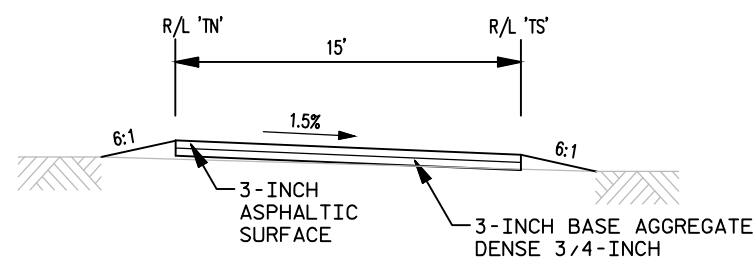
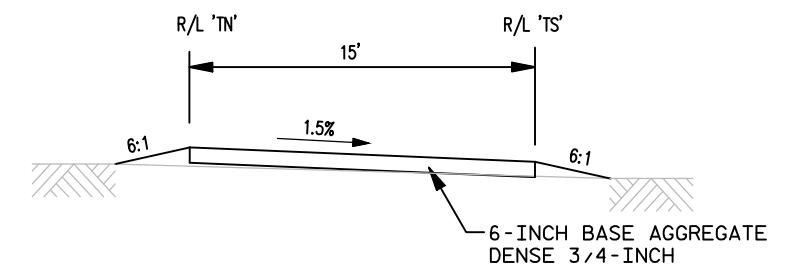
TURN LANE EXPANSION
WISCONSIN AVENUE INTERSECTION

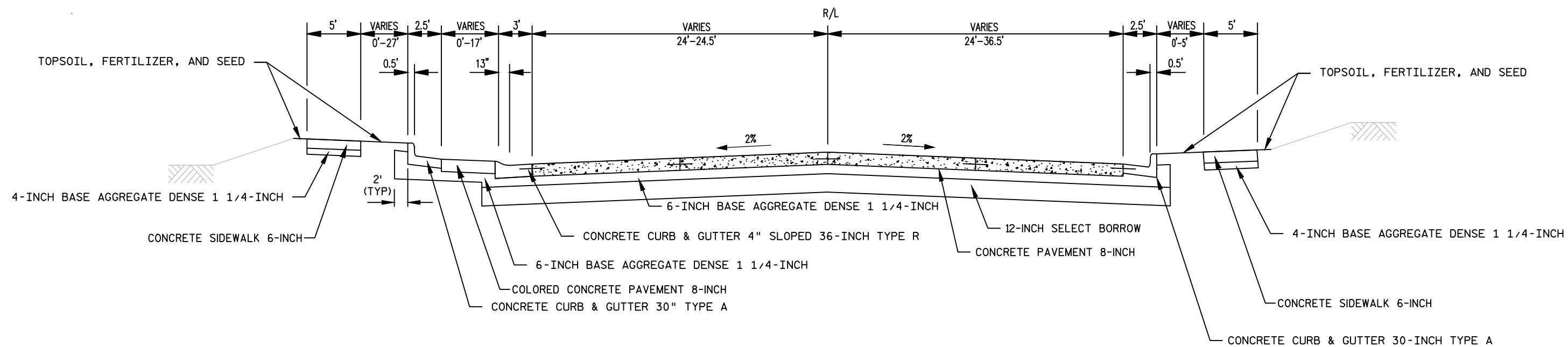
**TYPICAL FINISHED SECTION - STH 48**

STA 79+34 TO STA 79+89

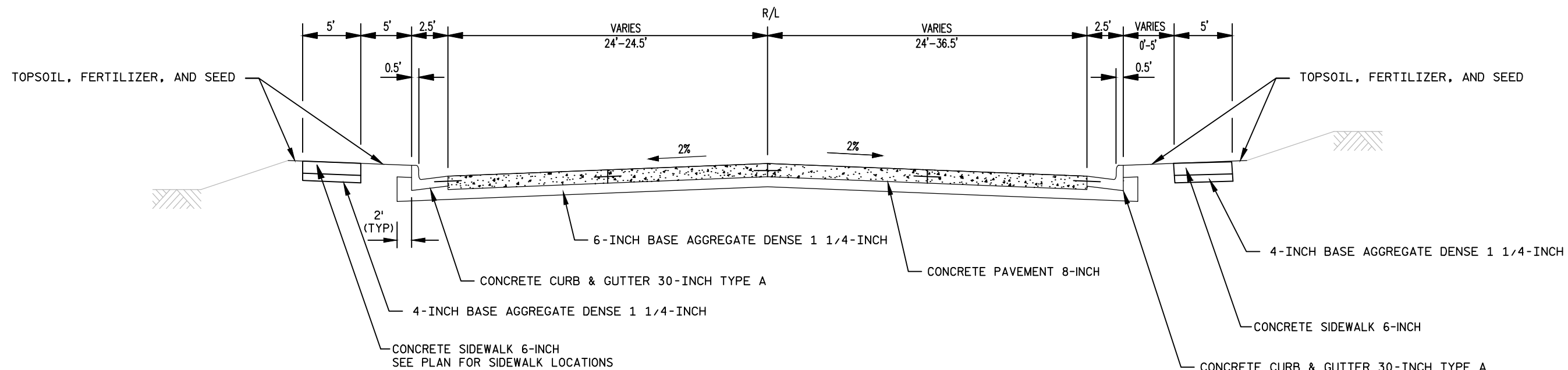
TOTAL LAYER PAVEMENT THICKNESS	LAYERS	HMA PAVEMENT SPECIFICATIONS
3"	1 1/2" UPPER LAYER 1 1/2" LOWER LAYER	HMA PAVEMENT 5 MT 58-34 H HMA PAVEMENT 5 MT 58-34 H

NOTE:
REMOVE CONCRETE SURFACE PARTIAL DEPTH AND REPAIR CONCRETE PAVEMENT, PAID FOR UNDER "PREPARATION OF FOUNDATION FOR ASPHALTIC PAVING SPECIAL", "ASPHALTIC SURFACE PATCHING", "CONCRETE PAVEMENT REPAIR", AND "CONCRETE PAVEMENT REPLACEMENT".

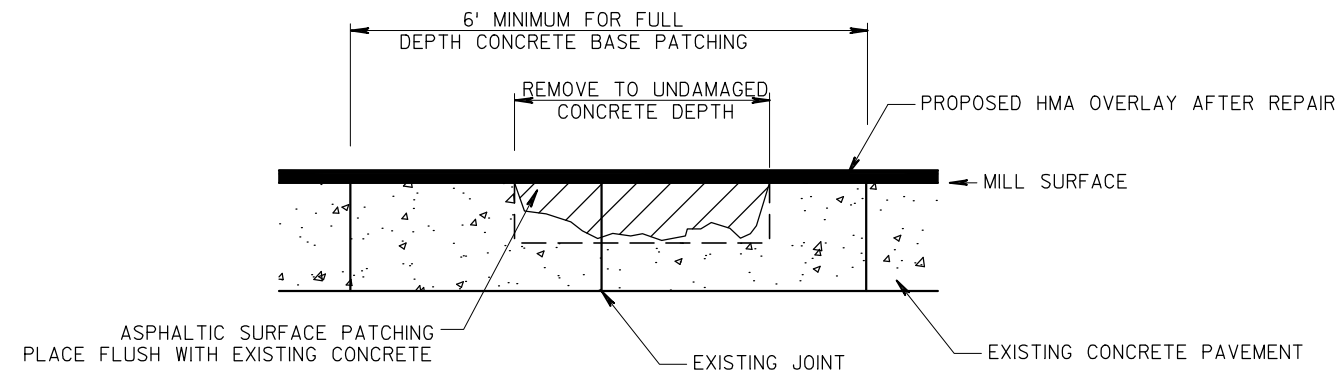
**TYPICAL FINISHED SECTION - WILD RIVERS TRAIL NORTH**STA 1+00'TN' TO STA 1+28'TN'
STA 2+13'TS' TO STA 2+47'TS'**TYPICAL FINISHED SECTION - WILD RIVERS TRAIL NORTH**STA 1+28'TN' TO STA 1+66'TN'
STA 1+63'TS' TO STA 2+13'TS'**TYPICAL FINISHED SECTION - WILD RIVERS TRAIL SOUTH**STA 1+66'TN' TO STA 2+77'TN'
STA 1+00'TS' TO STA 1+63'TS'

**TYPICAL FINISHED SECTION - STH 48**

STA 79+89 TO STA 80+59
STA 1+38'NS' TO STA 2+13'NS'

**TYPICAL FINISHED SECTION - STH 48**

STA 80+51 TO STA 81+24



ASPHALTIC SURFACE PATCHING

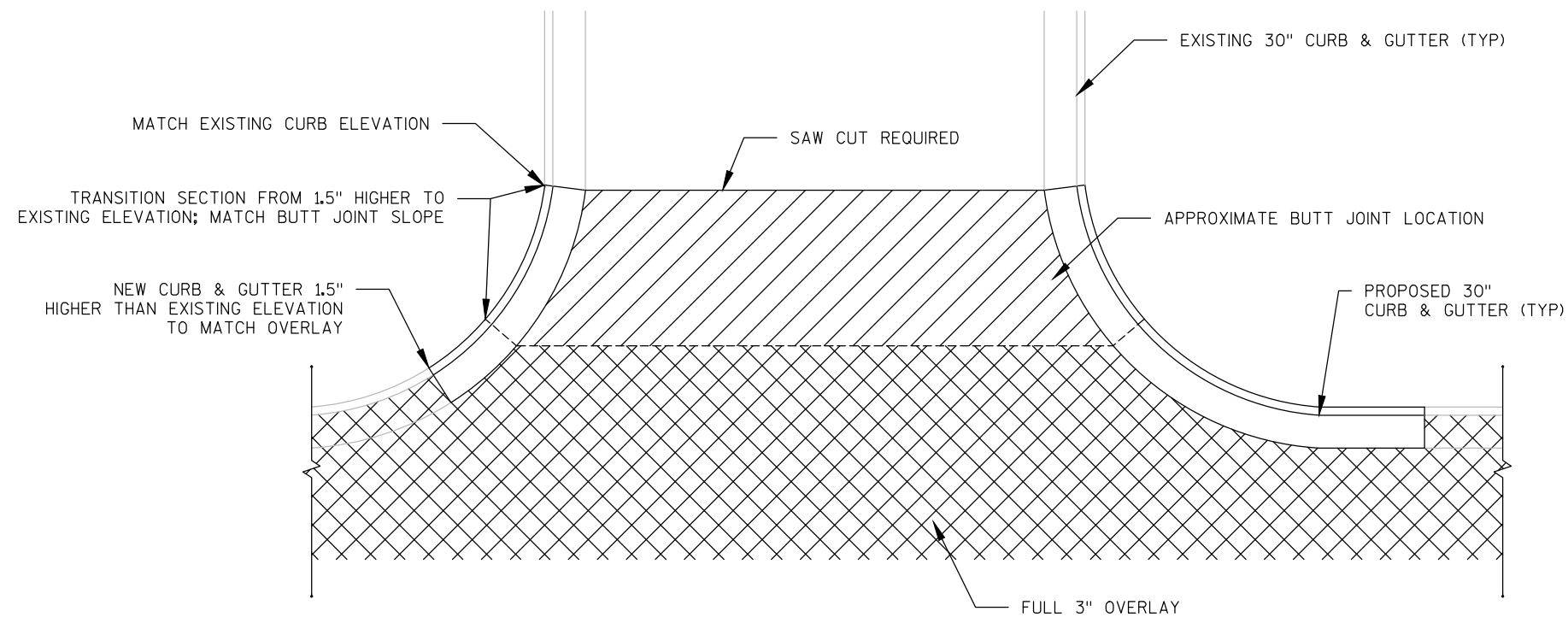
NOTE:

PRIOR TO THE LOWER HMA LAYER PLACEMENT, REMOVE ALL CONCRETE, ASPHALT, AND ANY UNSOUND MATERIAL FROM TRANSVERSE AND LONGITUDINAL JOINTS AND RANDOM CRACKS. LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

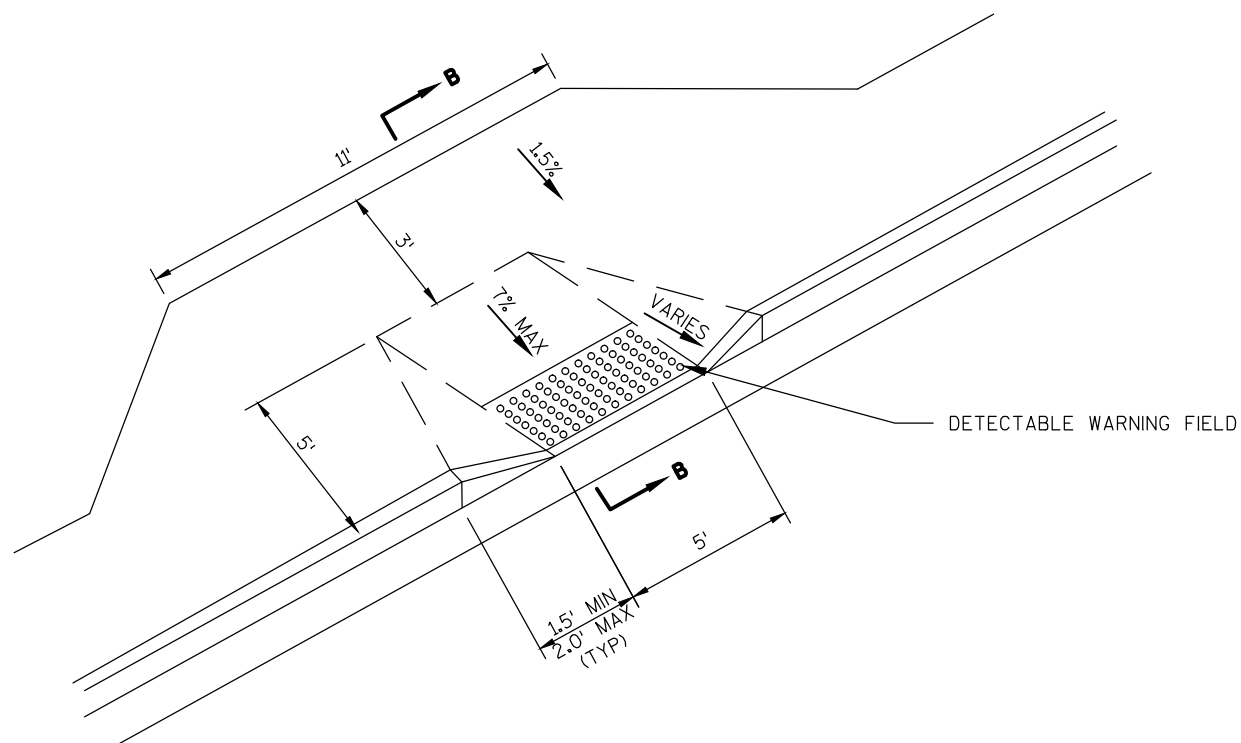
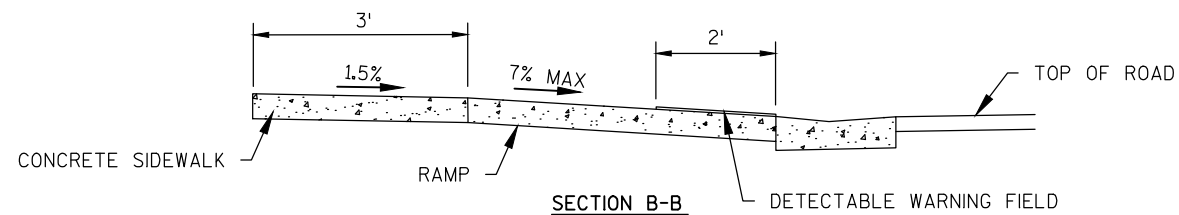
PLACE ASPHALTIC SURFACE PATCHING IN THE JOINT REPAIR AREAS. COMPACT PATCHING IN LIFTS UNTIL FLUSH WITH THE SURFACE OF THE CONCRETE. ASPHALTIC SURFACE PATCHING PAID SEPARATELY FROM PREPARATION OF FOUNDATION FOR ASPHALT PAVING SPECIAL ITEM.

DEPTH VARIES FROM A MINIMUM DEPTH OF 4-INCH TO A FULL DEPTH JOINT AS CONDITIONS DICTATE.

APPROXIMATE WIDTH OF JOINTS OR CRACK REPAIR VARIES. THE CONTRACTOR IS RECOMMENDED TO REVIEW THE PROJECT SITE TO CONFIRM THE JOINT CONDITIONS PRIOR TO BIDDING.

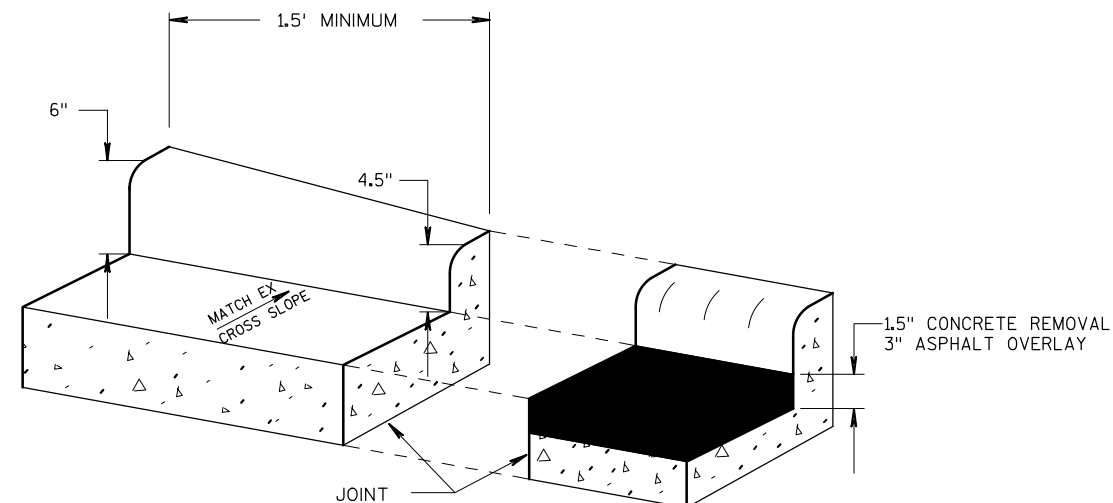


SIDEROAD TRANSITION DETAIL



CURB RAMP TYPE 7A MODIFIED

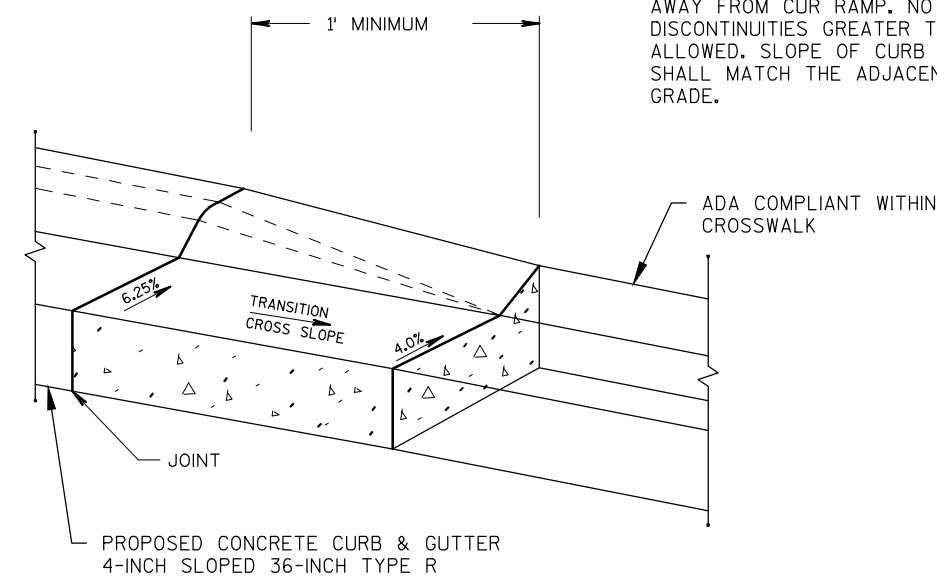
STATION 81+20 RT
(NOT TO SCALE)



CURB HEIGHT TRANSITION DETAIL

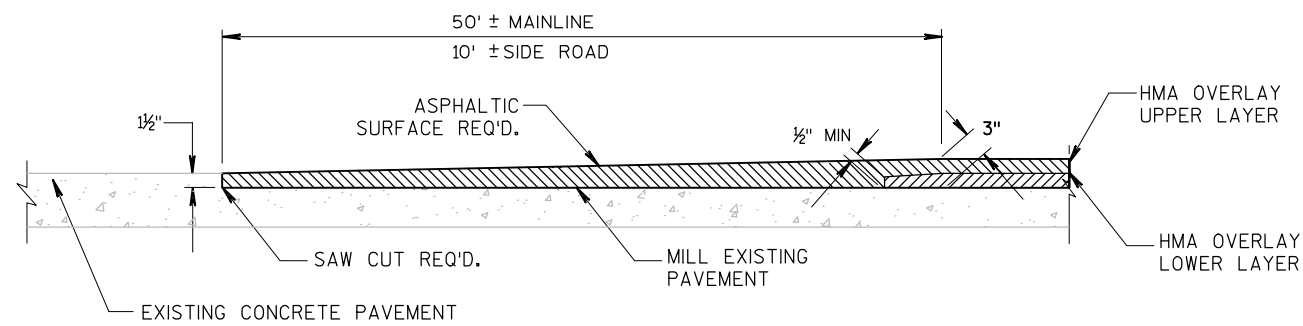
30" TYPE "A" CURB & GUTTER TO EXISTING CURB AND GUTTER
(TO BE MEASURED & PAID FOR AS 30" CONC. C&G)
REFER TO PLANS FOR NEW CURB & GUTTER LOCATIONS ADJACENT TO MILL & OVERLAY

NOTE:
GRADE CHANGE BETWEEN GUTTER FLAG SLOPE
AND THE APRON SLOPE SHALL NOT EXCEED 11%.
MAXIMUM GUTTER SLOPE IS 4%. PROVIDE
LONGITUDINAL DRAINAGE AROUND CURB AND
AWAY FROM CURB RAMP. NO VERTICAL LIPS OR
DISCONTINUITIES GREATER THAN 1/4-INCH ARE
ALLOWED. SLOPE OF CURB HEAD OPENING
SHALL MATCH THE ADJACENT TRUCK APRON
GRADE.

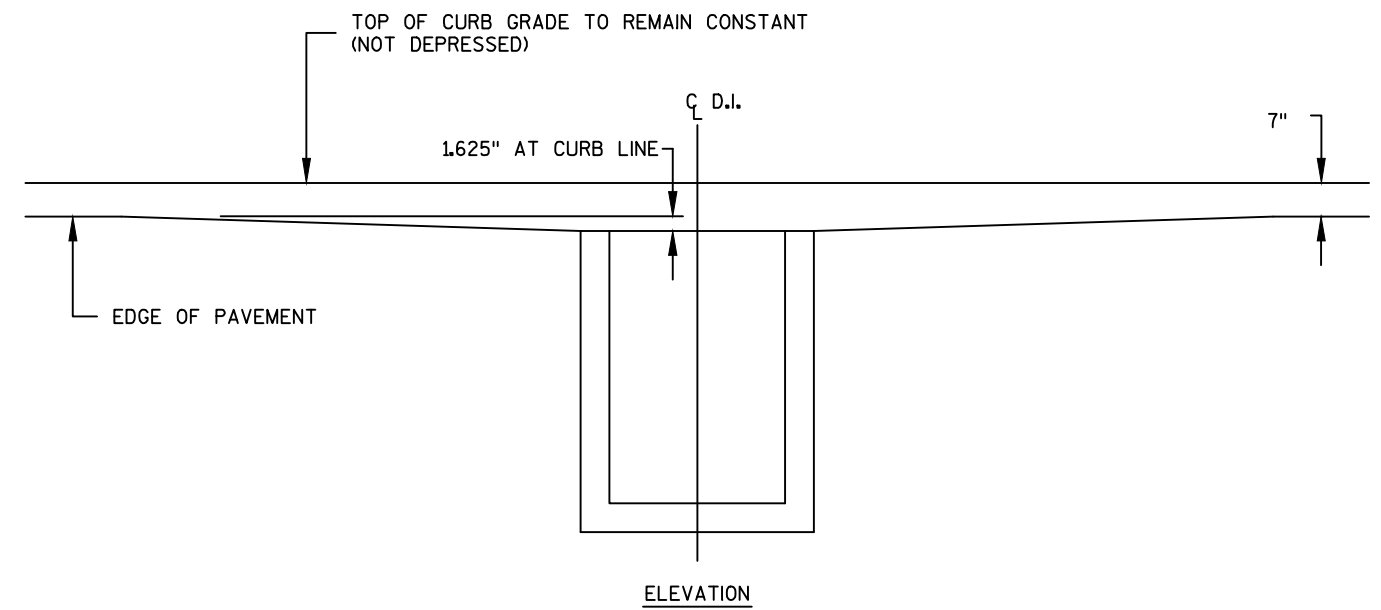
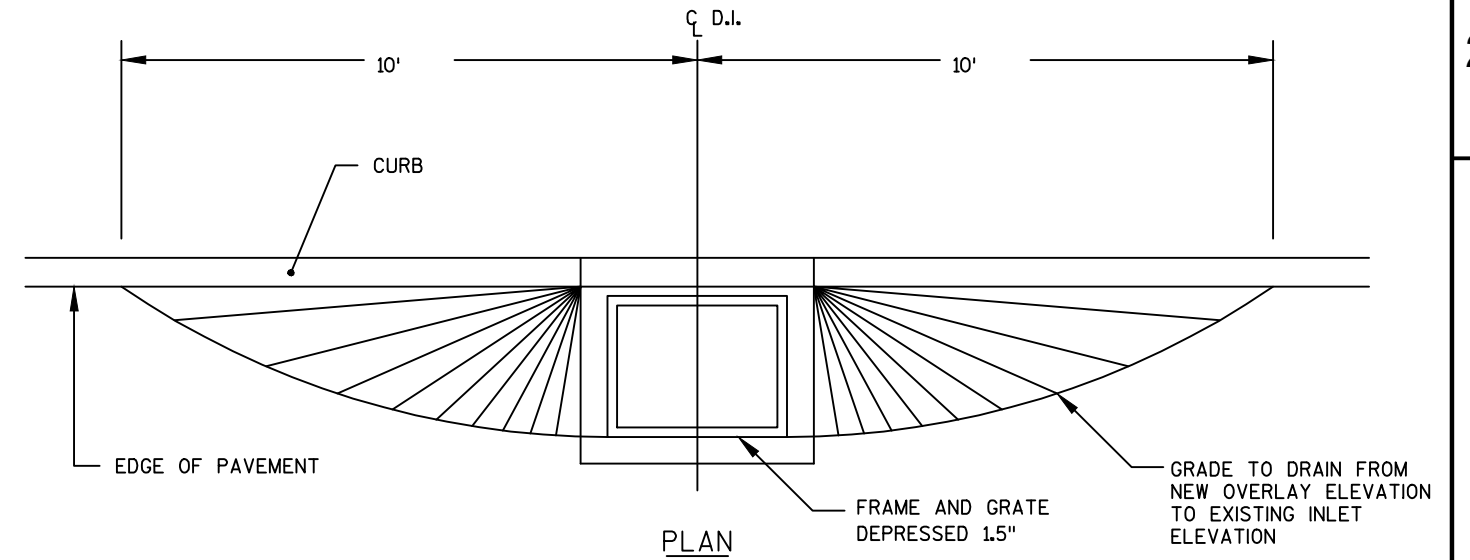


CURB TRANSITION WITHIN TRUCK APRON

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TO ADA CURB RAMP CURB AND GUTTER
(TO BE MEASURED & PAID FOR AS CONCRETE C&G 4-INCH SLOPED 36-INCH)
REFER TO PLANS AT HAMMOND AVENUE TRUCK APRON
NOT TO SCALE - MIRROR DETAIL FOR OTHER SIDE

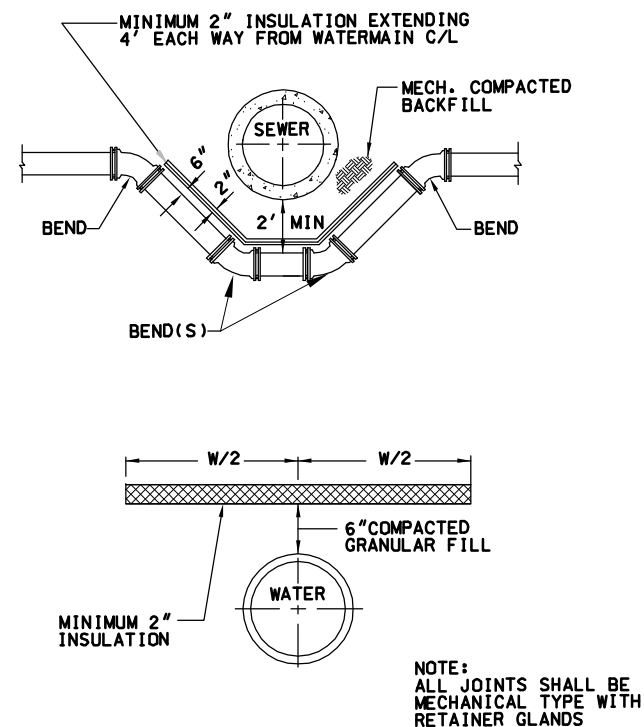


BUTT JOINT DETAIL AT CONSTRUCTION LIMITS

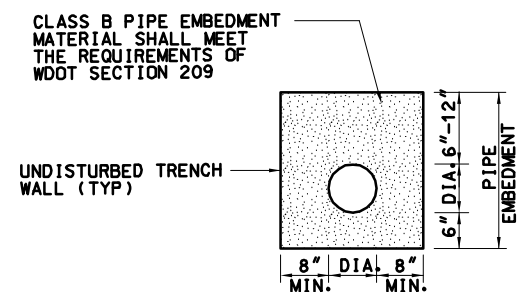


DEPRESSED INLET PAVING

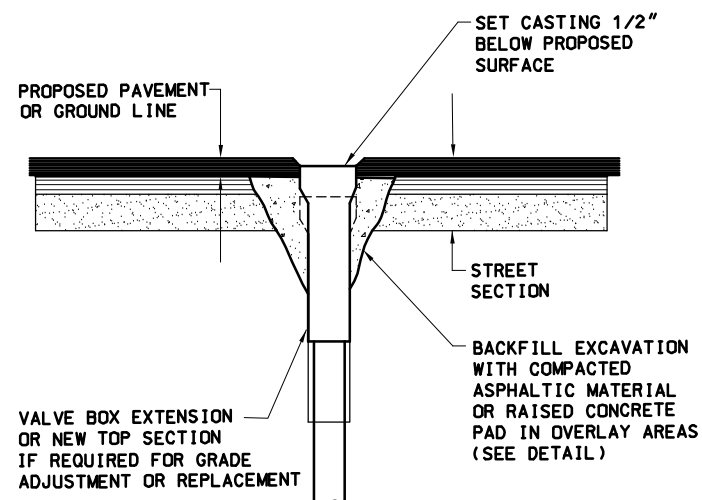
NOT TO SCALE



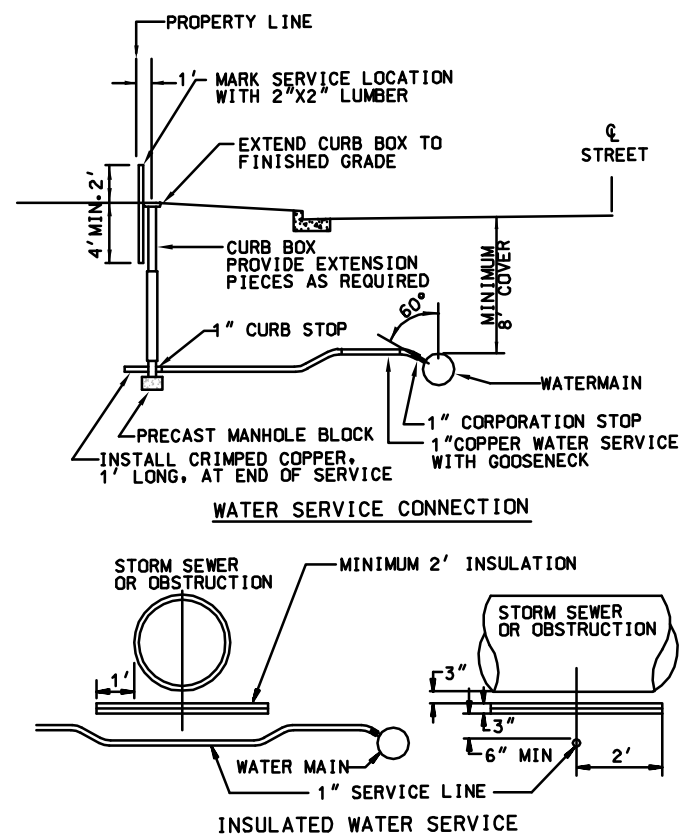
LOWER WATER MAIN W/INSULATION



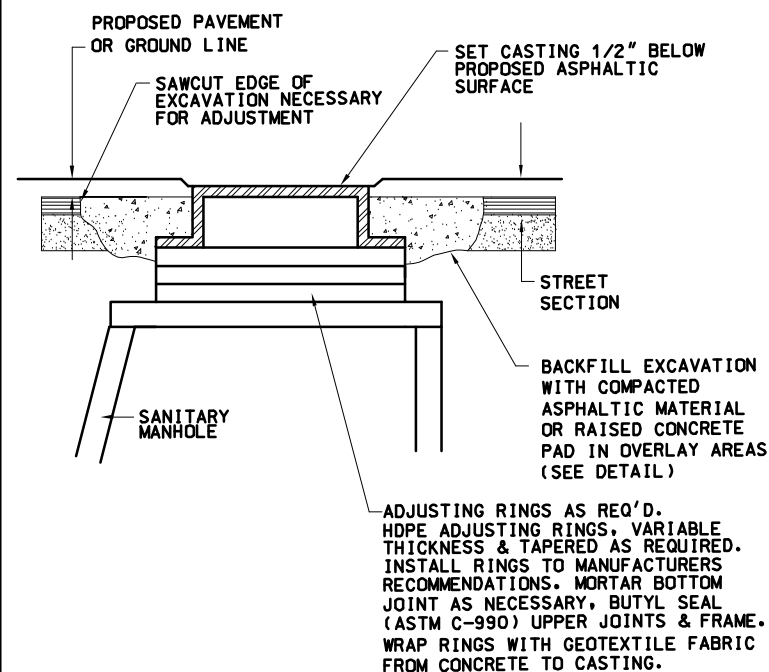
CLASS B PIPE EMBEDMENT



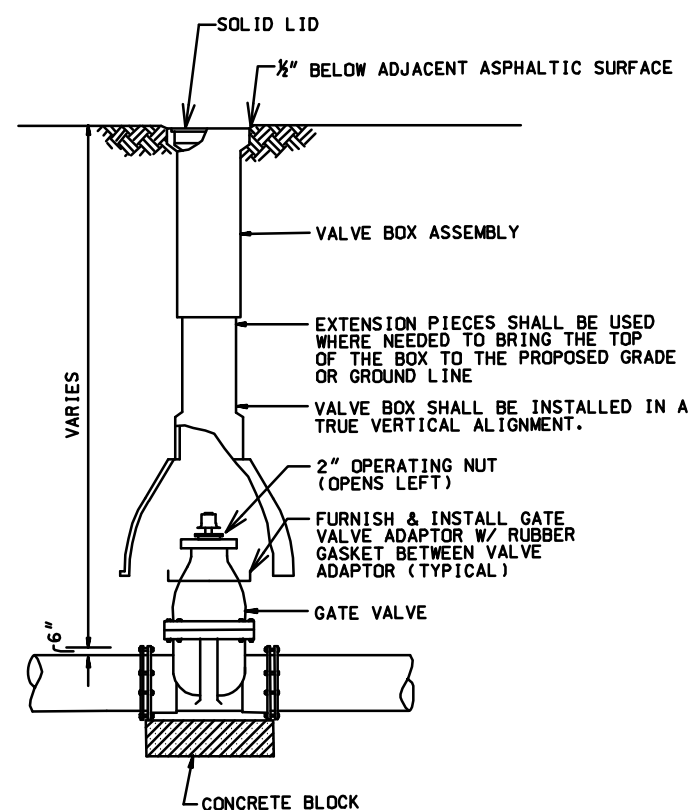
VALVE BOX ADJUSTMENT



1" WATER SERVICE CONNECTION

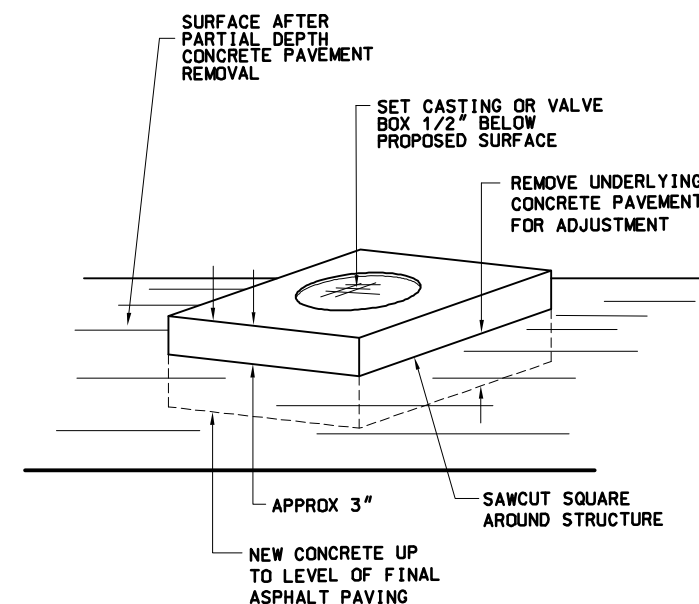


EXISTING SANITARY MANHOLE CASTING ADJUSTMENT



GATE VALVE & BOX

NOTE: IF MULTIPLE STRUCTURES ARE IN CLOSE PROXIMITY, A SINGLE SQUARE RAISED SEGMENT MAY BE POURED ENCOMPASSING THE TOPS OF SEVERAL ITEMS. VERIFY WITH ENGINEER IN SUCH SITUATIONS FOR LAYOUT APPROVAL.



ADJUSTMENTS IN CONCRETE OVERLAY AREAS

NOTE:
THIS DETAIL SUPPLEMENTS STANDARD DETAIL
DRAWINGS FOR CURB RAMP 1, 1-A, 2, 3, 4A, 4B,
5, 6, 7A, 7B, & 8, CURB RAMP DETECTABLE
WARNING FIELDS APPLICATIONS, AND CURB RAMP
RECTANGULAR AND RADIAL DETECTABLE WARNING
PLATES.

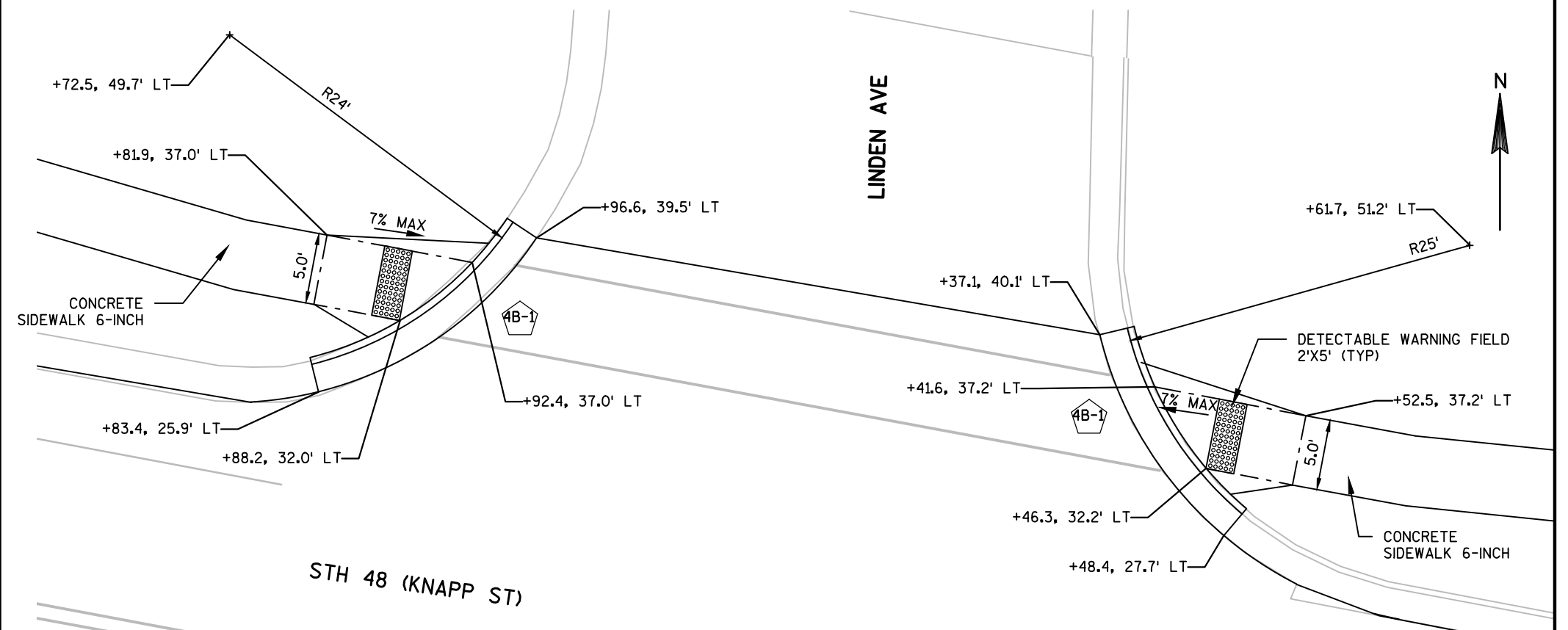
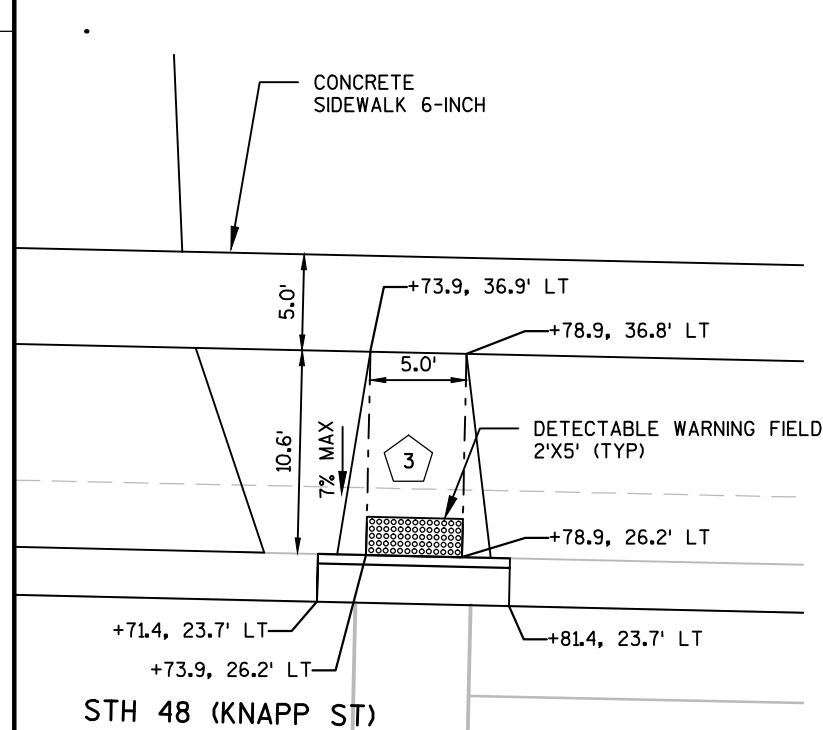
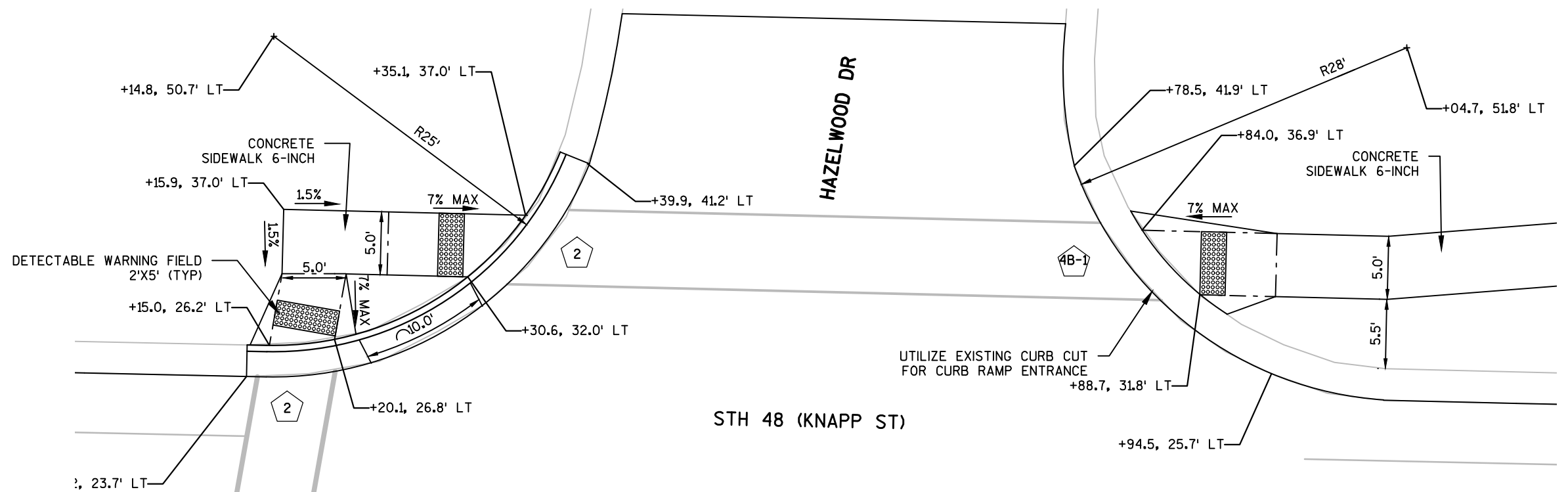
MODIFY SLOPES TO MATCH SITE CONDITIONS WITH
APPROVAL BY THE ENGINEER.

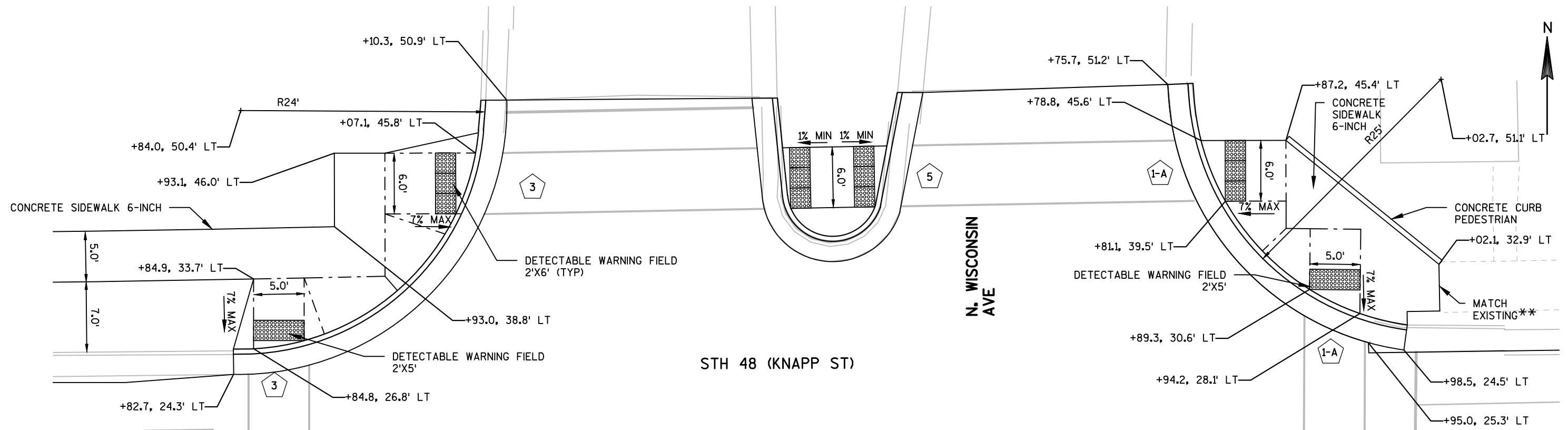
REFER TO INTERSECTION AND PLAN DETAILS FOR
ADDITIONAL LAYOUT POINTS AND MATERIAL
INFORMATION.

MATCH CURB RADIUS AND LOCATIONS TO EXISTING
CONDITIONS.

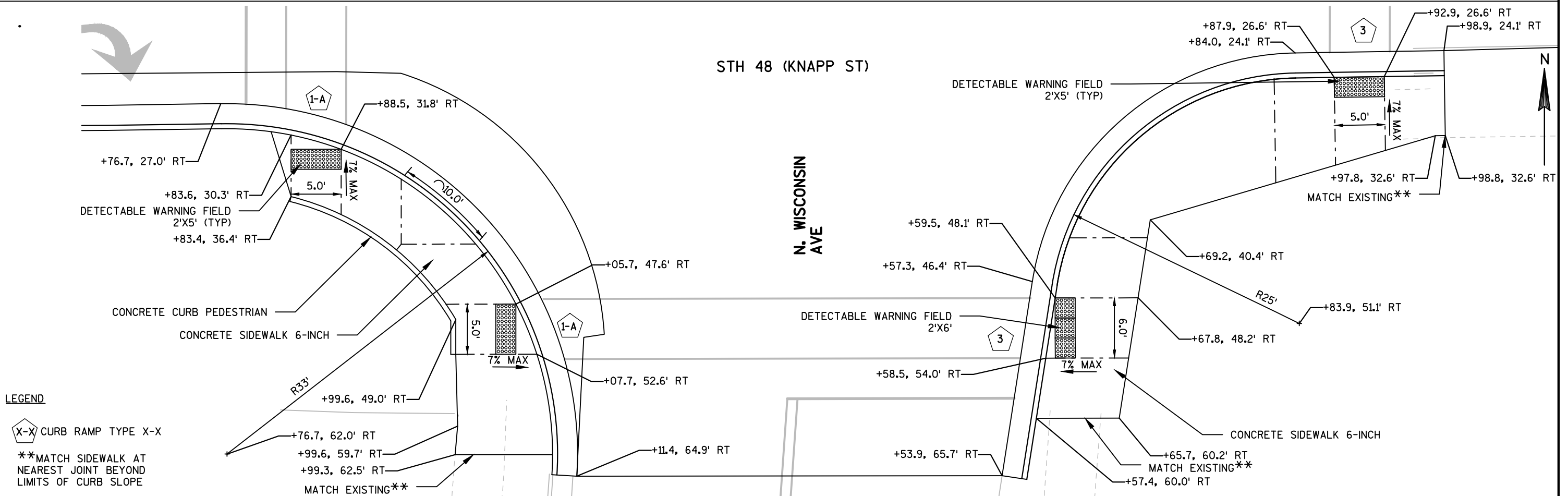
LEGEND

X-X CURB RAMP TYPE X-X





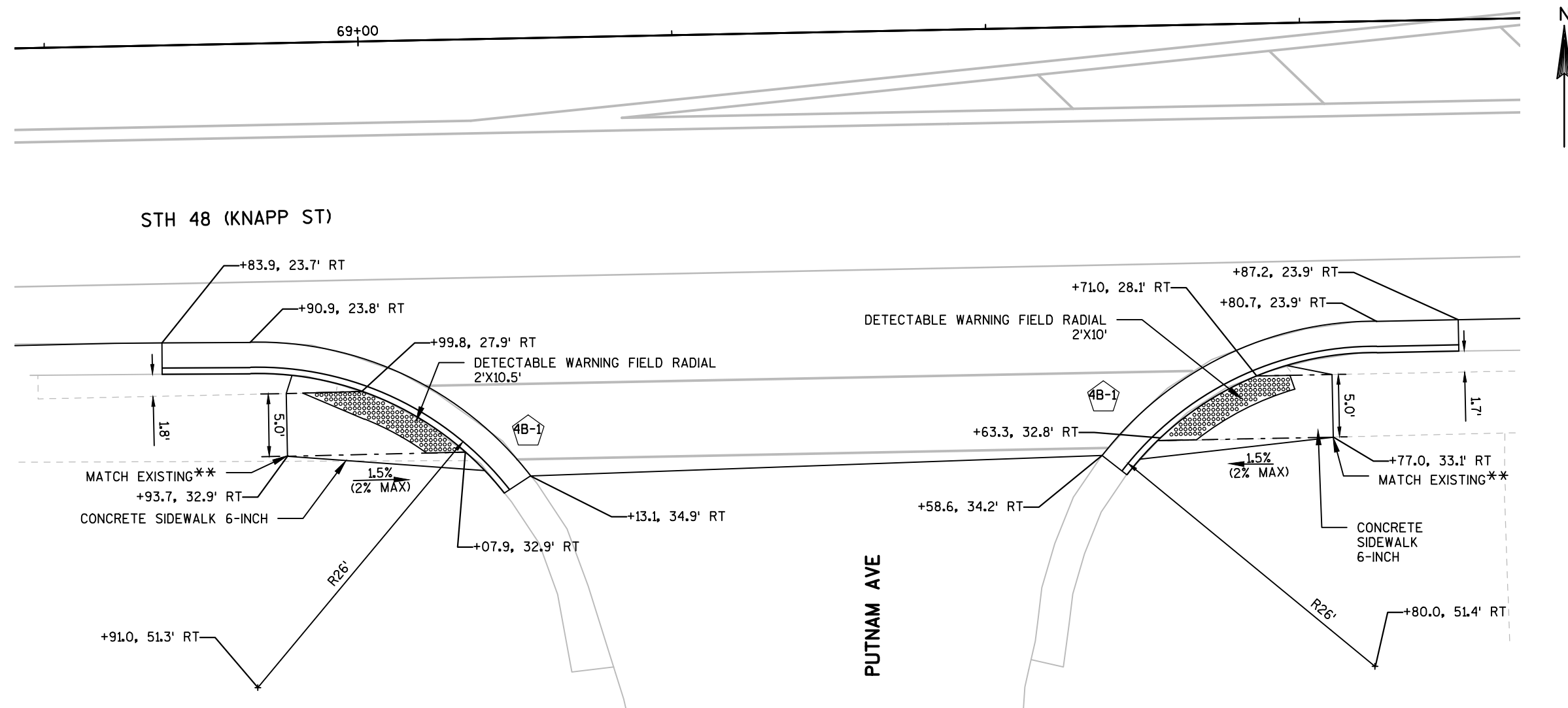
STH 48 (KNAPP ST)



LEGEND

X-X CURB RAMP TYPE X-X

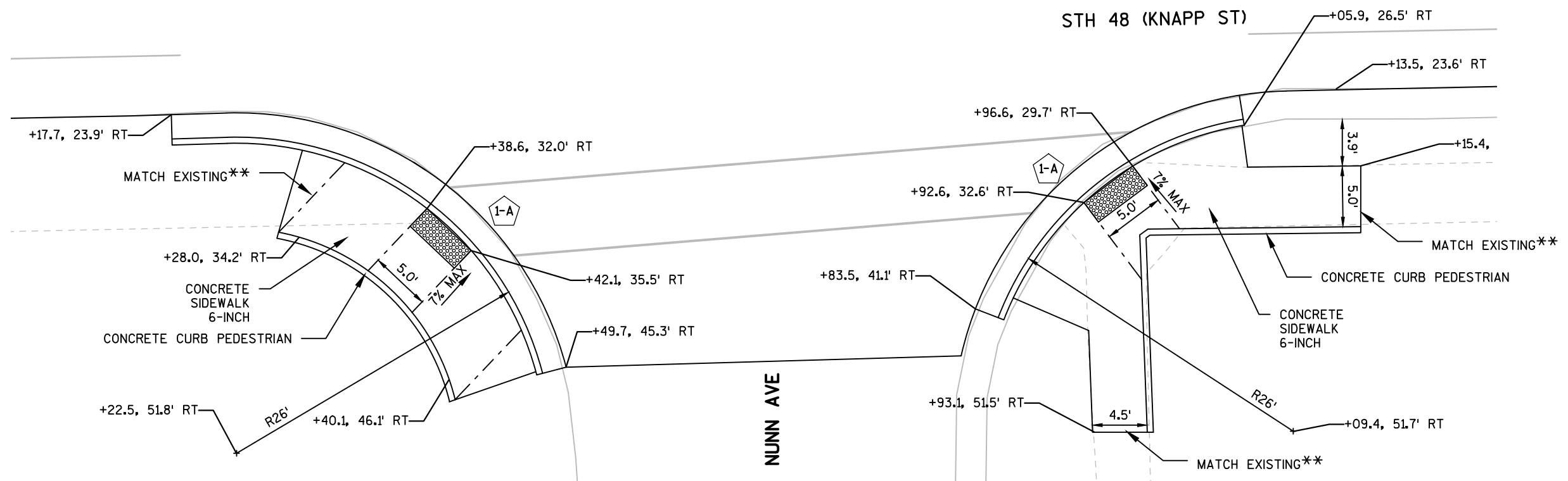
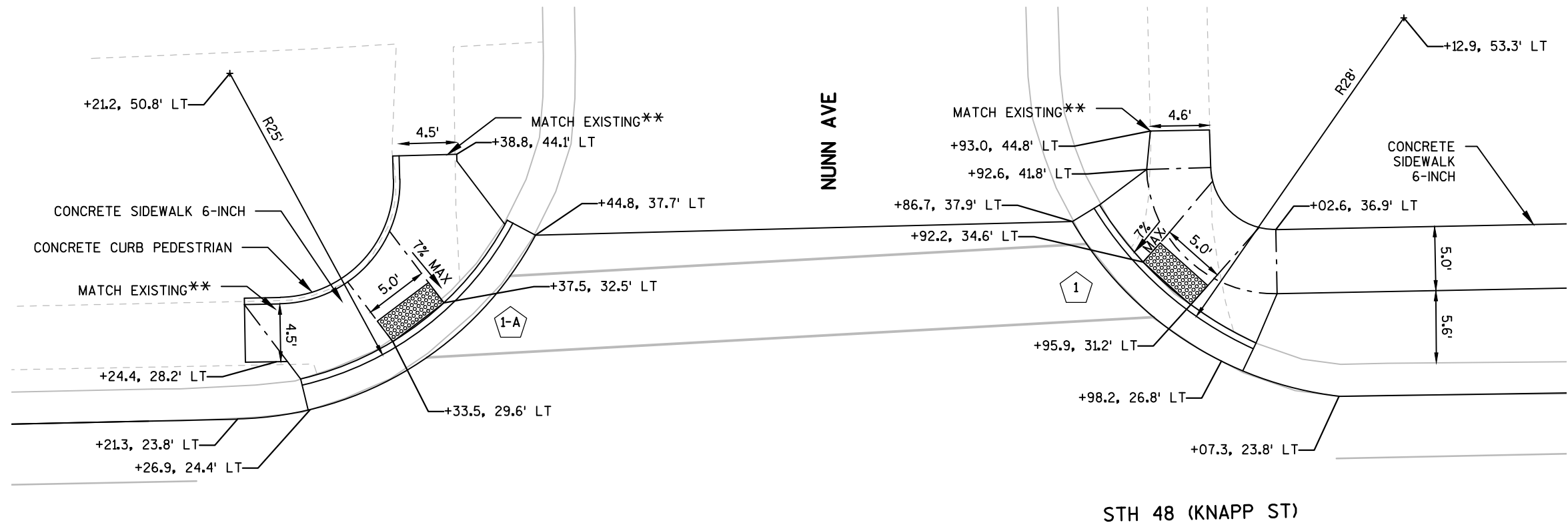
**MATCH SIDEWALK AT
NEAREST JOINT BEYOND
LIMITS OF CURB SLOPE



LEGEND

X-X CURB RAMP TYPE X-X

**MATCH SIDEWALK AT
NEAREST JOINT BEYOND
LIMITS OF CURB SLOPE



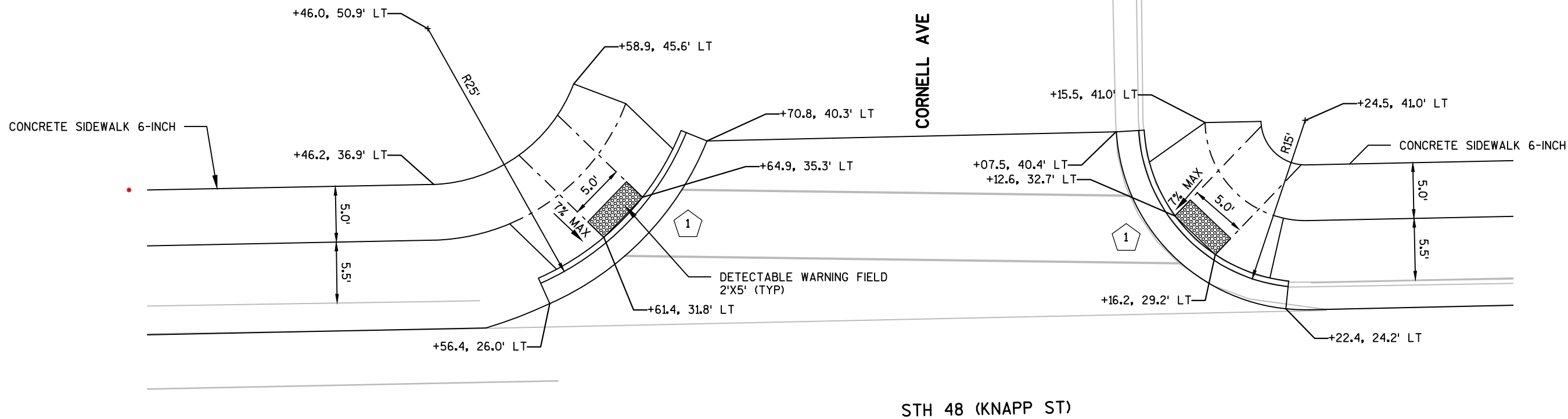
LEGEND

X-X CURB RAMP TYPE X-X

**MATCH SIDEWALK AT
NEAREST JOINT BEYOND
LIMITS OF CURB SLOPE

2

2



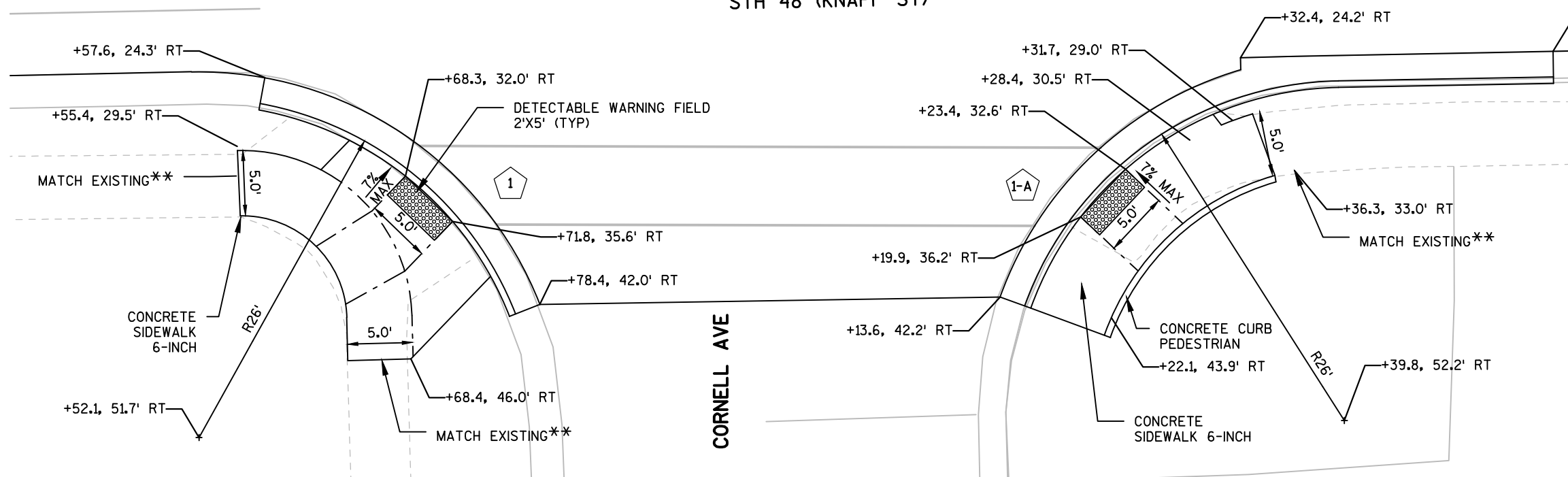
STH 48 (KNAPP ST)



LEGEND

X-X CURB RAMP TYPE X-X

**MATCH SIDEWALK AT
NEAREST JOINT BEYOND
LIMITS OF CURB SLOPE



PROJECT NO: 8120-04-73

HWY: STH 48

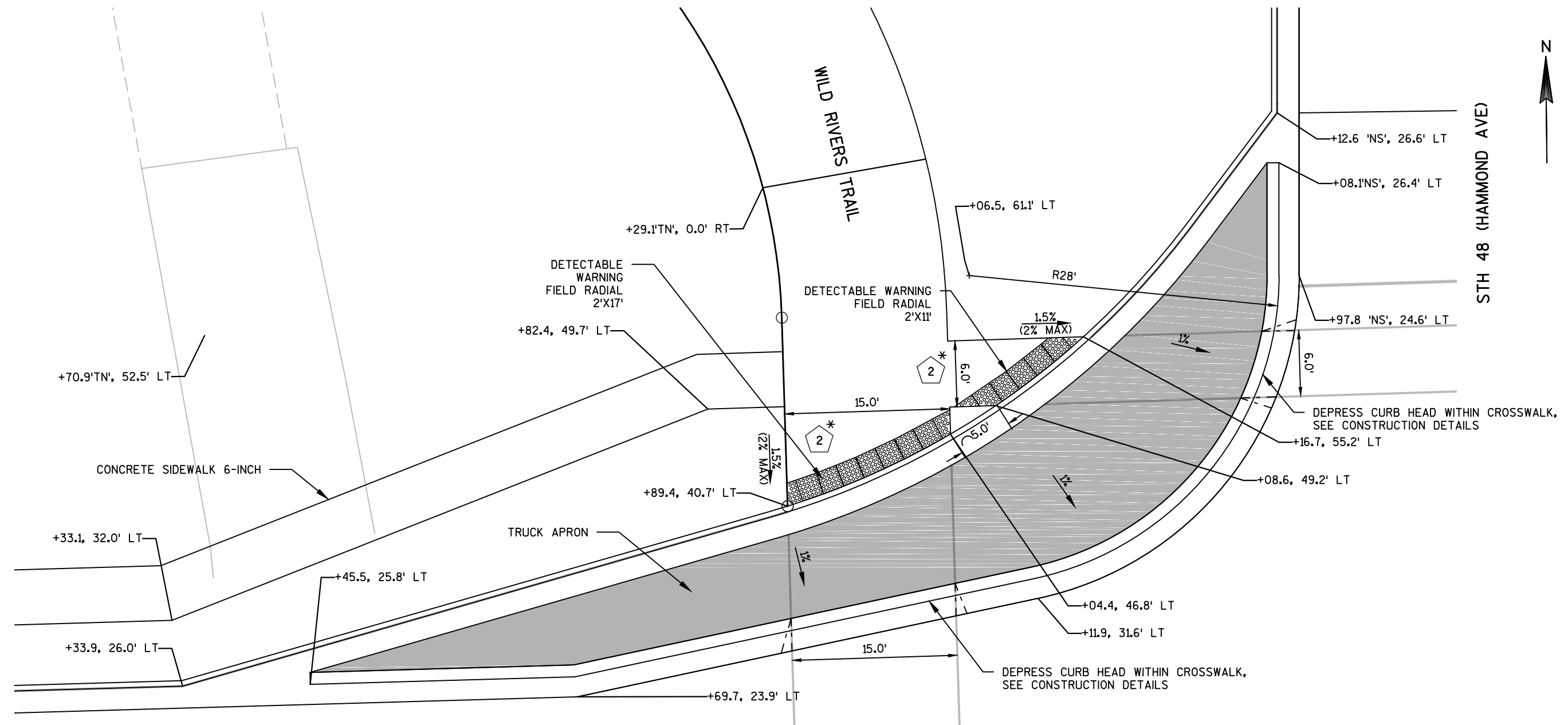
COUNTY: BARRON

CURB RAMP DETAILS

SHEET

18

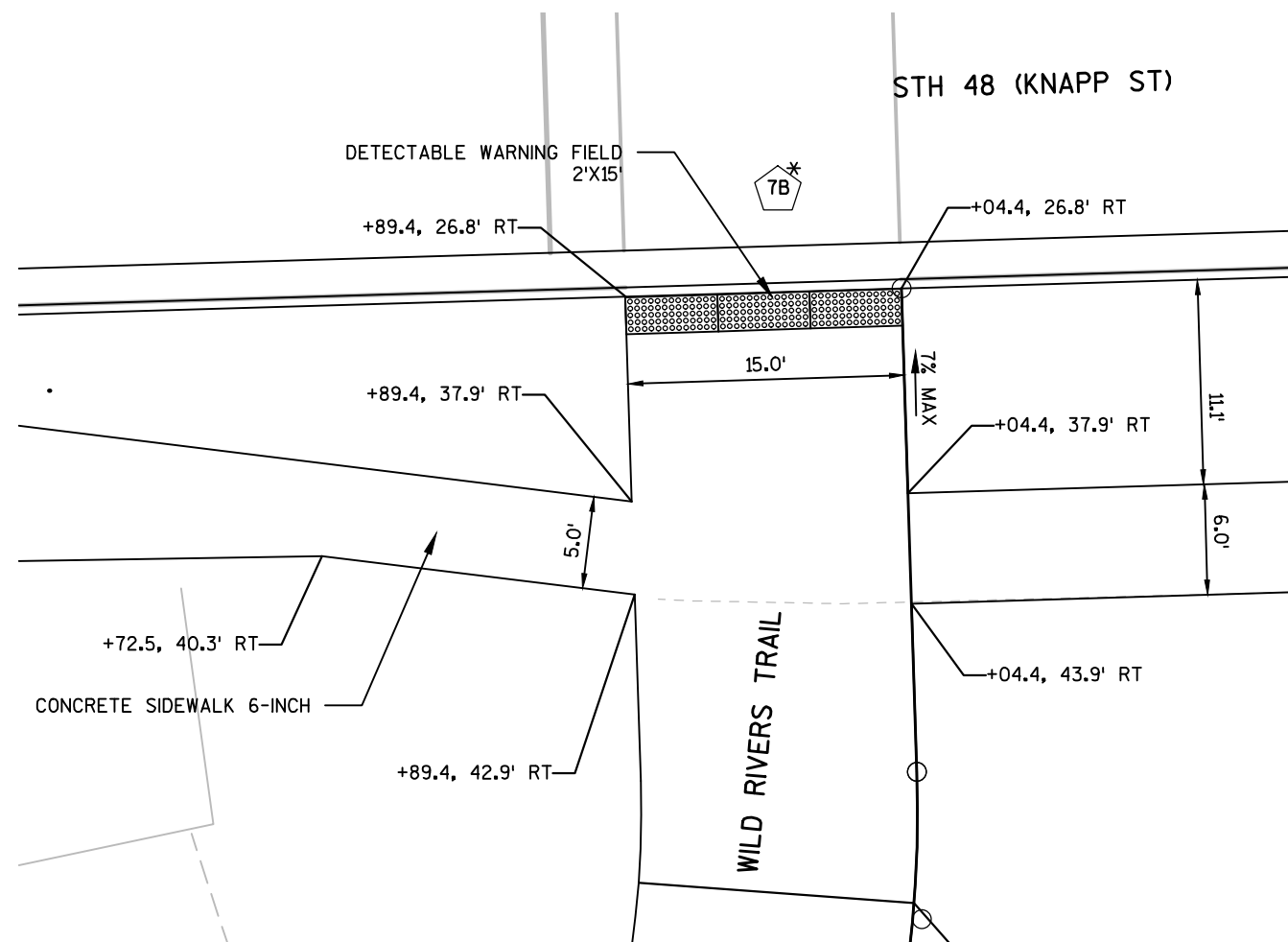
E



LEGEND

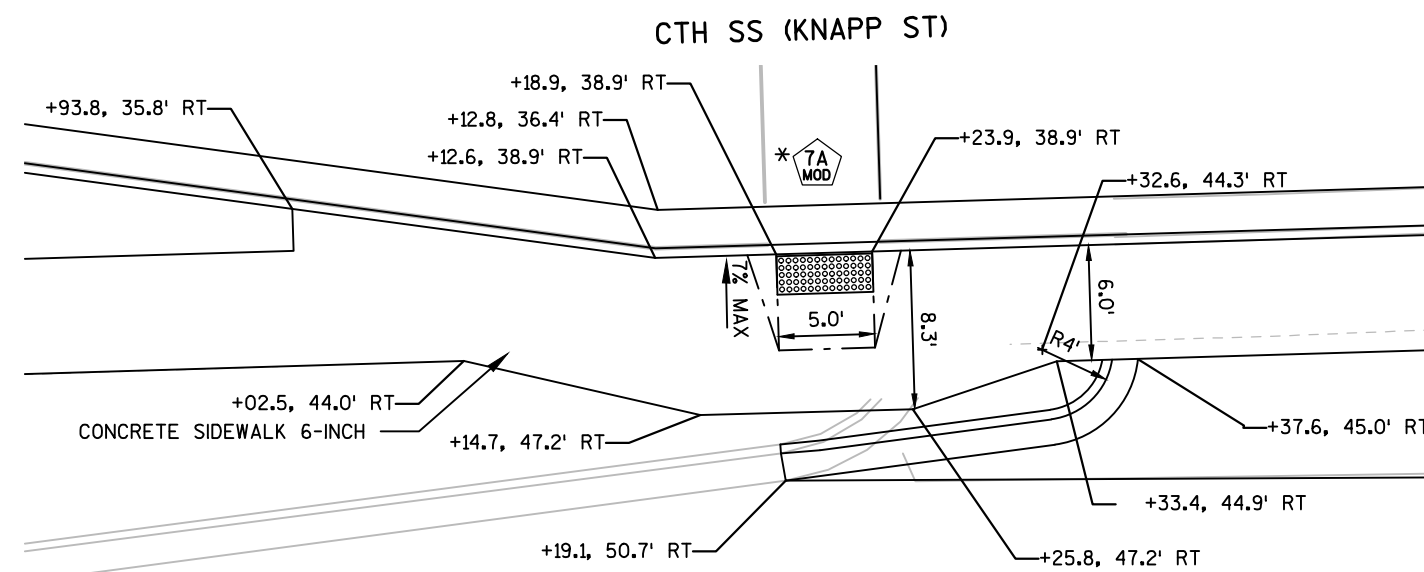
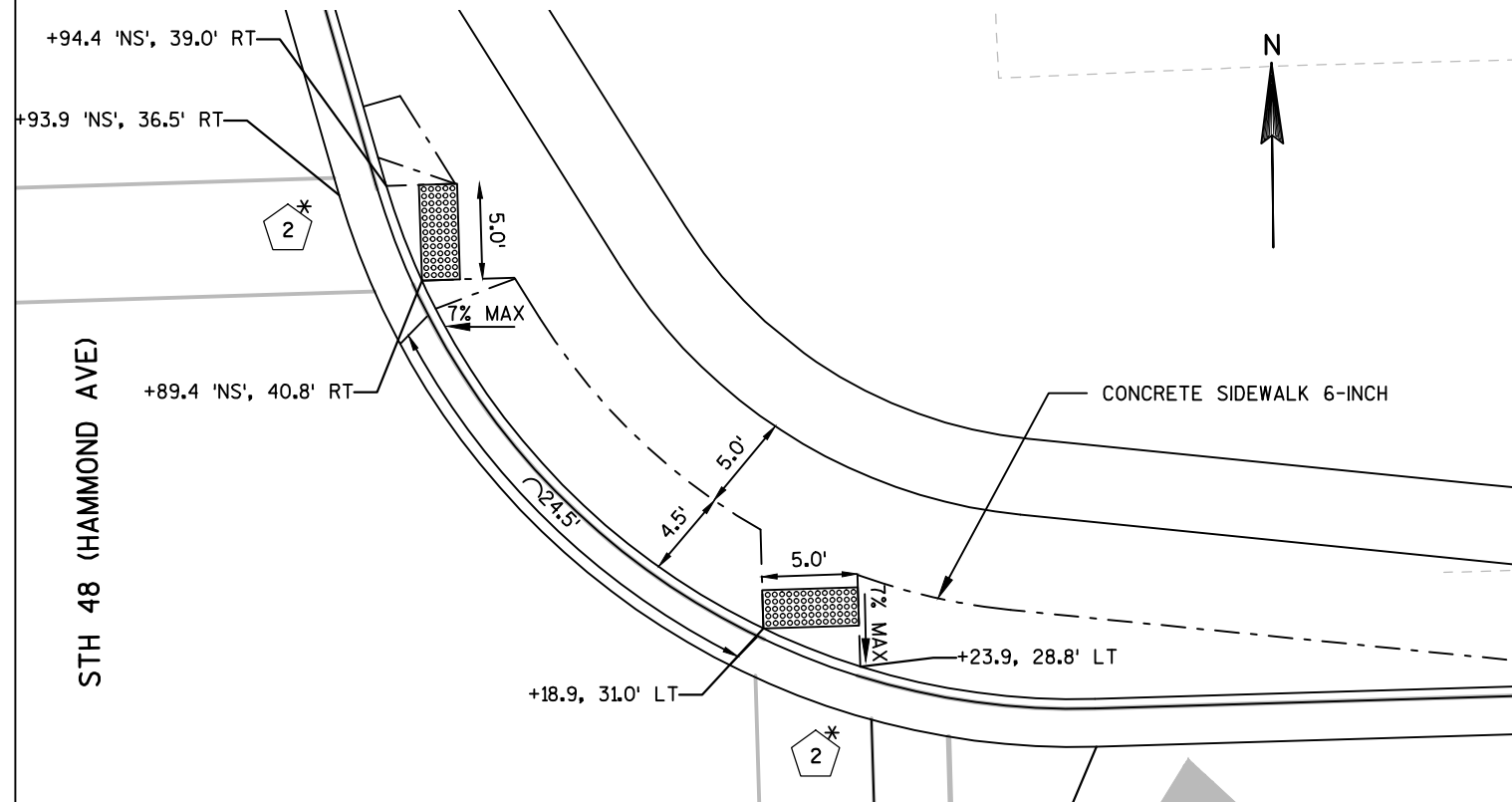
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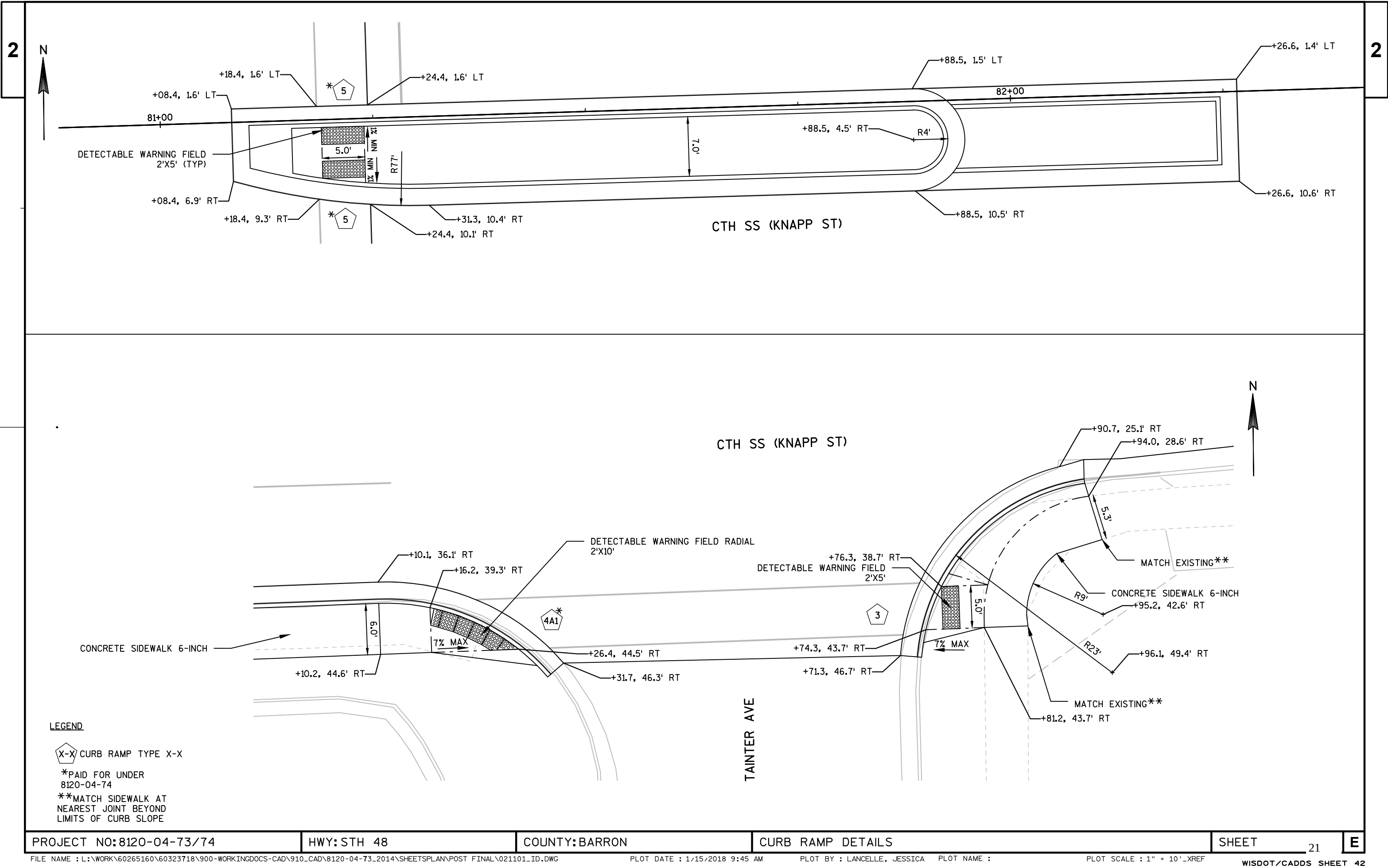
*PAID FOR UNDER
8120-04-74



LEGEND

X-X CURB RAMP TYPE X-X

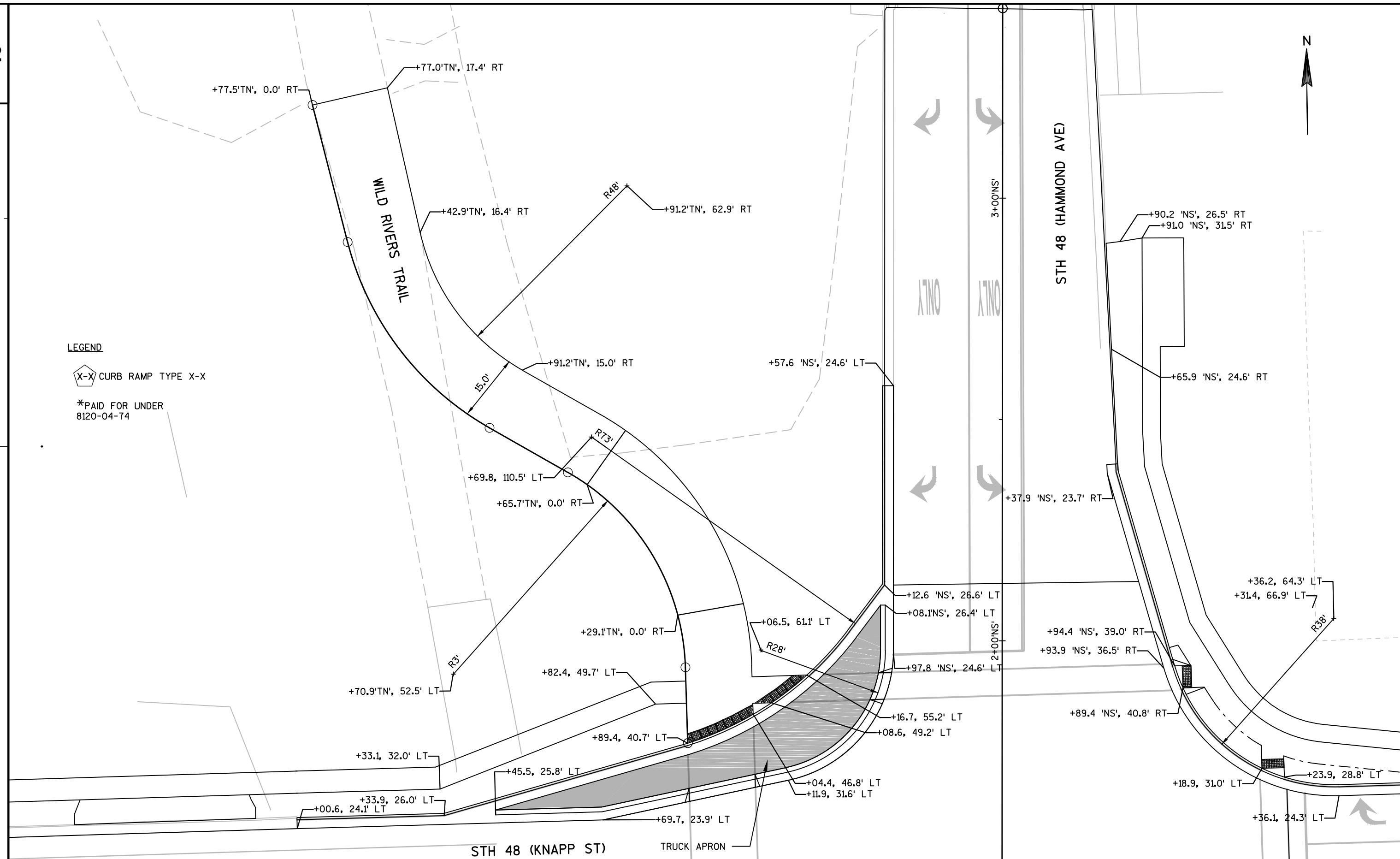
*PAID FOR UNDER
8120-04-74



LEGEND

X-X CURB RAMP TYPE X-X

*PAID FOR UNDER
8120-04-74



PROJECT NO:8120-04-73/74

HWY:STH 48

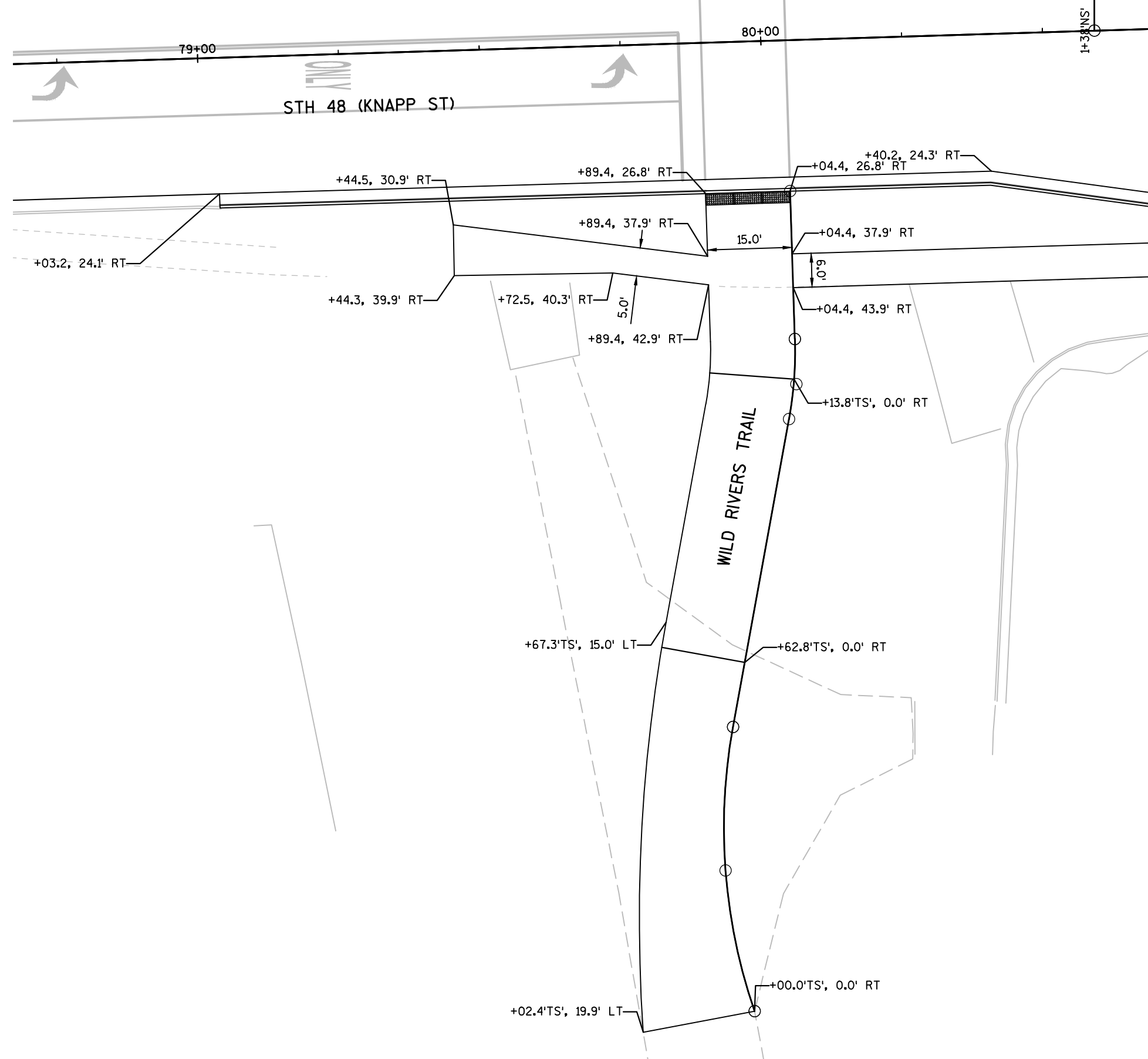
COUNTY:BARRON

TRAIL DETAILS

SHEET

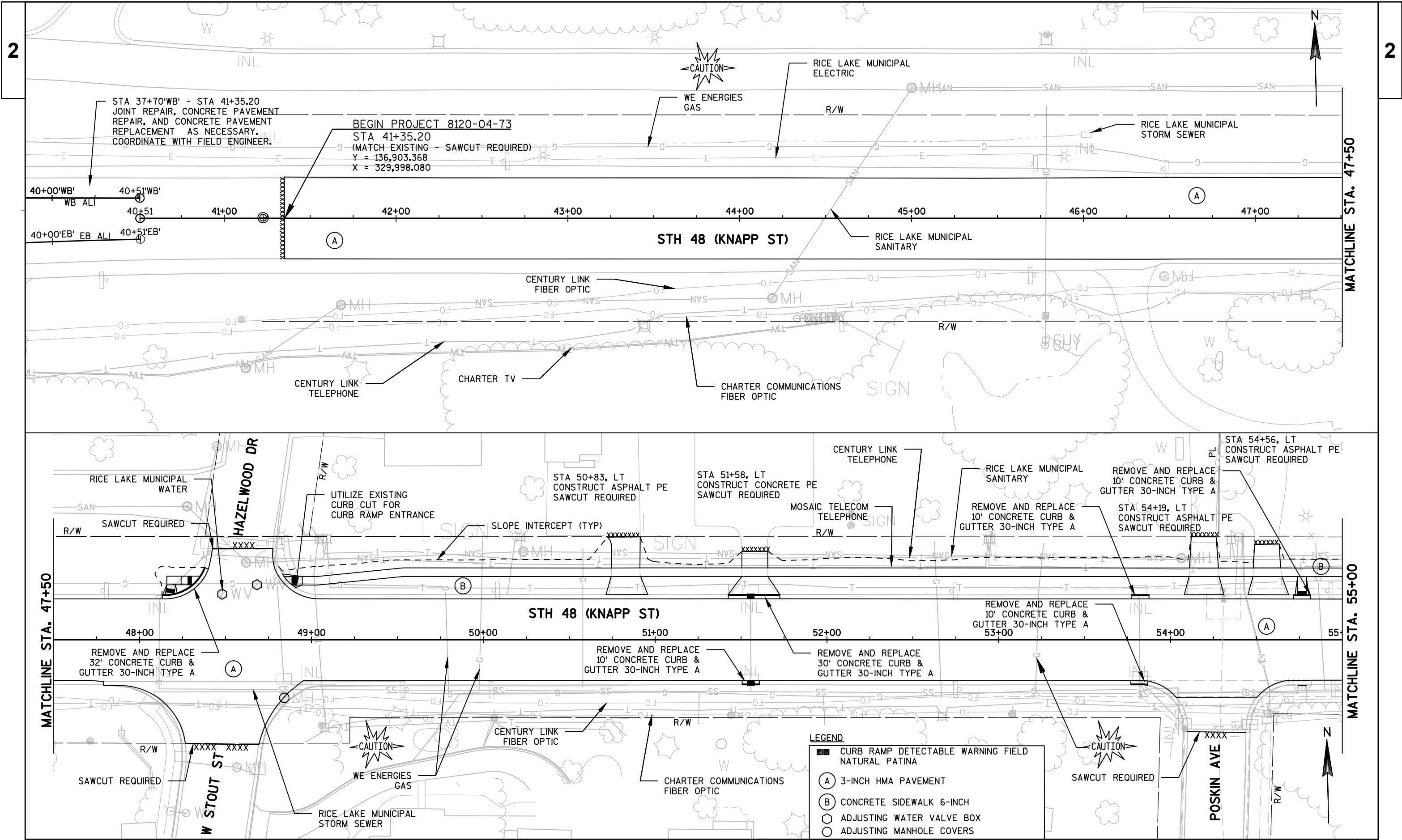
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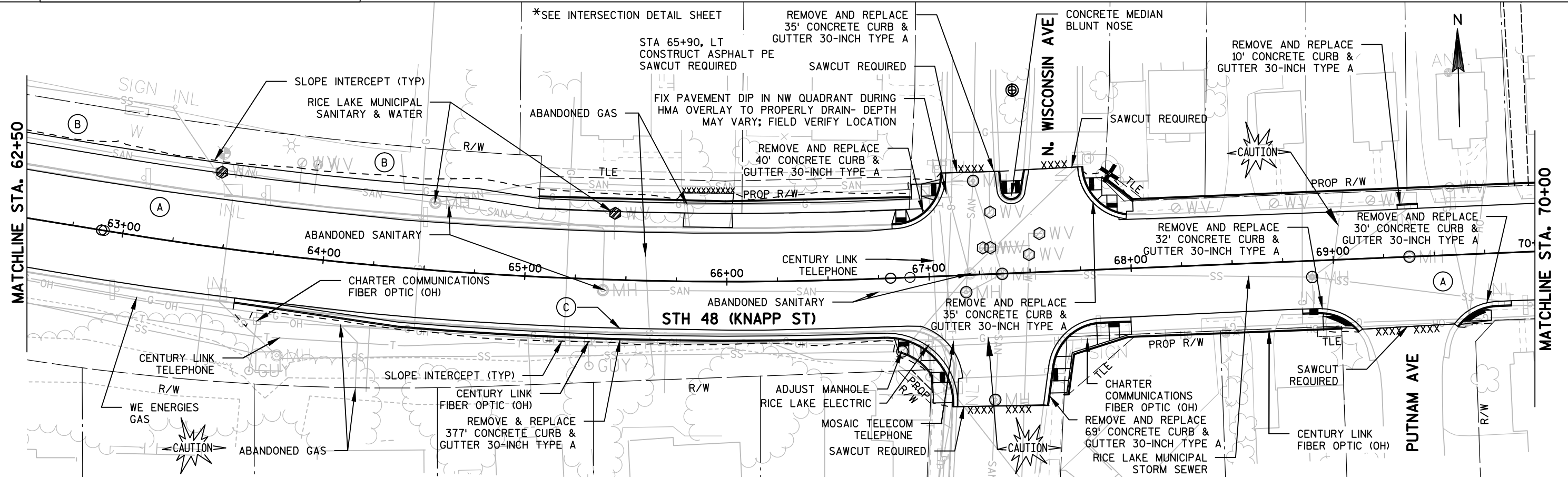
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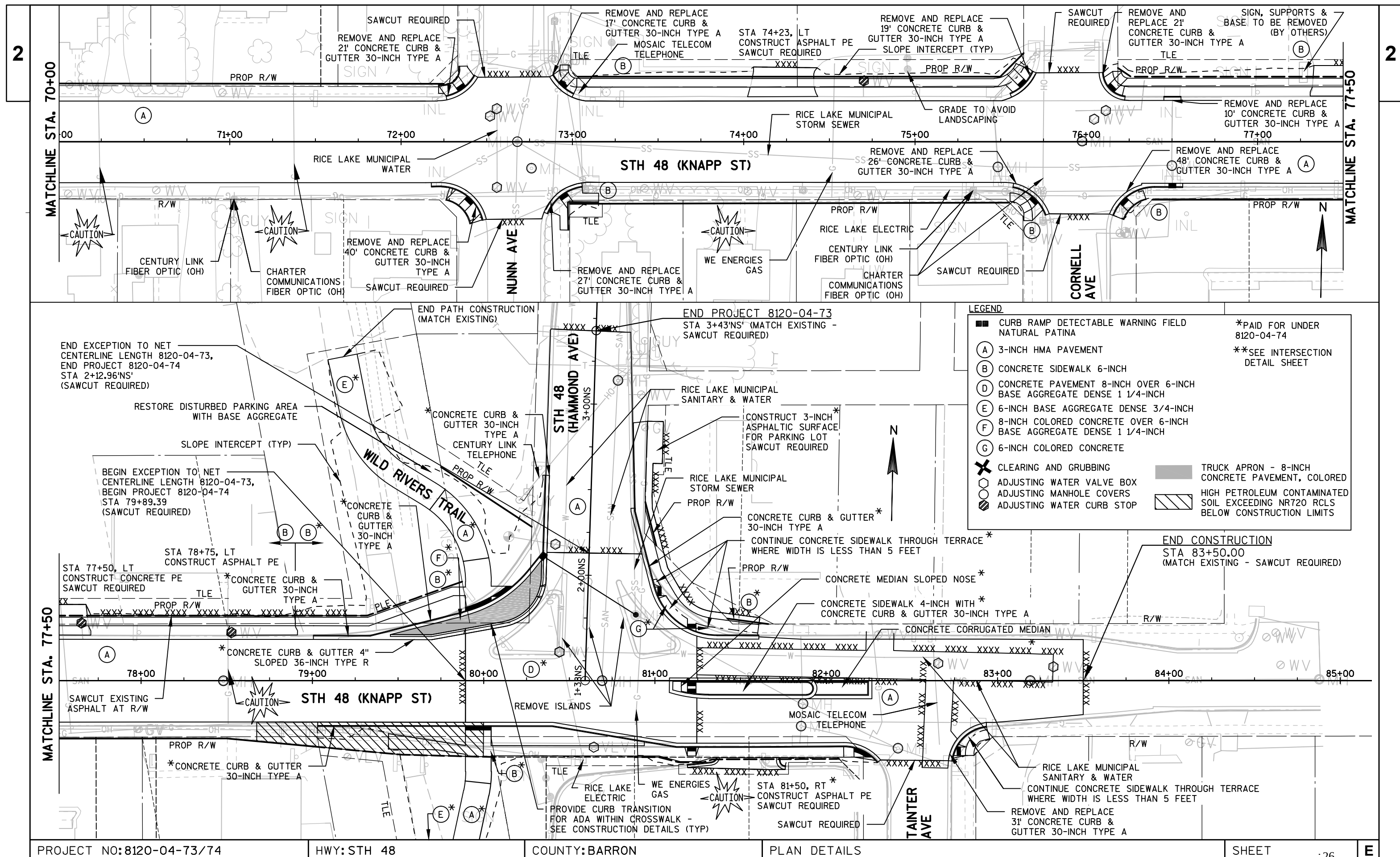
**LEGEND**

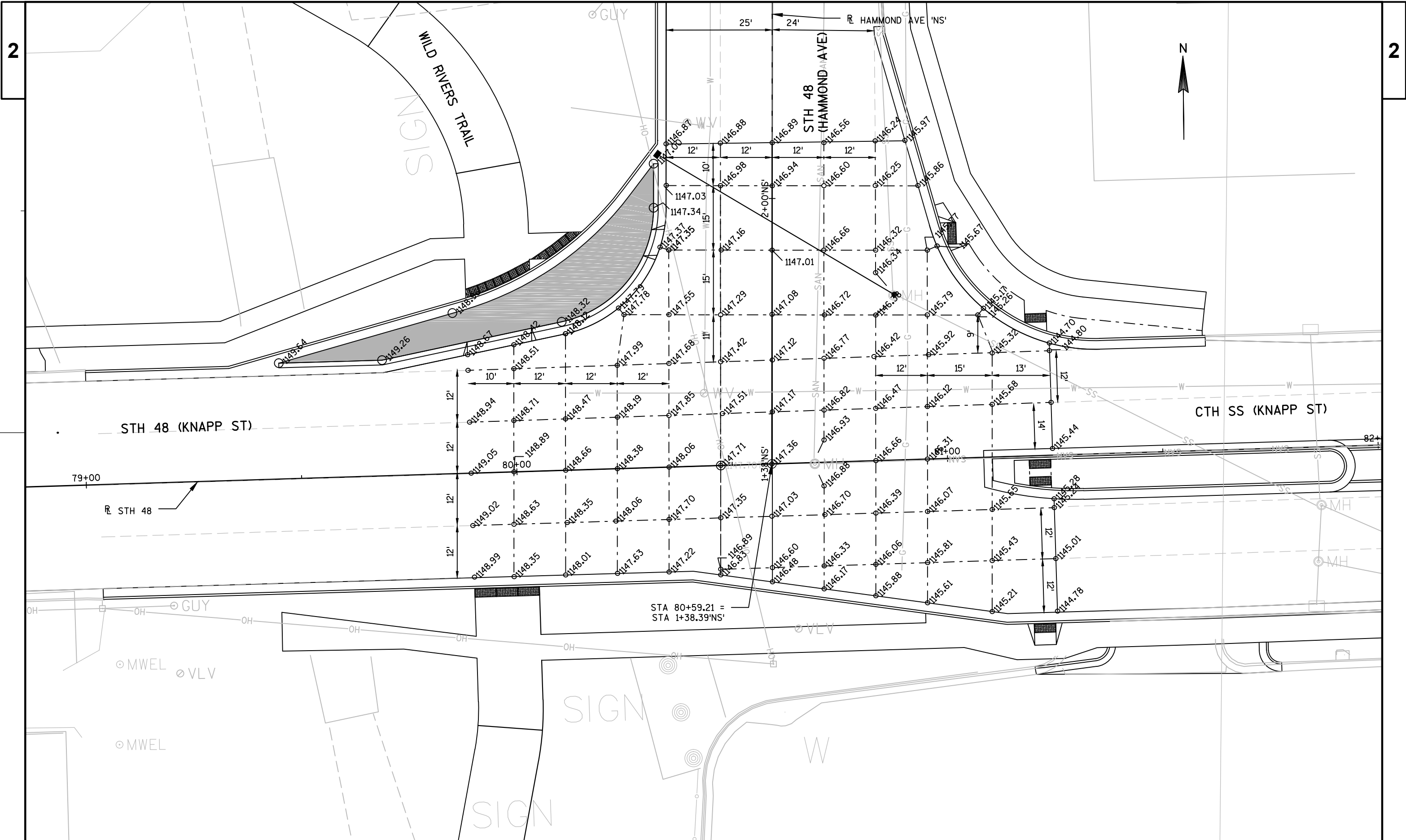
X-X CURB RAMP TYPE X-X

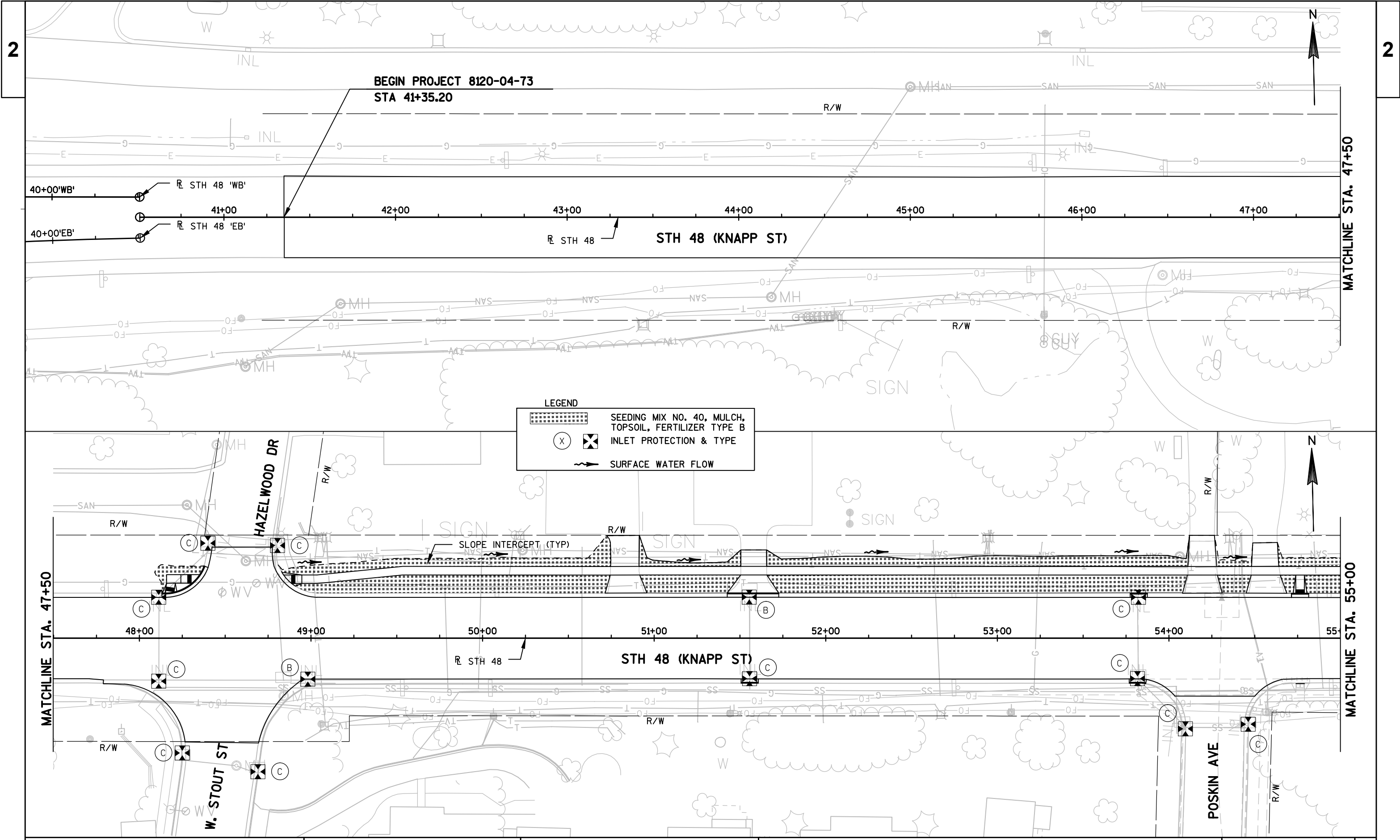
*PAID FOR UNDER
8120-04-74



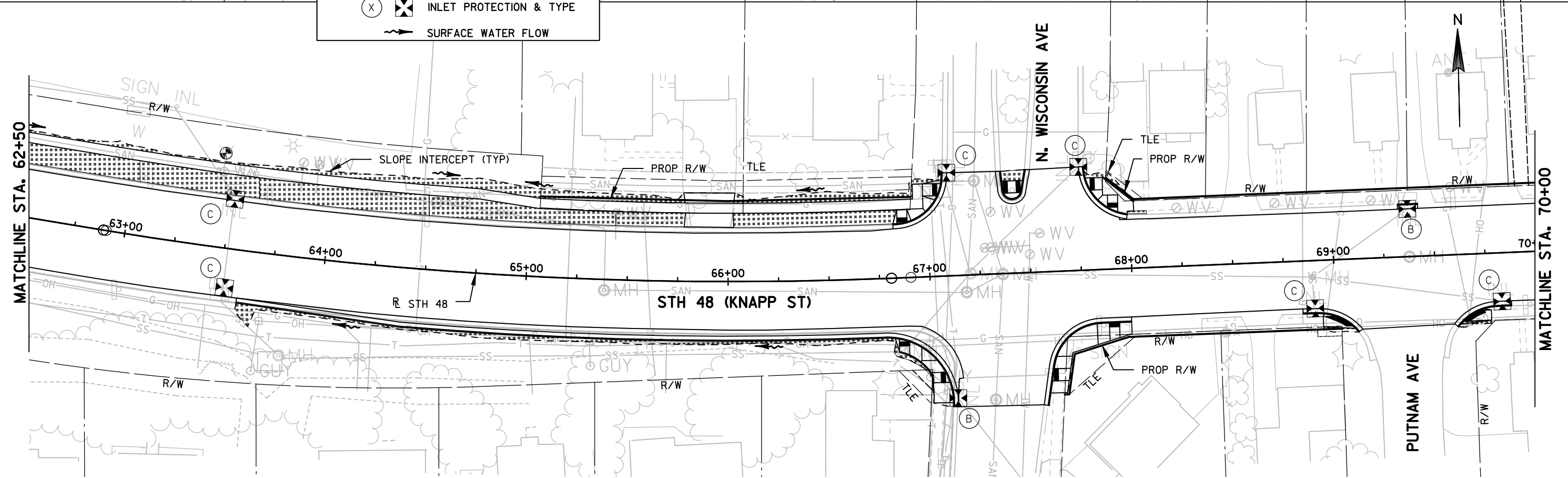


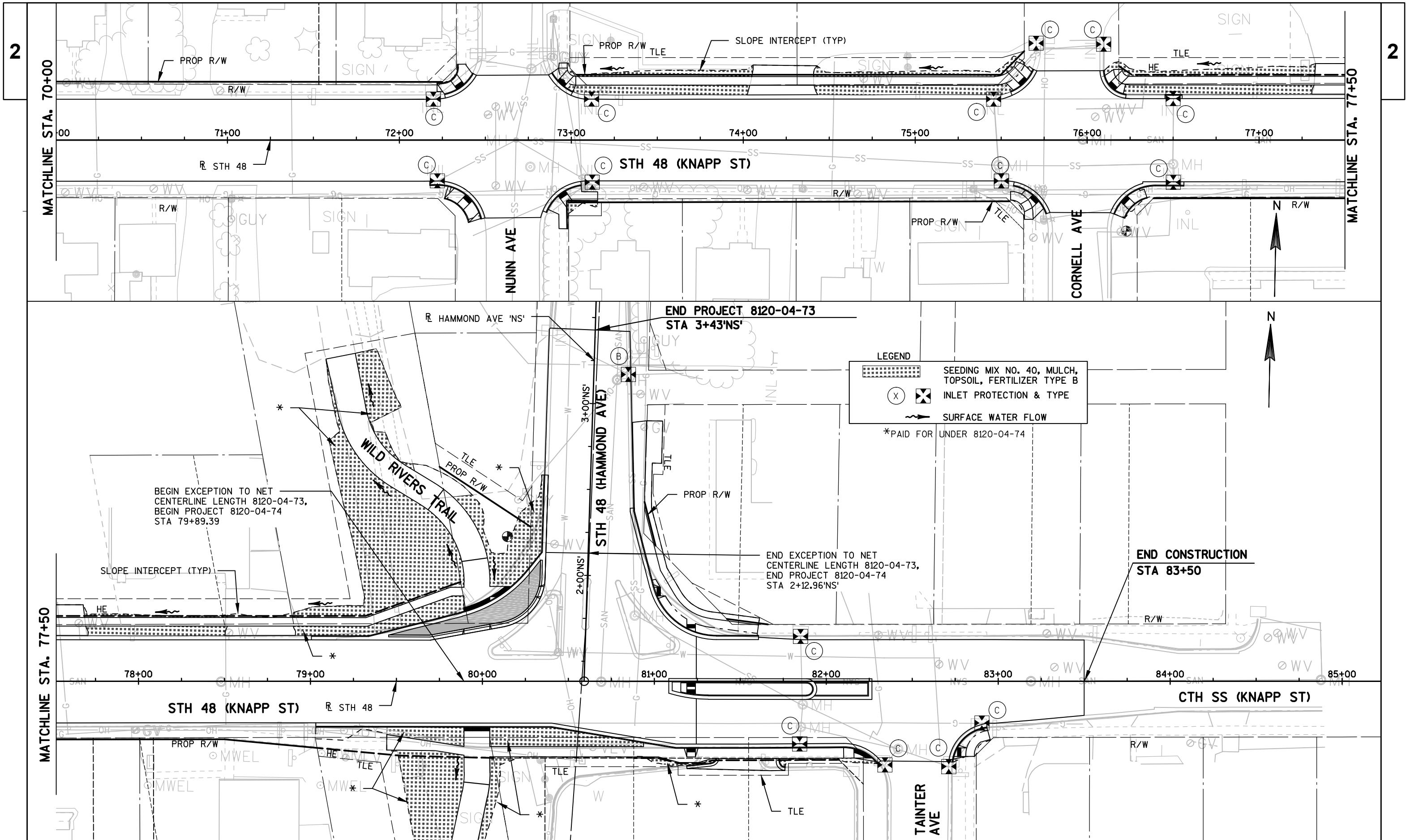


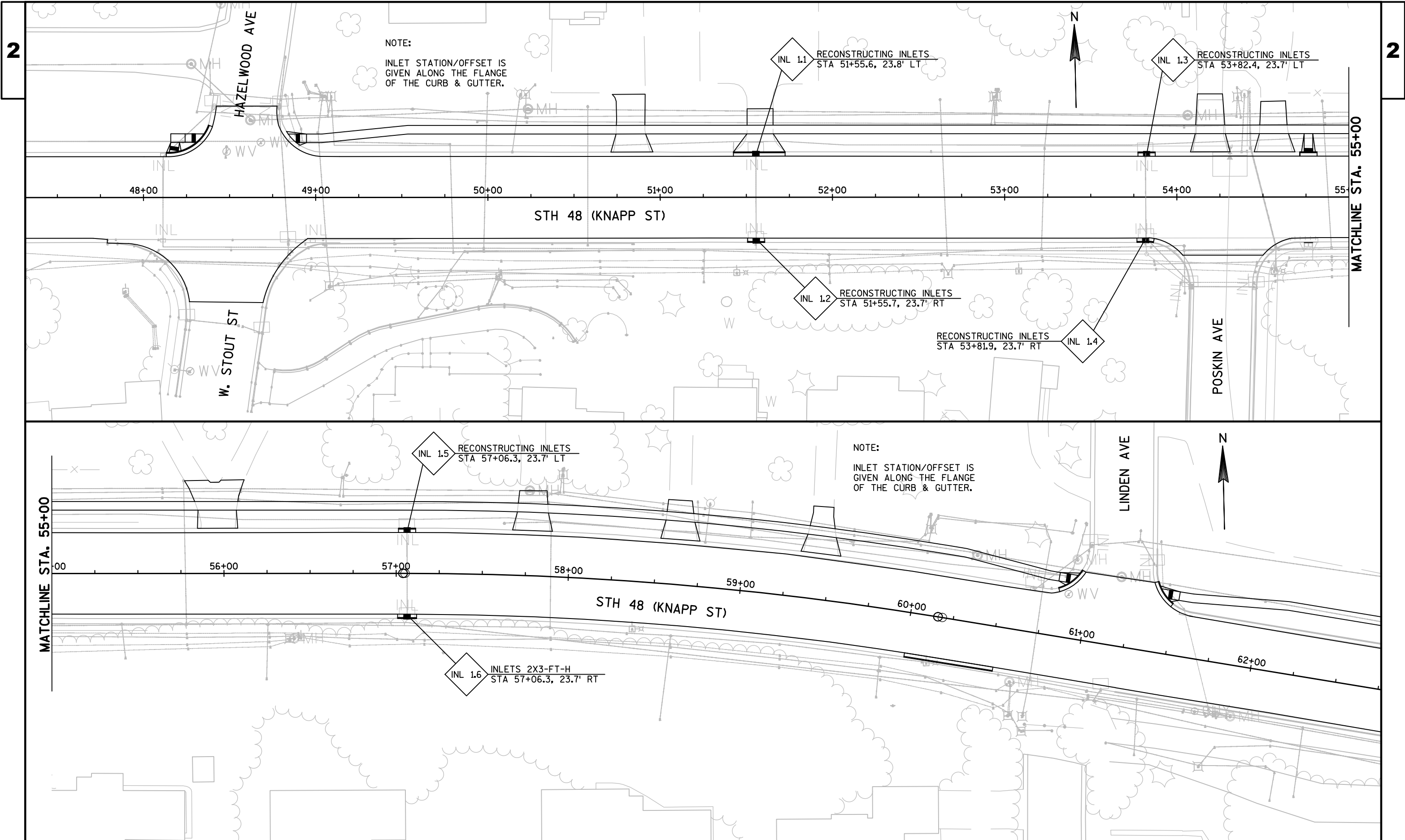




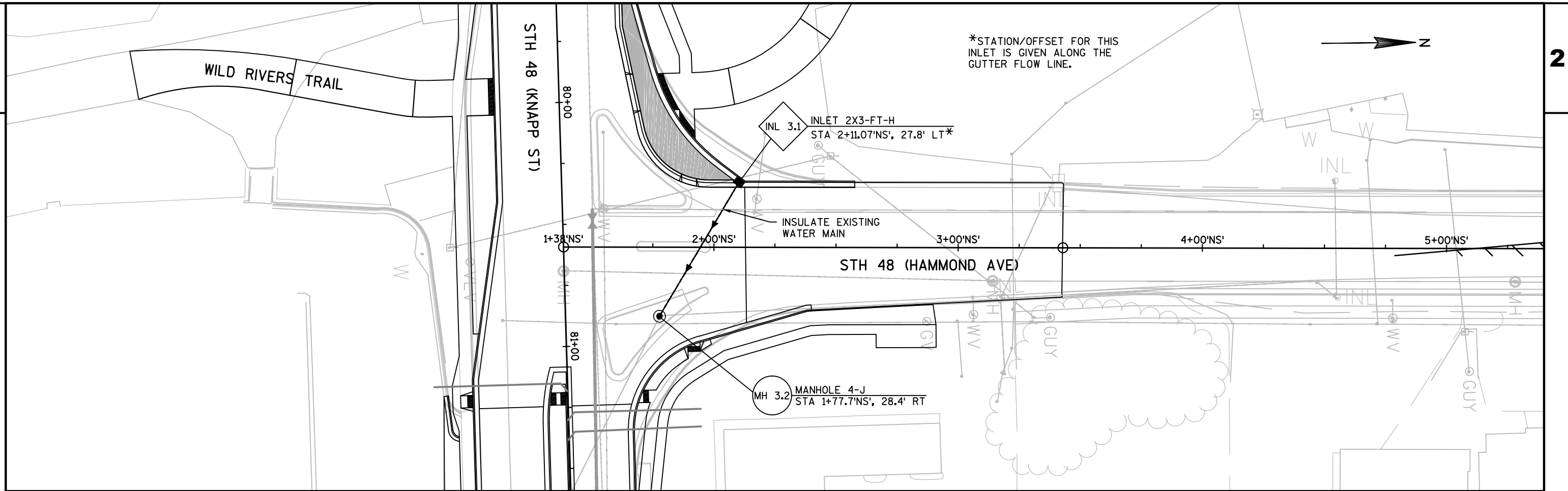
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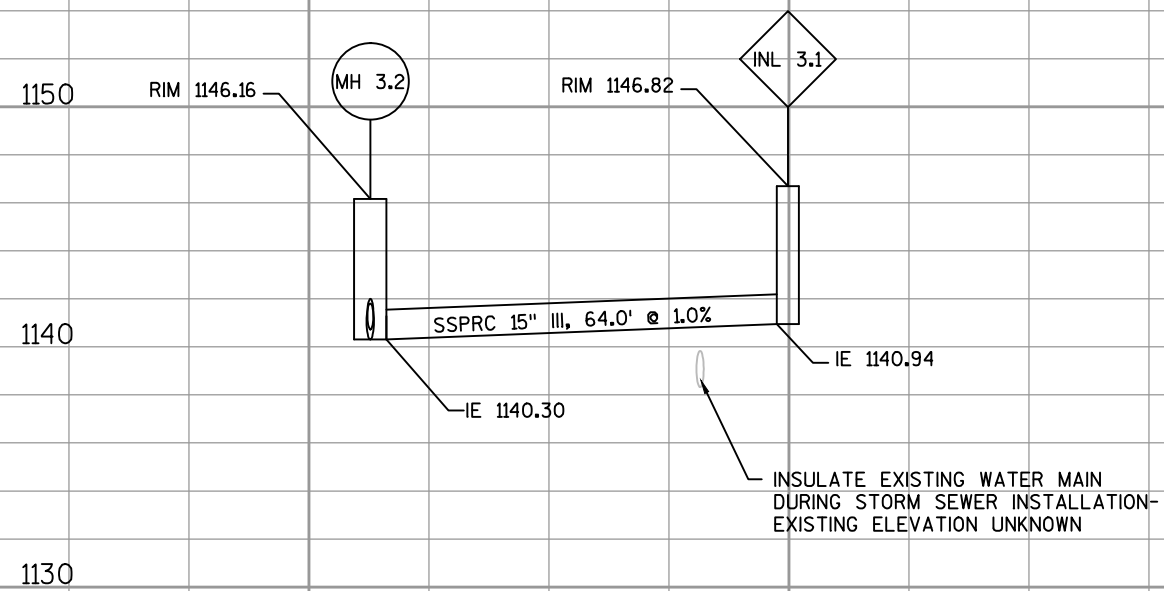


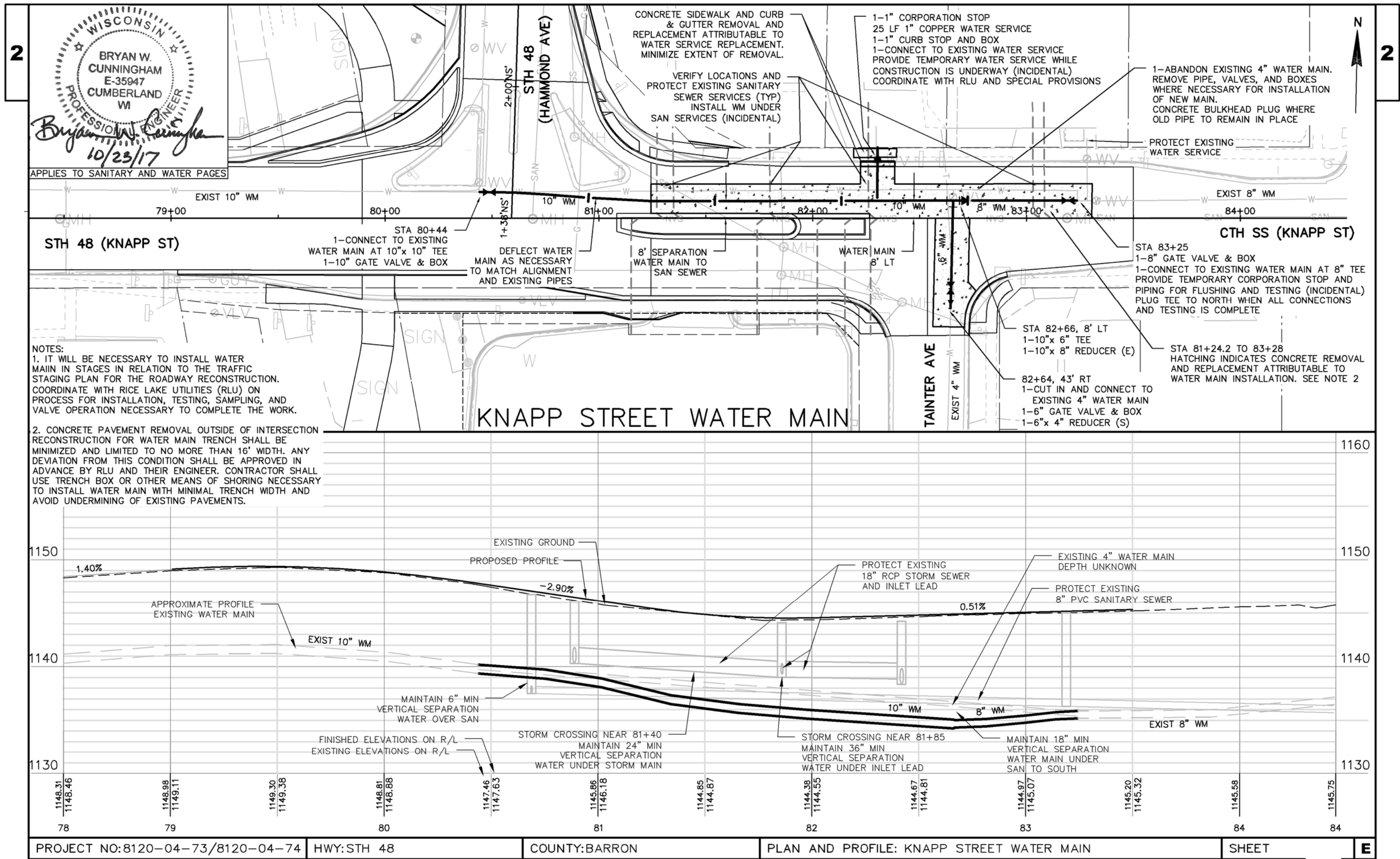


2



2

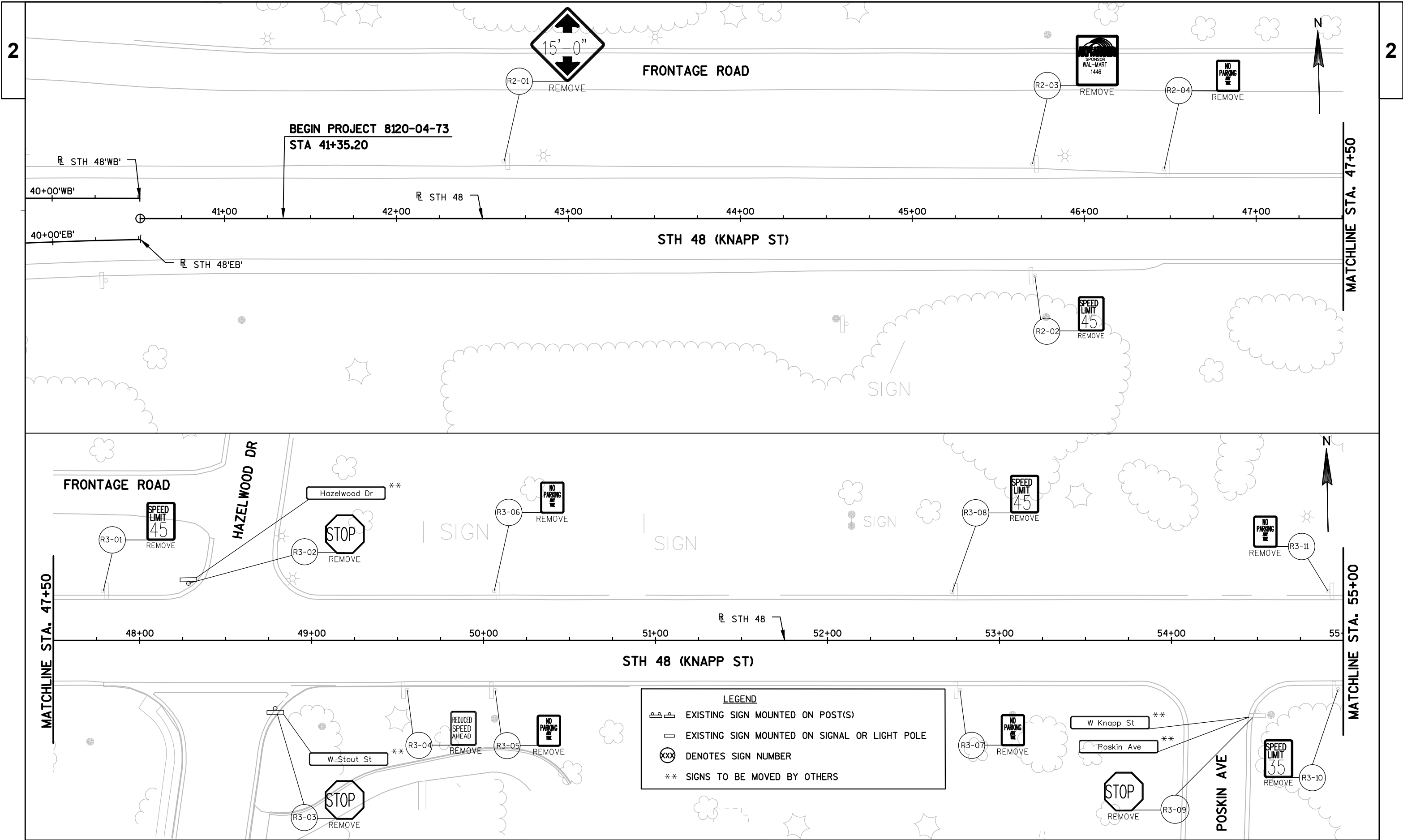


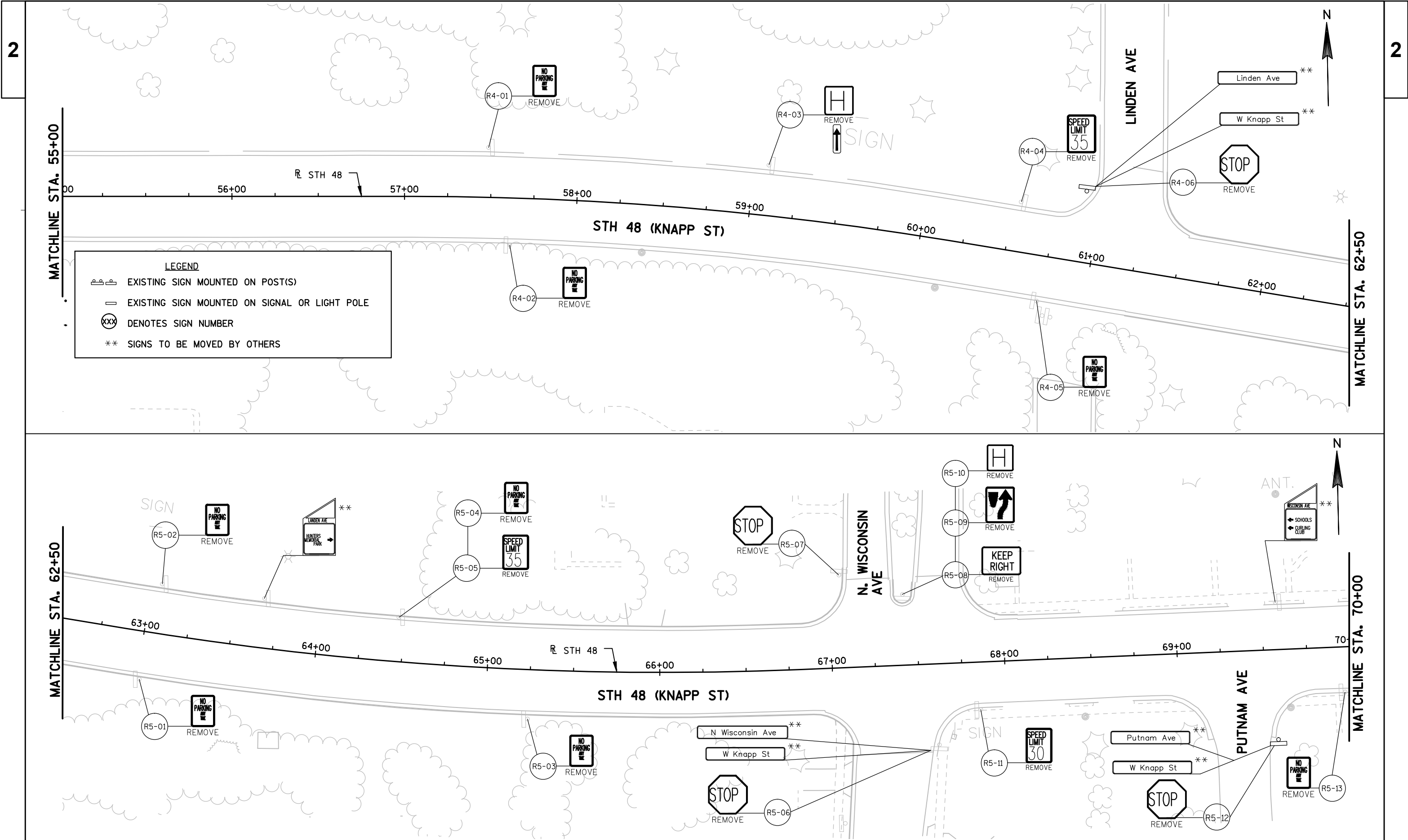


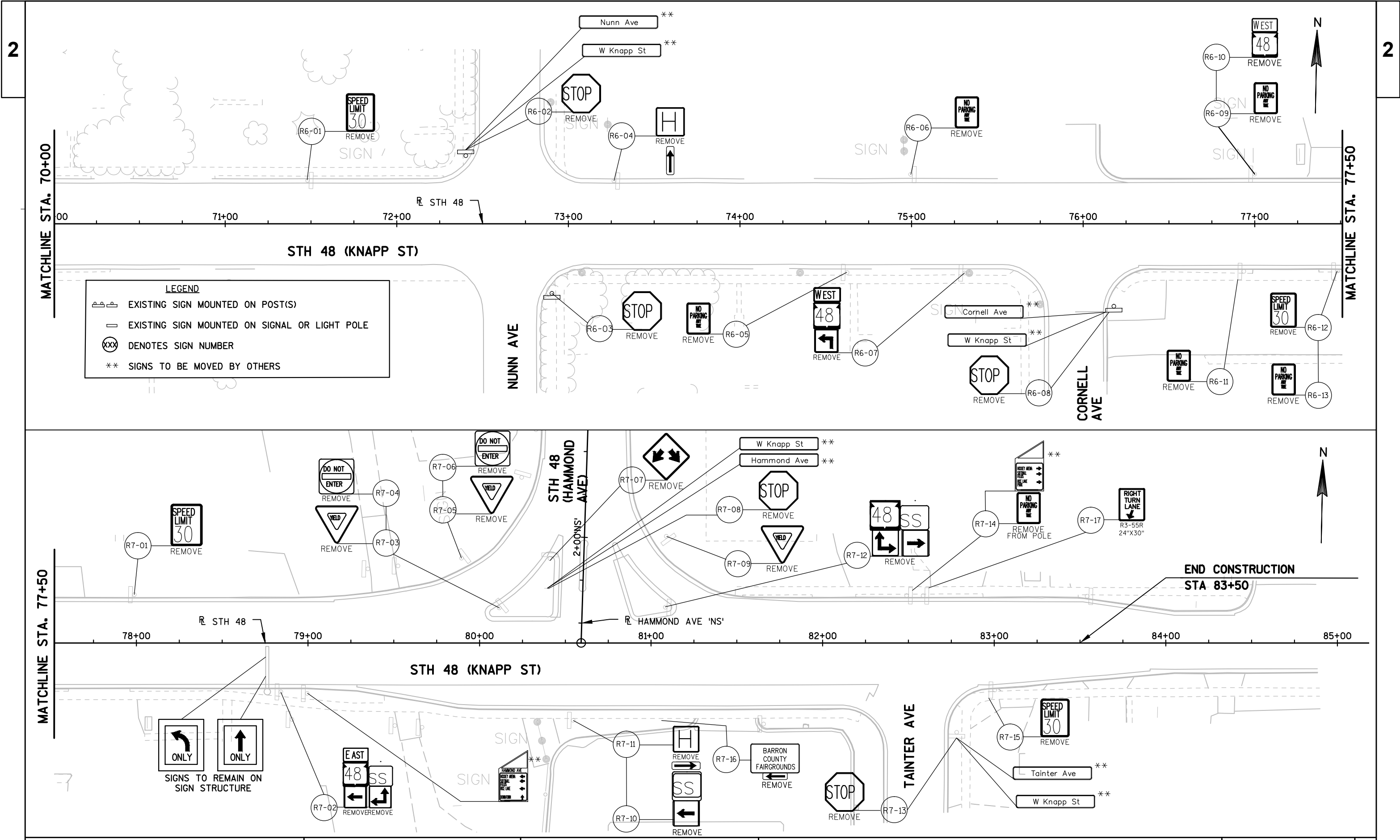
NOTES:

1. IT WILL BE NECESSARY TO INSTALL WATER MAIN IN STAGES IN RELATION TO THE TRAFFIC STAGING PLAN FOR THE ROADWAY RECONSTRUCTION. COORDINATE WITH RICE LAKE UTILITIES (RLU) ON PROCESS FOR INSTALLATION, TESTING, SAMPLING, AND VALVE OPERATION NECESSARY TO COMPLETE THE WORK.

2. CONCRETE PAVEMENT REMOVAL OUTSIDE OF INTERSECTION RECONSTRUCTION FOR WATER MAIN TRENCH SHALL BE MINIMIZED AND LIMITED TO NO MORE THAN 16' WIDTH. ANY DEVIATION FROM THIS CONDITION SHALL BE APPROVED IN ADVANCE BY RLU AND THEIR ENGINEER. CONTRACTOR SHALL USE TRENCH BOX OR OTHER MEANS OF SHORING NECESSARY TO INSTALL WATER MAIN WITH MINIMAL TRENCH WIDTH AND AVOID UNDERMINING OF EXISTING PAVEMENTS.



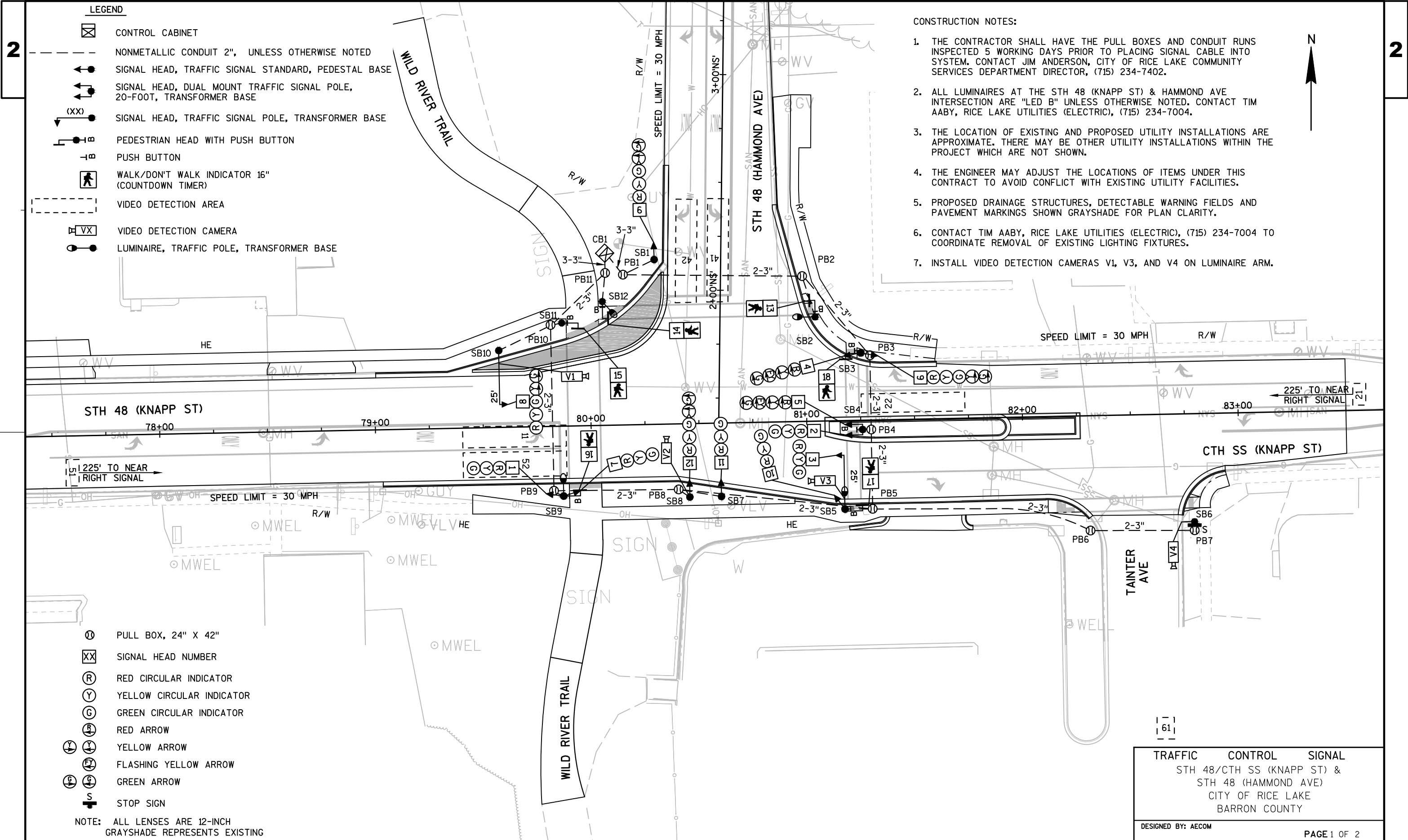






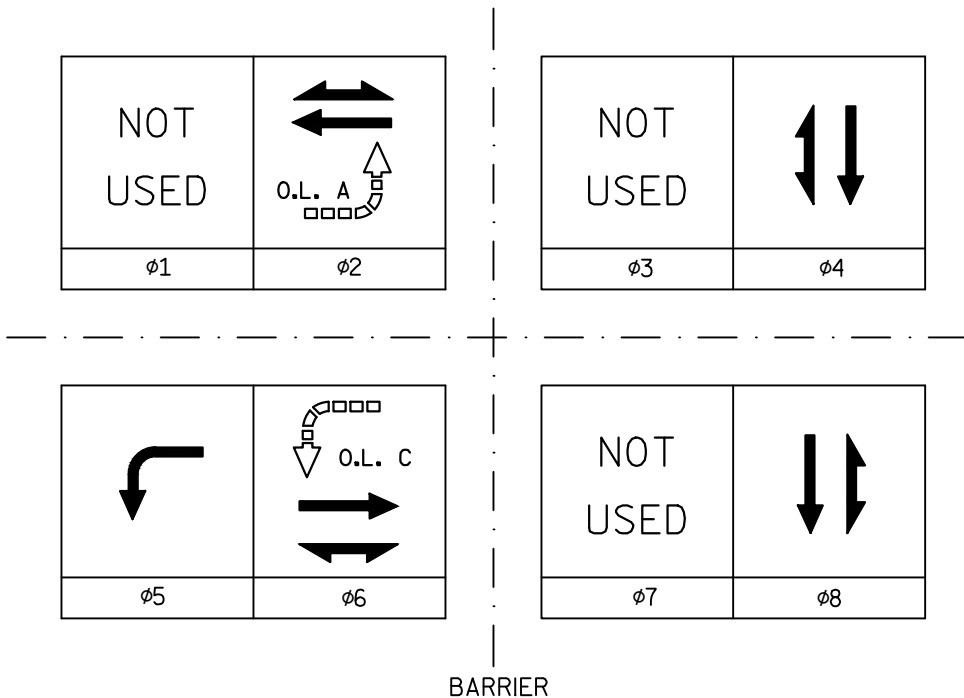






	HEAD NUMBERS	FLASH
ø1		-
ø2	4,5,6,7,8	R
ø3		-
ø4	14,15,16	R
ø5	9,10	R
ø6	1,2,3	R
ø7		-
ø8	11,12,13	-
ø2PED	21,22	-
ø4PED	23,24	-
ø6PED	17,18	-
ø8PED	19,20	-
OLA	4,5	R
OLB		-
OLC	9,10	R
OLD		-

OL ASSIGNMENTS	
OLA	2
OLB	
OLC	5+6
OLD	

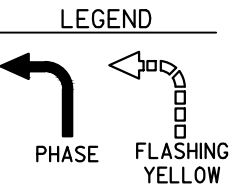


CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	X
3				
4		8		X
5		2		X
6	X	2	MIN	X
7				
8		4		X

TYPE OF INTERCONNECT	
NONE	
TBC	X
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	



TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF REMOTE COMMUNICATION	
NONE	
FIBER	
CELL MODEM	X
PHONE	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR *(S)								
ASSIGNED PHASE								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	19	17	23	21	27	25	31	29
DETECTOR *(S)	21	23	51	62				
ASSIGNED PHASE	2	2	5	6				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	X							
DELAY								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR *(S)								
ASSIGNED PHASE								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	20	18	24	22	28	26	32	30
DETECTOR *(S)	22	41	61	81				
ASSIGNED PHASE	2	4	6	8				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND			X					
DELAY								

TRAFFIC CONTROL SIGNAL STH 48 (KNAPP ST) & WISCONSIN AVE CITY OF RICE LAKE BARRON COUNTY
CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: OCTOBER 2017

2

PROJECT ID: 8120-04-74

INTERSECTION: STH 48 & HAMMOND AVE

SIGNAL WIRE COLOR CODING

BLK-BLACK

WHT-WHITE

RED-RED

BLU-BLUE

GRN-GREEN

ORG-ORANGE

DATE: Oct-17

CB1 TO	AWG 14 # OF COND.	HEAD NO.	SIGNAL INDICATION WIRE COLOR								PED BUTTON	OTHER
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<FLASH YEL>	<GREEN>	D/WALK		
SB1	12	9	RED	ORG	GRN		BLK		BLU			
SB2	7	13								BLK	BLU	
		PB										WHT/BLK
SB3	15	6	RED	ORG	GRN		BLK		BLU			
		4				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK			
		18								BLK/WHT	BLU/WHT	
		PB										WHT/BLK
SB4	12	2	RED	ORG	GRN		BLK		BLU			
		5				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK			
		PB										WHT/BLK
SB5	12	3	RED	ORG	GRN							
		10	RED/BLK	ORG/BLK	GRN/BLK							
		17								BLK	BLU	
		PB										WHT/BLK
SB7	7	11	RED	ORG	GRN							
SB8	12	12	RED	ORG	GRN		BLK		BLU			
SB9	12	1	RED	ORG	GRN							
		7	RED/BLK	ORG/BLK	GRN/BLK							
		16								BLK	BLU	
		PB										WHT/BLK
SB10	12	8	RED	ORG	GRN		ORG/BLK		GRN/BLK			
SB11	7	15								BLK	BLU	
		PB										WHT/BLK
SB12	7	14								BLK	BLU	
		PB										WHT/BLK

STH 48/CTH SS (KNAPP STREET) &
STH 48 (HAMMOND AVE)

CITY OF RICE LAKE
BARRON COUNTY

CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE: JULY 2017

PAGE NO. 1 OF 2

PROJECT NUMBER: 8120-04-74

HWY: STH 48

COUNTY: BARRON

CABLE ROUTING

SHEET

44

E

FILE NAME: L:\work\60265160\60323718\900-WorkingDocs-CAD\910_CAD\8120-04-73_2014\SheetsPlan\dt1078\Cable Routing_Hammond.pptx

ORIGINATOR: MICHAEL SCHNEIDER

ORIG. DATE: OCTOBER 2017

PLOTTED DATE: 10/20/2017 7:51 AM

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB8	SB8
PB9	SB9
PB10	SB11
PB11	CB1

LIGHTING UF 12 AWG W/ GROUND	
FROM	TO
CB1	SB2
SB2	SB5
CB1	SB12
SB12	SB9

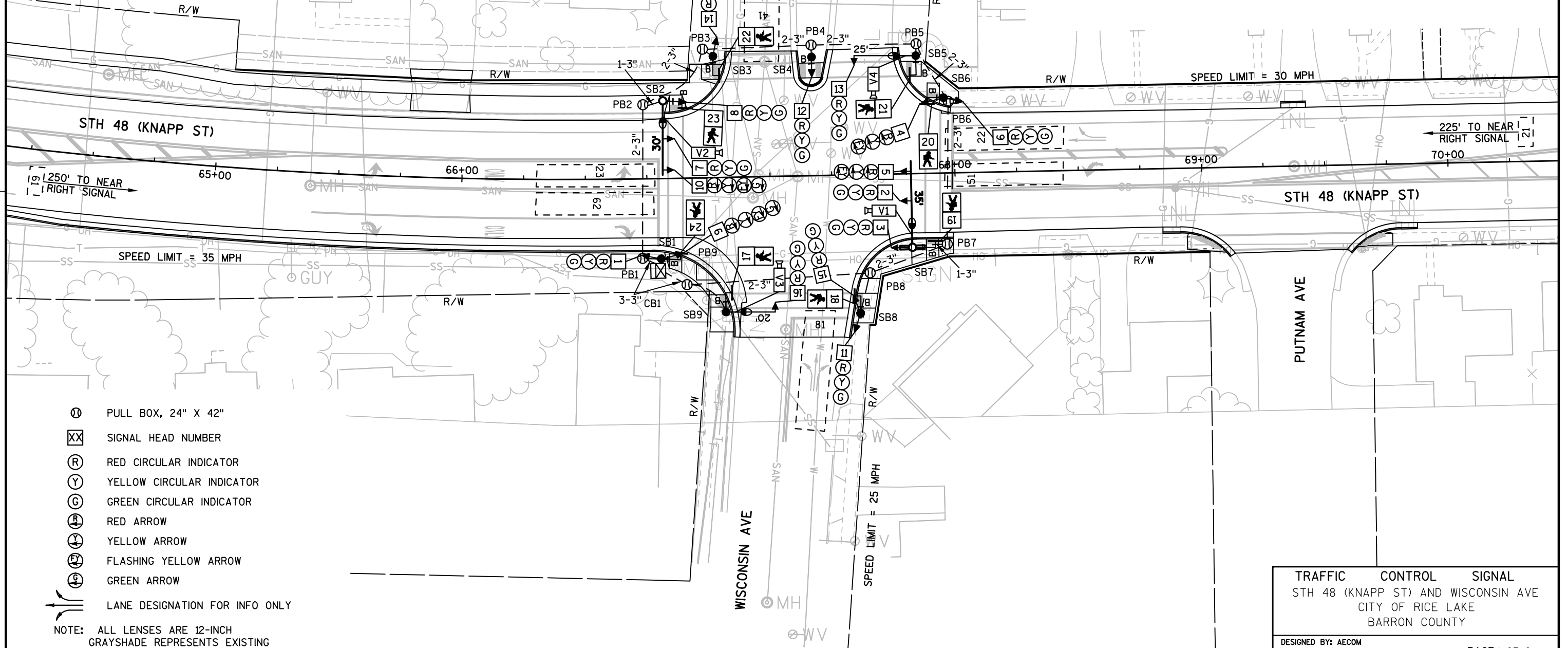
VIDEO DETECTION CABLE 12 AWG W/ GROUND	
FROM	TO
CB1	V1
CB1	V2
CB1	V3
CB1	V4

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

STH 48/CTH SS (KNAPP STREET) & STH 48 (HAMMOND AVE)	
CITY OF RICE LAKE BARRON COUNTY	
CABINET TYPE: TS2	
CONTROLLER TYPE: EPAC	
DATE: JULY 2017	PAGE NO. 2 OF 2

LEGEND

-  CONTROL CABINET
 NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
 SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
 SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
 MONOTUBE BASE, POLE, 15'-30' ARM
 MONOTUBE BASE, POLE, 35'-55' ARM
 PEDESTRIAN HEAD WITH PUSH BUTTON
 PUSH BUTTON
 WALK/DON'T WALK INDICATOR 16"
(COUNTDOWN TIMER)
 VIDEO DETECTION AREA
 VIDEO DETECTION CAMERA
 LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT JIM ANDERSON, CITY OF RICE LAKE COMMUNITY SERVICES DEPARTMENT DIRECTOR, (715) 234-7004.
2. ALL LUMINAIRES AT THE STH 48 (KNAPP ST) & WISCONSIN AVENUE INTERSECTION ARE "LED B" UNLESS OTHERWISE NOTED. CONTACT TIM AABY, RICE LAKE UTILITIES (ELECTRIC), (715) 234-7004.
3. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3" CONDUIT.
6. PROPOSED DRAINAGE STRUCTURES, DETECTABLE WARNING FIELDS AND PAVEMENT MARKINGS SHOWN GRAYSHADE FOR PLAN CLARITY.
7. CONTACT TIM AABY, RICE LAKE UTILITIES (ELECTRIC), (715) 234-7004 TO COORDINATE REMOVAL OF EXISTING LIGHTING FIXTURES.

TRAFFIC CONTROL SIGNAL
 STH 48 (KNAPP ST) AND WISCONSIN AVE
 CITY OF RICE LAKE
 BARRON COUNTY

DESIGNED BY: AECOM

PAGE 1 OF 2

PROJECT NO: 8120-04-75

HWY: STH 48

COUNTY: BARRON

TRAFFIC SIGNAL PLAN

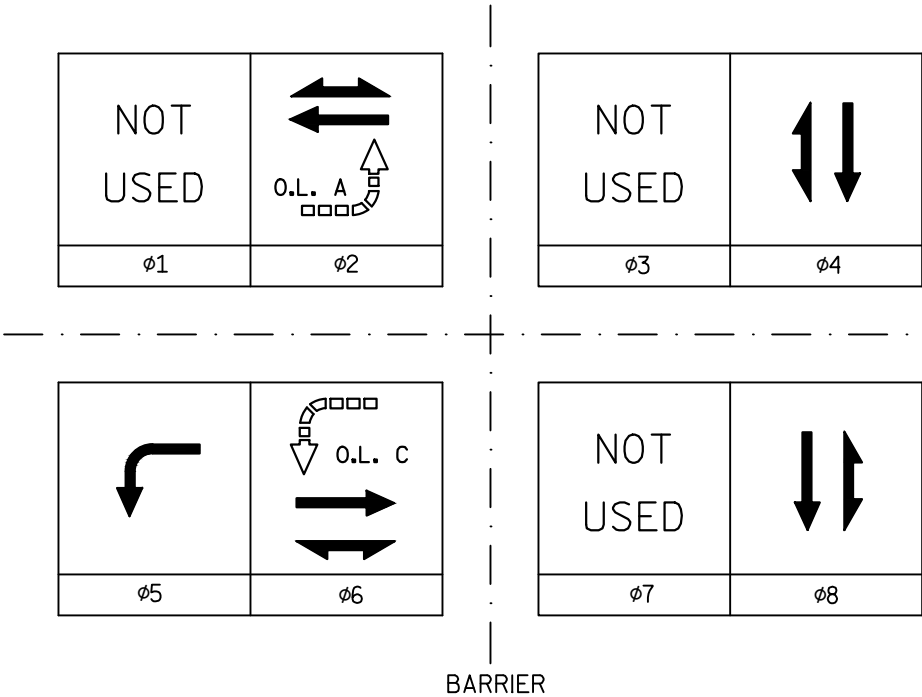
SHEET

46

E

	HEAD NUMBERS	FLASH
ø1		-
ø2	4,5,6,7,8	R
ø3		-
ø4	14,15,16	R
ø5	9,10	R
ø6	1,2,3	R
ø7		-
ø8	11,12,13	-
ø2PED	21,22	-
ø4PED	23,24	-
ø6PED	17,18	-
ø8PED	19,20	-
OLA	4,5	R
OLB		-
OLC	9,10	R
OLD		-

OL ASSIGNMENTS	
2	
5+6	

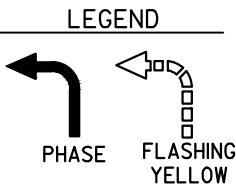


CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	X
3				
4		8		X
5		2		X
6	X	2	MIN	X
7				
8		4		X

TYPE OF INTERCONNECT	
NONE	
TBC	X
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	



TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF REMOTE COMMUNICATION	
NONE	
FIBER	
CELL MODEM	X
PHONE	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR *(S)								
ASSIGNED PHASE								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	19	17	23	21	27	25	31	29
DETECTOR *(S)	21	23	51	62				
ASSIGNED PHASE	2	2	5	6				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	X							
DELAY								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR *(S)								
ASSIGNED PHASE								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	20	18	24	22	28	26	32	30
DETECTOR *(S)	22	41	61	81				
ASSIGNED PHASE	2	4	6	8				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND			X					
DELAY								

TRAFFIC CONTROL SIGNAL STH 48 (KNAPP ST) & WISCONSIN AVE CITY OF RICE LAKE BARRON COUNTY
CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: JULY 2017

2

PROJECT ID: 8120-04-75

INTERSECTION: STH 48 & WISCONSIN AVE

SIGNAL WIRE COLOR CODING

BLK-BLACK

RED-RED

GRN-GREEN

WHT-WHITE

BLU-BLUE

ORG-ORANGE

DATE: Oct-17

CB1 TO	AWG 14 # OF COND.	HEAD NO.	SIGNAL INDICATION WIRE COLOR								PED BUTTON	OTHER	
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<FLASH YEL>	<GREEN>	D/WALK			WALK
SB1	12	1	RED	ORG	GRN								
		9				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
		24								BLK	BLU		
		PB										WHT/BLK	
SB2	15	7	RED	ORG	GRN								
		8	RED	ORG	GRN								
		10				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
		23								BLK	WHT		
		PB										WHT/BLK	
SB3	12	14	RED	ORG	GRN								
		22								BLK	WHT		
		SB										WHT/BLK	
SB4	7	12	RED	ORG	GRN								
SB5	12	13	RED	ORG	GRN								
		21								BLK	WHT		
		PB										WHT/BLK	
SB6	12	6	RED	ORG	GRN								
		4				RED/BLK	ORG/BLK		GRN/BLK				
		20								BLK	WHT		
		PB										WHT/BLK	
SB7	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		5				RED/BLK	ORG/BLK		GRN/BLK				
		19								BLK	WHT		
		PB										WHT/BLK	
SB8	12	11	RED	ORG	GRN								
		15	RED/BLK	ORG/BLK	GRN/BLK								
		18								BLK	WHT		
		PB										WHT/BLK	
SB9	12	16	RED	ORG	GRN								
		17								BLK	WHT		
		PB										WHT/BLK	

STH 48 (KNAPP STREET) & WISCONSIN AVE

CITY OF RICE LAKE

BARRON COUNTY

CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE: JULY 2017

PAGE NO. 1 OF 2

PROJECT NUMBER: 8120-04-75

HWY: STH 48

COUNTY: BARRON

CABLE ROUTING

SHEET 48

E

FILE NAME: L:\work\60265160\60323718\900-WorkingDocs-CAD\910_CAD\8120-04-73_2014\SheetsPlan\dt1078\Cable Routing_Wisconsin.pptx

ORIGINATOR: MICHAEL SCHNEIDER

ORIG. DATE: OCTOBER 2017

PLOTTED DATE: 10/20/2017 8:00 AM

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB6	SB6
PB7	SB7
PB8	SB8
PB9	CB1

LIGHTING UF 12 AWG W/ GROUND	
FROM	TO
CB1	SB2
SB2	SB5
CB1	SB9
SB9	SB7

VIDEO DETECTION CABLE 12 AWG W/ GROUND	
FROM	TO
CB1	V1
CB1	V2
CB1	V3
CB1	V4

- NOTES:**
- 1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
 - 2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
 - 3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.
CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

STH 48 (KNAPP STREET) & WISCONSIN AVE	
CITY OF RICE LAKE	
BARRON COUNTY	
CABINET TYPE: TS2	
CONTROLLER TYPE: EPAC	
DATE: JULY 2017	PAGE NO. 2 OF 2

LEGEND

-  MARKING LINE EPOXY 4-INCH WHITE
-  MARKING LINE EPOXY 4-INCH YELLOW
-  MARKING LINE EPOXY 8-INCH WHITE
-  MARKING DIAGONAL EPOXY 12-INCH WHITE:
25' APART, 45° TO CENTER LINE
-  MARKING LINE EPOXY 4-INCH DOUBLE YELLOW
-  MARKING ARROW EPOXY
-  MARKING DIAGONAL EPOXY 12-INCH YELLOW:
25' APART, 45° TO CENTER LINE

MATCHLINE STA. 19+00'WB'

MATCHLINE STA. 26+00'WB'

USH 53 SB
ON RAMP

PROJECT NO: 8120-04-73

HWY: STH 48

COUNTY: BARRON

PLAN: PAVEMENT MARKINGS

SHEET 50

E

MATCHLINE STA. 26+00'WB'

USH 53 NB
ON RAMP

MATCHLINE STA. 33+00'WB'

LEGEND

-  MARKING LINE EPOXY 4-INCH WHITE
-  MARKING LINE EPOXY 4-INCH YELLOW
-  MARKING LINE EPOXY 8-INCH WHITE
-  MARKING DIAGONAL EPOXY 12-INCH WHITE:
25' APART, 45° TO CENTER LINE
-  MARKING LINE EPOXY 4-INCH DOUBLE YELLOW
-  MARKING ARROW EPOXY
-  MARKING DIAGONAL EPOXY 12-INCH YELLOW:
25' APART, 45° TO CENTER LINE
-  MARKING WORDS EPOXY WHITE
-  MARKING ISLAND NOSE EPOXY YELLOW

MATCHLINE STA. 33+00'WB'

BEAR PAW AVENUE

MATCHLINE STA. 40+00'WB'

MATCHLINE STA. 40+00'WB'

BEGIN PROJECT 8120-04-73
STA 41+35.20

STH 48 (KNAPP ST)

MATCHLINE STA. 47+50

LEGEND

 MARKING LINE EPOXY 4-INCH WHITE	 MARKING ARROW EPOXY
 MARKING LINE EPOXY 4-INCH YELLOW	 MARKING DIAGONAL EPOXY 12-INCH YELLOW: 25' APART, 45° TO CENTER LINE
 MARKING LINE EPOXY 8-INCH WHITE	 PAVEMENT MARKING EPOXY 4-INCH WHITE: 3' LINE, 9' GAP
 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	 MARKING WORDS EPOXY WHITE
 MARKING LINE EPOXY 4-INCH DOUBLE YELLOW	 MARKING LINE EPOXY 4-INCH WHITE: 12.5' LINE, 37.5' GAP
 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH WHITE	 MARKING LINE EPOXY 4-INCH WHITE: 3' LINE, 9' GAP

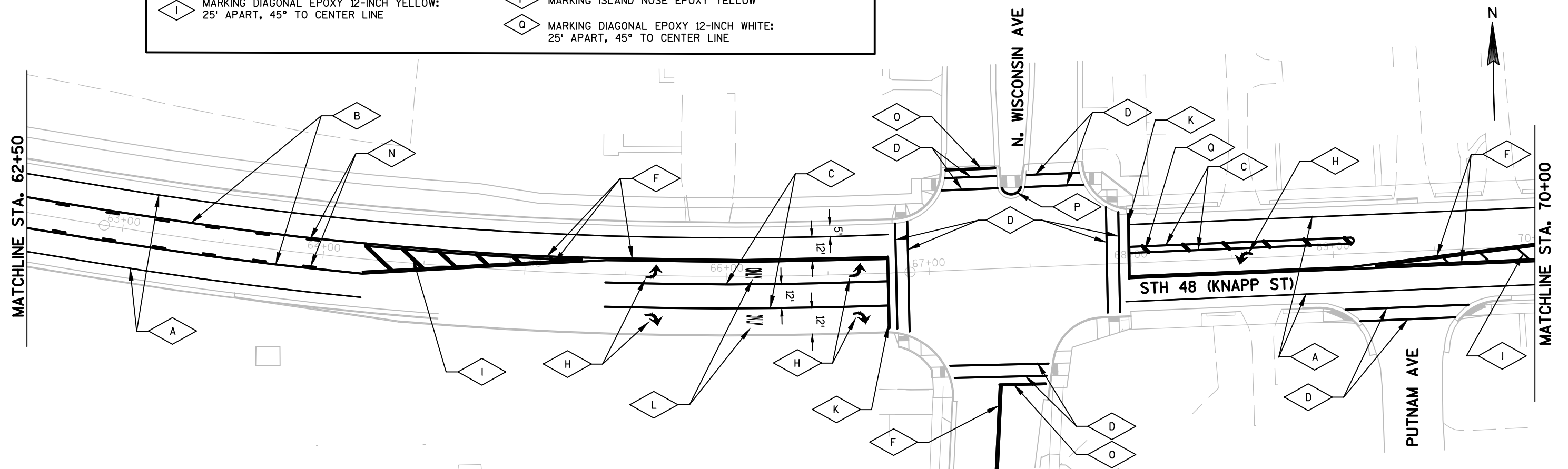
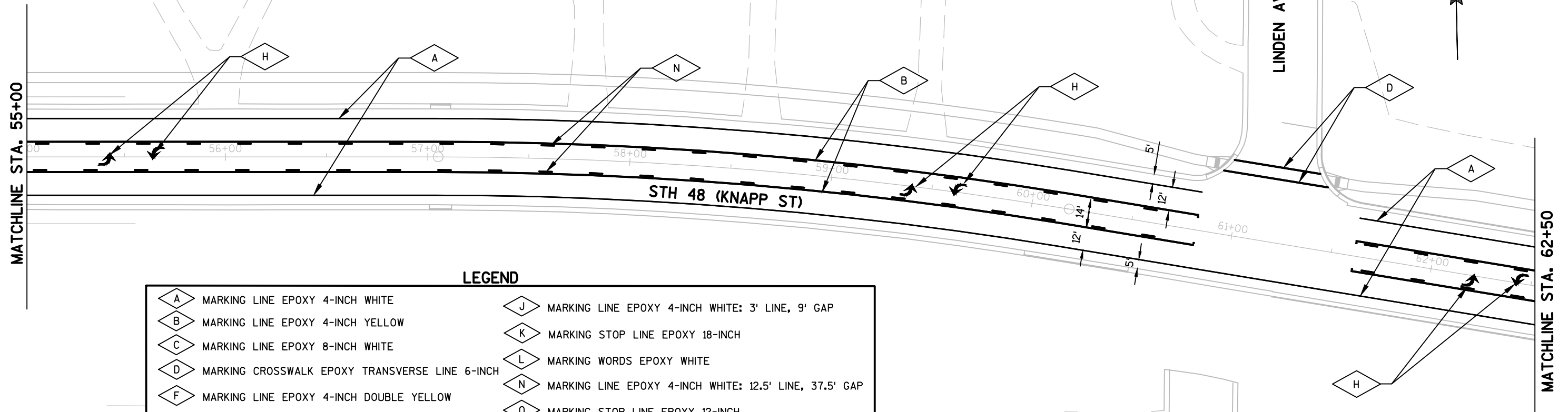
MATCHLINE STA. 47+50

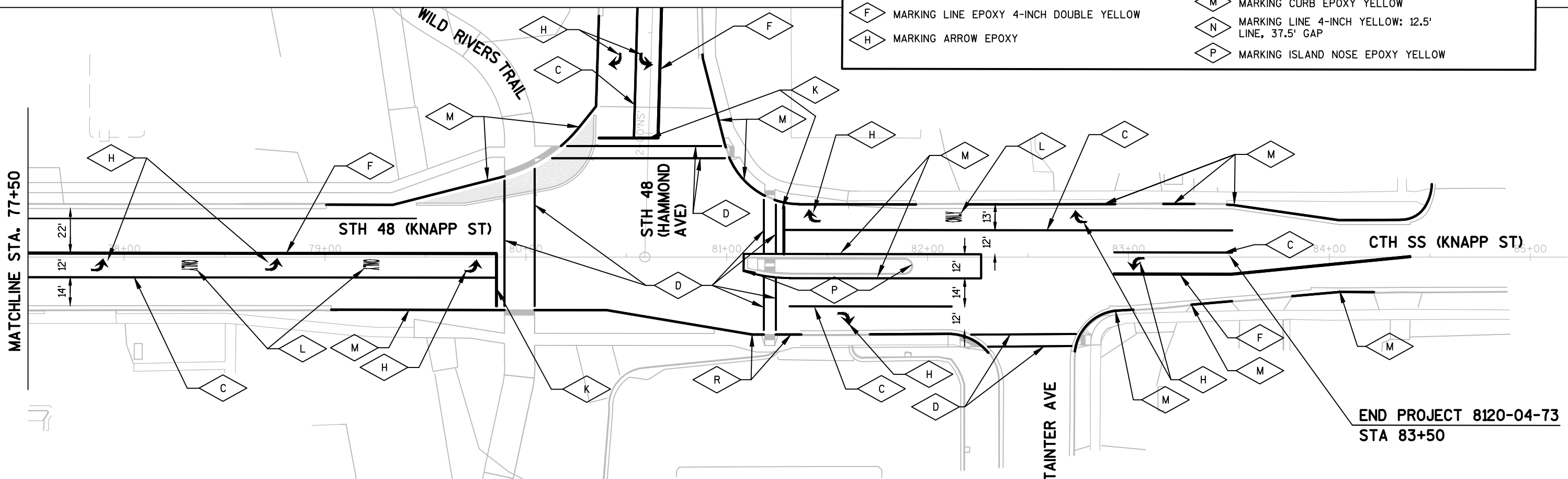
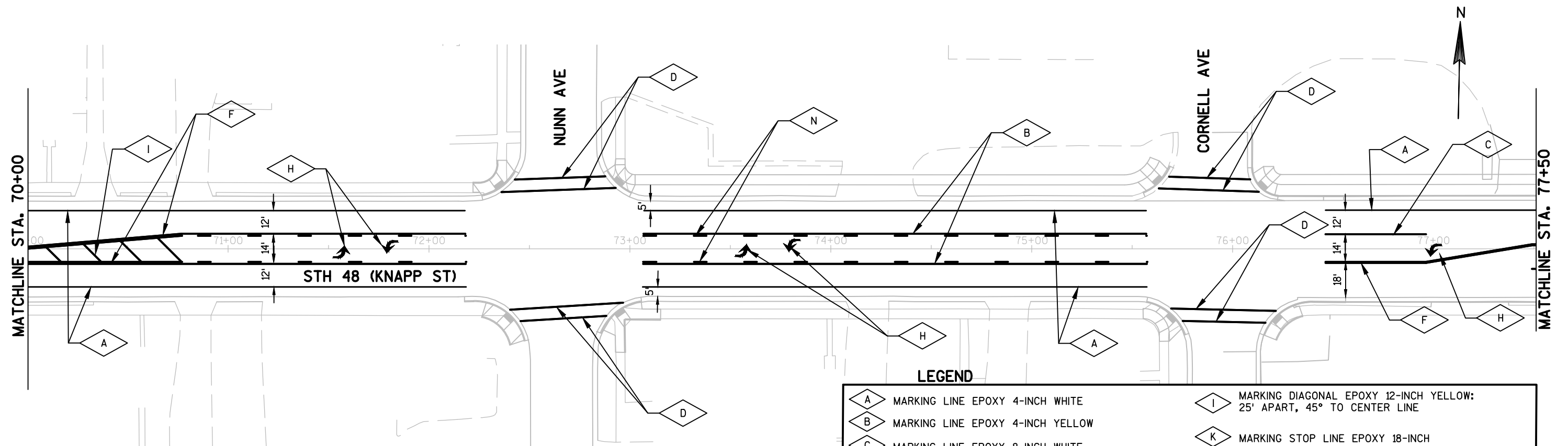
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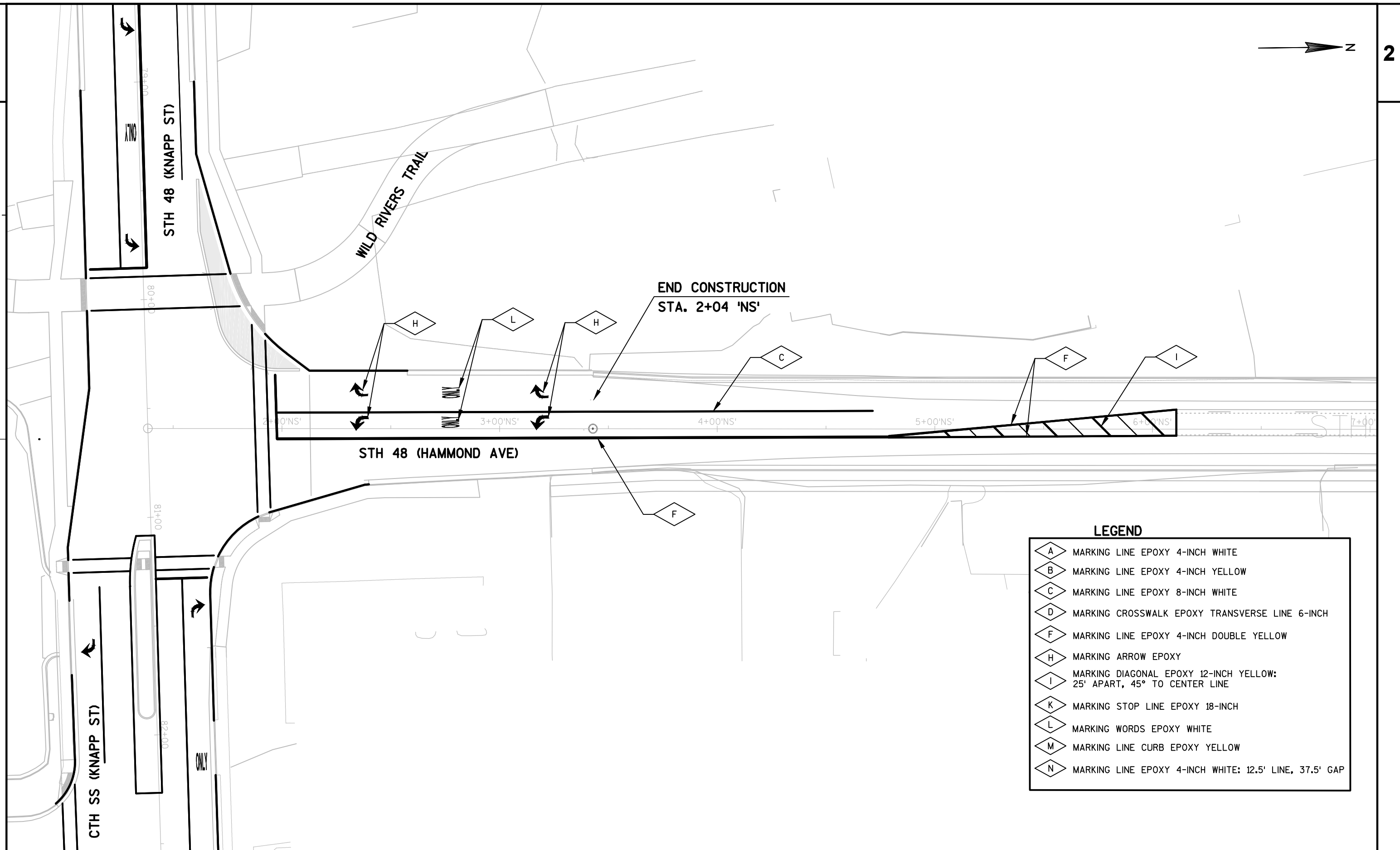
STH 48 (KNAPP ST)

MATCHLINE STA. 55+00

POSKIN AVE







STAGE CONSTRUCTION WORK NOTES

STAGE 1

- REMOVE EXISTING ISLANDS AT HAMMOND AVENUE INTERSECTION AND PLACE ASPHALTIC SURFACE TEMPORARY

STAGE 2

- REMOVE PAVEMENT AND PLACE HMA PAVEMENT ON EB LANES OF STH 48
- PLACE CONCRETE ON EB LANES OF STH 48 AT HAMMOND INTERSECTION
- REMOVE AND RECONSTRUCT SOUTHERN PORTION OF WILD RIVERS TRAIL

STAGE 2B

- CONTINUE WITH CONSTRUCTION FROM STAGE 2
- CONSTRUCT CITY WATERMAIN ALONG TAINTER AVENUE TO THE WATERMAIN TEE WITH CTH SS. REMAINING WORK TO BE COMPLETED IN STAGE 3

STAGE 3

- REMOVE PAVEMENT AND PLACE HMA PAVEMENT ON WB LANES OF STH 48 AND HAMMOND AVE
- PLACE CONCRETE ON WB LANES OF STH 48 AT HAMMOND INTERSECTION
- REMOVE AND RECONSTRUCT NORTHERN PORTION OF WILD RIVERS TRAIL
- INSTALL FINAL PAVEMENT MARKINGS EXCEPT THOSE ALONG CTH SS EAST OF HAMMOND AVENUE

STAGE 4

- CONSTRUCT MEDIAN NEAR HAMMOND AVENUE
- INSTALL PERMANENT SIGNALS AT THE INTERSECTIONS OF KNAPP ST WITH WISCONSIN AVE AND HAMMOND AVE
- INSTALL REMAINING FINAL PAVEMENT MARKINGS ALONG CTH SS EAST OF HAMMOND AVENUE AND ANY MARKINGS DISTURBED BY SIGNAL INSTALLATIONS

STAGE CONSTRUCTION TRAFFIC NOTES

STAGE 1

- TRAFFIC ON EXISTING LANES
- TEMPORARY SHIFTS AT HAMMOND AVE FOR MEDIAN REMOVAL
- MAINTAIN ACCESS TO WILD RIVERS TRAIL ACROSS STH 48

STAGE 2

- ALL TRAFFIC ON EXISTING WB LANES
- KEEP TAINTER AVE OR DRIVEWAY OPEN THROUGH STAGE TO KEEP ACCESS TO GAS STATION
- ALLOW ACCESS TO SIDE ROADS DURING CONSTRUCTION (SEE DETAILS)
- MAINTAIN ACCESS TO WILD RIVERS TRAIL ACROSS STH 48
- UTILIZE ALL-WAY STOP CONTROL AT STH 48 & HAMMOND AVENUE INTERSECTION
- UTILIZE TEMPORARY PEDESTRIAN ACCOMMODATIONS FOR CONTINUOUS ACCESS.

STAGE 2B

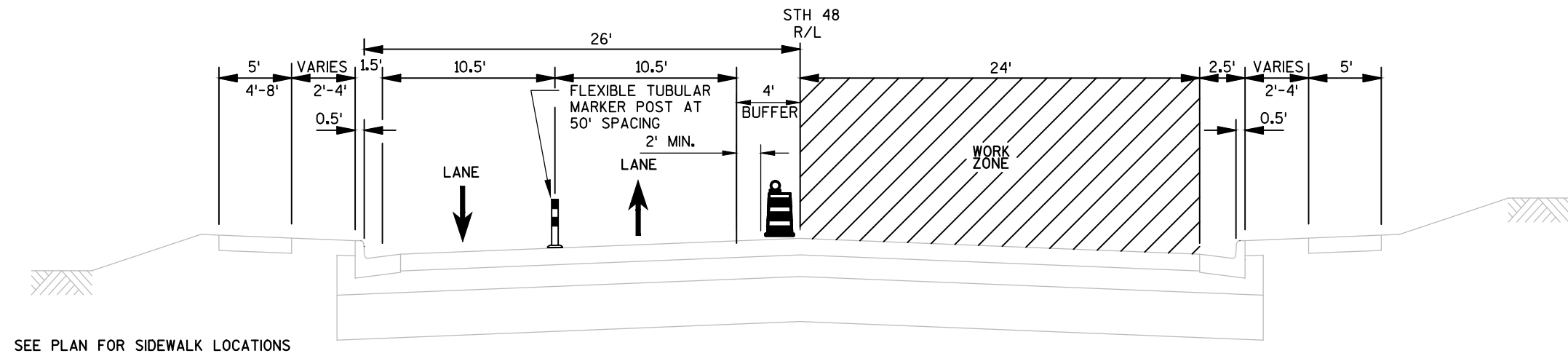
- CONTINUE WITH TRAFFIC FROM STAGE 2
- CLOSE EB STH 48 TRAFFIC EAST OF HAMMOND AVENUE, WB TRAFFIC TO REMAIN OPEN

STAGE 3

- ALL TRAFFIC ON EXISTING EB LANES
- ALLOW ACCESS TO SIDE ROADS DURING CONSTRUCTION (SEE DETAILS)
- MAINTAIN ACCESS TO WILD RIVERS TRAIL ACROSS STH 48
- STH 48 & HAMMOND AVENUE INTERSECTION DETOUR (SEE DETOUR SHEETS)
- UTILIZE TEMPORARY PEDESTRIAN ACCOMMODATIONS FOR CONTINUOUS ACCESS.

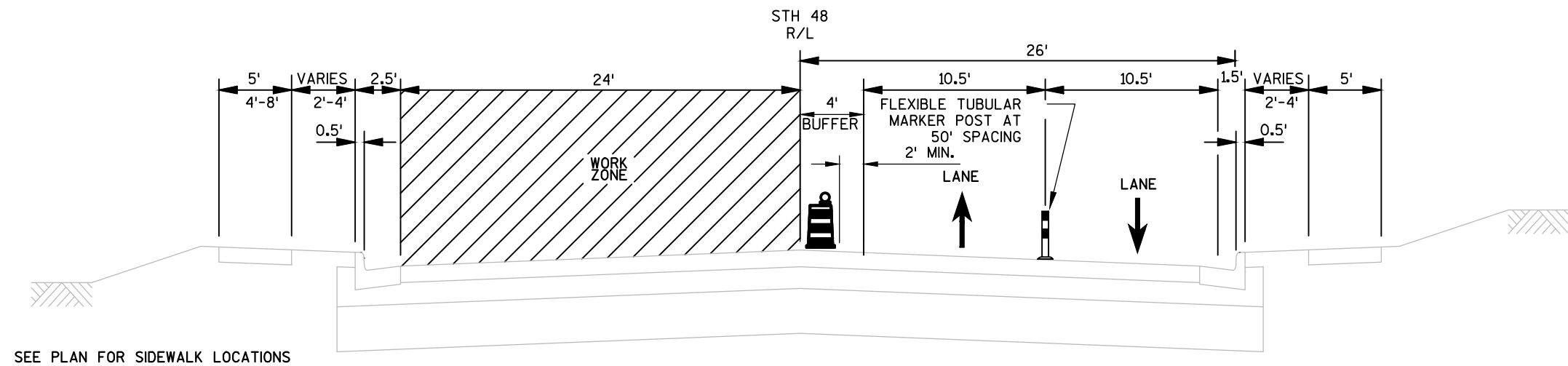
STAGE 4

- LANE CLOSURES FOR MEDIAN CONSTRUCTION
- MAINTAIN ACCESS TO WILD RIVERS TRAIL ACROSS STH 48
- UTILIZE SIDE ROAD STOP CONTROL



STH 48 STAGING TYPICAL SECTION - STAGE 2

BEAR PAW AVE. - TAINTER AVE.
(LOOKING EAST)



STH 48 STAGING TYPICAL SECTION - STAGE 3

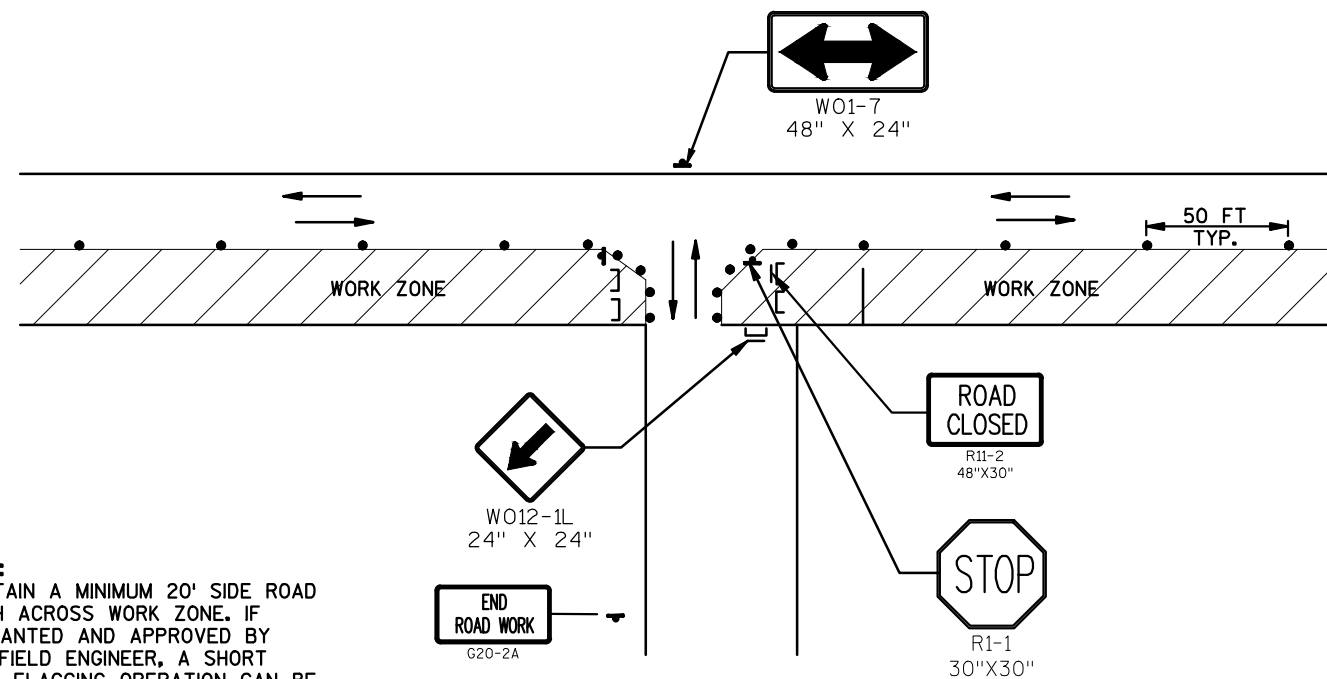
BEAR PAW AVE. - TAINTER AVE.
(LOOKING EAST)

NOTE:
MAINTAIN DRIVEWAY AND SIDE ROAD ACCESS
ACROSS WORK ZONE DURING CONSTRUCTION.
USING TRAFFIC CONTROL DRUMS, MAINTAIN A
DRIVEWAY OR SIDE ROAD WIDTH EQUAL TO
THE EXISTING WIDTH, OR AS APPROVED BY
THE FIELD ENGINEER.

2



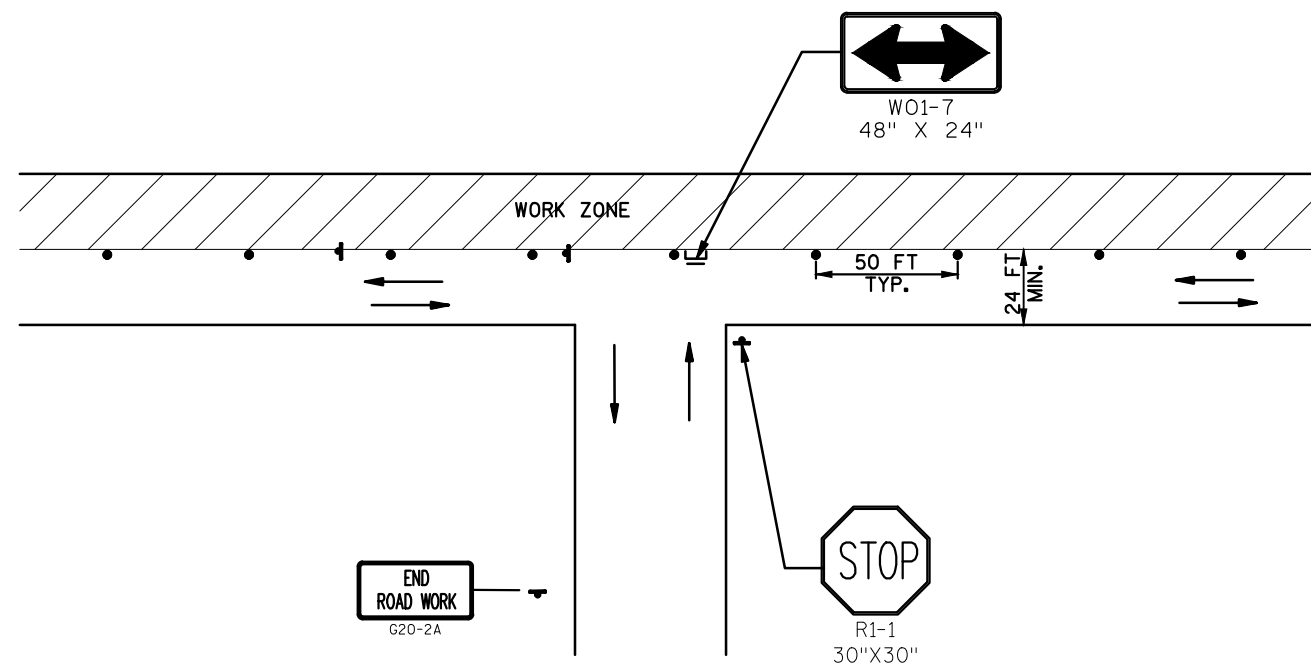
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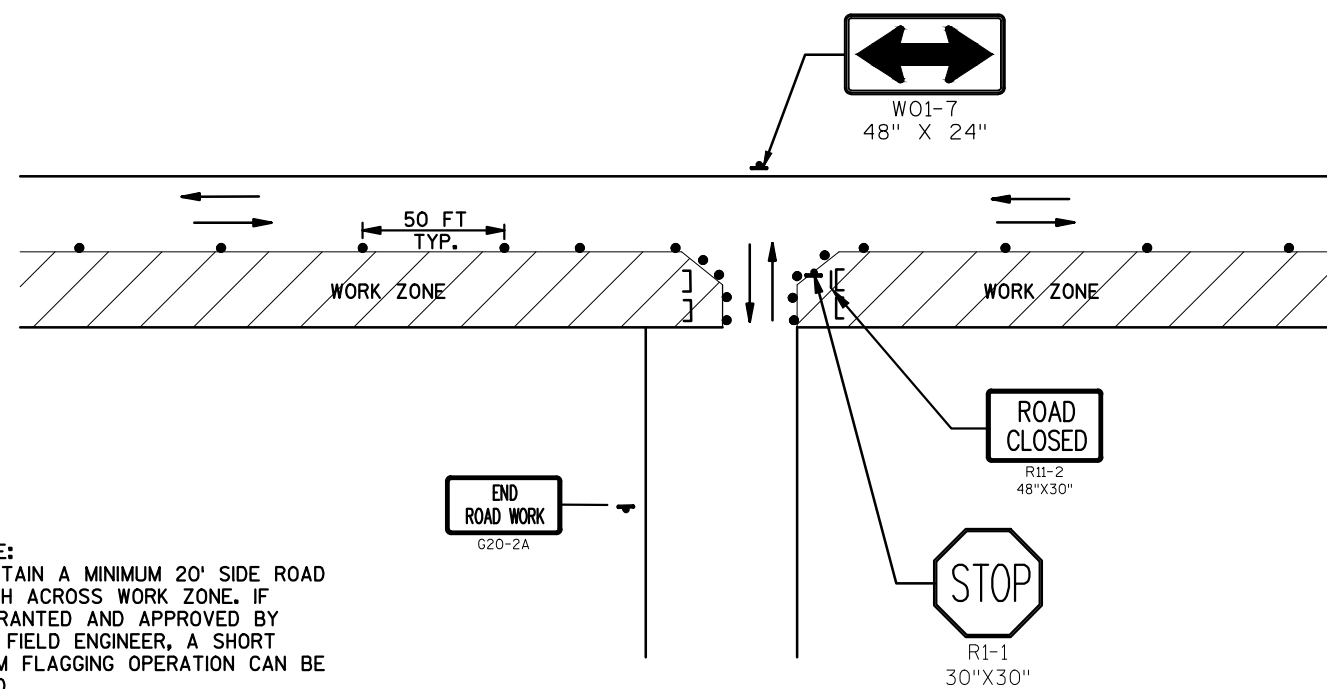
NOTE:
MAINTAIN A MINIMUM 20' SIDE ROAD
WIDTH ACROSS WORK ZONE. IF
WARRANTED AND APPROVED BY
THE FIELD ENGINEER, A SHORT
TERM FLAGGING OPERATION CAN BE
USED.

TRAFFIC CONTROL AT INTERSECTION
NEAR SIDE LANE CLOSURE CASE 1

2



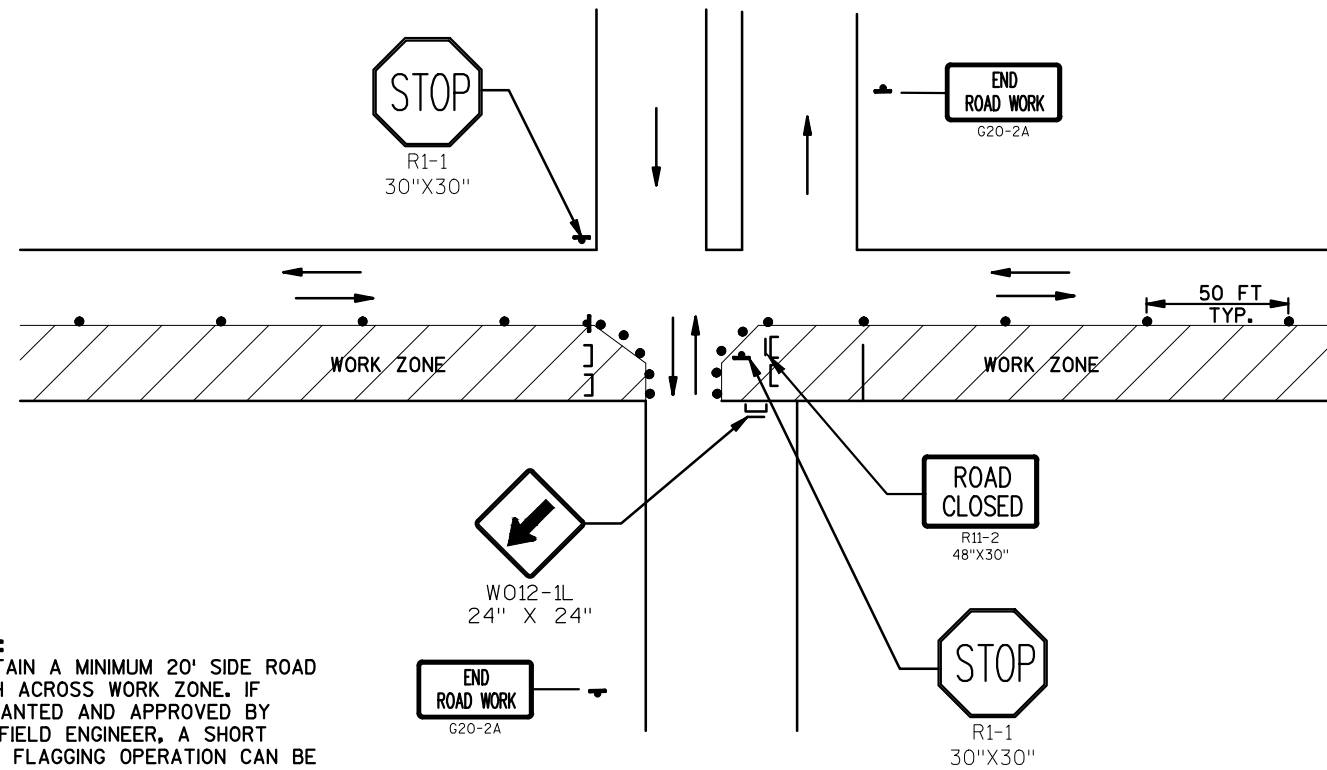
TRAFFIC CONTROL AT INTERSECTION
FAR SIDE LANE CLOSURE



NOTE:
MAINTAIN A MINIMUM 20' SIDE ROAD
WIDTH ACROSS WORK ZONE. IF
WARRANTED AND APPROVED BY
THE FIELD ENGINEER, A SHORT
TERM FLAGGING OPERATION CAN BE
USED.

TRAFFIC CONTROL AT INTERSECTION
NEAR SIDE LANE CLOSURE CASE 2

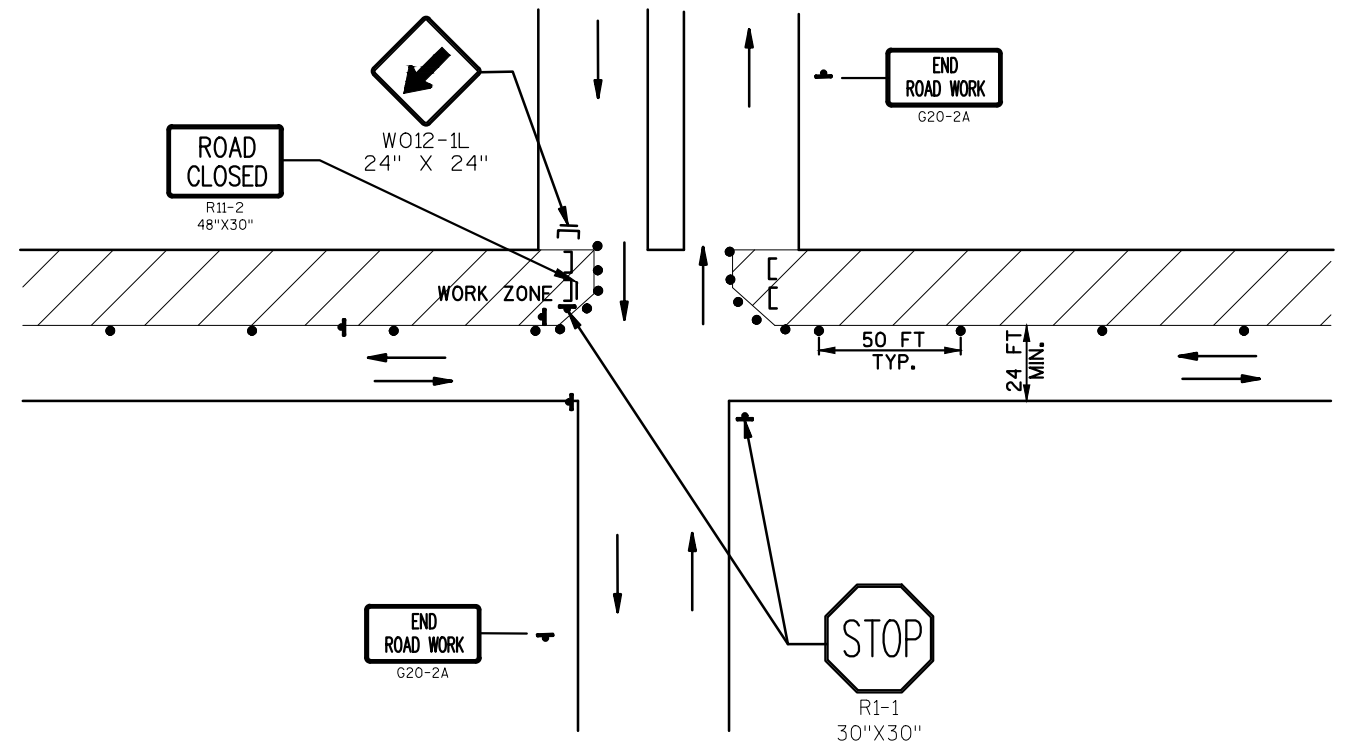
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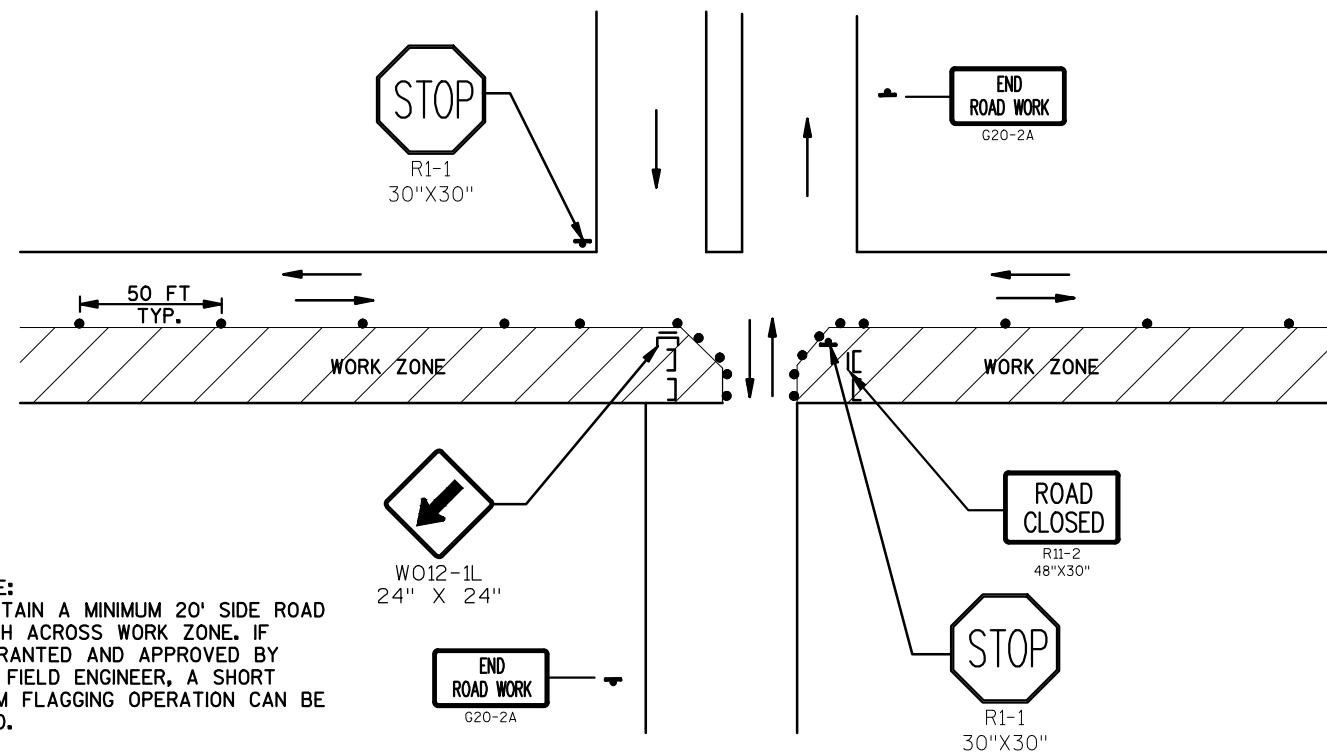
NOTE:
MAINTAIN A MINIMUM 20' SIDE ROAD
WIDTH ACROSS WORK ZONE. IF
WARRANTED AND APPROVED BY
THE FIELD ENGINEER, A SHORT
TERM FLAGGING OPERATION CAN BE
USED.

TRAFFIC CONTROL AT WISCONSIN AVENUE
INTERSECTION
LANE CLOSURE CASE 1

2

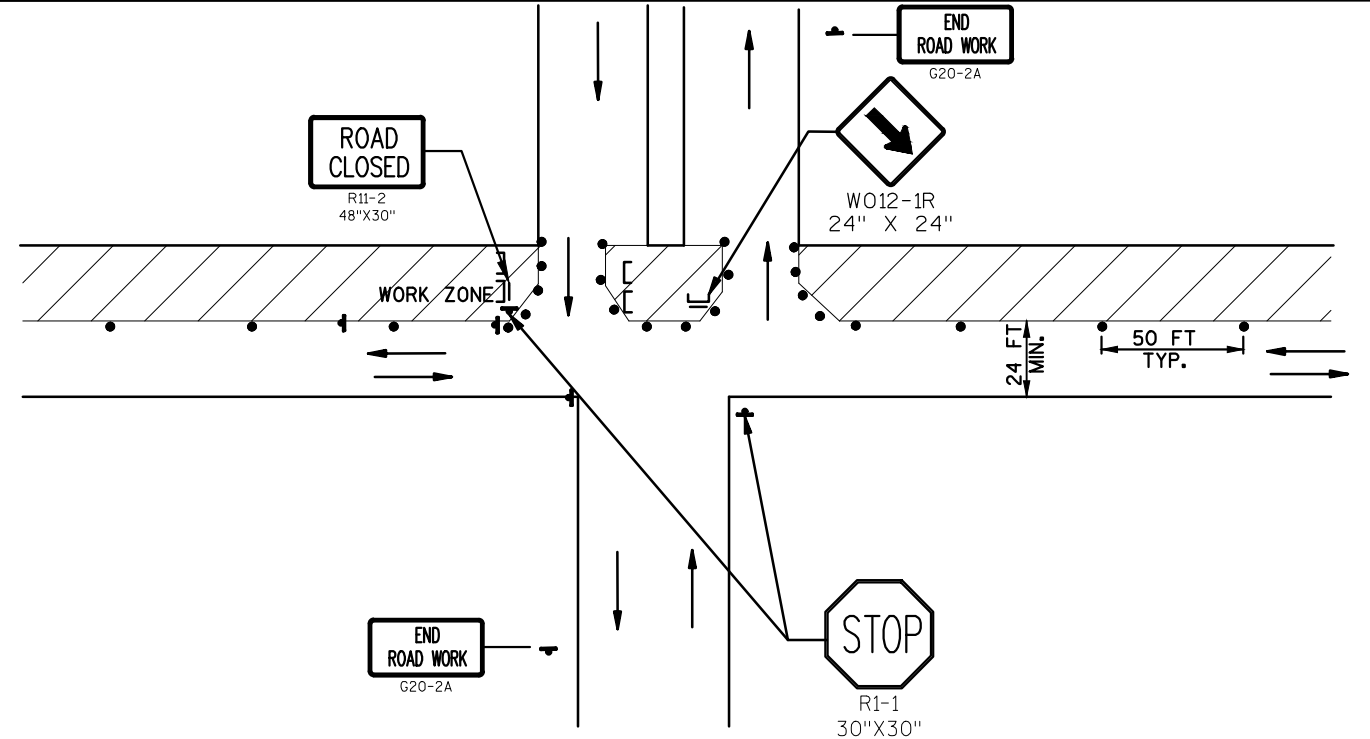


TRAFFIC CONTROL AT WISCONSIN AVENUE
INTERSECTION
LANE CLOSURE CASE 3

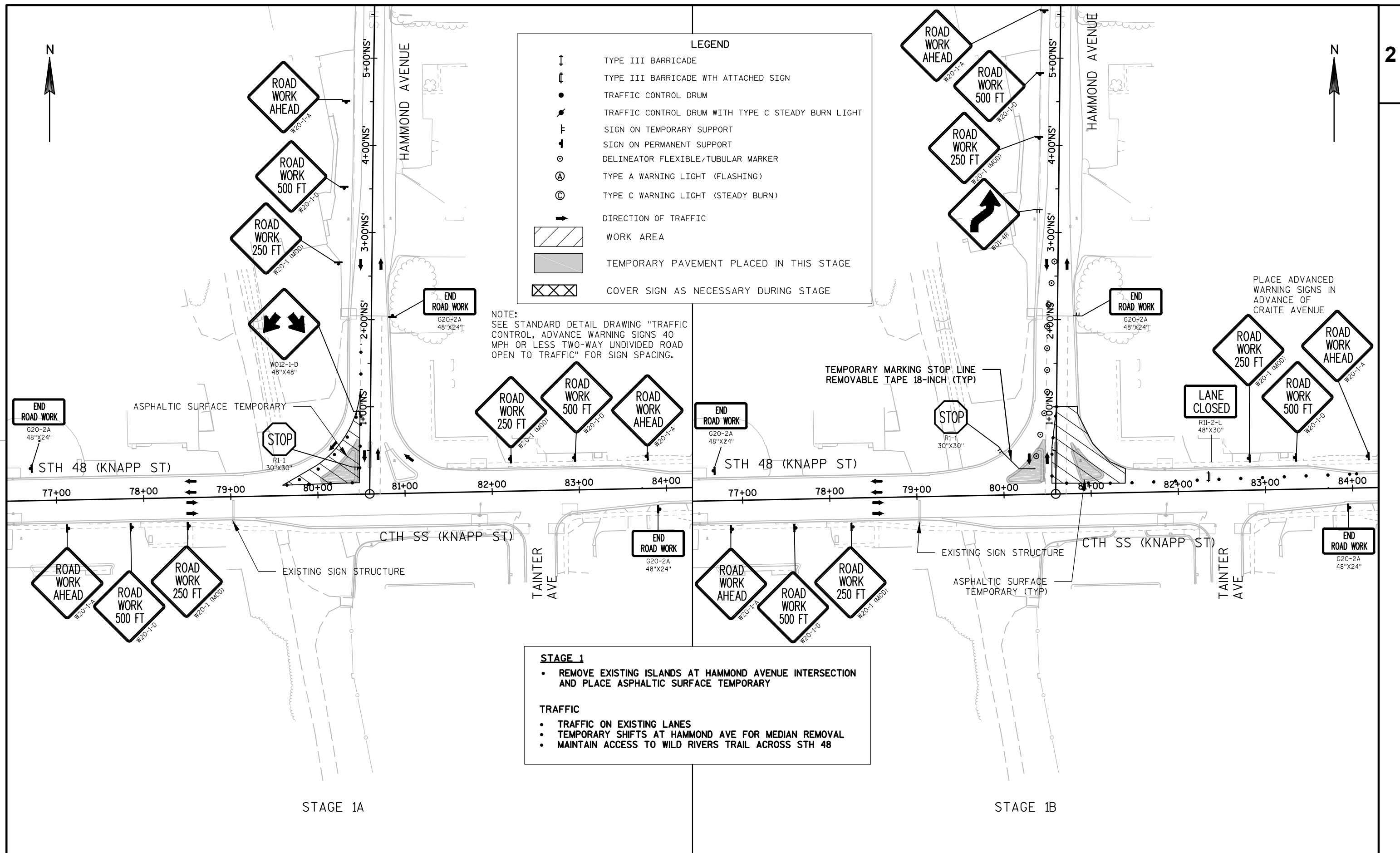


NOTE:
MAINTAIN A MINIMUM 20' SIDE ROAD
WIDTH ACROSS WORK ZONE. IF
WARRANTED AND APPROVED BY
THE FIELD ENGINEER, A SHORT
TERM FLAGGING OPERATION CAN BE
USED.

TRAFFIC CONTROL AT WISCONSIN AVENUE
INTERSECTION
LANE CLOSURE CASE 2



TRAFFIC CONTROL AT WISCONSIN AVENUE
INTERSECTION
LANE CLOSURE CASE 4



STAGE 2

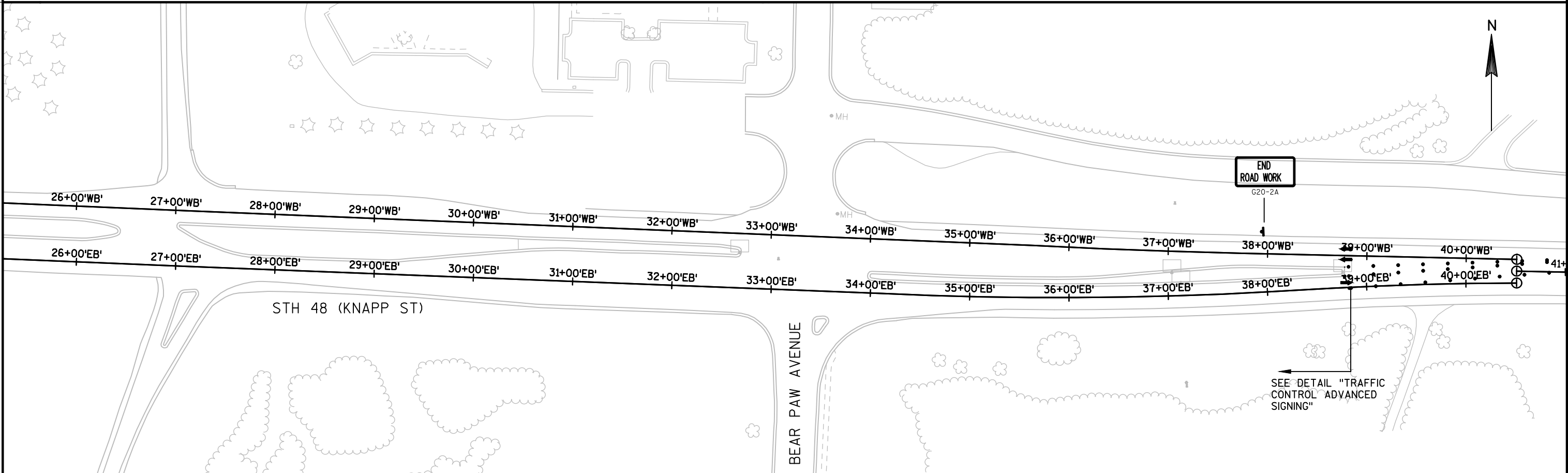
- REMOVE PAVEMENT AND PLACE HMA PAVEMENT ON EB LANES OF STH 48
- PLACE CONCRETE ON EB LANES OF STH 48 AT HAMMOND INTERSECTION
- REMOVE AND RECONSTRUCT SOUTHERN PORTION OF WILD RIVERS TRAIL

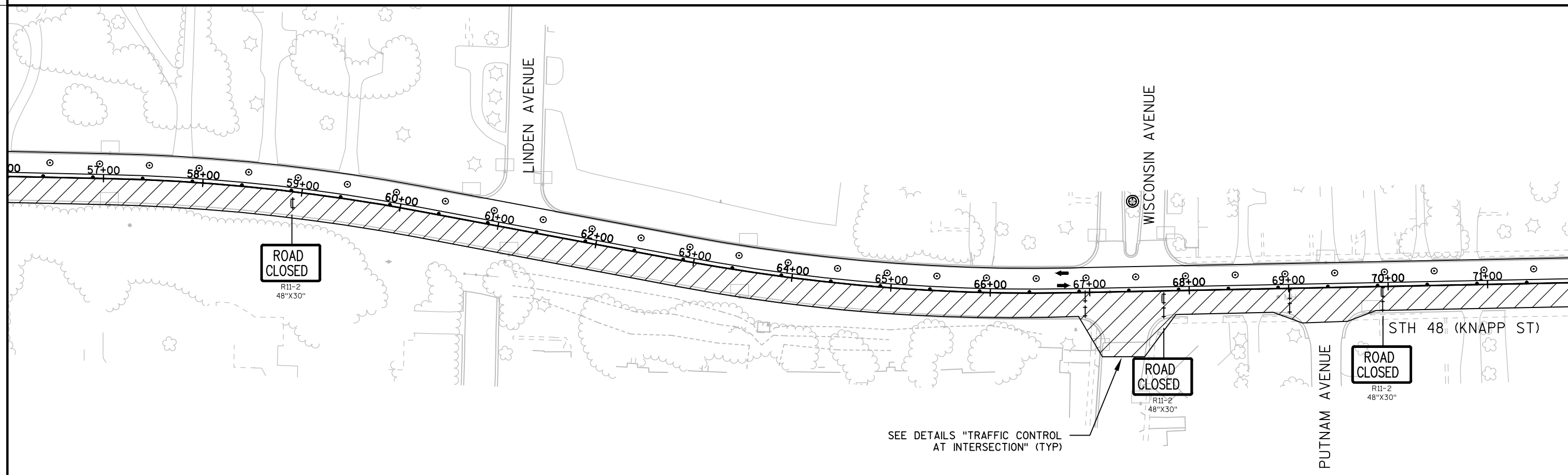
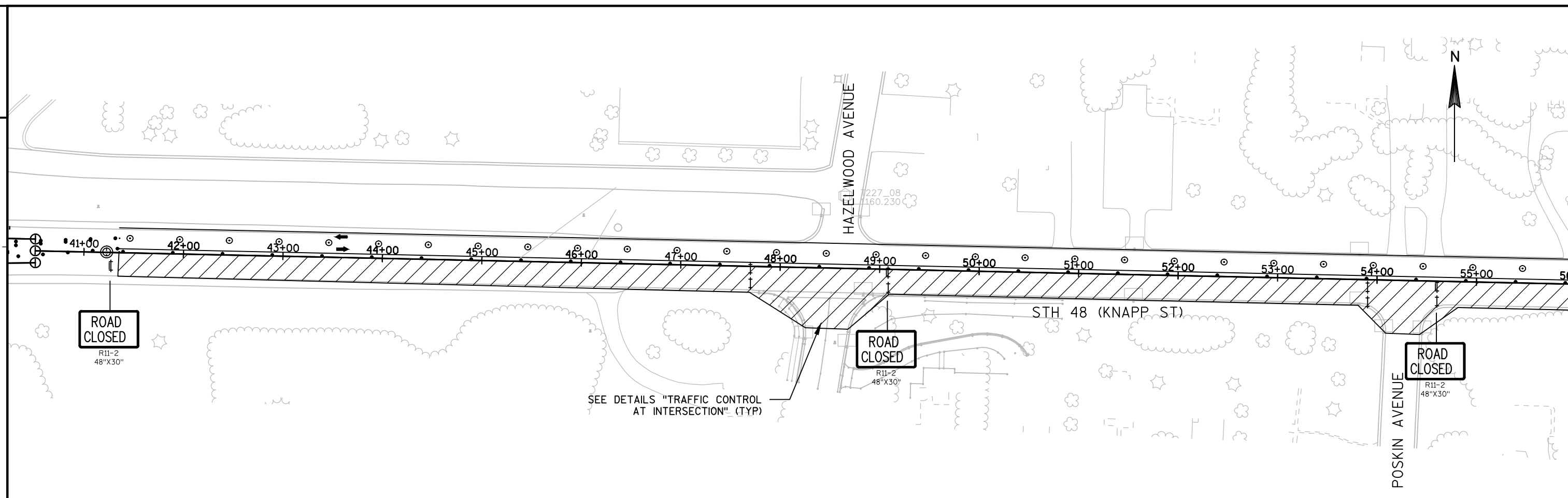
TRAFFIC

- ALL TRAFFIC ON EXISTING WB/SB LANES
- KEEP TAINTER AVE OR DRIVEWAY OPEN THROUGH STAGE TO KEEP ACCESS TO GAS STATION
- ALLOW ACCESS TO SIDE ROADS DURING CONSTRUCTION (SEE DETAILS)
- MAINTAIN ACCESS TO WILD RIVERS TRAIL ACROSS STH 48
- UTILIZE ALL-WAY STOP CONTROL AT STH 48 & HAMMOND AVENUE INTERSECTION
- UTILIZE TEMPORARY PEDESTRIAN ACCOMMODATIONS FOR CONTINUOUS ACCESS

LEGEND

- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ⌋ SIGN ON TEMPORARY SUPPORT
- ⌋ SIGN ON PERMANENT SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- ➔ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ▩ TEMPORARY PAVEMENT PLACED STAGE 1
- ⊠ COVER SIGN AS NECESSARY DURING STAGE





PROJECT NO: 8120-04-73

HWY: STH 48

COUNTY: BARRON

TRAFFIC CONTROL, STH 48, STAGE 2

SHEET

63

E

FILE NAME : L:\WORK\60265160\60323718\900-WORKINGDOCS-CAD\910-CAD\8120-04-73_2014\SHEETSP\LAN\POST FINAL\025003_TC2.DWG

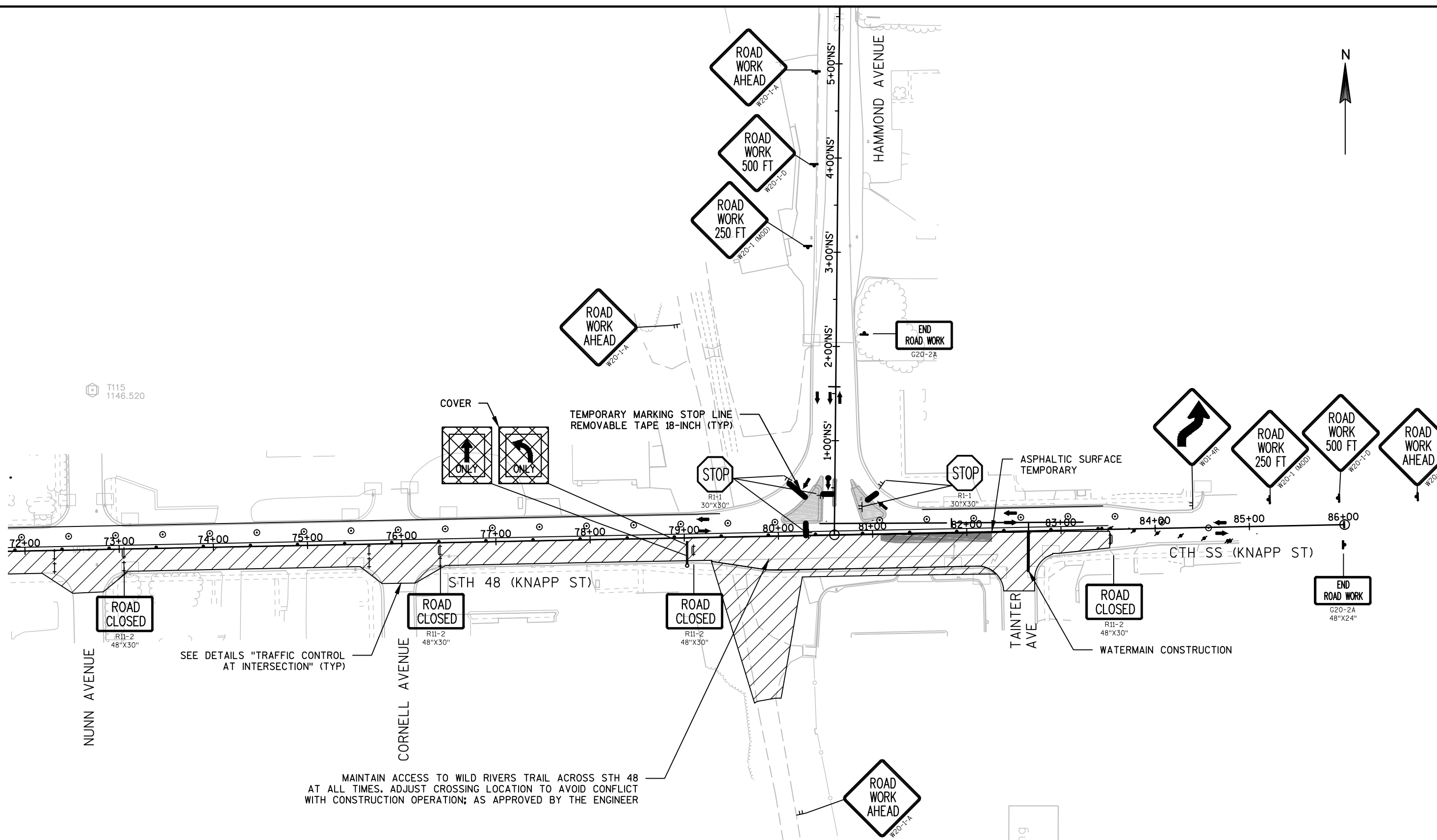
PLOT DATE : 1/15/2018 10:02 AM

PLOT BY : LANCELE, JESSICA

PLOT NAME :

PLOT SCALE : *****

WISDOT/CADDs SHEET 44



NOTE:
SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR SIGN SPACING.

STAGE 2B

- CONTINUE WITH CONSTRUCTION FROM STAGE 2
- CONSTRUCT CITY WATERMAIN ALONG TANTIER AVENUE TO THE WATERMAIN TEE WITH CTH SS. REMAINING WORK TO BE COMPLETED IN STAGE 3

TRAFFIC

- CONTINUE WITH TRAFFIC FROM STAGE 2
- CLOSE EB STH 48 TRAFFIC EAST OF HAMMOND AVENUE, WB TRAFFIC TO REMAIN OPEN

EB SS
CLOSED
AHEAD

7 DAYS
USE ALT
ROUTE

PLACE NORTH OF BUNDY ST.

ROAD
WORK
AHEAD

ROAD
WORK
500 FT

ROAD
WORK
250 FT

ROAD
WORK
AHEAD

END
ROAD WORK

COVER

ONLY

ONLY

TEMPORARY MARKING STOP LINE
REMOVABLE TAPE 18-INCH (TYP)

STOP

STOP

ASPHALTIC SURFACE TEMPORARY

CLOSE EB LANE AND
COMPLETE TEE WATER MAIN
CONSTRUCTION PRIOR
TO STAGE 3 TRAFFIC SWITCH

ROAD
WORK
250 FT

ROAD
WORK
500 FT

ROAD
WORK
AHEAD

72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00

EB SS
CLOSED
AHEAD

7 DAYS
USE ALT
ROUTE

MAINTAIN ACCESS TO WILD RIVERS TRAIL ACROSS STH 48
AT ALL TIMES. ADJUST CROSSING LOCATION TO AVOID CONFLICT
WITH CONSTRUCTION OPERATION; AS APPROVED BY THE ENGINEER

ROAD
CLOSED

PLACE PRIOR TO
CLOSING EB LANE

LANE
CLOSED

WATERMAIN CONSTRUCTION

STOP

LEFT
TURN
ONLY

ROAD
WORK
AHEAD

LEGEND

- PORTABLE CHANGEABLE MESSAGE BOARD
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TYPE A WARNING LIGHT (FLASHING)
- TYPE C WARNING LIGHT (STEADY BURN)
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY PAVEMENT PLACED STAGE 1
- COVER SIGN AS NECESSARY DURING STAGE



NOTE:
SEE STANDARD DETAIL DRAWING "TRAFFIC
CONTROL, ADVANCE WARNING SIGNS 40
MPH OR LESS TWO-WAY UNDIVIDED ROAD
OPEN TO TRAFFIC" FOR SIGN SPACING.

STAGE 3

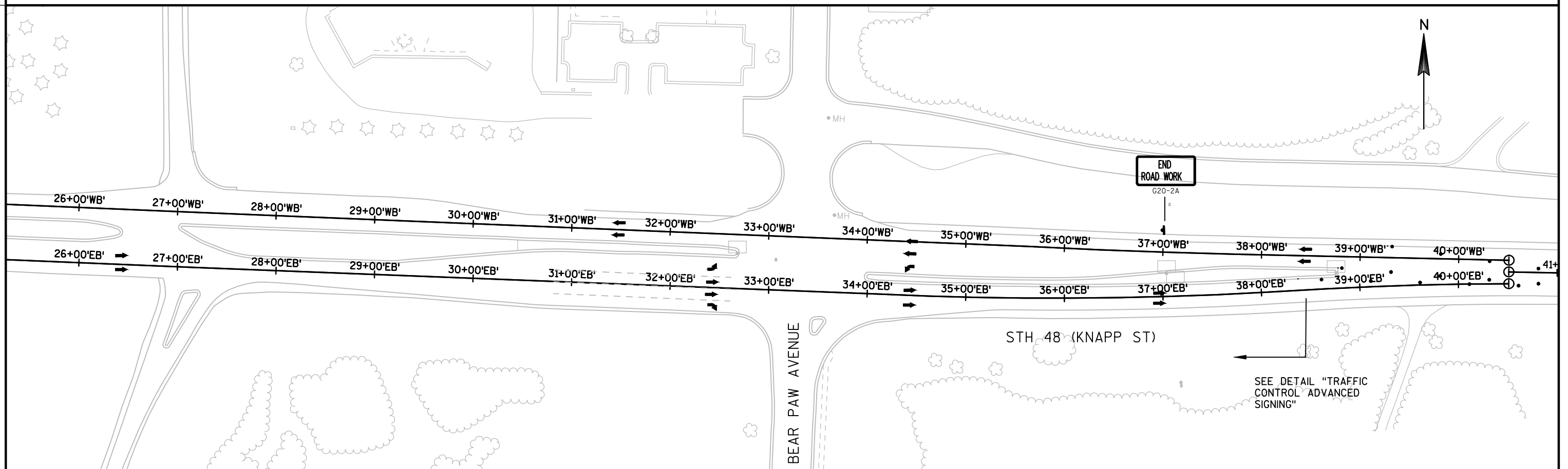
- REMOVE PAVEMENT AND PLACE HMA PAVEMENT ON WB LANES OF STH 48 AND HAMMOND AVE
- PLACE CONCRETE ON WB LANES OF STH 48 AT HAMMOND INTERSECTION
- REMOVE NORTHERN PORTION OF WILD RIVERS TRAIL
- CONSTRUCT NORTHERN PORTION OF WILD RIVERS TRAIL
- INSTALL FINAL PAVEMENT MARKINGS EXCEPT THOSE ALONG STH 48 EAST OF HAMMOND AVENUE
- COMPLETE CITY WATERMAIN CONSTRUCTION

TRAFFIC

- ALL TRAFFIC ON EXISTING EB/NB LANES
- ALLOW ACCESS TO SIDE ROADS DURING CONSTRUCTION (SEE DETAILS)
- MAINTAIN ACCESS TO WILD RIVERS TRAIL ACROSS STH 48
- STH 48 & HAMMOND AVENUE INTERSECTION DETOUR (SEE DETOUR SHEETS)
- UTILIZE TEMPORARY PEDESTRIAN ACCOMMODATIONS FOR CONTINUOUS ACCESS

LEGEND

	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON TEMPORARY SUPPORT
	SIGN ON PERMANENT SUPPORT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	TYPE A WARNING LIGHT (FLASHING)
	TYPE C WARNING LIGHT (STEADY BURN)
	DIRECTION OF TRAFFIC
	WORK AREA
	TEMPORARY PAVEMENT PLACED IN A PREVIOUS STAGE
	COVER SIGN AS NECESSARY DURING STAGE



PROJECT NO: 8120-04-73

HWY: STH 48

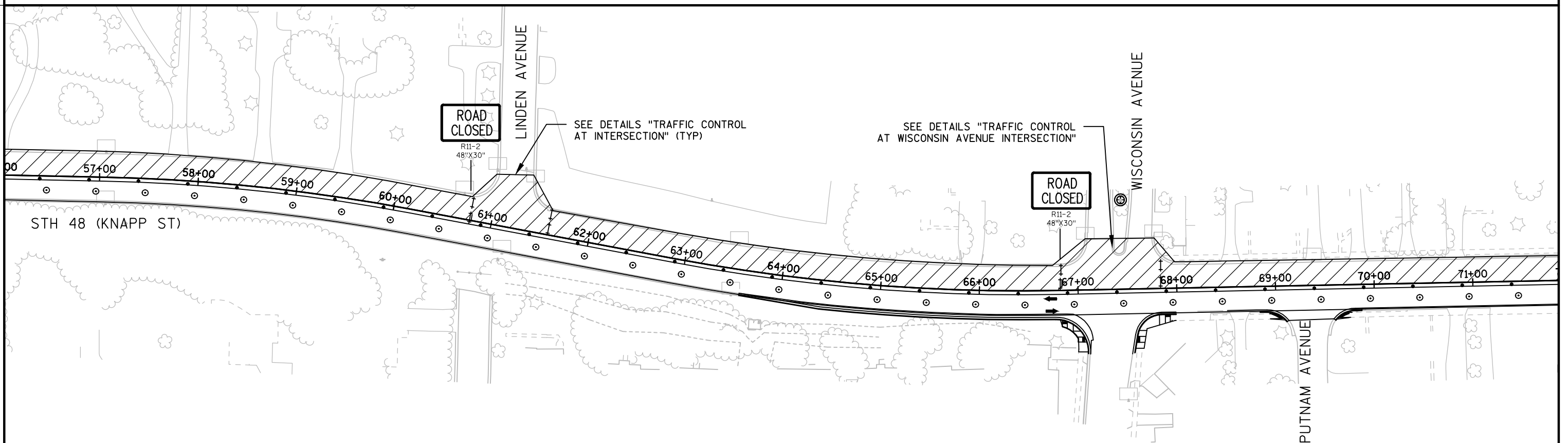
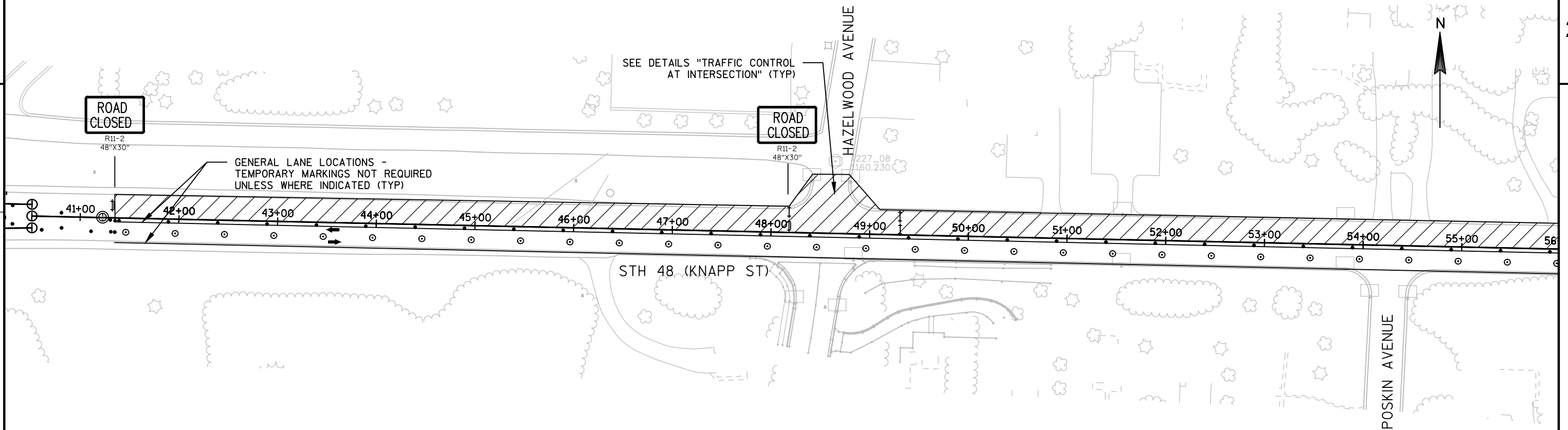
COUNTY: BARRON

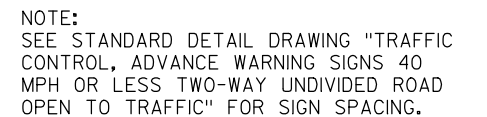
TRAFFIC CONTROL, STH 48, STAGE 3

SHEET

66

E

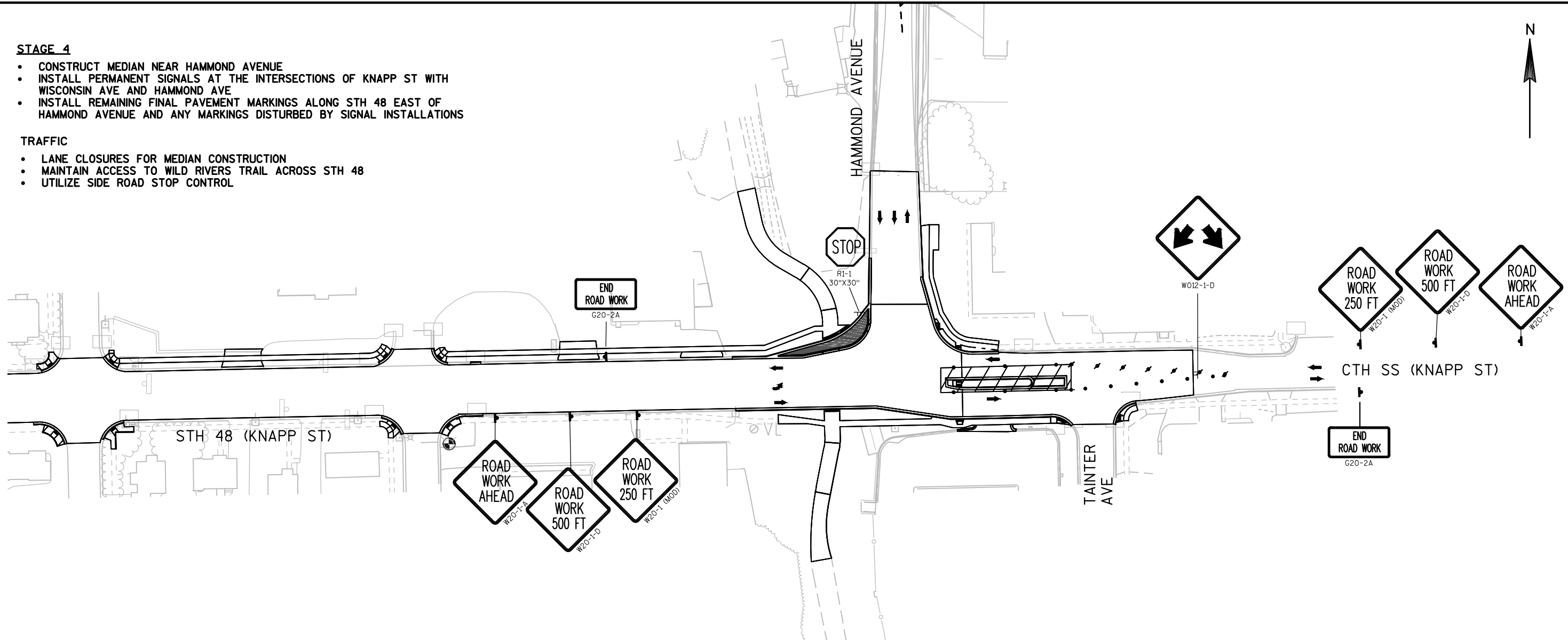




2

- CONSTRUCT MEDIAN NEAR HAMMOND AVENUE
- INSTALL PERMANENT SIGNALS AT THE INTERSECTIONS OF KNAPP ST WITH WISCONSIN AVE AND HAMMOND AVE
- INSTALL REMAINING FINAL PAVEMENT MARKINGS ALONG STH 48 EAST OF HAMMOND AVENUE AND ANY MARKINGS DISTURBED BY SIGNAL INSTALLATIONS

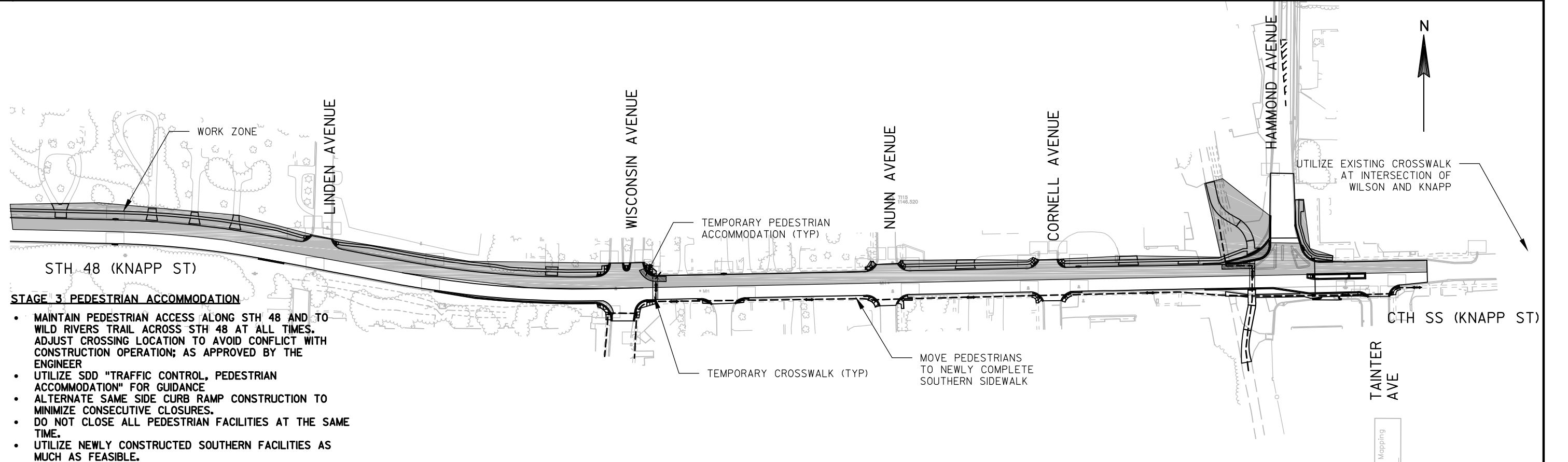
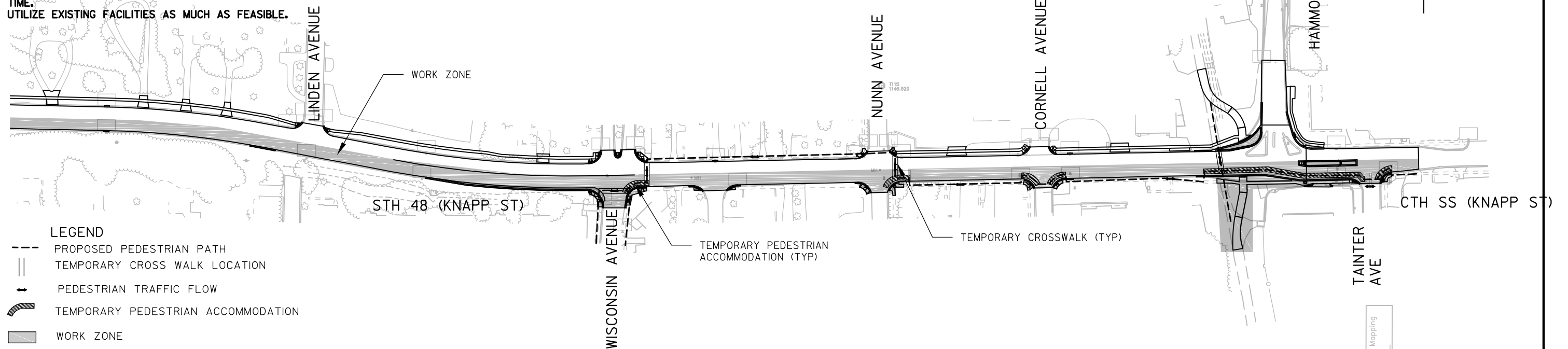
- LANE CLOSURES FOR MEDIAN CONSTRUCTION
- MAINTAIN ACCESS TO WILD RIVERS TRAIL ACROSS STH 48
- UTILIZE SIDE ROAD STOP CONTROL



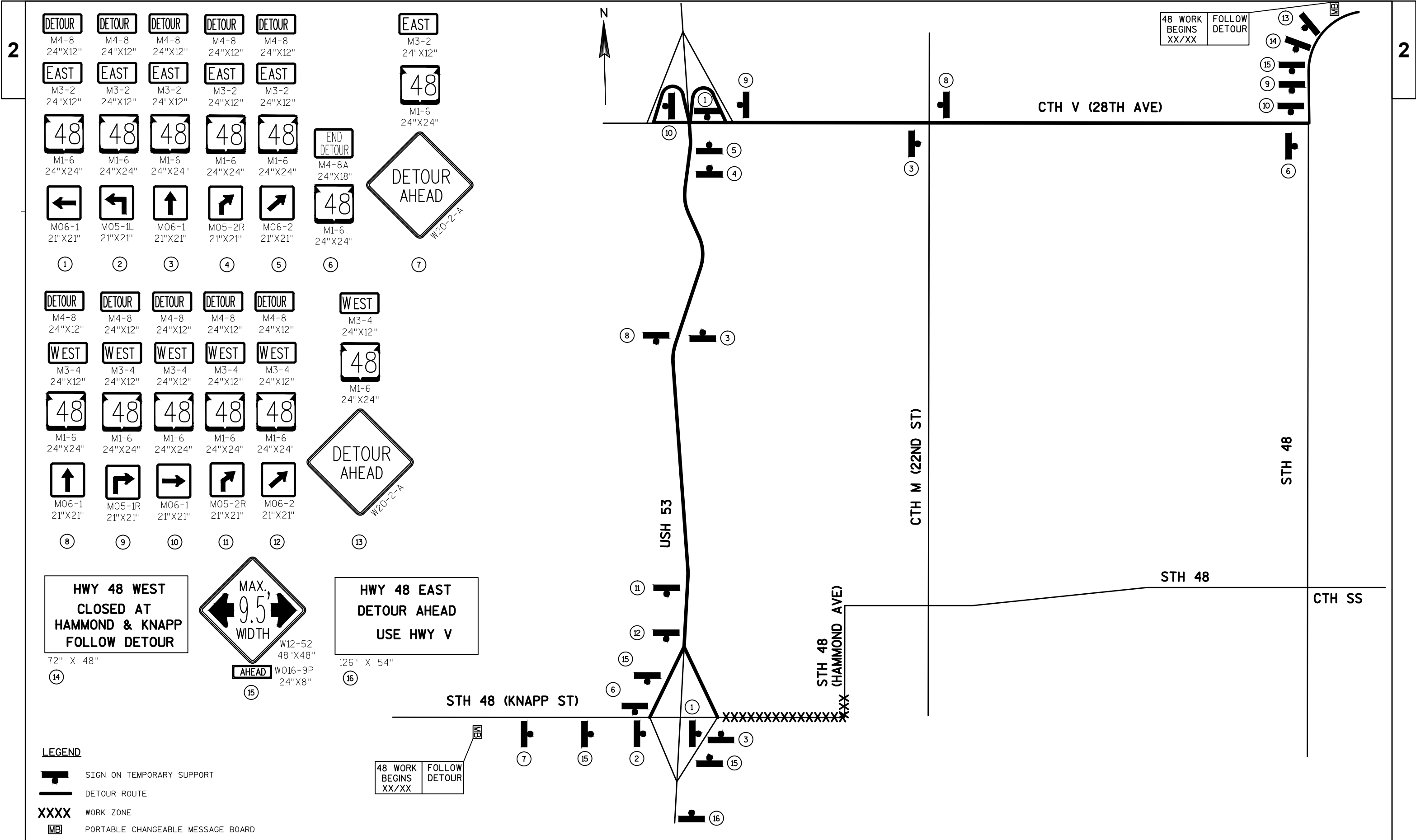
NOTE:
SEE STANDARD DETAIL DRAWING "TRAFFIC
CONTROL, ADVANCE WARNING SIGNS 40
MPH OR LESS TWO-WAY UNDIVIDED ROAD
OPEN TO TRAFFIC" FOR SIGN SPACING.

STAGE 2 PEDESTRIAN ACCOMMODATION

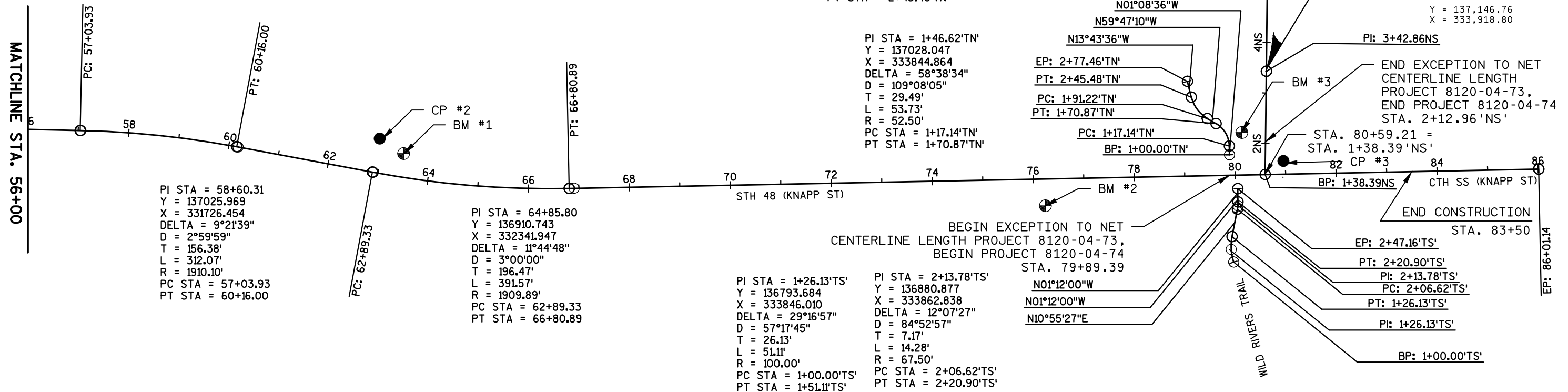
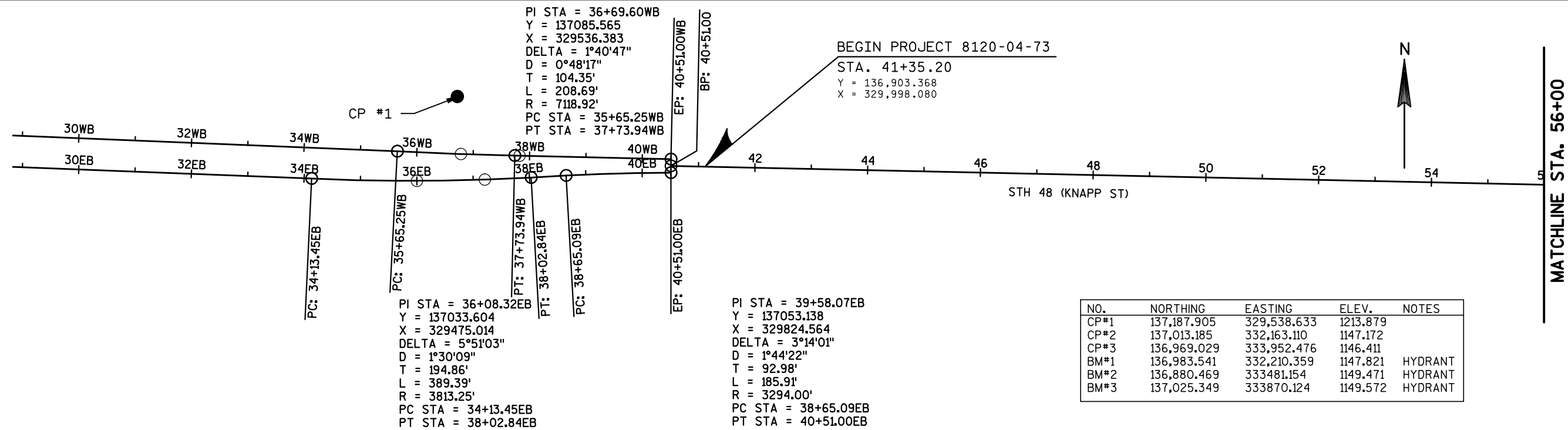
- MAINTAIN PEDESTRIAN ACCESS ALONG STH 48 AND TO WILD RIVERS TRAIL ACROSS STH 48 AT ALL TIMES. ADJUST CROSSING LOCATION TO AVOID CONFLICT WITH CONSTRUCTION OPERATION; AS APPROVED BY THE ENGINEER
- UTILIZE SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" FOR GUIDANCE
- ALTERNATE SAME SIDE CURB RAMP CONSTRUCTION TO MINIMIZE CONSECUTIVE CLOSURES.
- DO NOT CLOSE ALL PEDESTRIAN FACILITIES AT THE SAME TIME.
- UTILIZE EXISTING FACILITIES AS MUCH AS FEASIBLE.

**STAGE 3 PEDESTRIAN ACCOMMODATION**

- MAINTAIN PEDESTRIAN ACCESS ALONG STH 48 AND TO WILD RIVERS TRAIL ACROSS STH 48 AT ALL TIMES. ADJUST CROSSING LOCATION TO AVOID CONFLICT WITH CONSTRUCTION OPERATION; AS APPROVED BY THE ENGINEER
- UTILIZE SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" FOR GUIDANCE
- ALTERNATE SAME SIDE CURB RAMP CONSTRUCTION TO MINIMIZE CONSECUTIVE CLOSURES.
- DO NOT CLOSE ALL PEDESTRIAN FACILITIES AT THE SAME TIME.
- UTILIZE NEWLY CONSTRUCTED SOUTHERN FACILITIES AS MUCH AS FEASIBLE.



- LEGEND**
- SIGN ON TEMPORARY SUPPORT
 - DETOUR ROUTE
 - WORK ZONE
 - PORTABLE CHANGEABLE MESSAGE BOARD



Estimate Of Quantities

					8120-04-73	8120-04-74	8120-04-75
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0002	201.0120	Clearing	ID	8.000	8.000		
0004	201.0220	Grubbing	ID	8.000	8.000		
0006	204.0100	Removing Pavement	SY	465.000	465.000		
0008	204.0109.S	Removing Concrete Surface Partial Depth	SF	215,727.000	215,727.000		
0010	204.0150	Removing Curb & Gutter	LF	2,278.000	1,403.000	875.000	
0012	204.0155	Removing Concrete Sidewalk	SY	11.000	11.000		
0014	205.0100	Excavation Common	CY	2,325.000	1,045.000	1,280.000	
0016	208.1100	Select Borrow	CY	560.000	93.000	467.000	
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	172.000	20.000	152.000	
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,377.000	2,743.000	634.000	
0022	320.0130	Concrete Base 6 1/2-Inch	SY	580.000	580.000		
0024	405.0100	Coloring Concrete WisDOT Red	CY	24.000		24.000	
0026	415.0060	Concrete Pavement 6-Inch	SY	24.000		24.000	
0028	415.0080	Concrete Pavement 8-Inch	SY	1,222.000		1,222.000	
0030	416.0160	Concrete Driveway 6-Inch	SY	551.000	551.000		
0032	416.0610	Drilled Tie Bars	EACH	745.000	503.000	242.000	
0034	416.0620	Drilled Dowel Bars	EACH	132.000		132.000	
0036	416.1710	Concrete Pavement Repair	SY	600.000	600.000		
0038	416.1720	Concrete Pavement Replacement	SY	300.000	300.000		
0040	455.0605	Tack Coat	GAL	3,404.000	3,404.000		
0042	460.2000	Incentive Density HMA Pavement	DOL	2,620.000	2,620.000		
0044	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	8,294.000	8,294.000		
0046	460.6445	HMA Pavement 5 MT 58-34 H	TON	4,082.000	4,082.000		
0048	465.0110	Asphaltic Surface Patching	TON	680.000	680.000		
0050	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	88.000	41.000	47.000	
0052	465.0125	Asphaltic Surface Temporary	TON	63.000	63.000		
0054	509.1000	Joint Repair	SY	100.000	100.000		
0056	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	1,919.000	1,113.000	806.000	
0058	601.0580	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R	LF	116.000		116.000	
0060	601.0600	Concrete Curb Pedestrian	LF	134.000	134.000		
0062	602.0405	Concrete Sidewalk 4-Inch	SF	520.000		520.000	
0064	602.0415	Concrete Sidewalk 6-Inch	SF	16,910.000	12,900.000	4,010.000	
0066	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	320.000	260.000	60.000	
0068	602.0615	Curb Ramp Detectable Warning Field Radial Natural Patina	SF	117.000	41.000	76.000	
0070	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	64.000		64.000	
0072	611.0430	Reconstructing Inlets	EACH	5.000	5.000		
0074	611.0530	Manhole Covers Type J	EACH	1.000		1.000	
0076	611.0624	Inlet Covers Type H	EACH	2.000		2.000	

Estimate Of Quantities

					8120-04-73	8120-04-74	8120-04-75
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0078	611.2004	Manholes 4-FT Diameter	EACH	1.000		1.000	
0080	611.3230	Inlets 2x3-FT	EACH	2.000		2.000	
0082	611.8110	Adjusting Manhole Covers	EACH	22.000	22.000		
0084	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000		
0086	611.8120.S	Cover Plates Temporary	EACH	22.000	22.000		
0088	612.0902.S	Insulation Board Polystyrene (inch) 01. 2-Inch	SY	27.600	24.000	3.600	
0090	616.0700.S	Fence Safety	LF	400.000		400.000	
0092	619.1000	Mobilization	EACH	1.000	0.670	0.220	0.110
0094	620.0100	Concrete Corrugated Median	SF	400.000		400.000	
0096	620.0200	Concrete Median Blunt Nose	SF	55.000	55.000		
0098	620.0300	Concrete Median Sloped Nose	SF	66.000		66.000	
0100	624.0100	Water	MGAL	55.000	43.000	12.000	
0102	625.0100	Topsoil	SY	4,419.000	2,993.000	1,426.000	
0104	627.0200	Mulching	SY	4,419.000	2,993.000	1,426.000	
0106	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000		
0108	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000		
0110	628.7010	Inlet Protection Type B	EACH	7.000	7.000		
0112	628.7015	Inlet Protection Type C	EACH	47.000	47.000		
0114	629.0210	Fertilizer Type B	CWT	10.000	7.000	3.000	
0116	630.0140	Seeding Mixture No. 40	LB	97.000	69.000	28.000	
0118	631.0300	Sod Water	MGAL	63.000	39.000	24.000	
0120	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	56.000	56.000		
0122	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	17.000	17.000		
0124	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	3.000	3.000		
0126	637.2210	Signs Type II Reflective H	SF	609.800	609.800		
0128	637.2230	Signs Type II Reflective F	SF	101.000	101.000		
0130	638.2602	Removing Signs Type II	EACH	62.000	62.000		
0132	638.3000	Removing Small Sign Supports	EACH	58.000	58.000		
0134	642.5001	Field Office Type B	EACH	1.000	1.000		
0136	643.0300	Traffic Control Drums	DAY	10,977.000	10,977.000		
0138	643.0410	Traffic Control Barricades Type II	DAY	263.000	263.000		
0140	643.0420	Traffic Control Barricades Type III	DAY	1,754.000	1,754.000		
0142	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	192.000	192.000		
0144	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	192.000	192.000		
0146	643.0705	Traffic Control Warning Lights Type A	DAY	3,850.000	3,850.000		
0148	643.0715	Traffic Control Warning Lights Type C	DAY	1,248.000	1,248.000		
0150	643.0800	Traffic Control Arrow Boards	DAY	48.000	48.000		
0152	643.0900	Traffic Control Signs	DAY	6,567.000	6,567.000		
0154	643.0920	Traffic Control Covering Signs Type II	EACH	11.000	11.000		
0156	643.1000	Traffic Control Signs Fixed Message	SF	71.300	71.300		

Estimate Of Quantities

					8120-04-73	8120-04-74	8120-04-75
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0158	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000		
0160	643.5000	Traffic Control	EACH	1.000	1.000		
0162	644.1601.S	Temporary Curb Ramp	EACH	7.000	7.000		
0164	644.1616.S	Temporary Pedestrian Safety Fence	LF	1,260.000	1,260.000		
0166	646.1020	Marking Line Epoxy 4-Inch	LF	21,960.000	21,960.000		
0168	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	2,082.000	2,082.000		
0170	646.3020	Marking Line Epoxy 8-Inch	LF	3,129.000	3,129.000		
0172	646.5020	Marking Arrow Epoxy	EACH	40.000	40.000		
0174	646.5120	Marking Word Epoxy	EACH	11.000	11.000		
0176	646.6020	Marking Stop Line Epoxy 12-Inch	LF	12.000	12.000		
0178	646.6120	Marking Stop Line Epoxy 18-Inch	LF	146.000	146.000		
0180	646.7120	Marking Diagonal Epoxy 12-Inch	LF	2,059.000	2,059.000		
0182	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	1,793.000	1,793.000		
0184	646.8120	Marking Curb Epoxy	LF	918.000	918.000		
0186	646.8220	Marking Island Nose Epoxy	EACH	27.000	27.000		
0188	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	102.000	102.000		
0190	650.4000	Construction Staking Storm Sewer	EACH	2.000		2.000	
0192	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,113.000	1,113.000		
0194	650.7000	Construction Staking Concrete Pavement	LF	200.000		200.000	
0196	650.8000	Construction Staking Resurfacing Reference	LF	4,210.000	4,210.000		
0198	650.9000	Construction Staking Curb Ramps	EACH	35.000	26.000	9.000	
0200	650.9910	Construction Staking Supplemental Control (project) 01. 8120-04-73	LS	1.000	1.000		
0202	650.9910	Construction Staking Supplemental Control (project) 01. 8120-04-74	LS	1.000		1.000	
0204	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	193.000		134.000	59.000
0206	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	2,041.000		1,239.000	802.000
0208	652.0615	Conduit Special 3-Inch	LF	928.000		380.000	548.000
0210	653.0140	Pull Boxes Steel 24x42-Inch	EACH	20.000		11.000	9.000
0212	654.0101	Concrete Bases Type 1	EACH	11.000		6.000	5.000
0214	654.0102	Concrete Bases Type 2	EACH	8.000		6.000	2.000
0216	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	2.000		1.000	1.000
0218	655.0230	Cable Traffic Signal 5-14 AWG	LF	794.000		270.000	524.000
0220	655.0240	Cable Traffic Signal 7-14 AWG	LF	1,025.000		730.000	295.000
0222	655.0260	Cable Traffic Signal 12-14 AWG	LF	2,288.000		1,168.000	1,120.000
0224	655.0270	Cable Traffic Signal 15-14 AWG	LF	332.000		214.000	118.000
0226	655.0305	Cable Type UF 2-12 AWG Grounded	LF	1,057.000		491.000	566.000
0228	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,891.000		1,756.000	1,135.000
0230	655.0610	Electrical Wire Lighting 12 AWG	LF	894.000		414.000	480.000
0232	656.0200	Electrical Service Meter Breaker Pedestal (location) 01.	LS	1.000		1.000	

Estimate Of Quantities

					8120-04-73	8120-04-74	8120-04-75
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
		Knapp St & Hammond Ave					
0234	656.0200	Electrical Service Meter Breaker Pedestal (location) 02. Knapp St & Wisconsin Ave	LS	1.000			1.000
0236	657.0100	Pedestal Bases	EACH	11.000		6.000	5.000
0238	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	8.000		6.000	2.000
0240	657.0305	Poles Type 2	EACH	1.000		1.000	
0242	657.0310	Poles Type 3	EACH	4.000		2.000	2.000
0244	657.0315	Poles Type 4	EACH	3.000		3.000	
0246	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	4.000		1.000	3.000
0248	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	5.000		3.000	2.000
0250	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	2.000		2.000	
0252	657.0590	Trombone Arms 20-FT	EACH	1.000			1.000
0254	657.0595	Trombone Arms 25-FT	EACH	3.000		2.000	1.000
0256	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	7.000		5.000	2.000
0258	657.0709	Luminaire Arms Truss Type 4-Inch Clamp 12-FT	EACH	1.000		1.000	
0260	658.0173	Traffic Signal Face 3S 12-Inch	EACH	20.000		6.000	14.000
0262	658.0174	Traffic Signal Face 4S 12-Inch	EACH	4.000		2.000	2.000
0264	658.0175	Traffic Signal Face 5S 12-Inch	EACH	4.000		4.000	
0266	658.0416	Pedestrian Signal Face 16-Inch	EACH	14.000		6.000	8.000
0268	658.0500	Pedestrian Push Buttons	EACH	16.000		7.000	9.000
0270	658.5069	Signal Mounting Hardware (location) 01. Knapp St & Hammond Ave	LS	1.000		1.000	
0272	658.5069	Signal Mounting Hardware (location) 02. Knapp St & Wisconsin Ave	LS	1.000			1.000
0274	659.1120	Luminaires Utility LED B	EACH	8.000		4.000	4.000
0276	690.0150	Sawing Asphalt	LF	673.000	444.000	229.000	
0278	690.0250	Sawing Concrete	LF	2,092.000	1,545.000	547.000	
0280	715.0415	Incentive Strength Concrete Pavement	DOL	500.000		500.000	
0282	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000		
0284	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000		
0286	SPV.0060	Special 01. Install Cellular Modem	EACH	2.000		1.000	1.000
0288	SPV.0060	Special 02. Poles Type 10	EACH	1.000			1.000
0290	SPV.0060	Special 03. Poles Type 13	EACH	1.000			1.000
0292	SPV.0060	Special 04. Monotube Arms 30-FT	EACH	1.000			1.000
0294	SPV.0060	Special 05. Monotube Arms 35-FT	EACH	1.000			1.000
0296	SPV.0060	Special 06. Adjusting Water Valve Box	EACH	18.000	18.000		
0298	SPV.0060	Special 07. 6-Inch Gate Valve and Box	EACH	1.000	1.000		
0300	SPV.0060	Special 08. 8-Inch Gate Valve and Box	EACH	1.000	1.000		
0302	SPV.0060	Special 09. 10-Inch Gate Valve and Box	EACH	1.000	1.000		
0304	SPV.0060	Special 10. Connect to Existing Water Main	EACH	3.000	3.000		

Estimate Of Quantities

					8120-04-73	8120-04-74	8120-04-75
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0306	SPV.0060	Special 11. 1-Inch Corporation Stop	EACH	1.000	1.000		
0308	SPV.0060	Special 12. 1-Inch Curb Stop and Box	EACH	1.000	1.000		
0310	SPV.0060	Special 13. Connect to Existing Water Service	EACH	1.000	1.000		
0312	SPV.0060	Special 14. Adjusting Water Curb Stop	EACH	5.000	5.000		
0314	SPV.0060	Special 15. Luminaire Arm Steel 6-FT	EACH	2.000			2.000
0316	SPV.0060	Special 16. Concrete Bases Type 10, Contractor Supplied Anchor Bolts & Rod Template	EACH	1.000			1.000
0318	SPV.0060	Special 17. Concrete Bases Type 13, Contractor Supplied Anchor Bolts & Rod Template	EACH	1.000			1.000
0320	SPV.0060	Special 18. Replace Valve Box Top	EACH	5.000	5.000		
0322	SPV.0085	Special 01. Water Main Fittings	LB	179.000	179.000		
0324	SPV.0090	Special 01. 6-Inch Water Main	LF	52.000	52.000		
0326	SPV.0090	Special 02. 8-Inch Water Main	LF	59.000	59.000		
0328	SPV.0090	Special 03. 10-Inch Water Main	LF	222.000	222.000		
0330	SPV.0090	Special 04. 1-Inch Copper Water Service	LF	25.000	25.000		
0332	SPV.0090	Special 05. Construction Staking Water Main	LF	333.000	333.000		
0334	SPV.0105	Special 01. Preparation of Foundation for Asphaltic Paving Special	LS	1.000	1.000		
0336	SPV.0105	Special 02. Vehicular Video Detection System Knapp St & Hammond Ave	LS	1.000		1.000	
0338	SPV.0105	Special 03. Vehicular Video Detection System Knapp St & Wisconsin Ave	LS	1.000			1.000
0340	SPV.0105	Special 04. Abandon Water Main	LS	1.000	1.000		
0342	SPV.0105	Special 05. Traffic Signal Controller and Cabinet Knapp St & Hammond Ave	LS	1.000		1.000	
0344	SPV.0105	Special 06. Traffic Signal Controller and Cabinet Knapp St & Wisconsin Ave	LS	1.000			1.000

CLEARING & GRUBBING

				201.0120	201.0220
				CLEARING	GRUBBING
CATEGORY	STAGE	STA	LT/RT	ID	ID
0010	3	67+90	LT	8	8
TOTAL				8	8

EARTHWORK

Division	From / To Station	Location	205.0100 Common Excavation (1)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate + / - (14)
			Cut (2) CY			Factor 1.25	
CATEGORY 0010	49+00 TO 81+50	STH 48	1045	1045	46	58	987
Subtotal			1045	1045	46	58	987
Grand Total			1045	1045	46	58	987
Total Common Exc			1045				

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 5) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 13) Expanded Fill. Factor = 1.25
- 14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

REMOVING CONCRETE

			204.0100	204.0155
			REMOVING	REMOVING
			PAVEMENT	CONCRETE
			PAVEMENT	SIDEWALK
CATEGORY	STAGE	LOCATION	SY	SY
0010	1B	0+30NS - 0+60NS	15	-
		SUBTOTAL	15	0
0040		WATERMAIN	450	11
		SUBTOTAL	450	11
		TOTAL	465	11

REMOVING CONCRETE SURFACE PARTIAL DEPTH

					204.0109.S
					REMOVING CONCRETE
					SURFACE PARTIAL DEPTH
CATEGORY	STAGE	STA	STA	LT/RT	SF
0010	2	41+35	47+50	RT	14,542
		47+50	55+00	RT	21,544
		55+00	62+50	RT	17,765
		62+50	70+00	RT	20,689
		70+00	77+50	RT	19,795
		77+50	END	RT	12,793
SUBTOTAL					107,128
0010	3	41+35	47+50	LT	14,542
		47+50	55+00	LT	18,416
		55+00	62+50	LT	18,723
		62+50	70+00	LT	19,710
		70+00	77+50	LT	19,391
		77+50	END	LT	17,817
SUBTOTAL					108,599
		TOTAL			215,727

BASE AGGREGATE

					208.1100	305.0120	305.0110
					SELECT	BASE AGGREGATE	BASE AGGREGATE
					BORROW	DENSE 1 1/4-INCH	DENSE 3/4-INCH
CATEGORY	STAGE	STATION	STATION	LT/RT	CY	TON	TON
0010	2	41+35	47+50	RT	-	-	9
		47+50	55+00	RT	-	2	1
		55+00	62+50	RT	-	6	-
		62+50	70+00	RT	-	62	-
		70+00	77+50	RT	-	27	-
		77+50	END	RT	-	2	-
		TURN LANE					
		63+60	67+15	RT	93	57	-
		SUBTOTAL			93	156	10
0010	3	41+35	47+50	LT	-	-	9
		47+50	55+00	LT	-	757	1
		55+00	62+50	LT	-	782	-
		62+50	70+00	LT	-	215	-
		70+00	77+50	LT	-	356	-
		77+50	END	LT	-	321	-
		SUBTOTAL			0	2,431	10
0040	2/3	WATERMAIN			-	156	-
		SUBTOTAL			0	156	0
		TOTAL			93	2,743	20

REMOVING CURB & GUTTER

					204.0150
					REMOVING
					CURB & GUTTER
CATEGORY	STAGE	STATION	-	STATION	LT/RT LF
0010	1A	0+13NS		0+63NS	LT 160
	1B	0+13NS		0+60NS	RT 130
SUBTOTAL					290
0010	2	51+50		51+60	RT 10
		53+77		53+87	RT 10
		57+00		57+12	RT 10
		60+00		60+52	RT 52
		63+59		67+11	RT 377
		67+53		67+98	RT 69
		68+83		69+13	RT 32
		69+58		69+87	RT 30
		72+17		72+49	RT 40
		72+83		73+05	RT 27
		75+57		75+78	RT 26
		76+13		76+56	RT 48
		82+71		82+94	RT 31
		SUBTOTAL			
0010	3	48+13		48+40	LT 32
		51+42		51+72	LT 30
		53+76		53+86	LT 10
		54+71		54+81	LT 10
		57+01		57+11	LT 11
		60+83		60+96	LT 18
		61+37		61+48	LT 16
		66+82		67+10	LT 40
		67+34		67+51	LT 35
		67+75		67+98	LT 35
		69+32		69+42	LT 10
		72+26		72+44	LT 21
		72+86		72+98	LT 17
		75+55		75+68	LT 19
		76+07		76+22	LT 21
		76+45		76+55	LT 10
SUBTOTAL					335
0040	WATERMAIN				16
SUBTOTAL					16
TOTAL					1,403

ASPHALTIC SURFACE TEMPORARY

					465.0125
					ASPHALTIC
					SURFACE
					TEMPORARY
CATEGORY	STAGE	STA	STA	LT/RT	TON
0010	1A	0+13NS	0+63NS	LT	36
	1B	0+30NS	0+60NS	LT/RT	4
		0+13NS	0+60NS	RT	24
TOTAL					63

DRIVEWAY PAVEMENT

				416.0160	465.0120
				CONCRETE	ASPHALTIC
				DRIVEWAY	SURFACE
				6-INCH	DRIVEWAYS AND
					FIELD ENTRANCES
CATEGORY	STAGE	STA	LT/RT	SY	TON
0010	3	50+83	LT	34	6
		51+57	LT	51	-
		54+19	LT	34	6
		54+56	LT	33	4
		55+96	LT	40	7
		57+79	LT	35	3
		58+64	LT	33	2
		59+44	LT	49	-
		65+89	LT	32	3
		74+22	LT	45	5
		77+11	LT	45	5
		77+50	LT	74	-
		78+71	LT	46	-
TOTAL				551	41

HMA PAVEMENT

					320.0130	460.6445	455.0605	460.4110.S
								REHEATING
					CONCRETE	HMA		HMA PAVEMENT
					BASE	PAVEMENT	TACK	LONGITUDINAL
					6 1/2-INCH	5 MT 58-34 H	COAT	JOINTS
CATEGORY	STAGE	STA	STA	LT/RT	SY	TON	GAL	LF
0030	2	41+35	47+50	RT	-	187	-	-
		SUBTOTAL	0030		0	187	0	0
0010	2	41+35	47+50	RT	-	86	227	-
		47+50	55+00	RT	-	403	336	-
		55+00	62+50	RT	-	332	277	-
		62+50	70+00	RT	-	408	340	-
		70+00	77+50	RT	-	370	308	-
		77+50	END	RT	-	239	200	-
		TURN LANE						
		63+60	67+15	RT	130	-	-	-
		SUBTOTAL	0010		130	1,838	1,688	0
0010	3	41+35	47+50	LT	-	272	227	1,230
		47+50	55+00	LT	-	372	310	1,500
		55+00	62+50	LT	-	350	292	1,500
		62+50	70+00	LT	-	368	307	1,500
		70+00	77+50	LT	-	362	302	1,500
		77+50	END	LT	-	333	278	1,064
		SUBTOTAL	0010		0	2,057	1,716	8,294
0040	2/3	WATERMAIN			450	-	-	-
		SUBTOTAL	0010		450	0	0	0
		TOTAL			580	4,082	3,404	8,294

SURFACE PREPARATION

					416.0610*	416.1710	416.1720	465.0110	509.1000	SPV.0105.01
										PREPARATION
					DRILLED	CONCRETE	CONCRETE	ASPHALTIC		OF FOUNDATION
					TIE	PAVEMENT	PAVEMENT	SURFACE	JOINT	FOR ASPHALTIC
					BARS	REPAIR	REPLACEMENT	PATCHING	REPAIR	PAVING SPECIAL
CATEGORY	STAGE	STA	STA	LT/RT	EACH	SY	SY	TON	SY	LS
		PROJECT			-	-	-	-	-	1
0010	2	41+35	47+50	RT	-	-	-	46	-	-
		47+50	55+00	RT	-	-	-	68	-	-
		55+00	62+50	RT	-	-	-	56	-	-
		62+50	70+00	RT	-	-	-	65	-	-
		70+00	77+50	RT	-	-	-	62	-	-
		77+50	END	RT	-	-	-	40	-	-
		SUBTOTAL			0	0	0	337	0	1
0010	3	41+35	47+50	RT	-	-	-	46	-	-
		47+50	55+00	RT	-	-	-	59	-	-
		55+00	62+50	RT	-	-	-	59	-	-
		62+50	70+00	RT	-	-	-	62	-	-
		70+00	77+50	RT	-	-	-	61	-	-
		77+50	END	RT	-	-	-	56	-	-
		SUBTOTAL			0	0	0	343	0	0
		UNDISTRIBUTED			50	600	300	-	100	-
		TOTAL			50	600	300	680	100	1
		*DENOTES QUANTITY FOUND ELSEWHERE								

CONCRETE CURB & GUTTER

					601.0409	416.0610*
					CONCRETE	DRILLED
					CURB & GUTTER	TIE
					30-INCH TYPE A	BARS
CATEGORY	STAGE	STATION -	STATION	LT/RT	LF	EACH
0010	2	51+50	51+60	RT	10	4
		53+77	53+87	RT	10	4
		57+00	57+12	RT	10	4
		60+00	60+52	RT	52	21
		63+59	67+11	RT	377	151
		67+53	67+98	RT	69	28
		68+83	69+13	RT	32	13
		69+58	69+87	RT	30	12
		72+17	72+49	RT	40	16
		72+83	73+05	RT	27	11
		75+57	75+78	RT	26	11
		76+13	76+56	RT	48	20
		82+71	82+94	RT	31	13
		SUBTOTAL				
0010	3	48+13	48+40	LT	32	13
		51+42	51+72	RT	30	12
		53+76	53+86	RT	10	4
		54+71	54+81	LT	10	4
		57+01	57+11	RT	11	5
		60+83	60+96	LT	18	8
		61+37	61+48	LT	16	7
		66+82	67+10	LT	40	16
		67+34	67+51	LT	35	14
		67+75	67+98	LT	35	14
		69+32	69+42	LT	10	4
		72+26	72+44	LT	21	9
		72+86	72+98	LT	17	7
		75+55	75+68	LT	19	8
		76+07	76+22	LT	21	9
		76+45	76+55	LT	10	4
		SUBTOTAL				
0040	2/3	WATERMAIN			16	7
SUBTOTAL					16	7
TOTAL					1,113	453

*DENOTES QUANTITY FOUND ELSEWHERE

CURB RAMPS

				602.0515	602.0615	601.0600	
				CURB RAMP			
				CURB RAMP	DETECTABLE		
				DETECTABLE	WARNING FIELD	CONCRETE	
				WARNING FIELD	RADIAL	CURB	
				NATURAL PATINA	NATURAL PATINA	PEDESTRIAN	
CATEGORY	STAGE	STA	LT/RT	SF	SF	LF	
0010	2	66+85	RT	10	-	12	
		67+05	RT	10	-	13	
		67+60	RT	10	-	-	
		67+90	RT	10	-	-	
		69+00	RT	-	21	-	
		69+70	RT	-	20	-	
		72+40	RT	10	-	18	
		72+95	RT	10	-	35	
		75+70	RT	10	-	-	
		76+20	RT	10	-	19	
		82+77	RT	10	-	-	
		SUBTOTAL			90	41	97
		0010	3	48+20	LT	20	-
48+90	LT			10	-	-	
48+75	LT			10	-	-	
55+75	LT			10	-	-	
60+85	LT			10	-	-	
61+45	LT			10	-	-	
66+85	LT			10	-	-	
67+00	LT			10	-	-	
67+40	LT			20	-	-	
67+80	LT			10	-	10	
67+90	LT			10	-	10	
72+35	LT			10	-	17	
72+95	LT			10	-	-	
75+60	LT			10	-	-	
76+15	LT			10	-	-	
SUBTOTAL				170	0	37	
TOTAL			260	41	134		

CONCRETE SIDEWALK

					602.0415
					CONCRETE
					SIDEWALK
					6- INCH
CATEGORY	STAGE	STA	STA	LT/RT	SF
0020	2	62+50	70+00	RT	870
		70+00	77+50	RT	665
		77+50	END	RT	-
SUBTOTAL					1,535
0020	3	47+50	55+00	LT	2,975
		55+00	62+50	LT	3,180
		62+50	70+00	LT	2,580
		70+00	77+50	LT	2,115
		77+50	END	LT	415
SUBTOTAL					11,265
0040	2/3	WATERMAIN			100
SUBTOTAL					100
TOTAL					12,900

RECONSTRUCTING INLETS

611.0430						
RECONSTRUCTING						
INLETS						
CATEGORY	STAGE	NO.	STATION	LT/RT	EACH	
0010	2	INL 1.2	51+55	RT	1	
		INL 1.4	53+82	RT	1	
SUBTOTAL						2
0010	3	INL 1.1	51+55	LT	1	
		INL 1.3	53+82	LT	1	
		INL 1.5	57+06	LT	1	
SUBTOTAL						3
TOTAL						5

CONCRETE MEDIAN

620.0200				
CONCRETE				
MEDIAN				
BLUNT NOSE				
CATEGORY	STAGE	STA	LT/RT	SF
0010	3	67+45	LT	55
TOTAL				55

ADJUSTMENTS

				611.8110	611.8115	SPV.0060.06	SPV.0060.14	SPV.0060.18	611.8120.S
				ADJUSTING	ADJUSTING	ADJUSTING	ADJUSTING	REPLACE	COVER
				MANHOLE	INLET	WATER	WATER	VALVE	PLATES
				COVERS	COVERS	VALVE BOX	CURB STOP	BOX TOP	TEMPORARY
CATEGORY	STAGE	STATION	LT/RT	EACH	EACH	EACH	EACH	EACH	EACH
0040	2	66+85	RT	1	-	-	-	-	1
		48+83	RT	1	-	-	-	-	1
		65+38	RT	1	-	-	-	-	1
		65+38	RT	1	-	-	-	-	1
		67+18	RT	1	-	-	-	-	1
		67+20	RT	1	-	-	-	-	1
		67+30	RT	1	-	-	-	-	1
		67+36	RT	1	-	-	-	-	1
		68+89	RT	1	-	-	-	-	1
		69+37	RT	1	-	-	-	-	1
		72+56	RT	-	-	1	-	-	-
		72+67	RT	1	-	-	-	-	1
		72+76	RT	1	-	-	-	-	1
		75+48	RT	1	-	-	-	-	1
		75+98	RT	1	-	-	-	-	1
		76+50	RT	1	-	-	-	-	1
		78+78	RT	1	-	-	-	-	1
		80+64	RT	-	-	1	-	-	-
		80+69	RT	1	-	-	-	-	1
		80+85	RT	1	-	-	-	-	1
80+86	RT	1	-	-	-	-	1		
82+41	RT	1	-	-	-	-	1		
83+19	RT	1	-	-	-	-	1		
SUBTOTAL				21	0	2	0	0	21
0040	3	48+35	LT	-	1	-	-	-	-
		48+48	LT	-	-	1	-	-	-
		48+68	LT	-	-	1	-	-	-
		48+80	LT	-	1	-	-	-	-
		60+90	LT	-	-	1	-	-	-
		63+45	LT	-	-	-	1	-	-
		65+43	LT	-	-	-	1	-	-
		67+26	LT	-	-	1	-	-	-
		67+31	LT	-	-	1	-	-	-
		67+32	LT	-	-	1	-	-	-
		67+49	LT	-	-	1	-	-	-
		67+55	LT	-	-	1	-	-	-
		72+52	LT	-	-	1	-	-	-
		72+55	LT	-	-	1	-	-	-
		74+69	LT	-	-	-	1	-	-
		76+05	LT	-	-	1	-	-	-
		76+11	LT	-	-	1	-	-	-
		77+65	LT	-	-	-	1	-	-
		78+53	LT	-	-	-	1	-	-
		80+44	LT	-	-	1	-	-	-
		82+65	LT	-	-	1	-	-	-
		83+33	LT	-	-	1	-	-	-
		2+15 'NS '	LT	-	-	1	-	-	-
3+14 'NS '	RT	1	-	-	-	-	1		
SUBTOTAL				1	2	16	5	0	1
UNDISTRIBUTED				-	-	-	-	5	-
TOTAL				22	2	18	5	5	22

INLET PROTECTION

				628.7010	628.7015
				INLET	INLET
				PROTECTION	PROTECTION
				TYPE B	TYPE C
CATEGORY	STAGE	STATION	LT/RT	EACH	EACH
0010	2	48+25	RT	-	1
		48+11	RT	-	1
		48+68	RT	-	1
		48+98	RT	1	-
		51+55	RT	-	1
		53+82	RT	-	1
		54+07	RT	-	1
		54+46	RT	-	1
		57+06	RT	-	1
		63+51	RT	-	1
		67+11	RT	1	-
		68+90	RT	-	1
		69+82	RT	-	1
		72+22	RT	-	1
		73+12	RT	-	1
		75+50	RT	-	1
		76+50	RT	-	1
		81+84	RT	-	1
		82+34	RT	-	1
		82+71	RT	-	1
		82+90	RT	-	1
SUBTOTAL STAGE 2				2	19

INLET PROTECTION

				628.7010	628.7015
				INLET	INLET
				PROTECTION	PROTECTION
				TYPE B	TYPE C
CATEGORY	STAGE	STATION	LT/RT	EACH	EACH
0010	3	48+11	LT	-	1
		48+35	LT	-	1
		48+80	LT	-	1
		51+55	LT	1	-
		53+82	LT	-	1
		57+06	LT	-	1
		60+67	LT	-	1
		60+97	LT	-	1
		61+34	LT	-	1
		63+51	LT	-	1
		67+10	LT	-	1
		67+75	LT	-	1
		69+37	LT	1	-
		72+20	LT	-	1
		73+12	LT	-	1
		75+70	LT	-	1
		76+09	LT	-	1
		76+50	LT	-	1
		81+85	LT	-	1
			3+17 'NS'	LT	1
SUBTOTAL STAGE 3				3	18
UNDISTRIBUTED				2	10
TOTAL				7	47

WATER		
		624.0100
		WATER
CATEGORY	STAGE	MGAL
0010	2	3
	3	37
SUBTOTAL		40
0040	2/3	3
SUBTOTAL		3
TOTAL		43

MOBILIZATION EROSION CONTROL			
		628.1905	628.1910
			MOBILIZATION
		MOBILIZATION	EMERGENCY
		EROSION	EROSION
		CONTROL	CONTROL
CATEGORY	STAGE	EACH	EACH
0010		6	3
TOTAL		6	3

LANDSCAPING									
					625.0100	627.0200	629.0210	631.0300	630.0140
							FERTILIZER	SOD	SEEDING
					TOPSOIL	MULCHING	TYPE B	WATER	MIXTURE NO. 40
CATEGORY	STAGE	STATION	STATION	LT/RT	SY	SY	CWT	MGAL	LB
0010	2	62+50	70+00	RT	71	71	1	2	2
		70+00	77+50	RT	7	7	1	1	1
		77+50	END	RT	-	-	-	-	9
SUBTOTAL					78	78	2	3	12
0010	3	47+50	55+00	LT	908	908	1	11	17
		55+00	62+50	LT	826	826	1	10	15
		62+50	70+00	LT	562	562	1	7	11
		70+00	77+50	LT	344	344	1	4	7
SUBTOTAL					2,640	2,640	4	32	50
UNDISTRIBUTED					275	275	1	4	7
TOTAL					2,993	2,993	7	39	69

FIELD OFFICE		
		642.5001
		FIELD OFFICE
		TYPE B
CATEGORY	LOCATION	EACH
0010	PROJECT	1
TOTAL		1

PERMANENT SIGNING												PERMANENT SIGNING - CONTINUED																	
637.2230		637.2210		634.0616		634.0618		634.0620		SIGN		637.2230		637.2210		634.0616		634.0618		634.0620		SIGN							
SIGNS		SIGNS		POSTS WOOD		POSTS WOOD		POSTS WOOD		MOUNTED		SIGNS		SIGNS		POSTS WOOD		POSTS WOOD		POSTS WOOD		MOUNTED							
TYPE II		TYPE II		4X6-INCH		4X6-INCH		4X6-INCH		ON SAME		TYPE II		TYPE II		4X6-INCH		4X6-INCH		4X6-INCH		ON SAME							
REFELCTIVE F		REFELCTIVE H		16-FT		18-FT		20-FT		POST AS		REFELCTIVE F		REFELCTIVE H		16-FT		18-FT		20-FT		POST AS							
CATEGORY	SIGN #	CODE	W	H	#	POSTS	SF	SF	EACH	EACH	EACH	#	REMARKS	CATEGORY	SIGN #	CODE	W	H	#	POSTS	SF	SF	EACH	EACH	EACH	#	REMARKS		
0010	2-01	W12-2	36	36	1		9.0	-	-	1	-	2-02	VERTICAL CLEARANCE	0010	6-01	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT		
	2-02	W57-52	24	18	-		3.0	-	-	-	-	2-01	X MILES AHEAD		6-02	R1-1	36	36	1		-	7.3	1	-	-		STOP		
	2-03	I55-56	30	36	1		-	7.5	1	-	-		ADOPT A HIGHWAY		6-03	R1-1	36	36	1		-	7.3	1	-	-		STOP		
	2-04	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT		6-04	R7-1D	24	30	1		-	5.0	-	-	1	6-05	NO PARKING		
	2-05	R7-1R	24	30	1		-	5.0	1	-	-		NO PARKING		6-05	R2-1	36	48	-		-	12.0	-	-	-	7-01	SPEED LIMIT		
	2-06	W11-2	36	36	1		9.0	-	-	1	-	2-06	PEDESTRIAN CROSSING		6-06	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING		
	2-07	W16-9P	30	18	-		3.8	-	-	-	-	2-05	AHEAD		6-07	J3-1	24	57	1		-	9.5	-	1	-		REASSURANCE ASSEMBLY		
3-01	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT	6-08	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING				
3-02	R1-1	36	36	1		-	7.3	1	-	-		STOP	6-09	R3-9B	36	48	1		-	12.0	-	1	-	6-10	CENTER LANE ONLY				
3-03	R1-1	36	36	1		-	7.3	1	-	-		STOP	6-10	R3-9D	24	6	-		-	1.0	-	-	-	6-11	END				
3-04	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING	6-11	R3-9B	36	48	1		-	12.0	-	1	-	6-12	CENTER LANE ONLY				
3-05	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING	6-12	R3-9C	24	6	-		-	1.0	-	-	-	6-13	BEGIN				
3-06	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING	6-13	R1-1	36	36	1		-	7.3	1	-	-		STOP				
3-07	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT	6-14	D7-77L	60	36	2		-	15.0	2	-	-		FAIRGROUNDS				
3-08	R1-1	36	36	1		-	7.3	1	-	-		STOP	6-15	R7-1D	24	30	1		-	5.0	-	1	-		NO PARKING				
3-09	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT	6-16	J4-1	24	36	-		-	6.0	-	-	-		REASSURANCE ASSEMBLY				
3-10	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING	6-17	J1-1	24	39	1		-	6.5	1	-	-		JCT ASSEMBLY				
3-11	R3-9D	24	6	1		-	1.0	-	1	-	3-12	END	7-01	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT				
3-12	R3-9B	36	48	-		-	12.0	-	-	-	3-11	CENTER LANE ONLY	7-02	J2-2	48	57	1		-	19.0	-	1	-		REASSURANCE ASSEMBLY				
3-13	R3-9C	36	9	1		-	2.3	-	1	-	3-14	BEGIN	7-03	R1-1F	36	36	1		-	7.3	1	-	-		STOP- FOLDING				
3-14	R3-9B	36	48	-		-	12.0	-	-	-	3-13	CENTER LANE ONLY	7-04	J13-1	24	45	1		-	7.5	1	-	-		REASSURANCE ASSEMBLY				
3-15	W11-2	36	36	1		9.0	-	-	1	-	3-16	PEDESTRIAN CROSSING	7-05	JH-1	24	45	1		-	7.5	1	-	-		HOSPITAL RIGHT				
3-16	W16-7L	30	18	-		3.8	-	-	-	-	3-15	LEFT ARROW	7-06	J ASSEMBLY	48	77	2		-	25.7	-	-	2		REASSURANCE ASSEMBLY				
3-17	W11-2	36	36	1		9.0	-	-	1	-	3-18	PEDESTRIAN CROSSING	7-07	J2-2	48	57	1		-	19.0	1	-	-		REASSURANCE ASSEMBLY				
3-18	W16-7L	30	18	-		3.8	-	-	-	-	3-17	LEFT ARROW	7-08	R7-1-D	24	30	1		-	5.0	1	-	-		NO PARKING				
3-19	W11-2	36	36	1		9.0	-	-	1	-	3-20	PEDESTRIAN CROSSING	7-09	R1-1	36	36	1		-	7.3	1	-	-		STOP				
3-20	W16-7L	30	18	-		3.8	-	-	-	-	3-19	LEFT ARROW	7-10	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT				
3-21	W11-2	36	36	1		9.0	-	-	1	-	3-22	PEDESTRIAN CROSSING	8-01	J3-3	72	57	2		-	28.5	-	2	-		REASSURANCE ASSEMBLY				
3-22	W16-7L	30	18	-		3.8	-	-	-	-	3-21	LEFT ARROW	8-02	D9-52R	36	36	1		-	9.0	1	-	-		AIRPORT RT				
4-01	W11-2	36	36	1		9.0	-	-	1	-	4-02	PEDESTRIAN CROSSING	8-03	J4-2	48	36	2		-	12.0	2	-	-		REASSURANCE ASSEMBLY				
4-02	W16-9P	30	18	-		3.8	-	-	-	-	4-01	AHEAD	8-04	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT				
4-03	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING	8-05	JH-1	24	45	1		-	7.5	1	-	-		HOSPITAL AHEAD RIGHT				
4-04	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING	8-06	W1-4R	30	30	1		6.3	-	1	-	-		REVERSE CURVE				
4-05	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING	8-07	W1-4L	30	30	1		6.3	-	1	-	-		REVERSE CURVE				
4-06	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT	SUBTOTAL												12.5	320.0	24	7	3
4-07	R1-1	36	36	1		-	7.3	1	-	-		STOP	TOTAL												101.0	609.8	56	17	3
4-08	R3-9B	36	48	1		-	12.0	1	-	-		CENTER LANE ONLY																	
4-09	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT																	
5-01	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING																	
5-02	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING																	
5-03	R3-9B	36	48	1		-	12.0	1	-	-		CENTER LANE ONLY																	
5-04	R3-8W	54	30	2		-	11.3	2	-	-		TURN ONLY																	
5-05	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT																	
5-06	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING																	
5-07	R1-1	36	36	1		-	7.3	1	-	-		STOP																	
5-08	R1-1	36	36	1		-	7.3	1	-	-		STOP																	
5-09	R4-7	24	30	1		-	5.0	1	-	-		KEEP RIGHT																	
5-10	R7-1D	24	30	1		-	5.0	1	-	-		NO PARKING																	
5-11	R3-2	24	24	-		-	4.0	-	-	-		NO LT TURN																	
5-12	R2-1	36	48	1		-	12.0	1	-	-		SPEED LIMIT																	
5-13	R1-1	36	36	1		-	7.3	-	1	-		STOP																	
5-14	R3-2	24	24	-		-	4.0	-	-	-		NO LT TURN																	
SUBTOTAL							88.5	289.8	32	10	0																		

REMOVING SIGNING					
		638.2602	638.3000		
		REMOVING	REMOVING	SIGN	
		SIGNS	SMALL SIGN	MOUNTED ON SAME	
		TYPE II	SUPPORTS	POST AS	
CATEGORY	SIGN #	EACH	EACH	#	REMARKS
0010	R2-01	1	1		VERTICAL CLEARANCE
	R2-02	1	1		SPEED LIMIT
	R2-03	1	1		ADOPT A HIGHWAY
	R2-04	1	1		NO PARKING
	R3-01	1	1		SPEED LIMIT
	R3-02	1	1		STOP
	R3-03	1	1		STOP
	R3-04	1	1		REDUCED SPEED AHEAD
	R3-05	1	1		NO PARKING
	R3-06	1	1		NO PARKING
	R3-07	1	1		NO PARKING
	R3-08	1	1		SPEED LIMIT
	R3-09	1	1		STOP
	R3-10	1	1		SPEED LIMIT
	R3-11	1	1		NO PARKING
	R4-01	1	1		NO PARKING
	R4-02	1	1		NO PARKING
	R4-03	1	1		HOSPITAL
	R4-04	1	1		SPEED LIMIT
	R4-05	1	1		NO PARKING
	R4-06	1	1		STOP
	R5-01	1	1		NO PARKING
	R5-02	1	1		NO PARKING
	R5-03	1	1		NO PARKING
	R5-04	1	1		NO PARKING
	R5-05	1	1		SPEED LIMIT
	R5-06	1	1		STOP
	R5-07	1	1		STOP
	R5-08	1	1	R5-09	KEEP RIGHT
	R5-09	-	-	R5-10	KEEP RIGHT
	R5-10	-	-	R5-08	HOSPITAL
	R5-11	1	1		SPEED LIMIT
	R5-12	1	1		STOP
	R5-13	1	1		NO PARKING
SUBTOTAL		32	32		

REMOVING SIGNING					
		638.2602	638.3000		
		REMOVING	REMOVING	SIGN	
		SIGNS	SMALL SIGN	MOUNTED ON SAME	
		TYPE II	SUPPORTS	POST AS	
CATEGORY	SIGN #	EACH	EACH	#	REMARKS
0010	R6-01	1	1		SPEED LIMIT
	R6-02	1	1		STOP
	R6-03	1	1		STOP
	R6-04	1	1		HOSPITAL
	R6-05	1	1		NO PARKING
	R6-06	1	1		NO PARKING
	R6-07	1	1		REASSURANCE ASSEMBLY
	R6-08	1	1		STOP
	R6-09	1	1	R6-10	NO PARKING
	R6-10	-	-	R6-09	REASSURANCE ASSEMBLY
	R6-11	1	1		NO PARKING
	R6-12	1	1	R6-13	SPEED LIMIT
	R6-13	-	-	R6-12	NO PARKING
	R7-01	1	1		SPEED LIMIT
	R7-02	1	1		REASSURANCE ASSEMBLY
	R7-03	1	1	R7-04	YIELD
	R7-04	-	-	R7-03	DO NOT ENTER
	R7-05	1	1	R7-06	YIELD
	R7-06	-	-	R7-05	DO NOT ENTER
	R7-07	1	1		LEFT/RIGHT
	R7-08	1	1		STOP
	R7-09	1	1		YIELD
	R7-10	1	1	R7-11	REASSURANCE ASSEMBLY
	R7-11	-	-	R7-10	HOSPITAL
	R7-12	1	1		REASSURANCE ASSEMBLY
	R7-13	1	1		STOP
	R7-14	1	-	POLE MOUNTED	NO PARKING
	R7-15	1	1		SPEED LIMIT
	R7-16	2	-	POLE MOUNTED	FAIRGROUNDS
	R7-17	1	1		TURN LANE
	R8-01	1	1		REASSURANCE ASSEMBLY
	R8-02	1	-	POLE MOUNTED	AIRPORT
	R8-03	1	1		HOSPITAL
	R8-04	1	1		SPEED LIMIT
SUBTOTAL		30	26		
TOTAL		62	58		

TRAFFIC CONTROL COVERING SIGNS

643.0920						
TRAFFIC CONTROL						
COVERING SIGNS						
TYPE II						
CATEGORY	STAGE	LOCATION	MESSAGE	SIGN CODE	EACH	CYCLES
0010	2	SIGN STRUCTURE	LEFT TURN ONLY	R3-5L	1	1
		SIGN STRUCTURE	THRU ONLY	R3-5A	1	1
SUBTOTAL					2	
0010	3	SIGN STRUCTURE	LEFT TURN ONLY	R3-5L	1	1
		SIGN STRUCTURE	THRU ONLY	R3-5A	1	1
		HAMMOND AVE	ROUTE ASSEMBLY	J2-2	1	1
		HAMMOND AVE	ROUTE ASSEMBLY	J2-2	1	1
SUBTOTAL					4	
UNDISTRIBUTED					5	
TOTAL					11	

TRAFFIC CONTROL SIGNS FIXED MESSAGE

643.1000				
TRAFFIC CONTROL				
SIGNS				
FIXED MESSAGE				
CATEGORY	STAGE	MESSAGE	SIZE	SF
0010		HWY 48 WEST CLOSED AT HAMMOND & KNAPP FOLLOW DETOUR	4'X 6'	24.0
		HWY 48 EAST DETOUR AHEAD USE HWY V	0.5'X 4.5	47.3
TOTAL				71.3

PEDESTRIAN ACCOMMODATIONS

644.1616.S			644.1601.S	
TEMPORARY			TEMPORARY	
PEDESTRIAN			CURB	
SAFETY			RAMP	
FENCE			EACH	
CATEGORY	STAGE	LOCATION	LF	
0010	2	WISCONSIN	80	1
		NUNN	80	1
		CORNELL	160	2
		HAMMOND	700	1
		TAINTER	160	1
SUBTOTAL			1,180	6
0010	3	WISCONSIN	80	1
SUBTOTAL			80	1
TOTAL			1,260	7

TRAFFIC CONTROL

643.5000		
TRAFFIC		
CONTROL		
CATEGORY	LOCATION	EACH
0010	PROJECT	1
TOTAL		1

TRAFFIC CONTROL

			643.0300		643.0410		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050		643.0500		643.0600		REMARKS
									TRAFFIC										TRAFFIC		TRAFFIC		
			TRAFFIC		TRAFFIC		TRAFFIC		CONTROL				TRAFFIC				TRAFFIC		CONTROL		CONTROL		
			CONTROL		CONTROL		CONTROL		WARNING				CONTROL		TRAFFIC		CONTROL		FLEXIBLE		FLEXIBLE		
			CONTROL		BARRICADES		BARRICADES		LIGHTS				ARROW		CONTROL		SIGNS		TUBULAR		TUBULAR		
			DRUMS		TYPE II		TYPE III		TYPE A		TYPE C		BOARDS		SIGNS		PCMS		MARKER POSTS		MARKER BASES		
			EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAY	EACH		EACH		
CATEGORY	STAGE	LOCATION																					
0010	1	HAMMOND ISLANDS (UNDISTRIBUTED)	18	90	-	-	1	5	2	10	-	-	-	-	15	75	-	-	10		10		5 DAYS
	2/3	DETOUR	-	-	-	-	-	-	-	-	-	-	-	-	84	3,192	2	14	-		-		38 DAYS
	2	RECONSTRUCT EB	214	2,568	-	-	38	456	80	960	28	336	1	12	59	708	-	-	86		86		12 DAYS
		SIDEWALK CLOSURE	-	-	19	190	-	-	19	190	-	-	-	-	19	190	-	-	-		-		10 DAYS
	2B	WATER MAIN WORK	214	1,498	-	-	39	273	82	574	28	196	1	7	61	427	2	14	-		-		7 DAYS
	3	RECONSTRUCT WB	233	6,058	-	-	36	936	72	1,872	22	572	1	26	57	1,482	-	-	86		86		26 DAYS
		SIDEWALK CLOSURE	-	-	6	60	-	-	6	60	-	-	-	-	6	60	-	-	-		-		10 DAYS
	4	HAMMOND ISLAND	20	240	-	-	-	-	-	-	7	84	-	-	10	120	-	-	-		-		12 DAYS
UNDISTRIBUTED			523		-	13	-	84	-	184	-	60	-	3	-	313	-	-	10		10		
TOTALS			10,977		263		1,754		3,850		1,248		48		6,567		28		192		192		

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3

MARKING LINE																	
			646.1020				646.3020	646.6020	646.6120	646.8220	646.7120	646.5120	646.8120	646.7420		646.1040	646.5020
							MARKING		MARKING		MARKING				MARKING		
			MARKING LINE				MARKING LINE	STOP LINE	STOP LINE	MARKING	DIAGONAL				CROSSWALK EPOXY		LINE
			EPOXY				EPOXY	EPOXY	EPOXY	ISLAND	EPOXY		MARKING	MARKING	TRANSVERSE LINE		GROOVED
			4 - INCH				8 - INCH	12 - INCH	18 - INCH	NOSE	12 - INCH		WORD	CURB	6 - INCH		WET REF
			SOLID	DASH	SOLID	DASH	SOLID	SOLID	SOLID	EPOXY	SOLID	SOLID	EPOXY	EPOXY	SOLID	EPOXY 4 - INCH	EPOXY
			YELLOW	YELLOW	WHITE	WHITE	WHITE	WHITE	WHITE	YELLOW	WHITE	YELLOW	WHITE	YELLOW	WHITE	WHITE	WHITE
CATEGORY	STA	STA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EACH	LF	LF	EACH	EACH
0010	BEGIN	19+00WB	710	-	348	-	-	-	-	-	-	255	-	-	-	-	-
	19+00WB	26+00WB	720	-	630	-	519	-	-	-	125	58	-	-	-	-	2
	26+00WB	33+00WB	483	-	551	-	980	-	-	-	390	-	2	-	-	-	4
	33+00WB	40+00WB	1414	-	576	-	-	-	-	14	-	478	-	-	-	-	-
	40+00WB	47+50	3002	-	1510	13	143	-	-	-	-	586	2	-	-	985	2
	47+50	55+00	1269	256	42	-	59	-	-	-	-	9	-	-	304	1097	5
	55+00	62+50	1340	335	1421	-	-	-	-	-	-	-	-	-	95	-	6
	62+50	70+00	1737	-	1003	-	505	12	67	13	26	73	2	-	518	-	5
	70+00	77+50	1302	197	1043	-	50	-	-	-	-	12	-	-	384	-	5
	77+50	END	1863	-	195	-	873	-	79	-	-	47	5	-	492	-	11
SUBTOTAL			21,960				3,129	12	146	27	2,059		11	0	1,793	2,082	40
0040	BEGIN	40+00WB	-	-	-	-	-	-	-	-	-	-	-	31	-	-	-
	77+50	END	-	-	-	-	-	-	-	-	-	-	-	887	-	-	-
SUBTOTAL			0				0	0	0	0	0		0	918	0	0	0
TOTAL			21,960				3,129	12	146	27	2,059		11	918	1,793	2,082	40

TEMPORARY MARKING LINE

649.0850		
TEMPORARY MARKING		
STOP LINE		
REMOVABLE		
TAPE 18-INCH		
WHITE		
CATEGORY	STAGE	LF
0010	1B	45
	2	57
SUBTOTAL		102
TOTAL		102

CONSTRUCTION STAKING

		650.5500	650.8000	650.9000	650.9910	SPV.0090.05
		CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION
		STAKING	STAKING	STAKING	STAKING	STAKING
		CURB GUTTER	RESURFACING	CURB	SUPPLEMENTAL	WATER MAIN
		AND	REFERENCE	RAMPS	CONTROL	
		CURB & GUTTER			8120-04-73	
CATEGORY	LOCATION	LF	LF	EACH	LS	LF
0010	PROJECT	1113	4210	26	1	-
SUBTOTAL		1113	4210	26	1	-
0040	HAMMOND INTERSECTION	-	-	-	-	333
SUBTOTAL		-	-	-	-	333
TOTAL		1113	4210	26	1	333

SAWING PAVEMENT

						690.0150	690.0250	
						SAWING	SAWING	
						ASPHALT	CONCRETE	
CATEGORY	STAGE	LOCATION	STATION	-	STATION	LT/RT	LF	LF
0010	1A		0+13NS		0+63NS	LT	-	160
	1B		0+30NS		0+60NS	LT/RT	-	65
			0+13NS		0+60NS	RT	-	130
SUBTOTAL							0	355
0010	2	BEGIN EB	41+35		-	RT	-	24
		STOUT	48+27		48+69	RT	-	43
		POSKIN	54+09		54+43	RT	-	46
		WISCONSIN	67+09		67+56	RT	47	-
		PUTNAM	69+11		69+60	RT	50	-
		NUNN	72+49		72+82	RT	-	32
		CORNELL	75+78		76+13	RT	-	35
		TAINTER	82+31		82+71	RT	-	40
		END EB	83+50		-	LT/RT	-	20
		CURB & GUTTER	SPOT REPLACEMENTS			RT	-	55
SUBTOTAL							97	295
0010	3	BEGIN WB	41+35		41+35	LT	-	24
		HAZELWOOD	48+40		48+78	LT	-	35
		DRIVEWAY	50+72		50+91	LT	19	-
		DRIVEWAY	51+50		51+65	LT	-	15
		DRIVEWAY	54+12		54+26	LT	14	-
		DRIVEWAY	54+48		54+63	LT	14	-
		DRIVEWAY	55+77		56+11	LT	27	-
		DRIVEWAY	57+70		57+86	LT	16	-
		DRIVEWAY	58+54		58+68	LT	14	-
		DRIVEWAY	59+36		59+48	LT	12	-
		LINDEN	60+96		61+37	LT	-	40
		DRIVEWAY	65+77		66+03	LT	25	-
		WISCONSIN	67+07		67+78	LT	-	60
		NUNN	72+45		72+86	LT	-	46
		DRIVEWAY	74+05		74+43	LT	38	-
		CORNELL	75+71		75+07	LT	-	36
		DRIVEWAY	77+33		79+31	LT	168	35
		HAMMOND	3+43 'NS'		-	LT/RT	-	45
		END WB	83+50		-	LT/RT	-	24
CURB & GUTTER	SPOT REPLACEMENTS			LT	-	85		
SUBTOTAL							347	445
0040	WATERMAIN						-	450
SUBTOTAL							0	450
TOTAL							444	1,545

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WATER MAIN																
			(SPV.0105.04)	(SPV.0090.01)	(SPV.0090.02)	(SPV.0090.03)	(SPV.0060.07)	(SPV.0060.08)	(SPV.0060.09)	(SPV.0085.01)	(SPV.0060.10)	(SPV.0060.11)	(SPV.0090.04)	(SPV.0060.12)	(SPV.0060.13)	612.0902.S
			ABANDON	6-INCH	8-INCH	10-INCH	6-INCH	8-INCH	10-INCH	WATER MAIN	CONNECT TO	1-INCH	1-INCH	1-INCH	CONNECT TO	INSULATION BOARD
			WATER MAIN	WATER MAIN	WATER MAIN	WATER MAIN	GATE VALVE	GATE VALVE	GATE VALVE	FITTINGS	EXISTING	CORPORATION	COPPER WATER	CURB STOP	EXISTING	POLYSTYRENE,
CATEGORY	STATION	LOCATION	LS	LF	LF	LF	AND BOX	AND BOX	AND BOX	LBS	WATER MAIN	STOP	SERVICE	AND BOX	WATER SERVICE	2-INCH
							EACH	EACH	EACH		EACH	EACH	LF	EACH	EACH	SY
0040	80+44	12 LT	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	80+44	12 LT	-	-	-	222	-	-	-	-	-	-	-	-	-	-
	80+45	12 LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-
	82+30	9 LT	-	-	-	-	-	-	-	-	-	1	25	1	1	-
			-	-	-	-	-	-	-	-	-	-	-	-	-	-
	82+64	41 RT	-	-	-	-	1	-	-	-	-	-	-	-	-	-
	82+64	42 RT	-	-	-	-	-	-	-	24	-	-	-	-	-	-
	82+64	43 RT	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	82+66	9 LT	-	-	59	-	-	-	-	-	-	-	-	-	-	-
	82+66	9 LT	-	52	-	-	-	-	-	-	-	-	-	-	-	-
	82+66	9 LT	-	-	-	-	-	-	-	155	-	-	-	-	-	-
	83+24	8 LT	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	83+25	8 LT	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	83+25	12 LT	1	-	-	-	-	-	-	-	-	-	-	-	-	-
UNDISTRIBUTED			-	-	-	-	-	-	-	-	-	-	-	-	-	24
PROJECT TOTALS			1	52	59	222	1	1	1	179	3	1	25	1	1	24

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REMOVING CURB & GUTTER

204.0150					
REMOVING					
CURB & GUTTER					
CATEGORY	STAGE	STATION	-	STATION	LT/RT LF
0010	1	80+03		80+46	LT 123
		80+78		81+15	LT 120
SUBTOTAL					243
0010	2	79+03		83+32	RT 331
SUBTOTAL					331
0010	3	79+00		2+58NS	186
		2+39NS		81+60	115
SUBTOTAL					301
TOTAL					875

EARTHWORK

Division	From /To Station	Location	205.0100 Common Excavation (1)	Salvaged /Unsa ble Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate + /- (14)
			Cut (2) CY				Factor 1.25	
HAMMOND (0010)	79+00 TO 81+50	HAMMOND AVE	1204	391	813	20	0	813
NORTH PATH (0010)	1+20 TO 2+75	NORTH PATH	72	0	72	45	57	15
SOUTH PATH (0010)	1+00 TO 2+00	SOUTH PATH	4	0	4	12	15	-11
Subtotal (0010)			1280	0	76	57	72	4
Grand Total			1280	391	889	78	72	817
Total Common Exc			1280					

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 4) Salvaged/Unusable Pavement Material
- 5) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 13) Expanded Fill. Factor = 1.25
- 14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

BASE AGGREGATE										
					208.1100	305.0110	305.0120			
					SELECT	BASE AGGREGATE	BASE AGGREGATE			
					BORROW	DENSE 3/4-INCH	DENSE 1 1/4-INCH			
CATEGORY	STAGE	STATION	-	STATION	LT/RT	CY	TON	TON		
0010	2	79+89		81+24	LT/RT	144	-	144		
		80+04		82+25	RT	20	-	28		
		82+74		82+94	RT	-	-	5		
		CURB REPLACEMENTS				-	-	30		
		81+18		81+76		-	-	5		
		S. PATH								
		79+44		80+04	RT	-	-	19		
		79+44		80+04	RT	-	66	-		
		3		79+45		80+35	LT	62	-	83
				79+89		81+24	LT/RT	241	-	241
1+69 'NS'				2+91 'NS'	LT		-	24		
CURB REPLACEMENTS				-	-	17				
1+75 'NS'				2+91 'NS'		-	-	14		
N. PATH										
78+91				80+17	LT	-	-	24		
78+91				80+17	LT	-	86	-		
SUBTOTAL						467	152	634		
TOTAL						467	152	634		

CONCRETE CURB & GUTTER

		601.0409		601.0580		416.0610	
		CONCRETE		CONCRETE		DRILLED	
		CONCRETE		CURB & GUTTER		TIE	
		CURB & GUTTER		4-INCH SLOPED		BARS	
		30-INCH TYPE A		36-INCH TYPE R			
CATEGORY	STAGE	STATION -	STATION	LT/RT	LF	LF	EACH
0010	2	79+03	83+32	RT	331	-	72
SUBTOTAL					331	0	72
0010	3	79+00	2+58NS	LT	195	-	38
		79+45	2+08NS	LT	-	116	20
		2+39NS	81+60	RT	122	-	30
SUBTOTAL					317	116	88
0010	4	81+08	81+94	LT/RT	158	-	82
SUBTOTAL					158	0	82
TOTAL					806	116	242

CURB RAMPS

				602.0515		602.0615	
				CURB RAMP		CURB RAMP	
				DETECTABLE		DETECTABLE	
				WARNING FIELD		WARNING FIELD	
				NATURAL PATINA		NATURAL PATINA	
CATEGORY	STAGE	STA	LT/RT	SF		SF	
0010	2	80+00	RT	30		-	
		81+21	RT	10		-	
		82+20	RT	-		20	
0010	3	80+00	LT	-		34	
		80+10	LT	-		22	
		81+02	LT	10		-	
		81+21	LT	10		-	
SUBTOTAL				60		76	
TOTAL				60		76	

STORM SEWER

					608.0315	611.0530	611.0624	611.2004	611.3230
					STORM SEWER PIPE	MANHOLE	INLET	MANHOLES	
					REINFORCED CONCRETE	COVERS	COVERS	4-FT	INLETS
					CLASS III 15-INCH	TYPE J	TYPE H	DIAMETER	2X3-FT
CATEGORY	STAGE	NO.	STATION	LT/RT	LF	EACH	EACH	EACH	EACH
0010	2	INL 1.6	57+06	RT	-	-	1	-	1
0010	3	MH 3.2	1+77 'NS'	RT	64	1	-	1	-
		INL 3.1	2+11 'NS'	LT	-	-	1	-	1
TOTAL					64	1	2	1	2

WATER MAIN INSULATION

				612.0902.S
				INSULATION
				BOARD
				POLYSTYRENE
				2-INCH
CATEGORY	STAGE	STATION	OFFSET	SY
0010	3	2+03 'NS'	15' LT	3.6
TOTAL				3.6

FENCE SAFETY

			616.0700.S
			FENCE
			SAFETY
CATEGORY	STAGE	LOCATION	LF
0010	2	TRAIL - UNDISTRIBUTED	200
	3	TRAIL - UNDISTRIBUTED	200
TOTAL			400

CONCRETE MEDIAN

					620.0300	620.0100
					CONCRETE	CONCRETE
					MEDIAN	CORRUGATED
					SLOPED NOSE	MEDIAN
CATEGORY	STAGE	STA	STA	LT/RT	SF	SF
0010	4	81+10	81+15	LT/RT	66	-
		81+94	82+26	LT/RT	-	400
TOTAL					66	400

WATER		
		624.0100
		WATER
CATEGORY	STAGE	MGAL
0010	2/3	12
	TOTAL	12

SOD									
					625.0100	627.0200	629.0210	631.0300	630.0140
							FERTILIZER	SOD	SEEDING
					TOPSOIL	MULCHING	TYPE B	WATER	MIXTURE NO. 40
CATEGORY	STAGE	STATION	STATION	LT/RT	SY	SY	CWT	MGAL	LB
0010	2	77+50	END	RT	452	452	1	11	9
0010	3	77+50	END	LT	844	844	1	10	16
UNDISTRIBUTED					130	130	1	3	3
TOTAL					1,426	1,426	3	24	28

CONSTRUCTION STAKING					
		650.4000	650.7000	650.9000	650.9910
		CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION
		STAKING	STAKING	STAKING	STAKING
		STORM	CONCRETE	CURB	SUPPLEMENTAL
		SEWER	PAVEMENT	RAMPS	CONTROL
					8120-04-74
CATEGORY	LOCATION	EACH	LF	EACH	LS
0010	PROJECT	2	200	9	1
	TOTAL	2	200	9	1

							690.0150	690.0250
							SAWING	SAWING
							ASPHALT	CONCRETE
CATEGORY	STAGE	LOCATION	STATION	-	STATION	LT/RT	LF	LF
0010	1	HAMMOND ISLANDS	1+50 'NS'		2+00 'NS'	LT	-	170
		HAMMOND ISLANDS	1+50 'NS'		2+00 'NS'	RT	-	135
SUBTOTAL							0	305
0010	2	48 EB	79+89		-	RT	-	24
		DRIEWAY	81+19		81+73	RT	57	-
		48 EB	81+24		-	RT	-	36
		CURB & GUTTER	SPOT REPLACEMENTS			RT	-	15
SUBTOTAL							57	75
0010	3	48 WB	79+89		-	LT	-	40
		48 WB	81+24		-	LT	-	37
		HAMMOND	2+13 'NS'		-	LT/RT	-	80
		DRIVEWAY	1+73 'NS'		2+91 'NS'	RT	172	-
		CURB & GUTTER	SPOT REPLACEMENTS			LT	-	10
SUBTOTAL							172	167
TOTAL							229	547

3

CONDUIT

		* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.		* 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.		* 652.0615 CONDUIT SPECIAL 3-INCH L.F.	
LOC.	TO	LOC.					
CB1		PB1		33			
PB1		SB1	15				
PB1		PB2		158			
PB2		SB2	19				
PB2		PB3		92			
PB3		SB3	4				
PB3		PB4				66	
PB4		SB4	3				
PB4		PB5				70	
PB5		PB6		202			
PB6		PB7				94	
PB7		SB6	6				
PB5		SB5	12				
PB5		PB8		178			
PB8		SB7	20				
PB8		SB8	6				
PB8		PB9		112			
PB9		SB9	5				
PB9		PB10				150	
PB10		SB10	26				
PB10		SB11	5				
PB10		PB11		66			
PB11		SB12	13				
PB11		CB1		18			
TOTAL			134	1239		380	

ELECTRICAL SERVICE METER BREAKER PEDESTAL

		* 656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.	
CABINET NO.	** LOCATION		
CB1	KNAPP ST & HAMMOND AVE	1	
TOTAL		1	

CONCRETE BASES

		* 654.0101 CONCRETE BASES TYPE 1 EACH		* 654.0102 CONCRETE BASE TYPE 2 EACH		* 654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	
SIGNAL BASE NO.	** LOCATION						
CB1	80+09, 79' LT					1	
SB1	80+31, 76' LT	1					
SB2	81+05, 48' LT			1			
SB3	81+26, 31' LT	1					
SB4	81+26, 4' RT			1			
SB5	81+17, 41' RT			1			
SB6	82+79, 50' RT			1			
SB7	80+60, 34' RT	1					
SB8	80+45, 34' RT			1			
SB9	79+87, 32' RT	1					
SB10	79+58, 36' LT			1			
SB11	79+87, 48' LT	1					
SB12	80+06, 57' LT	1					
TOTAL		6		6		1	

PULL BOXES

		* 653.0140 PULL BOXES STEEL 24"x42" EACH	
PULL BOX NO.	** LOCATION		
PB1	80+16, 70' LT	1	
PB2	80+99, 67' LT	1	
PB3	81+30, 30' LT	1	
PB4	81+30, 4' RT	1	
PB5	81+30, 41' RT	1	
PB6	82+30, 53' RT	1	
PB7	82+79, 54' RT	1	
PB8	80+40, 30' RT	1	
PB9	79+82, 30' RT	1	
PB10	79+82, 47' LT	1	
PB11	80+08, 71' LT	1	
TOTAL		11	

LEGEND

* ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STH 48/CTH SS (KNAPP ST) &
STH 48 (HAMMOND AVE)
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TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE

			*	*	*	*	*	*	*
			655.0230	655.0240	655.0260	655.0270	655.0305	655.0515	655.0610
			CABLE	CABLE	CABLE	CABLE	CABLE	ELECTRICAL	ELECTRICAL
			TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TYPE UF	WIRE TRAFFIC	WIRE
			SIGNAL	SIGNAL	SIGNAL	SIGNAL	2-12 AWG	SIGNALS	LIGHTING
			5-14 AWG	7-14 AWG	12-14 AWG	15-14 AWG	GROUND	10 AWG	12 AWG
LOC.	TO	LOC.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
CB1		SB1			55			55	
CB1		SB2		168			168		
CB1		SB3				214			
CB1		SB4			261				
CB1		SB5			320				
CB1		SB7		263					
CB1		SB8			249				
CB1		SB9			175				
CB1		SB10			108		108		
CB1		SB11		87					
CB1		SB12		47				47	
PB1		CB1						30	
PB2		SB2						35	
PB3		SB3						20	
PB4		SB4						19	
PB5		SB5						28	
PB8		SB8						22	
PB9		SB9						21	
PB10		SB11						21	
PB11		CB1						25	
SB1		SB2						155	
SB2		SB3						110	
SB3		SB4						80	
SB4		SB5						90	
SB5		SB6						218	
SB6		SB7						330	
SB7		SB8						50	
SB8		SB9						107	
SB9		SB10						146	
SB10		SB11						56	
SB11		SB12						91	
SB2		SB5					215		
SB1		HEAD 9		23					
SB2		HEAD 13	15						
SB2		LUMINAIRE							138
SB3		HEAD 4		22					
SB3		HEAD 6		23					
SB3		HEAD 18	15						
SB4		HEAD 2	21						
SUBTOTAL			51	633	1168	214	491	1756	138

LEGEND

* ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STH 48/CTH SS (KNAPP ST) &
STH 48 (HAMMOND AVE)
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TRAFFIC SIGNAL EQUIPMENT

	*	*		*	*	*	*		*	*		*	*
	657.0100	657.0255	657.0305	657.0310	657.0315	657.0420	657.0425	657.0430	657.0595	657.0609	657.0709	658.0500	659.1120
SIG. BASE NO.	PEDESTAL BASES EACH	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	POLES TYPE 2 EACH	POLES TYPE 3 EACH	POLES TYPE 4 EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	TROMBONE ARMS 25-FT EACH	LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	LUMINAIRE ARMS TRUSS TYPE 4-INCH CLAMP 12-FT EACH	PEDESTRIAN PUSH BUTTONS EACH	LUMINAIRES UTILITY LED B EACH
SB1	1						1						
SB2		1			1					1		1	1
SB3	1						1					1	
SB4		1	1									1	
SB5		1		1					1	1		1	1
SB6		1			1					1			
SB7	1						1						
SB8		1			1								
SB9	1					1				1		1	1
SB10		1		1					1		1		
SB11	1							1				1	
SB12	1							1		1		1	1
TOTAL	6	6	1	2	3	1	3	2	2	5	1	7	4

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TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE (CONTINUED)

		*	*	*	*	*	*	*
		655.0230	655.0240	655.0260	655.0270	655.0305	655.0515	655.0610
		CABLE	CABLE	CABLE	CABLE	CABLE	ELECTRICAL	ELECTRICAL
		TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TYPE UF	WIRE TRAFFIC	WIRE
		SIGNAL	SIGNAL	SIGNAL	SIGNAL	2-12 AWG	SIGNALS	LIGHTING
LOC.	TO	5-14 AWG L.F.	7-14 AWG L.F.	12-14 AWG L.F.	15-14 AWG L.F.	GROUNDED L.F.	10 AWG L.F.	12 AWG L.F.
SB4	HEAD 5		22					
SB5	HEAD 3	50						
SB5	HEAD 10	50						
SB5	HEAD 17	15						
SB5	LUMINAIRE							138
SB7	HEAD 11	21						
SB8	HEAD 12		23					
SB9	HEAD 1	19						
SB9	HEAD 7	19						
SB9	HEAD 16	15						
SB10	HEAD 8		52					
SB10	LUMINAIRE							138
SB11	HEAD 15	15						
SB12	HEAD 14	15						
TOTAL		270	730	1168	214	491	1756	414

VIDEO DETECTION SYSTEM

** LOCATION	SPV.0105.02 VEHICULAR VIDEO DETECTION SYSTEM L.S.
KNAPP ST & HAMMOND AVE	1
TOTAL	1

LEGEND

* ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STH 48/CTH SS (KNAPP ST) &
STH 48 (HAMMOND AVE)
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TRAFFIC SIGNAL FACES

SIG. HEAD NO.	SIG. BASE NO.	* 658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	* 658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0175 TRAFFIC SIGNAL FACE 5S 12-INCH EACH	* 658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
1	SB9	1			
2	SB4	1			
3	SB5	1			
4	SB3		1		
5	SB4		1		
6	SB3			1	
7	SB9	1			
8	SB10			1	
9	SB1			1	
10	SB5	1			
11	SB7	1			
12	SB8			1	
13	SB2				1
14	SB12				1
15	SB11				1
16	SB9				1
17	SB5				1
18	SB3				1
TOTAL		6	2	4	6

TRAFFIC SIGNAL CONTROLLER AND CABINET

CONTROL CABINET NO.	** LOCATION	SPV.0105.05 TRAFFIC SIGNAL CONTROLLER AND CABINET KNAPP ST & HAMMOND AVE EACH	SPV.0060.01 INSTALL CELLULAR MODEM EACH
CB1	80+09, 79' LT	1	1
TOTAL		1	1

SIGNAL MOUNTING HARDWARE

** LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE L.S.
KNAPP ST & HAMMOND AVE	1
TOTAL	1

LEGEND

* ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE
ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STH 48/CTH SS (KNAPP ST) &
STH 48 (HAMMOND AVE)
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CONDUIT

		* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.		* 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.		* 652.0615 CONDUIT SPECIAL 3-INCH L.F.	
LOC.	TO	LOC.					
CB1		PB1		21			
PB1		SB1	7				
PB1		PB2				122	
PB2		SB2		7			
PB2		PB3		66			
PB3		SB3	5				
PB3		PB4				86	
PB4		SB4	4				
PB4		PB5				82	
PB5		SB5	4				
PB5		PB6		50			
PB6		SB6	3				
PB6		PB7				112	
PB7		SB7		13			
PB7		PB8		64			
PB8		SB8	16				
PB8		PB9				146	
PB9		SB9	20				
PB9		CB1		33			
TOTAL			59	802		548	

ELECTRICAL SERVICE METER BREAKER PEDESTAL

		656.0200.02 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.	
CABINET NO.	** LOCATION		
CB1	KNAPP ST & WISCONSIN AVE	1	
TOTAL		1	

CONCRETE BASES

		* 654.0101	* 654.0102	* 654.0217	SPV.0060.16 CONCRETE BASES TYPE 10 CONTRACTOR SUPPLIED ANCHOR BOLTS AND ROD TEMPLATE EACH	SPV.0060.17 CONCRETE BASES TYPE 13 CONTRACTOR SUPPLIED ANCHOR BOLTS AND ROD TEMPLATE EACH
SIGNAL BASE NO.	** LOCATION	CONCRETE BASES TYPE 1 EACH	CONCRETE BASE TYPE 2 EACH	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH		
CB1	66+80, 37' RT			1		
SB1	66+80, 33'RT	1				
SB2	66+82, 31'LT				1	
SB3	67+03, 49'LT	1				
SB4	67+43, 48'LT	1				
SB5	67+85, 48'LT		1			
SB6	67+96, 30'LT	1				
SB7	67+82, 30'RT					1
SB8	67+61, 56'RT	1				
SB9	67+06, 55'RT		1			
TOTAL		5	2	1	1	1

PULL BOXES

		* 653.0140 PULL BOXES STEEL 24"x42" EACH
PULL BOX NO.	** LOCATION	
PB1	66+73, 32'RT	1
PB2	66+74, 30'LT	1
PB3	66+99, 52'LT	1
PB4	67+43, 53'LT	1
PB5	67+85, 53'LT	1
PB6	67+98, 29'LT	1
PB7	67+96, 29'RT	1
PB8	67+65, 40'RT	1
PB9	66+90, 43'RT	1
TOTAL		9

LEGEND

* ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE
ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STH 48 (KNAPP ST) &
WISCONSIN AVE
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TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE									
LOC.	TO	LOC.	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	* 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	* 655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	* 655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG L.F.	* 655.0305 CABLE TYPE UF 2-12 AWG GROUNDED L.F.	* 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	SB1				42			42	
CB1	SB2					118	118		
CB1	SB3				164				
CB1	SB4			221					
CB1	SB5				277				
CB1	SB6				248				
CB1	SB7				187				
CB1	SB8				143				
CB1	SB9				59	59	59		
PB1	CB1							26	
PB2	SB2							23	
PB3	SB3							21	
PB4	SB4							20	
PB5	SB5							20	
PB6	SB6							19	
PB7	SB7							29	
PB8	SB8							32	
PB9	CB1							30	
SB1	SB2							115	
SB2	SB3							85	
SB3	SB4							92	
SB4	SB5							89	
SB5	SB6							71	
SB6	SB7							112	
SB7	SB8							101	
SB8	SB9							149	
SB2	SB5					197			
SB9	SB7					192			
SB1	HEAD 1		19						
SB1	HEAD 24		15						
SB2	HEAD 7		40						
SB2	HEAD 8		19						
SB2	HEAD 10			53					
SB2	HEAD 23		15						
SB2	LUMINAIRE								120
SB3	HEAD 14		19						
SB3	HEAD 22		15						
SB4	HEAD 12		19						
SB5	HEAD 4		19						
SB5	HEAD 13		50						
SB5	HEAD 21		15						

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE (CONTINUED)

LOC.	TO	LOC.	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	* 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	* 655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	* 655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG L.F.	* 655.0305 CABLE TYPE UF 2-12 AWG GROUNDED L.F.	* 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
SB5	LUMINAIRE								120
SB6	HEAD 6		19						
SB6	HEAD 20		15						
SB7	HEAD 2		43						
SB7	HEAD 3		19						
SB7	HEAD 5		55						
SB7	HEAD 19		15						
SB7	LUMINAIRE								120
SB8	HEAD 11		19						
SB8	HEAD 15		19						
SB8	HEAD 18		15						
SB9	HEAD 9			21					
SB9	HEAD 16		45						
SB9	HEAD 17		15						
SB9	LUMINAIRE								120
TOTAL			524	295	1120	118	566	1135	480

- LEGEND**
- * ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE
 - ** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STH 48 (KNAPP ST) &
WISCONSIN AVE
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TRAFFIC SIGNAL EQUIPMENT

	*	*	*	*	*		*	*	*	*					
	657.0100	657.0255	657.0310	657.0420	657.0425	657.0590	657.0595	657.0609	658.0500	659.1120	SPV.0060.02	SPV.0060.03	SPV.0060.04	SPV.0060.05	SPV.0060.15
SIG. BASE NO.	PEDESTAL BASES EACH	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	POLES TYPE 3 EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	TROMBONE ARMS 20-FT EACH	TROMBONE ARMS 25-FT EACH	LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	PEDESTRIAN PUSH BUTTONS EACH	LUMINAIRES UTILITY LED B EACH	POLES TYPE 10 EACH	POLES TYPE 13 EACH	MONOTUBE ARMS 30-FT EACH	MONOTUBE ARMS 35-FT EACH	LUMINAIRE ARMS STEEL 6-FT EACH
SB1	1				1				1						
SB2									1	1	1		1		1
SB3	1			1					1						
SB4	1			1					1						
SB5		1	1				1	1	1	1					
SB6	1				1				1						
SB7									1	1		1		1	1
SB8	1			1					1						
SB9		1	1			1		1	1	1					
TOTAL	5	2	2	3	2	1	1	2	9	4	1	1	1	1	2

LEGEND

★ ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE

★★ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STH 48 (KNAPP ST) &
WISCONSIN AVE
PAGE 3 OF 4

3

TRAFFIC SIGNAL FACES

SIG. HEAD NO.	SIG. BASE NO.	* 658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	* 658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	* 658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
1	SB1	1		
2	SB7	1		
3	SB7	1		
4	SB5	1		
5	SB7	1		
6	SB6	1		
7	SB2	1		
8	SB2	1		
9	SB9		1	
10	SB2		1	
11	SB8	1		
12	SB4	1		
13	SB5	1		
14	SB3	1		
15	SB8	1		
16	SB9	1		
17	SB9			1
18	SB8			1
19	SB7			1
20	SB6			1
21	SB5			1
22	SB3			1
23	SB2			1
24	SB1			1
TOTAL		14	2	8

VIDEO DETECTION SYSTEM

** LOCATION	SPV.0105.03 VEHICULAR VIDEO DETECTION SYSTEM L.S.
KNAPP ST & WISCONSIN AVE	1
TOTAL	
1	

TRAFFIC SIGNAL CONTROLLER AND CABINET

CONTROL CABINET NO.	** LOCATION	SPV.0105.06 TRAFFIC SIGNAL CONTROLLER AND CABINET KNAPP ST & WISCONSIN AVE EACH	SPV.0060.01 INSTALL CELLULAR MODEM EACH
CB1	66+80, 37' RT	1	1
TOTAL		1	1

SIGNAL MOUNTING HARDWARE

** LOCATION	658.5069.02 SIGNAL MOUNTING HARDWARE L.S.
KNAPP ST & WISCONSIN AVE	1
TOTAL	
1	

LEGEND

* ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE
ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

STH 48 (KNAPP ST) &
WISCONSIN AVE
PAGE 4 OF 4

3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
PROJECT NO. 8120-04-23
CITY OF RICE LAKE, KNAPP STREET
BEAR PAW AVENUE TO HAMMOND AVENUE

STH 48
BARRON COUNTY



CONVENTIONAL SYMBOLS

SECTION LINE	SECTION	R/W MONUMENT	•
QUARTER LINE	CORNER	NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	NOTATION FOR COMBUSTIBLE FLUIDS	FOUND IRON PIN	IP
NEW REFERENCE LINE	NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES	VALVE (GAS, WATER, ETC.)	⊗ (TYPE)
NEW R/W LINE		SIGN	⊗ (TYPE)
EXISTING R/W LINE		OFF-PREMISE SIGN	⊗ (TYPE)
PROPERTY LINE			
LOT, TIE & OTHER MINOR LINES			
CORPORATE LIMITS			
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)			
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)			
TEMPORARY LIMITED EASEMENT AREA			
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)			
TRANSMISSION STRUCTURES			
BUILDING			
NATIONAL GEODETIC SURVEY MONUMENT			
SIXTEENTH CORNER MONUMENT			

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 8120-04-23

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BARRON COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/8" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLES) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A HIGHWAY EASEMENT (HE) IS AN EASEMENT FOR HIGHWAY PURPOSES, AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPANCIAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD	—OH—
TRANSMISSION LINES	—E—
ELECTRIC	—TV—
CABLE TELEVISION	—FO—
FIBER OPTIC	—SAN—
SANITARY SEWER	—SS—
STORM SEWER	—SS—

PROJECT NUMBER 8120-04-23-4.01
SHEET 2 OF 2

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.				
PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W AREAS REQUIRED SQUARE FEET			TLE SF
			NEW	EXISTING	TOTAL	
1	PETR C. NELSON AND LISA M. NELSON	FEE, TLE	619		619	999
2	AMBER M. GARDNER	FEE, TLE	542		542	831
3	JOANN HENNINGSEN, VENDOR KEELER RENTAL PROPERTIES, LLC, PURCHASER	TLE	-----	-----	-----	91

UTILITY INTEREST REQUIRED		
UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
200	WISCONSIN GAS, LLC d/b/a WE ENERGIES	RELEASE OF RIGHTS

TRANSPORTATION PROJECT PLAT NO: 8120-04-23-4.01

THAT PART OF PARCEL A OF C.S.M. 867, LOT 1 OF BLOCK A OF MASER ADDITION, AND OUTLOT 83 OF THE CITY OF RICE LAKE, ALL IN THE NE 1/4 OF SECTION 20, TOWNSHIP 35 NORTH, RANGE 11 WEST, CITY OF RICE LAKE, BARRON COUNTY, WISCONSIN

RELOCATION ORDER STH 48, CITY OF RICE LAKE, KNAPP STREET (BEAR PAW AVE TO HAMMOND AVE)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RICE LAKE DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

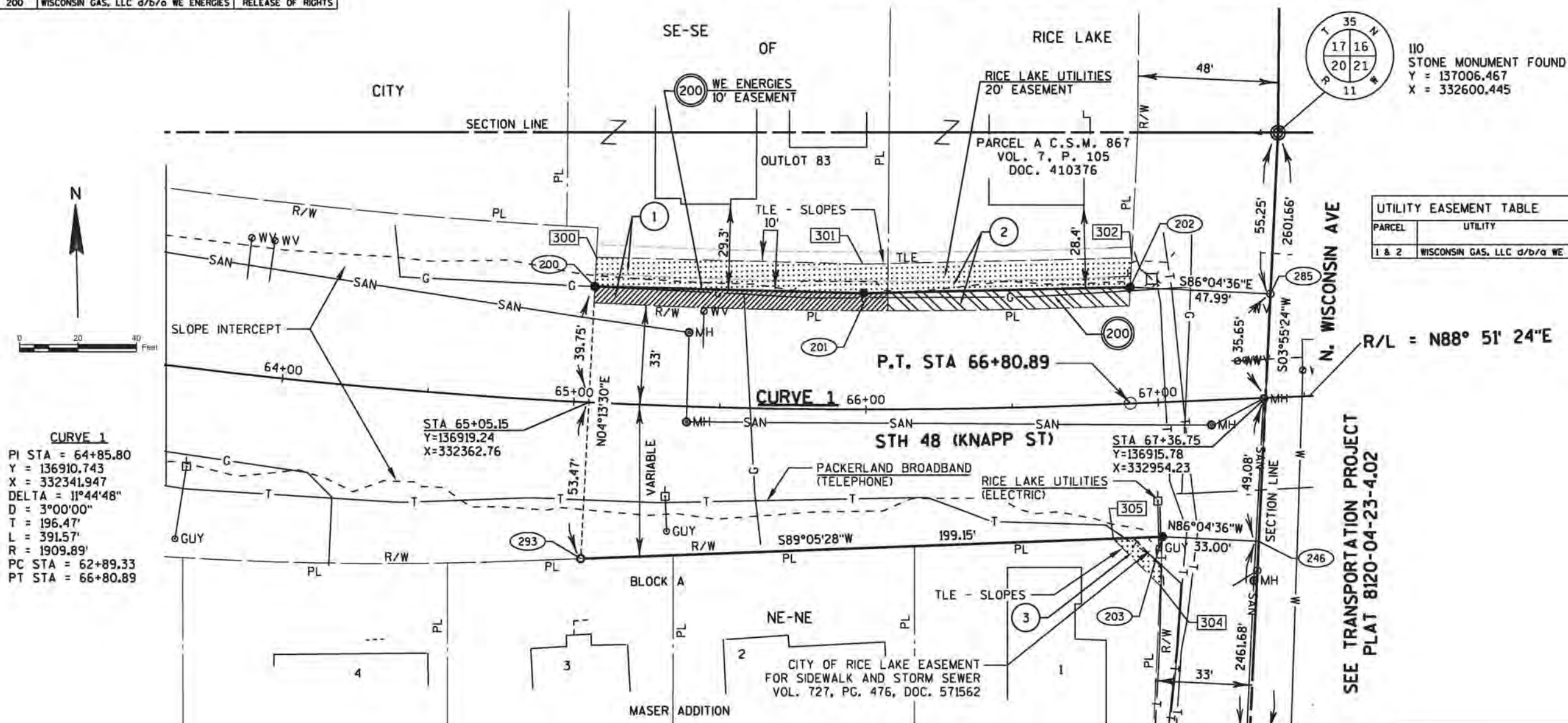
TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE CITY

HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAY OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RICE LAKE, PURSUANT TO THE PROVISIONS OF SECTION 62.22 AND 84.09 (1) OR (2), WISCONSIN STATUTES.

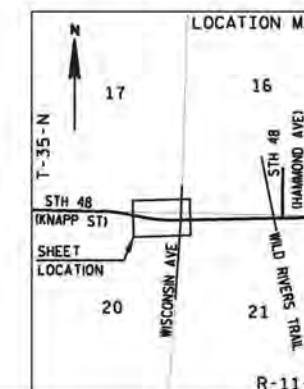
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Barron County, Wisconsin
Register of Deeds
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Vol: 0 Page: 0
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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8120-04-23-4.01
AMENDMENT NO:
SHEET 1 OF 2



UTILITY EASEMENT TABLE		
PARCEL	UTILITY	VOL. & P./DOC.
1 & 2	WISCONSIN GAS, LLC d/b/a WE ENERGIES	V. 455 P. 627/V. 457 P.236

R/W COORDINATE TABLE		
POINT	Y	X
200	136958.882	332365.684
201	136954.522	332457.492
202	136954.629	332548.784
203	136869.070	332557.945
246	136866.812	332590.867
285	136951.345	332596.665
293	136865.912	332358.816



CURVE 1
PI STA = 64+85.80
Y = 136910.743
X = 332341.947
DELTA = 11°44'48"
D = 3°00'00"
T = 196.47'
L = 391.57'
R = 1909.89'
PC STA = 62+89.33
PT STA = 66+80.89

RIGHT OF WAY COURSE TABLE		
FROM - TO	BEARING	DISTANCE
200 - 201	S87°16'52"E	91.91'
201 - 202	N89°55'60"E	91.29'

TLE STATION/OFFSET TABLE		
POINT	STATION	OFFSET
300	65+05.23	49.75' LT
301	65+99.34	49.75' LT
302	66+92.99	49.73' LT
304	66+98.07	62.70' RT
305	66+82.75	45.91' RT

R/W STATION/OFFSET TABLE		
POINT	STATION	OFFSET
200	65+05.22	39.75' LT
201	65+99.09	39.75' LT
202	66+92.09	39.75' LT
203	66+99.55	45.91' RT
246	67+32.42	48.89' RT
285	67+39.90	35.51' LT
293	65+05.06	53.47' RT

III
LOCATION ESTABLISHED
FROM TIES
Y = 134410.900
X = 332422.439

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BARRON COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RICE LAKE.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT OF WAY FOR STH-48, WISCONSIN AVE, PUTNAM AVE, NUNN AVE CORNELL AVE, AND TANTER AVE IS ESTABLISHED FROM HAMMOND'S ADDITION, MASER ADDITION, MAACK'S ADDITION, LEFEBVRE'S ADDITION, CSM 867, CSM 4142 AND CSM 1373.

I, PETER J. NELSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RICE LAKE, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8120-04-23-4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Peter J. Nelson* DATE: 5/15/17
PRINT NAME: PETER J. NELSON
REGISTRATION NUMBER: 2527

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RICE LAKE.

SIGNATURE: *Michael M. Diercks* DATE: May 19, 2017
PRINT NAME: MAYOR MICHAEL M. DIERCKS

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNER	INTEREST REQUIRED	R/W AREAS REQUIRED SQUARE FEET		HE SF	TLE SF
				NEW	EXISTING		
4		ROBIN R. SYLTE	FEE, TLE	69		69	60
6		DANIEL HOFF AND ANGELA HOFF	FEE, TLE	286		286	295
7		JEAN M. MARSH	FEE, TLE	75		75	43
8		GEOFFREY C. PEDERSEN & STEVEN W. SWOBODA	FEE, TLE	102		102	106
23		CRAIG A. LARSON	FEE	45		45	
24		CHARLES O. JUMP	FEE	51		51	
26		DEREK D. HYLAND	FEE	57		57	
27		KEVIN MULLALLY	FEE	84		84	
28		ABDULLAH S. AL-HULAIBI & AWATEF M. AL-WEHAIB	FEE	162		162	

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

TRANSPORTATION PROJECT PLAT NO: 8120-04-23-4.02 AMENDMENT NO: 1

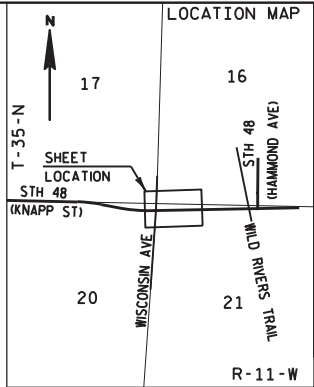
AMENDS PARCEL 24, CHANGES UTILITY PARCEL 200 TO 202 AND REMOVES UTILITY PARCEL 201.

THAT PART OF OUTLOT 49, OUTLOT 50, OUTLOT 51, OUTLOT 130 AND OUTLOT 129 OF THE CITY OF RICE LAKE ALL IN THE NW 1/4 OF THE NW 1/4 OF SECTION 21, TOWNSHIP 35 NORTH, RANGE 11 WEST, CITY OF RICE LAKE, BARRON COUNTY, WISCONSIN

RELOCATION ORDER STH 48, CITY OF RICE LAKE, KNAPP STREET (BEAR PAW AVE TO HAMMOND AVE)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RICE LAKE DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE CITY HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RICE LAKE, PURSUANT TO THE PROVISIONS OF SECTION 62.22 AND 84.09 (1) OR (2), WISCONSIN STATUTES.



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returned to the submitter.**

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PROJECT NUMBER 8120-04-23-4.02
AMENDMENT NO: 1

110
STONE MONUMENT FOUND
Y = 137006.467
X = 332600.445

112
LOCATION ESTABLISHED
FROM TIES
Y = 136956.073
X = 335233.792

SEE TRANSPORTATION PROJECT
PLAT 8120-04-23-4.01

SEE TRANSPORTATION PROJECT
PLAT 8120-04-23-4.03

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BARRON COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RICE LAKE.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT OF WAY FOR STH-48, WISCONSIN AVE, PUTNAM AVE, NUNN AVE CORNELL AVE, AND TANTER AVE IS ESTABLISHED FROM HAMMOND'S ADDITION, MASER ADDITION, MAACK'S ADDITION, LEFEBVRE'S ADDITION, CSM 867, CSM 4142 AND CSM 1373.

R/W STATION/OFFSET TABLE		
POINT	STATION	OFFSET
205	67+88.96	45.30' LT
206	68+02.25	34.13' LT
207	67+66.58	61.00' RT
208	67+70.06	41.30' RT
209	67+97.19	33.87' RT
212	69+02.76	34.20' RT
238	72+24.93	33.79' LT
241	72+32.46	43.98' RT
242	72+22.45	33.95' RT
243	69+78.77	33.19' RT
244	69+68.70	43.15' RT
247	72+33.18	42.02' LT
286	67+41.14	49.54' LT
287	67+31.60	58.03' RT
297	67+64.34	61.00' RT

R/W COORDINATE TABLE		
POINT	Y	X
205	136962.110	332645.516
206	136951.206	332659.028
207	136855.385	332625.264
208	136875.151	332628.354
209	136883.123	332655.328
212	136884.898	332760.883
238	136959.304	333081.636
241	136881.696	333090.716
242	136891.525	333080.502
243	136887.427	332836.856
244	136877.259	332826.992
247	136967.691	333089.716
286	136965.394	332597.628
287	136857.653	332590.238
297	136855.340	332623.024

UTILITY INTEREST REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
202	CTC COMMUNICATIONS, INC. A.K.A. CHIBARDUN TELEPHONE COOPERATIVE	RELEASE OF RIGHTS

TLE STATION/OFFSET TABLE		
POINT	STATION	OFFSET
303	68+00.16	33.88' RT
306	67+89.27	48.90' LT
307	68+06.92	34.12' LT
347	72+16.44	33.80' LT
348	72+33.17	50.49' LT
359	69+02.74	37.76' RT
360	68+90.69	37.68' RT
361	68+90.70	34.16' RT

UTILITY EASEMENT TABLE

PARCEL	UTILITY	VOL. & P./DOC.
27	CTC COMMUNICATIONS, INC. A.K.A. CHIBARDUN TELEPHONE COOPERATIVE	V. 835 P. 594/DOC. 614760
28	CTC COMMUNICATIONS, INC. A.K.A. CHIBARDUN TELEPHONE COOPERATIVE	V. 834 P. 140/DOC. 614096

RIGHT OF WAY COURSE TABLE

FROM - TO	BEARING	DISTANCE
205 - 206	S51°05'50"E	17.36'
238 - 247	N43°55'51"E	11.65'
241 - 242	N46°05'58"W	14.18'
243 - 244	S44°07'54"W	14.17'
212 - 209	N89°02'10"W	105.57'
209 - 208	S73°32'04"W	32.80'
208 - 207	S08°53'11"W	20.01'
207 - 297	S88°51'24"W	2.24'

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF DOCUMENT NO. 836667, FOR ADDITIONAL INFORMATION.

AECOM

I, PETER J. NIELSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RICE LAKE, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8120-04-23-4.02 AMENDMENT 1 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



SIGNATURE: *Peter J. Nielson* DATE: 10/5/17

PRINT NAME: PETER J. NIELSON

REGISTRATION NUMBER: 2527

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RICE LAKE

SIGNATURE: *Michael M. Diercks* DATE: 10/11/2017

PRINT NAME: MAYOR MICHAEL M. DIERCKS

108

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.				
PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W AREAS REQUIRED SQUARE FEET		HE SF	TLE SF
			NEW	EXISTING		
4	ROBIN R. SYLVE	FEE, TLE	69		69	60
6	DANIEL HOFF AND ANGELA HOFF	FEE, TLE	286		286	295
7	JEAN M. MARSH	FEE, TLE	75		75	43
8	GEOFFREY C. PEDERSEN & STEVEN W. SWOBODA	FEE, TLE	102		102	106
23	CRAIG A. LARSON	FEE	45		45	
24	CHARLES O. JUMP	FEE	51		50	
26	DEREK D. HYLAND	FEE	57		57	
27	KEVIN MULLALLY	FEE	84		84	
28	ABDULLAH S. AL-HULAIBI & AWATEF M. AL-WEHAIB	FEE	162		162	

TRANSPORTATION PROJECT PLAT NO: 8120-04-23-4.02

THAT PART OF OUTLOT 49, OUTLOT 50, OUTLOT 51, OUTLOT 130 AND OUTLOT 129 OF THE CITY OF RICE LAKE ALL IN THE NW 1/4 OF THE NW 1/4 OF SECTION 21, TOWNSHIP 35 NORTH, RANGE 11 WEST, CITY OF RICE LAKE, BARRON COUNTY, WISCONSIN

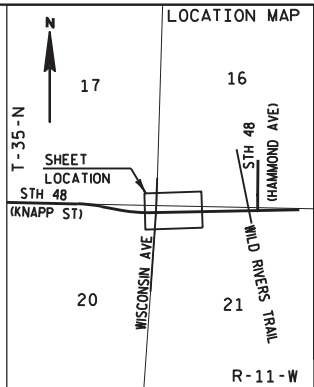
RELOCATION ORDER STH 48, CITY OF RICE LAKE, KNAPP STREET (BEAR PAW AVE TO HAMMOND AVE)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RICE LAKE DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE CITY

HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RICE LAKE, PURSUANT TO THE PROVISIONS OF SECTION 62.22 AND 84.09 (1) OR (2), WISCONSIN STATUTES.



Document Number: 836860
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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8120-04-23-4.02
AMENDMENT NO:

110
STONE MONUMENT FOUND
Y = 137006.467
X = 332600.445

112
LOCATION ESTABLISHED
FROM TIES
Y = 136956.073
X = 335233.792

SEE TRANSPORTATION PROJECT
PLAT 8120-04-23-4.01

SEE TRANSPORTATION PROJECT
PLAT 8120-04-23-4.03

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BARRON COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RICE LAKE.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT OF WAY FOR STH-48, WISCONSIN AVE, PUTNAM AVE, NUNN AVE CORNELL AVE, AND TANTIER AVE IS ESTABLISHED FROM HAMMOND'S ADDITION, MASER ADDITION, MAACK'S ADDITION, LEFEBVRE'S ADDITION, CSM 867, CSM 4142 AND CSM 1373.

R/W STATION/OFFSET TABLE		
POINT	STATION	OFFSET
205	67+88.96	45.30' LT
206	68+02.25	34.13' LT
207	67+66.58	61.00' RT
208	67+70.06	41.30' RT
209	67+97.19	33.87' RT
212	69+02.76	34.20' RT
238	72+24.93	33.79' LT
241	72+32.46	43.98' RT
242	72+22.45	33.95' RT
243	69+78.77	33.19' RT
244	69+68.70	43.15' RT
247	72+33.18	42.02' LT
286	67+41.14	49.54' LT
287	67+31.60	58.03' RT
297	67+64.34	61.00' RT

R/W COORDINATE TABLE		
POINT	Y	X
205	136962.110	332645.516
206	136951.206	332659.028
207	136855.385	332625.264
208	136875.151	332628.354
209	136883.123	332655.328
212	136884.898	332760.883
238	136959.304	333081.636
241	136881.696	333090.716
242	136891.525	333080.502
243	136887.427	332836.856
244	136877.259	332826.992
247	136967.691	333089.716
286	136965.394	332597.628
287	136857.653	332590.238
297	136855.340	332623.024

UTILITY INTEREST REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
201	RICE LAKE UTILITIES	RELEASE OF RIGHTS
202	CTC COMMUNICATIONS, INC.	RELEASE OF RIGHTS

TLE STATION/OFFSET TABLE		
POINT	STATION	OFFSET
303	68+00.16	33.88' RT
306	67+89.27	48.90' LT
307	68+06.92	34.12' LT
347	72+16.44	33.80' LT
348	72+33.17	50.49' LT
359	69+02.74	37.76' RT
360	68+90.69	37.68' RT
361	68+90.70	34.16' RT

RIGHT OF WAY COURSE TABLE

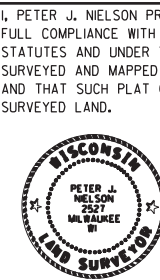
FROM - TO	BEARING	DISTANCE
205 - 206	S51°05'50"E	17.36'
238 - 247	N43°55'51"E	11.65'
241 - 242	N46°05'58"W	14.18'
243 - 244	S44°07'54"W	14.17'
212 - 209	N89°02'10"W	105.57'
209 - 208	S73°32'04"W	32.80'
208 - 207	S08°53'11"W	20.01'
207 - 297	S88°51'24"W	2.24'

UTILITY EASEMENT TABLE

PARCEL	UTILITY	VOL. & P./DOC.
27	CTC COMMUNICATIONS INC.	V. 835 P. 594/DOC. 614760
28	CTC COMMUNICATIONS INC.	V. 834 P. 140/DOC. 614096

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF DOCUMENT NO. 836667, FOR ADDITIONAL INFORMATION.

AECOM



SIGNATURE: *Peter J. Nielson* DATE: 5/30/17

PRINT NAME: PETER J. NIELSON

REGISTRATION NUMBER: 2527

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RICE LAKE

SIGNATURE: *Michael M. Diercks* DATE: 5/31/17

PRINT NAME: MAYOR MICHAEL M. DIERCKS

109

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.	INTEREST REQUIRED	R/W AREAS REQUIRED		HE SF	TLE SF
				NEW	EXISTING		
9	RESNICK TRUST		FEE, TLE	752	752	-----	1,314
11	LYNN MARIE AND MARIE ELENA SULACKOW		FEE, TLE	132	132	-----	149
12	LAURA L. CUTSFORTH		FEE, TLE	114	114	-----	104
13	CROTTEAU PROPERTIES, LLC		FEE, TLE	732	732	-----	1,251
29	JAMES E. GARGULAK & MARLENE K. GARGULAK		FEE	132	132	-----	-----
31	NICHOLAS S. JOHNSON		FEE	132	132	-----	-----

TRANSPORTATION PROJECT PLAT NO: 8120-04-23-4.03

THAT PART OF LOT 1 OF LEFEBVRE'S ADDITION, LOT 1 OF BLOCK A OF MAACK'S ADDITION, AND LOTS 1, 2, 3 AND 4 OF BLOCK 7 OF HAMMOND'S ADDITION, ALL IN THE NW 1/4 OF THE NW 1/4 OF SECTION 21, TOWNSHIP 35 NORTH, RANGE 11 WEST, CITY OF RICE LAKE, BARRON COUNTY, WISCONSIN

RELOCATION ORDER STH 48, CITY OF RICE LAKE, KNAPP STREET (BEAR PAW AVE TO HAMMOND AVE)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RICE LAKE DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE CITY HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RICE LAKE, PURSUANT TO THE PROVISIONS OF SECTION 62.22 AND 84.09 (1) OR (2), WISCONSIN STATUTES.

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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8120-04-23-4.03
AMENDMENT NO:

SEE TRANSPORTATION PROJECT
PLAT 8120-04-23-4.02

SEE TRANSPORTATION PROJECT
PLAT 8120-04-23-4.04

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2
OF DOCUMENT NO. 836667, FOR ADDITIONAL INFORMATION.

R/W STATION/OFFSET TABLE		
POINT	STATION	OFFSET
215	73+03.00	38.00' LT
216	75+49.77	38.00' LT
217	72+98.45	36.19' RT
241	72+32.46	43.98' RT
247	72+33.18	42.02' LT
248	72+99.18	41.81' LT
249	75+63.46	51.73' LT
250	75+63.06	43.51' RT
251	75+55.06	35.53' RT
280	72+99.18	48.00' LT

R/W COORDINATE TABLE		
POINT	Y	X
215	136965.068	333159.608
216	136969.992	333406.325
217	136890.804	333156.535
241	136881.696	333090.716
247	136967.691	333089.716
248	136968.805	333155.707
249	136983.996	333419.740
250	136888.759	333421.236
251	136896.577	333413.080
280	136997.115	333089.113

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BARRON COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

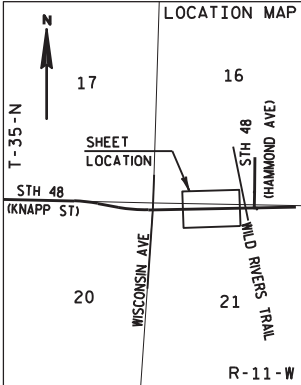
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RICE LAKE.

NO COMPENSABLE UTILITIES ON THIS SHEET.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT OF WAY FOR STH-48, WISCONSIN AVE, PUTNAM AVE, NUNN, AVE CORNELL AVE, AND TANTIER AVE IS ESTABLISHED FROM HAMMOND'S ADDITION, MASER ADDITION, MAACK'S ADDITION, LEFEBVRE'S ADDITION, CSM 867, CSM 4142 AND CSM 1373.

TLE STATION/OFFSET TABLE		
POINT	STATION	OFFSET
309	72+99.18	48.00' LT
310	74+31.31	48.00' LT
312	75+50.73	48.00' LT
313	73+17.50	36.14' RT
349	72+98.46	44.00' RT
350	73+17.52	43.95' RT
351	75+46.59	35.56' RT
352	75+63.06	51.99' RT

RIGHT OF WAY COURSE TABLE		
FROM - TO	BEARING	DISTANCE
248 - 215	S46°13'54"E	5.40'
216 - 249	N43°46'06"E	19.39'
250 - 251	N46°12'43"W	11.30'



I, PETER J. NIELSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RICE LAKE, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8120-04-23-4.03 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Peter J. Nielson* DATE: 5/30/17
PRINT NAME: PETER J. NIELSON
REGISTRATION NUMBER: 2527
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RICE LAKE
SIGNATURE: *Michael M. Diercks* DATE: 5/31/17
PRINT NAME: MAYOR MICHAEL M. DIERCKS

110

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W AREAS REQUIRED SQUARE FEET			HE SF	TLE SF
			NEW	EXISTING	TOTAL		
14	BLAKE E. MARSH	HE, TLE	---	---	---	541	978
16	MB PROPERTIES, LLC	HE, TLE	---	---	---	833	1,704
17	WISCONSIN DEPT. OF NATURAL RESOURCES	HE, TLE	---	---	---	2,045	19,368
32	DANIEL E. OSTERBAUER & STACY L. OSTERBAUER	FEE	112	---	112	-----	-----
33	MARY ANN WIRSINSKI, TRUSTEE OF THE WIRSINSKI FAMILY TRUST DATED JUNE 7TH, 2011	FEE	236	---	236	-----	-----

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

TRANSPORTATION PROJECT PLAT NO: 8120-04-23-4.04

THAT PART OF OUTLOT 27, 28, AND 29 OF THE CITY OF RICE LAKE, C.S.M. 1373, AND PARCEL A AND PARCEL B OF C.S.M. 3130 BEING PART OF LOTS 1 AND 2 OF BLOCK 6 OF HAMMOND'S ADDITION, ALL IN THE NW 1/4 OF THE NW 1/4 OF SECTION 21, AND THE SE 1/4 OF THE SE 1/4 OF SECTION 16, TOWNSHIP 35 NORTH, RANGE 11 WEST, CITY OF RICE LAKE, BARRON COUNTY, WISCONSIN

RELOCATION ORDER STH 48, CITY OF RICE LAKE, KNAPP STREET (BEAR PAW AVE TO HAMMOND AVE)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RICE LAKE DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE CITY HEREBY ORDERS THAT:

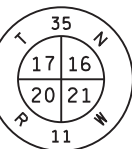
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RICE LAKE, PURSUANT TO THE PROVISIONS OF SECTION 62.22 AND 84.09 (1) OR (2), WISCONSIN STATUTES.

Document Number: 836862
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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8120-04-23-4.04
AMENDMENT NO:

RIGHT OF WAY COURSE TABLE		
FROM - TO	BEARING	DISTANCE
279 - 259	N69°06'52"E	42.54'
259 - 299	S11°34'17"E	16.32'
299 - 290	S11°34'17"E	8.29'
295 - 260	S11°29'07"E	12.20'
260 - 261	S89°41'53"W	54.02'
261 - 262	N85°50'49"W	102.94'
264 - 265	S43°43'47"W	13.44'
220 - 256	S57°37'24"E	9.11'
257 - 258	N88°51'24"E	42.61'
258 - 279	N69°06'52"E	16.33'

110
STONE MONUMENT FOUND
Y = 137006.467
X = 332600.445



SEE TRANSPORTATION PROJECT
PLAT 8120-04-23-4.03

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF DOCUMENT NO. 836667, FOR ADDITIONAL INFORMATION.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BARRON COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

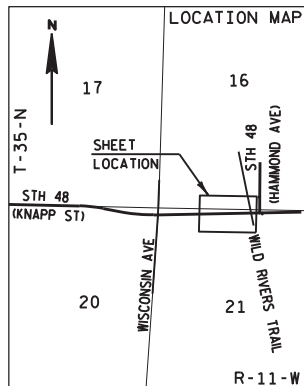
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RICE LAKE.

NO COMPENSABLE UTILITIES ON THIS SHEET.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT OF WAY FOR STH-48, WISCONSIN AVE, PUTNAM AVE, NUNN AVE CORNELL AVE, AND TANTER AVE IS ESTABLISHED FROM HAMMOND'S ADDITION, MASER ADDITION, MAACK'S ADDITION, LEFEBVRE'S ADDITION, CSM 867, CSM 4142 AND CSM 1373.

R/W COORDINATE TABLE		
POINT	Y	X
220	136976.391	333474.897
249	136983.996	333419.740
250	136888.759	333421.236
256	136971.514	333482.590
257	136976.768	333745.886
258	136977.618	333788.485
259	136998.606	333843.489
260	136896.539	333864.616
261	136896.823	333810.595
262	136904.278	333707.926
264	136899.958	333496.530
265	136890.244	333487.237
279	136983.440	333803.742
290	136974.499	333848.425
295	136908.494	333862.186
299	136982.616	333846.763

PARCEL A
C.S.M. 3130
VOL. 22, P. 35
DOC. 546617



AECOM

I, PETER J. NIELSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RICE LAKE, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8120-04-23-4.04 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Peter J. Nielson* DATE: 5/30/17

PRINT NAME: PETER J. NIELSON
REGISTRATION NUMBER: 2527

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RICE LAKE

SIGNATURE: *Mayor Michael M. Diercks* DATE: 5/31/17
PRINT NAME: MAYOR MICHAEL M. DIERCKS



NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BARRON COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RICE LAKE.

NO COMPENSABLE UTILITIES ON THIS SHEET.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT OF WAY FOR STH-48, WISCONSIN AVE, PUTNAM AVE, NUNN, AVE CORNELL AVE, AND TAINTER AVE IS ESTABLISHED FROM HAMMOND'S ADDITION, MASER ADDITION, MAAK'S ADDITION, LEFEBVRE'S ADDITION, CSM 867, CSM 4142 AND CSM 1373.

TRANSPORTATION PROJECT PLAT NO: 8120-04-23-4.05 AMENDMENT NO: 1

AMENDS RIGHT OF WAY POINT NUMBERS, R/W STATION/OFFSET TABLE, R/W COORDINATE TABLE AND RIGHT OF WAY COURSE TABLE.

THAT PART OF OUTLOT 26, LOCATED IN THE SW 1/4 OF THE SW 1/4 AND PART OF LOTS 15 AND 16 OF BLOCK 1 OF HAMMOND AND CRAITE ADDITION, LOCATED IN THE SE 1/4 OF THE SW 1/4 IN SECTION 16 AND PART OF LOT 1 OF CSM 4142 BEING PART LOTS 1, 2, AND 3 OF THE FIRST ADDITION TO THE CITY OF RICE LAKE, LOCATED IN THE NW 1/4 OF THE NW 1/4 AND THE NE 1/4 OF THE NW 1/4 OF SECTION 21, ALL IN TOWNSHIP 35 NORTH, RANGE 11 WEST, CITY OF RICE LAKE, BARRON COUNTY, WISCONSIN.

RELOCATION ORDER STH 48, CITY OF RICE LAKE, KNAPP STREET (BEAR PAW AVE TO HAMMOND AVE)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RICE LAKE DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE CITY

HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RICE LAKE, PURSUANT TO THE PROVISIONS OF SECTION 62.22 AND 84.09 (1) OR (2), WISCONSIN STATUTES.

Document Number: 840614
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PROJECT NUMBER 8120-04-23-4.05
AMENDMENT NO: 1

TLE STATION/OFFSET TABLE		
POINT	STATION	OFFSET
326	79+72.60	138.42' LT
327	80+23.33	105.00' LT
328	80+28.82	113.33' LT
329	81+06.32	160.89' LT
330	81+05.03	120.22' LT
331	80+99.65	120.39' LT
332	80+99.30	109.46' LT
333	81+09.12	70.29' LT
334	81+21.80	57.25' LT
335	81+69.22	33.11' LT
336	82+09.60	47.75' RT
337	81+78.00	47.72' RT
338	81+78.00	54.62' RT
339	81+13.90	54.62' RT
340	81+13.90	49.62' RT
341	80+36.50	49.62' RT

R/W STATION/OFFSET TABLE		
POINT	STATION	OFFSET
225	80+94.40	104.32' LT
226	81+00.79	78.87' LT
227	81+42.21	36.25' LT
228	81+66.09	33.11' LT
260	80+06.50	44.58' RT
268	79+75.10	124.80' LT
269	80+28.12	89.88' LT
270	82+21.64	59.76' RT
271	82+07.51	45.65' RT
272	81+33.66	45.95' RT
273	81+28.06	47.62' RT
274	81+13.90	47.62' RT
275	81+02.23	44.62' RT
276	80+88.08	44.62' RT
277	82+11.56	32.75' RT
278	82+21.60	42.77' RT
290	79+91.87	33.69' LT
294	81+46.01	35.75' LT
295	80+04.31	32.58' RT
296	80+36.50	44.61' RT
298	80+36.22	207.42' RT
299	79+90.37	41.83' LT

R/W COORDINATE TABLE		
POINT	Y	X
225	137047.163	333949.527
226	137021.851	333956.415
227	136980.061	333998.677
228	136977.395	334022.621
260	136896.539	333864.616
268	137065.256	333829.842
269	137031.405	333883.542
270	136885.654	334080.008
271	136899.477	334065.598
272	136897.710	333991.774
273	136895.927	333986.208
274	136895.644	333972.051
275	136898.411	333960.323
276	136898.129	333946.174
277	136912.460	334069.398
278	136902.644	334079.631
290	136974.499	333848.425
294	136979.636	334002.496
295	136908.494	333862.186
296	136897.113	333894.610
298	136734.323	333897.576
299	136982.616	333846.763

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W AREAS REQUIRED SQUARE FEET			HE SF	TLE SF
			NEW	EXISTING	TOTAL		
19	CITY OF RICE LAKE	FEE, TLE	3,092		3,092	----	683
21	JON E. GARGULAK	FEE, TLE	99		99	----	934
22	CONVENIENCE STORE INVESTMENTS, LLP	HE, TLE	-----	-----	-----	151	963

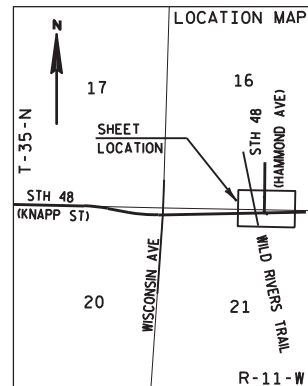
OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.

FIRST ADDITION TO THE CITY OF RICE LAKE

BLOCK 6

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF DOCUMENT NO. 836667, FOR ADDITIONAL INFORMATION.

NO UTILITY EASEMENTS



AECOM

I, PETER J. NIELSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RICE LAKE, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8120-04-23-4.05 AMENDMENT 1 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Peter J. Nielson* DATE: 10/5/17
PRINT NAME: PETER J. NIELSON
REGISTRATION NUMBER: 2527

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RICE LAKE

SIGNATURE: *Michael M. Diercks* DATE: 10/11/2017
PRINT NAME: MAYOR MICHAEL M. DIERCKS

112

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BARRON COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RICE LAKE.

NO COMPENSABLE UTILITIES ON THIS SHEET.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT OF WAY FOR STH-48, WISCONSIN AVE, PUTNAM AVE, NUNN, AVE CORNELL AVE, AND TANTIER AVE IS ESTABLISHED FROM HAMMOND'S ADDITION, MASER ADDITION, MAACK'S ADDITION, LEFEBVRE'S ADDITION, CSM 867, CSM 4142 AND CSM 1373.

TRANSPORTATION PROJECT PLAT NO: 8120-04-23-4.05

THAT PART OF OUTLOT 26, LOCATED IN THE SW 1/4 OF THE SW 1/4 AND PART OF LOTS 15 AND 16 OF BLOCK 1 OF HAMMOND AND CRAITE ADDITION, LOCATED IN THE SE 1/4 OF THE SW 1/4 IN SECTION 16 AND PART OF LOT 1 OF CSM 4142 BEING PART LOTS 1, 2, AND 3 OF THE FIRST ADDITION TO THE CITY OF RICE LAKE, LOCATED IN THE NW 1/4 OF THE NW 1/4 AND THE NE 1/4 OF THE NW 1/4 OF SECTION 21, ALL IN TOWNSHIP 35 NORTH, RANGE 11 WEST, CITY OF RICE LAKE, BARRON COUNTY, WISCONSIN.

RELOCATION ORDER STH 48, CITY OF RICE LAKE, KNAPP STREET (BEAR PAW AVE TO HAMMOND AVE)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RICE LAKE DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE CITY HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RICE LAKE, PURSUANT TO THE PROVISIONS OF SECTION 62.22 AND 84.09 (1) OR (2), WISCONSIN STATUTES.

Document Number: 836863
MARGO KATTERHAGEN
Barron County, Wisconsin
Register of Deeds
Recorded On:
05/31/2017 11:24:42 AM
Number of Pages: 1
Vol: 0Page: 0
SUBMITTER: WI DOT
**The above recording information
verifies that this document has
been electronically recorded and
returned to the submitter.**

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8120-04-23-4.05
AMENDMENT NO:

SEE TRANSPORTATION PROJECT
PLAT 8120-04-23-4.04

EASEMENTS 1 AND 2 ARE PERPETUAL EASEMENTS IN GROSS FOR GOVERNMENT PURPOSES AS THE CITY OF RICE LAKE SEES FIT, INCLUDING, BUT NOT LIMITED TO, USE AS A STREET OR HIGHWAY RIGHT OF WAY, RECREATIONAL TRAIL, OR UTILITY PURPOSES. VOLUME 977, PAGE 122, DOCUMENT 658126.

FIRST ADDITION TO THE CITY OF RICE LAKE
BLOCK 6

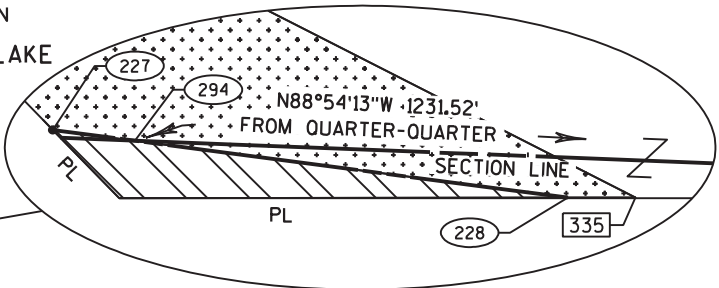
REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2
OF DOCUMENT NO. 836667, FOR ADDITIONAL INFORMATION.

TLE STATION/OFFSET TABLE		
POINT	STATION	OFFSET
326	79+72.60	138.42' LT
327	80+23.33	105.00' LT
328	80+28.82	113.33' LT
329	81+06.32	160.89' LT
330	81+05.03	120.22' LT
331	80+99.65	120.39' LT
332	80+99.30	109.46' LT
333	81+09.12	70.29' LT
334	81+21.80	57.25' LT
335	81+69.22	33.11' LT
336	82+09.60	47.75' RT
337	81+78.00	47.72' RT
338	81+78.00	54.62' RT
339	81+13.90	54.62' RT
340	81+13.90	49.62' RT
341	80+36.50	49.62' RT

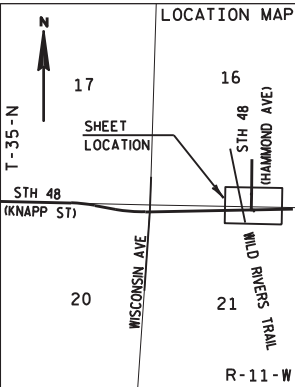
R/W STATION/OFFSET TABLE		
POINT	STATION	OFFSET
226	81+00.79	78.87' LT
227	81+42.21	36.25' LT
228	81+66.09	33.11' LT
268	79+75.10	124.80' LT
269	80+28.12	89.88' LT
270	82+21.64	59.76' RT
271	82+07.51	45.65' RT
272	81+33.66	45.95' RT
273	81+28.06	47.62' RT
274	81+13.90	47.62' RT
275	81+02.23	44.62' RT
276	80+88.08	44.62' RT
277	82+11.56	32.75' RT
278	82+21.60	42.77' RT
290	79+91.87	33.69' LT
294	81+46.01	35.75' LT
295	80+04.31	32.58' RT
296	80+36.50	44.61' RT
298	80+36.22	207.42' RT

R/W COORDINATE TABLE		
POINT	Y	X
226	137021.851	333956.415
227	136980.061	333998.677
228	136977.395	334022.621
268	137065.256	333829.842
269	137031.405	333883.542
270	136885.654	334080.008
271	136899.477	334065.598
272	136897.710	333991.774
273	136895.927	333986.208
274	136895.644	333972.051
275	136898.411	333960.323
276	136898.129	333946.174
277	136912.460	334069.398
278	136902.644	334079.631
290	136974.499	333848.425
294	136979.636	334002.496
295	136908.494	333862.186
296	136897.113	333894.610
298	136734.323	333897.576

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.				
		INTEREST REQUIRED	R/W AREAS REQUIRED SQUARE FEET			TLE SF
PARCEL NUMBER	OWNER		NEW	EXISTING	TOTAL	
19	CITY OF RICE LAKE	FEE, TLE	3,092		3,092	683
21	JON E. GARGULAK	FEE, TLE	99		99	934
22	CONVENIENCE STORE INVESTMENTS, LLP	HE, TLE			151	963



RIGHT OF WAY COURSE TABLE		
FROM - TO	BEARING	DISTANCE
291 - 268	N11°34'17"W	84.35'
268 - 269	S57°46'23"E	63.48'
225 - 226	S15°13'21"E	26.23'
226 - 227	S45°19'19"E	59.43'
227 - 294	S83°38'47"E	3.84'
294 - 228	S83°38'47"E	20.25'
277 - 278	S46°11'25"E	14.18'
278 - 270	S01°16'09"E	16.99'
270 - 271	N46°11'25"W	20.00'
271 - 272	S88°36'32"W	73.82'
272 - 273	S72°14'10"W	5.84'
273 - 274	S88°51'24"W	14.16'
274 - 275	N76°43'35"W	12.05'
275 - 276	S88°51'24"W	14.15'
276 - 296	S88°52'16"W	51.57'
296 - 298	S01°02'37"E	162.82'
298 - 292	N11°29'07"W	165.53'
292 - 295	N11°29'07"W	12.20'
290 - 291	N11°43'17"W	8.29'

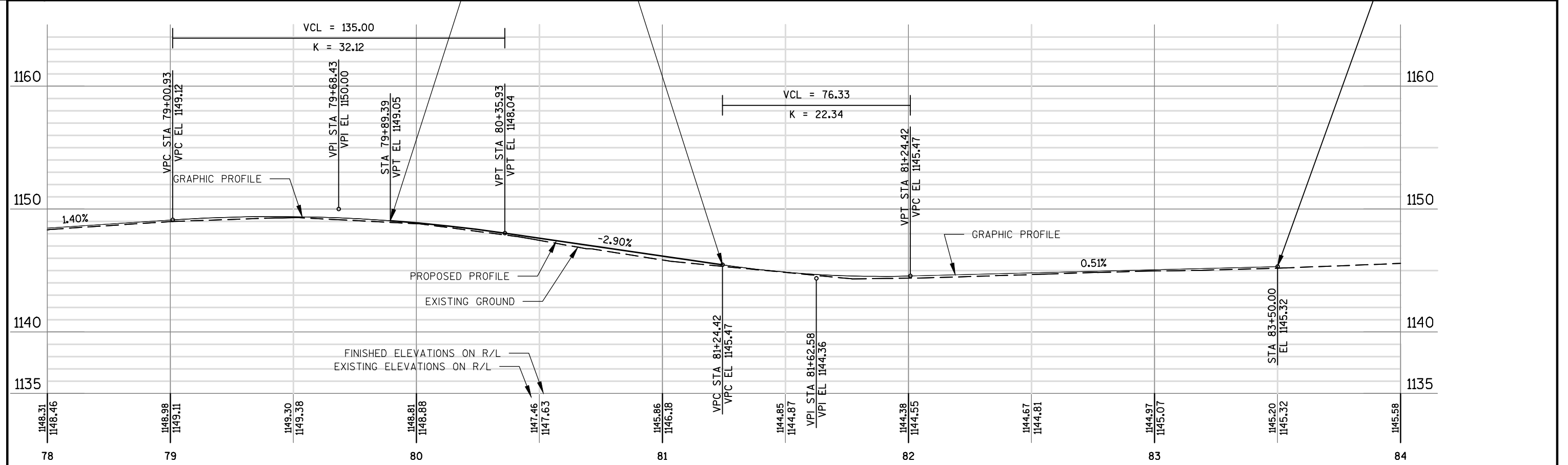
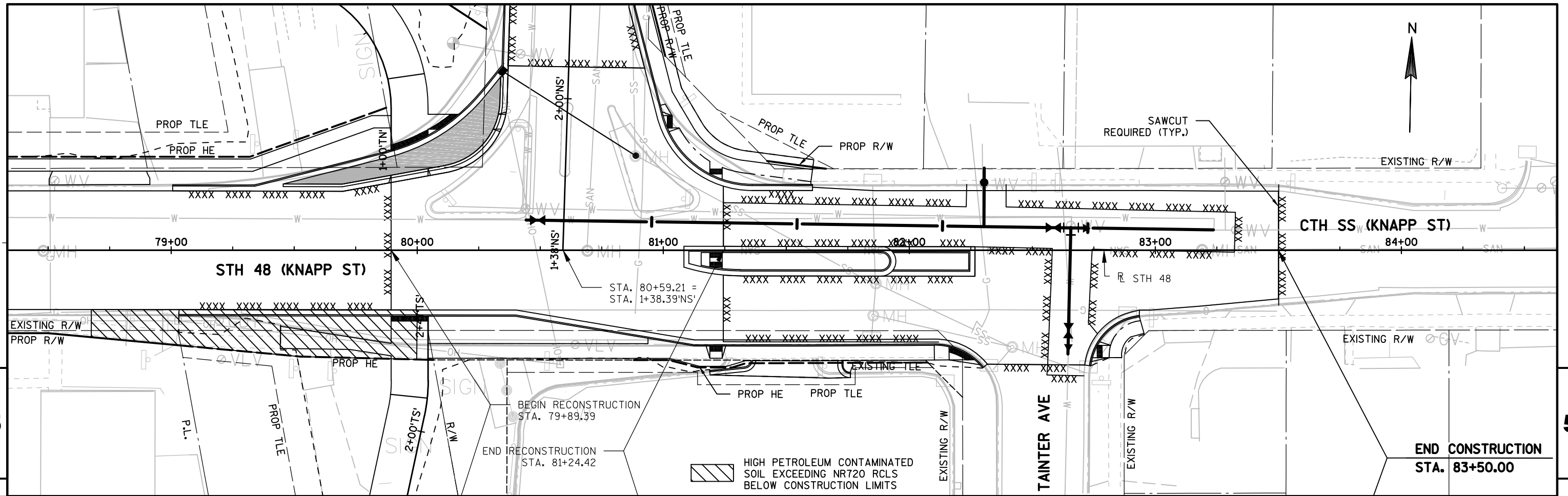


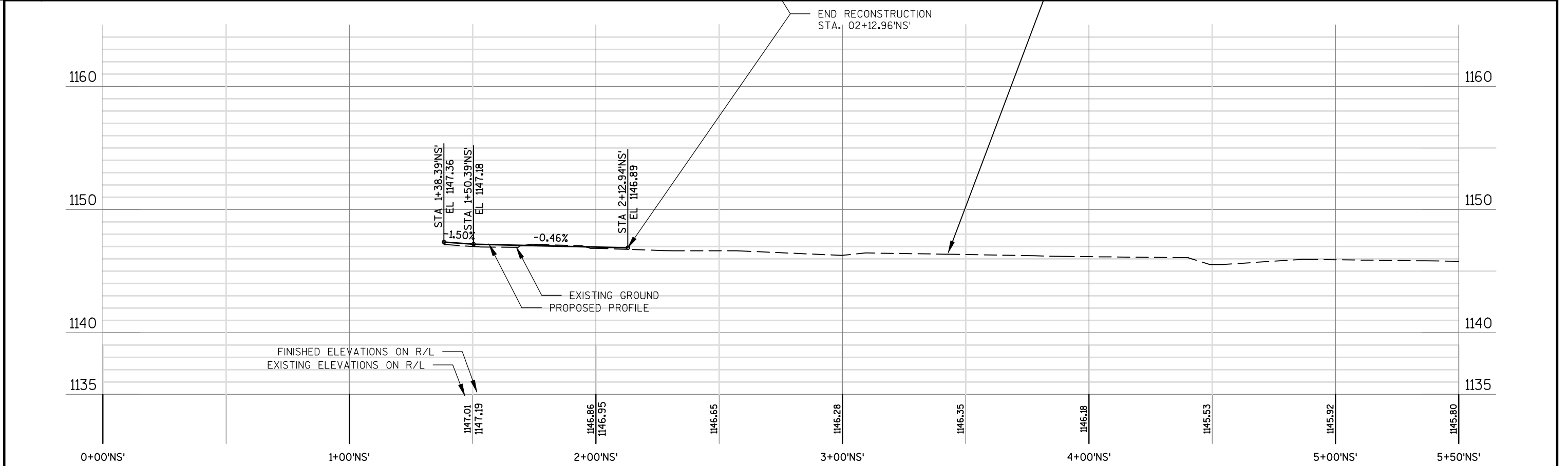
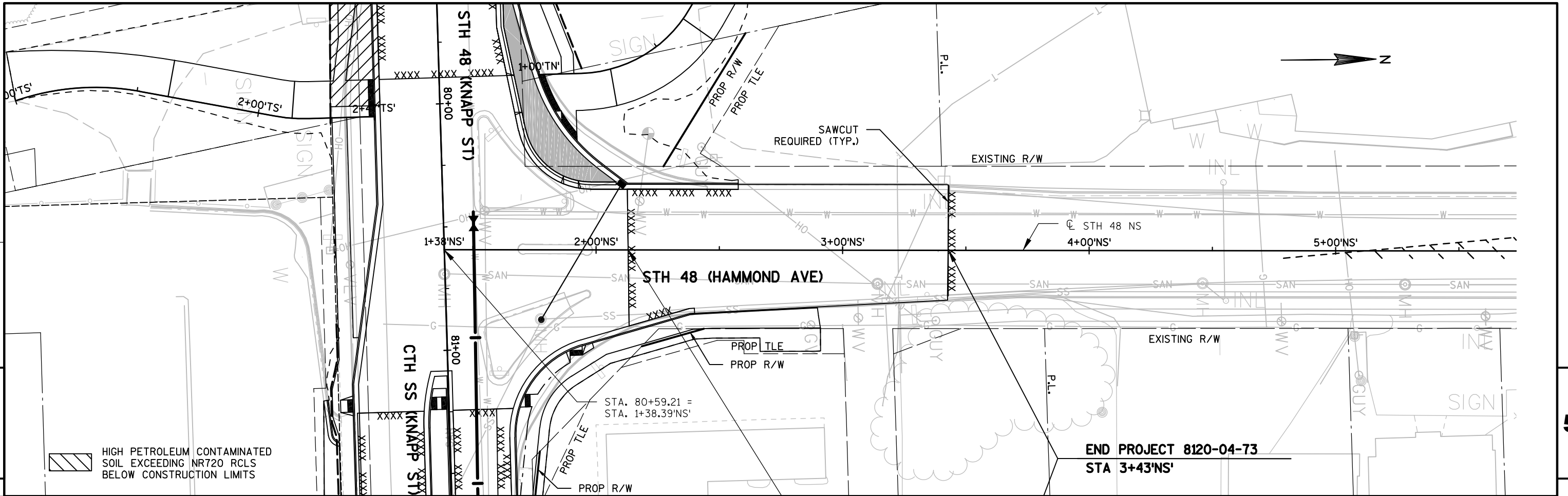
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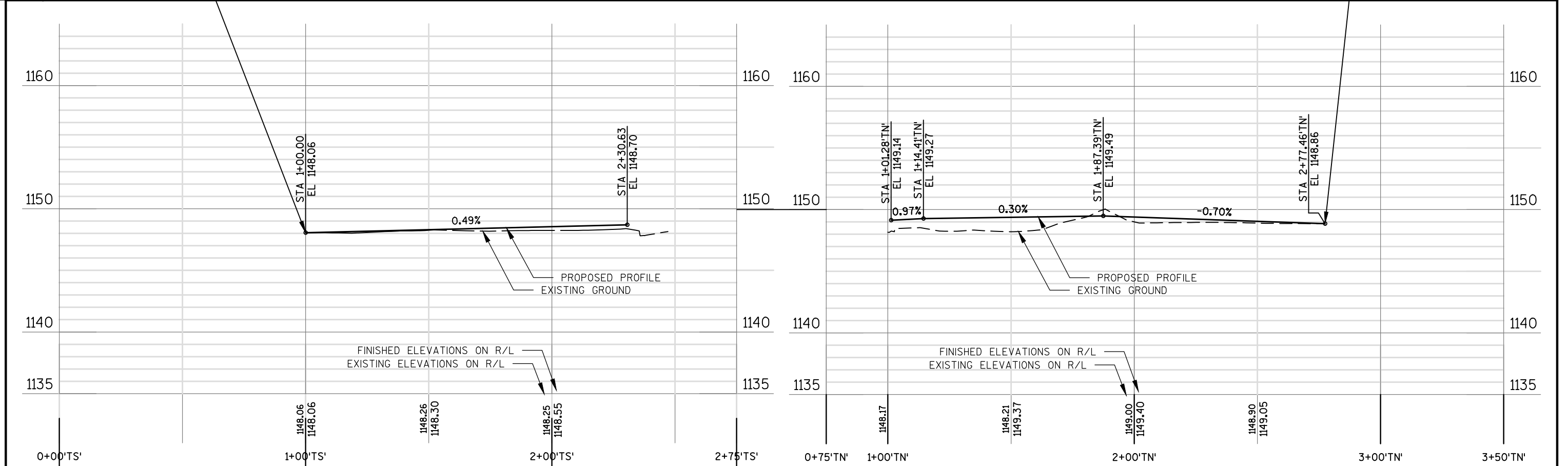
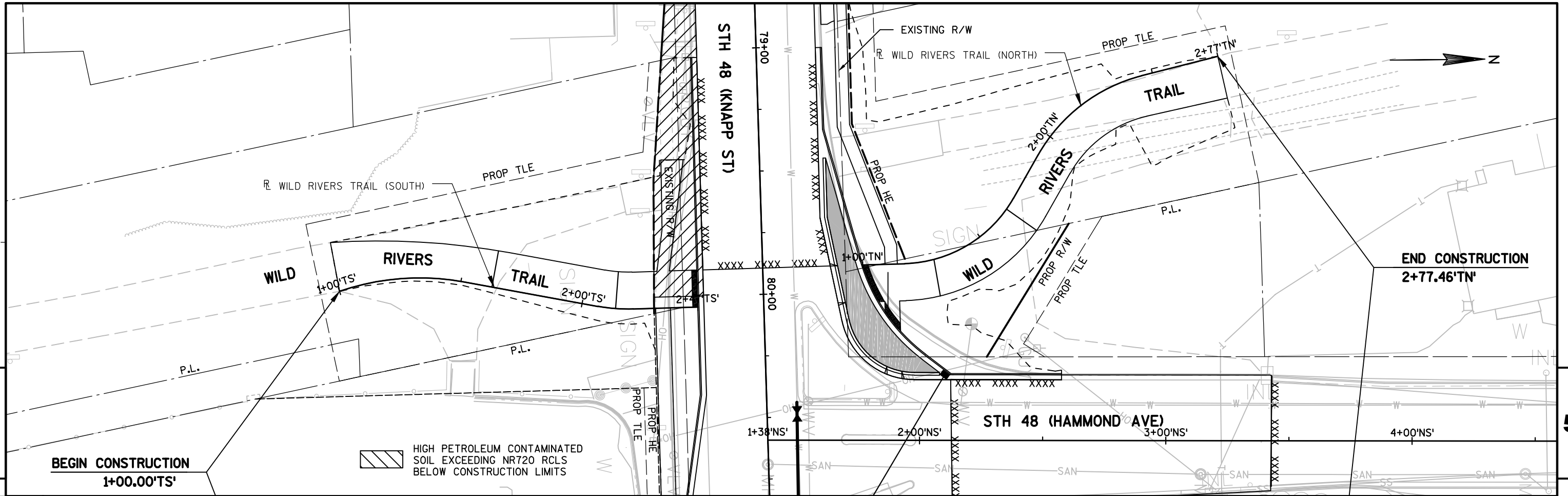
I, PETER J. NIELSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RICE LAKE, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8120-04-23-4.05 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Peter J. Nielson* DATE: 5/30/17
PRINT NAME: PETER J. NIELSON
REGISTRATION NUMBER: 2527
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RICE LAKE
SIGNATURE: *Michael M. Diercks* DATE: 5/31/17
PRINT NAME: MAYOR MICHAEL M. DIERCKS

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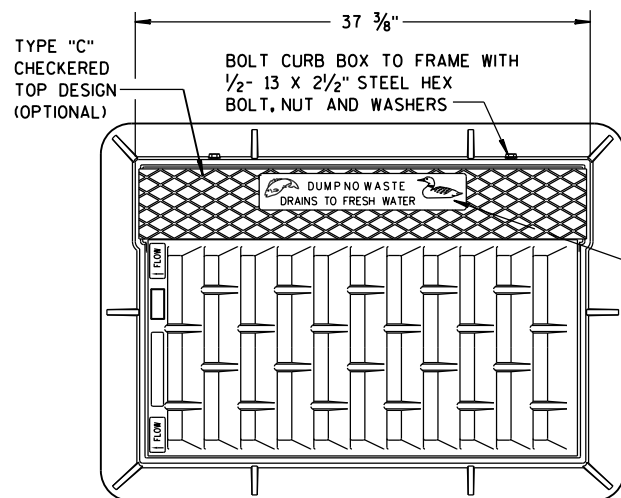


Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D18-01	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08D19-01	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-14A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-14B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E05-06	TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E08-08B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-08D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
11B01-05	CONCRETE CORRUGATED MEDIAN
11B02-02	CONCRETE MEDIAN NOSE
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-14A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-14B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-14C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C15-06A	CONCRETE BASE
13C15-06B	CONCRETE BASE
13C18-05A	CONCRETE PAVEMENT JOINTING
13C18-05B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-05C	CONCRETE PAVEMENT JOINT TYPES
13C18-05D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C08-18B	PAVEMENT MARKING (TURN LANES)
15C11-06	FLEXIBLE TUBULAR MARKER POST
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-04	MEDIAN ISLAND MARKING
15C27-02B	PAVEMENT MARKING (ISLANDS)
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-01A	PAVEMENT MARKING (INTERSECTIONS)
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

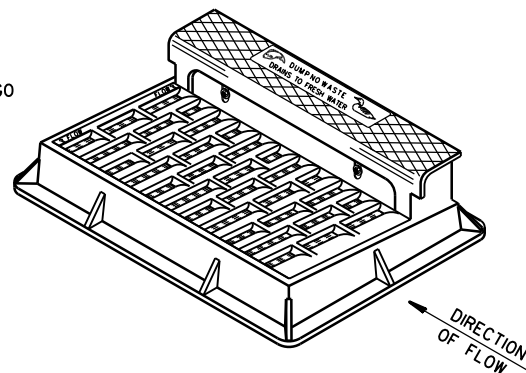
Standard Detail Drawing List

15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

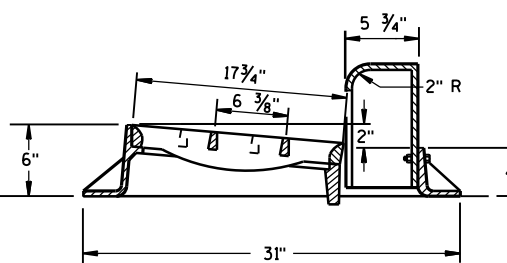
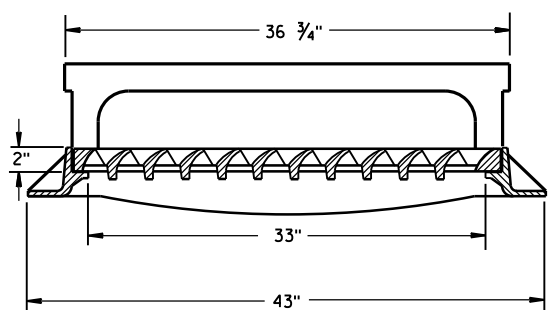
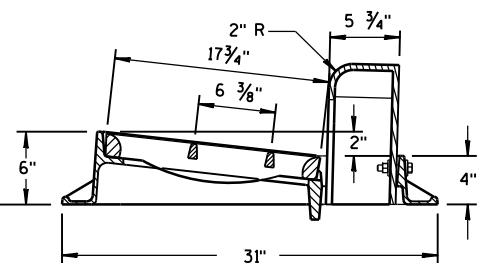
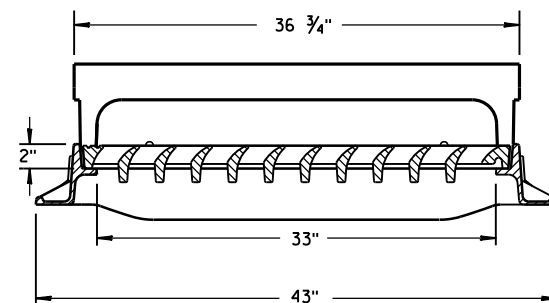
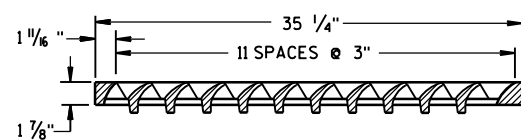


SEE LOGO
DETAIL

NOTE:
GRATE IS REVERSIBLE.

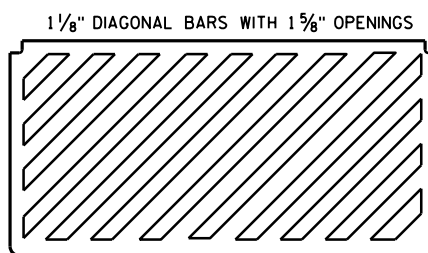


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

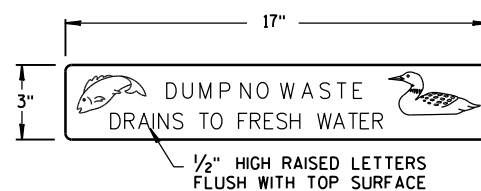
NOTE: EITHER CASTING IS ACCEPTABLE



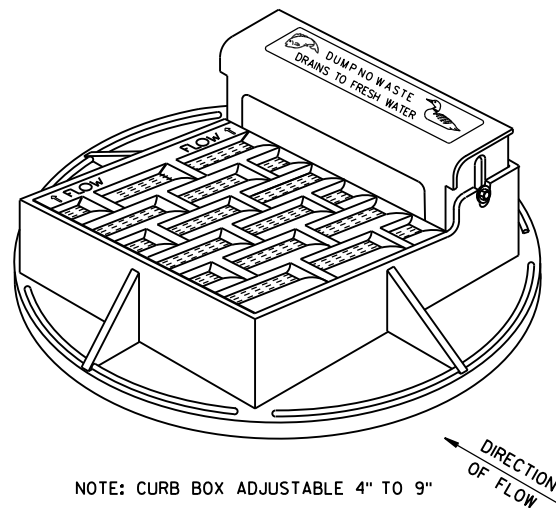
**SPECIAL GRATE FOR
TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

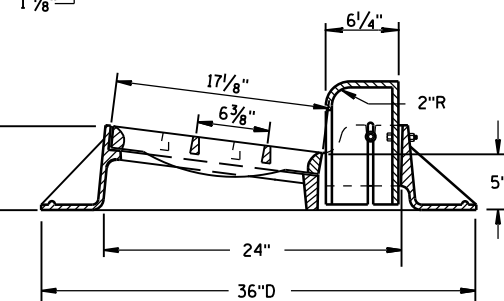
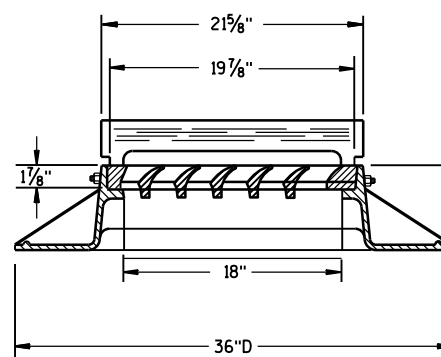
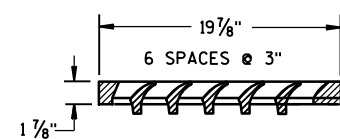
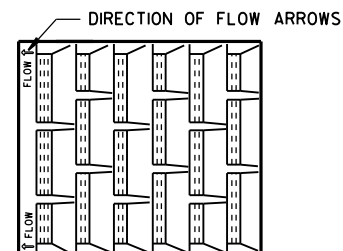


LOGO DETAIL

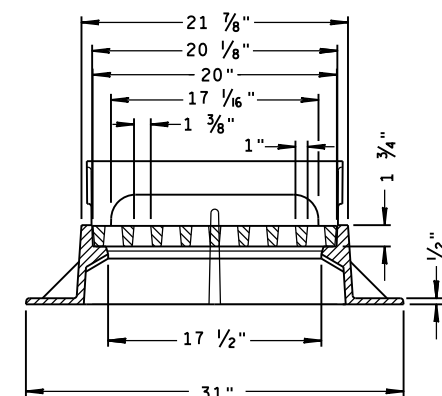
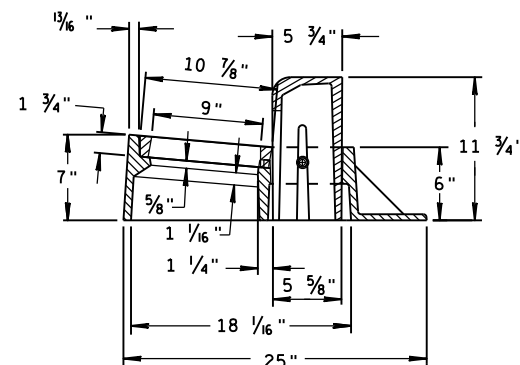


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

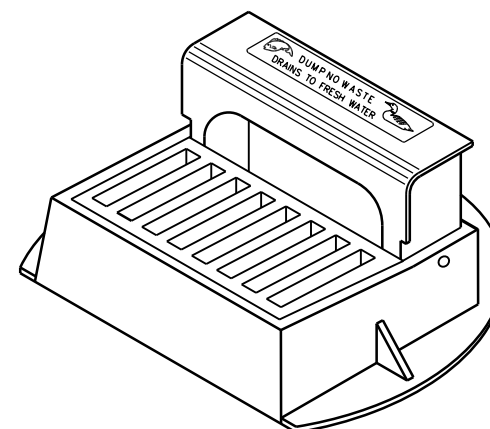
NOTE:
GRATE IS REVERSIBLE.



TYPE "A"



TYPE "Z"



**INLET COVERS
TYPE A, H, A-S, H-S & Z**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED

11-27-13

DATE

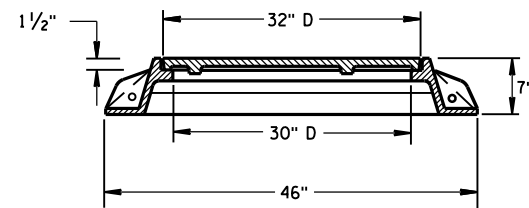
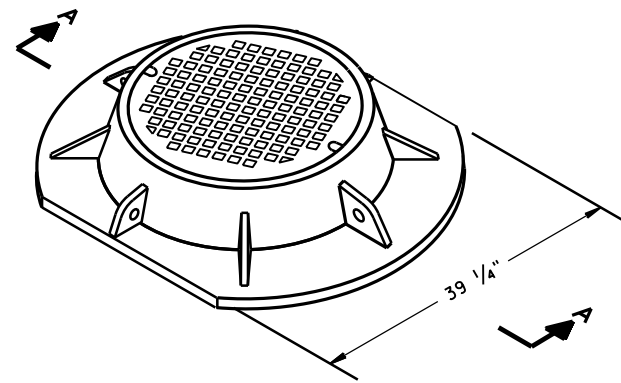
FHWA

/S/ Jerry H. Zogg

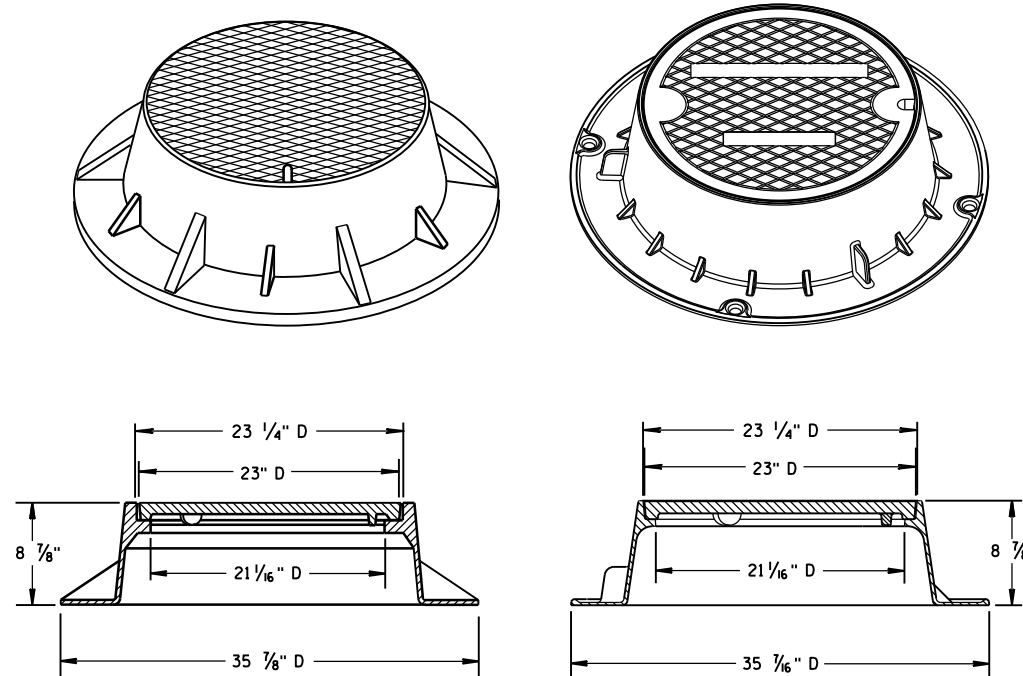
ROADWAY STANDARDS 119

ENGINEER

ENT

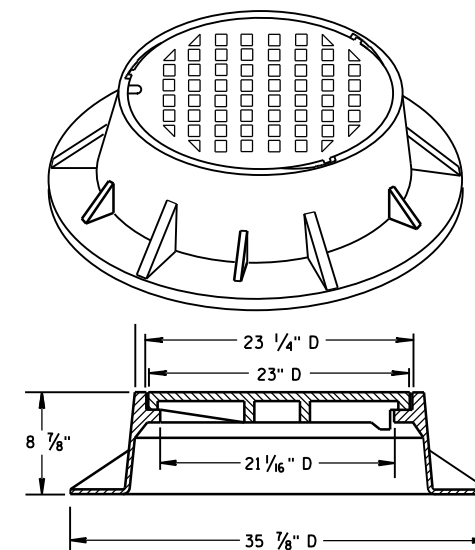
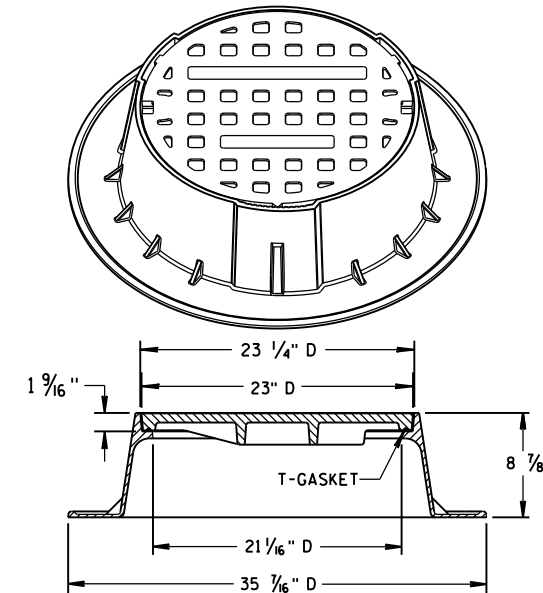


SECTION A-A
TYPE "K"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

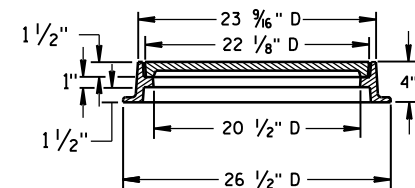
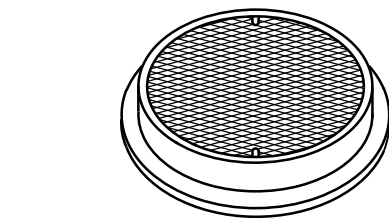


TYPE "J" SPECIAL

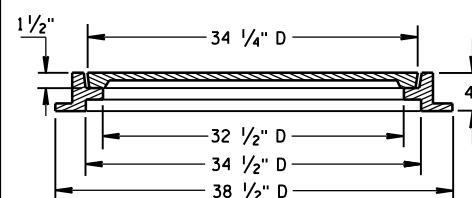
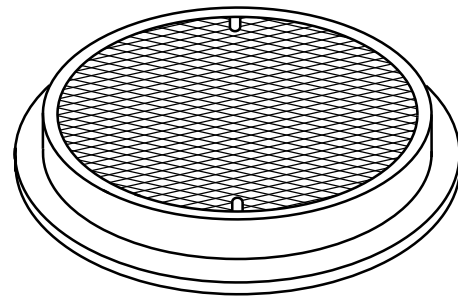
TYPE "B" NON-ROCKING SELF-SEAL LID

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

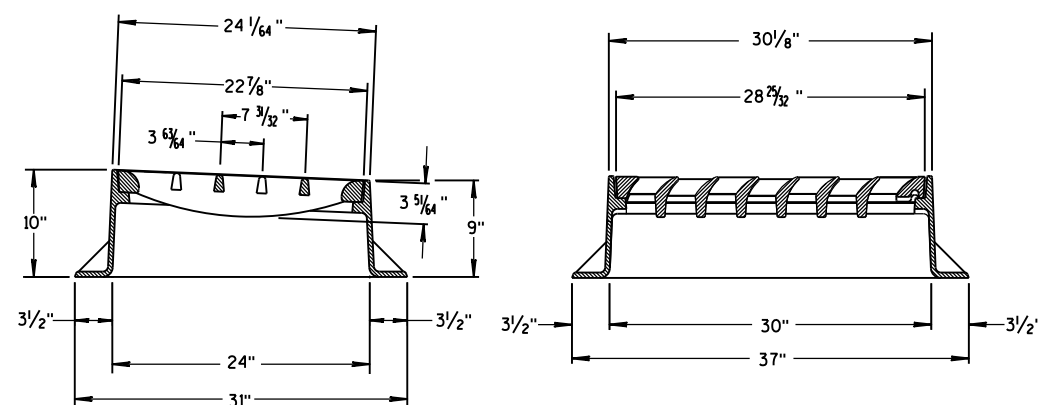
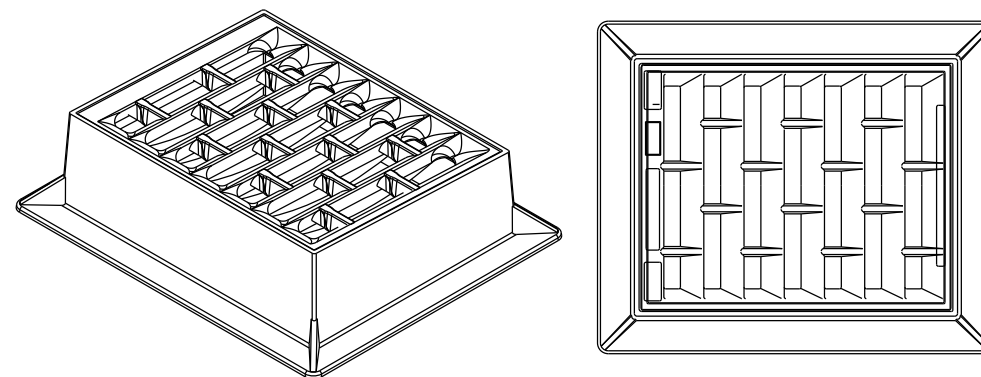
NOTE: EITHER CASTING IS ACCEPTABLE



TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K,
J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/27/2013

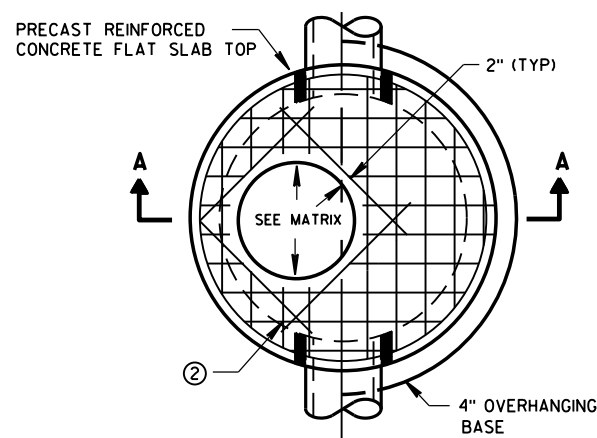
DATE

FHWA

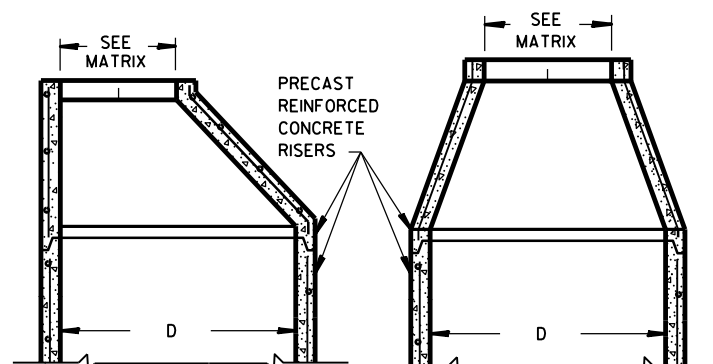
/S/ Jerry H. Zogg

ROADWAY STANDARDS 120

ENGINEER

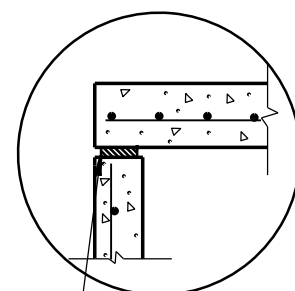


PLAN VIEW CIRCULAR OPENING

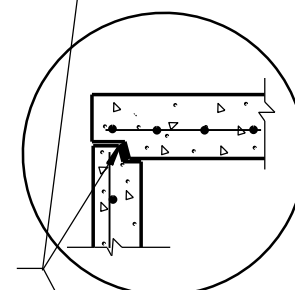


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

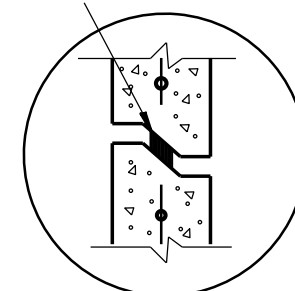
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



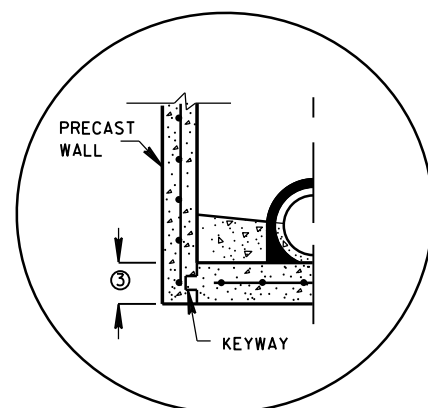
TOP WITH TONGUE AND GROOVE JOINT



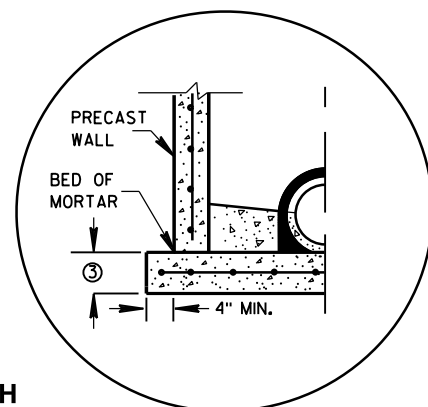
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

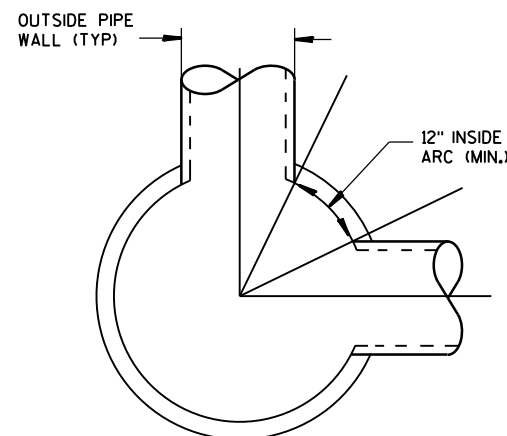


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

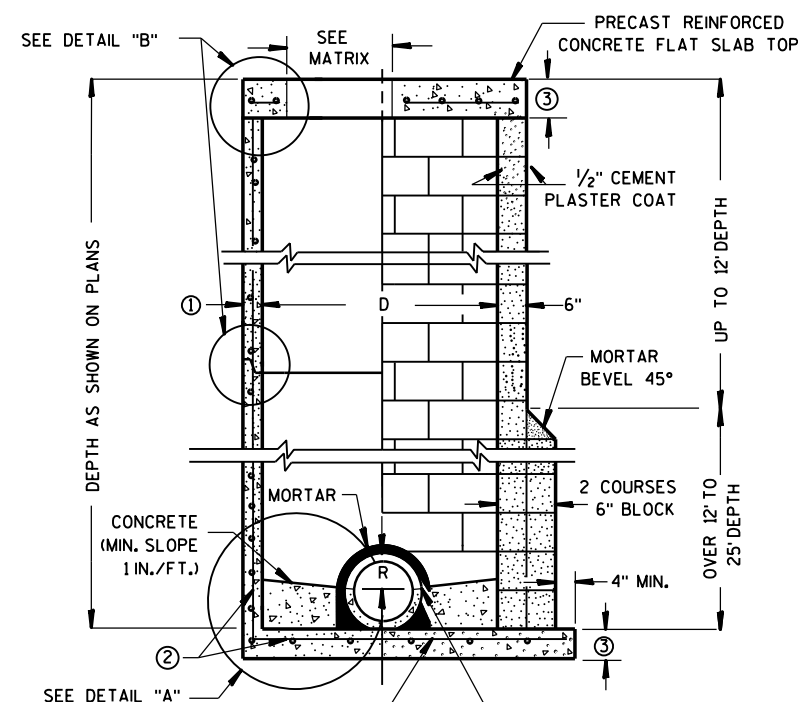


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

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. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

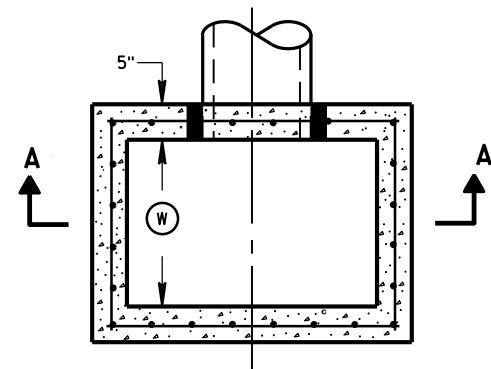
APPROVED

Sept., 2016

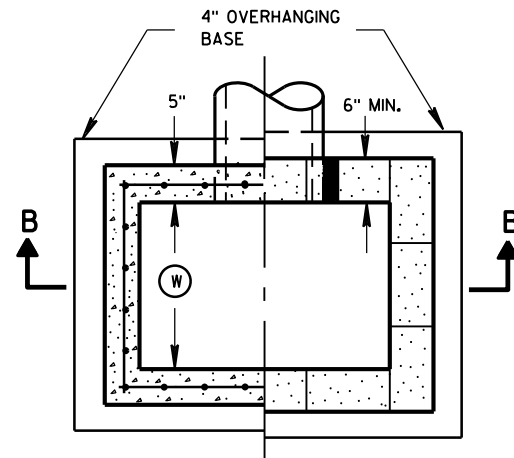
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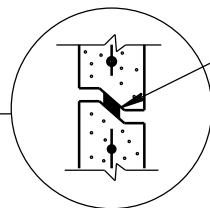
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV 121



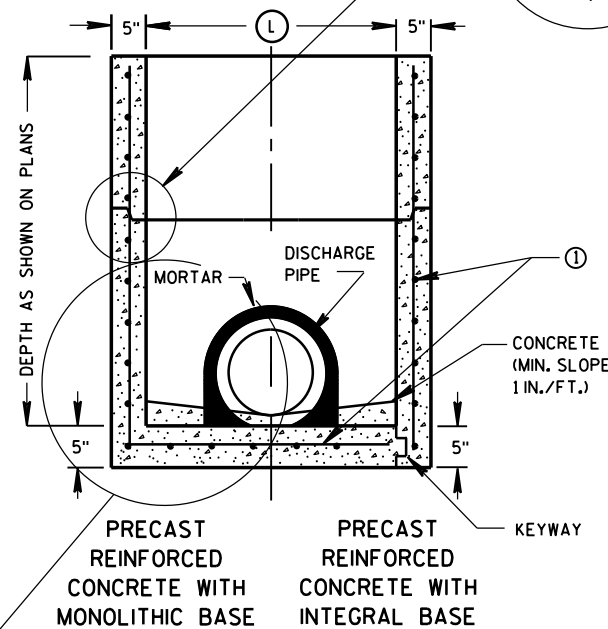
PLAN VIEW



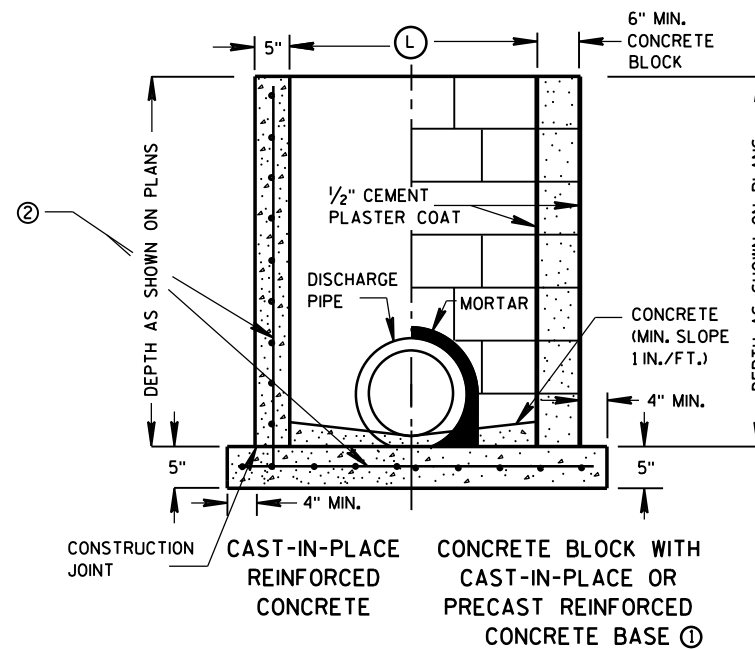
PLAN VIEW



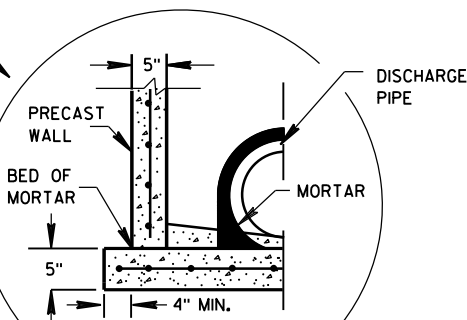
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

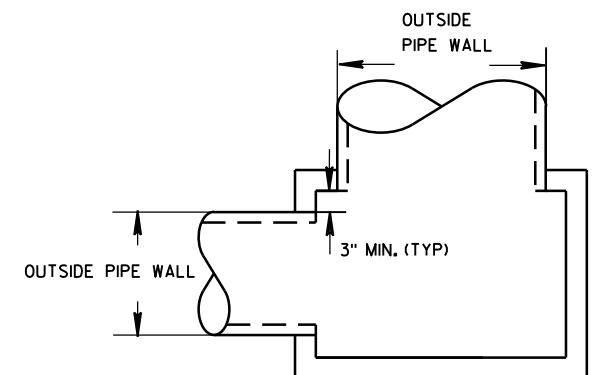
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	WIDTH ① (FT)	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
		LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



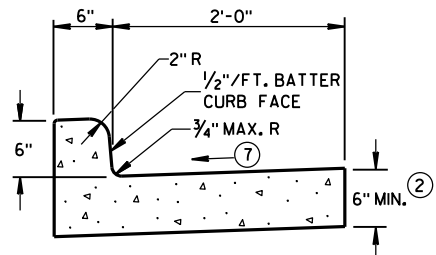
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

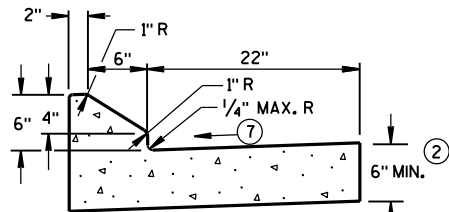
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS D IT
FHWA UNIT SUPERVIS 122

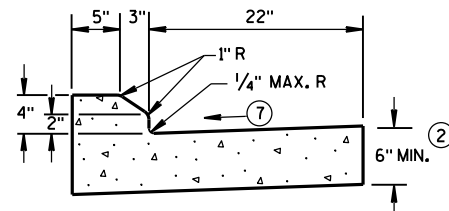
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



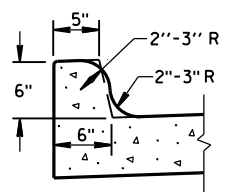
TYPES A^① & D



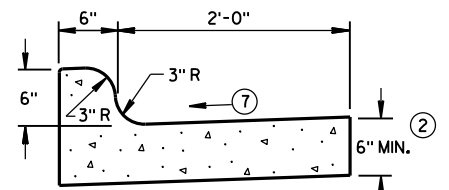
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

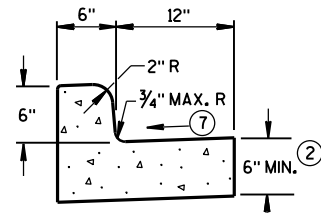


TYPES K^① & L
(OPTIONAL CURB SHAPE)



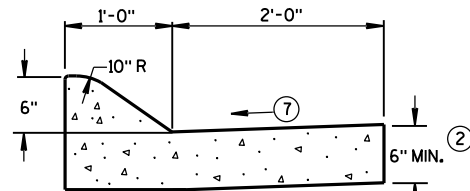
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

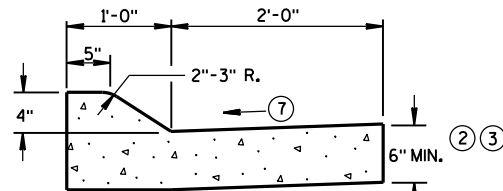


TYPES A^① & D

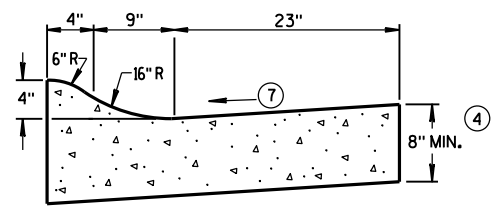
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

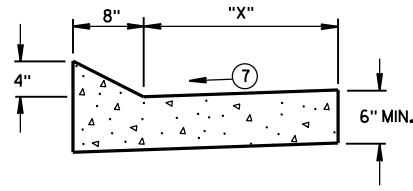


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

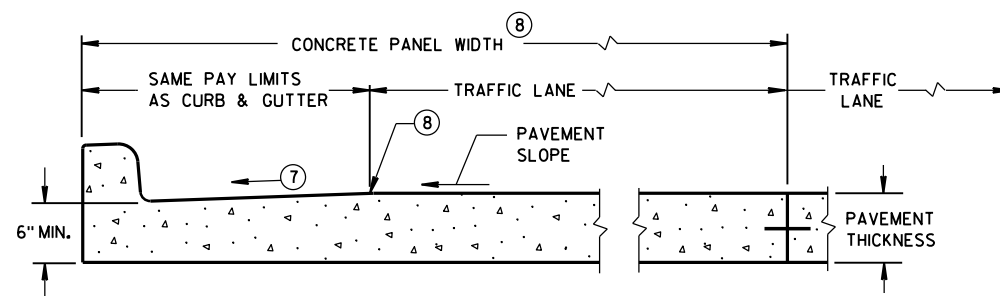
CONCRETE CURB & GUTTER 36"



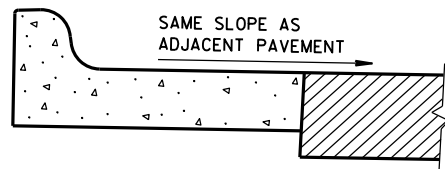
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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 GUTTER 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.

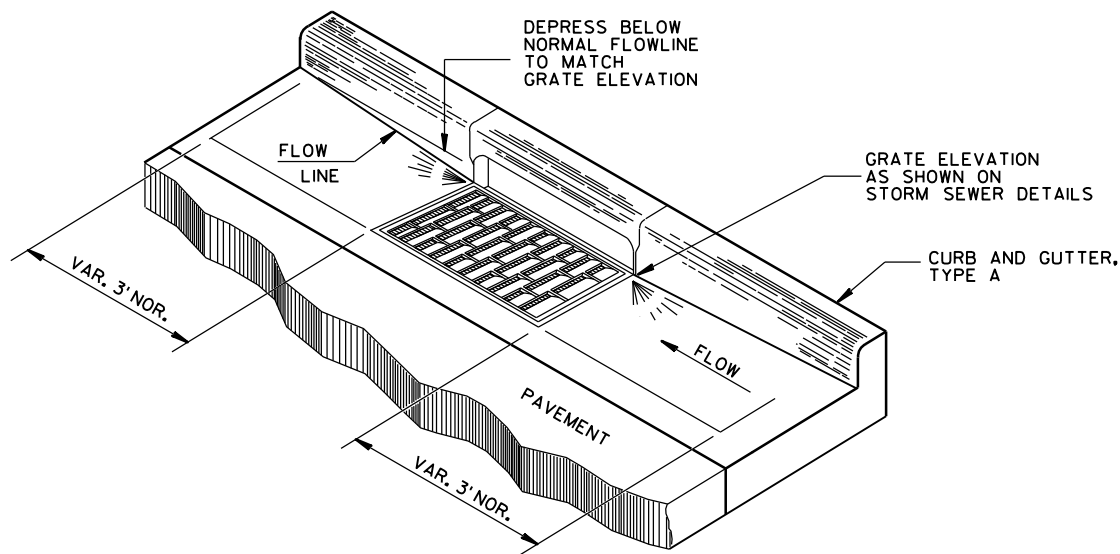
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

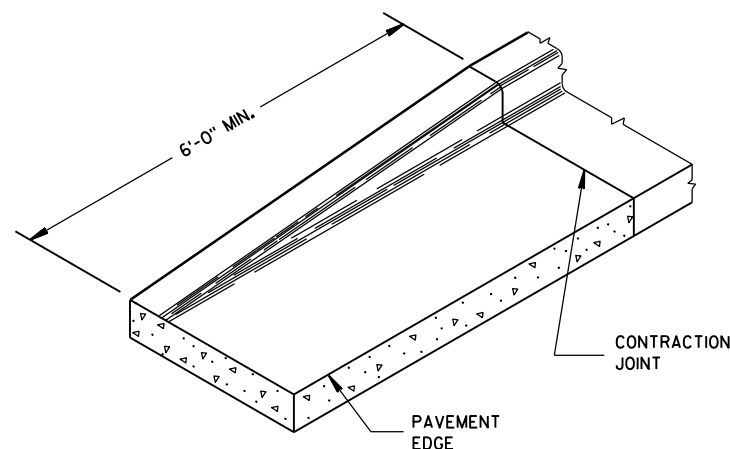
* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

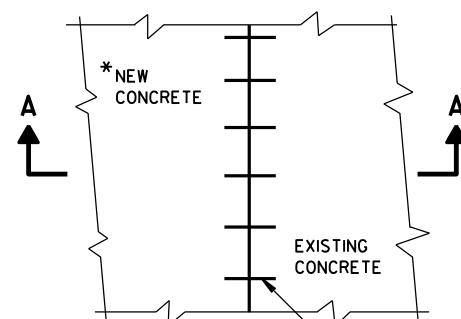
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



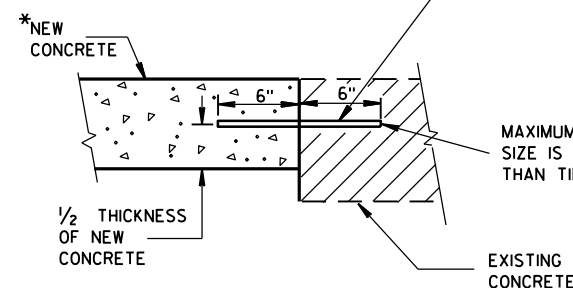
DETAIL OF CURB AND GUTTER AT INLETS
(TYPE H INLET COVER SHOWN)



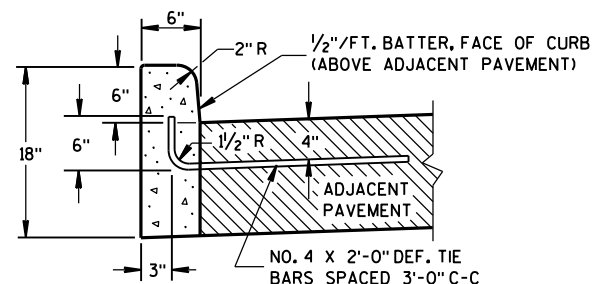
END SECTION CURB & GUTTER



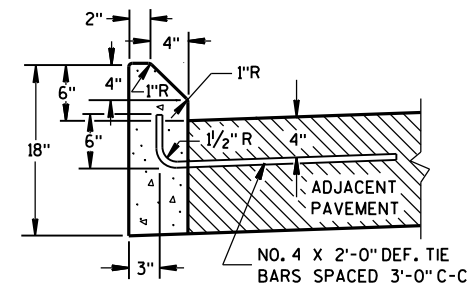
PLAN VIEW



TIE BARS DRILLED
INTO EXISTING PAVEMENT



TYPES A^① & D



TYPES G^① & J

GENERAL NOTES

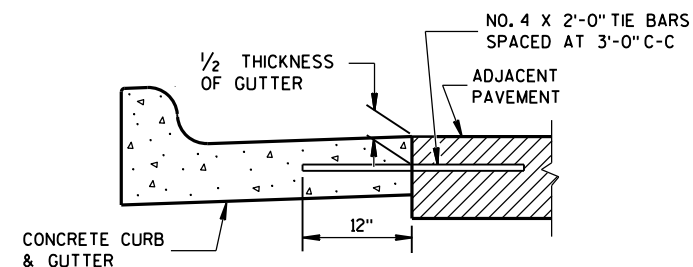
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

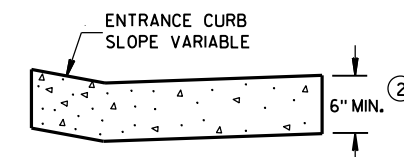
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER 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 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

CONCRETE CURB

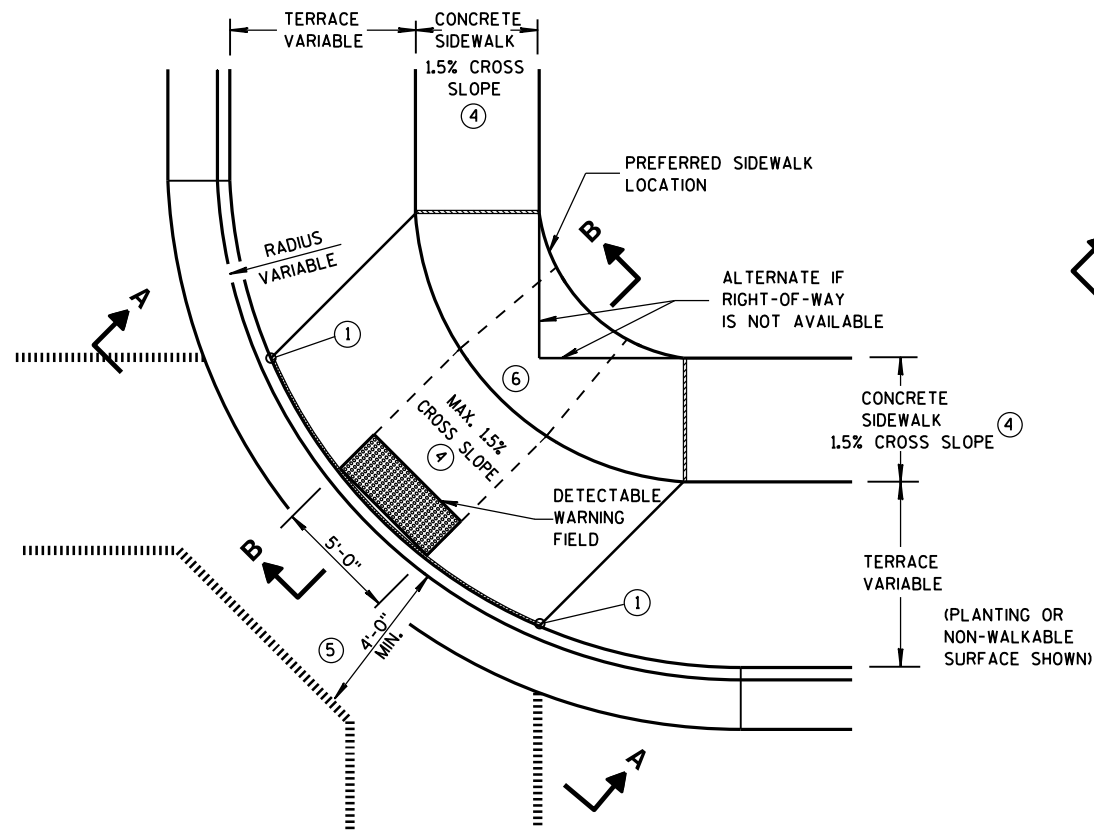


TYPICAL TIE BAR LOCATION^①

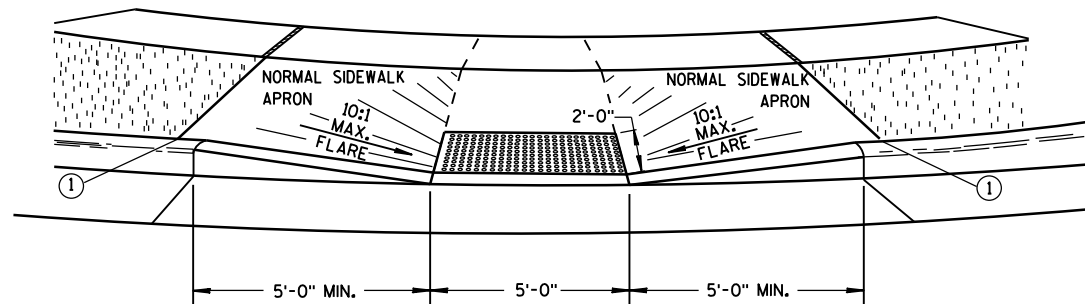


DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED June, 2017 DATE	/S/ Rodney Taylor ROADWAY STANDARDS 124 UNIT SUPERVISOR	ENT	
FHWA			

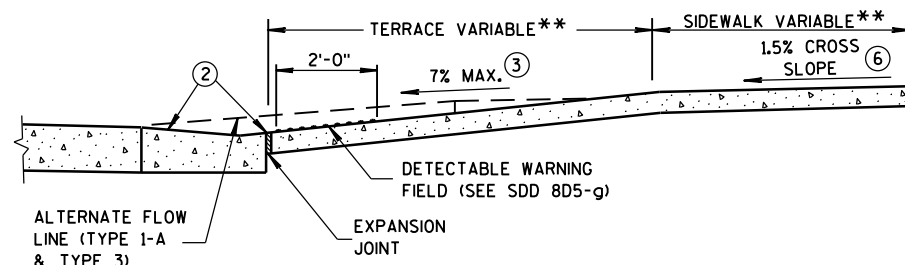


**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

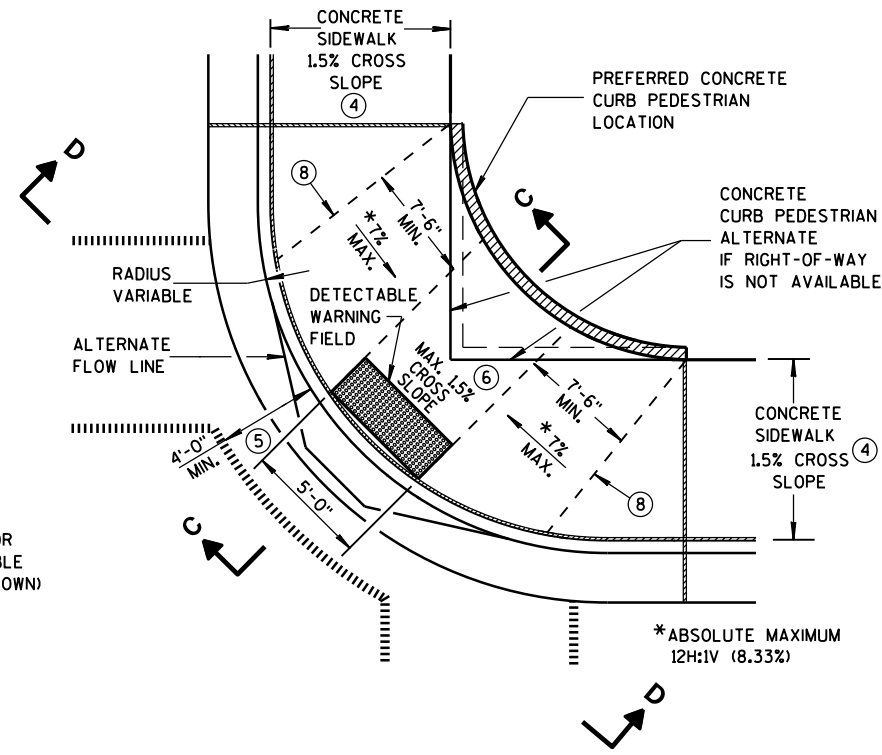


VIEW A-A

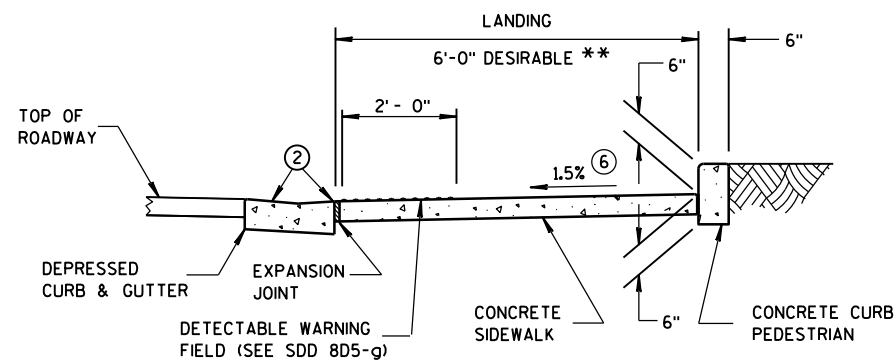
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



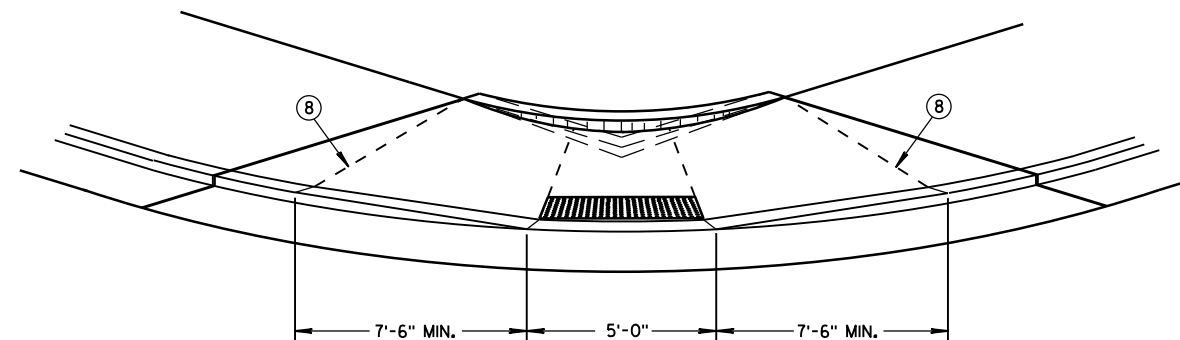
SECTION B-B



**PLAN VIEW
TYPE 1-A RAMP**
(NO TERRACE)



SECTION C-C



VIEW D-D

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

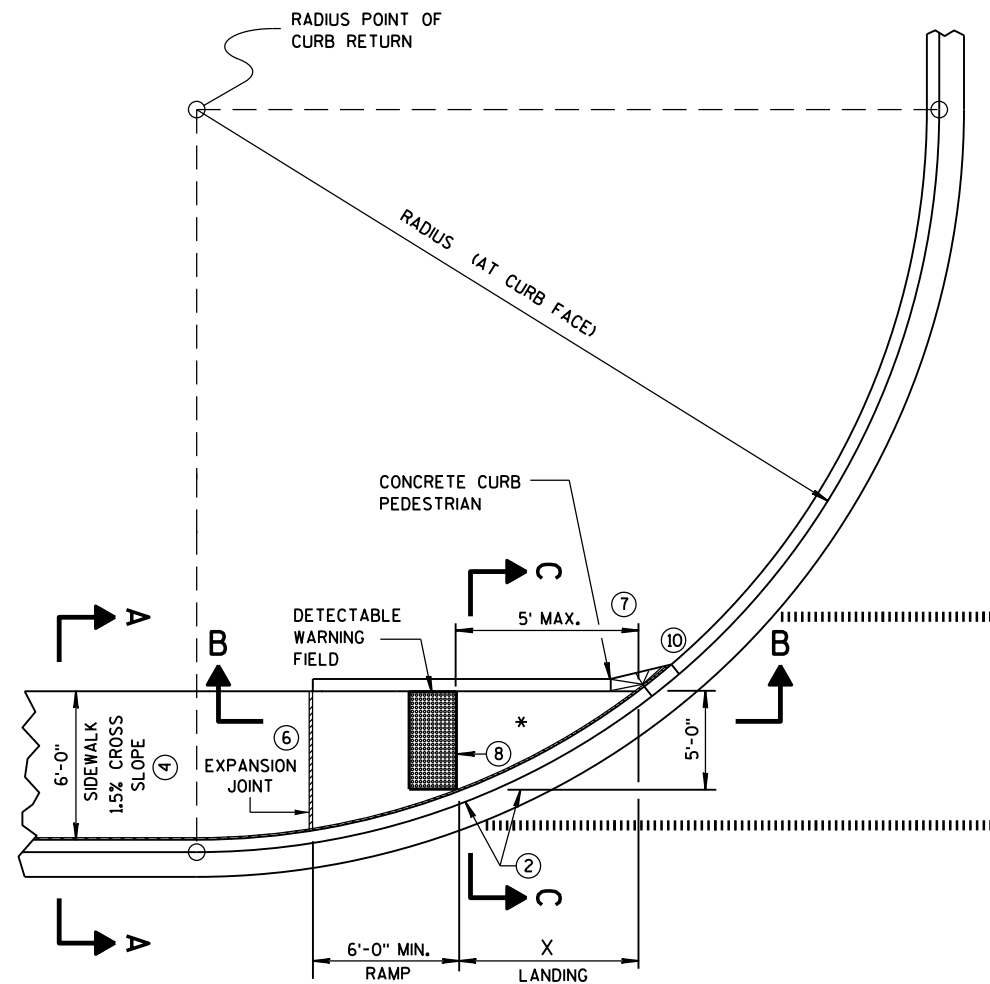
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

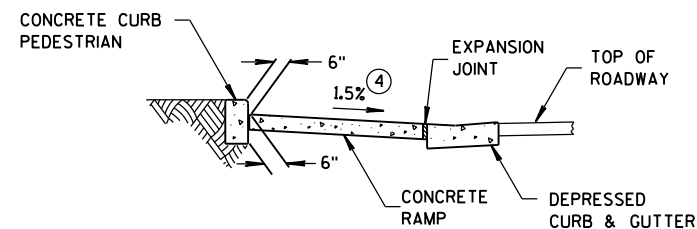
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

**CURB RAMPS
TYPES 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 125

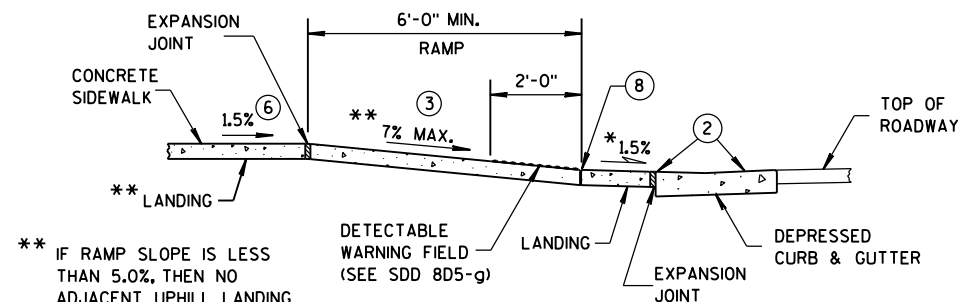


CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A

* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK

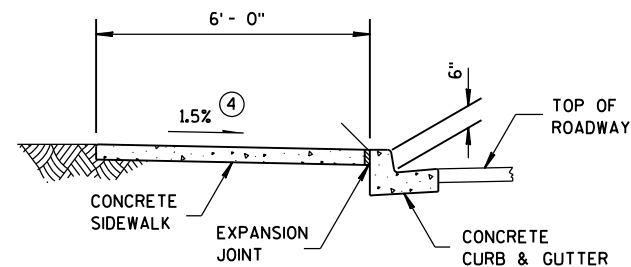


SECTION B-B FOR TYPE 4A

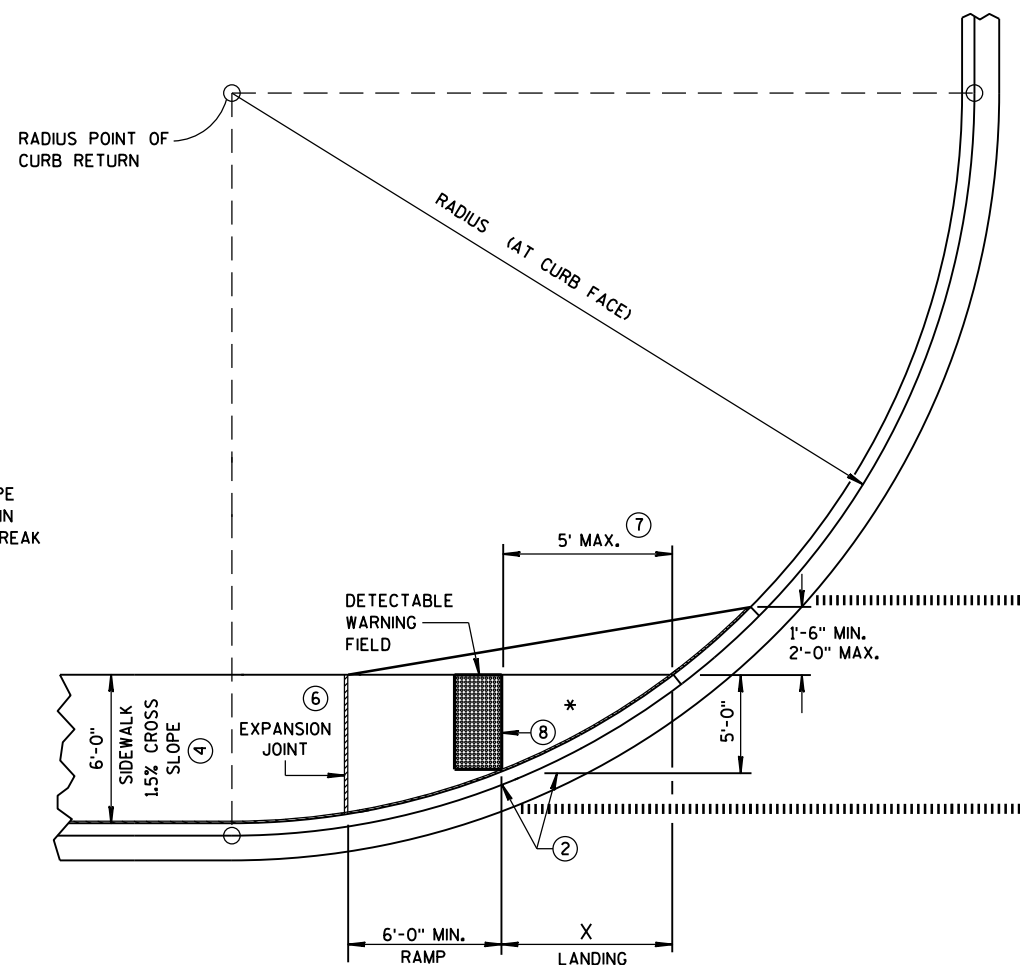
** IF RAMP SLOPE IS LESS
THAN 5.0%, THEN NO
ADJACENT UPHILL LANDING
IS REQUIRED

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



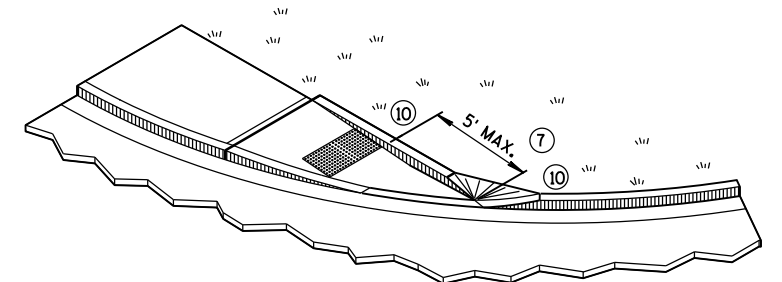
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

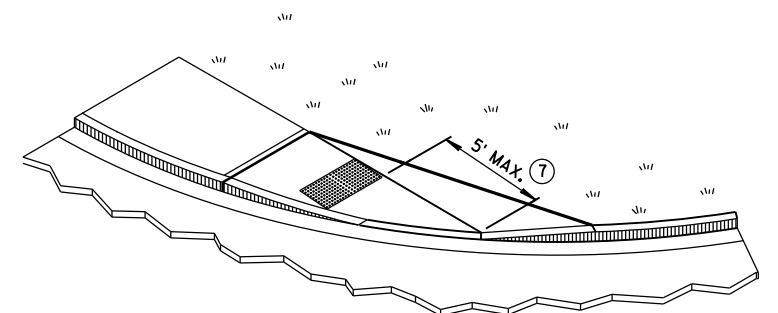
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



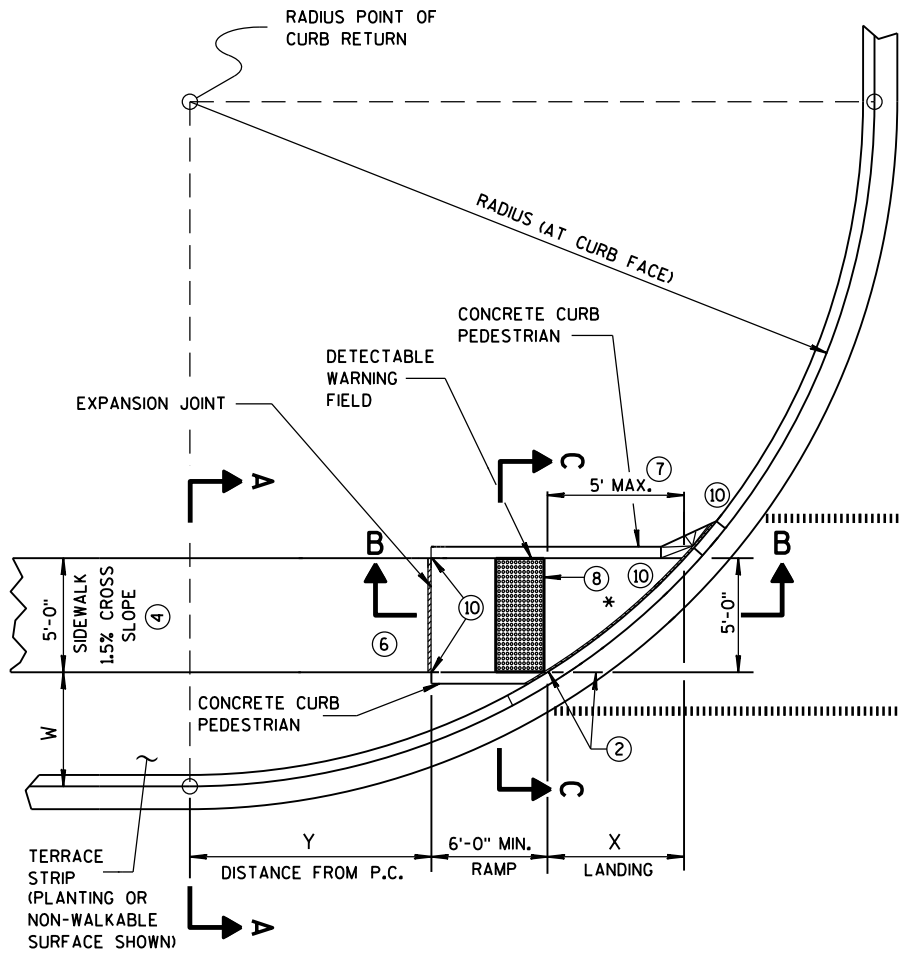
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

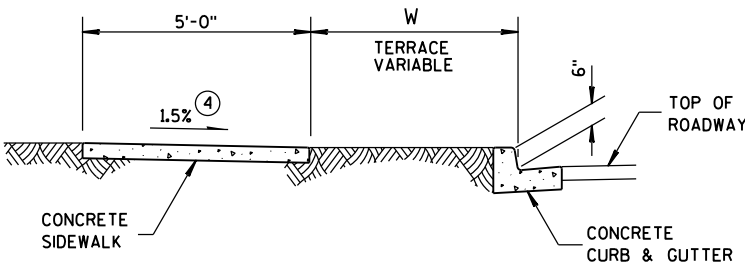
- ½" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

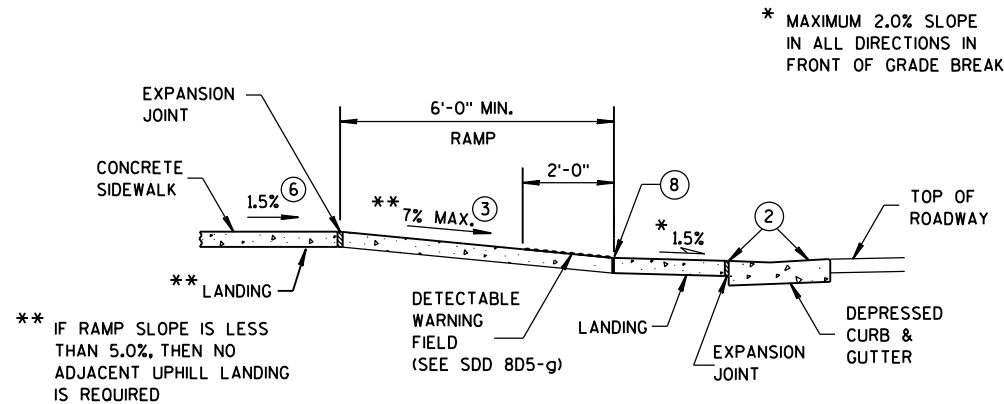
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 127



**CURB RAMP TYPE 4B
PLAN VIEW**



SECTION A-A FOR TYPE 4B



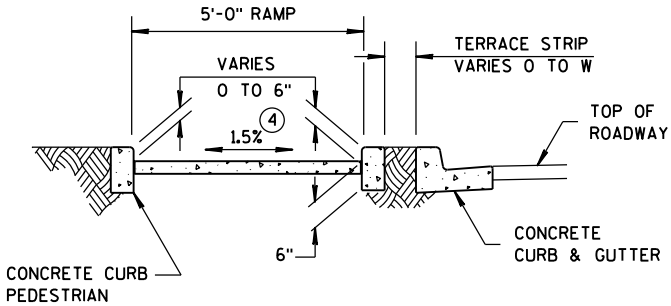
SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10 1/4"	0'-5"	2'-1"	1'-4 1/2"	1'-5"	2'-1"	0'-10"	2'-7 1/2"	0'-3 1/4"	3'-0 1/4"						
15 FEET	4'-6 3/4"	2'-1 3/4"	3'-9"	3'-5 1/4"	3'-1 1/4"	4'-6"	2'-6 3/4"	5'-4 1/2"	2'-1"	6'-1"	1'-8"	6'-8 1/2"	1'-3 1/4"	7'-2 1/2"	0'-10 3/4"	7'-7 1/4"
20 FEET	5'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 1/4"	6'-5 1/2"	3'-8 3/4"	7'-7"	3'-3"	8'-6 1/2"	2'-10"	9'-4 1/2"	2'-5 1/2"	10'-1 1/4"	2'-1 1/4"	10'-9"
30 FEET			6'-9 1/4"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"	4'-5 1/2"	13'-7 3/4"	4'-0 3/4"	14'-8 1/2"	3'-8 1/2"	15'-8 1/4"
40 FEET									6'-1 3/4"	15'-8 1/2"	5'-8"	17'-2"	5'-3"	18'-5 3/4"	4'-10 3/4"	19'-8 1/4"
50 FEET															5'-10 1/4"	23'-2"

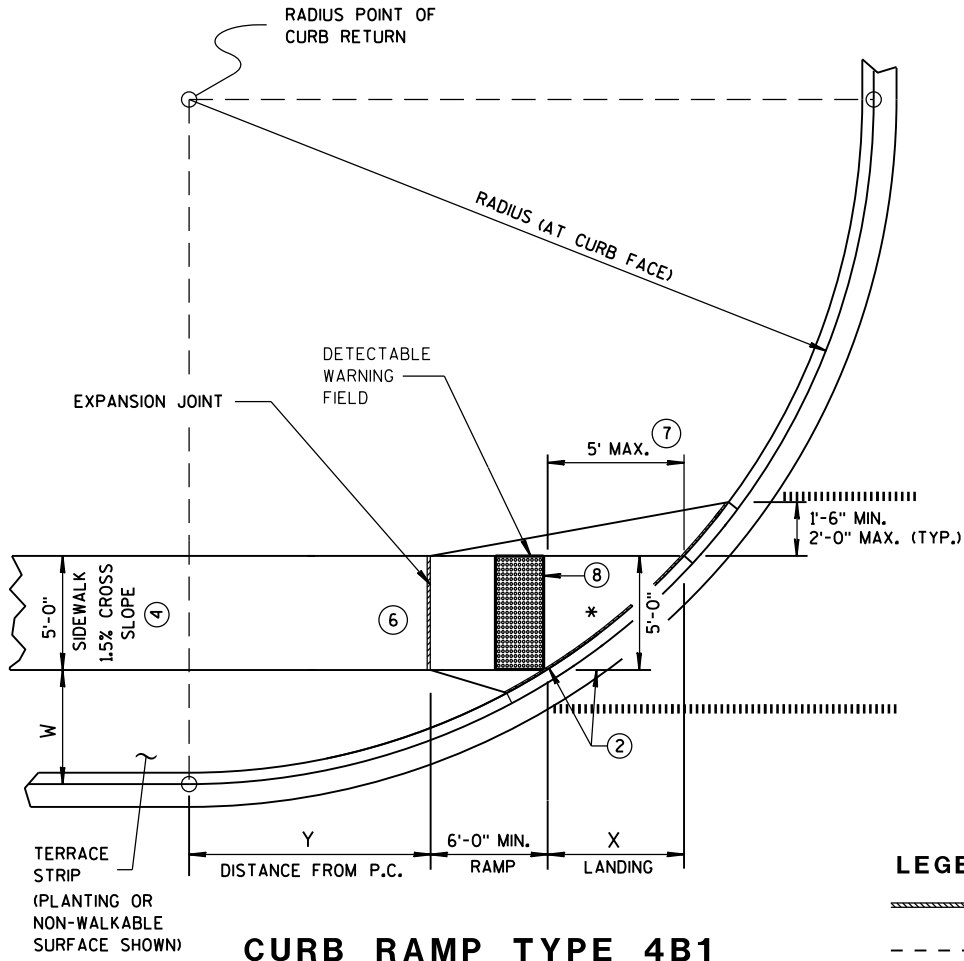
INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

GENERAL NOTES

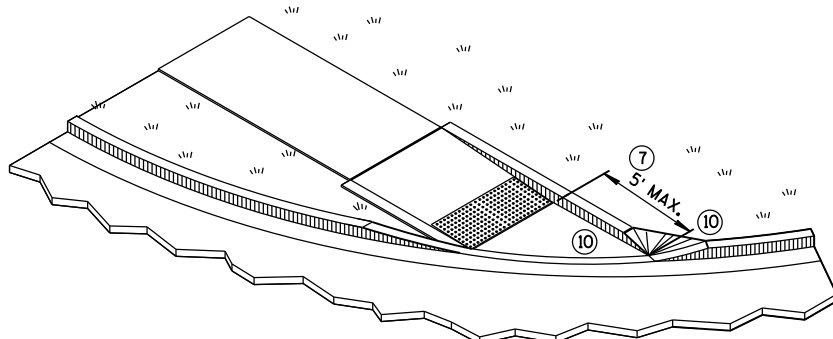
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



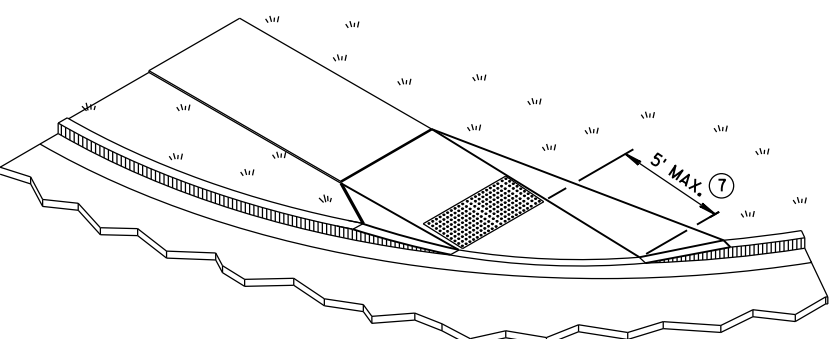
SECTION C-C FOR TYPE 4B



**CURB RAMP TYPE 4B1
PLAN VIEW**



ISOMETRIC VIEW FOR TYPE 4B



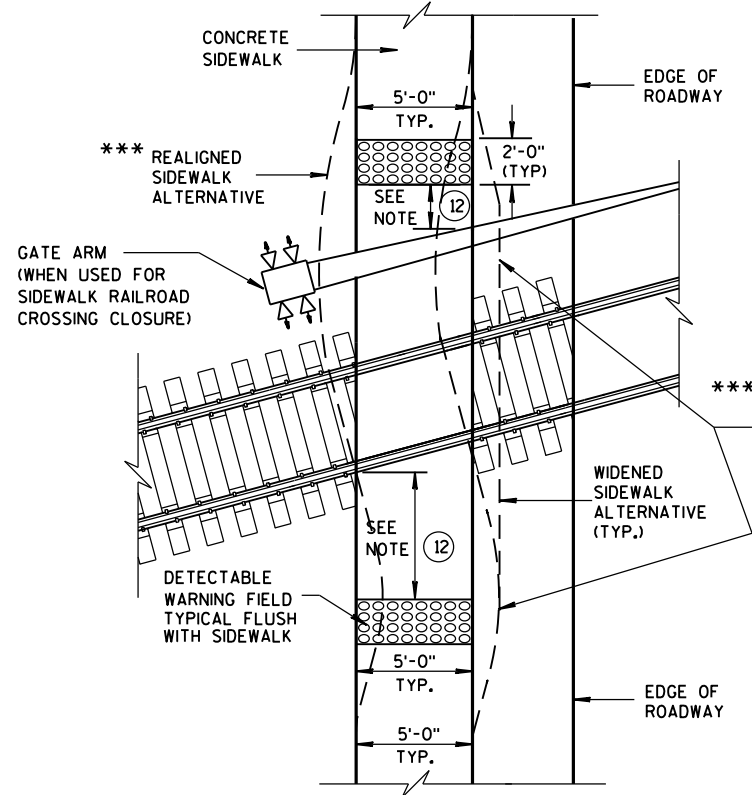
ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

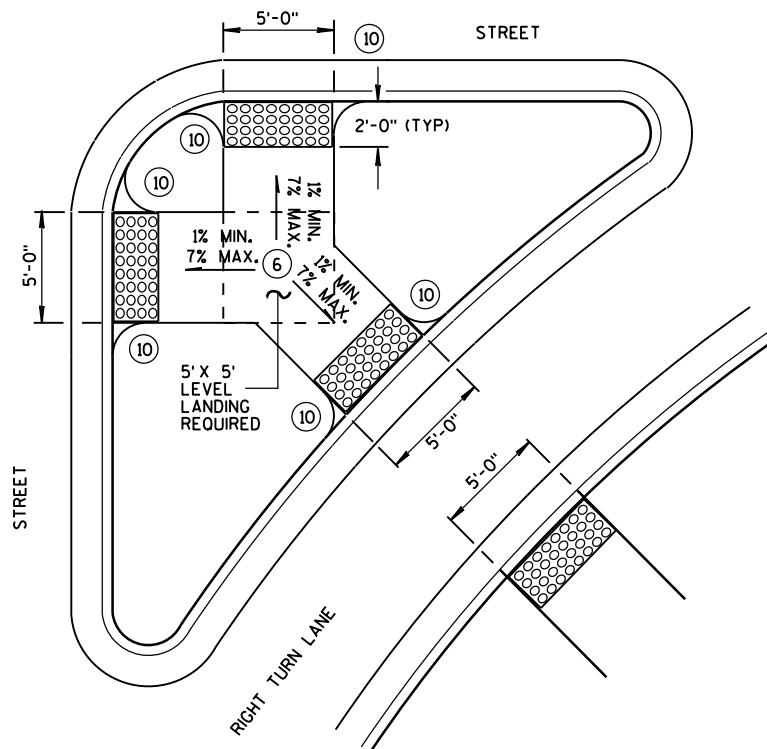
**CURB RAMPS
TYPE 4B AND 4B1**

STATE OF WISCONSIN
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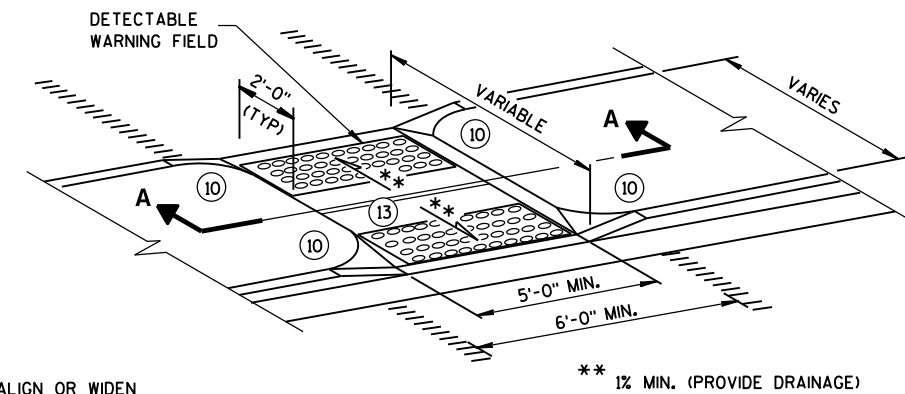


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS

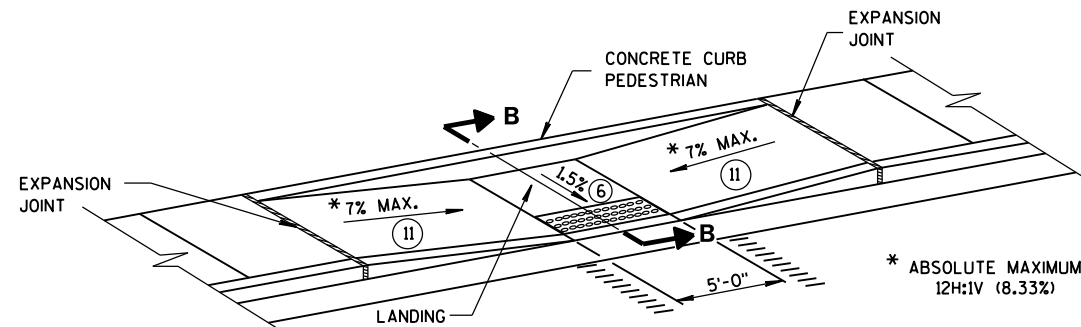


TYPE 6
DETECTABLE WARNING AT ISLANDS

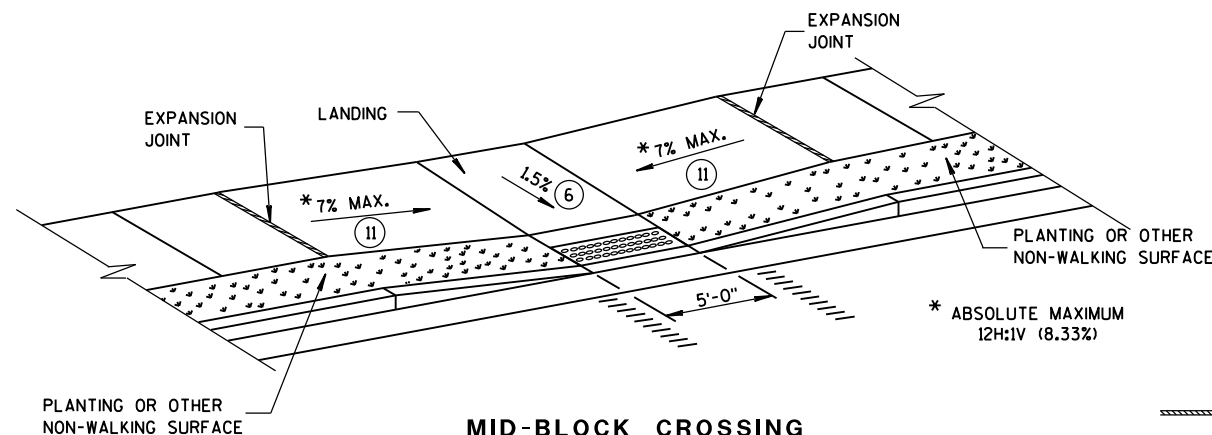


MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

*** DETAILS TO BE DETERMINED
BY DESIGNER



MID-BLOCK CROSSING
TYPE 7A

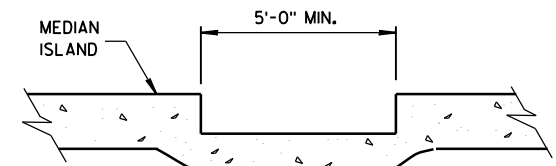


MID-BLOCK CROSSING
TYPE 7B

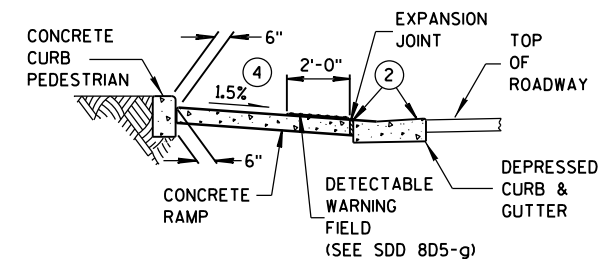
NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS
MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 15 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



SECTION A-A



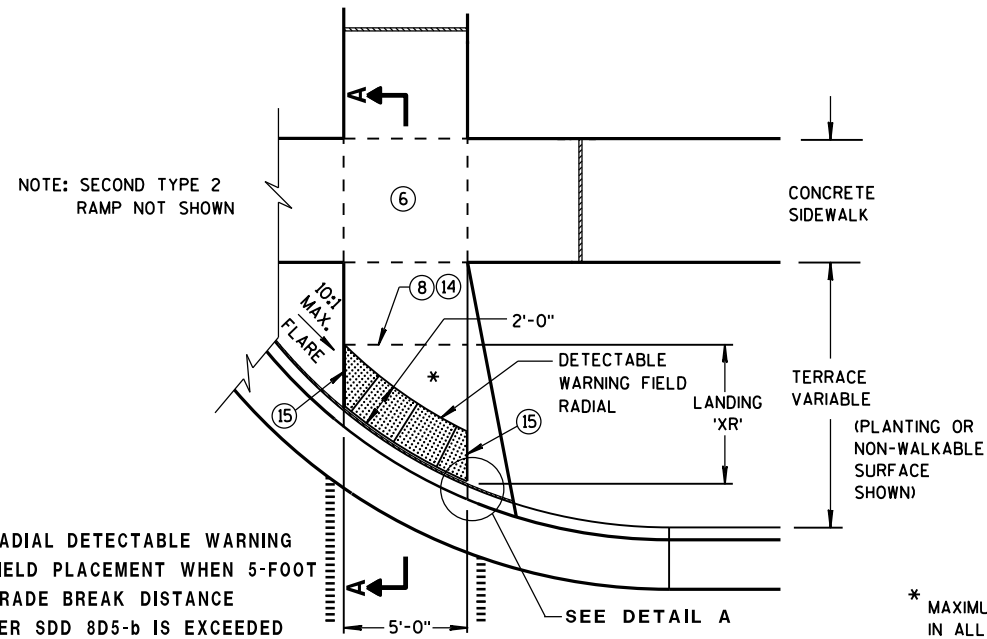
SECTION B-B

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 129

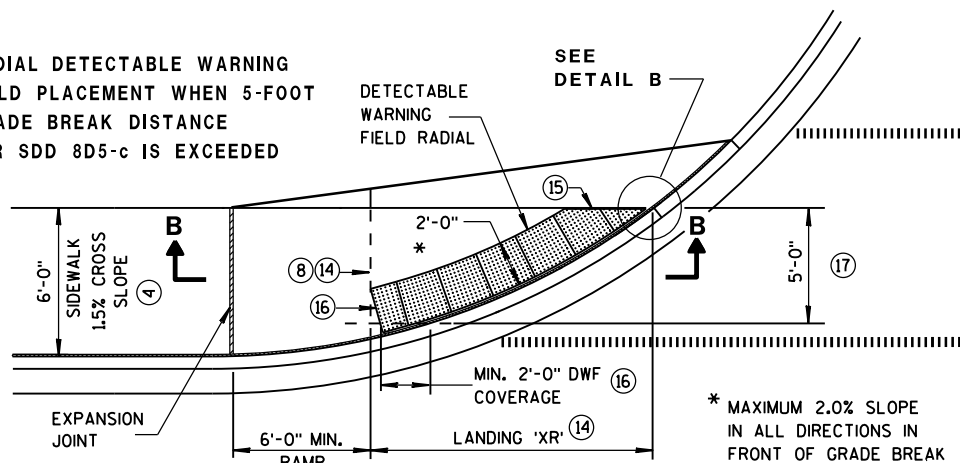


TYPE 2 RAMP PLAN VIEW

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

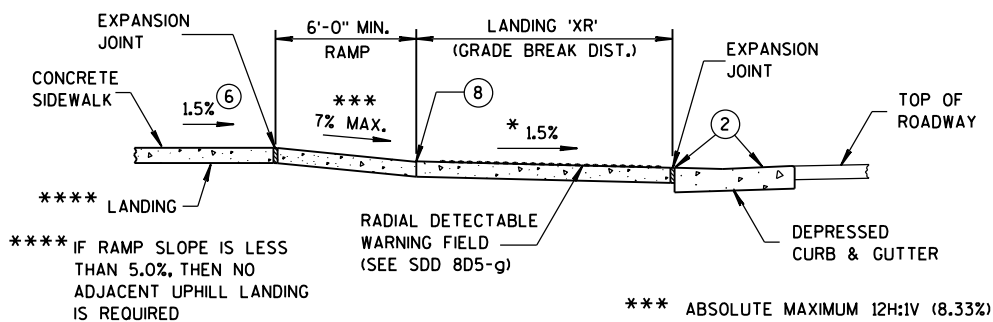
(ON LINE WITH SIDEWALK)

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5-FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED

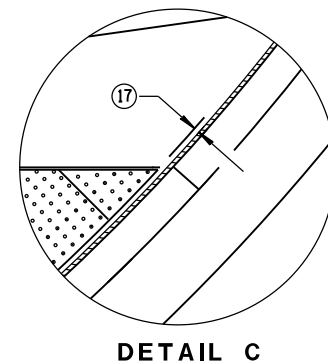
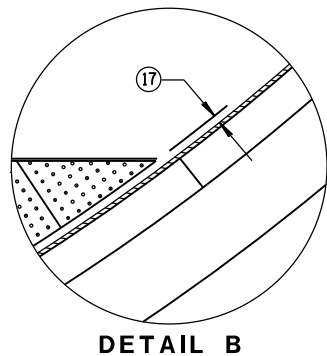
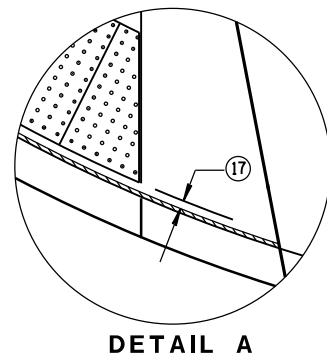
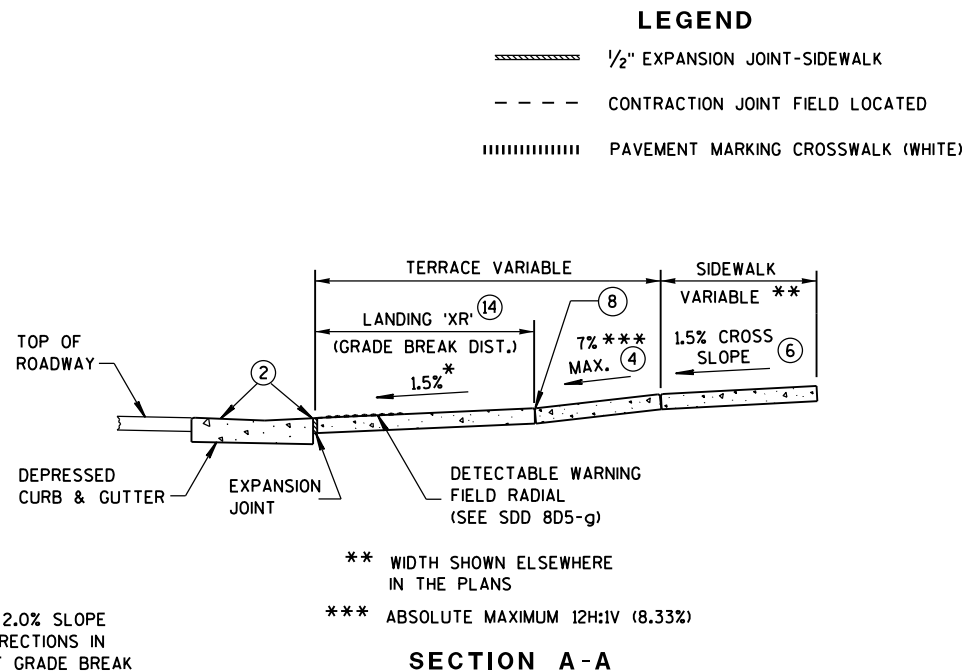


CURB RAMP TYPE 4A1 PLAN VIEW

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B-B FOR TYPE 4A1



GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS (DWFs) THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

3 ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

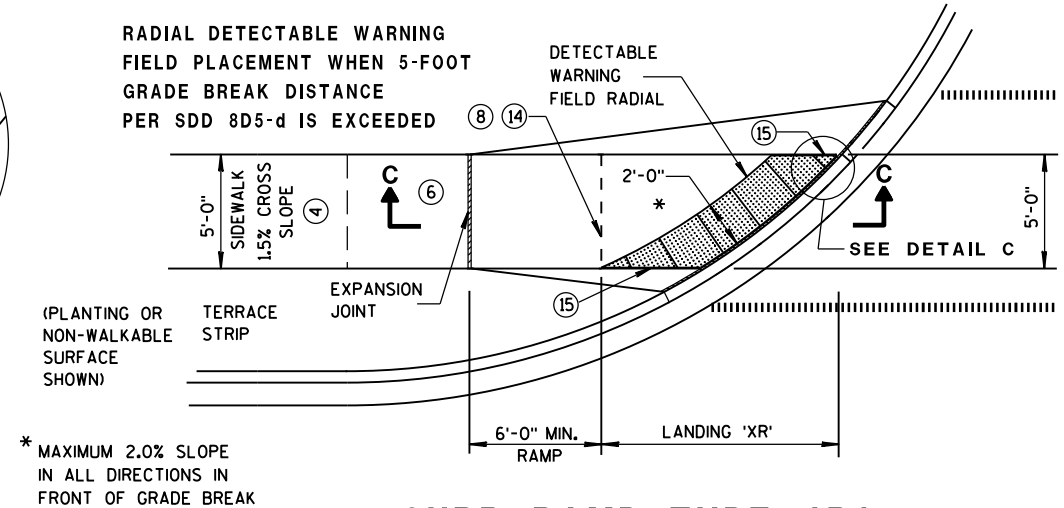
14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

16 USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

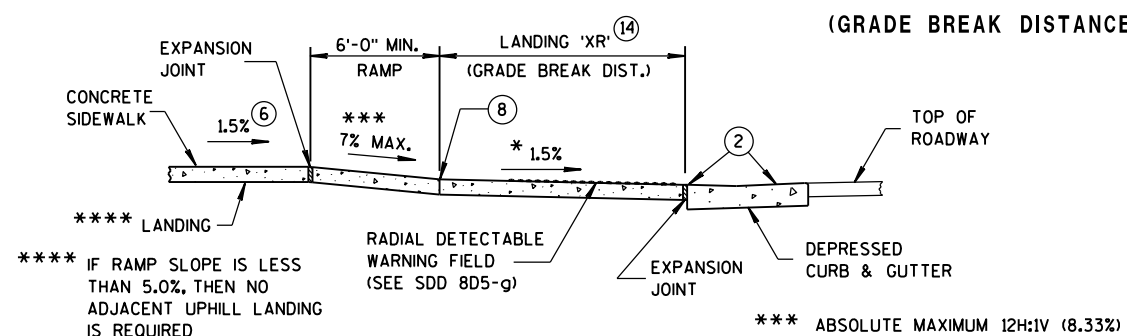
17 A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5-FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



CURB RAMP TYPE 4B1 PLAN VIEW

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



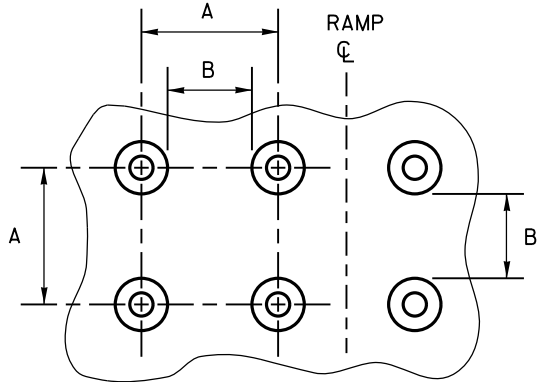
SECTION C-C FOR TYPE 4B1

**CURB RAMPS
RADIAL DETECTABLE WARNING
FIELD APPLICATIONS**

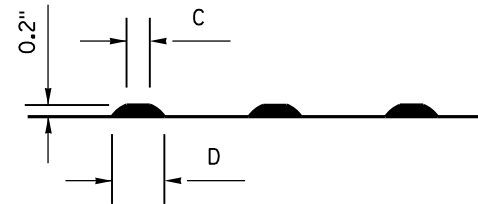
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 130

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

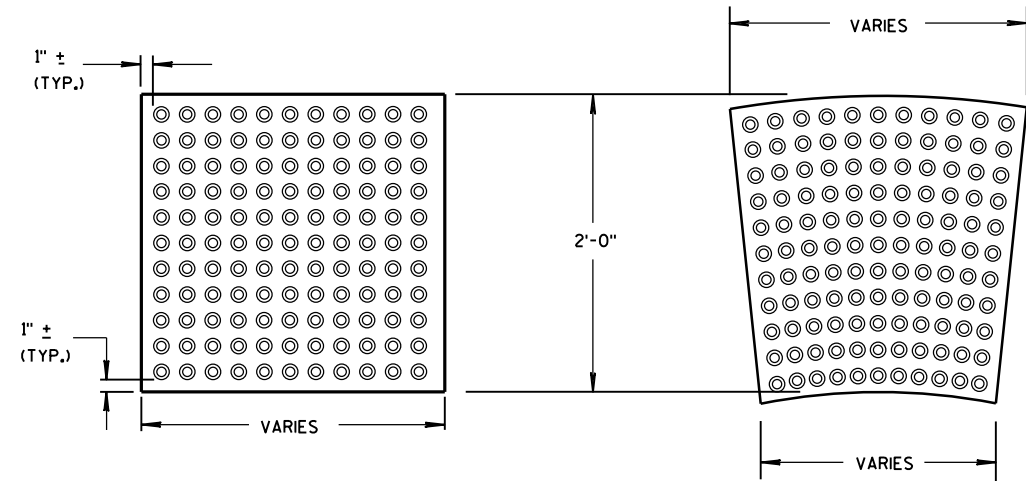


PLAN VIEW



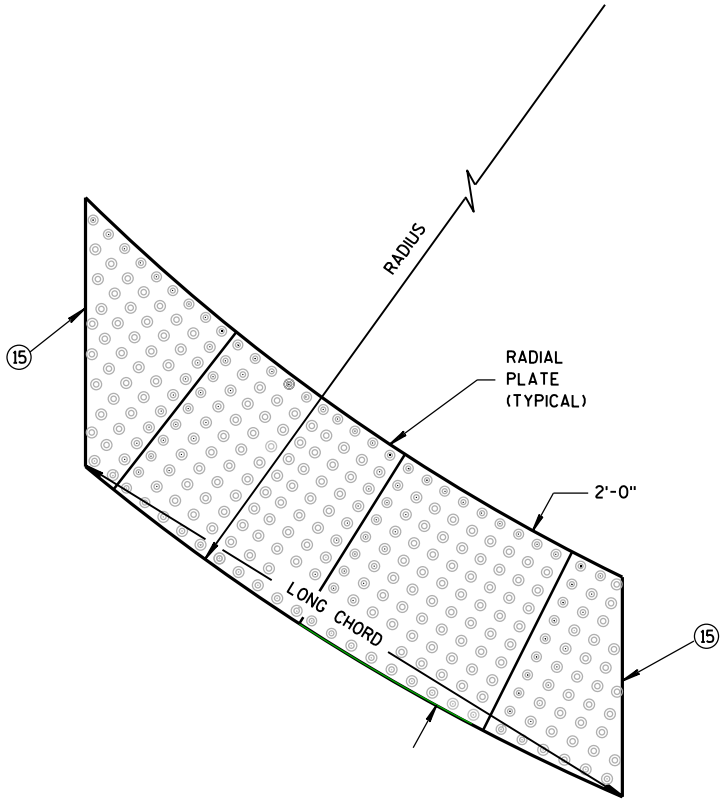
ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR
PLATES
DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGES IN COMBINATION WITH SQUARE PANELS ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

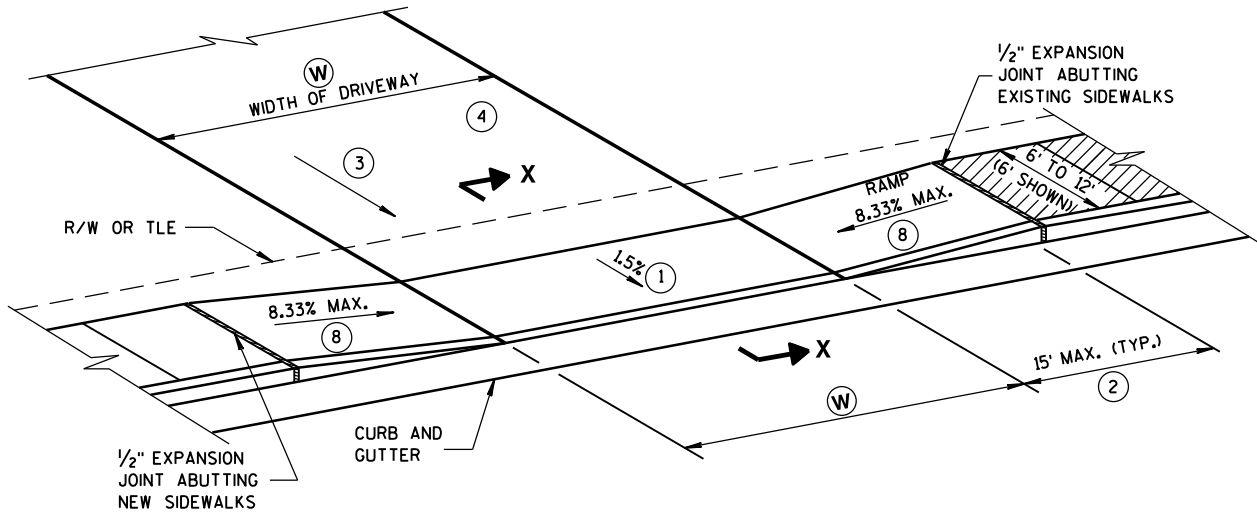
CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

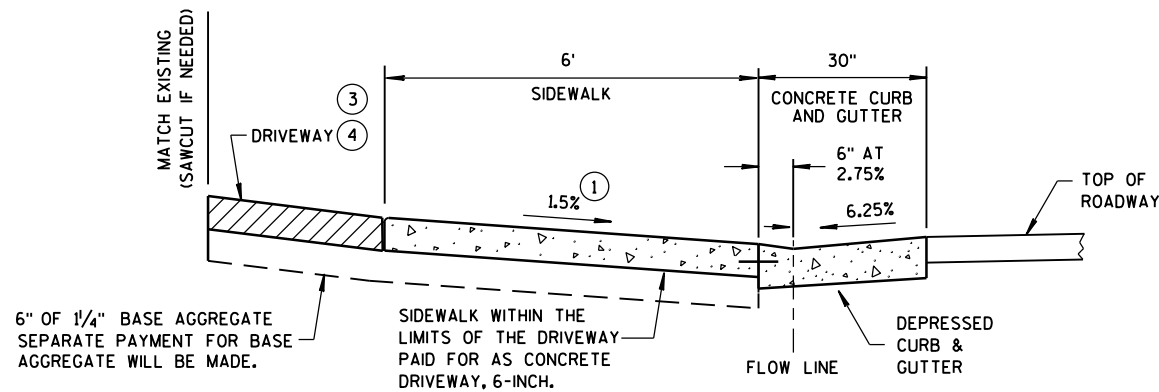
APPROVED
June, 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV 131 ENT
FHWA

GENERAL NOTES

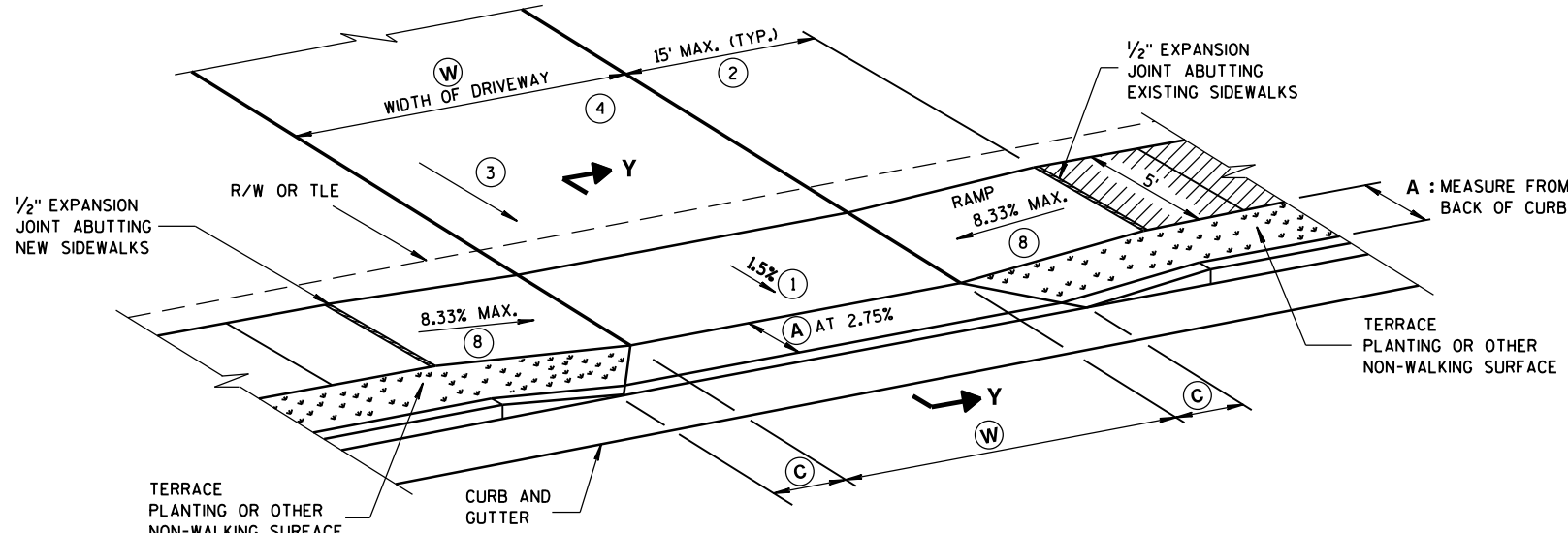
- 1 CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- 2 THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.
- 3 DRIVEWAY SLOPES: DESIRABLE MAXIMUM
10.5% UP AWAY FROM SIDEWALK (SAG)
8.5% DOWN AWAY FROM SIDEWALK (CREST)
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG
- 4 DRIVEWAY TYPES
 - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
 - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
 - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)
- 5 PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.
- 6 W IS SHOWN ON PLAN AND PROFILE SHEETS.
- 7 OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.
- 8 SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.



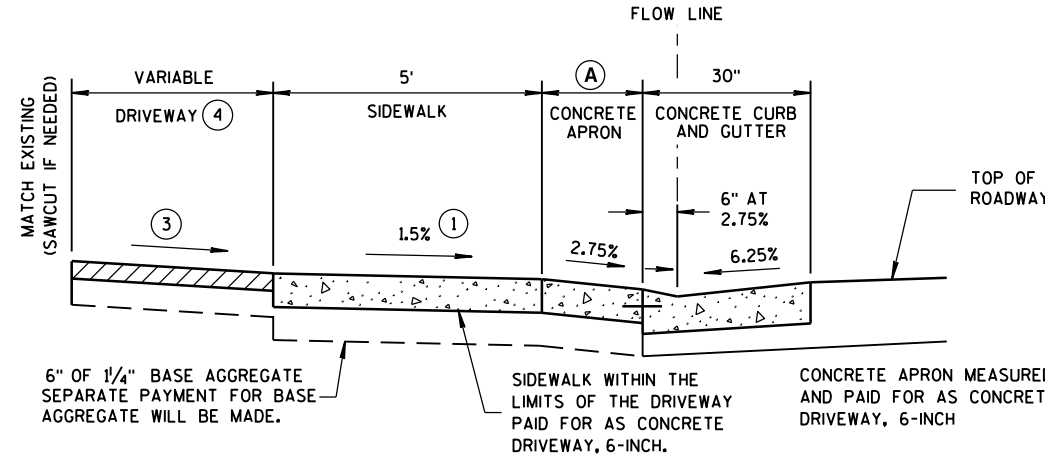
TYPE X
SIDEWALK ABUTS CURB & GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X-X



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y-Y
DRIVEWAY DETAIL
WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)

TABLE Y

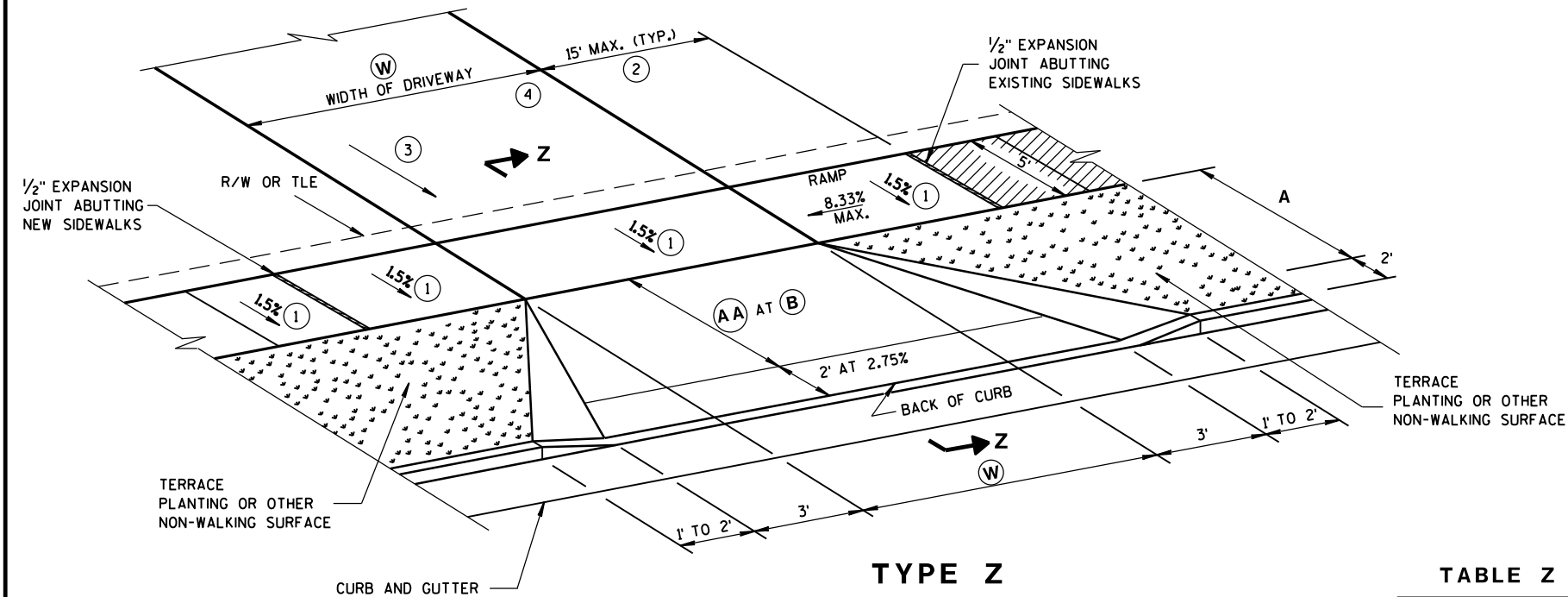
(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

NOT TO SCALE

DRIVEWAY AND SIDEWALK
RAMPS
TYPES X & Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV 132 ENT
FHWA



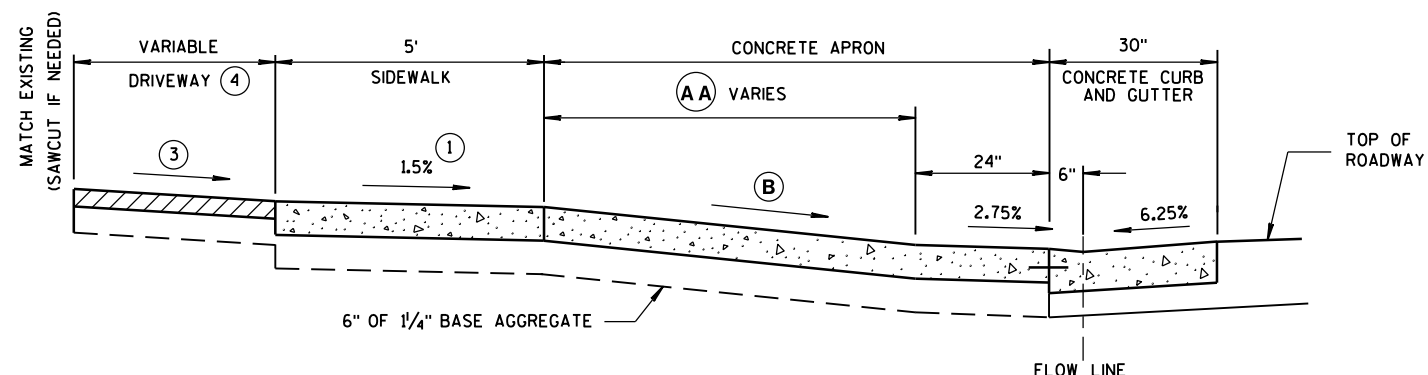
TYPE Z
SIDEWALK WITH WIDER TERRACE
TERRACE VARIES 7 TO 12 FEET

TABLE Z

(A) FEET	(B) %
4.5'	11.5%
5.5'	9-11.5%
6.5'	8-11.5%
7.5'	7-11.5%
8.5'	6-11.5%
9.5'	5-11.5%

GENERAL NOTES

- CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.
- DRIVEWAY SLOPES: DESIRABLE MAXIMUM**
 10.5% UP AWAY FROM SIDEWALK (SAG)
 8.5% DOWN AWAY FROM SIDEWALK (CREST)
 ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG
- DRIVEWAY TYPES**
 - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
 - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
 - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)
- PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.
- (W) IS SHOWN ON PLAN AND PROFILE SHEETS.
- OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR B VALUES NOT SHOWN IN TABLE Z.
 SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY, 6-INCH.
 SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.

PROVIDE (A) AND (B) AS SHOWN ON CROSS SECTIONS.

CONCRETE APRON MEASURED AND PAID FOR AS CONCRETE DRIVEWAY, 6-INCH

SECTION Z-Z

DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER (URBAN AND SUBURBAN)

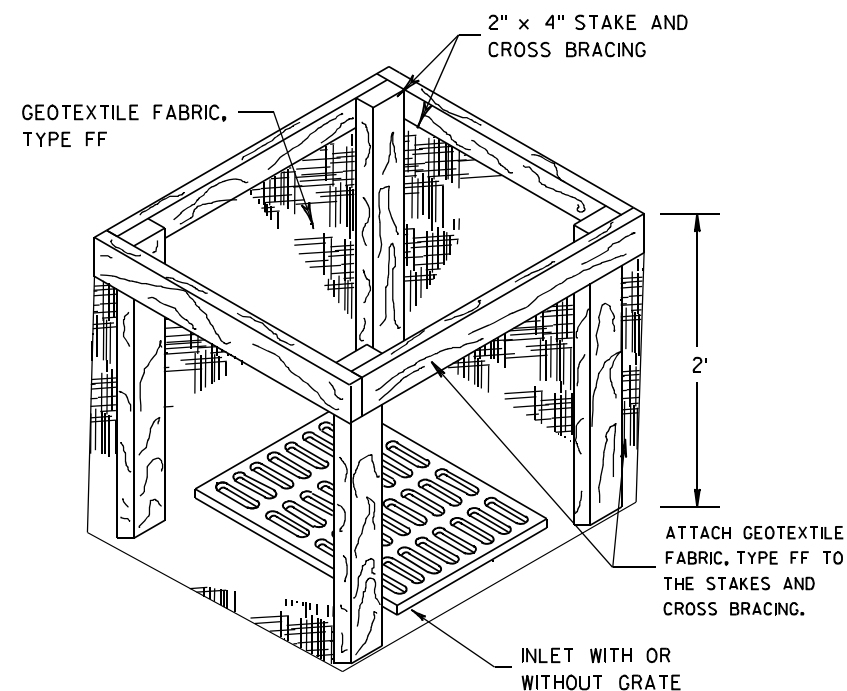
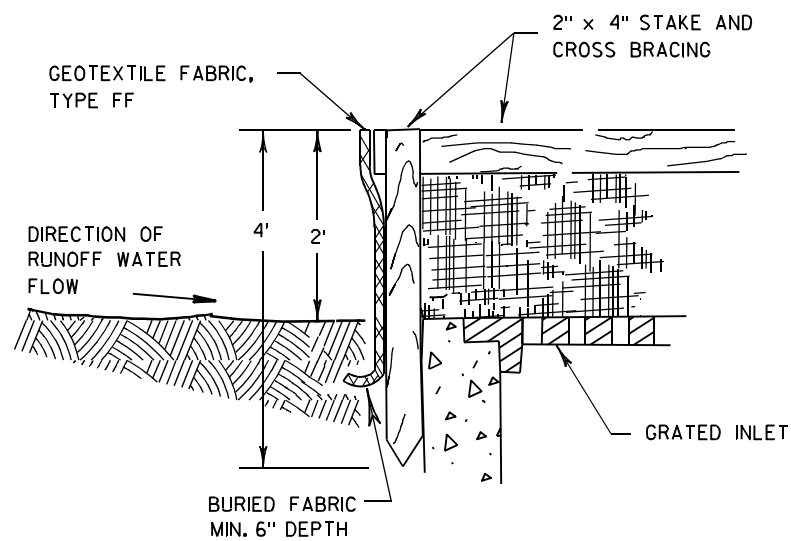
(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
 16' MIN. - 35' MAX. COMMERCIAL (CE)

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS TYPE Z

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 December, 2016 /S/ Rodney Taylor
 DATE ROADWAY STANDARDS UNIT SUPERV 133 ENT
 FHWA



INLET PROTECTION, TYPE A

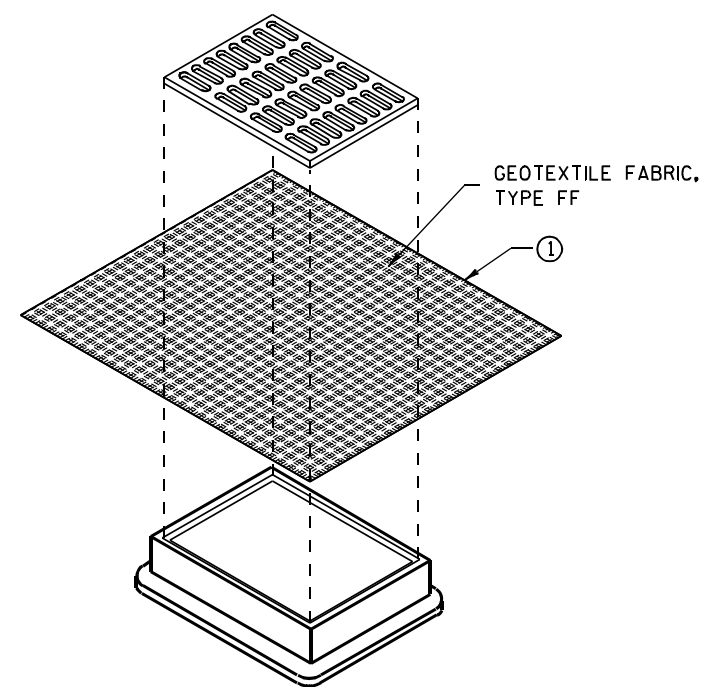
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

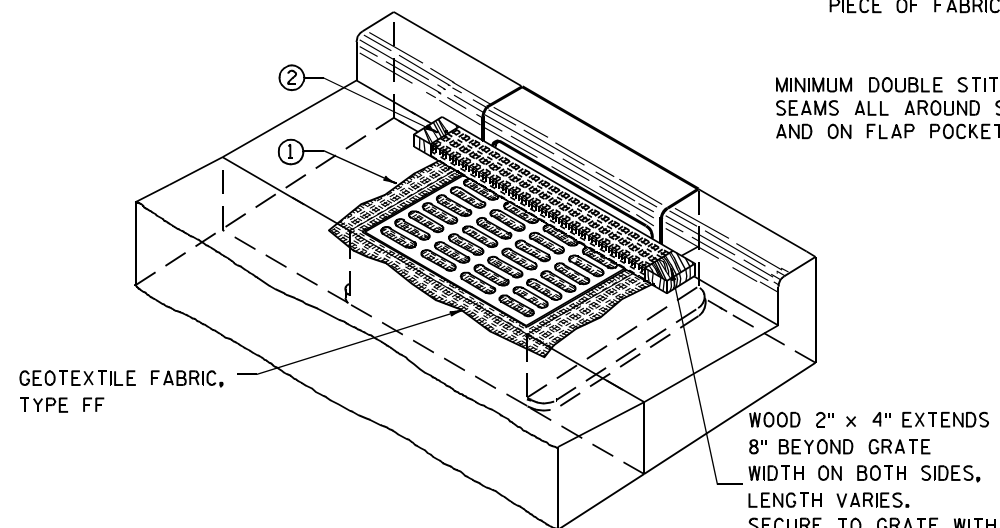
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

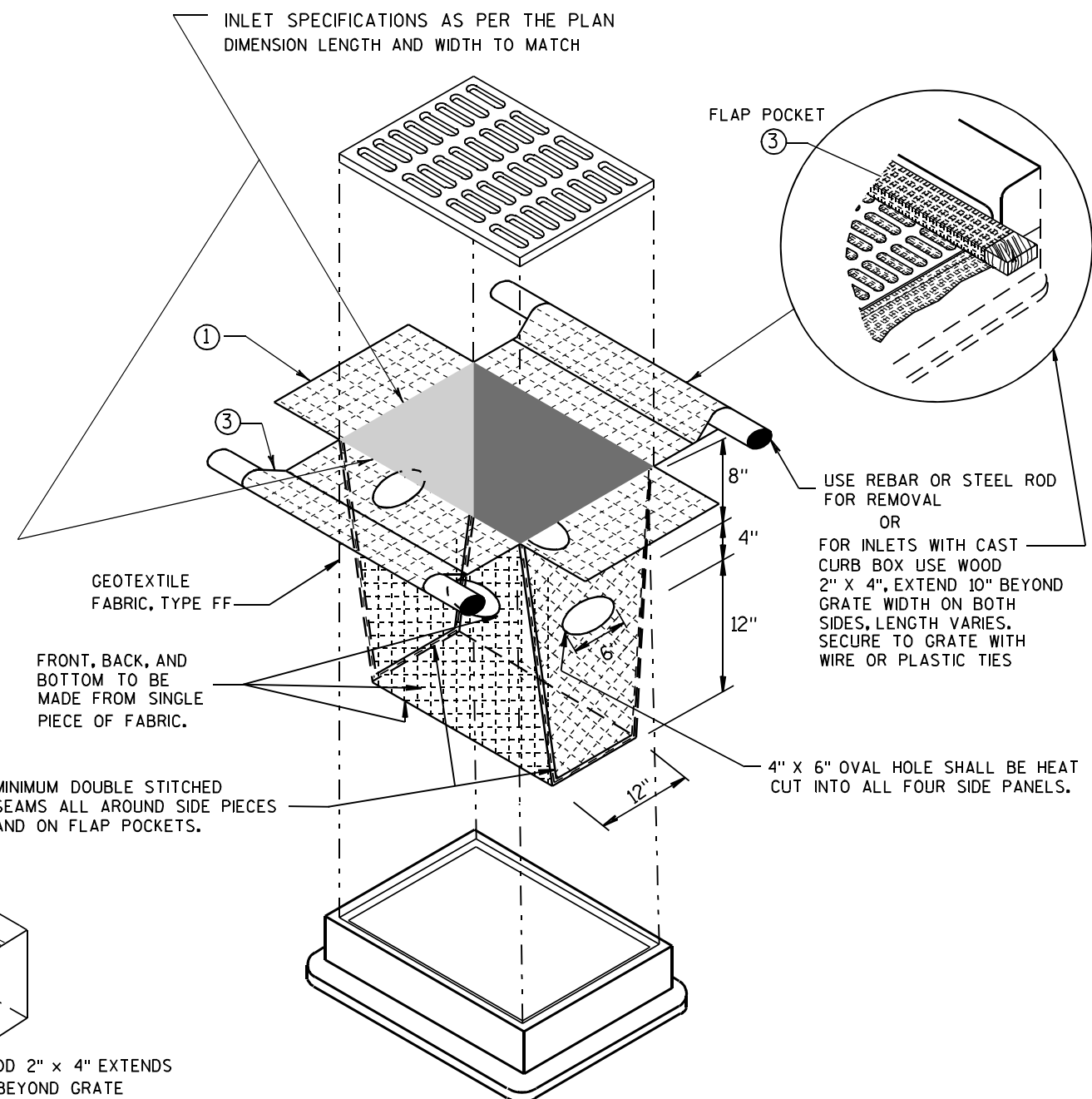
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



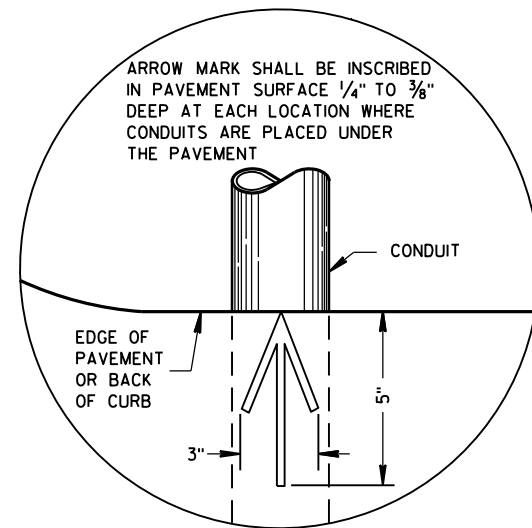
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

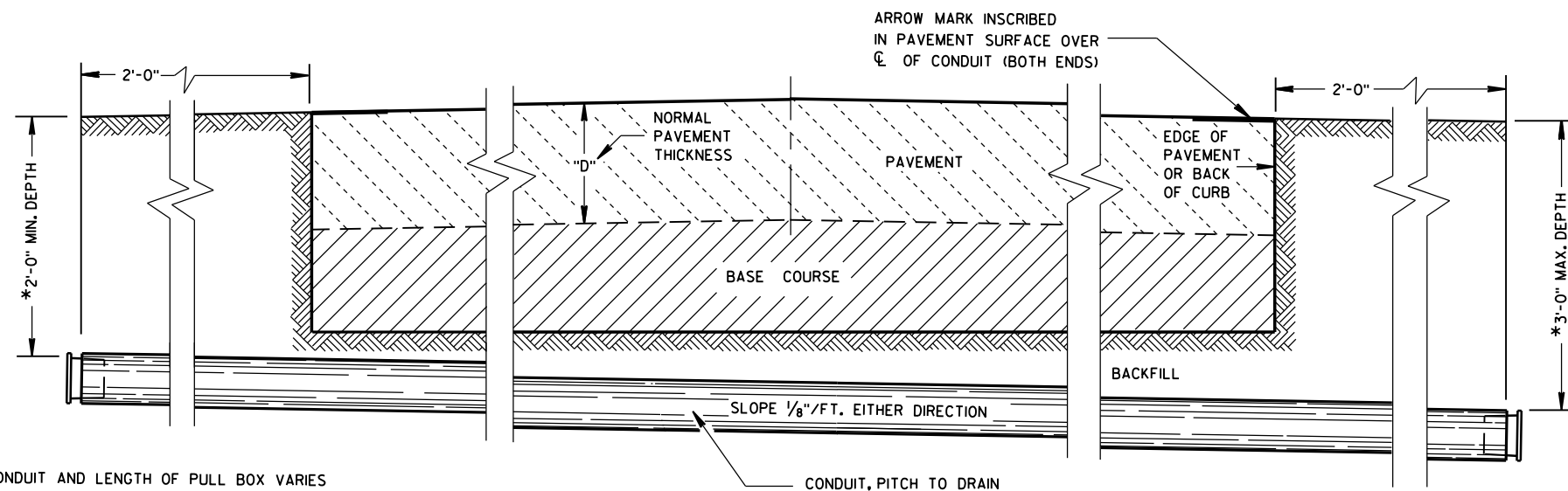
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connolly
DATE 134
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



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 135
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.

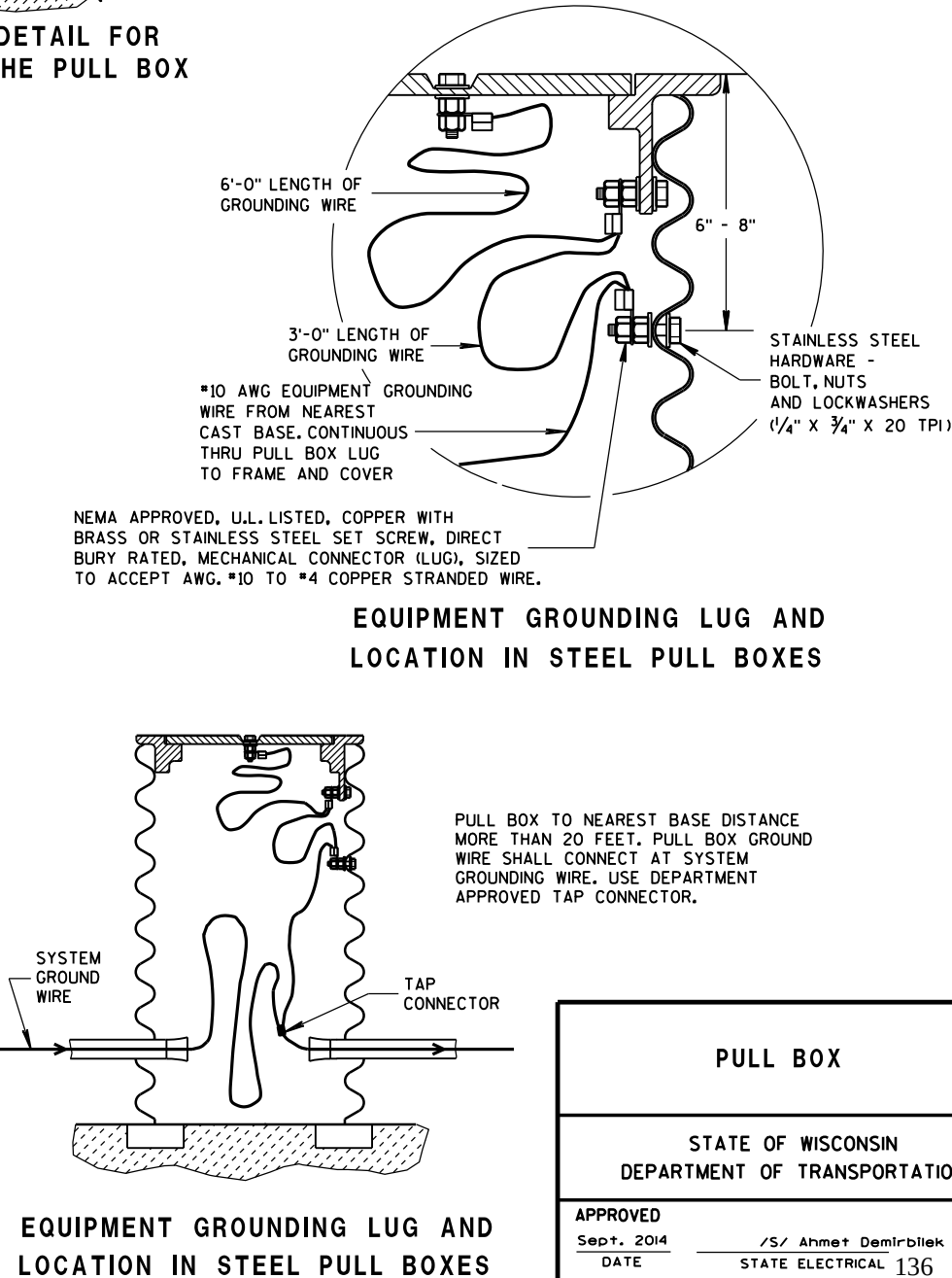
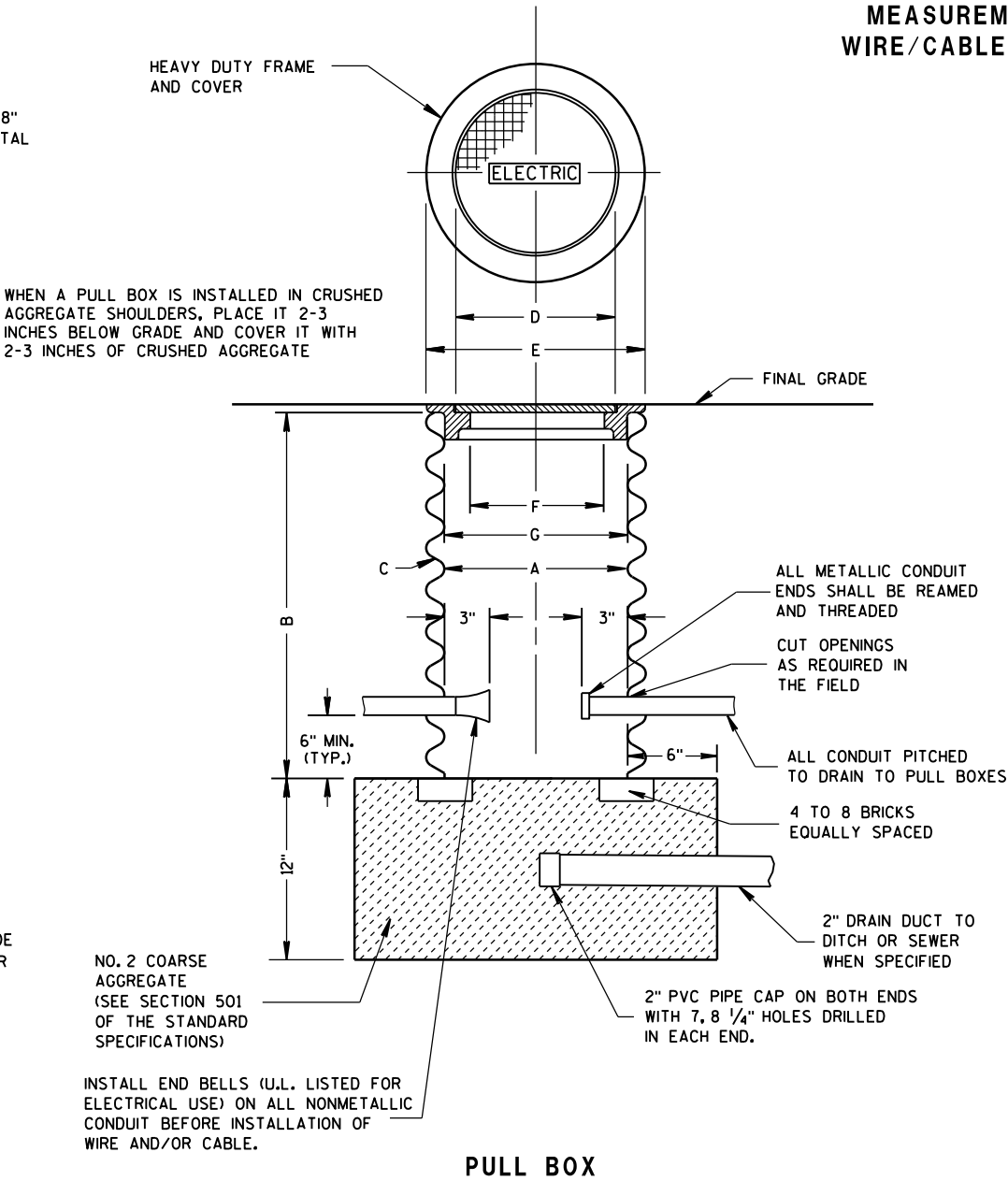
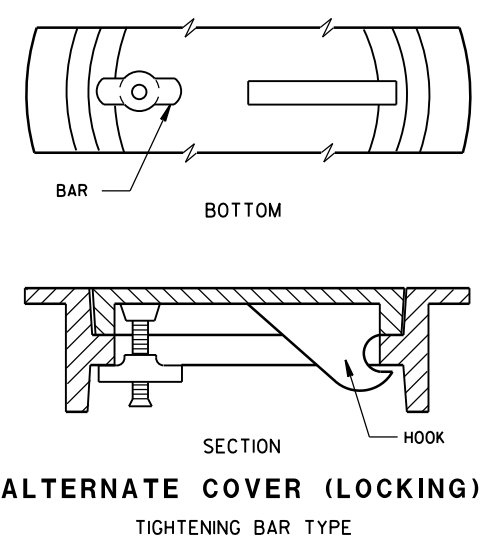
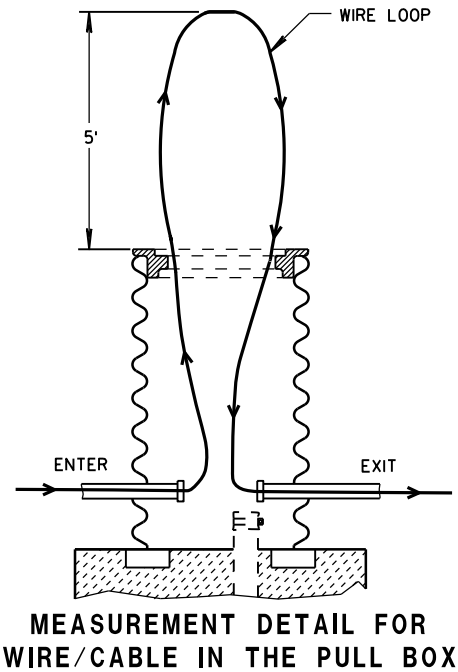
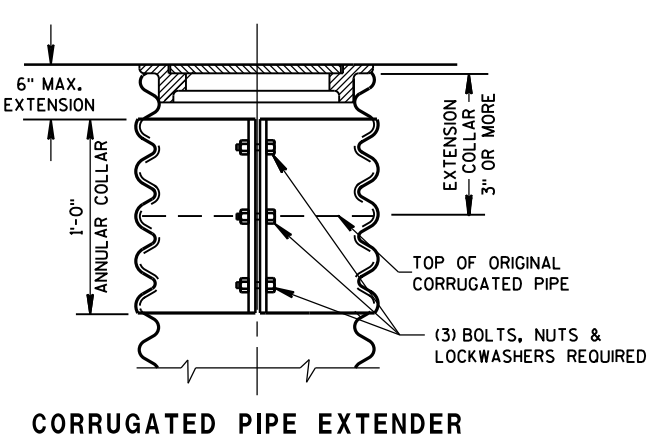
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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.

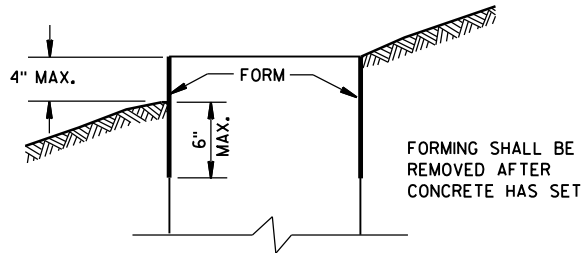
ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

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 Demirelek STATE ELECTRICAL 136
FHWA	

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

GENERAL NOTES

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 AS 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.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X 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 NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

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

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

WHEN REQUIRED TO CONNECT NONMETALLIC 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 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES 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" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

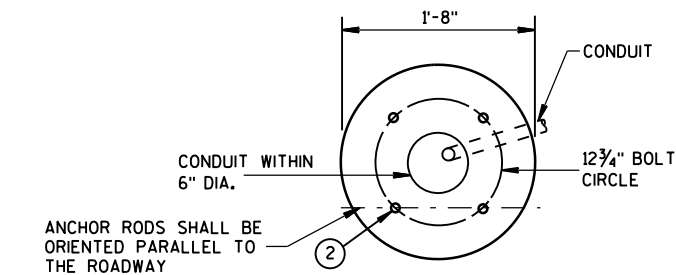
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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).

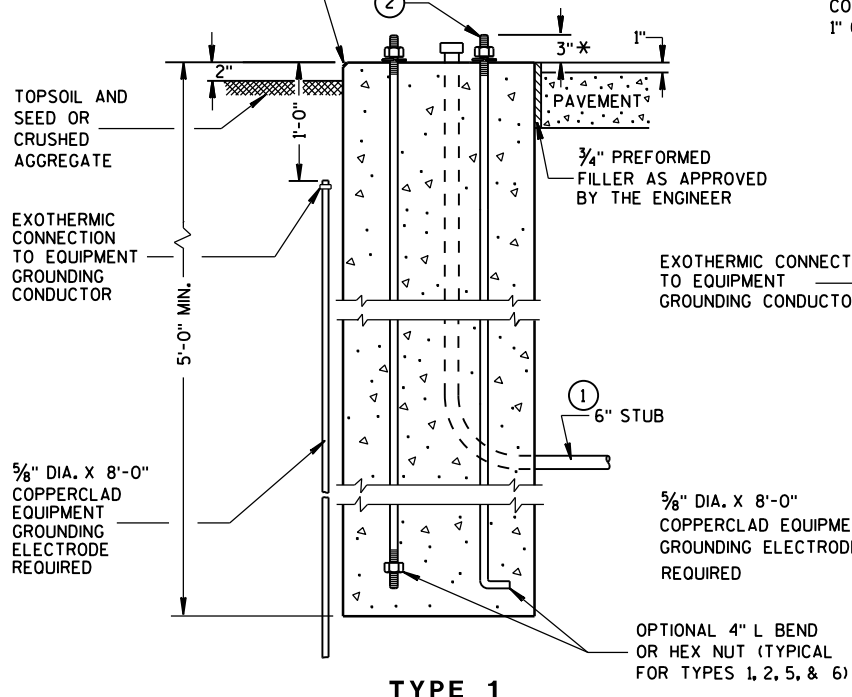
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY 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.

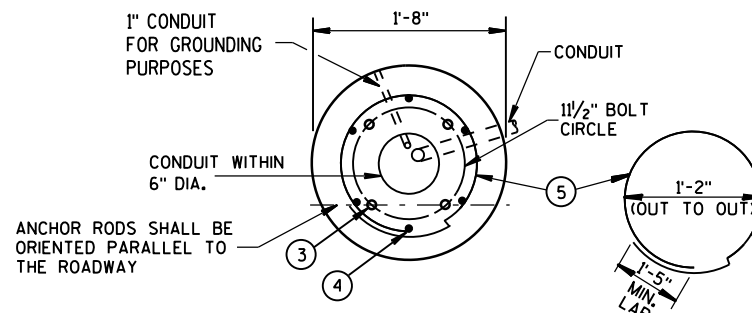


FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

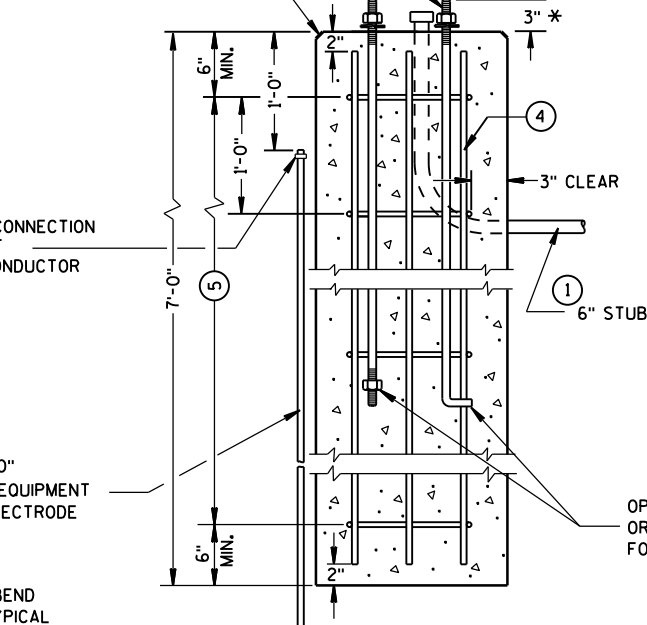
HALF SECTION IN UNPAVED AREA (TYPICAL FOR TYPES 1, 2, 5, & 6)



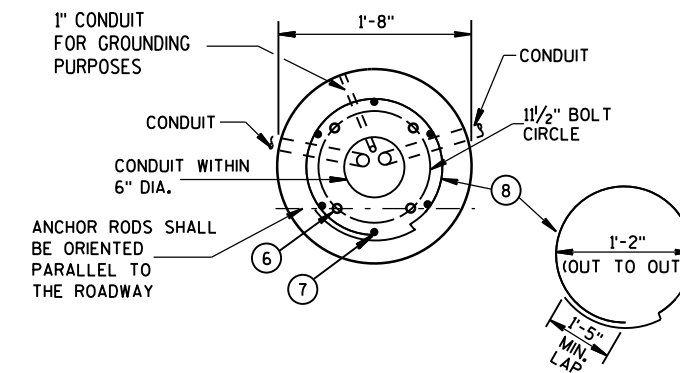
TYPE 1



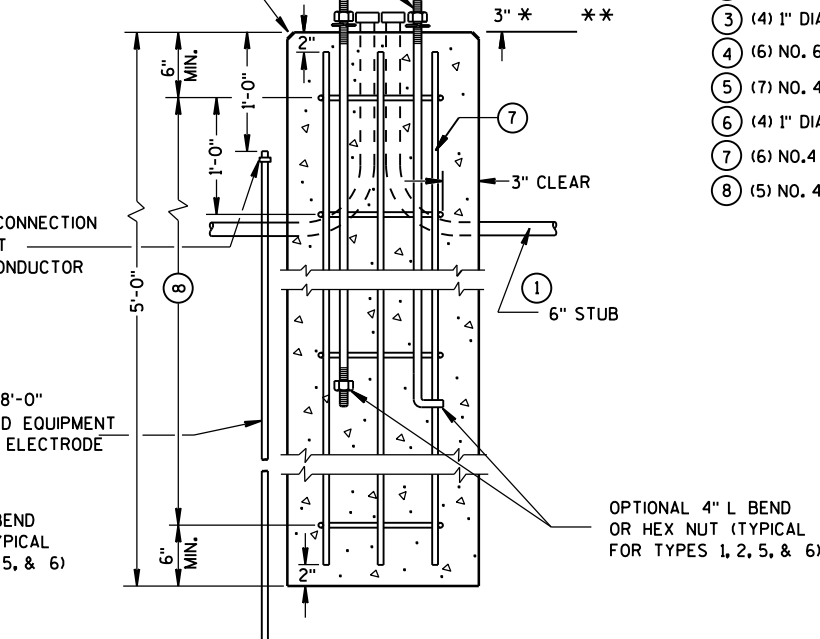
FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5 & 6

CONCRETE BASES

* 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.

** FOR NONBREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014

DATE

/S/ Ahmet Demirel

STATE ELECTRICAL 137

FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

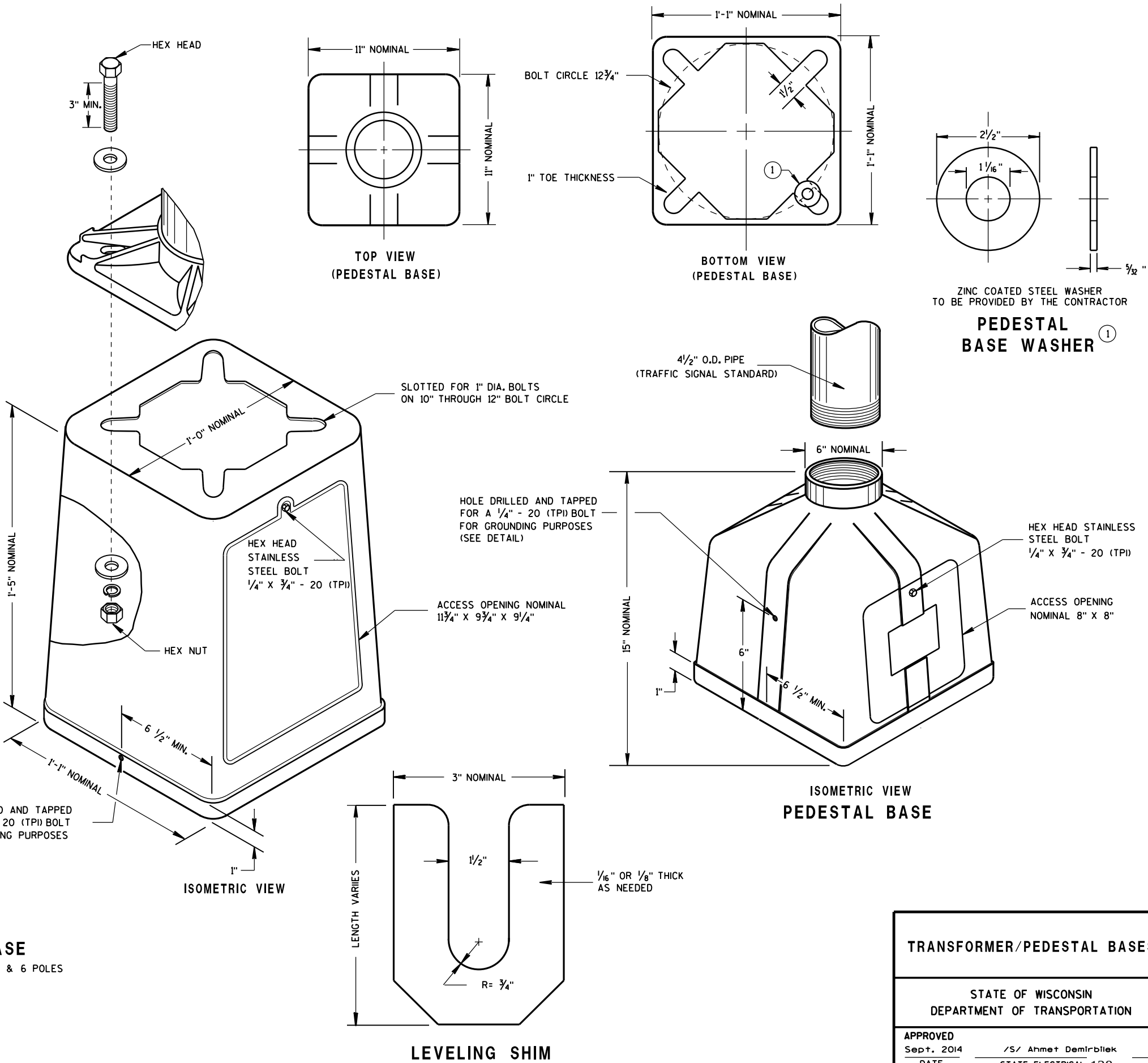
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

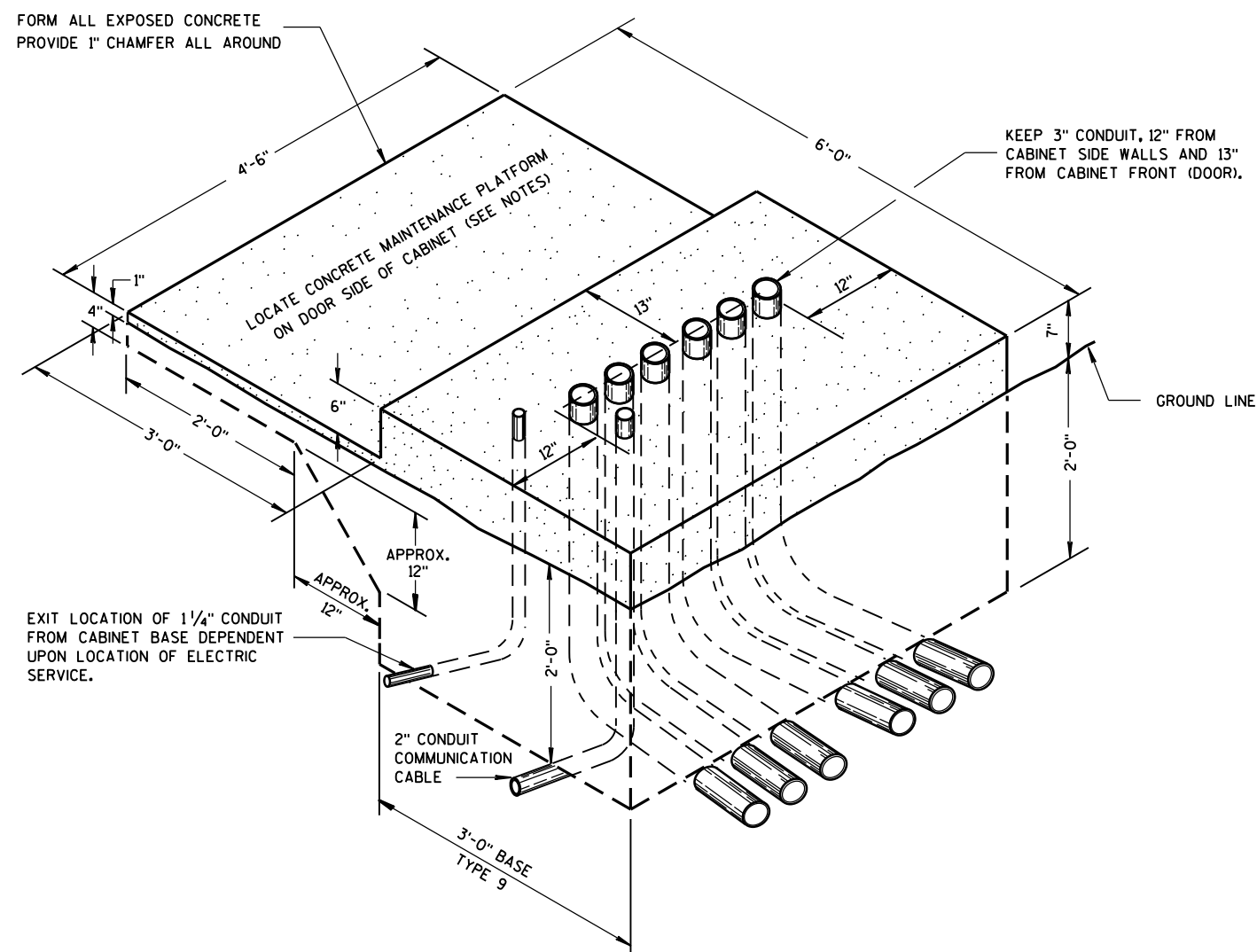
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



TRANSFORMER/PEDESTAL BASES

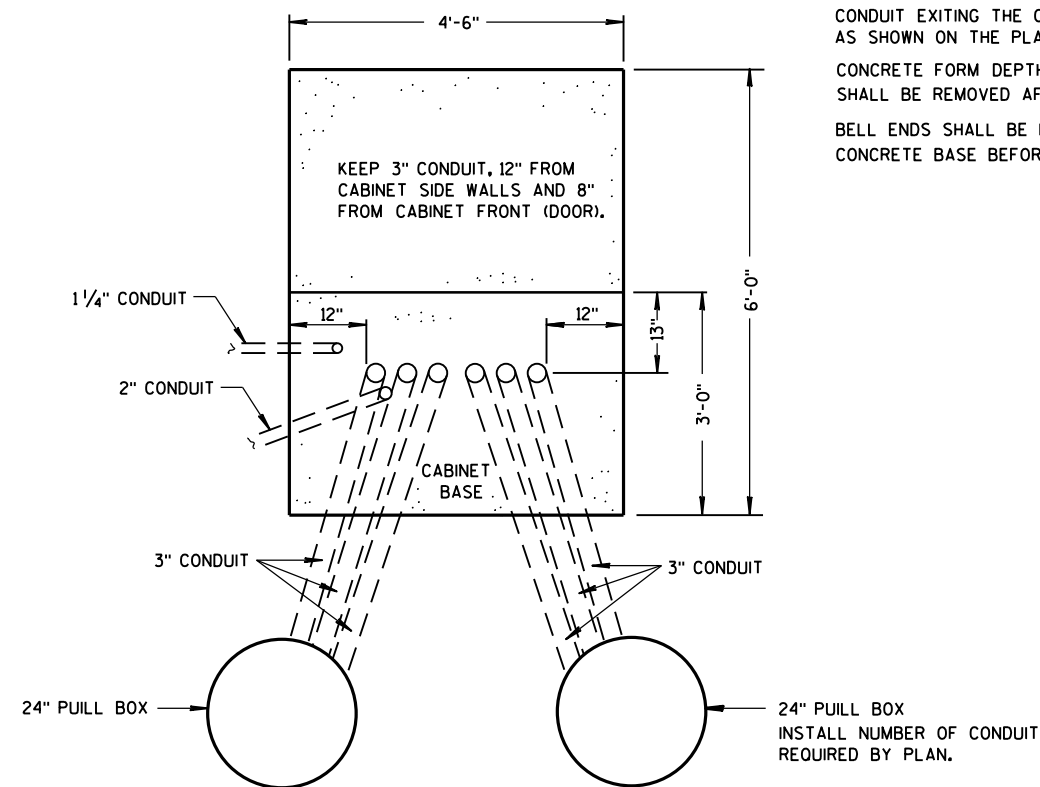
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 138
FHWA



ISOMETRIC VIEW
TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

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 STAINLESS STEEL 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 SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE 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.

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

PLUG ALL BELOW GRADE NONMETALLIC 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 NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" 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 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sep. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 139
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GENERAL NOTES

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 AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS 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.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

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. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

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

WHEN REQUIRED TO CONNECT NONMETALLIC 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).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE 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.

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

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

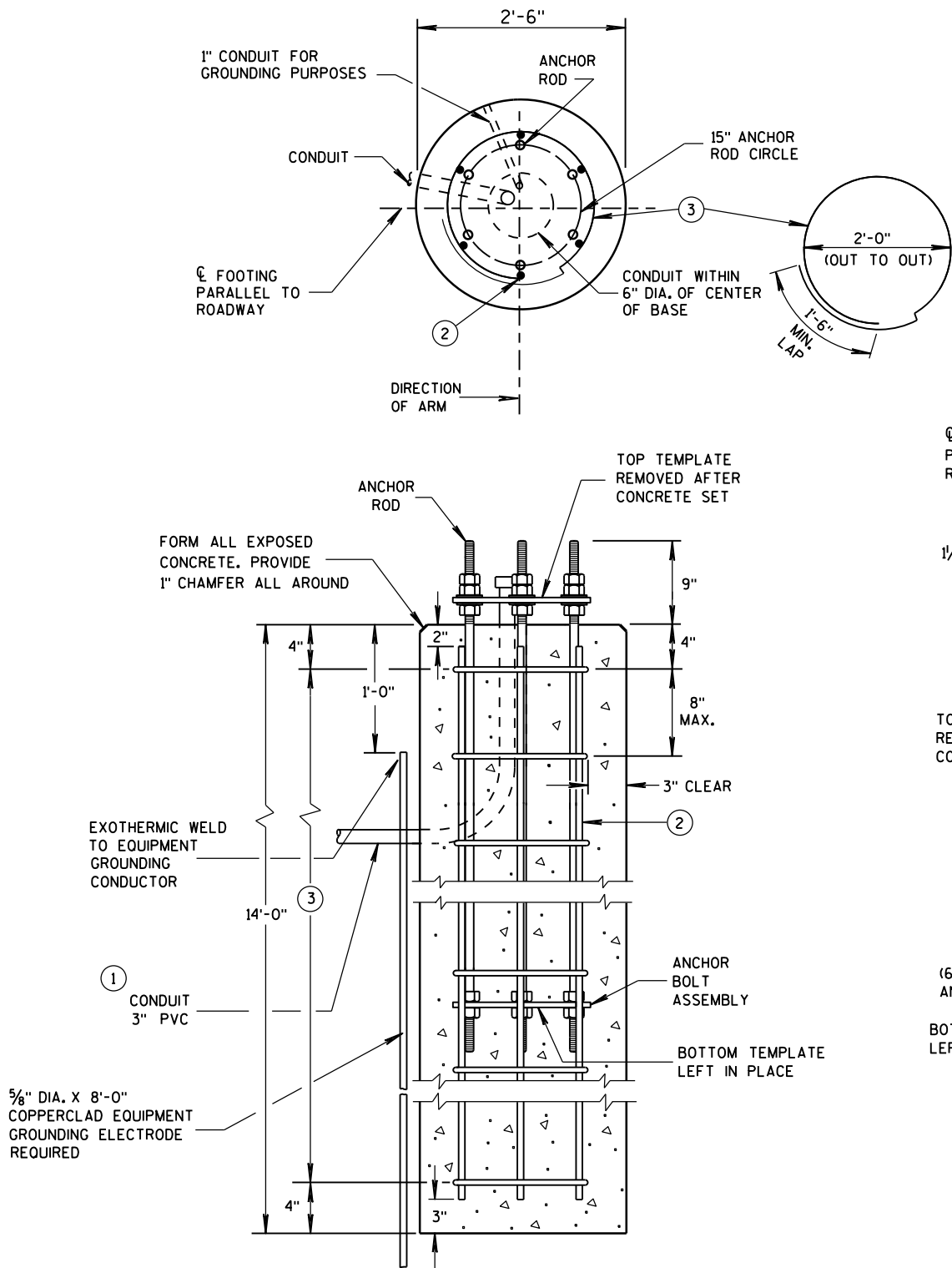
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

② (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

③ (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

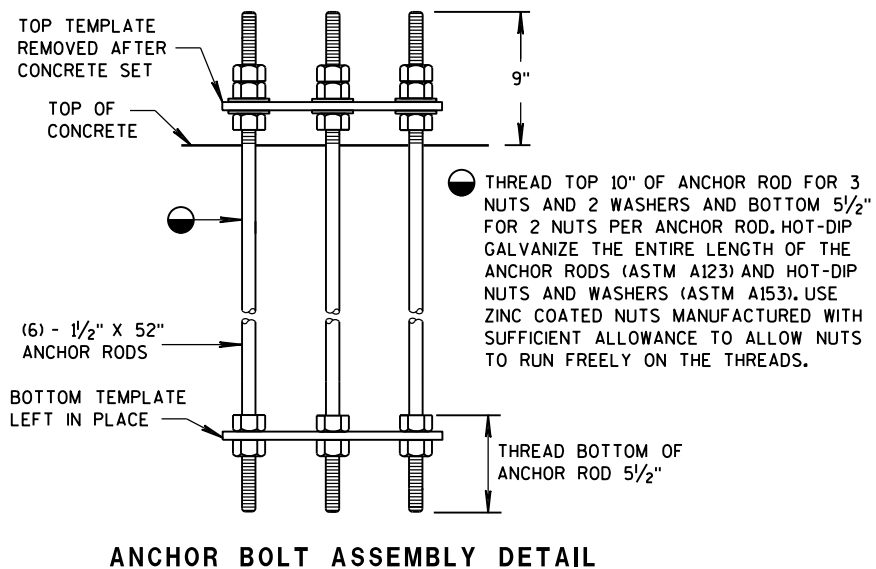
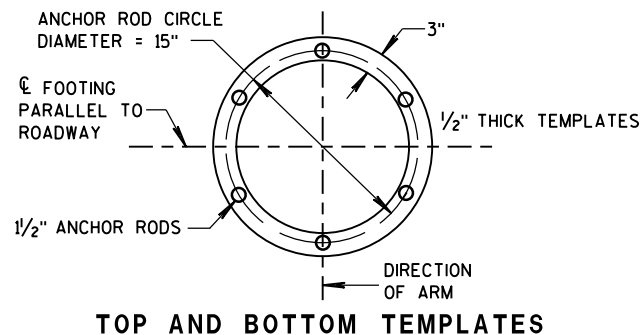
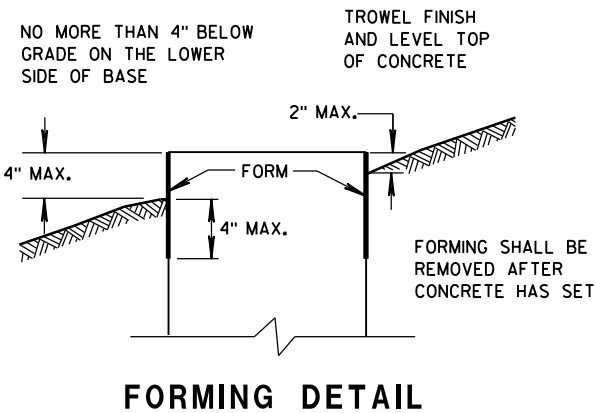
CONCRETE MASONRY	-----	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	-----	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATION)	-----	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	-----	fy=36,000 p.s.i.



CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 & OVER HEIGHT (OH) POLES)

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122

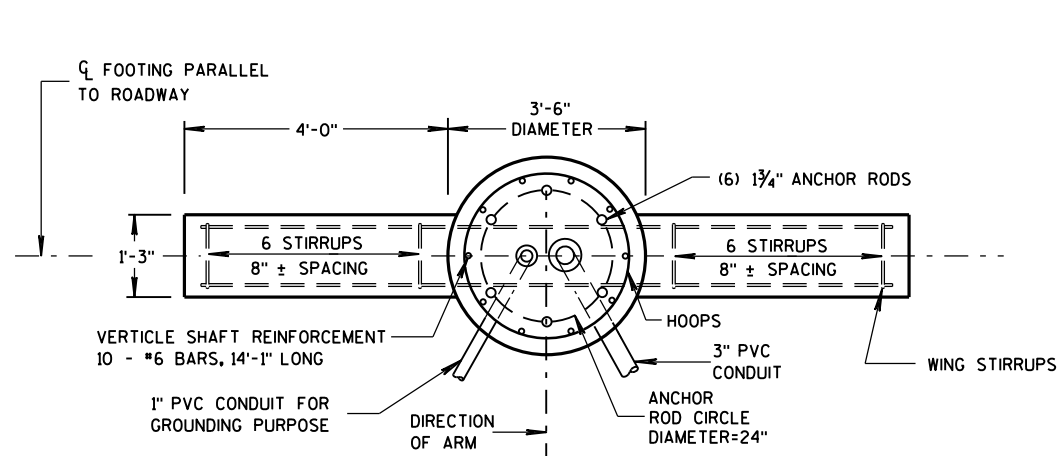


CONCRETE BASE TYPE 10
ANCHOR ASSEMBLY

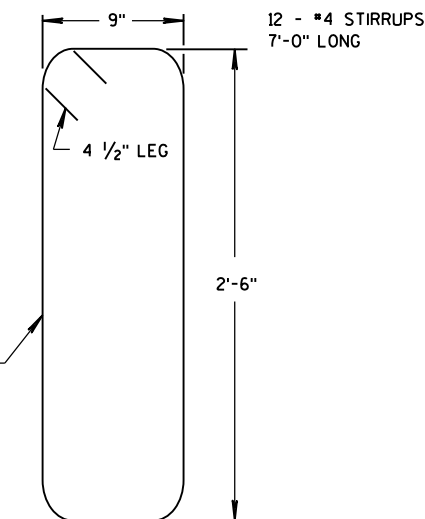
CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

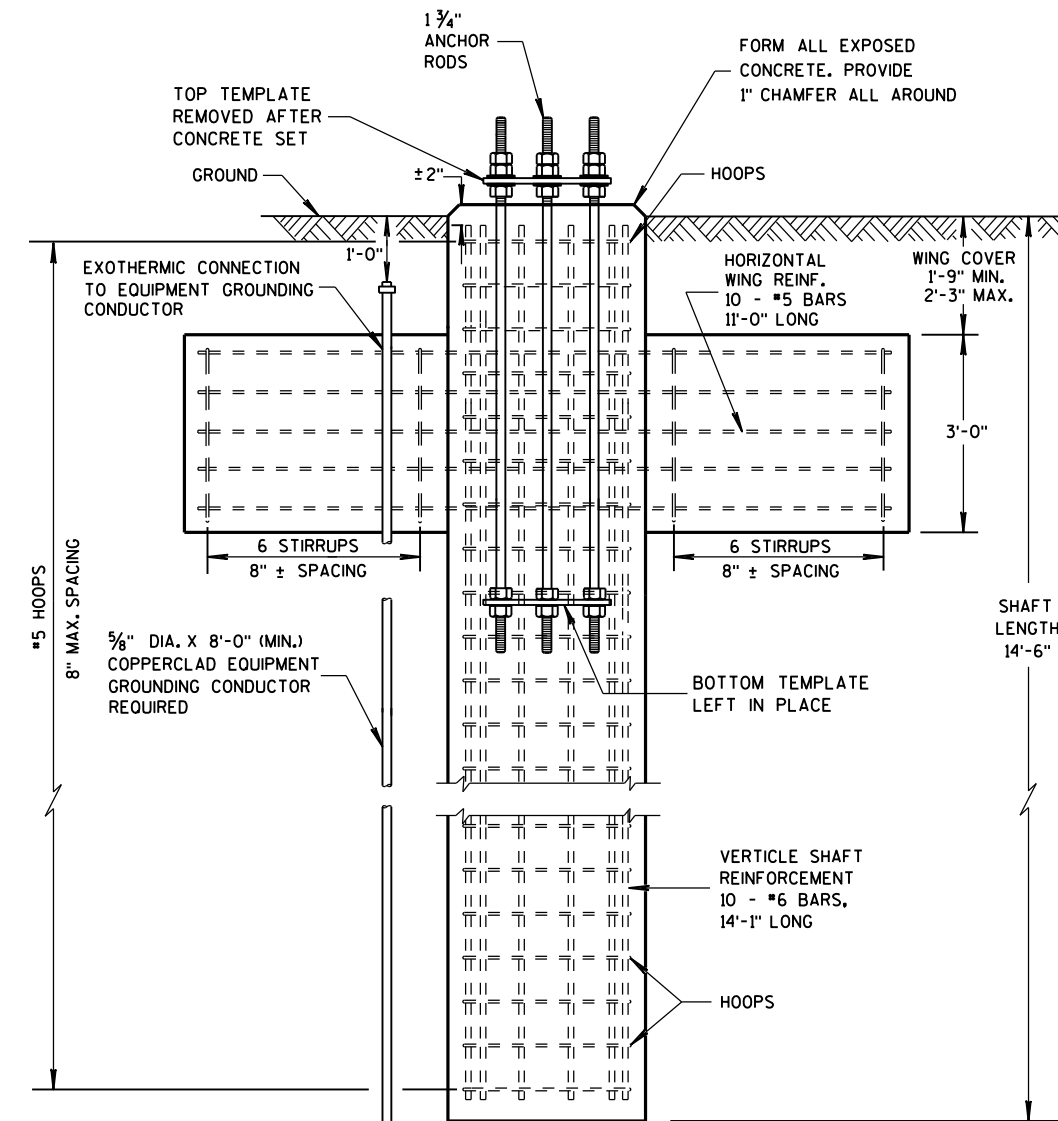
APPROVED
May 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 140
FHWA



PLAN VIEW

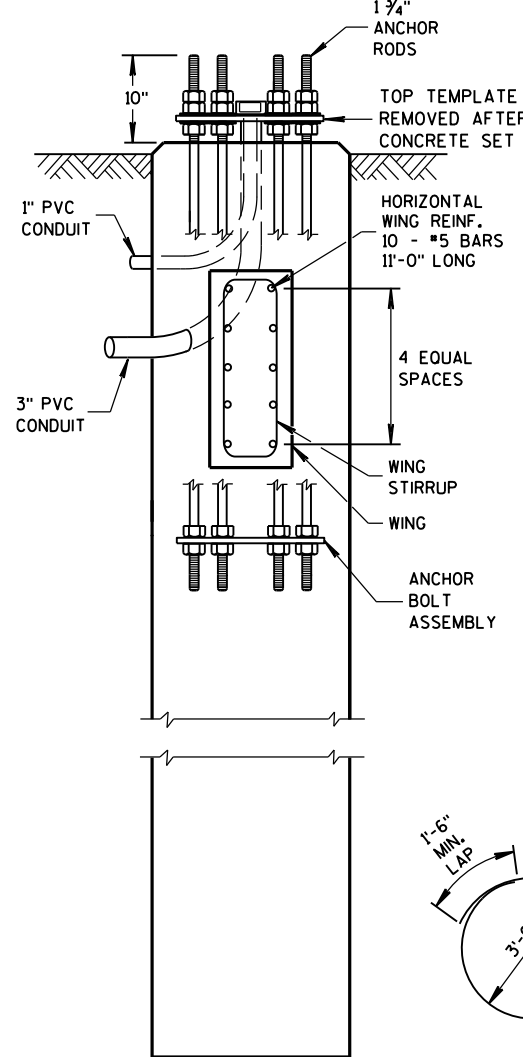


WING STIRRUP



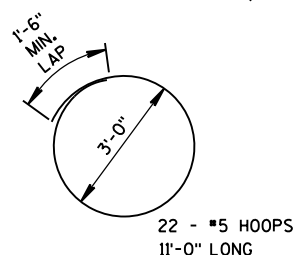
ELEVATION VIEW*

* CONDUITS ARE NOT SHOWN ON THIS VIEW FOR CLARITY



SIDE VIEW **

** HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY



HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, 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.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4 1/2" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE 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 INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE 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.

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

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL 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, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

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

CONCRETE MASONRY $f_c=3,500$ p.s.i.

HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 $f_y=60,000$ p.s.i.

ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATIONS) $f_y=55,000$ p.s.i.

TEMPLATES, ASTM A709 GRADE 36 $f_y=36,000$ p.s.i.

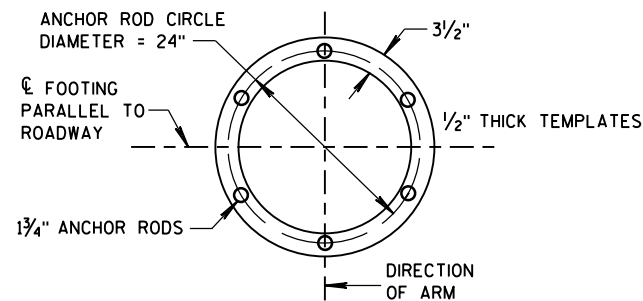
(FOR TYPE 12 & 13 & OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 635 LBS.

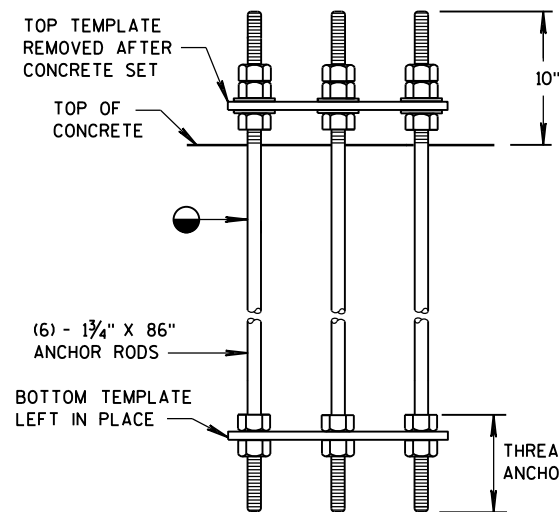
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

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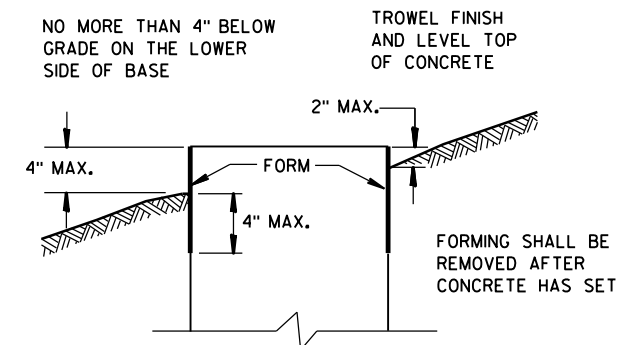
TOP AND BOTTOM TEMPLATES



● THREAD TOP 11" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT-DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR RODS (ASTM A123) AND HOT-DIP NUTS AND WASHERS (ASTM A153). USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13

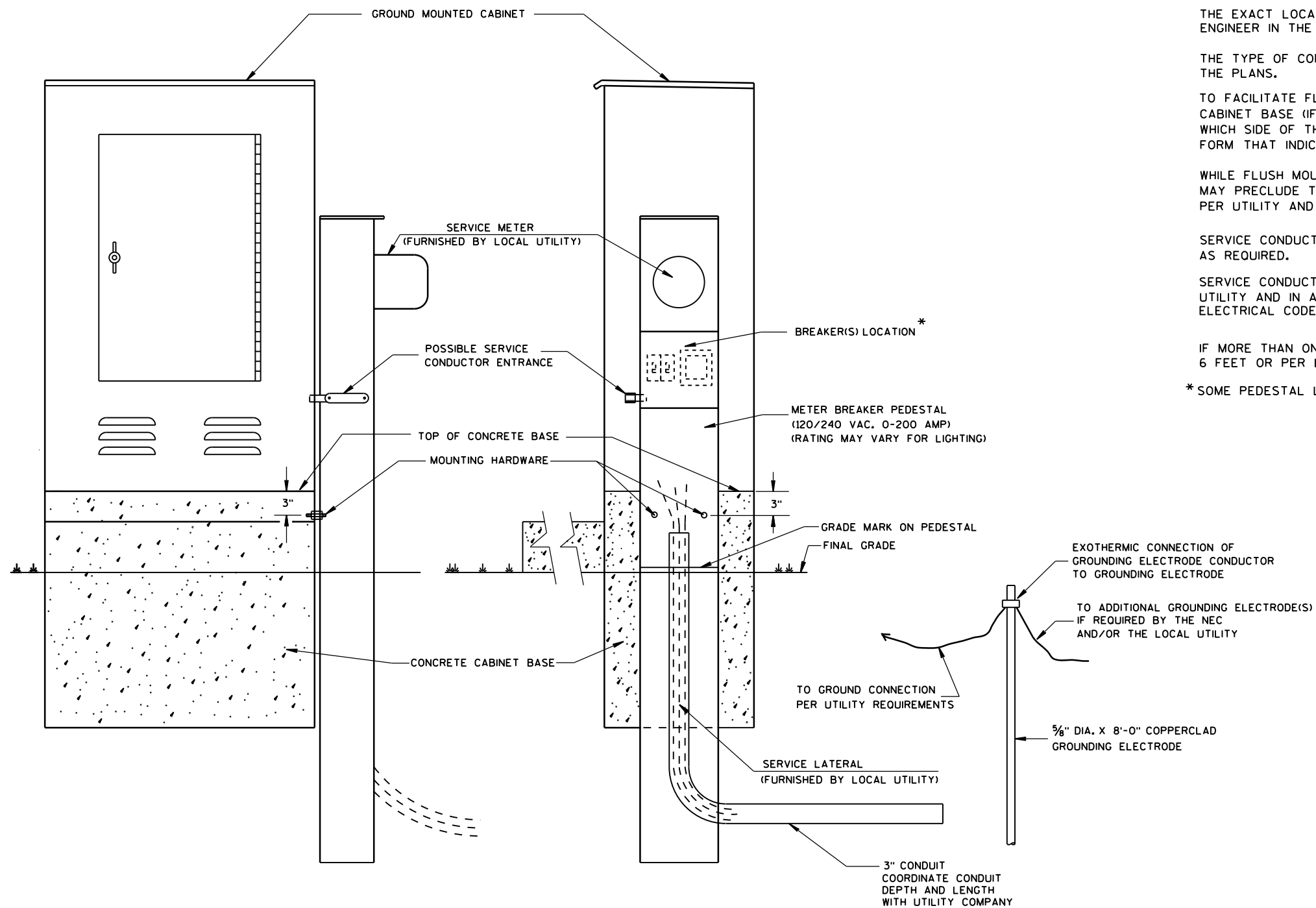
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2017
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL 142

FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

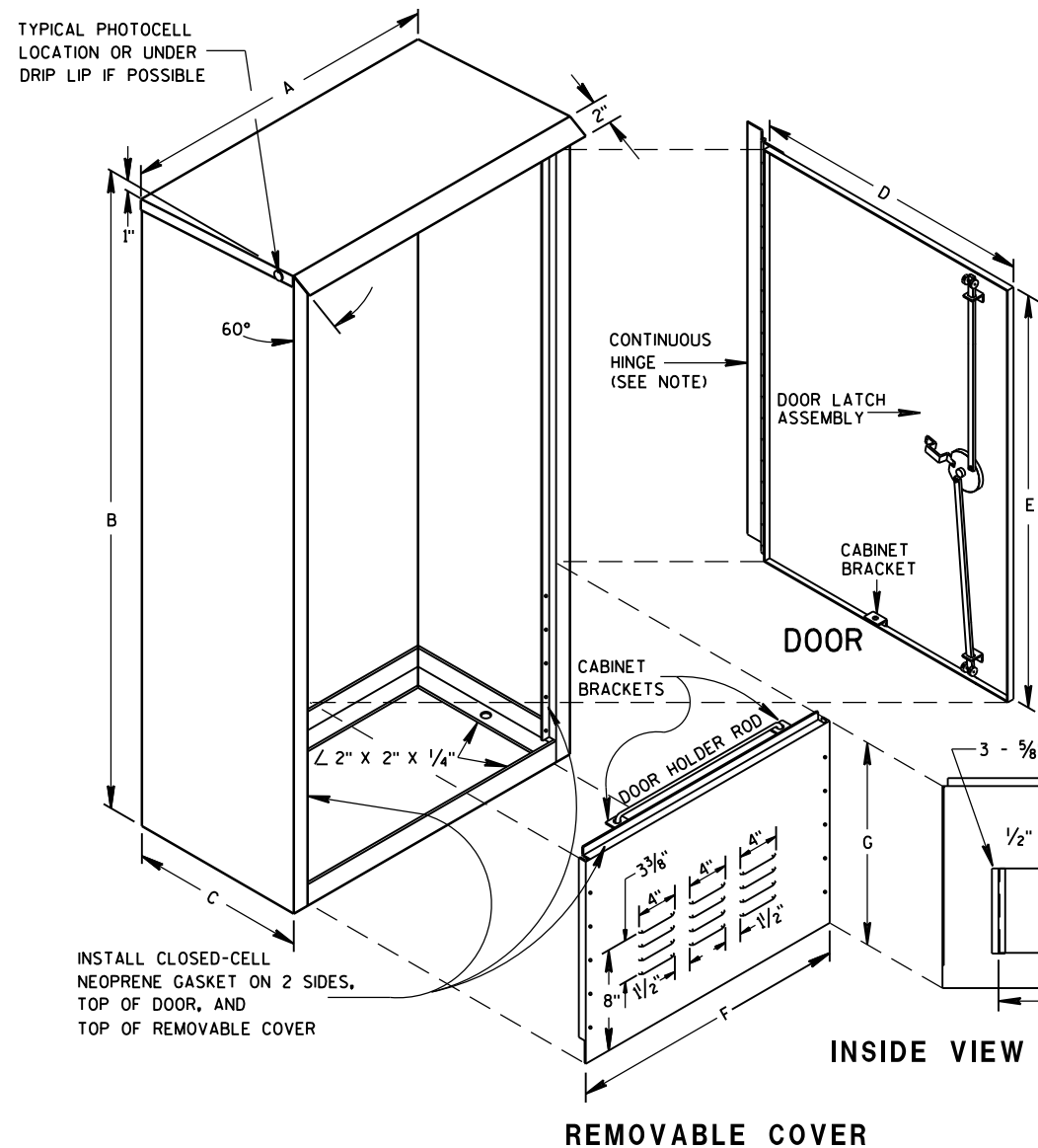
Sept. 2014

DATE

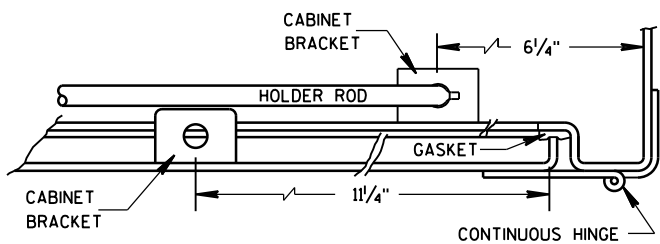
FHWA

/S/ Ahmet Demirbilek

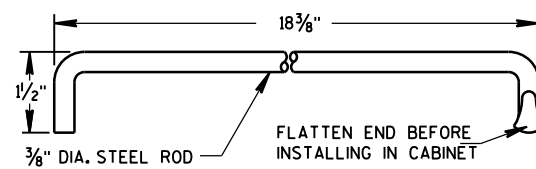
STATE ELECTRICAL 143



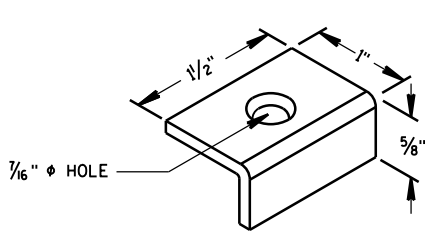
INSTALL CLOSED-CELL NEOPRENE GASKET ON 2 SIDES, TOP OF DOOR, AND TOP OF REMOVABLE COVER



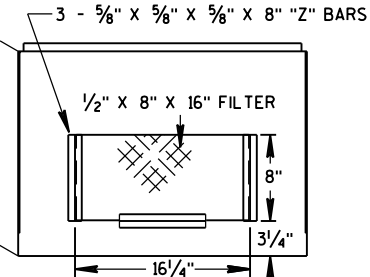
HINGE & DOOR HOLDER



HOLDER ROD



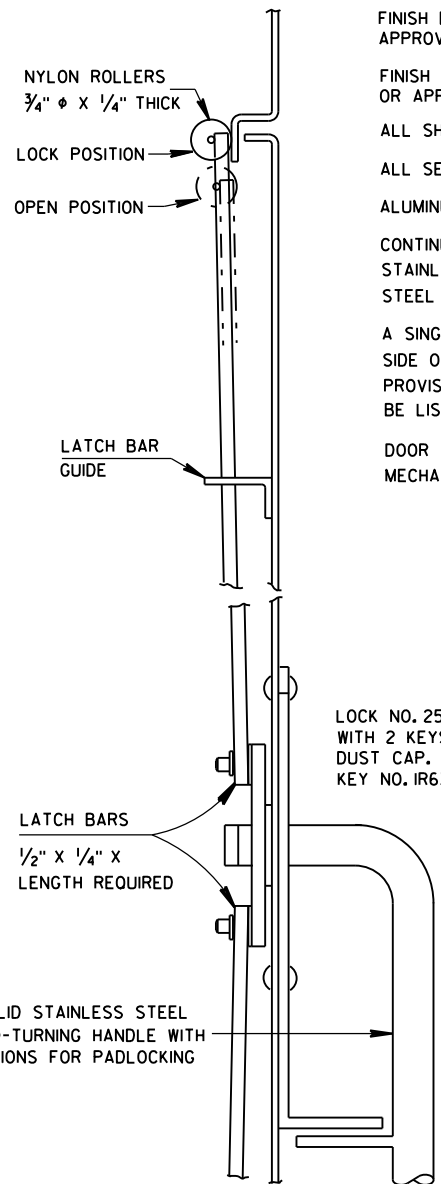
CABINET BRACKET



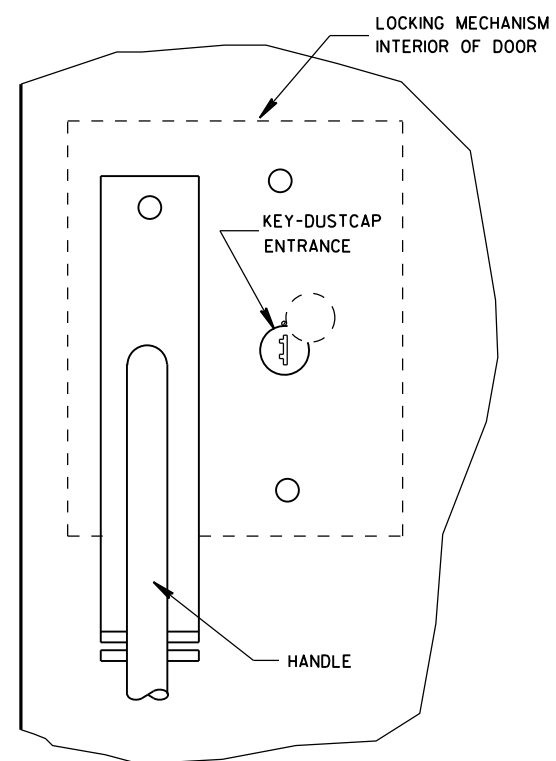
INSIDE VIEW SHOWING FILTER

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

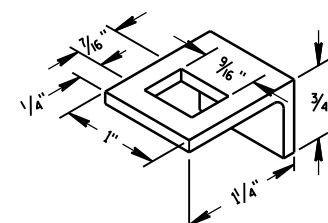


SIDE VIEW



FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

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.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

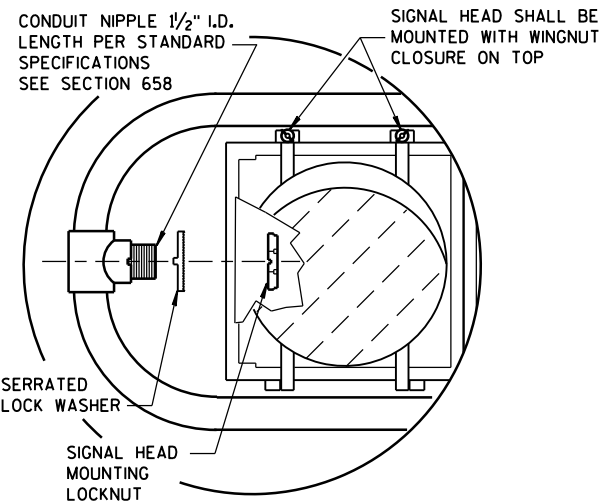
A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

SIGNAL CONTROL CABINET

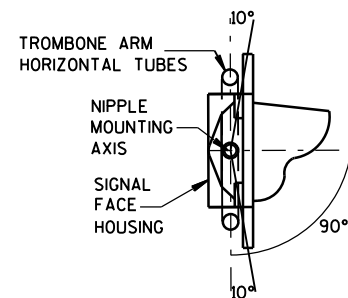
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 144
FHWA



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

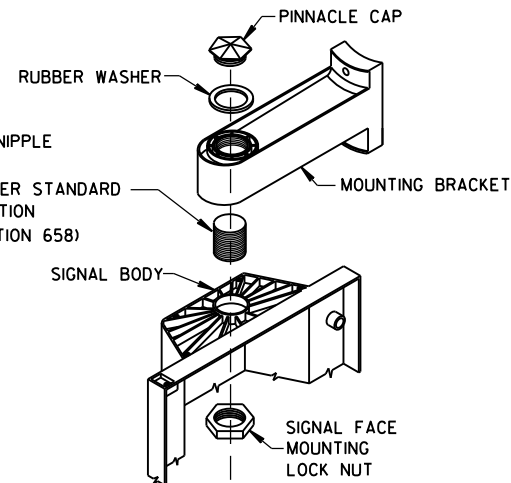
* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

CONDUIT NIPPLE
1/2" I.D.
LENGTH PER STANDARD
SPECIFICATION
(SEE SECTION 658)



SIGNAL FACE MOUNTING DETAIL (BANDED)

GENERAL NOTES

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

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

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

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

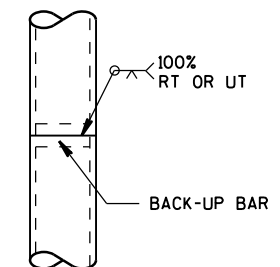
WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- ① 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
- ③ GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE 10R MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ⑦ MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1/2 INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).
- ⑧ VERTICAL STRUT (ADJUSTABLE), ONE (1) SET SCREW (1/4" X 3/4" LONG-20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- ⑨ FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
- ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



POLE SPLICE DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

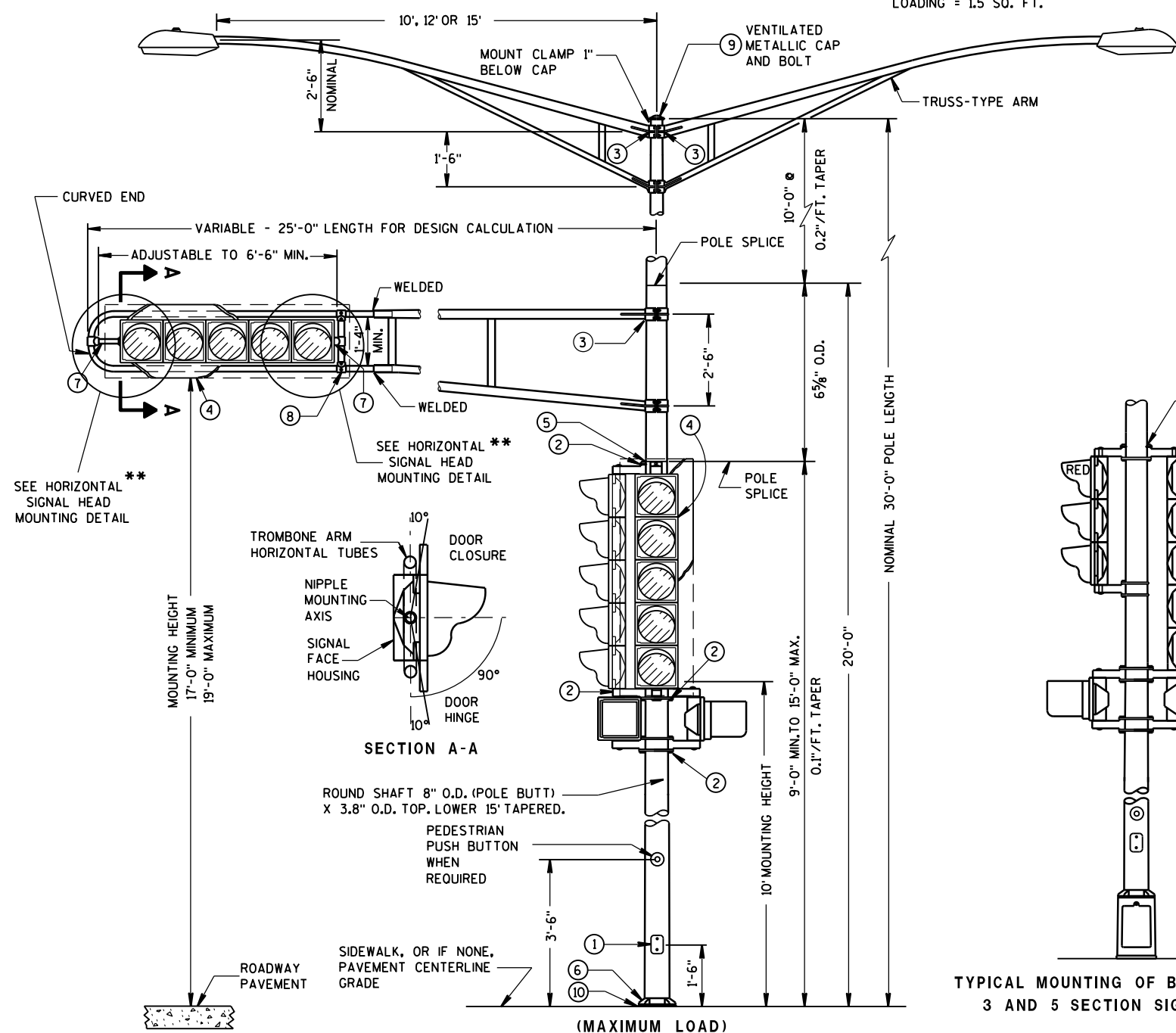
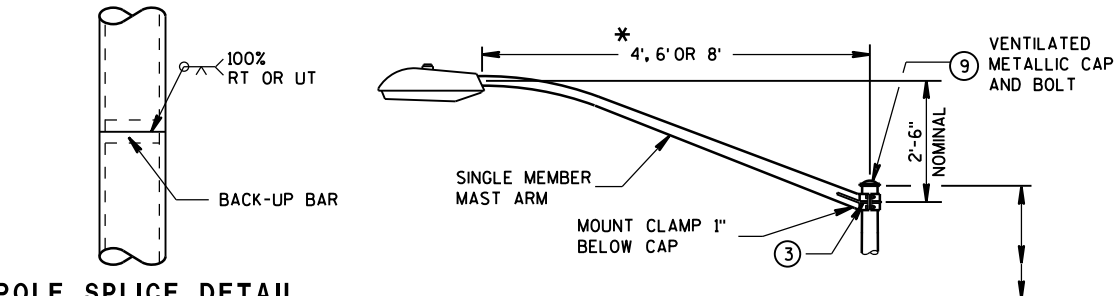
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 145

FOR MANUFACTURERS USE ONLY

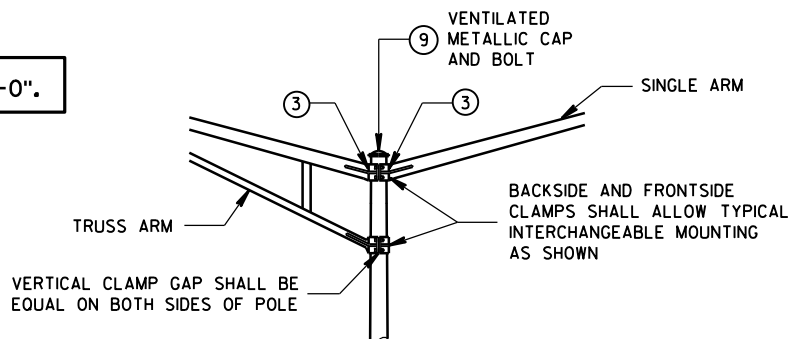
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

* RISE FOR 4' ARM SHALL BE 2'-0".

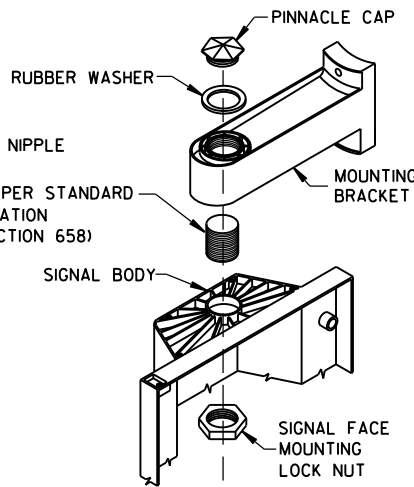
POLE SPLICE DETAIL



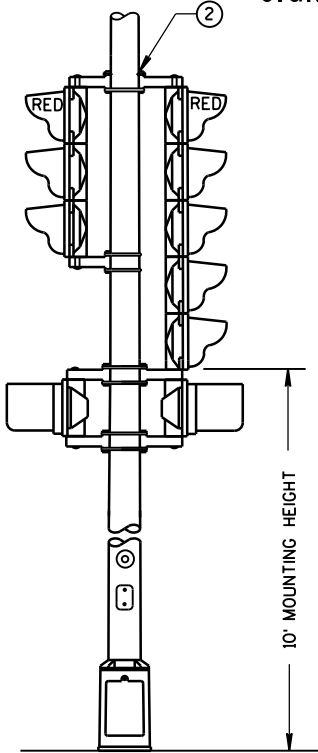
INTERCHANGEABLE MOUNTING DETAIL



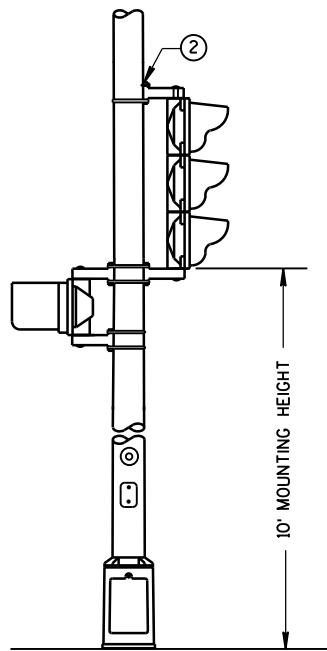
LUMINAIRE
WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.



**SIGNAL FACE MOUNTING DETAIL
(BANDED)**



TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

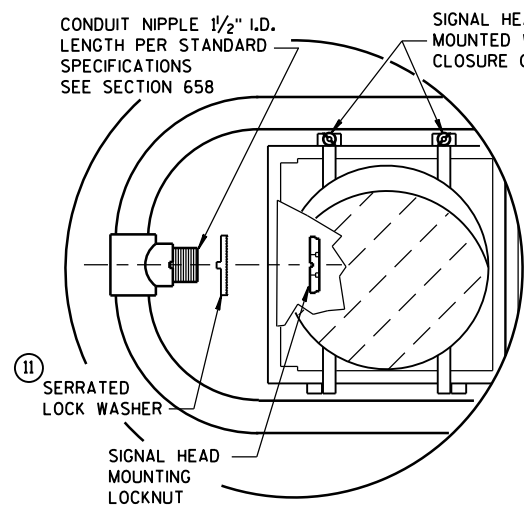
SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

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 & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
- ③ GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- ⑥ TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.
- ⑦ MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1 1/2 INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)
- ⑧ VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- ⑨ FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



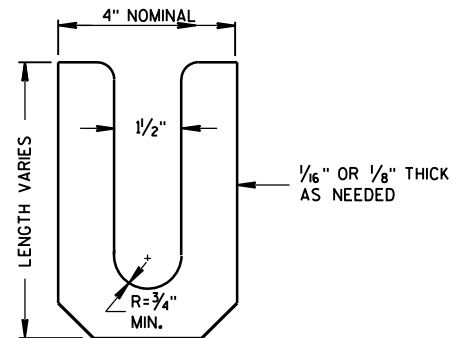
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

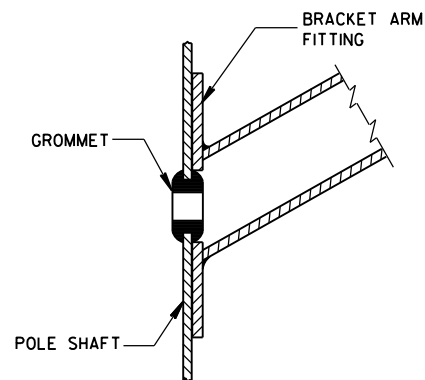
**POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 3
(HEAVY DUTY)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 146

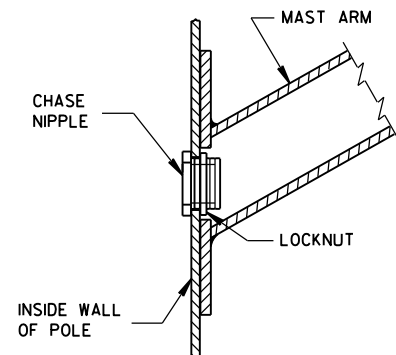
TYPE 3 POLE MOUNTING CONFIGURATION



LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



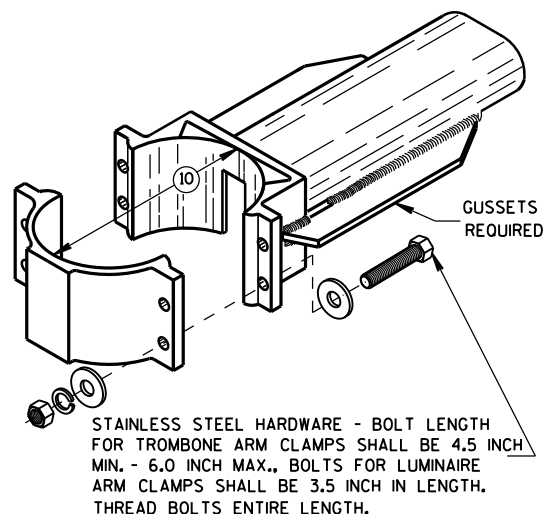
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

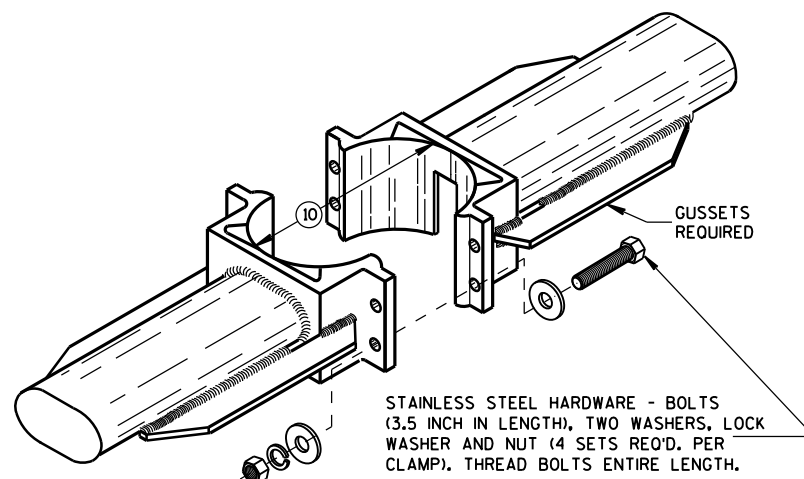
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ⑩ 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ⑪ INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ⑫ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT
CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ⑬ 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.

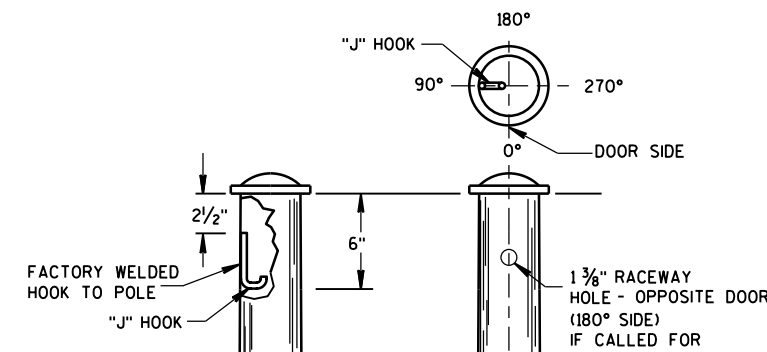
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE
AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



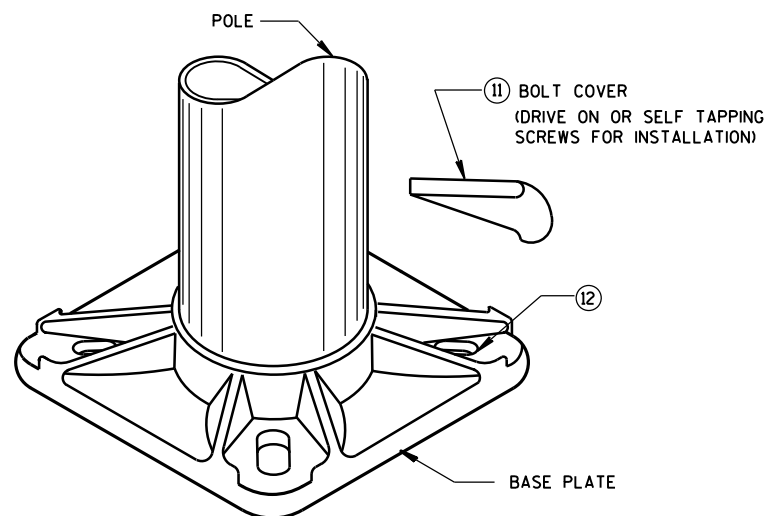
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



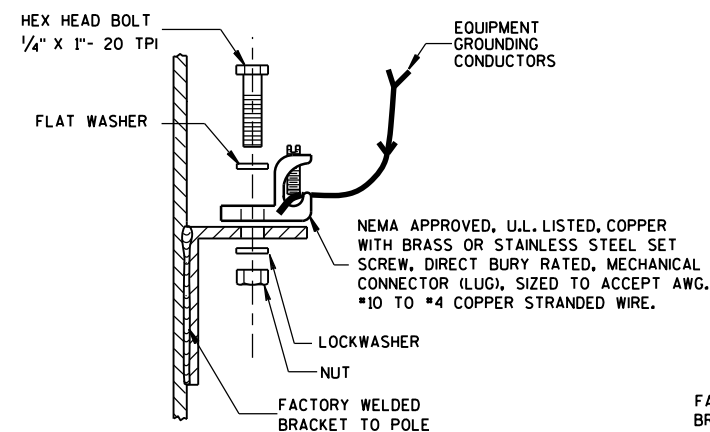
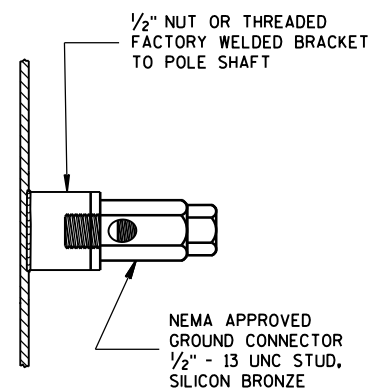
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



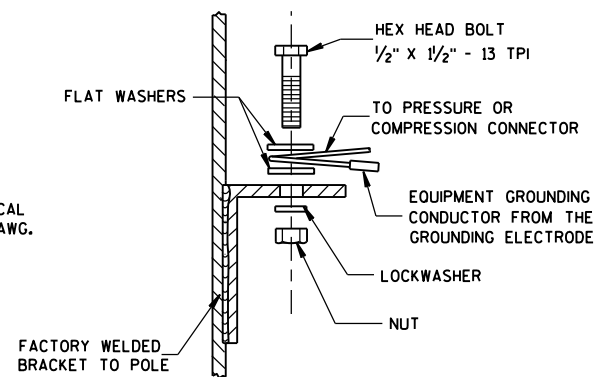
TYPICAL "J" HOOK LOCATION



BASE PLATE



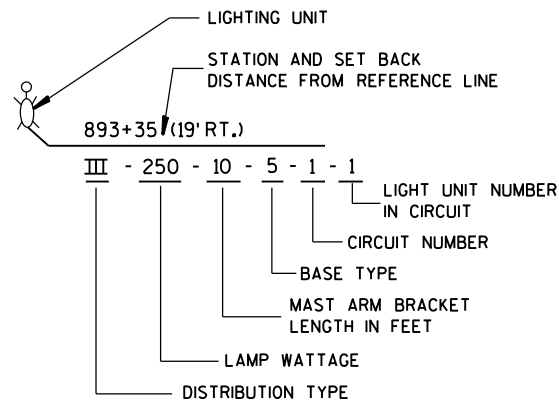
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



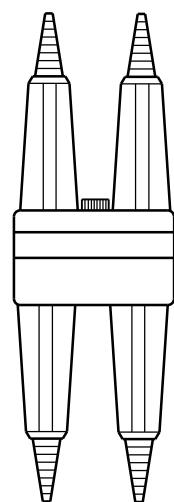
HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

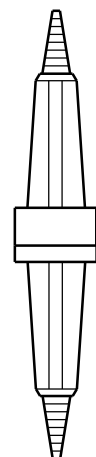
APPROVED
Feb. 2015
DATE /S/ Ahmet Demirbilek
STATE ELECTRICAL 147
FHWA



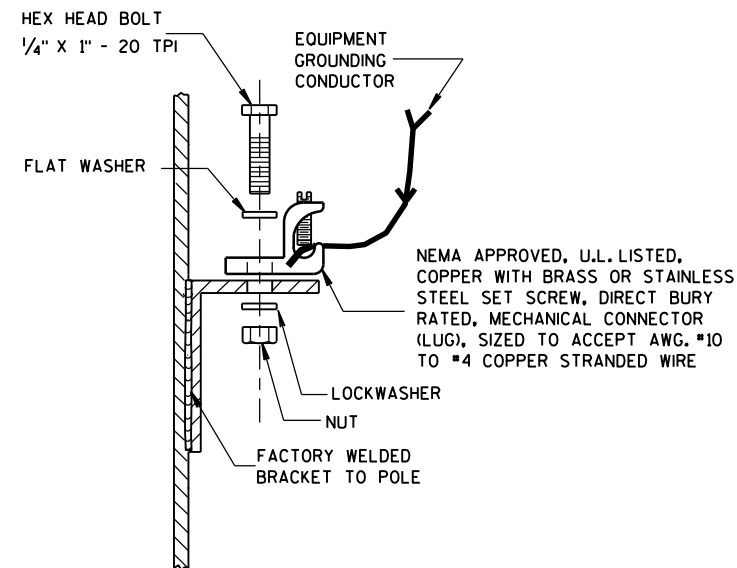
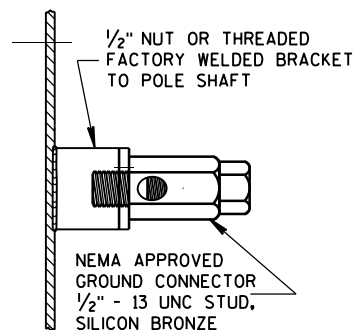
**LIGHTING UNIT CODE
(TYPICAL)**



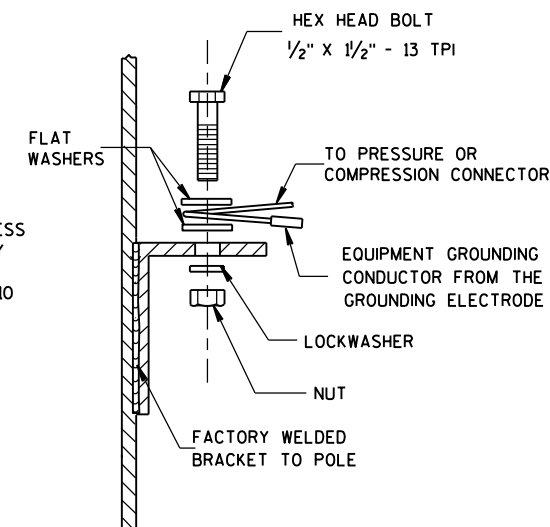
**DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT**



**DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT**



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



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 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.

ADDITIONAL CONDUCTORS
AND FUSE FOR TWIN
LIGHTING UNITS

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPICE CONNECTOR.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

CONDUCTORS TO
LUMINAIRES SHALL BE #12 AWG,
COPPER STRANDED, U.S.E. RATED,
XLP INSULATED. SINGLE
LIGHTING UNIT SHOWN

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE SINGLE POLE FUSE ASSEMBLY.
600 VAC, WITH 5 AMP FAST ACTING
FUSE (SEE DETAIL "B")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTOR AND FUSEHOLDER

APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

ALTERNATE PHASE UNGROUNDED
CIRCUIT CONDUCTOR PASSING
THROUGH THIS POLE

**3 WIRE - 120, 240 OR 480 VAC (UNGROUND CONDUCTOR)
WITH GROUNDED CONDUCTOR AND
WITH EQUIPMENT GROUNDING CONDUCTOR**

TWIN LIGHTING UNITS REQUIRE
INDIVIDUAL SETS OF UNGROUNDED
CONDUCTORS AND FUSE ASSEMBLY.

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPICE CONNECTOR.

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

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

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE FUSE ASSEMBLY
TWO POLE, 600 VAC,
WITH 5 AMP FAST ACTING
FUSE (SEE DETAIL "A")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTORS AND FUSEHOLDERS

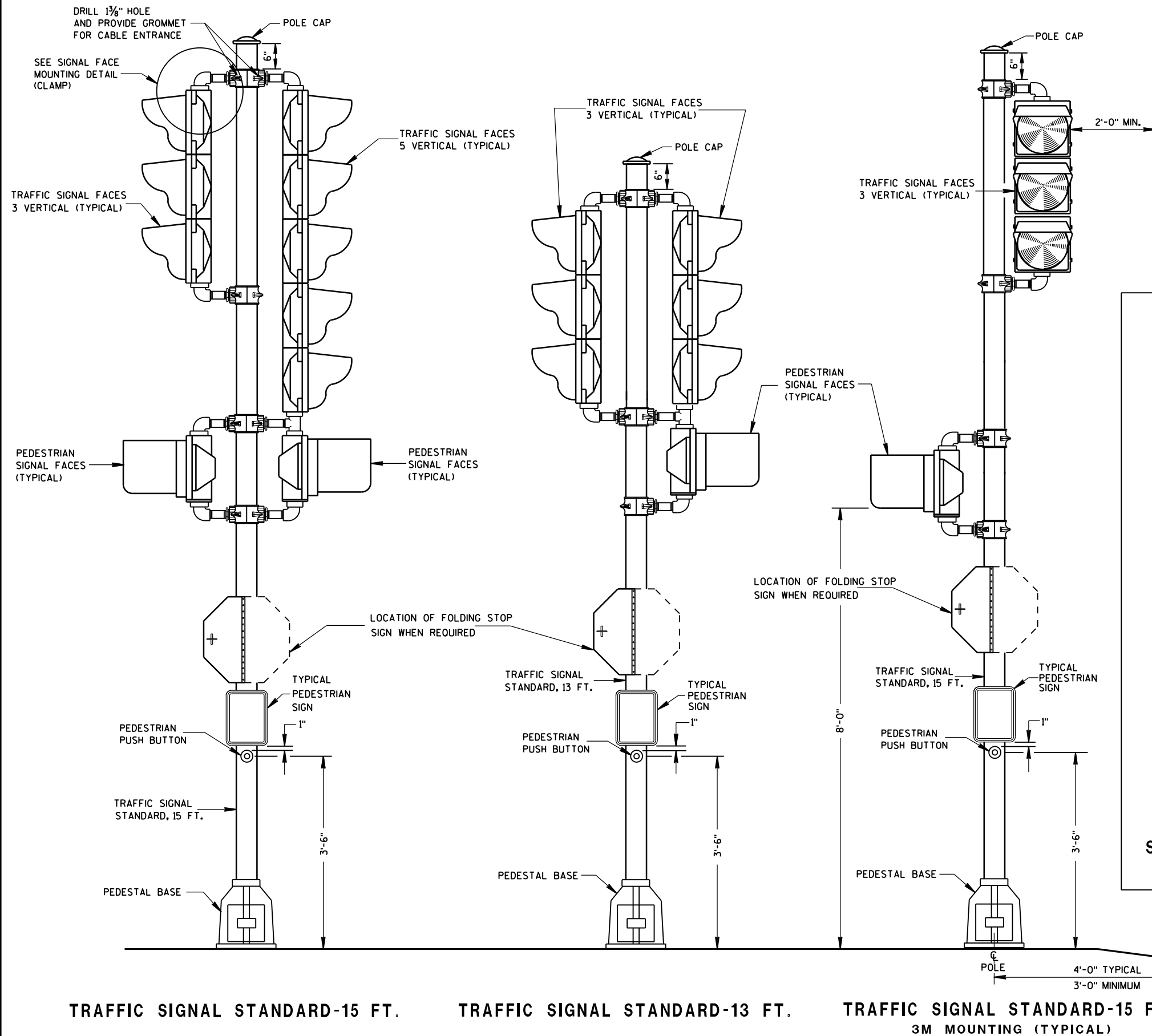
APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

**NON-FREEWAY LIGHTING UNIT
POLE WIRING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 148
FHWA



GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLE CLAMP (AS SHOWN) MOUNTING BRACKETS SHALL BE USED.

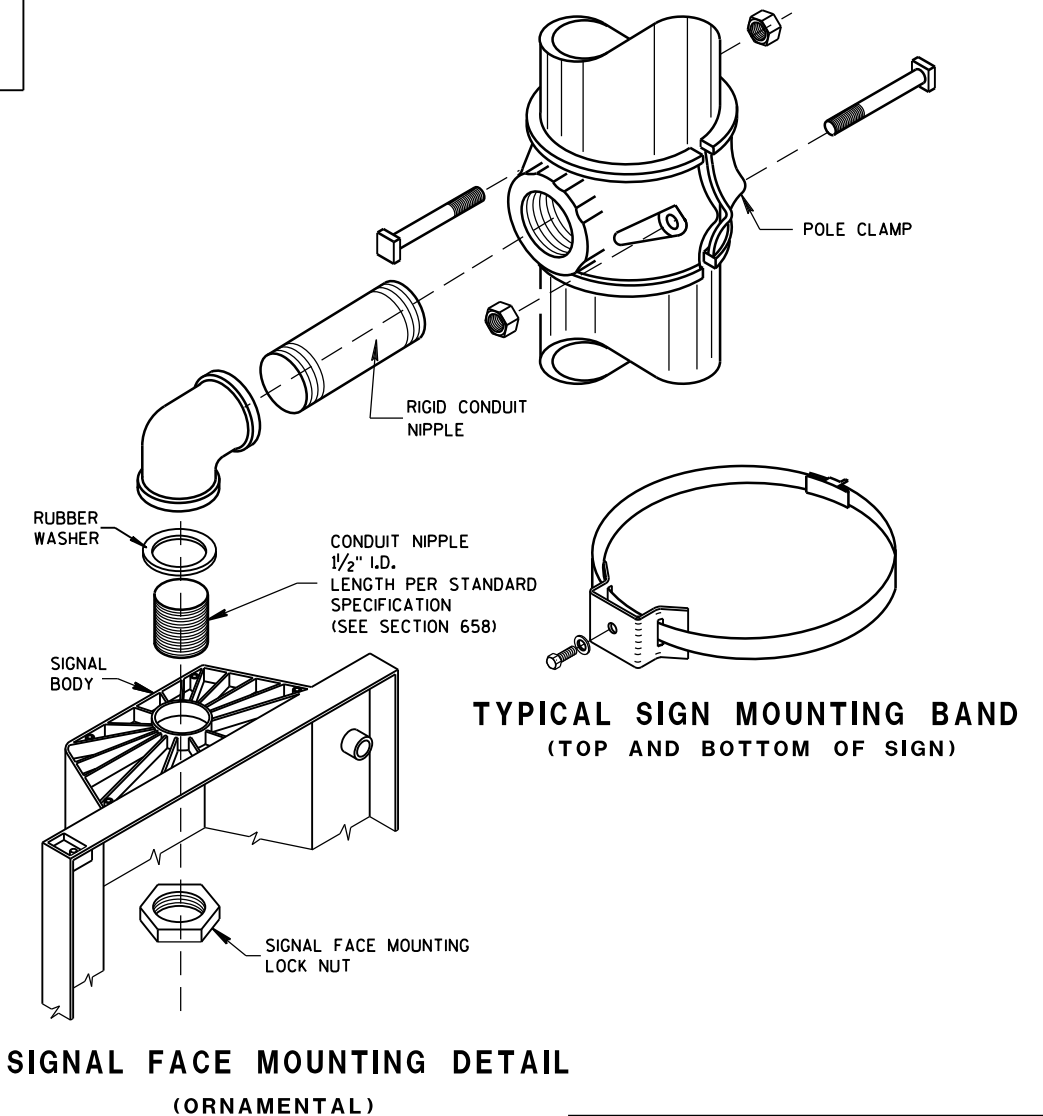
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) $\frac{1}{4}$ " x $\frac{3}{4}$ " - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



TRAFFIC SIGNAL STANDARD
ORNAMENTAL BRACKET MOUNTINGS
TYPICAL FOR 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

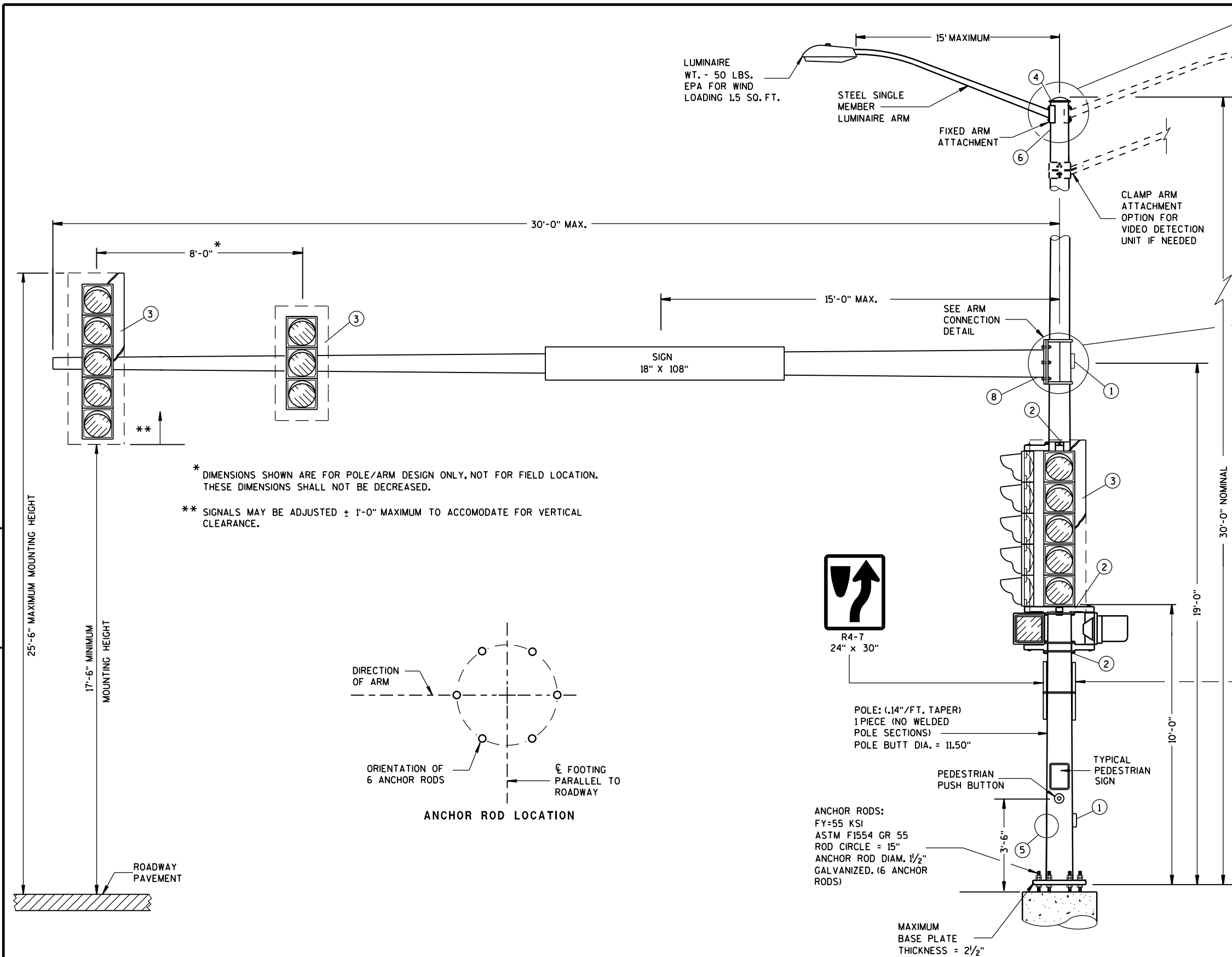
APPROVED
2/28/2013
DATE /S/ Ahmet Demirbilek
STATE ELECTRICAL 149
FHWA



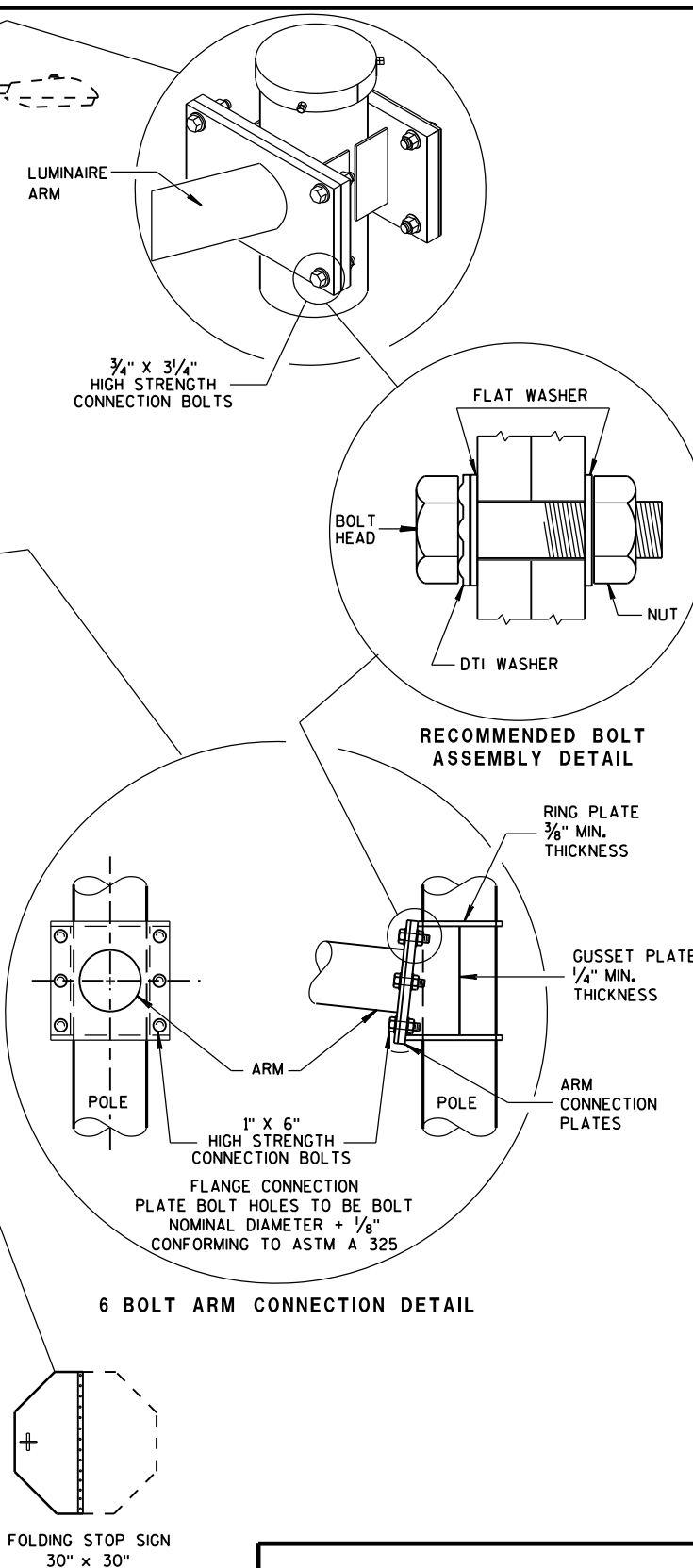
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS.
FASTEN CAPS WITH ONE (1) $\frac{1}{4}$ " X $\frac{3}{4}$ " - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



S.D.D. 9 E 6-5



(MAXIMUM LOAD)
**TYPE 10 POLE
 15'- 30' MONOTUBE ARM**



**TYPE 10 POLE
 15' - 30' MONOTUBE ARM**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED

May, 2016

DATE

FHWA

/S/ Ahmet Demirbilek

STATE ELECTRICAL 151

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 ¼ ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

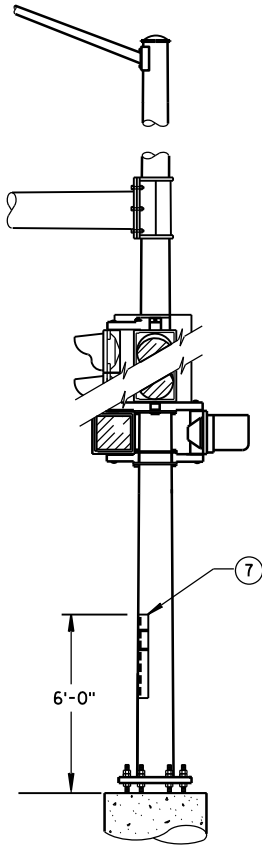
- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

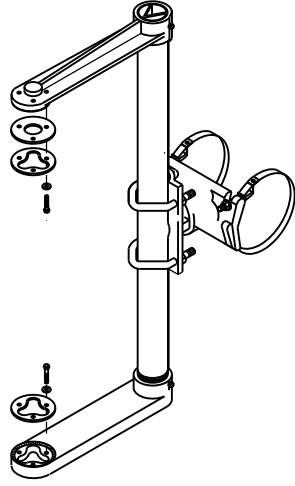
INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

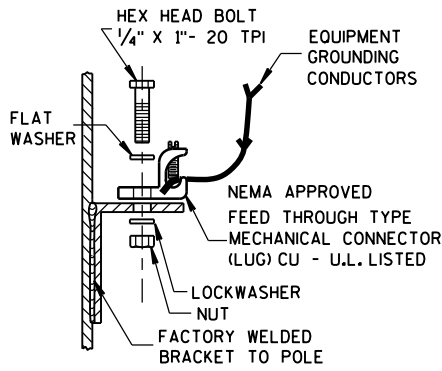


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



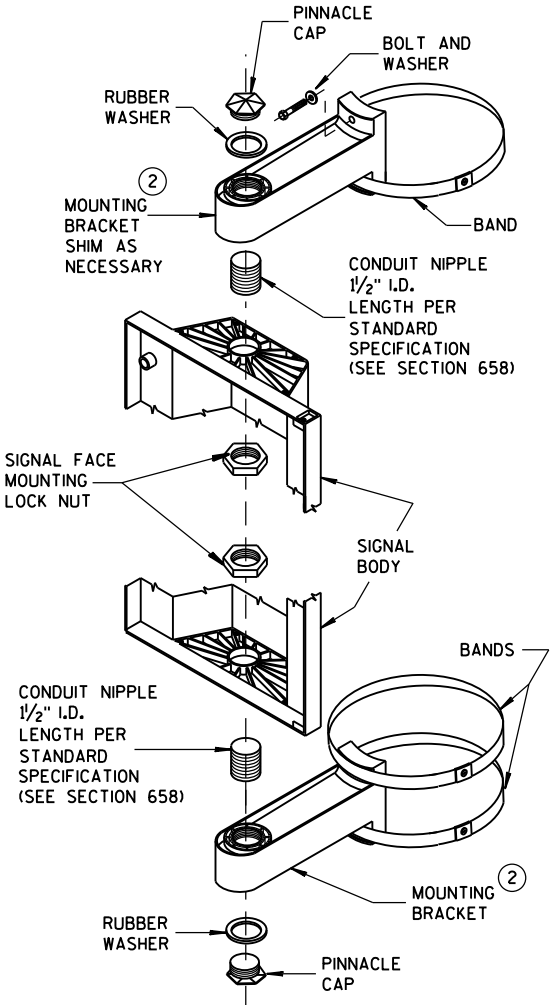
SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

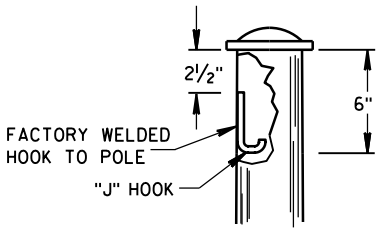


TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



SIGNAL FACE
VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT

- DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" x ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).
- SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" x ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

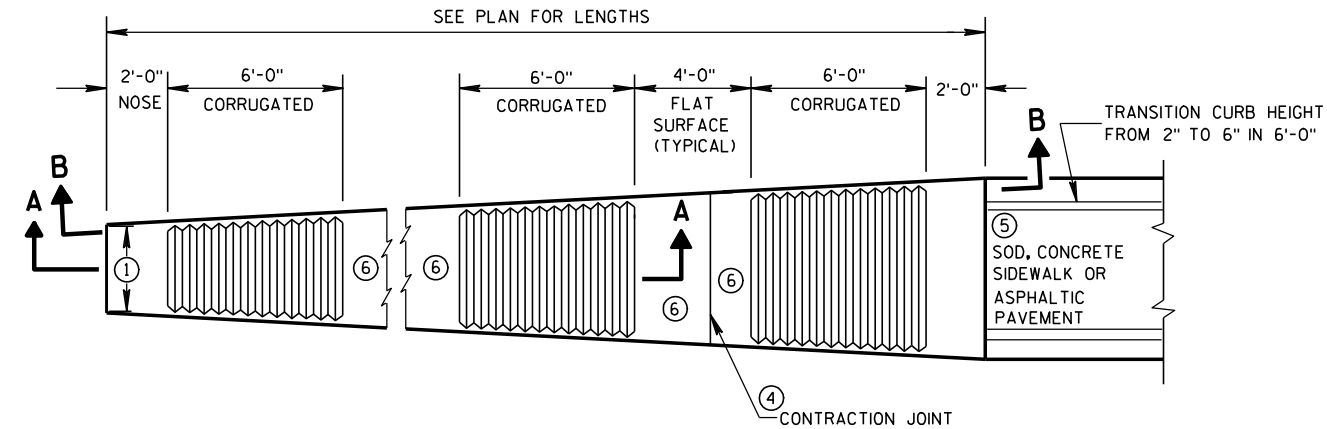
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

- FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

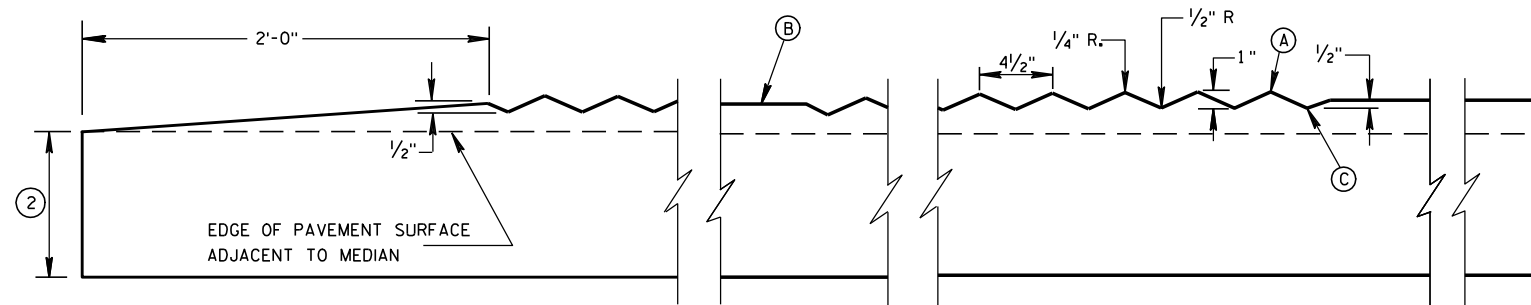
GENERAL NOTES AND HARDWARE
DETAILS FOR TYPE 9, 10, 12 & 13
POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

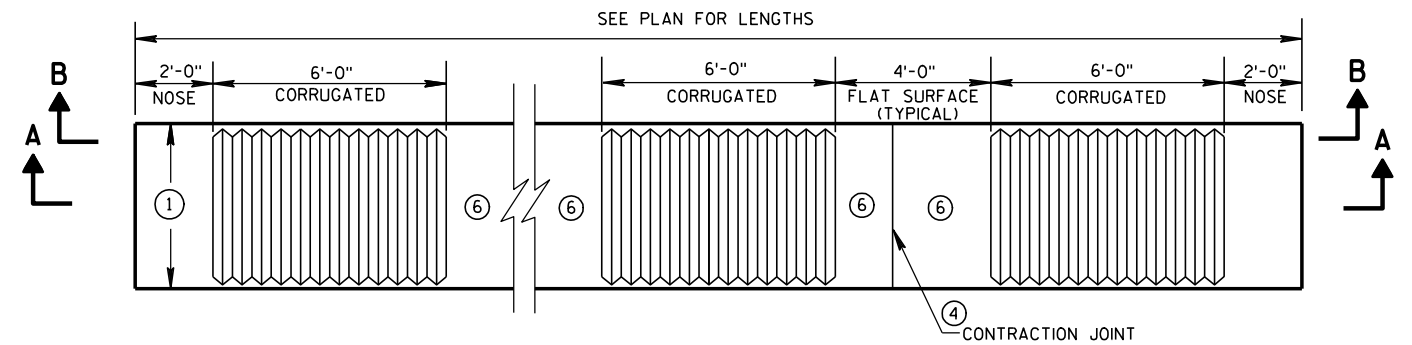
APPROVED
May 2016
DATE
/S/ Ahmet Demirebilek
STATE ELECTRICAL 153
FHWA



PLAN VIEW
VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



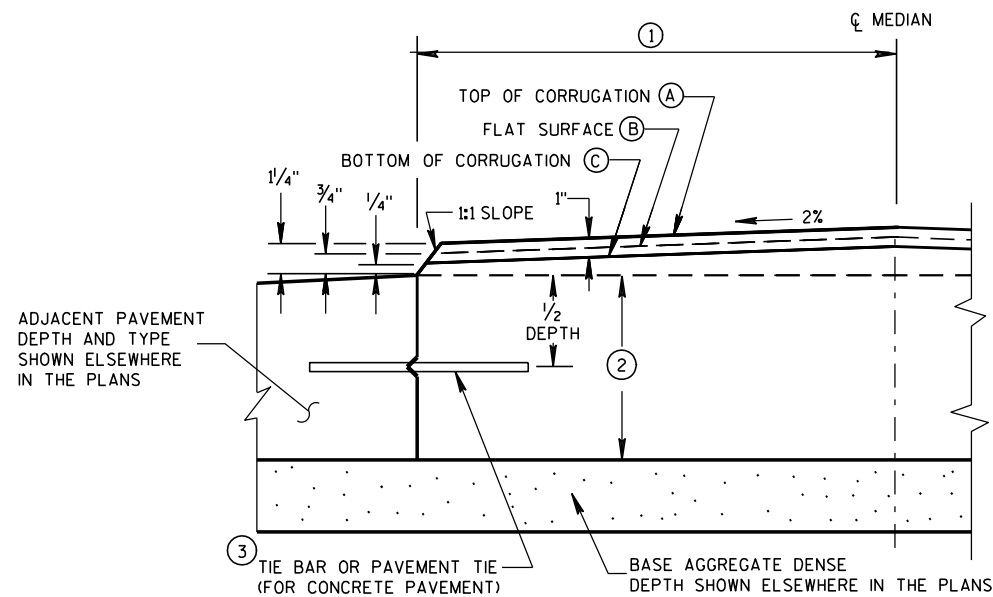
SECTION A-A
LONGITUDINAL SECTION



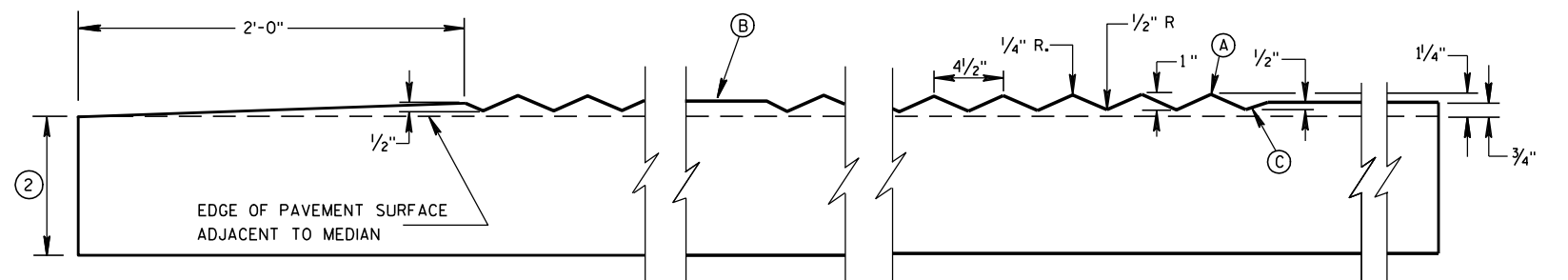
PLAN VIEW
UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN

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

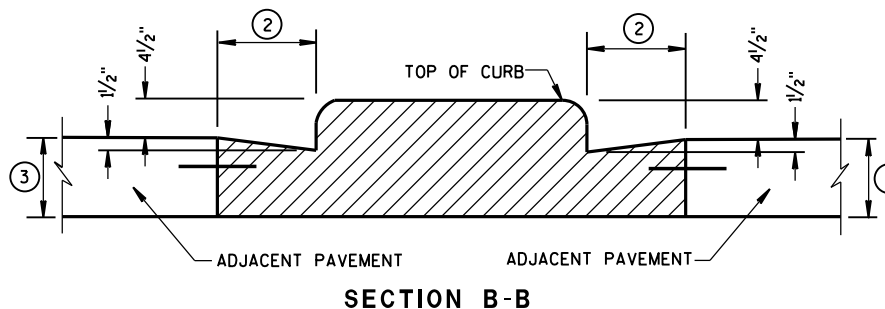
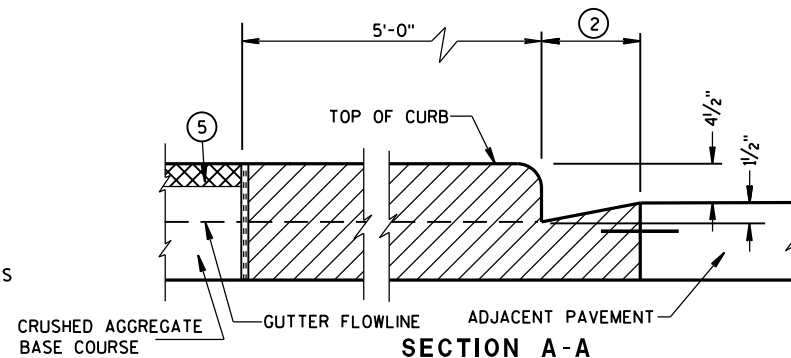
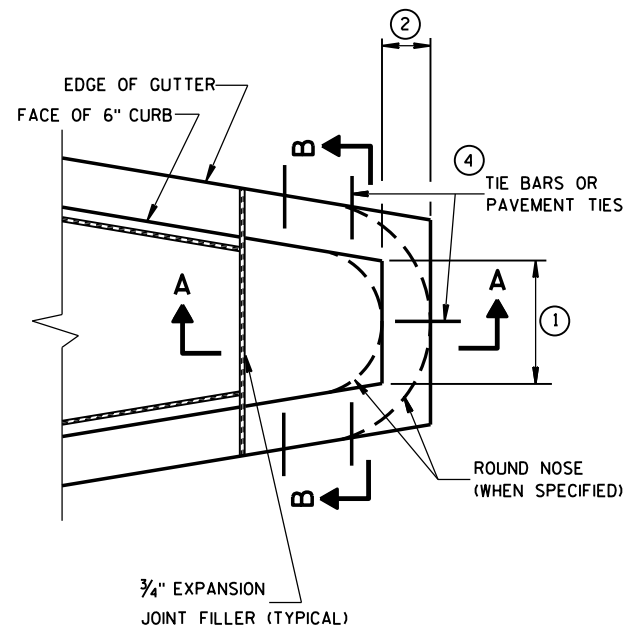
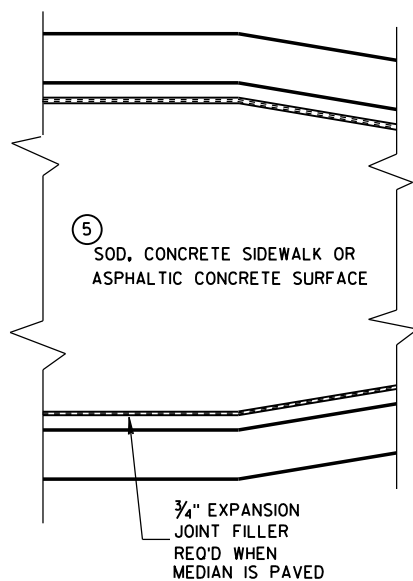


SECTION B-B
LONGITUDINAL SECTION

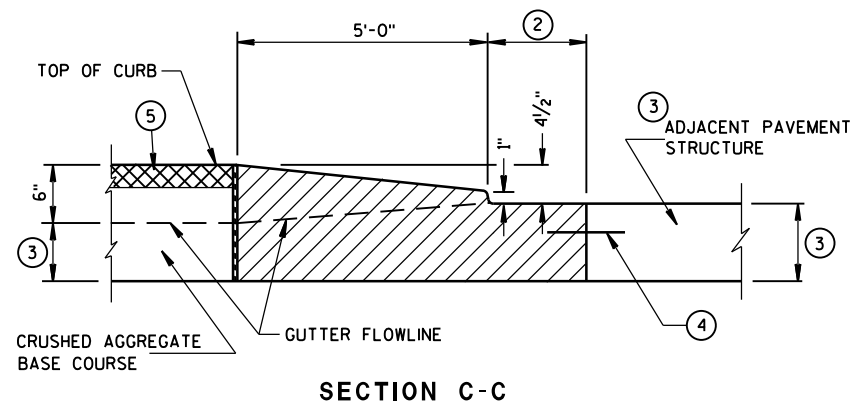
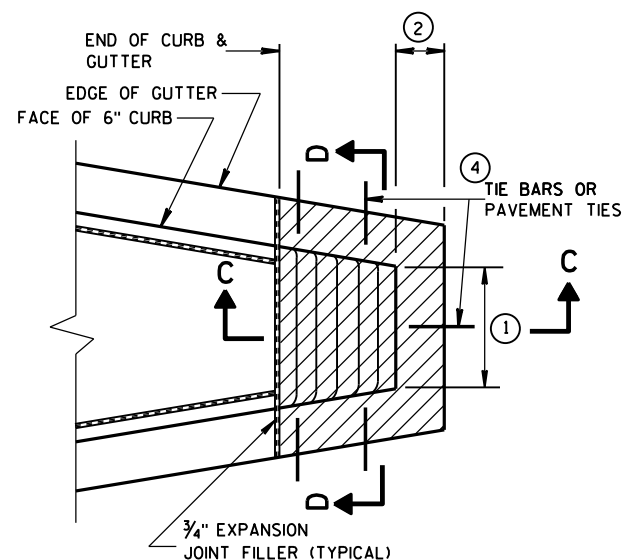
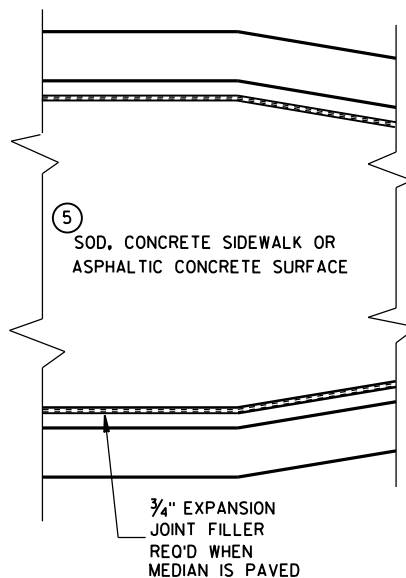
CONCRETE CORRUGATED MEDIAN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

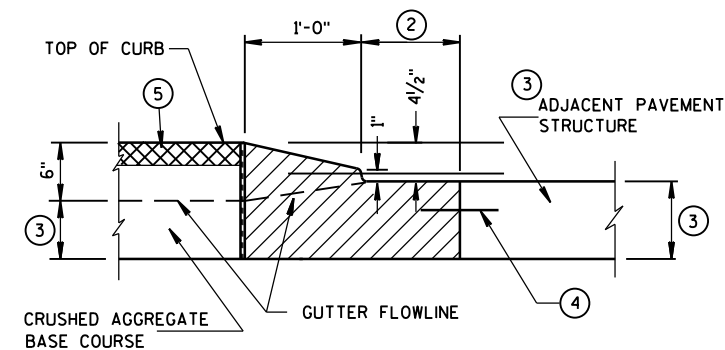
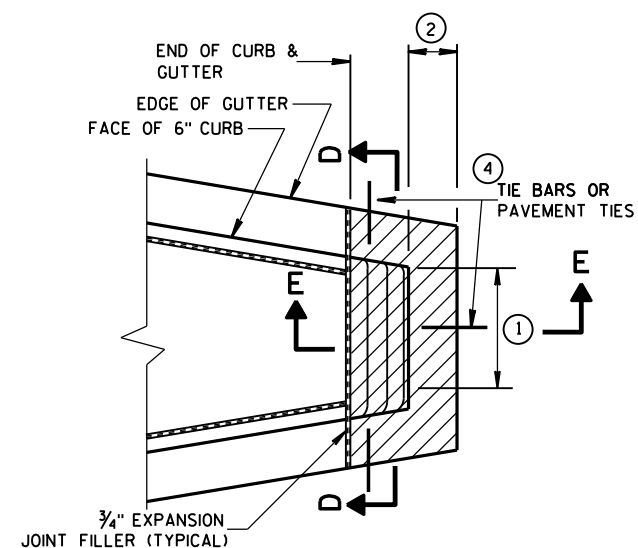
APPROVED
12/17/07 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS 154
FHWA ENGINEER



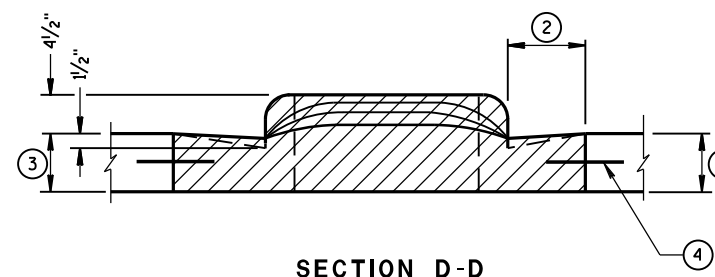
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



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 SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
 - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ 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.

PAVEMENT TIES REQUIRED IN EXISTING 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.

- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006

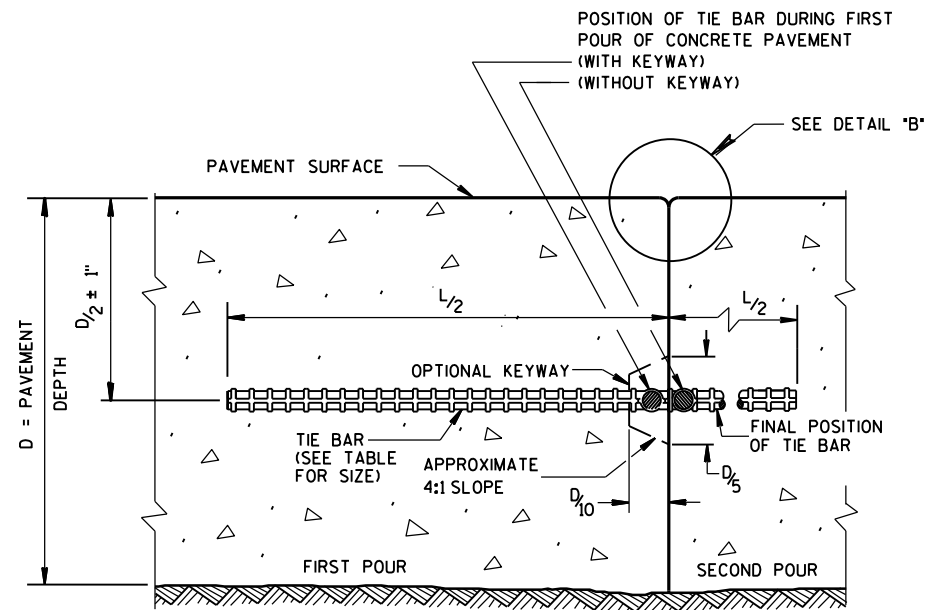
DATE

FHWA

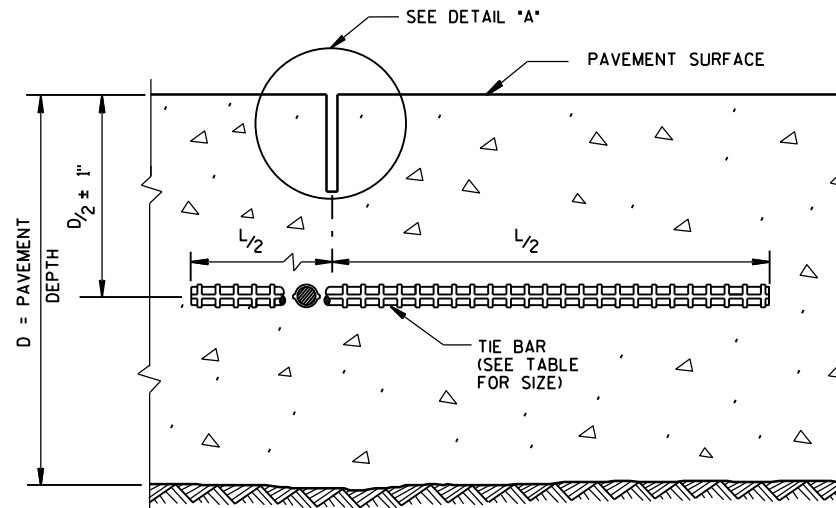
/S/ Jerry H. Zoag
ROADWAY STANDARDS & ENGINEER

155

155



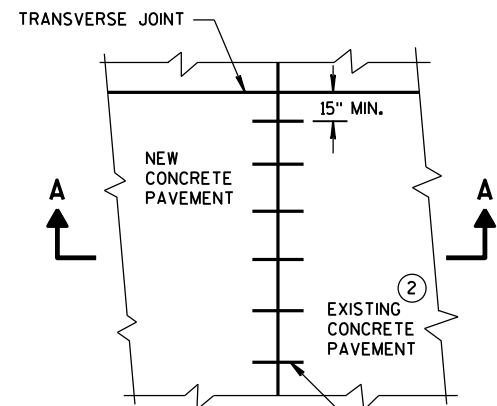
CONSTRUCTION JOINT



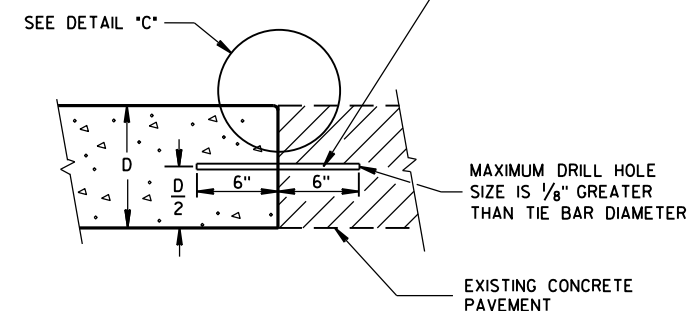
SAWED JOINT

GENERAL NOTES

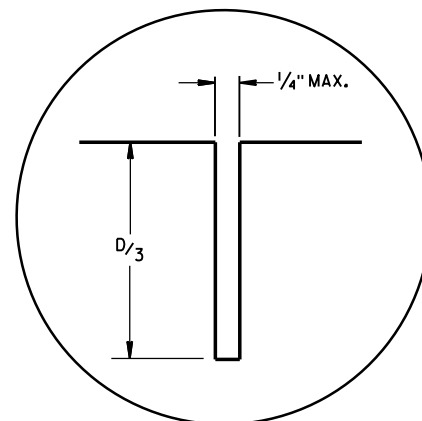
- DO NOT SEAL OR FILL LONGITUDINAL JOINTS.
- CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



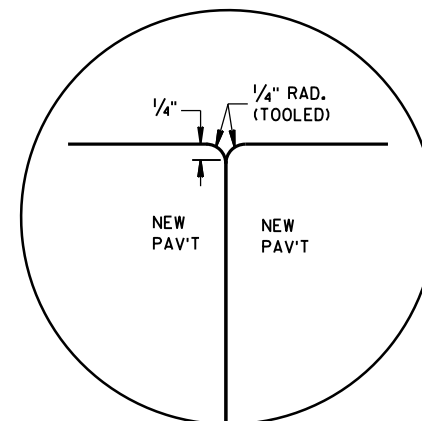
PLAN VIEW



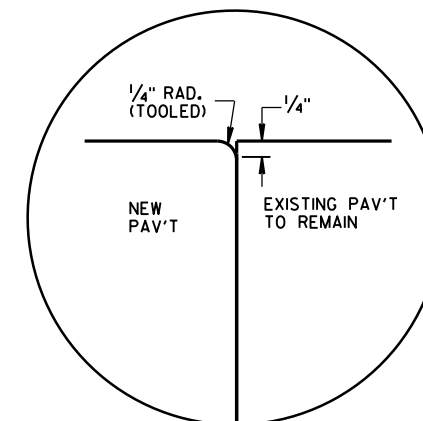
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"

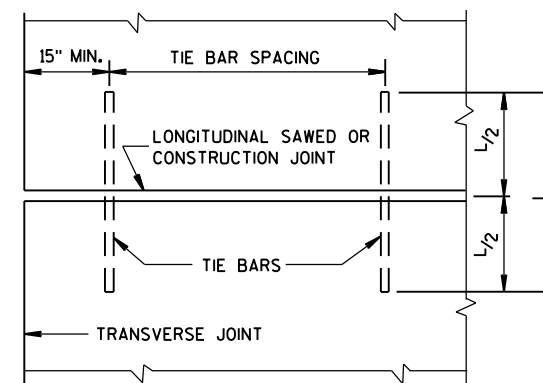


DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

- * SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)
- ** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

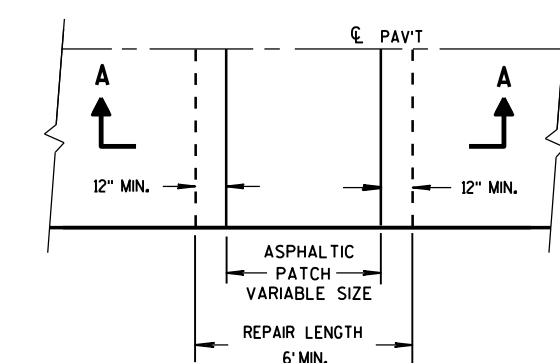


PLAN VIEW
SHOWING LOCATION OF TIE BARS

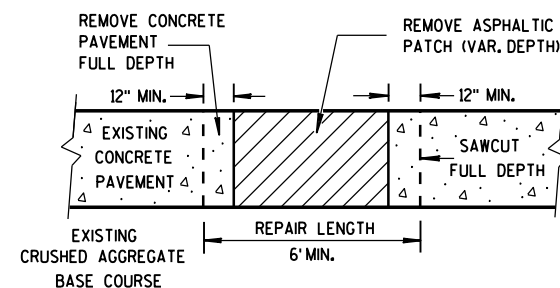
CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

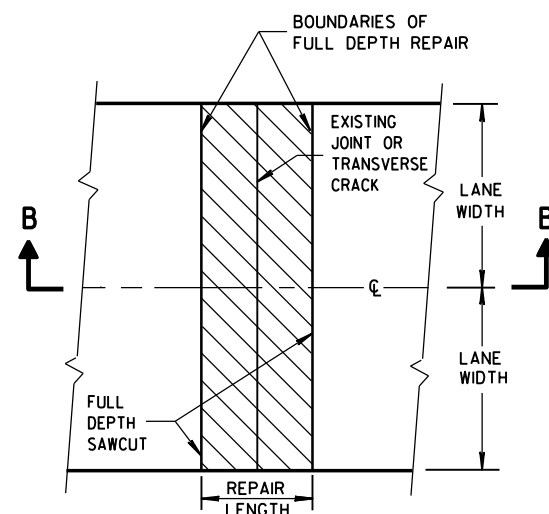
APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPER 156
FHWA



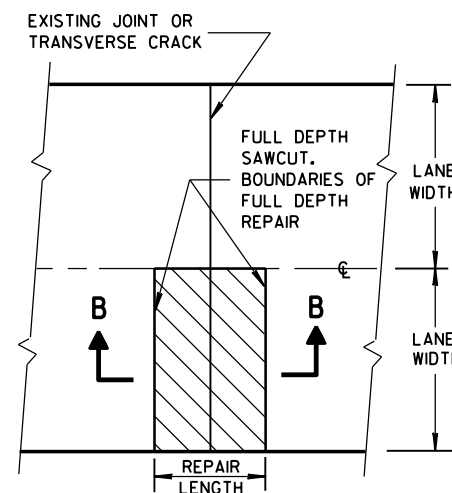
PLAN VIEW



SECTION A-A
HMA PATCH REMOVAL



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL

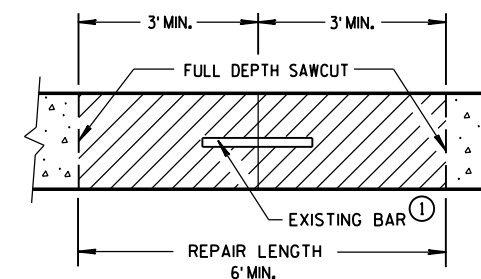
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

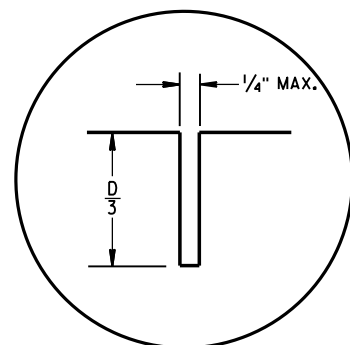
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

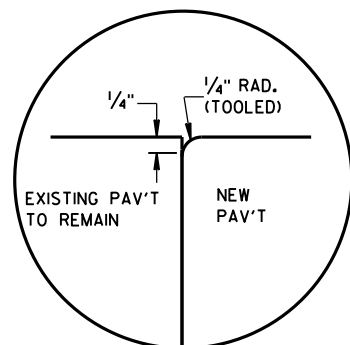
① DOWEL BARS MIGHT NOT EXIST.



SECTION B-B
CONCRETE REMOVAL

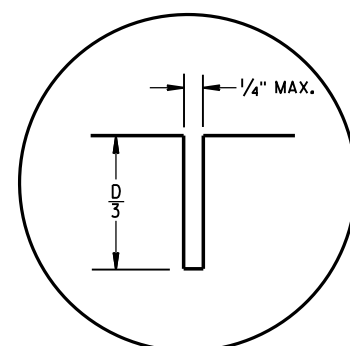


C1

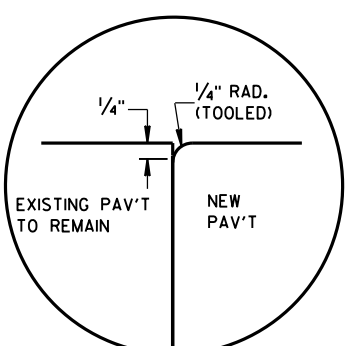


C2

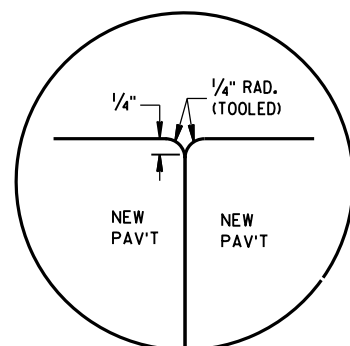
TRANSVERSE JOINTS



L1



L2



L3

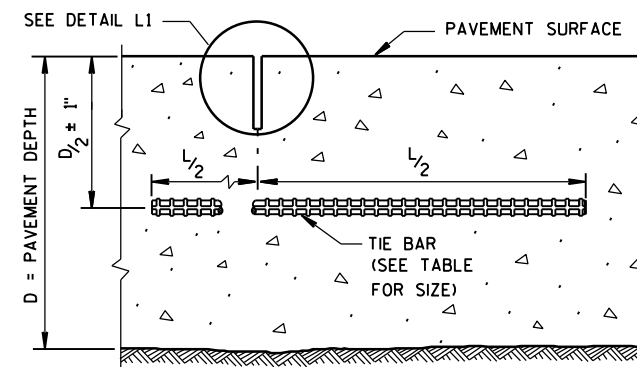
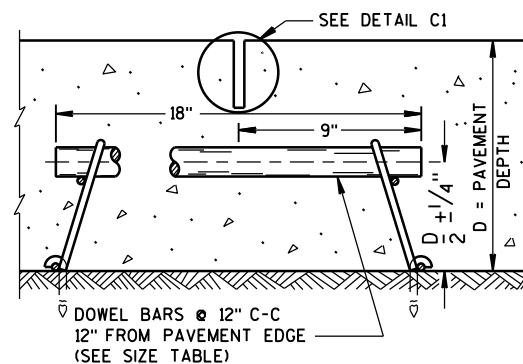
LONGITUDINAL JOINTS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

SECTION C-C
SAWED LONGITUDINAL JOINTSECTION F-F
CONTRACTION JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

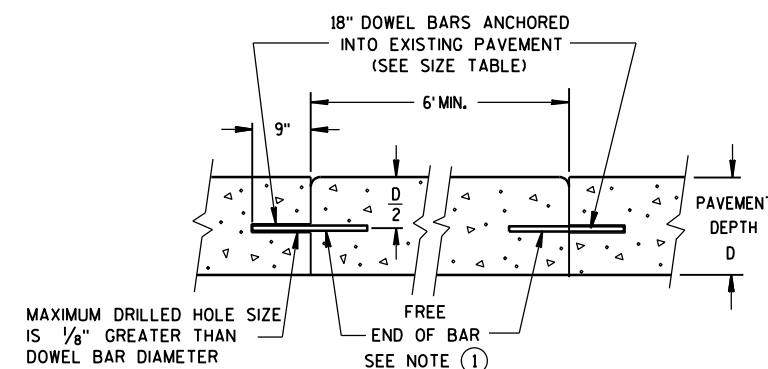
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

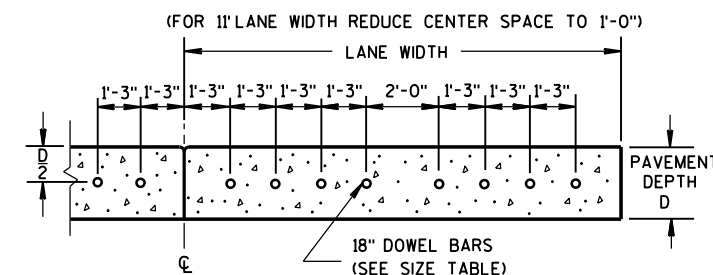
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



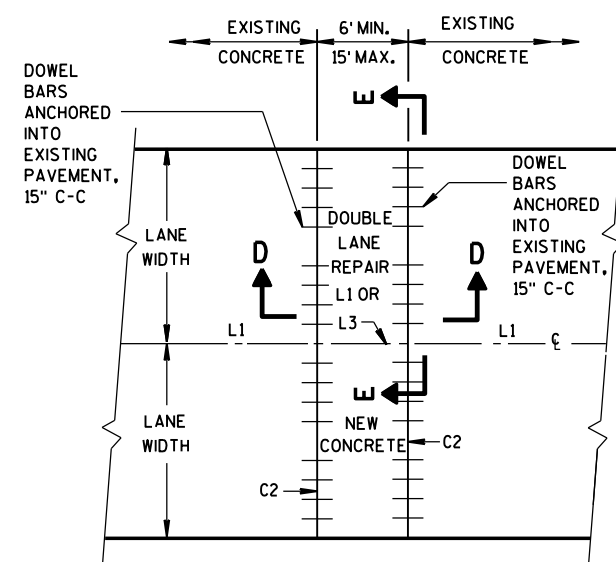
SECTION D-D

SECTION E-E
DRILLED DOWEL BAR CONSTRUCTION JOINTPAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'

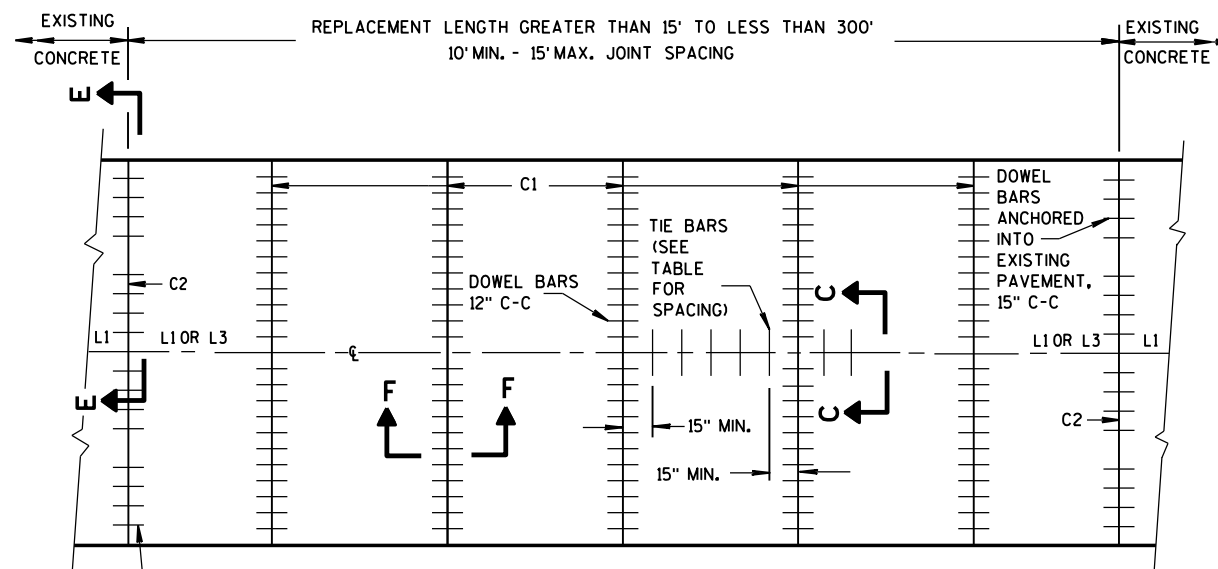
CONCRETE PAVEMENT
REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 158



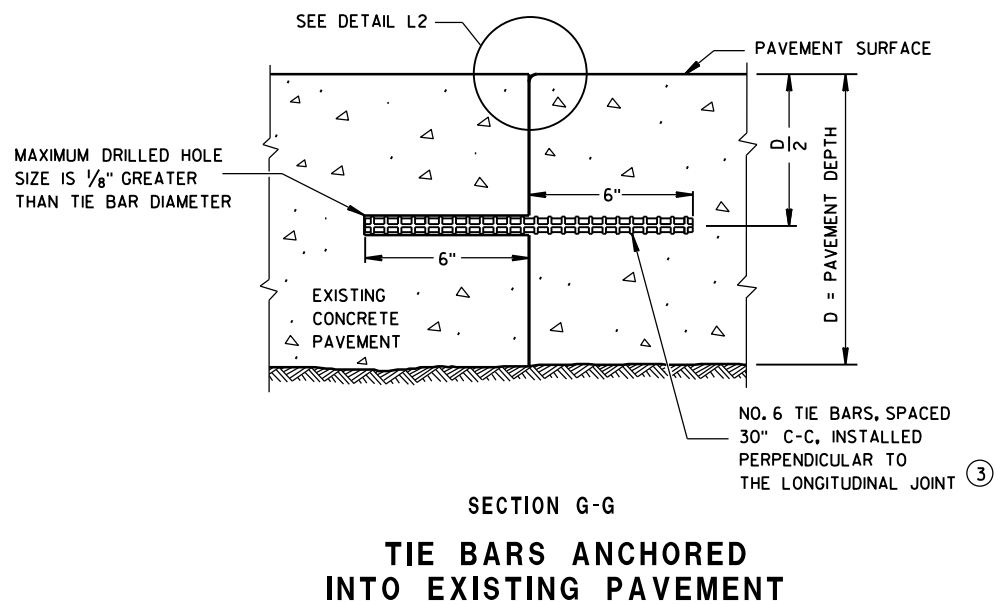
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



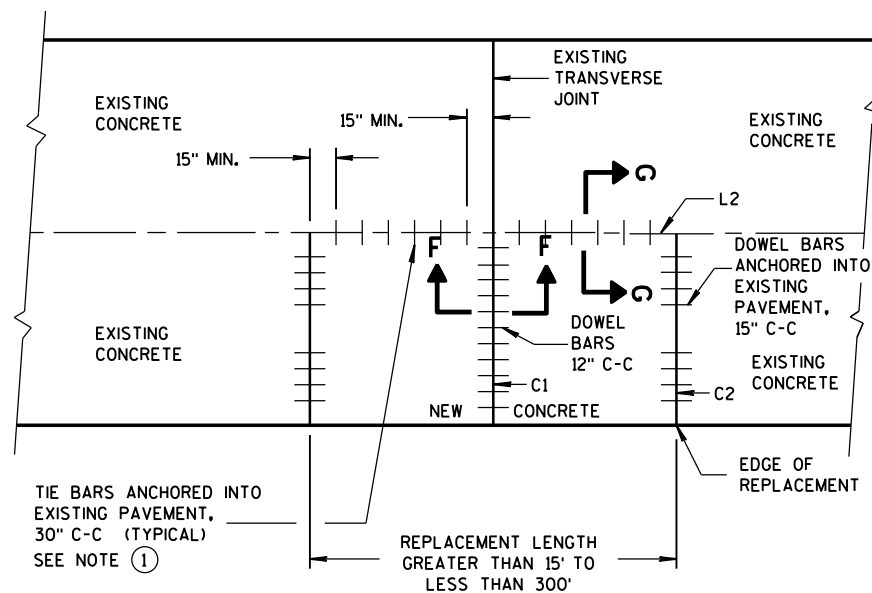
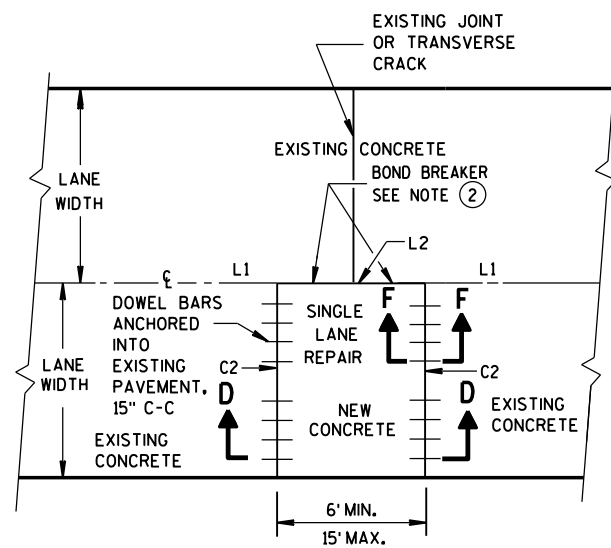
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT



GENERAL NOTES

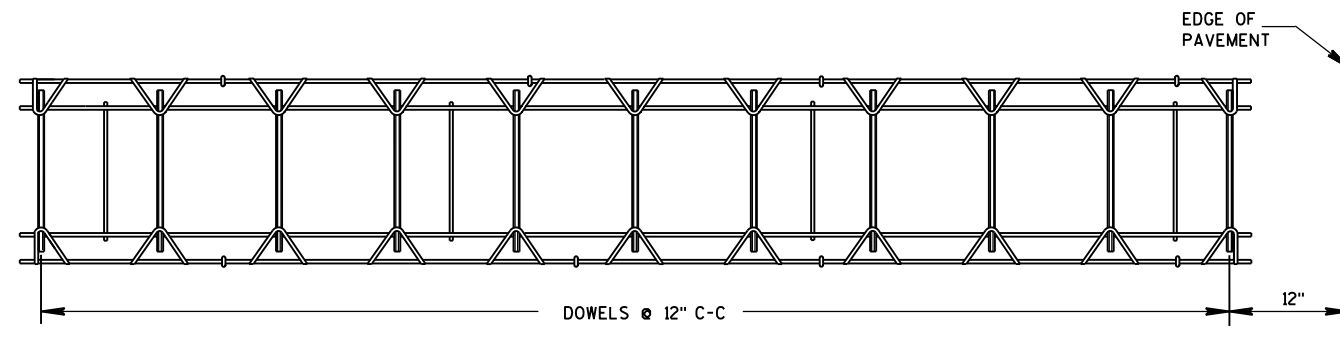
- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



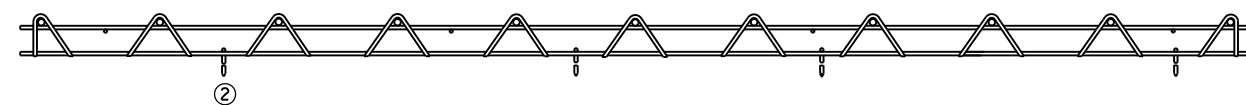
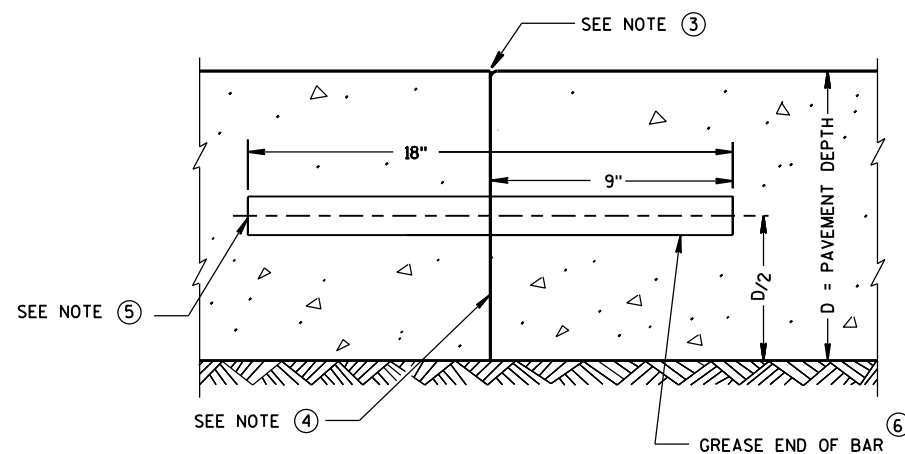
**CONCRETE PAVEMENT
REPAIR AND REPLACEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

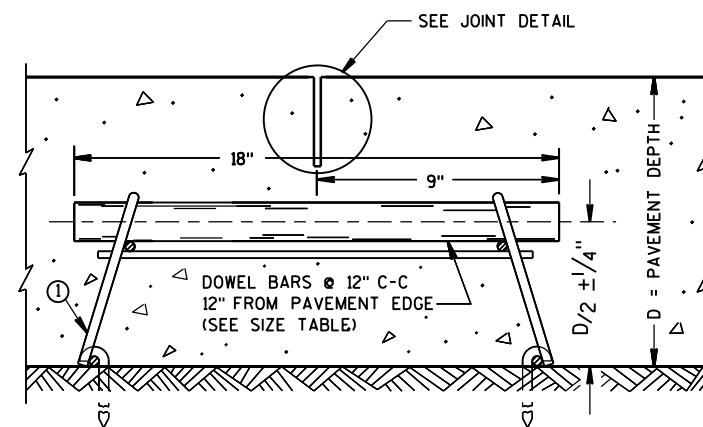
APPROVED
March, 2017 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPER 159
FHWA



PLAN VIEW

SIDE VIEW
CONTRACTION JOINT DOWEL ASSEMBLY (1)

TRANSVERSE CONSTRUCTION JOINT



DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

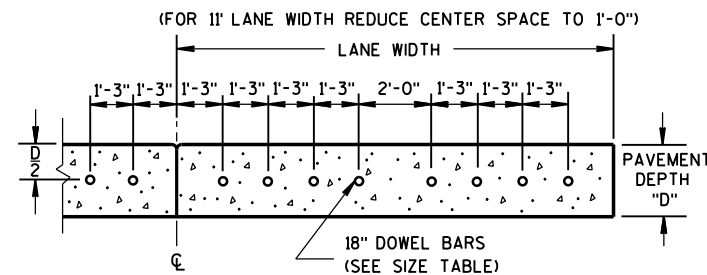
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

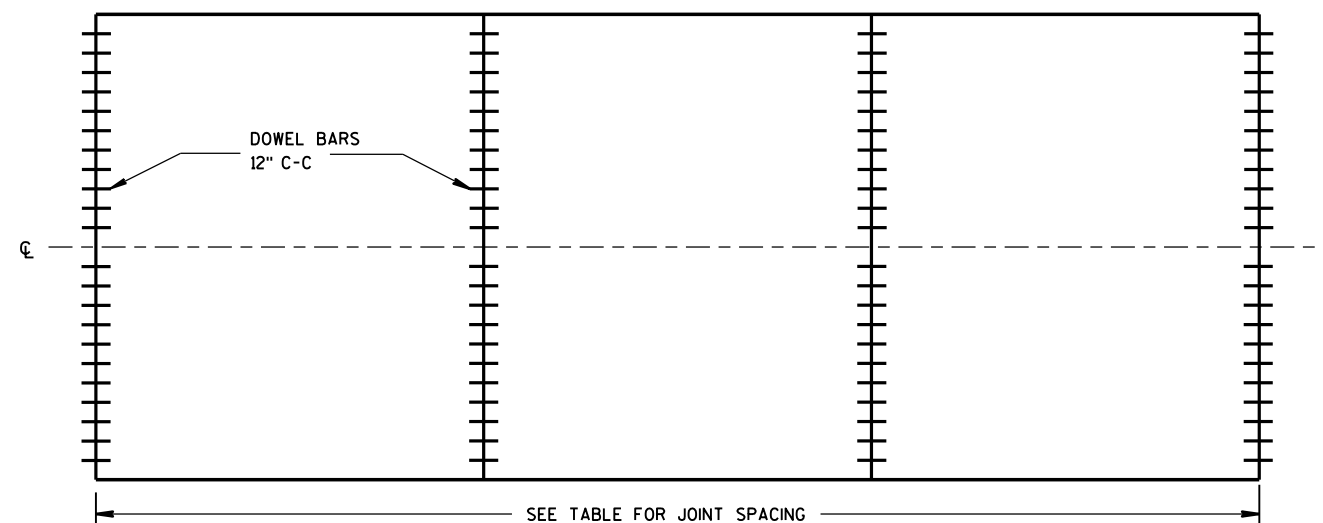
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

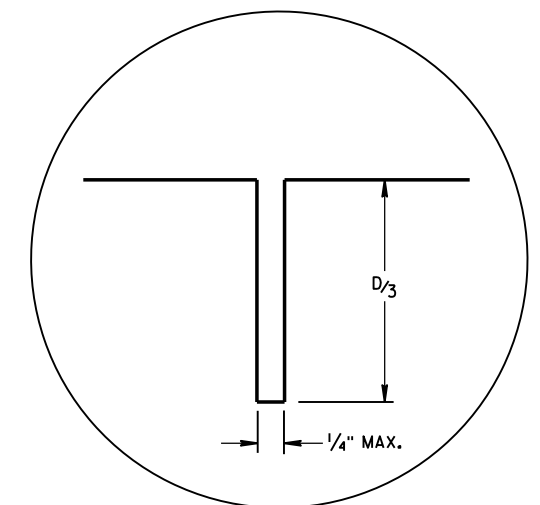
- (1) OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- (2) SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- (3) FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.
- (4) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- (5) INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.
- (6) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- (7) ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DRILLED DOWEL BAR CONSTRUCTION JOINT (7)



CONTRACTION JOINT LOCATIONS



JOINT DETAIL

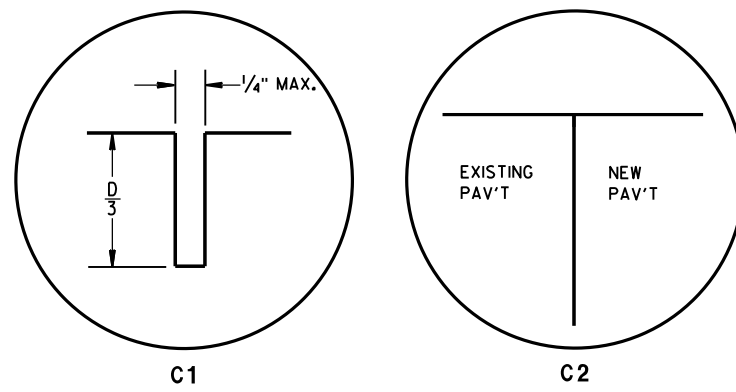
URBAN DOWELED
CONCRETE PAVEMENTSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

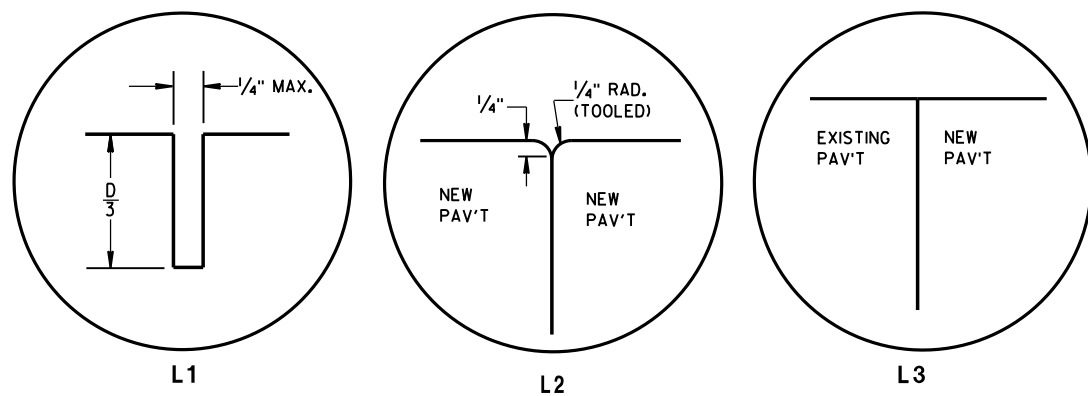
5/3/2013
DATE/S/ Deb Bischoff
PAVEMENT POLICY & DE 160

JEER

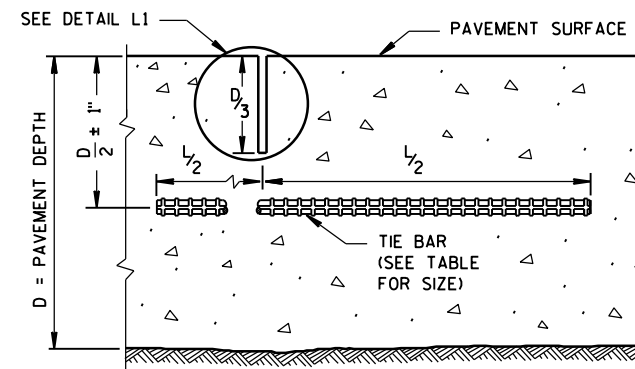
FHWA



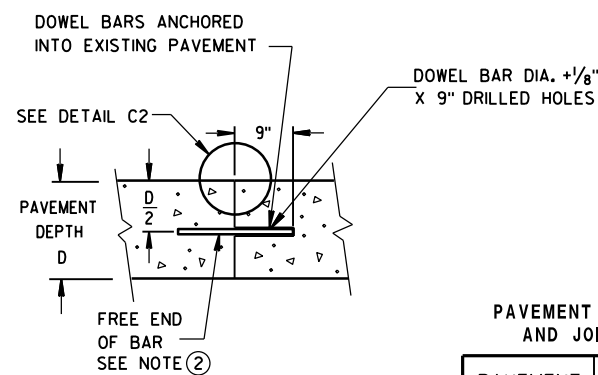
TRANSVERSE JOINTS



LONGITUDINAL JOINTS



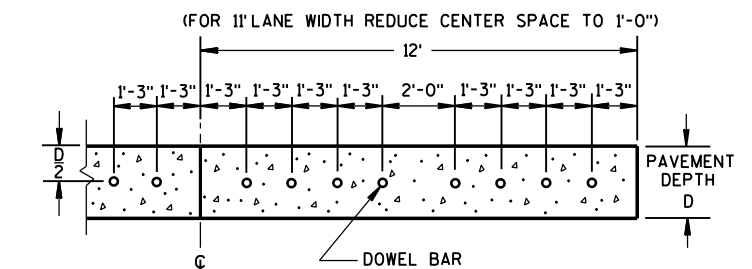
SECTION C-C
SAWED JOINT



SECTION D-D

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6, 6 1/2"	NONE	12'
7, 7 1/2"	1"	14'
8, 8 1/2"	1 1/4"	15'
9, 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'



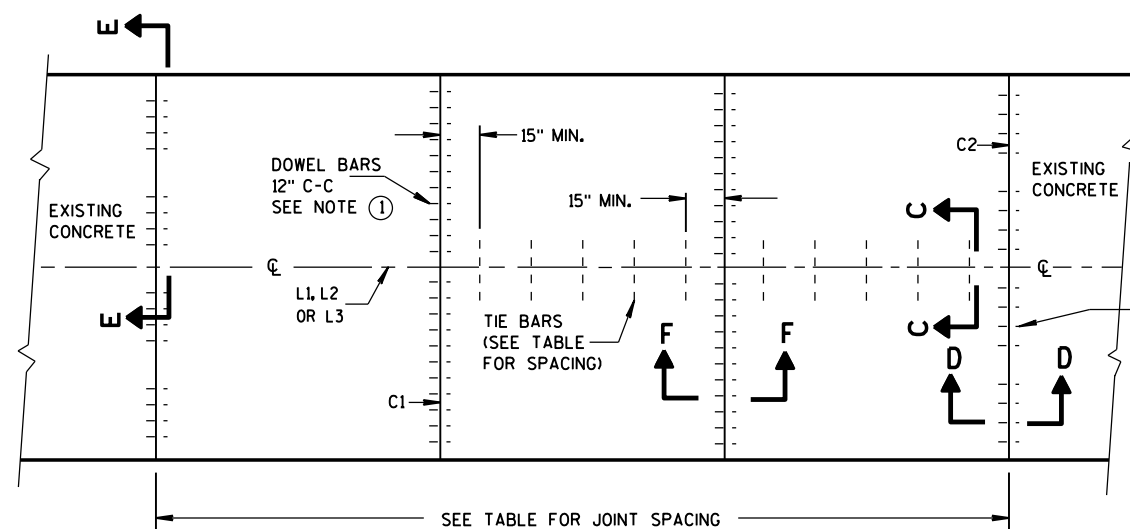
SECTION E-E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

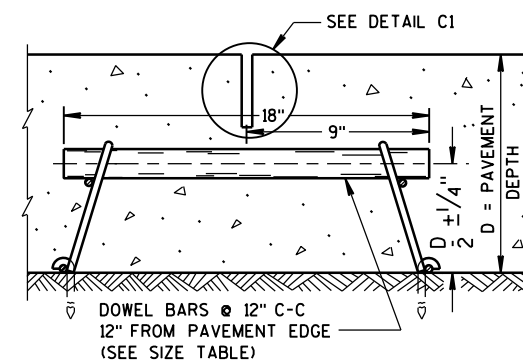
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"***

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



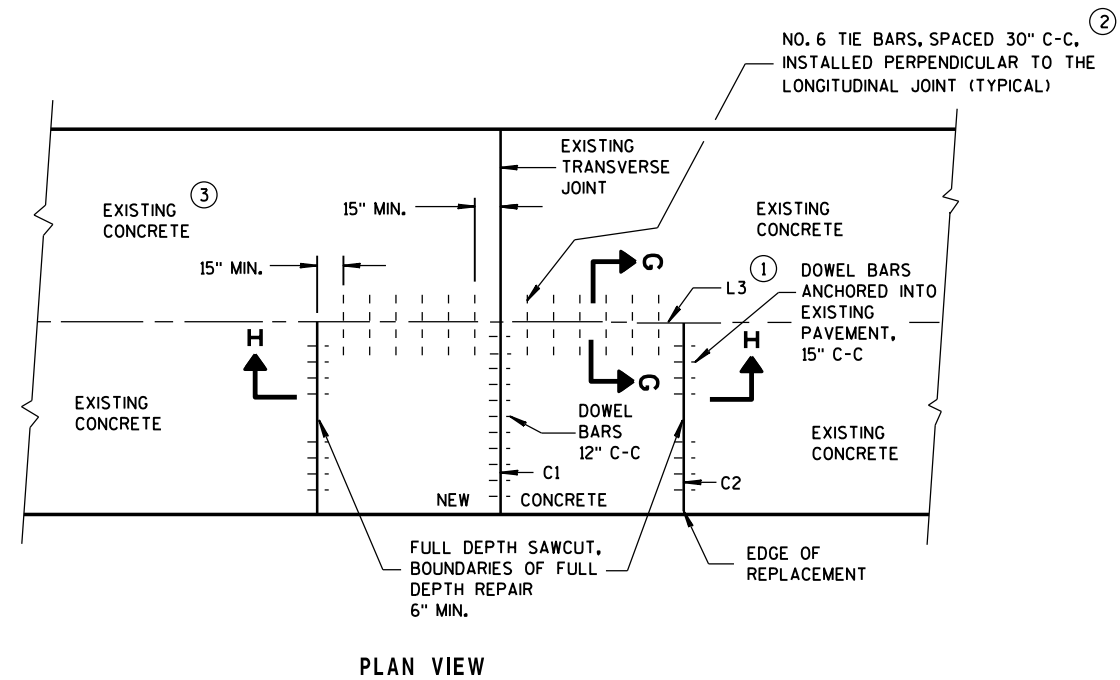
PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS



SECTION F-F
CONTRACTION JOINT

CONCRETE BASE

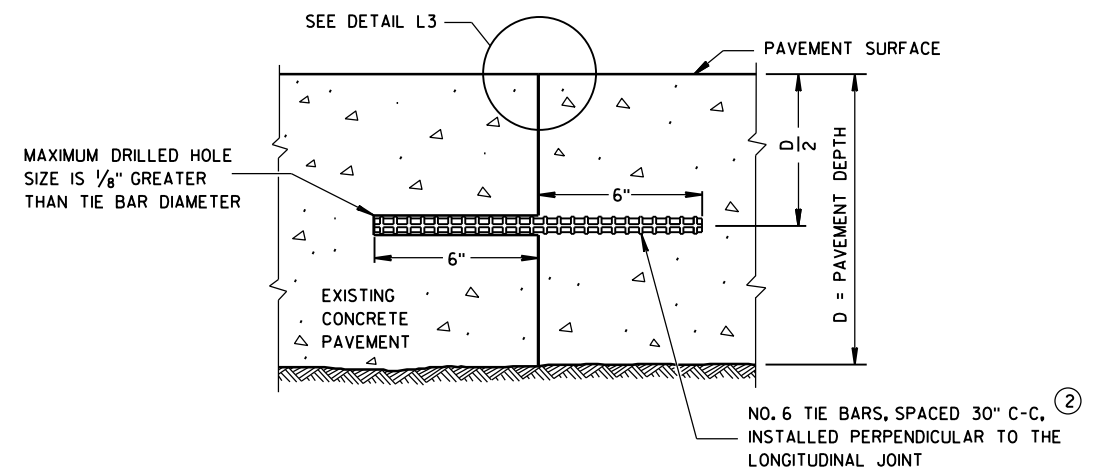
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 161



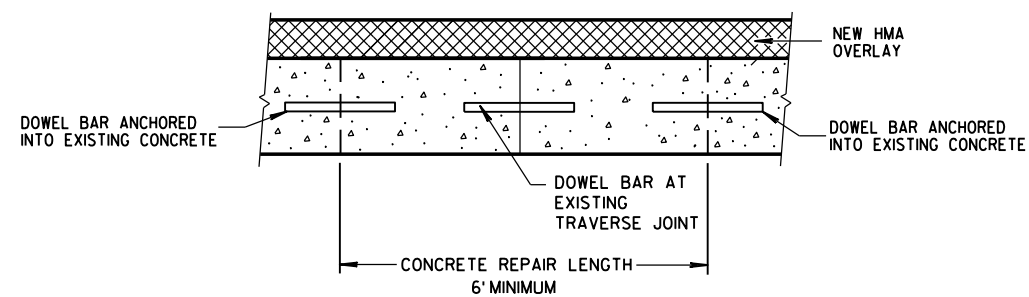
SINGLE LANE CONCRETE BASE REPAIR

GENERAL NOTES

- (1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
- (2) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- (3) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



TIE BARS ANCHORED INTO EXISTING PAVEMENT



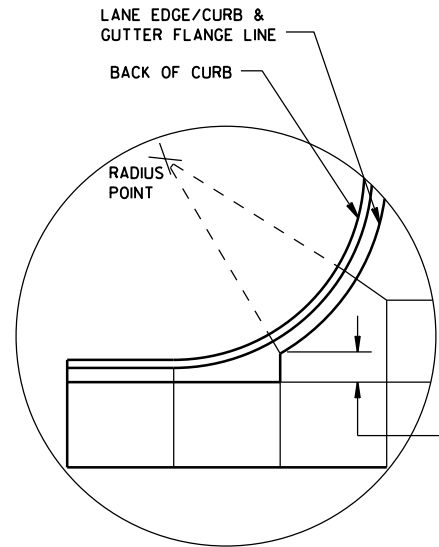
CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

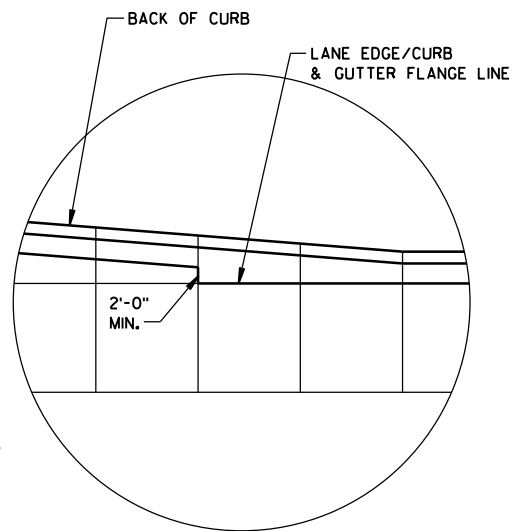
APPROVED

June, 2015
DATE/S/ Peter Kemp, P.E.
PAVEMENT SUPEI 162

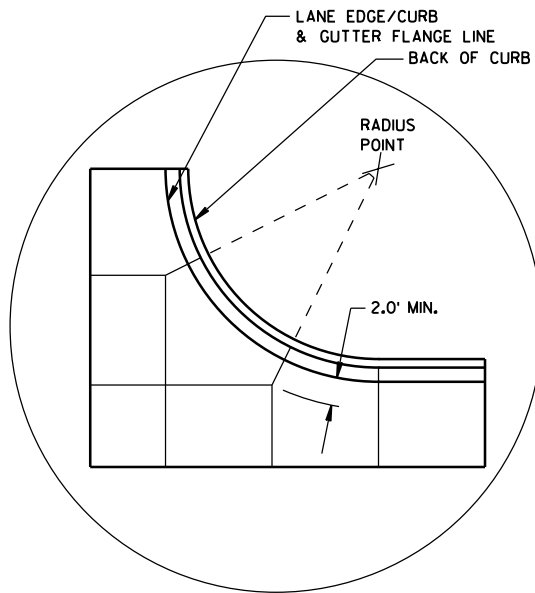
FHWA



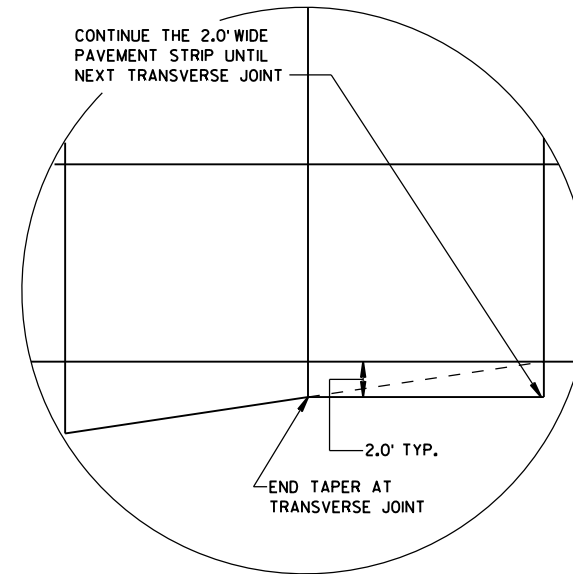
DETAIL "A"



DETAIL "B"



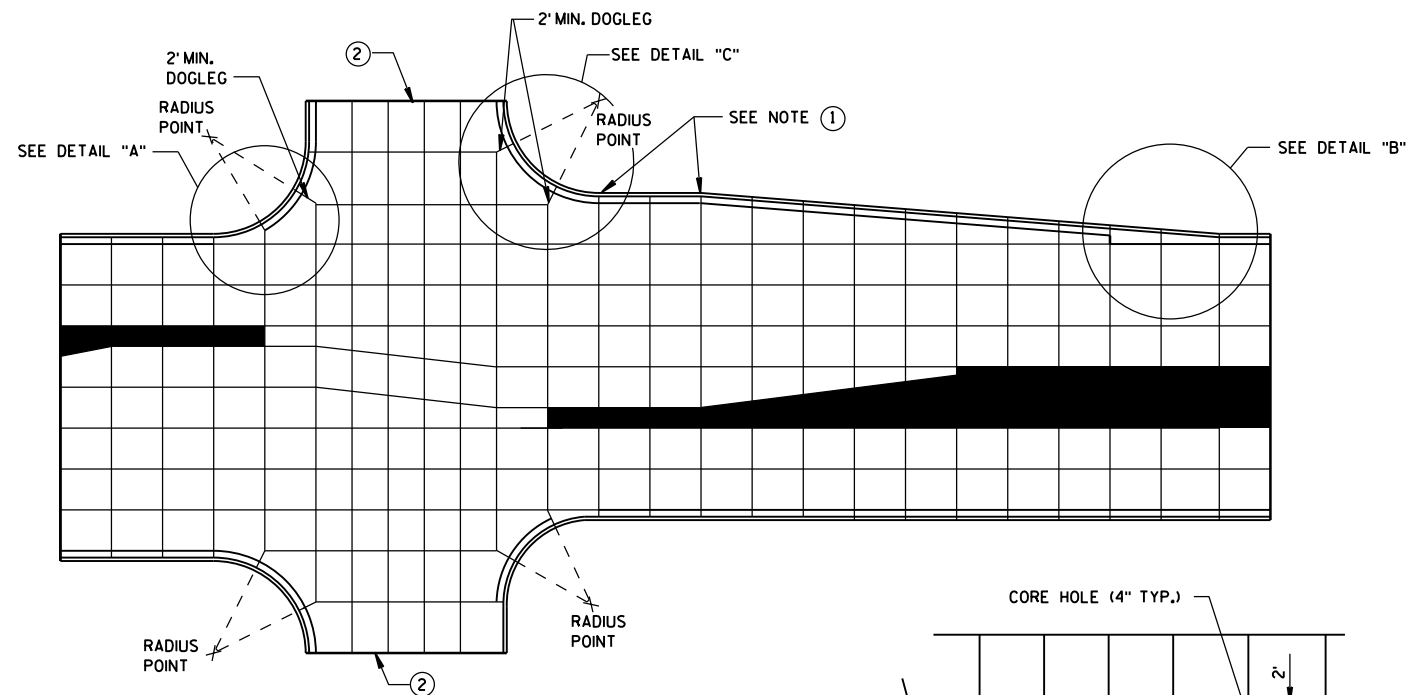
DETAIL "C"



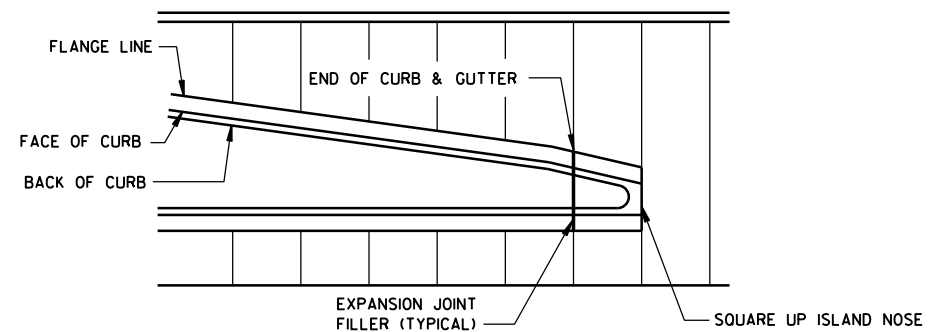
DETAIL "D"

GENERAL NOTES

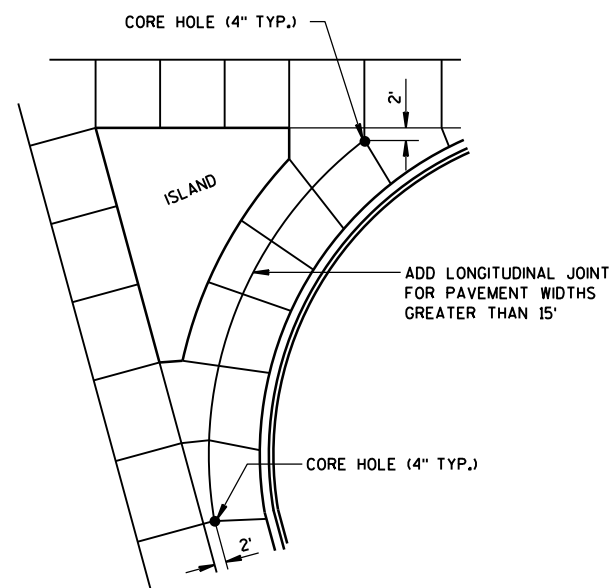
- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
 2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
 3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



STANDARD INTERSECTION



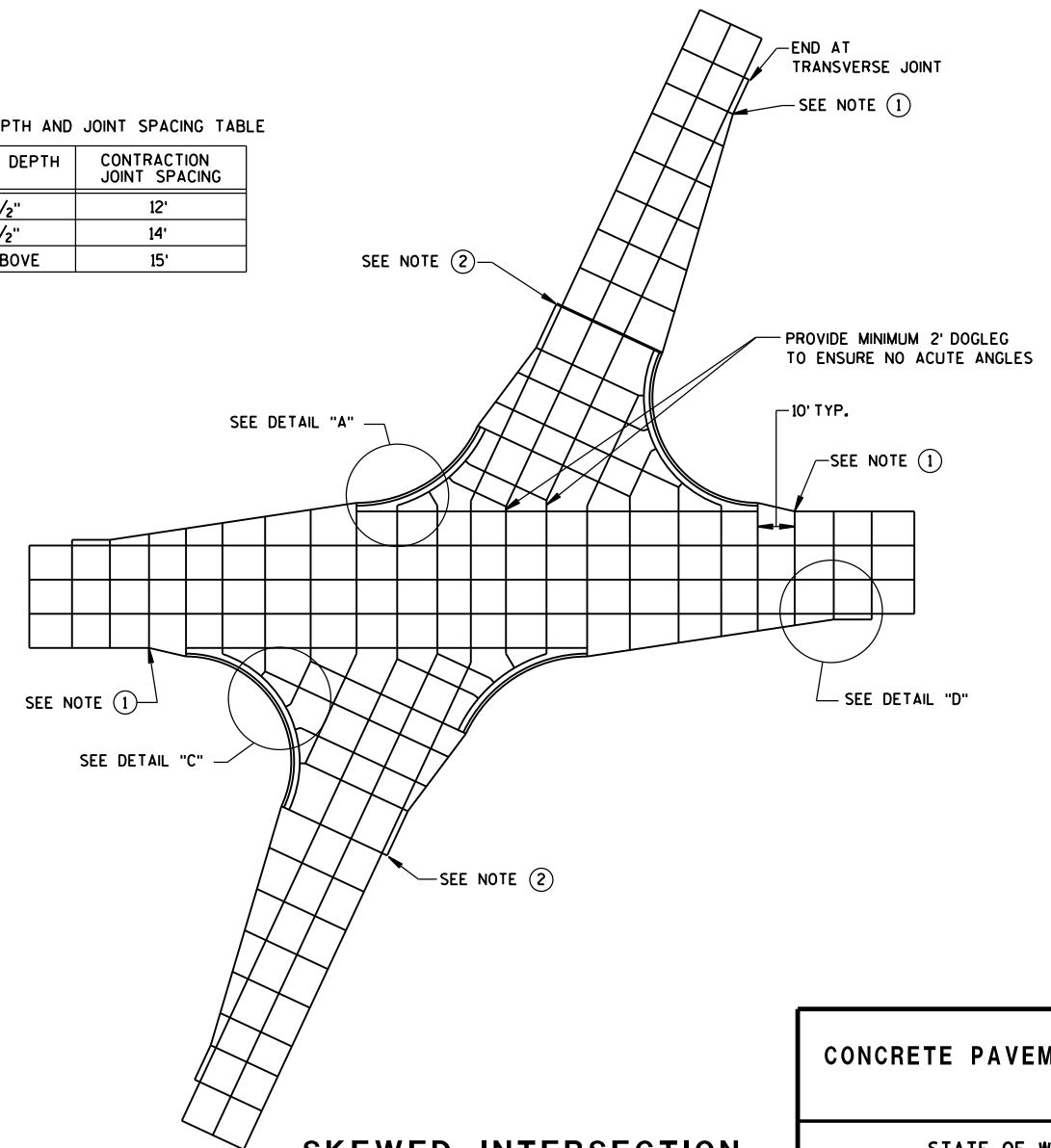
APPROACH TO MEDIAN



LARGE RIGHT TURN

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



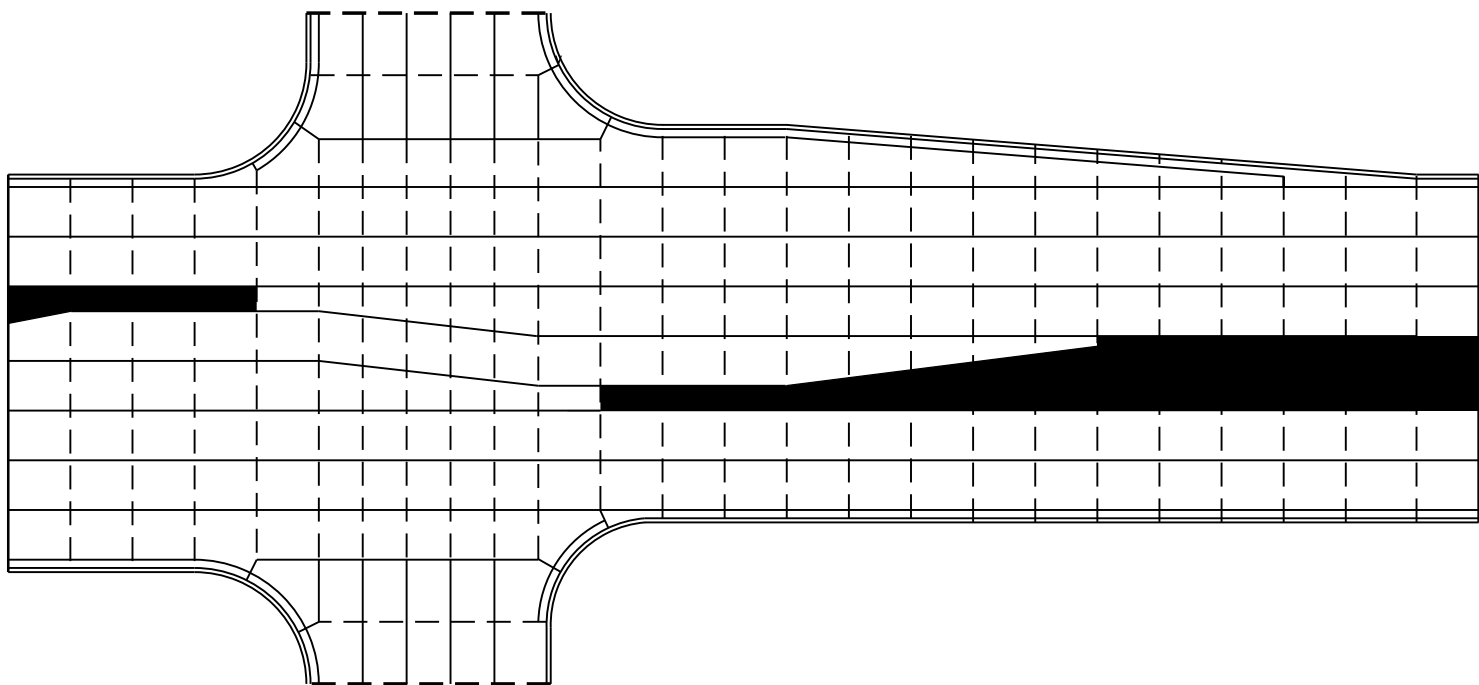
SKEWED INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 163

LEGEND

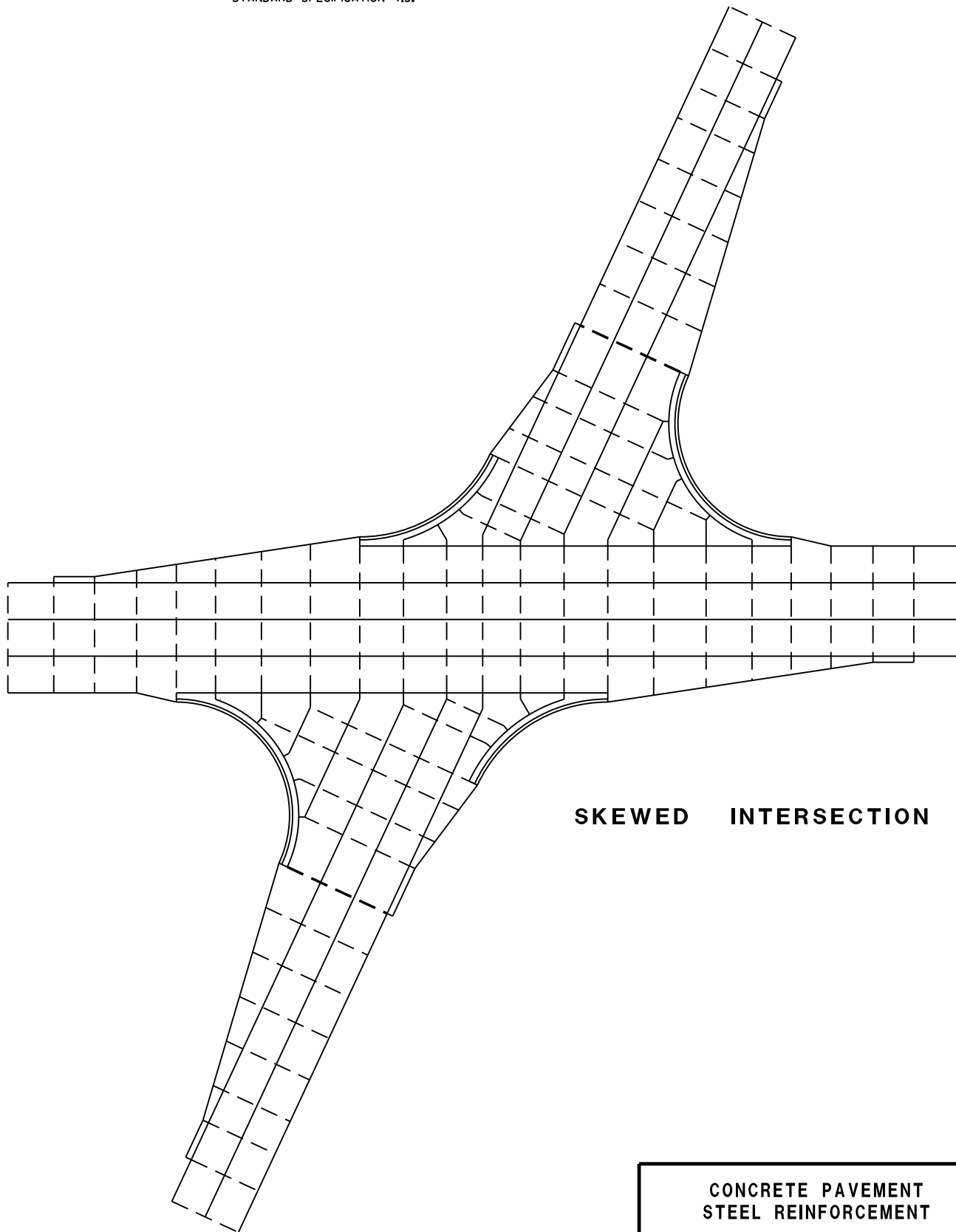
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

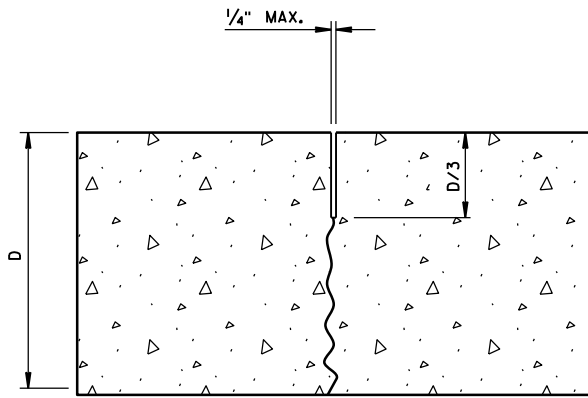


SKEWED INTERSECTION

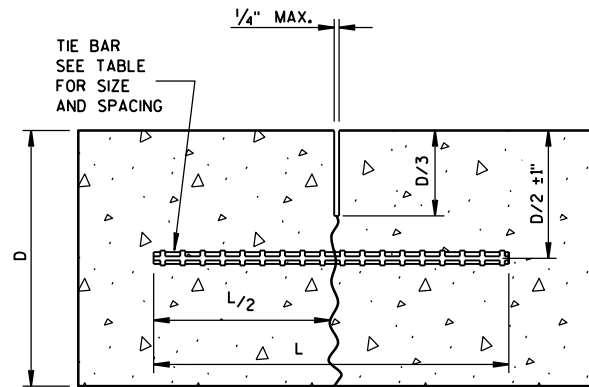
CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

164



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

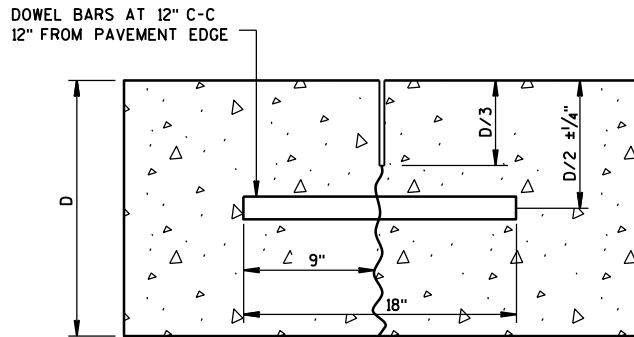
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

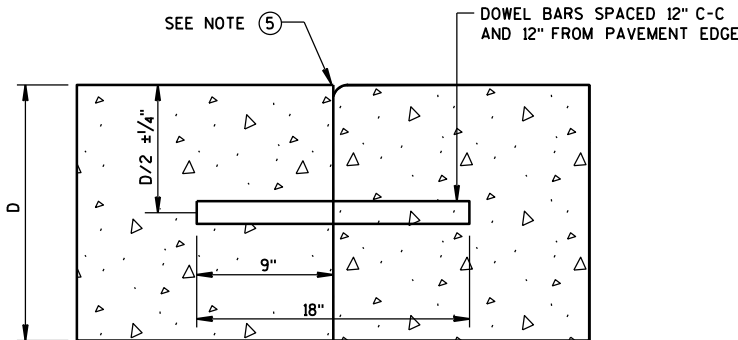
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



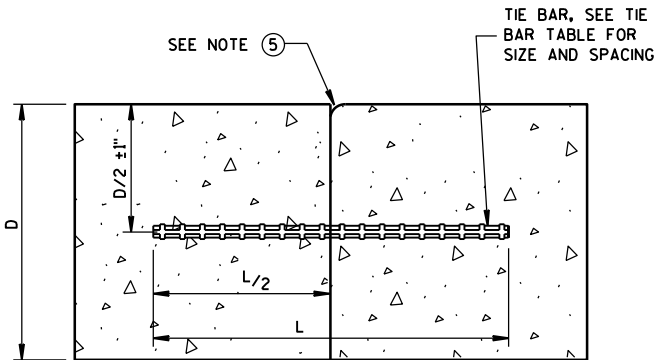
DOWELED-TRANSVERSE

CONTRACTION JOINTS

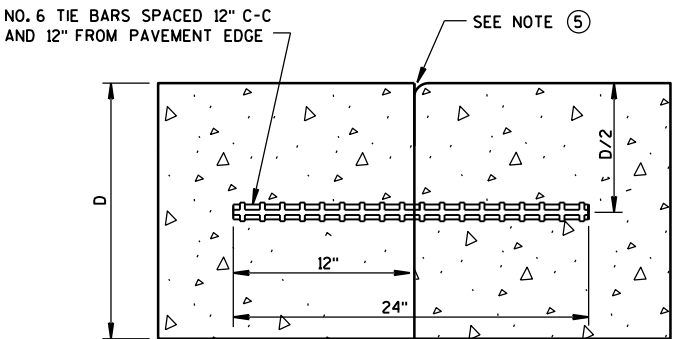
SEE NOTE ②



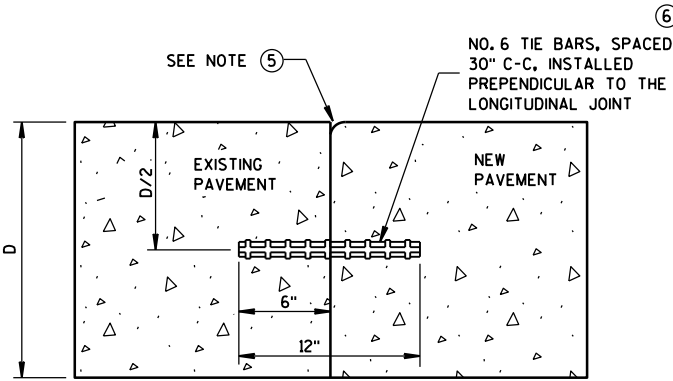
DOWELED TRANSVERSE ③



TIED LONGITUDINAL



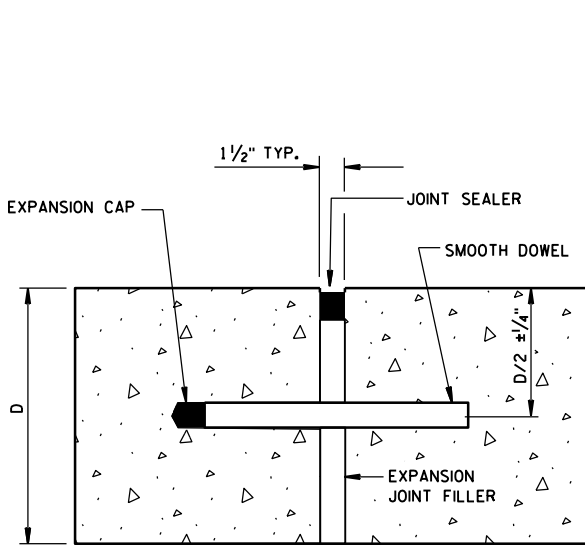
TIED TRANSVERSE ③
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



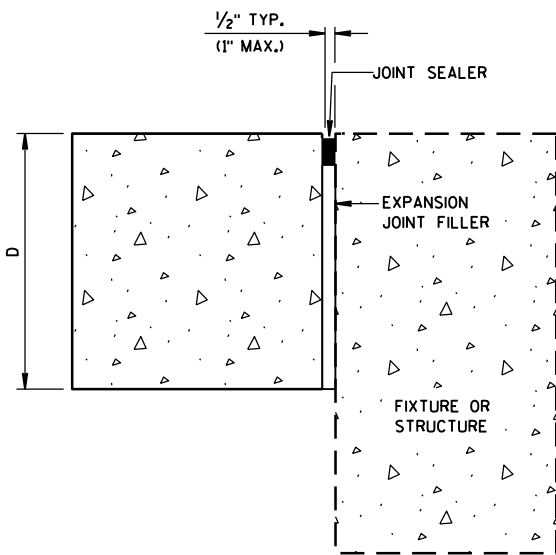
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE ④



DOWELED-TRANSVERSE
SEE NOTE ①

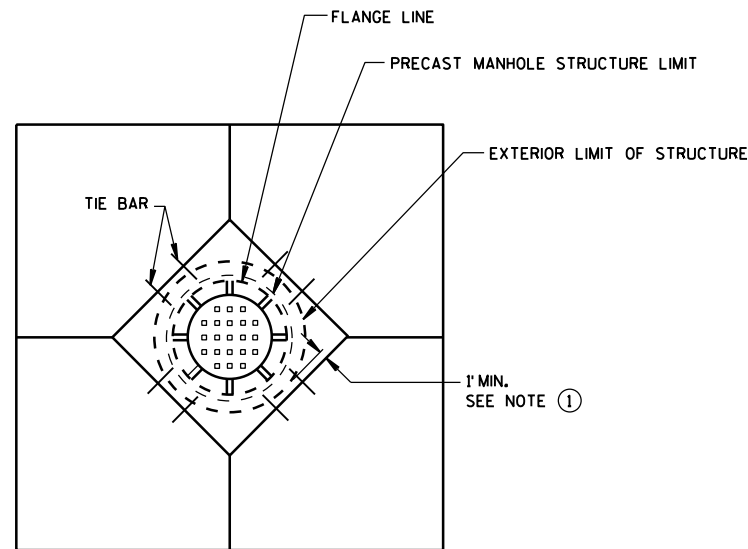


UNTIED-LONGITUDINAL

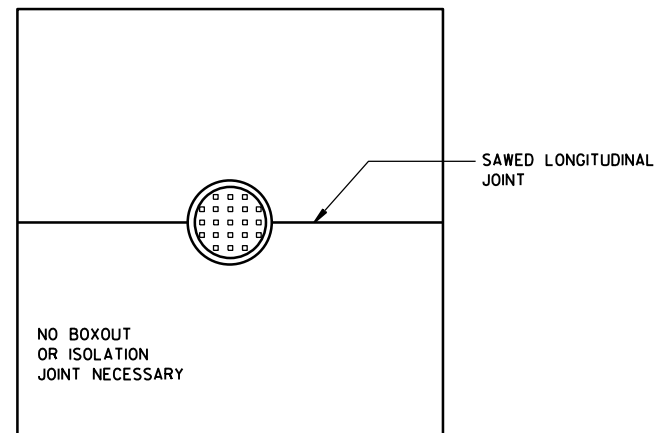
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

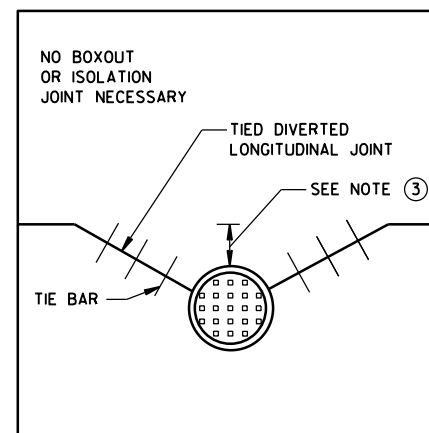
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 165



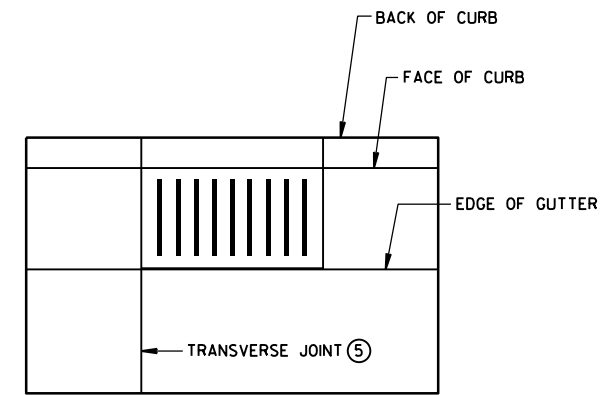
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



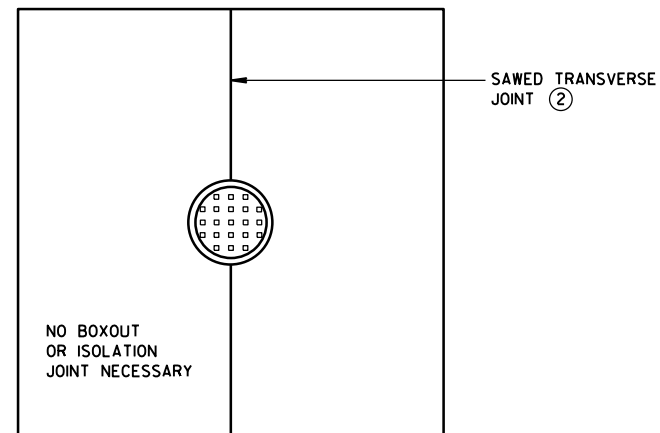
**MANHOLE WITH
LONGITUDINAL JOINT**



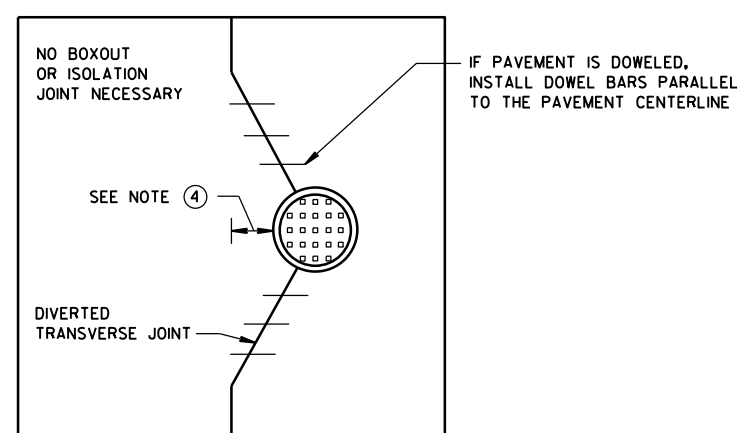
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

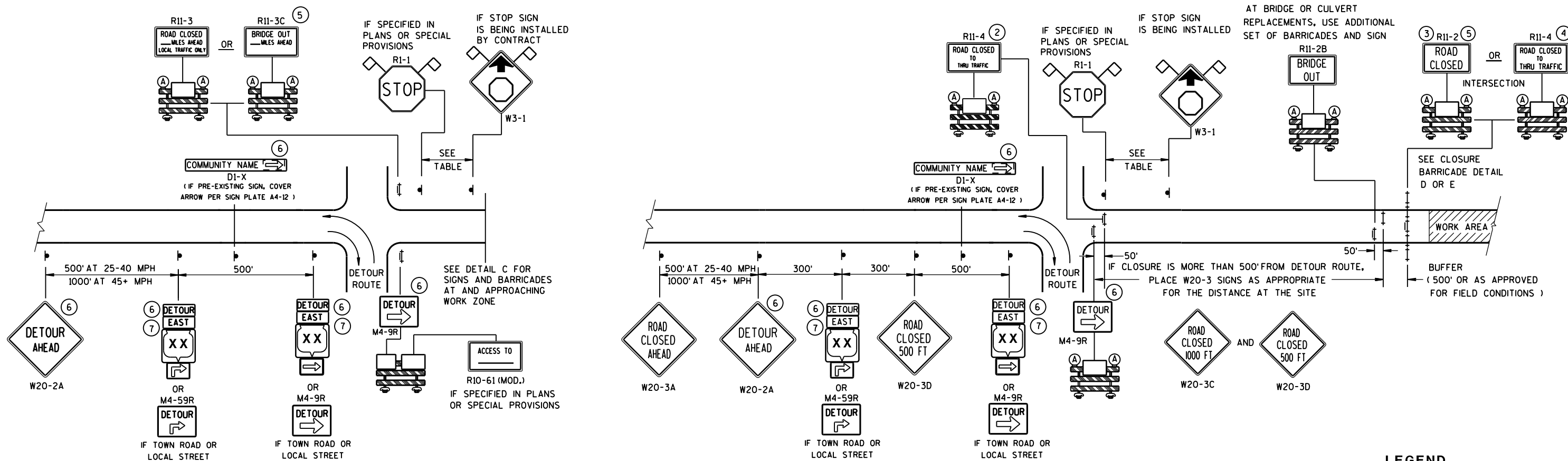
GENERAL NOTES

- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

**CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPEF 166
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

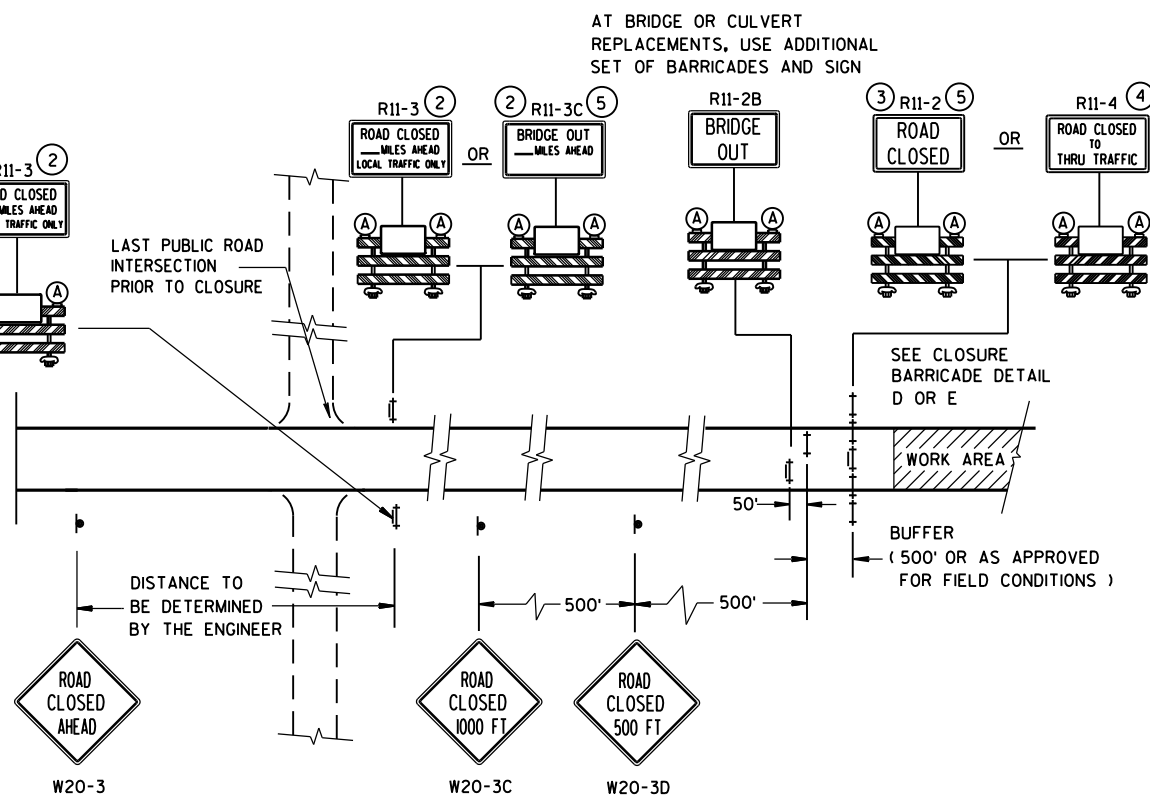
WORK AREA

DETOUR EAST M4-8
M3-X
XX OR COUNTY XX OR XX
M1-4 M1-5A M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

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



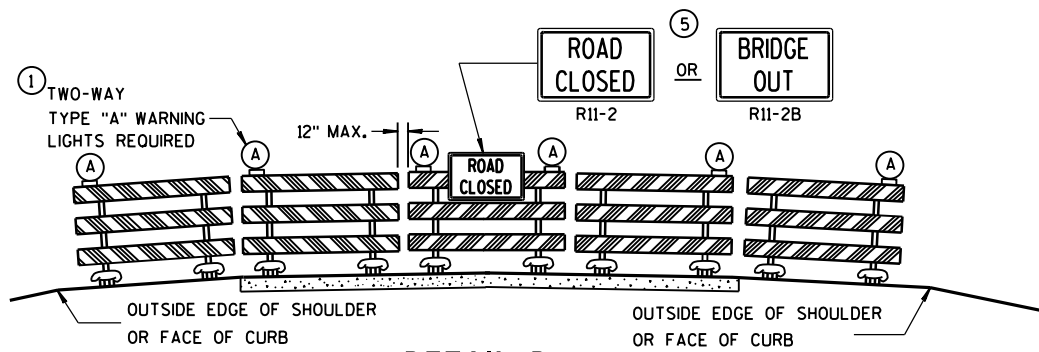
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

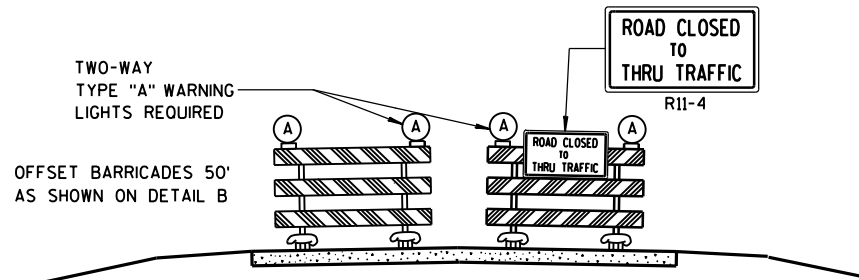
**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE SAFETY 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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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:

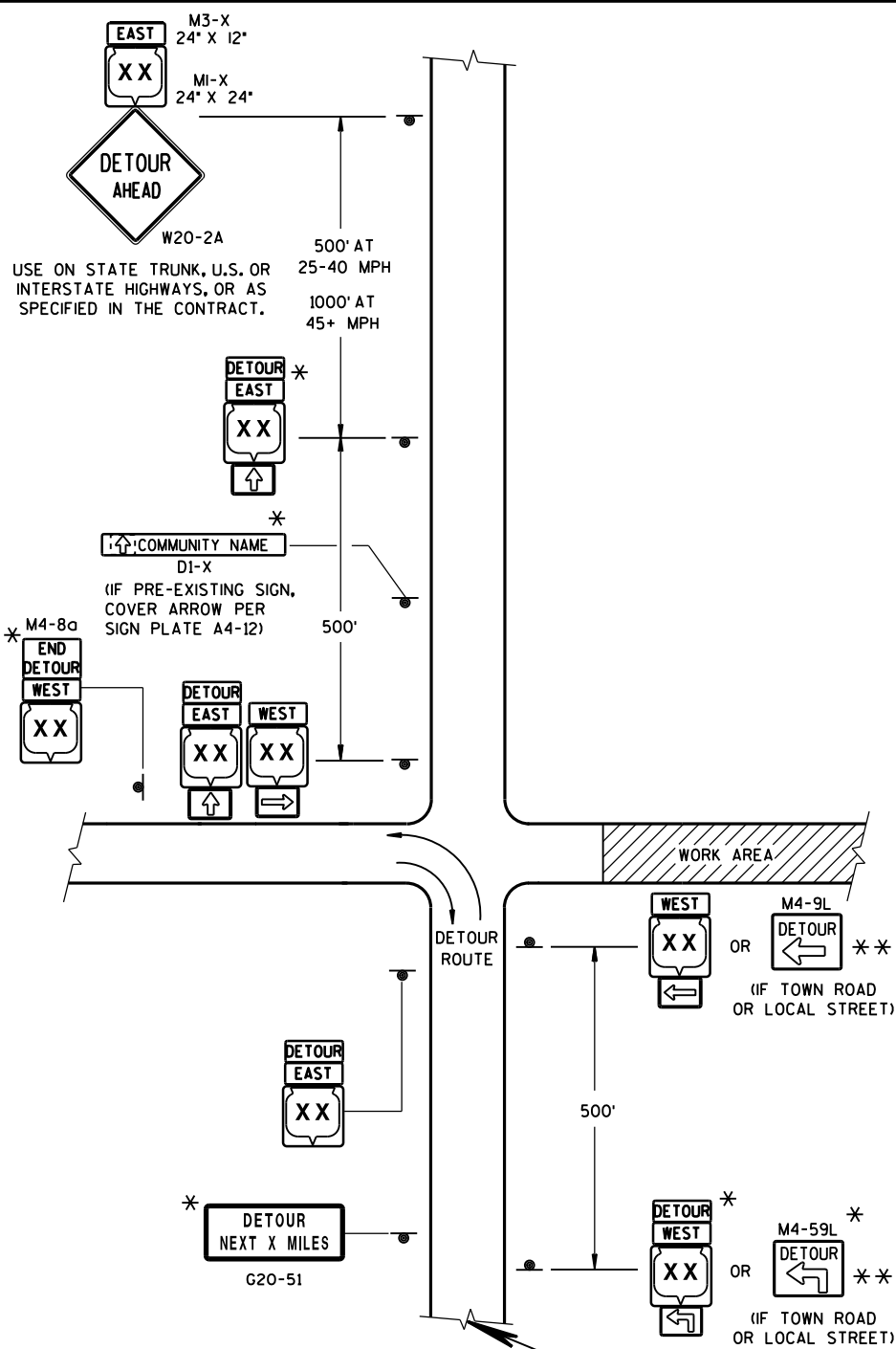
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- 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 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 LANE 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
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZO 168 FIC
FHWA SAFETY ENGI



LEGEND

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

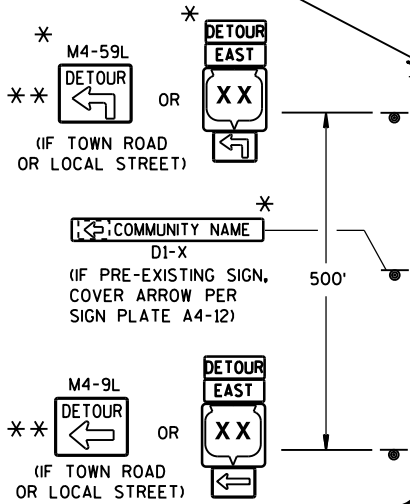
SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

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

MATCH POINT

DETAIL F
DETOUR SIGNING

USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT.



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.

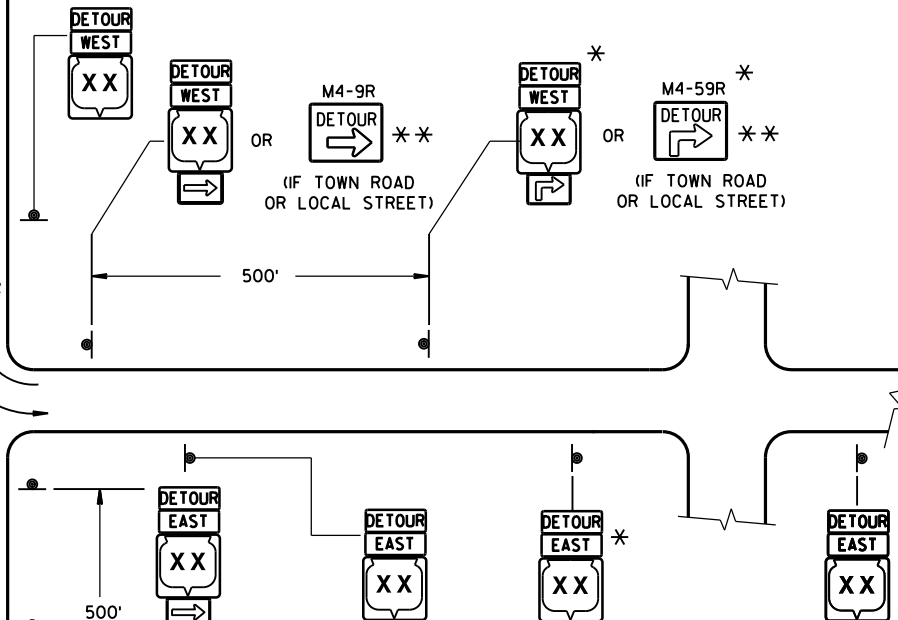
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- MI-4, MI-5A, AND MI-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 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.

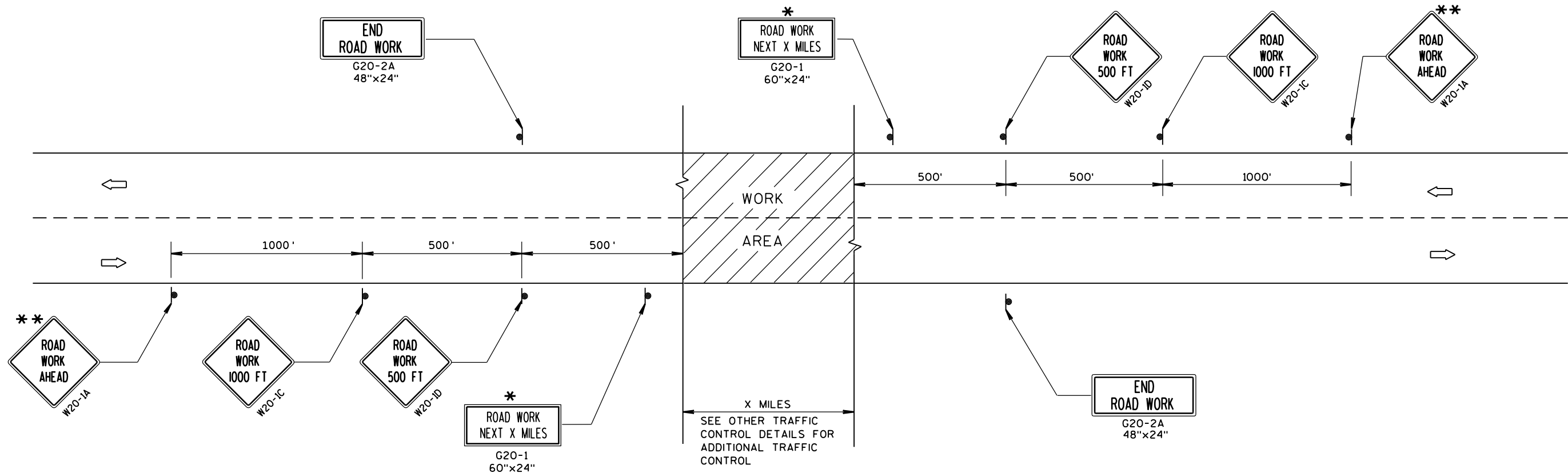


PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA.)

DETOUR SIGNING FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

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.

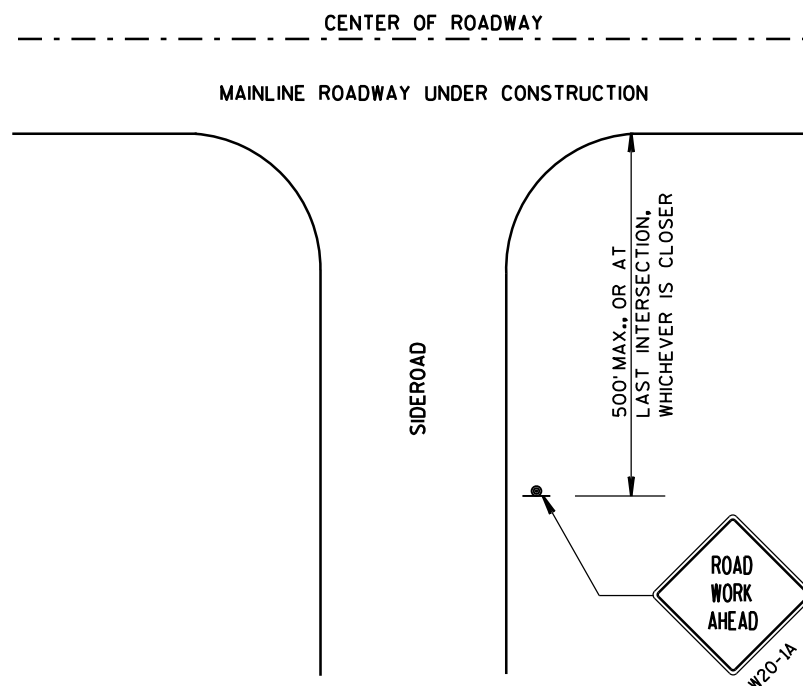
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

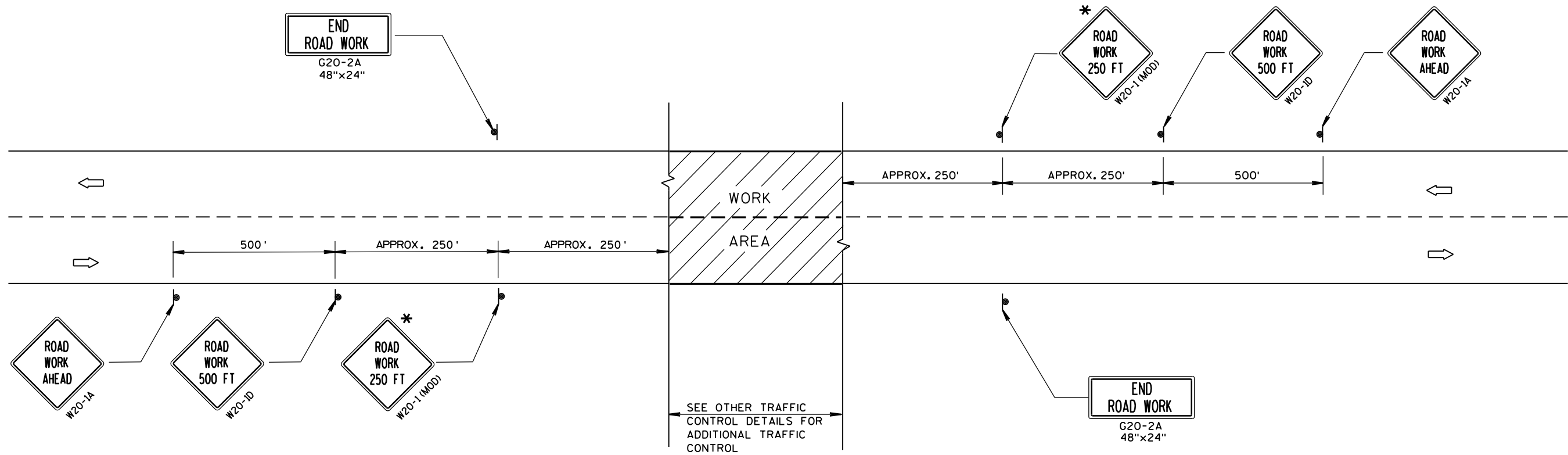
** PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED	/S/ Peter Amokobe Atepe		
DATE	Sept. 2015	STATEWIDE WORK ZONE	170
FHWA		SAFETY ENGINEER	IC



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

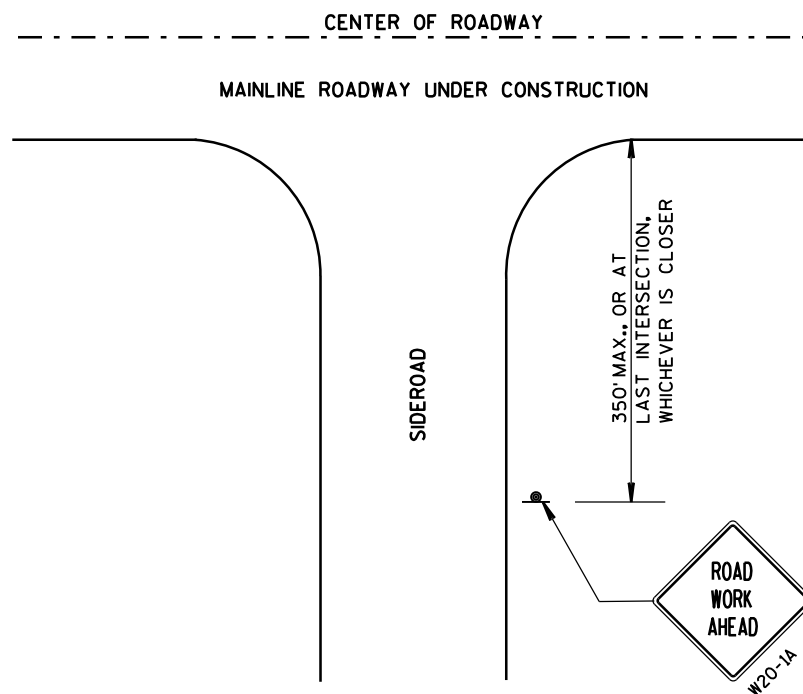
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

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



LEGEND

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

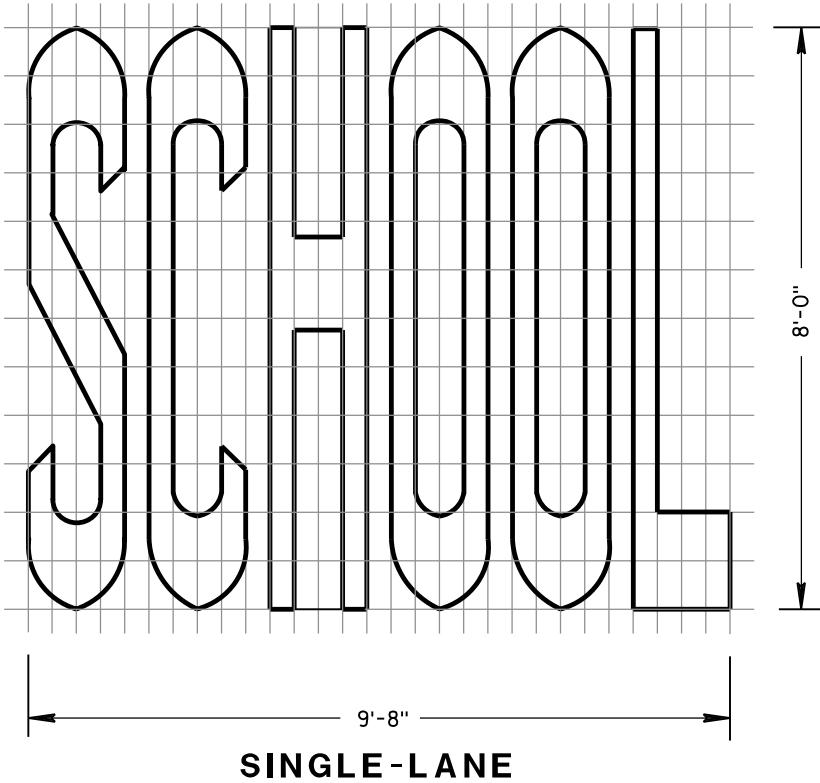
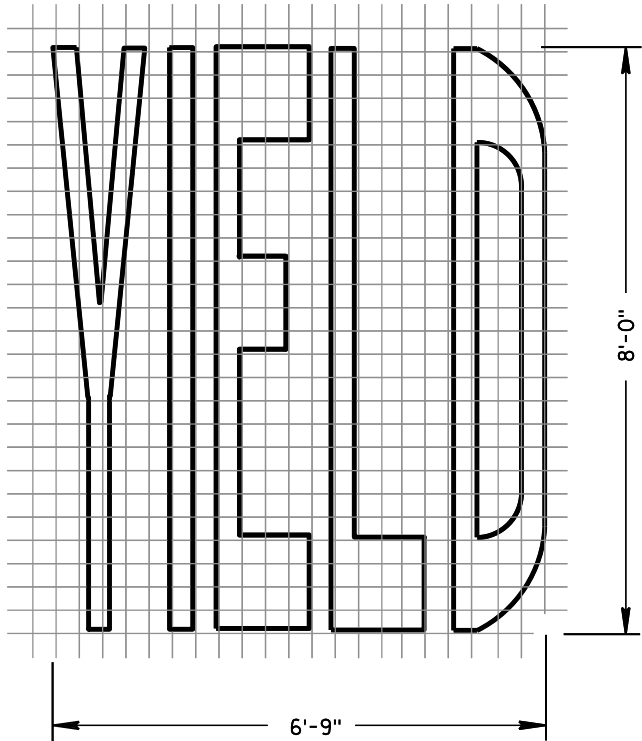
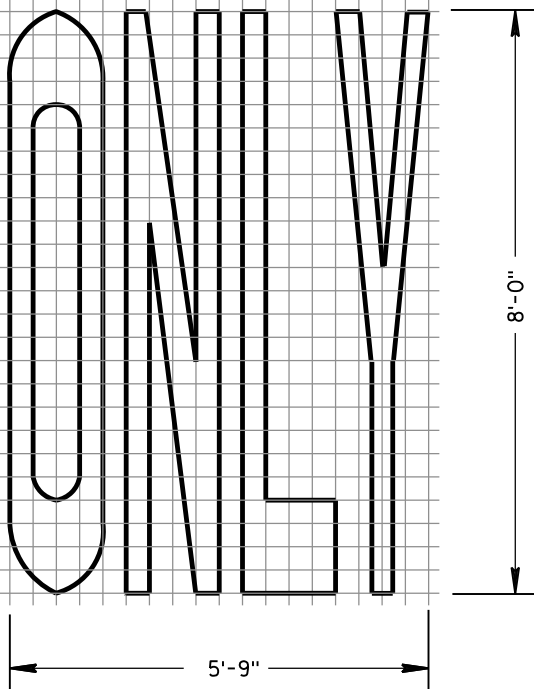
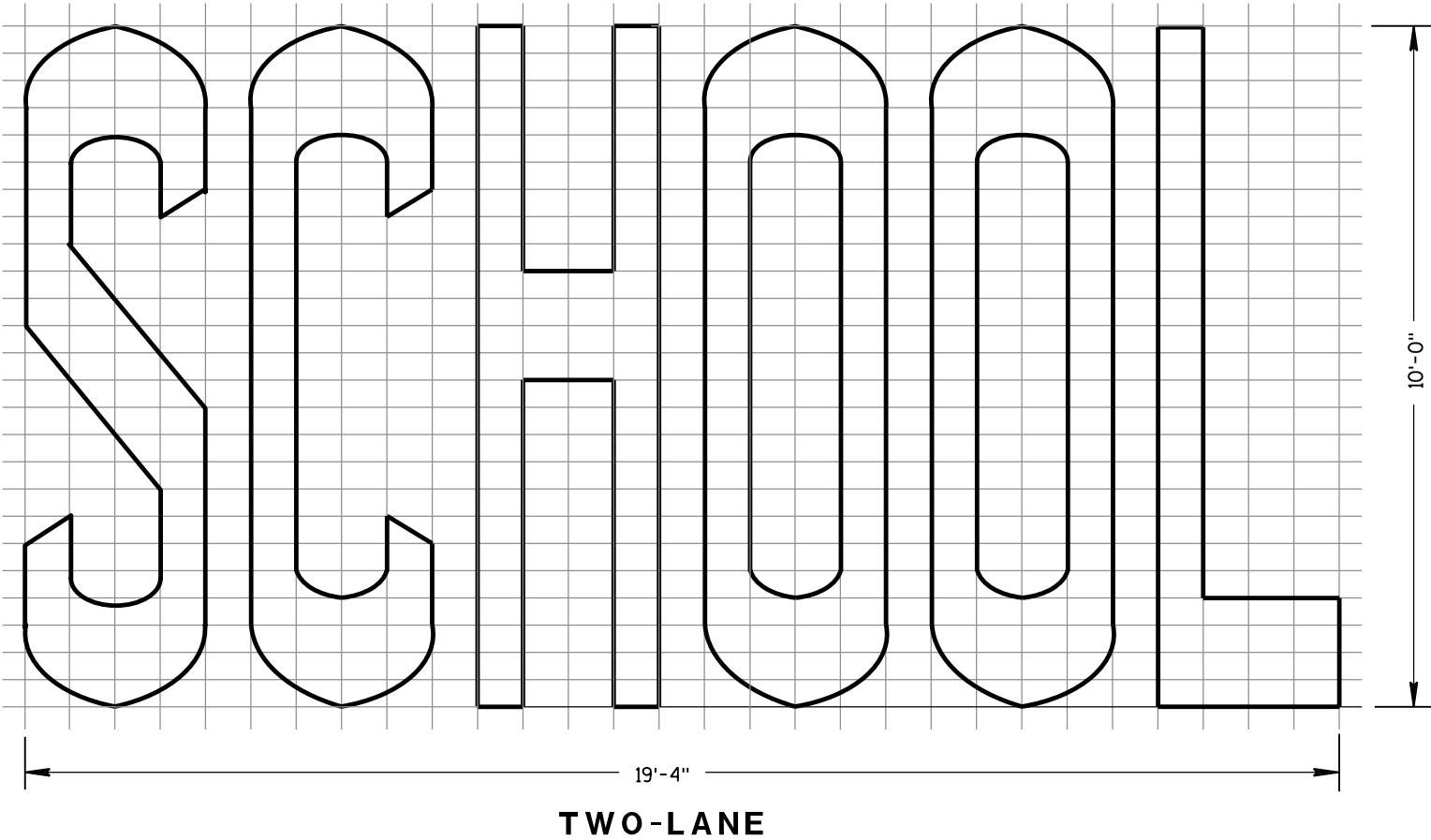
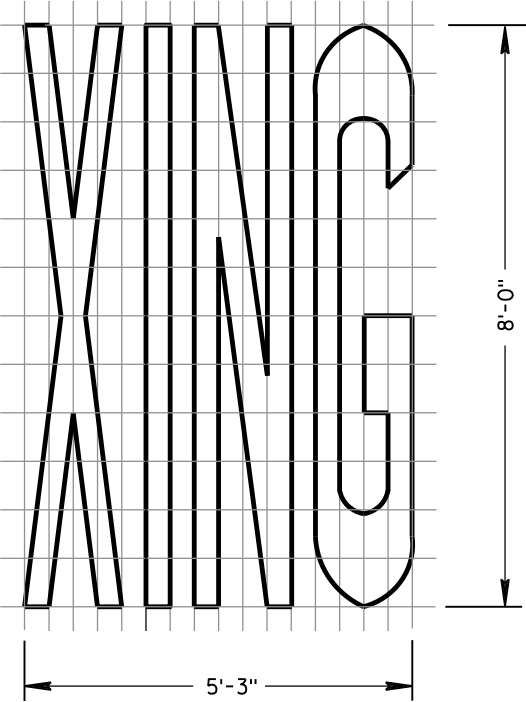
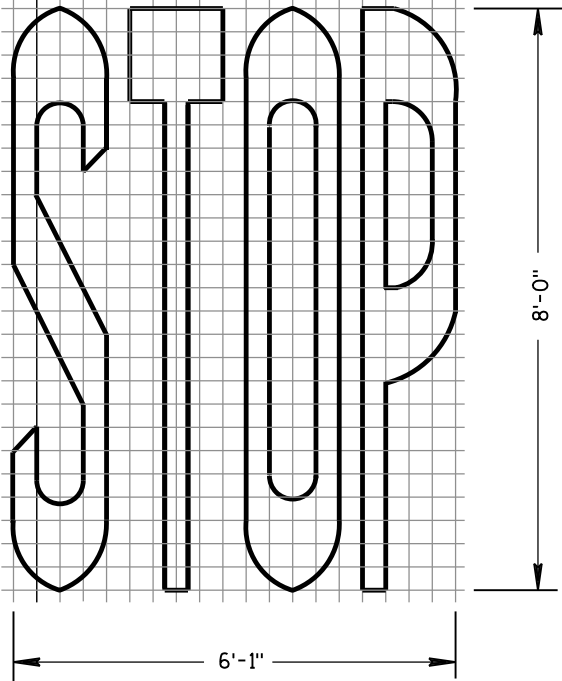
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

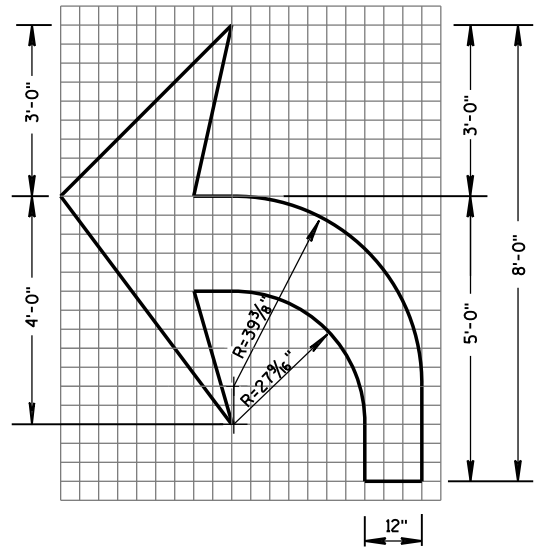
APPROVED
Sept. 2015 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

GENERAL NOTES

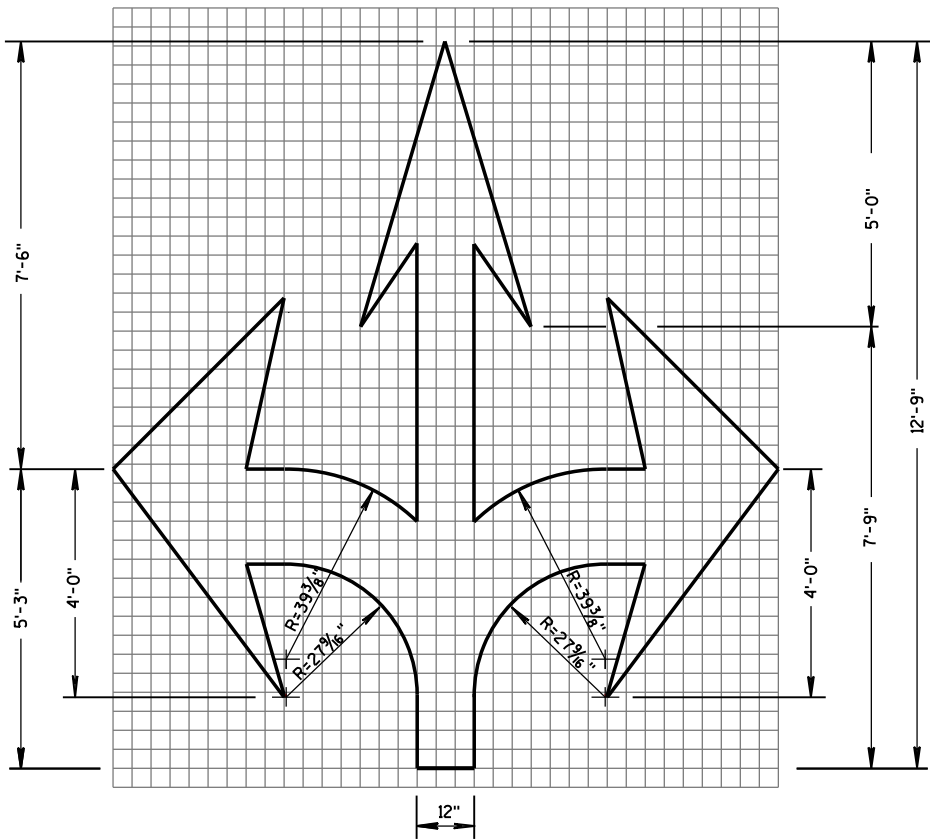
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



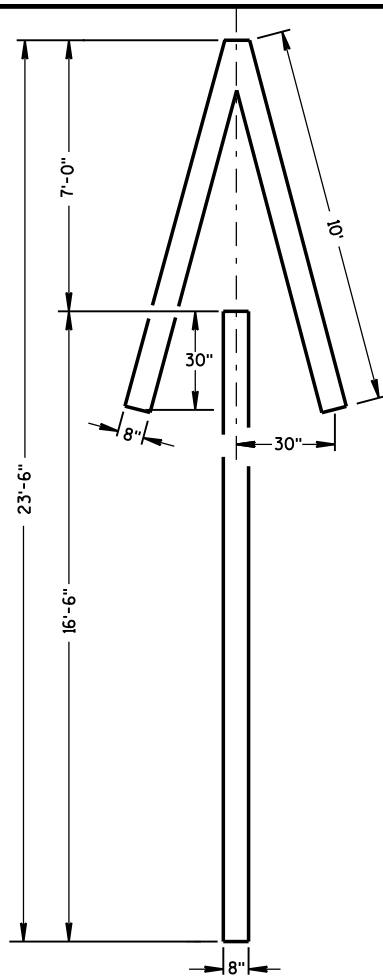
PAVEMENT MARKING WORDS			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
June 2017	/S/ Matthew R. Rauch		
DATE	STATE SIGNING AND MARK	172	EER
FHWA			



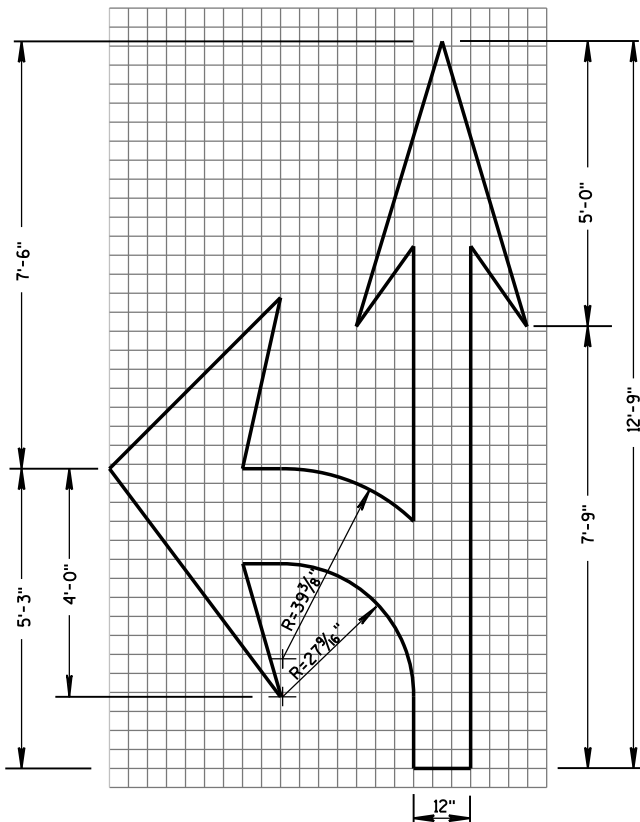
TYPE 2



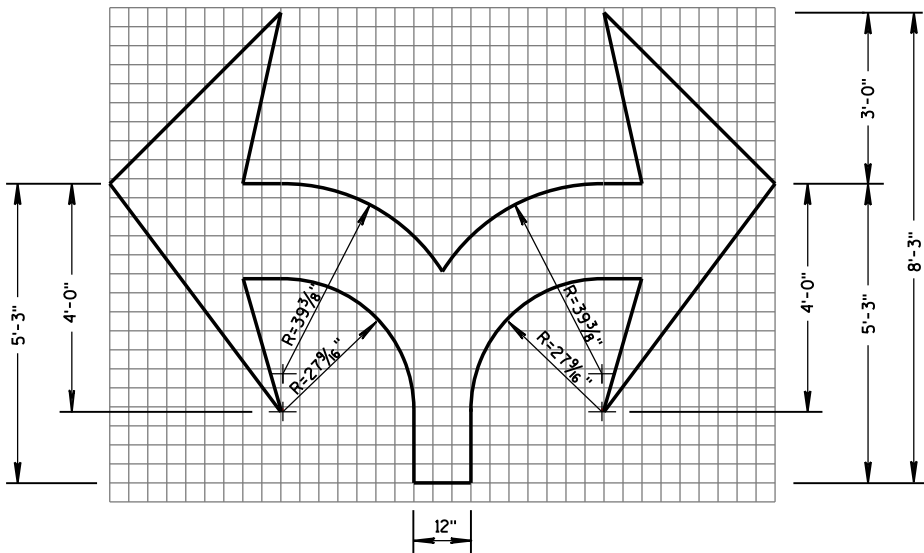
TYPE 6



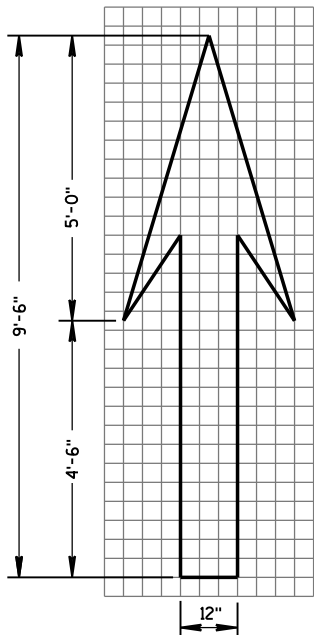
TYPE 4



TYPE 3



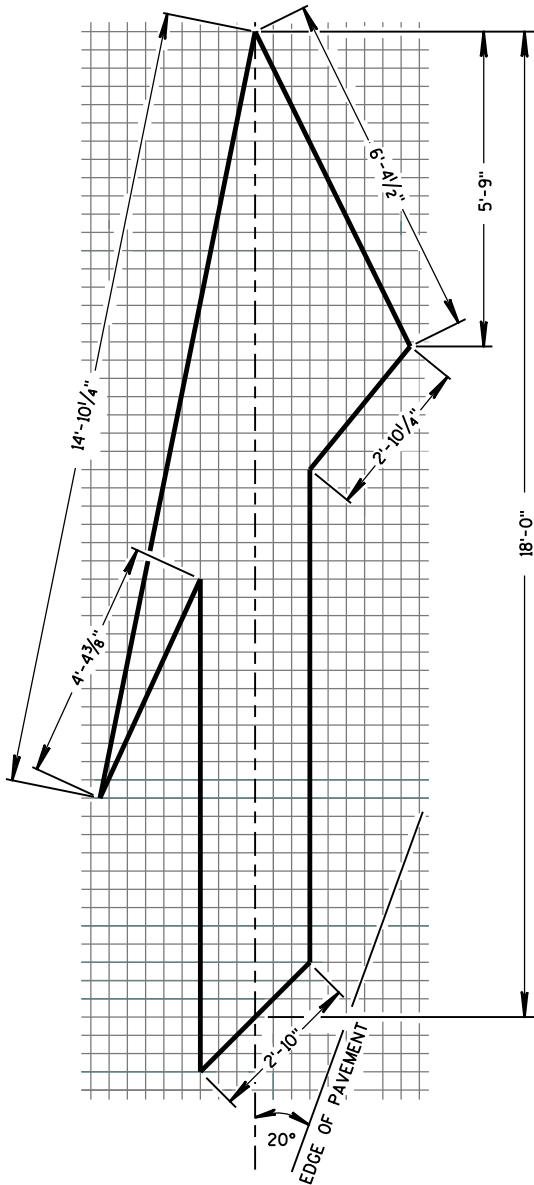
TYPE 7



TYPE 1

GENERAL NOTES

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

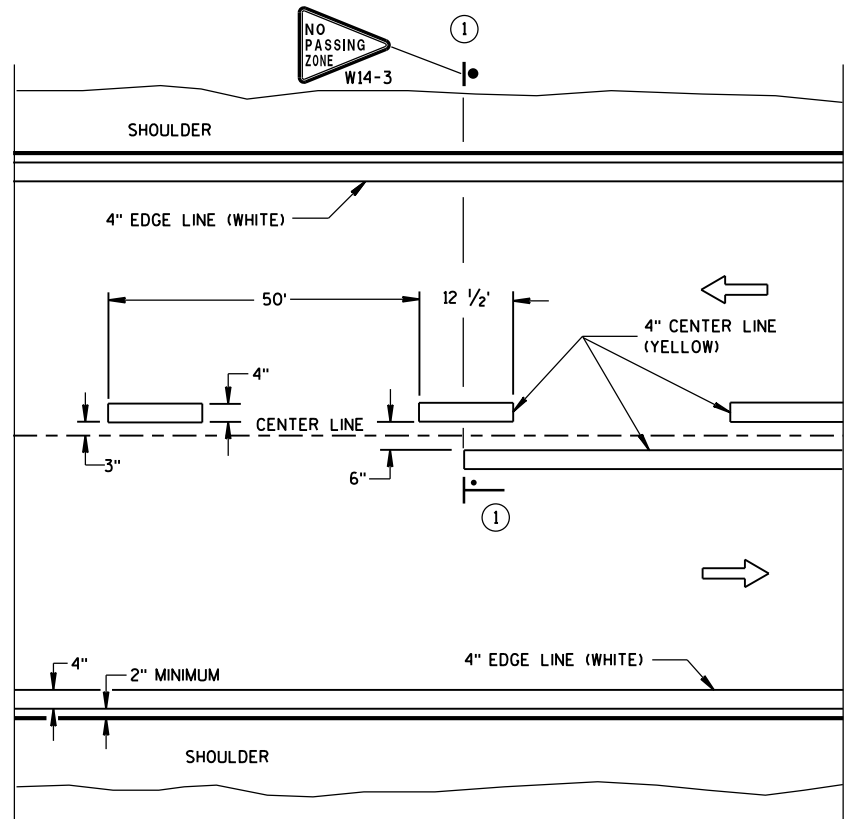


TYPE 5 LANE DROP ARROW

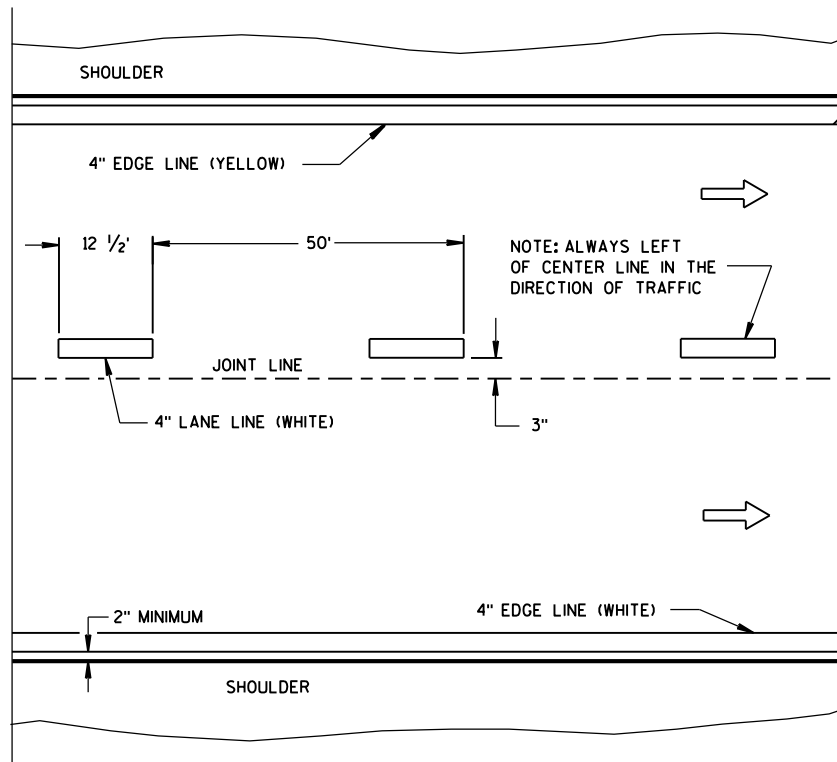
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MAR 173
FHWA VER

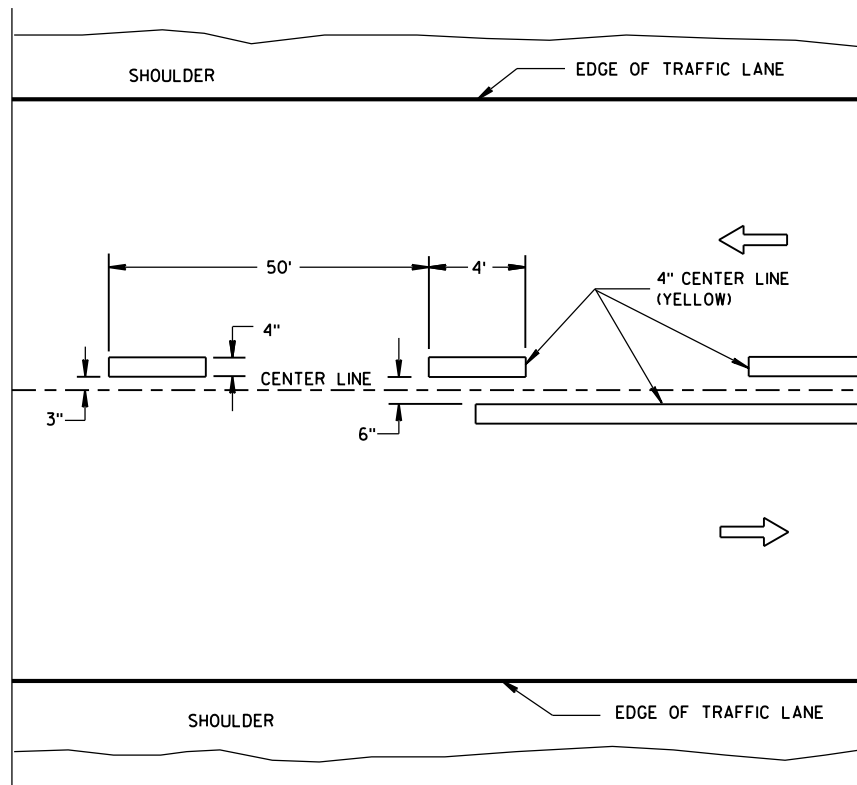


TWO WAY TRAFFIC

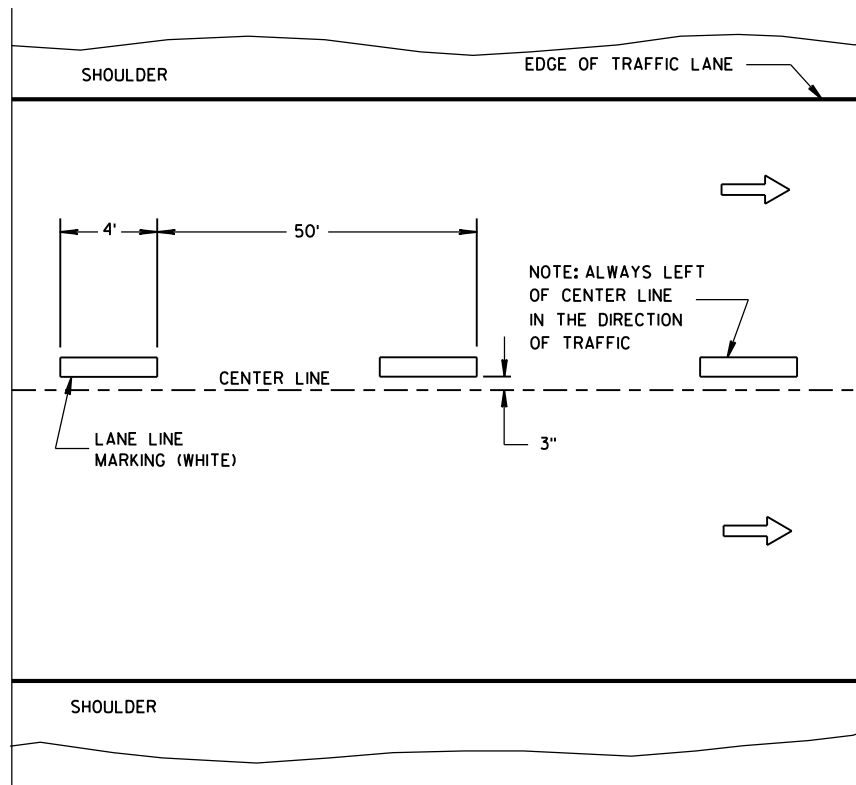


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

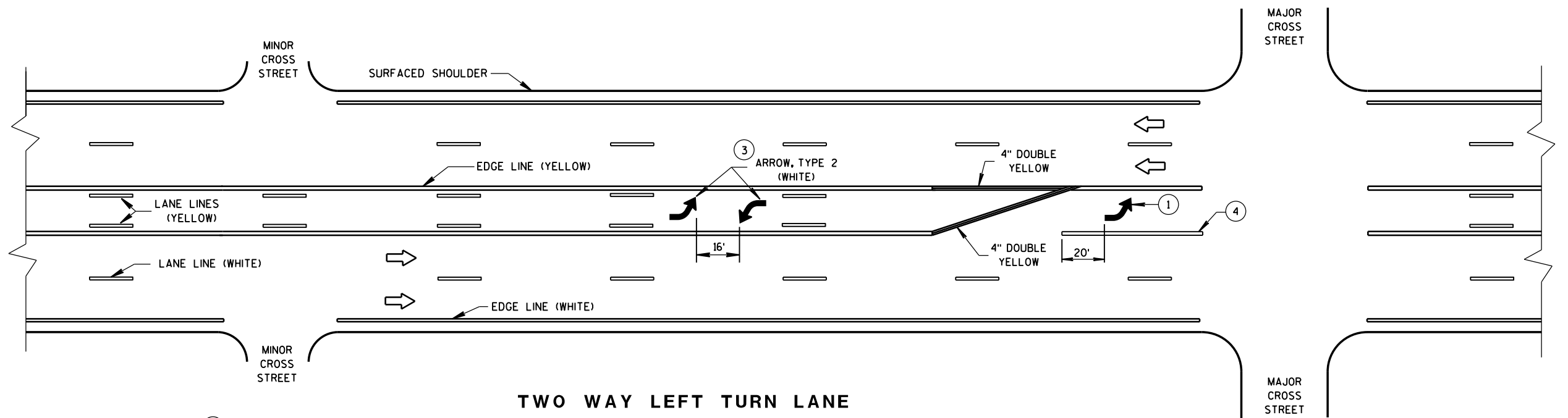
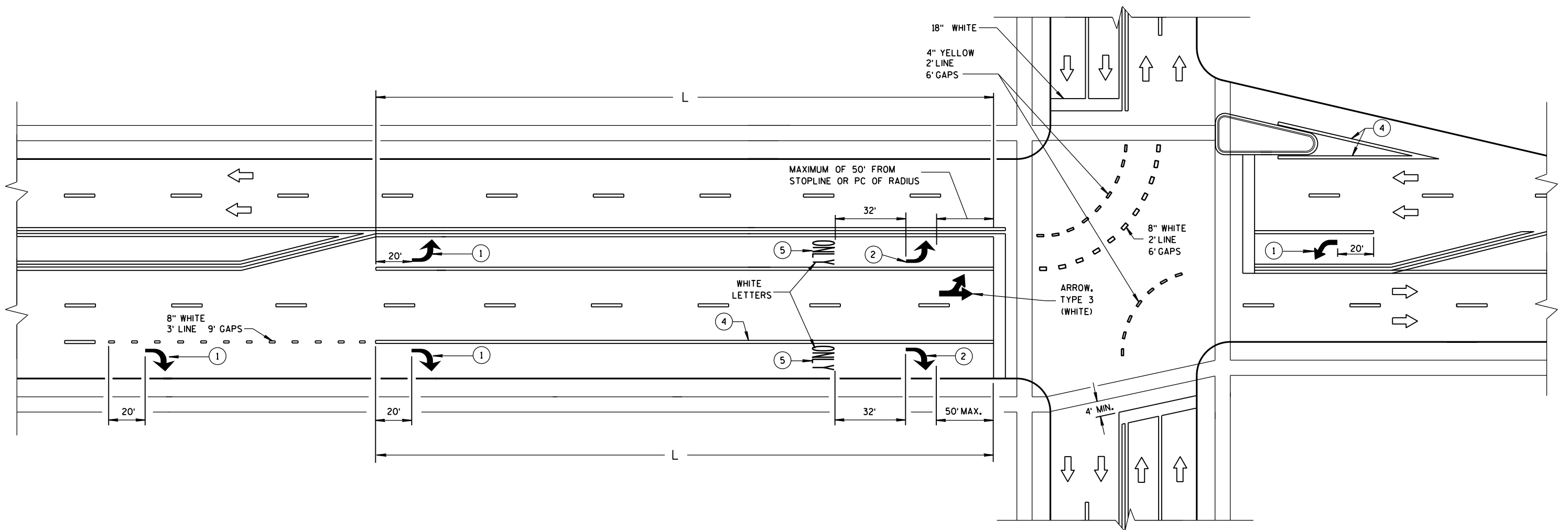
├── "T" MARKING

● POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MAP 174 ENGINEER
FHWA



GENERAL NOTES

- ① REQUIRED ARROW, TYPE 2 (WHITE).
- ② REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ 8" WHITE
- ⑤ REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

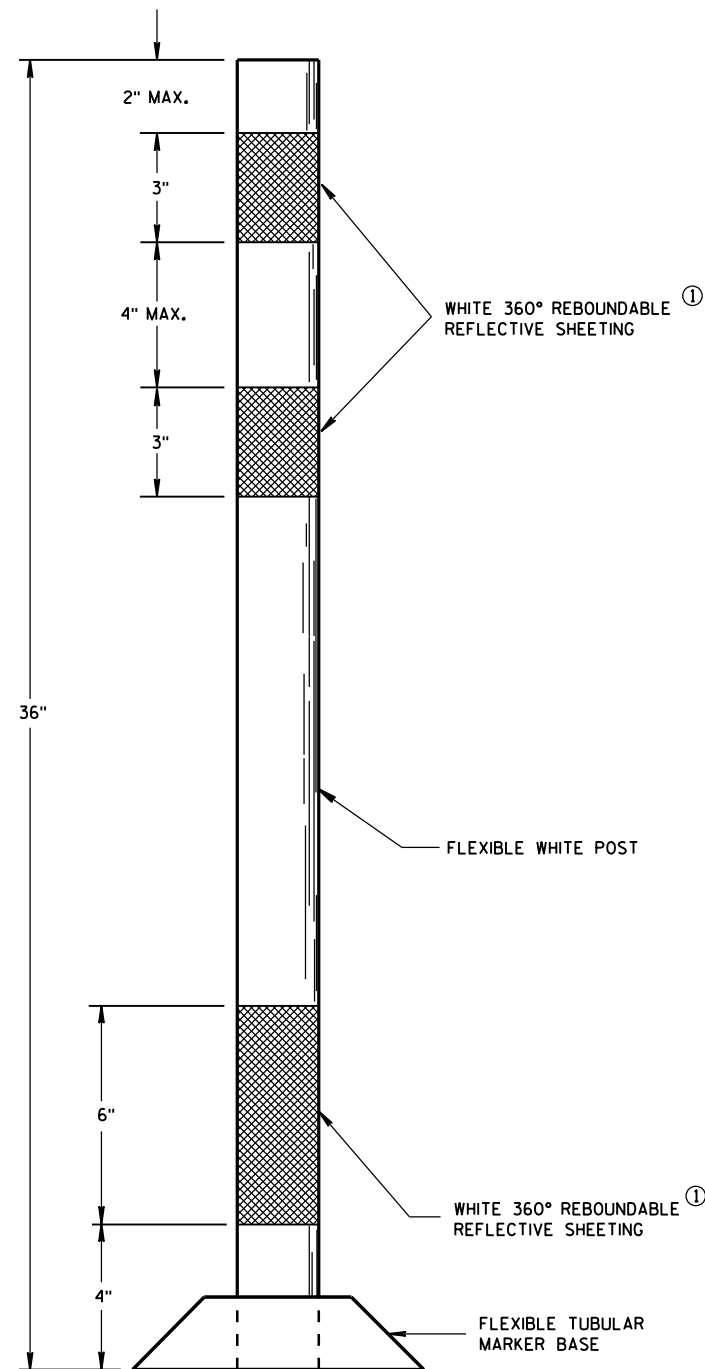
TWO WAY LEFT TURN LANE

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

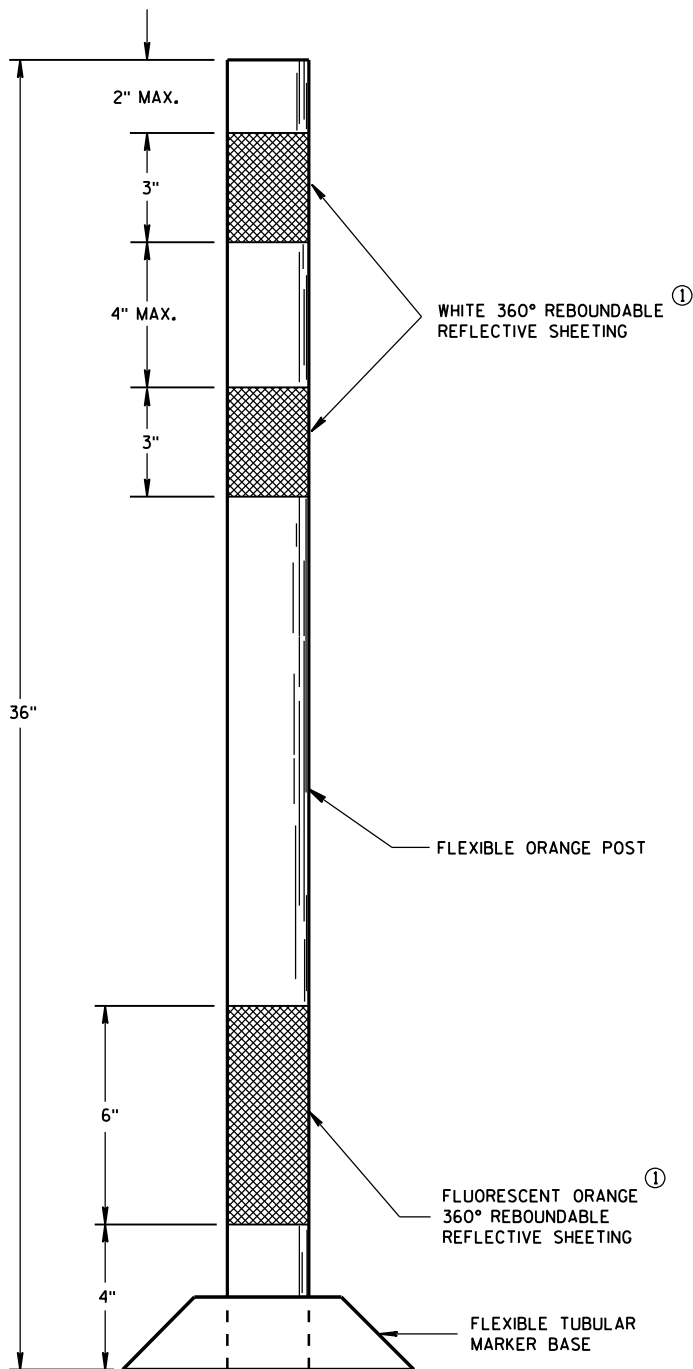
L = LENGTH OF TURN BAY

PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 175



**FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE
TUBULAR MARKER POST
WORK ZONE**

GENERAL NOTES

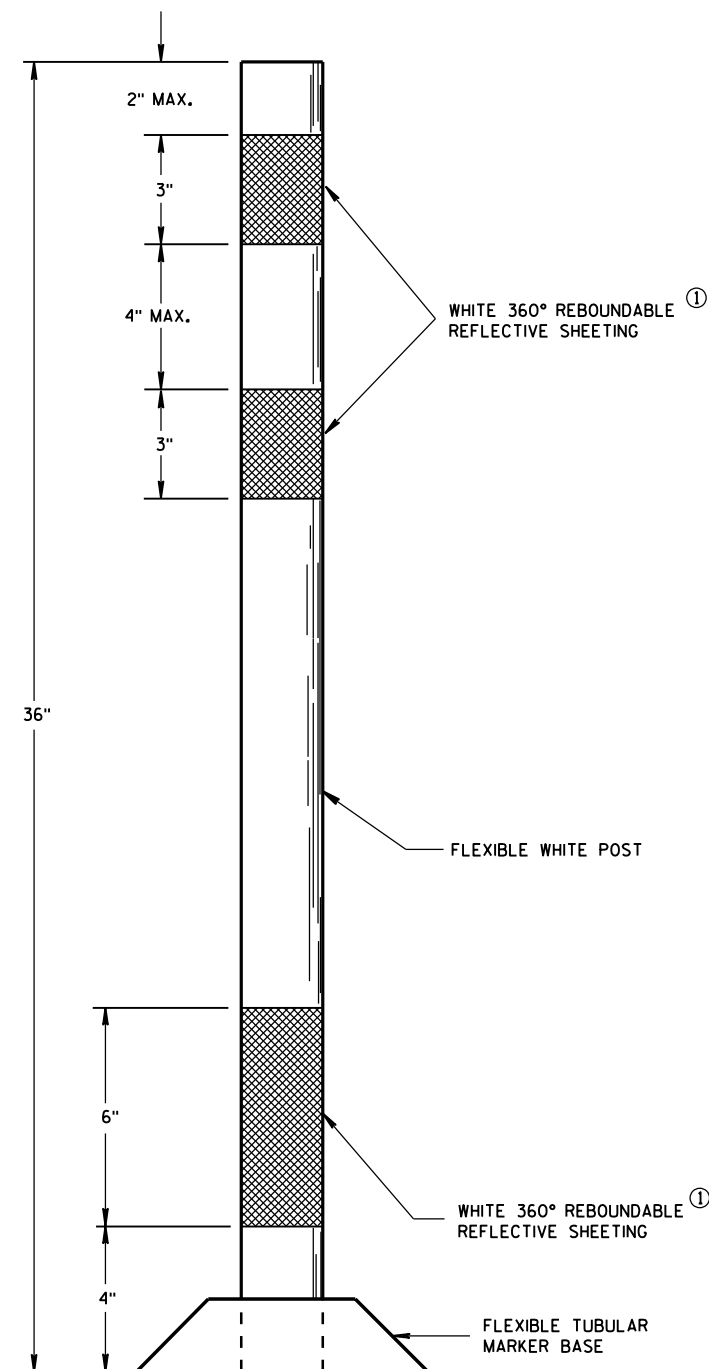
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

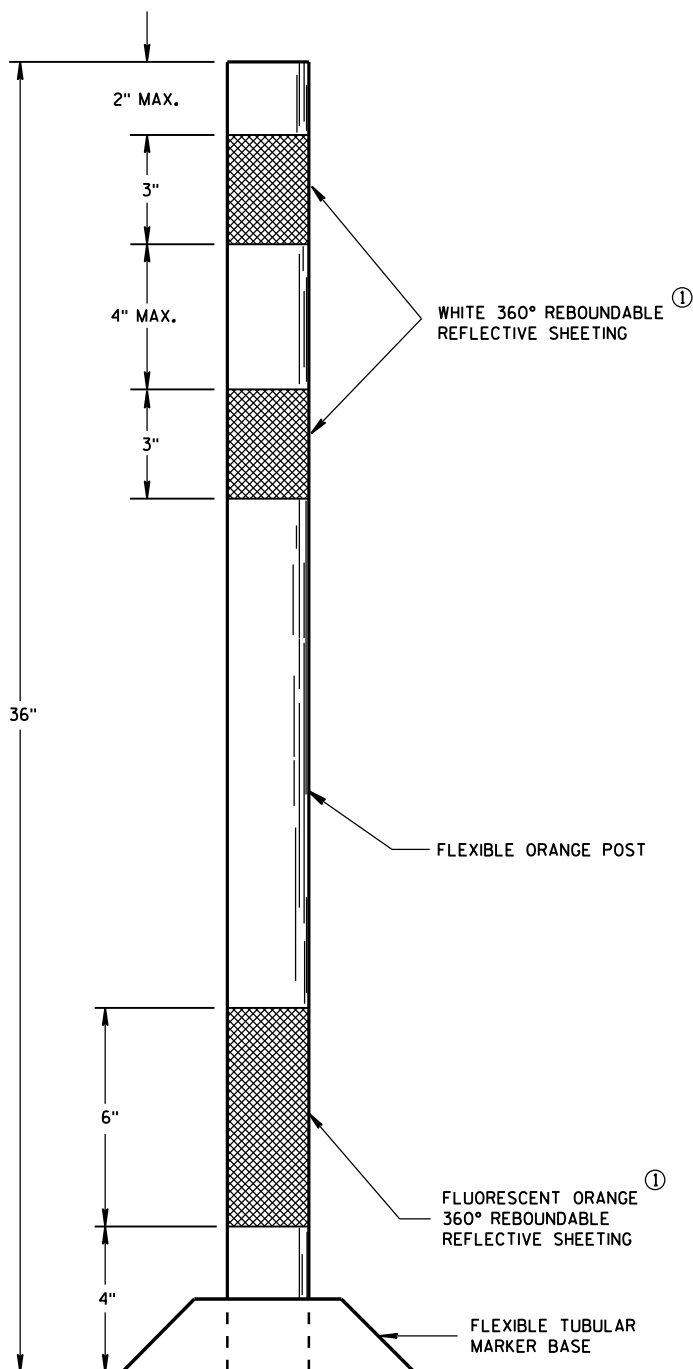
THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

FLEXIBLE TUBULAR MARKER POST	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 10-16-2015	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE SAFETY ENGINEER 176
FHWA	



**FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE
TUBULAR MARKER POST
WORK ZONE**

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

**CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER
POST**

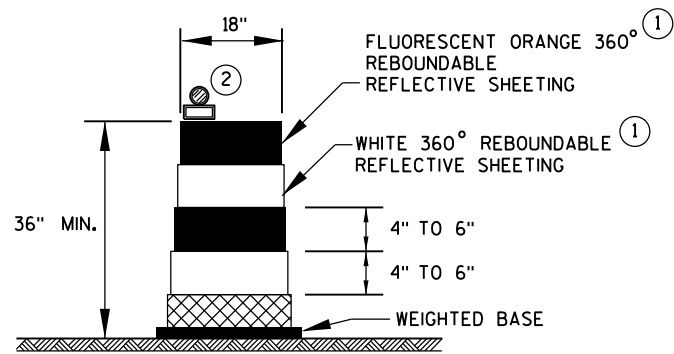
**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED

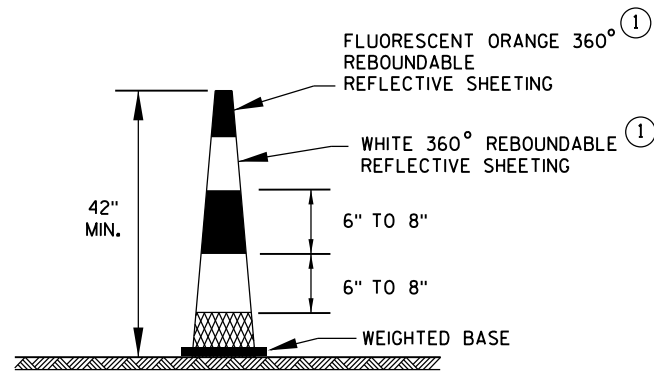
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER 177

FHWA



DRUM

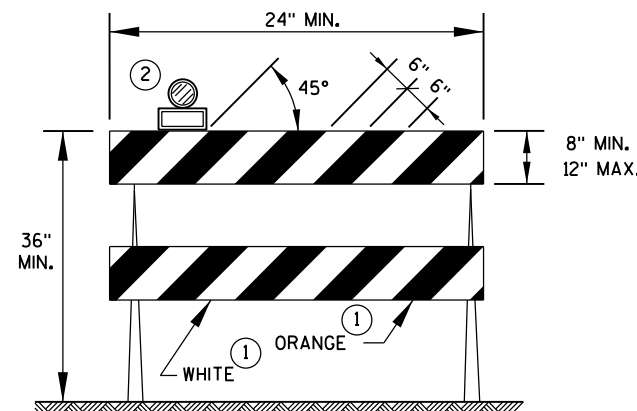


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

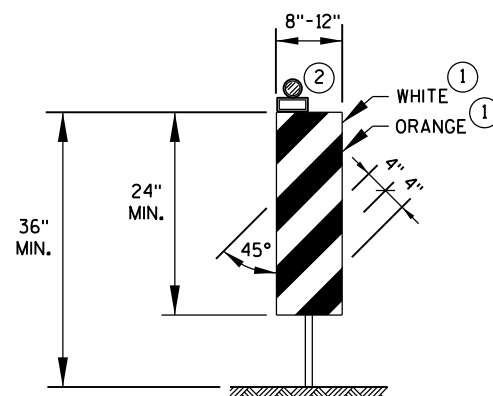
GENERAL NOTES

- 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.



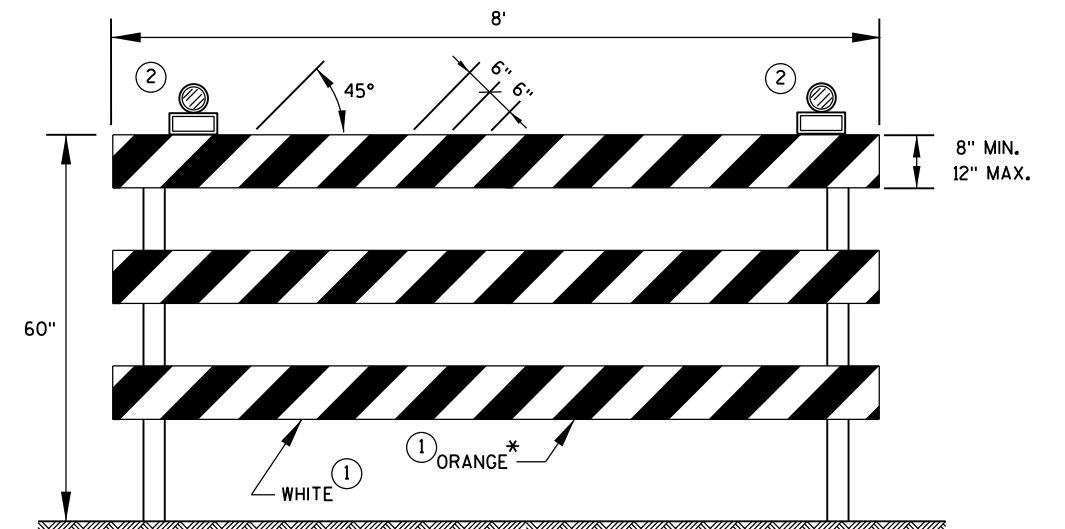
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 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.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

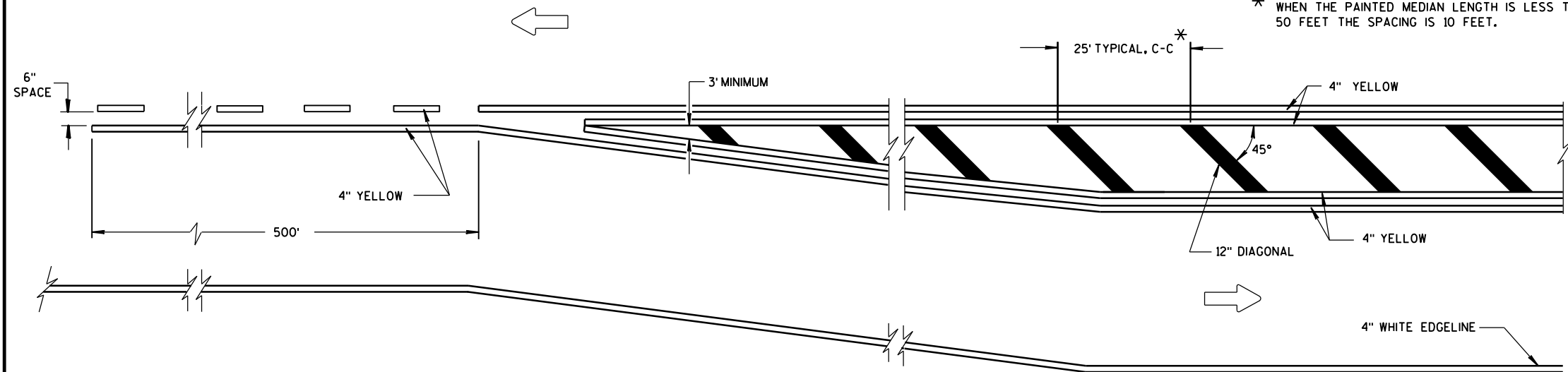
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENG 178

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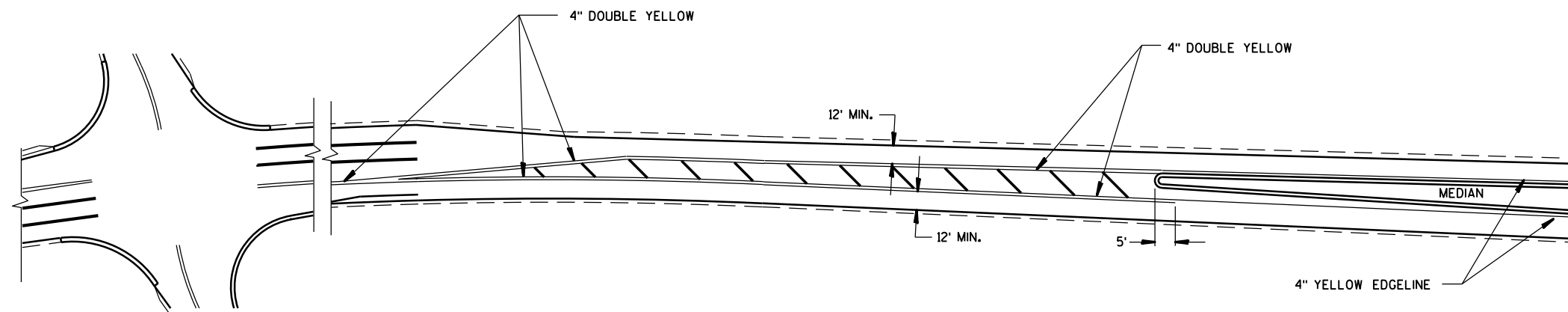


MEDIAN ISLAND DETAIL

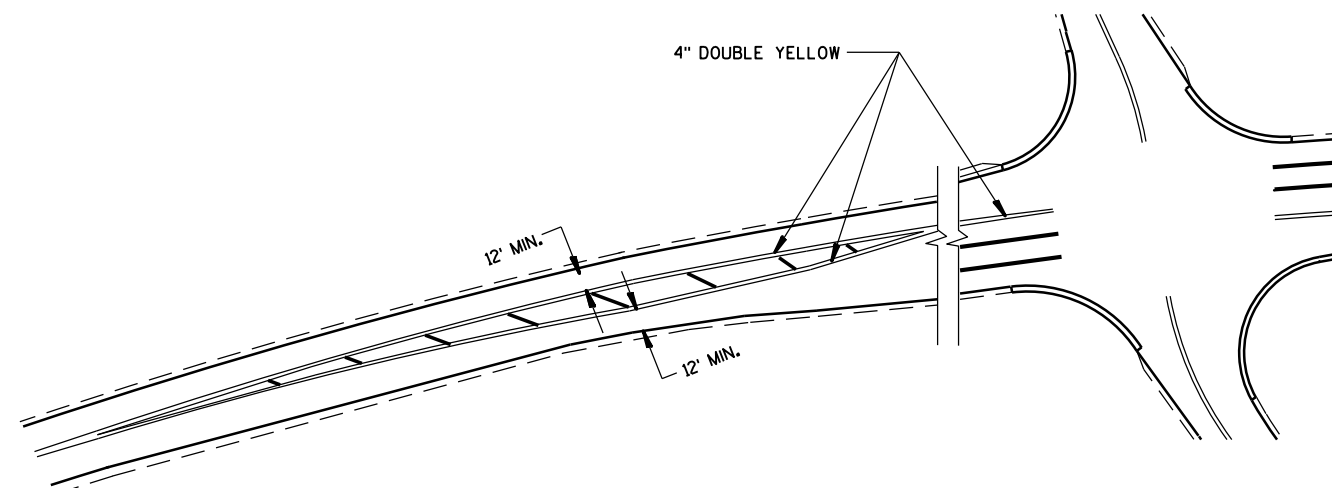
GENERAL NOTE

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

➡ DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

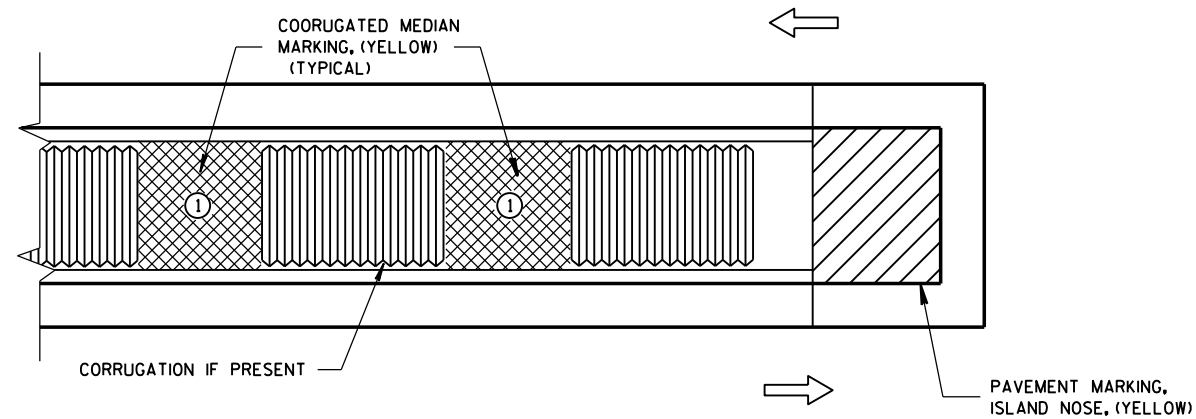


NON APPROACH MARKINGS

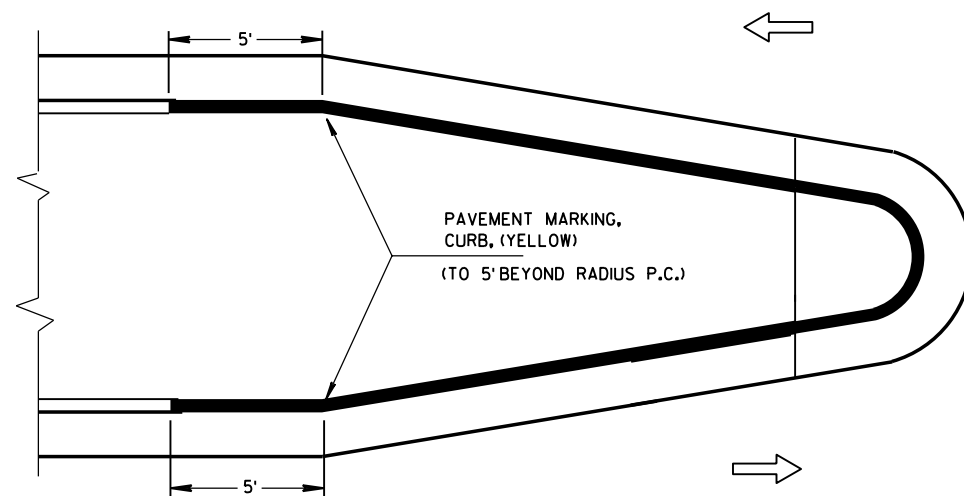
MEDIAN ISLAND MARKING

STATE OF WISCONSIN
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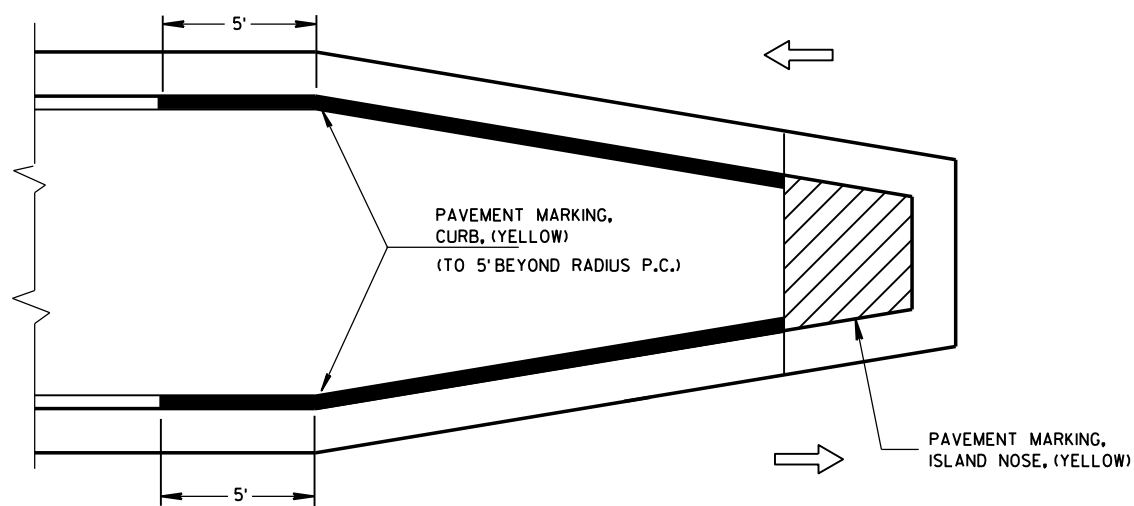
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MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE

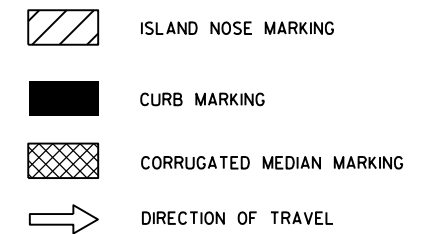


MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

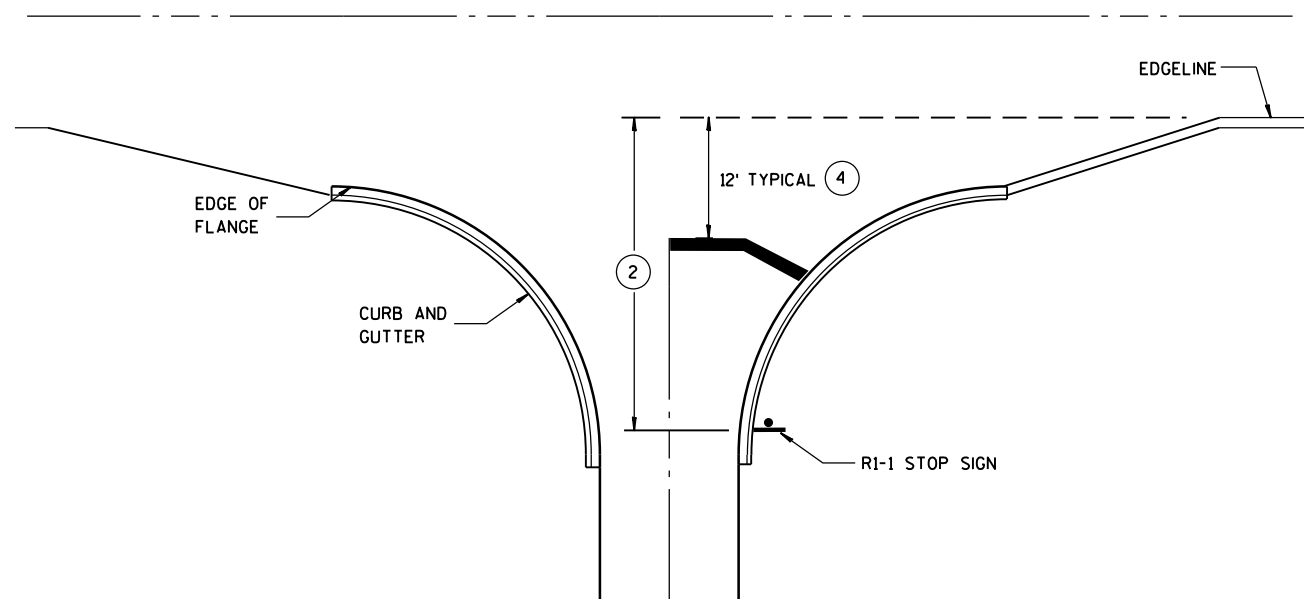
- ① WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



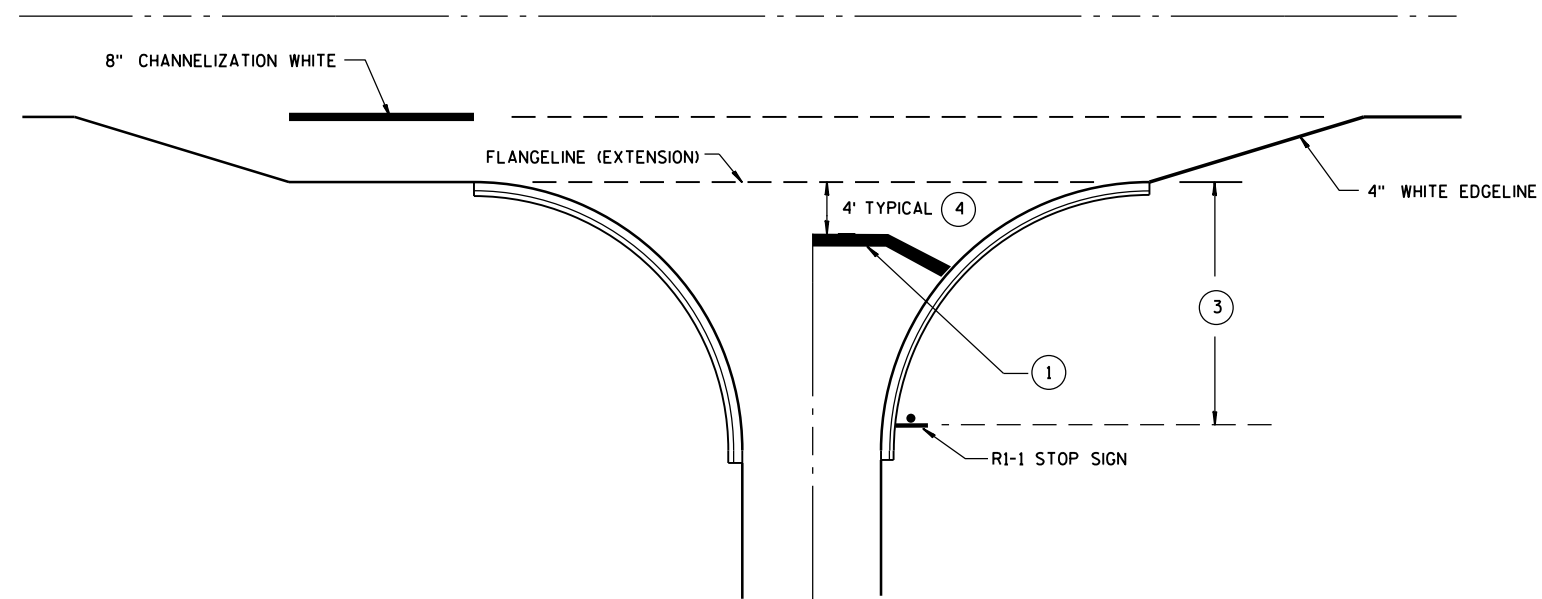
PAVEMENT MARKING (ISLANDS)

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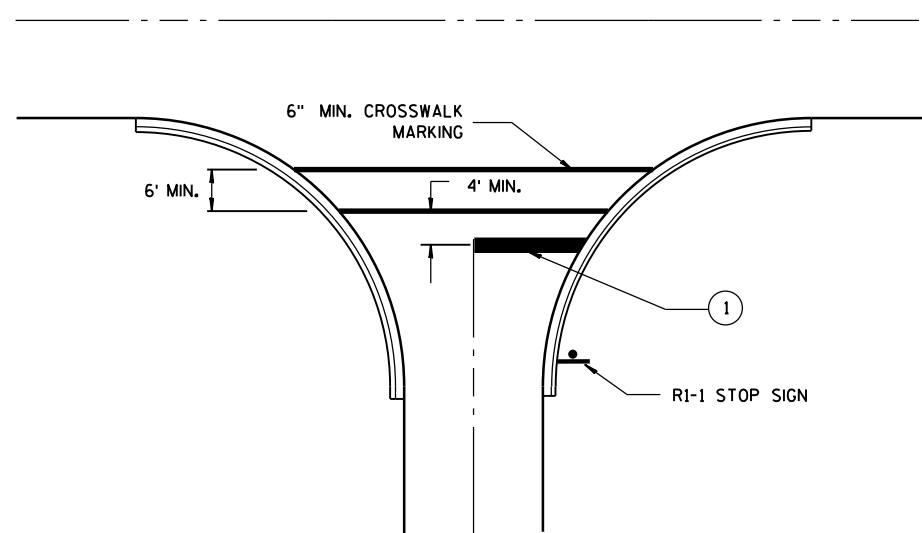
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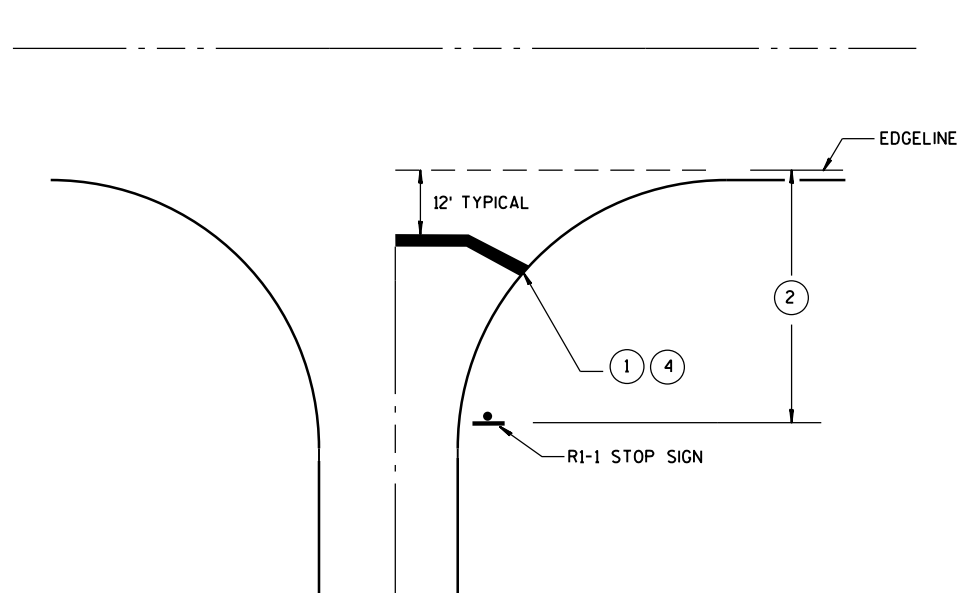
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**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

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

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

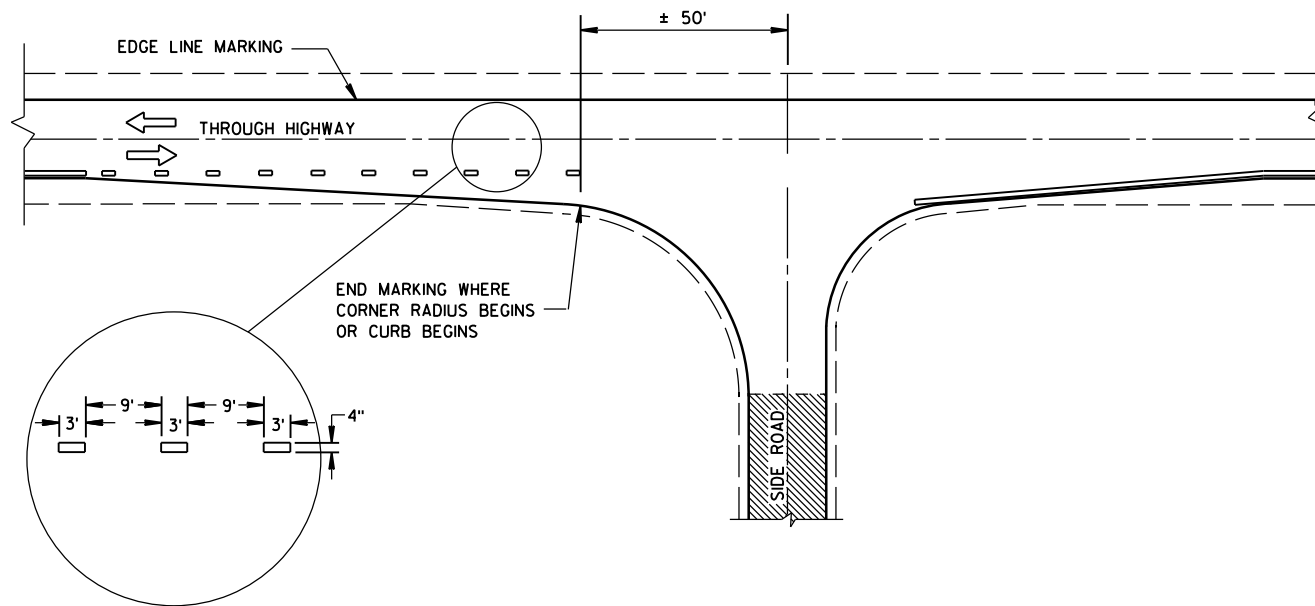
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STATE SIGNING AND MAR 181

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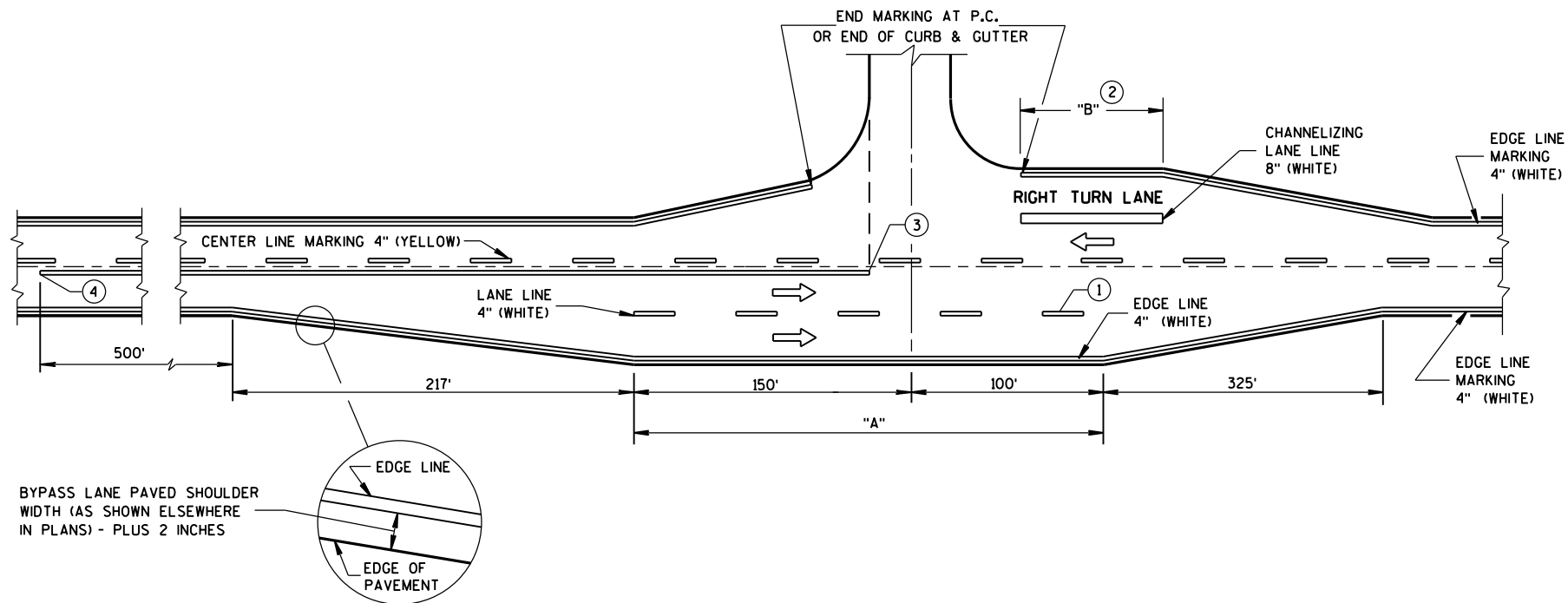
MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

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

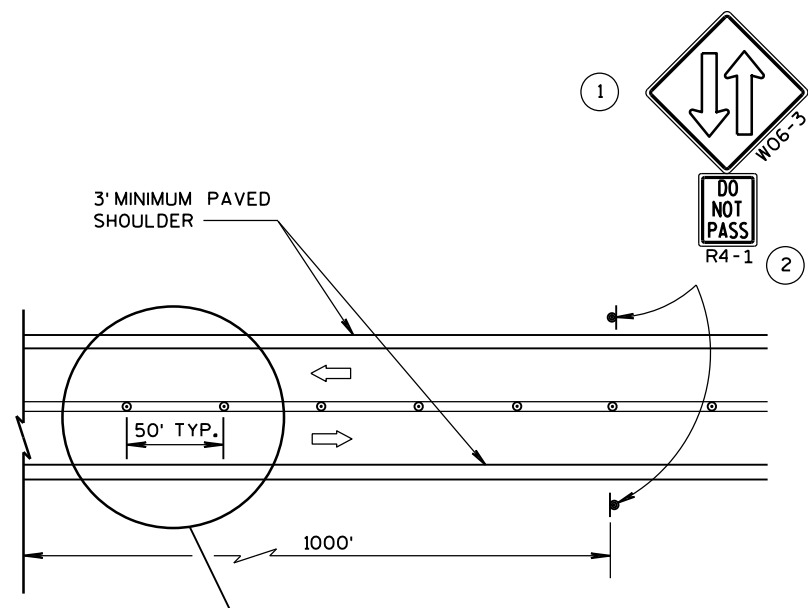
ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL



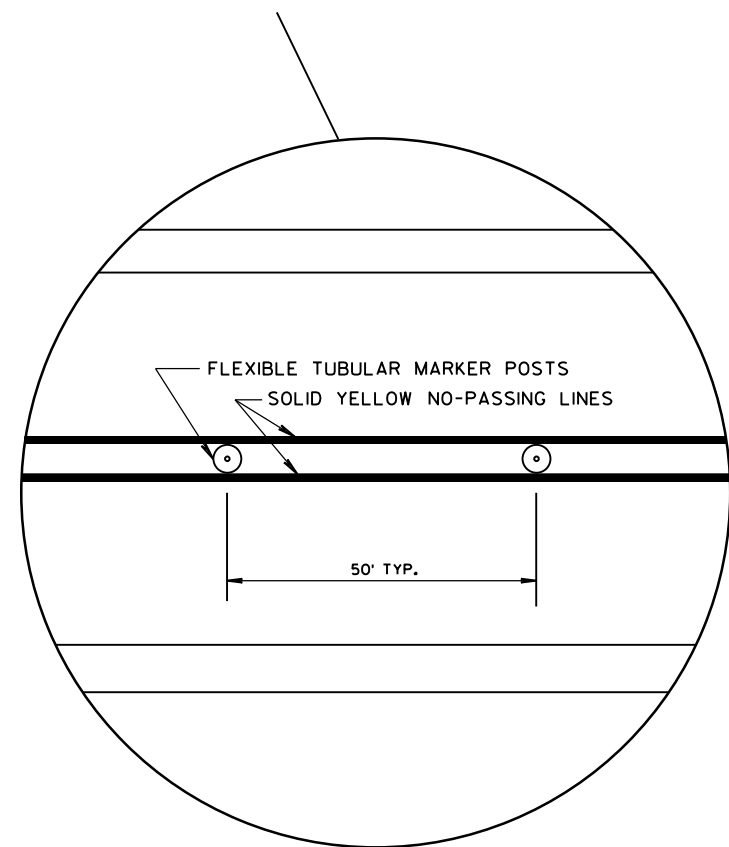
MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 182



TWO LANE, TWO WAY OPERATION



LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊙ DELINEATOR FLEXIBLE/TUBULAR MARKER
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

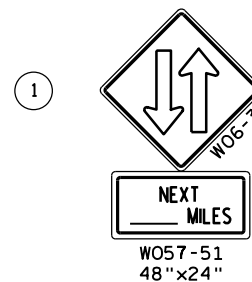
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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 DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50-FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.



THE WO6-3 WITH THE W057-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE WO6-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE WO6-3 AND THE W057-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN WO6-3 SIGNS.

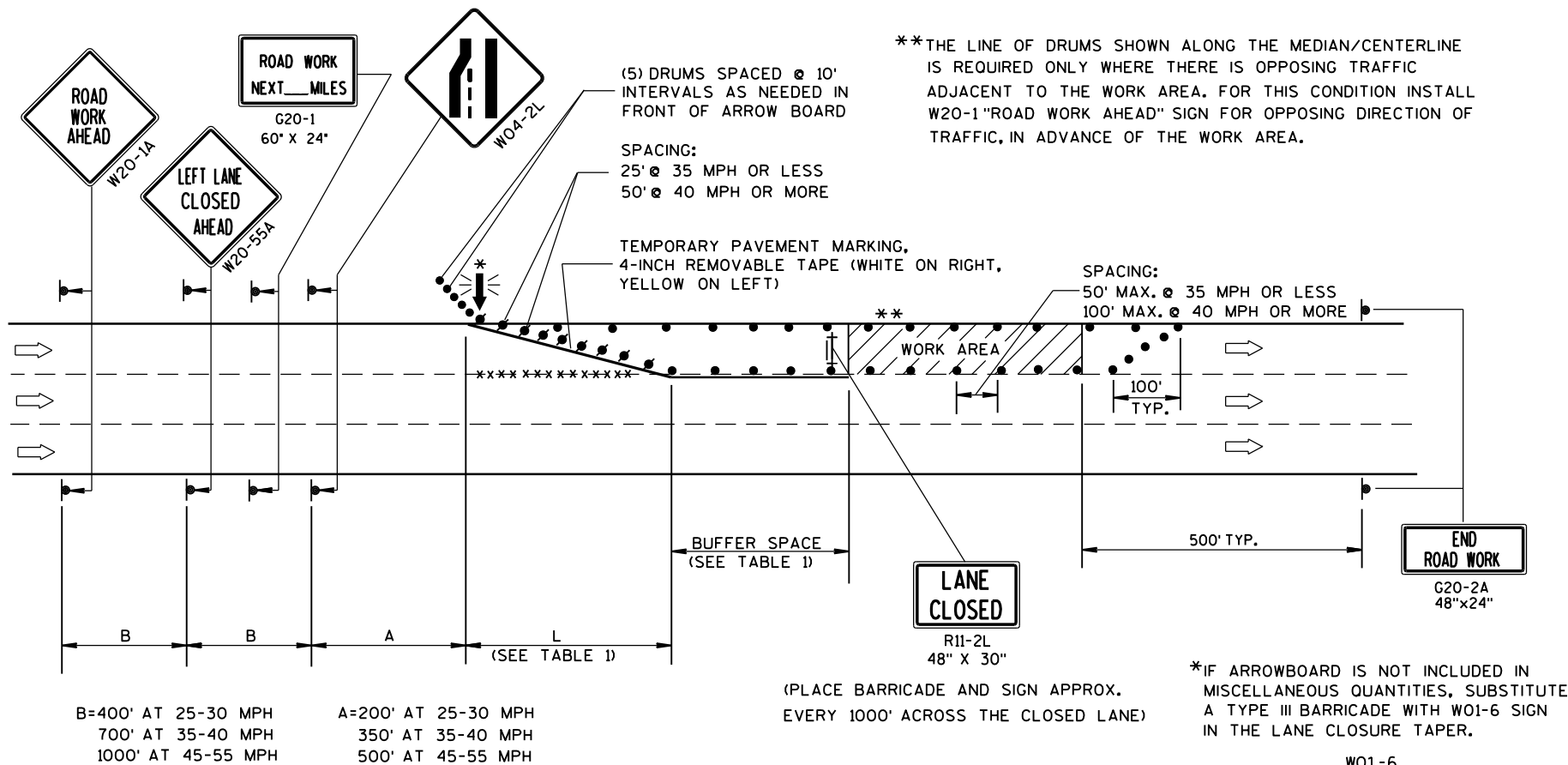
CONVENTIONAL: 24"x30"
FREEWAY AND EXPRESSWAY: 36"x48"

TRAFFIC CONTROL,
TWO LANE TWO
WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEE 183 SIGN
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GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 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.

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 DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

BARRICADES IN A CLOSED LANE 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.

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

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE SAFETY ENGINEER 184 IC
FHWA	

6



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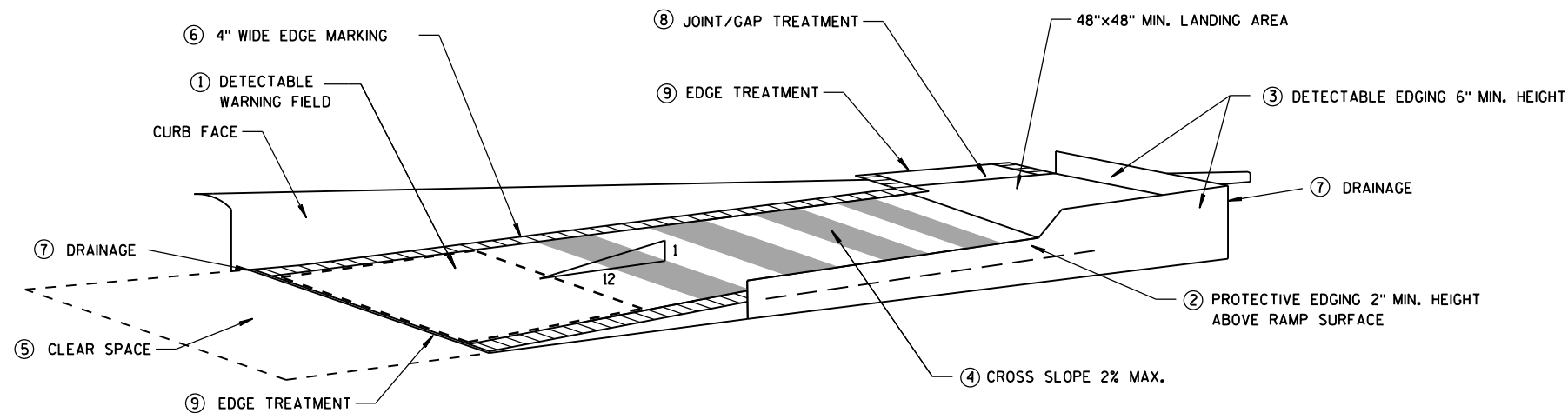


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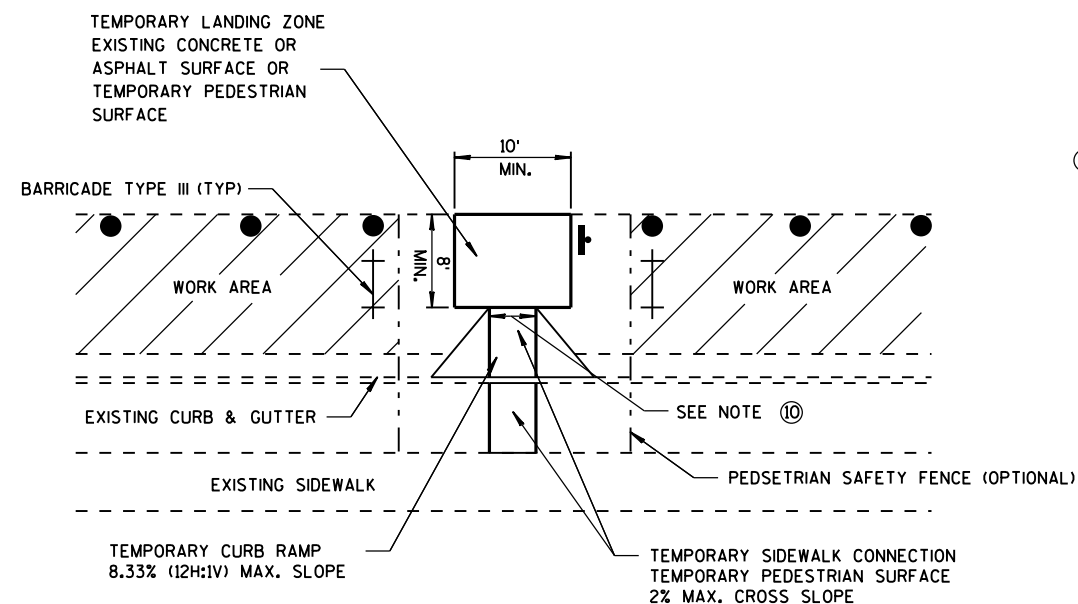
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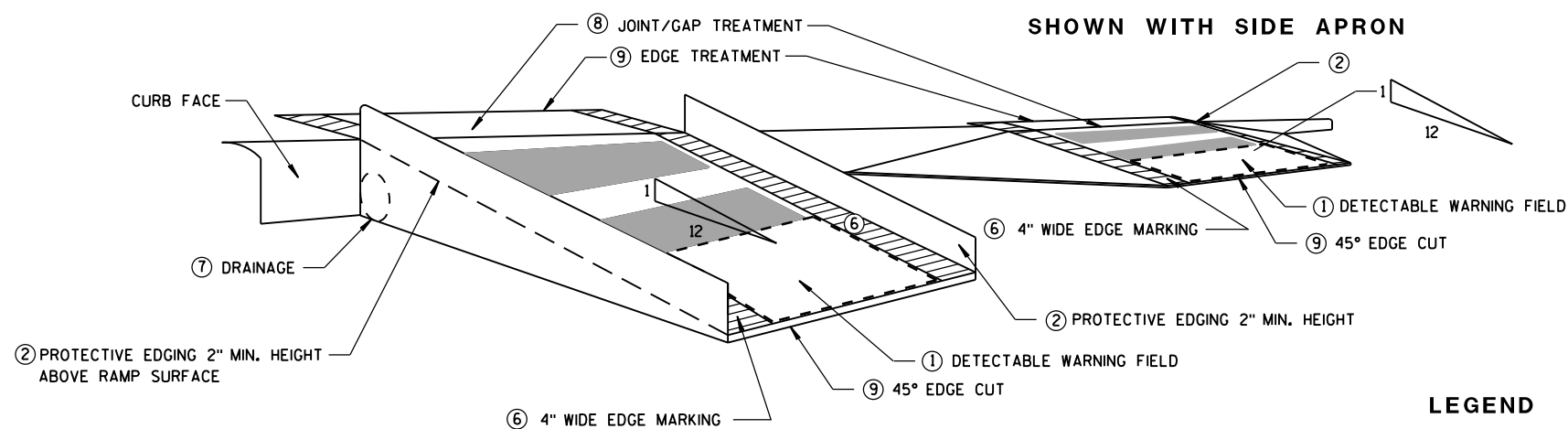
TEMPORARY CURB RAMP
PARALLEL TO CURB

GENERAL NOTES

- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY
TO MAINTAIN PEDESTRIAN ACCESS.
- 1 CURB RAMP SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".
 - 2 PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
 - 3 DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
 - 4 CURB RAMP AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
 - 5 CLEAR SPACE OF 48"x48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
 - 6 THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
 - 7 DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
 - 8 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
 - 9 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
 - 10 5' WIDE MIN. WITH PEDESTRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



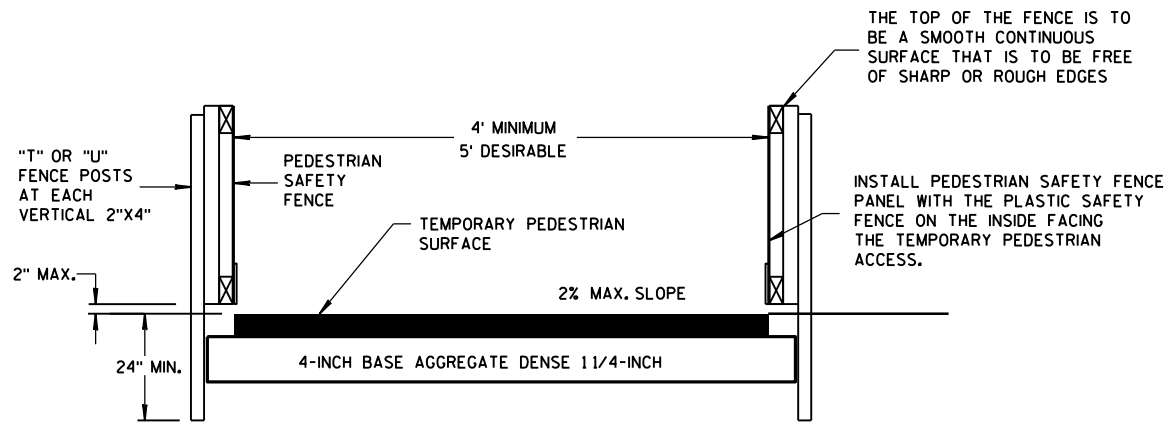
SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP
PERPENDICULAR TO CURB

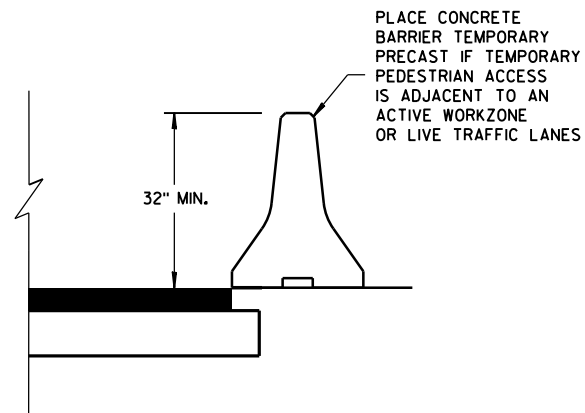
LEGEND

	WORK AREA
	TYPE III BARRICADE
	TRAFFIC CONTROL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA 186	

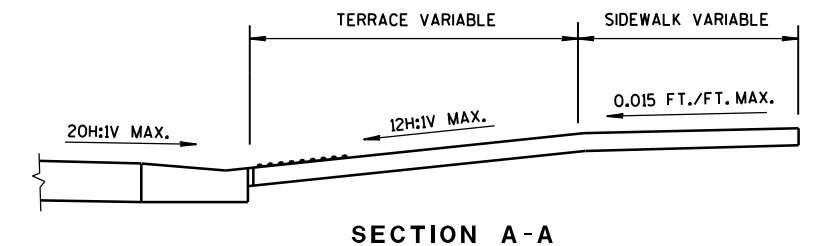


TEMPORARY PEDESTRIAN ACCESS

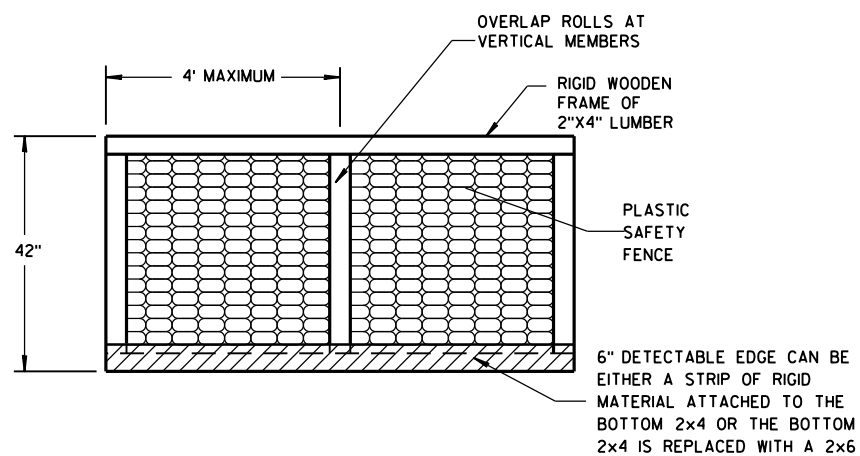


GENERAL NOTES

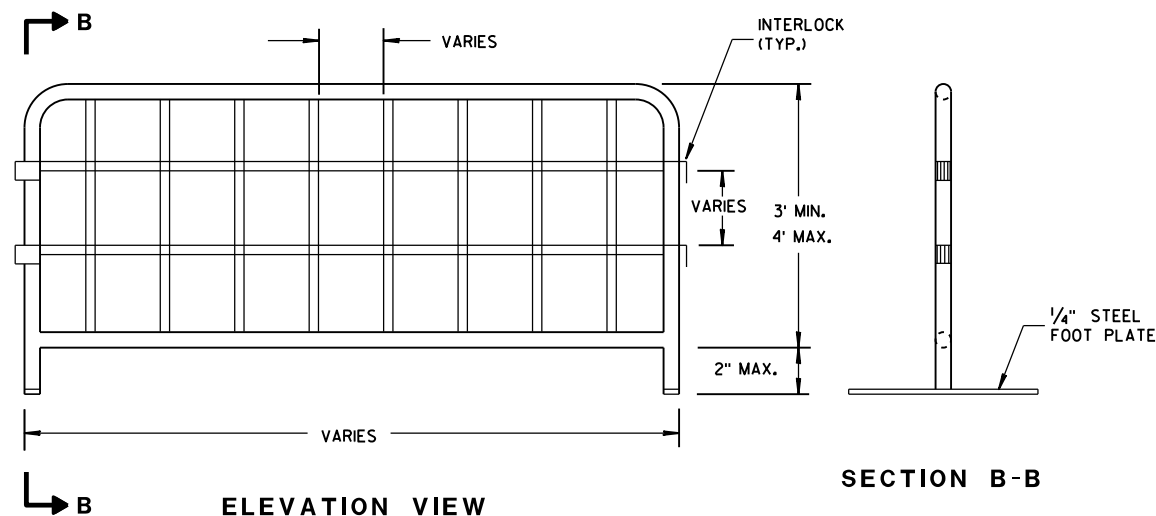
- INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



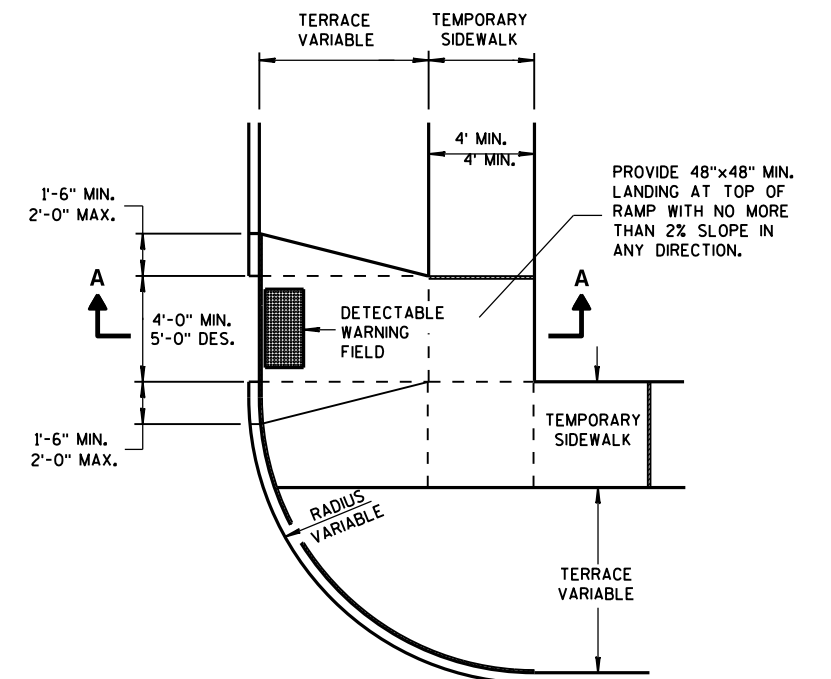
SECTION A-A



PEDESTRIAN SAFETY FENCE



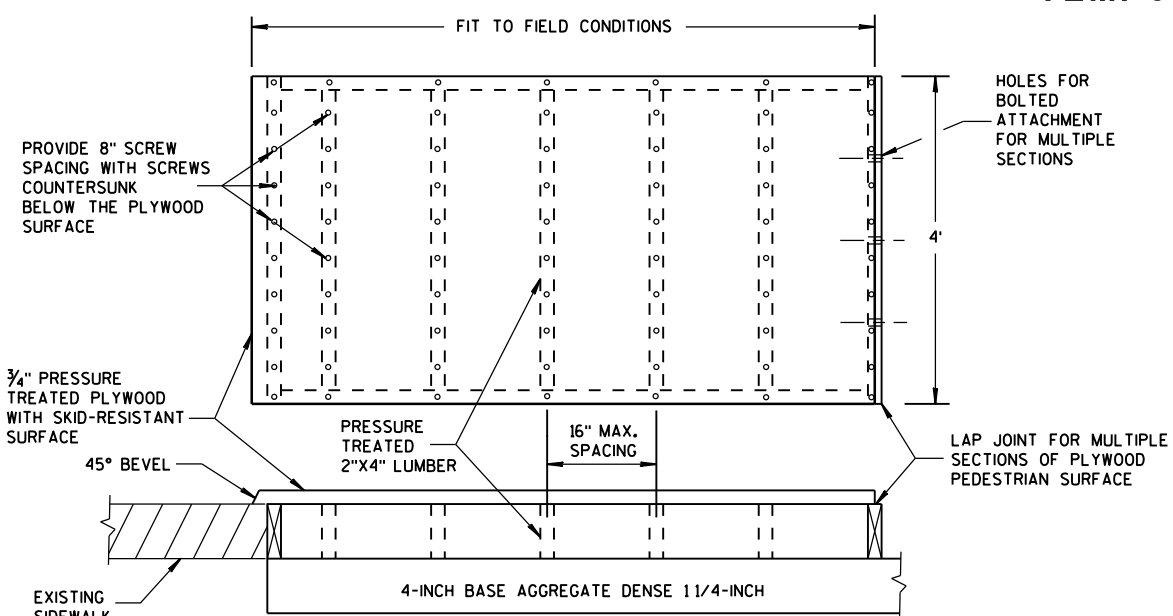
TEMPORARY PEDESTRIAN STEEL BARRICADE



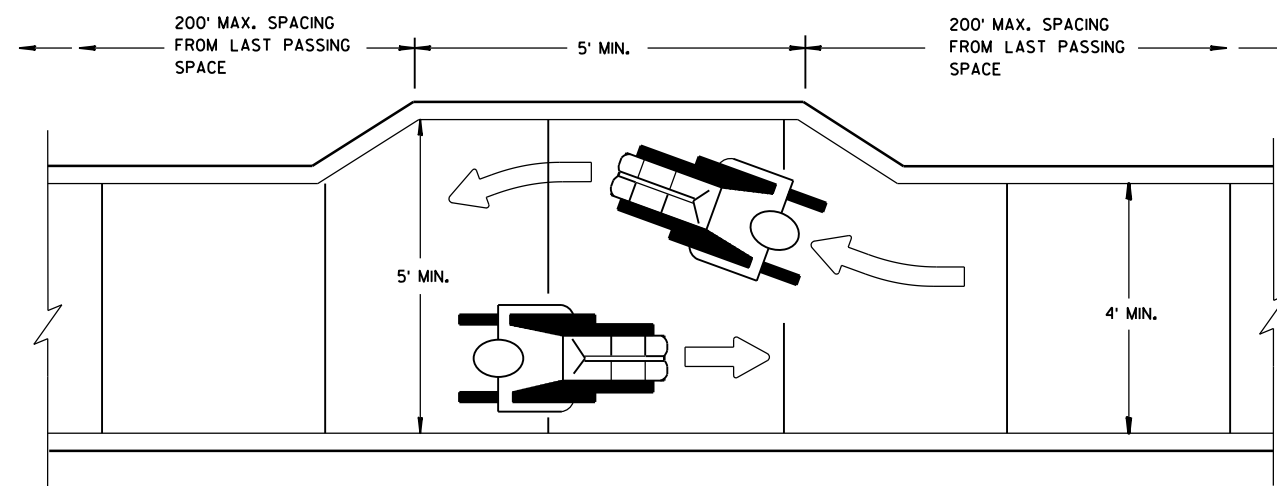
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

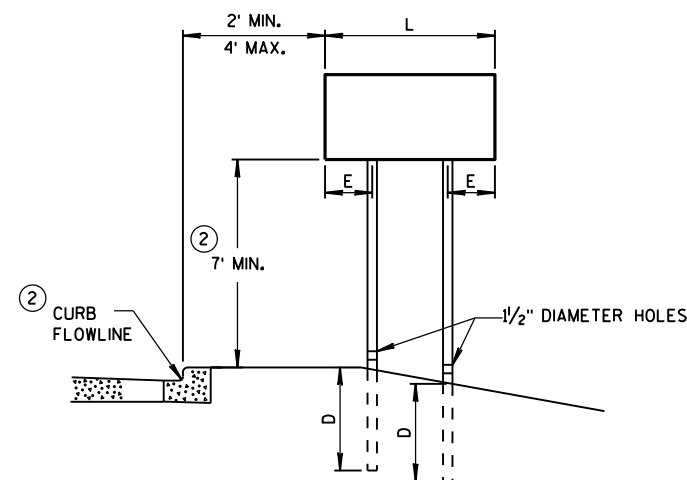
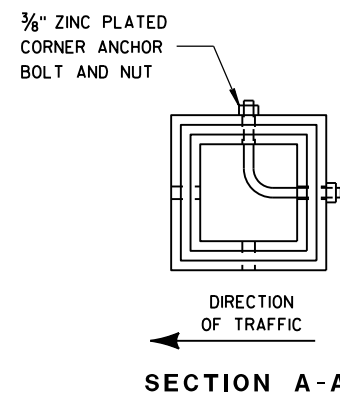
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June 2016
DATE /S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGINEER 187 IC
FHWA



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 LARGER THAN 27 SQ.FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

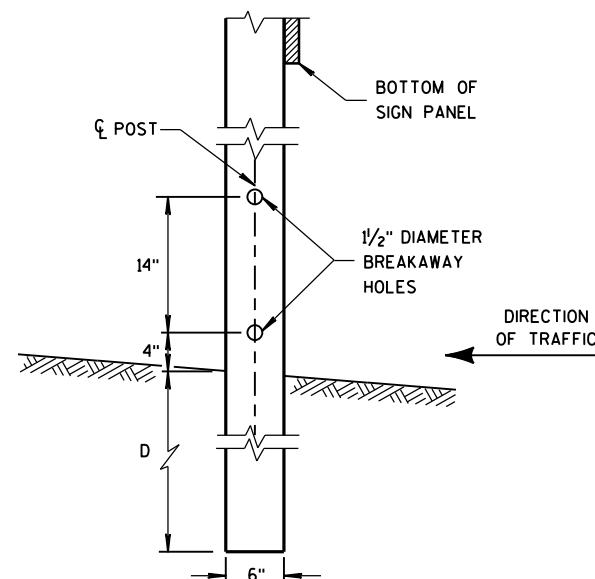


URBAN AREA

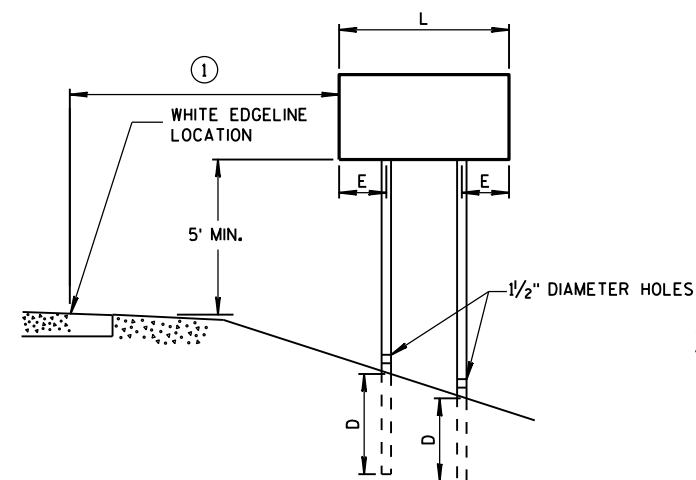
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

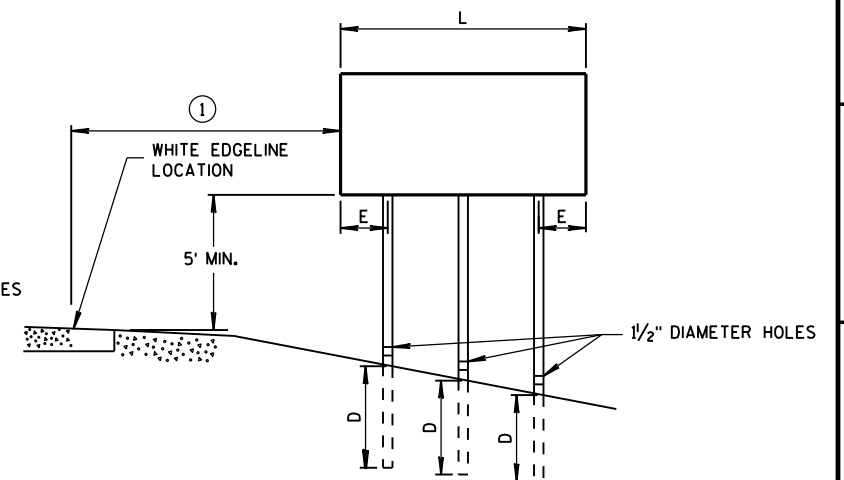
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4"x6" WOOD POST MODIFICATION



RURAL AREA



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.

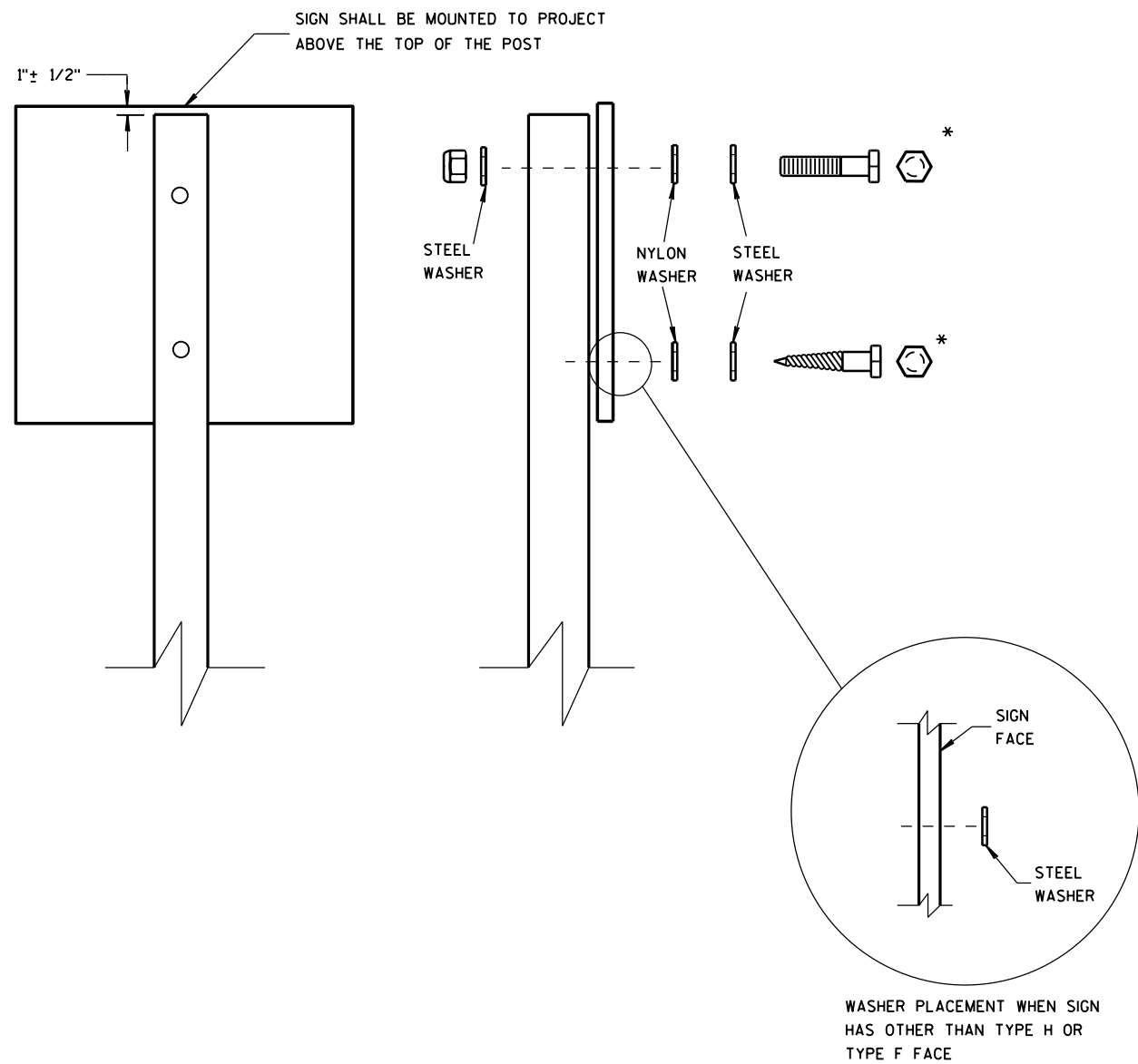
4" X 6" WOOD POST

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)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 188



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

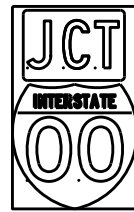
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

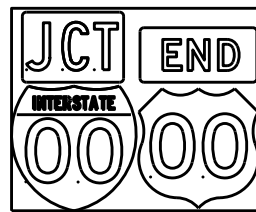
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE EN 189
FHWA	

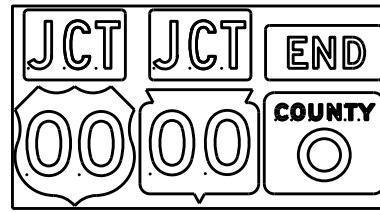
TYPICAL ASSEMBLIES



J1-1



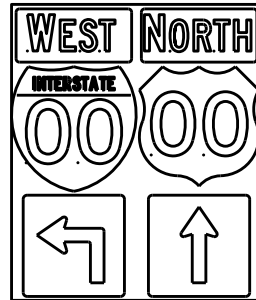
J1-2



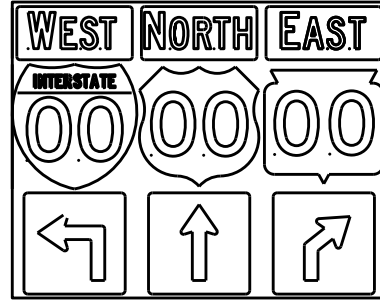
J1-3



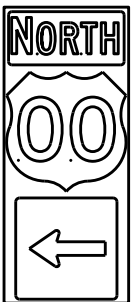
J2-1



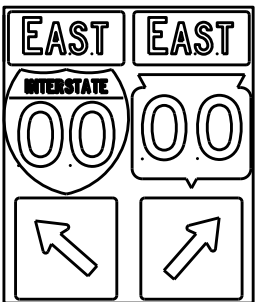
J2-2



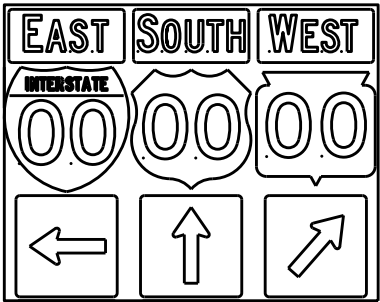
J2-3



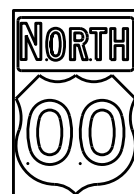
J3-1



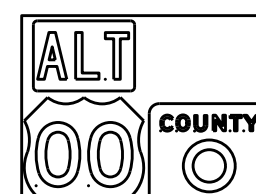
J3-2



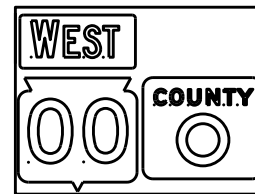
J3-3



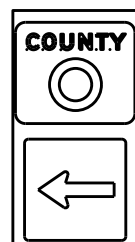
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

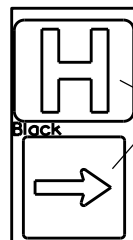


J22-1



JV

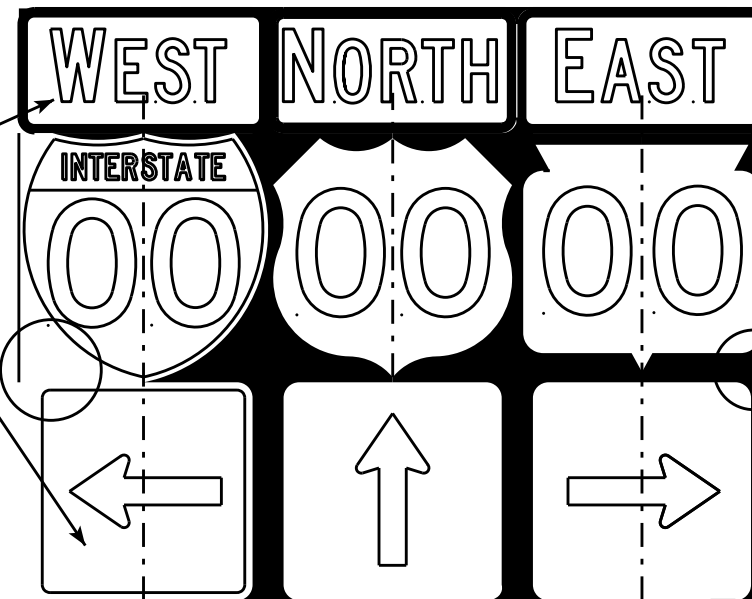
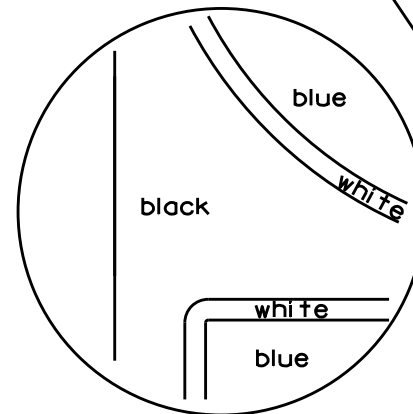
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 2/06/14	PL 190 A2-1S.8

NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Black Non-reflective
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

PROJECT NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN

PLOT DATE : 06-FEB-2014 14:10

PLOT BY : mscs.ja

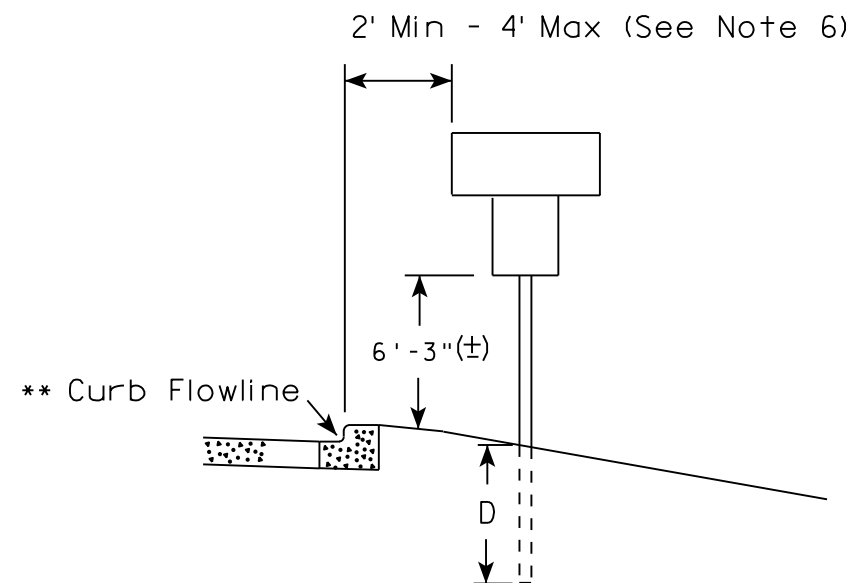
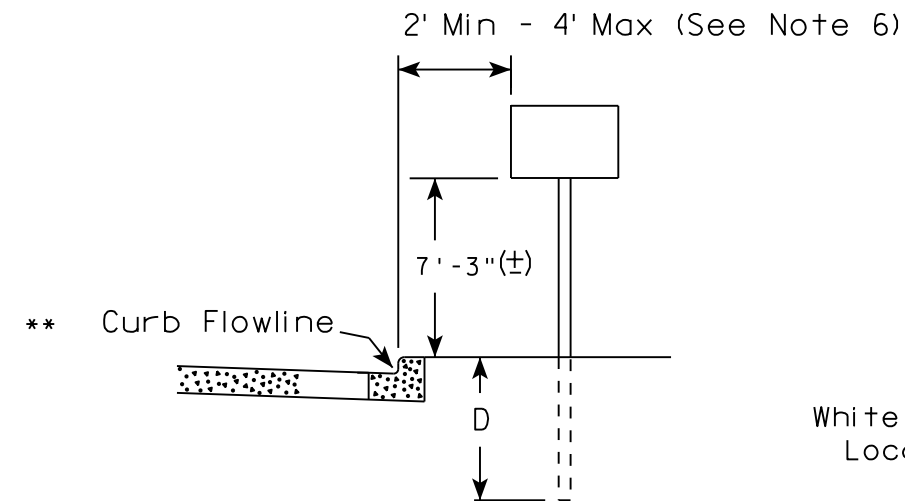
PLOT NAME :

SHEET NO:

E

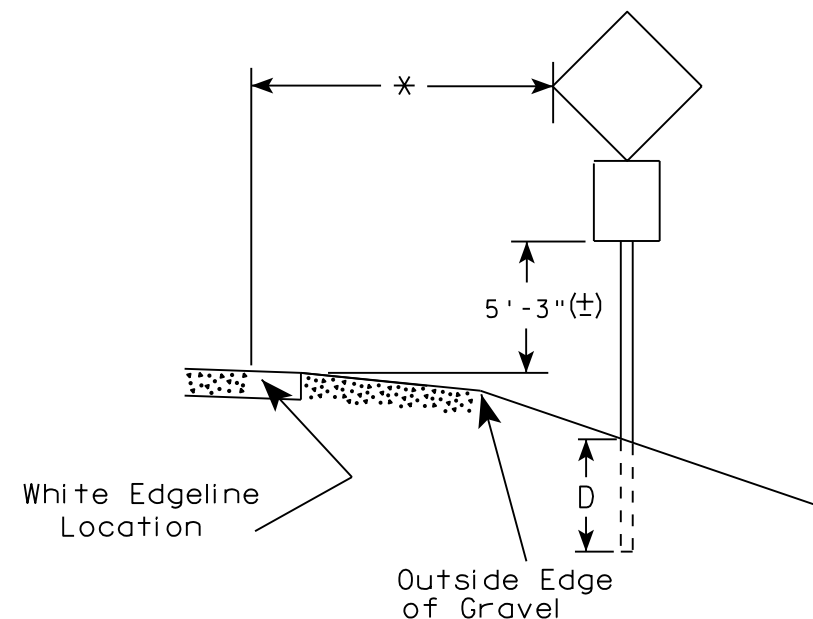
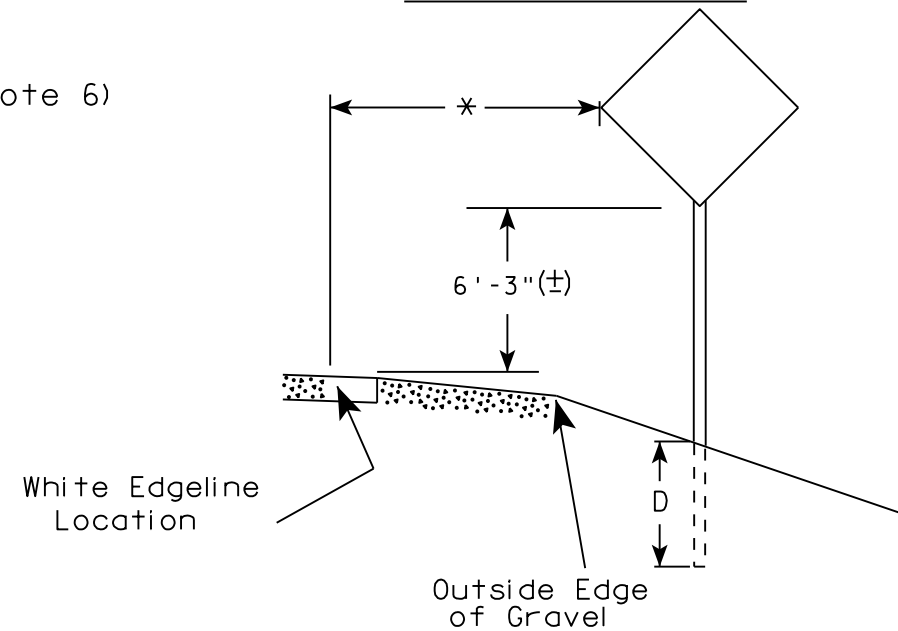
WISDOT/CADDs SHEET 42

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

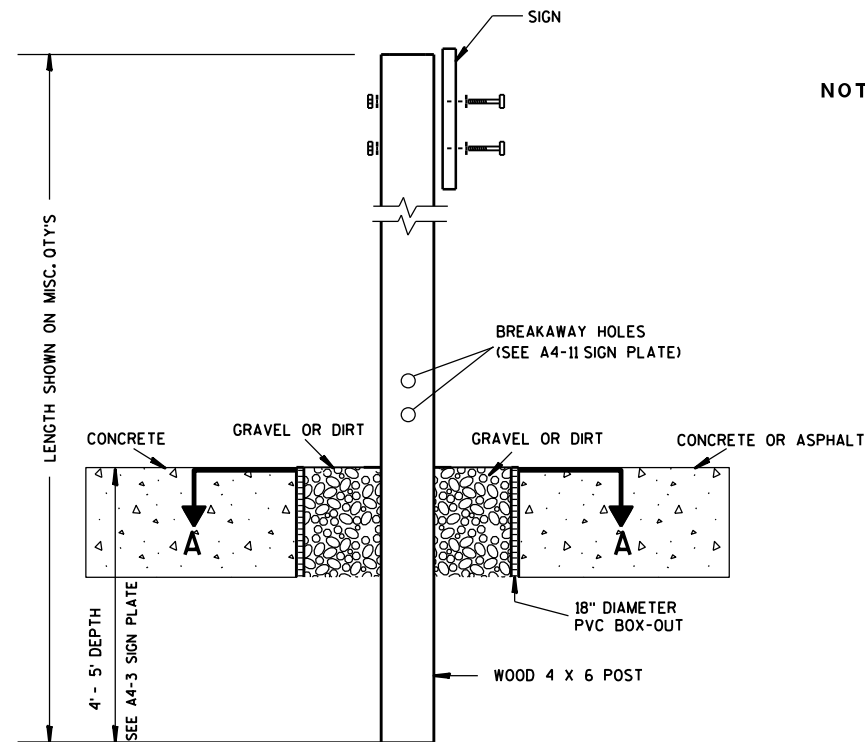
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. 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), 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" (±).

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

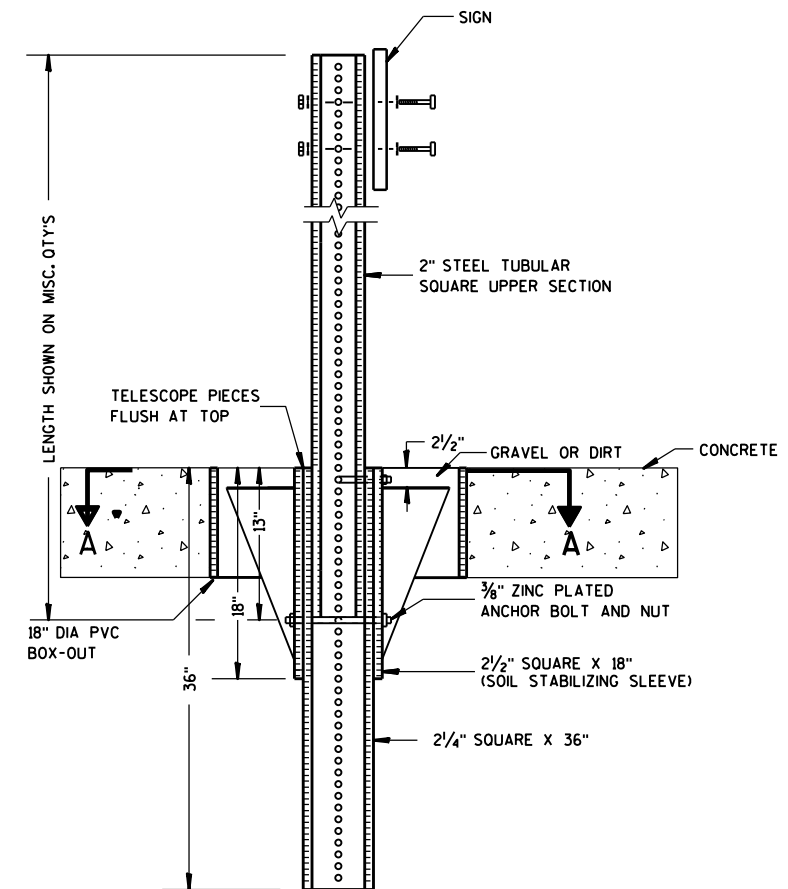
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

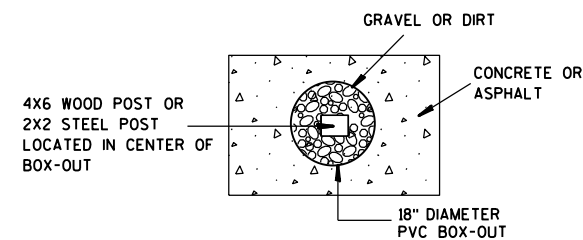
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 PLAT 192 A4-3B.1

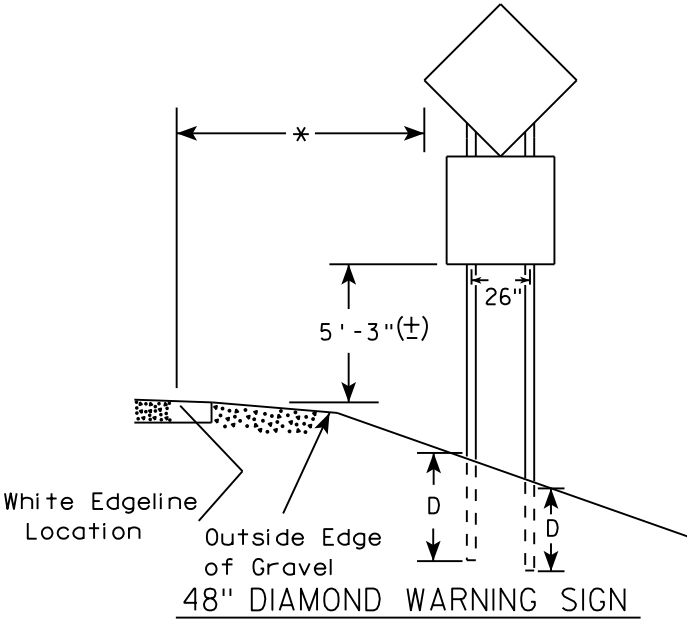
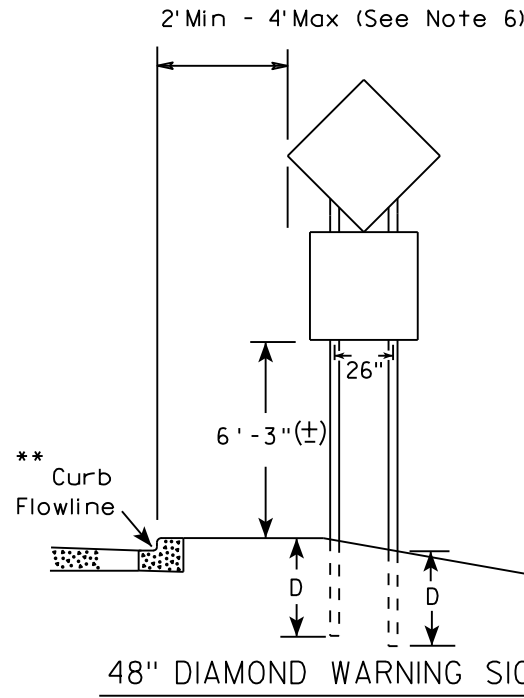
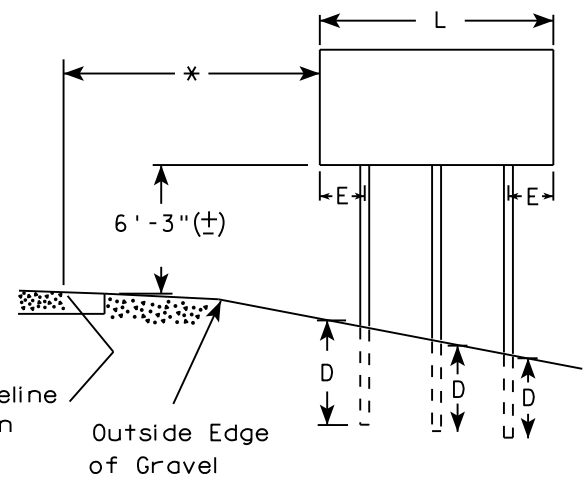
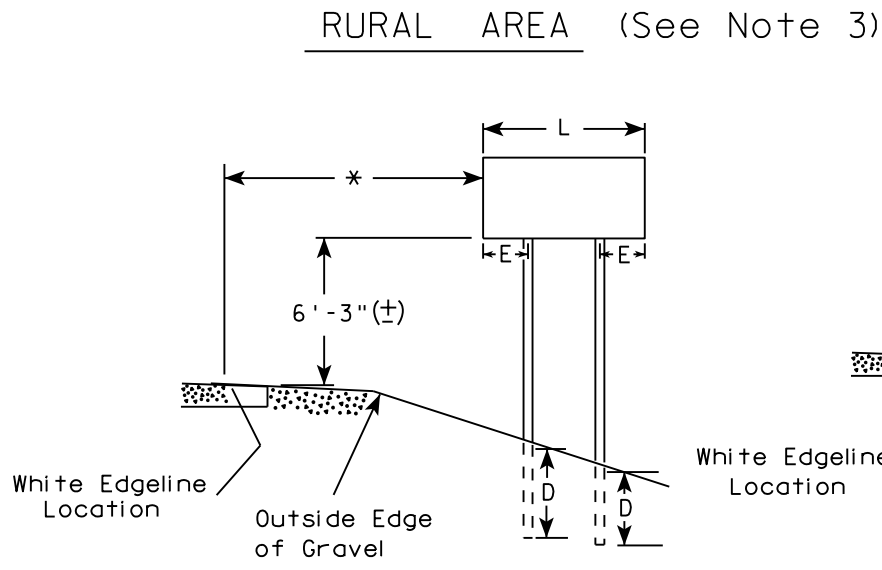
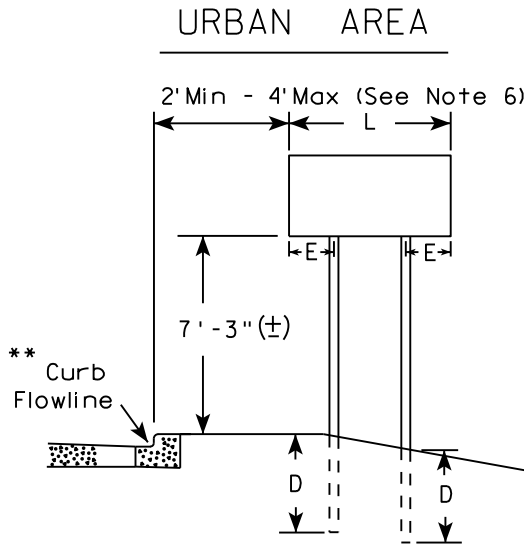
PROJECT NO:

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

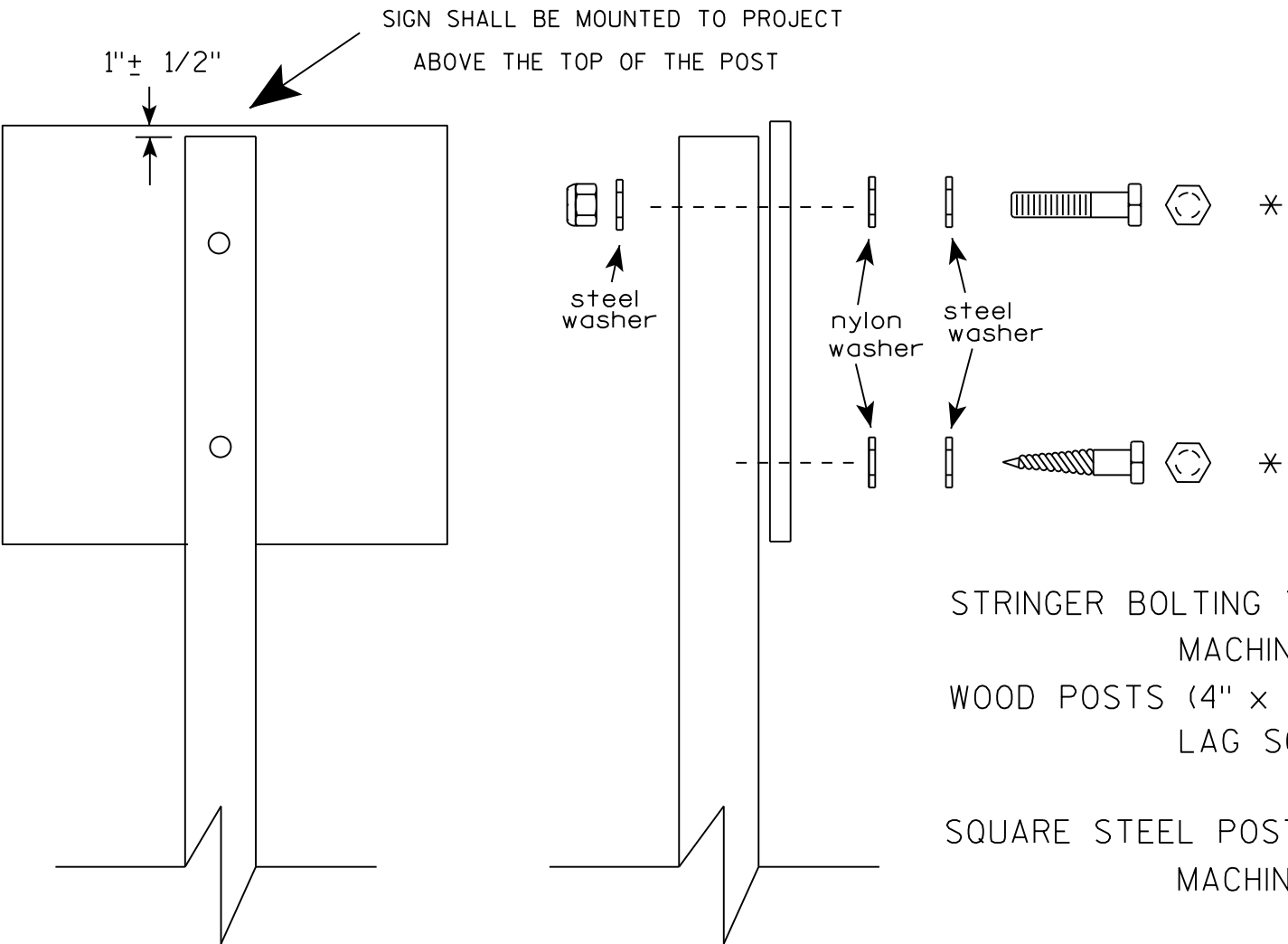
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
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.

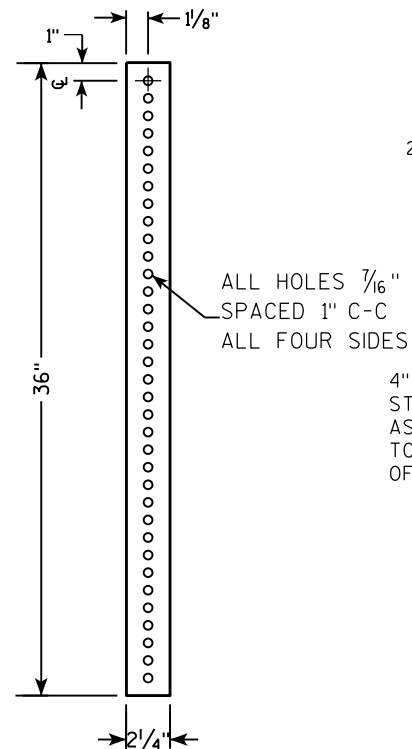
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
 - 3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

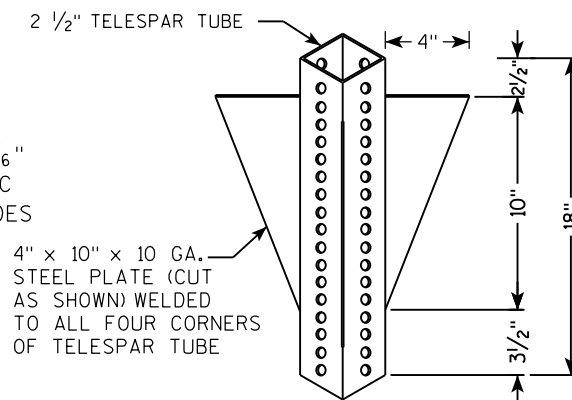
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/11/16	PLATE NO. A4-8.8 194

**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" GRAVEL OR DIRT
 $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
 2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 2" SQUARE X 36"
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN

LENGTH SHOWN ON MISC. QTY'S

SIGN

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

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

TELESCOPE PIECES FLUSH AT TOP

1"

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

2 $\frac{1}{2}$ " SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 $\frac{1}{4}$ " SQUARE X 36"

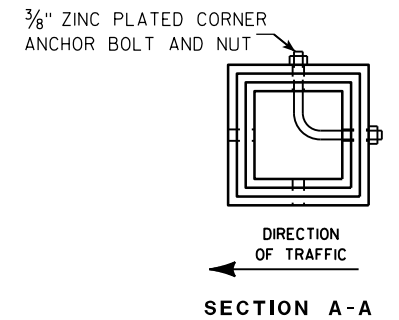
36"

18"

12"

A

B



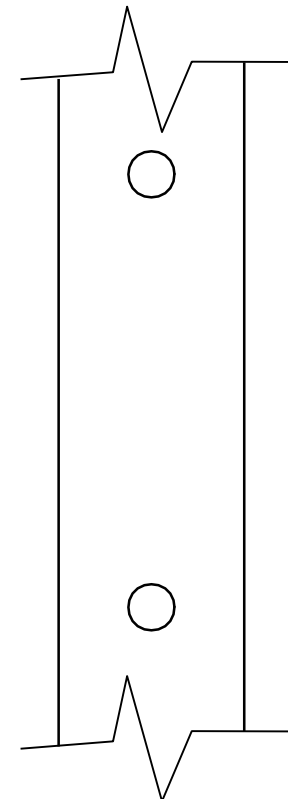
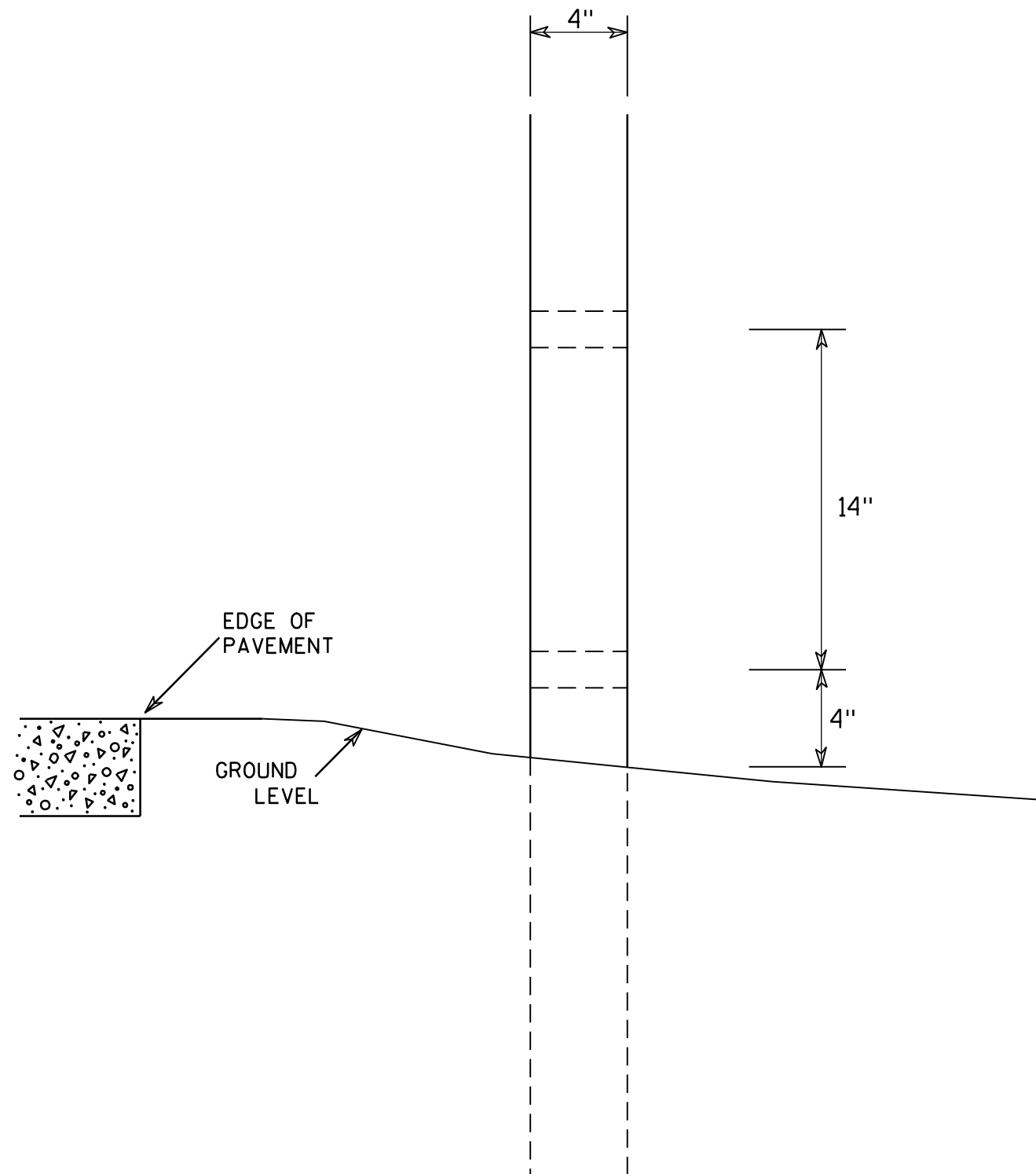
Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/05/15 PLAT 195 14-9.9



SIDE VIEW

GENERAL NOTES

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

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:

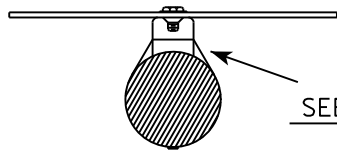
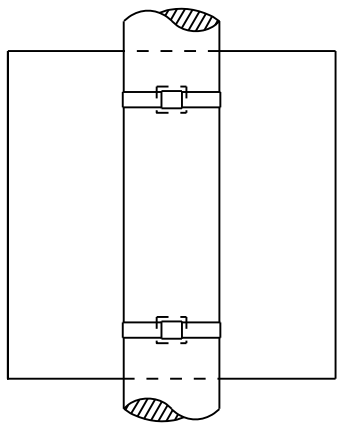
COUNTY:

SHEET NO: 196

E

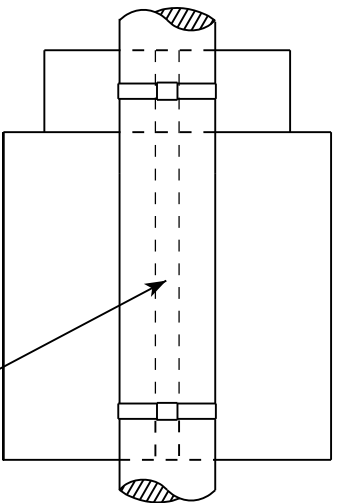
BANDING

SINGLE SIGN

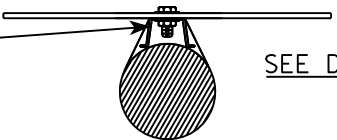


SEE DETAIL A

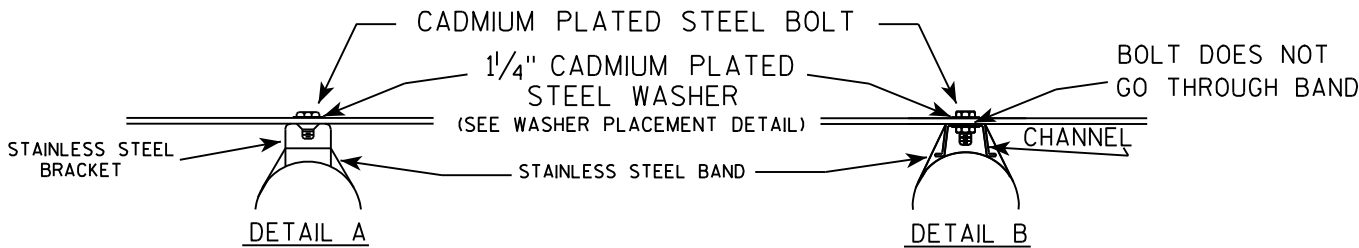
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



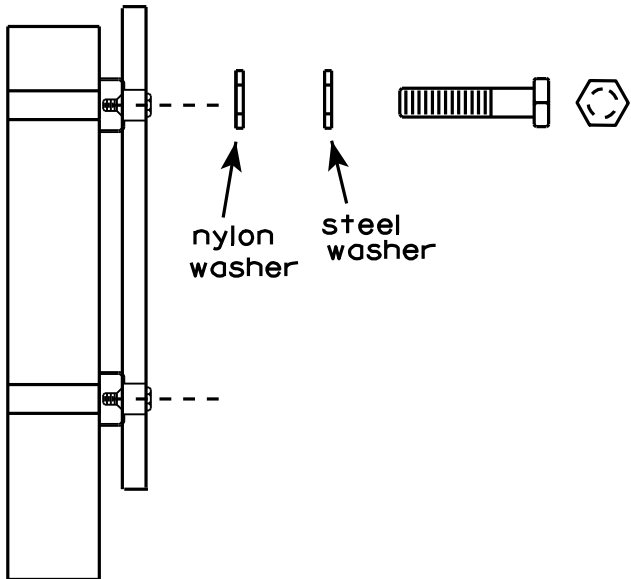
SEE DETAIL B



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.

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 8/16/13

PLATE NO. A5-9.3

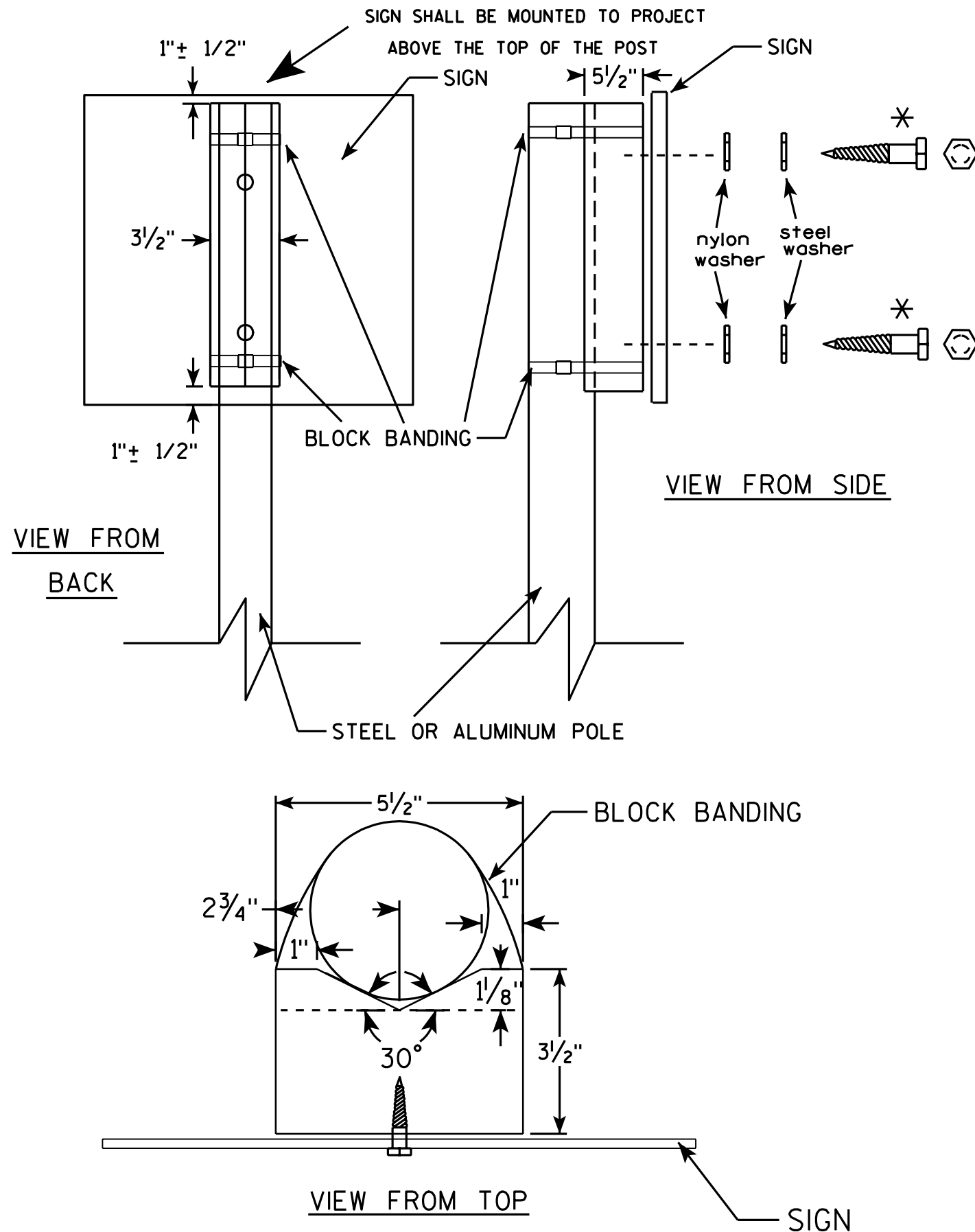
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 197

E



GENERAL NOTES

1. WOOD 4"x6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
 - b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
 - c. 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 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 198

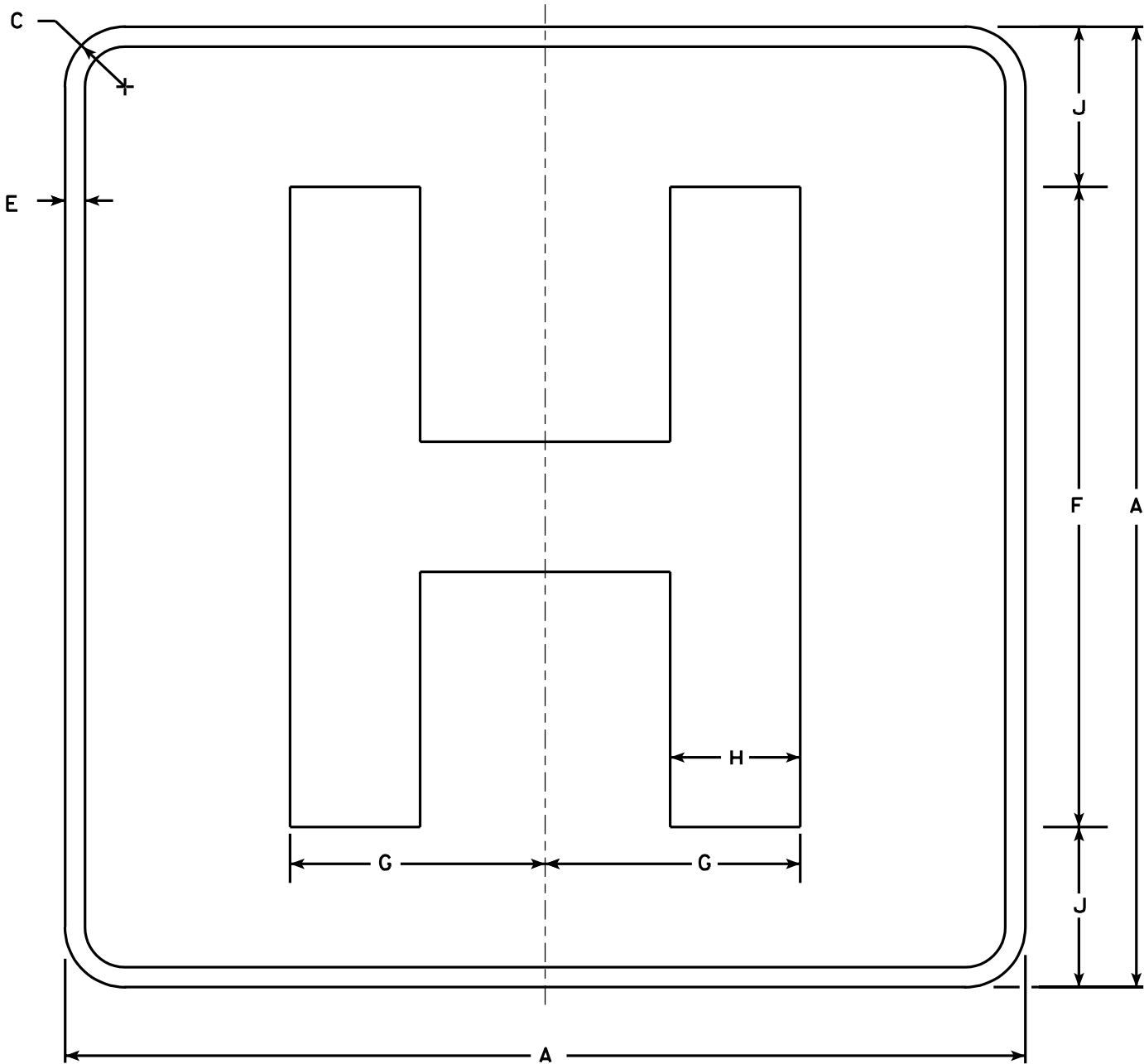
E

7

Metric equivalent
for this sign is:

SIZE	
1	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											



NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Blue
Message - White - Type H Reflective
- Message Series - E Modified
- 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.

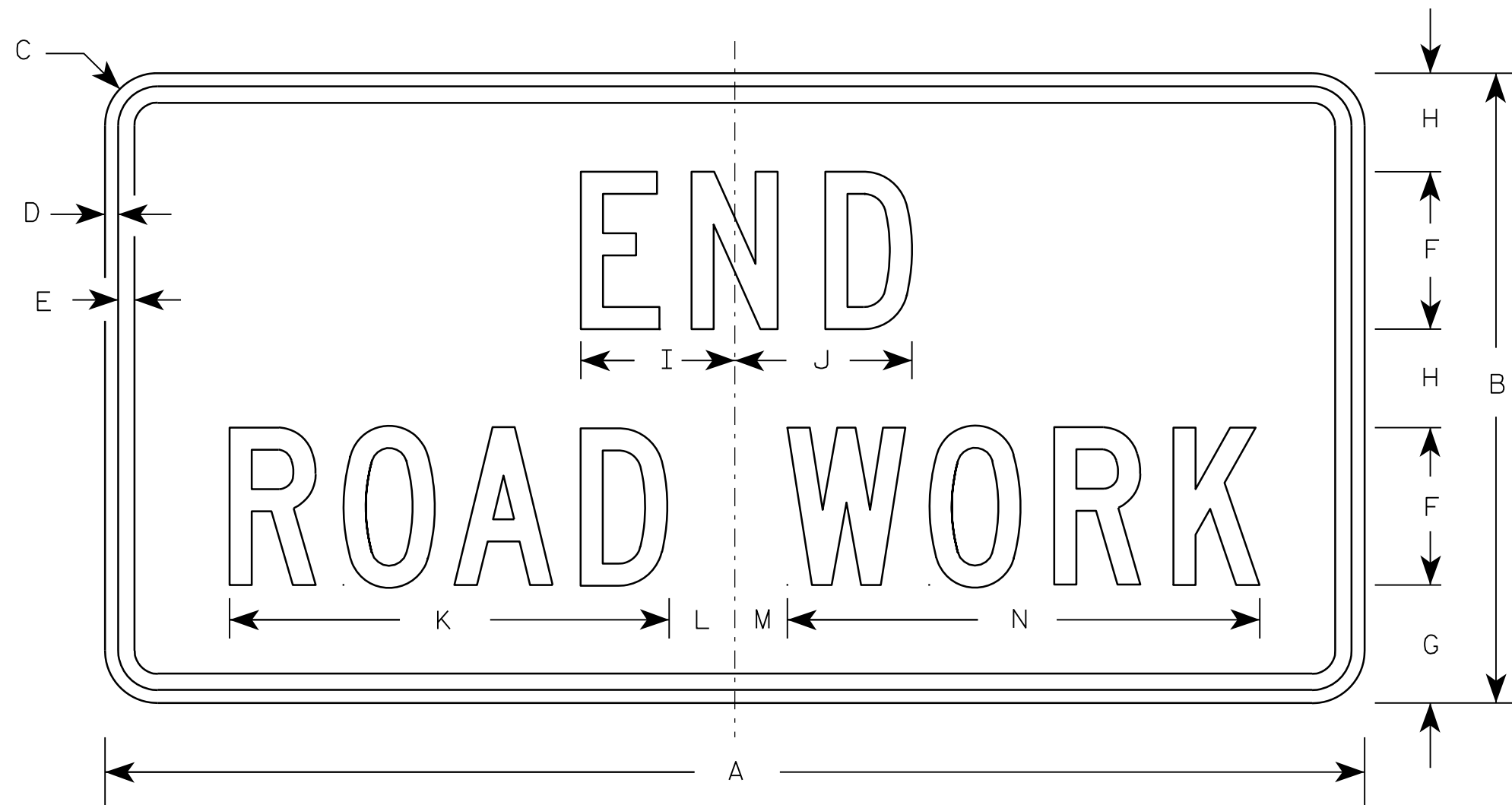
STANDARD SIGN
D9-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Chester J. Spang
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

7



G20-2A

Metric equivalent
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

NOTES

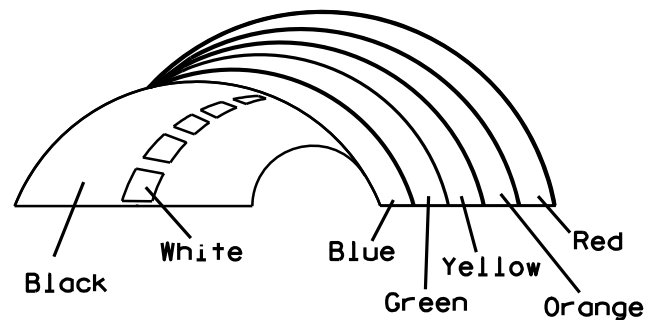
- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown.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

7



* VARIES

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - (See Note 5)
3. Message Series - (See Note 6)
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. Border - Blue
Line 1 - Red
Line 2 - Black
Line 3-5 - Blue
6. Line 1 - Dutch 8011L
Line 2 - Series E
Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

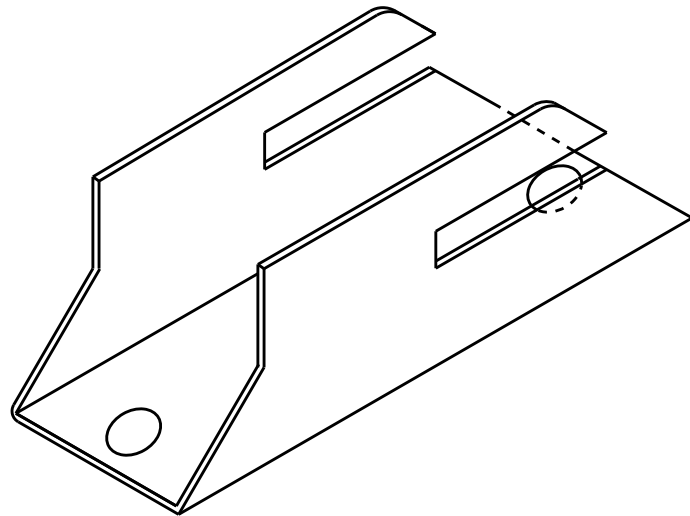
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 201
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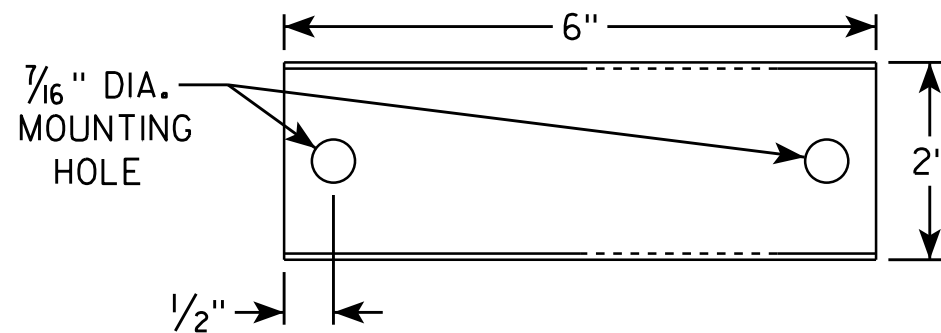
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 4/27/11 PLATE NO. I55-56.3

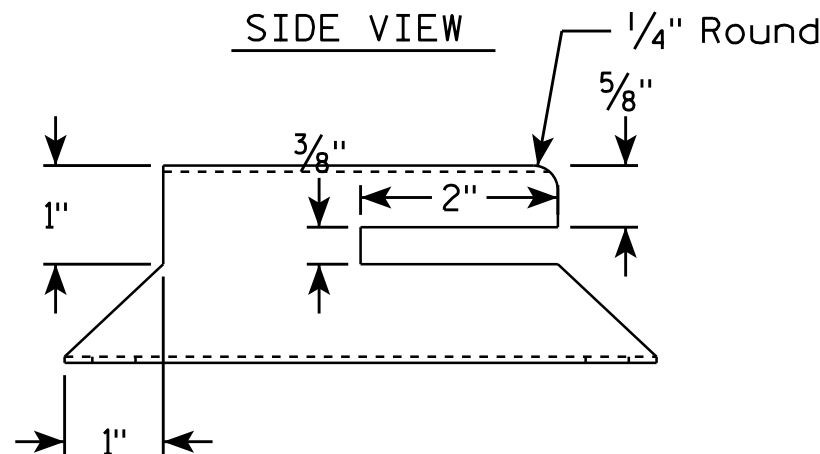
ISOMETRIC VIEW



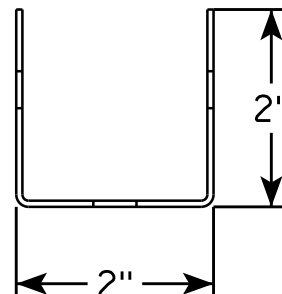
TOP VIEW



SIDE VIEW



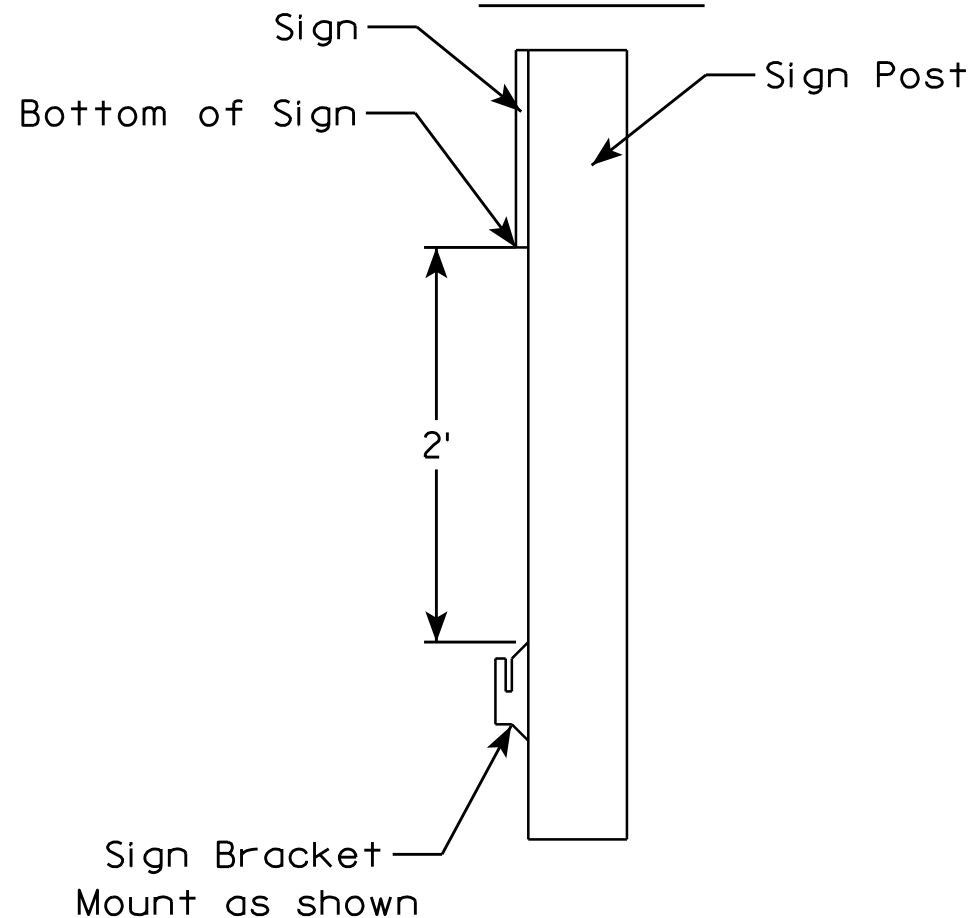
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/26/16 PLA 202 I55-56B.2

PROJECT NO:

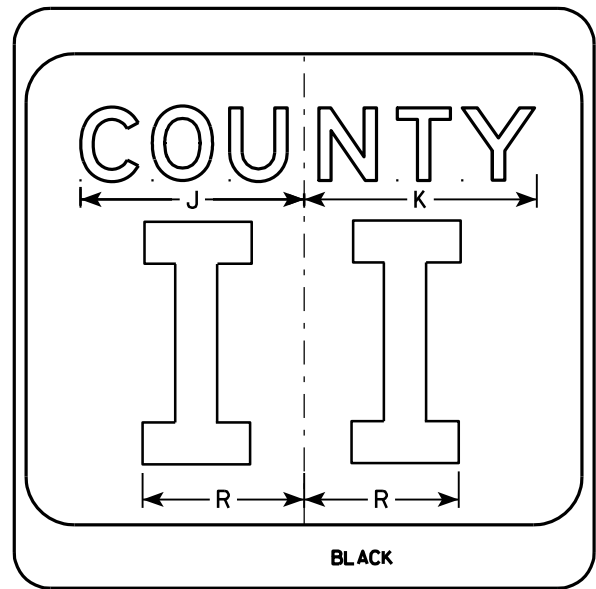
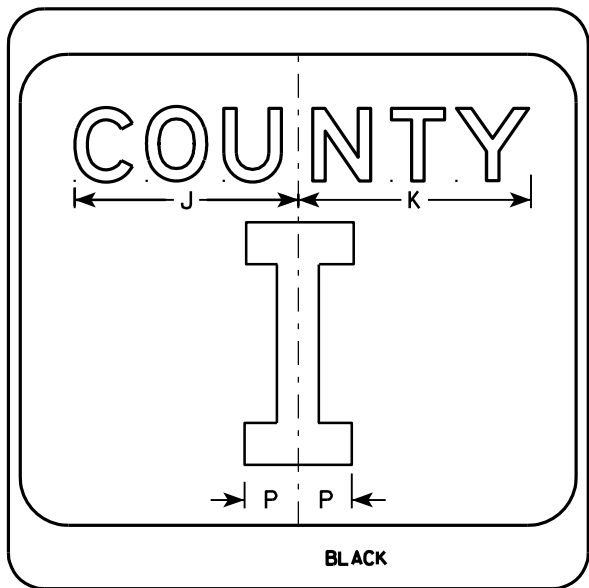
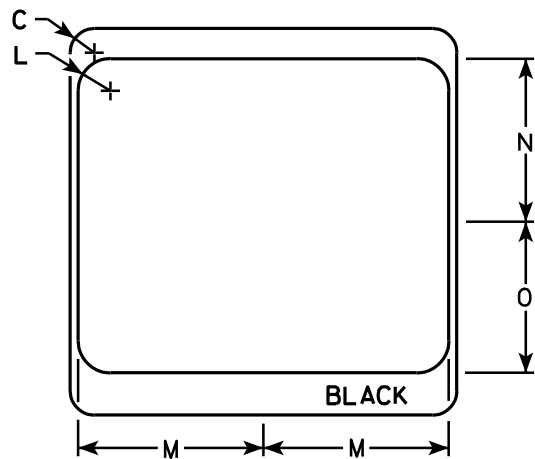
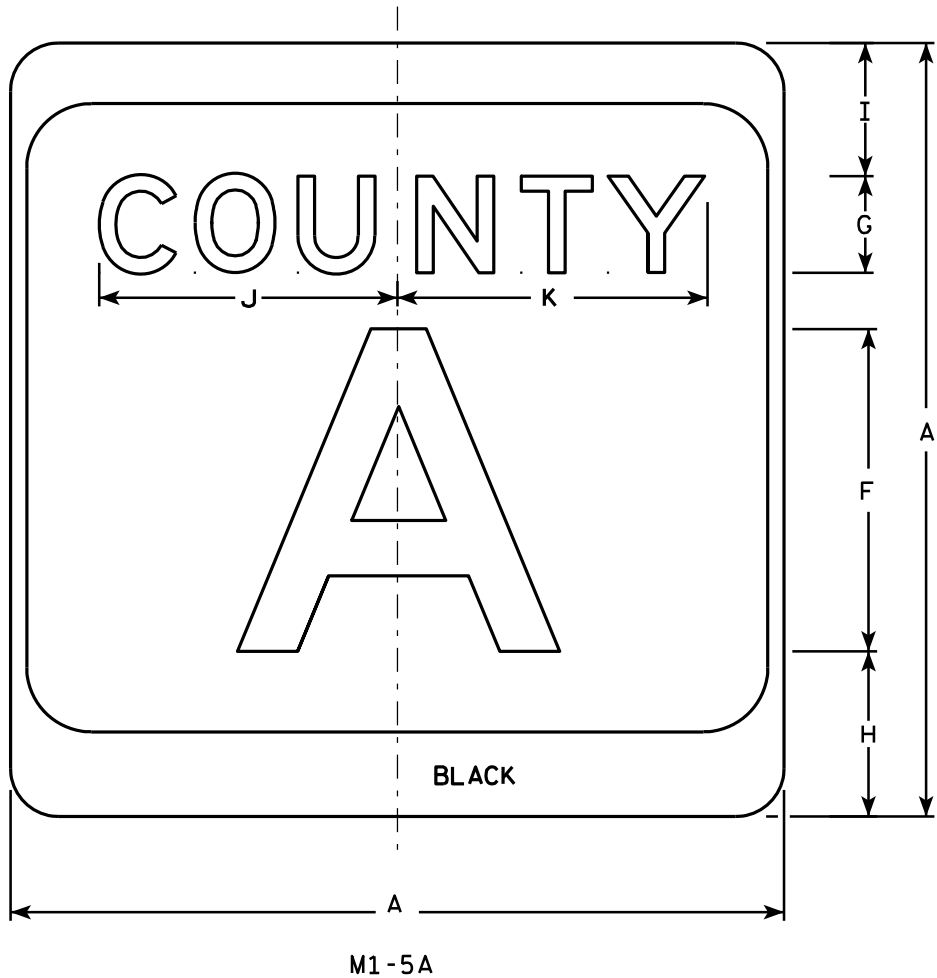
HWY:

COUNTY:

SHEET NO:

E

7



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 203

E

CTH MARKER

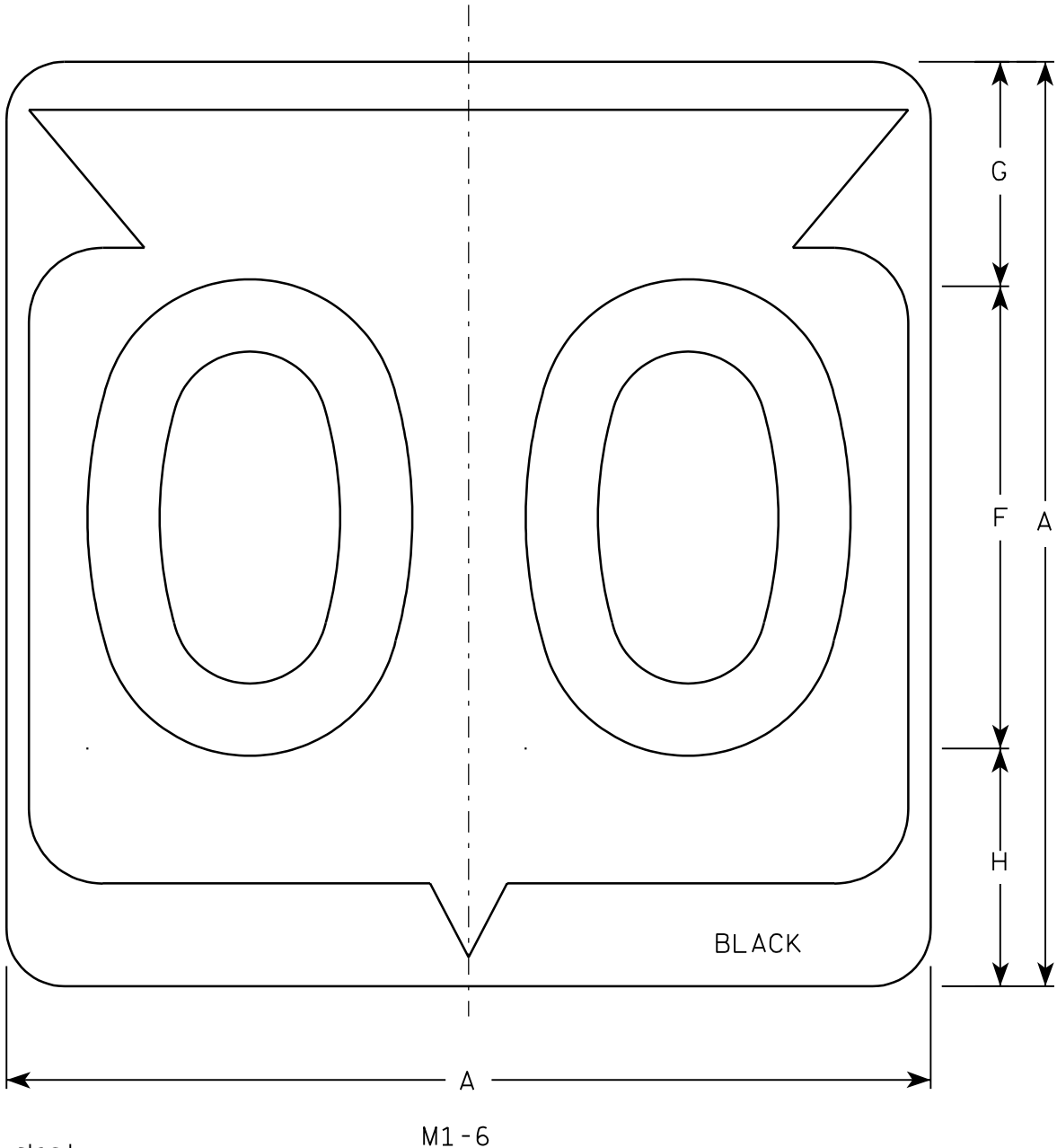
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

7



Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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 m ²
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	.36
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	.81
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	.81
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	.81

PROJECT NO:

HWY:

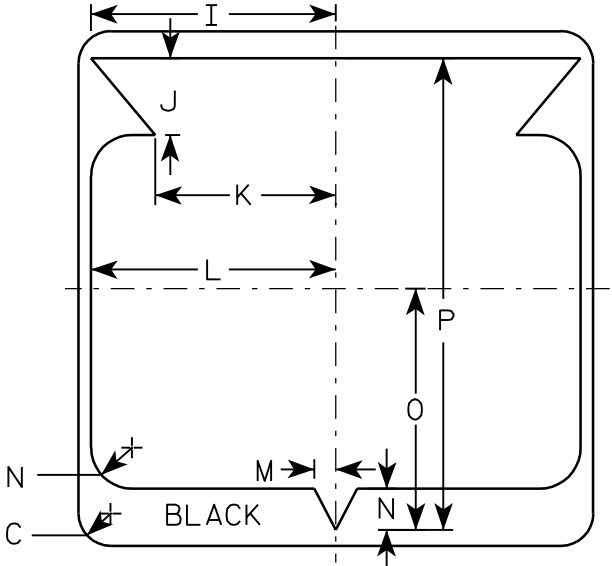
COUNTY:

SHEET NO: 204

E

NOTES

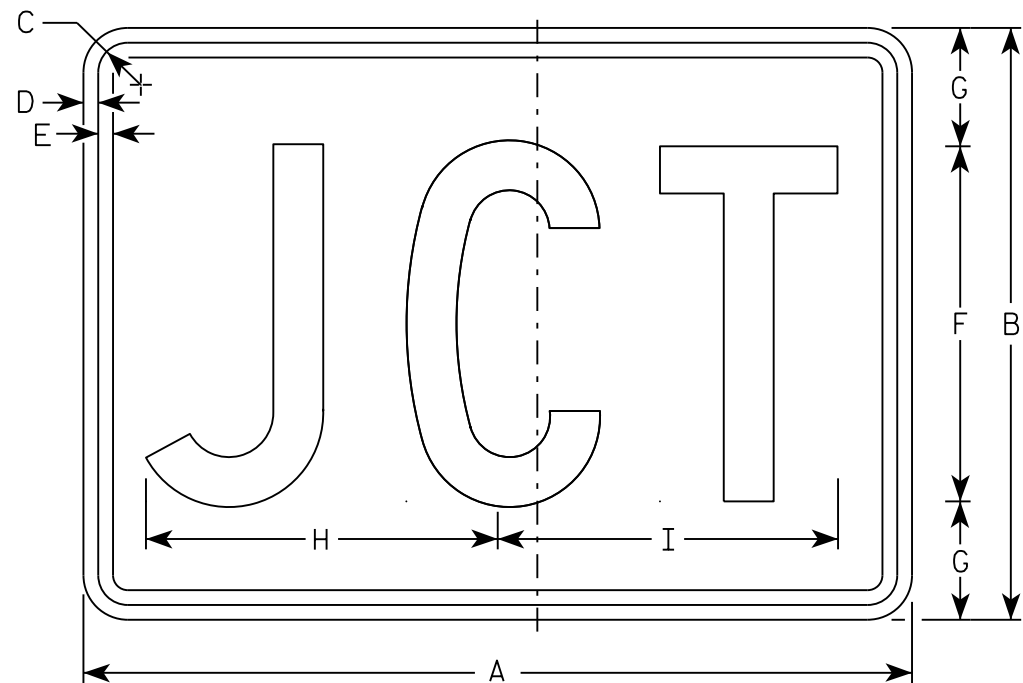
- Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White & Black - See Note 6
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
- Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



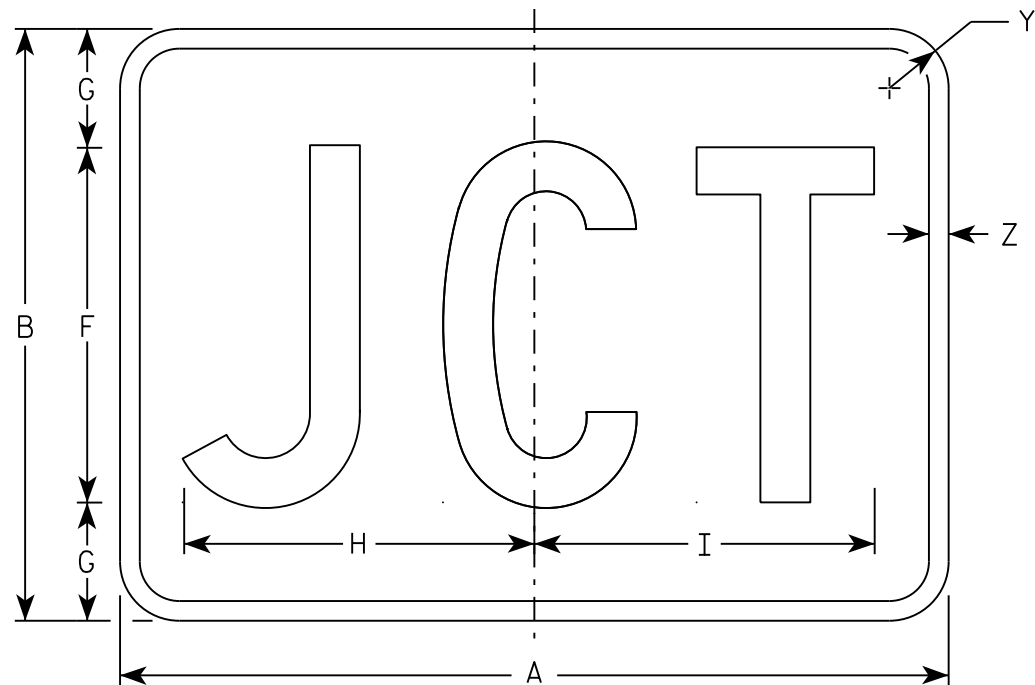
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Chester J. Spang
for State Traffic Engineer
DATE 3/20/02 PLATE NO. M1-6.9



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

- 1. Sign is 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. M2-1 Background - White
 Message - Black
 MB2-1 Background - Blue
 Message - White
 MK2-1 Background - Green
 Message - White
 MM2-1 Background - White
 Message - Green
 MN2-1 Background - Brown
 Message - White
 MP2-1 Background - White
 Message - Blue
 MR2-1 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	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

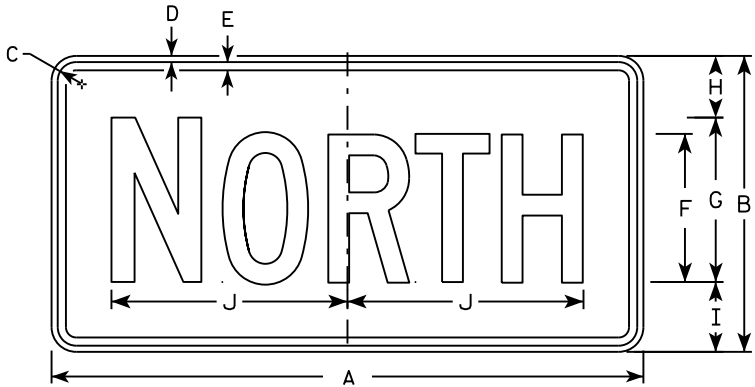
Matthew R. Rauch

For State Traffic Engineer

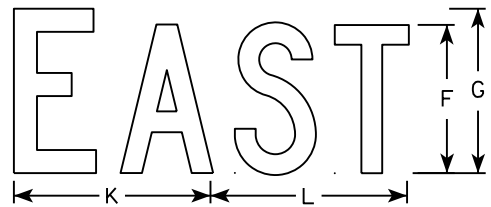
DATE 10/15/15

PLATE 205

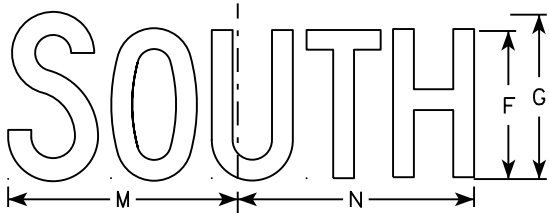
'2-1.12



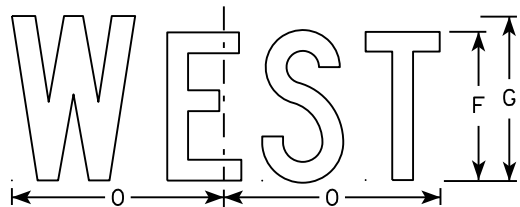
M3-1
MM3-1
MP3-1



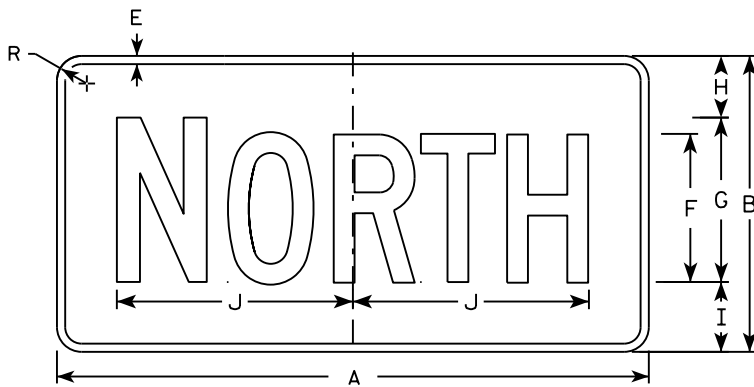
M3-2
MM3-2
MP3-2



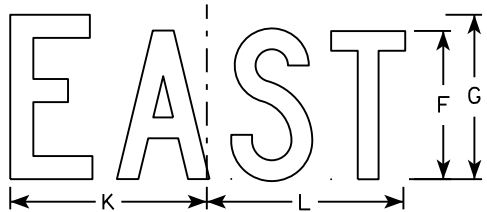
M3-3
MM3-3
MP3-3



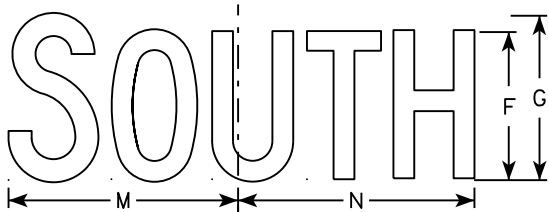
M3-4
MM3-4
MP3-4



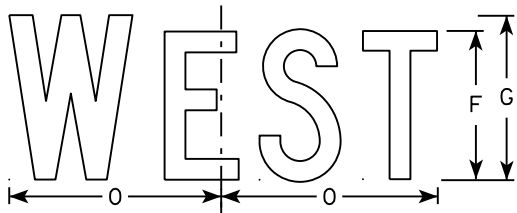
MB3-1
MK3-1
MN3-1



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

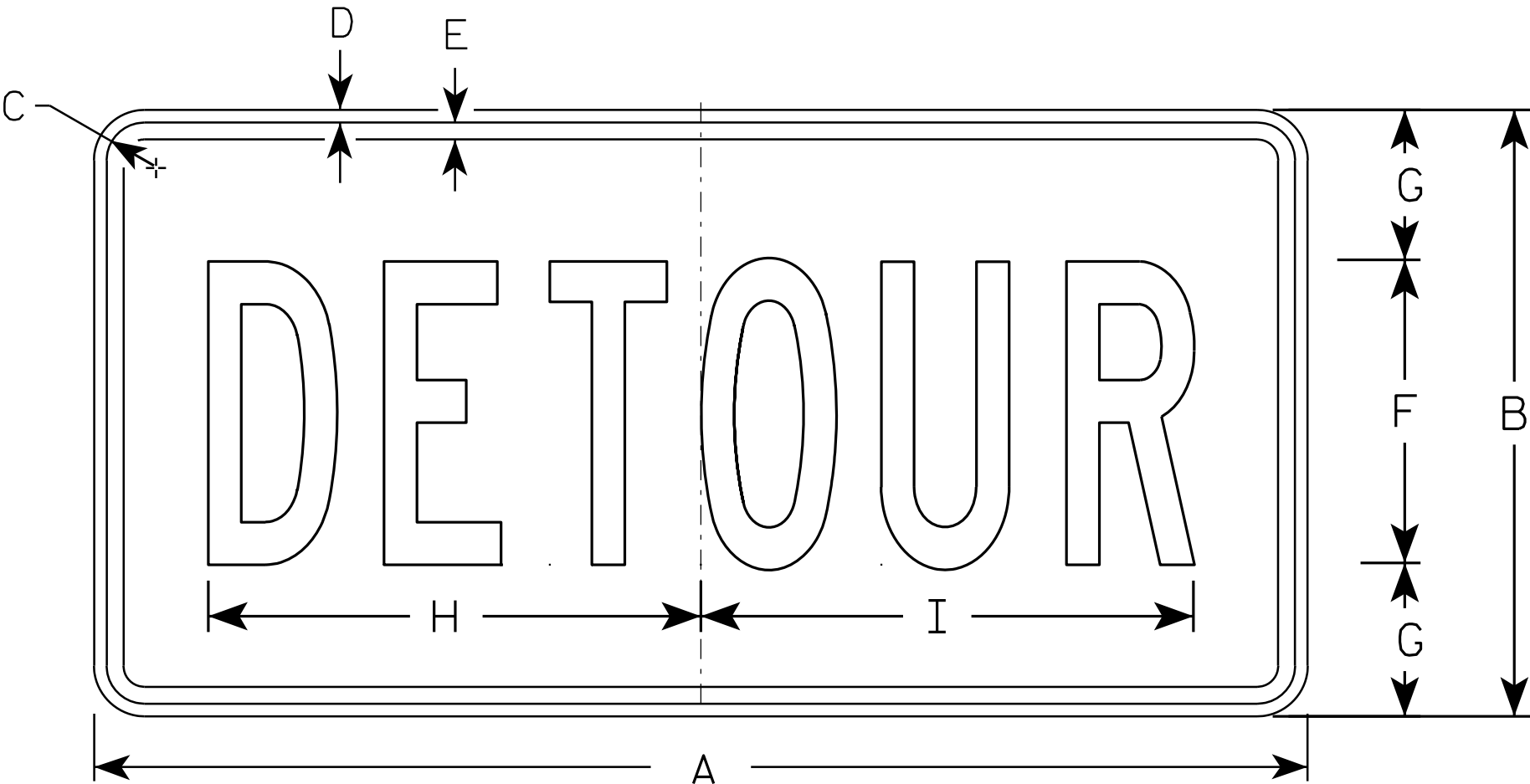
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. 206 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	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

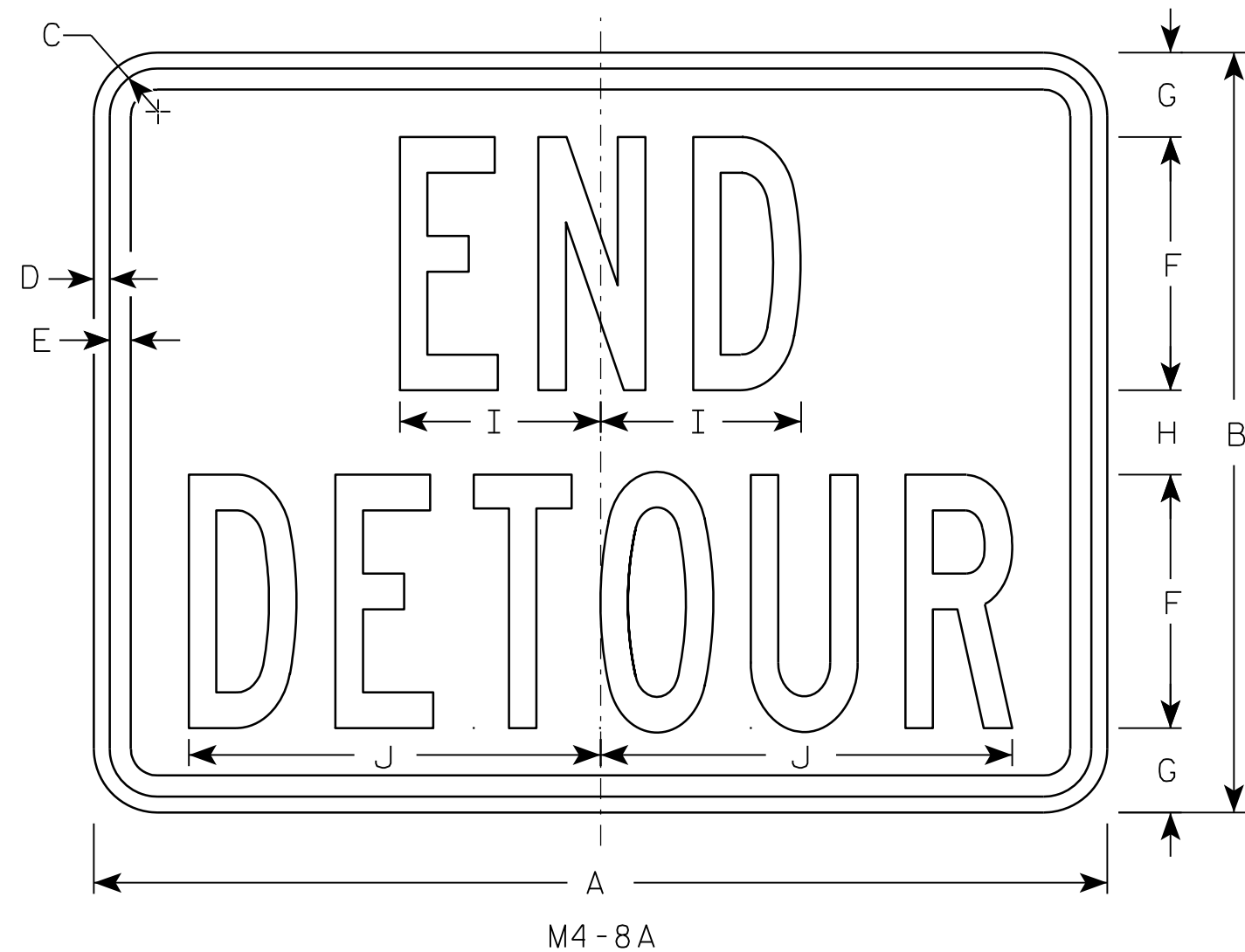
STANDARD SIGN
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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

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																											

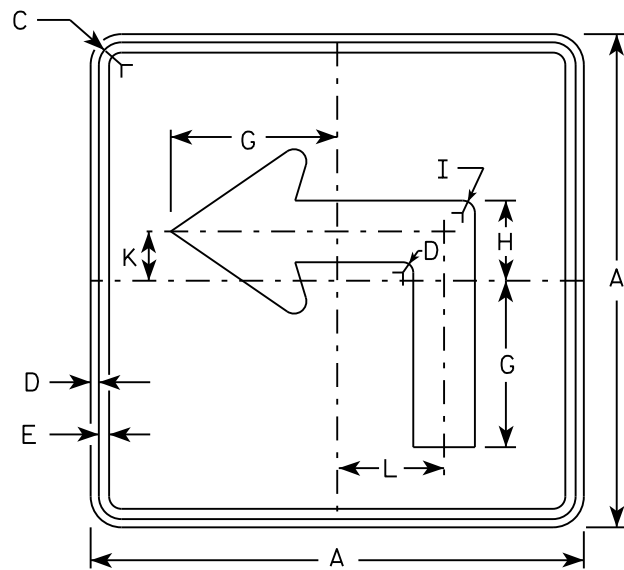
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 208	E
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STANDARD SIGN
M4-8A

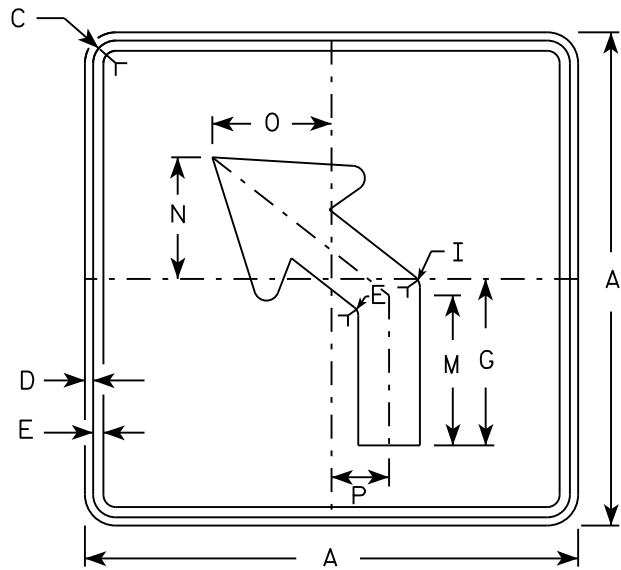
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

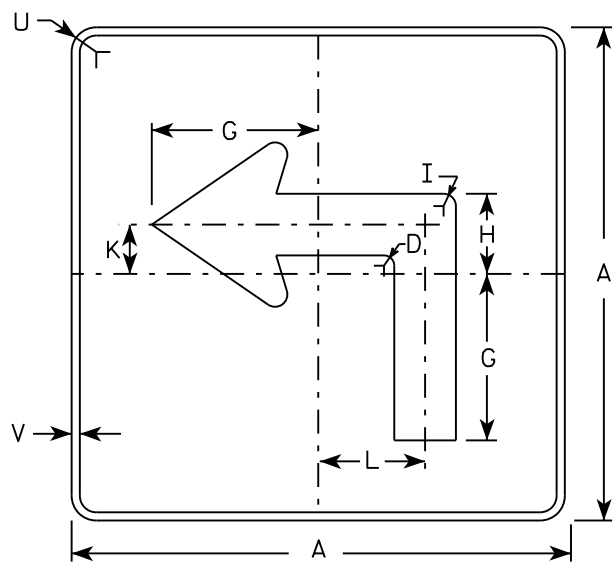
DATE 3/9/11 PLATE NO. M4-8A.2



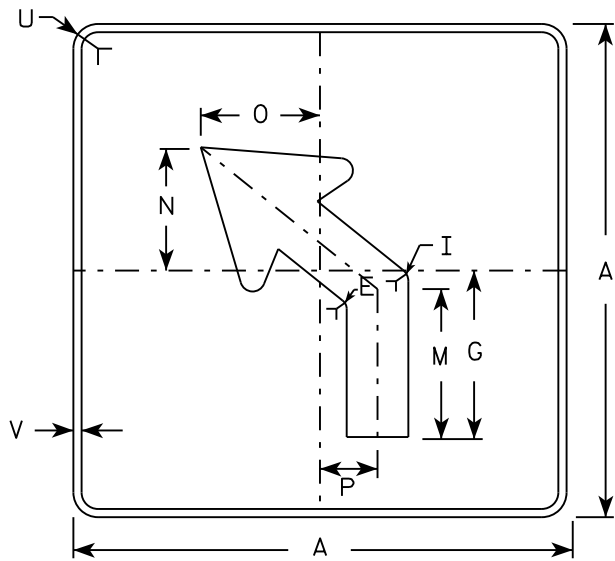
M5-1L
MM5-1L
M05-1L
MP5-1L



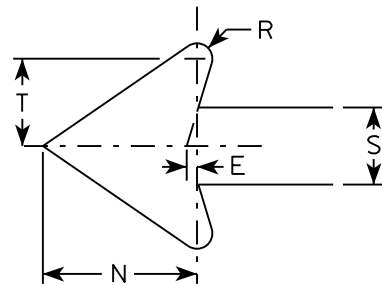
M5-2L
MM5-2L
M05-2L
MP5-2L



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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

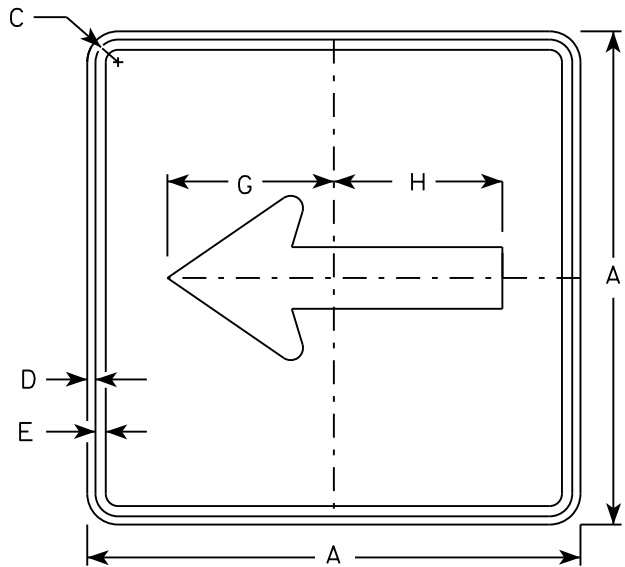
E

STANDARD SIGN
M5-1 & M5-2

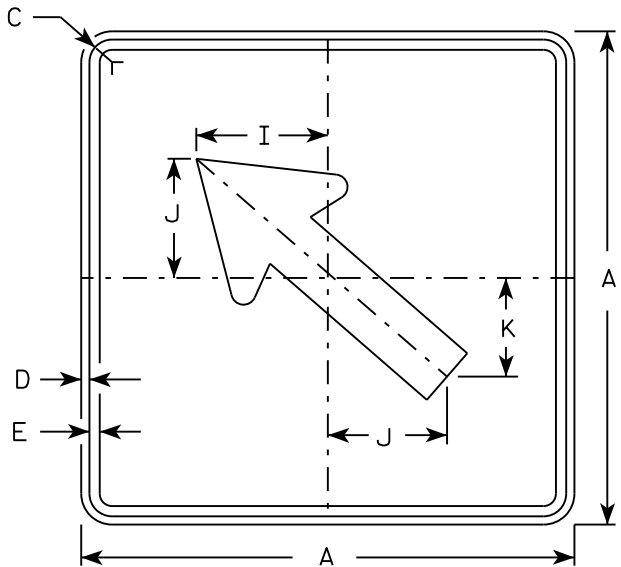
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

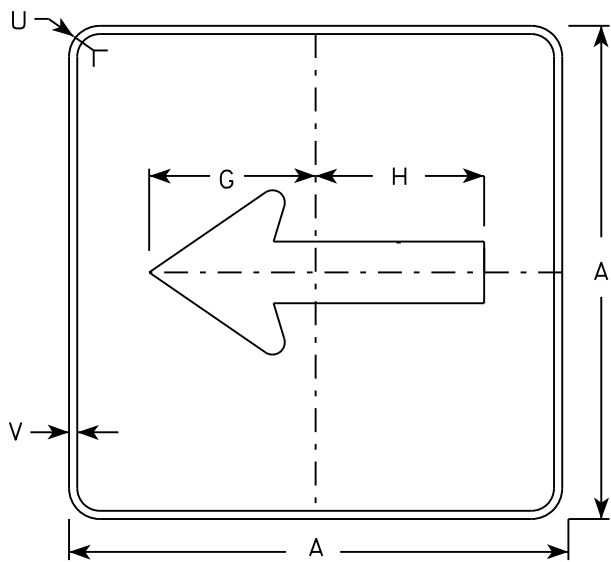
DATE 10/15/15 PLATE 209 M5-1.13



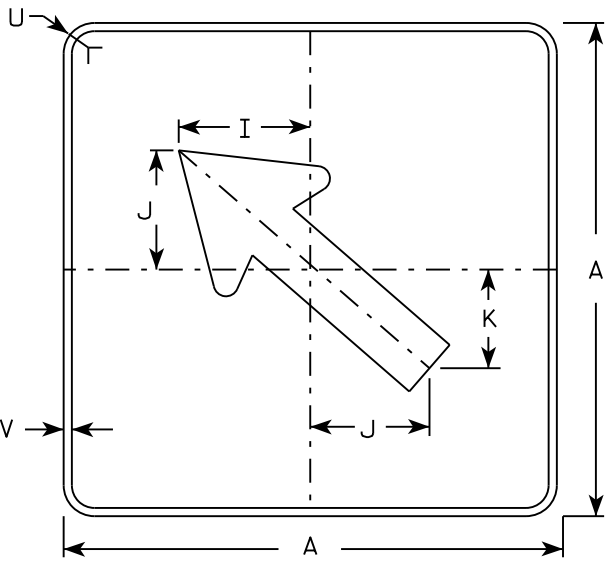
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



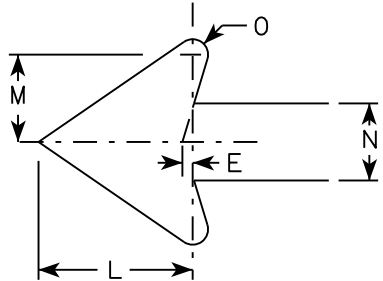
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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



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



NOTES

- 1. Signs are Type II - Type H except as Shown
- 2. Color:
Background - See note 4
Message - See note 4
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. 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:

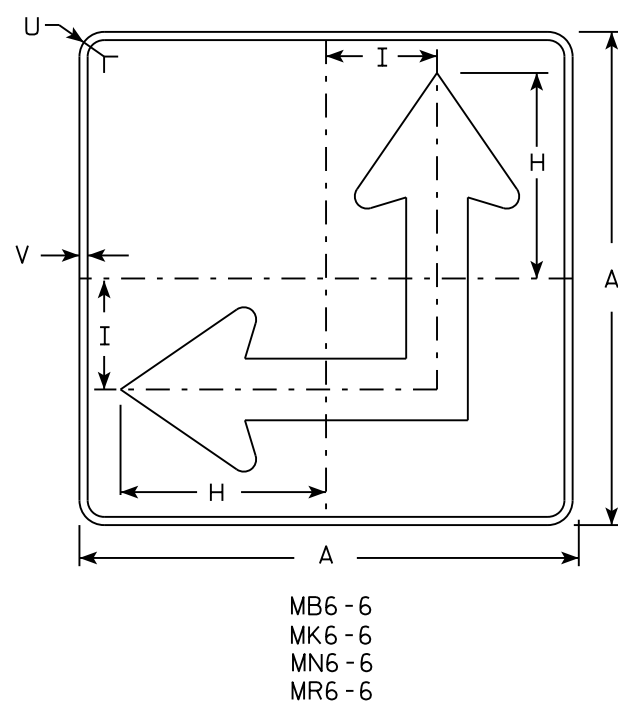
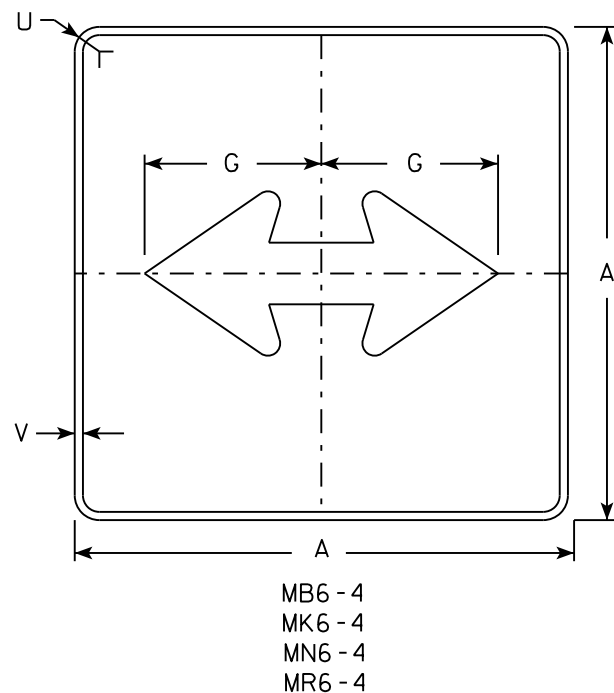
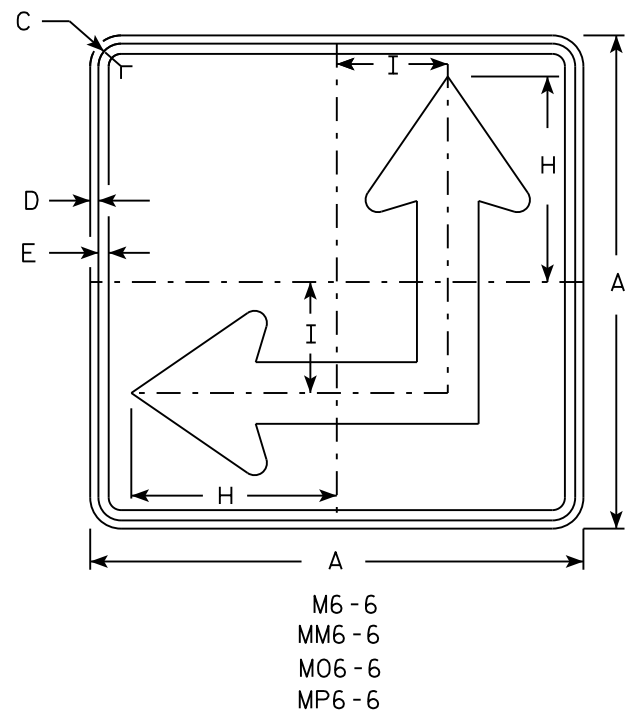
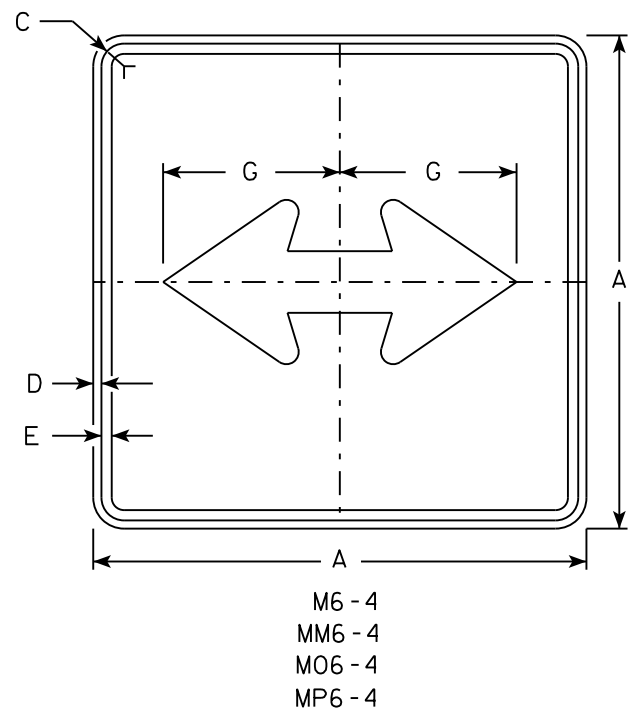
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

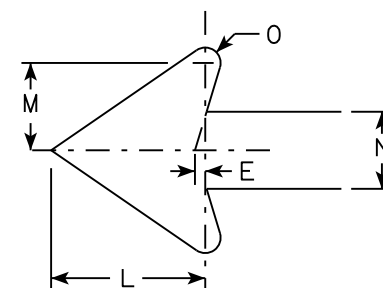
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLAT 210 M6-1.15



NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:	HWY:	COUNTY:	PLAT NO:	SHEET NO:	E
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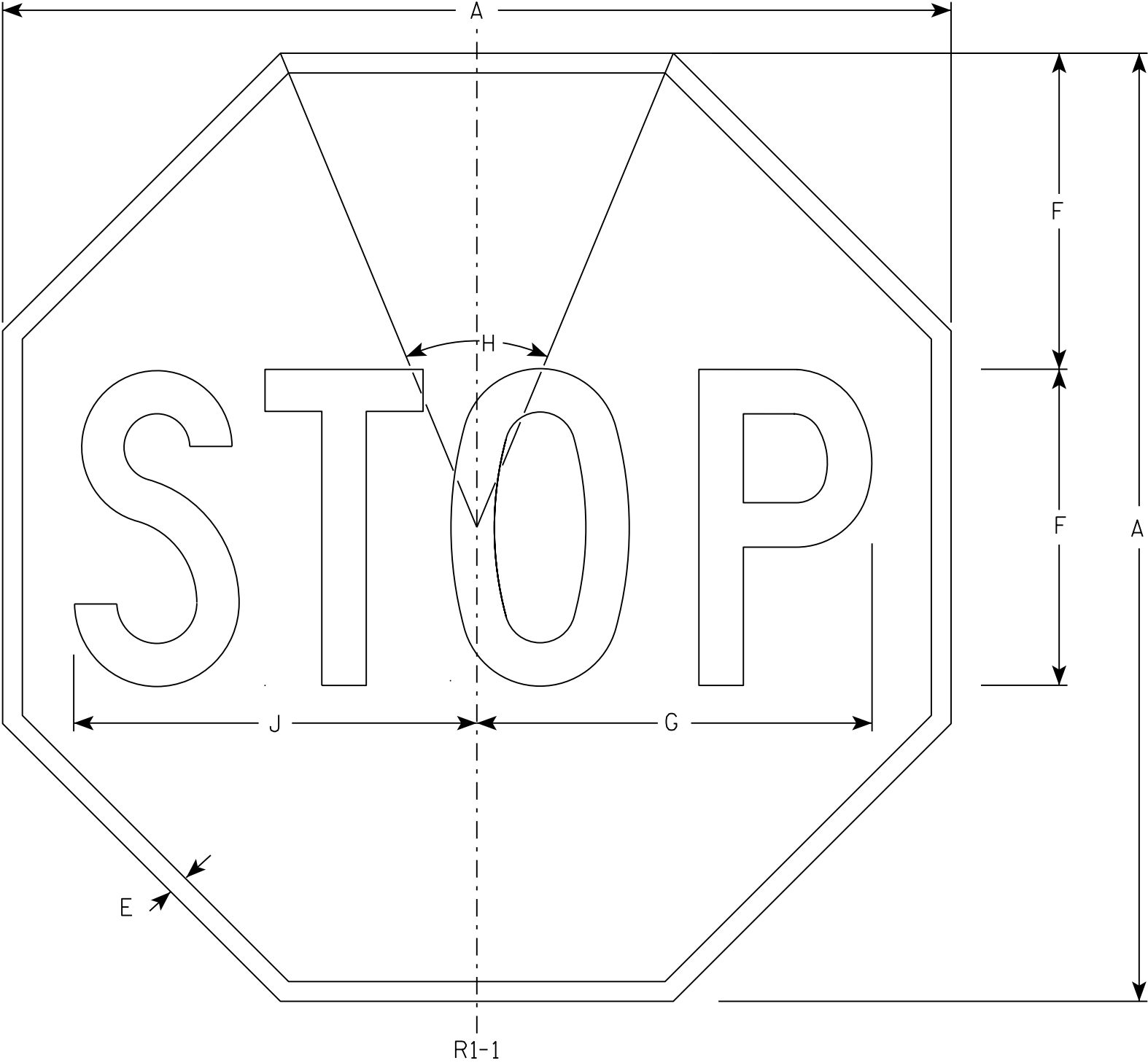
STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLAT 211 M6-4.10

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 212

E

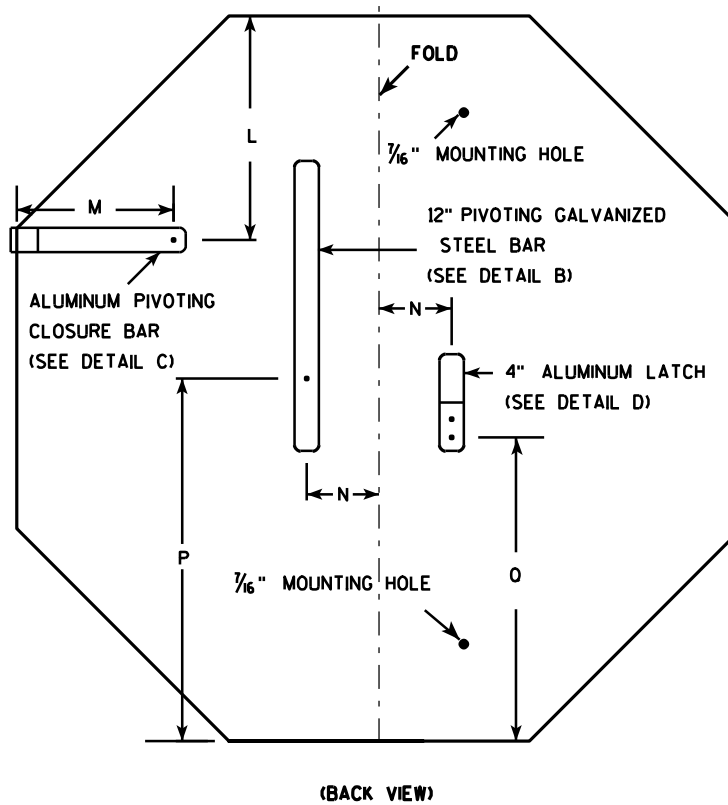
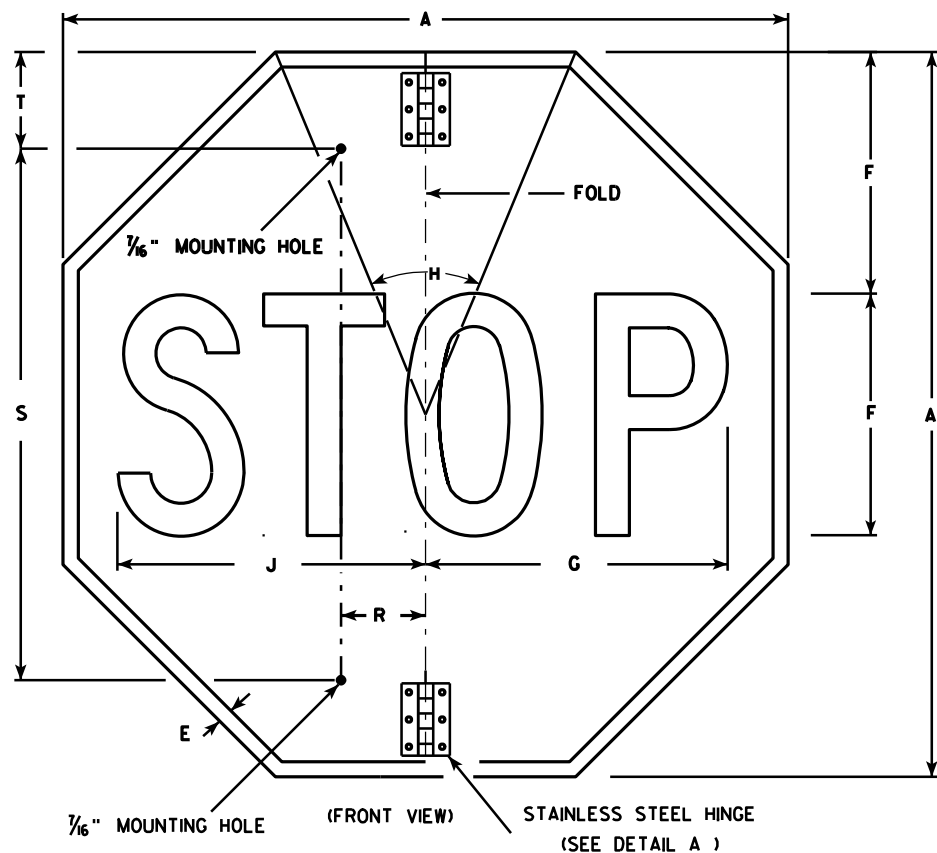
STANDARD SIGN

R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

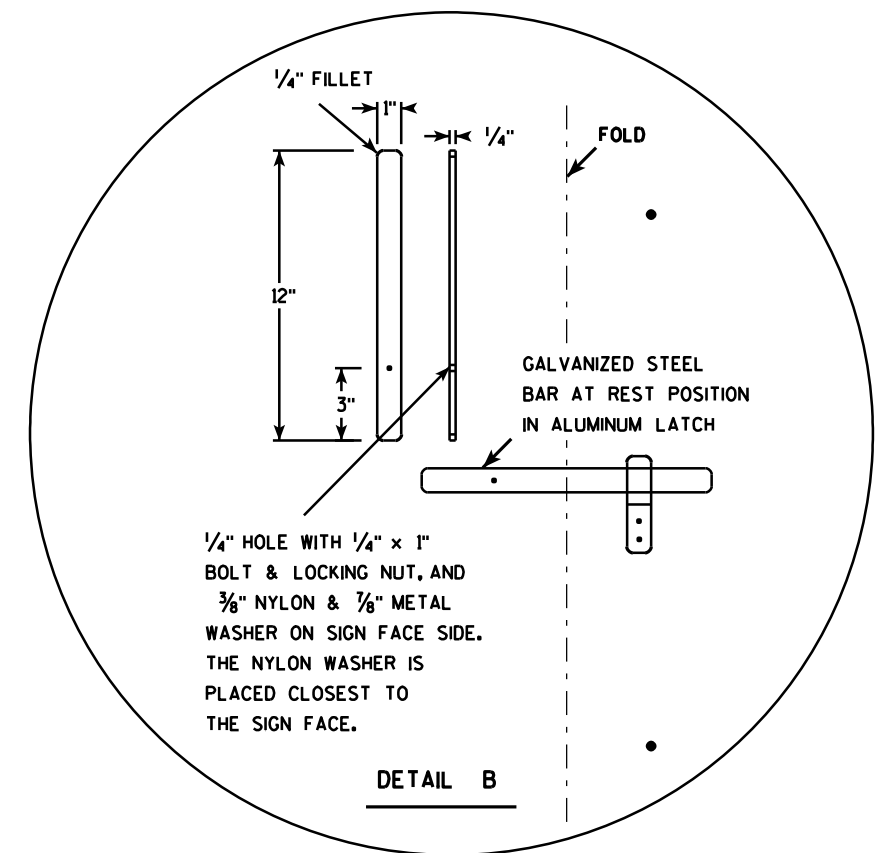
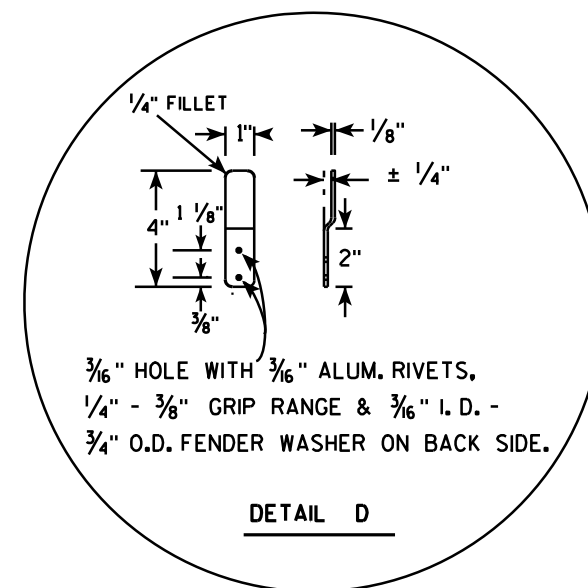
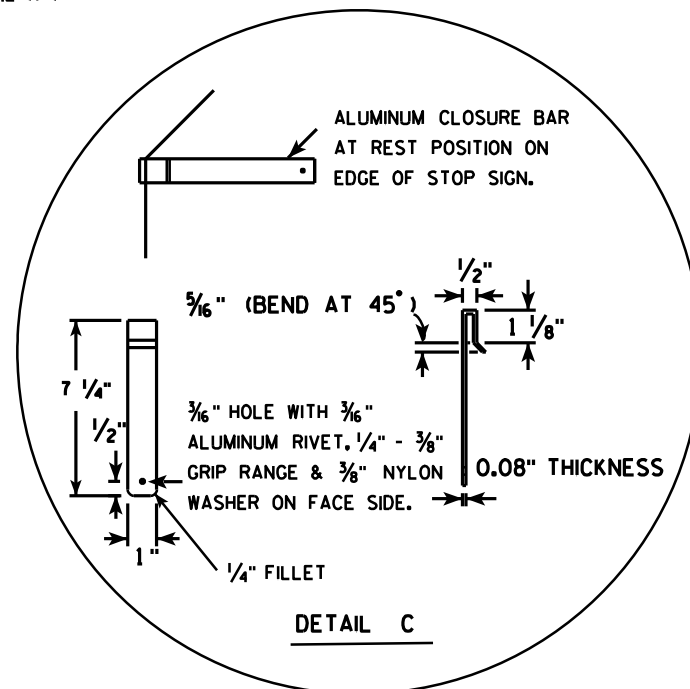
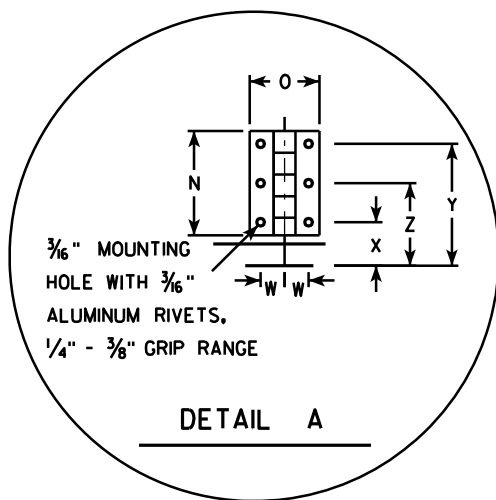
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

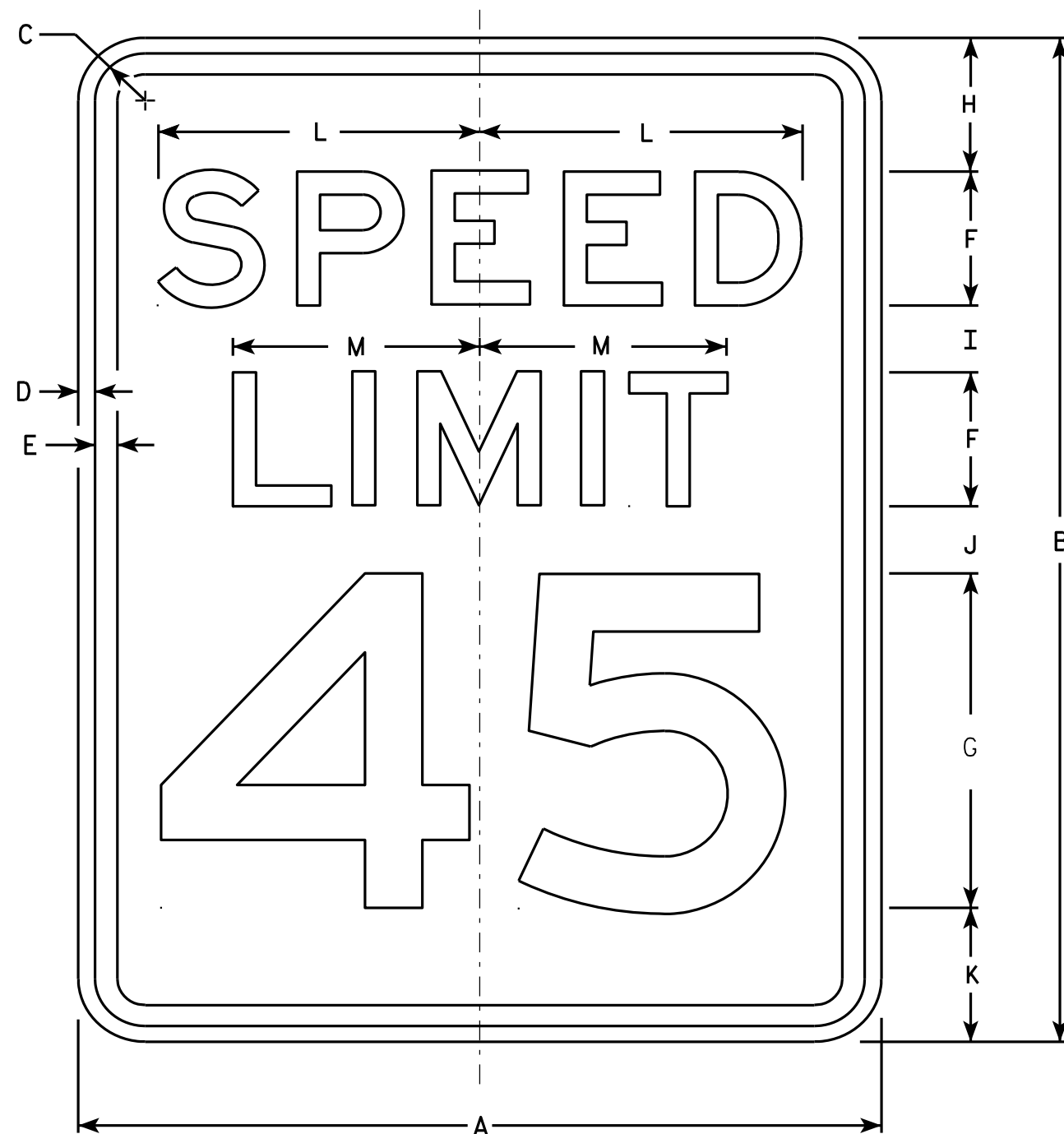
- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Red
Message - White
- Message Series - C
- All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



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				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/8	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/8	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/8	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

STANDARD SIGN R1-1F	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/03/10	PLATE NO. R1-1F.3

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 213	E
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NOTES

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

R2-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

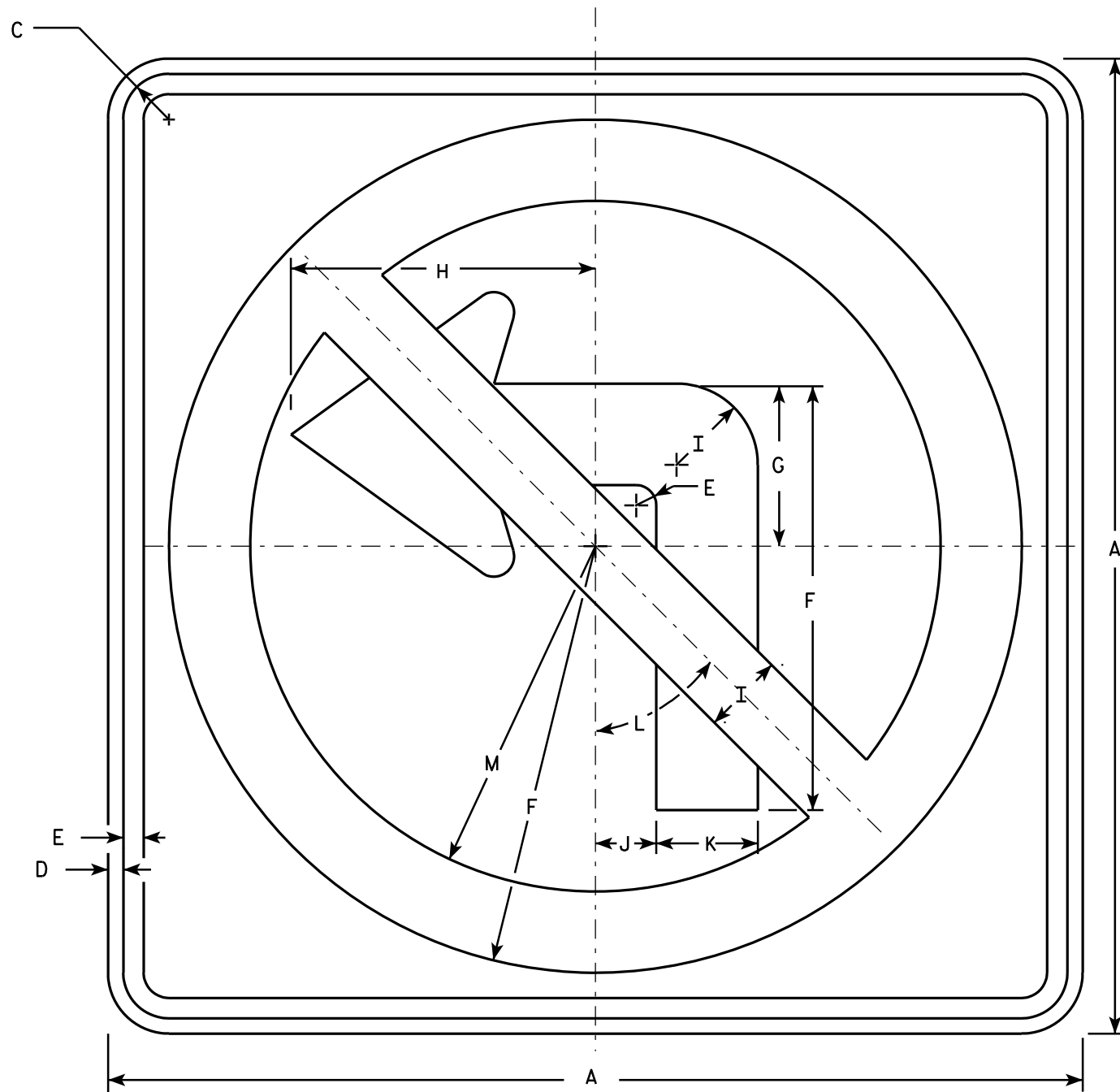
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 214

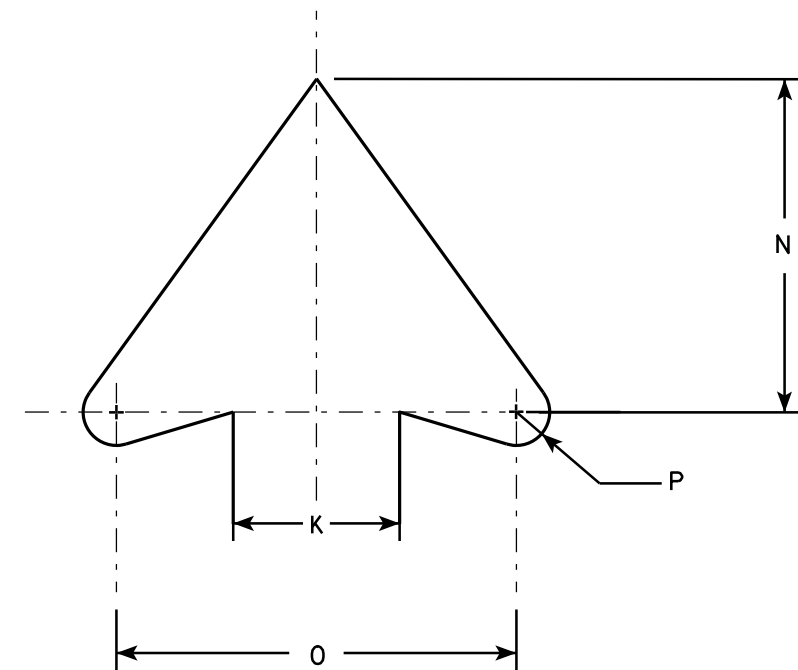
E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

STANDARD SIGN R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

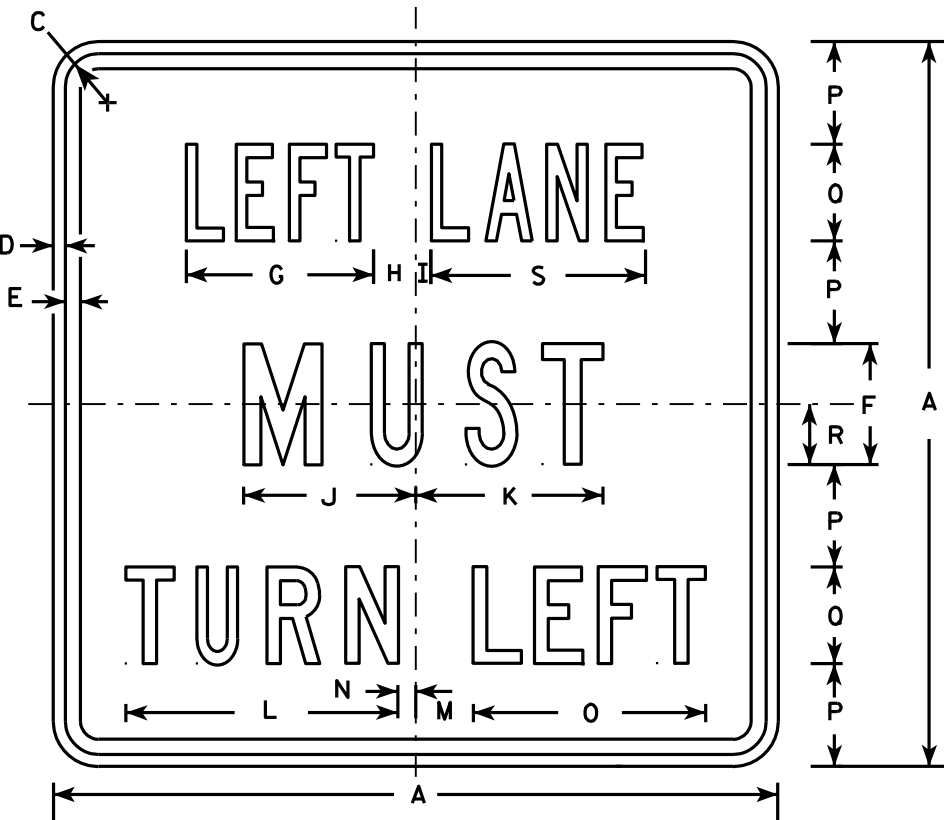
PROJECT NO:

HWY:

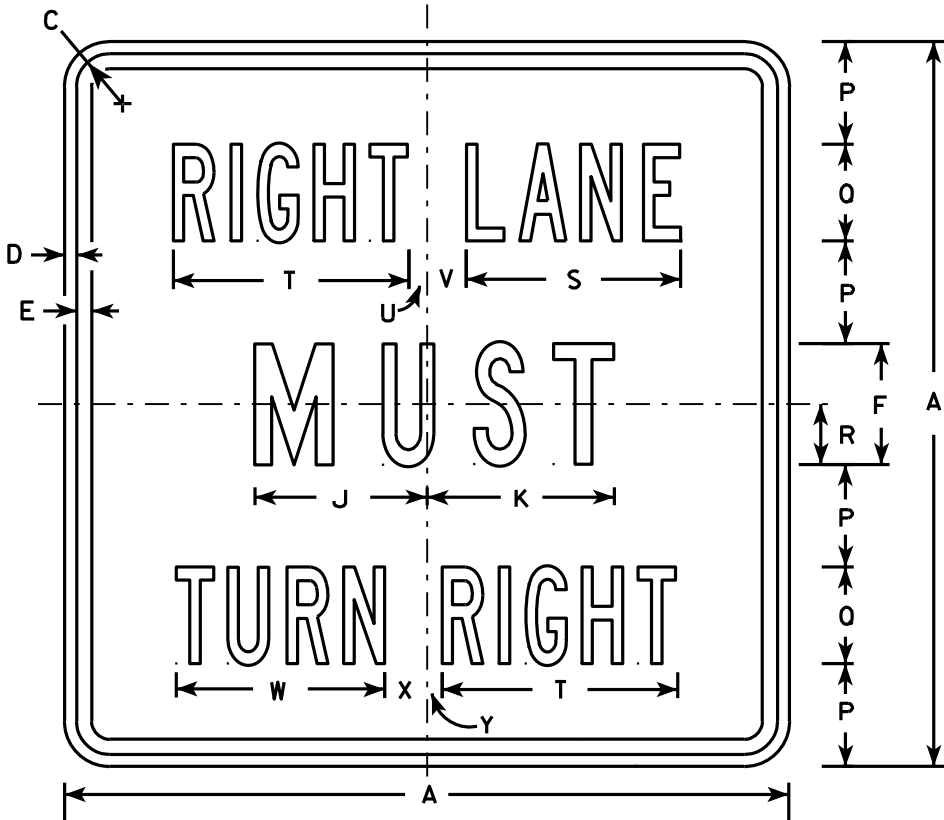
COUNTY:

SHEET NO: 215

E



R3-7L



R3-7R

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
Message - Black
- 3. Message Series - Line 1 is Series B.
Line 2 is Series C.
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
- 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 216

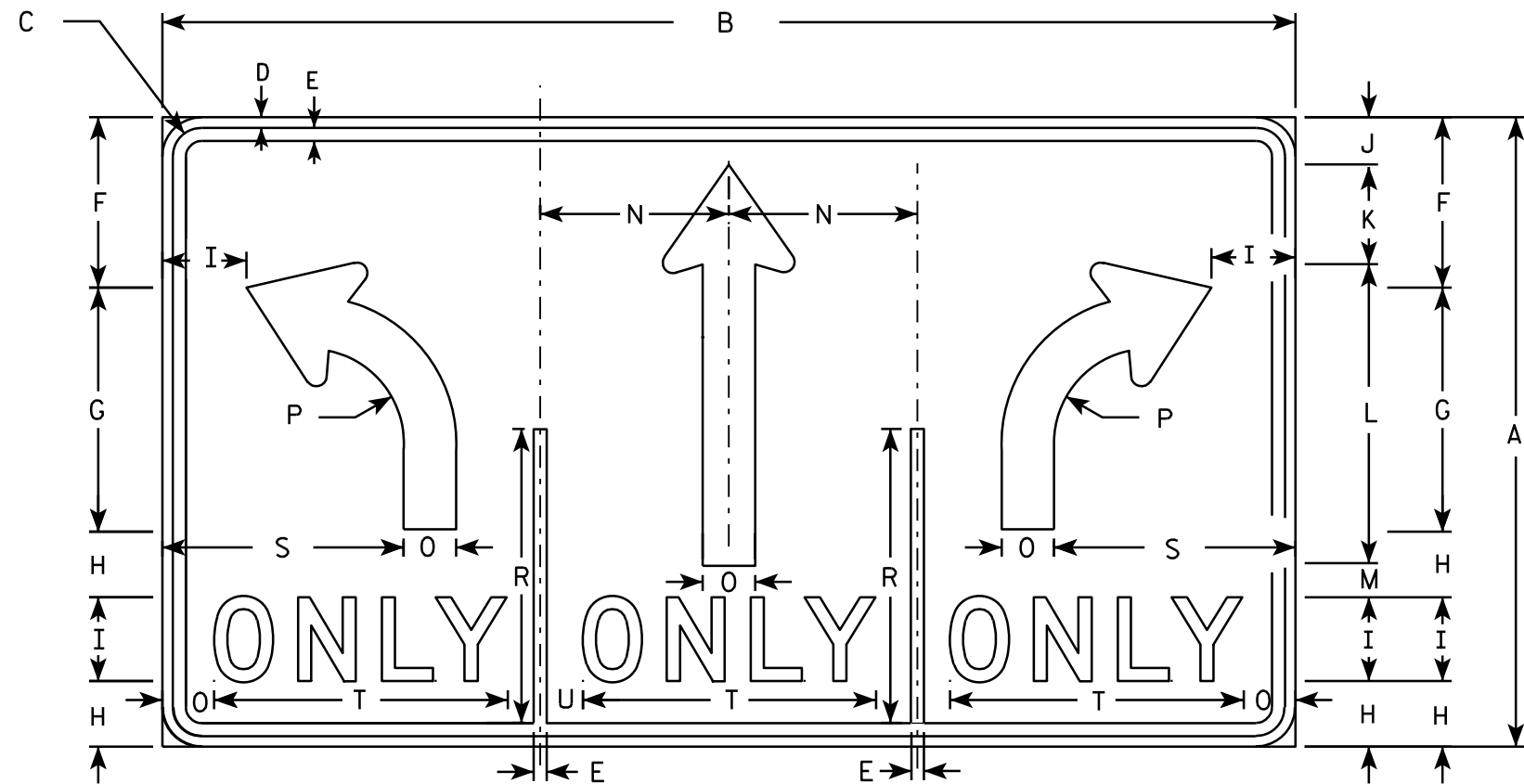
E

STANDARD SIGN
R3-7L & R3-7R

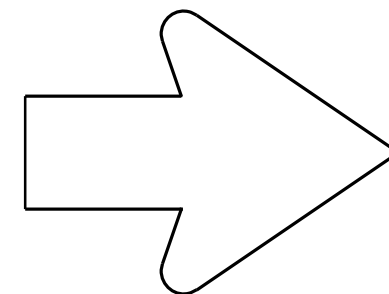
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3



R3-8W



SEE R3-8 FOR ARROW DETAIL

NOTES

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

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	54	1 3⁄8	1⁄2	5⁄8	8 1⁄8	11 5⁄8	3 1⁄8	4	2 1⁄4	4 3⁄4	14 1⁄4	1 5⁄8	9	2 1⁄2	4 1⁄2		14	11 1⁄2	14	2						11.25
2M	30	54	1 3⁄8	1⁄2	5⁄8	8 1⁄8	11 5⁄8	3 1⁄8	4	2 1⁄4	4 3⁄4	14 1⁄4	1 5⁄8	9	2 1⁄2	4 1⁄2		14	11 1⁄2	14	2						11.25
3																											
4	48	84	2 1⁄4	3⁄4	1	13	18 1⁄2	5 1⁄4	6	3 3⁄4	7	29 1⁄8	2 3⁄8	14	3 3⁄4	7 1⁄4		22 3⁄8	17 1⁄4	20 1⁄2	3 1⁄4						28.0
5	48	84	2 1⁄4	3⁄4	1	13	18 1⁄2	5 1⁄4	6	3 3⁄4	7	29 1⁄8	2 7⁄8	14	3 3⁄4	7 1⁄4		22 3⁄8	17 1⁄4	20 1⁄2	3 1⁄4						28.0

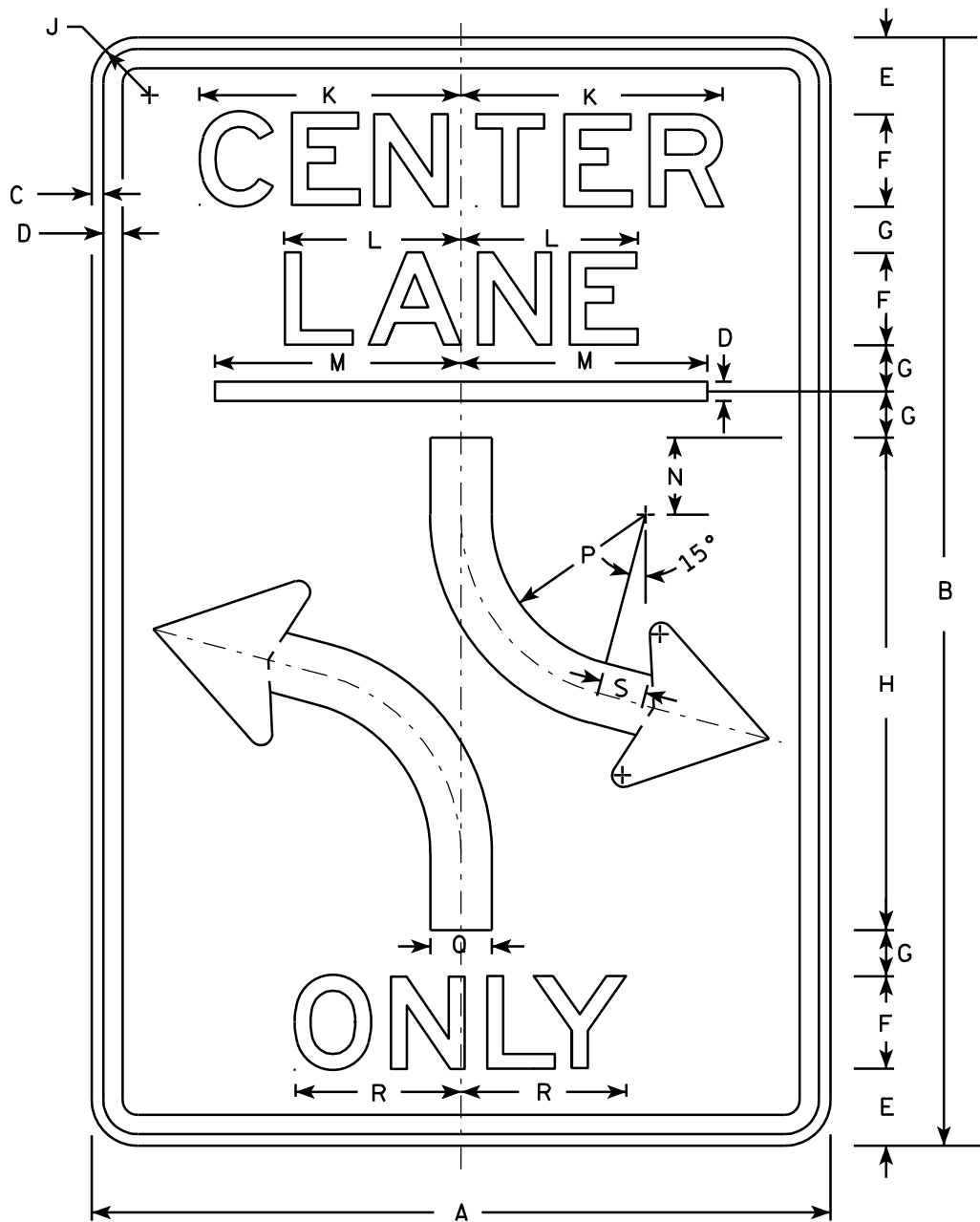
PROJECT NO:																											SHEET NO: 217	E
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STANDARD SIGN
R3-8W

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

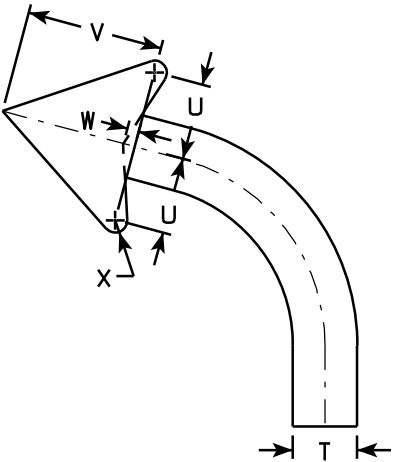
DATE 3/24/2011 PLATE NO. R3-8W.4



R3-9B

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	$\frac{3}{8}$	$\frac{1}{2}$	2 $\frac{1}{2}$	3	1 $\frac{1}{2}$	16		1 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{3}{4}$	8	2 $\frac{1}{2}$		6	2	5 $\frac{1}{8}$	1 $\frac{1}{2}$		2 $\frac{3}{8}$	4 $\frac{3}{8}$	$\frac{3}{8}$				6.0
2M	24	36	$\frac{3}{8}$	$\frac{1}{2}$	2 $\frac{1}{2}$	3	1 $\frac{1}{2}$	16		1 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{3}{4}$	8	2 $\frac{1}{2}$		6	2	5 $\frac{1}{8}$	1 $\frac{1}{2}$		2 $\frac{3}{8}$	4 $\frac{3}{8}$	$\frac{3}{8}$				6.0
3	36	48	$\frac{5}{8}$	$\frac{7}{8}$	3 $\frac{1}{2}$	5	1 $\frac{1}{2}$	20		2 $\frac{1}{4}$	14 $\frac{1}{8}$	9 $\frac{1}{2}$	12	3		4	3	9 $\frac{7}{8}$	2		3 $\frac{1}{2}$	6 $\frac{1}{8}$	$\frac{1}{2}$				12.0
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 218

E

STANDARD SIGN
R3-9B

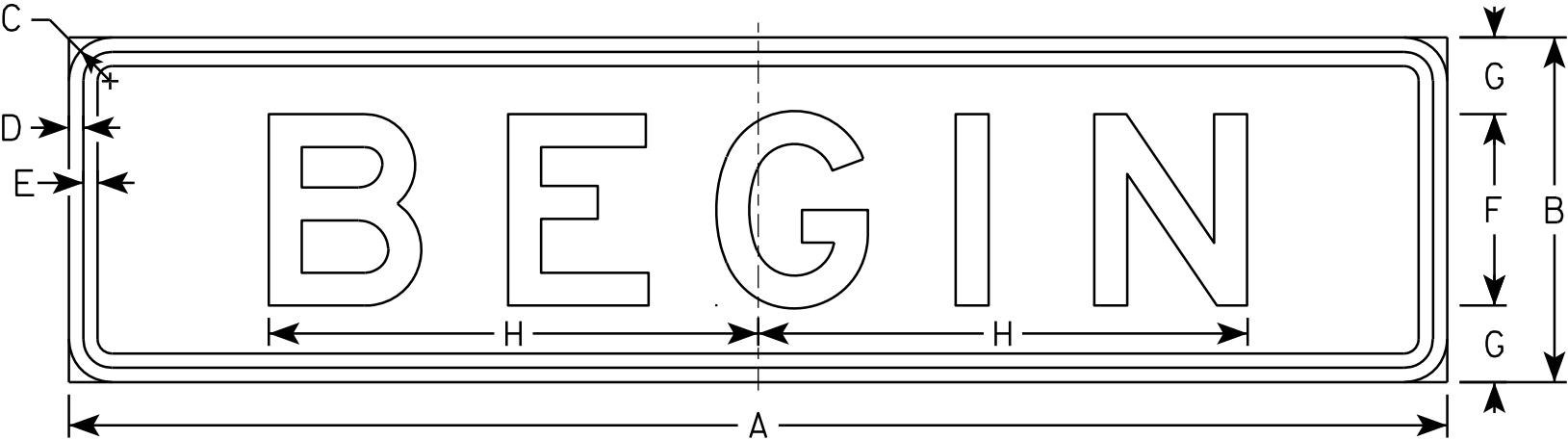
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

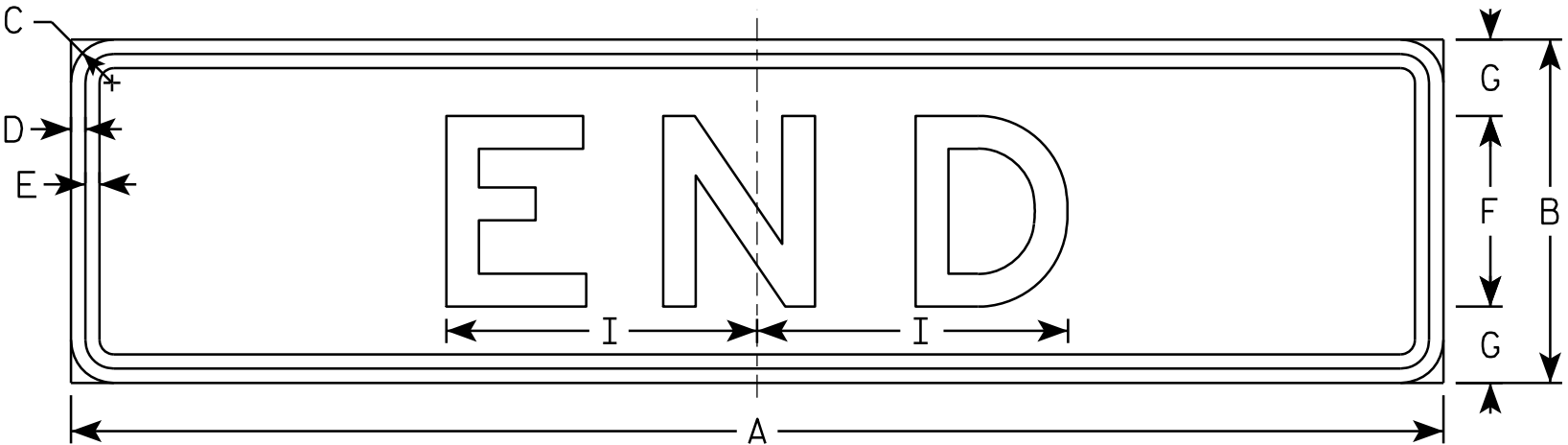
DATE 3/24/2011 PLATE NO. R3-9B.5

NOTES

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



R3-9C



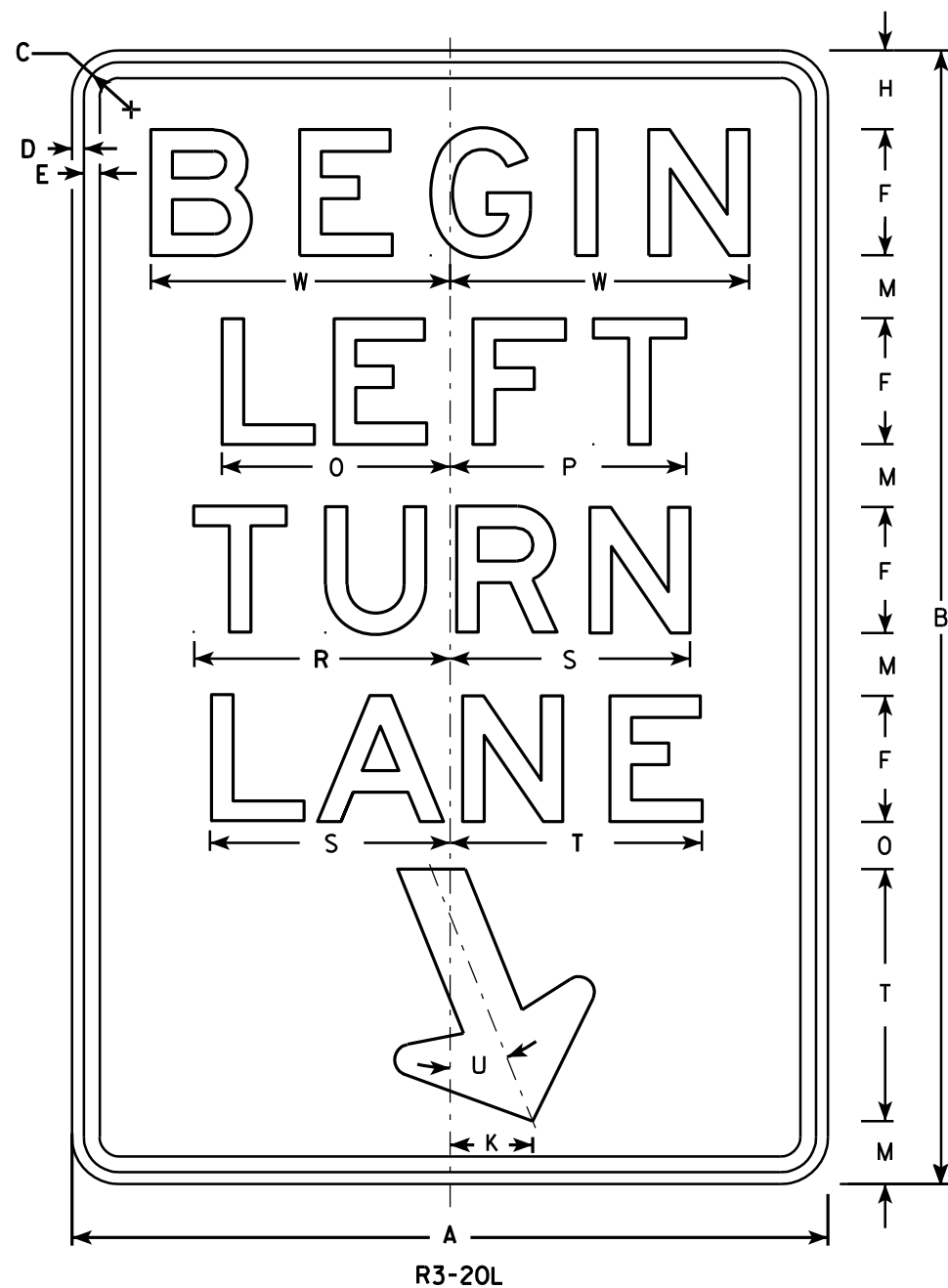
R3-9D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
2M	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
3	36	9	1 1/8	3/8	3/8	5	2	12 3/4	8 1/8																		1.86
4																											
5																											

STANDARD SIGN
R3-9C & R3-9D

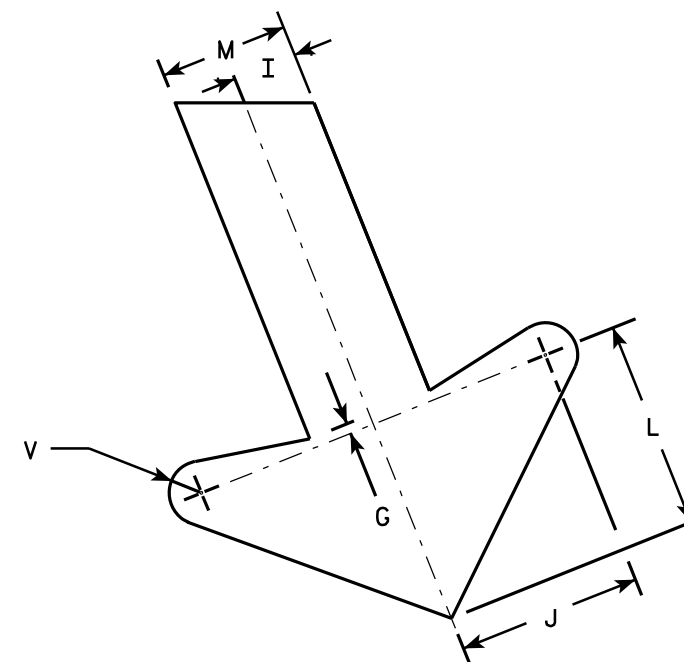
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/24/2011 PLATE NO. R3-9C.2



NOTES

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



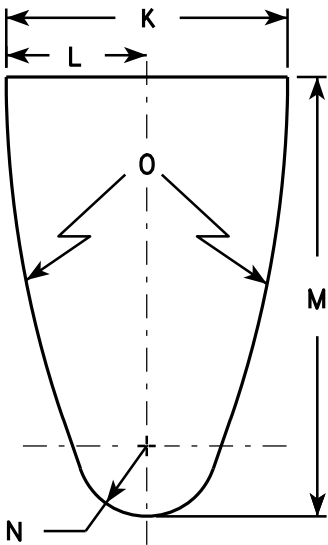
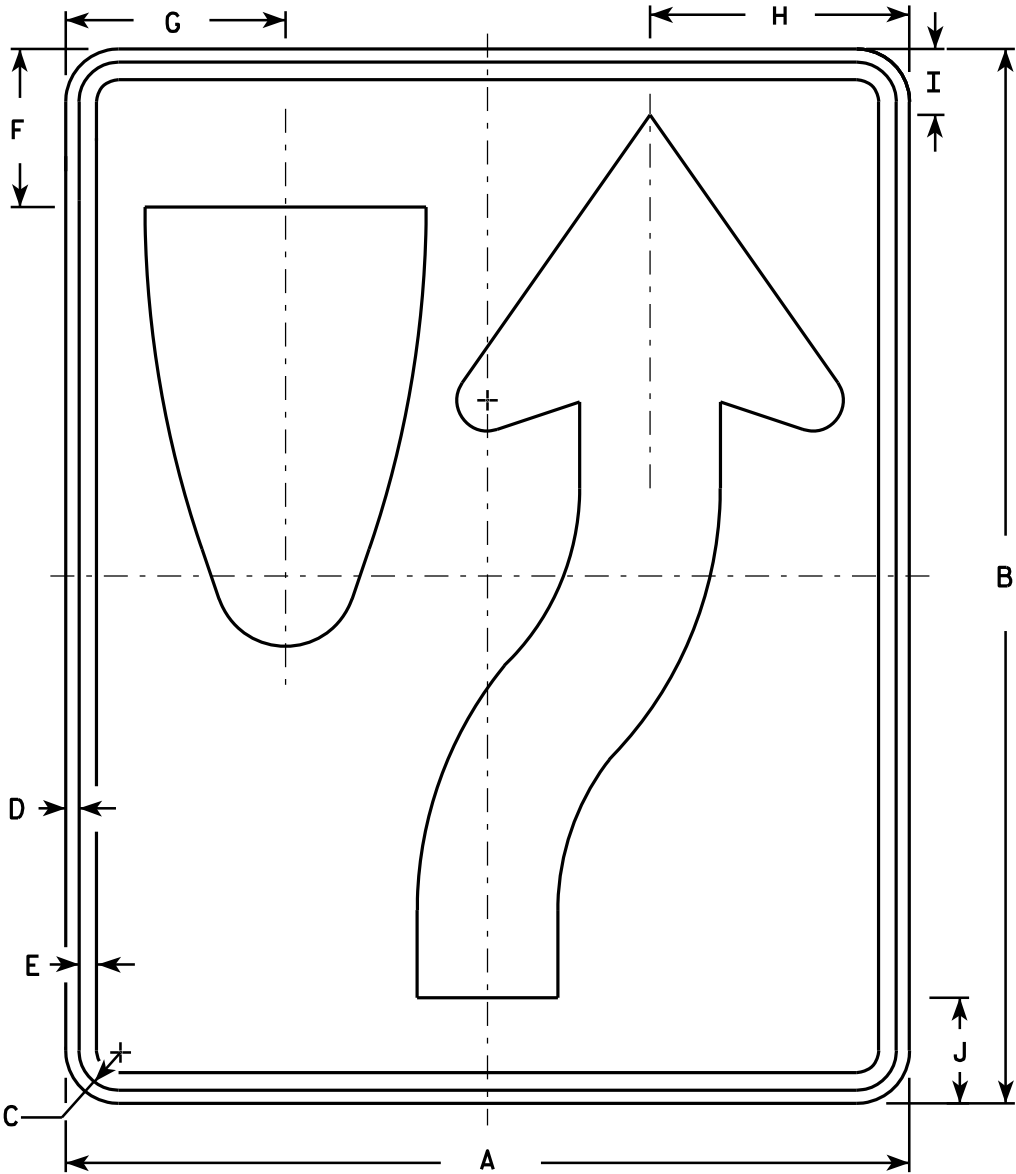
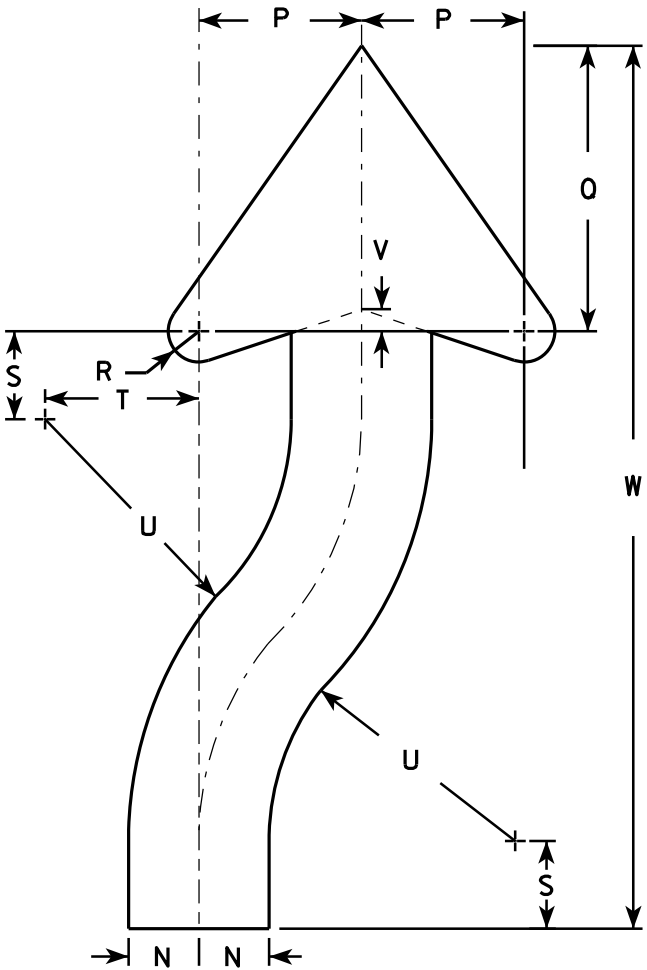
ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN R3-20L	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 10/18/10	PLATE NO. R3-20L.7

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
- 2. Color:
Background - White
Message - Black
- 3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
- 4. R4-8 is the same as R4-7 except Legend is reversed.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

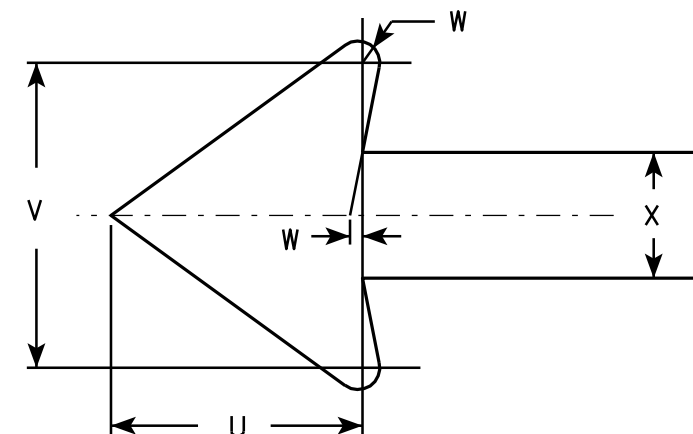
DATE 3/25/2011 PLATE NO. R4-7.8



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

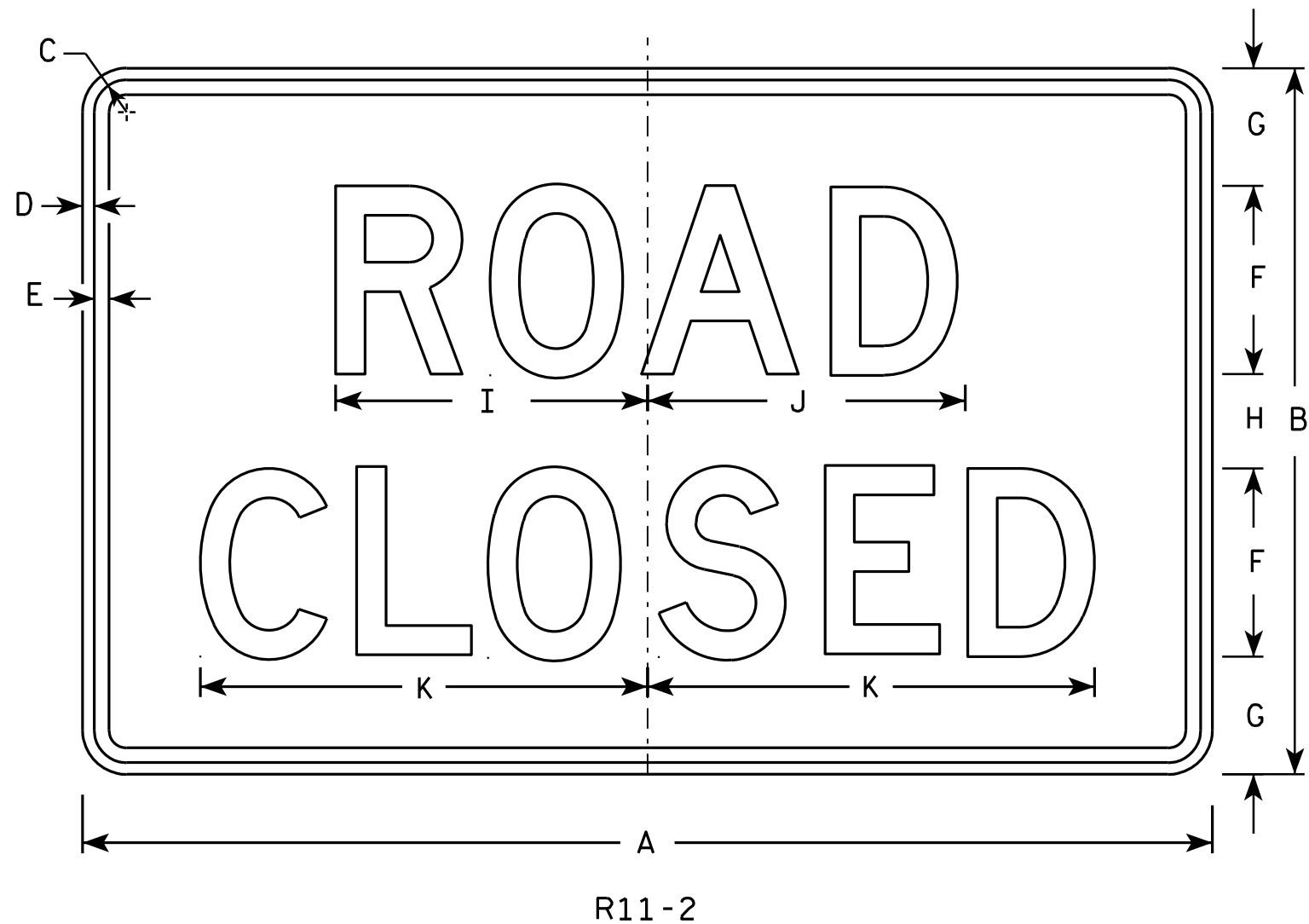
STANDARD SIGN R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

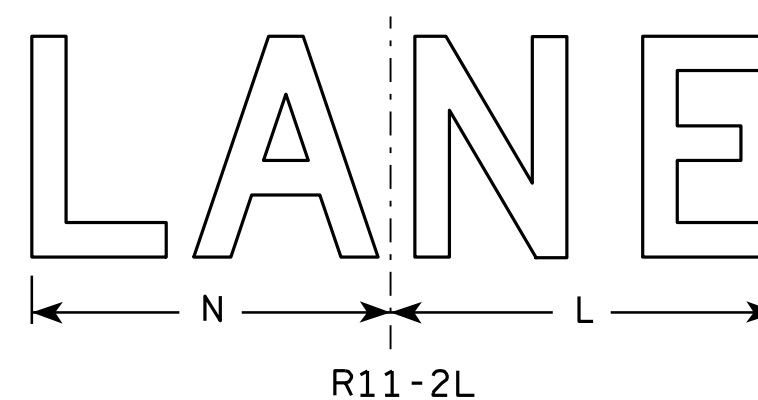
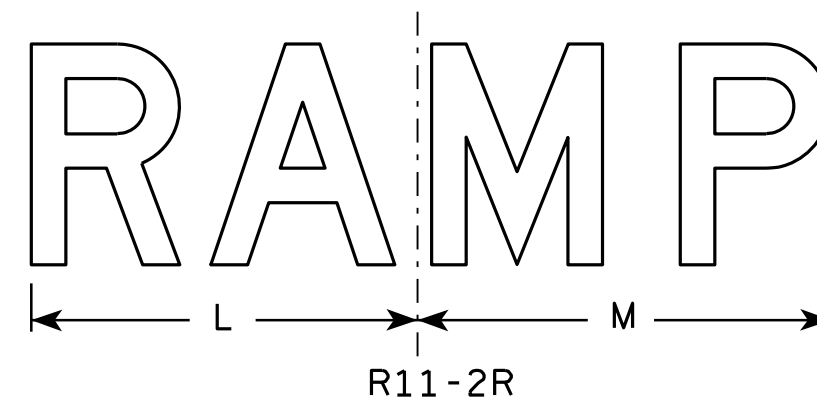
DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: HWY: COUNTY: SHEET NO: 222 E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
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. Modify the message as required.

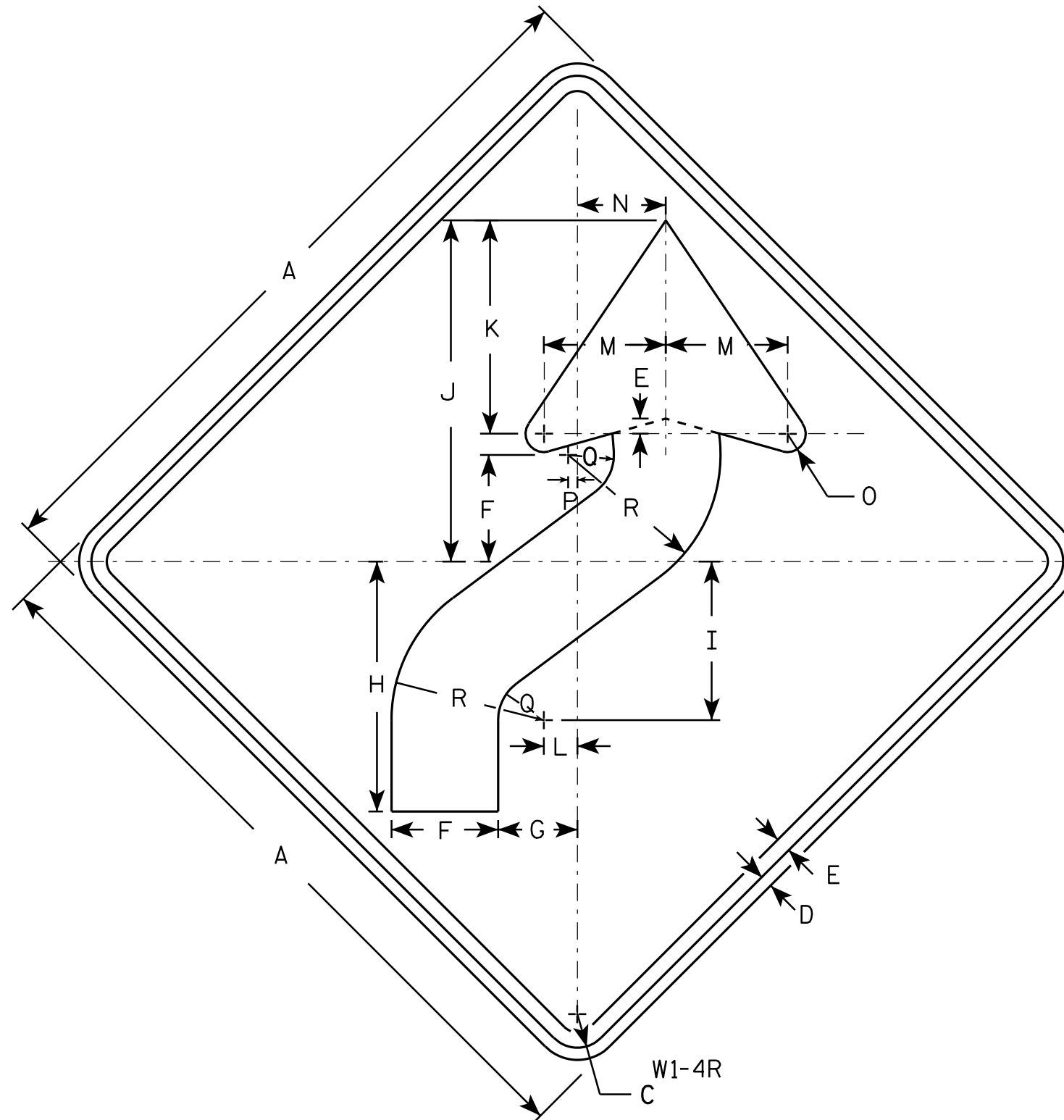


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN R11-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: 223 **E**



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - Black
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

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	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

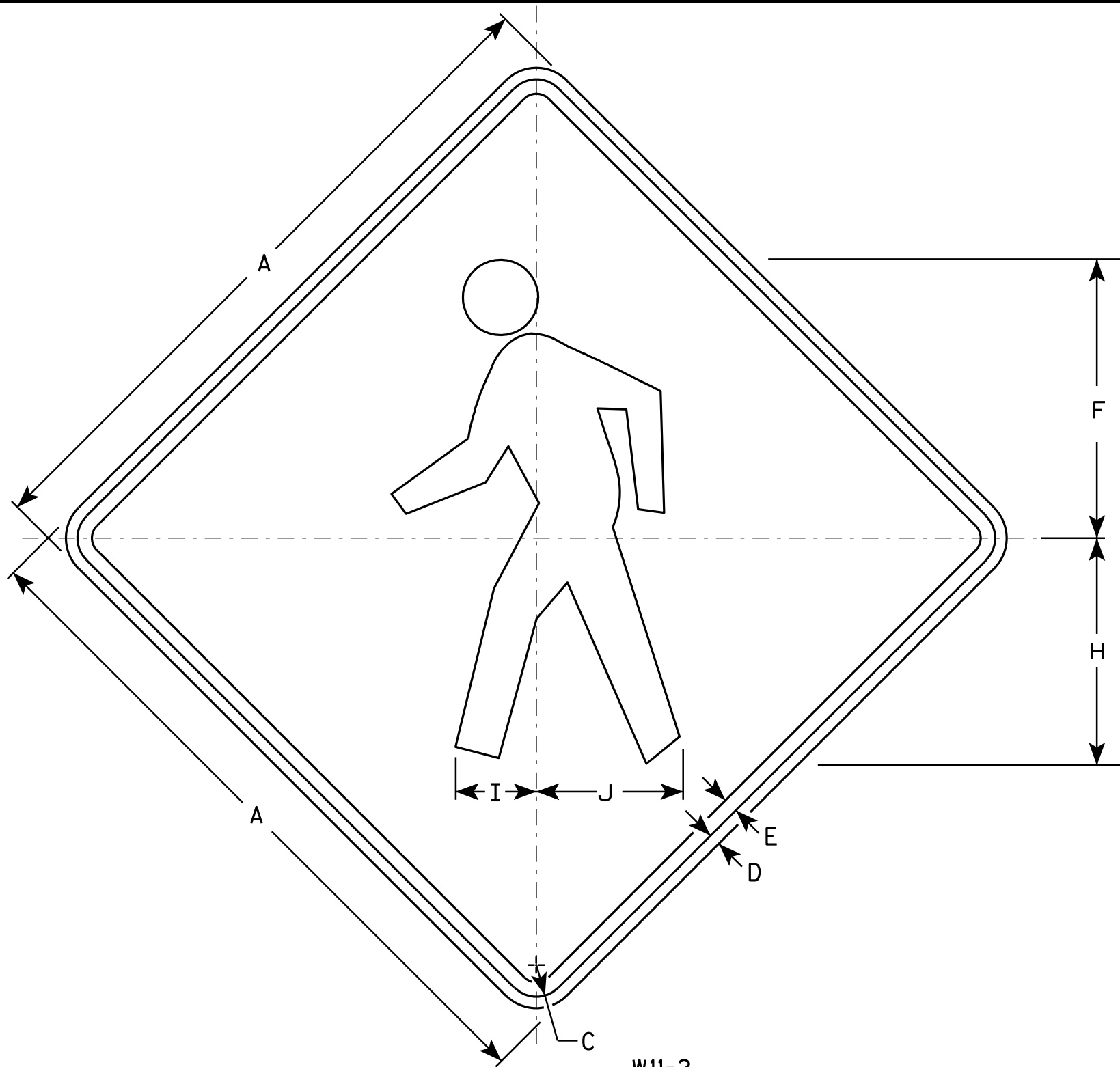
STANDARD SIGN W1 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 224	E
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W11-2

NOTES

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

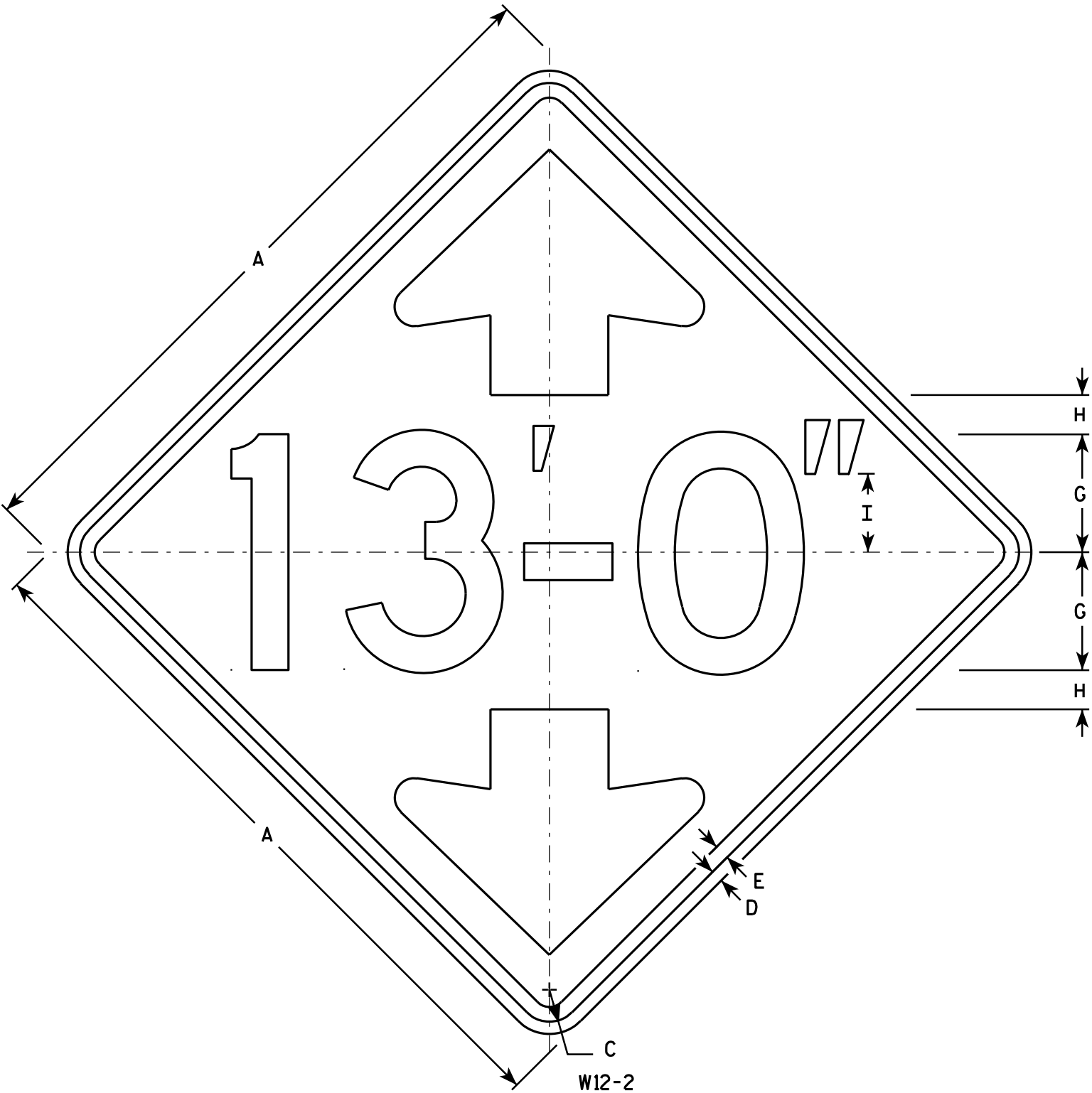
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

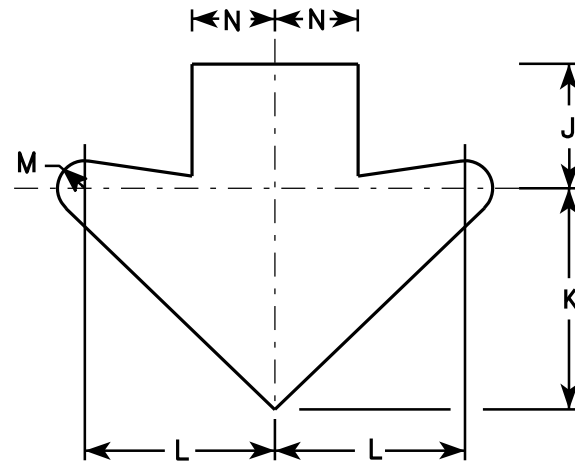
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

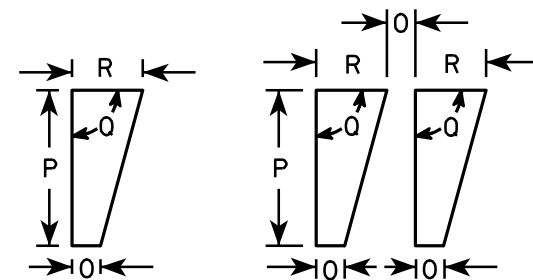


NOTES

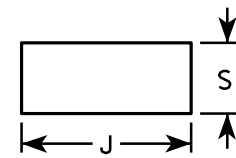
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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



Arrow Detail



Foot Mark & Inch Mark Detail



Hyphen Detail

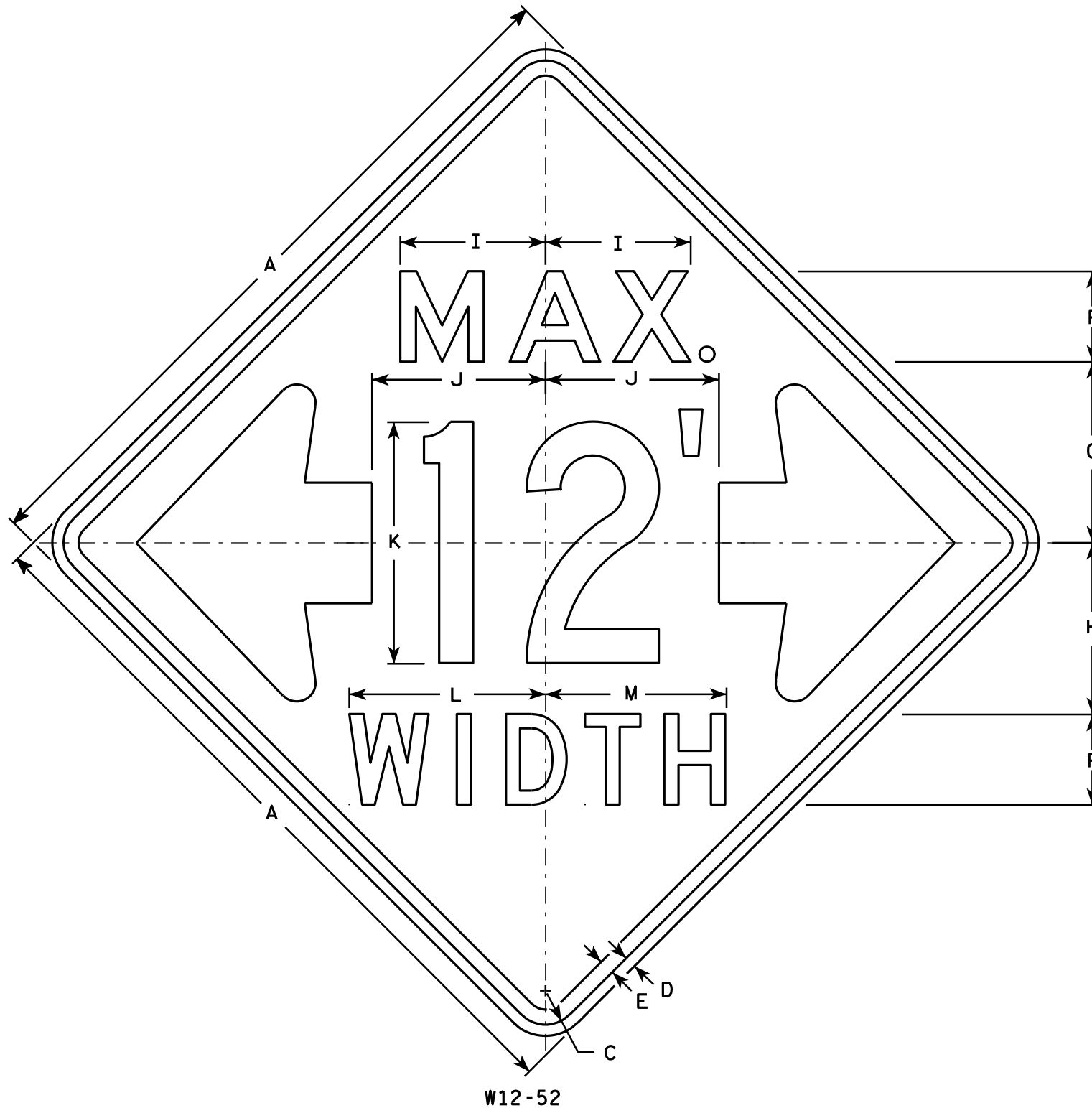
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		5	1 5/8	3 3/8	3 3/4	6 5/8	5 3/4	3/4	2 1/2	1/2	2 1/4	90°	1	1 5/8								6.25
2S	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
2M	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
3	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
4	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
5	48		2 1/4	3/4	1		8	2 5/8	5 1/2	5 7/8	10 5/8	9 1/4	1 3/8	4	5/8	3 5/8	90°	1 5/8	2 1/2								16.00

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 226	E
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STANDARD SIGN
W12-2

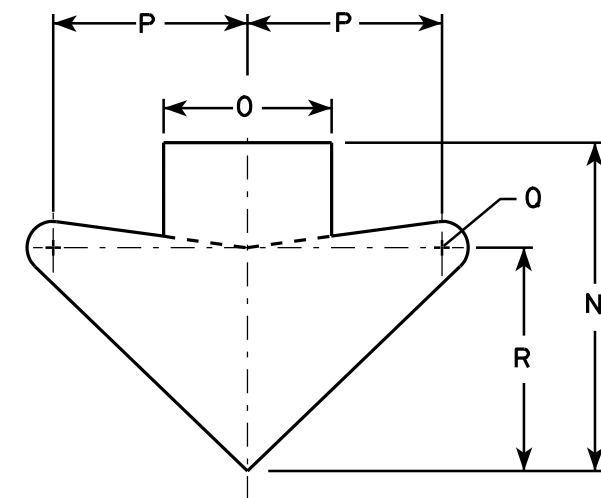
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 3/13/13 PLATE NO. W12-2.9



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - See note 5
- 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.
- The top line is series E, the numerals are series C, and the bottom line is series D.
- Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN W12-52

WISCONSIN DEPT OF TRANSPORTATION

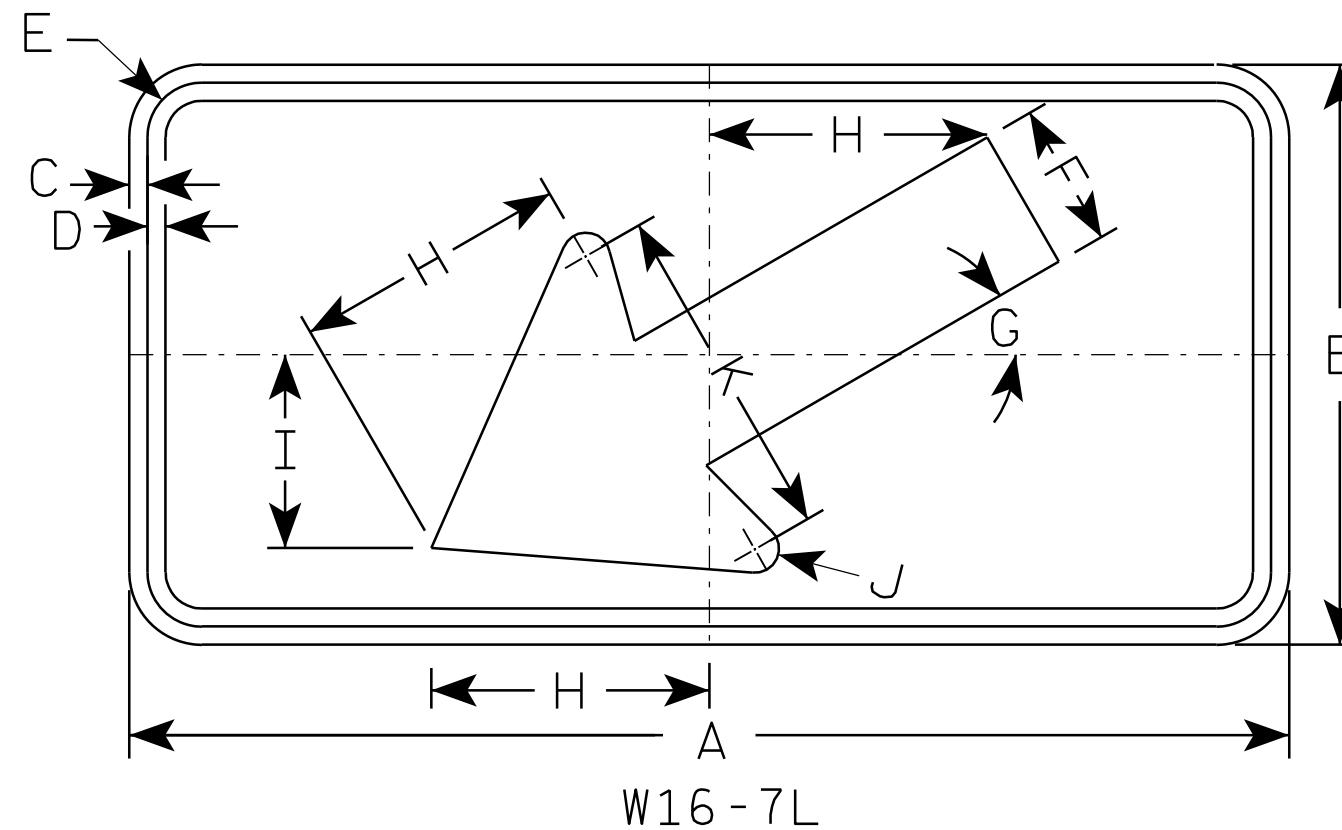
APPROVED
Matthew R. Rauch
 For State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: HWY: COUNTY: SHEET NO: 227 E

NOTES

1. Sign is Type II - Type F Reflective -
reference WIS DOT Standard Specification for
HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
4. W16-7R is the same as W16-L
except the arrow is reversed along
the vertical centerline.

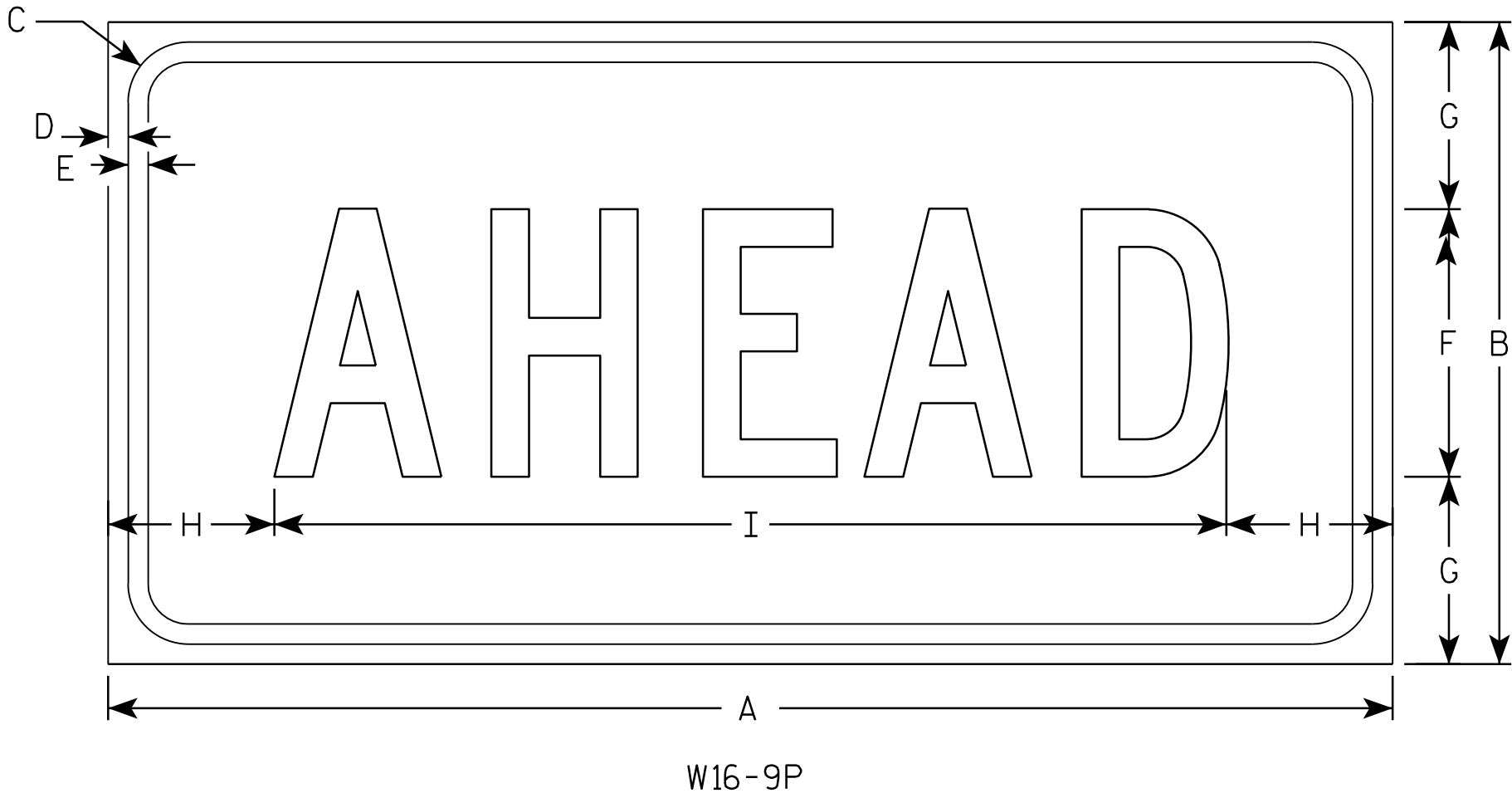


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

STANDARD SIGN	
W16-7	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 11/02/10	PLATE NO. W16-7.5

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 228	E
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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 - Yellow
Message - Black
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.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

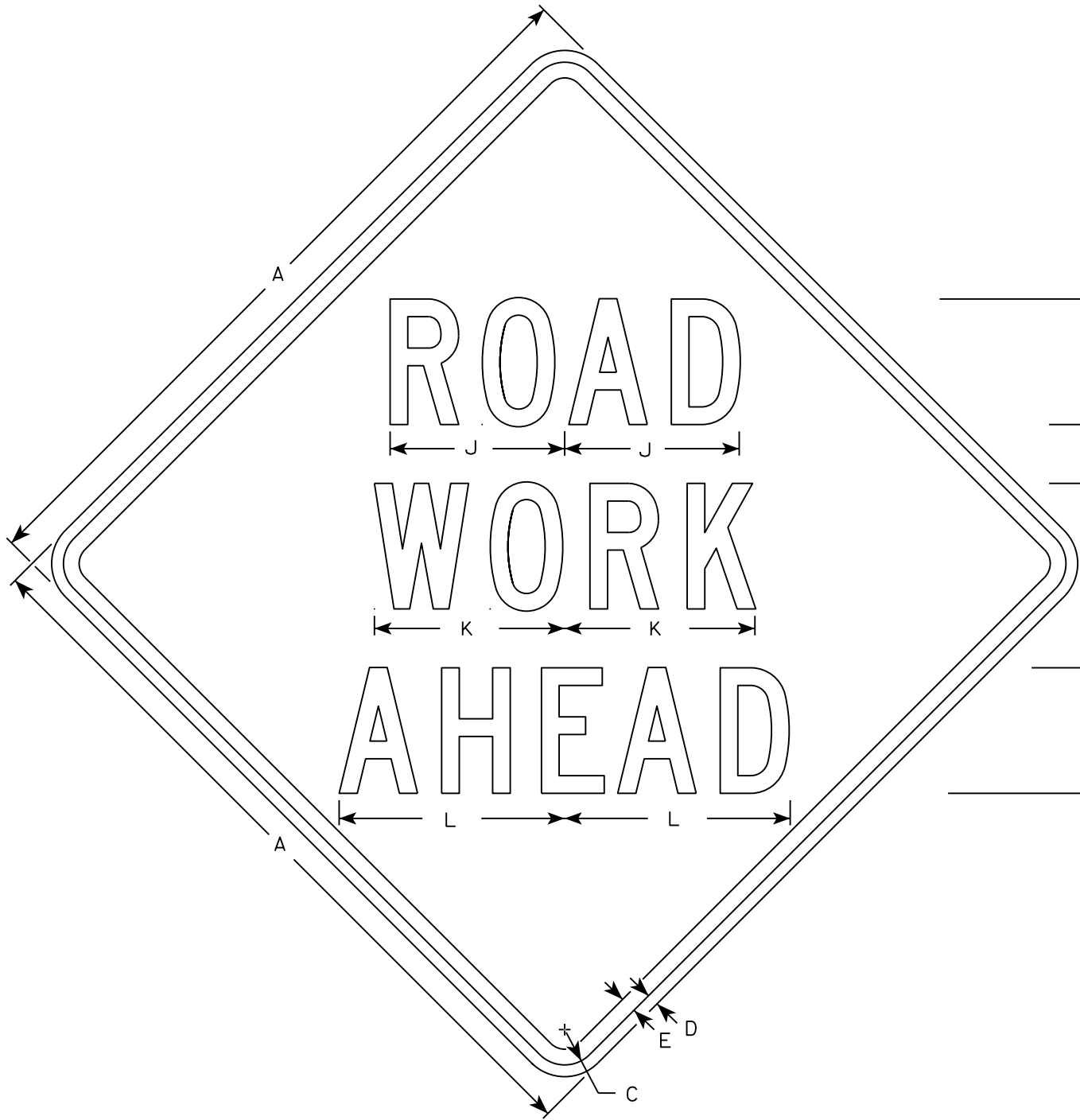
STANDARD SIGN

W16-9P

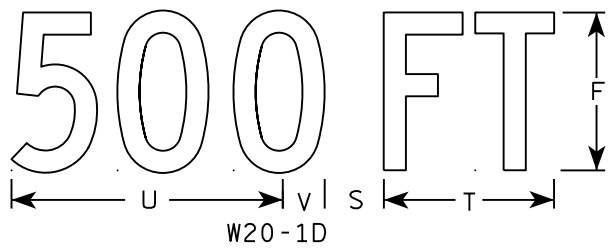
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

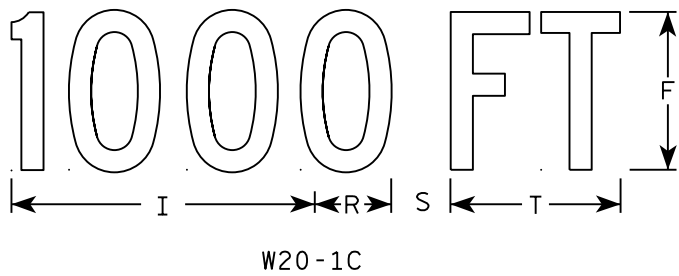
DATE 12/28/10 PLATE NO. W16-9P.6



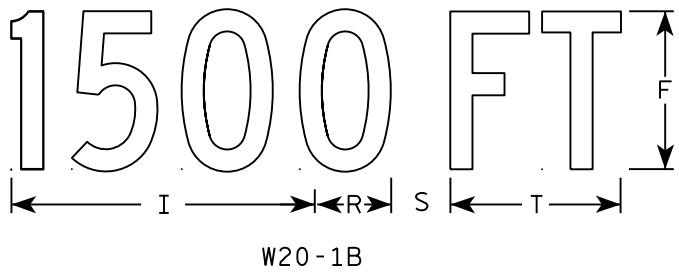
W20-1A



W20-1D



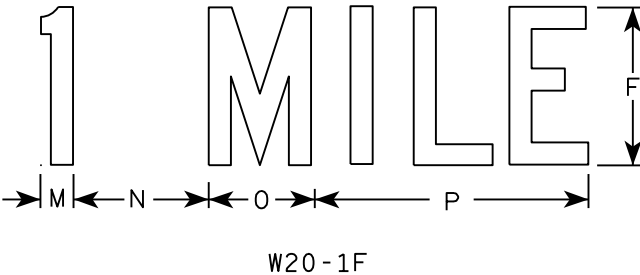
W20-1C



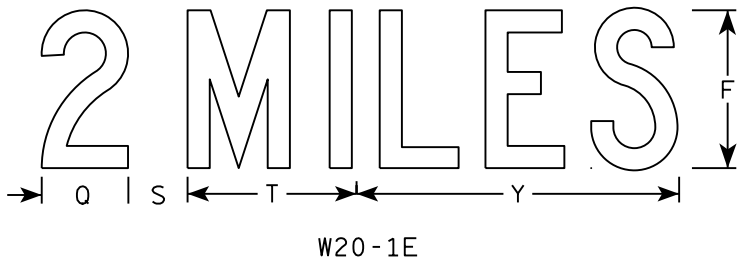
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

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

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 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

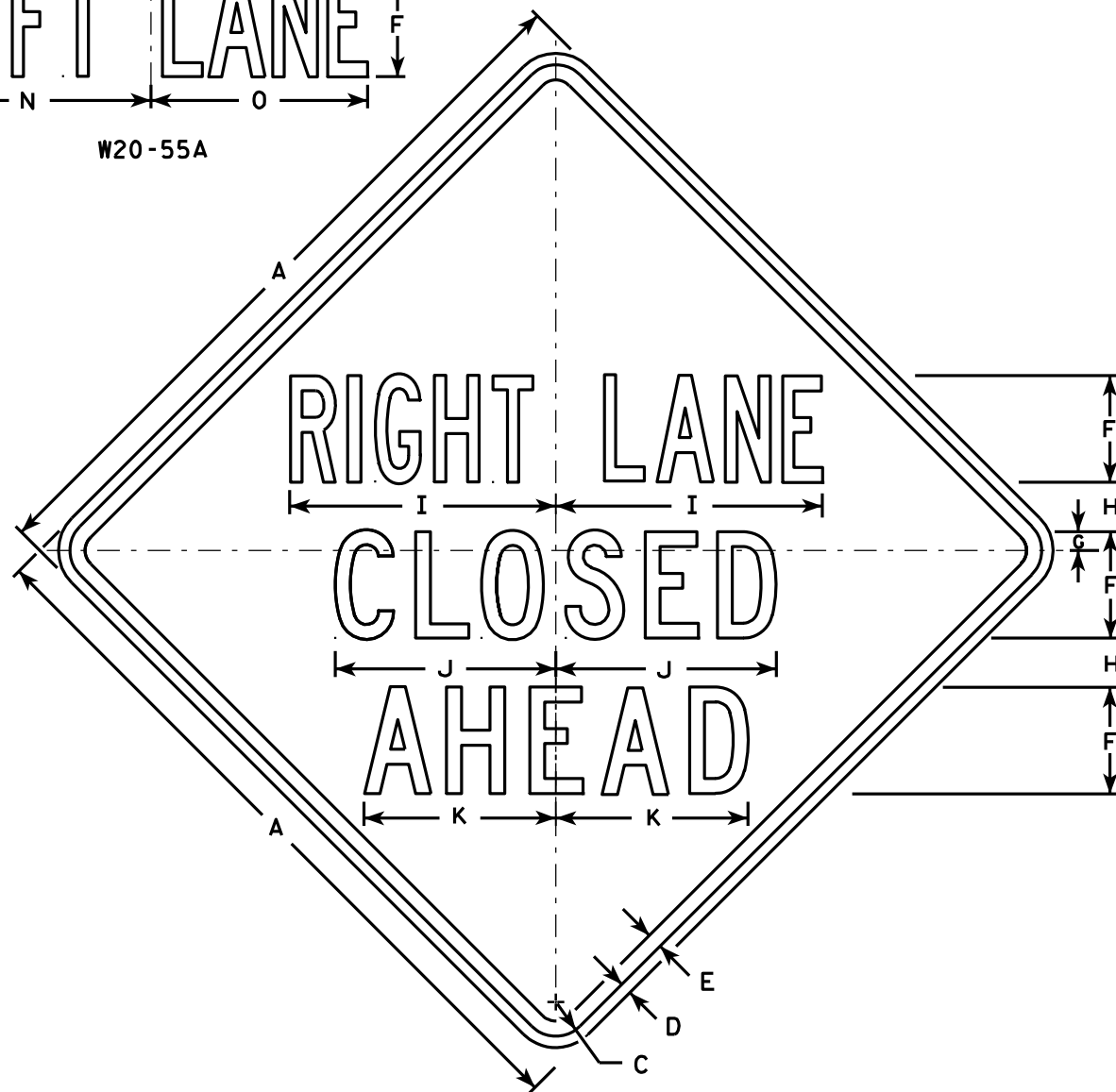
230

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

1 MILE

W20-5F

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. "----- LANE" is Series B.
All other copy is Series C.

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	6	1 5/8	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

PROJECT NO:

HWY:

COUNTY:

STANDARD SIGN
W20-5A, B, C, D, F & G

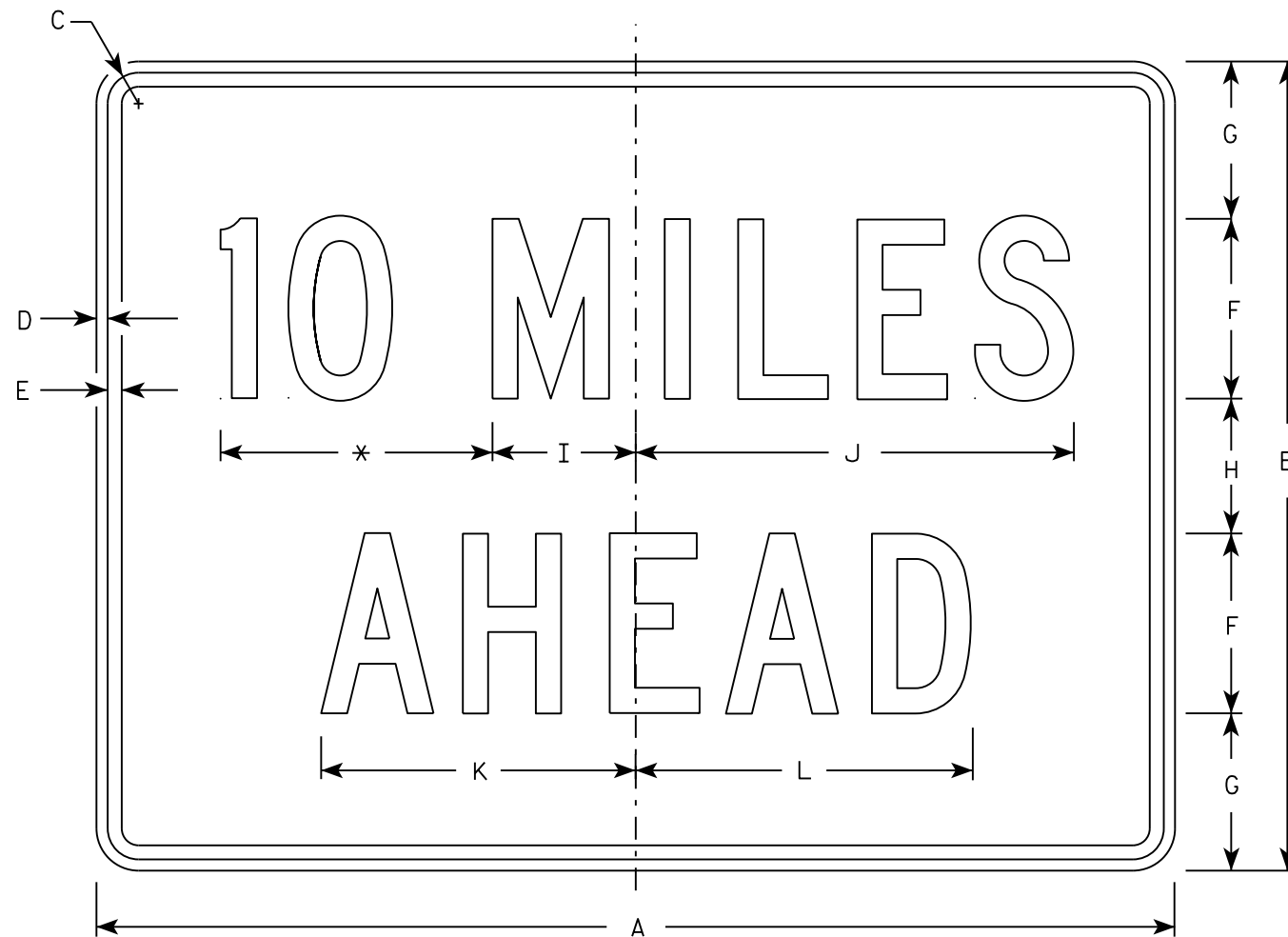
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

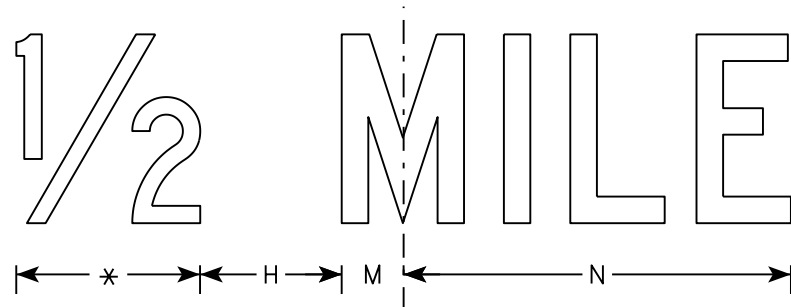
DATE 3/18/11 PLATE NO. W20-5.11

SHEET NO: 231

E



W57-52



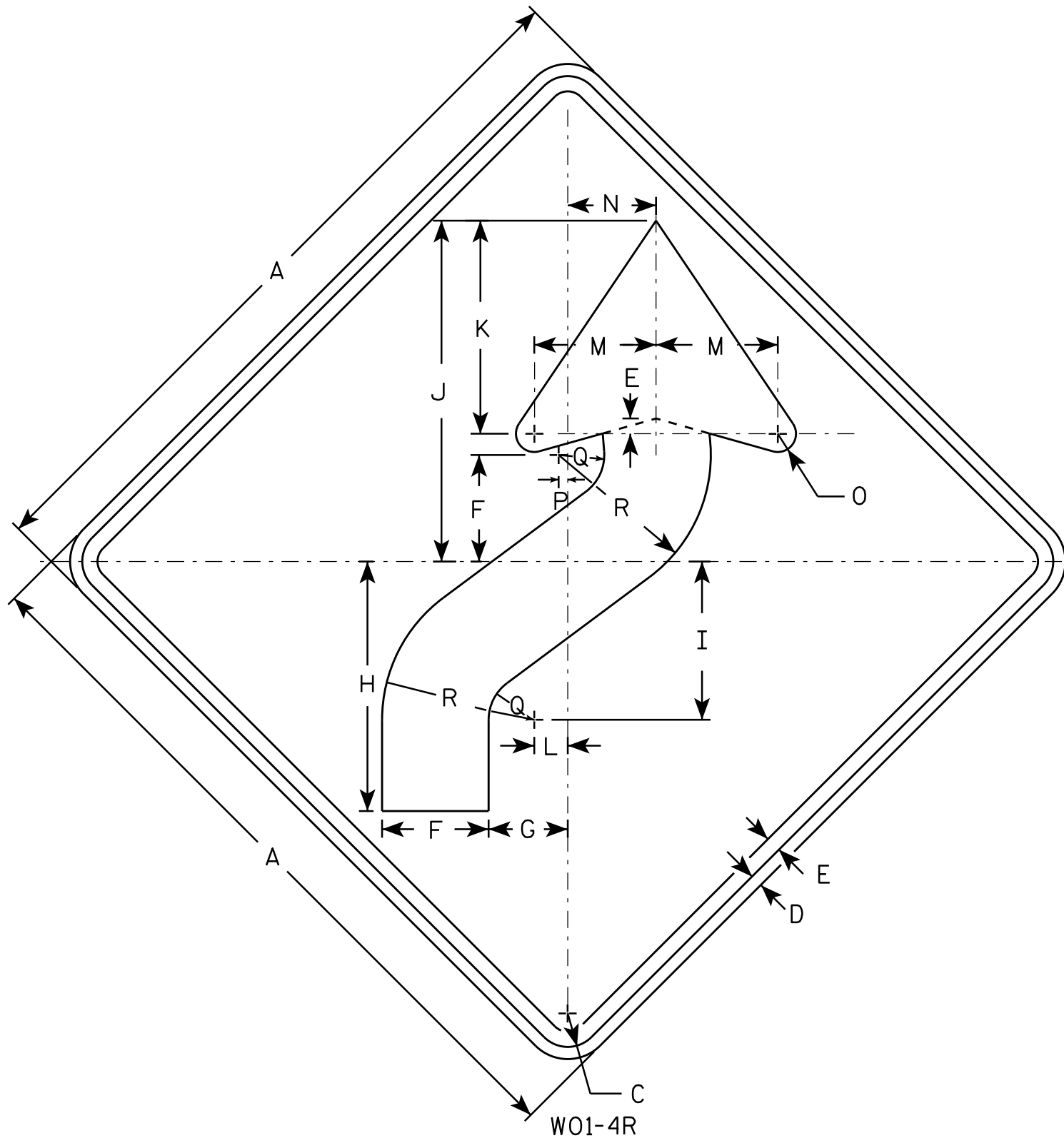
* See note 5

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - C
4. Corners and borders shall be rounded.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

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	24	18	1 1/8	3/8	1/2	4	3 1/2	3	3 1/8	9 3/4	7	7 1/2	1 3/8	8 1/4													3.0
2S	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2M	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
3	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN	
W57-52	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> State Traffic Engineer
DATE 3/21/17	PLATE NO. W57-52.8



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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN W01-4

WISCONSIN DEPT OF TRANSPORTATION

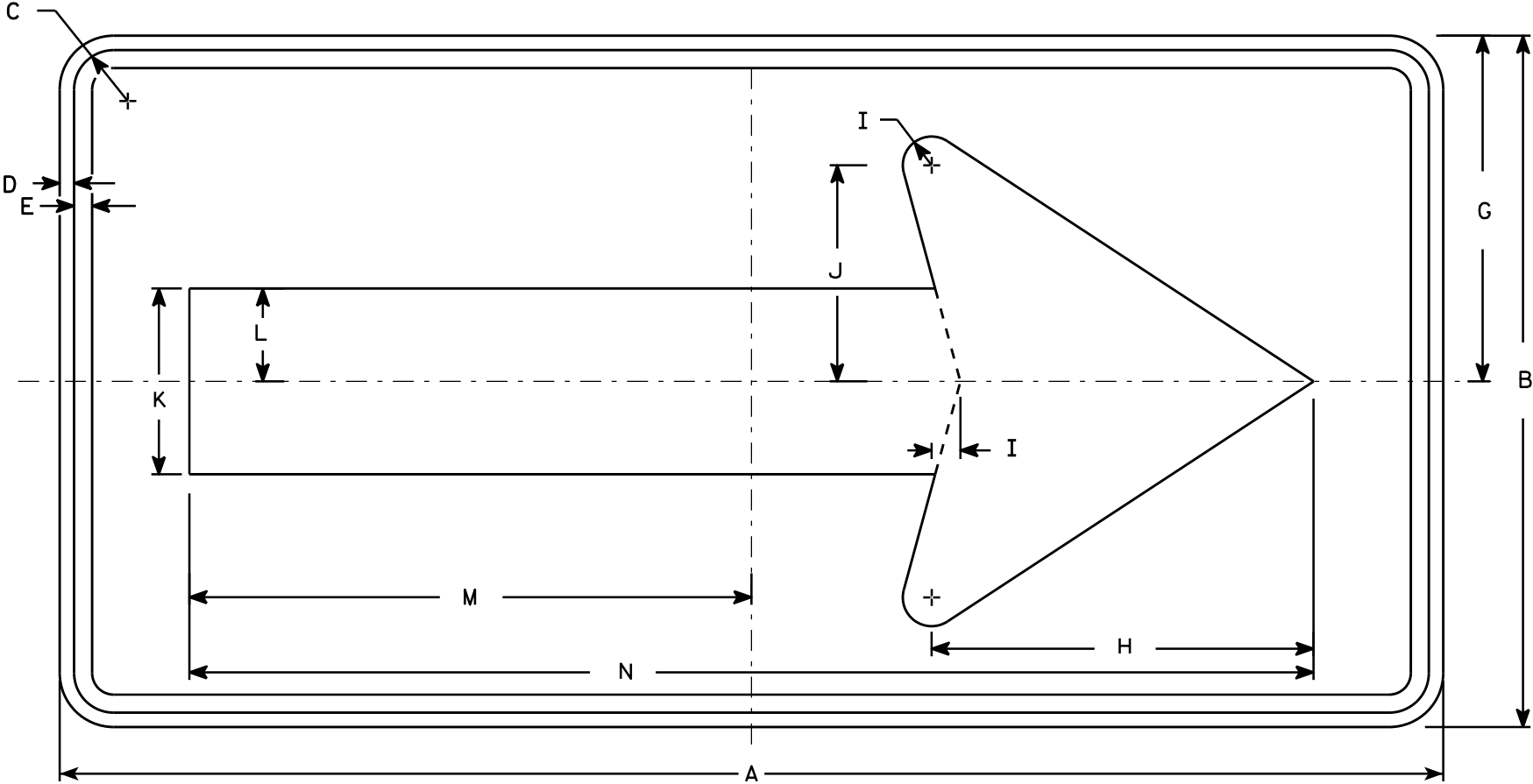
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1
233

PROJECT NO: HWY: COUNTY: SHEET NO: E

NOTES

1. Sign is Type II - Type F Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. 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.



W01-6

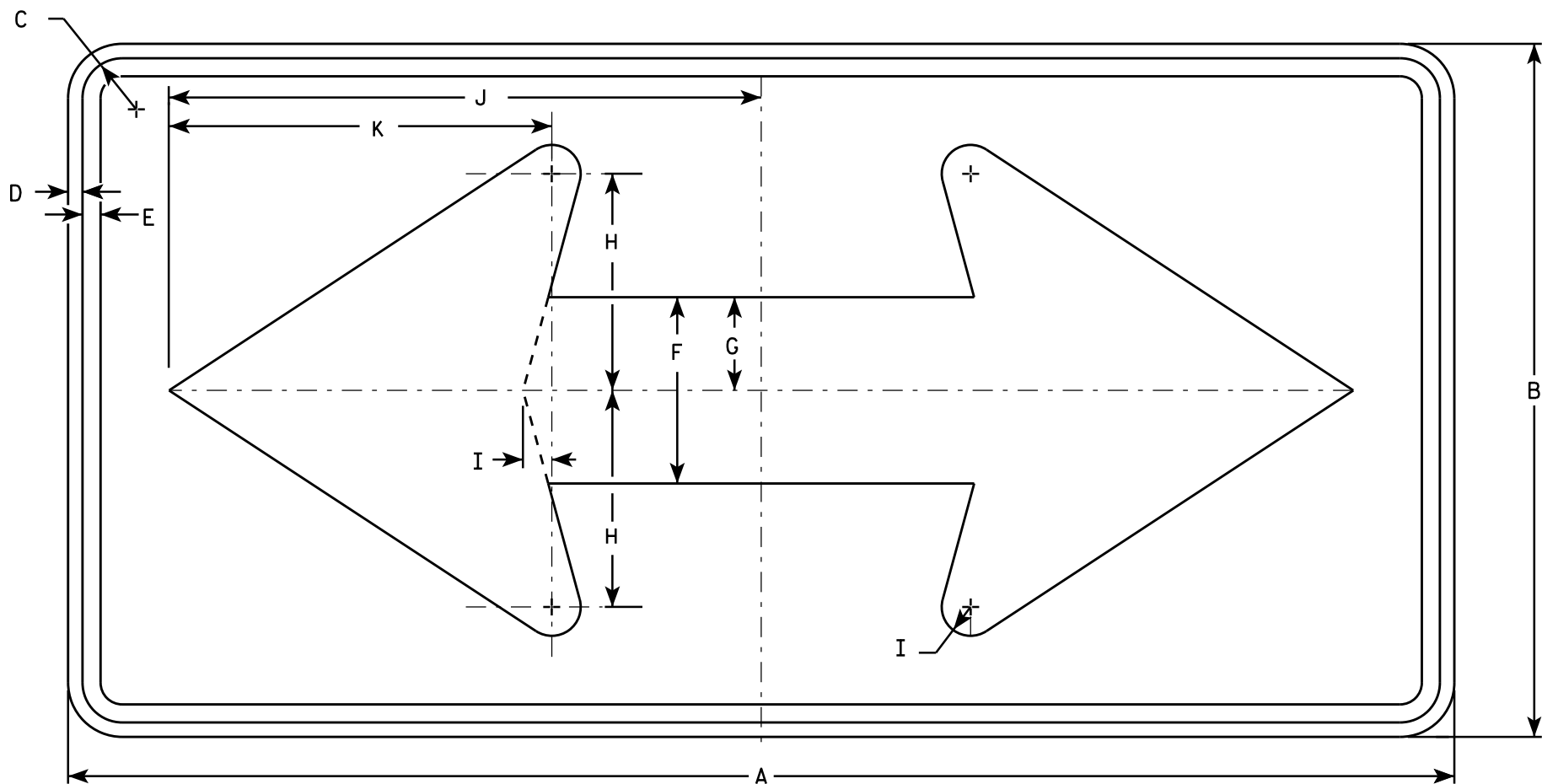
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3⁄8	1⁄2	5⁄8		12	13 1⁄4	1	7 1⁄2	6 1⁄2	3 1⁄4	19 1⁄2	39													8.0
2M	48	24	1 3⁄8	1⁄2	5⁄8		12	13 1⁄4	1	7 1⁄2	6 1⁄2	3 1⁄4	19 1⁄2	39													8.0
3	60	30	1 3⁄8	1⁄2	5⁄8		15	16 1⁄4	1 1⁄4	9 1⁄4	8	4	24 3⁄8	48 3⁄4													12.5
4	60	30	1 3⁄8	1⁄2	5⁄8		15	16 1⁄4	1 1⁄4	9 1⁄4	8	4	24 3⁄8	48 3⁄4													12.5
5	60	30	1 3⁄8	1⁄2	5⁄8		15	16 1⁄4	1 1⁄4	9 1⁄4	8	4	24 3⁄8	48 3⁄4													12.5

STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. 234 W01-6.1



W01-7

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. 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3⁄8	1⁄2	5⁄8	6 1⁄2	3 1⁄4	7 1⁄2	1	20 1⁄2	13 1⁄4																8.0
2M	48	24	1 3⁄8	1⁄2	5⁄8	6 1⁄2	3 1⁄4	7 1⁄2	1	20 1⁄2	13 1⁄4																8.0
3	60	30	1 3⁄8	1⁄2	5⁄8	8	4	9 1⁄4	1 1⁄4	25 3⁄8	16 1⁄4																12.5
4	60	30	1 3⁄8	1⁄2	5⁄8	8	4	9 1⁄4	1 1⁄4	25 3⁄8	16 1⁄4																12.5
5	60	30	1 3⁄8	1⁄2	5⁄8	8	4	9 1⁄4	1 1⁄4	25 3⁄8	16 1⁄4																12.5

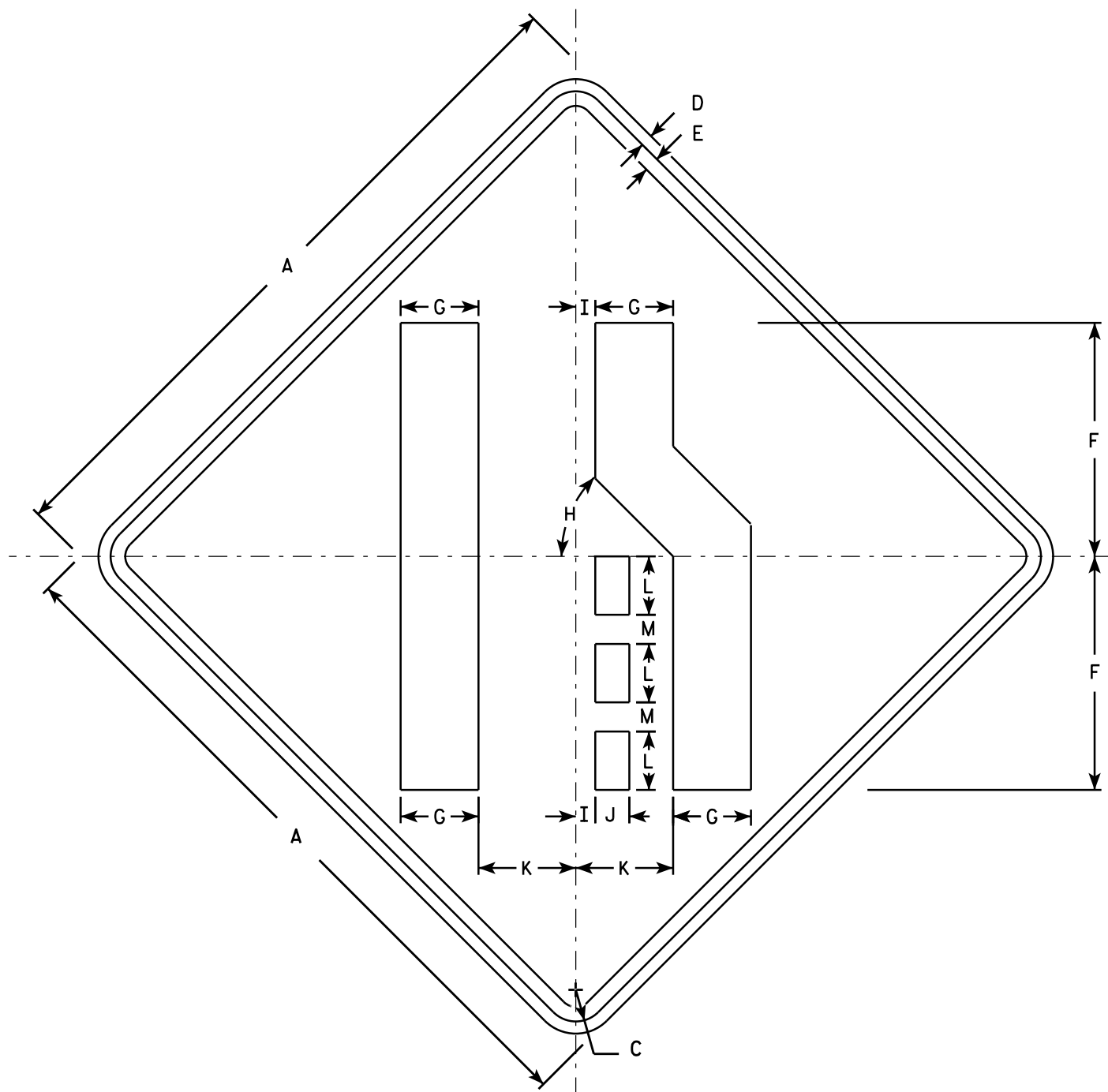
STANDARD SIGN
W01-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE 1235 11-7.1

SHEET NO: E



W04-2R

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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

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	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN

W04-2

WISCONSIN DEPT OF TRANSPORTATION

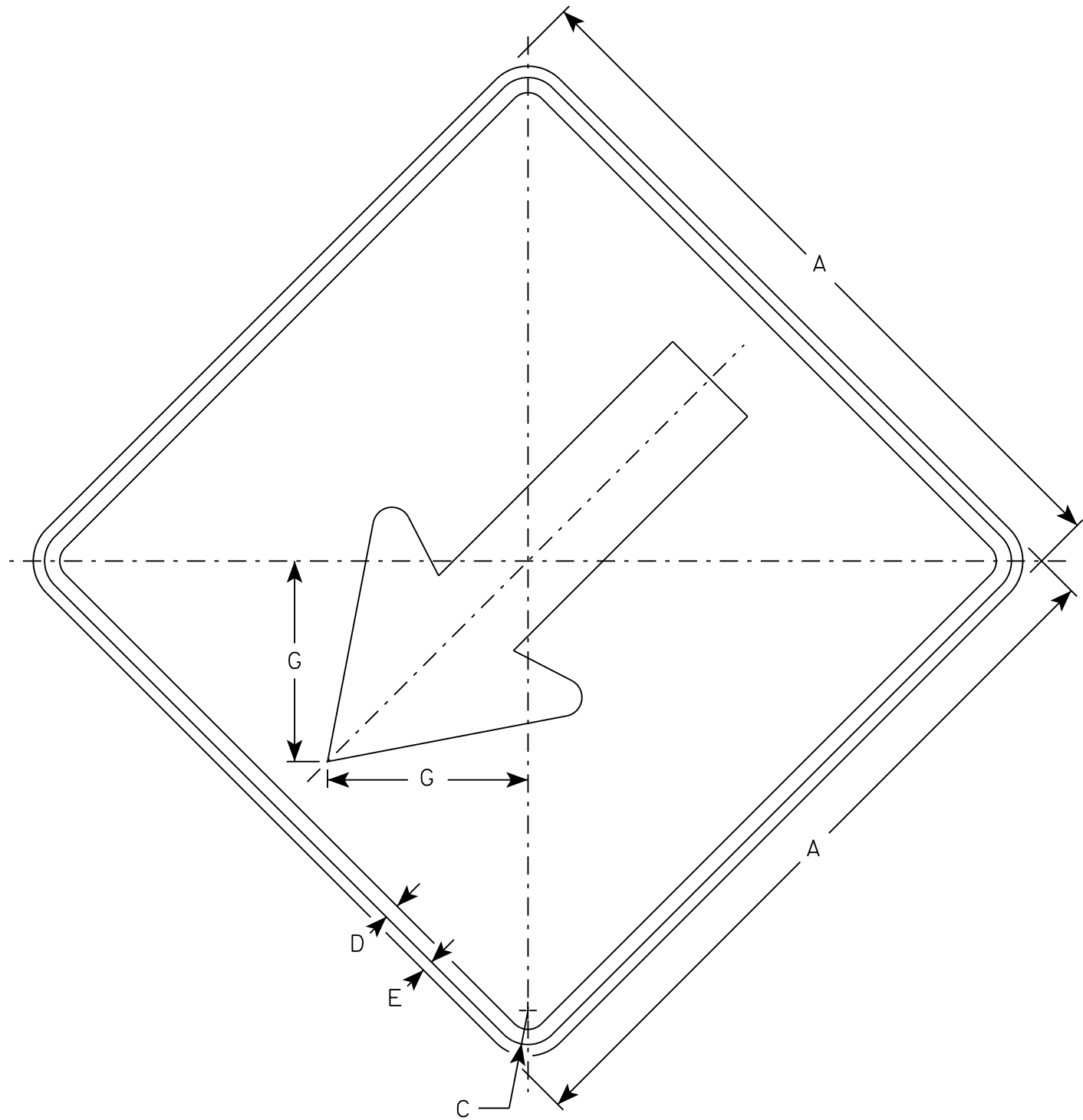
APPROVED

Matthew R. Rauch
For State Traffic Engineer

DATE 11/20/13

PLATE 236

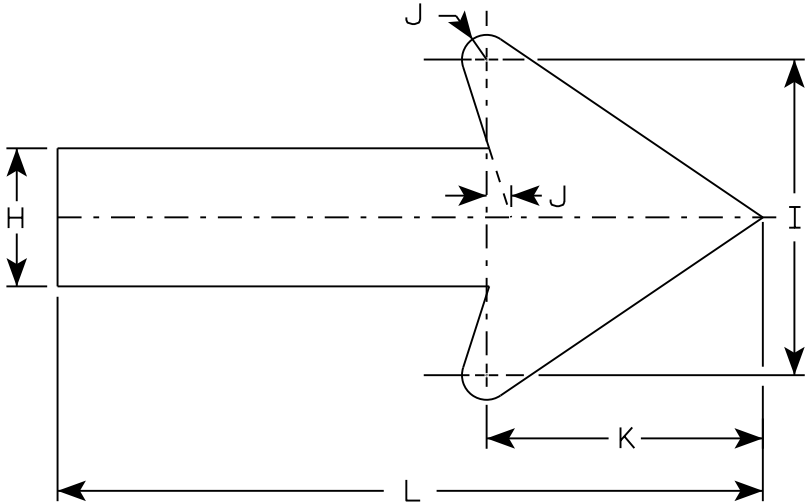
W04-2.1



W012-1

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

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	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
2S	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
2M	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
3	30		1 3/8	5/8	1/2		8 1/4	4 3/8	10	3/4	8 3/4	22 3/8															6.25
4	36		1 3/4	3/4	5/8		10 3/8	5 1/2	12 1/2	1	11	27 7/8															9.0
5	36		1 3/4	3/4	5/8		10 3/8	5 1/2	12 1/2	1	11	27 7/8															9.0

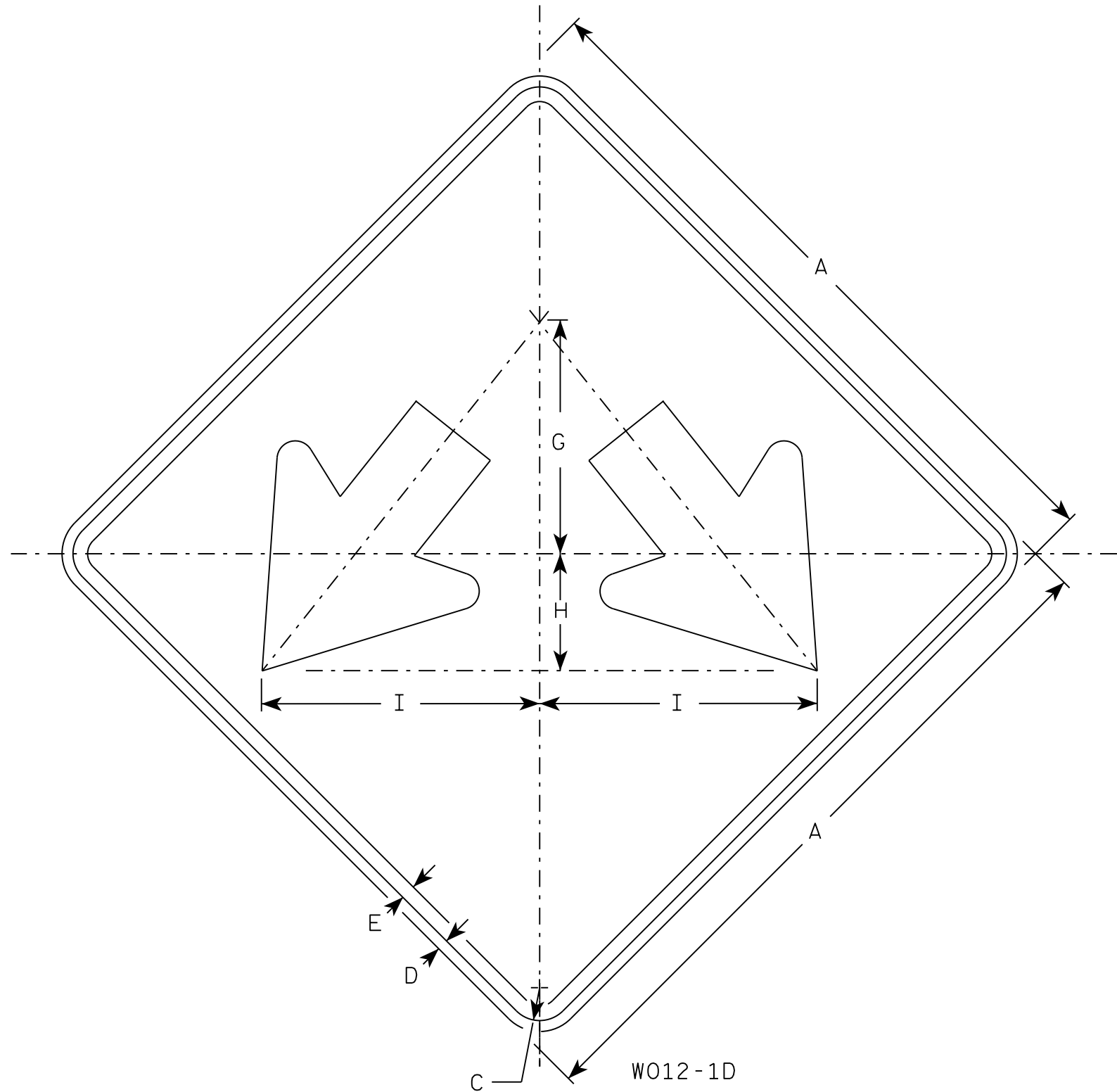
STANDARD SIGN

W012-1

WISCONSIN DEPT OF TRANSPORTATION

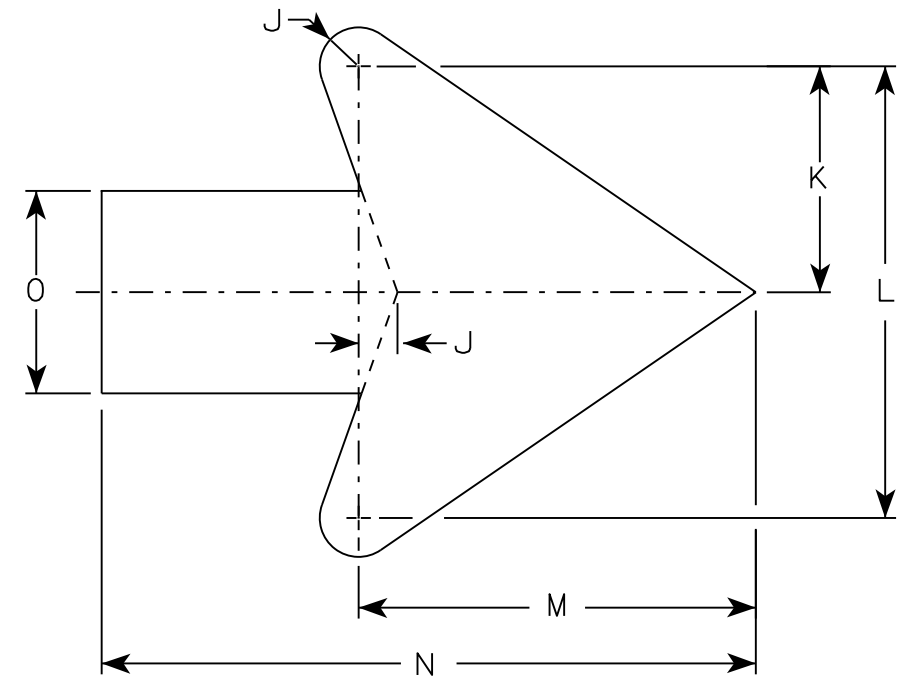
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/26/16 PLA 237 W012-1.2



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

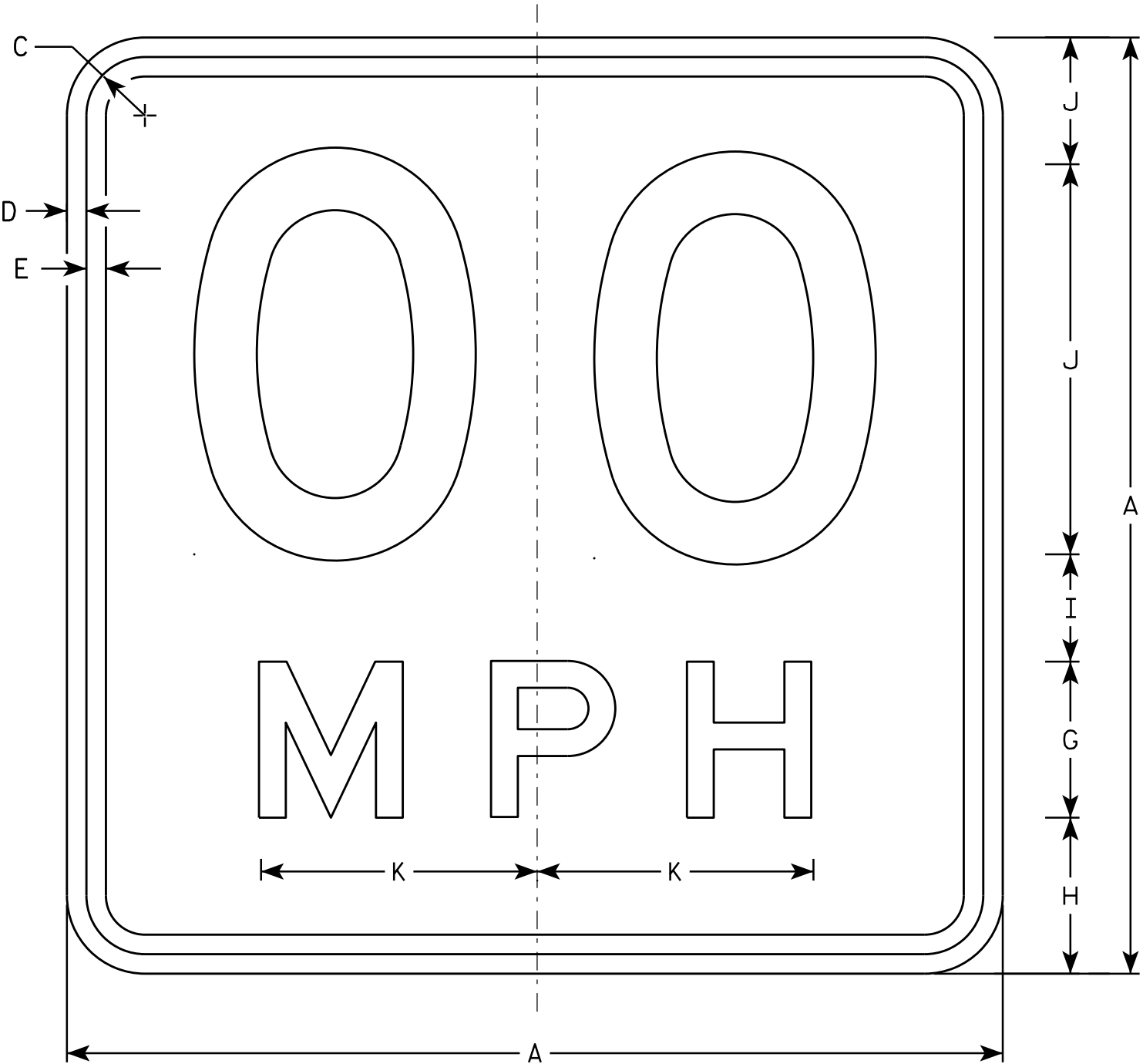
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0

STANDARD SIGN
W012-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/28/16 PLATE NO. W012-1D.2
238



W013-1

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 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

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	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

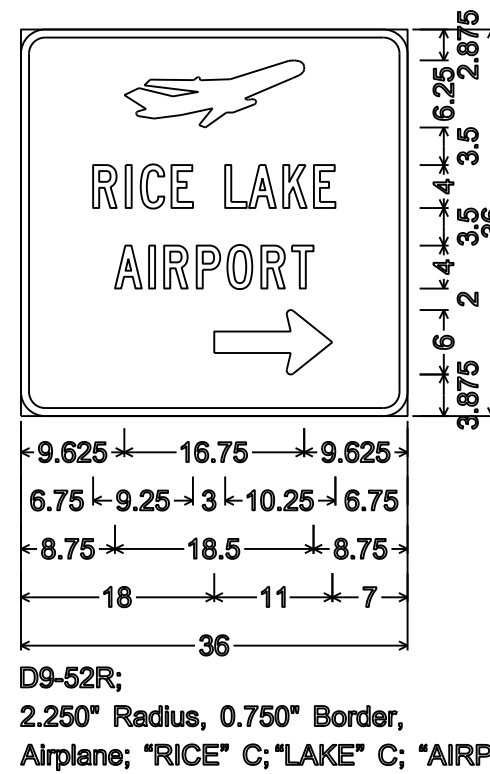
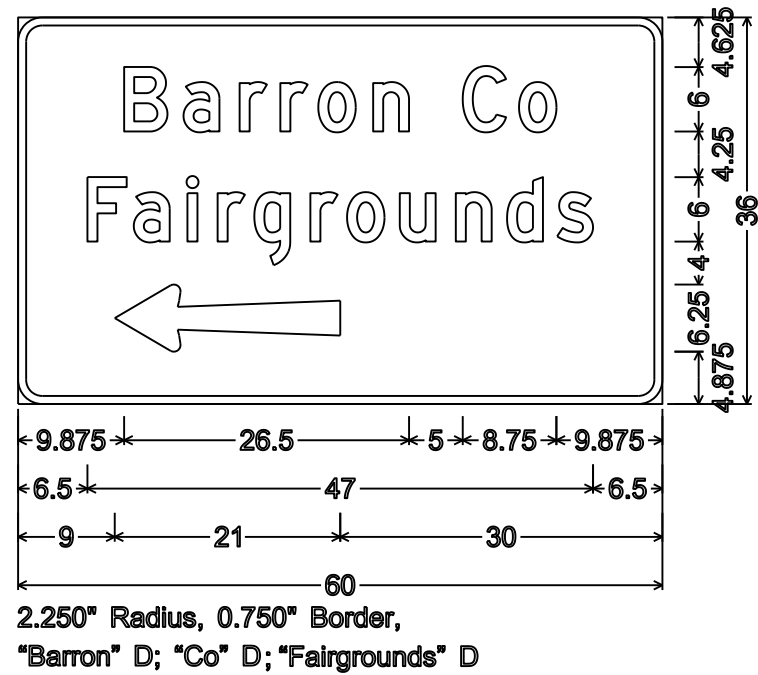
WISCONSIN DEPT OF TRANSPORTATION

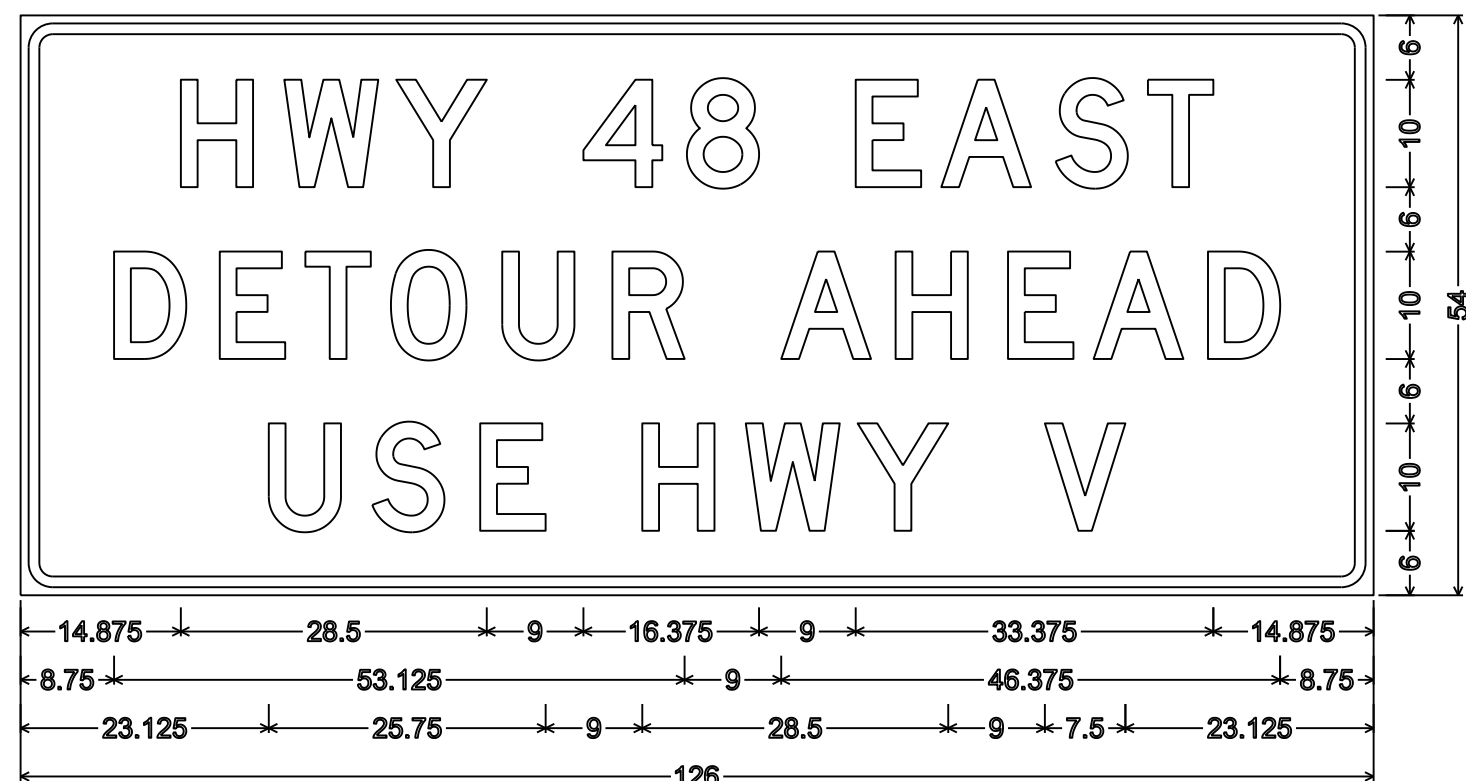
APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 11/21/13 PLATE 239 W013-1.1

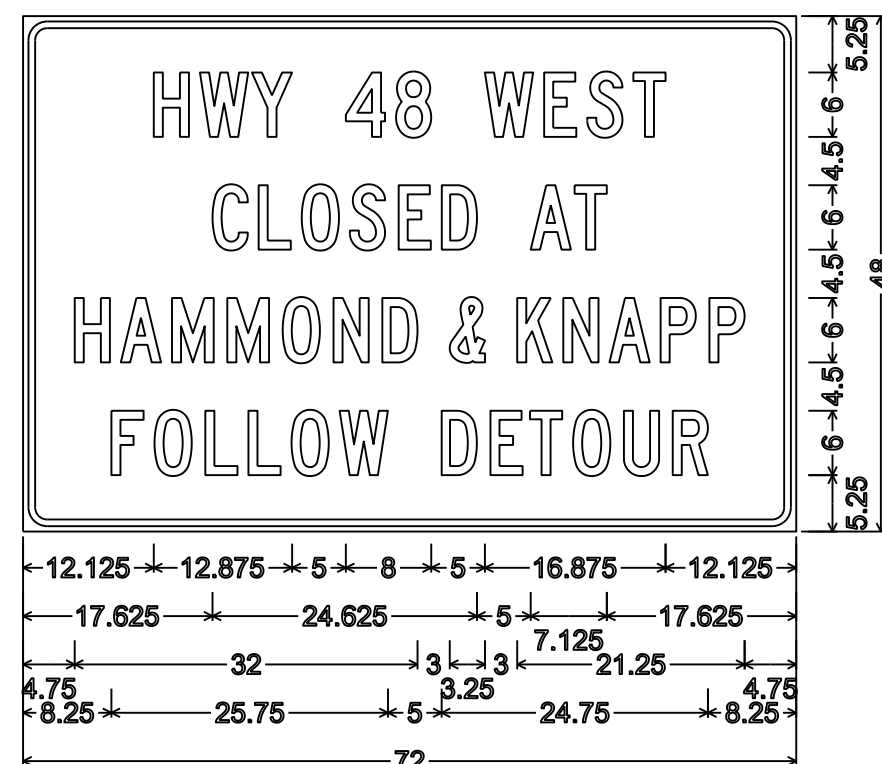
NOTES

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





3.000" Radius, 1.000" Border, 0.750" Indent,
"HWY" D; "48" D; "EAST" D; "DETOUR" D; "AHEAD" D; "USE" D; "HWY" D; "V" D



2.250" Radius, 0.625" Border, 0.500" Indent,
"HWY" C; "48" C; "WEST" C; "CLOSED" C; "AT" C;
"HAMMOND" C; "&" C; "KNAPP" C; "FOLLOW" C;
"DETOUR" C

NOTES

1. All Signs Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - As noted

9

STH 48										
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
49+00		8.58	0	0.01	0	0	0	0	0	0
49+50	50	16.01	0	0.00	23	0	0	23	0	23
50+00	50	13.87	0	0.00	28	0	0	50	0	50
50+50	50	13.95	0	0.00	26	0	0	76	0	76
50+83	33	22.48	0	0.01	22	0	0	98	0	98
51+00	17	11.44	0	1.22	11	0	0	109	1	109
51+50	50	9.81	0	0.28	20	0	1	129	2	127
51+58	8	11.38	0	0.13	3	0	0	132	2	130
52+00	42	16.80	0	0.00	22	0	0	154	2	151
52+50	50	13.89	0	0.57	28	0	1	182	3	179
53+00	50	15.60	0	0.00	27	0	1	210	4	206
53+50	50	16.82	0	0.00	30	0	0	240	4	236
54+00	50	19.95	0	0.00	34	0	0	274	4	270
54+19	19	12.90	0	0.03	12	0	0	285	4	281
54+50	31	14.83	0	0.45	16	0	0	301	4	297
54+56	6	15.69	0	0.46	3	0	0	305	4	300
55+00	44	14.61	0	0.03	25	0	0	329	5	324
55+50	50	12.58	0	0.26	25	0	0	354	5	349
55+96	96	16.65	0	0.02	52	0	0	406	6	401
56+00	4	17.50	0	0.00	3	0	0	409	6	403
56+50	50	13.82	0	0.90	29	0	1	438	7	431
57+00	50	13.16	0	4.17	25	0	5	463	13	450
57+50	50	9.46	0	1.88	21	0	6	484	20	464
57+78	28	8.80	0	0.15	9	0	1	493	21	472
58+00	22	6.02	0	0.82	6	0	0	499	21	478
58+50	50	11.54	0	0.00	16	0	1	516	22	493
58+62	12	12.00	0	0.00	5	0	0	521	22	498
59+00	38	11.55	0	1.82	17	0	1	537	24	513
59+43	43	17.73	0	0.00	23	0	1	561	26	535
59+50	7	13.79	0	0.42	4	0	0	565	26	539
60+00	50	8.14	0	2.66	20	0	3	585	29	556
60+16	16	10.08	0	1.72	5	0	1	590	31	559
60+50	34	9.07	0	0.73	12	0	2	603	33	570
61+00	50	1.72	0	2.39	10	0	3	613	37	576
61+50	50	4.11	0	1.52	5	0	4	618	41	577
62+00	50	6.95	0	0.00	10	0	1	628	43	585
62+50	50	5.23	0	0.00	11	0	0	639	43	597
63+00	50	4.24	0	0.15	9	0	0	648	43	605
63+50	50	4.88	0	0.11	8	0	0	657	43	613
64+00	50	13.87	0	0.06	17	0	0	674	44	630
64+50	50	18.12	0	0.10	30	0	0	704	44	660
65+00	50	22.32	0	0.04	37	0	0	741	44	697
65+50	50	21.81	0	0.00	41	0	0	782	44	738
65+90	40	18.28	0	0.27	30	0	0	812	44	767
66+00	10	17.42	0	0.22	7	0	0	818	44	774
66+50	50	36.26	0	0.00	50	0	0	868	45	823
67+00	50	22.77	0	1.78	55	0	2	923	47	876
73+25		6.94	0	0.01	0	0	0	923	47	876
73+50	25	8.47	0	0.00	7	0	0	930	47	883
74+00	50	7.63	0	0.30	15	0	0	945	47	898
74+23	23	8.01	0	0.23	7	0	0	951	47	904
74+50	27	6.20	0	0.01	7	0	0	958	47	911
75+00	50	6.16	0	0.20	11	0	0	970	48	922
75+50	50	4.46	0	0.32	10	0	0	980	48	931
76+50		8.75	0	0.11	0	0	0	980	48	931
77+00	50	10.39	0	0.00	18	0	0	997	48	949
77+50	50	6.91	0	0.59	16	0	1	1013	49	964
78+00	50	7.53	0	0.00	13	0	1	1027	50	977
78+50	50	4.50	0	0.39	11	0	0	1038	50	988
79+00	50	1.60	0	3.06	6	0	3	1044	54	989
79+50	50	0.00	0	0.00	1	0	3	1045	58	987
80+00	50	0.00	0	0.00	0	0	0	1045	58	987
80+50	50	0.00	0	0.00	0	0	0	1045	58	987
81+00	50	0.00	0	0.00	0	0	0	1045	58	987
81+50	50	0.00	0	0.00	0	0	0	1045	58	987
					1045	0	46			

9

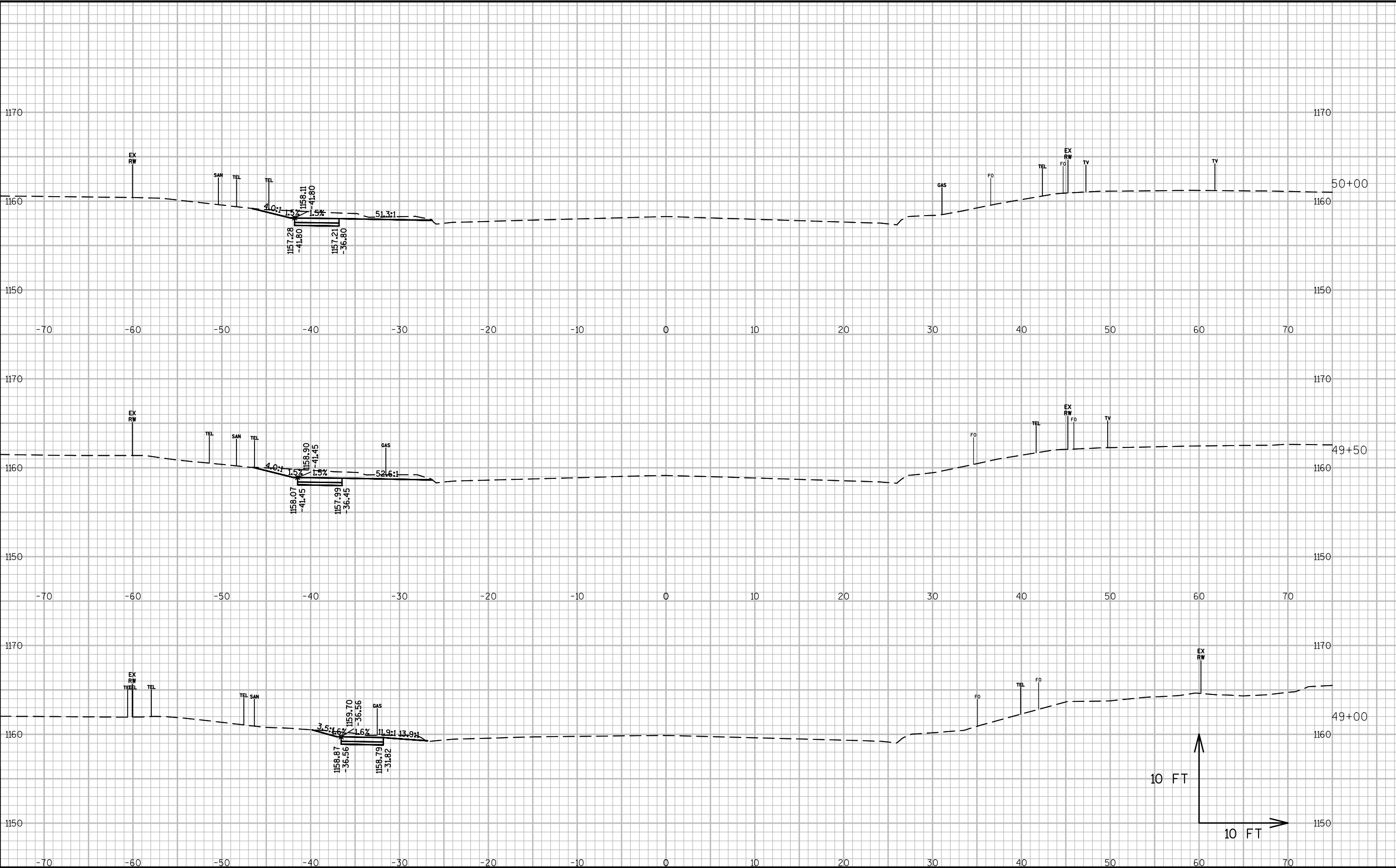
NORTH PATH										
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	
01+20		1.90	0	26.07	0	0	0	0	0	0
01+50	30	1.52	0	17.55	2	0	24	2	30	-28
02+00	50	16.30	0	2.50	17	0	19	18	53	-35
02+50	50	20.30	0	0.15	34	0	2	52	57	-4
02+75	25	21.30	0	0.00	19	0	0	72	57	15
Column totals					72	0	45			

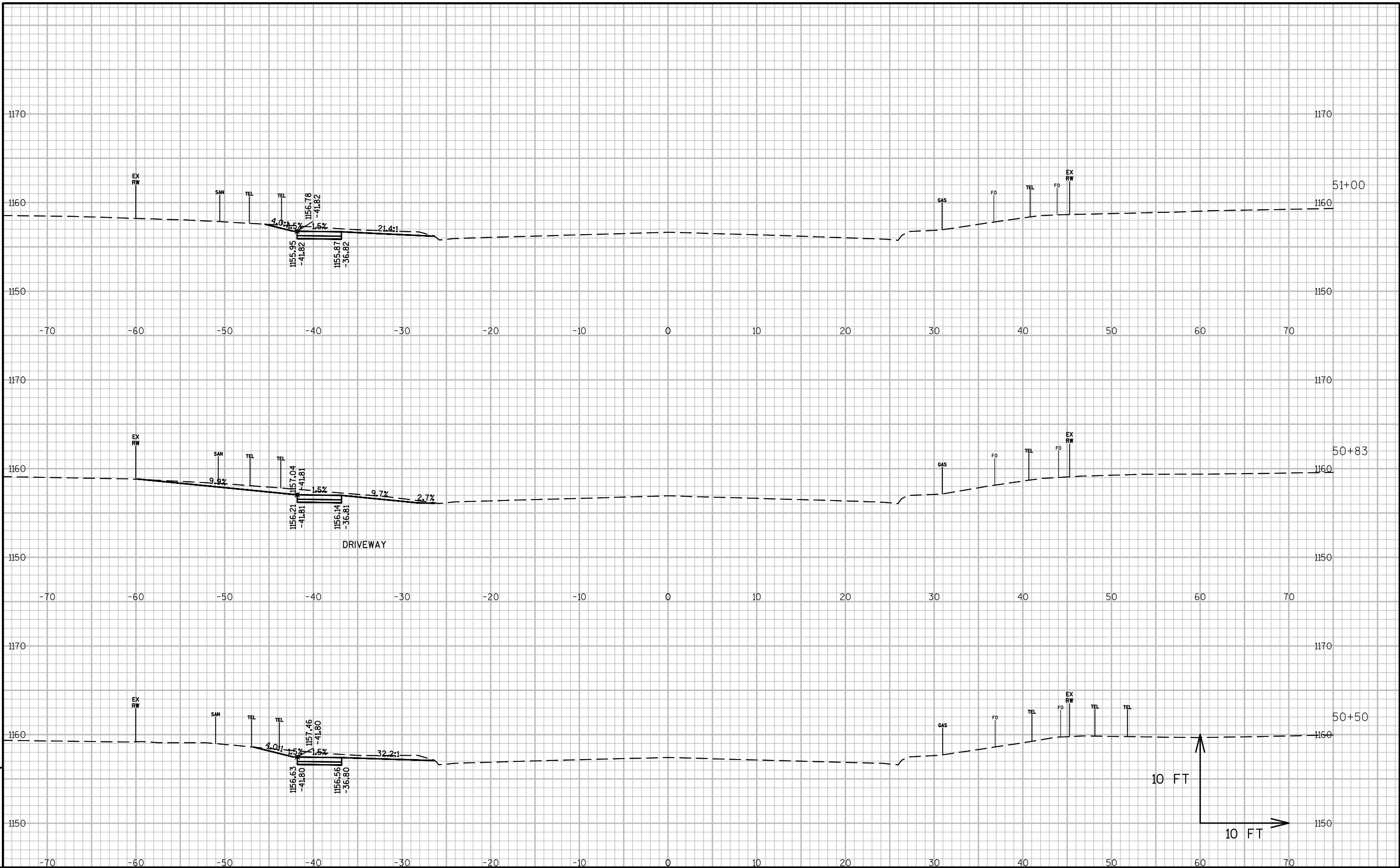
SOUTH PATH										
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	
01+00		8.6	0.0	0.0	0	0	0	0	0	0
01+10	10	0.0	0.0	1.0	2	0	0	2	0	1
01+50	40	0.2	0.0	2.4	0	0	2	2	3	-2
02+00	50	2.7	0.0	7.8	3	0	9	4	15	-11
Column totals					4	0	12			

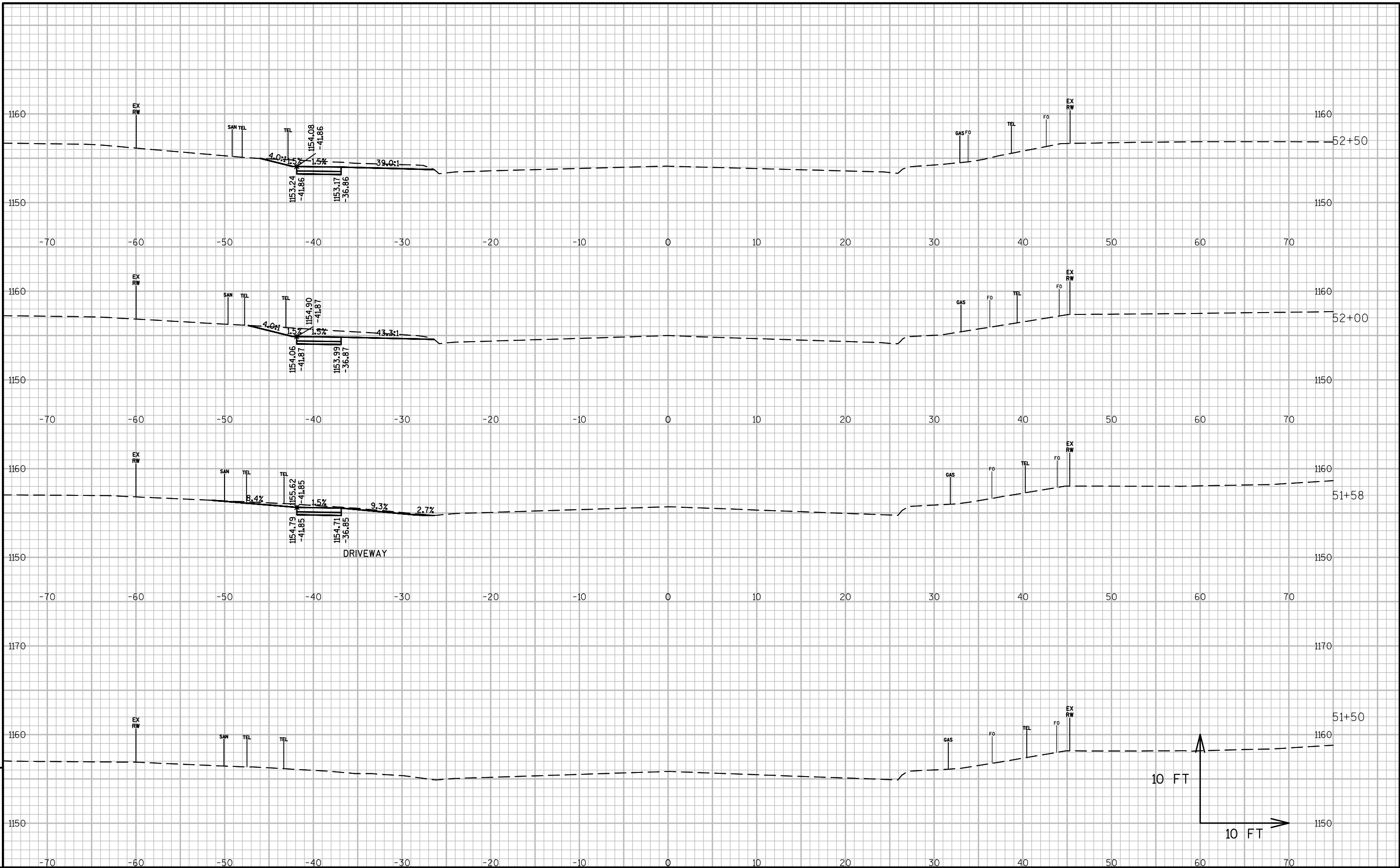
HAMMOND AVENUE INTERSECTION										
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
79+00		0.00	0.00	0.00	0	0	0	0	0	0
79+50	50	31.80	9.12	0.89	29	8	1	29	1	20
80+00	50	161.90	49.83	5.57	179	55	6	209	9	137
80+50	50	234.48	77.90	1.90	367	118	7	576	17	377
81+00	50	206.89	69.17	1.77	409	136	3	984	21	646
81+50	50	30.01	10.51	1.71	219	74	3	1204	25	787
Column totals					1204	391	20			

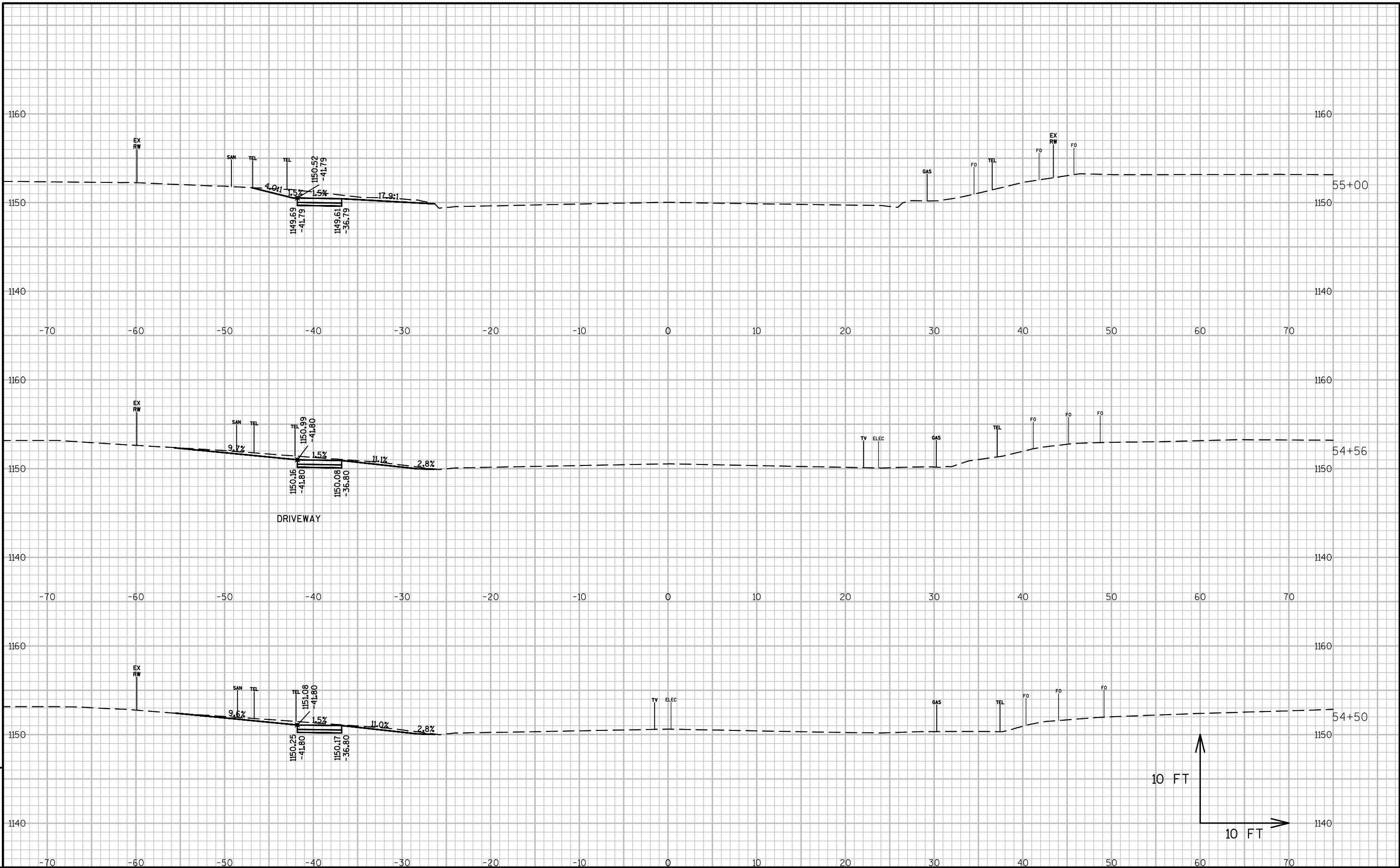
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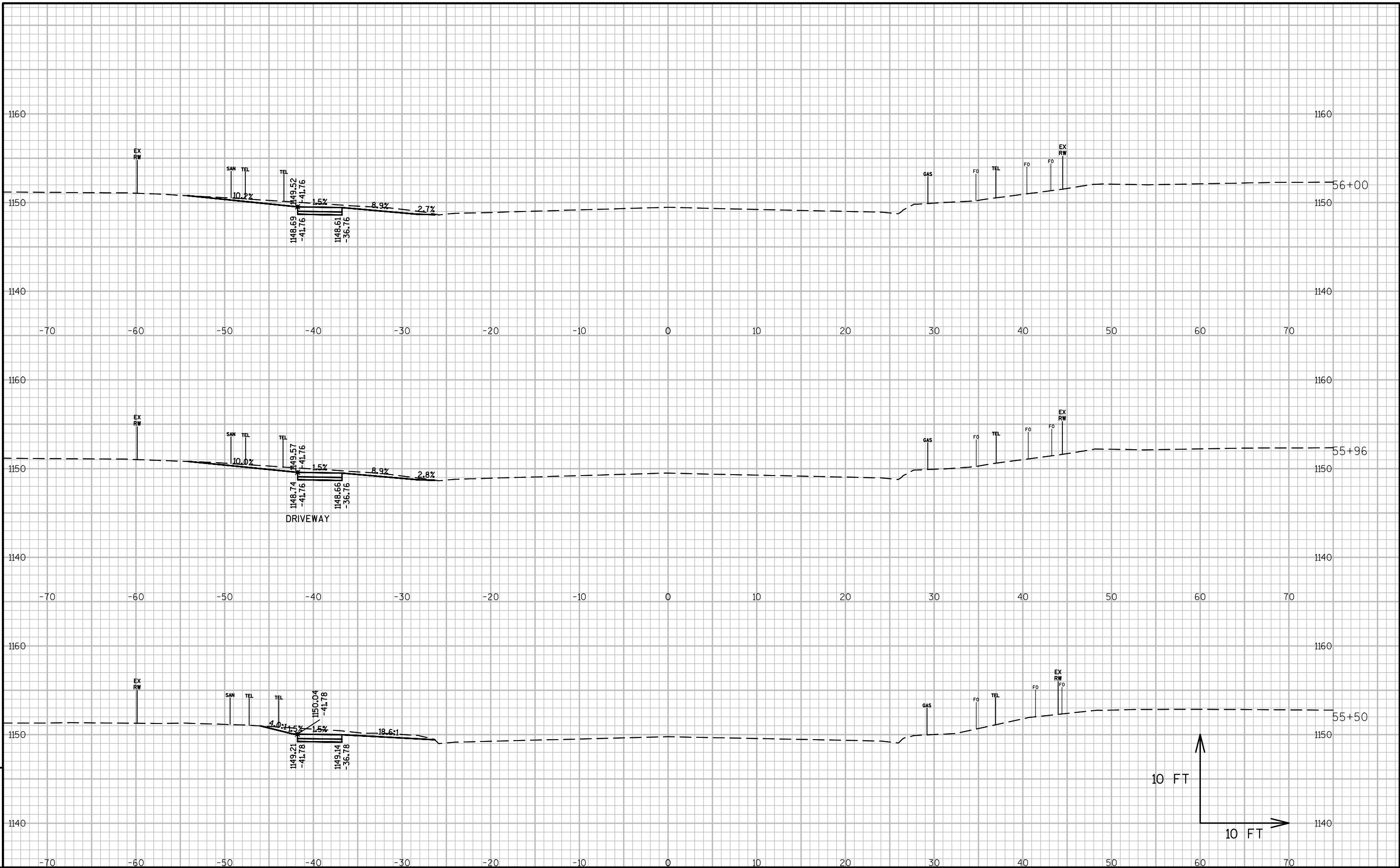
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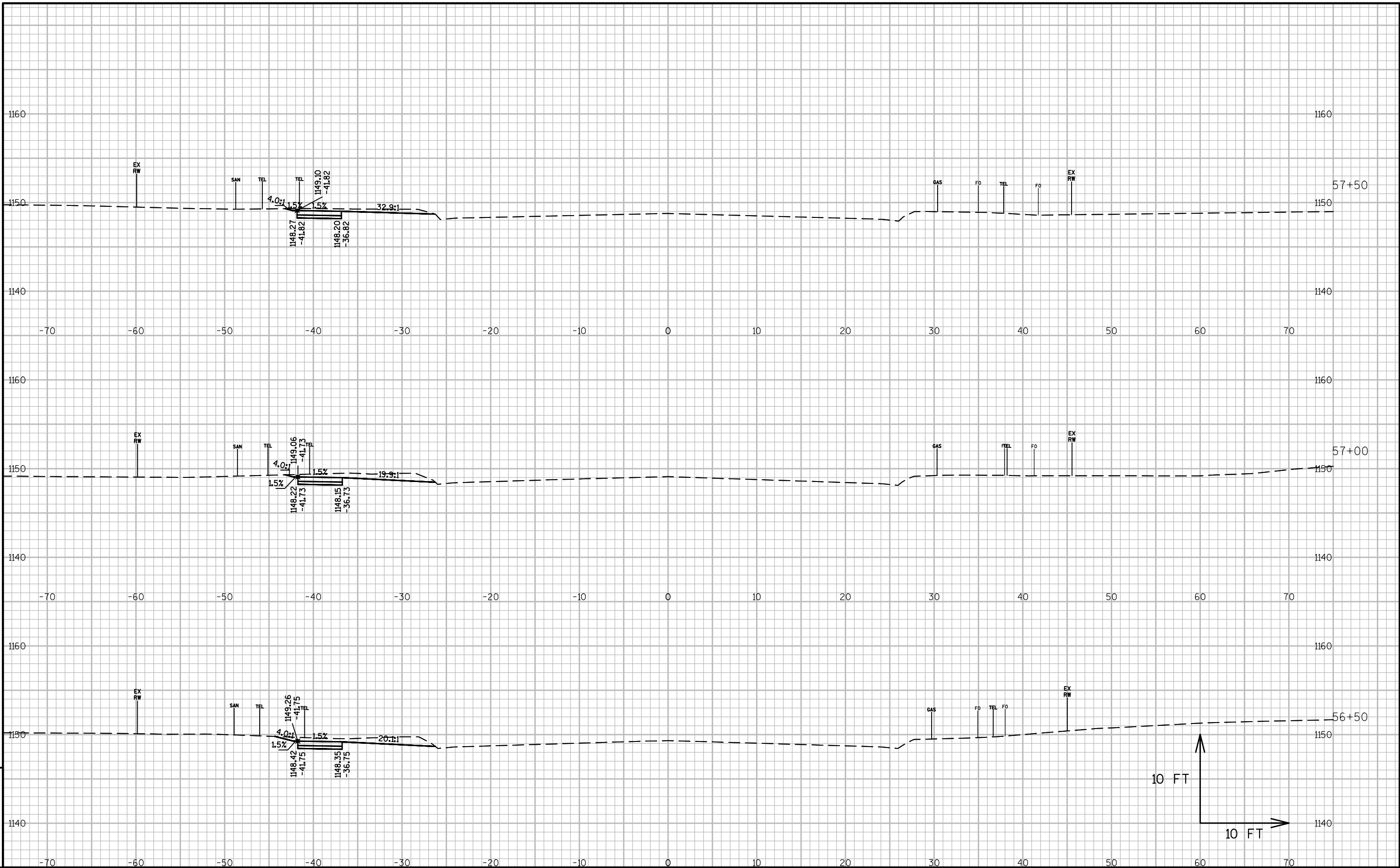


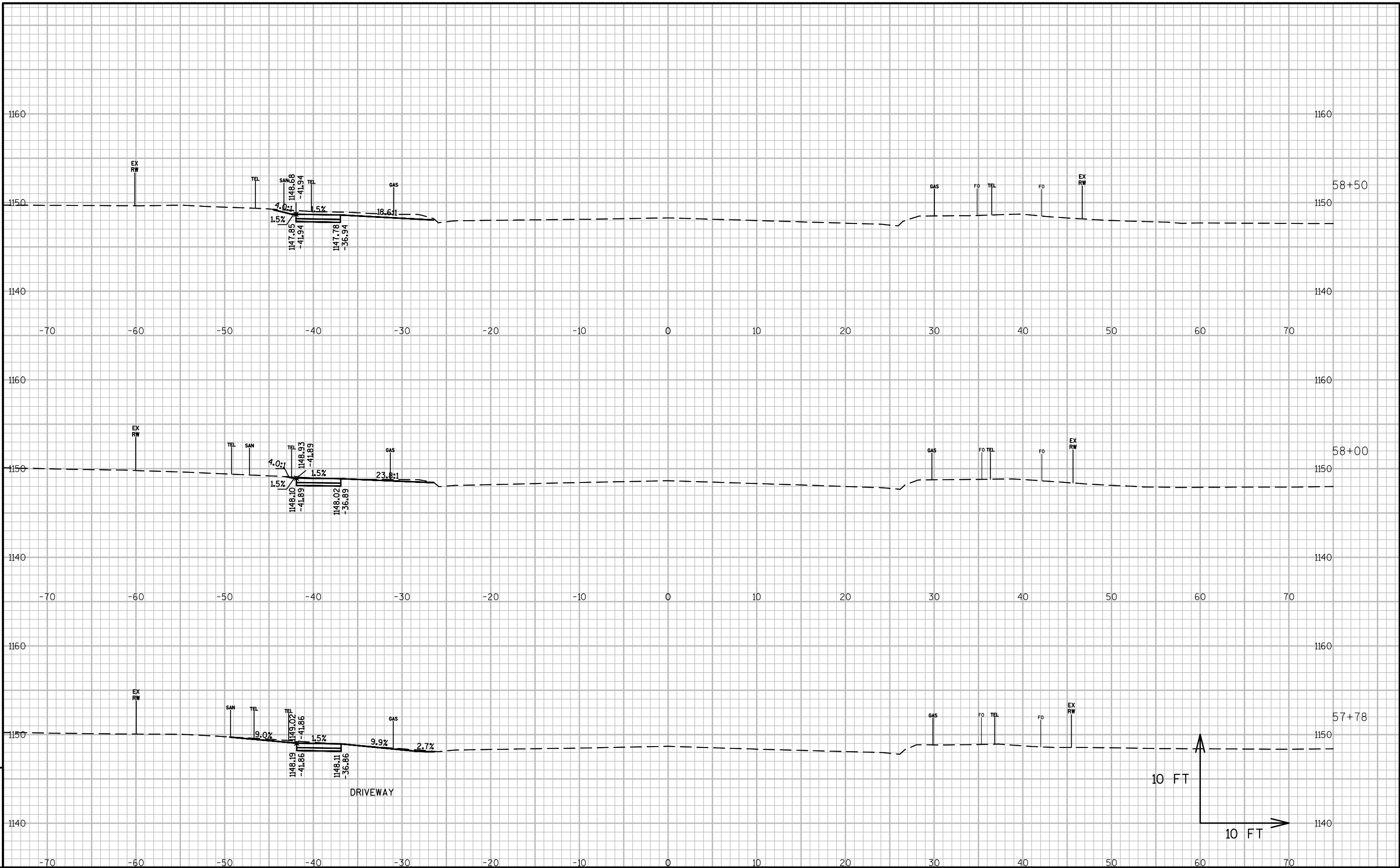


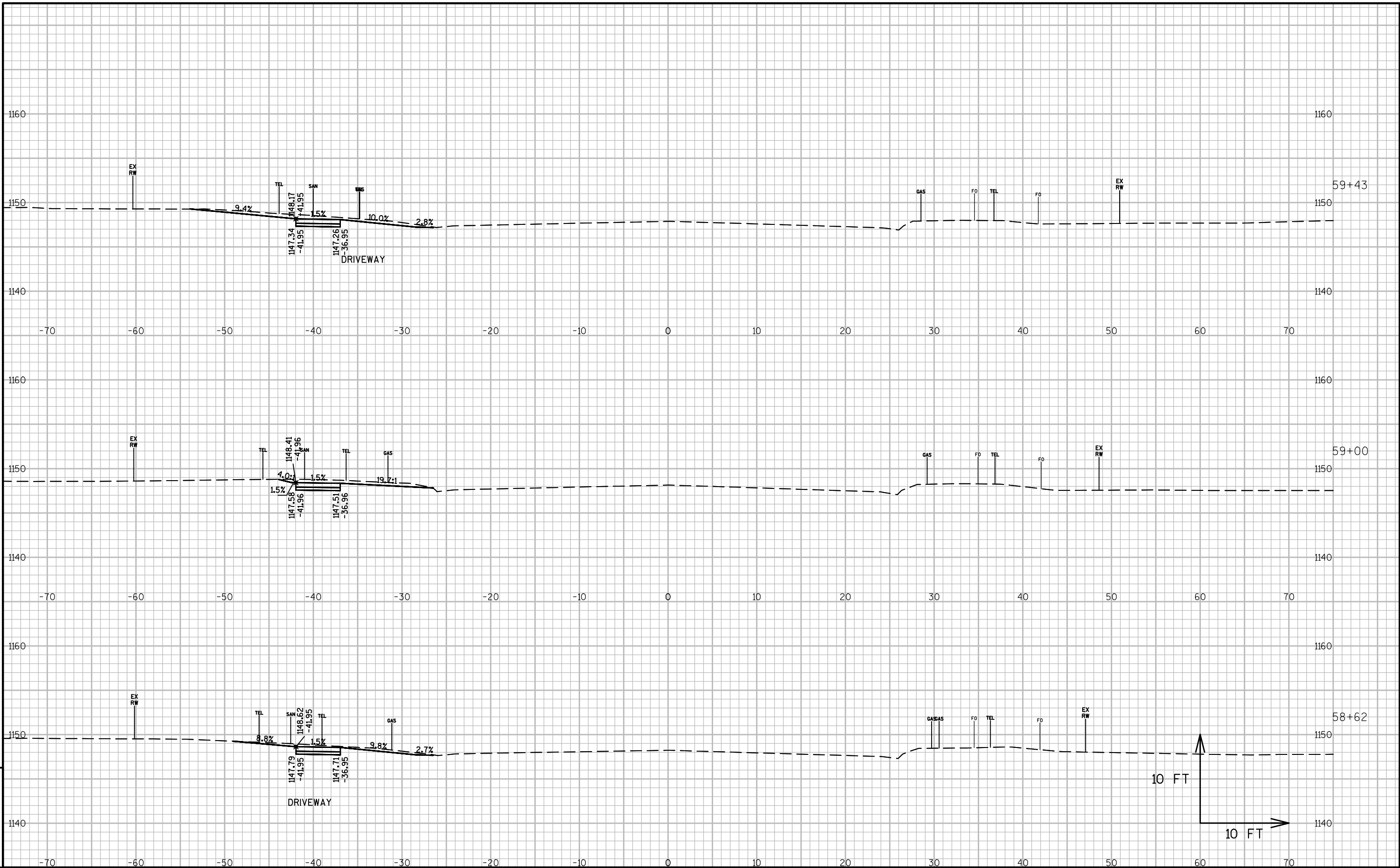


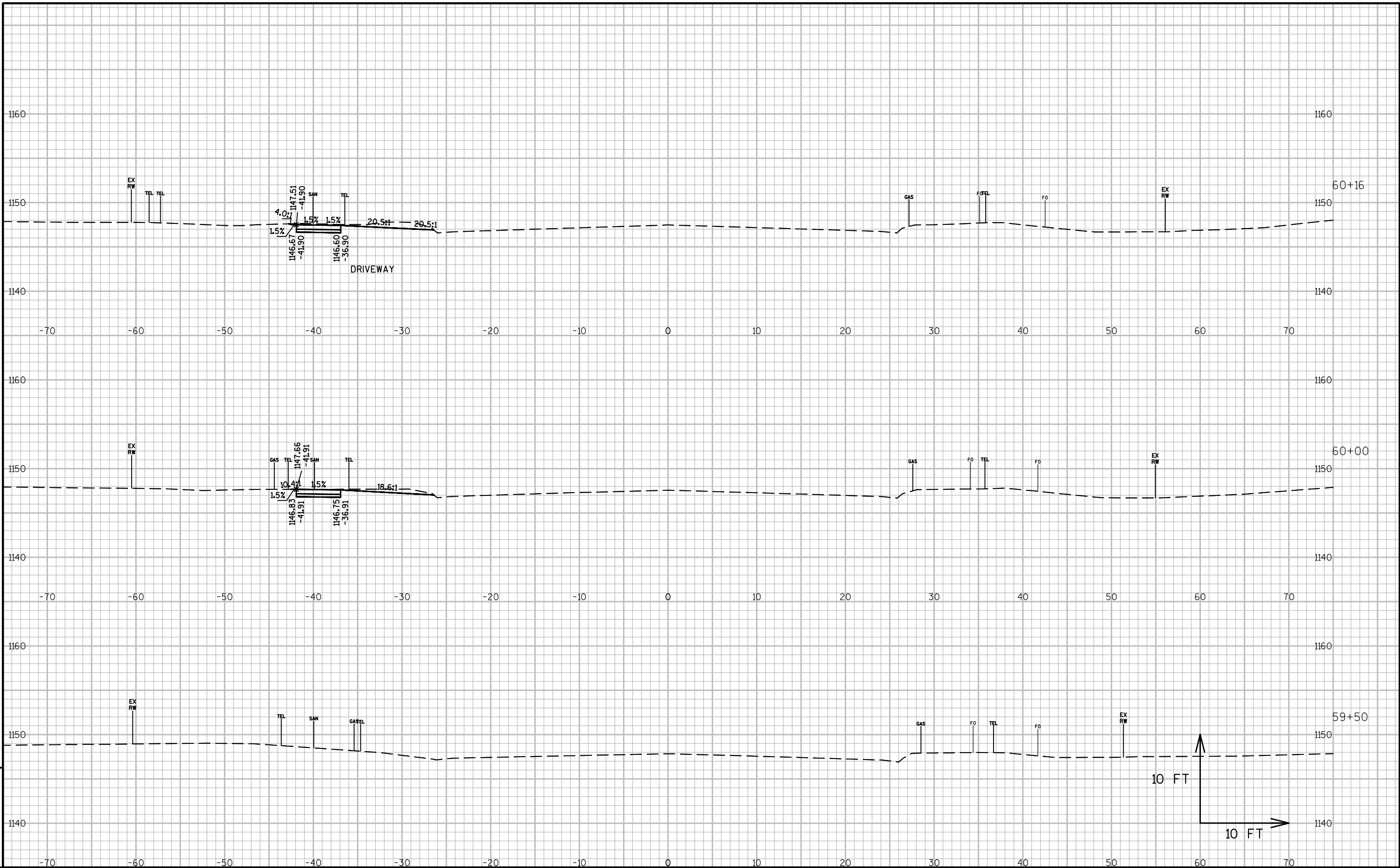


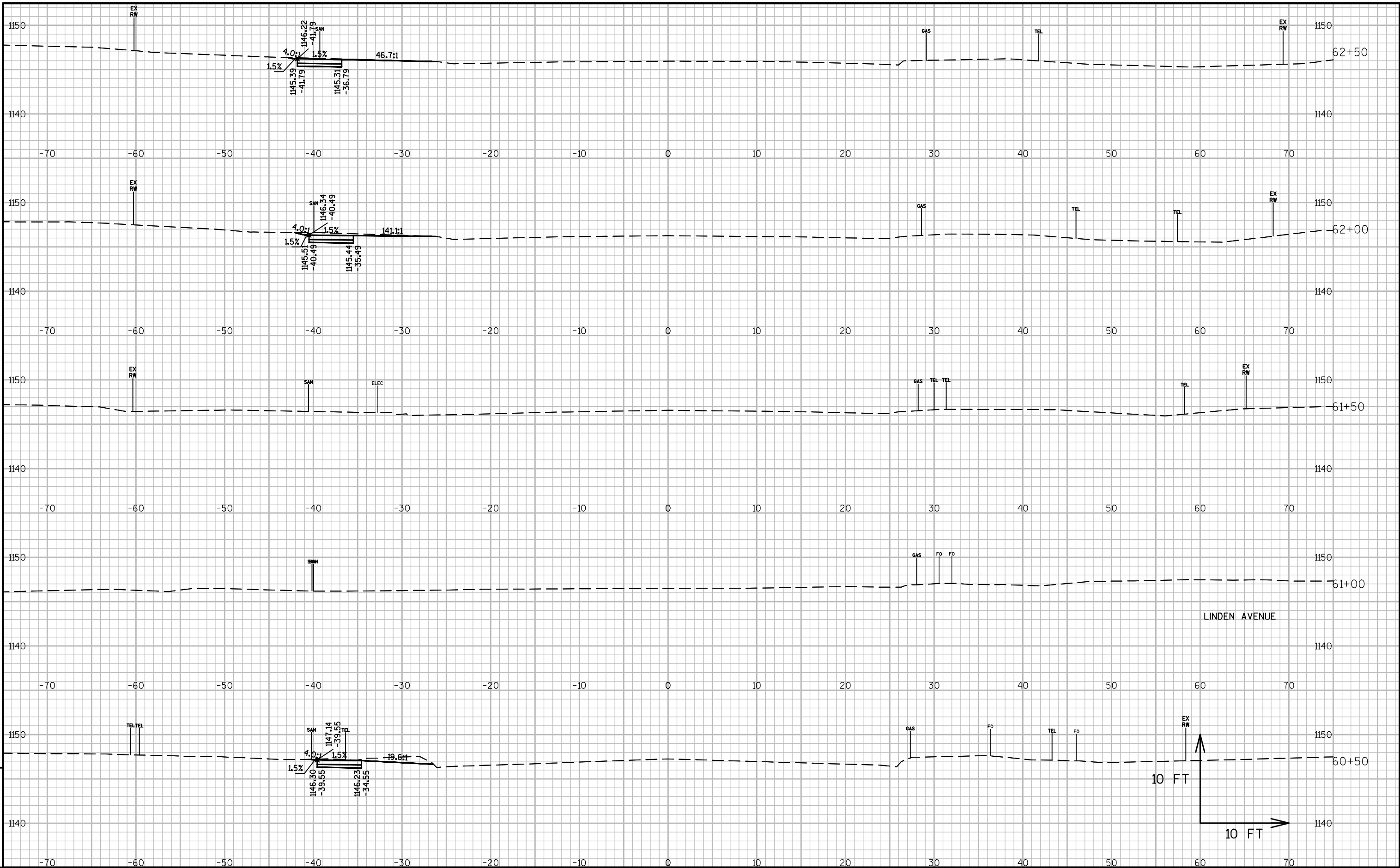


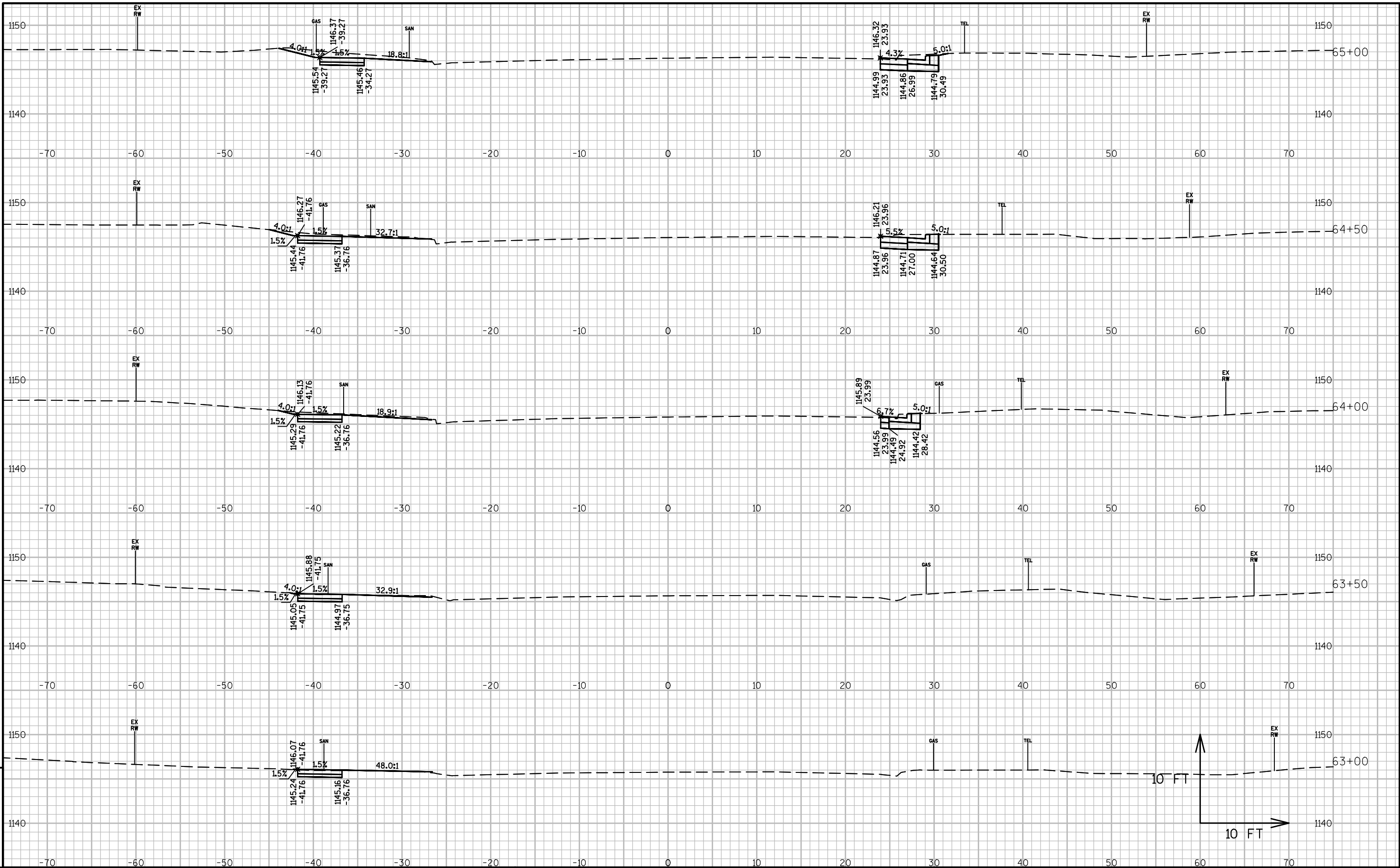


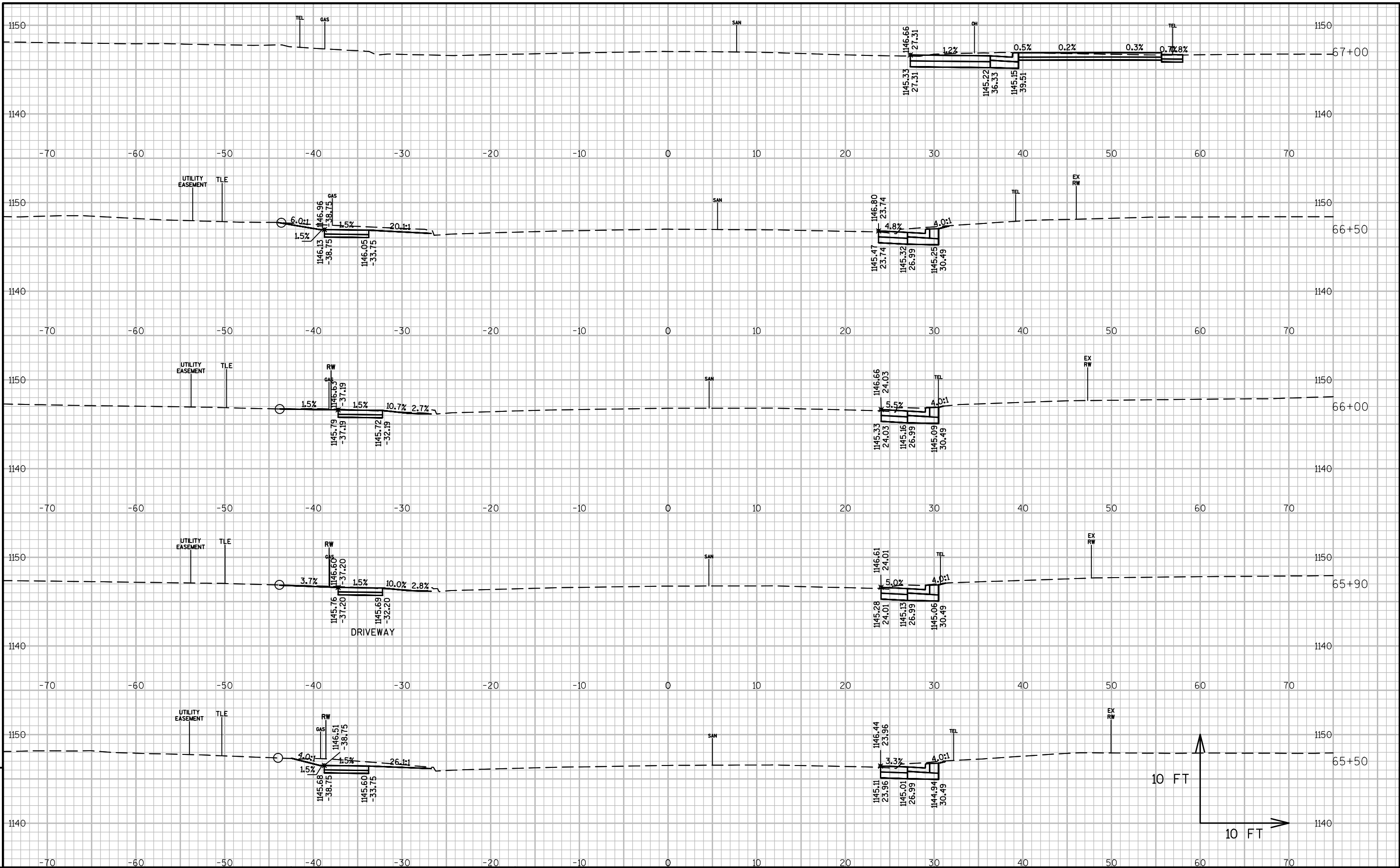


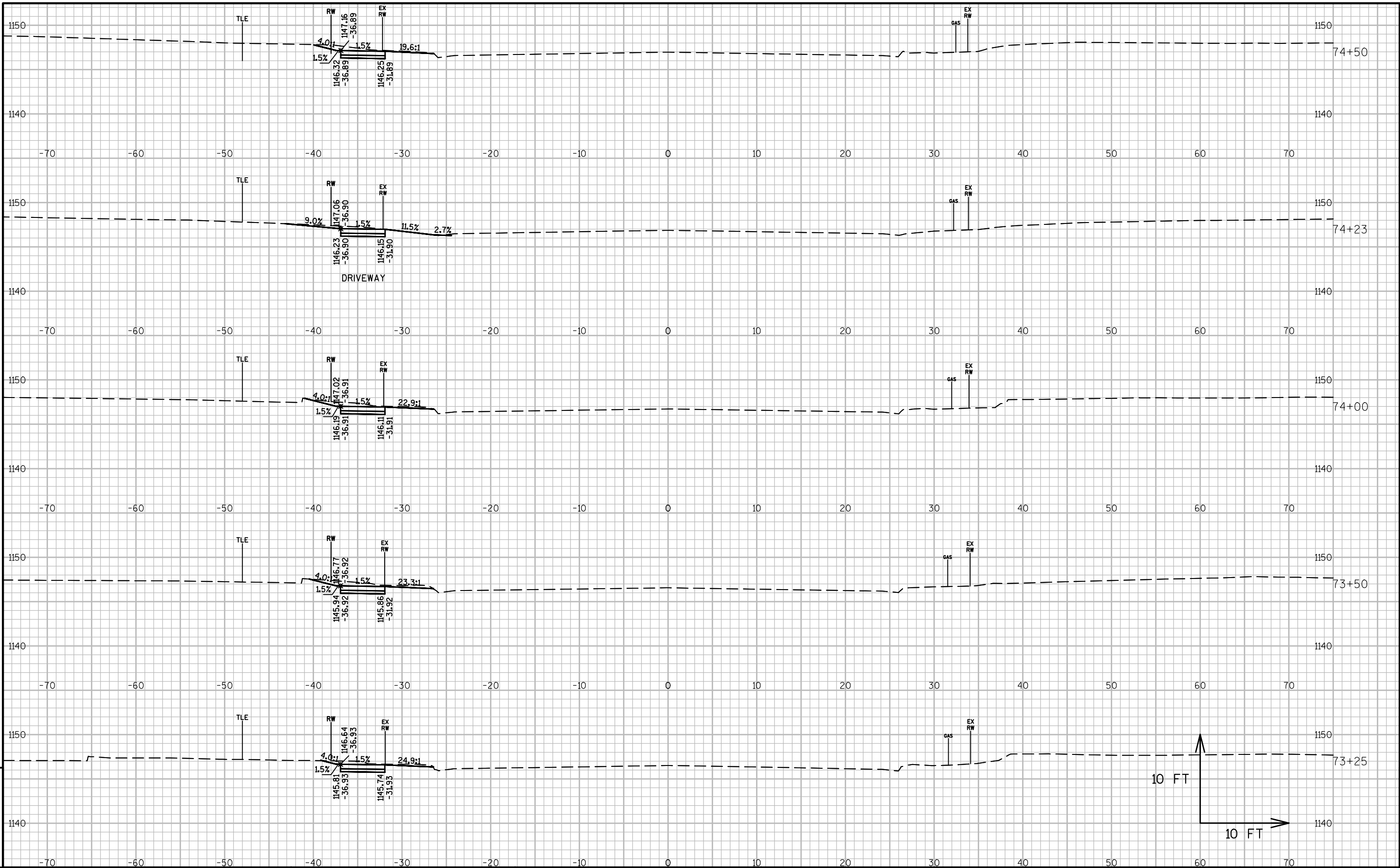


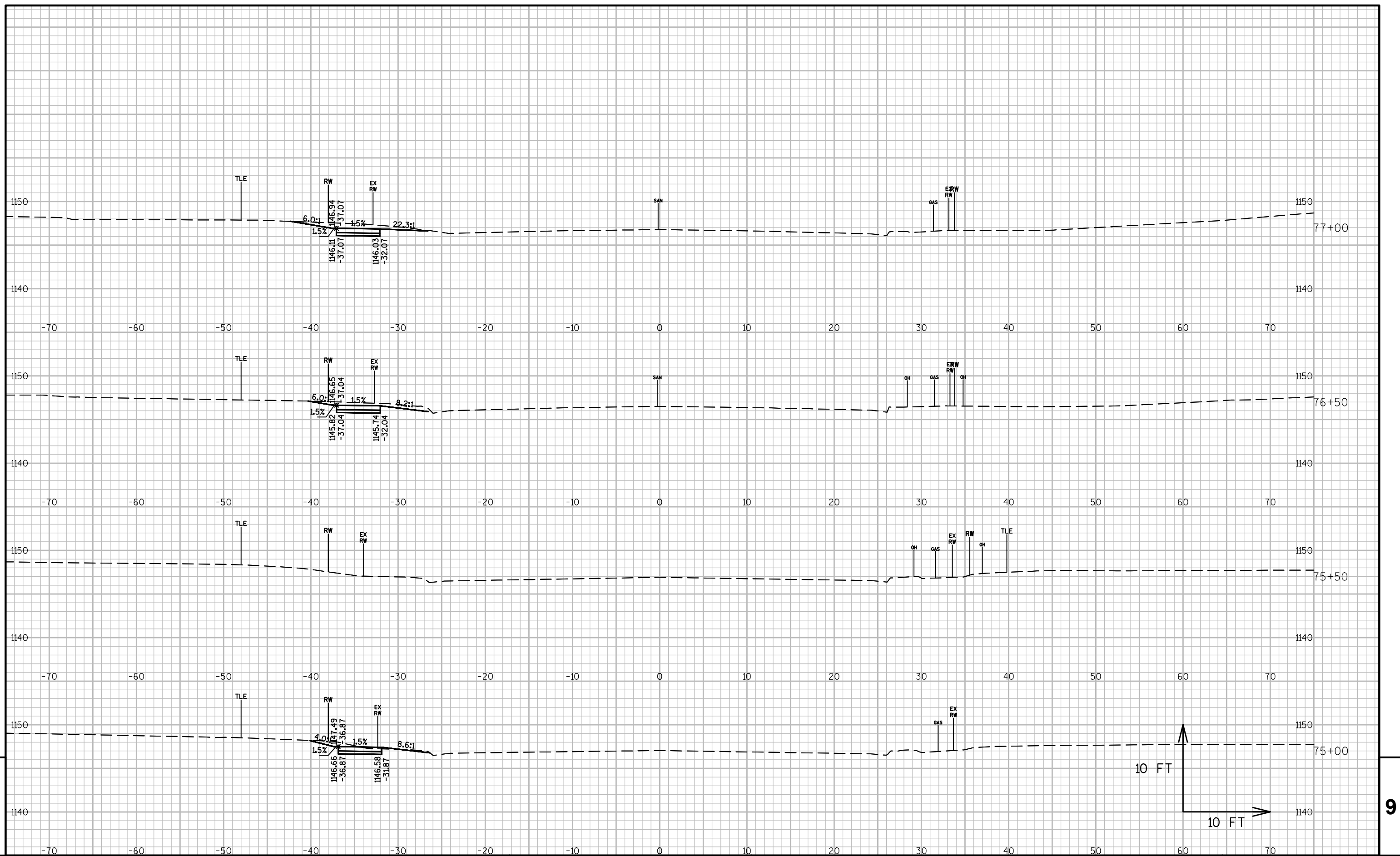












PROJECT NO: 8120-04-73

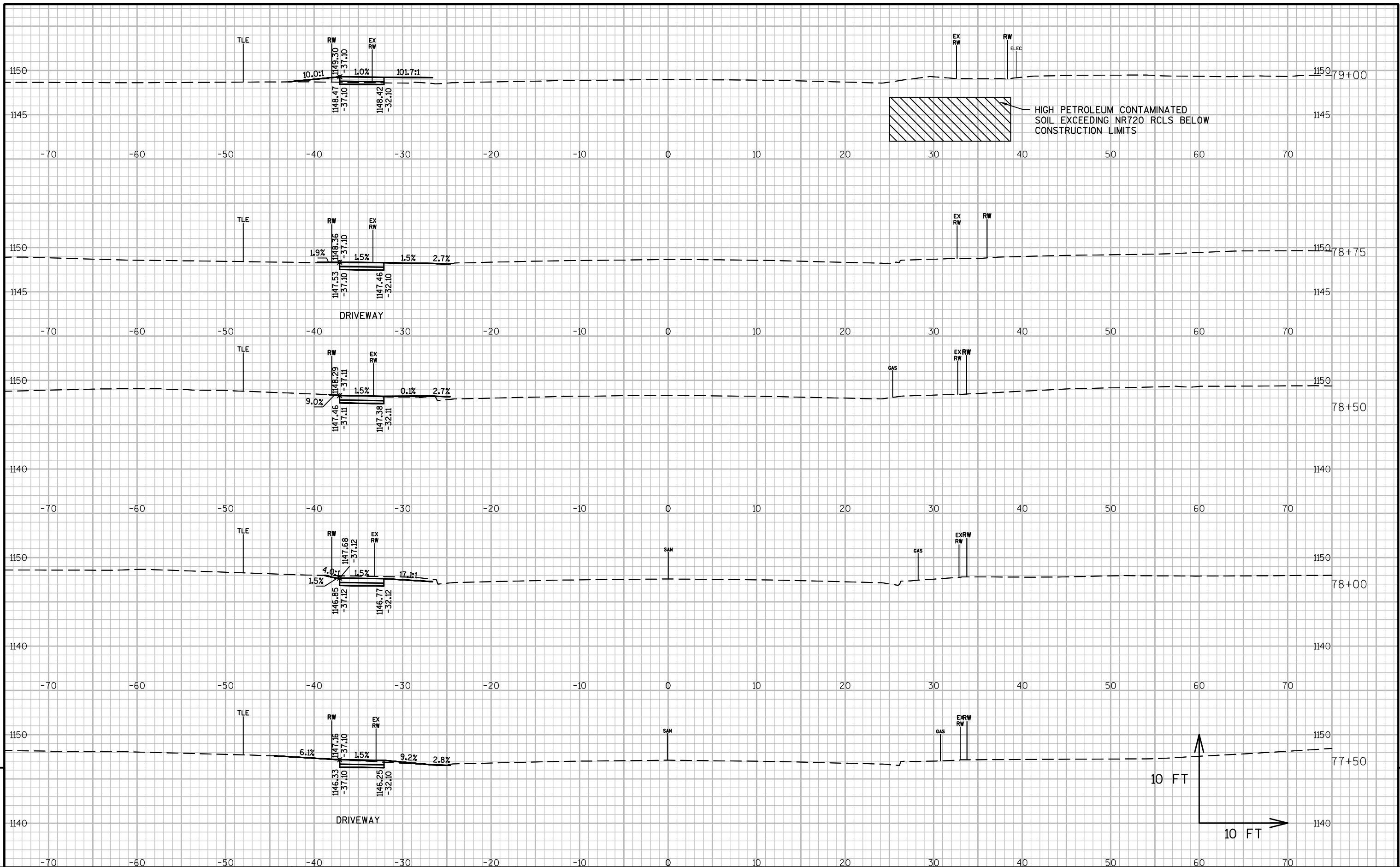
HWY:STH 48

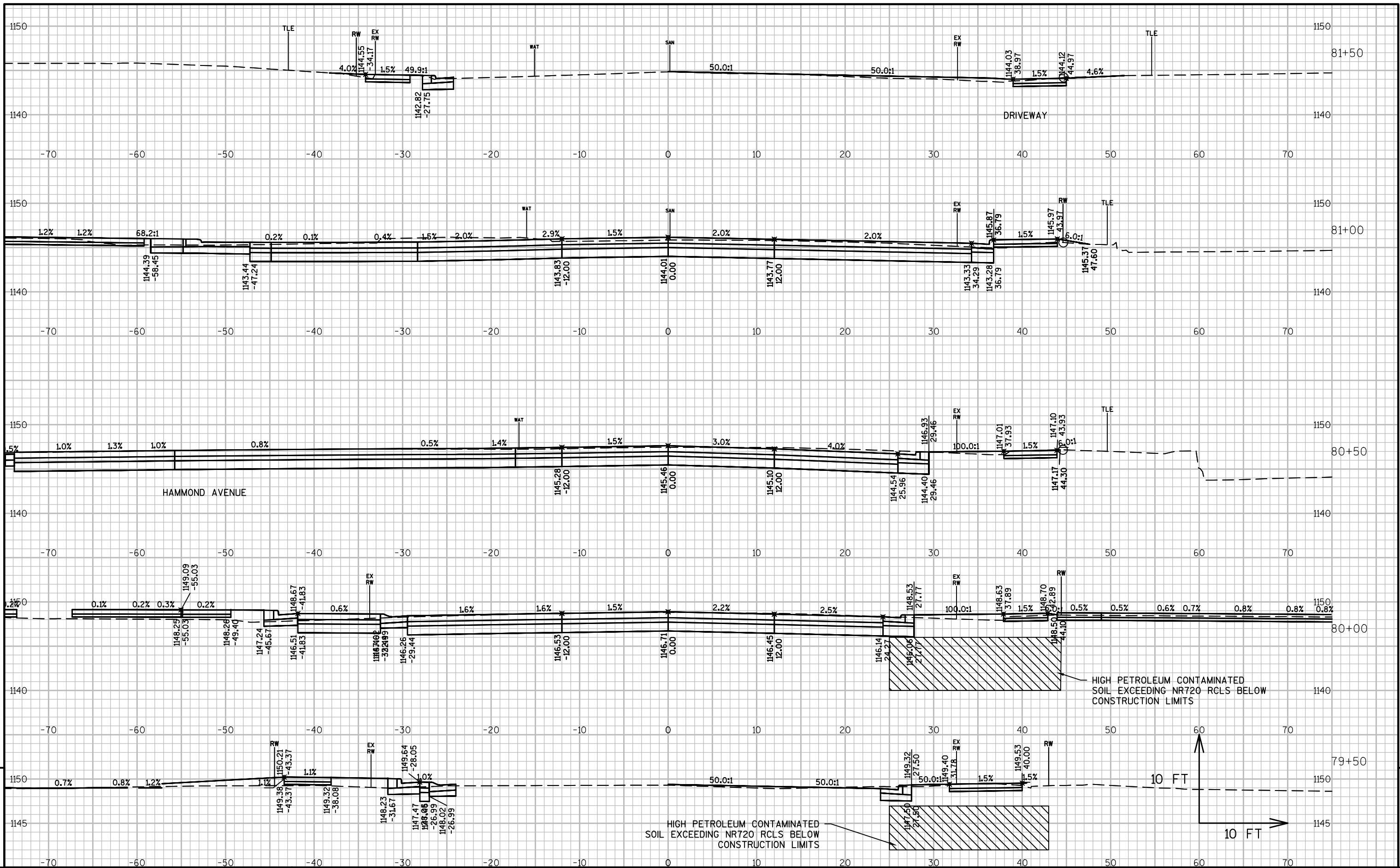
COUNTY: BARRON

CROSS SECTIONS: STH 48

SHEET 258

1





PROJECT NO: 8120-04-73 /74

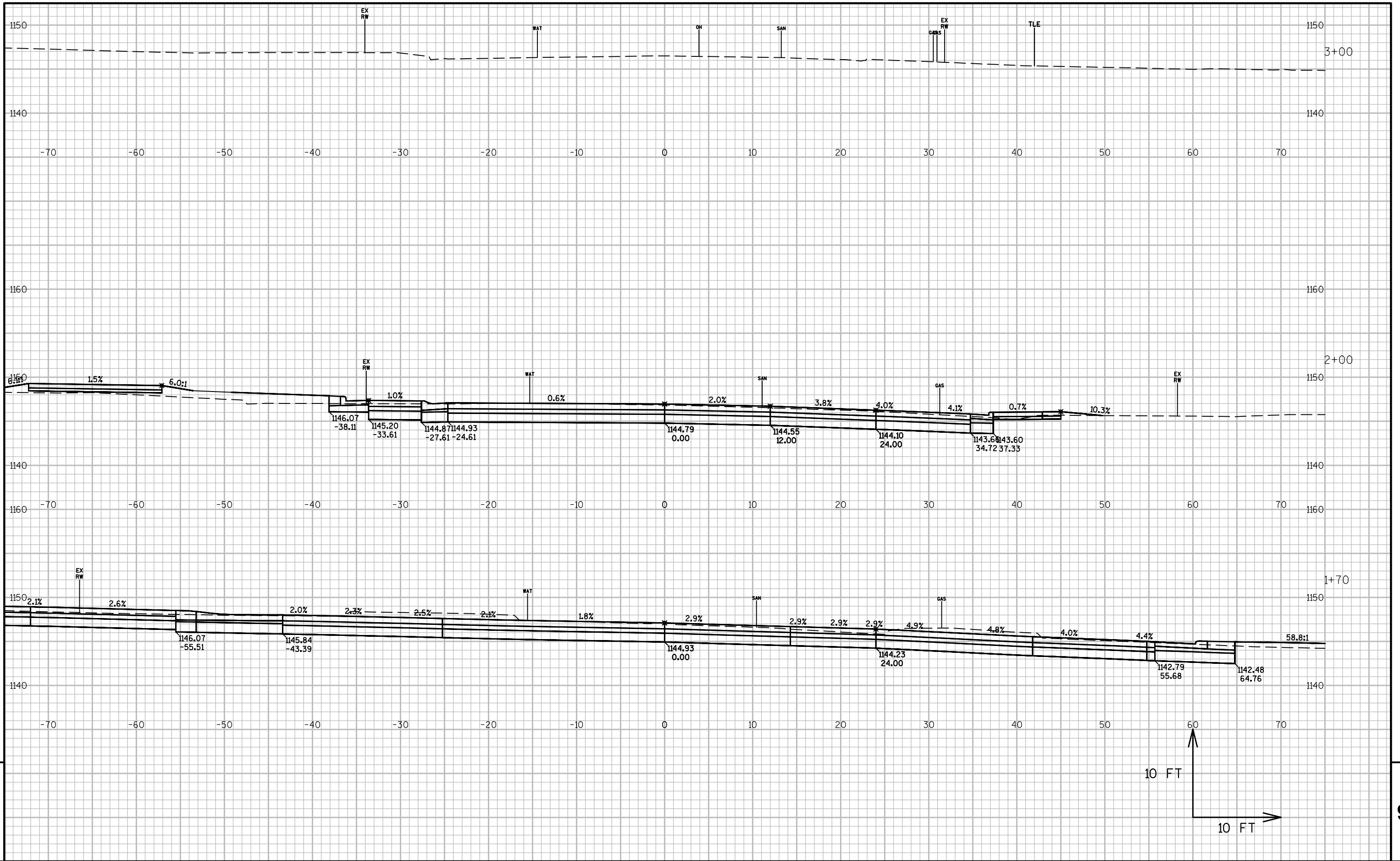
HWY: STH 48

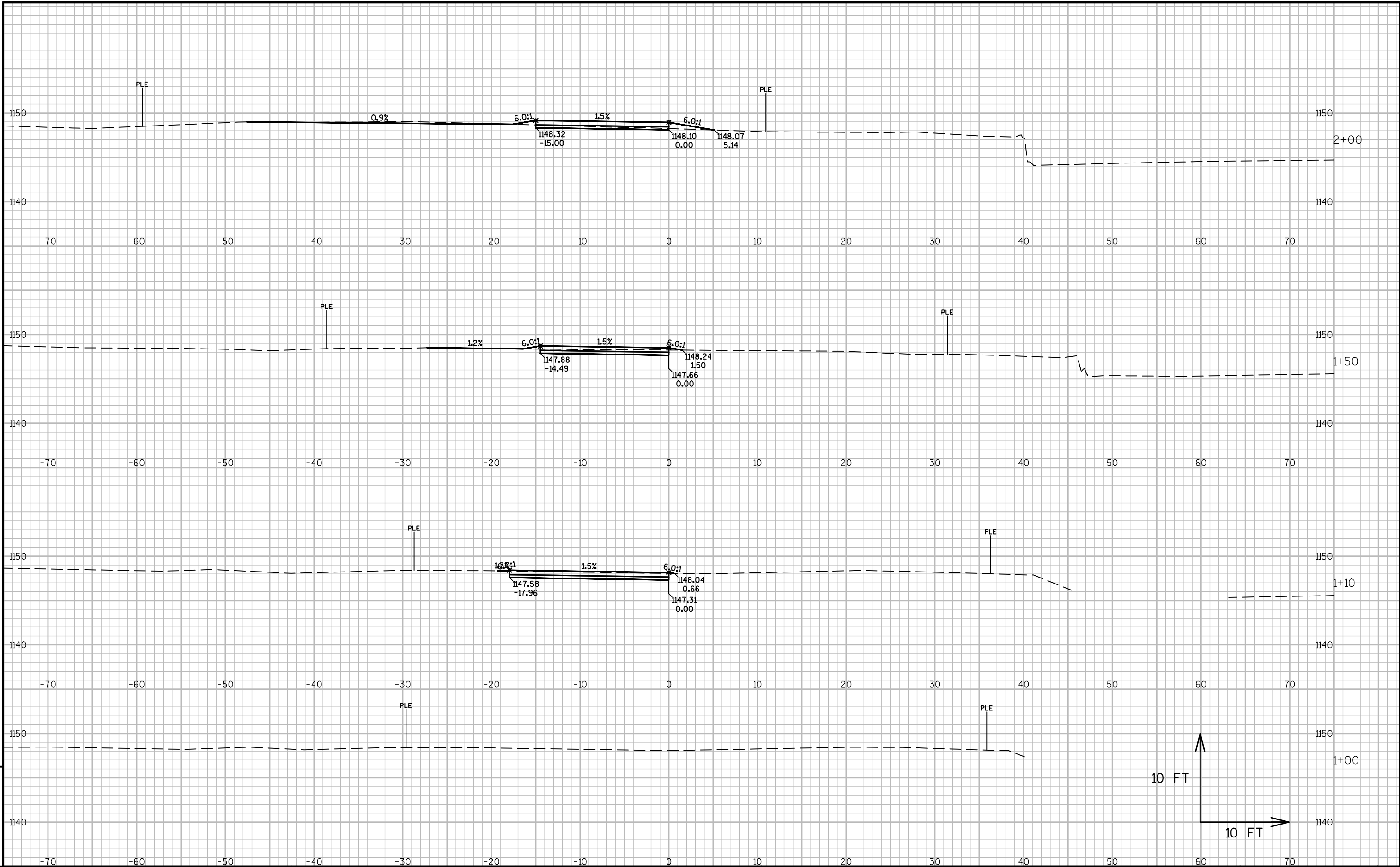
COUNTY: BARRON

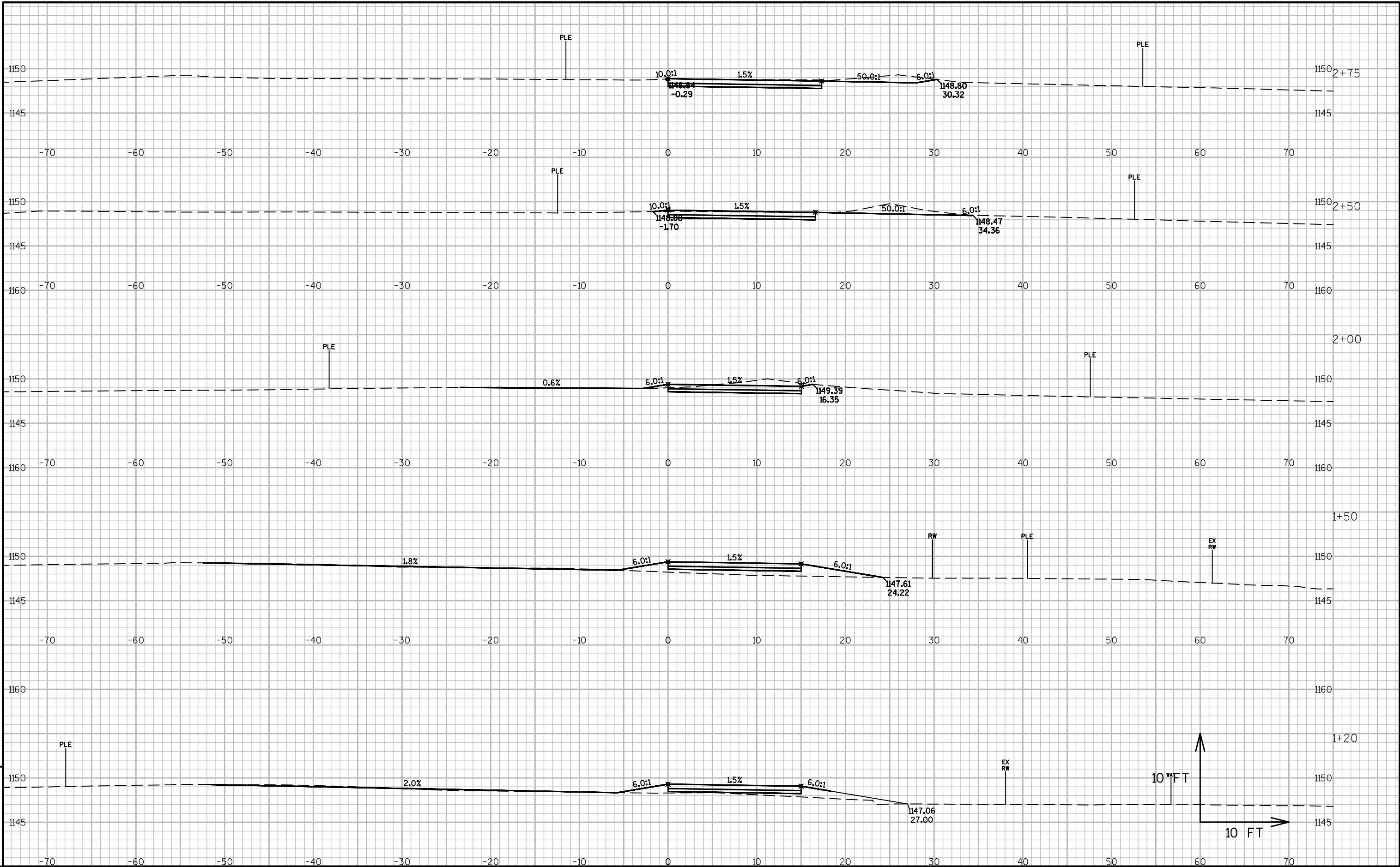
CROSS SECTIONS: STH 48

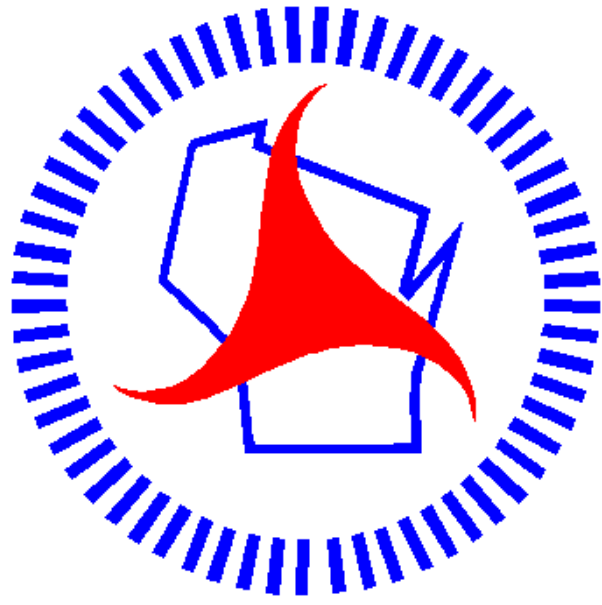
SHEET 260

E









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