

GRE

WITH: N/A

PROJECT ID: 1430-15-71

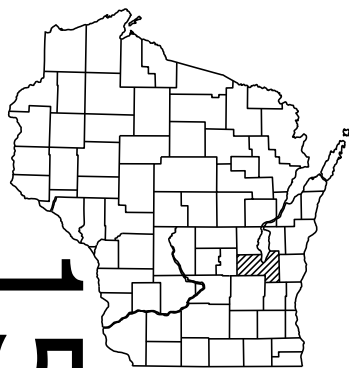
COUNTY: FOND DU LAC

JULY 2015

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 = 146



DESIGN DESIGNATION

A.A.D.T. 2015	=	7000
A.A.D.T. 2035	=	8000
D.H.V.	=	800
D.D.	=	60/40
T.	=	13.0
DESIGN SPEED	=	60 mph
ESALS	=	2,430,900

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

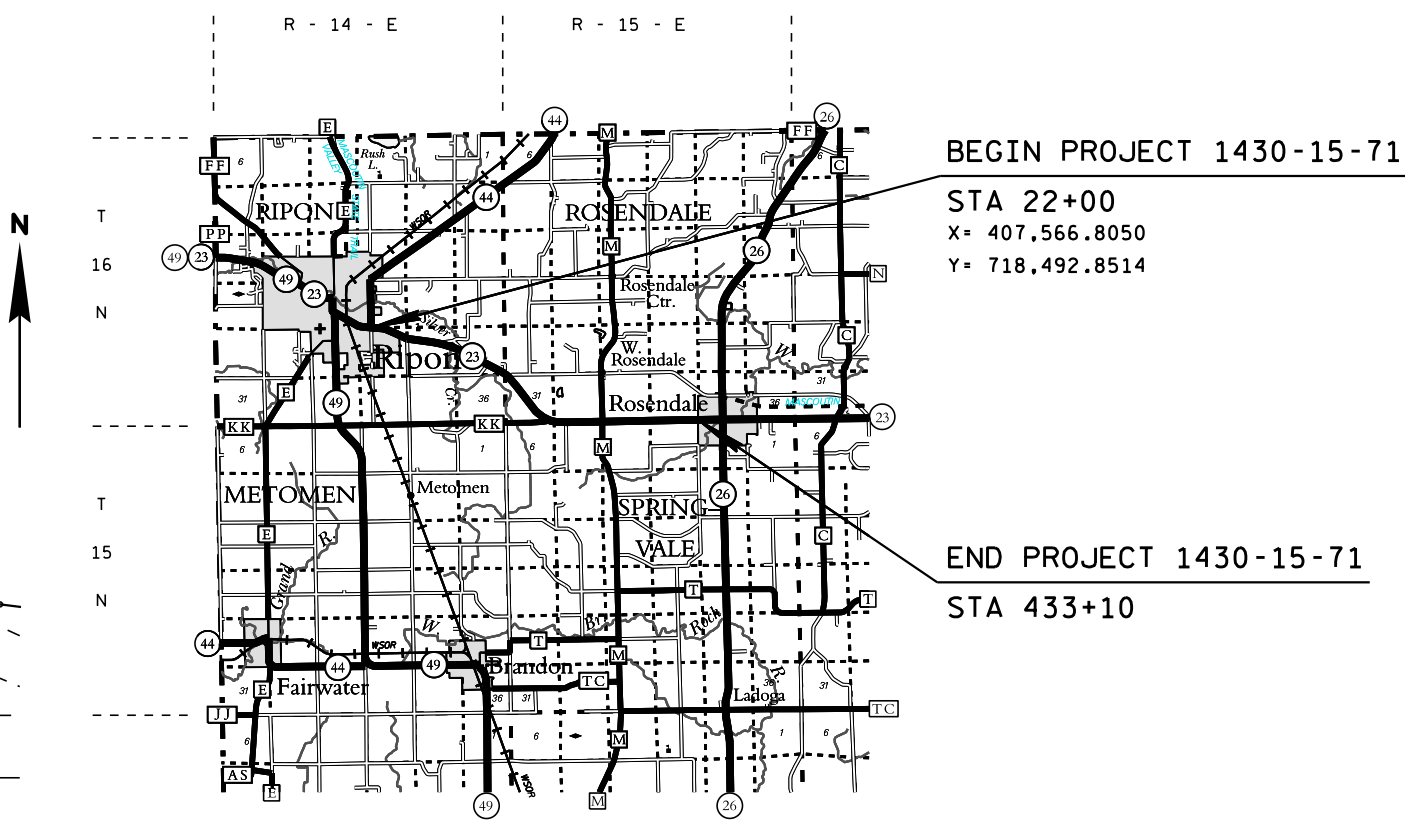
RIPON - ROSENDALE

DOUGLAS ST - LAFAYETTE ST

STH 23

FOND DU LAC COUNTY

STATE PROJECT NUMBER
1430-15-71



BEGIN PROJECT 1430-15-71

STA 22+00
X= 407,566.8050
Y= 718,492.8514

END PROJECT 1430-15-71

STA 433+10

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 7.786 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) HORIZONTAL, NAD 83 (2007) VERTICAL NAVD 88 (2007) FOND DU LAC COUNTY.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1430-15-71	WISC 2015424	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	B REESE
Designer	B LEARST
Project Manager	
Regional Examiner	
Regional Supervisor	R WAGNER
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 1-22-2015
(Signature)

E

GENERAL NOTES

CURVE DATA IS FOR INFORMATIONAL PURPOSES ONLY. MATCH EXISTING SUPERELEVATIONS.

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

CROSS SLOPES AS SHOWN ON THE TYPICAL SECTION WILL VARY AT THE INTERSECTIONS. SEE DETAIL SHEETS AND CROSS SECTIONS FOR SLOPES AND GRADES.

NO TREES OR SHRUBS SHALL BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE BEEN DESIGNATED FOR REMOVAL BY THE ENGINEER.

WHEN PORTIONS OF EXISTING ASPHALTIC SURFACES ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT JOINT THROUGH THE ASPHALTIC SURFACE SO THAT REMOVAL OF THE ASPHALT SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO REMAINING PORTIONS. THE LOCATION OF SAW JOINTS AND THE AMOUNT REMOVED AT SIDE ROADS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORATION OF ASPHALTIC CONCRETE DRIVEWAYS, SIDEWALKS OR SIDE STREETS SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

EXISTING DRAINAGE DITCHES AND CULVERT PIPES SHALL REMAIN FUNCTIONAL DURING EXCAVATION OPERATIONS.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL NEW CONCRETE CULVERT PIPES SHALL REQUIRE JOINT TIES.

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.

DIMENSIONS OF RIPRAP PLACEMENT SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

IN THE PERFORMANCE OF THE WORK UNDER THE ITEM "MULCHING", ALL AREAS SEEDED AND FERTILIZED SHALL BE MULCHED AS DIRECTED BY THE ENGINEER.

SHAPING, TRIMMING AND DISPOSAL OF EXISTING SHOULDERS WILL BE INCIDENTAL TO THE BID ITEM OF BASE AGGREGATE DENSE ¾-INCH.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PIPE LAYING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAY SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER PIPE IN DRIVEWAY AREA IS INSTALLED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.

PRIOR TO ORDERING DRAINAGE STRUCTURES THE CONTRACTOR SHALL VERIFY EXISTING DRAINAGE INFORMATION.

WETLAND AREAS ARE SHOWN ON PLANS. CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO WORK WITHIN SLOPE INTERCEPTS IN THE WETLAND AREAS.

UTILITIES

TONY MARCINIAK
ATC MANAGEMENT, INC. - ELECTRICITY
W 234 N 2000 RIDGEVIEW PARKWAY COURT
P.O. BOX 47
WAUKESHA, WI 53187-0047
(262) 506-6814
AMARCINIAK@ATCLLC.COM

JASON HOGAN
ALLIANT ENERGY / WISCONSIN POWER AND LIGHT COMPANY - ELECTRICITY
SUITE 1000
4902 N BILTMORE LANE
MADISON, WI 53718
(608) 458-4871
JASONHOGAN@ALLIANTENERGY.COM

JASON HOGAN
ALLIANT ENERGY / WISCONSIN POWER AND LIGHT COMPANY - GAS/PETROLEUM
SUITE 1000
4902 N BILTMORE LANE
MADISON, WI 53718
(608) 458-4871
JASONHOGAN@ALLIANTENERGY.COM

TIM KROEZE
CENTURYLINK - COMMUNICATION LINE
201 STARK ST
P.O. BOX 98
RANDOLPH, WI 53956
(920) 326-2224
TIM.KROEZE@CENTURYTEL.COM

TONY KLATT
CHARTER COMMUNICATIONS - COMMUNICATION LINE
N3760 CTH DJ
JUNEAU, WI 53039
(920) 263-0062
TONY.KLATT@CHARTER.COM

TRAVIS DRAKE
CITY OF RIPON - WATER
570 ASPEN ST
RIPON, WI 54971-1396
(920) 748-4908
TDRAKE@CITYOFRIPON.COM

COUNTY SURVEYOR OR SURVEYS CONTACT PERSON

CONTACT: CORMAC MCINNIS
WISDOT-NE REGION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
920-492-5638
CORMAC.MCINNIS@DOT.WI.GOV

DNR AREA LIAISON

JAY SCHIEFELBEIN
DEPARTMENT OF NATURAL RESOURCES
NORTHEAST REGION
2984 SHAWANO AVE
GREEN BAY, WI 54313
920-360-3784
JEREMIAH.SCHIEFELBEIN@WISCONSIN.GOV

DIGGERS



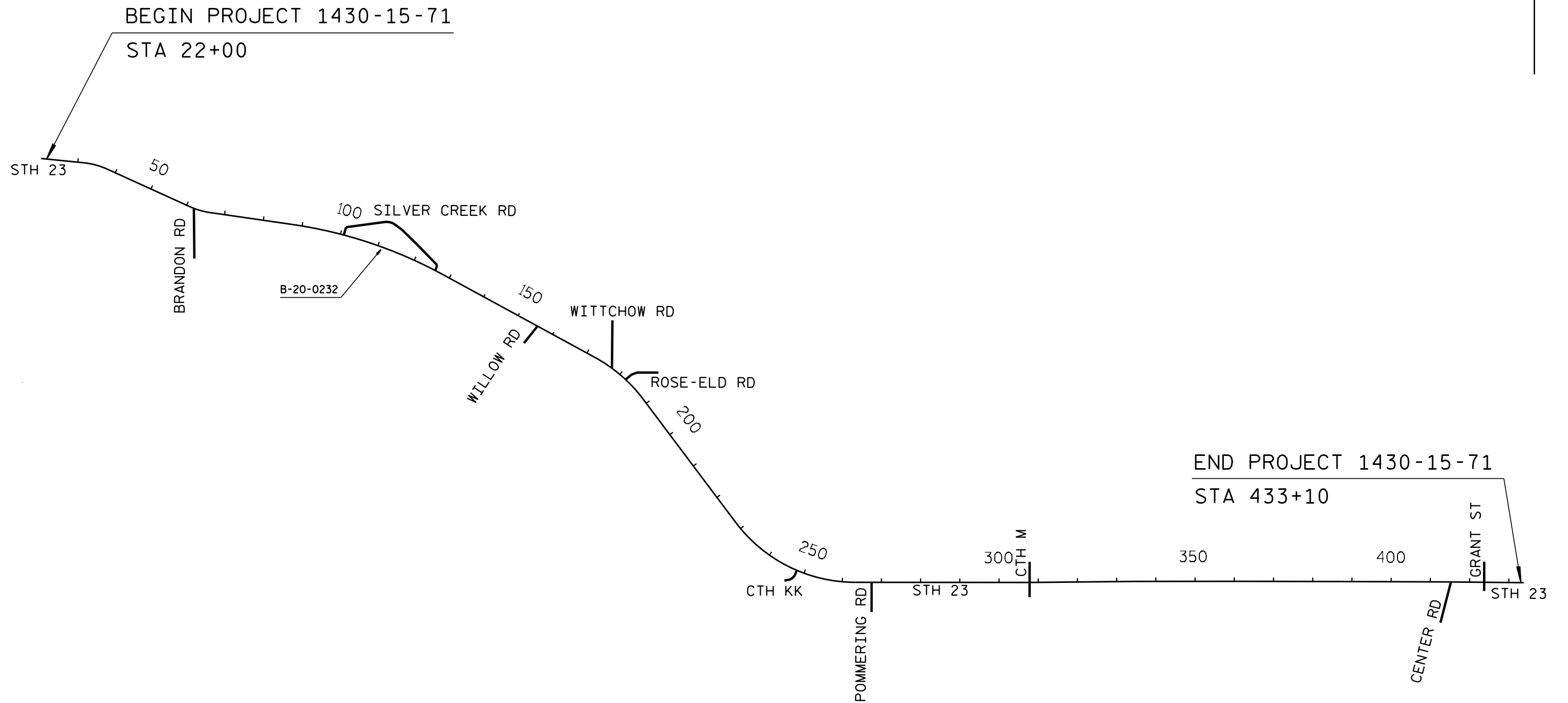
HOTLINE

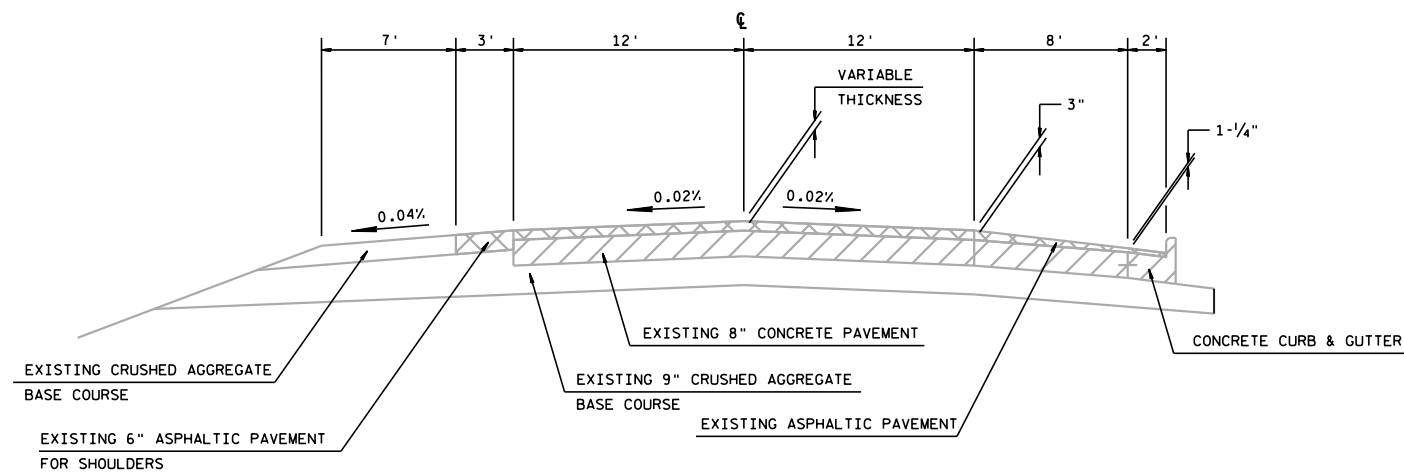
Dial  or (800)242-8511

www.DiggersHotline.com

EMERGENCY CONTACT NUMBERS FOR WISCONSIN POWER AND LIGHT COMPANY

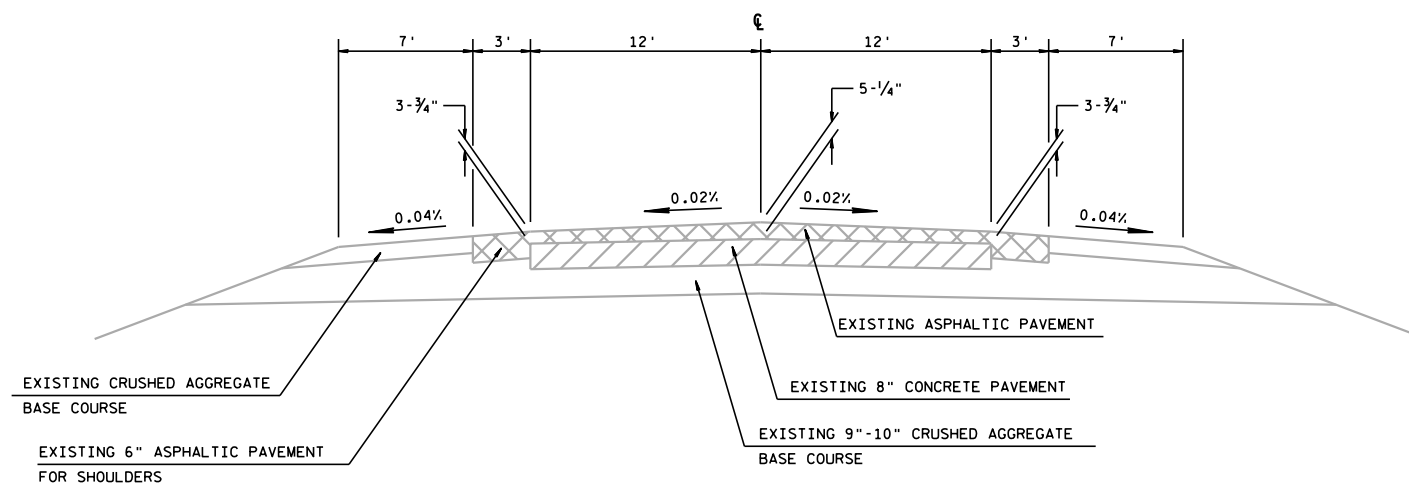
ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-862-6261
GAS 24 HOUR EMERGENCY SERVICE: 1-800-862-6263





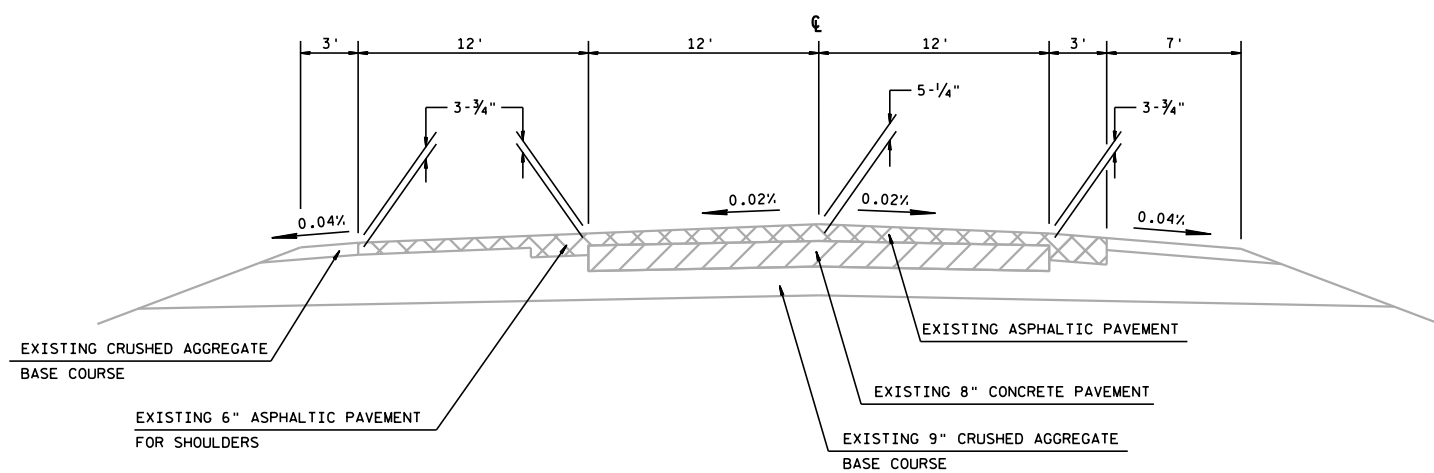
TYPICAL EXISTING CROSS SECTION

22+00 - 33+50



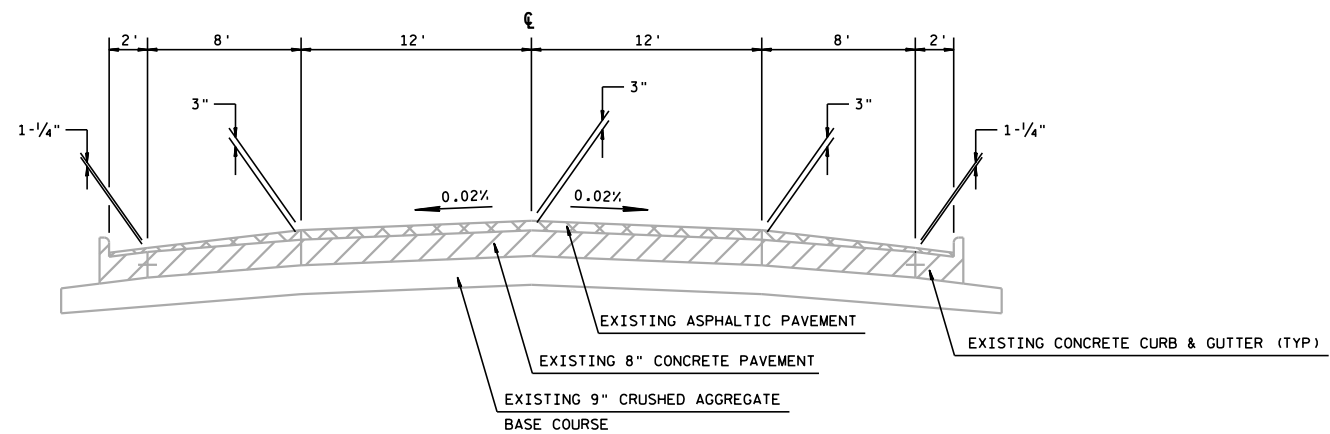
TYPICAL EXISTING CROSS SECTION

33+50 - 413+89



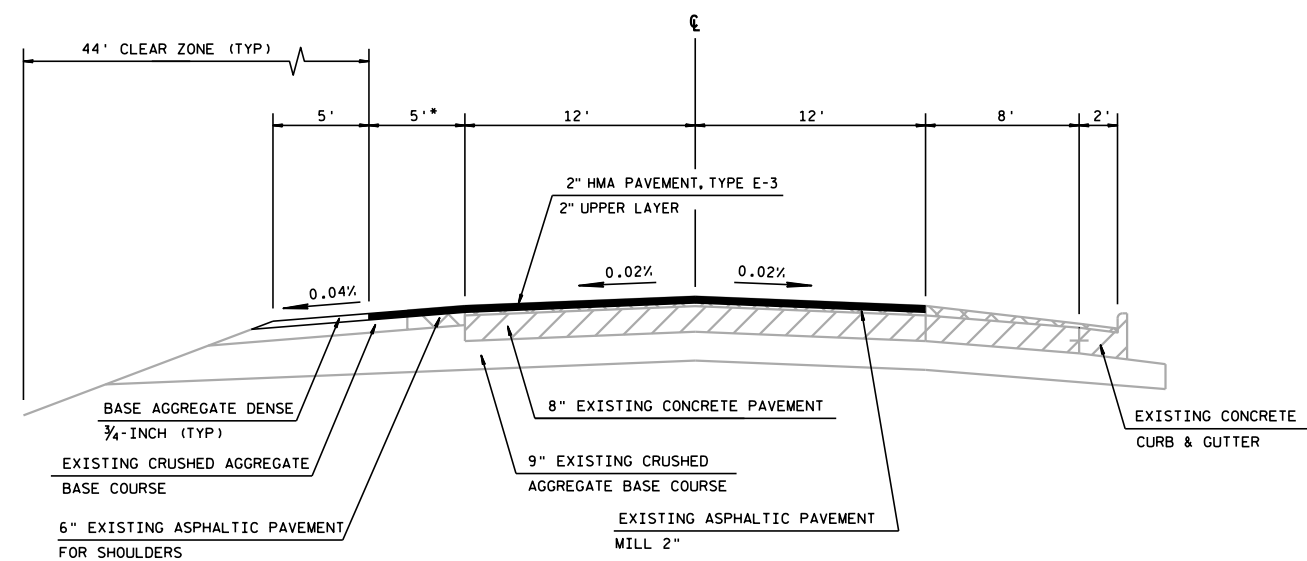
TYPICAL EXISTING CROSS SECTION

413+89 - 426+50



TYPICAL EXISTING CROSS SECTION

426+50 - 433+10



TYPICAL FINISHED CROSS SECTION

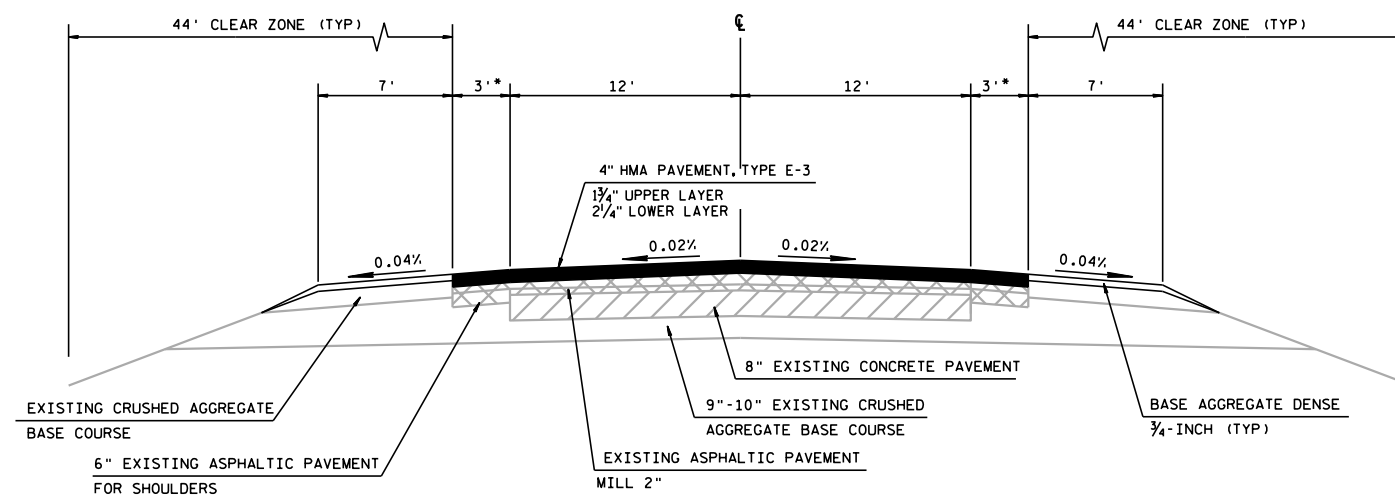
22+00 - 33+50

NOTE

* 5' PAVED SHOULDERS AT 22+00 - 61+50 AND 413+81 - 426+50. Safety edge required for shoulders 3' or less paved.

2

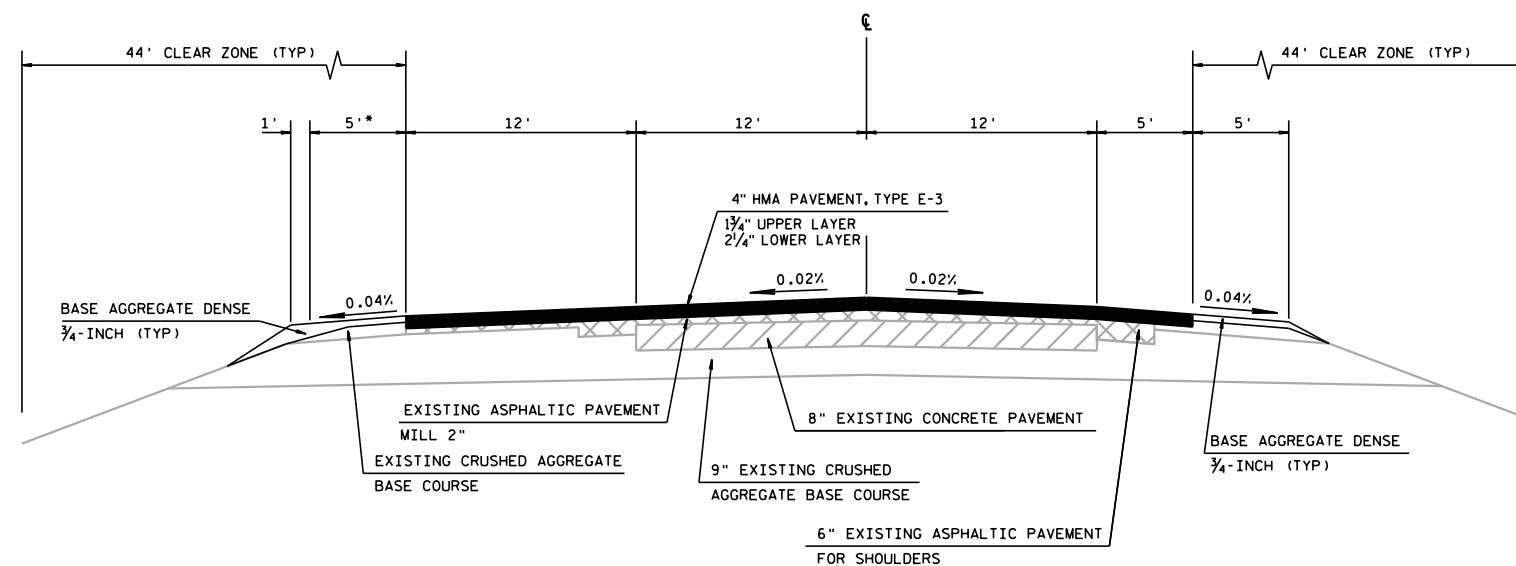
2



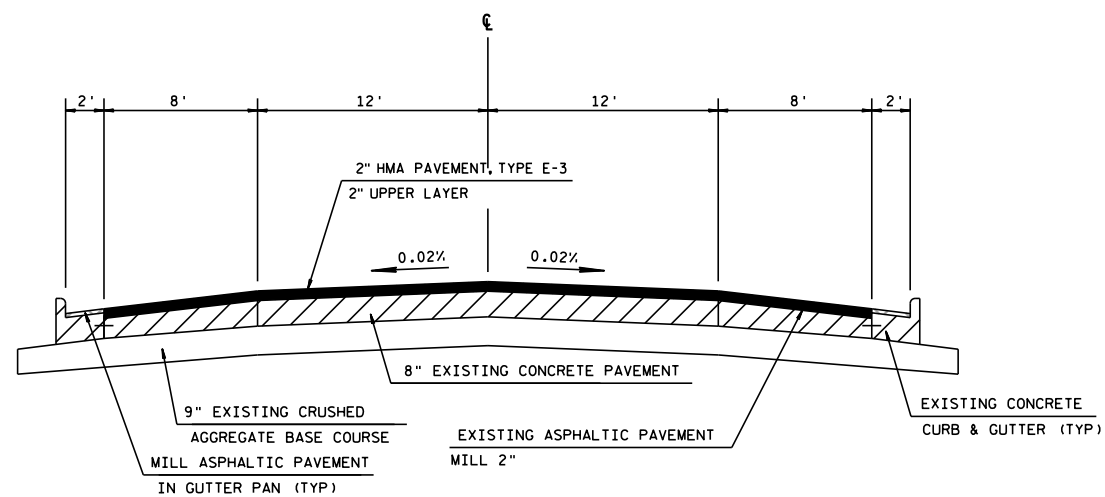
NOTE

* 5' PAVED SHOULDERS AT 22+00 - 61+50
AND 413+81 - 426+50. Safety edge
required for shoulders 3' or less
paved.

TYPICAL FINISHED CROSS SECTION

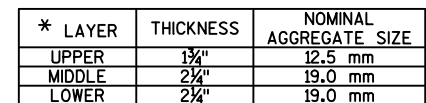
$$33+50 \quad - \quad 413+89$$


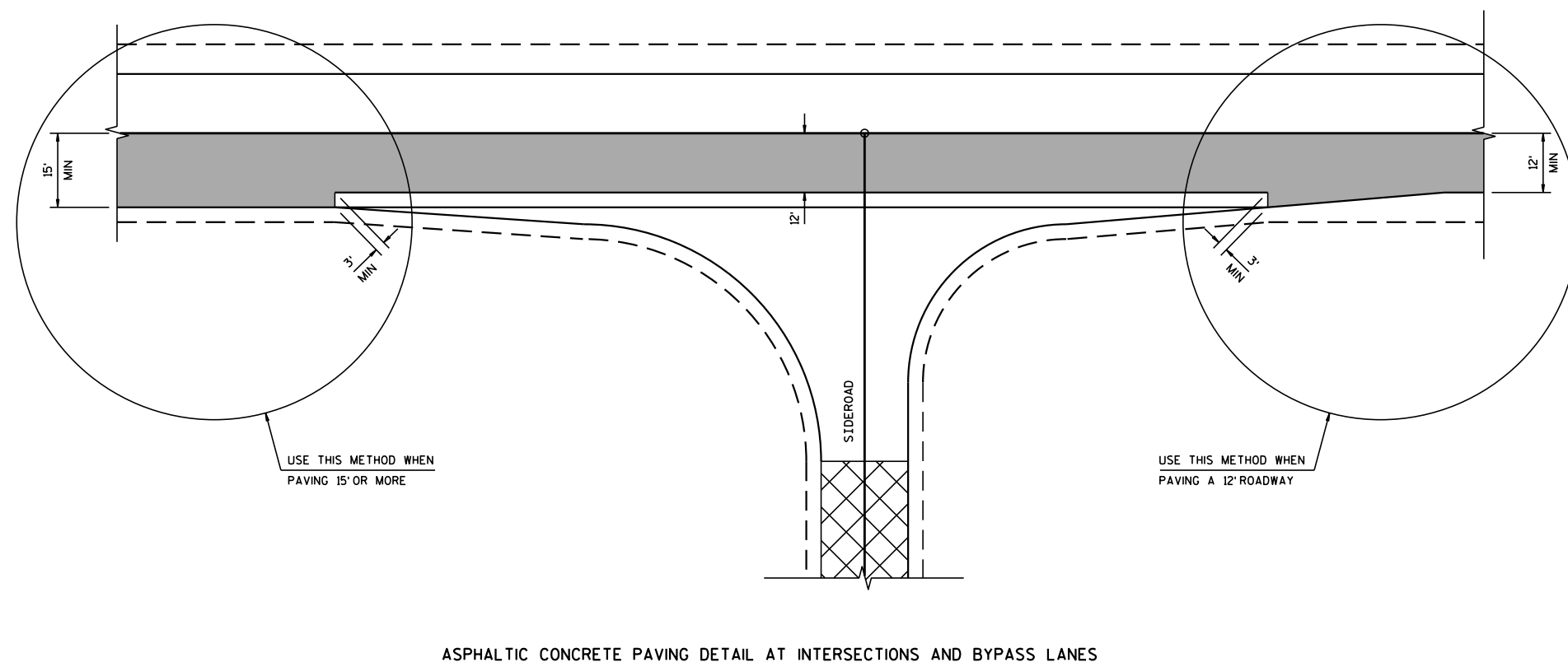
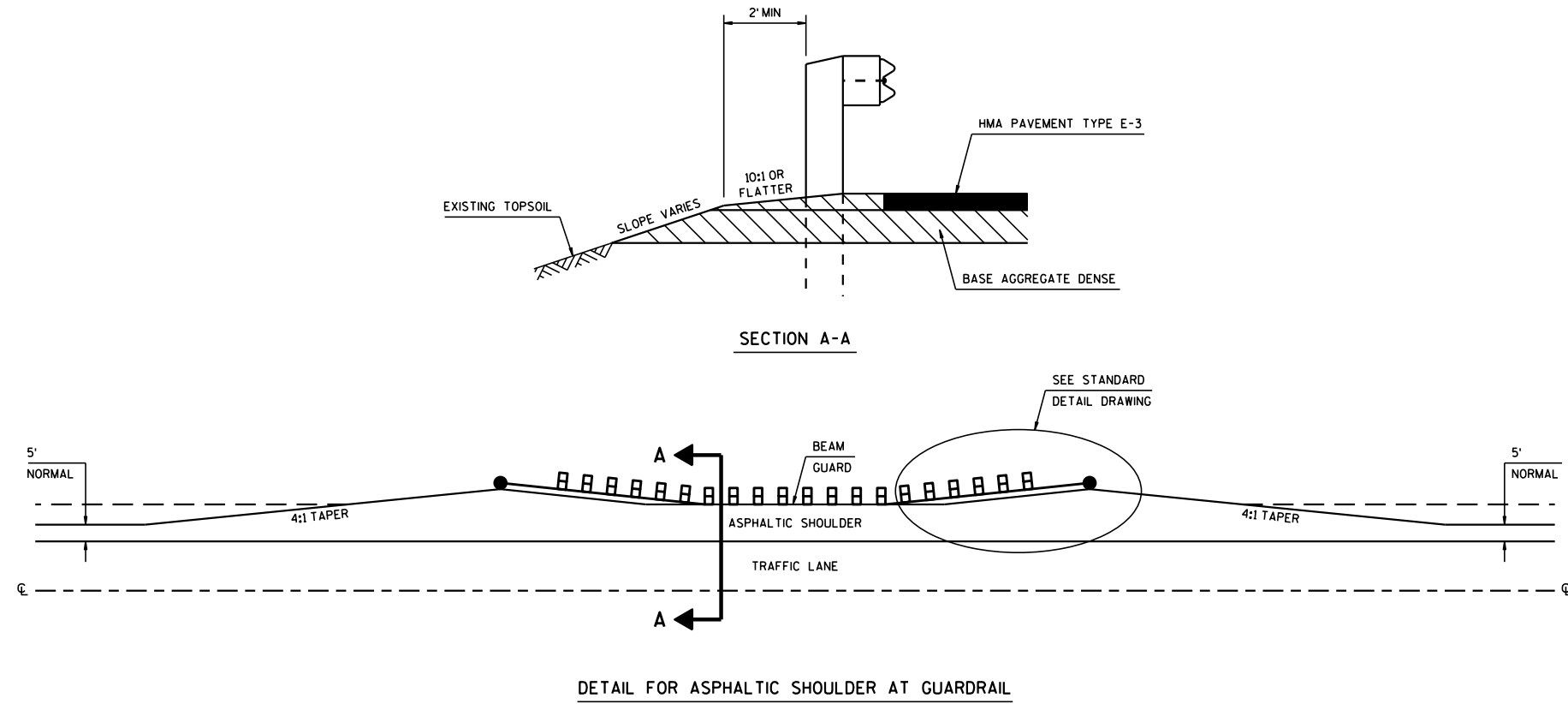
TYPICAL FINISHED CROSS SECTION

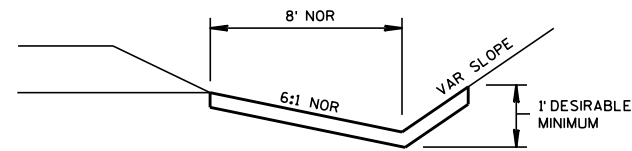
$$413+89 - 426+50$$


TYPICAL FINISHED CROSS SECTION

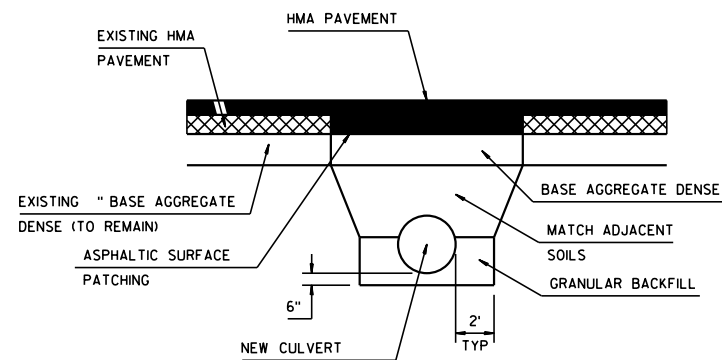
$$426+50 - 433+10$$



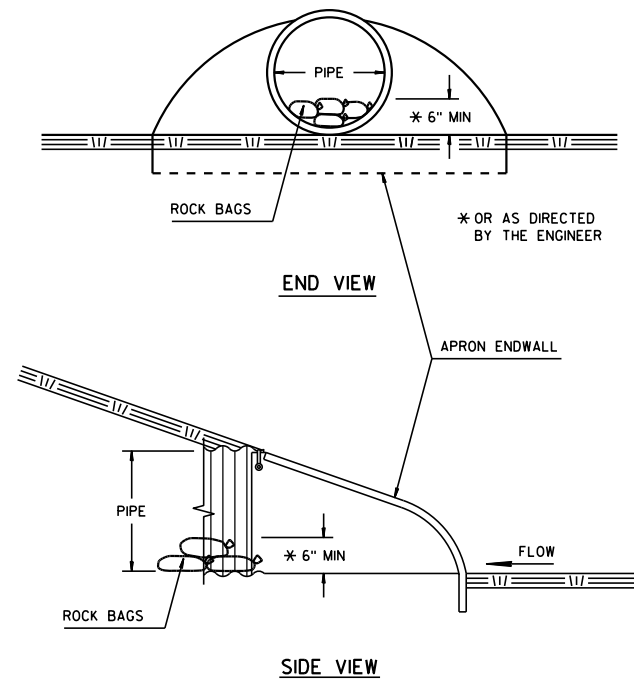




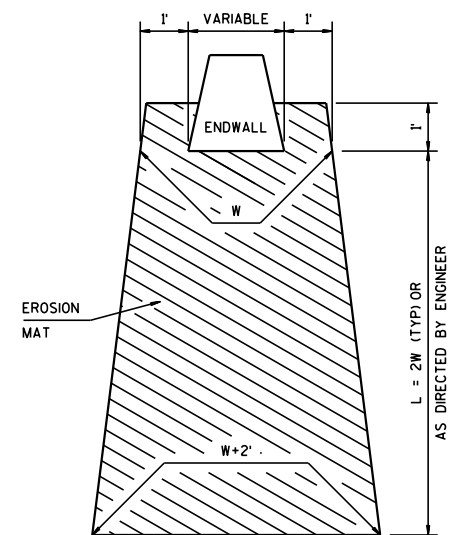
EROSION MAT DETAIL FOR DITCHES



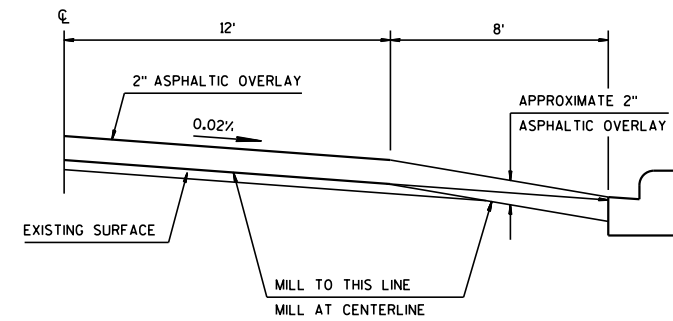
DETAIL FOR CULVERT REPLACEMENT



CULVERT PIPE CHECKS

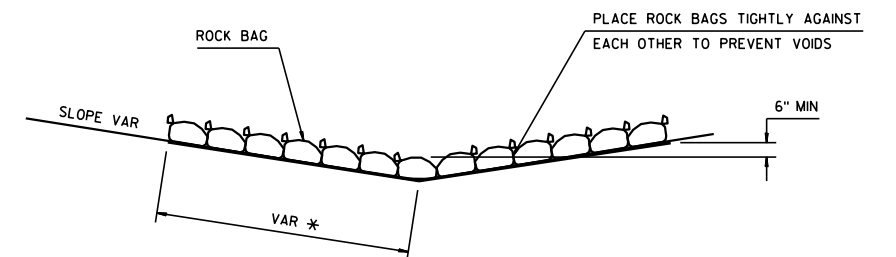


EROSION MAT TREATMENT AT CULVERTS

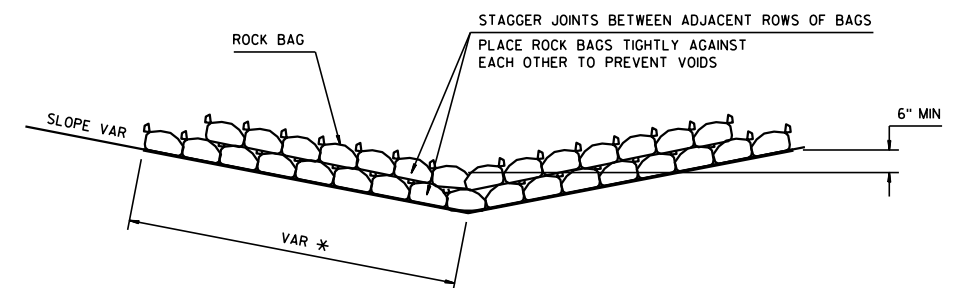


BUTT JOINT DETAIL FOR CURB & GUTTER

STA 426+50 - 439+30



SIDE VIEW (SINGLE LAYER)

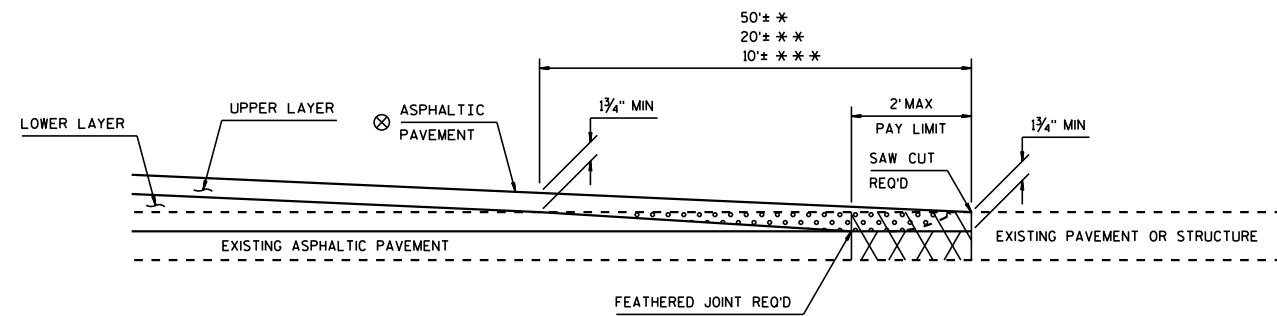


* LENGTH AND NUMBER OF BAGS MAY VARY
DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)

ROCK BAGS DITCH CHECK

PAID AS ROCK BAGS

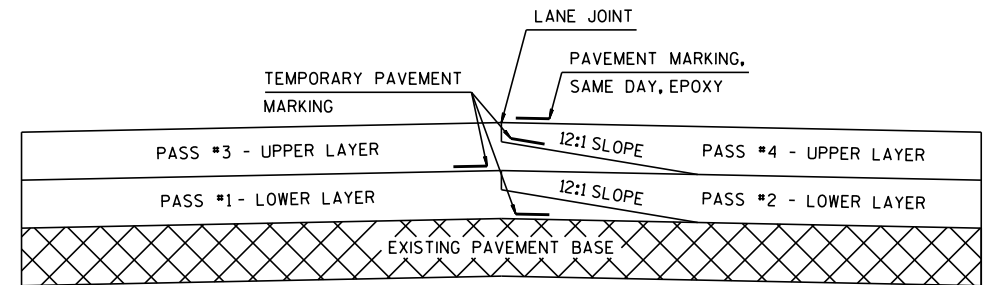


⊗ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

- REMOVING ASPHALTIC SURFACE, MILLING
- REMOVING ASPHALTIC SURFACE, BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)
- ASPHALTIC WEDGING (FULL DEPTH REMOVAL OPTION)

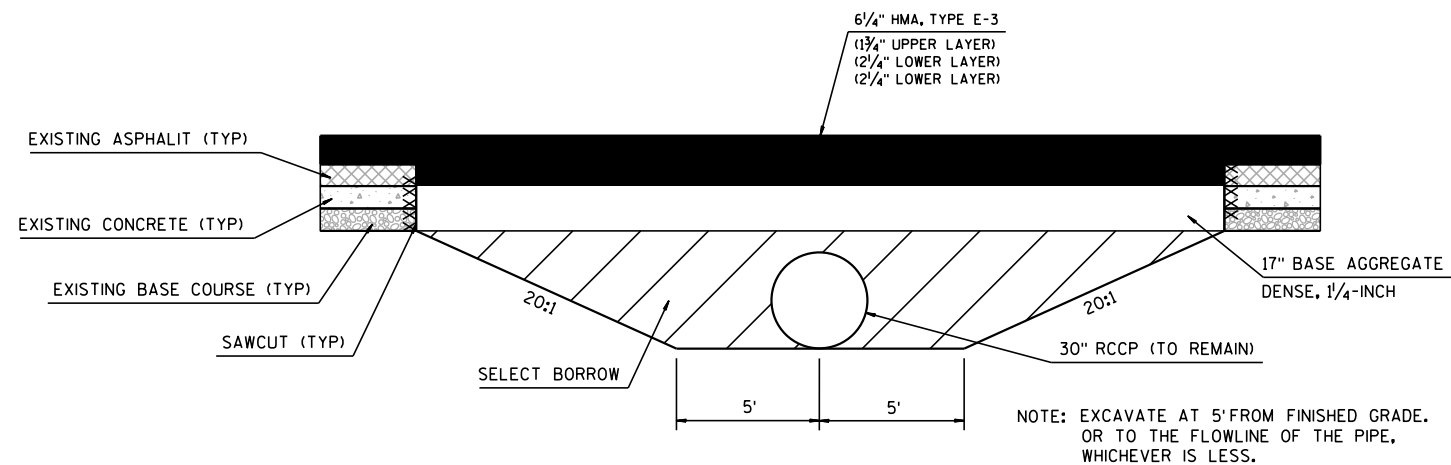
BUTT JOINT DETAIL FOR MILLED ASPHALTIC PAVEMENTS

* MAINLINE
** SIDEROADS
*** PRIVATE ENTRANCES



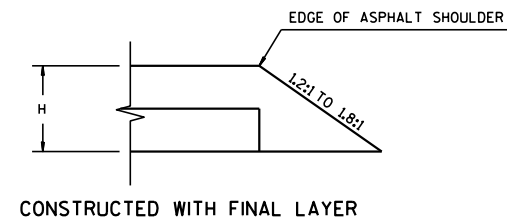
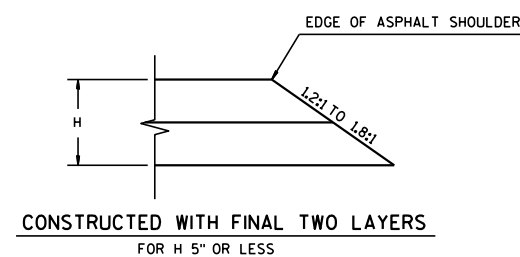
LOWER AND UPPER LAYERS

PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN ASPHALTIC PAVEMENTS



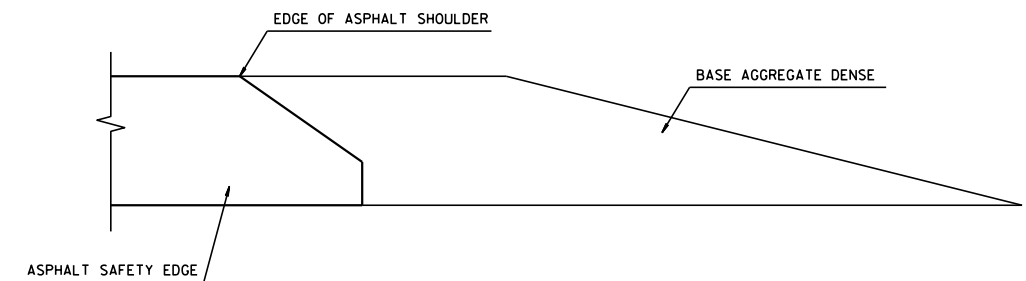
LONGITUDINAL DETAIL FOR FROST HEAVE REPAIR AREAS

STA 90+99
STA 192+00

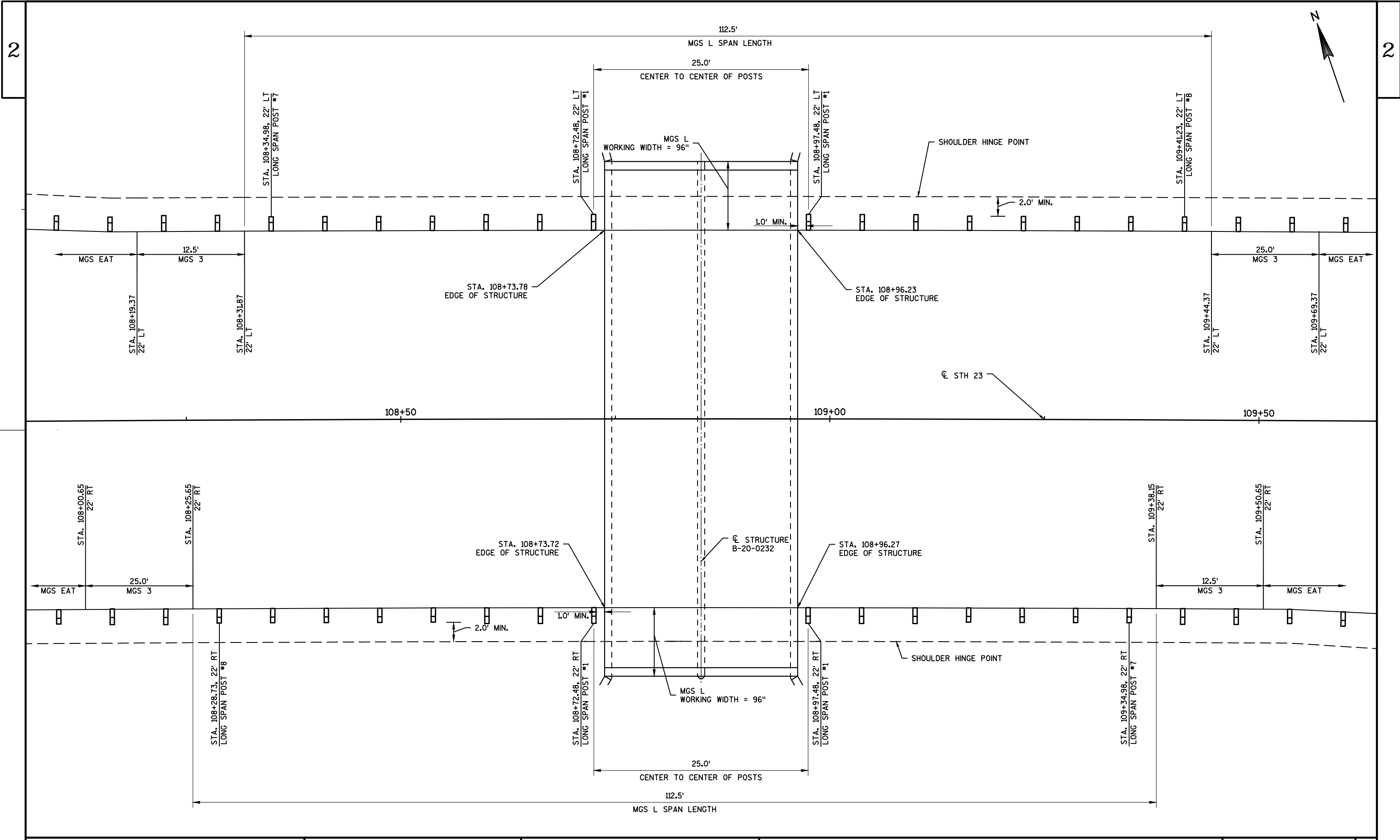


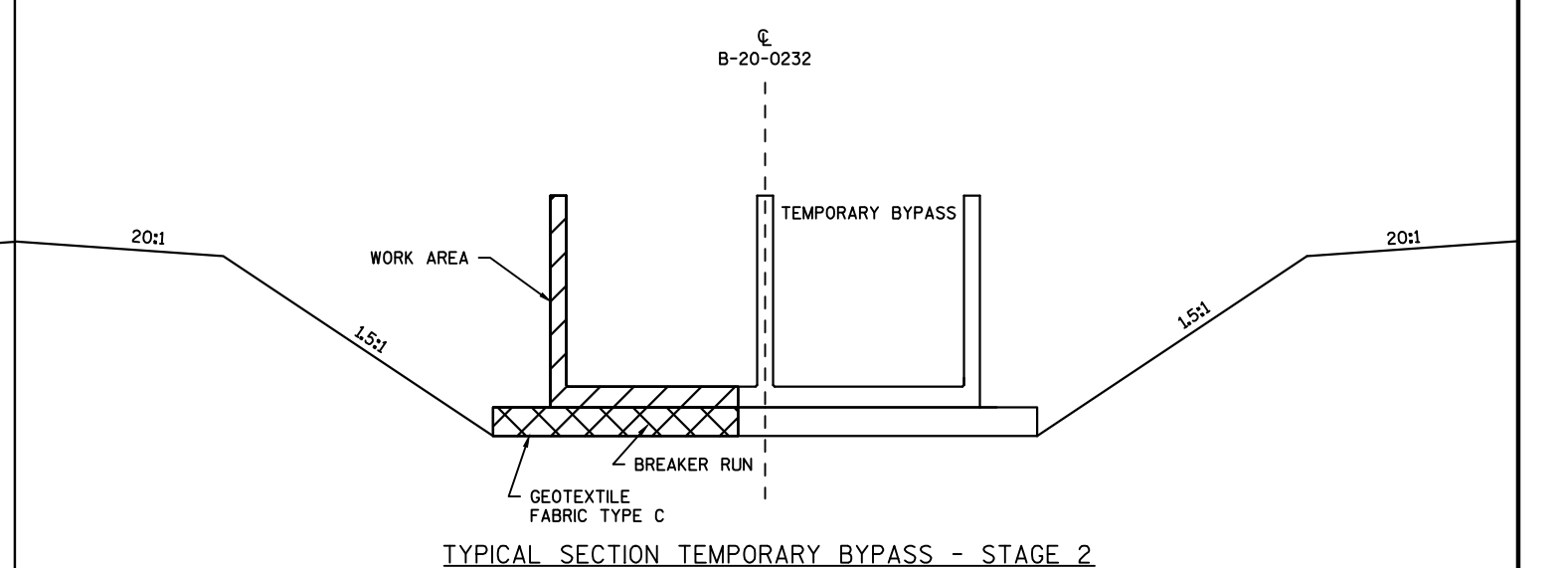
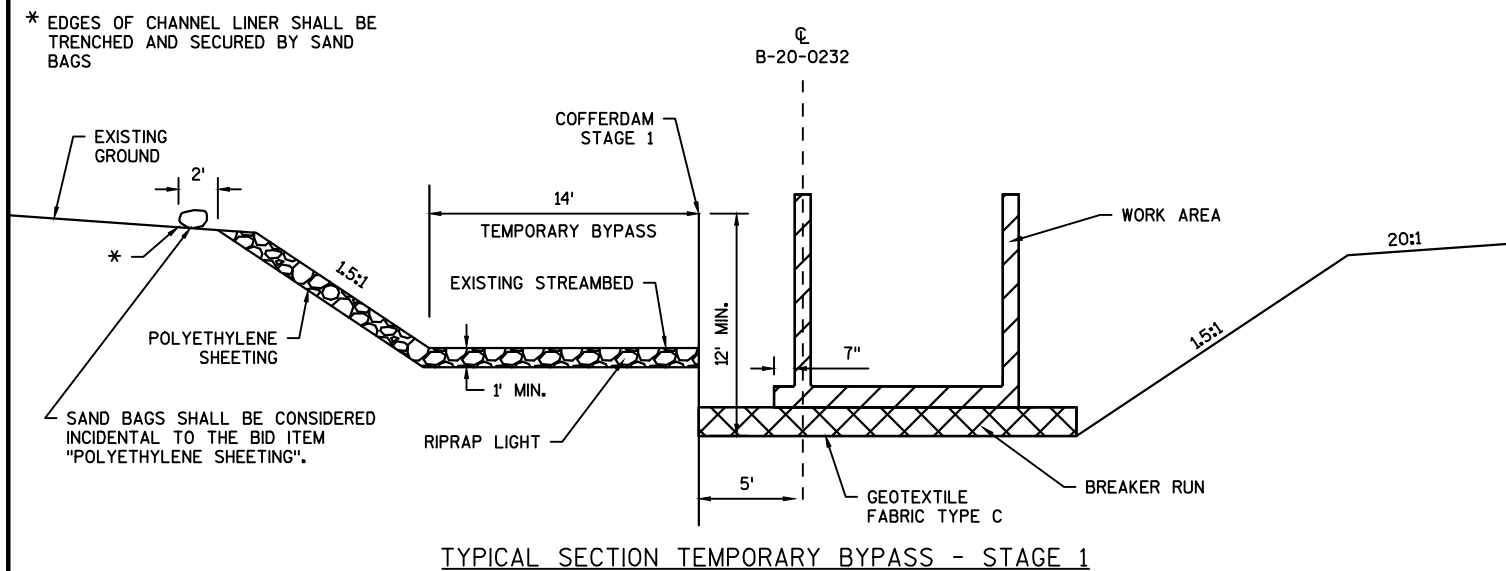
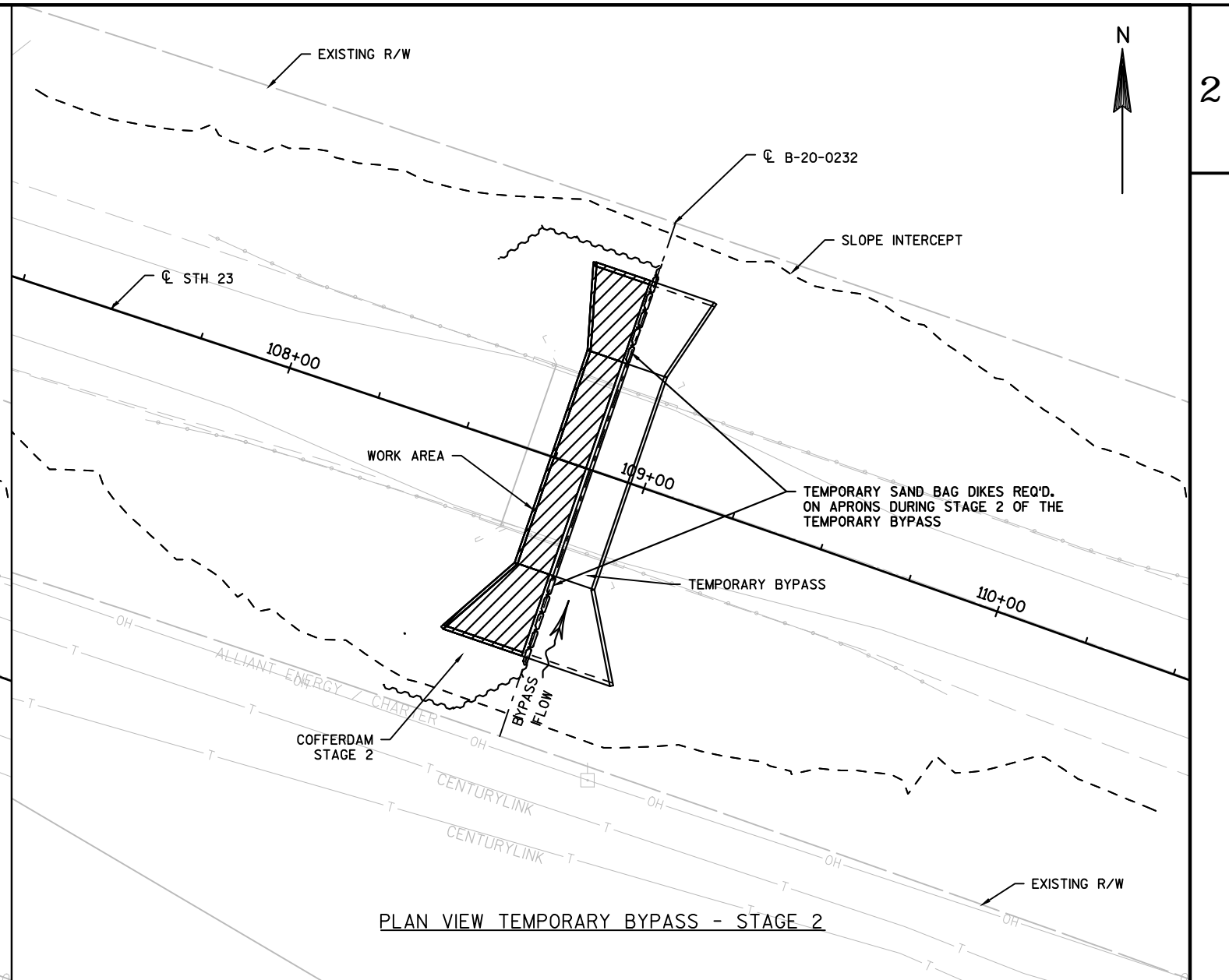
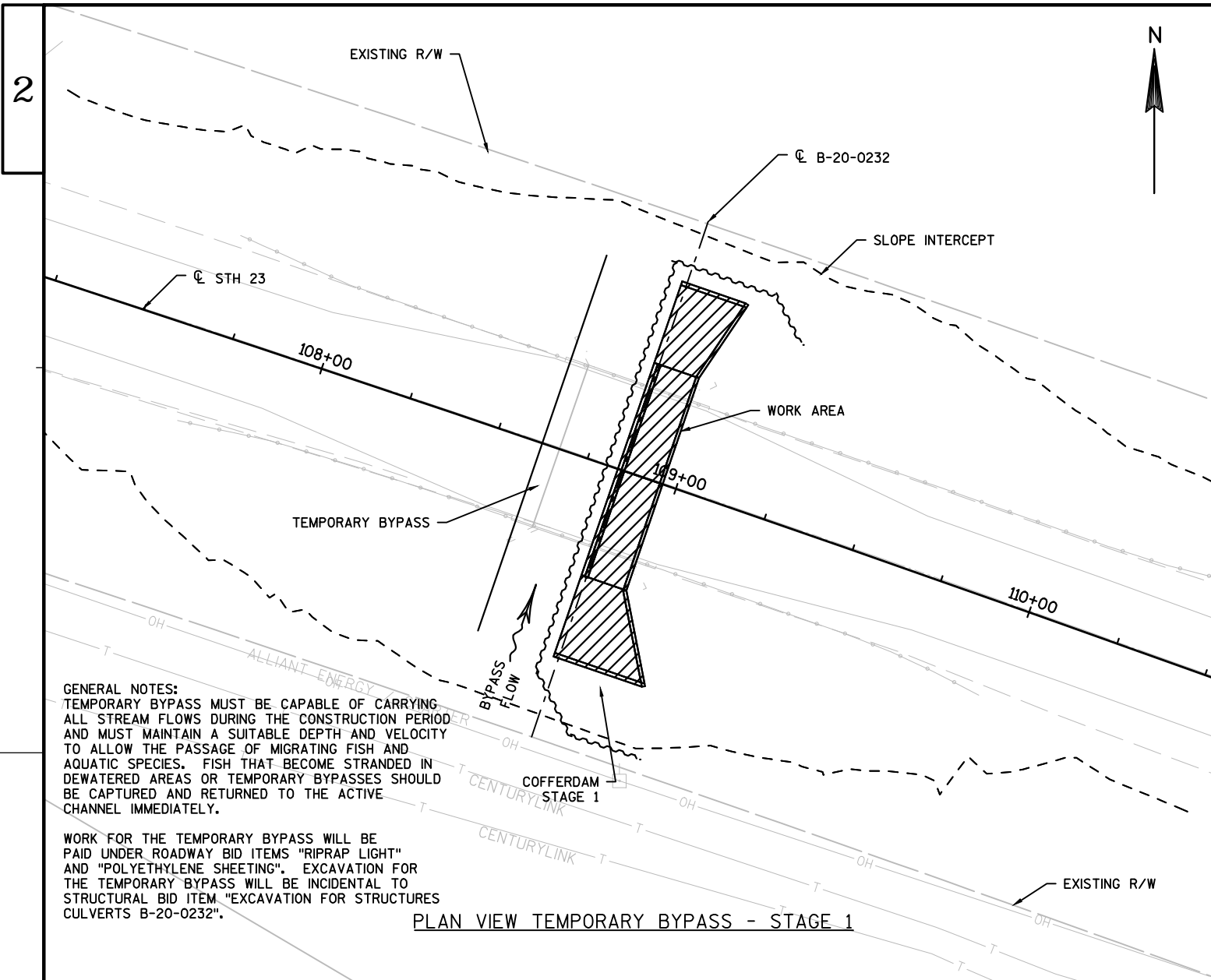
HMA PAVEMENT AND HMA OVERLAYS

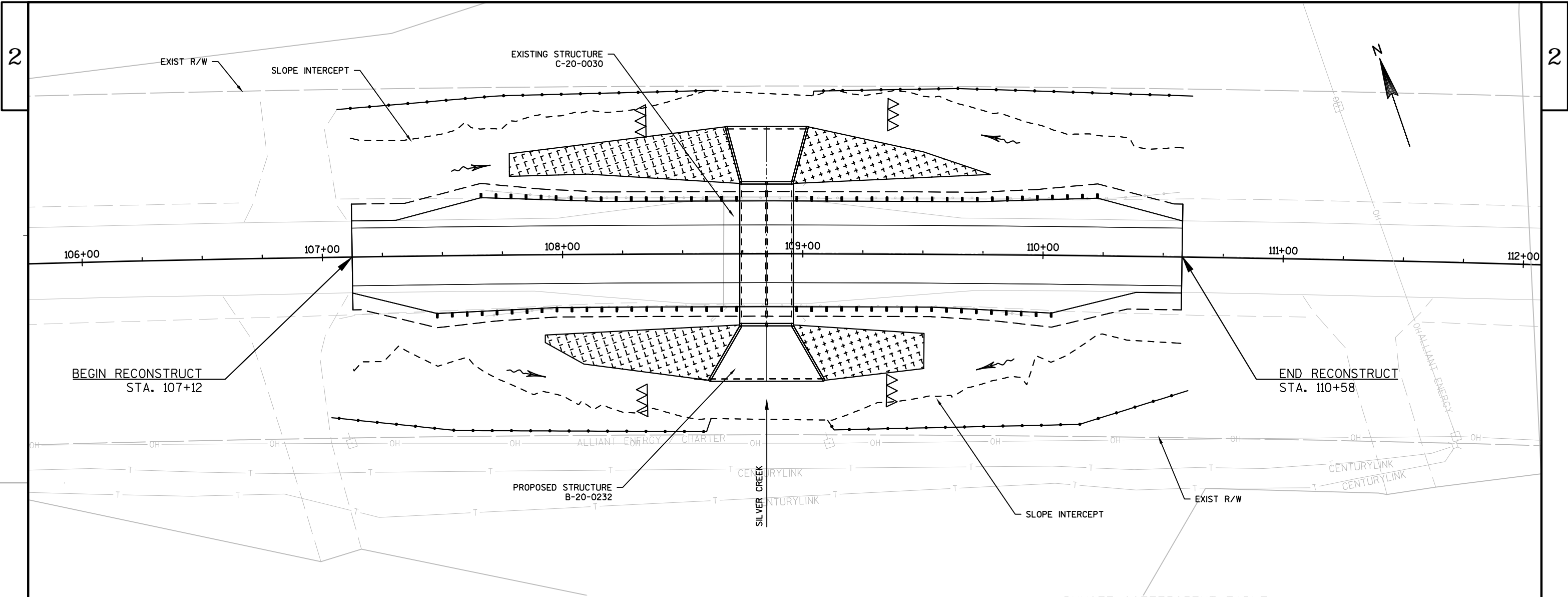
SAFETY EDGE



SHOULDER AGGREGATE PLACEMENT







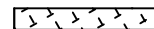
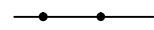


RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT						.70 - .95						
CONCRETE						.80 - .95						
BRICK						.70 - .80						
DRIVES, WALKS						.75 - .85						
ROOFS						.75 - .95						
GRAVEL ROADS, SHOULDERS						.40 - .60						

HIGH WATER, EL. 932.47±
TOTAL RECONSTRUCT AREA = 1.15 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.90 ACRES

SCALE, FEET 0 20 40

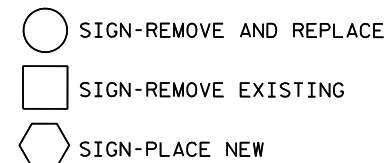
LEGEND

-  EROSION MAT URBAN CLASS I TYPE B
-  SILT FENCE
-  TEMPORARY DITCH CHECK
-  SURFACE WATER FLOW

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



E

SIGNING NOTES

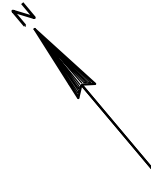
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.

W14-3
48" X 36"

20

R1-1
30" X 30"

21

BRANDON RD

BRANDON RD

R1-1
30" X 30"

22

W14-3
48" X 36"

23

○ SIGN-REMOVE AND REPLACE

□ SIGN-REMOVE EXISTING

◡ SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

PROJECT NO:1430-15-71

HWY:STH 23

COUNTY:FOND DU LAC

PERMANENT SIGNING

SHEET

E

SIGNING NOTES

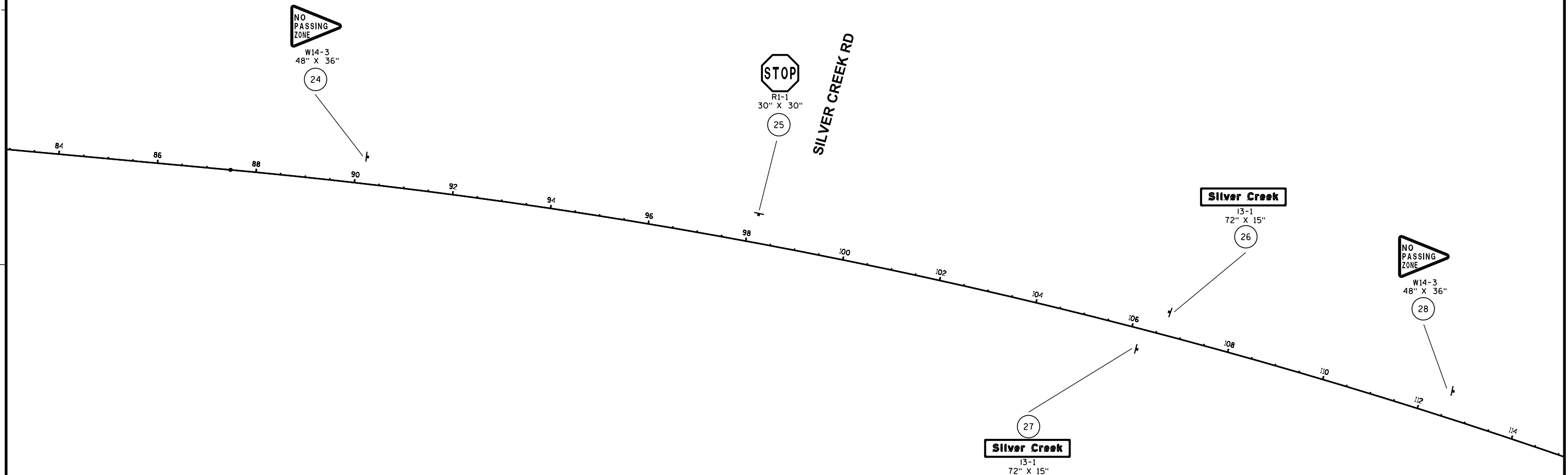
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.




WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



-  SIGN-REMOVE AND REPLACE
-  SIGN-REMOVE EXISTING
-  SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO:1430-15-71

HWY:STH 23

COUNTY:FOND DU LAC

PERMANENT SIGNING

SHEET

E

SIGNING NOTES

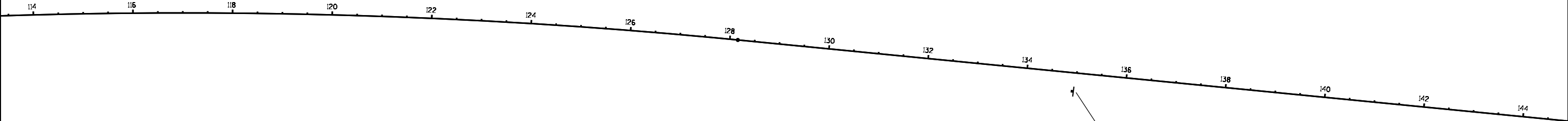
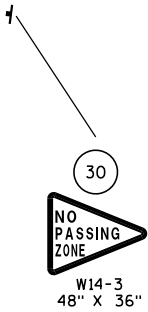
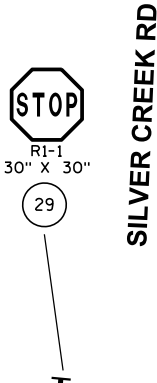
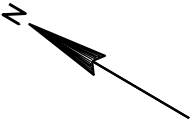
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.




WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



-  SIGN-REMOVE AND REPLACE
-  SIGN-REMOVE EXISTING
-  SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

SIGNING NOTES

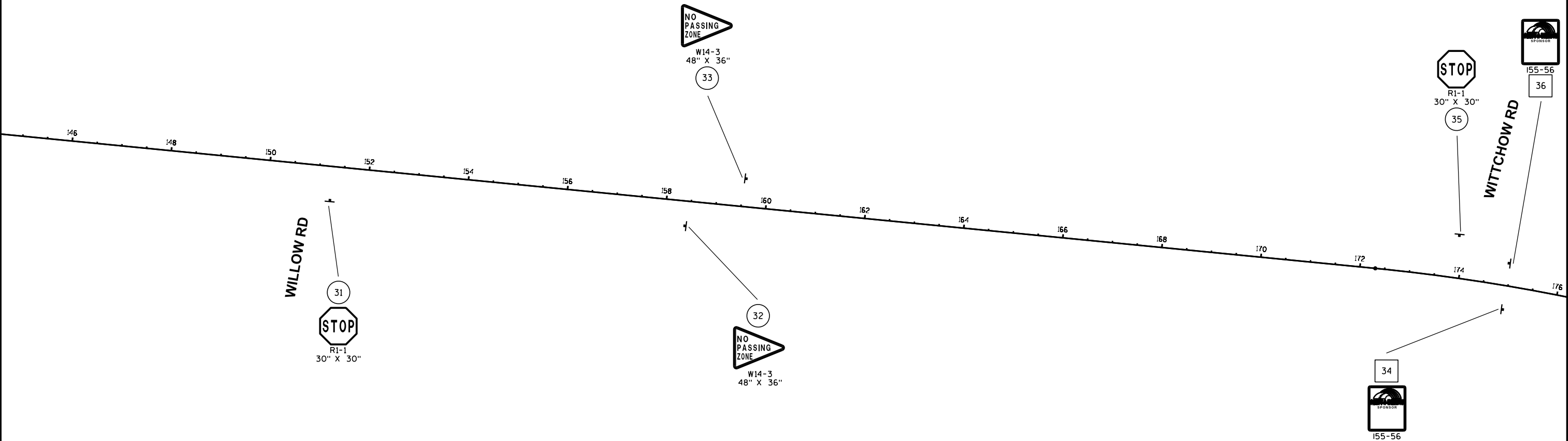
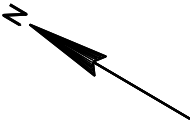
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO:1430-15-71	HWY:STH 23	COUNTY:FOND DU LAC	PERMANENT SIGNING	SHEET	E
-----------------------	------------	--------------------	-------------------	-------	---

SIGNING NOTES

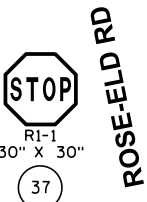
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



W14-3
48" X 36"

39

238

236

234

232

230

228

226

224

222

220

218

216

214

212




210

208

40



J1-1
24" X 39"

-  SIGN-REMOVE AND REPLACE
-  SIGN-REMOVE EXISTING
-  SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

SIGNING NOTES

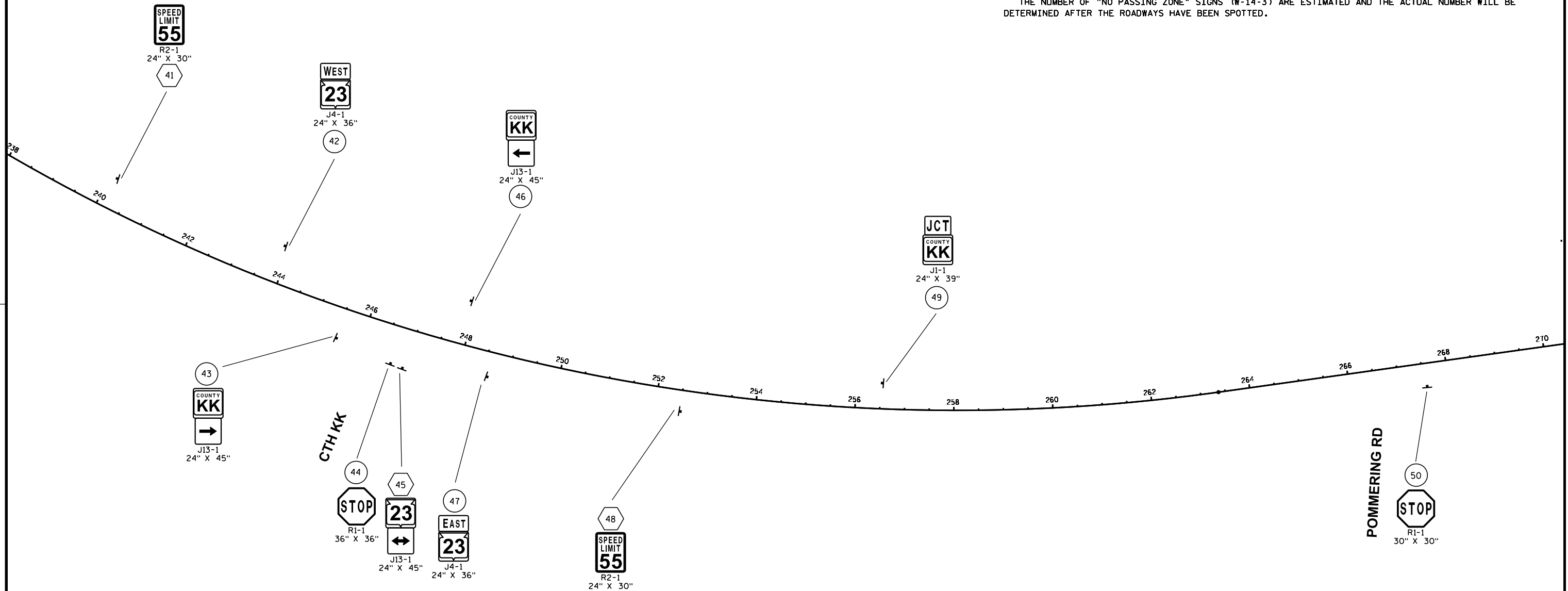
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

PROJECT NO:1430-15-71

HWY:STH 23

COUNTY:FOND DU LAC

PERMANENT SIGNING

SHEET

E

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



W14-3
48" X 36"

52



I55-56

54



W14-3
48" X 36"

51

53

JCT

COUNTY

M

J1-1

24" X 39"



SIGN-REMOVE AND REPLACE



SIGN-REMOVE EXISTING



SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

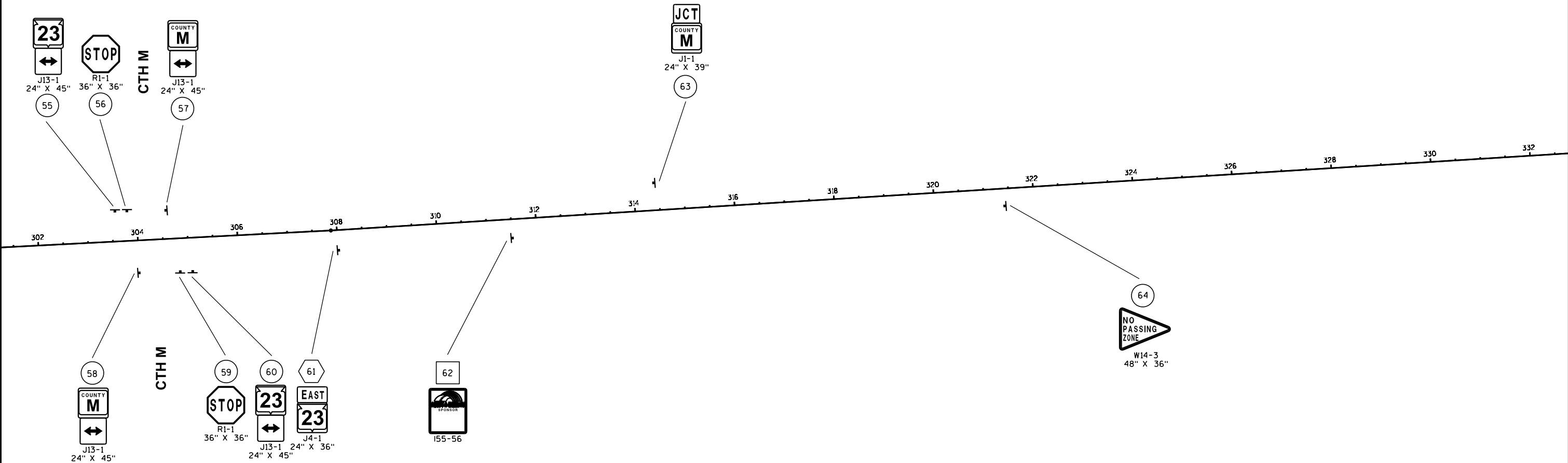
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

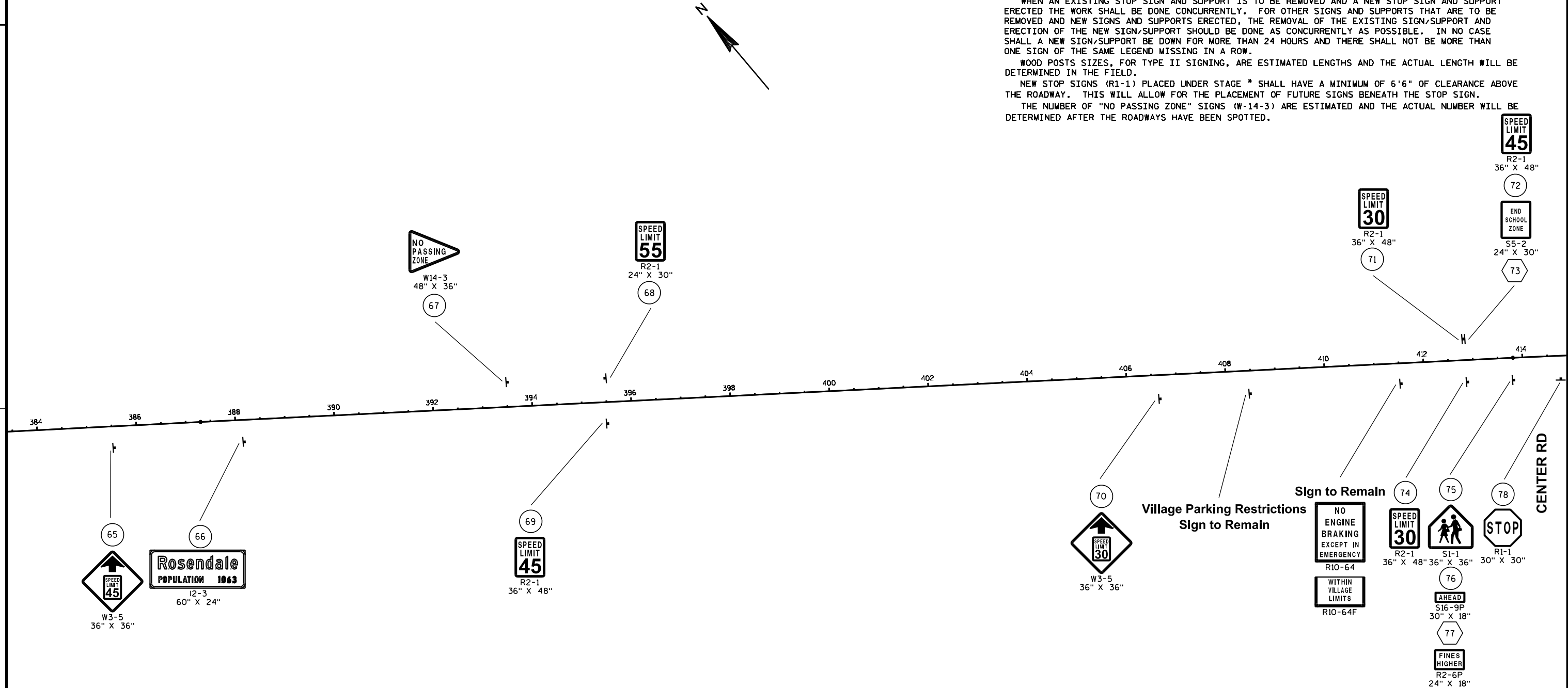
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO:1430-15-71

HWY:STH 23

COUNTY:FOND DU LAC

PERMANENT SIGNING

SHEET

E

SIGNING NOTES

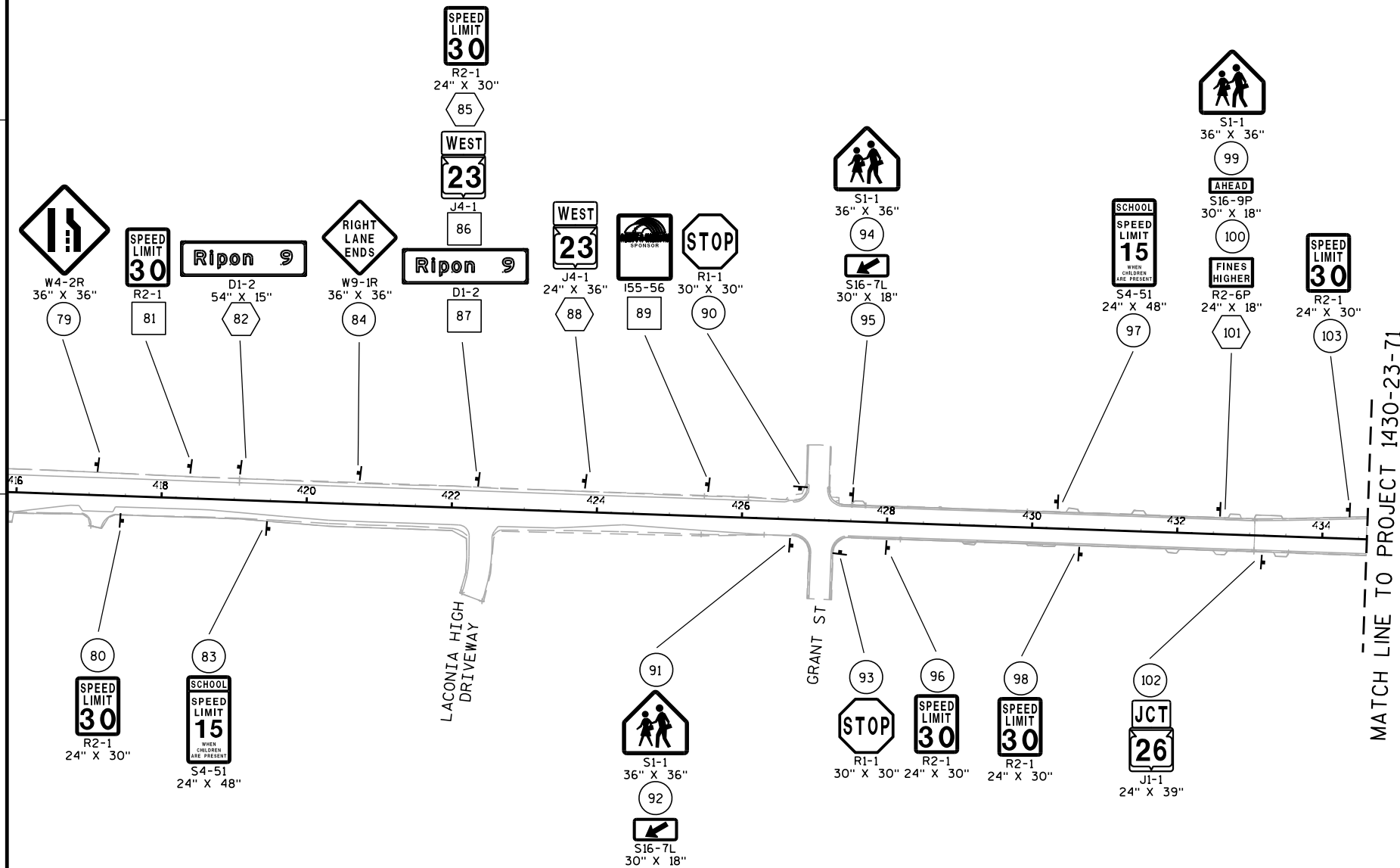
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

PROJECT NO:1430-15-71

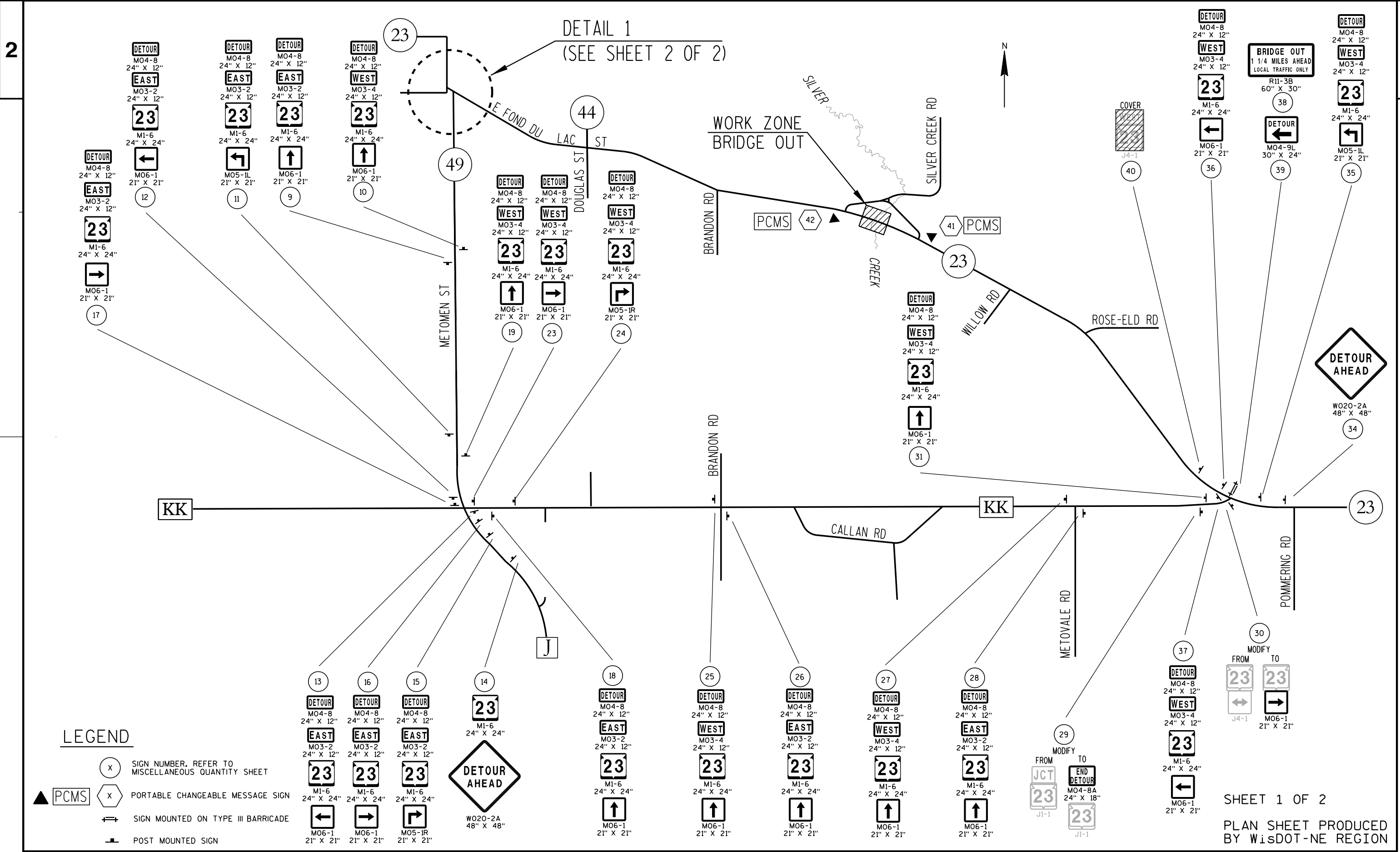
HWY:STH 23

COUNTY:FOND DU LAC

PERMANENT SIGNING

SHEET

E



LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
- (PCMS) PORTABLE CHANGEABLE MESSAGE SIGN
- (BARRICADE) SIGN MOUNTED ON TYPE III BARRICADE
- (POST) POST MOUNTED SIGN

SHEET 1 OF 2
PLAN SHEET PRODUCED
BY WISDOT-NE REGION



		SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
		
		PORTABLE CHANGEABLE MESSAGE SIGN
		SIGN MOUNTED ON TYPE III BARRICADE
		POST MOUNTED SIGN

SHEET 2 OF 2

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

DATE 04MAY15		E S T I M A T E O F Q U A N T I T I E S			
LINE					1430-15-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0100	Removing Small Pipe Culverts	EACH	7.000	7.000
0020	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 108+81	LS	1.000	1.000
0030	204.0100	Removing Pavement	SY	212.000	212.000
0040	204.0115	Removing Asphaltic Surface Butt Joints	SY	85.000	85.000
0050	204.0120	Removing Asphaltic Surface Milling	SY	142,310.000	142,310.000
0060	204.0155	Removing Concrete Sidewalk	SY	17.000	17.000
0070	204.0165	Removing Guardrail	LF	500.000	500.000
0080	204.0210	Removing Manholes	EACH	2.000	2.000
0090	204.0220	Removing Inlets	EACH	1.000	1.000
0100	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	64.000	64.000
0110	205.0100	Excavation Common	CY	2,218.000	2,218.000
0120	206.2000	Excavation for Structures Culverts (structure) 01. B-20-0232	LS	1.000	1.000
0130	206.5000	Cofferdams (structure) 01. B-20-0232	LS	1.000	1.000
0140	208.1100	Select Borrow	CY	74.000	74.000
0150	209.0100	Backfill Granular	CY	1,440.000	1,440.000
0160	210.0100	Backfill Structure	CY	258.000	258.000
0170	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	94.000	94.000
0180	213.0100	Finishing Roadway (project) 01. 1430-15-71	EACH	1.000	1.000
0190	305.0110	Base Aggregate Dense 3/4-Inch	TON	7,635.000	7,635.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,066.000	2,066.000
0210	305.0500	Shaping Shoulders	STA	119.000	119.000
0220	311.0115	Breaker Run	CY	202.000	202.000
0230	440.4410.S	Incentive IRI Ride	DOL	31,120.000	31,120.000
0240	455.0105	Asphaltic Material PG58-28	TON	2,000.000	2,000.000
0250	455.0605	Tack Coat	GAL	17,375.000	17,375.000
0260	460.1103	HMA Pavement Type E-3	TON	35,000.000	35,000.000
0270	460.2000	Incentive Density HMA Pavement	DOL	22,400.000	22,400.000
0280	460.4000	HMA Cold Weather Paving	TON	5,250.000	5,250.000
0290	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	41,110.000	41,110.000
0300	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	400.000	400.000
0310	465.0125	Asphaltic Surface Temporary	TON	80.000	80.000
0320	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural	LF	36,100.000	36,100.000
0330	504.0100	Concrete Masonry Culverts	CY	240.000	240.000
0340	505.0410	Bar Steel Reinforcement HS Culverts	LB	28,760.000	28,760.000
0350	505.0610	Bar Steel Reinforcement HS Coated Culverts	LB	3,000.000	3,000.000
0360	516.0500	Rubberized Membrane Waterproofing	SY	82.000	82.000
0370	520.8000	Concrete Collars for Pipe	EACH	3.000	3.000
0380	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	100.000	100.000
0390	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	373.000	373.000
0400	522.0142	Culvert Pipe Reinforced Concrete Class III 42-Inch	LF	96.000	96.000
0410	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0420	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	8.000	8.000

DATE 04MAY15		E S T I M A T E O F Q U A N T I T I E S			
LINE					1430-15-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0430	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	2.000	2.000
0440	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	30.000	30.000
0450	602.0410	Concrete Sidewalk 5-Inch	SF	150.000	150.000
0460	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	24.000	24.000
0470	606.0100	Riprap Light	CY	103.000	103.000
0480	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	64.000	64.000
0490	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	16.000	16.000
0500	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	8.000	8.000
0510	611.0530	Manhole Covers Type J	EACH	2.000	2.000
0520	611.0660	Inlet Covers Type WM	EACH	1.000	1.000
0530	611.2003	Manholes 3-FT Diameter	EACH	2.000	2.000
0540	611.3230	Inlets 2x3-FT	EACH	1.000	1.000
0550	611.8120.S	Cover Plates Temporary	EACH	2.000	2.000
0560	614.0010	Barrier System Grading Shaping Finishing	EACH	4.000	4.000
0570	614.2300	MGS Guardrail 3	LF	75.000	75.000
0580	614.2340	MGS Guardrail 3 L	LF	225.000	225.000
0590	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0600	619.1000	Mobilization	EACH	1.000	1.000
0610	625.0500	Salvaged Topsoil	SY	2,190.000	2,190.000
0620	627.0200	Mulching	SY	1,785.000	1,785.000
0630	628.1504	Silt Fence	LF	1,080.000	1,080.000
0640	628.1520	Silt Fence Maintenance	LF	1,080.000	1,080.000
0650	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0660	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0670	628.2004	Erosion Mat Class I Type B	SY	65.000	65.000
0680	628.2008	Erosion Mat Urban Class I Type B	SY	560.000	560.000
0690	628.5505	Polyethylene Sheeting	SY	345.000	345.000
0700	628.7015	Inlet Protection Type C	EACH	10.000	10.000
0710	628.7504	Temporary Ditch Checks	LF	224.000	224.000
0720	628.7555	Culvert Pipe Checks	EACH	8.000	8.000
0730	629.0210	Fertilizer Type B	CWT	1.850	1.850
0740	630.0120	Seeding Mixture No. 20	LB	74.500	74.500
0750	630.0200	Seeding Temporary	LB	74.500	74.500
0760	633.5200	Markers Culvert End	EACH	18.000	18.000
0770	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	62.000	62.000
0780	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	24.000	24.000
0790	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	3.000	3.000
0800	637.2210	Signs Type II Reflective H	SF	424.490	424.490
0810	637.2230	Signs Type II Reflective F	SF	193.000	193.000
0820	638.2602	Removing Signs Type II	EACH	85.000	85.000
0830	638.3000	Removing Small Sign Supports	EACH	88.000	88.000
0840	642.5001	Field Office Type B	EACH	1.000	1.000
0850	643.0100	Traffic Control (project) 01. 1430-15-71	EACH	1.000	1.000
0860	643.0420	Traffic Control Barricades Type III	DAY	118.000	118.000
0870	643.0705	Traffic Control Warning Lights Type A	DAY	236.000	236.000
0880	643.0920	Traffic Control Covering Signs Type II	EACH	4.000	4.000
0890	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0900	643.2000	Traffic Control Detour (project) 01. 1430-15-71	EACH	1.000	1.000

DATE 04MAY15		E S T I M A T E O F Q U A N T I T I E S				
LINE					1430-15-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	
0910	643.3000	Traffic Control Detour Signs	DAY	6,077.000	6,077.000	
0920	645.0105	Geotextile Fabric Type C	SY	465.000	465.000	
0930	646.0126	Pavement Marking Epoxy 8-Inch	LF	2,200.000	2,200.000	
0940	646.0406	Pavement Marking Same Day Epoxy 4-Inch	LF	41,110.000	41,110.000	
0950	646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF	82,160.000	82,160.000	
0960	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	30.000	30.000	
0970	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	50.000	50.000	
0980	648.0100	Locating No-Passing Zones	MI	7.786	7.786	
0990	649.0100	Temporary Pavement Marking 4-Inch	LF	50,000.000	50,000.000	
1000	650.6500	Construction Staking Structure Layout (structure) 01. B-20-0232	LS	1.000	1.000	
1010	650.8000	Construction Staking Resurfacing Reference	LF	41,110.000	41,110.000	
1020	690.0150	Sawing Asphalt	LF	440.000	440.000	
1030	690.0250	Sawing Concrete	LF	520.000	520.000	
1040	715.0502	Incentive Strength Concrete Structures	DOL	1,440.000	1,440.000	
1050	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000	
1060	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,320.000	1,320.000	
1070	SPV.0090	Special 01. MILLING AND REMOVING TEMPORARY JOINT	LF	41,110.000	41,110.000	
1080	SPV.0105	Special 01. TEMPORARY SAND BAG DIKE	LS	1.000	1.000	
1090	SPV.0195	Special 01. GRAVEL BED SUBSTRATE	TON	97.000	97.000	

3

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203. 0100 EACH	REMARKS
0010	197+00	STH 23	1	30" CMCP
0010	249+00	STH 23	1	30" CMCP
0010	283+17	STH 23	1	30" CMCP
0010	288+62	STH 23	1	30" CMCP
0010	404+11	STH 23	1	30" CMCP
0010	426+50	STH 23	2	30" CMCP
TOTAL 0010			7	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION	LOCATION	204. 0115 SY	REMARKS
0010	22+00	STH 23	6	BEGIN PROJECT
0010		BRANDON RD	6	
0010		SILVER CREEK RD WEST	5	
0010		SILVER CREEK RD EAST	5	
0010		WILLOW RD	5	
0010		WITTCHOW RD	5	
0010		ROSE-ELD RD	6	
0010		CTH KK	6	
0010		POMMERING RD	5	
0010		CTH M NORTH	6	
0010		CTH M SOUTH	6	
0010		CENTER RD	5	
0010		GRANT ST NORTH	5	
0010		GRANT ST SOUTH	5	
0010	433+10	STH 23	9	END PROJECT
TOTAL 0010			85	

REMOVING CONCRETE SIDEWALK

CATEGORY	STATION	LOCATION	204. 0155 SY	REMARKS
0010	427+30	GRANT ST	6	NE CURB RAMP
0010	427+30	GRANT ST	6	SE CURB RAMP
0010	426+90	GRANT ST	5	SW CURB RAMP
TOTAL 0010			17	

REMOVING PAVEMENT

CATEGORY	STATION	LOCATION	204. 0100 SY	REMARKS
0010	90+99	STH 23	33	FROST HEAVE REPAIR
0010	192+00	STH 23	33	FROST HEAVE REPAIR
0010	197+00	STH 23	22	CULVERT PIPE REPLACEMENT
0010	249+00	STH 23	26	CULVERT PIPE REPLACEMENT
0010	283+17	STH 23	18	CULVERT PIPE REPLACEMENT
0010	288+62	STH 23	18	CULVERT PIPE REPLACEMENT
0010	404+11	STH 23	18	CULVERT PIPE REPLACEMENT
0010	426+50	STH 23	38	CULVERT PIPE REPLACEMENT
0010	427+75	STH 23, LT	6	DRIVEWAY APPROACH
TOTAL 0010			212	

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION TO	STATION	LOCATION	204. 0120 SY
0010	22+00 -	433+10	STH 23, MAINLINE	109627
0010	22+00 -	33+50	LT SHOULDER	384
0010	33+50 -	413+89	RT & LT SHOULDER	25360
0010	413+89 -	426+50	RT SHOULDER	421
0010	413+89 -	426+50	BYPASS LANE	1682
0010			INTERSECTIONS	1734
0010			UNDISTRIBUTED	2222
			TOTAL 0010	141430
0030	426+50 -	433+10	PARKING LANES	880
			TOTAL 0030	880

REMOVING GUARDRAIL

CATEGORY	STATION TO	STATION	LOCATION	204. 0165 LF
0010	106+91 -	109+79	STH 23, RT	250
0010	107+63 -	110+14	STH 23, LT	250
			TOTAL 0010	500

3

3

REMOVING MANHOLES

CATEGORY	STATION	LOCATION	204. 0210 EACH	REMARKS
0010	427+00	STH 23	1	REMOVE AND REPLACE (MH- 1)
0010	428+20	STH 23	1	REMOVE AND REPLACE (MH- 2)
TOTAL 0010			2	

REMOVING STORM SEWER (SIZE)

CATEGORY	STATION TO	STATION	LOCATION	204. 0245 LF	REMARKS
0010	428+15	- 428+90	STH 23	64	12-INCH MH- 2 TO I- 1
TOTAL 0010				64	

SELECT BORROW

CATEGORY	STATION	LOCATION	208. 1100 CY	REMARKS
0010	90+99	STH 23	37	FROST HEAVE REPAIR
0010	192+00	STH 23	37	FROST HEAVE REPAIR
TOTAL 0010			74	

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION TO	STATION	LOCATION	305. 0110 TON	REMARKS
0010	22+00	- 33+50	STH 23 LT	75	SHOULDERS
0010	33+50	- 61+50	STH 23 RT & LT	364	SHOULDERS
0010	61+50	- 413+89	STH 23 RT & LT	6409	SHOULDERS
0010	107+12	- 110+58	STH 23 RT & LT	64	SHOULDERS
0010	413+89	- 426+50	STH 23 RT & LT	164	SHOULDERS
0010			DRIVEWAYS	195	
0010			UNDISTRIBUTED	364	
TOTAL 0010				7635	

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION TO	STATION	LOCATION	305. 0120 TON	REMARKS
0010	107+12	- 110+58	STH 23	2066	MAINLINE
TOTAL 0010				2066	

REMOVING INLETS

CATEGORY	STATION	LOCATION	204. 0220 EACH	REMARKS
0010	428+90	STH 23 LT	1	REMOVE AND REPLACE (I- 1)
TOTAL 0010			1	

EXCAVATION COMMON

CATEGORY	STATION TO	STATION	LOCATION	205. 0100 CY	REMARKS
0010	90+99		STH 23	37	FROST HEAVE REPAIR
0010	192+00		STH 23	37	FROST HEAVE REPAIR
0010	107+12	- 110+58	STH 23	2144	SHOULDERS LT/RT**
TOTAL 0010				2218	

**Note: This quantity is from the Earthwork M sheet located at the end of the M sheets

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

CATEGORY	STATION TO	STATION	LOCATION	211. 0400 STA	REMARKS
0010	22+00	- 61+50	STH 23	40	SHOULDERS, LT
0010	33+50	- 61+50	STH 23	28	SHOULDERS, RT
0010	413+81	- 426+50	STH 23	26	SHOULDERS, RT/LT
TOTAL 0010				94	

SHAPING SHOULDERS

CATEGORY	STATION TO	STATION	LOCATION	305. 0500 STA	REMARKS
0010	33+50	- 40+00	STH 23	7	SUPERELEVATION
0010	60+00	- 68+00	STH 23	8	SUPERELEVATION
0010	85+00	- 130+00	STH 23	45	SUPERELEVATION
0010	171+00	- 190+00	STH 23	19	SUPERELEVATION
0010	226+00	- 265+50	STH 23	40	SUPERELEVATION
TOTAL 0010				119	

3

ASPHALTIC MATERIAL PG58-28

CATEGORY	STATION TO	STATION	LOCATION	455. 0105 TON	REMARKS
0010	22+00 -	33+50	STH 23	21	
0010	33+50 -	61+50	STH 23	128	
0010	61+50 -	413+89	STH 23	1422	
0010	413+89 -	426+50	STH 23	70	
0010	426+50 -	433+10	STH 23	10	
0010	107+12 -	110+58	STH 23	19	MAINLINE
0010	107+12 -	110+58	STH 23	8	SHOULDERS LT
0010	107+12 -	110+58	STH 23	8	SHOULDERS RT
0010			INTERSECTIONS	234	
0010			UNDISTRIBUTED	70	
TOTAL 0010				1990	
0030	426+50 -	433+10	PARKING LANES	10	
TOTAL 0030				10	

HMA PAVEMENT TYPE E-3

CATEGORY	STATION TO	STATION	LOCATION	460. 1103 TON	REMARKS
0010	22+00 -	33+50	STH 23	380	
0010	33+50 -	61+50	STH 23	2328	
0010	61+50 -	413+89	STH 23	25842	
0010	413+89 -	426+50	STH 23	1264	
0010	426+50 -	433+10	STH 23	205	
0010	107+12 -	110+58	STH 23	332	MAINLINE
0010	107+12 -	110+58	STH 23	130	SHOULDERS LT
0010	107+12 -	110+58	STH 23	130	SHOULDERS RT
0010			INTERSECTIONS	3144	
0010			UNDISTRIBUTED	1095	
TOTAL 0010				34850	
0030	426+50 -	433+10	PARKING LANES	150	
TOTAL 0030				150	

TACK COAT

CATEGORY	STATION TO	STATION	LOCATION	455. 0605 GAL	REMARKS
0010	22+00 -	33+50	STH 23	223	
0010	33+50 -	61+50	STH 23	1270	
0010	61+50 -	413+89	STH 23	14096	
0010	413+89 -	426+50	STH 23	774	
0010	426+50 -	433+10	STH 23	176	
0010	107+12 -	110+58	STH 23	111	MAINLINE
0010	107+12 -	110+58	STH 23	44	SHOULDERS LT
0010	107+12 -	110+58	STH 23	44	SHOULDERS RT
0010			INTERSECTIONS	84	
0010			UNDISTRIBUTED	500	
TOTAL 0010				17322	
0030	426+50 -	433+10	PARKING LANES	53	
TOTAL 0030				53	

HMA COLD WEATHER PAVING

CATEGORY	STATION TO	STATION	LOCATION	460. 4000 TON	REMARKS
0010	22+00 -	433+10	STH 23	5250	UNDISTRIBUTED
TOTAL 0010				5250	

REHEATING HMA LONGITUDINAL JOINTS

CATEGORY	STATION TO	STATION	LOCATION	460. 4110. S LF	REMARKS
0010	22+00 -	433+10	STH 23	41110	CENTER LINE
TOTAL 0010				41110	

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CATEGORY	STATION TO	STATION	LOCATION	465. 0120 TON	REMARKS
0010	22+00 -	433+10	UNDISTRIBUTED	400	
TOTAL 0010				400	

3

ASPHALTIC SURFACE TEMPORARY

ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL

CATEGORY	STATION	LOCATION	465.0125 TON	REMARKS
0010	90+99	STH 23	10	FROST HEAVE REPAIR
0010	192+00	STH 23	10	FROST HEAVE REPAIR
0010	197+00	STH 23	10	CULVERT PIPE REPLACEMENT
0010	249+00	STH 23	10	CULVERT PIPE REPLACEMENT
0010	283+17	STH 23	10	CULVERT PIPE REPLACEMENT
0010	288+62	STH 23	10	CULVERT PIPE REPLACEMENT
0010	404+11	STH 23	10	CULVERT PIPE REPLACEMENT
0010	426+50	STH 23	10	CULVERT PIPE REPLACEMENT
TOTAL 0010			80	

STATION TO	STATION	LOCATION	465.0475 LF	REMARKS
33+50 -	61+00	STH 23	3750	
63+00 -	99+75	STH 23	3675	
101+75 -	123+25	STH 23	2150	
125+25 -	181+00	STH 23	5575	
183+00 -	246+50	STH 23	6350	
250+00 -	306+00	STH 23	5600	
310+00	400+00	STH 23	9000	
TOTAL 0010			36100	

3

522- CULVERTS

CATEGORY	STATION	LOCATION	522.0130 CPRC CLASS III 30- INCH LF	522.0136 CPRC CLASS III 36- INCH LF	522.0142 CPRC CLASS III 42- INCH LF	522.1030 AEW FOR CPRC 30- INCH EACH	522.1036 AEW FOR CPRC 36- INCH EACH	522.1042 AEW FOR CPRC 42- INCH EACH	REMARKS
0010	197+00	STH 23	100			2			30" CPRC
0010	249+00	STH 23		117			2		36" CPRC
0010	283+17	STH 23		84			2		36" CPRC
0010	288+62	STH 23		86			2		36" CPRC
0010	404+11	STH 23		86			2		36" CPRC
0010	426+50	STH 23			96			2	42" CPRC
TOTAL 0010			100	373	96	2	8	2	

3

CONCRETE CURB & GUTTER 30-INCH TYPE D

CATEGORY	STATION TO	STATION	LOCATION	601. 0411 LF	REMARKS
0010	427+60	- 427+75	STH 23 LT	15	VILLAGE OF ROSENDALE
0010	427+90	- 428+05	STH 23 RT	15	VILLAGE OF ROSENDALE
TOTAL 0010				30	

CURB RAMP DETECTABLE WARNING FIELD YELLOW

CATEGORY	LOCATION	602. 0505 SF	REMARKS
0010	NEC GRANT ST	8	VILLAGE OF ROSENDALE
0010	SEC GRANT ST	8	VILLAGE OF ROSENDALE
0010	SWC GRANT ST	8	VILLAGE OF ROSENDALE
TOTAL 0010		24	

CONCRETE SIDEWALK 5-INCH

CATEGORY	LOCATION	602. 0410 SF	REMARKS
0010	NEC GRANT ST	50	VILLAGE OF ROSENDALE
0010	SEC GRANT ST	50	VILLAGE OF ROSENDALE
0010	SWC GRANT ST	50	VILLAGE OF ROSENDALE
TOTAL 0010		150	

RI PRAP LIGHT

CATEGORY	STATION	LOCATION	606. 0100 CY	REMARKS
0010	108+71	STH 23 RT/LT	103	TEMP BYPASS STAGE 1
TOTAL 0010			103	

611-STORM

CATEGORY	NO	STATION	TO	STATION	RIM ELEV	FLOW LINE ELEV	DEPTH TO FLOW LINE (FT)	LOCATION	MANHOLES 3- FT DIAM 611. 2003 EACH	INLETS 2X3- FT 611. 3230 EACH	MANHOLE COVERS TYPE J 611. 0530 EACH	INLET COVERS TYPE WM 611. 0660 EACH	COVER PLATE TEMPORARY 611. 8120. S EACH	CONCRETE COLLARS FOR PIPE 520. 8000	STORM SEWER RC CLASS III 12-INCH 608. 0312 LF	STORM SEWER RC CLASS III 18-INCH 608. 0318	STORM SEWER RC CLASS III 24-INCH 608. 0324 LF
0010	MH- 1	427+00			905. 09	900. 09	5. 00	STH 23	1		1		1	2		8	
0010	MH- 2	428+20			904. 41	901. 29	3. 12	STH 23	1		1		1	1		8	8
0010	I- 1	428+90			903. 91	901. 96	1. 95			1		1					
0010		428+20	-	428+90											64		
TOTAL 0010									2	1	2	1	2	3	64	16	8

3

BARRIER SYSTEM GRADING SHAPING FINISHING

CATEGORY	STATION TO	STATION	LOCATION	614. 0010 EACH	REMARKS
0010	108+00 -	109+50	STH 23 RT	2	
0010	108+19 -	109+70	STH 23 LT	2	
TOTAL 0010				4	

BEAMGUARD SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614. 2300 LF	MGS GUARDRAIL 3 L 614. 2340 LF	MGS GUARDRAIL TERMINAL EAT 614. 2610 EACH	REMARKS
0010	108+00	-	109+50	STH 23 RT	37. 5	112. 5	2	MAINLINE RT
0010	108+19	-	109+70	STH 23 LT	37. 5	112. 5	2	MAINLINE LT
PROJECT TOTALS =					75. 0	225. 0	4	

POLYETHYLENE SHEETING

CATEGORY	STATION	LOCATION	628. 5505 SY	REMARKS
0010	108+71	STH 23 RT/LT	345	TEMP BYPASS STAGE 1
PROJECT TOTALS =			345	

NOTE: SAND BAGS USED TO SECURE LINER ARE INCIDENTAL TO THIS ITEM

INLET PROTECTION TYPE C

CATEGORY TO	STATION	LOCATION	628. 7015 EACH
0010	PROJECT	STH 23	10
TOTAL 0010			10

628- EROSION

CATEGORY	STATION TO	STATION	LOCATION	625. 0500 SALVAGED TOPSOIL SY	627. 0200 MULCHING SY	628. 1504 SILT FENCE LF	628. 1520 SILT FENCE MAINTENANCE LF	628. 1905 MOBILIZ EROSION CONTROL EACH	628. 1910 EMERG MOB EROSION CONTROL EACH	628. 2004 EROSION MAT CLASS I TYPE B SY	628. 2008 EROSION MAT URBAN CLASS I TYPE B SY	628. 7555 CULVERT PIPE CHECKS EACH	629. 0210 FERTILIZER TYPE B CWT	630. 0120 SEED MIXTURE NO. 20 LB	630. 0200 TEMP SEED LB	REMARKS
0010	90+99			20	20	40	40			5		1	0. 02	0. 5	0. 5	FROST HEAVE REPAIR
0010	107+00 -	108+62	STH 23 RT			165	165									
0010	107+02 -	108+67	STH 23 LT			170	170									
0010	109+03 -	110+63	STH 23 RT			165	165									
0010	109+10 -	110+61	STH 23 LT			160	160									
0010	107+12 -	108+74	STH 23 RT	460	350						115		0. 40	16. 0	16. 0	
0010	107+12 -	108+74	STH 23 LT	505	385						200		0. 40	17. 0	17. 0	
0010	108+96 -	110+58	STH 23 RT	415	350						65		0. 35	14. 5	14. 5	
0010	108+96 -	110+58	STH 23 LT	515	450						125		0. 40	17. 5	17. 5	
0010	192+00			20	20	40	40			5		1	0. 02	0. 7	0. 7	FROST HEAVE REPAIR
0010	197+00			25	20	40	40			10		1	0. 02	0. 7	0. 7	CULVERT PIPE REPLACEMENT
0010	249+00			25	20	40	40			10		1	0. 02	0. 7	0. 7	CULVERT PIPE REPLACEMENT
0010	283+17			25	20	40	40			10		1	0. 02	0. 7	0. 7	CULVERT PIPE REPLACEMENT
0010	288+62			25	20	40	40			10		1	0. 02	0. 7	0. 7	CULVERT PIPE REPLACEMENT
0010	404+11			25	20	40	40			10		1	0. 02	0. 7	0. 7	CULVERT PIPE REPLACEMENT
0010	426+50			25	25	40	40			5	55	1	0. 03	0. 8	0. 8	CULVERT PIPE REPLACEMENT
0010		UNDISTRIBUTED		105	85	100	100						0. 13	4. 0	4. 0	
0010		PROJECT						3	2							
0010																
0010																
TOTAL 0010				2190	1785	1080	1080	3	2	65	560	8	1. 85	74. 5	74. 5	

TEMPORARY DITCH CHECKS

CATEGORY	STATION TO	STATION	LOCATION	628. 7504 LF	REMARKS
0010	90+99		STH 23	16	FROST HEAVE REPAIR
0010	108+35		STH 23 RT	16	
0010	108+35		STH 23 LT	16	
0010	109+35		STH 23 RT	16	
0010	109+35		STH 23 LT	16	
0010	192+00		STH 23	16	FROST HEAVE REPAIR
0010	197+00		STH 23	16	CULVERT PIPE REPLACEMENT
0010	249+00		STH 23	16	CULVERT PIPE REPLACEMENT
0010	283+17		STH 23	16	CULVERT PIPE REPLACEMENT
0010	288+62		STH 23	16	CULVERT PIPE REPLACEMENT
0010	404+11		STH 23	16	CULVERT PIPE REPLACEMENT
0010	426+50		STH 23	16	CULVERT PIPE REPLACEMENT
0010		UNDISTRIBUTED		32	
TOTAL 0010				224	

MARKERS CULVERT END

CATEGORY	STATION TO	STATION	LOCATION	633. 5200 EACH	REMARKS
0010	90+99		STH 23	2	FROST HEAVE REPAIR
0010	108+85		STH 23	2	B- 20- 0232
0010	192+00		STH 23	2	FROST HEAVE REPAIR
0010	197+00		STH 23	2	CULVERT PIPE REPLACEMENT
0010	249+00		STH 23	2	CULVERT PIPE REPLACEMENT
0010	283+17		STH 23	2	CULVERT PIPE REPLACEMENT
0010	288+62		STH 23	2	CULVERT PIPE REPLACEMENT
0010	404+11		STH 23	2	CULVERT PIPE REPLACEMENT
0010	426+50		STH 23	2	CULVERT PIPE REPLACEMENT
TOTAL 0010				18	

REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVI NG SIGNS TYPE II EACH	638. 3000 REMOVI NG SMALL SI GN SUPPORTS EACH	REMARKS
1	STH 23, E. OF DOUGLAS ST/STH 44	J3-1	24" X 57"	9.50	---	---	1	---	1	1	NORTH STH 44, SEE PLAN SHEET
2	"	J4-1	24" X 36"	6.00	---	1	---	---	---	---	EAST STH 23
3	"	J4-1	---	---	---	---	---	---	1	1	EAST STH 23
4	"	D2-1	72" X 15"	7.50	---	2	---	---	---	2	ROSENDALE 8, SEE SIGN DETAIL SHEET, PART OF REMOVAL FOR SIGN #3
5	"	R2-1	24" X 30"	5.00	---	1	---	---	1	1	35 MPH
6	"	J3-1	24" X 57"	9.50	---	---	1	---	1	1	NORTH STH 44, SEE PLAN SHEET
7	"	R59-51	36" X 36"	9.00	---	1	---	---	1	1	
8	"	R2-1	24" X 30"	5.00	---	1	---	---	1	1	35 MPH
9	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	MOUNT ON BACK OF SIGN #10
10	"	R2-1	24" X 30"	5.00	---	1	---	---	---	---	35 MPH, PART OF REMOVAL FOR SIGN #9
11	"	J2-2	48" X 57"	19.00	---	---	1	---	1	1	SOUTH STH 44, NORTH STH 44, SEE PLAN SHEET
12	"	J1-1	24" X 39"	6.50	---	1	---	---	1	1	JCT STH 44
13	"	I55-56	---	---	---	---	---	---	1	1	PHI KAPPA PI MERRIMAN
14	"	R2-1	24" X 30"	5.00	---	1	---	---	1	1	55 MPH
15	"	R2-1	36" X 48"	12.00	---	---	1	---	1	1	35 MPH
16	"	J1-1	---	---	---	---	---	---	1	1	
17	STH 23, E. OF DOUGLAS ST/STH 44	R2-5A	---	---	---	---	---	---	1	1	ALSO REMOVE W13-1
18	"	W3-5	36" X 36"	---	9.00	---	1	---	---	---	
19	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
20	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
21	BRANDON RD	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
22	"	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
23	STH 23, E. OF BRANDON RD	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
24	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
25	SILVER CREEK RD	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
26	STH 23, E. OF SILVER CREEK RD	I3-1	72" X 15"	7.50	---	2	---	---	1	1	SILVER CREEK
27	"	I3-1	72" X 15"	7.50	---	2	---	---	1	1	SILVER CREEK
28	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
29	SILVER CREEK RD	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
30	STH 23, E. OF SILVER CREEK RD	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
31	WILLOW RD	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
32	STH 23, E. OF WILLOW RD	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
33	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
34	"	I55-56	---	---	---	---	---	---	1	1	PHI KAPPA PI MERRIMAN
35	WITTCHOW RD	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
36	STH 23, BETWEEN WITTCHOW & ROSE-ELD RD	I55-56	---	---	---	---	---	---	1	1	PHI SIGMA KAPPA
37	ROSE-ELD RD	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
38	STH 23, E. OF ROSE-ELD RD	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
39	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	

PAGE SUBTOTALS

150.26

75.00

31

5

0

35

37

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS											
SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
40	STH 23, E. OF ROSE-ELD RD	J1-1	24" X 39"	6.50	---	1	---	---	1	1	JCT CTH KK
41	"	R2-1	24" X 30"	5.00	---	1	---	---	---	---	55 MPH
42	"	J4-1	24" X 36"	6.00	---	1	---	---	1	1	WEST STH 23
43	"	J13-1	24" X 45"	7.50	---	---	1	---	1	1	CTH KK, SEE PLAN SHEET
44	CTH KK	R1-1	36" X 36"	7.46	---	1	---	---	1	1	
45	"	J13-1	24" X 45"	7.50	---	---	1	---	---	---	STH 23, SEE PLAN SHEET
46	STH 23, E. OF CTH KK	J13-1	24" X 45"	7.50	---	---	1	---	1	1	CTH KK, SEE PLAN SHEET
47	"	J4-1	24" X 36"	6.00	---	1	---	---	1	1	EAST STH 23
48	"	R2-1	24" X 30"	5.00	---	1	---	---	---	---	55 MPH
49	"	J1-1	24" X 39"	6.50	---	---	1	---	1	1	JCT CTH KK
50	POMMERING RD	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
51	STH 23, E. OF POMMERING RD	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
52	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
53	"	J1-1	24" X 39"	6.50	---	1	---	---	1	1	JCT CTH M
54	"	I55-56	---	---	---	1	---	---	1	1	PHI SIGMA KAPPA
55	CTH M	J13-1	24" X 45"	7.50	---	---	1	---	1	1	STH 23, SEE PLAN SHEET
56	"	R1-1	36" X 36"	7.46	---	1	---	---	1	1	
57	STH 23, E. OF CTH M	J13-1	24" X 45"	7.50	---	---	1	---	1	1	CTH M, SEE PLAN SHEET
58	STH 23, W. OF CTH M	J13-1	24" X 45"	7.50	---	---	1	---	1	1	CTH M, SEE PLAN SHEET
59	CTH M	R1-1	36" X 36"	7.46	---	1	---	---	1	1	
60	"	J13-1	24" X 45"	7.50	---	---	1	---	1	1	STH 23, SEE PLAN SHEET
61	STH 23, E. OF CTH M	J4-1	24" X 36"	6.00	---	1	---	---	---	---	EAST STH 23
62	"	I55-56	30" X 36"	7.50	---	1	---	---	1	1	ROSENDALE-BRANDON TEACHERS
63	"	J1-1	24" X 39"	6.50	---	1	---	---	1	1	JCT CTH M
64	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
65	"	W3-5	36" X 36"	---	9.00	---	1	---	1	1	45 MPH
66	"	I2-3	60" X 24"	10.00	---	1	---	---	1	1	
67	"	W14-3	48" X 36"	---	6.00	1	---	---	1	1	
68	"	R2-1	24" X 30"	5.00	---	1	---	---	1	1	55 MPH
69	"	R2-1	36" X 48"	12.00	---	---	1	---	1	1	45 MPH
70	STH 23, W. OF CENTER RD	W3-5	36" X 36"	---	9.00	---	1	---	1	1	30 MPH
71	"	R2-1	36" X 48"	12.00	---	---	1	---	1	1	30 MPH
72	"	R2-1	36" X 48"	12.00	---	---	---	1	---	1	45 MPH, PART OF REMOVAL FOR SIGN #71
73	"	S5-2	24" X 30"	5.00	---	---	---	---	---	---	MOUNT BELOW SIGN #72
74	"	R2-1	36" X 48"	12.00	---	---	1	---	1	1	30 MPH
75	"	S1-1	36" X 36"	---	6.75	---	---	1	1	1	
76	"	S16-9P	30" X 18"	---	3.75	---	---	---	---	---	MOUNT BELOW SIGN #75, PART OF REMOVAL FOR SIGN #75
77	"	R2-6P	24" X 18"	3.00	---	---	---	---	---	---	MOUNT BELOW SIGN #76
78	CENTER RD	R1-1	30" X 30"	5.18	---	1	---	---	1	1	
PAGE SUBTOTALS				217.74	52.50	21	13	2	31	32	
PLAN SHEET PRODUCED BY WisDOT - NE REGION											
PROJECT NUMBER: 1430-15-71		HWY: STH 23		COUNTY: FOND DU LAC			MISCELLANEOUS QUANTITIES				SHEET

REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVI NG SIGNS TYPE II EACH	638. 3000 REMOVI NG SMALL SI GN SUPPORTS EACH	REMARKS
79	STH 23, E. OF CENTER RD	W4-2R	36" X 36"	---	9. 00	---	1	---	1	1	
80	"	R2-1	24" X 30"	5. 00	---	1	---	---	1	1	30 MPH
81	"	R2-1	---	---	---	---	---	---	1	1	
82	"	D1-2	54" X 15"	5. 63	---	1	---	---	1	1	RIPON 9, SEE SIGN DETAI L SHEET
83	"	S4-51	24" X 48"	---	8. 00	---	1	---	1	1	15 MPH
84	"	W9-1R	36" X 36"	---	9. 00	---	1	---	1	1	
85	"	R2-1	24" X 30"	5. 00	---	1	---	---	---	---	30 MPH
86	"	J4-1	---	---	---	---	---	---	1	1	
87	"	D1-2	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #86
88	"	J4-1	24" X 36"	6. 00	---	1	---	---	1	1	WEST STH 23
89	"	I 55-56	---	---	---	---	---	---	1	1	
90	GRANT ST	R1-1	30" X 30"	5. 18	---	1	---	---	1	1	
91	STH 23, E. OF CENTER RD	S1-1	36" X 36"	---	6. 75	---	1	---	1	1	
92	"	S16-7L	30" X 18"	---	3. 75	---	---	---	---	---	MOUNT BELOW SIGN #91, PART OF REMOVAL FOR SIGN #91
93	GRANT ST	R1-1	30" X 30"	5. 18	---	1	---	---	1	1	
94	STH 23, W. OF GRANT ST	S1-1	36" X 36"	---	6. 75	---	1	---	1	1	
95	"	S16-7L	30" X 18"	---	3. 75	---	---	---	---	---	MOUNT BELOW SIGN #94, PART OF REMOVAL FOR SIGN #94
96	"	R2-1	24" X 30"	5. 00	---	1	---	---	1	1	30 MPH
97	"	S4-51	24" X 48"	---	8. 00	---	1	---	1	1	15 MPH
98	"	R2-1	24" X 30"	5. 00	---	1	---	---	1	1	30 MPH
99	"	S1-1	36" X 36"	---	6. 75	---	---	1	1	1	
100	"	S16-9P	30" X 18"	---	3. 75	---	---	---	---	---	MOUNT BELOW SIGN #99, PART OF REMOVAL FOR SIGN #99
101	"	R2-6P	24" X 18"	3. 00	---	---	---	---	---	---	MOUNT BELOW SIGN #100
102	"	J1-1	24" X 39"	6. 50	---	1	---	---	1	1	JCT STH 26
103	"	R2-1	24" X 30"	5. 00	---	1	---	---	1	1	30 MPH

PAGE SUBTOTALS

56. 49 65. 50 10 6 1 19 19

PROJECT TOTALS

424. 49 193. 00 62 24 3 85 88

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 59 DAYS	643. 3000 DETOUR SIGNS DAYS	643. 0420 BARRI CADES TYPE III DAYS	643. 0705 WARNING LIGHTS TYPE A DAYS	643. 0300 DRUMS DAYS	643. 0715 WARNING LIGHTS TYPE C DAYS	643. 1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643. 1000 SIGNS FIXED MESSAGE S. F.	643. 0910 COVERING SIGNS TYPE I EACH	643. 0920 TYPE II EACH	REMARKS
1	100' S OF BLOSSOM ST ON STH 23/49 (SB)	WO 20-2-A	48"x48"	1	59	59									
2	@ J1-1 (JCT 44) ON STH 23/49 (E FOND DU LAC ST) (SB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 5-1-R	21"x21"	1	59	59									
3	RT OF J3-1 (N- 44-AH) ON STH 23/49 (E FOND DU LAC ST) (SB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									RIGHT
4	SE QUAD OF STH 23 (E FOND DU LAC ST) & STH 49 (METOMEN ST)	R 11-3-B	60"x30"	1	59	59	59	118							1 1/4 MILES
5	BELOW SIGN # 4	MD 4-9-R	30"x24"	1	59	59									
6	J4-2 (E-23; N-44)													1	EAST 23
7	200' S OF STH 23 (E FOND DU LAC ST) ON STH 49 (METOMEN ST) (SB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
8A	JV3-4 (W-23/N-49-LT; E-23/N-44-RT)													1	EAST 23
8B	JV2-4 (W-23/N-49-AH LT; E-23/N-44-AH RT)													1	EAST 23
8C	MODIFY J1-1 (JCT 23)	MD 4-8-A	24"x18"	1	59	59									
	"	M 1-6	EXISTING												23
9	LT OF J4-2 (S-44/49) ON STH 49 (SB) @ RINGSTAD ST	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
10	100' N OF RINGSTAD ST INTERSECTION ON STH 49 (NB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
11	LT OF J1-1 (JCT KK) ON STH 44/49 (SB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 5-1-L	21"x21"	1	59	59									
12	RT OF J13-1 (KK-LT & RT) ON HWY 44/49 (SB) (NEAR RT)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									LEFT
13	BACKSIDE OF J13-1 (KK-LT & RT) ON HWY 44/49 (NB) (FAR LT)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									LEFT
14	300' S OF J1-1 (JCT KK) ON STH 44/49 (NB)	M 1-6	24"x24"	1	59	59									23
	"	WO 20-2-A	48"x48"	1	59	59									
15	250' N OF J1-1 (JCT KK) ON STH 44/49 (NB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 5-1-R	21"x21"	1	59	59									
16	RT OF J13-1 (KK-LT & RT) ON HWY 44/49 (NB) (NEAR RT)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									RIGHT
17	BACKSIDE OF J13-1 (KK-LT & RT) ON HWY 44/49 (SB) (FAR RT)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									RIGHT

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 59 DAYS	643. 3000 DETOUR SIGNS DAYS	643. 0420 BARRI CADES TYPE III DAYS	643. 0705 WARNI NG LIGHTS TYPE A DAYS	643. 0300 DRUMS DAYS	643. 0715 WARNI NG LIGHTS TYPE C DAYS	643. 1050 SI GNS PORTABLE CHANGEABLE MESSAGE DAYS	643. 1000 SI GNS FIXED MESSAGE S. F.	643. 0910 COVERI NG SI GNS TYPE I EACH	643. 0920 TYPE II EACH	REMARKS
18	250' E OF STH 44/49 INTERSECTION ON CTY KK (EB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
19	ABOVE J4-2 (N-44/N-49) ON STH 44/49 (NB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
	GAP IN SIGN NUMBERING (20-22)														
23	RT OF J4-2 (N-44/N-49) ON CTY KK (WB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									RIGHT
24	RT OF J1-2 (JCT 44; JCT 49) ON CTY KK (WB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 5-1-R	21"x21"	1	59	59									
25	200' W OF BRANDON RD INTERSECTION ON CTY KK (WB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
26	200' W OF BRANDON RD INTERSECTION ON CTY KK (EB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
27	200' W OF METOVALE RD INTERSECTION ON CTY KK (WB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
28	200' W OF METOVALE RD INTERSECTION ON CTY KK (EB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-2	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									AHEAD
29	MODIFY J1-1 (JCT 23) ON CTY KK (EB)	MD 4-8-A	24"x18"	1	59	59									
	"	M 1-6	EXISTING												23
30	MODIFY J4-1 (23-LT & RT) ON CTY KK (EB)	M 1-6	EXISTING												23
	"	MD 6-1	21"x21"	1	59	59									RIGHT
31	LT OF J4-1 (23-LT & RT) ON CTY KK (EB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-1	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									44
	"	MD 6-1	21"x21"	1	59	59									AHEAD
	GAP IN SIGN NUMBERING (32-33)														
34	500' W OF J1-1 (JCT KK) ON STH 23 (WB)	WO 20-2-A	48"x48"	1	59	59									
35	RT OF J1-1 (JCT KK) ON STH 23 (WB)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 5-1-L	21"x21"	1	59	59									
36	RT OF J13-1 (KK-LT) ON STH 23 (WB) (NEAR RT)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									LEFT
37	BACKSIDE OF J13-1 (KK-LT) ON STH 23 (EB) (FAR RT)	MD 4-8	24"x12"	1	59	59									
	"	MD 3-4	24"x12"	1	59	59									
	"	M 1-6	24"x24"	1	59	59									23
	"	MD 6-1	21"x21"	1	59	59									LEFT
38	NW QUAD OF STH 23 & CTY KK INTERSECTION	R 11-3-B	60"x30"	1	59	59	59	118							1 1/2 MILES
39	BELOW SIGN # 38	MD 4-9-L	30"x24"	1	59	59									
40	J4-1 (W-23) @ CTY KK INTERSECTION													1	WEST 23
41	FIELD LOCATED - STH 23 (WB)	PCMS		1							7				PRIOR TO CONSTRUCTION
42	FIELD LOCATED - STH 23 (EB)	PCMS		1							7				PRIOR TO CONSTRUCTION
	TOTAL			105		6, 077	118	236	0	0	14	0	0	4	

646- PAVEMENT- MARKINGS

CATEGORY	STATION TO	STATION	LOCATION	GROOVED		SAME DAY	STOP LINE	CROSSWALK	LOCATING	TEMP	REMARKS
				WET REFL							
				EPOXY	EPOXY						
				4- INCH	8- INCH						
				646. 2304. S	646. 0126	646. 0406	647. 0566	647. 0766	648. 0100	649. 0100	
				LF	LF	LF	LF	LF	MI	LF	
0010	22+00 -	433+10	STH 23	82160	2200	41110	30	50	7. 786	50000	MATCH EXISTING
			TOTAL 0010	82160	2200	41110	30	50	7. 786	50000	

CONSTRUCTION STAKING RESURFACING REFERENCE

SAWING ASPHALT

CATEGORY	STATION TO	STATION	LOCATION	650. 8000	REMARKS
				LF	
0010	22+00 -	433+10	STH 23	41110	PROJECT
			TOTAL 0010	41110	

CATEGORY	STATION	LOCATION	690. 0150	REMARKS
			LF	
0010	22+00	STH 23	30	BEGIN PROJECT
0010	40+50	EASTGATE DR	20	PRIVATE DRIVEWAY
0010	62+00	BRANDON RD	30	INTERSECTION
0010	100+80	SILVER CREEK RD W	20	INTERSECTION
0010	124+25	SILVER CREEK RD E	20	INTERSECTION
0010	155+75	WILLOW RD	30	INTERSECTION
0010	177+10	WITTCROW RD	20	INTERSECTION
0010	182+00	ROSE- ELD RD	30	INTERSECTION
0010	248+20	CTH KK	30	INTERSECTION
0010	267+50	POMMERING RD	30	INTERSECTION
0010	307+90	CTH M	60	INTERSECTION
0010	415+25	CENTER RD	30	INTERSECTION
0010	427+15	GRANT ST	50	INTERSECTION
0010	433+10	STH 23	40	END PROJECT
		TOTAL 0010	440	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690. 0250	REMARKS
			LF	
0010	90+99	STH 23	60	FROST HEAVE
0010	107+12	STH 23	30	BOX CULVERT REPLACEMENT
0010	110+58	STH 23	30	BOX CULVERT REPLACEMENT
0010	192+00	STH 23	60	FROST HEAVE
0010	197+00	STH 23	60	CULVERT PIPE REPLACEMENT
0010	249+00	STH 23	60	CULVERT PIPE REPLACEMENT
0010	283+17	STH 23	60	CULVERT PIPE REPLACEMENT
0010	288+62	STH 23	60	CULVERT PIPE REPLACEMENT
0010	404+11	STH 23	60	CULVERT PIPE REPLACEMENT
0010	426+50	STH 23	40	CULVERT PIPE REPLACEMENT
		TOTAL 0010	520	

MILLING AND REMOVING TEMPORARY JOINT

CATEGORY	STATION TO	STATION	LOCATION	SPV. 0090. 01	REMARKS
				LF	
0010	22+00 -	433+10	STH 23	41110	CENTER LINE
			TOTAL 0010	41110	

TEMPORARY SAND BAG DIKE

CATEGORY	STATION	LOCATION	SPV. 0105. 01	REMARKS
			LS	
0010	108+85	B- 20- 0232	1	TEMPORARY BYPASS STAGE 2
		PROJECT TOTALS =	1	

Division	From/To Station	Location	Common Excavation (item # 205.0100)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Marsh Excavation (6)	Rock Excavation (7)	Reduced Marsh in Fill (8)	Reduced EBS in Fill (9)	Expanded Marsh Backfill (10)	Expanded EBS Backfill (11)	Expanded Rock (12)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Borrow
			Cut (2)	EBS Excavation (3)			(item #205.0400)	(item #205.0200)	Factor 0.60	Factor 0.80	Factor 1.50	Factor 1.30	Factor 1.10		Factor 1.25			(item #208.0100)
Division 1																		
EWKDetail - STH 23	107+12.39/110+57.9	STH 23	2,144	0	368	1,775	0	0	0	0	0	0	0	48	60	1,715	1,715	0
Division 1 Subtotal			2,144	0	368	1,775	0	0	0	0	0	0	0	48	60	1,715	1,715	0
Grand Total			2,144	0	368	1,775	0	0	0	0	0	0	0	48	60	1,715	1,715	0
			Total Common Exc 2,144															

- 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.
- 3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
- 4) Salvaged/Unusable Pavement Material
- 5) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 205.0400
- 7) Rock Excavation item number 205.0200
- 8) Reduced Marsh in Fill - Excavated Marsh material is usable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = 0.6
- 9) Reduced EBS in Fill - Excavated EBS material is usable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
- 10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item number 208.1100
- 11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.1100
- 12) Expanded Rock - Factor = 1.1
- 13) Expanded Fill. Factor = 1.25
- Depending on selections: Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor
- Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
- Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
- Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor
- 14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
- 15) Use 60 CY of material from Division 1. Borrow Excavation item number 208.0100

PI STA = 108+03.66
Y = 405604.170
X = 726793.853
DELTA = 20°20'24"
D = 0°30'00"
T = 2055.64'
L = 4068.01'
R = 11459.14'
PC STA = 87+48.02
Y = 405898.682
X = 724759.421
PT STA = 128+16.03
Y = 404620.870
X = 728599.061

TOTAL WETLAND IMPACTS = 0.175 ACRES

MGS GUARDRAIL TERMINAL E.A.T. REQ'D
STA 107+66.25 - STA 108+19.37
(POST 1, STA 107+66.25, 24' LT)
AND MGS GUARDRAIL 3 REQ'D
STA 108+19.37 - STA 108+31.87, 22' LT

MGS GUARDRAIL 3 L REQ'D
STA 108+31.87 - STA 109+44.37, 22' LT
SPAN LENGTH = 112.5 FT
SEE CONSTRUCTION DETAIL

WETLAND BOUNDARY

MGS GUARDRAIL 3 REQ'D
STA 109+44.37 - STA 109+69.37, 22' LT
AND MGS GUARDRAIL TERMINAL E.A.T. REQ'D
STA 109+69.37 - STA 110+22.49
(POST 1, STA 110+22.49, 24' LT)

PROPOSED STRUCTURE
B-20-0232

WETLAND IMPACTS
0.0916 ACRES

EXISTING STRUCTURE
C-20-0030

BEGIN RECONSTRUCTION
STA. 107+12

END RECONSTRUCTION
STA. 110+58

*SEE SHEET 2, BOX DETAIL & GENERAL NOTES, OF THE STRUCTURE
PLAN FOR THE LIMITS OF "EXCAVATION FOR STRUCTURES", "BACKFILL
GRANULAR", AND "BACKFILL STRUCTURE".

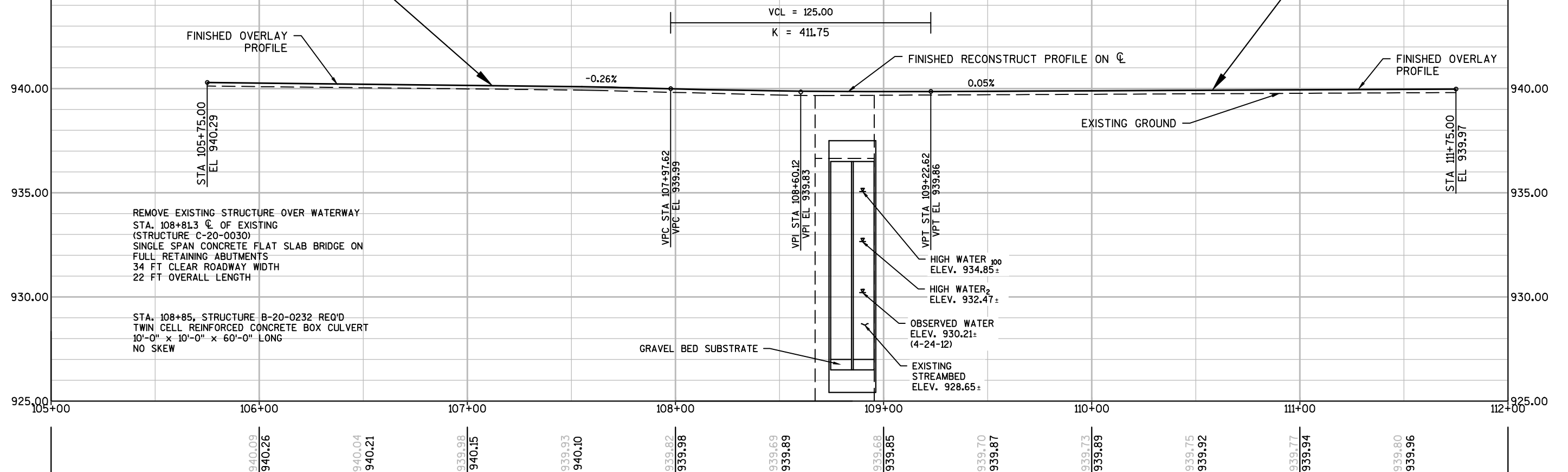
MGS GUARDRAIL TERMINAL E.A.T. REQ'D STA
107+47.53 - STA 108+00.65
(POST 1, STA 107+47.53, 24' RT)
AND MGS GUARDRAIL 3 REQ'D
STA 108+00.65 - STA 108+25.65, 22' RT

MGS GUARDRAIL 3 L REQ'D
STA 108+25.65 - STA 109+38.15, 22' RT
SPAN LENGTH = 112.5 FT
SEE CONSTRUCTION DETAIL

MGS GUARDRAIL 3 REQ'D
STA 109+38.15 - STA 109+50.65, 22' RT
AND MGS GUARDRAIL TERMINAL E.A.T. REQ'D
STA 109+50.65 - STA 110+03.78
(POST 1, STA 110+03.78, 24' RT)

NET CENTERLINE LENGTH STA. 107+12 - 110+58 = 346 FT

SCALE, FEET 0 25 50



PROJECT NO:1430-15-71

HWY:STH 23

COUNTY:FOND DU LAC

PLAN AND PROFILE: STH 23

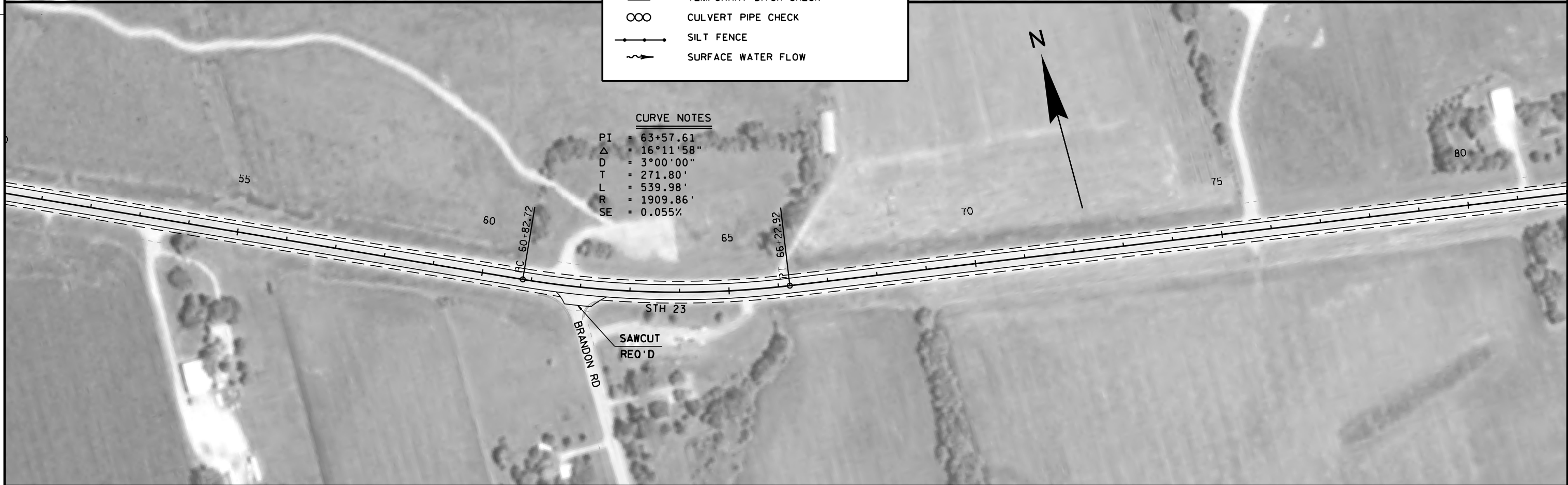
SHEET

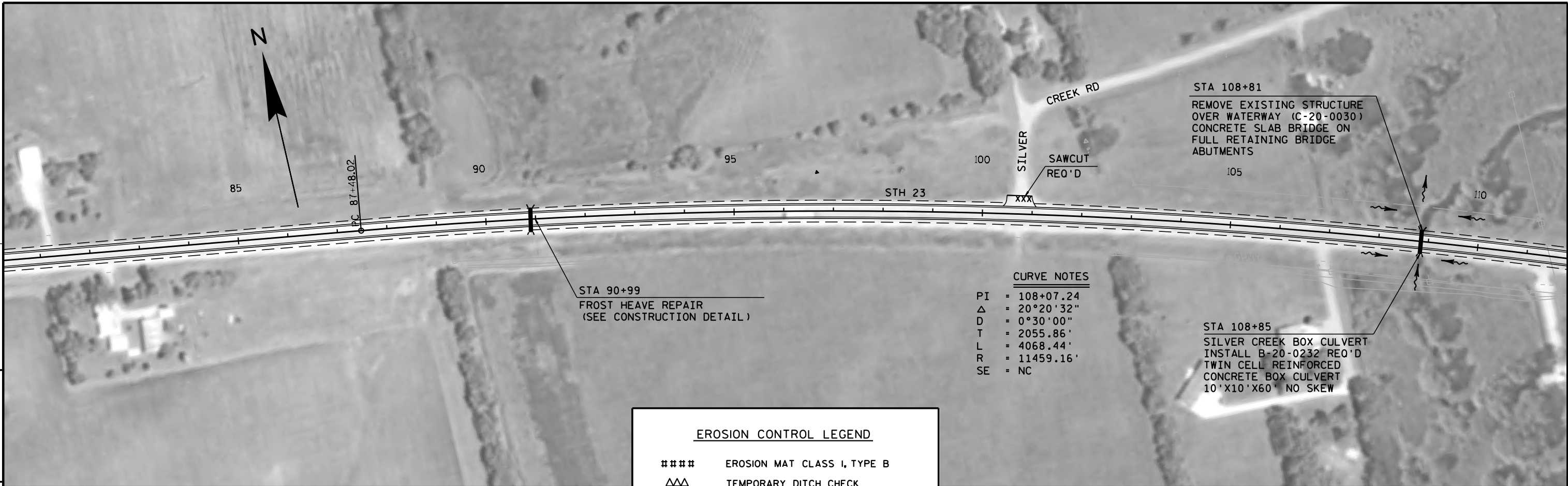
E



5

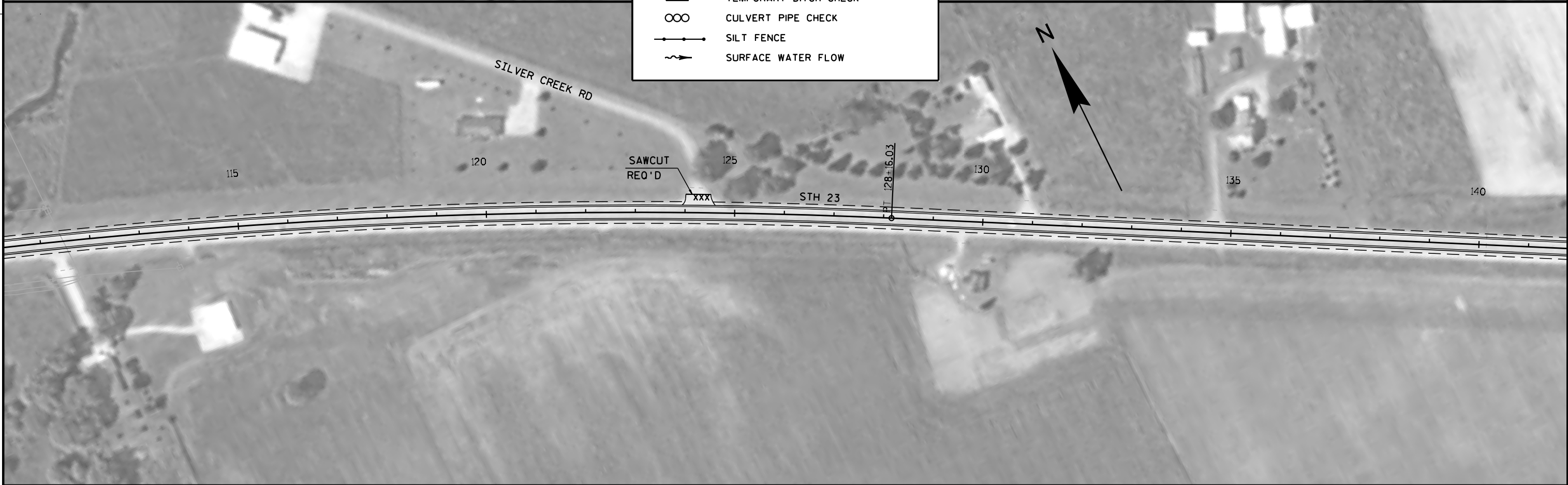
5

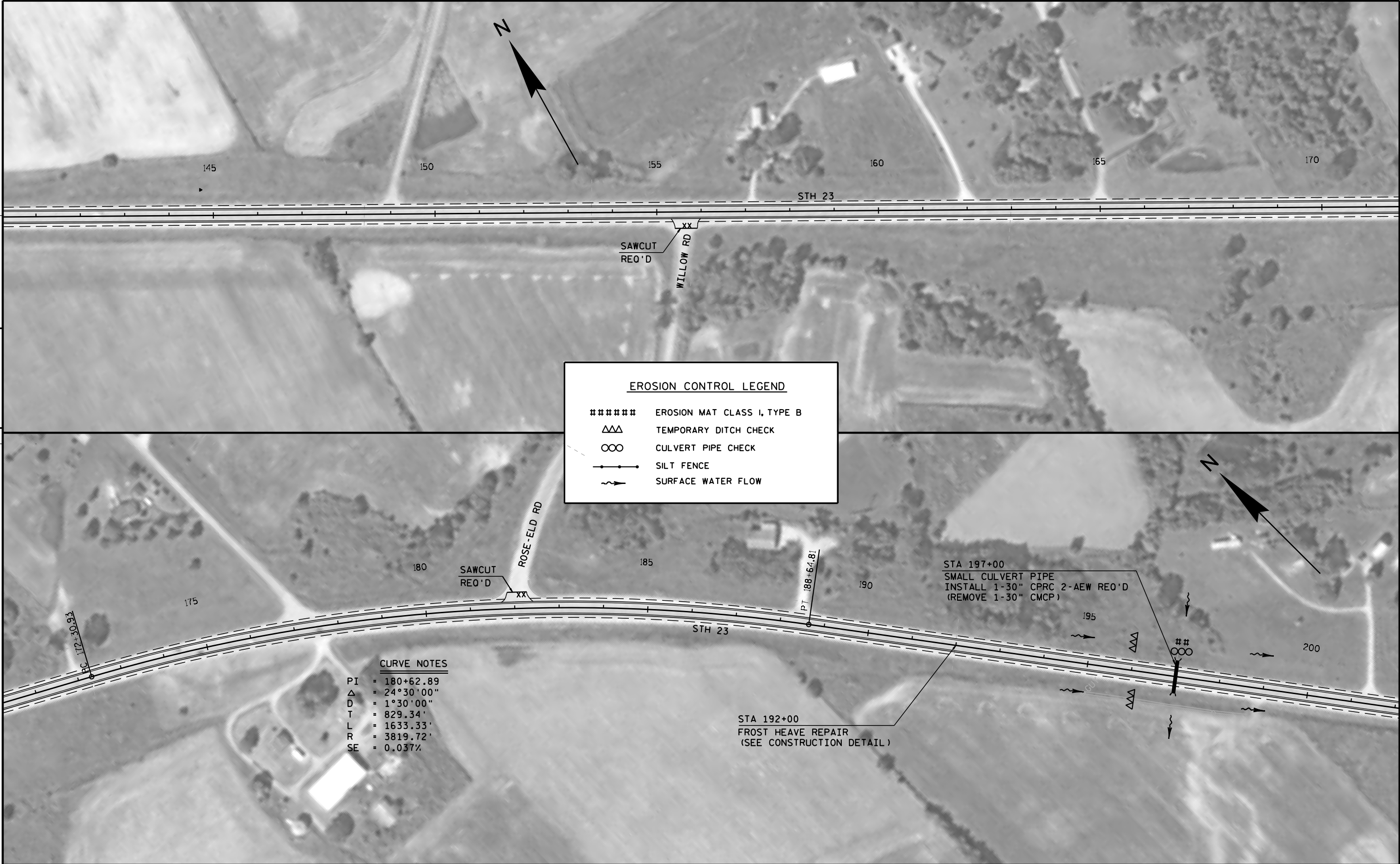




EROSION CONTROL LEGEND	
####	EROSION MAT CLASS I, TYPE B
△△△	TEMPORARY DITCH CHECK
○○○	CULVERT PIPE CHECK
—●—●—	SILT FENCE
~>	SURFACE WATER FLOW

CURVE NOTES	
PI	= 108+07.24
Δ	= 20°20'32"
D	= 0°30'00"
T	= 2055.86'
L	= 4068.44'
R	= 11459.16'
SE	= NC





5

5



CURVE NOTES
PI = 228+02.71
Δ = 126°58'25"
D = 1°30'00"
T = 1905.54'
L = 3535.09'
R = 3819.72'
SE = 0.037%

EROSION CONTROL LEGEND	
####	EROSION MAT CLASS I, TYPE B
△△	TEMPORARY DITCH CHECK
○○	CULVERT PIPE CHECK
—●—●—	SILT FENCE
~→	SURFACE WATER FLOW

STA 249+00
SMALL CULVERT PIPE
INSTALL 1-36" CPRC 2 AEW REQ'D
(REMOVE 1-30" CMCP)

SAWCUT
REQ'D



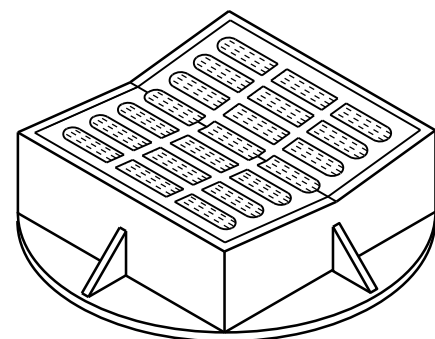
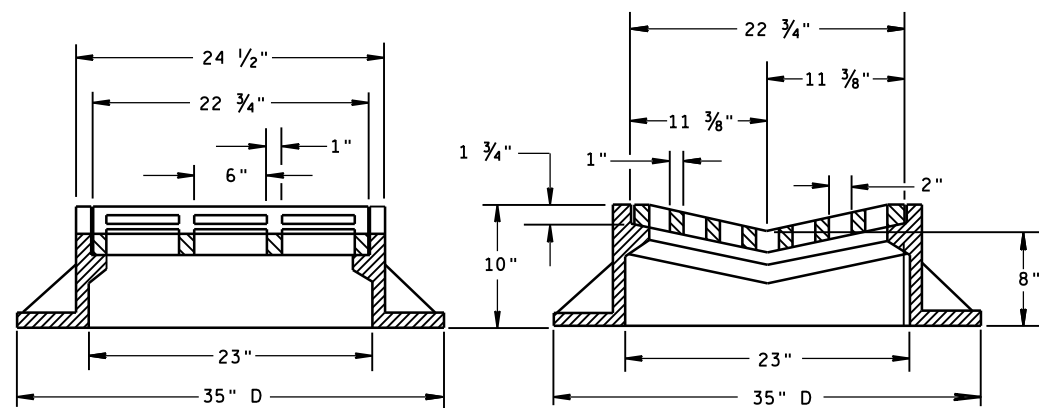




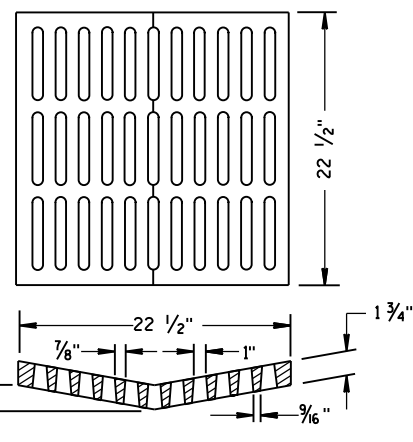
EROSION CONTROL LEGEND	
####	EROSION MAT CLASS I, TYPE B
△△	TEMPORARY DITCH CHECK
○○	CULVERT PIPE CHECK
—●—	SILT FENCE
~>	SURFACE WATER FLOW

Standard Detail Drawing List

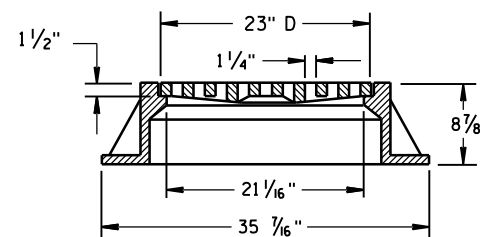
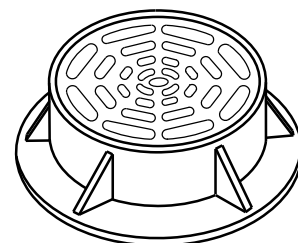
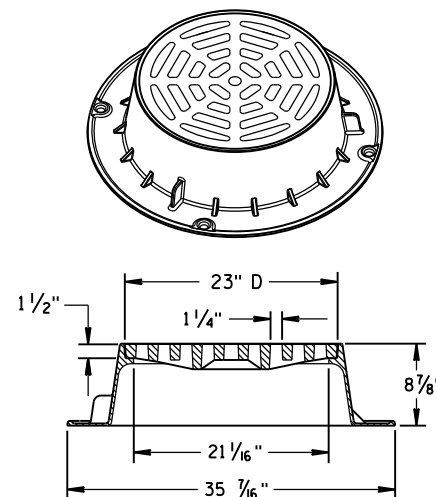
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
12A03-10	NAME PLATE (STRUCTURES)
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B29-01	SAFETY EDGE
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-03A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-02A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE



TYPE "B"

ALTERNATIVE GRATE FOR
TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
 NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

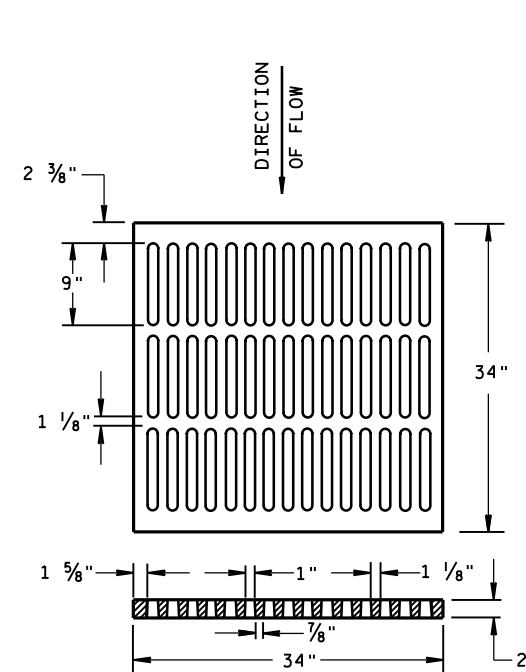
NOTE: EITHER CASTING IS ACCEPTABLE

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.

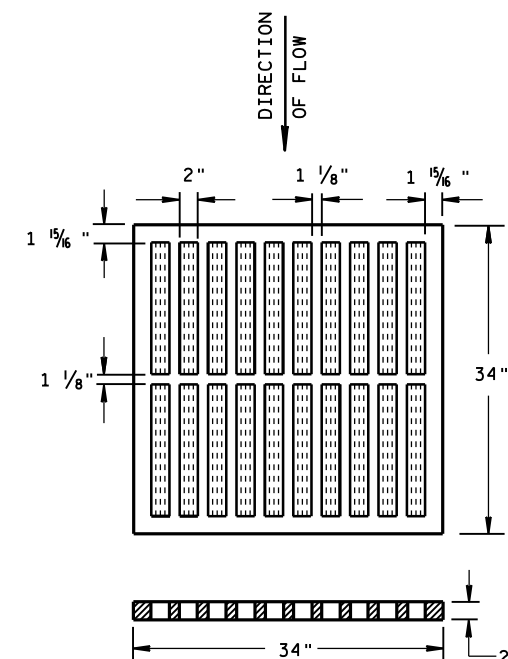
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



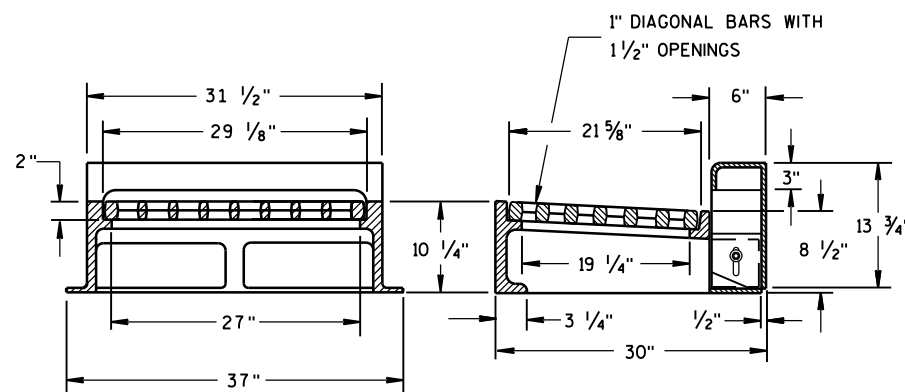
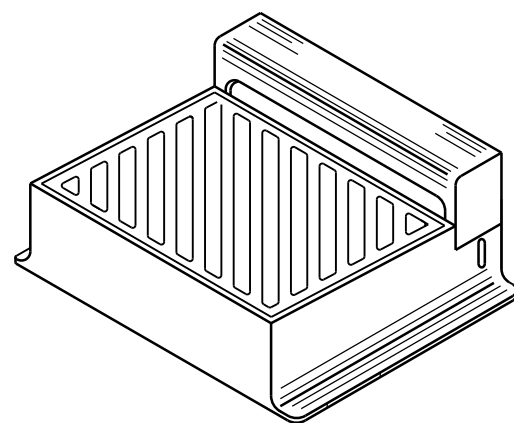
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
 NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
 NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

DIAGONAL SLOTS, SHALL BE ORIENTED
 TO THE DIRECTION OF FLOW AS ILLUSTRATED.
 GRATES ARE MANUFACTURED TO BE REVERSIBLE.

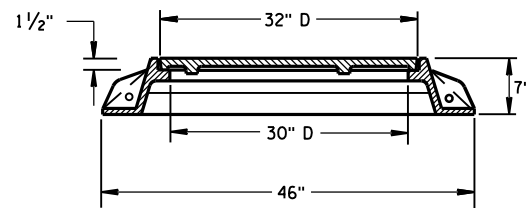
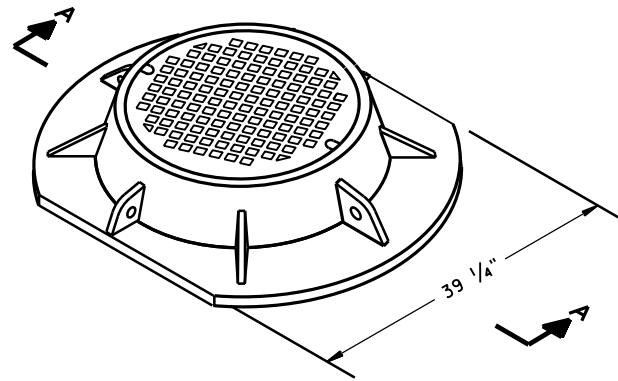
DIRECTION
OF FLOW

INLET COVERS
 TYPE B, B-A, C,
 MS, MS-A, & WM

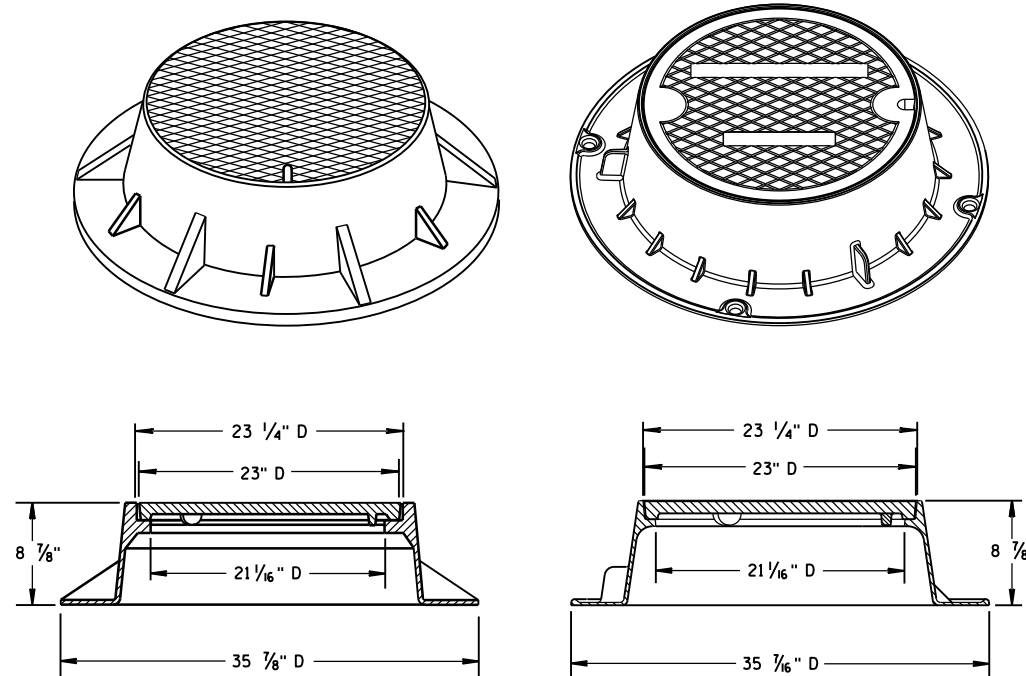
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 11/27/2013
 DATE
 FHWA

/S/ Jerry H. Zogg
 ROADWAY STANDARDS DEVELOPMENT
 ENGINEER

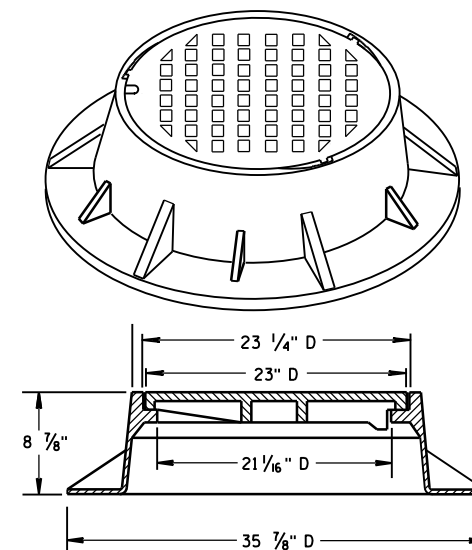
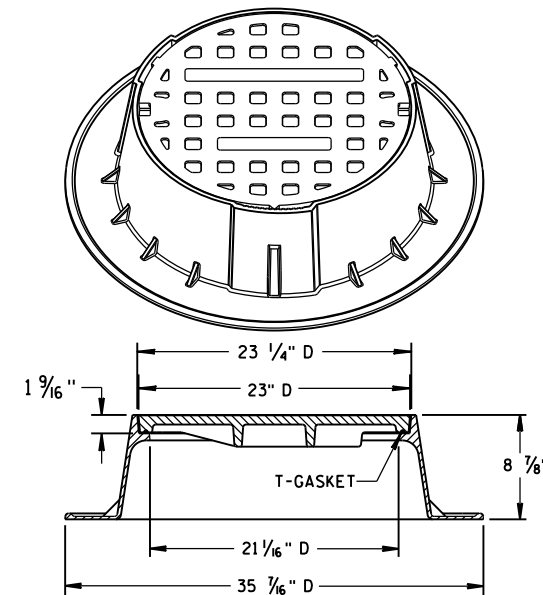


SECTION A-A
TYPE "K"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

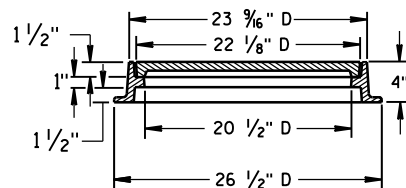
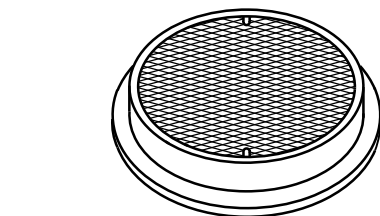


TYPE "J" SPECIAL

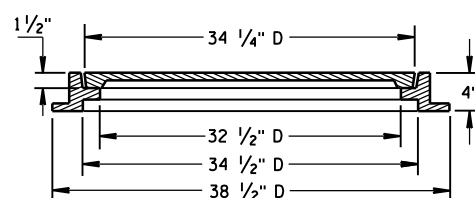
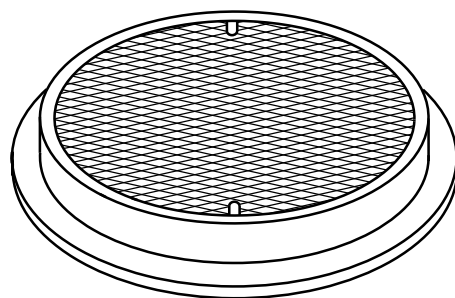
TYPE "B" NON-ROCKING SELF-SEAL LID

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

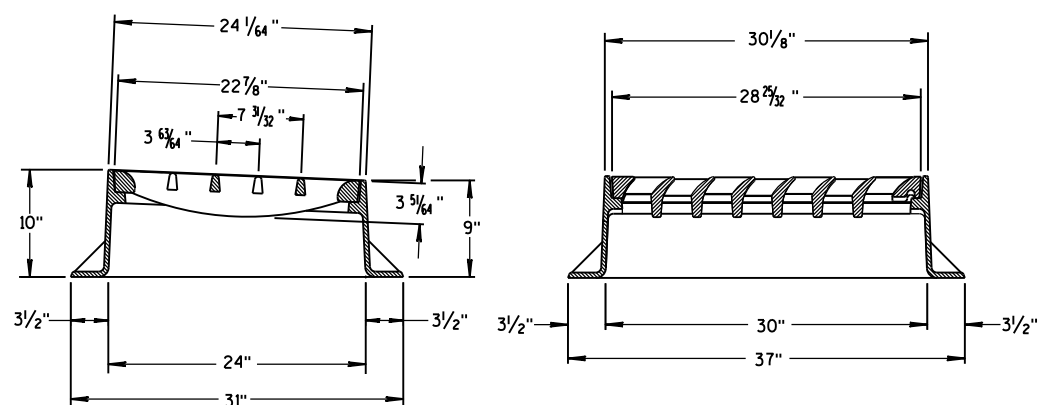
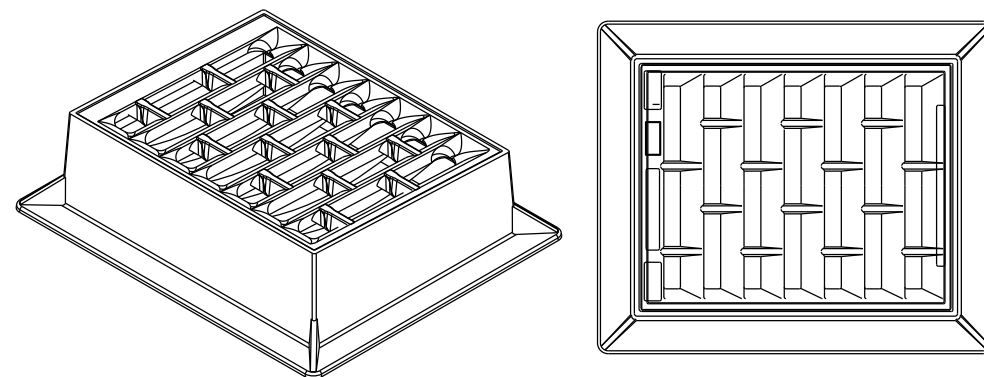
NOTE: EITHER CASTING IS ACCEPTABLE



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.

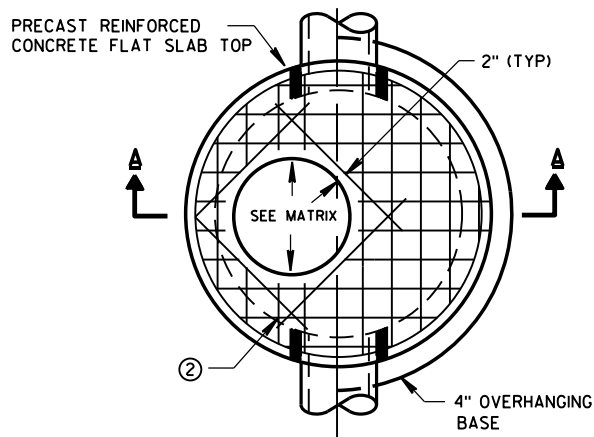
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

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

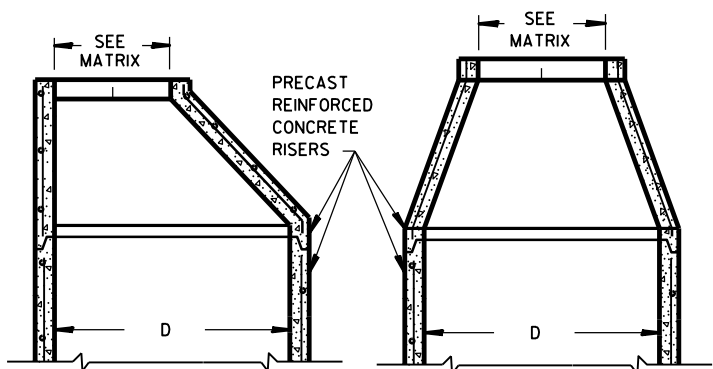
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

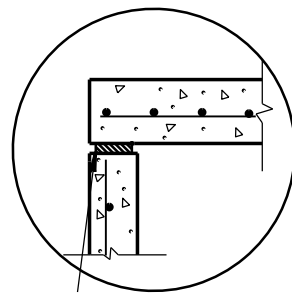


PLAN VIEW CIRCULAR OPENING

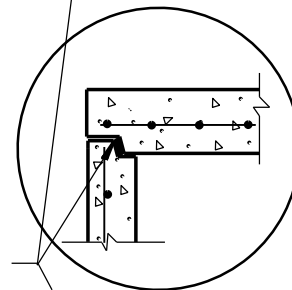


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

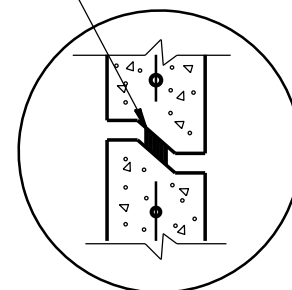
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



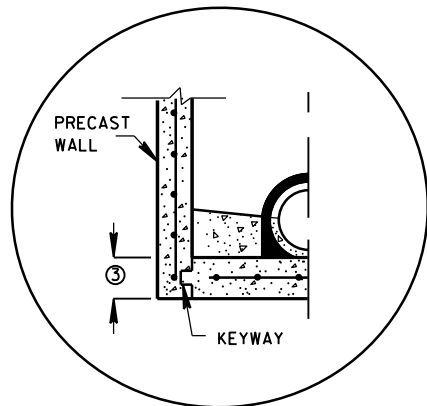
TOP WITH TONGUE AND GROOVE JOINT



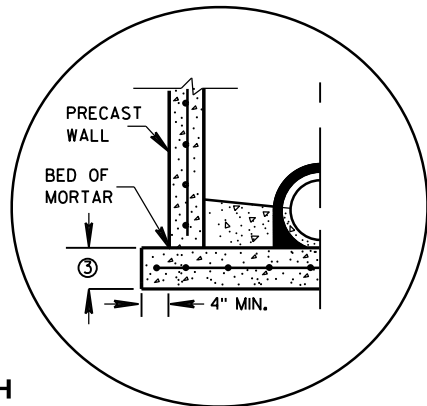
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

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

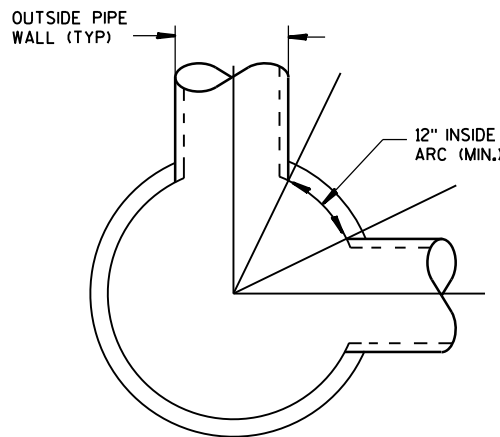


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

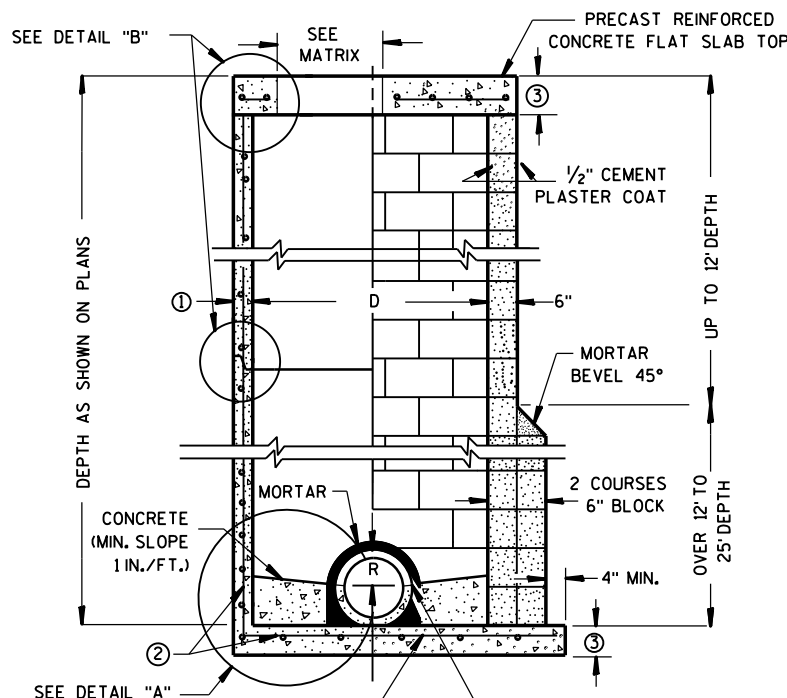


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 GRANULAR 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. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

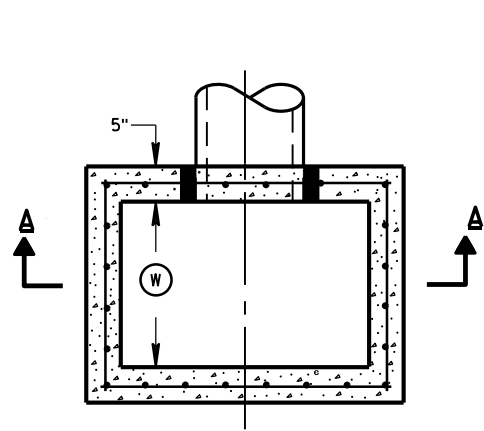
PIPE MATRIX

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

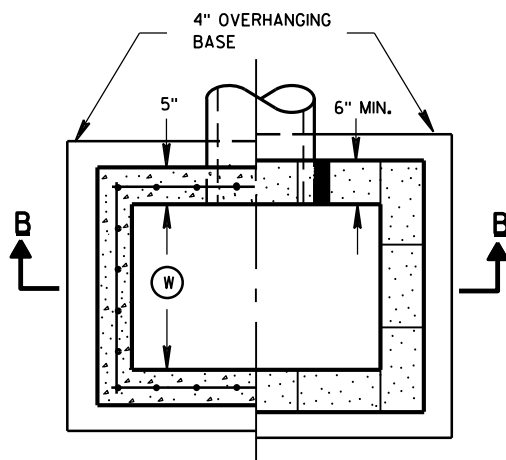
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER

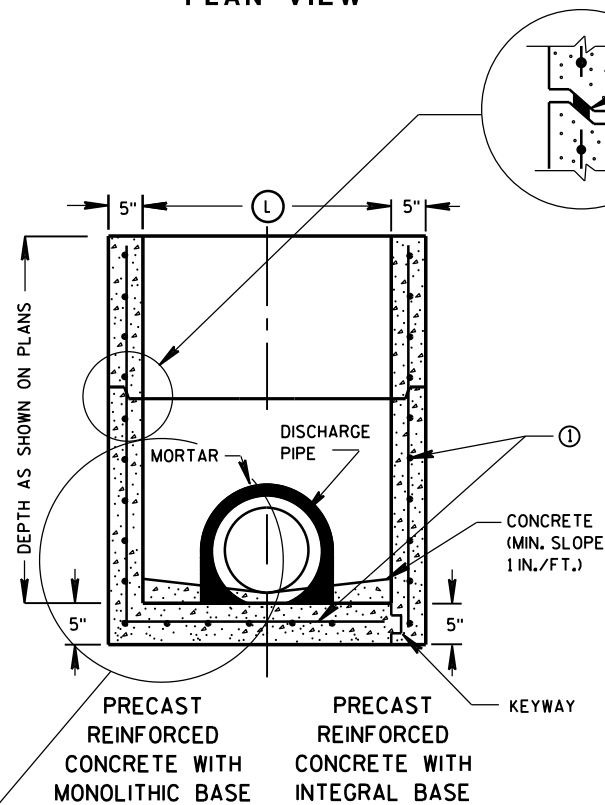


PLAN VIEW

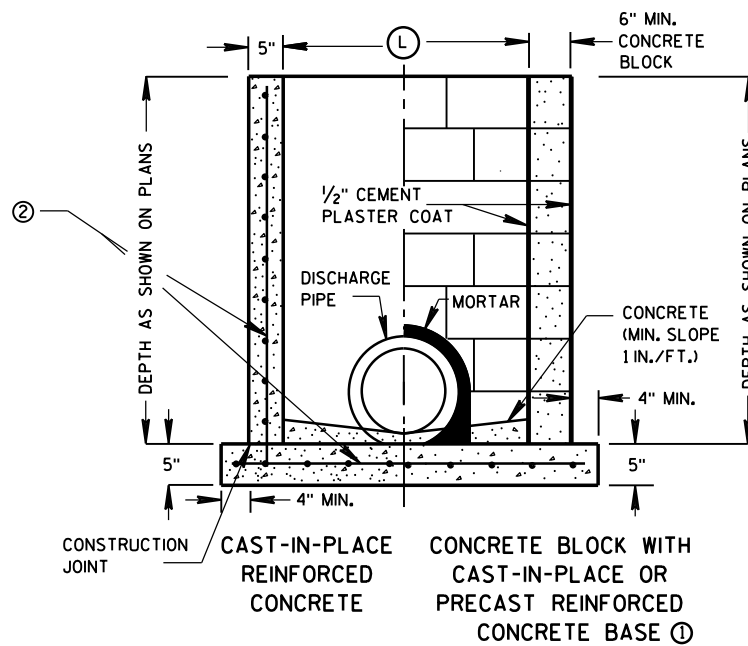


PLAN VIEW

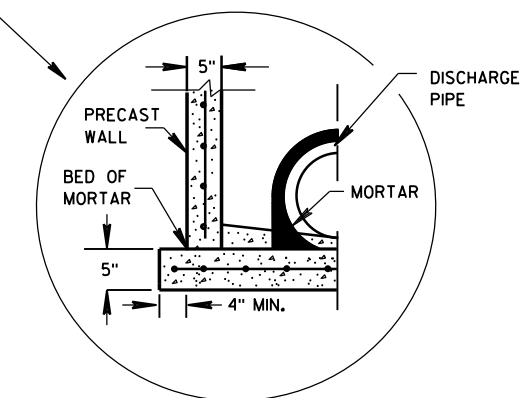
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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

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 GRANULAR 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.

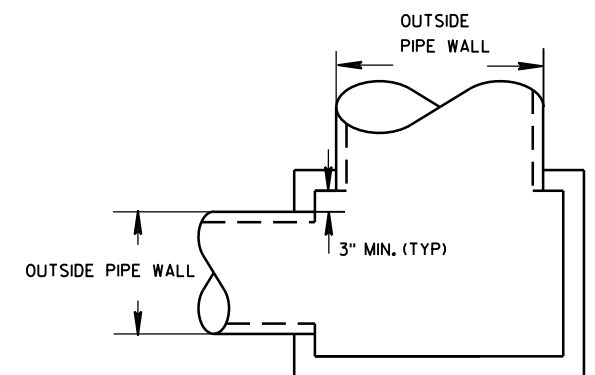
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH ① (FT)	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

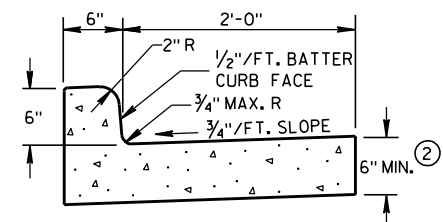


DETAIL "A"

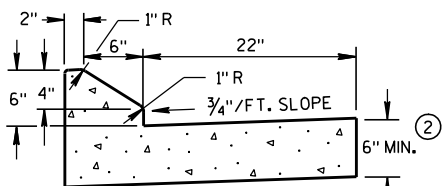
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

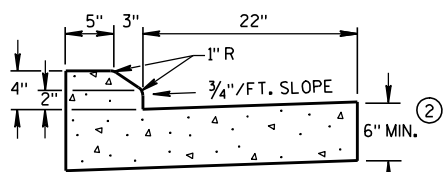
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



TYPES A & D ①

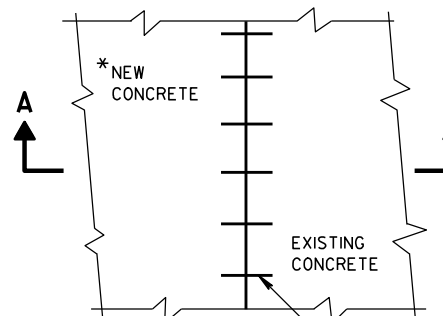


6" SLOPED CURB TYPES G & J ①



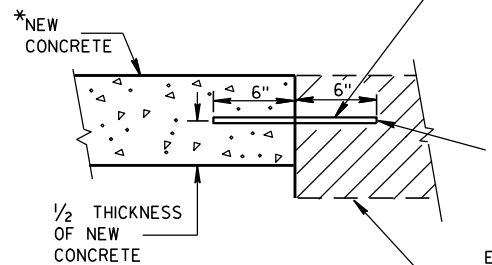
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



PLAN VIEW

* NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

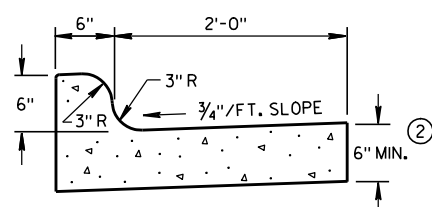


SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

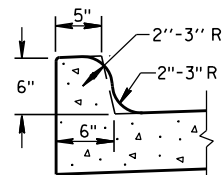
NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

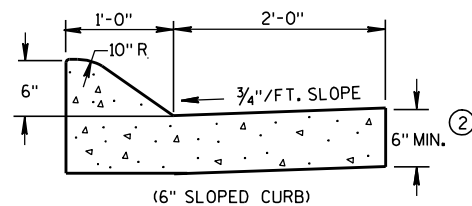
EXISTING
CONCRETE



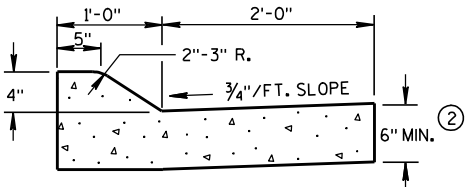
TYPES K & L ①



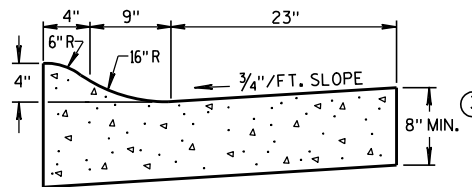
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)

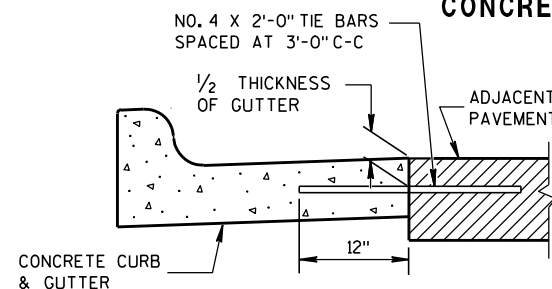


TYPES A & D ①

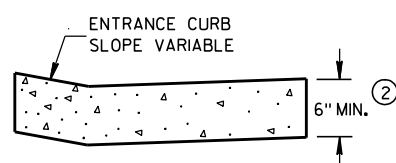


4" SLOPED CURB TYPES R & T ① ④

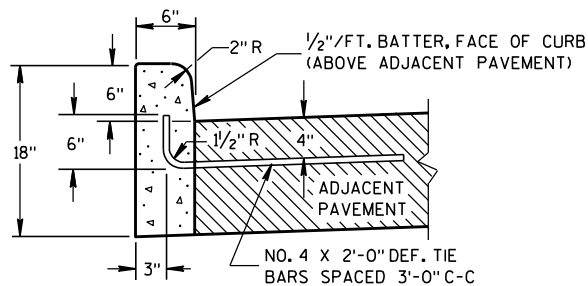
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①

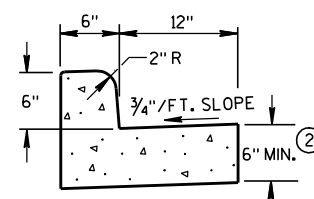


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

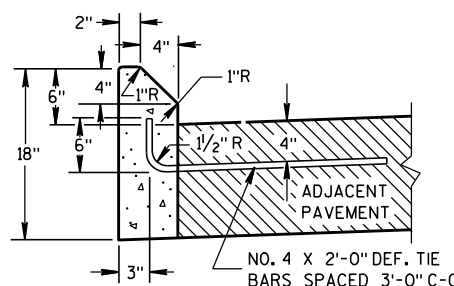


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

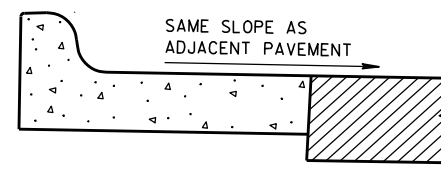
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

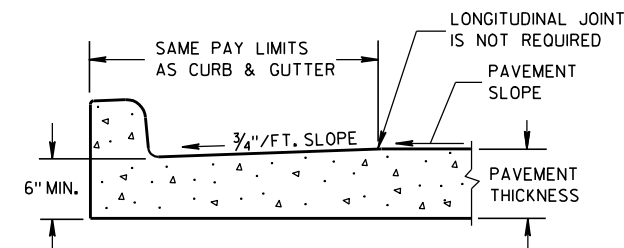
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

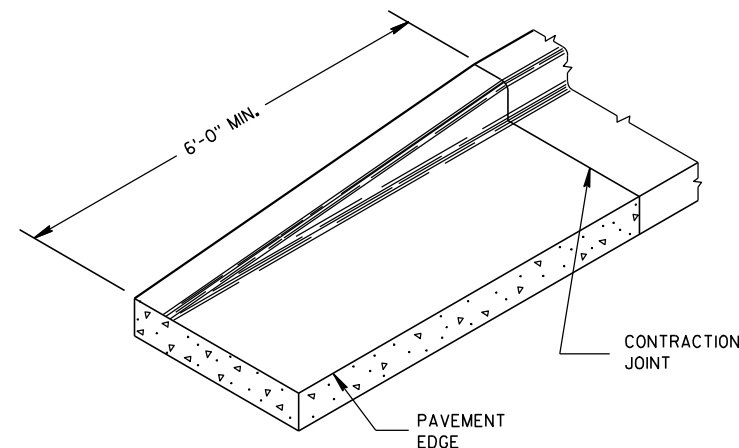
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

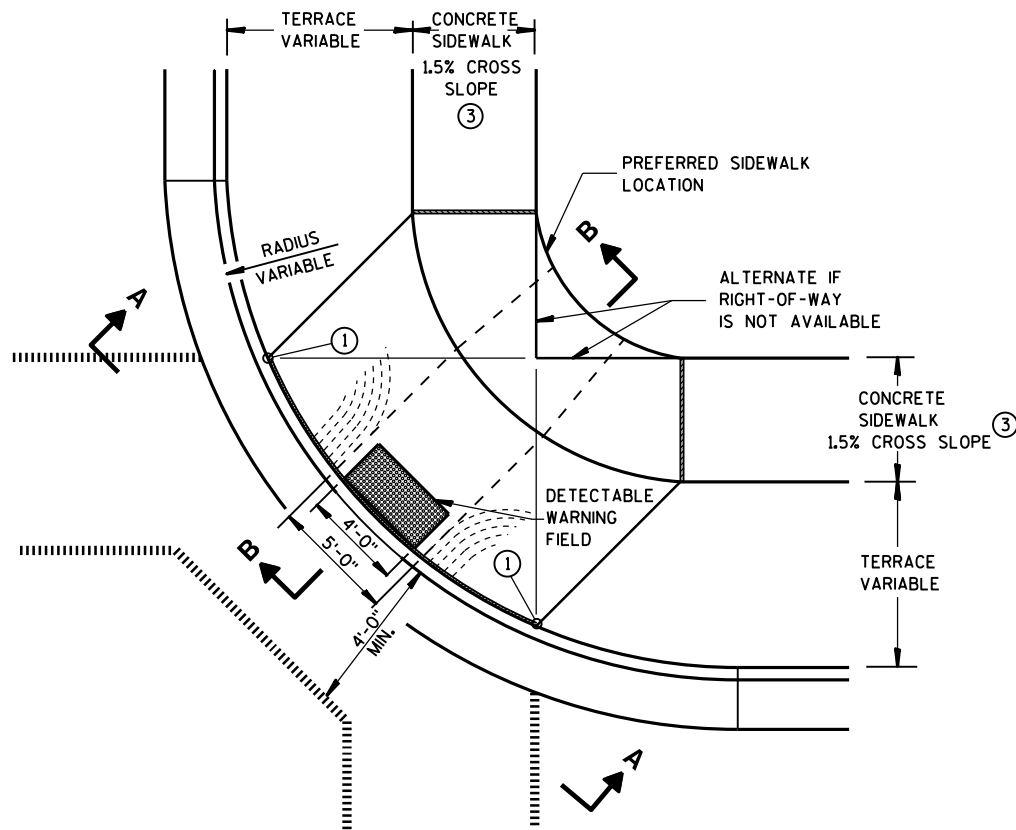
APPROVED

9/4/08

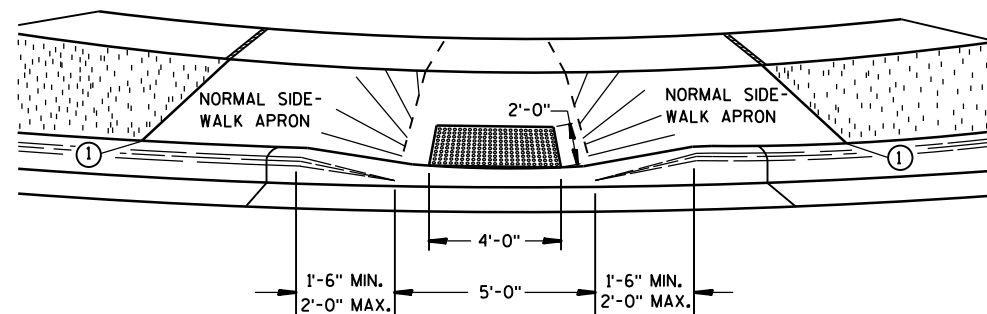
DATE

FHWA

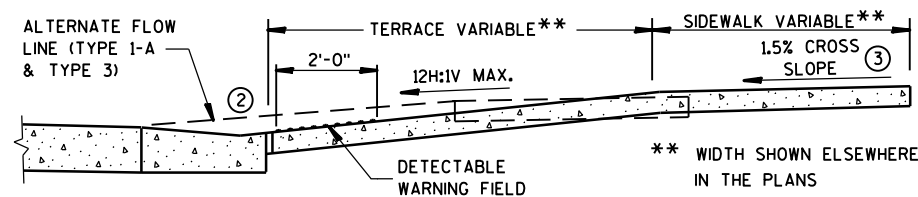
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



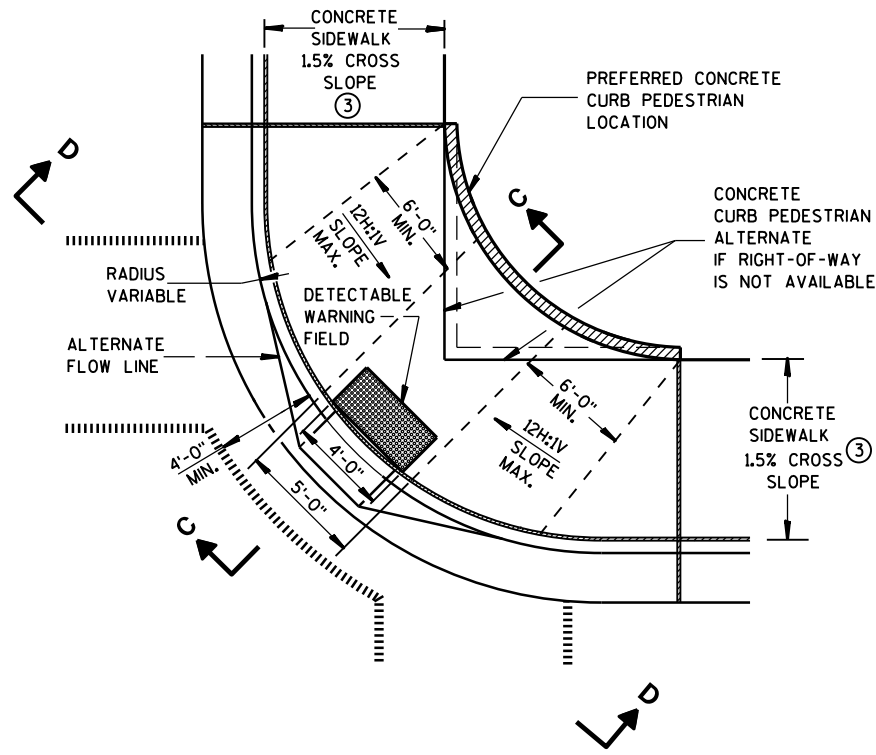
**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)



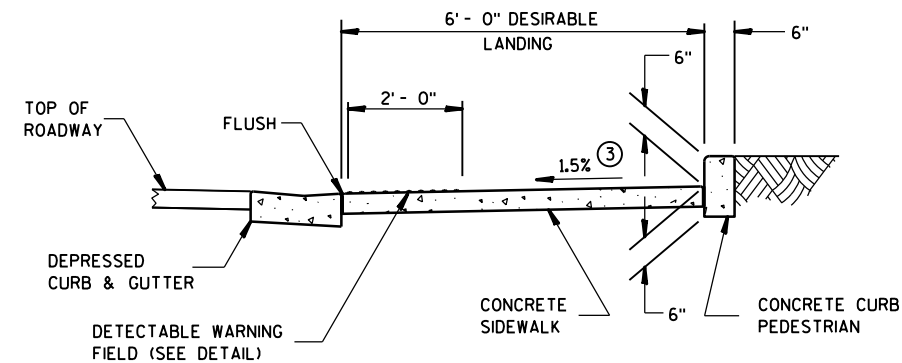
VIEW A-A



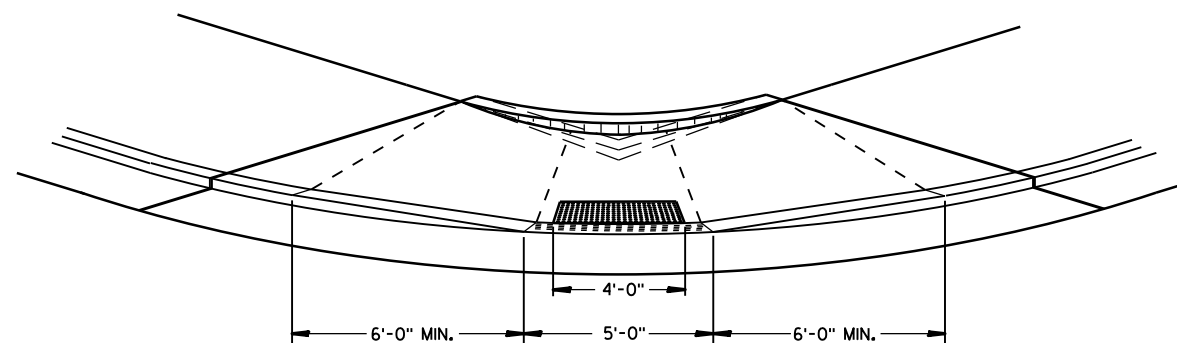
SECTION B-B



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



SECTION C-C



VIEW D-D

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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. 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.

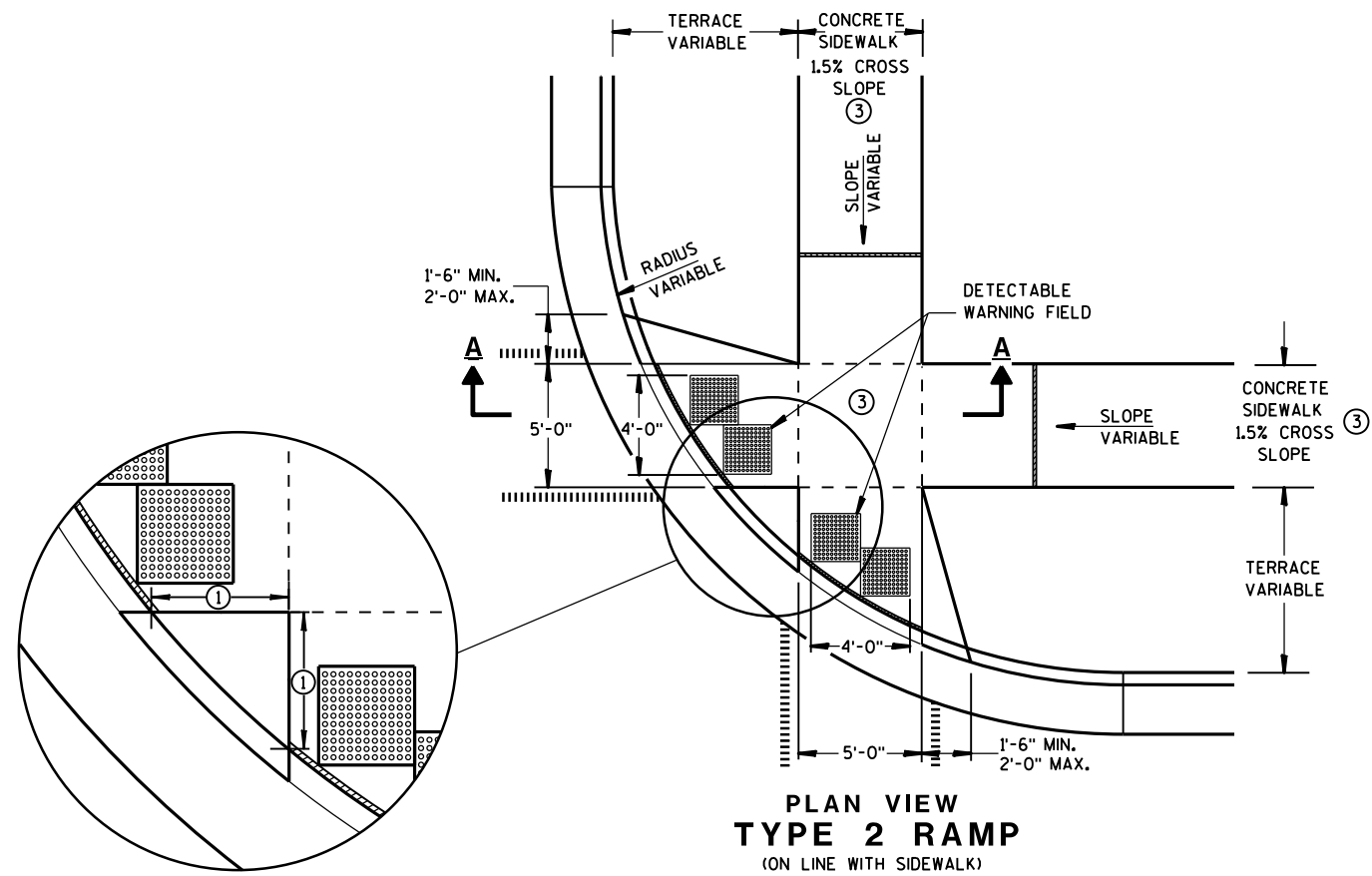
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

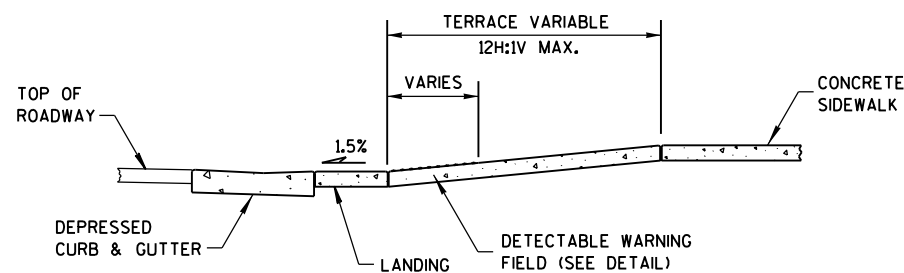
- 1/2" EXPANSION JOINT-SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

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

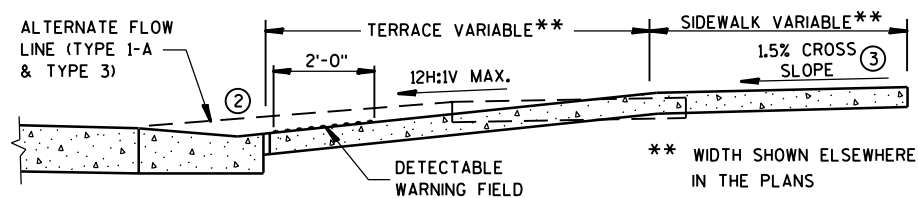
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW
TYPE 2 RAMP**
(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

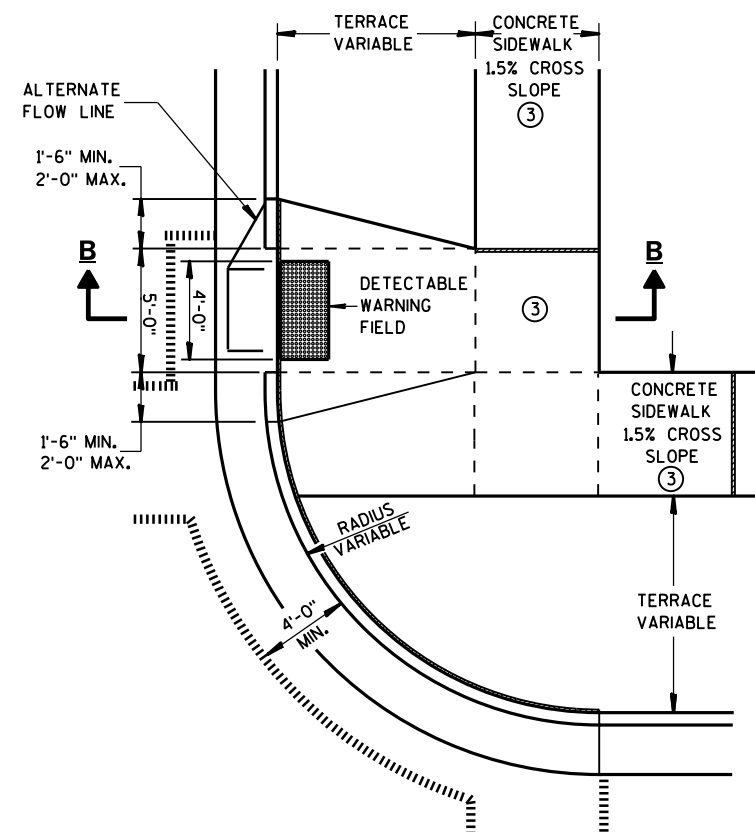
USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

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

- ① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

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



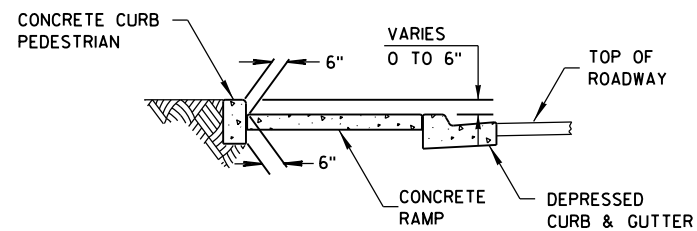
**PLAN VIEW
TYPE 3 RAMP**
(OUTSIDE OF CROSSWALK AREA)

**CURB RAMPS
TYPES 2 AND 3**

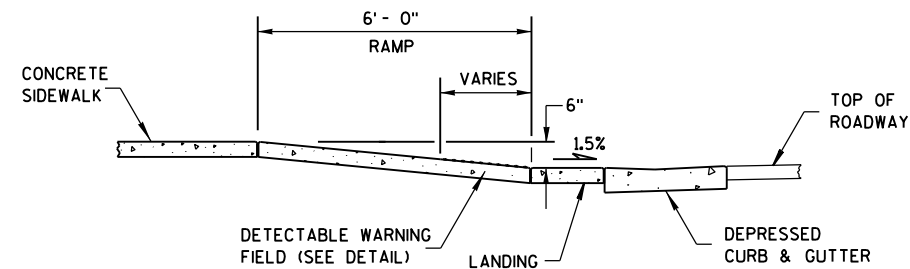
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4A
PLAN VIEW



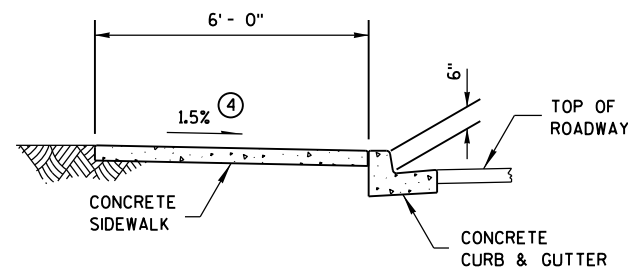
SECTION C-C FOR TYPE 4A



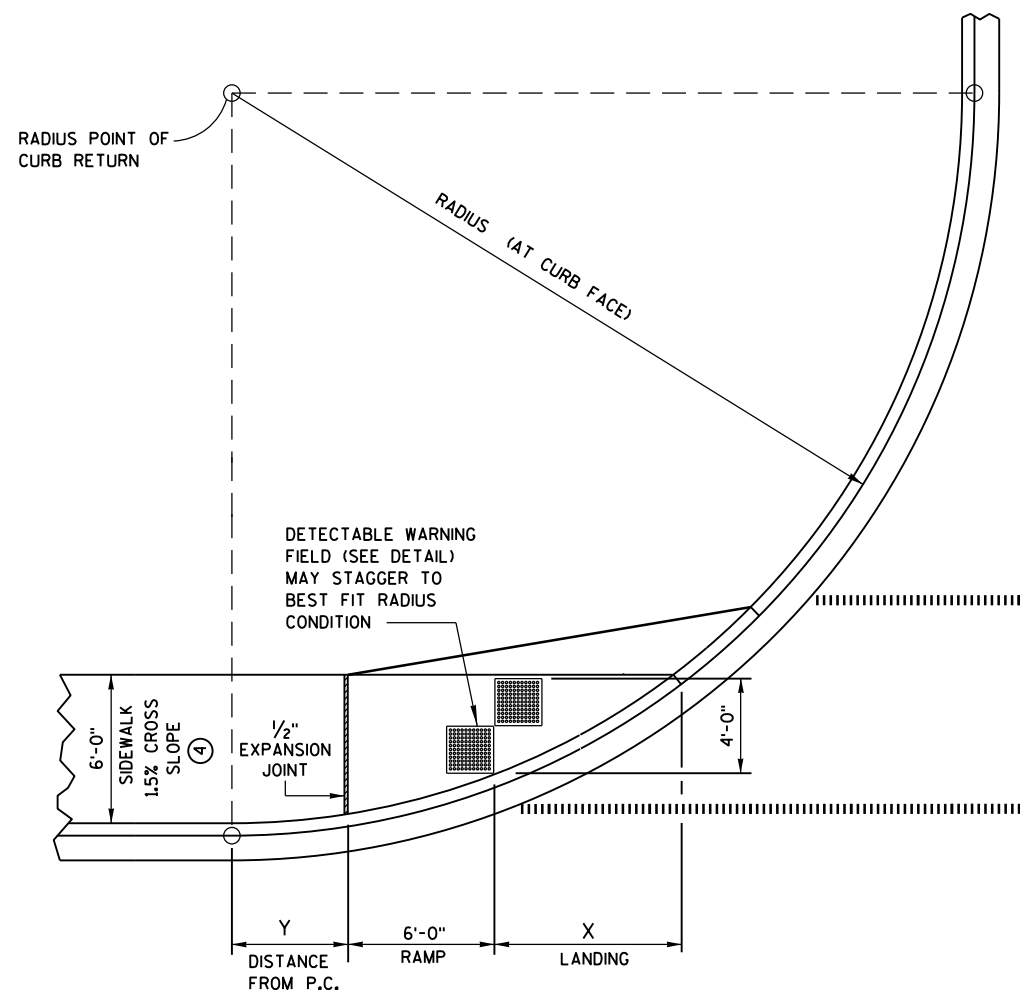
SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1 $\frac{3}{4}$ "	2'-7 $\frac{1}{4}$ "
30 FEET	7'-11 $\frac{3}{4}$ "	4'-8 $\frac{1}{4}$ "
40 FEET	9'-5 $\frac{1}{4}$ "	6'-5"
50 FEET	10'-8 $\frac{3}{4}$ "	7'-11 $\frac{1}{4}$ "
60 FEET	11'-10 $\frac{1}{4}$ "	9'-3 $\frac{1}{2}$ "

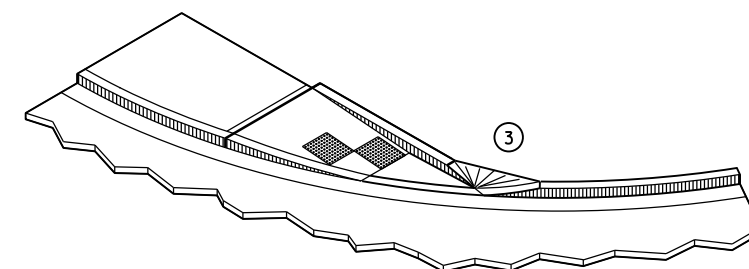
INTERMEDIATE RADII CAN BE INTERPOLATED



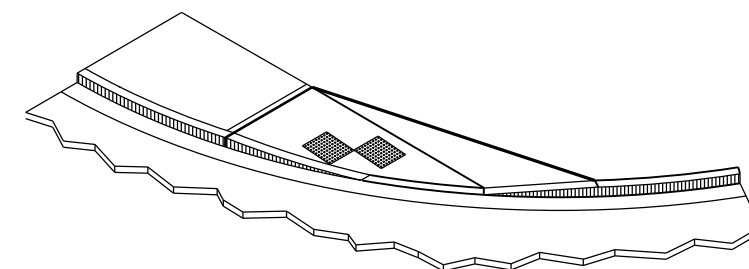
SECTION A-A FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A



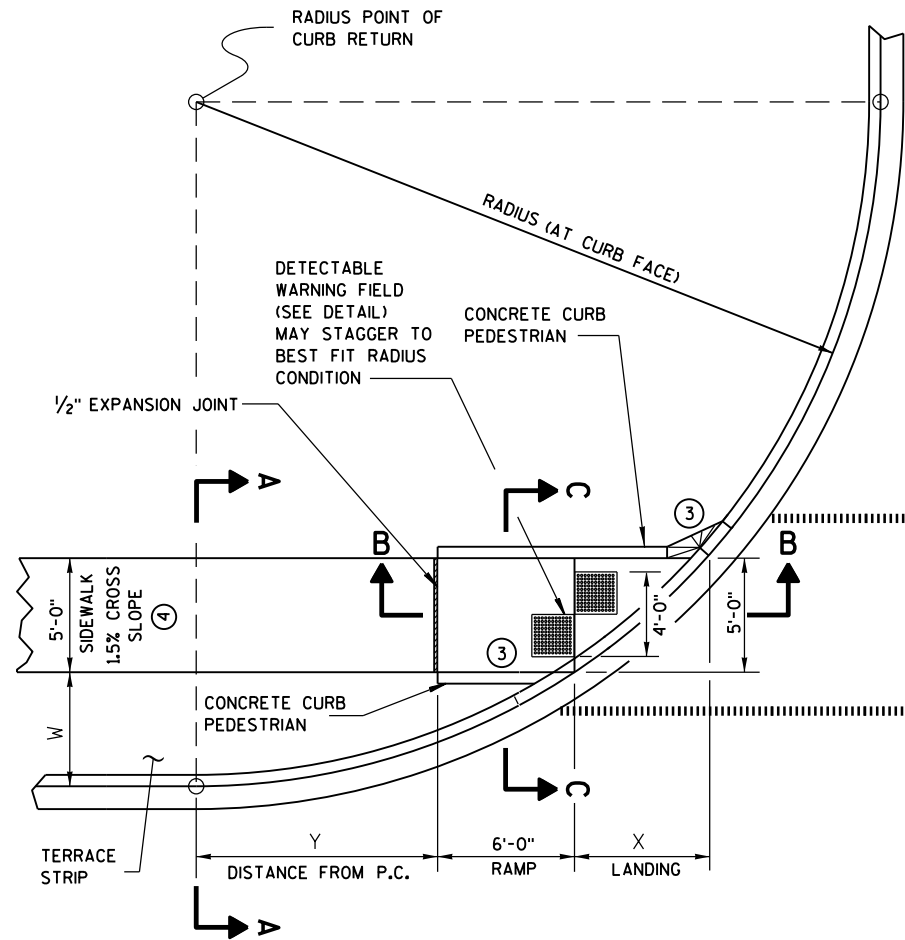
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

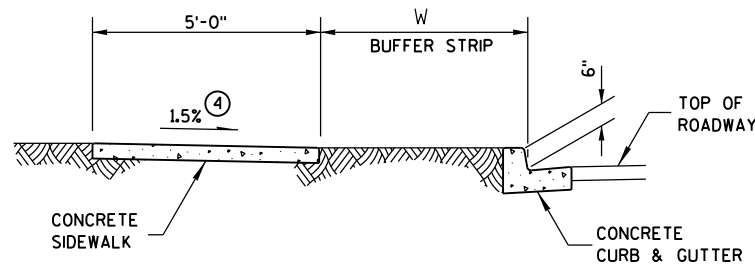
- | | |
|---------|------------------------------------|
| ===== | 1/2" EXPANSION JOINT-SIDEWALK |
| - - - - | CONTRACTION JOINT FIELD LOCATED |
| | PAVEMENT MARKING CROSSWALK (WHITE) |

CURB RAMPS TYPES 4A AND 4A1

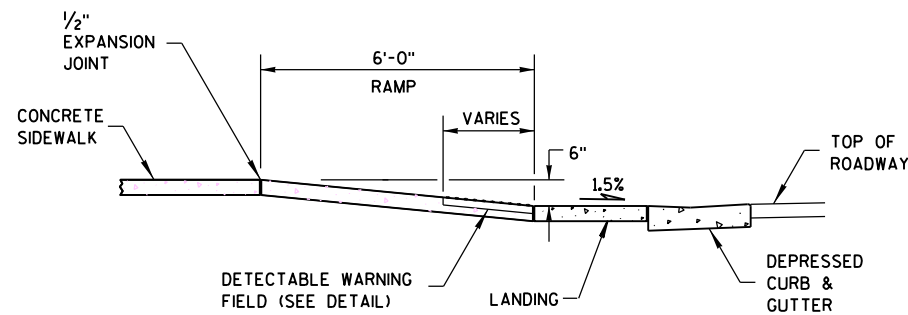
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB RAMP TYPE 4B
PLAN VIEW**



SECTION A-A FOR TYPE 4B

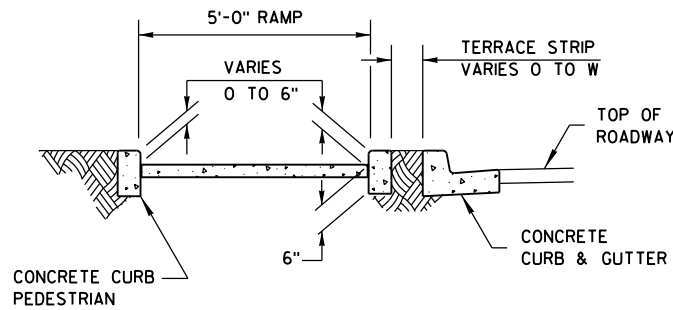


SECTION B-B FOR TYPE 4B

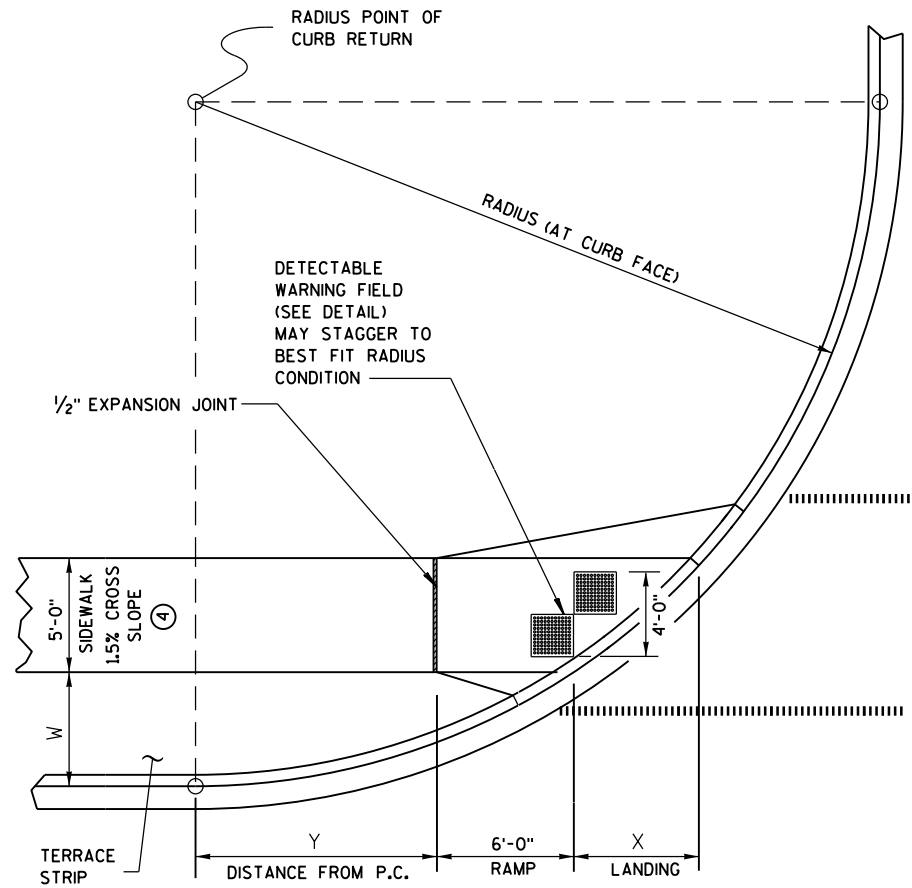
- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3/4"	11'-3/4"	9'-1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B



**CURB RAMP TYPE 4B1
PLAN VIEW**

GENERAL NOTES

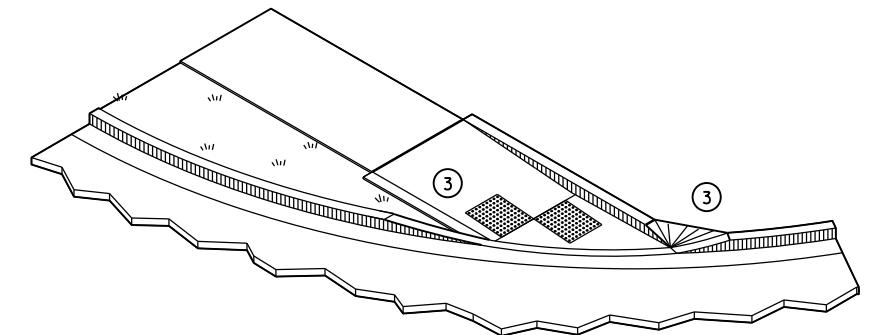
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

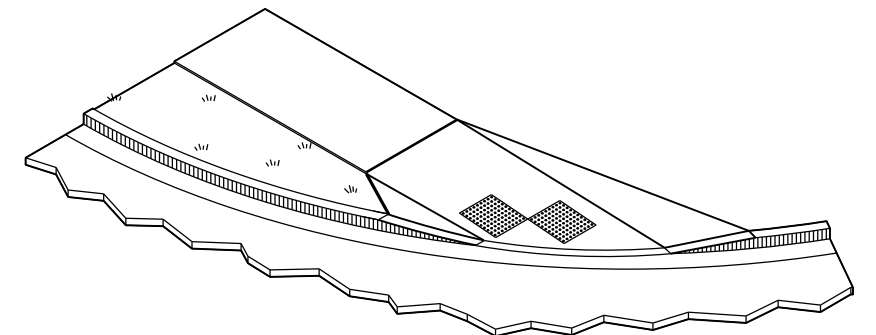
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

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



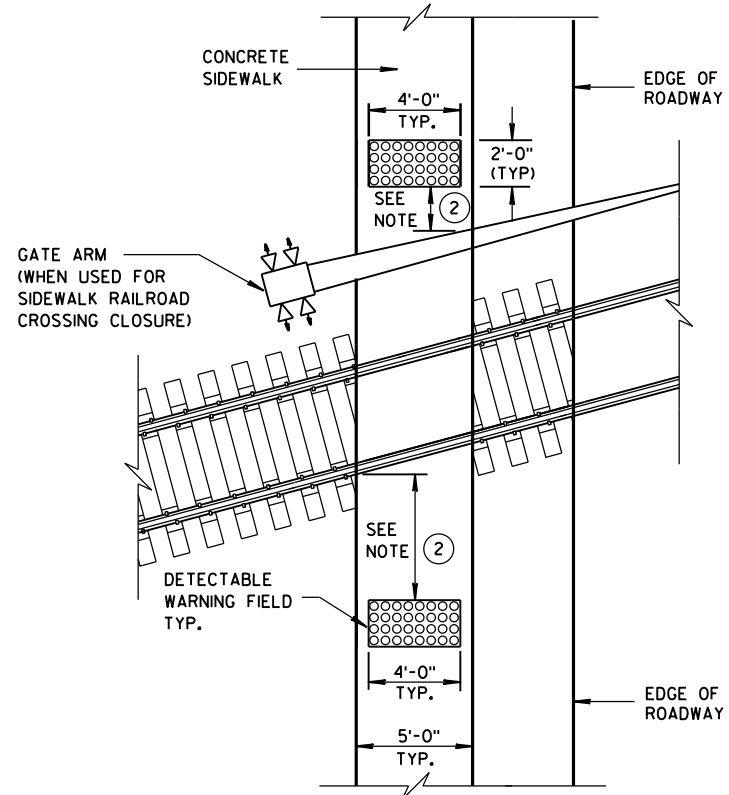
ISOMETRIC VIEW FOR TYPE 4B



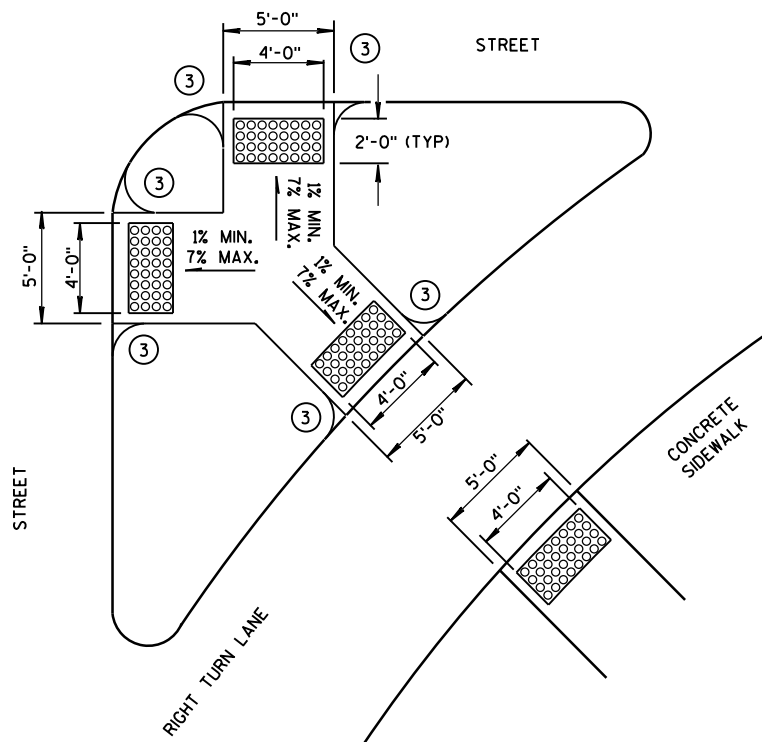
ISOMETRIC VIEW FOR TYPE 4B1

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

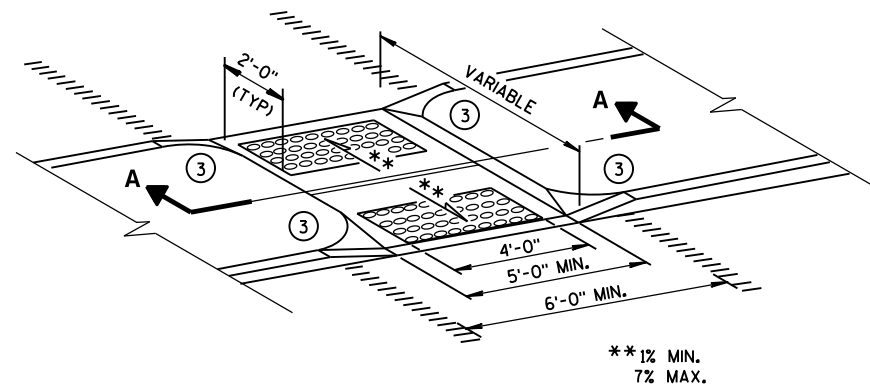
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



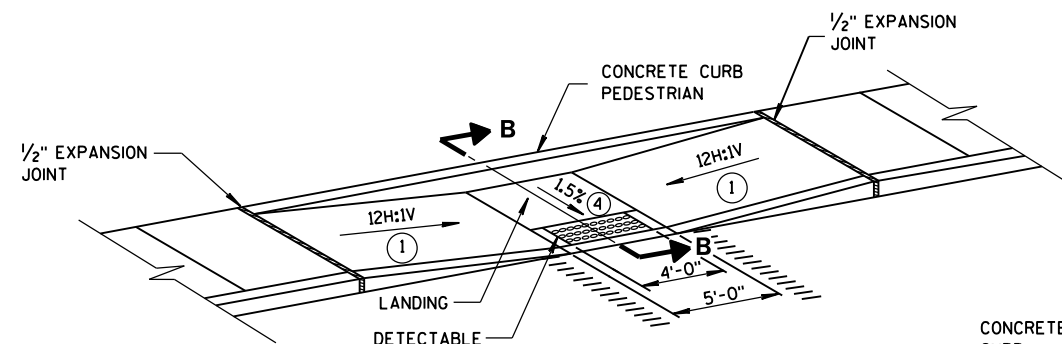
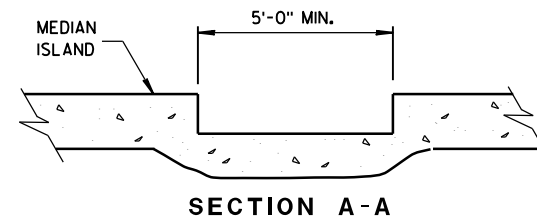
TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING



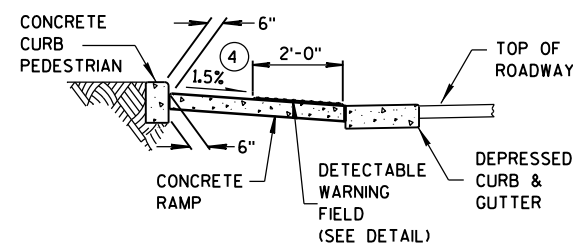
TYPE 6
DETECTABLE WARNING AT ISLANDS



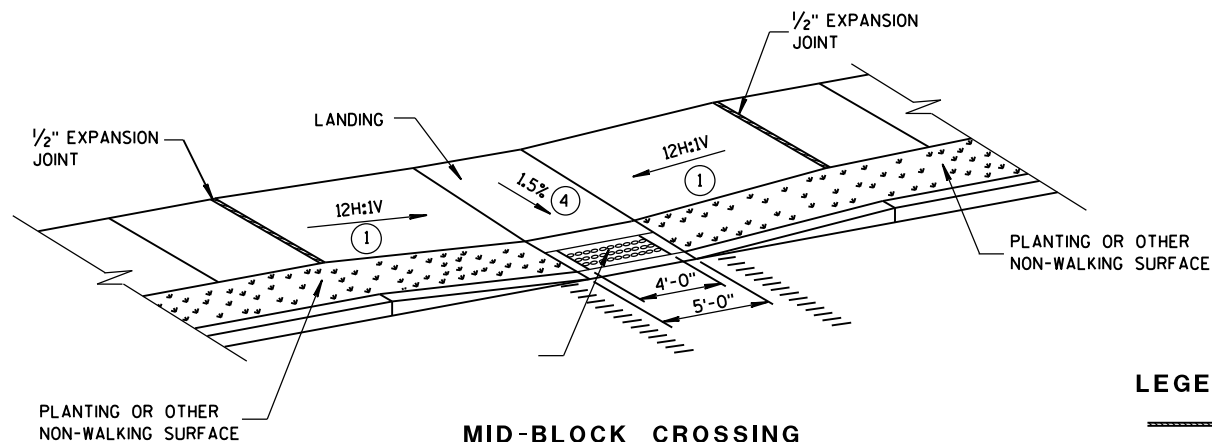
MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



MID-BLOCK CROSSING
TYPE 7B

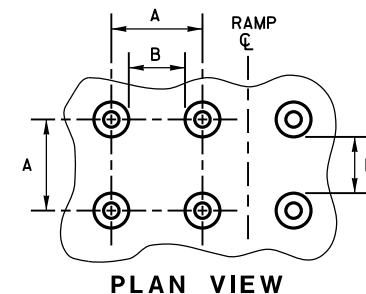
NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

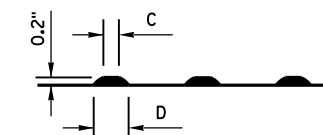
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

- 1 SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- 2 THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET \pm 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.
- 3 INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.
- 4 \pm 0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



PLAN VIEW



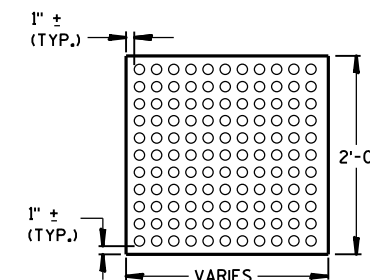
ELEVATION VIEW

	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.

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

LEGEND

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

CURB RAMPS

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

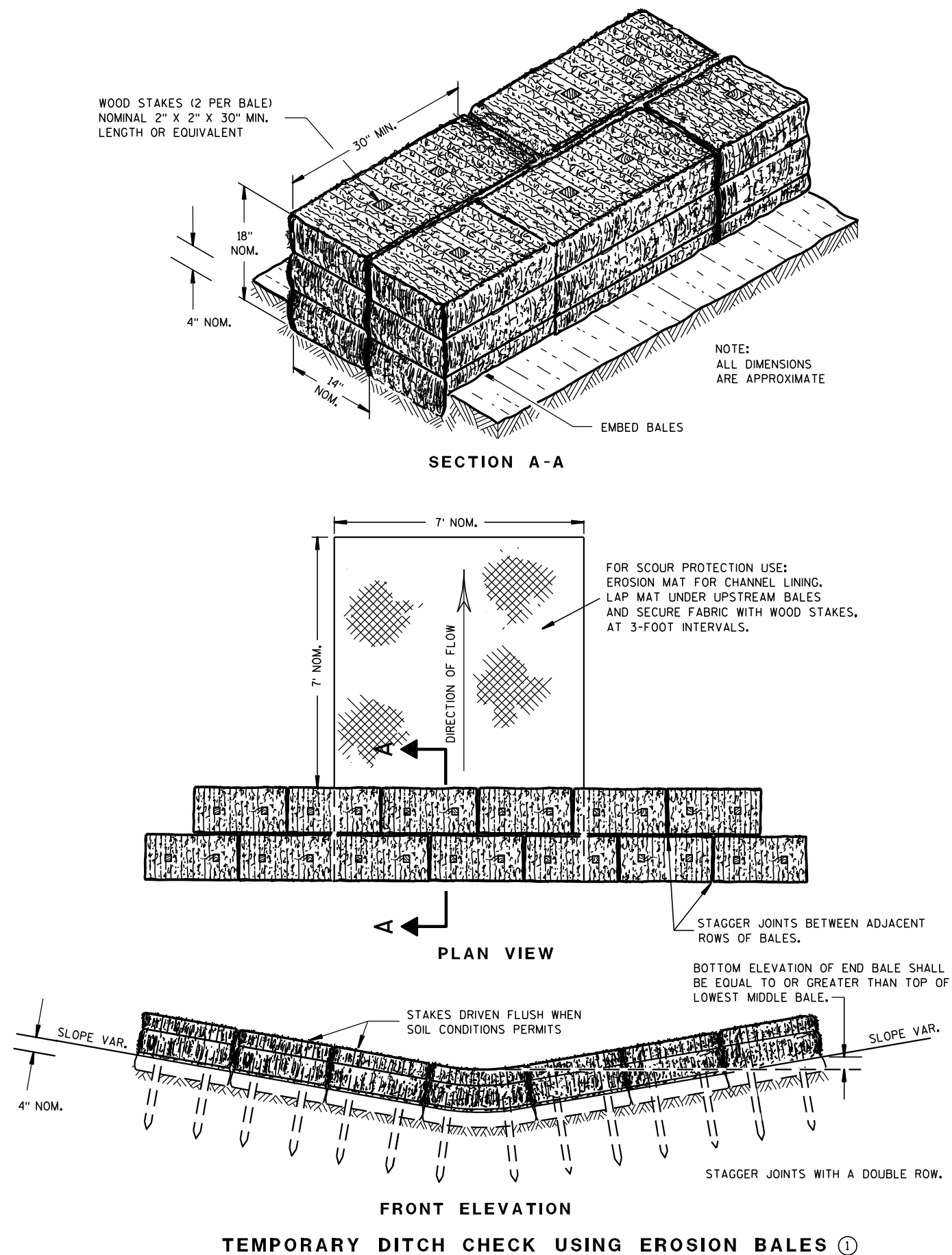
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-6-2013
DATE

FHWA

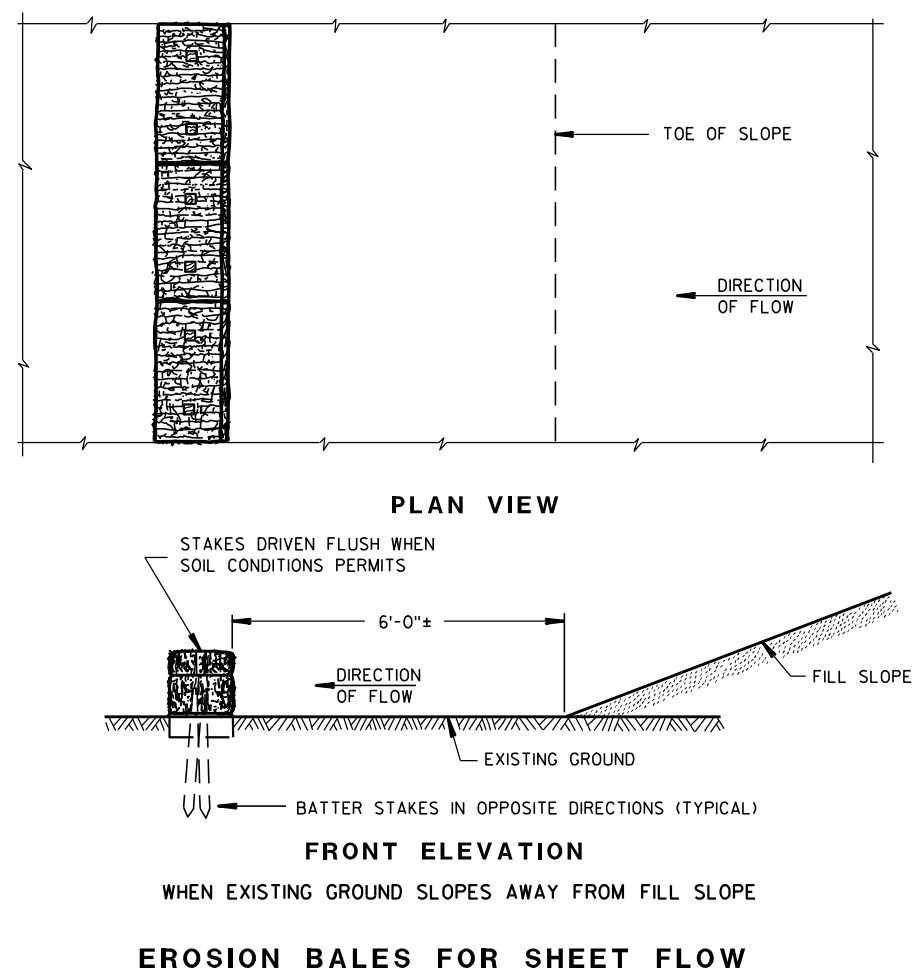
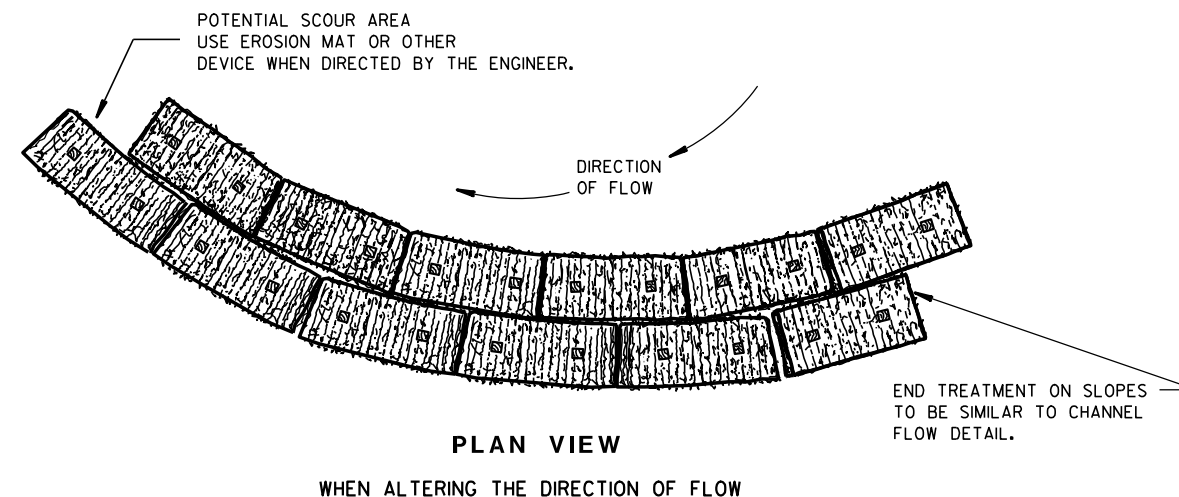
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



GENERAL NOTES

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

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

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

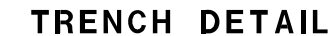
6/04/02
DATE

FHWA

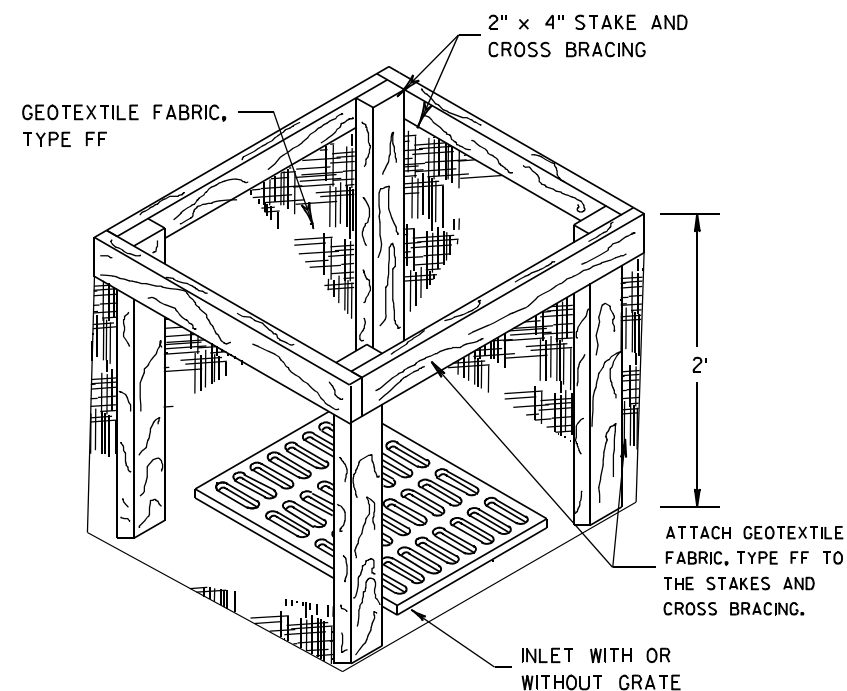
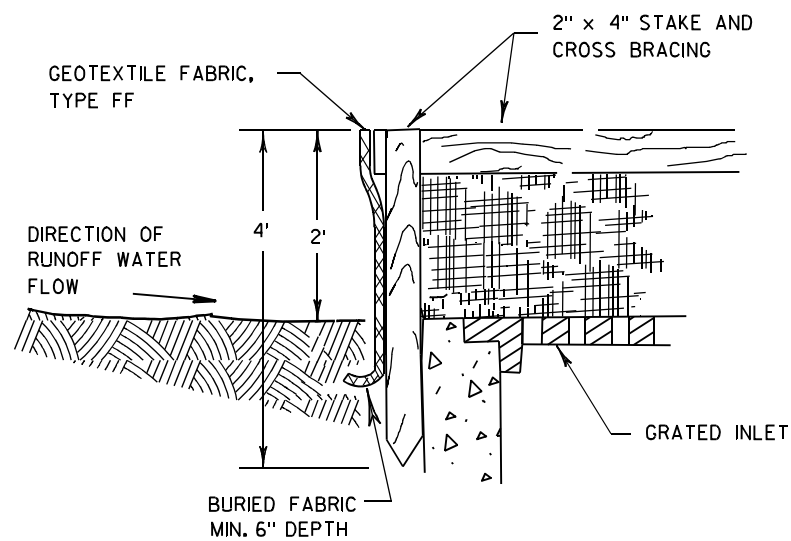
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



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



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



INLET PROTECTION, TYPE A

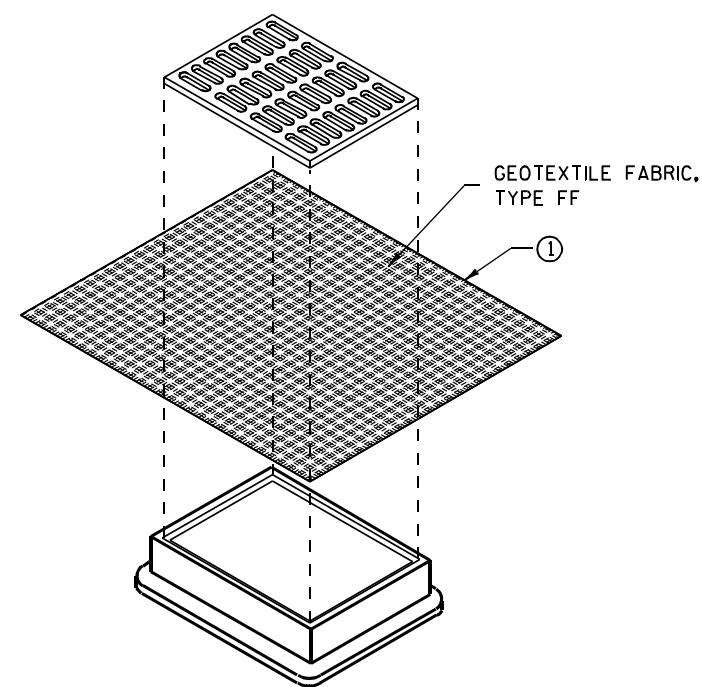
GENERAL NOTES

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.

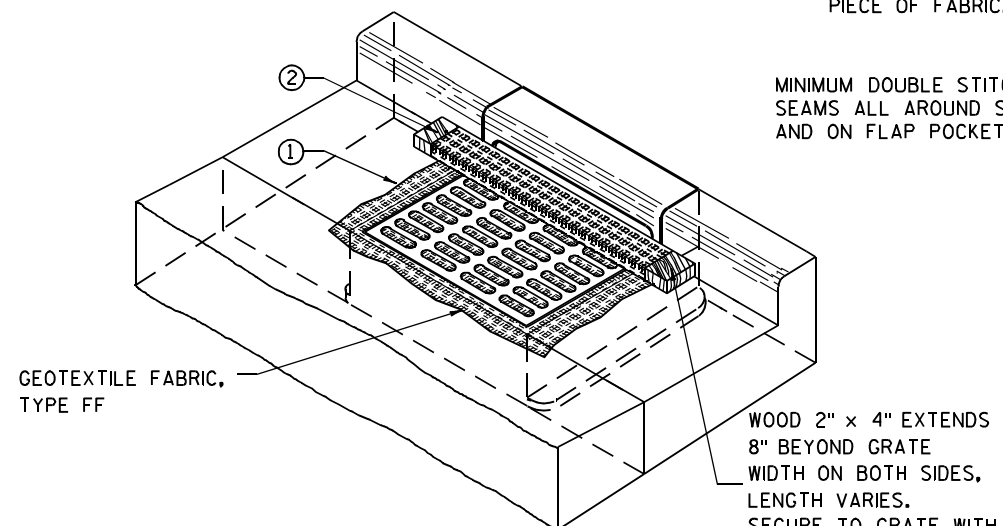
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

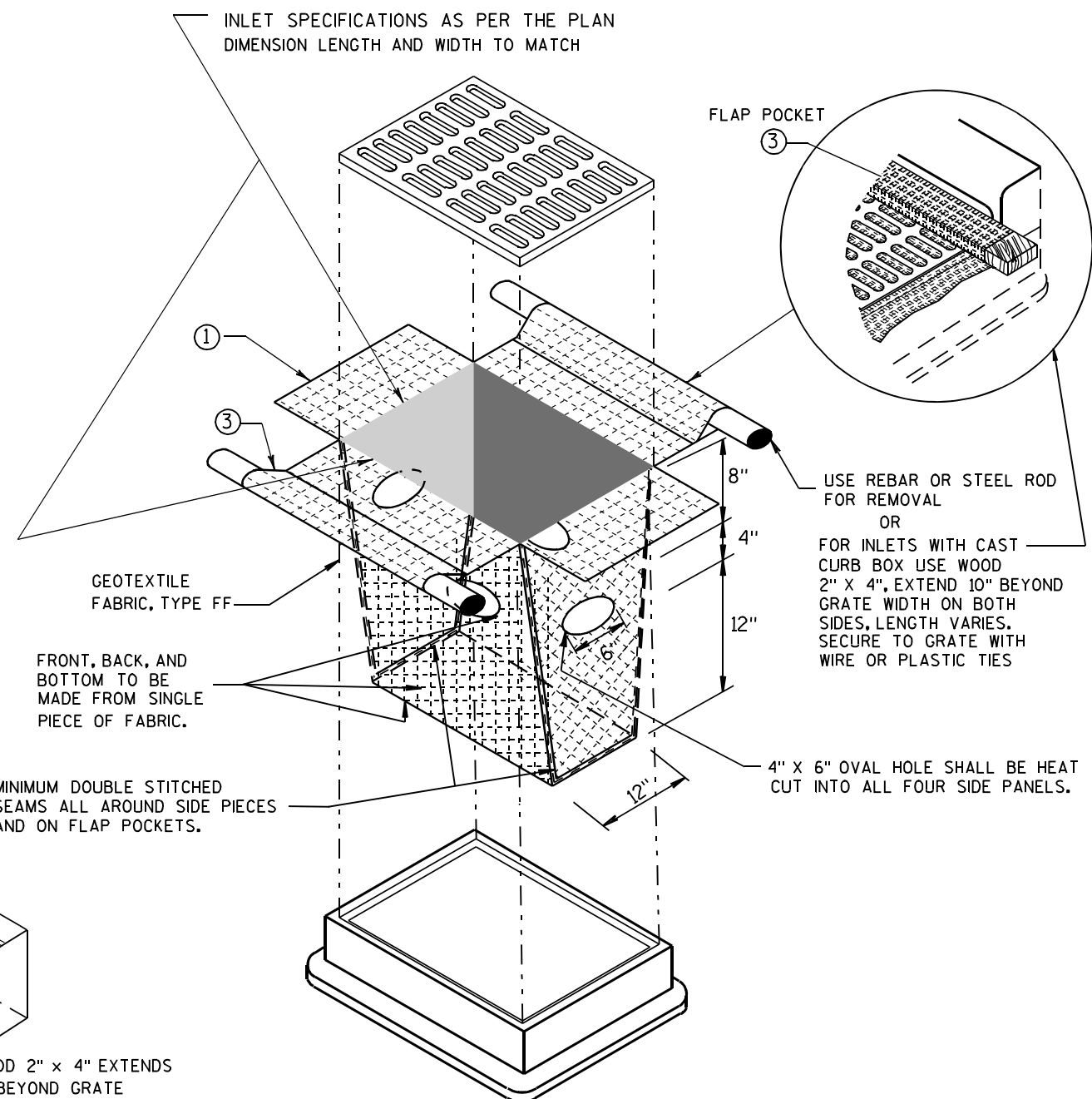
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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)

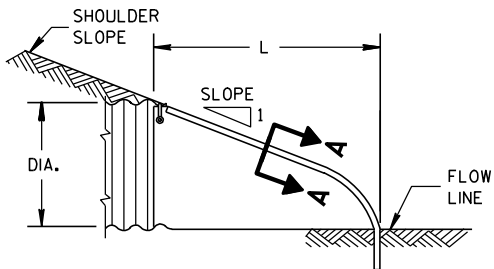
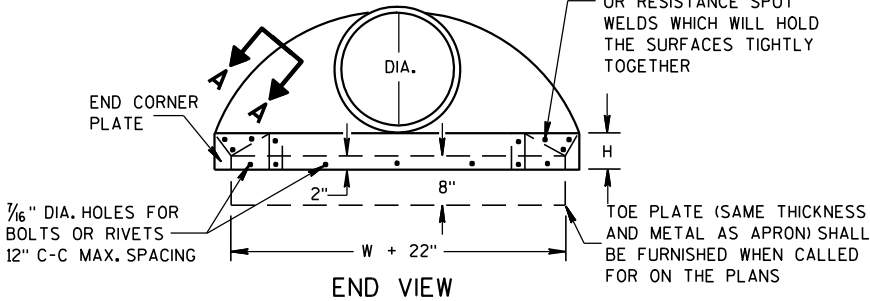
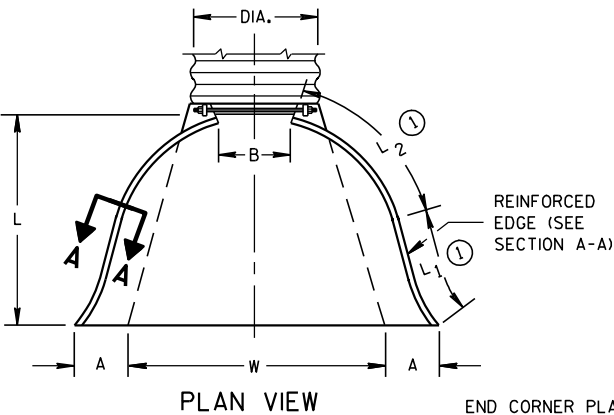
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

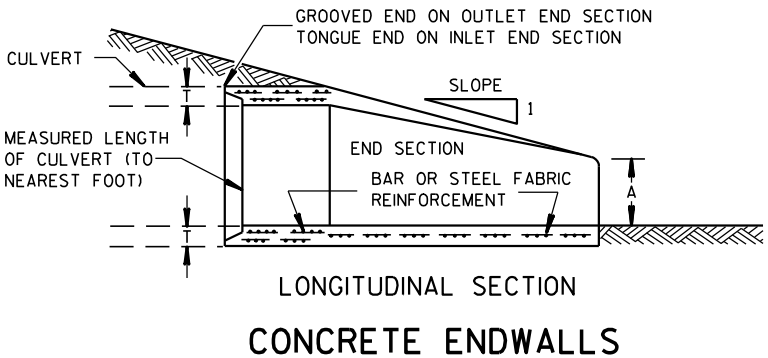
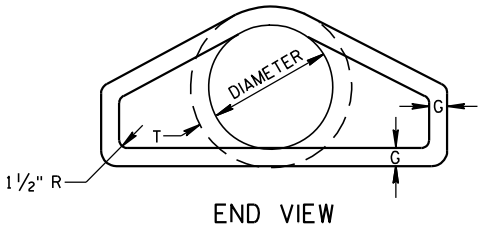
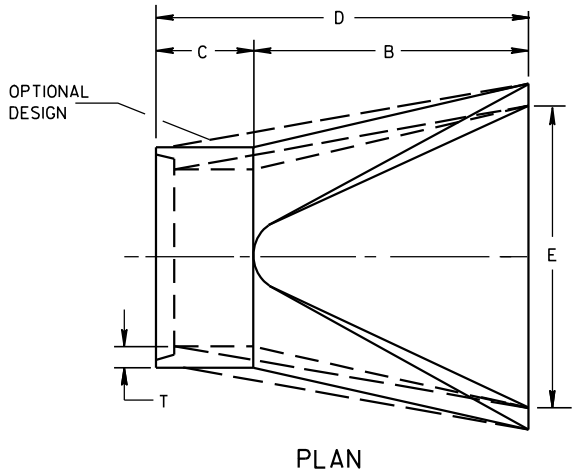
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

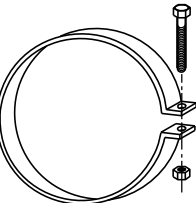
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9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

* MINIMUM
** MAXIMUM

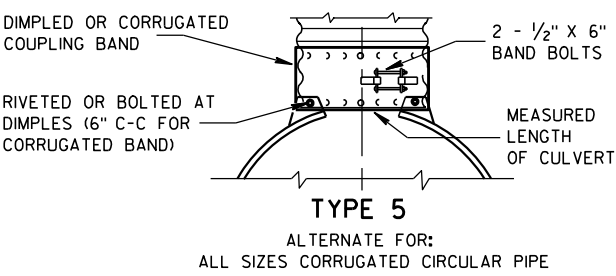
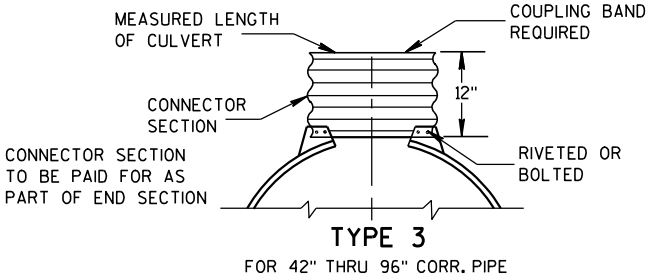
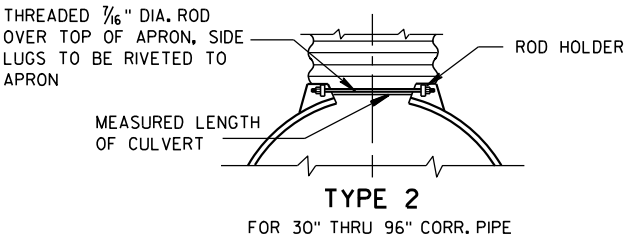
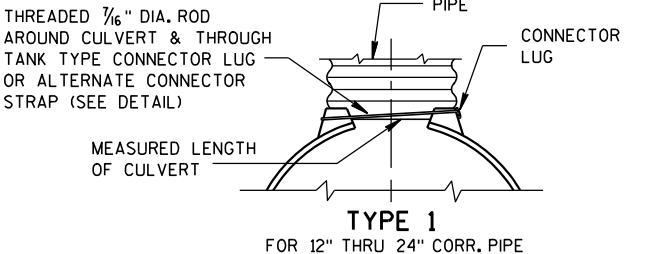


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



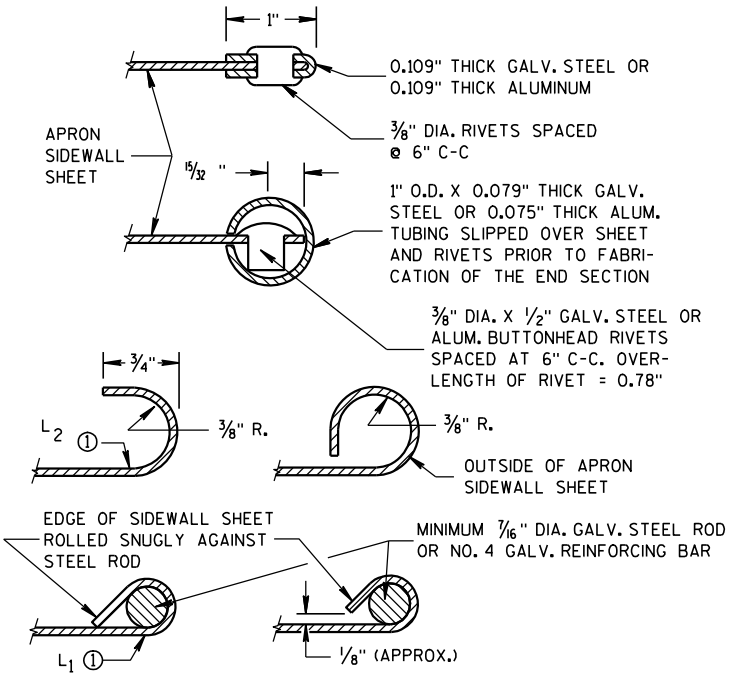
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

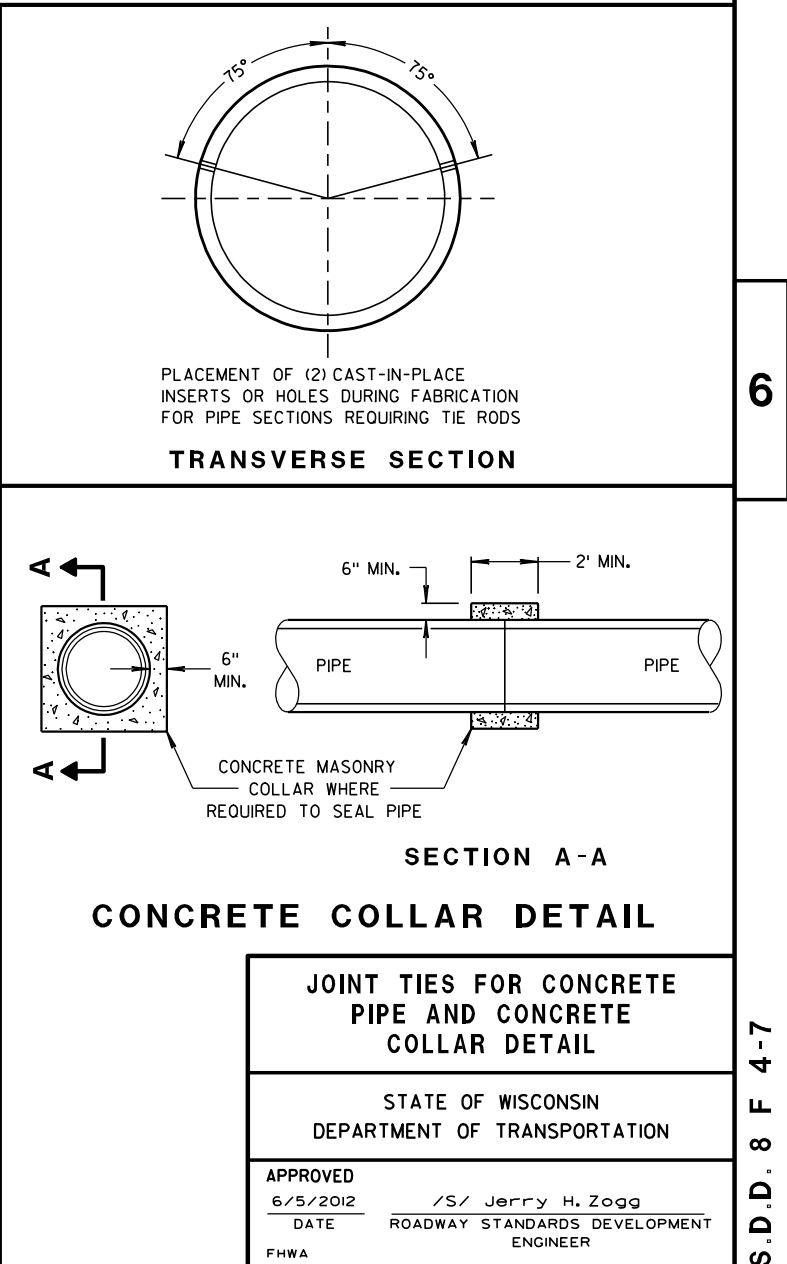
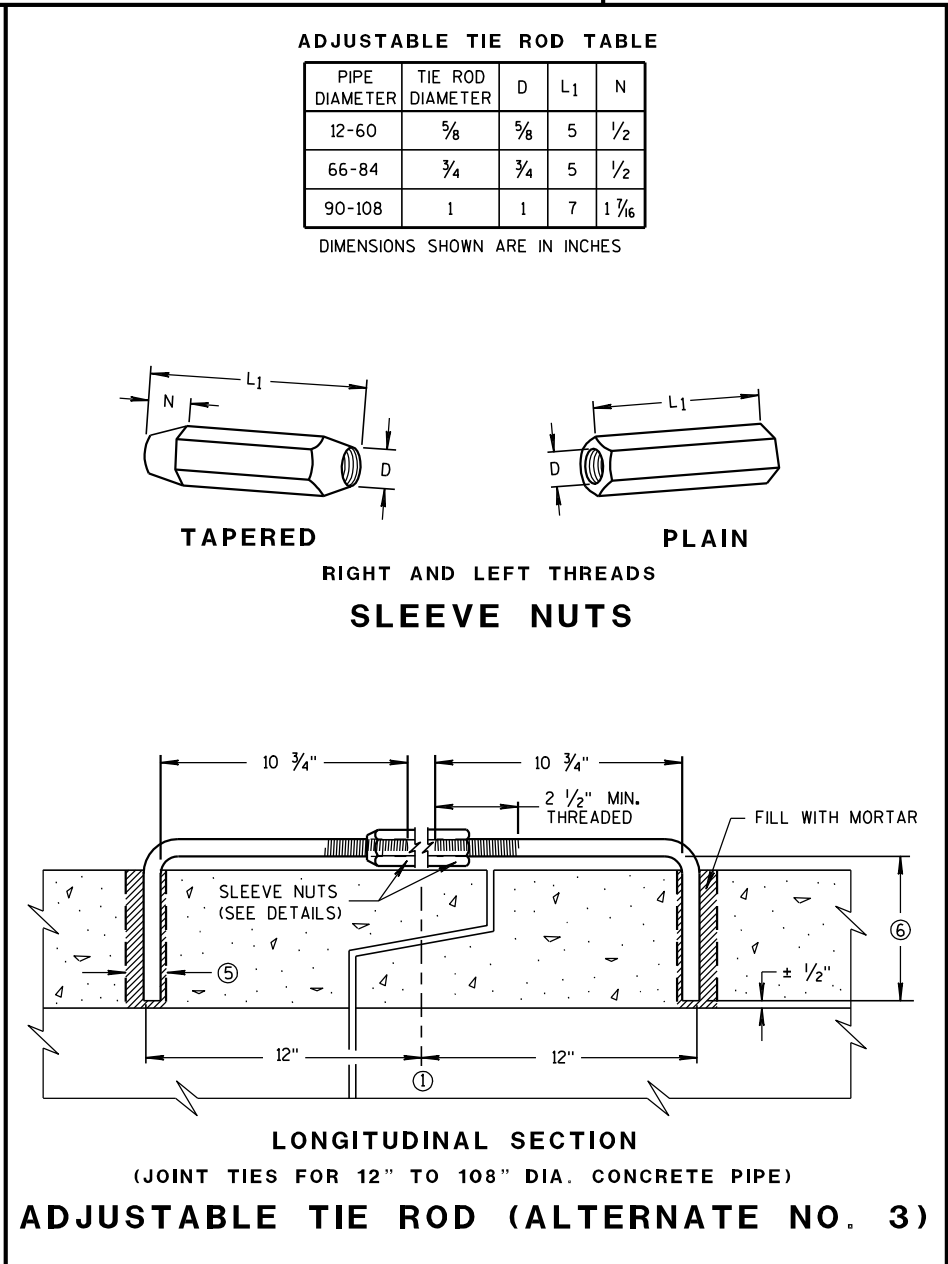
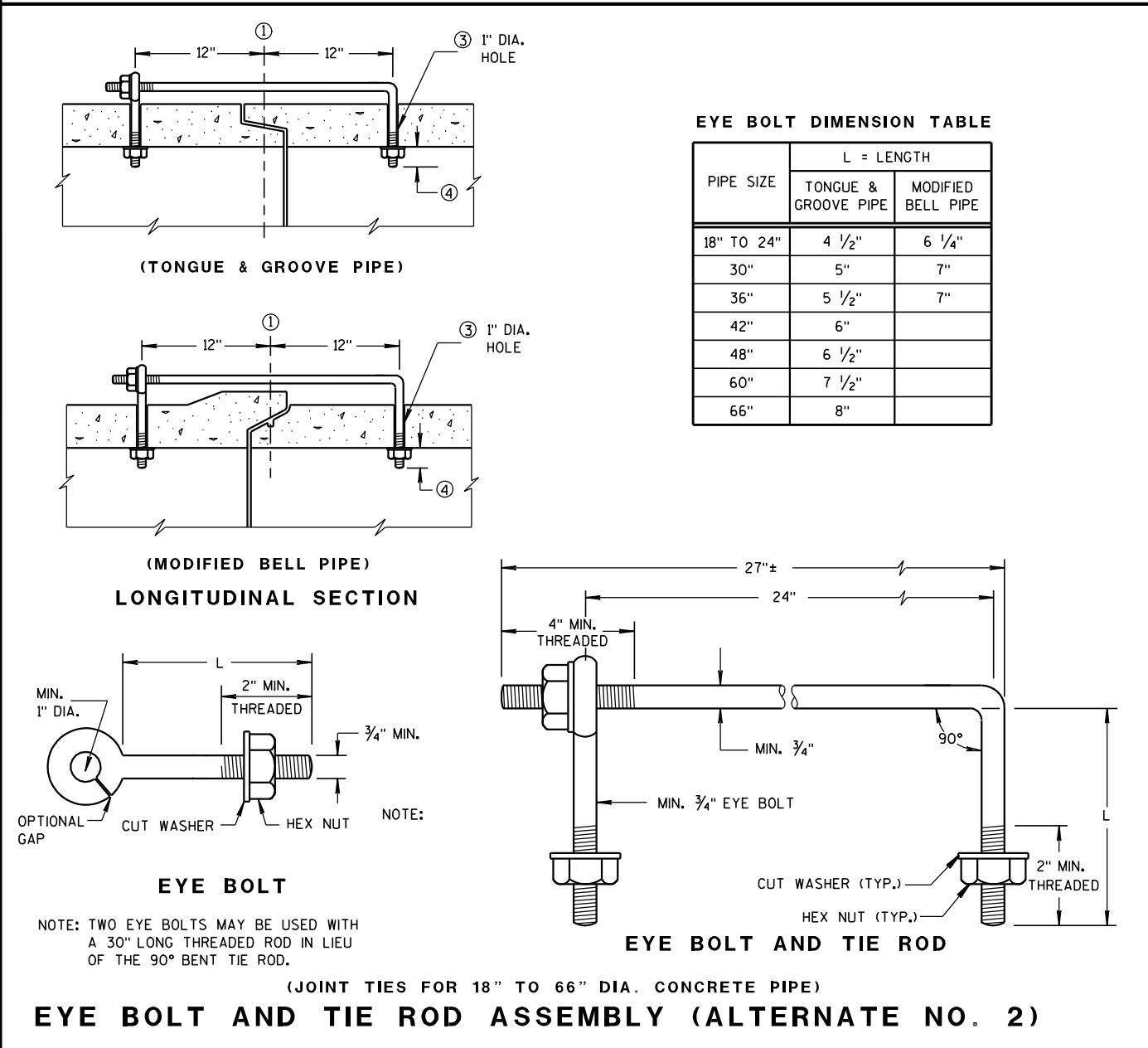
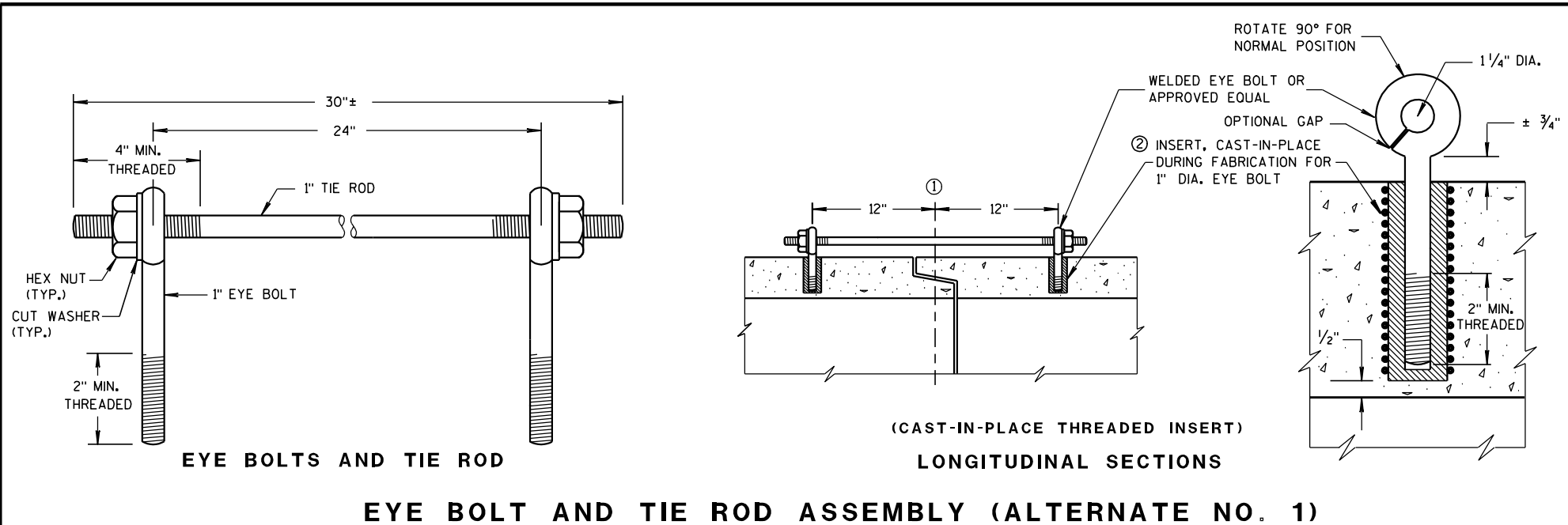
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

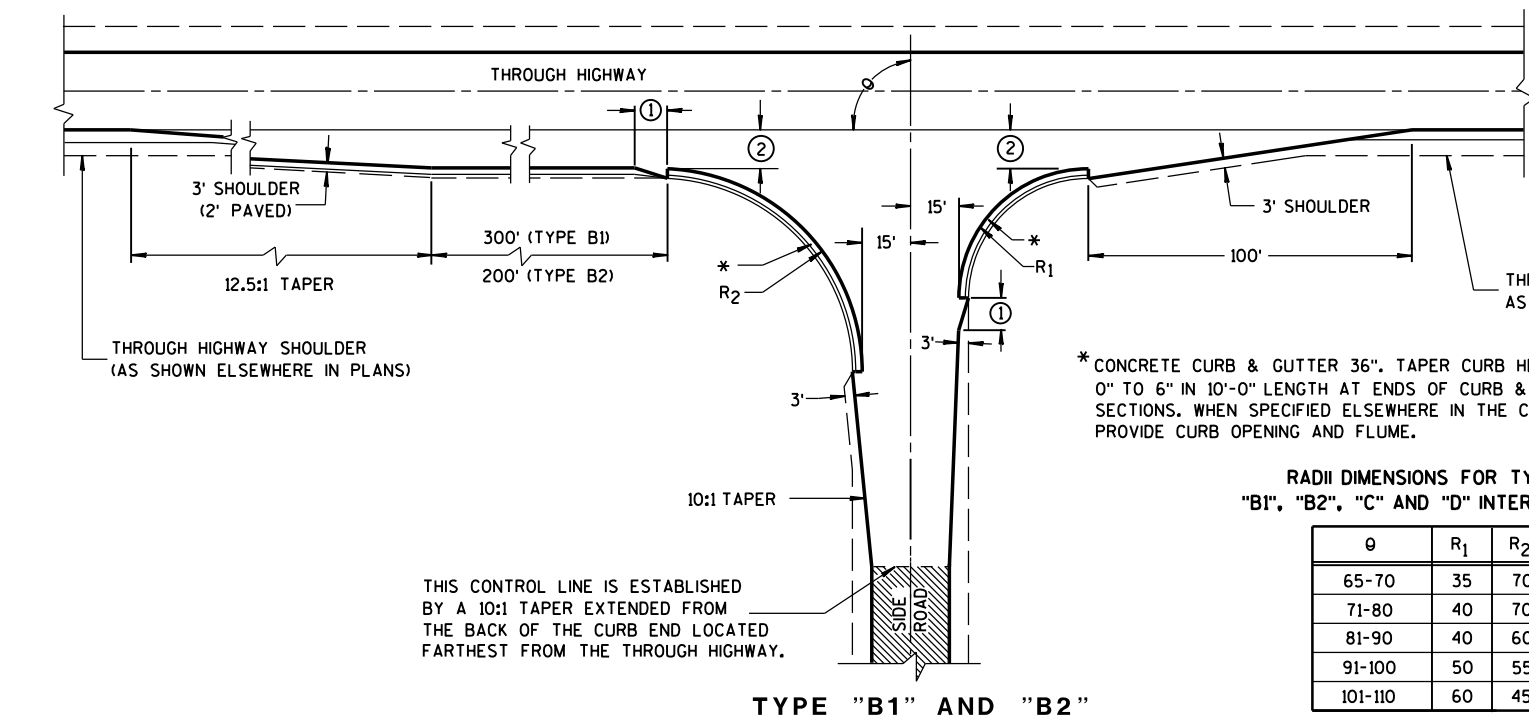
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES.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

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

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

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





GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

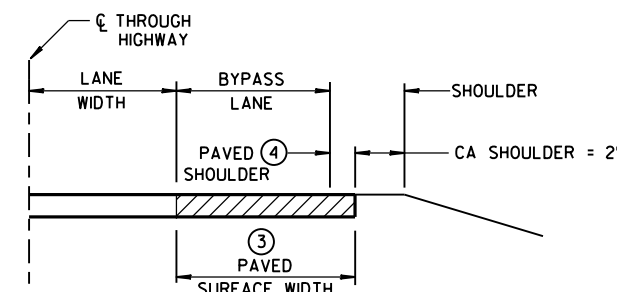
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

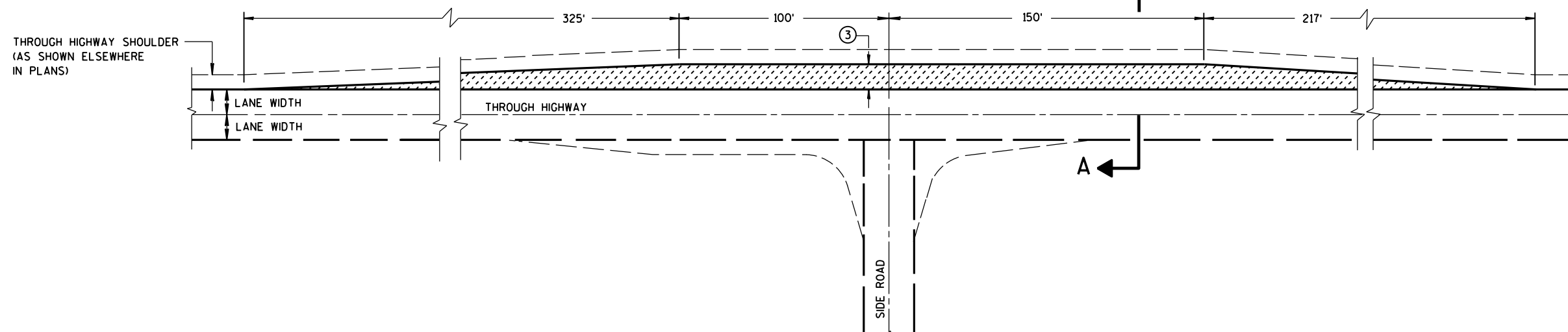
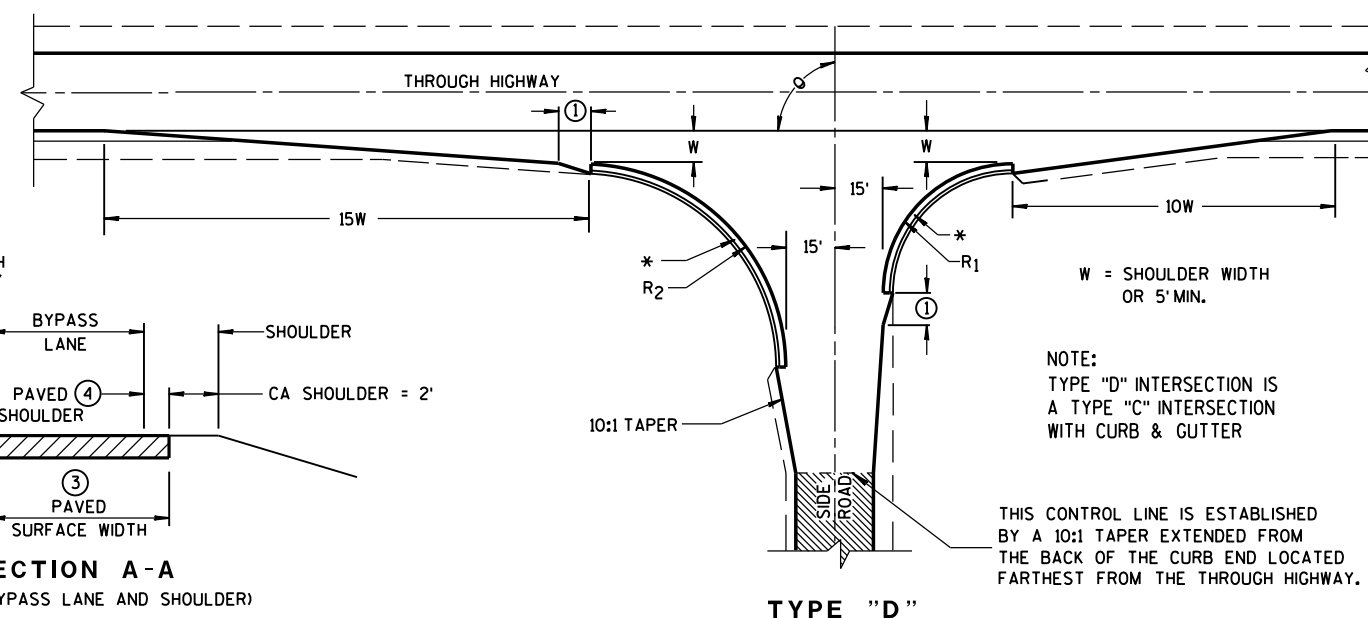
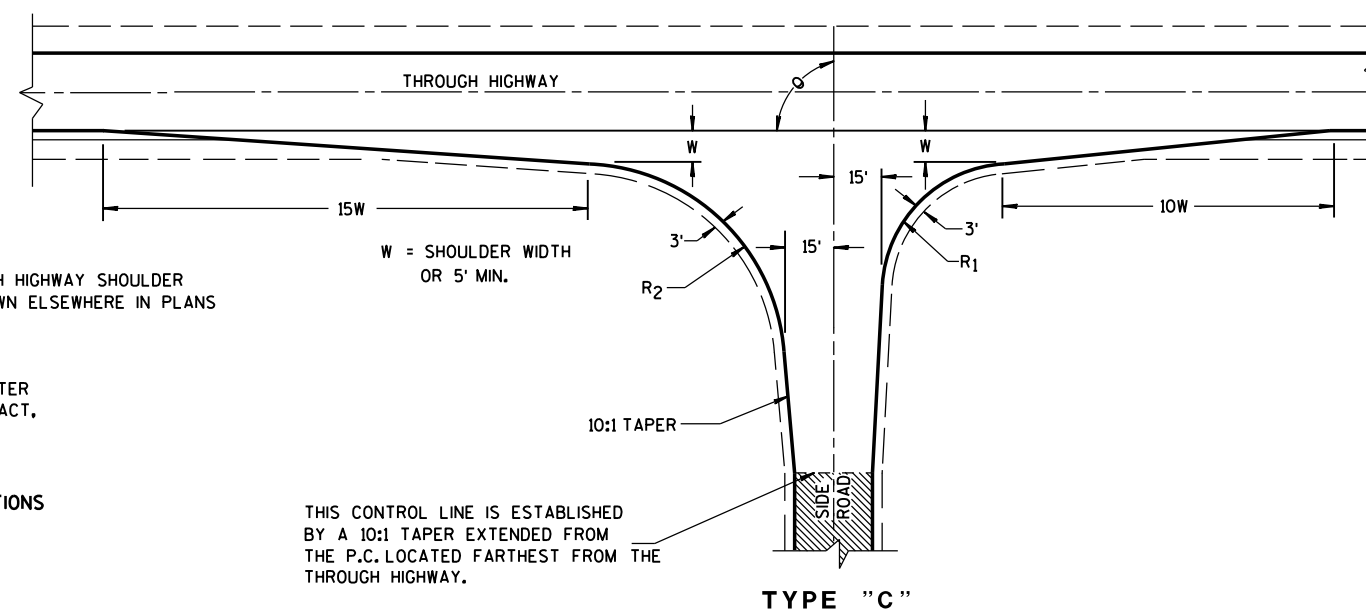
EXISTING PAVED SURFACE

BYPASS LANE

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



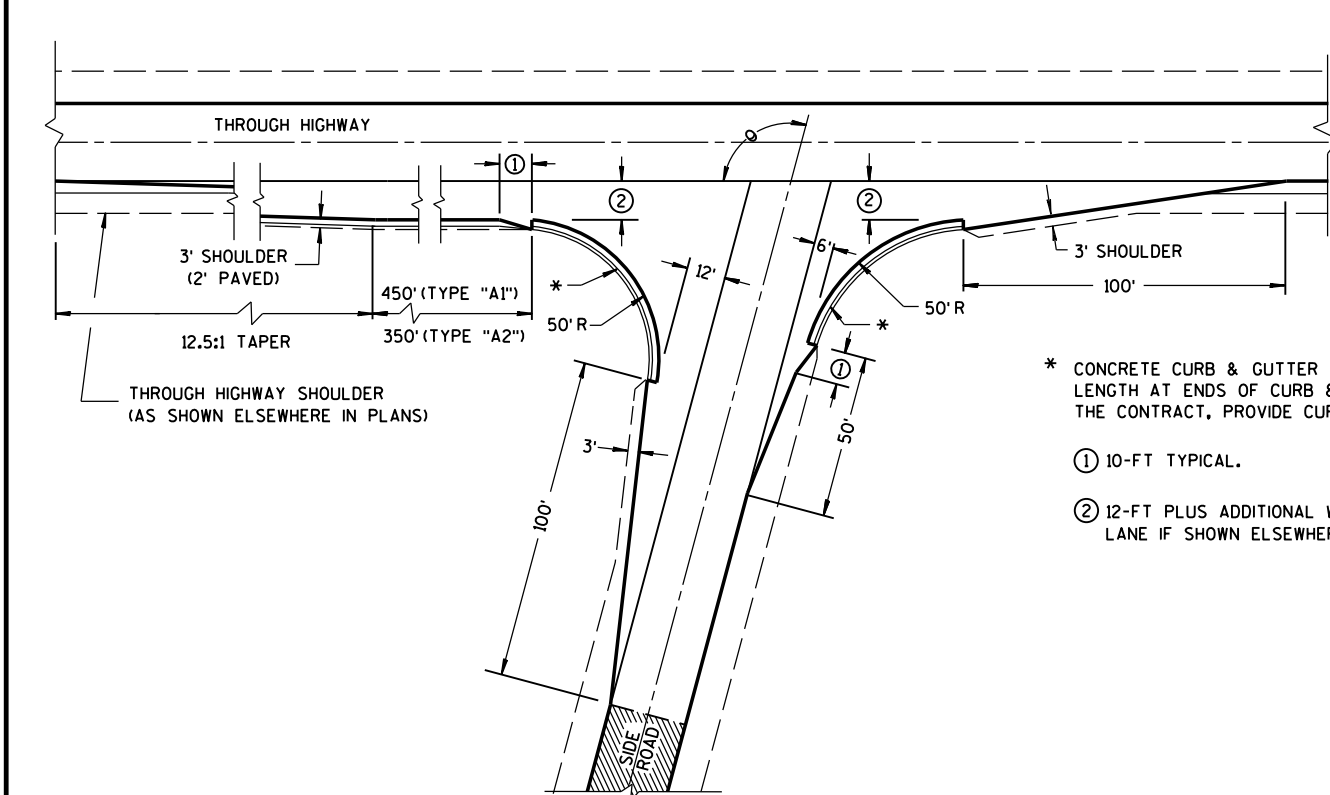
SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

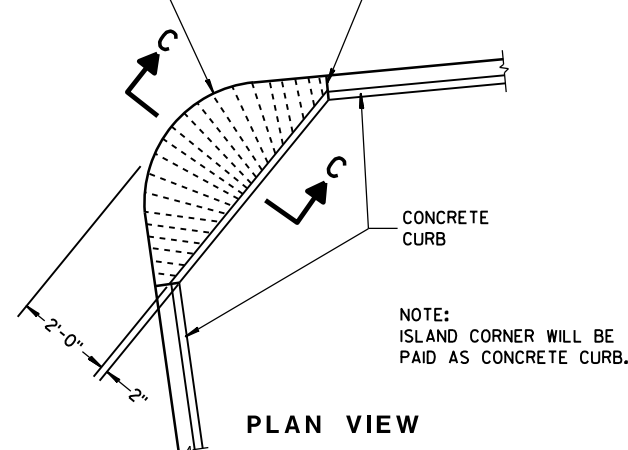
① 10-FT TYPICAL.

② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.

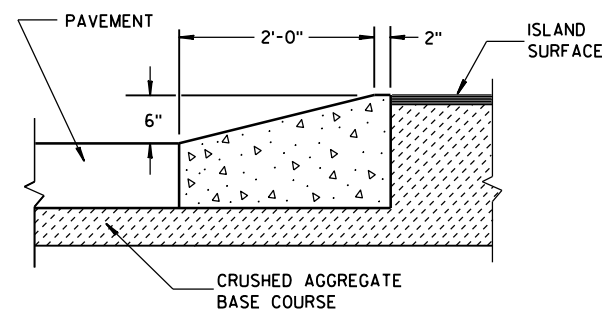
1'-6" OR 2'-6" RADIUS AS REQUIRED
3/4" EXPANSION JOINT MATERIAL

$\theta = \text{MORE THAN } 80^\circ$

EXISTING PAVED SURFACE



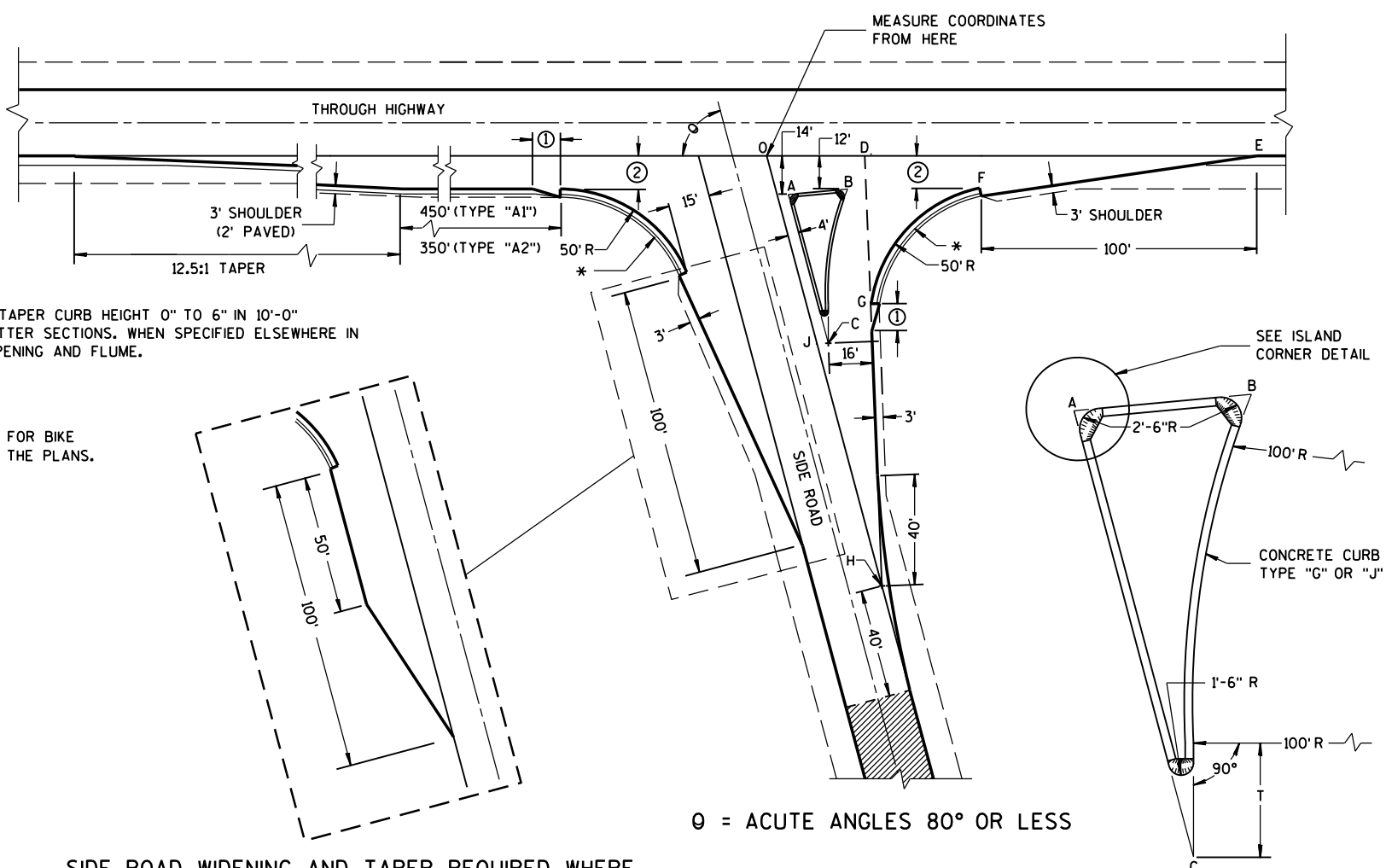
PLAN VIEW



SECTION C-C

ISLAND CORNER DETAIL

(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)



$\theta = \text{ACUTE ANGLES } 80^\circ \text{ OR LESS}$

SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 $\theta = \text{ACUTE ANGLES } 70^\circ \text{ OR LESS}$

TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES

(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/18/12

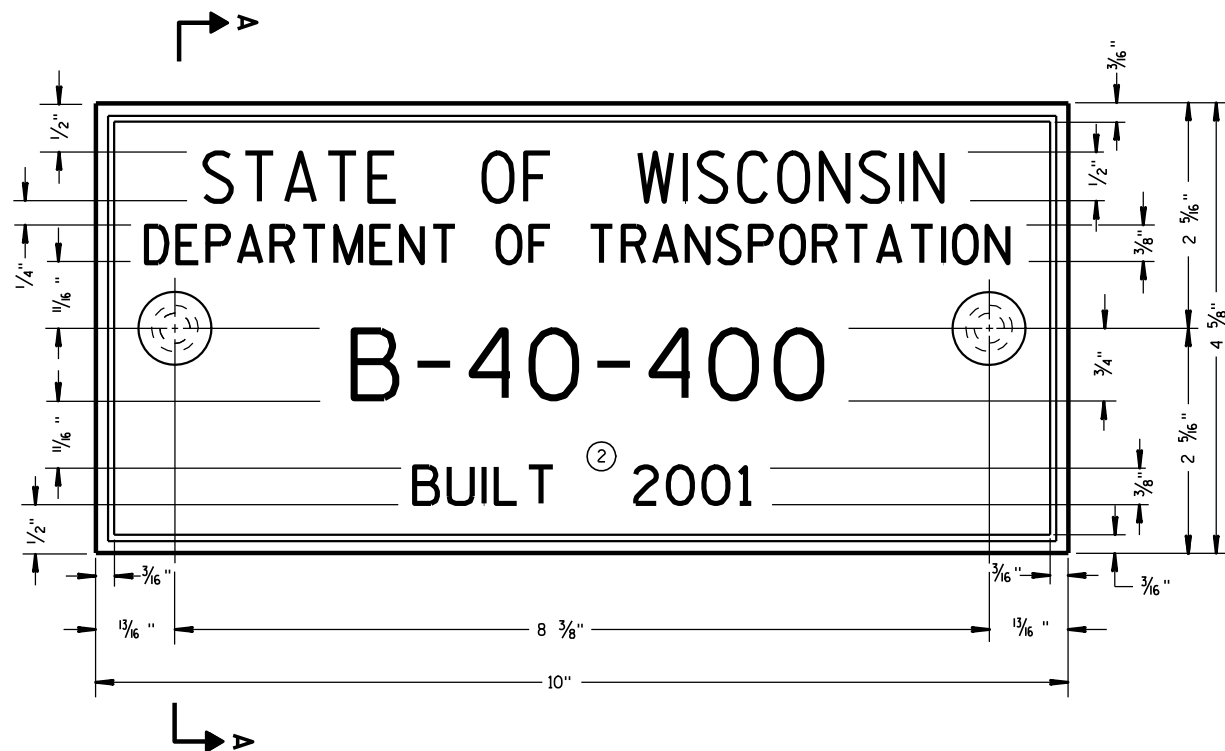
DATE

FHWA

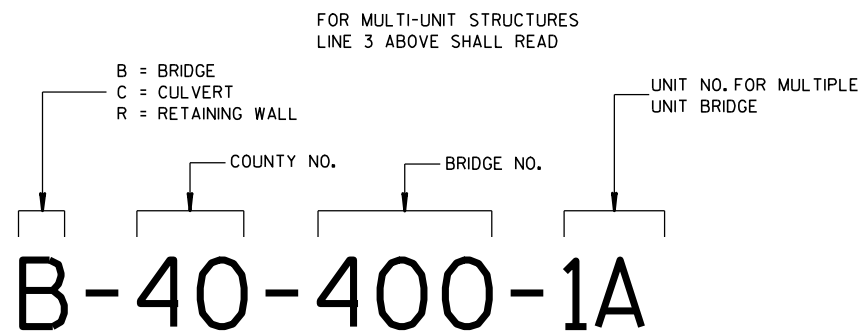
/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



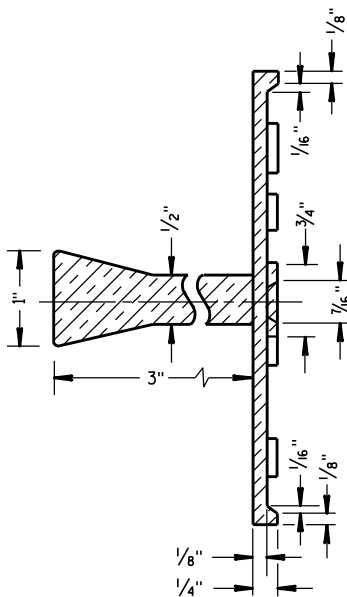
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

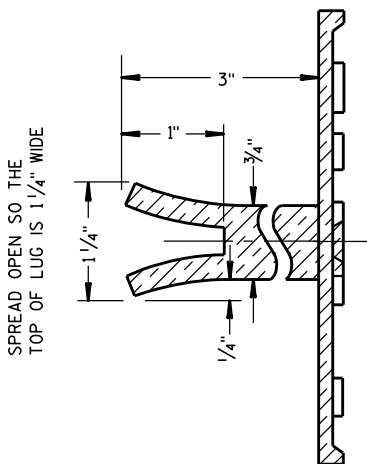
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

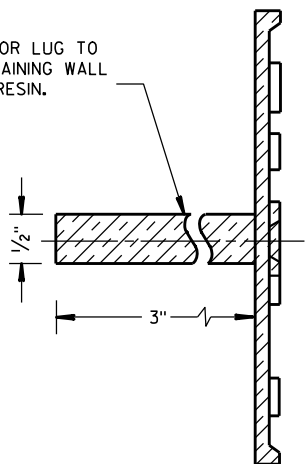


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/26/10
DATE
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA

GENERAL NOTES

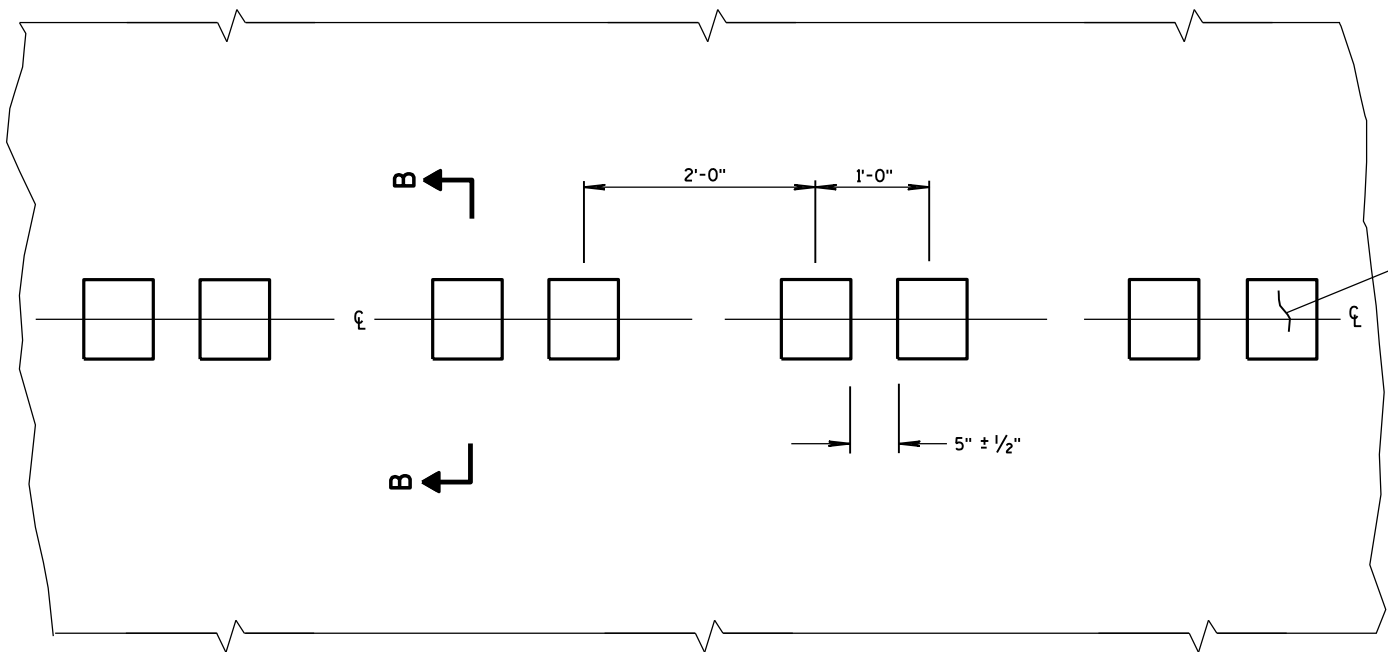
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

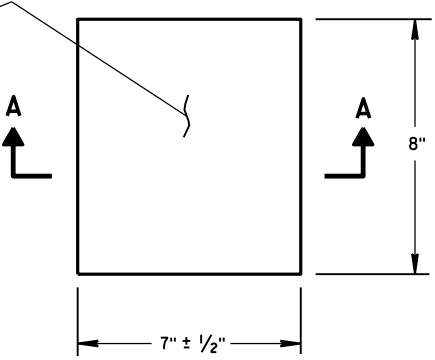
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

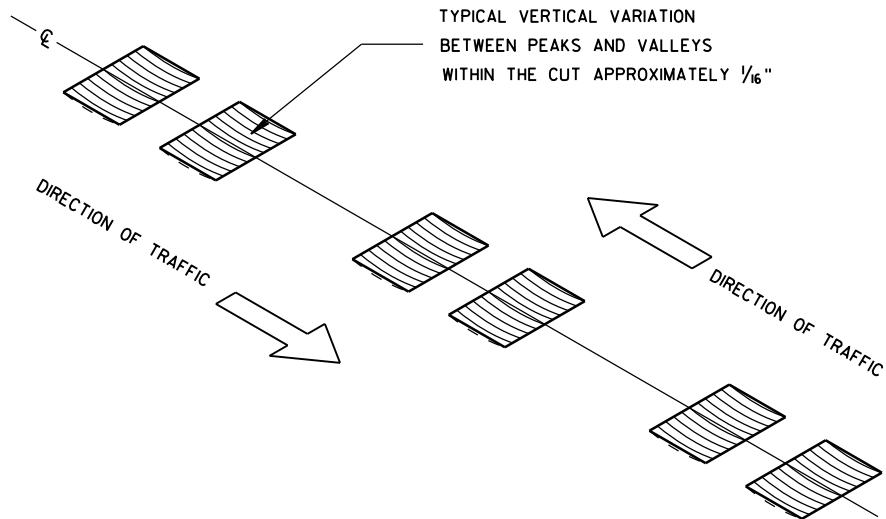
① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



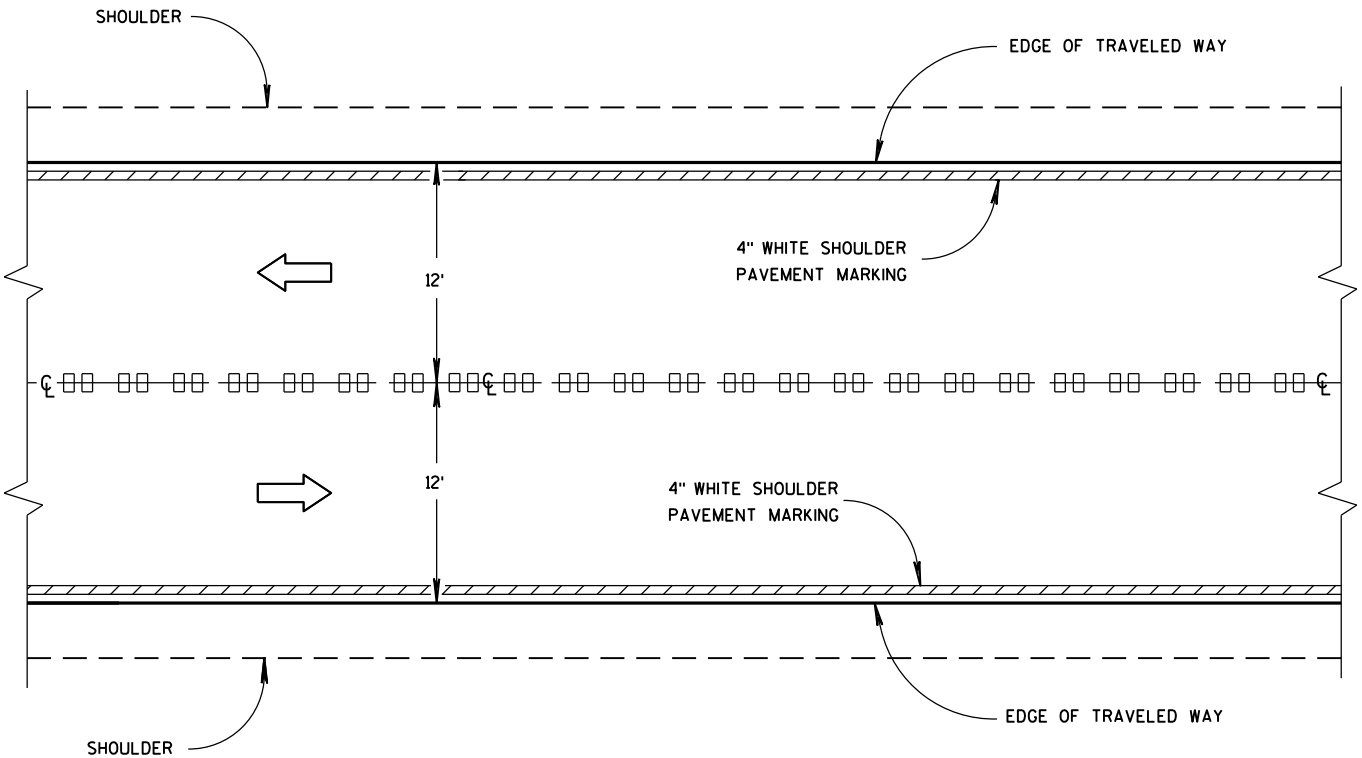
PLAN VIEW
CENTER LINE WITH GROOVES



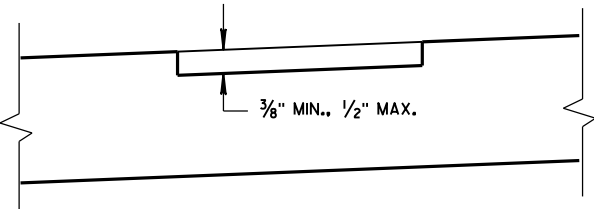
PLAN VIEW
(SINGLE GROOVE)



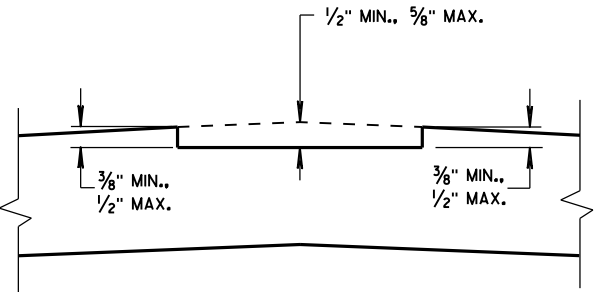
ISOMETRIC



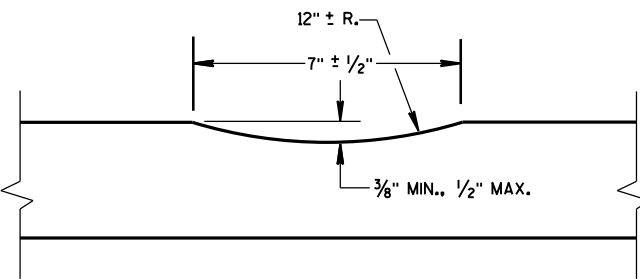
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



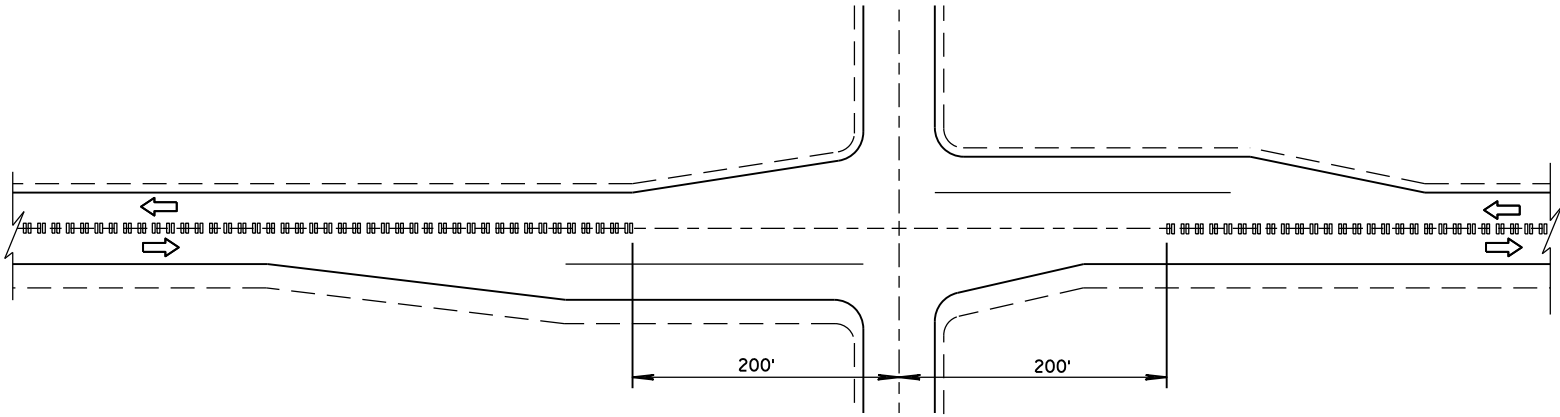
SECTION B-B
CROWNED ROADWAY



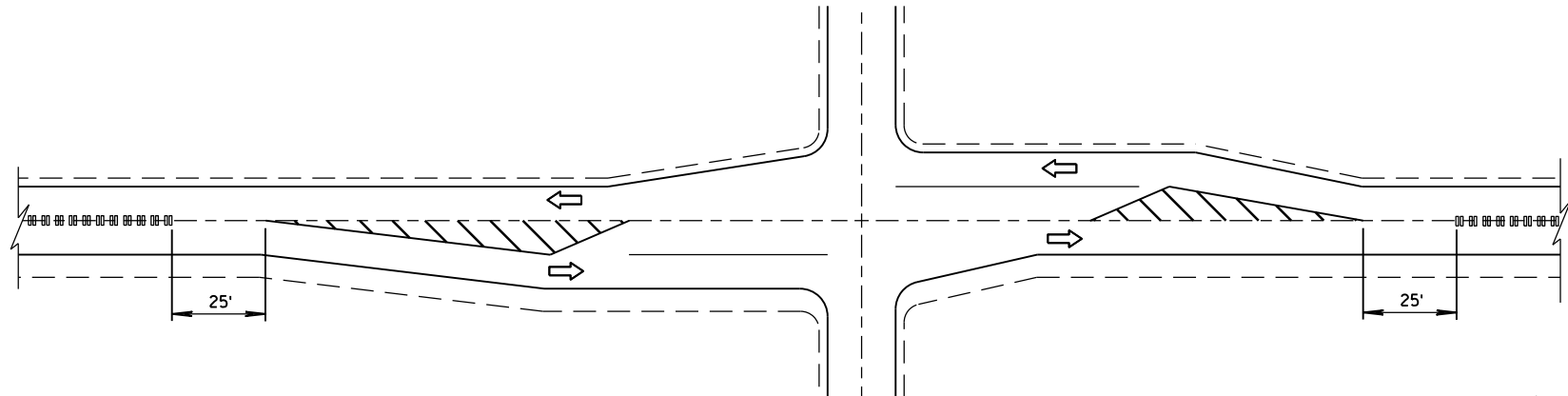
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

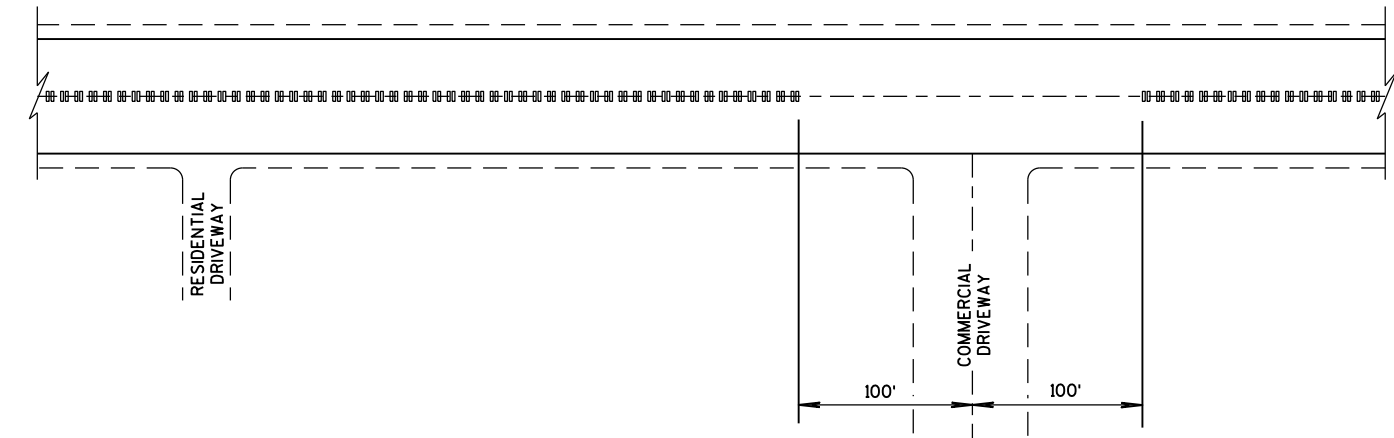
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

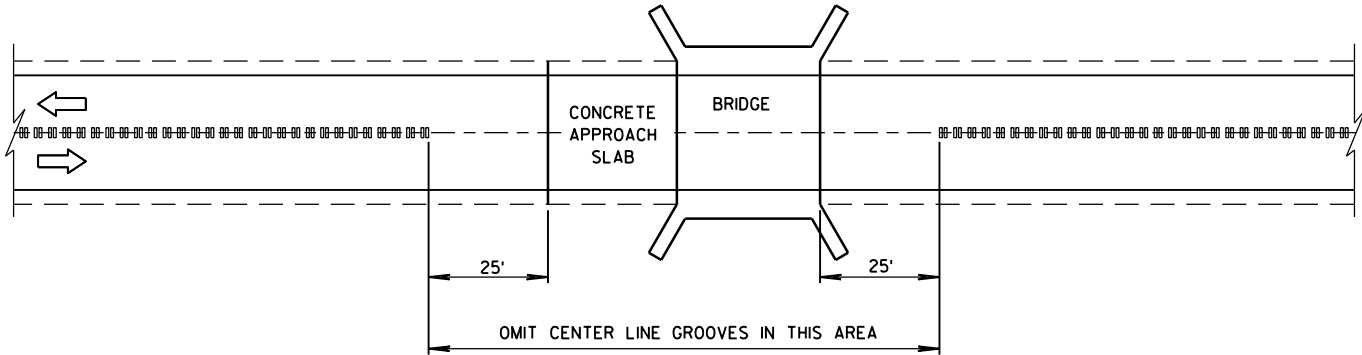


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

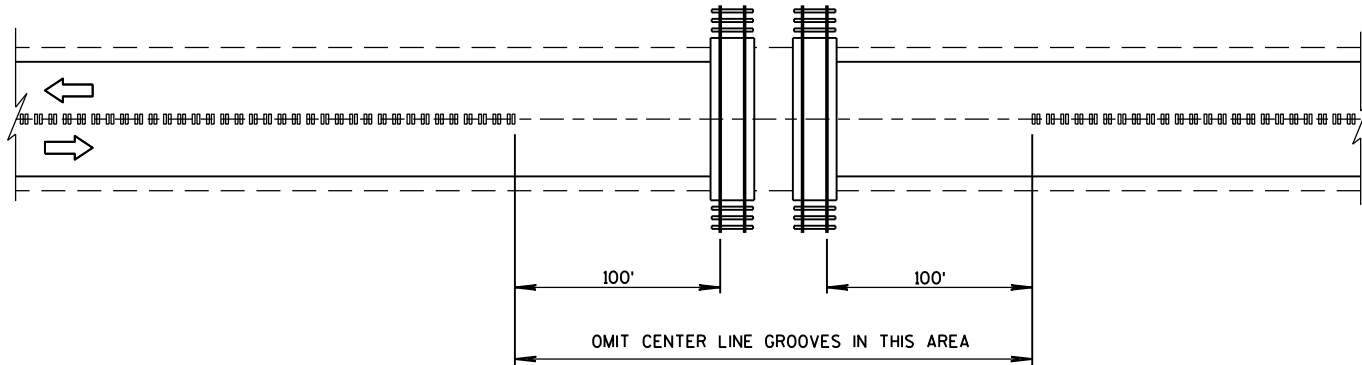


CENTER LINE GROOVES AT DRIVEWAYS^①

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

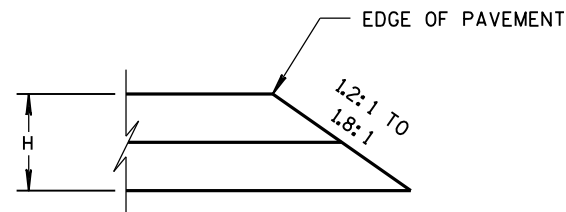


CENTER LINE GROOVES AT BRIDGES

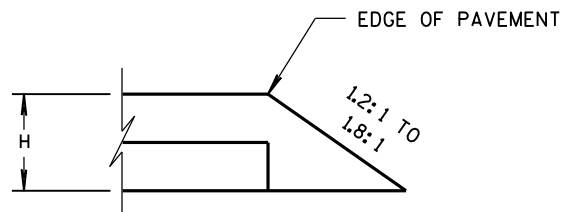


CENTER LINE GROOVES AT RAILROADS

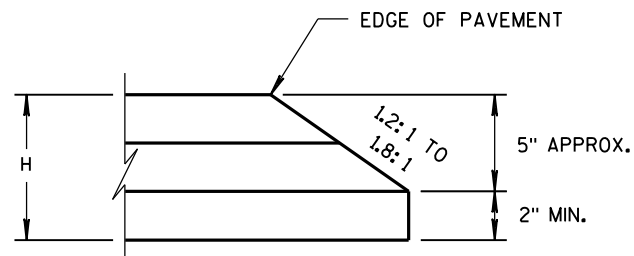
2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/15/2013 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



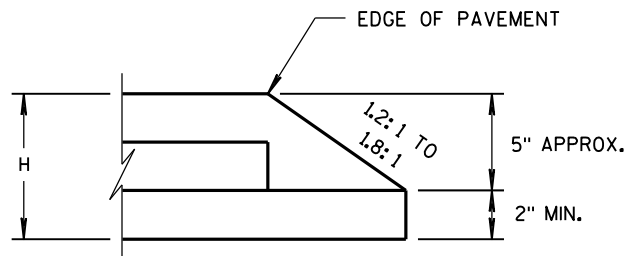
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

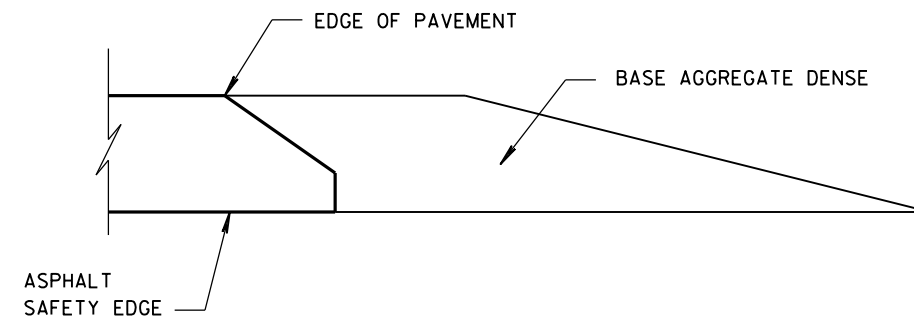


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE
FHWA

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

6

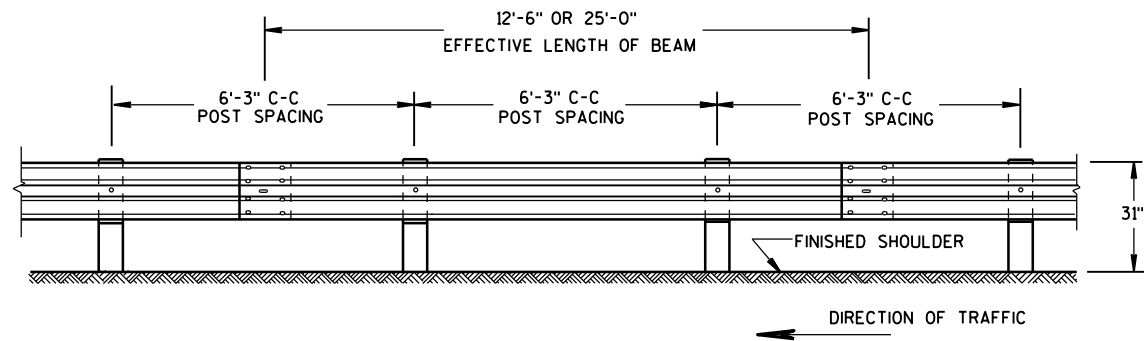
- S.D.D. 14 B 42-3a**



S.D.D. 14 B 42-3a

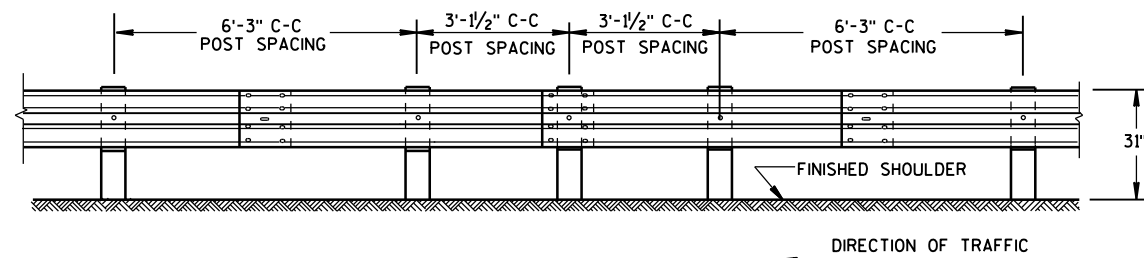


S.D.D. 14 B 42-3a



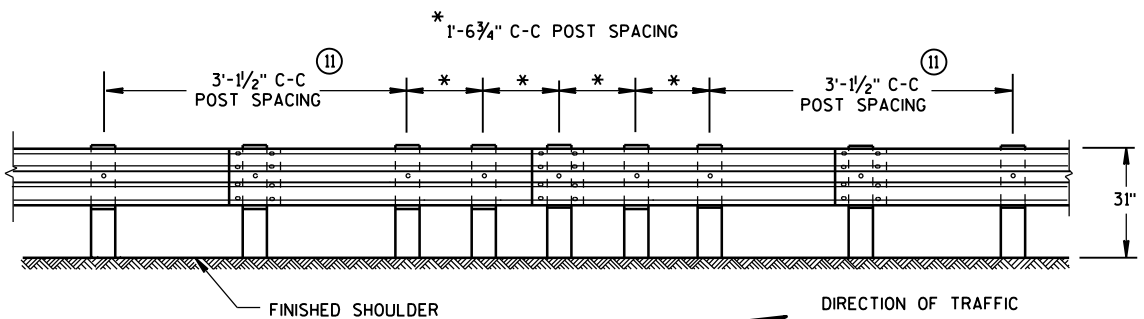
FRONT VIEW

POST SPACING STANDARD INSTALLATION



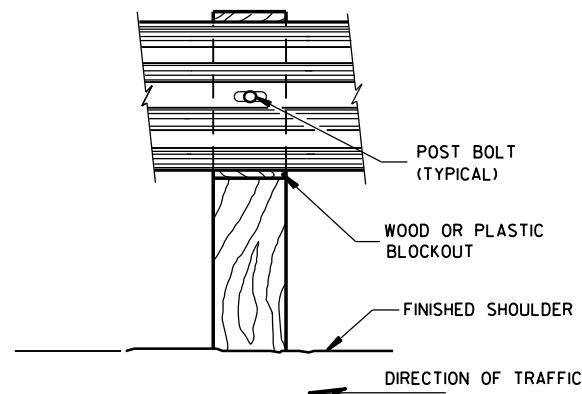
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

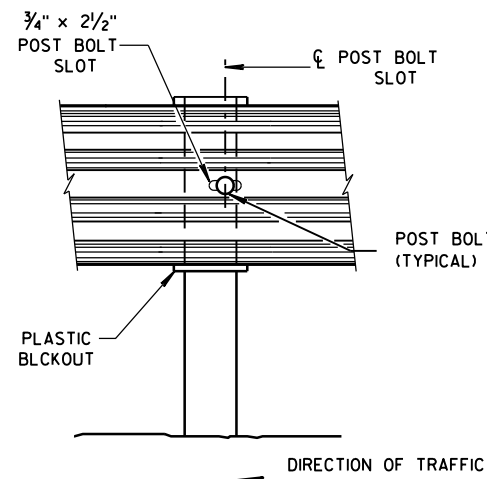


FRONT VIEW

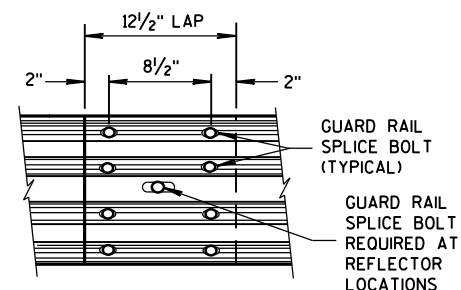
QUARTER POST SPACING (QS)



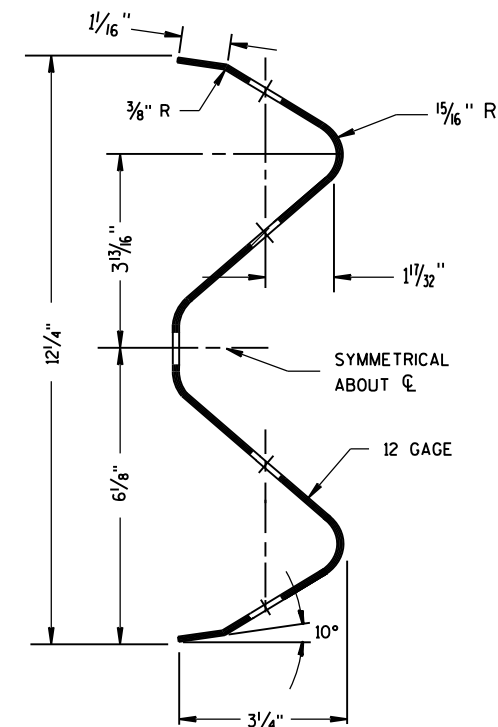
FRONT VIEW AT WOOD POST



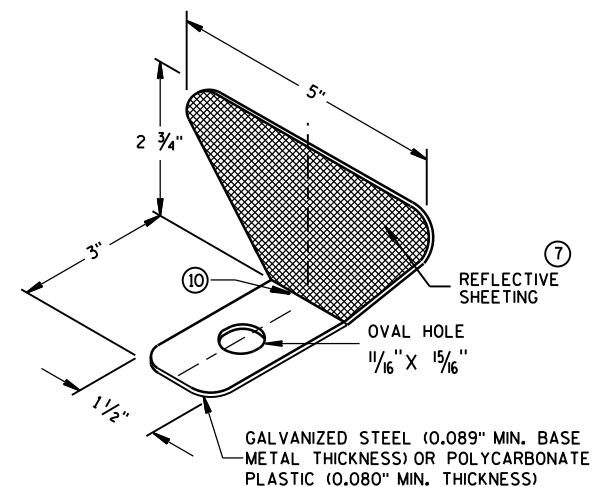
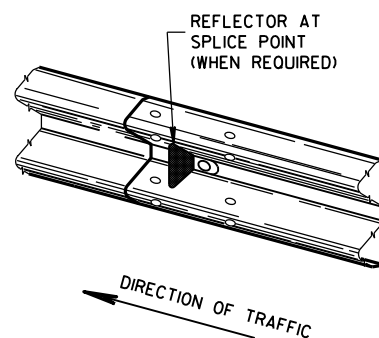
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

- ⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
- ⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- ⑩ PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
- ⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

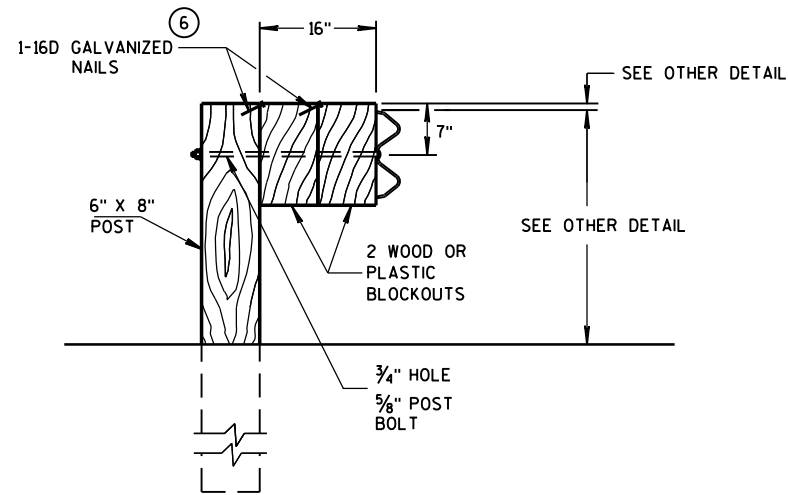
GUARD RAIL SPLICE BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑨	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ⑩	3
	> 200'	100' C-C	2	

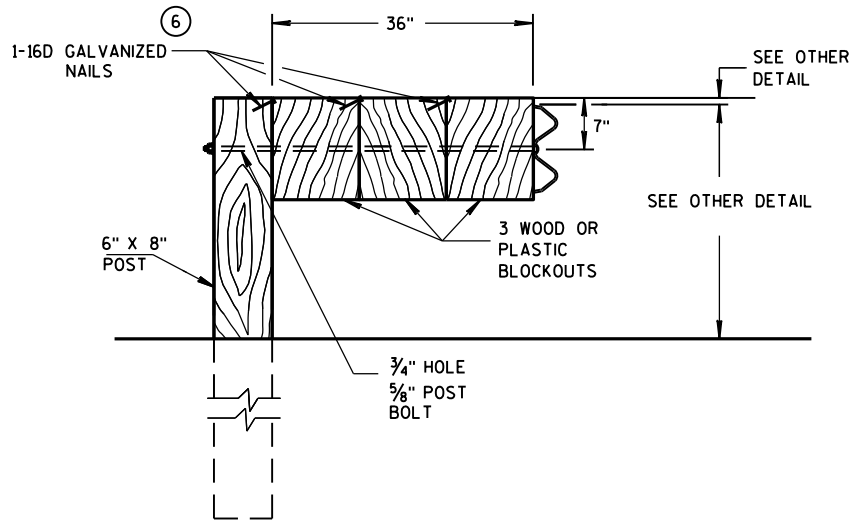
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

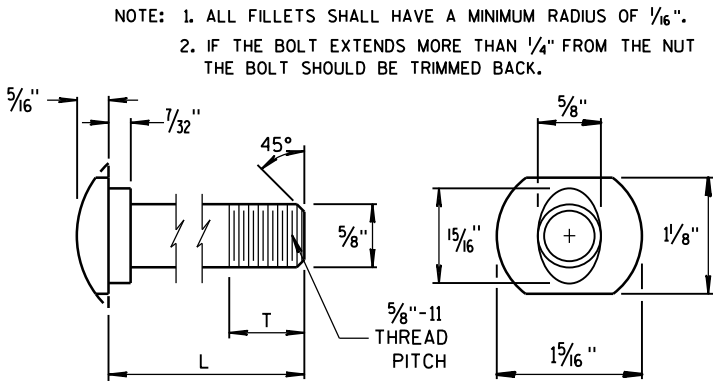
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

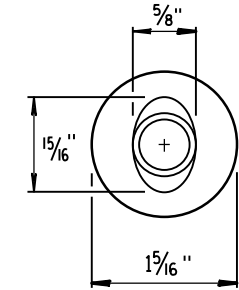
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

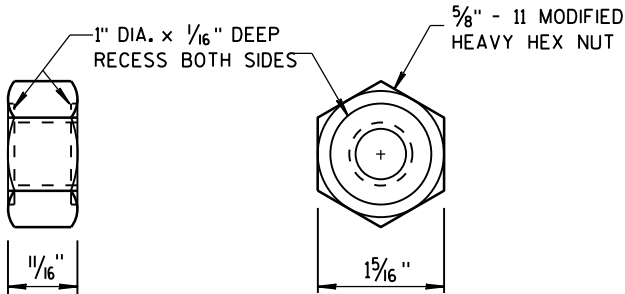


POST BOLT TABLE

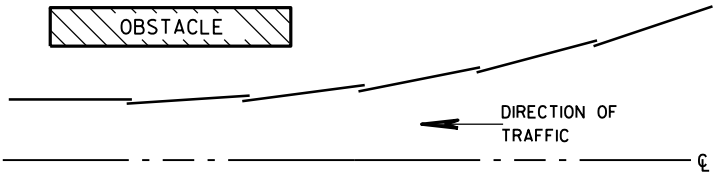
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



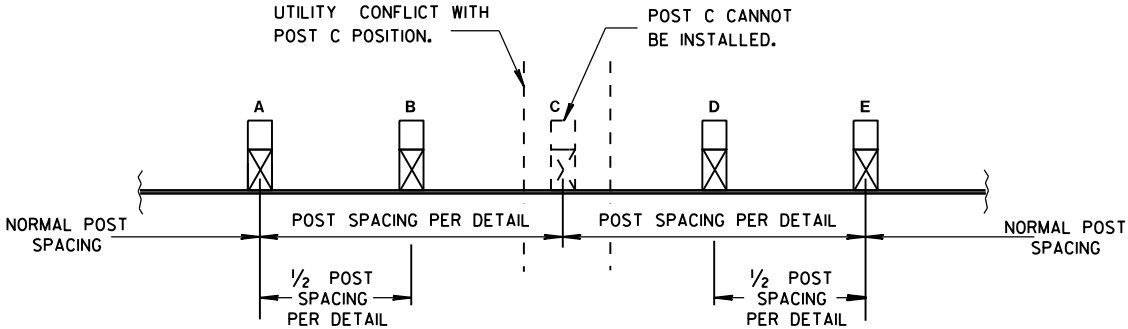
ALTERNATE BOLT HEAD



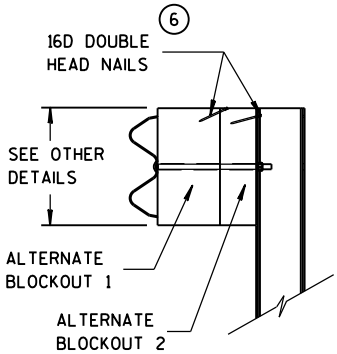
POST BOLT
AND RECESS NUT



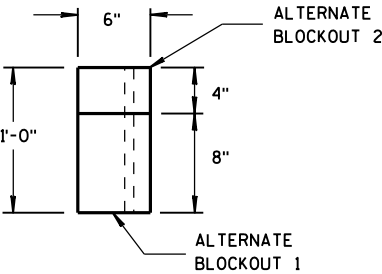
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

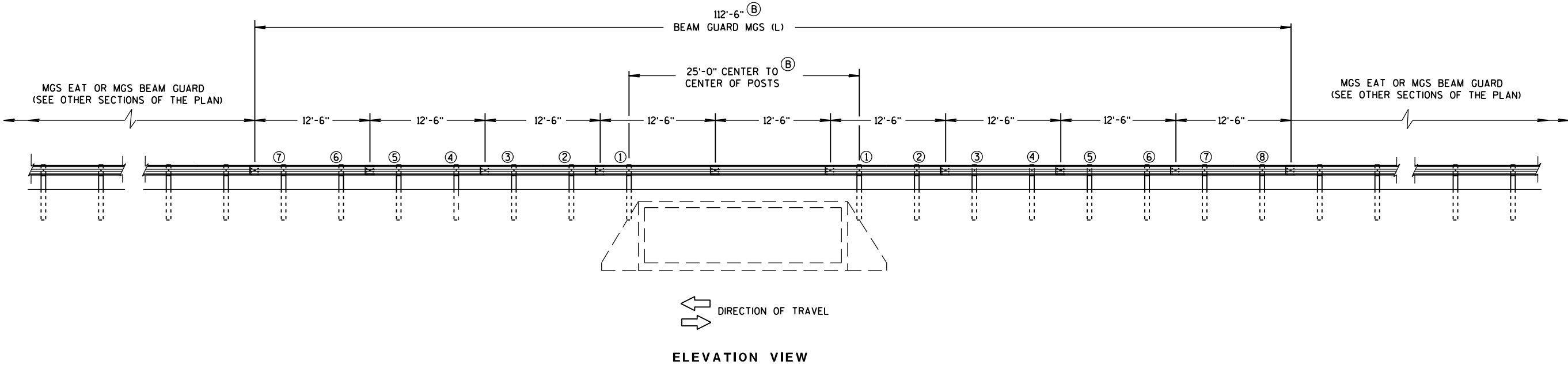
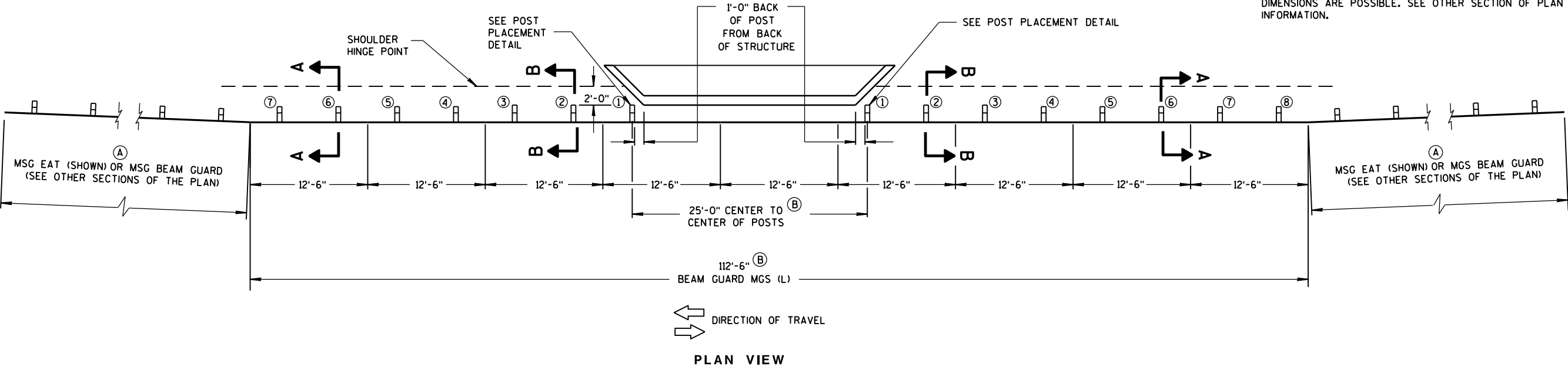
APPROVED
June 2014
DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

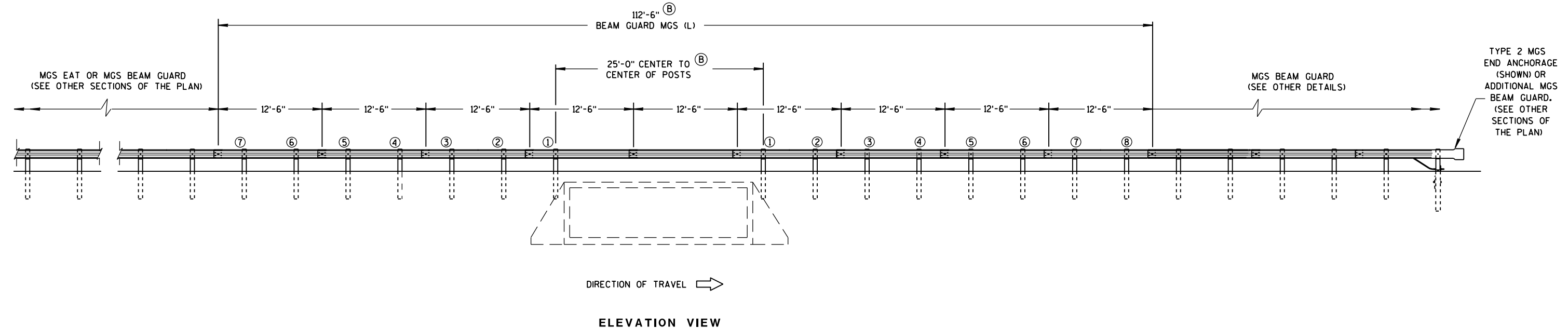
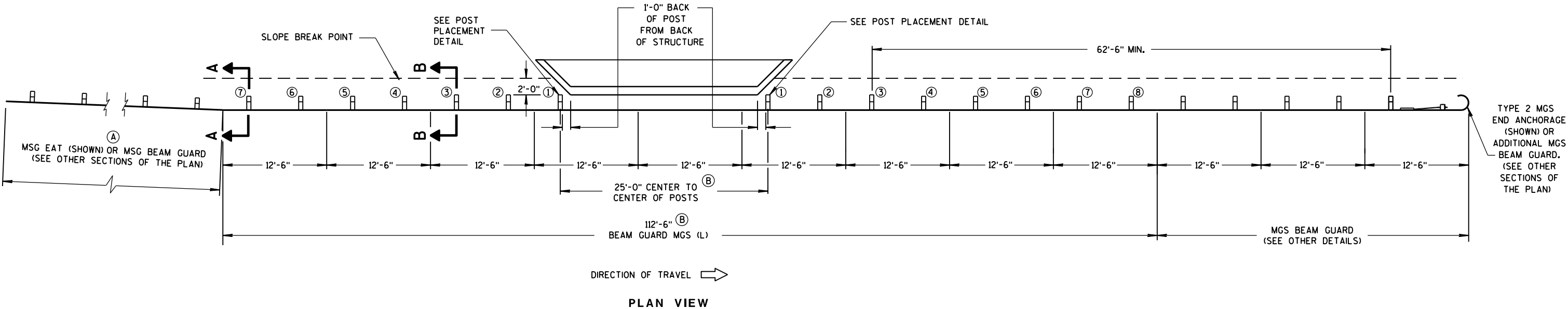
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

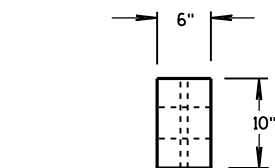
- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



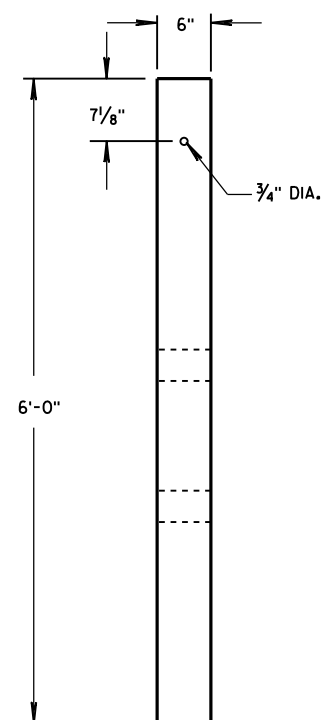
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

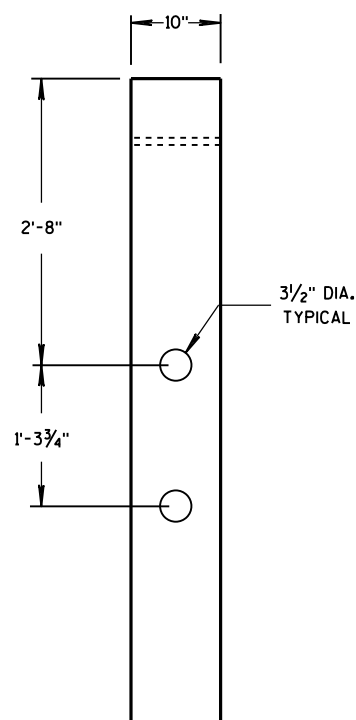


PLAN VIEW

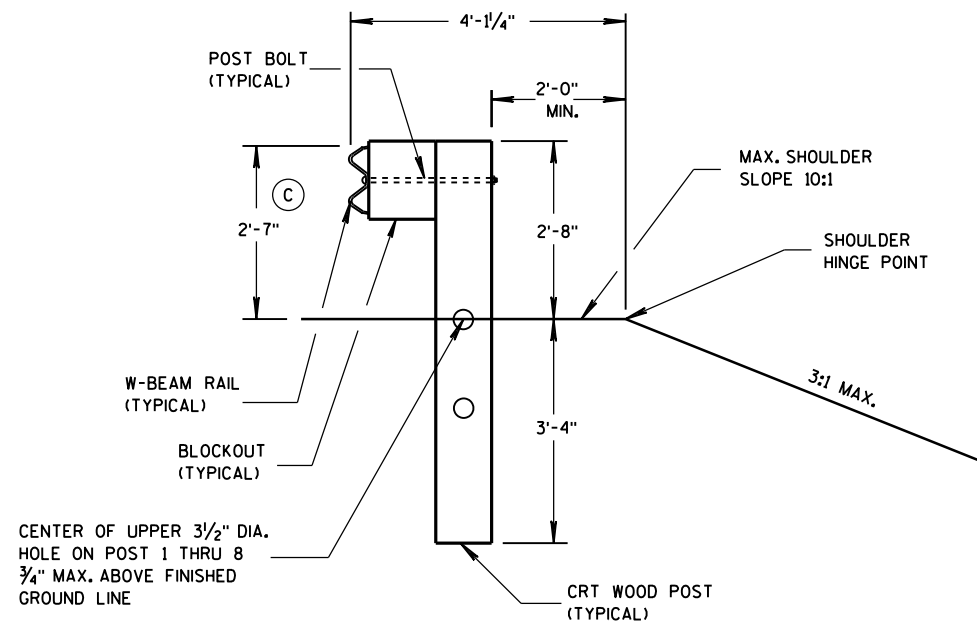


FRONT VIEW

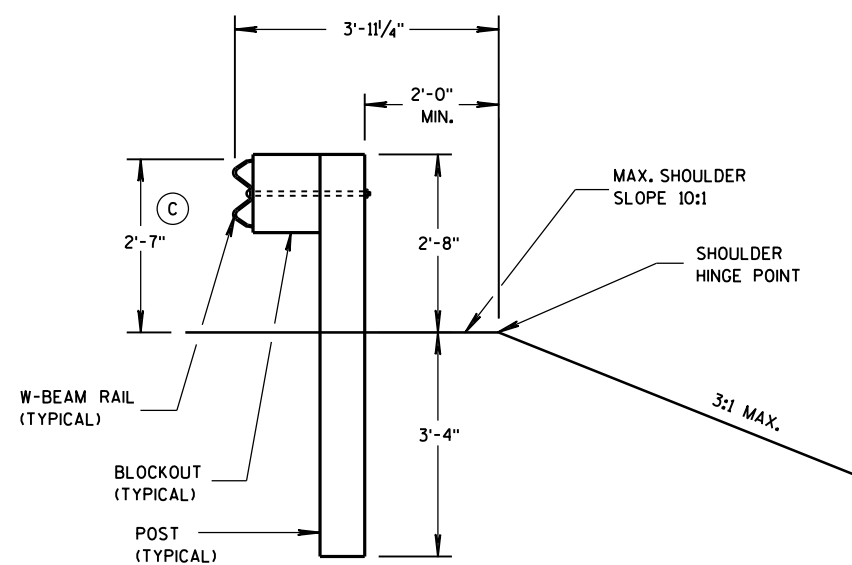
CRT WOOD POST



SIDE VIEW

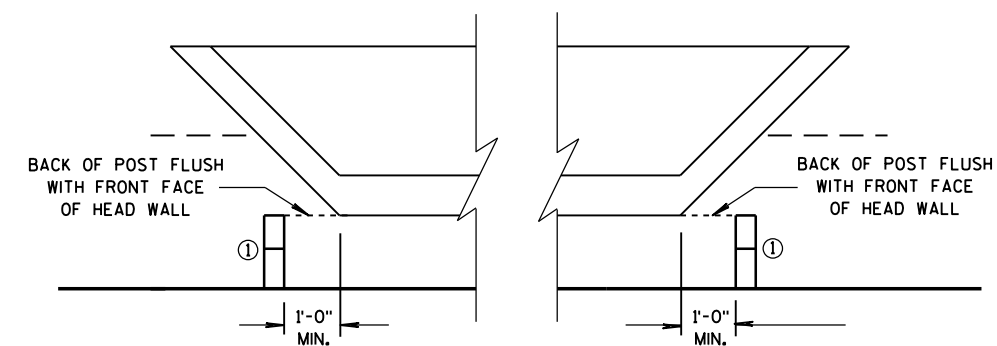
SECTION B-B
POSTS NO. 1-3

SEE OTHER DETAILS

SECTION A-A
POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.

POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
5/10/2013
DATE
FHWA/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.
- (G) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

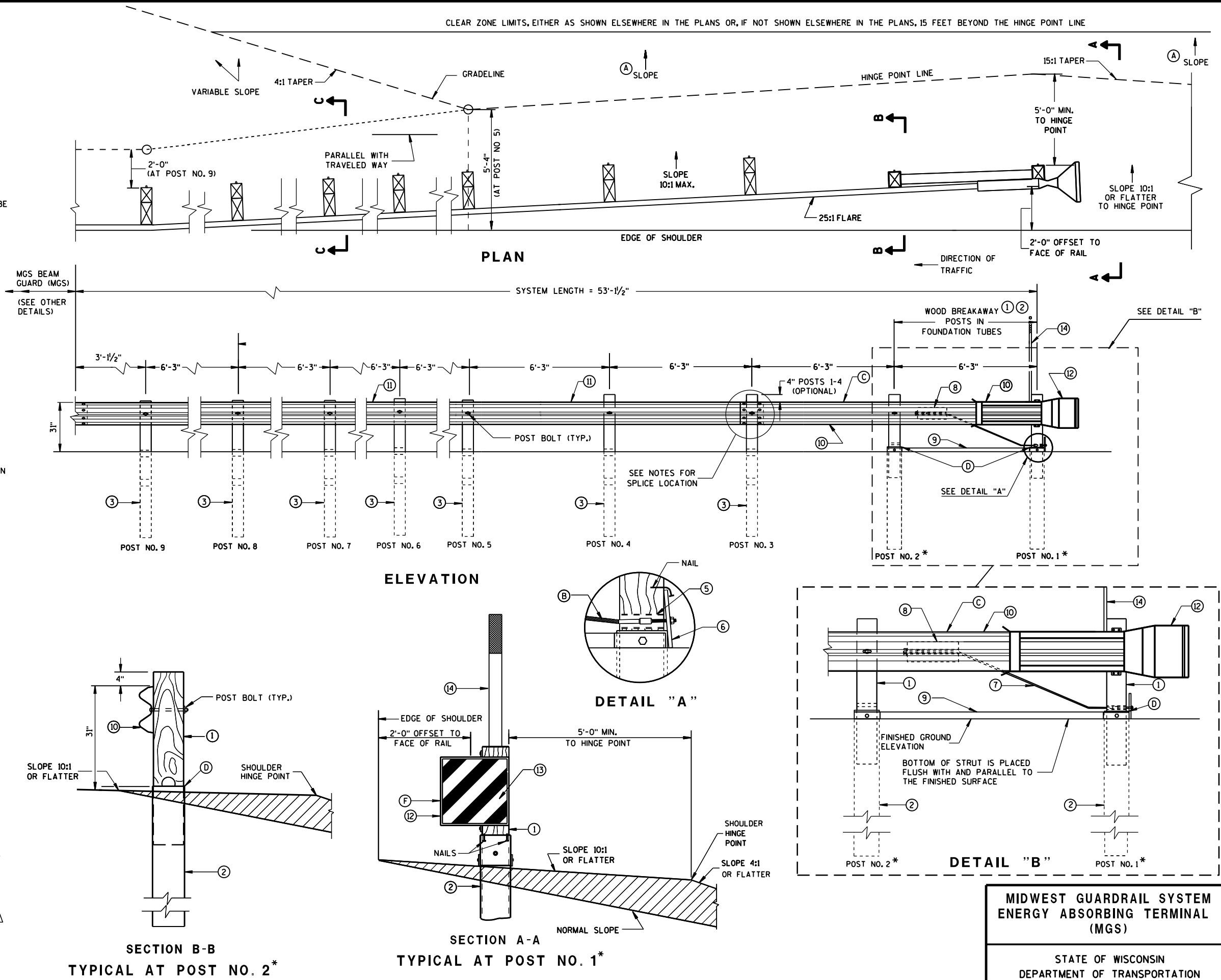
SEE SDD 14B42 FOR MORE INFORMATION.

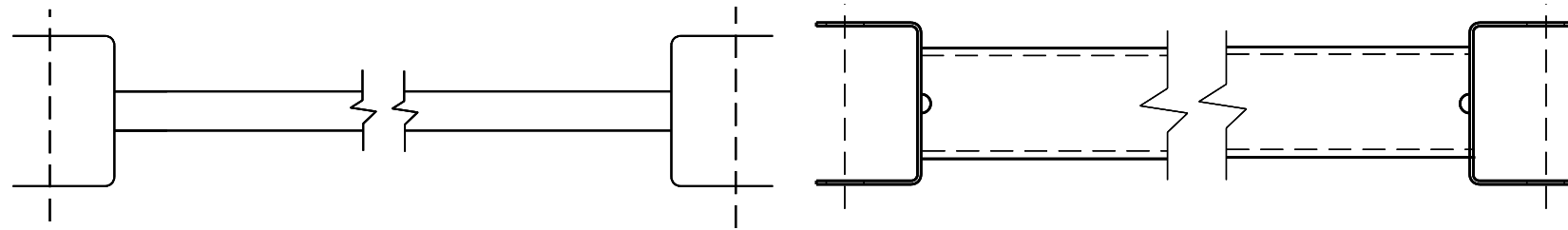
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

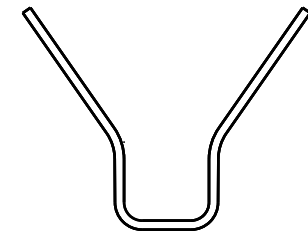
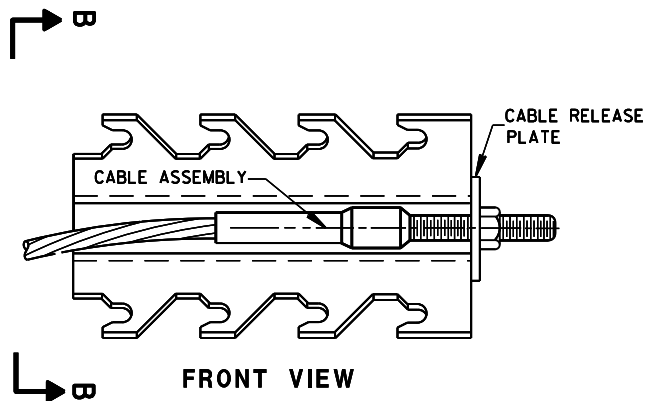
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

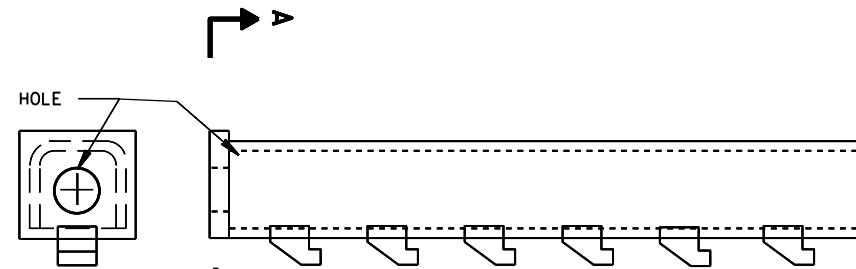




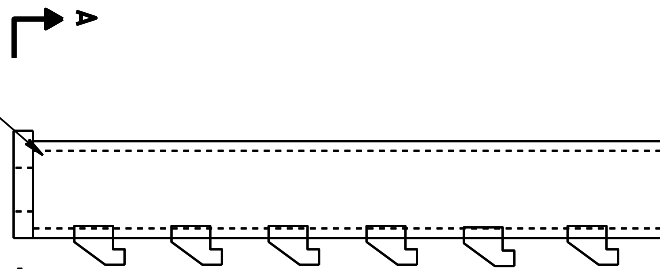
GENERIC GROUND STRUT (9) (H)



SECTION B-B



SECTION A-A

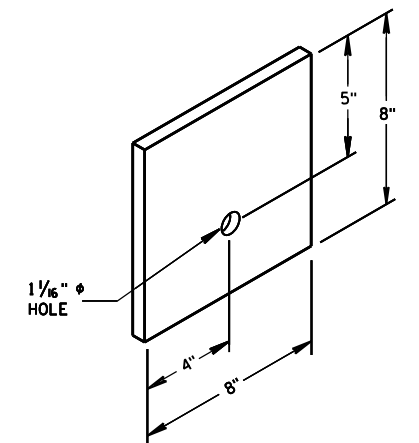


PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

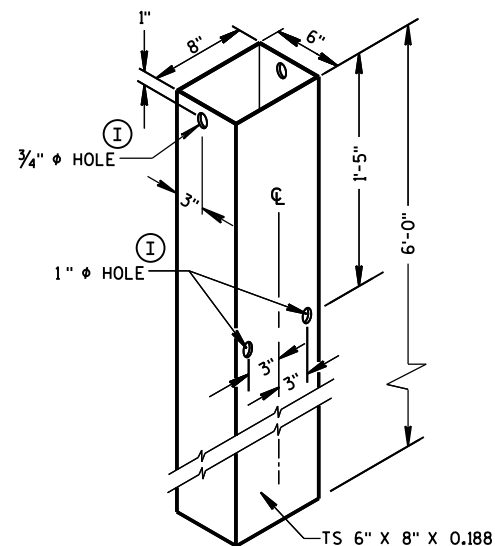
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



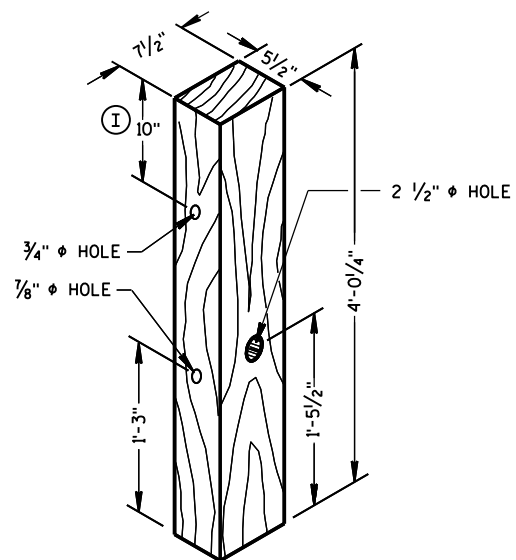
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

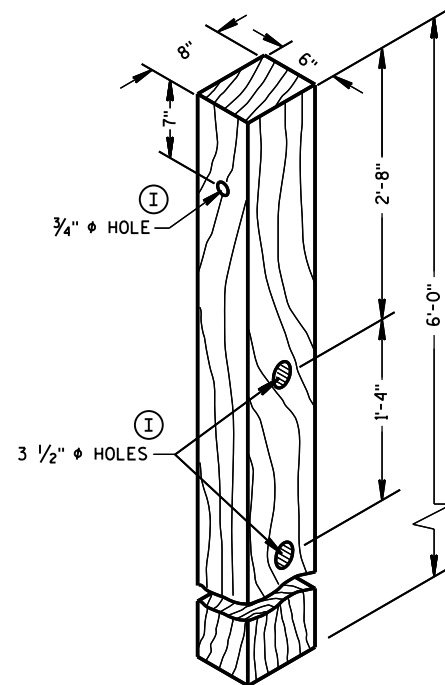
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



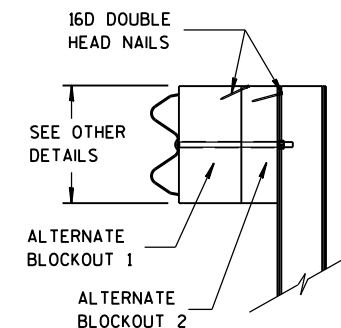
FOUNDATION TUBE ②



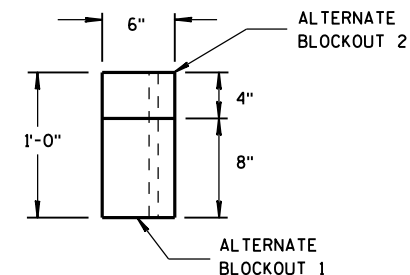
POSTS NUMBER 1 AND 2
WOOD BREAKAWAY POST ①



POSTS NUMBER 3-9
WOOD CRT POST ③

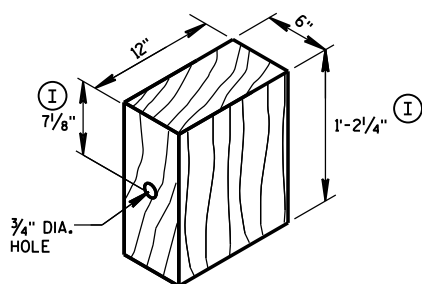


SIDE VIEW



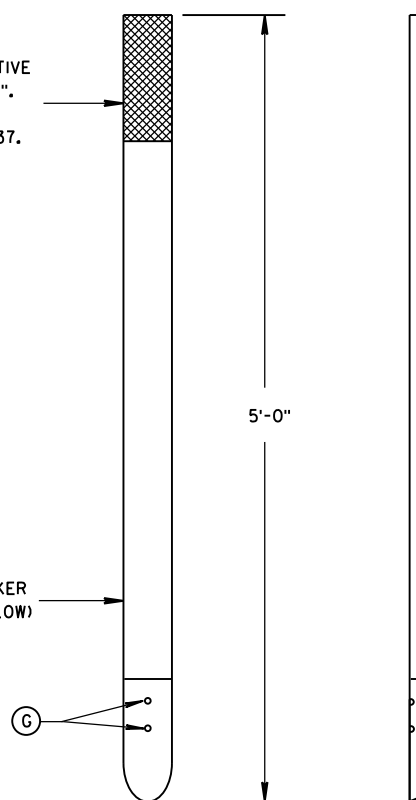
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL



WOOD BLOCKOUT ④
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

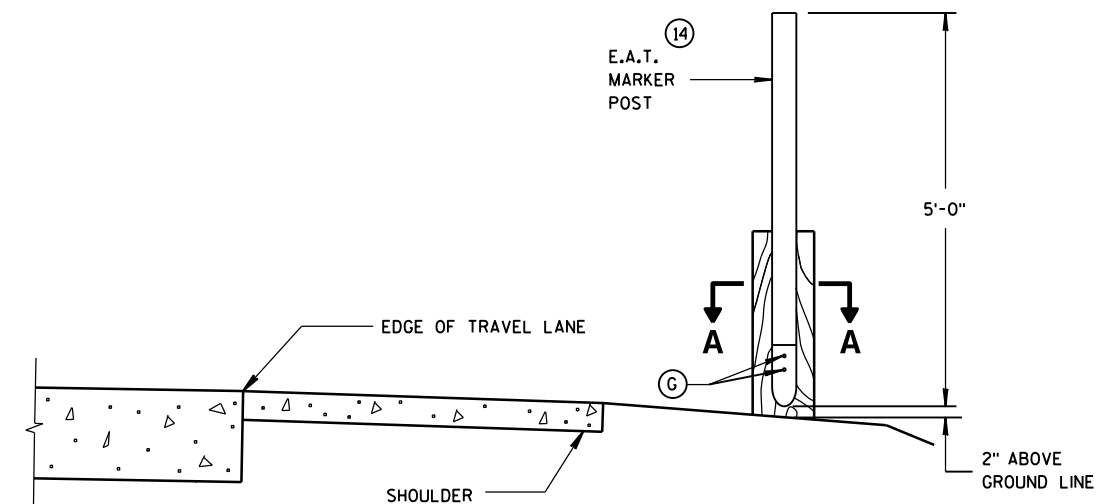
TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.



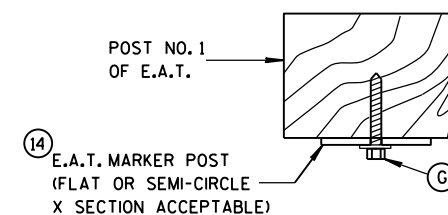
FRONT VIEW

SIDE VIEW

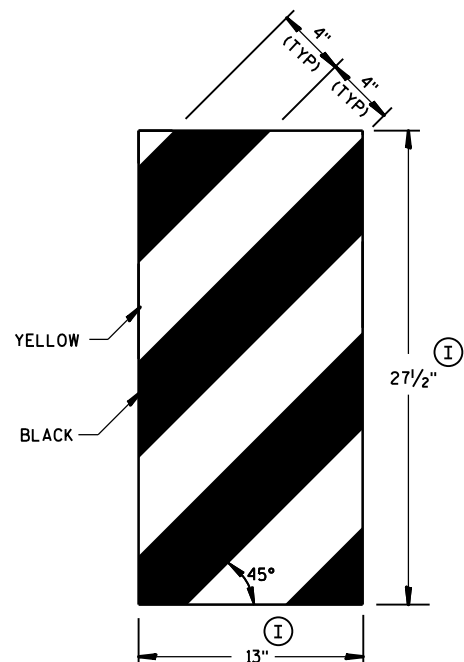
E.A.T. MARKER POST ⑭



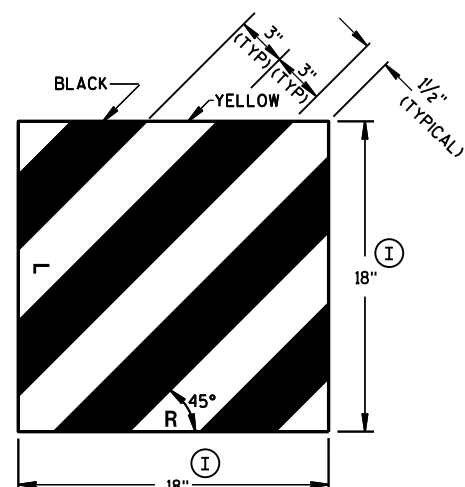
TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A



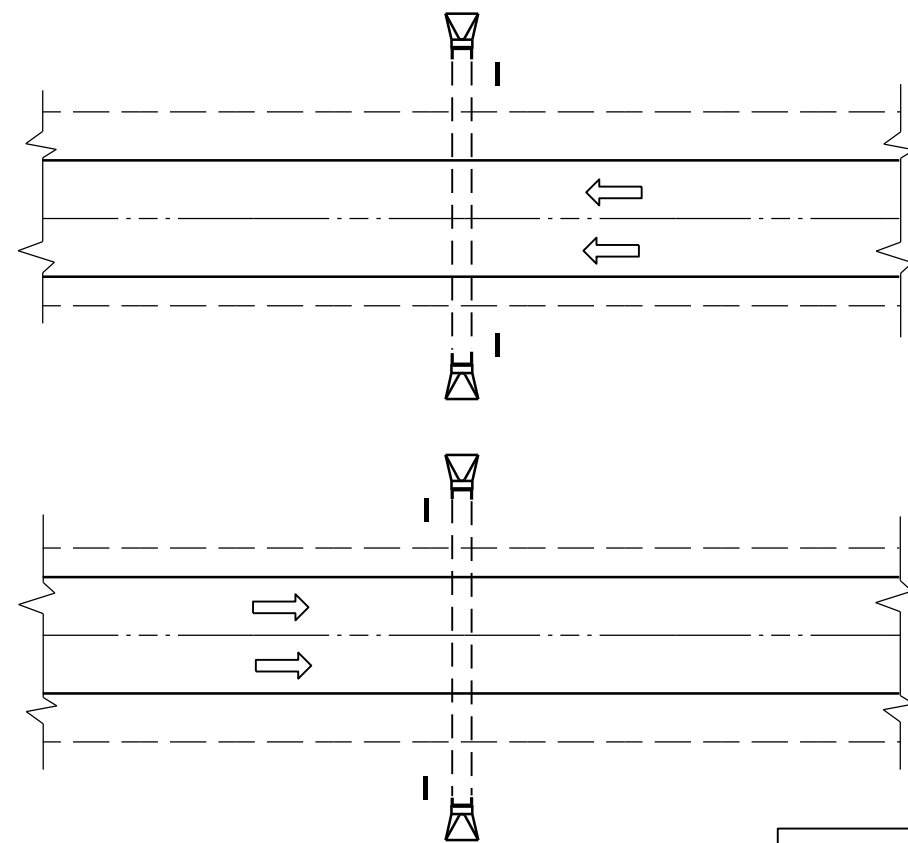
GENERIC REFLECTIVE SHEETING ⑬ ①



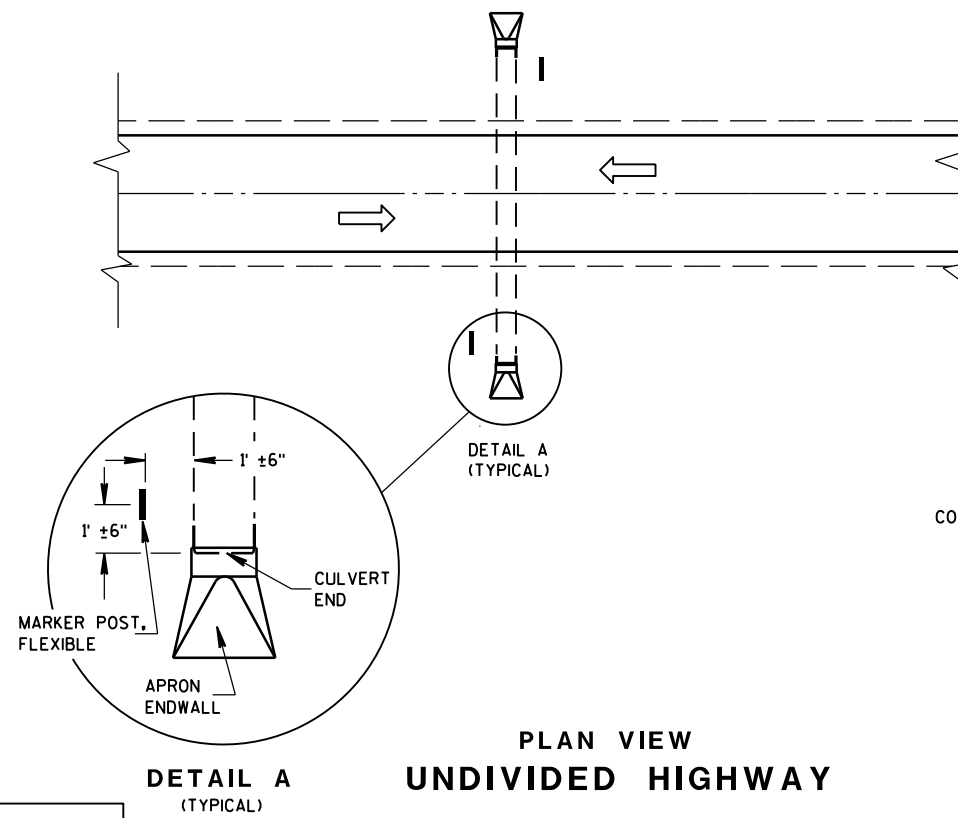
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

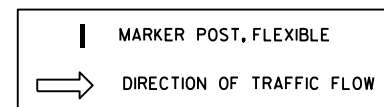
APPROVED
June 2014 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



PLAN VIEW
DIVIDED HIGHWAY



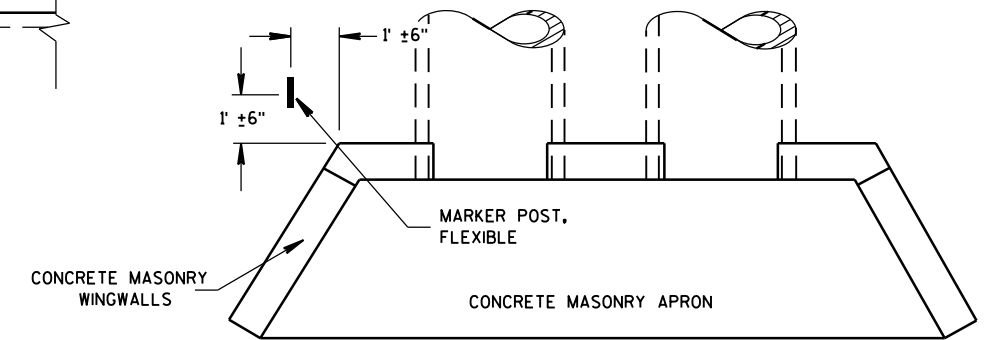
PLAN VIEW
UNDIVIDED HIGHWAY



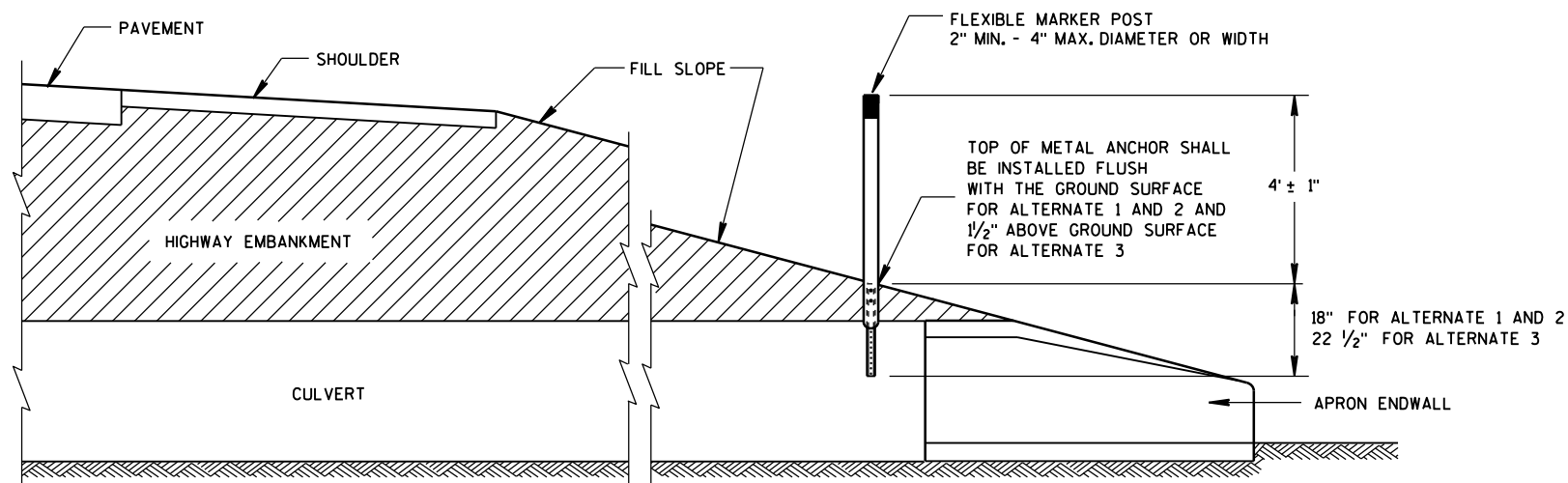
FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

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



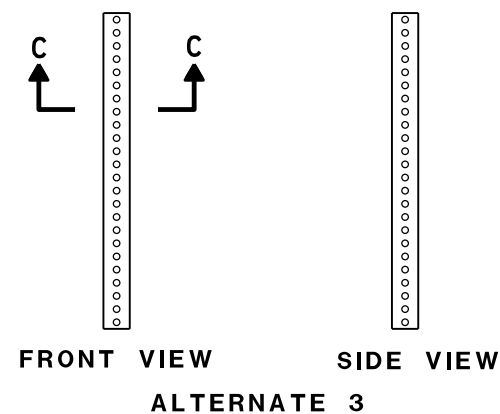
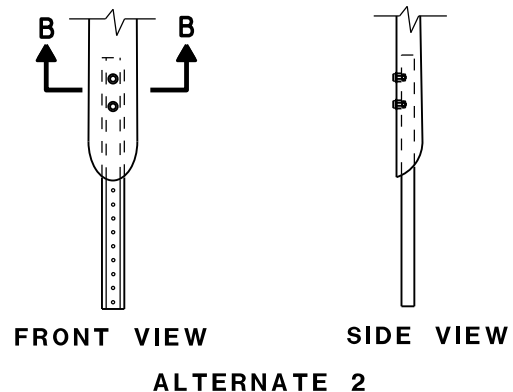
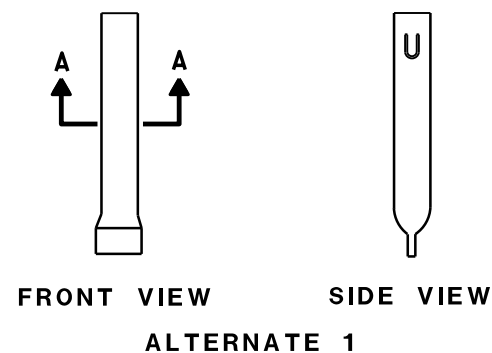
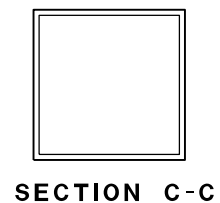
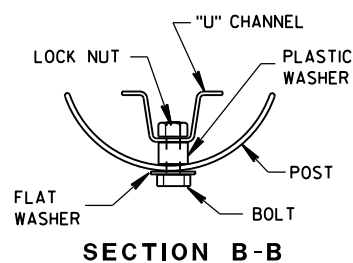
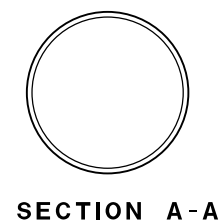
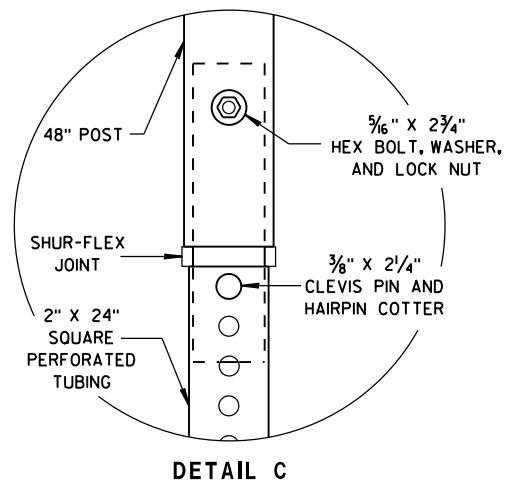
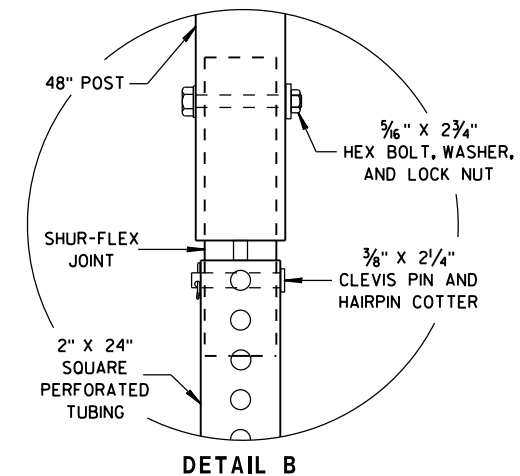
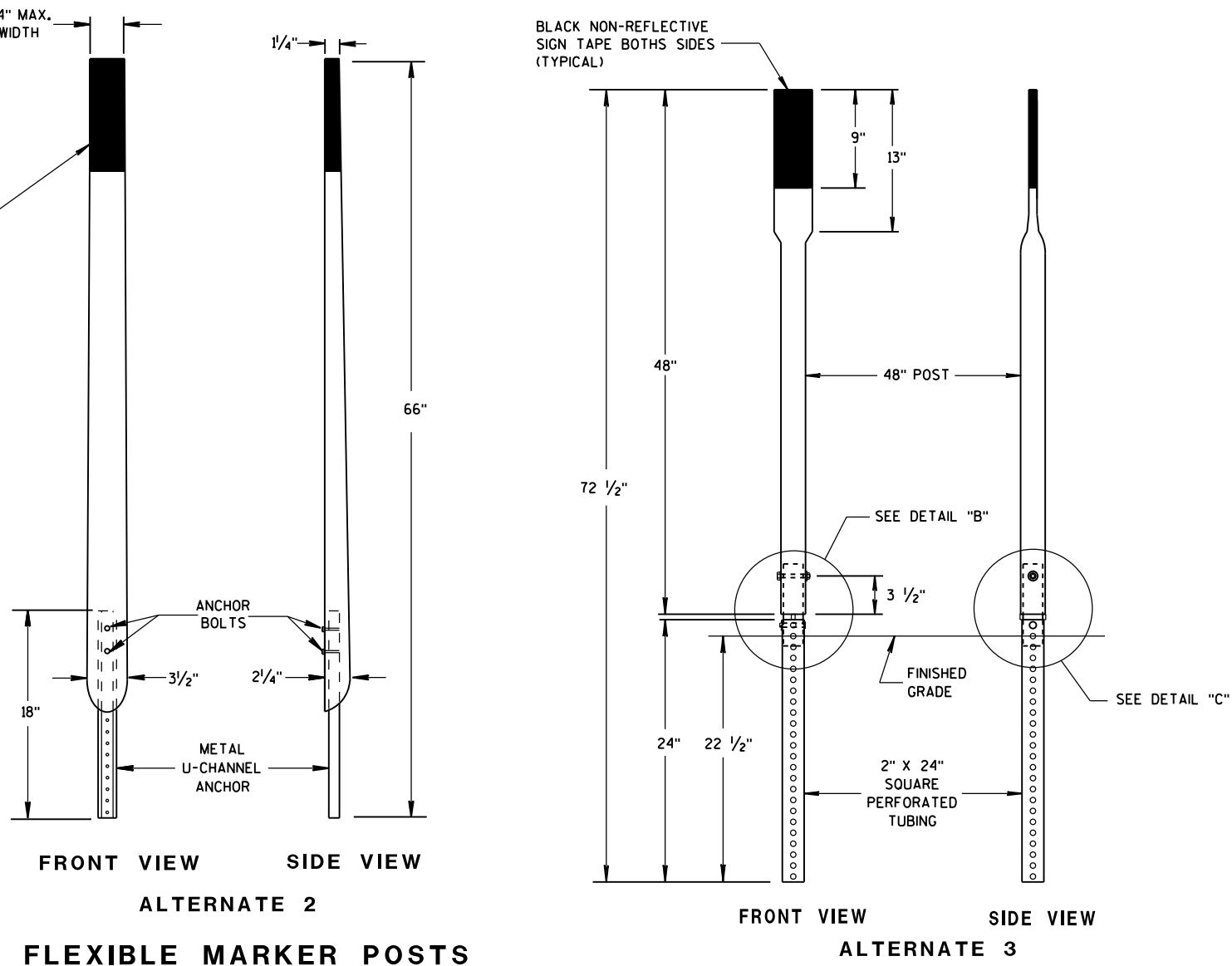
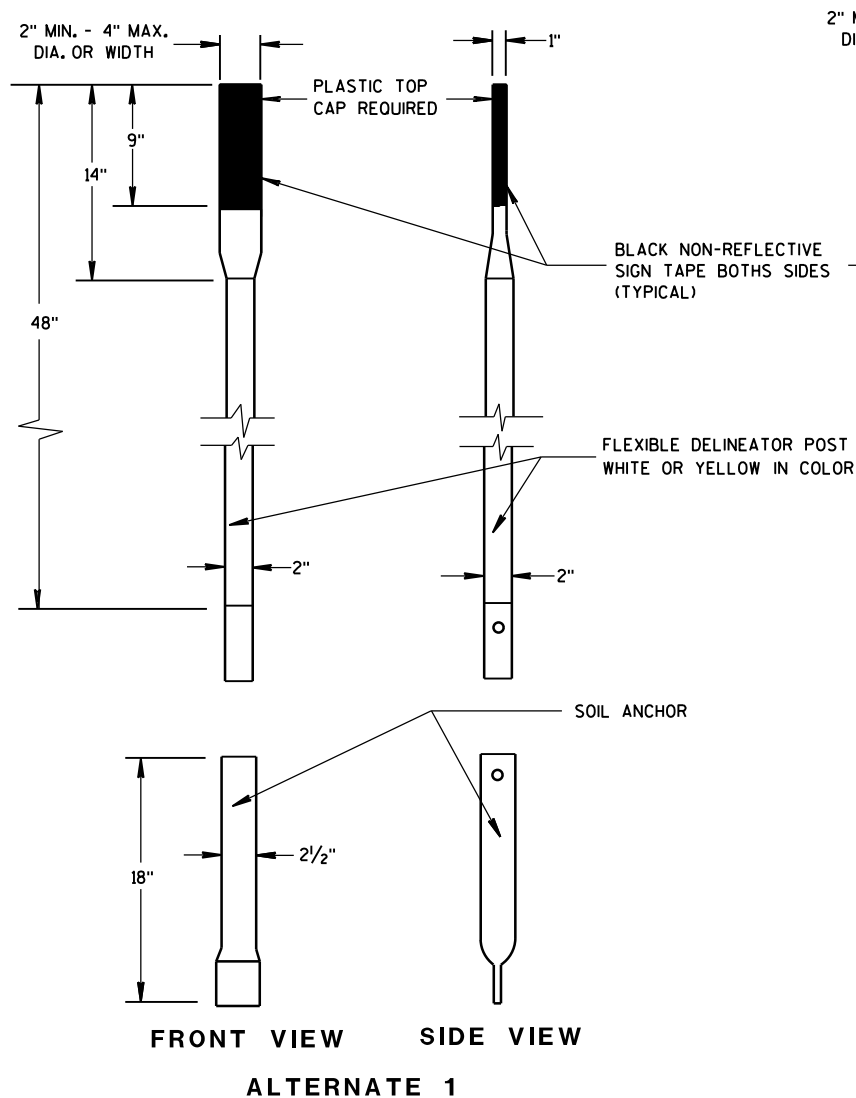
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



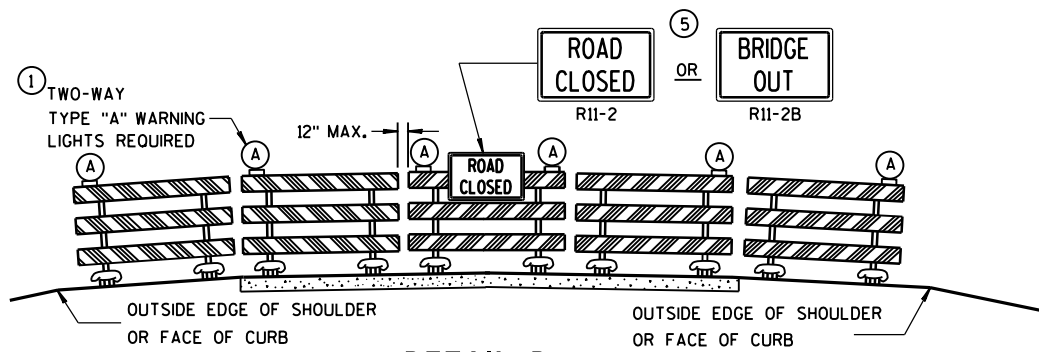
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

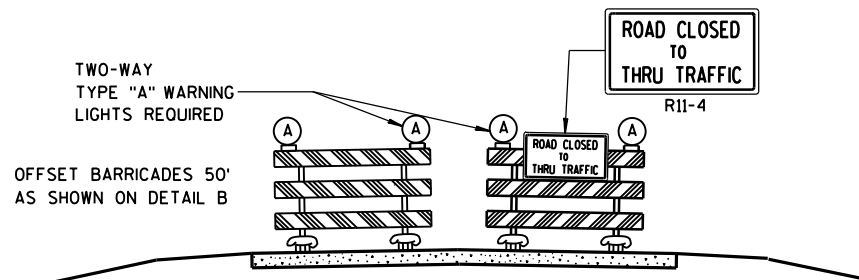
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



DETAIL 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.

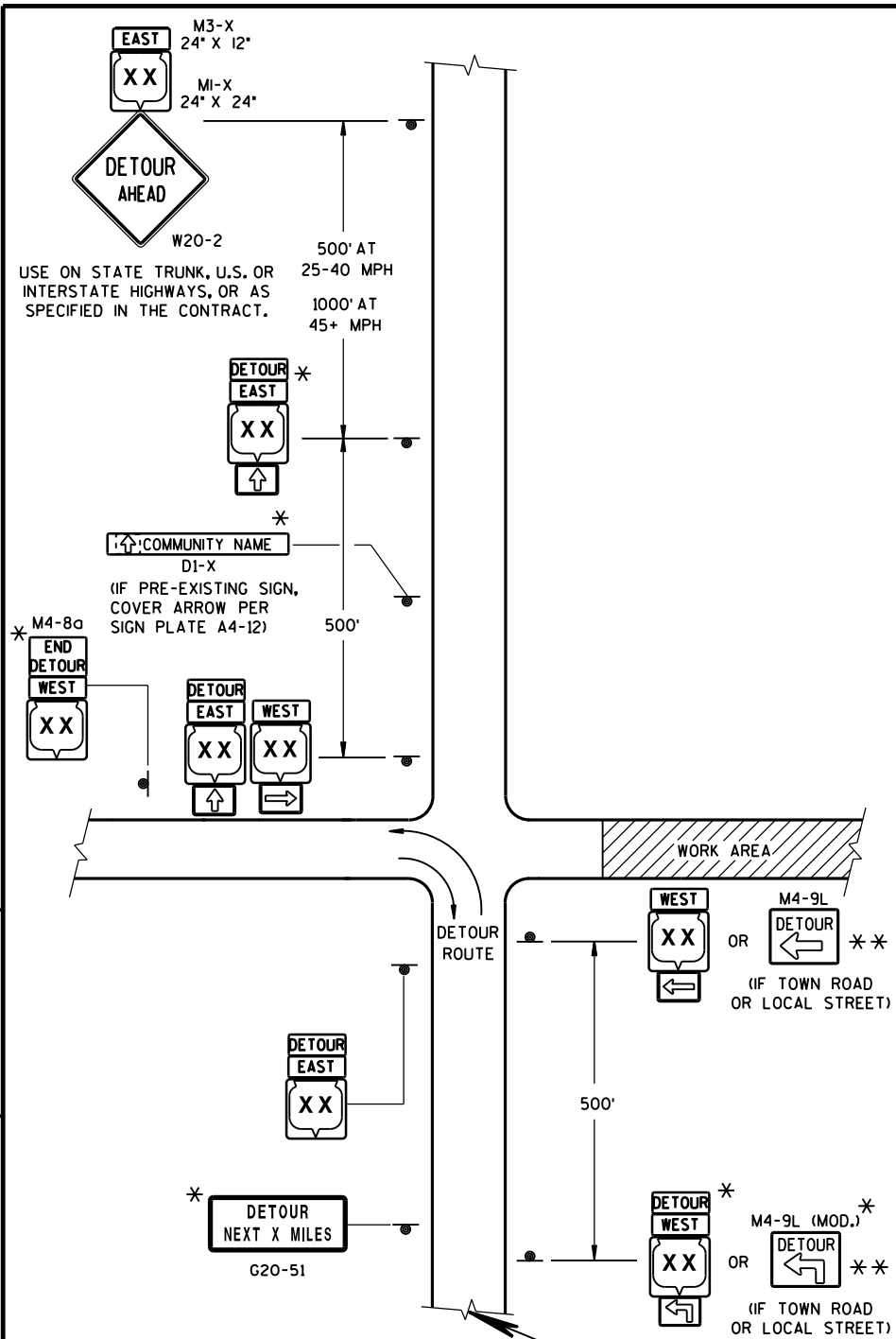
R1-1 SHALL BE 36" X 36".

- 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

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



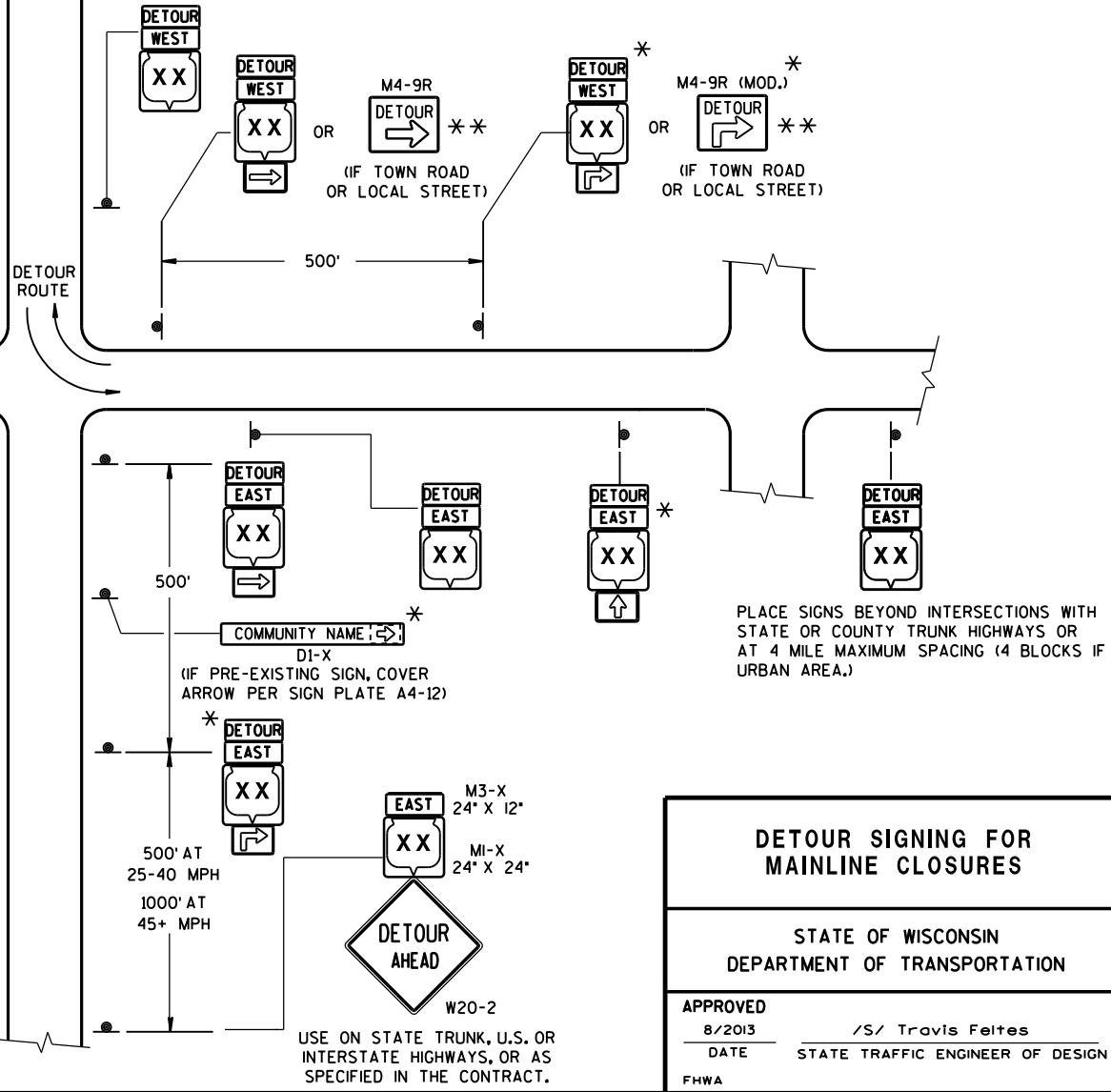
THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT

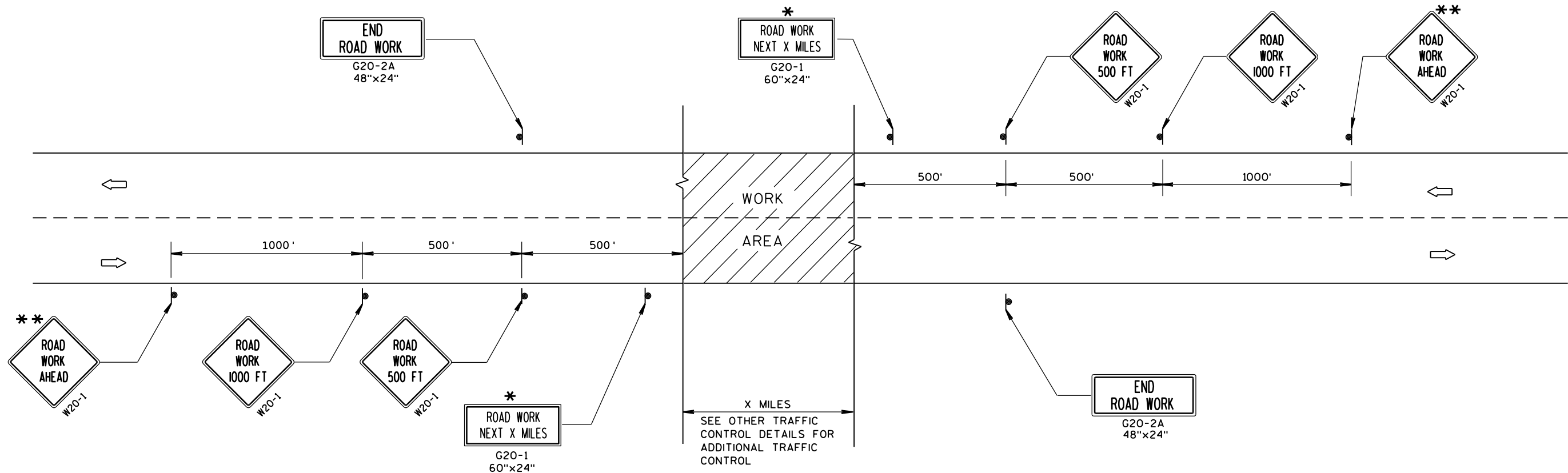
DETAIL F
DETOUR SIGNING

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.)
 - M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M4-9 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.



DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
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.

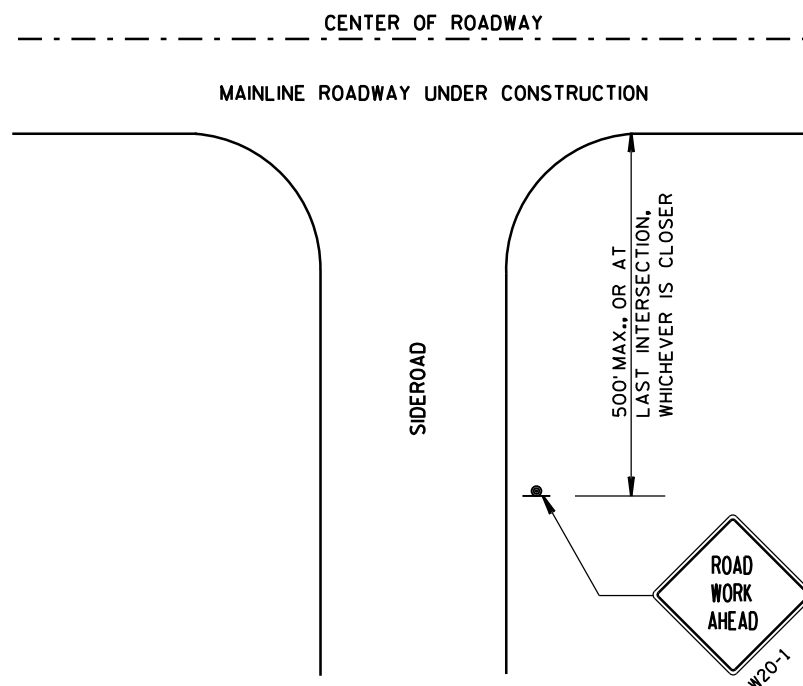
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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 W20-1 "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

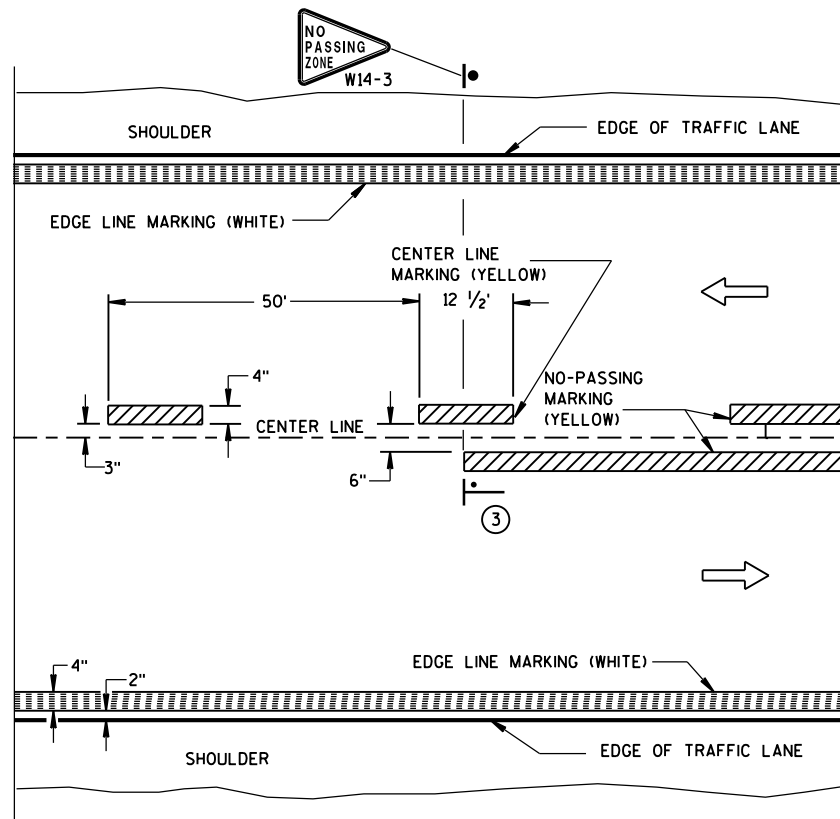
APPROVED

8/2013

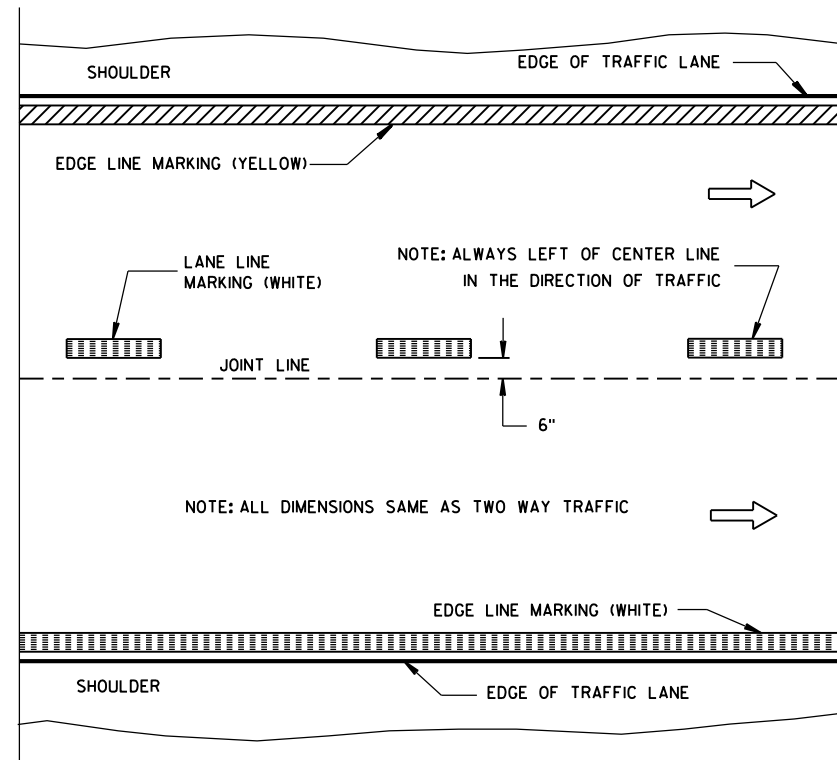
DATE

FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN

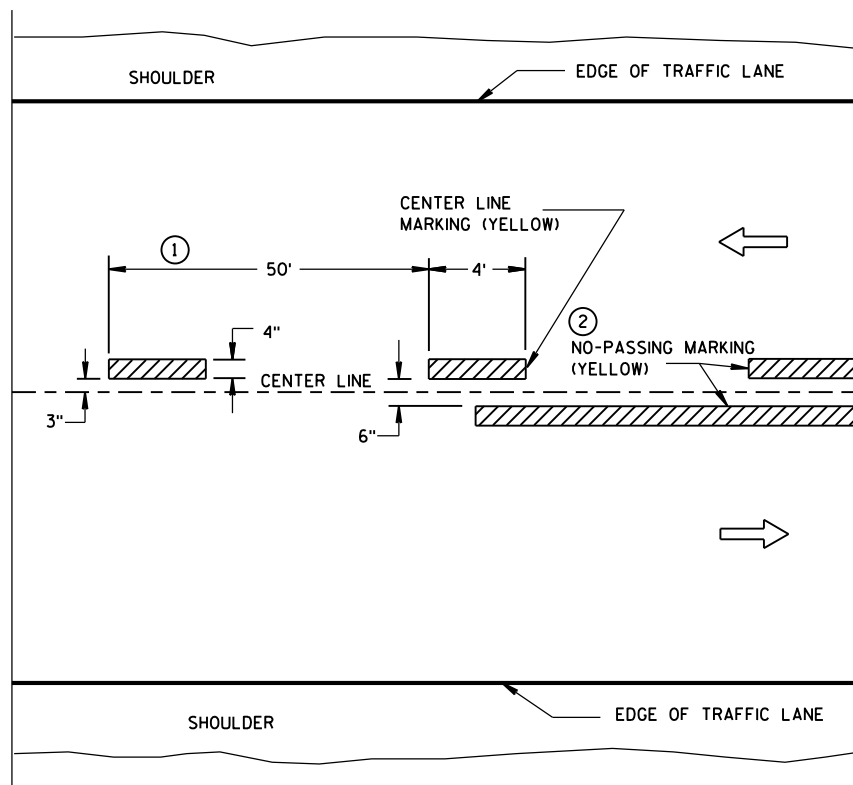


TWO WAY TRAFFIC

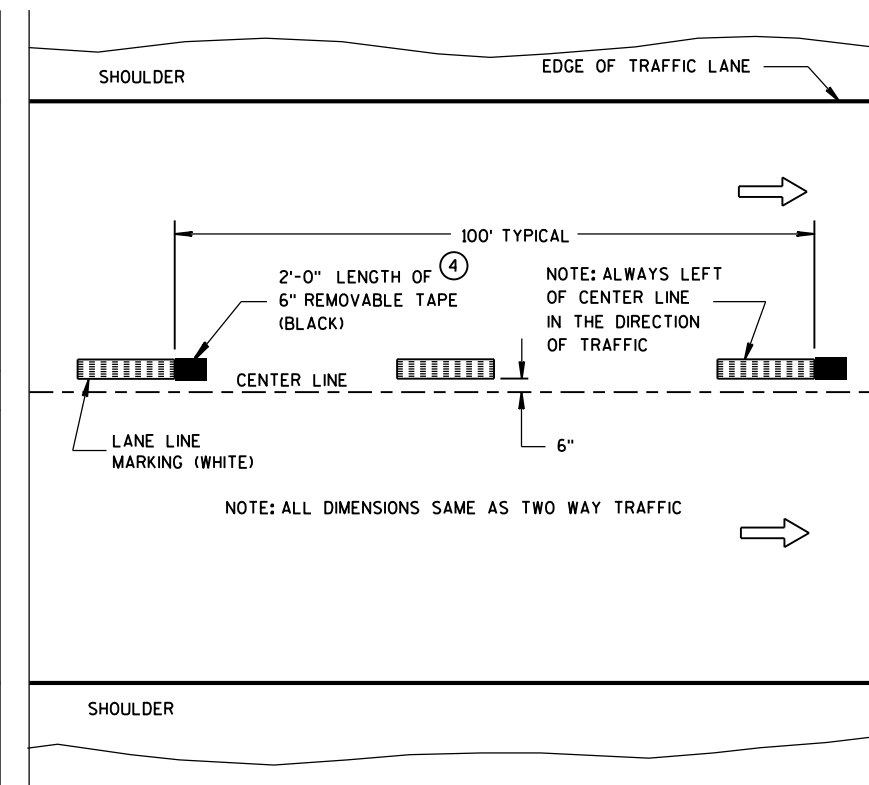


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

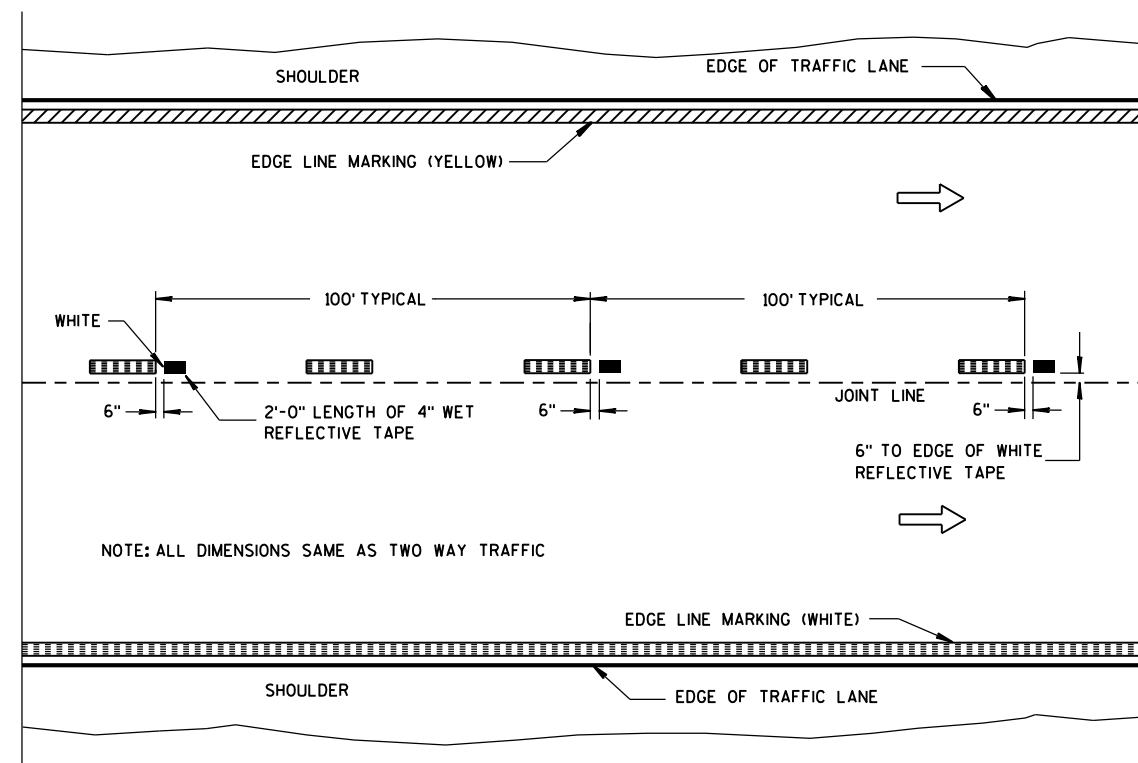
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

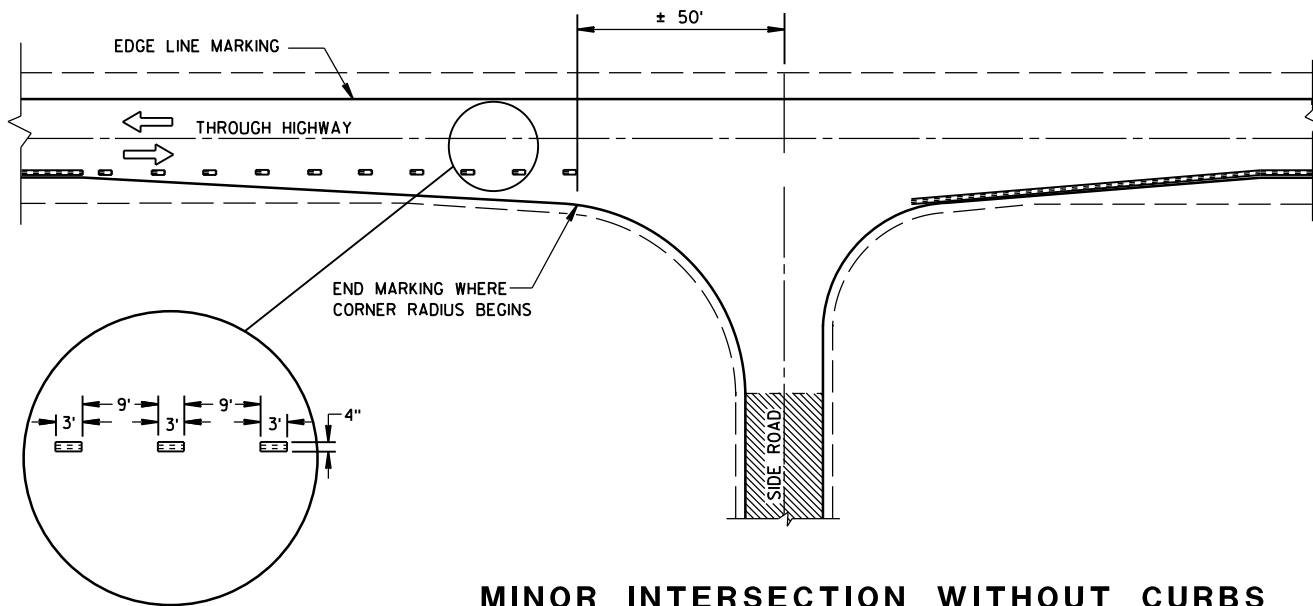
- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

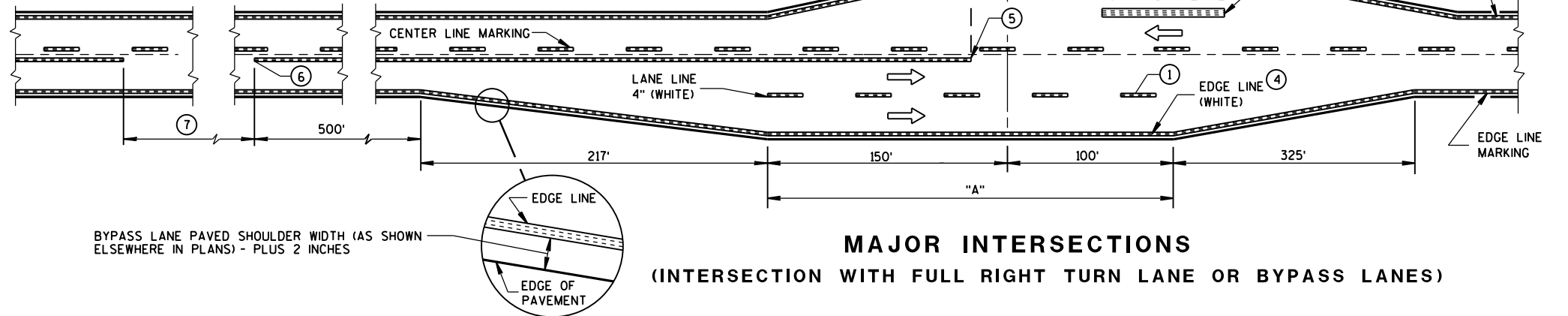
APPROVED
5-13-2013
DATE
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER



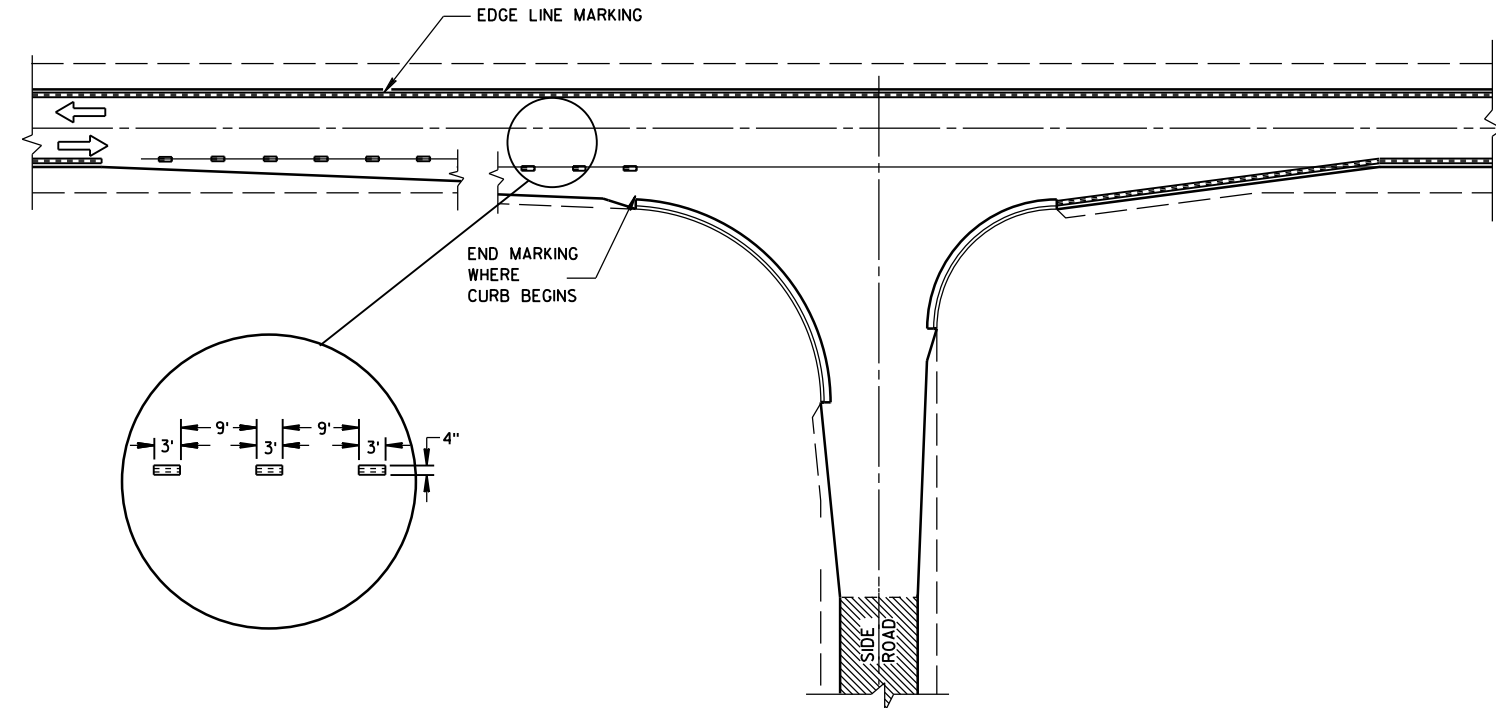
MINOR INTERSECTION WITHOUT CURBS

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792

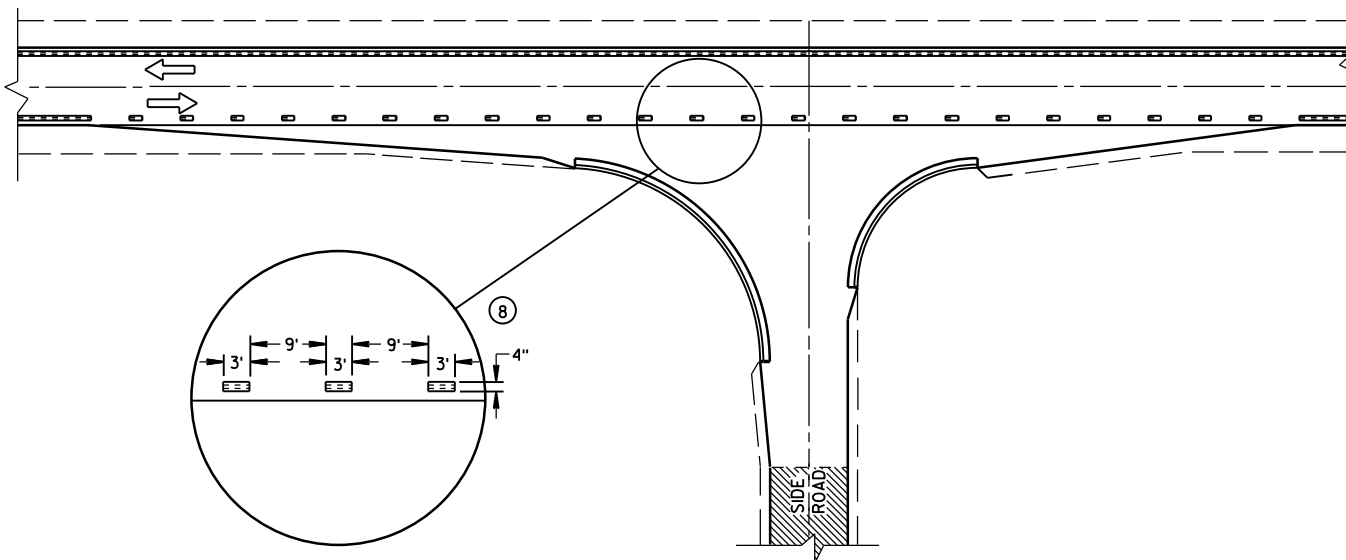


MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)







MINOR INTERSECTION WITH CURBS
(FOR SPECIAL CONDITIONS AS SPECIFIED)

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 ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - 4 THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - 5 BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - 6 BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - 7 IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - 8 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

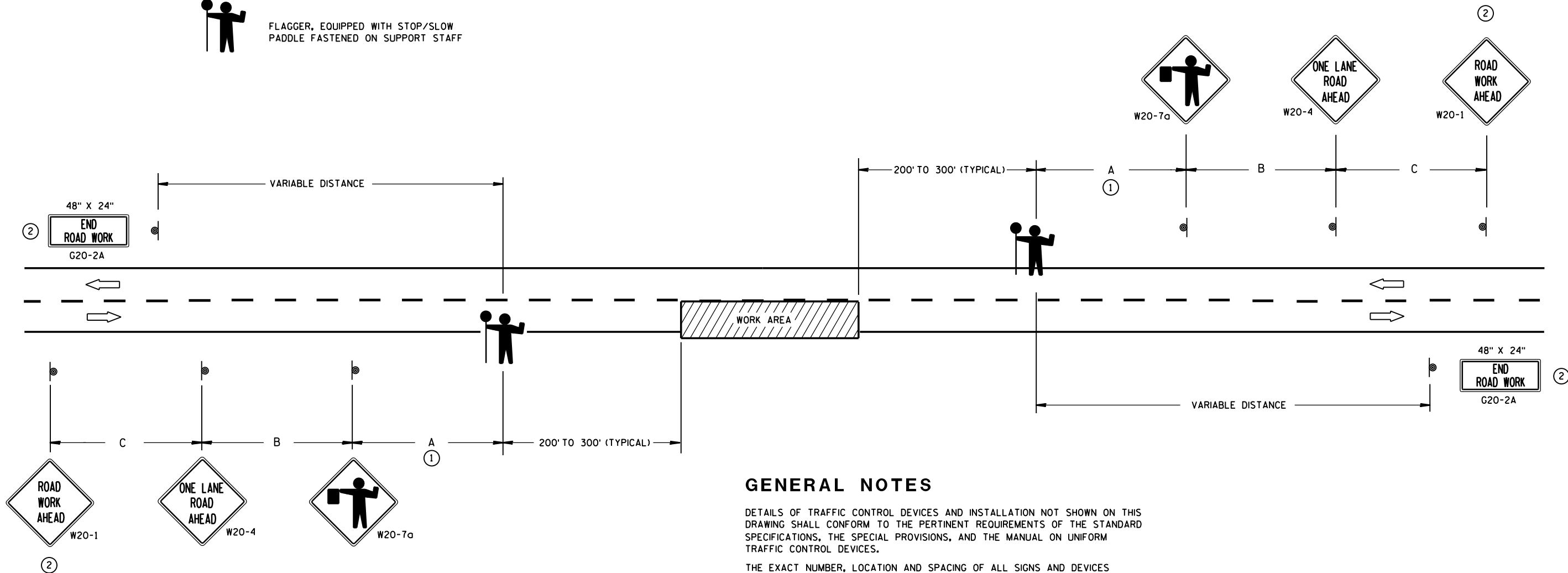
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

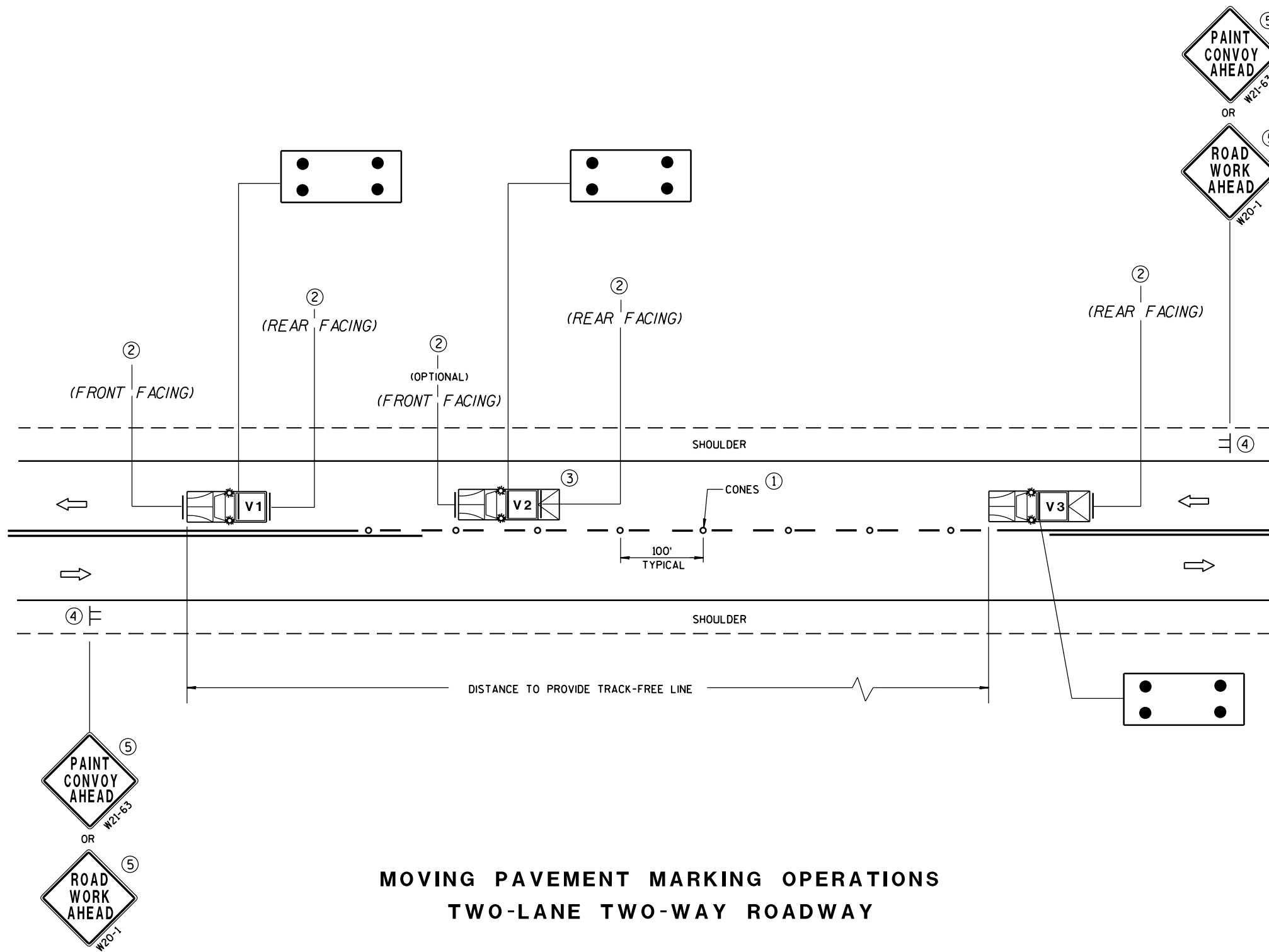
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



MOVING PAVEMENT MARKING OPERATIONS TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

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

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

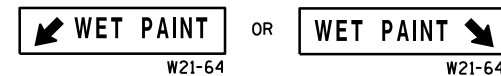
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

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

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

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

CONES

FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

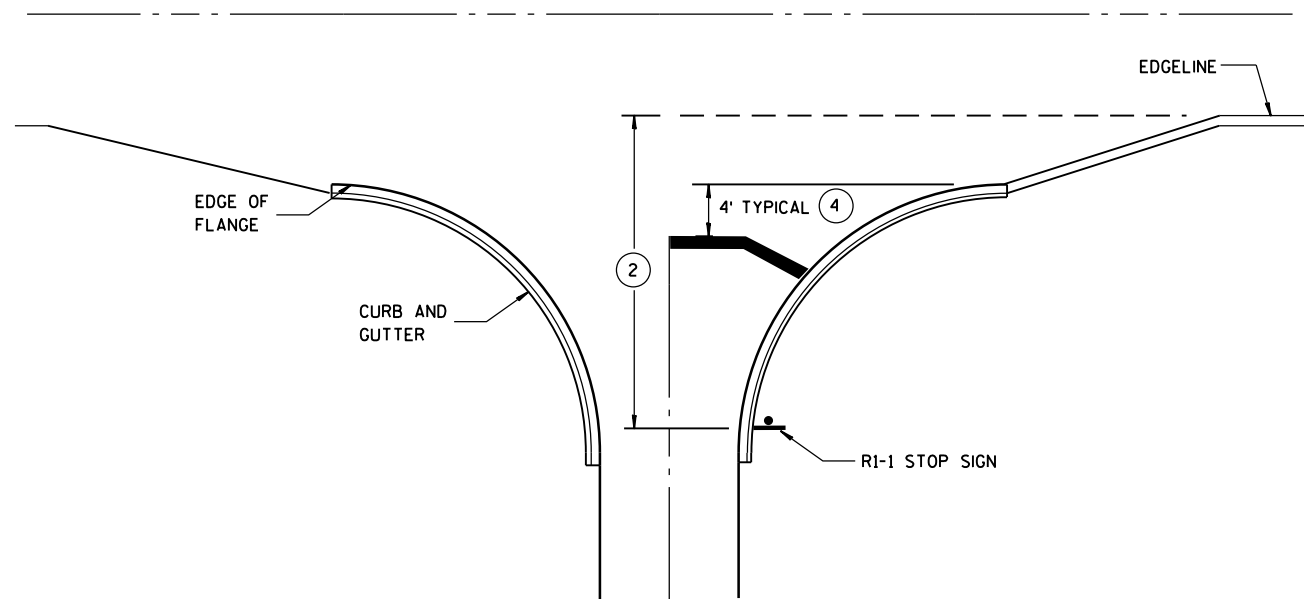
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

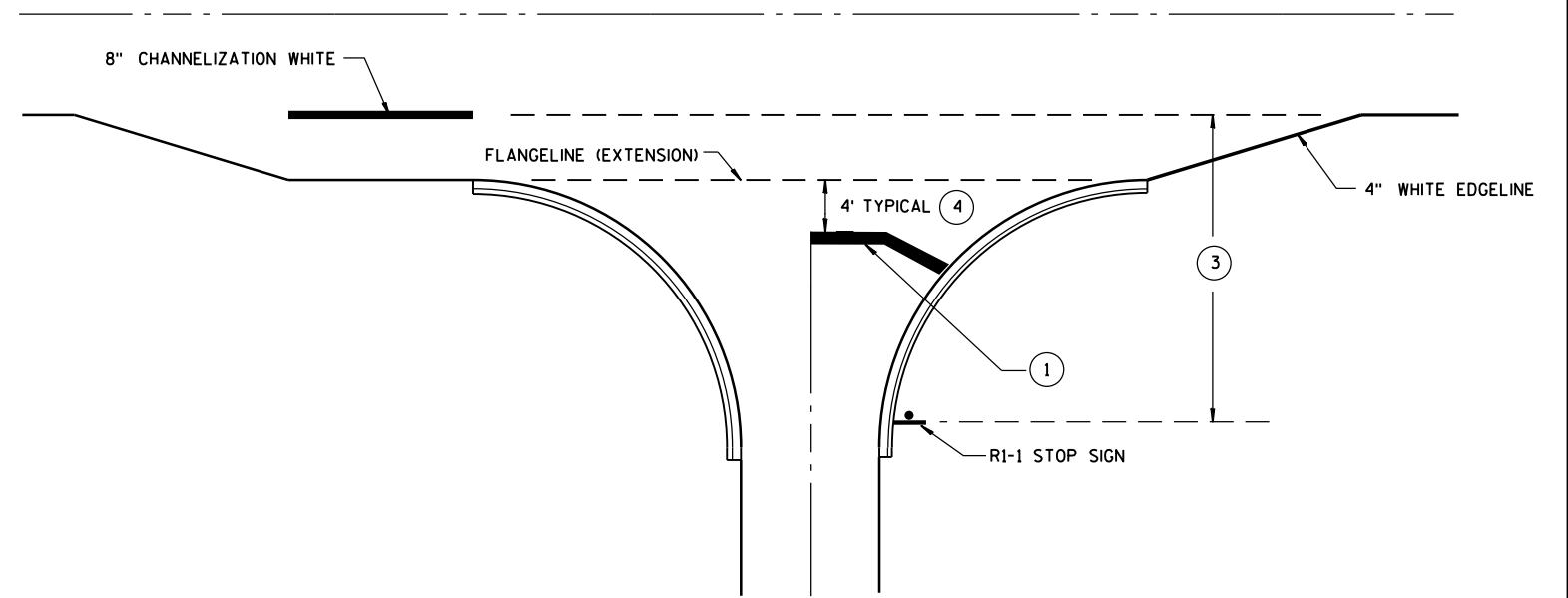
5/3/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

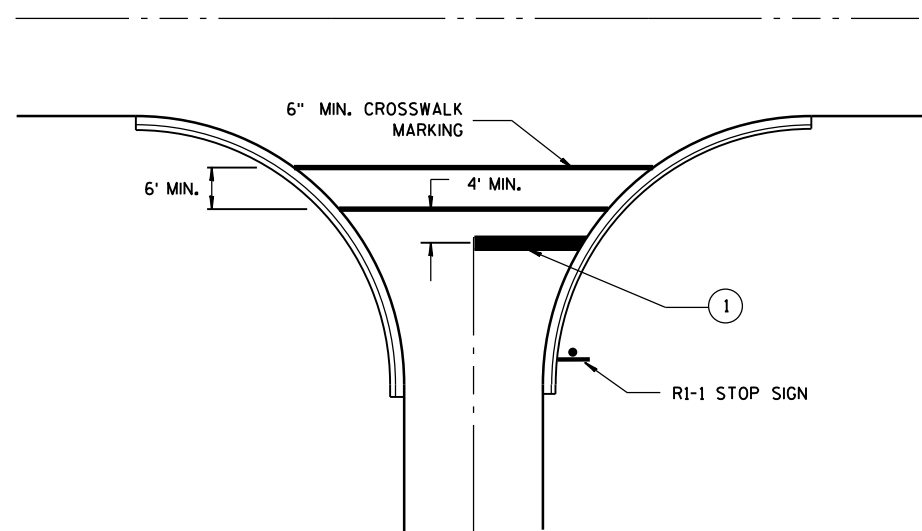
FHWA



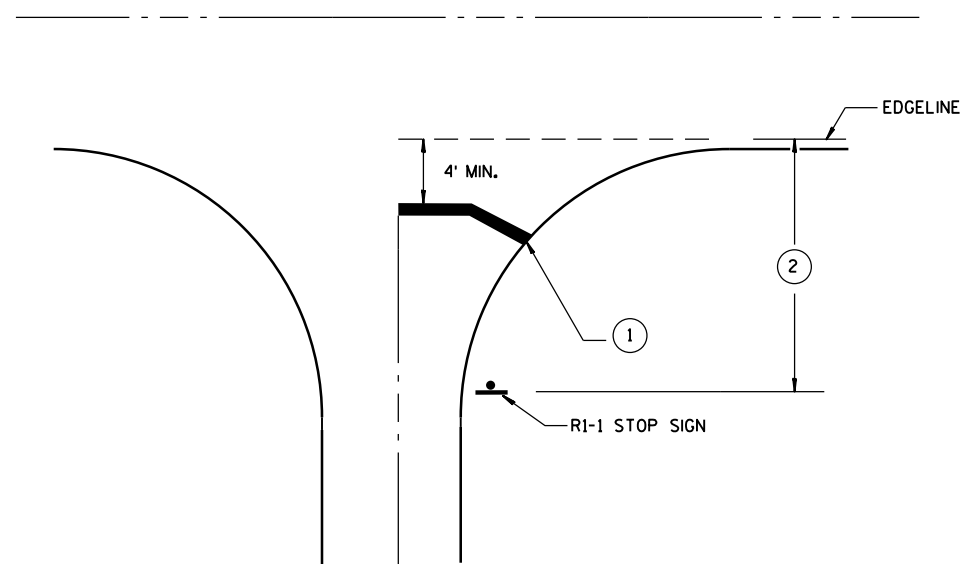
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER**

GENERAL NOTES

- 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.

**STOP LINE AND CROSSWALK
PAVEMENT MARKING**

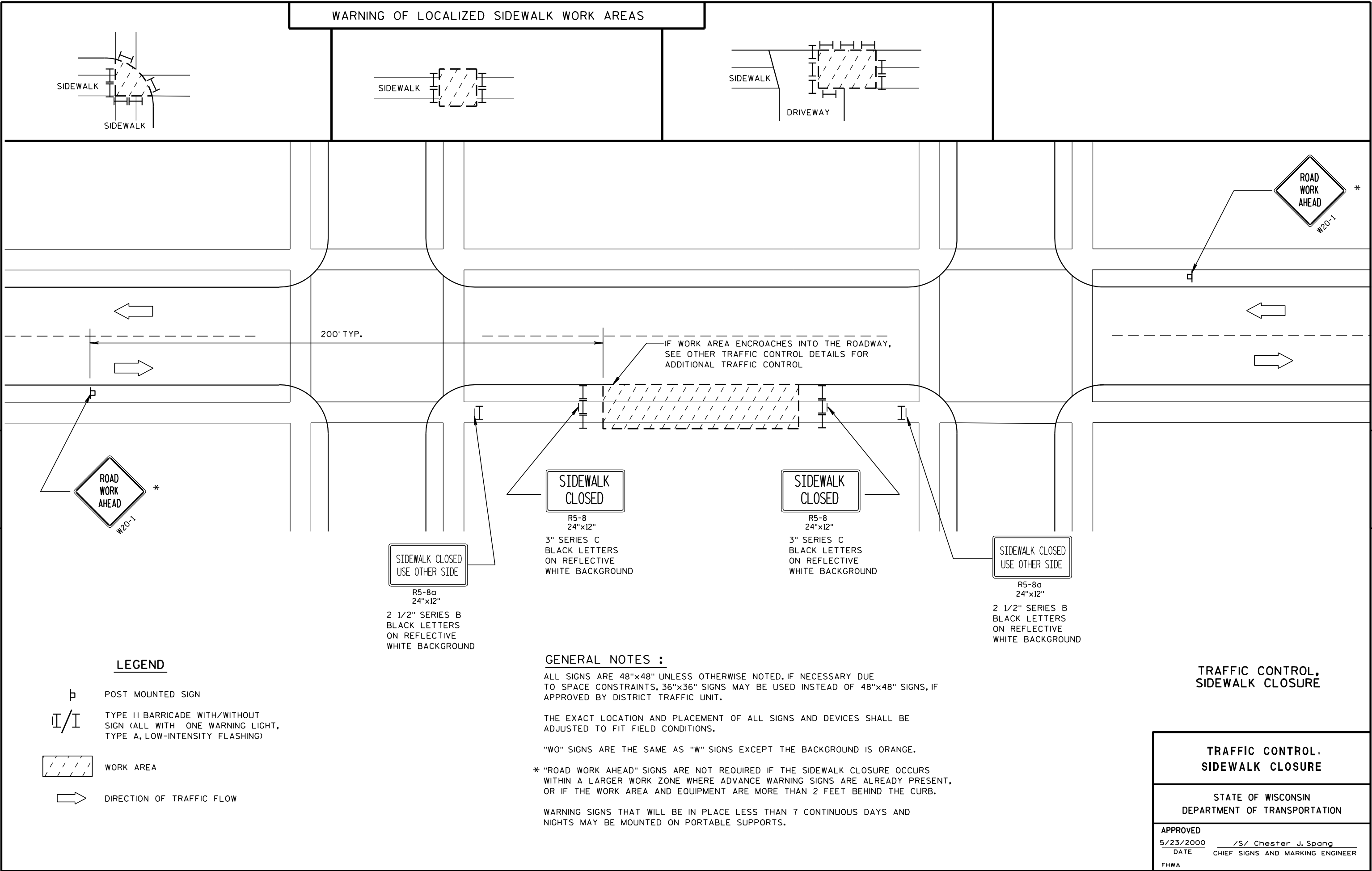
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

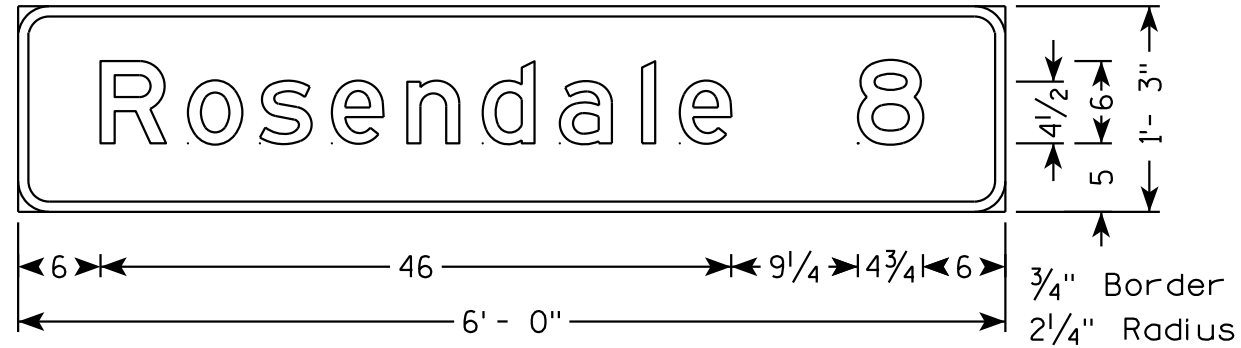
FHWA

/S/ Travis Feltz
STATE TRAFFIC ENGINEER



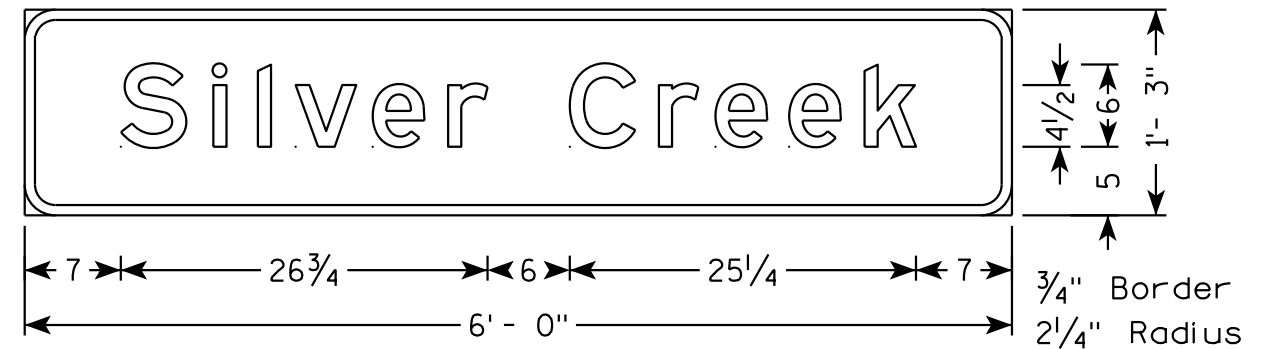
NOTES

1. All SignType II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E except as Shown



D2-1

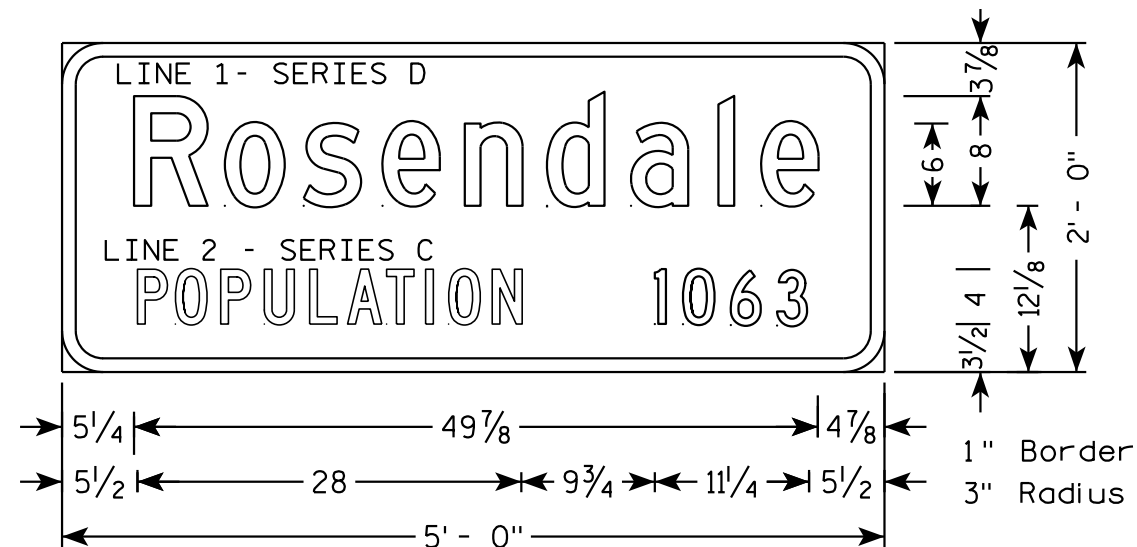
4



I2-3

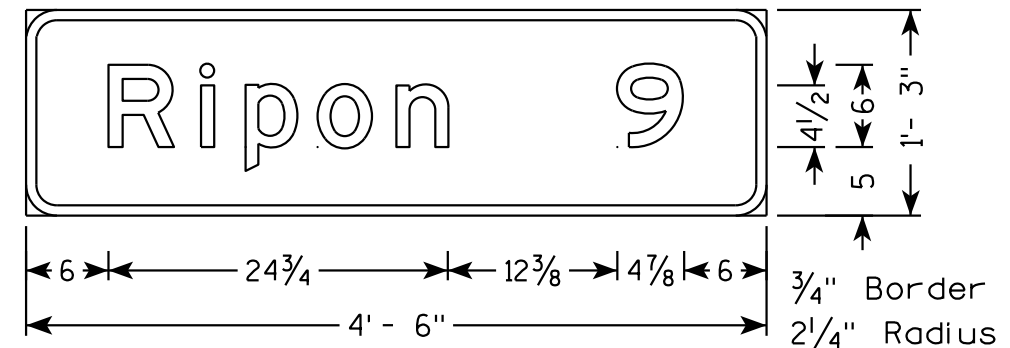
26

27



I2-3

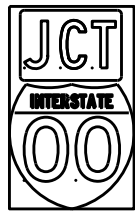
66



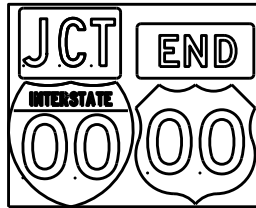
D2-1

82

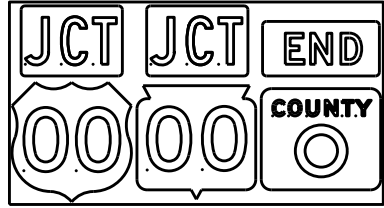
TYPICAL ASSEMBLIES



J1-1



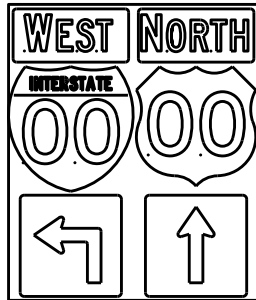
J1-2



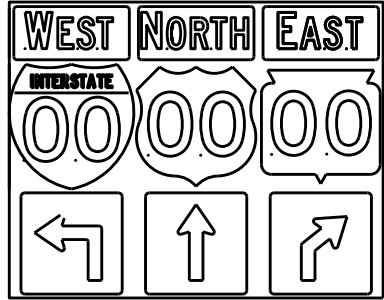
J1-3



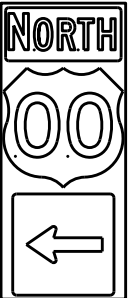
J2-1



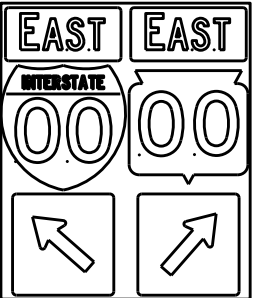
J2-2



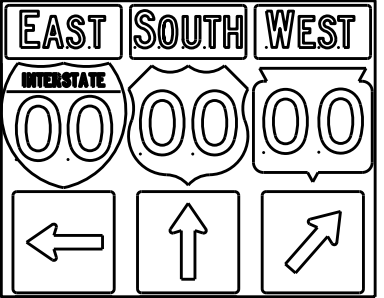
J2-3



J3-1



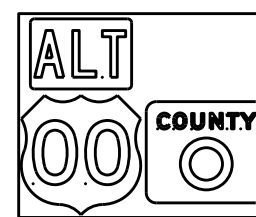
J3-2



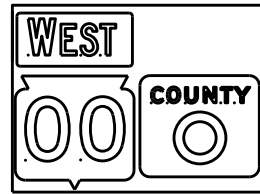
J3-3



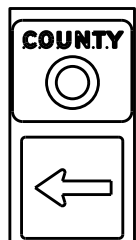
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

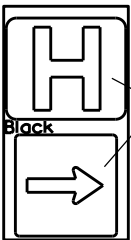


J22-1



JV

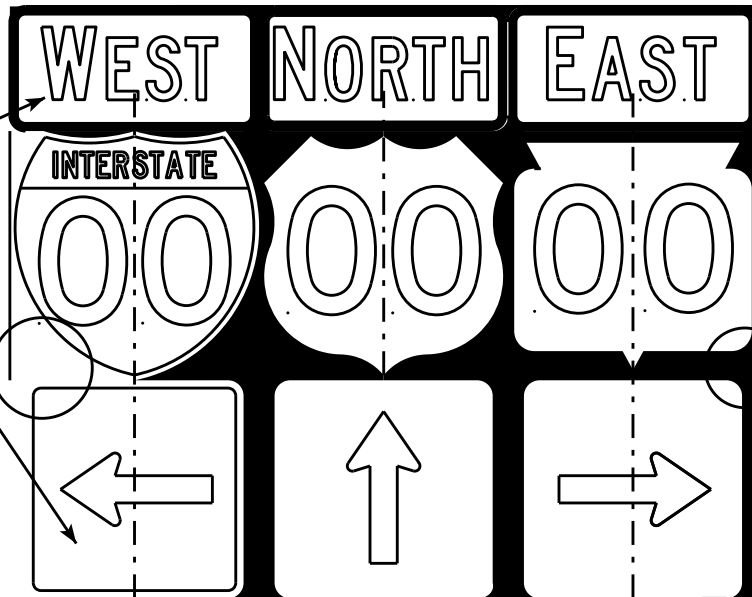
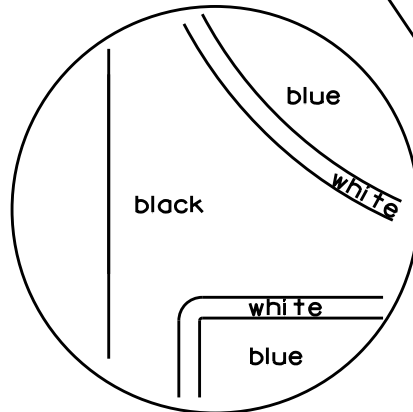
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. 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.
7. 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.
8. 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.
9. 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.
10. All Vertical J Assemblies are given a Sign Code of JV
11. 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

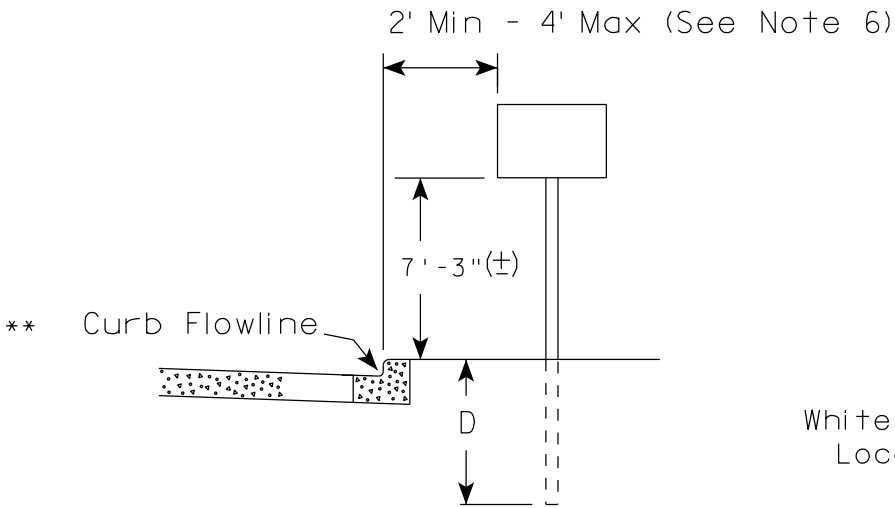
PLOT NAME :

SHEET NO:

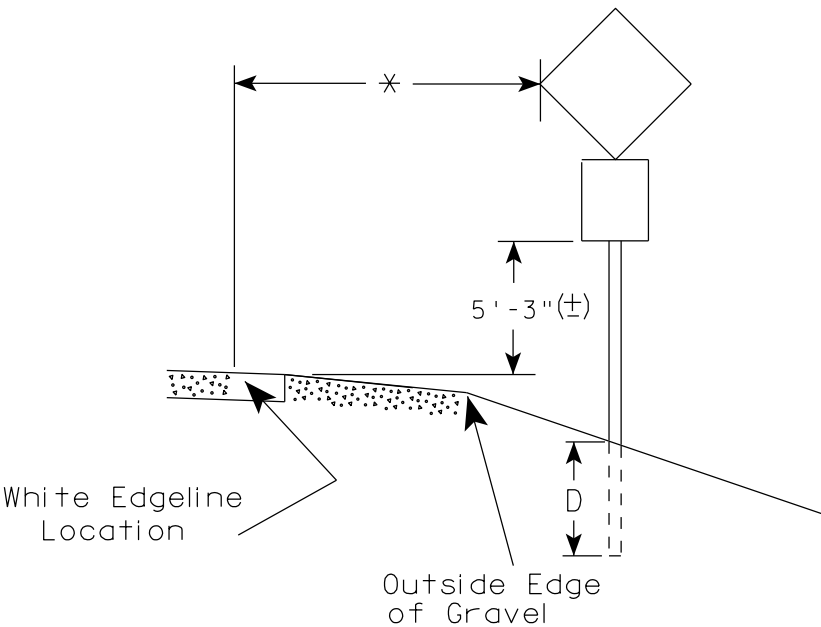
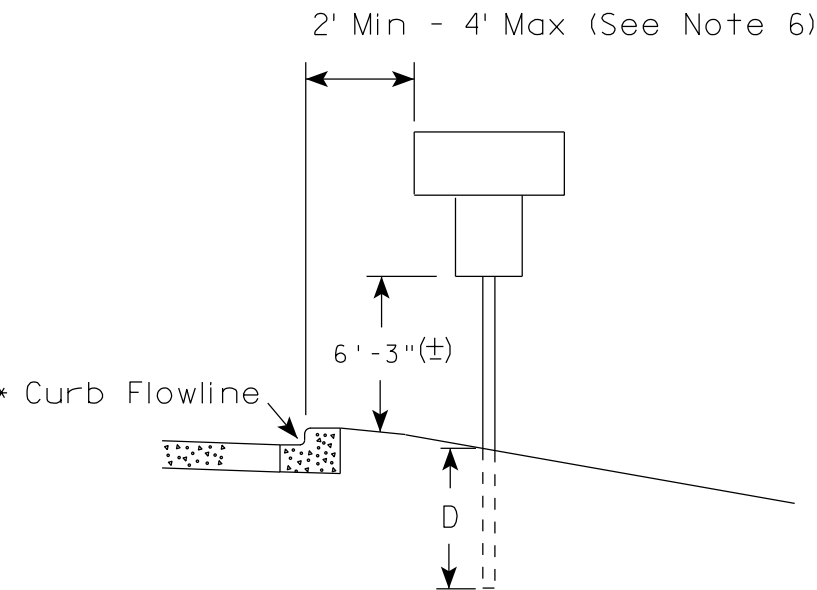
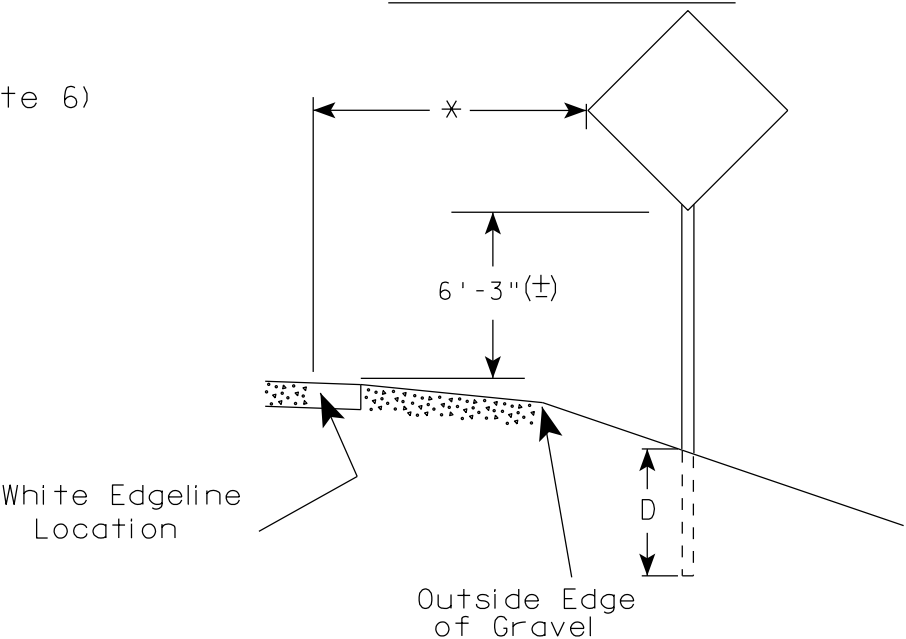
E

WISDOT/CADDs SHEET 42

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

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

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

GENERAL NOTES

1. Signs wider than 4 feet, 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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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

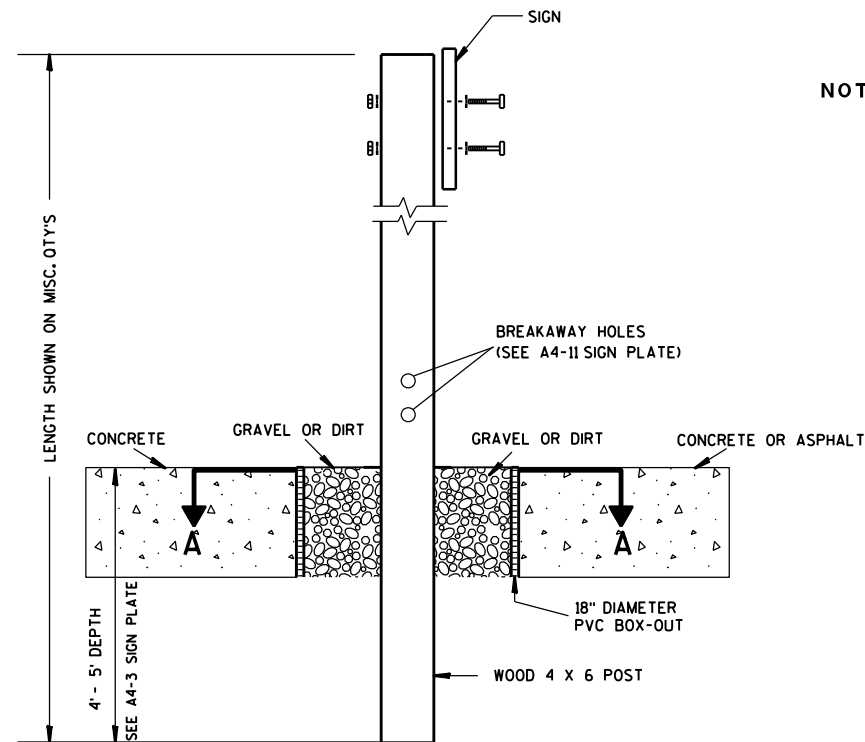
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 11/12/14

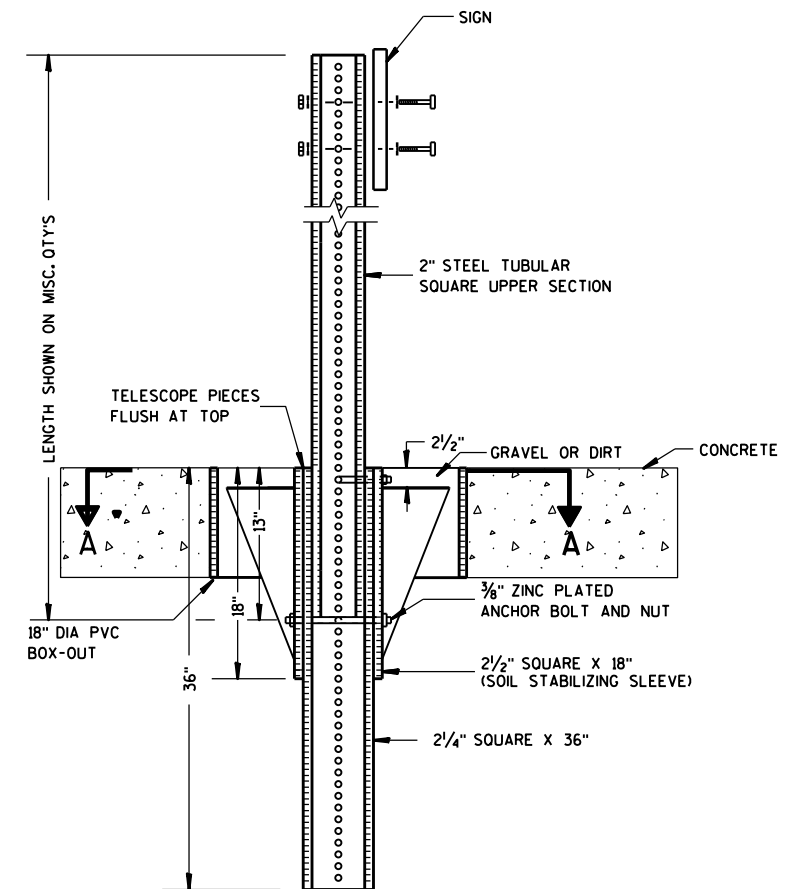
PLATE NO. A4-3.19



ELEVATION VIEW

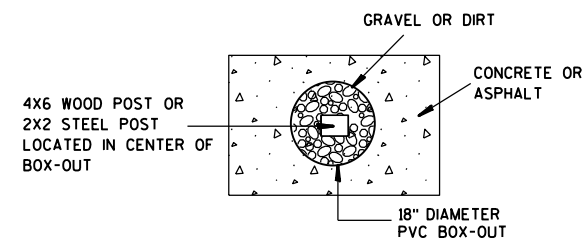
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

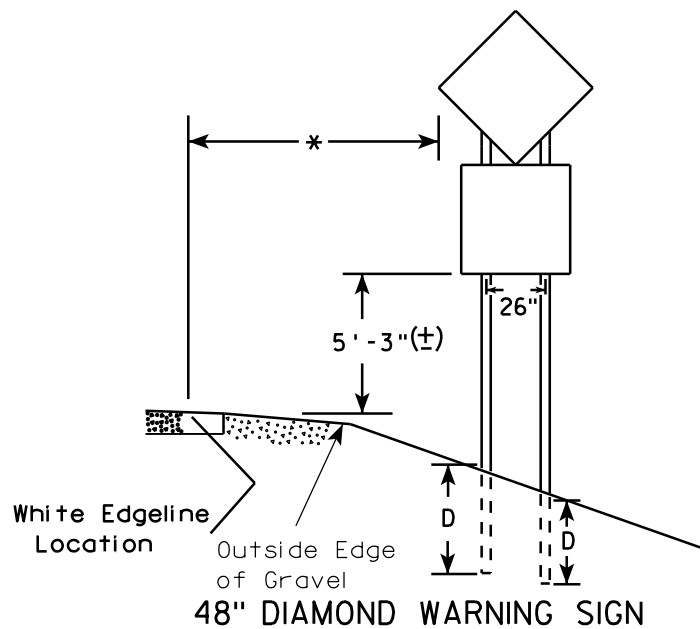
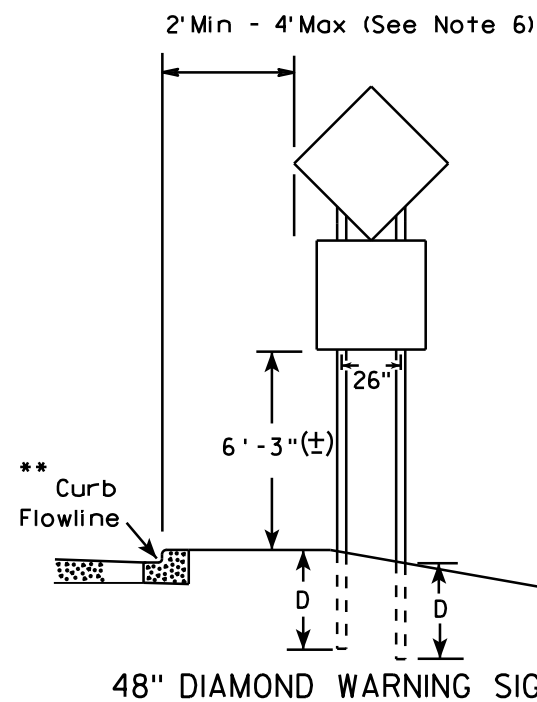
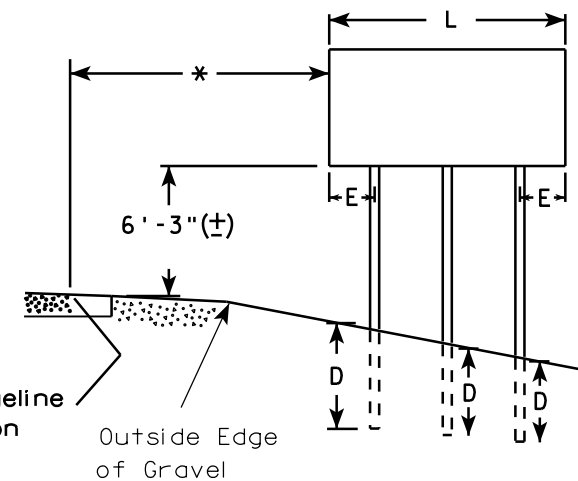
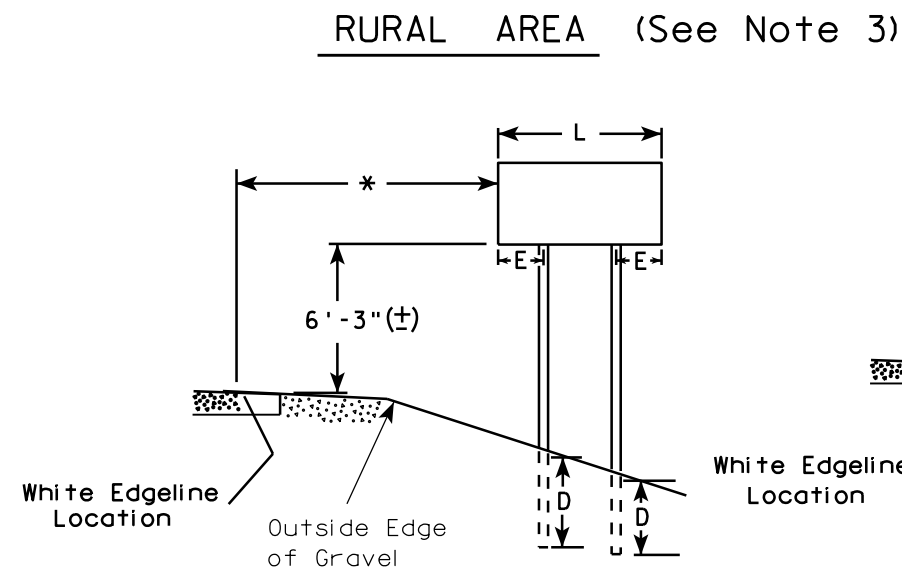
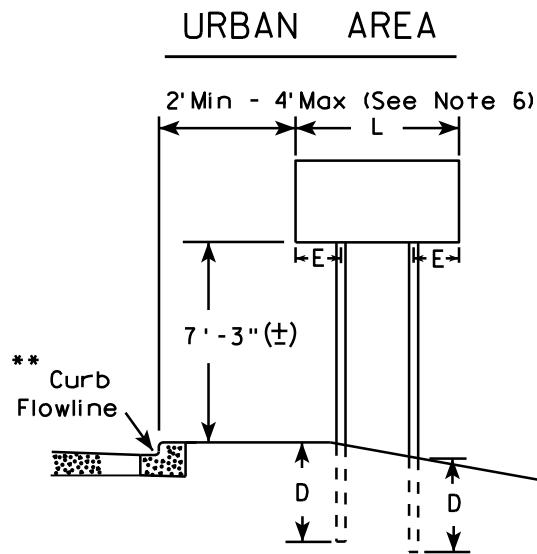
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



- 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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 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 or less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

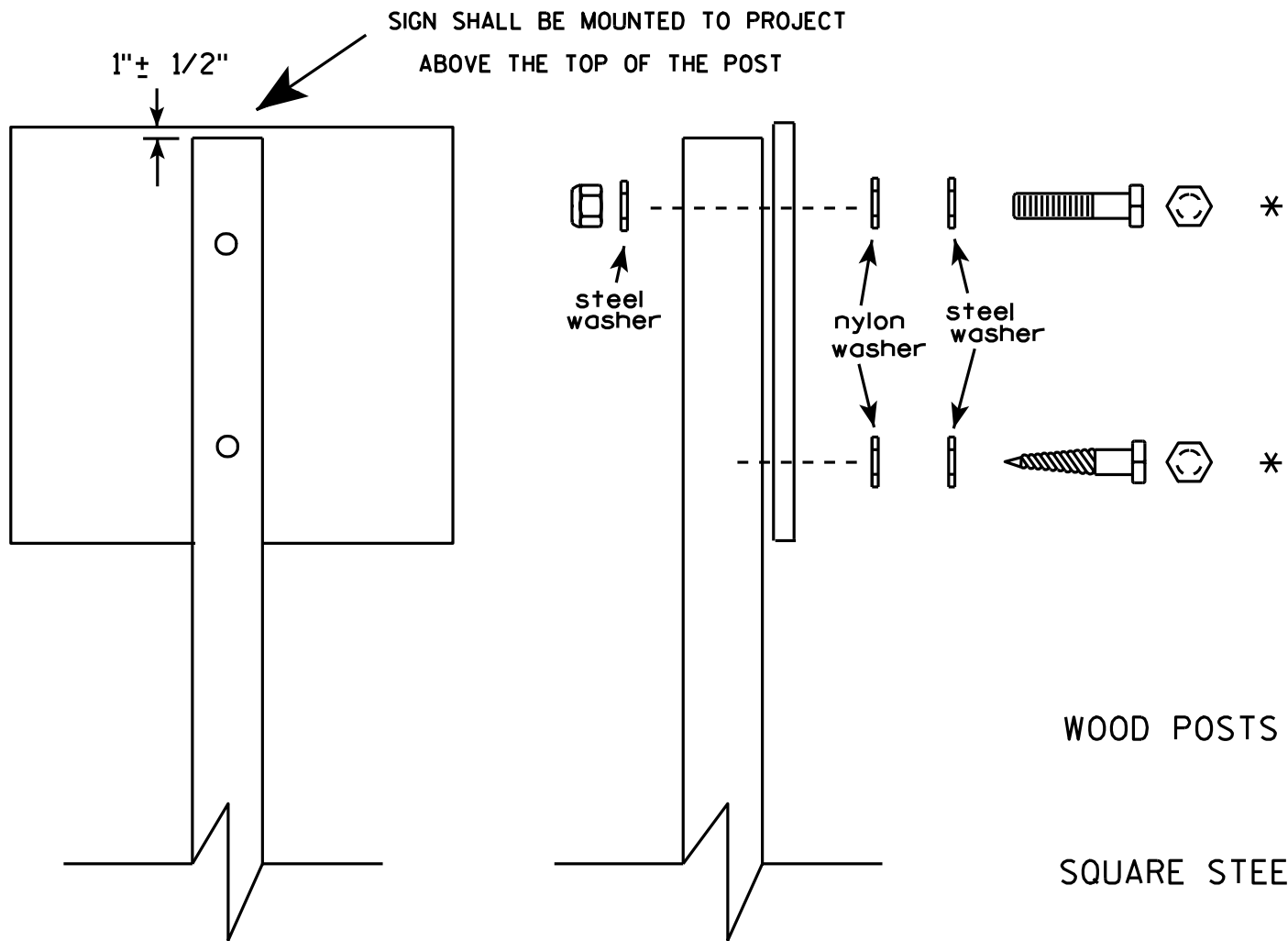
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-4.13

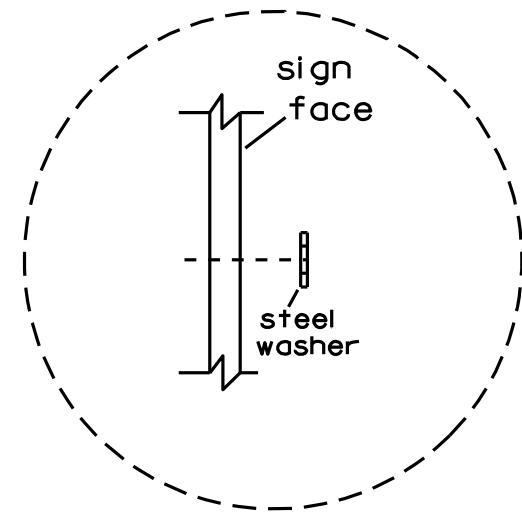


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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 - $\frac{3}{8}$ " X 3"
- MACHINE BOLTS - $\frac{5}{16}$ " X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON for all Type H signs.

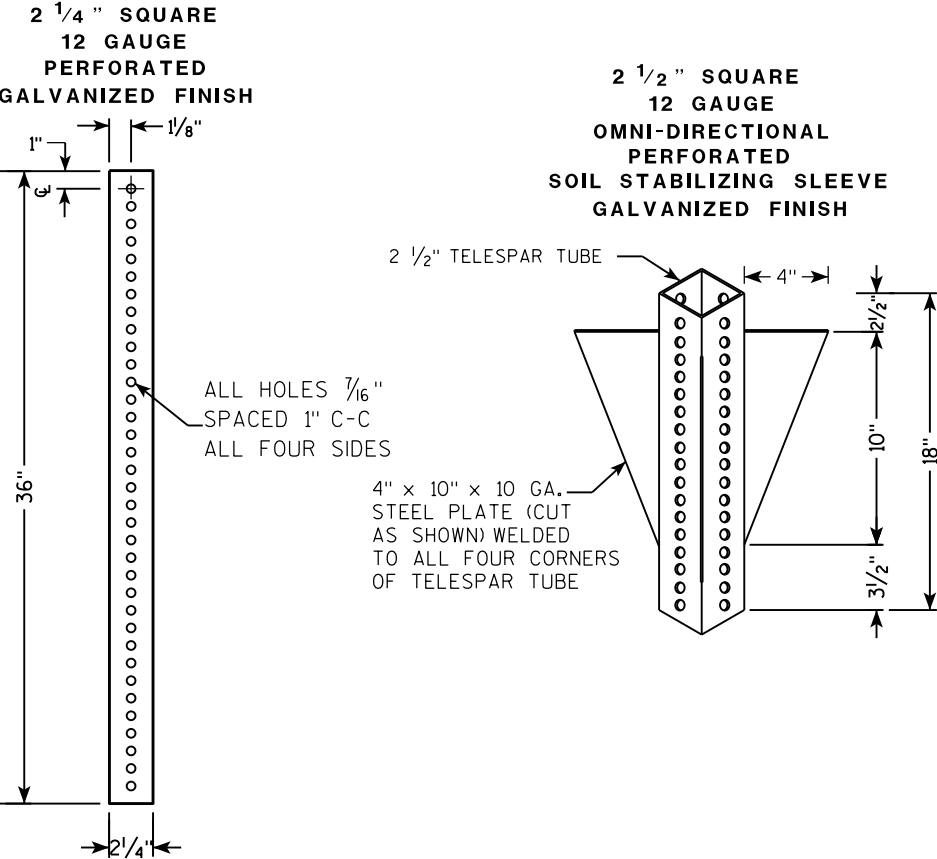


Washer Placement when Sign Has Other Than Type H or Type F Face

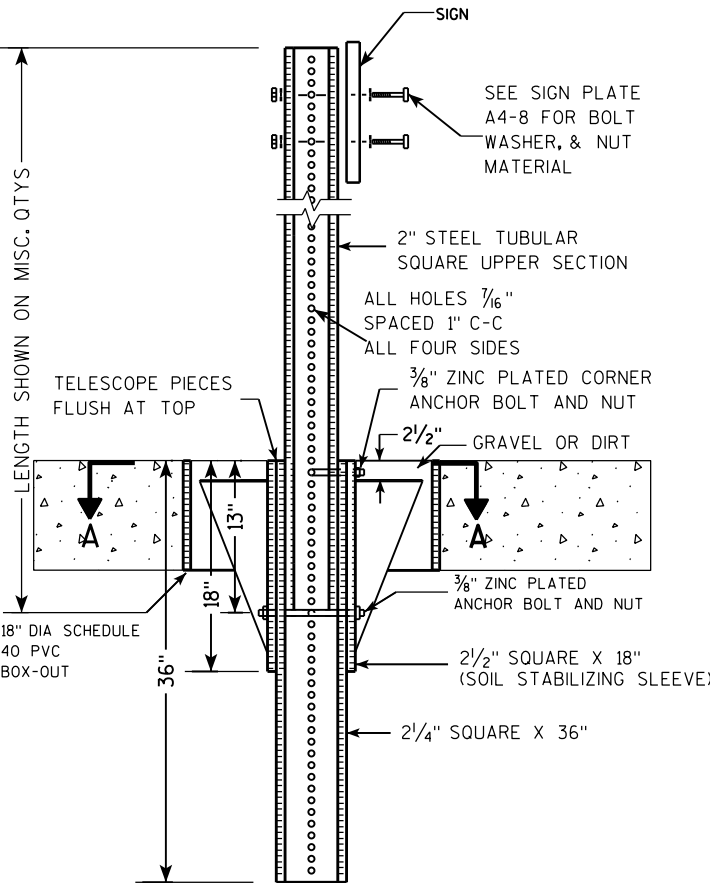
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require 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 3/23/10	PLATE NO. A4-8.7

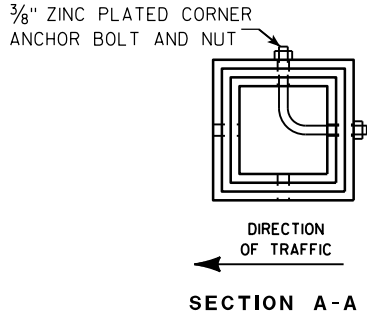
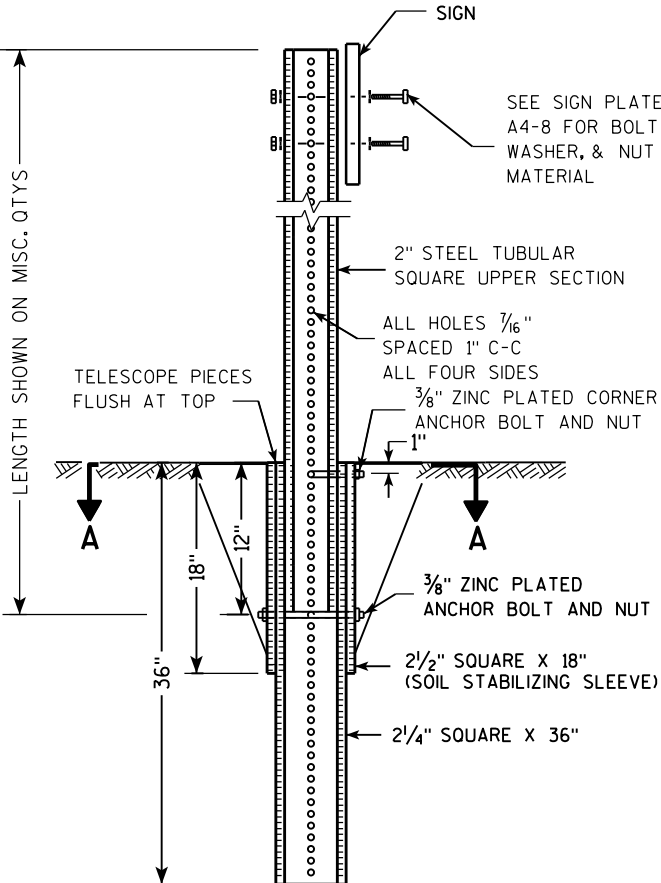
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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



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



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

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

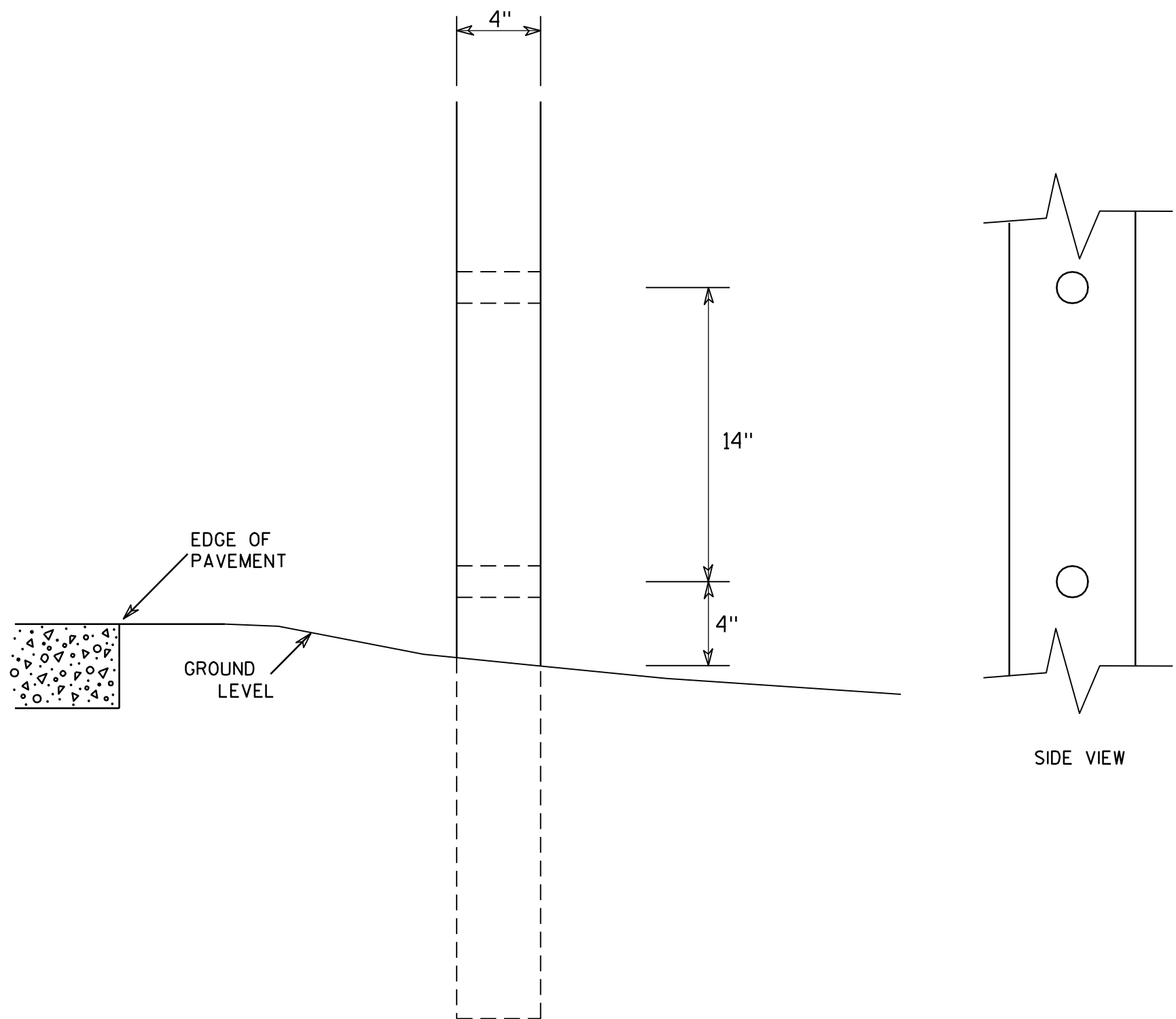
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



GENERAL NOTES

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

7

4 X 6 WOOD POST
MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

COUNTY:

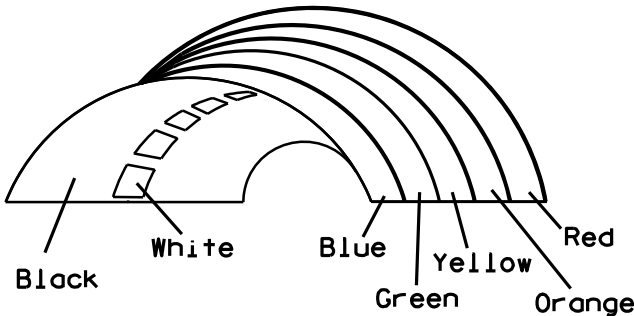
SHEET NO:

E



* 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:

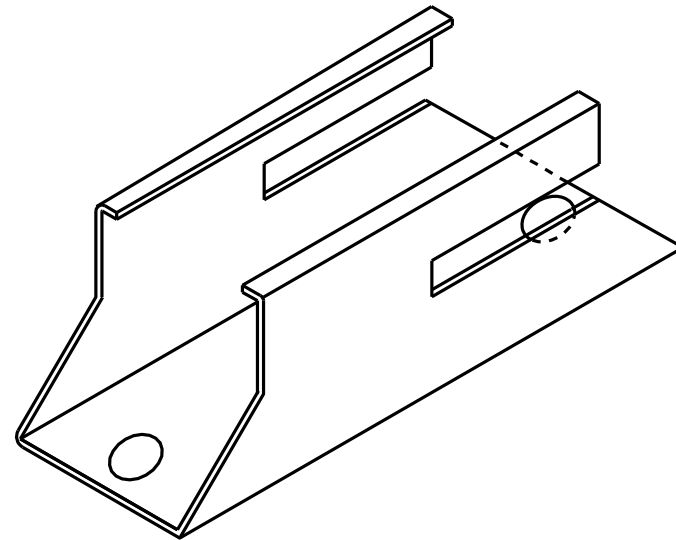
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

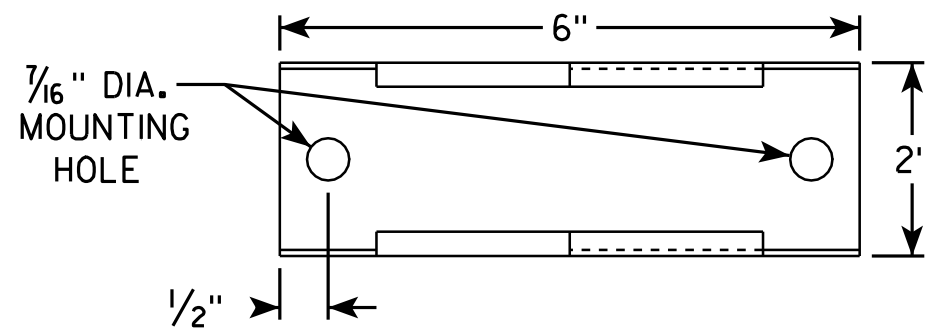
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/27/11 PLATE NO. I55-56.3

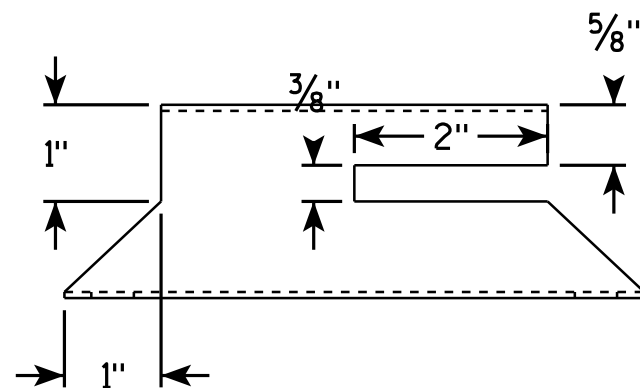
ISOMETRIC VIEW



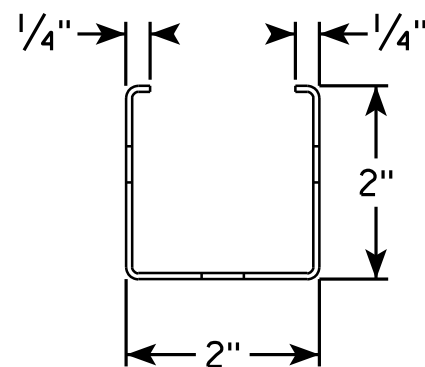
TOP VIEW



SIDE VIEW



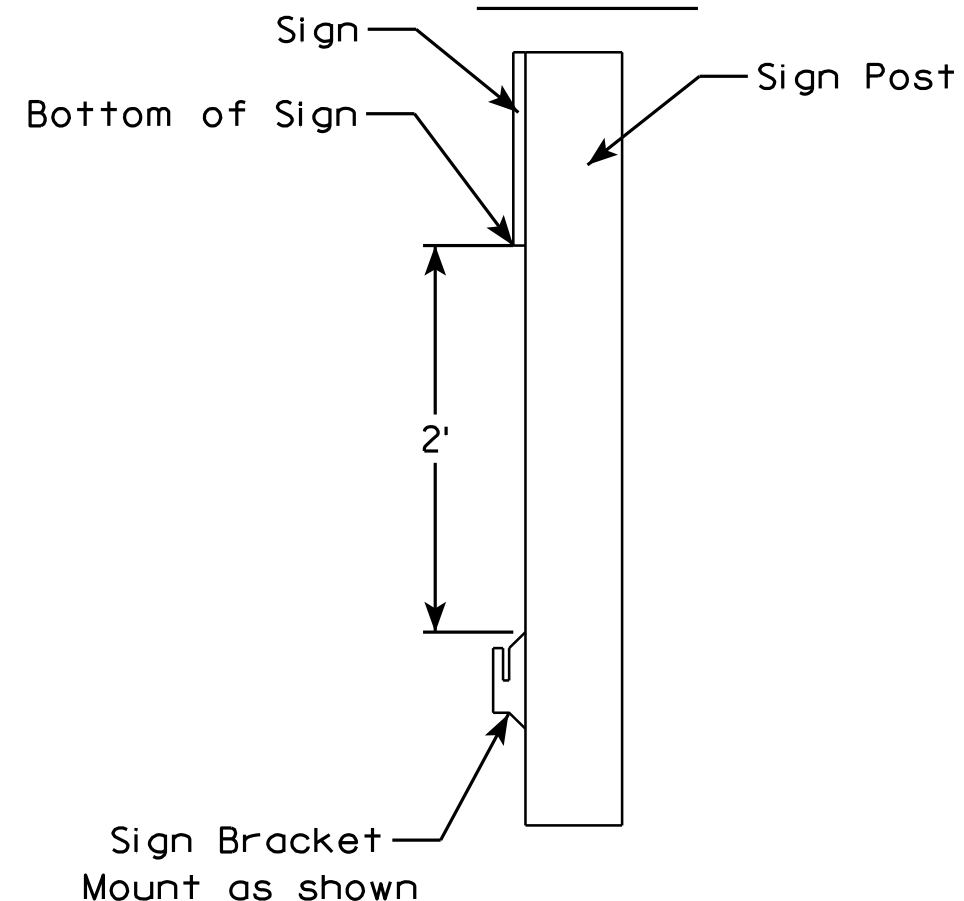
END VIEW



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 2/5/10 PLATE NO. I55-56B.1

PROJECT NO:

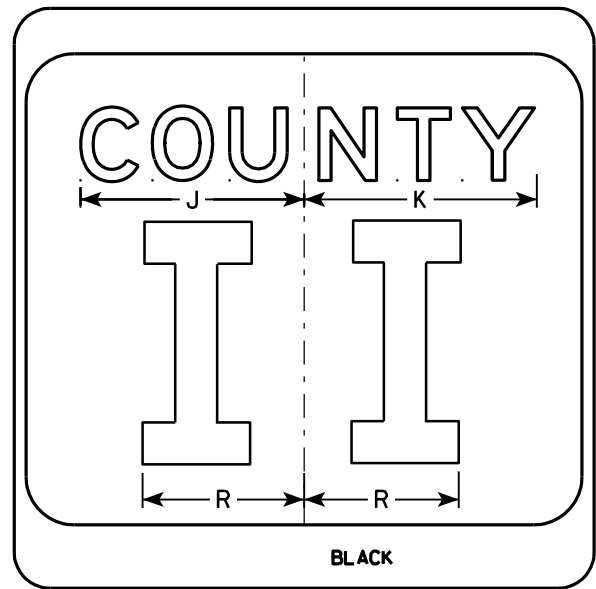
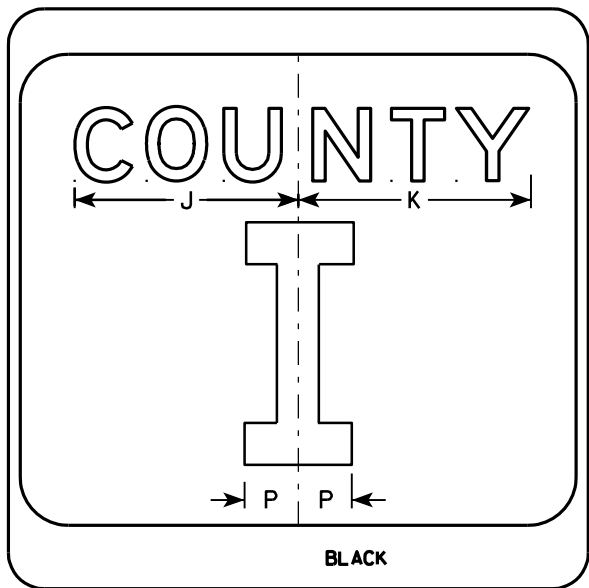
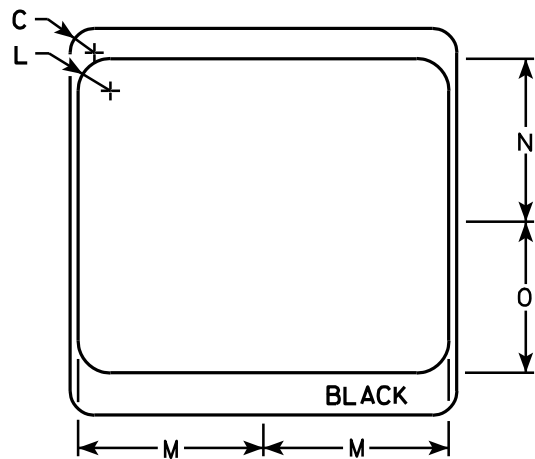
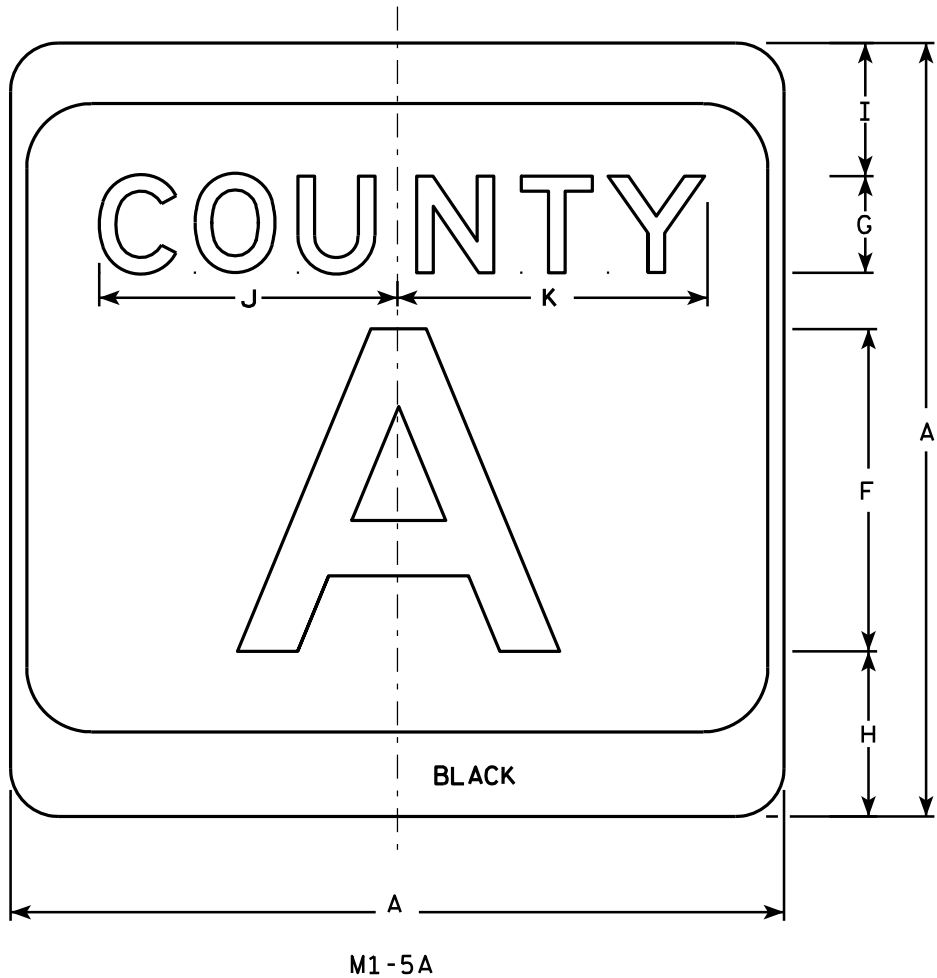
HWY:

COUNTY:

SHEET NO:

E

7



NOTES

- Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White & Black - See Note 7
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.
- 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.
- Substitute appropriate letters & optically center to achieve proper balance.
- Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

CTH MARKER

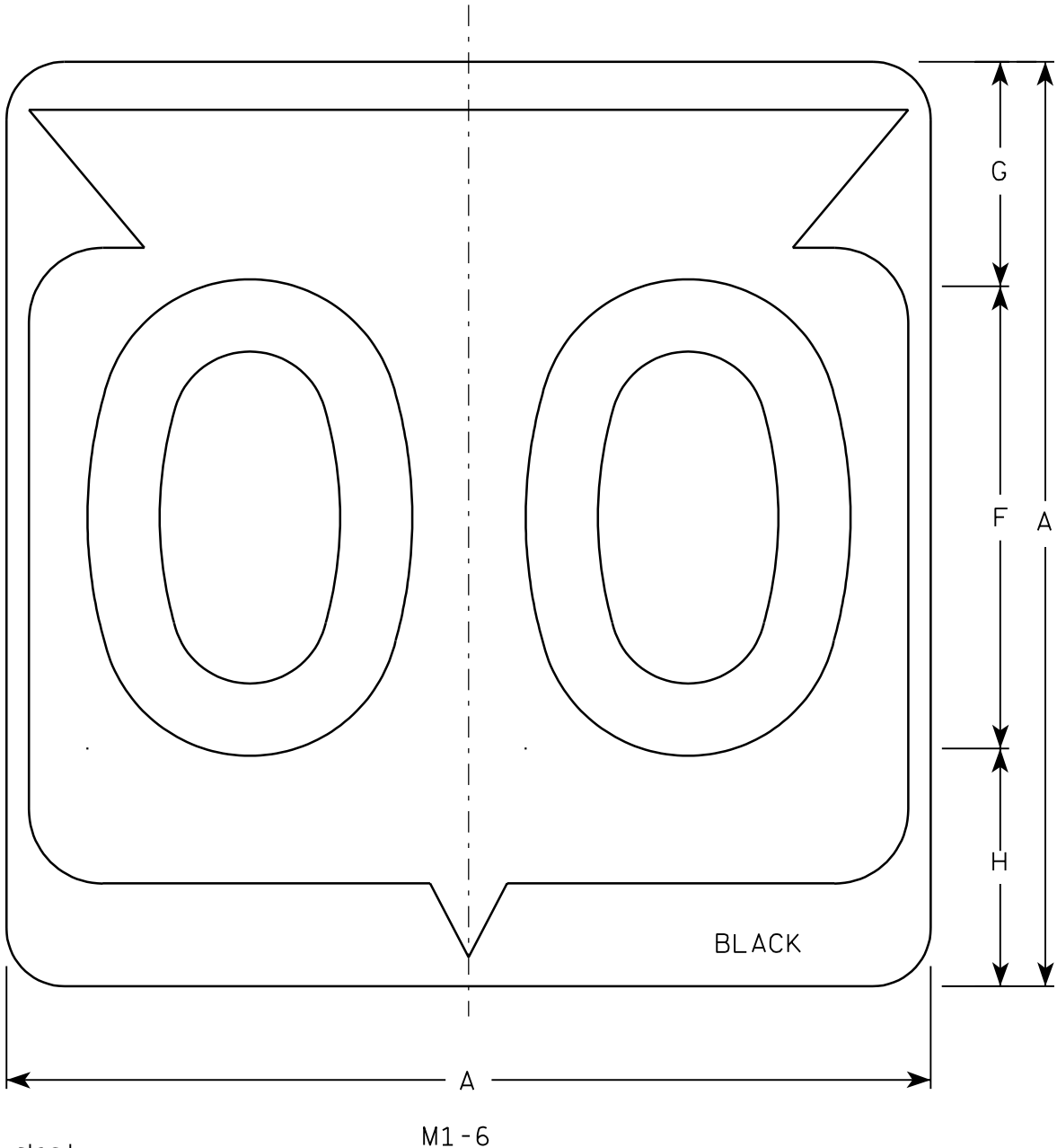
M1-5A FOR ASSEMBLIES

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:

E

FILE NAME : C:\Users\Projects\tr_stdplate\M16.DGN

PLOT DATE : 13-OCT-2005 14:55

PLOT BY : DITJPH

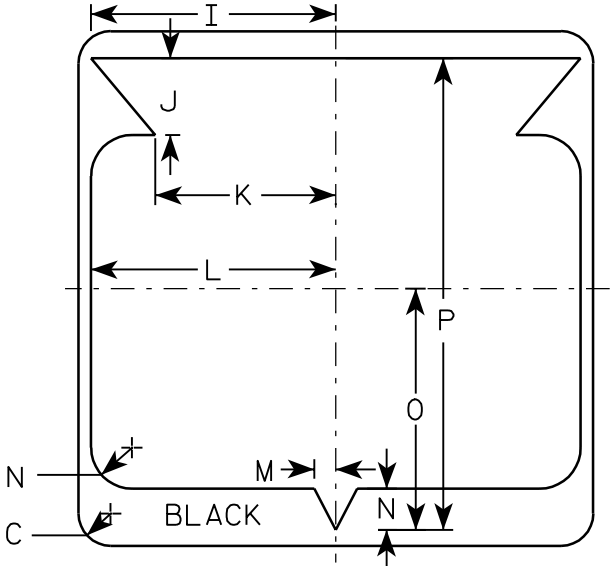
PLOT NAME :

PLOT SCALE : 6.715871:1.000000

WISDOT/CADDS SHEET 42

NOTES

1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
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. Substitute appropriate Series numerals and
adjust spacing as per plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

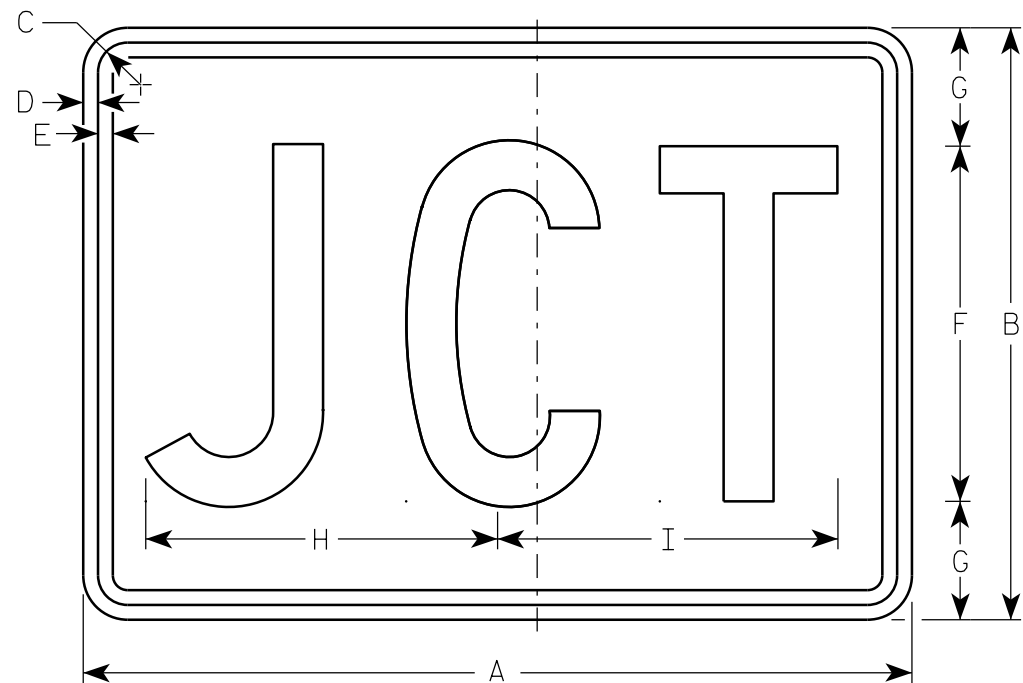
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

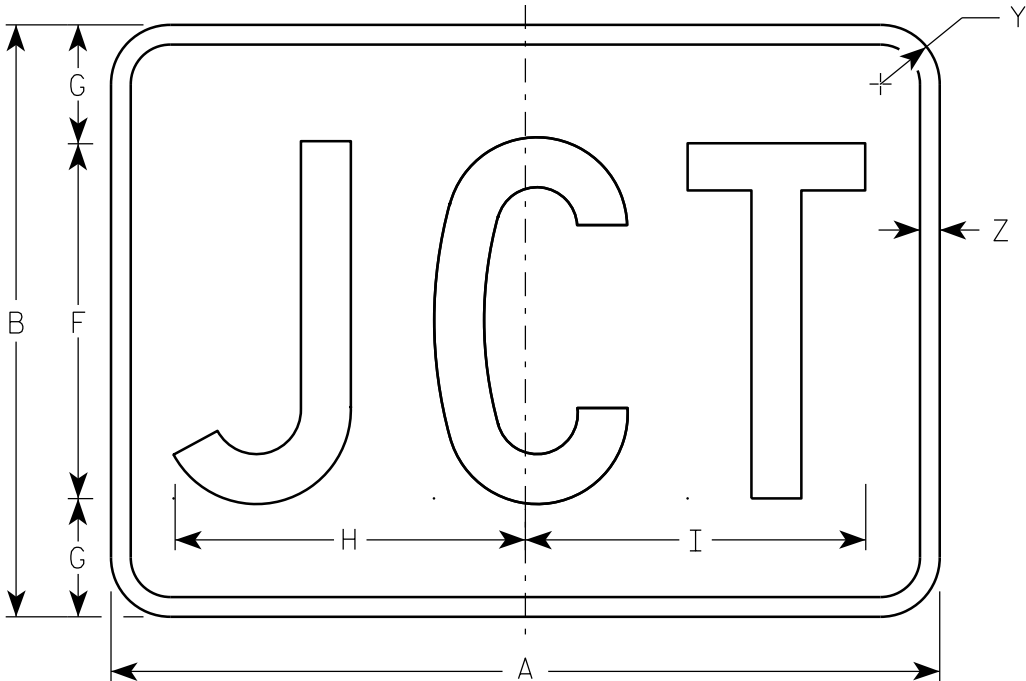
Chester J. Spang
for State Traffic Engineer

DATE 3/20/02

PLATE NO. M1-6.9



M2-1
MK2-1
MM2-1
MN2-1
MR2-1



MB2-1

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
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

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

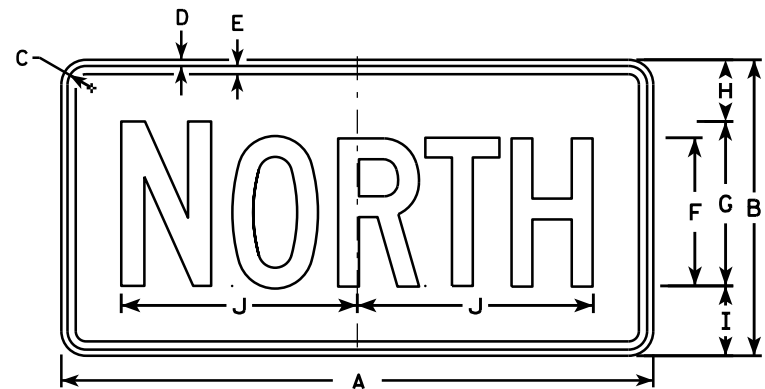
APPROVED

Matthew R. Rauch

For State Traffic Engineer

DATE 6/30/14

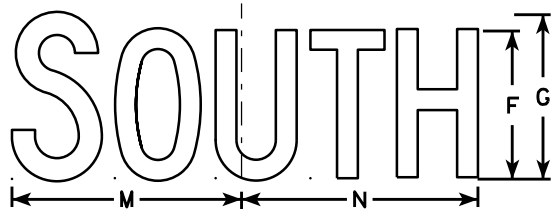
PLATE NO. M2-1.11



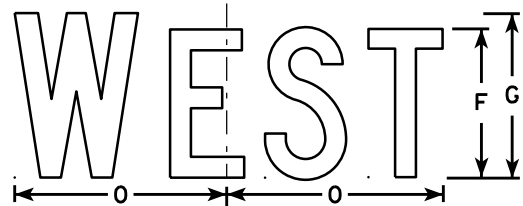
M3-1
MK3-1
MM3-1
MN3-1



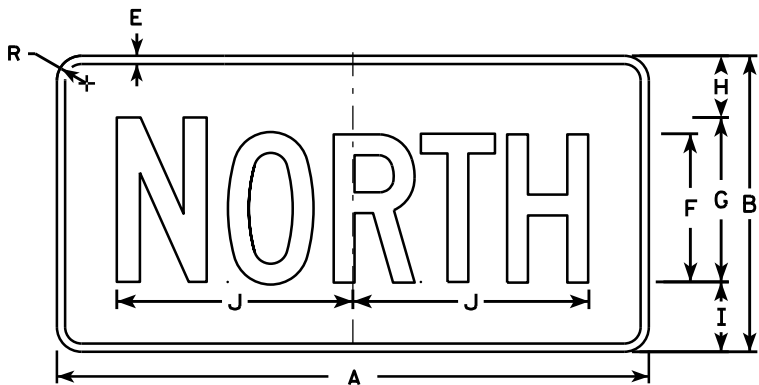
M3-2
MK3-2
MM3-2
MN3-2



M3-3
MK3-3
MM3-3
MN3-3



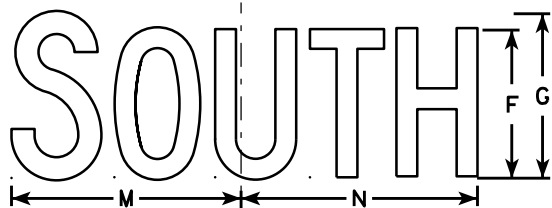
M3-4
MK3-4
MM3-4
MN3-4



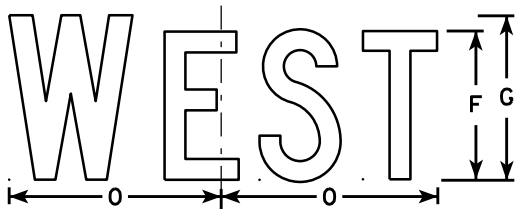
MB3-1



MB3-2



MB3-3



MB3-4

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
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

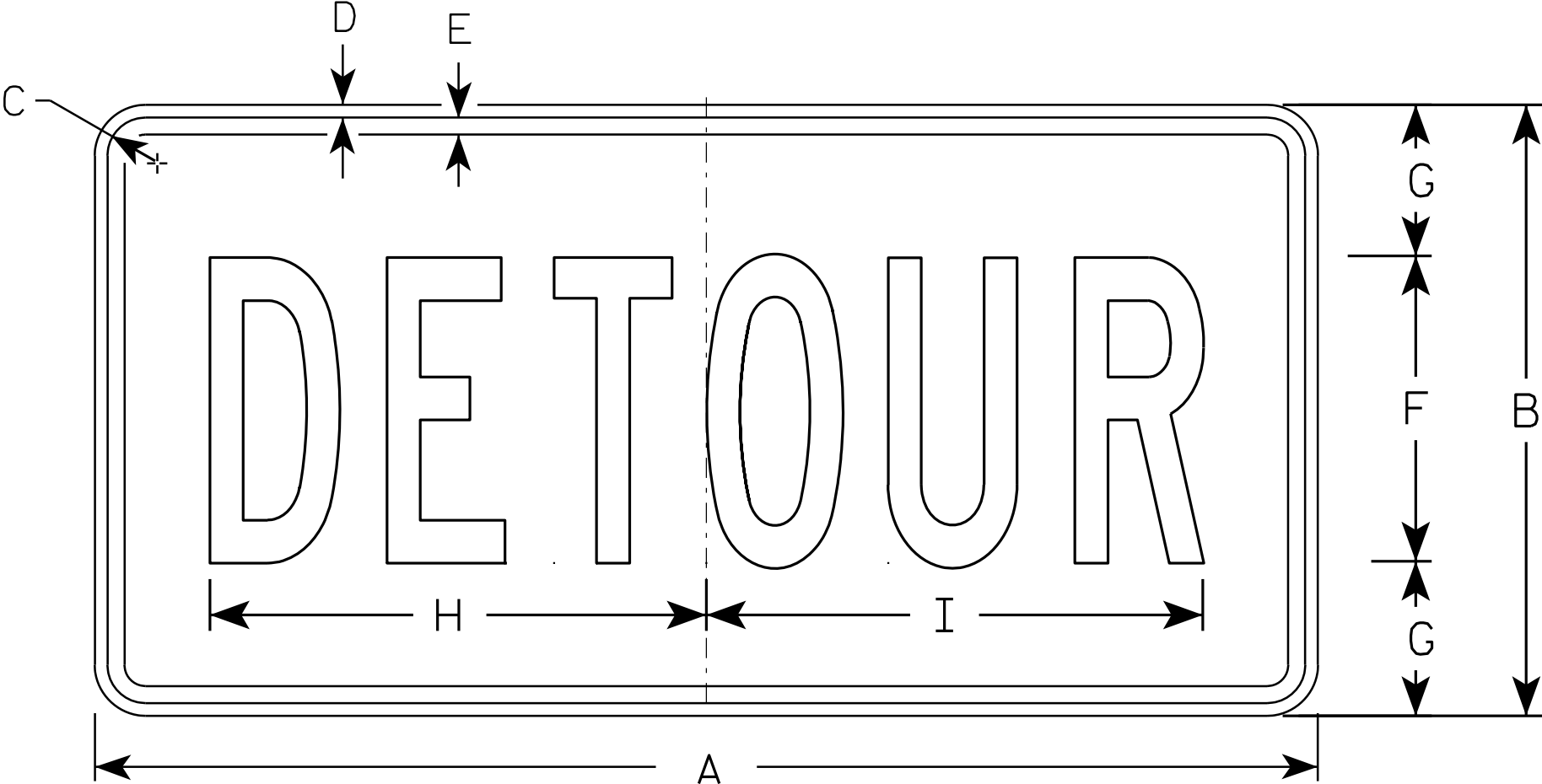
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE NO. M3-1.13

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

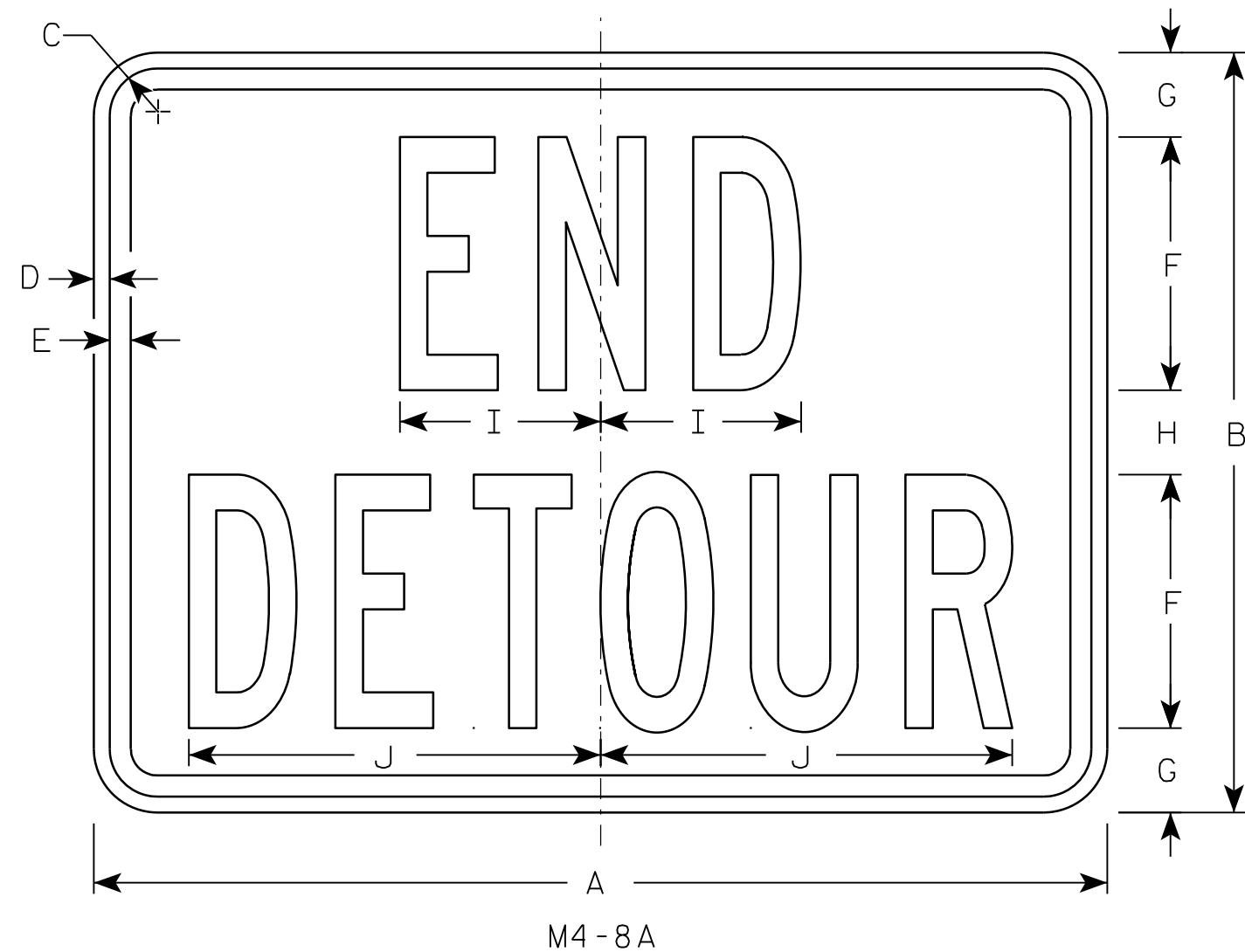
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

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



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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

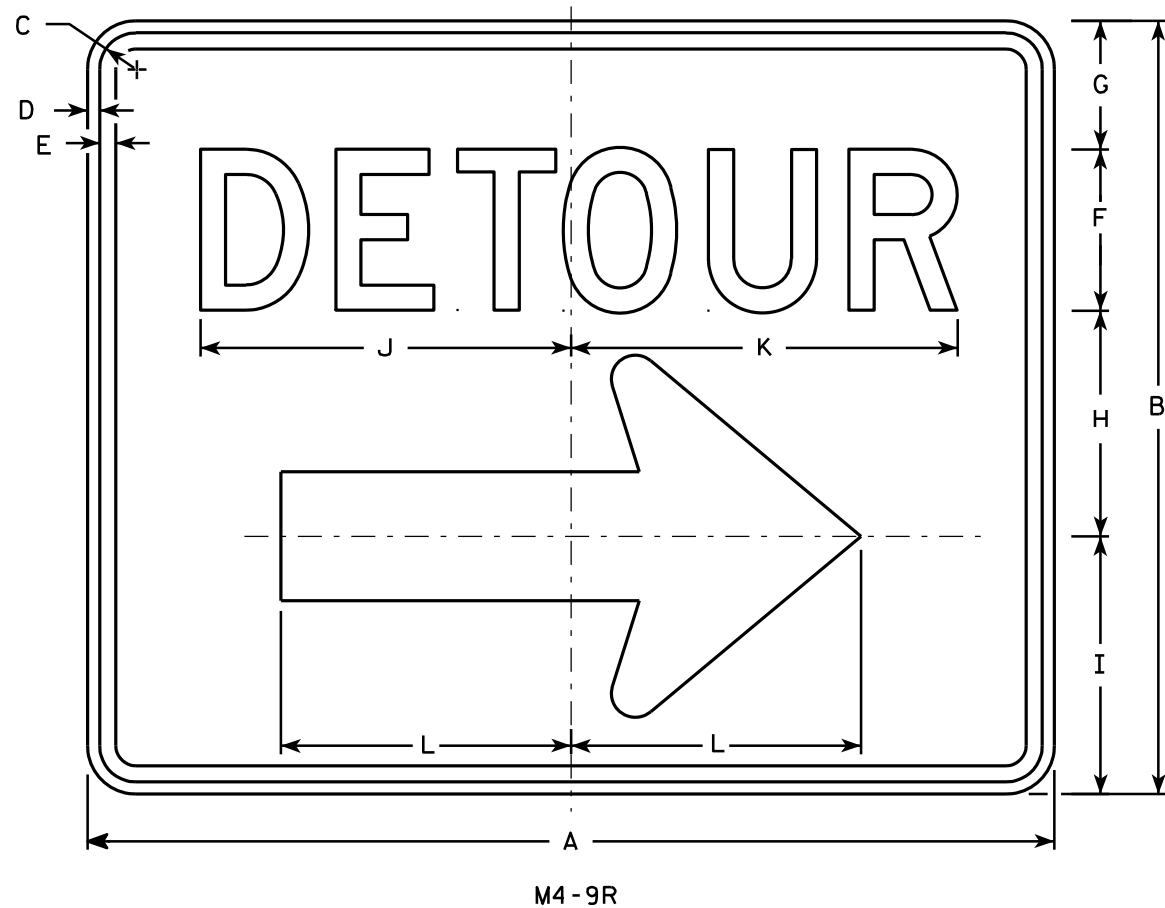
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---

STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

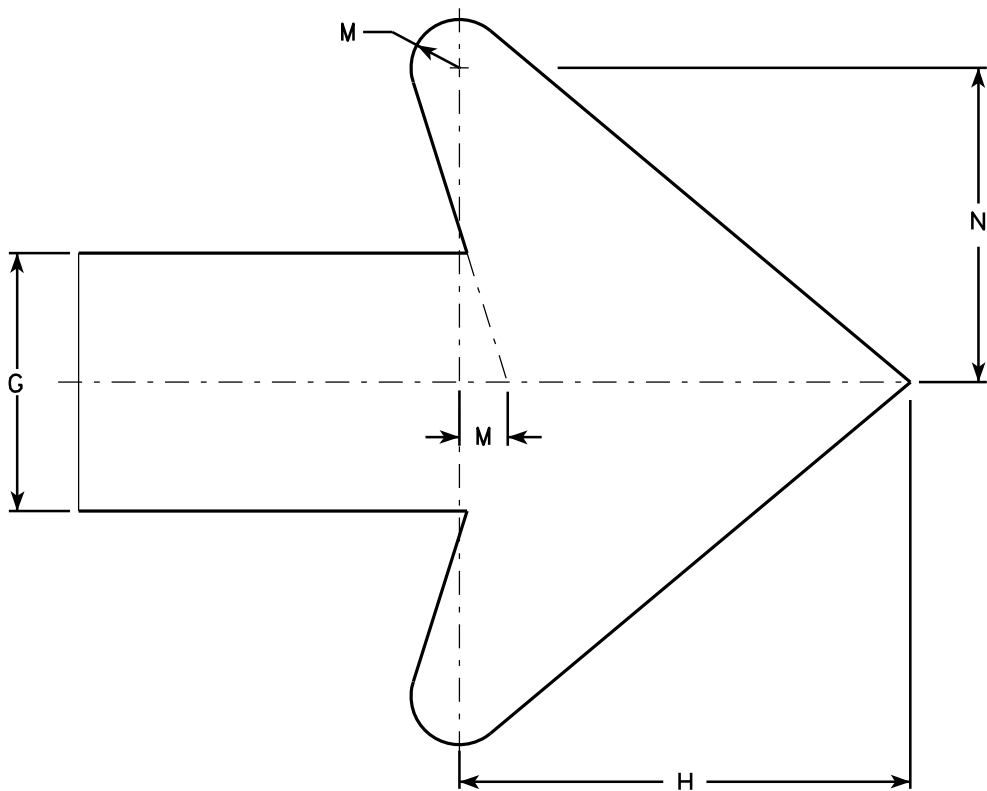
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



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 - 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. M4-9L is the same as M4-9R except the arrow is reversed.



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																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

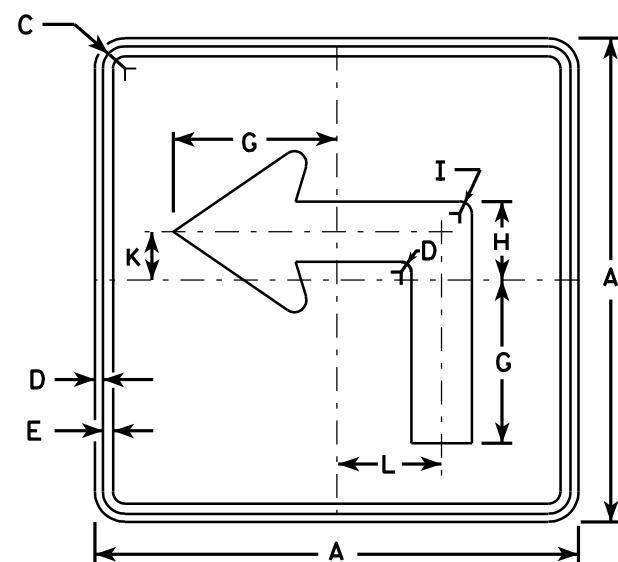
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

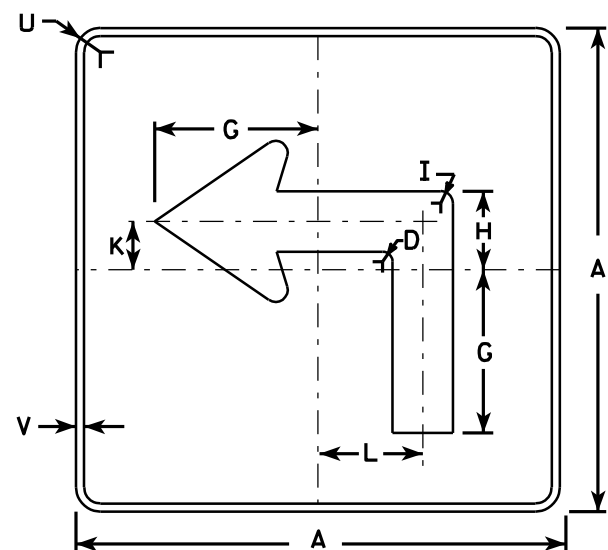
APPROVED *Matthew R. Rauch*

For State Traffic Engineer

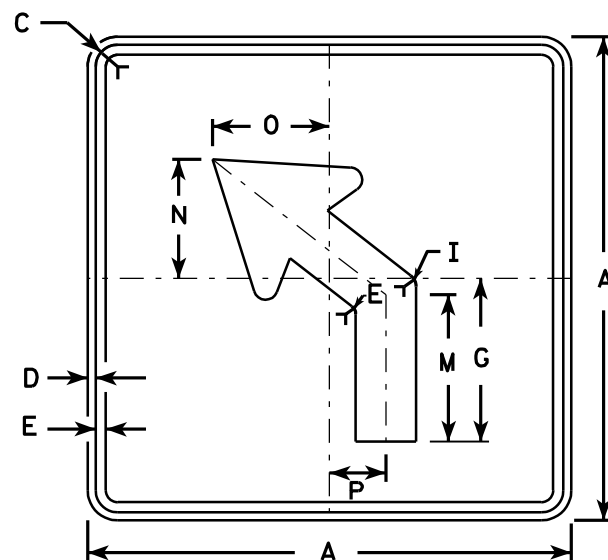
DATE 3/9/11 PLATE NO. M4-9R.4



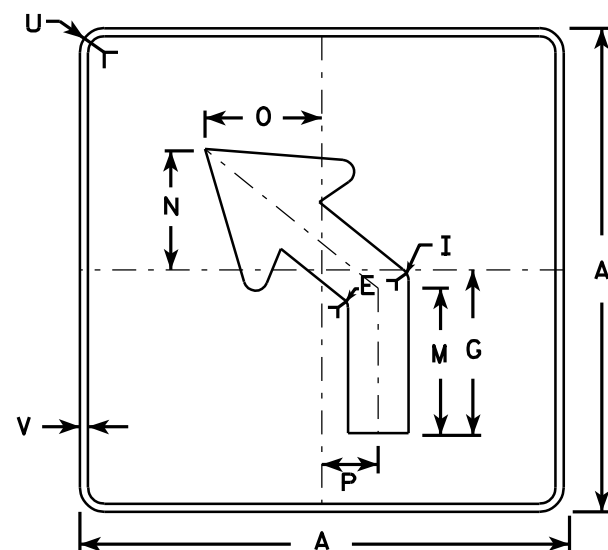
M5-1L
MK5-1L
MM5-1L
M05-1L
MP5-1L
MR5-1L



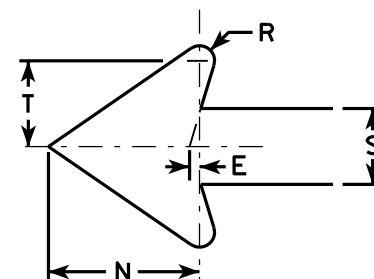
MB5-1L
MG5-1L
MN5-1L



M5-2L
MK5-2L
MM5-2L
M05-2L
MP5-2L
MR5-2L



MB5-2L
MG5-2L
MN5-2L

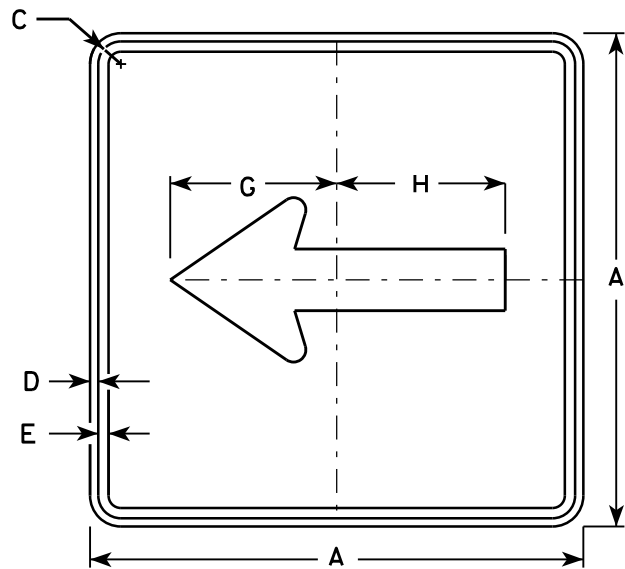


NOTES

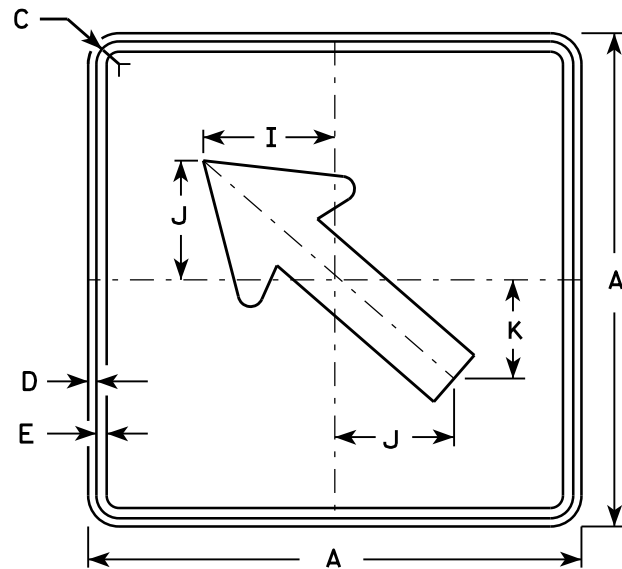
- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White - Type H Reflective
Message - Black
MB5-1 and MB5-2 Background - Blue
Message - White - Type H Reflective
MG5-1 and MG5-2 Background - Green
Message - White - Type H Reflective
MK5-1 and MK5-2 Background - Green
Message - White Type H Reflective
MM5-1 and MM5-2 Background - White - Type H Reflective
Message - Green
MN5-1 and MN5-2 Background - Brown
Message - White - Type H Reflective
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 - Type H Reflective
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

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

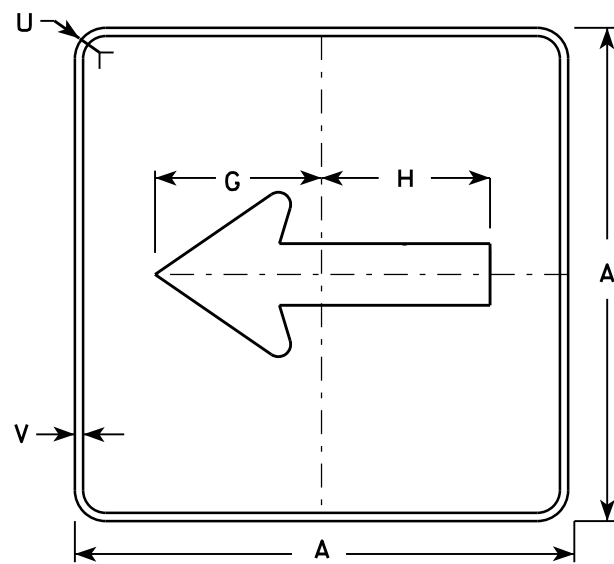
STANDARD SIGN	
M5-1 & M5-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/29/13	PLATE NO. M5-1.12



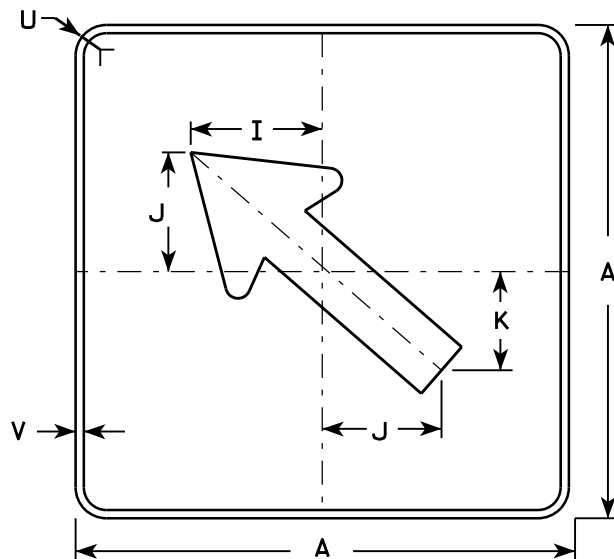
M6 - 1
MK6 - 1
MM6 - 1
MN6 - 1
M06 - 1
MP6 - 1
MR6 - 1



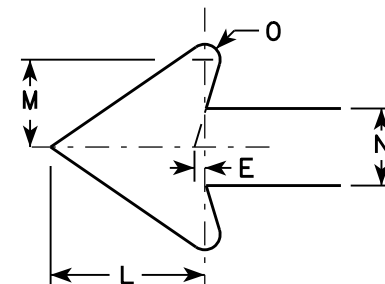
M6 - 2
MK6 - 2
MM6 - 2
MN6 - 2
M06 - 2
MP6 - 2
MR6 - 2



MB6 - 1



MB6 - 2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MG6-1 and MG6-2 Background - Green
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

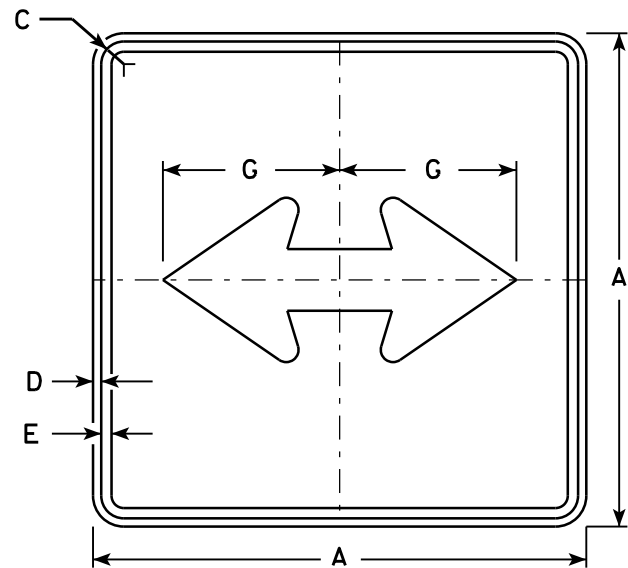
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10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

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

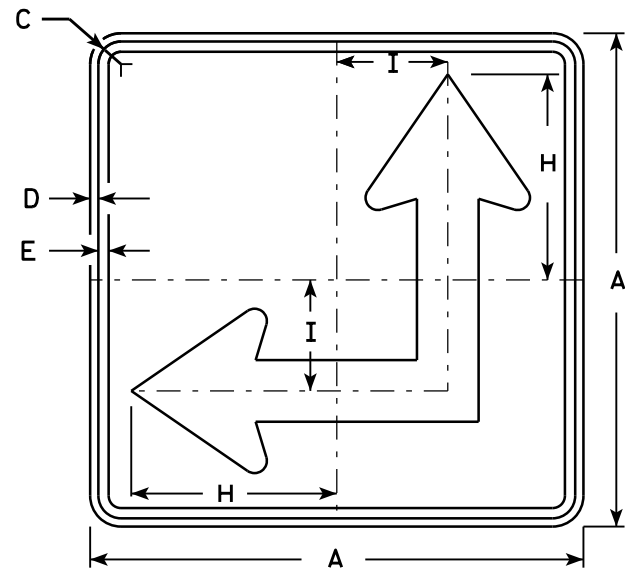
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

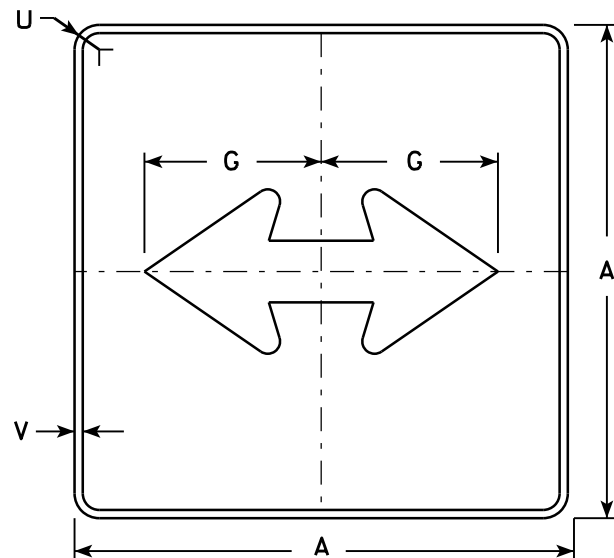
DATE 7/03/14 PLATE NO. M6-1.14



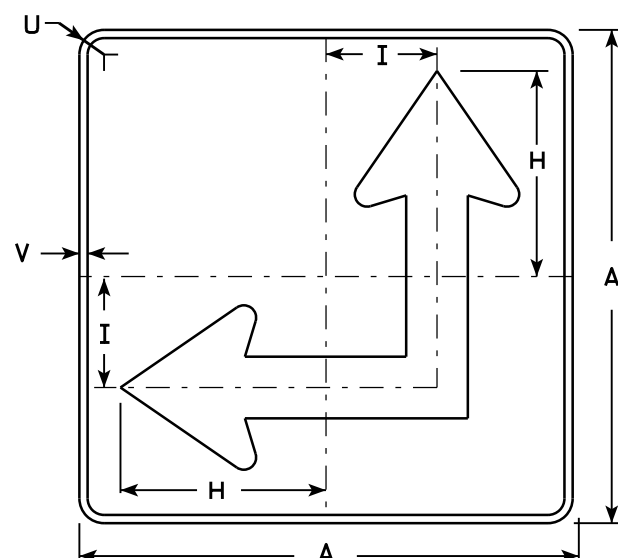
M6 - 4
MK6 - 4
MM6 - 4
MN6 - 4
M06 - 4
MP6 - 4
MR6 - 4



M6 - 6
MK6 - 6
MM6 - 6
MN6 - 6
M06 - 6
MP6 - 6
MR6 - 6



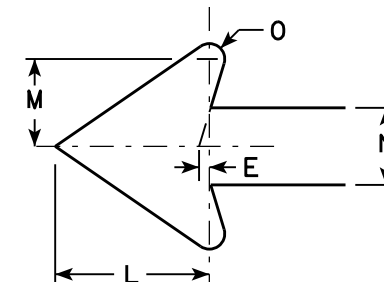
MB6 - 4



MB6 - 6

NOTES

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



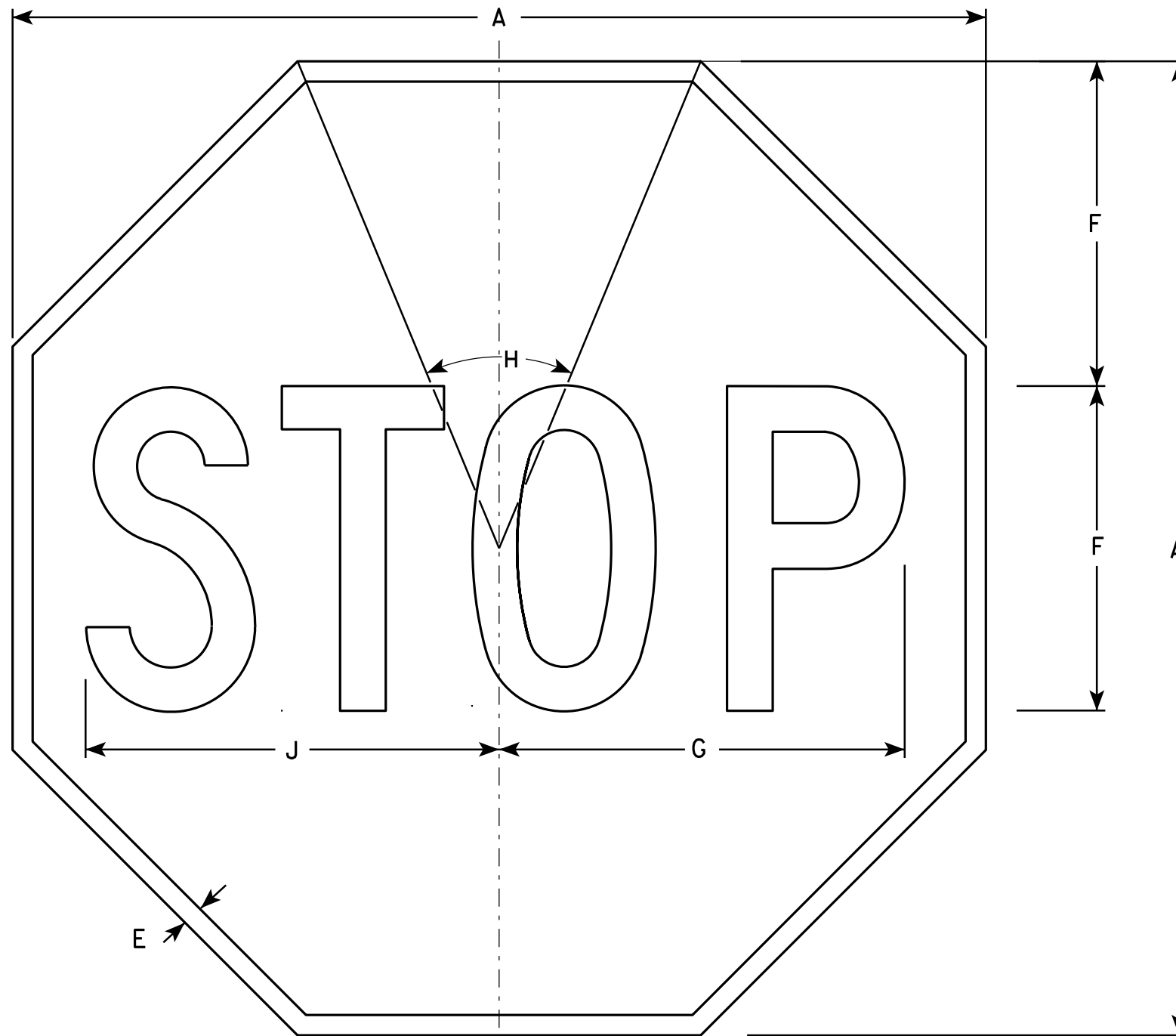
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/03/14 PLATE NO. M6-4.9



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

R1-1

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	24				$\frac{3}{8}$	8	10	45°		10 $\frac{1}{4}$																	3.31
2S	30				$\frac{5}{8}$	10	12 $\frac{1}{2}$	45°		12 $\frac{3}{4}$																	5.18
2M	36				$\frac{3}{4}$	12	15	45°		15 $\frac{3}{8}$																	7.46
3	36				$\frac{3}{4}$	12	15	45°		15 $\frac{3}{8}$																	7.46
4	48				1	16	20	45°		20 $\frac{1}{2}$																	13.25
5	48				1	16	20	45°		20 $\frac{1}{2}$																	13.25
6	18				$\frac{3}{8}$	6	7 $\frac{3}{4}$	45°		7 $\frac{3}{4}$																	1.86
7	12				$\frac{1}{4}$	4	5	45°		5 $\frac{1}{8}$																	0.78

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

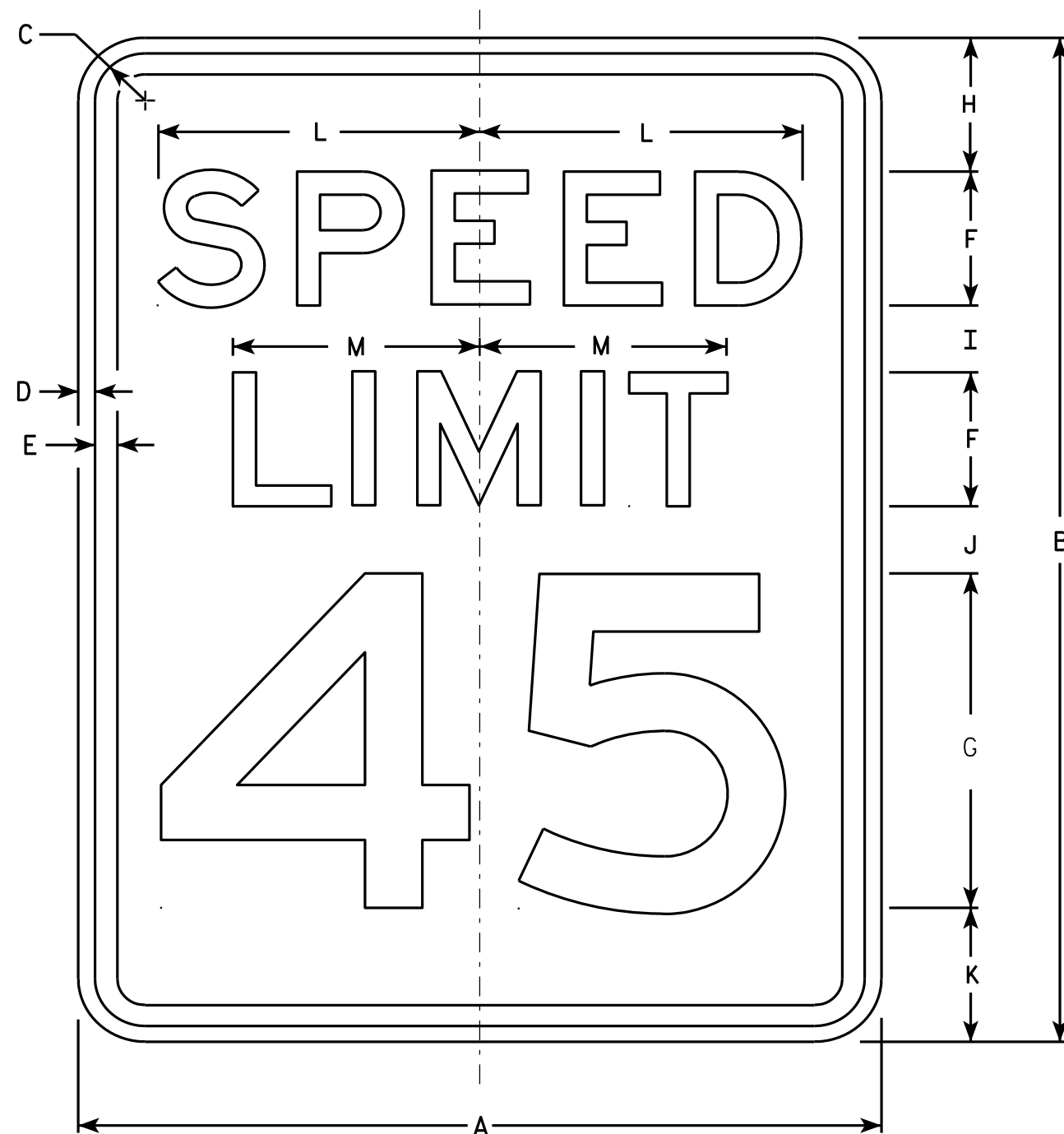
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

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



R2-6P

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.

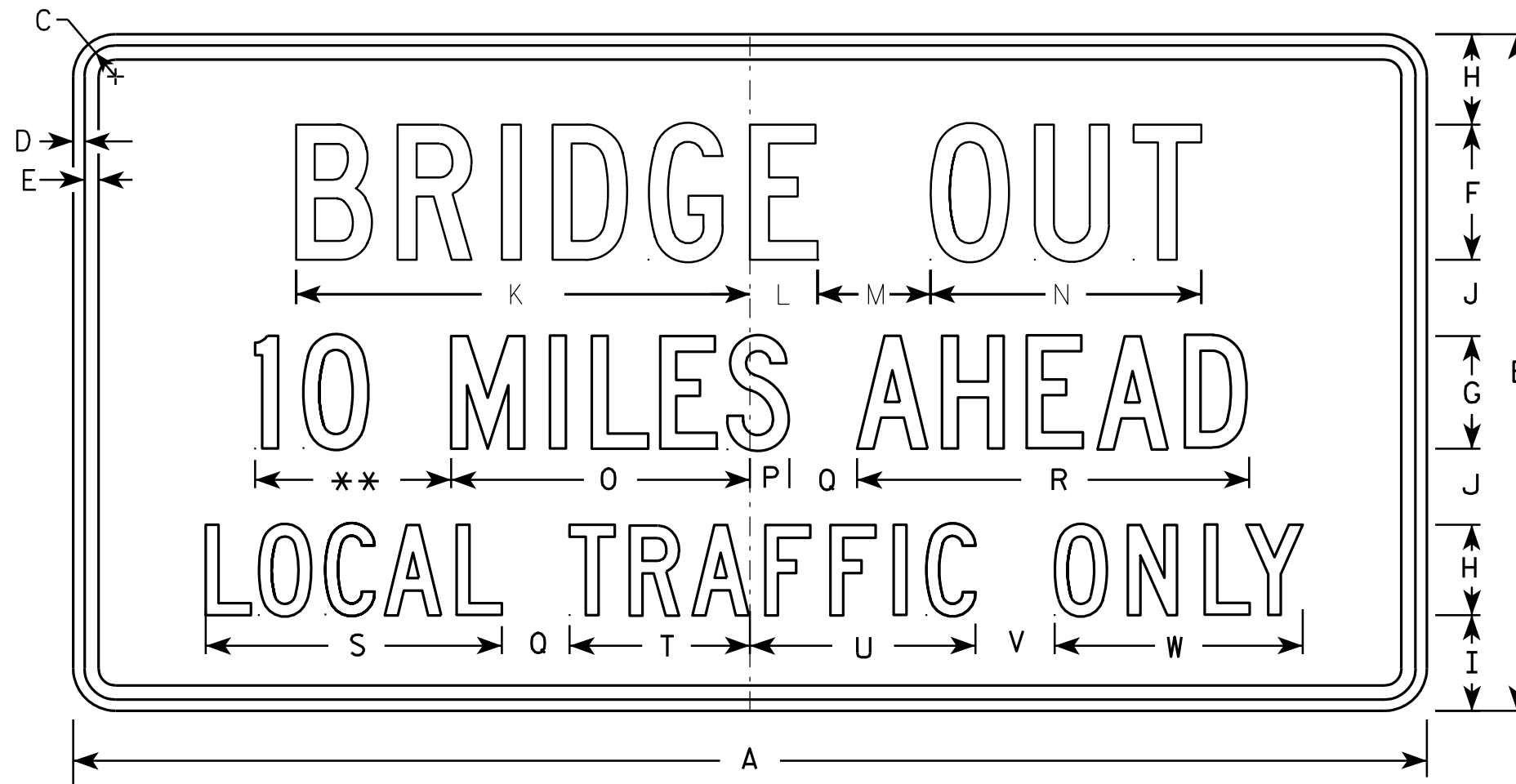
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
2M	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
3	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
4	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
5	48	36	1 3/8	1/2	5/8	8	7	6	15 1/8	19																	12.0

STANDARD SIGN
R2-6P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/20/10 PLATE NO. R2-6P.2



R11-3B

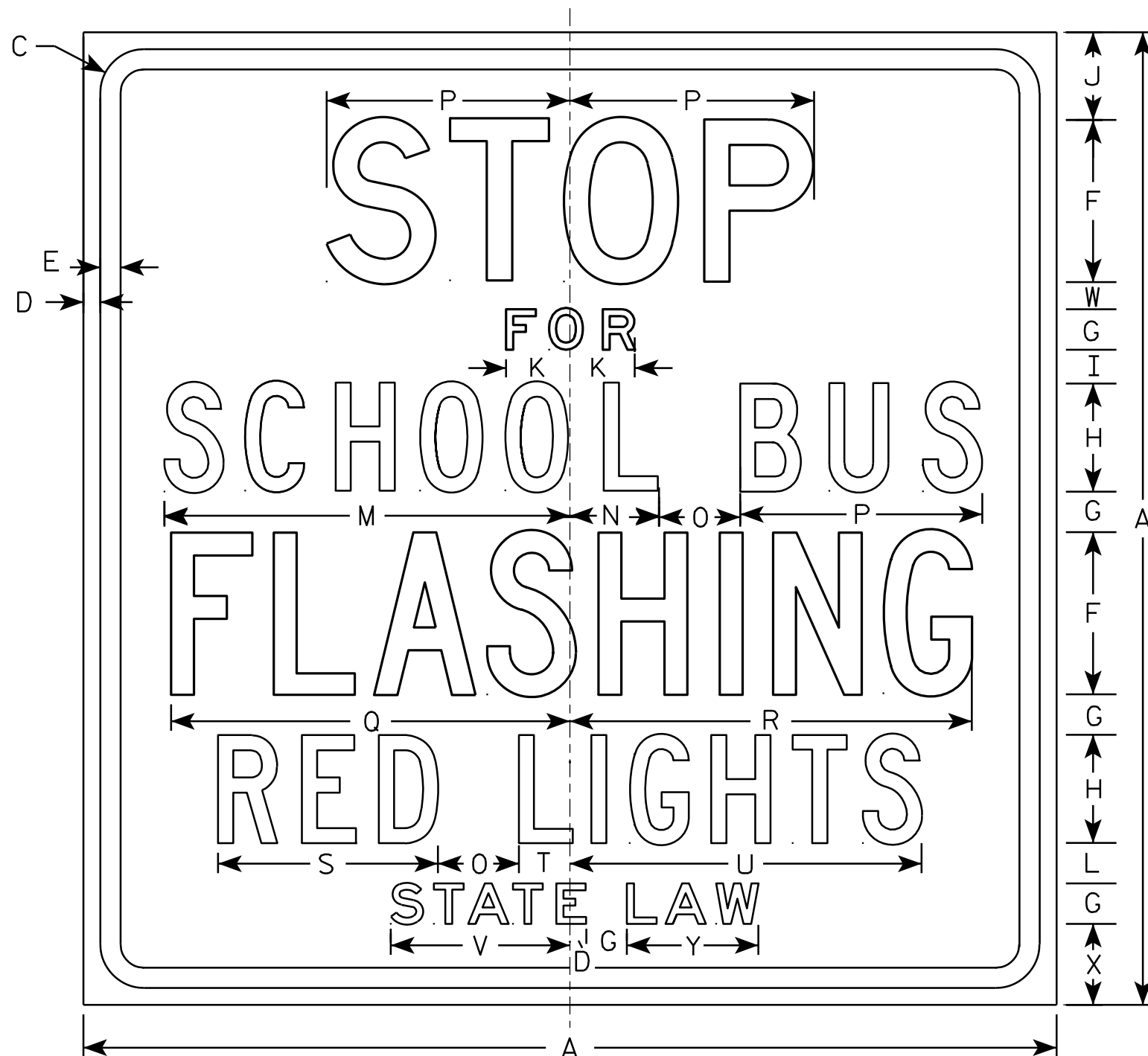
NOTES

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 - 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. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

** See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3⁄8	1⁄2	5⁄8	4	3	2 1⁄2	2	2	13 1⁄4	2 1⁄4	3	8	8	1 1⁄2	2	10 3⁄4	8 3⁄8	4 3⁄4	6 1⁄2	2	6 3⁄4				4.5
2S	60	30	1 3⁄8	1⁄2	5⁄8	6	5	4	4 1⁄4	3 3⁄8	20 1⁄8	3	5	12	13 1⁄4	1 3⁄4	3	17 3⁄8	13 1⁄8	8	10	3 1⁄2	11				12.5
2M	60	30	1 3⁄8	1⁄2	5⁄8	6	5	4	4 1⁄4	3 3⁄8	20 1⁄8	3	5	12	13 1⁄4	1 3⁄4	3	17 3⁄8	13 1⁄8	8	10	3 1⁄2	11				12.5
3																											
4																											
5																											

STANDARD SIGN R11-3B	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/1/11	PLATE NO. R11-3B.2



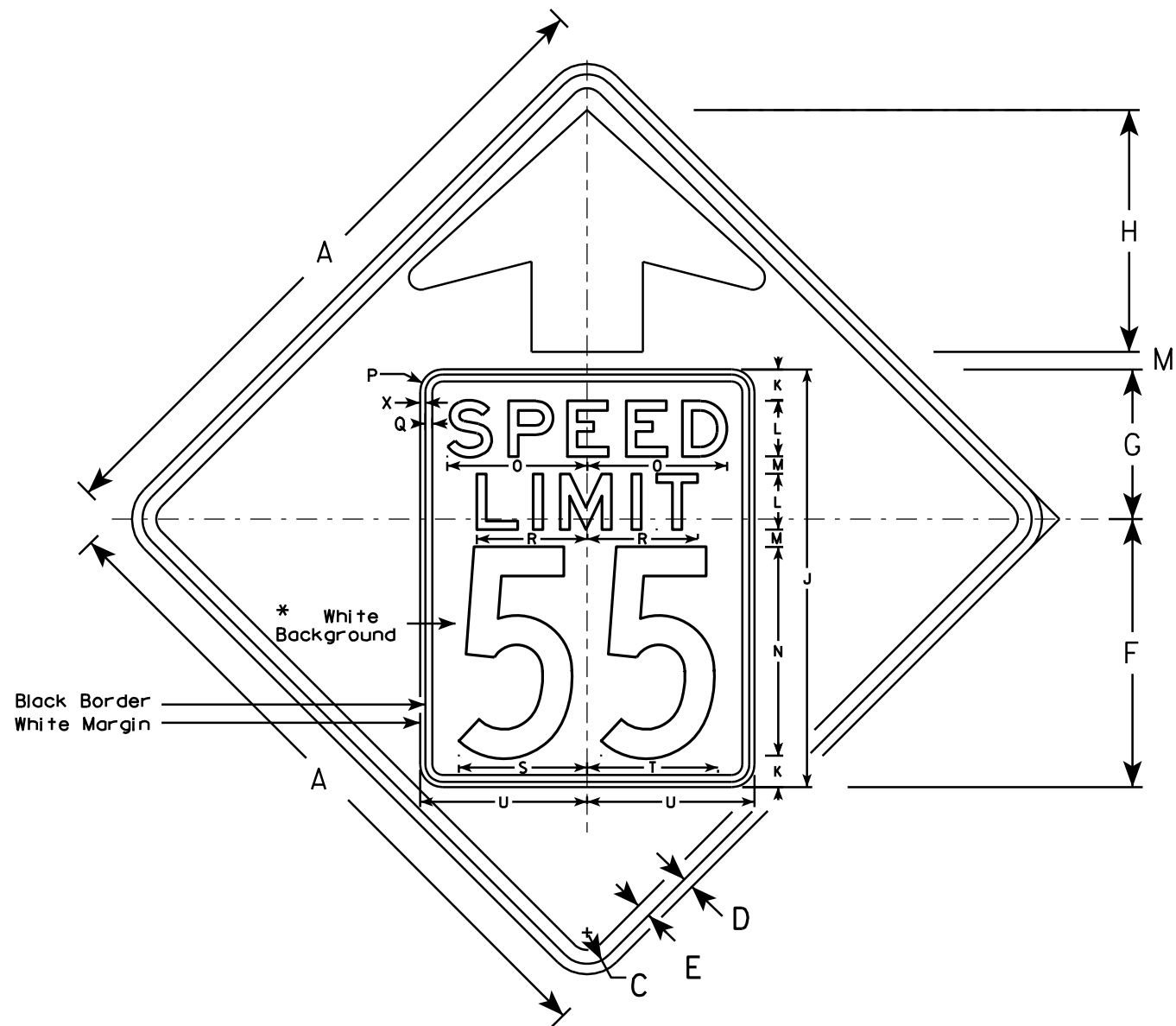
R59-51

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D
Lines 2 & 6 are Series E
Line 3, 4 & 5 are 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																											
2S	36		1 5⁄8	5⁄8	3⁄4	6	1 1⁄2	4	1 1⁄4	3 1⁄4	2 3⁄8	1 1⁄2	15	3 1⁄4	3	9	14 3⁄4	14 7⁄8	8 1⁄8	1 7⁄8	13	6 5⁄8	1	3	4 7⁄8		9.0
2M	36		1 5⁄8	5⁄8	3⁄4	6	1 1⁄2	4	1 1⁄4	3 1⁄4	2 3⁄8	1 1⁄2	15	3 1⁄4	3	9	14 3⁄4	14 7⁄8	8 1⁄8	1 7⁄8	13	6 5⁄8	1	3	4 7⁄8		9.0
3	48		2 1⁄4	3⁄4	1	8	2	6	1 1⁄4	4 3⁄4	3 1⁄4	1 1⁄2	20 1⁄4	5	3 5⁄8	12	19 1⁄2	20	11 5⁄8	3 3⁄4	19	9 1⁄2	1	3 1⁄2	6 3⁄4		16.0
4	48		2 1⁄4	3⁄4	1	8	2	6	1 1⁄4	4 3⁄4	3 1⁄4	1 1⁄2	20 1⁄4	5	3 5⁄8	12	19 1⁄2	20	11 5⁄8	3 3⁄4	19	9 1⁄2	1	3 1⁄2	6 3⁄4		16.0
5																											

STANDARD SIGN R59-51	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/30/11	PLATE NO. R59-51.10

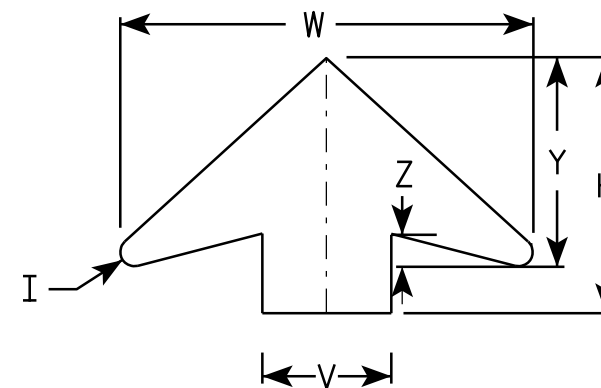


W3-5

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 for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



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	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN

W3-5

WISCONSIN DEPT OF TRANSPORTATION

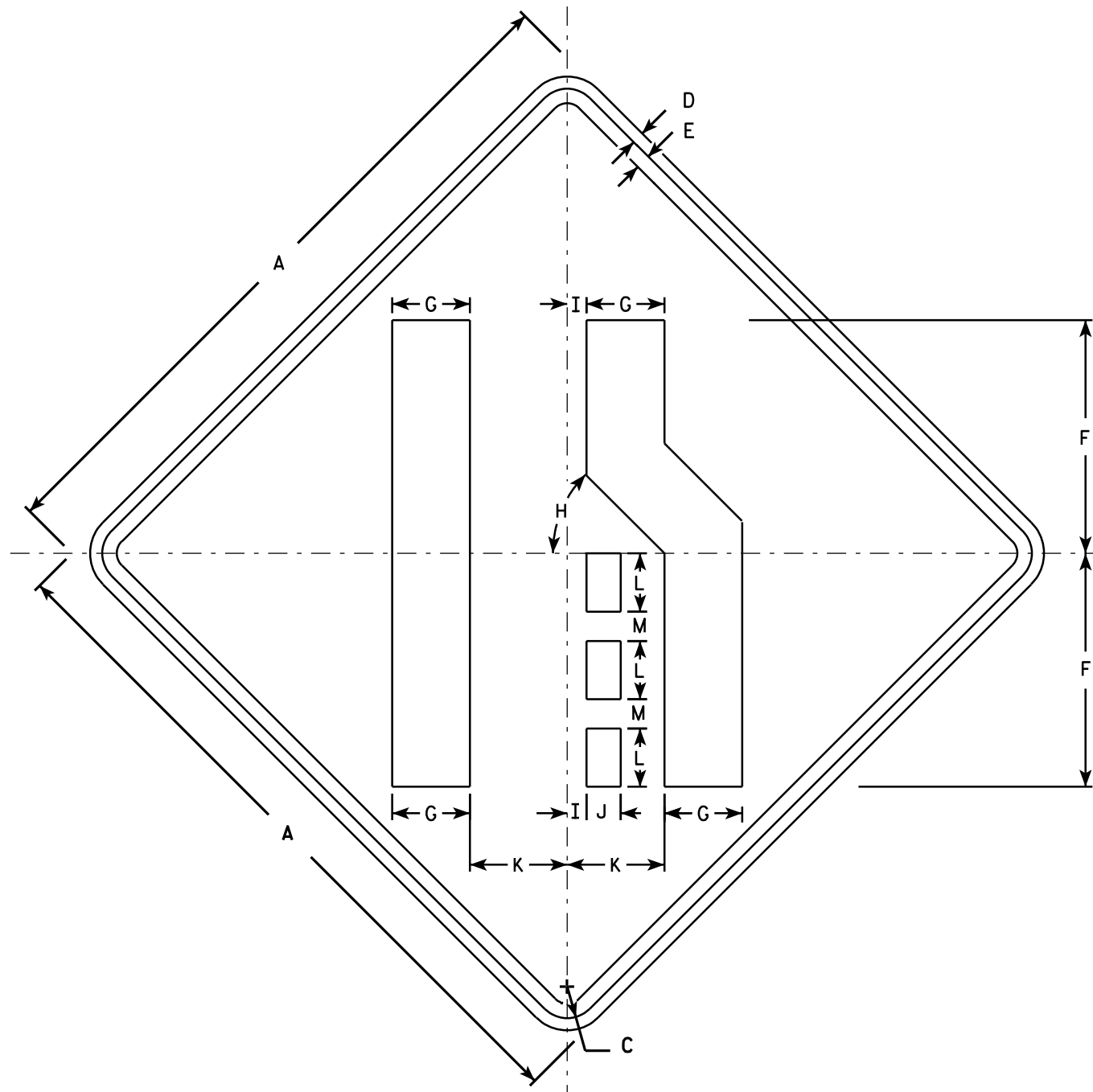
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO:

E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - 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. W4-2L is the same as W4-2R except the symbols 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	30		1 3⁄8	1⁄2	5⁄8	10	3 3⁄8	45°	7⁄8	1 1⁄2	4 1⁄4	2 1⁄2	1 1⁄4														6.25
2S	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
2M	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
3	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
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 W4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

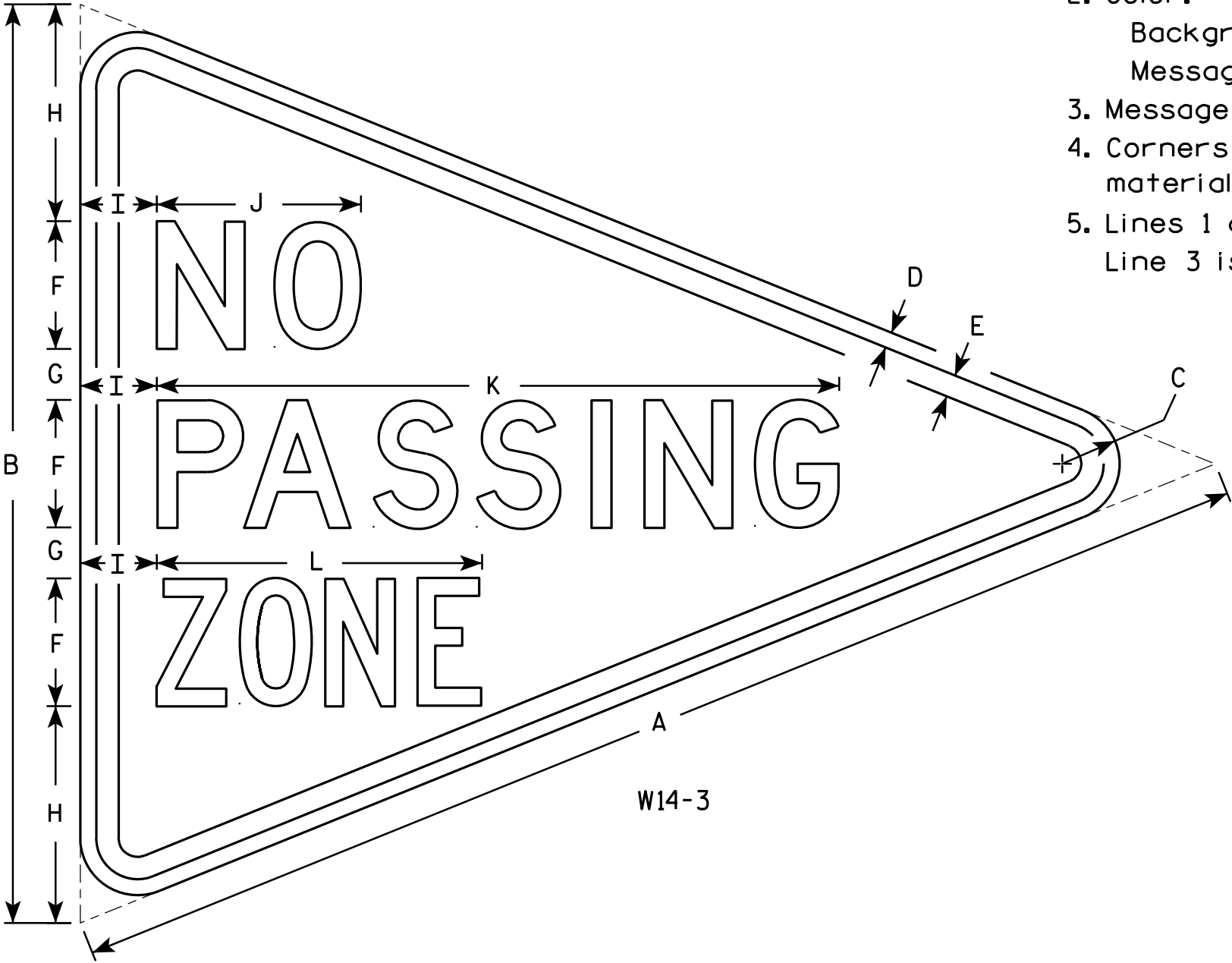
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

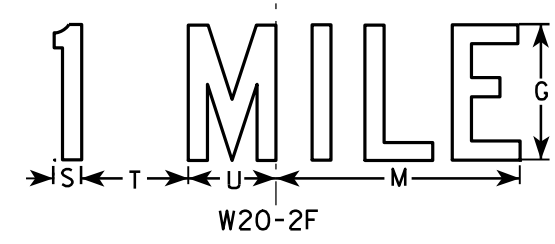
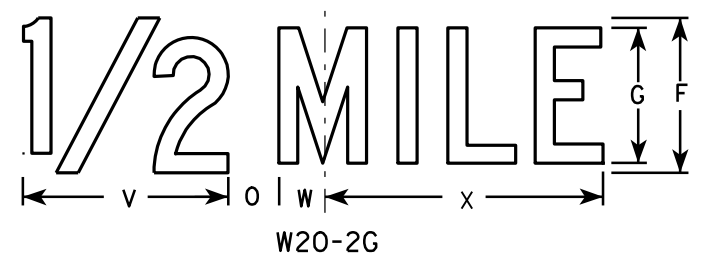
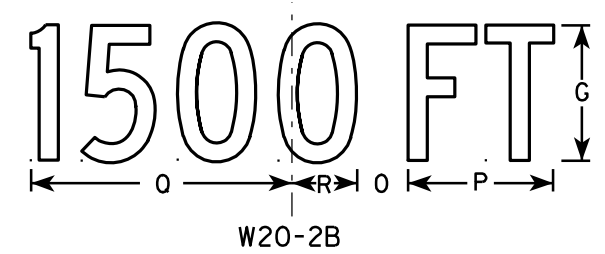
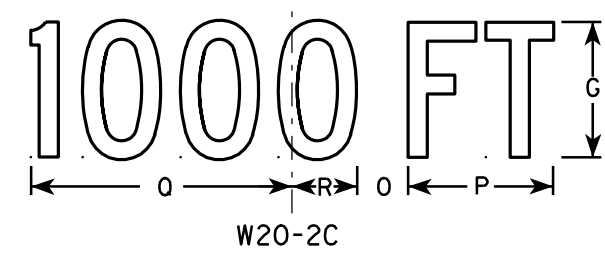
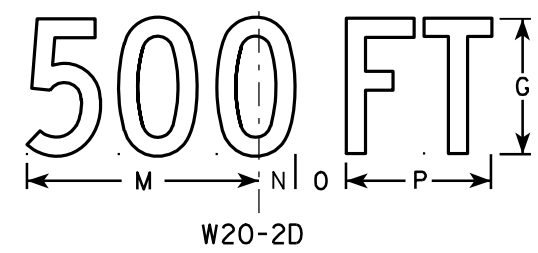
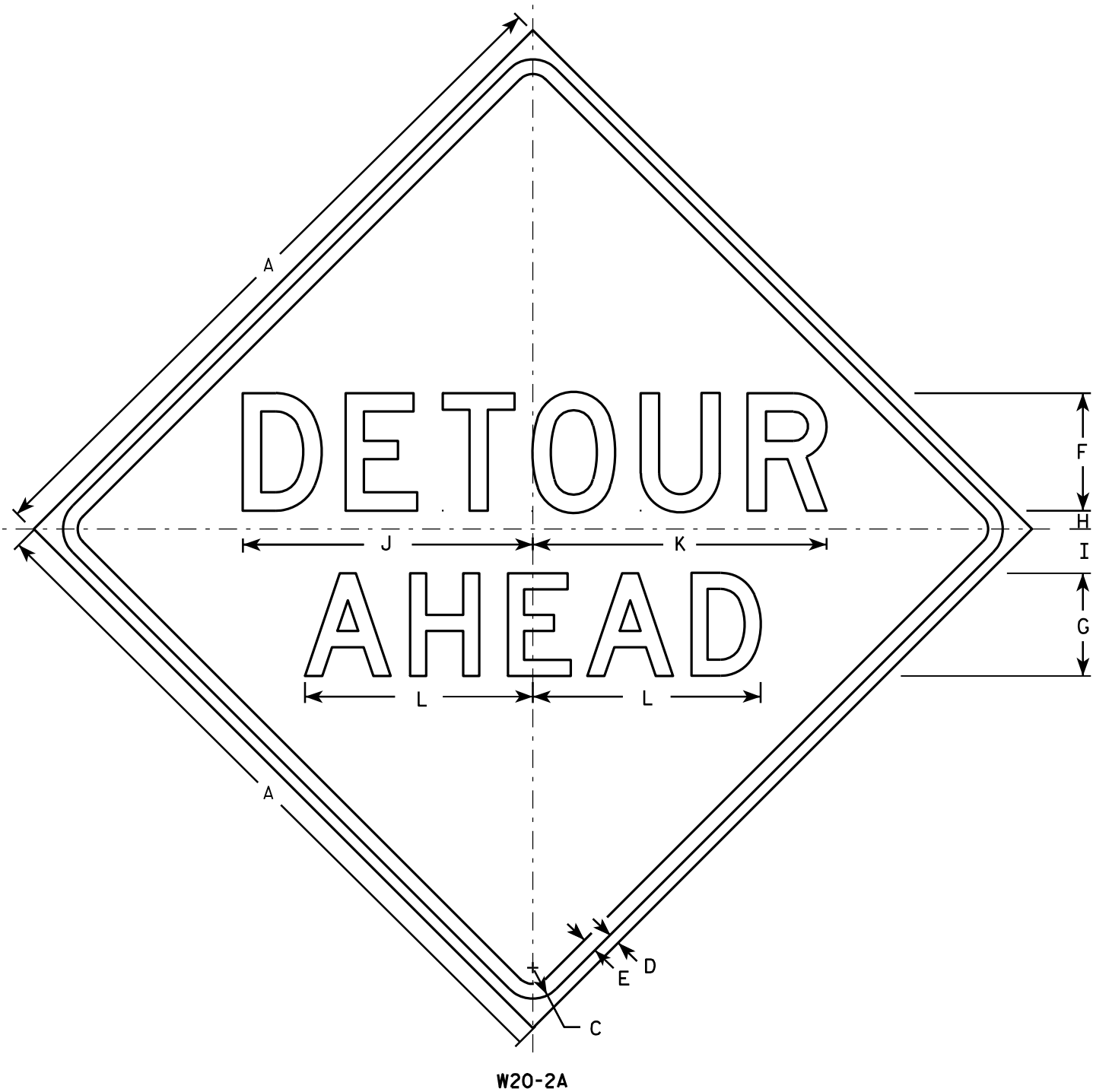
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

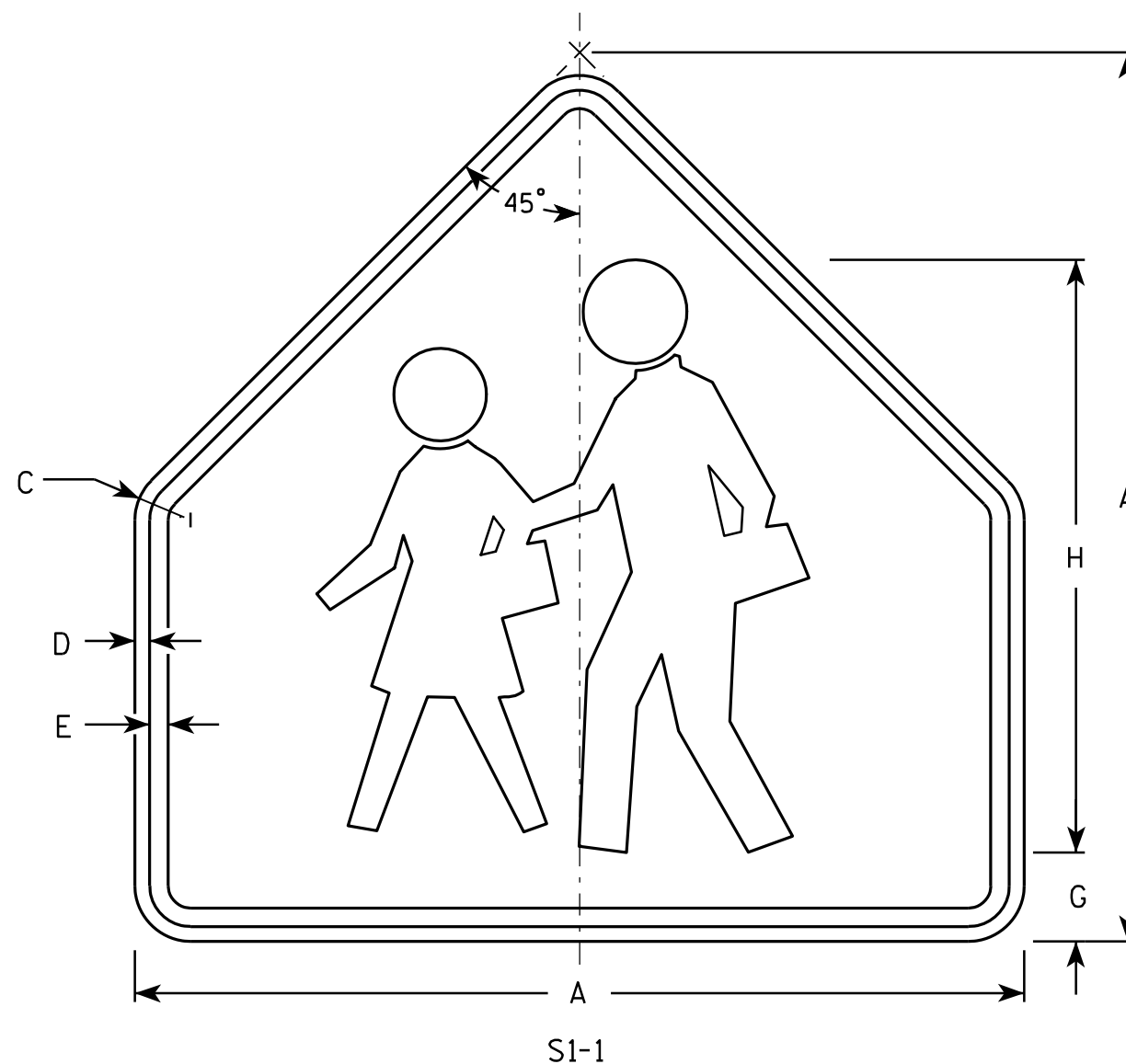
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow-Green
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.

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		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

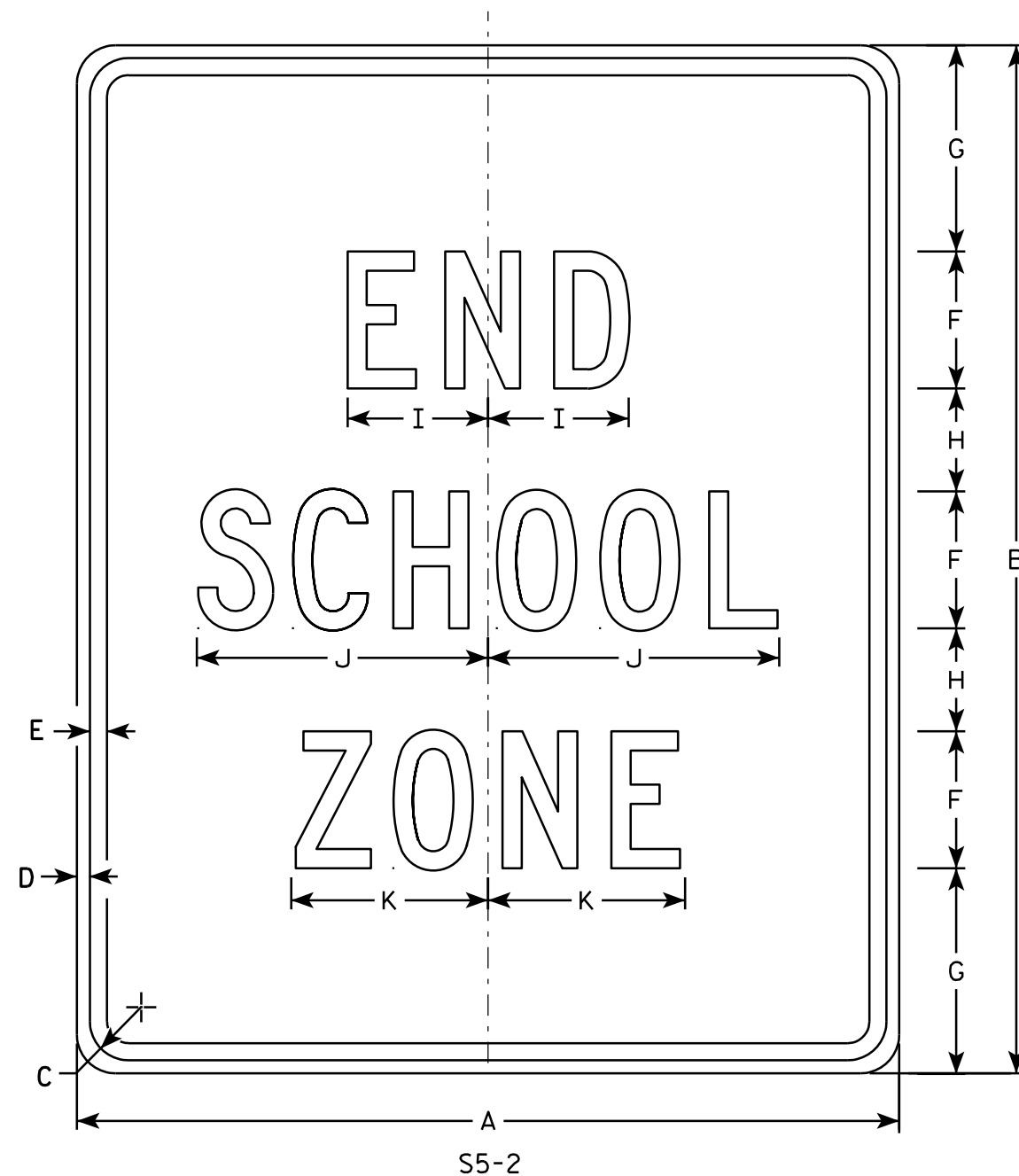
STANDARD SIGN S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer
DATE 6/30/05 PLATE NO. S1-1.8

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

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 - White
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.

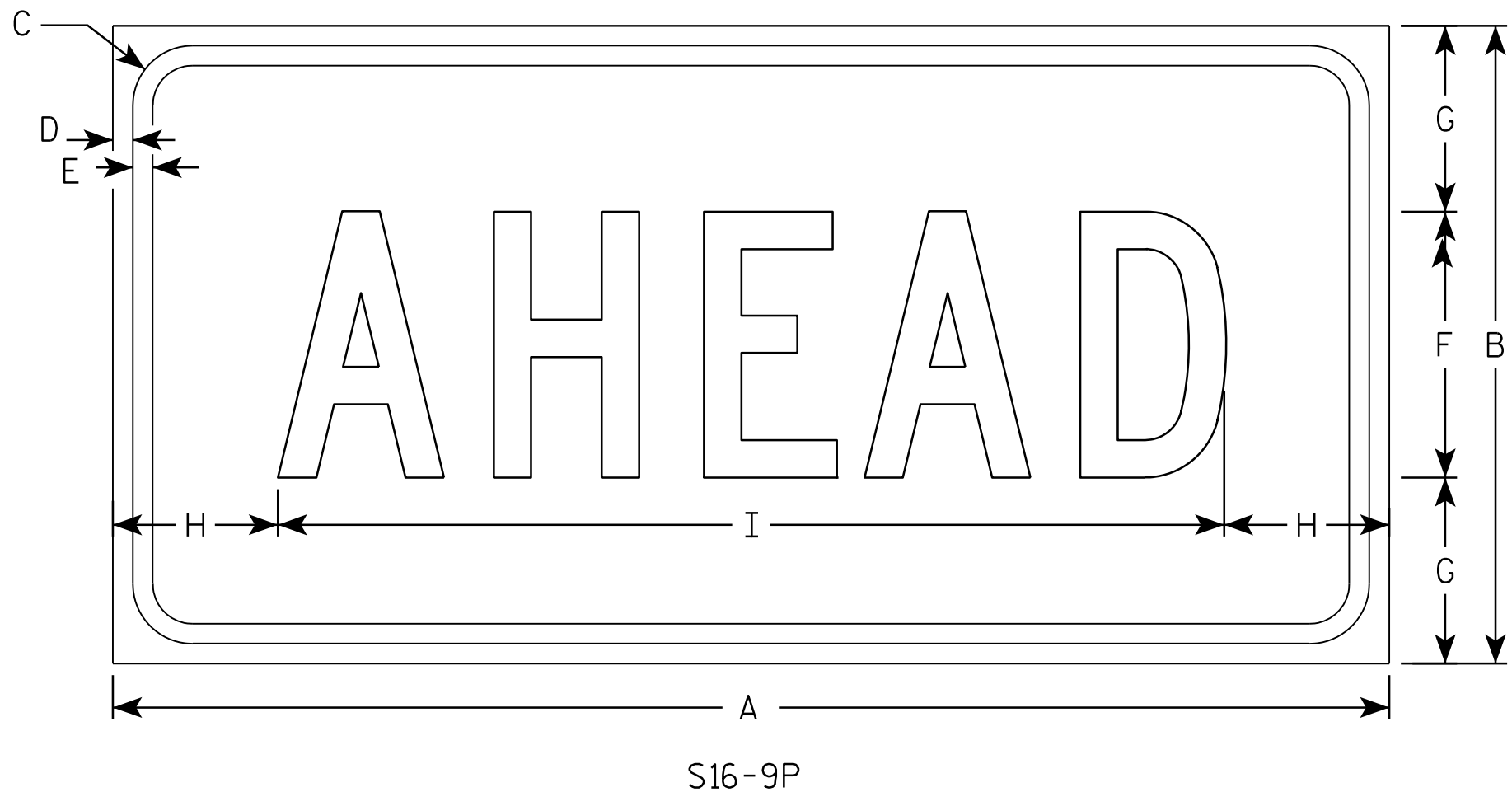
7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	30	1 1⁄8	3⁄8	1⁄2	4	6	3	4 1⁄8	8 1⁄2	5 3⁄4																5.0
3	36	42	1 5⁄8	5⁄8	3⁄4	6	7	5	6 1⁄8	12 5⁄8	8 5⁄8																10.5
4																											
5																											

STANDARD SIGN S5-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/8/11	PLATE NO. S5-2.2

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---

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-Green
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	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
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																											

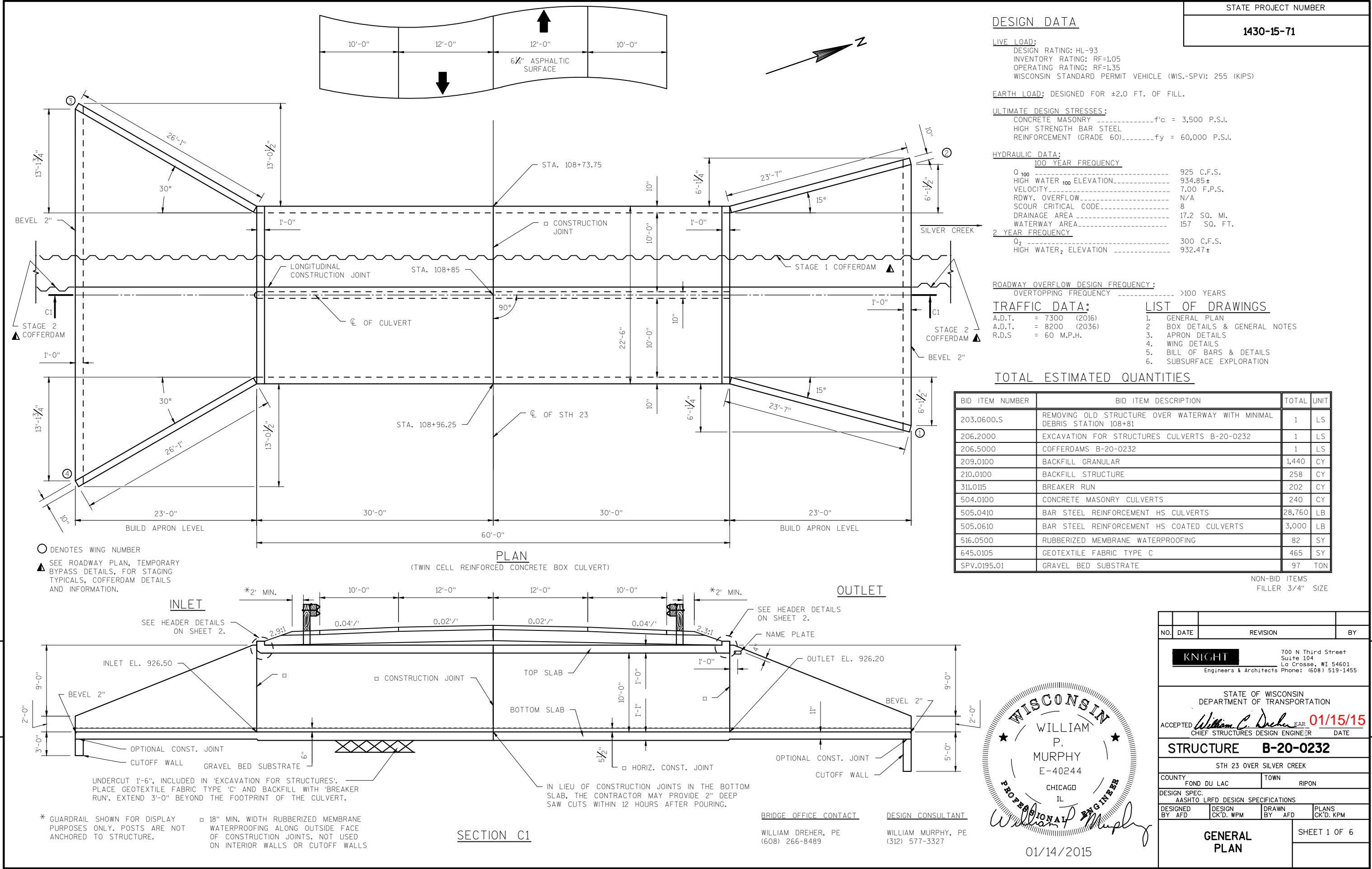
STANDARD SIGN

S16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-9P.1



STATE PROJECT NUMBER

1430-15-71

DESIGN DATA

LIVE LOAD:
DESIGN RATING: HL-93
INVENTORY RATING: RF=1.05
OPERATING RATING: RF=1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255 (KIPS)

EARTH LOAD: DESIGNED FOR ±2.0 FT. OF FILL.

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY -----f'c = 3,500 P.S.I.
HIGH STRENGTH BAR STEEL
REINFORCEMENT (GRADE 60)-----fy = 60,000 P.S.I.

HYDRAULIC DATA:
100 YEAR FREQUENCY
Q₁₀₀ ----- 925 C.F.S.
HIGH WATER₁₀₀ ELEVATION ----- 934.85±
VELOCITY ----- 7.00 F.P.S.
RDWY. OVERFLOW ----- N/A
SCOUR CRITICAL CODE ----- 8
DRAINAGE AREA ----- 17.2 SQ. MI.
WATERWAY AREA ----- 157 SQ. FT.
2 YEAR FREQUENCY
Q₂ ----- 300 C.F.S.
HIGH WATER₂ ELEVATION ----- 932.47±

ROADWAY OVERFLOW DESIGN FREQUENCY:
OVERTOPPING FREQUENCY ----- >100 YEARS

TRAFFIC DATA:
A.D.T. = 7300 (2016)
A.D.T. = 8200 (2036)
R.D.S. = 60 M.P.H.

LIST OF DRAWINGS
1. GENERAL PLAN
2. BOX DETAILS & GENERAL NOTES
3. APRON DETAILS
4. WING DETAILS
5. BILL OF BARS & DETAILS
6. SUBSURFACE EXPLORATION

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM DESCRIPTION	TOTAL	UNIT
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 108+81	1	LS
206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-20-0232	1	LS
206.5000	COFFERDAMS B-20-0232	1	LS
209.0100	BACKFILL GRANULAR	1,440	CY
210.0100	BACKFILL STRUCTURE	258	CY
311.0115	BREAKER RUN	202	CY
504.0100	CONCRETE MASONRY CULVERTS	240	CY
505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	28,760	LB
505.0610	BAR STEEL REINFORCEMENT HS COATED CULVERTS	3,000	LB
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	82	SY
645.0105	GEOTEXTILE FABRIC TYPE C	465	SY
SPV.0195.01	GRAVEL BED SUBSTRATE	97	TON

NON-BID ITEMS
FILLER 3/4" SIZE

NO.

DATE

REVISION

BY

KNIGHT

700 N Third Street
Suite 104
La Crosse, WI 54601
Engineers & Architects Phone: (608) 519-1455

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED *William C. Dreher* **01/15/15**
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-20-0232

STH 23 OVER SILVER CREEK

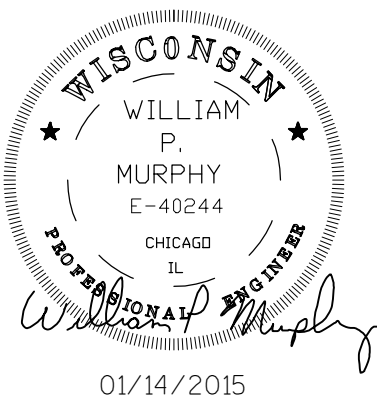
COUNTY FOND DU LAC TOWN RIPON

DESIGN SPEC. AASHTO LRFD DESIGN SPECIFICATIONS

DESIGNED BY AFD DESIGN CK'D. WPM DRAWN BY AFD PLANS CK'D. KPM

GENERAL PLAN

SHEET 1 OF 6



BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

DESIGN CONSULTANT
WILLIAM MURPHY, PE
(312) 577-3327

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

BACKFILL STRUCTURE IS REQUIRED BEHIND ALL WING WALLS.

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M 153, TYPE I, II OR III OR AASHTO DESIGNATION M 213.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" SHALL BE THE EXISTING GROUND LINE.

THE ALTERNATE CUTOFF WALL MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONCRETE CUTOFF WALLS. PAYMENT SHALL BE BASED ON THE CONCRETE CUTOFF WALLS.

THE CONCRETE IN THE CUTOFF WALL MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

LOCATE NAME PLATE ON NEAREST RIGHT WING TRAVELING UP STATION, FACE NAME PLATE UP STATION.

THE EXISTING STRUCTURE TO BE REMOVED, C-20-0030, IS A SINGLE SPAN CONCRETE FLAT SLAB BRIDGE ON FULL RETAINING ABUTMENTS, 22.0 FT. LONG WITH A 34.0 FT. CLEAR ROADWAY WIDTH.

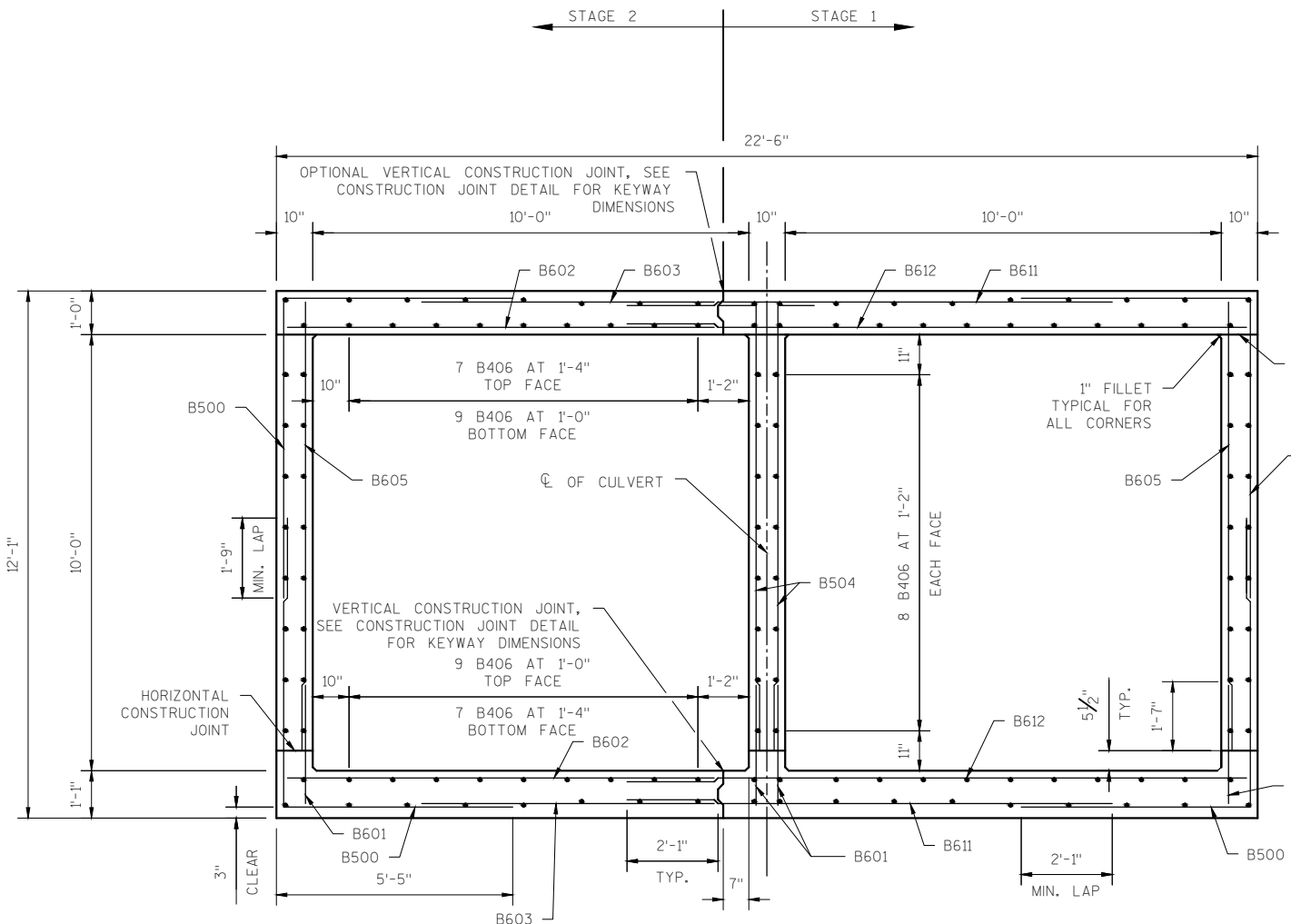
BACKFILL USING BACKFILL STRUCTURE PER THE STANDARD SPECIFICATION LIMITS. ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE AND FALL OUTSIDE THE BACKFILL STRUCTURE LIMITS, SHALL BE BACKFILLED WITH BACKFILL GRANULAR GRADE 2 TO THE BOTTOM OF SUBBASE WITHIN THE LENGTH OF THE BOX. THE PAY LIMITS OF THE BACKFILL STRUCTURE AND BACKFILL GRANULAR GRADE 2 ARE AS SHOWN.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS IN CHAPTER 36 STANDARDS OF THE CURRENT WISCONSIN DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

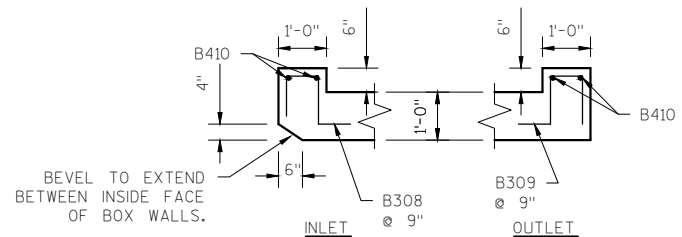
*GEOTEXTILE FABRIC TYPE C IS TO BE PLACED UNDER THE LIMITS OF BREAKER RUN, UP THE SIDES, AND OUTWARDS AWAY FROM THE BREAKER RUN FOR AN ADDITIONAL 1 FOOT.

STATE PROJECT NUMBER

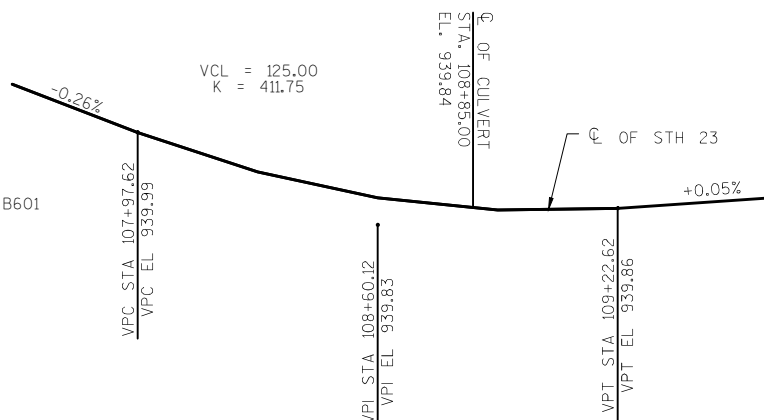
1430-15-71



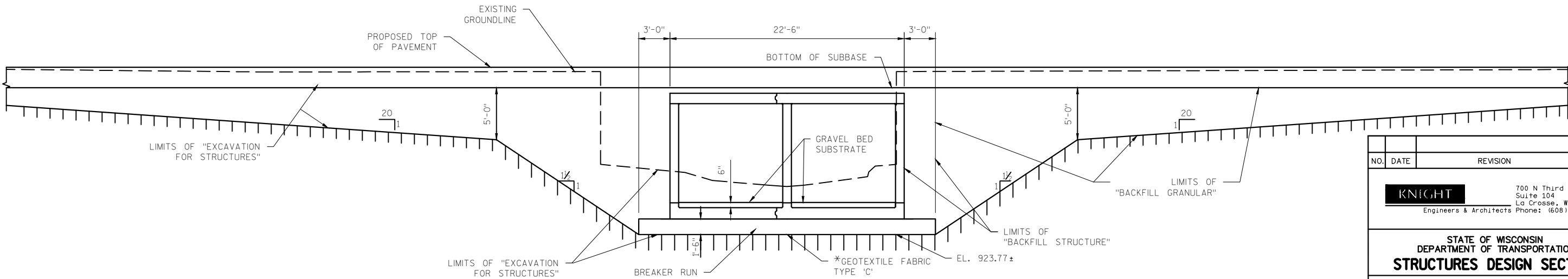
TYPICAL SECTION THRU CULVERT
(LOOKING NORTH)
(ALL LONGITUDINAL BARS NOT IDENTIFIED ARE B406)



HEADER DETAILS

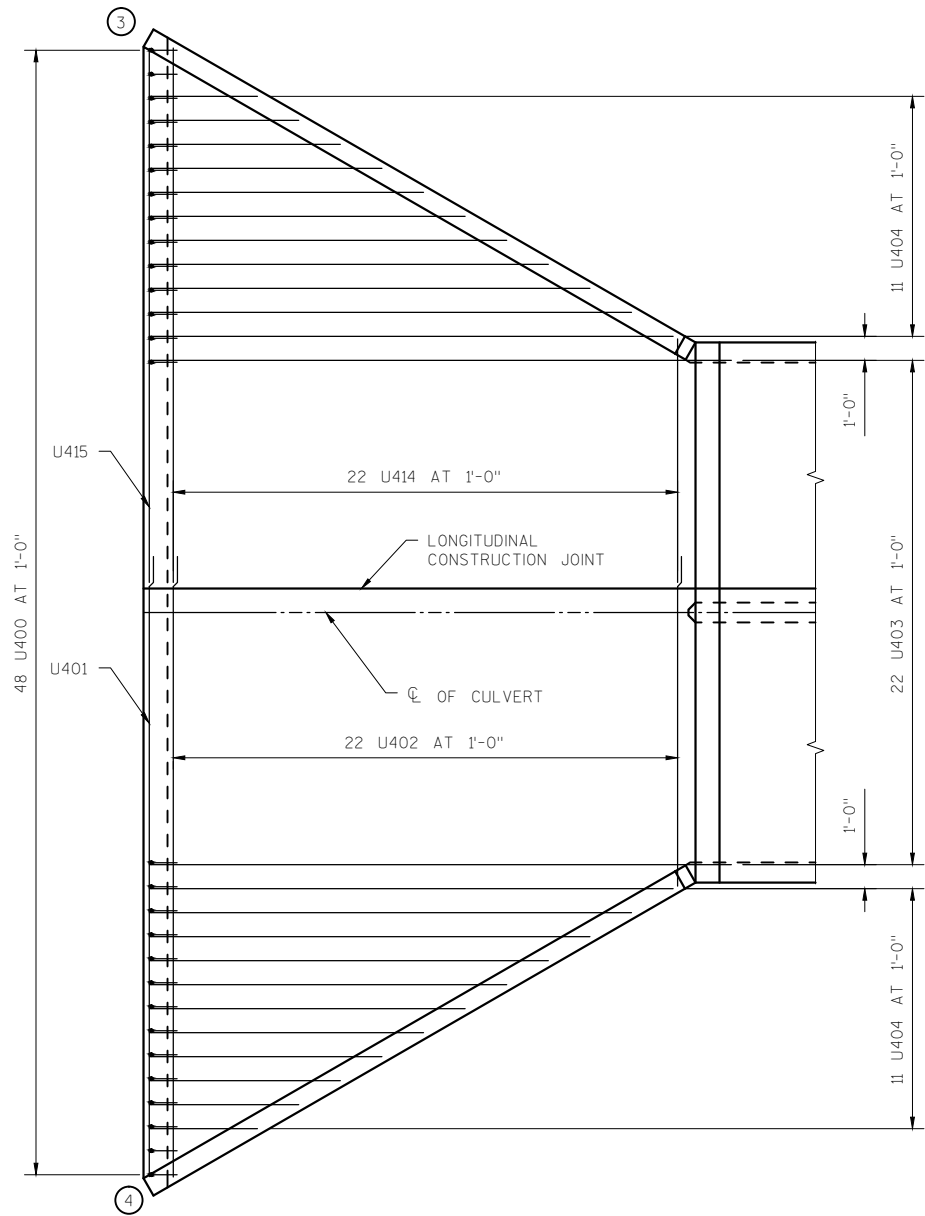


PROFILE GRADE LINE
(STH 23)

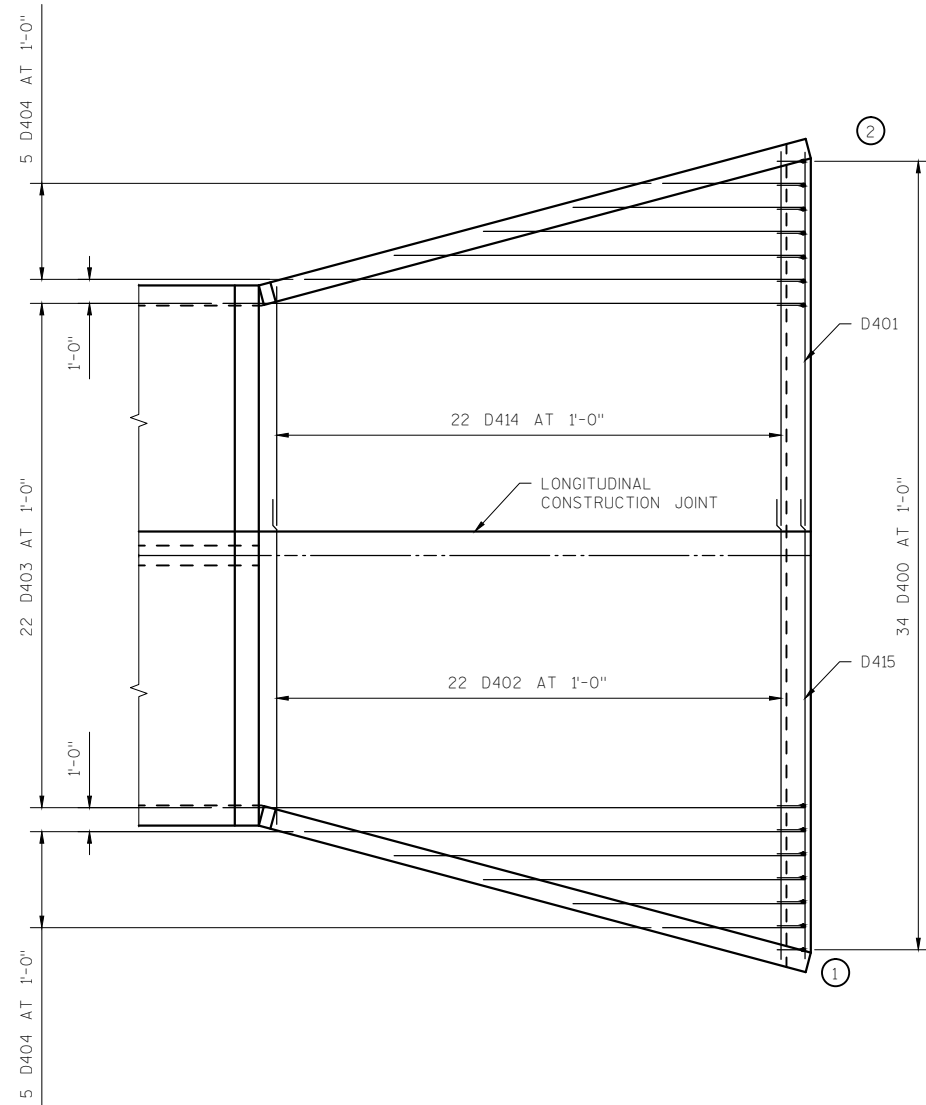


CROSS SECTION THRU CULVERT

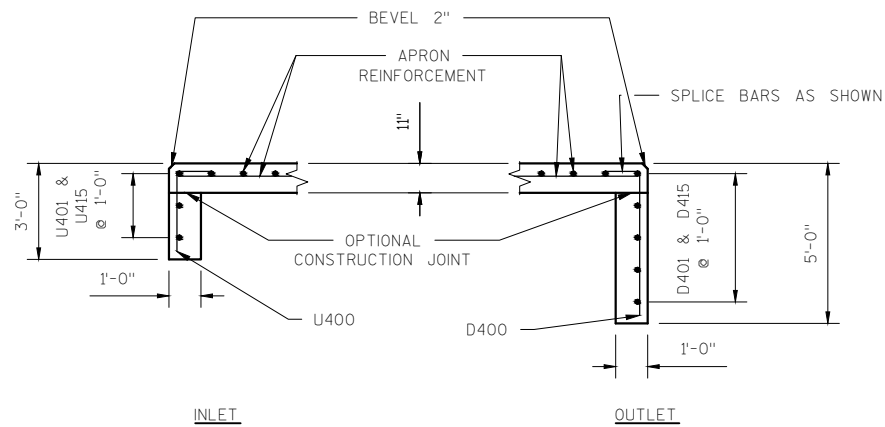
NO.	DATE	REVISION	BY
1			
KNIGHT 700 N Third Street Suite 104 La Crosse, WI 54601 Engineers & Architects Phone: (608) 519-1455			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-20-0232			
DRAWN BY AFD		PLANS CK'D. KPM	
BOX DETAILS & GENERAL NOTES			SHEET 2 OF 6



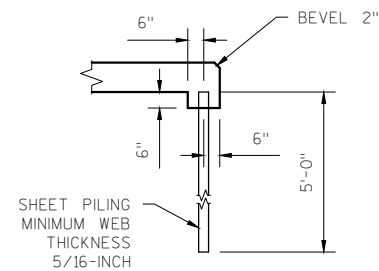
APRON REINFORCEMENT
(INLET)



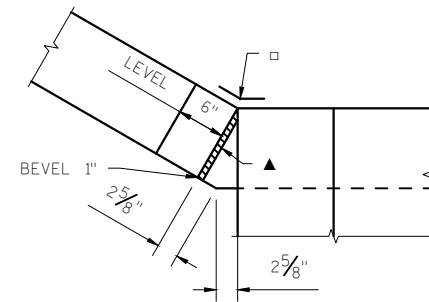
APRON REINFORCEMENT
(OUTLET)



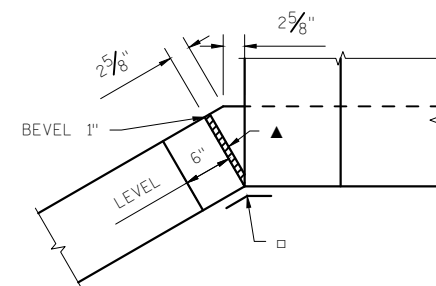
CUTOFF WALLS
SECTION THRU THE WALLS



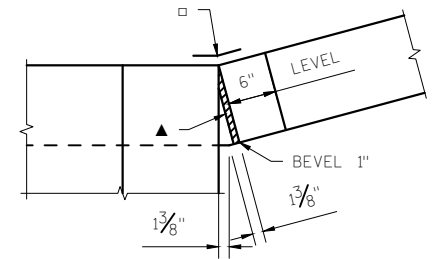
ALTERNATIVE CUTOFF WALLS



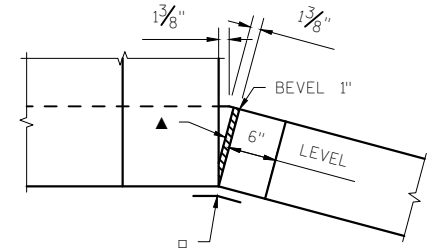
WING WALL 3 CORNER DETAIL



WING WALL 4 CORNER DETAIL



WING WALL 2 CORNER DETAIL



WING WALL 1 CORNER DETAIL

- RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM HORIZONTAL CONSTRUCTION JOINT TO TOP OF WALL. (FLUSH WITH FACE OF CONCRETE)
- ▲ 3/4-INCH FILLER TO EXTEND FROM HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING
- DENOTES WING NUMBER

CORNER DETAIL

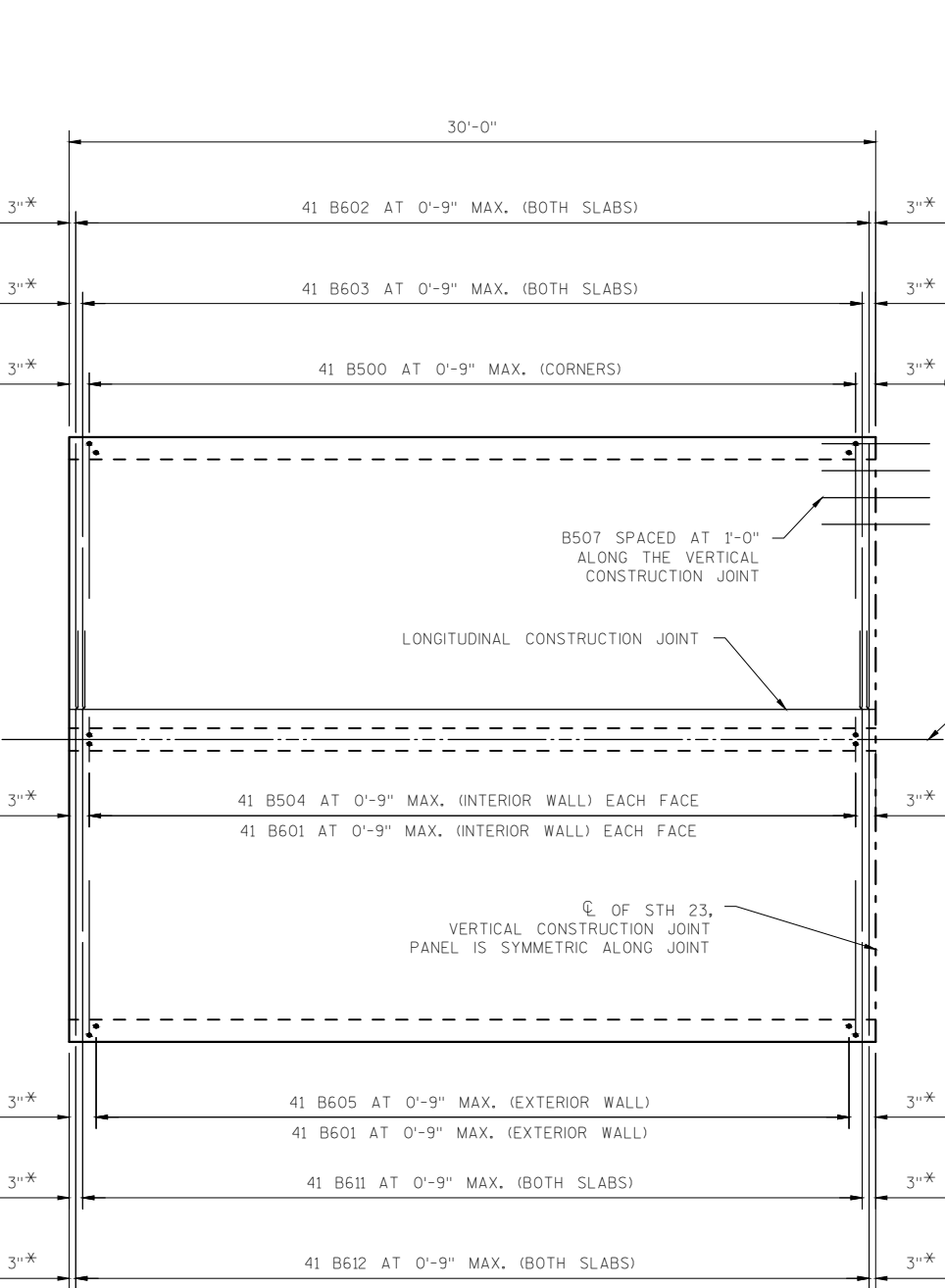
STATE PROJECT NUMBER
1430-15-71

NO.	DATE	REVISION	BY
KNIGHT 700 N Third Street Suite 104 La Crosse, WI 54601 Engineers & Architects Phone: (608) 519-1455			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-20-0232			
DRAWN BY AFD		PLANS CK'D. KPM	
APRON DETAILS			SHEET 3 OF 6

NOTES:
E.F. DENOTES EACH FACE

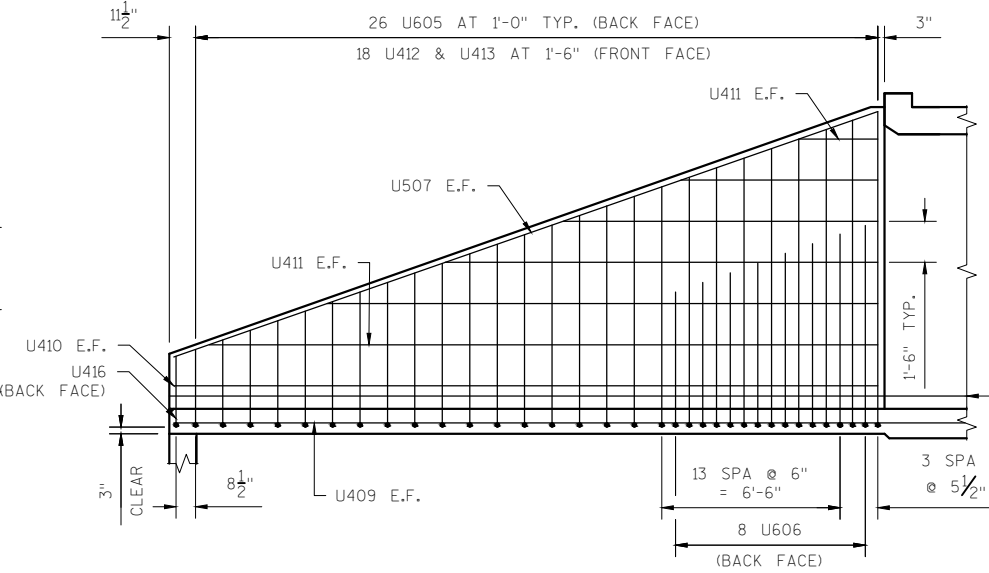
STATE PROJECT NUMBER

1430-15-71

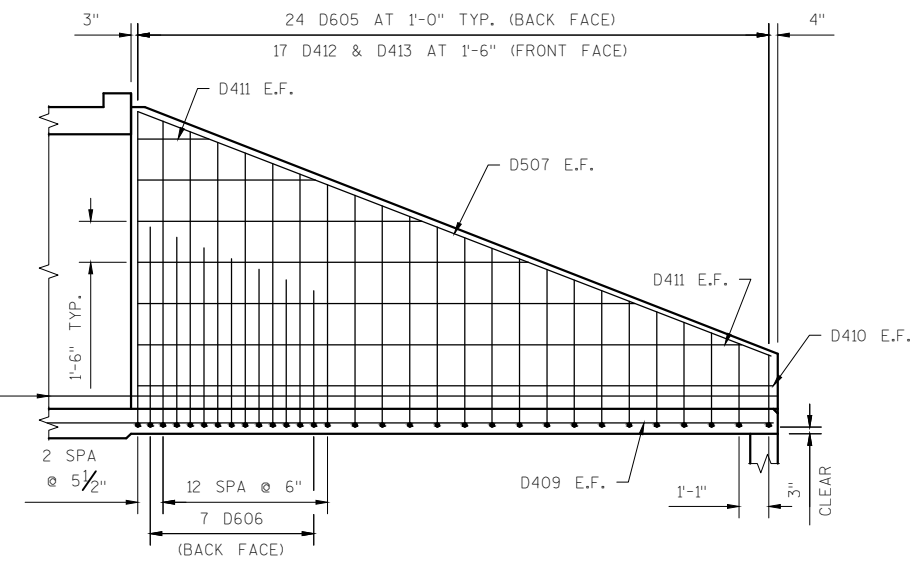


PLAN VIEW OF TYPICAL PANEL

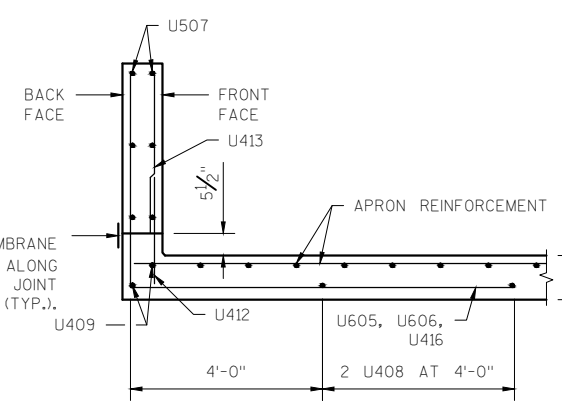
* DIMENSIONS ARE NOT TO SCALE



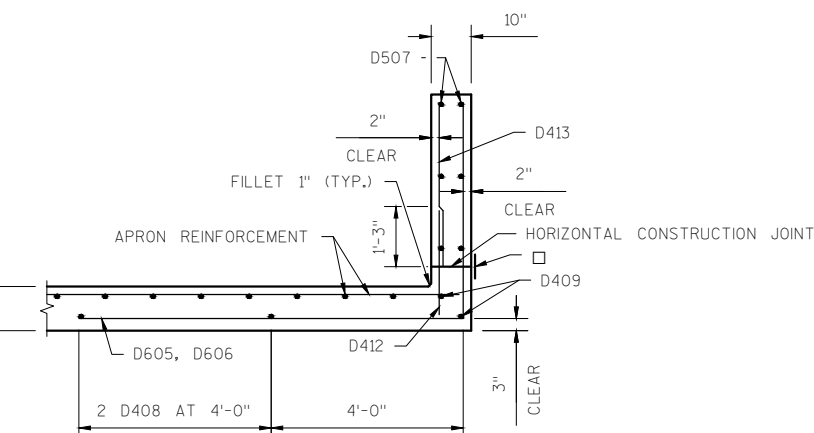
WING 3 & 4
(INLET)



WING 1 & 2
(OUTLET)



SECTION THRU WING 3 & 4
(INLET)



SECTION THRU WING 1 & 2
(OUTLET)

NO.	DATE	REVISION	BY
<div><div>KNIGHT</div><div>700 N Third Street Suite 104 La Crosse, WI 54601 Engineers & Architects Phone: (608) 519-1455</div></div>			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-20-0232			
DRAWN BY AFD		PLANS CK'D. KPM	
WING DETAILS			SHEET 4 OF 6

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B500		328	11-1	5'-9"		BOX CORNER
B601		328	2-11			BOX WALL DOWELS
B602		164	9-10			BOX TOP & BOTTOM SLAB TRANS.
B603		164	6-9			BOX TOP & BOTTOM SLAB TRANS.
B504		164	11-0	0'-10"		BOX INTERIOR WALL VERTICAL
B605		164	10-4			BOX EXTERIOR WALL VERTICAL
B406		256	29-8			BOX LONGITUDINAL
B507		76	4-0			CONSTRUCTION JOINT
B308		31	3-0	X		INLET HEADER
B309		31	3-2	X		OUTLET HEADER
B410		4	22-0			HORIZONTAL HEADER
B611		164	11-2			BOX TOP & BOTTOM SLAB TRANS.
B612		164	12-3			BOX TOP & BOTTOM SLAB TRANS.
U400		48	3-6	1'-1"		INLET APRON AND CUTOFF WALL
U401		3	25-8			INLET APRON AND CUTOFF WALL
U402		22	19-8		X	INLET APRON
U403		22	24-3			INLET APRON
U404		22	13-2		X	INLET APRON
U605	X	52	15-0	8'-0"	X	WING 3 & 4 VERTICAL BACK FACE
U606	X	16	14-0	8'-0"	X	WING 3 & 4 VERTICAL BACK FACE
U507		4	27-2			WING 3 & 4 HORIZONTAL BOTH FACES
U408		4	25-7			WING 3 & 4 HORIZONTAL APRON BOTTOM SLAB
U409		4	27-0			WING 3 & 4 HORIZONTAL APRON BOTTOM SLAB
U410		4	25-8			WING 3 & 4 HORIZONTAL BOTH FACES
U411		24	13-7		X	WING 3 & 4 HORIZONTAL BOTH FACES
U412	X	36	2-4			WING 3 & 4 DOWELS FRONT FACE
U413		36	6-1		X	WING 3 & 4 VERTICAL FRONT FACE
U414		22	16-4		X	INLET APRON
U415		3	22-4			INLET APRON AND CUTOFF WALL
U416	X	2	10-6	8'-0"		WING 3 & 4 VERTICAL BACK FACE
D400		34	5-6	1'-1"		OUTLET APRON AND CUTOFF WALL
D401		5	19-0			OUTLET APRON AND CUTOFF WALL
D402		22	16-2		X	OUTLET APRON
D403		22	24-3			OUTLET APRON
D404		10	13-5		X	OUTLET APRON
D605	X	48	14-11	8'-0"	X	WING 1 & 2 VERTICAL BACK FACE
D606	X	14	14-0	8'-0"	X	WING 1 & 2 VERTICAL BACK FACE
D507		4	24-9			WING 1 & 2 HORIZONTAL BOTH FACES
D408		4	23-1			WING 1 & 2 HORIZONTAL APRON BOTTOM SLAB
D409		4	24-6			WING 1 & 2 HORIZONTAL APRON BOTTOM SLAB
D410		4	23-2			WING 1 & 2 HORIZONTAL BOTH FACES
D411		24	12-4		X	WING 1 & 2 HORIZONTAL BOTH FACES
D412	X	34	2-4			WING 1 & 2 DOWELS FRONT FACE
D413		34	6-0		X	WING 1 & 2 VERTICAL FRONT FACE
D414		22	12-11		X	OUTLET APRON
D415		5	19-0			OUTLET APRON AND CUTOFF WALL

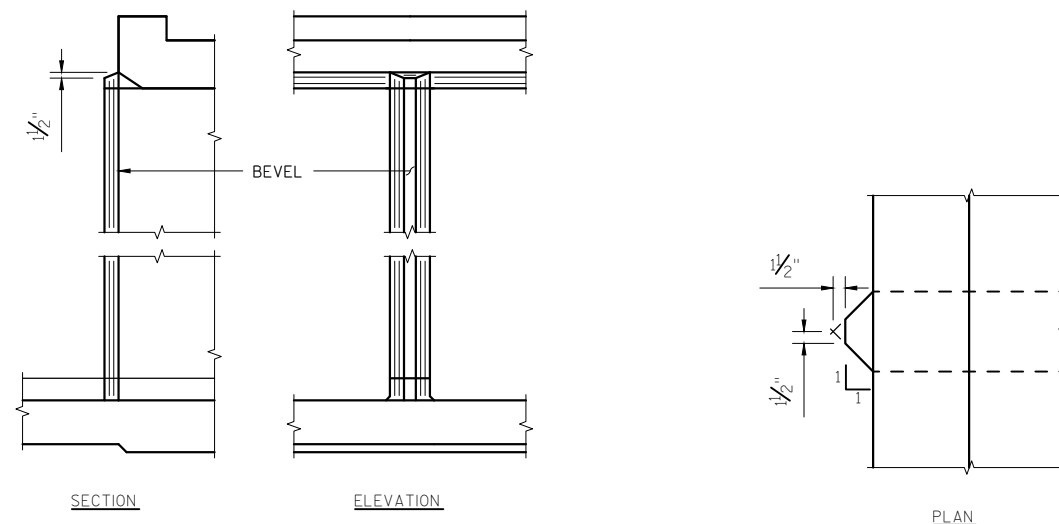
BAR SERIES

BAR MARK	NO. REQ'D	LENGTH
U402	1 SETS OF 22	13'-7" TO 25'-9"
U404	2 SETS OF 11	4'-6" TO 21'-10"
U605	2 SETS OF 26	10'-7" TO 19'-4"
U606	2 SETS OF 8	12'-9" TO 15'-2"
U411	4 SETS OF 6	2'-10" TO 24'-4"
U413	2 SETS OF 18	1'-8" TO 10'-5"
U414	1 SETS OF 22	10'-3" TO 22'-5"
D402	1 SETS OF 22	13'-5" TO 19'-0"
D404	2 SETS OF 5	5'-11" TO 20'-10"
D605	2 SETS OF 24	10'-6" TO 19'-4"
D606	2 SETS OF 7	12'-9" TO 15'-2"
D411	4 SETS OF 6	2'-7" TO 22'-0"
D413	2 SETS OF 17	1'-6" TO 10'-5"
D414	1 SETS OF 22	10'-1" TO 15'-9"

Technical drawings of two L-shaped profiles, B308 and B309.

B308: The vertical leg is 10" high. The horizontal leg is 1'-0" long. The corner radius is 8".

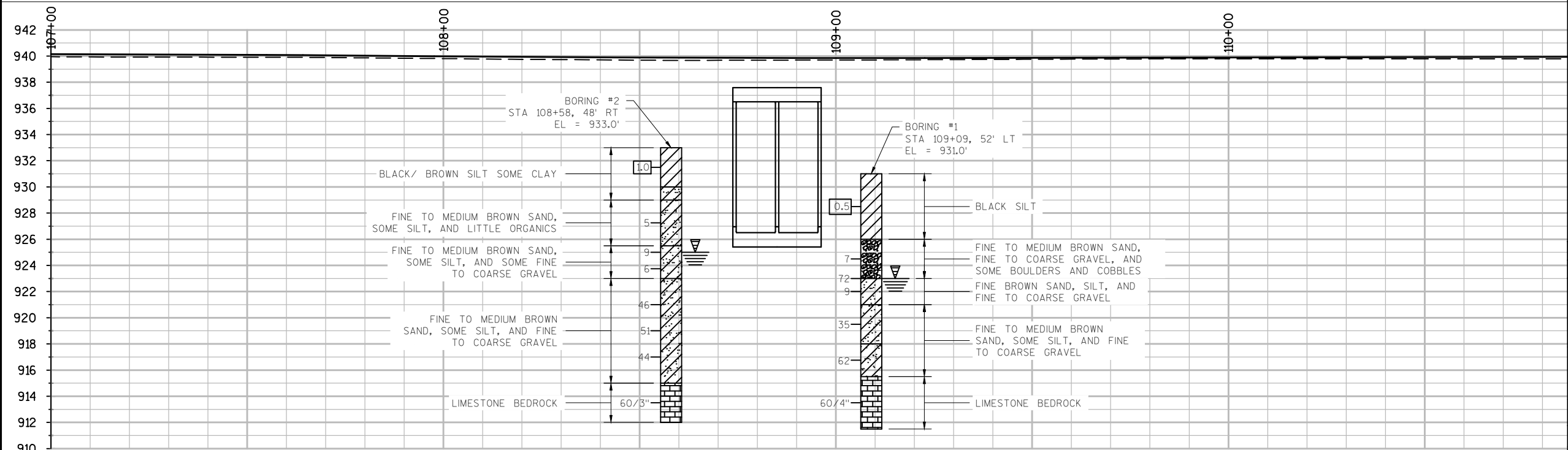
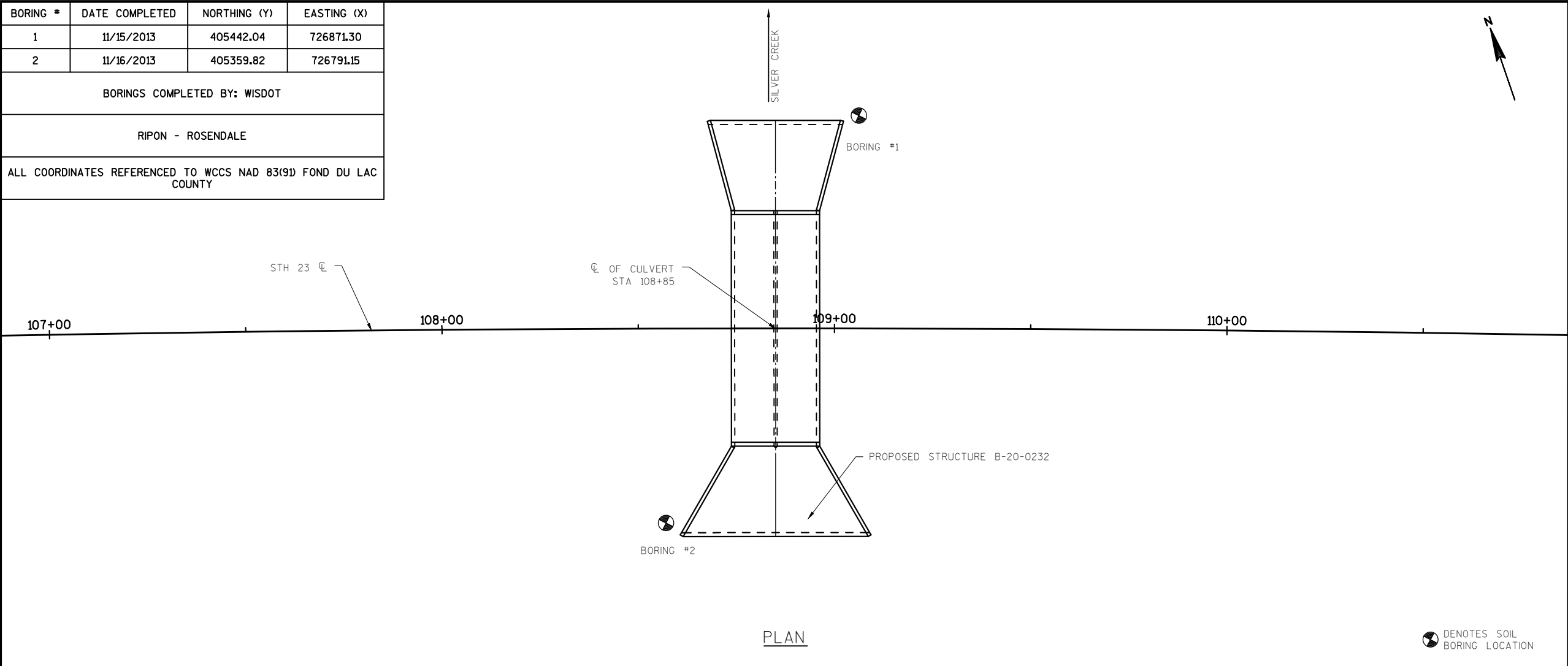
B309: The vertical leg is 1'-0" high. The horizontal leg is 8" long. The corner radius is 6".



INLET NOSE DETAIL

NO.	DATE	REVISION	BY
<div style="background-color: black; color: white; padding: 5px; display: inline-block;">KNIGHT</div>		700 N Third Street Suite 104 La Crosse, WI 54601 Engineers & Architects Phone: (608) 519-1455	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-20-0232	
		DRAWN BY	PLANS CK'D. KPM
BILL OF BARS & DETAILS		SHEET 5 OF 6	

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	11/15/2013	405442.04	726871.30
2	11/16/2013	405359.82	726791.15
BORINGS COMPLETED BY: WISDOT			
RIPON - ROSENDALE			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) FOND DU LAC COUNTY			



STATE PROJECT NUMBER
1430-15-71

NOTE:
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL INFORMATION.
BORING STATIONS AND OFFSETS ARE BASED ON STH 23 C/L.

ABBREVIATIONS
F— Fine M— Medium C— Coarse
Ws— Weathered So— Sound

MATERIAL SYMBOLS

Pavement Structure	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Igneous Rock

LEGEND OF PROBING
Probing No.
Sta.
Elevation
7 Average Blows Per Foot
Refusal

LEGEND OF BORING
Boring No.
Sta.
Elev.
Unconfined STRENGTH → 7.7
Blows Per 6-IN. USING 10* WT. FALLING 24"
Wash Sample
Shelby Tube —S.T.
Ground Water ELEVATION
No Ground Water OBSERVED ABOVE THIS ELEVATION
Sandy Gravel
F. Boulders or COBBLES
Sand
Silty Clay
So
Limestone

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER 6-INCH AT THE LOCATIONS INDICATED ARE BASED ON DCP TESTING. THE DCP TESTS WERE PERFORMED USING A SOLID METAL ROD FITTED WITH A 1-3/8-INCH DIAMETER CONICAL POINT. THE POINT IS DRIVEN INTO THE SOIL WITH A 10-POUND WEIGHT FALLING 24-INCHES. THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT. BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY
-----	------	----------	----

700 N Third Street
Suite 104
La Crosse, WI 54601
Engineers & Architects Phone: (608) 519-1455

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE **B-20-0232**

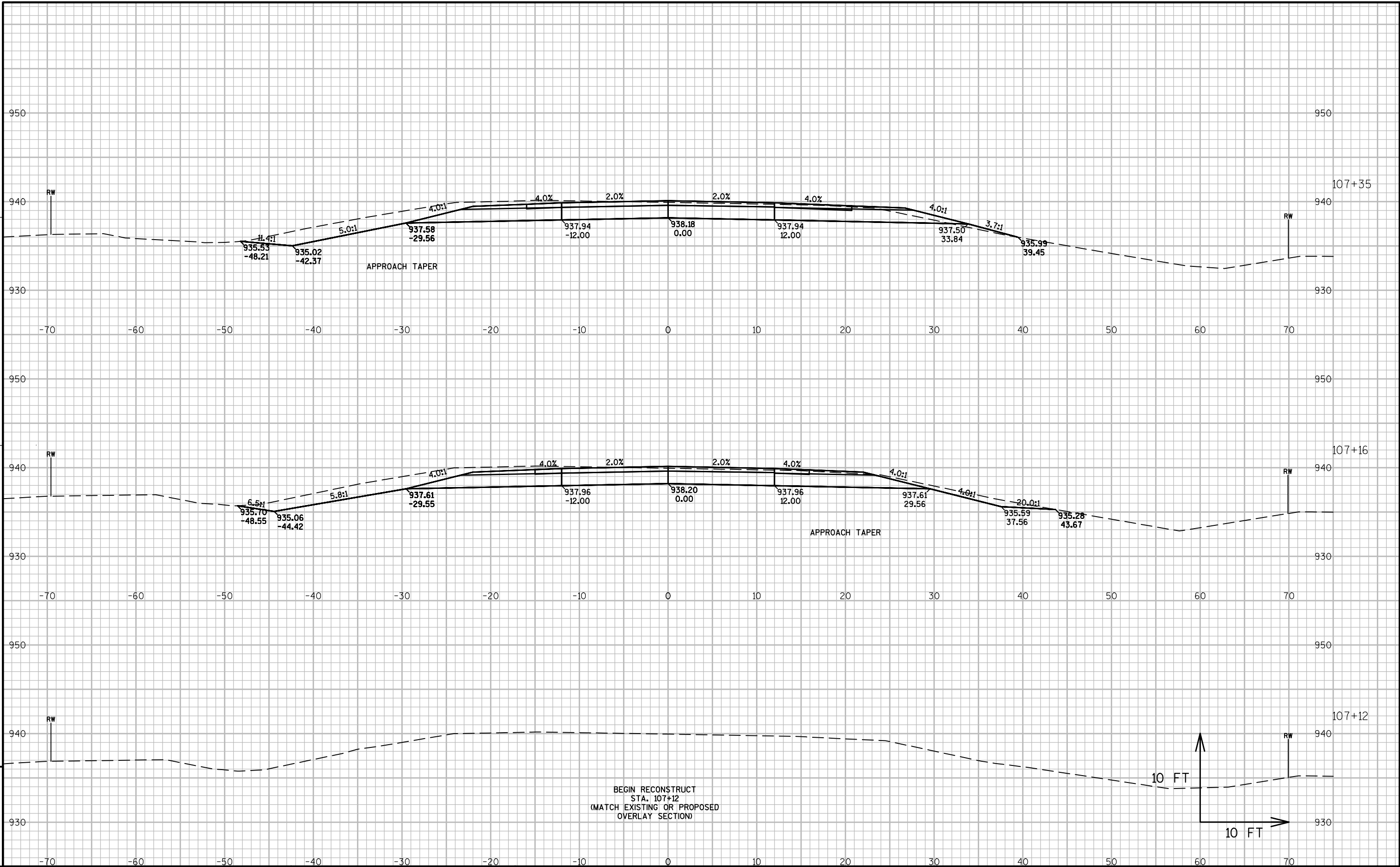
DRAWN BY AFD	PLANS CK'D. KPM
--------------	-----------------

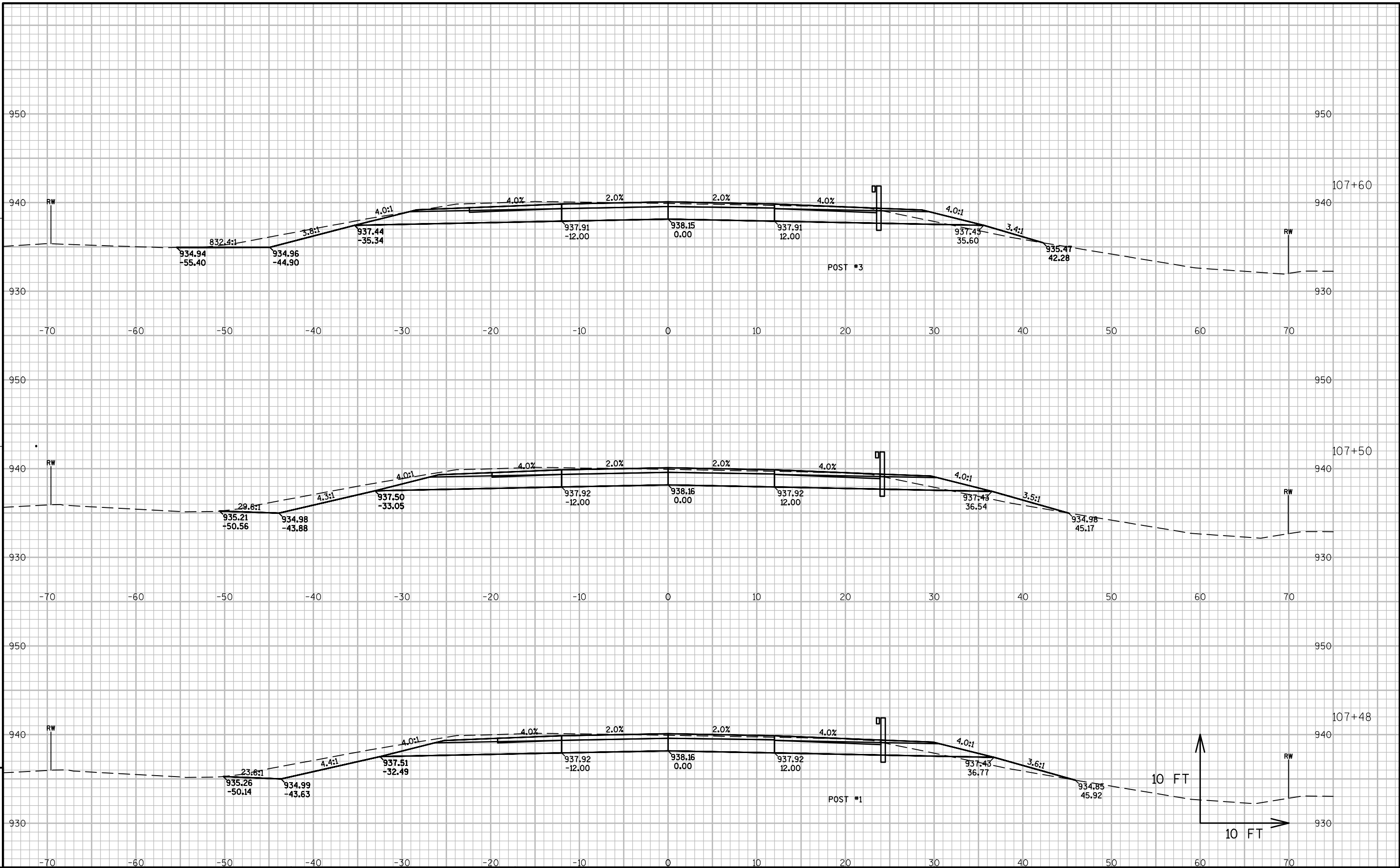
SUBSURFACE EXPLORATION

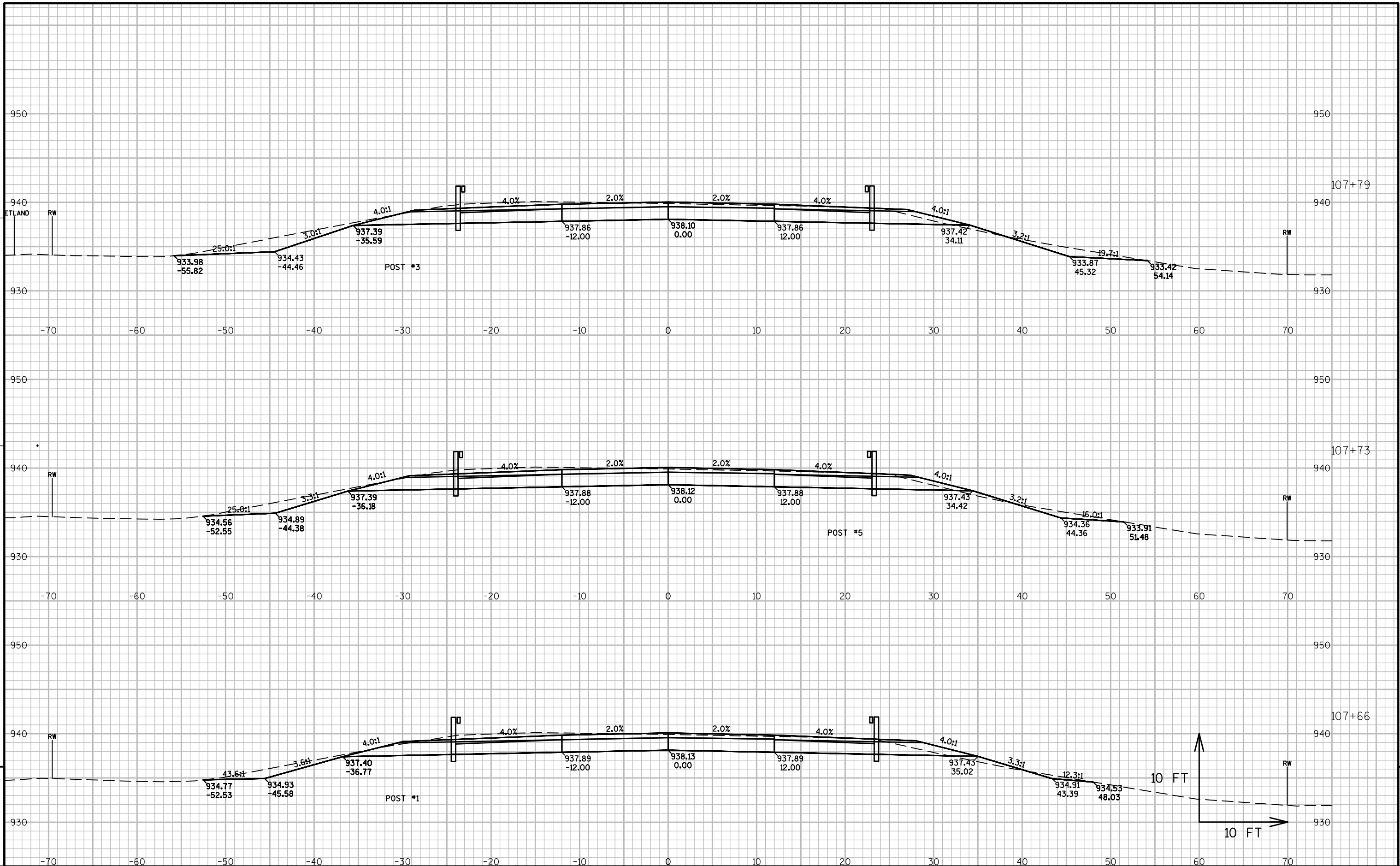
SHEET 6 OF 6

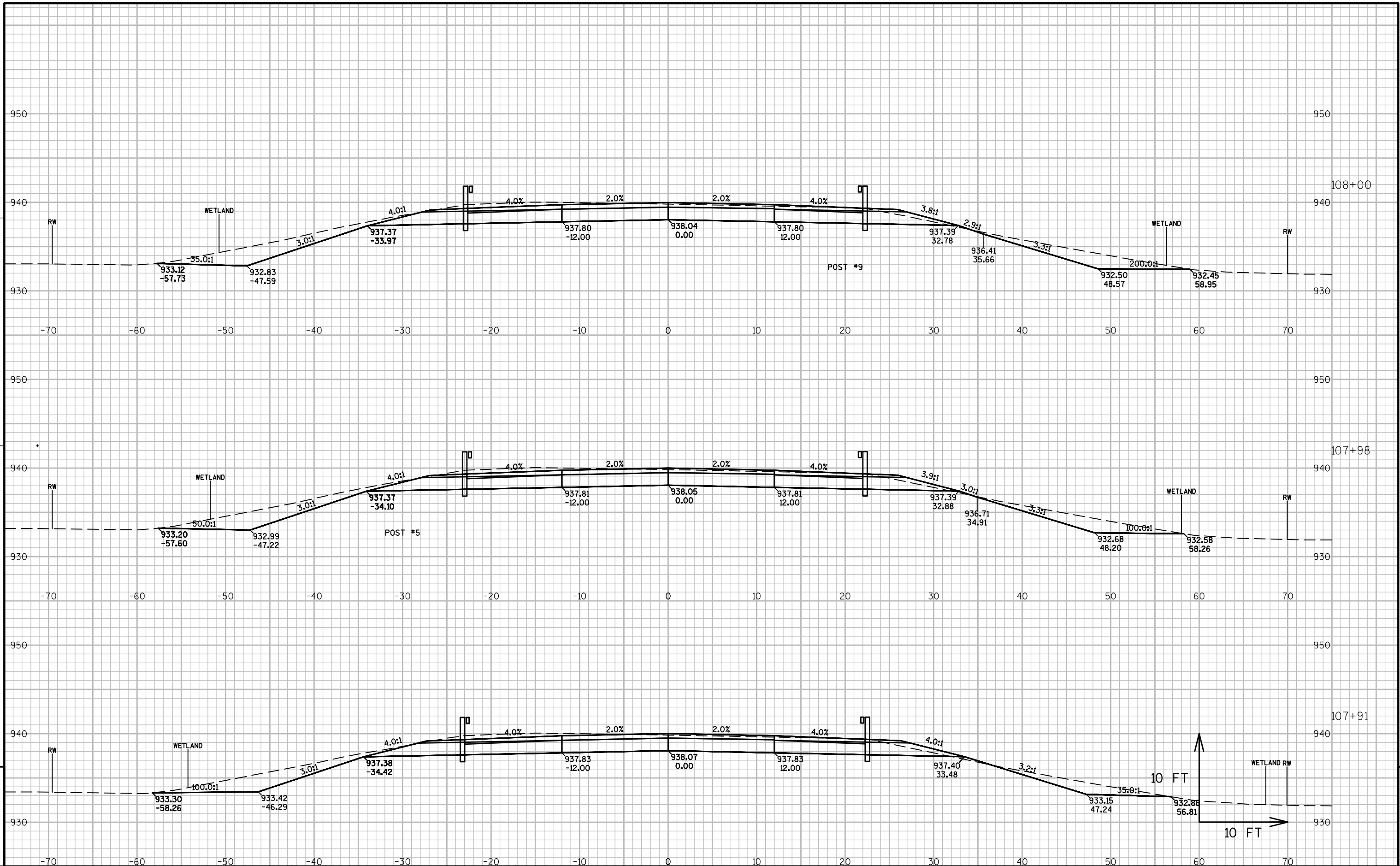
STATION	Real Station	Distance	AREA (SF)						Incremental Vol (CY) (Unadjusted)						Cumulative Vol (CY)										Mass Ordinate
			Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	Backfill 1.50 Note 4	Expanded Rock 1.10	Backfill 1.30 Note 5	Reduced Marsh in Fill 0.60 Note 6	Reduced EBS In Fill 0.80 Note 7				
107+12.39	10712.39	0.00	139.11	27.25	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00			
107+15.92	10715.92	3.52	135.72	27.25	0.00	0.00	0.00	0.00	18	4	0	0	0	0	18	0	0	0	0	0.00	0.00	14.38			
107+34.64	10734.64	18.72	132.05	27.25	1.60	0.00	0.00	0.00	93	19	1	0	0	0	111	1	0	0	0	0.00	0.00	87.62			
107+47.53	10747.53	12.89	128.48	27.25	6.82	0.00	0.00	0.00	62	13	2	0	0	0	173	3	0	0	0	0.00	0.00	134.29			
107+50	10750.00	2.47	127.72	27.25	6.19	0.00	0.00	0.00	12	2	1	0	0	0	185	4	0	0	0	0.00	0.00	142.78			
107+60.03	10760.03	10.03	124.76	27.25	3.99	0.00	0.00	0.00	47	10	2	0	0	0	232	6	0	0	0	0.00	0.00	177.18			
107+66.25	10766.25	6.22	124.50	27.25	2.81	0.00	0.00	0.00	29	6	1	0	0	0	260	7	0	0	0	0.00	0.00	198.65			
107+72.52	10772.52	6.27	131.49	27.25	1.61	0.00	0.00	0.00	30	6	1	0	0	0	290	8	0	0	0	0.00	0.00	221.42			
107+78.75	10778.75	6.23	138.19	27.25	1.31	0.00	0.00	0.00	31	6	0	0	0	0	321	8	0	0	0	0.00	0.00	245.80			
107+91.25	10791.25	12.50	150.99	27.44	0.57	0.00	0.00	0.00	67	13	0	0	0	0	388	9	0	0	0	0.00	0.00	299.54			
107+97.53	10797.53	6.28	155.85	27.66	0.25	0.00	0.00	0.00	36	6	0	0	0	0	424	9	0	0	0	0.00	0.00	328.68			
108+00	10800.00	2.47	158.61	27.84	0.21	0.00	0.00	0.00	14	3	0	0	0	0	438	9	0	0	0	0.00	0.00	340.52			
108+16.25	10816.25	16.25	176.72	29.15	0.18	0.00	0.00	0.00	101	17	0	0	0	0	539	9	0	0	0	0.00	0.00	424.11			
108+31.25	10831.25	15.00	200.97	30.30	0.38	0.00	0.00	0.00	105	17	0	0	0	0	644	9	0	0	0	0.00	0.00	512.34			
108+50	10850.00	18.75	219.90	31.74	2.88	0.00	0.00	0.00	146	22	1	0	0	0	790	11	0	0	0	0.00	0.00	635.52			
108+56.25	10856.25	6.25	204.26	32.12	23.07	0.00	0.00	0.00	49	7	3	0	0	0	839	15	0	0	0	0.00	0.00	673.46			
109+12.5	10912.50	56.25	200.89	31.35	5.35	0.00	0.00	0.00	422	66	30	0	0	0	1,261	52	0	0	0	0.00	0.00	992.36			
109+37.5	10937.50	25.00	231.49	29.54	0.36	0.00	0.00	0.00	200	28	3	0	0	0	1,461	55	0	0	0	0.00	0.00	1,161.04			
109+50	10950.00	12.50	210.69	28.64	0.07	0.00	0.00	0.00	102	13	0	0	0	0	1,564	55	0	0	0	0.00	0.00	1,249.81			
109+72.48	10972.48	22.48	170.48	27.25	0.70	0.00	0.00	0.00	159	23	0	0	0	0	1,722	55	0	0	0	0.00	0.00	1,384.84			
109+78.77	10978.77	6.29	158.91	27.25	0.88	0.00	0.00	0.00	38	6	0	0	0	0	1,761	56	0	0	0	0.00	0.00	1,416.64			
109+91.28	10991.28	12.50	140.13	27.25	1.62	0.00	0.00	0.00	69	13	1	0	0	0	1,830	56	0	0	0	0.00	0.00	1,472.52			
109+97.48	10997.48	6.20	132.18	27.25	2.99	0.00	0.00	0.00	31	6	1	0	0	0	1,861	57	0	0	0	0.00	0.00	1,496.88			
110+00	11000.00	2.52	129.59	27.25	3.78	0.00	0.00	0.00	12	3	0	0	0	0	1,874	57	0	0	0	0.00	0.00	1,506.16			
110+03.78	11003.78	3.78	125.71	27.25	5.13	0.00	0.00	0.00	18	4	1	0	0	0	1,891	58	0	0	0	0.00	0.00	1,519.42			
110+10	11010.00	6.22	121.94	27.25	2.85	0.00	0.00	0.00	29	6	1	0	0	0	1,920	59	0	0	0	0.00	0.00	1,540.52			
110+22.49	11022.49	12.50	123.88	27.25	0.03	0.00	0.00	0.00	57	13	1	0	0	0	1,977	60	0	0	0	0.00	0.00	1,583.97			
110+35.41	11035.41	12.91	127.91	27.25	0.00	0.00	0.00	0.00	60	13	0	0	0	0	2,037	60	0	0	0	0.00	0.00	1,631.14			
110+50	11050.00	14.59	127.83	27.25	0.00	0.00	0.00	0.00	69	15	0	0	0	0	2,106	60	0	0	0	0.00	0.00	1,685.52			
110+54.18	11054.18	4.18	128.64	27.25	0.00	0.00	0.00	0.00	20	4	0	0	0	0	2,126	60	0	0	0	0.00	0.00	1,701.15			
110+57.9	11057.90	3.72	128.20	27.25	0.00	0.00	0.00	0.00	18	4	0	0	0	0	2,144	60	0	0	0	0.00	0.00	1,715.09			

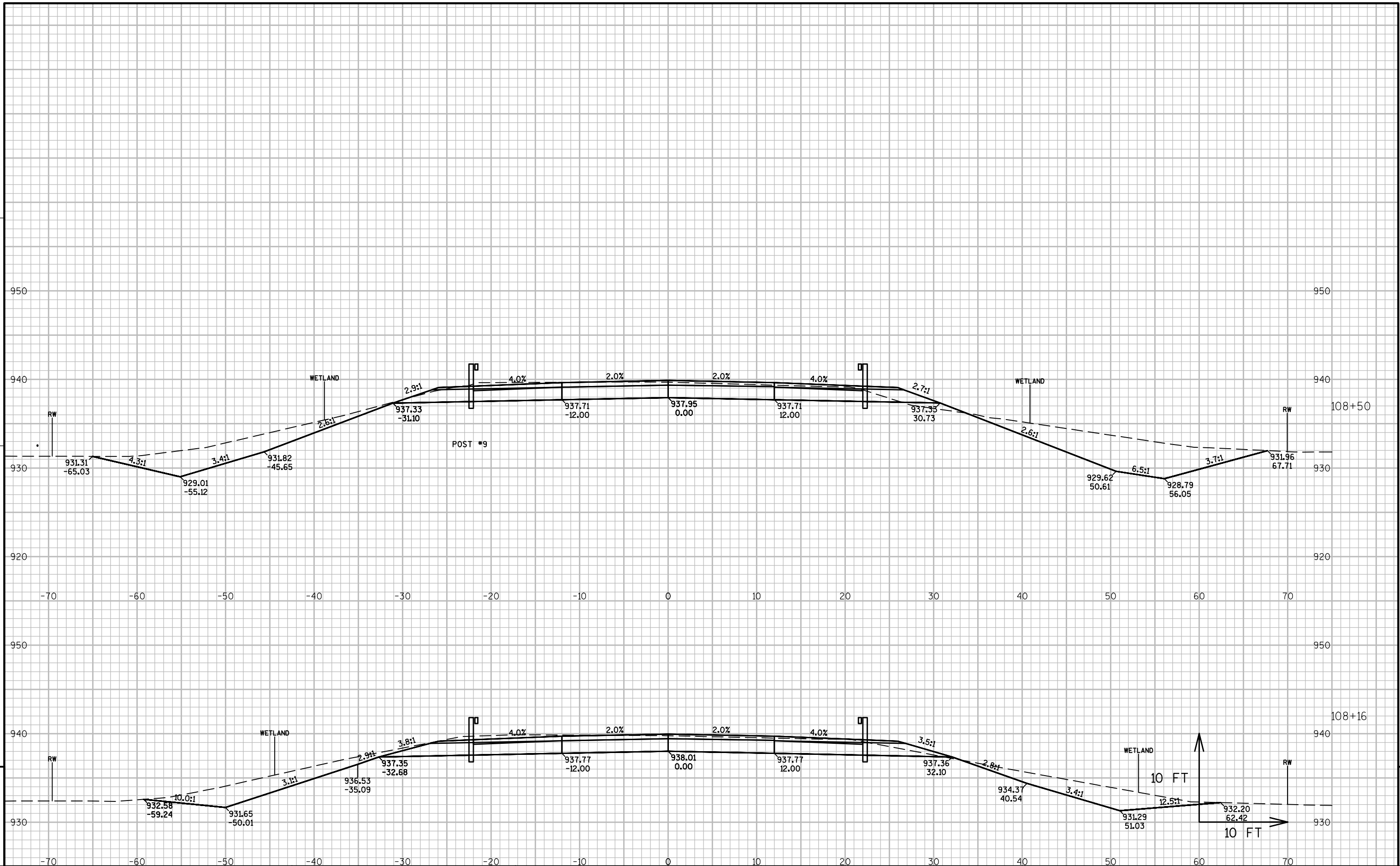
2,144	368	48	0	0	0
-------	-----	----	---	---	---

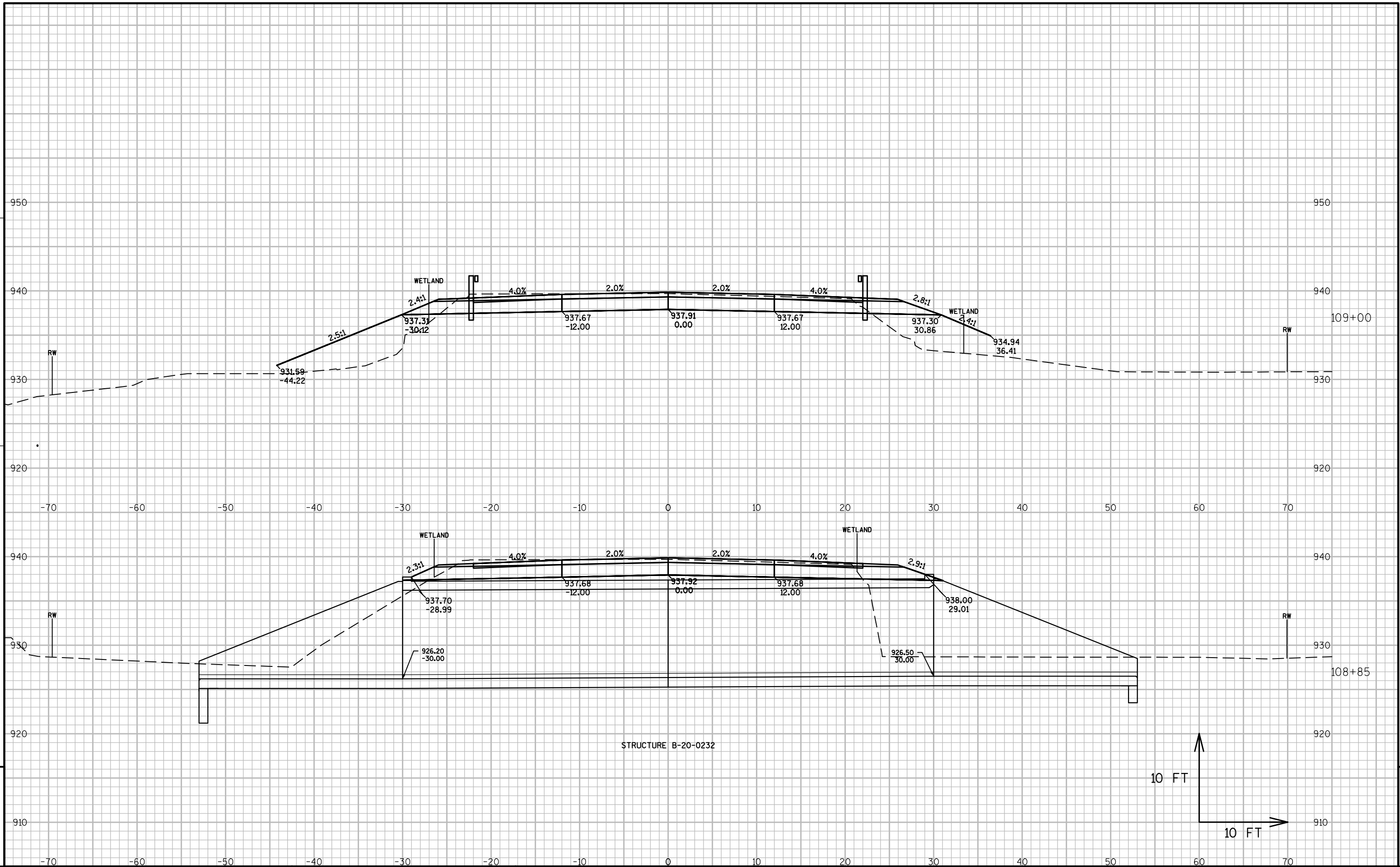


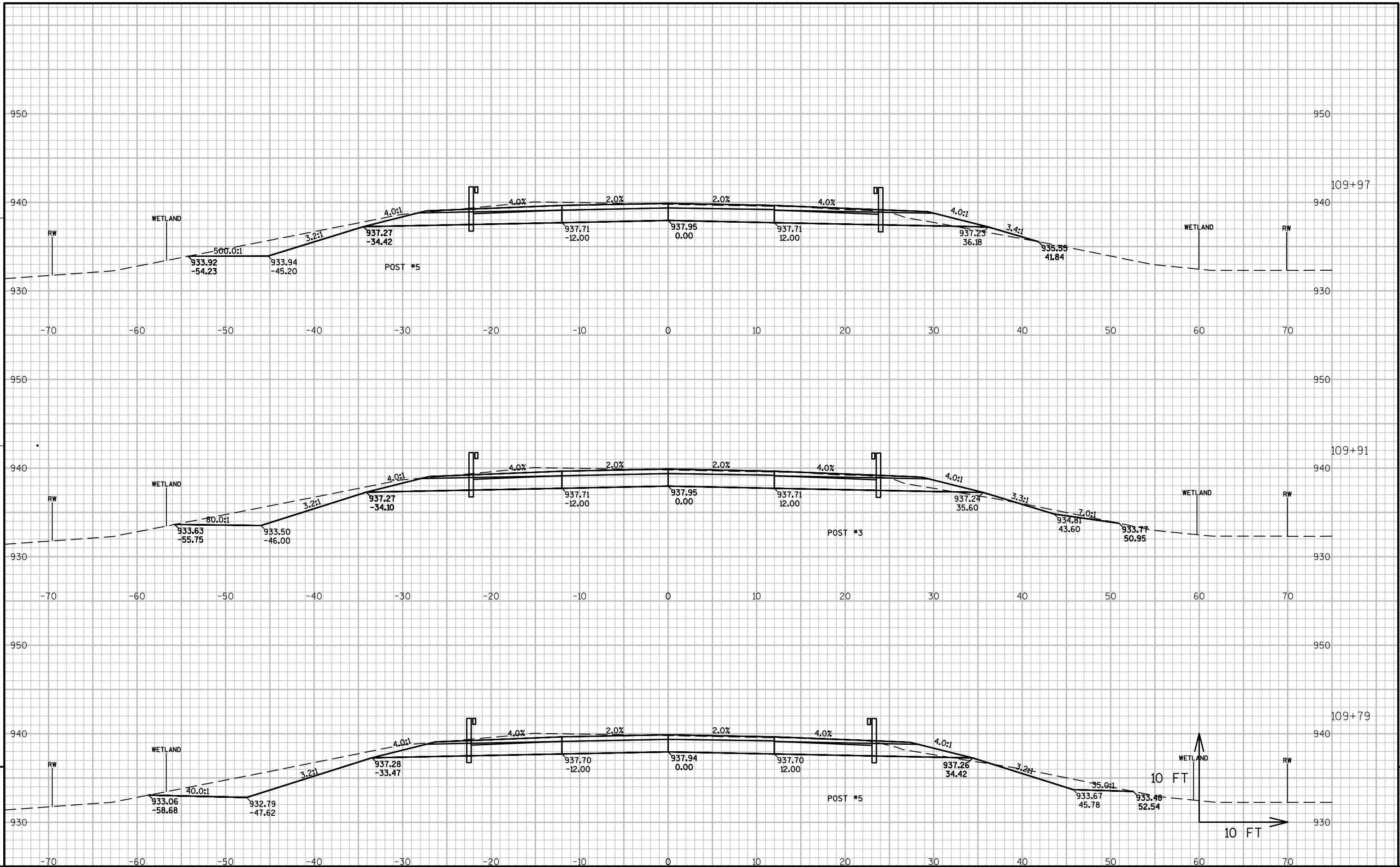


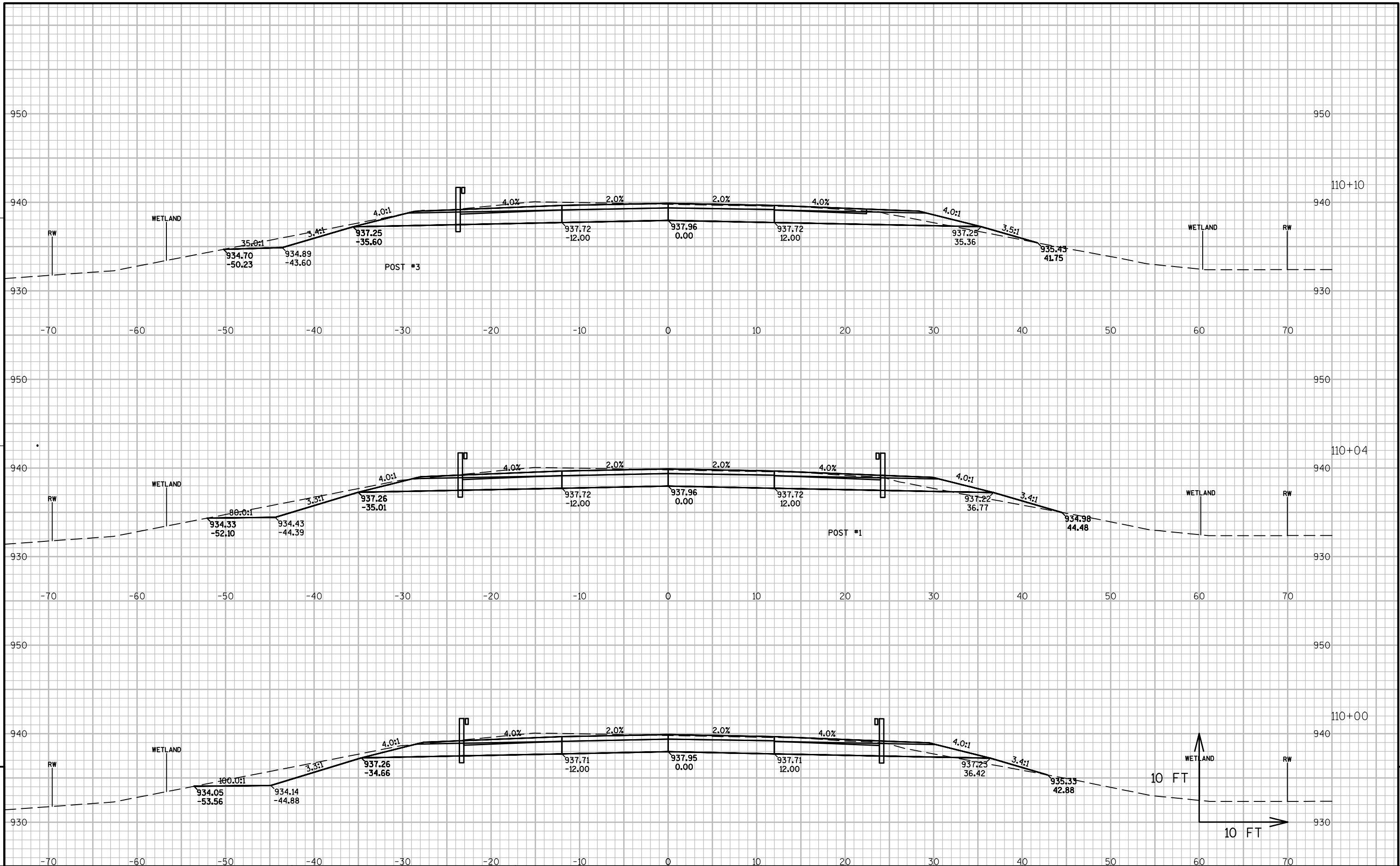


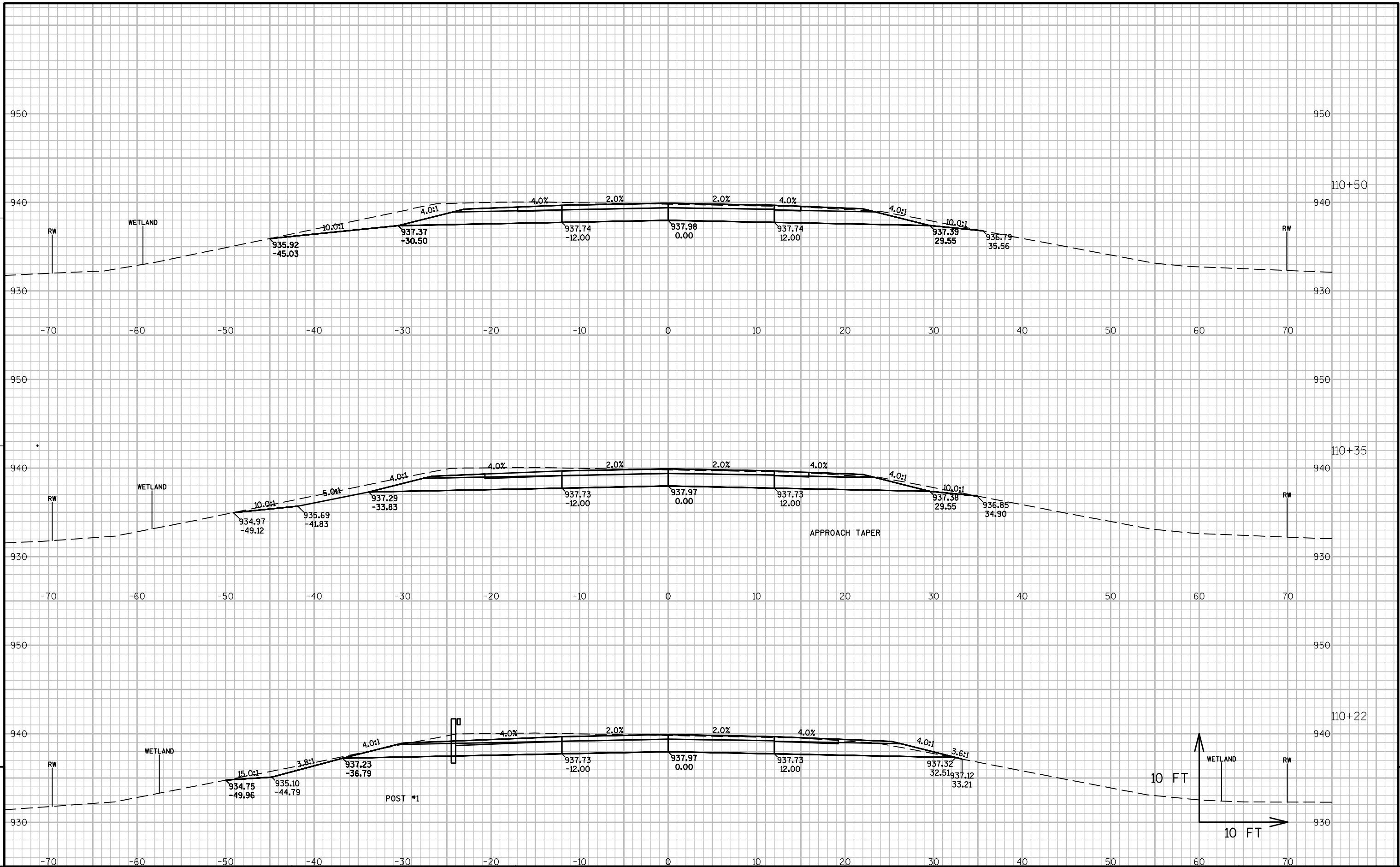


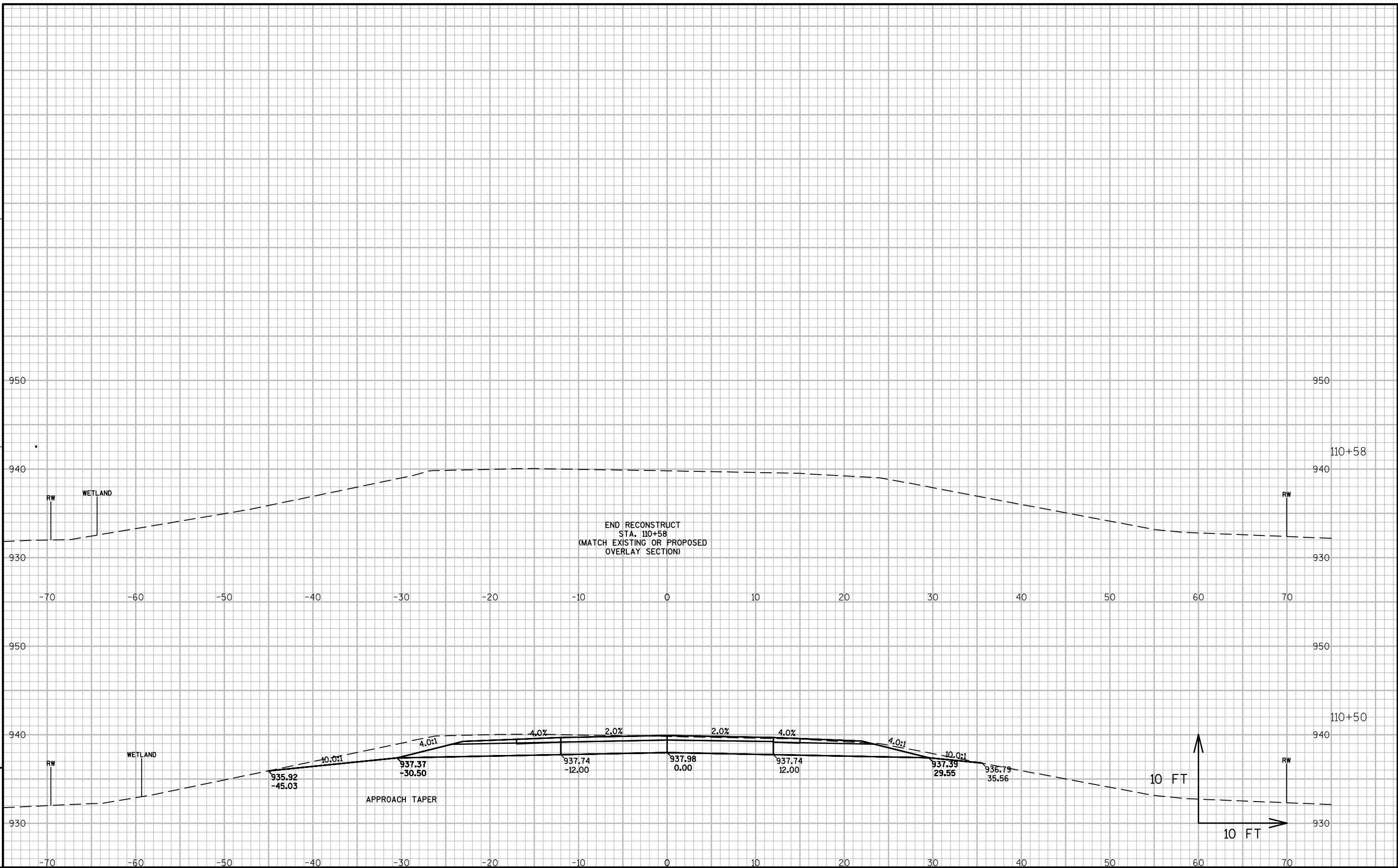


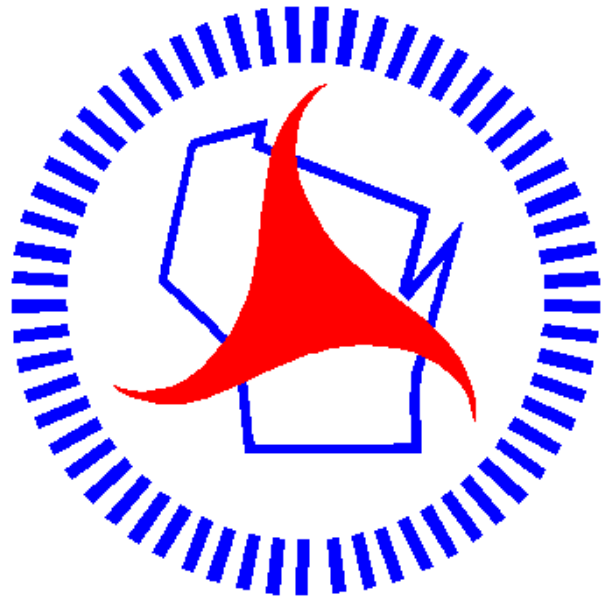












Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>