

GRE

FEB 2014

PROJECT ID:

1500-34-71

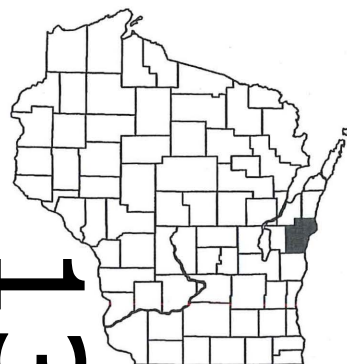
COUNTY:

MANITOWOC

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 = 194



DESIGN DESIGNATION

A.A.D.T. 2015	=	8,300
A.A.D.T. 2035	=	9,700
D.H.V.	=	1,086
D.D.	=	59/41
T.	=	7%
DESIGN SPEED	=	60 MPH
ESALS	=	1,686,300

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	CAUTION
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

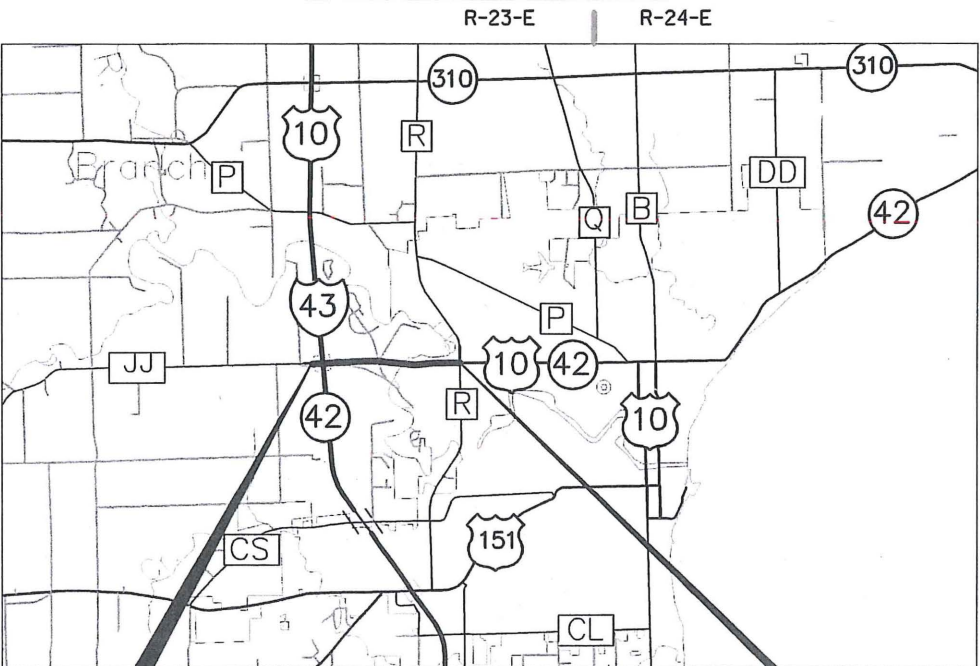
IH 43 - CTH R

IH 43- RAPIDS AVENUE

USH 10

MANITOWOC COUNTY

STATE PROJECT NUMBER
1500-34-71



BEGIN PROJECT
STA 190+00.00
Y=307283.31
X=213897.45

END PROJECT
STA 275+00.00
Y=307065.38
X=222368.29

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 160 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY
COORDINATE SYSTEM (WCCS), MANITOWOC COUNTY.
ELEVATIONS ON THIS PLAN ARE REFERENCED TO NAVD 88

STATE PROJECT

1500-34-71

FEDERAL PROJECT

PROJECT

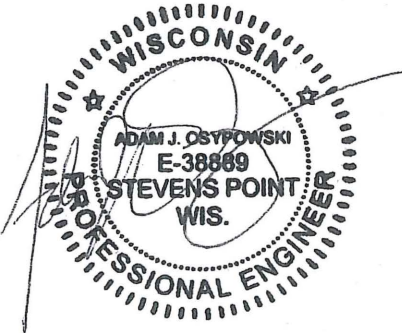
CONTRACT

PLANS PREPARED BY

QUEST

Civil Engineers, LLC

2811 8th Street South, Suite 8
Wisconsin Rapids, WI 54494



DATE: 4/8/2013

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	QUEST Civil Engineers
Designer	QUEST Civil Engineers
Project Manager	MATT HAEFS
Regional Examiner	
Regional Supervisor	REBECCA ROOYAKKERS

APPROVED FOR THE DEPARTMENT

DATE: 4/10/13 [Signature] P.E.
(Signature)

E

LIST OF STANDARD ABBREVIATIONS

Δ	CENTRAL ANGLE OR DELTA	LB	POUND
AADT	ANNUAL AVERAGE DAILY TRAFFIC	LC	LONG CHORD OF CURVE
AC	ASPHALT CEMENT	LIN FT and LF	LINEAR FOOT
ADT	AVERAGE DAILY TRAFFIC	LS	LUMP SUM
AECPRC	APRON ENDWALL FOR CULV PIPE REIN CONC	LT	LEFT
AEW	APRON ENDWALL	M	MARSH
AGG	AGGREGATE	MAINT	MAINTENANCE
ASPH	ASPHALTIC	MATL	MATERIAL
AVG	AVERAGE	MAX	MAXIMUM
BAD	BASE AGGREGATE DENSE	MIN	MINIMUM
BM	BENCH MARK	N	NORTH
C&G	CURB AND GUTTER	NB	NORTHBOUND
CABC	CRUSHED AGGREGATE BASE COURSE	NC	NORMAL CROWN
CE	COMMERCIAL ENTRANCE	NO	NUMBER
CL or C/L	CENTER LINE	NW	NORMAL WATER
CO	COUNTY	OD	OUTSIDE DIAMETER
CONC	CONCRETE	PAVT	PAVEMENT
CP	CULVERT PIPE	PC	POINT OF CURVATURE
CPCP	CULVERT PIPE CORRUGATED POLYETHYLENE	PD or PED	PEDISTAL
CPCS	CULVERT PIPE CORRUGATED STEEL	PE	PRIVATE ENTRANCE
CPRC	CULVERT PIPE REINFORCED CONCRETE	PI	POINT OF INTERSECTION
CPRCHE	CULV PIPE REIN CONC HORIZONTAL ELLIPTICAL	PL	PROPERTY LINE
CTH	COUNTY TRUNK HIGHWAY	PP	POWER POLE
CULV	CULVERT	PROJ	PROJECT
CWT	HUNDREDWEIGHT	PROP	PROPOSED
CY or CUYD	CUBIC YARD	PT	POINT OF TANGENCY
D	DEGREE OF CURVE	R	RADIUS
DG	DITCH GRADE	R/L	REFERENCE LINE
DHV	DESIGN HOUR VOLUME	R/W	RIGHT-OF-WAY
DIA	DIAMETER	RD	ROAD
DISCH	DISCHARGE	RR	RAILROAD
DIST	DISTRICT	RT	RIGHT
DWY	DRIVEWAY	SB	SOUTH BOUND
EAT	ENERGY ABSORBING TERMINAL	SDD	STANDARD DETAIL DRAWINGS
EB	EASTBOUND	SE	SUPERELEVATION
EBS	EXCAVATING BELOW SUBGRADE	SF or SQ FT	SQUARE FEET
EL or ELEV	ELEVATION	SHLDR	SHOULDER
ENT	ENTRANCE	SPECS	SPECIFICATIONS
EOP	EDGE OF PAVEMENT	STA	STATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	STH	STATE TRUNK HIGHWAYS
EW	ENDWALL	SY or SQ YD	SQUARE YARD
EXC	EXCAVATION	T or TAN	TANGENT
EXIST	EXISTING	T	TRUCKS (PERCENT OF)
FE	FIELD ENTRANCE	T or TN	TOWN
FERT	FERTILIZE	TEL	TELEPHONE
FG	FINISHED GRADE	TYP	TYPICAL
FL or F/L	FLOW LINE	V	VELOCITY OR DESIGN SPEED
FO	FIBEROPTIC	VAR	VARIABLE
FP	FENCE POST	VC	VERTICAL CURVE
FT	FOOT	VPC	VERTICAL POINT OF CURVE
GAL	GALLON	VPI	VERTICAL POINT OF INTERSECTION
HMA	HOT MIX ASPHALT	VPT	VERTICAL POINT OF TANGENCY
ID	INSIDE DIAMETER	W	WATER
INV	INVERT	WB	WESTBOUND
IP	IRON PIPE OR PIN	X	EAST GRID COORDINATE
JCT	JUNCTION	Y	NORTH GRID COORDINATE
L	LENGTH		

GENERAL NOTES

THE ALIGNMENT IN THIS PLAN IS BASED ON FIELD SURVEY SHOTS TAKEN ON THE CENTERLINE AND/OR EDGELINE. ACTUAL ROADWAY CENTERLINE MAY DEVIATE FROM THE PLAN. NEW HMA PAVEMENT SHALL FOLLOW EXISTING ROADWAY CENTERLINE. ANY ADJUSTMENTS SHALL BE INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.

IF THE CONCRETE BASE PATCHING, CURB AND GUTTER REPLACEMENT, CLEAN AND PATCH, LONGITUDINAL JOINT REPAIR, OR HMA PAVEMENT WILL IMPACT ANY TRAFFIC SIGNAL LOOPS, PULLBOXES, OR TRAFFIC COUNTER LOOPS WITHIN THE PROJECT LIMITS, CITY OF MANITOWOC ELECTRICIANS SHALL PERFORM THE REPLACEMENTS. CONTACT THE CITY OF MANITOWOC (MARK DEZEEUW) AT 920-374-0034 TWO WEEKS PRIOR TO OPERATIONS THAT MAY AFFECT THE LOOPS.

ELEVATIONS ON THIS PLAN ARE REFERENCED TO NAVD 88.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF ALL LANDMARKS, BENCHMARKS, AND OTHER CONTROL POINTS IN ALL AREAS WHERE SUCH LANDMARKS, BENCHMARKS, OR OTHER CONTROL POINTS MAY EXIST.

THE CONTRACTOR SHALL PROTECT ALL SURVEY MARKERS. SURVEY MARKERS SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

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

PAVING LIMITS ON THE PLAN ARE APPROXIMATE. ACTUAL PAVING LIMITS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL WASTE MATERIAL RESULTING FROM THE VARIOUS CONSTRUCTION OPERATIONS SHALL BE ENTIRELY REMOVED AND PROPERLY DISPOSED OF IMMEDIATELY OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESHAPING AND RESTORATION (INCLUDING, BUT NOT LIMITED TO, SEED, FERTILIZER, MULCH, AND EROSION MAT) OF ANY DISTURBED AREAS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AS DETERMINED BY THE ENGINEER.

EROSION CONTROL ITEMS ARE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

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

APPROX. SIGN LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. PROPER PLACEMENT OF THE SIGNS (ELEVATION, OFFSET, LEVEL, AND ORIENTATION) IS THE RESPONSIBILITY OF THE CONTRACTOR.

DETAILS OF CONSTRUCTION NOT SHOWN ON THE PLAN SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

MUNICIPAL CONTACTS

MANITOWOC COUNTY HIGHWAY DEPARTMENT
GARY KENNEDY - COMMISSIONER
3500 STATE HWY 310
MANITOWOC, WI 54220-9659
TELEPHONE: (920) 683-4345
FAX: (920) 683-4366
EMAIL: garykennedy@co.manitowoc.wi.us

CITY OF MANITOWOC
DIRECTOR OF PUBLIC WORKS
VALERIE MELLON, P.E.
900 QUAY ST.
MANITOWOC, WI 54220
TELEPHONE: (920) 686-6910
FAX: (920) 686-6906
EMAIL: vmellon@manitowoc.org

MANITOWOC COUNTY HIGHWAY DEPARTMENT
JOHN KROPP - SURVEY
3500 STATE HWY 310
MANITOWOC, WI 54220-9659
TELEPHONE: (920) 683-4348
FAX: (920) 683-4366
EMAIL: johnkropp@co.manitowoc.wi.us

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: MATT SCHAEVE
2984 SHAWANO AVE
GREEN BAY, WI 54313
TELEPHONE: (920) 662-5472
EMAIL: matthewschaeve@wisconsin.gov

UTILITY CONTACTS

AT&T WISCONSIN – COMMUNICATION LINE
ATTN: KARI JENSEN
205 SOUTH JEFFERSON STREET
GREEN BAY, WI 54301
TELEPHONE: (920) 433-4112
EMAIL: junkbox2082@sbcglobal.net

AMERICAN TRANSMISSION COMPANY, LLC - ELECTRIC TRANSMISSION
ATTN: MIKE OLSEN
801 O'KEEFE RD
P.O. BOX 6113
DE PERE, WI 54115-6113
TELEPHONE: (920) 338-6582
CELL PHONE: (920) 660-2390
EMAIL: molsen@atllc.com

CITY OF MANITOWOC – SANITARY SEWER
ATTN: GREG MINIKEL
900 QUAY STREET
MANITOWOC, WI 554220
PHONE: (920) 686-6910
CELL PHONE: (920) 374-0411
EMAIL: gminikel@manitowoc.org

CITY OF MANITOWOC – TRAFFIC SIGNALS AND LOOP DETECTORS
ATTN: GREG MINIKEL
900 QUAY STREET
MANITOWOC, WI 554220
PHONE: (920) 686-6910
CELL PHONE: (920) 374-0411
EMAIL: gminikel@manitowoc.org

COMCAST - COMMUNICATION LINE
ATTN: DAVID HOWARTH
P.O. BOX 429
MANITOWOC, WI 54221-0429
TELEPHONE: (920) 482-5563
CELL PHONE: (920) 374-0292
EMAIL: david_howarth@cable.comcast.com

MANITOWOC PUBLIC UTILITIES – ELECTRIC / FIBER OPTICS
ATTN: STEVE BACALZO
P.O. BOX 1090
MANITOWOC, WI 54221-1090
TELEPHONE: (920) 686-4310
EMAIL: sbacalzo@mpu.org

MANITOWOC PUBLIC UTILITIES - WATER
ATTN: ROBERT MICHAELSON
1303 SOUTH 8TH ST
P.O. BOX 1090
MANITOWOC, WI 54221-1090
TELEPHONE: (920) 686-4354
CELL PHONE: (920)374-0959
EMAIL: rmichaelson@mpu.org

PAETEC – COMMUNICATION LINE
ATTN: JOHN LOUIS
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
TELEPHONE: (414) 831-5041
CELL PHONE: (414) 305-0332
EMAIL: john.louis@windstream.com

TRANS CANADA – GAS / PETROLEUM
ATTN: STEVE WHITTY
W8715 TOWER DRIVE
ADELL, WI 53001
TELEPHONE: (262) 626-3441
CELL PHONE: (920) 375-0475
EMAIL: steven_whitty@transcanada.com

WISCONSIN PUBLIC SERVICE CORPORATION - GAS
ATTN: JERRY PEOT
800 COLUMBUS STREET
TWO RIVERS, WI 54241
TELEPHONE: (920) 657-1815
CELL PHONE: (920) 655-0522
EMAIL: gjpeot@wisconsinpublicservice.com

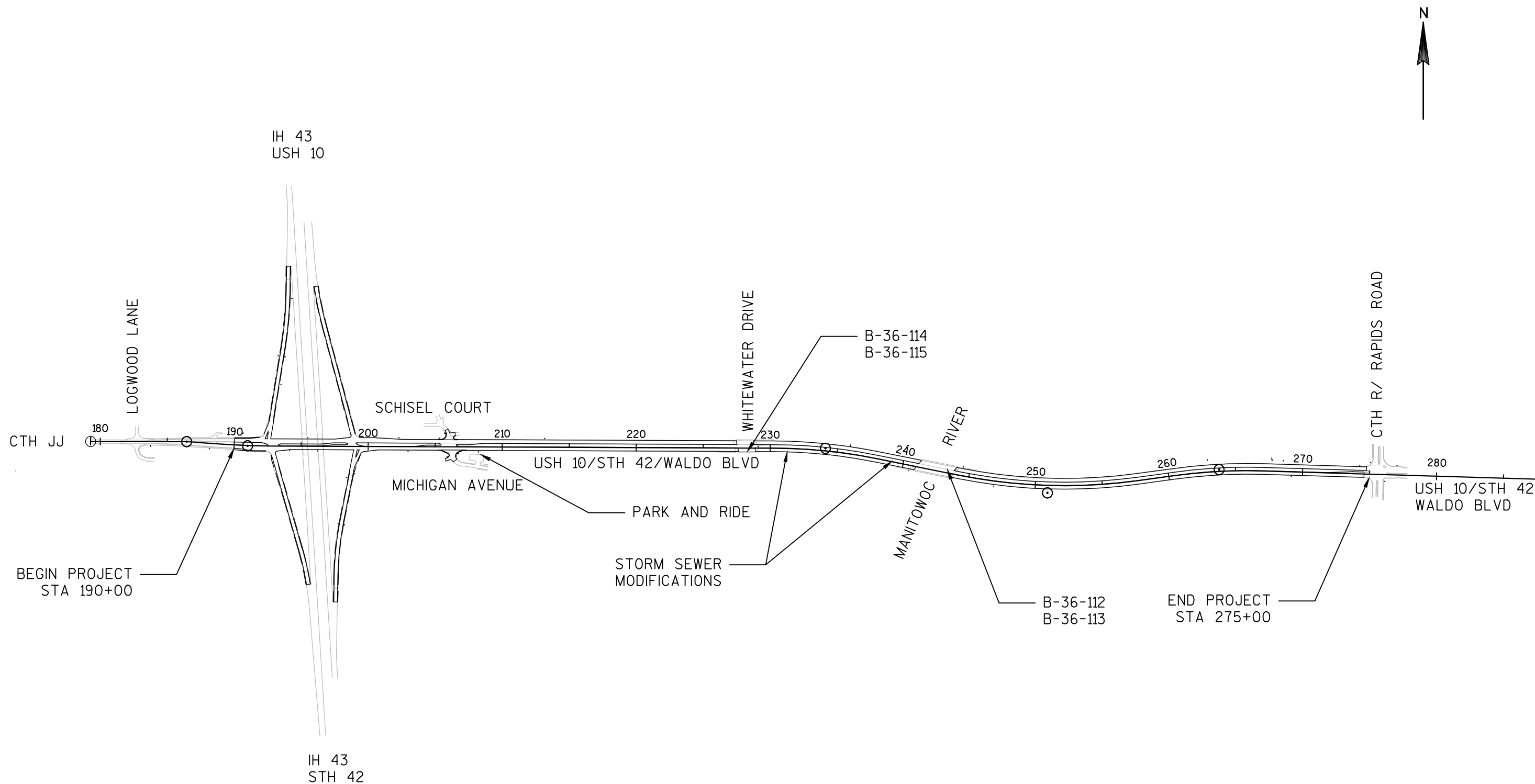
WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRIC
ATTN: JEFF PELISCHEK
800 COLUMBUS STREET
TWO RIVERS, WI 54241
TELEPHONE: (920) 657-1816
CELL PHONE: (920) 323-4836
EMAIL: jspelischek@wisconsinpublicservice.com

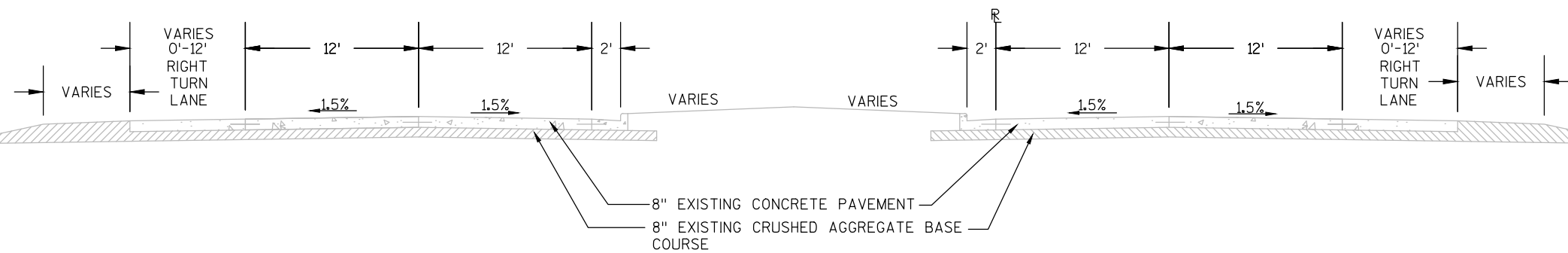


CALL 811 3 WORK DAYS BEFORE YOU DIG
OR TOLL FREE (800) 242-8511
HEARING IMPAIRED TDD (800) 542-2289
www.DiggersHotline.com

CALL DIGGERS HOTLINE
TO OBTAIN LOCATION OF
PARTICIPANTS' UNDERGROUND
FACILITIES BEFORE YOU DIG.

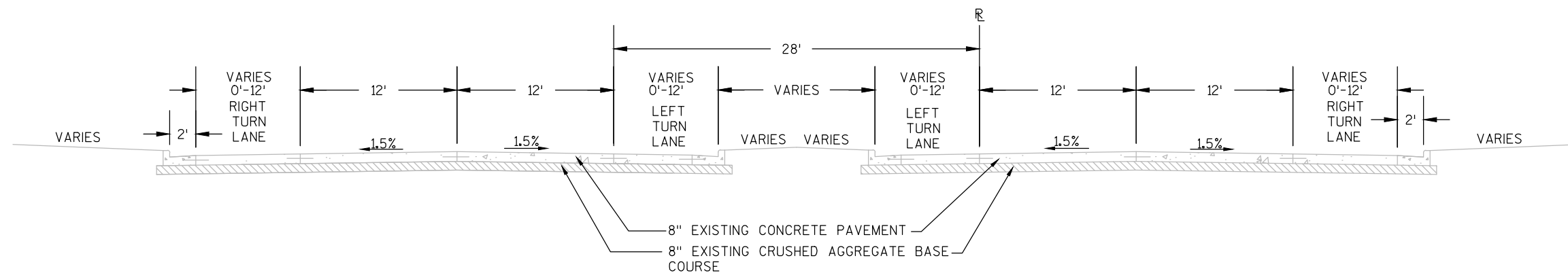
WISCONSIN STATUTE 182.0175
REQUIRES MINIMUM OF 3
WORKING DAYS NOTICE BEFORE
YOU EXCAVATE





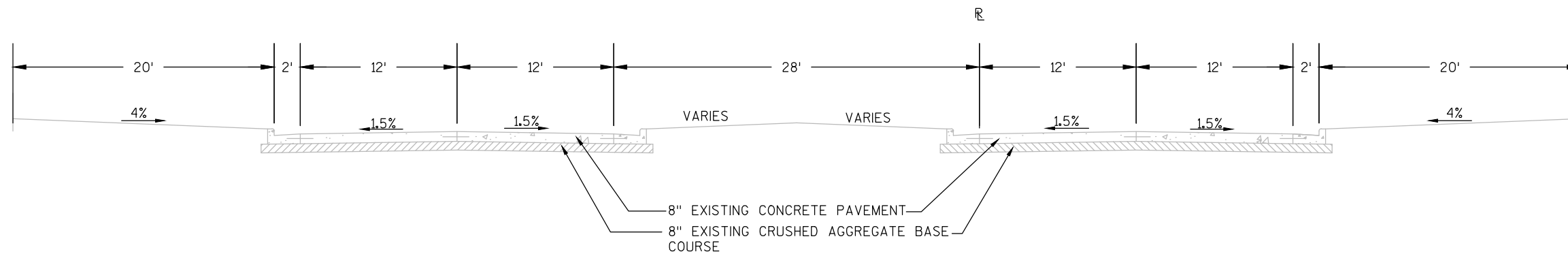
EXISTING USH 10 TYPICAL SECTION

STA 190+00 TO STA 192+50



EXISTING USH 10 TYPICAL SECTION

STA 192+50 TO STA 209+18

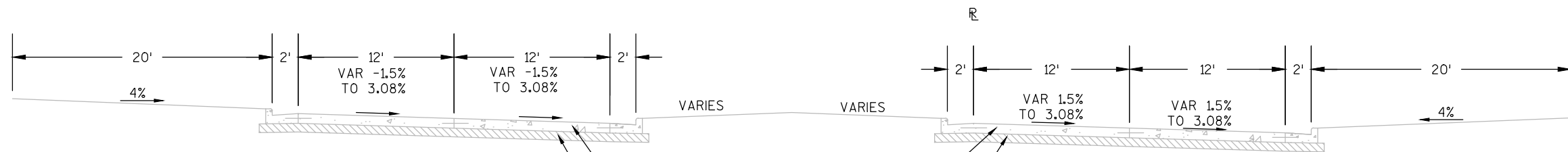


EXISTING USH 10 TYPICAL SECTION

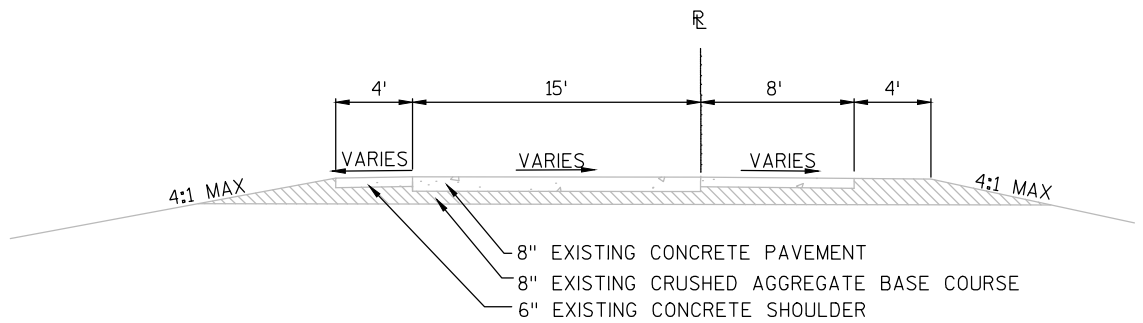
STA 209+18	TO	STA 228+23.01
STA 238+97.38	TO	STA 242+21.23
STA 269+07.07	TO	STA 275+00

LEGEND

-  CONCRETE PAVEMENT
-  CRUSHED AGGREGATE BASE COURSE
-  ASPHALTIC PAVEMENT
-  CRUSHED AGGREGATE BASE COURSE (SHOULDERS)
-  TOPSOIL

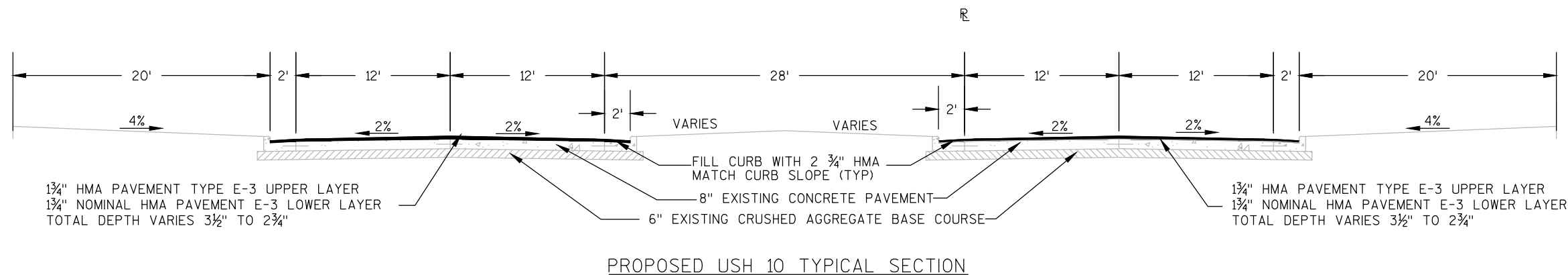
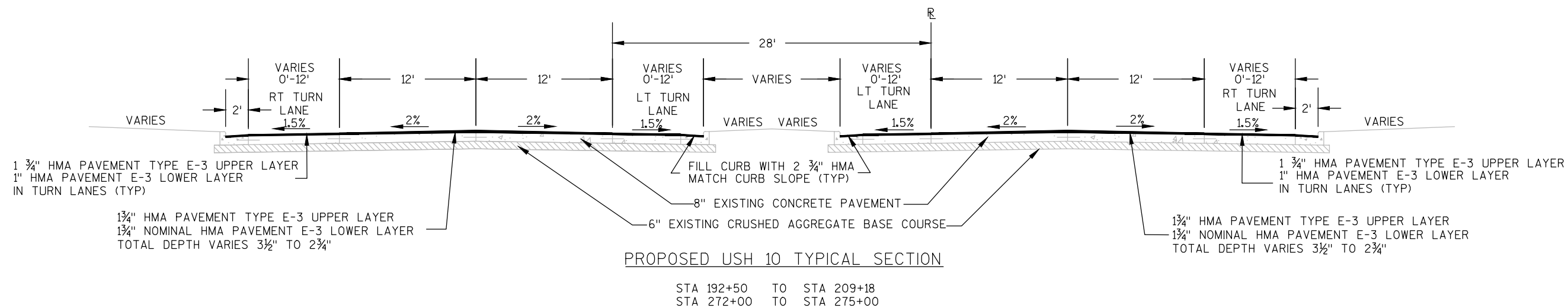
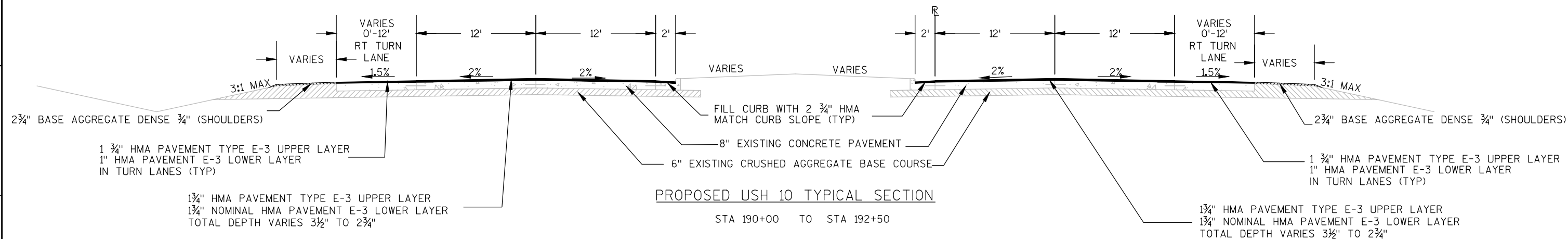


8" EXISTING CONCRETE PAVEMENT
6" EXISTING CRUSHED AGGREGATE BASE COURSE
EXISTING USH 10 SUPERELEVATED
TYPICAL SECTION
STA 228+23.01 TO STA 239+97.38
STA 242+21.23 TO STA 259+00 (REVERSED)
STA 259+00 TO STA 269+07.07



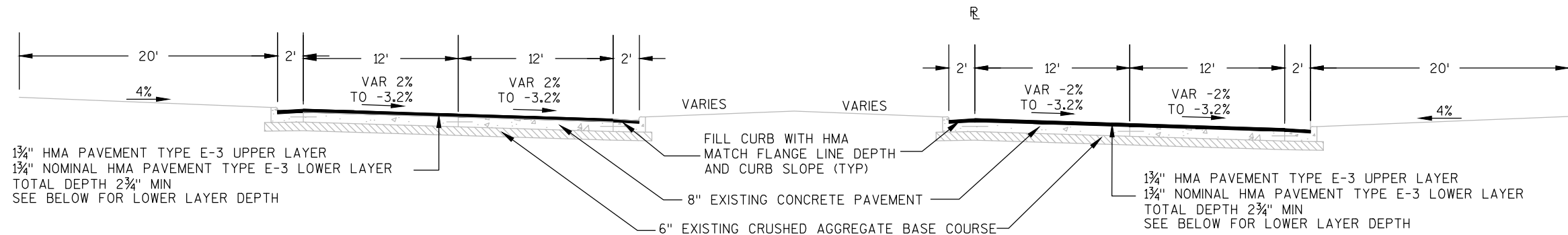
EXISTING RAMP TYPICAL SECTION
RAMP SW (REVERSED)
RAMP SE (REVERSED)
RAMP NW
RAMP NE

- LEGEND
- CONCRETE PAVEMENT
 - CRUSHED AGGREGATE BASE COURSE
 - ASPHALTIC PAVEMENT
 - CRUSHED AGGREGATE BASE COURSE (SHOULDERS)
 - TOPSOIL



LEGEND

EXIST	PROP	
		CONCRETE PAVEMENT
		BASE AGGREGATE DENSE
		HMA PAVEMENT
		BASE AGGREGATE DENSE (SHOULDERS)
		TOPSOIL



LEGEND

EXIST	PROP	
		CONCRETE PAVEMENT
		BASE AGGREGATE DENSE
		HMA PAVEMENT
		BASE AGGREGATE DENSE (SHOULDERS)
		TOPSOIL

PROPOSED USH 10 SUPERELEVATED
TYPICAL SECTION

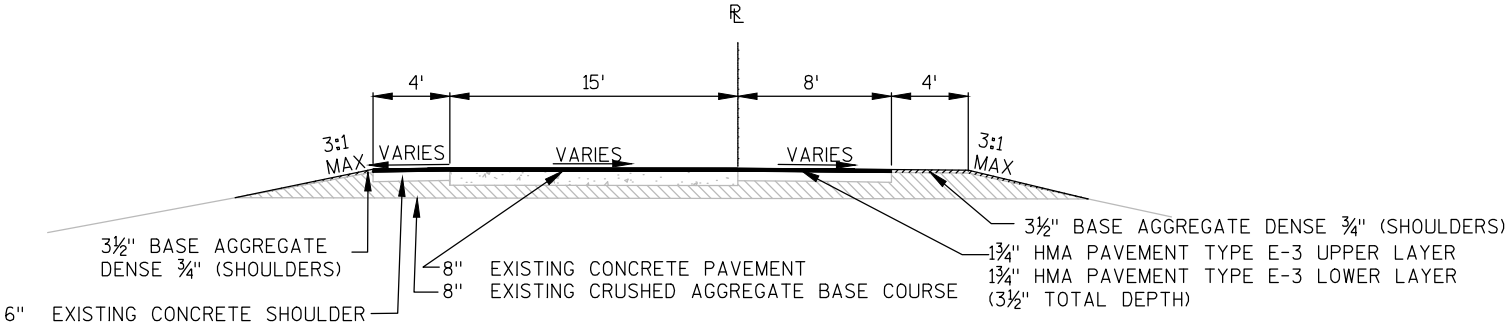
STA 228+23.01	TO	STA 239+97.38
STA 242+21.23	TO	STA 259+00 (REVERSED)
STA 259+00	TO	STA 269+07.07

CURVE 1 ENTRY	CURVE 1 EXIT	CURVE 2 ENTRY	TRANSITION CURVE 2 TO CURVE 3	CURVE 3 EXIT
END NORMAL CROWN STA 228+23.01 1.00" 2% 1.72" 2% 1.00" 1.5% 1.5%	REVERSE CROWN STA 237+97.38 2.44" 2% 1.72" 2% 1.00" 1.5% 1.5%	END NORMAL CROWN STA 242+21.23 1.00" 2% 1.72" 2% 1.00" 1.5% 1.5%	REVERSE CROWN STA 257+58.33 1.00" 2% 1.72" 2% 2.44" 1.5% 1.5%	FULL SUPER STA 261+28.71 - STA 266+27.07 1.89" 3.2% 1.72" 3.2% 1.55" 3.08% 3.08%
END TANGENT RUNOUT STA 229+23.01 1.72" 0% 1.72" 2% 1.00" 0% 1.5%	BEGIN RUNOUT STA 238+97.38 1.72" 0% 1.72" 2% 1.00" 0% 1.5%	END TANGENT RUNOUT STA 243+21.23 1.00" 2% 1.72" 0% 1.72" 1.5% 0%	STA 259+00 1.72" 0% 1.72" 0% 1.72" 0% 0%	REVERSE CROWN STA 267+07.07 2.44" 2% 1.72" 2% 1.00" 1.5% 1.5%
REVERSE CROWN STA 230+23.01 2.44" 2% 1.72" 2% 1.00" 1.5% 1.5%	RESUME NORMAL CROWN STA 239+97.38 1.00" 2% 1.72" 2% 1.00" 1.5% 1.5%	REVERSE CROWN STA 244+21.23 1.00" 2% 1.72" 2% 2.44" 1.5% 1.5%	REVERSE CROWN STA 260+48.71 2.44" 2% 1.72" 2% 1.00" 1.5% 1.5%	BEGIN TANGENT RUNOUT STA 268+07.07 1.72" 0% 1.72" 2% 1.00" 0% 1.5%
FULL SUPER STA 231+03.01 - STA 237+17.38 1.89" 3.2% 1.72" 3.2% 1.55" 3.08% 3.08%		FULL SUPER STA 245+01.23 - STA 256+78.33 1.55" 3.2% 1.72" 3.2% 1.89" 3.08% 3.08%		RESUME NORMAL CROWN STA 269+07.07 1.00" 2% 1.72" 2% 1.00" 1.5% 1.5%

SUPERELEVATION HMA LOWER LAYER PAVEMENT DEPTHS

KEY:

DEPTH AT FLANGE LINE	DEPTH AT CROWN	DEPTH AT FLANGE LINE
SLOPE		SLOPE
EX. SLOPE		EX. SLOPE



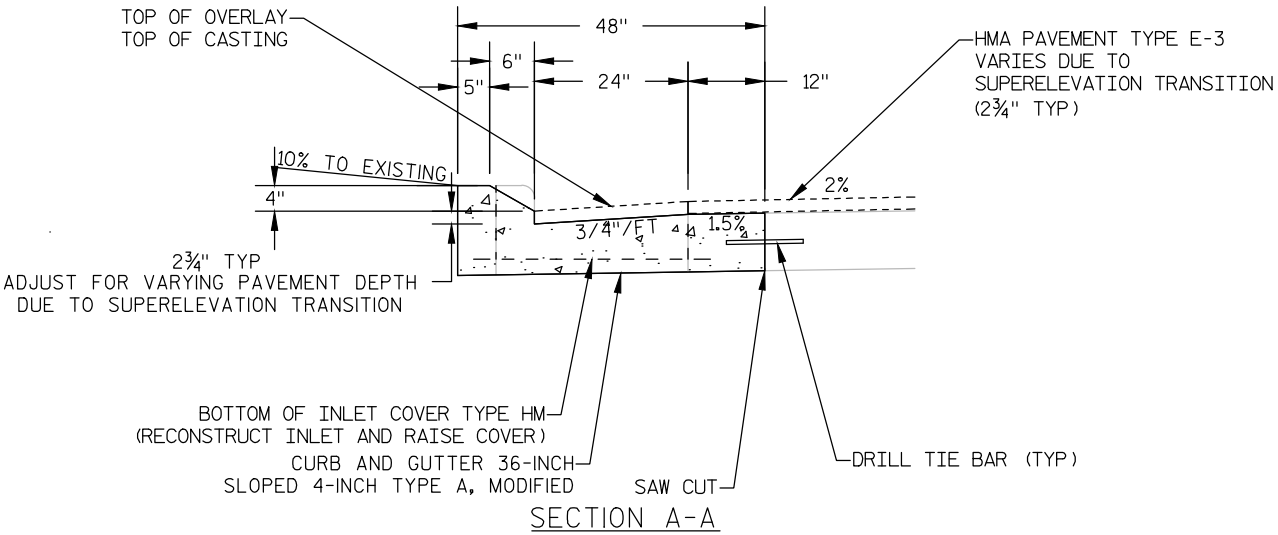
PROPOSED RAMP TYPICAL SECTION

RAMP SW (REVERSED)
RAMP SE (REVERSED)
RAMP NW
RAMP NE

LEGEND

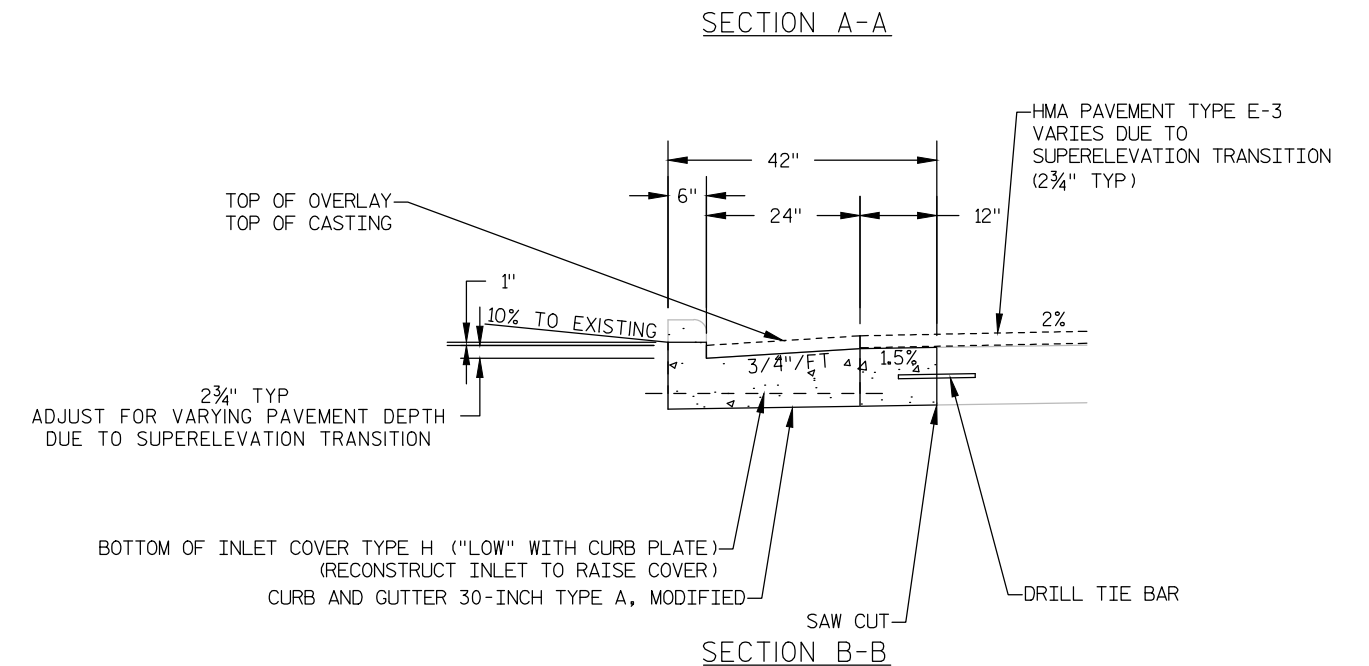
EXIST	PROP	
		CONCRETE PAVEMENT
		BASE AGGREGATE DENSE
		HMA PAVEMENT
		BASE AGGREGATE DENSE (SHOULDERS)
		TOPSOIL

2

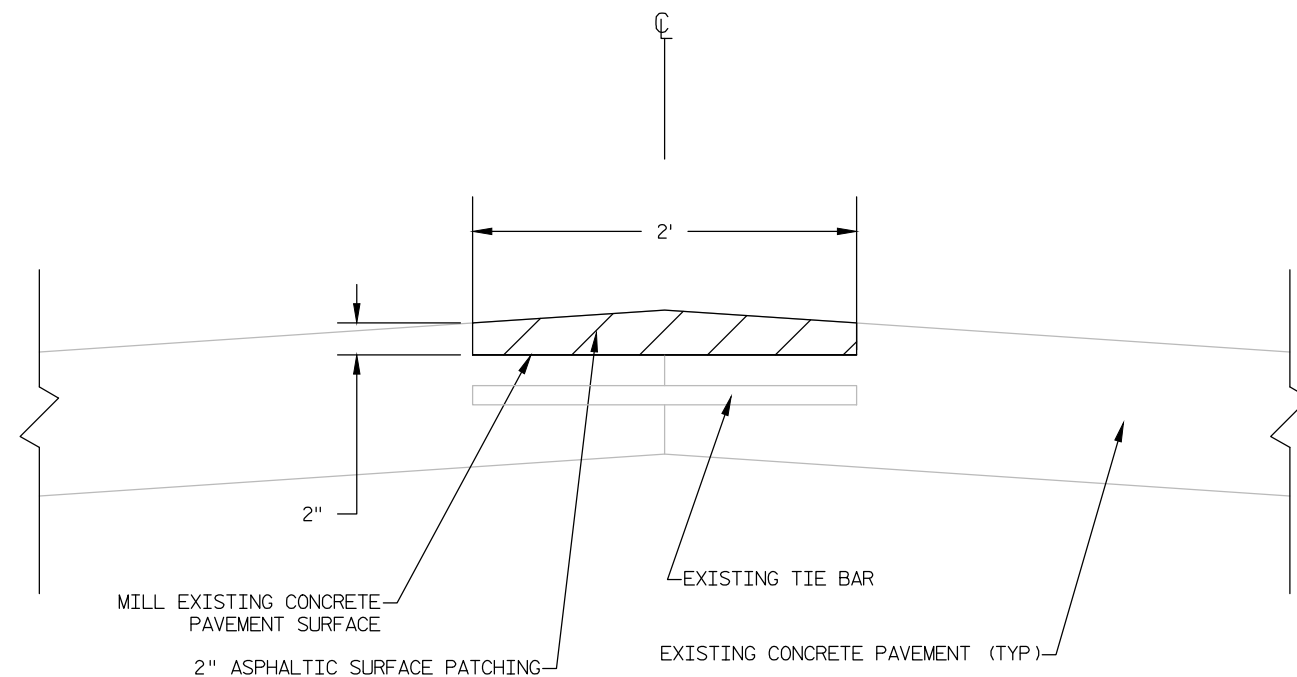


CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A, MODIFIED
(INLET COVER TYPE HM AREAS)

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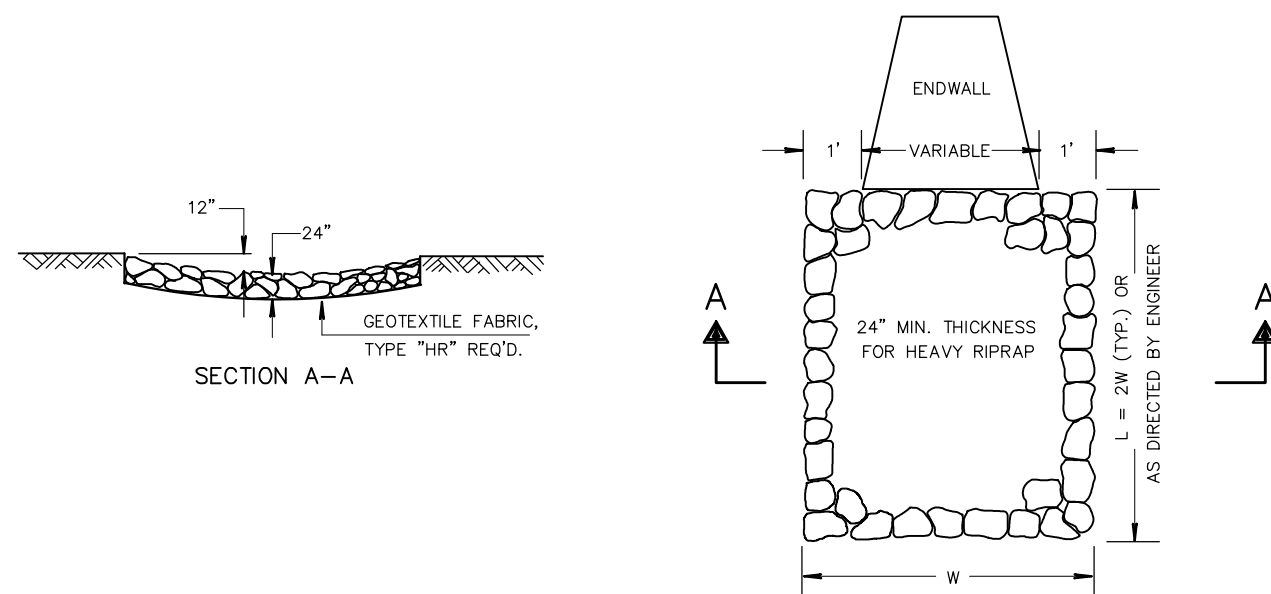


CONCRETE CURB AND GUTTER 30-INCH TYPE A, MODIFIED
(GUARDRAIL AREAS)

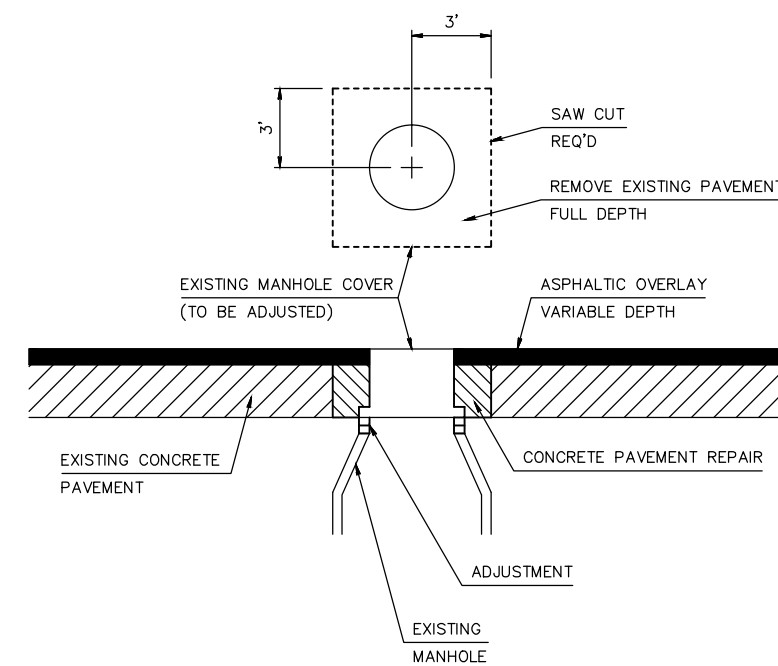


LONGITUDINAL JOINT REPAIR

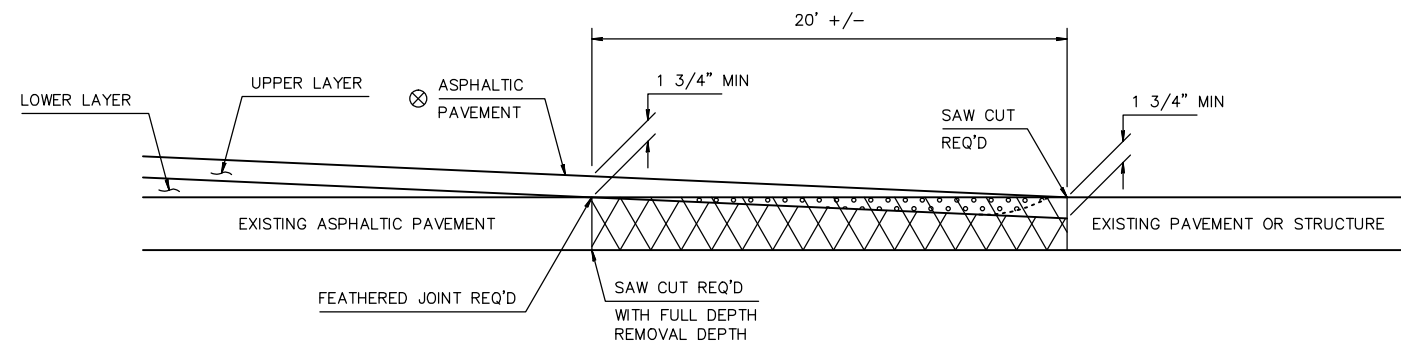
SEE PLAN SHEETS FOR LOCATIONS



HEAVY RIPRAP TREATMENT AT CULVERTS



ADJUSTING MANHOLE COVERS

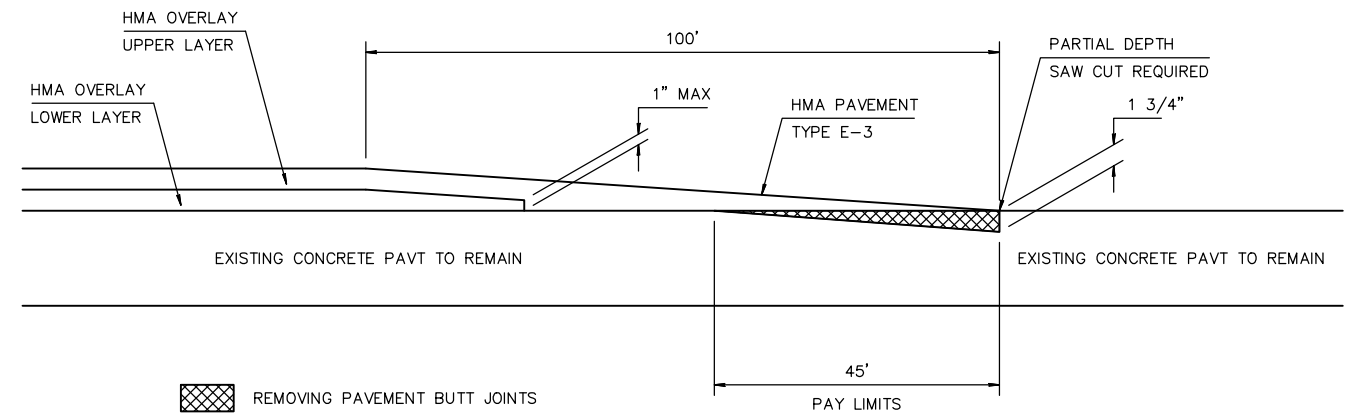


⊗ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

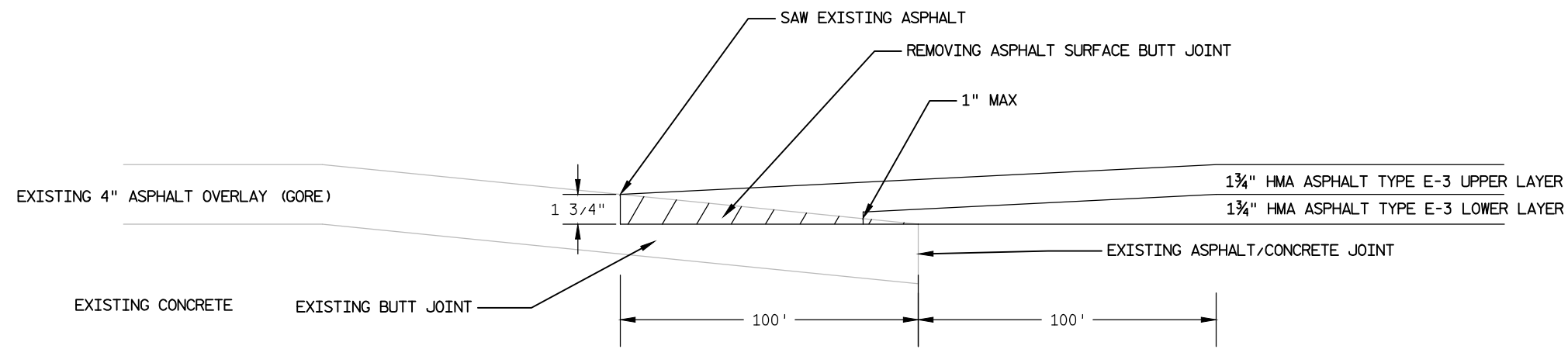
-  REMOVING ASPHALTIC SURFACE, BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)
-  ASPHALTIC WEDGING (FULL DEPTH REMOVAL OPTION)
-  REMOVING ASPHALTIC SURFACE, BUTT JOINTS (MILLING OPTION)

BUTT JOINT DETAIL FOR NON-MILLED ASPHALTIC PAVEMENTS

MICHIGAN AVE
SCHISEL CT



REMOVING PAVEMENT BUTT JOINT DETAIL AT PROJECT LIMITS AND ON APPROACH SLABS



BUTT JOINT AT RAMP GORES

PROFILE VIEW

Point #	Northing	Easting	Radius
1	307361.86	215440.87	40.0'
2	307336.94	215548.64	15.5'
3	307205.64	215484.08	18.5'
4	307200.67	215578.73	30.0'
5	307144.79	215620.89	100.0'
6	307224.62	215560.66	PCC

N

SCHISEL CT

SAW CUT

20' REMOVING ASPHALTIC
SURFACE BUTT JOINT REQ'D

ASPHALTIC FLUME

205+83.06
126.65' LT205+81.29
104.35' LT

EXISTING B.A.D.

206+49.96
80.62' LT206+67.40
52' LT205+22.67
52' LT10' CURB TRANSITION
FROM EXISTING 30" TYPE A10' CURB TRANSITION
TO EXISTING 30" TYPE A

205+00

206+00

207+00

208+00

10' CURB TRANSITION
FROM EXISTING 30" TYPE A10' CURB TRANSITION
TO EXISTING 30" TYPE A205+27.22
24' RTPCC
STA 206+63.56,
44.6' RT207+34.11
24' RT

ASPHALTIC FLUME

20' REMOVING ASPHALTIC
SURFACE BUTT JOINT REQ'D205+93.72
81.19' RTASPHALTIC
FLUME206+53.72
79.21' RT205+78+33
97.37' RT206+49.18
102.48' RT

SAW CUT

MICHIGAN AVE / SCHISEL CT INTERSECTION

MICHIGAN AVE

NOTES:

SEE PLAN SHEETS FOR BASE PATCHING AREAS

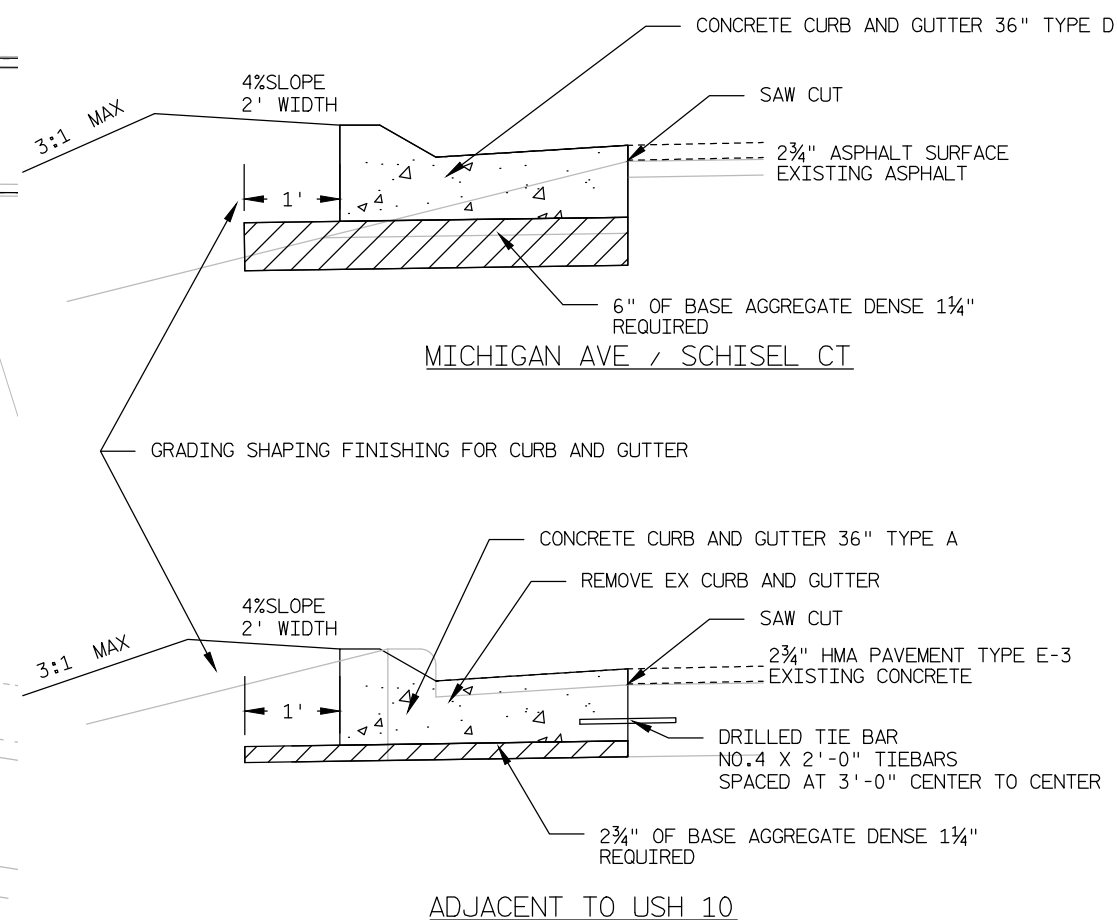
OVERLAY MAINLINE USH 10 PRIOR TO REMOVING OR INSTALLING INTERSECTION CURB

INSTALL NEW CONCRETE CURB AND GUTTER 36" TYPE A WITH FLAG LEVEL WITH TOP
OF NEW HMA

UPPER LAYER (2¾" ABOVE EX. SURFACE)

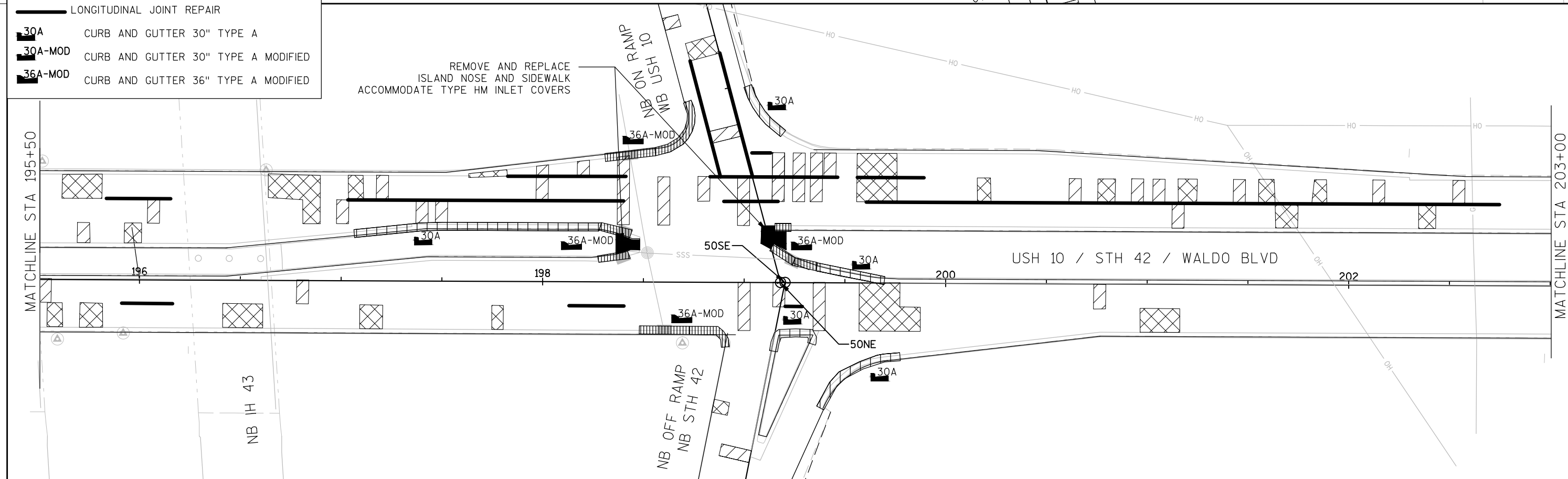
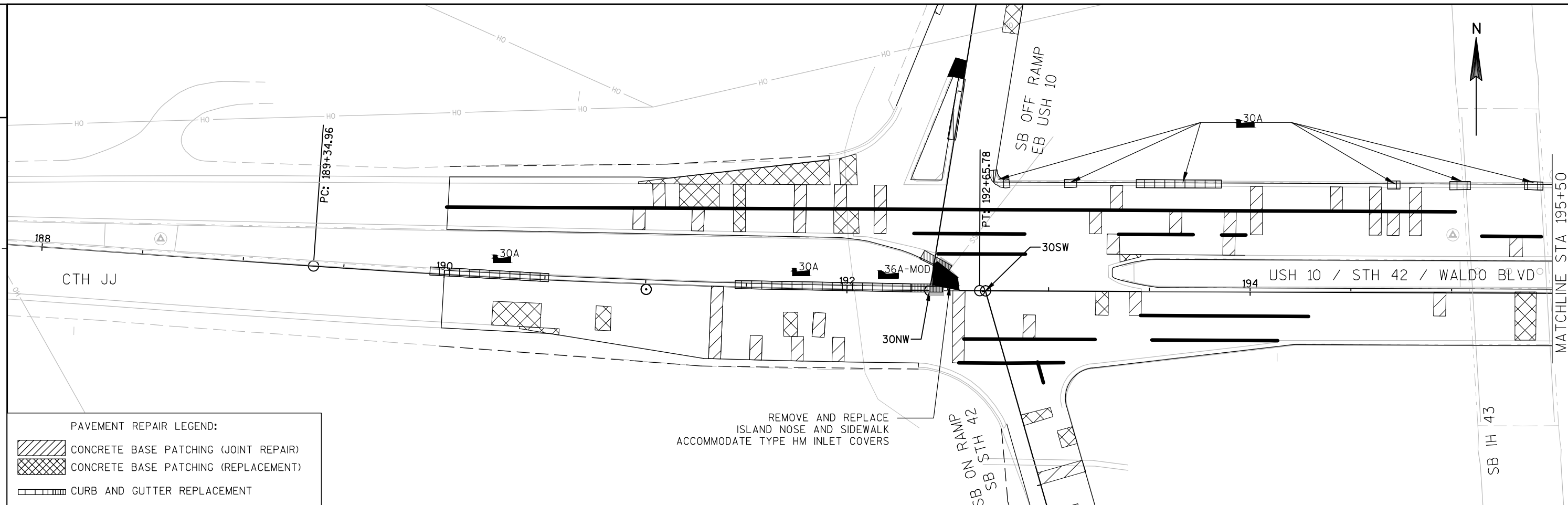
INSTALL NEW CURB AND GUTTER 36" TYPE D IN RADIUS 2¾" ABOVE EXISTING
ASPHALT SURFACEOVERLAY SIDE ROAD WITH ASPHALT SURFACE AFTER NEW CURB AND GUTTER IS
INSTALLED

ELEVATIONS WILL BE PROVIDED IN THE FIELD BY THE ENGINEER



2

2



PROJECT NO:1500-34-71

HWY: USH 10

COUNTY: MANITOWOC

PLAN DETAIL: USH 10

SHEET	14
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E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1500-34-00 (USH 10) - NE\CD\SHEETS\PLAN\021201_PD_1500-34-71.DWG PLOT DATE : 11/7/2012 1:49

PLOT DATE : 11/7/2012 1:49 PM PLOT BY : QUEST CIVIL ENG

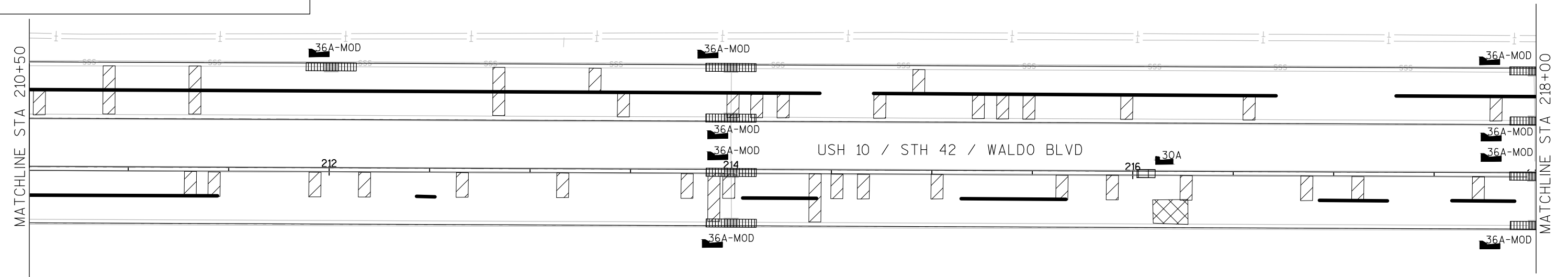
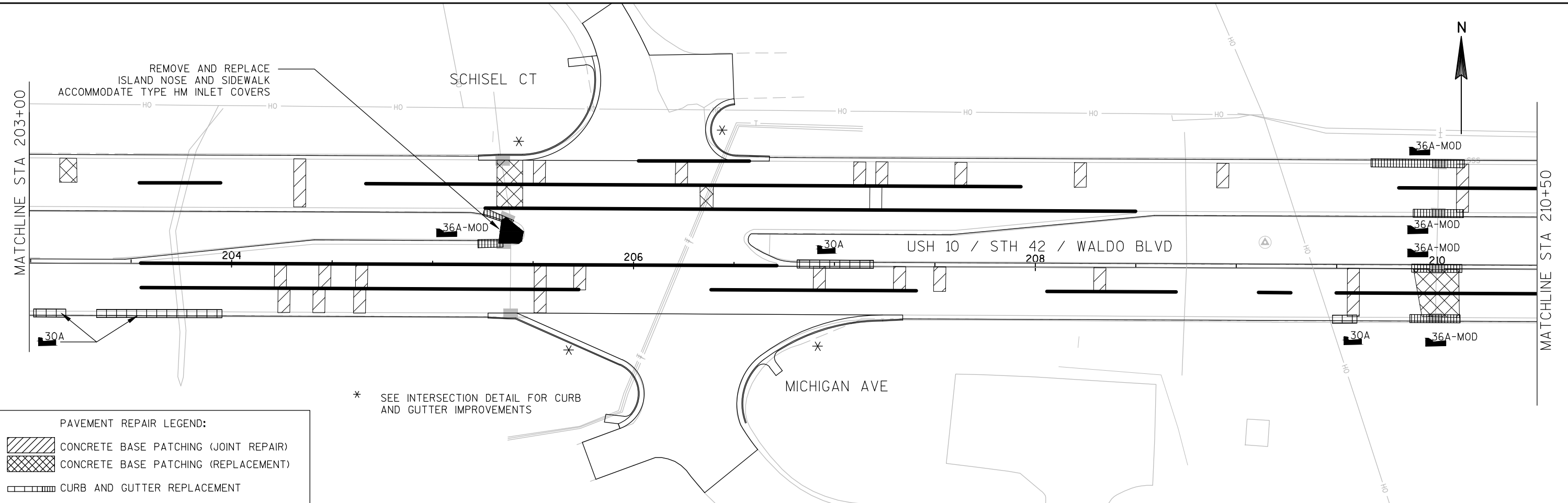
PLOT BY : QUEST CIVIL ENG PLOT NAME : _____ PLOT SCALE : 1 IN:50 FT

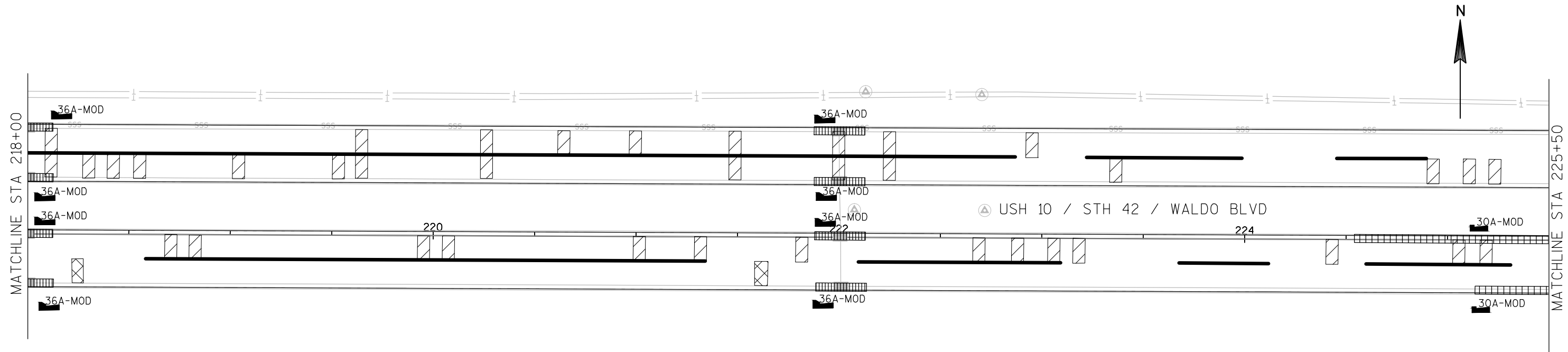
PLOT NAME : _____ PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

2

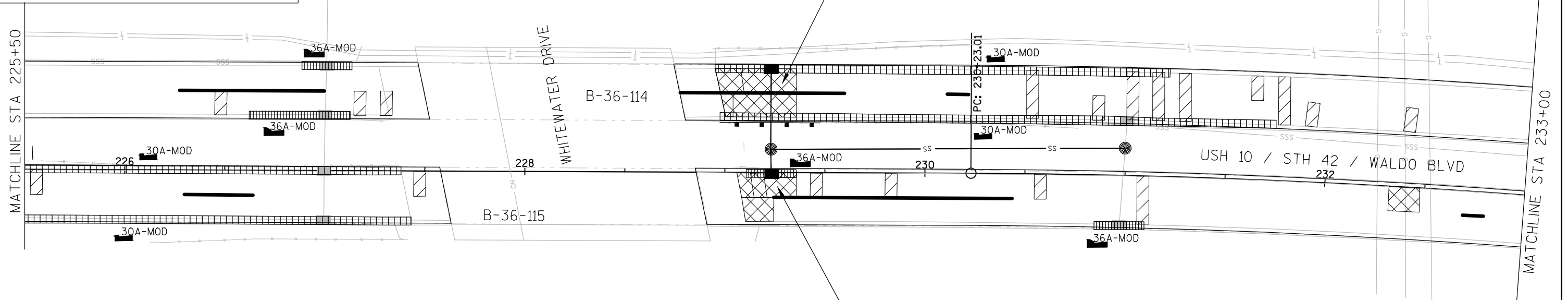
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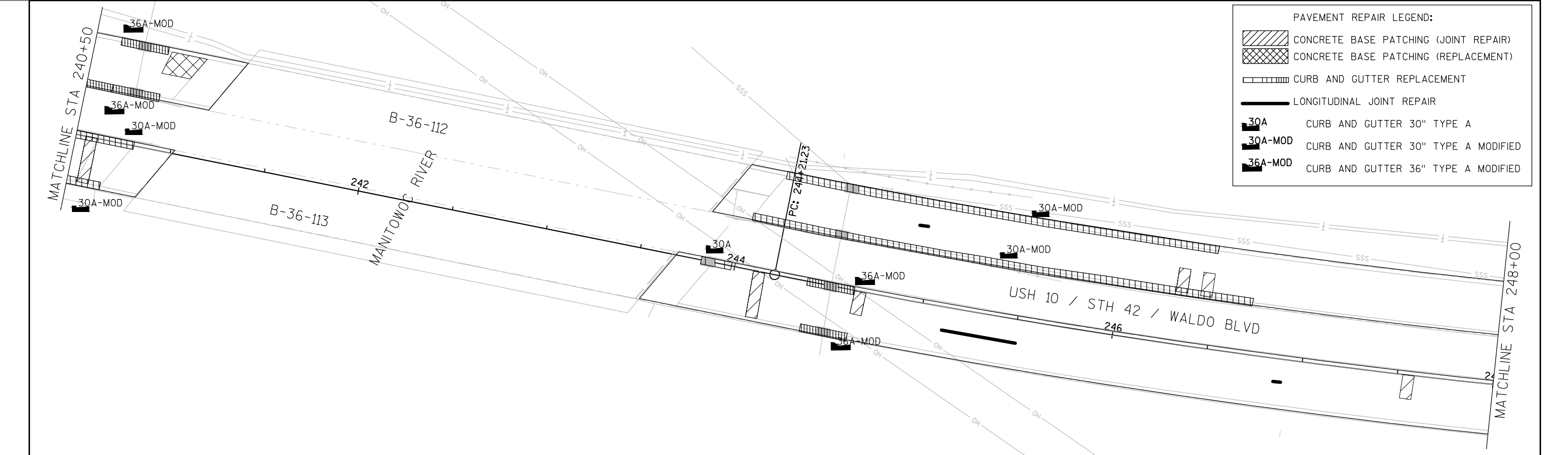
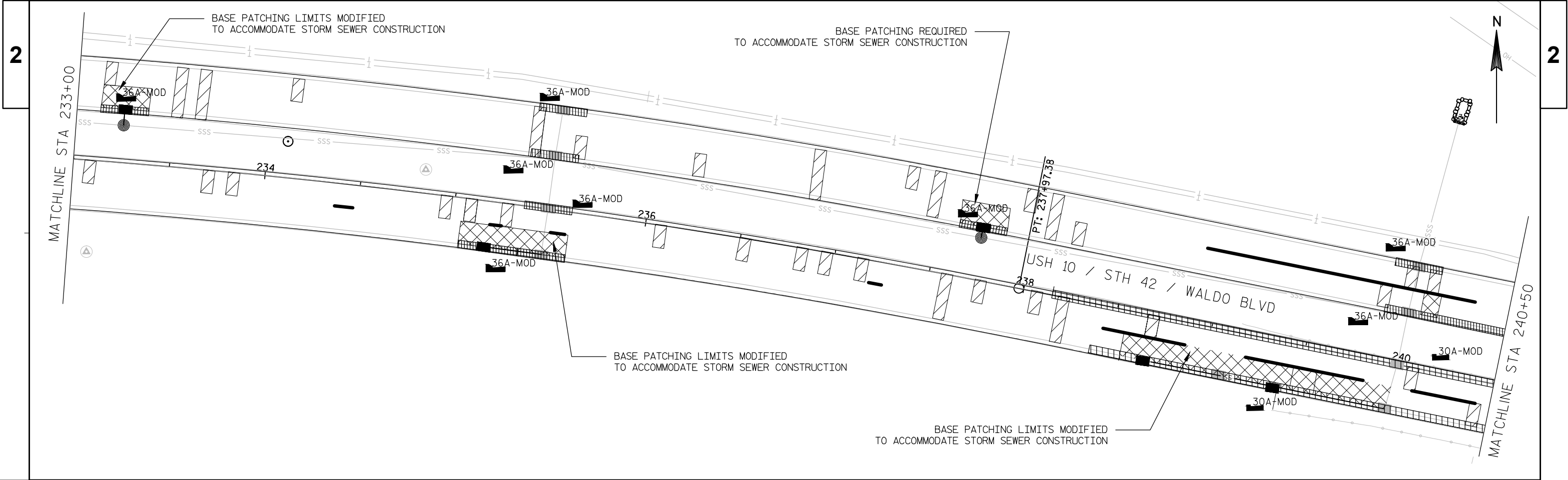




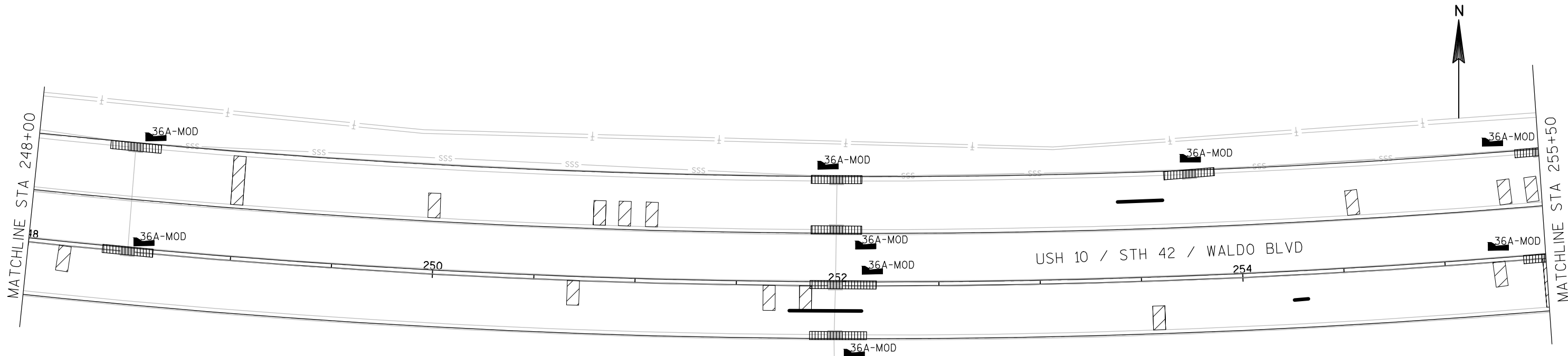
PAVEMENT REPAIR LEGEND:

- CONCRETE BASE PATCHING (JOINT REPAIR)
- CONCRETE BASE PATCHING (REPLACEMENT)
- CURB AND GUTTER REPLACEMENT
- LONGITUDINAL JOINT REPAIR
- 30A CURB AND GUTTER 30" TYPE A
- 30A-MOD CURB AND GUTTER 30" TYPE A MODIFIED
- 36A-MOD CURB AND GUTTER 36" TYPE A MODIFIED



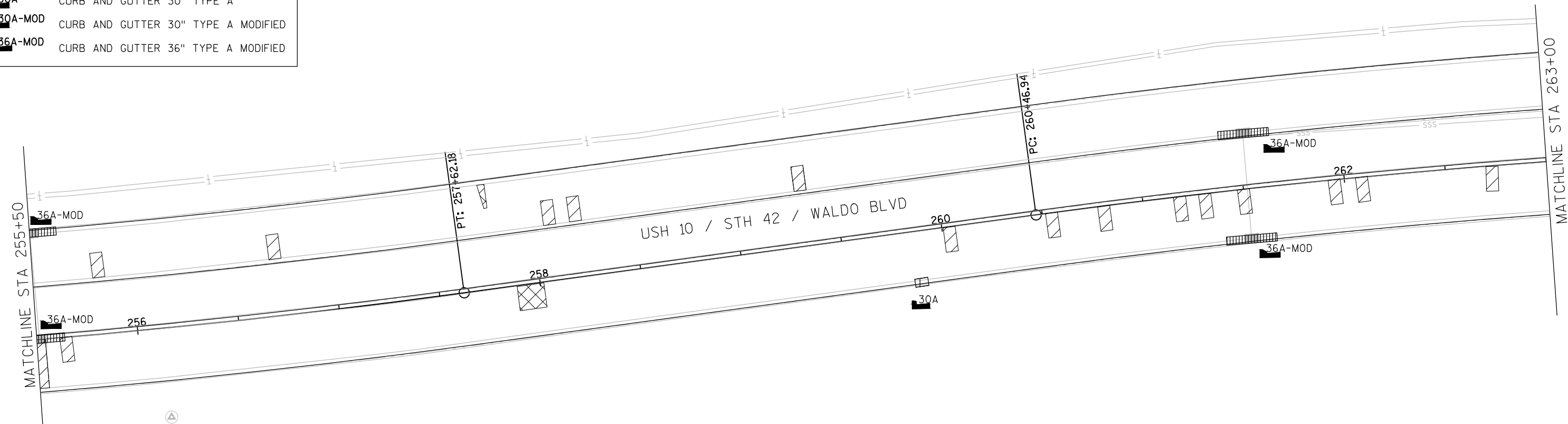


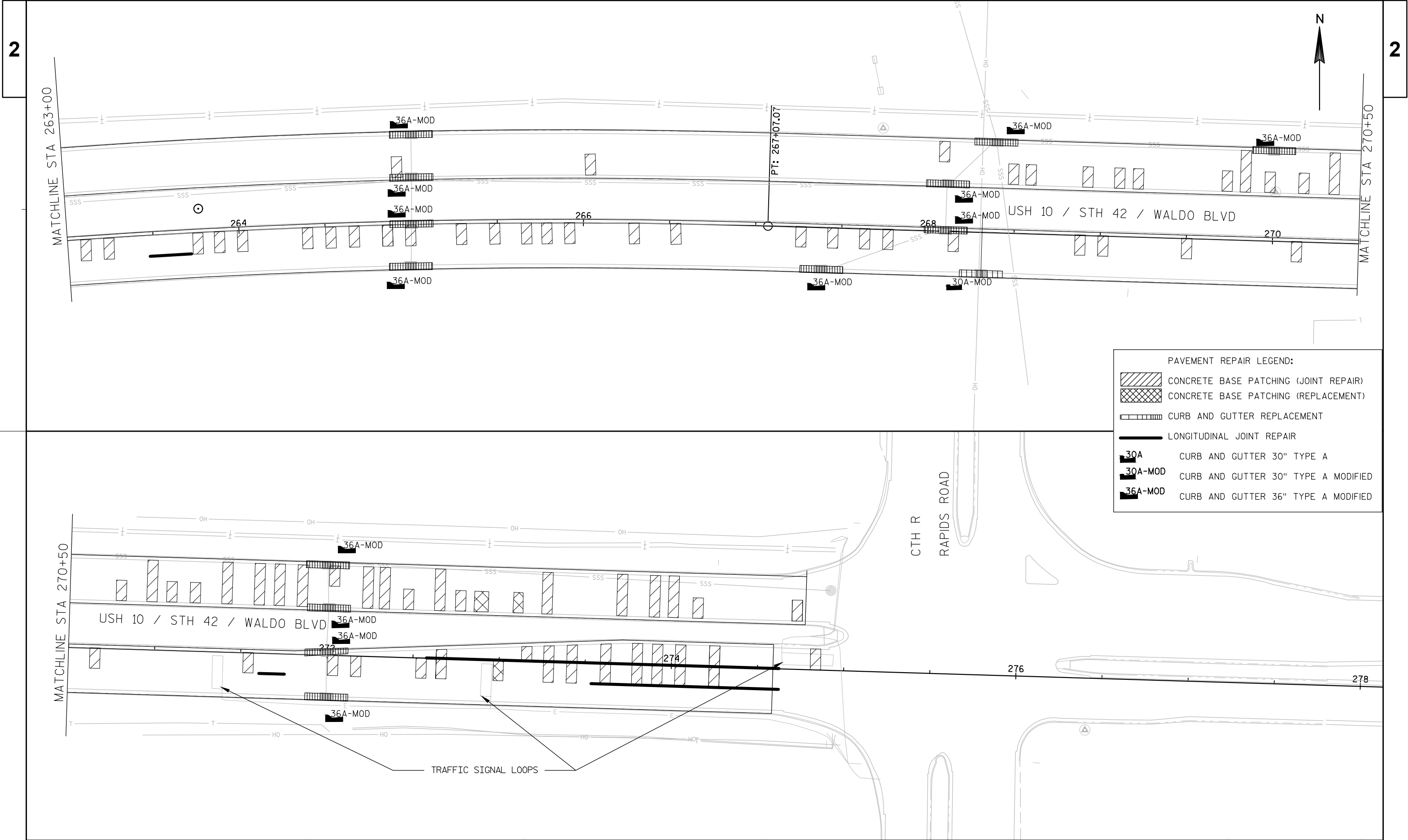
PAVEMENT REPAIR LEGEND:	
	CONCRETE BASE PATCHING (JOINT REPAIR)
	CONCRETE BASE PATCHING (REPLACEMENT)
	CURB AND GUTTER REPLACEMENT
	LONGITUDINAL JOINT REPAIR
	CURB AND GUTTER 30" TYPE A
	CURB AND GUTTER 30" TYPE A MODIFIED
	CURB AND GUTTER 36" TYPE A MODIFIED

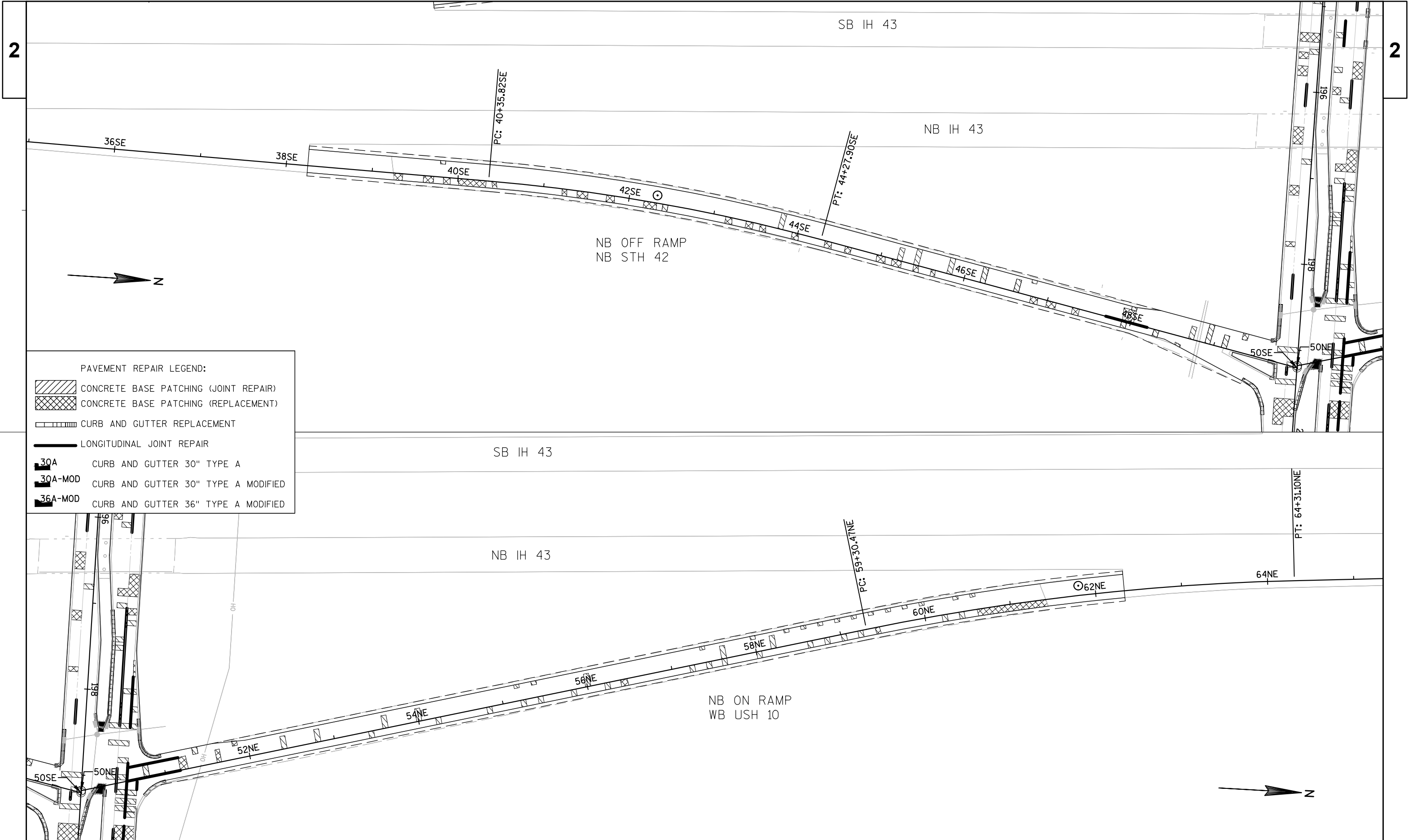


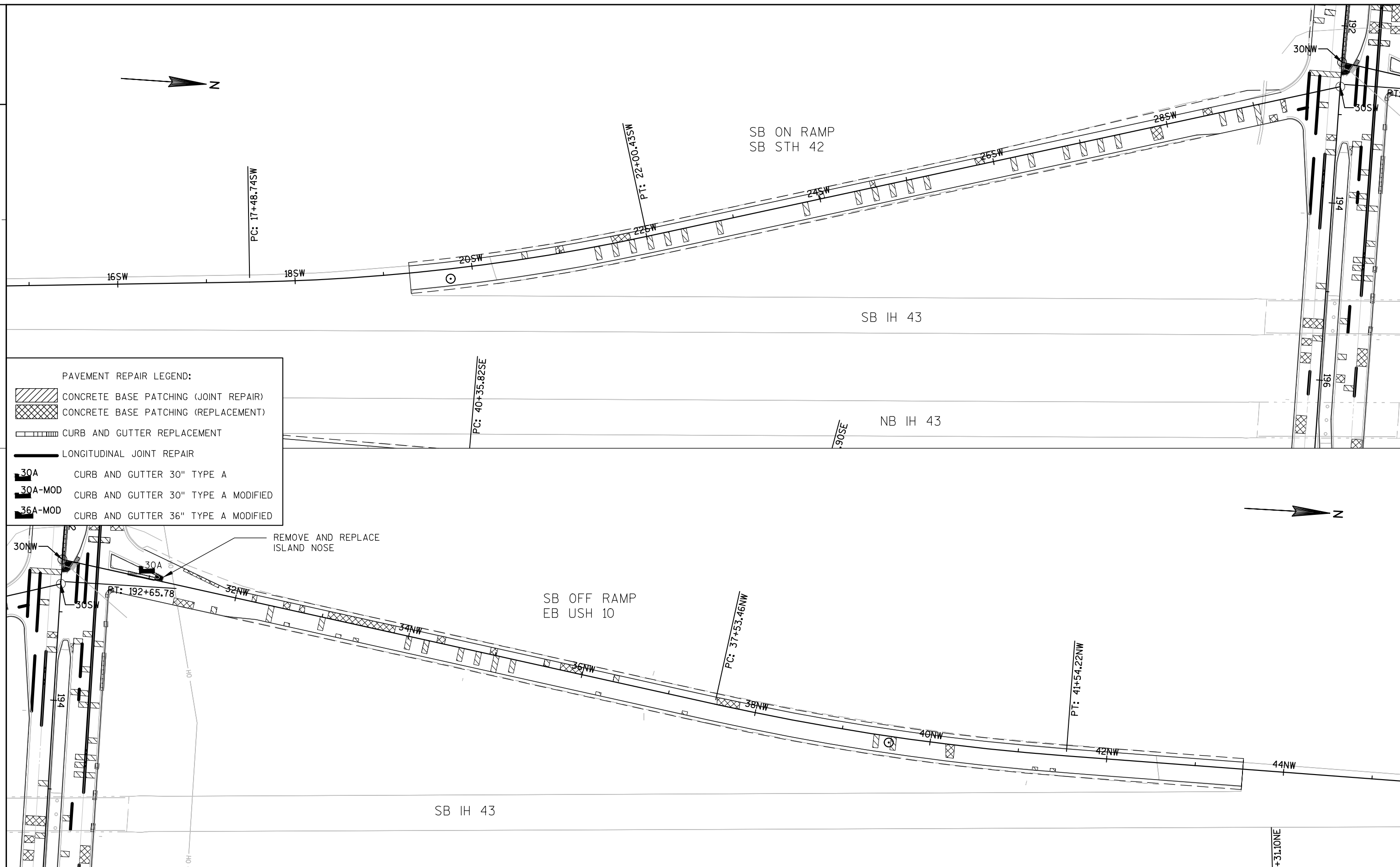
PAVEMENT REPAIR LEGEND:

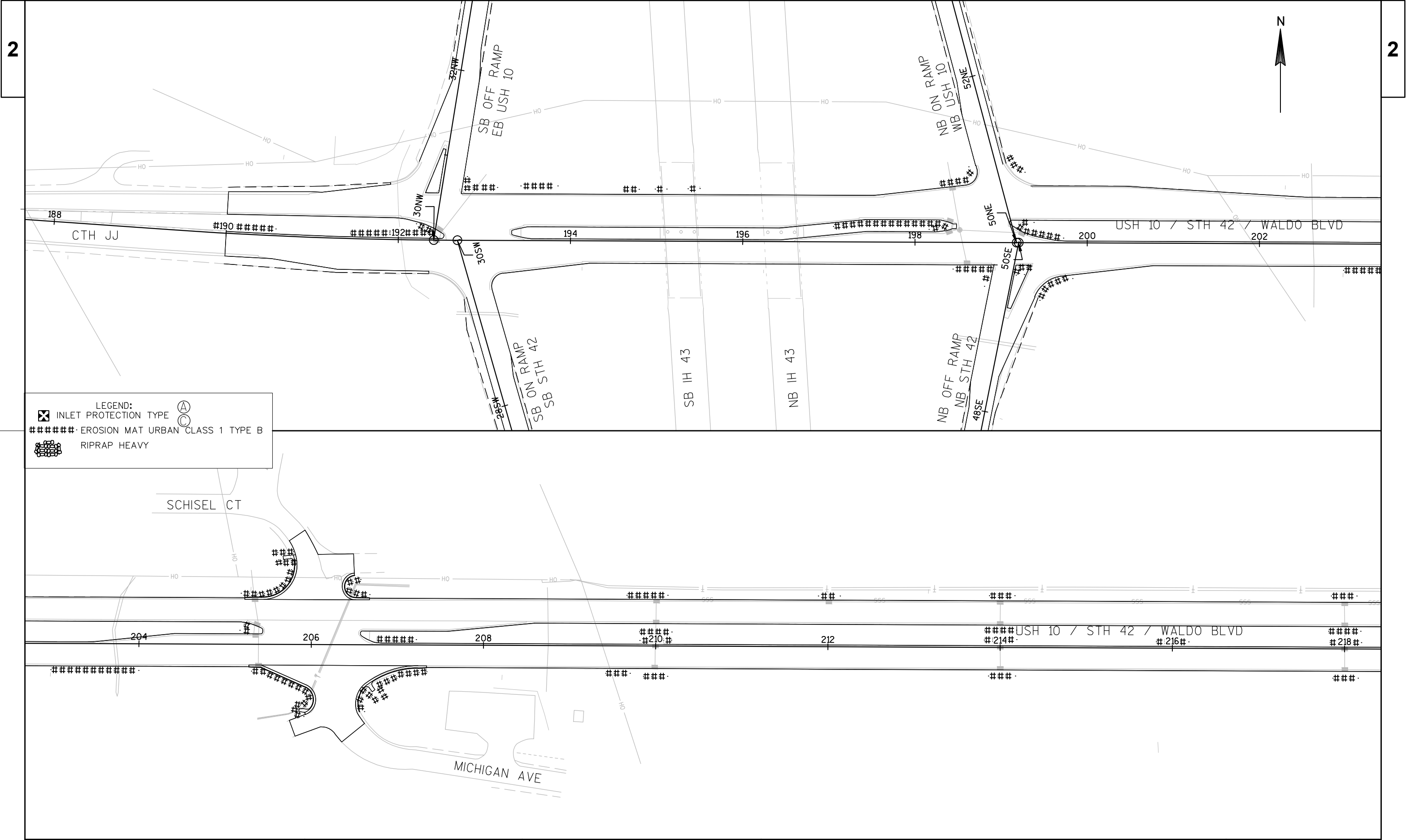
- CONCRETE BASE PATCHING (JOINT REPAIR)
- CONCRETE BASE PATCHING (REPLACEMENT)
- CURB AND GUTTER REPLACEMENT
- LONGITUDINAL JOINT REPAIR
- 30A CURB AND GUTTER 30" TYPE A
- 30A-MOD CURB AND GUTTER 30" TYPE A MODIFIED
- 36A-MOD CURB AND GUTTER 36" TYPE A MODIFIED









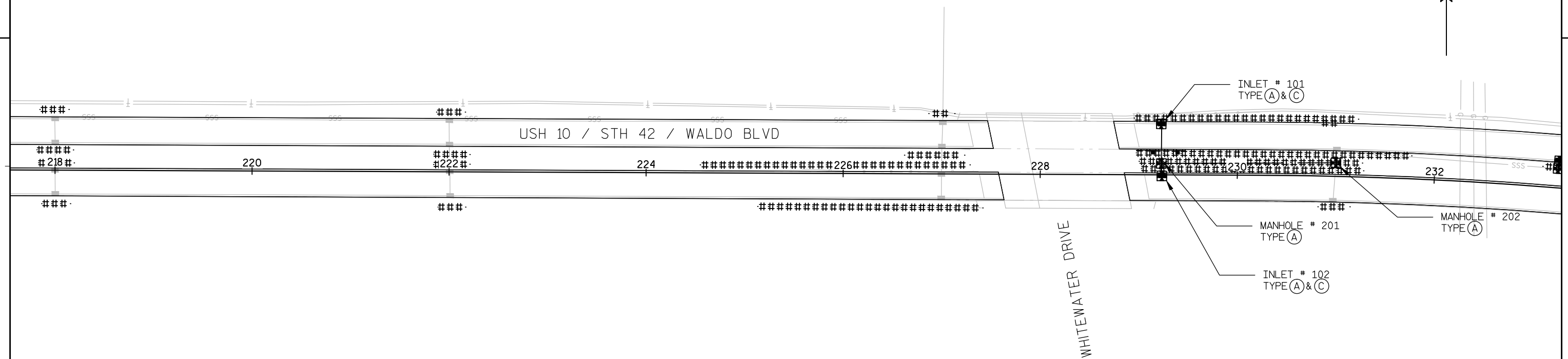


LEGEND:

INLET PROTECTION TYPE

EROSION MAT URBAN CLASS 1 TYPE B

RIPRAP HEAVY

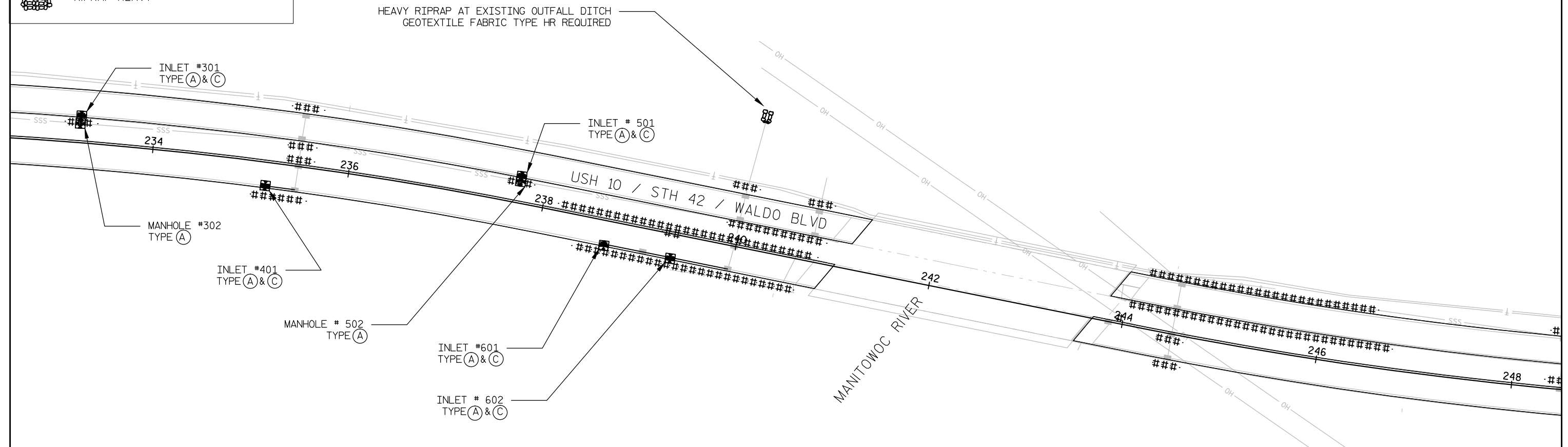


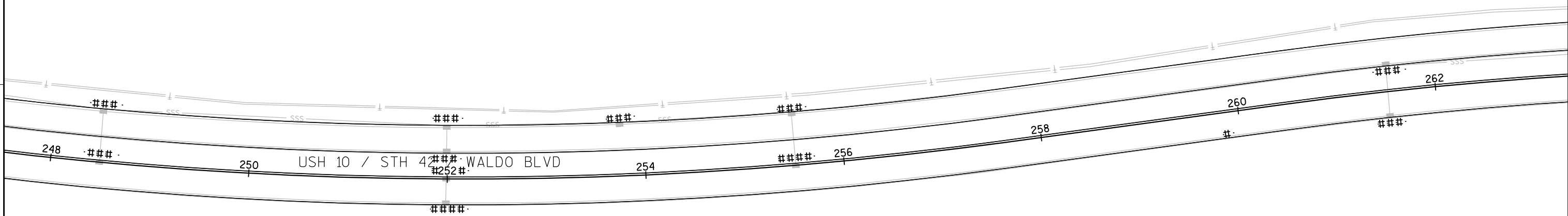
LEGEND:

☒ INLET PROTECTION TYPE (A) (C)

EROSION MAT URBAN CLASS 1 TYPE B

⬢ RIPRAP HEAVY



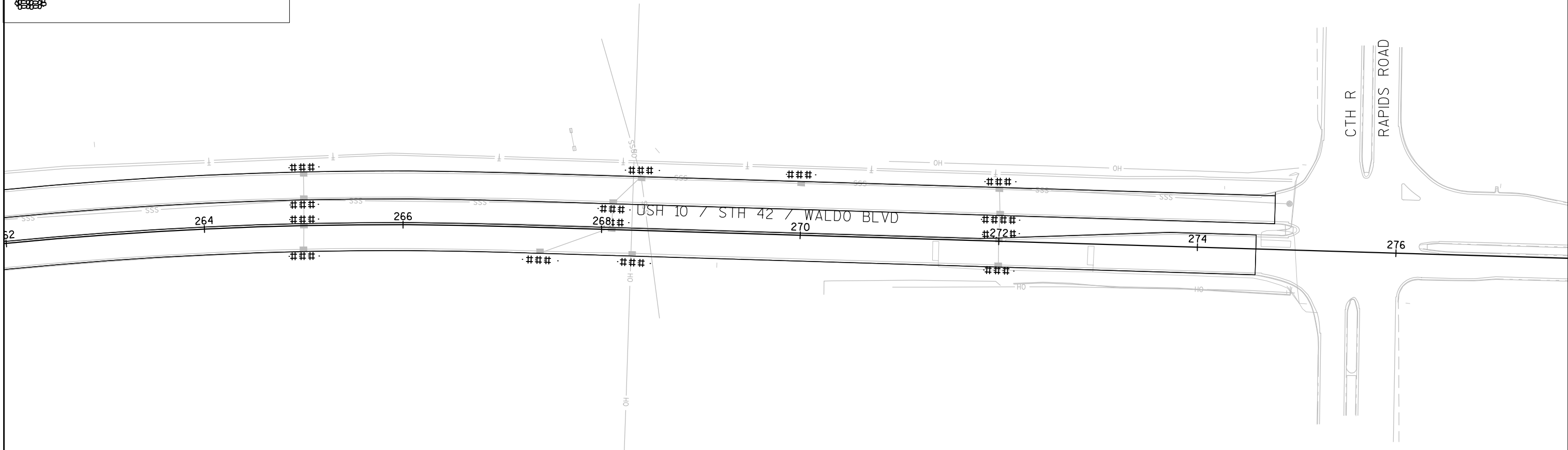


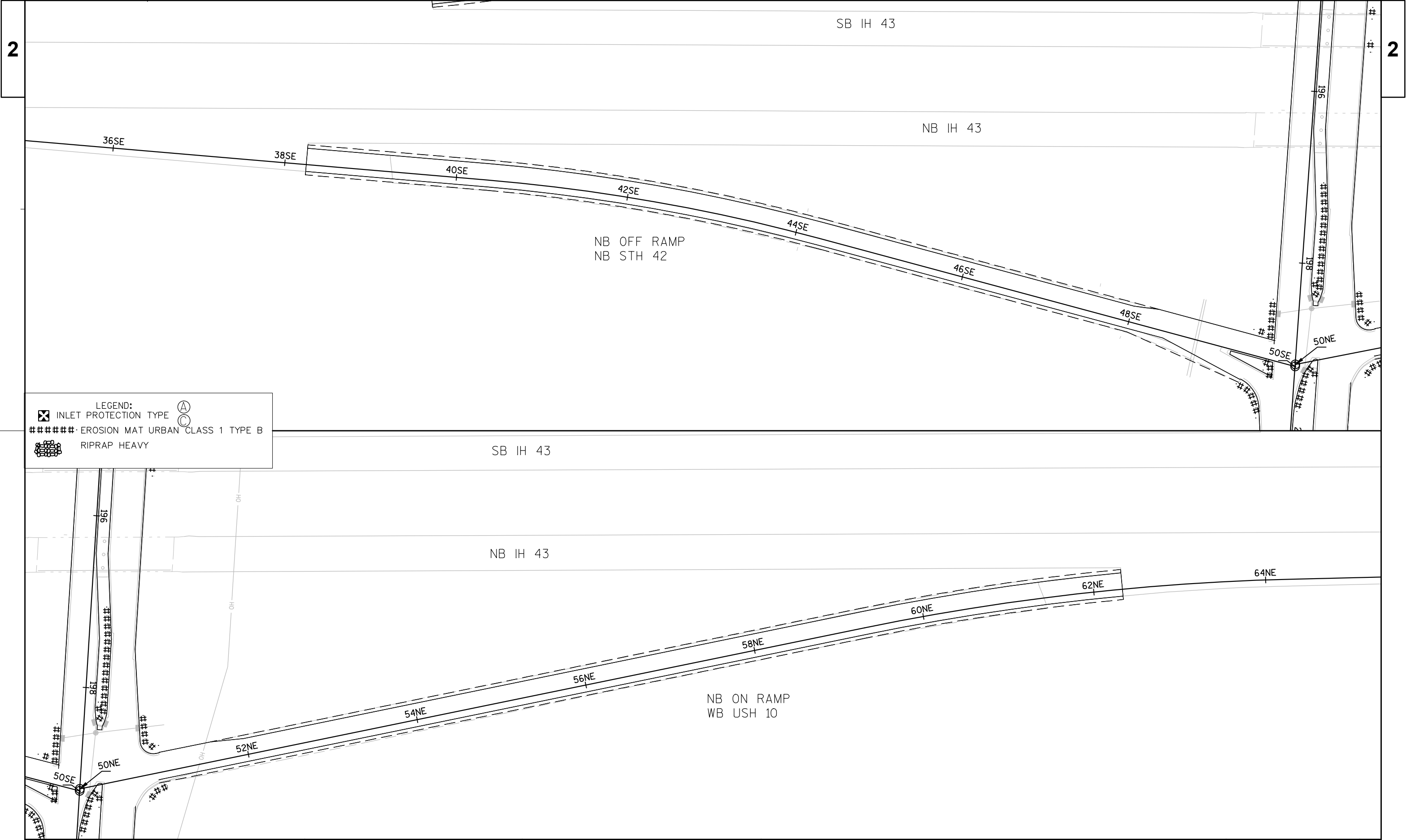
LEGEND:

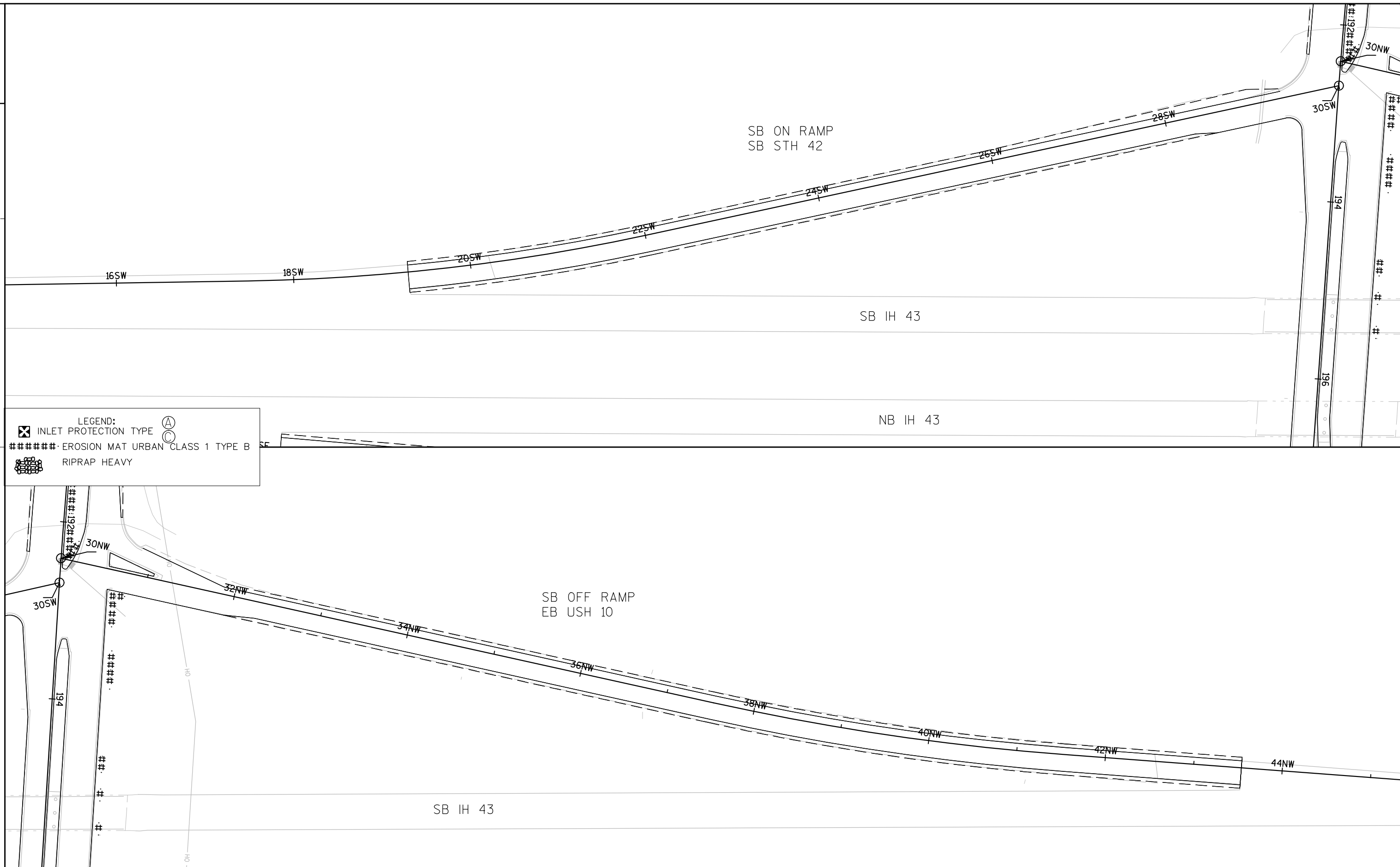
 INLET PROTECTION TYPE

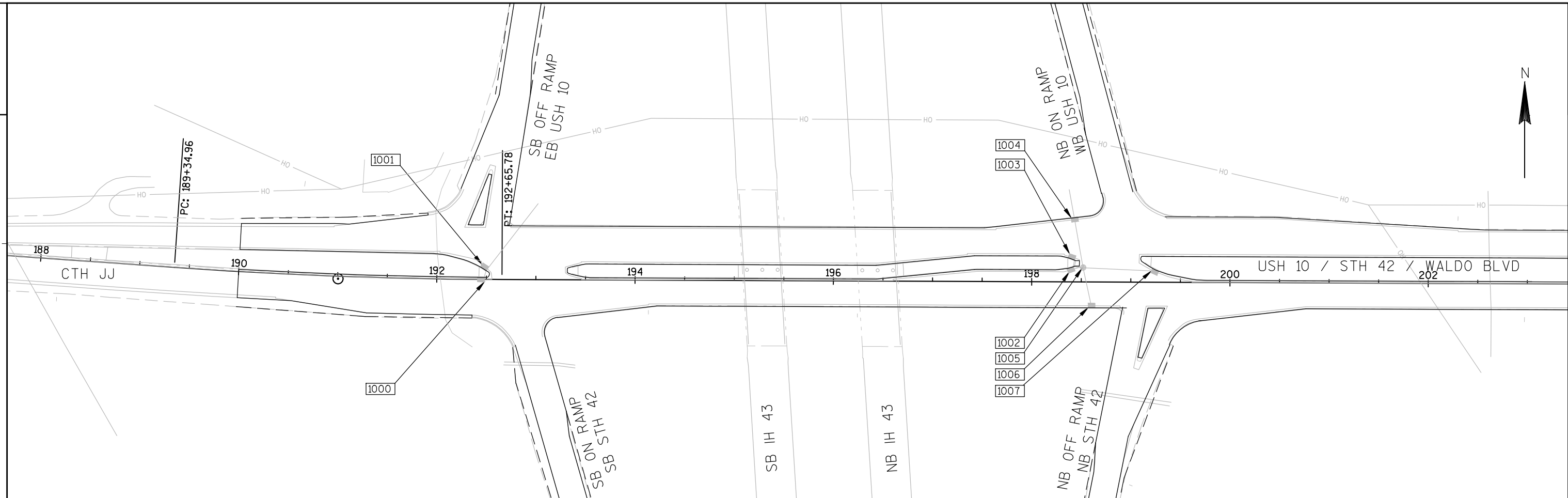
 EROSION MAT URBAN CLASS 1 TYPE B

 RIPRAP HEAVY

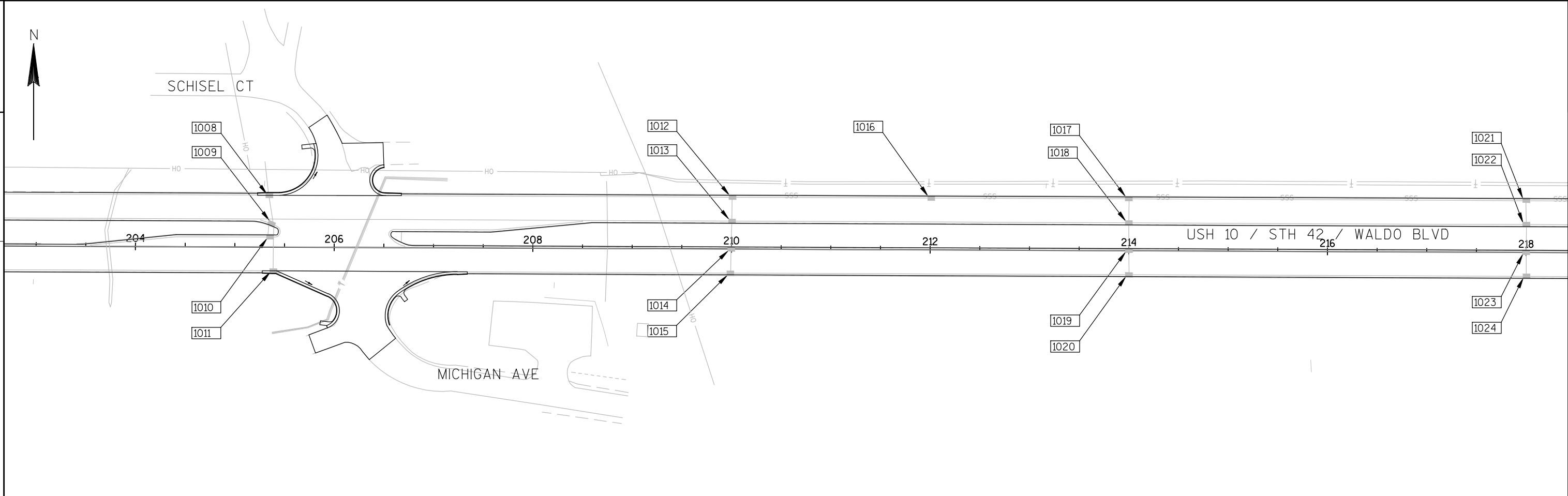




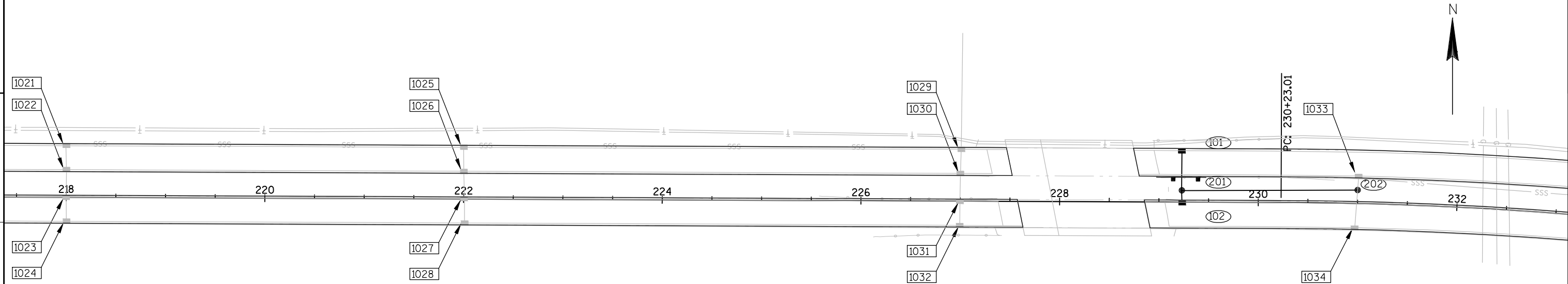




STRUCT NO.	STATION	OFFSET	STRUCTURE			EXIST RIM	PROPOSED RIM	REMARKS
				TYPE	COVER			
1000	192+48	2'	L	INL EXIST	HM	741.76	741.99	RECONSTRUCT INLET (RECTANGULAR)
1001	192+50	9'	L	INL EXIST	HM	741.56	741.79	RECONSTRUCT INLET (RECTANGULAR)
1002	198+42	15.4'	L	INL EXIST	HM	738.44	738.67	RECONSTRUCT INLET (RECTANGULAR)
1003	198+43	22'	L	INL EXIST	HM	738.65	738.88	RECONSTRUCT INLET (RECTANGULAR)
1004	198+43	64.6'	L	INL EXIST	HM	738.54	738.77	RECONSTRUCT INLET (RECTANGULAR)
1005	198+52	14.3'	L	MH EXIST	EX J	738.67	738.90	ADJUST MANHOLE COVER
1006	198+61	26'	R	INL EXIST	HM	738.65	738.88	RECONSTRUCT INLET (RECTANGULAR)
1007	199+28	11.2'	L	INL EXIST	HM	738.15	738.38	RECONSTRUCT INLET (RECTANGULAR)



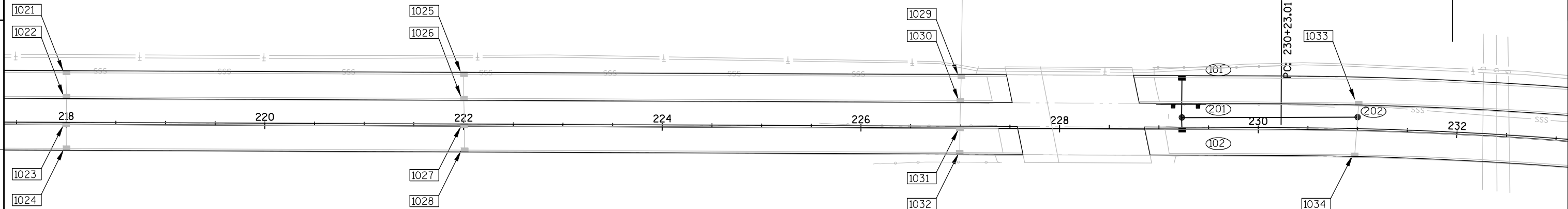
STRUCT NO.	STATION	OFFSET	STRUCTURE				EXIST RIM	PROPOSED RIM	REMARKS
			TYPE	COVER					
1008	205+34	54'	L	INL	EXIST	HM	735.28	735.51	RECONSTRUCT INLET (RECTANGULAR)
1009	205+39	20.4'	L	INL	EXIST	HM	735.26	735.49	RECONSTRUCT INLET (RECTANGULAR)
1010	205+39	12'	L	INL	EXIST	HM	735.16	735.39	RECONSTRUCT INLET (RECTANGULAR)
1011	205+39	26'	R	INL	EXIST	HM	735.42	735.65	RECONSTRUCT INLET (RECTANGULAR)
1012	210+00	54'	L	INL	EXIST	HM	725.62	725.85	RECONSTRUCT INLET (ROUND)
1013	210+00	26'	L	INL	EXIST	HM	725.66	725.89	RECONSTRUCT INLET (RECTANGULAR)
1014	210+00	2'	L	INL	EXIST	HM	725.61	725.84	RECONSTRUCT INLET (RECTANGULAR)
1015	210+00	26'	R	INL	EXIST	HM	725.89	726.12	RECONSTRUCT INLET (RECTANGULAR)
1016	212+00	54'	L	INL	EXIST	HM	719.39	719.62	RECONSTRUCT INLET (ROUND)
1017	214+00	54'	L	INL	EXIST	HM	713.12	713.35	RECONSTRUCT INLET (ROUND)
1018	214+00	26'	L	INL	EXIST	HM	713.13	713.36	RECONSTRUCT INLET (RECTANGULAR)
1019	214+00	2'	L	INL	EXIST	HM	713.16	713.39	RECONSTRUCT INLET (RECTANGULAR)
1020	214+00	26'	R	INL	EXIST	HM	713.24	713.47	RECONSTRUCT INLET (RECTANGULAR)
1021	218+00	54'	L	INL	EXIST	HM	700.37	700.60	RECONSTRUCT INLET (ROUND)
1022	218+00	26'	L	INL	EXIST	HM	700.29	700.52	RECONSTRUCT INLET (RECTANGULAR)
1023	218+00	2'	L	INL	EXIST	HM	700.34	700.57	RECONSTRUCT INLET (RECTANGULAR)
1024	218+00	26'	R	INL	EXIST	HM	700.49	700.72	RECONSTRUCT INLET (RECTANGULAR)

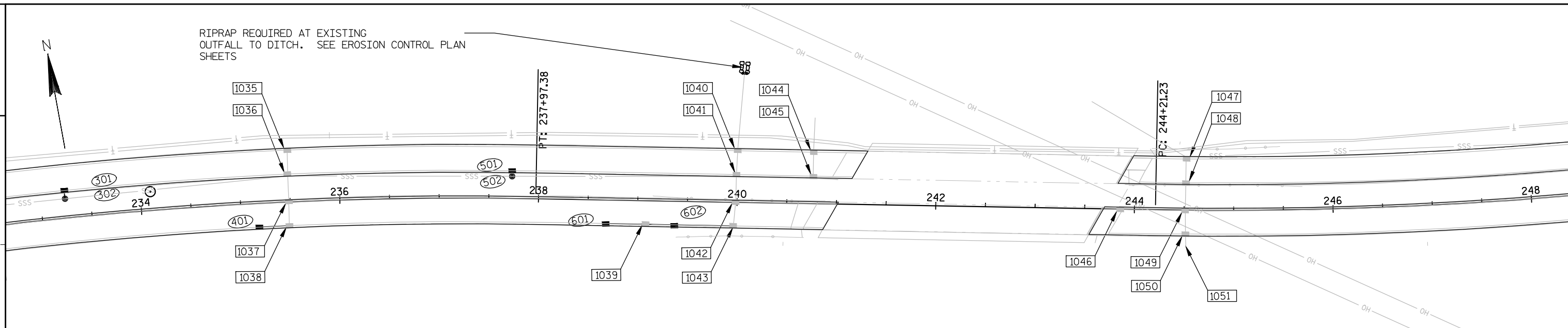


STRUCT NO.	STATION	OFFSET	STRUCTURE			EXIST RIM	PROPOSED RIM	REMARKS	
				TYPE	COVER				
1025	222+00	54'	L	INL	EXIST	HM	687.55	687.78	RECONSTRUCT INLET (ROUND)
1026	222+00	26'	L	INL	EXIST	HM	687.53	687.76	RECONSTRUCT INLET (RECTANGULAR)
1027	222+01	2'	L	INL	EXIST	HM	687.46	687.69	RECONSTRUCT INLET (RECTANGULAR)
1028	222+01	26'	R	INL	EXIST	HM	687.74	687.97	RECONSTRUCT INLET (RECTANGULAR)
1029	227+00	54'	L	INL	EXIST	HM	671.25	671.48	RECONSTRUCT INLET (ROUND)
1030	227+00	26'	L	INL	EXIST	HM	671.16	671.39	RECONSTRUCT INLET (RECTANGULAR)
1031	227+00	2'	L	INL	EXIST	H (LOW)	671.29	671.52	RECONSTRUCT INLET (RECTANGULAR)
1032	227+00	26'	R	INL	EXIST	H (LOW)	671.36	671.59	RECONSTRUCT INLET (RECTANGULAR)

STRUCT NO.	STATION	OFFSET		C-C (FT)	TO STRUCT	STRUCTURE			EXIST RIM	RIM/ GRATE ELEV	T.O.S. ELEV	DEPTH (FT)	DISCHARGE PIPE					REMARKS
						TYPE	COVER						SIZE (IN)	INLET ELEV	DISCHARGE ELEV	LENGTH (FT)	SLOPE (%)	
1033	231+00	26'	L	-	302	INL	EXIST	H(LOW)	658.34	658.61	-	-	EX	652.02	EX	-	2.5	RECONSTRUCT INLET (ROUND)
101	229+23	54'	L	40	201	INL	2x3	H(LOW)	-	664.65	663.82	5.21	12	658.61	656.37	40	1	
102	229+23	2'	L	13	201	INL	2X3	HM	-	664.47	663.64	5.03	12	658.61	656.37	13	1	
201	229+23	13'	L	177	202	MH	4FT	J	-	665.16	663.91	9.58	12	654.33	654.11	177	1	
202	231+00	14'	L	-	1033	MH	4FT	J	-	659.19	657.94	5.40	EX	652.54	652.29	-	1.87	
1034	231+00	26'	R	-	202	INL	EXIST	HM	657.82	658.09	-	-	EX	653.30	EX	-	1.87	RECONSTRUCT INLET (RECTANGULAR)



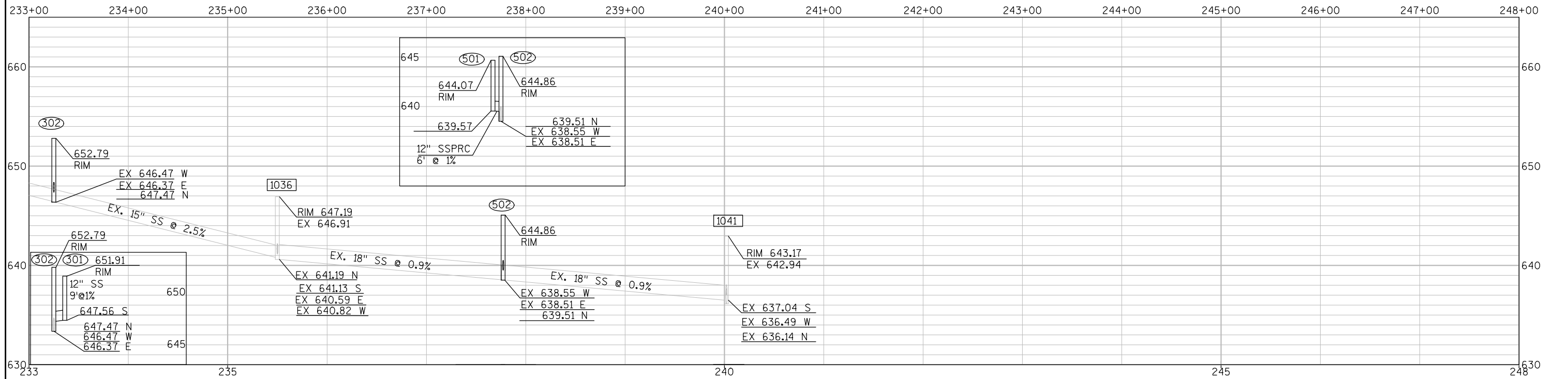


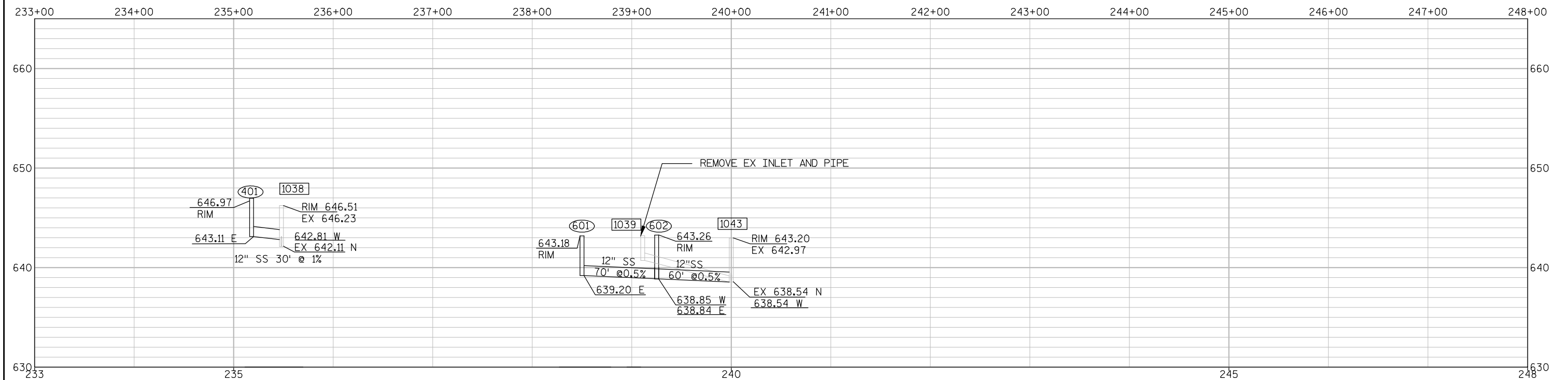
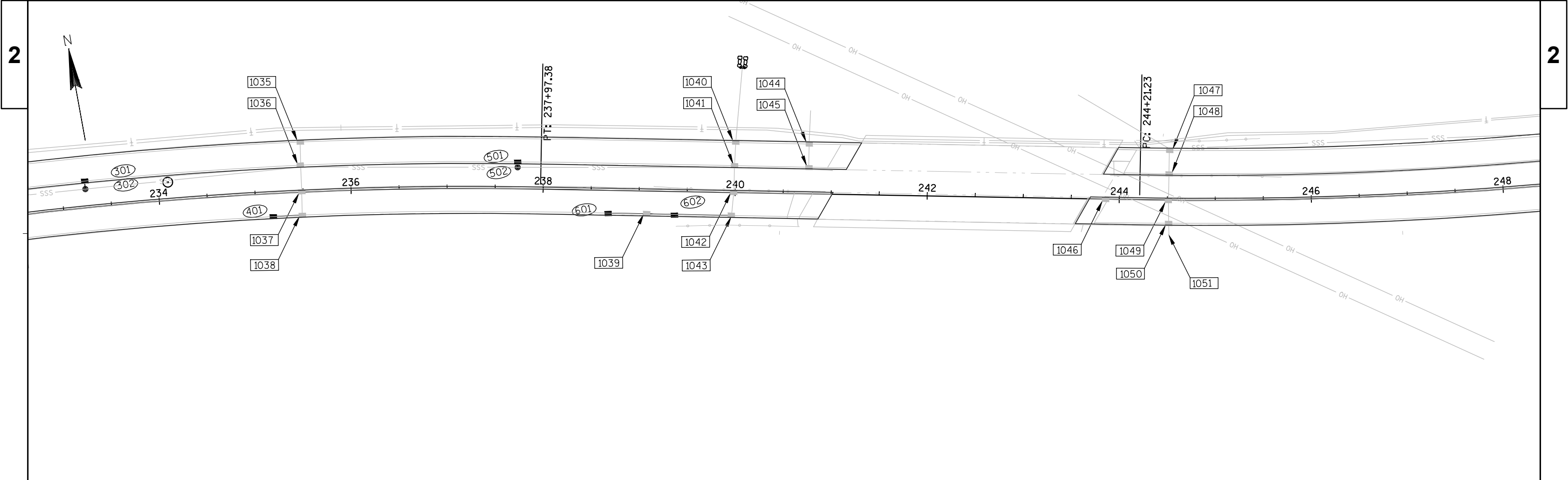


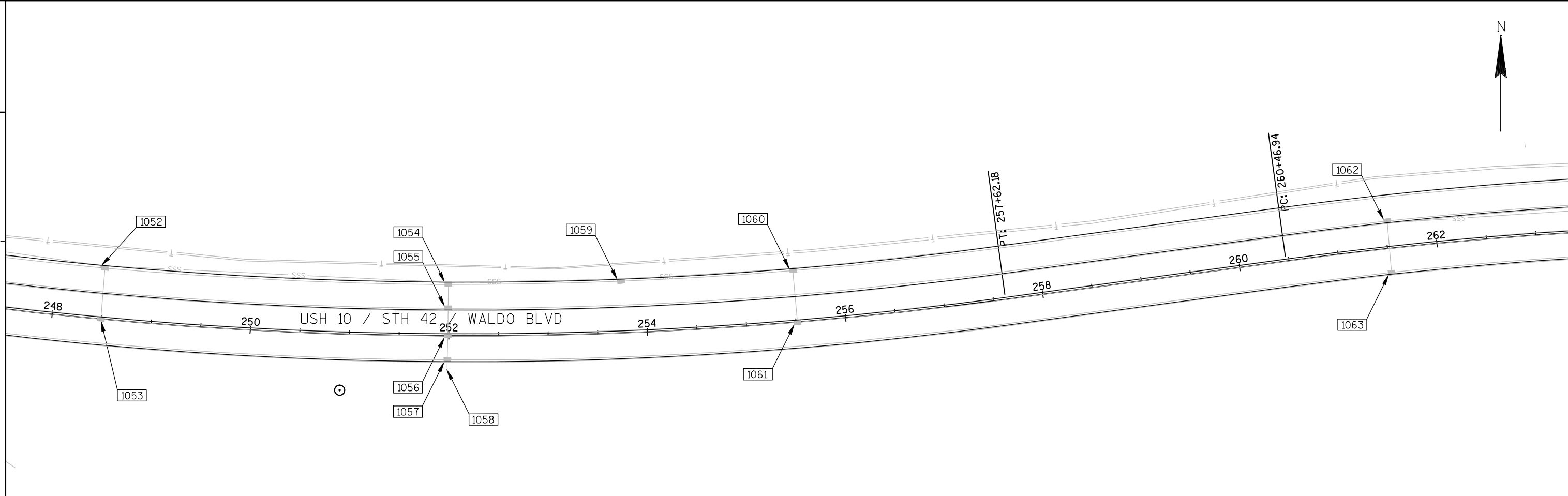
RIPRAP REQUIRED AT EXISTING
OUTFALL TO DITCH. SEE EROSION CONTROL PLAN
SHEETS

STRUCT NO.	STATION	OFFSET	STRUCTURE		EXIST RIM	PROPOSED RIM	REMARKS
			TYPE	COVER			
1035	235+49	54'	L INL	EXIST HM	647.60	647.90	RECONSTRUCT INLET (RECTANGULAR)
1037	235+49	2'	L INL	EXIST HM	647.02	647.32	RECONSTRUCT INLET (RECTANGULAR)
1039	239+11	26'	R INL	EXIST REMOVE	REMOVE	REMOVE	REMOVE INLET AND PIPE SALVAGED CASTING TO #1072 STA 268+50
1040	240+00	54'	L INL	EXIST HM	642.84	643.07	RECONSTRUCT INLET (ROUND)
1042	239+99	2'	L INL	EXIST H (LOW)	642.70	642.93	RECONSTRUCT INLET (RECTANGULAR)
1044	240+76	54'	L INL	EXIST HM	643.16	643.29	RECONSTRUCT INLET (RECTANGULAR)
1045	240+76	26'	L INL	EXIST HM	642.99	643.22	RECONSTRUCT INLET (RECTANGULAR)
1046	243+86	2'	L INL	EXIST SALVAGE EX A	644.79	645.02	RECONSTRUCT INLET (ROUND)
1047	244+51	54'	L INL	EXIST H (LOW)	644.54	644.87	RECONSTRUCT INLET (ROUND)
1048	244+51	26'	L INL	EXIST H (LOW)	645.22	645.47	RECONSTRUCT INLET (RECTANGULAR)
1049	244+51	2'	L INL	EXIST HM	645.24	645.57	RECONSTRUCT INLET (RECTANGULAR)
1050	244+51	26'	R INL	EXIST HM	645.95	646.20	RECONSTRUCT INLET (RECTANGULAR)
1051	244+52	36'	R INL	EXIST TO REMAIN	645.93	---	EXISTING INLET TO REMAIN

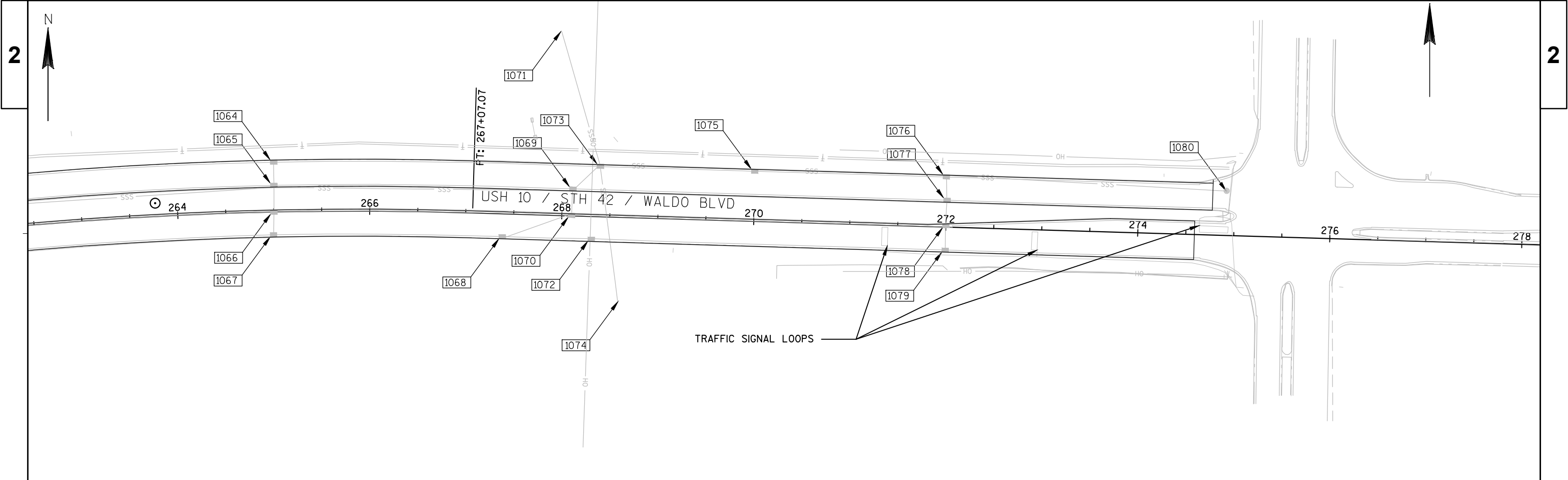
STRUCT NO.	STATION	OFFSET	C-C (FT)	TO STRUCT	STRUCTURE		EXIST RIM	RIM/GRATE ELEV	T.O.S. ELEV	DEPTH (FT)	DISCHARGE PIPE					REMARKS
					TYPE	COVER					SIZE (IN)	INLET ELEV	DISCHARGE ELEV	LENGTH (FT)	SLOPE (%)	
302	233+25	20'	L	-	1036	MH 4 FT	J	-	652.79	651.54	5.17	EX 646.37	640.82	-	2.5	
301	233+25	26'	L	9	302	INL 2X3	HM	-	651.91	651.08	3.52	12 647.56	647.47	9	1	
1036	235+49	26'	L	-	502	INL EXIST	HM	646.91	647.19	-	-	EX 640.59	EX	-	0.9	RECONSTRUCT INLET (ROUND)
502	237+75	20'	L	-	1041	MH 4 FT	HM	-	644.86	643.61	5.10	EX 638.51	636.49	-	0.9	
501	237+75	26'	L	6	502	INL 2X3	HM	-	644.07	643.24	3.67	12 639.57	639.51	6	1	
1041	240+00	26'	L	-	1040	INL EXIST	HM	642.94	643.17	-	-	EX 636.14	EX	-	-	RECONSTRUCT INLET (ROUND)
401	235+18	26'	R	30	1038	INL 2X3	HM	-	646.97	646.14	3.03	12 643.11	642.81	30	1	
1038	235+48	26'	R	-	1037	INL EXIST	HM	646.23	646.51	-	-	EX 642.11	EX	-	-	RECONSTRUCT INLET (RECTANGULAR)
601	238+67	26'	R	70	602	INL 2X3	H(LOW)	-	643.18	642.35	3.15	12 639.20	639.84	70	1	
602	239+37	26'	R	60	1043	INL 2X3	H(LOW)	-	643.26	642.43	3.59	12 638.84	638.54	60	1	
1043	239+97	26'	R	-	1042	INL EXIST	H(LOW)	642.97	643.20	-	-	EX 638.54	EX	-	-	RECONSTRUCT INLET (RECTANGULAR)







STRUCT NO.	STATION	OFFSET	STRUCTURE				EXIST RIM	PROPOSED RIM	REMARKS
				TYPE	COVER				
1052	248+49	54'	L	INL	EXIST	HM	647.62	647.90	RECONSTRUCT INLET ROUND
1053	248+49	2'	L	INL	EXIST	HM	648.47	647.75	RECONSTRUCT INLET (RECTANGULAR)
1054	252+00	54'	L	INL	EXIST	HM	652.18	652.46	RECONSTRUCT INLET (ROUND)
1055	252+00	26'	L	INL	EXIST	HM	653.00	653.30	RECONSTRUCT INLET (RECTANGULAR)
1056	252+00	2'	L	INL	EXIST	HM	652.81	652.07	RECONSTRUCT INLET (RECTANGULAR)
1057	252+00	26'	R	INL	EXIST	HM	653.79	653.09	RECONSTRUCT INLET (RECTANGULAR)
1058	251+98	34'	R	INL	EXIST	TO REMAIN	653.79	---	EXISTING INLET TO REMAIN
1059	253+75	54'	L	INL	EXIST	HM	654.50	654.78	RECONSTRUCT INLET (ROUND)
1060	255+51	54'	L	INL	EXIST	HM	656.86	657.14	RECONSTRUCT INLET (ROUND)
1061	255+51	2'	L	INL	EXIST	HM	657.51	657.79	RECONSTRUCT INLET (RECTANGULAR)
1062	261+53	26'	L	INL	EXIST	HM	659.63	659.91	RECONSTRUCT INLET (ROUND)
1063	261+53	26'	R	INL	EXIST	HM	659.06	659.34	RECONSTRUCT INLET (RECTANGULAR)



STRUCT NO.	STATION	OFFSET	STRUCTURE				EXIST RIM	PROPOSED RIM	REMARKS
				TYPE	COVER				
1064	265+00	54'	L	INL	EXIST	HM	656.84	657.14	RECONSTRUCT INLET (RECTANGULAR)
1065	265+00	26'	L	INL	EXIST	HM	656.16	656.44	RECONSTRUCT INLET (ROUND)
1066	265+00	2'	L	INL	EXIST	HM	656.15	656.45	RECONSTRUCT INLET (RECTANGULAR)
1067	265+00	26'	R	INL	EXIST	HM	655.59	655.87	RECONSTRUCT INLET (RECTANGULAR)
1068	267+38	26'	R	INL	EXIST	HM	653.61	653.84	RECONSTRUCT INLET (RECTANGULAR)
1069	268+10	26'	L	INL	EXIST	HM	653.38	653.61	RECONSTRUCT INLET (ROUND)
1070	268+10	2'	L	INL	EXIST	HM	653.43	653.72	RECONSTRUCT INLET (RECTANGULAR)
1071	267+94	191.3'	L	INL	EXIST	TO REMAIN	653.22	---	EXISTING INLET TO REMAIN
1072	268+31	26'	R	INL	EXIST	SALVAGE FROM 1039	653.47	653.70	RECONSTRUCT INLET (ROUND)
1073	268+38	54'	L	INL	EXIST	HM	653.44	653.71	RECONSTRUCT INLET (ROUND)
1074	268+61	87.6'	R	INL	EXIST	TO REMAIN	625.83	---	EXISTING INLET TO REMAIN
1075	270+00	54'	L	INL	EXIST	HM	653.86	654.09	RECONSTRUCT INLET (ROUND)
1076	272+00	54'	L	INL	EXIST	HM	655.05	655.28	RECONSTRUCT INLET (ROUND)
1077	272+00	26'	L	INL	EXIST	HM	654.97	655.20	RECONSTRUCT INLET (RECTANGULAR)
1078	272+00	3'	L	INL	EXIST	HM	654.94	655.17	RECONSTRUCT INLET (RECTANGULAR)
1079	272+00	26'	R	INL	EXIST	HM	654.04	655.27	RECONSTRUCT INLET (RECTANGULAR)
1080	274+91	46.2'	L	MH	EXIST	TO REMAIN	657.38	---	EXISTING MANHOLE TO REMAIN

SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

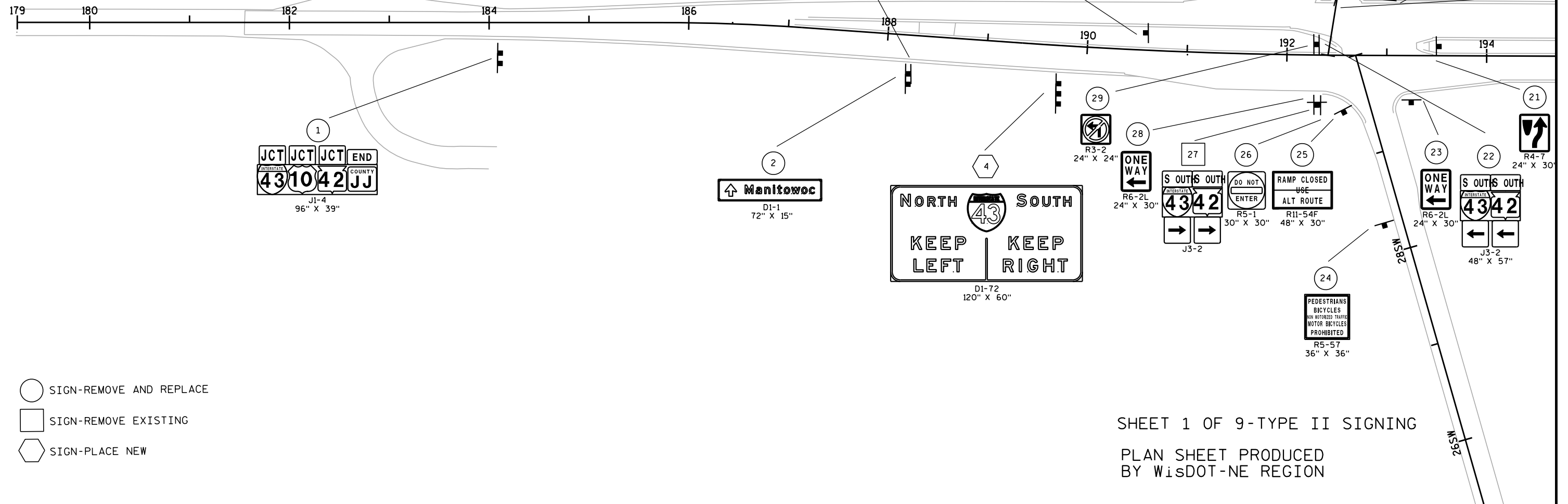
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WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

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.



SHEET 1 OF 9-TYPE II SIGNING

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

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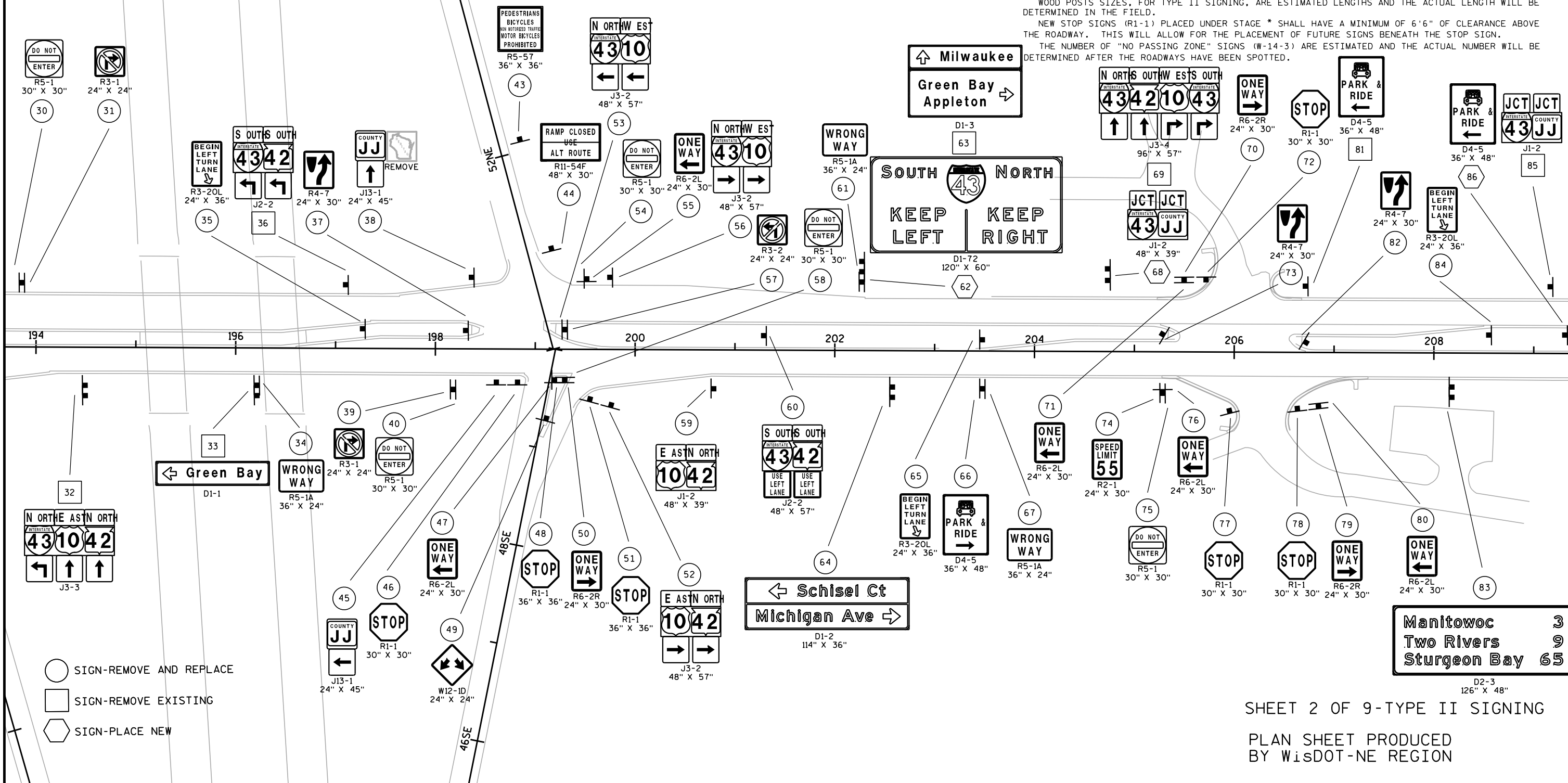
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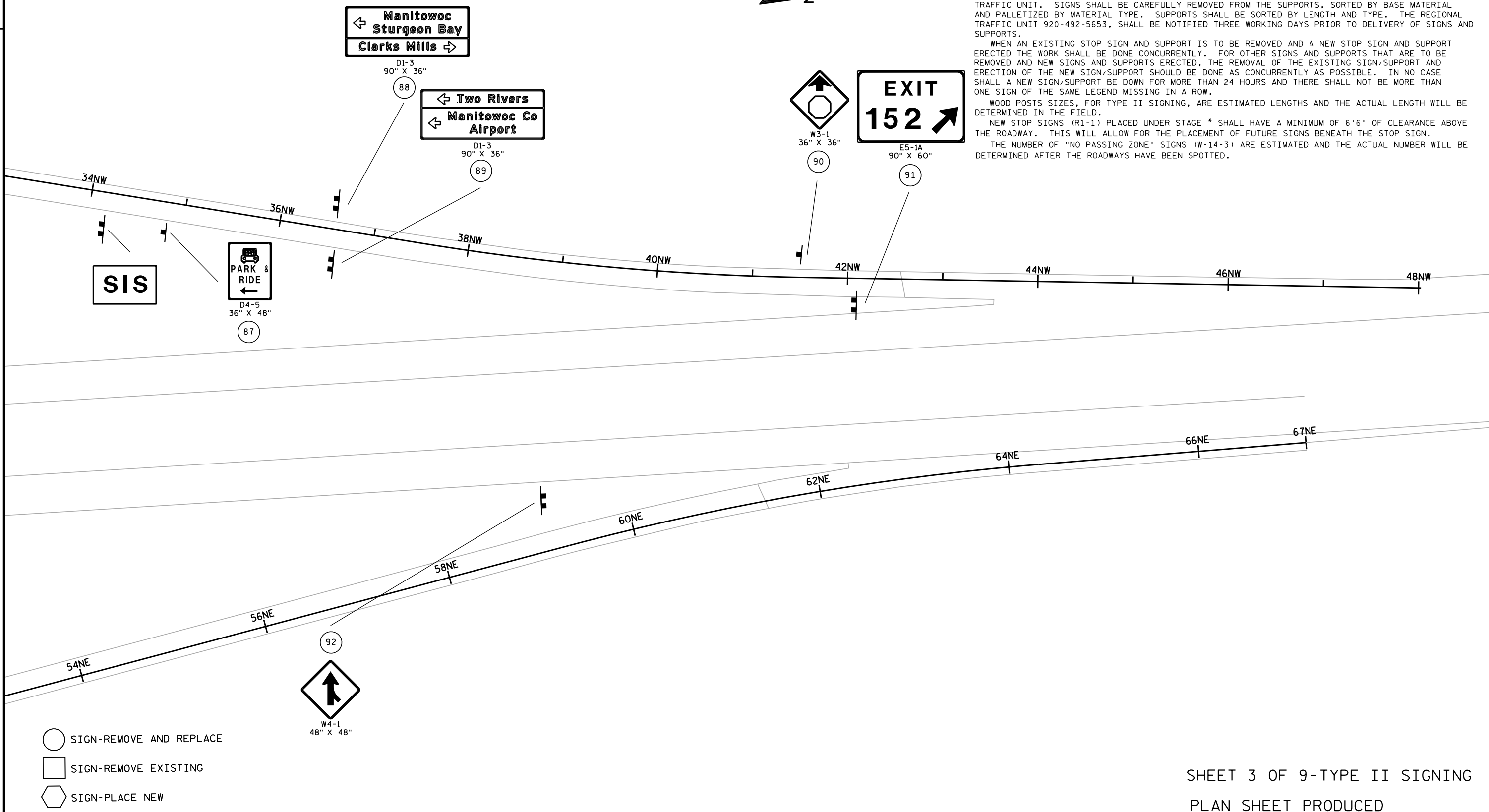
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SHEET 3 OF 9-TYPE II SIGNING

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

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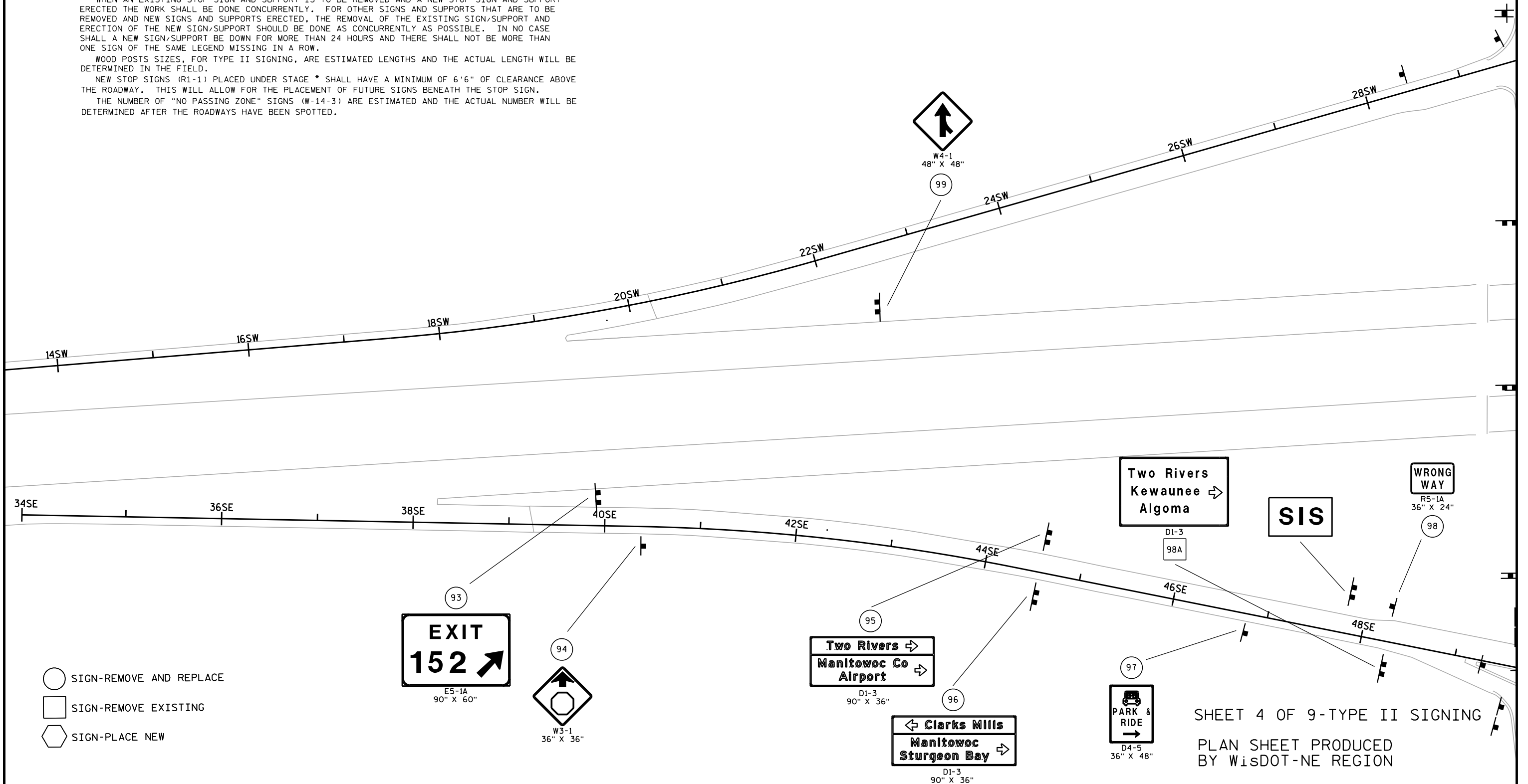
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NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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D1-2
114" X 36"

101

210

212

214

216

218

220

222

224

100



155-56
30" X 36"

○ SIGN-REMOVE AND REPLACE

□ SIGN-REMOVE EXISTING

⬡ SIGN-PLACE NEW

SHEET 5 OF 9-TYPE II SIGNING

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO:1500-34-71

HWY:USH 10

COUNTY:MANITOWOC

PERMANENT SIGNING - TYPE II

SHEET 39

E

SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

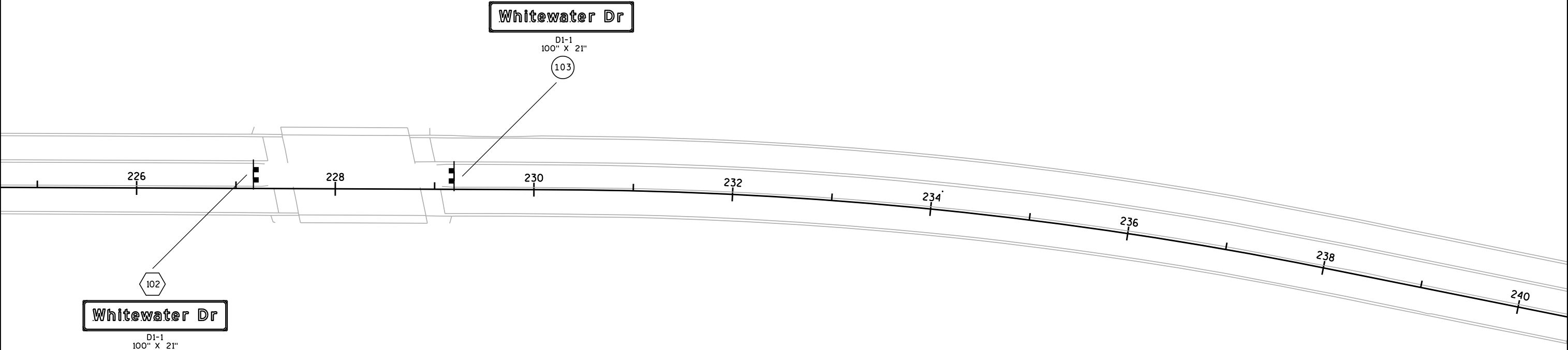
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SHEET 6 OF 9-TYPE II SIGNING

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

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Manitowoc
River

13-1
78" X 36"

105

242

244

246

248

250

252

254

104

Manitowoc
River

13-1
78" X 36"

106

Manitowoc
POPULATION 33,736

12-3
66" X 24"

○ SIGN-REMOVE AND REPLACE

□ SIGN-REMOVE EXISTING

⬡ SIGN-PLACE NEW

SHEET 7 OF 9-TYPE II SIGNING

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO:1500-34-71

HWY:USH 10

COUNTY:MANITOWOC

PERMANENT SIGNING - TYPE II

SHEET 41

E

SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

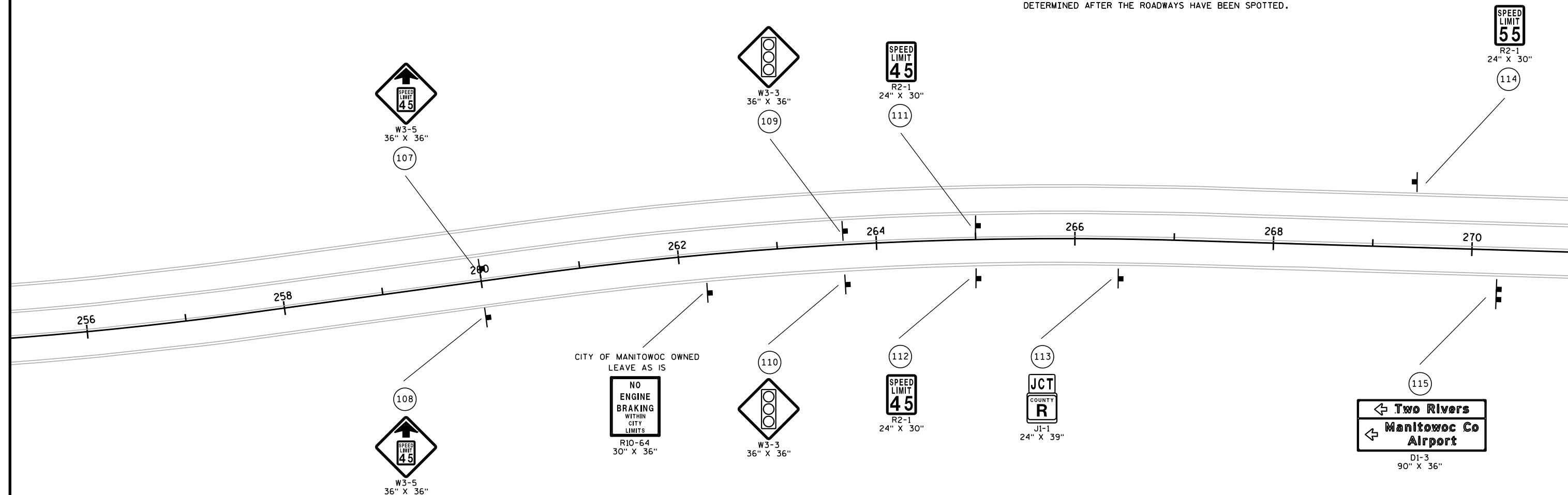
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THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



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

SHEET 8 OF 9-TYPE II SIGNING

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

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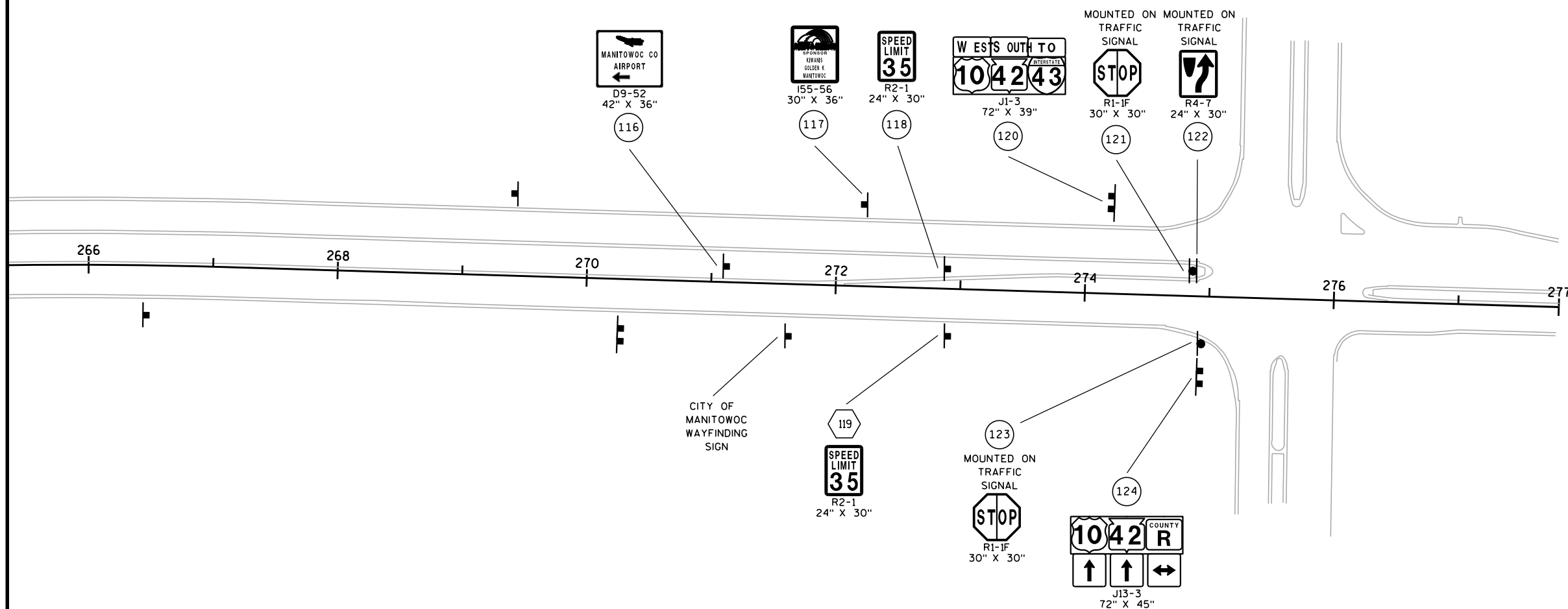
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THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



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

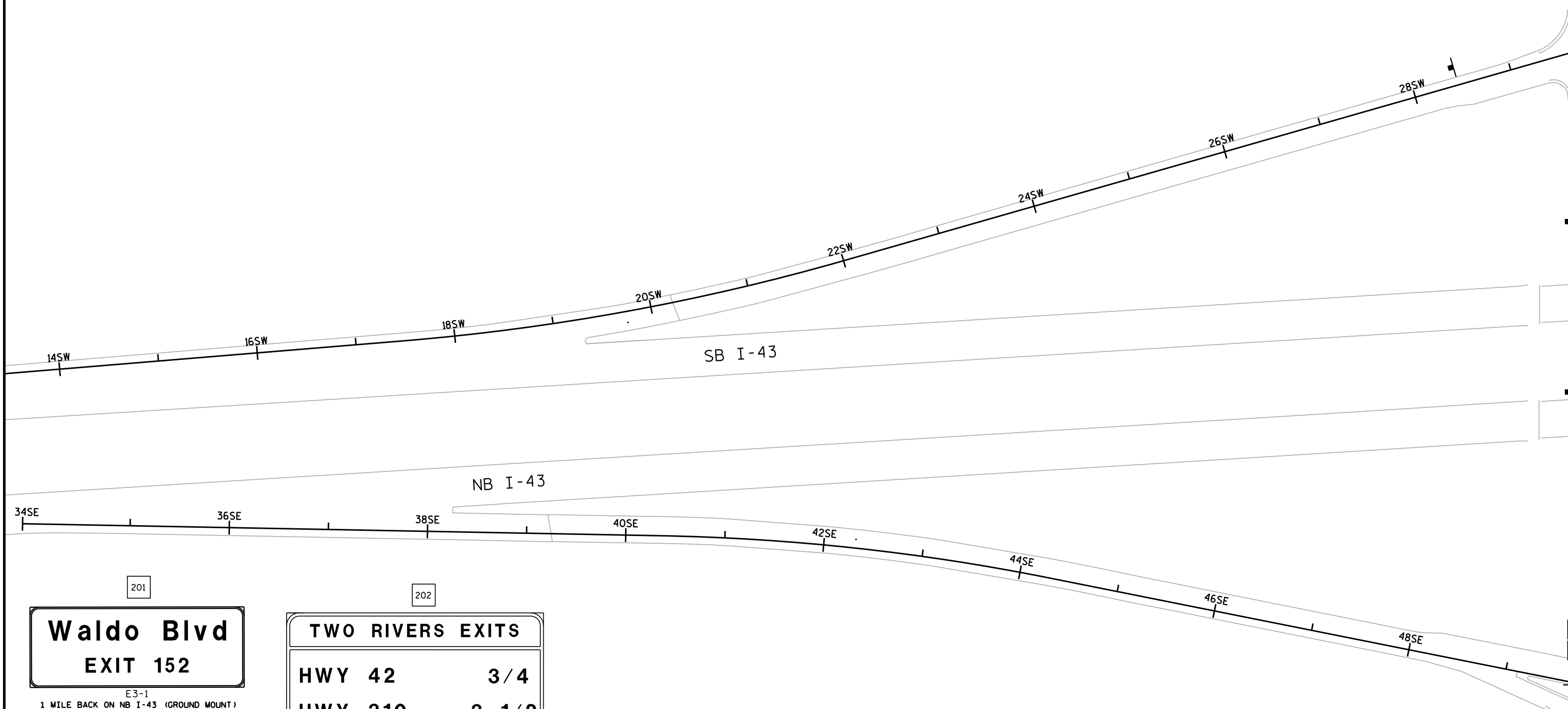
SHEET 9 OF 9-TYPE II SIGNING

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

DO NOT MOVE OR REMOVE ANY SPECIFIC INFORMATION SIGNS (BLUE GAS, FOOD, LODGING, CAMPING OR ATTRACTION SIGNS) OR THEIR ASSOCIATED POSTS. A SEPARATE CONTRACTOR, DERSE, INC., MAINTAINS THESE SIGNS. CONTACT MARK ROGNSVOOG OF THE DERSE COMPANY AT (800) 345-5772 A MINIMUM OF 14 CALENDAR DAYS IN ADVANCE TO COORDINATE MOVING, REMOVING OR RE-INSTALLATION OF THESE SIGNS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.



Waldo Blvd
EXIT 152

201

E3-1
1 MILE BACK ON NB I-43 (GROUND MOUNT)

TWO RIVERS EXITS
HWY 42 3 / 4
HWY 310 3 1 / 2

202

E8-1
¾ MILE BACK ON NB I-43 (OVERHEAD)

☐ SIGN-REMOVE EXISTING

SHEET 1 OF 4-TYPE I SIGNING
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

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THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.



203

Waldo Blvd
EXIT 152

E3-1

 $\frac{3}{4}$ MILE BACK ON SB I-43 (GROUND MOUNT)

34NW

36NW

38NW

40NW

42NW

44NW

46NW

48NW

SB I-43

NB I-43

62NE

64NE

66NE

67NE

60NE

58NE

56NE

54NE

 SIGN-REMOVE EXISTING

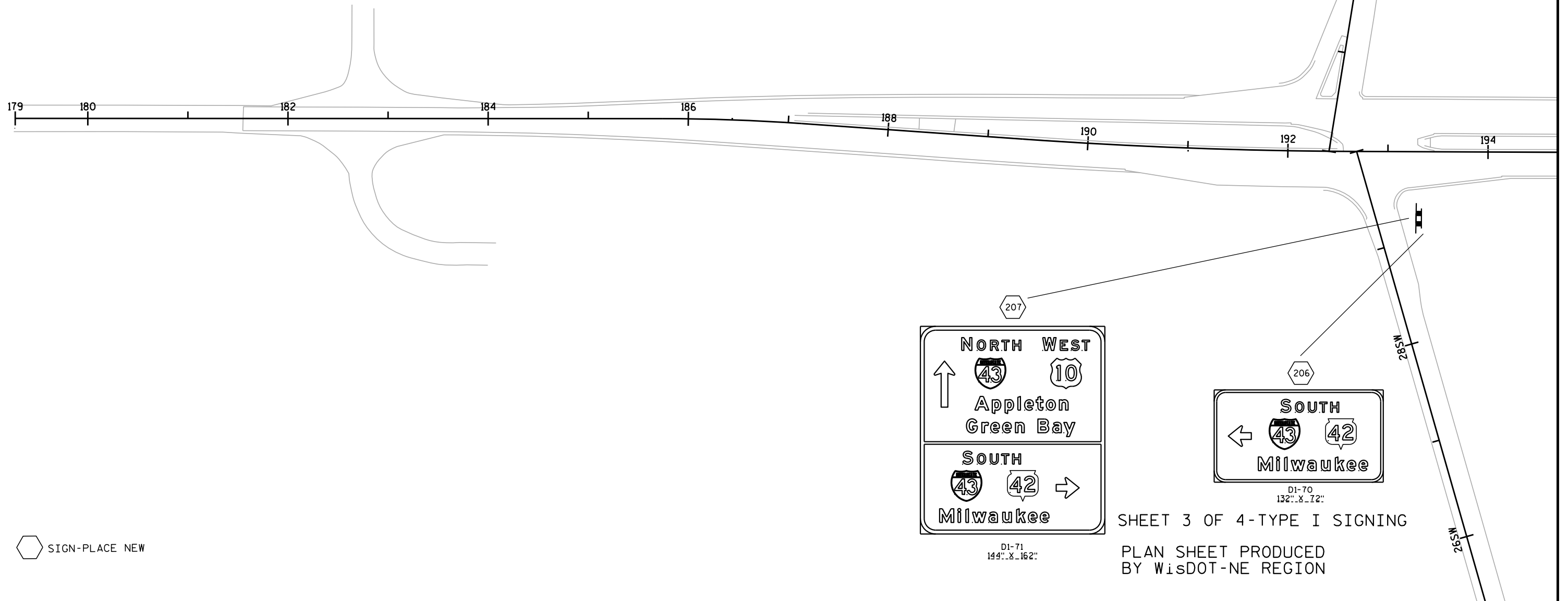
SHEET 2 OF 4-TYPE I SIGNING

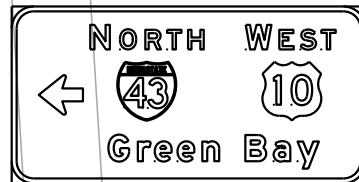
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

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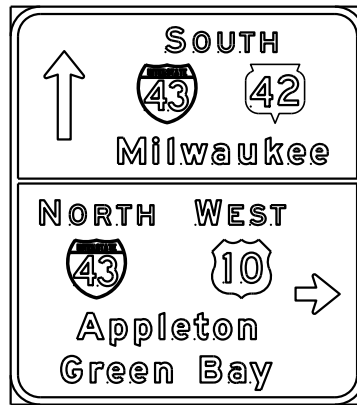
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.





D1-70
144" X 72"

205



D1-71
144" X 162"

204

N

SIGNING NOTES

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THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.

194

196

198

200

202

204

206

208

SIGN-PLACE NEW

SHEET 4 OF 4-TYPE I SIGNING

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

PROJECT NO:1500-34-71

HWY:USH 10

COUNTY:MANITOWOC

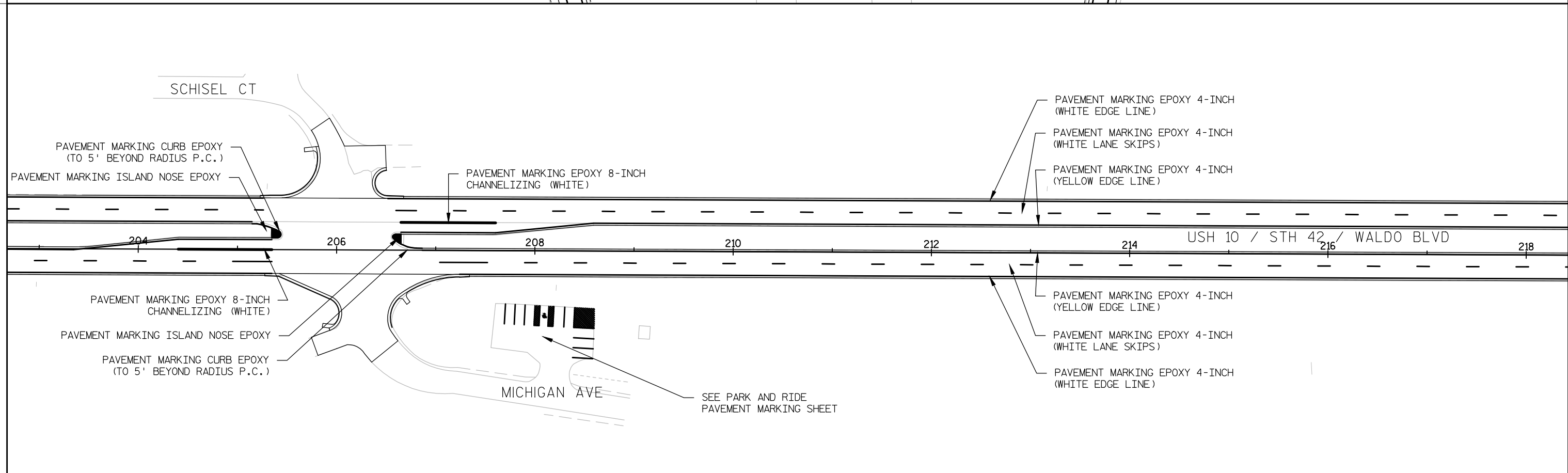
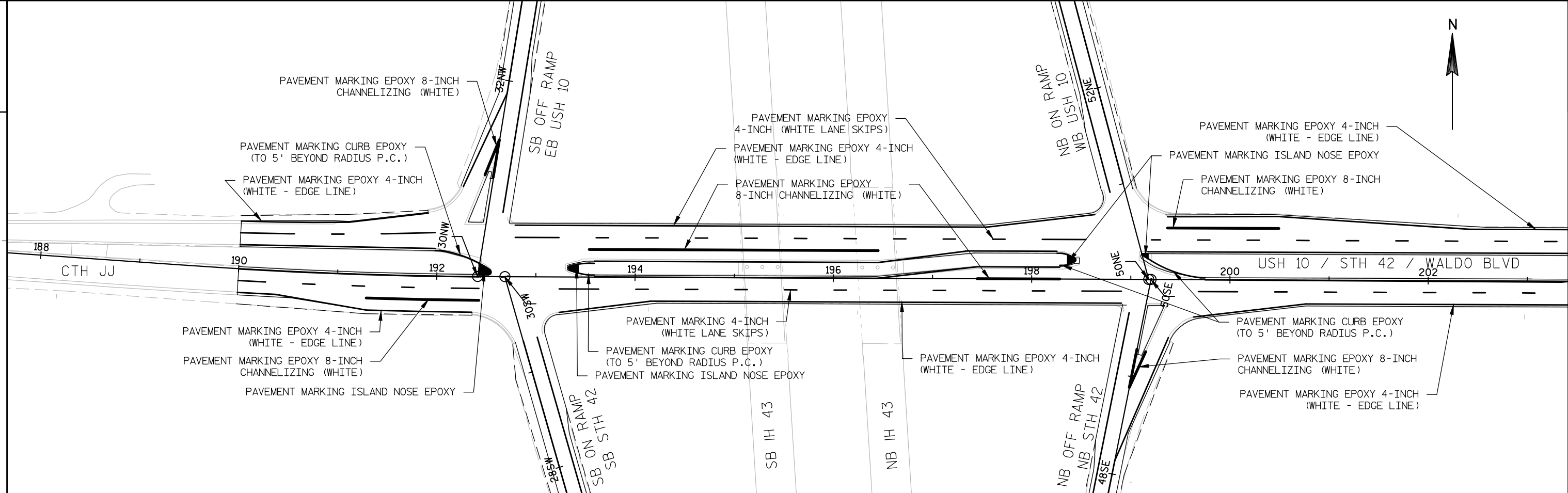
PERMANENT SIGNING - TYPE I

SHEET 47

E

2

2



PROJECT NO:1500-34-71

HWY: USH 10

COUNTY: MANITOWOC

PAVEMENT MARKING

SHEET	48
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E

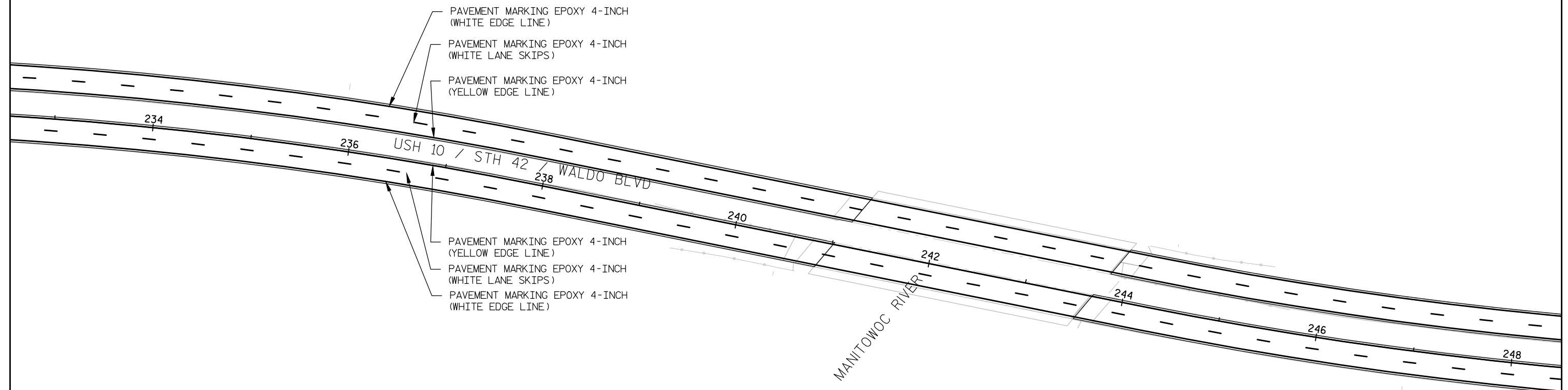
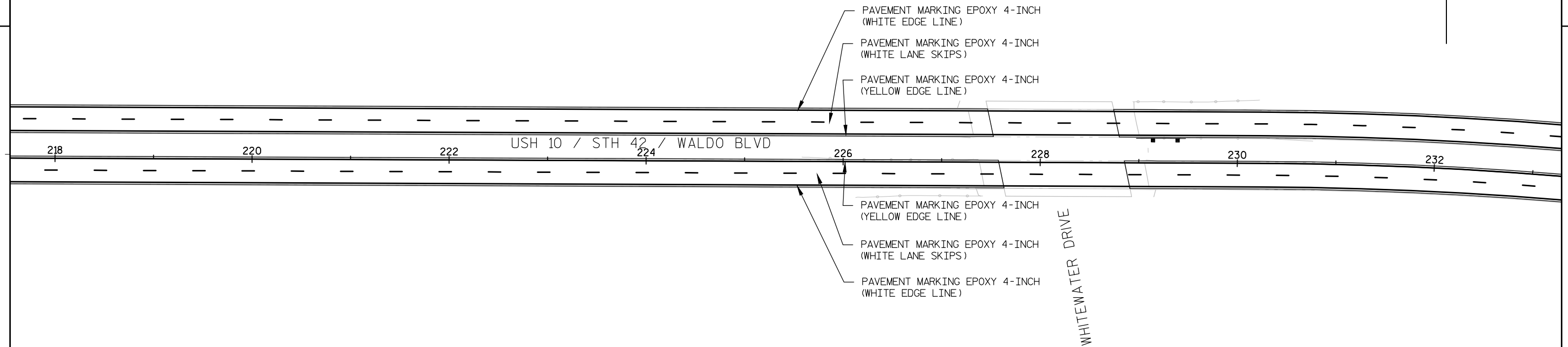
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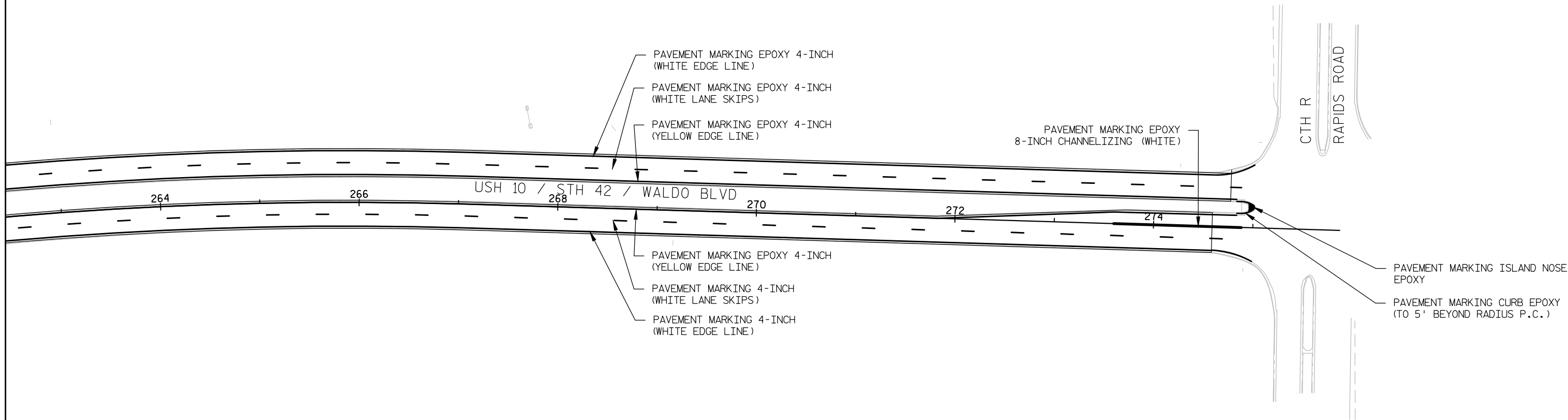
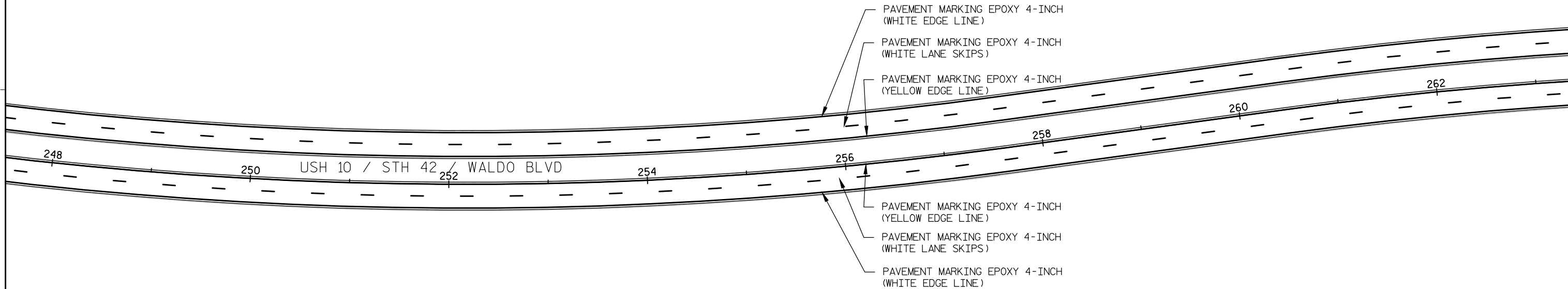
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PLOT BY : QUEST CIVIL ENG PLOT NAME : _____ PLOT SCALE : 1 IN:100 FT

PLOT NAME : _____ PLOT SCALE : 1 IN:100 FT

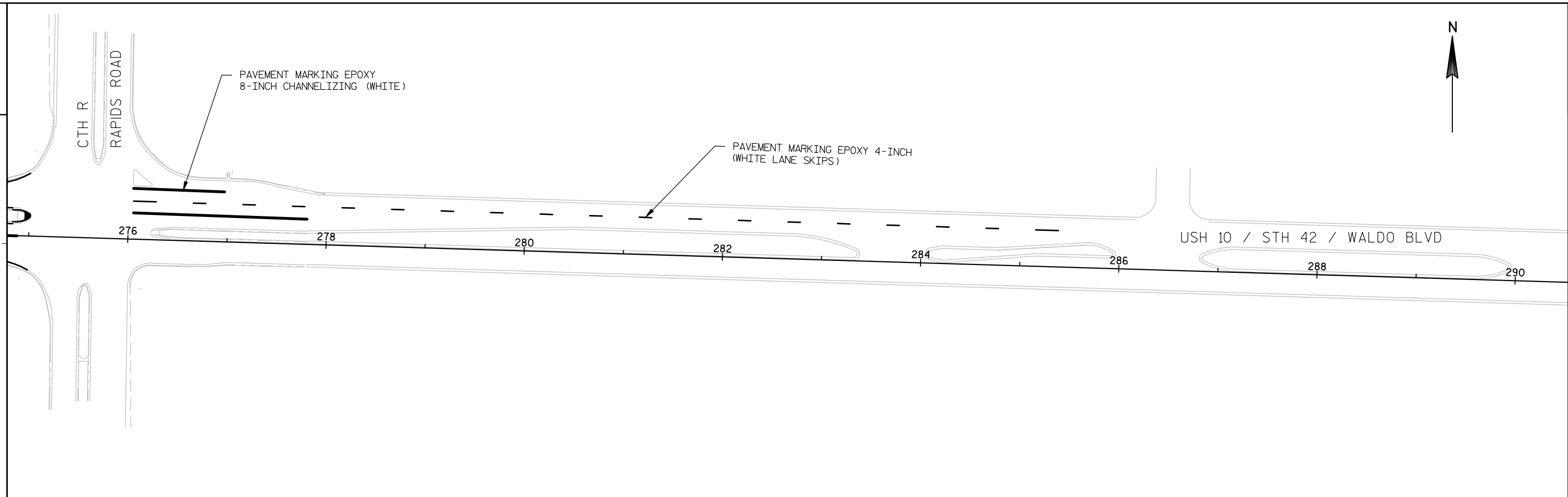
WISDOT/CADDS SHEET 44



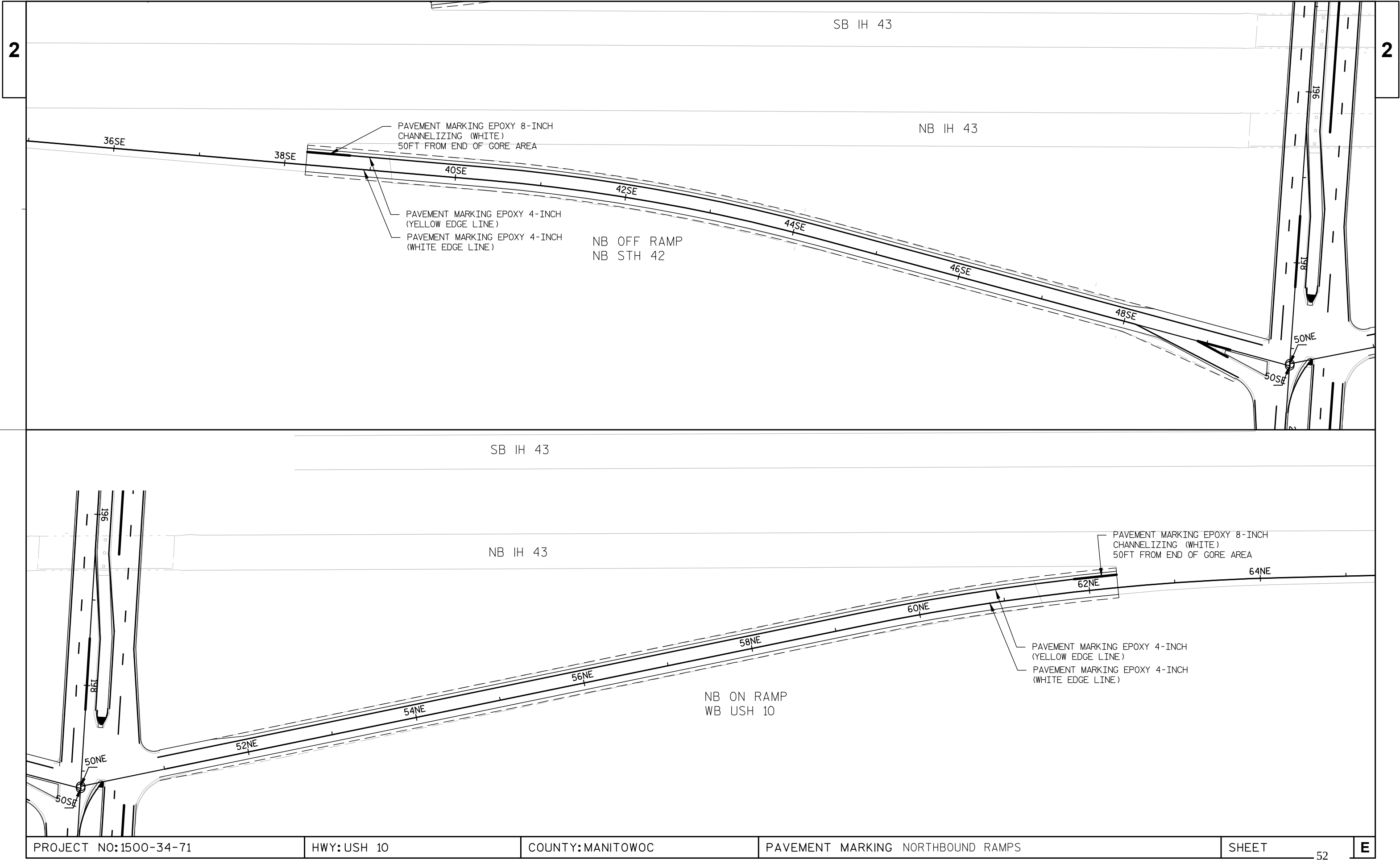


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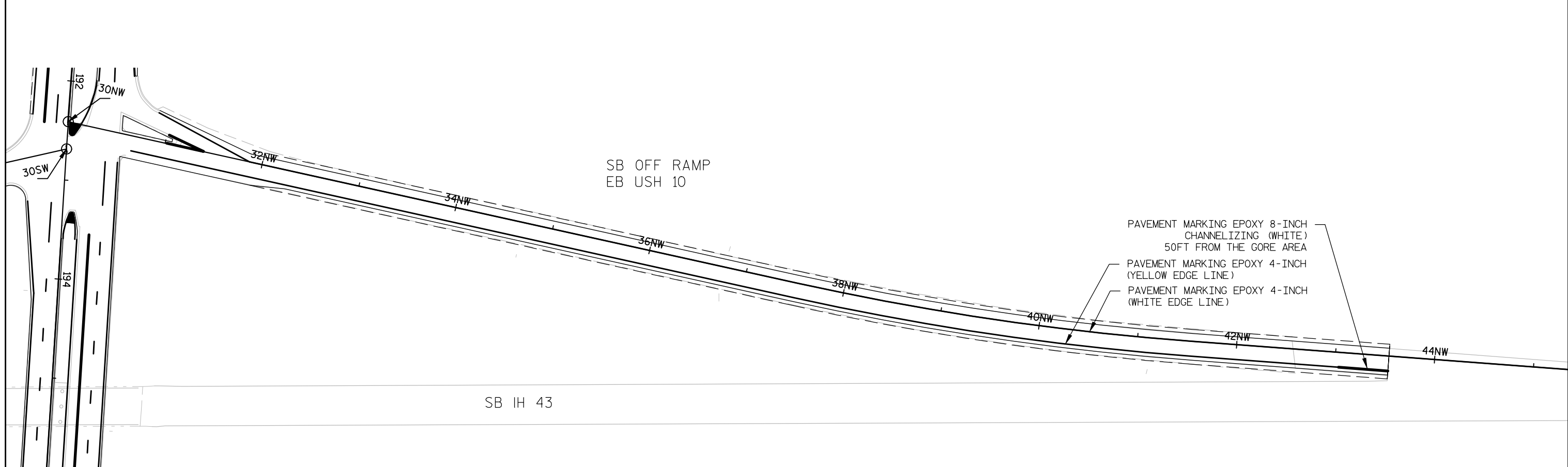
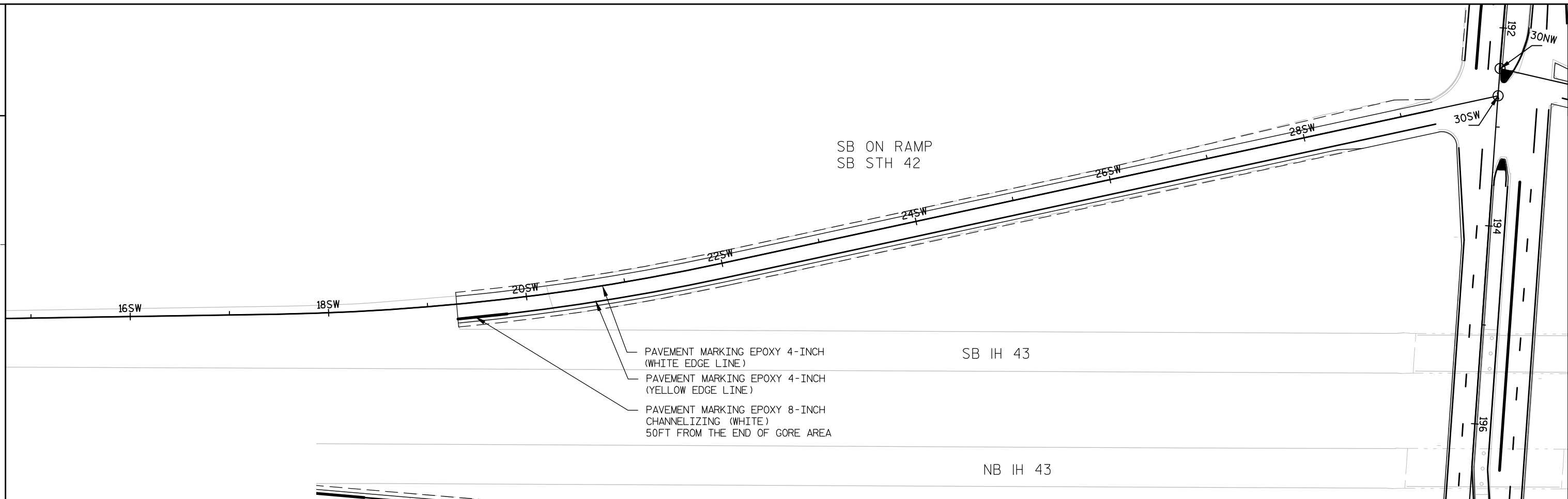


PROJECT NO:1500-34-71	HWY: USH 10	COUNTY: MANITOWOC	PAVEMENT MARKING	SHEET 51	E
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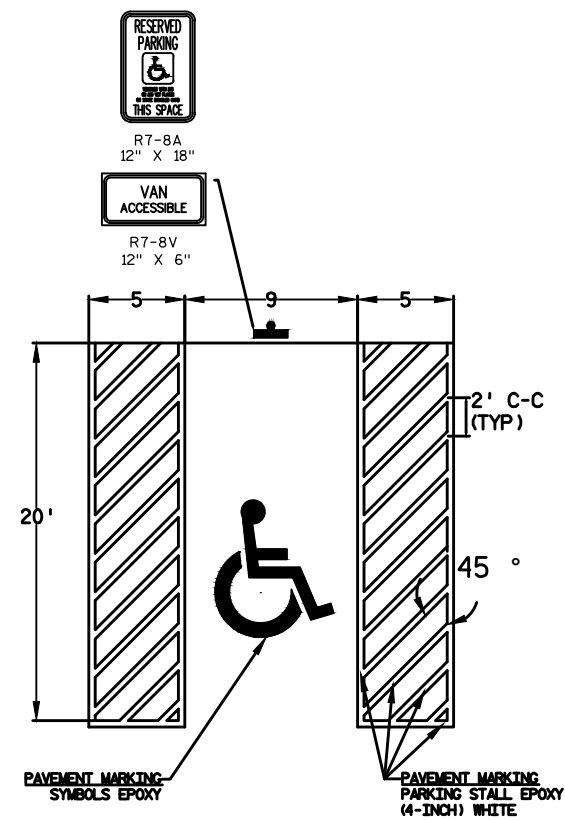
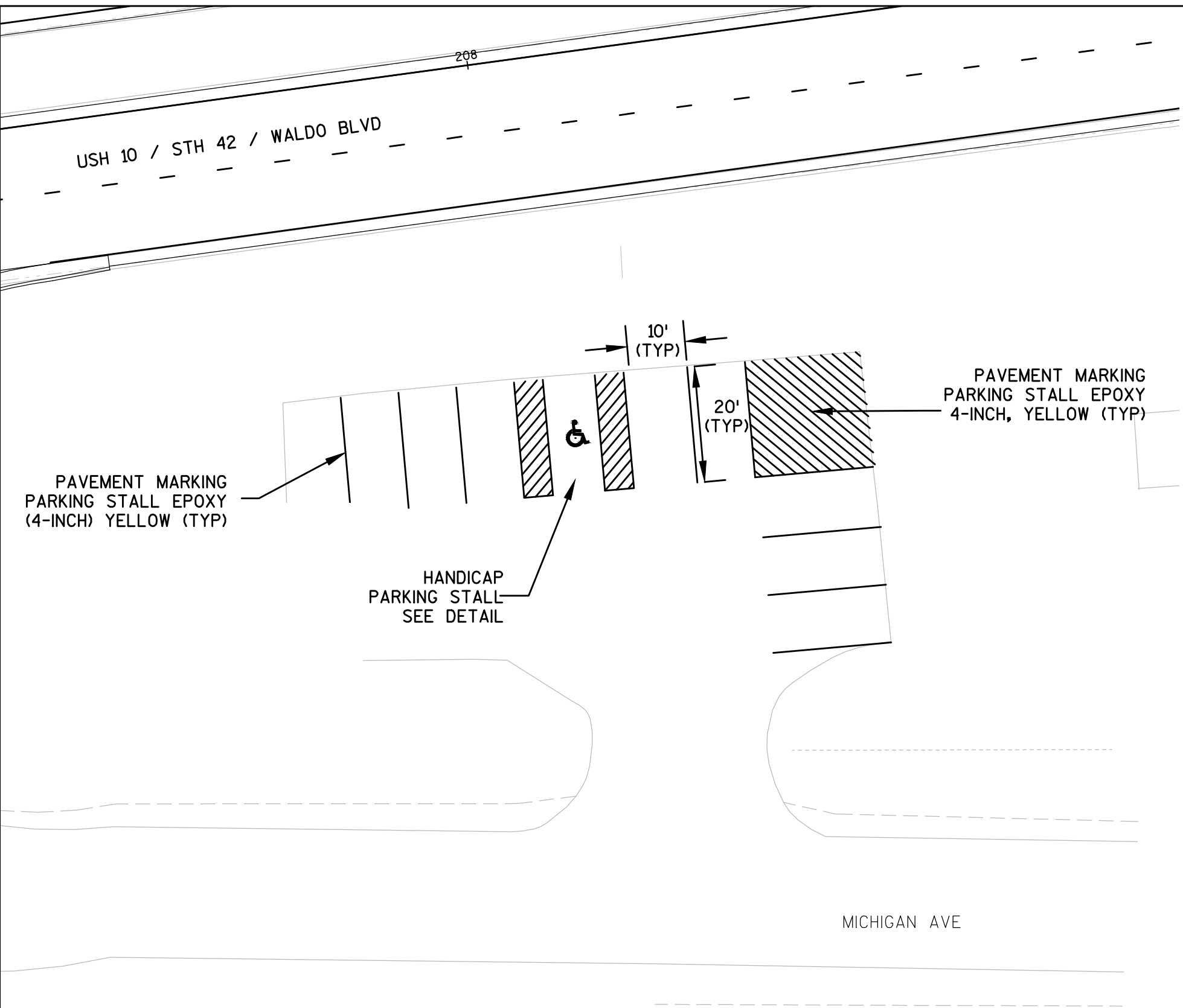


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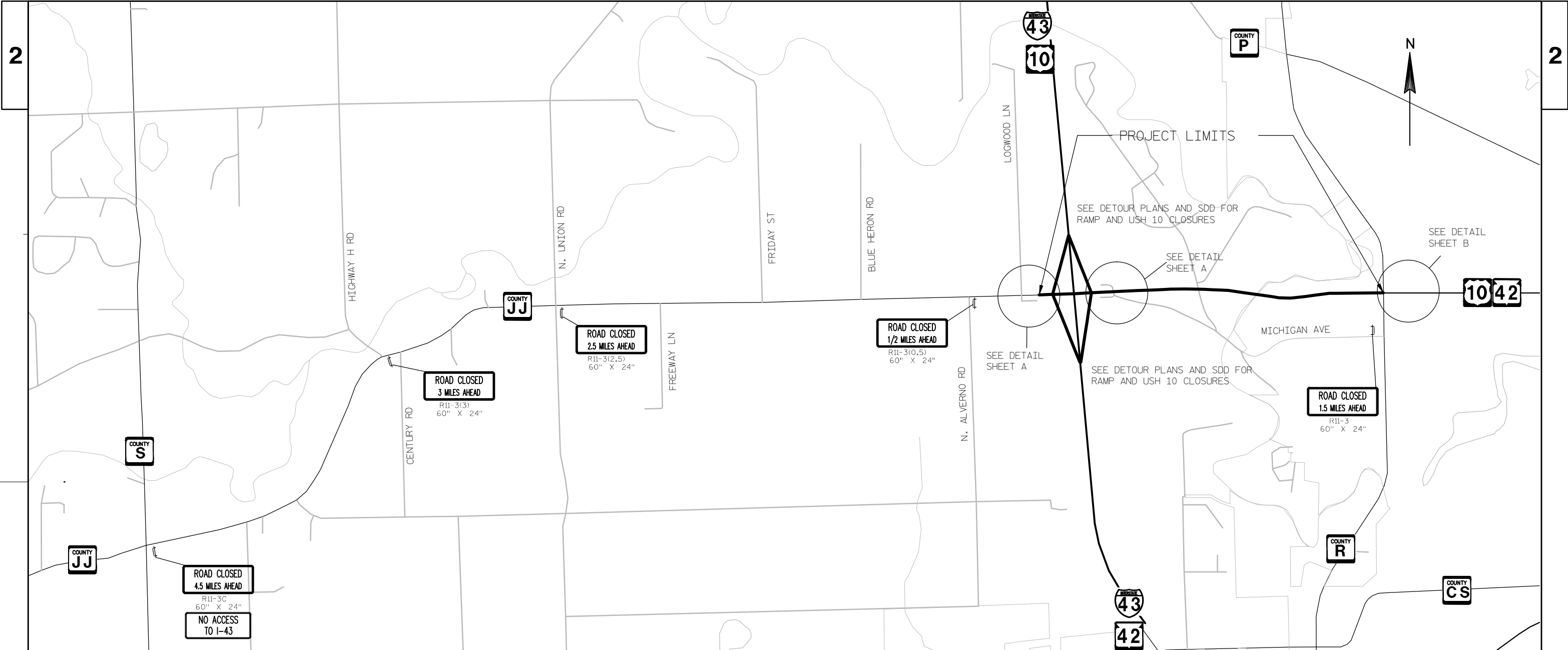
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PROJECT NO:1500-34-71	HWY:USH 10	COUNTY:MANITOWOC	PAVEMENT MARKING SOUTHBOUND RAMPS	SHEET 53	E
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HANDICAPPED PARKING STALL DETAIL



TRAFFIC CONTROL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS OR AS DETERMINED BY THE ENGINEER.
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMUTCD), A SUPPLEMENT TO THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).

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

USE SIGN W013-1, "45 MPH" SUPPLEMENTAL SIGNS ON ALL WARNING SIGNS ON USH 10 WITHIN THE 55 MPH ZONE

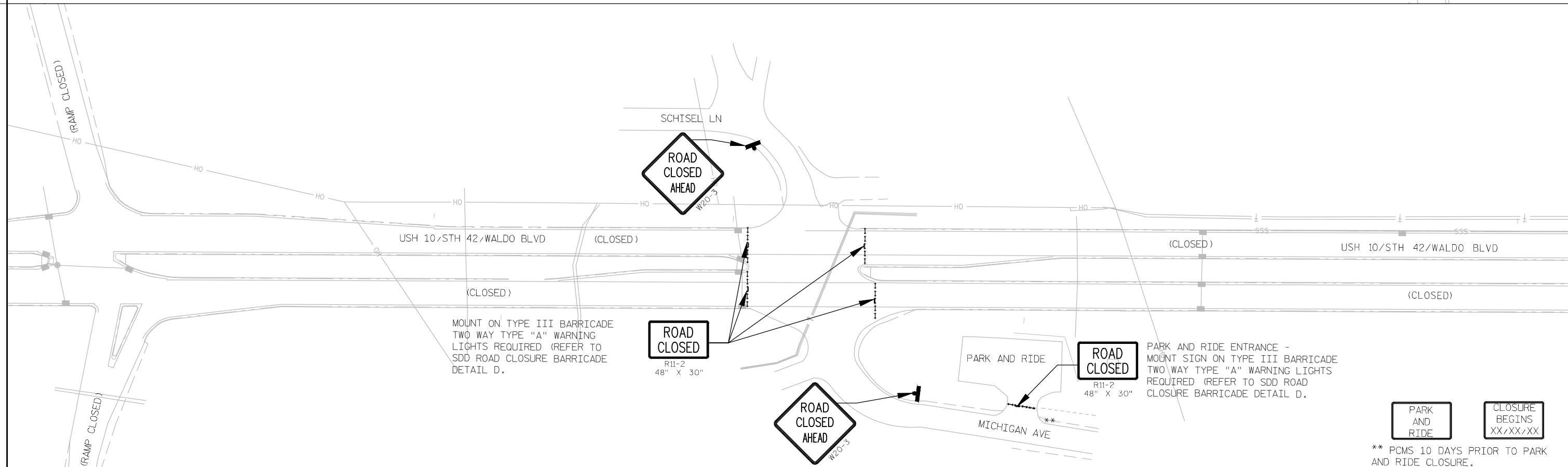
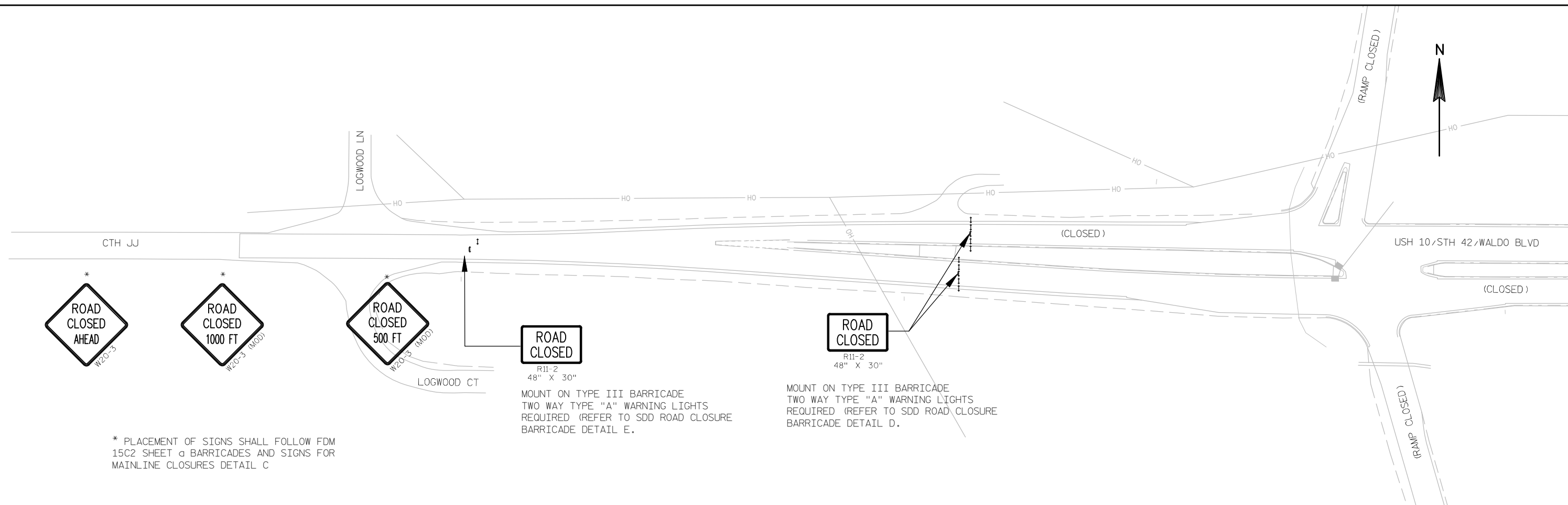
SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

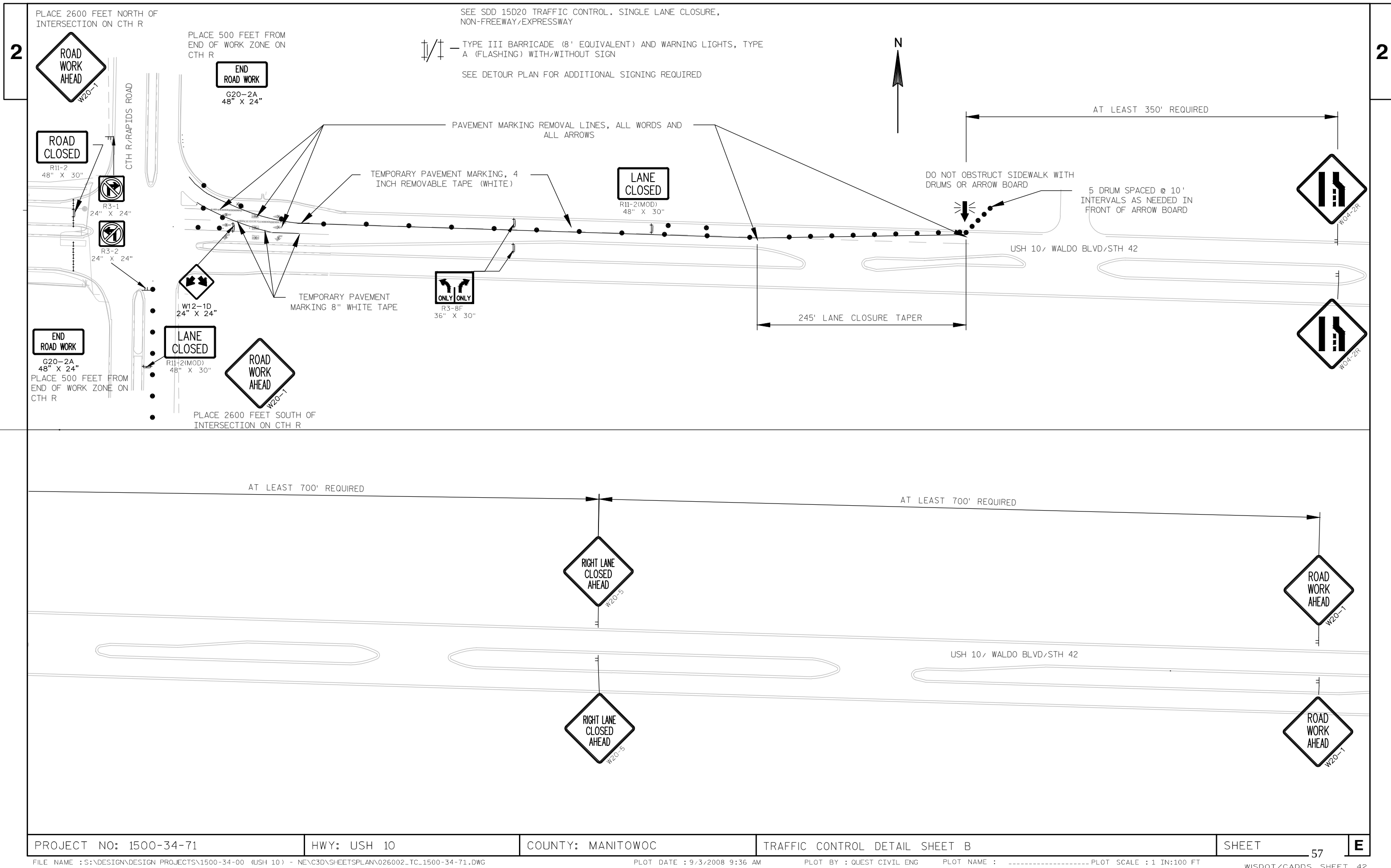
THE FOLLOWING SIGNS SHALL BE USED AS NEEDED THROUGHOUT THE WORK ZONE. THESE SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM 643.0100 "TRAFFIC CONTROL (PROJECT 1500-34-71)"

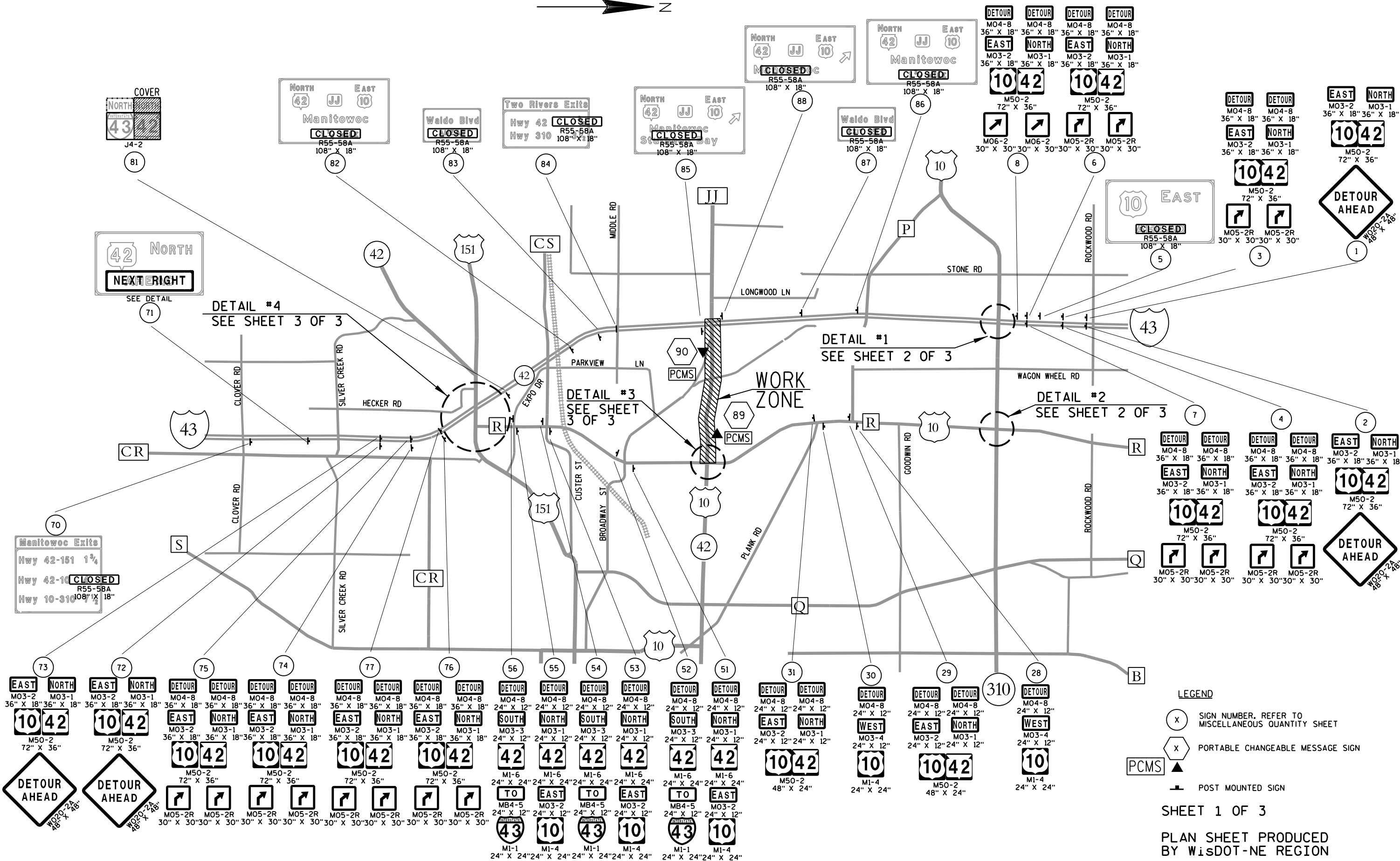
- W8-1 36"x36" "BUMP"
- W8-11 36"x36" "UNEVEN LANES"

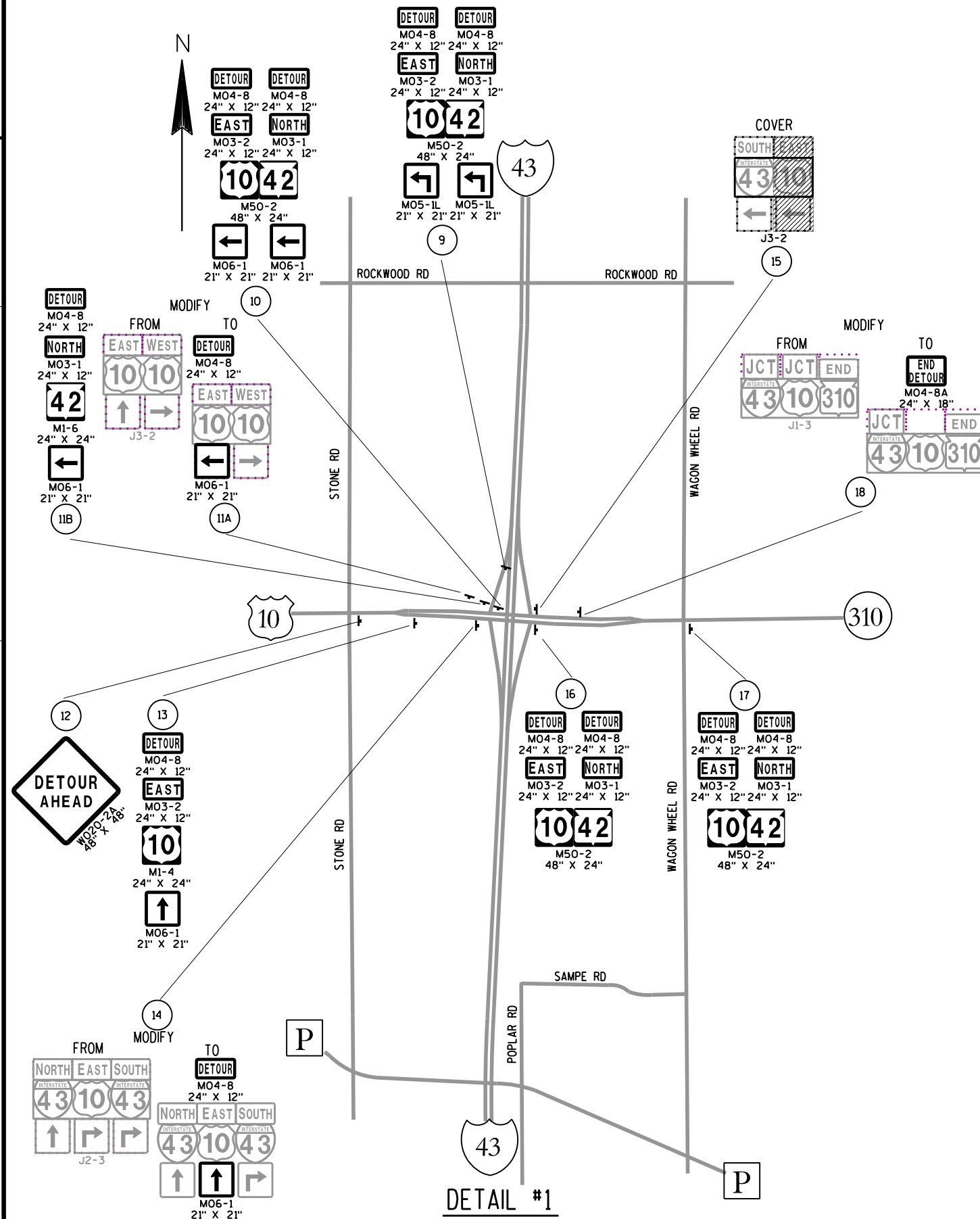
SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.

ALL DRUM SPACING IS 50' UNLESS OTHERWISE NOTED

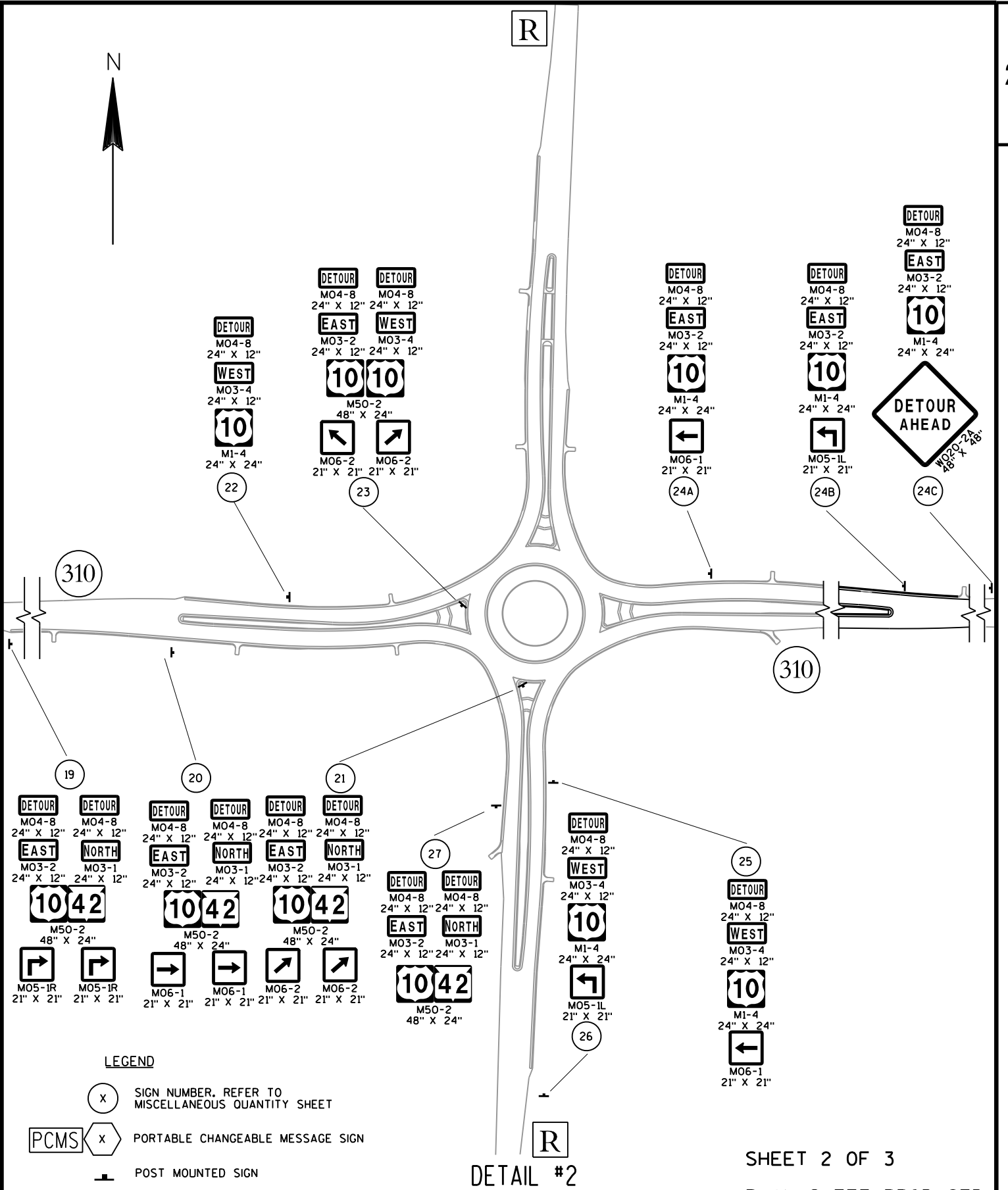








DETAIL #1



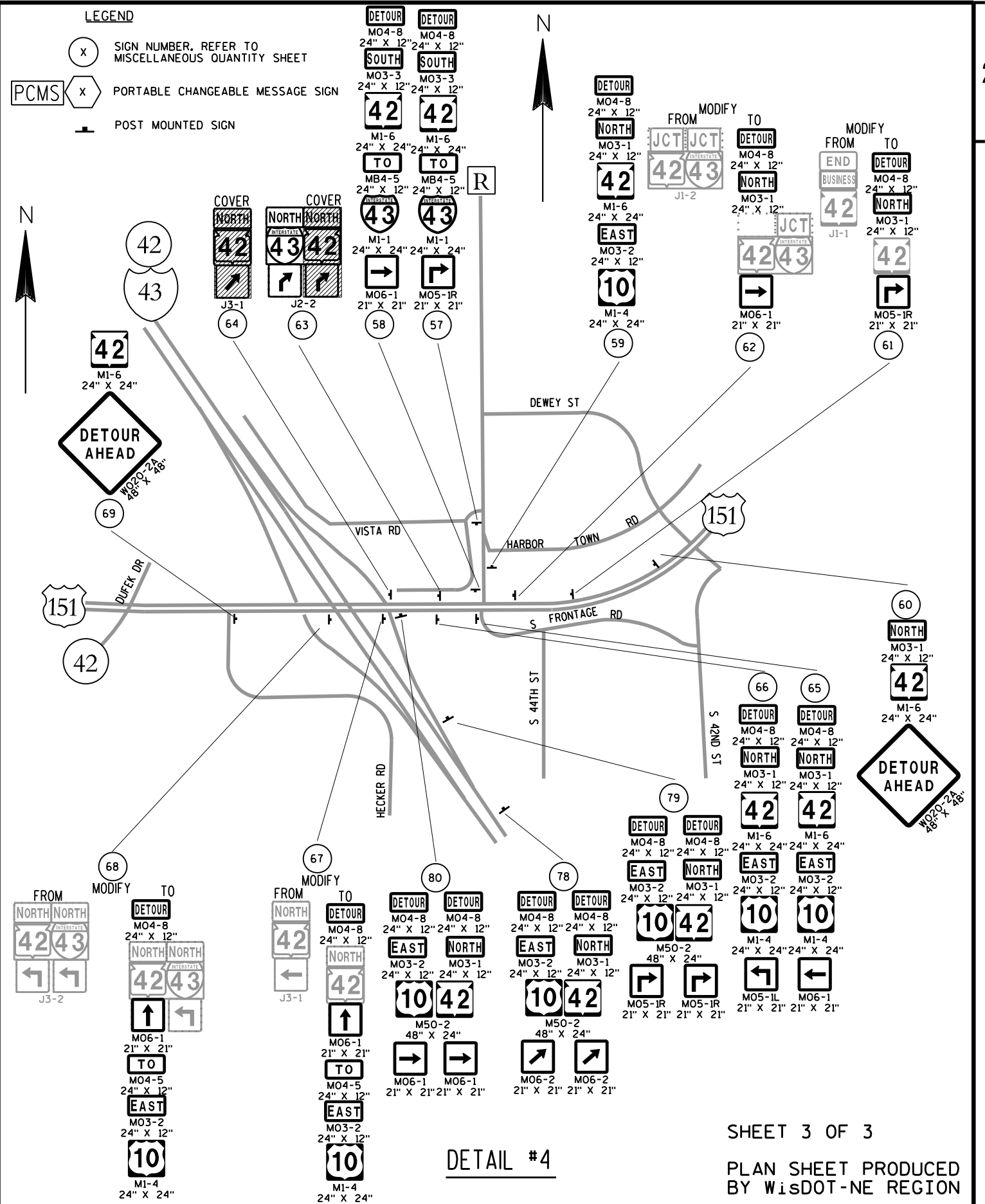
LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- POST MOUNTED SIGN

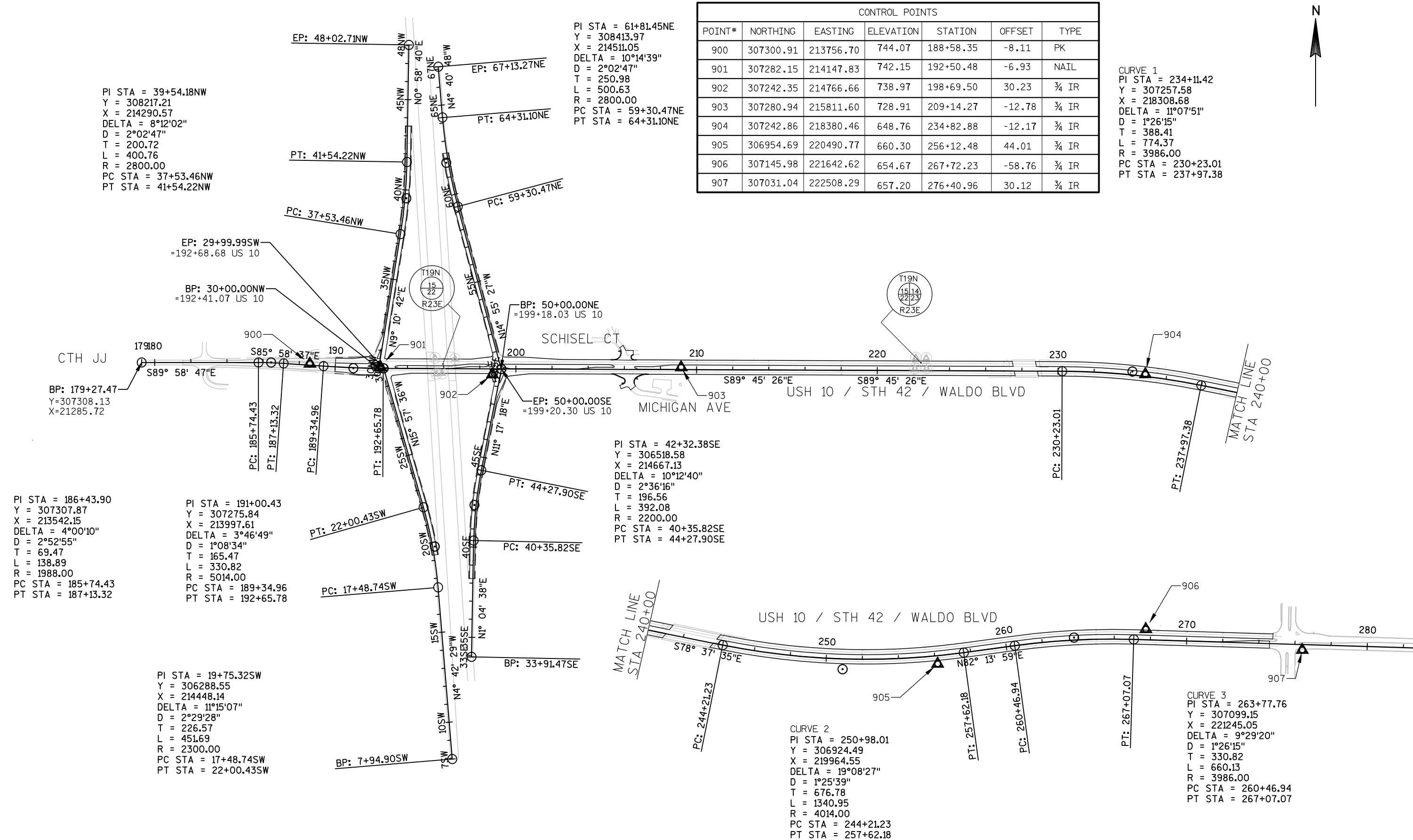
DETAIL #2

SHEET 2 OF 3

PLAN SHEET PRODUCED
BY WisDOT-NE REGION



60



3

DATE 06DEC13		E S T I M A T E O F Q U A N T I T I E S			
LINE				1500-34-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	204.0105	REMOVING PAVEMENT BUTT JOINTS	SY	425.000	425.000
0020	204.0110	REMOVING ASPHALTIC SURFACE	SY	20.000	20.000
0030	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	1,380.000	1,380.000
0040	204.0150	REMOVING CURB & GUTTER	LF	4,660.000	4,660.000
0050	204.0155	REMOVING CONCRETE SIDEWALK	SY	65.000	65.000
0060	204.0165	REMOVING GUARDRAIL	LF	50.000	50.000
0070	204.0220	REMOVING INLETS	EACH	1.000	1.000
0080	213.0100	FINISHING ROADWAY (PROJECT) 01.	EACH	1.000	1.000
		1500-34-71			
0090	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	1,510.000	1,510.000
0100	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	250.000	250.000
0110	390.0303	BASE PATCHING CONCRETE	SY	5,840.000	5,840.000
0120	416.0610	DRILLED TIE BARS	EACH	3,010.000	3,010.000
0130	416.0620	DRILLED DOWEL BARS	EACH	8,145.000	8,145.000
0140	440.4410.S	INCENTIVE IRI RIDE	DOL	14,565.000	14,565.000
0150	455.0105	ASPHALTIC MATERIAL PG58-28	TON	727.000	727.000
0160	455.0605	TACK COAT	GAL	3,450.000	3,450.000
0170	460.1103	HMA PAVEMENT TYPE E-3	TON	13,210.000	13,210.000
0180	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	4,258.200	4,258.200
0190	465.0105	ASPHALTIC SURFACE	TON	245.000	245.000
0200	465.0110	ASPHALTIC SURFACE PATCHING	TON	245.000	245.000
0210	465.0315	ASPHALTIC FLUMES	SY	205.000	205.000
0220	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	695.000	695.000
0230	601.0551	CONCRETE CURB AND GUTTER 4-INCH SLOPED	LF	75.000	75.000
		36-INCH TYPE A			
0240	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED	LF	310.000	310.000
		36-INCH TYPE D			
0250	602.0405	CONCRETE SIDEWALK 4-INCH	SF	215.000	215.000
0260	606.0300	RIPRAP HEAVY	CY	5.000	5.000
0270	608.0312	STORM SEWER PIPE REINFORCED CONCRETE	LF	405.000	405.000
		CLASS III 12-INCH			
0280	611.0430	RECONSTRUCTING INLETS	EACH	74.000	74.000
0290	611.0530	MANHOLE COVERS TYPE J	EACH	4.000	4.000
0300	611.0600	INLET COVERS TYPE A	EACH	2.000	2.000
0310	611.0624	INLET COVERS TYPE H	EACH	10.000	10.000
0320	611.0627	INLET COVERS TYPE HM	EACH	69.000	69.000
0330	611.2004	MANHOLES 4-FT DIAMETER	EACH	4.000	4.000
0340	611.3230	INLETS 2X3-FT	EACH	7.000	7.000
0350	611.8110	ADJUSTING MANHOLE COVERS	EACH	1.000	1.000
0360	611.9710	SALVAGED INLET COVERS	EACH	1.000	1.000
0370	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	50.000	50.000
0380	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS	EACH	1.000	1.000
		(PROJECT) 01. 1500-34-71			
0390	619.1000	MOBILIZATION	EACH	1.000	1.000
0400	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	340.000	340.000
0410	621.0100	LANDMARK REFERENCE MONUMENTS	EACH	8.000	8.000
0420	624.0100	WATER	MGAL	10.000	10.000
0430	625.0100	TOPSOIL	SY	1,715.000	1,715.000
0440	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	4.000	4.000
0450	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0460	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	1,715.000	1,715.000
0470	628.7005	INLET PROTECTION TYPE A	EACH	15.000	15.000
0480	628.7015	INLET PROTECTION TYPE C	EACH	15.000	15.000
0490	629.0210	FERTILIZER TYPE B	CWT	2.000	2.000
0500	630.0120	SEEDING MIXTURE NO. 20	LB	46.000	46.000

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DATE 06DEC13		E S T I M A T E O F Q U A N T I T I E S			
LINE				1500-34-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0510	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	48.000	48.000
0520	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	48.000	48.000
0530	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	20.000	20.000
0540	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	2,114.000	2,114.000
0550	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	3.000	3.000
0560	636.0500	SIGN SUPPORTS STEEL REINFORCEMENT	LB	196.000	196.000
0570	637.1210	SIGNS TYPE I REFLECTIVE H	SF	462.000	462.000
0580	637.2210	SIGNS TYPE II REFLECTIVE H	SF	1,121.710	1,121.710
0590	637.2215	SIGNS TYPE II REFLECTIVE H FOLDING	SF	30.360	30.360
0600	637.2230	SIGNS TYPE II REFLECTIVE F	SF	112.000	112.000
0610	638.2601	REMOVING SIGNS TYPE I	EACH	3.000	3.000
0620	638.2602	REMOVING SIGNS TYPE II	EACH	211.000	211.000
0630	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	118.000	118.000
0640	638.3100	REMOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	4.000	4.000
0650	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000
0660	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1500-34-71	EACH	1.000	1.000
0670	643.0300	TRAFFIC CONTROL DRUMS	DAY	4,400.000	4,400.000
0680	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	6,710.000	6,710.000
0690	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	12,100.000	12,100.000
0700	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,100.000	1,100.000
0710	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	110.000	110.000
0720	643.0900	TRAFFIC CONTROL SIGNS	DAY	3,630.000	3,630.000
0730	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	10.000	10.000
0740	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	21.000	21.000
0750	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1500-34-71	EACH	1.000	1.000
0760	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	42,020.000	42,020.000
0770	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	18.000	18.000
0780	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	48,245.000	48,245.000
0790	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	1,550.000	1,550.000
0800	646.0600	REMOVING PAVEMENT MARKINGS	LF	340.000	340.000
0810	647.0256	PAVEMENT MARKING SYMBOLS EPOXY	EACH	1.000	1.000
0820	647.0456	PAVEMENT MARKING CURB EPOXY	LF	240.000	240.000
0830	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	7.000	7.000
0840	647.0656	PAVEMENT MARKING PARKING STALL EPOXY	LF	320.000	320.000
0850	647.0955	REMOVING PAVEMENT MARKINGS ARROWS	EACH	7.000	7.000
0860	647.0965	REMOVING PAVEMENT MARKINGS WORDS	EACH	3.000	3.000
0870	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	700.000	700.000
0880	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	180.000	180.000
0890	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	11.000	11.000
0900	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	385.000	385.000
0910	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	21,900.000	21,900.000
0920	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1500-34-71	LS	1.000	1.000
0930	690.0150	SAWING ASPHALT	LF	515.000	515.000
0940	690.0250	SAWING CONCRETE	LF	27,000.000	27,000.000
0950	SPV.0060	SPECIAL 01. REESTABLISH SECTION CORNER MONUMENTS	EACH	2.000	2.000
0960	SPV.0060	SPECIAL 02. RECONNECT EXISTING STORM SEWER LATERAL	EACH	6.000	6.000

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DATE 06DEC13			E S T I M A T E O F Q U A N T I T I E S		
LINE					1500-34-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0970	SPV.0090	SPECIAL 01. CONCRETE CURB AND GUTTER	LF	2,065.000	2,065.000
		30-INCH TYPE A MODIFIED			
0980	SPV.0090	SPECIAL 02. CONCRETE CURB AND GUTTER	LF	1,835.000	1,835.000
		4-INCH SLOPED 36-INCH TYPE A MODIFIED			
0990	SPV.0090	SPECIAL 03. LONGITUDINAL JOINT REPAIR	LF	7,250.000	7,250.000
1000	SPV.0090	SPECIAL 04. CLEAN AND PATCH CONCRETE	LF	6,950.000	6,950.000
		PAVEMENT			
1010	SPV.0090	SPECIAL 05. GRADING SHAPING FINISHING	LF	380.000	380.000
		FOR INTERSECTION CURB AND GUTTER			
1020	SPV.0120	SPECIAL 01. WATER FOR SEEDED AREAS	MGAL	20.000	20.000

3

REMOVING CONCRETE PAVEMENT

204.0105 REMOVING PAVEMENT BUTT JOINTS			
CATEGORY	STATION	LOCATION	SY
0010	190+00	EB	30
	190+00	WB	25
	274+59	EB	65
	274+77	WB	45
	227+27	WB	30
	227+39	EB	30
	229+02	WB	30
	229+10	EB	30
	240+65	EB	35
	240+75	WB	35
	243+82	EB	35
	244+02	WB	35
TOTAL			425

REMOVING ASPHALTIC SURFACE

204.0110 REMOVING ASPHALTIC SURFACE				204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	
CATEGORY	STATION	LOCATION	SY	SY	
0010	63+33	RAMP NE	---	300	
	43+55	RAMP NW	---	300	
	38+25	RAMP SE	---	300	
	19+29	RAMP SW	---	300	
	205+83	SCHISEL CT (NW)	8	50	
	206+49	SCHISEL CT (NE)	5	---	
	206+49.	MICHIGAN AVE (SW)	2	80	
	205+78	MICHIGAN AVE (SE)	5	50	
TOTAL			20	1,380	

3

REMOVING INLETS

204.0220 REMOVING INLETS				
CATEGORY	STATION	OFFSET	STR NO	EACH
0010	239+11	26' RT	3627	1
TOTAL				1

BASE AGGREGATE DENSE

		305.0110 BASE AGG DENSE 3/4"		305.0120 BASE AGG DENSE 1 1/4"		624.0100 WATER MGL
CATEGORY	STATION	LOCATION	TON	TON		
0010	19+71 - 29+25	RAMP SW LT	175	---		0.72
	19+71 - 29+25	RAMP SW RT	105	---		0.72
	37+71 - 49+25	RAMP SE RT	210	---		0.87
	37+71 - 49+25	RAMP SE LT	125	---		0.87
	33+00 - 43+10	RAMP NW RT	110	---		0.76
	33+00 - 43+10	RAMP NW LT	185	---		0.76
	51+00 - 62+00	RAMP NE RT	205	---		0.83
	51+00 - 62+00	RAMP NE LT	120	---		0.83
MICHIGAN/SCHISEL INTERSECTION			4	---		0.03
	190+00-192+50	EB SHOULDER	99	---		0.62
	190+00-192+50	WB SHOULDER	163	---		1.12
STORM SEWER LOCATIONS			---	176		1.21
MICHIGAN/SCHISEL INTERSECTION			---	32		0.22
UNDISTRIBUTED			8	42		0.34
TOTAL			1,510	250		10

CONCRETE PAVEMENT REPAIR AND BASE PATCHING

CATEGORY	STATION	PASS/DRIVE LANE LOCATION	390.0303 BASE PATCHING CONCRETE SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	690.0250 SAWING CONCRETE LF
0010	190+36 EB	DRIVING	32	12	16	72
	190+49 EB	TURN LANE	5	---	---	44
	190+79 EB	DRIVING	10	---	16	39
	191+36 EB	BOTH	24	---	32	84
	191+54 EB	TURN LANE	8	---	16	36
	191+71 EB	DRIVING	9	---	16	38
	191+75 EB	TURN LANE	8	---	16	36
	191+87 EB	DRIVING	8	---	16	36
	191+97 EB	TURN LANE	8	---	16	36
	192+58 EB	BOTH	24	---	32	84
	192+90 EB	DRIVING	8	---	16	36
	193+26 EB	PASSING	8	---	16	36
	193+43 EB	PASSING	8	---	16	36
	194+93 EB	PASSING	8	---	16	36
	195+35 EB	BOTH	28	---	32	69
	195+58 EB	PASSING	10	---	16	36
	195+52 EB	DRIVING	8	---	16	39
	195+75 EB	DRIVING	15		16	47
	196+50 EB	DRIVING	26	10	16	64
	196+80 EB	PASSING	8	---	16	36
	197+15 EB	DRIVING	15	---	16	46
	197+77 EB	DRIVING	7	---	16	35
	198+98 EB	BOTH	16	---	32	60
	199+17 EB	PASSING	8	---	16	36
	199+37 EB	BOTH	16	---	32	60
	199+66 EB	BOTH	67	15	32	109
	200+75 EB	PASSING	8	---	16	36
	201+06 EB	DRIVING	26	10	16	63
	204+24 EB	PASSING	8	---	16	36
	204+26 EB	DRIVING	8	---	16	36
	204+43 EB	DRIVING	8	---	16	36
	204+46 EB	PASSING	8	---	16	36
	204+65 EB	DRIVING	8	---	16	36
	204+65 EB	PASSING	8	---	16	36
	205+53 EB	BOTH	16	---	32	60
	205+72 EB	PASSING	8	---	16	36
	206+92 EB	PASSING	8	---	16	36
	207+33 EB	PASSING	8	---	16	36
	207+52 EB	PASSING	8	---	16	36
	208+31 EB	PASSING	8	---	16	36
	209+58 EB	BOTH	16	---	32	60
	210+06 EB	BOTH	54	---	32	89
CONTINUED		SUBTOTALS	603	47	800	1,994

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

CATEGORY	STATION	PASS/DRIVE LANE LOCATION	390.0303 BASE PATCHING CONCRETE SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	690.0250 SAWING CONCRETE LF
	211+30 EB	PASSING	8	---	16	36
	211+42 EB	PASSING	8	---	16	36
	211+92 EB	PASSING	8	---	16	36
	212+17 EB	PASSING	8	---	16	36
	212+67 EB	PASSING	8	---	16	36
	213+17 EB	PASSING	8	---	16	36
	213+79 EB	PASSING	8	---	16	36
	213+92 EB	BOTH	16	---	32	60
	213+98 EB	PASSING	8	---	16	36
	214+41 EB	BOTH	16	---	32	60
	214+52 EB	PASSING	8	---	16	36
	214+65 EB	PASSING	8	---	16	36
	215+02 EB	PASSING	8	---	16	36
	215+64 EB	PASSING	8	---	16	36
	215+89 EB	PASSING	8	---	16	36
	216+17 EB	DRIVING	8	8	16	36
	216+26 EB	PASSING	8	---	16	36
	216+86 EB	PASSING	8	---	16	36
	217+12 EB	PASSING	8	---	16	36
	218+25 EB	PASSING	7	---	16	35
	218+70 EB	PASSING	8	---	16	36
	218+82 EB	PASSING	8	---	16	36
	219+95 EB	PASSING	8	---	16	36
	220+07 EB	PASSING	8	---	16	36
	221+01 EB	PASSING	8	---	16	36
	221+32 EB	PASSING	8	---	16	36
	221+62 EB	DRIVING	9	---	16	37
	221+82 EB	PASSING	8	---	16	36
	222+69 EB	PASSING	8	---	16	36
	222+89 EB	PASSING	8	---	16	36
	223+06 EB	PASSING	8	---	16	36
	223+18 EB	PASSING	8	---	16	36
	224+43 EB	PASSING	8	---	16	36
	225+06 EB	PASSING	8	---	16	36
	225+19 EB	PASSING	8	---	16	36
	225+55 EB	PASSING	8	---	16	36
	227+47 EB	PASSING	8	---	16	36
	229+15 EB	PASSING	39	5	16	49
	229+15 EB	DRIVING	9	6	16	37
	229+45 EB	PASSING	8	---	16	36
	229+83 EB	PASSING	8	---	16	36
	230+57 EB	PASSING	8	---	16	36
CONTINUED		SUBTOTALS	389	19	704	1,589

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	DRILLED	DRILLED	SAWING
		LANE	CONCRETE	TIE	DOWEL	CONCRETE
CATEGORY	STATION	LOCATION	SY	BARS EACH	BARS EACH	LF
	231+09 EB	BOTH	16	---	32	60
	232+39 EB	PASSING	21	4	16	55
	233+08 EB	PASSING	8	---	16	36
	233+70 EB	PASSING	8	---	16	36
	233+84 EB	PASSING	8	---	16	36
	234+95 EB	PASSING	8	---	16	36
	235+08 EB	PASSING	8	---	16	36
	235+27 EB	PASSING	8	---	16	36
	235+38 EB	DRIVING	74	22	16	80
	236+07 EB	PASSING	8	---	16	36
	236+52 EB	PASSING	8	---	16	36
	236+83 EB	PASSING	8	---	16	36
	236+95 EB	PASSING	8	---	16	36
	237+15 EB	PASSING	8	---	16	36
	237+59 EB	BOTH	16	---	32	60
	237+77 EB	PASSING	8	---	16	36
	238+07 EB	PASSING	8	---	16	36
	238+21 EB	BOTH	16	---	32	60
	238+69 EB	PASSING	8	---	16	36
	239+52 EB	DRIVING	190	56	16	165
	240+07 EB	PASSING	8	---	16	36
	240+42 EB	DRIVING	8	---	16	36
	240+58 EB	BOTH	16	---	32	60
	244+13 EB	BOTH	16	---	32	60
	244+66 EB	BOTH	8	---	16	36
	247+56 EB	PASSING	8	---	16	36
	248+19 EB	PASSING	8	---	16	36
	250+69 EB	PASSING	8	---	16	36
	251+66 EB	PASSING	8	---	16	36
	251+84 EB	PASSING	8	---	16	36
	253+57 EB	PASSING	8	---	16	36
	255+26 EB	PASSING	8	---	16	36
	255+51 EB	BOTH	16	---	32	60
	255+64 EB	PASSING	8	---	16	36
	257+94 EB	PASSING	8	---	16	36
	260+03 EB	PASSING	8	---	16	36
	260+54 EB	PASSING	8	---	16	36
	260+80 EB	PASSING	8	---	16	36
	261+18 EB	PASSING	8	---	161	36
	261+30 EB	PASSING	8	---	16	36
	261+49 EB	PASSING	8	---	16	36
	261+95 EB	PASSING	8	---	16	36
CONTINUED		SUBTOTALS	649	83	913	1,859

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	DRILLED	DRILLED	SAWING
		LANE	CONCRETE	TIE	DOWEL	CONCRETE
CATEGORY	STATION	LOCATION	SY	BARS EACH	BARS EACH	LF
	262+08 EB	PASSING	8	---	16	36
	262+73 EB	PASSING	8	---	16	36
	263+11 EB	PASSING	8	---	16	36
	263+24 EB	PASSING	8	---	16	36
	263+76 EB	PASSING	8	---	16	36
	263+89 EB	PASSING	8	---	16	36
	264+01 EB	PASSING	8	---	16	36
	264+40 EB	PASSING	8	---	16	36
	264+53 EB	PASSING	8	---	16	36
	264+67 EB	PASSING	8	---	16	36
	264+86 EB	PASSING	8	---	16	36
	265+00 EB	PASSING	8	---	16	36
	265+28 EB	PASSING	8	---	16	36
	265+48 EB	PASSING	8	---	16	36
	265+66 EB	PASSING	8	---	16	36
	265+78 EB	PASSING	8	---	16	36
	265+91 EB	PASSING	8	---	16	36
	266+28 EB	PASSING	8	---	16	36
	266+54 EB	PASSING	8	---	16	36
	267+26 EB	PASSING	8	---	16	36
	267+45 EB	PASSING	8	---	16	36
	267+63 EB	PASSING	8	---	16	36
	267+76 EB	PASSING	8	---	16	36
	268+15 EB	PASSING	8	---	16	36
	268+88 EB	PASSING	8	---	16	36
	269+02 EB	PASSING	8	---	16	36
	269+50 EB	PASSING	8	---	16	36
	270+14 EB	PASSING	8	---	16	36
	270+65 EB	PASSING	8	---	16	36
	271+54 EB	PASSING	8	---	16	36
	272+03 EB	PASSING	8	---	16	36
	272+16 EB	PASSING	8	---	16	36
	272+55 EB	PASSING	8	---	16	36
	272+66 EB	PASSING	11	---	18	46
	273+00 EB	PASSING	8	---	16	35
	273+15 EB	PASSING	5	---	10	28
	273+29 EB	PASSING	14	---	20	54
	273+42 EB	PASSING	15	---	20	56
	273+61 EB	PASSING	15	---	20	58
	273+80 EB	PASSING	16	---	32	60
	273+91 EB	PASSING	16	---	32	60
	274+05 EB	PASSING	16	---	32	60
CONTINUED		SUBTOTALS	382	0	728	1,645

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	TIE	DOWEL	SAWING
		LANE	CONCRETE	BARS	BARS	CONCRETE
CATEGORY	STATION	LOCATION	SY	EACH	EACH	LF
	274+24 EB	PASSING	16	---	32	60
	274+84 EB	TURN LANE	8	---	16	36
	190+95 WB	PASSING	8	---	16	36
	191+06 WB	DRIVING	8	---	16	36
	191+24 WB	DRIVING	26	10	16	63
	191+24 WB	PASSING	8	---	16	30
	191+45 WB	DRIVING	8	---	16	30
	191+45 WB	PASSING	8	---	16	30
	191+75 WB	DRIVING	8	---	16	30
	191+75 WB	PASSING	8	---	16	30
	191+93 WB	DRIVING	8	---	16	20
	191+95 WB	PASSING	17	---	16	50
	191+99 WB	ALT	13	20	16	45
	192+15 WB	BOTH	16	---	32	60
	193+22 WB	DRIVING	8	---	16	36
	193+32 WB	PASSING	8	---	16	36
	193+33 WB	ALT	8	---	16	36
	193+62 WB	DRIVING	8	---	16	36
	193+88 WB	BOTH	16	---	32	60
	194+02 WB	BOTH	16	---	32	60
	194+43 WB	DRIVING	8	---	16	36
	194+61 WB	BOTH	16	---	32	60
	194+70 WB	PASSING	8	---	16	36
	194+81 WB	BOTH	16	---	32	60
	195+31 WB	ALT	7	---	16	32
	195+72 WB	ALT	8	---	16	36
	195+72 WB	DRIVING	26	31	32	63
	195+96 WB	ALT	8	---	16	33
	196+06 WB	PASSING	9	---	16	37
	196+80 WB	BOTH	46	41	32	99
	197+00 WB	PASSING	8	---	16	36
	197+07 WB	DRIVING	10	---	16	39
	197+20 WB	DRIVING	8	---	16	36
	197+39 WB	PASSING	8	---	16	36
	197+50 WB	PASSING	8	---	16	36
	198+00 WB	DRIVING	12	---	16	47
	198+20 WB	ALT	5	---	16	28
	198+40 WB	BOTH	23	---	32	80
	198+57 WB	BOTH	16	---	32	60
	198+80 WB	DRIVING	8	---	16	36
	199+00 WB	BOTH	16	---	32	60
	199+17 WB	BOTH	16	---	32	60
CONTINUED		SUBTOTALS	513	102	864	1,866

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	TIE	DOWEL	SAWING
		LANE	CONCRETE	BARS	BARS	CONCRETE
CATEGORY	STATION	LOCATION	SY	EACH	EACH	LF
	199+26 WB	BOTH	16	---	32	60
	199+35 WB	BOTH	16	---	32	60
	199+42 WB	ALT	8	---	16	36
	199+64 WB	BOTH	53	32	32	88
	200+19 WB	DRIVING	9	---	16	36
	200+63 WB	DRIVING	8	---	16	36
	200+79 WB	DRIVING	11	---	16	41
	200+95 WB	DRIVING	8	---	16	36
	201+05 WB	DRIVING	8	---	16	36
	201+14 WB	DRIVING	8	---	16	36
	201+20 WB	DRIVING	13	---	16	43
	201+45 WB	DRIVING	8	---	16	36
	201+58 WB	DRIVING	11	---	16	40
	201+68 WB	DRIVING	15	---	16	46
	201+85 WB	DRIVING	9	---	16	36
	202+14 WB	DRIVING	8	---	16	36
	202+39 WB	DRIVING	11	---	16	40
	202+54 WB	DRIVING	8	---	16	36
	203+18 WB	DRIVING	11	---	16	41
	204+33 WB	BOTH	16	---	32	60
	205+38 WB	BOTH	34	28	32	73
	205+52 WB	DRIVING	8	---	16	36
	206+23 WB	DRIVING	8	---	16	36
	206+36 WB	PASSING	9	---	16	37
	207+12 WB	DRIVING	8	---	16	36
	207+20 WB	PASSING	8	---	16	36
	207+24 WB	DRIVING	8	---	16	36
	207+62 WB	DRIVING	8	---	16	36
	208+22 WB	DRIVING	8	---	16	36
	208+93 WB	DRIVING	8	---	16	36
	210+12 WB	BOTH	16	---	32	60
	210+55 WB	PASSING	8	---	16	36
	210+90 WB	BOTH	16	---	32	60
	211+32 WB	BOTH	8	---	16	36
	212+83 WB	BOTH	16	---	32	60
	213+32 WB	DRIVING	16	---	32	60
	213+45 WB	PASSING	8	---	16	36
	214+00 WB	PASSING	8	---	16	36
	214+13 WB	PASSING	8	---	16	36
	214+25 WB	PASSING	8	---	16	36
	214+73 WB	PASSING	8	---	16	36
	214+92 WB	DRIVING	8	---	16	36
CONTINUED		SUBTOTALS	494	60	816	1,805

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	TIE	DOWEL	SAWING
		LANE	CONCRETE	BARS	BARS	CONCRETE
CATEGORY	STATION	LOCATION	SY	EACH	EACH	LF
	215+23 WB	PASSING	8	---	16	36
	215+35 WB	PASSING	8	---	16	36
	215+47 WB	PASSING	8	---	16	36
	215+96 WB	PASSING	8	---	16	36
	216+57 WB	PASSING	8	---	16	36
	217+80 WB	PASSING	8	---	16	36
	218+10 WB	BOTH	16	---	32	36
	218+30 WB	PASSING	8	---	16	36
	218+41 WB	PASSING	8	---	16	36
	218+55 WB	PASSING	8	---	16	36
	219+04 WB	PASSING	8	---	16	36
	219+53 WB	PASSING	8	---	16	36
	219+65 WB	BOTH	16	---	32	60
	220+26 WB	BOTH	16	---	32	60
	220+64 WB	DRIVING	8	---	16	36
	220+94 WB	DRIVING	8	---	16	36
	221+48 WB	BOTH	16	---	32	60
	222+00 WB	BOTH	16	---	32	60
	222+26 WB	BOTH	16	---	32	60
	222+95 WB	DRIVING	8	---	16	36
	223+36 WB	PASSING	8	---	16	36
	224+93 WB	PASSING	8	---	16	36
	225+11 WB	PASSING	8	---	16	36
	225+24 WB	PASSING	8	---	16	36
	226+48 WB	PASSING	8	---	16	36
	227+17 WB	PASSING	8	---	16	36
	227+30 WB	PASSING	8	---	16	36
	229+03 WB	DRIVING	53	---	16	62
	229+03 WB	PASSING	48	---	16	62
	230+54 WB	BOTH	16	---	32	60
	230+87 WB	PASSING	8	---	16	36
	231+04 WB	BOTH	16	---	32	60
	231+17 WB	BOTH	16	---	32	60
	231+31 WB	BOTH	16	---	32	60
	231+67 WB	DRIVING	8	---	16	36
	231+81 WB	BOTH	16	---	32	60
	231+94 WB	PASSING	8	---	16	36
	232+42 WB	PASSING	8	---	16	36
	233+13 WB	DRIVING	8	---	16	30
	233+13 WB	PASSING	33	10	16	49
	233+51 WB	BOTH	16	---	32	60
	233+64 WB	BOTH	16	---	32	60
CONTINUED		SUBTOTALS	552	10	880	1,859

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	TIE	DOWEL	SAWING
		LANE	CONCRETE	BARS	BARS	CONCRETE
CATEGORY	STATION	LOCATION	SY	EACH	EACH	LF
	233+14 WB	DRIVING	8	---	16	36
	235+37 WB	BOTH	16	---	32	60
	235+61 WB	PASSING	8	---	16	36
	236+25 WB	PASSING	8	---	16	36
	236+85 WB	BOTH	16	---	32	60
	237+36 WB	DRIVING	8	---	16	36
	237+47 WB	BOTH	16	---	32	60
	237+70 WB	PASSING	33	10	16	49
	237+95 WB	DRIVING	8	---	16	36
	238+09 WB	BOTH	16	---	32	60
	238+23 WB	PASSING	8	---	16	36
	239+86 WB	PASSING	8	---	16	36
	239+96 WB	DRIVING	8	---	16	36
	240+08 WB	PASSING	12	---	16	42
	240+08 WB	DRIVING	8	---	16	36
	240+84 WB	DRIVING	22	4	32	60
	246+31 WB	PASSING	8	--	16	36
	246+45 WB	PASSING	8	---	16	36
	249+00 WB	BOTH	16	---	32	60
	250+00 WB	PASSING	8	---	16	36
	250+81 WB	PASSING	8	---	16	36
	250+96 WB	PASSING	8	---	16	36
	251+07 WB	PASSING	8	---	16	36
	254+59 WB	PASSING	8	---	16	36
	255+35 WB	PASSING	8	---	16	36
	255+48 WB	PASSING	8	---	16	36
	255+86 WB	PASSING	8	---	16	36
	256+74 WB	PASSING	8	---	16	36
	257+81 WB	DRIVING	3	---	16	29
	258+08 WB	PASSING	8	---	16	36
	258+21 WB	PASSING	8	---	16	36
	259+33 WB	PASSING	8	---	16	36
	264+92 WB	PASSING	8	---	16	36
	266+05 WB	PASSING	8	---	16	36
	268+09 WB	DRIVING	8	---	16	36
	268+48 WB	PASSING	8	---	16	36
	268+58 WB	PASSING	8	---	16	36
	268+92 WB	PASSING	8	---	16	36
	269+10 WB	PASSING	8	---	16	36
	269+22 WB	PASSING	8	---	16	36
	269+73 WB	PASSING	8	---	16	36
	269+83 WB	BOTH	16	---	32	60
CONTINUED		SUBTOTALS	425	14	784	1,692

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	TIE	DOWEL	SAWING
		LANE	CONCRETE	BARS	BARS	CONCRETE
CATEGORY	STATION	LOCATION	SY	EACH	EACH	LF
	269+97 WB	PASSING	8	---	16	36
	270+16 WB	PASSING	8	---	16	36
	270+35 WB	BOTH	16	---	32	60
	270+80 WB	PASSING	8	---	16	36
	270+98 WB	BOTH	16	---	32	60
	271+08 WB	PASSING	8	---	16	36
	271+22 WB	PASSING	8	---	16	36
	271+40 WB	BOTH	16	---	32	60
	271+60 WB	BOTH	16	---	32	60
	271+72 WB	BOTH	16	---	32	60
	271+86 WB	BOTH	16	---	32	60
	272+04 WB	DRIVING	8	---	16	36
	272+22 WB	BOTH	16	---	32	60
	272+32 WB	BOTH	16	---	32	60
	272+46 WB	PASSING	8	---	16	36
	272+64 WB	BOTH	16	---	32	60
	272+76 WB	PASSING	8	---	16	36
	272+88 WB	PASSING	11	---	16	40
	273+10 WB	PASSING	8	---	16	35
	273+27 WB	BOTH	16	---	32	60
	273+70 WB	BOTH	16	---	32	60
	273+91 WB	BOTH	16	---	32	60
	274+01 WB	BOTH	16	---	32	60
	274+15 WB	PASSING	8	---	16	36
	274+72 WB	PASSING	8	---	16	36
	20+61 SW	LT	5	2	---	28
	21+00 SW	LT	8	5	---	33
	21+41 SW	LANE	10	4	16	42
	21+62 SW	LANE	10	2	16	42
	21+72 SW	LT	19	10	---	58
	21+81 SW	LANE	10	4	16	42
	22+01 SW	LANE	10	4	16	42
	22+21 SW	LANE	10	4	16	42
	22+41 SW	LANE	10	4	16	42
	22+82 SW	LANE	10	4	16	42
	23+82 SW	LANE	10	4	16	42
	24+02 SW	LT	6	2	---	29
	24+41 SW	LANE	10	4	16	42
	24+61 SW	LT	5	2	---	27
	24+61 SW	LANE	10	2	16	42
	24+81 SW	LANE	10	4	16	42
	25+01 SW	LANE	10	4	16	42
CONTINUED		SUBTOTALS	470	65	800	1,894

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	TIE	DOWEL	SAWING
		LANE	CONCRETE	BARS	BARS	CONCRETE
CATEGORY	STATION	LOCATION	SY	EACH	EACH	LF
	25+21 SW	LANE	10	4	16	42
	25+84 SW	LT	8	5	---	35
	26+21 SW	LANE	10	4	16	42
	26+42 SW	LANE	10	4	16	42
	26+81 SW	LANE	10	4	16	42
	27+02 SW	LANE	10	4	16	42
	27+21 SW	LANE	10	4	16	42
	27+42 SW	LANE	10	4	16	42
	27+86 SW	LANE	19	6	16	53
	28+48 SW	LT	9	5	---	36
	28+62 SW	LANE	10	4	16	42
	28+82 SW	LANE	10	4	16	42
	29+01 SW	LANE/RT	15	2	16	58
	29+19 SW	RT	8	2	---	33
	29+32 SW	LANE	8	4	---	40
	30+56 NW	RT TURN LANE	71	91	---	8
	30+56 NW	RT TURN LANE	13	9	---	16
	31+42 NW	RT	21	12	---	63
	31+54 NW	LT	14	2	---	93
	31+78 NW	RT	5	2	---	27
	32+20 NW	LT	4	2	---	26
	32+41 NW	LANE	13	2	16	50
	32+58 NW	LT	7	2	---	31
	32+63 NW	RT	10	2	---	42
	32+76 NW	LT	5	2	---	28
	33+00 NW	LANE	10	4	16	42
	33+22 NW	RT	3	2	---	20
	33+45 NW	LT	69	37	---	170
	33+42 NW	RT	3	2	---	20
	34+01 NW	LANE	10	4	16	42
	34+21 NW	LANE	10	4	16	42
	34+36 NW	LT	8	3	---	34
	34+61 NW	LANE	10	4	16	42
	34+80 NW	LANE	10	4	16	42
	34+97 NW	LT	7	2	---	31
	35+02 NW	LANE/RT	13	2	16	50
	35+21 NW	LANE	10	4	---	42
	35+57 NW	LT	5	2	---	27
	35+85 NW	LT	23	12	---	68
	36+22 NW	RT	3	2	---	20
	36+38 NW	LT	5	2	---	27
	37+21 NW	RT	3	2	--	20
CONTINUED		SUBTOTALS	521	278	288	1,756

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	DRILLED	DRILLED	SAWING
		LANE	CONCRETE	TIE	DOWEL	CONCRETE
CATEGORY	STATION	LOCATION	SY	BARS EACH	BARS EACH	LF
	37+68 NW	LT	24	12	---	68
	39+39 NW	LANE	10	4	16	42
	39+58 NW	LANE	10	4	16	42
	40+22 NW	LANE	16	7	16	49
	41+20 NW	RT	2	2	---	19
	41+40 NW	RT	2	2	---	19
	39+28 SE	RT	9	5	---	37
	39+64 SE	RT	11	5	---	40
	39+81 SE	LT	3	2	---	20
	39+86 SE	RT	7	3	---	32
	40+14 SE	RT	25	2	---	80
	40+41 SE	RT	5	2	---	27
	41+23 SE	RT	5	2	---	27
	41+46 SE	RT	11	5	---	41
	41+78 SE	RT	9	3	---	35
	42+25 SE	RT	14	6	---	47
	42+43 SE	RT	5	2	---	28
	43+17 SE	RT	7	2	---	32
	43+43 SE	RT	8	3	---	33
	43+57 SE	RT	6	2	---	31
	43+79 SE	LANE	12	2	16	49
	43+98 SE	RT	7	3	---	32
	44+37 SE	RT	6	3	---	30
	44+61 SE	RT	6	3	---	32
	45+01 SE	RT	9	4	---	37
	45+18 SE	RT	10	2	---	39
	45+22 SE	LANE/RT	10	2	16	42
	45+42 SE	RT	6	---	---	29
	45+43 SE	LANE	13	---	16	50
	45+63 SE	RT	5	2	---	26
	45+80 SE	LANE/LT	13	2	16	50
	46+21 SE	LANE/LT	13	2	16	50
	46+61 SE	LANE	10	4	16	42
	46+81 SE	LT	3	2	---	20
	46+86 SE	RT	8	3	---	33
	47+05 SE	RT	10	4	16	28
	47+34 SE	RT	7	3	---	32
	47+93 SE	RT	5	---	---	28
	47+96 SE	LANE	23	12	16	49
	48+00 SE	LT	3	---	---	14
	48+31 SE	RT	6	2	---	30
	48+60 SE	RT	2	2	---	20
CONTINUED		SUBTOTALS	374	132	176	1,511

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
		390.0303		416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	DRILLED	DRILLED	SAWING
		LANE	CONCRETE	BARS EACH	BARS EACH	CONCRETE
CATEGORY	STATION	LOCATION	SY	BARS EACH	BARS EACH	LF
	48+72 SE	LANE	10	4	---	42
	48+91 SE	LANE/LT	15	2	16	58
	49+11 SE	LANE	10	4	16	42
	49+34 SE	LT	6	2	---	29
	50+78 NE	LANE	10	4	16	42
	51+24 NE	LANE	15	4	16	49
	51+36 NE	LT	5	2	---	28
	51+63 NE	LANE	9	4	16	41
	51+84 NE	LT	4	2	---	23
	52+40 NE	LANE	10	4	16	42
	52+80 NE	LANE	10	4	16	42
	53+42 NE	RT	5	2	---	28
	53+59 NE	LANE	10	4	16	42
	54+00 NE	LANE	10	4	16	42
	54+21 NE	RT	5	2	---	28
	54+82 NE	RT	5	2	---	28
	55+17 NE	LT	3	2	---	20
	55+22 NE	RT	5	2	---	28
	55+39 NE	LT	3	2	---	20
	55+43 NE	RT	5	2	---	28
	55+82 NE	RT	5	2	---	28
	56+00 NE	LANE	10	4	16	42
	56+21 NE	RT	5	2	---	28
	56+41 NE	RT	7	2	---	32
	57+22 NE	RT	5	2	---	28
	57+39 NE	LT	3	2	---	20
	57+42 NE	RT	5	2	---	28
	57+63 NE	LANE/RT	15	2	16	48
	58+00 NE	LT	3	2	---	20
	58+02 NE	RT	5	2	---	28
	58+20 NE	LANE	10	4	16	42
	58+38 NE	LT	3	2	---	20
	58+57 NE	LT	3	2	---	20
	58+62 NE	RT	5	2	---	28
	58+77 NE	LT	3	2	---	20
	58+83 NE	RT	5	2	---	28
	59+00 NE	LT	3	2	---	20
	59+02 NE	RT	5	2	---	28
	59+17 NE	LT	3	2	---	20
	59+22 NE	RT	5	2	---	28
	59+37 NE	LT	3	2	---	20
	59+42 NE	RT	5	2	---	28
CONTINUED		SUBTOTALS	273	106	192	1,306

3

CONCRETE PAVEMENT REPAIR AND BASE PATCHING (CONTINUED)

		**				
			390.0303	416.0610	416.0620	690.0250
		PASS/DRIVE	BASE PATCHING	DRILLED	DRILLED	SAWING
		LANE	CONCRETE	TIE	DOWEL	CONCRETE
CATEGORY	STATION	LOCATION	SY	EACH	EACH	LF
	59+58 NE	LT	3	2	---	20
	59+78 NE	LT	3	2	---	20
	60+00 NE	LT	3	2	---	20
	60+21 NE	RT	5	2	---	28
	60+38 NE	LT	3	2	---	20
	60+42 NE	RT	5	2	---	28
	60+58 NE	LT	3	2	---	20
	60+98 NE	RT	73	40	---	178
	UNDISTRIBUTED		100	213	200	200
	FROM CURB AND GUTTER			1827		
		SUBTOTALS	197	2,094	200	534
		TOTAL	5,840	3,010	8,145	21,310

** SEE SAWING CONCRETE ITEM FOR PROJECT TOTALS

ASPHALTIC FLUMES

		465.0315
		ASPHALTIC
		FLUMES
CATEGORY	STATION	SY
0010	NW RADIUS OF SCHISEL AND USH 10	80
	SW RADIUS OF MICHIGAN AND USH 10	80
	SE RADIUS OF MICHIGAN AND USH 10	45
TOTAL		205

**USE SEED, FERTILIZER, AND MULCH FOR RESTORATION. SEE EROSION CONTROL QUANTITIES

ASPHALTIC SURFACE

CATEGORY	STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON
0010	SCHISEL CT	EB/WB WEDGING	87	---
	MICHIGAN AVE		127	---
	PROJECT LIMITS	LONGITUDINAL JOINT REPAIR	---	173
	PROJECT LIMITS	CLEAN AND PATCH	---	44
	UNDISTRIBUTED		31	28
TOTAL			245	245

3

HMA PAVEMENT

CATEGORY	STATION - STATION	LOCATION	THICKNESS INCH	460.1103 HMA PAVEMENT TYPE E-3	455.0105 ASPHALTIC MATERIAL PG58-28
				TON	TON
0010	190+00-227+35	EB/WB LOWER	VAR	1,900	105
	229+11-229+23	EB/WB LOWER	VAR	0	0
	229+23-230+23	EB/WB LOWER	VAR	60	3
	230+23-231+03	EB/WB LOWER	VAR	60	3
	231+03-237+17	EB/WB LOWER	VAR	400	22
	237+17-237+97	EB/WB LOWER	VAR	60	3
	237+97-238+97	EB/WB LOWER	VAR	60	3
	238+97-239+97	EB/WB LOWER	VAR	60	3
	239+97-240+73	EB/WB LOWER	VAR	40	2
	243+80-244+20	EB/WB LOWER	VAR	40	2
	244+20-245+00	EB/WB LOWER	VAR	60	3
	245+00-267+87	EB/WB LOWER	VAR	1,460	80
	267+87-268+87	EB/WB LOWER	VAR	60	3
	268+87-269+87	EB/WB LOWER	VAR	60	3
	269+87-275+00	EB/WB LOWER	VAR	260	14
	190+00-218+00 WB	UPPER LAYER	1.75	880	48
	190+00-218+00 EB	UPPER LAYER	1.75	880	48
	218+00-227+30 WB	UPPER LAYER	1.75	300	17
	218+00-227+30 EB	UPPER LAYER	1.75	300	17
	229+00-241+00 WB	UPPER LAYER	1.75	400	22
	229+09-240+73 EB	UPPER LAYER	1.75	380	21
	244+10-248+00 WB	UPPER LAYER	1.75	120	7
	243+80-248+00 EB	UPPER LAYER	1.75	140	8
	248+00-275+00 WB	UPPER LAYER	1.75	840	46
	248+00-275+00 EB	UPPER LAYER	1.75	840	46
	192+00-197+00 WB	TURN LANE AND MEDIAN	1.75	140	8
	196+50-199+50 EB	TURN LANE AND MEDIAN	1.75	80	4
	203+50EB-208+50WB	TURN LANES AND MEDIAN	1.75	140	8
	271+95-275+00EB	TURN LANE	1.75	5	0
	NW AND SW RADIUS EDGE OF USH10/CTY R		1.75	5	0
	RAMP SW		3.5	740	41
	RAMP SE		3.5	760	42
	RAMP NW		3.5	860	47
	RAMP NE		3.5	820	45
	SCHISEL CT		---	---	---
	MICHIGAN AVE		---	---	---
TOTAL				13,210	727

TACK COAT

CATEGORY	LOCATION	LAYER	455.0605 TACK COAT GAL
0010	USH 10	LOWER	1305
	RAMP SW	LOWER	90
	RAMP SE	LOWER	95
	RAMP NW	LOWER	105
	RAMP NE	LOWER	100
	SCHISEL CT	LOWER	10
	MICHIGAN AVE	LOWER	20
	USH 10	UPPER	1305
	RAMP SW	UPPER	90
	RAMP SE	UPPER	95
	RAMP NW	UPPER	105
	RAMP NE	UPPER	100
	SCHISEL CT	UPPER	10
	MICHIGAN AVE	UPPER	20
TOTAL			3450

CONCRETE CURB & GUTTER AND SIDEWALK

* SLOPE NOSE REMOVAL QUANTITIES INCLUDED WITH SIDEWALK REMOVAL
** ADDITIONAL QUANTITIES LISTED UNDER CONCRETE PAVEMENT REPAIR AND BASE PATCHING
*** ADDITIONAL QUANTITIES LISTED UNDER SAWING CONCRETE

CATEGORY	STATION	- STATION	LOCATION	204.0150	204.0155	416.0610	601.0409	601.0551	601.0557	SPV.0090.01	SPV.0090.02	602.0405	620.0300	690.0250
				REMOVING CURB & GUTTER LF	REMOVING CONCRETE SIDEWALK SY	DRILLED TIE BARS EA	CONCRETE CURB & GUTTER 30 INCH TYPE A LF	CONCRETE CURB & GUTTER 4-INCH SLOPED 36 INCH TYPE A LF	CONCRETE CURB & GUTTER 4-INCH SLOPED 36 INCH TYPE D LF	CONCRETE CURB & GUTTER 30 INCH TYPE A (MOD) LF	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A (MOD) LF	CONCRETE SIDEWALK 4" SF	CONCRETE MEDIAN SLOPED NOSE SF	*** SAWING CONCRETE LF
0010	189+93	190+51	EB MEDIAN	58	---	21	58	---	---	---	---	---	---	63
	191+44	192+32	EB MEDIAN	88	---	31	88	---	---	---	---	---	---	93
	192+32	192+48	EB MEDIAN	16	---	7	---	---	---	---	16	---	---	21
	192+37	192+51	WB MEDIAN	14	---	7	---	---	---	---	14	---	---	19
	193+07	193+14	WB LT	7	---	4	7	---	---	---	---	---	---	12
	193+43	193+86	WB LT	43	---	16	43	---	---	---	---	---	---	48
	194+68	194+74	WB LT	6	---	4	6	---	---	---	---	---	---	11
	194+99	195+09	WB LT	10	---	5	10	---	---	---	---	---	---	15
	195+35	195+45	WB LT	10	---	5	10	---	---	---	---	---	---	15
	197+06	198+28	WB MEDIAN	122	---	43	122	---	---	---	---	---	---	127
	198+28	198+43	WB MEDIAN	15	---	7	---	---	---	---	15	---	---	20
	198+28	198+43	EB MEDIAN	15	---	7	---	---	---	---	15	---	---	20
	199+15	199+23	WB MEDIAN	8	---	5	---	---	---	---	8	---	---	13
	199+12	199+36	EB MEDIAN	24	---	10	---	---	---	---	24	---	---	29
	199+36	199+70	EB MEDIAN	34	---	13	34	---	---	---	---	---	---	39
	203+02	203+18	EB RT	16	---	7	16	---	---	---	---	---	---	21
	203+33	203+96	EB RT	63	---	23	63	---	---	---	---	---	---	68
	205+25	205+40	WB MEDIAN	15	---	7	---	---	---	---	15	---	---	20
	205+25	205+39	EB MEDIAN	14	---	7	---	---	---	---	15	---	---	19
	206+81	207+20	EB MEDIAN	39	---	15	39	---	---	---	---	---	---	44
	209+48	209+60	EB RT	12	---	6	12	---	---	---	---	---	---	17
	209+66	210+14	WB LT	48	---	18	---	---	---	---	48	---	---	53
	209+88	210+13	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	209+87	210+12	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	209+87	210+12	EB RT	25	---	10	---	---	---	---	25	---	---	30
	211+88	212+13	WB LT	25	---	10	---	---	---	---	25	---	---	30
	213+87	214+12	WB LT	25	---	10	---	---	---	---	25	---	---	30
	213+87	214+12	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	213+88	214+13	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	213+88	214+13	EB RT	25	---	10	---	---	---	---	25	---	---	30
	216+02	216+11	EB MEDIAN	9	---	5	9	---	---	---	---	---	---	14
	217+88	218+33	WB LT	45	---	10	---	---	---	---	25	---	---	50
	217+88	218+33	WB MEDIAN	45	---	10	---	---	---	---	25	---	---	50
	217+88	218+33	EB MEDIAN	45	---	10	---	---	---	---	25	---	---	50
	217+88	218+33	EB RT	45	---	10	---	---	---	---	25	---	---	50
	221+88	222+13	WB LT	25	---	10	---	---	---	---	25	---	---	30
	221+88	222+13	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	221+88	222+13	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	221+89	222+14	EB RT	25	---	10	---	---	---	---	25	---	---	30
	226+62	227+13	WB MEDIAN	51	---	19	---	---	---	---	51	---	---	56
	226+88	227+13	WB LT	25	---	10	---	---	---	---	25	---	---	30
CONTINUED			SUBTOTALS	1242	0	470	517	0	0	0	646	0	0	1447

CONCRETE CURB & GUTTER AND SIDEWALK (CONTINUED)

* SLOPE NOSE REMOVAL QUANTITIES INCLUDED WITH SIDEWALK REMOVAL
** ADDITIONAL QUANTITIES LISTED UNDER CONCRETE PAVEMENT REPAIR AND BASE PATCHING
*** ADDITIONAL QUANTITIES LISTED UNDER SAWING CONCRETE

CATEGORY	STATION	- STATION	LOCATION	204.0150	204.0155	416.0610	601.0409	601.0551	601.0557	SPV.0090.01	SPV.0090.02	602.0405	620.0300	***
				REMOVING	REMOVING	DRILLED	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE
				CURB & GUTTER	CONCRETE	TIE	CURB & GUTTER	CURB & GUTTER	CURB & GUTTER	CURB & GUTTER	CURB & GUTTER	CONCRETE	MEDIAN	SAWING
				LF	SY	EA	30 INCH	4-INCH SLOPED	4-INCH SLOPED	30 INCH	4-INCH SLOPED	CONCRETE	NOSE	CONCRETE
				LF			TYPE A	TYPE A	TYPE D	TYPE A (MOD)	TYPE A (MOD)	4"	SF	LF
	224+54	227+38	EB MEDIAN	284	---	97	---	---	---	284	---	---	---	289
	225+14	227+43	EB RT	229	---	78	---	---	---	229	---	---	---	234
	228+95	231+21	WB LT	226	---	77	---	---	---	226	---	---	---	231
	228+97	231+75	WB MEDIAN	278	---	95	---	---	---	278	---	---	---	283
	229+11	229+36	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	230+85	231+10	EB RT	25	---	10	---	---	---	---	25	---	---	30
	233+12	233+37	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	235+37	235+62	WB LT	25	---	10	---	---	---	---	25	---	---	30
	235+36	235+61	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	235+36	235+61	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	235+04	235+61	EB RT	57	---	21	---	---	---	---	57	---	---	62
	237+61	237+86	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	239+87	240+12	WB LT	25	---	10	---	---	---	---	25	---	---	30
	239+87	240+89	WB MEDIAN	102	---	36	---	---	---	---	102	---	---	107
	238+15	240+81	EB MEDIAN	266	---	91	---	---	---	266	---	---	---	271
	238+39	240+67	EB RT	228	---	78	---	---	---	228	---	---	---	233
	240+64	240+89	WB LT	25	---	10	---	---	---	---	25	---	---	30
	244+17	246+49	WB LT	232	---	79	---	---	---	232	---	---	---	237
	244+04	246+70	WB MEDIAN	266	---	91	---	---	---	266	---	---	---	271
	244+39	244+64	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	244+39	244+64	EB RT	25	---	10	---	---	---	---	25	---	---	30
	248+36	248+61	WB LT	25	---	10	---	---	---	---	25	---	---	30
	248+37	248+62	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	251+87	252+12	WB LT	25	---	10	---	---	---	---	25	---	---	30
	251+87	252+12	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	251+86	252+19	EB MEDIAN	33	---	13	---	---	---	---	33	---	---	38
	251+86	252+14	EB RT	28	---	11	---	---	---	---	28	---	---	33
	253+63	253+88	WB LT	25	---	10	---	---	---	---	25	---	---	30
	255+39	255+64	WB LT	25	---	10	---	---	---	---	25	---	---	30
	255+39	255+64	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	259+83	259+90	EB RT	7	---	4	7	---	---	---	---	---	---	12
	261+40	261+65	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	261+39	261+64	EB RT	25	---	10	---	---	---	---	25	---	---	30
	264+88	265+13	WB LT	25	---	10	---	---	---	---	25	---	---	30
	264+88	265+13	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	264+88	265+13	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	264+87	265+12	EB RT	25	---	10	---	---	---	---	25	---	---	30
	267+26	267+51	EB RT	25	---	10	---	---	---	---	25	---	---	30
	267+98	268+23	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	267+98	268+23	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	268+26	268+51	WB LT	25	---	10	---	---	---	---	25	---	---	30
	268+19	268+44	EB RT	25	---	10	---	---	---	25	---	---	---	30
CONTINUED			SUBTOTALS	2961	0	1071	7	0	0	2034	920	0	0	3171

CONCRETE CURB & GUTTER AND SIDEWALK (CONTINUED)

* SLOPE NOSE REMOVAL QUANTITIES INCLUDED WITH SIDEWALK REMOVAL
** ADDITIONAL QUANTITIES LISTED UNDER CONCRETE PAVEMENT REPAIR AND BASE PATCHING
*** ADDITIONAL QUANTITIES LISTED UNDER SAWING CONCRETE

CATEGORY	STATION	- STATION	LOCATION	204.0150	204.0155	416.0610	601.0409	601.05551	601.0557	SPV.0090.01	SPV.0090.02	602.0405	620.0300	690.0250
				REMOVING	REMOVING	DRILLED	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE
				CURB & GUTTER	CONCRETE	TIE	CURB & GUTTER	CURB & GUTTER	CURB & GUTTER	CURB & GUTTER	CURB & GUTTER	CONCRETE	MEDIAN	SAWING
				LF	SY	EA	30 INCH	4-INCH SLOPED	4-INCH SLOPED	30 INCH	36-INCH	4-INCH SLOPED	NOSE	CONCRETE
				LF	SY	EA	TYPE A	36 INCH	36 INCH	TYPE A (MOD)	TYPE A (MOD)	TYPE A (MOD)	TYPE A (MOD)	TYPE A (MOD)
				LF	SY	EA	LF	LF	LF	LF	LF	SF	SF	LF
	269+87	270+12	WB LT	25	---	10	---	---	---	---	25	---	---	30
	271+87	272+12	WB LT	25	---	10	---	---	---	---	25	---	---	30
	271+88	272+13	WB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	271+87	272+12	EB MEDIAN	25	---	10	---	---	---	---	25	---	---	30
	271+88	272+13	EB RT	25	---	10	---	---	---	---	25	---	---	30
	30+76	31+06	NW RAMP	30	---	12	30	---	---	---	---	---	---	35
	30+59	30+64	NW RAMP	12	---	6	12	---	---	---	---	---	---	17
	50+85	50+99	NE RAMP	60	---	22	---	---	---	---	60	---	---	65
	50+71	50+99	NE RAMP	30	---	12	30	---	---	---	---	---	---	35
	49+42	49+75	SE RAMP	50	---	19	50	---	---	---	---	---	---	55
	49+65	49+73	SE RAMP MEDIAN	31	---	12	31	---	---	---	---	---	---	36
	198+48	49+62	SE RAMP/USH10	48	---	18	---	---	---	---	48	---	---	53
	SCHISEL CT	USH 10	EAST	20	---	23	---	17	45	---	---	---	---	25
	SCHISEL CT	USH 10	WEST	22	---	34	---	22	74	---	---	---	---	27
	MICHIGAN AVE	USH 10	EAST	7	---	40	---	21	93	---	---	---	---	12
	MICHIGAN AVE	USH 10	WEST	11	---	40	---	15	98	---	---	---	---	16
	31+06	31+06	NW RAMP	---	7	---	---	---	---	---	---	---	64	32
	192+42	192+55	USH 10 MED	---	14	---	---	---	---	---	---	63	60	20
	198+36	198+48	USH 10 MED	---	14	---	---	---	---	---	---	48	80	17
	199+08	199+21	USH 10 MED	---	13	---	---	---	---	---	---	51	67	22
	205+33	205+45	USH 10 MED	---	12	---	---	---	---	---	---	46	62	19
			UNDISTRIBUTED	11	5	---	18	---	---	31	36	7	7	
			SUBTOTALS	457	65	289	171	75	310	31	269	215	340	636
			TOTAL	4660	65	1830	695	75	310	2,065	1835	215	340	5,254
					*	**								***

GRADING, SHAPING FINISHING FOR CURB AND GUTTER

				SPV.0090.05 GRADING SHAPING FINIHSING INTERSECTION CURB AND GUTER
CATEGORY	STATION	- STATION	LOCATION	LF
0010	SCHISEL CT	USH 10	EAST	60
	SCHISEL CT	USH 10	WEST	94
	MICHIGAN AVE	USH 10	EAST	112
	MICHIGAN AVE	USH 10	WEST	112
TOTAL				380

STORM SEWER PIPES

		608.0312 STORM SEWER PIPE REINFORCED CONCRETE CL III 12-INCH	
CATEGORY	FROM STRUCTURE	TO STRUCTURE	LF
0010	101	201	40
	102	201	13
	201	202	177
	301	302	9
	401	1035	30
	501	502	6
	601	602	70
	602	1042	60
TOTAL			405

STORM SEWER STRUCTURES

CATEGORY	STR NO	STATION	OFFSET	611.2004	611.3230	611.0430	611.0530	611.0600	611.0624	611.0627	611.8110	611.9710	650.4000	SPV.0060.02
				MANHOLES	INLETS	RECONSTRUCT	MANHOLE	INLET	INLET	INLET	ADJUSTING	SALVAGED	CONSTRUCTION	RECONNECT
				4-FT DIA	2 x 3 FT	INLET	COVER	COVERS	COVERS	COVERS	MANHOLE	INLET	STAKING	EXISTING
				EACH	EACH	EACH	TYPE J	TYPE A	TYPE H	TYPE HM	COVERS	COVERS	SEWER	STORM LATERAL
							EA	EACH	(LOW)	EACH	EACH	EACH	EACH	EACH
0010	1000	192+48	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1001	192+50	9' LT	---	---	1	---	---	---	1	---	---	---	---
	1002	198+42	15.4' LT	---	---	1	---	---	---	1	---	---	---	---
	1003	198+43	22' LT	---	---	1	---	---	---	1	---	---	---	---
	1004	198+43	64.6' LT	---	---	1	---	---	---	1	---	---	---	---
	1005	198+52	14.3' LT	---	---	---	---	---	---	---	1	---	---	---
	1006	198+61	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1007	199+28	11.2' LT	---	---	1	---	---	---	1	---	---	---	---
	1008	205+34	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1009	205+39	20.4' LT	---	---	1	---	---	---	1	---	---	---	---
	1010	205+39	12' LT	---	---	1	---	---	---	1	---	---	---	---
	1011	205+39	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1012	210+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1013	210+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1014	210+00	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1015	210+00	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1016	212+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1017	214+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1018	214+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1019	214+00	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1020	214+00	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1021	218+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1022	218+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1023	218+00	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1024	218+00	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1025	222+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1026	222+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1027	222+01	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1028	222+01	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1029	227+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1030	227+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1031	227+00	2' LT	---	---	1	---	---	1	---	---	---	---	---
	1032	227+00	26' RT	---	---	1	---	---	1	---	---	---	---	---
	1033	231+00	26' LT	---	---	1	---	---	1	---	---	---	---	---
	1034	231+00	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1035	235+49	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1036	235+49	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1037	235+49	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1038	235+48	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1039	239+11	26' RT	---	---	REMOVE	---	---	---	---	---	1	---	---
	1040	240+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1041	240+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
CONTINUED		SUBTOTAL		0	0	40	0	0	3	37	1	1	0	0

STORM SEWER STRUCTURES (CONTINUED)

CATEGORY	STR NO	STATION	OFFSET	611.2004 MANHOLES 4-FT DIA EACH	611.3230 INLETS 2 x 3 FT EACH	611.0430 RECONSTRUCT INLET EACH	611.0530 MANHOLE COVER TYPE J EA	611.0600 INLET COVERS TYPE A EACH	611.0624 INLET COVERS TYPE H (LOW) EACH	611.0627 INLET COVERS TYPE HM EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.9710 SALVAGED INLET COVERS EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	SPV.0060.02 RECONNECT EXSITNG STORM LATERAL EACH
	1042	239+99	2' LT	---	---	1	---	---	1	---	---	---	---	---
	1043	239+97	26' RT	---	---	1	---	---	1	---	---	---	---	---
	1044	240+76	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1045	240+76	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1046	243+86	2' LT	---	---	1	---	1	---	---	---	---	---	---
	1047	244+51	54' LT	---	---	1	---	---	1	---	---	---	---	---
	1048	244+51	26' LT	---	---	1	---	---	1	---	---	---	---	---
	1049	244+51	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1050	244+51	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1052	248+49	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1053	248+49	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1054	252+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1055	252+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1056	252+00	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1057	252+00	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1059	253+75	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1060	255+51	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1061	255+51	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1062	261+53	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1063	261+53	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1064	265+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1065	265+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1066	265+00	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1067	265+00	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1068	267+38	26' RT	---	---	1	---	---	---	1	---	---	---	---
	1069	268+10	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1070	268+10	2' LT	---	---	1	---	---	---	1	---	---	---	---
	1072	268+31	26' RT	---	---	1	---	1	---	---	---	FROM 1039	---	---
	1073	268+38	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1075	270+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1076	272+00	54' LT	---	---	1	---	---	---	1	---	---	---	---
	1077	272+00	26' LT	---	---	1	---	---	---	1	---	---	---	---
	1078	272+00	3' LT	---	---	1	---	---	---	1	---	---	---	---
	1079	272+00	26' RT	---	---	1	---	---	---	1	---	---	---	---
	101	229+23	54' LT	---	1	---	---	---	1	---	---	---	1	---
	201	229+23	16' LT	1	---	---	1	---	---	---	---	---	1	---
	102	229+23	2' LT	---	1	---	---	---	---	1	---	---	1	---
	202	231+00	14' LT	1	---	---	1	---	---	---	---	---	1	2
	301	233+25	26' LT	---	1	---	---	---	---	1	---	---	1	---
	302	233+25	16' LT	1	---	---	1	---	---	---	---	---	1	2
	401	235+25	26' RT	---	1	---	---	---	---	1	---	---	1	---
	501	237+75	26' LT	---	1	---	---	---	---	1	---	---	1	---
CONTINUED		SUBTOTAL		3	5	34	3	2	5	32	0	0	8	4

STORM SEWER STRUCTURES (CONTINUED)

CATEGORY	STR NO	STATION	OFFSET	611.2004	611.3230	611.0430	611.0530	611.0600	611.0624	611.0627	611.8110	611.9710	650.4000	SPV.0060.02
				MANHOLES	INLETS	RECONSTRUCT	MANHOLE	INLET	INLET	INLET	ADJUSTING	SALVAGED	CONSTRUCTION	RECONNECT
				4-FT DIA	2 x 3 FT	INLET	COVER	COVERS	COVERS	COVERS	MANHOLE	INLET	STAKING	EXISTING
				EACH	EACH	EACH	J	TYPE A	TYPE H	TYPE HM	COVERS	COVERS	SEWER	STORM LATERAL
				EACH	EACH	EACH	EA	EACH	(LOW)	EACH	EACH	EACH	EACH	EACH
	502	237+75	20' LT	1	---	---	1	---	---	---	---	---	1	2
	601	238+70	26' RT	---	1	---	---	---	1	---	---	---	1	---
	602	239+35	26' RT	---	1	---	---	---	1	---	---	---	1	---
SUBTOTAL				1	2	0	1	0	2	0	0	0	3	2
TOTAL				4	7	74	4	2	10	69	1	1	11	6

BEAM GUARD

CATEGORY	STATION TO STATION	LOCATION	204.0165	614.0305
			REMOVING	STEEL PLATE
			GUARDRAIL	BEAM GUARD
			LF	CLASS A
			LF	LF
0010	228+97 - 229+47	WB RT	50	50
TOTAL			50	50

LANDMARK REFERENCE MONUMENTS

CATEGORY	LANDMARK		621.0100	SPV.0060.01	REMARKS
	LOCATION	SECTIONS	LANDMARK	REESTABLISH	
			REFERENCE	SECTION CORNER	
			MONUMENTS	MONUMENTS	
			EACH	EACH	
0010	QUARTER CORNER	15/22	4	1	T19N R23E
	SECTION CORNER	15/22/14/23	4	1	T19N R23E
TOTAL			8	2	

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FINISHING ITEMS							
CATEGORY	STATION - STATION	LOCATION	625.0100	629.0210	630.0120	628.2008	SPV.0120.01
			TOPSOIL	FERTILIZER	SEEDING	EROSION	WATER FOR
			SY	TYPE B	MIXTURE	CLASS I	SEEDING
				CWT	NO. 20	TYPE B	AREAS
					LB		MGAL
0010		SCHIESEL CT WEST	20	0.015	0.54	20	0.2
		SCHIESEL CT EAST	31	0.020	0.85	31	0.2
		MICHIGAN AVE WEST	37	0.025	1.01	37	0.2
		MICHIGAN AVE EAST	37	0.025	1.01	37	0.2
	189+93 190+51	EB MEDIAN	19	0.010	0.52	19	0.2
	191+44 192+32	EB MEDIAN	29	0.020	0.79	29	0.2
	192+32 192+48	EB MEDIAN	5	0.005	0.14	5	0.2
	192+37 192+51	WB MEDIAN	5	0.005	0.13	5	0.2
	193+07 193+14	WB LT	2	0.000	0.06	2	0.2
	193+43 193+86	WB LT	14	0.010	0.39	14	0.2
	194+68 194+74	WB LT	2	0.000	0.05	2	0.2
	194+99 195+09	WB LT	3	0.000	0.09	3	0.2
	195+35 195+45	WB LT	3	0.000	0.09	3	0.2
	197+06 198+28	WB MEDIAN	41	0.025	1.10	41	0.2
	198+28 198+43	WB MEDIAN	5	0.005	0.14	5	0.2
	198+28 198+43	EB MEDIAN	5	0.005	0.14	5	0.2
	199+15 199+23	WB MEDIAN	3	0.000	0.07	3	0.2
	199+12 199+36	EB MEDIAN	8	0.005	0.22	8	0.2
	199+36 199+70	EB MEDIAN	11	0.005	0.31	11	0.2
	203+02 203+18	EB RT	5	0.005	0.14	5	0.2
	203+33 203+96	EB RT	21	0.015	0.57	21	0.2
	205+25 205+40	WB MEDIAN	5	0.005	0.14	5	0.2
	205+25 205+39	EB MEDIAN	5	0.005	0.13	5	0.2
	206+81 207+20	EB MEDIAN	13	0.010	0.35	13	0.2
	209+48 209+60	EB RT	4	0.005	0.11	4	0.2
	209+66 210+14	WB LT	16	0.010	0.43	16	0.2
	209+88 210+13	WB MEDIAN	8	0.005	0.23	8	0.2
	209+87 210+12	EB MEDIAN	8	0.005	0.23	8	0.2
	209+87 210+12	EB RT	8	0.005	0.23	8	0.2
	211+88 212+13	WB LT	8	0.005	0.23	8	0.2
	213+87 214+12	WB LT	8	0.005	0.23	8	0.2
	213+87 214+12	WB MEDIAN	8	0.005	0.23	8	0.2
	213+88 214+13	EB MEDIAN	8	0.005	0.23	8	0.2
	213+88 214+13	EB RT	8	0.005	0.23	8	0.2
	216+02 216+11	EB MEDIAN	3	0.000	0.08	3	0.2
	217+88 218+33	WB LT	15	0.010	0.41	15	0.2
	217+88 218+33	WB MEDIAN	15	0.010	0.41	15	0.2
	217+88 218+33	EB MEDIAN	15	0.010	0.41	15	0.2
	217+88 218+33	EB RT	15	0.010	0.41	15	0.2
	221+88 222+13	WB LT	8	0.005	0.23	8	0.2
	221+88 222+13	WB MEDIAN	8	0.005	0.23	8	0.2
	221+88 222+13	EB MEDIAN	8	0.005	0.23	8	0.2
CONTINUED		SUBTOTAL	506	0.330	14	506	8

FINISHING ITEMS (CONTINUED)

CATEGORY	STATION - STATION	LOCATION	625.0100	629.0210	630.0120	628.2008	SPV.0120.01
			TOPSOIL	FERTILIZER	SEEDING	EROSION	WATER FOR
			SY	TYPE B	MIXTURE	CLASS I	SEEDING
				CWT	NO. 20	TYPE B	AREAS
					LB		MGAL
	221+89 222+14	EB RT	8	0.005	0.23	8	0.2
	226+62 227+13	WB MEDIAN	17	0.010	0.46	17	0.2
	226+88 227+13	WB LT	8	0.005	0.23	8	0.2
	224+54 227+38	EB MEDIAN	95	0.060	2.56	95	0.2
	225+14 227+43	EB RT	76	0.050	2.06	76	0.2
	228+95 231+21	WB LT	75	0.045	2.03	75	0.2
	228+97 231+75	WB MEDIAN	93	0.060	2.50	93	0.2
	229+11 229+36	EB MEDIAN	8	0.005	0.23	8	0.2
	230+85 231+10	EB RT	8	0.005	0.23	8	0.2
	233+12 233+37	WB MEDIAN	8	0.005	0.23	8	0.2
	235+37 235+62	WB LT	8	0.005	0.23	8	0.2
	235+36 235+61	WB MEDIAN	8	0.005	0.23	8	0.2
	235+36 235+61	EB MEDIAN	8	0.005	0.23	8	0.2
	235+04 235+61	EB RT	19	0.010	0.51	19	0.2
	237+61 237+86	WB MEDIAN	8	0.005	0.23	8	0.2
	239+87 240+12	WB LT	8	0.005	0.23	8	0.2
	239+87 240+89	WB MEDIAN	34	0.020	0.92	34	0.2
	238+15 240+81	EB MEDIAN	89	0.055	2.39	89	0.2
	238+39 240+67	EB RT	76	0.050	2.05	76	0.2
	240+64 240+89	WB LT	8	0.005	0.23	8	0.2
	244+17 246+49	WB LT	77	0.050	2.09	77	0.2
	244+04 246+70	WB MEDIAN	89	0.055	2.39	89	0.2
	244+39 244+64	EB MEDIAN	8	0.005	0.23	8	0.2
	244+39 244+64	EB RT	8	0.005	0.23	8	0.2
	248+36 248+61	WB LT	8	0.005	0.23	8	0.2
	248+37 248+62	EB MEDIAN	8	0.005	0.23	8	0.2
	251+87 252+12	WB LT	8	0.005	0.23	8	0.2
	251+87 252+12	WB MEDIAN	8	0.005	0.23	8	0.2
	251+86 252+19	EB MEDIAN	11	0.005	0.30	11	0.2
	251+86 252+14	EB RT	9	0.005	0.25	9	0.2
	253+63 253+88	WBLT	8	0.005	0.23	8	0.2
	255+39 255+64	WB LT	8	0.005	0.23	8	0.2
	255+39 255+64	EB MEDIAN	8	0.005	0.23	8	0.2
	259+83 259+90	EB RT	2	0.000	0.06	2	0.2
	261+40 261+65	WB MEDIAN	8	0.005	0.23	8	0.2
	261+39 261+64	EB RT	8	0.005	0.23	8	0.2
	264+88 265+13	WB LT	8	0.005	0.23	8	0.2
	264+88 265+13	WB MEDIAN	8	0.005	0.23	8	0.2
	264+88 265+13	EB MEDIAN	8	0.005	0.23	8	0.2
	264+87 265+12	EB RT	8	0.005	0.23	8	0.2
	267+26 267+51	EB RT	8	0.005	0.23	8	0.2
	267+98 268+23	WB MEDIAN	8	0.005	0.23	8	0.2
CONTINUED		SUBTOTAL	996	0.615	27	996	8

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FINISHING ITEMS (CONTINUED)

CATEGORY	STATION - STATION	LOCATION	625.0100	629.0210	630.0120	628.2008	SPV.0120.01
			TOPSOIL SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB	EROSION MAT URBAN CLASS I TYPE B SY	WATER FOR SEEDED AREAS MGAL
	267+98 268+23	EB MEDIAN	8	0.005	0.23	8	0.2
	268+26 268+51	WB LT	8	0.005	0.23	8	0.2
	268+19 268+44	EB RT	8	0.005	0.23	8	0.2
	269+87 270+12	WB LT	8	0.005	0.23	8	0.2
	271+87 272+12	WB LT	8	0.005	0.23	8	0.2
	271+88 272+13	WB MEDIAN	8	0.005	0.23	8	0.2
	271+87 272+12	EB MEDIAN	8	0.005	0.23	8	0.2
	271+88 272+13	EB RT	8	0.005	0.23	8	0.2
	30+76 31+06	NW RAMP MED	10	0.005	0.27	10	0.2
	30+59 30+64	NW RAMP EAST	4	0.005	0.11	4	0.2
	50+79 50+99	NE RAMP WEST	20	0.015	0.55	20	0.2
	50+71 50+99	NE RAMP EAST	10	0.005	0.26	10	0.2
	49+62 49+63	SE RAMP WEST	16	0.010	0.44	16	0.2
	49+65 49+73	SE RAMP MEDIAN	11	0.005	0.29	11	0.2
	49+42 49+75	SE RAMP EAST	17	0.010	0.46	17	0.2
	FLUME	SCHIESEL CT WEST	7	0.005	0.19	7	0.2
	FLUME	MICHIGAN AVE WEST	7	0.005	0.19	7	0.2
	FLUME	MICHIGAN AVE EAST	7	0.005	0.19	7	0.2
		UNDISTRUBUTED	37	0.92	1.00	37	---
		SUBTOTAL	213	1.030	6	213	4
TOTAL			1,715	2	46	1,715	20

RIPRAP

CATEGORY	LOCATION	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
0010	240+00 LT	5	18
TOTAL		5	18

INLET PROTECTION

CATEGORY	STATION	OFFSET	STR NO	628.7005	628.7015
				INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE C EACH
0010	229+23	54' LT	101	1	1
	229+23	16' LT	201	1	---
	229+23	2' LT	102	1	1
	231+00	14' LT	202	1	---
	233+25	26' LT	301	1	1
	233+25	16' LT	302	1	---
	235+25	26' RT	401	1	1
	237+75	26' LT	501	1	1
	237+75	20' LT	502	1	---
	238+70	26' RT	601	1	1
	239+35	26' RT	602	1	---
	UNDISTRIBUTED			4	9
				15	15

MOBILIZATIONS EROSION CONTROL

CATEGORY	PROJECT	628.1905	628.1910
		MOBILIZATION EROSION CONTROL EACH	MOBILIZATION EMERGENCY EROSION CONTROL EACH
0010	1500-34-71	4	2
TOTAL		4	2

REMOVAL & ERECTION OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS REFLECTIVE H TYPE II S.F.	637.2215 SIGNS REFLECTIVE H FOLDING TYPE II S.F.	637.2230 SIGNS REFLECTIVE F TYPE II 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
1	CTH JJ, W. OF I-43	J1-4	96" X 39"	26.00			1	1		8	2	JCT I-43, JCT USH 10, JCT STH 42, END CTH JJ, SEE PLAN SHEET
2	"	D1-1	72" X 15"	7.50			1	1		1	2	SEE SIGN DETAIL SHEET
3	"	R5-1A	36" X 24"	6.00						1		MOUNT ON BACKSIDE OF SIGN #1A
4	"	D1-72	120" X 60"	50.00				2	1			SEE SIGN DETAIL SHEET
5	"	W4-2L	36" X 36"			9.00	1			1	1	
6	"	R5-1A	36" X 24"	6.00						1		MOUNT ON BACKSIDE OF SIGN #5
7	"	W6-2	36" X 36"			9.00		1		1	1	
8	I-43 SB OFF-RAMP TO USH 10 / STH 42	R1-1	36" X 36"	7.46				1		1	1	
9	I-43 SB OFF-RAMP SPLITTER ISLAND	R5-1	30" X 30"	6.25						1		MOUNT ON BACKSIDE OF SIGN #8
10	"	R6-2R	24" X 30"	5.00			1			1	1	
11	"	W12-1D	24" X 24"			4.00	1			1	1	
12	I-43 SB OFF-RAMP TO USH 10 / STH 42	J3-3	72" X 57"	28.50				1	1	9	2	EAST USH 10, NORTH STH 42, WEST CTH JJ, SEE PLAN SHEET
13	"	J3-1								3	1	
14	"	R5-1A	36" X 24"	6.00			1			1		MOUNT ON BACKSIDE OF SIGN #11
15	"	R1-1	36" X 36"	7.46			1			1	1	
16	"	R1-1	30" X 30"	6.25			1			1	1	
17	"	D9-2	24" X 24"	4.00				1		1	1	
18	"	M6-1	21" X 21"	3.06						1		MOUNT BELOW SIGN #15
19	"	R5-1	30" X 30"	6.25						1		MOUNT ON BACKSIDE OF SIGN #15
20	I-43 SB OFF-RAMP SPLITTER ISLAND	R6-2L	24" X 30"	5.00						1		MOUNT ON SIDE OF SIGN #13
21	USH 10 / STH 42, SB OFF-RAMP INTERSECTION	R4-7	24" X 30"	5.00			1			1	1	
22	"	J2-2	48" X 57"	19.00			1			6	1	SOUTH I-43, SOUTH STH 42, SEE PLAN SHEET
23	"	R6-2L	24" X 30"	5.00			1			1	1	
24	"	R5-57	36" X 36"	9.00			1			1	1	
25	"	R11-54F	48" X 30"		10.00		1					
26	USH 10 / STH 42, SB OFF-RAMP INTERSECTION	R5-1	30" X 30"	6.25						1		MOUNT ON BACKSIDE OF SIGN #28
27	"	J2-2								4	1	
28	"	R6-2L	24" X 30"	5.00			1			1		MOUNT ON SIDE
29	"	R3-2	24" X 24"	4.00						1		MOUNT ON BACKSIDE OF SIGN #20
30	"	R5-1	30" X 30"	6.25								
31	"	R3-1	24" X 24"	4.00								
32	"	J3-3								9	2	
33	USH 10 / STH 42, UNDERNEATH I-43 OVERPASS	D1-1								1	2	
34	"	R5-1A	36" X 24"	6.00			1			1	1	

PAGE SUBTOTALS

250.23

10.00

22.00

15

8

2

63

25

PLAN SHEET PRODUCED
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REMOVAL & ERECTION OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGN REFLECTIVE H TYPE II S.F.	637.2215 SIGN REFLECTIVE H FOLDING TYPE II S.F.	637.2230 SIGN REFLECTIVE F TYPE II S.F.	634.0614 POSTS WOOD 4X6X14 EACH	634.0616 POSTS WOOD 4X6X16 EACH	634.0618 POSTS WOOD 4X6X18 EACH	638.2602 REMOVING SIGN TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
35	USH 10 / STH 42, NB OFF-RAMP INTERSECTION	R3-20L	24" X 36"	6.00			1			1	1	
36	"	J2-2								6	1	
37	"	R4-7	24" X 30"	5.00			1			1	1	
38	"	J13-1	24" X 45"	7.50			1			2	1	REMOVE M1-85 ALSO
39	"	R3-1	24" X 24"	4.00			1			1	1	
40	"	R5-1	30" X 30"	6.25						1		MOUNT ON BACKSIDE OF SIGN #40
41-42	VACANT											
43	"	R5-57	36" X 36"	9.00			1			1	1	
44	"	R11-54F	48" X 30"		10.00		1			1	1	
45	USH 10 / STH 42, NB OFF-RAMP INTERSECTION	J13-1	24" X 45"	7.50			1			2	1	CTH JJ, SEE PLAN SHEET
46	"	R1-1	30" X 30"	5.18			1			1	1	
47	I-43 NB OFF-RAMP SPLITTER ISLAND	R6-2L	24" X 30"	5.00			1			1	1	MOUNT ON SIDE OF POST FACING WEST
48	"	R1-1	36" X 36"	7.46						1		MOUNT ON POST FOR SIGN #47
49	"	W12-1D	24" X 24"			4.00	1			1	1	
50	"	R6-2R	24" X 30"	5.00			1			1	1	
51	USH 10 / STH 42, NB OFF-RAMP INTERSECTION	R1-1	36" X 36"	7.46				1		1	1	
52	"	J3-2	48" X 57"	19.00					1	6	1	EAST USH 10, NORTH STH 42, SEE PLAN SHEET
53	"	J2-2	48" X 57"	19.00				1		6	1	NORTH I-43, WEST USH 10, SEE PLAN SHEET
54	"	R5-1	30" X 30"	6.25			1			1	1	
55	"	R6-2L	24" X 30"	5.00						1		MOUNT ON SIDE OF POST FACING SOUTH
56	"	J2-2	48" X 57"	19.00				1		6	1	NORTH I-43, WEST USH 10, SEE PLAN SHEET
57	"	J2-2	48" X 57"	19.00						6		MOUNT ON BACKSIDE OF SIGN #53
58	I-43 NB OFF-RAMP SPLITTER ISLAND	R5-1	30" X 30"	6.25						1		MOUNT ON BACKSIDE OF SIGN #50
59	USH 10 / STH 42, E. OF I-43 INTERCHANGE	J1-2	48" X 39"	13.00				1		4	1	EAST USH 10, NORTH STH 42, SEE PLAN SHEET
60	"	J2-2	48" X 57"	19.00				1		6	1	SOUTH I-43, SOUTH STH 42, SEE PLAN SHEET
61	"	R5-1A	36" X 24"	6.00						1		MOUNT ON BACKSIDE OF SIGN #62
62	"	D1-72	120" X 60"	50.00				1	2	1		SEE SIGN DETAIL SHEET
63	"	D1-3								1	2	
64	"	D1-2	114" X 36"	28.50				1	1	1	2	SEE SIGN DETAIL SHEET
65	USH 10 / STH 42, MICHIGAN AVE INTERSECTION	R3-20L	24" X 36"	6.00			1			1	1	
66	"	D4-5	36" X 48"	12.00				1		1	1	
67	"	R5-1A	25" X 24"	4.17						1		MOUNT ON BACKSIDE OF SIGN #66
68	"	J1-2	48" X 39"	13.00			1	1		4		JCT I-43, JCT CTH JJ, SEE PLAN SHEET

PAGE SUBTOTALS

320.52

10.00

4.00

14

9

4

70

25

PLAN SHEET PRODUCED
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REMOVAL & ERECTION OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS REFLECTIVE H TYPE II S.F.	637.2215 SIGNS REFLECTIVE H FOLDING TYPE II S.F.	637.2230 SIGNS REFLECTIVE F TYPE II 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
69	USH 10 / STH 42, MICHIGAN AVE INTERSECTION	J3-4								12	2	
70	SCHISEL CT	R6-2R	24" X 30"	5.00			1			1	1	
71	"	R6-2L	24" X 30"	5.00						1		MOUNT ON BACKSIDE OF SIGN #70
72	"	R1-1	30" X 30"	5.18			1			1	1	
73	USH 10 / STH 42, MICHIGAN AVE INTERSECTION	R4-7	24" X 30"	5.00			1			1	1	
74	"	R2-1	24" X 30"	5.00			1			1	1	55 MPH
75	"	R5-1	30" X 30"	6.25						1		MOUNT ON BACKSIDE OF SIGN #74
76	"	R6-2L	24" X 30"	5.00						1		MOUNT ON SIDE OF SIGN #74
77	MICHIGAN AVE	R1-1	30" X 30"	5.18			1			1	1	
78	"	R1-1	30" X 30"	5.18			1			1	1	
79	"	R6-2R	24" X 30"	5.00			1			1	1	
80	"	R6-2L	24" X 30"	5.00						1		MOUNT ON BACKSIDE OF SIGN #79
81	USH 10 / STH 42, MICHIGAN AVE INTERSECTION	D4-5								1	1	
82	"	R4-7	24" X 30"	5.00			1			1	1	
83	"	D1-3	126" X 48"	42.00				1	1	1	2	SEE SIGN DETAIL SHEET
84	"	R3-20L	24" X 36"	6.00			1			1	1	
85	USH 10 / STH 42, E. OF MICHIGAN AVE	J1-2								4	1	
86	"	D4-5	36" X 48"	12.00			1			1	1	
87	I-43 SB OFF-RAMP	D4-5	36" X 48"	12.00				1		1	1	
88	"	D1-3	90" X 36"	22.50				1	1	1	2	SEE SIGN DETAIL SHEET
89	"	D1-3	90" X 36"	22.50				1	1	1	2	SEE SIGN DETAIL SHEET
90	"	W3-1	36" X 36"			9.00		1		1	1	
91	"	E5-1A	90" X 60"	37.50					2	1	2	EXIT 152
92	I-43 NB ON-RAMP	W4-1	48" X 48"			16.00		1	1	1	2	
93	I-43 NB OFF-RAMP	E5-1A	90" X 60"	37.50					2	1	2	EXIT 152
94	"	W3-1	36" X 36"			9.00		1		1	1	
95	"	D1-3	90" X 36"	22.50				1	1	1	2	SEE SIGN DETAIL SHEET
96	"	D1-3	90" X 36"	22.50				1	1	1	2	SEE SIGN DETAIL SHEET
97	"	D4-5	36" X 48"	12.00				1		1	1	
98	"	R5-1A	36" X 24"	6.00			1			1	1	
98A	"	D1-3								1	2	
99	I-43 SB ON-RAMP	W4-1	48" X 48"			16.00		1	1	1	2	
100	USH 10 / STH 42, E. OF MICHIGAN AVE	I55-56	30" X 36"	7.50			1			1	1	SEE PLAN SHEET
101	"	D1-2	114" X 36"	28.50				1	1	1	2	SEE SIGN DETAIL SHEET
102	USH 10 / STH 42, AT WHITEWATER DR OVERPASS	D1-1	100" X 21"	14.58				2				SEE SIGN DETAIL SHEET

PAGE SUBTOTALS

367.37

0.00

50.00

12

14

12

48

42

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REMOVAL & ERECTION OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS REFLECTIVE H TYPE II S.F.	637.2215 SIGNS REFLECTIVE H FOLDING TYPE II S.F.	637.2230 SIGNS REFLECTIVE F TYPE II 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
103	USH 10 / STH 42, AT WHITEWATER DR OVERPASS	D1-1	100" X 21"	14.58				2		2	2	SEE SIGN DETAIL SHEET
104	USH 10 / STH 42, AT MANITOWOC RIVER	I3-1	78" X 36"	19.50				1	1	1	2	SEE SIGN DETAIL SHEET
105	"	I3-1	78" X 36"	19.50				1	1	1	2	SEE SIGN DETAIL SHEET
106	USH 10 / STH 42, E. OF MANITOWOC RIVER	I2-3	66" X 24"	11.00				2		1	2	SEE SIGN DETAIL SHEET
107	"	W3-5	36" X 36"			9.00	1			1	1	45 MPH
108	"	W3-5	36" X 36"			9.00		1		1	1	45 MPH
109	"	W3-3	36" X 36"			9.00	1			1	1	
110	"	W3-3	36" X 36"			9.00		1		1	1	
111	"	R2-1	24" X 30"	5.00			1			1	1	45 MPH
112	"	R2-1	24" X 30"	5.00				1		1	1	45 MPH
113	"	J1-1	24" X 39"	6.50				1		2	1	JCT CTH R
114	USH 10 / STH 42, W. OF CTH R	R2-1	24" X 30"	5.00				1		1	1	55 MPH
115	"	D1-3	90" X 36"	22.50				2		1	2	SEE SIGN DETAIL SHEET
116	"	D9-52	42" X 36"	10.50			1			1	1	MANITOWOC CO AIRPORT, SEE PLAN SHEET
117	"	I55-56	30" X 36"	7.50			1			1	1	SEE PLAN SHEET
118	"	R2-1	24" X 30"	5.00			1			1	1	35 MPH
119	"	R2-1	24" X 30"	5.00			1			1	1	35 MPH
120	"	J1-3	72" X 39"	19.50				2		6	2	WEST USH 10, SOUTH STH 42, TO I-43, SEE PLAN SHEET
121	USH 10 / STH 42, AT CTH R INTERSECTION	R1-1F	30" X 30"		5.18					1		MOUNT ON TRAFFIC SIGNAL
122	"	R4-7	24" X 30"	5.00						1		MOUNT ON TRAFFIC SIGNAL
123	"	R1-1F	30" X 30"		5.18					1		MOUNT ON TRAFFIC SIGNAL
124	"	J13-3	72" X 45"	22.50				2		2	2	USH 10, STH 42, CTH R, SEE PLAN SHEET
PAGE SUBTOTALS				183.58	10.36	36.00	7	17	2	30	26	
PROJECT TOTALS				1121.71	30.36	112.00	48	48	20	211	118	

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ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE I
ERECTING STRUCTURAL STEEL SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	637.1210 SIGNS REFLECTIVE H TYPE I				635.0200 SIGN SUPPORTS STRUCT. STEEL HIGH-STRENGTH	636.0100 SIGN SUPPORTS CONCRETE MASONRY	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT	TYPE/SIZE OF STEEL	638.2601 REMOVING SIGNS TYPE I	638.3100 REMOVING STRUCT. STEEL SIGN SUPPORTS	REMARKS
			W	X	H	S.F.	LB	CY	LB		EACH	EACH	
201	I-43 NB, S. OF MIDDLE RD OVERPASS	E3-1									1	2	WALDO BLVD EXIT 152
202	I-43 NB, S. OF US 10 / STH 42 EXIT, MOUNTED ON MIDDLE RD OVERPASS	E8-1									1		TWO RIVERS EXITS
203	I-43 SB, N. OF US 10 / STH 42 EXIT	E3-1									1	2	WALDO BLVD EXIT 152
204	I-43 SB ON RAMP TO USH 10 / STH 42	D1-71	144"	X	162"	162.00	1057	1.6	98	2-TYPE B			SEE SIGN DETAIL SHEET
205	"	D1-70	144"	X	72"	72.00							MOUNT ON BACKSIDE OF SIGN #204, SEE SIGN DETAIL SHEET
206	I-43 NB ON-RAMP TO USH 10 / STH 42	D1-70	132"	X	72"	66.00	1057	1.6	98	2-TYPE B			SEE SIGN DETAIL SHEET
207	"	D1-71	144"	X	162"	162.00							MOUNT ON BACKSIDE OF SIGN #206, SEE SIGN DETAIL SHEET
PROJECT TOTALS							462.00	2114	3	196	3	4	

PLAN SHEET PRODUCED
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TRAFFIC CONTROL DEVICES

CATEGORY	LOCATION	SERVICE DAYS	643.0300 DRUMS		643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0715 WARNING LIGHTS TYPE C		643.0800 ARROW BOARDS		643.0900 SIGNS	
			IN SERVICE	DAYS	IN SERVICE	DAYS	IN SERVICE	DAYS	IN SERVICE	DAYS	IN SERVICE	DAYS	IN SERVICE	DAYS
0010	PROJECT	---	---	---	---	---	---	---	---	---	---	---	---	---
	CTH S / USH 10	110	---	---	1	110	2	220	---	---	---	---	2	220
	HIGHWAY H RD / USH 10	110	---	---	1	110	2	220	---	---	---	---	1	110
	UNIOIN RD/ USH 10	110	---	---	1	110	2	220	---	---	---	---	1	110
	N. ALVERNO RD / USH 10	110	---	---	1	110	2	220	---	---	---	---	1	110
	MICHIGAN AVE	110	---	---	1	110	2	220	---	---	---	---	1	110
	WEST END OF PROJECT	110	---	---	12	1,320	16	1,760	---	---	---	---	6	660
	SCHISEL LN / MICHIGAN AVE	110	---	---	20	2,200	48	5,280	---	---	---	---	4	440
	PARK AND RIDE	110	---	---	4	440	5	550	---	---	---	---	1	110
	CTH R INTERSECTION	110	40	4,400	20	2,200	31	3,410	10	1,100	1	110	16	1,760
	TOTALS			4,400		6,710		12,100		1,100		110		3,630

TRAFFIC CONTROL

CATEGORY	LOCATION	643.0100 TRAFFIC CONTROL (PROJECT) EACH		643.2000 DETOUR (PROJECT) EACH	
0010	PROJECT 1500-34-71	1		1	
	TOTAL	1		1	

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 110 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	LT OF TYPE 1 (10 WEST/310; TWO RIVERS/APPLETON; EXIT 1 MILE)	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10/42
	"	WO 20-2-A	48"x48"	1	110	110			
2	ACROSS FROM SIGN # 1 (MEDIAN SIDE)	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10/42
	"	WO 20-2-A	48"x48"	1	110	110			
3	1700' S OF SIGN # 1	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10/42
	"	MO 5-2-R	30"x30"	2	110	220			
4	ACROSS FROM SIGN # 3 (MEDIAN SIDE)	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10/42
	"	MO 5-2-R	30"x30"	2	110	220			
5	10-EAST-AHEAD		120"x 24"	1	110	110			NEXT RIGHT (PLACED OVER "AHEAD") SEE DETAIL
6	1700' S OF SIGN # 3	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10/42
	"	MO 5-2-R	30"x30"	2	110	220			
7	ACROSS FROM SIGN # 6 (MEDIAN SIDE)	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10/42
	"	MO 5-2-R	30"x30"	2	110	220			
8	LT OF TYPE 1 (10 WEST/310; TWO RIVERS/APPLETON; TILT RIGHT)	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10/42
	"	MO 6-2	30"x30"	2	110	220			RIGHT
9	200' S OF STOP AHEAD SIGN ON HWY 10 W OFF-RAMP (LEFT SIDE)	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10/42
	"	MO 5-1-R	30"x30"	2	110	220			
10	RT OF J3-2 (E-310-LT; T0-R-LT) LEFT SIDE	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
	"	MO 6-1	21"x21"	2	110	220			LEFT
CONTINUED	SUBTOTAL			58		6,380	0	0	

NOTE ALL COVERING SIGNS ITEMS ARE ANTICIPATED TO BE ONE CYCLE

TRAFFIC CONTROL DETOUR SIGN SUMMARY (CONTINUED)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 110 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
11A	MODIFY J3-2 (E-10-AH; W-10-RT)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-2	EXISTING						EAST
	"	M 1-4	EXISTING						10
	"	MO 6-1	21"x21"	1	110	110			LEFT
11B	RT OF SIGN # 11A	MO 4-8	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 6-1	21"x21"	1	110	110			RIGHT
12	150' E OF STONE RD INTERSECTION ON USH 10	WO 20-2-A	48"x48"	1	110	110			
13	LT OF J1-2 (JCT 43; JCT 310)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 6-1	21"x21"	1	110	110			AHEAD
14	MODIFY J2-3 (N-43-AH; E-10-AH RT; S-43-AH RT)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-2	EXISTING						EAST
	"	M 1-4	EXISTING						10
	"	MO 6-1	21"x21"	1	110	110			AHEAD
15	J3-2 (S-43-LT; E-10- LT)							1	EAST-10-LEFT
16	200' E OF NB I43 OFF-RAMP ON STH 310	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
17	RT OF J4-1 (E-310) @ WAGON WHEEL RD ON STH 310 EB	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
18	MODIFY J1-3 (JCT 43; JCT 10; END 310)	MO 4-8-A	24"x18"	1	110	110			
	"	M 1-4	EXISTING						10
19	RT OF J1-1 (JCT R)	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
	"	MO 5-1-R	21"x21"	2	110	220			
20	RT OF RAB DIAGRAMATIC (310 EB)	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
	"	MO 6-1	21"x21"	2	110	220			RIGHT
21	ABOVE D1-1 (R-TILT RT) SB SPLITTER ISLAND	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
	"	MO 6-2	21"x21"	2	110	220			RIGHT
22	RT OF J4-1 (W-310) ON STH 310 WB WEST OF R-A-B	MO 4-8	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
CONTINUED	SUBTOTAL			48		5,280	0	1	

NOTE ALL COVERING SIGNS ITEMS ARE ANTICIPATED TO BE ONE CYCLE

TRAFFIC CONTROL DETOUR SIGN SUMMARY (CONTINUED)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 110 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
23	ABOVE D1-1 (W-310-TILT RT) WB SPLITTER ISLAND	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10/10
	"	MO 6-2	21"x21"	1	110	110			LEFT
	"	MO 6-2	21"x21"	1	110	110			RIGHT
24A	RT OF YIELD SIGN (WB HWY 310 @ CTH R)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 6-1	21"x21"	1	110	110			LEFT
24B	LT OF RAB DIAGRAMATIC (310 WB)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 5-1-L	21"x21"	1	110	110			
24C	RT OF J1-1 (JCT R)	MO 3-2	36"x18"	1	110	110			
	"	M 1-4	36"x36"	1	110	110			10
	"	WO 20-2-A	48"x48"	1	110	110			
25	LT OF RAB DIAGRAMATIC (CTH R-NB)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 6-1	21"x21"	1	110	110			LEFT
26	RT OF J1-1 (JCT 310)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 5-1-L	21"x21"	1	110	110			
27	LT OF J4-1(SOUTH-R) S OF R-A-B ON R	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
28	200' N OF CTH P INTERSECTION ON CTH R	MO 4-8	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
29	200' S OF CTH P INTERSECTION ON CTH R	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
30	200' N OF PLANK RD INTERSECTION ON CTH R	MO 4-8	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
31	200' S OF PLANK RD INTERSECTION ON CTH R	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 50-2	48"x24"	1	110	110			10/42
32	MODIFY J1-2 (JCT 10; JCT 42)	MO 4-8-A	24"x18"	2	110	220			
	"	M 50-2	EXISTING						42/10
	GAP IN SIGN NUMBERS								
34	MODIFY J3-3 (CTH R-AH; STH 42-LT & RT; USH 10-LT & RT)	M 50-3	EXISTING						R-42-10
	"	MO 6-1	21"x21"	2	110	220			LEFT
CONTINUED	SUBTOTAL			51		5,610	0	0	

NOTE ALL COVERING SIGNS ITEMS ARE ANTICIPATED TO BE ONE CYCLE

TRAFFIC CONTROL DETOUR SIGN SUMMARY (CONTINUED)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 110 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
35	200' N OF WALDO BLVD INTERSECTION ON CTH R	MO 4-8	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
36	200' W OF CRESENT ST ON WALDO BLVD	M 50-2	48"x24"	1	110	110			10/42
	"	WO 20-2-A	48"x48"	1	110	110			
37A	J4-3 (10; 42; TO 43)							1	10-42-TO 43
37B	@ J4-3 (10; 42; TO 43)	MO 4-8	24"x12"	2	110	220			
	"	MO 3-3	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 50-2	24"x24"	1	110	110			42/10
	"	MO 4-5	24"x12"	1	110	110			
	"	M 1-51	24"x24"	1	110	110			43
	"	MO 5-1-L	21"x21"	2	110	220			
38	J4-3 (10; 42; TO 43)							1	10-42-TO 43
39	@ J4-3 (10; 42; TO 43)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	M 4-5	24"x12"	1	110	110			TO
	"	M 1-51	EXISTING						43
	"	MO 5-1-L	21"x21"	1	110	110			
40	RIGHT OF SIGN # 39	MO 4-8	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 5-1-R	21"x21"	1	110	110			
41	ACROSS FROM SIGN # 39 (MEDIAN SIDE)	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
	"	MO 5-1-L	21"x21"	1	110	110			
42	J2-3 (10-AH; 42-AH; CTH R LT & RT)							1	10-AHEAD; 42-AHEAD
43A	@J2-3 (10-AH; 42-AH; CTH R LT & RT)	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
	"	MO 5-1-L	21"x21"	1	110	110			
43B	RIGHT OF SIGN # 43A	MO 4-8	24"x12"	1	110	110			
	"	MO 3-4	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 5-1-R	21"x21"	1	110	110			
44	J4-3 (W-10; S-42-TO-43) WEST OF CTH R INTERSECTION							1	WEST 10; SOUTH 42-TO-43
45	200' S OF WALDO BLVD INTERSECTION ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
CONTINUED	SUBTOTAL			44		4,840	0	4	

NOTE ALL COVERING SIGNS ITEMS ARE ANTICIPATED TO BE ONE CYCLE

TRAFFIC CONTROL DETOUR SIGN SUMMARY (CONTINUED)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 110 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
46	J3-3 (10-LT & RT; 42-LT & RT; CTH R AH)							1	10 LT & RT; 42 LT & RT
47	IN FRONT OF SIGN # 46	MO 4-5	24"x12"	3	110	330			
	"	MO 3-4	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	MO 3-2	24"x12"	1	110	110			
	"	M 50-3	72"x24"	1	110	110			10/42/10
	"	MO 6-1	21"x21"	1	110	110			AHEAD
	"	MO 6-1	21"x21"	2	110	220			RIGHT
48A	J3-2 (W-10-AH LT; T0-43-AH LT) (MEDIAN SIDE)							1	T0-43-AH LT
48B	IN FRONT OF SIGN # 48A	MO 4-5	24"x12"	1	110	110			
	"	MO 4-8	24"x12"	2	110	220			
	"	MO 3-4	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	MO 3-2	24"x12"	1	110	110			
	"	M 50-3	72"x24"	1	110	110			10/42/10
	"	MO 6-1	21"x21"	1	110	110			AHEAD
	"	MO 6-2	21"x21"	2	110	220			RIGHT
48C	500' E OF SIGN # 48B ON FREE FLOW CURVE	MO 4-8-A	24"x18"	2	110	220			
	"	M 50-2	48"x24"	1	110	110			10/42
49	200' N OF MICHIGAN ST ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 5-2-R	21"x21"	1	110	110			
50	200' S OF MICHIGAN ST ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
51	200' N OF BROADWAY ST ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
52	200' S OF BROADWAY ST ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
53	200' N OF CUSTER ST ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
CONTINUED	SUBTOTAL			49		5,390	0	2	

NOTE ALL COVERING SIGNS ITEMS ARE ANTICIPATED TO BE ONE CYCLE

TRAFFIC CONTROL DETOUR SIGN SUMMARY (CONTINUED)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 110 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
54	200' S OF CUSTER ST ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
55	200' N OF EXPO DR ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
56	200' S OF EXPO DR ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
57	500' N OF USH 151 INTERSECTION ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
	"	MO 5-1-R	21"x21"	1	110	110			
58	RT OF J3-2 (TO CTH CR; 151-LT & RT)	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-3	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MB 4-5	24"x12"	1	110	110			
	"	M 1-1	24"x24"	1	110	110			43
	"	MO 6-1	21"x21"	1	110	110			RIGHT
59	200' N OF USH 151 INTERSECTION ON CTH R	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
60	500' W OF DEWEY ST ON USH 151	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	WO 20-2-A	48"x48"	1	110	110			
61	MODIFY J1-1 (END BUSINESS 42)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 5-1-R	21"x21"	1	110	110			
62	MODIFY J1-2 (JCT 42; JCT 43)	MO 4-8	24"x12"	1	110	110			
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	EXISTING						42
	"	MO 6-1	21"x21"	1	110	110			RIGHT
63	J2-2 (N-43-AH TILT RT; N-42-AH TILT RT)							1	N-42-AH TILT RT
64	J3-1 (N-42-TILT RT)							1	N-42-TILT RT
CONTINUED	SUBTOTAL			42		4,620	0	2	

NOTE ALL COVERING SIGNS ITEMS ARE ANTICIPATED TO BE ONE CYCLE

TRAFFIC CONTROL DETOUR SIGN SUMMARY (CONTINUED)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 110 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
65	RT OF TRAFFIC SIGNAL	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 6-1	21"x21"	1	110	110			LEFT
66	500' W OF SIGN # 65	MO 4-8	24"x12"	1	110	110			VERTICAL INSTALLATION
	"	MO 3-1	24"x12"	1	110	110			
	"	M 1-6	24"x24"	1	110	110			42
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
	"	MO 5-1-L	21"x21"	1	110	110			
67	MODIFY J3-1 (N-42-LT)	MO 4-8	24"x12"	1	110	110			
	"	M 3-1	EXISTING						
	"	M 1-6	EXISTING						42
	"	MO 6-1	21"x21"	1	110	110			AHEAD
	"	MO 4-5	24"x12"	1	110	110			
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
68	MODIFY J2-3 (N-42-AH LT; N-43-AH LT)	MO 4-8	24"x12"	1	110	110			
	"	M 3-1	EXISTING						
	"	M 1-6	EXISTING						42
	"	MO 6-1	21"x21"	1	110	110			AHEAD
	"	MO 4-5	24"x12"	1	110	110			
	"	MO 3-2	24"x12"	1	110	110			
	"	M 1-4	24"x24"	1	110	110			10
69	500' W OF HECKER ST ON USH 151	M 1-6	24"x24"	1	110	110			42
	"	WO 20-2-A	48"x48"	1	110	110			
70	TYPE 1 (MANITOWOC EXITS- HWY 42/151 1-3/4; HWY 42/10 4; HWY 10/310 7- 1/2)	R 55-58-A	108"x18"	1	110	110			HWY 42/10 CLOSED
71	TYPE 1 (42-NORTH-AHEAD)		120"x 24"	1	110	110			NEXT RIGHT (PLACED OVER "AHEAD") SEE DETAIL
72	LT OF TYPE 1 (151/BUS 42; MANITOWOC/FOND DU LAC; 1 1/4 MILES)	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10 42
	"	WO 20-2-A	48"x48"	1	110	110			
73	ACROSS FROM SIGN # 72 (MEDIAN SIDE)	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10 42
	"	WO 20-2-A	48"x48"	1	110	110			
74	1700' N OF SIGN # 72	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10 42
	"	MO 5-2-R	30"x30"	2	110	220			
CONTINUED	SUBTOTAL			41		4,510	0	0	

TRAFFIC CONTROL DETOUR SIGN SUMMARY (CONTINUED)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 110 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
75	ACROSS FROM SIGN # 74 (MEDIAN SIDE)	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10 42
	"	MO 5-2-R	30"x30"	2	110	220			
76	1700' N OF SIGN # 74	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10 42
	"	MO 5-2-R	30"x30"	2	110	220			
77	ACROSS FROM SIGN # 76 (MEDIAN SIDE)	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10 42
	"	MO 5-2-R	30"x30"	2	110	220			
78	LT OF TYPE 1 (151/BUS 42; MANITOWOC/FOND DU LAC; TILT RT)	MO 4-8	36"x18"	2	110	220			
	"	MO 3-2	36"x18"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	72"x36"	1	110	110			10 42
	"	MO 6-2	30"x30"	2	110	220			RIGHT
79	100' N OF SIGNAL AHEAD SIGN	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	24"x24"	1	110	110			10 42
	"	MO 5-1-R	21"x21"	2	110	220			
80	ABOVE J3-3 (S-151-LT; BUS 42-RT; N-151-RT)	MO 4-8	24"x12"	2	110	220			
	"	MO 3-2	24"x12"	1	110	110			
	"	MO 3-1	36"x18"	1	110	110			
	"	M 50-2	24"x24"	1	110	110			10 42
	"	MO 6-1	21"x21"	2	110	220			RIGHT
81	J4-2 (N-43; N-42) ON I 43 NB							1	NORTH-42
82	TYPE 1 - I 43 NB (N-42/CTHJJ/E-10; MANITOWOC/STURGEON BAY; EXIT 1-1/4 MILES) I 43 NB	R 55-58-A	108"x18"	1	110	110			N-42/CTHJJ/E-10; MANITOWOC/STURGEON BAY; CLOSED
83	TYPE 1 - I 43 NB (WALDO BLVD-EXIT 152)	R 55-58-A	108"x18"	1	110	110			WALDO BLVD- CLOSED
84	TYPE 1 - I 43 NB (TWO RIVERS EXITS-HWY 42 3/4; HWY 310 3-1/2) I 43 NB	R 55-58-A	108"x18"	1	110	110			HWY 42 CLOSED
85	TYPE 1 - I 43 NB (N-42/CTHJJ/E-10; MANITOWOC/STURGEON BAY; TILT RT) I 43 NB	R 55-58-A	108"x18"	1	110	110			N-42/CTHJJ/E-10; MANITOWOC/STURGEON BAY; CLOSED
86	TYPE 1 - I 43 SB (N-42/CTHJJ/E-10; MANITOWOC/STURGEON BAY; EXIT 1-1/4 MILES	R 55-58-A	108"x18"	1	110	110			N-42/CTHJJ/E-10; MANITOWOC/STURGEON BAY; CLOSED
87	TYPE 1 - I 43 SB (WALDO BLVD - AHEAD)	R 55-58-A	108"x18"	1	110	110			WALDO BLVD - CLOSED
88	TYPE 1 - I 43 SB (N-42/CTHJJ/E-10; MANITOWOC; TILT RT)	R 55-58-A	108"x18"	1	110	110			N-42/CTHJJ/E-10; MANITOWOC; CLOSED
89	ON WALDO BLVD WB - TO BE LOCATED IN THE FIELD			1			7		
90	ON WALDO BLVD EB - TO BE LOCATED IN THE FIELD			1			7		
91	PARK AND RIDE			1			7		
	SUBTOTAL			52		5,390	21	1	
	TOTAL			385		42,020	21	10	

NOTE ALL COVERING SIGNS ITEMS ARE ANTICIPATED TO BE ONE CYCLE

PAVEMENT MARKING EPOXY

CATEGORY	STA. - STA.	LOCATION	646.0106	646.0106	646.0106	646.0126	647.0256	647.0456	647.0656	647.0606
			4-INCH WHITE EDGE LF	4-INCH YELLOW EDGE LF	4-INCH WHITE DASH LF	8-INCH WHITE LF	SYMBOLS EACH	CURB LF	PARKING STALL LF	ISLAND NOSE EACH
0010	190+00-191+91	USH 10 WB	189	---	---	---	---	---	---	---
	190+00-191+98	USH 10 WB	---	---	49	---	---	---	---	---
	190+00-191+98	USH 10 WB	---	197	---	---	---	---	---	---
	192+79-198+68	USH 10 WB	576	---	---	---	---	---	---	---
	192+79-198+68	USH 10 WB	---	---	144	---	---	---	---	---
	193+59-198+25	USH 10 WB	---	467	---	---	---	---	---	---
	199+38-205+29	USH 10 WB	590	---	---	---	---	---	---	---
	199+20-205+29	USH 10 WB	---	---	151	---	---	---	---	---
	199+20-205+16	USH 10 WB	---	603	---	---	---	---	---	---
	206+52-275+00	USH 10 WB	6,852	---	---	---	---	---	---	---
	206+61-274+88	USH 10 WB	---	---	1,707	---	---	---	---	---
	206+61-274+82	USH 10 WB	---	6,820	---	---	---	---	---	---
	190+00-192+43	USH 10 EB	---	242	---	---	---	---	---	---
	190+00-192+43	USH 10 EB	---	---	61	---	---	---	---	---
	190+00-192+36	USH 10 EB	238	---	---	---	---	---	---	---
	193+60-198+28	USH 10 EB	---	470	---	---	---	---	---	---
	193+23-198+89	USH 10 EB	---	---	142	---	---	---	---	---
	193+23-198+90	USH 10 EB	568	---	---	---	---	---	---	---
	199+71-205+35	USH 10 EB	---	560	---	---	---	---	---	---
	199+67-205+35	USH 10 EB	---	---	142	---	---	---	---	---
	199+63-205+35	USH 10 EB	572	---	---	---	---	---	---	---
	206+86-274+88	USH 10 EB	---	6,797	---	---	---	---	---	---
	207+03-274+83	USH 10 EB	---	---	1,696	---	---	---	---	---
	207+23-275+00	USH 10 EB	6,776	---	---	---	---	---	---	---
	191+29-192-43	USH 10 EB	---	---	---	114	---	---	---	---
	197+45-198+28	USH 10 EB	---	---	---	83	---	---	---	---
	204+40-205+35	USH 10 EB	---	---	---	95	---	---	---	---
	273+60-274+83	USH 10 EB	---	---	---	129	---	---	---	---
	193+54-196+46	USH 10 WB	---	---	---	292	---	---	---	---
	199+38-200+52	USH 10 WB	---	---	---	112	---	---	---	---
	206+65-207+61	USH 10 WB	---	---	---	97	---	---	---	---
	274+89	USH 10 EB	---	---	---	---	---	---	---	---
	30+58-48+03	NW RAMP	1,719	---	---	---	---	---	---	---
	30+51-43+03	NW RAMP	---	1,238	---	---	---	---	---	---
	50+58-67+13	NE RAMP	1,613	---	---	---	---	---	---	---
	50+74-61+83	NE RAMP	---	1,090	---	---	---	---	---	---
	7+95-29+26	SW RAMP	2,139	---	---	---	---	---	---	---
	19+78-29+54	SW RAMP	---	955	---	---	---	---	---	---
	33+92-49+72	SE RAMP	1,558	---	---	---	---	---	---	---
	38+75-49+71	SE RAMP	---	1,091	---	---	---	---	---	---
	31+01-31+40	NW RAMP	---	---	---	78	---	---	---	---
	48+89-49+28	SE RAMP	---	---	---	80	---	---	---	---
	43+04-43+54	NW RAMP	---	---	---	50	---	---	---	---
	61+83-62+33	NE RAMP	---	---	---	50	---	---	---	---
	CONTINUED	SUBTOTAL	23,390	20,530	4,092	1,180	0	0	0	0

PAVEMENT MARKING EPOXY (CONTINUED)

CATEGORY	STA. - STA.	LOCATION	646.0106	646.0106	646.0106	646.0126	647.0256	647.0456	647.0656	647.0606
			4-INCH WHITE EDGE LF	4-INCH YELLOW EDGE LF	4-INCH WHITE DASH LF	8-INCH WHITE LF	SYMBOLS EACH	CURB LF	PARKING STALL LF	ISLAND NOSE EACH
0010	38+25-38+75	SE RAMP	---	---	---	50	---	---	---	---
	19+28-19+78	SW RAMP	---	---	---	50	---	---	---	---
	49+72	NW RAMP	---	---	---	---	---	---	---	---
	49+66	NW RAMP	---	---	---	---	---	---	---	---
	30+57	SE RAMP	---	---	---	---	---	---	---	---
	30+65	SE RAMP	---	---	---	---	---	---	---	---
	193+42-193.58	USH 10 EB LT	---	---	---	---	---	17	---	---
	198+29-198+37	USH 10 EB LT	---	---	---	---	---	10	---	---
	199+18-199+75	USH 10 EB LT	---	---	---	---	---	62	---	---
	206+65-206+86	USH 10 EB LT	---	---	---	---	---	23	---	---
	274+83-274+97	USH 10 EB LT	---	---	---	---	---	14	---	---
	191+96-192+43	USH 10 WB RT	---	---	---	---	---	48	---	---
	193+42-193.58	USH 10 WB RT	---	---	---	---	---	18	---	---
	198+25-198.37	USH 10 WB RT	---	---	---	---	---	12	---	---
	205+14-205+35	USH 10 WB RT	---	---	---	---	---	22	---	---
	274+83-274+97	USH 10 WB RT	---	---	---	---	---	14	---	---
	MICHIGAN AVE	PARK AND RIDE	---	---	---	---	1	---	320	---
	192+50 - 195+53	MEDIAN	---	---	---	---	---	---	---	1
	193+32 - 193+37	MEDIAN	---	---	---	---	---	---	---	1
	198+43 - 198+48	MEDIAN	---	---	---	---	---	---	---	1
	199+11 - 199+14	MEDIAN	---	---	---	---	---	---	---	1
	205+40 - 205+44	MEDIAN	---	---	---	---	---	---	---	1
	206+57 - 206-62	MEDIAN	---	---	---	---	---	---	---	1
	274+96 - 274+99	MEDIAN	---	---	---	---	---	---	---	1
	CTH R INTERSECTION		---	---	233	270	---	---	---	---
		SUBTOTAL	0	0	233	370	1	240	320	7
			23,390	20,530	4,325					
		TOTAL		48,245		1,550	1	240	320	7

PAVEMENT MARKING TEMPORARY

CATEGORY	STA. - STA.	LOCATION	646.0600	647.0955	647.0965	649.0400	649.0801
			REMOVING PM LF	REMOVING PM ARROWS EACH	REMOVING PM WORDS EACH	TEMP PVT MKG REMOVABLE TAPE 4-INCH LF	TEMP PVT MKG REMOVABLE TAPE 8-INCH LF
0010	CTH R INTERSECTION	USH 10 WB	340	7	3	700	180
		TOTAL	340	7	3	700	180

CONSTRUCTION STAKING

CATEGORY	STATION	LOCATION	650.5500	650.8000	650.9910
			CONSTRUCTION STAKING CURB AND GUTTER LF	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS
0010	(PROJECT)		---	---	1
	190+00-275+00	EB	---	8,500	---
	190+00-275+00	WB	---	8,500	---
	RAMP	NE	---	1,250	---
	RAMP	EW	---	1,350	---
	RAMP	SE	---	1,200	---
	RAMP	SW	---	1,100	---
	SCHISEL CT	EAST	62	---	---
	SCHISEL CT	WEST	96	---	---
	MICHIGAN AVE	EAST	114	---	---
	MICHIGAN AVE	WEST	113	---	---
TOTAL			385	21,900	1

QUANTITY FOR CONSTRUCTION STAKING STORM SEWER SYSTEM SHOWN WITH
STORM SEWER STRUCTURES

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250	REMARKS
			SAWING CONCRETE LF	
0010	190+00	EB	24	PARTIAL DEPTH FOR BUTT JOINT
	190+00	WB	24	PARTIAL DEPTH FOR BUTT JOINT
	275+00	EB	51	PARTIAL DEPTH FOR BUTT JOINT
	275+00	WB	40	PARTIAL DEPTH FOR BUTT JOINT
	B-36-114	WB WEST APPROACH	28	PARTIAL DEPTH FOR BUTT JOINT
	B-36-114	WB EAST APPROACH	28	PARTIAL DEPTH FOR BUTT JOINT
	B-36-112	WB WEST APPROACH	28	PARTIAL DEPTH FOR BUTT JOINT
	B-36-112	WB EAST APPROACH	28	PARTIAL DEPTH FOR BUTT JOINT
	B-36-115	EB WEST APPROACH	28	PARTIAL DEPTH FOR BUTT JOINT
	B-36-115	EB EAST APPROACH	28	PARTIAL DEPTH FOR BUTT JOINT
	B-36-113	EB WEST APPROACH	28	PARTIAL DEPTH FOR BUTT JOINT
	B-36-113	EB EAST APPROACH	28	PARTIAL DEPTH FOR BUTT JOINT
	PROJECT	FROM "CONCRETE PAVEMENT REPAIR AND BASE PATCHING"	21,310	
UNDISTRIBUTED	PROJECT	FROM "CURB AND GUTTER"	5,254	
			73	
	TOTAL		27,000	

SAWING ASPHALT

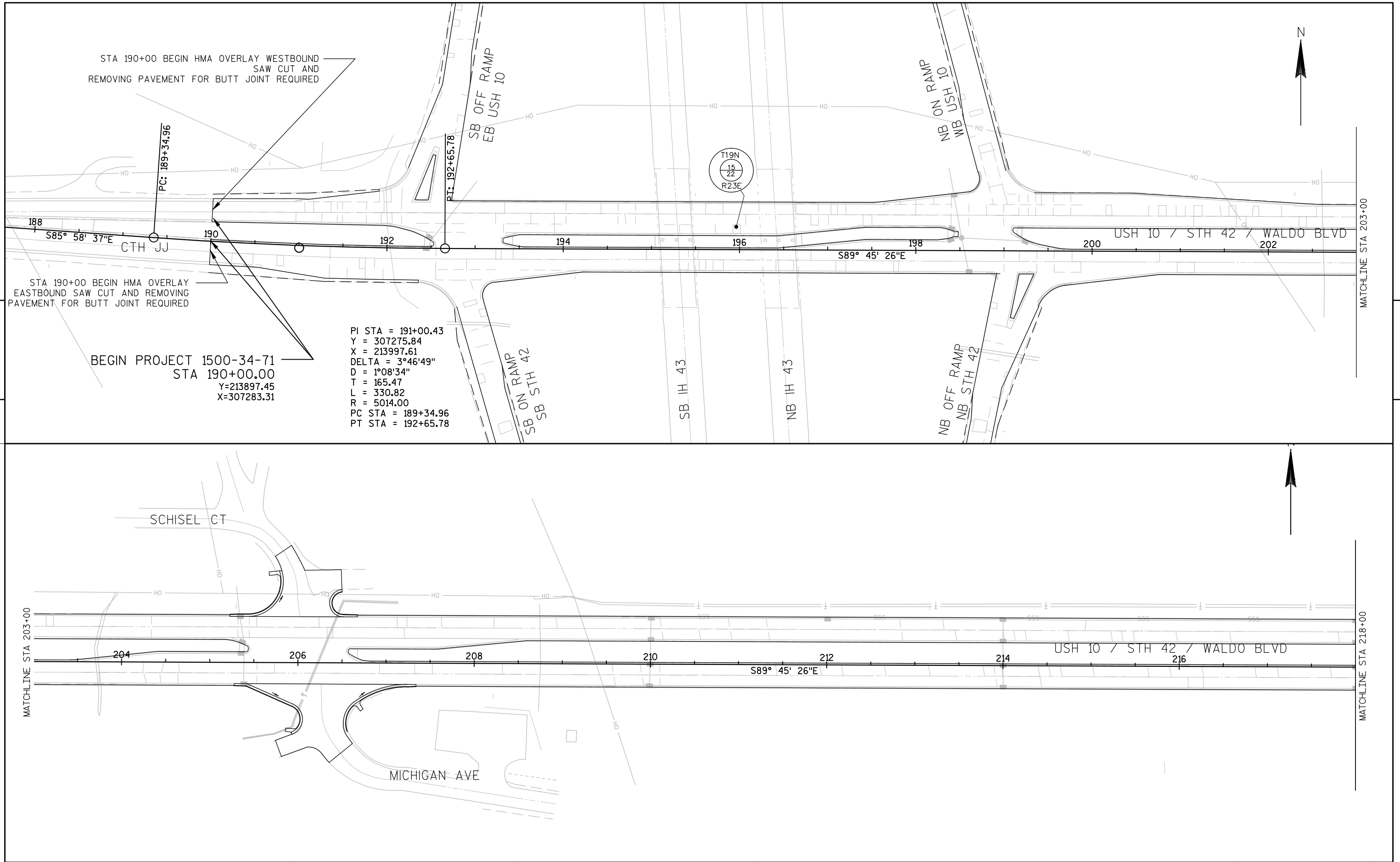
			690.0150 SAWING ASPHALT LF
CATEGORY	STATION	LOCATION	
0010	205+83	SCHISEL CT (NW)	98
	206+67	SCHISEL CT (NE)	49
	205+78	MICHIGAN AVE (NW)	122
	206+49	MICHIGAN AVE (NE)	138
	62+33 NE	NE RAMP	27
	43+55 NW	NW RAMP	27
	38+25 SE	SE RAMP	27
	19+29 SW	SW RAMP	27
TOTAL			515

LONGITUDINAL JOINT REPAIR

			SPV.0090.03 LONGITUDINAL JOINT REPAIR LF
CATEGORY	STATION	LOCATION	
0010	190+00 - 217+31	WB	2859
	217+13 - 248+00	WB	945
	248+00 - 275+00	WB	22
	190+00 - 217+31	EB	1461
	217+31 - 248+00	EB	900
	248+00 - 275+00	EB	395
	SE RAMP		50
	NE RAMP		123
	SW RAMP		11
	UNDISTRIBUTED		485
TOTAL			7,250

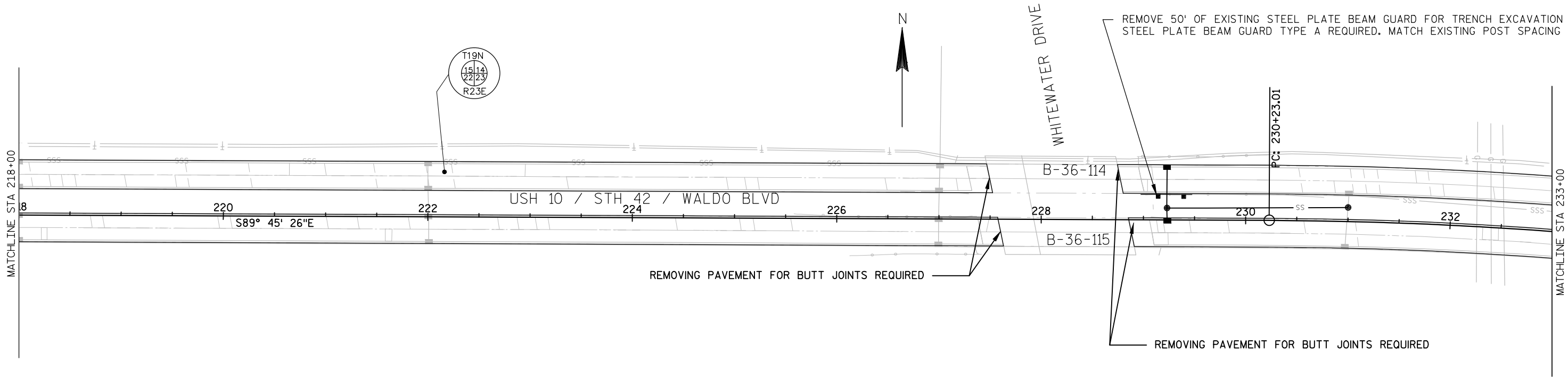
CLEAN AND PATCH CONCRETE PAVEMENT

			SPV.0090.04 CLEAN AND PATCH LF
CATEGORY	STATION	LOCATION	
0010	USH 10	LONGITUDINAL	5,100
	RAMPS	LONGITUDINAL	1050
	USH 10	TRANSVERSE	700
	RAMPS	TRANSVERSE	100
TOTAL			6,950

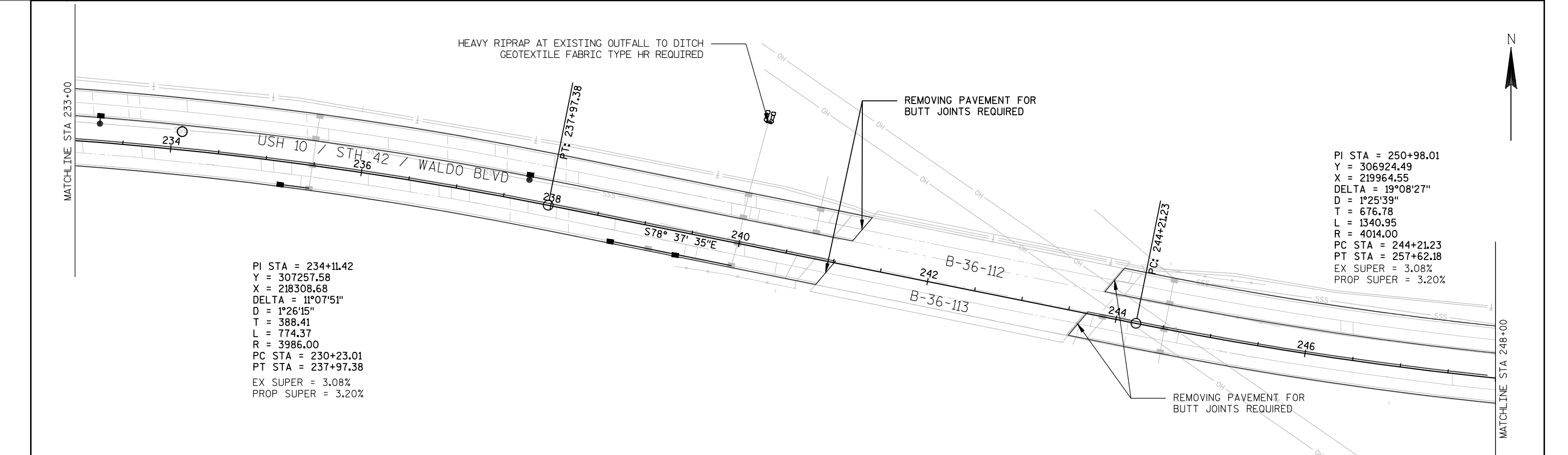


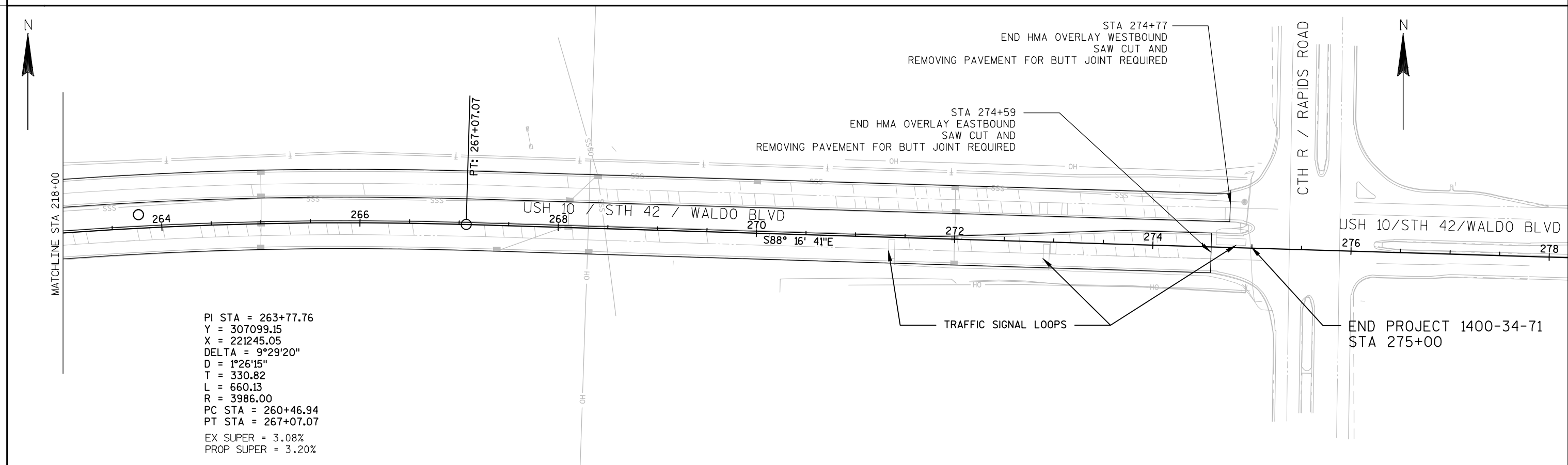
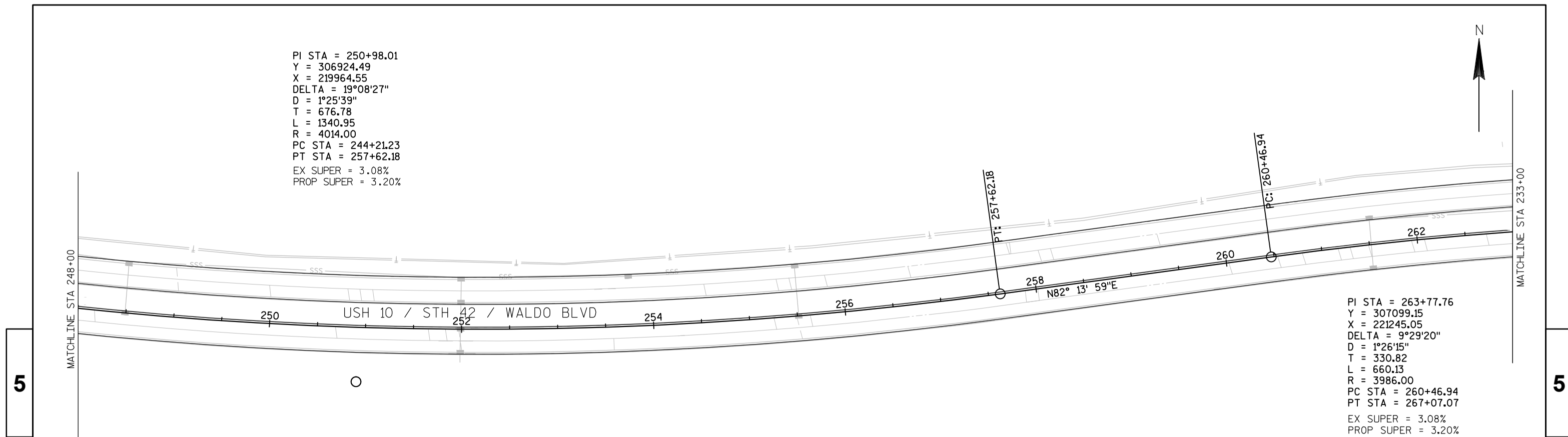
PROJECT NO:1500-34-71	HWY:USH 10	COUNTY:MANITOWOC	PLAN	STA 190+00 - STA 218+00	SHEET	101	E
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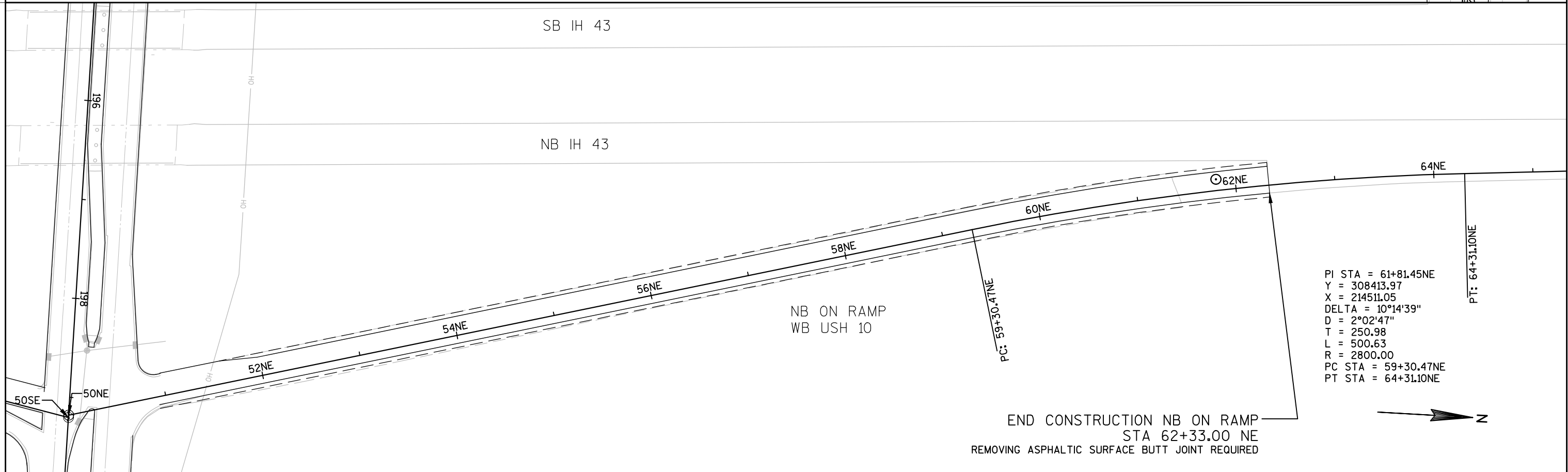
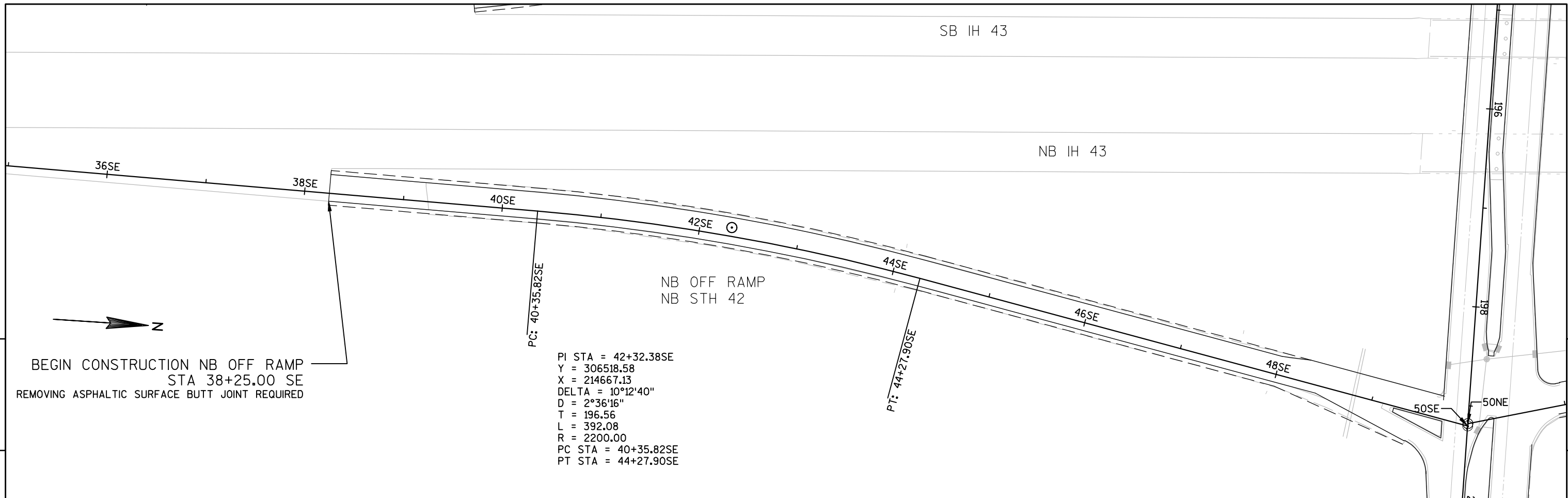
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PI STA = 19+75.32SW
Y = 306288.55
X = 214448.14
DELTA = 11°15'07"
D = 2°29'28"
T = 226.57
L = 451.69
R = 2300.00
PC STA = 17+48.74SW
PT STA = 22+00.43SW

BEGIN CONSTRUCTION SB ON RAMP
STA 19+29.00 SW
REMOVING ASPHALTIC SURFACE BUTT JOINT REQUIRED

SB ON RAMP
SB STH 42

PT: 22+00.43SW

26SW

28SW

24SW

22SW

20SW

16SW

18SW

PC: 17+48.74SW

SB IH 43

NB IH 43

36SE

38SE



END CONSTRUCTION SB OFF RAMP
STA 43+55.00 NW
REMOVING ASPHALTIC SURFACE BUTT JOINT REQUIRED

PI STA = 39+54.18NW
Y = 308217.21
X = 214290.57
DELTA = 8°12'02"
D = 2°02'47"
T = 200.72
L = 400.76
R = 2800.00
PC STA = 37+53.46NW
PT STA = 41+54.22NW

SB OFF RAMP
EB USH 10

PC: 37+53.46NW

PT: 41+54.22NW

40NW

42NW

44NW

38NW

36NW

34NW

32NW

30SW

30NW

192

194

196

198

200

202

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206

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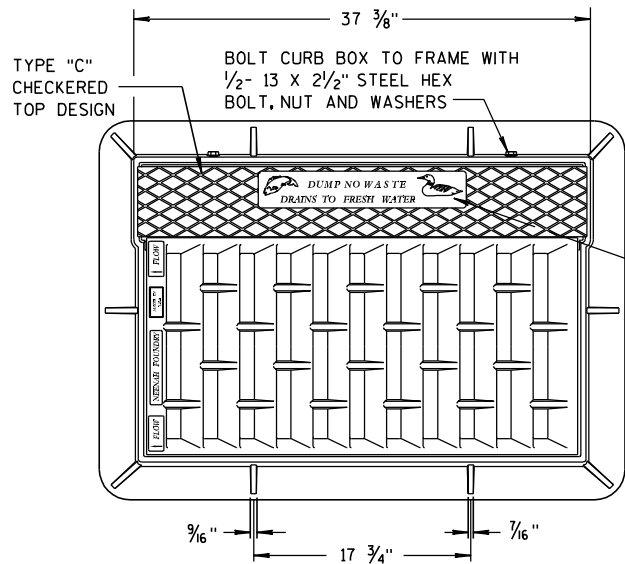
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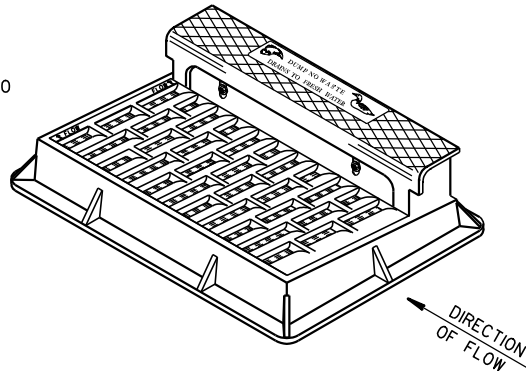
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Standard Detail Drawing List

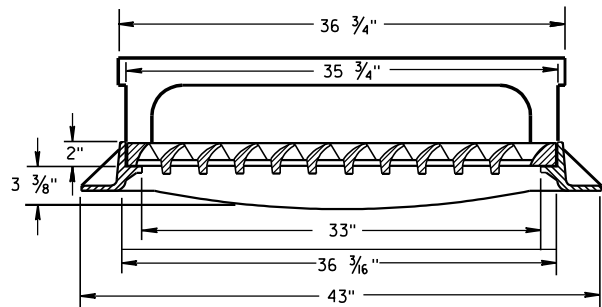
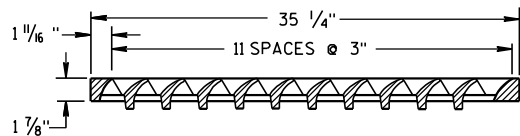
08A05-18A	INLET COVERS TYPE A, H, A-S, & H-S
08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
11B02-02	CONCRETE MEDIAN NOSE
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C14-04A	BASE PATCHING CONCRETE
13C14-04B	BASE PATCHING CONCRETE
13C14-04C	BASE PATCHING CONCRETE
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
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
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12A	PAVEMENT MARKING SYMBOLS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15D12-03	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS



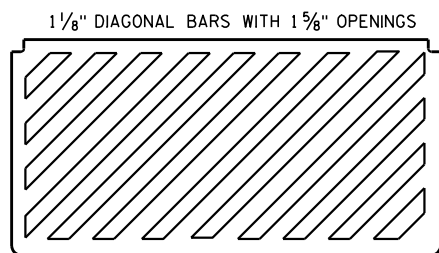
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

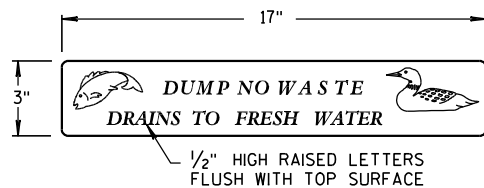


TYPE "H"
(APPROXIMATE WEIGHT 441 LBS.)
FRAME..... 181 LBS.
GRATE..... 146 LBS.
CURB BOX..... 114 LBS.

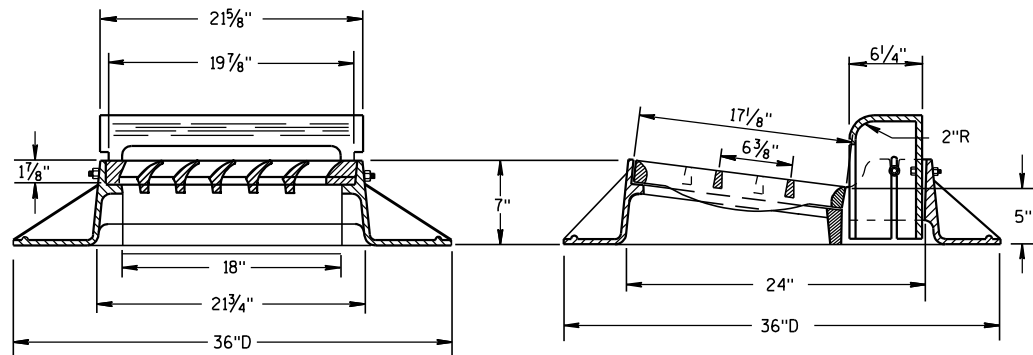
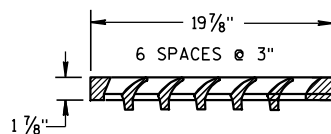
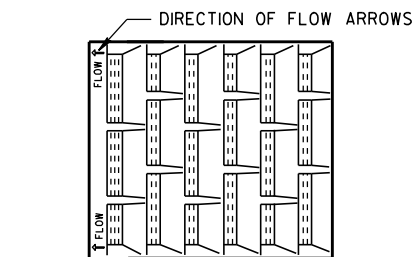


SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")
(APPROXIMATE WEIGHT 159 LBS.)
GRATE..... 159 LBS.
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



TYPE "A"

(APPROXIMATE WEIGHT 340 LBS.)
FRAME..... 185 LBS.
GRATE..... 71 LBS.
CURB BOX..... 84 LBS.

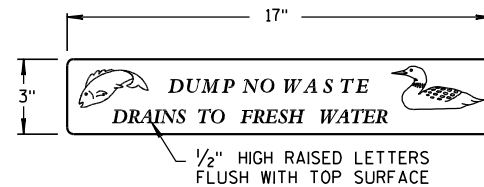
GENERAL NOTES

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.

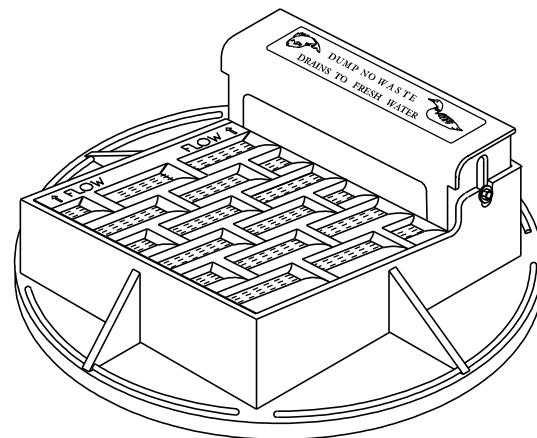
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



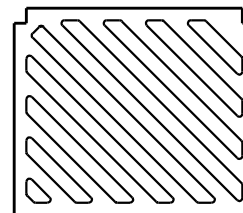
LOGO DETAIL

NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

1" DIAGONAL BARS WITH 1 1/2" OPENINGS



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 7/8")
GRATE..... 84 LBS.
(NOTED AS TYPE A-S ON DRAINAGE TABLE)

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

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DEPARTMENT OF TRANSPORTATION

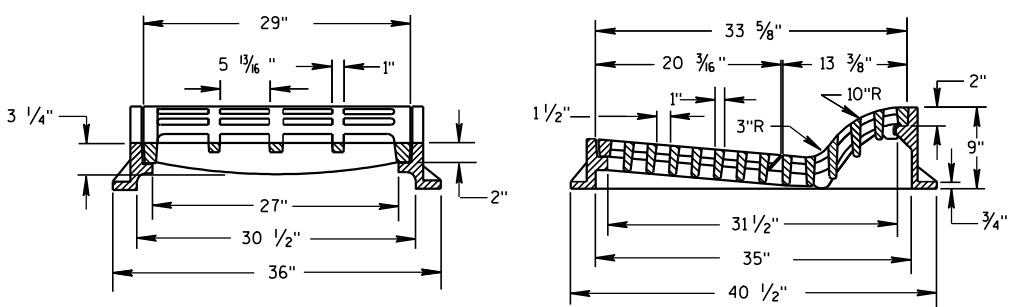
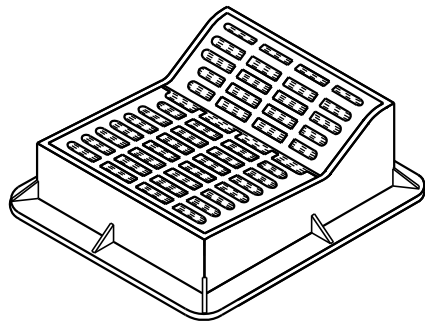
APPROVED

6/5/2012
DATE

FHWA

/s/ Jerry H. Zocco
ROADWAY STANDARDS 107
ENGINEER

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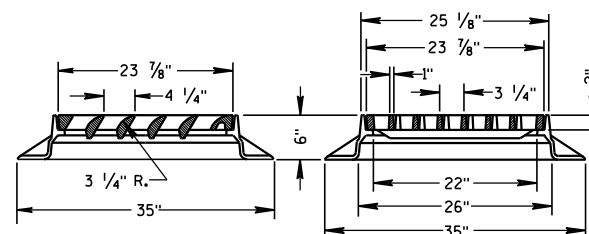
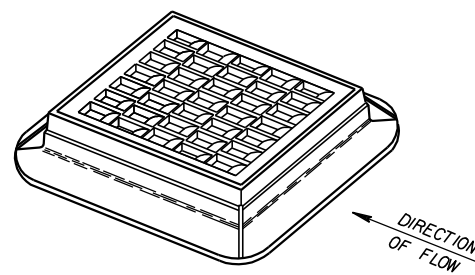


TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.
GRATE.....160 LBS.
GRATE.....182 LBS.

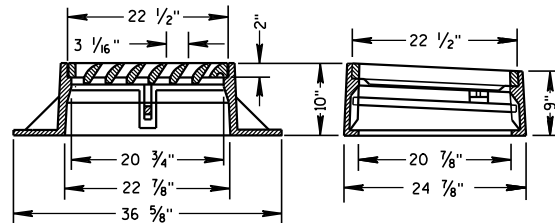
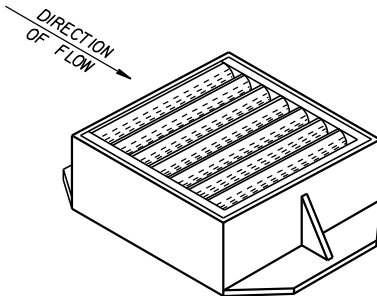
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.
GRATE.....169 LBS.



TYPE "V"

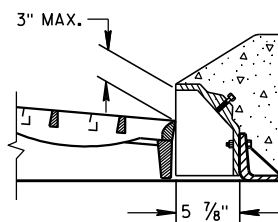
(APPROXIMATE WEIGHT 410 LBS.)

FRAME.....269 LBS.
GRATE.....136 LBS.
SAFETY BAR.....5 LBS.

ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH NOTED AS TYPE HM-GJ ON DRAINAGE TABLE



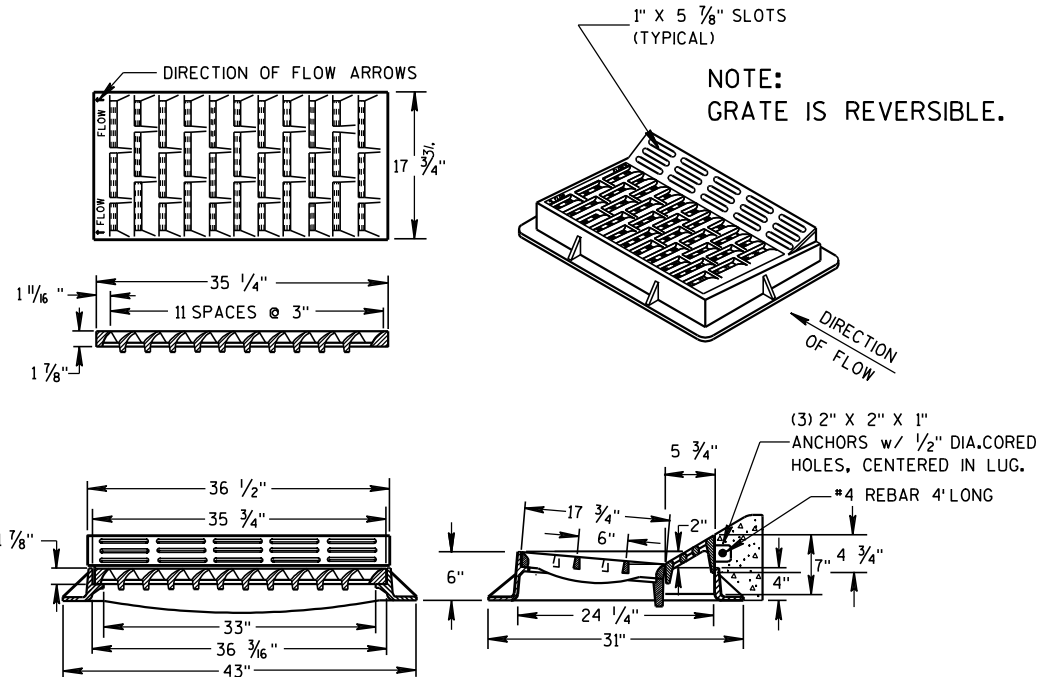
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

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

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



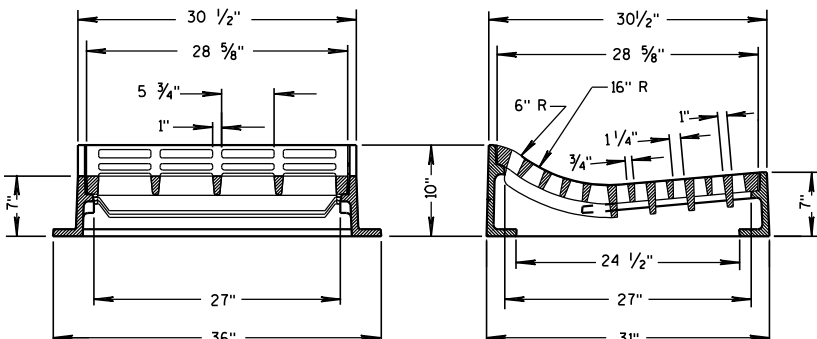
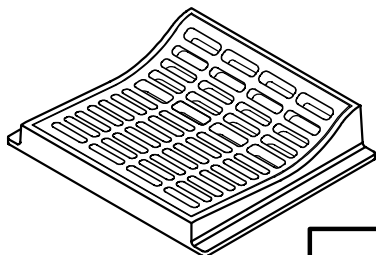
TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)

FRAME.....181 LBS.
GRATE.....159 LBS.
CURB BOX.....74 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM" COVER NOTED AS TYPE HM-S ON DRAINAGE TABLE



TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)

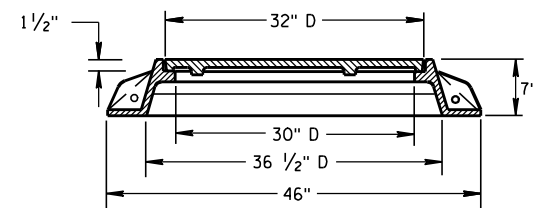
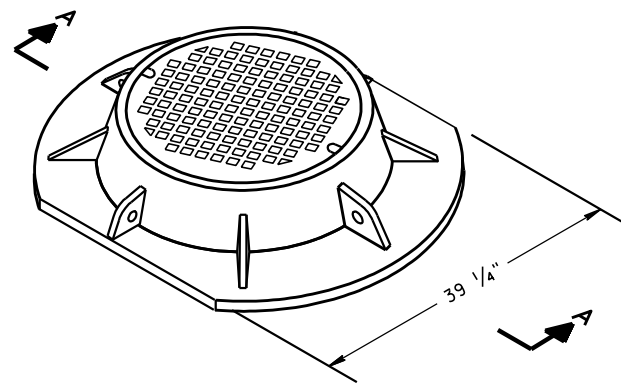
FRAME.....270 LBS.
GRATE.....260 LBS.

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

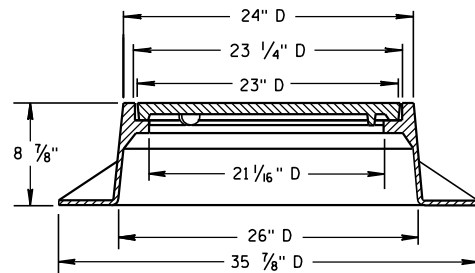
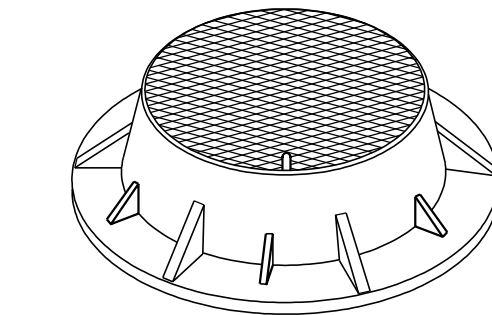
INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

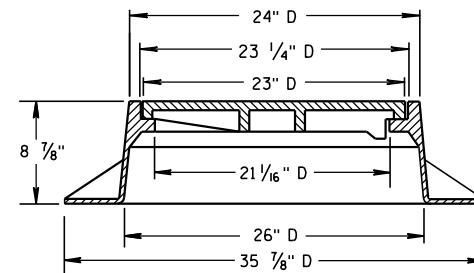
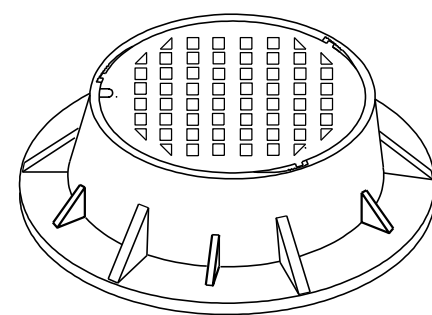
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS 108
FHWA ENGINEER



SECTION A-A
TYPE "K"
(APPROXIMATE WEIGHT 439 LBS.)
FRAME.....216 LBS.
LID.....223 LBS.



TYPE "J"
(APPROXIMATE WEIGHT 267 LBS.)
FRAME.....152 LBS.
LID.....115 LBS.



TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(APPROXIMATE WEIGHT 267 LBS.)
FRAME.....158 LBS.
LID.....109 LBS.
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

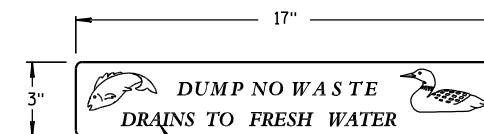
GENERAL NOTES

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.

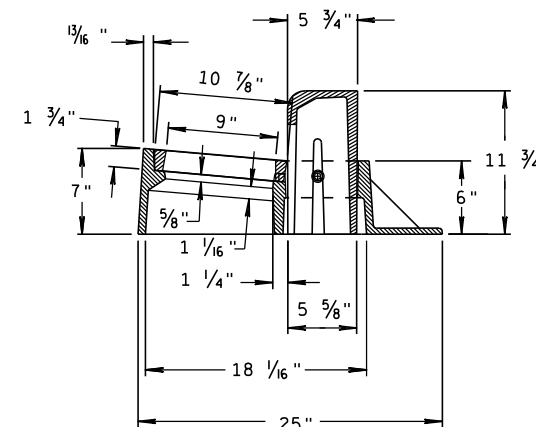
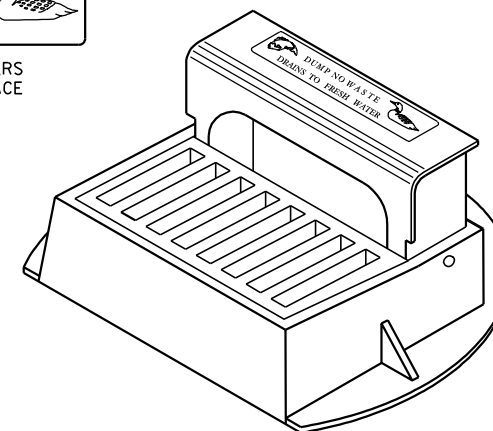
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

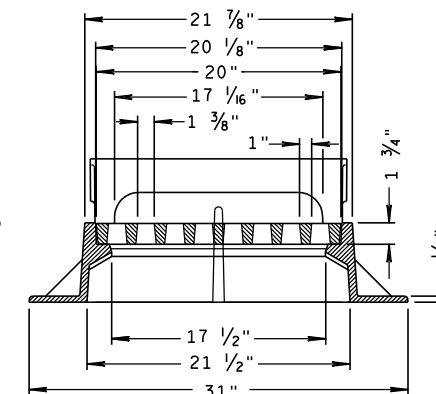
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



LOGO DETAIL



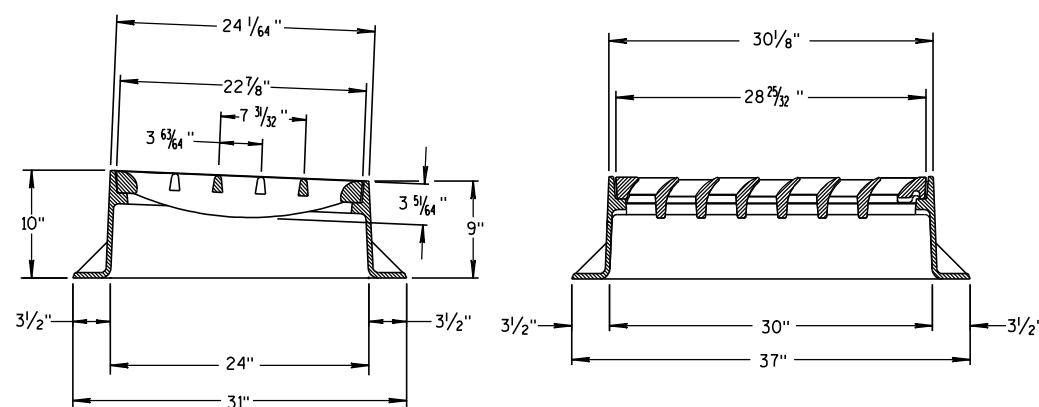
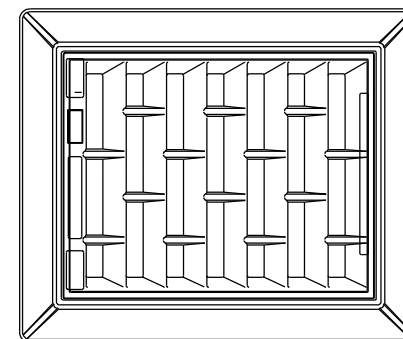
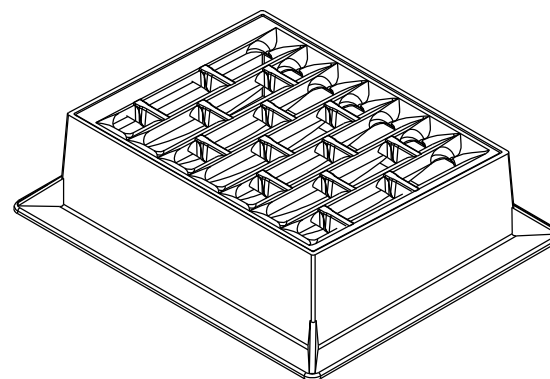
INLET COVER TYPE "Z"
(APPROXIMATE WEIGHT 344 LBS.)
FRAME.....206 LBS.
GRATE.....46 LBS.
CURB BOX.....92 LBS.



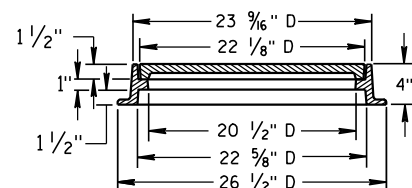
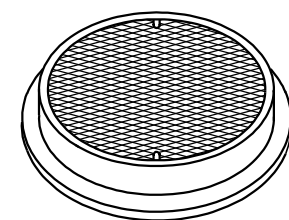
INLET COVERS, TYPE BW, Z
MANHOLE COVERS, TYPE
K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

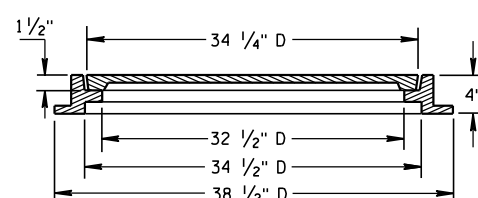
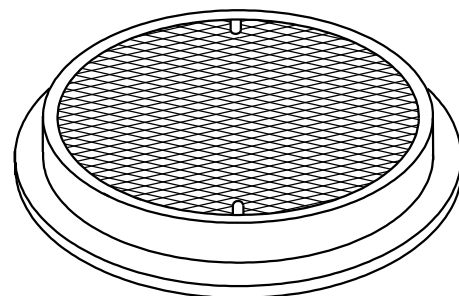
APPROVED
6/5/2012 /S/ Jerry H. Zopp
DATE ROADWAY STANDARDS 109 NT
FHWA ENGINEER



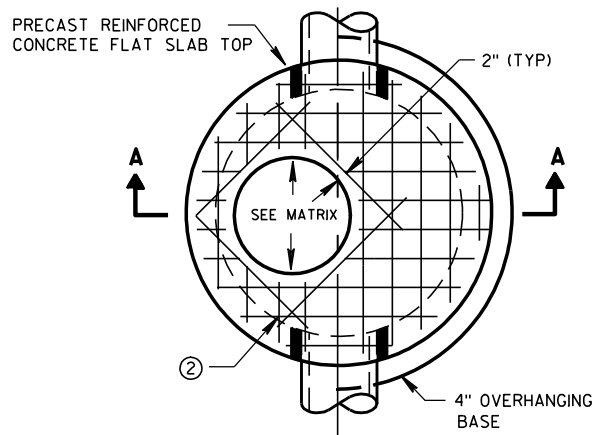
INLET COVER TYPE "BW"



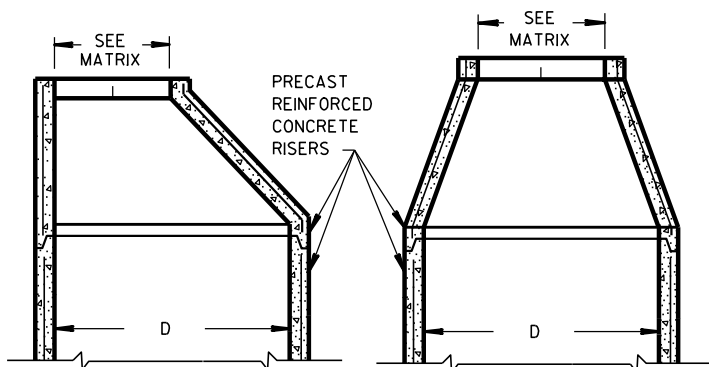
TYPE "L"
(APPROXIMATE WEIGHT 158 LBS.)
FRAME.....81 LBS.
LID.....77 LBS.



TYPE "M"
(APPROXIMATE WEIGHT 377 LBS.)
FRAME.....125 LBS.
LID.....252 LBS.

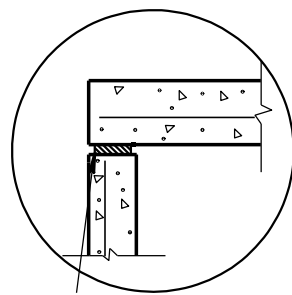


PLAN VIEW CIRCULAR OPENING

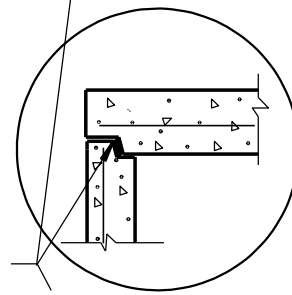


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

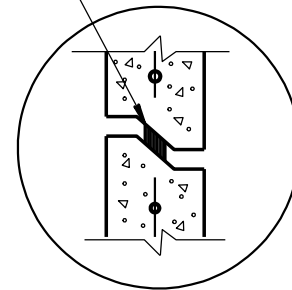
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



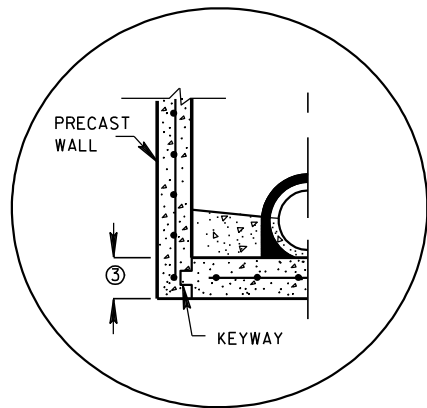
TOP WITH TONGUE AND GROOVE JOINT



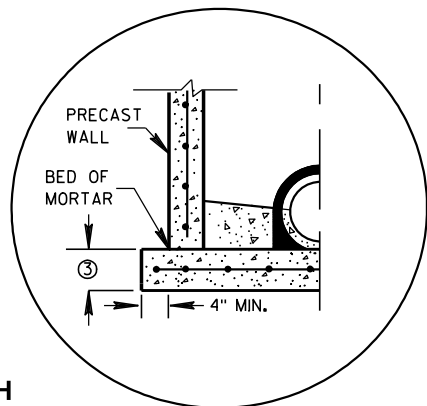
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

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

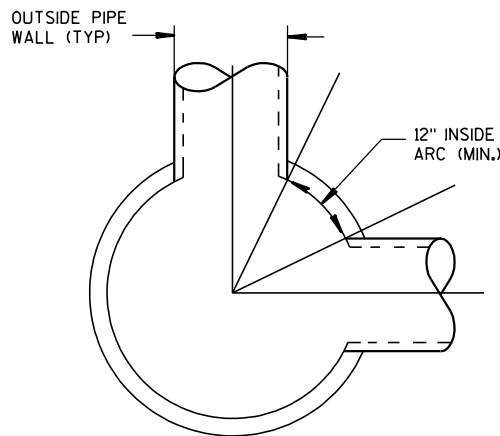


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

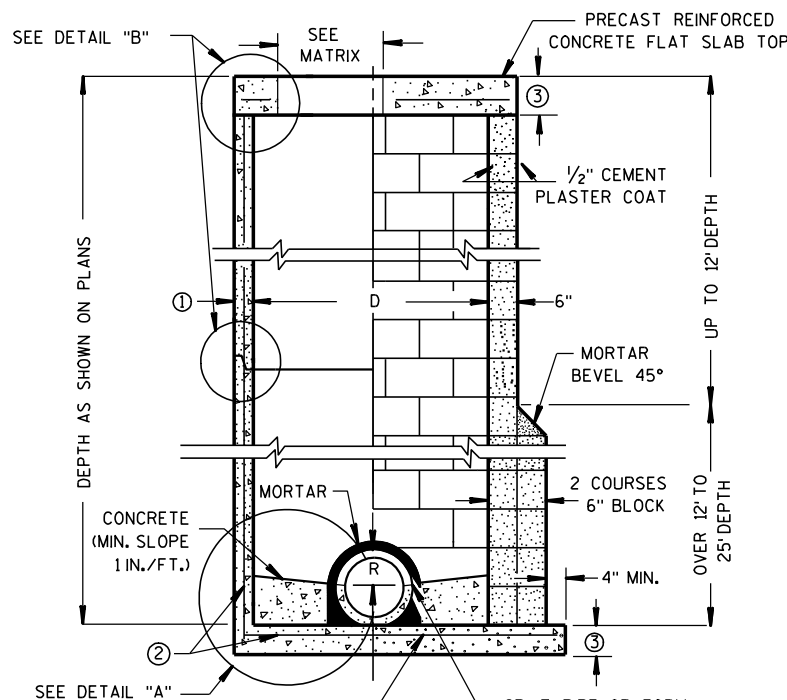


SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

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 SEPERATE 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

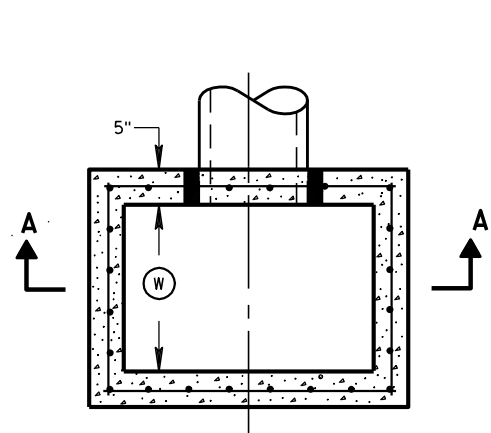
PIPE MATRIX

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

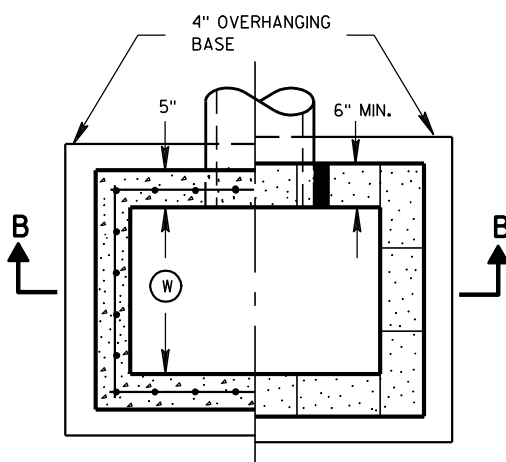
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER 110

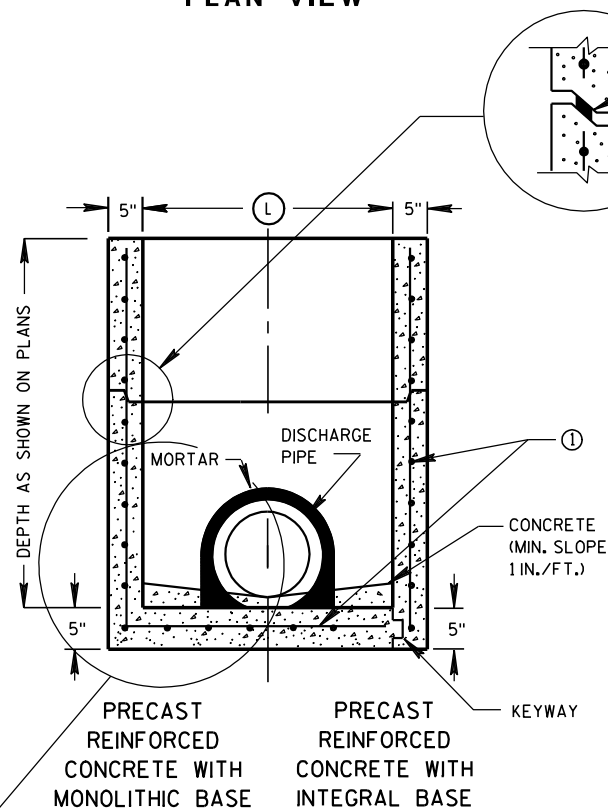


PLAN VIEW

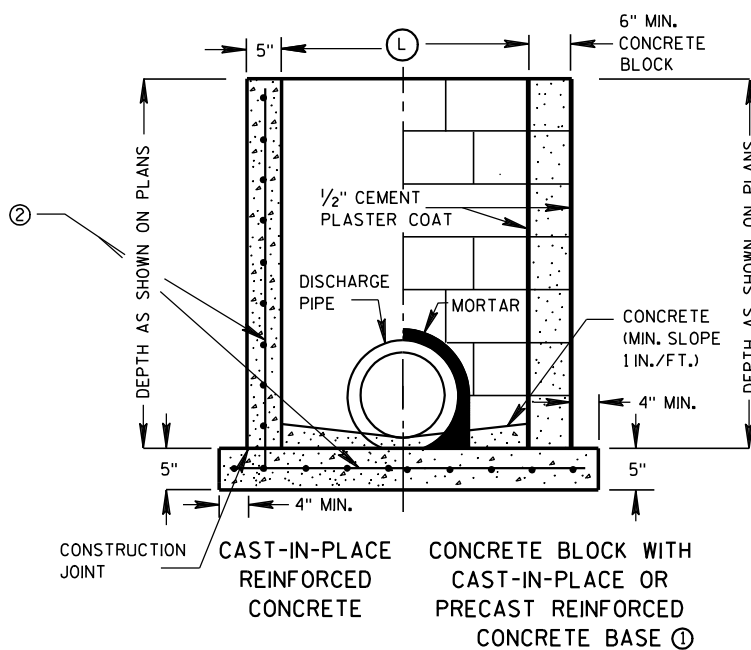


PLAN VIEW

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

SEPERATE 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 SEPERATE 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.

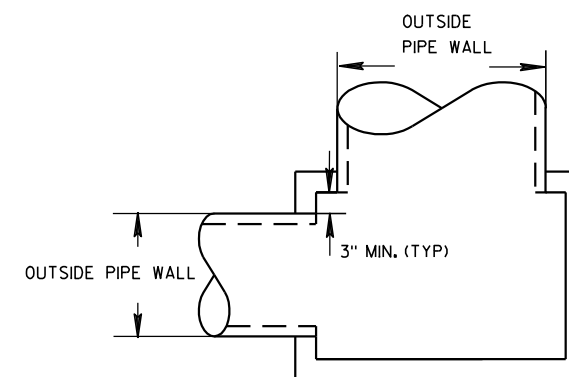
- FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

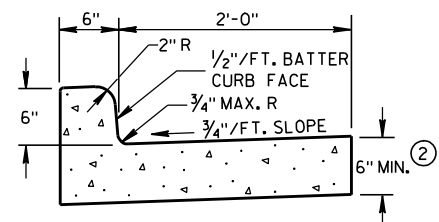


DETAIL "A"

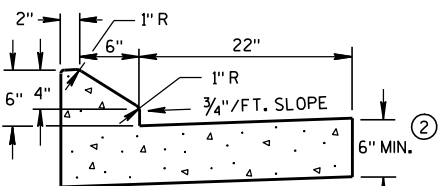
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

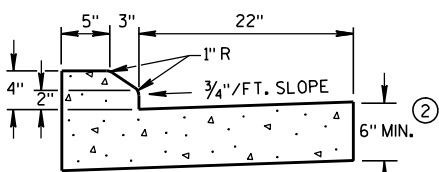
APPROVED
6/5/2012 /S/ Jerry H. Zoaa
DATE ROADWAY STANDARDS D 111 IT
FHWA ENGINEER



TYPES A & D ①

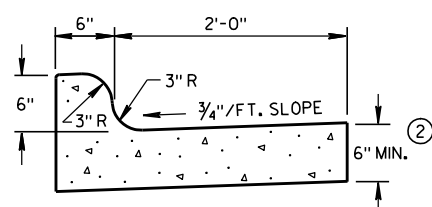


6" SLOPED CURB TYPES G & J ①

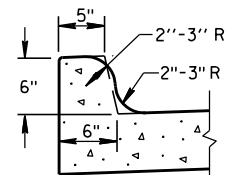
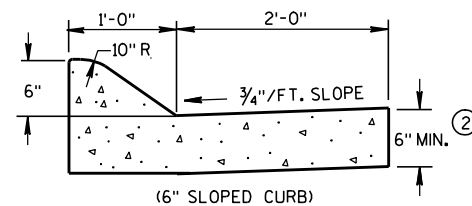


4" SLOPED CURB TYPES G & J ①

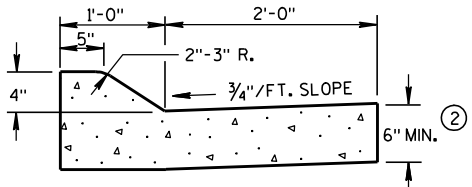
CONCRETE CURB & GUTTER 30"



TYPES K & L ①

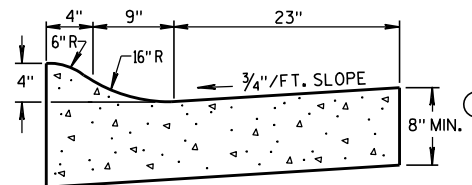
OPTIONAL CURB SHAPE
FOR TYPES K & L ①

(6" SLOPED CURB)

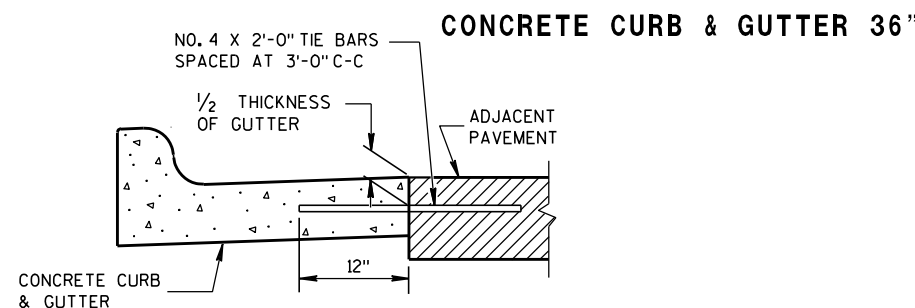


(4" SLOPED CURB)

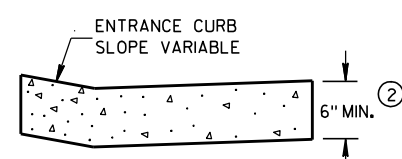
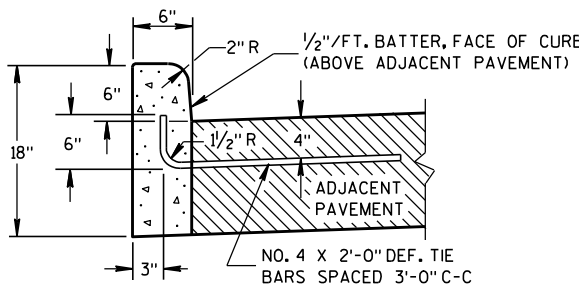
TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ④

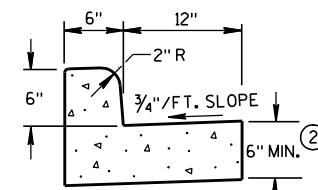
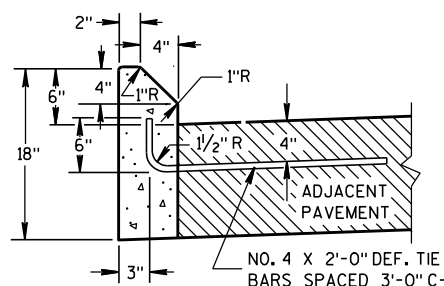


TYPICAL TIE BAR LOCATION ①

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.

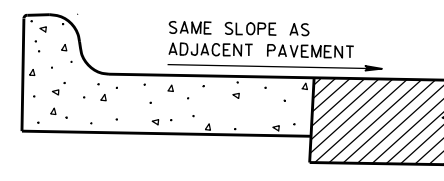
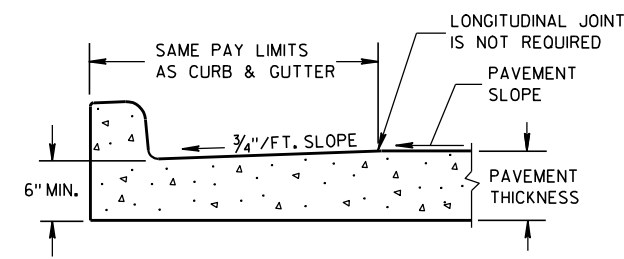
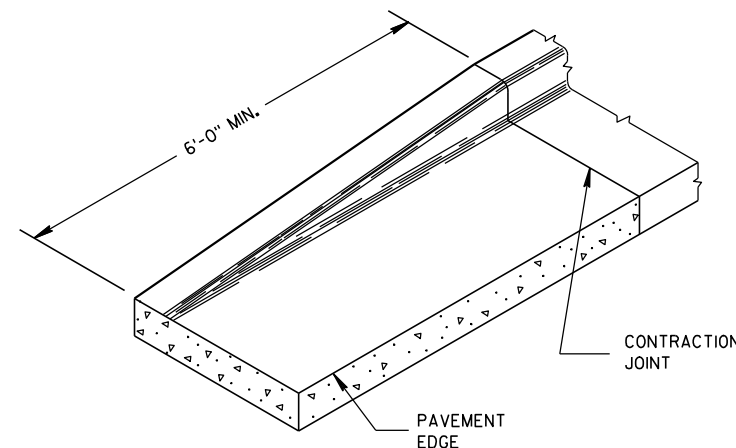
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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.

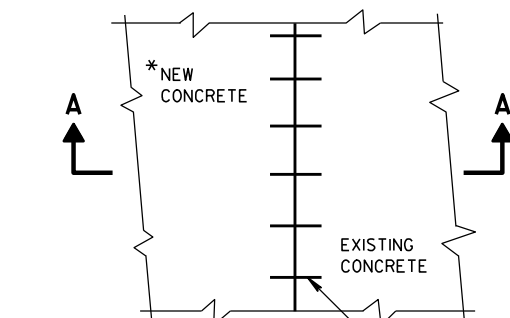
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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.

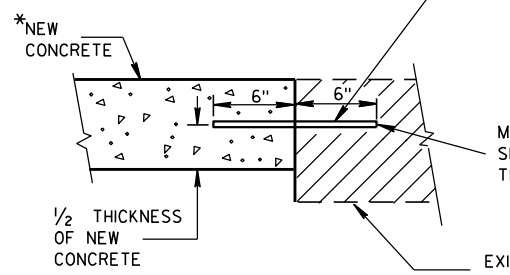
REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER

END SECTION CURB & GUTTER



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

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/4/08

DATE

/S/ Jerry H. 7

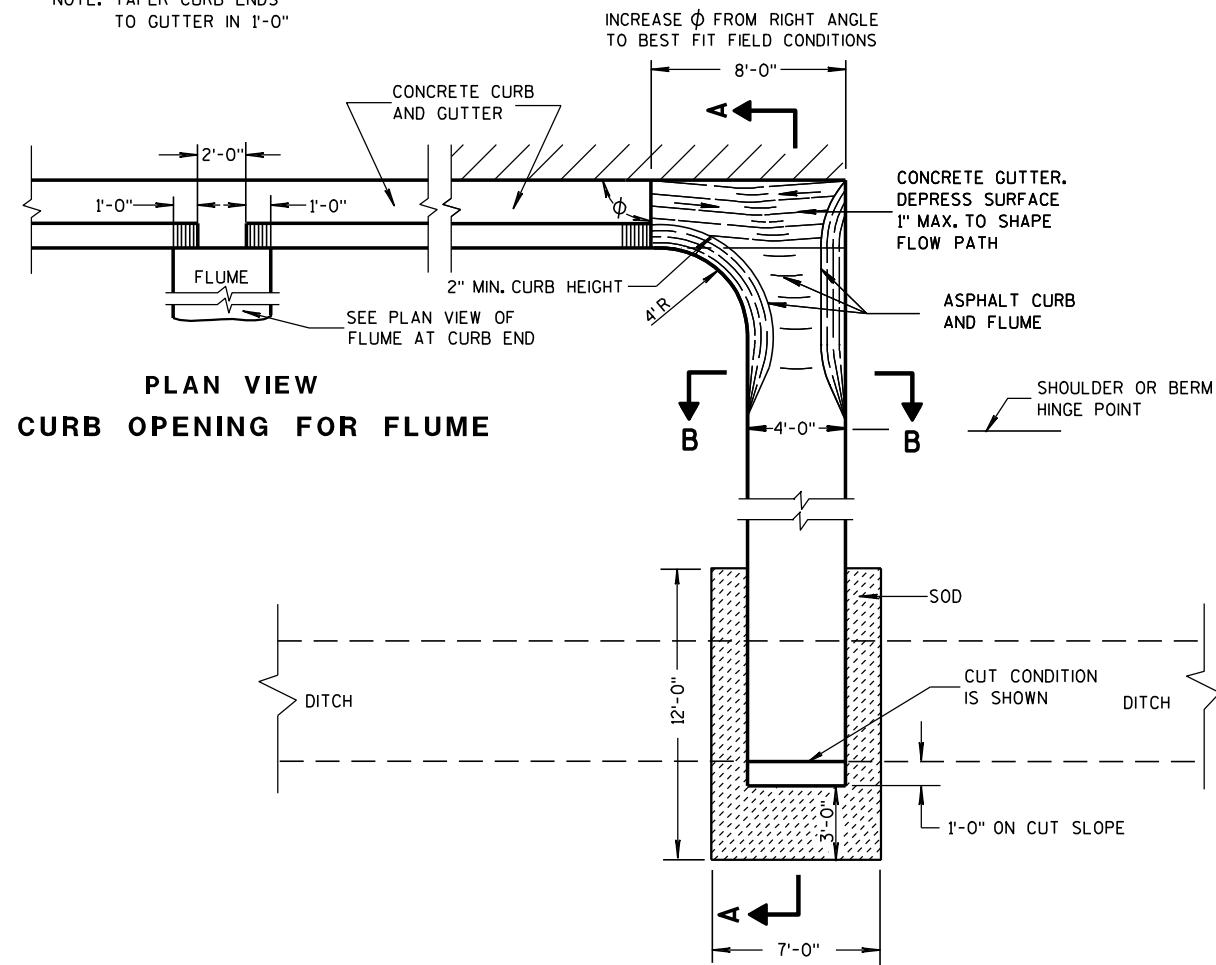
ROADWAY STANDARDS 112 ENT

FHWA

ENGINEER

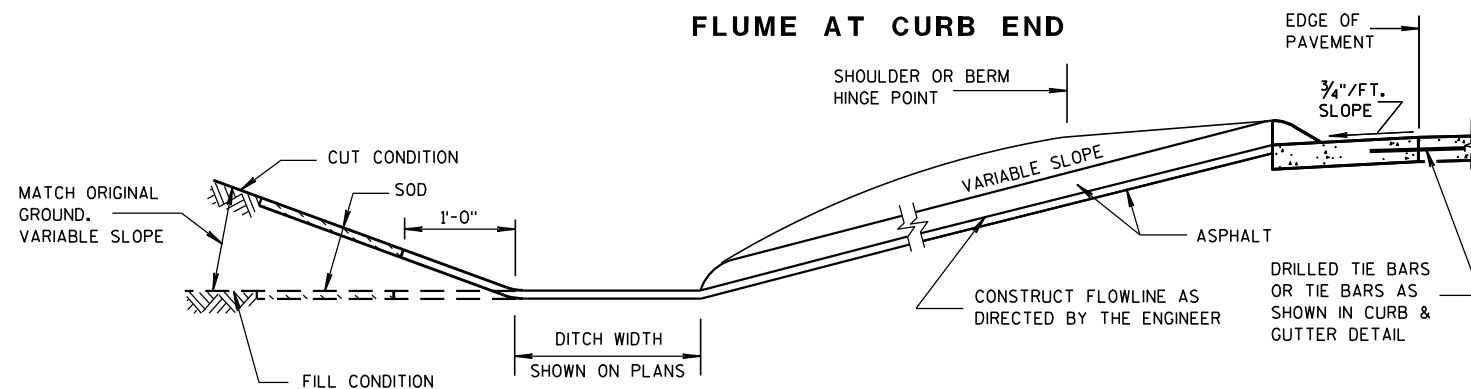
ASPHALTIC FLUME

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

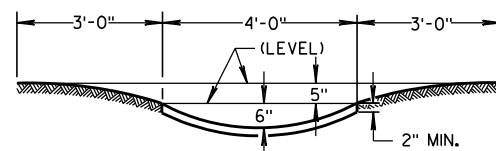


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

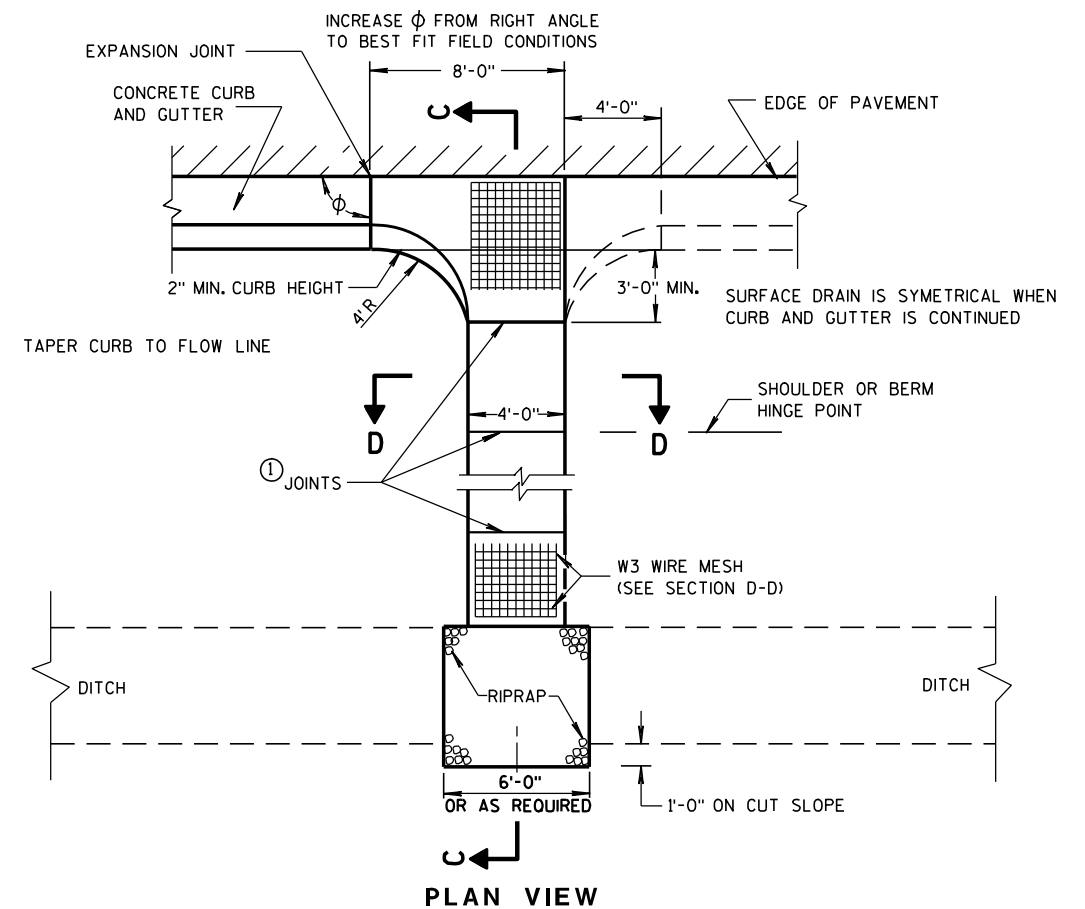
GENERAL NOTES

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

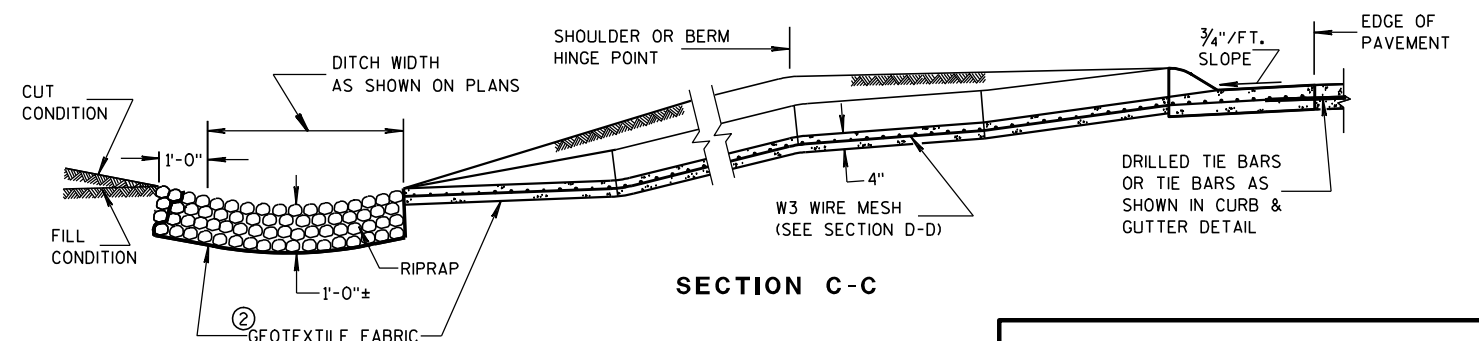
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8 TO 1/4 INCH WIDE BY 1 1/2 INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

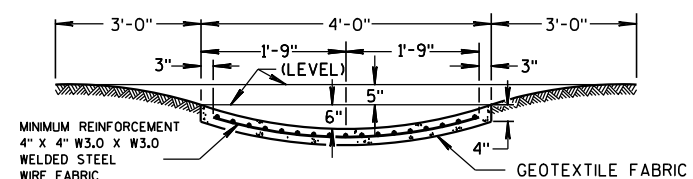
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08

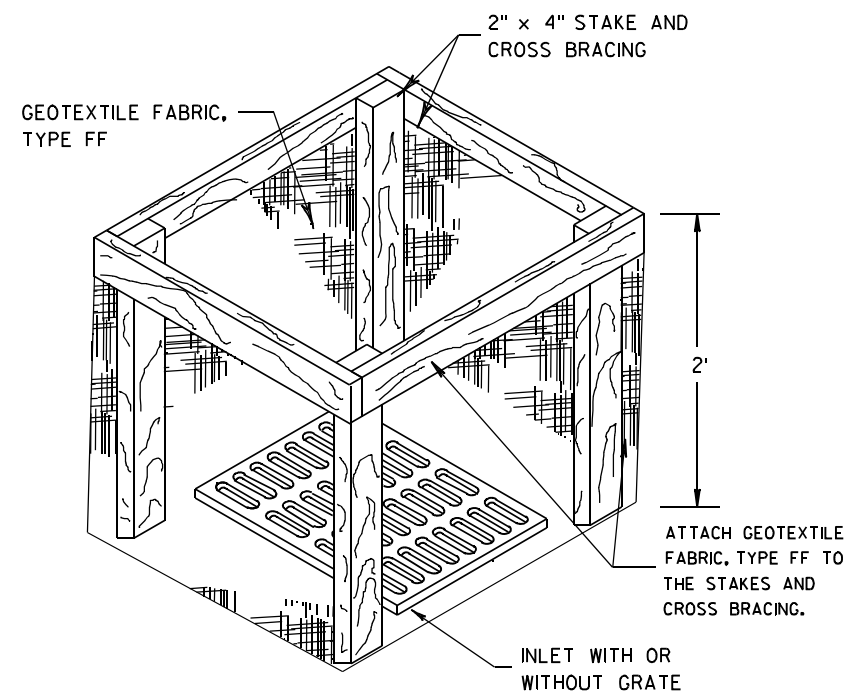
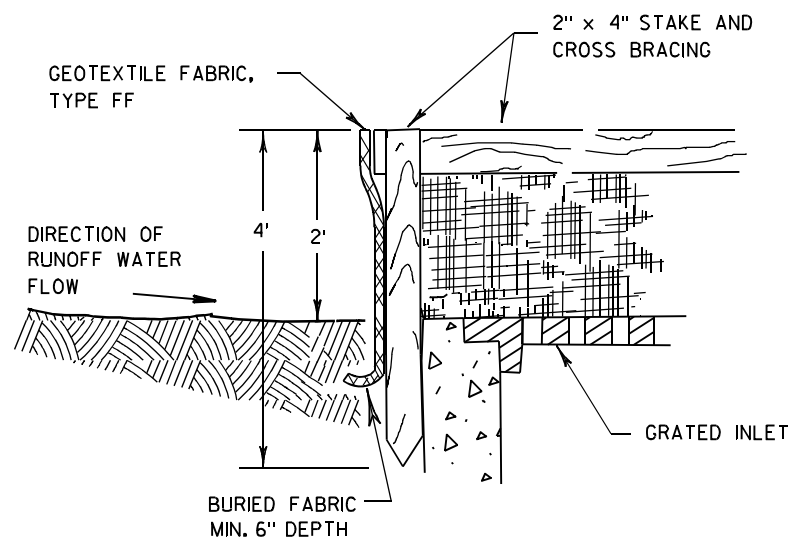
DATE

/S/ Jerry H. 7000

ROADWAY STANDARDS 113

ENGINEER

FHWA



INLET PROTECTION, TYPE A

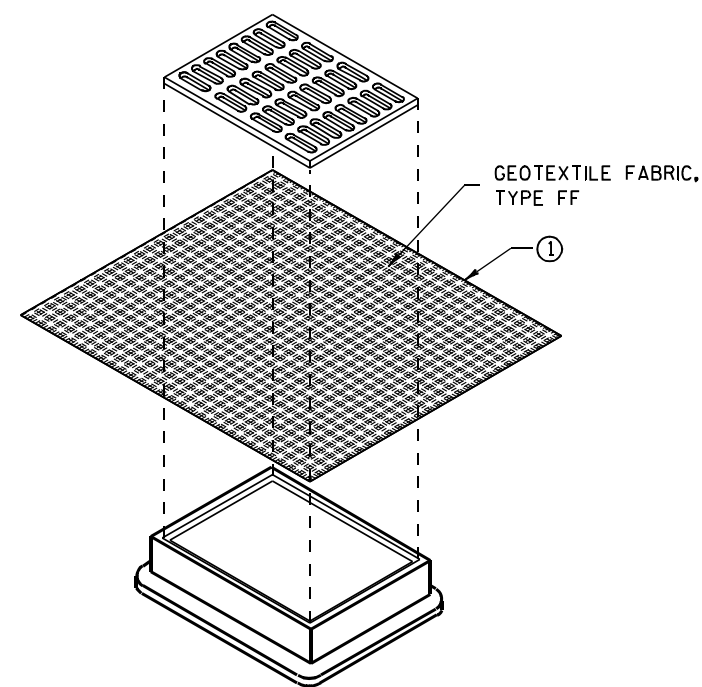
GENERAL NOTES

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

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

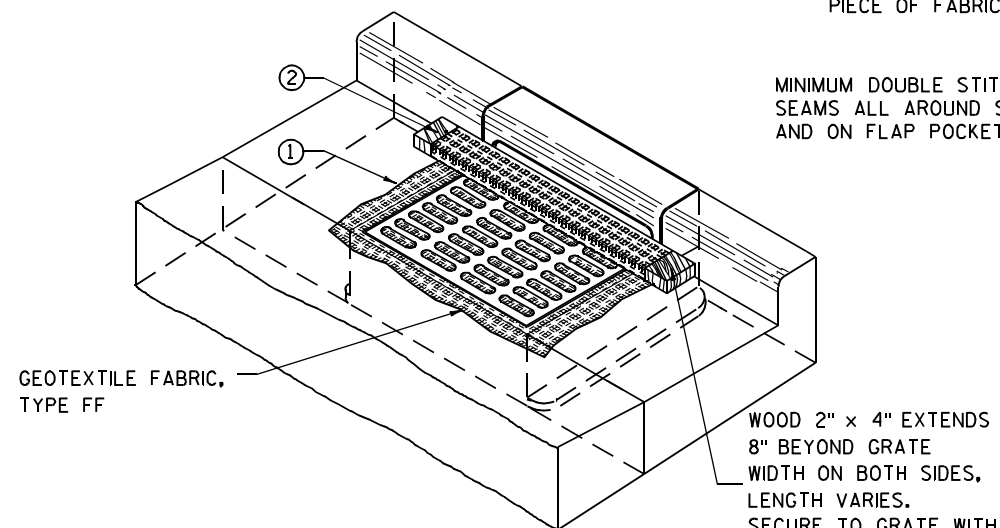
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

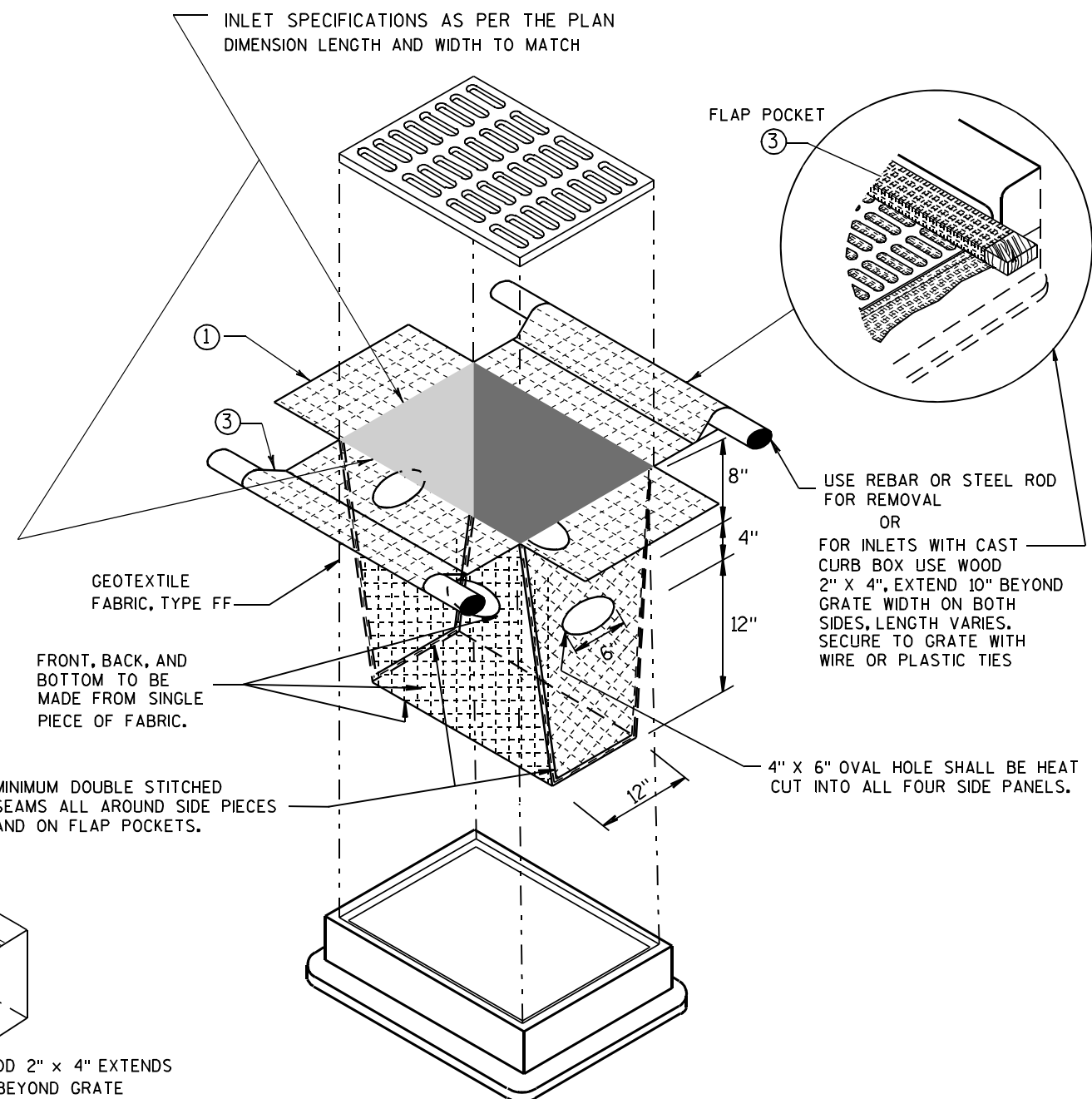
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



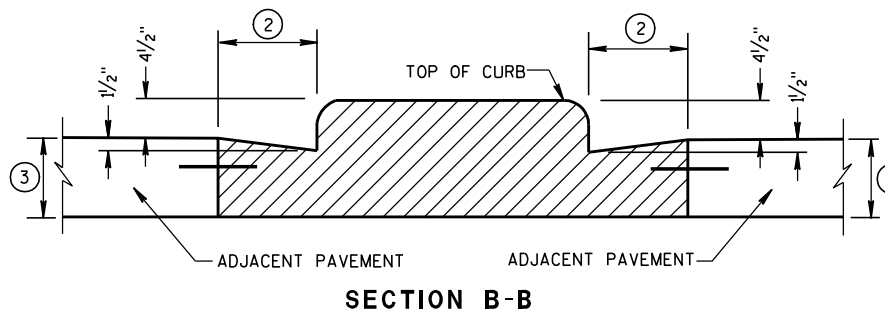
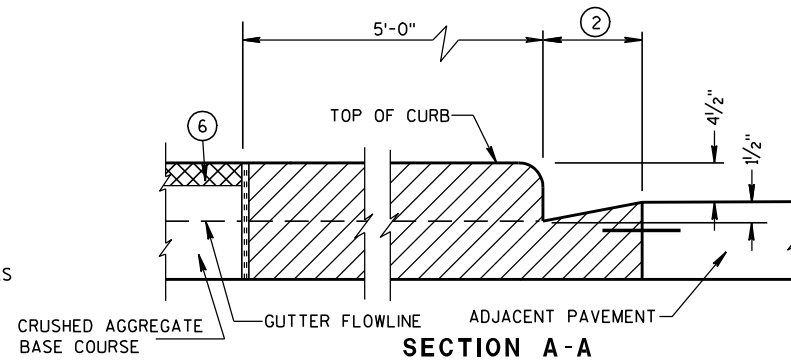
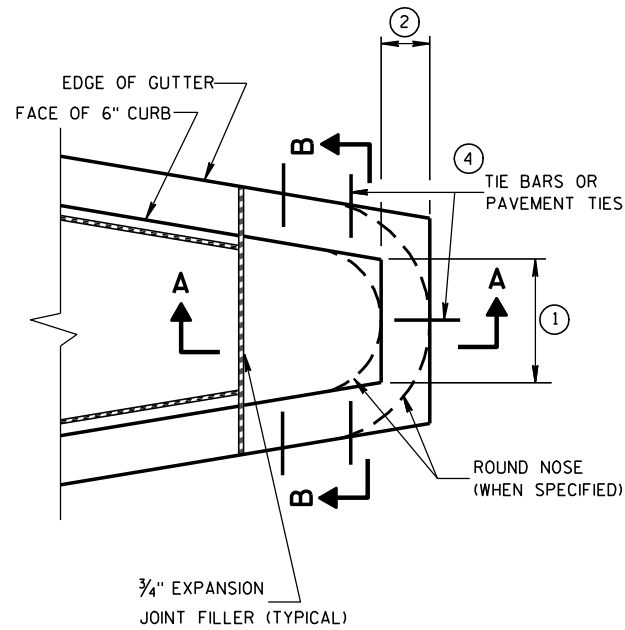
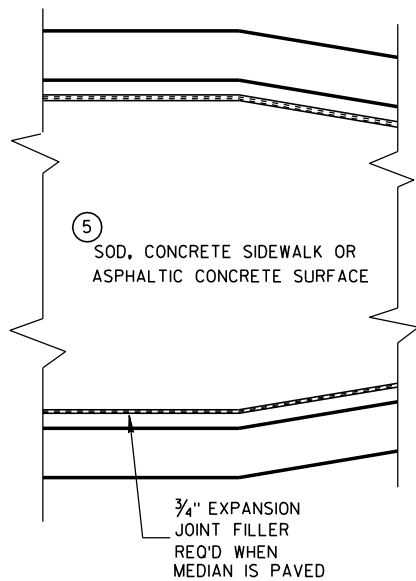
INLET PROTECTION, TYPE D

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

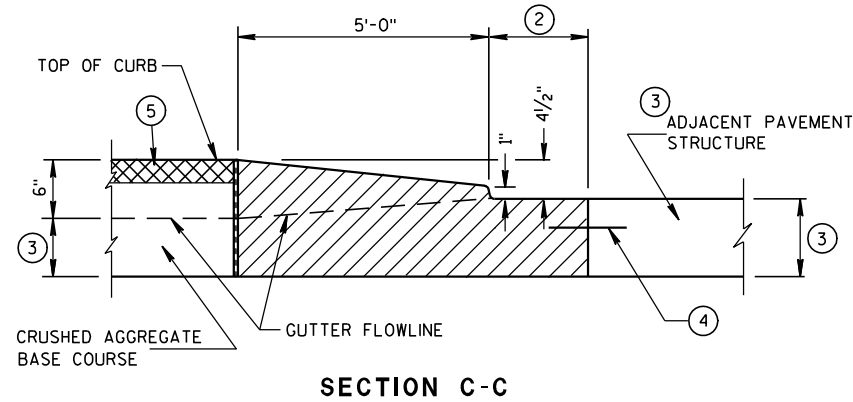
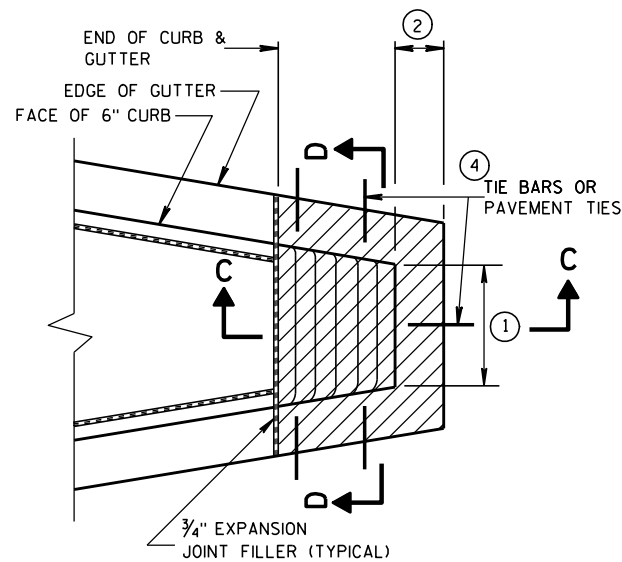
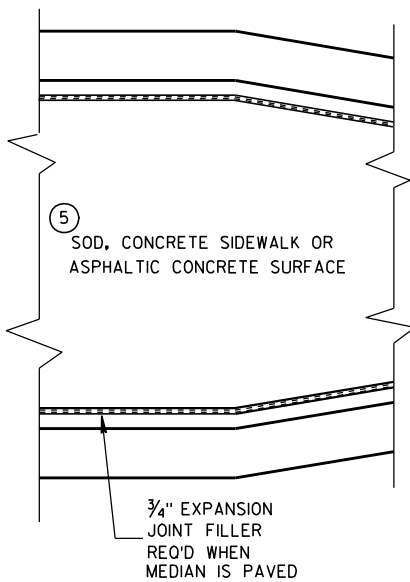
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

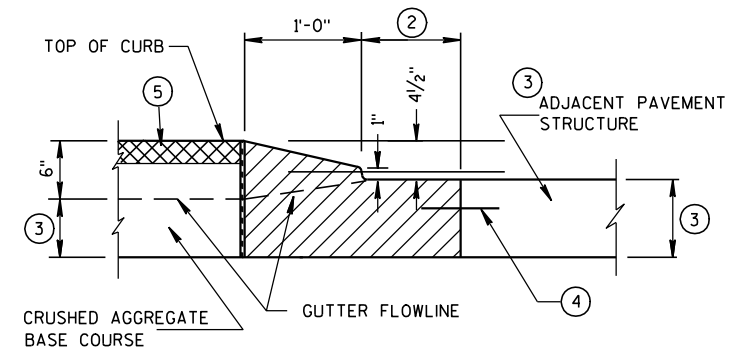
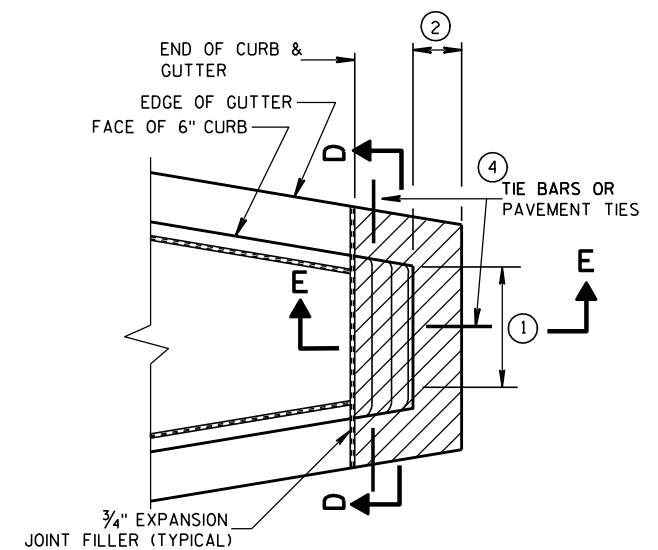
APPROVED
10/16/02 /S/ Beth Connolly
DATE 114
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



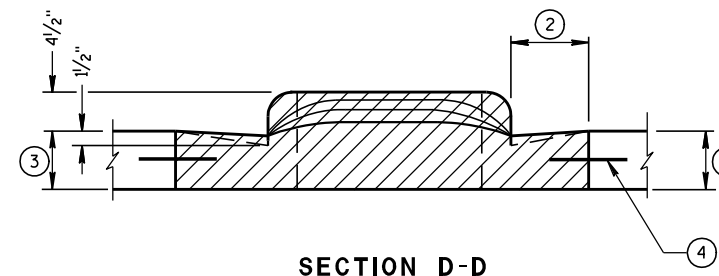
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



GENERAL NOTES

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

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

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

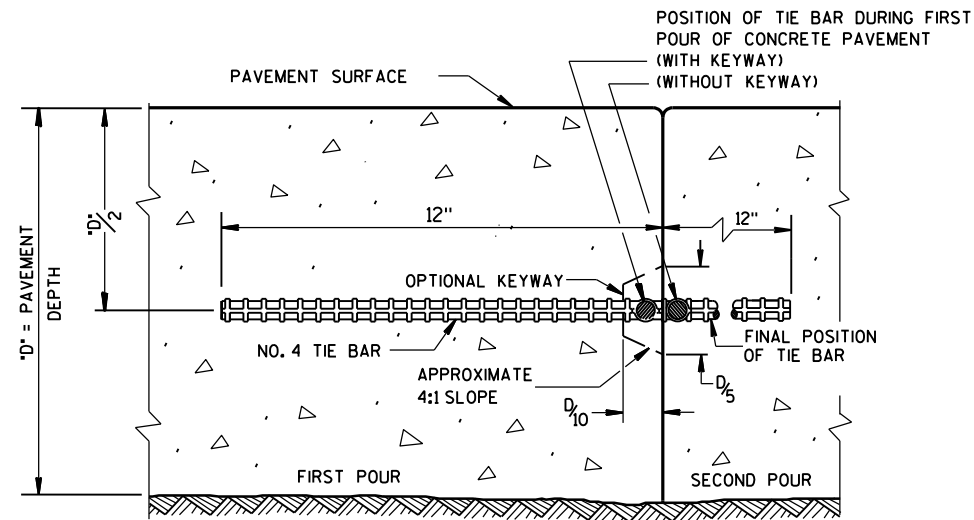
APPROVED

6/8/2006

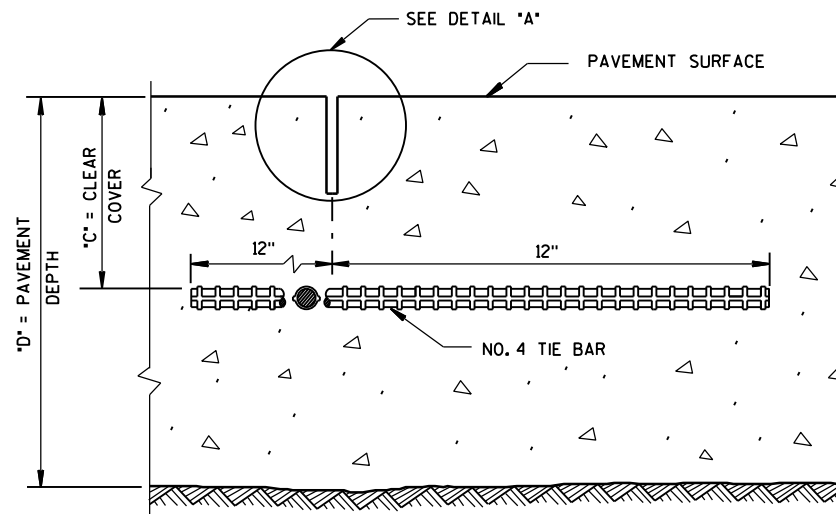
DATE

FHWA

/S/ Jerry H. 7
ROADWAY STANDARDS 115 NT
ENGINEER



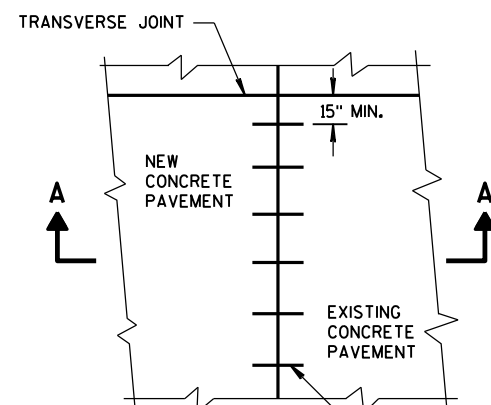
CONSTRUCTION JOINT



SAWED JOINT

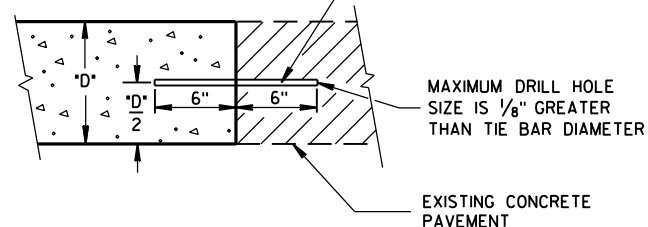
GENERAL NOTES

- DO NOT SEAL OR FILL LONGITUDINAL JOINTS.
- CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

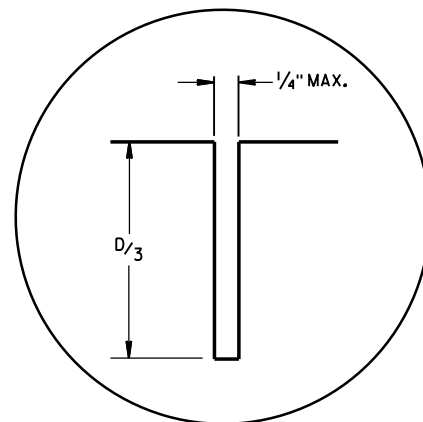


PLAN VIEW

NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



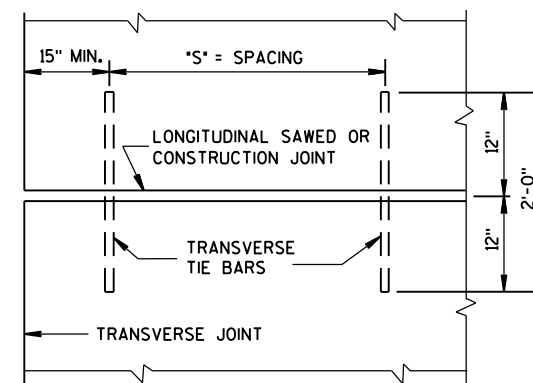
**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH 24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"



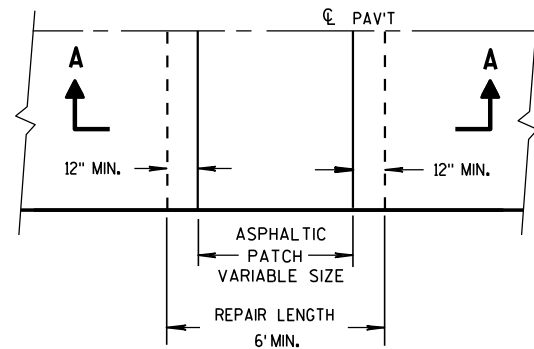
**PLAN VIEW
SHOWING LOCATION OF TIE BARS**

**CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES**

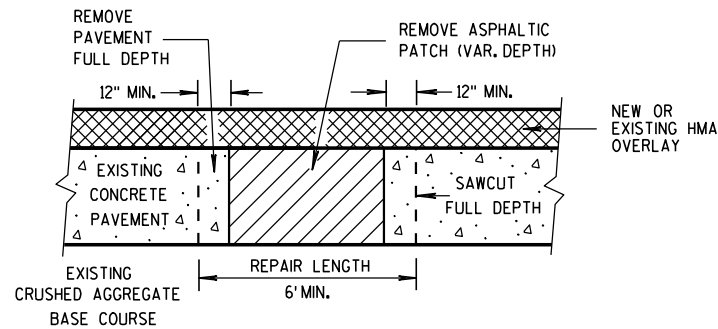
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013 /S/ Deb Bischoff
DATE PAVEMENT POLICY & DE 116
FHWA

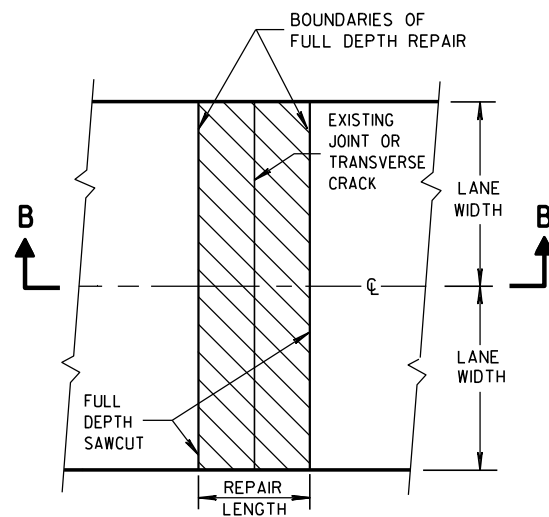


PLAN VIEW

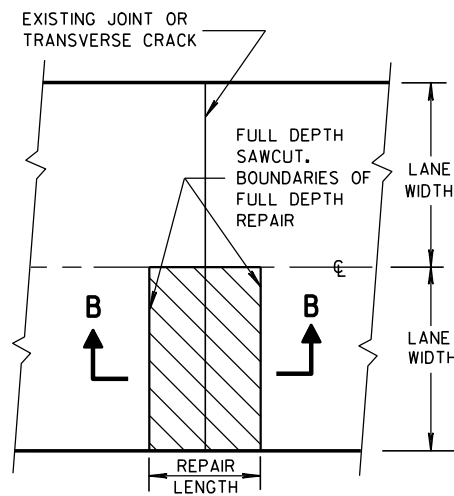


SECTION A-A

HMA PATCH REMOVAL



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)

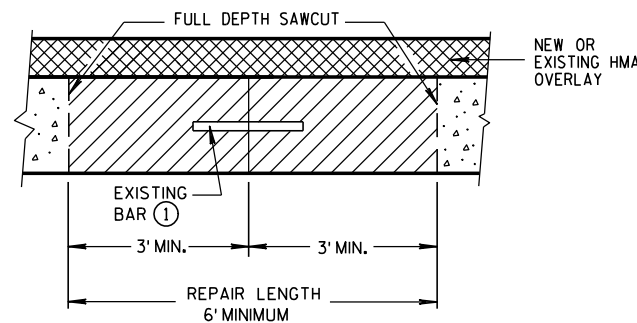
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

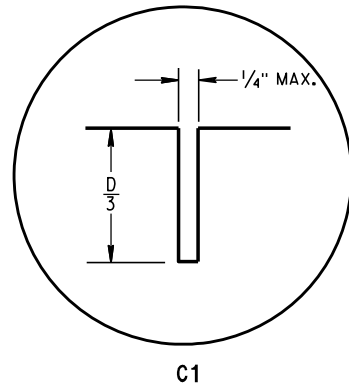
① DOWEL BARS MIGHT NOT EXIST.



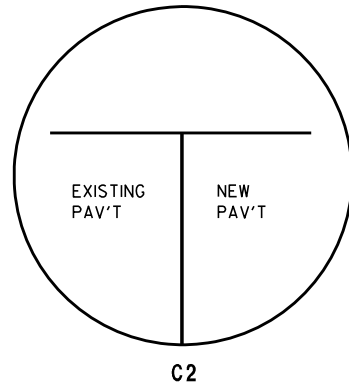
SECTION B-B
CONCRETE REMOVAL

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

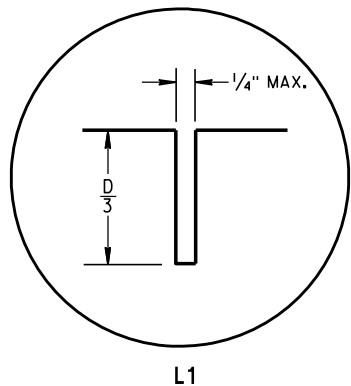


C1

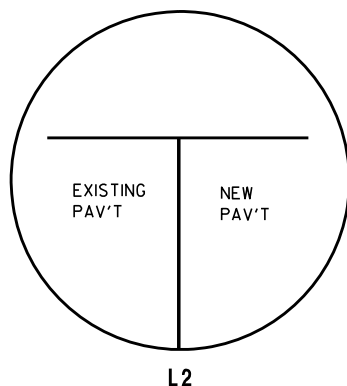


C2

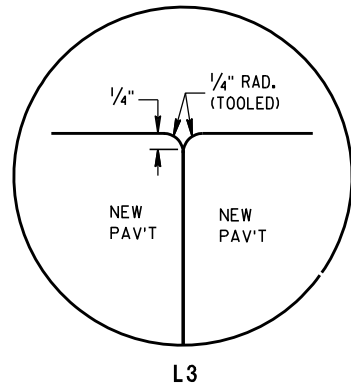
TRANSVERSE JOINTS



L1

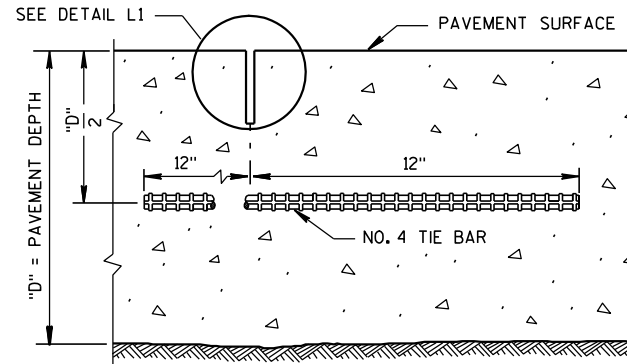


L2

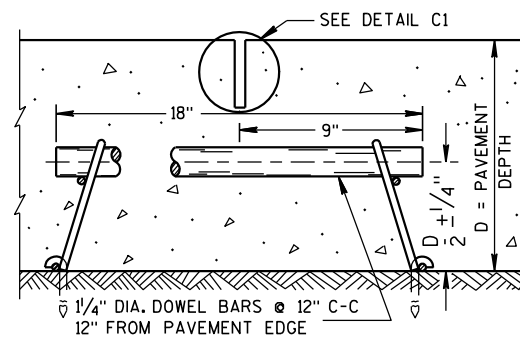


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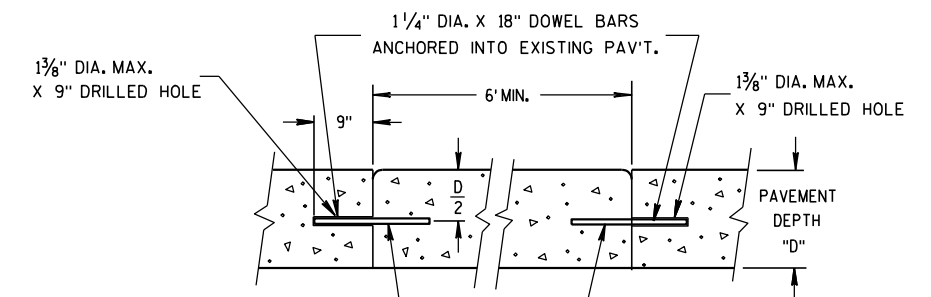
LONGITUDINAL JOINTS



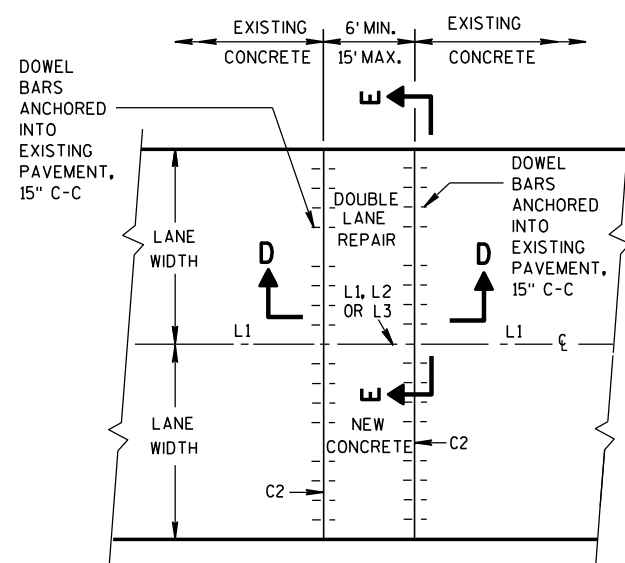
SECTION C-C
SAWED LONGITUDINAL JOINT



SECTION F-F
CONTRACTION JOINT

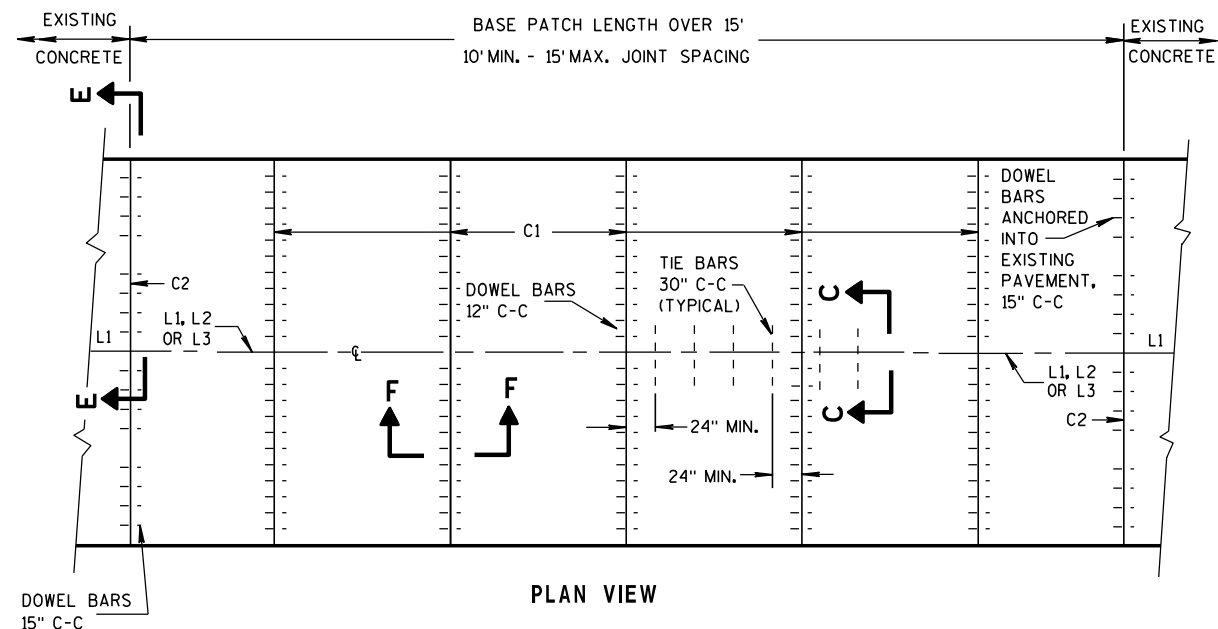


SECTION D-D



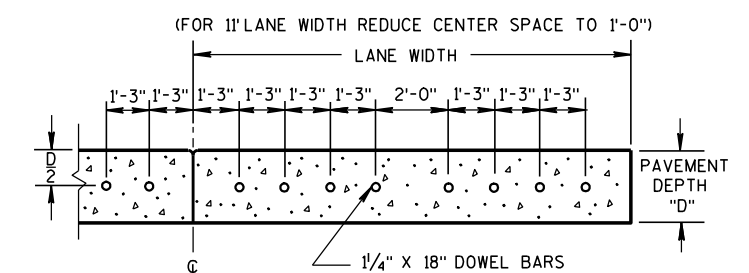
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH



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

GENERAL NOTES

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

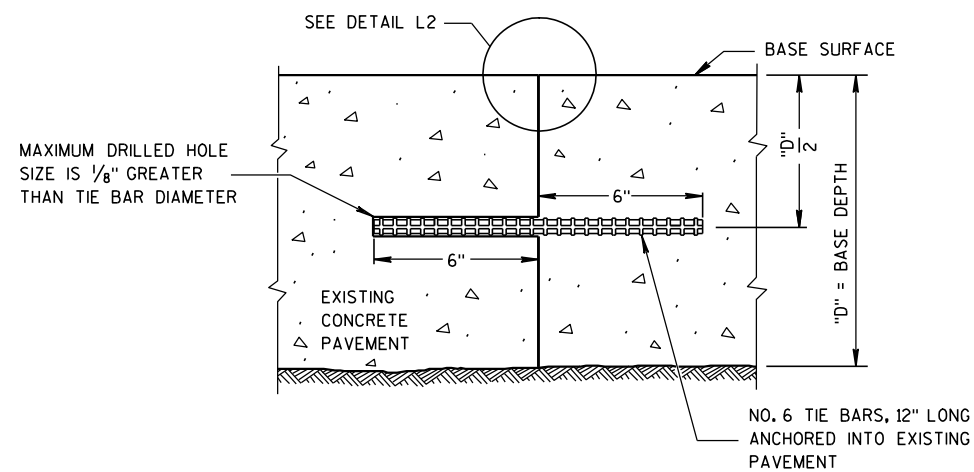
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

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

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

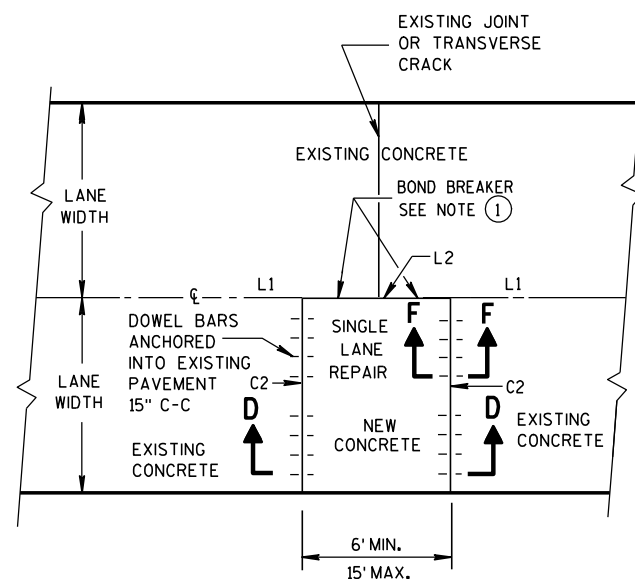
- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



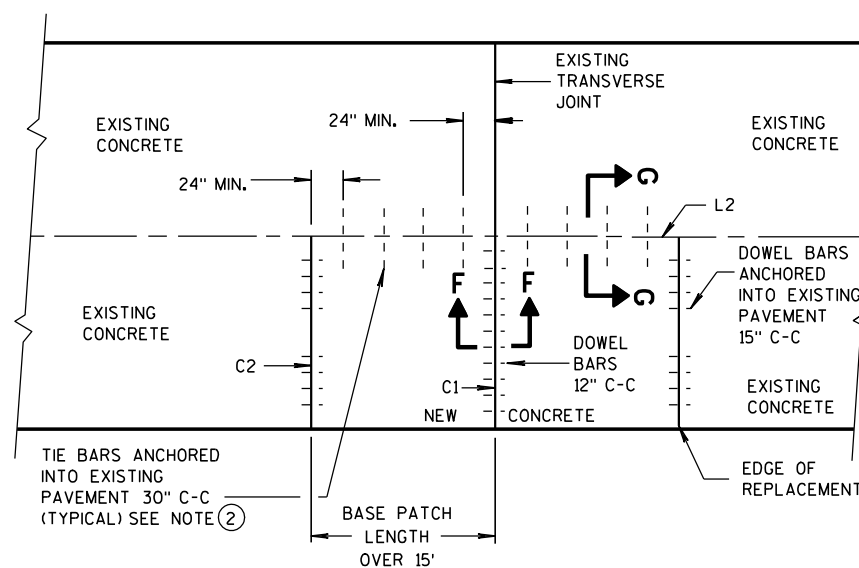
SECTION G-G
TIE BARS ANCHORED
INTO EXISTING PAVEMENT

GENERAL NOTES

- ① USE AN ENGINEER-APPROVED BOND BREAKER FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.
- ② WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12-11-2009

DATE

FHWA

/S/ Deb Bischoff
PAVEMENT POLICY & DE 119

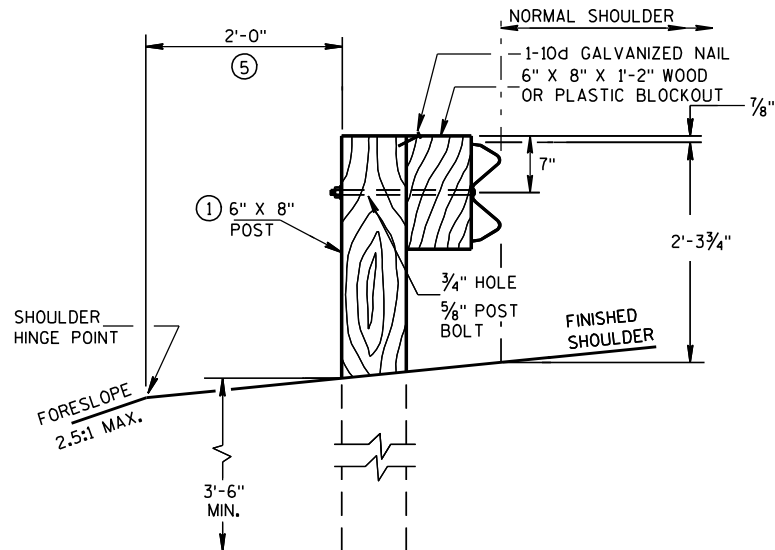
NEER

GENERAL NOTES

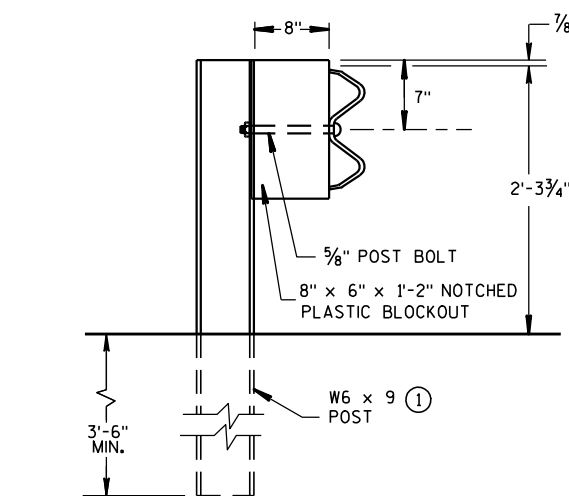
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, AND THE APPLICABLE SPECIAL PROVISIONS.

- 1 W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
- 2 DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- 3 USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111 EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPALTER COATING ON GALVANIZED POSTS.
- 4 INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- 5 USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- 6 IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- 7 IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.

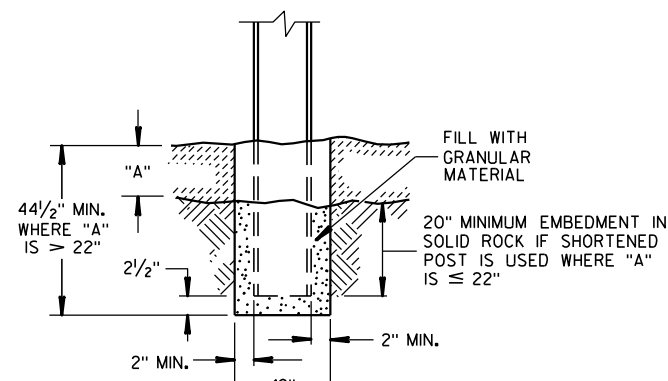
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



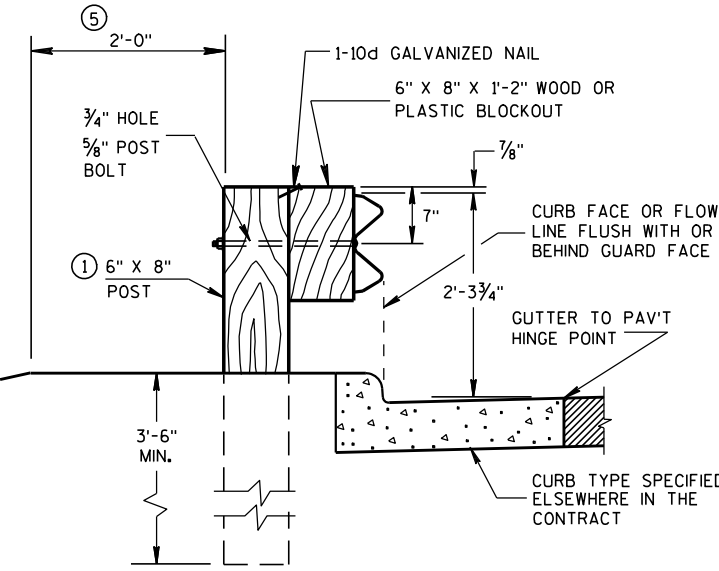
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



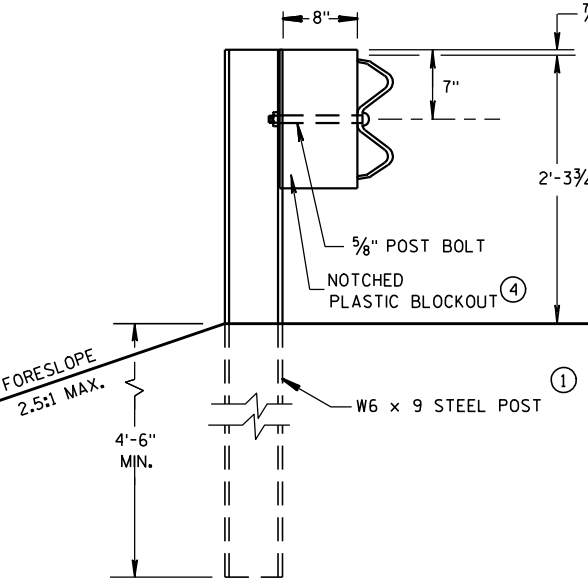
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



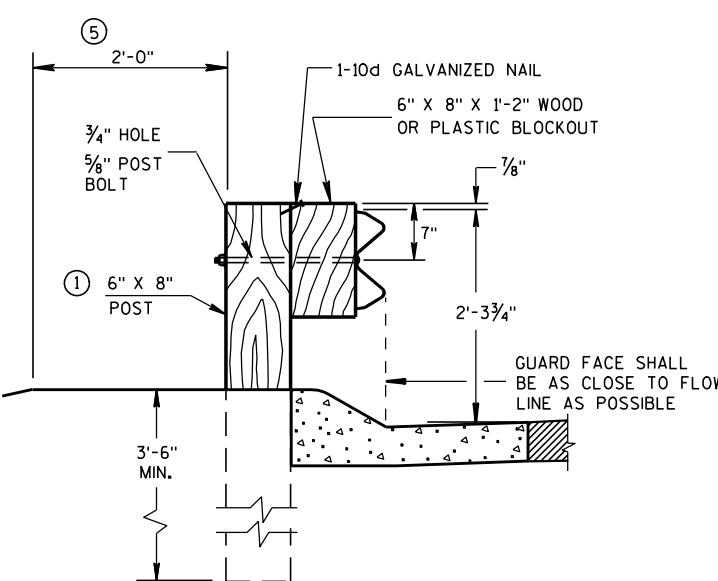
END VIEW
SETTING STEEL OR WOOD POST IN ROCK 6



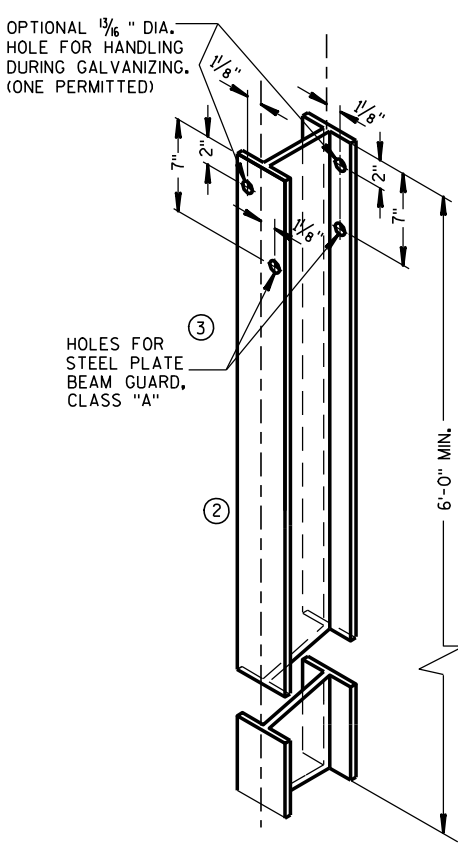
END VIEW
LOCATED ALONG A CURBED ROADWAY



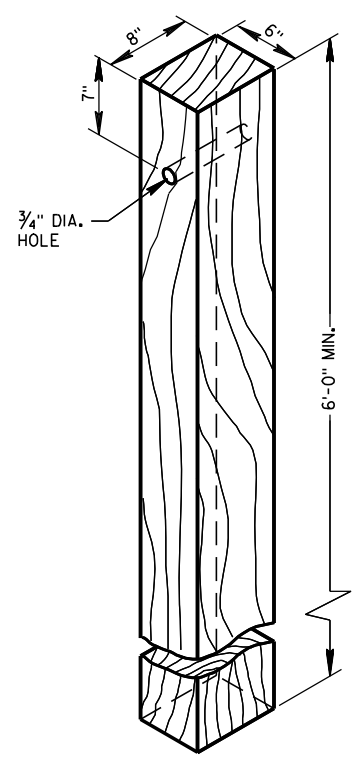
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



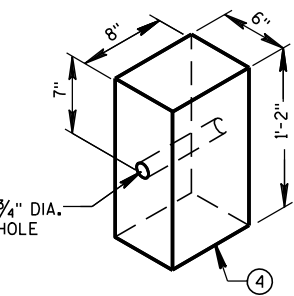
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



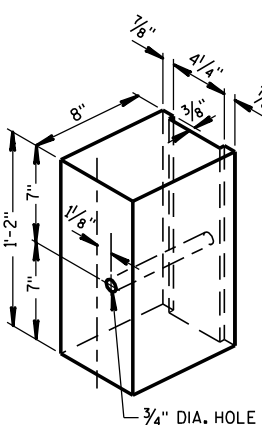
STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) 1
ALL HOLES 1 3/8\"/>



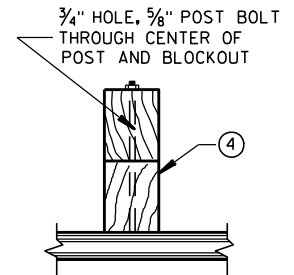
WOOD POST
(6\"/>



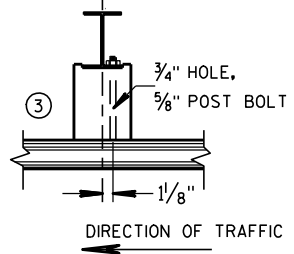
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS 1



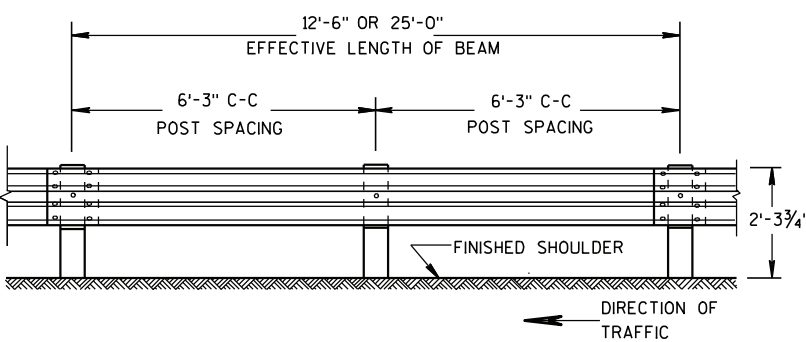
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

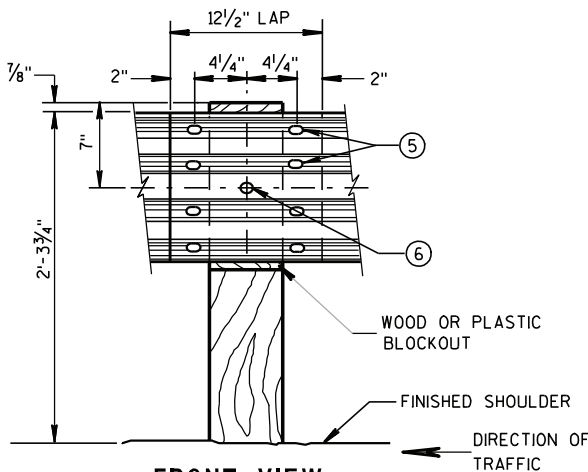
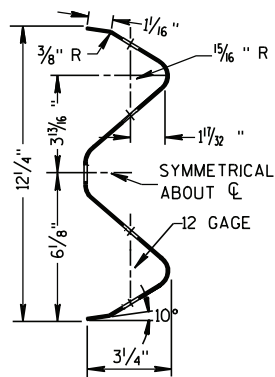
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



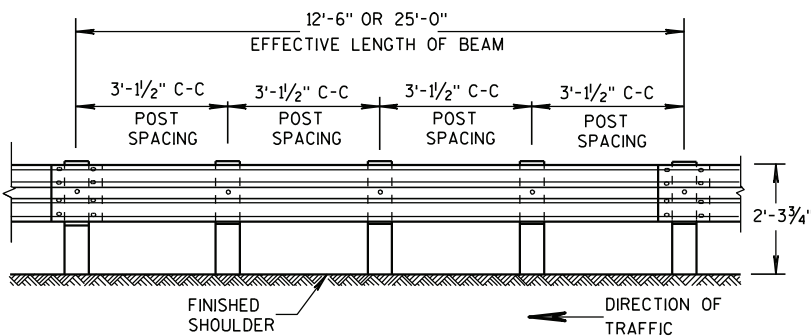
FRONT VIEW

POST SPACING STANDARD INSTALLATION

SECTION THRU W BEAM

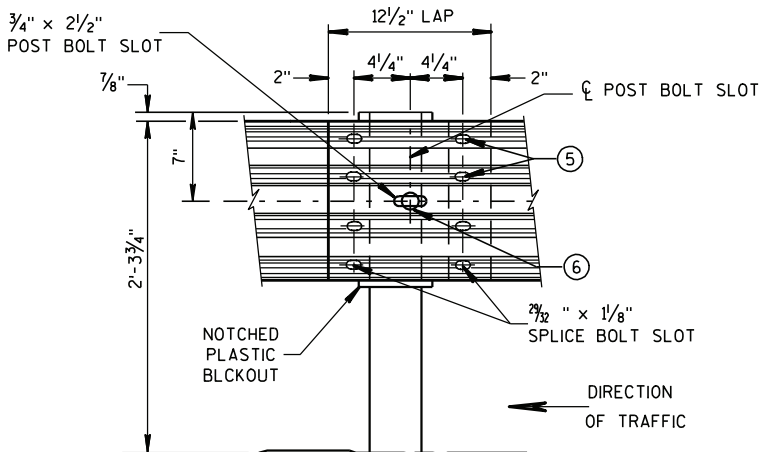


FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL



FRONT VIEW

POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)

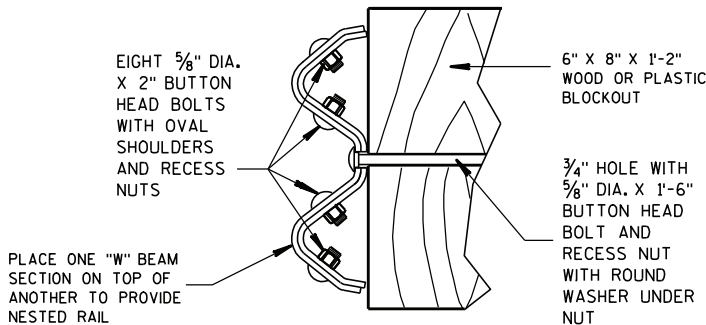


FRONT VIEW
BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

GENERAL NOTES

- ① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
- ② DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- ③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- ④ PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
- ⑤ 8 - $\frac{5}{8}$ " ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑥ $\frac{5}{8}$ " ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.

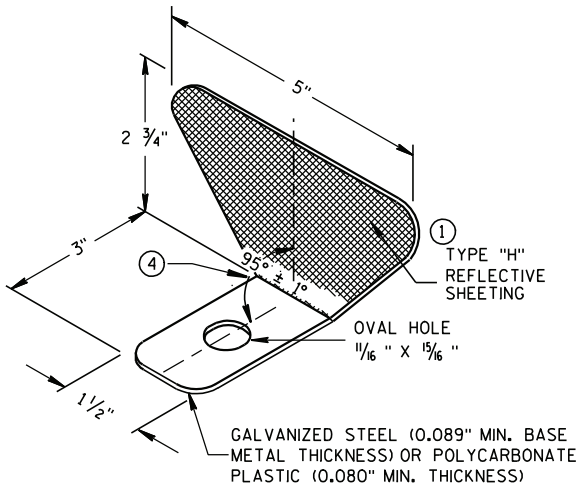
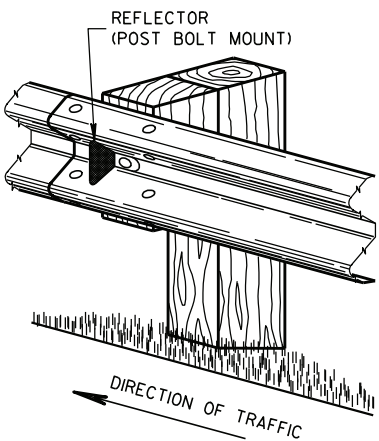


NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING^②

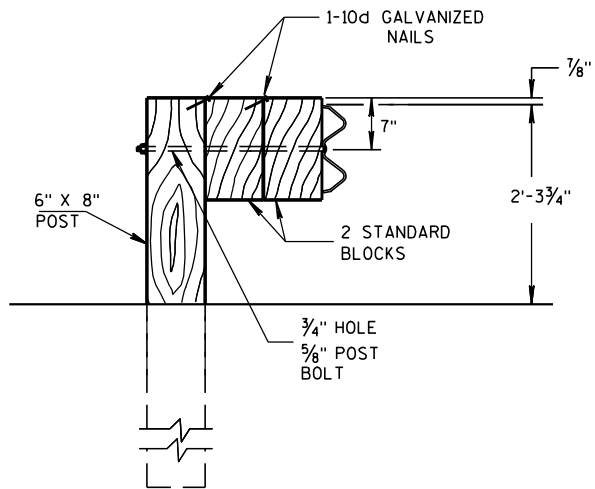
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ③	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ④	3
	> 200'	100' C-C	2	



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

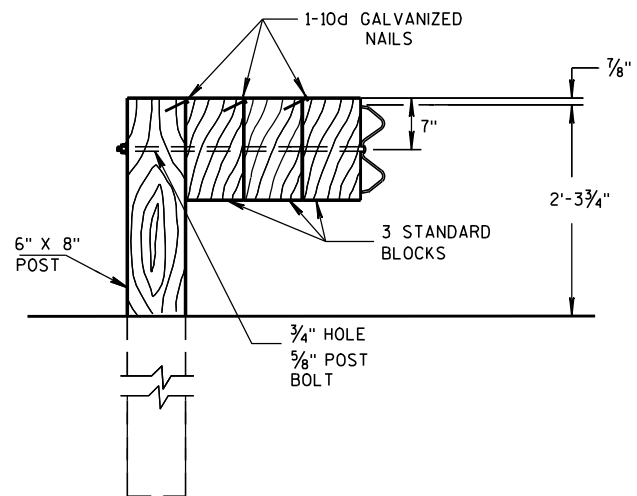
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS
WITHIN A BARRIER RUN IS UNLIMITED

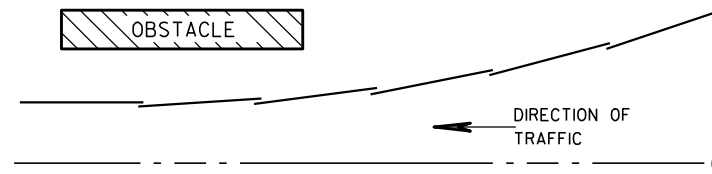


DETAIL FOR TRIPLE BLOCKS

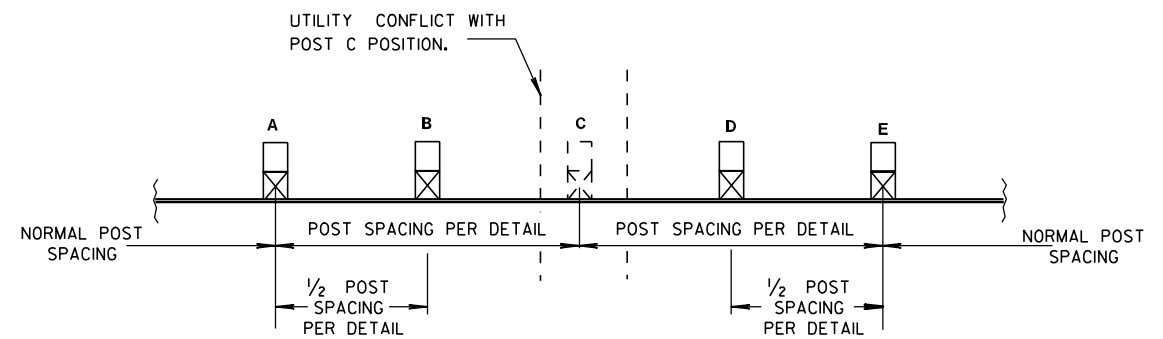
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES
PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.



PLAN VIEW BEAM LAPPING DETAIL

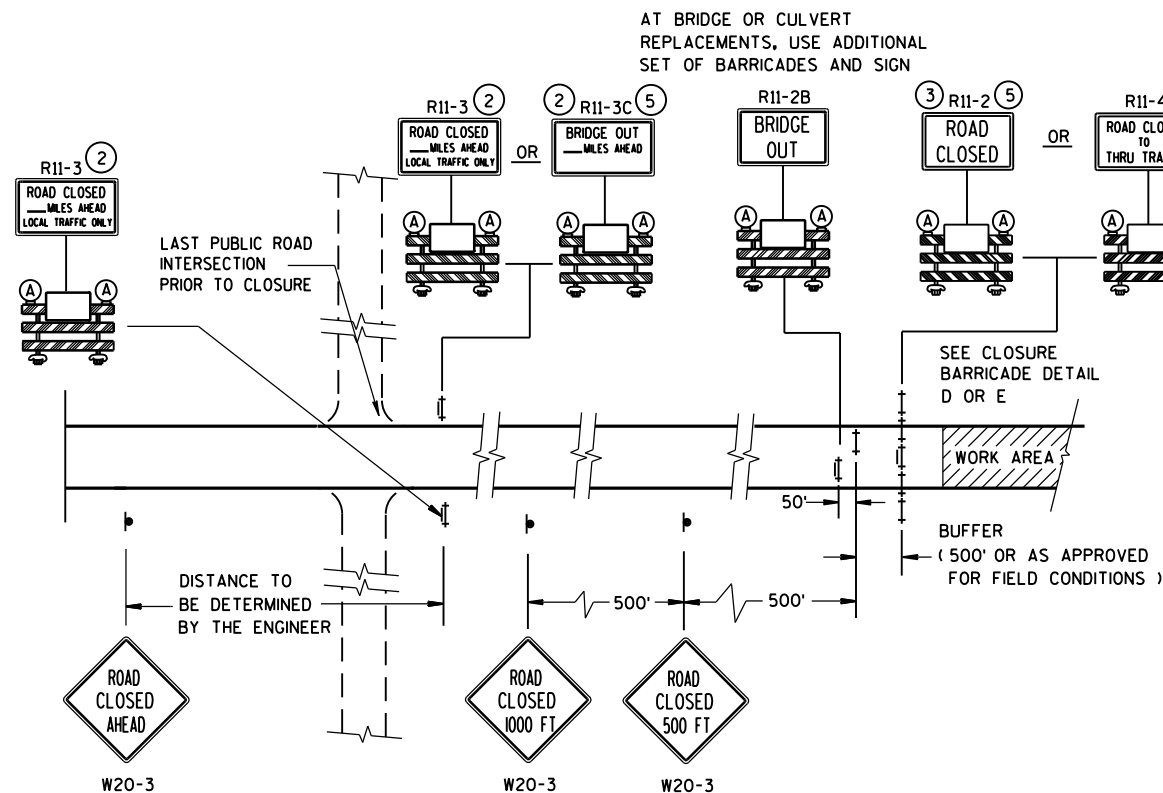
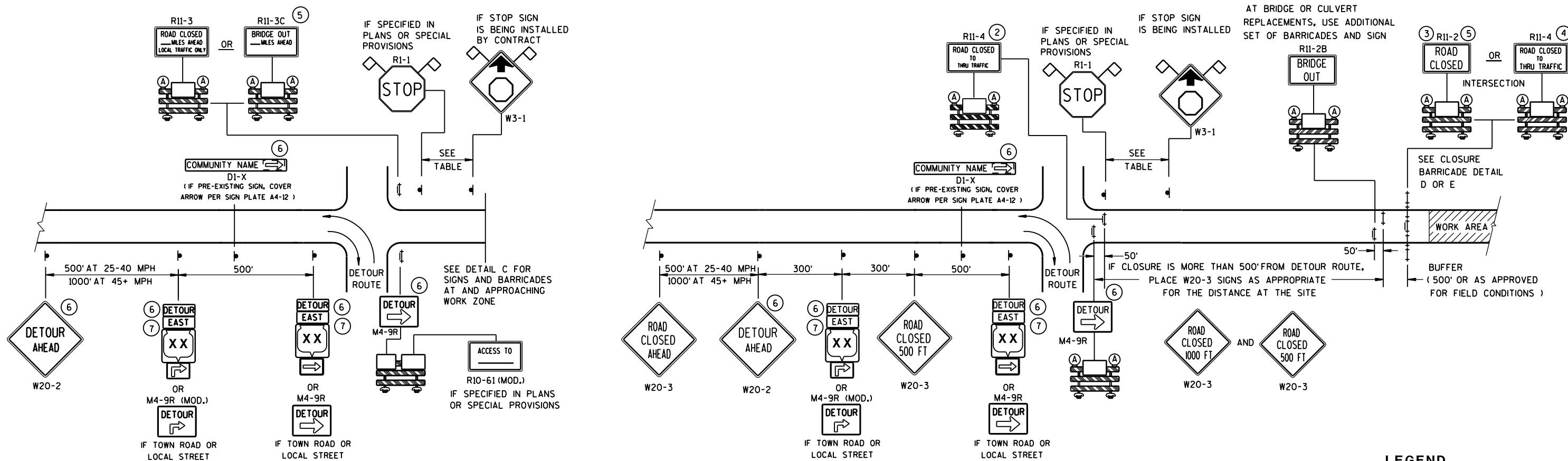


POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

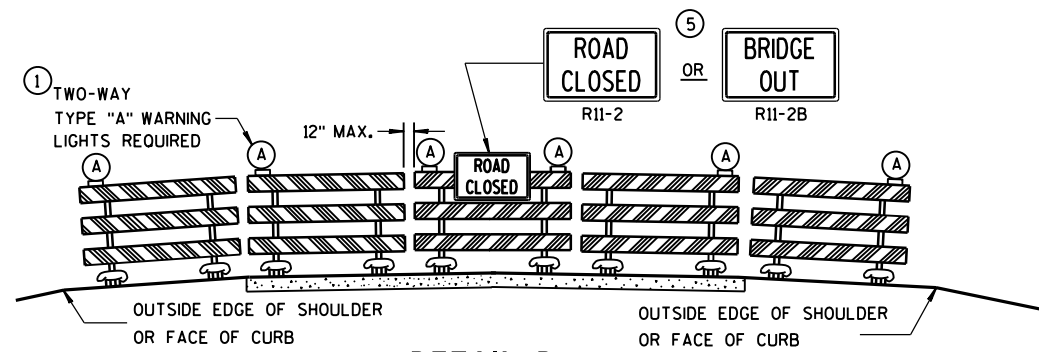
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/11
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS 122 ENT
ENGINEER
FHWA

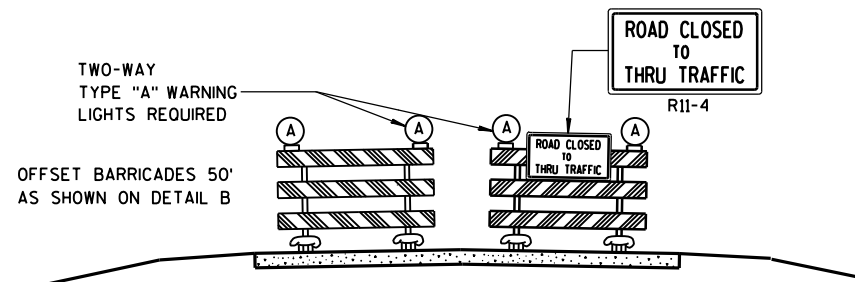


SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

BARRICADES AND SIGNS FOR MAINLINE CLOSURES		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINE 123	ESIGN
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.

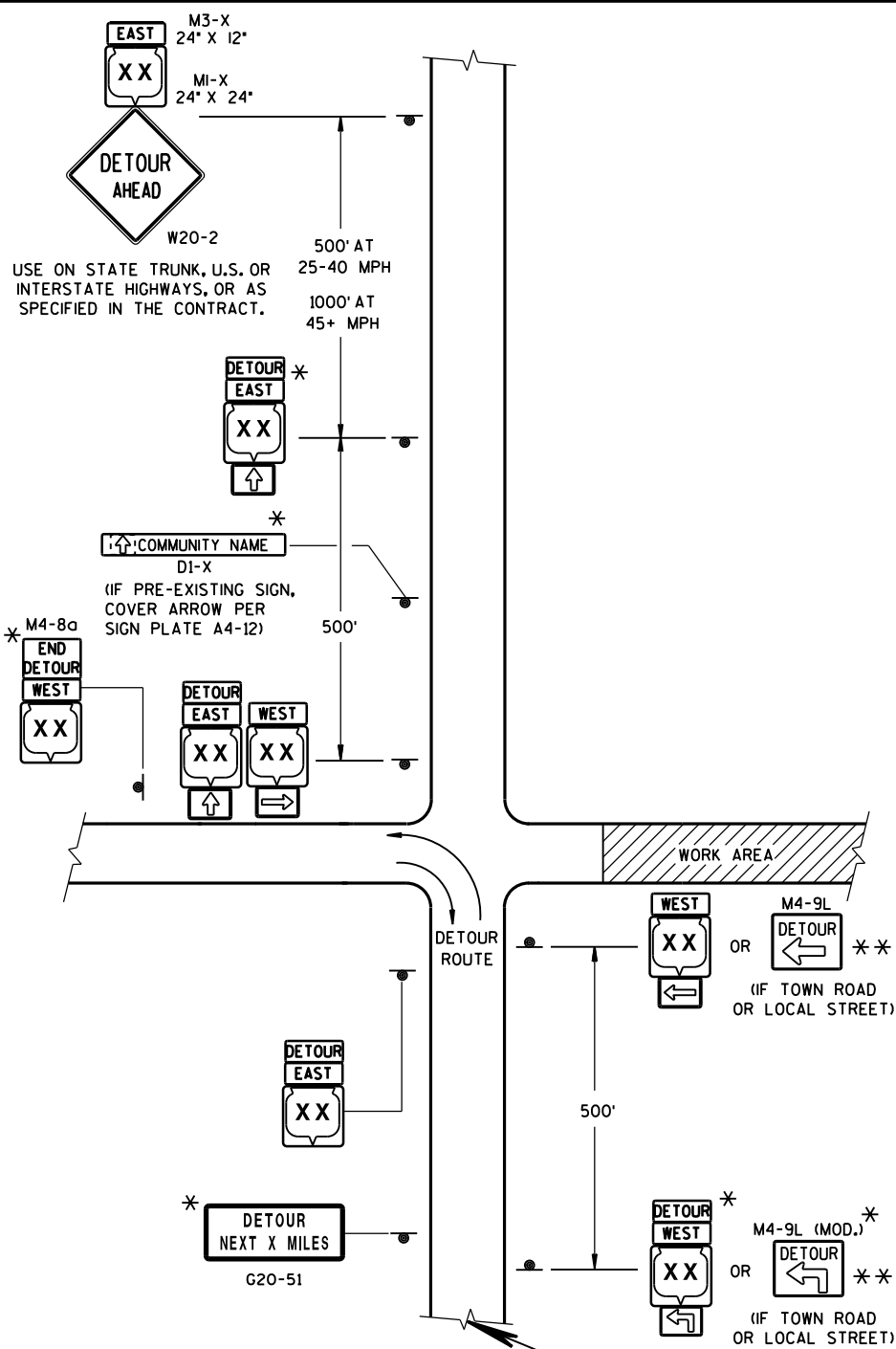
R1-1 SHALL BE 36" X 36".

- 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 ENGINE 124 ESIGN
FHWA



LEGEND

● SIGN ON PERMANENT SUPPORT

▨ WORK AREA

DETOUR EAST M4-8 M3-X

MI-4 OR COUNTY MI-5A OR MI-6

M05-1 OR M06-1 OR M06-1

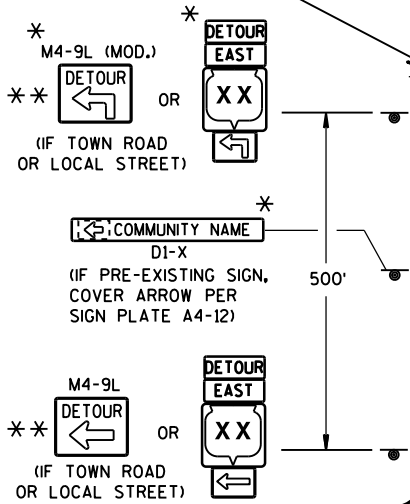
SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

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

MATCH POINT

DETAIL F
DETOUR SIGNING

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



GENERAL NOTES

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

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

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

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

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

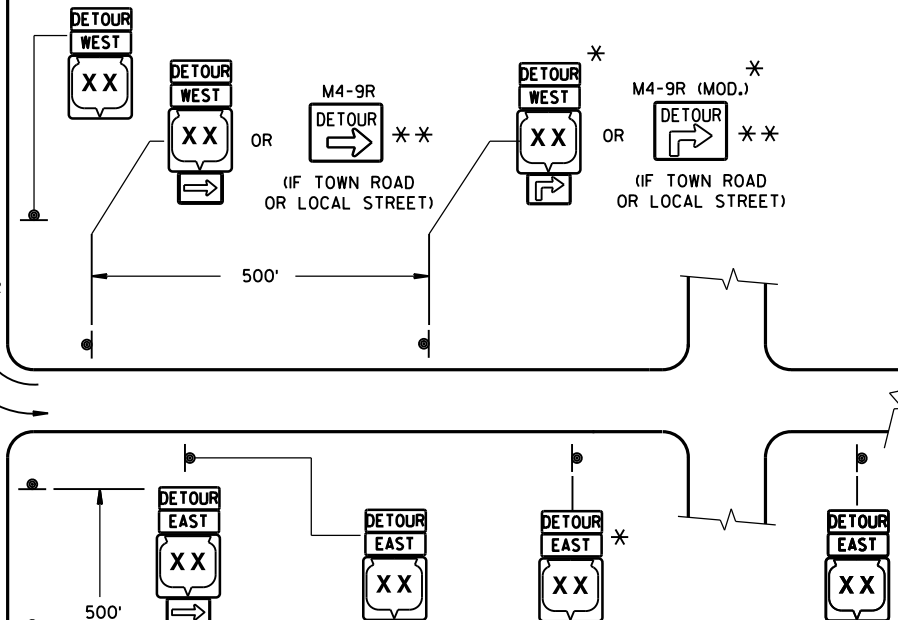
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- MI-4, MI-5A, AND MI-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

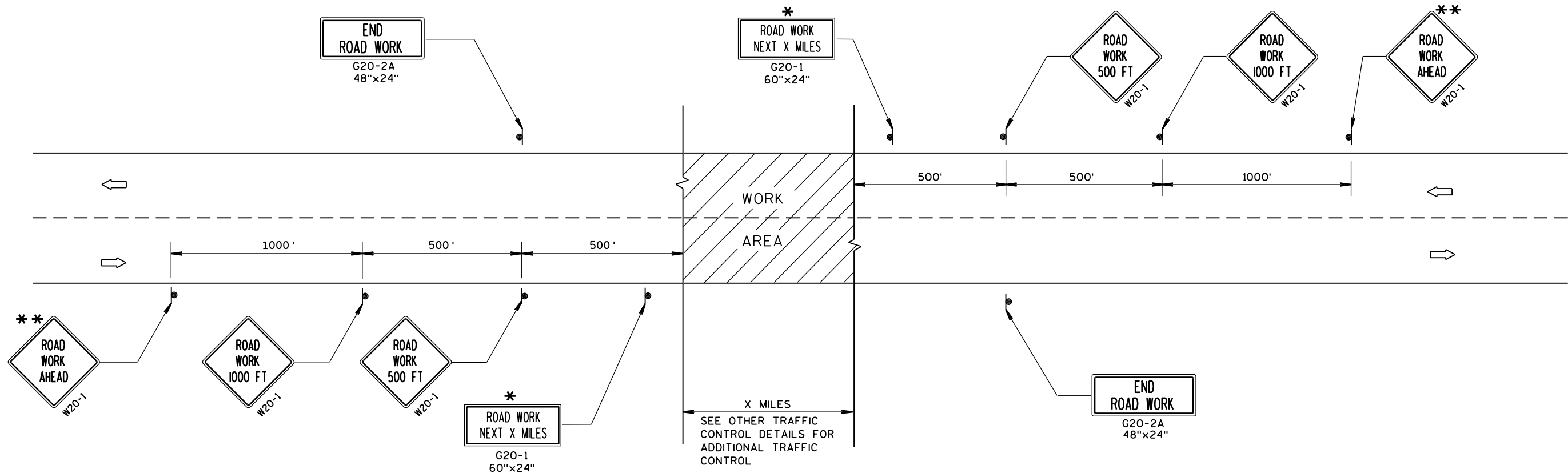


PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA.)

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINE 125 SIGN
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.

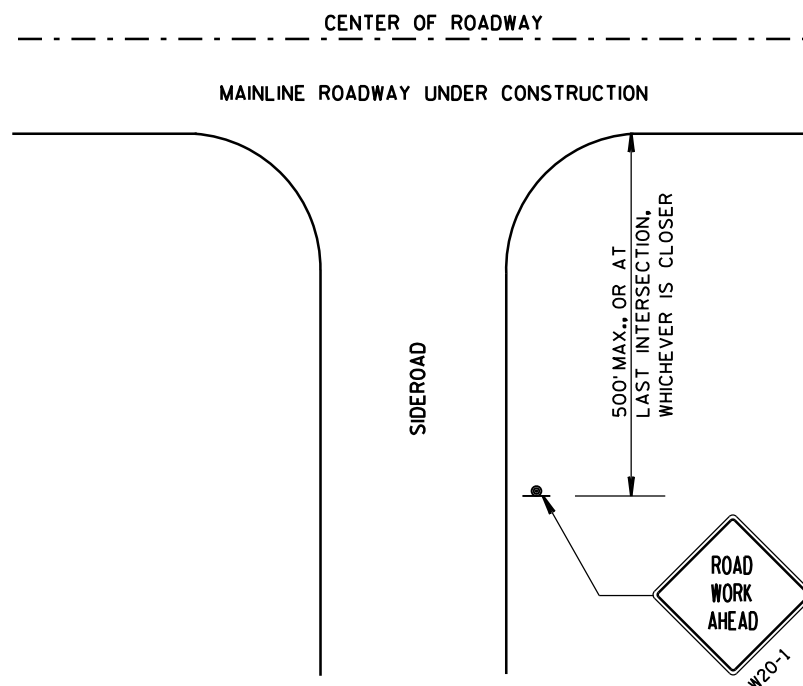
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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.

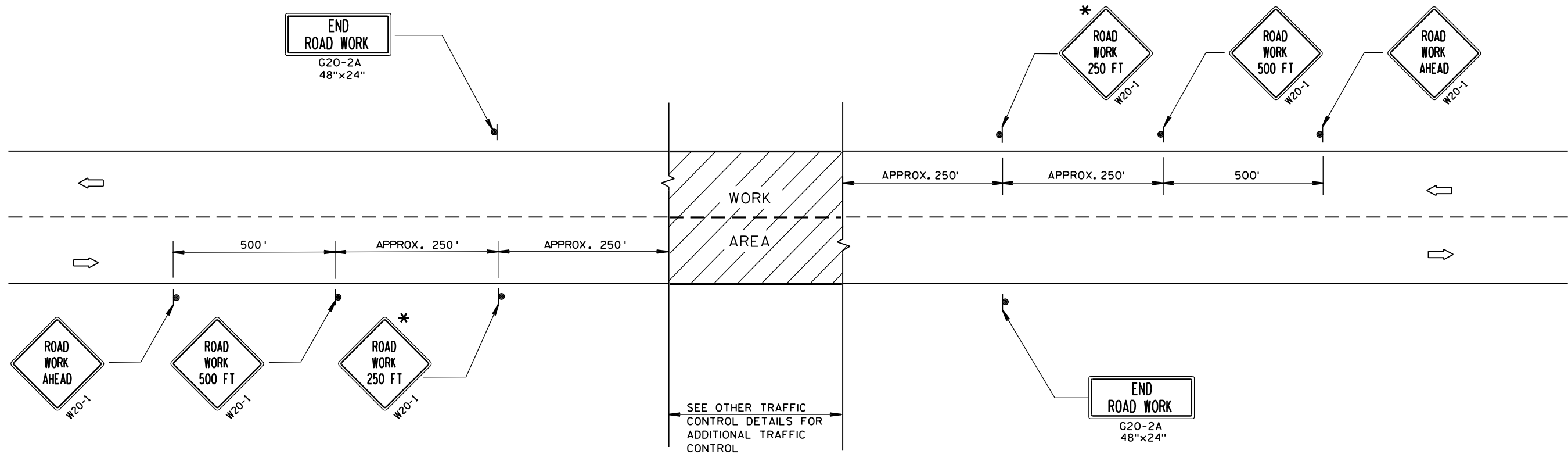
** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



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	/S/ Travis Feltes STATE TRAFFIC ENGINEER 126 SIGN
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.

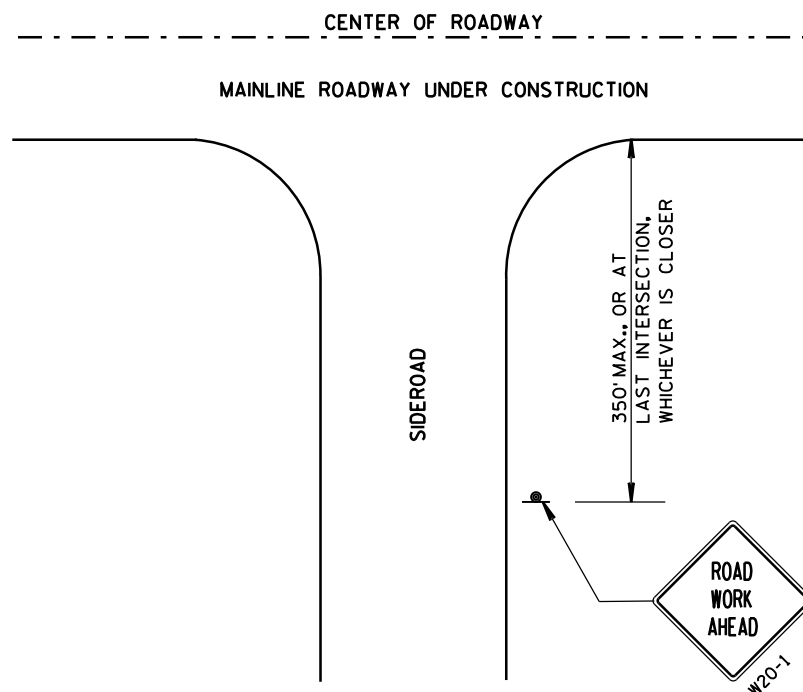
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

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



LEGEND

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

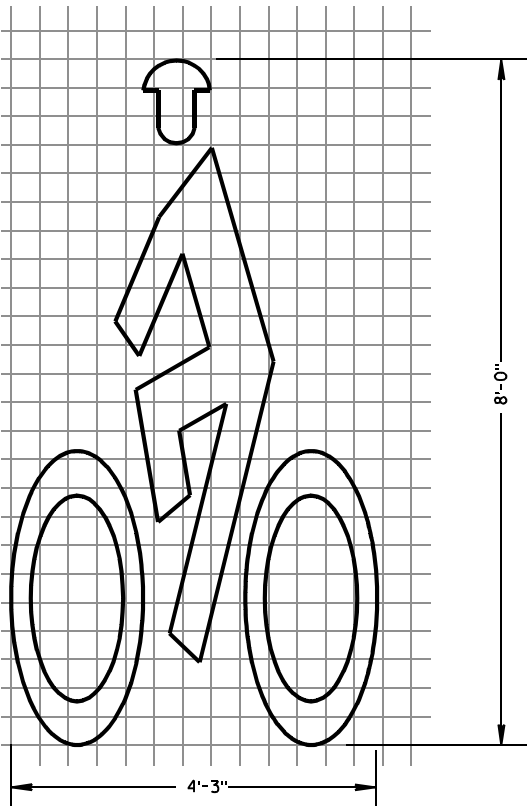
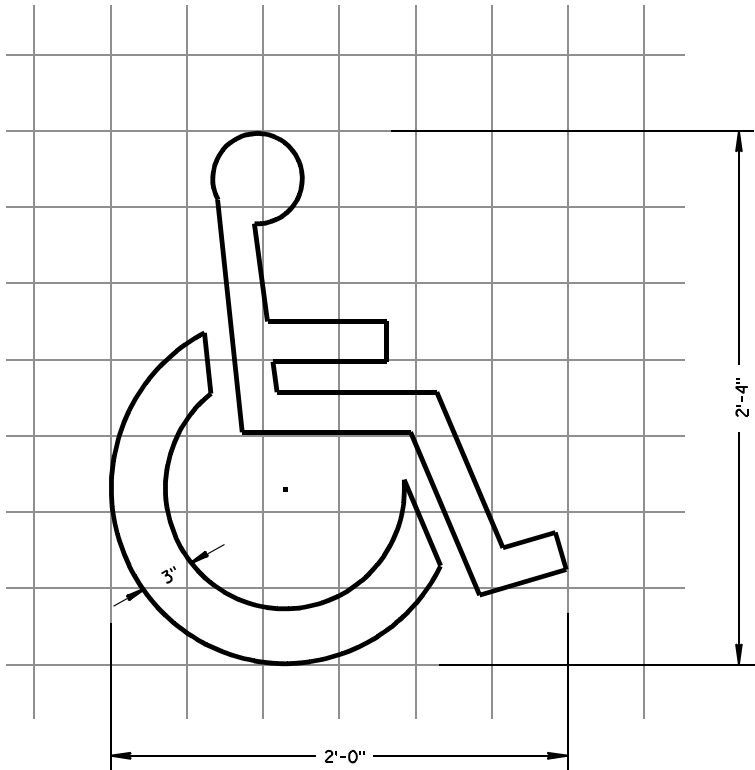
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

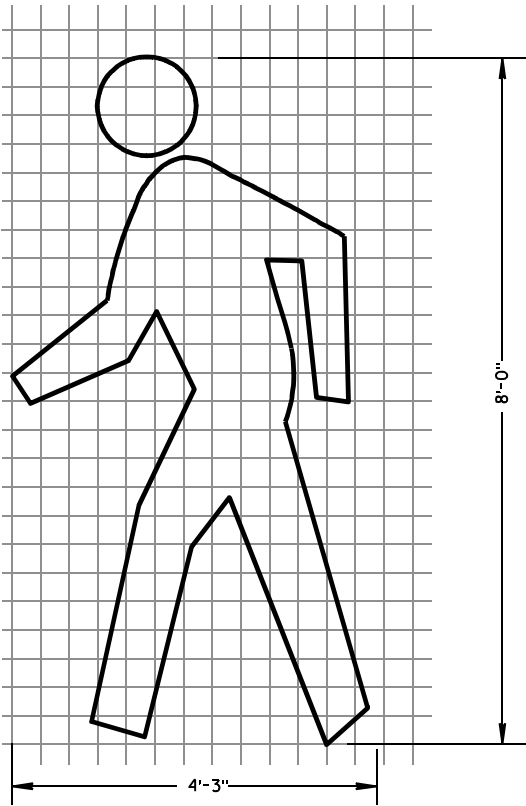
APPROVED

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER SIGN

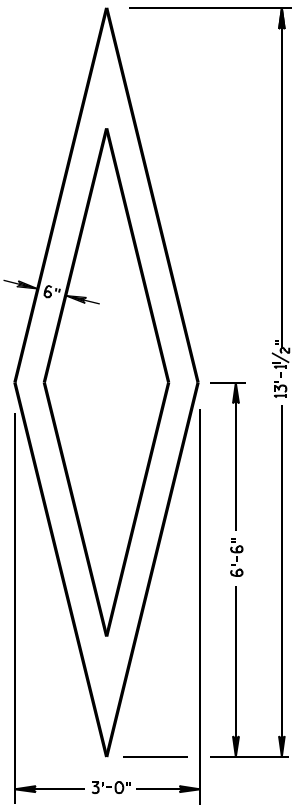
FHWA



BIKE CROSSING SYMBOL



PEDESTRIAN SYMBOL



PREFERENTIAL
LANE SYMBOL

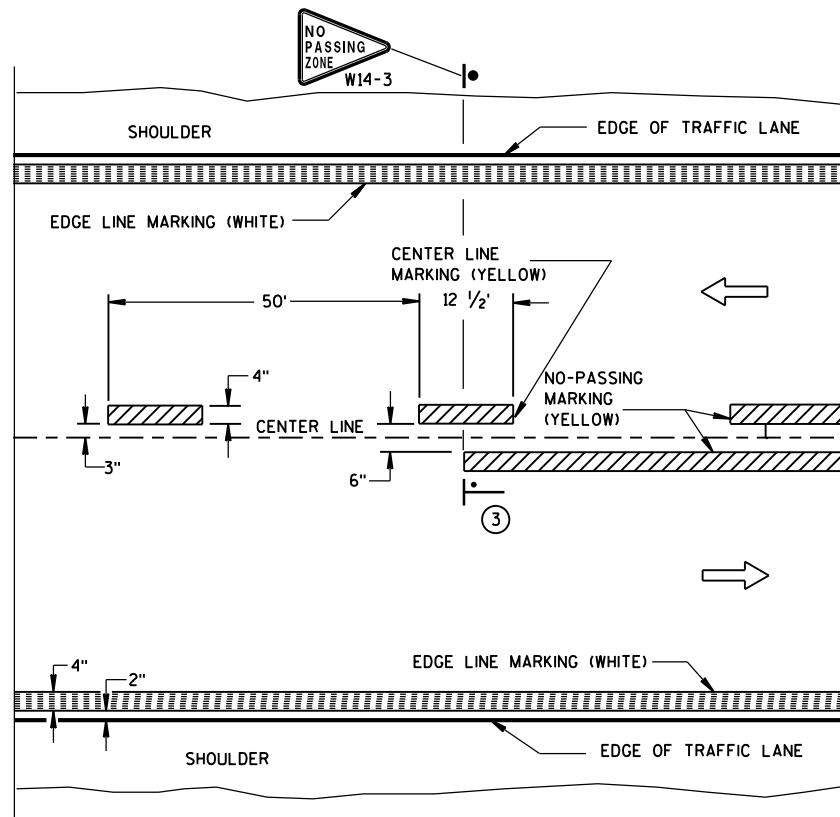
GENERAL NOTES

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

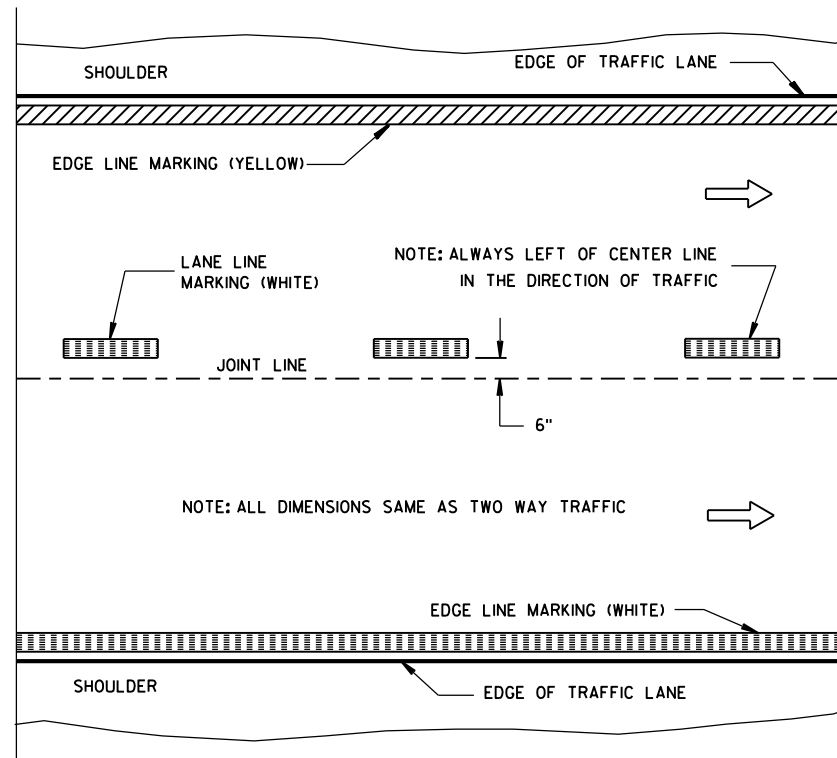
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.

PAVEMENT MARKING SYMBOLS			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
7/1/11	/S/ Thomas N. Nathan		
DATE	STATE TRAFFIC ENGINEER	128	IGN
FHWA			

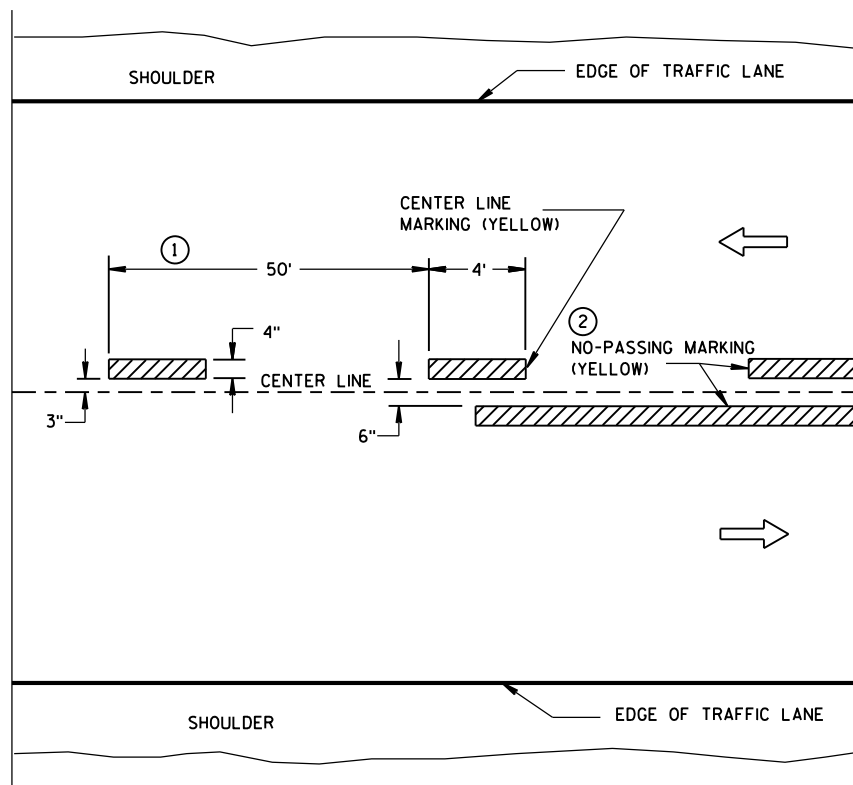


TWO WAY TRAFFIC

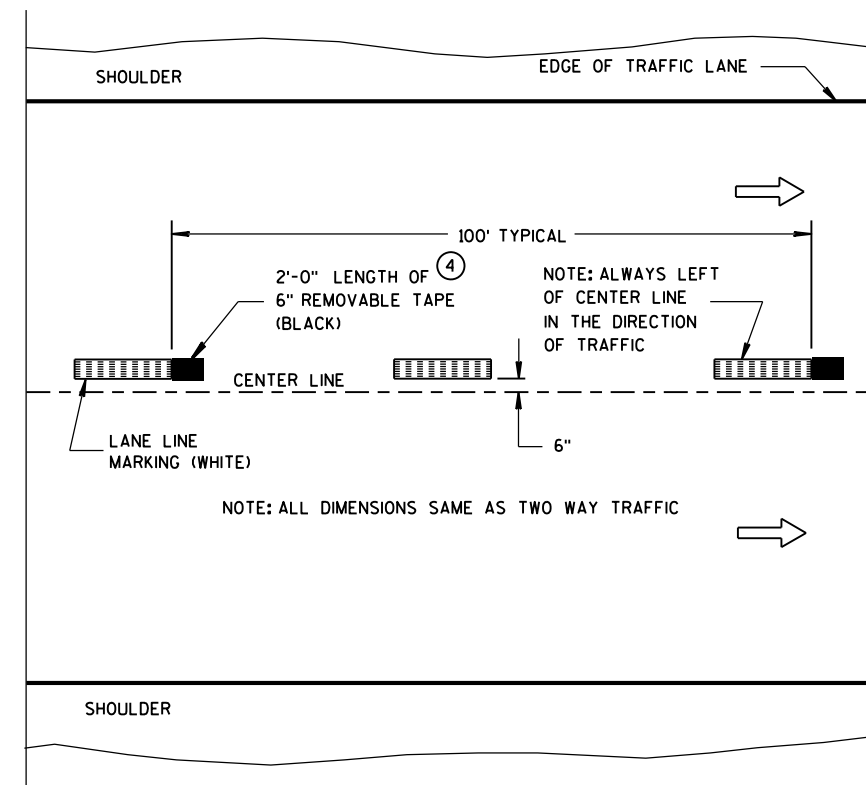


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

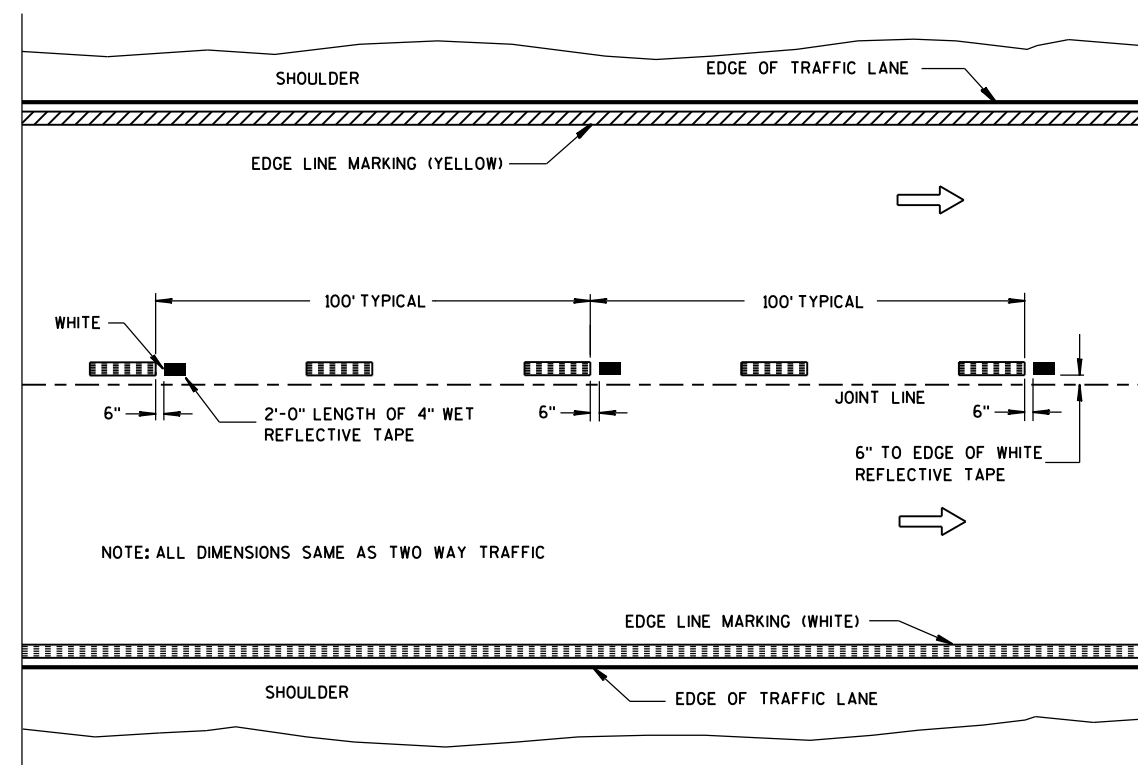
GENERAL NOTES

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)

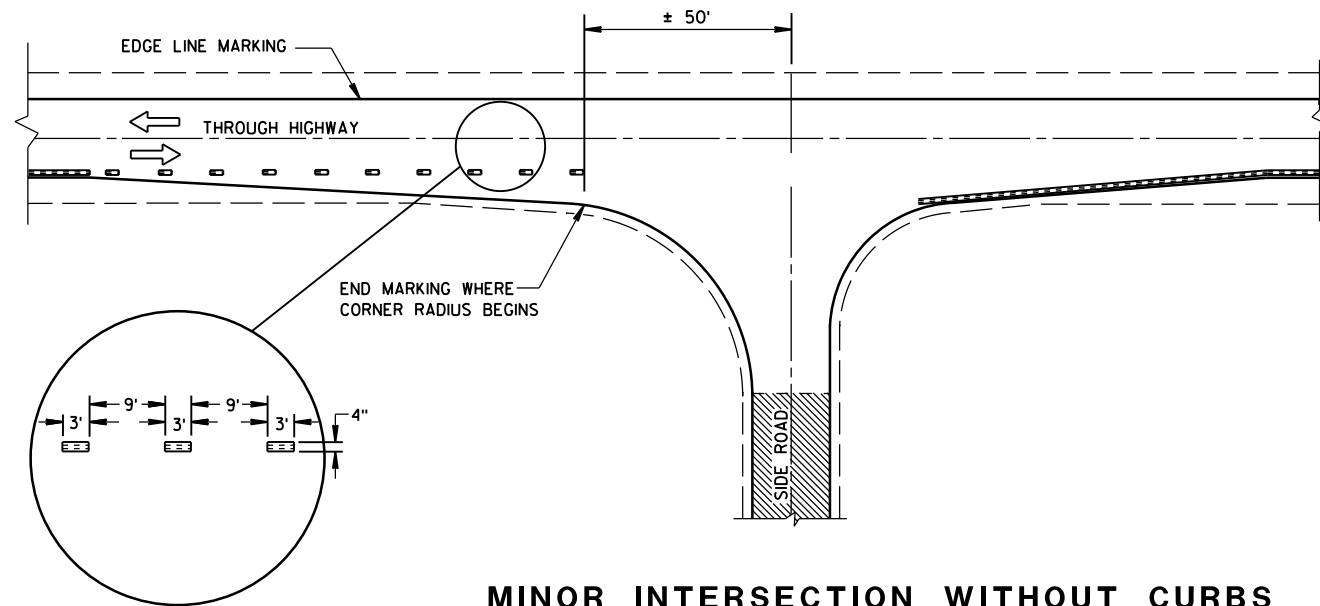
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

FHWA

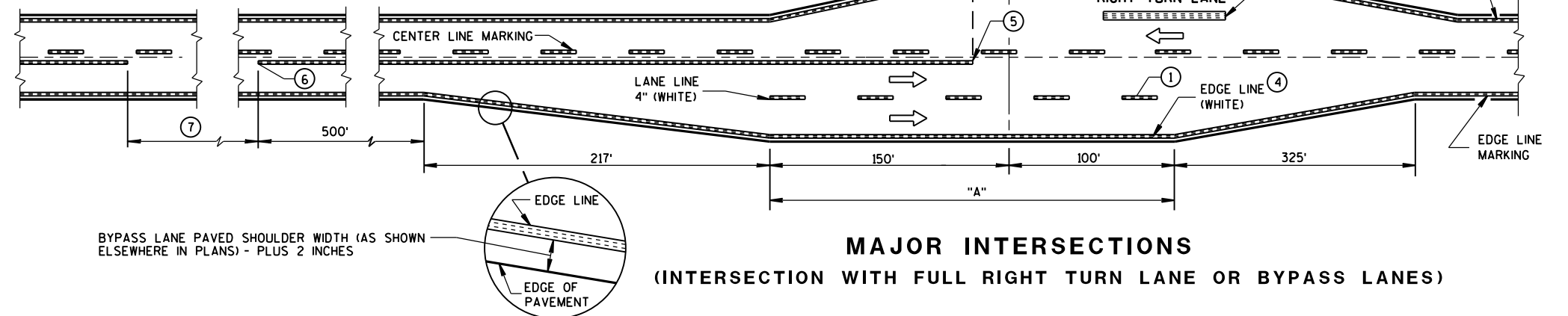
/S/ Travis Feltes
STATE TRAFFIC E 129



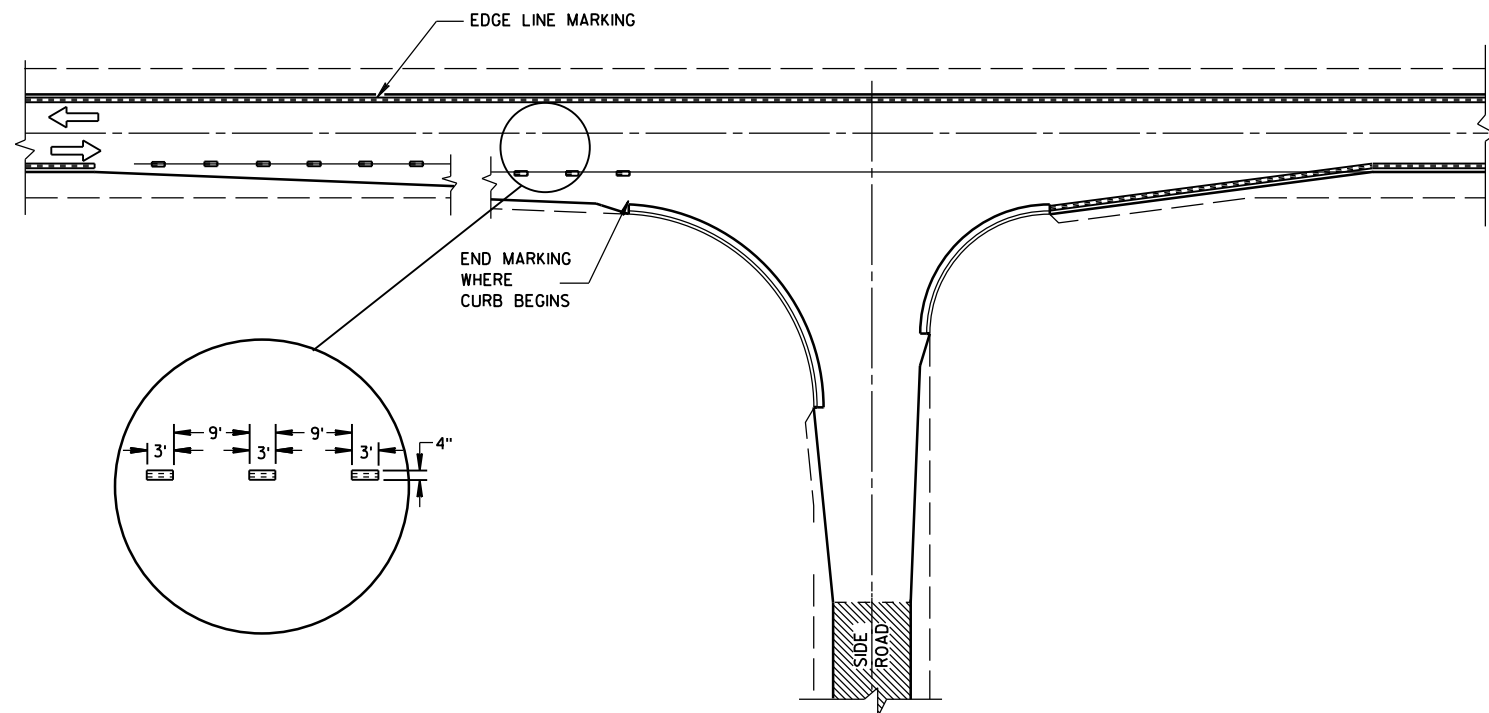
MINOR INTERSECTION WITHOUT CURBS

⑦

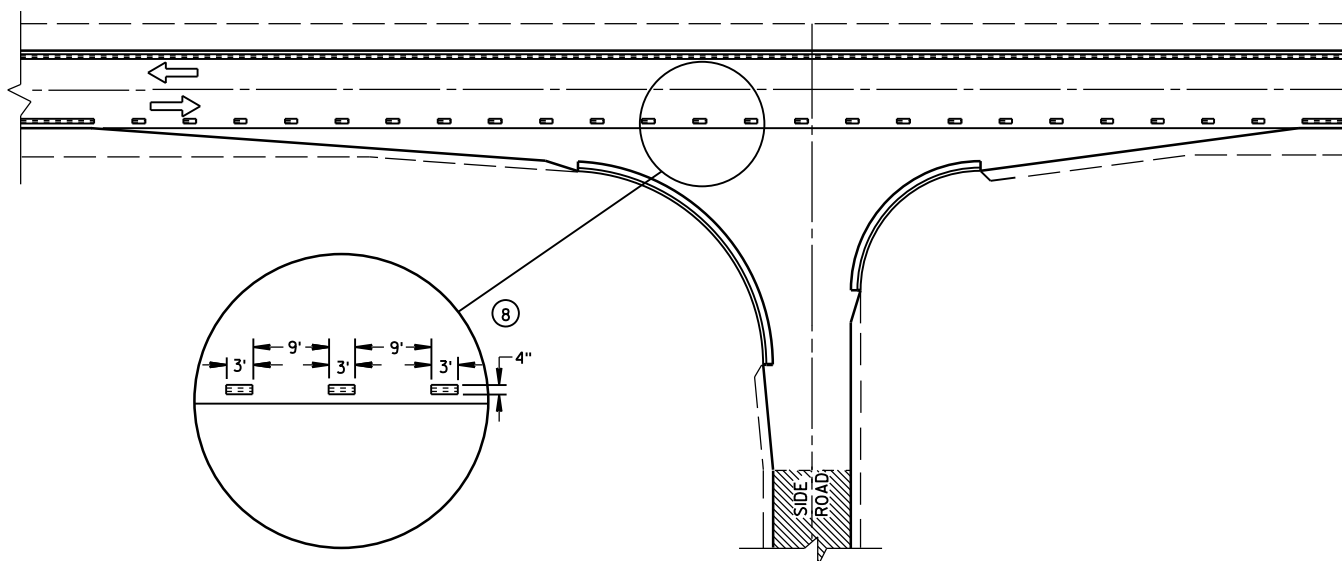
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



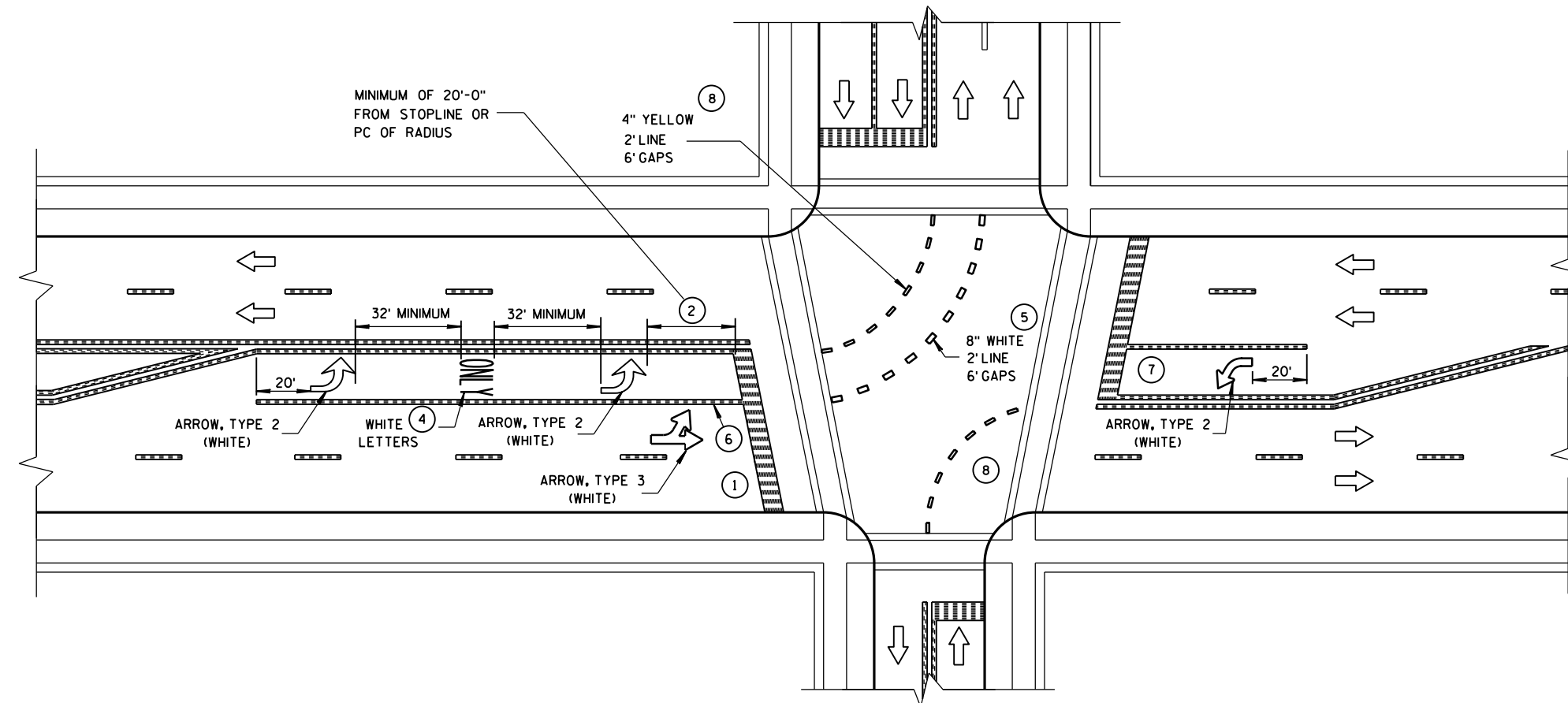
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

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

PAVEMENT MARKING
(INTERSECTIONS)

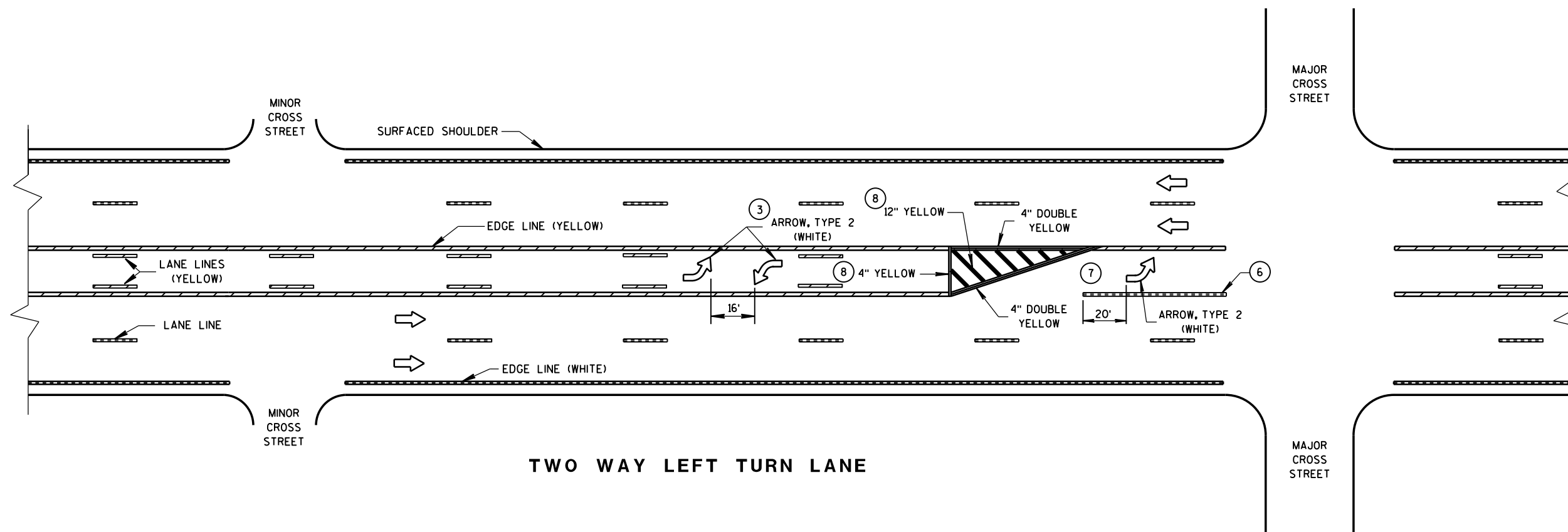
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 130



GENERAL NOTES

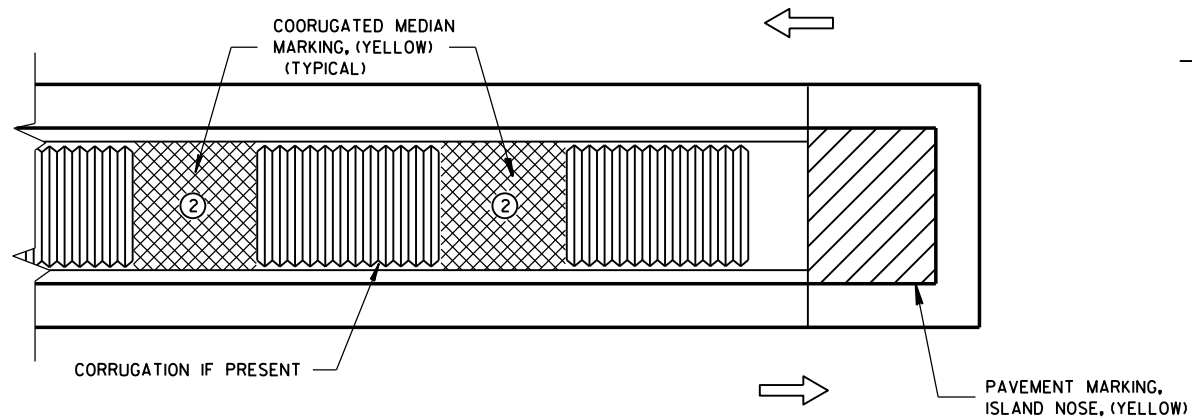
- ① STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DISTANCE MAY BE ADJUSTED TO ACCOMMODATE SHORT LEFT TURN LANES, AS APPROVED BY THE ENGINEER.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
- ⑤ 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
- ⑥ 8" WHITE
- ⑦ ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
- ⑧ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (➡)
SHOWS DIRECTION OF TRAVEL

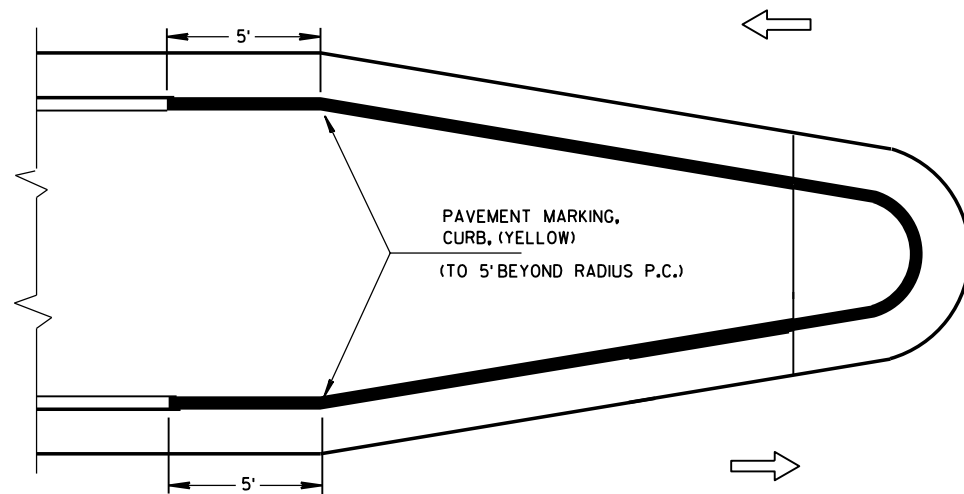


PAVEMENT MARKING
(LEFT TURN LANE)

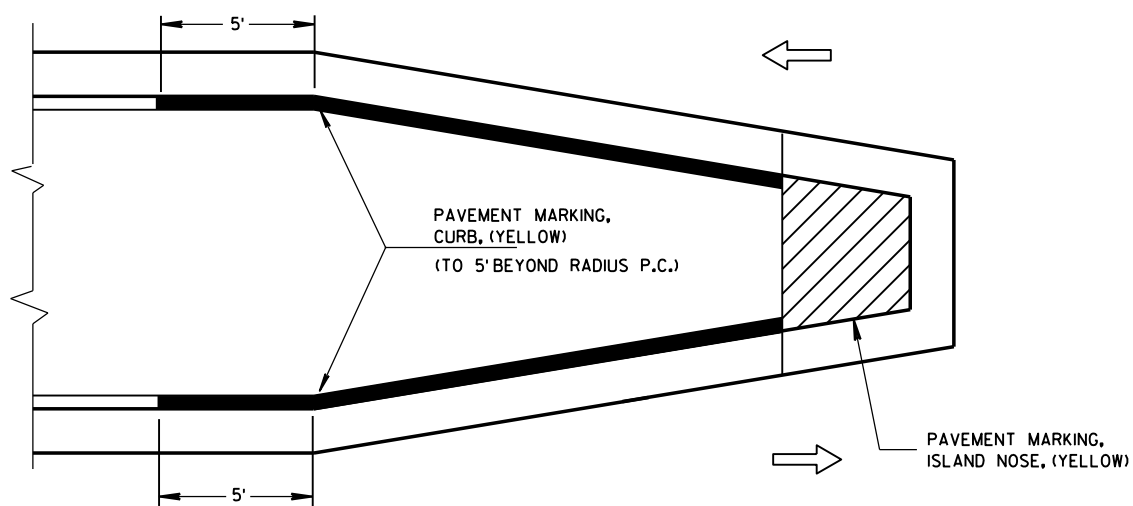
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

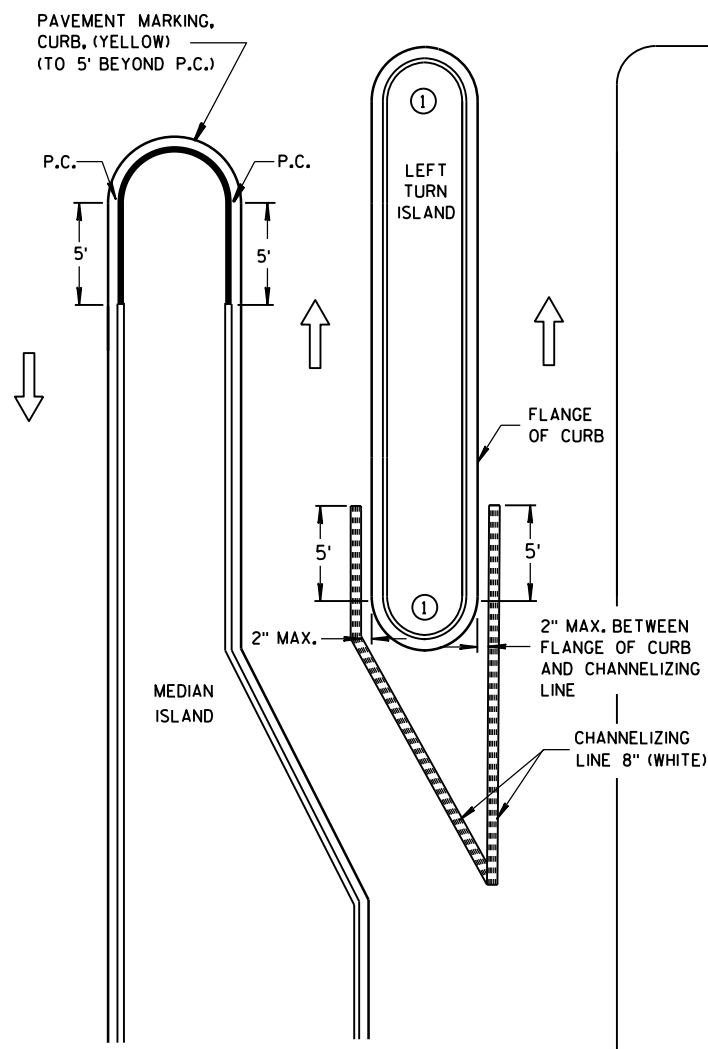


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

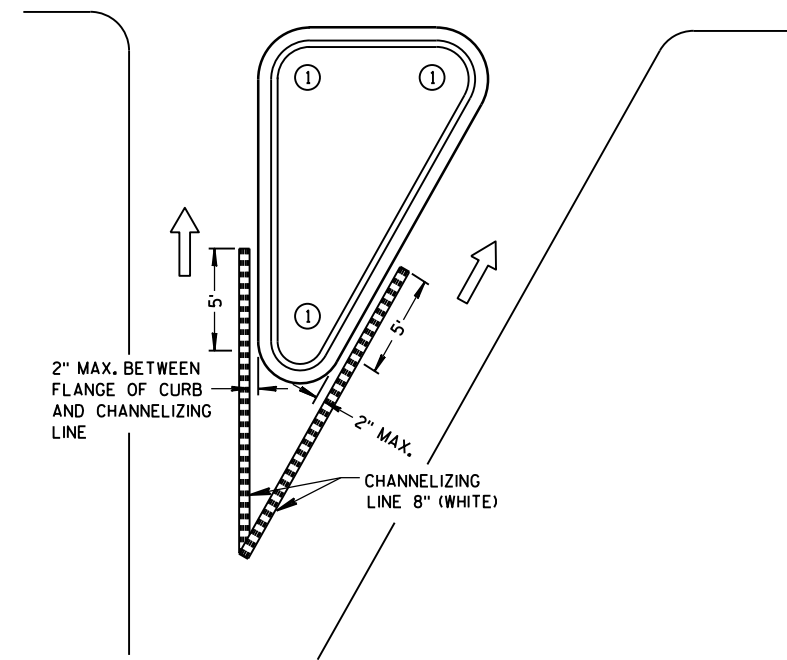
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

- DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



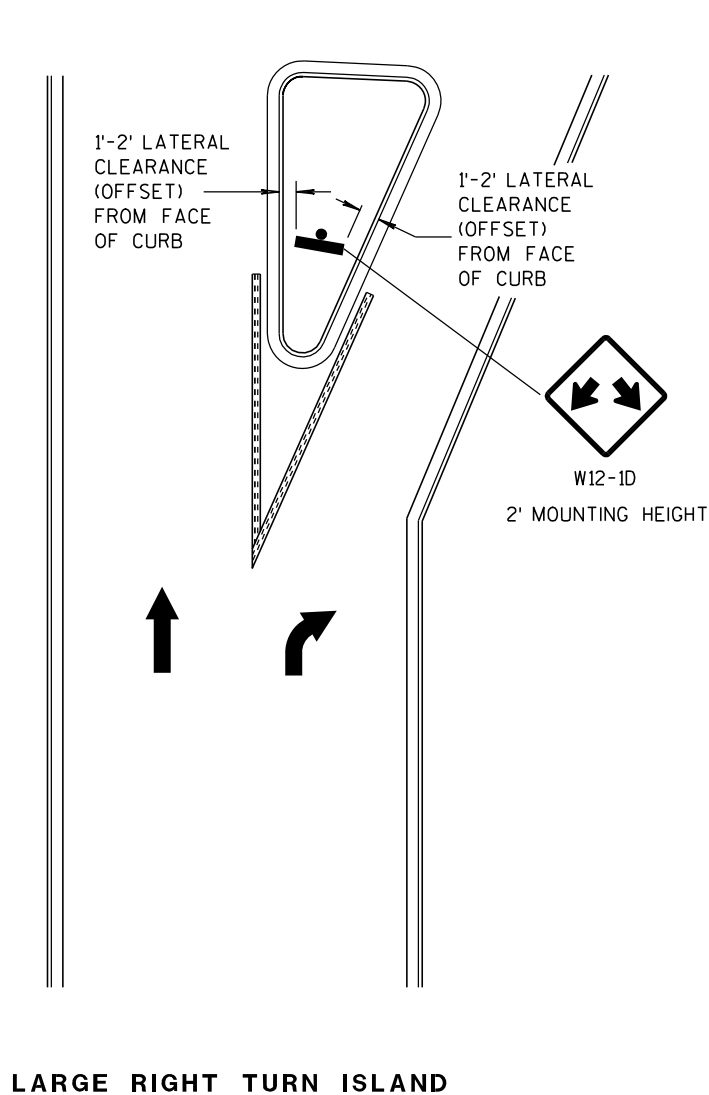
RIGHT TURN ISLAND

LEGEND

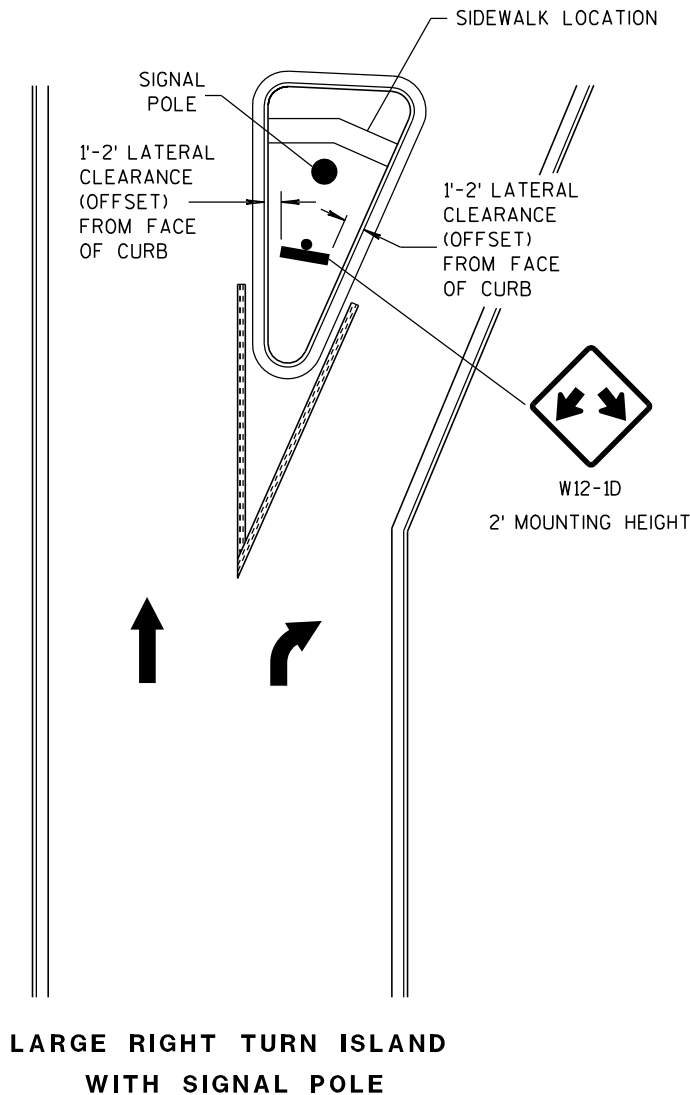
- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 132

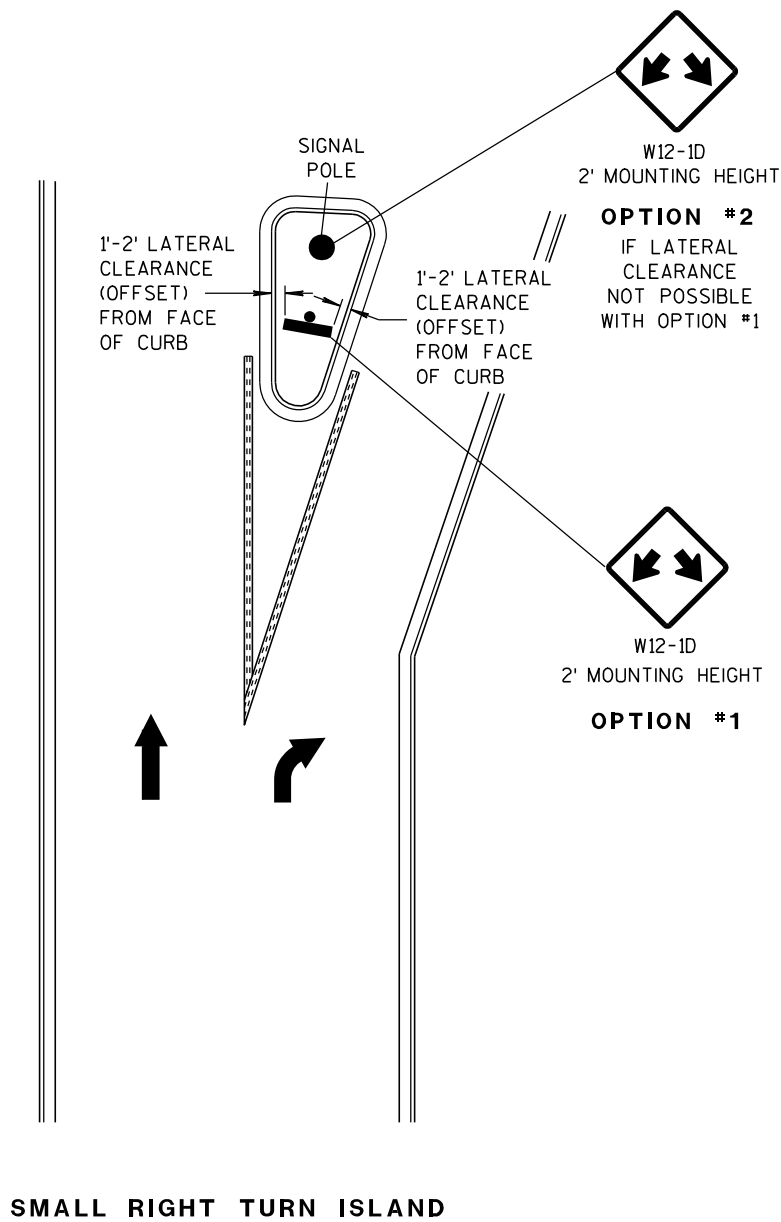


DOUBLE ARROW WARNING SIGN PLACEMENT



GENERAL NOTE

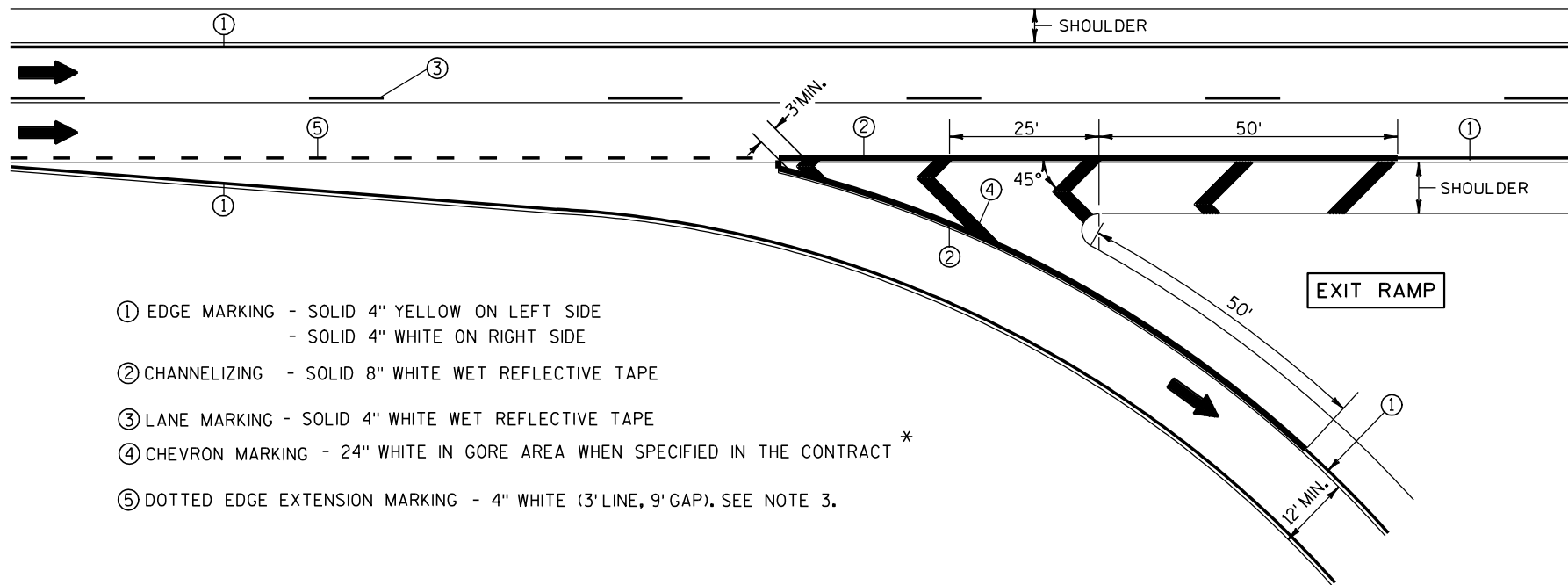
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.



DOUBLE ARROW
WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-22-08
DATE
/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER 133
IGN
FHWA

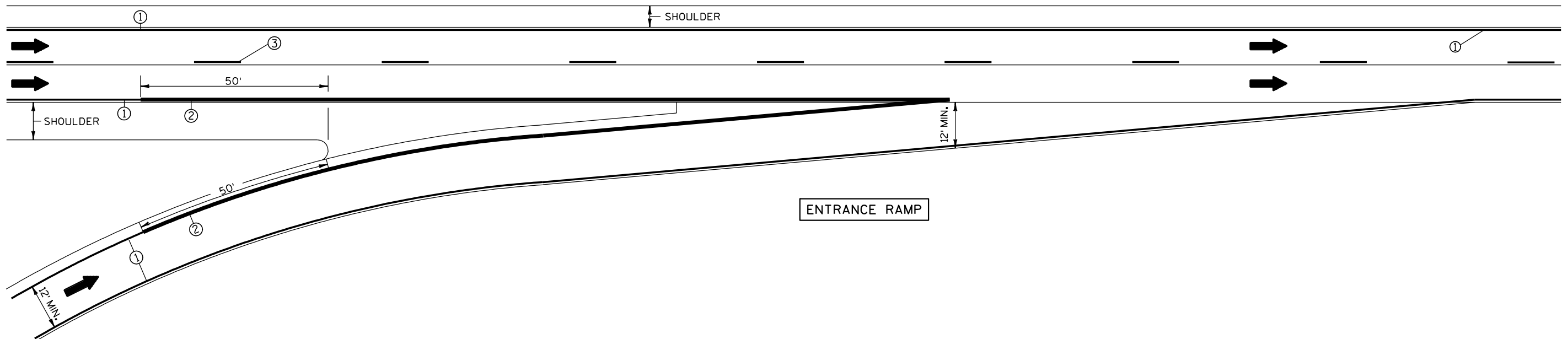


- ① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE
- ② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE
- ③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE
- ④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *
- ⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

- 1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
- 2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
- 3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

6

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- POST WITH ATTACHED SIGN IN DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

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

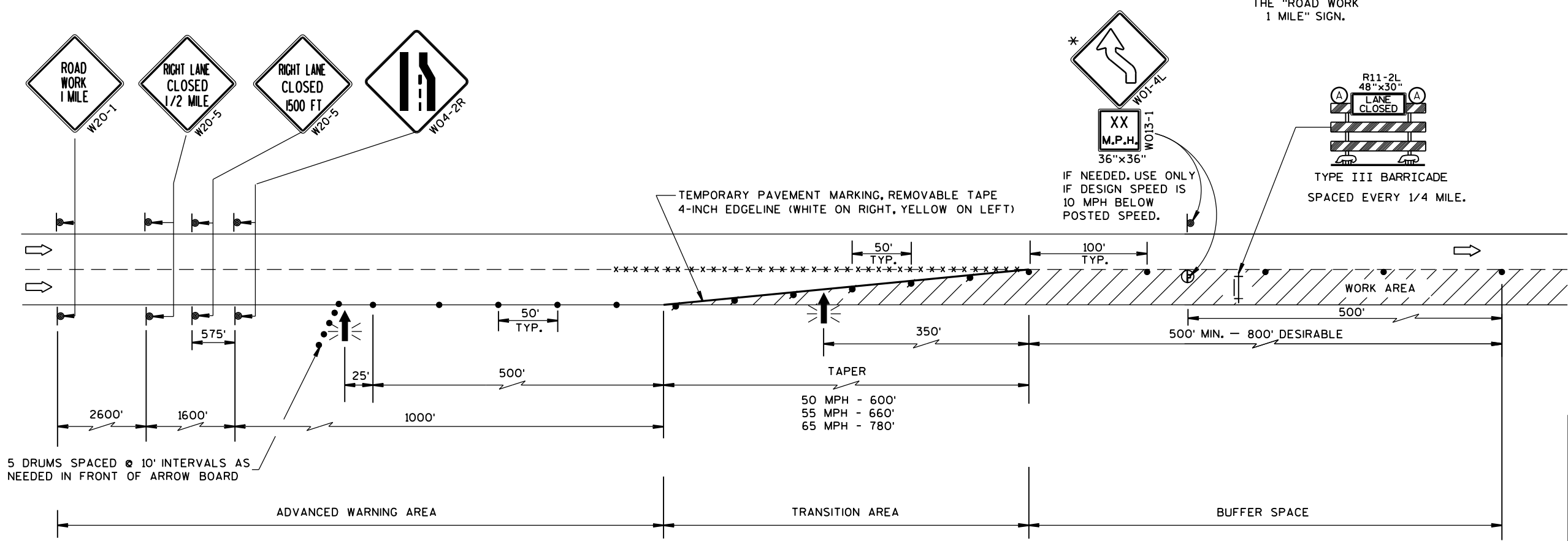
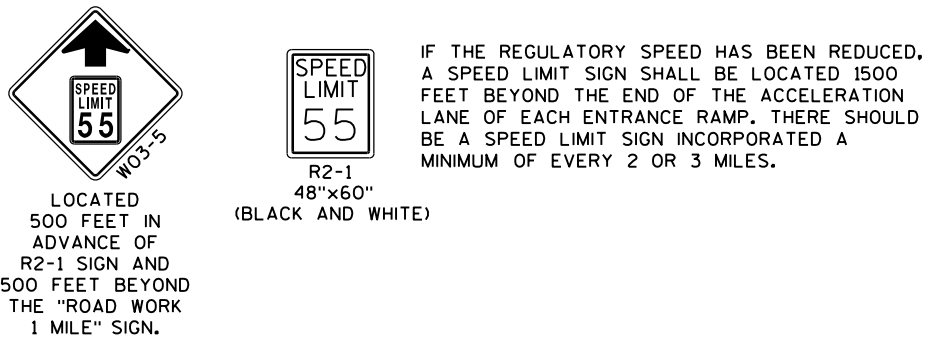
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

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

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER 135 SIGN
FHWA	

S.D.D. 15 D 12-3

S.D.D. 15 D 12-3

LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  SIGN ON PERMANENT SUPPORT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

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

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

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

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

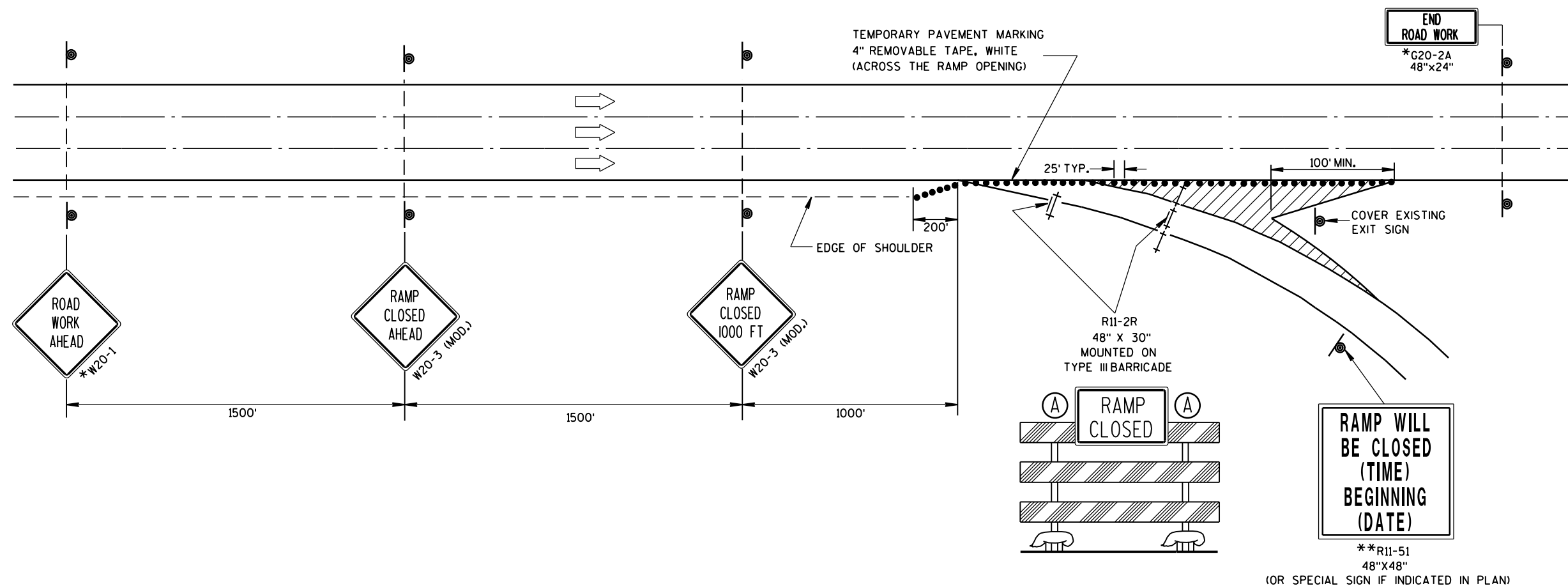
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

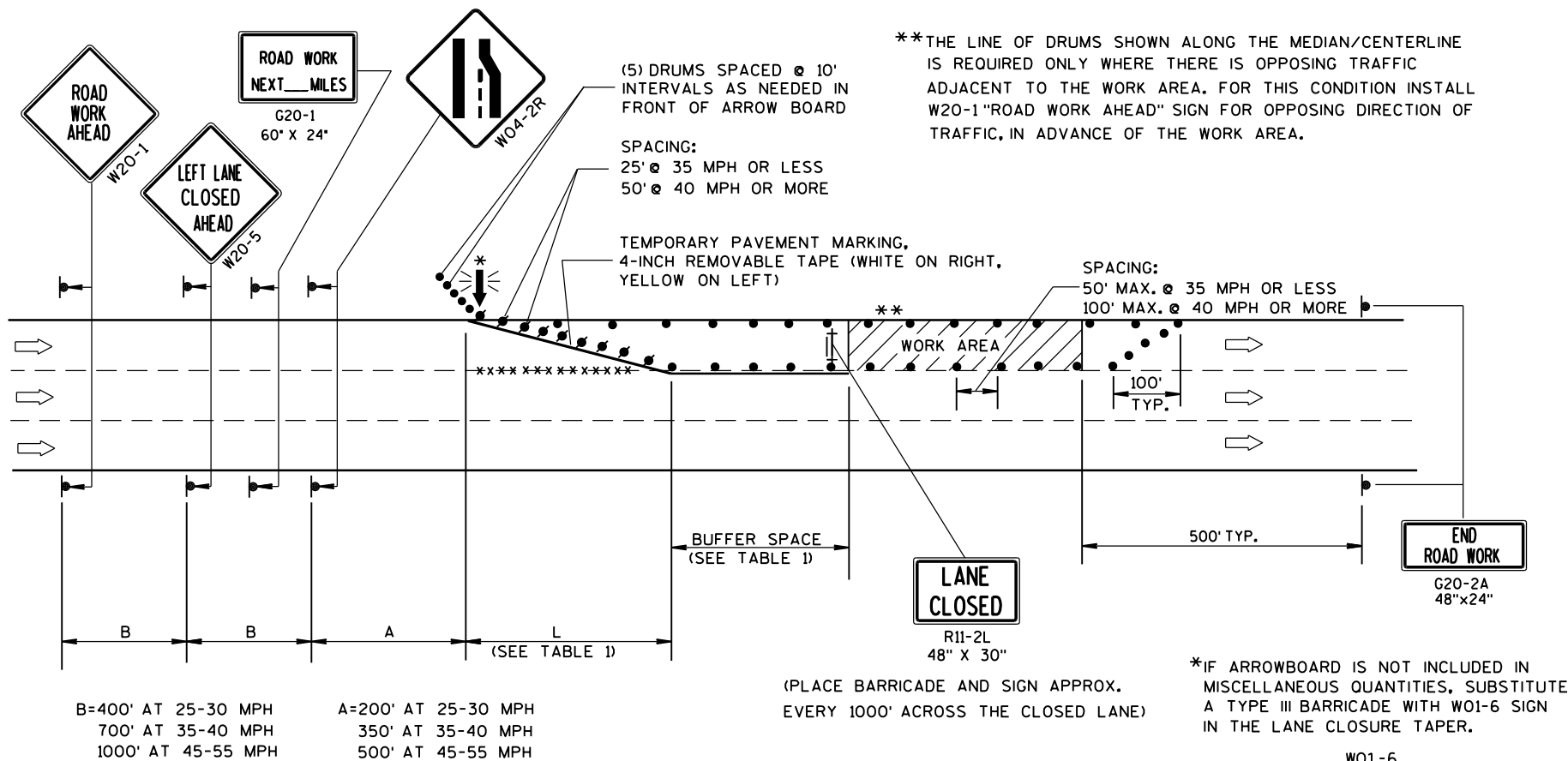
** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINE 136 E SIGN
FHWA



GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

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

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

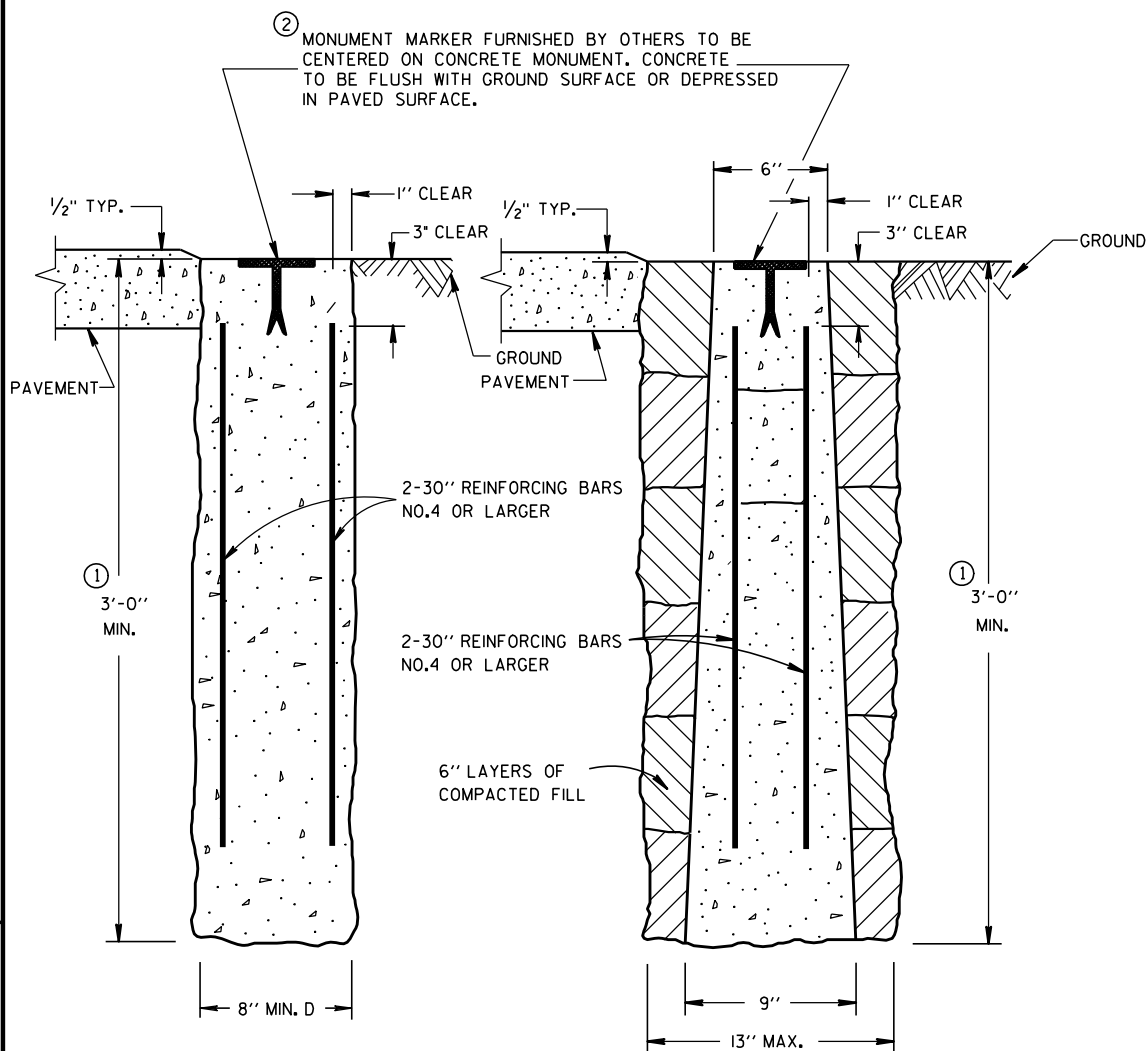
LEGEND

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

TRAFFIC CONTROL,
SINGLE LANE CLOSURE,
NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINE 137 :SIGN
FHWA

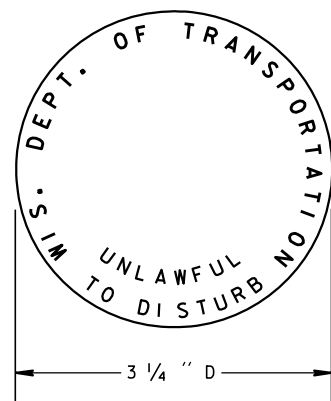


CAST-IN-PLACE

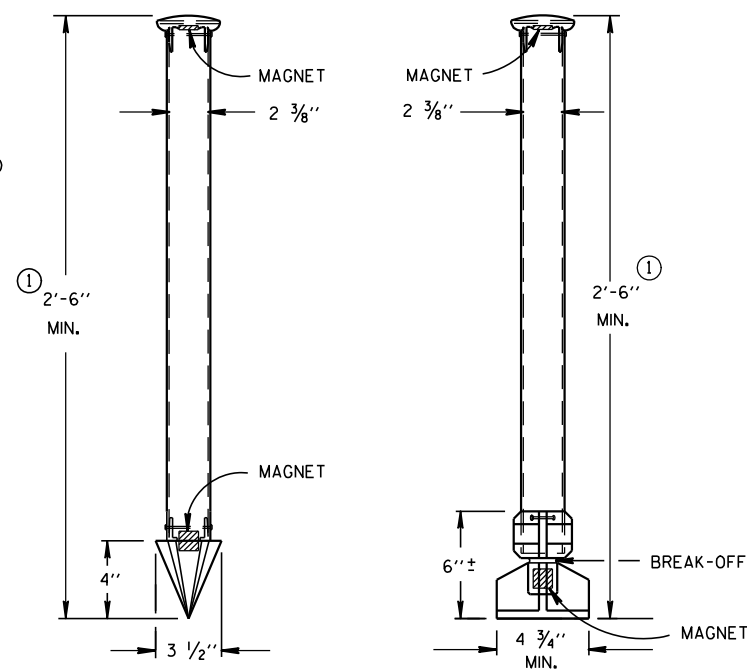
PRECAST

CONCRETE MONUMENTS

TYPE A



② WIS DOT MONUMENT MARKER LOGO
FOR TYPES "A", "C" & "D"

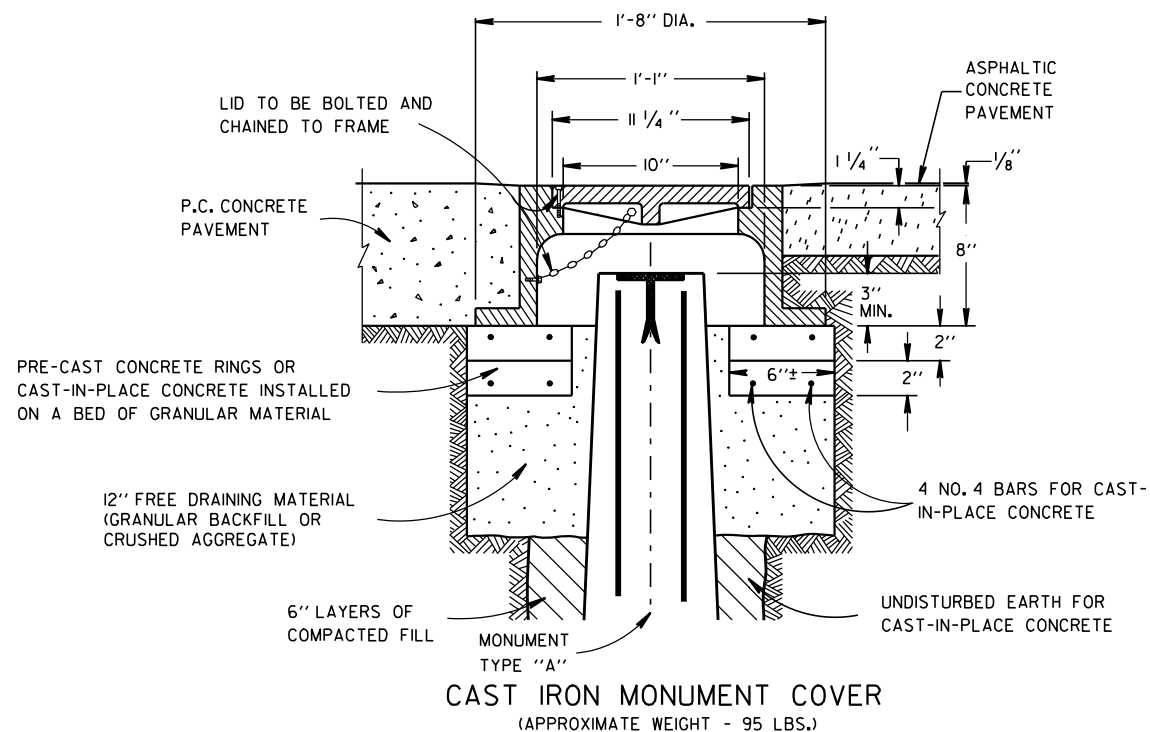


TYPE C

TYPE D

DRIVE-IN MONUMENT

BREAK-OFF MONUMENT

ALUMINUM MONUMENTS
(INCLUDES MARKER)CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT - 95 LBS.)

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.

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

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

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

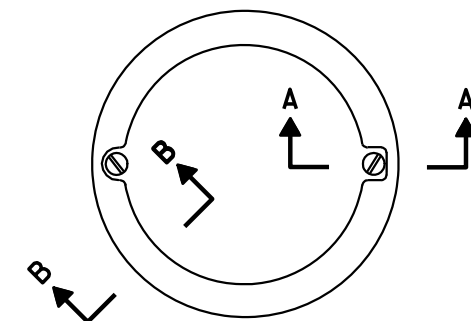
MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

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

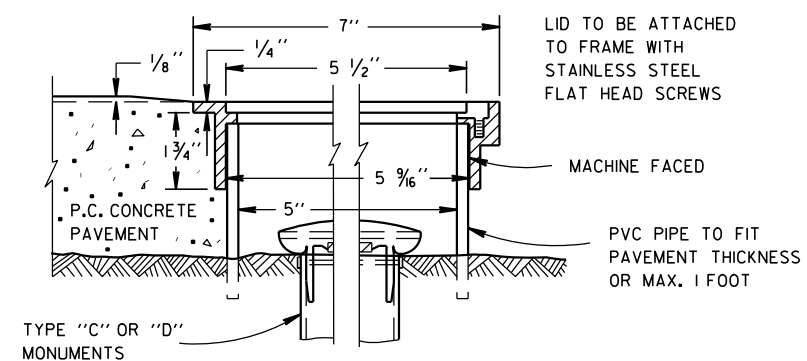
THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

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

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



TOP VIEW

TYPE "C" OR "D"
MONUMENTSSECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER

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

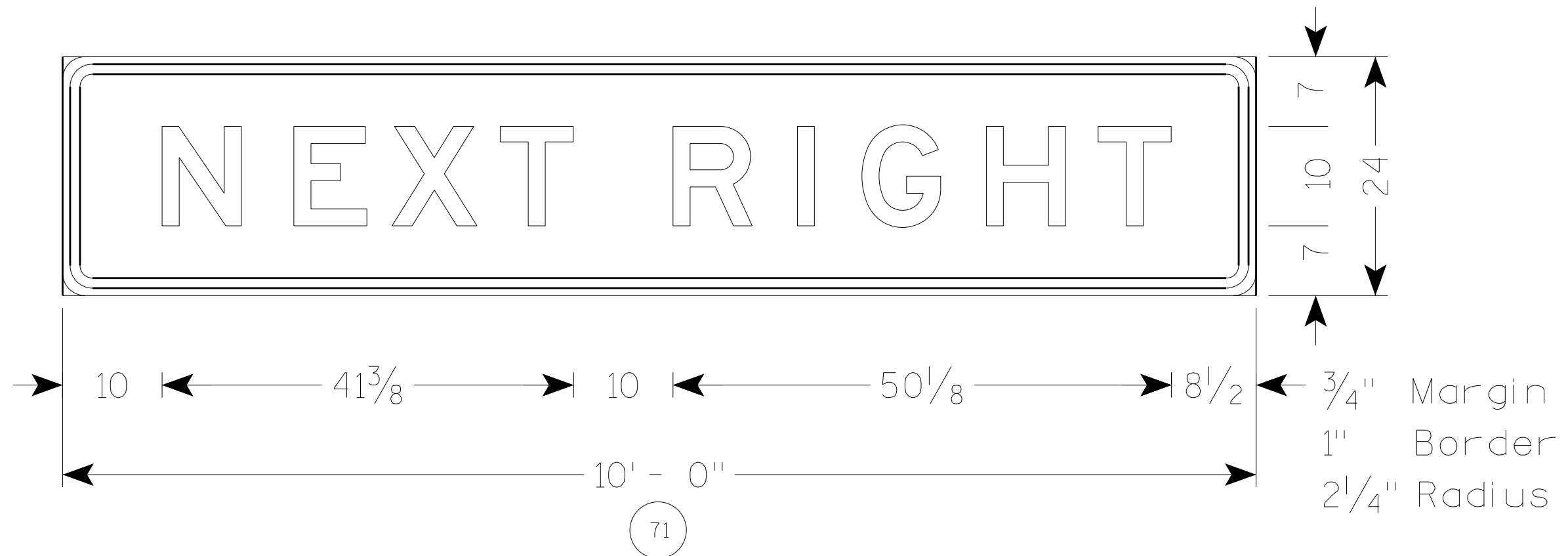
LANDMARK REFERENCE
MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/22/1999 /S/ Rory L. Rhin...
DATE CHIEF ROADWAY DEVELOP 138 NEER
FHWA

NOTES

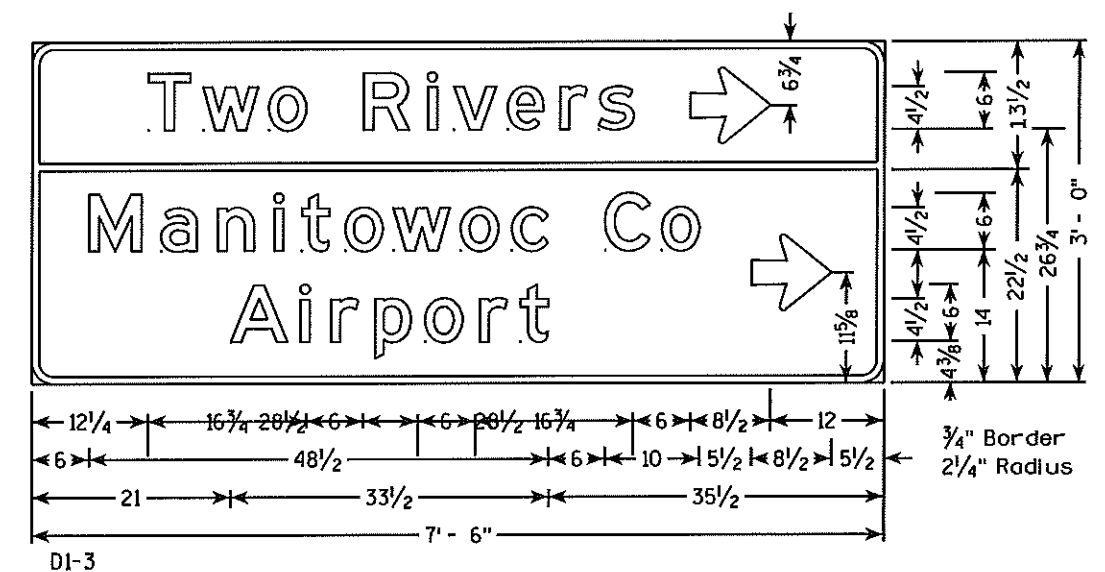
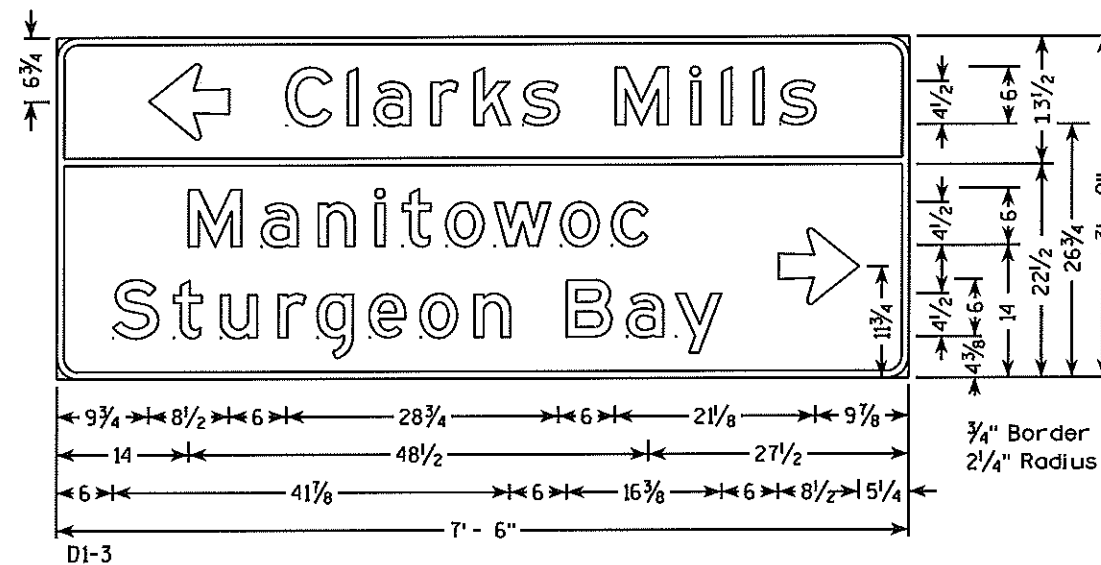
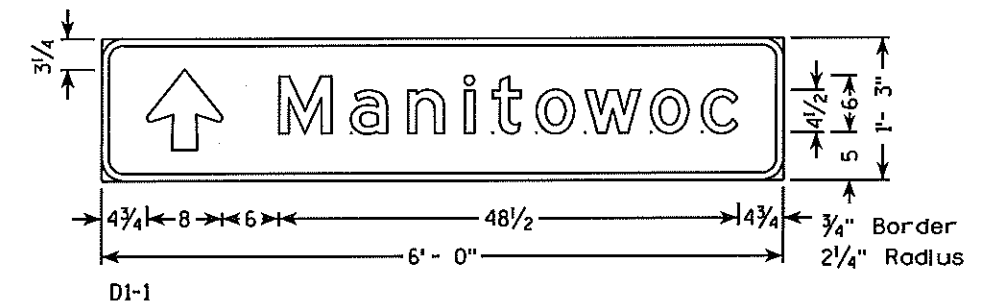
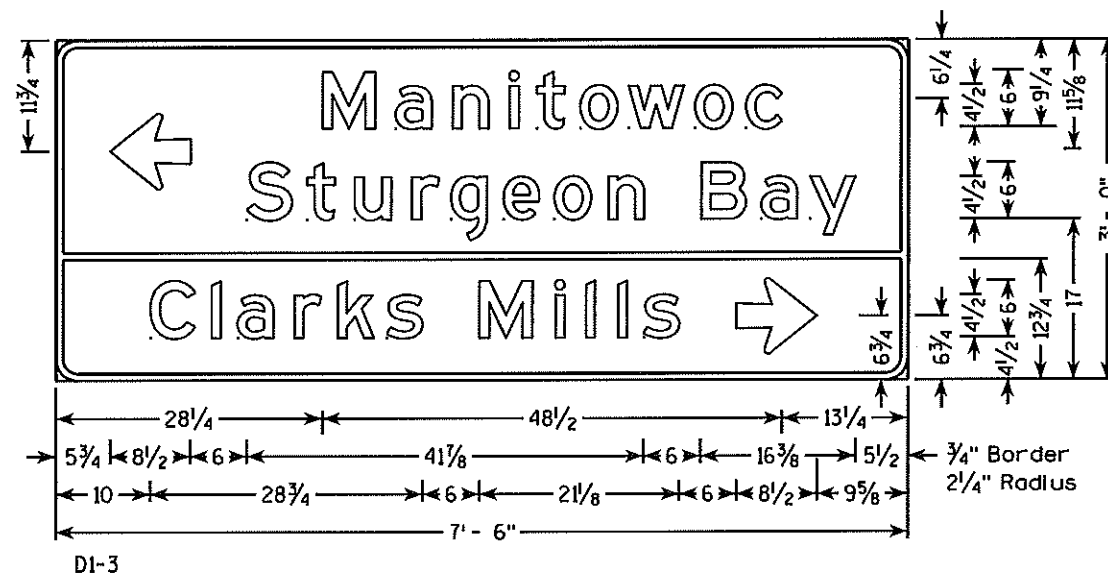
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 - Background - ORANGE
 - Message - BLACK
3. Message Series - E

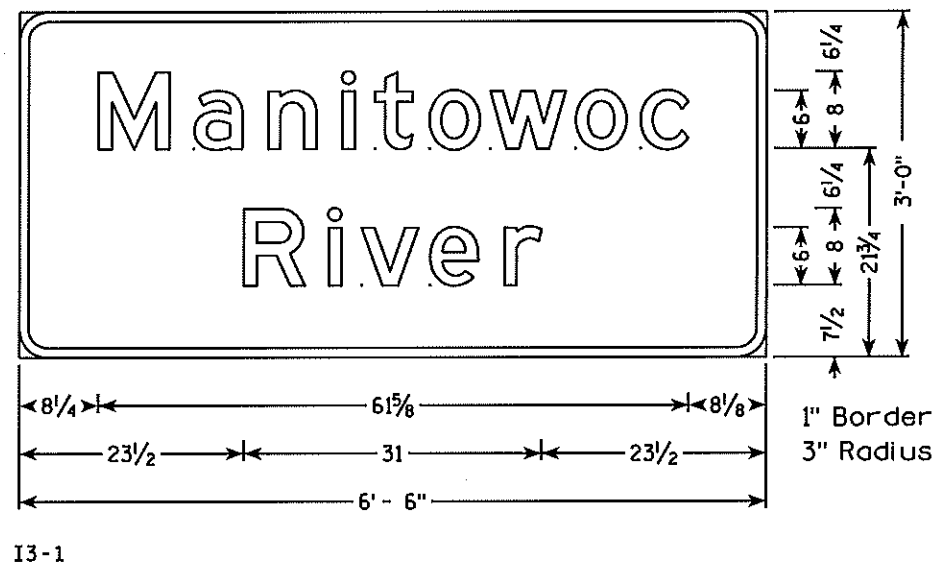
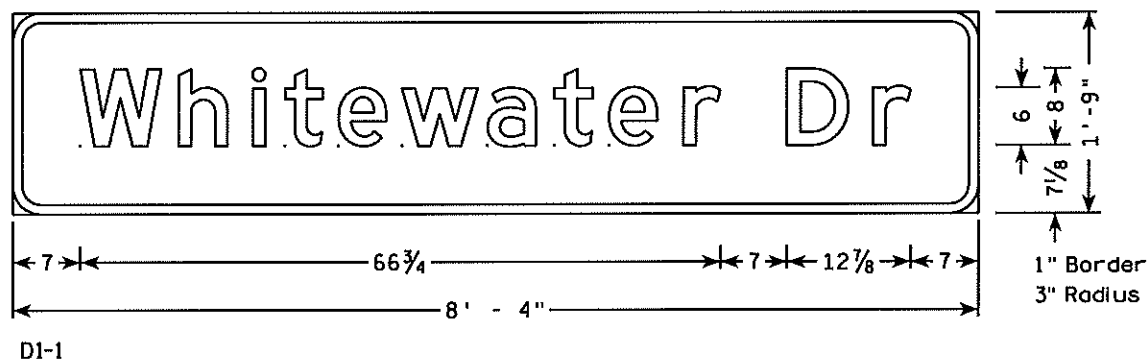
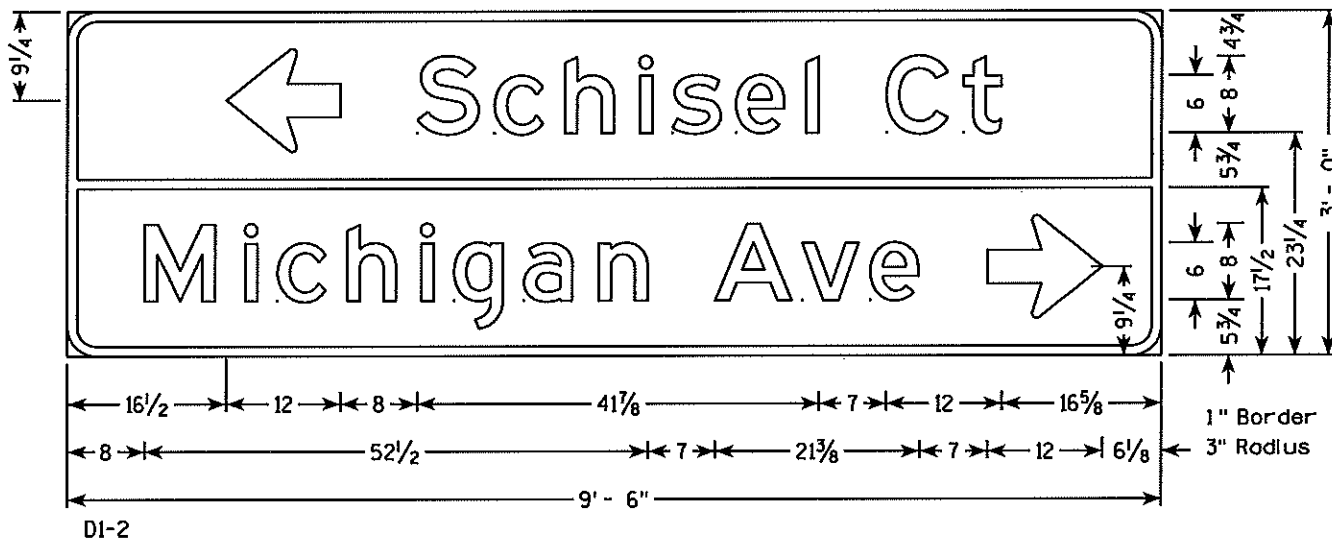


PLAN SHEET PRODUCED
BY WisDOT-NE REGION

NOTES

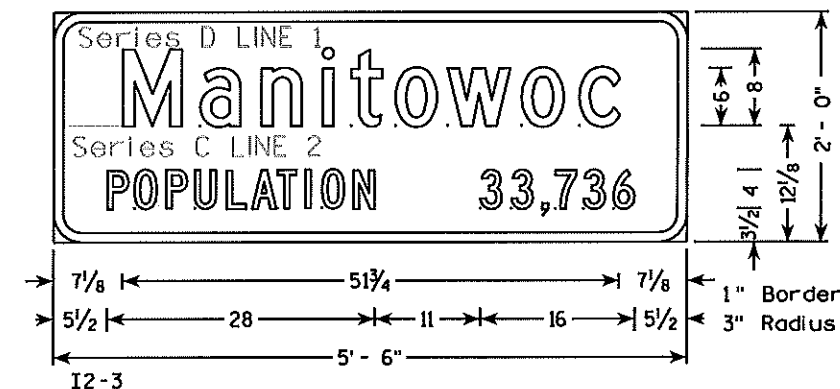
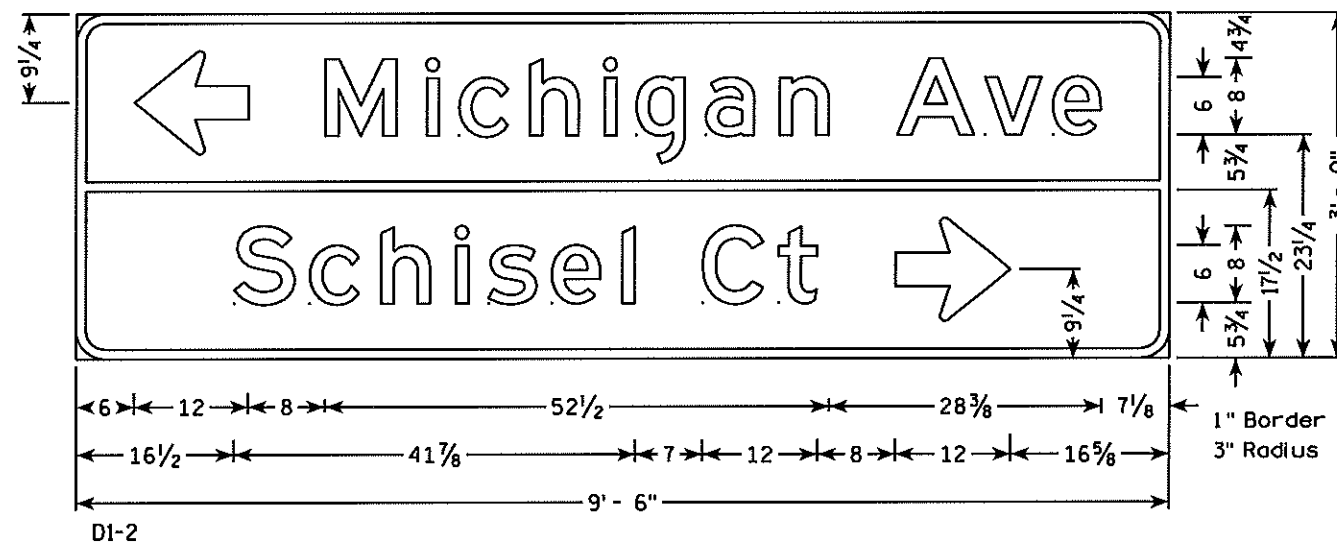
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E

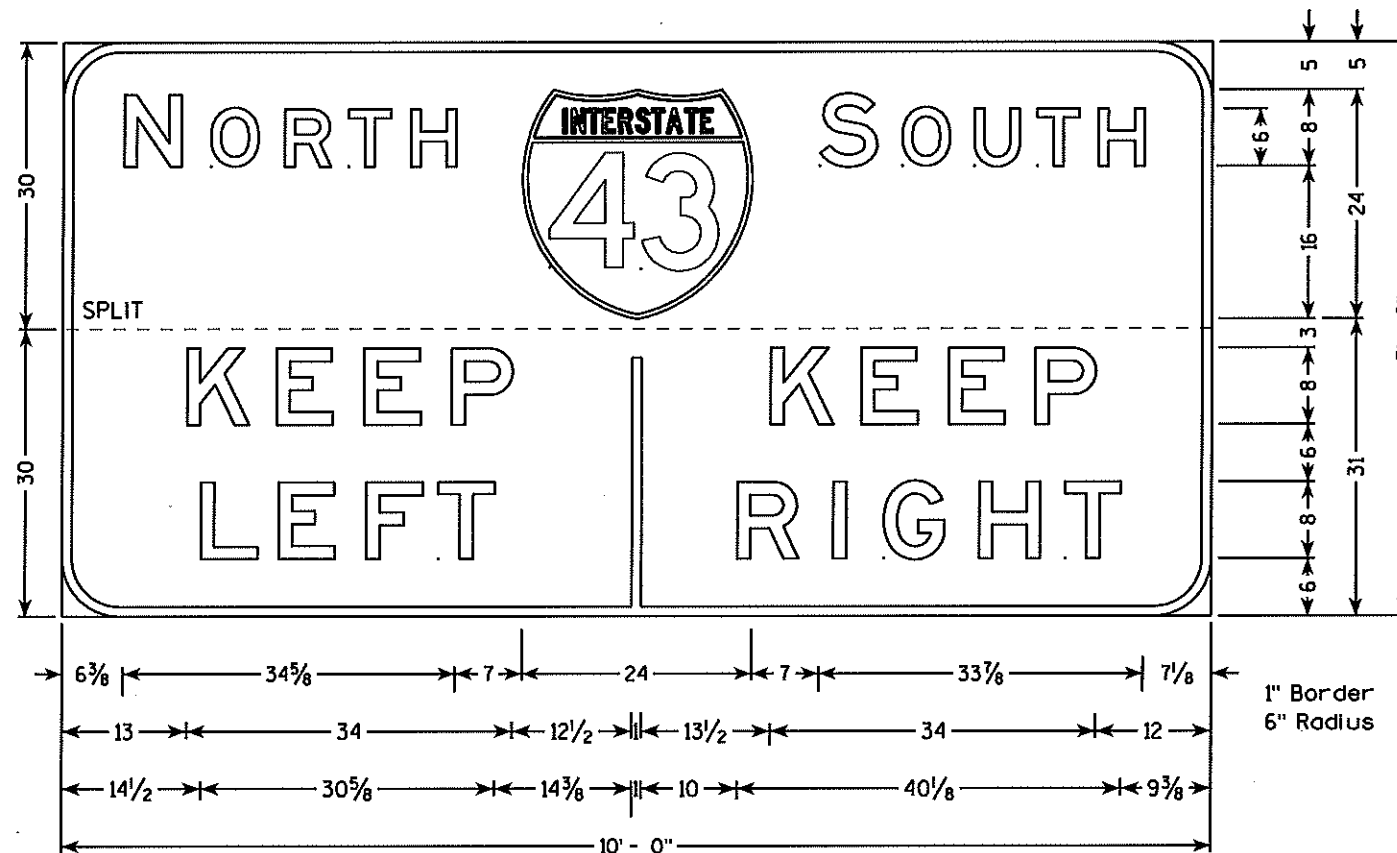




NOTES

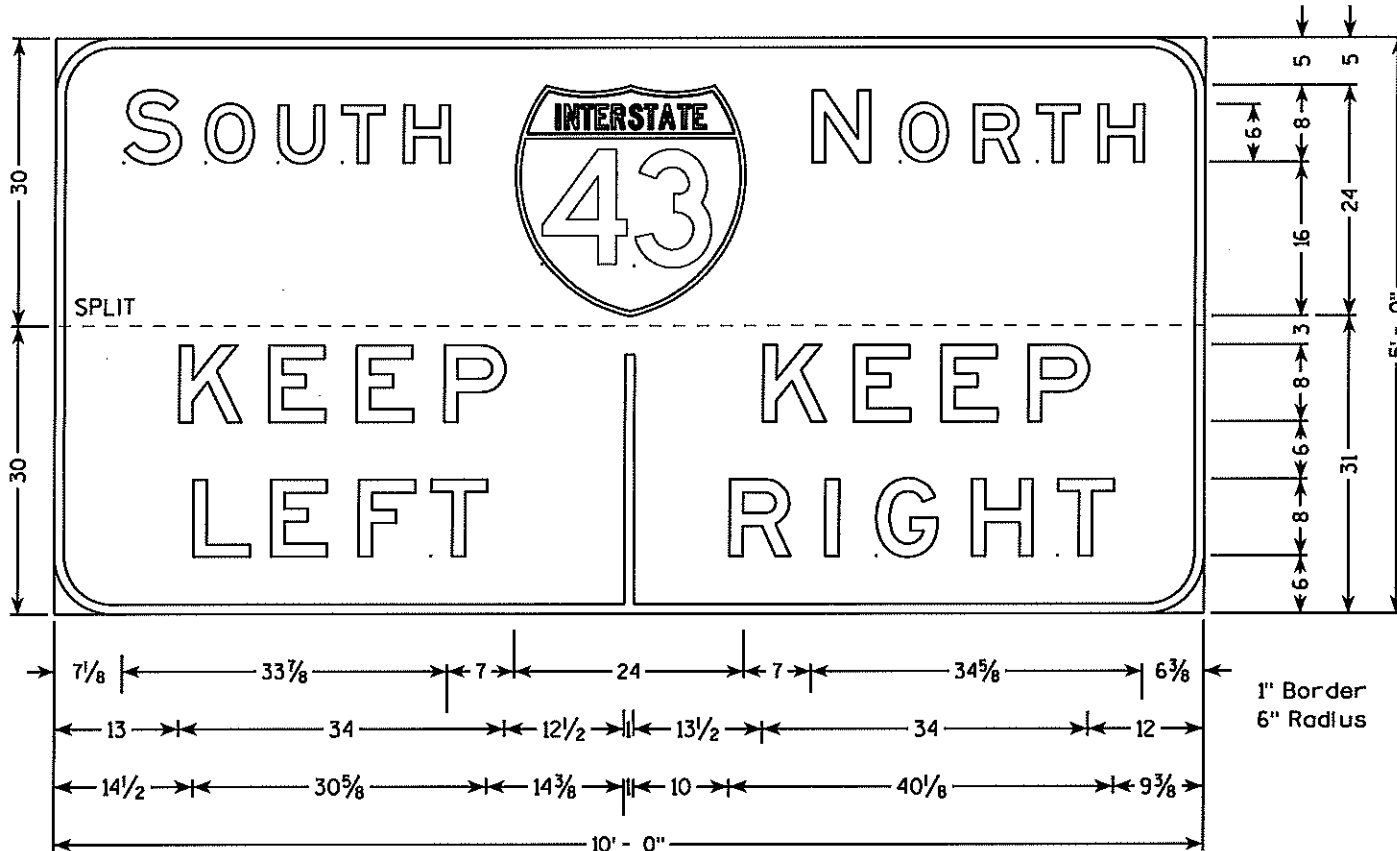
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E except as Shown





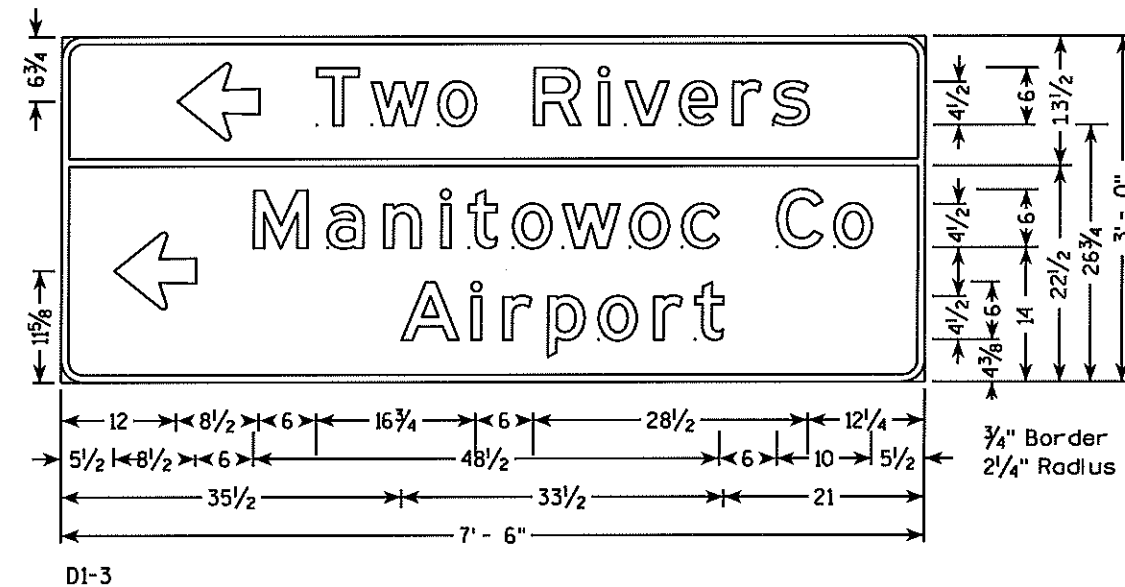
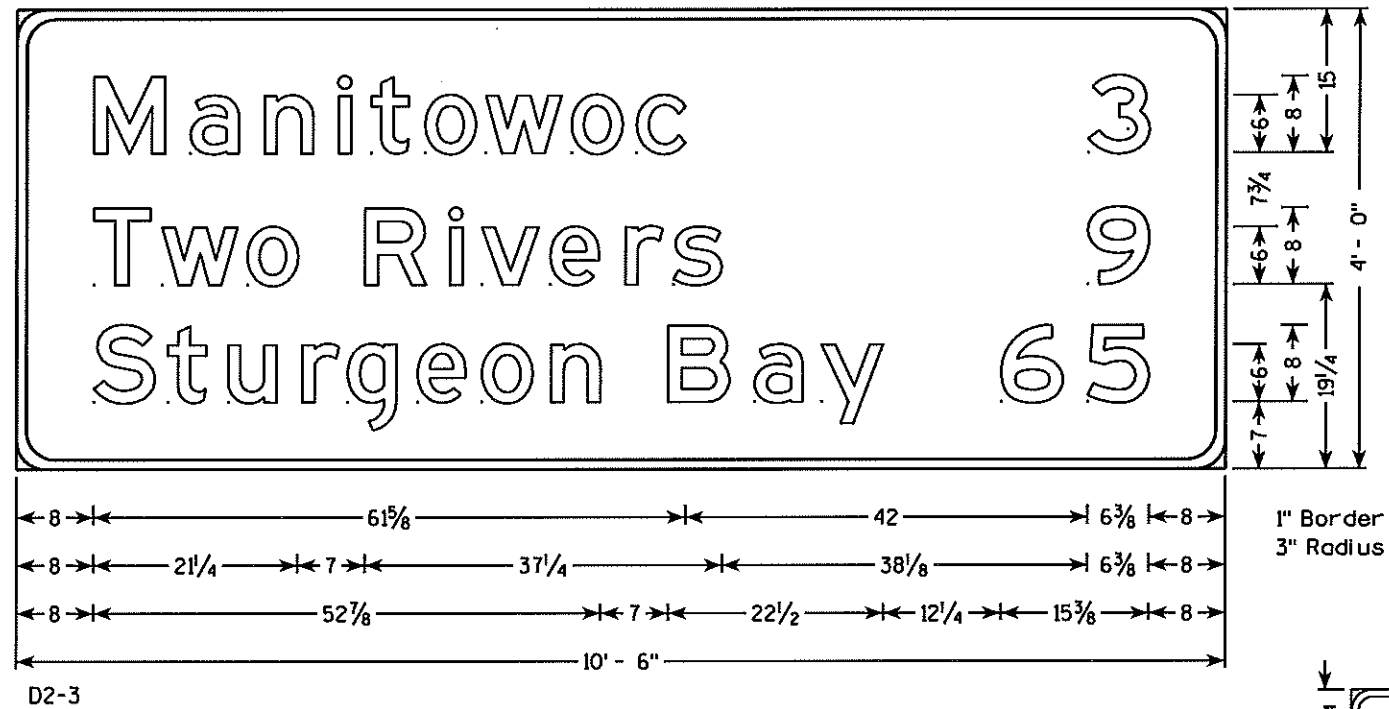
NOTES

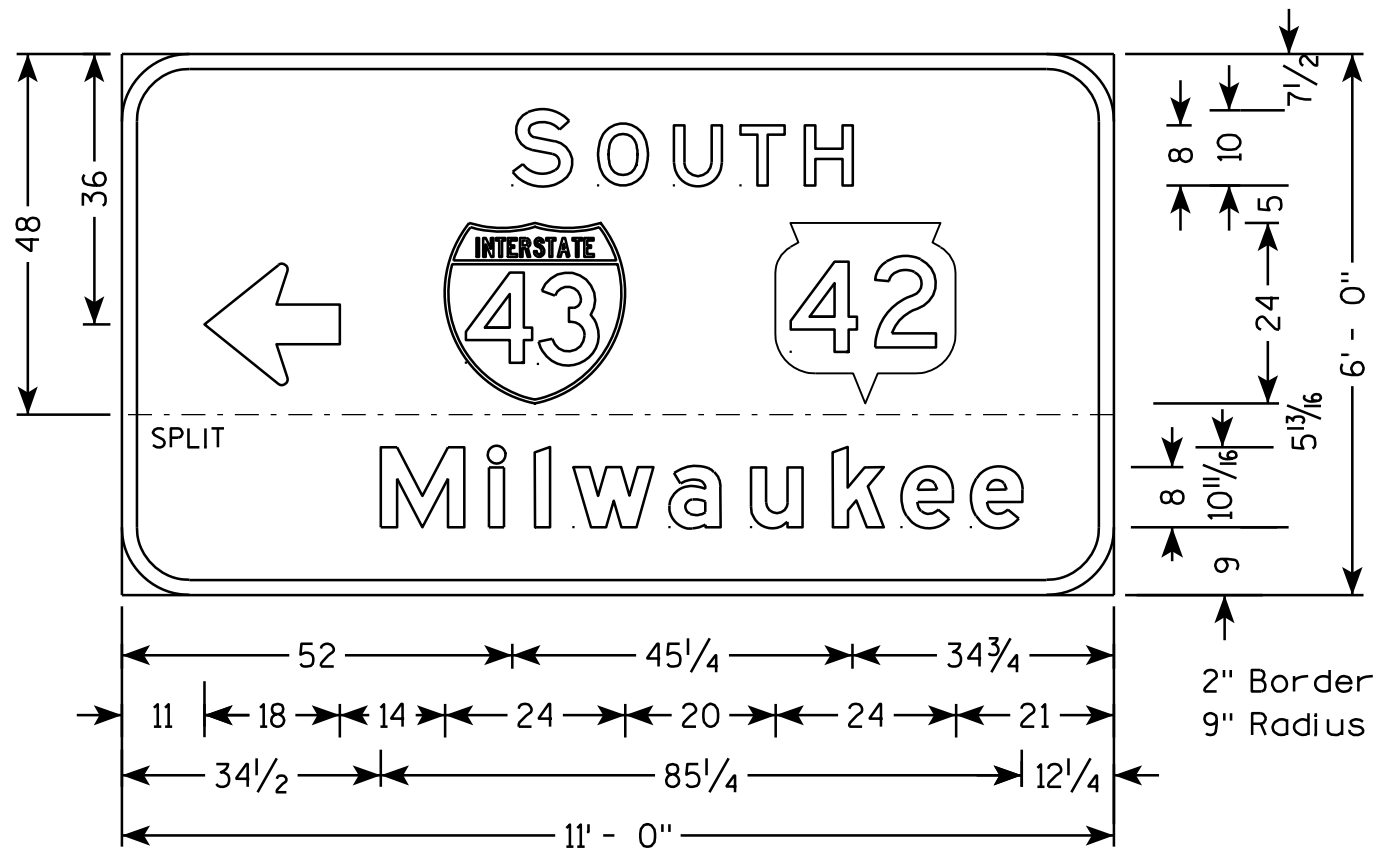
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2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E except as Shown



NOTES

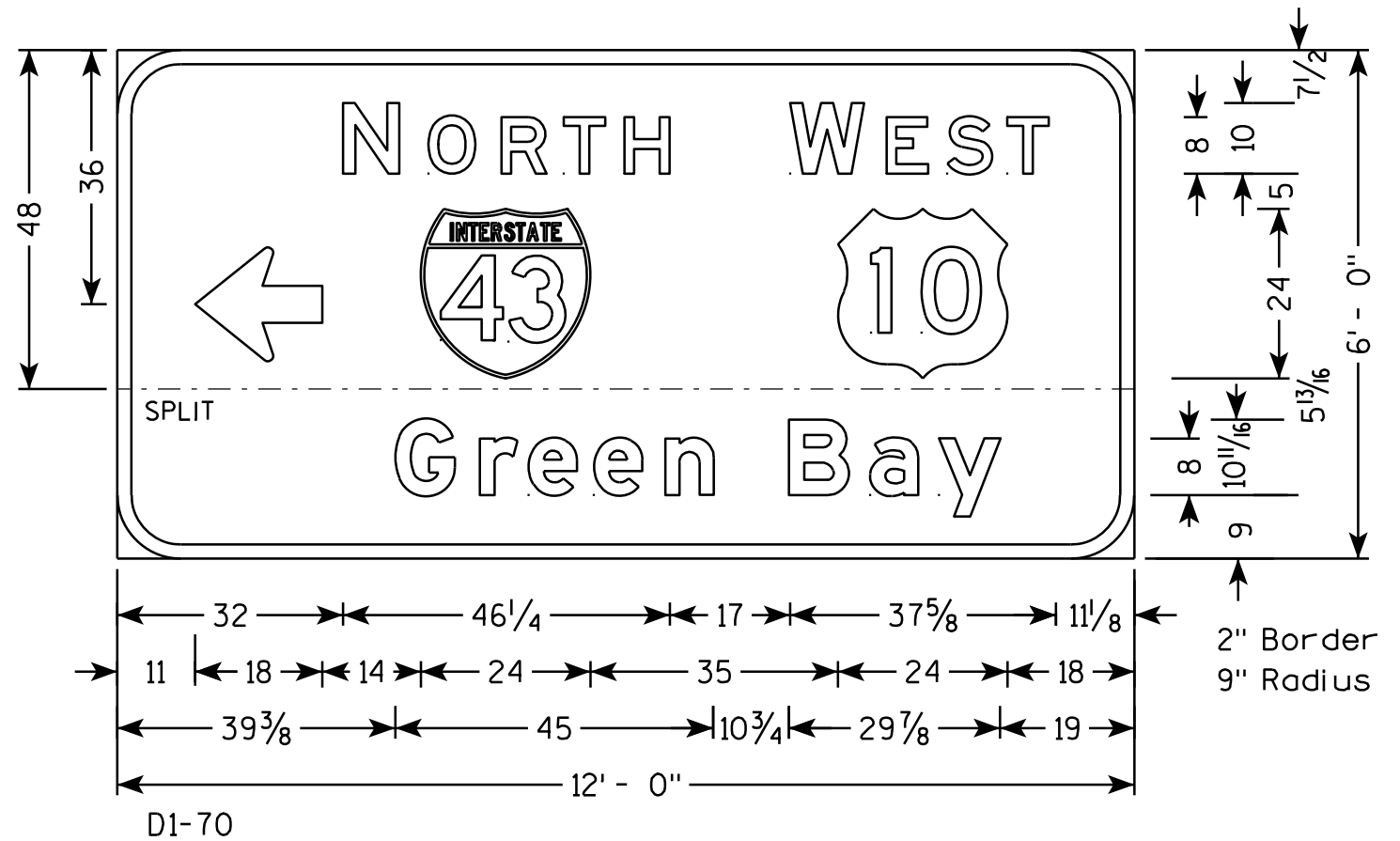
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2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E except as Shown



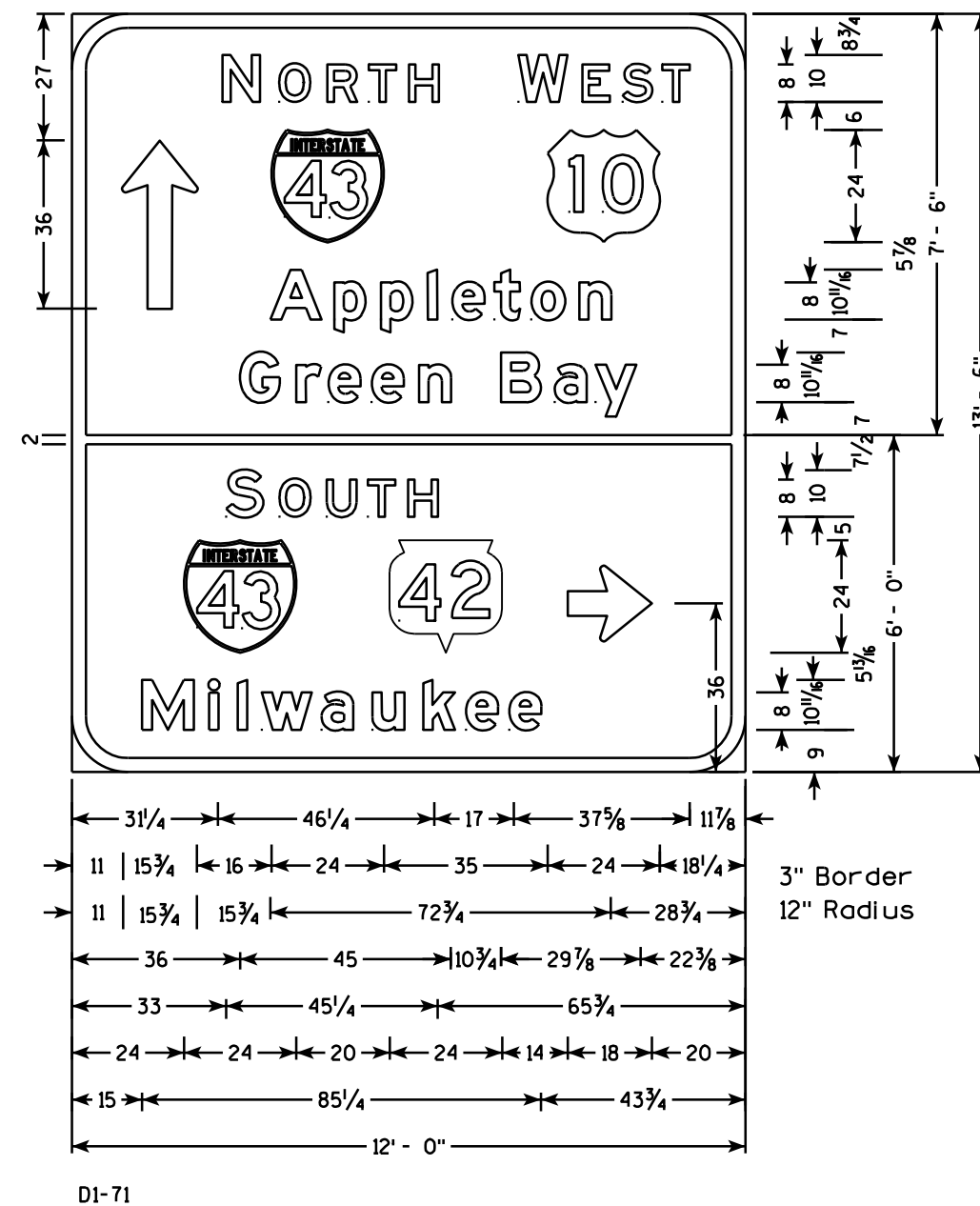


D1-70

- NOTES**
1. All Signs Type 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

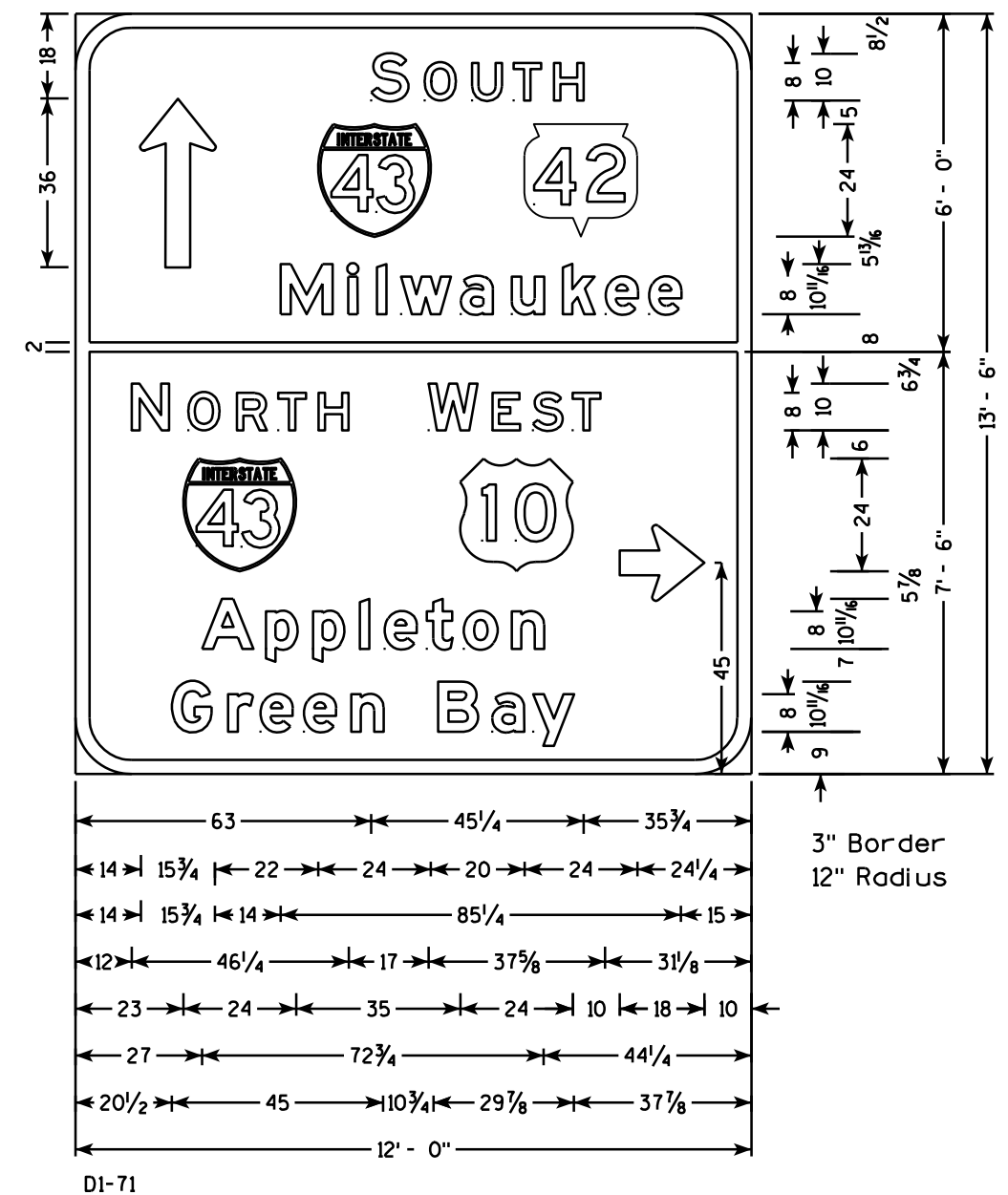


D1-70



D1-71

- NOTES**
1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Green
Message - White
 3. Message Series - E Modified except Cardinals are Series E

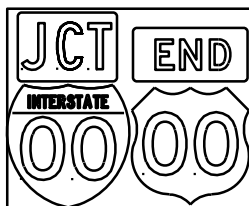


D1-71

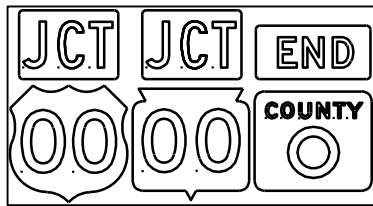
TYPICAL ASSEMBLIES



J1-1



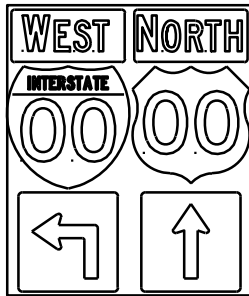
J1-2



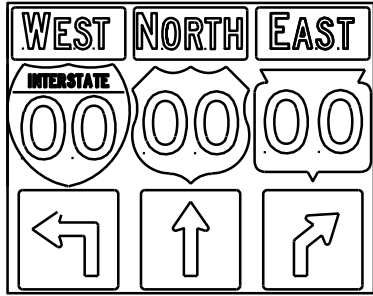
J1-3



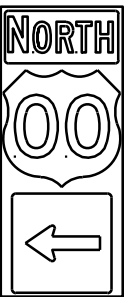
J2-1



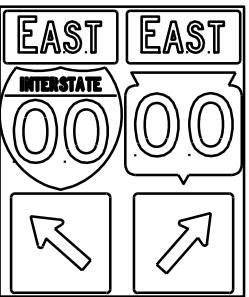
J2-2



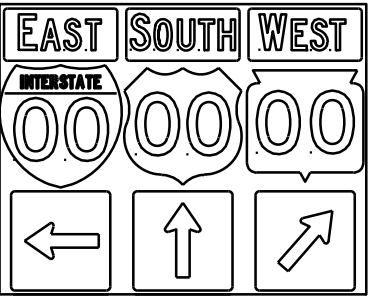
J2-3



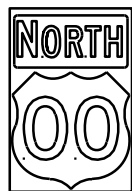
J3-1



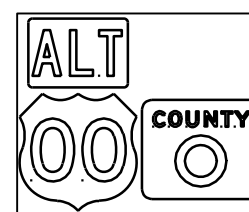
J3-2



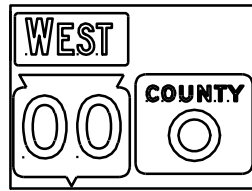
J3-3



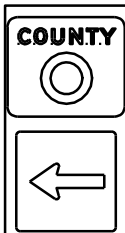
J4-1



J4-2



J4-2



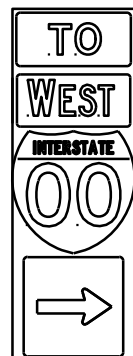
J13-1



J12-1



J32-1



J33-1



J23-1



J22-1



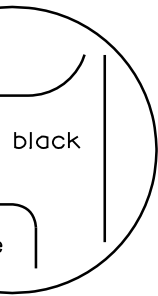
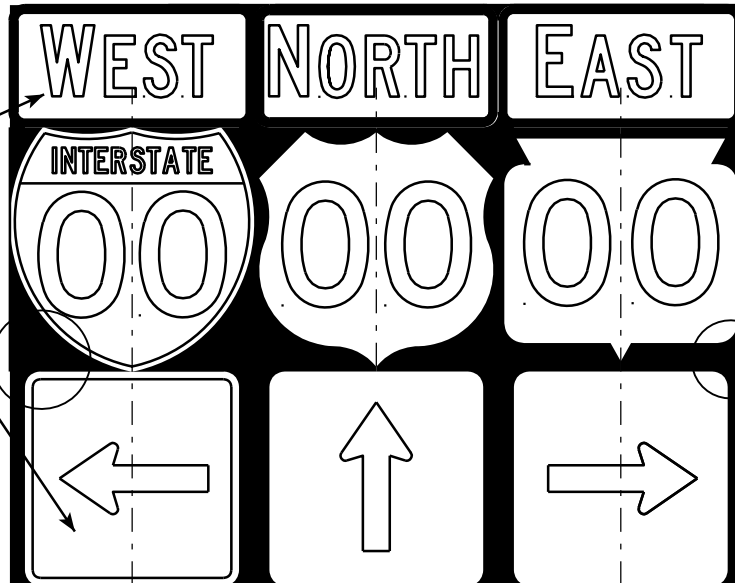
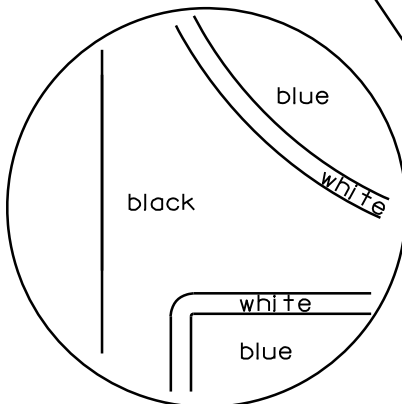
JV

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

NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Black Non-reflective
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

[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 3/25/13 PLATE NO. A2-1S.7

PROJECT NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN

PLOT DATE : 25-MAR-2013 11:33

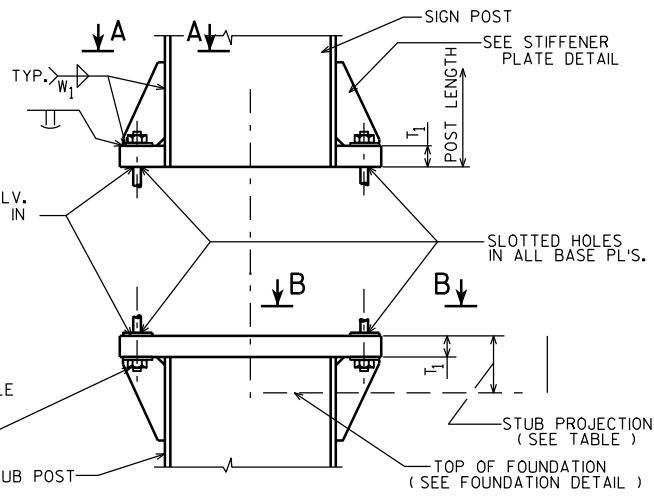
PLOT BY : mscsja

PLOT NAME :

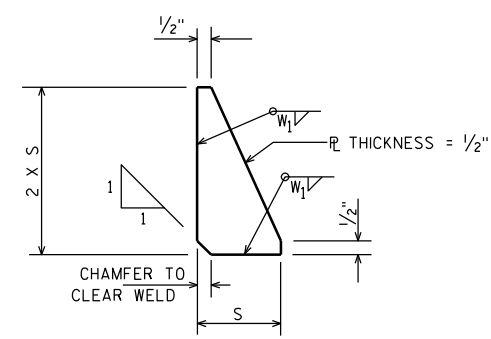
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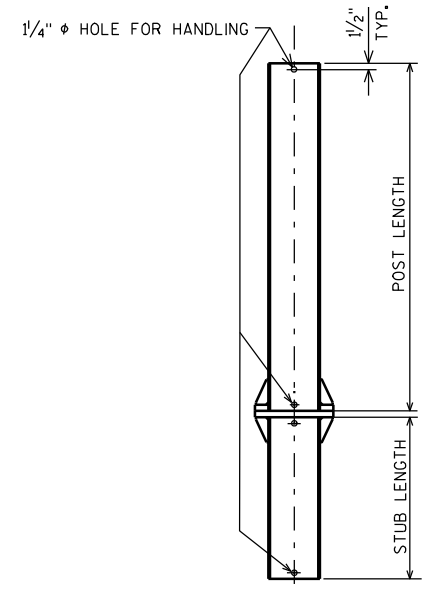
WISDOT/CADDs SHEET 42



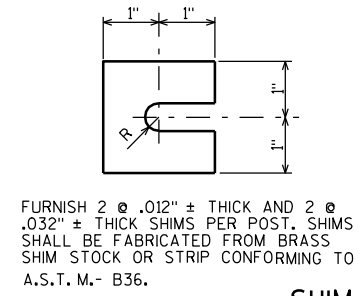
SIGN POST AND STUB POST ELEVATION



STIFFENER PLATE DETAIL
(SEE TABLE FOR DIMENSIONS)



POST DETAIL



SHIM DETAIL

QUANTITIES FOR 1 FOOTING			
	CONC. MASONRY C.Y.	REINF. STEEL	LBS.
A	0.6	34	
B	0.8	49	
C	0.9	50	
D	0.9	56	
E	1.0	62	

⑦

REINF.	TYPE	#3	#4
⑦	A	8 @ 4'-5"	5 @ 6'-3"
	B	8 @ 6'-5"	7 @ 6'-3"
	C	8 @ 6'-11"	7 @ 6'-3"
	D	8 @ 7'-5"	8 @ 6'-3"
	E	8 @ 7'-11"	9 @ 6'-3"

④

④

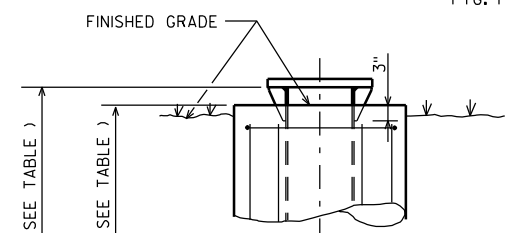
③

		BASE CONNECTION DATA TABLE											FOUNDATION DATA				②
TYPE	DIMENSION POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T ₁	T ₄	W ₁	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K
④	A	W10"X12.0 #/FT.	¾" φ @ 75*-FT.	5¼"	1'-0 ⅜"	⅞"	3½"	⅞"	1"	⅜"	⅝"	1⅜"	3'-6"	3"	2'-0 φ	5'-0"	76.0#
④	B	W12"X16.0 #/FT.	⅞" φ @ 85*-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	⅞"	⅝"	3"	5'-6"	3"	2'-0 φ	7'-0"	146.5#
	C	W12"X19.0 #/FT.	⅞" φ @ 85*-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅝"	⅝"	3"	6'-0"	3"	2'-0 φ	7'-6"	182.1#
	D	W12"X22.0 #/FT.	⅞" φ @ 85*-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅜"	⅝"	3"	6'-6"	3"	2'-0 φ	8'-0"	210.5#
③	E	W12"X26.0 #/FT.	1" φ @ 90*-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	⅝"	1⅜"	3"	7'-0"	3"	2'-0 φ	8'-6"	293.0#

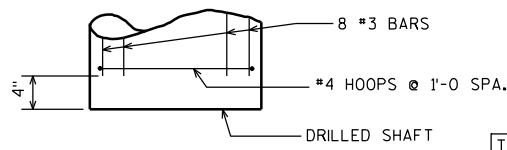
① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1POST) = K + (POST LENGTH X POST WT.)
"K" INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

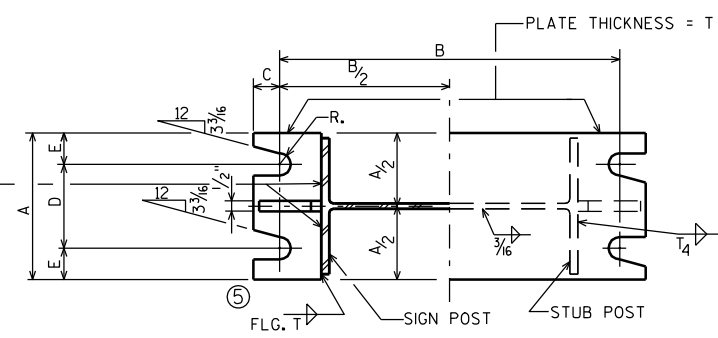
FTG. T + 1/16
FTG. T + 1/16



SECTION

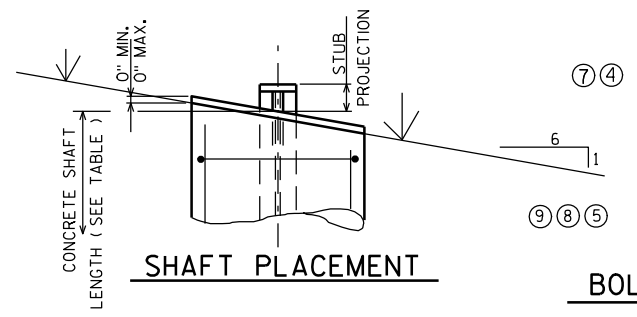


FOUNDATION DETAIL

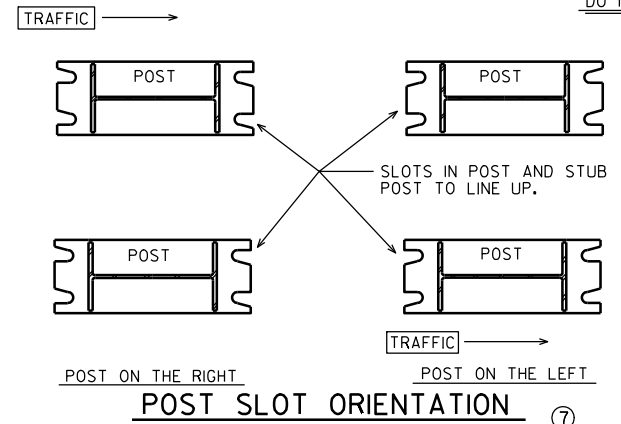


SECTION A-A

SECTION B-B



SHAFT PLACEMENT



POST SLOT ORIENTATION

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.
GROUP LOADS PERCENT OF ALLOWABLE STRESS
1. DEAD 100
2. DEAD & WIND 140
3. DEAD, ICE & 1/2 WIND Δ 140 Δ25 P.S.F. MIN.
ALLOWABLE SOIL PRESSURE = 1/2 T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
4. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 4/26/11 PLATE NO. A3-1.13

⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE R WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T ₁ • T ₂ & W ₁

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
TYPE A, B, C, D, & E
CONST. SPEC. 2011 DRAWN BY JPH PLANS CK'D.
FTG. & SIGN SUPPORT DETAILS
GROUND MOUNT BREAK-AWAY SIGNS
SHEET

7

VERITCAL DIMENSION ⇄

HORIZONTAL DIMENSION ⇄

	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.	
10 ft.	25 Sq. Ft	30 Sq. Ft	35 Sq. Ft	40 Sq. Ft	45 Sq. Ft	50 Sq. Ft	55 Sq. Ft	60 Sq. Ft	65 Sq. Ft	70 Sq. Ft	75 Sq. Ft	80 Sq. Ft	85 Sq. Ft	90 Sq. Ft	95 Sq. Ft	100 Sq. Ft	105 Sq. Ft	110 Sq. Ft	115 Sq. Ft	120 Sq. Ft	125 Sq. Ft	130 Sq. Ft	135 Sq. Ft	140 Sq. Ft	145 Sq. Ft	150 Sq. Ft	155 Sq. Ft	160 Sq. Ft	
11 ft.	27.5 Sq. Ft	33 Sq. Ft	38.5 Sq. Ft	44 Sq. Ft	49.5 Sq. Ft	55 Sq. Ft	60.5 Sq. Ft	66 Sq. Ft	71.5 Sq. Ft	77 Sq. Ft	82.5 Sq. Ft	88 Sq. Ft	93.5 Sq. Ft	99 Sq. Ft	104.5 Sq. Ft	110 Sq. Ft	115.5 Sq. Ft	121 Sq. Ft	126.5 Sq. Ft	132 Sq. Ft	137.5 Sq. Ft	143 Sq. Ft	148.5 Sq. Ft	154 Sq. Ft	159.5 Sq. Ft	165 Sq. Ft	170.5 Sq. Ft	176 Sq. Ft	
12 ft.	30 Sq. Ft	36 Sq. Ft	42 Sq. Ft	48 Sq. Ft	54 Sq. Ft	60 Sq. Ft	66 Sq. Ft	72 Sq. Ft	78 Sq. Ft	84 Sq. Ft	90 Sq. Ft	96 Sq. Ft	102 Sq. Ft	108 Sq. Ft	114 Sq. Ft	120 Sq. Ft	126 Sq. Ft	132 Sq. Ft	138 Sq. Ft	144 Sq. Ft	150 Sq. Ft	156 Sq. Ft	162 Sq. Ft	168 Sq. Ft	174 Sq. Ft	180 Sq. Ft	186 Sq. Ft	192 Sq. Ft	
13 ft.	32.5 Sq. Ft	39 Sq. Ft	45.5 Sq. Ft	52 Sq. Ft	58.5 Sq. Ft	65 Sq. Ft	71.5 Sq. Ft	78 Sq. Ft	84.5 Sq. Ft	91 Sq. Ft	97.5 Sq. Ft	104 Sq. Ft	110.5 Sq. Ft	117 Sq. Ft	123.5 Sq. Ft	130 Sq. Ft	136.5 Sq. Ft	143 Sq. Ft	149.5 Sq. Ft	156 Sq. Ft	162.5 Sq. Ft	169 Sq. Ft	175.5 Sq. Ft	182 Sq. Ft	188.5 Sq. Ft	195 Sq. Ft	201.5 Sq. Ft	208 Sq. Ft	
14 ft.	35 Sq. Ft	42 Sq. Ft	49 Sq. Ft	56 Sq. Ft	63 Sq. Ft	70 Sq. Ft	77 Sq. Ft	84 Sq. Ft	91 Sq. Ft	98 Sq. Ft	105 Sq. Ft	112 Sq. Ft	119 Sq. Ft	126 Sq. Ft	133 Sq. Ft	140 Sq. Ft	147 Sq. Ft	154 Sq. Ft	161 Sq. Ft	168 Sq. Ft	175 Sq. Ft	182 Sq. Ft	189 Sq. Ft	196 Sq. Ft	203 Sq. Ft	210 Sq. Ft	217 Sq. Ft	224 Sq. Ft	
15 ft.	37.5 Sq. Ft	45 Sq. Ft	52.5 Sq. Ft	60 Sq. Ft	67.5 Sq. Ft	75 Sq. Ft	82.5 Sq. Ft	90 Sq. Ft	97.5 Sq. Ft	105 Sq. Ft	112.5 Sq. Ft	120 Sq. Ft	127.5 Sq. Ft	135 Sq. Ft	142.5 Sq. Ft	150 Sq. Ft	157.5 Sq. Ft	165 Sq. Ft	172.5 Sq. Ft	180 Sq. Ft	187.5 Sq. Ft	195 Sq. Ft	202.5 Sq. Ft	210 Sq. Ft	217.5 Sq. Ft	225 Sq. Ft	232.5 Sq. Ft	240 Sq. Ft	
16 ft.	40 Sq. Ft	48 Sq. Ft	56 Sq. Ft	64 Sq. Ft	72 Sq. Ft	80 Sq. Ft	88 Sq. Ft	96 Sq. Ft	104 Sq. Ft	112 Sq. Ft	120 Sq. Ft	128 Sq. Ft	136 Sq. Ft	144 Sq. Ft	152 Sq. Ft	160 Sq. Ft	168 Sq. Ft	176 Sq. Ft	184 Sq. Ft	192 Sq. Ft	200 Sq. Ft	208 Sq. Ft	216 Sq. Ft	224 Sq. Ft	232 Sq. Ft	240 Sq. Ft	248 Sq. Ft	256 Sq. Ft	
17 ft.	42.5 Sq. Ft	51 Sq. Ft	59.5 Sq. Ft	68 Sq. Ft	76.5 Sq. Ft	85 Sq. Ft	93.5 Sq. Ft	102 Sq. Ft	110.5 Sq. Ft	119 Sq. Ft	127.5 Sq. Ft	136 Sq. Ft	144.5 Sq. Ft	153 Sq. Ft	161.5 Sq. Ft	170 Sq. Ft	178.5 Sq. Ft	187 Sq. Ft	195.5 Sq. Ft	204 Sq. Ft	212.5 Sq. Ft	221 Sq. Ft	229.5 Sq. Ft	238 Sq. Ft	246.5 Sq. Ft	255 Sq. Ft	263.5 Sq. Ft	272 Sq. Ft	
18 ft.	45 Sq. Ft	54 Sq. Ft	63 Sq. Ft	72 Sq. Ft	81 Sq. Ft	90 Sq. Ft	99 Sq. Ft	108 Sq. Ft	117 Sq. Ft	126 Sq. Ft	135 Sq. Ft	144 Sq. Ft	153 Sq. Ft	162 Sq. Ft	171 Sq. Ft	180 Sq. Ft	189 Sq. Ft	198 Sq. Ft	207 Sq. Ft	216 Sq. Ft	225 Sq. Ft	234 Sq. Ft	243 Sq. Ft	252 Sq. Ft	261 Sq. Ft	270 Sq. Ft	279 Sq. Ft	288 Sq. Ft	
19 ft.	47.5 Sq. Ft	57 Sq. Ft	66.5 Sq. Ft	76 Sq. Ft	85.5 Sq. Ft	95 Sq. Ft	104.5 Sq. Ft	114 Sq. Ft	123.5 Sq. Ft	133 Sq. Ft	142.5 Sq. Ft	152 Sq. Ft	161.5 Sq. Ft	171 Sq. Ft	180.5 Sq. Ft	190 Sq. Ft	199.5 Sq. Ft	209 Sq. Ft	218.5 Sq. Ft	228 Sq. Ft	237.5 Sq. Ft	247 Sq. Ft	256.5 Sq. Ft	266 Sq. Ft	275.5 Sq. Ft	285 Sq. Ft	294.5 Sq. Ft	304 Sq. Ft	
20 ft.	50 Sq. Ft	60 Sq. Ft	70 Sq. Ft	80 Sq. Ft	90 Sq. Ft	100 Sq. Ft	110 Sq. Ft	120 Sq. Ft	130 Sq. Ft	140 Sq. Ft	150 Sq. Ft	160 Sq. Ft	170 Sq. Ft	180 Sq. Ft	190 Sq. Ft	200 Sq. Ft	210 Sq. Ft	220 Sq. Ft	230 Sq. Ft	240 Sq. Ft	250 Sq. Ft	260 Sq. Ft	270 Sq. Ft	280 Sq. Ft	290 Sq. Ft	300 Sq. Ft	310 Sq. Ft	320 Sq. Ft	
21 ft.	52.5 Sq. Ft	63 Sq. Ft	73.5 Sq. Ft	84 Sq. Ft	94.5 Sq. Ft	105 Sq. Ft	115.5 Sq. Ft	126 Sq. Ft	136.5 Sq. Ft	147 Sq. Ft	157.5 Sq. Ft	168 Sq. Ft	178.5 Sq. Ft	189 Sq. Ft	199.5 Sq. Ft	210 Sq. Ft	220.5 Sq. Ft	231 Sq. Ft	241.5 Sq. Ft	252 Sq. Ft	262.5 Sq. Ft	273 Sq. Ft	283.5 Sq. Ft	294 Sq. Ft	304.5 Sq. Ft	315 Sq. Ft	325.5 Sq. Ft	336 Sq. Ft	
Type "A" (2 Posts) 1.2 CY Conc. 68 LBs Bar Steel					Type "B" (2 Posts) 1.6 CY Conc. 98 LBs Bar Steel										Type "C" (2 Posts) 1.8 CY Conc. 100 LBs Bar Steel					Type "D" (2 Posts) 1.8 CY Conc. 112 LBs Bar Steel			Type "C" (3 Posts) 2.7 CY Conc. 150 LBs Bar Steel						
STEEL POST SIZE "A" - W10" x 12" "B" - W12" x 16" "C" - W12" x 19" "D" - W12 x 22"																													

7

DETERMINATION OF HIGH STRENGTH
STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer

DATE 3/03/10 PLATE NO. A3-2.2

VERTICAL DIMENSION ⇄

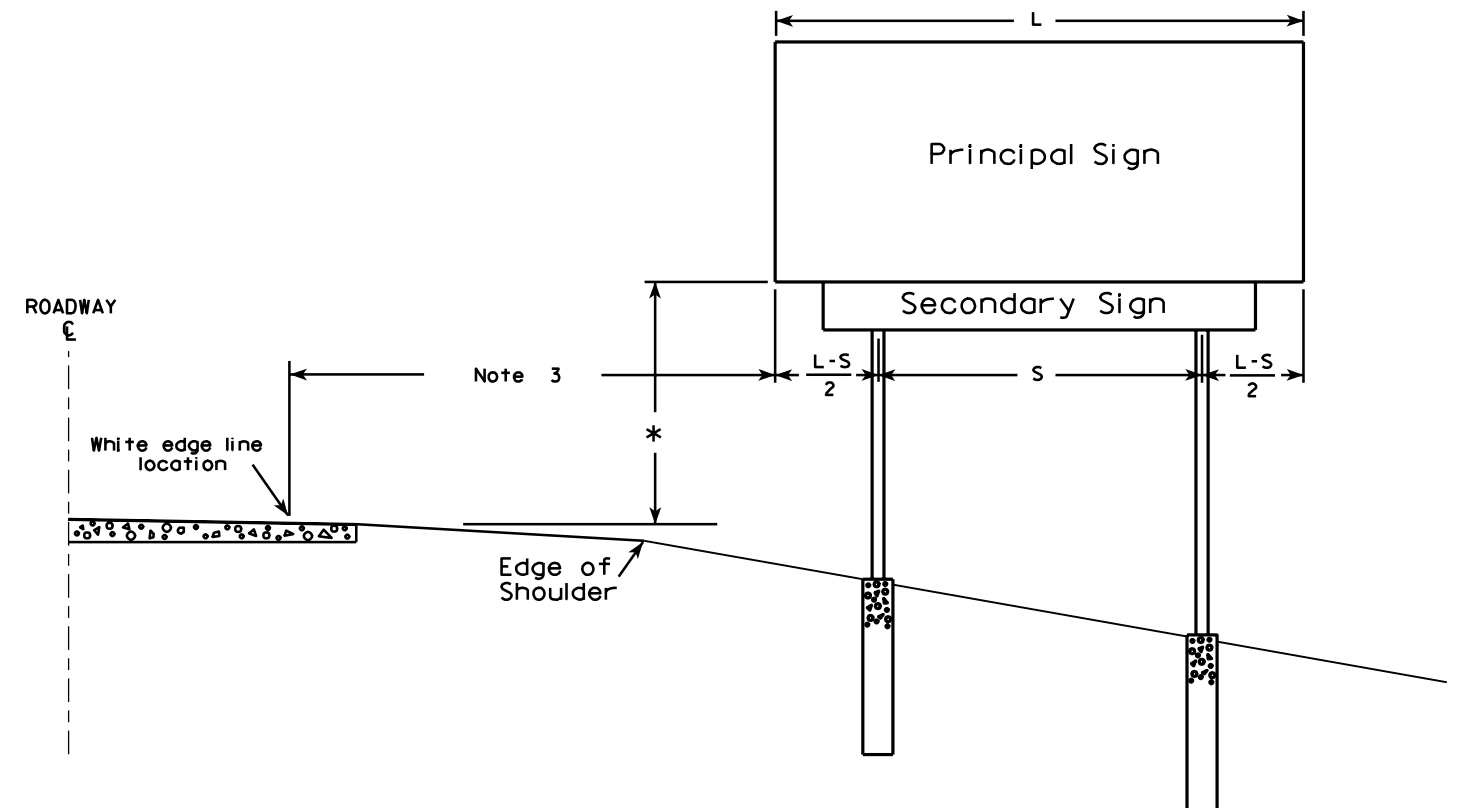
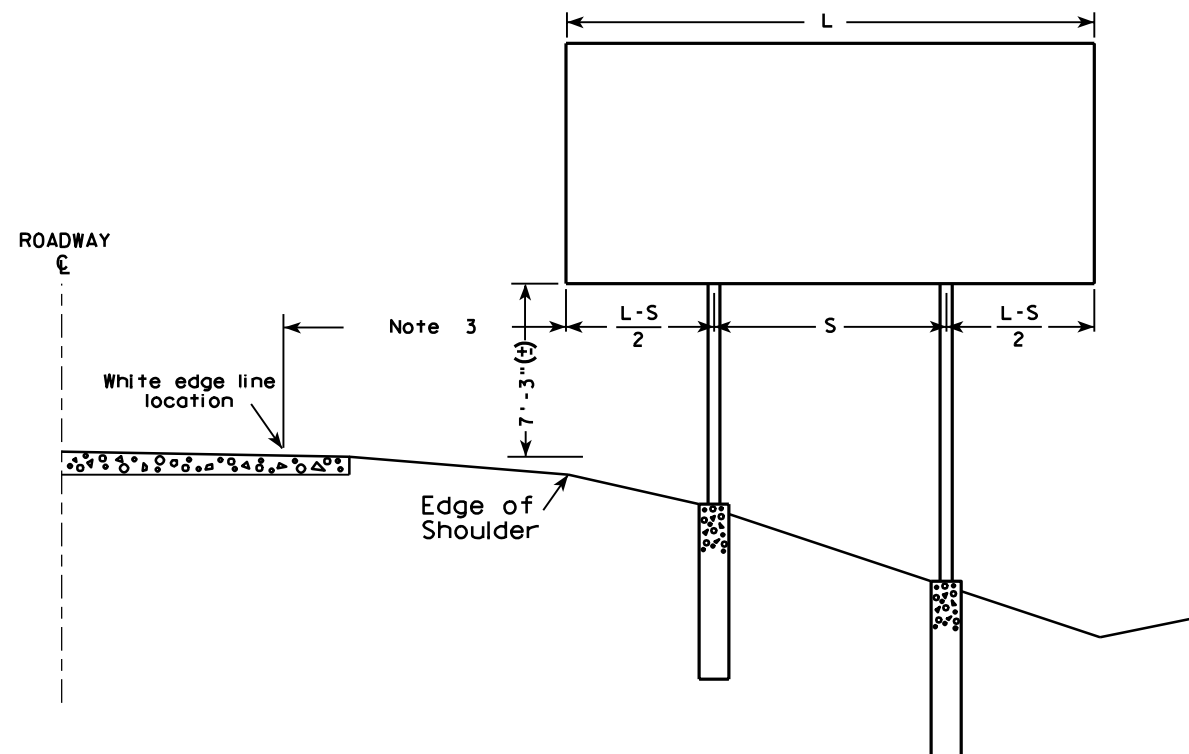
HORIZONTAL DIMENSION ⇄	Type "A" (2 Posts)																												
		2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
	22 ft.	55 Sq. Ft	66 Sq. Ft	77 Sq. Ft	88 Sq. Ft	99 Sq. Ft	110 Sq. Ft	121 Sq. Ft	132 Sq. Ft	143 Sq. Ft	154 Sq. Ft	165 Sq. Ft	176 Sq. Ft	187 Sq. Ft	198 Sq. Ft	209 Sq. Ft	220 Sq. Ft	231 Sq. Ft	242 Sq. Ft	253 Sq. Ft	264 Sq. Ft	275 Sq. Ft	286 Sq. Ft	297 Sq. Ft	308 Sq. Ft	319 Sq. Ft	330 Sq. Ft	341 Sq. Ft	352 Sq. Ft
	23 ft.	57.5 Sq. Ft	69 Sq. Ft	80.5 Sq. Ft	92 Sq. Ft	103.5 Sq. Ft	115 Sq. Ft	126.5 Sq. Ft	138 Sq. Ft	149.5 Sq. Ft	161 Sq. Ft	172.5 Sq. Ft	184 Sq. Ft	195.5 Sq. Ft	207 Sq. Ft	218.5 Sq. Ft	230 Sq. Ft	241.5 Sq. Ft	253 Sq. Ft	264.5 Sq. Ft	276 Sq. Ft	287.5 Sq. Ft	299 Sq. Ft	310.5 Sq. Ft	322 Sq. Ft	333.5 Sq. Ft	345 Sq. Ft	356.5 Sq. Ft	368 Sq. Ft
	24 ft.	60 Sq. Ft	72 Sq. Ft	84 Sq. Ft	96 Sq. Ft	108 Sq. Ft	120 Sq. Ft	132 Sq. Ft	144 Sq. Ft	156 Sq. Ft	168 Sq. Ft	180 Sq. Ft	192 Sq. Ft	204 Sq. Ft	216 Sq. Ft	228 Sq. Ft	240 Sq. Ft	252 Sq. Ft	264 Sq. Ft	276 Sq. Ft	288 Sq. Ft	300 Sq. Ft	312 Sq. Ft	324 Sq. Ft	336 Sq. Ft	348 Sq. Ft	360 Sq. Ft	372 Sq. Ft	384 Sq. Ft
	25 ft.	62.5 Sq. Ft	75 Sq. Ft	87.5 Sq. Ft	100 Sq. Ft	112.5 Sq. Ft	125 Sq. Ft	137.5 Sq. Ft	150 Sq. Ft	162.5 Sq. Ft	175 Sq. Ft	187.5 Sq. Ft	200 Sq. Ft	212.5 Sq. Ft	225 Sq. Ft	237.5 Sq. Ft	250 Sq. Ft	262.5 Sq. Ft	275 Sq. Ft	287.5 Sq. Ft	300 Sq. Ft	312.5 Sq. Ft	325 Sq. Ft	337.5 Sq. Ft	350 Sq. Ft	362.5 Sq. Ft	375 Sq. Ft	387.5 Sq. Ft	400 Sq. Ft
	26 ft.	65 Sq. Ft	78 Sq. Ft	91 Sq. Ft	104 Sq. Ft	117 Sq. Ft	130 Sq. Ft	143 Sq. Ft	156 Sq. Ft	169 Sq. Ft	182 Sq. Ft	195 Sq. Ft	208 Sq. Ft	221 Sq. Ft	234 Sq. Ft	247 Sq. Ft	260 Sq. Ft	273 Sq. Ft	286 Sq. Ft	299 Sq. Ft	312 Sq. Ft	325 Sq. Ft	338 Sq. Ft	351 Sq. Ft	364 Sq. Ft	377 Sq. Ft	390 Sq. Ft	403 Sq. Ft	416 Sq. Ft
	27 ft.	67.5 Sq. Ft	81 Sq. Ft	94.5 Sq. Ft	108 Sq. Ft	121.5 Sq. Ft	135 Sq. Ft	148.5 Sq. Ft	162 Sq. Ft	175.5 Sq. Ft	189 Sq. Ft	202.5 Sq. Ft	216 Sq. Ft	229.5 Sq. Ft	243 Sq. Ft	256.5 Sq. Ft	270 Sq. Ft	283.5 Sq. Ft	297 Sq. Ft	310.5 Sq. Ft	324 Sq. Ft	337.5 Sq. Ft	351 Sq. Ft	364.5 Sq. Ft	378 Sq. Ft	391.5 Sq. Ft	405 Sq. Ft	418.5 Sq. Ft	432 Sq. Ft
	28 ft.	70 Sq. Ft	84 Sq. Ft	98 Sq. Ft	112 Sq. Ft	126 Sq. Ft	140 Sq. Ft	154 Sq. Ft	168 Sq. Ft	182 Sq. Ft	196 Sq. Ft	210 Sq. Ft	224 Sq. Ft	238 Sq. Ft	252 Sq. Ft	266 Sq. Ft	280 Sq. Ft	294 Sq. Ft	308 Sq. Ft	322 Sq. Ft	336 Sq. Ft	350 Sq. Ft	364 Sq. Ft	378 Sq. Ft	392 Sq. Ft	406 Sq. Ft	420 Sq. Ft	434 Sq. Ft	448 Sq. Ft
	29 ft.	72.5 Sq. Ft	87 Sq. Ft	101.5 Sq. Ft	116 Sq. Ft	130.5 Sq. Ft	145 Sq. Ft	159.5 Sq. Ft	174 Sq. Ft	188.5 Sq. Ft	203 Sq. Ft	217.5 Sq. Ft	232 Sq. Ft	246.5 Sq. Ft	261 Sq. Ft	275.5 Sq. Ft	290 Sq. Ft	304.5 Sq. Ft	319 Sq. Ft	333.5 Sq. Ft	348 Sq. Ft	362.5 Sq. Ft	377 Sq. Ft	391.5 Sq. Ft	406 Sq. Ft	420.5 Sq. Ft	435 Sq. Ft	449.5 Sq. Ft	464 Sq. Ft
	30 ft.	75 Sq. Ft	90 Sq. Ft	105 Sq. Ft	120 Sq. Ft	135 Sq. Ft	150 Sq. Ft	165 Sq. Ft	180 Sq. Ft	195 Sq. Ft	210 Sq. Ft	225 Sq. Ft	240 Sq. Ft	255 Sq. Ft	270 Sq. Ft	285 Sq. Ft	300 Sq. Ft	315 Sq. Ft	330 Sq. Ft	345 Sq. Ft	360 Sq. Ft	375 Sq. Ft	390 Sq. Ft	405 Sq. Ft	420 Sq. Ft	435 Sq. Ft	450 Sq. Ft	465 Sq. Ft	480 Sq. Ft
Type "A" (2 Posts) 1.2 CY Conc. 68 Lbs Bar Steel	31 ft.	77.5 Sq. Ft	93 Sq. Ft	108.5 Sq. Ft	124 Sq. Ft	139.5 Sq. Ft	155 Sq. Ft	170.5 Sq. Ft	186 Sq. Ft	201.5 Sq. Ft	217 Sq. Ft	232.5 Sq. Ft	248 Sq. Ft	263.5 Sq. Ft	279 Sq. Ft	294.5 Sq. Ft	310 Sq. Ft	325.5 Sq. Ft	341 Sq. Ft	356.5 Sq. Ft	372 Sq. Ft	387.5 Sq. Ft	403 Sq. Ft	418.5 Sq. Ft	434 Sq. Ft	449.5 Sq. Ft	465 Sq. Ft	480.5 Sq. Ft	496 Sq. Ft
	32 ft.	80 Sq. Ft	96 Sq. Ft	112 Sq. Ft	128 Sq. Ft	144 Sq. Ft	160 Sq. Ft	176 Sq. Ft	192 Sq. Ft	208 Sq. Ft	224 Sq. Ft	240 Sq. Ft	256 Sq. Ft	272 Sq. Ft	288 Sq. Ft	304 Sq. Ft	320 Sq. Ft	336 Sq. Ft	352 Sq. Ft	368 Sq. Ft	384 Sq. Ft	400 Sq. Ft	416 Sq. Ft	432 Sq. Ft	448 Sq. Ft	464 Sq. Ft	480 Sq. Ft	496 Sq. Ft	512 Sq. Ft
	33 ft.	82.5 Sq. Ft	99 Sq. Ft	115.5 Sq. Ft	132 Sq. Ft	148.5 Sq. Ft	165 Sq. Ft	181.5 Sq. Ft	198 Sq. Ft	214.5 Sq. Ft	231 Sq. Ft	247.5 Sq. Ft	264 Sq. Ft	280.5 Sq. Ft	297 Sq. Ft	313.5 Sq. Ft	330 Sq. Ft	346.5 Sq. Ft	363 Sq. Ft	379.5 Sq. Ft	396 Sq. Ft	412.5 Sq. Ft	429 Sq. Ft	445.5 Sq. Ft	462 Sq. Ft	478.5 Sq. Ft	495 Sq. Ft	511.5 Sq. Ft	528 Sq. Ft
	34 ft.	85 Sq. Ft	102 Sq. Ft	119 Sq. Ft	136 Sq. Ft	153 Sq. Ft	170 Sq. Ft	187 Sq. Ft	204 Sq. Ft	221 Sq. Ft	238 Sq. Ft	255 Sq. Ft	272 Sq. Ft	289 Sq. Ft	306 Sq. Ft	323 Sq. Ft	340 Sq. Ft	357 Sq. Ft	374 Sq. Ft	391 Sq. Ft	408 Sq. Ft	425 Sq. Ft	442 Sq. Ft	459 Sq. Ft	476 Sq. Ft	493 Sq. Ft	510 Sq. Ft	527 Sq. Ft	544 Sq. Ft
	35 ft.	87.5 Sq. Ft	105 Sq. Ft	122.5 Sq. Ft	140 Sq. Ft	157.5 Sq. Ft	175 Sq. Ft	192.5 Sq. Ft	210 Sq. Ft	227.5 Sq. Ft	245 Sq. Ft	262.5 Sq. Ft	280 Sq. Ft	297.5 Sq. Ft	315 Sq. Ft	332.5 Sq. Ft	350 Sq. Ft	367.5 Sq. Ft	385 Sq. Ft	402.5 Sq. Ft	420 Sq. Ft	437.5 Sq. Ft	455 Sq. Ft	472.5 Sq. Ft	490 Sq. Ft	507.5 Sq. Ft	525 Sq. Ft	542.5 Sq. Ft	560 Sq. Ft
	36 ft.	90 Sq. Ft	108 Sq. Ft	126 Sq. Ft	144 Sq. Ft	162 Sq. Ft	180 Sq. Ft	198 Sq. Ft	216 Sq. Ft	234 Sq. Ft	252 Sq. Ft	270 Sq. Ft	288 Sq. Ft	306 Sq. Ft	324 Sq. Ft	342 Sq. Ft	360 Sq. Ft	378 Sq. Ft	396 Sq. Ft	414 Sq. Ft	432 Sq. Ft	450 Sq. Ft	468 Sq. Ft	486 Sq. Ft	504 Sq. Ft	522 Sq. Ft	540 Sq. Ft	558 Sq. Ft	576 Sq. Ft
Type "B" (2 Posts) 1.6 CY Conc. 98 Lbs Bar Steel												Type "C" (2 Posts) 1.8 CY Conc. 100 Lbs Bar Steel			Type "D" (2 Posts) 1.8 CY Conc. 112 Lbs Bar Steel			Type "C" (3 Posts) 2.7 CY Conc. 150 Lbs Bar Steel			Type "D" (3 Posts) 2.7 CY Conc. 168 Lbs Bar Steel								
STEEL POST SIZE "A" - W10" x 12" "B" - W12" x 16" "C" - W12" x 19" "D" - W12 x 22"																													

DETERMINATION OF HIGH STRENGTH
STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/5/10 PLATE NO. A3-3.2



GENERAL NOTES

1. For a 2 post installation, S equals $3L/5$, but shall not be less than 9 ft.
2. For a 3 post installation, S equals $5L/7$, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3" (±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3" (±).

TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

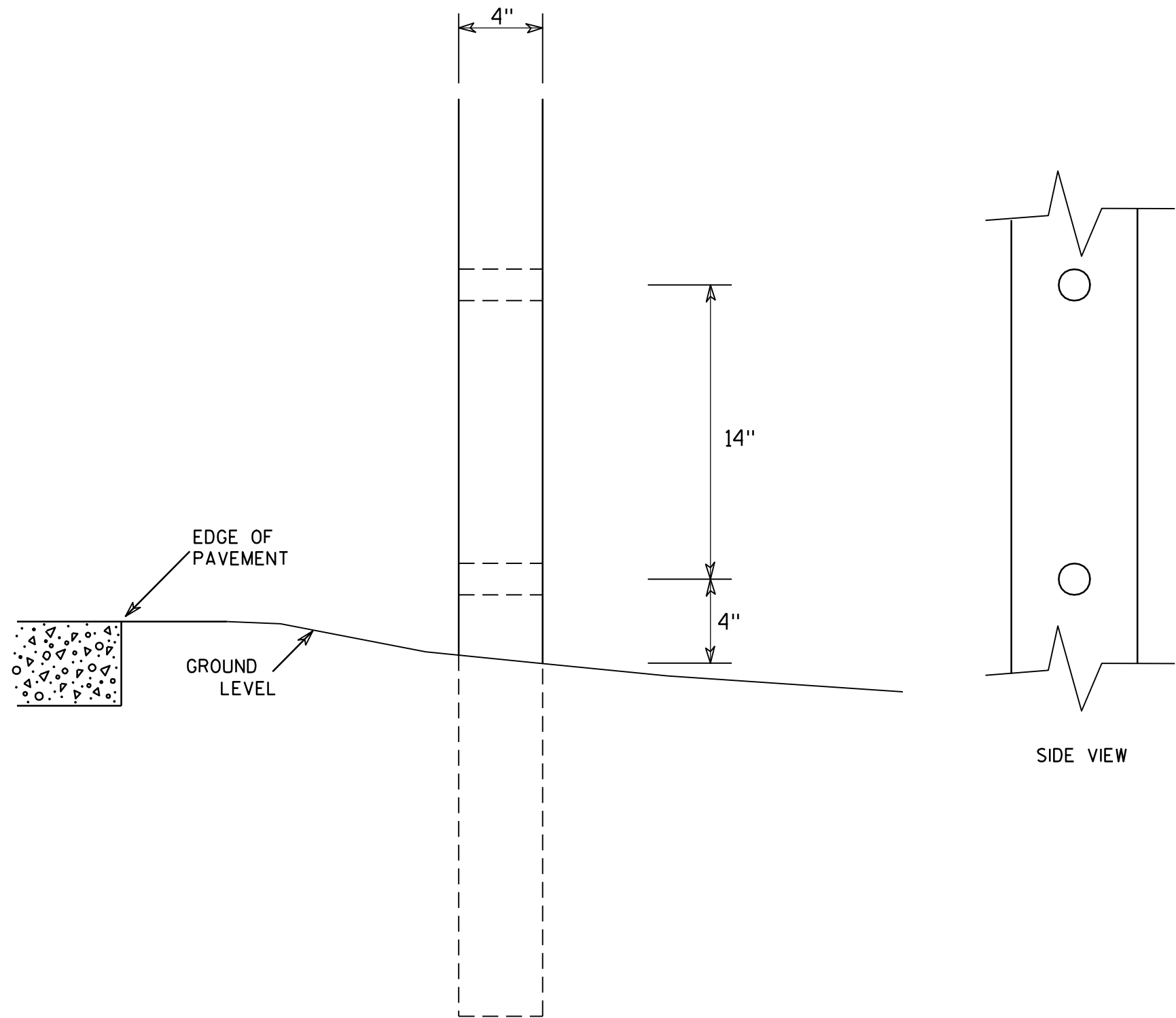
DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:

SHEET NO: 150

E

7

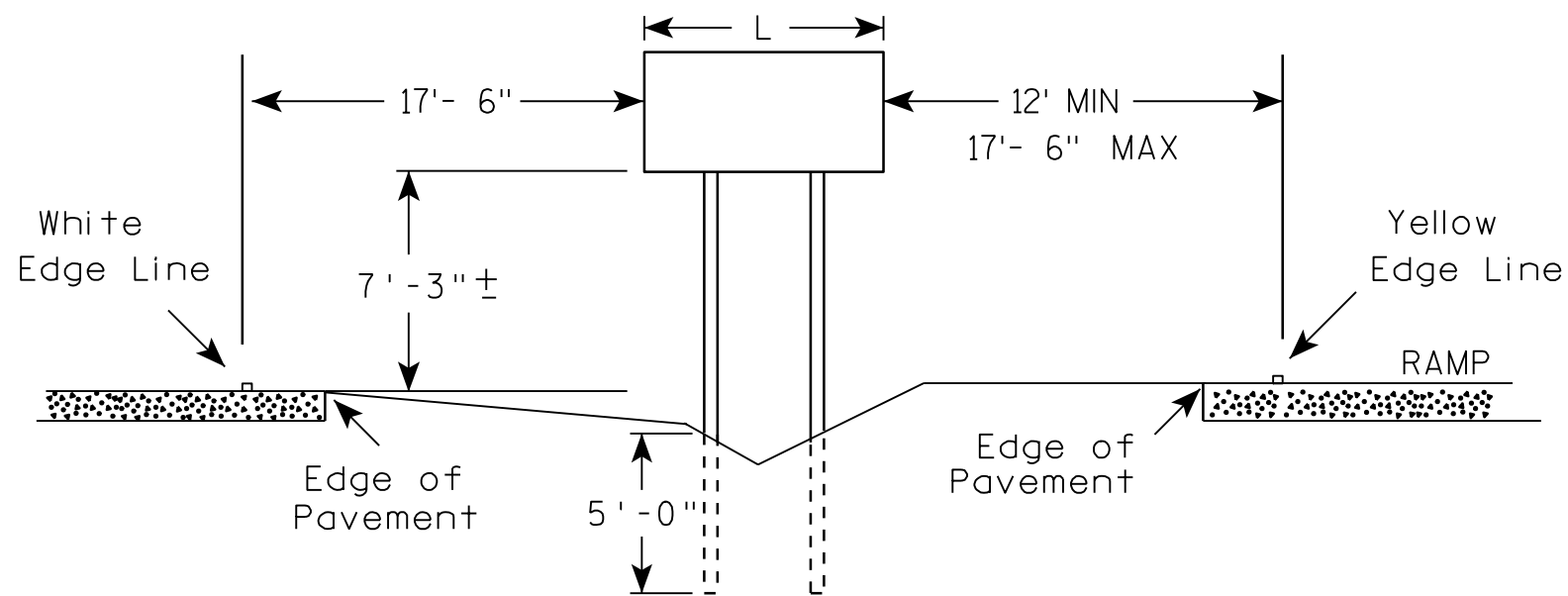


GENERAL NOTES

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

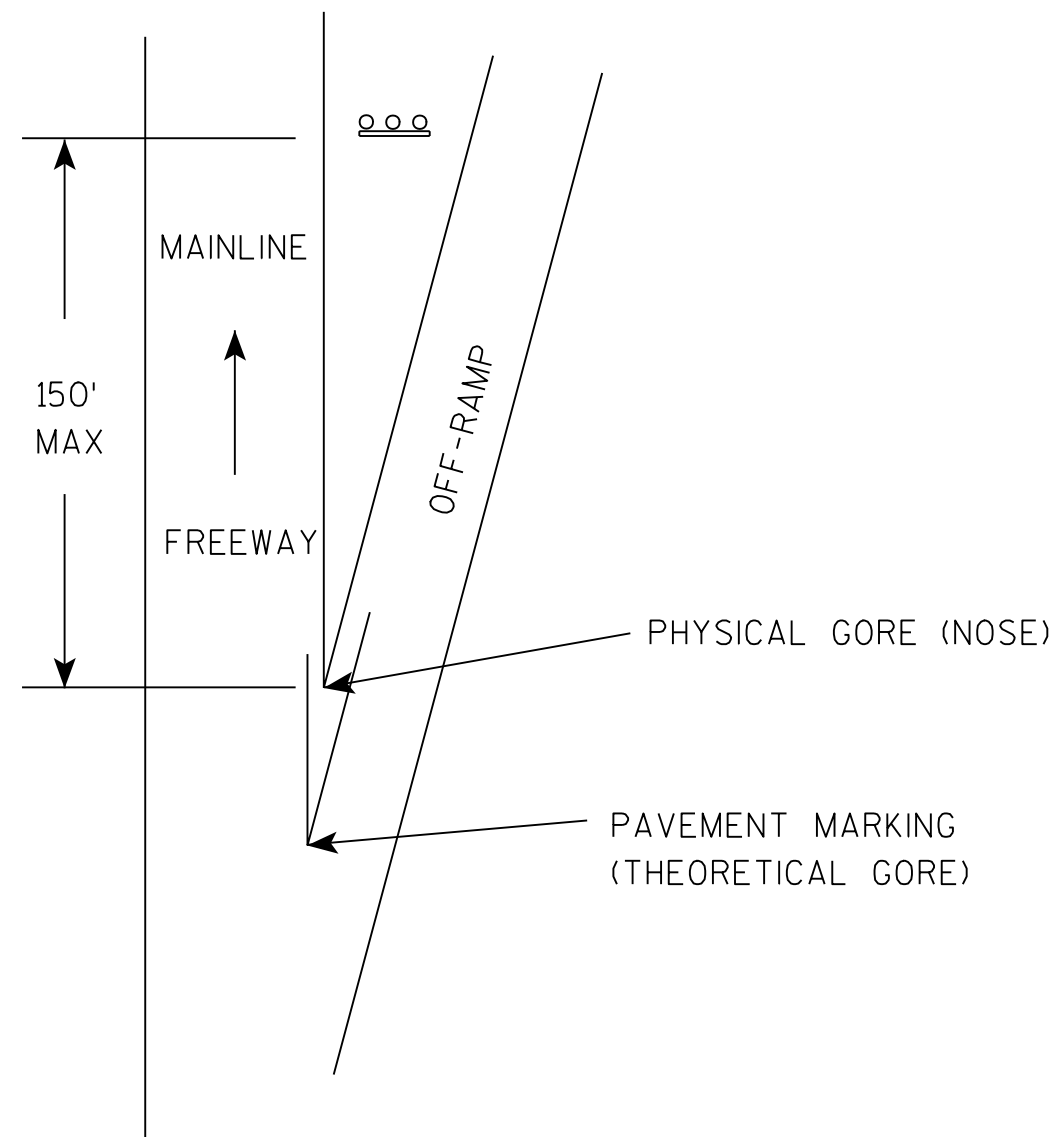
7

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



GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 9 feet, use 3 posts as per A4-4.
6. The ($\mp$) tolerance for the mounting height is 3 inches.



TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 4/4/00

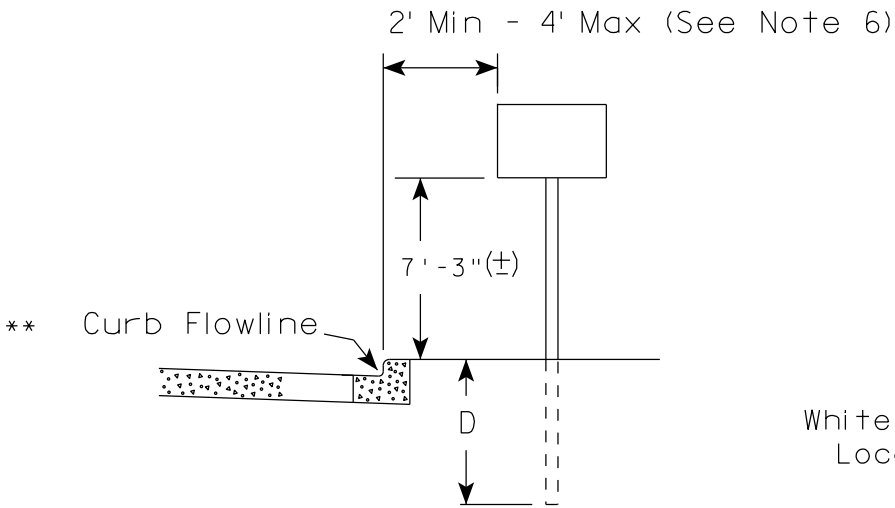
PLATE NO. A4-2.2

PROJECT NO:

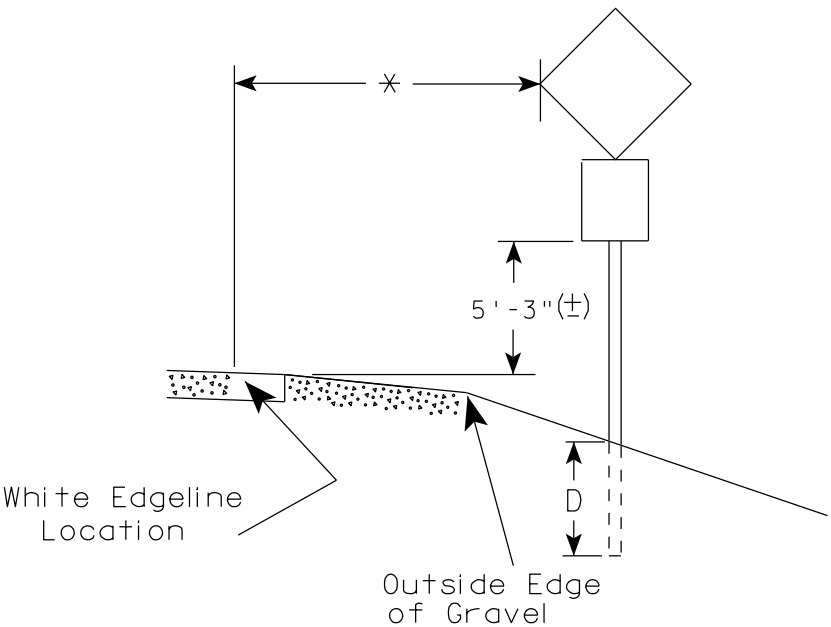
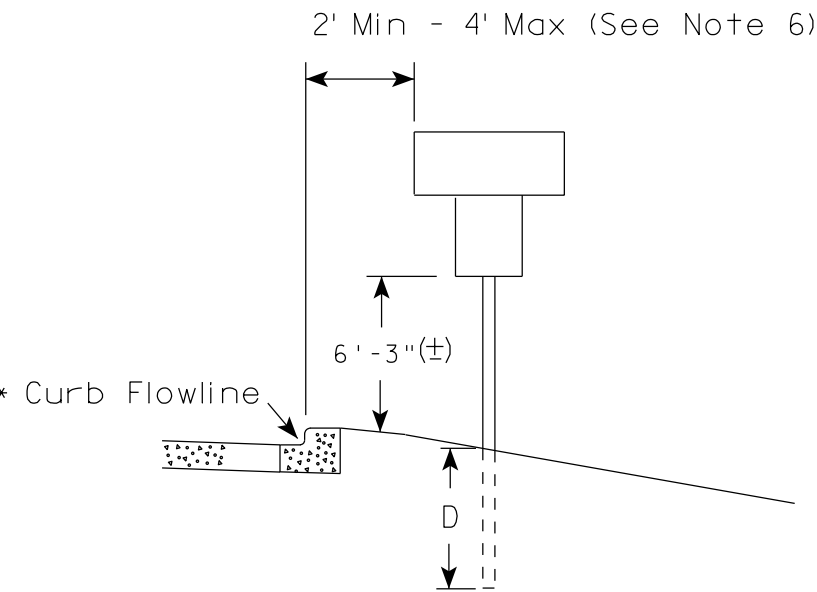
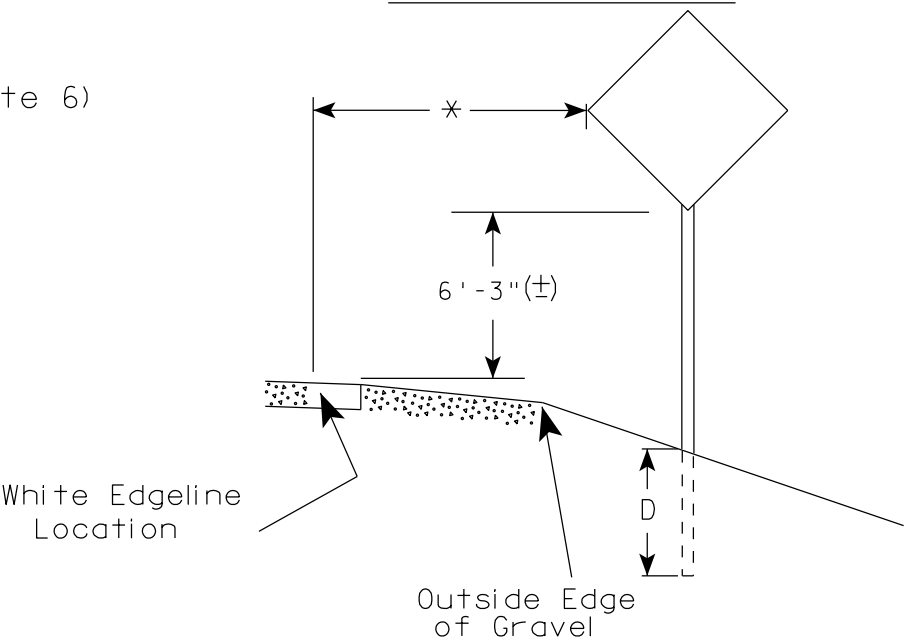
SHEET NO: 152

E

URBAN AREA



RURAL AREA (See Note 2)



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 (A4-5) 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 stop signs (R1-1F) 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) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

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

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

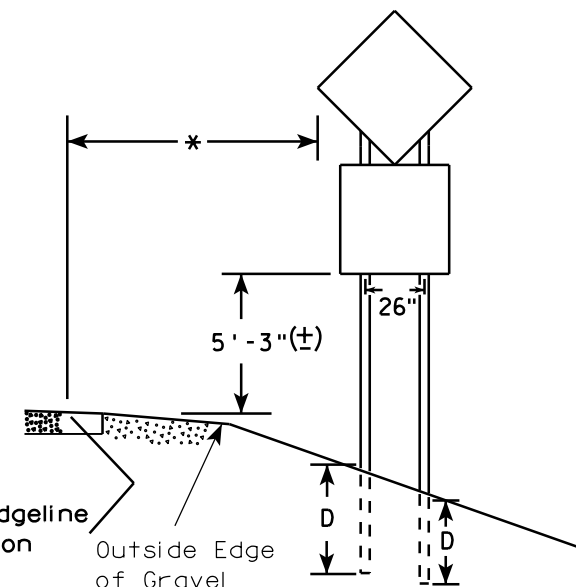
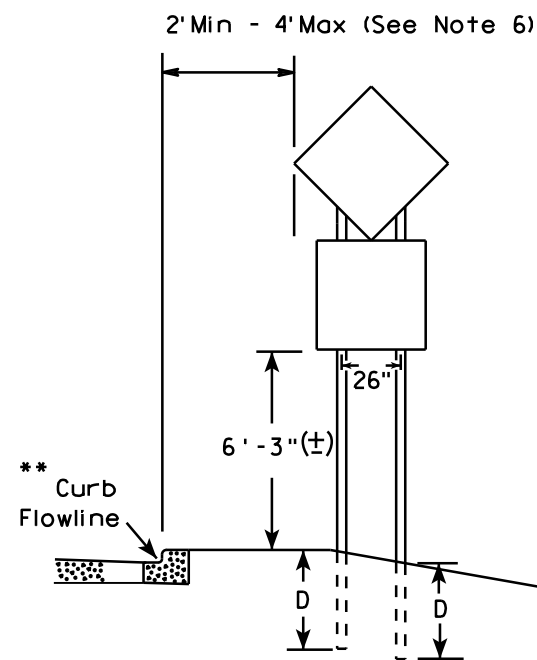
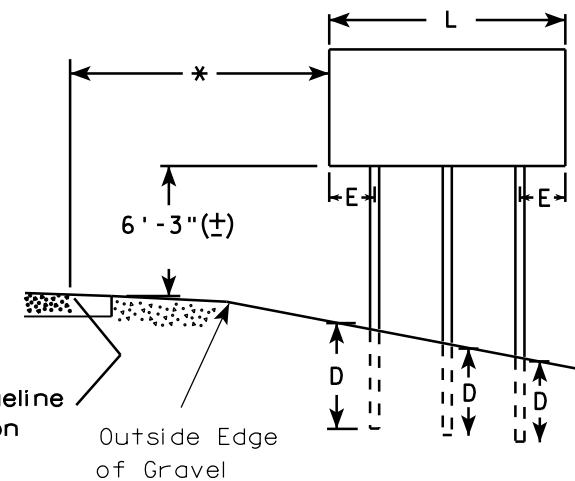
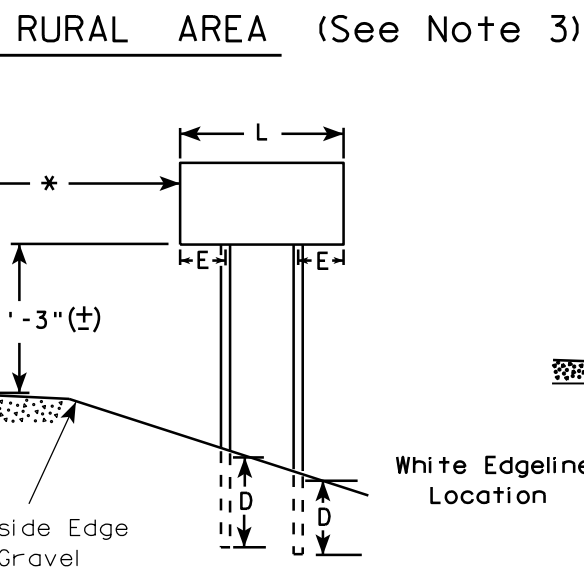
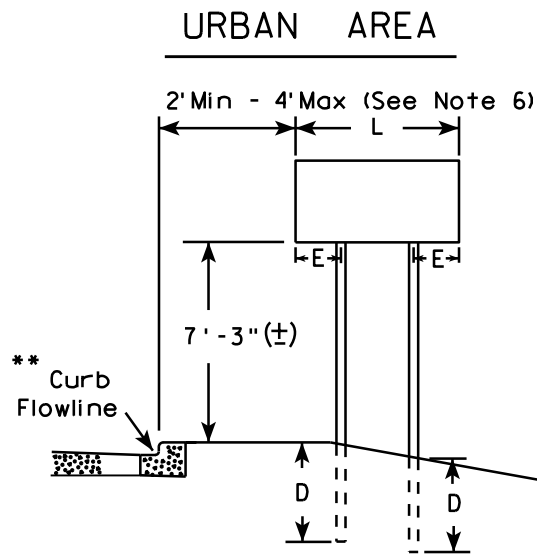
TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

153



- 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 (A4-5) 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 stop signs (R1-1F) 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) & End of Road Markers (W5-56 & W5-56A) 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 20 S.F. or less 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 9/30/13 PLATE NO. 154 12

PROJECT NO:

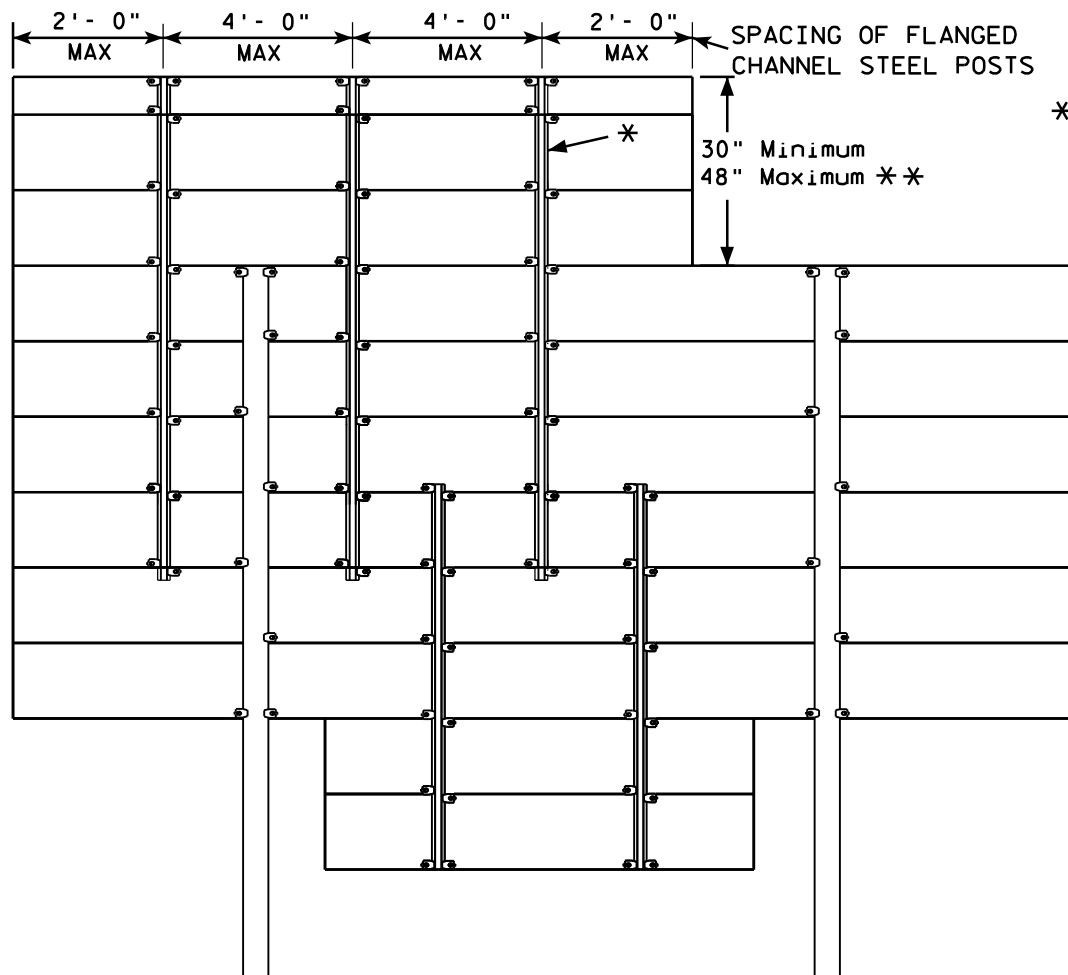
HWY:

COUNTY:

SHEET NO:

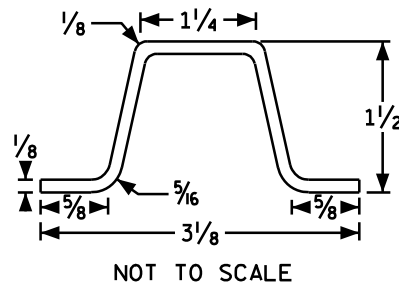
E

GROUND MOUNTED SIGN

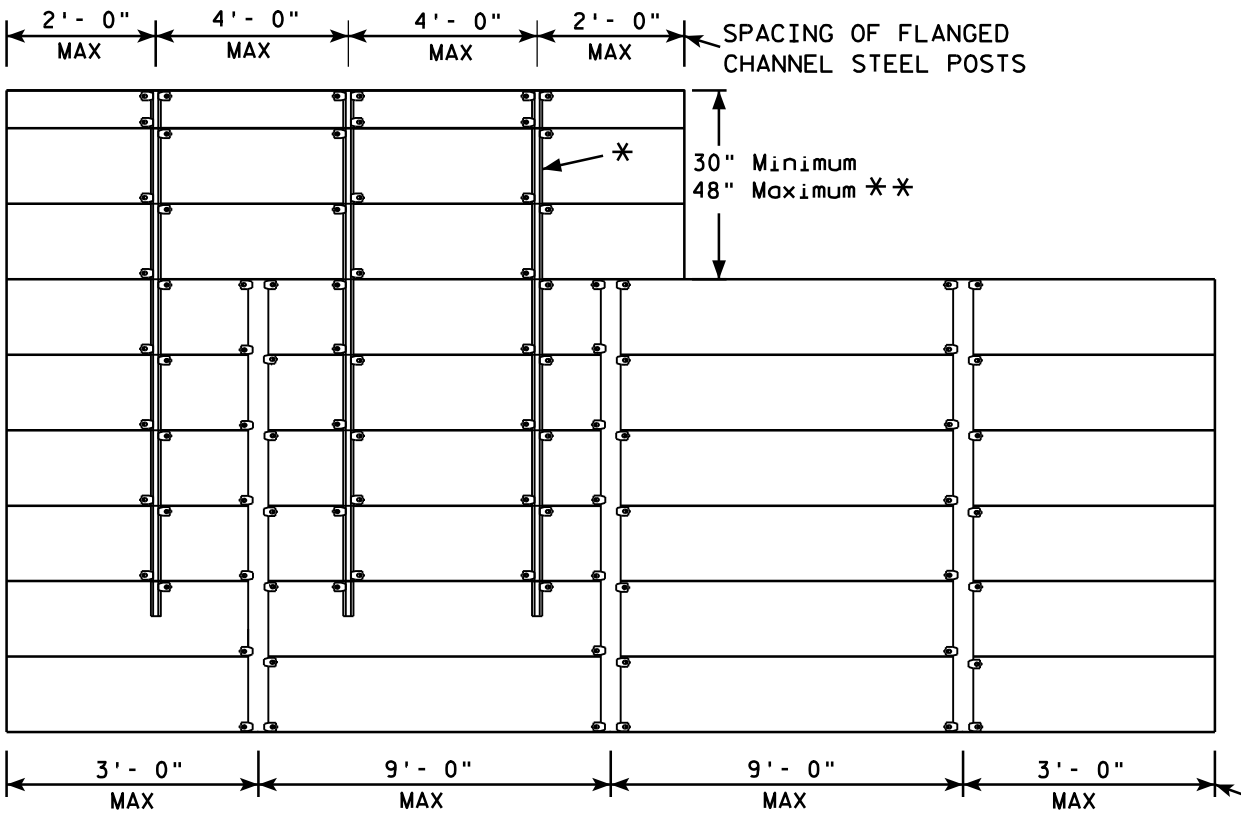


* = 2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED
* * = FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

FLANGE CHANNEL DETAIL



SIGN BRIDGE MOUNTED SIGN



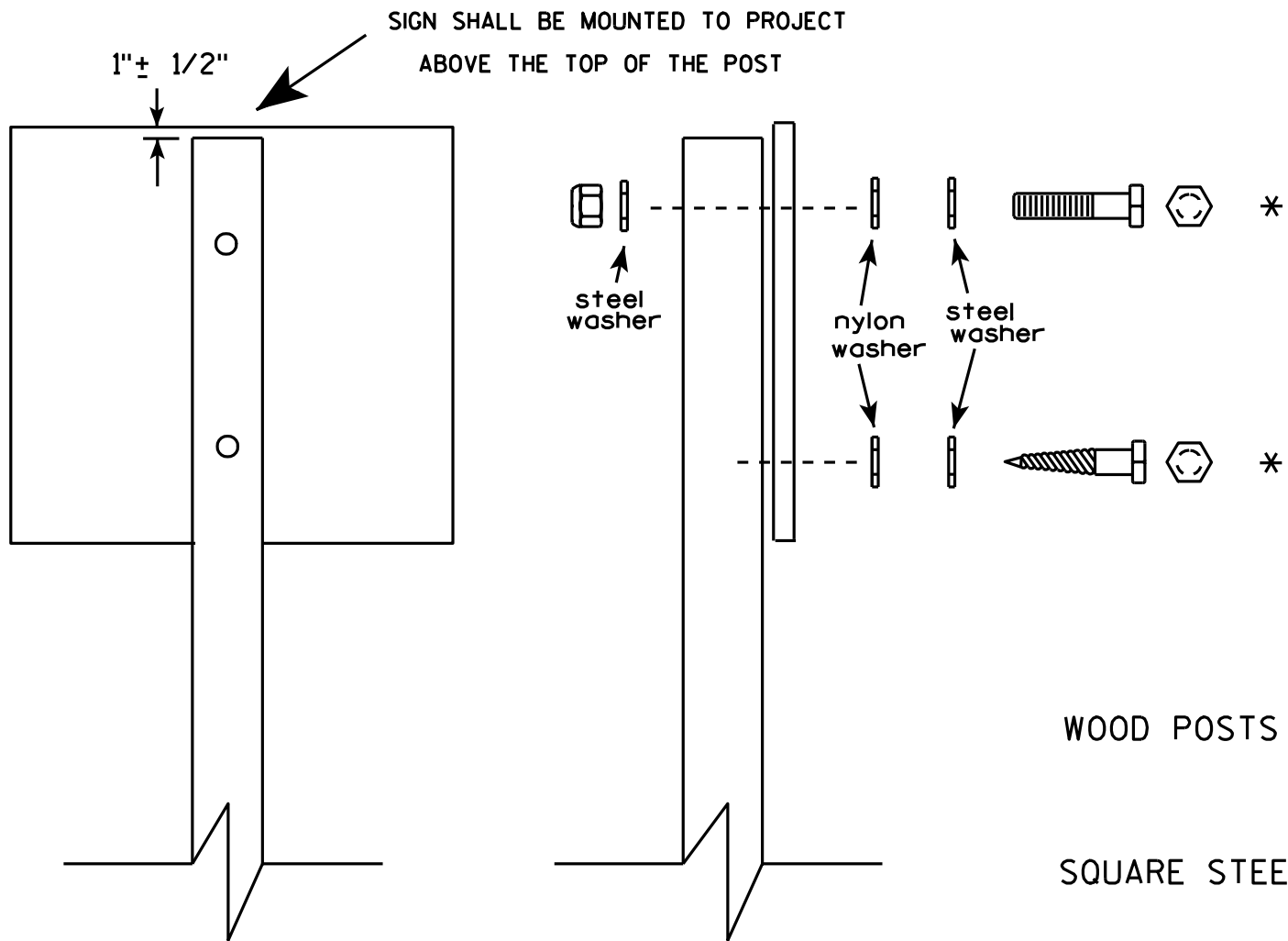
SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:
PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
PANEL LENGTH 9'-0" - 12'-0" = 3 CHANNELS
PANEL LENGTH 13'-0" OR MORE = 4 CHANNELS
If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. A4-6.11

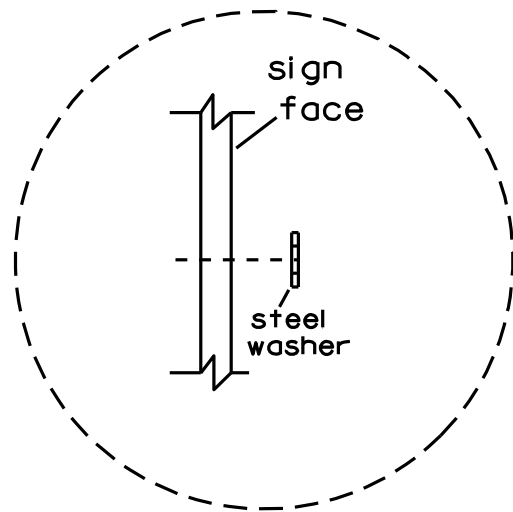


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

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

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

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



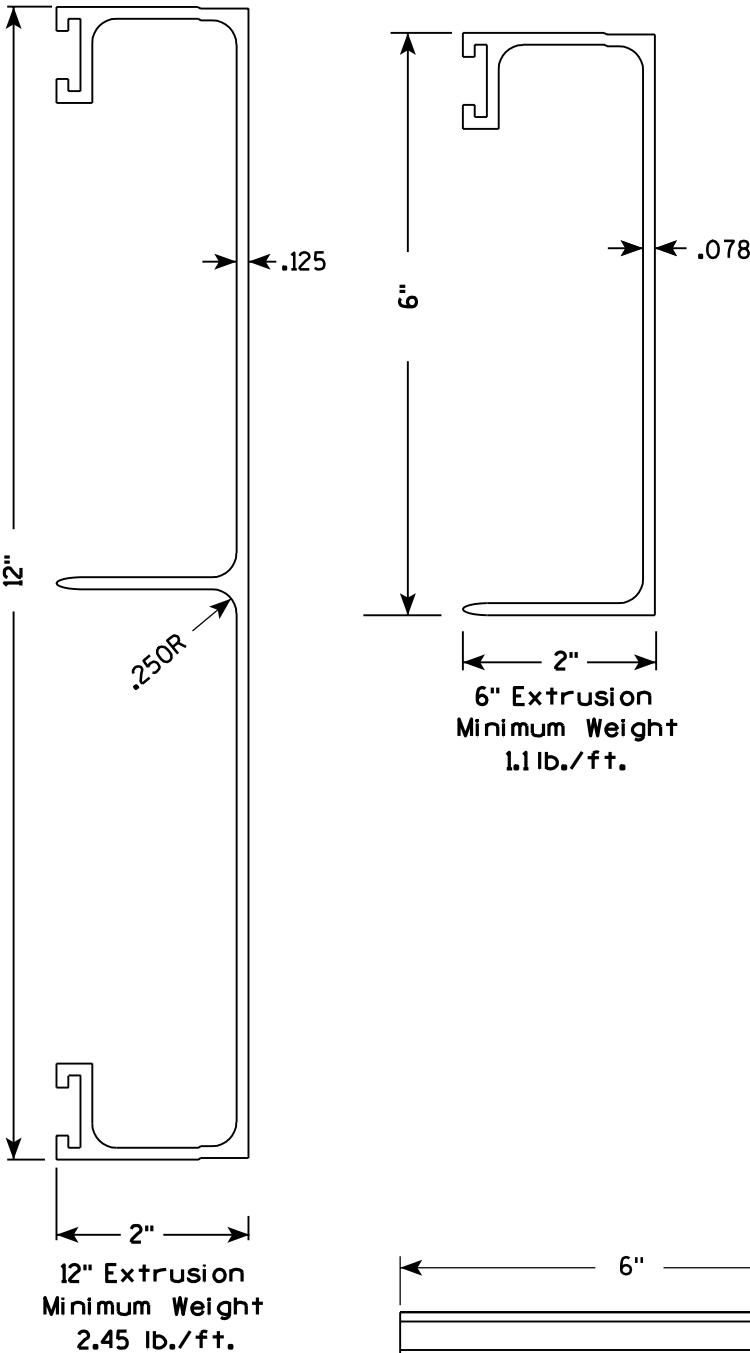
Washer Placement when Sign Has Other Than Type H or Type F Face

* 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

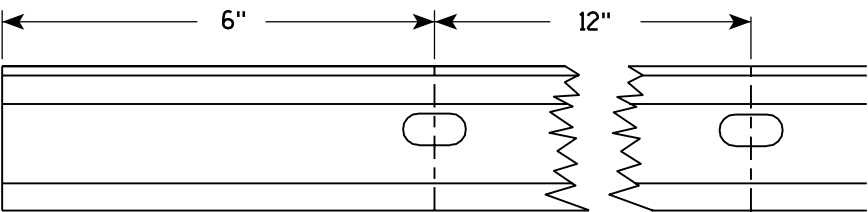
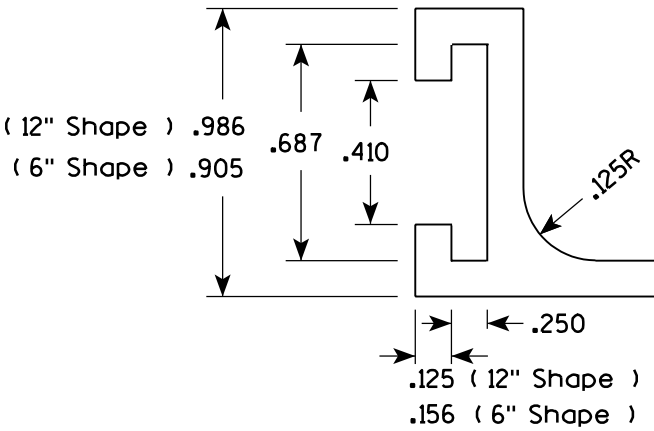
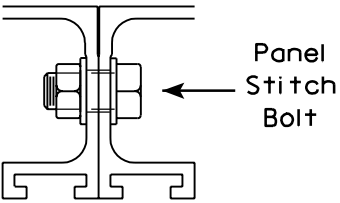
Extruded Shape

Hardware

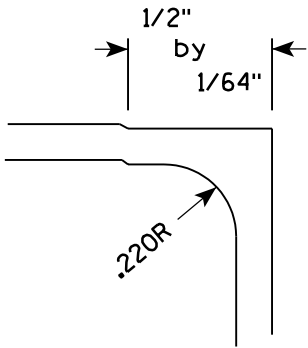


STITCH BOLT, WASHER & NUT

The hardware includes:
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy

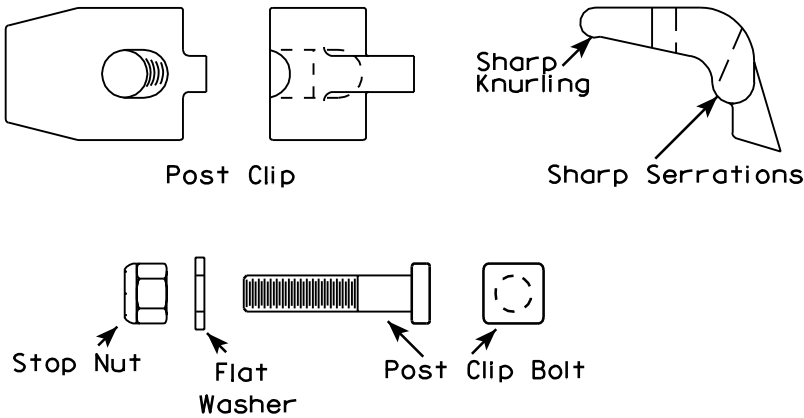


Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.



NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR
TYPE I SIGNS

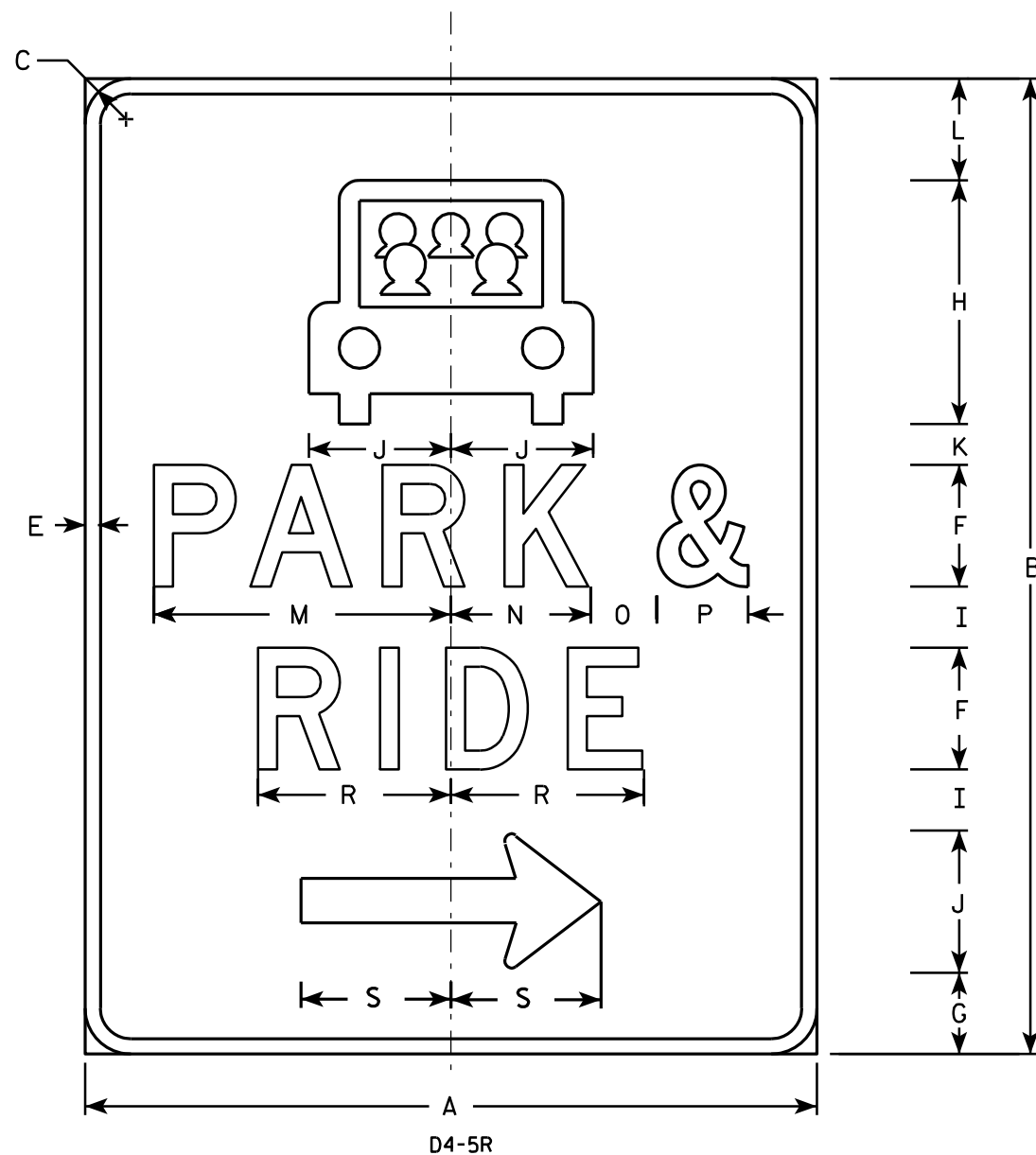
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Chester J. Spang*
for State Traffic Engineer
DATE 11/18/99 PLATE NO. A5-2.9

PROJECT NO:

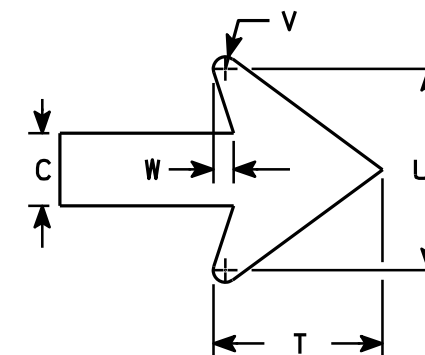
SHEET NO: 157

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 - Green
Message - White - Type H Reflective
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. The D4-5L is the same as a D4-5R 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	36	1 3⁄8		5⁄8	5	1 3⁄8	9	2	5	1 5⁄8	5	11 3⁄4	5 1⁄2	2 3⁄4	3 3⁄4		8	6 1⁄8	4	4 3⁄8	3⁄8	1⁄2				7.5
3	36	48	2 1⁄4		3⁄4	6	4	12	3	7	2	5	14 5⁄8	6 7⁄8	3 1⁄4	4 1⁄2		9 1⁄2	7 1⁄2	5 1⁄4	6 1⁄4	3⁄8	5⁄8				12.0
4																											
5																											

STANDARD SIGN D4-5 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 11/15/10 PLATE NO. D4-5.2

PROJECT NO:

SHEET NO: 158

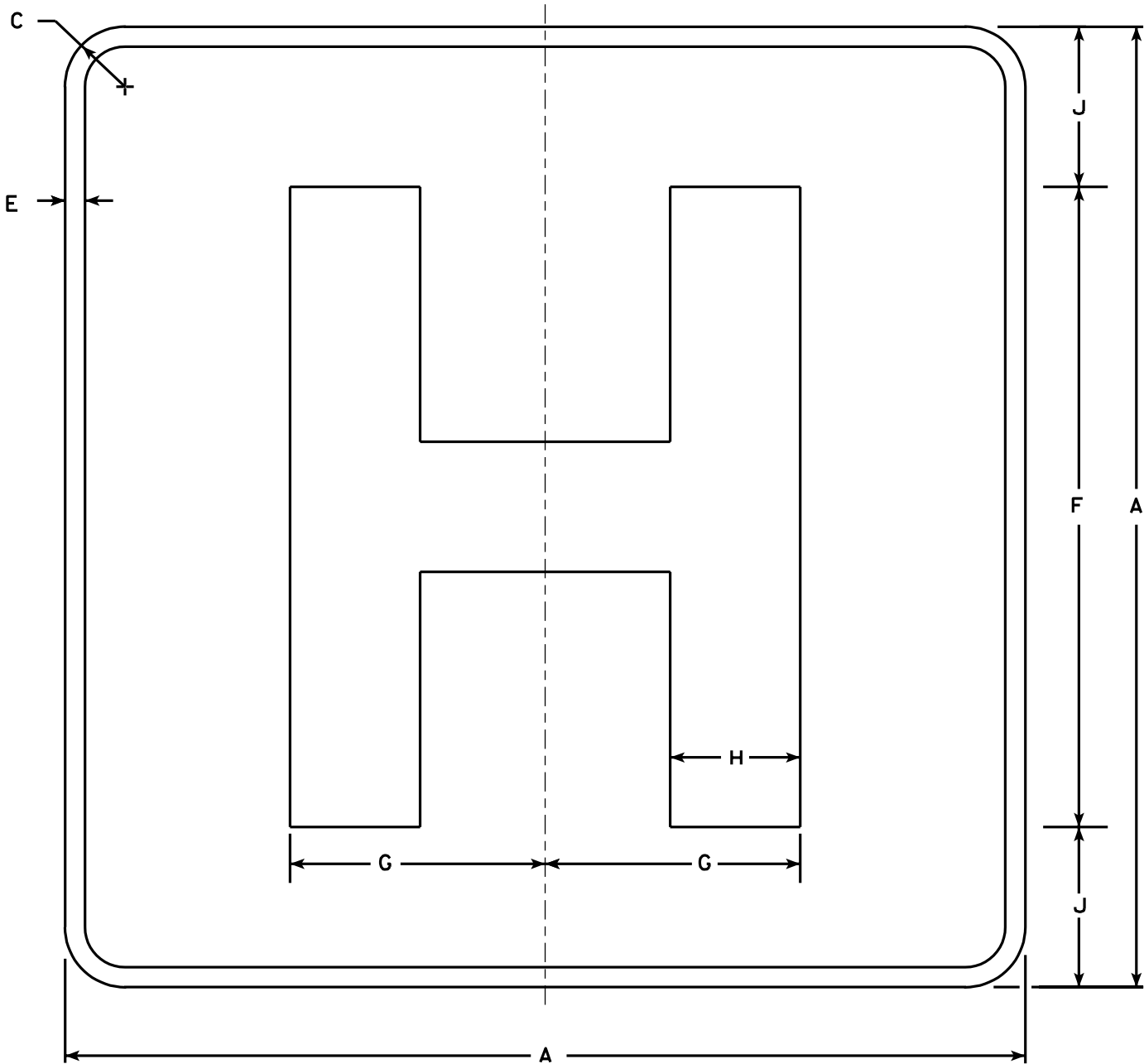
E

7

Metric equivalent
for this sign is:

SIZE	
1	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											



D9-2

NOTES

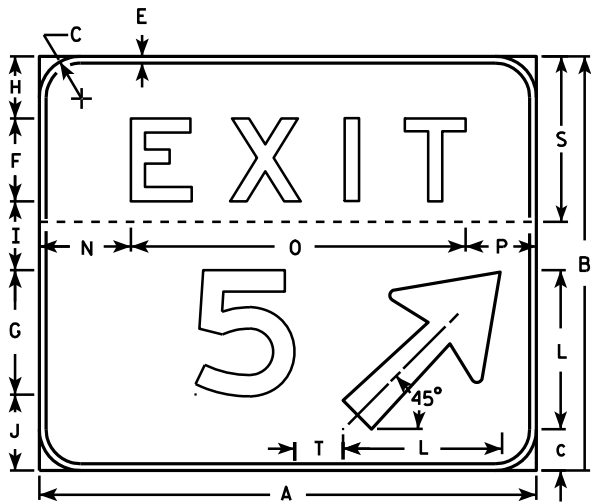
- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Blue
Message - White - Type H Reflective
- Message Series - E Modified
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

STANDARD SIGN
D9-2

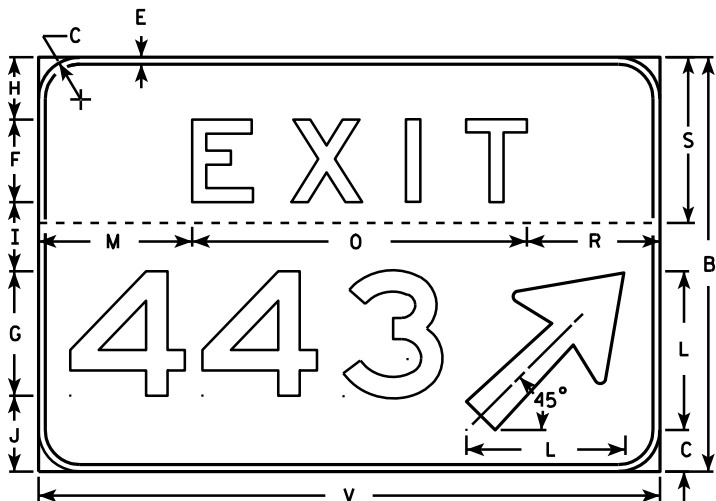
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Chester J. Spang
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4



NOTE: T dimension shall be measured from the back of the number to the front of the arrow



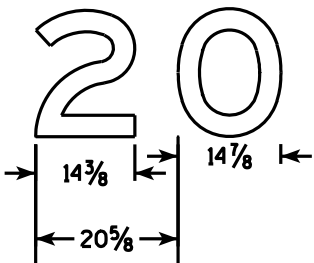
NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two separate pieces as shown on each detail by the dashed line (-----).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

EXAMPLE FOR USING SPACING CHART



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
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 ⁷ / ₈	23	22 ¹ / ₄	13 ¹ / ₄	48 ¹ / ₂	10 ¹ / ₄		19 ¹ / ₄	24	7		90		96	7 ¹ / ₂	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

STANDARD SIGN
E5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 5/11/10 PLATE NO. E5-1A.12

PROJECT NO:

HWY:

COUNTY:

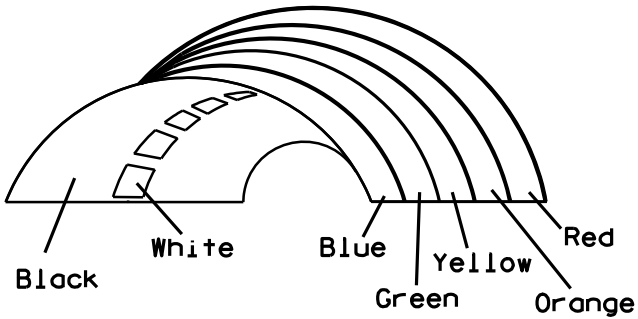
SHEET NO: 160

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: 161

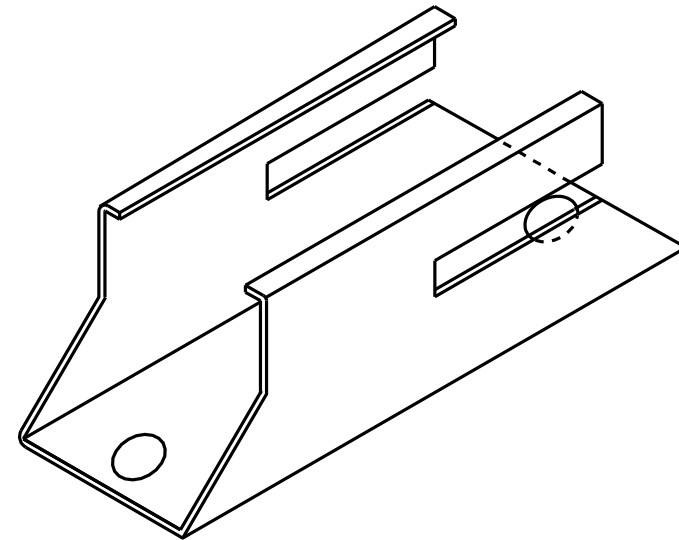
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

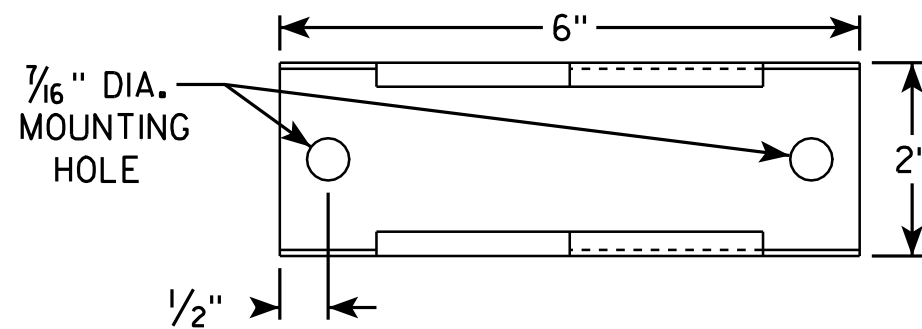
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

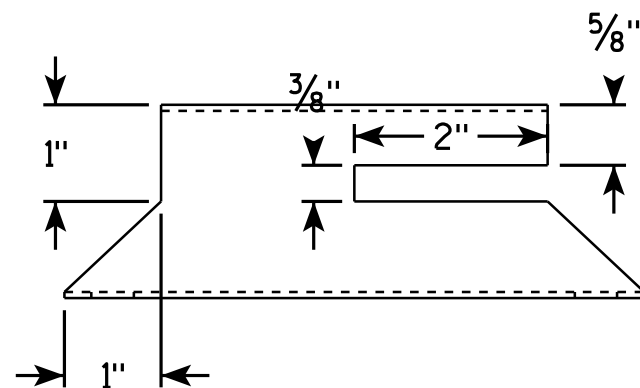
ISOMETRIC VIEW



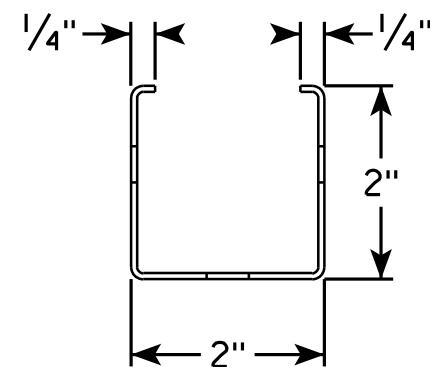
TOP VIEW



SIDE VIEW



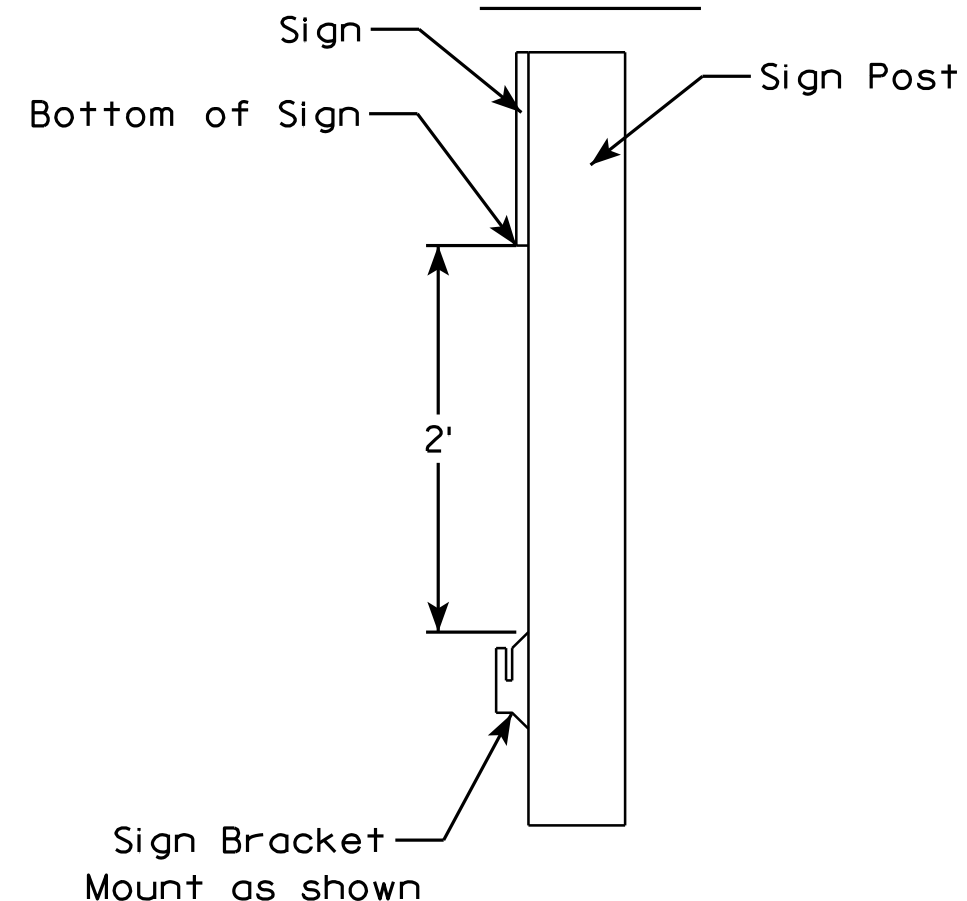
END VIEW



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

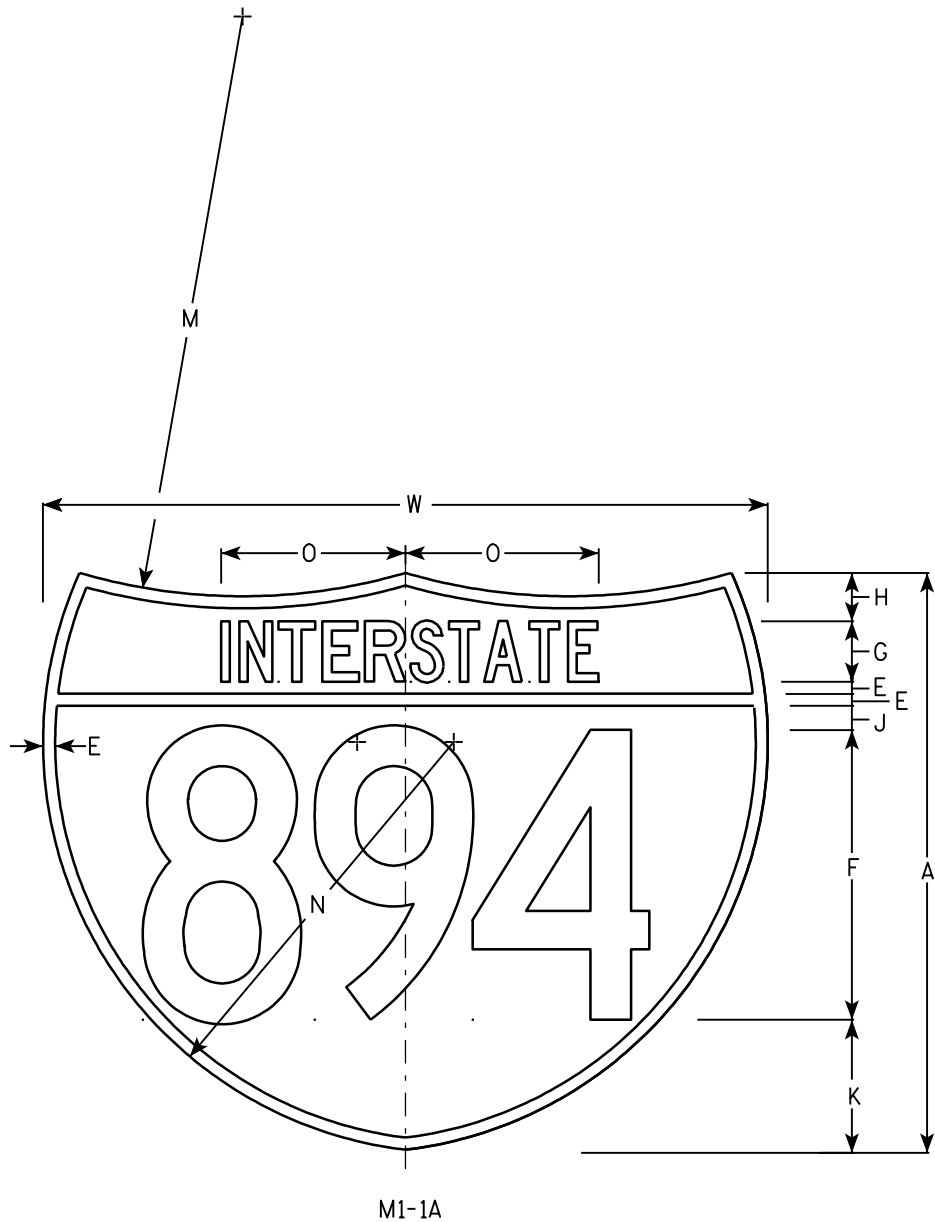
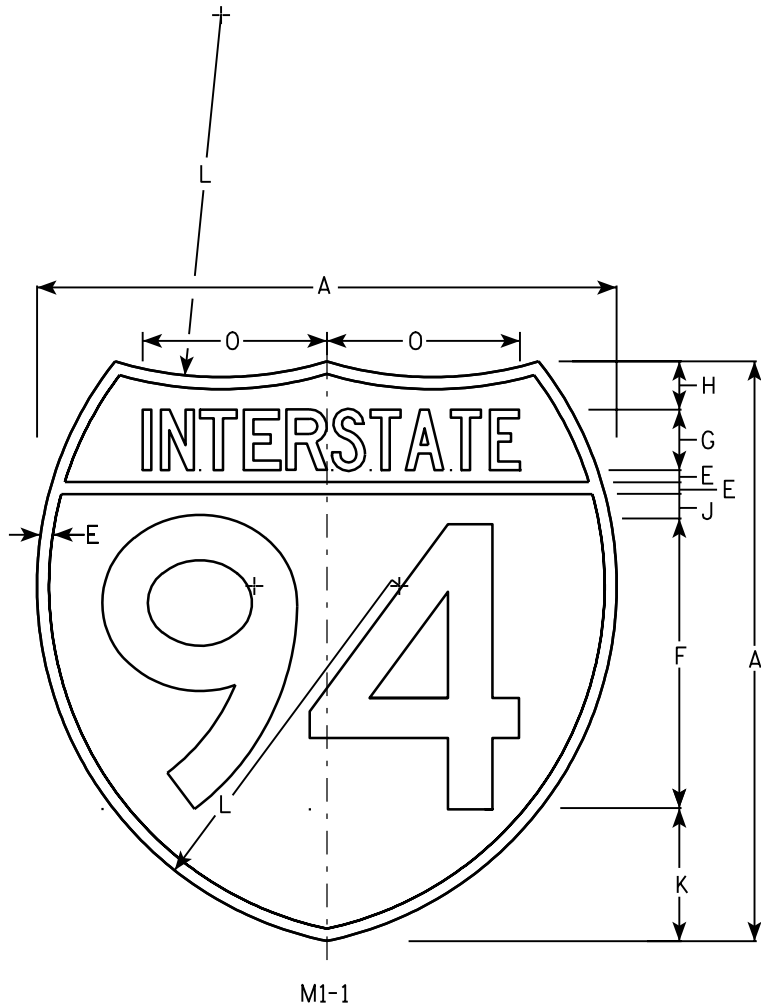
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 162

E



NOTES

- 1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Top Red - Bottom Blue (See Note 6)
Message - White - See Note 6
- 3. Message Series - See note 5
- 4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
- 5. M1-1 - Numerals - D
Interstate - C
M1-1A - All copy - C
- 6. Permanent Signs
Message - Type H Reflective
Detour or other temporary signs
Background - Reflective
Message - Reflective

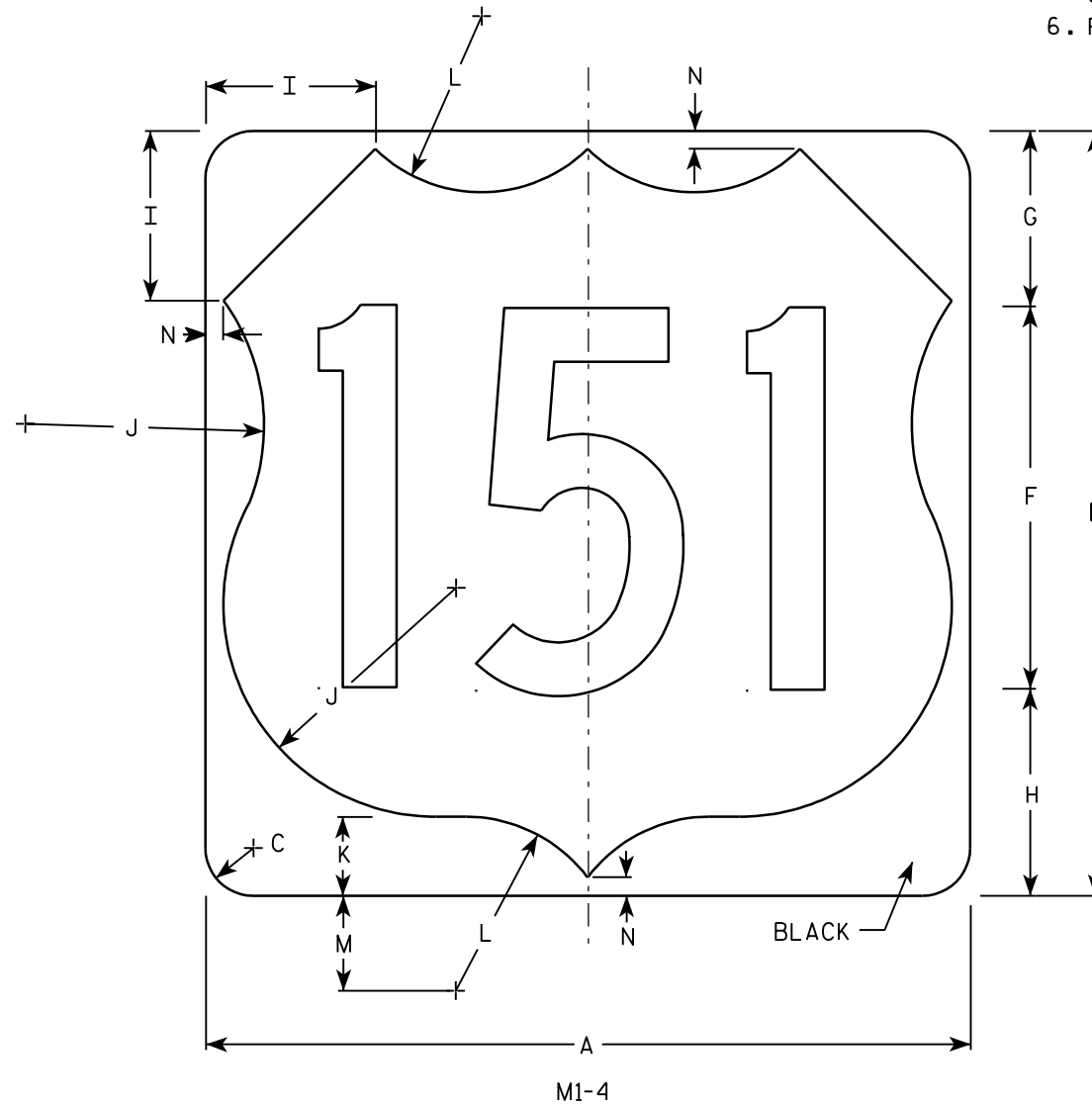
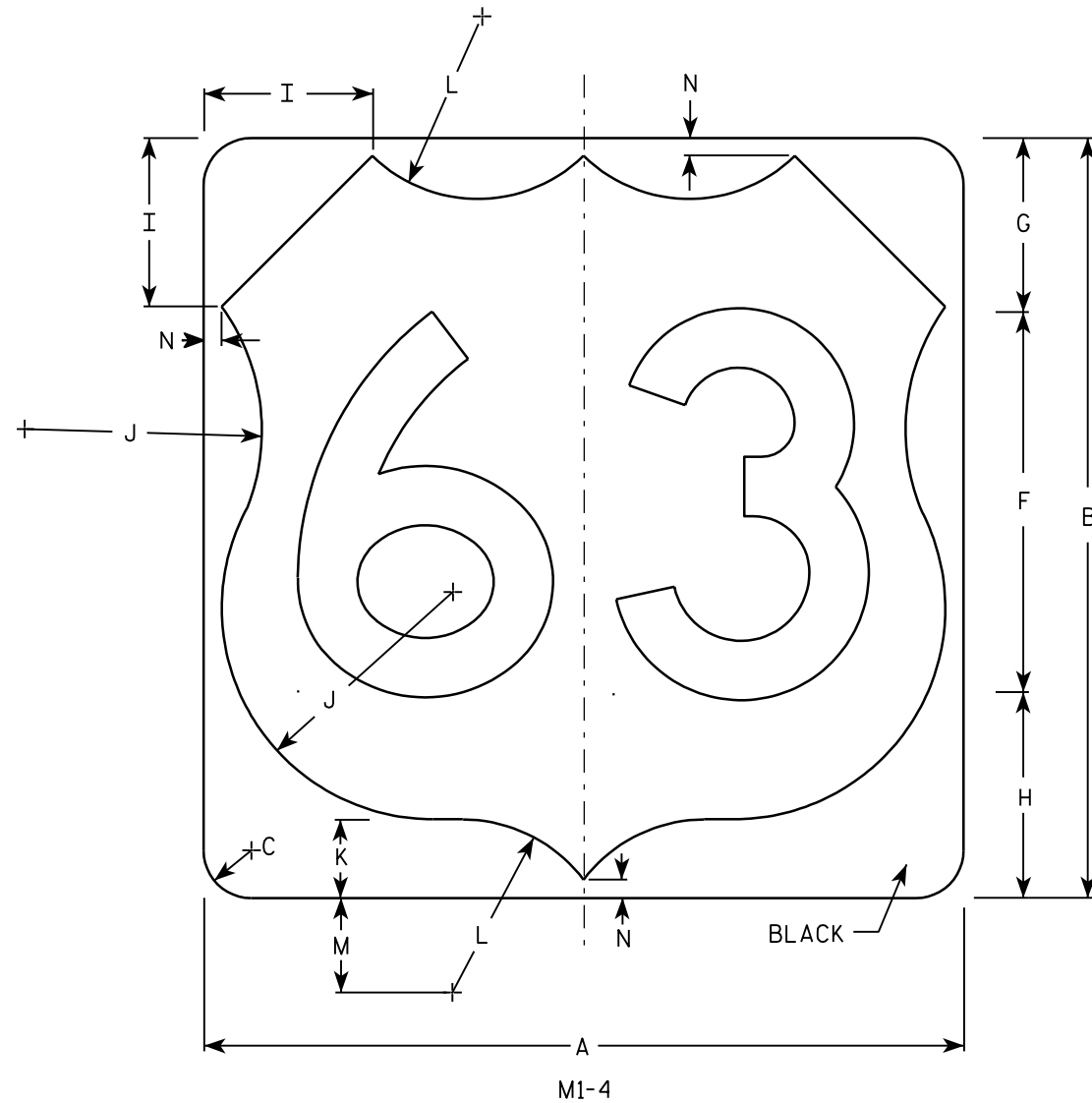
Metric equivalent for these signs are:

SIZE	M1 - 1	SIZE	M1 - 1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 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	Area sq. ft.	Area sq. ft.	Area m ²	Area m ²
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

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 numerals and adjust
spacing as per Plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or other temporary signs
Background - Reflective



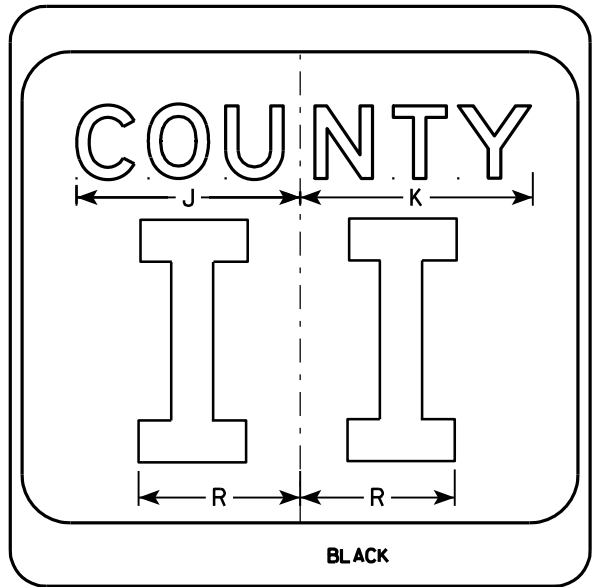
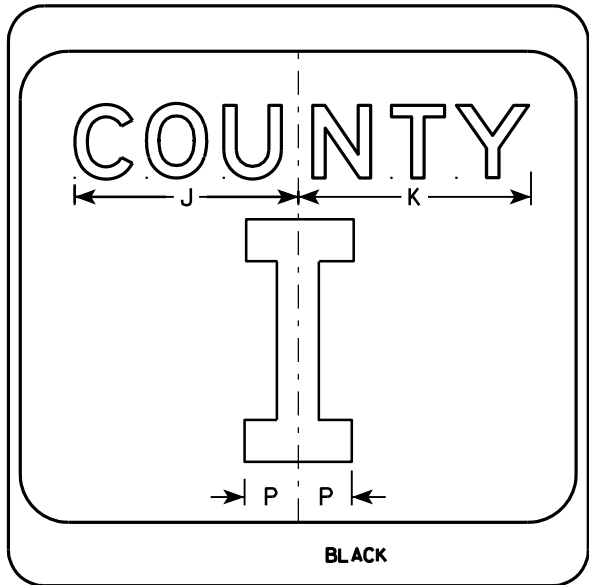
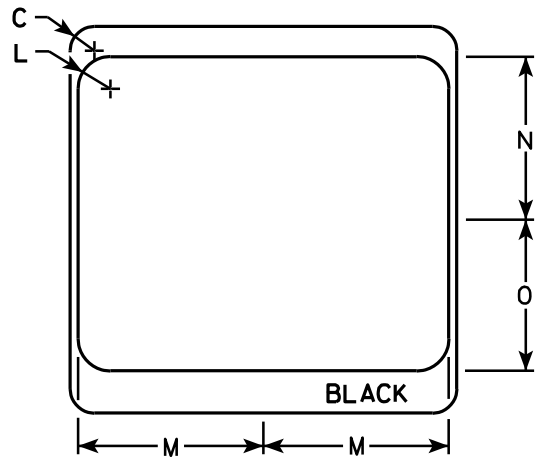
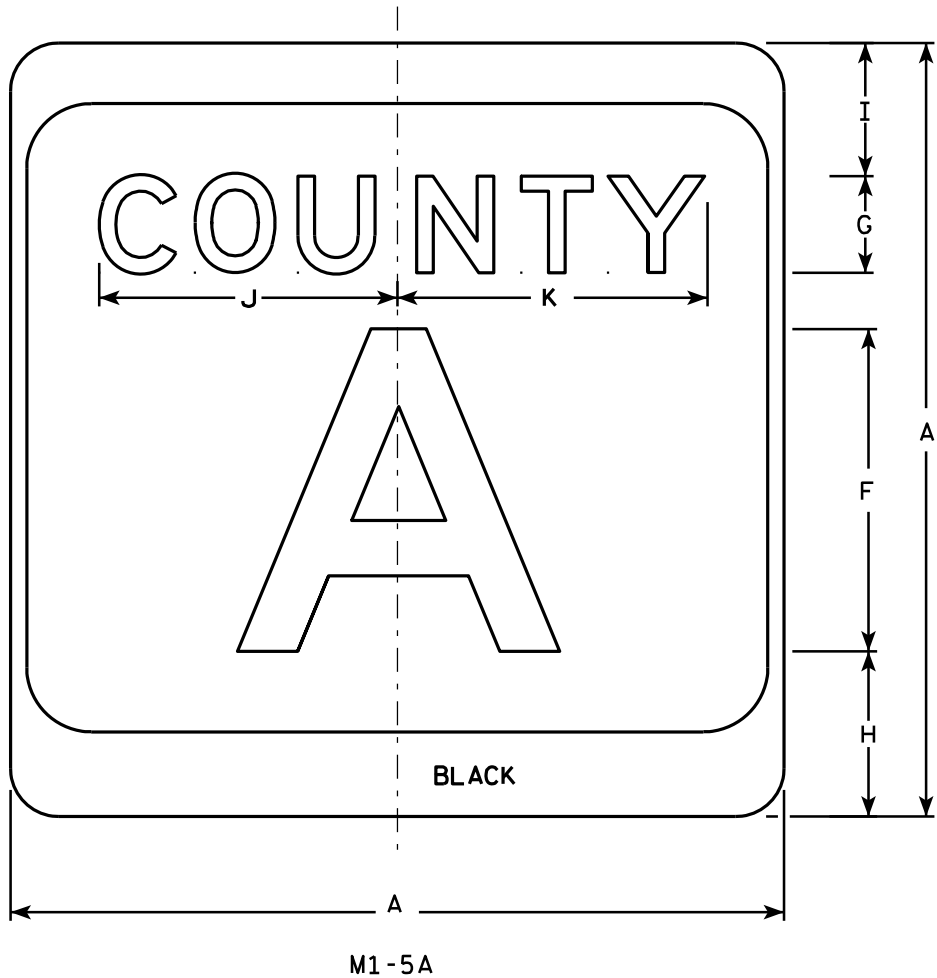
Metric equivalent
for this sign is:

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	Areq sq. ft.	Area m ²
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

PROJECT NO: HWY: COUNTY: SHEET NO: 164 E

7



NOTES

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

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 165

E

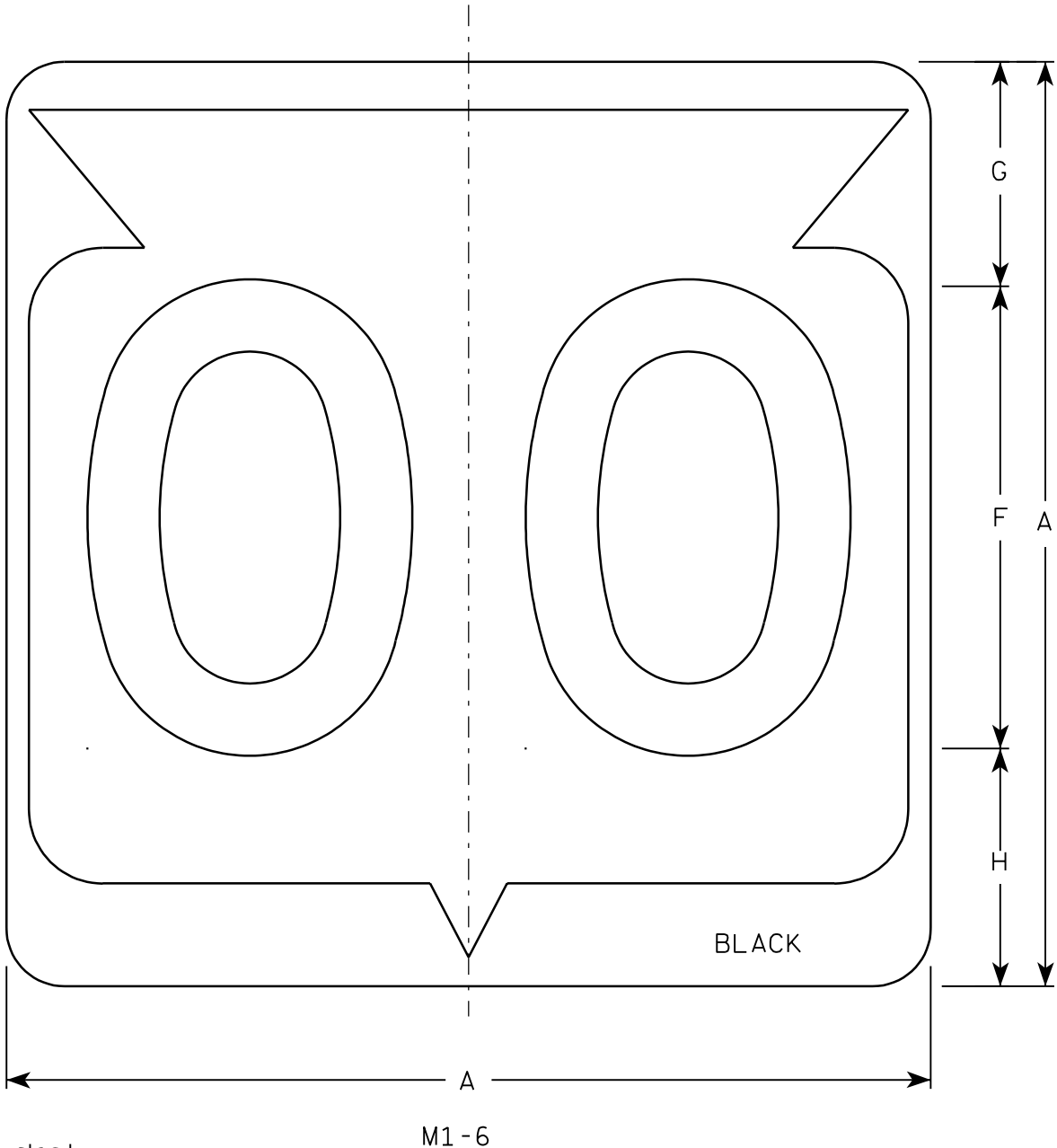
CTH MARKER
M1-5A FOR ASSEMBLIES

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:

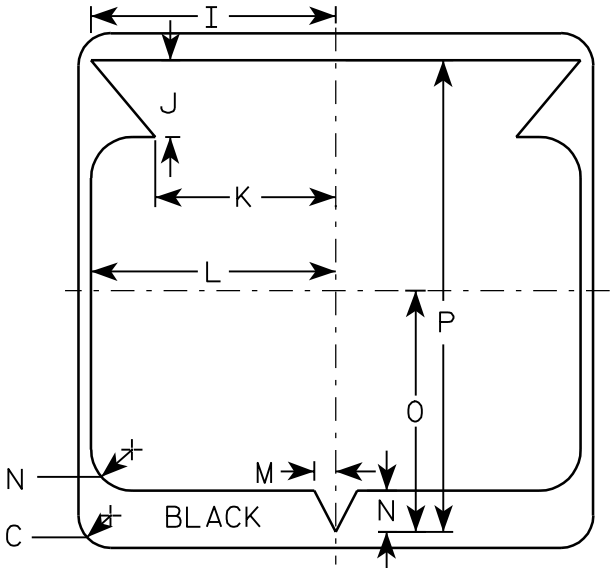
COUNTY:

SHEET NO: 166

E

NOTES

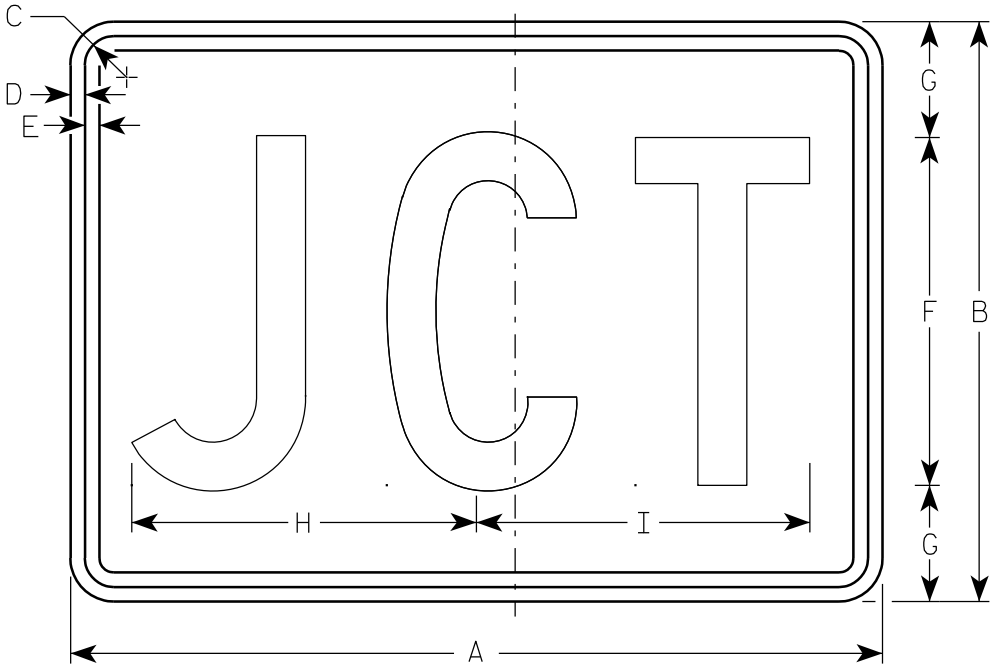
1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base
material is plywood but borders 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



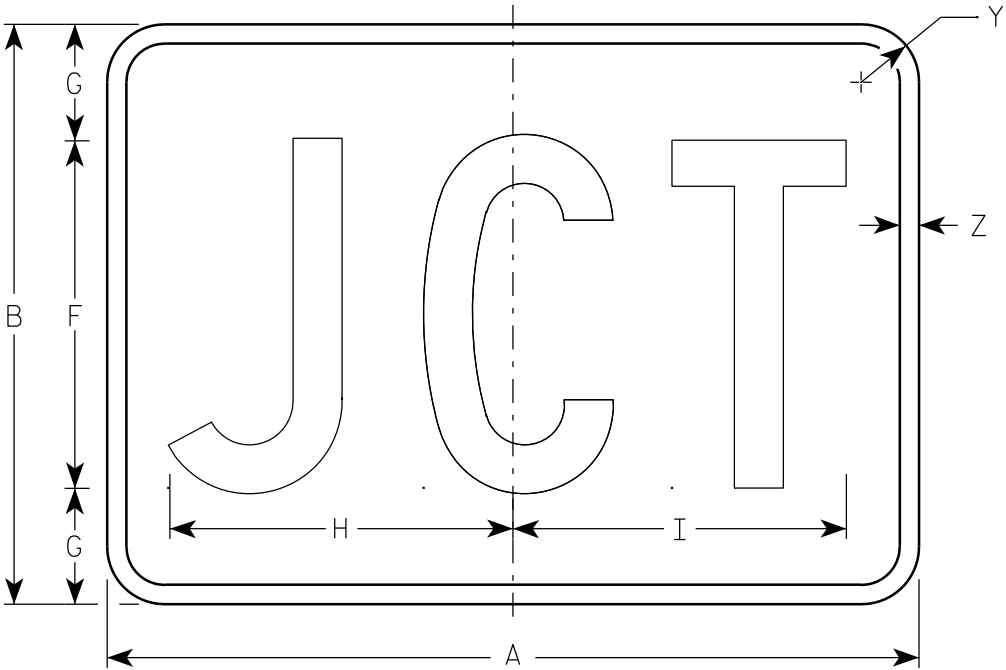
7

NOTES

1. Sign is Type II - See Note 5 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB2-1 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG2-1 Background - Green
Message - White - Type H Reflective
MK2-1 Background - Green
Message - White - Type H Reflective
MM2-1 Background - White - Type H Reflective
Message - Green
MN2-1 Background - Brown
Message - White - Type H Reflective
MR2-1 Background - Brown
Message - Yellow - Type H Reflective



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



MB2-1
MG2-1
MN2-1

Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

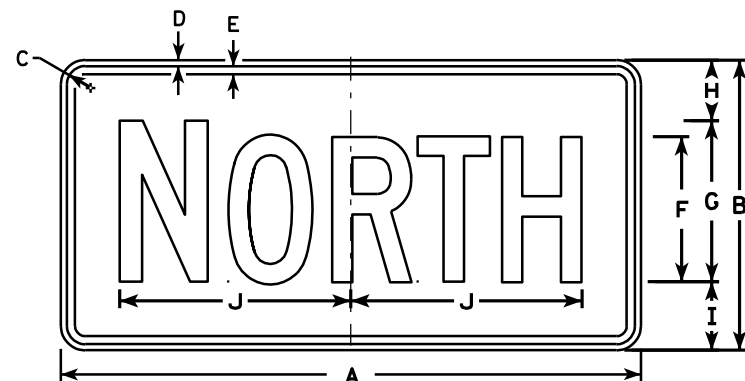
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
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	0.20

STANDARD SIGN
M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

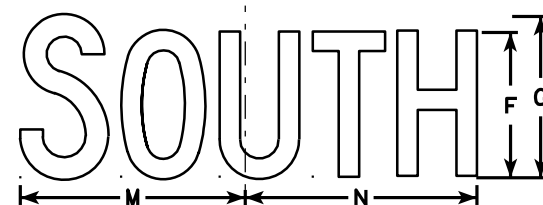
DATE 3/16/10 PLATE NO. M2-1.10



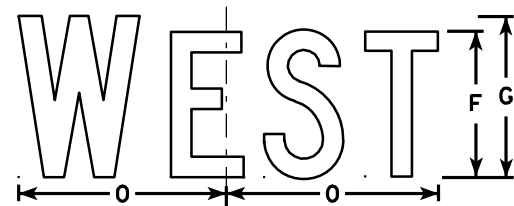
M3-1
MK3-1
M03-1



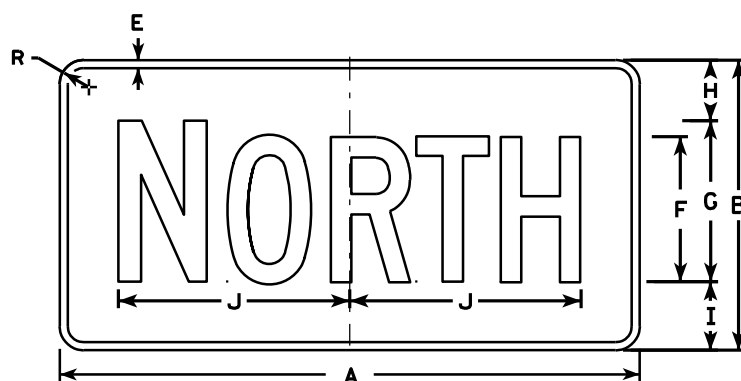
M3-2
MK3-2
M03-2



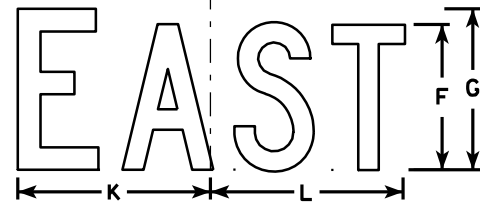
M3-3
MK3-3
M03-3



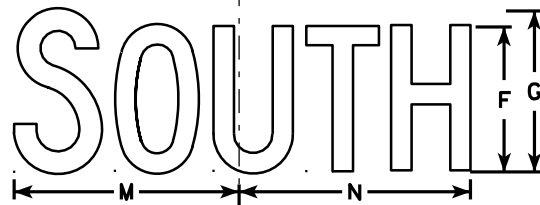
M3-4
MK3-4
M03-4



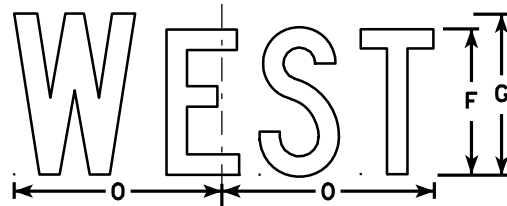
MB3-1
MG3-1
MM3-1
MN3-1



MB3-2
MG3-2
MM3-2
MN3-2



MB3-3
MG3-3
MM3-3
MN3-3



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective (Detour or temporary signs - Reflective)
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White - Type H Reflective (Detour or temporary signs - Reflective)
MG3-1 thru MG3-4 Background - Green
Message - White - Type H Reflective
MK3-1 thru MK3-4 Background - Green
Message - White - Type H Reflective
MM3-1 thru MM3-4 Background - White - Type H Reflective
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White - Type H Reflective
M03-1 thru M03-4 Background - Orange - Reflective
Message - Black
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

PROJECT NO: HWY: COUNTY: SHEET NO: 168 E

STANDARD SIGNS M3-1 thru M3-4 SERIES

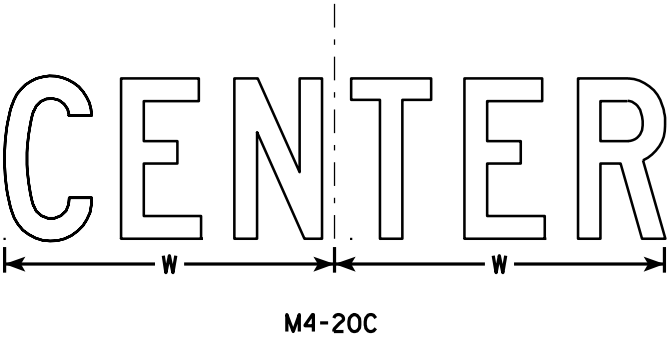
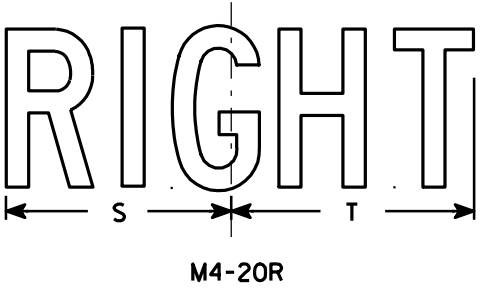
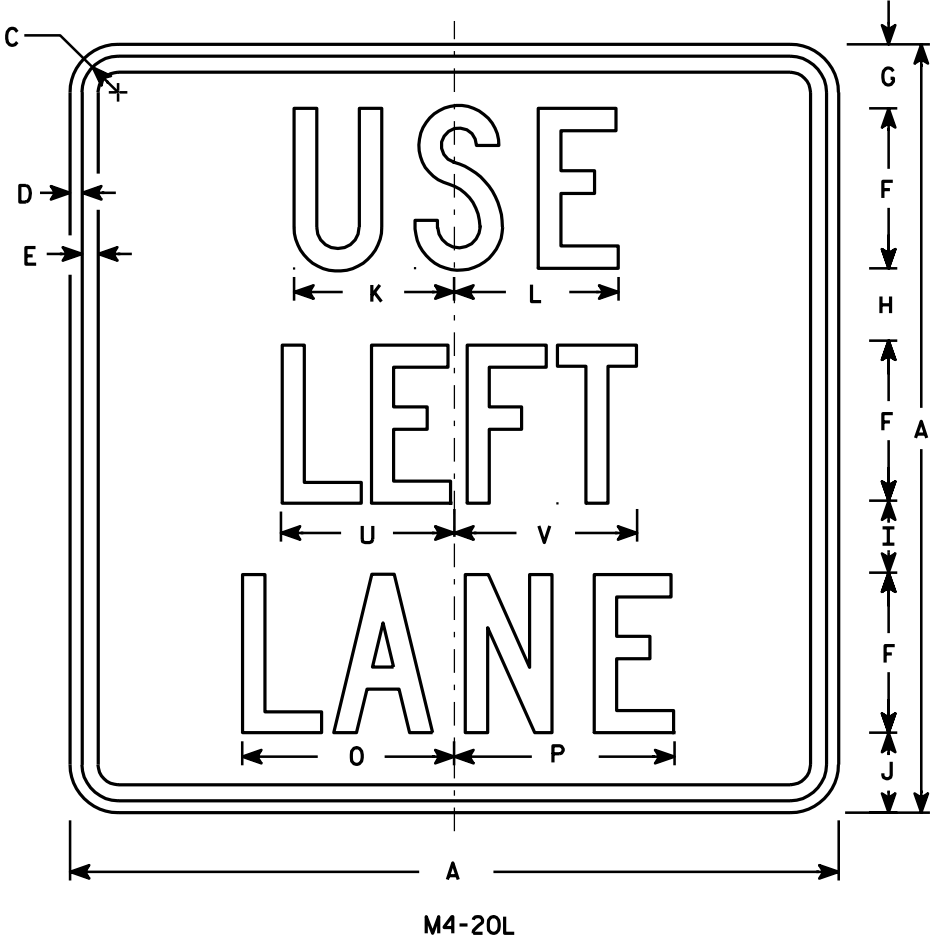
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

NOTES

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



Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	
5	

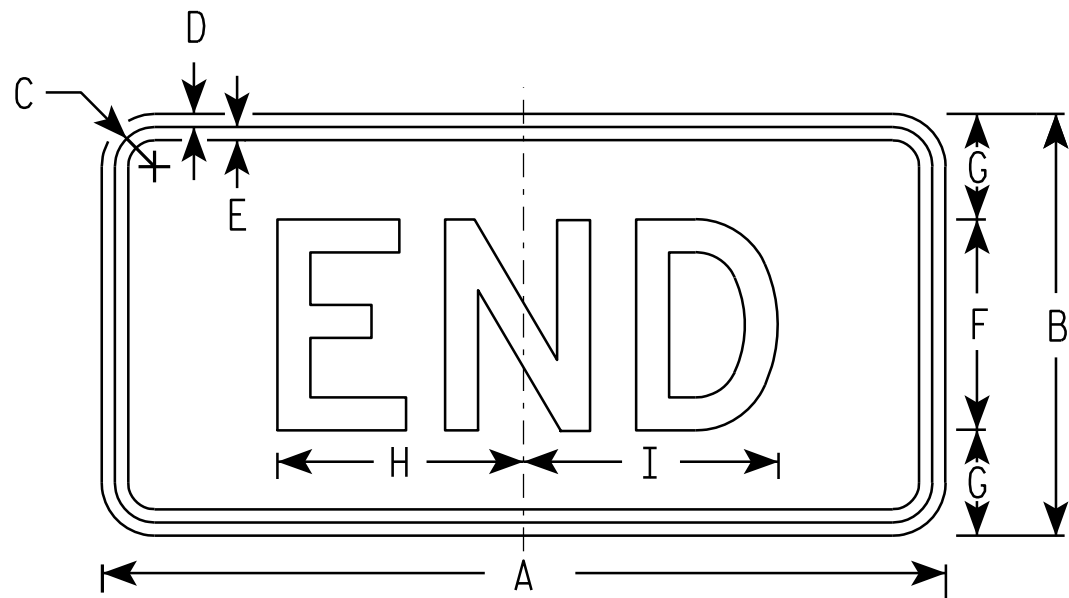
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8			6 5/8	6 7/8			7	7 5/8	5 3/8	5 3/4	10 1/4				4.0	0.36
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4			9 7/8	10 1/4			10 3/8	11 3/8	8	8 5/8	14 3/8				9.0	0.81
4																												
5																												

STANDARD SIGN
M4-20

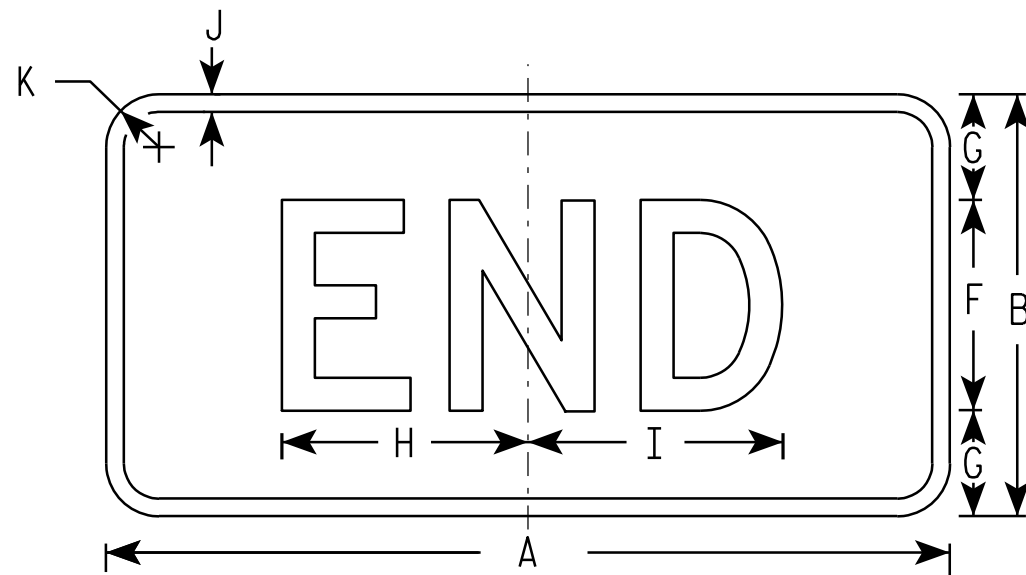
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 2/1/09 PLATE NO. M4-20.2

PROJECT NO: HWY: COUNTY: SHEET NO: 169 E



M4-6
MK4-6
MM4-6
MR4-6



MB4-6
MG4-6
MN4-6

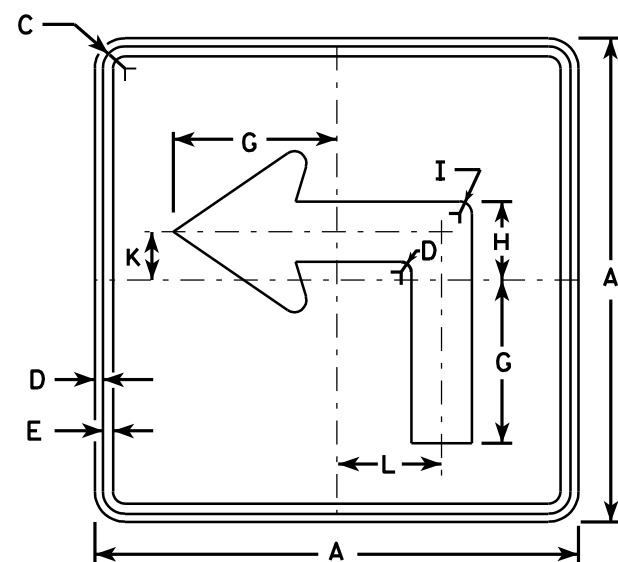
NOTES

- Sign is Type II - See Note 5 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 5
Message - See note 5
- Message Series - D
- 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.
- M4-6 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB4-6 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG4-6 Background - Green
Message - White - Type H Reflective
MK4-6 Background - Green
Message - White - Type H Reflective
MM4-6 Background - White - Type H Reflective
Message - Green
MN4-6 Background - Brown
Message - White - Type H Reflective
MR4-6 Background - Brown
Message - Yellow - Type H Reflective

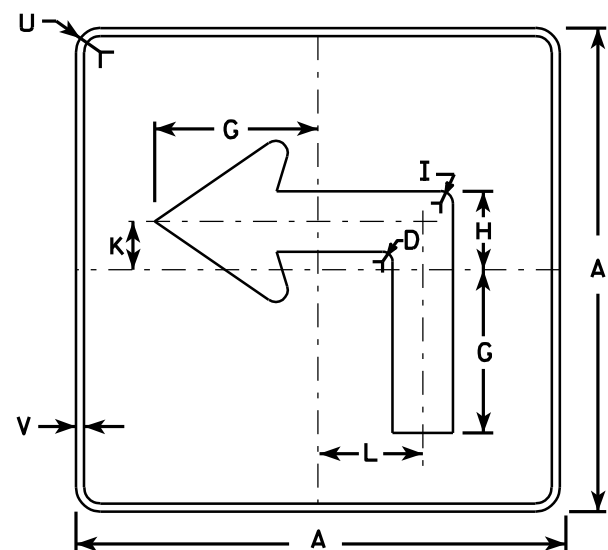
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

PROJECT NO: HWY: COUNTY: SHEET NO: 170 E

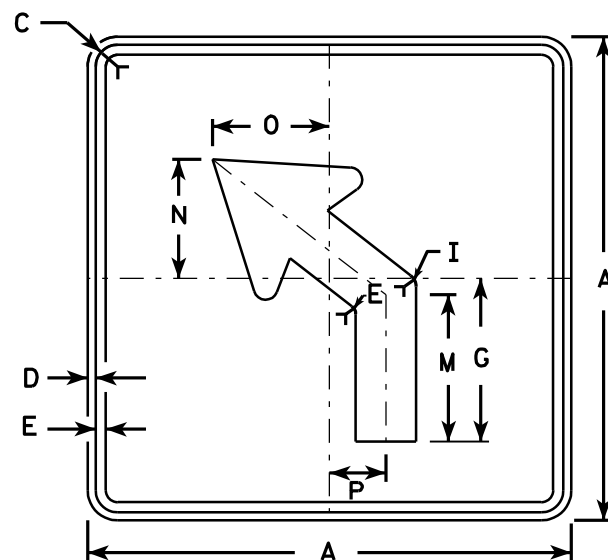
STANDARD SIGN M4 - 6	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 11/10/10	PLATE NO. M4-6.7



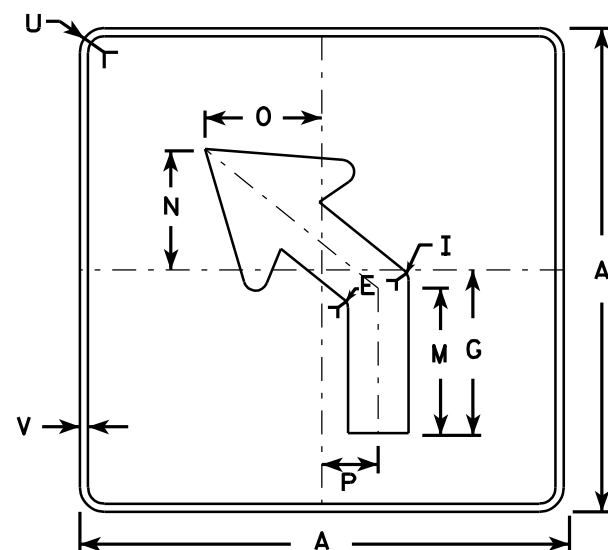
M5-1L
MK5-1L
MM5-1L
M05-1L
MP5-1L
MR5-1L



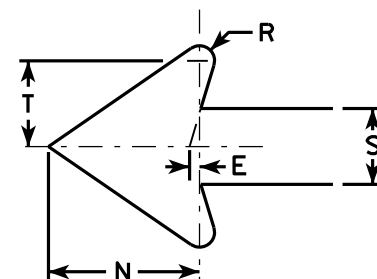
MB5-1L
MG5-1L
MN5-1L



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



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

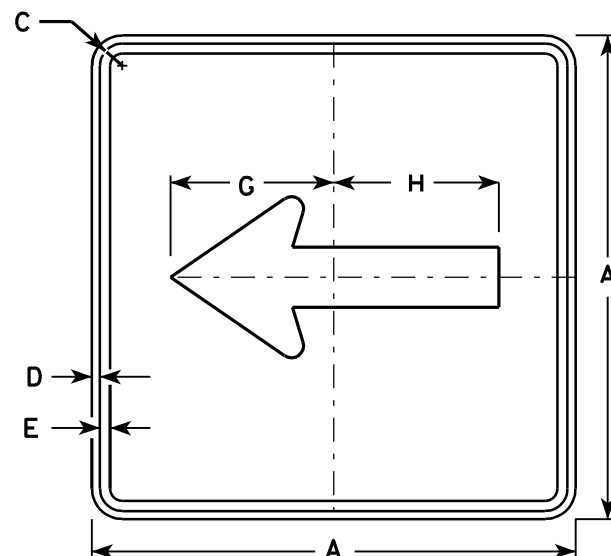


NOTES

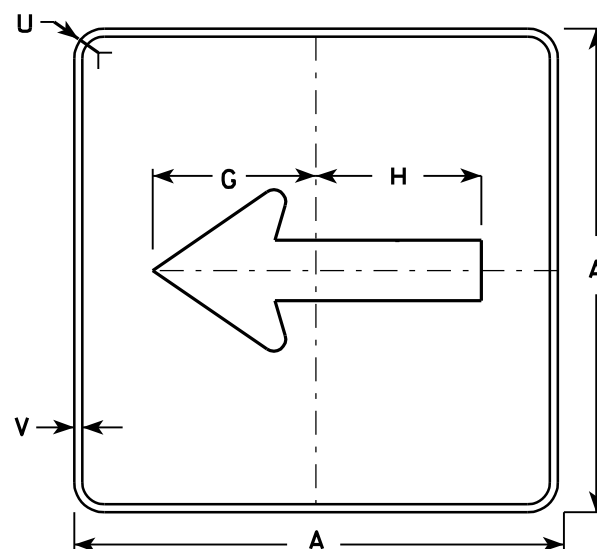
- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material 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

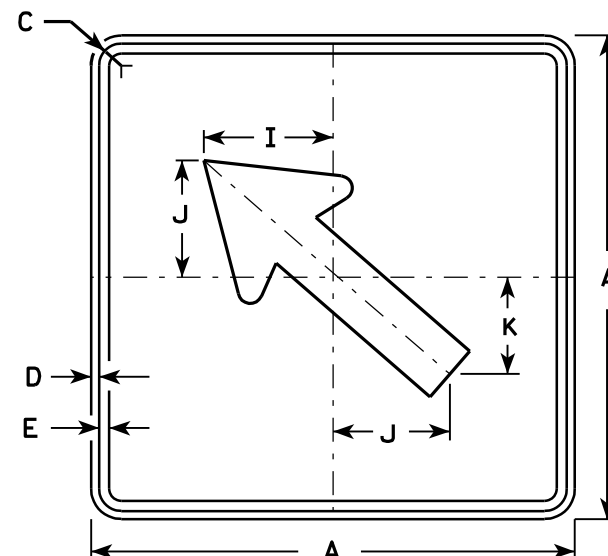
STANDARD SIGN	
M5-1 & M5-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/29/13	PLATE NO. M5-1.12



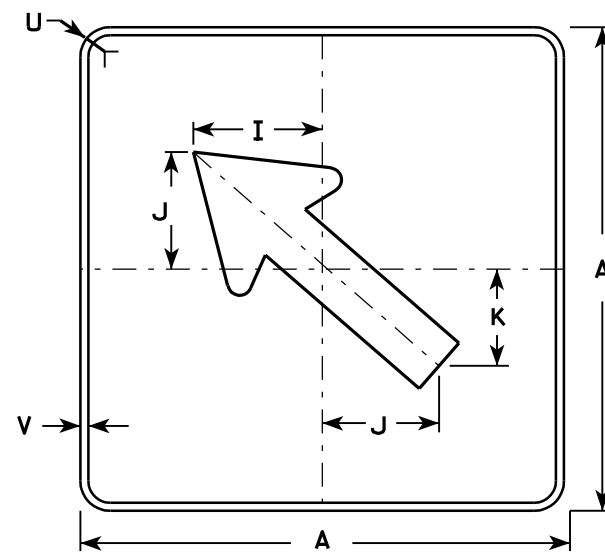
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



MB6-1
MG6-1
MN6-1



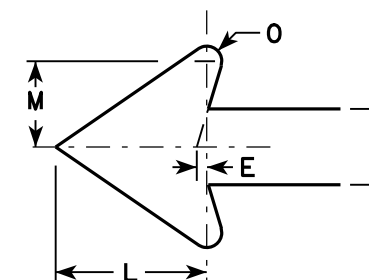
M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-2
MG6-2
MN6-2

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.
- M6-1 and M6-2 Background - White - Type H Reflective Message - Black
 - MB6-1 and MB6-2 Background - Blue Message - White - Type H Reflective
 - MG6-1 and MG6-2 Background - Green Message - White - Type H Reflective
 - MK6-1 and MK6-2 Background - Green Message - White - Type H Reflective
 - MM6-1 and MM6-2 Background - White - Type H Reflective Message - Green
 - MN6-1 and MN6-2 Background - Brown Message - White - Type H Reflective
 - MO6-1 and MO6-2 Background - Orange - Type F Reflective Message - Black
 - MP6-1 and MP6-2 Background - White - Type H Reflective Message - Blue
 - MR6-1 and MR6-2 Background - Brown Message - Yellow - Type H Reflective



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	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 7/29/13 PLATE NO. M6-1.13

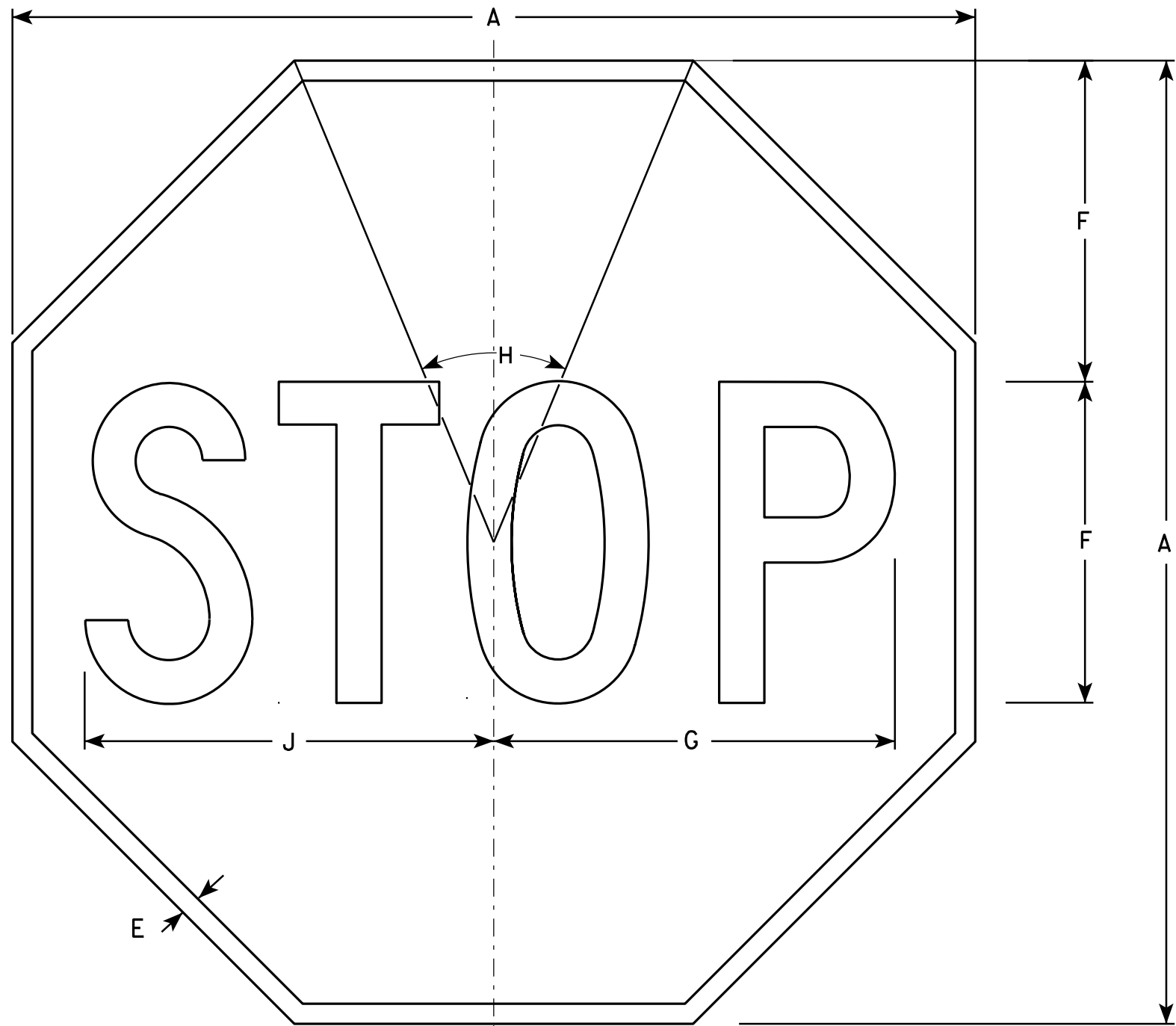
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 172

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 - Red
Message - White
- 3. Message Series - C

R1-1

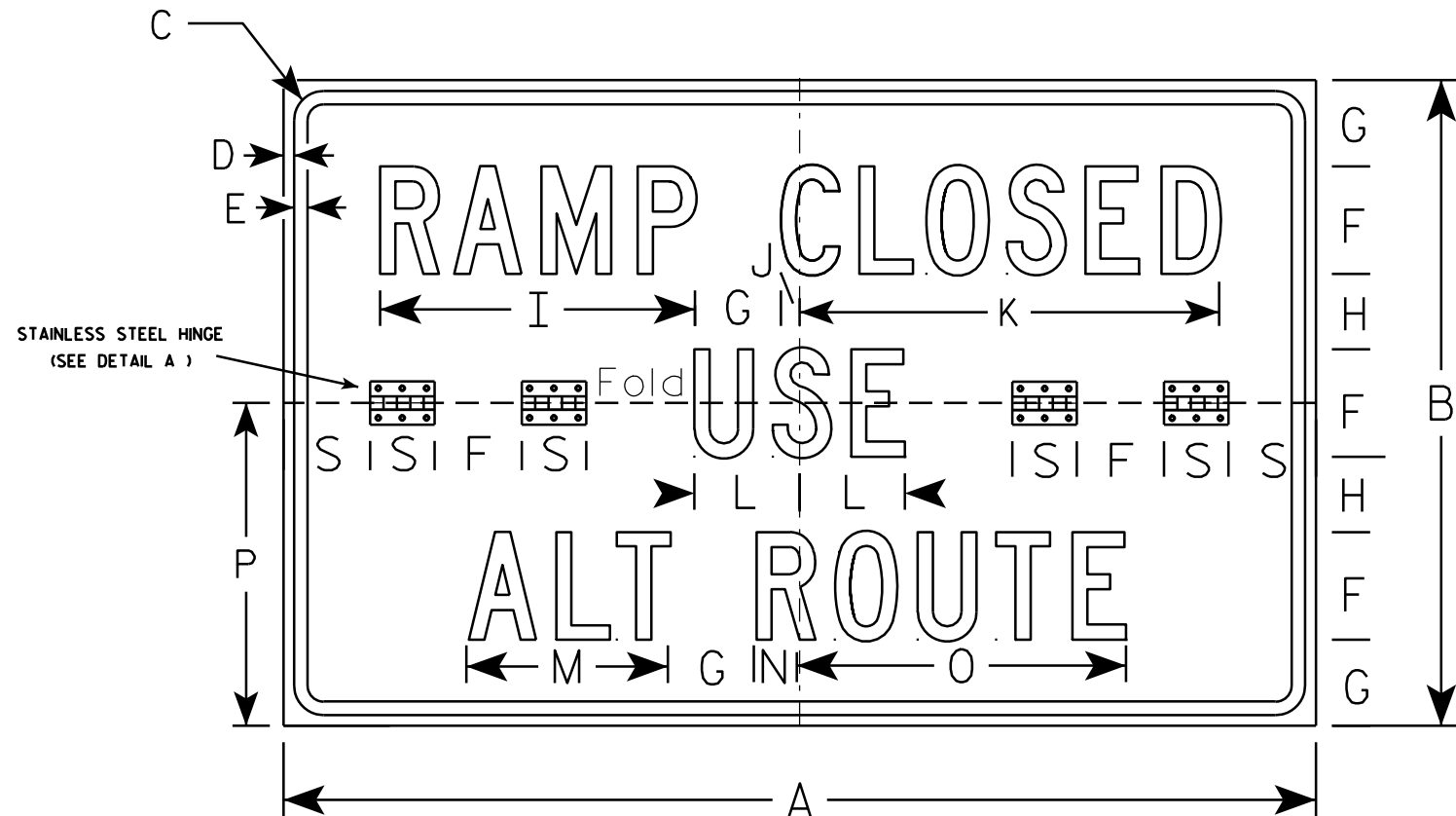
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1 - 1

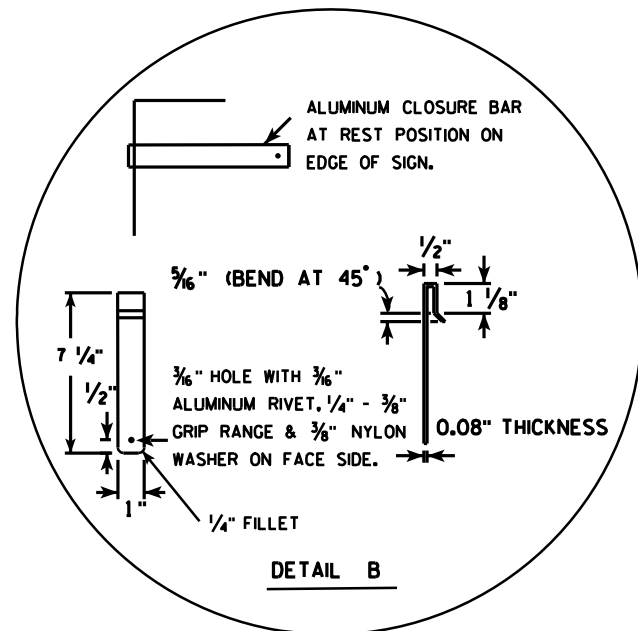
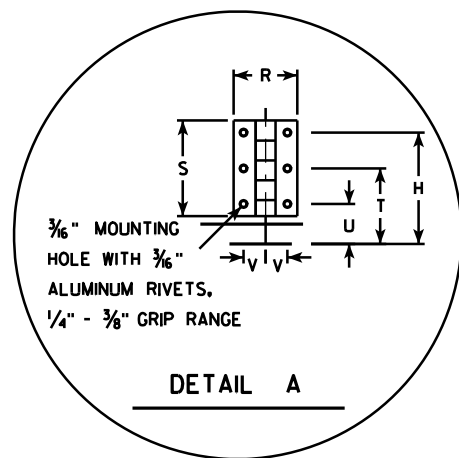
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

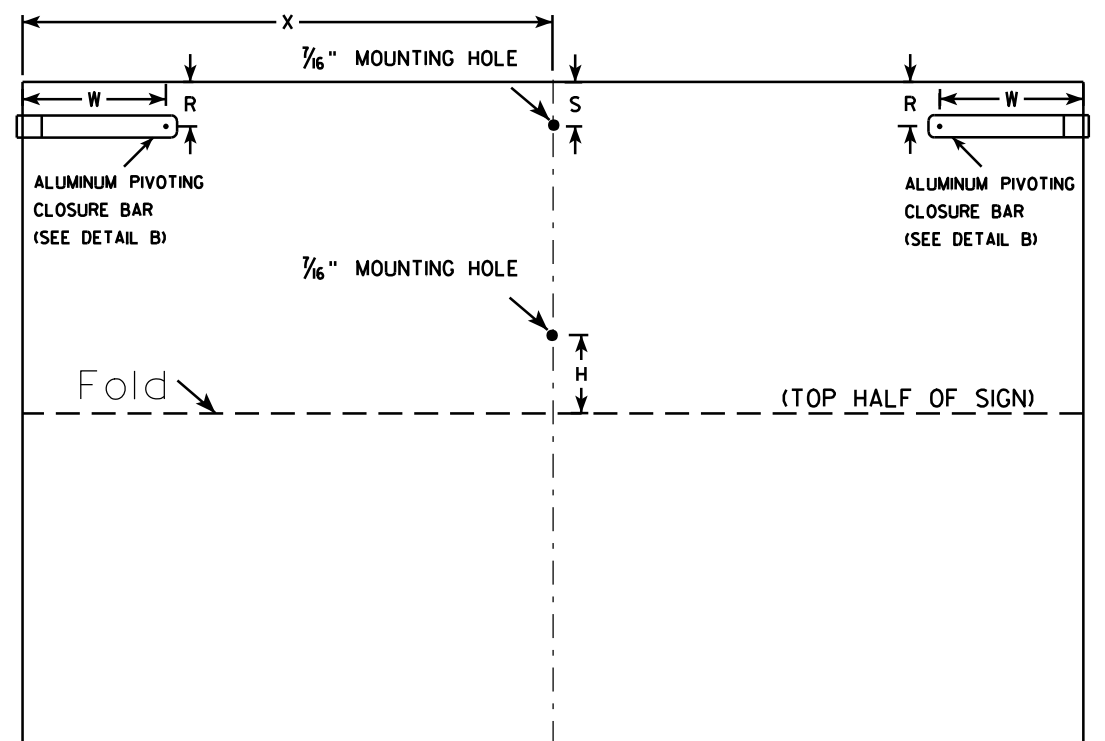


R11-54F



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. Sign Base Material shall be aluminum corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



(BACK VIEW)

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	5	4	3 1⁄2	14 5⁄8	7⁄8	19 1⁄2	4 7⁄8	9 3⁄8	2	15 1⁄4	15		2	3	2 5⁄8	1 1⁄4	11⁄16	6 1⁄2	24			10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	5	4	3 1⁄2	14 5⁄8	7⁄8	19 1⁄2	4 7⁄8	9 3⁄8	2	15 1⁄4	15		2	3	2 5⁄8	1 1⁄4	11⁄16	6 1⁄2	24			10.0
3																											
4																											
5																											

STANDARD SIGN
R11-54F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-54F.2

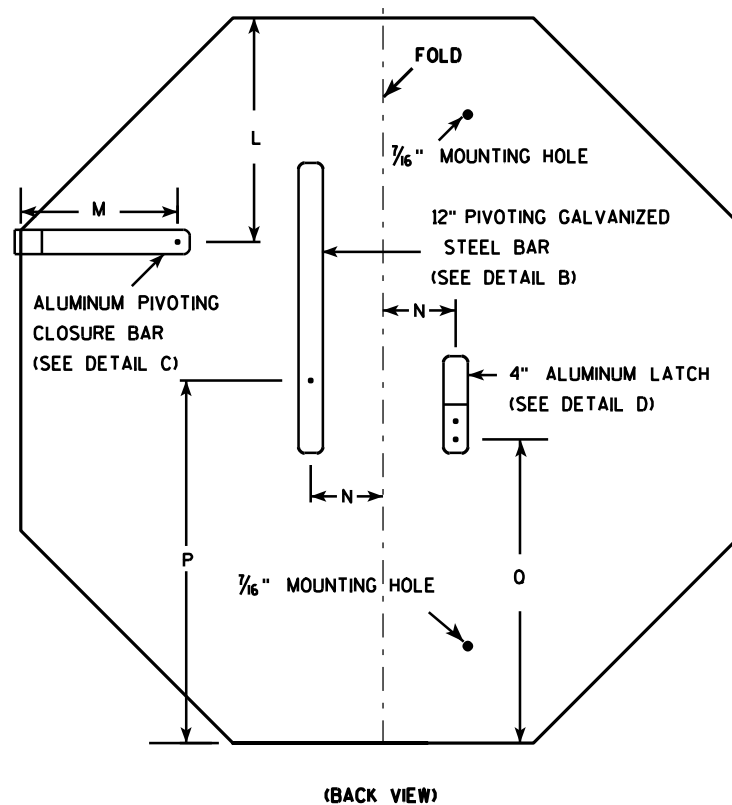
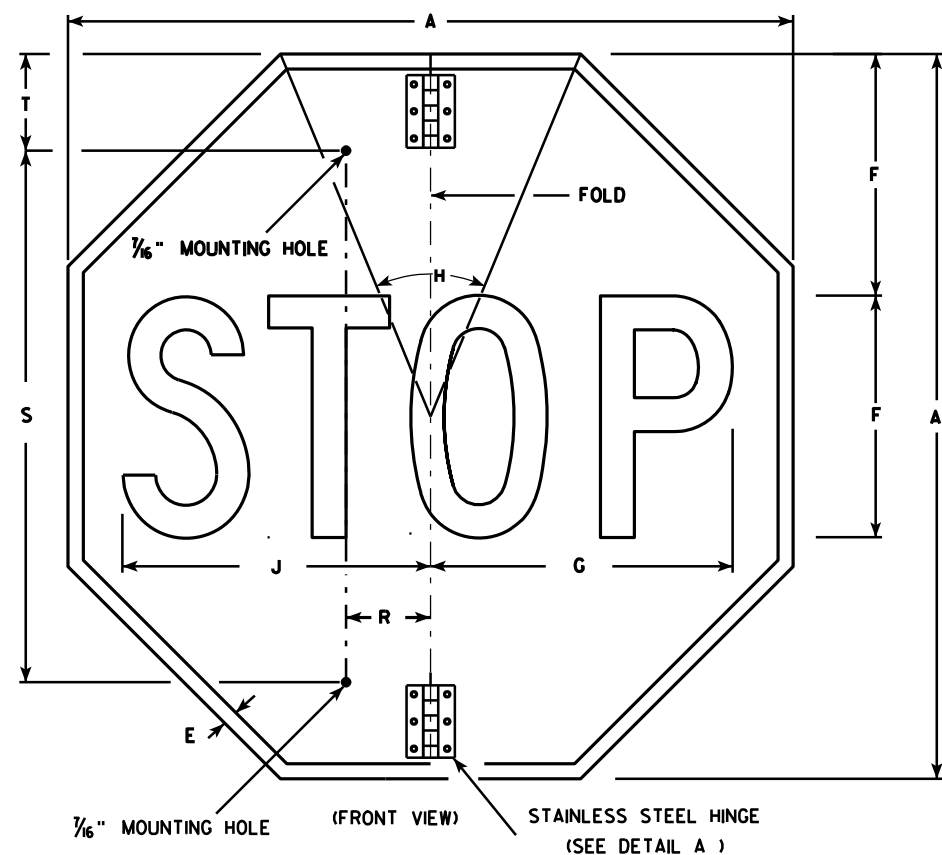
PROJECT NO:

HWY:

COUNTY:

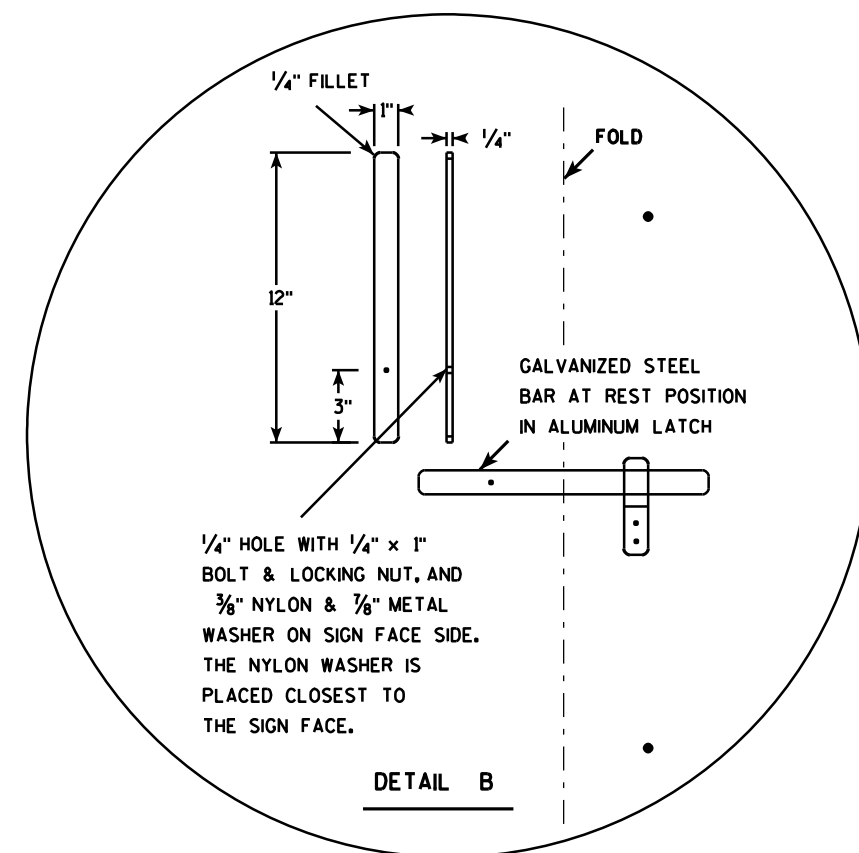
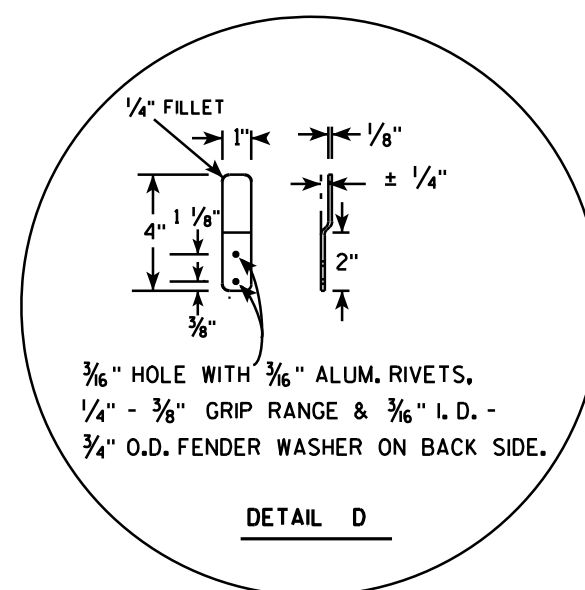
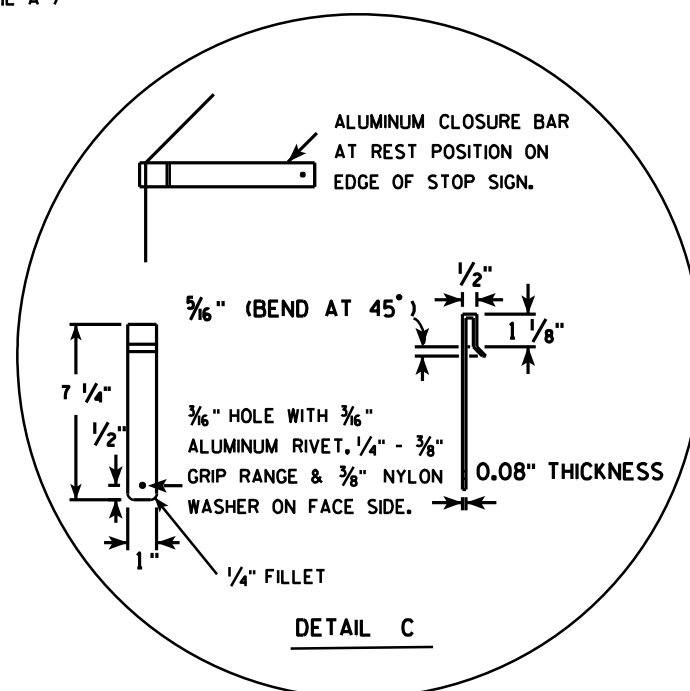
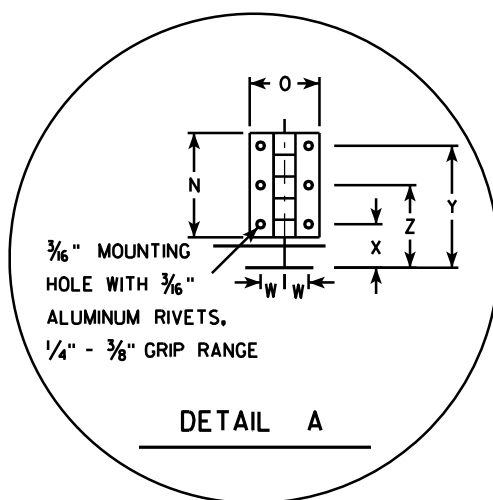
SHEET NO: 174

E

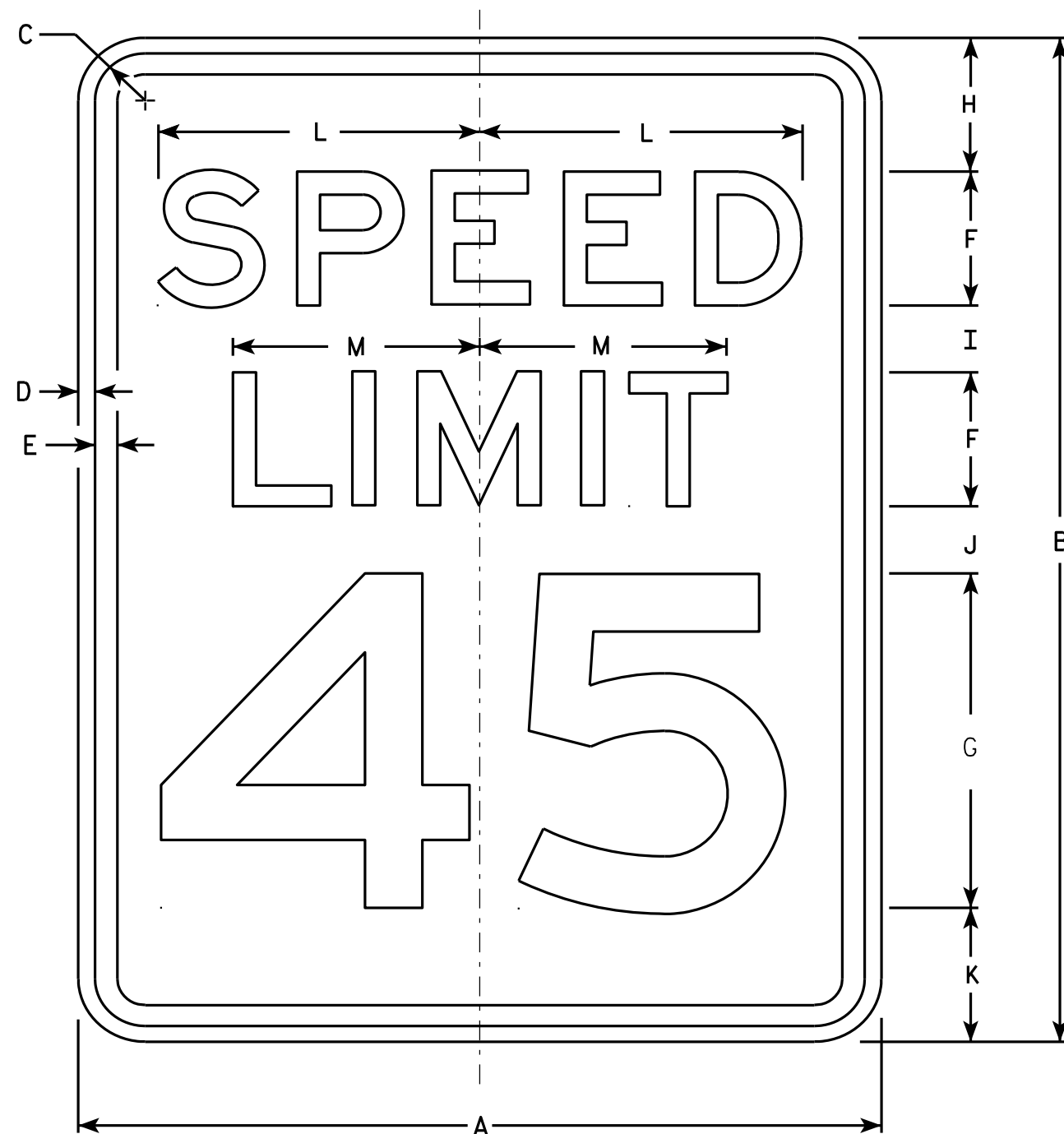


- ## NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 - Background - Red
 - Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.

[illegible]

STANDARD SIGN	
R1-1F	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R. Rauch</u> for State Traffic Engineer
DATE 12/03/10	PLATE NO. R1-1F.3



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

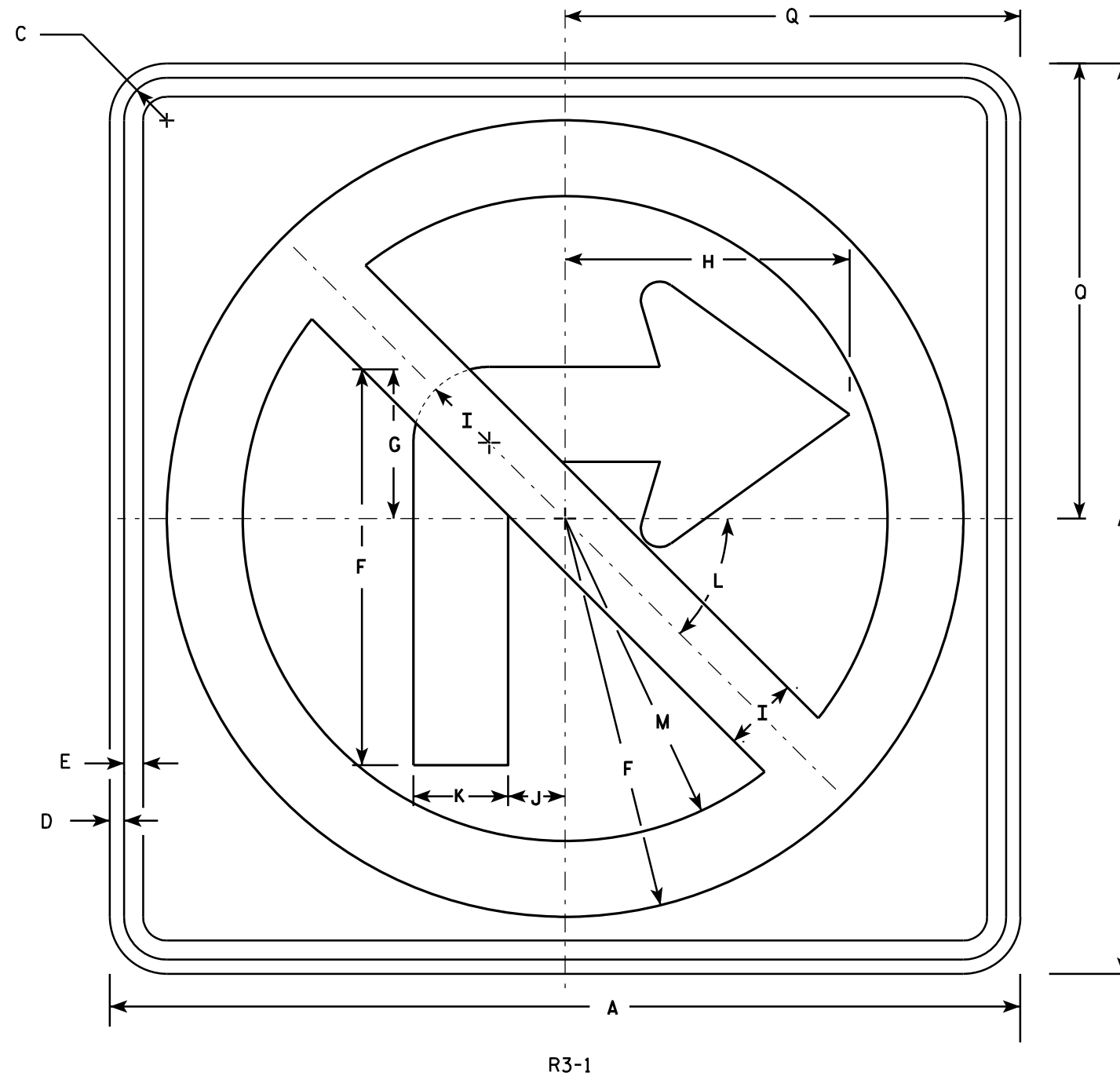
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

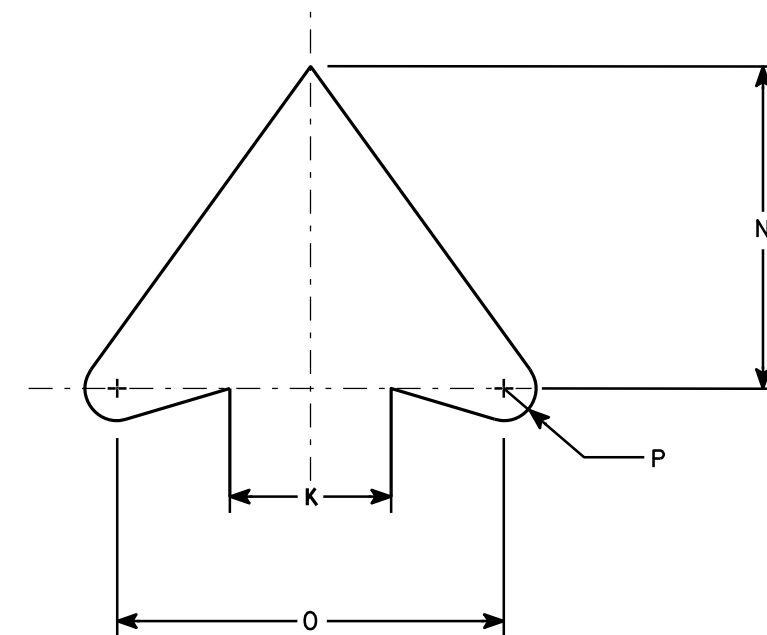
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: 176 E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

STANDARD SIGN

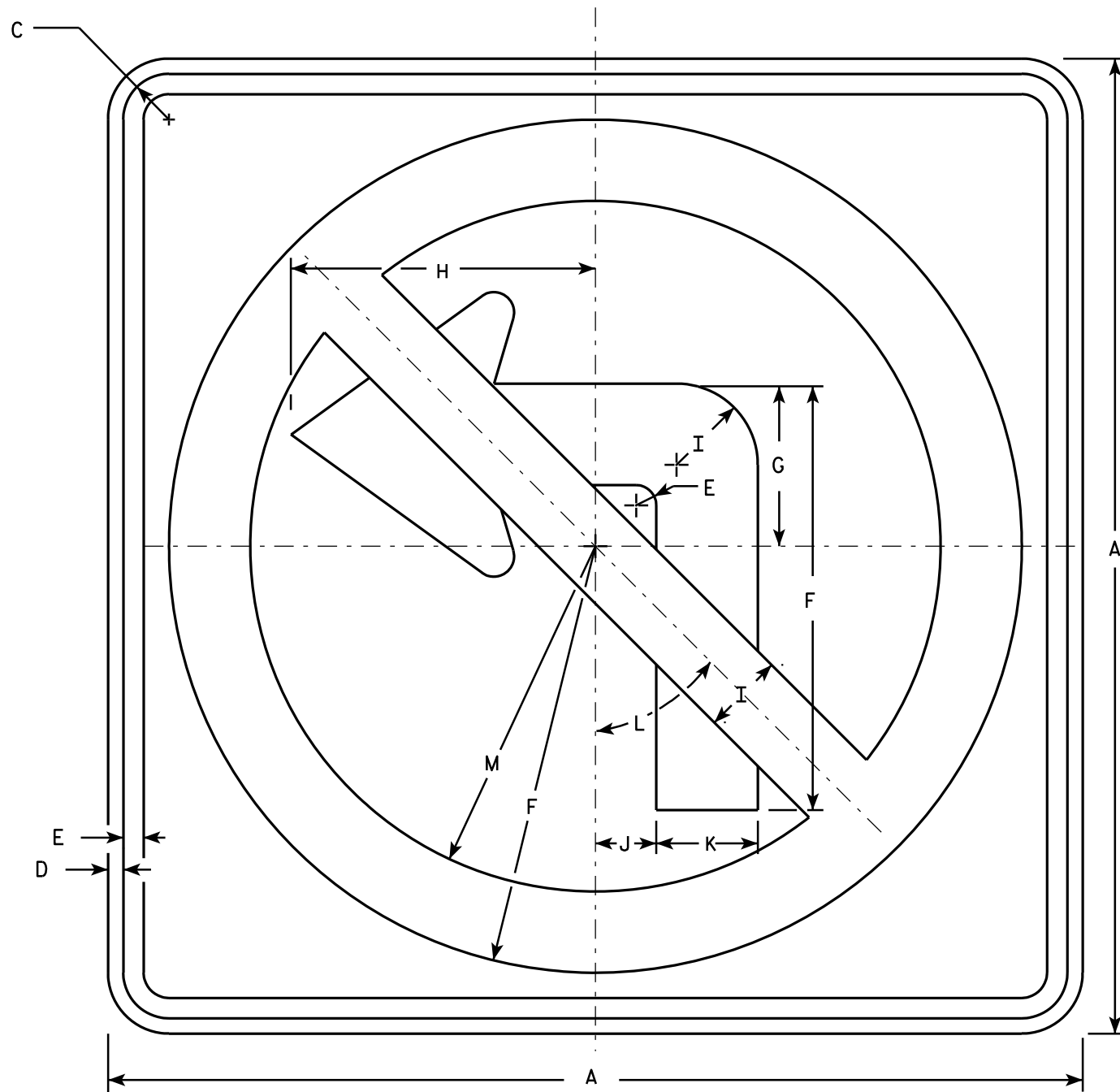
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

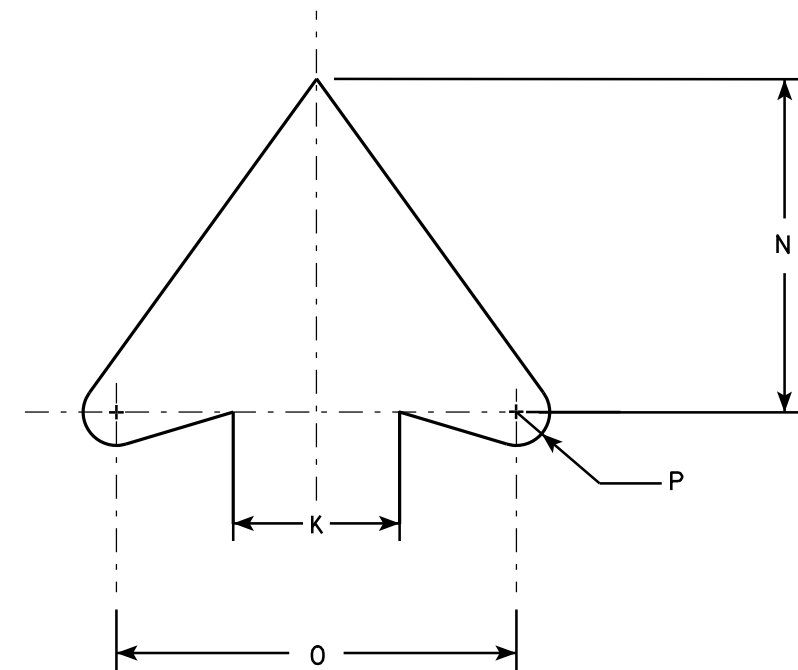
PROJECT NO: HWY: COUNTY: SHEET NO: 177 E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

STANDARD SIGN R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

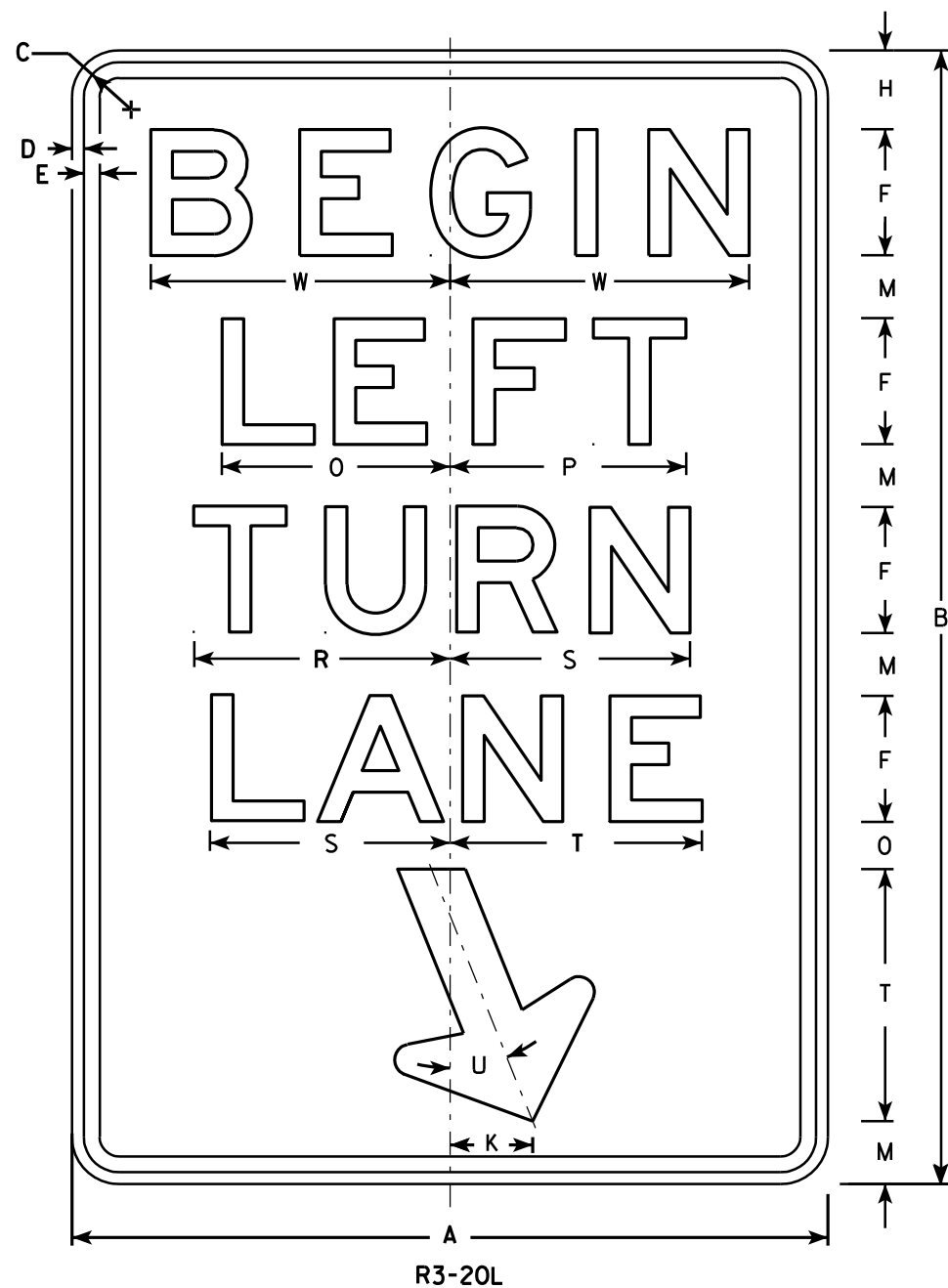
PROJECT NO:

HWY:

COUNTY:

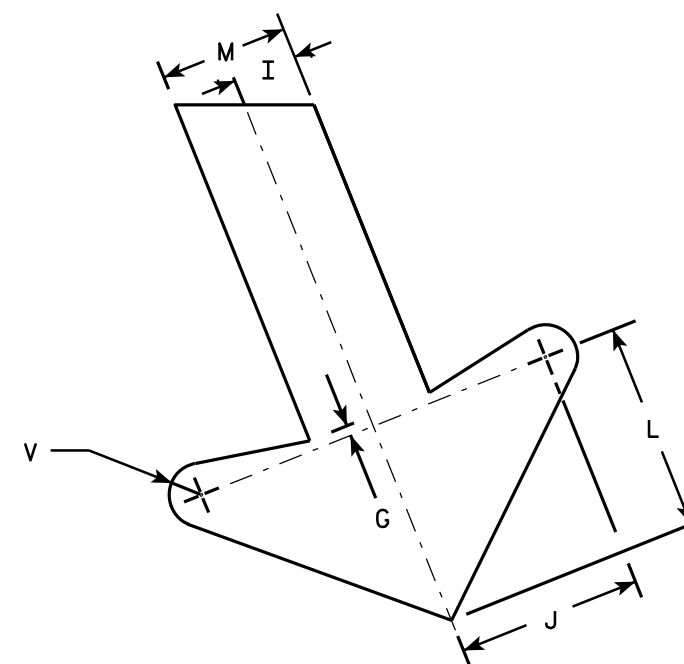
SHEET NO: 178

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.



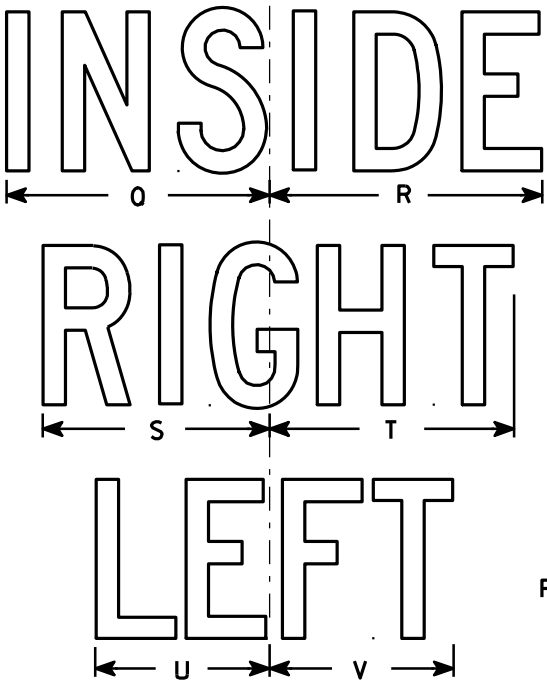
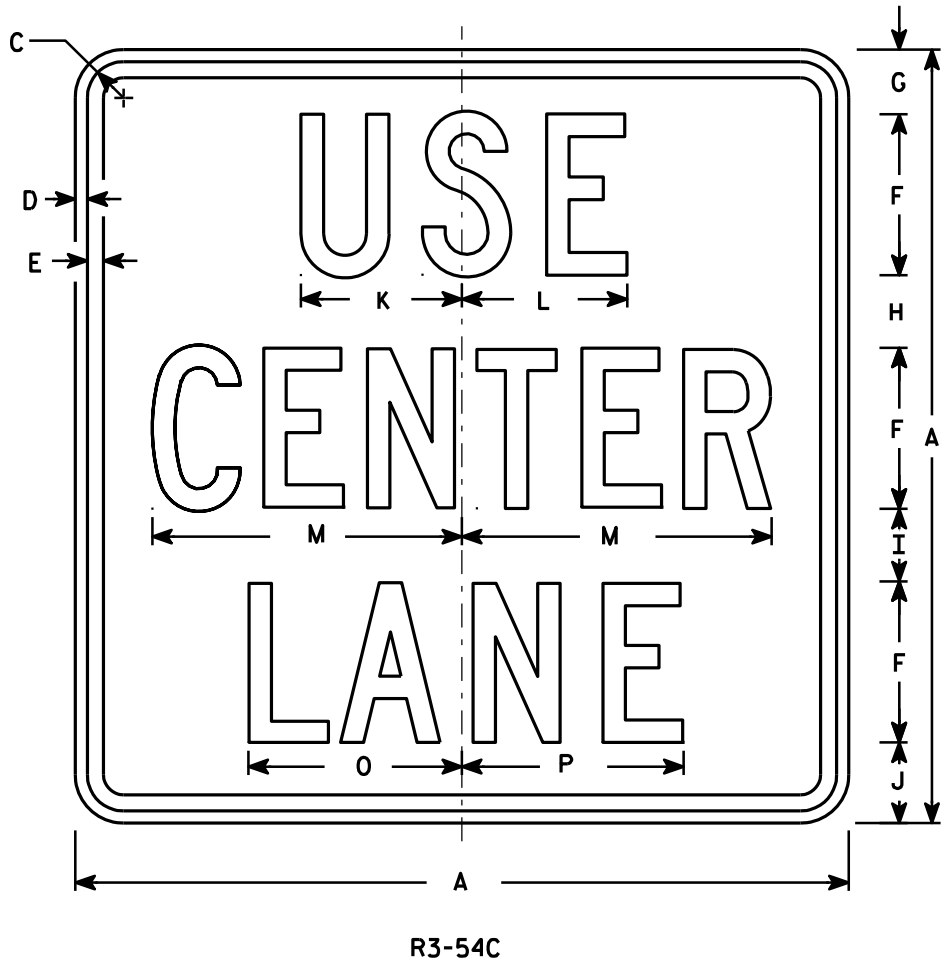
ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN R3-20L	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 10/18/10	PLATE NO. R3-20L.7

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 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.



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

STANDARD SIGN
R3-54C, I ,L & R

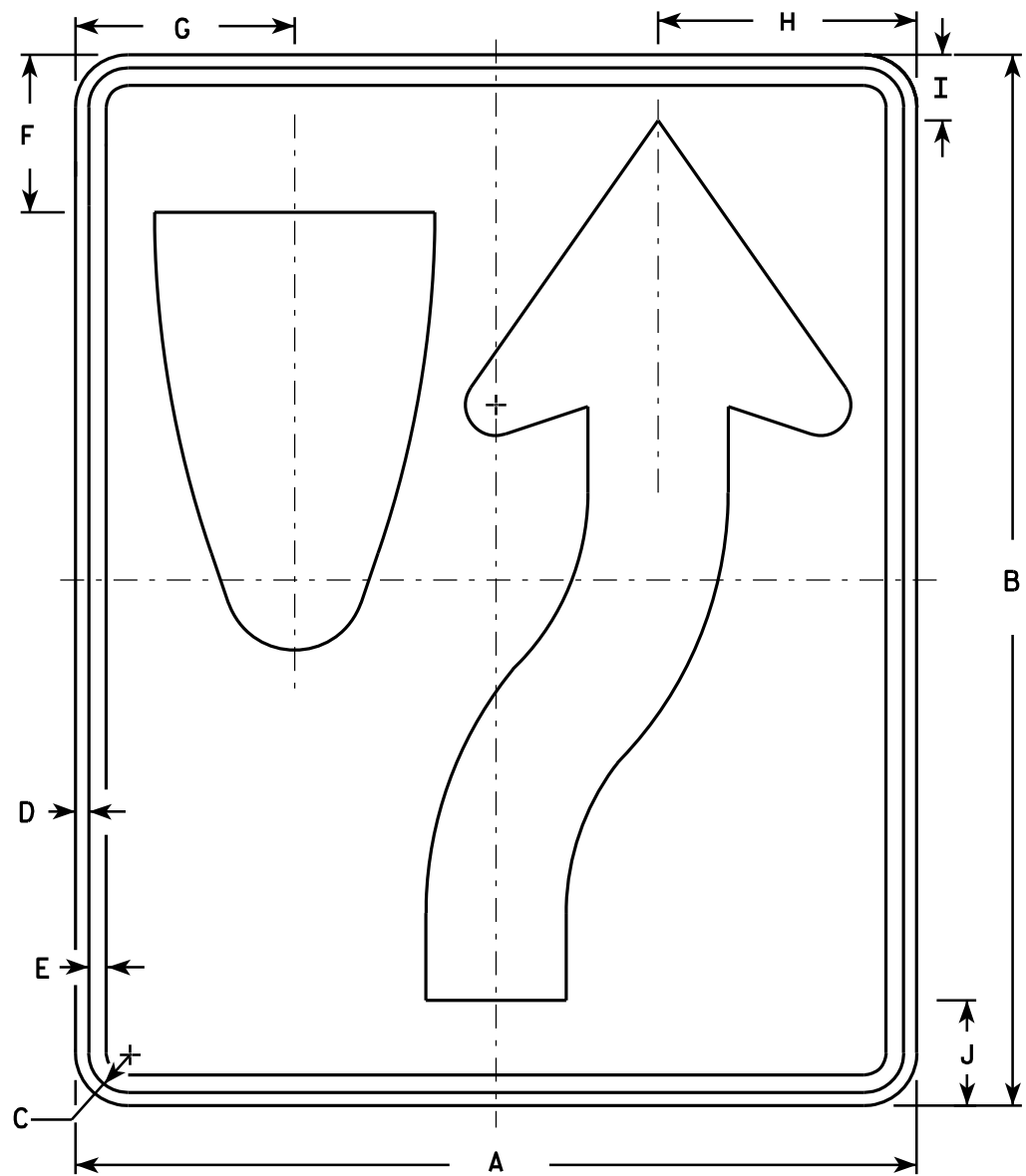
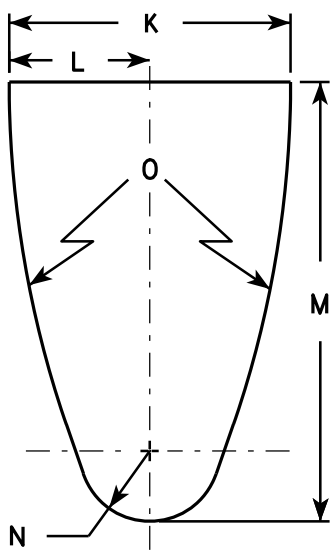
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

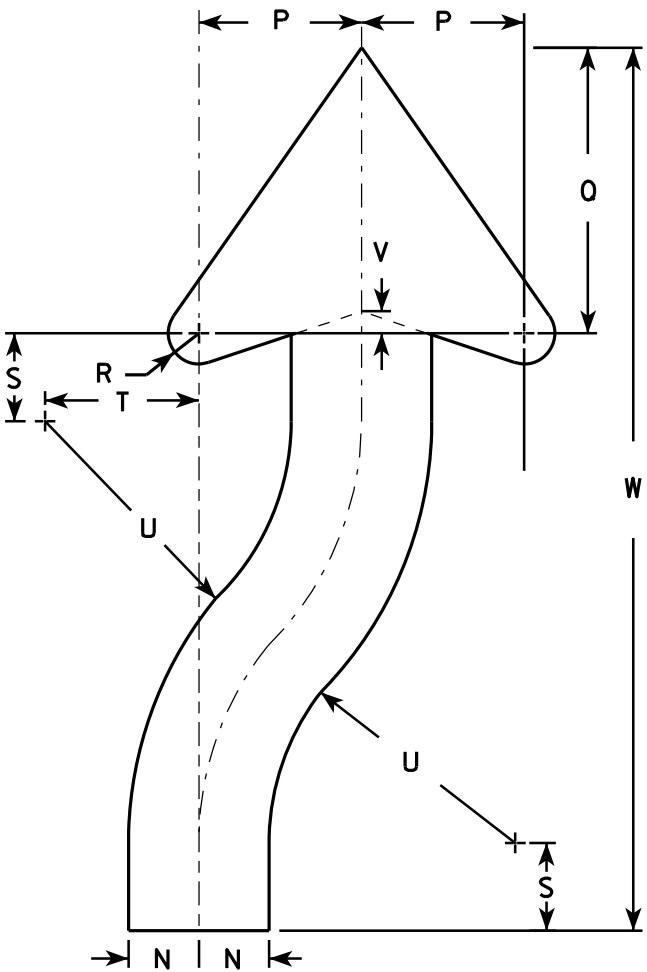
DATE 3/24/2011 PLATE NO. R3-54.8

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
- 2. Color:
Background - White
Message - Black
- 3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
- 4. R4-8 is the same as R4-7 except Legend is reversed.



R4-7



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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:

HWY:

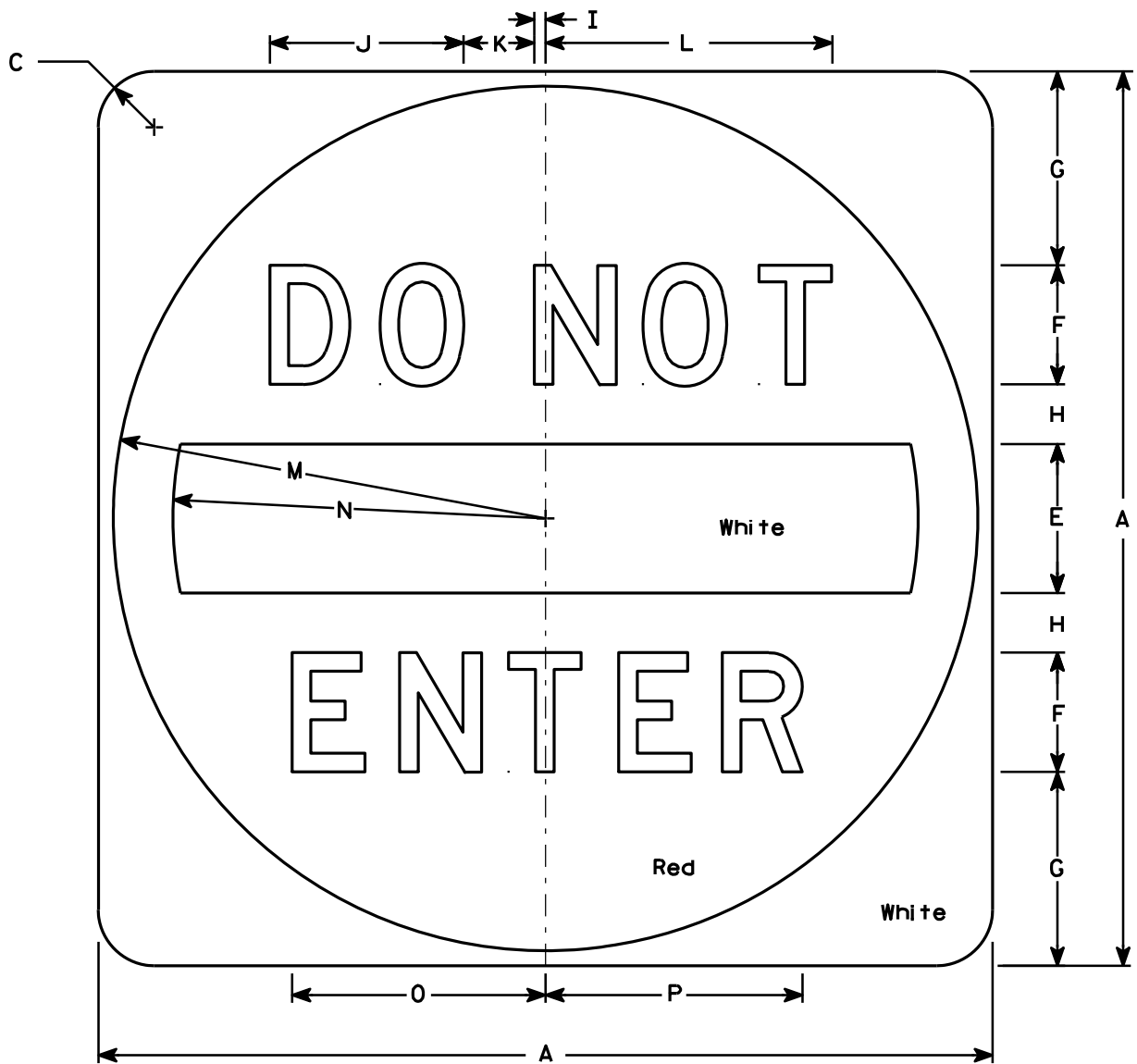
COUNTY:

SHEET NO: 181

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 - See detail
 - Message - White - Type H Reflective
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but when base material is metal, the corners shall be rounded.



R5 - 1

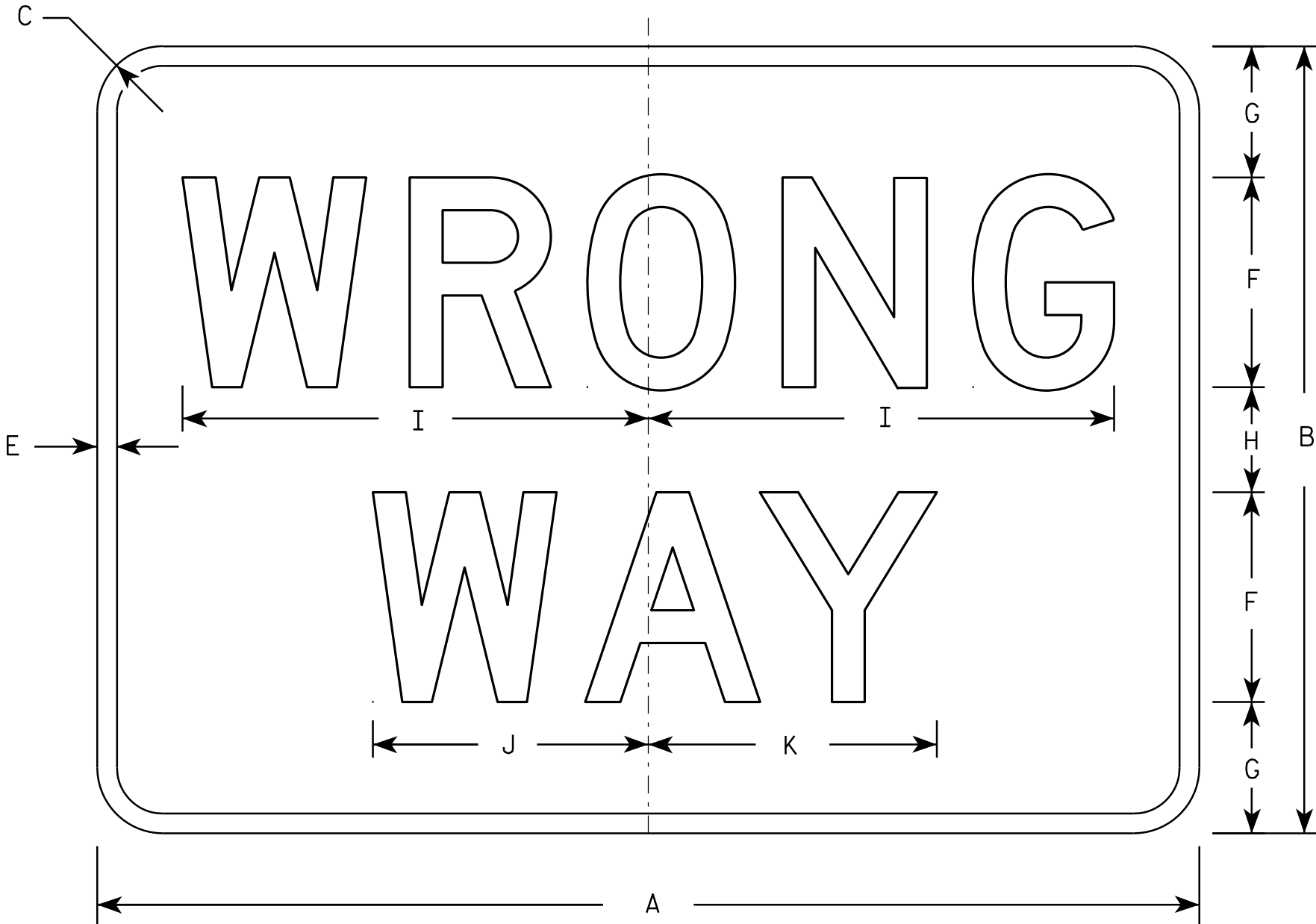
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN
R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15



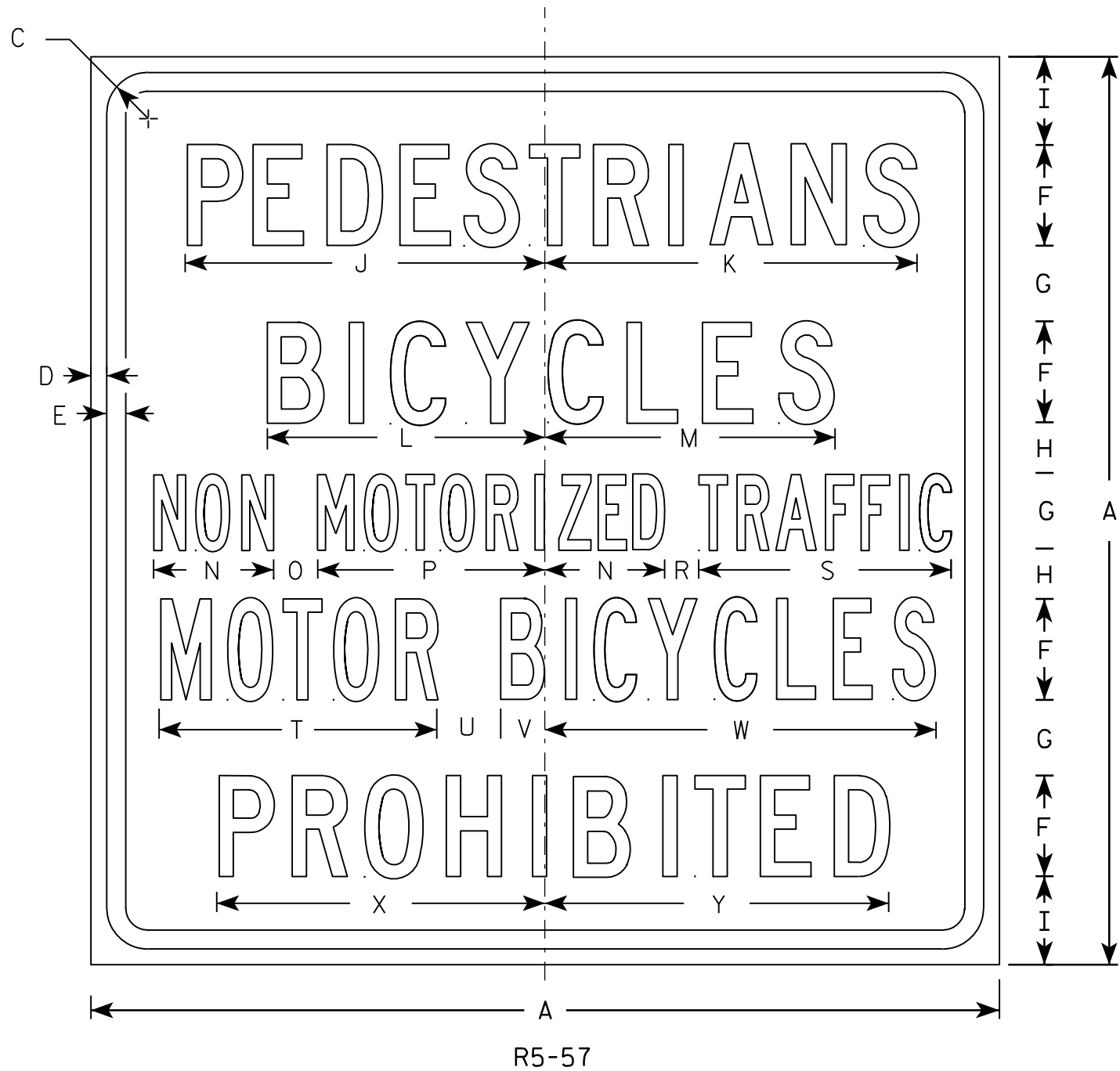
R5-1A

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 - 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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN R5-1A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/17/10	PLATE NO. R5-1A.2



NOTES

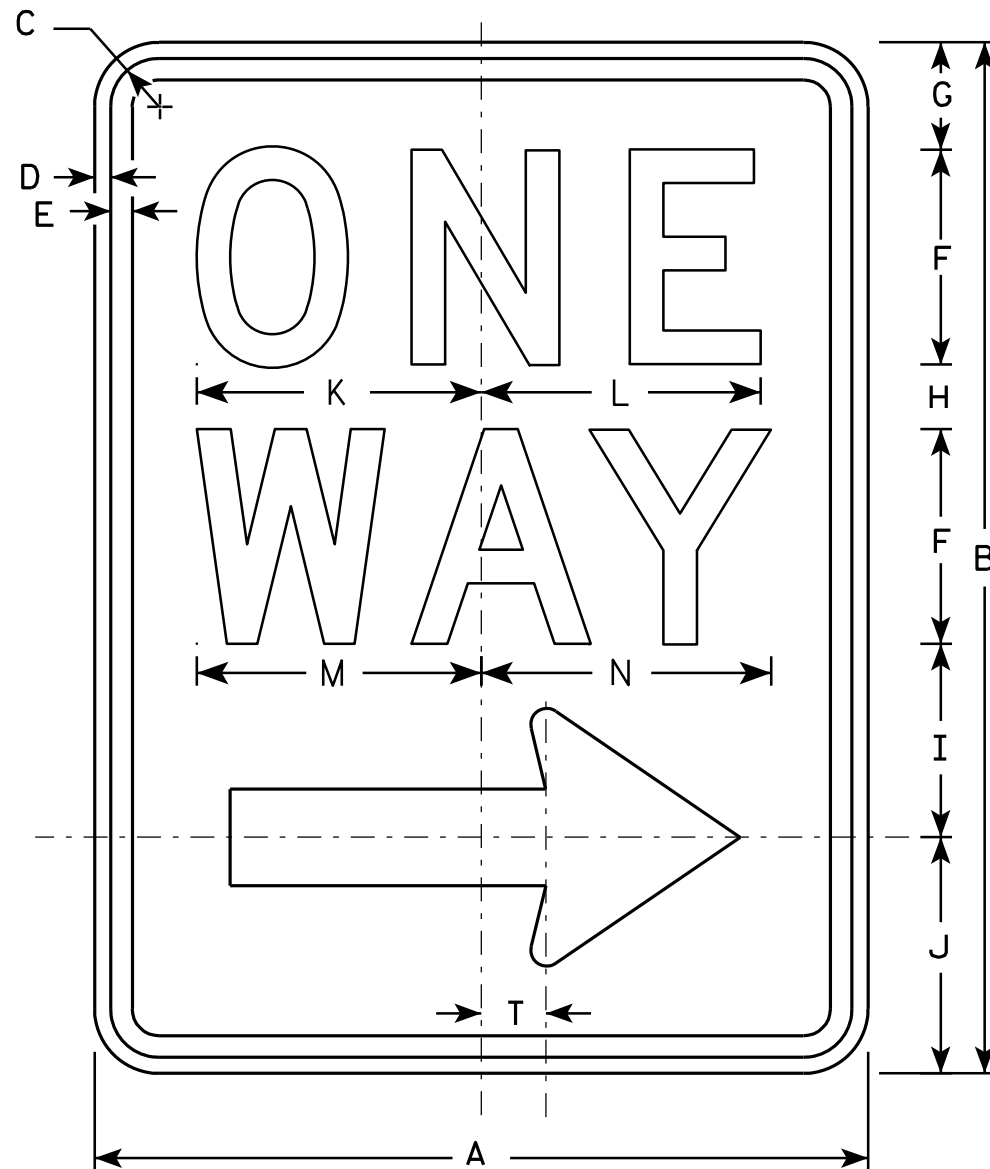
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - Lines 1, 2, and 5 are Series C.
Lines 3 and 4 are Series B.
4. Corners may be square or rounded when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

7

7

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

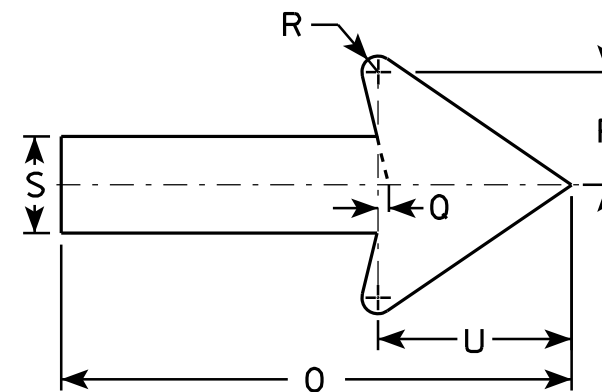
STANDARD SIGN R5-57	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/29/2011	PLATE NO. R5-57.10



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 185	E
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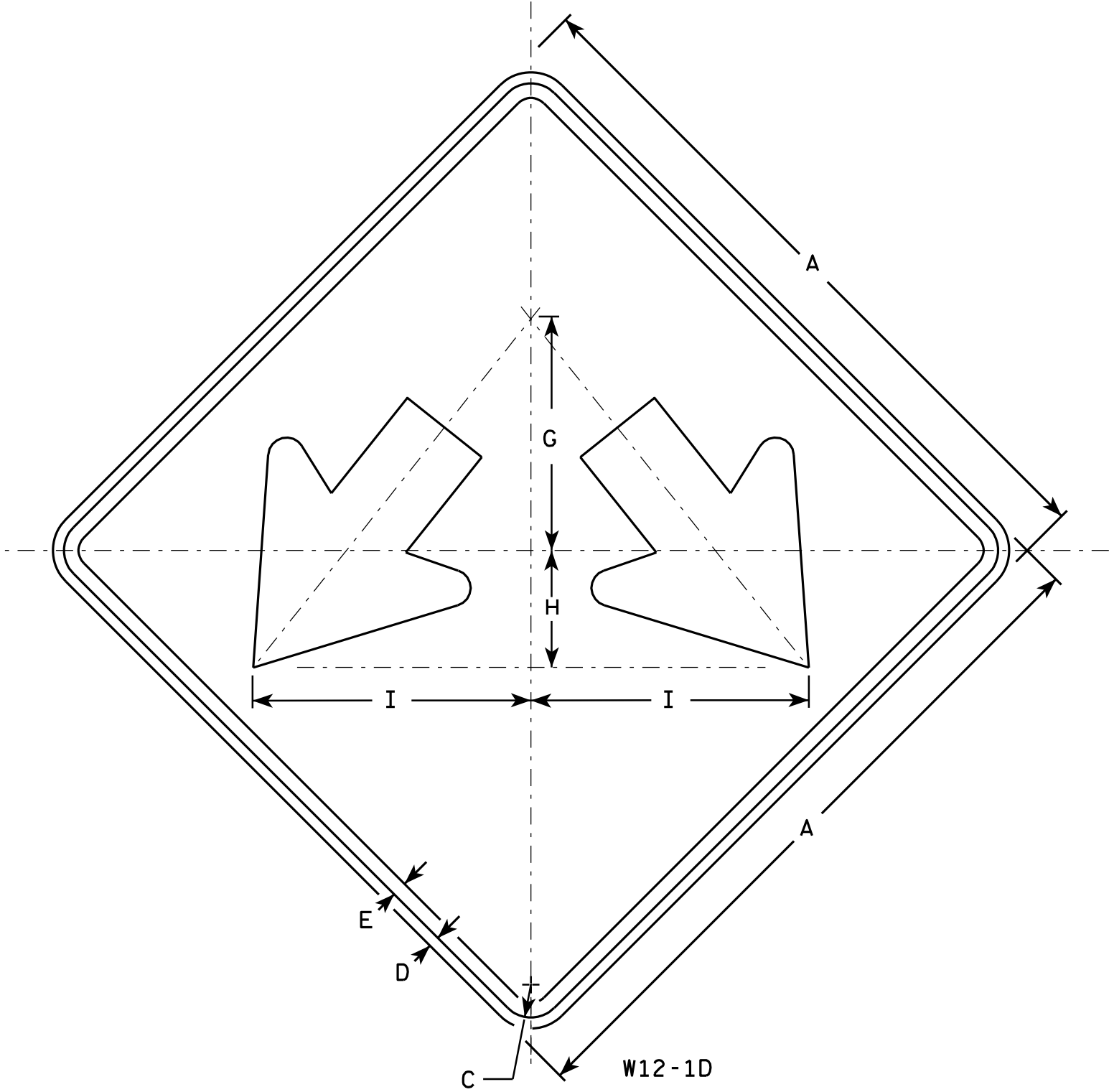
STANDARD SIGN

R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

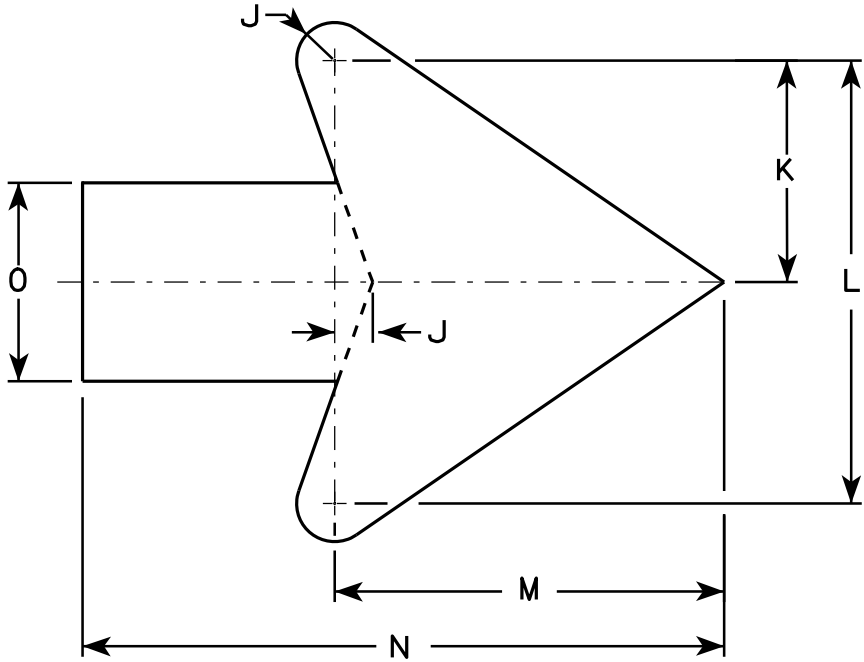
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8



NOTES

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



Arrow Detail

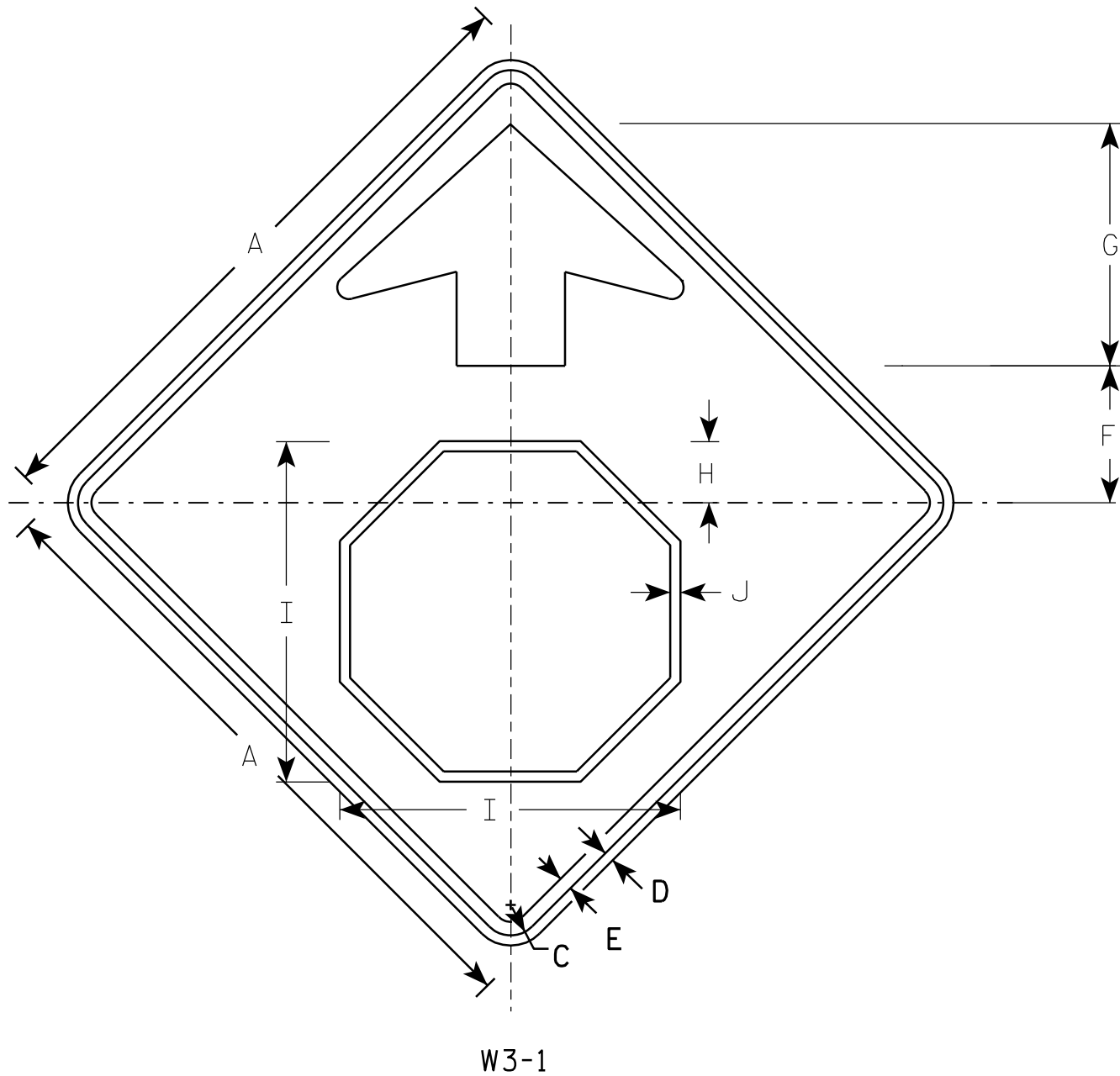
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

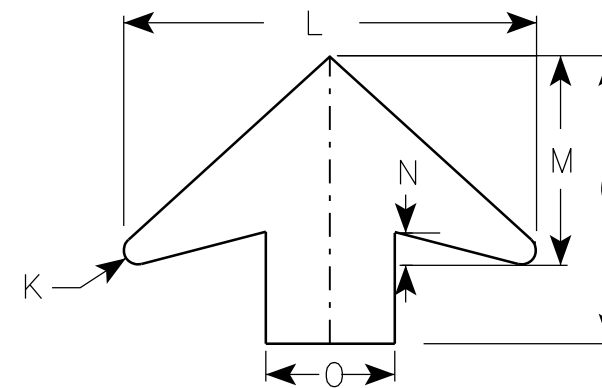
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15



NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Arrow & Border - BLACK
Stop Symbol - WHITE BORDER ON RED 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	30		1 ³ / ₈	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN

W3-1

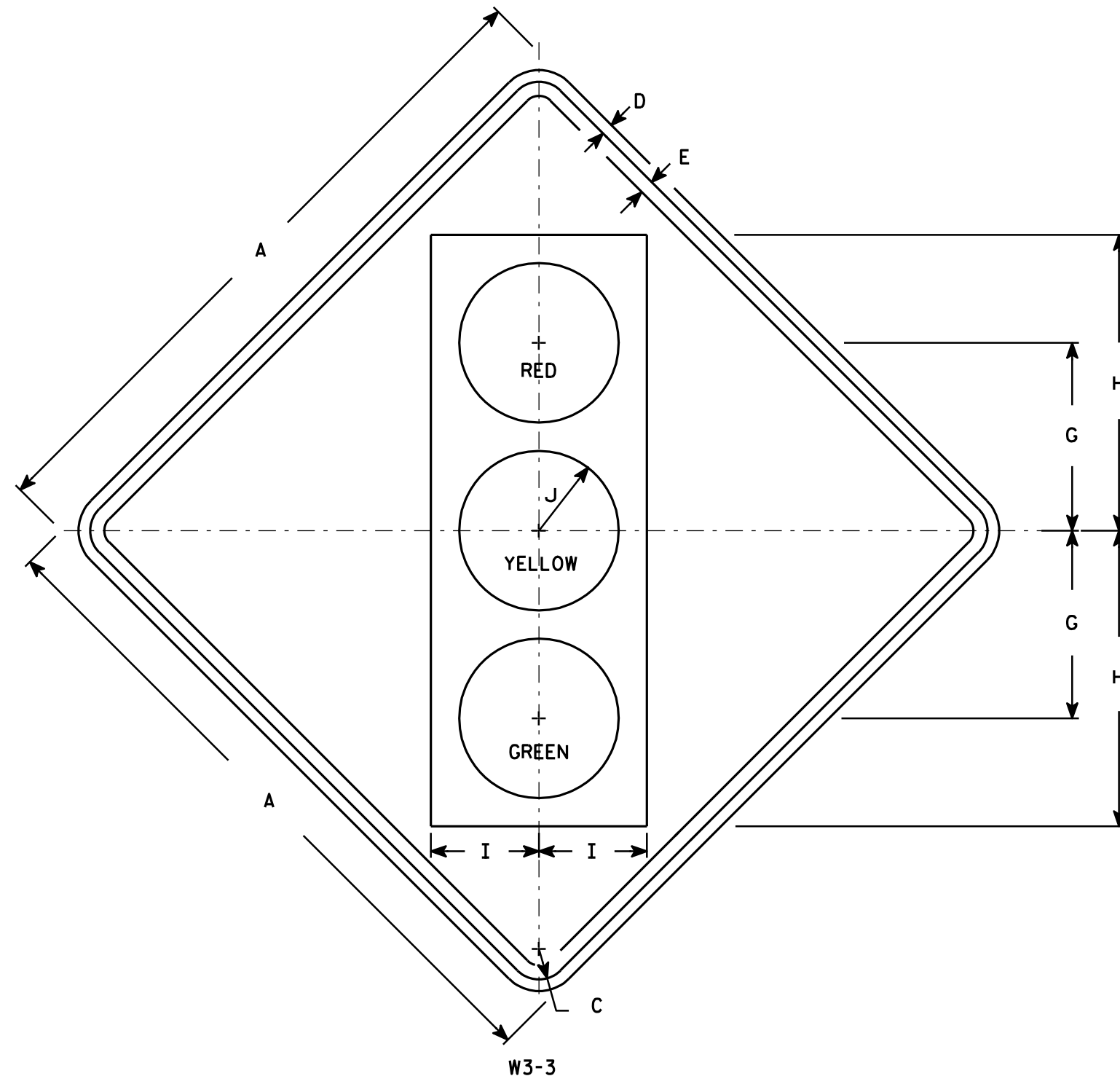
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

for State Traffic Engineer

DATE 6/7/10

PLATE NO. W3-1.12



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
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.
- Symbol and border are non-reflective black.
Top circle - Type H Reflectorized Red
Center circle - Same as background
Bottom circle - Type H Reflectorized Green

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		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 6/7/10

PLATE NO. W3-3.11

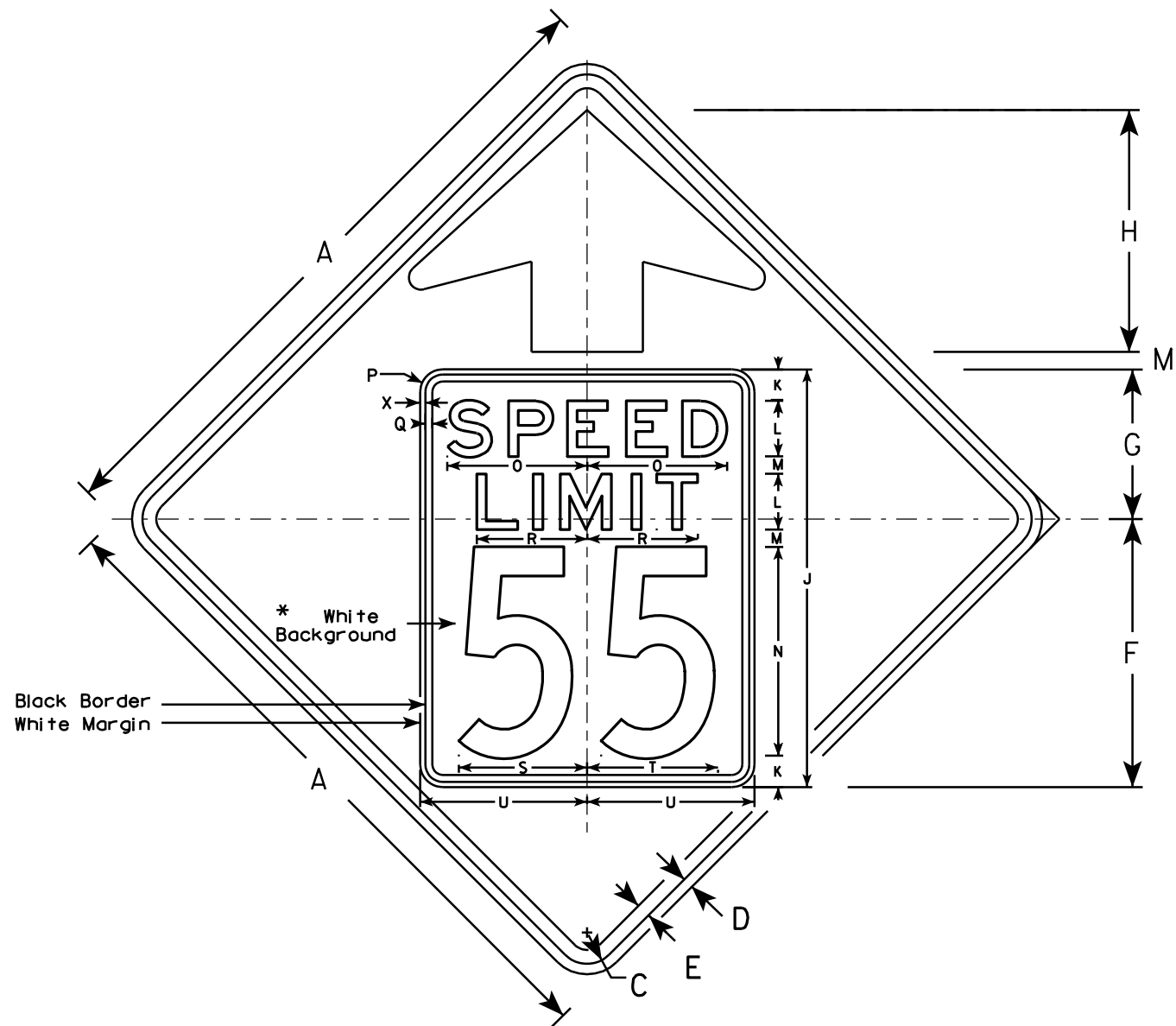
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 188

E

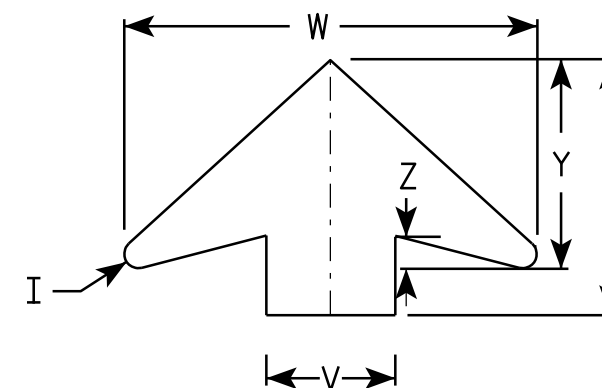


W3-5

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

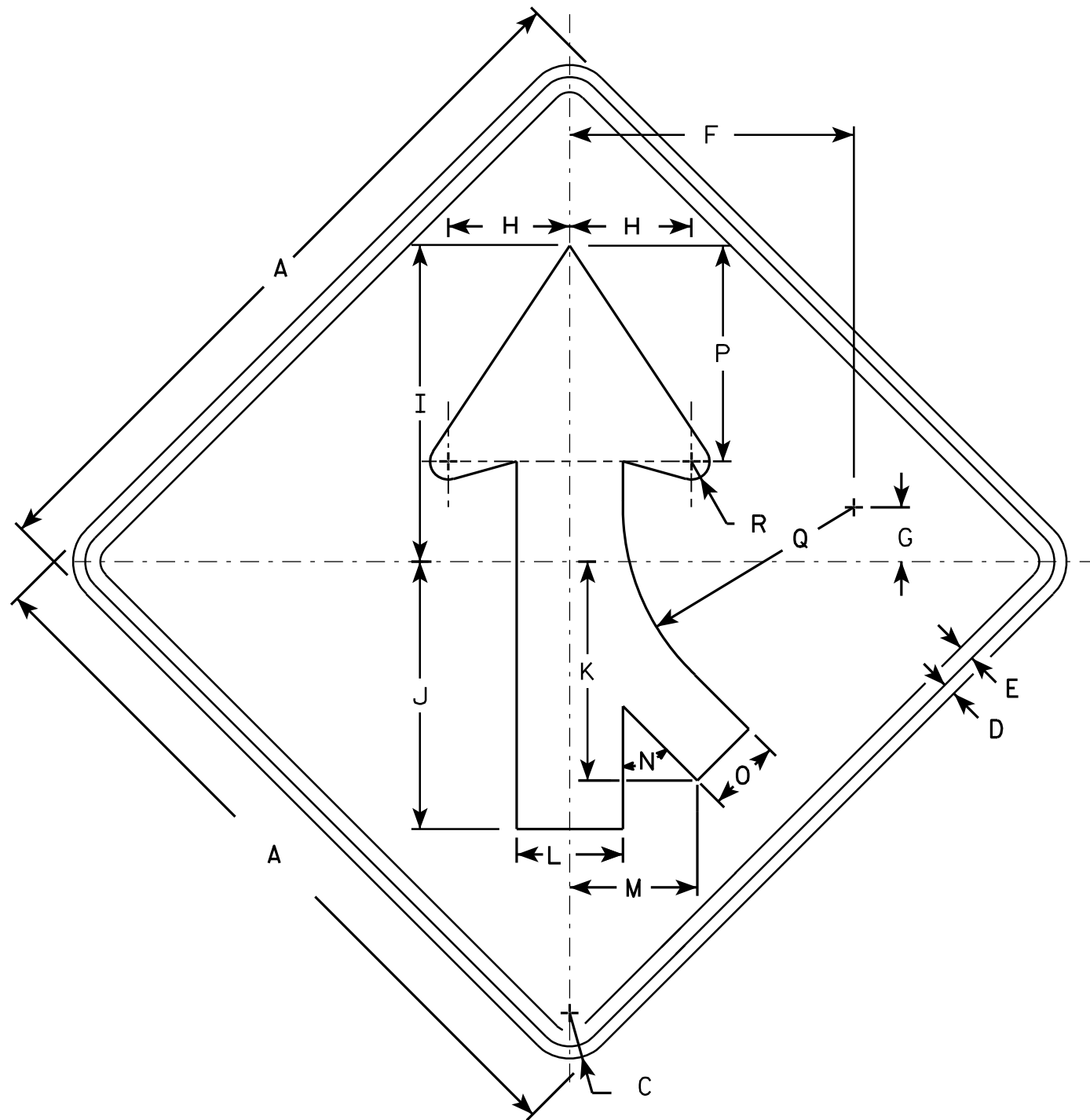
DATE 5/29/12

PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 189

E



W4-1 R

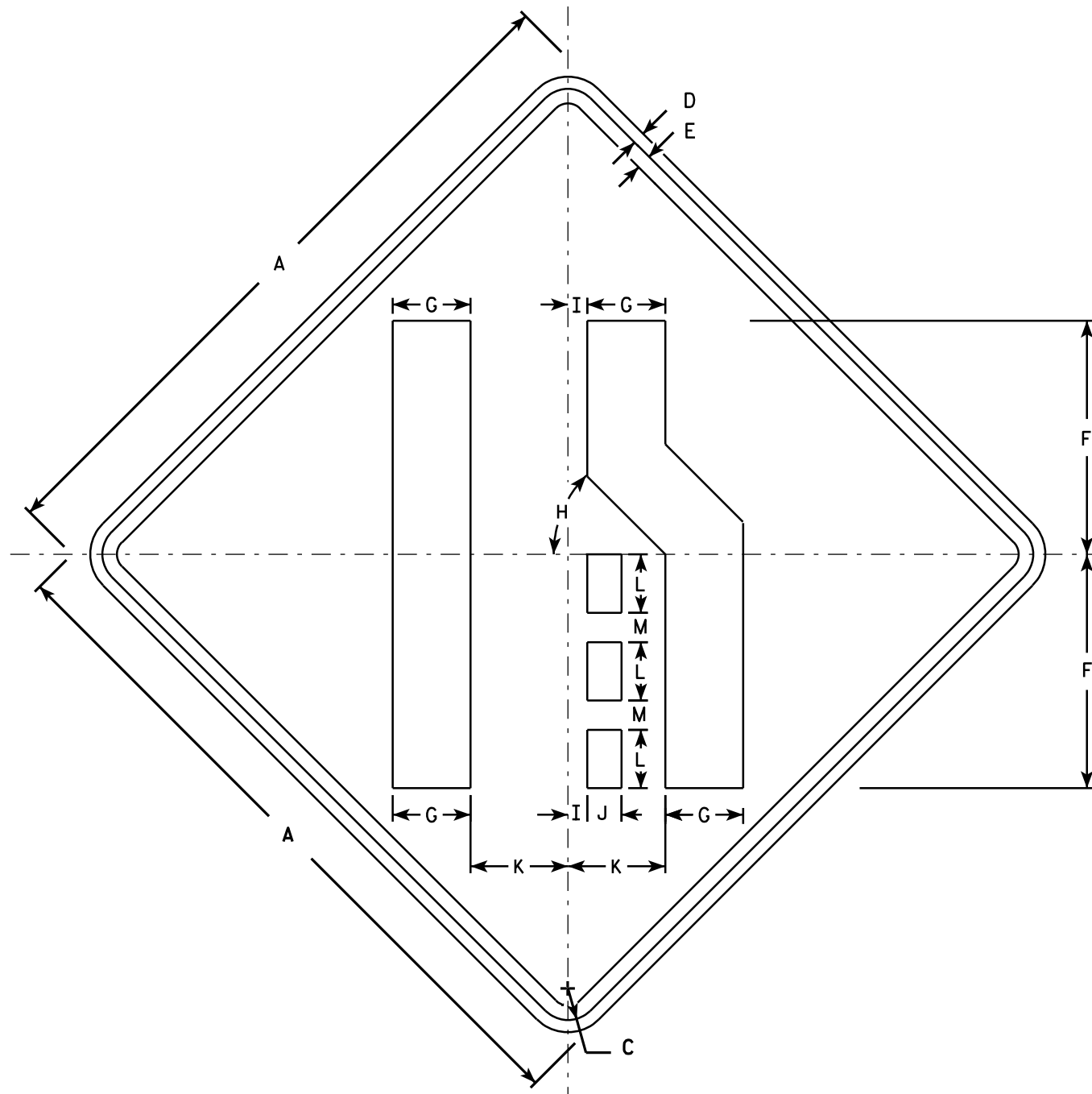
NOTES

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. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 ³ / ₈	1/2	5/8	11 ⁵ / ₈	2 1/2	5	13	11	9	4 ³ / ₈	5 1/4	45°	3	8 ⁷ / ₈	9 1/2	3/4									6.25
2S	36		1 ⁵ / ₈	5/8	3/4	14	2 ³ / ₄	6	15 ³ / ₄	13 1/4	10 1/4	5 1/4	6 ³ / ₈	45°	3 ⁵ / ₈	10 ⁵ / ₈	11 ³ / ₈	7/8									9.0
2M	36		1 ⁵ / ₈	5/8	3/4	14	2 ³ / ₄	6	15 ³ / ₄	13 1/4	10 1/4	5 1/4	6 ³ / ₈	45°	3 ⁵ / ₈	10 ⁵ / ₈	11 ³ / ₈	7/8									9.0
3	36		1 ⁵ / ₈	5/8	3/4	14	2 ³ / ₄	6	15 ³ / ₄	13 1/4	10 1/4	5 1/4	6 ³ / ₈	45°	3 ⁵ / ₈	10 ⁵ / ₈	11 ³ / ₈	7/8									9.0
4	48		2 1/4	3/4	1	18 ³ / ₄	3 ⁵ / ₈	8	20 1/2	17 1/2	14 ³ / ₈	7	8 ³ / ₈	45°	4 ³ / ₄	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 ³ / ₄	3 ⁵ / ₈	8	20 1/2	17 1/2	14 ³ / ₈	7	8 ³ / ₈	45°	4 ³ / ₄	14 1/4	15 1/4	1 1/4									16.0

STANDARD SIGN W4-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 03/12/13 PLATE NO. W4-1.14



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 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

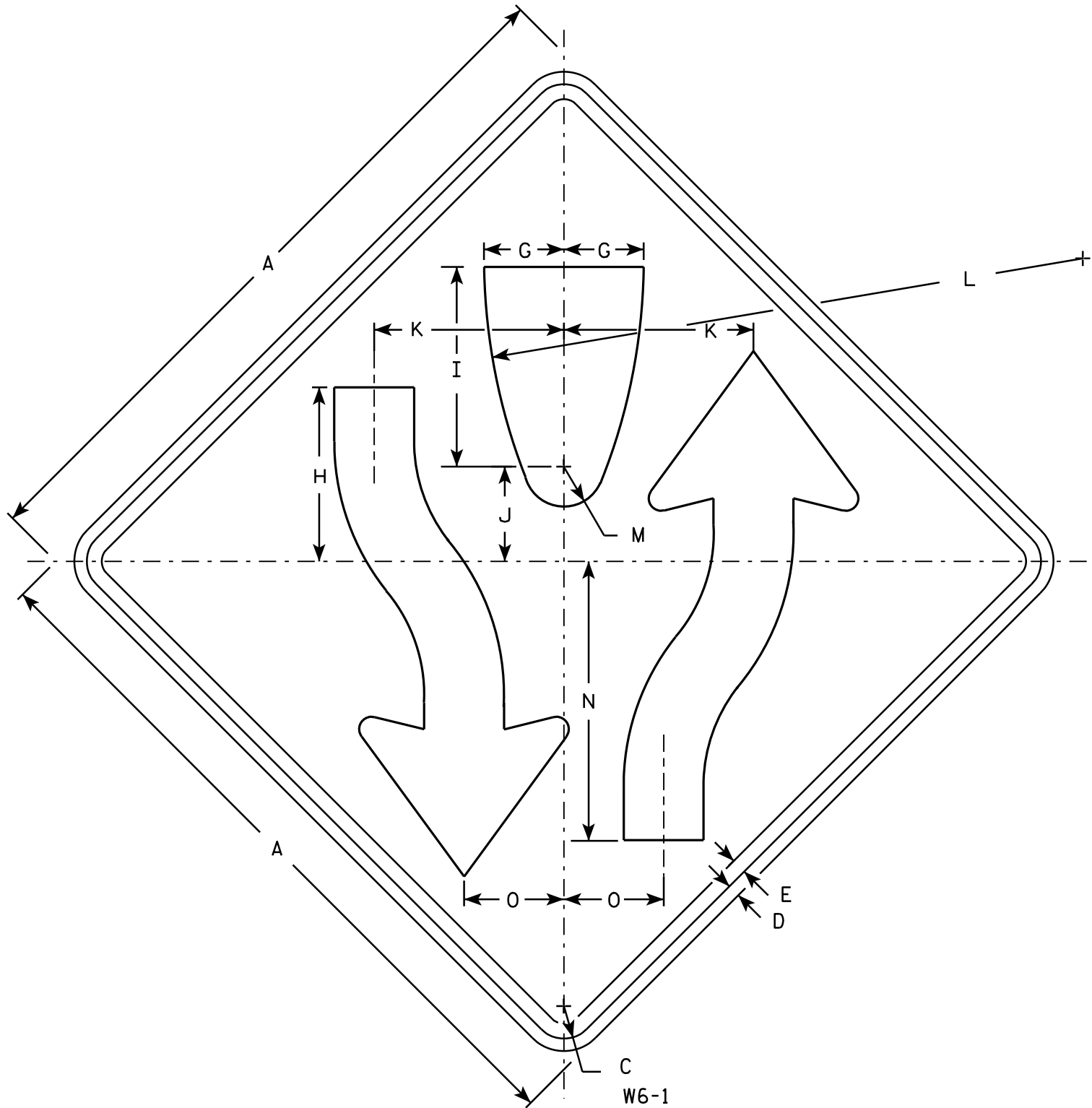
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

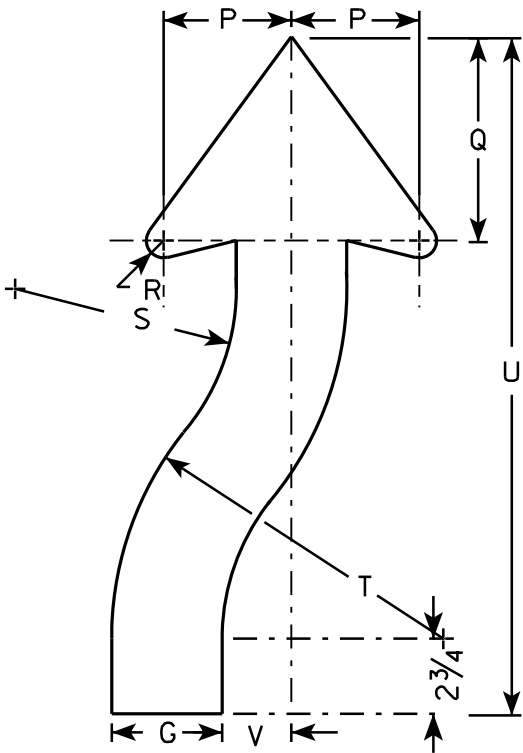
PROJECT NO:

SHEET NO: 191



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. W6-2 same as W6-1 but is rotated 180° when mounted.



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	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

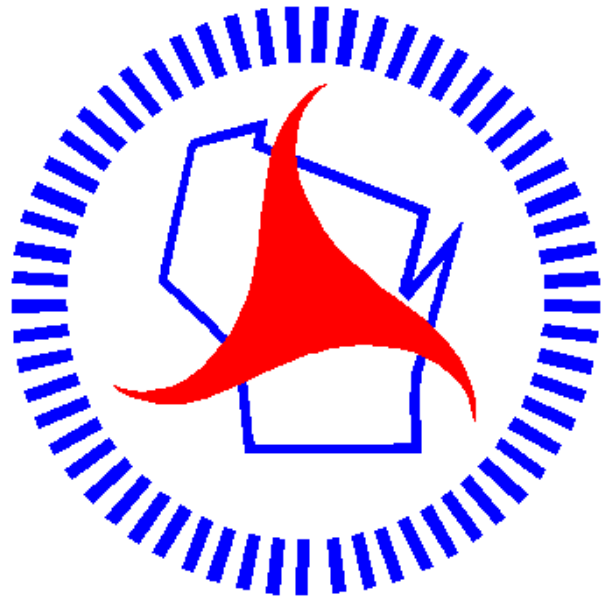
STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

Notes



Wisconsin Department of Transportation

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