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		REFERENCE LINE	
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		PROPOSED CULVERT (Box or Pipe)	
		COMBUSTIBLE FLUIDS	
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		FILE NAME : J:\projects	NUZ.,Z1500

STATE OF WISCONSIN OF SHEETS Title DEPARTMENT OF TRANSPORTATION Typical Sections and Details Estimate of Quantities

PLAN OF PROPOSED IMPROVEMENT

W. BROWN DEER ROAD

INTERSECTION AT N. 51ST STREET

STH 100 MILWAUKEE COUNTY

> STATE PROJECT NUMBER 2150-00-70

FEDERAL PROJECT STATE PROJECT PROJECT CONTRACT 2150-00-70 WISC 2011310

PRIME CONTRACTOR: STARK ASPHALT S&-CONTRACTORS: DOLSON FAC.

ONDOOR LIGHTING CONSTRUCTION CO.

BRICKLINE INC.

CECUSEY CONSTEVETION CORP.

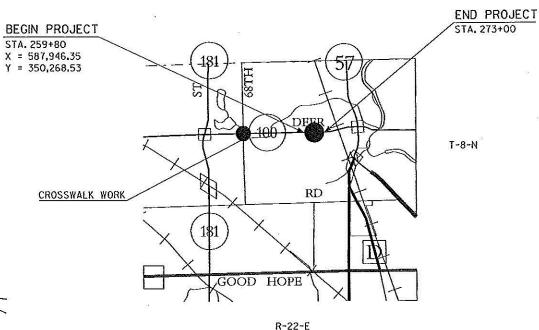
PROSECT MANAGER: MOHAMMAD HOSSAIN

PROJECT PELSONNEL! SEE DIARY

DATE WORK STARTED: 7-14-11

DATE WOLK COMPLETED: 11-14-11

CONTRACT AMOUNT: \$ 679,970,69



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EFERENCE LINE	
KISTING CULVERT	422
ROPOSED CULVERT (Box or Pipe)	
OMBUSTIBLE FLUIDS	-caution-
ARSH AREA	

= 4.0% = 50 MPH = N/A

> PROFILE GRADE LINE ORIGINAL GROUND MARSH OR ROCK PROFILE (To be noted as such) SPECIAL DITCH GRADE ELEVATION CULVERT (Profile View) UTILITIES ELECTRIC

Miscellaneous Quantities

Right of Way Plat

Plan and Profile Standard Detail Drawings

Structure Plans Computer Earthwork Data-

Cross Sections

Sign Plates

FIBER OPTIC GAS SANITARY SEWER STORM SEWER TELEPHONE WATER UTILITY PEDESTAL POWER POLE TELEPHONE POLE

Ġ Ø

_ LABEL _

LAYOUT 0.5 MI. SCALE L

TOTAL NET LENGTH OF CENTERLINE = 0.250 ML

-"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), 'MILWAUKEE' COUNTY, NAD 1983 (2007)"

PREPARED BY Surveyor	WISDOT	
Designer	ANDY FERK	
Project Manager	MOHAMMAD HOSSAIN	
Regional Examiner		
Regional Supervisor	AZIZ ALEION	
C.O. Exominer	Carl WBayanowski	

PLOT BY : dotshw

OTHER CONTACTS

MR. DAN SANDE, PROJECT MANAGER WE ENERGIES (ELECTRIC) 333 W EVERETT ST. - A279 MILWAUKEE, WI 53203 PHONE: (414) 221-4578 FAX: (414) 221-2336 dan.sande@we-energies.com

MR. DAN SANDE, PROJECT MANAGER WISC. GAS CO. d/b/a We ENERGIES 333 W EVERETT ST. - A279 MILWAUKEE, WI 53203 PHONE: (414) 221-4578 FAX: (414) 221-2336 dan.sande@we-energies.com

MR. CHARLES LANDEY WISDOT TRAFFIC LIGHTING 141 NW BARSTOW PO BOX 798 WAUKESHA, WI 53187-0798 PHONE: (262) 521-5346 charles.landey@dot.wi.gov

MR. TODD BARTELS, AREA MANAGER AT&T WISCONSIN 7721 W. FOND DU LAC AVE., 1ST FL. MILWAUKEE, WI 53218 PHONE: (414) 536-2971

MR. STEVE CRAMER, UTILITY COORD. TIME WARNER CABLE 1320 N. MARTIN LUTHER KING JR. DR. MILWAUKEE, WI 53212 PHONE: (414) 277-4045 FAX: (414) 277-0638 steve.cramer@twcable.com

MR. JAMES BIRKENHEIER, SUPERVISOR - OSP NETWORK PAETEC (FORMERLY MCLEOD USA) 731 NORTH JACKSON ST., STE 410 MILWAUKEE, WI 53202 PHONE: (414) 831-5252 FAX: (414) 831-5070 james.birkenheier@paetec.com

MR. MIKE OLSEN ATC MANAGEMENT, INC. 801 O'KEEFE RD. PO BOX 6113 DePERE, WI 54115 6113 PHONE: (920) 338-6582 molsen@atcllc.com

UTILITIES

MR. JOEL BOJARSKI MIDWEST FIBER NETWORKS 3701 W. BURNHAM ST., STE C MILWAUKEE, WI 53215

MS. DEBRA JENSEN, PLANNING SERVICES SUPERVISOR MILWAUKEE METRO SEWERAGE DIST. 260 W. SEEBOTH ST. MILWAUKEE, WI 53204 1446 PHONE: (414) 225-2143 djensen@mmsd.com

MR. JOHN COTTRELL TW TELECOM 3235 INTERTECH DR., STE 600 BROOKFIELD, WI 53045

MS. Elizabeth Lloyd-Weis WIS DOT SIGNALS 141 NW BARSTOW PO Box 798 WAUKESHA, WI 53187 0798 PHONE: (262) 521-4404 Elizabeth.LloydWeis@dot.wi.gov

MS. TONI REVANE DNR 2300 N. DR.ML KING JR. DR. MILWAUKEE, WI 53212 PHONE: (414) 263-8517 toni.revane@wisconsin.gov

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MR. DONALD SCHELL WISDOT STOC 633 W. WISCONSIN AVE. STE. 1200 WISDOT OH SIGNING MILWAUKEE, WI 53203 PHONE: (414) 227-2148 donald.schell@dot.wi.gov

MR. MIKE RAU, SUPERINTENDENT **BROWN DEER UTILITY** 4800 WEST GREEN BROOK DR. BROWN DEER, WI 53223 PHONE: (414) 371-3080 mrau@browndeerwi.org

MR. JAMES BUSKE VILLAGE OF BROWN DEER 4800 WEST GREEN BROOK DR. BROWN DEER, WI 53223 PHONE: (414) 371-3060 jbuske@browndeerwi.org

MR. MIKE STATEZNY WISDOT SIGN SHOP 935 S. 60TH STREET WEST ALLIS, WI 53214 PHONE: (414) 266-1157 FAX: (414) 266-1150 michael.statenzy@dot.wi.gov

MR. DENNIS NEWTON 935 S. 60TH STREET WEST ALLIS, WI 53214-3362 PHONE: (414) 266-1165 dennis.newton@dot.wi.gov



Call 811 3 Work Days Before You Dig Or Toll Free (800) 242-8511 Hearing Impaired TDD (800) 542-2289 www.DiggersHotline.com

PROJECT NO: 2150-00-70

HWY: STH 100

COUNTY: MILWAUKEE

SHEET:

2

E

PLOT DATE:

PLOT SCALE: 1:1

GENERAL NOTES

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

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

THE CONTRACTOR SHALL CONTACT ALL PRIVATE UTILITIES 48 HOURS PRIOR TO BEGINNING GRADING WORK TO ARRANGE FOR A WATCHDOG.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED.

THE CONTRACTOR MUST CONTACT JIM BUSKE @ (414) 371-3060, VILLAGE OF BROWN DEER 48 HOURS PRIOR TO BEGINNING CONSTRUCTION IN THE VICINITY OF WATER AND SEWER UTILITIES.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH GRANULAR BACKFILL.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

HMA PAVEMENT SHALL BE CONSTRUCTED AS FOLLOWS:

2-INCH

BROWN DEER ROAD

- 1-3/4-INCH UPPER LAYER (12.5 mm GRADATION, PG64-28)
- 2-1/4-INGH-2ND LOWER LAYER (19 mm GRADATION, PG64-22)
- -2-INCH 1ST LOWER LAYER (19 mm GRADATION, PG64-22)

51ST STREET

- 1 3/4-INCH UPPER LAYER (12.5 mm GRADATION, PG64-28)
- 2 1/4-INCH LOWER LAYER (19 mm GRADATION, PG64-22)

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF C & G, CURB AND GUTTER-RADII ARE MEASURED TO THE FLANGE.

EXPANSION JOINTS ARE TO BE CONSTRUCTED AT ALL RADIUS POINTS IN CURB AND GUTTER ADJACENT TO CONCRETE PAVEMENT.

TOPSOIL SHALL BE PLACED WITH 4-INCH MINIMUM DEPTH.

A SAWED JOINT IS REQUIRED WHERE NEW HMA PAVEMENT SURFACE MEETS EXISTING ASPHALTIC CONCRETE SURFACE.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

SIGNS TO BE MOVED SHALL BE STORED AND PROTECTED BY THE CONTRACTOR FREE FROM DAMAGE, UNTIL SUCH TIME AS THEY ARE RE-INSTALLED.

ALL DISTURBED NON-PAVED AREAS SHALL BE COVERED WITH TOPSOIL, FERTILIZED, AND SODDED AS DIRECTED BY THE ENGINEER.

WHERE PROPOSED CURB & GUTTER OR CONCRETE BASE IS ADJACENT TO THE EXISTING CONCRETE BASE, TIE INTO EXISTING W/#6 BARS X 1'-0" @ 36" C-C.

EXACT LOCATION OF SAWCUTS TO BE DETERMINED BY THE ENGINEER.

PROJECT NO: 2150-00-70

HWY: STH 100

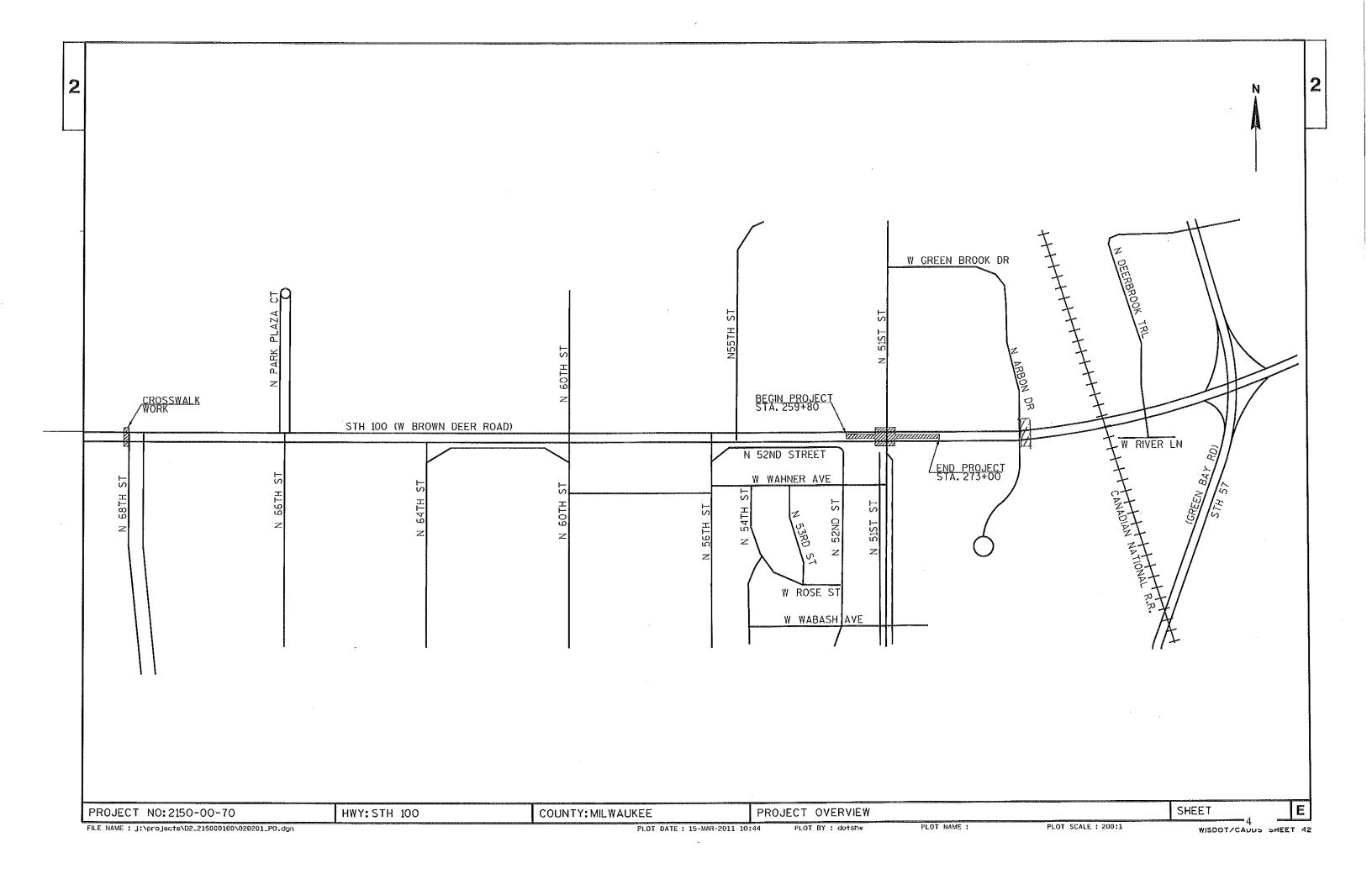
COUNTY: MILWAUKEE

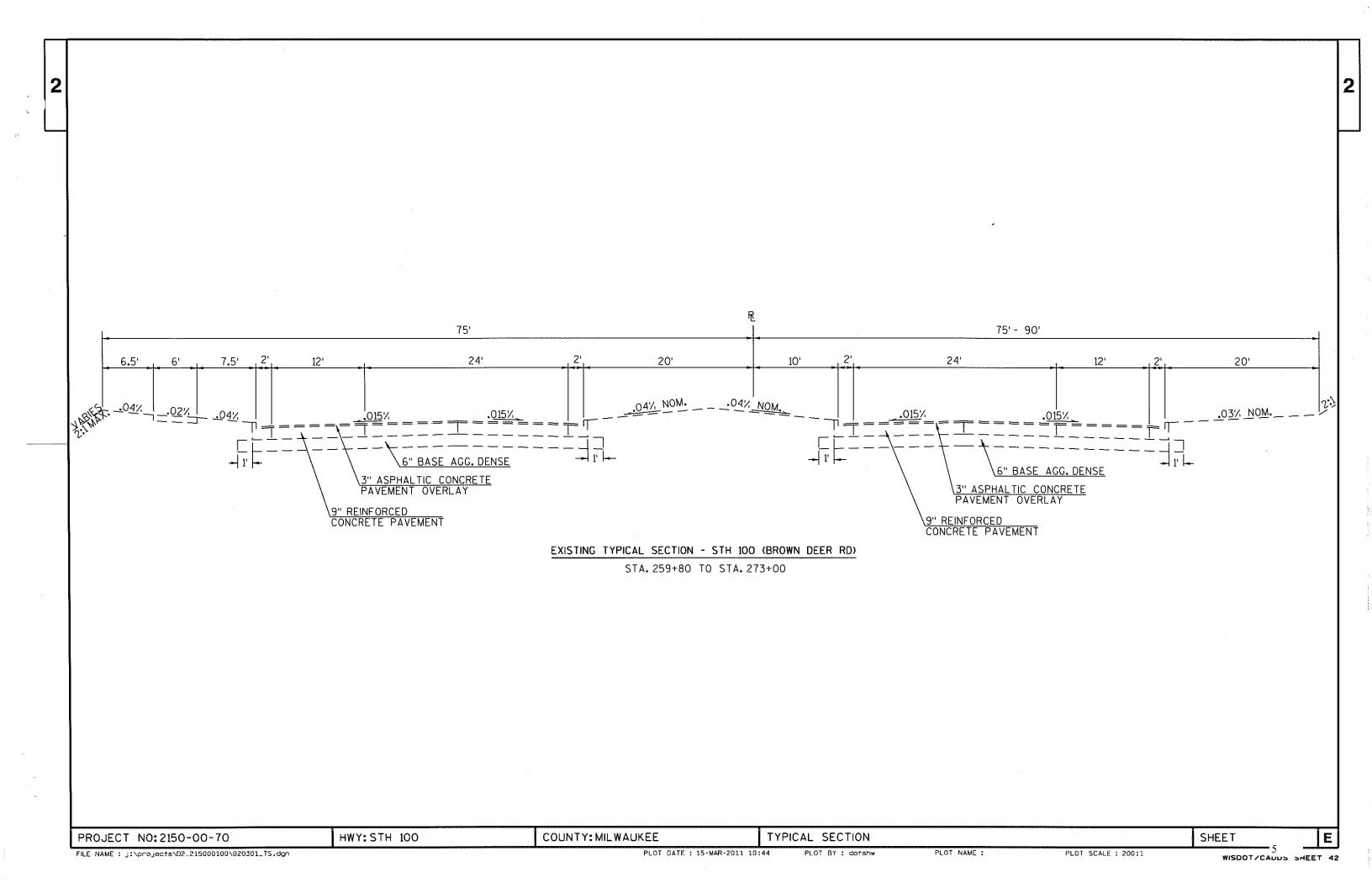
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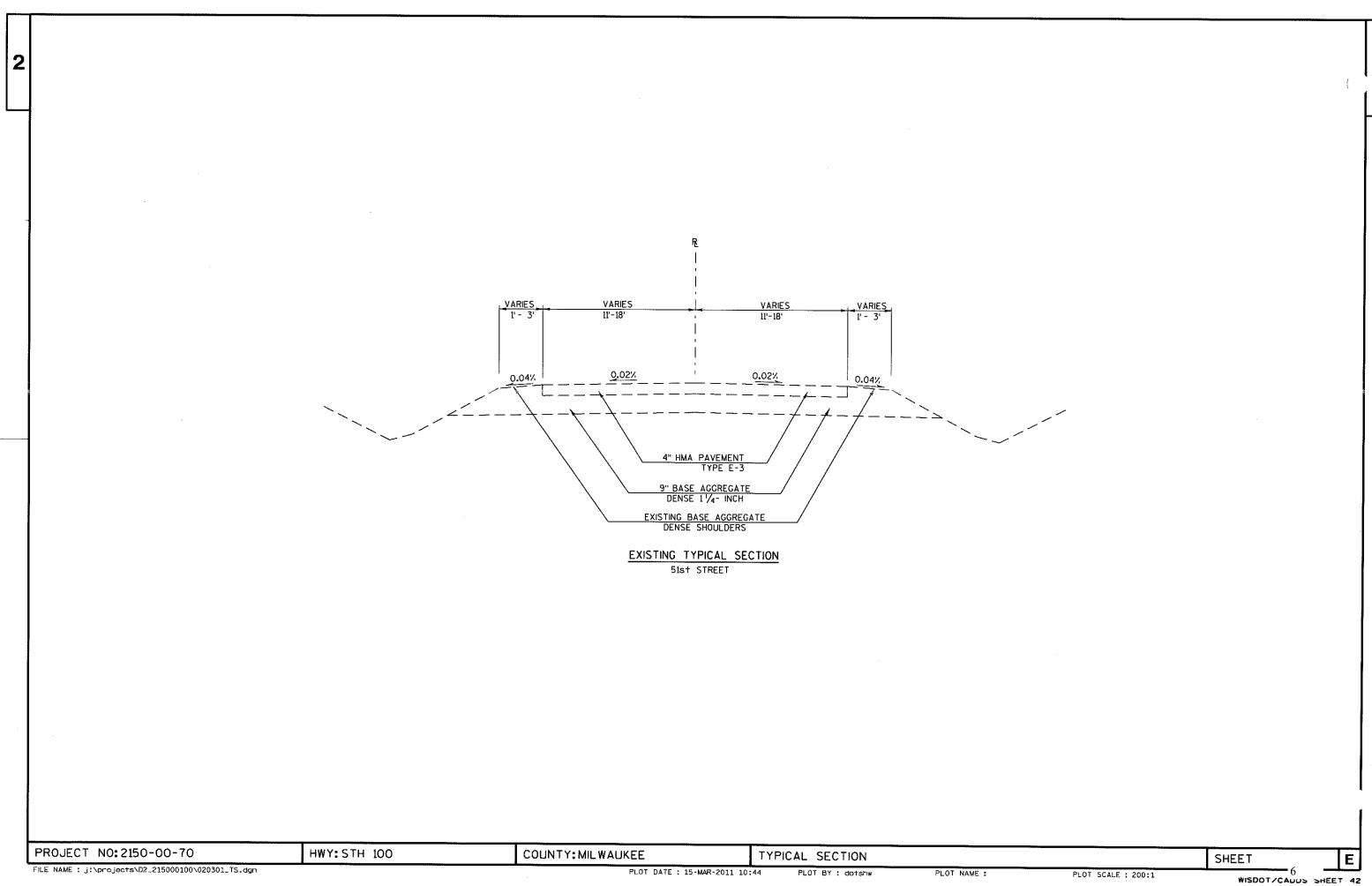
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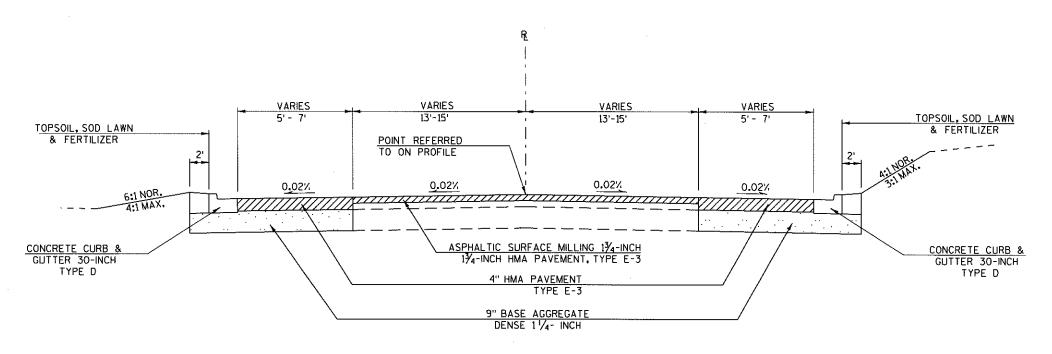
TBY:

LOT NAME:







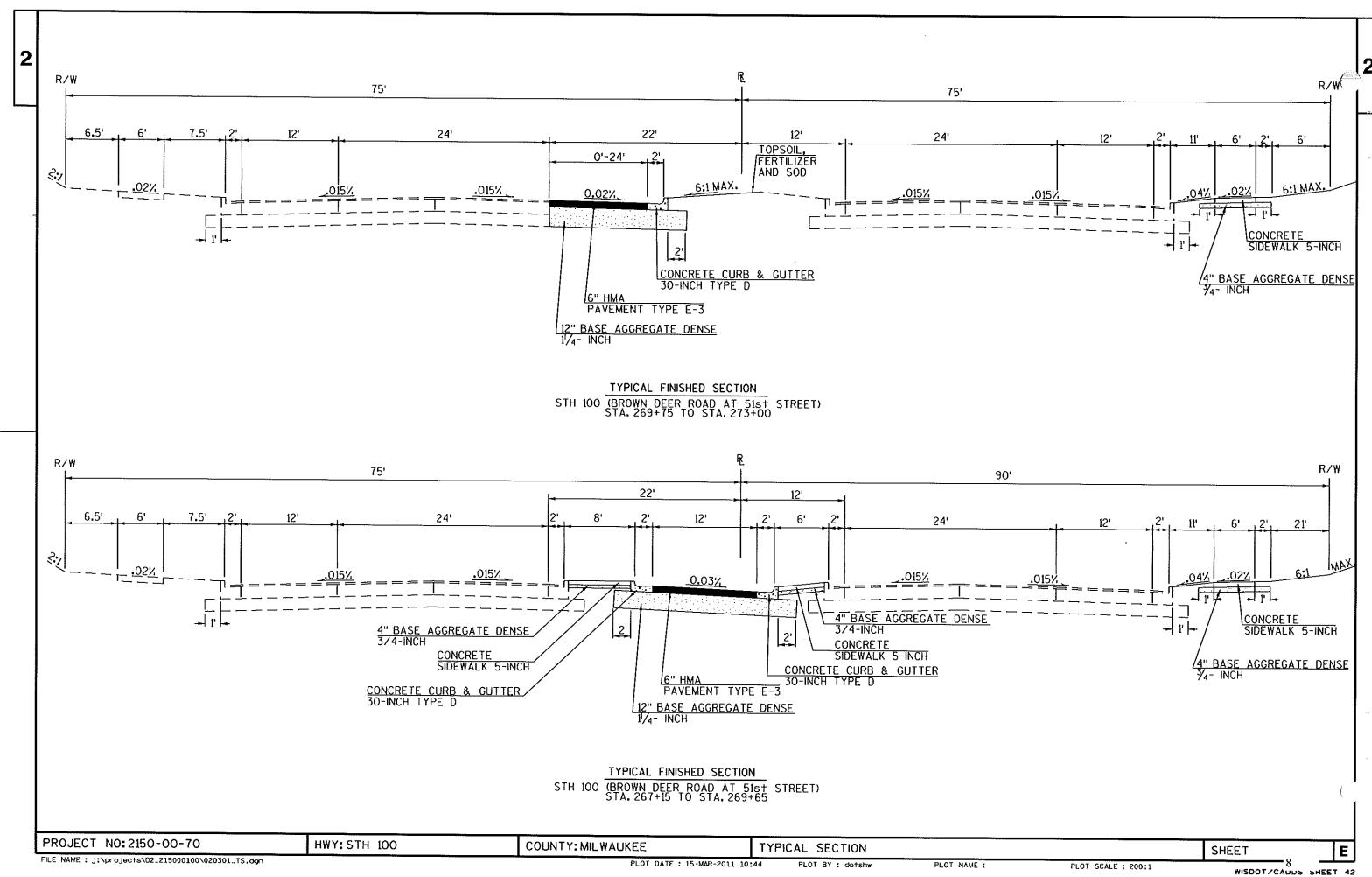


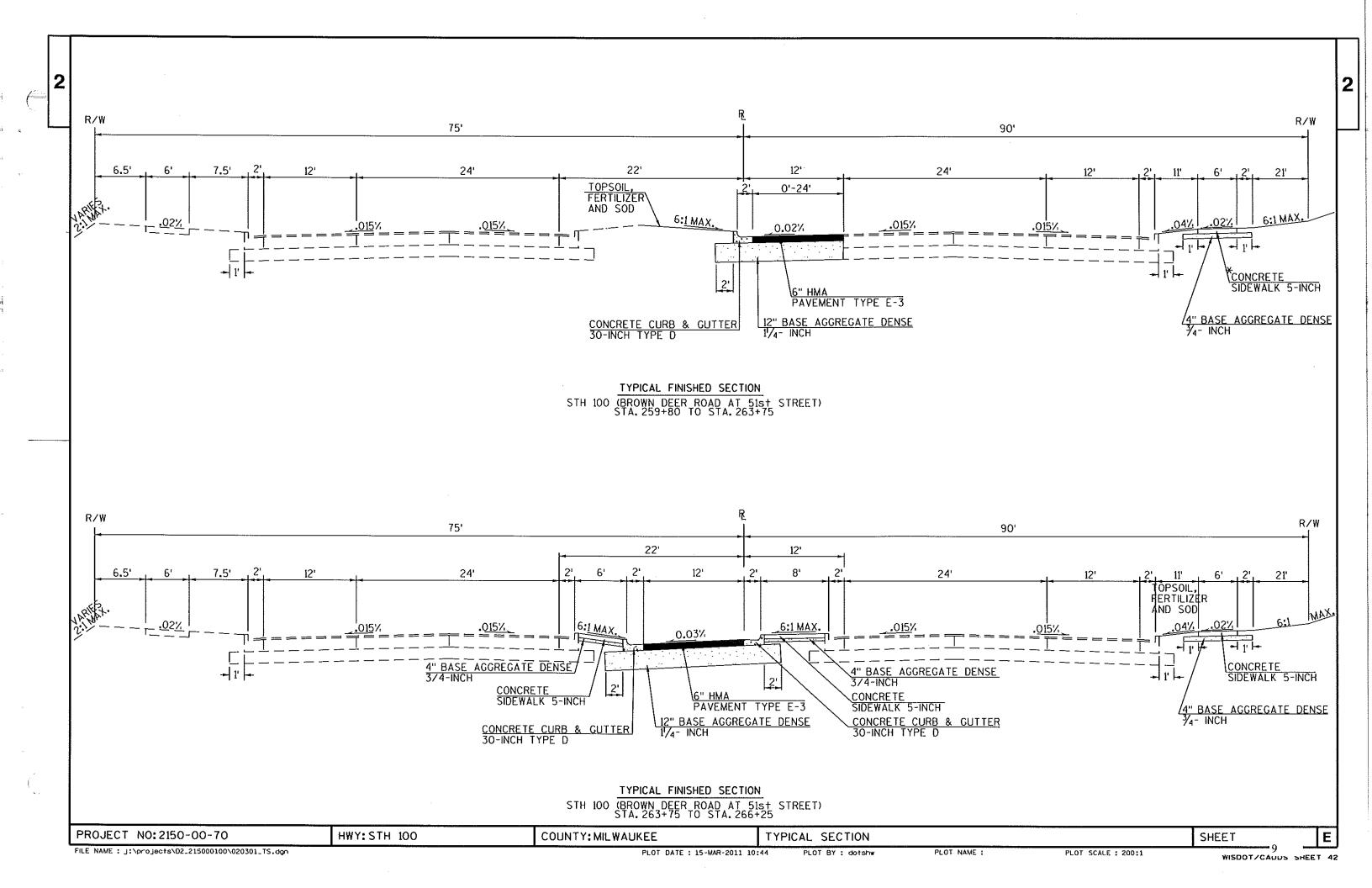
FINISHED TYPICAL SECTION

51st STREET

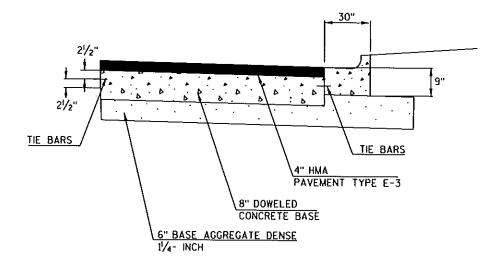
PROJECT NO: 2150-00-70 HWY: STH 100 COUNTY: MILWAUKEE TYPICAL SECTION SHEET

PLOT NAME :









CONCRETE CURB & GUTTER 30-INCH TYPE A, SPECIAL

SW QUADRANT

NW QUADRANT NE QUADRANT

SE QUADRANT

TRAFFIC FLOW

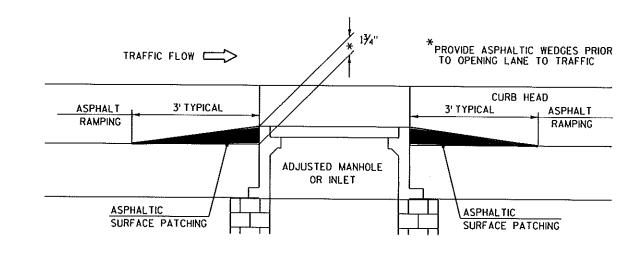
3'

13/4"

ADJUSTED VALVE BOX

ASPHALT RAMPING WATER VALVE BOXES

ASPHALTIC SURFACE PATCHING



PROJECT NO: 2150-00-70

HWY: STH 100

COUNTY: MILWAUKEE

CONSTRUCTION DETAILS

SHEET

_10 _

FILE NAME : J:\projects\D2_215000100\021001_CD.dgn

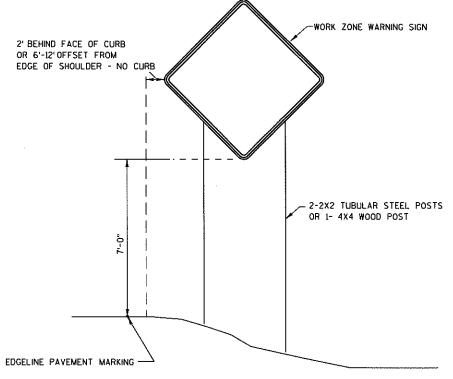
PLOT DATE : 17-MAR-2011 09:07

PLOT BY: dotshw

PLOT NAME :

PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

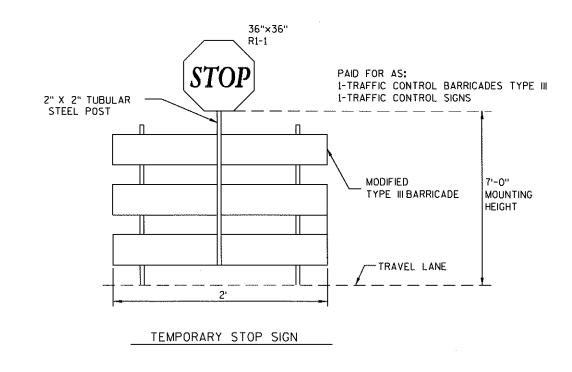


TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL MOUNTING ON FIXED SUPPORT

LONG TERM 7 DAYS OR MORE

GENERAL NOTES FOR TRAFFIC CONTROL

- TRAFFIC CONTROL DRUMS IN TAPERS, SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE "C", ONE WAY LIGHTS IN TAPERS ONLY, UNLESS OTHERWISE SHOWN.
- 2. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.
- 3. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
- 4. ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.
- 5. BARRICADE STRIPES ARE TO BE SLOPED DOWNWARD IN THE DIRECTIOIN OF TRAFFIC FLOW.



HWY: STH 100

COUNTY: MIL WAUKEE

CONSTRUCTION DETAILS

PLOT BY : dotshw

SHEET

FILE NAME : j:\projects\D2_215000100\021001_CD.dgn

PROJECT NO: 2150-00-70

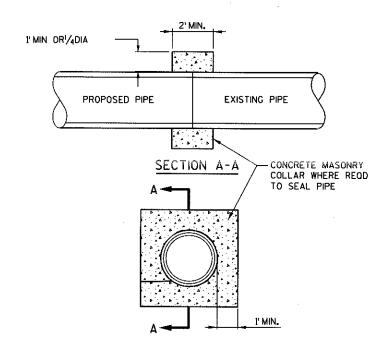
PLOT DATE : 15-MAR-2011 10:44

PLOT NAME :

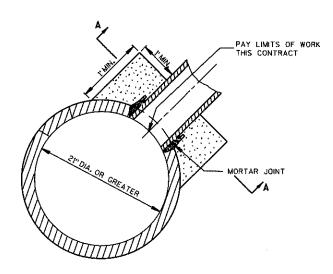
PLOT SCALE : 200:1

WISDOT/CAUUS SHEET 42

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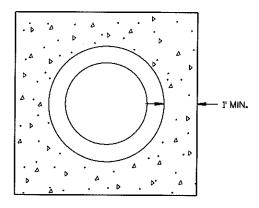


CULVERT PIPE CONCRETE COLLAR DETAIL



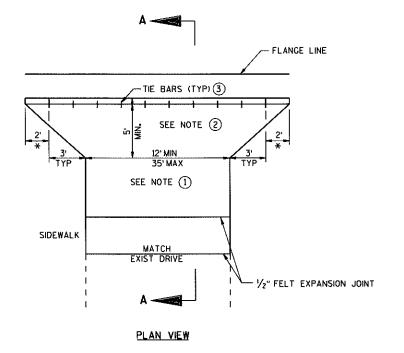
CULVERT PIPE CONCRETE COLLAR DETAIL OF CONNECTION TO STORM SEWER PIPE OR MANHOLE

NOTE: COST OF SAWING CONCRETE PIPE AND THE CONNECTION INCLUDING MORTARED JOINT AND CONCRETE ARE INCIDENTAL TO THE COST OF CONCRETE COLLAR.



SECTION A-A STA. 270+50.12' RT

PLOT NAME :



NOTES:

MATCH EXISTING TYPE:

(1) ASPHALTIC SURFACE (3-INCH) DRIVEWAYS AND FIELD ENTRANCES OVER BASE AGGREGATE DENSE 3/4-INCH (4-INCH) CONCRETE DRIVEWAY 7-INCH OVER
BASE AGGREGATE DENSE 3/4-INCH (4-INCH)
OR BASE AGGREGATE DENSE 3/4-INCH (6-INCH)

- (2) ALL URBAN DRIVEWAYS TO BACK OF APRON SHALL BE PAID FOR AS CONCRETE DRIVEWAY 7-INCH
- (3) THE BARS ARE INCIDENTAL TO THE BID ITEM "CONCRETE DRIVEWAY 7-INCH"

JOINTING IN DRIVE APPROACHES SHALL BE IN LINE WITH SIDEWALK JOINTS OR AS DIRECTED BY THE ENGINEER

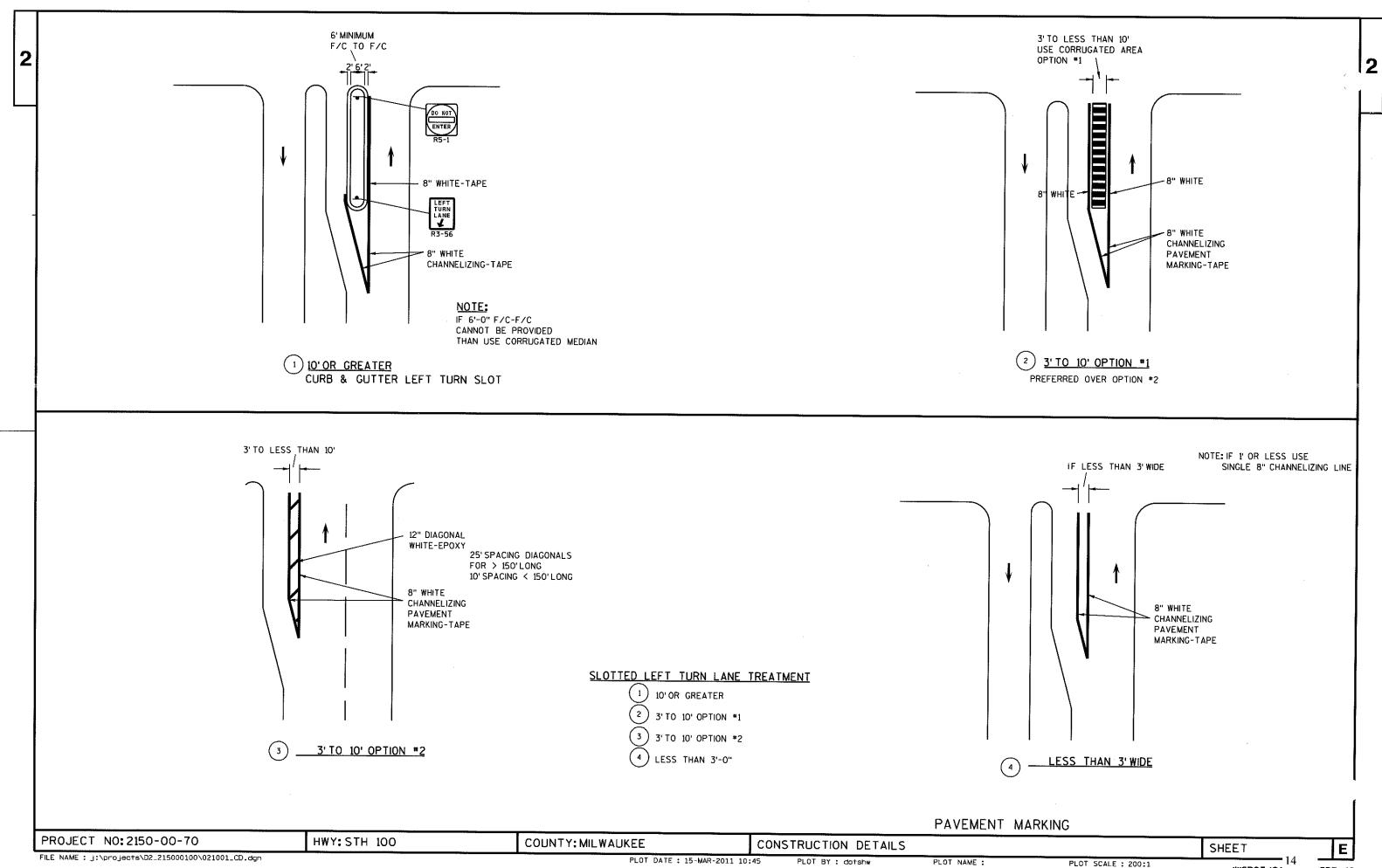
* TAPER CURB HEAD

MATCH EXISTING DRIVEWAY-- 6' CONCRETE SIDEWALK - 4% NORMAL TERRACE SLOPE 0.02'/FT MAX 8% MAX BASE AGGREGATE DENSE SEE NOTE 1 -PAVEMENT, SEE NOTE (1) • 4 x 2'TIE BARS • 3'C-C (TYP)

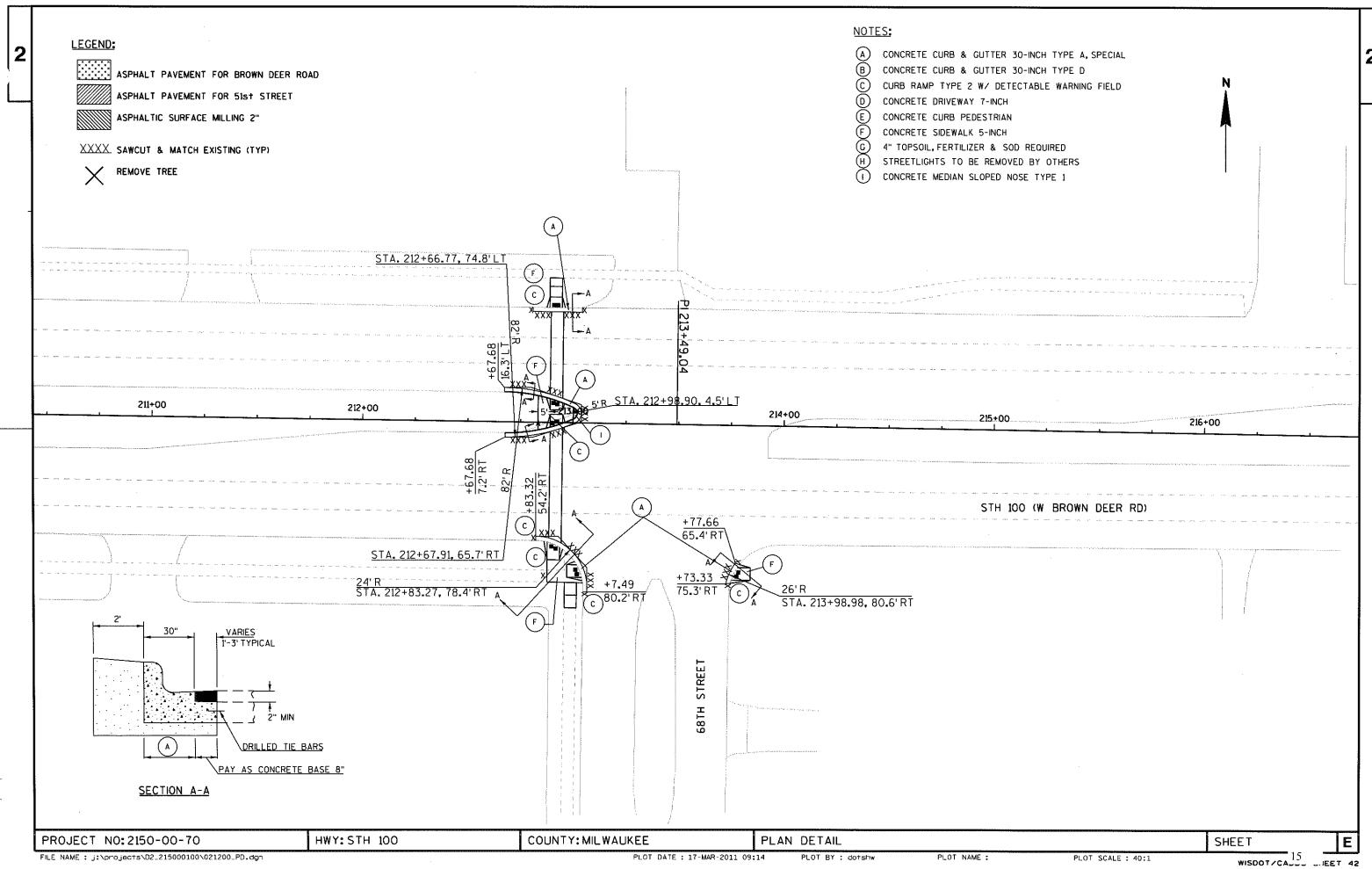
SECTION A-A

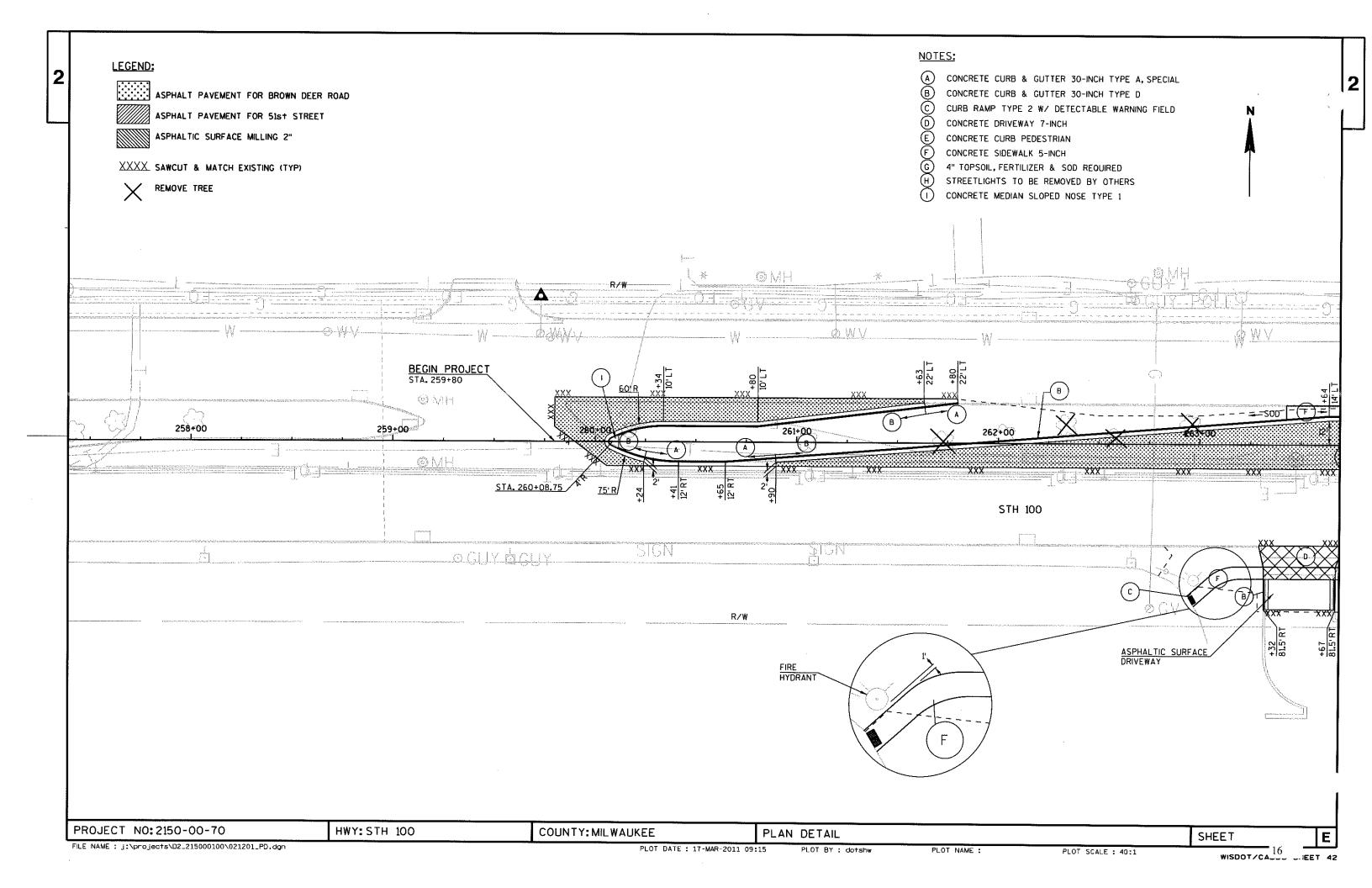
URBAN DRIVEWAY

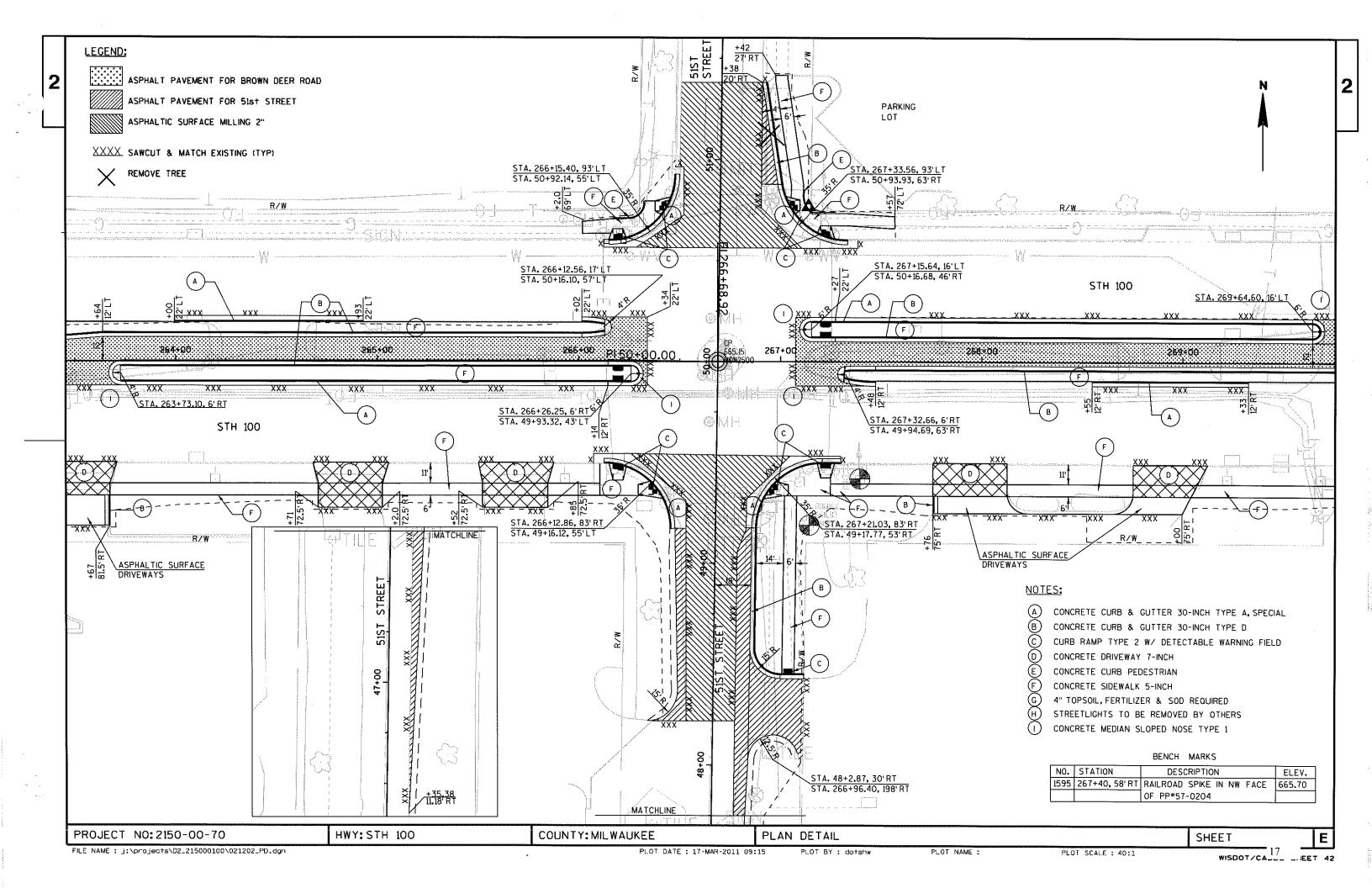
HWY: STH 100 COUNTY: MILWAUKEE CONSTRUCTION DETAILS SHEET PROJECT NO: 2150-00-70 PLOT NAME :

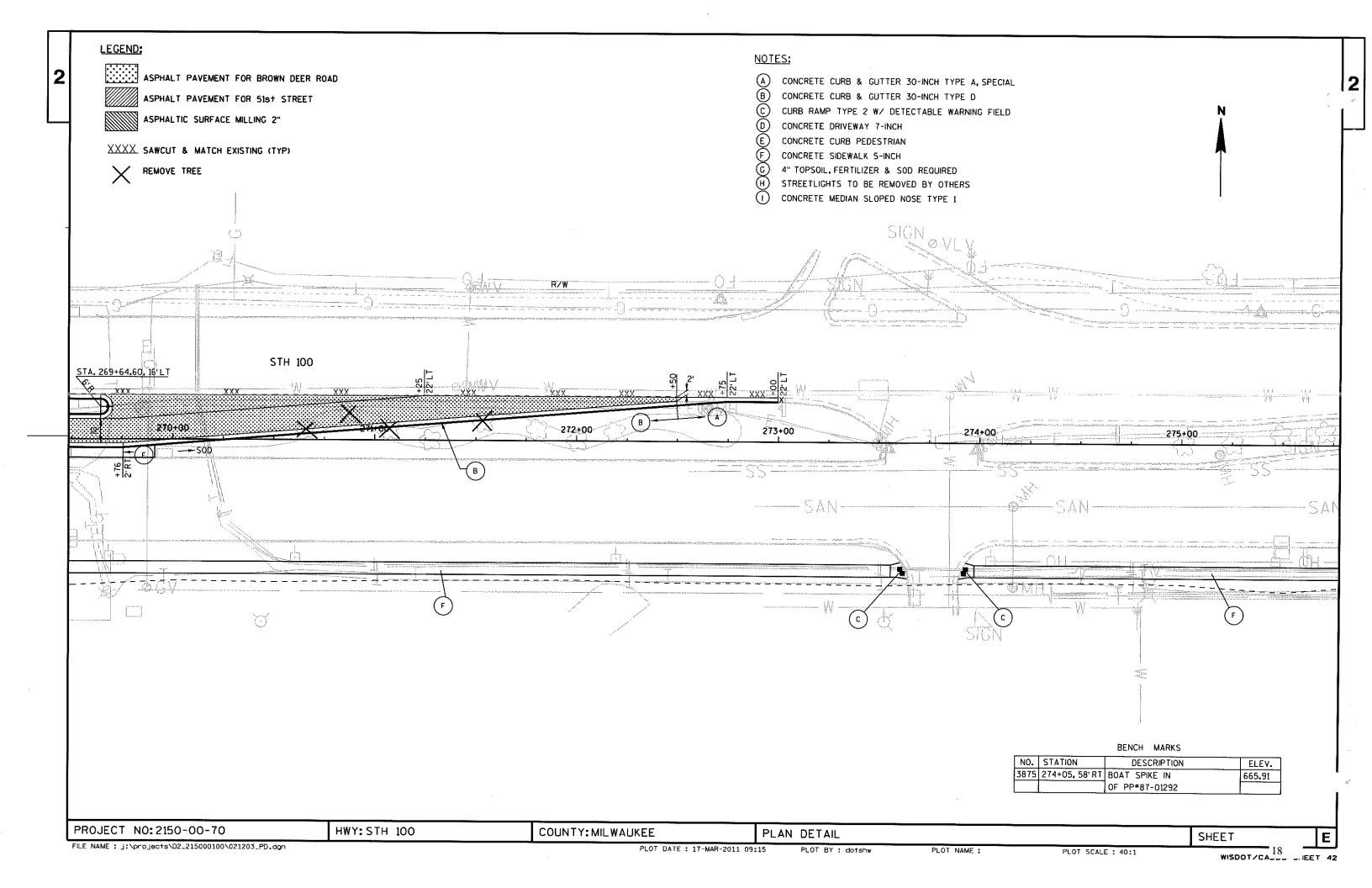


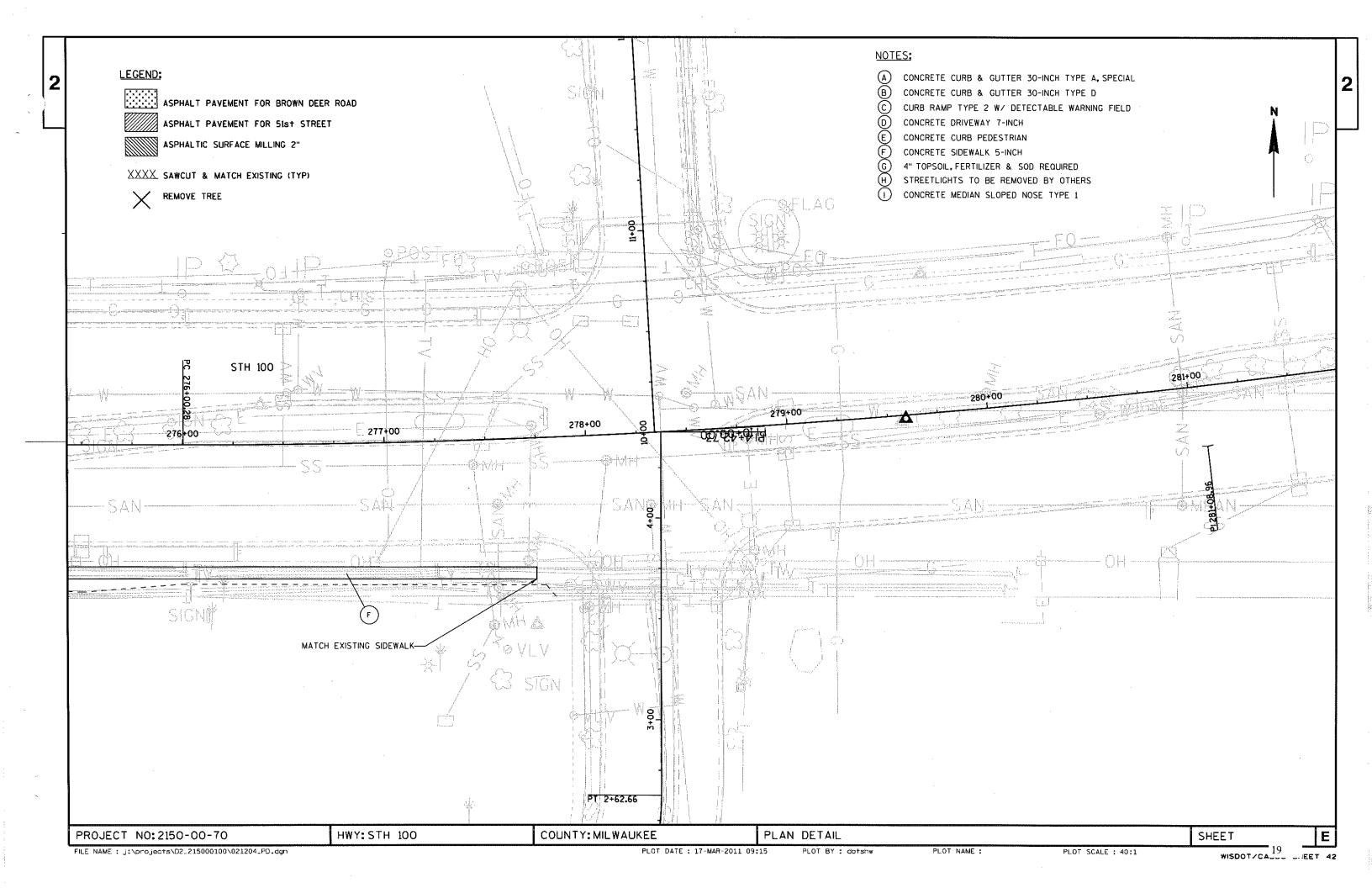
WISDOT/CAUDS SHEET 42

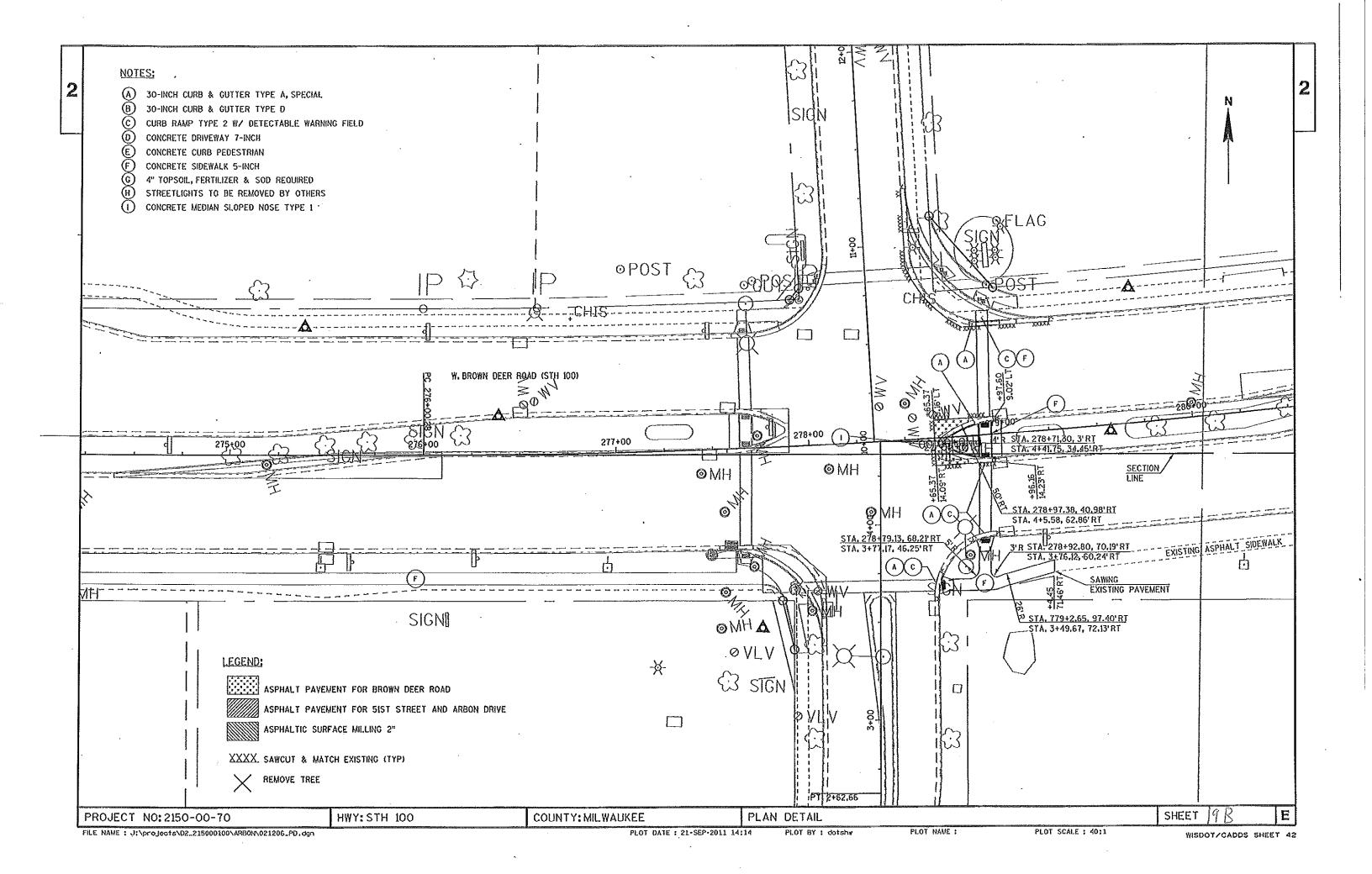


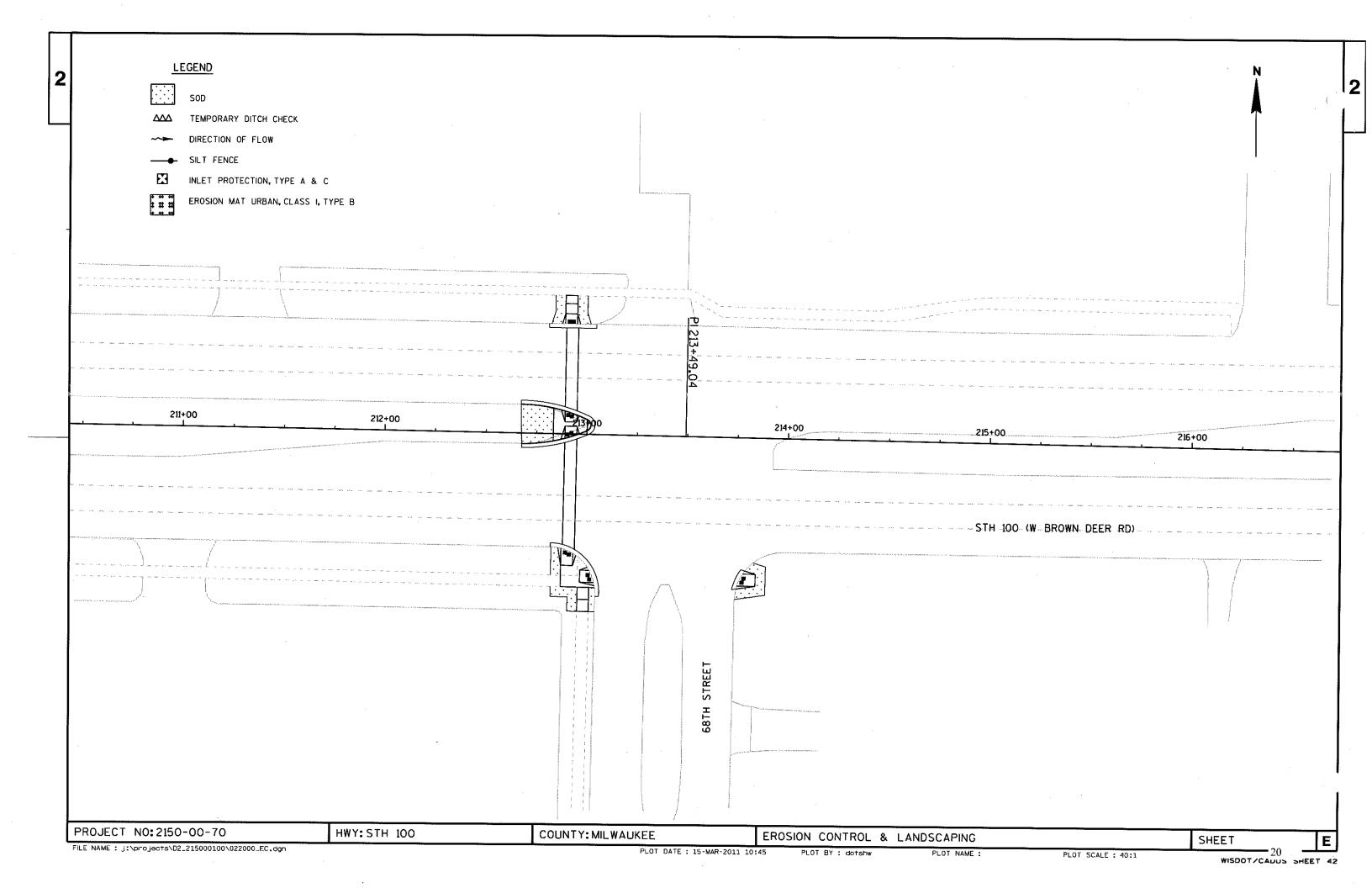


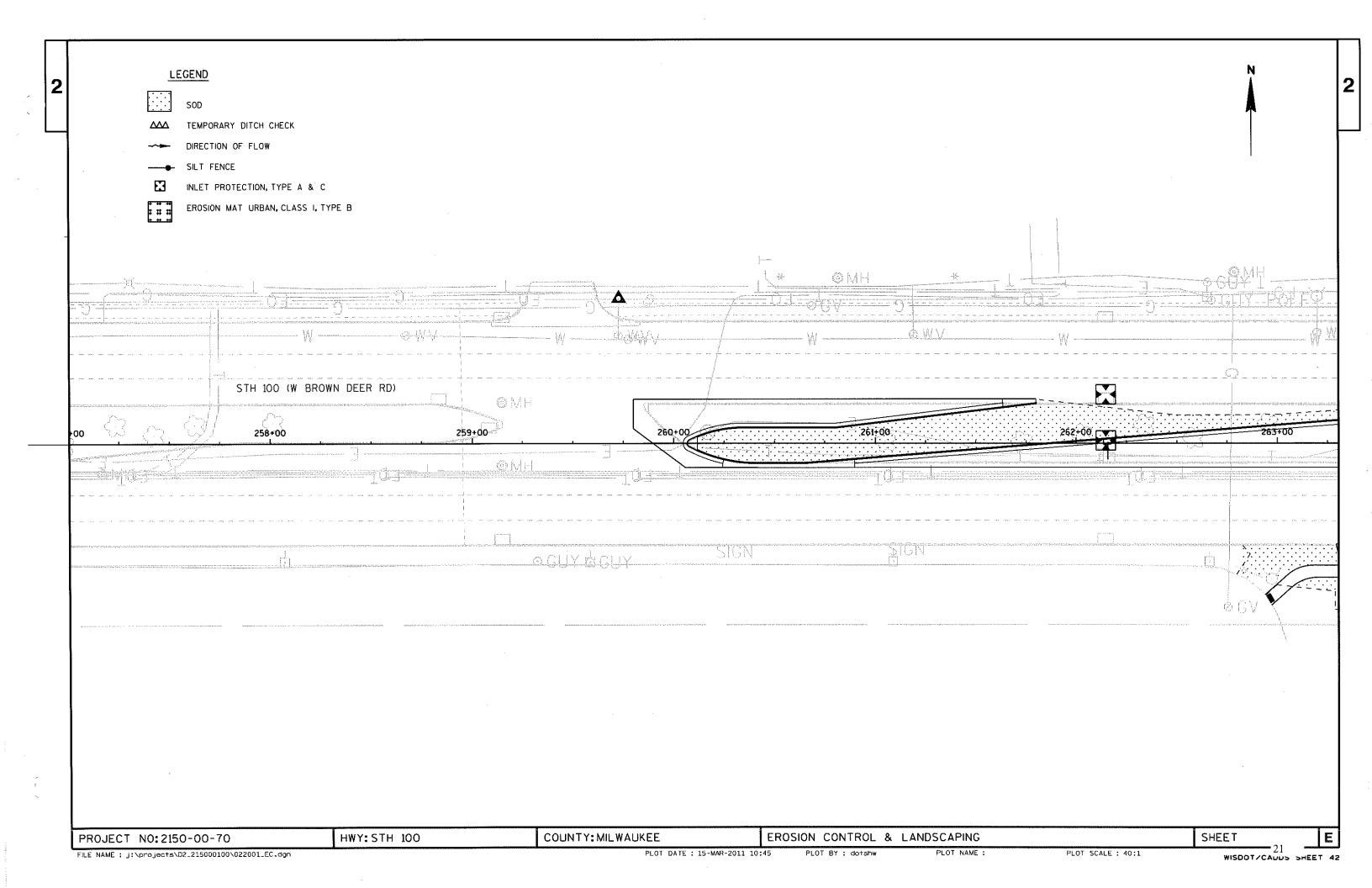


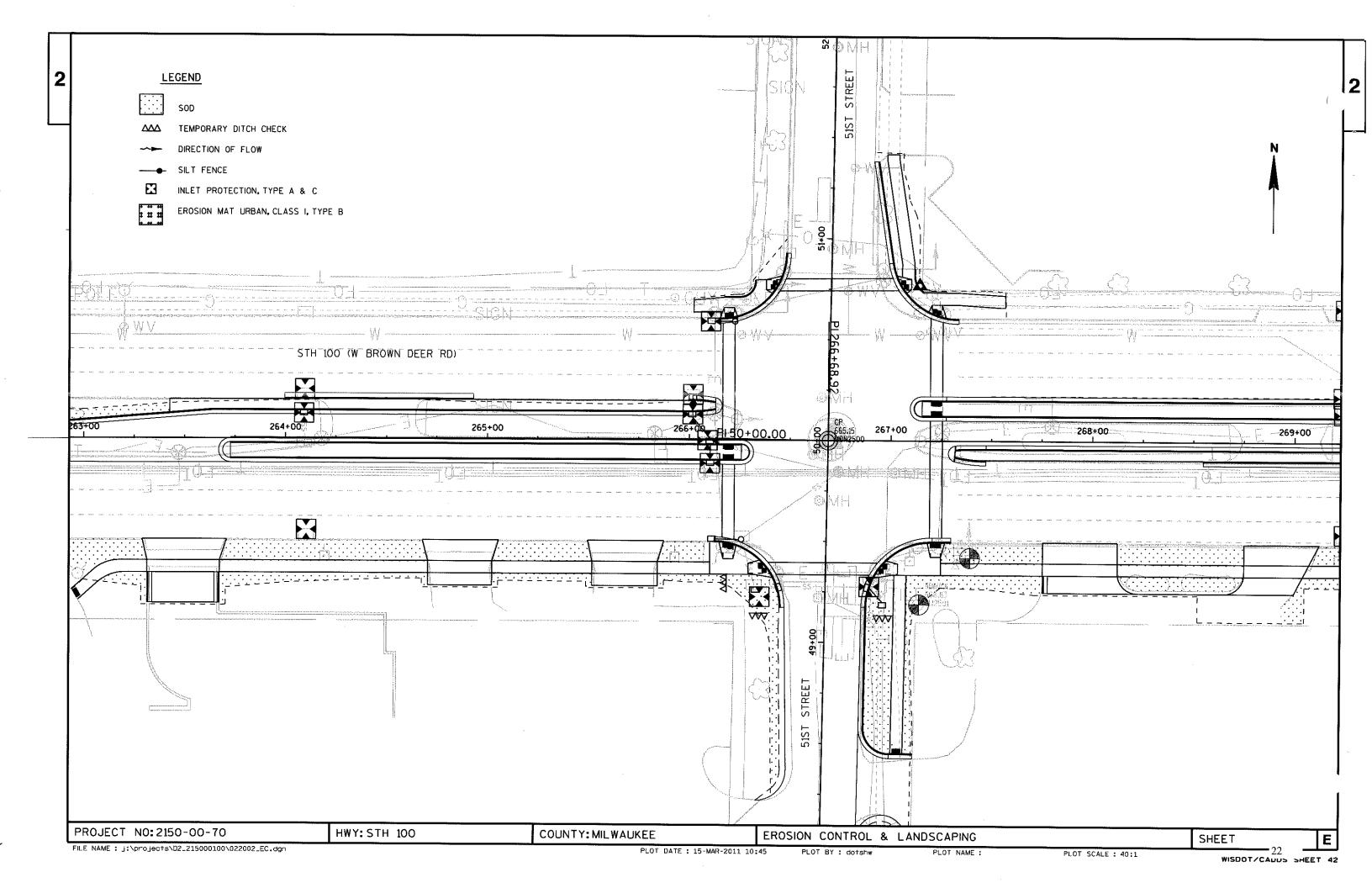


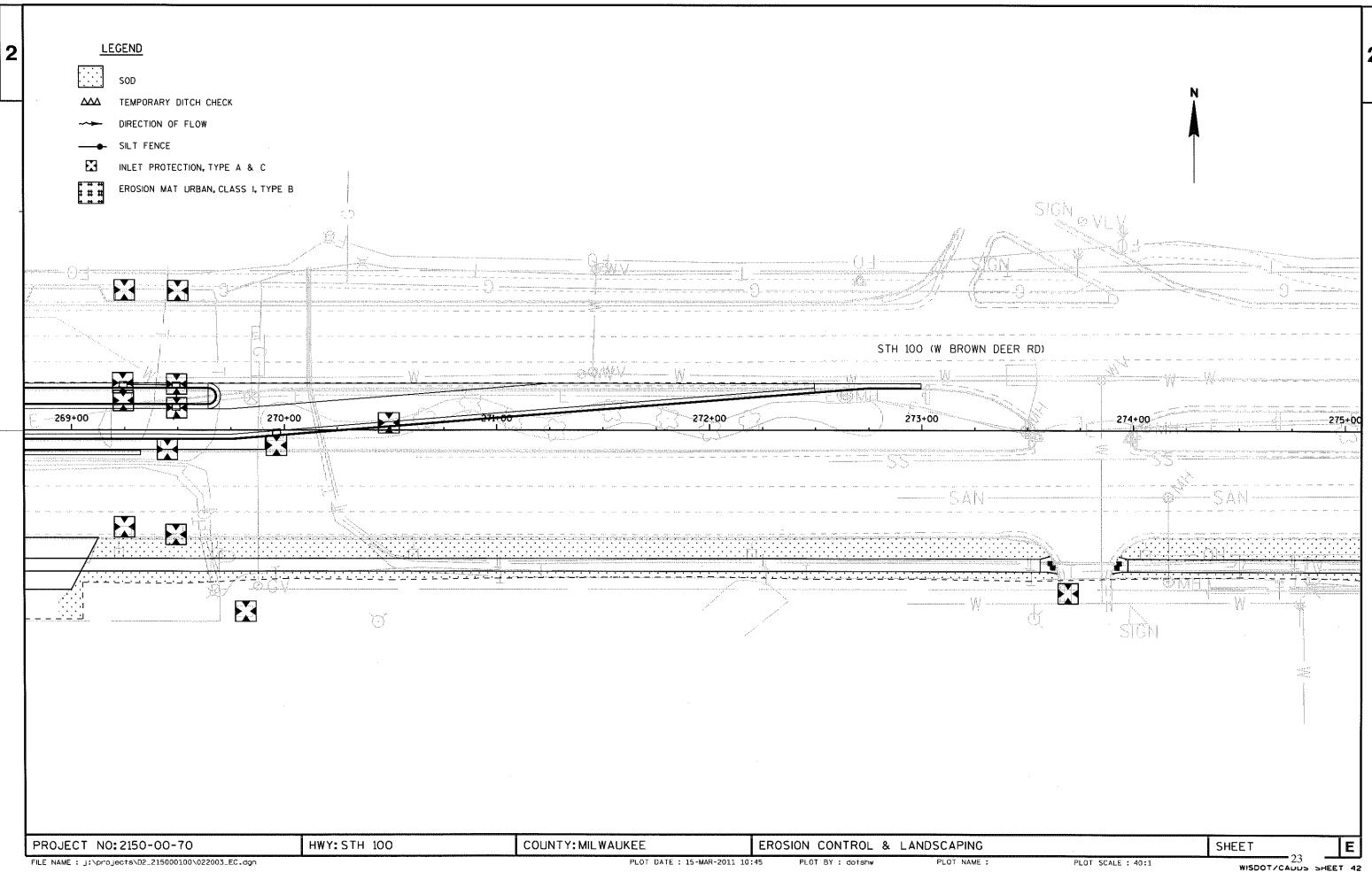


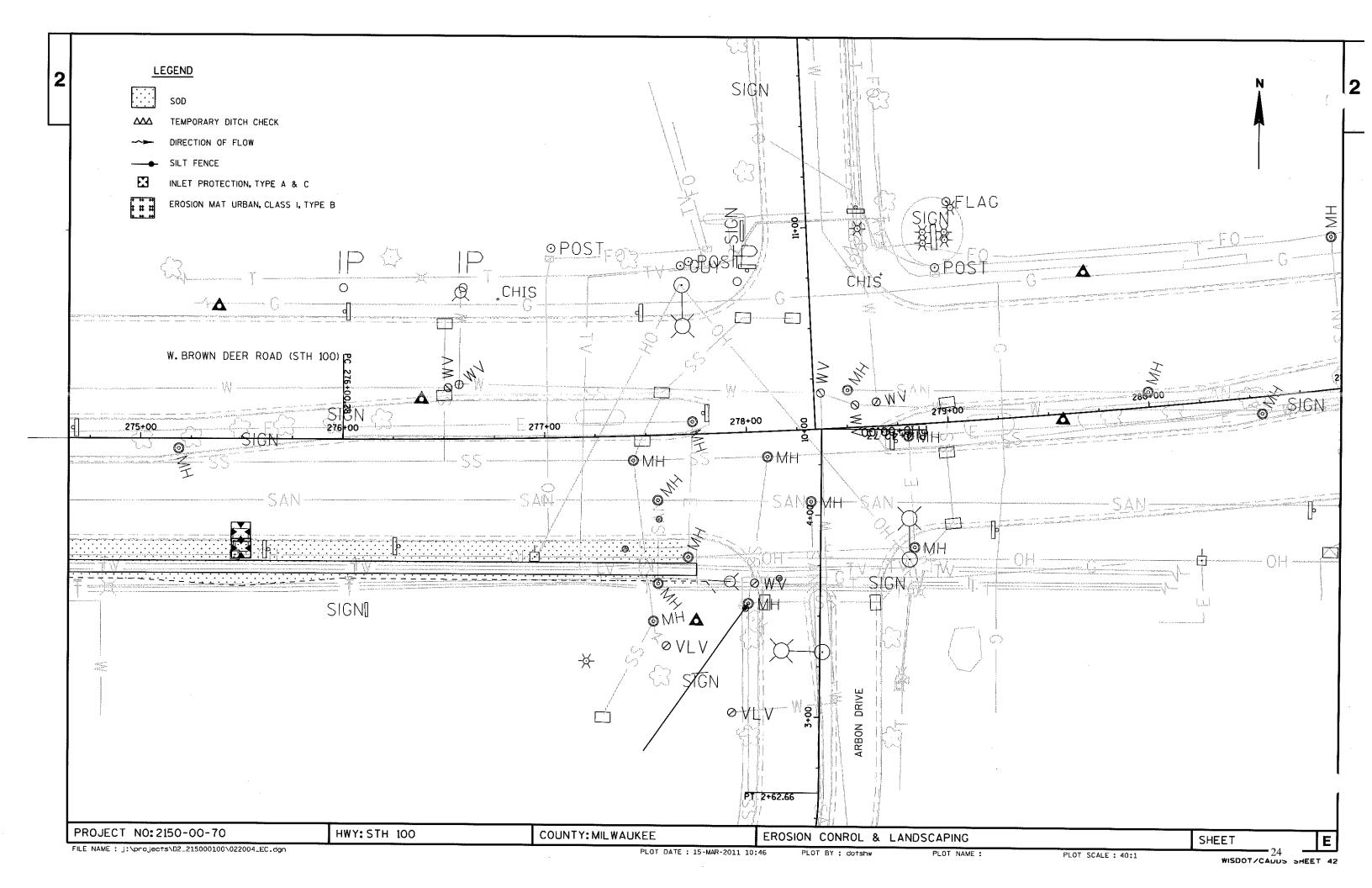


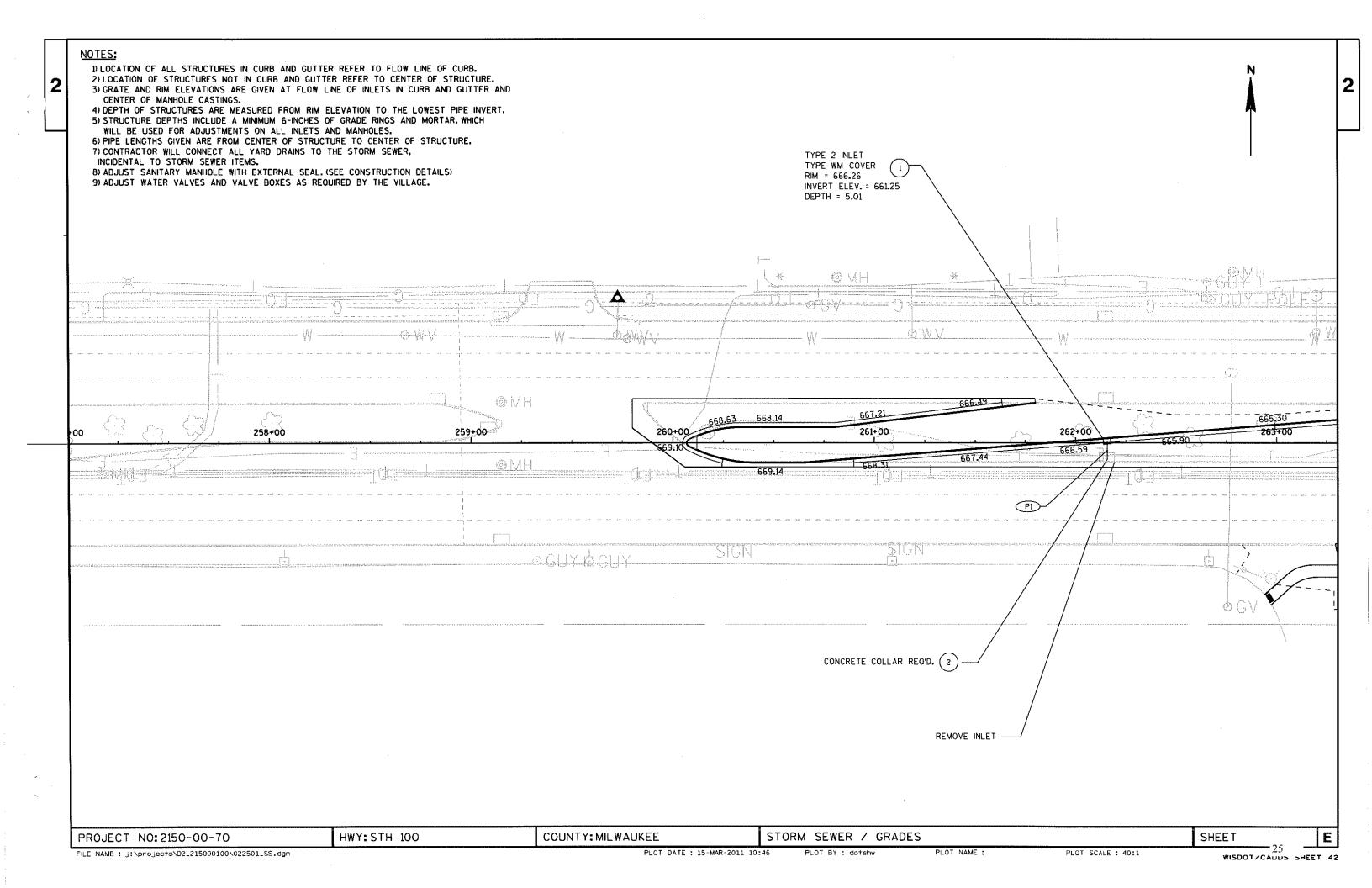


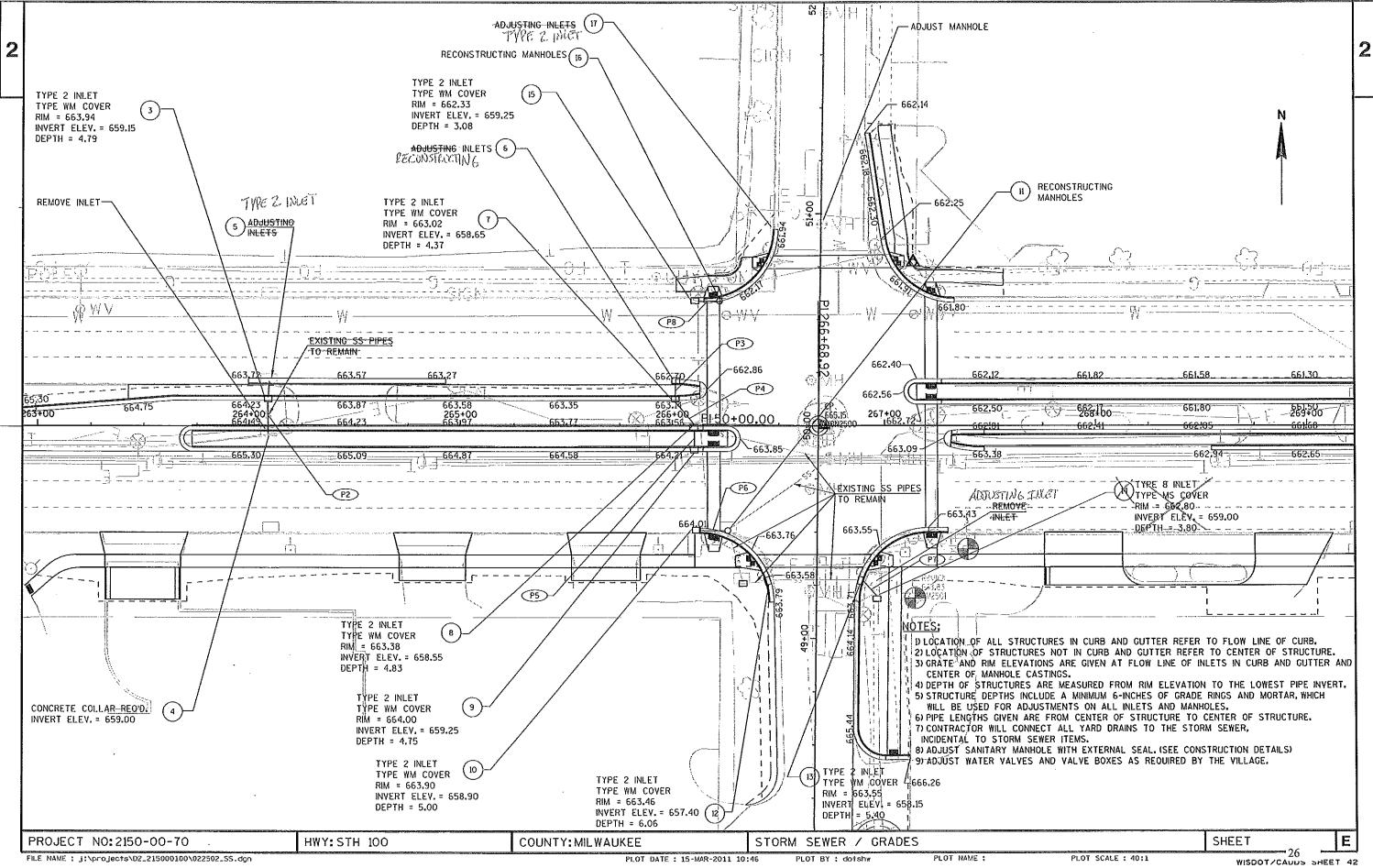


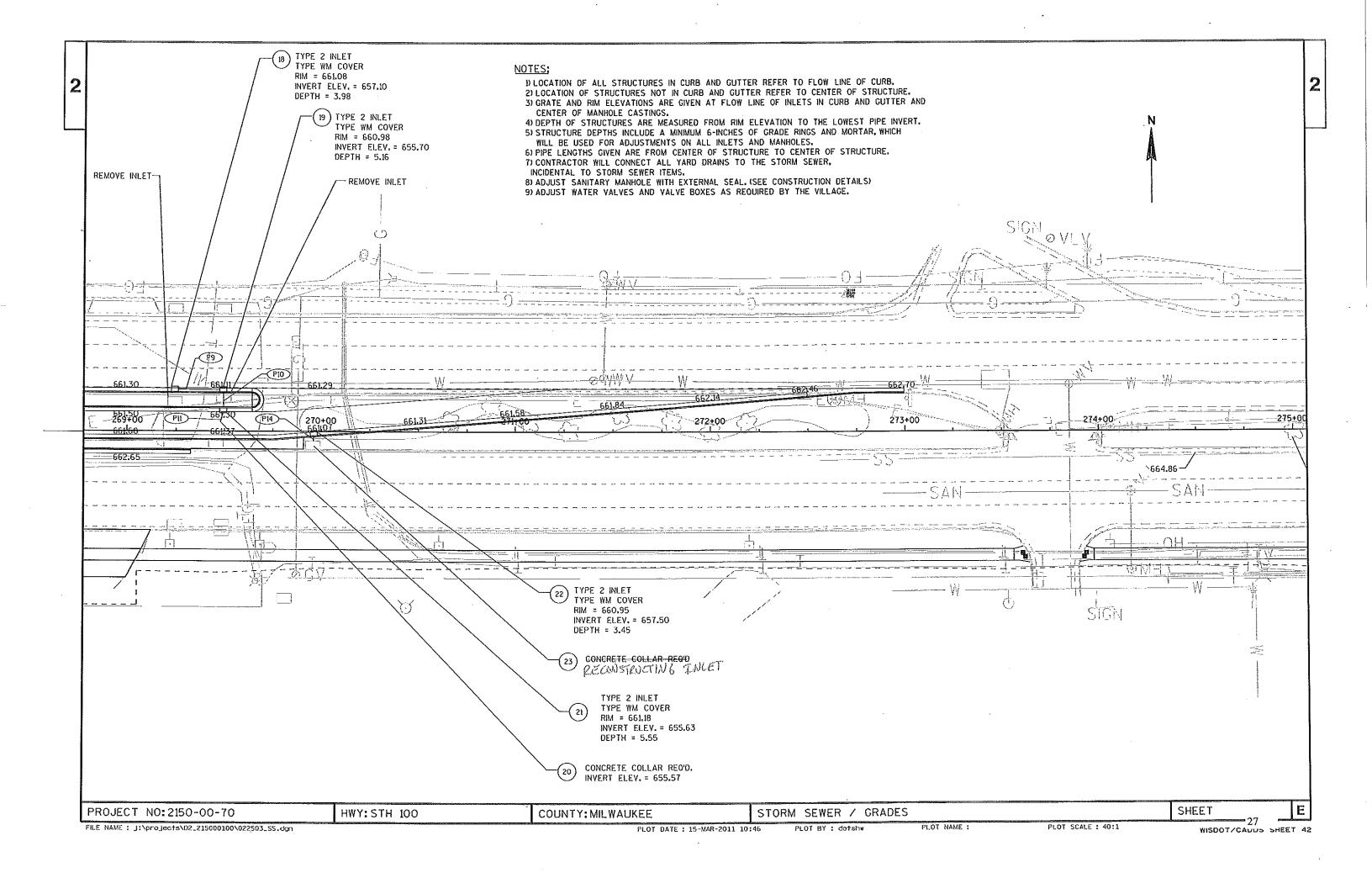


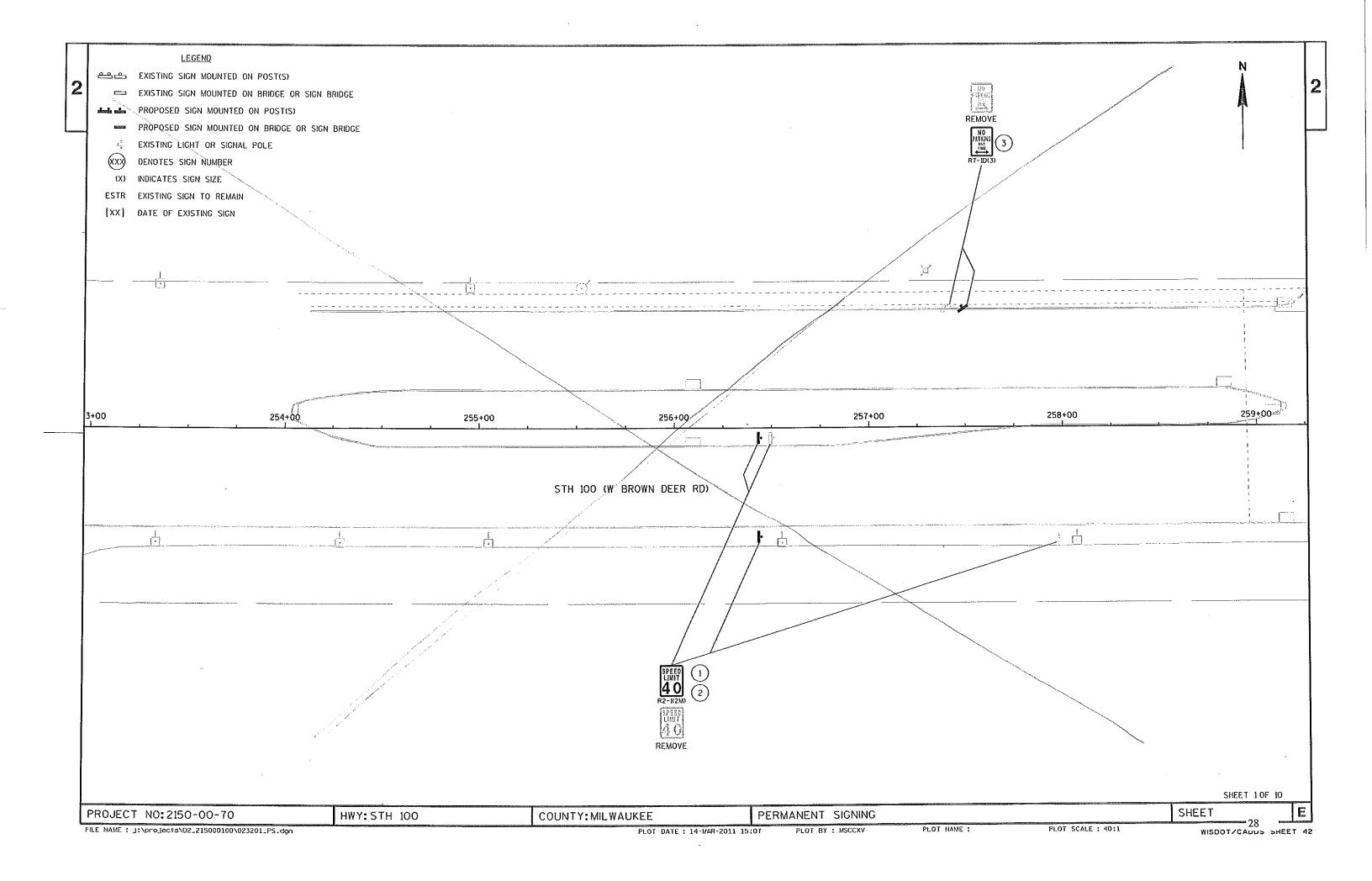


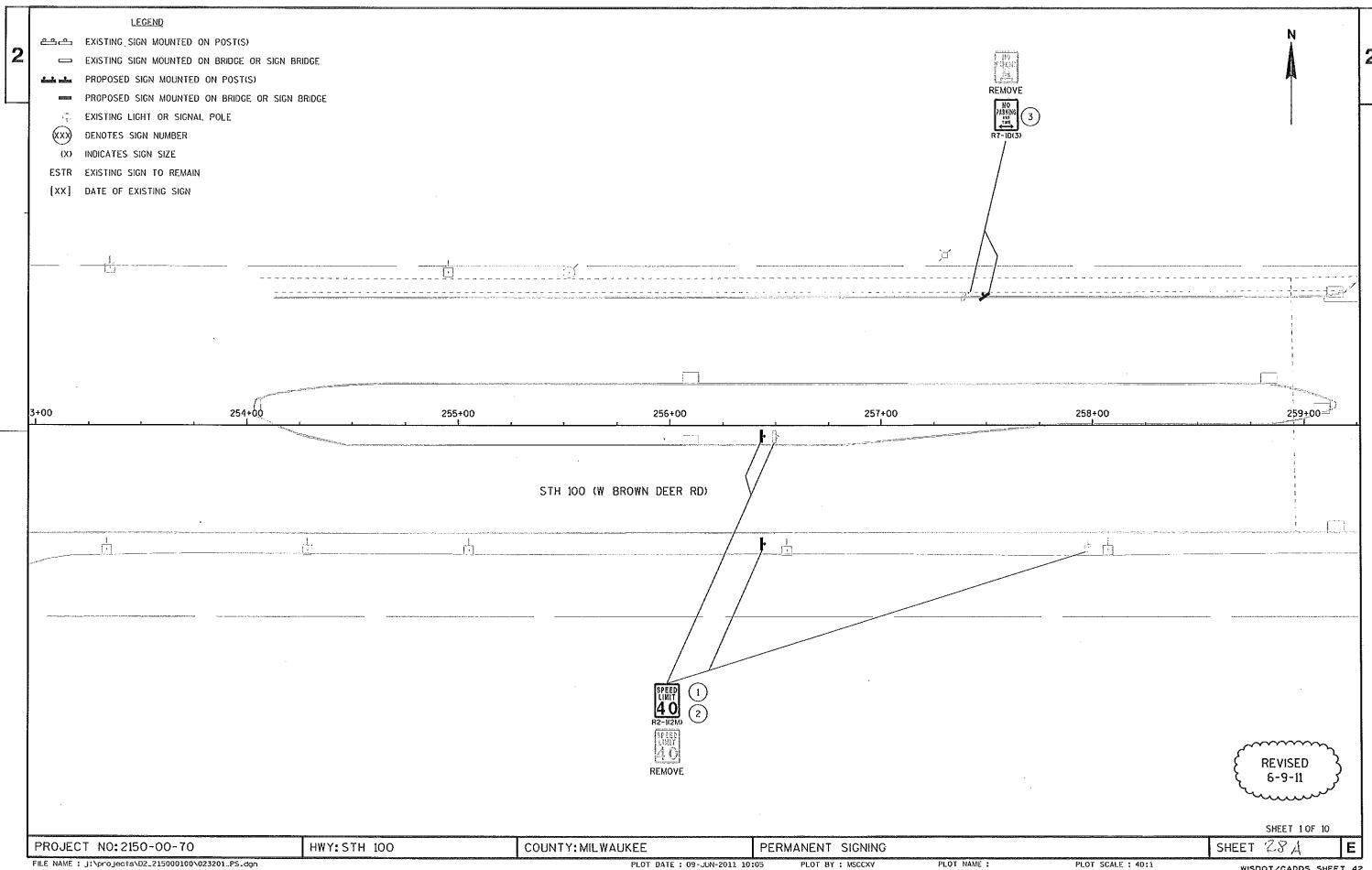


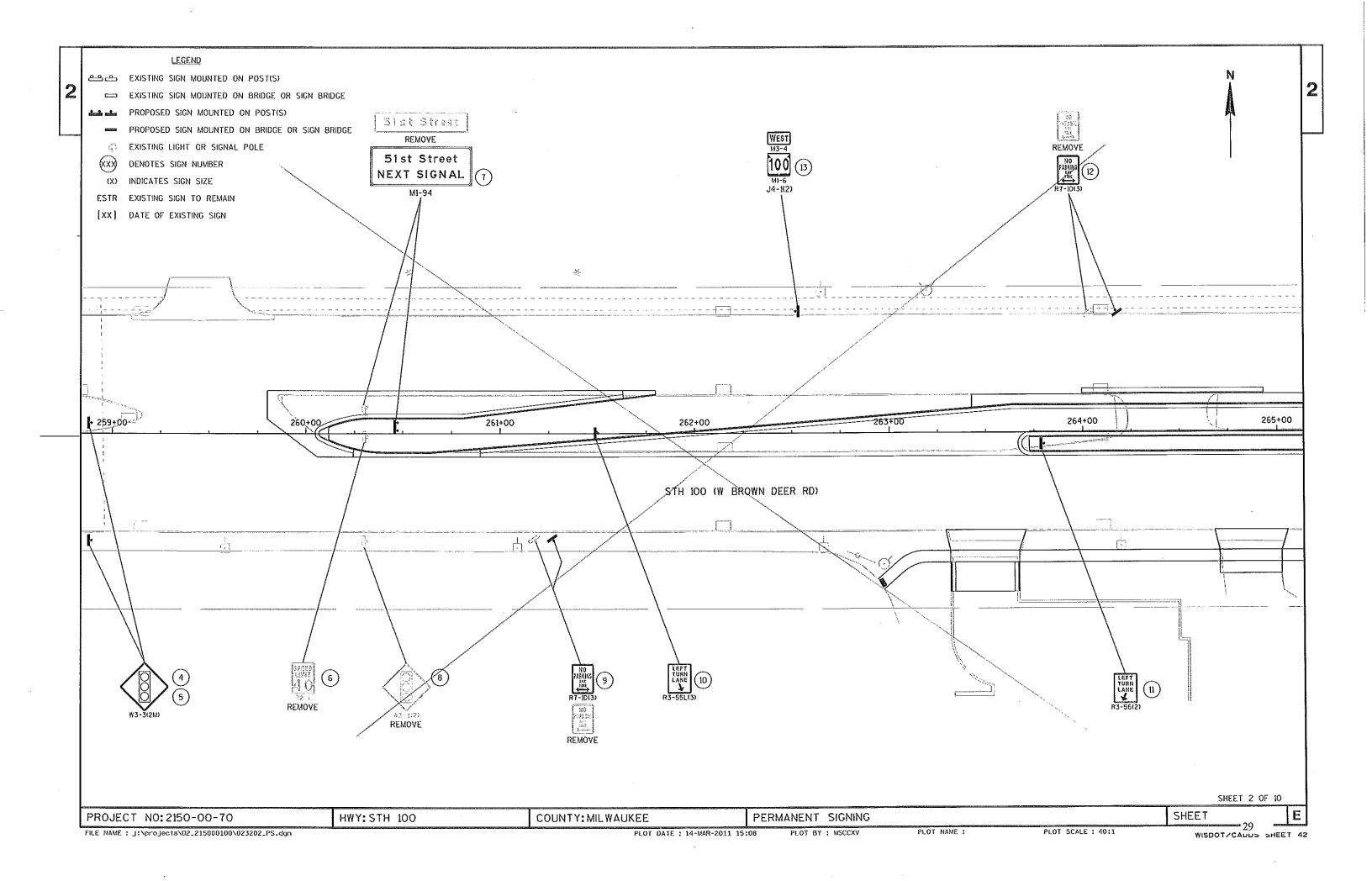


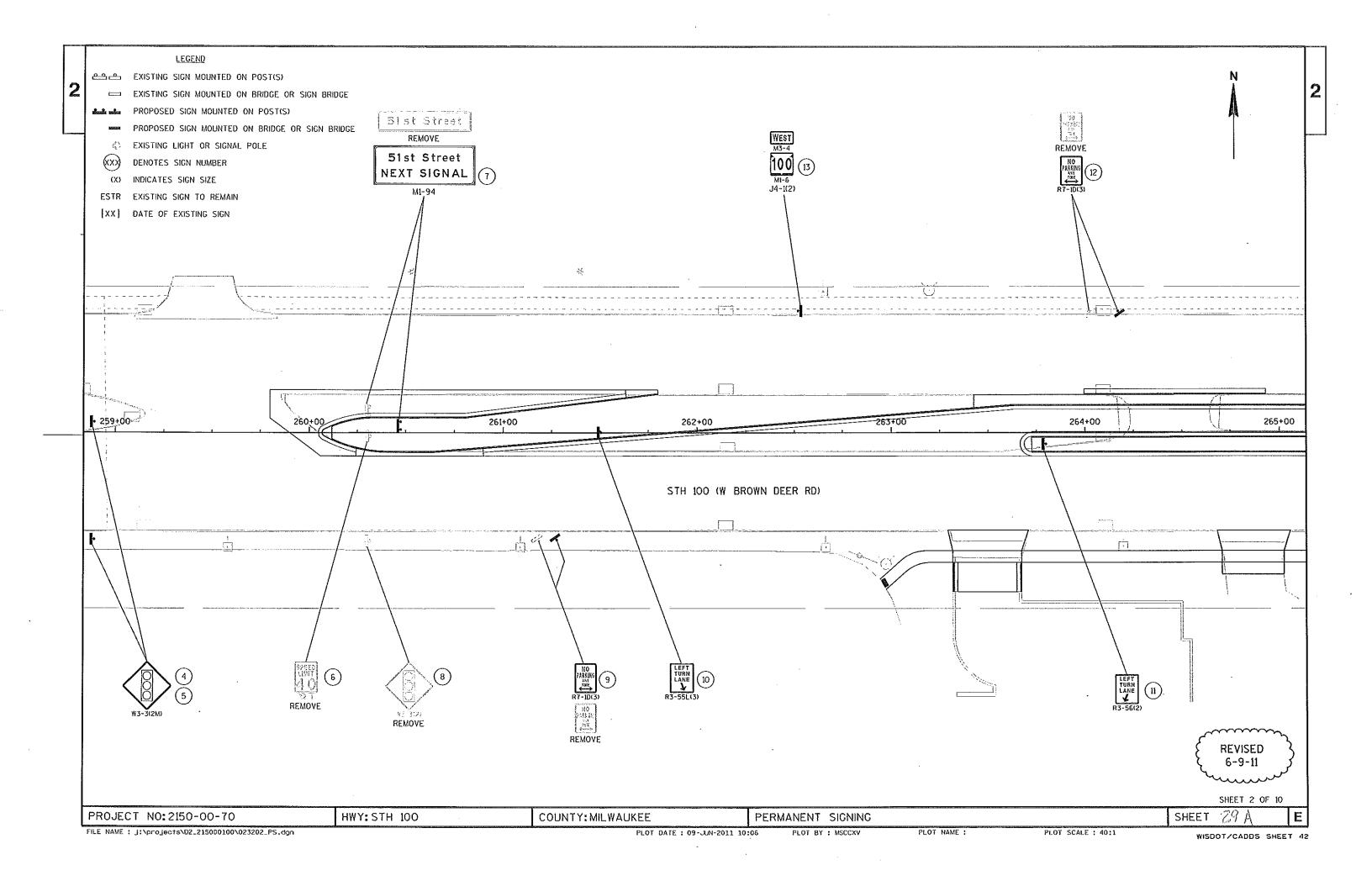


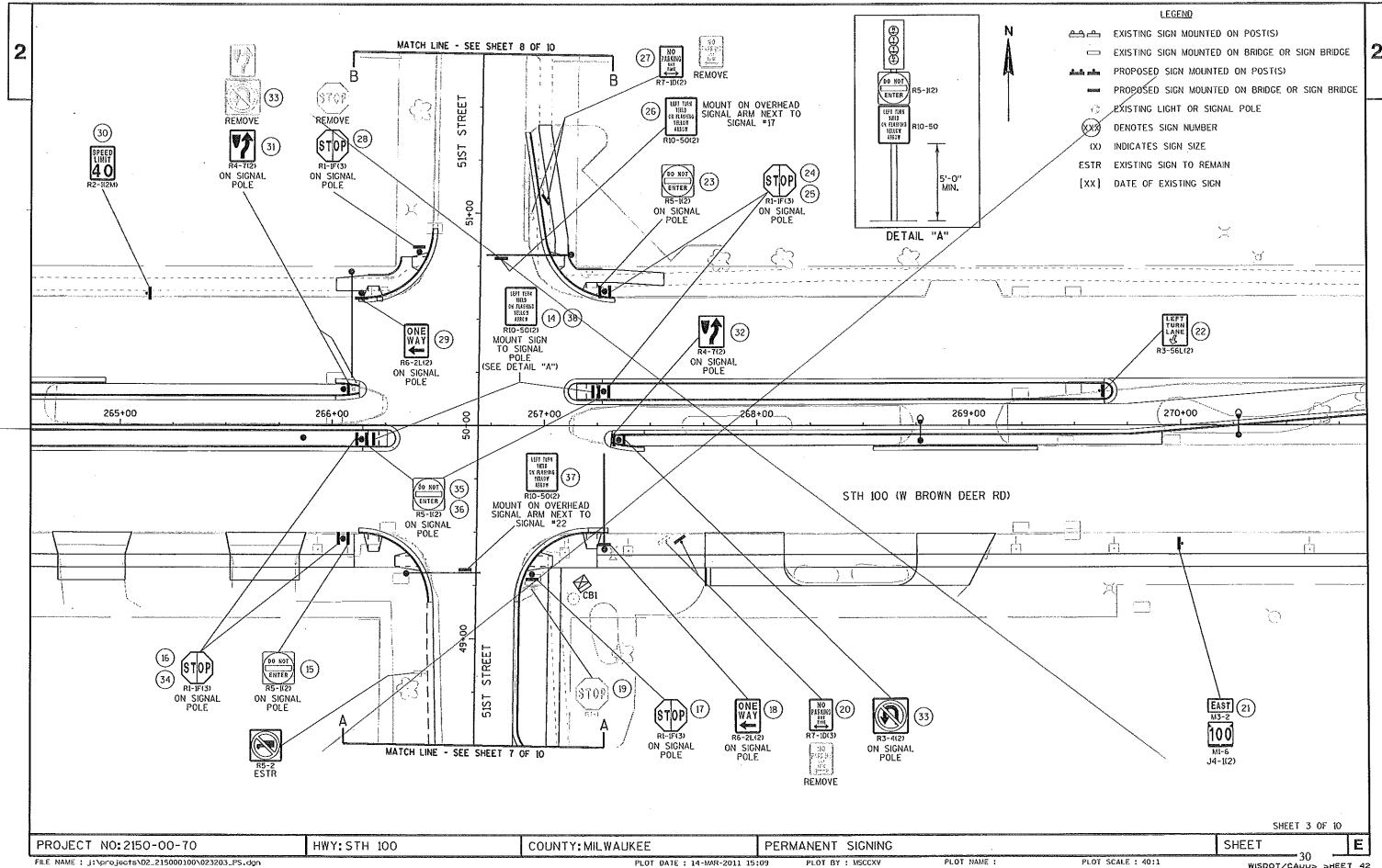


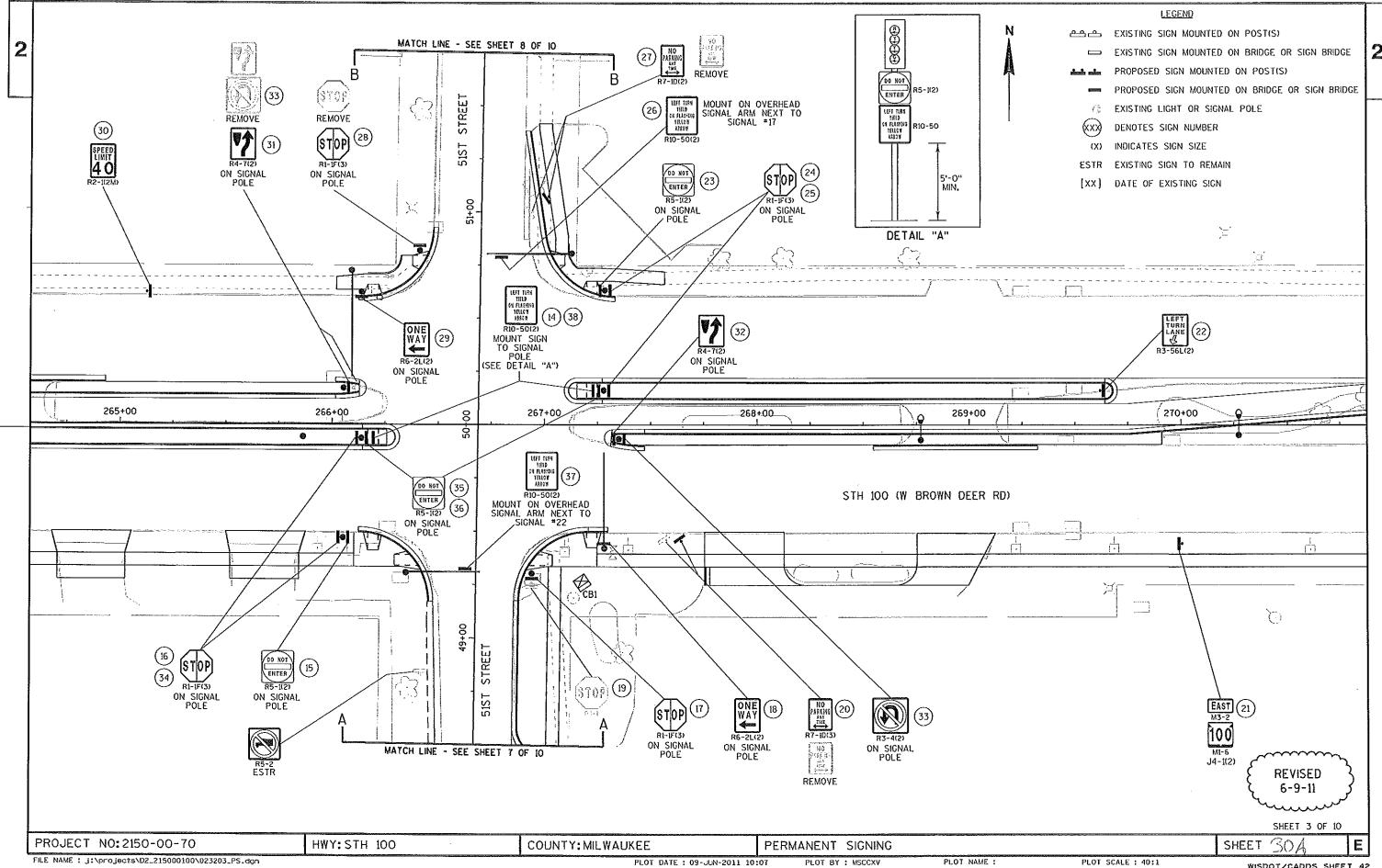


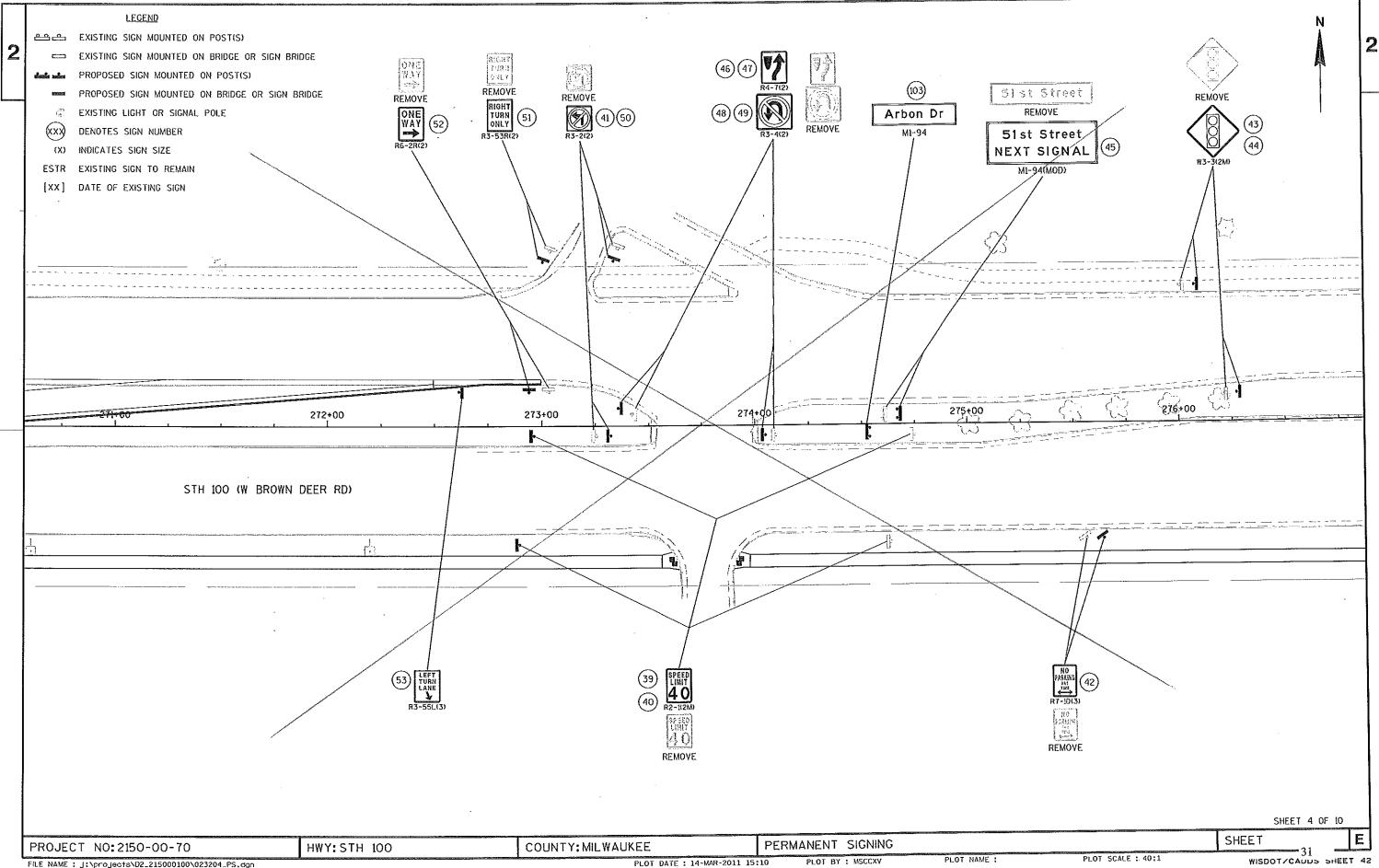


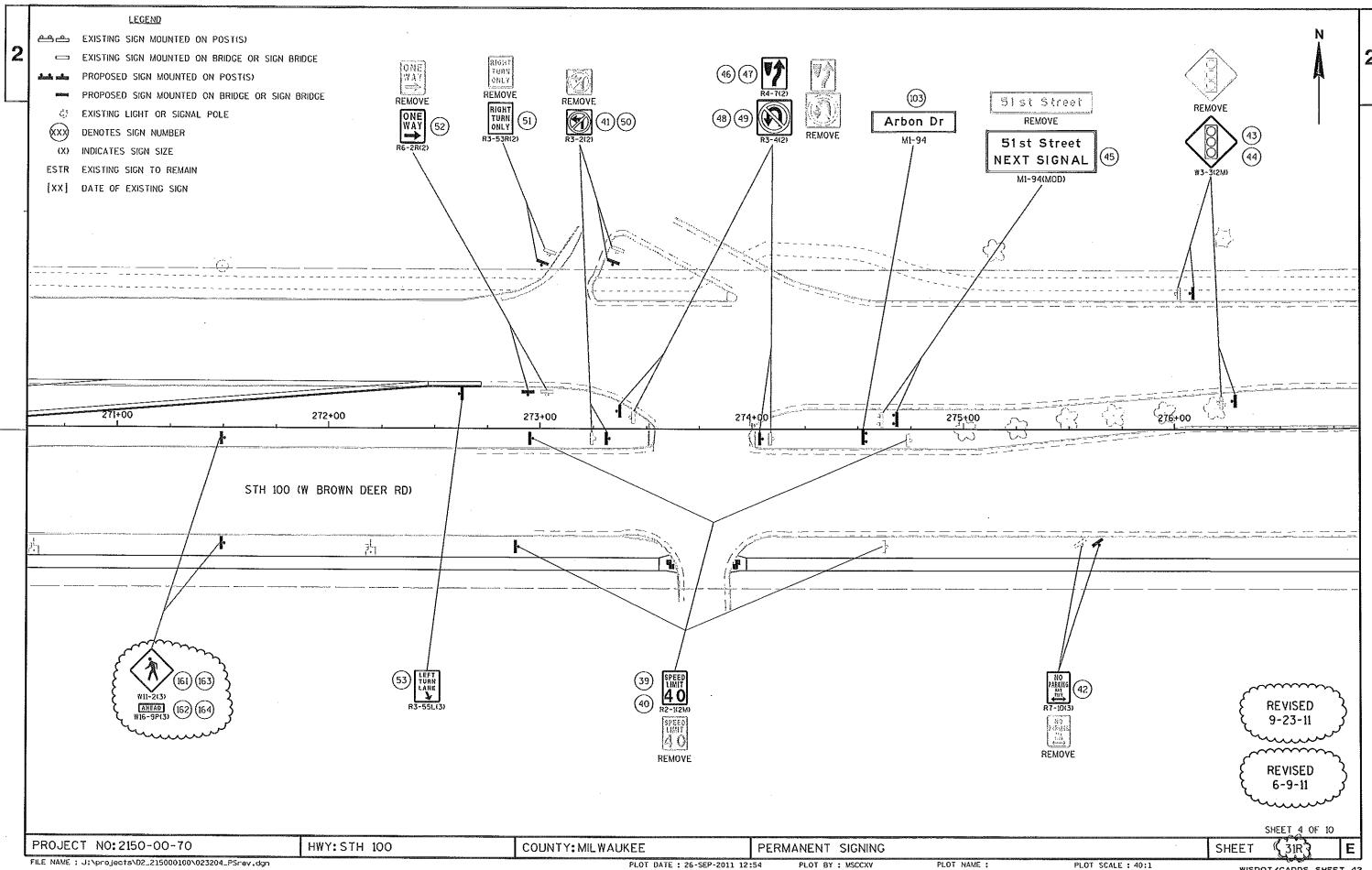


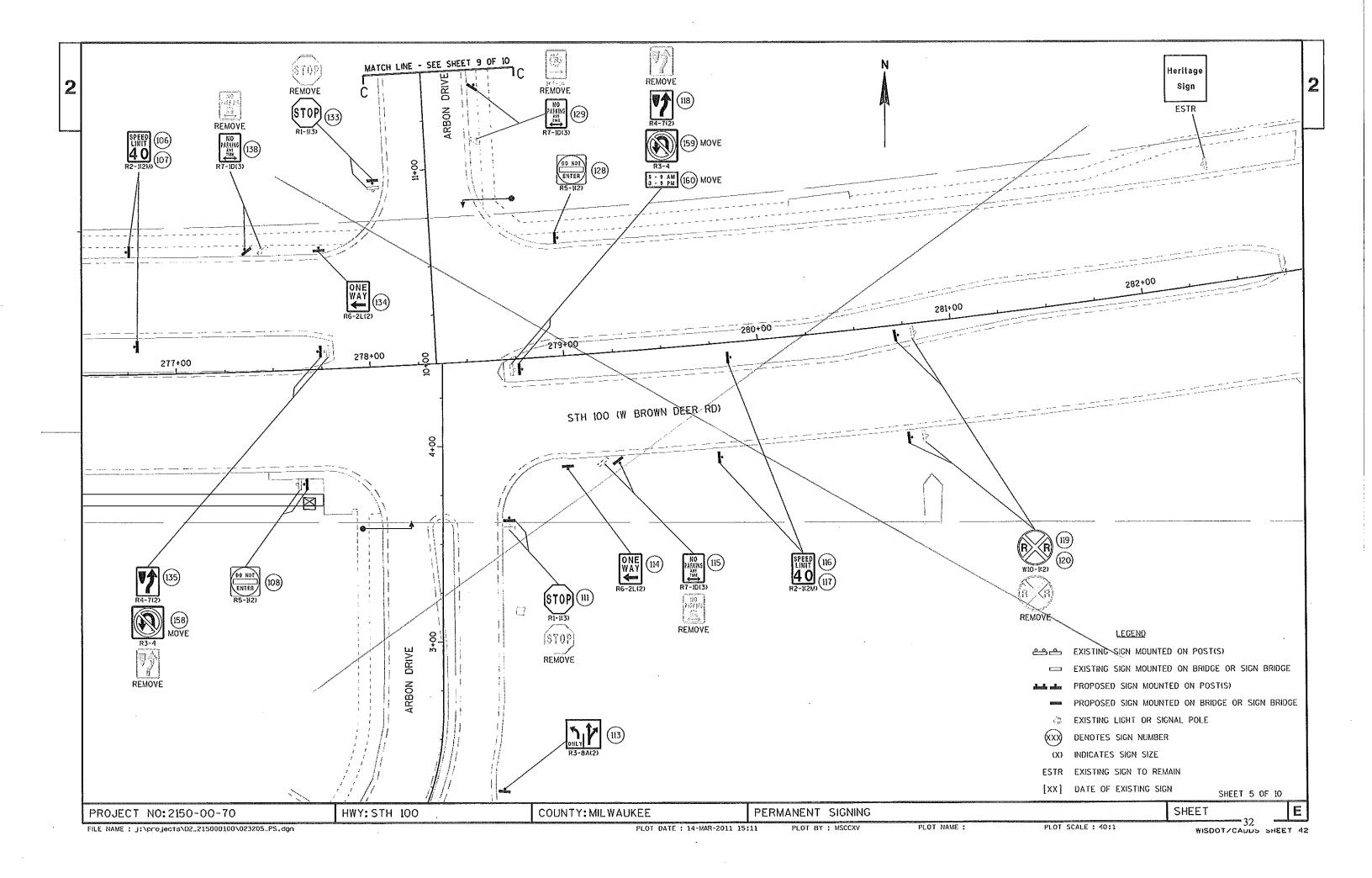


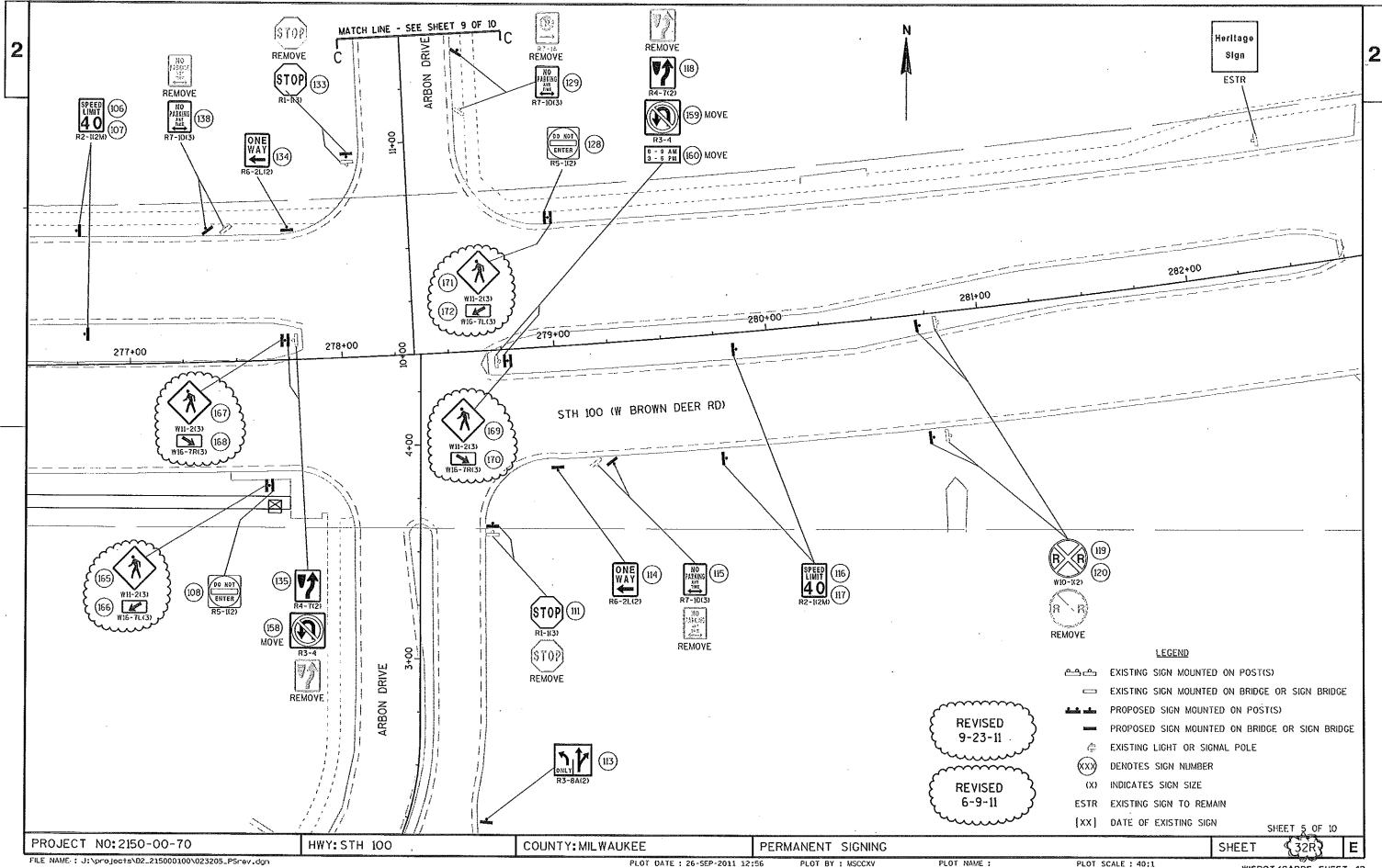


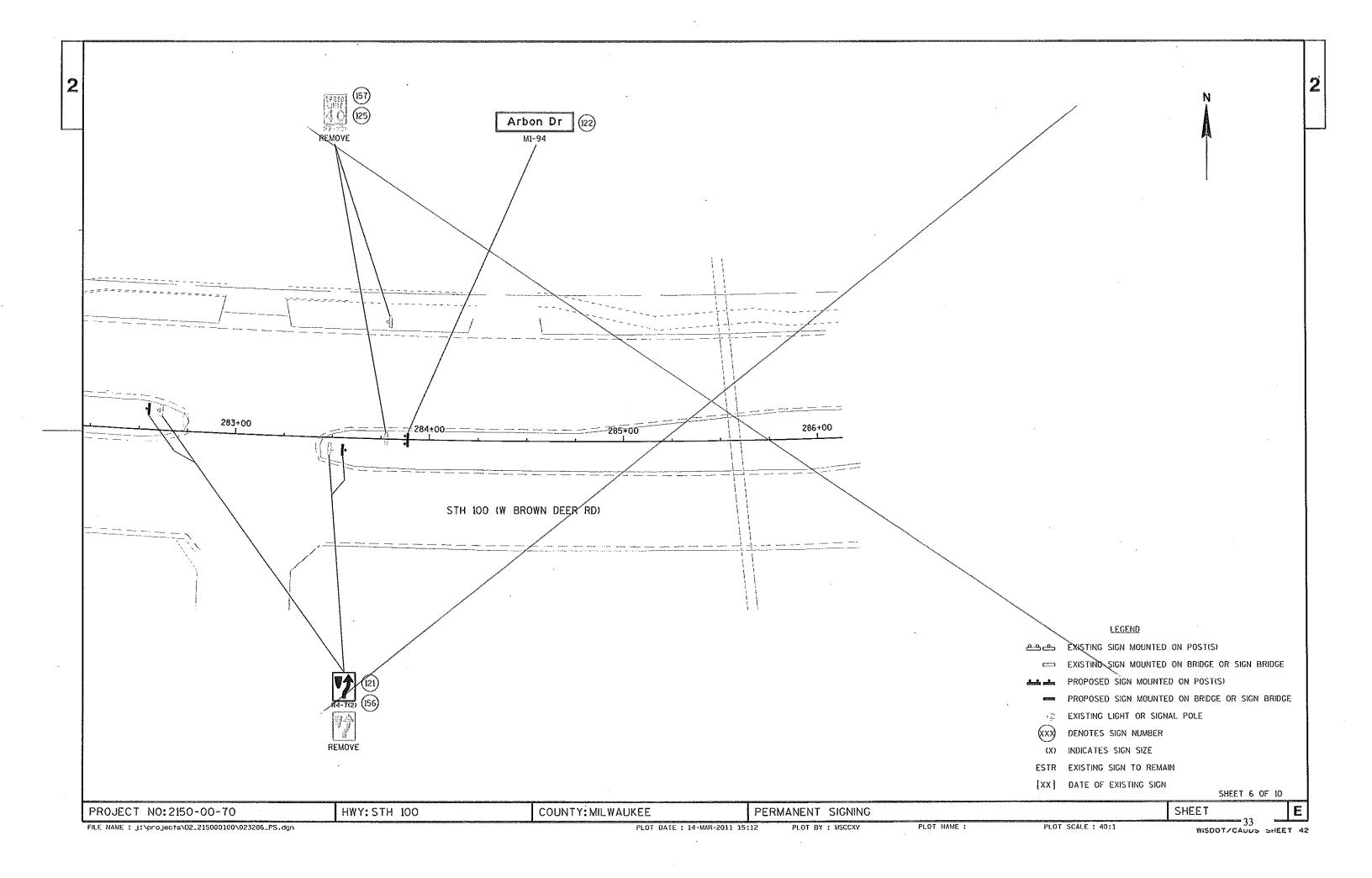


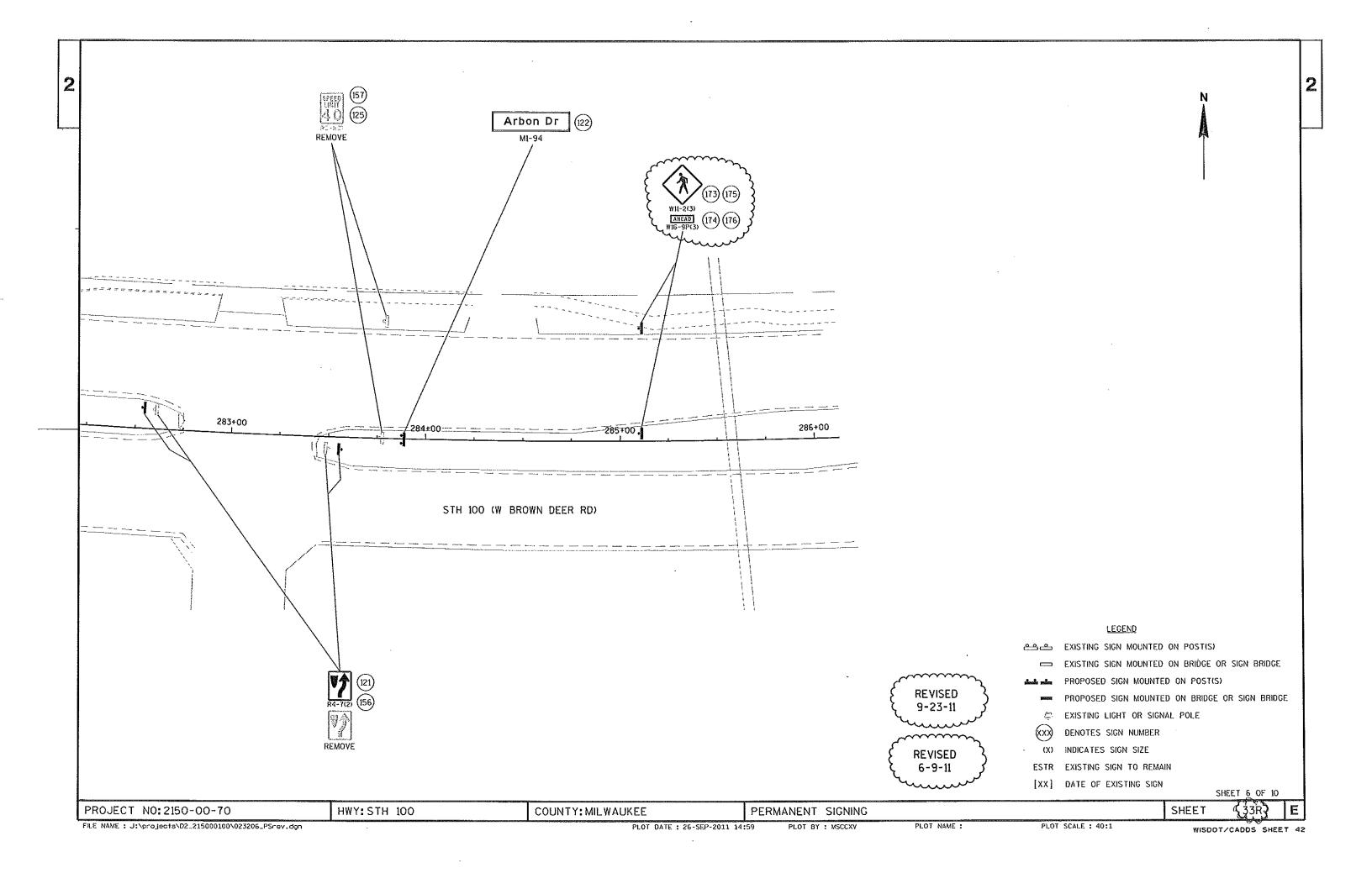


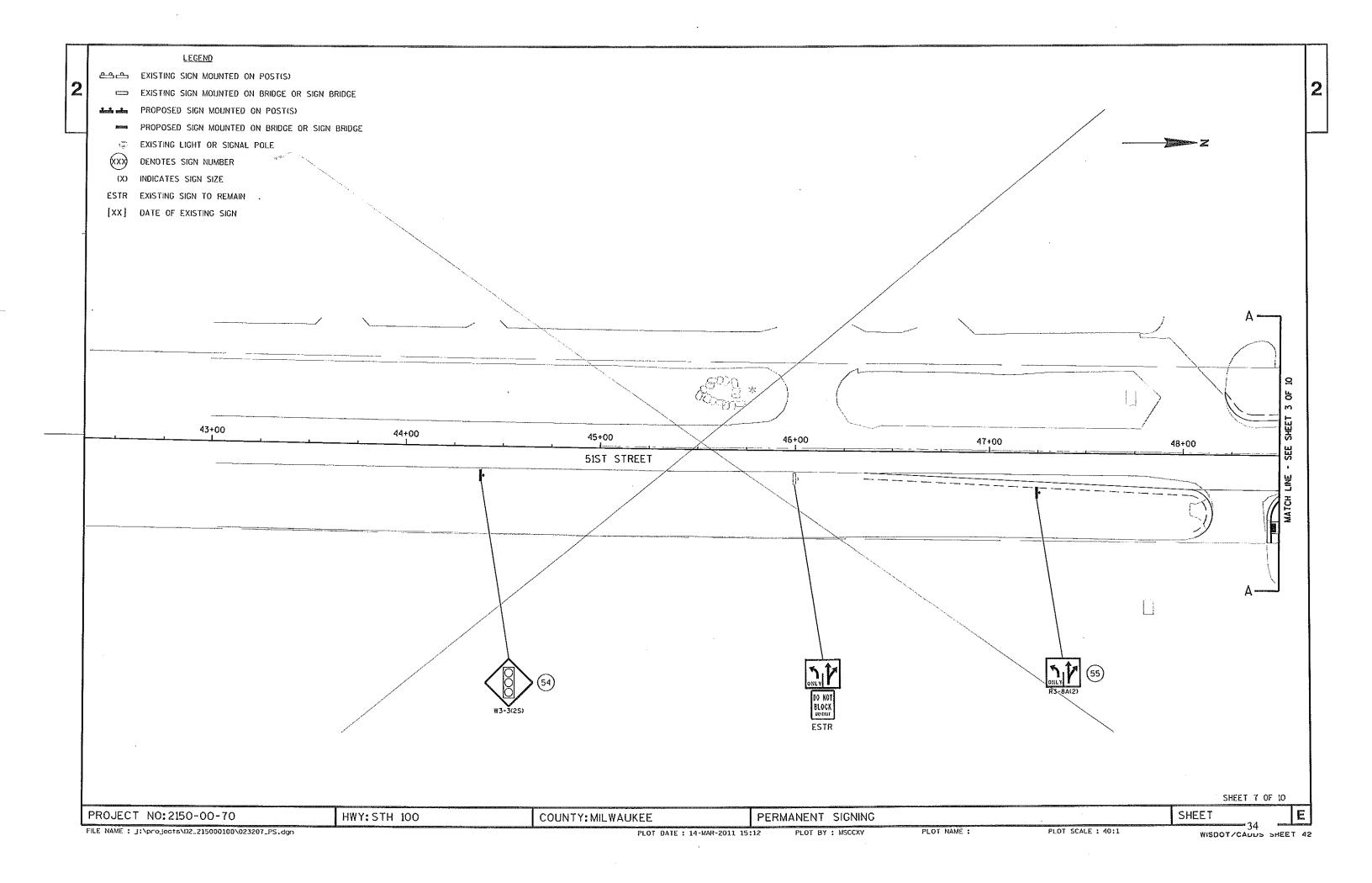


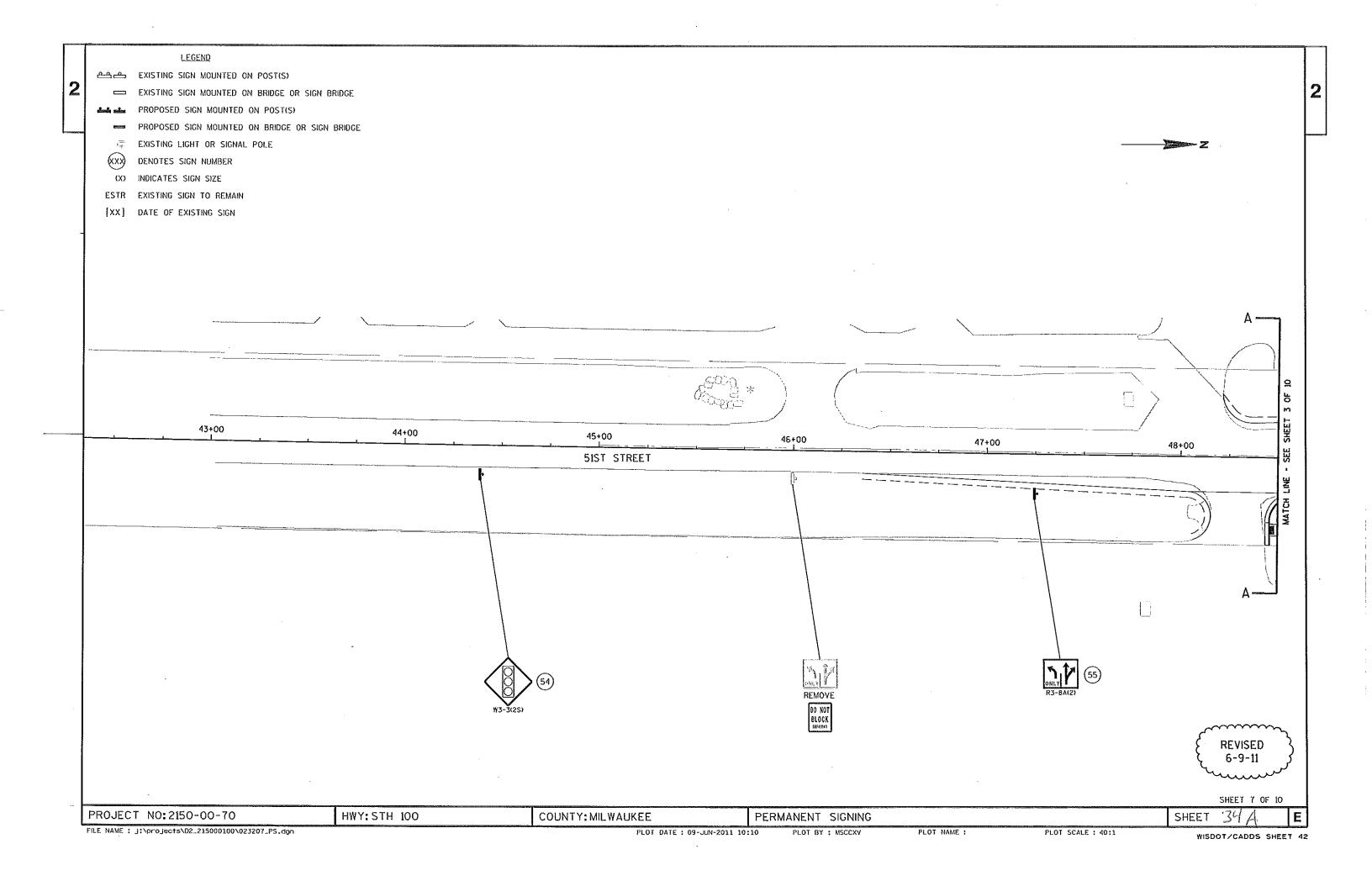


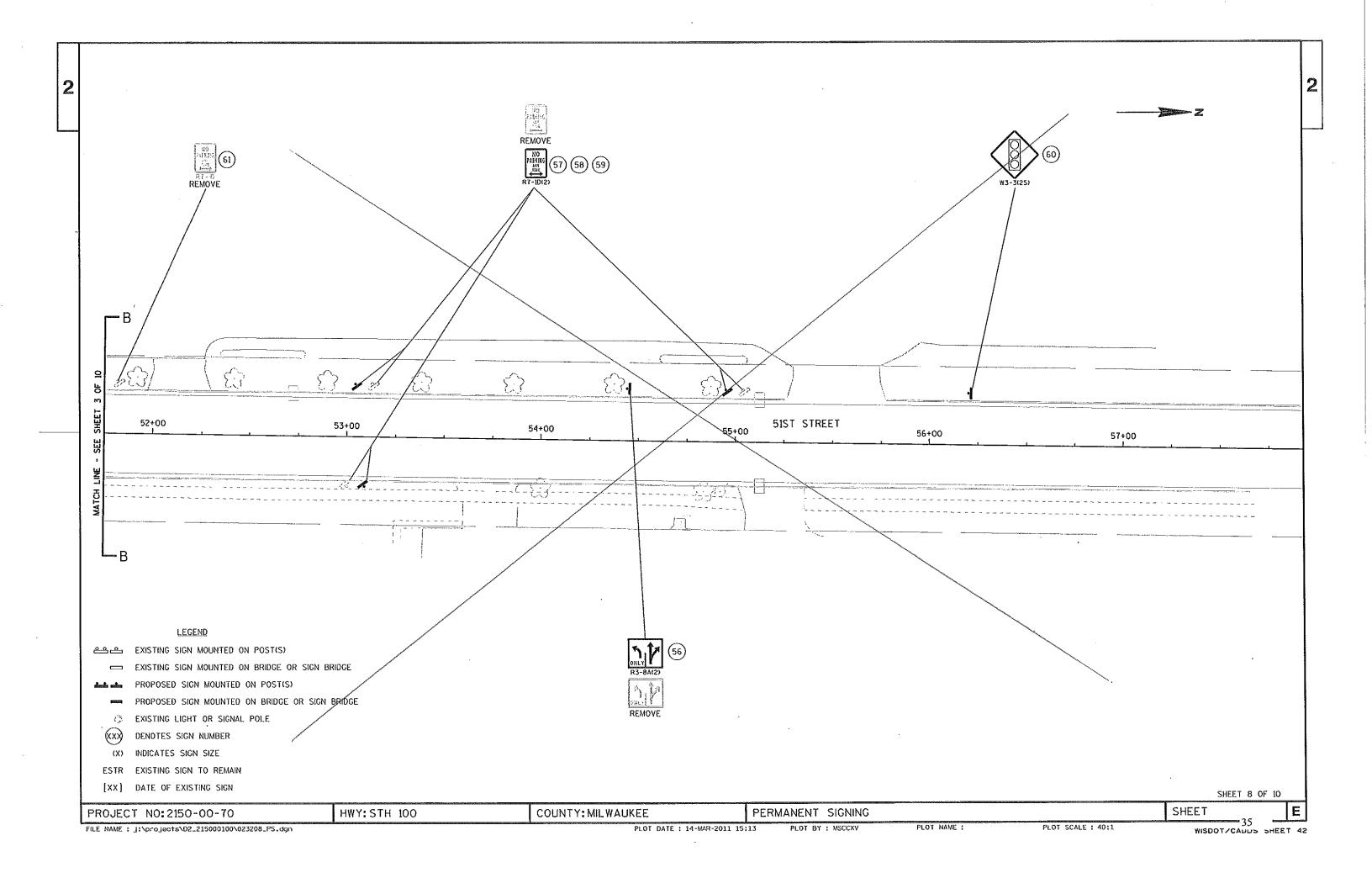


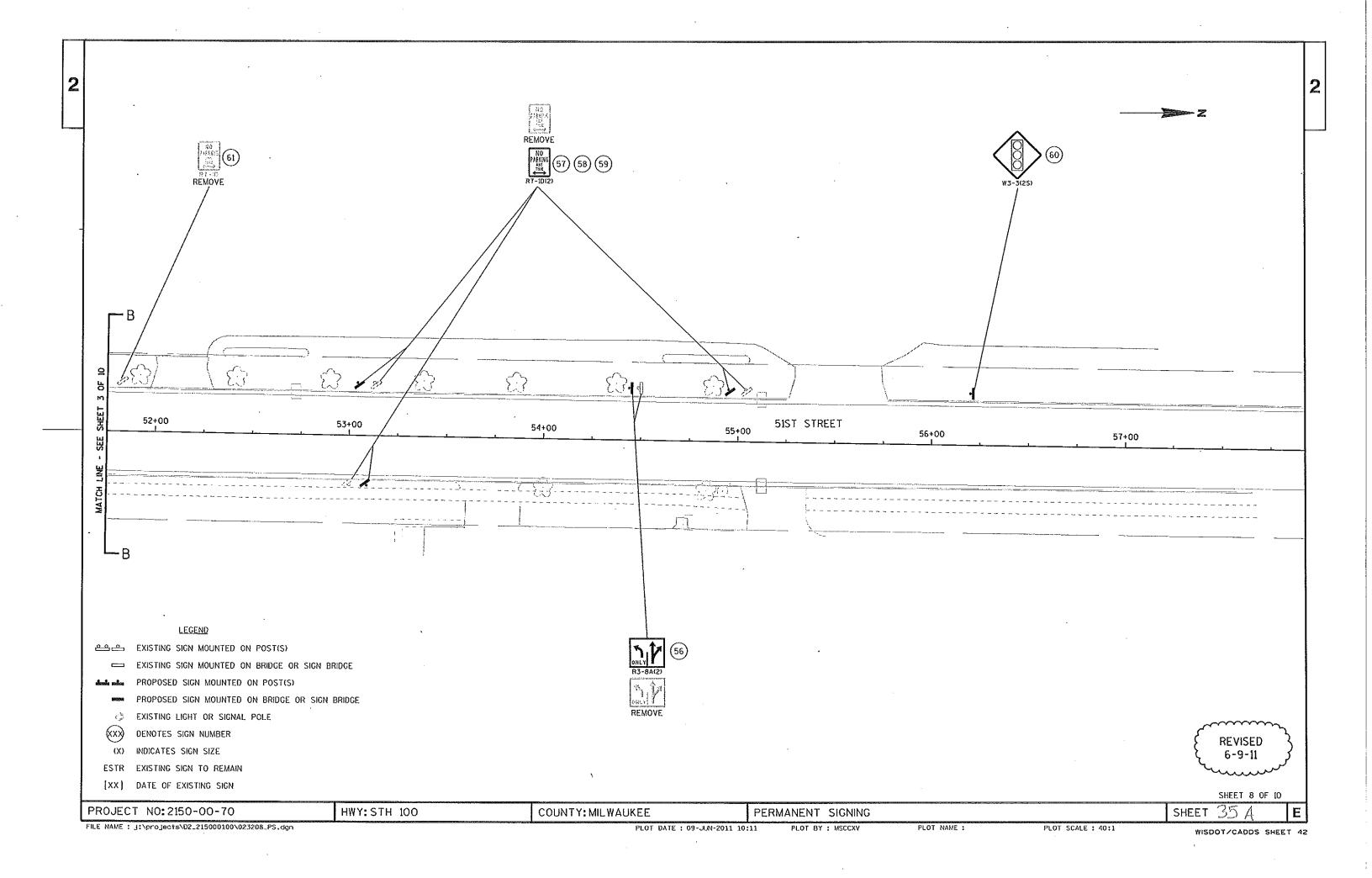


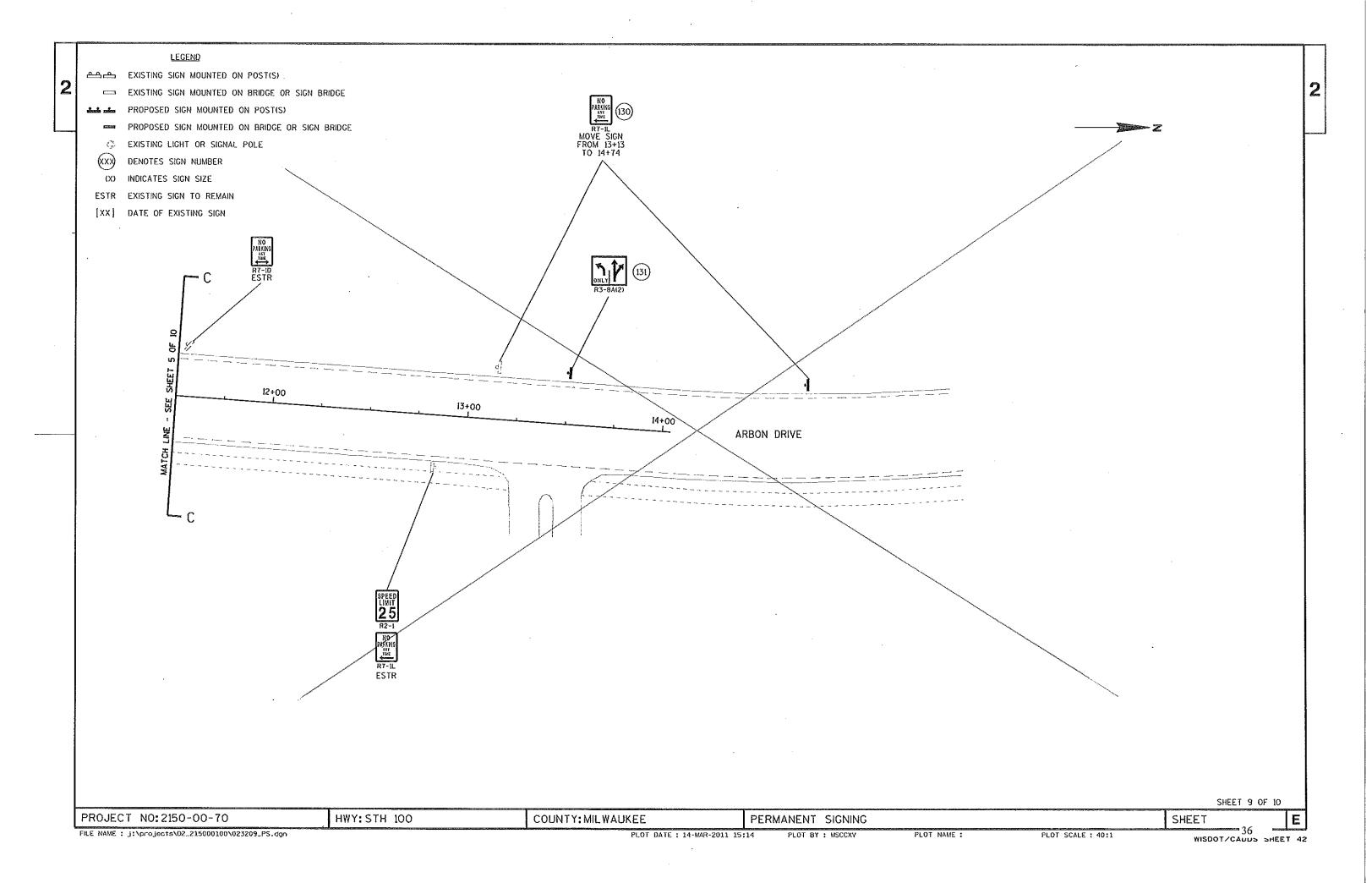


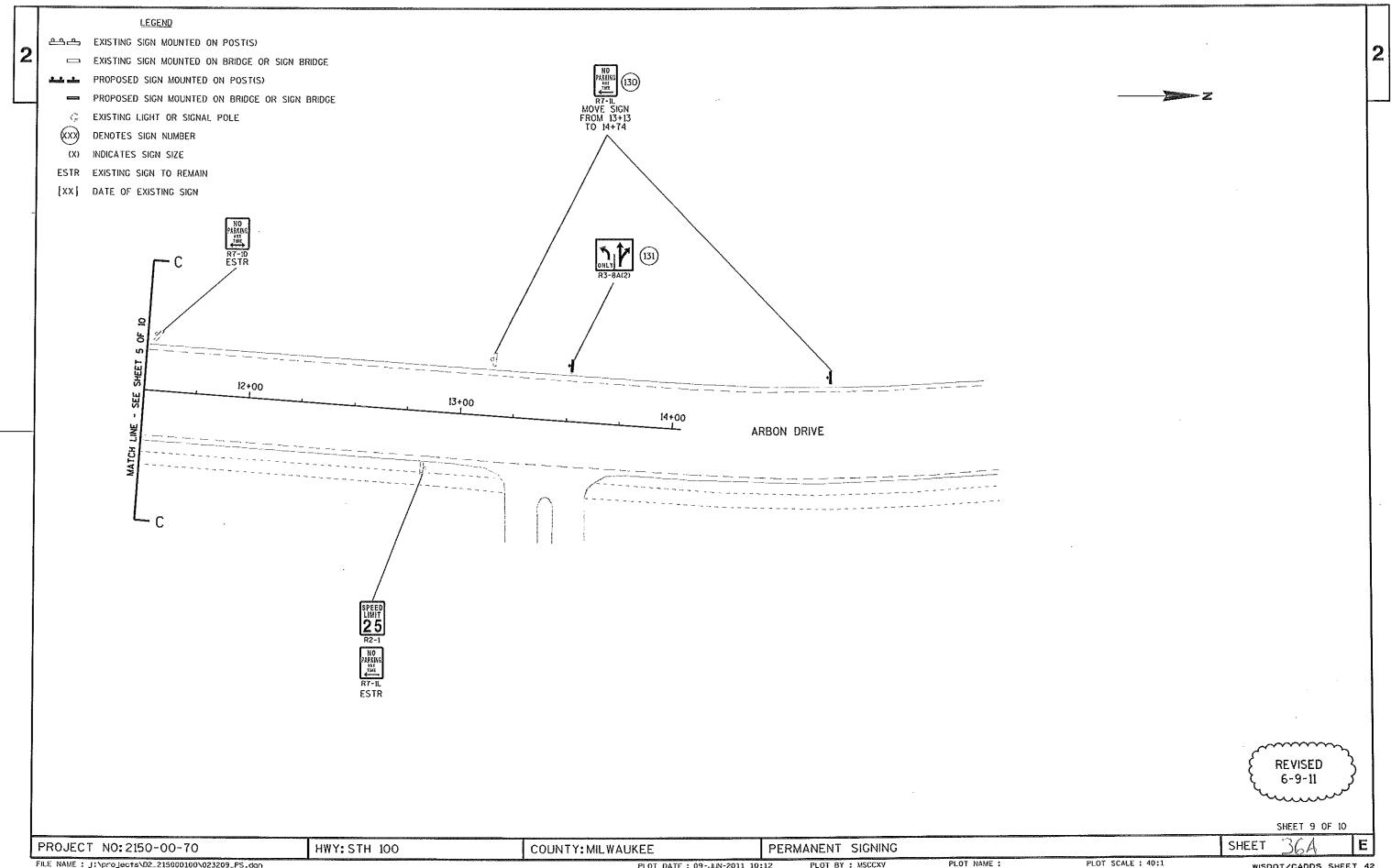












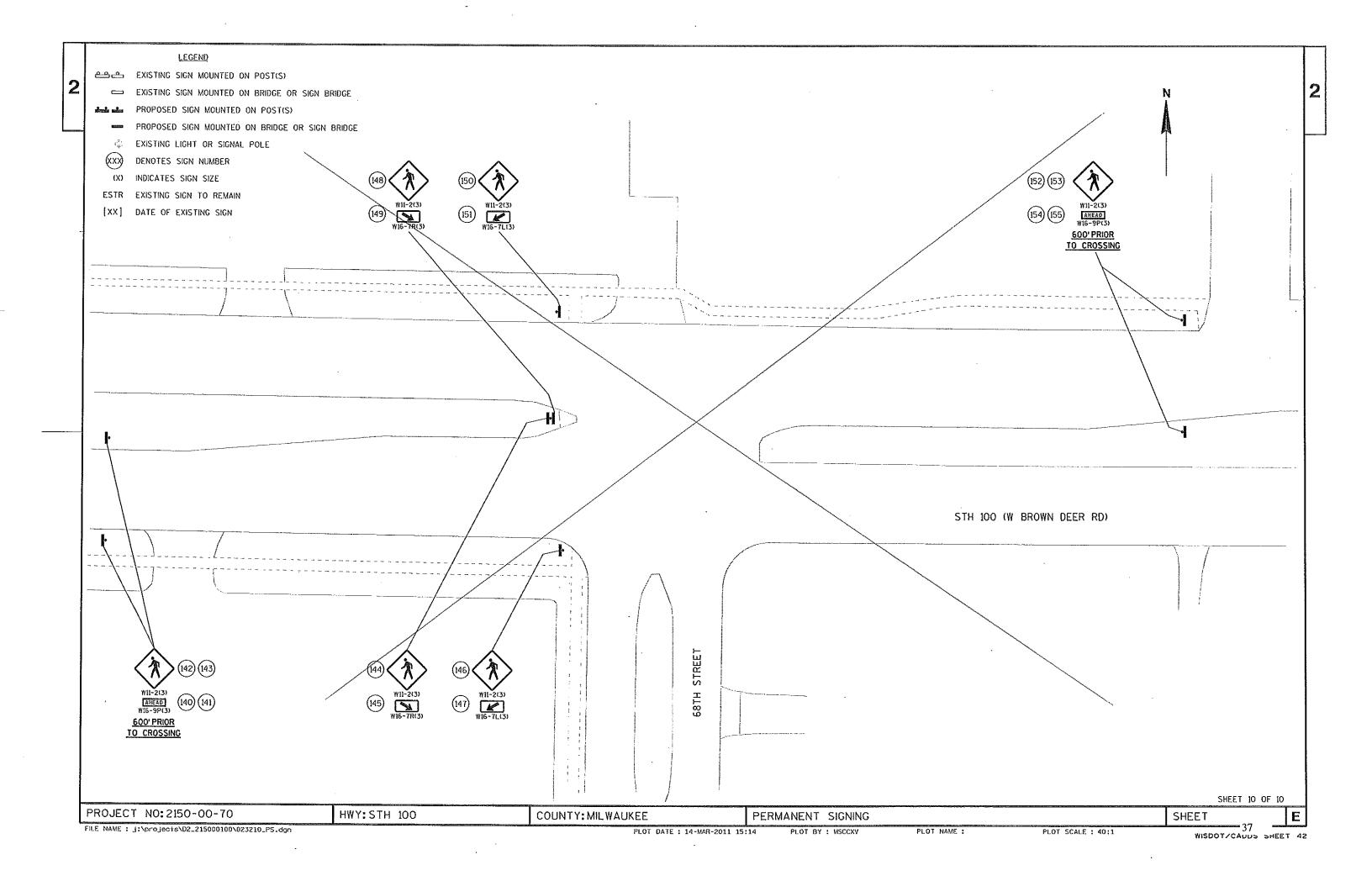
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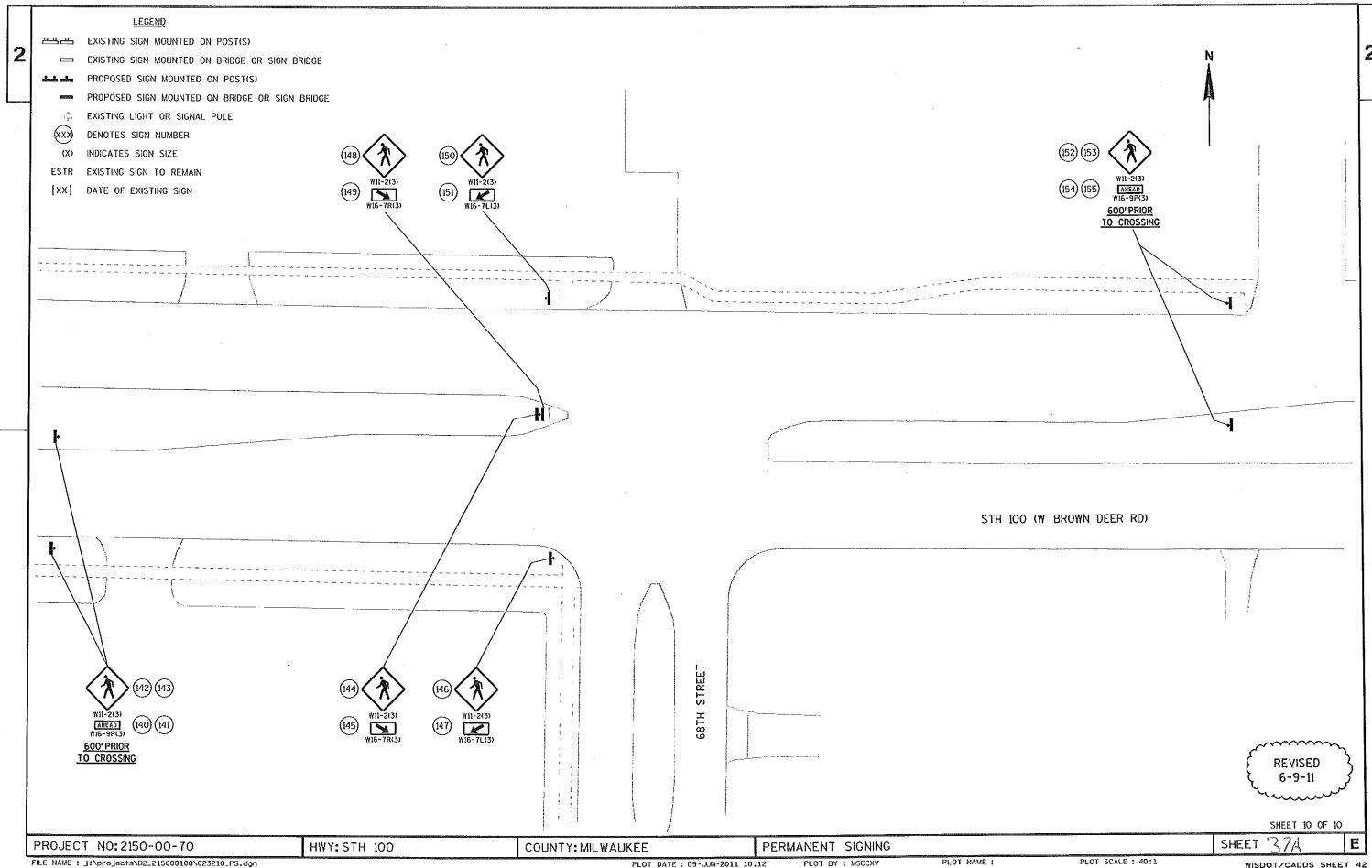
PLOT DATE: 09-JUN-2011 10:12

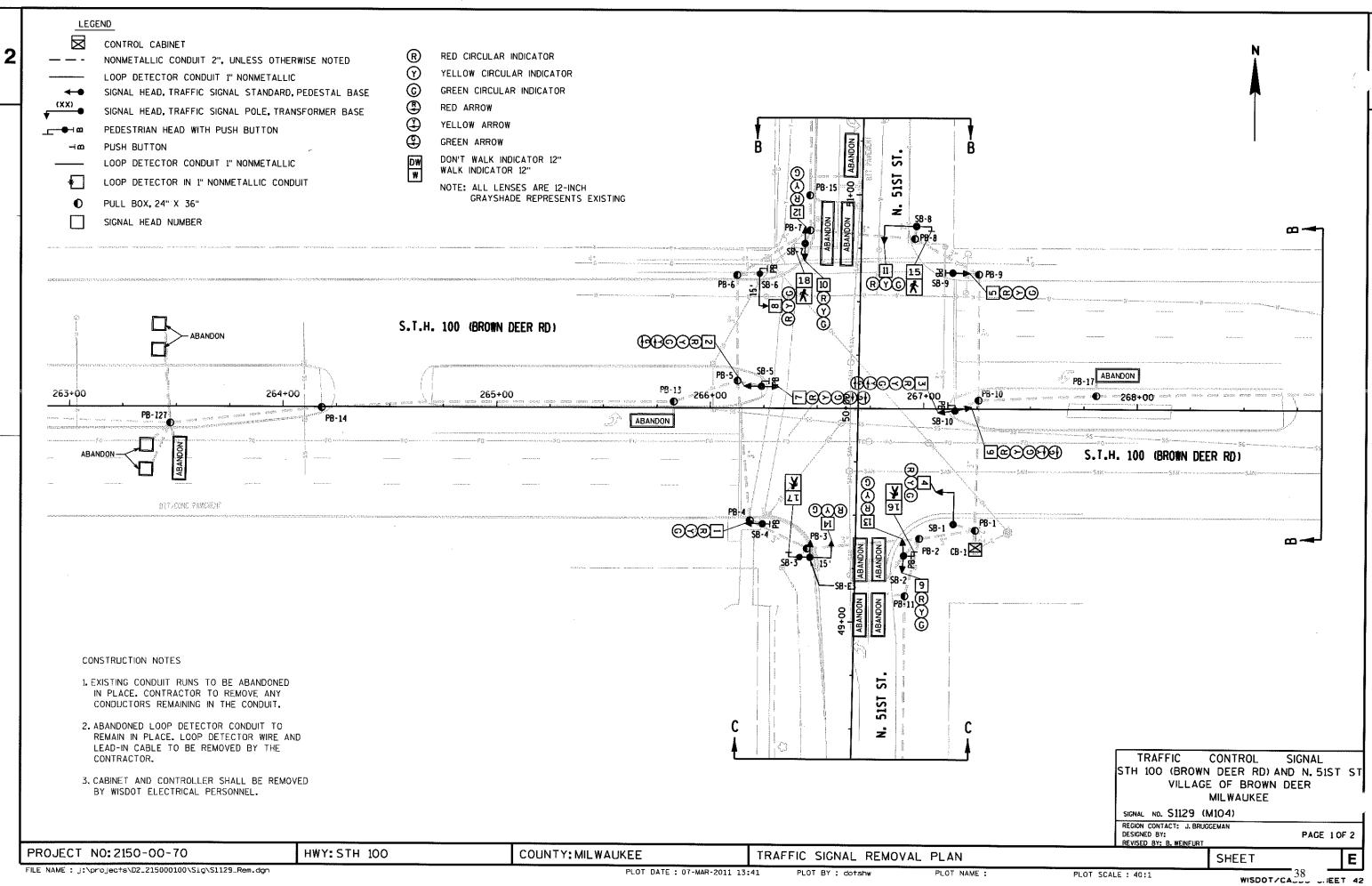
PLOT BY : MSCCXV

PLOT SCALE : 40:1

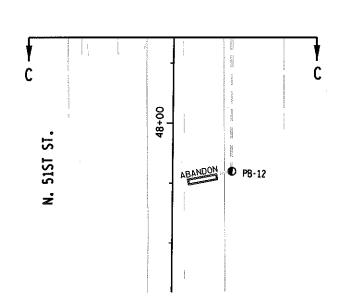
WISDOT/CADDS SHEET 42

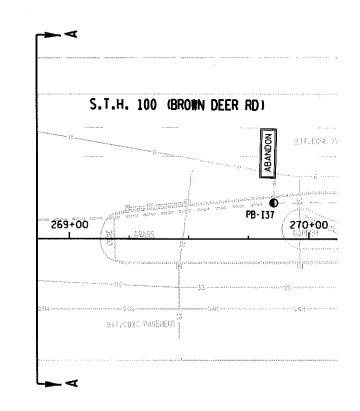






PB-16 PABANDON 51ST ST.





TRAFFIC CONTROL SIGNAL STH 100 (BROWN DEER RD) AND N. 51ST ST VILLAGE OF BROWN DEER MILWAUKEE

SHEET

SIGNAL NO. S1129 (M104)
REGION CONTACT: J. BRUGGEMAN
DESIGNED BY:
REVISED BY: B. WEINFURT

PAGE 2 OF 2

PROJECT NO: 2150-00-70

HWY: STH 100

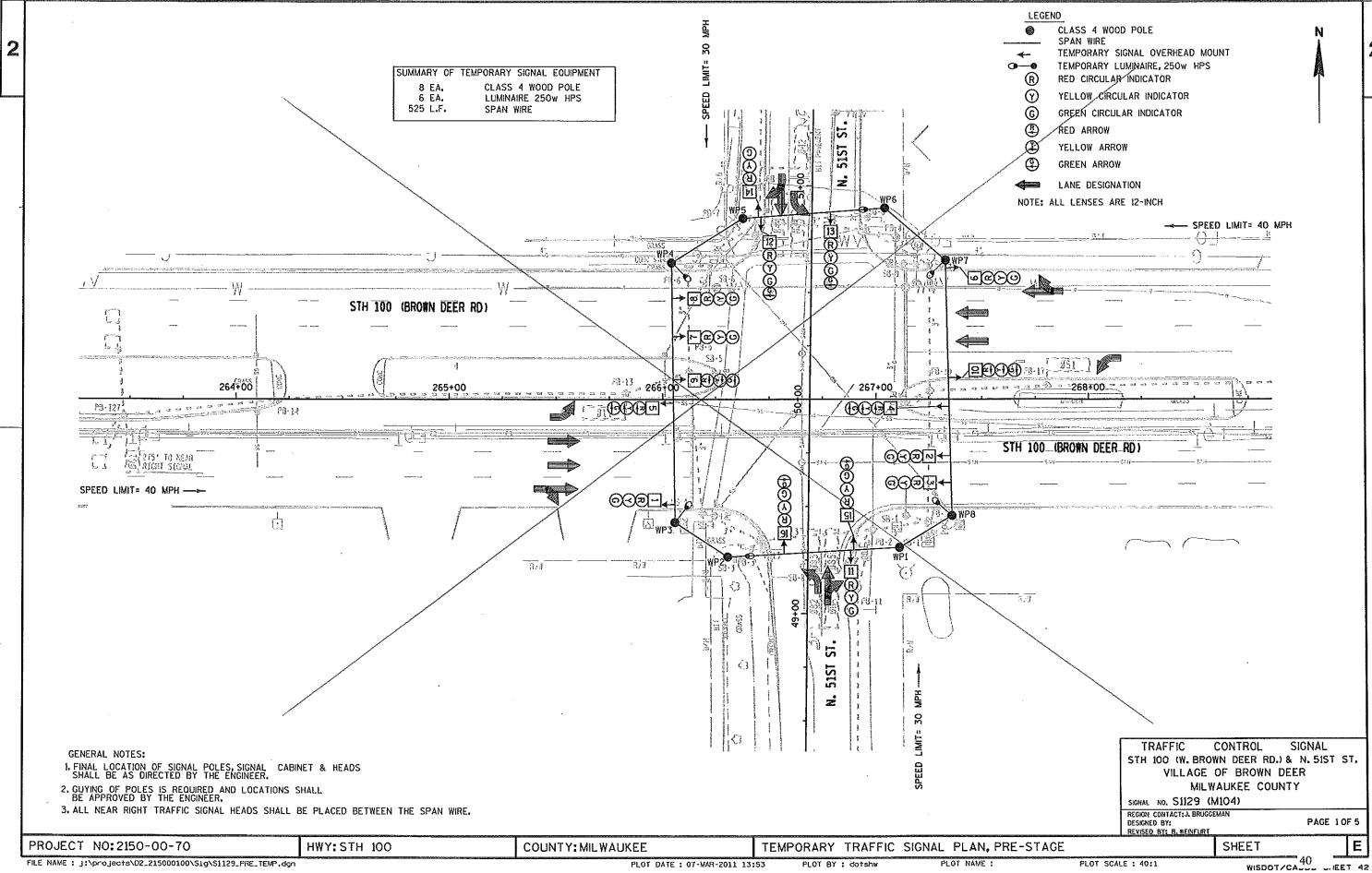
COUNTY: MILWAUKEE

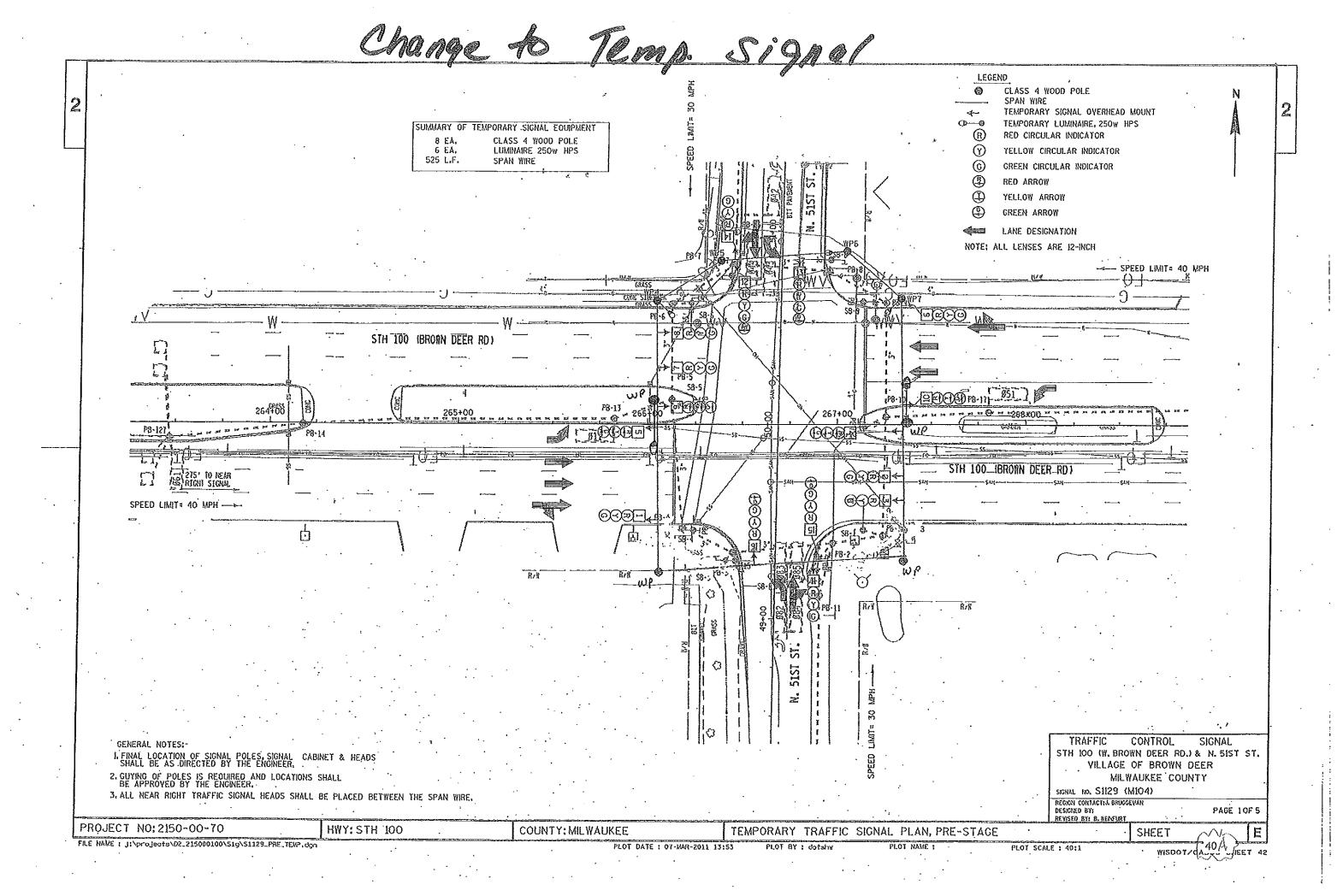
TRAFFIC SIGNAL REMOVAL PLAN

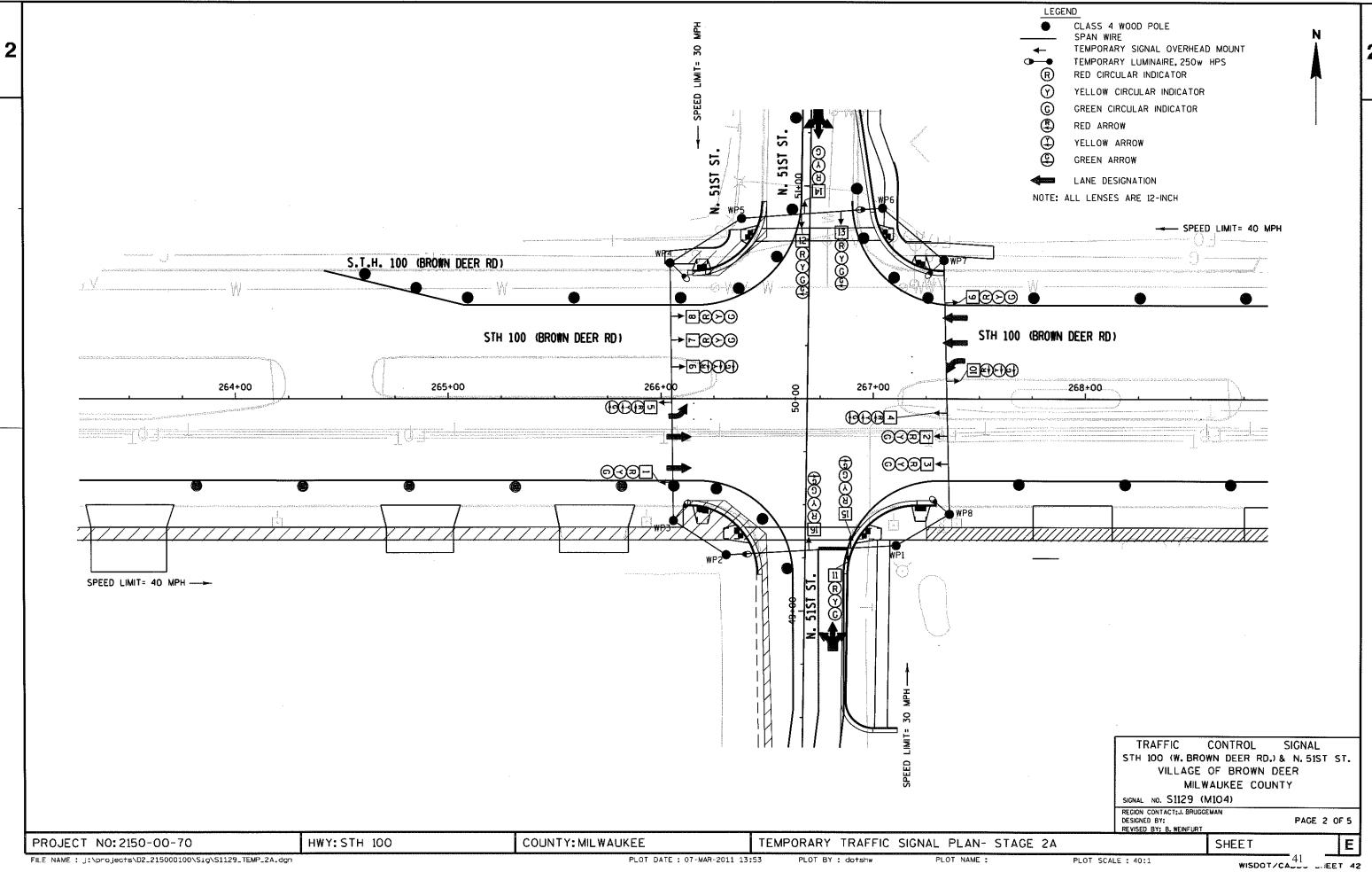
PLOT BY : dotshw

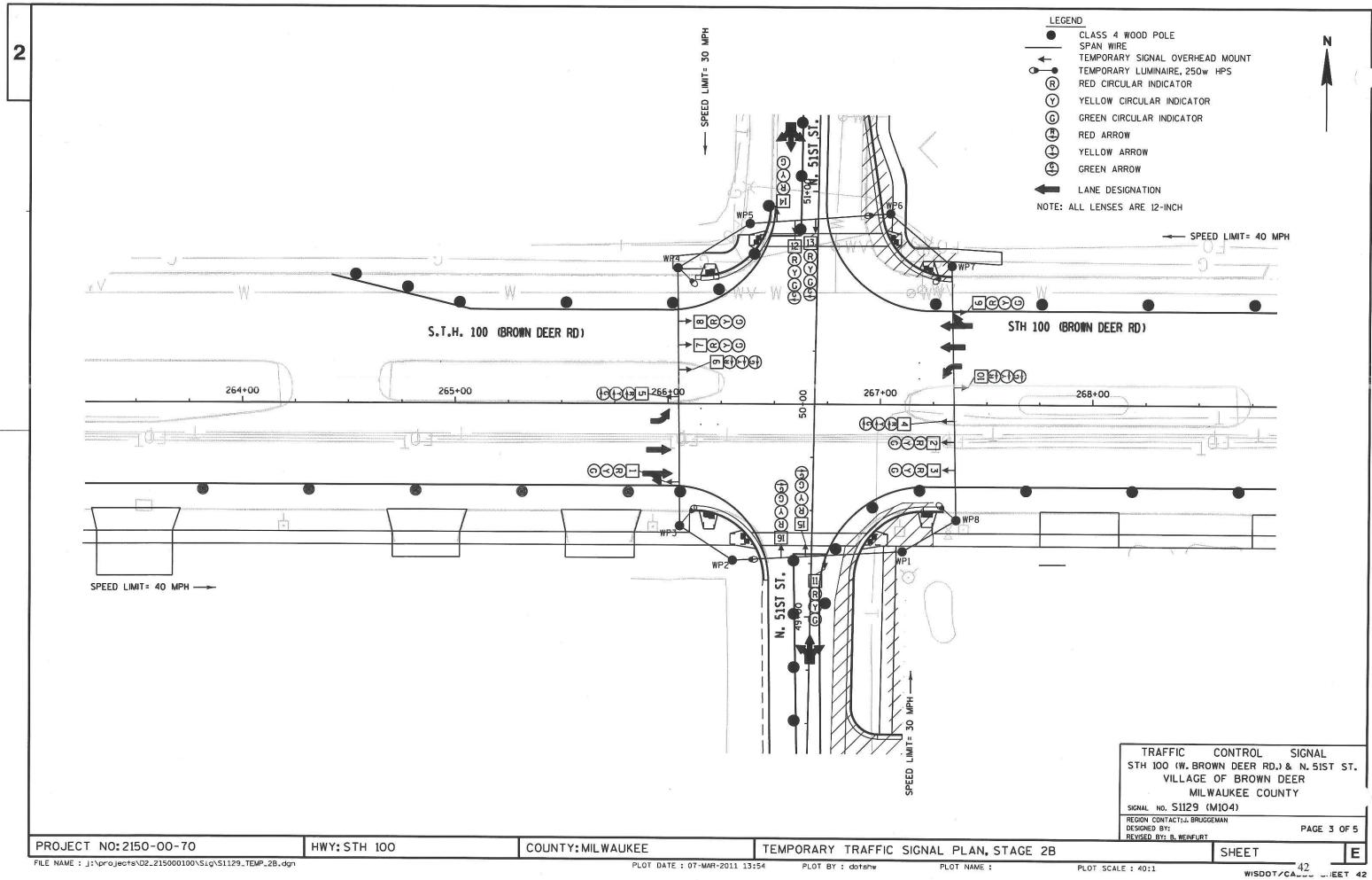
PLOT SCALE : 40:1

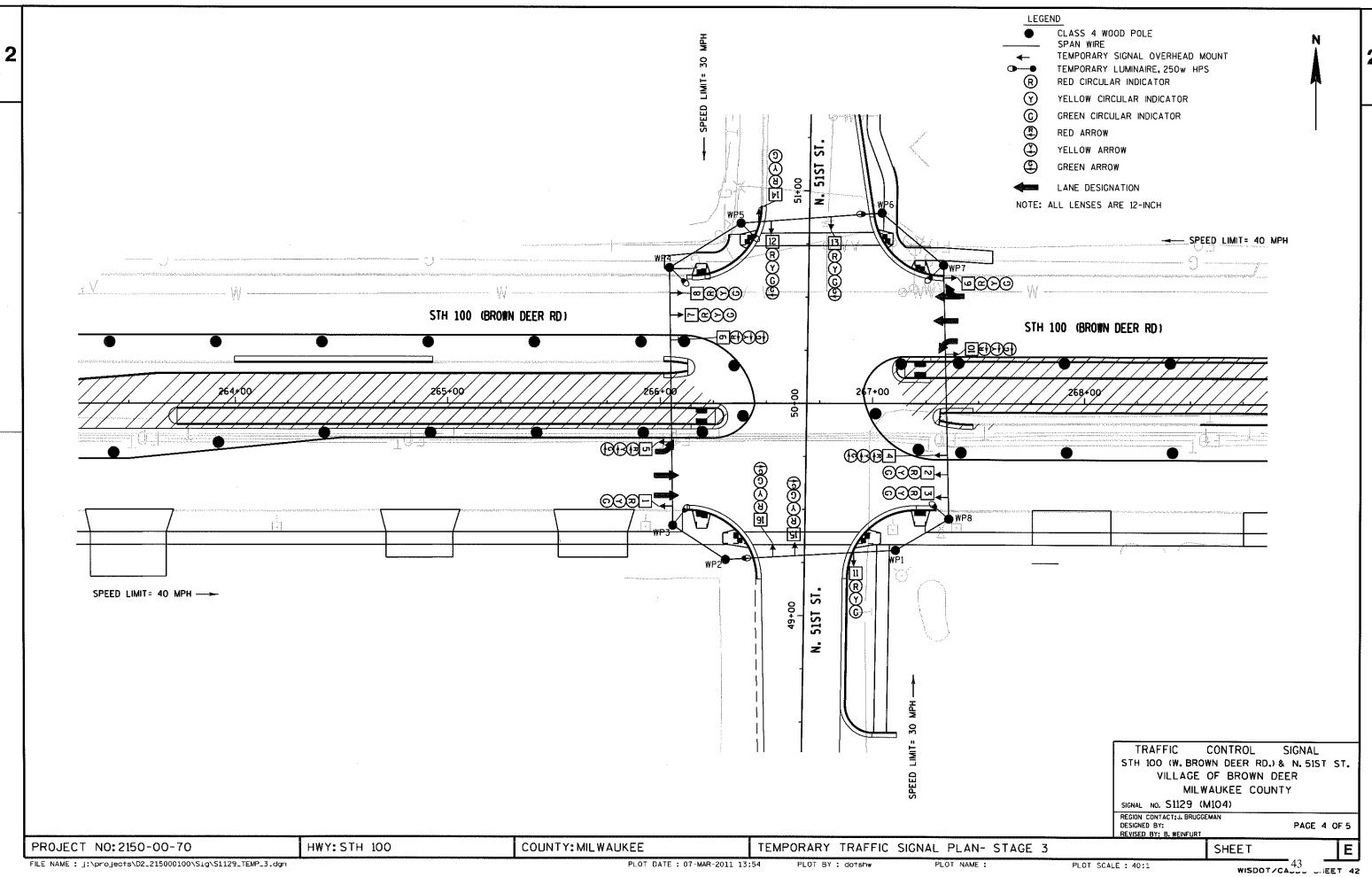
WISDOT/CA--- JIEET 42











CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1			MAX	х
2			MAX	х
3			MAX	х
4			MAX	Х
5			MAX	Х
6			MAX	Х
7				
8				

OVERLAPS

0.L.	"A"	=
0.L.	"B"	=
0.L.	"C"	
0.L.	"D"	=

TYPE OF INTERCONNECT COMMUNICA	ATION
NONE	Π
TBC	Х
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	
RADIO	
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS	

TYPE OF PRE-EMPT	
NONE	×
RAILROAD	
EMERGENCY VEHICLE	
3M	T
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	T
OUEUE DETECTOR	

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

GENERAL NOTES:

1. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1.)

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

	CHART 1	
PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5	2,3,4,6
2	5 OR 6	1,3,4
3	NONE	1,2,4,5,6
4	NONE	1,2,3,5,6
5	1 OR 2	3,4,6
6	2	1,3,4,5
7		
8		

STH 100 (W. BROWN DEER RD.) & N. 51ST ST. VILLAGE OF BROWN DEER MILWAUKEE COUNTY

SHEET

SIGNAL NO. S1129 (M104)

CONTROLLER TYPE: TEMP

DATE 12/10

PAGE NO. 5 OF 5

FILE NAME : j:\projects\D2_215000100\Sig\S1129_PRE_TEMP.dgn

BARRIER

SEQUENCE OF OPERATION

02

R/W X X

YR

RR

RR

G

R

R

R

CLEAR TO

CLEAR TO

R/W XX

RRR

RRR

RRR

RRR

HWY: STH 100

03

R/W XX

RRR

RRR

RRR

RRR

NOT

USED

07

R/W XX

CLEAR TO

G, G Y R

CLEAR TO

04

**

RRR

RRR

RRR

NOT USED

08

* *

R/W

CLEAR TO

G, G Y R

R/W

CLEAR TO

R

R R

01

R/W | * *

RRR

RRR

05

R/W XX

RRR

RRR

RRR

RRR

G Y R

CLEAR TO

HEAD

NUMBERS

4,5

6,7,8

11,12,13

14,15,16

1,2,3

9,10

HEAD

NUMBERS

4,5

6,7,8

11,12,13

14,15,16

1,2,3

9,10

01

02

03

04

05

06

07

08 Ø2P 04P Ø6P Ø8P

01

02

03

05

06

07

08

Ø2P Ø4P Ø6P

RING 2 04

RING

CLEAR TO

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS- ALL STAGES

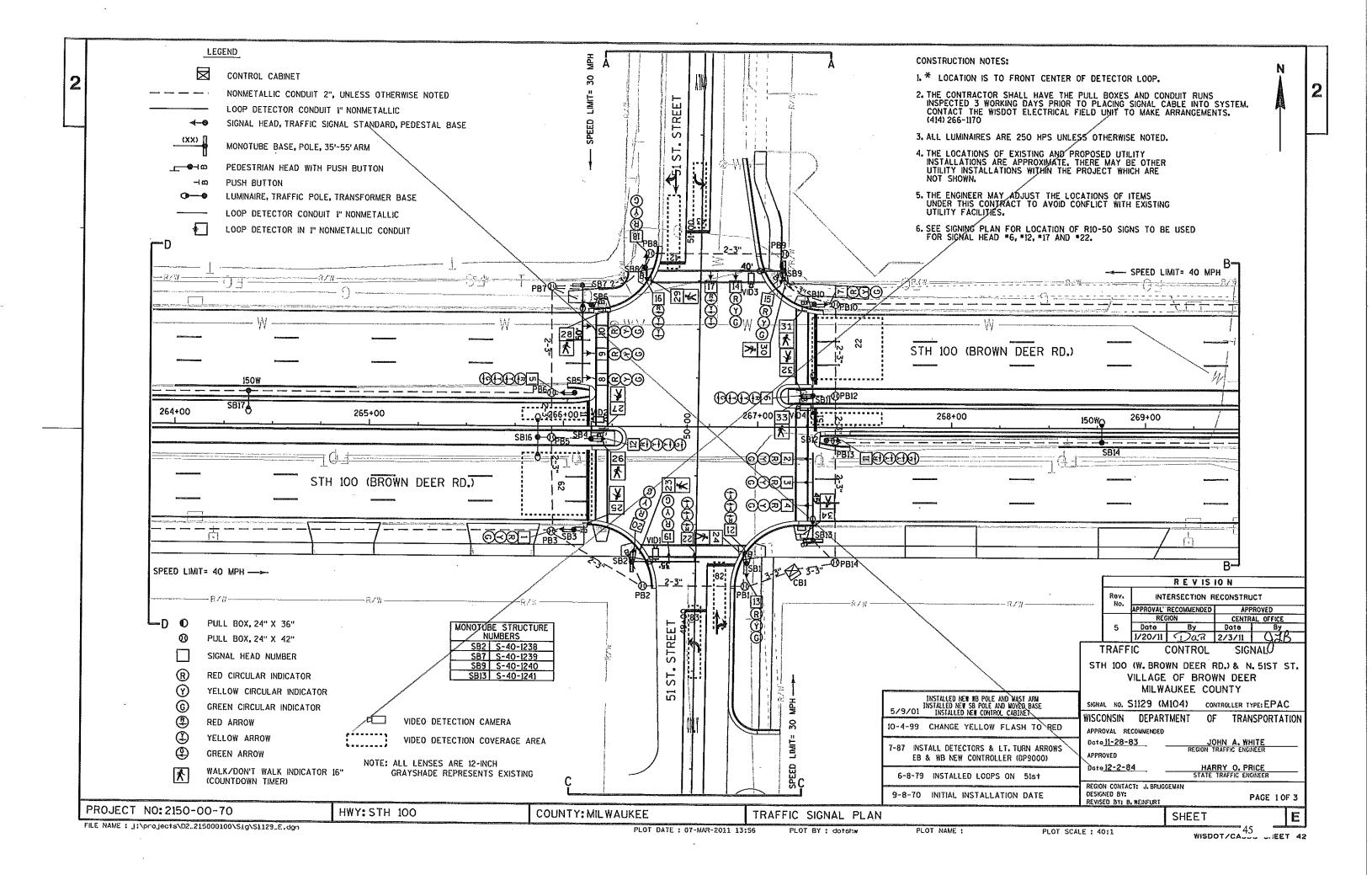
PLOT BY : dotshw

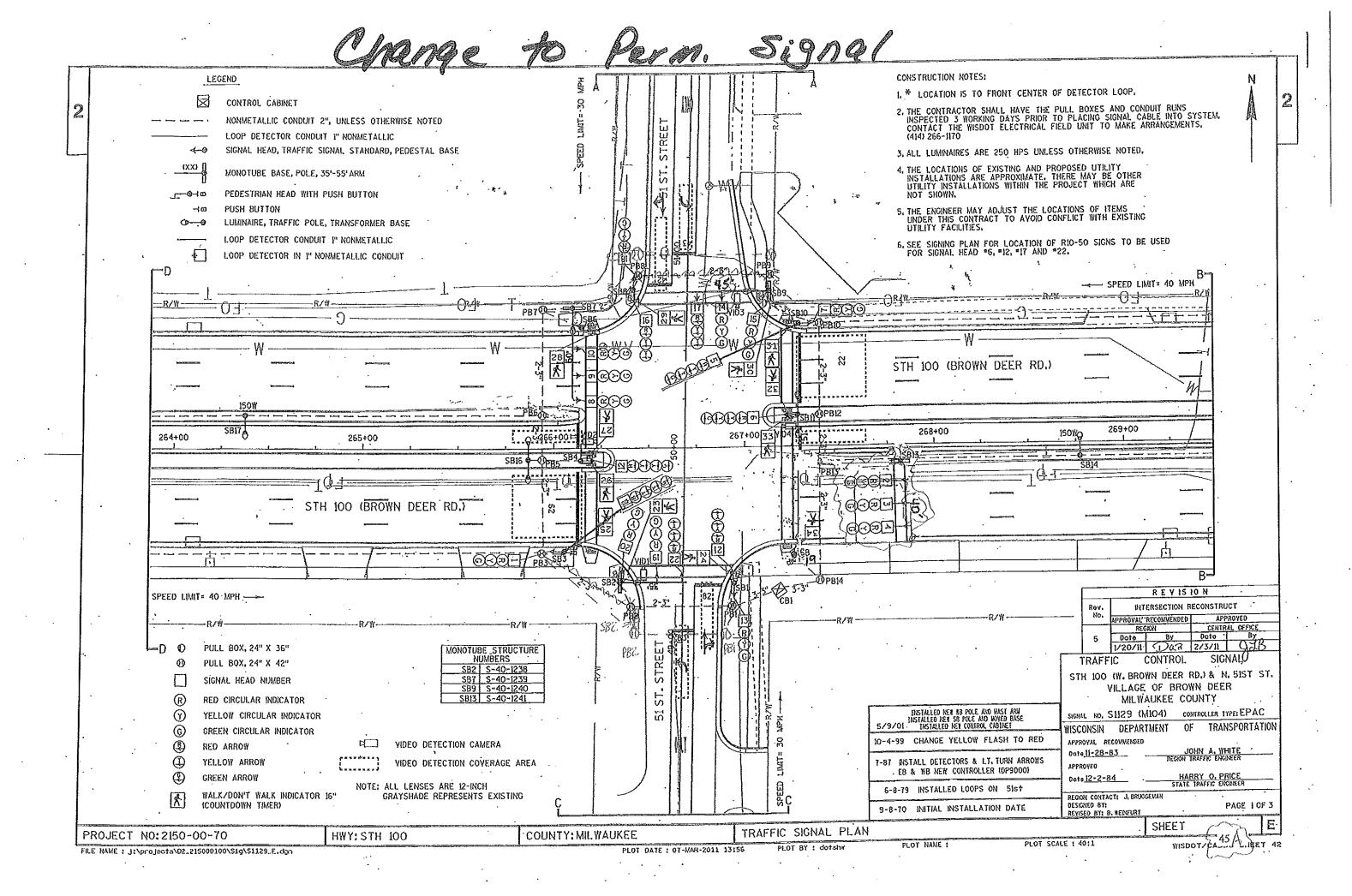
PLOT NAME :

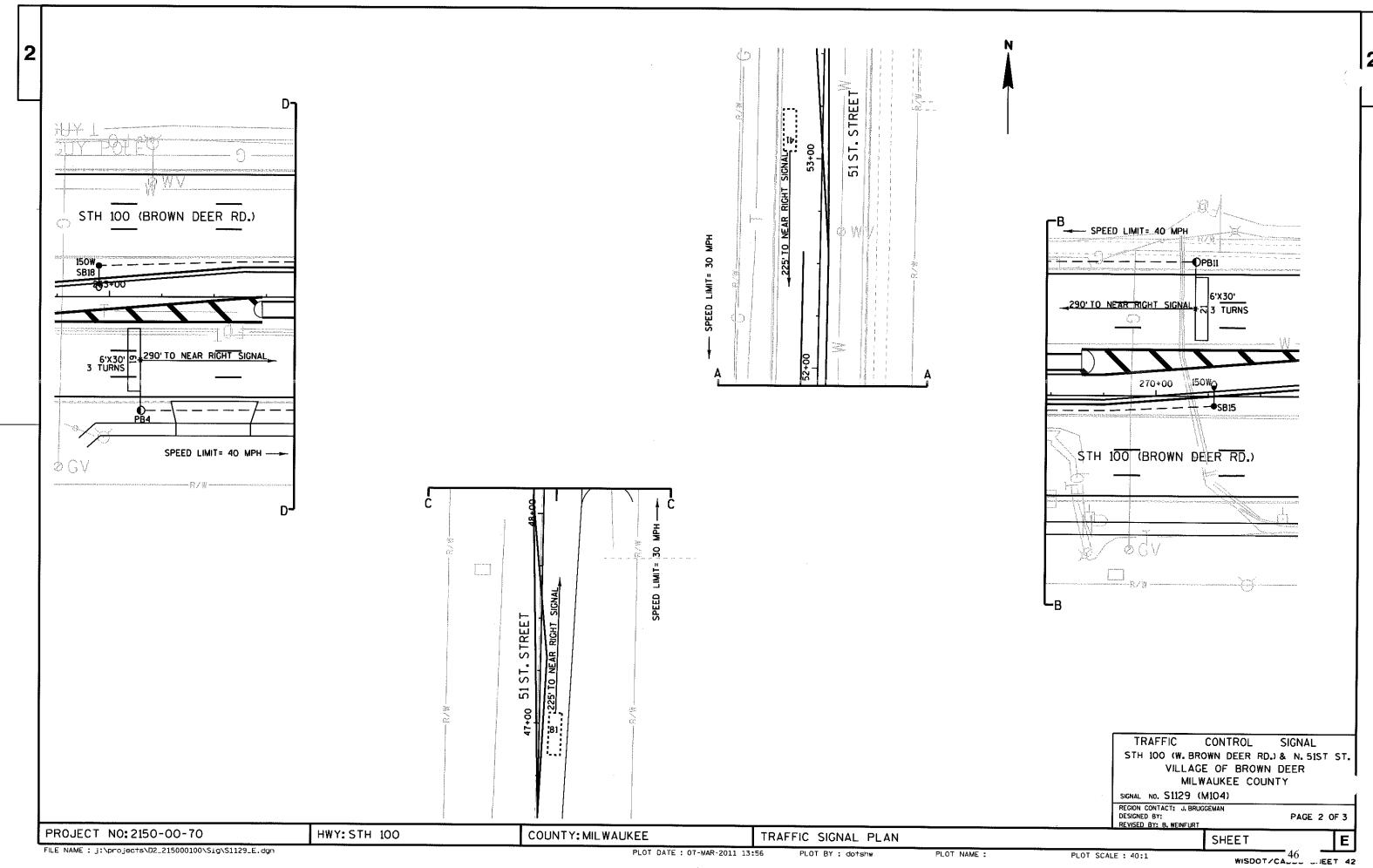
PLOT SCALE : 40.000373:1

PROJECT NO: 2150-00-70

2







SPECIAL OVERLAPS

4

Х

8

	PROTECTIVE PERMISSI								
O.L. "A" =	1	2							
0.L. "B" =	-	4							
O.L. "C" =	5	6							
O.L. "D" =	1	8							

		DETE	CTOR	LOGIC			
OR OPE	RATION						Γ
CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	
		1	1				-
	х		2			x	
		2	2				-
	×		4			х	İ
		1	1		· ·		ľ

11 **VIDEO** 21 Х 6X30 3 22 **VIDEO** 41 Х **VIDEO** 42 Χ **VIDEO** 43 4 4 **VIDEO** 61 2 Х 6 6X30 Х 3 62 Х 6 6 **VIDEO** 81 X 8 Х **VIDEO** 82 8 8 Х **VIDEO**

8

8

DETECTOR OPERATION

CALLS

AND EXTENDS

DETECTOR AMPLIFIER

83

~ ♦OLC

06

CLEAR TO

SEQUENCE OF OPERATION

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**

G Y R

RRR

RRR

RRR

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CLEAR TO

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RRR

R RR

R RRR

D D D

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o oo

05

CLEAR TO

HEAD

NUMBERS

5,6

7,8,9,10

18,19,20

11.12

1,2,3,4

13,14,15

29,30

25,26,27,28

23,24

31,32,33,34

5,6 16.17

11,12

21,22

01

02

Ø3

04

05

06

07

08

Ø2P

Ø4P

Ø6P

Ø8P

OL'A'

OL'B' OL'C'

OL'D'

RING 1

CLEAR TO

NOT USED

07

CLEAR TO

NOT USED

03

R/W | X X |

CLEAR TO

% aD 1 /

08

CLEAR TO

∜ OLB

CLEAR TO

| * * |

RRR

* |D | D

D | D | D

	1 1			Ι.				·		1.				-			l	Ι.,		 	 		l			-	
		HEAD	R/W	*	*				R/W	×	*	L				1	R/W	X	X			R/W	X	*		_	
		NUMBERS												L		1										$oldsymbol{\bot}$	
	01	5,6	-	-	-				-	-	-											-	-	-			
	02	7,8,9,10	R	R	R				R	R	R					1						R	R	R			
	03				L																						
RING 2	04	18,19,20	R	R	R	Ĺ			R	R	R		L									R	R	R			
	Ø5	11,12	G	-	-				-	[-	-											-	-	-			
	06	1,2,3,4	R	R	R				G	Υ	R					lı						R	R	R			
	07															;											
	Ø8	13,14,15	R	R	R				R	R	R											G	Y	R			
	Ø2P	29,30	D	D	D				D	D	D					ŀ						D	D	D			
	04P	25,26,27,28	D	ס	D				D	D	D									i		D	D	D			
	Ø6P	23,24	D	D	D				*	D	D					ľ						D	D	D			
	Ø8P	31,32,33,34	D		D	_			D	D	1	_										*	D	D		I	
	OL'A'	5,6	R	P	R				R	R	R											₽	R	C T			
	OL'B'	16.17	R	R	Ŗ	Ţ			R	R	R	_[I									r †	R V	R			
	OL'C'	11,12	-	Y	R		Τ		FY	Y	R	T	Τ	Π	Τ							R	R	R			

FY = FLASHING YELLOW ARROW

BARRIER

- ** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)
- * WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2,4,8
2	5 OR 6	1,4,8
3		
4	8	1,2,5,6
5	1 OR 2	4,6,8
6	10R 2	4,5,8
7		
8	4	1,2,5,6

CHART 1

TYPE OF INTERCONNECT COMMUNICATION NONE TBC CLOSED LOOP TWISTED PAIR* CLOSED LOOP FIBER OPTIC* Х FIBER OPTIC RADIO *LOCATION OF MASTER CONTROLLER NO: S-1180 SIGNAL SYSTEM *: SS-00-15

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	Г
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE]
QUEUE DETECTOR	Τ

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

SiZE

NUMBER

VIDEO

GENERAL NOTES:

- I. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART LAT LEFT.)
- 3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT-TURN CONFLICT.

STH 100 (W. BROWN DEER RD.) & N. 51ST ST. VILLAGE OF BROWN DEER MILWAUKEE COUNTY

SIGNAL NO. \$1129 (M104)

CONTROLLER TYPE: EPAC

12/10 DATE

PAGE NO. 3 OF 3

PROJECT NO: 2150-00-70

HWY: STH 100

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS PLOT BY : dotshw

SHEET

FILE NAME: j:\projects\D2_215000100\Sig\S1129_E.dgn

PLOT DATE: 07-MAR-2011 13:56

PLOT NAME :

PROJECT ID:	2150-00-70							
INTERSECTION:	STH 100 (Br Dr) & N 51st St							

0	BLK - black	RED - red	GRN - green
Signal Wire Color Coding	WHT - white	BLU - blue	ORG - orange

]				SIGNA	LINDICATION	WIRE COLOR					1
CB1 TO	AWG14#OF CONDUCTORS	HEAD NO.	PHASE	RED	YELLOW	GREEN	<red></red>	<yellow></yellow>	<green></green>	<flashing> <yellow></yellow></flashing>	D/WALK	WALK	PED	OTUE
SB1	15	13	8	RED	ORG	GRN	33505	-11LLLO11-	TORCLINA		DIVVALI	WALK	BOLION	VIRE
	,,	21	4		U	0141	RED/BLK	ORG/BLK		BLU/WHT			+	_
		24	6		ĺ		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	UNUIDEN		DEGITITI	BLK	BLU		\vdash
		BUTTON	6								J. J.	1000	WHT/BLK	
SB2	15	19	4	RED	ORG	GRN								
		20	4	RED	ORG	GRN			·					
		22	4				RED/BLK	ORG/BLK		BLU/WHT				
		23	6								BLK	BLU	Į	
		BUTTON	6										WHT/BLK	
SB3	12	1	6	RED	000	ODL								ļ
563	12	25	4	KEU	ORG	GRN								
		BUTTON	4								BLK	BLU		
		BUTTON	-							<u> </u>			WHT/BLK	
SB4	15	12	5				RED	ORG	GRN	BLUWHT	 			
		26	4				-11-12	<u> </u>	GIM	DECIMAL	BLK	BLU	l	
		27	4						***	<u> </u>		GRN/BLK	·	
		BUTTON	4								1,25,020	CITIONEN	WHT/BLK	
SB5	15	5	1				RED	ORG	GRN	BLU/WHT				
									-					
SB6	12	28	4								BLK	BŁU		
	ļ	BUTTON	4										WHT/BLK	
		<u>.</u>												
SB7	12	8 9	2	RED	ORG	GRN								
		10	2	RED RED	ORG	GRN								
		10		NEU	ORG	GRN		***************************************						
\$88	15	18	4	RED	ORG	GRN								
		16	8	INCO	ORG	OINI	RED/BLK	ORG/BLK		BLU/WHT	-			
		29	2				IILDIULII	OKORDEK		DLOMMIN	BLK	BLU		
		BUTTON	2								- DLIN		WHT/BLK	-
										*			······	
SB9	15	14	8	RED	ORG	GRN								
		15	8	RED	ORG	GRN								
		17	8				RED/BLK	ORG/BLK		BLU/WHT				
		30	2								BLK	BLU		
		BUTTON	2										WHT/BLK	
CB40	12		2	DCO	000	ODN							 	
SB10		31	8	RED	ÖRG	GRN					- BI 12		<u> </u>	
		BUTTON	8								BLK	BLU	WHT/BLK	
		SOLION			l								WHI/BLK	
SB11	15	6	1				RED	ORG	GRN	BLU/WHT				
		32	8								BLK	BLU		
		33	8								RED/BLK			
		BUTTON	8										WHT/BLK	
SB12	15	11	. 5				RED	ORG	GRN	BLU/WHT				
SB13	12	2	6	RED	ORG	GRN								
	1	3	6	RED	ORG	GRN								
		4 34	6 8	RED	ORG	GRN					BLK	BLU		

	een XLP
From	то
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	586
SB8	889
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	CB1

Jumper	cBonding ∙10 AWG :n XLP
From	То
PB1	CB1
PB2	SB2
PB3	SB3
PB5	SB4
PB6	SB5
PB7	S87
P88	S88
P89	SB9
PB10	SB10
PB12	SB11
P813	SB12
PB14	CB1
	1

Lighting UF #	†10 w/grou
From	То
CB1	SB2
SB2	SB16
SB16	SB17
SB17	SB18
SB16	SB7
CB1	SB13
SB13	SB11
SB11	SB14
SB14	SB15
SB11	SB9

VID	EO CABLE
From	To
CB1	SB2 (VID 1)
CB1	SB4 (VID 2)
CB1	SB9 (VID 3)
CB1	SB11 (VID 4)

PLOT NAME:

PROJECT NO: 2150-00-70

HWY: STH 100

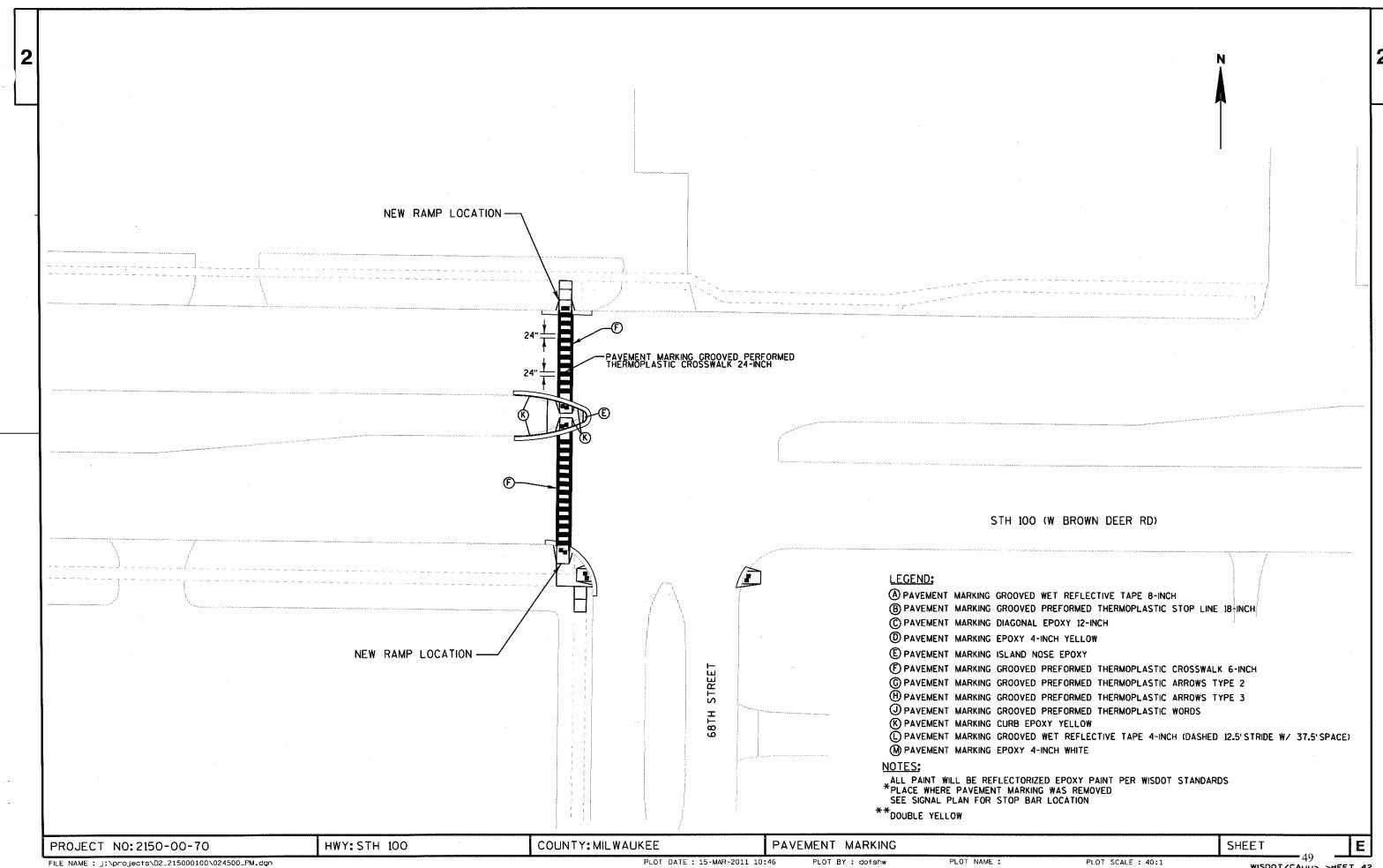
COUNTY: MILWAUKEE

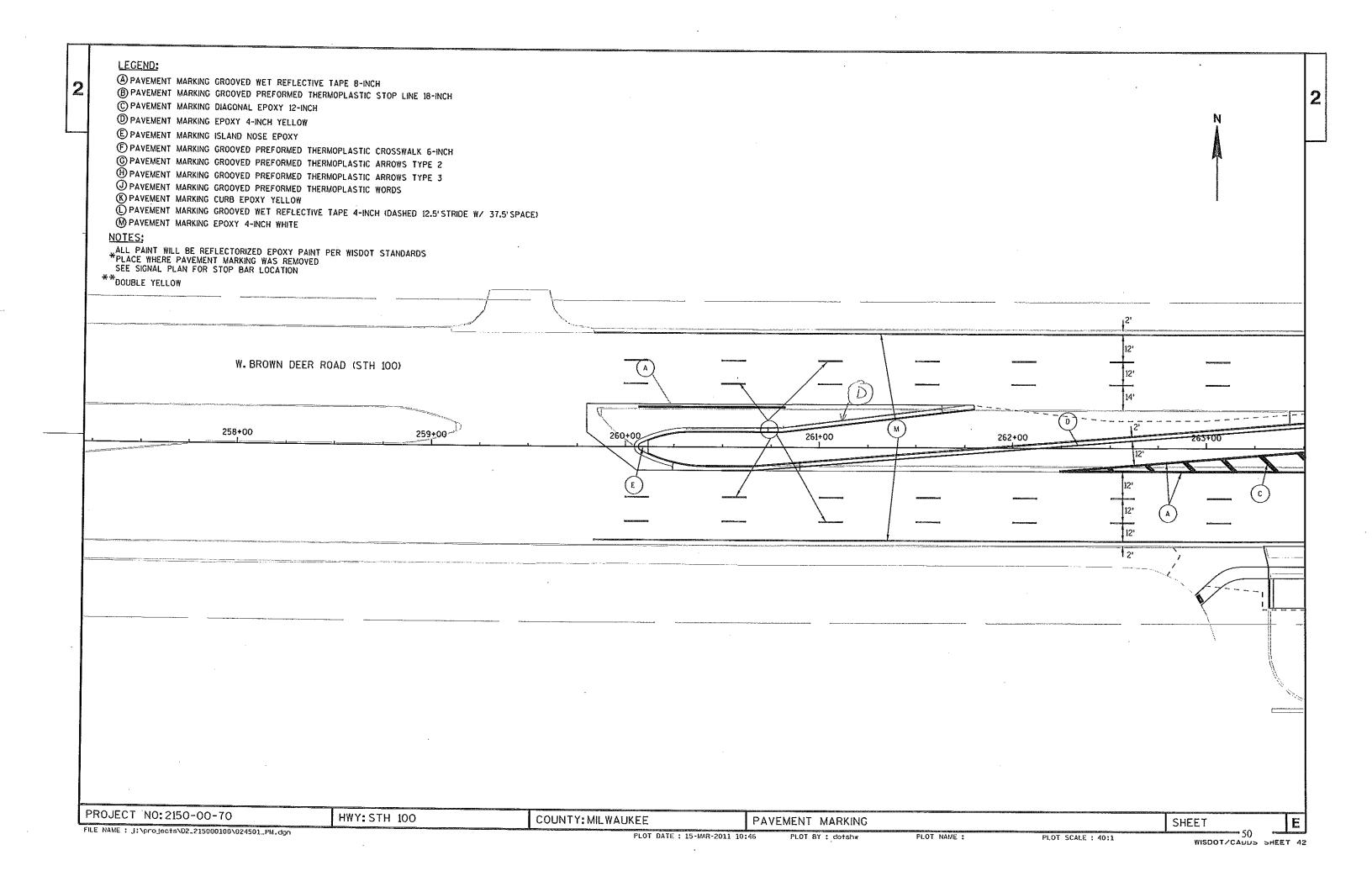
CABLE ROUTING

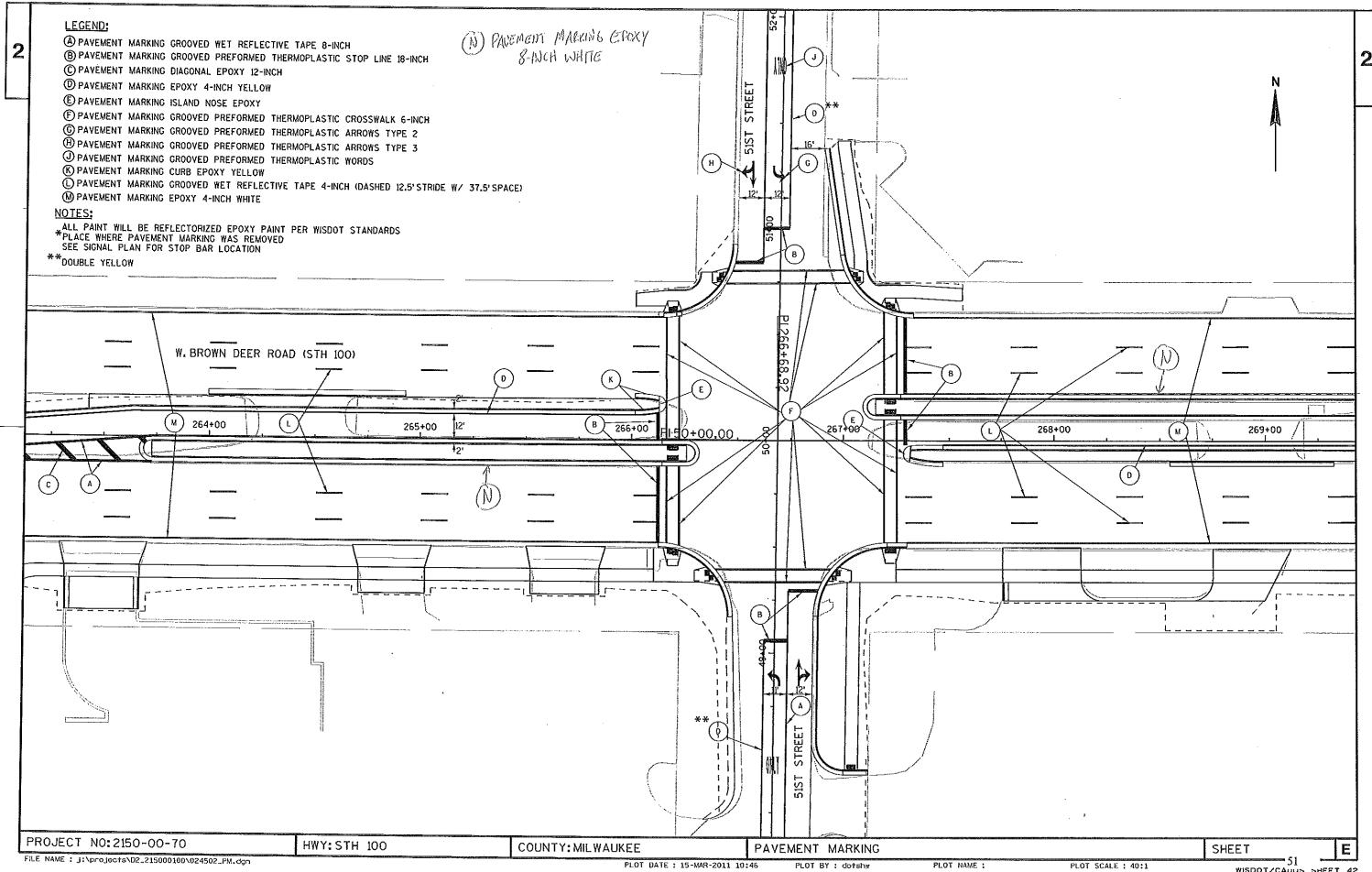
SHEET

^{*}Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
*At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.

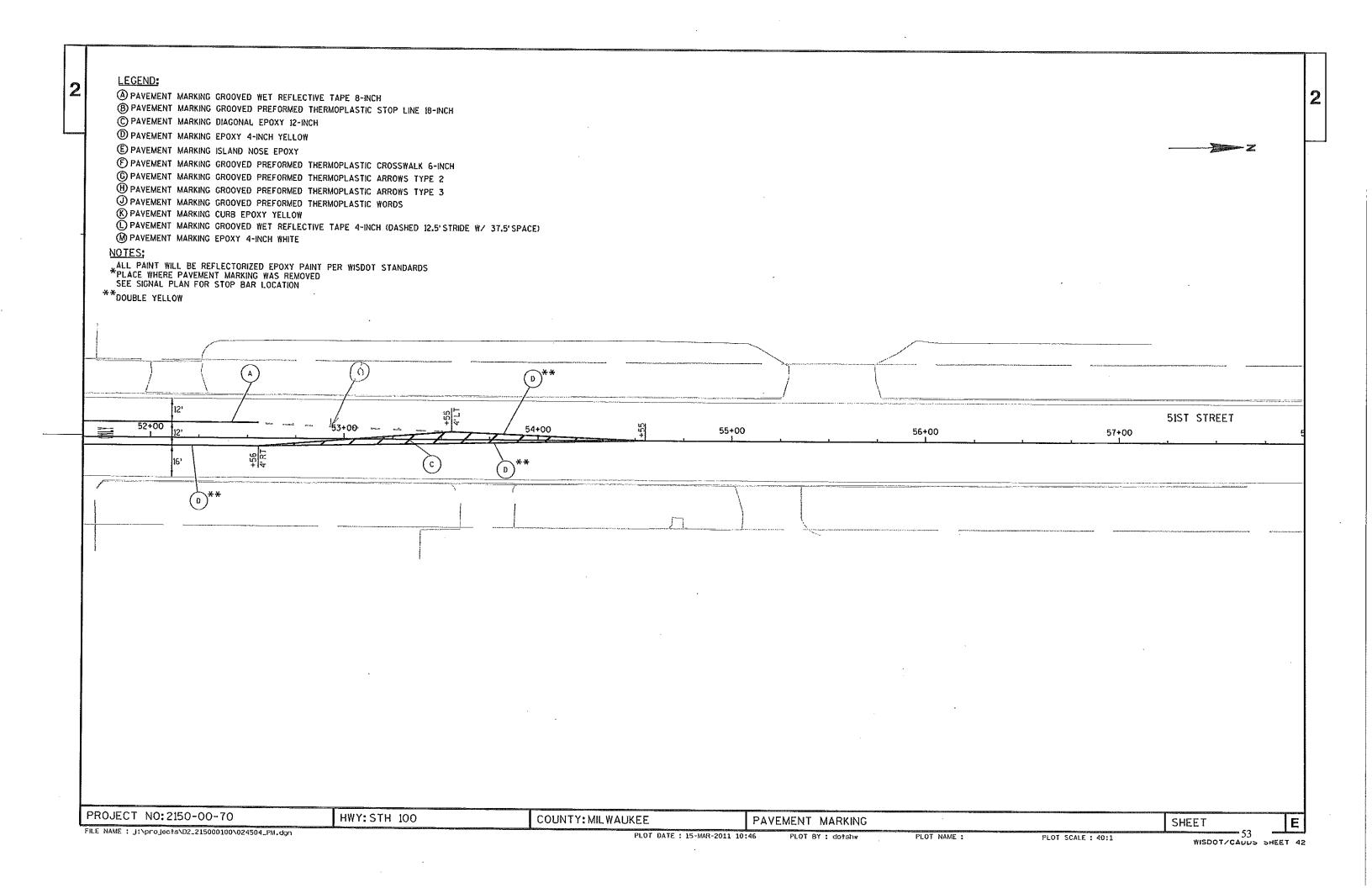
^{*}Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
*At the signal

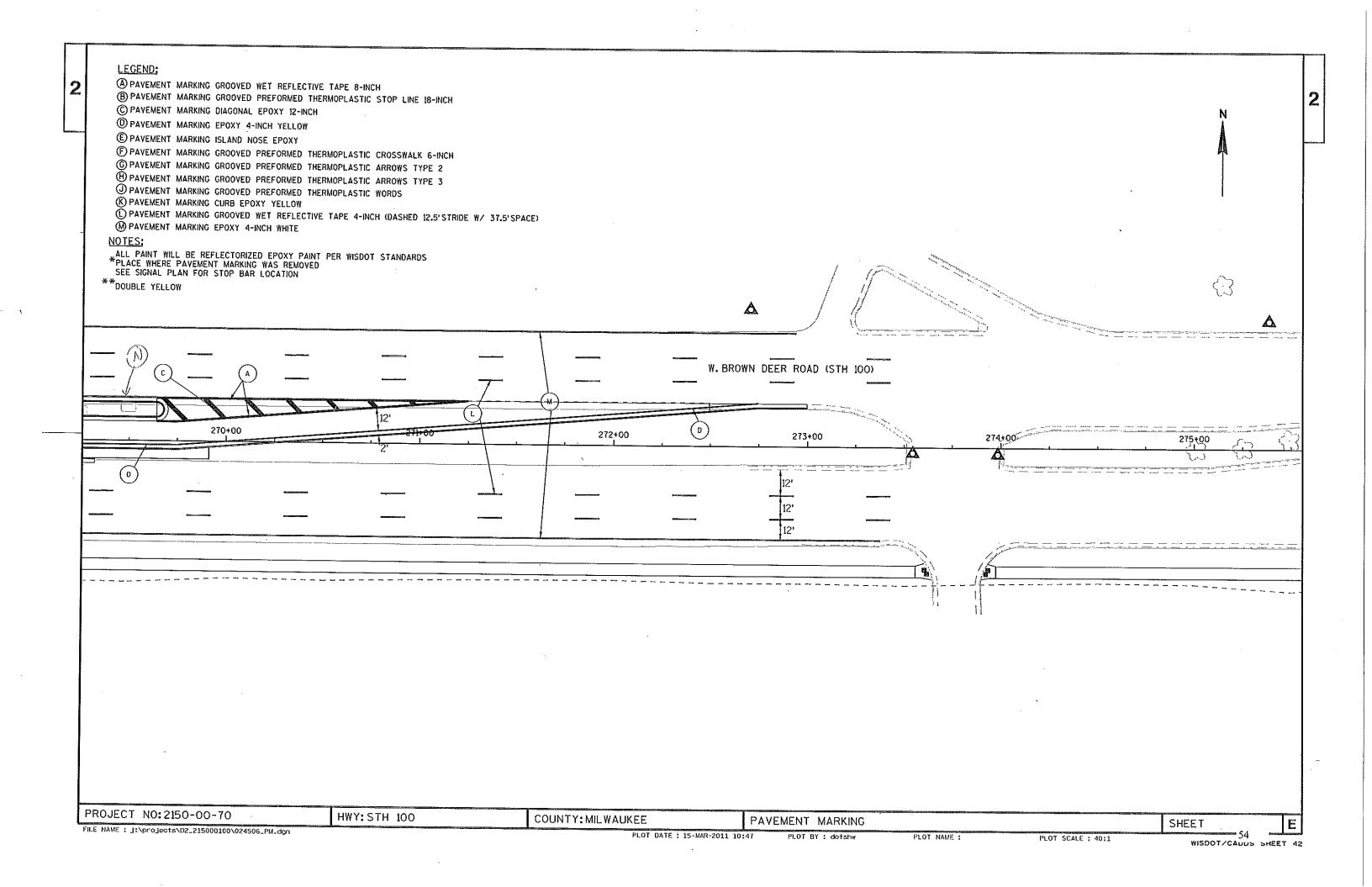


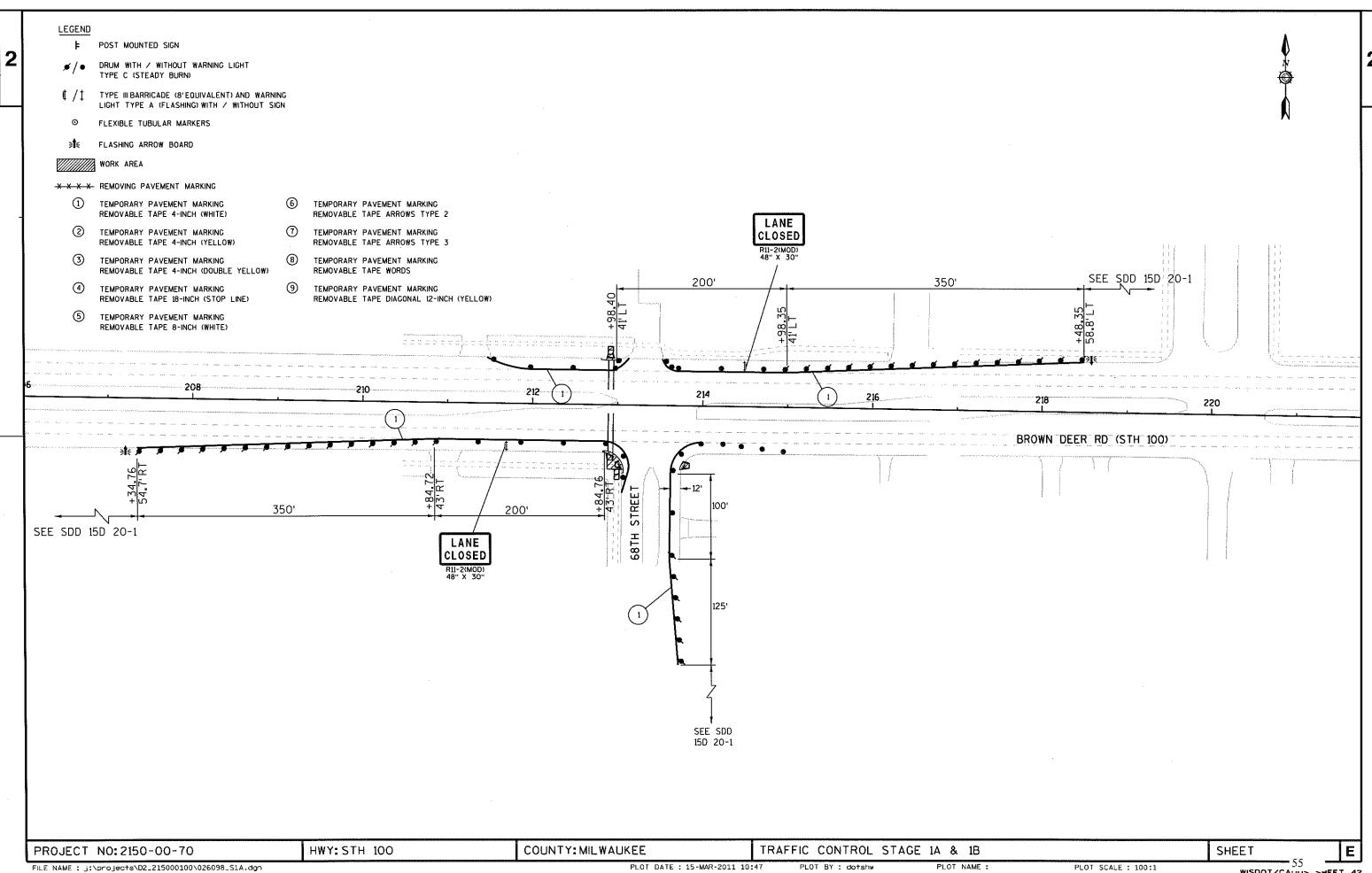


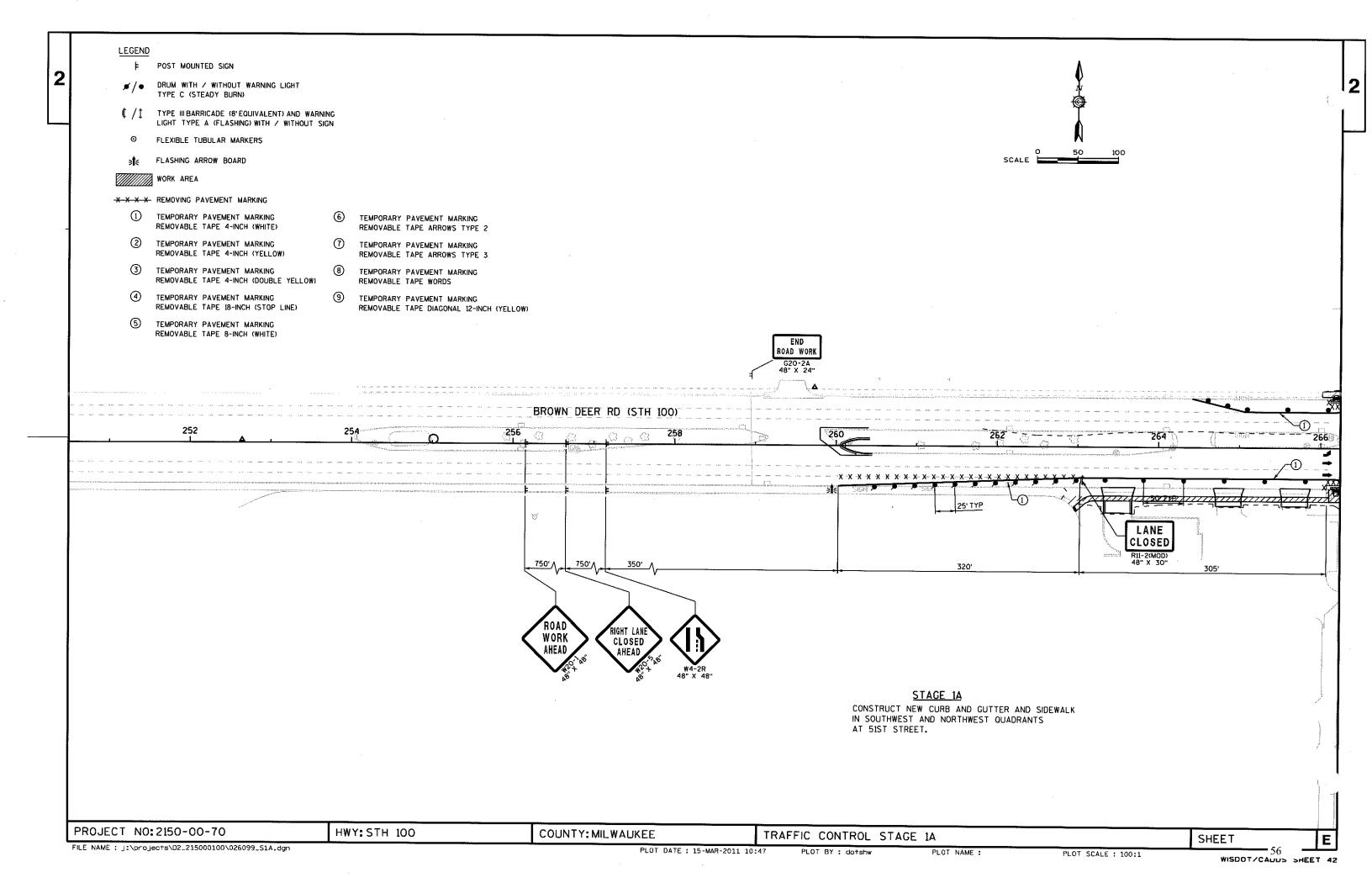


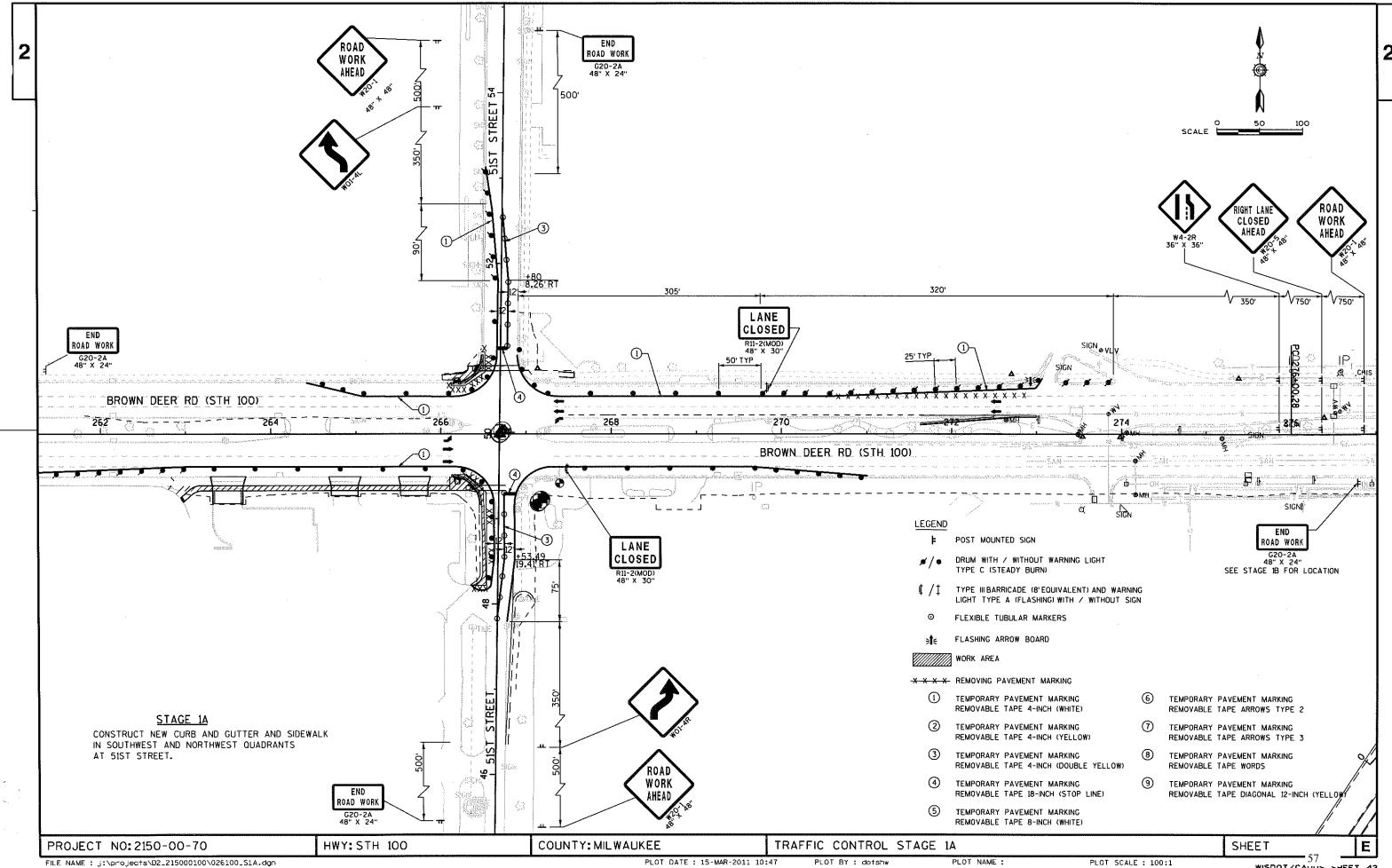
Department indexed complete protection relationship along a time of the complete protection of the com	2	© PAVEMENT MARKING DIAGONAL EF ① PAVEMENT MARKING EPOXY 4-INC	REFORMED THERMOPLASTIC STOP LINE 18-INCH POXY 12-INCH CH YELLOW	(d) PANEMENT MARKIN	6 EPOXY 3'LINE, 9' SPACE)			
43+00 44+00 45+00 46+00 47+00 51ST STREET 48400	1	© PAVEMENT MARKING GROOVED PR © PAVEMENT MARKING GROOVED PR ⊕ PAVEMENT MARKING GROOVED PR ⊕ PAVEMENT MARKING GROOVED PR © PAVEMENT MARKING CURB EPOXY ⊕ PAVEMENT MARKING GROOVED WE ⊕ PAVEMENT MARKING EPOXY 4-INC NOTES: *ALL PAINT WILL BE REFLECTORIZED *PLACE WHERE PAVEMENT MARKING Y SEE SIGNAL PLAN FOR STOP BAR L	REFORMED THERMOPLASTIC CROSSWALK 6-INCH REFORMED THERMOPLASTIC ARROWS TYPE 2 REFORMED THERMOPLASTIC ARROWS TYPE 3 REFORMED THERMOPLASTIC WORDS ' YELLOW ET REFLECTIVE TAPE 4-INCH (DASHED 12.5'STRIDE CH WHITE EPOXY PAINT PER WISDOT STANDARDS WAS REMOVED	E W/ 37,5'SPACE)				Z
45+00 45+00		**DOUBLE YELLOW						
45+00 47+00 47+00 A8+00						(D**	(b)*
		43+00	44+00	45+00	46+00	47+00	51ST STREET	
					+ 36 - 11.18 RT	D * * * : ;;		
								att variation division
		·						

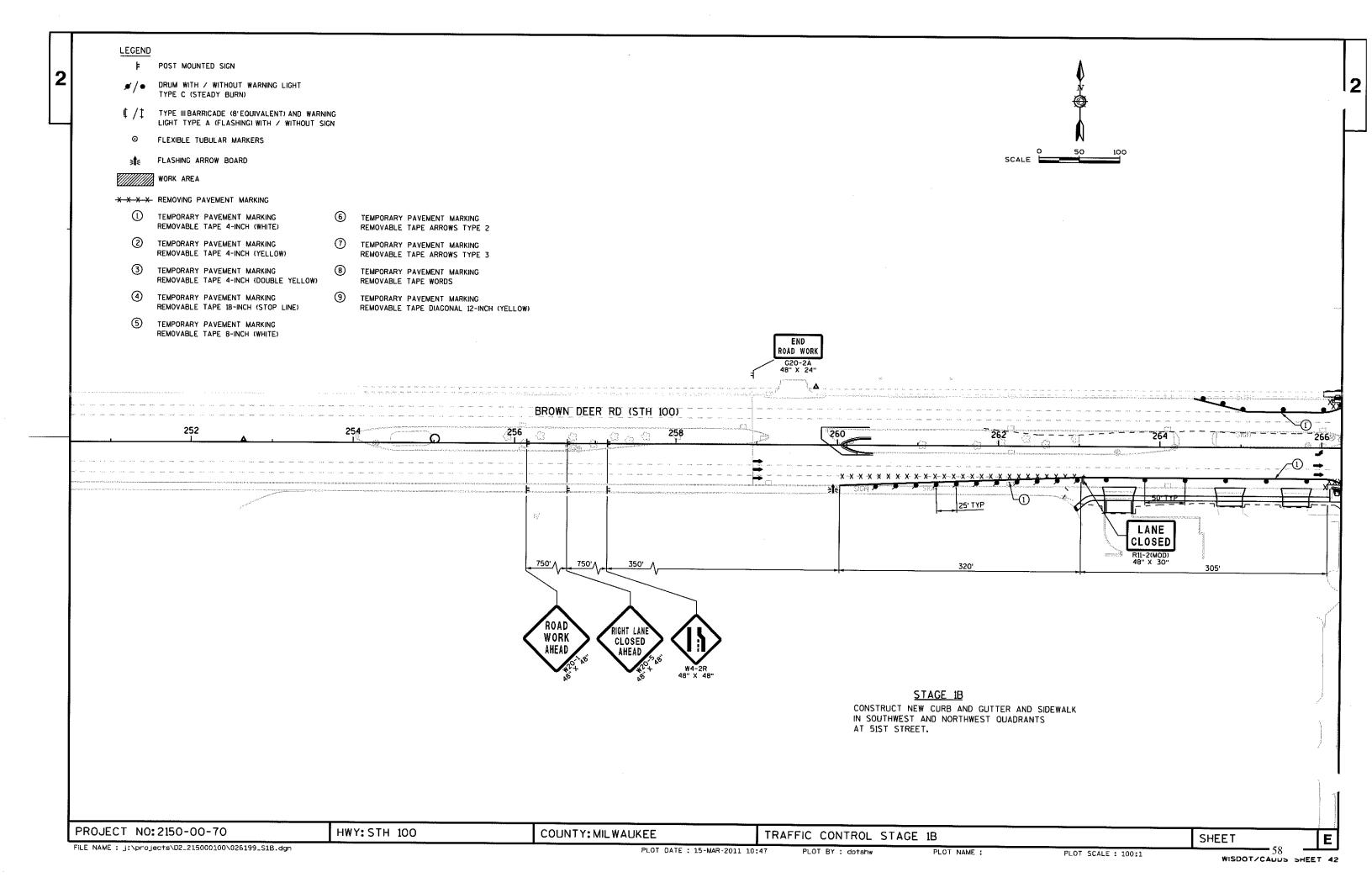


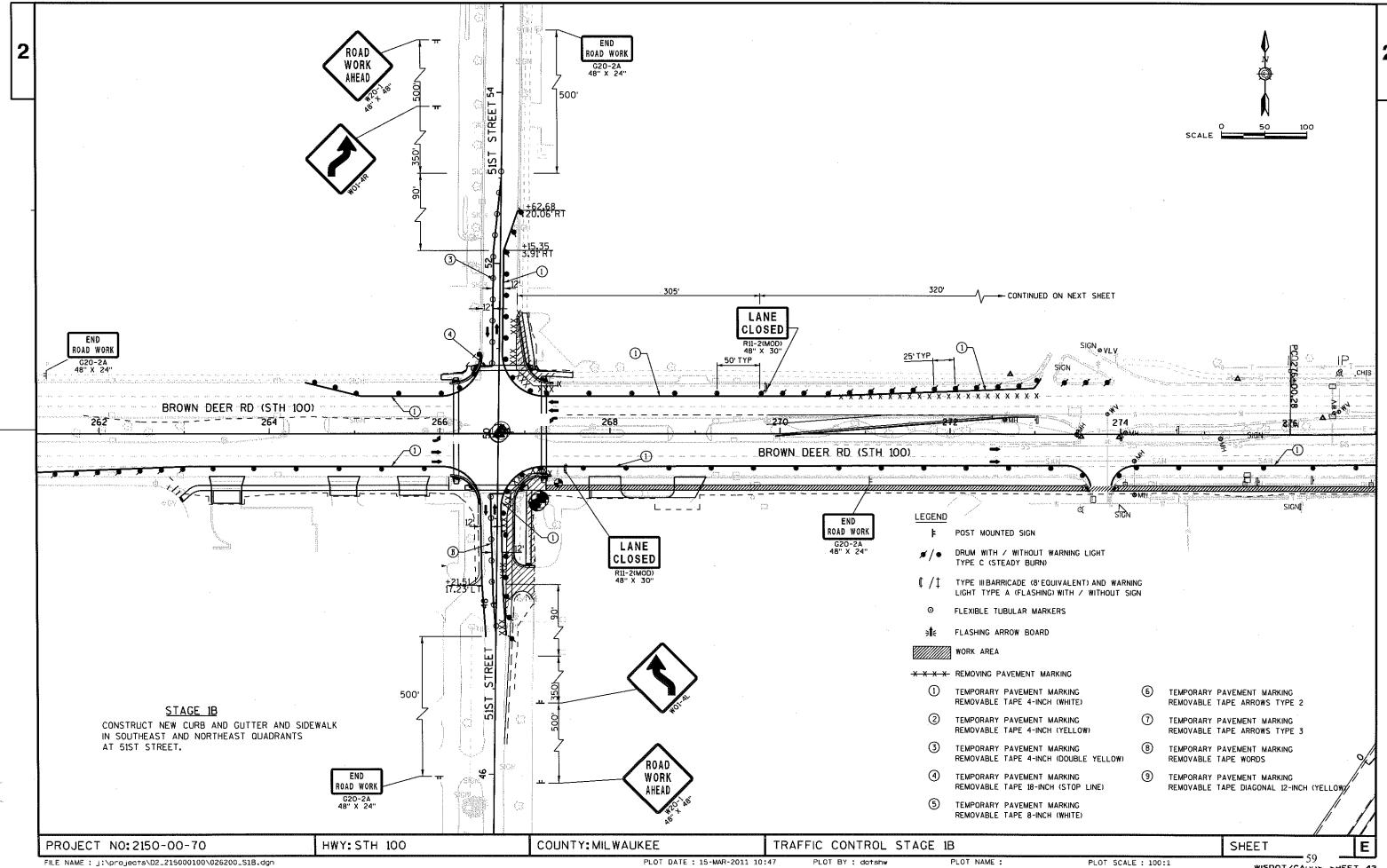


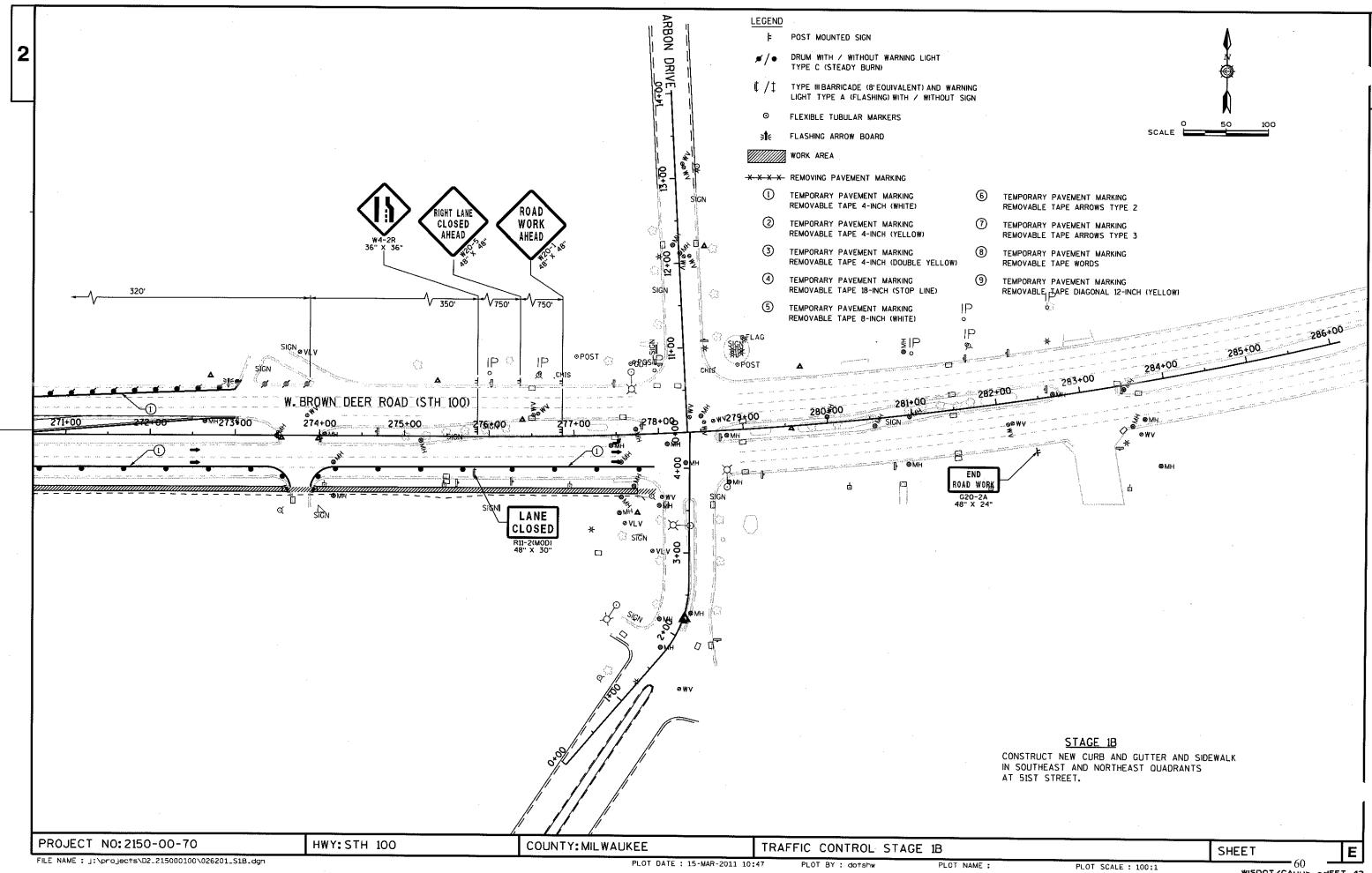


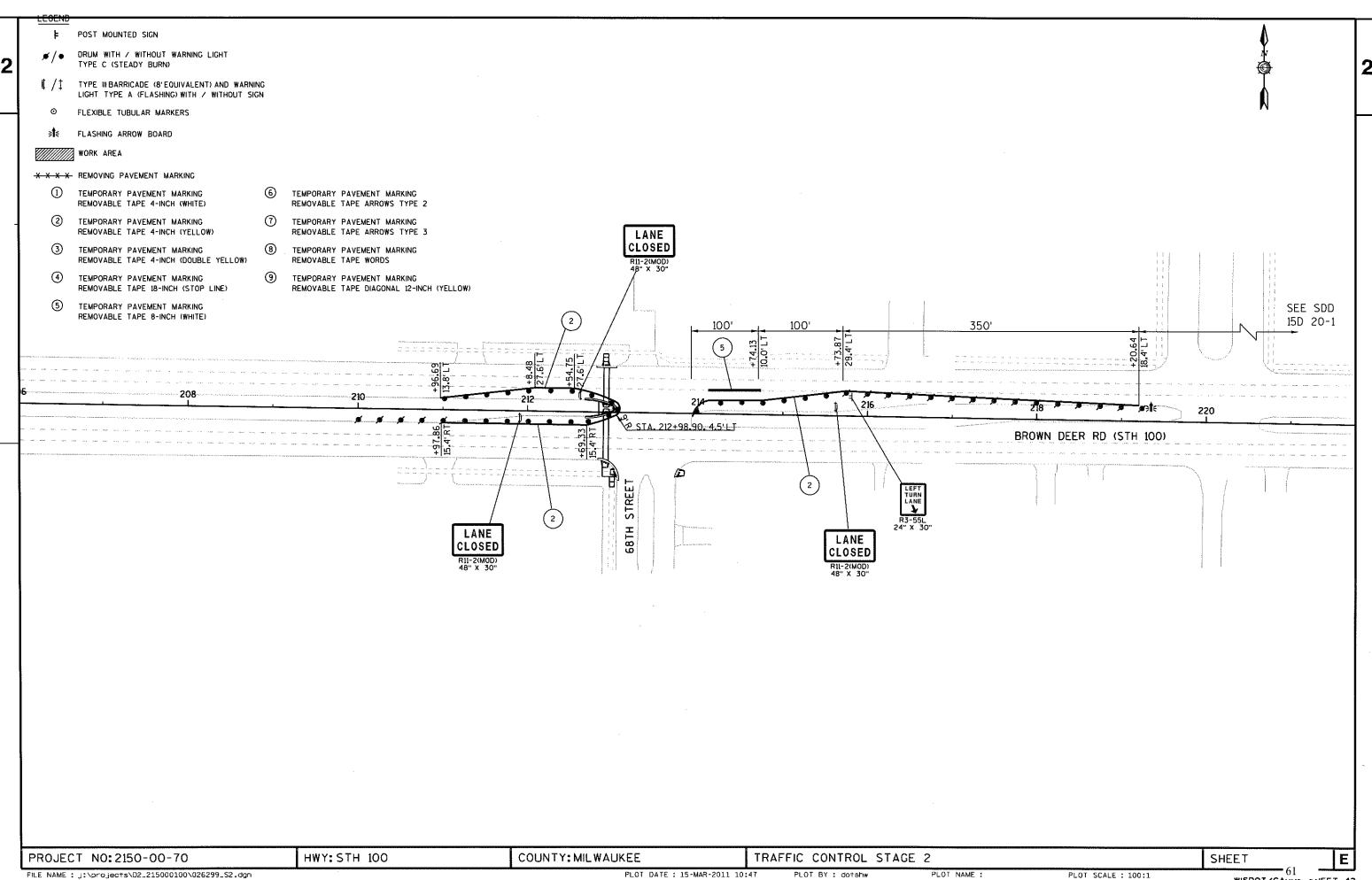




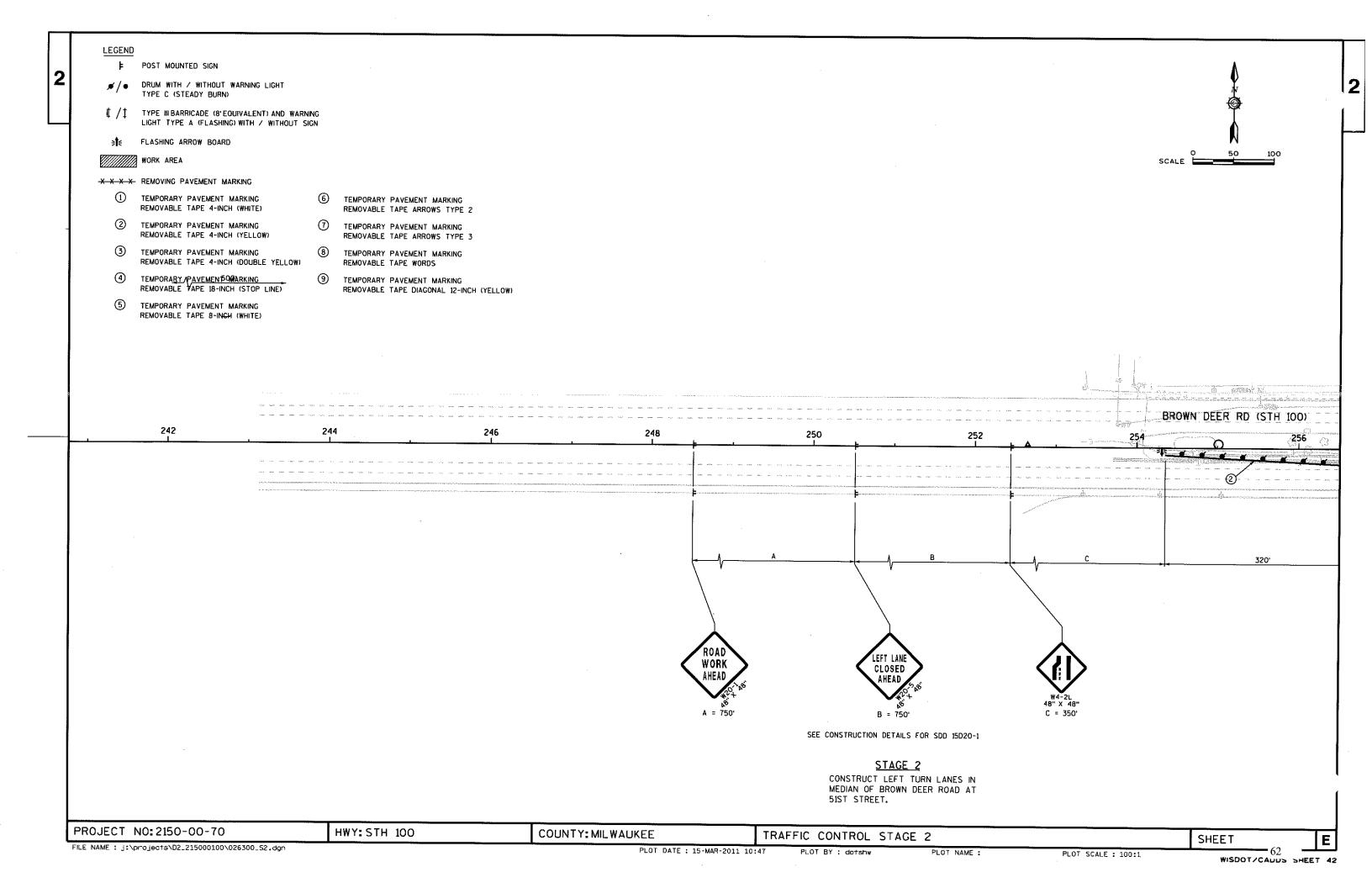


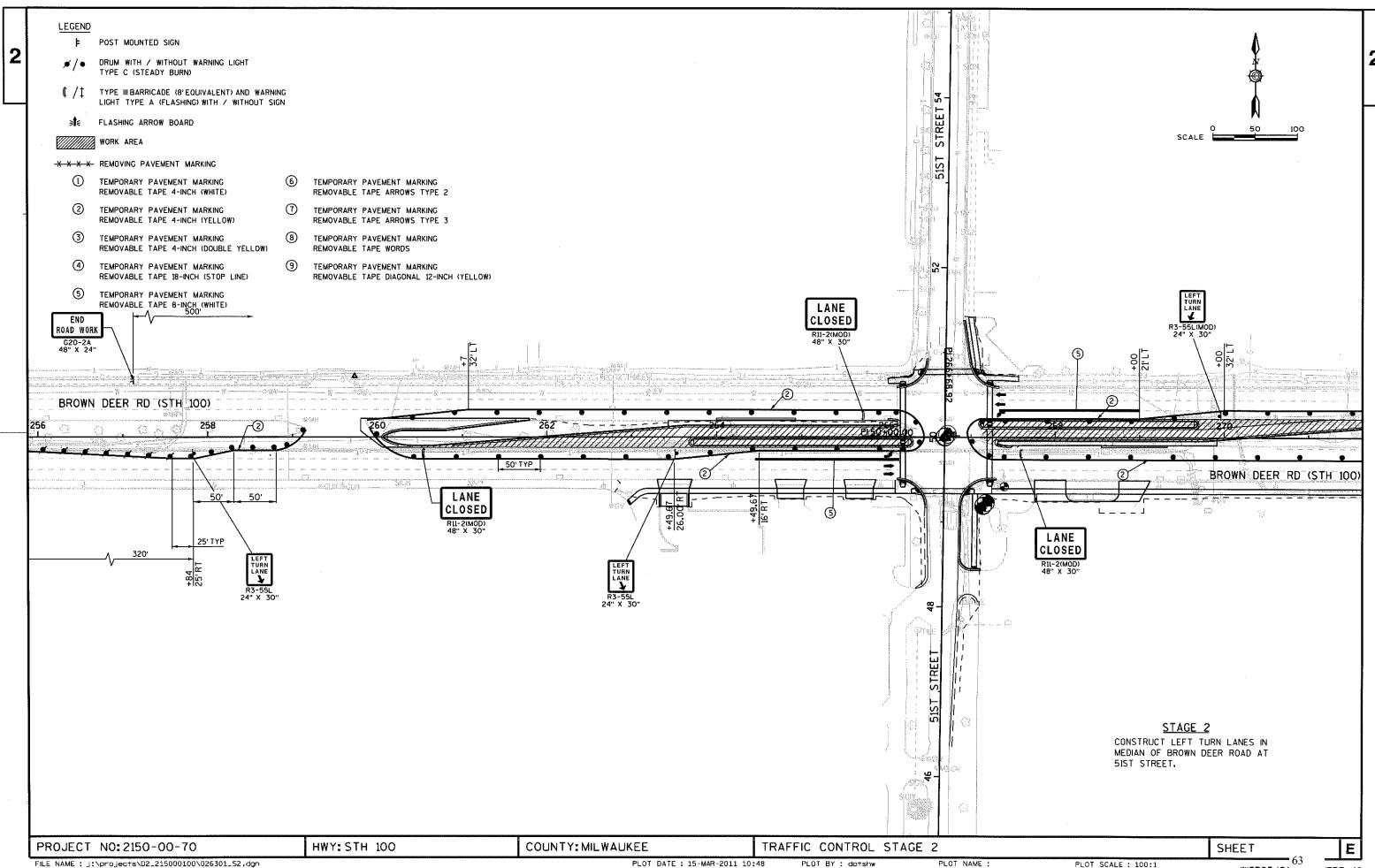


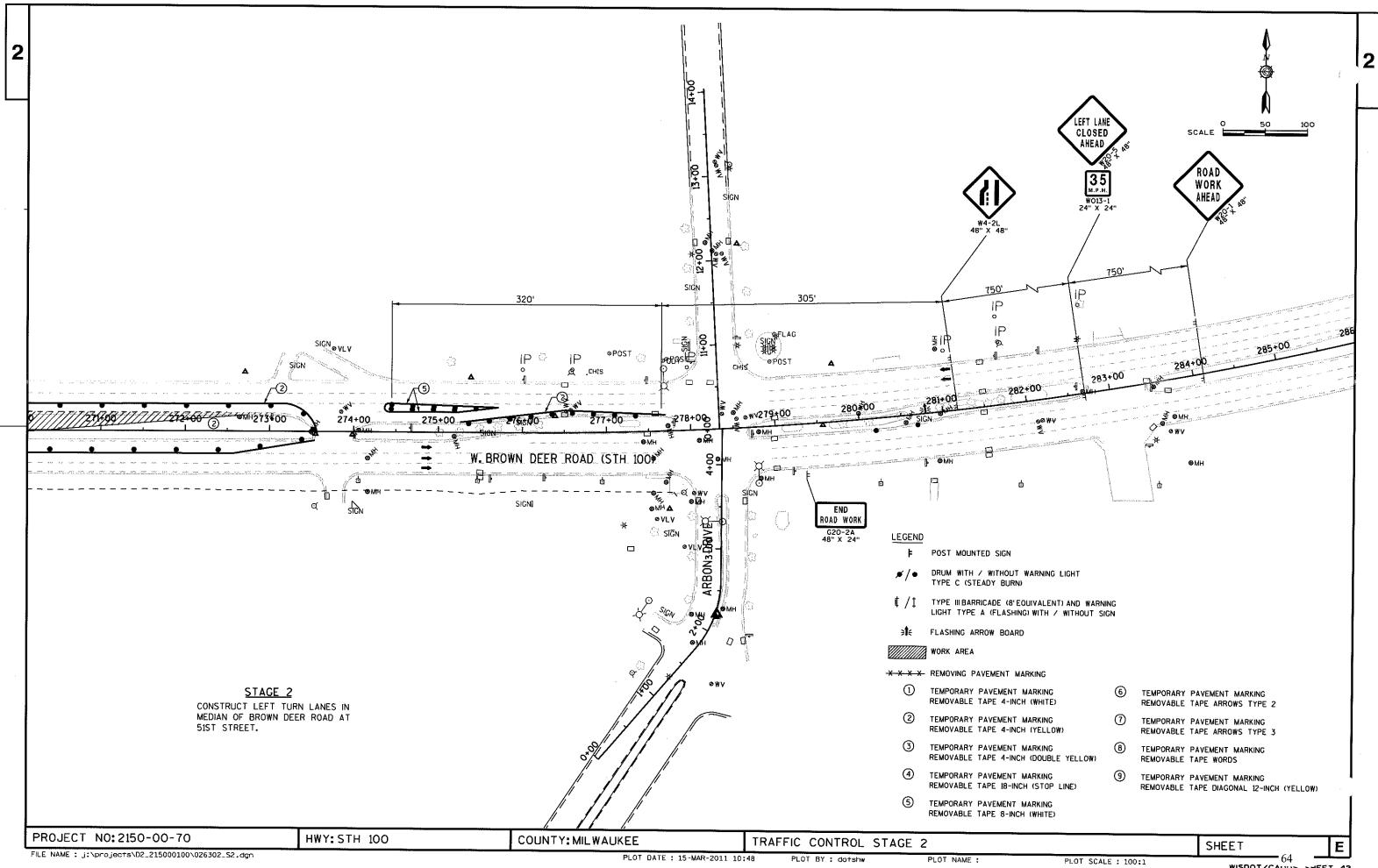


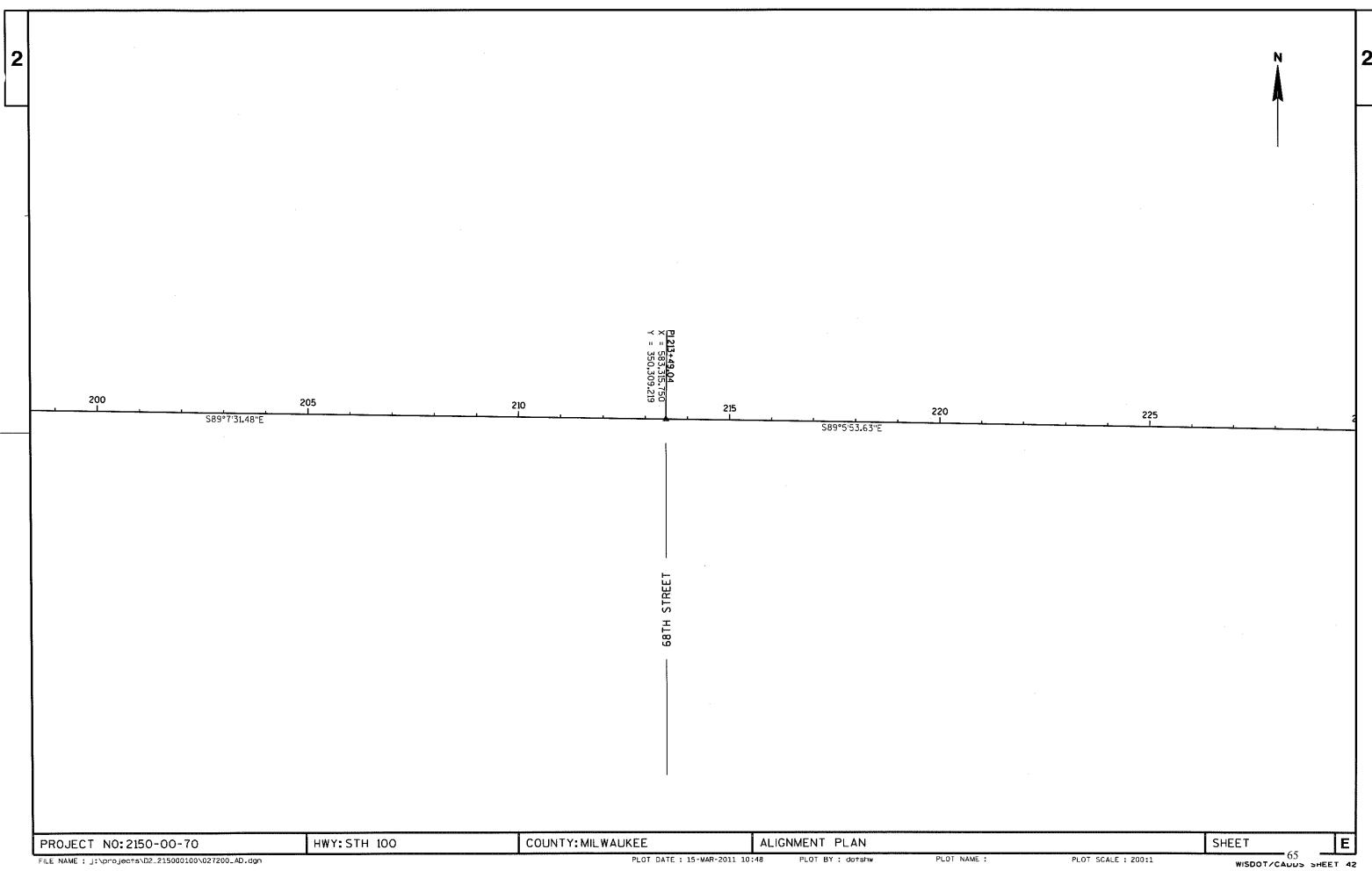


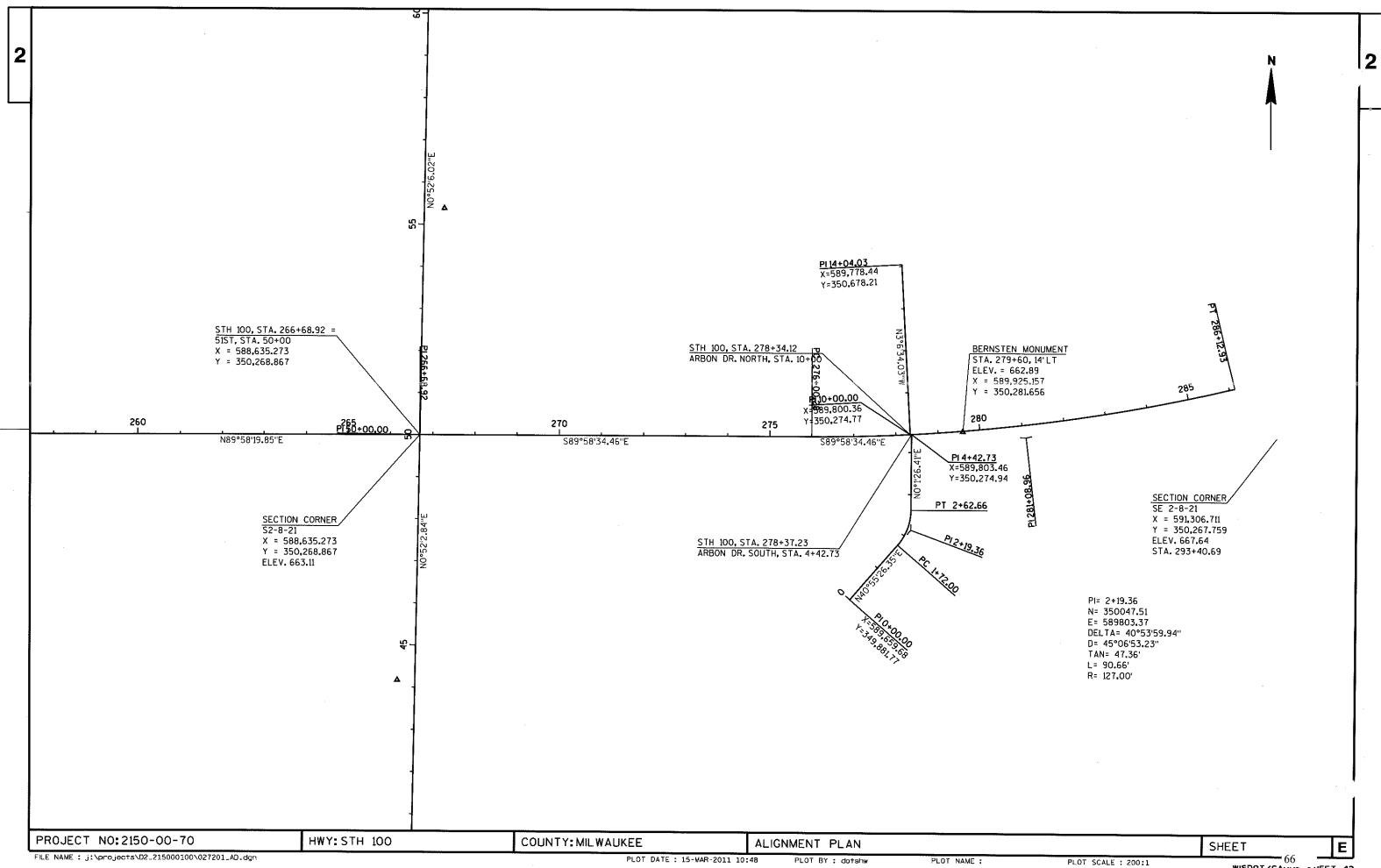
WISDOT/CAUDS SHEET 42











DATE 28	BMAR11	ı	ESTIMATE	OF QUAN	TITIES 2150-00-70	
NUMBER	TTFM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	
0010	201.0120	CLEARING	ID	62.000	62.000	
0020	201.0220	GRUBBING	ID	62.000	62.000	
0030	204.0100	REMOVING PAVEMENT	SY	1,380.000	1,380.000	
0040	204.0125	REMOVING ASPHALTIC SURFACE MILLING	TON	99.000	99.000	
0050	204.0150	REMOVING CURB & GUTTER	LF	475.000	475.000	
0060	204.0155	REMOVING CONCRETE SIDEWALK	SY	196.000	196.000	
0070	204.0195	REMOVING CONCRETE BASES	EACH	11.000	11.000	
0800	204.0215	REMOVING CATCH BASINS	EACH	7.000	7.000	
0090	204.0245	REMOVING STORM SEWER (SIZE) 01.	LF	95.000	95.000	
		(12-INCH)				
0100	204.0245	REMOVING STORM SEWER (SIZE) 02.	LF	4.000	4.000	
		(24-INCH)				
0110	305 0100	EVCAVATION COMMON ***P**	CV	2 160 000	2 160 000	
0110	205.0100	EXCAVATION COMMON **P**	CY	3,160.000 1.000	3,160.000 1.000	
0120	213.0100	FINISHING ROADWAY (PROJECT) 01.	EACH	1.000	1.000	
0130	305.0110	2150-00-70 BASE AGGREGATE DENSE 3/4-INCH	TON	490.000	490.000	
0140	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	3,000.000	3,000.000	
0150	320.0145	CONCRETE BASE 8-INCH	SY	123.000	123.000	
07.30	JEO. OT47	CONCRETE BASE O'THOR	٥,	123.000	123.000	
0160	415,2000	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	123.000	123,000	
0170	416.0170	CONCRETE DRIVEWAY 7-INCH	SY	365.000	365.000	
0180	416.0610	DRILLED TIE BARS	EACH	421.000	421.000	
0190	455.0115	ASPHALTIC MATERIAL PG64-22	TON	32.200	32.200	
0200	455.0120	ASPHALTIC MATERIAL PG64-28	TON	21.800	21.800	
0210	455.0605	TACK COAT	GAL.	162.000	162.000	
0220	460.1103	HMA PAVEMENT TYPE E-3	TON	900.000	900.000	
0230	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	900.000	900.000	
0240	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIEL	D TON	50.000	50.000	
		ENTRANCES				
0250	520.8000.9	CULVERT PIPE CONCRETE COLLAR	EACH	4.000	4.000	
0250	CO1 0411	COURTED TO THE THE		1 071 000	1 021 000	
0260	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE		1,921.000	1,921.000 100.000	
0270	601.0600	CONCRETE CURB PEDESTRIAN	LF cr	100.000 16,550.000	16,550.000	
0280	602.0410	CONCRETE SIDEWALK 5-INCH	SF SF	200.000	200.000	
0290	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	ЭF	200.000	200.000	
0300	608.0312	STORM SEWER PIPE REINFORCED CONCRETE	LF	112.000	112.000	
0300	000.0312	CLASS III 12-INCH		112.000	112.000	
		CEASS 121 22 INCI				
0310	608.0315	STORM SEWER PIPE REINFORCED CONCRETE	LF	21,000	21.000	
		CLASS III 15-INCH				
0320	608.0324	STORM SEWER PIPE REINFORCED CONCRETE	LF	12.000	12.000	
		CLASS III 24-INCH				
0330	611.0302	INLETS TYPE 2	EACH	13.000	13.000	
0340	611.0305	INLETS TYPE 8	EACH	1.000	1.000	
0350	611.0420	RECONSTRUCTING MANHOLES	EACH	2.000	2.000	
0360	611.0530	MANHOLE COVERS TYPE J	EACH	2.000	2.000	
0370	611.0642	INLET COVERS TYPE MS	EACH	1.000	1.000	
0380	611.0660	INLET COVERS TYPE WM	EACH	13.000	13.000	
0390	611.8110	ADJUSTING MANHOLE COVERS	EACH	1.000	1.000	
0400	611.8115	ADJUSTING INLET COVERS	EACH	3.000	3.000	
				4 000		
0410	619.1000	MOBILIZATION	EACH	1.000	1.000	
0420	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	470.000	470.000	
0430	624.0100	WATER	MGAL	20.000	20.000	
0440	625.0100	TOPSOIL	SY	3,486.000	3,486.000	
0450	628.1504	SILT FENCE	LF	100.000	100.000	
0.450	C30 1530	CTLT FENCE MATNESSANGE	1.5	100 000	100 000	
0460	628.1520	SILT FENCE MAINTENANCE	LF EACH	100.000	100.000	
0470	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000	

DATE 28	BMAR11	E S	TIMAT	E O F QUAN				
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2150-00-70			
0480	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	TOTAL 2.000	QUANTITY			
0490	628.7005	INLET PROTECTION TYPE A	EACH	22.000	2.000 22.000			
0500	628.7015	INLET PROTECTION TYPE C	EACH	22.000	22.000			
			LACII	22.000	22.000			
0510	628.7504	TEMPORARY DITCH CHECKS	LF	40.000	40.000		 	
0520	629.0210	FERTILIZER TYPE B	CWT	3.200	3.200			
0530	631.0300	SOD WATER	MGAL.	66.000	66.000			
0540	631.1000	SOD LAWN	SY	3,486.000	3,486.000			
0550	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	75.000	75.000			
					13.000			
0560	637.0202	SIGNS REFLECTIVE TYPE II	SF	637.070	637.070		 	
0570	638.2102	MOVING SIGNS TYPE II	EACH	4.000	4.000			
0580	638.2602	REMOVING SIGNS TYPE II	EACH	42.000	42.000			
0590	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	42.000	42.000			
0600	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000			
0610	643.0100	TRAFFIC CONTROL (PROJECT) 01. 2150-00-70	EACH	1.000	1.000			
0620	643.0300	TRAFFIC CONTROL DRUMS	DAY	6,900.000	6,900.000			
0630	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	644.000	644.000			
0640	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER	EACH	31.000	31.000			
0.550	640 0600	POSTS						
0650	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER	EACH	31.000	31.000			
		BASES						
0660	642 0705	TRAFFIC CONTROL HARVEN TO THE					 	
0660 0670	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1,288.000	1,288.000			
0680	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	4,790.000	4,790.000			
	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	261.000	261.000			
0690	643.0900	TRAFFIC CONTROL SIGNS	DAY	4,047.000	4,047.000			
0700	043.1050.5	TRAFFIC CONTROL SIGNS PORTABLE	DAY	126.000	126.000			
		CHANGEABLE MESSAGE						
0710	646.0106	PAVEMENT MARKING EPOXY 4-INCH	1 =	r 410 000	F 410 000		 	
0720	646.0600	REMOVING PAVEMENT MARKINGS	LF.	5,418.000	5,418.000			
0720		PAVEMENT MARKING GROOVED WET REFLECTIVE	LF	525.000	525.000			
0730	040.0041.3	CONTRAST TAPE 4-INCH	LF	1,300.000	1,300.000			
0740	646 0843 5	PAVEMENT MARKING GROOVED WET REFLECTIVE	LF	000 000	000 000			
00	0101001313	CONTRAST TAPE 8-INCH	L.F	989.000	989.000			
0750	647.0456	PAVEMENT MARKING CURB EPOXY	LF	275.000	275.000			
			L .	273.000	273.000			
0760	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	4.000	4.000		 	
0770	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	226.000	226.000			
0780	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	11,771.000	11.771.000			
0790	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE	LF	676.000	676.000			
		TAPE 8-INCH		0701000	070.000			
0800	649.1200	TEMPORARY PAVEMENT MARKING STOP LINE	LF	52.000	52.000			
		REMOVABLE TAPE 18-INCH		22.000	32.000			
0810	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	16.000	16.000		 	
0820	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	1,615.000	1,615.000			
0830	650.5000	CONSTRUCTION STAKING BASE	LF	1,615.000	1,615.000			
0840	650.5500	CONSTRUCTION STAKING CURB GUTTER AND	LF	2,296.000	2,296.000			
0050	CEO 0-00	CURB & GUTTER		•	•			
0850	650.8500	CONSTRUCTION STAKING ELECTRICAL	L.S	1.000	1.000			
		INSTALLATIONS (PROJECT) 01. 2150-00-70						
		STH 100 & 51ST STREET						
0860	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL		1 000	4	·	 	
0000	030.3310	CONTROL (PROJECT) 01. 2150-00-70	LS	1.000	1.000			
0870	650.9920			1 050 000	4 080 000			
0880	652.0225	CONSTRUCTION STAKING SLOPE STAKES	LF	1,850.000	1,850.000			
0000	032.0223	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	1,407.000	1,407.000			
0890	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40		402.000	402 222			
0000	002.0200	3-INCH	LF	402.000	402.000			
0900	652.0615	CONDUIT SPECIAL 3-INCH	LF	760.000	760.000			
			LF.	700.000	700.000			

	DATE 28MAR11			EST	IMAT	E O F Q U A N			
		LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2150-00-70 QUANTITY		
		0910	652.0800	CONDUIT LOOP DETECTOR	LF	162.000	162.000		
		0920	652.0900	LOOP DETECTOR SLOTS	LF	154.000	154.000		
	*	0930 0940	653.0135 653.0140	PULL BOXES STEEL 24X36-INCH PULL BOXES STEEL 24X42-INCH	EACH	2.000 12.000	2.000 12.000		
- -		0940	653.0905	REMOVING PULL BOXES	EACH EACH	16.000	16.000		
		0960	654.0101	CONCRETE PAGES TYPE 1	FACIL	7.000	7.000		
		0900	654.0102	CONCRETE BASES TYPE 1 CONCRETE BASES TYPE 2	EACH EACH	3.000	3.000		
3		0980	654.0105	CONCRETE BASES TYPE 5	EACH	4.000	4.000		
		0990	654.0113	CONCRETE BASES TYPE 13	EACH	4.000	4.000		
		1000	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	1.000	1.000		
		1010	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	973.000	973.000		
		1020	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	92.000	92.000		,
		1030	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	1,167.000 1,615.000	1,167.000		
		1040 1050	655.0270 655.0305	CABLE TRAFFIC SIGNAL 15-14 AWG CABLE TYPE UF 2-12 AWG GROUNDED	LF LF	1,514.000	1,615.000 1,514.000		
		1030	033.0303	CABLE TIPE OF 2-12 AWG GROUNDED	LI	1,514.000	1,314.000		
		1060	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	3,144.000	3,144.000		
		1070	655.0700	LOOP DETECTOR LEAD IN CABLE	LF	950.000	950.000		
		1080	655.0800	LOOP DETECTOR WIRE	LF	464.000	464.000		
		1090	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. STH 100 & 51ST STREET	LS	1.000	1.000		
		1100	657.0100	PEDESTAL BASES	EACH	7.000	7.000		
		1110	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	7.000	7.000		
		1120	657.0315	POLES TYPE 4	EACH	1.000	1.000		
		1130	657.0322	POLES TYPE 5-ALUMINUM	EACH	6.000	6.000		
		1140	657.0420	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	EACH	4.000	4.000		•
		1150	657.0425	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	EACH	2.000	2.000		
		1160	657.0430	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	EACH	1.000	1.000		
		1170	657.0610	LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT	EACH	9.000	9.000		
•		1180	657.1360	INSTALL POLES TYPE 13	EACH	4.000	4.000		
		1190 1200	657.1535 657.1540	INSTALL MONOTUBE ARMS 35-FT INSTALL MONOTUBE ARMS 40-FT	EACH EACH	1.000 1.000	$1.000 \\ 1.000$	•	
		1200	037.1340	INSTALL MONOTOBE ARMS 40-FT	LACII	£,000	1.000		
		1210	657.1545	INSTALL MONOTUBE ARMS 45-FT	EACH	1.000	1.000		
		1220	657.1550	INSTALL MONOTUBE ARMS 50-FT	EACH	1.000	1.000		
		1230	657.1815	INSTALL LUMINAIRE ARMS STEEL 15-FT	EACH	4.000	4.000		
		1240 1250	658.0110 658.0115	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	EACH EACH	18.000 4.000	18.000 4.000		
				TRAITE SEGME TACE 4 LE ENCH VENTECAL	L-7011		1.000		
		1260	658.0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	18.000	18.000		
		1270	658.0220	BACKPLATES SIGNAL FACE 4 SECTION 12-INCH		4.000	4.000		
		1280 1290	658.0416 658.0500	PEDESTRIAN SIGNAL FACE 16-INCH PEDESTRIAN PUSH BUTTONS	EACH EACH	12.000 10.000	12.000 10.000		
		1300	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 01.	LS	1.000	1.000	•	
		1300	030.3003	STH 100 & 51ST STREET		1.000	11000		
		1310	659.0115	LUMINAIRES UTILITY HPS 150 WATTS	EACH	4.000	4.000		
		1320	659.0125	LUMINAIRES UTILITY HPS 250 WATTS	EACH	8.000	8.000		
		1330	661.0200	TEMPORARY TRAFFIC SIGNALS FOR	LS	1.000	1.000		
				INTERSECTIONS (LOCATION) 01. TEMPORARY					
				TRAFFIC SIGNALS FOR INTERSECTIONS STH					
-		1340	690.0150	100 & 51ST STREET SAWING ASPHALT	LF	815.000	815.000		
		1350	690.0250	SAWING CONCRETE	LF	2,610.000	2,610.000		

DATE 28	ΙΜΔΡ11	ECT	" T M A T	EOFQUAN	TTTTE6
LINE	TO TO TAKE	231	I P A 1	LOFQUAN	2150-00-70
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
1360	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5. 00/HR	HRS	600.000	600.000
1370	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR	HRS	650.000	650.000
1380	SPV.0060	SPECIAL 01. TRAFFIC SIGNAL FACE, ARROW,	EACH	8.000	8.000
		RED, LED MODULES			
1390	SPV.0060	SPECIAL 02. TRAFFIC SIGNAL FACE, ARROW,	EACH	12.000	12.000
4.00		YELLOW, LED MODULES			
1400	SPV.0060	SPECIAL 03. TRAFFIC SIGNAL FACE, ARROW,	EACH	8.000	8.000
		GREEN, LED MODULES			
1410	SPV.0060	SPECIAL 04. PAVEMENT MARKING GROOVED	EACH	2.000	2,000
	3. 1.0000	PREFORMED THERMOPLASTIC ARROWS TYPE 2	LACII	2.000	2.000
1420	SPV.0060	SPECIAL 05, PAVEMENT MARKING GROOVED	EACH	2.000	2.000
		PREFORMED THERMOPLASTIC ARROWS TYPE 3			2.000
1430	SPV.0060	SPECIAL 06. PAVEMENT MARKING GROOVED	EACH	2.000	2.000
		PREFORMED THERMOPLASTIC WORDS			
1440	SPV.0060	SPECIAL 07. EXTERNAL SANITARY MANHOLE	EACH	1.000	1.000
		SEALS			
1450	SPV.0090	SPECIAL 01. VIDEO DET BELDEN 8281	LF	1,265.000	1,265.000
		COAXIAL CBL & 16-3C AWG POWER CBL			
		MONOTUBE INSTALL			
1460	SPV.0090	SPECIAL 03. CONCRETE CURB & GUTTER	LF	1,222.000	1,222.000
		30-INCH TYPE A SPECIAL	***	_,	_,
1470	SPV.0090	SPECIAL 04. PAVEMENT MARKING GROOVED	LF	780.000	780.000
		PREFORMED THERMOPLASTIC CROSSWALK 6-INCH			
1480	SPV.0090	SPECIAL 05. PAVEMENT MARKING GROOVED	LF	148.000	148.000
		PREFORMED THERMOPLASTIC STOP LINE			
1400	cm/ 0000	18-INCH			
1490	SPV.0090	SPECIAL 06. PAVEMENT MARKING GROOVED	LF	150.000	150.000
		PREFORMED THERMOPLASTIC CROSSWALK 24-INCH			
1500	SPV.0105	SPECIAL 01. TRAFFIC SIGNALS, STH 100 &	1.0	1 000	1 000
1300	364.0103	51ST ST	LS	1.000	1.000
		J231 31			
1510	SPV.0105	SPECIAL 02, REMOVE TRAFFIC SIGNALS	LS	1.000	1.000
1520	SPV.0105	SPECIAL 03. TRANSPORTING TRAFFIC SIGNAL	LS	1.000	1.000
		& INTER LIGHTING MATERIALS, STH 100 &			
		51st			
1530	SPV.0105	SPECIAL 04. REMOVE LOOP DETECTOR WIRE &	ŁS	1.000	1.000
		LEAD-IN CABLE STH 100 & 51ST STREET			

CATEGORY 0010	CLEARING 201.0120	GRUBBING 201.0220
LOCATION	ID	ID
STH 100 & 51ST STREET		
260+25 - 266+25, MEDIAN	20	20
NE QUADRANT	20	20
267+10 - 269+70, MEDIAN	22	22
TOTALS	62	62

CATEGORY 0010	REMOVING ASPHALTIC
	SURFACE MILLING
	204.0125
LOCATION	TON
51ST STREET	
48+20 - 49+52	52
50+55 - 51+35	47
TOTALS	99

CATEGORY 0010	REMOVING PAVEMENT 204.0100		
LOCATION	SY		
STH 100 & 51ST STREET			
259+80 - 266+25, MEDIAN	622		
SW QUADRANT	56		
NW QUADRANT	33		
NE QUADRANT	33		
SE QUADRANT	33		
267+25 - 273+00, MEDIAN	600		
STH 100 & 68TH STREET MEDIAN NOSE SW QUADRANT	2		
TOTALS	1,380		

CATEGORY 0010	REMOVING CURB & GUTTER		
	204.0150		
LOCATION	L F		
STH 100 & 68TH STREET			
SE QUADRANT	20		
SW QUADRANT	40		
MEDIAN NOSE	40		
NORTH CURB RAMP	15		
STH 100 & 51ST STREET			
259+80 - 261+80, MEDIAN			
SW QUADRANT	50		
NW QUADRANT	60		
NE QUADRANT	60		
SE QUADRANT	60		
263+50, DRIVEWAY RT	30		
268+25 - 268+75, 75' RT	100		
TOTALS	475		

HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: E PROJECT NO: 2150-00-70 PLOT SCALE: 1:1

PLOT DATE:_

CATEGORY 0010	REMOVING CONCRETE SIDEWALK 204.0155
OCATION	SY
STH 100 & 68TH STREET	
SW QUADRANT	22
NORTH CURB RAMP	14
STH 100 & 51ST STREET	
SW QUADRANT	12
NW QUADRANT	25
NE QUADRANT	56
SE QUADRANT	67
OTALS	196

CATEGORY 0010	REMOVING CATCH BASINS 204.0215 EACH		
LOCATION			
STH 100			
262+15, 8' RT	1		
264+15, 0'RT	1		
266+00, 2' RT	1		
269+25, 16' LT	1		
269+50, 16' LT	1		
51ST STREET			
49+25, 28' RT	1		
49+25, 35' LT	1		
TOTALS	7		

CATEGORY 0010	REMOVING STORM SEWER			
	12-INCH	24-INCH		
	204.0245.01	204.0245.02		
LOCATION	LF	LF		
STH 100				
262+15, 8' RT	10	m=		
264+15, 0'RT	15			
266+00, 12' RT	15	m=		
269+25, 16' LT	25			
269+50, 16' LT	15	-		
51ST STREET				
49+25, 28' RT	5	-		
49+25, 28' RT	10	_		
49+27, 24' LT		4		
TOTALS	95	4		

PROJECT NO: 2150-00-70 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: E

.....

TE:______PL

NAME:______PLOT SCA

3

EARTHWORK CATEGORY 0010

Division	From/To Station	Location	Common Excavation (1) Cut (2)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Waste	Comment:
STAGE 1	68TH STREET 46+50 to 51+50	STH 100 51ST STREET	45 340	15 100			
Division 1 Subtotal			385	115	270	··· .	
STAGE 2	68TH STREET 260+50 to 277+00	STH 100 STH 100	45 2300				
Division 2 Subtotal	•		2345	415	1930		
Grand Total			2730		2200	2730	
			Total Common Exc	· ·			

EARTHWORK CATEGORY 0020

Division	From/To Station	Location	Common Excavation (1) Cut (2)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Waste	Comment:
		l					· · · · · · · · · · · · · · · · · · ·
STAGE 2	263+50 to 277+75	STH 100	430	50	380	430	
Division 2 Subtotal			430	50	380		
	1						
Grand Total			430		380	430	
			Total Common Exc			- Charles and Char	

PROJECT NO: 2150-00-70 HWY: STH 100 COUNTY: MILWAUKEE SHEET: E MISCELLANEOUS QUANTITIES

PLOT DATE : __

PLOT NAME : _

			3/4	- INCH	1 1/4 - INCH	- WATER
			CATEGORY 0010	CATEGORY 0020	CATEGORY 0010	CATEGORY 0010
			305.0110	305.0110	305.0120	624.0100
		LOCATION	TON	TON	TON	MGAL
CATEGORY 0010						
	CONCRETE DRIVEWAY 7-INCH	STH 100 & 68TH STREET				
	416.0170	SW QUADRANT	 8		12	****
LOCATION	SY	SE QUADRANT	2		5	
		MEDIAN NOSE	5		15	
263+50, RT	70	NORTH CURB RAMP	2	70.00	5	_
264+80, RT	83					
265+70, RT	84	STH 100 & 51ST STREET				
268+00, RT	70	259+80 - 266+40, MEDIAN	81		1296	
268+93, RT	58	262+77 - 266+10, 51' RT.		45		
TOTALS	365	SW QUADRANT	9		111	
		NW QUADRANT	9		33	
		NE QUADRANT	19		62	
		SE QUADRANT	23		191	
		267+10 - 273+00, MEDIAN	74		1070	****
		267+25 - 277+75, 51' RT.		160	-	·
		UNDISTRIBUTED	28	25	200	20
		TOTALS	260	230	3000	20

CATEGORY 0010	CONCRETE BASE 8-INCH	INCENTIVE STRENGTH CONCRETE PAVEMENT	CATEGORY 0010	DRILLED TIE BARS 416.0610
LOCATION	320.0145 SY	415.2000.S DOL	LOCATION	EACH
			STH 100 & 68TH STREET	
STH 100 & 68TH STREET			SW QUADRANT	15
SW QUADRANT	1	1	SE QUADRANT	8
SE QUADRANT	1	1	MEDIAN NOSE	30
MEDIAN NOSE	2	2	NORTH CURB RAMP	8
NORTH CURB RAMP	1	1		G
			STH 100 & 51ST STREET	
STH 100 & 51ST STREET			259+80 - 266+40, MEDIAN	150
260+50 - 266+40, MEDIAN	3	3	SW QUADRANT	20
SW QUADRANT	27	27	NW QUADRANT	20
NW QUADRANT	23	23	NE QUADRANT	20
NE QUADRANT	42	42	SE QUADRANT	20
SE QUADRANT	20	20	267+10 - 273+00, MEDIAN	130
267+10 - 273+00, MEDIAN	3	3	TOTALS	421
TOTALS	123	123	, 	-1 2 1

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DDO IDOT NO. 0450 00 70	LEAN COTIL 400			
PROJECT NO: 2150-00-70	HWY: STH 100	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	1
7.1.00	1	OCCIVITY WILLYACKEL	MISCELLANEOUS QUANTITIES	SHEET: E

FILE NAME :

PLOT DATE :

PLOT NAME : _

PLOT BY : ___

PLOT SCALE: 1:1

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			IALI HEIVIO			
	ASPHALTIC	ASPHALTIC		HMA	INCENTIVE	ASPHALTIC SURFACE
CATEGORY 0010	MATERIAL	MATERIAL	TACK	PAVEMENT	DENSITY	DRIVEWAYS AND
	PG 64-22	PG 64-28	COAT	TYPE E-3	HMA PAVEMENT	FIELD ENTRANCES
	455.0115	455.0120	455.0605	460.1103	460.2000	465.0120
LOCATION	TON	TON	GALLON	TON	DOLLAR	TON
STH 100 & 68TH STREET						
SW QUADRANT	-	0.1	1	1	1	
SE QUADRANT	<u></u>	0.1	1	2	2	
MEDIAN NOSE		0.2	1	3	3	
NORTH CURB RAMP		0.1	1	1	1	
STH 100 & 51ST STREET						
259+80 - 266+40, MEDIAN	 16.2	6.7	53	382	382	
SW QUADRANT	0.6	0.4	4	17	17	
NW QUADRANT	0.2	0.2	1	6	6	
NE QUADRANT	0.5	0.4	3	16	16	
SE QUADRANT	1.4	1.1	9	41	41	Months
263+50, DRIVEWAY RT						15
268+50, DRIVEWAY RT						30
267+10 - 273+00, MEDIAN	11.9	4.9	39	280	280	
51ST STREET						
SOUTH		4.1	23	68	68	
NORTH	40 M	2.9	21	49	49	***
UNDISTRIBUTED	1.4	0.6	5	34	34	5
TOTALS	32.2	21.8	162	900	900	50

HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: PROJECT NO: 2150-00-70 PLOT SCALE : 1:1

	CONCRETE	CURB & GUTTER	CONCRETE SIDEWALK		
	CATEGORY 0010	CATEGORY 0010	CATEGORY 0010	CATEGORY 0020	
	30-INCH, TYPE D	30-INCH TYPE A, SPECIAL	5-INCH	5-INCH	
	601.0411	SPV.0090.03	602.0410	602.0410	
LOCATION	LF	LF	SF	SF	
STH 100 & 68TH STREET					
SW QUADRANT	759	40	325		
SE QUADRANT		20	65	n=4	
MEDIAN NOSE	==	80	195		
NORTH CURB RAMP		25	100	: 	
STH 100 & 51ST STREET					
258+80 - 266+25, MEDIAN	705	188	1,300		
263+70 - 266+30, MEDIAN ISLAND	255	255	1,800	_	
262+77 - 266+10, 51' RT.	93500 256			1,360	
SW QUADRANT	85	55	360		
NW QUADRANT	- 	60	355		
NE QUADRANT	ás:	47	775	10000	
SE QUADRANT	y 	58	1,000		
263+50, DRIVEWAY RT	30			7.3.2.1 *******	
267+25 - 273+00, MEDIAN	535	144	1,240		
267+10 - 269+70, MEDIAN ISLAND	250	250	1,875	55%	
267+25 - 277+75, 51' RT.			1,075	5,800	
				5,000	
51ST STREET					
SOUTH	95))	
NORTH	51		11.0 0		
TOTALS	1,921	1,222	9,390	7,160	

PROJECT NO: 2150-00-70 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET:

PLOT SCALE: 1:1

	CONCRETE CURB PEDESTRIAN	CURB RAMP DETECTABL	E WARNING FIELD YELLOW
	CATEGORY 0010	CATEGORY 0010	CATEGORY 0020
	601.0600	602.0505	602.0505
LOCATION	LF	SF	SF
STH 100 & 68TH STREET			
SW QUADRANT		16	
SE QUADRANT	m w	8	_
MEDIAN NOSE		16	****
NORTH CURB RAMP		8	_
STH 100 & 51ST STREET			
263+70 - 266+30, MEDIAN ISLAND	· _	16	
SW QUADRANT	55	16	<u></u>
NW QUADRANT	25	16	_
NE QUADRANT	20	16	
SE QUADRANT		16	-
262+90, RT	-	8	
267+25 - 273+00, MEDIAN		16	
273+75, RT		16	
48+50, RT		8	
STH 100			
262+50 - 265+50, RT			8
268+20 - 277+75, RT		<u></u>	16
TOTALS	100	176	24

CATEGORY 0010	CONCRETE MEDIAN SLOPED NOSE 620.0300
LOCATION	SF
STH 100 & 68TH STREET	
MEDIAN ISLAND	66
STH 100 & 51ST STREET	
260+10, 0' LT	60
263+73, 6' RT	60
266+26, 6' RT	60
266+12, 17' LT	52
267+15, 16' LT	60
267+33, 6' RT	52
269+65, 16' LT	60
TOTALS	470

STORM S	EWER PIPE	ES		STORM SEWER PIPE REINFORCED				
CATEGORY 0010					CONCRETE CLASS III			
					12-INCH	15-INCH	24-INCH	
			INLET	DISCH	608.0312	608.0315	608.0324	
PIPE	FROM	ТО	ELEV.	ELEV.	LF	LF	LF	
P-1	1	2	661.25	661.15	9			
P-2	3	4	659.15	659.00	17			
P-3	6	7	658.75	658.65	8			
P-4	7	8	658.65	658.55	16	******		
P-5	9	8	659.25	658.75	10			
P-6	10	11	658.90	658.75	15			
P-7	14	13	659.00	658.15			12	
P-8	15	16	659.25	659.15	12			
P-9	18	19	657.10	656.85	25		-	
P-10	19	21	655.70	655.63		10		
P-11	21	20	655.63	655.57		6		
P-12	23	22	657.50	657.40		5		
TOTALS				_	112	21	12	

PROJECT NO: 2150-00-70 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET:

ILE NAME : _____

PLOT DATE : ___

PLOT BY :

PLOT SCALE

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	RM SEWER STRU Egory: 0010	CTURES			INLE	ETS	INLET CO	OVERS	CULVERT PIPE CONCRETE	STAKING STORM SEWER	
STR NO.	STA.		GRAT ELEV.	DEPTH (FT.)	TYPE 2 611.0302 EACH	TYPE 8 611.0305 EACH	TYPE WM 611.0660 EACH	TYPE MS 611.0642 EACH	COLLAR 520.8000.S EACH	SYSTEM 650.4000 EACH	REMARKS
1	262+15, 2' LT	STH 100	666.26	5.01	1		1			1	
2	262+15, 10' RT	STH 100	•		<u></u>				1	1	-
3	264+10, 14' LT	STH 100	663.94	4.79	1		. 1	-	<u>.</u>	1	
4	264+10, 5' RT	STH 100						_	1		
7	266+02, 14' LT	STH 100	663.02	4.37	1		1		- 	1	
8	266+11, 2' RT	STH 100	663.38	4.83	1	~~	1			1	
9	266+11, 10' RT	STH 100	664.00	4.75	1		1		_	1	
10	266+11, 50' RT	STH 100	663.90	5.00	1		1		***	1	<u></u>
11	266+27, 49' RT	STH 100	663.90				. 			1	<u></u>
12	49+27, 24' LT	51ST STREET	663.46	6.06	1	_	1			1	BUILD OVER EXISTING 24-INCH RCCP
13	49+27, 21.5' RT	51ST STREET	663.55	5.40	1		1			1	BUILD OVER EXISTING 24-INCH RCCP
14	49+22, 27.5' RT	51ST STREET	662.80	3.80		1		1		1	BUILD OVER EXISTING 18-INCH PVC PIPE
15	266+10, 60' LT	STH 100	662.33	3.08	1		1			1	
16	266+23, 58.5' LT	STH 100						anna	→ m	1	<u></u>
18	269+25, 20' LT	STH 100	661.08	3.98	1		1			1	<u></u>
19	269+50, 20' LT	STH 100	660.98	5.16	1		1			1	
20	269+49, 5' LT	STH 100					***		1		
21	269+50, 12' LT	STH 100	661.18	5.55	1		1			1	
22	269+96, 2' RT	STH 100	660.95	3.45	1		1			1	
23	269+96, 6' RT	STH 100						. 	1		CONNECT TO EXISTING MANHOLE
	TOTALS				13	1	13	1	4	16	

STR.	EGORY 0010 LOCATION	EXTERNAL SANITARY MANHOLE SEALS SPV.0060.07 EACH	RECONSTRUCTING MANHOLES 611.0420 EACH	MANHOLE COVERS TYPE J 611.0530 EACH	ADJUSTING MANHOLE COVERS 611.8110 EACH	ADJUSTING INLET COVERS 611.8115 EACH
	STH 100					
5	264+10, 14' LT					1
6	266+00, 14' LT					1
11	266+27, 49' RT		1	1	***	
16	266+23, 58.5' LT		1	1		
	51ST STREET					
19	50+95,20' LT	Wich				1
	50+95,0' LT	1			1	<u>'</u>
	TOTALS	1	2	2	1	ব

CONSTRUCTION

PROJECT NO: 2150-00-70 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: E

ME:____

DATE : PLOT BY

4E:______PLOT SCALE: 1:1

CATEGORY 0010

•	SILT FENCE 628,1504	SILT FENCE MAINTENANCE 628.1520
LOCATION	LF	LF
UNDISTRIBUTED	100	100
TOTALS	100	100

CATEGORY 0010	MOBILIZATION EROSION CONTROL 628.1905	MOBILIZATION EMERGENCY EROSION CONTROL 628.1910
LOCATION	LF	LF
STAGE 1	1	1
STAGE 2	1	1 ·
TOTALS	2	2

CATEGORY 0010	TEMPORARY DITCH CHECKS 628.7504
	6 1
STH 100	40
266+20, 80' RT	10
52ST STREET	
49+15, 30' RT	10
49+15, 30' LT	10
·	
UNDISTRIBUTED	10
TOTALS	40

CATEGORY 001	0	INLET PROTECTION				
		TYPE A	TYPE C			
		628.7005	628.7015			
STA.	LOCATION	EACH	<u>EACH</u>			
STH 100						
262+15	2.0' LT	1	1			
262+15	10.0' RT	1	1			
264+10	14.0' LT	1	1			
264+10	5.0, RT	1	1			
266+02	14.0' LT	1	1			
266+11	2.0' RT	1	1			
266+11	10.0' RT	1	1			
266+11	50.0' RT	1	1			
266+27	49.0' RT	1	1			
266+32	68.0' RT	1	1			
266+10	60.0' LT	1	1			
266+23	58.5' LT	1	1			
269+25	20.0' LT	1	i			
269+50	20.0' LT	. 1	1			
269+49	5' LT	1	1			
269+50	12.0' LT	1	1			
270+50	10.0' RT	1	1			
270+50	2.0' LT	1	1			
51ST STREET						
49+20	34' LT	1	1			
49+27	24' LT	1	1			
49+27	21.5' RT	1	· 1			
49+22	27.5' RT	1	1			
TOTALS		22	22			

PROJECT NO: 2150-00-70 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: E

DATE : _____

PLOT NAME : _____

OT SCALE : 1:1

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CATEGORY 0010	CONSTRUCTION STAKING						
			CURB, GUTTER				
			AND	SLOPE			
	SUBGRADE	BASE	CURB & GUTTER	STAKING			
	650.4500	650.5000	650.5500	650.9920			
LOCATION	LF	LF	LF	LF			
STH 100 & 68TH STREET							
SW QUADRANT			40				
SE QUADRANT	-		20	_			
MEDIAN NOSE	_		80				
NORTH CURB RAMP		<u>-</u>	25				
STH 100 & 51ST STREET							
259+80 - 266+25, MEDIAN	650	650	960				
SW QUADRANT			55				
NW QUADRANT	Mini		60				
NE QUADRANT			47	w			
SE QUADRANT			58				
263+50, DRIVEWAY RT			30				
267+25 - 273+00, MEDIAN	590	590	775				
263+00 - 277+75, RT	****			1,475			
51ST STREET		•					
SOUTH	300	300	95	300			
NORTH	-75	75	51	75			
TOTALS	1,615	1,615	2,296	1,850			

CATEGORY 0010 LOCATION	TOPSOIL 625.0100 SY	FERTILIZER TYPE B 629.0210 CWT	SOD WATER 631.0300 MGAL	SOD LAWN 631.1000 SY
STH 100 & 68TH STREET				
SW QUADRANT	- 14	0.1	4	44
SE QUADRANT	12	* * *	1	14
MEDIAN NOSE	12 34	0.1	1	12
NORTH CURB RAMP	34 12	0.1	1	34
NOTHI COLL IVAIVA	12	0.1	1	12
STH 100 & 51ST STREET				
260+50 - 266+40, MEDIAN	500	0.4	9	500
SW QUADRANT	128	0.1	3	128
NW QUADRANT	25	0.1	1	25
NE QUADRANT	81	0.1	2	8 1
SE QUADRANT	389	0.3	7	389
267+10 - 273+00, MEDIAN	345	0.3	6	345
UNDISTRIBUTED	56	0.1	1	56
TOTALS	1,596	1.8	33	1,596

CATEGORY 0010

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS
650.8500
LOCATION
LS

STH 100 & 51ST STREET
1
TOTALS
1

LOCATION	TOPSOIL 625.0100 SY	FERTILIZER TYPE B 629.0210 CWT	SOD WATER 631.0300 MGAL	SOD LAWN 631.1000 SY	
STH 100					
262+50 - 265+50, RT	334	0.3	6	334	
268+20 - 277+75, RT	1,500	1.0	26	1500	
UNDISTRIBUTED	56	0.1	1	56	
TOTALS	1,890	1.4	33	1.890	

PROJECT NO: 2150-00-70

HWY: STH 100

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

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PLOT SCALE: 1:1

SHEET:

FILE NAME : ___

PLOT DATE : ___

AME : _____

PAVEMENT MARKING

CATEGORIO																				
	GROOVED WET REFLECTIVE CONTRAST TAPE					ISLAND	DIAGONAL	GROOVED PREFORMED THERMOPLASTIC												
	4-INCH (SKIPS) 646.0841.S	8-INCH 646.0843.S	(WHITE)	(YELLOW) .0106	CURB EPOXY 647.0456	NOSE EPOXY 647.0606	EPOXY 12-INCH 647.0726	ARROWS TYPE 2 SPV.0060.04	ARROWS TYPE 3 SPV.0060.05	WORDS SPV.0060.06	CROSSWALK 6-INCH SPV.0090.04	STOP LINE 18-INCH SPV.0090.05	CROSSWALK 24-INCH SPV.0090.06							
LOCATION	LF	LF								LF	LF	LF	EACH	LF	EACH	EACH	EACH	LF	LF	LF
STH 100			•																	
260+00 - 266+75	650	372	1,228	565	92	2	57		==		190	49								
266+75 - 273+75	650	321	1,169	547	130	1	69		-		192	48								
51ST STREET																				
46+00 - 49+10	_	124		800			41	1	1	1	102	25	****							
51+00 - 55+00		172		1,109	_		59	1	1	1	112	26								
68TH STREET	9478	······			53	1					184		150							
			2,397	3,021			_													
TOTALS	1,300	989	5,	418	275	4	226	2	2	2	780	148	150							

CATEGORY 0010	SAWING ASPHALT	SAWING CONCRETE
LOCATION	690.0150 LF	690.0250 LF
LOCATION	LI.	L-I
STH 100 & 68TH STREET		
SW QUADRANT		50
SE QUADRANT		30
MEDIAN NOSE		100
NORTH CURB RAMP		30
STH 100 & 51ST STREET 259+80 - 266+30, MEDIAN ISLAND		050
SW QUADRANT	 250	950 85
NW QUADRANT		85
NE QUADRANT	40	90
SE QUADRANT	325	90
267+90 - 269+00, RT	125	
267+25 - 273+00, MEDIAN		900
UNDISTRIBUTED	75	200
TOTALS	815	2,610

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FILE NAME: _

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___ PLOT SCALE

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TRAFFIC CONTROL

	BARRICADES FLEXIBLE TUBULAR MARKER WARNING LIGHTS					SIGNS PORTABLE	REMOVING	П	EMPORARY PA	VEMENT MARI	KING			
	DD: #40					G LIGHTS	ARROW		CHANGEABLE	PAVEMENT		NCH	8-INCH	18-INCH
	DRUMS	TYPE III	POSTS	BASES	TYPE A	TYPE C	BOARDS	SIGNS	MESSAGE	MARKINGS	WHITE	YELLOW		STOP LINE
LOCATION	643.0300	643.0420	643.0500	643.0600	643.0705	643.0715	643.0800	643.0900	643.1050.S	646.0600	649.0100	649.0100	649.0801	649.1200
LOCATION	DAYS	DAYS	EACH	EACH	DAYS	DAYS	DAYS	DAYS	DAYS	LF	<u>LF</u>	<u>LF</u>	LF	LF
STAGE 1A:														
STH 100 & 68TH ST														
WEST OF 68TH ST	520	20			40	300	20	160	20	75	724	===	100 AM 100	
EAST OF 68TH ST	540	20			40	300	20	160	20	75	503			
68TH ST	140					120		80			282			
STH 100 & 51ST ST														
STA 241+50 - 51ST ST	540	20	the deput		40	260	20	160	20	75	806		-	
51ST ST - STA 291+50	640	20			40	320	20	160	20	75	997			
51ST ST	320		14	14		120		120	www		699	630		26
STAGE 1B:														20
STH 100														
STA 241+50 - 51ST ST	621	23			46	299	23	184	23		-	====		
51ST ST - STA 291+50	736	46			92	368	23	230	23		840			
51ST ST	368		17	17		138		138	- 		724	778		26
STAGE 2:												,,,,		20
STH 100 & 68TH ST														
WEST OF 68TH ST	1035	90			180	225		405			~~~	436		
EAST OF 68TH ST	990	45		-	90	675	45	405		75		538	62	
68TH ST								135	and Markan.					
STH 100 & 51ST ST														
WEST OF 51ST ST		90			180	630	45	495		75		1842	170	
EAST OF 51ST ST		90			180	585	45	495	w	75		1572	444	
51ST ST	Mil married	wa tao ma	-					270	~ m.m				E-1-1	
UNDISTRIBUTED	450	180			360	450		450	Make		200	200		
			-								5,775	5,996		
TOTALS	6,900	644	31	31	1,288	4,790	261	4,047	126	525	11,7	771	676	52

PROJECT NO: 2150-00-70 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES Е SHEET: FILE NAME :

PLOT NAME : ___

SUMMARY OF STATE FURNISHED MATERIALS

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	POLES, TYPE 13, 35' MONOTUBE ARM
1	POLES, TYPE 13, 40' MONOTUBE ARM
1	POLES, TYPE 13, 45' MONOTUBE ARM
1	POLES, TYPE 13, 50' MONOTUBE ARM
1	TRAFFIC SIGNAL CABINET
4	VIDEO DETECTION CAMERAS

STATE FURNISHED MONOTUBE POLES AND ARMS

NOTE: THIS TABLE IS FOR INFORMATION ONLY

POLES, TYPE 13, 35' MONOTUBE ARM POLES, TYPE 13, 40' MONOTUBE ARM POLES, TYPE 13, 45' MONOTUBE ARM POLES, TYPE 13, 50' MONOTUBE ARM

	POLE	POLE	POLE	POLE
SIG.	TYPE 13	TYPE 13	TYPE 13	TYPE 13
BASE	35' ARM	40' ARM	45' ARM	50' ARM
NO.	EACH	EACH	EACH	EACH
SB2	1			
SB7				1
SB9		1		
SB13			1	
TOTAL*	1	1	1	1

STH 100 (W. BROWN DEER RD.) & N. 51ST ST. MILWAUKEE COUNTY CATEGORY 0010

658.0110	TRAFFIC SIGNAL FACES, 3-12 INCH VERTICAL, LED MODULES
658.0115	TRAFFIC SIGNAL FACES, 4-12 INCH VERTICAL, LED MODULES
658.0215	BACKPLATES, 3 SECTION, 12-INCH SIGNAL FACES
658.0220	BACKPLATES, 4 SECTION, 12-INCH SIGNAL FACES
658.0416	PEDESTRIAN SIGNAL FACES, 16-INCH, LED MODULES
SPV.0060.01	TRAFFIC SIGNAL FACE, ARROW, RED, LED MODULES
SPV.0060.02	TRAFFIC SIGNAL FACE, ARROW, YELLOW, LED MODULES
SPV.0060.03	TRAFFIC SIGNAL FACE, ARROW, GREEN, LED MODULES

SIG. HEAD NO.	SIG. BASE NO.	3-12" VERT. EACH	4-12" VERT. EACH	RED ARROW EACH	YELLOW ARROW EACH	GREEN ARROW EACH	BCKPLT 3-SEC. EACH	BCKPLT 4-SEC. EACH	PED. FACE 16" EACH
1	SB3	1					1		
2	SB13	1					1		
3	SB13	1		1			1		l
4	SB13	1					1		
5	SB5		1	1	2	1		1	
6	SB11		1	1	2	1		1 1	
7	SB10	1					1		
8	SB7	1				-	1		
9	SB7	1					1		
10	SB7	1					1		
11	SB12		1	1	2	1		1 1	
12	SB4		1	1	2	1		1 1	
13	SB1	1					1		
14	SB9	1					1		
15	SB9	1					1		
16	SB8	1		1	1	1	1		
17	SB9	1		1	1	1	1		
18	SB8	1					1		
19	SB2	1					1		
20	SB2	1					1		
21	SB1	1		1	1	1	1		
22	SB2	1		1	1	1	1		
23	SB2			ľ					1
24	SB1								1
25	SB3								1
26	SB4								1
27	SB4								1
28	SB6								1
29	SB8								1
30	SB9	1							1
31	SB10								1
32	SB11								i
33	SB11								1
34	SB13								1
TOTAL*		18	4	8	12	8	18	4	12

PAGE 1 OF 5

PROJECT NO: 2150-00-70

HWY: STH 100

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCXV

PLOT NAME :

SHEET

83

REMOVE TRAFFIC SIGNAL	.5
	SPV.0105.02
	REMOVE
	TRAFFIC
	SIGNALS
LOCATION	L.S.
STH 100 & N. 51ST ST	1
TOTAL	1

TEMPORARY TRAFFIC	661,0200,01
	TEMPORARY
	TRAFFIC
	SIGNALS
LOCATION	L.S.
STH 100 & N. 51ST ST	1
TOTAL	1

REMOVE PULL BOXES				
	653.0905			
	REMOVE			
PULL BOX	PULL BOX			
NO.	EACH			
PB1	1			
PB2	1			
PB3	1			
PB4	1			
PB5	1			
PB6	1			
PB7	1			
PB8	1			
PB9	1			
PB10	1			
PB11	1			
PB12	1			
PB13	1			
PB14	1			
PB15	1			
PB16	1			
TOTAL	16			

	VIDEO CABLE					
				SPV.0090.01		
				VIDEO DETECTION		
				BELDEN 8281 COAXIAL		
				CABLE 16-3C AWG		
				POWER CABLE MONOTUBE		
				INSTALLATION		
LOC.	То	LOC.		L.F.		
CB1		SB2	(VID 1)	238		
CB1		SB4	(VID 2)	369		
CB1		SB9	(VID 3)	379		
CB1		SB11	(VID 4)	279		
			TOTAL	1265		

METER BREA	KER PED	ESTAL					
B.	656.0200.0						
		METER					
		BREAKER					
		PEDESTAL					
LOCATION*		L.S.					
267+18.0', 74.0' RT		1					
	TOTAL	1					

^{*} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

	CONDU	<u>IT </u>				
				652.0225 CONDUIT NONMET. 2-INCH	652.0235 CONDUIT NONMET. 3-INCH	652.0615 CONDUIT SPECIAL 3-INCH
LOC.	ТО	LOC.		L.F.	L.F.	L.F.
CB1	TO	PB1		Last :	78	L.F.
PB1	TO	SB1		13		
PB1	TO	PB2				106
PB2	ТО	SB2		14		100
PB2	TO	PB3			112	
PB3	TO	SB3		14		
PB3	TO	PB4		280		
PB3	TO	PB5				96
PB5	TO	SB4		20		
PB5	TO	SB16		8		
PB5	TO	PB6		100		46
PB6	TO	SB5		12		
PB6	TO	SB17		157		
SB17	TO	SB18	1	143		
PB6	ТО	PB7				110
PB7	TO	SB6		23		
PB7	TO	SB7	5	17		
PB7	TO	PB8			120	
PB8	TO	SB8		9		
PB8	TO	PB9				138
PB9	TO	SB9		9		
PB9	TO	PB10			92	
PB10	TO	SB10		13		
PB10	TO	PB11		280		
PB10	TO	PB12				94
PB12	TO	SB11		12		
PB12	TO	PB13				46
PB13	TO	SB12		6		
PB13	TO	SB14	1	138	1	
SB14	TO	SB15		150		
PB13	TO	PB14		22000		124
PB14	TO	SB13		17		
PB14	ТО	CB1		72		
			TOTAL	1407	402	760

PAGE 2 OF 5

PROJECT NO: 2150-00-70

HWY: STH 100

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCXV

SHEET

PLOT DATE: 23-FEB-2011 12:06

PLOT NAME :

PLOT SCALE : 200:1

STH 100 (W. BROWN DEER RD.) & N. 51ST ST. MILWAUKEE COUNTY **CATEGORY 0010**

	PULL BOXES		
		653.0135	653.0140
PULL		PULL BOXES	PULL BOXES
BOX		24"x36"	24"x42"
NO.	LOCATION*	EACH	EACH
PB1	266+94.0', 82.0' RT		1
PB2	266+41.0', 80.0' RT		1
PB3	265+94.0', 54.0' RT		1
PB4	263+15.0', 54.0' RT	1	
PB5	265+94.0', 6.0' RT		1
PB6	265+94.0', 17.0' LT		1
PB7	265+94.0', 72.0' LT		1
PB8	266+44.0', 89.0' LT		1
PB9	267+14.0', 89.0' LT		1
PB10	267+40.0', 63.0' LT		1
PB11	270+19.0', 64.0' LT	1	
PB12	267+40.0', 16.0' LT		1
PB13	267+40.0', 7.0' RT		1
PB14	267+40.0', 69.0' RT		1
	TOTAL	_ 2	12

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

REMOVING CO	REMOVING CONCRETE BASES									
	204.0195									
	REMOVING									
SIGNAL	CONCRETE									
BASE	BASES									
NO.	EACH									
SB1	1									
SB2	1									
SB3	1									
SB3E	1									
SB4	1									
\$B5	1									
\$B6	1									
SB7	1									
SB8	1									
SB9	1									
<u>\$B10</u>	1									
TOTAL	11									

CONCRETE BASES 654.0217 654.0101 654.0102 654.0105 654.0113 CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE BASES **SIGNAL** BASE BASE BASE BASE TYPE 9 BASE TYPE 1 TYPE 2 TYPE 5 **TYPE 13** SPECIAL NO. LOCATION* **EACH** EACH **EACH** EACH **EACH** CB1 267+18.0', 74.0' RT 1 SB1 266+95.0', 70.0' RT SB2 266+35.0', 69.0' RT SB3 266+6.0', 53.0' RT SB4 266+14.0', 7.0' RT 1 SB5 266+6.0', 17.0' LT SB6 266+14.0', 62.0' LT SB7 266+10.0', 73.0' LT 266+42.0', 82.0' LT SB8 1 SB9 267+13.0', 80.0' LT SB10 267+29.0', 63.0' LT 1 SB11 270+19.0', 64.0' LT 1 SB12 267+35.0', 7.0' RT SB13 267+28.0', 58.0' RT SB14 286+77.0', 9.0' RT **SB15** 270+28.0', 5.0' RT SB16 265+87.0', 6.0' RT **SB17** 264+38.0', 17.0' LT SB18 262+95.0', 15.0' LT

TRAFFIC DETECTOR LOOPS

1117	111000	TECTOR LOOPS	r		1			I		
							652.0800	652.0900	655.0700* * *	655.0800
						SDD	CONDUIT	LOOP DETECTOR	LEAD IN	LOOP DETECTOR
LOOP	HOME		SIZE	NO. OF	PAVEMENT	INSTALLATION	LOOP DETECTOR	SLOT	CABLE	WIRE
NO.	RUN PB	LOCATION*	(FT)x(FT)	TURNS	TYPE	REFERENCE	L.F.	L.F.	L.F.	L.F.
21	PB11	270+19.0', 42.0' LT	6'X30'	3	ASPHALT	LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLA	A 80	76	450	230
61	P84	263+15.0', 30.0' RT	6'X30'	3	ASPHALT	LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLA	82	78	440	234
						TOTAL	162	154	คดก	464

^{*} LOCATION IS TO FRONT CENTER OF DETECTOR LOOP

PAGE 3 OF 5

HWY: STH 100 COUNTY: MILWAUKEE PROJECT NO: 2150-00-70 MISCELLANEOUS QUANTITIES SHEET PLOT NAME :

^{*} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

^{**} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

^{* * *} QUANTITIES SHOWN ELSEWHERE ON PLAN.

STH 100 (W. BROWN DEER RD.) & N. 51ST ST. MILWAUKEE COUNTY CATEGORY 0010

			SIGNAL CAP	LE AND WIRE				
		655.0260	655.0270	655.0305	655.0515			
		CABLE	CABLE		ELECTRICAL			
		TRAFFIC	TRAFFIC	CABLE	WIRE TRAFFIC			
				TYPE	SIGNALS			655.02
		SIGNAL	SIGNAL					CABL
30	TO 100	12-14 AWG	15-14 AWG	UF 2-10 AWG	10 AWG			TRAFF
OC.	TO LOC.	L.F.	L.F.	L.F.	L.F.			SIGN
B1	SB1		58		58	LOC. To	LOC.	5-14 A
B1	SB2		121	121	•	SB1	HEAD 13	L.F.
CB1	SB3	185				SB1	HEAD 21	19
CB1	SB4		252		-	SB1	HEAD 24	18
CB1	SB5		276			SB1	BUTTON	
CB1	SB6	344				SB2 SB2	HEAD 19	50
CB1	SB7	351				SB2	HEAD 20 HEAD 22	19 60
CB1	SB8		370			SB2	HEAD 23	18
CB1	SB9		262			SB2	BUTTON	
CB1	SB10	228				SB2	LUMINAIRE	
CB1	SB10	220	460			SB3	HEAD 1	19
CB1	SB11 SB12		162			<u>SB3</u>	HEAD 25 BUTTON	18
			114			SB4	HEAD 12	
CB1	SB13	59		59	59	SB4	HEAD 26	18
SB1	SB2				108	SB4	HEAD 27	18
SB2	SB3				110	SB4	BUTTON	
SB3	SB4				110	<u>SB5</u> SB6	HEAD 5 HEAD 28	18
SB4	SB5				85	SB6	BUTTON	18
SB5	SB6				119	SB7	HEAD 8	75
3B6	SB7				58	SB7	HEAD 9	65
SB7	SB8				112	SB7	HEAD 10	55
SB8	SB9				116	SB7	LUMINAIRE	l
3B9	SB10				93	SB8 SB8	HEAD 18 HEAD 16	19
B10	SB11				101	SB8	HEAD 29	19 18
B11	\$B12				69	SB8	BUTTON	
B12	SB13					SB9	HEAD 14	55 19
CB1	PB1				113	SB9	HEAD 15	19
3B2	PB2				56	SB9 SB9	HEAD 17 HEAD 30	65 18
					44	SB9	BUTTON	10
3B3	PB3				42	SB9	LUMINAIRE	
3B4	PB5				51	SB10	HEAD 7	19
SB5	PB6				42	SB10	HEAD 31	18
SB7	PB7				46	SB10 SB11	BUTTON HEAD 6	1
3B8	PB8				38	SB11	HEAD 32	18
SB9	PB9				39	SB11	HEAD 33	18
B10	PB10				41	\$B11	BUTTON	
B11	PB12				42	SB11	LUMINAIRES	·
B12	PB13				35	SB12	HEAD 11	
CB1	PB14				53	SB13 SB13	HEAD 2 HEAD 3	70 60
B2	SB16			164		SB13	HEAD 4	50 50
B16	SB17			216		SB13	HEAD 34	18
B17	SB18			153		SB13	BUTTON	
B16	SB7					SB13	LUMINAIRE	
				141		SB14 SB15	LUMINAIRE	
B13	SB11			154	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	SB15 SB16	LUMINAIRE LUMINAIRES	
B11	SB14			203		SB17	LUMINAIRE	
B14	SB15			161		SB18	LUMINAIRE	
B11	SB9			142			TOTAL	973
	TOTAL	1167	1615	1514	1840			0.0

			SIGNAL CAI	BLE AND WIRE	
		655.0230	655.0240	655.0515	655.0700 *
		CABLE	CABLE	ELECTRICAL	LOOP
		TRAFFIC	TRAFFIC	WIRE TRAFFIC	
				1	DETECTOR
		SIGNAL	SIGNAL	SIGNALS	LEAD IN
		5-14 AWG	7-14 AWG	10 AWG	CABLE
LOC.	To LOC.	L.F.	L.F.	L.F.	L.F.
SB1	HEAD 13	19			,
SB1	HEAD 21	19			
SB1	HEAD 24	18			
SB1	BUTTON				6
SB2	HEAD 19	50			
SB2	HEAD 20	19			
SB2	HEAD 22	60			
SB2	HEAD 23	18			
SB2	BUTTON				6
SB2	LUMINAIRE			117	
SB3	HEAD 1	19			
SB3	HEAD 25	18			
SB3	BUTTON				6
SB4	HEAD 12		23		
SB4	HEAD 26	18			
SB4	HEAD 27	18			
SB4	BUTTON				6
SB5	HEAD 5		23		
SB6	HEAD 28	18			
SB6	BUTTON	٦-			6
SB7	HEAD 8	75			
SB7	HEAD 9	65			
SB7	HEAD 10	55			
SB7 SB8	LUMINAIRE	40		17	
SB8	HEAD 18 HEAD 16	19			
SB8	HEAD 16 HEAD 29	19			
SB8	BUTTON	18			
SB9	HEAD 14	ce			6
SB9	HEAD 15	55 19		l	
SB9	HEAD 17	65			
SB9	HEAD 30	18			
SB9	BUTTON	10			•
SB9	LUMINAIRE			447	6
SB10	HEAD 7	19		117	
SB10	HEAD 31	18			
SB10	BUTTON	10			
SB11	HEAD 6		23		6
SB11	HEAD 32	18	20		
SB11	HEAD 33	18			
SB11	BUTTON	10			6
SB11	LUMINAIRES			234	O
SB12	HEAD 11		23	234	
SB13	HEAD 2	70	20		
SB13	HEAD 3	60		1	
SB13	HEAD 4	50			
SB13	HEAD 34	18			
SB13	BUTTON				6
SB13	LUMINAIRE			117	UU
SB14	LUMINAIRE			117	
SB15	LUMINAIRE			117	
SB16	LUMINAIRES			234	
SB17	LUMINAIRE			117	
SB18	LUMINAIRE			117	
	TOTAL	973	02		
	IOIAL	च (३	92	1304	60

FILE NAME : j:\projects\D2_215000100\Sig\S1129_0TY.dgn

HWY: STH 100

PROJECT NO: 2150-00-70

PLOT DATE: 23-FEB-2011 12:06

COUNTY: MILWAUKEE

PLOT BY : MSCCXV PLOT NAME :

MISCELLANEOUS QUANTITIES

PLOT SCALE : 200:1

WISDOT/CADDS SHEET 43

SHEET

PAGE 4 OF 5

3

STH 100 (W. BROWN DEER RD.) & N. 51ST ST. MILWAUKEE COUNTY CATEGORY 0010

657.0100 PEDESTAL BASES* 657.0255 TRANSFORMER BASES, BREAKAWAY, 11 1/2 INCH BOLT CIRCLE 657.0315 POLES, TYPE 4 657.0322 **POLES, TYPE 5** 657.0430 TRAFFIC SIGNAL STANDARDS, ALUMINUM, 10-FOOT 657.0420 TRAFFIC SIGNAL STANDARDS, ALUMINUM, 13-FOOT 657.0425 TRAFFIC SIGNAL STANDARDS, ALUMINUM, 15-FOOT 659.0115 **LUMINAIRES, UTILITY, 150 W LUMINAIRES, UTILITY, 250 W** 659.0125 657.0610 LUMINAIRE ARMS, SINGLE MEMBER, 4 1/2-INCH CLAMP, 6-FOOT 658.0500 PEDESTRIAN PUSH BUTTONS 657.1360 **INSTALL POLES TYPE 13** 657.1535 **INSTALL MONOTUBE ARMS 35-FT** 657.1540 **INSTALL MONOTUBE ARMS 40-FT** 657.1545 **INSTALL MONOTUBE ARMS 45-FT** 657.1550 **INSTALL MONOTUBE ARMS 50-FT**

LUMINAIRE ARMS 15-FT, INSTALL

REMOVE LOOP DETECTOR WIRE & LEAD-IN CABLE
SPV.0105.04
REMOVE
LOOP DETECTOR
LEAD-IN CABLE

 LOCATION
 L.S.

 STH 100 & N. 51ST ST
 1

 TOTAL
 1

SIG. BASE NO.	PED. BASE EACH	TRANS. BASE EACH	POLE TYPE 4 EACH	POLE TYPE 5 EACH	10-FOOT STAND. EACH	13-FOOT STAND. EACH	15-FOOT STAND. EACH	LUMIN. 150 W EACH	LUMIN. 250 W EACH	ARM 6-FOOT EACH	PUSH BUTTON EACH	INSTALL POLE TYPE 13	INSTALL MONO ARM 35-FT	INSTALL MONO ARM 40-FT	INSTALL MONO ARM 45-FT	INSTALL MONO ARM 50-FT	ARM 15-FOOT INSTALL EACH
SB1	1					1					1	•					
SB2									1		1	1	1				1
SB3	1					1					1						
SB4		1	1							1	1						
SB5	1						1										
SB6	1				11						1						
SB7									1			1				1	1
SB8	1					1					1						
SB9									11		1	1		11			11
SB10	1					1					1						
SB11		1		1					2	2	1						
SB12	1						11										
SB13									1		1	1			1		1
SB14		1		1				1		1							
SB15		1		11				1		1							
SB16		1		1					2	2							
SB17		1		1				1		1							
SB18		1		1				1		1							
TOTAL *	7	7	1	6	1	4	2	4	8	9	10	4	1	1	1 1	1	4

^{*} INCIDENTAL TO ITEM "TRAFFIC SIGNALS & INTERSECTION LIGHTING", STH 100 & N. 51ST ST.

TRANSPORTING TRAFFIC SIGNAL & INTERSECTION LIGHTING MATERIALS

SPV.0105.03 TRANSPORTING TRAFFIC SIGNAL & INTERSECTION

LIGHTING MATERIALS L.S.

 LOCATION
 L.S.

 STH 100 & N. 51ST ST
 1

TOTAL 1

PAGE 5 OF 5

PROJECT NO: 2150-00-70

657.1815

HWY:STH 100

LOCATION

STH 100 & N. 51ST ST

COLIN

SPV.0105.01

TRAFFIC

SIGNALS

L.S.

1

TRAFFIC SIGNALS

TOTAL

COUNTY: MIL WAUKEE

MISCELLANEOUS QUANTITIES

PLOT BY: MSCCXV

SHEET

WISDOT/CAUDS SHEET 43

TYPE II PERMANENT SIGNING

3

STH 100 2150-00-70

	II PERIMANCINI						·	1	1	· · · · · · · · · · · · · · · · · · ·	1	1	STH 100 2150-
							637.0202	638.2602	638.3000	638.2102	634.0618		
0101	a				SIGN		SIGNS	REM	REM SMALL	MOVE	WOOD	MOUNT	
SIGN	SIGN		SIGN	- 1	SIZE		REFLC	SIGNS	SIGN	SIGNS	POSTS	ON SAME	
NO.	CODE		MESSAGE	W	x	Н	TYPE II	TYPEII	SUPPORT	TYPE II	4"X 6"x18'	POST AS	
				[IN.]	x	[IN.]	[SF]	[EA]	[EA]	[EA]	[EA]	SIGN#	REMARKS
	R2-1(2M)		SPEED LIMIT 40	30	×	36	7.50	1	1		1		
	R2-1(2M)		SPEED LIMIT 40	30	х	36	7.50	1	1		1		
	R7-1D(3)	NO PARKING		24	x	30	5.00	1	1		1	_	
4	W3-3(2M)	SIGNAL AHEAD		36	x	36	9.00				1		
5	W3-3(2M)	SIGNAL AHEAD		36	x	36	9.00	_			1		_
6	R2-1	REMOVE TII	-	—	х		_	1	1				-
7	M1-94		51ST STREET	78	x	30 .	16.25	1	2	_	2		
			NEXT SIGNAL			i							
8	W3-3	REMOVE TH	_		х			1	1		_	-	
9	R7-1D(3)	NO PARKING		24	x	30	5.00	1	1		1	-	
10	R3-55L(3)	LEFT TURN LANE		36	x	48	12.00	_			1		_
11	R3-56(2)	LEFT TURN LANE	-	24	х	30	5.00		_		1		
12	R7-1D(3)	NO PARKING	 -	24	x	30	5.00	1	1		1		A-154
13	J4-1(2)			24	х	36	6.00			-	1		
	M3-4	WEST		24	х	12					·		
	M1-6	STH	_	24		24							
14	R10-50(2M)	FLASHING ARROW	_	30		36	7.50				1		
	R5-1(2)	DO NOT ENTER		30	×	30	6.25	_			-		MOUNT ON SIGNAL POLE
	R1-1F(3)	FOLD-STOP		36	x	36	7.46				_		MOUNT ON SIGNAL POLE
	R1-1F(3)	FOLD-STOP		36	x	36	7.46					-	MOUNT ON SIGNAL POLE
	R6-2L(2)	ONE WAY		24		30	5.00					-	MOUNT ON SIGNAL POLE
	R1-1	REMOVE TII			×			1	1				MOUNT ON SIGNAL PULE
	R7-1D(3)	NO PARKING		24		30	5.00	1	1				
	J4-1(2)			24		36	6.00				1		
	M3-2	EAST		24		12	0.00			-	1		<u></u>
	M1-6	STH		24		24							
22	R3-56(2)	LEFT TURN LANE				30	F 00						
	R5-1(2)	DO NOT ENTER		24		I	5.00				1		
	R1-1F(3)	FOLD-STOP		30		30	6.25	_		-	-		MOUNT ON SIGNAL POLE
	R1-1F(3)	FOLD-STOP		36		36	7.46	-			-	_	MOUNT ON SIGNAL POLE
			_	36		36	7.46	-	77	-		₩■	MOUNT ON SIGNAL POLE
26	R10-50(2M)	FLASHING ARROW	-	30	x	36	7.50					-	MOUNT ON ARM NEXT TO SIG #17 INCIDENTAL TO SIGN
27	R7-1D(2)	NO PARKING		18	x	24	3.00	1	1		1		
28	R1-1F(3)	FOLD-STOP		36	×	36	7.46	_		-			MOUNT ON SIGNAL POLE
29	R6-2L(2)	ONE WAY	-	24		30	5.00						MOUNT ON SIGNAL POLE
30	R2-1(2M)		SPEED LIMIT 40	30		36	7.50				1		
	R4-7(2)	KEEP RT		24		30	5.00	1	1			_	MOUNT ON SIGNAL POLE
_	R4-7(2)	KEEP RT	•	24		30	5.00	-					MOUNT ON SIGNAL POLE
	R3-4(2)	NO U-TURN		24		24	4.00	1	_				ON SIGNAL POLE
	R1-1F(3)	FOLD-STOP		36		36	7.46	<u>.</u>	_				
	R5-1(2)	DO NOT ENTER	_	30		30	6.25	_		_			MOUNT ON SIGNAL POLE
	R5-1(2)	DO NOT ENTER		30		30	6.25	_	_	_	-		MOUNT ON SIGNAL POLE
	R10-50(2M)	FLASHING ARROW		30		36	7.50						MOUNT ON SIGNAL POLE MOUNT ON ARM NEXT TO SIG #22

SHEET 1 OF 3

FILE NAME : j:\projects\D2_215000100\030501_MQ.dgn

HWY:STH 100

COUNTY: MILWAUKEE

PLOT DATE : 14-MAR-2011 15:16

PERMANENT SIGNING QUANTITIES

PLOT BY : MSCCXV

SHEET

WISDOT/CAUUS SHEET 43

PLOT NAME:

PROJECT NO: 2150-00-70

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ı	7

							637.0202	638.2602	638.3000	638.2102	634.0618		
							007.0202	000.2002	000.0000	000.2102			
									REM				
					SIGN	ı	SIGNS	REM	SMALL	MOVE	WOOD	MOUNT	
SIGN	SIGN		SIGN		SIZE	i	REFLC	SIGNS	SIGN	SIGNS	POSTS	ON SAME	
NO.	CODE		MESSAGE	w	х	Н	TYPE II	TYPE II	SUPPORT	TYPE II	4"X 6"x18'	POST AS	
			WEODAGE	[IN.]		[IN.]	[SF]	[EA]	[EA]	(EA]	[EA]	SIGN#	REMARKS
38	R10-50(2M)	FLASHING ARROW		30	x	36	7.50				1		
39	R2-1(2M)		SPEED LIMIT 40	30	×	36	7.50	1	1	_	1		
1	R2-1(2M)		SPEED LIMIT 40	30	x	36	7.50	1	1		1		
1	R3-2(2)	NO LEFT		24	x	24	4.00	1	1		1	<u></u>	
	R7-1D(3)	NO PARKING	-	24	х	30	5.00	1	1		1		
	W3-3(2M)	SIGNAL AHEAD	_	36	x	36	9.00	1	1		1		
	W3-3(2M)	SIGNAL AHEAD		36	×	36	9.00	1	1		1	_	
	M1-94		51ST STREET	78	х	30	16.25	1	2	_	2		
			NEXT SIGNAL										
46	R4-7(2)	KEEP RT		24	х	30	5.00	1	1		1	_	
47	R4-7(2)	KEEP RT		24	х	30	5.00	1	1		1		
48	R3-4(2)	NO U-TURN		24	х	24	4.00	1	_	_		#46	
49	R3-4(2)	NO U-TURN		24	х	24	4.00	1				#47	
50	R3-2(2)	NO LEFT		24	×	24	4.00	1	1	_	1		
51	R3-53R(2)	RT TURN ONLY		24	х	30	5.00	1	1		1		
52	R6-2R(2)	ONE WAY		24	x	30	5.00	1	1	-	1	_	-
53	R3-55L(3)	LEFT TURN LANE	-	36	x	48	12.00				1	_	
54	W3-3(2S)	SIGNAL AHEAD		36	x	36	9.00			w-a-	1	_	SHEET 7
55	R3-8A(2)	LANE CONTROL		36	×	30	7.50				1		SHEET 7
56	R3-8A(2)	LANE CONTROL		36	x	30	7.50				1		
57	R7-1D(2)	NO PARKING		18	x	24	3.00	1	1		1	_	SHEET 8
58	R7-1D(2)	NO PARKING		18	x	24	3.00	1	1		1		SHEET 8
59	R7-1D(2)	NO PARKING		18	х	24	3.00	1	1		1		SHEET 8
60	W3-3(2S)	SIGNAL AHEAD		36	×	36	9.00				1	<u></u>	SHEET 8
61	R7-1D	REMOVE TII			×	_	_	1	1				SHEET 8
62-			* NOT USED *		×	<u> </u>					<u> </u>		* NOT USED *
-													
-102			* NOT USED *		х			_	_				* NOT USED *
	M1-94		ARBON DR	60		15	6.25		_		2		SHEET 4
104			NOT USED								_		
105			NOT USED										-
1	R2-1(2M)		SPEED LIMIT 40	30	x	3 6	7.50	_	_		1		
	R2-1(2M)		SPEED LIMIT 40	30	x	36	7.50				1		
1	R5-1(2)	DO NOT ENTER		30	x	30	6.25				1		
109			NOT USED		х		_						
110			NOT USED	_	x	-					_		
1	R1-1(3)	STOP SIGN	_	36	×	36	7.46	1	1		1		
112	` ′		NOT USED		x		_					_	
	R3-8A(2)	LANE CONTROL	 - -	36	x	30	7.50				1		
1	R6-2L(2)	ONE WAY		24	х	30	5.00			_	1		
	R7-1D(3)	NO PARKING		24	x	30	5.00	1 ,	1		1		44-4
	R2-1(2M)		SPEED LIMIT 40	30	x	36	7.50				1		
	R2-1(2M)		SPEED LIMIT 40	30	x	36	7.50			_	1		
1	R4-7(2)	KEEP RT		24	x	30	5.00	1	1		1	_	
L	, · · ·			1			1	· ·	1	.l	<u> </u>	<u> </u>	1

SHEET 2 OF 3

FILE NAME : j:\projects\D2_215000100\030501_MQ.dgn

PROJECT NO: 2150-00-70

TYPE II PERMANENT SIGNING

HWY: STH 100

COUNTY: MILWAUKEE

PERMANENT SIGNING QUANTITIES PLOT BY : MSCCXV

PLOT NAME :

STH 100 2150-00-70

SHEET

WISDOT/CADUS SHEET 43

PLOT SCALE : 300:1

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							637.0202	638.2602	638.3000	638.2102	634.0618		3111 100 2130-00
													·
									REM				
			· ·		SIGN		SIGNS	REM	SMALL	MOVE	WOOD	MOUNT	
SIGN	SIGN		SIGN		SIZE		REFLC	SIGNS	SIGN	SIGNS	POSTS	ONSAME	
NO.	CODE		MESSAGE	W		Н	TYPE II	TYPE II	SUPPORT	TYPE II	4"X 6"x18'	POST AS	
		***************************************		[IN.]	x	[IN.]	[SF]	[EA]	[EA]	[EA]	[EA]	SIGN#	REMARKS
119	W10-1(2)	RxR		36	×	36	7.07	1	1		1		
	W10-1(2)	RxR	_	36	×	36	7.07		'			_	
	R4-7(2)	KEEP RT		24		30	5.00	1	'1		1	-	
	M1-94	The state of the s	ARBON DR	60	×	15	6.25			_	2		
123			NOT USED		×								
124			NOT USED		x	_					_		
	R2-1(2M)		SPEED LIMIT 40	30		36	7.50				1	_	
126	. (=,,,,		NOT USED		x				_				
127			NOT USED		x			_					
	R5-1(3)	DO NOT ENTER	_	36		36	9.00				1		
	R7-1D(3)	NO PARKING	_	24		30	5.00	1 1	1				
	R7-1L	MOVE			×	-		<u>'</u>		1	1		CUEETO
	R3-8A(2)	LANE CONTROL		36		30	7.50		<u>'</u>		,		SHEET 9
132	110 OA(2)	LANE CONTROL	NOT USED	"			7.30				1		SHEET 9
	R1-1(3)	STOP		36	×	36	7.46	1	1				
	R6-2L(2)	ONE WAY		24		30	5.00		1	-	1	-	-
	R4-7(2)	KEEP RT		24		30	5.00			_	1	-	
136	114-7(2)	KLLI KI	NOT USED	24	х	30	5.00		_		1		
137			NOT USED										
	R7-1D(3)	NO PARKING	MOI OSED	24		30	E 00	4	,		_		
139	K7-1B(0)	NO PARRING	NOT USED	24		30	5.00	1	1		1		-
	W16-9P(3)	AHEAD	- INOT BOLD	36	X	14	2 50		-			.84.40	
	W16-9P(3)	AHEAD		36		14	3.50 3.50	-	-			#142	-
	W11-2(3)	CROSSING		36		36	9.00	 		-		#143	
	W11-2(3)	CROSSING		36		36	9.00				1		
	W11-2(3)	CROSSING		36		36	9.00		_		1		
	W16-7R(3)	ARROW		30		18	3.75	_	-	_	1	 #4.4.4	
- 1	W11-2(3)	CROSSING		36		36	9.00				1	#144	_
	W16-7L(3)	ARROW		30		18	3.75					#4.46	
	W11-2(3)	CROSSING		36		36	9.00		-		1	#146	
	W16-7R(3)	ARROW	_	30		18	3.75					#4.40	
	W11-2(3)	CROSSING		36		36	9.00		<u>-</u>		1	#148	
	W16-7L(3)	ARROW		30		18	3.75					#1E0	
	W11-2(3)	CROSSING		36		36	9.00	 			1	#150	
	W11-2(3)	CROSSING	_	36		36	9.00						
- 1	W16-9P(3)	AHEAD		36		14	3.50			_	1		_
	W16-9P(3)	AHEAD		36		14	3.50					#152	_
_	R4-7(2)	KEEP RT	_	24		30	5.00	1	1		1	#153	PHETA
157		SPEED LIMIT 40	_			_		1			1		SHEET 6
158			_		X	_		'	1	-			SHEET 6
159					^ V	_		_	_	1			SHEET 5 MOUNT UNDER SIGN #135
160		TIME PLAQUE			X	_			-	1	-		UNDER SIGN #118
	TOTALS	. IME . ERGUL	<u> </u>		х		627.07	42	40	1			UNDER SIGN #118
	IOIALO						637.07	42	42	4	75		<u> </u>

SHEET 3 OF 3

FILE NAME : j:\projects\D2_215000100\030501_M0.dgn

PROJECT NO: 2150-00-70

TYPE II PERMANENT SIGNING

HWY:STH 100

COUNTY: MILWAUKEE

PERMANENT SIGNING QUANTITIES

PLOT BY : MSCCXV

PLOT NAME:

STH 100 2150-00-70

SHEET

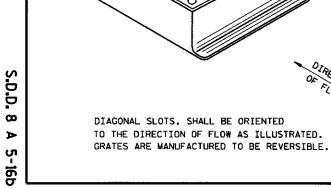
WISDOT/CAUDS SHEET 43

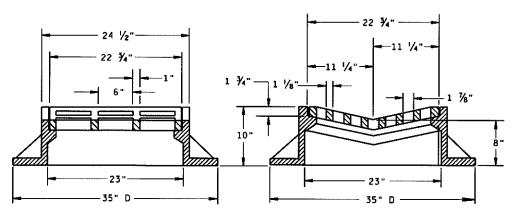
b

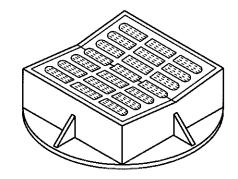
Standard Detail Drawing List

08A5-16B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A5-17D	INLET COVER, TYPE Z MANHOLE COVERS, TYPE K, J, J-S, J-H, J-H-S, L & M
08C1-5	INLETS TYPE 1, 2, 3 & 4
08C5-2	INLETS TYPE 8, 9, 10, AND 11
08D1-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D5-14A	CURB RAMPS TYPES 1 AND 1-A
08D5-14B	CURB RAMPS TYPES 2 AND 3
	CURB RAMPS TYPE 4A
	CURB RAMPS TYPE 4B
	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E9-6	SILT FENCE
08E10-2	INLET PROTECTION TYPE A, B, C AND D
	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
09B2-7	CONDUIT
09в4-9	PULL BOX
	CONCRETE BASES, TYPES 1, 2 & 5
09C3-3	TRANSFORMER/PEDESTAL BASES
09C6-5	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C12-1A	CONCRETE BASE TYPE 13
09C12-1B	CONCRETE BASE TYPE 13
09D1-4	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D2-2	SIGNAL OR LIGHTING CONTROL CABINET
09E1-10C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E1-10D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E1-10G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E3-3	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E6-4	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
	TRAFFIC SIGNAL STANDARD FOLL BRACKET MOUNTINGS (TTPICAL) 13 FT. OR 13 FT. TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
	TYPE 13 POLE 35'-55' MONOTBE ARM
09E8-3E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F8-3	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)
09F10-3	LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLAY
09F11-3	LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLAY
09G1-3A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G1-3B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G1-3D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G1-3E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11B2-2	CONCRETE MEDIAN NOSE
13C1-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C15-5A	CONCRETE BASE
13C15-5B	CONCRETE BASE
13C18-1C	CONCRETE PAVEMENT JOINT TIES
13C18-1D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C4-1	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C5-1	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C7-11B	PAVEMENT MARKING WORDS
15C7-11D	PAVEMENT MARKING WORDS PAVEMENT MARKING ARROWS
15C8-13A	PAVEMENT MARKING (MAINLINE)
15C8-13E	PAVEMENT MARKING (LEFT TURN LANE)
15C8-13F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C11-5	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C18-3	MEDIAN ISLAND MARKING
15D12-2	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D20-1	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D20 1	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-1	TRAFFIC CONTROL, SIDEWALK CLOSURE
	TOWN THE CONTROL STATEMEN CLOSURE



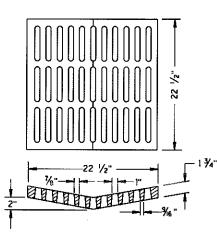






TYPE "B" (APPROXIMATE WEIGHT 395 LBS.)

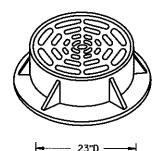
> FRAME..... 285 LBS. GRATE..... 110 LBS.

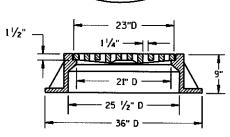


ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 125 LBS.) GRATE.....125 LBS.

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





TYPE "C"

(APPROXIMATE WEIGHT 340 LBS.)

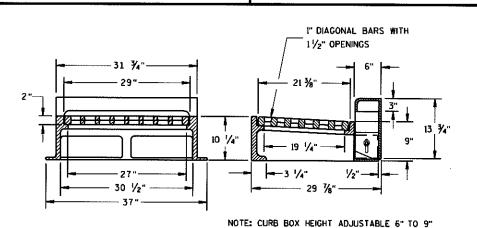
FRAME..... 235 LBS. GRATE..... 105 LBS.

(APPROXIMATE GRATE WEIGHT 365 LBS.)

TYPE "MS" (APPROXIMATE GRATE WEIGHT 270 LBS.)

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

GRATE.....270 LBS.



TYPE "WM"

(APPROXIMATE WEIGHT 670 LBS.)

FRAME..... 360 LBS. GRATE..... 160 LBS. CURB BOX..... 150 LBS.

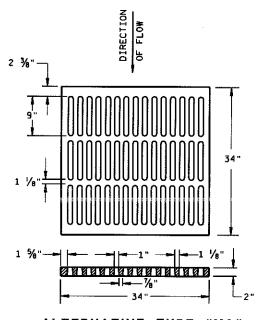
GENERAL NOTES

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.

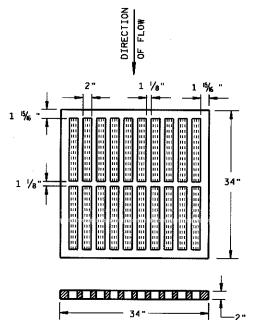
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



ALTERNATIVE TYPE "MS"

CRATE.....365 LBS.

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



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

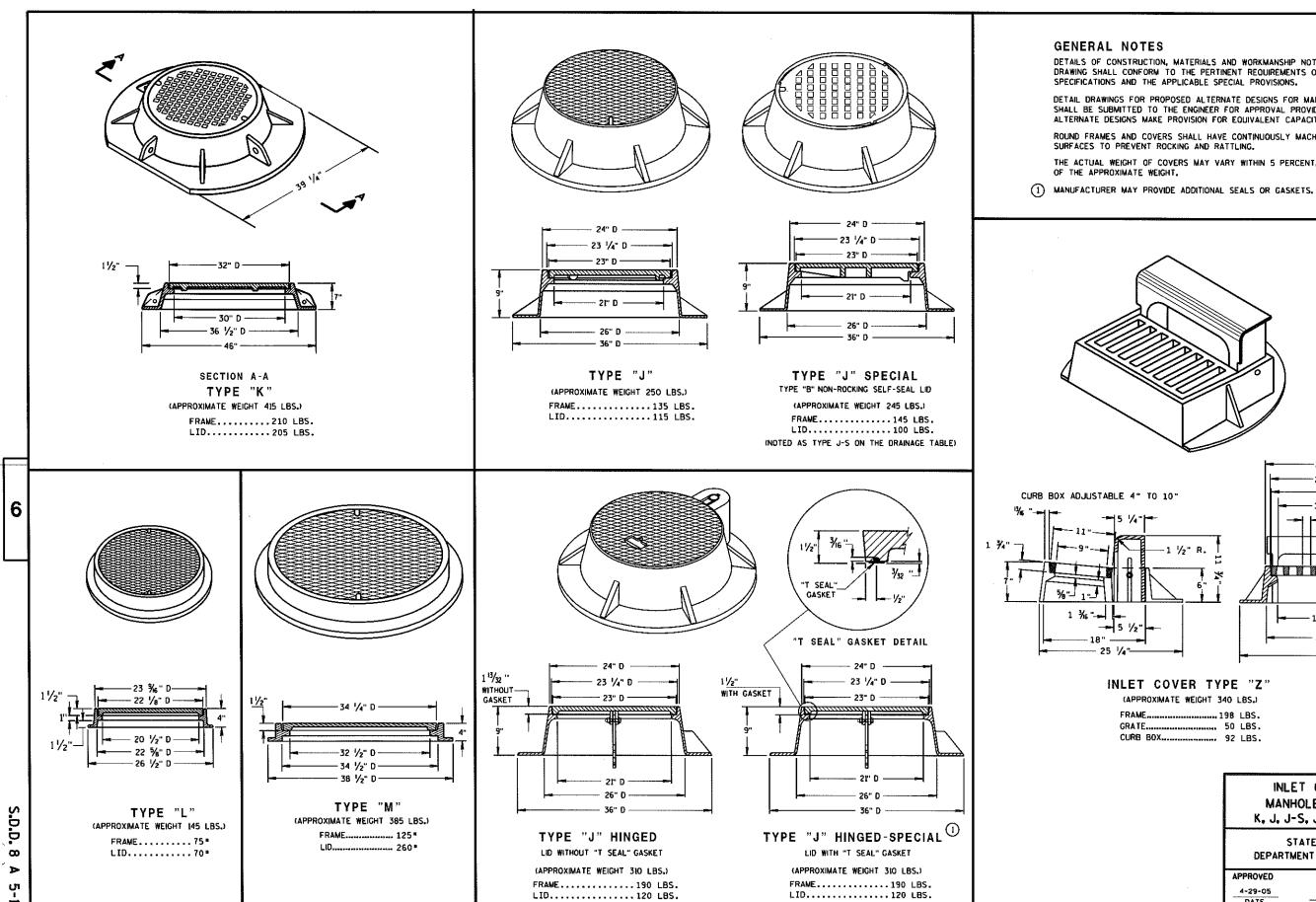
> STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED FHWA

Town Thomason CHIEF ROADWAY DEVELOPMENT ENGINEER

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

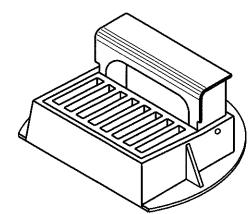
(NOTED AS TYPE J-S-H ON THE DRAINAGE TABLE)

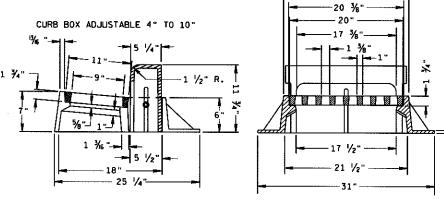
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.





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

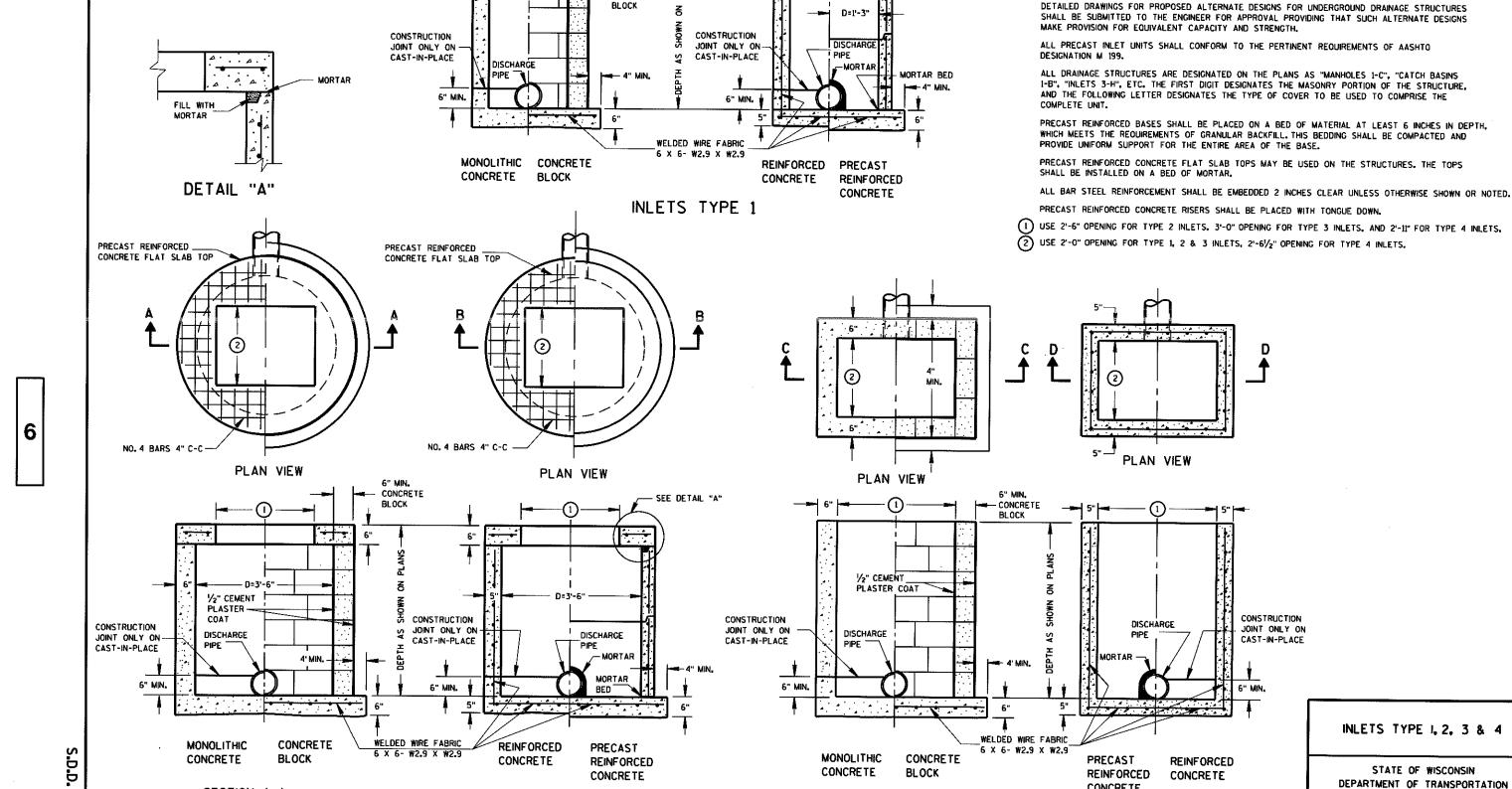
-21 %

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 4-29-05 DATE CHEP ROADWAY DEVELOPMENT ENGREER FHWA

⋖ ∞ D.D.

5-17d



CONCRETE

INLETS TYPE 2. 3 & 4

SECTION B-B

1/2" CEMENT PLASTER COAT /

6" MIN.

CONCRETE

*SELECTION OF SQUARE OR CIRCULAR

DESIGN WILL BE BASED ON THE PIPE

SIZES AND THE INLET COVER BEING

SECTION A-A

œ

C

-SEE DETAIL "A"

1'-0"

CONCRETE

SECTION C-C

BLOCK

GENERAL NOTES

SPECIAL PROVISIONS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL

REINFORCED

CONCRETE

SECTION D-D

REINFORCED

CONCRETE

CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE

94

JOHN J. MANGANTE
CHIEF ROADWAY DEVELOPMENT ENGINEER

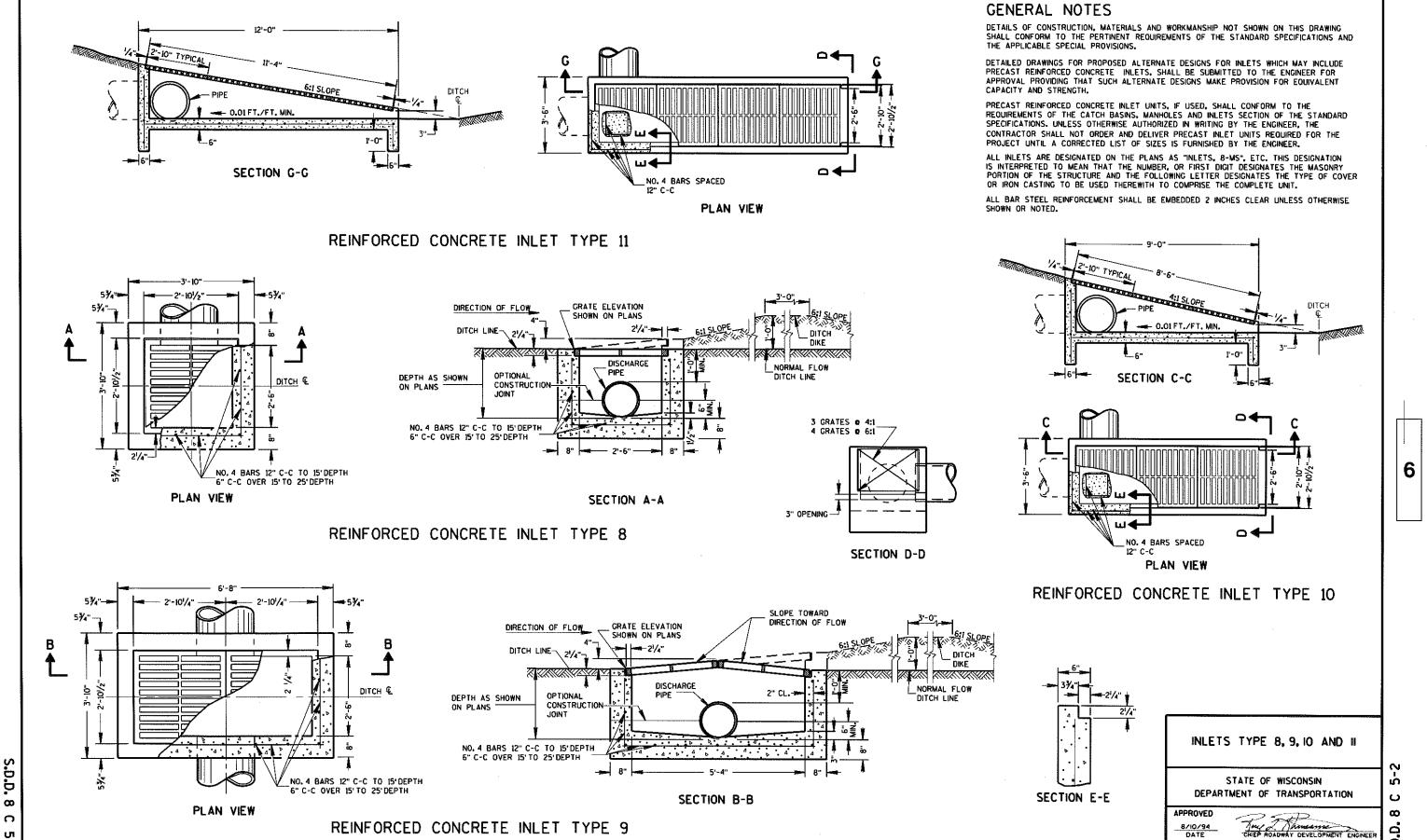
STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

8/26/94 DATE

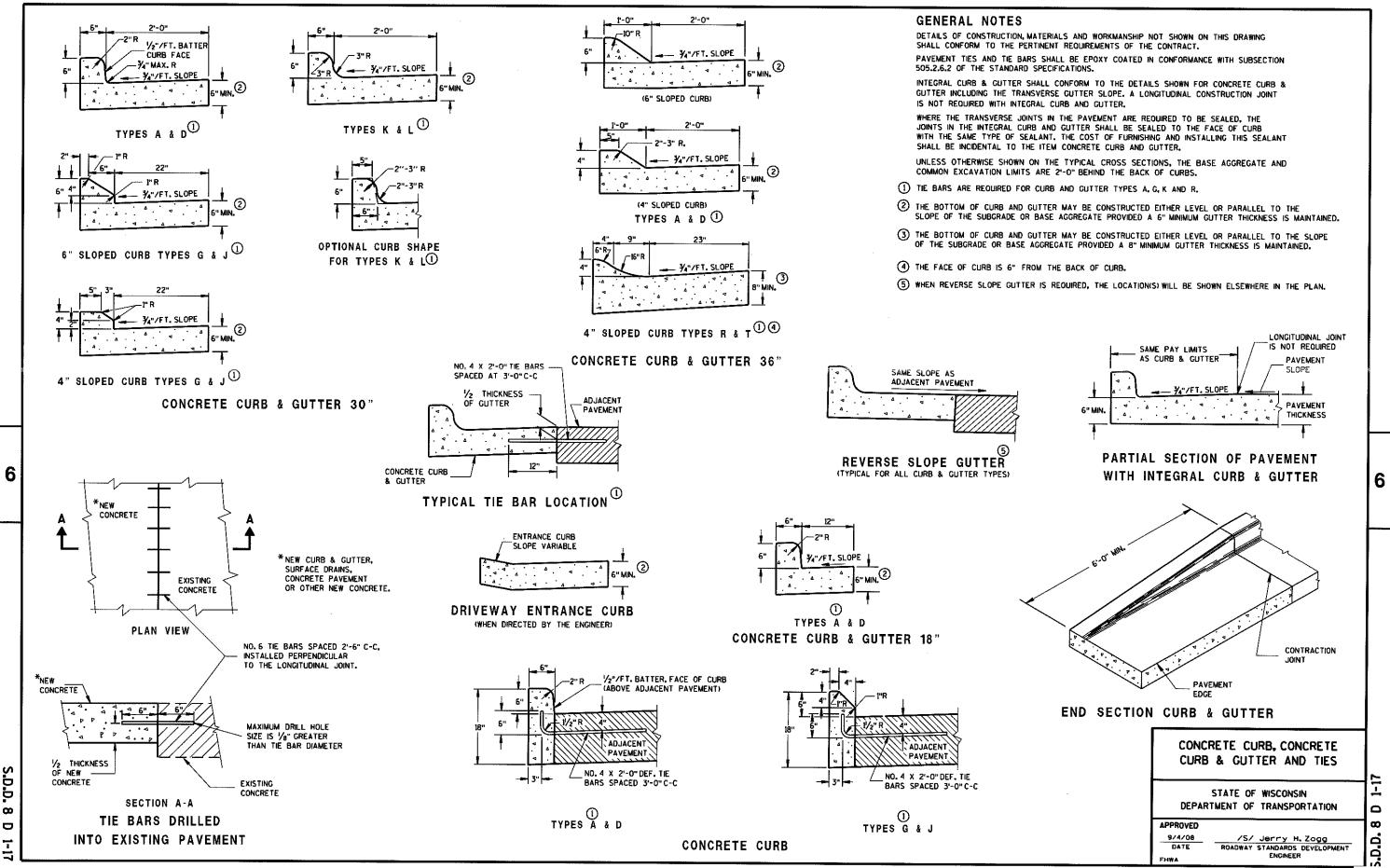
6

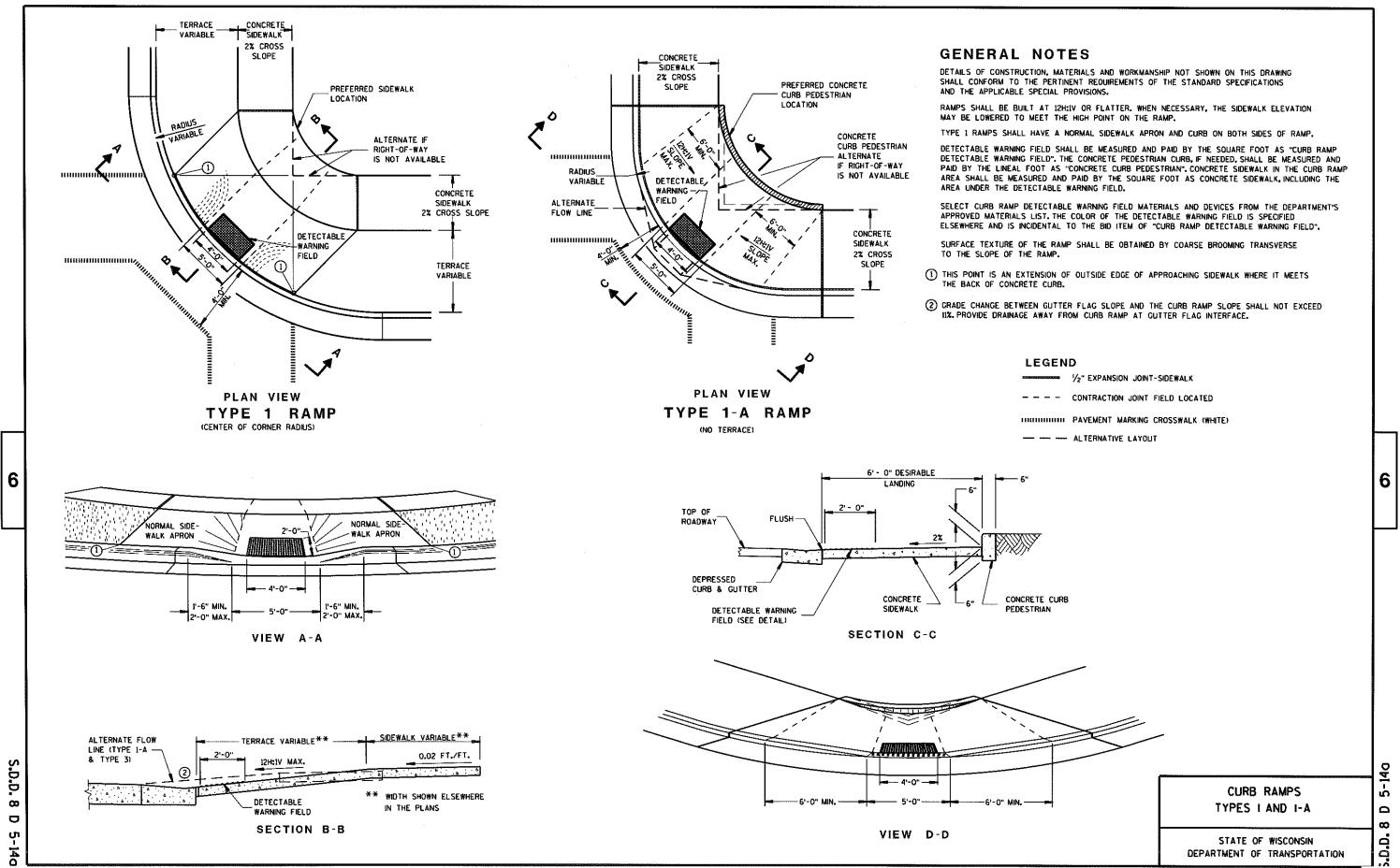
5-2

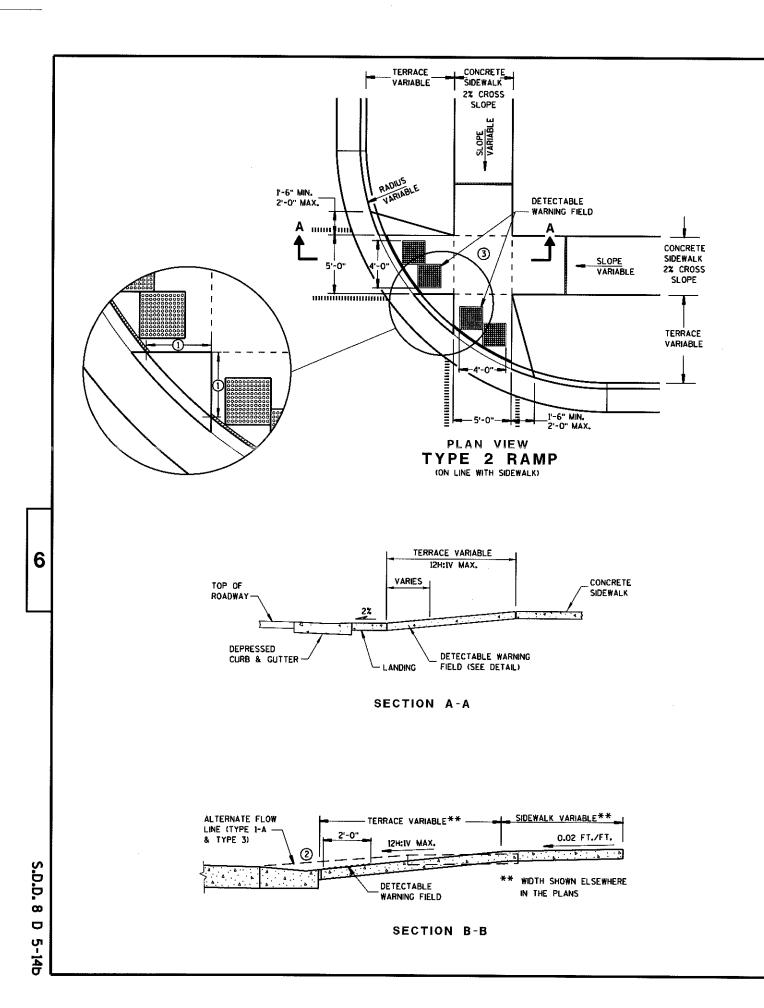


REINFORCED CONCRETE INLET TYPE 9

95







GENERAL NOTES

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

- (1) WHEN THIS DISTANCE IS LESS THAN 6'-O" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP, REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP, 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%, PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE,
- (3) PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

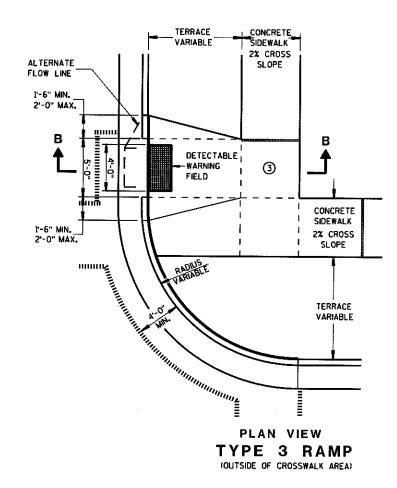
LEGEND

1/2" EXPANSION JOINT-SIDEWALK

--- CONTRACTION JOINT FIELD LOCATED

HILLIAHIHI PAVEMENT MARKING CROSSWALK (WHITE)

- - ALTERNATIVE LAYOUT

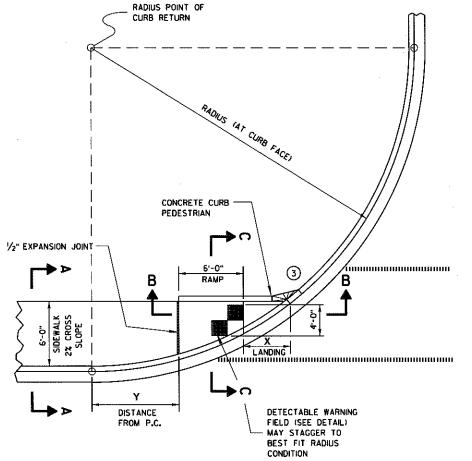


CURB RAMPS
TYPES 2 AND 3

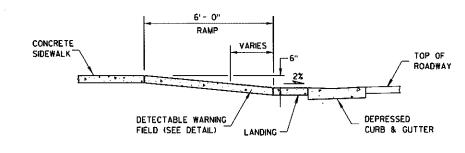
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

7

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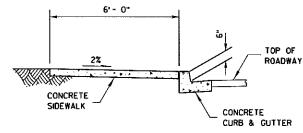
CURB RAMP TYPE 4A PLAN VIEW



SECTION B-B

RADIUS (AT CURB FACE) 20 FEET 6'-13/4" 2'-71/4" 30 FEET 7 -11 1/4" 4'-8'/4" 40 FEET 9'-5!/4" 6'-5" 50 FEET 10'-8¾" 7'-11'/4" 60 FEET 11'-10'/4" 9'-31/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A

ISOMETRIC VIEW

CONCRETE CURB VARIES PEDESTRIAN O TO 6" TOP OF ROADWAY CONCRETE - DEPRESSED RAMP CURB & GUTTER

SECTION C-C

GENERAL NOTES

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

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

LEGEND

1/2" EXPANSION JOINT-SIDEWALK

--- - CONTRACTION JOINT FIELD LOCATED

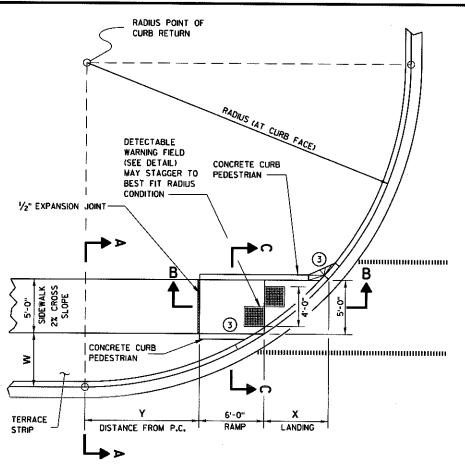
HIBHHIBHB PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4A

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 5-14c

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3.D.D.



GENERAL NOTES

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

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

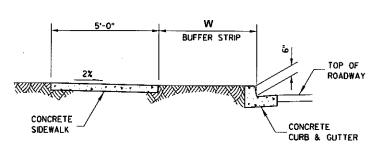
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

RADIUS	W = :	3' - 0"	W =	4' - 0"	W =	5' - 0''	W =	6' - 0"	W =	7' - 0''
(AT CURB FACE)	Х	Y	х	Y	х	Y	х	Υ	х	Y
20 FEET	5'-51/2"	4'-61/2"	4'-8'/2"	6'-0"	4'-1"	7'-23/4"	3'-7"	8'-3 ¹ /2"	3'-1/2"	9'-21/2"
30 FEET	7'-3¾"	7'-1"	6'-51/2"	8'-1t ¹ /2"	5'-9'/4"	10'-7"	5'-2'/2"	12'-0"	4'-8¾"	13'-3'/4"
40 FEET	8'-91/2"	9'-2'/2"	7'-10"	11'-5'/4"	7'-1"	13'-41/2"	6'-5¾"	15'-¾"	5'-11'/2"	16'-7'/4"
50 FEET	10'-3/4"	11'-¾"	9'-1/4"	13'-71/4"	8'-21/2"	15'-91/2"	7'-6'/2"	17'-9"	6'-113/4"	19'-6'/4"
60 FEET	11'-21/2"	12'-8¾"	10'-¾''	15'-61/2"	9'-21/4"	17'-11¾"	8'-5-7/4"	20'-13/4"	7'-101/2"	22"-11/2"
70 FEET	12'-2¾"	14'-3'/4"	11'-1/4"	17'-4"	10'-1"	19'-11¾"	9'-3¾"	22'-4'/4"	8'-8'/4"	24'-6'/4"
80 FEET	13'-2"	15'-81/2"	11'-10'/2"	18'-11¾"	10'-10¾"	21'-10"	10'-1"	24'-4¾"	9'-5"	26'-8 }/ 4"
90 FEET	14'- 1/2"	17'-1/2"	12'-8'/4"	20'-6'/2"	11'-7¾"	23'-7"	10'-9¾"	26'-3¾"	10'-11/4"	28'-9'/2"
100 FEET	14'-101/2"	18'-3¾"	13'-5 ¹ /2"	22'-0"	12'-4'/4"	25'-2¾"	1i°-5¾"	28'-11/2"	10'-9"	30'-9"

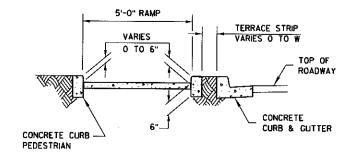
INTERMEDIATE RADII CAN BE INTERPOLATED



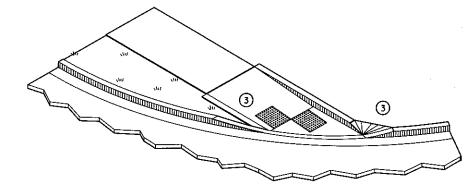


SECTION A-A

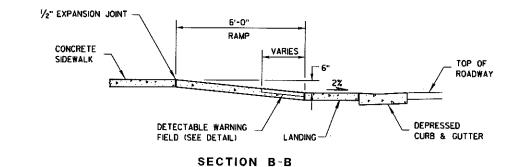
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SECTION C-C



ISOMETRIC VIEW



LEGEND

1/2" EXPANSION JOINT-SIDEWALK

- - - CONTRACTION JOINT FIELD LOCATED

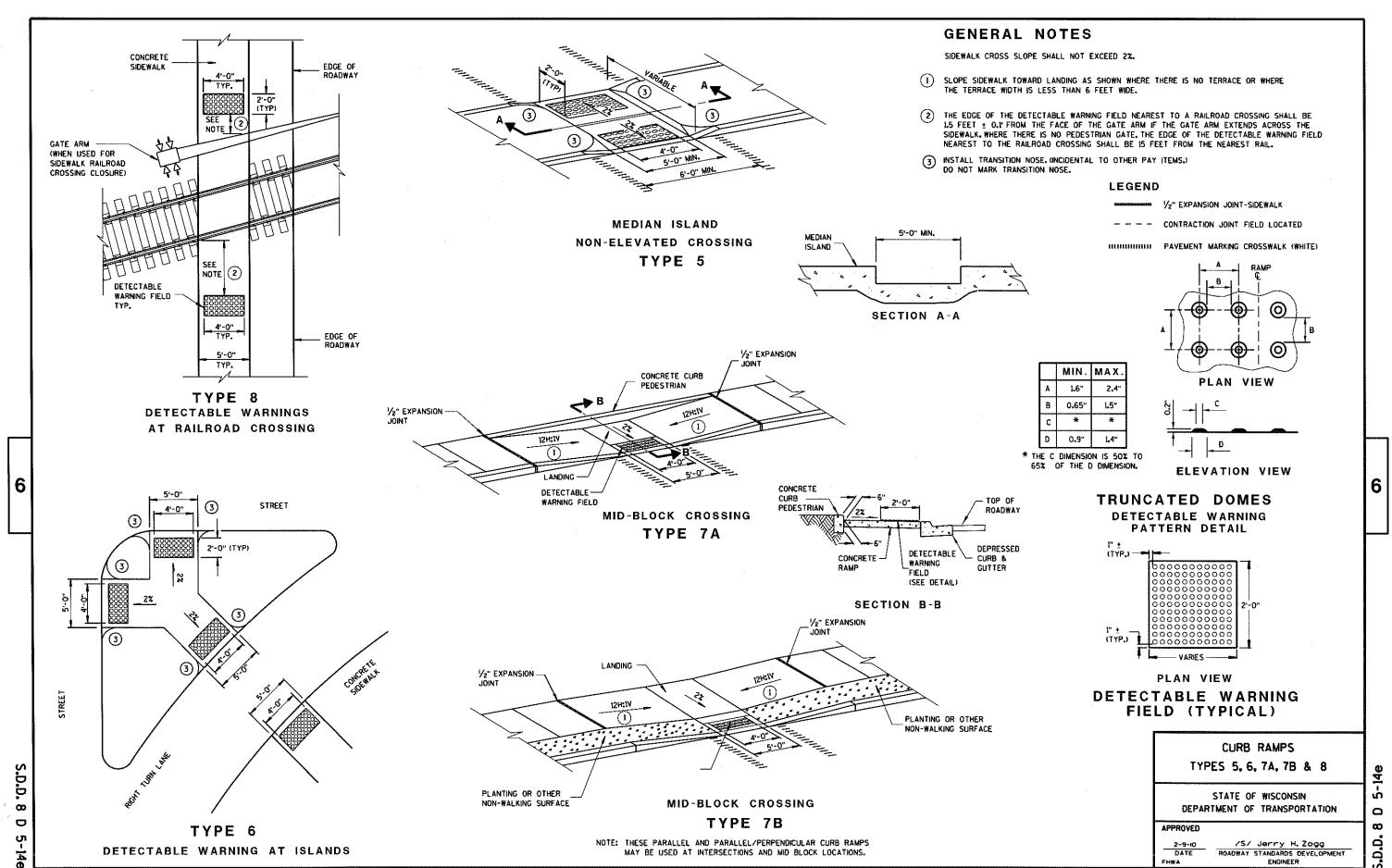
HITHIUHI PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 4B

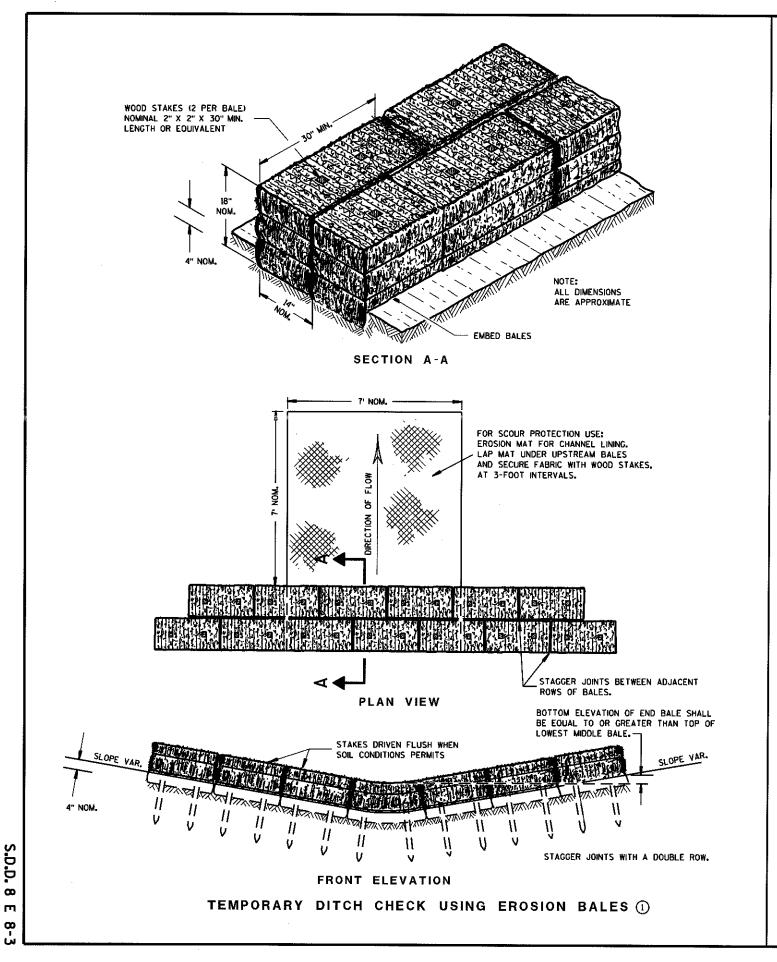
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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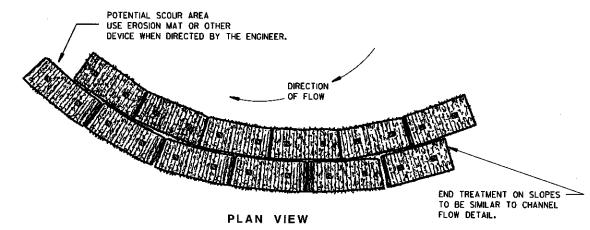




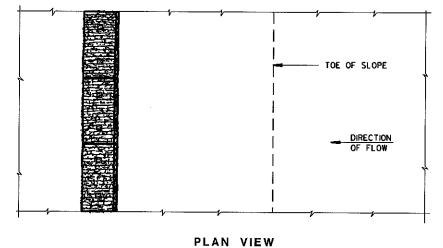
GENERAL NOTES

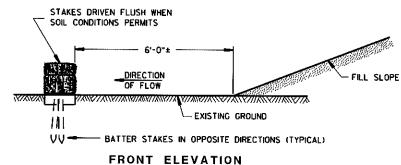
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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



WHEN ALTERING THE DIRECTION OF FLOW





WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

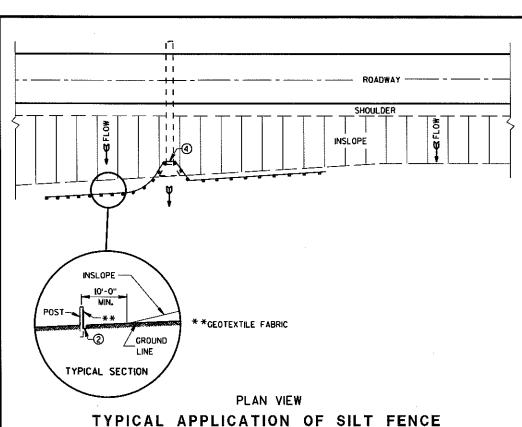
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

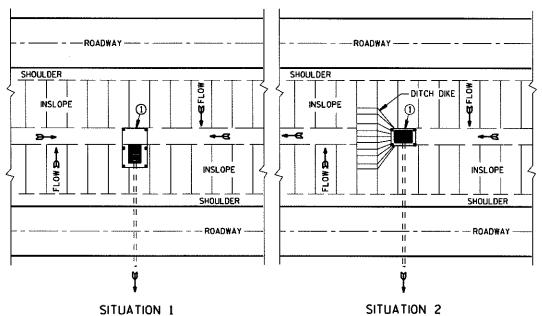
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02
DATE CHEFT NOADWAY DEVELOPMENT ENGINEER

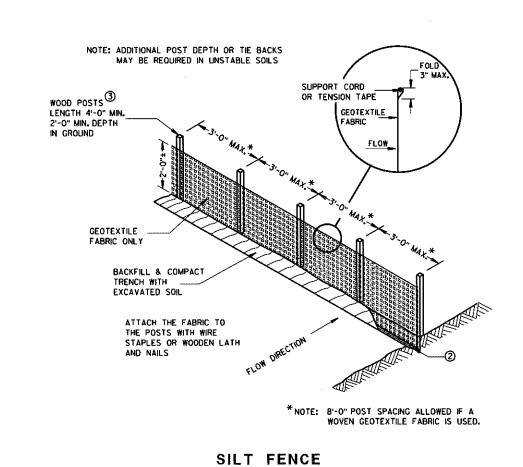
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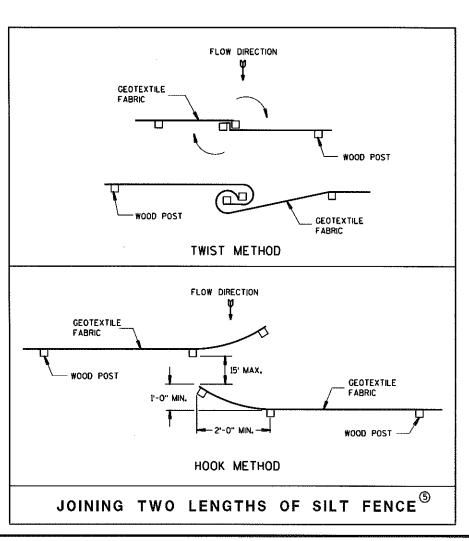
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PLAN VIEW SILT FENCE AT MEDIAN SURFACE DRAINS

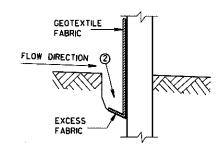




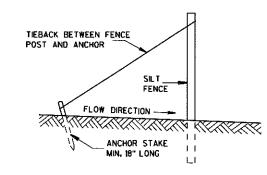
GENERAL NOTES

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

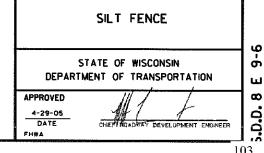
- 1 HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- (2) FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- 3 WOOD POSTS SHALL BE A MINIMUM SIZE OF 11/8" X 11/8" OF OAK OR HICKORY.
- 4 SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- (5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE



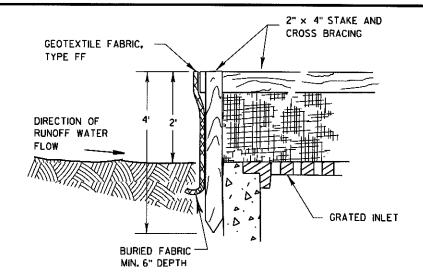
TRENCH DETAIL

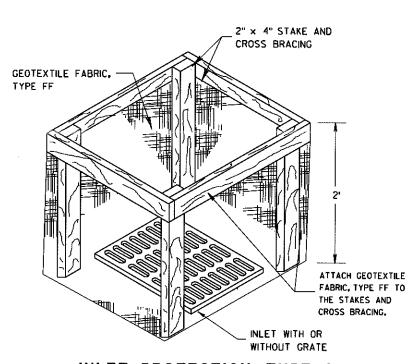


SILT FENCE TIE BACK (WHEN REQUIRED BY THE ENGINEER)



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INLET PROTECTION, TYPE A

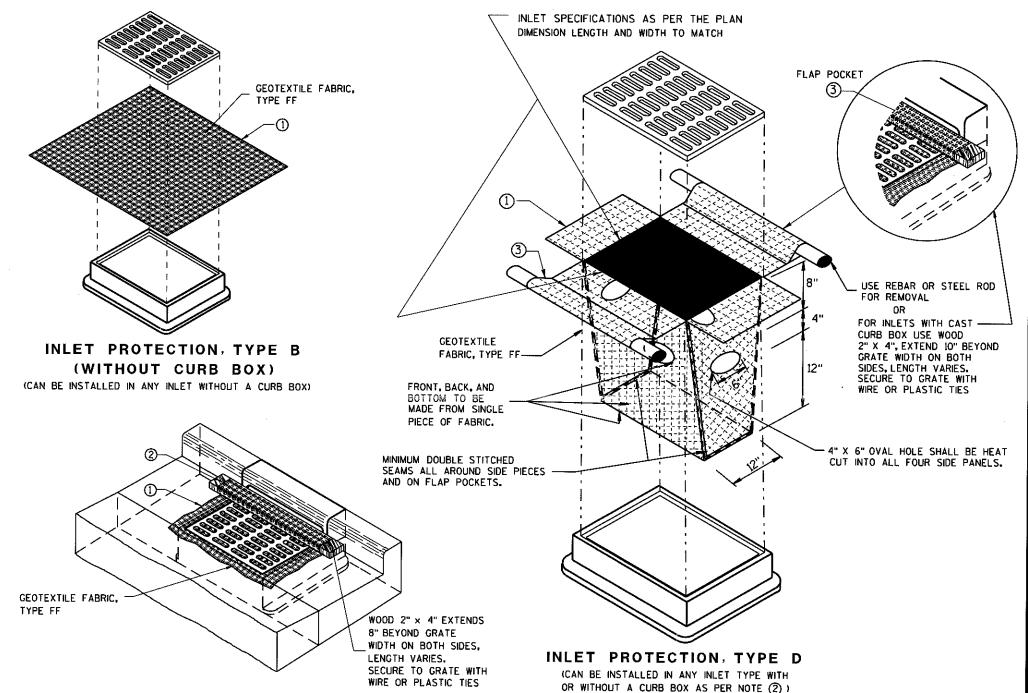
GENERAL NOTES

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 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 A. B. C. AND D

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

10/16/02 DATE

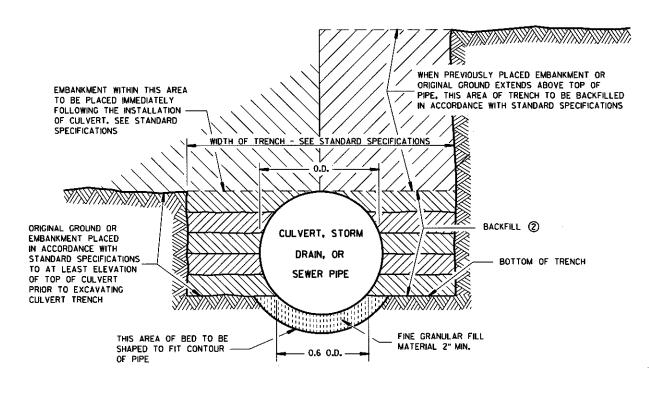
CHIEF ROADWAY DEVELOPMENT ENGINEER

GENERAL NOTES

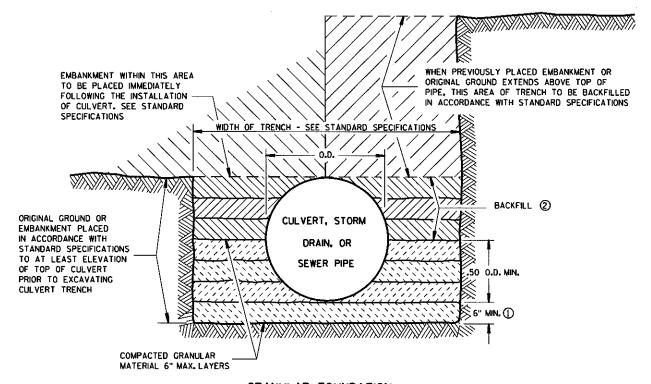
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS

- ① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO 1/2 INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.
- TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



GRANULAR FOUNDATION

CLASS "B" BEDDING

CLASS 'B' BEDDING FOR CULVERT PIPE OR STORM SEWER

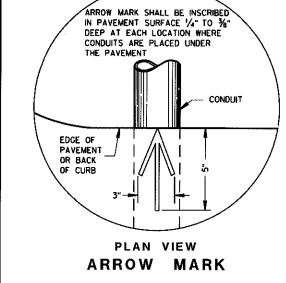
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

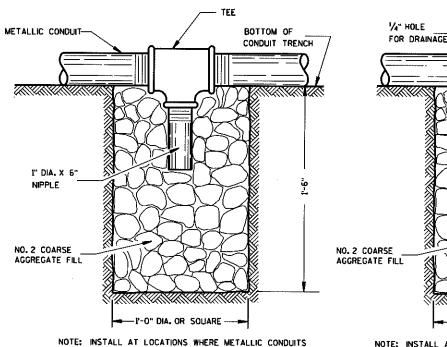
APPROVED

4/7/83 DATE

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PVC CONDUIT TRENCH

FOR DRAINAGE

PVC CONDUIT TRENCH

CONDUIT TRENCH

CONDUIT TRENCH

CONDUIT TRENCH

PVC CONDUIT TRENCH

TO DIA, OR SOUARE

NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS

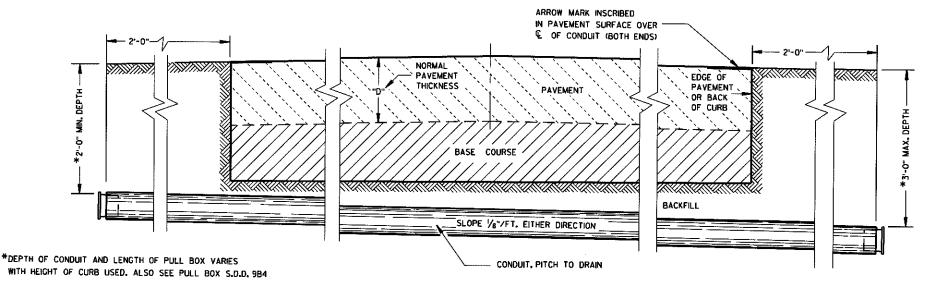
BOTTOM OF

CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT

CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 10/23/03 DATE

STATE ELECTRICAL ENGINEER FOR

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TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES	CORRUGATED STEEL PIPE									
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	В	24	30	36	24	30	36	36	42	48
WALL THICKNESS	С	0.064	0.064	0.064	0.064	0,064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	Ε	14 1/2	14 1/2	14 1/2	20 1/2	20 ½	20 ½	26 ½	26 ½	26 1/2
FRAME	F	8 1/2	8 1/2	8 ½	14 1/2	14 1/2	14 1/2	20 ½	20 ½	20 ½
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 ½	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

- * THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.
- NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48"
 (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

6" MAX. EXTENSION CORRUGATED PIPE (3) BOLTS, NUTS & LOCKWASHERS REQUIRED

CORRUGATED PIPE EXTENDER

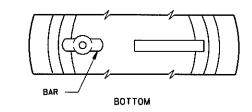
HEAVY DUTY FRAME -AND COVER

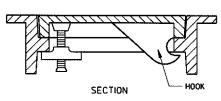
WHEN A PULL BOX IS INSTALLED IN CRUSHED

AGGREGATE SHOULDERS, PLACE IT 2-3

2-3 INCHES OF CRUSHED AGGREGATE

INCHES BELOW GRADE AND COVER IT WITH





ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

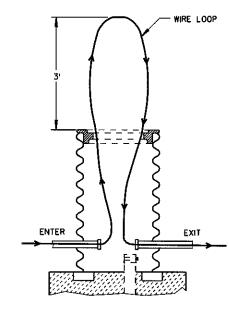
2" DRAIN DUCT TO

DITCH OR SEWER

2" PVC PIPE CAP ON BOTH ENDS

WITH 7.8 1/4" HOLES DRILLED

IN EACH END.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

ELECTRIC - FINAL GRADE 6'-0" LENGTH OF GROUNDING WIRE 3'-0" LENGTH OF STAINLESS STEEL GROUNDING WIRE HARDWARE -ALL METALLIC CONDUIT BOLT, NUTS *10 AWG EQUIPMENT GROUNDING ENDS SHALL BE REAMED AND LOCKWASHERS WIRE FROM NEAREST AND THREADED (1/4" X 3/4" X 20 TPI) CAST BASE, CONTINUOUS CUT OPENINGS THRU PULL BOX LUG AS REQUIRED IN TO FRAME AND COVER THE FIELD A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR LAY-IN (LUG) AL/CU RATED, SIZED TO ACCEPT AWG. "10 ALL CONDUIT PITCHED TO *4 COPPER STRANDED WIRE TO DRAIN TO PULL BOXES 4 TO 8 BRICKS **EQUIPMENT GROUNDING LUG AND** EQUALLY SPACED LOCATION IN STEEL PULL BOXES

PULL BOX STATE OF WISCONSIN \mathbf{a} DEPARTMENT OF TRANSPORTATION മ **APPROVED** /S/ Balu Ananthanarayanan 9/27/06 **વં** STATE ELECTRICAL ENGINEER FOR

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX. SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT CROUNDING ELECTRODE SHALL BE 3/8" X 8'-O", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A =4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE "4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.

INSTALL END BELLS (U.L. LISTED FOR ELECTRICAL USE) ON ALL NONMETALLIC CONDUIT BEFORE INSTALLATION OF

(TYP.)

NO. 2 COARSE

(SEE SECTION 501

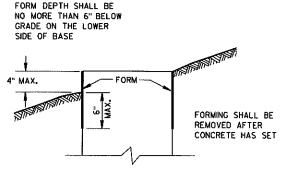
OF THE STANDARD

WIRE AND/OR CABLE.

SPECIFICATIONS)

AGGREGATE

PULL BOX



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

FORMING DETAIL

CONDUIT WITHIN

6" DIA.

ANCHOR RODS SHALL BE

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-CONDUIT

123/4" BOLT

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH

AND LEVEL.

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

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

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

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

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

1" CONDUIT 1" CONDUIT FOR GROUNDING FOR GROUNDING -CONDUIT -CONDUIT **PURPOSES** PURPOSES _111/2" BOLT CIRCLE _111/2" BOLT CIRCLE CONDUIT B E 689 CONDUIT WITHIN CONDUIT WITHIN 6" DIA. ได้บา то อบรั ANCHOR RODS SHALL BE ORIENTED PARALLEL TO (TUO OT TUO) THE ROADWAY

ORIENTED PARALLEL TO THE ROADWAY ANCHOR RODS SHALL BE ORIENTED PARALLEL TO FORM ALL EXPOSED THE ROADWAY CONCRETE. PROVIDE 1" CHAMFER ALL AROUND HALF SECTION HALF SECTION IN PAVEMENT IN UNPAVED AREA FORM ALL EXPOSED (TYPICAL FOR TYPES 1, 2 & 5) FORM ALL EXPOSED (TYPICAL FOR TYPES 1, 2 & 5) CONCRETE, PROVIDE CONCRETE, PROVIDE I" CHAMFER ALL AROUND 1" CHAMFER ALL AROUND ₹"-¥ PAVEMENT TOPSOIL AND SEED OR CRUSHED AGGREGATE 1/4" PREFORMED BY THE ENGINEER ■-3" CLEAR EXOTHERMIC CONNECTION EXOTHERMIC CONNECTION TO EQUIPMENT TO EQUIPMENT GROUNDING CONDUCTOR GROUNDING CONDUCTOR ≓6" STUB %" DIA, X 8'-0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED %" DIA, X 8'-0" COPPERCLAD EQUIPMENT OPTIONAL 4" L BEND GROUNDING ELECTRODE OR HEX NUT (TYPICAL RÉQUIRED FOR TYPES 1, 2 & 5) TYPE 1

CONCRETE BASES

TYPE 2

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 41/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

TYPE 5

GENERAL NOTES (CONTINUED)

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

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

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

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

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

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD, ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

- THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.
- (2) (4) 1" DIA. X 3'-6" ANCHOR RODS.
- (3) (4) I" DIA. X 5'-0" ANCHOR RODS.
- (4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.
- (5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT & 1'-0" C-C.
- (6) (4) 1" DIA. X 3'-6" ANCHOR RODS.
- (7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT,
- (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT & 1'-0" C-C.

CONCRETE BASES,
TYPES I, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/3/IO /S/ Joanna L. Bush

DATE STATE ELECTRICAL ENGINEER FOR HIGHWAYS

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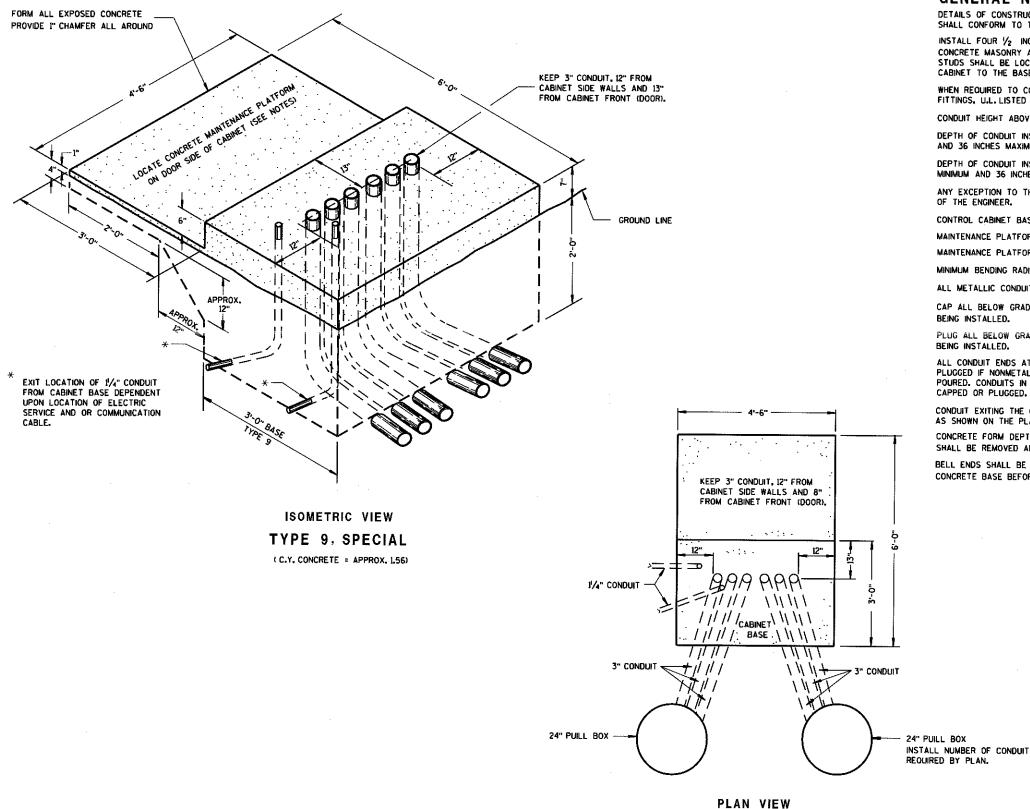
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GENERAL NOTES

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

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

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM

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

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

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

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

> CONCRETE CONTROL CABINET BASE, TYPE 9. SPECIAL

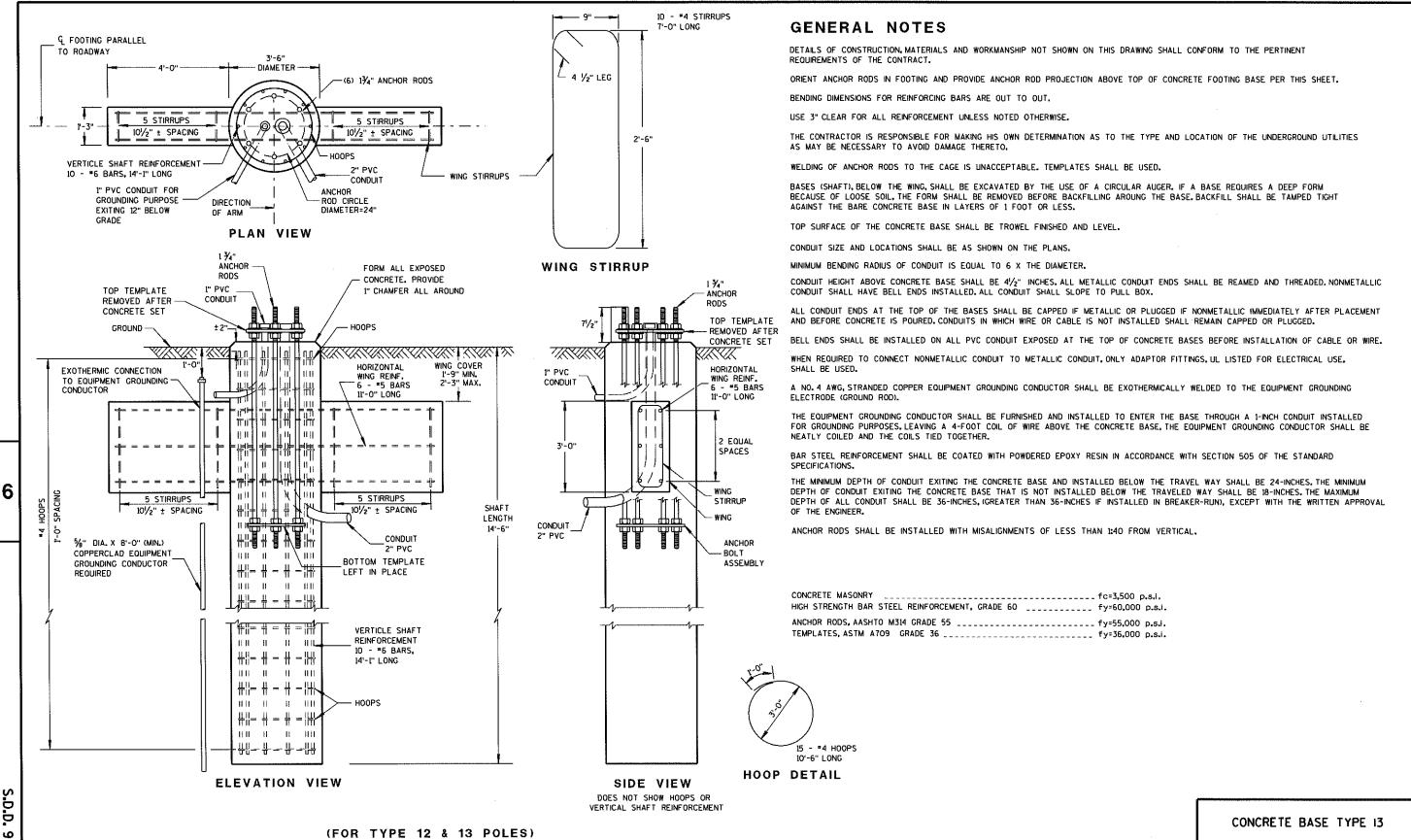
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

/S/ Balu Ananthanarayanan STATE ELECTRICAL ENGINEER FOR

2/27/07





CONCRETE = 6.3 C.Y.

SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

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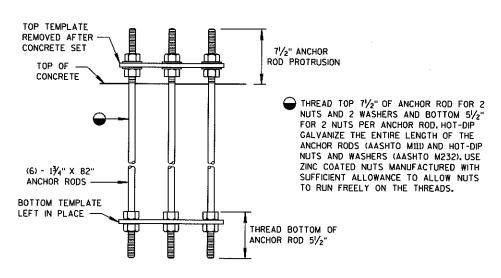
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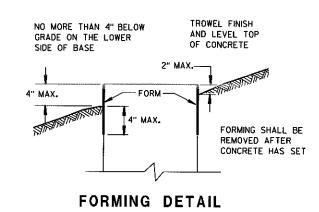
DEPARTMENT OF TRANSPORTATION

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ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



CONCRETE BASE TYPE 13

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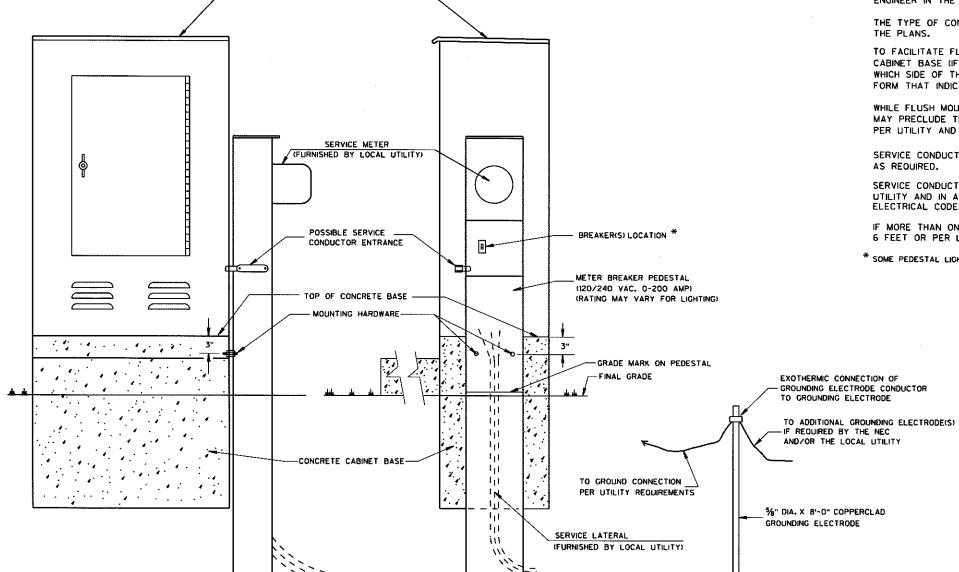
APPROVED 3-3-10

3-3-10 /S/ Joanne L. Bush
DATE STATE ELECTRICAL ENGINEER FOR HWY

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TYPICAL CABINET SERVICE INSTALLATION

D.D.

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GROUND MOUNTED CABINET

GENERAL NOTES

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

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

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

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

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

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

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

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

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

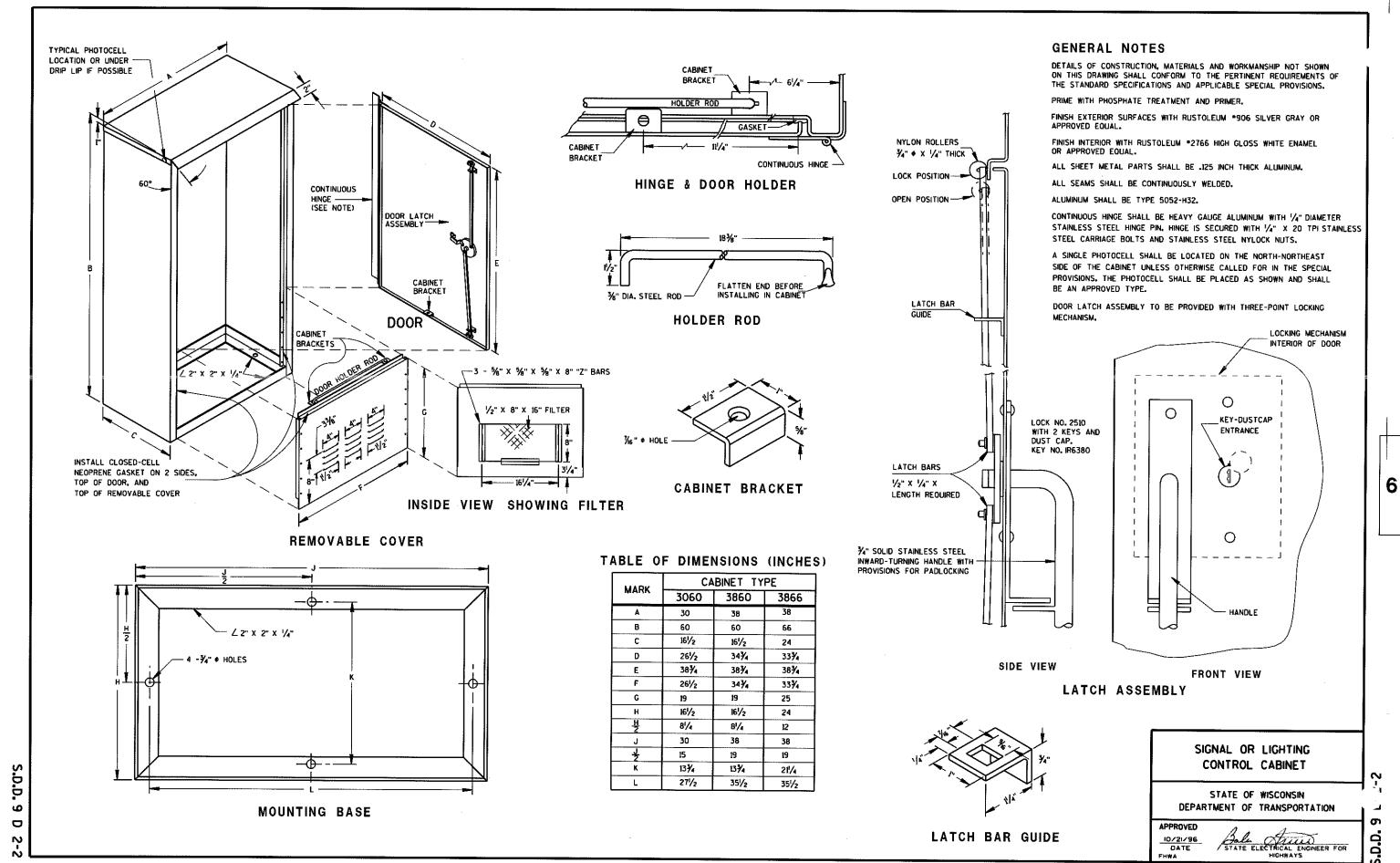
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED IO/27/09

/S/ Joanna L. Bush
STATE ELECTRICAL ENGINEER FOR HIGHWAYS

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SIDEWALK, OR IF NONE, PAVEMENT CENTERLINE GRADE.

GENERAL NOTES

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

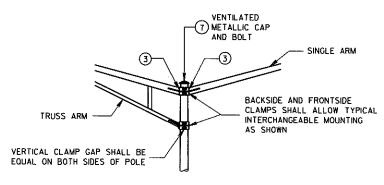
ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GACE (.1196").

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2% INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH. WHEN TRANSFORMER BASES ARE USED, CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658).
- GROMMETS, I" CHASE NIPPLES OR I" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 13/4" HOLE IN POLE SHAFT FOR WIRING.
- (4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- (5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- 6.) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- 7. FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE () 1/4" x 3/4" 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- (8) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.



INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TYPE 4 POLE MOUNTING CONFIGURATION

TYPICAL MOUNTING OF 3 SECTION

SIGNAL FACE

TYPICAL MOUNTING OF BACK TO BACK

3 AND 5 SECTION SIGNAL FACES

S.D.D. 9 E 1-10c

WHEN REQUIRED

(MAXIMUM LOAD)

D.D. 9 E

TYPE 5 POLE MOUNTING CONFIGURATION

(MAXIMUM LOAD)

LIGHTING ONLY

6

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN IS'ARMS WITH FINANDERES

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

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

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD IT GAGE (.1196").

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

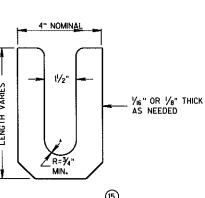
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FRONT VIEW RECTANGULAR CLAMP SHIM (4 TO A SET)

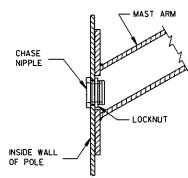
END VIEW



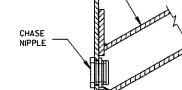
TYPICAL APPLICATION OF GROMMET IN POLE SHAFT

GROMMET

POLE SHAFT

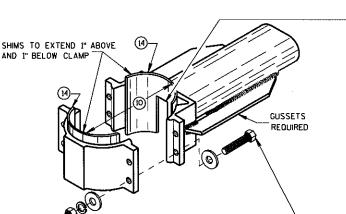


CHASE NIPPLE IN POLE SHAFT



TYPICAL APPLICATION OF

BRACKET ARM

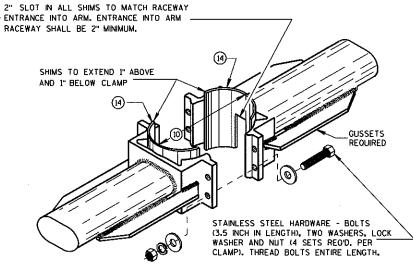


LEVELING SHIM

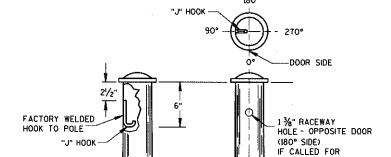
SHALL BE ALUMINUM

STAINLESS STEEL HARDWARE - BOLT LENGTH FOR TROMBONE ARM CLAMPS SHALL BE 4.5 INCH MIN. - 6.0 INCH MAX., BOLTS FOR LUMINAIRE ARM CLAMPS SHALL BE 3.5 INCH IN LENGTH. THREAD BOLTS ENTIRE LENGTH.

BASE PLATE



TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



GENERAL NOTES

(0. 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.

CIRCLE USING 1" DIAMETER ANCHOR RODS.

SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHALL BE 1/4" HIGH AND LEGIBLE.

6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(IL) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

(13.) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)

(4) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

12. BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT

PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35",

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10".

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM, NUMERALS

THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(5) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT

ACCEPTABLE, LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

SHIMS SHALL BE LONG ENDUGH AND WIDE ENOUGH TO COMPLETELY COVER THE

(6.625" O.D. FOR TROMBONE MAST ARM)

STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF

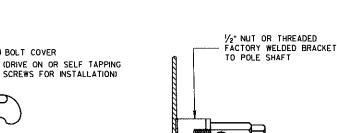
TYPICAL "J" HOOK LOCATION



POLE

BASE PLATE

PLAN VIEW

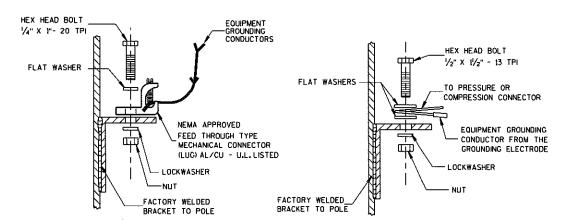


TYPICAL TROMBONE MAST ARM AND SINGLE

LUMINAIRE MAST ARM MOUNTING CLAMP

NEMA APPROVED GROUND CONNECTOR 1/2" - 13 UNC STUD, SILICON BRONZE

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



HARDWARE DETAILS FOR **POLE MOUNTINGS**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED		_
5/11/10	/S/ John Corbin	
DATE	STATE ELECTRICAL ENGINEER FOI	R
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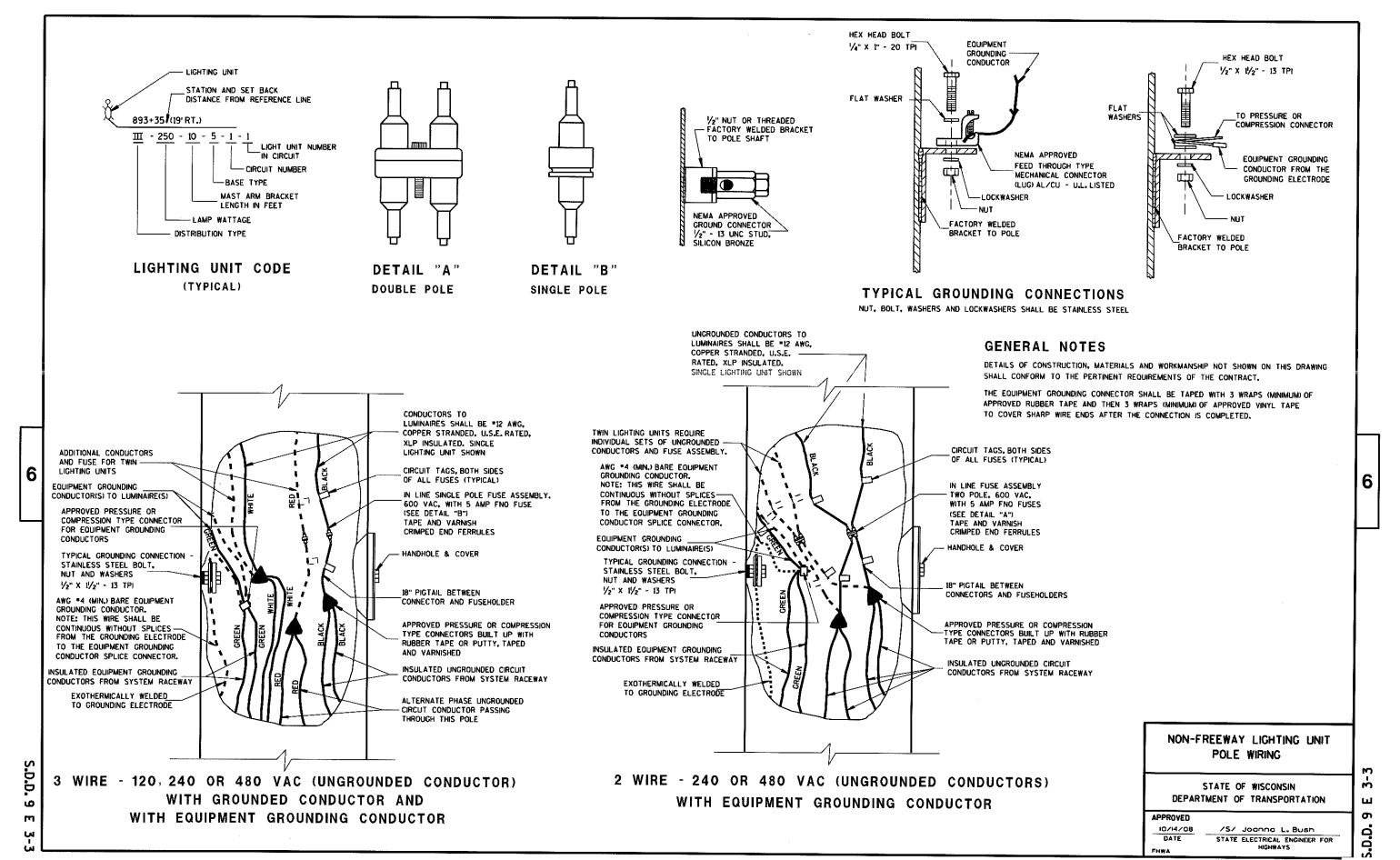
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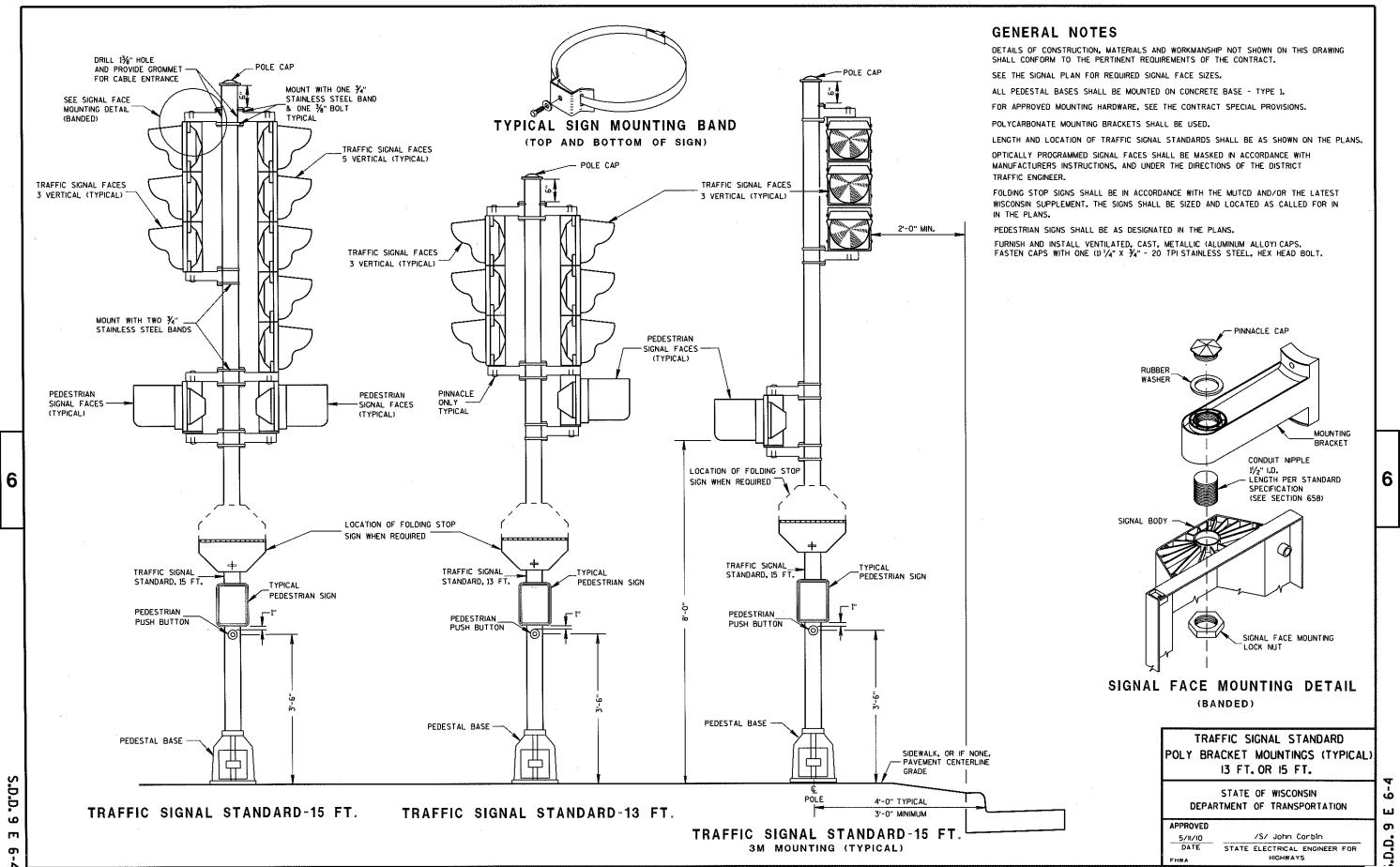
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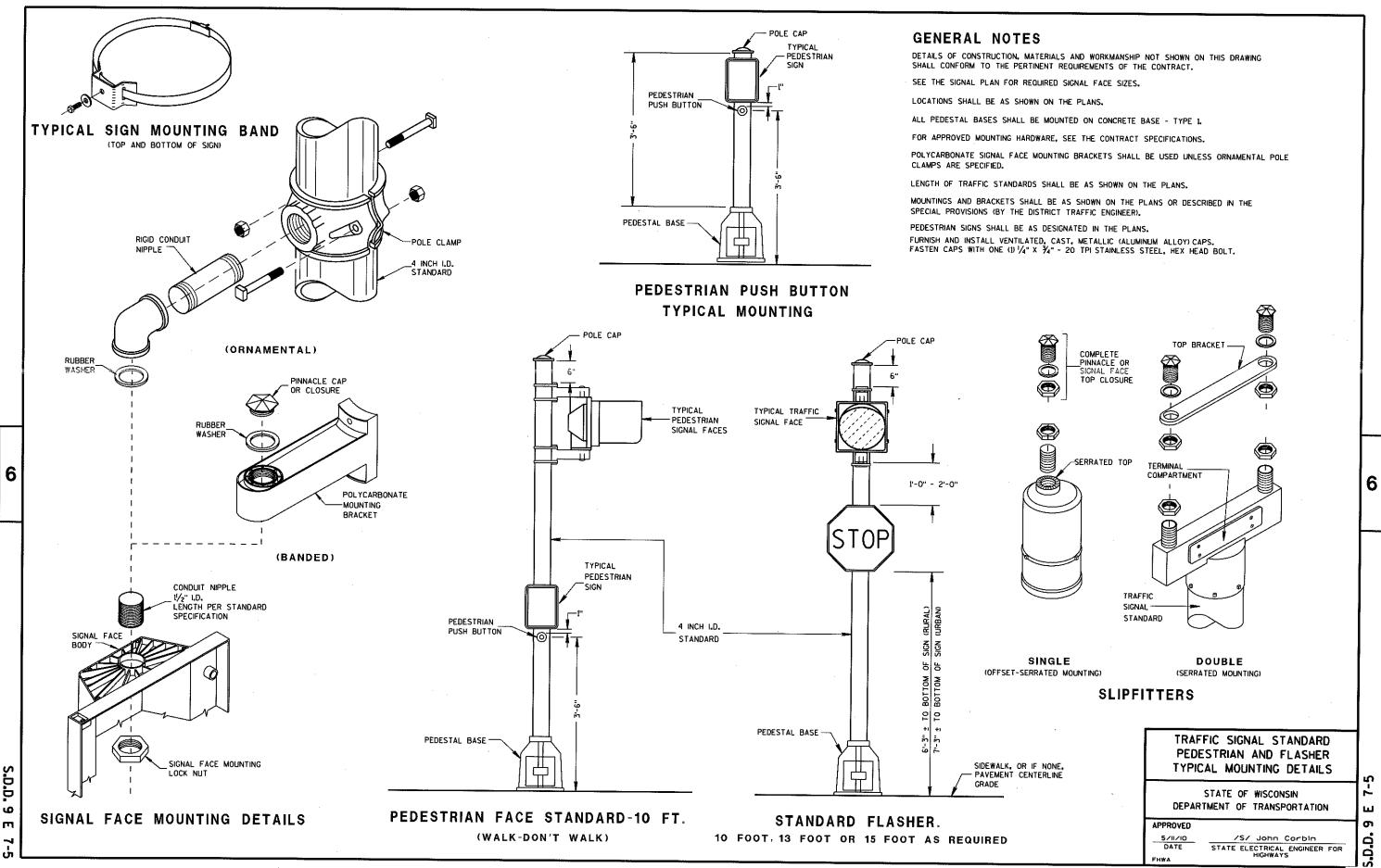
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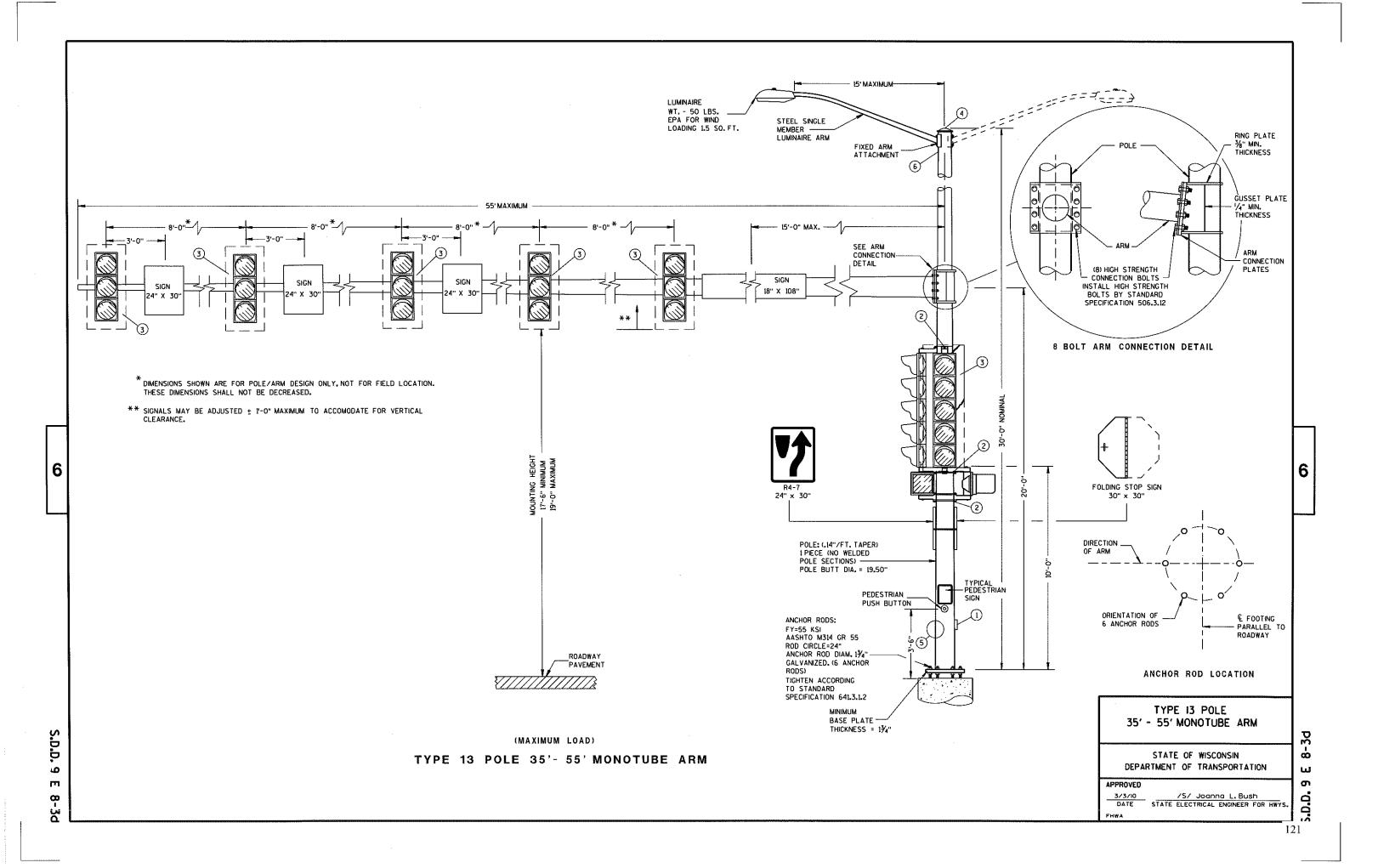
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POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

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

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

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

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

STANDARD STRAIGHT ARM DESIGN (3 % # RISE).

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

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

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

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

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL MESH AND SECURE THE MESH WITH 34" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL $\frac{1}{2}$ " HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING, THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

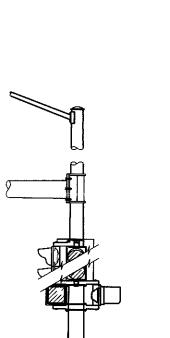
SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

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

- DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO 1/4" X 3/4" 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- 2 SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).
- (3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- 4 THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- (5) FACTORY-WELDED BRACKET FOR GROUNDING LUG. OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR 1/4" x 3/4" 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- (6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- (7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

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

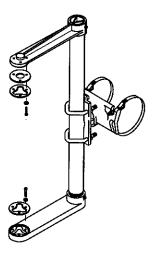
MOUNTING HEIGHT SHALL BE 5'-O" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.



STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT

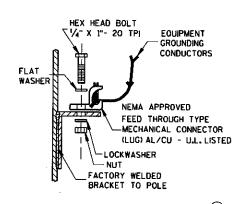
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5'-0"



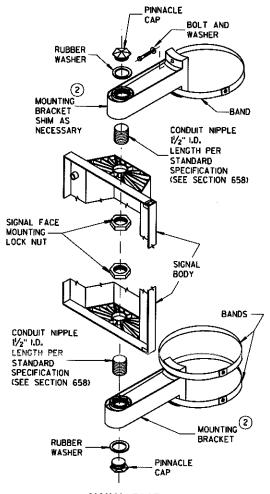
SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

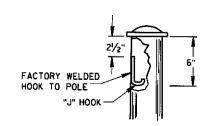


TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

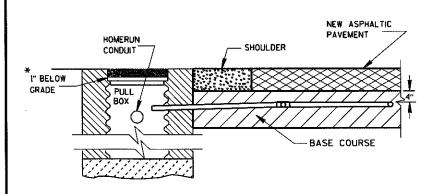
APPROVED 2/3/09

2/3/09 /S/ Joanno L. Bush
DATE STATE ELECTRICAL ENGINEER FOR HWYS

S.D.D. 9 E 8-3

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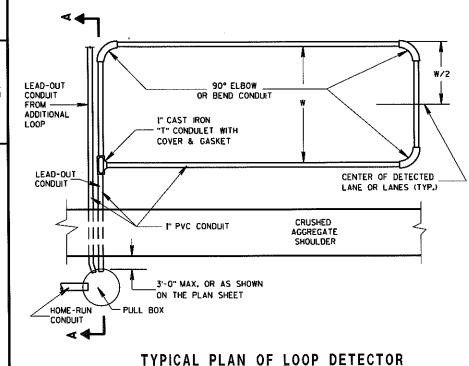
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SECTION A-A No curb & gutter

DETECTOR LOOP INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3"
BELOW GRADE IN SHOULDER AREAS OF CRUSHED
AGGREGATE. BACKFILL OVER COVER WITH THE
CRUSHED AGGREGATE TO BRING THE AREA TO
GRADE LEVEL.



GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD-OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT *12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER, REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE "12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

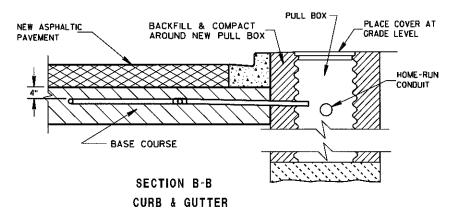
THE *12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT AND CONDULET SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE ASPHALTIC PAVEMENT IS PLACED.

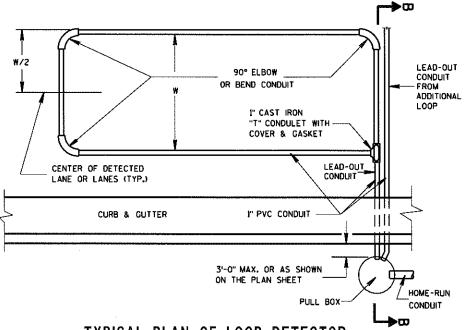
WHEN MULTIPLE LAYERS OF ASPHALTIC PAVEMENT ARE TO BE PLACED, LOOPS MAY BE INSTALLED BY SAWING A TWO INCH WIDE SLOT IN THE FIRST LAYER, DIG OUT THE ASPHALTIC MATERIAL AND BASE COURSE, PLACE THE LOOP, FILL THE SLOT WITH BASE COURSE MATERIAL AND NEW ASPHALTIC MATERIAL AND TAMP THE ASPHALTIC MATERIAL IN PLACE.

SHOULD TRAFFIC BE ALLOWED TO USE THE AREA OF ROADWAY WITH THE NEWLY INSTALLED LOOP BEFORE THE PLACEMENT OF THE NEXT LAYER OF ASPHALTIC PAVEMENT, THE SLOT/PAVEMENT OPENING SHALL BE SEALED WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405",

DRIVE A 1/2" MAX. PK NAIL INTO THE NEW ASPHALTIC PAVEMENT AND DIRECTLY ABOVE THE CONDULET AFTER THE FINAL LAYER OF NEW ASPHALTIC PAVEMENT IS COMPLETELY INSTALLED, IF REQUIRED BY THE DISTRICT TRAFFIC SECTION.



LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR PLACED
IN CRUSHED AGGREGATE BASE
(NEW ASPHALTIC PAVEMENT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/7/06
DATE
STATE ELECTRICAL ENGINEER FOR
HIGHWAYS

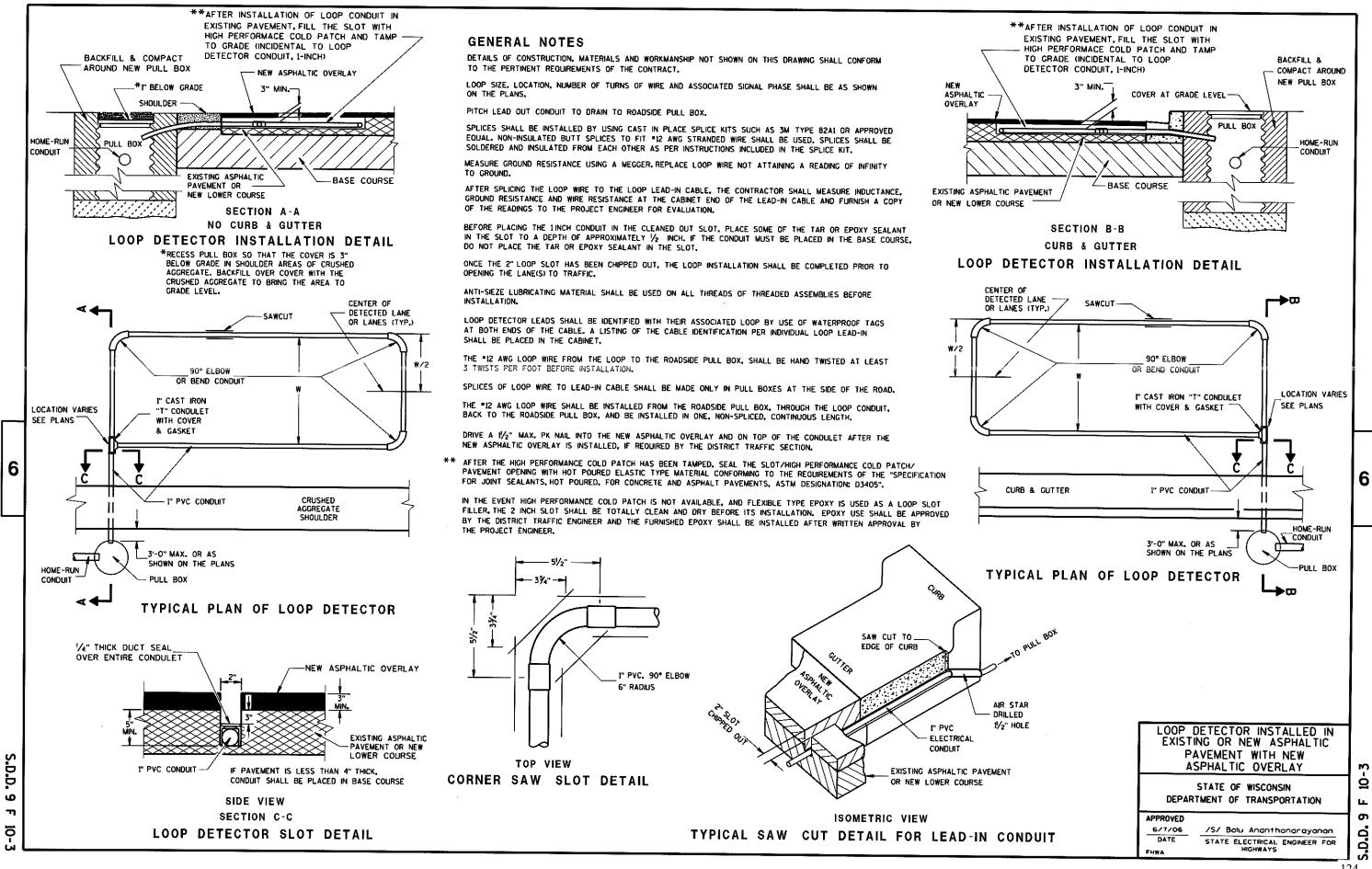
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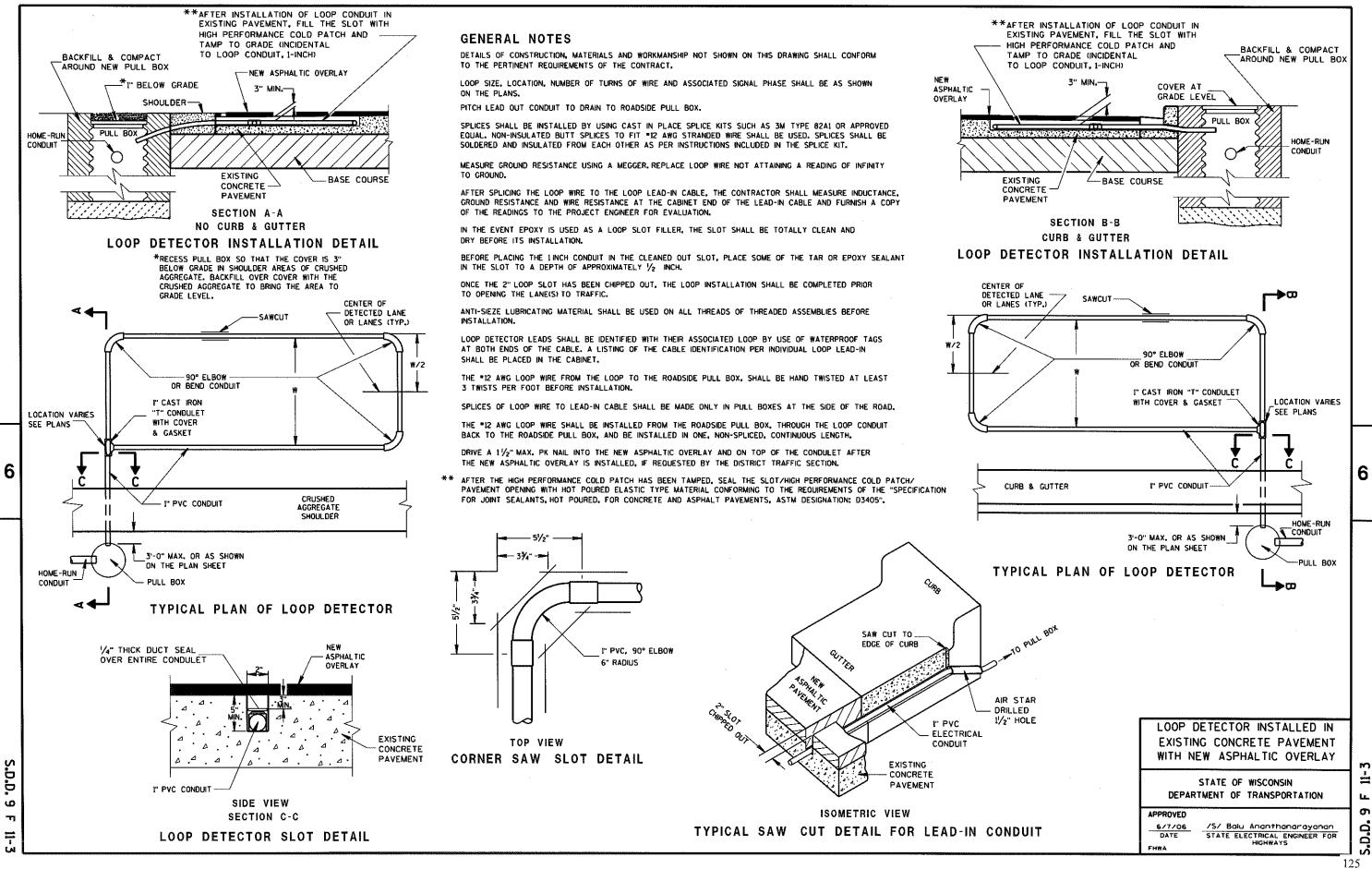
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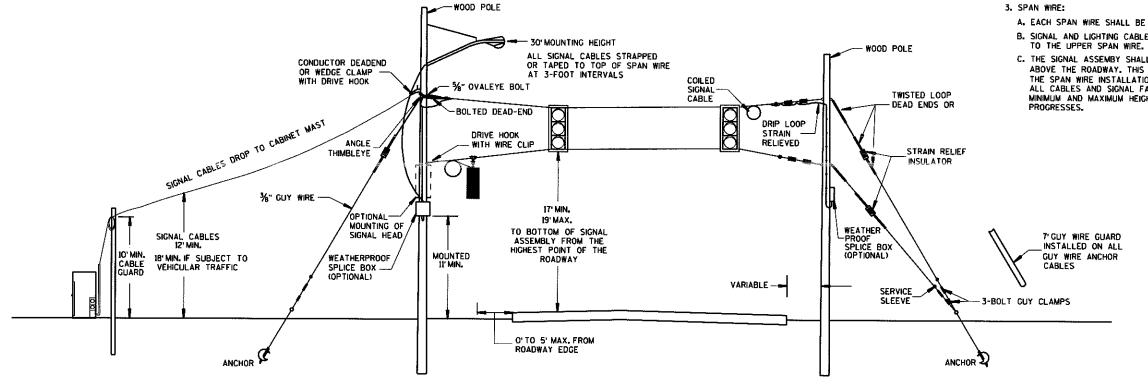




GENERAL NOTES

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

- 1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
- 2. SIGNAL FACES:
- A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
- B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
- C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
- D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY MOUNT THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
- A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
- B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED
- C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE, MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK



SPAN WIRE TEMPORARY SIGNALS

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 7-14-08

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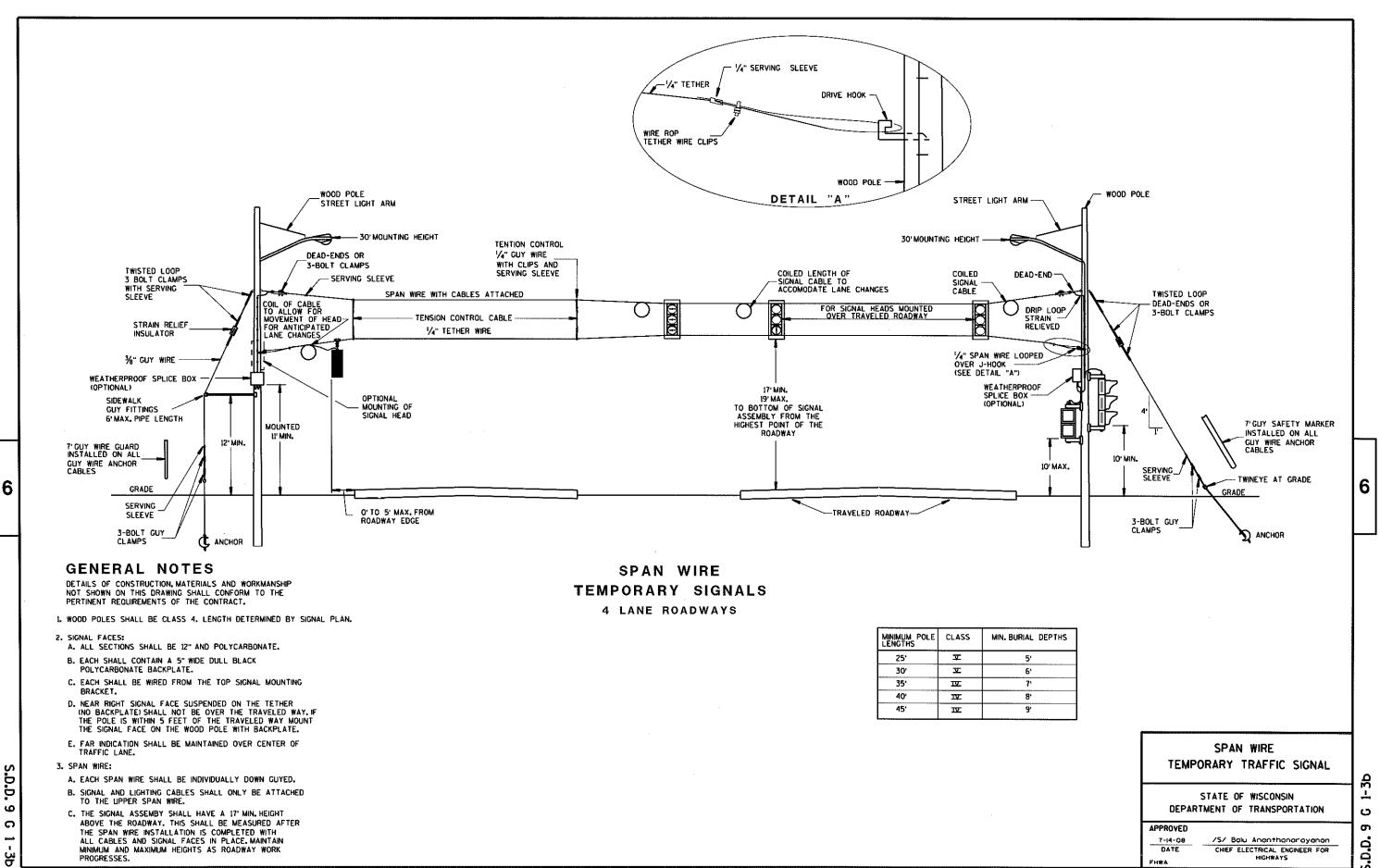
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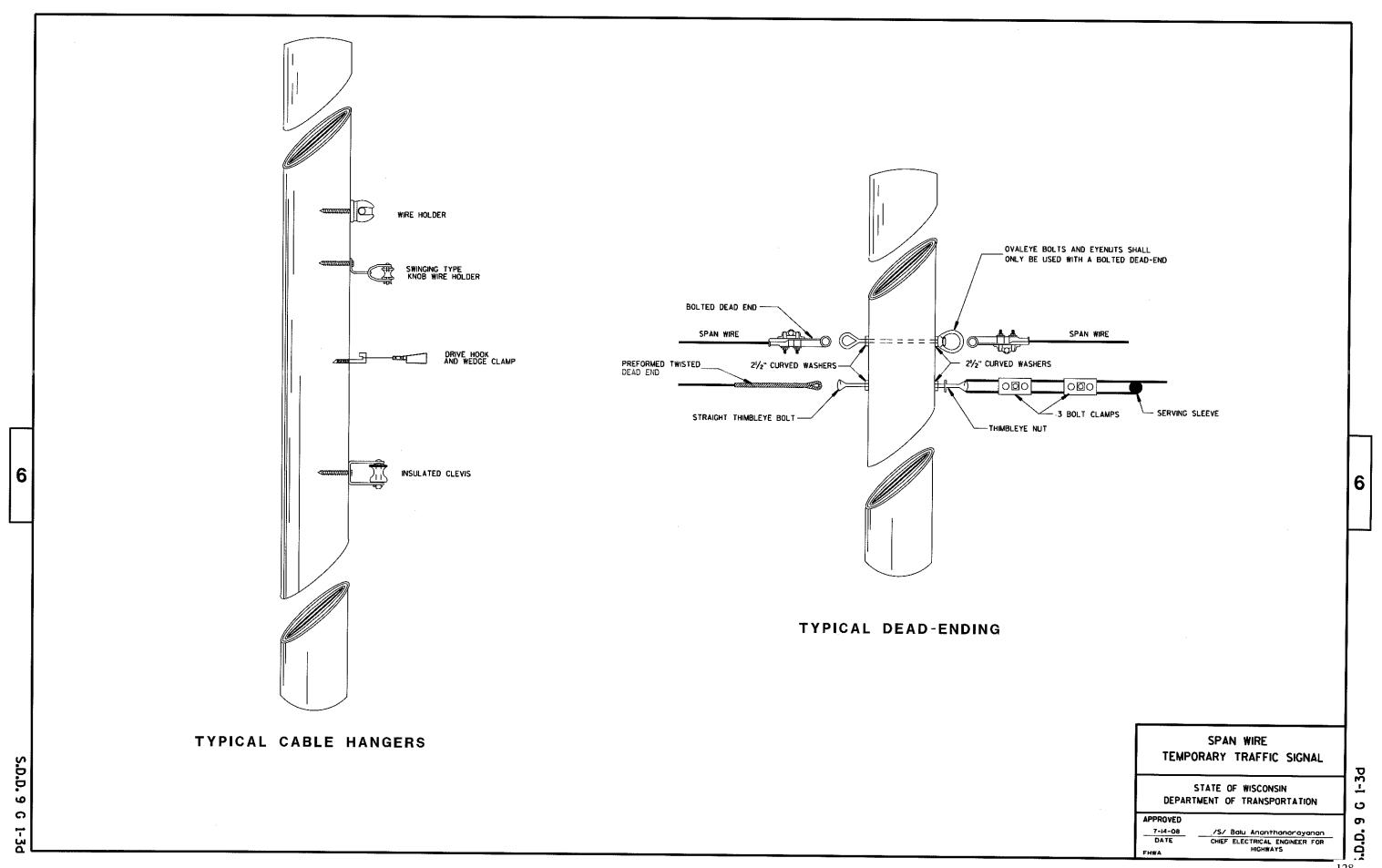
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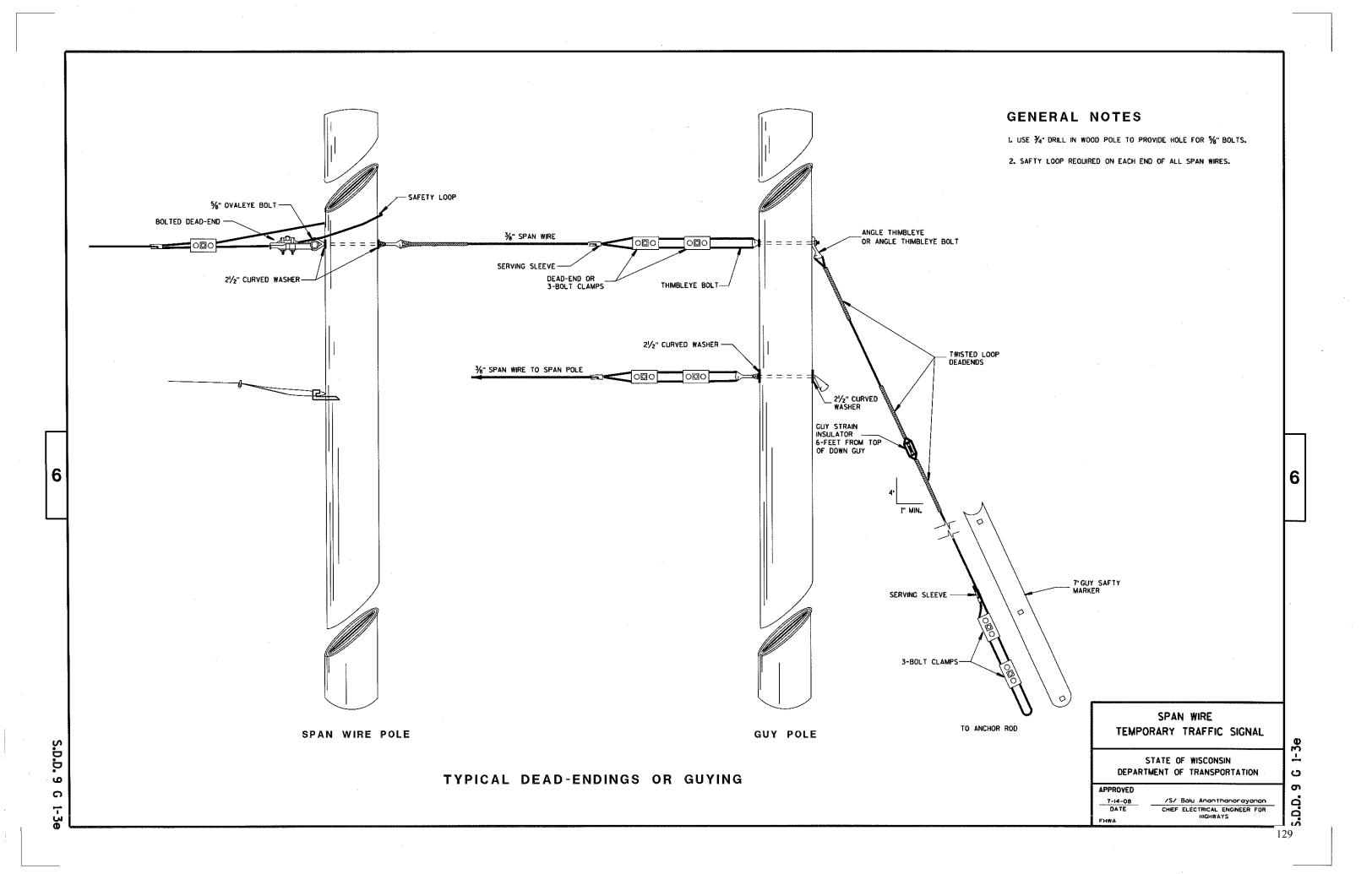
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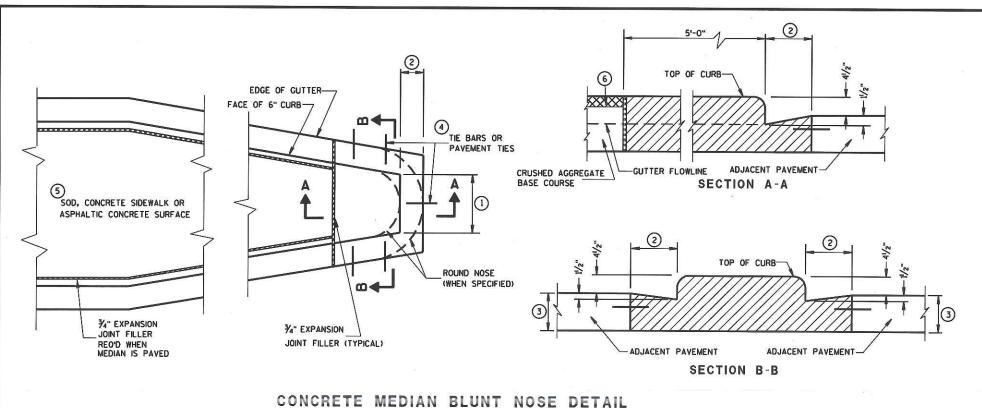
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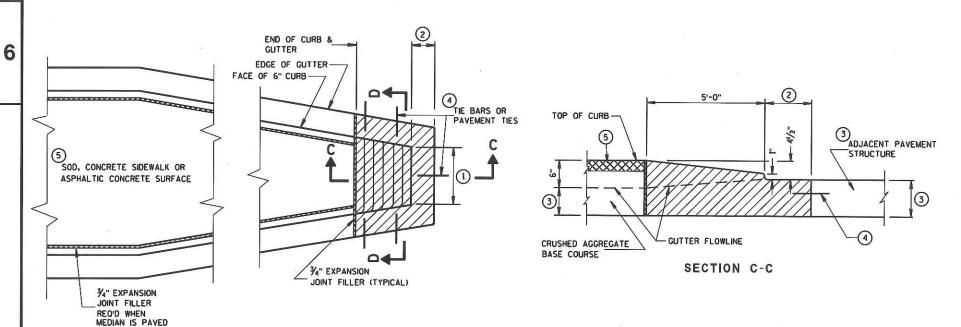
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CONCRETE MEDIAN SLOPED NOSE TYPE 1

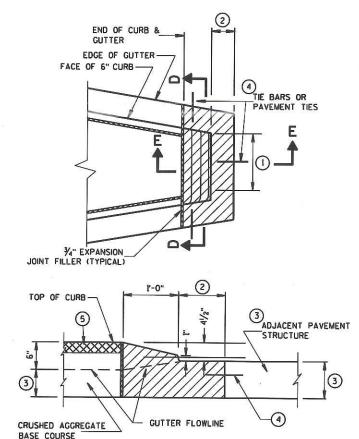
GENERAL NOTES

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

- 1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- 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.

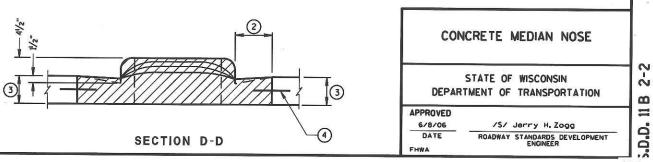
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE, PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

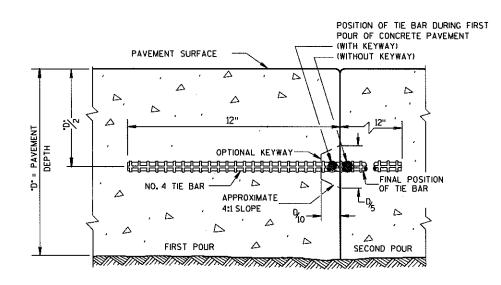
5 SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



CONCRETE MEDIAN SLOPED NOSE TYPE 2

SECTION E-E





CONSTRUCTION JOINT

PAVEMENT SURFACE

PAVEMENT SURFACE

12"

12"

12"

A

NO. 4 TIE BAR

A

SAWED JOINT

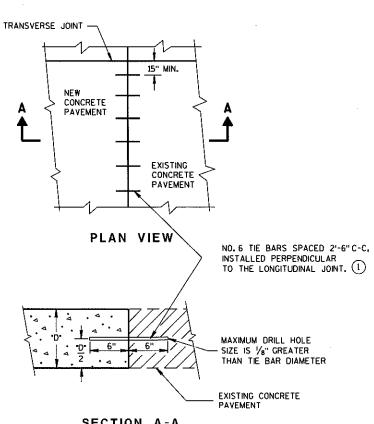
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

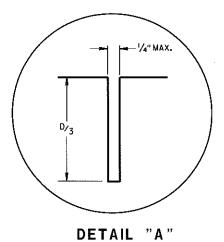
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

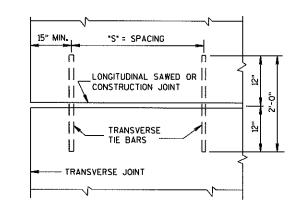
1 ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



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



PAVEMENT DEPTH *D*	CLEAR COVER	MAXIMUM TI SPACING PAVEMENT 24' OR 26'	"S"
6,6 1/2"	3"± ¹ /2"	48"	42"
7, 7 1/2"	3 ¼"±1"	45"	36"
8, 8 1/2"	3 ¾"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 ½"	4 ¾4"±1"	30"	24"
11, 11 ½"	5 1⁄4"±1"	27"	21"
12"	5 ¾"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRET	E PAVE	MENT	
LONGITUDINAL	JOINTS	AND	TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

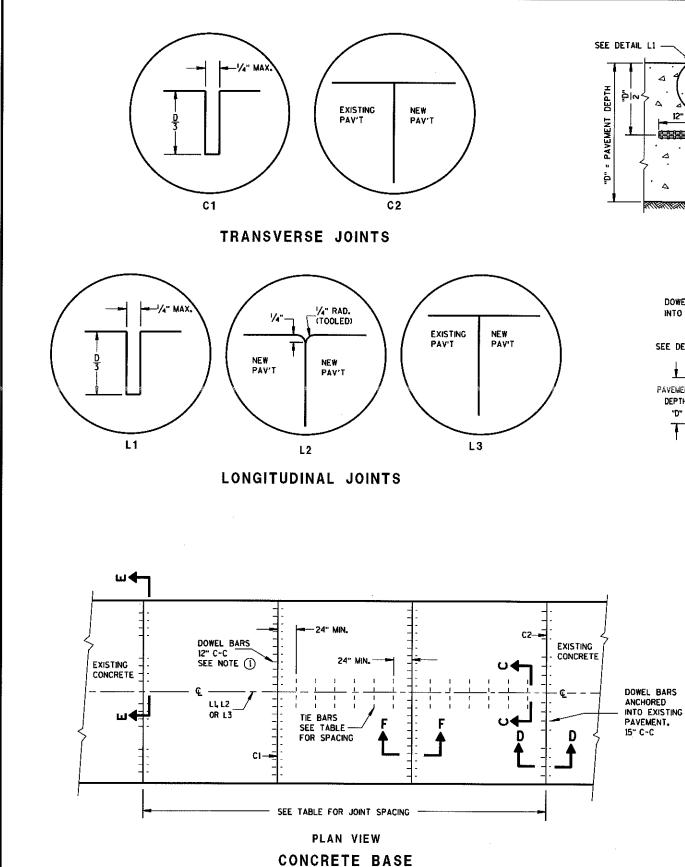
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10-5-2010	/5/	Deb B	isc	choff	
DATE	PAVEMENT	POLICY	B _x	DESIGN	ENGINEE

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D.D.



CONTRACTION JOINT LOCATIONS

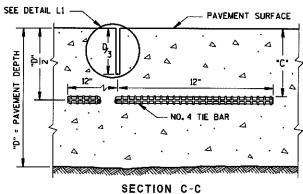
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SAWED JOINT

DOWEL BARS ANCHORED INTO EXISTING PAVEMENT DOWEL BAR DIA. +1/8" X 9" DRILLED HOLES PAVEMENT DEPTH "D" FREE END OF BAR SEE NOTE (2) PAVEM

SECTION D-D

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

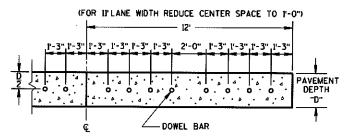
PAVEMENT DEPTH "D"	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
51/2", 6, 6 1/2"	NONE	12'
7, 7 1/2"	1"	14'
8, 8 1/2"	11/4"	15'
9, 9 ½"	11/4"	15'
10" & ABOVE	1 1/2"	15'

GENERAL NOTES

ANCHOR TIE BARS AND DOWEL 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) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.
- ② APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



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

TIE BAR LOCATION TABLE

PAVEMENT DEPTH	CLEAR COVER	MAXIMUM TIE BAR SPACING C-C							
	-с-	PAVEMENT	WIDTH						
.D.		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 ¾"±1"	39"	30"						
9,9 1/2"	4 ¼"±1"	33"	27"						
10, 10 1/2"	4 ¾"±1"	30"	24"						
11, 11 1/2"	5 ¼"±1"	27"	21"						
12"	5 ¾"±1"	24" 21"							

© DOWEL BARS © 12" C-C
12" FROM PAVEMENT EDGE

SEE DETAIL CI

SECTION F-F
CONTRACTION JOINT

(SEE SIZE TABLE)

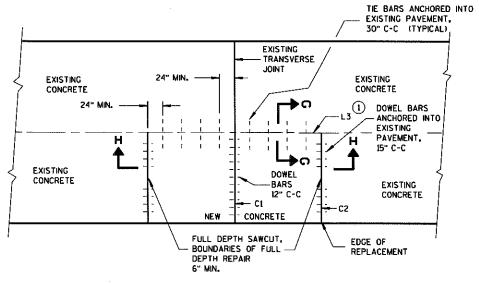
CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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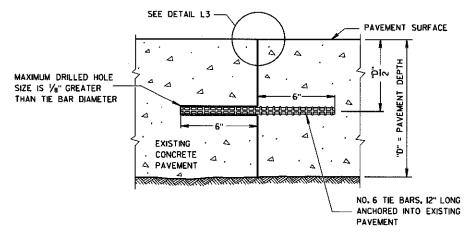
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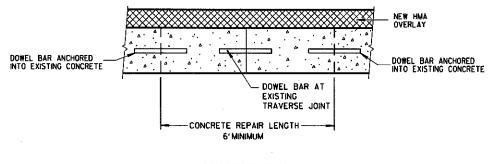
PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

CONCRETE BASE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 12-11-2009

FHWA

/S/ Deb Bischoff PAVEMENT POLICY & DESIGN ENGINEER DATE

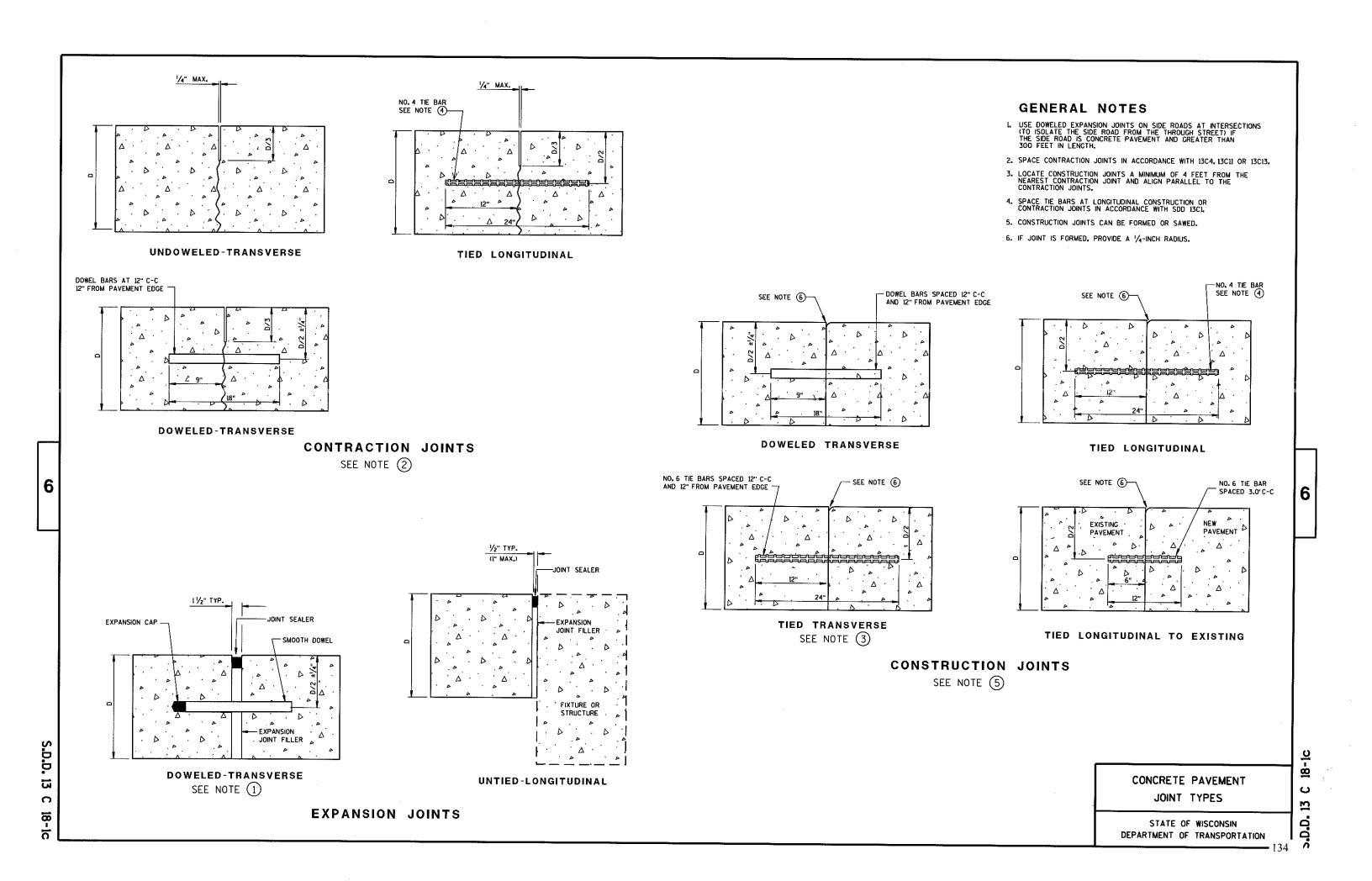
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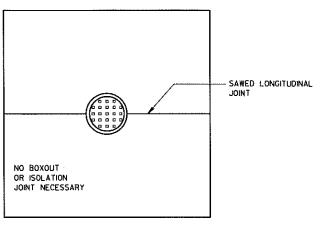
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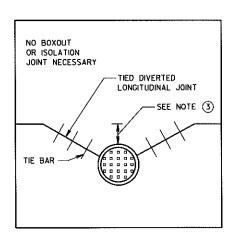
-FLANGE LINE

- PRECAST MANHOLE STRUCTURE LIMIT



MANHOLE WITH LONGITUDINAL JOINT

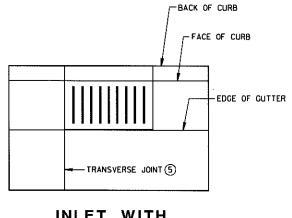
FOR CONSTRUCTION JOINTS



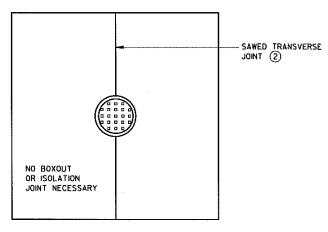
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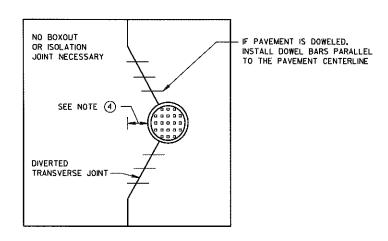
MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



INLET WITH TRANSVERSE JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

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

CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 10-5-2010

O-5-2010 /S/ Deb Bischoff

DATE PAVEMENT POLICY & DESIGN ENGINEER

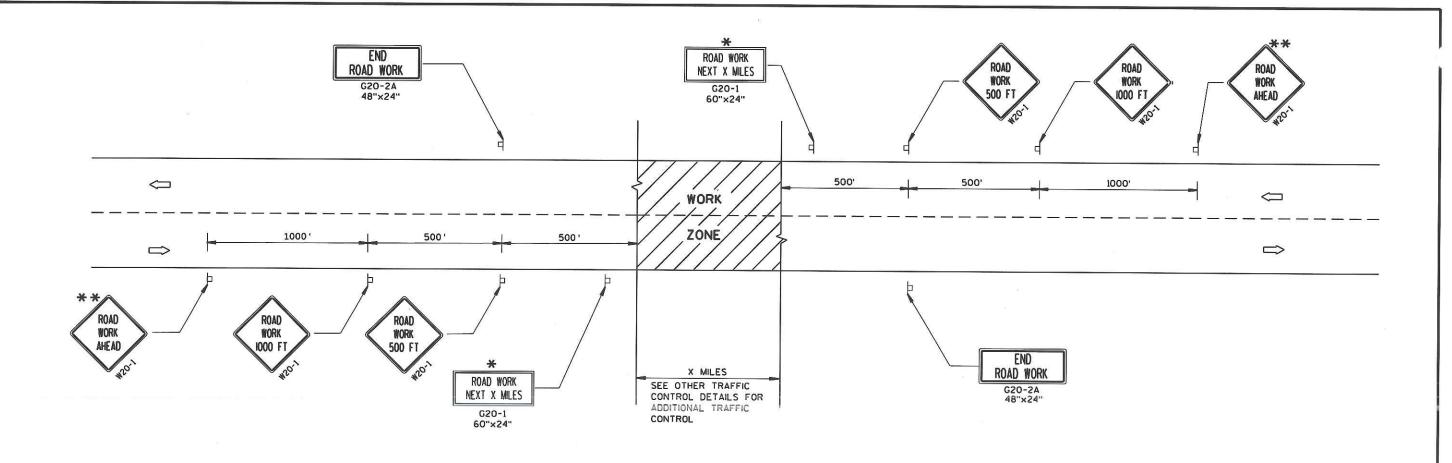
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TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

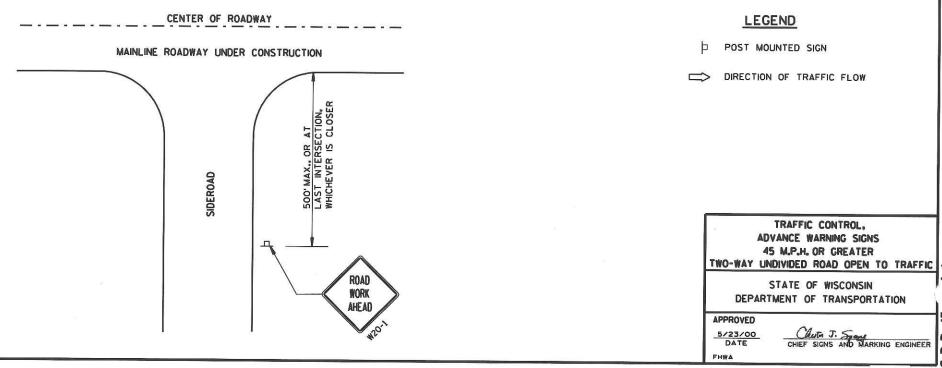
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

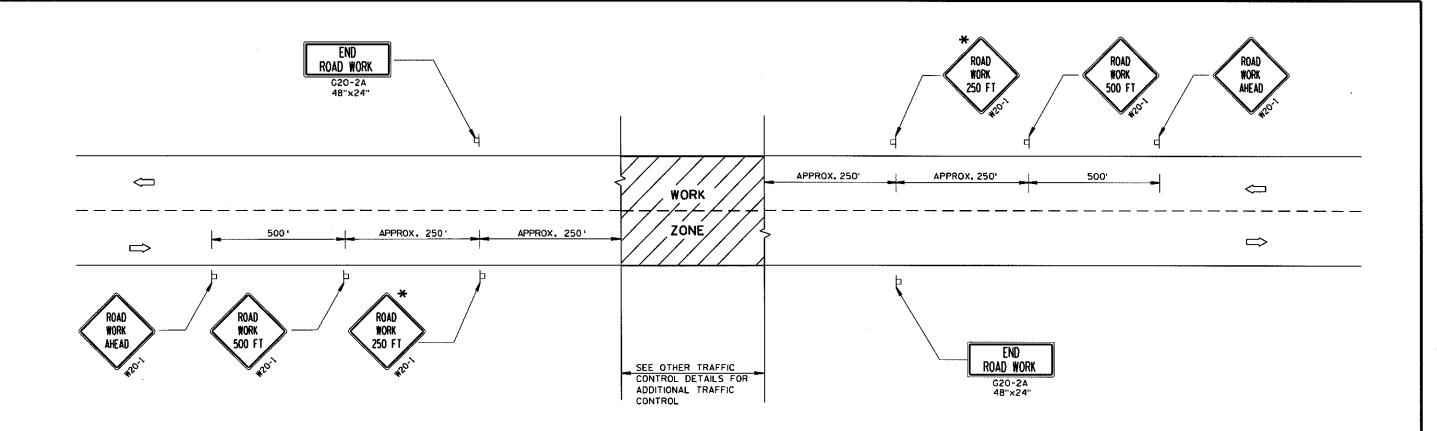
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

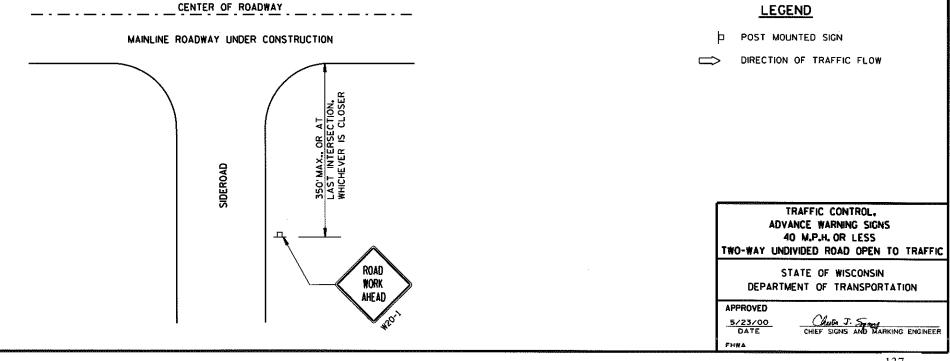
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING.



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GENERAL NOTES

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND

* 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

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

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

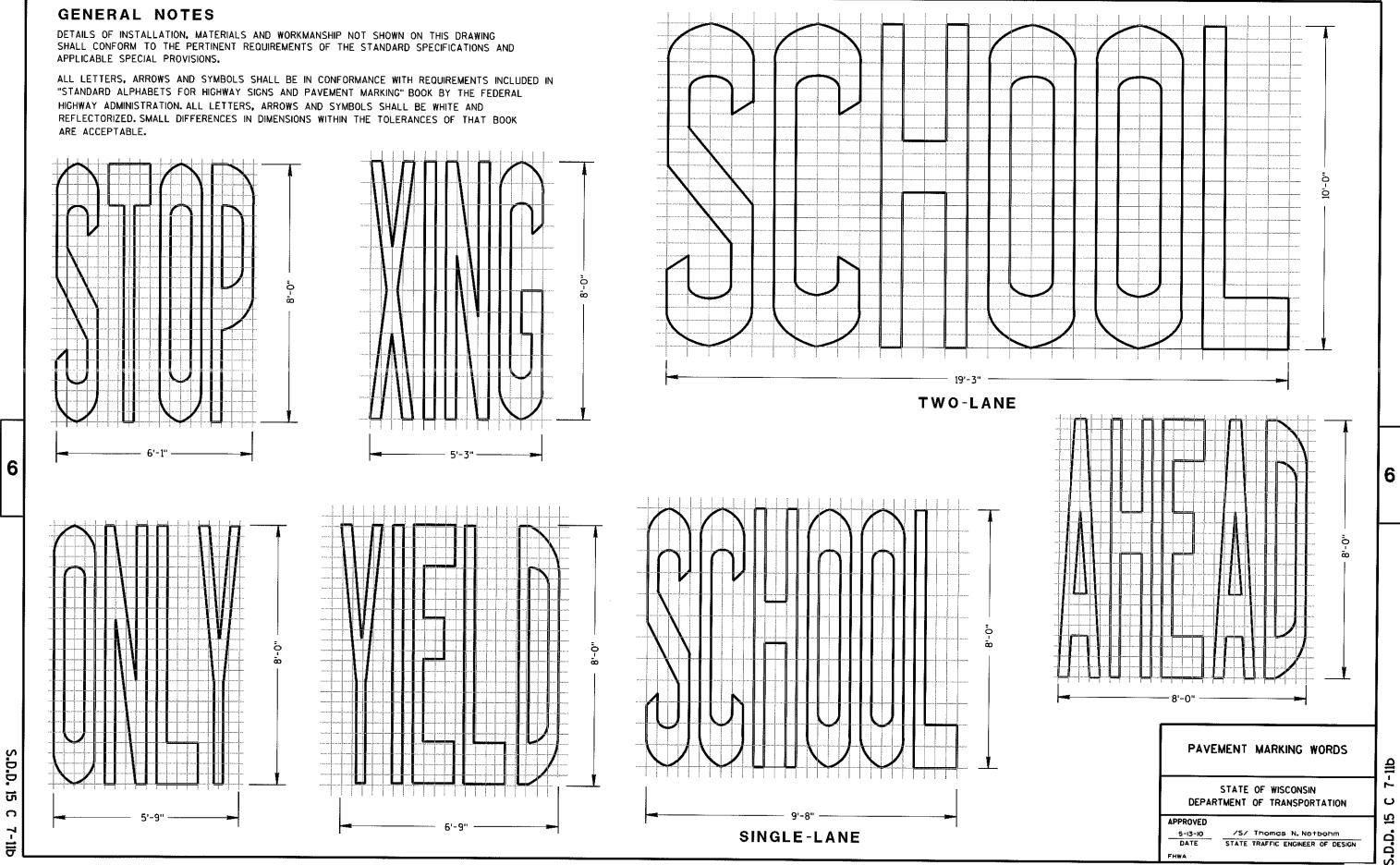
SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

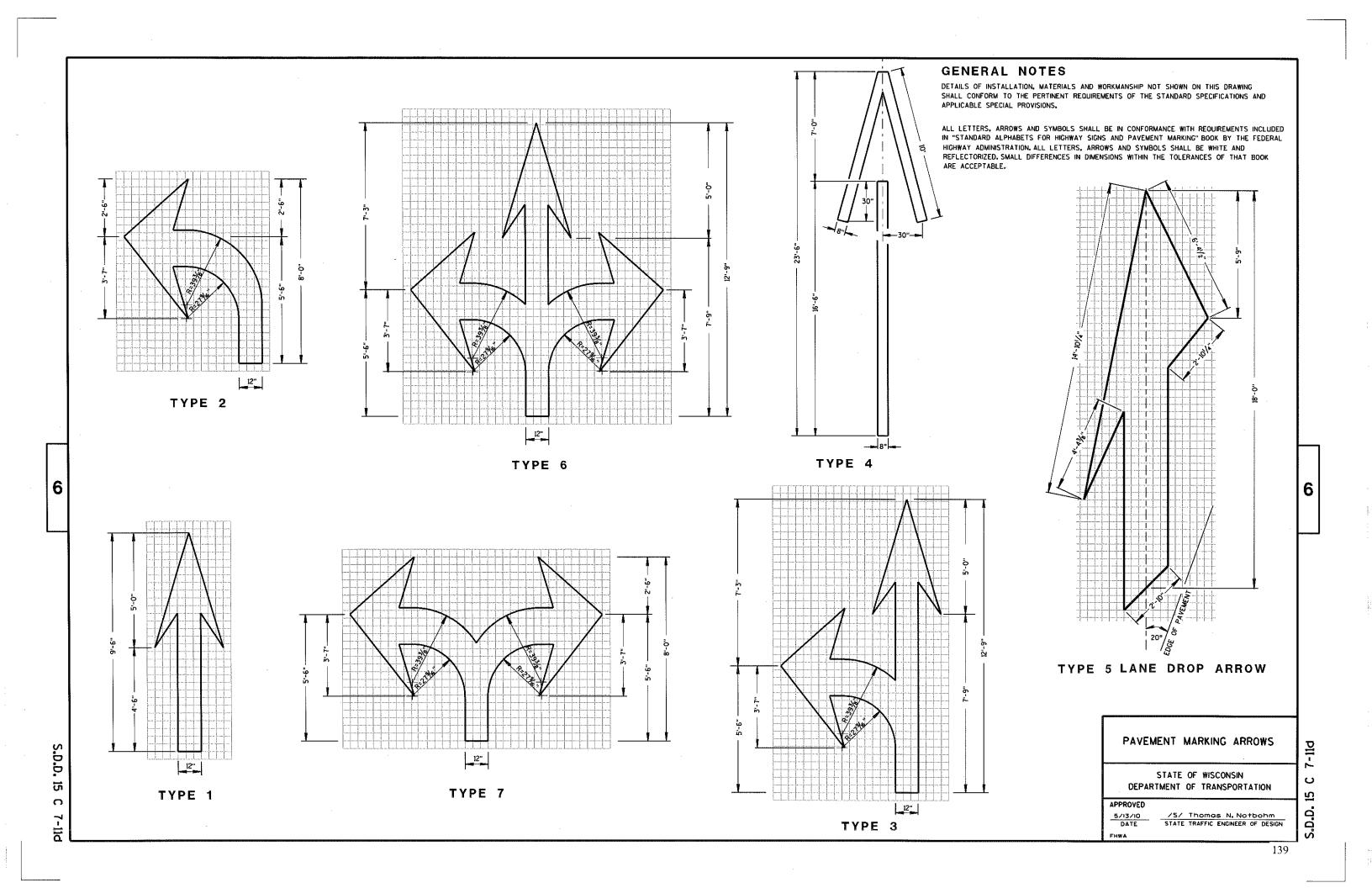
OTHER FIELD CONDITIONS.

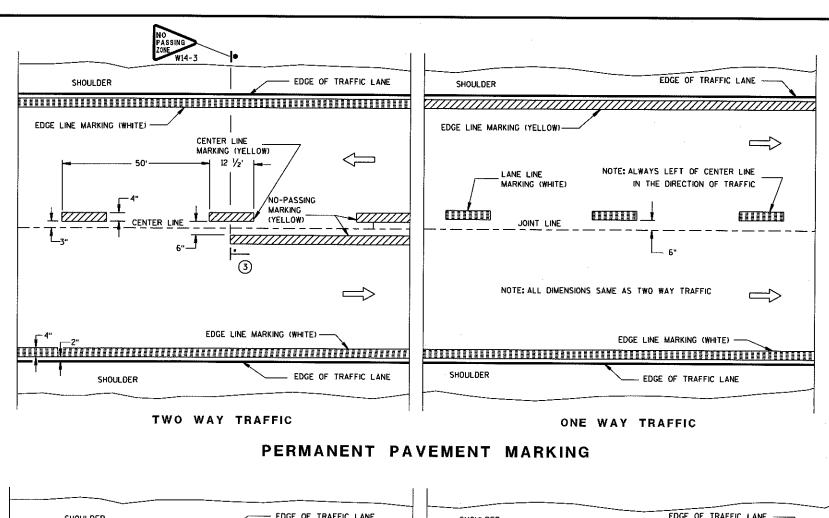
NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

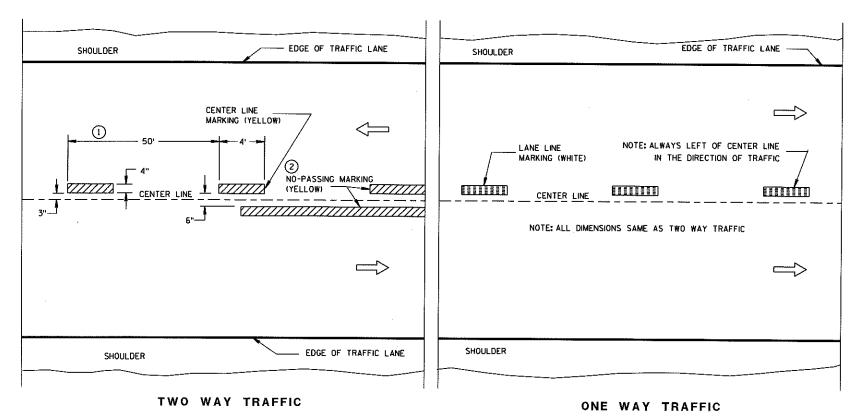
SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

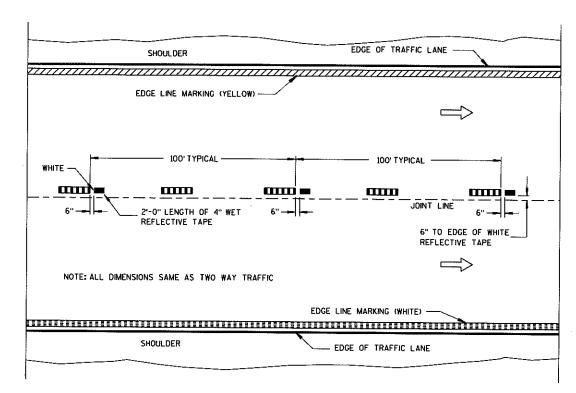
GENERAL NOTES

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

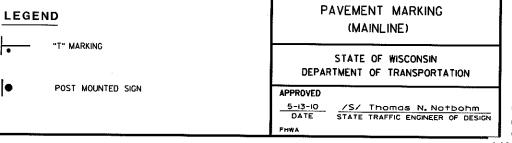
- 1 HALF CYCLE LENGTHS (25'±) WITH 2'MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- 2 NO PASSING ZONE TEMPORARY PAYEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAYEMENT MARKING WHEN A SAME DAY PERMANENT PAYEMENT 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.

NOTE

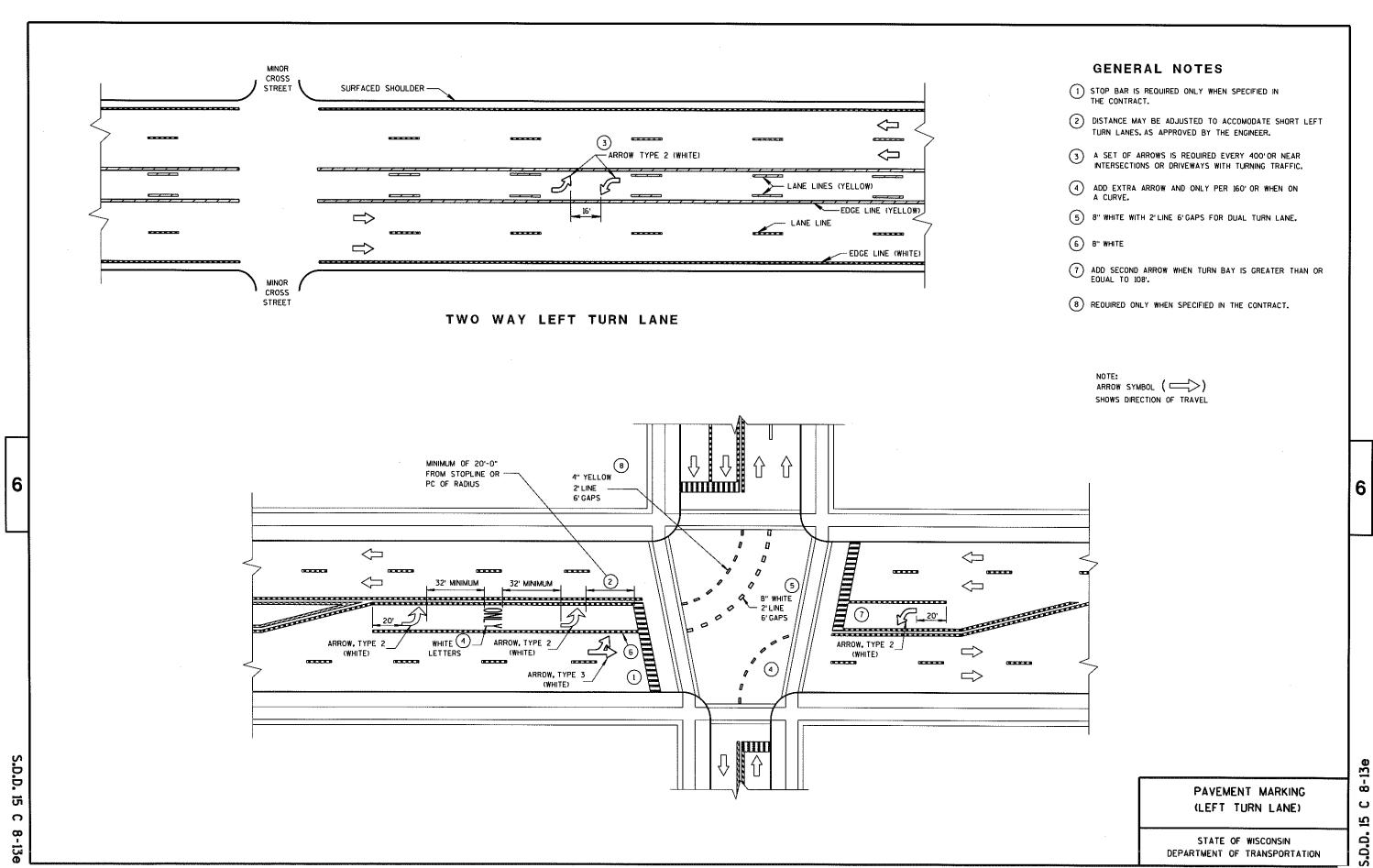
ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

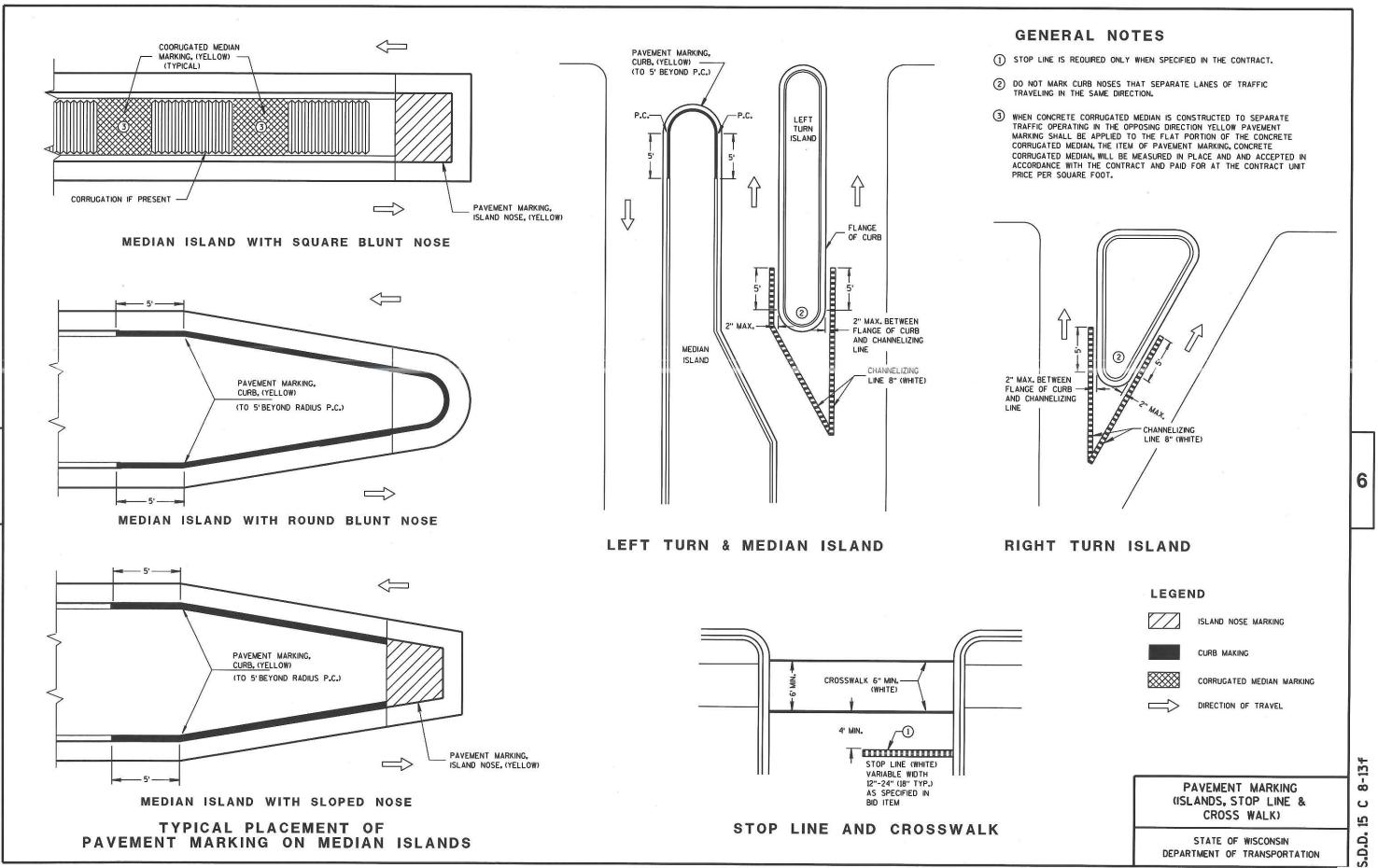


WET REFLECTIVE TAPE SUPPLEMENT TO SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE



D.D. 15 C 8-1



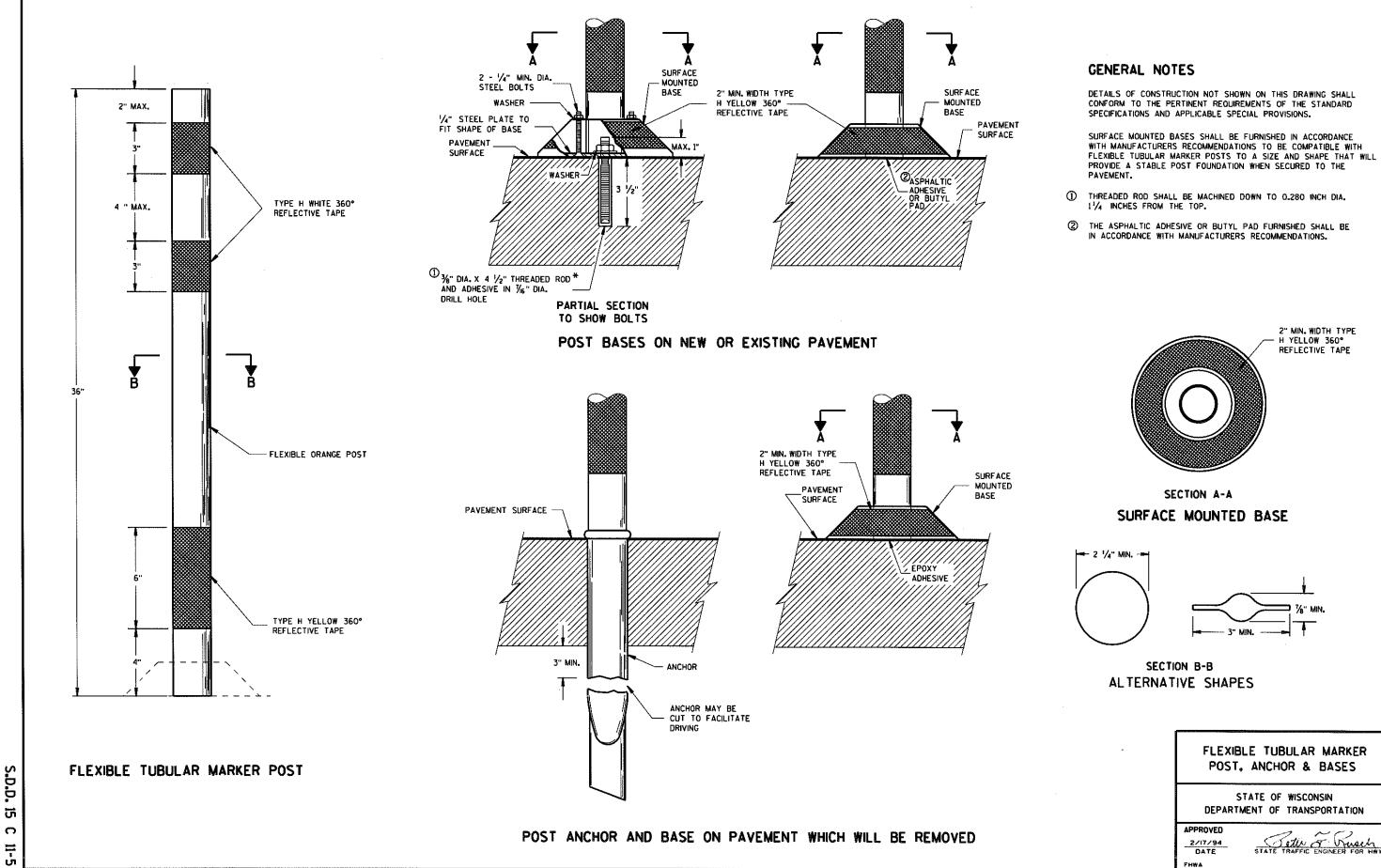


S.D.D.

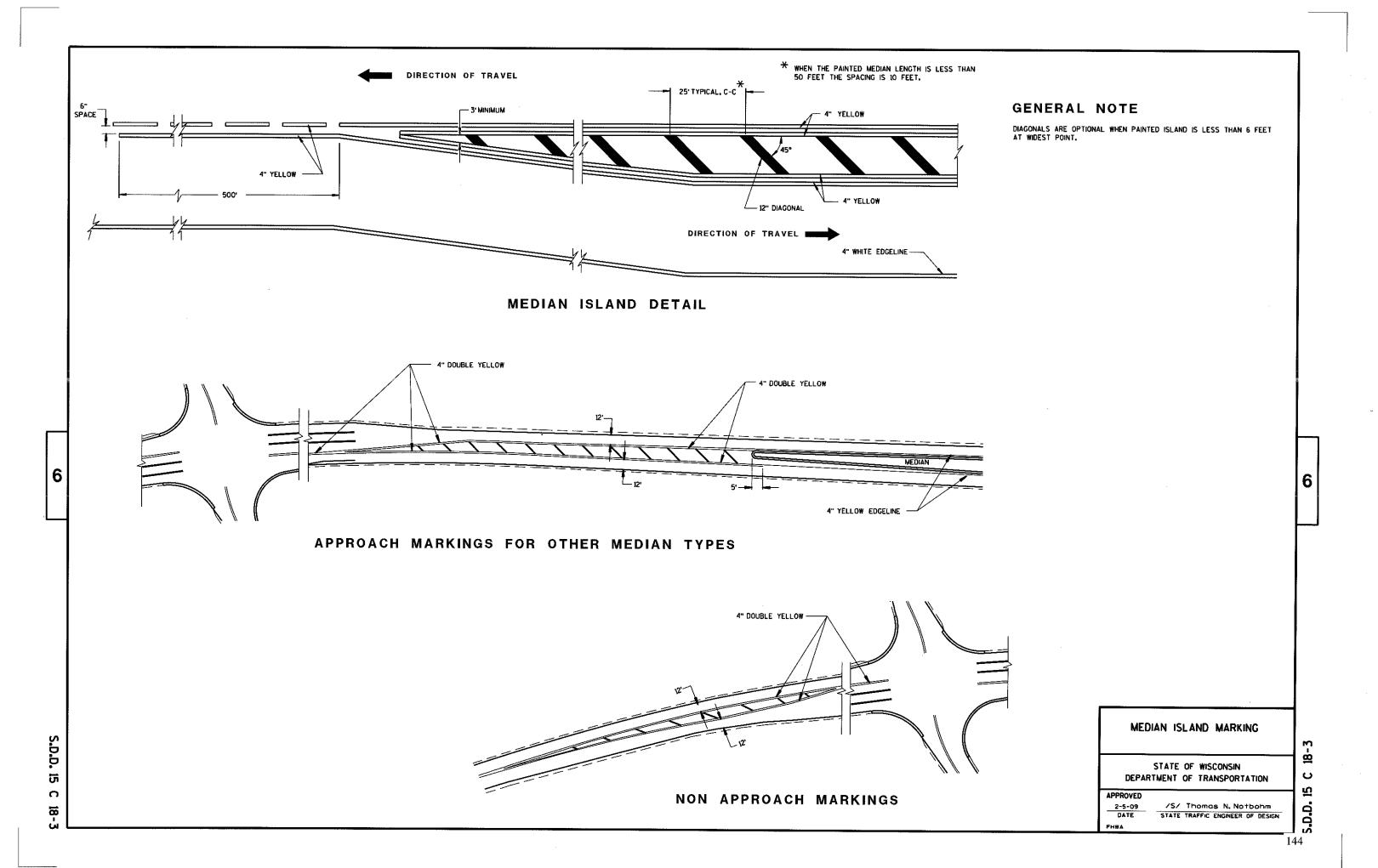
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FHWA.



POST WITH ATTACHED SIGN
 IN DRUM

■ DRUM WITH WARNING LIGHT (TYPE C)

DRIIM

→ ARROW BOARD

8' TYPE III BARRICADE

* * * REMOVING PAVEMENT MARKING

DIRECTION OF TRAFFIC

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.

(1) 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.

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

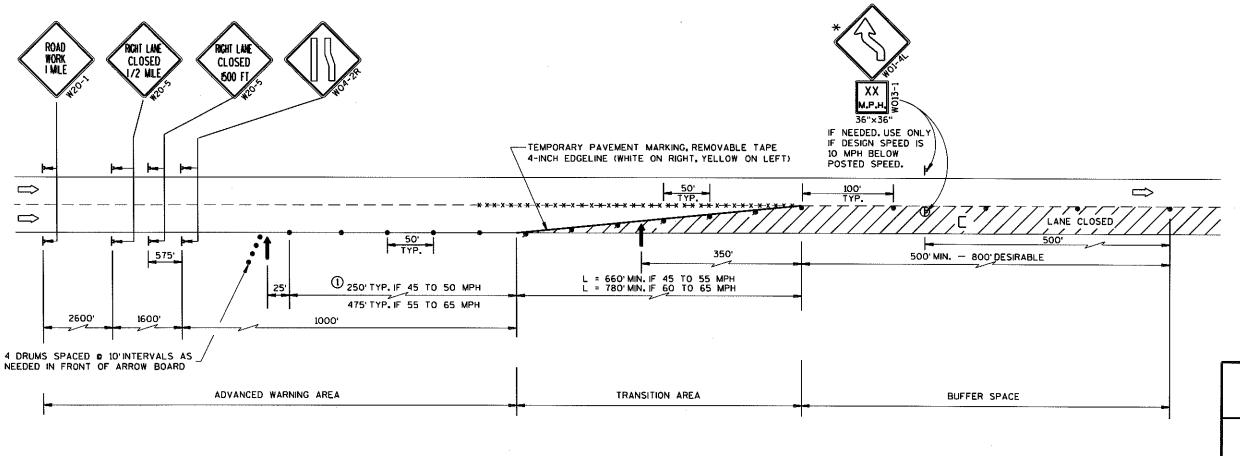
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

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 8-7-95 DATE

FHWA

Chata T Source of TRAFFIC

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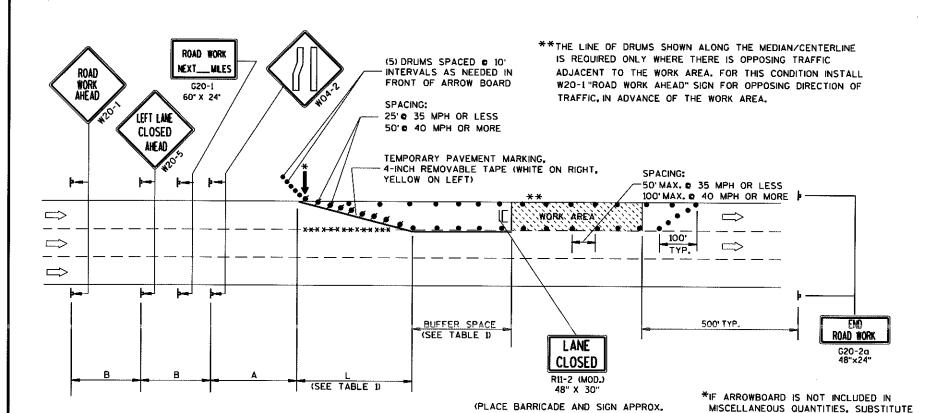


TABLE 1 TAPER AND BUFFER SPACE

B=400'AT 25-30 MPH

700'AT 35-40 MPH

1000' AT 45-55 MPH

FOR 1	12' LAN	E WIDTH
s	ك	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	5401	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)

A=200'AT 25-30 MPH

350'AT 35-40 MPH

500'AT 45-55 MPH

W = WIDTH OF LANE CLOSURE

A TYPE III BARRICADE WITH WOI-6 SIGN

48"x24"

IN THE LANE CLOSURE TAPER.

LEGEND

F/ DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)

POST MOUNTED SIGN

ARROW BOARD

EVERY 1000' ACROSS THE CLOSED LANE)

TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS. TYPE A (FLASHING) WITH/WITHOUT SIGN

DIRECTION OF TRAFFIC FLOW

*** REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

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"×48" 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 7 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.

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

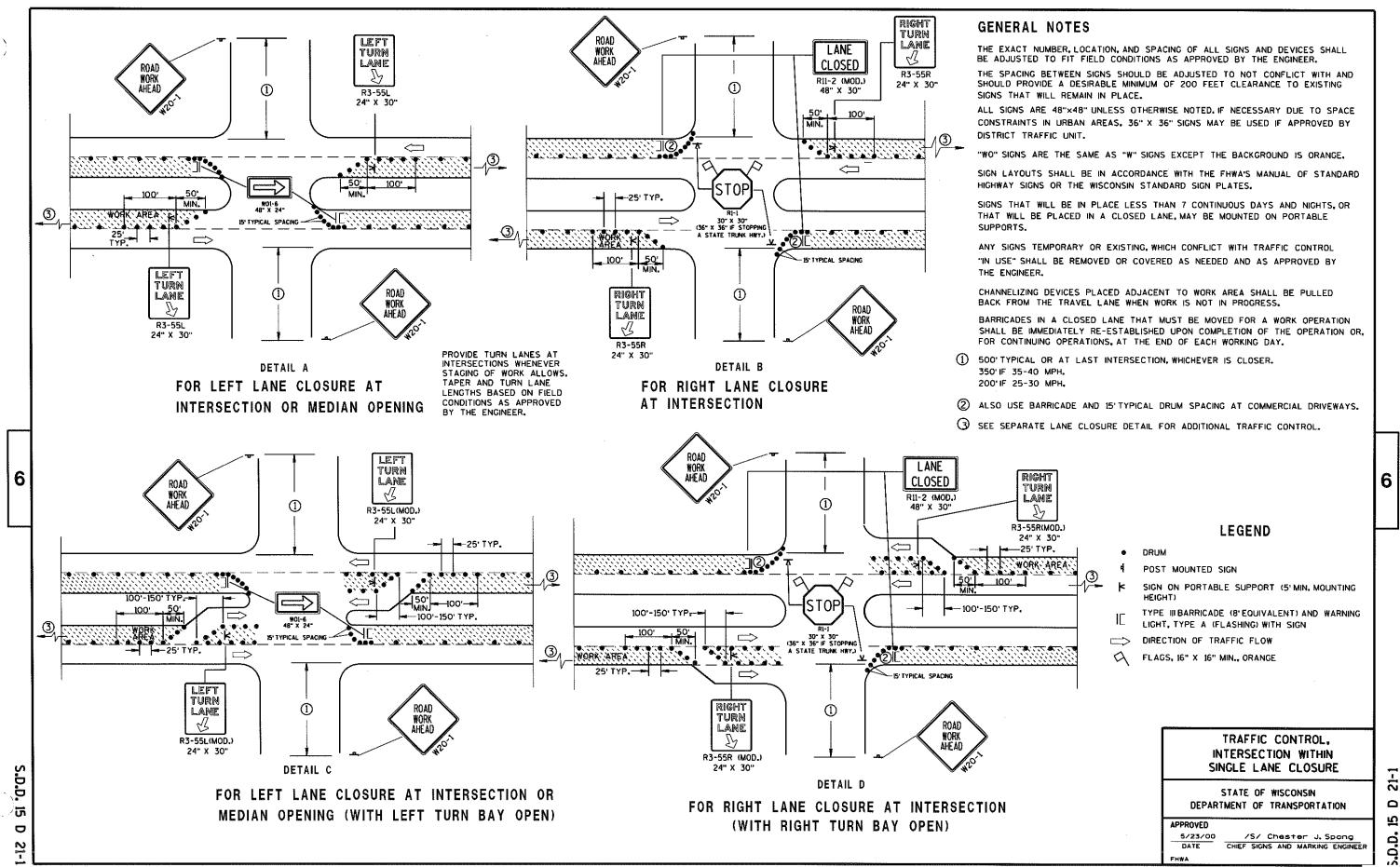
APPROVED 5/23/00 DATE

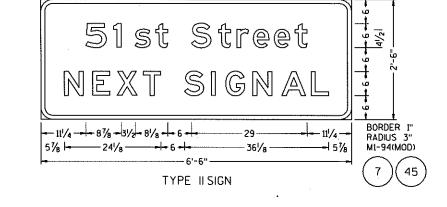
Chata J. Say CHIEF SIGNS AND MARKING ENGINEER

146

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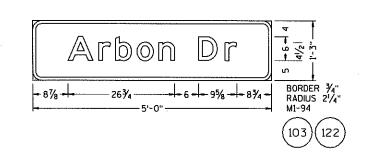
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GENERAL NOTES:

- 1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS. THE SPECIAL PROVISIONS, AND THE PLANS.
- 2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
- 3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND. "TYPE H MESSAGE MATERIAL". TYPE ISIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
- 4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
- 5, TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
- 6. TYPE ISIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
- 7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
- 8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
- 9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH
- 10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES ALL-7 AND ALL-10
- 11. DO NOT SCALE.



SHEET 1 OF 1

PROJECT NO: 2150-00-70

HWY: STH 100

COUNTY: MILWAUKEE

SIGNING DETAIL - TYPE I& II SIGNS

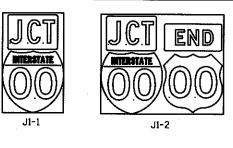
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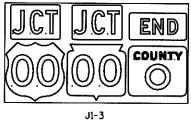
SHEET

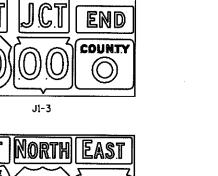
- 149

PLOT BY : MSCCXV

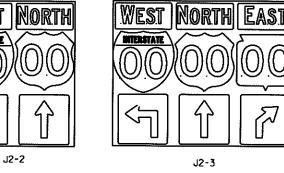
TYPICAL ASSEMBLIES



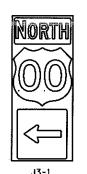




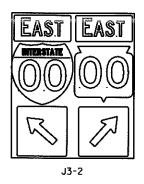


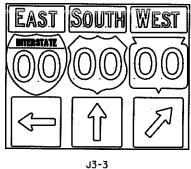


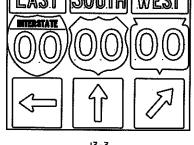


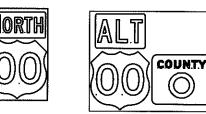


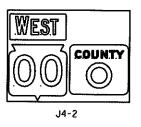
North

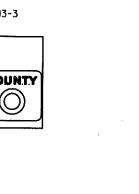


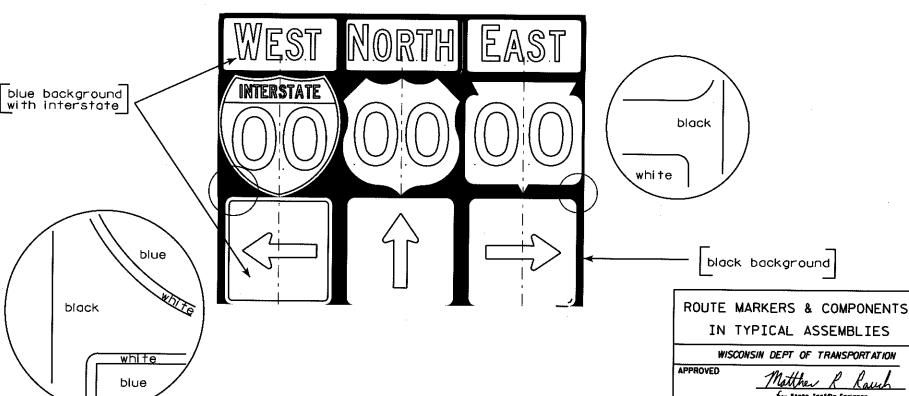






















J33-1 J32-1 PROJECT NO:

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A21S.DGN

PLOT DATE: 21-OCT-2009 09:27

PLOT BY : ditjph

PLOT NAME :

WISDOT/CADDS SHEET 42

SHEET NO: 150

PLATE NO. 42-15.6

DATE 10/21/09

Background - Black Non-reflective

Message - see Note 5 3. Message Series - See Note 5

2. Color:

NOTES

4. Corners shall be square since base material is plywood.

5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard

Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.

6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.

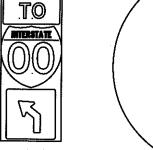
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.

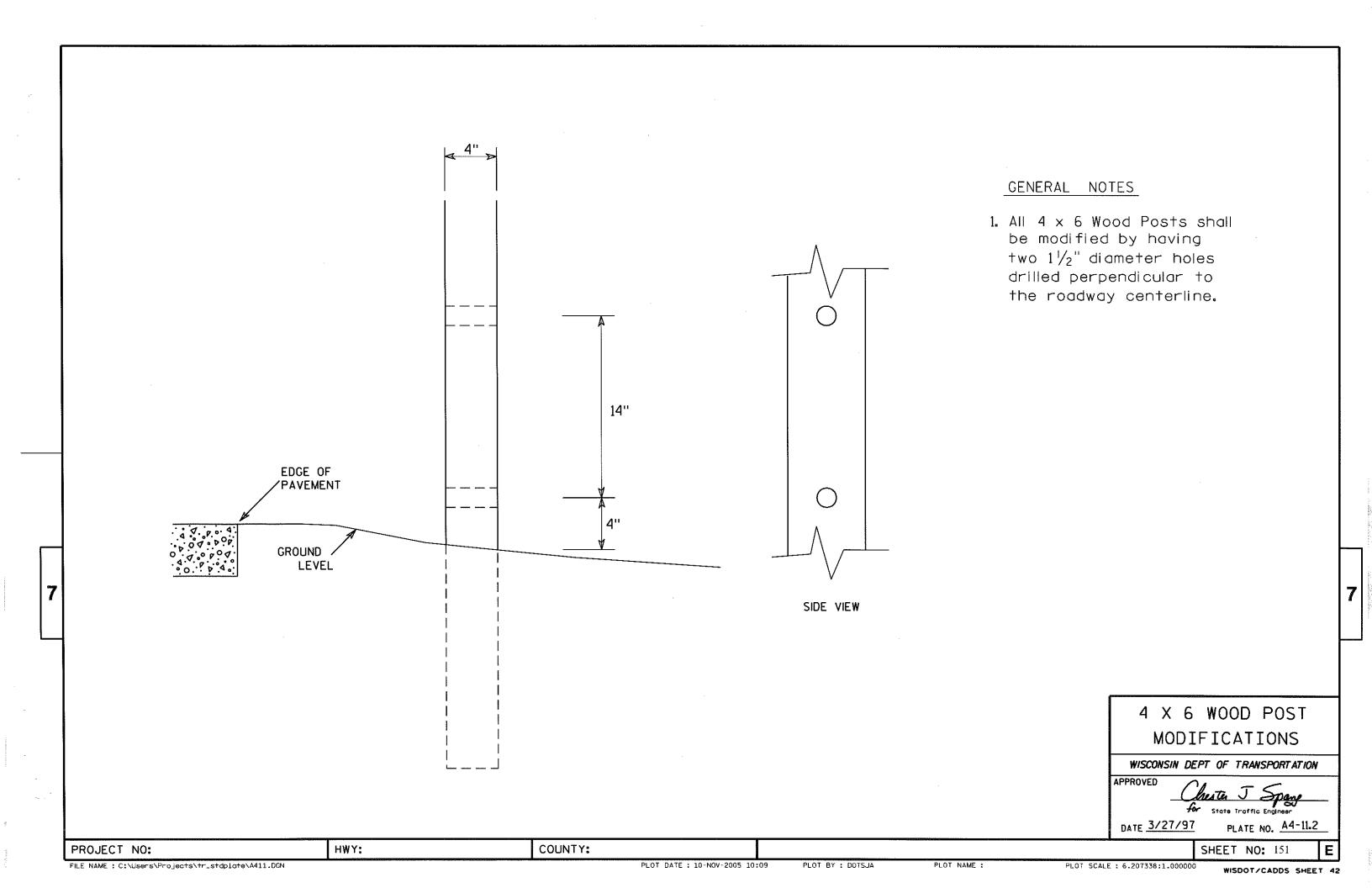
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.

9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (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.

MIERSTATE







URBAN AREA

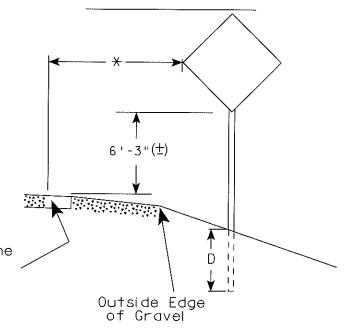
2' Min - 4' Max (See Note 5)

** Curb Flowline

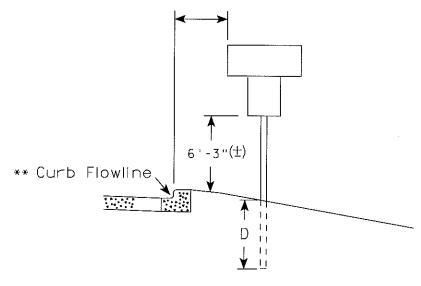
D

White Edgeline Location

RURAL AREA (See Note 2)



2' Min - 4' Max (See Note 5)



White Edgeline
Location

Outside Edge
of Gravel

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

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

GENERAL NOTES

- 1. Signs wider than 4 feet or larger than 20 sq. ft. 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'' (\pm) or 6'-3'' (\pm) per urban or rural detail respectively.
- 5. Minimum mounting height for signs mounted on traffic signal poles is $5' 3'' (\pm)$.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. The (\pm) 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 (W1-8A), 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" (±).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rawh

DATE 9/30/09

09 PLATE NO. A4-3.15

PROJECT NO:

HWY:

COUNTY:

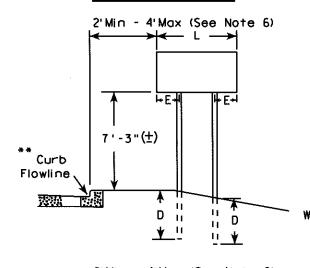
PLOT DATE: 30-SEP-2009 10:00 PLOT BY: ditjph

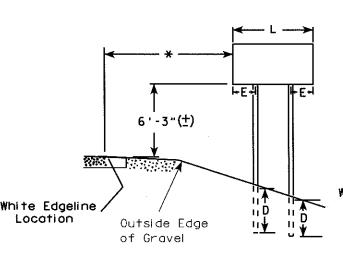
PLOT NAME :

SHEET NO: 152

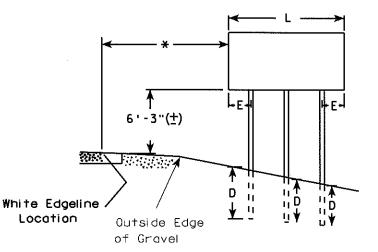
URBAN AREA

RURAL AREA (See Note 3)

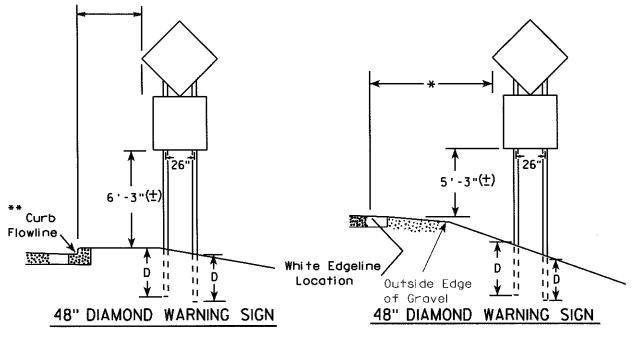




COUNTY:



2'Min - 4'Max (See Note 6)



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

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

HWY:

E
12"

GENERAL NOTES

- 1. For multiple 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 (W1-8A), 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.

POST EMBEDMENT DEPTH

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

TYPI	CAL INST	ALLATION
OF	TYPE II	SIGNS
ON	MULTIPLE	POSTS

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

SHEET NO: 153

DATE 9/30/09 PLATE NO. A4-4.10

PLOT BY: ditjph

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A44.DGN

***** *

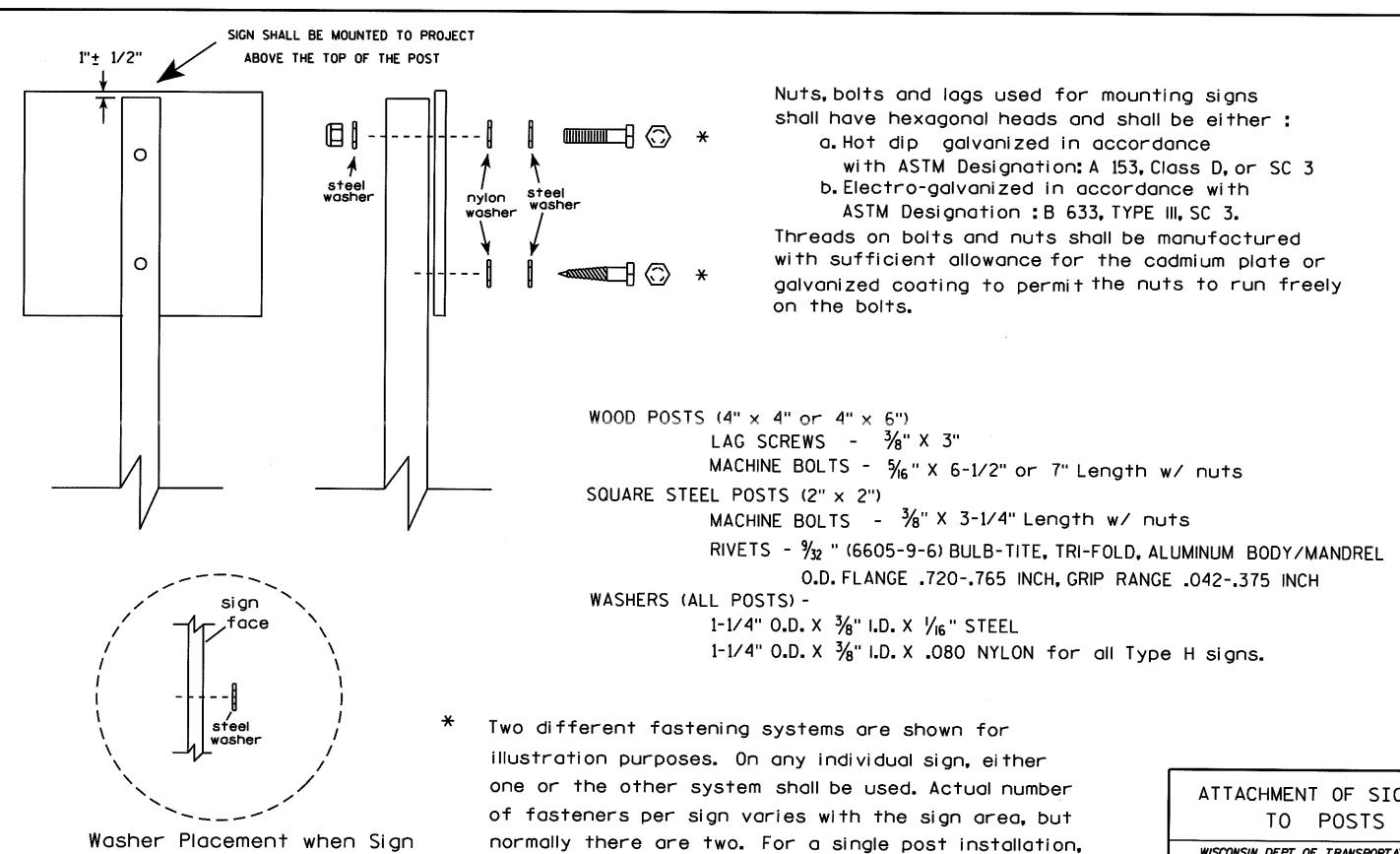
PROJECT NO:

PLOT DATE: 30-SEP-2009 10:08

PLOT NAME :

PLOT SCALE : 109.249131:1.000000

APPROVED



all signs greater than 9 sq.ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 3/23/10

PLATE NO. A4-8.7

SHEET NO: 154

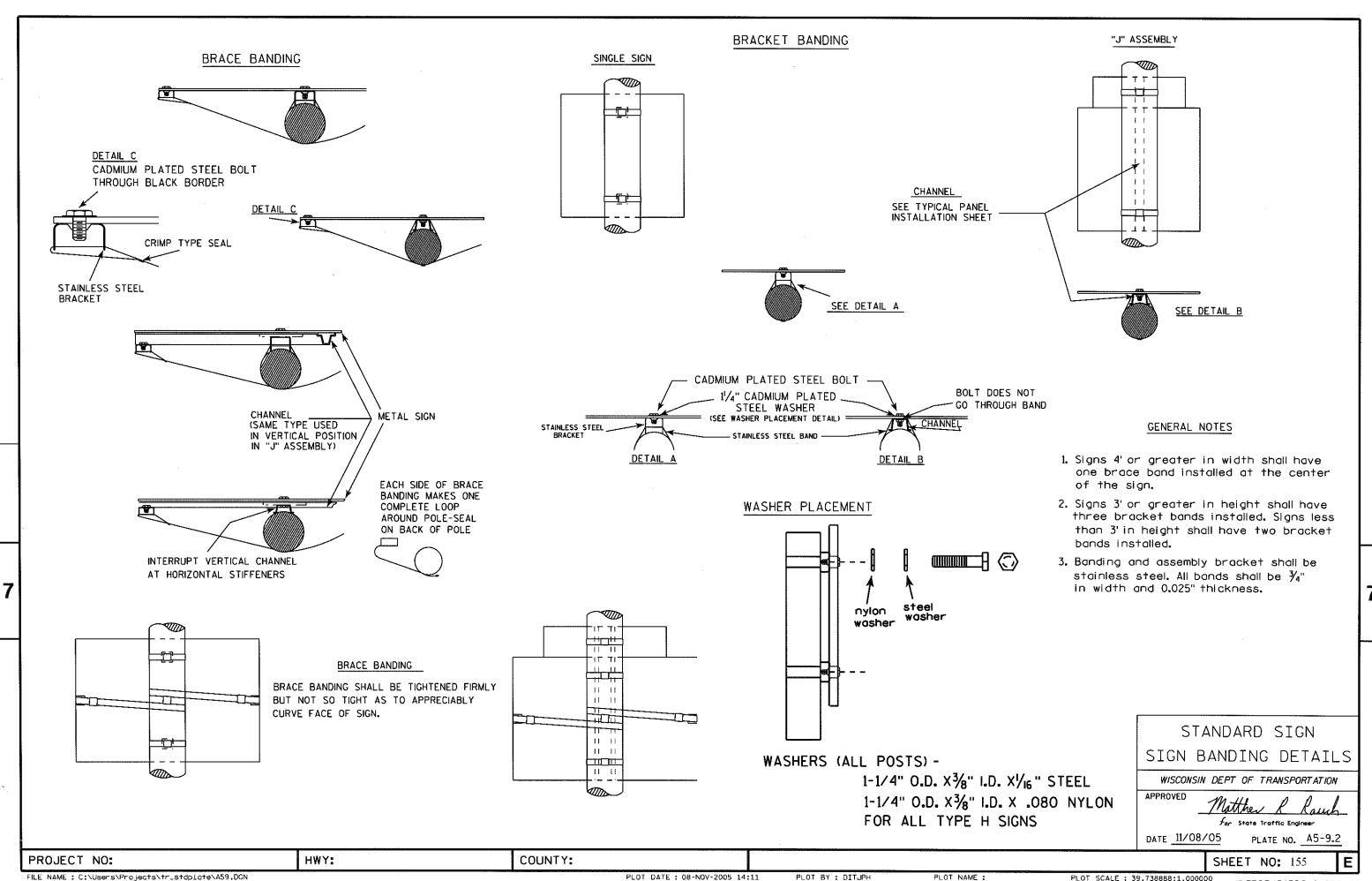
PROJECT NO:

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A48.DGN

Has Other Than Type H or

Type F Face

PLOT DATE: 23-MAR-2010 10:15

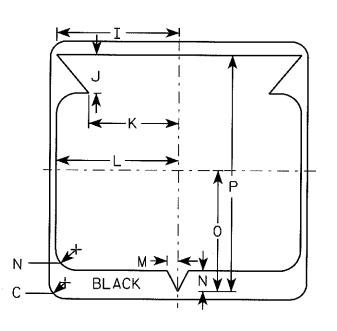


PLOT SCALE : 39.738888:1.000000

- 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



		G F
	BLACK	

HWY:

1 2 600 mm X 600 mm 3 900 mm

Metric equivalent for this sign is:

7

5 900 mm X 900 mm

PROJECT NO:

900 mm X 900 mm

SIZE	A	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р	Q	R	S	Т	U	٧	₩	×	Y	Z	Area sq. ft,	Area
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 1/8	11 1/2	1	1 1/8	11 1/4	21 1/8										******	4.0	. 36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 %	17 1/8	1 1/2	2 1/8	16 1/8	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 1/8	16 1/8	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 1/8	16 1/8	33											9.0	.81

COUNTY:

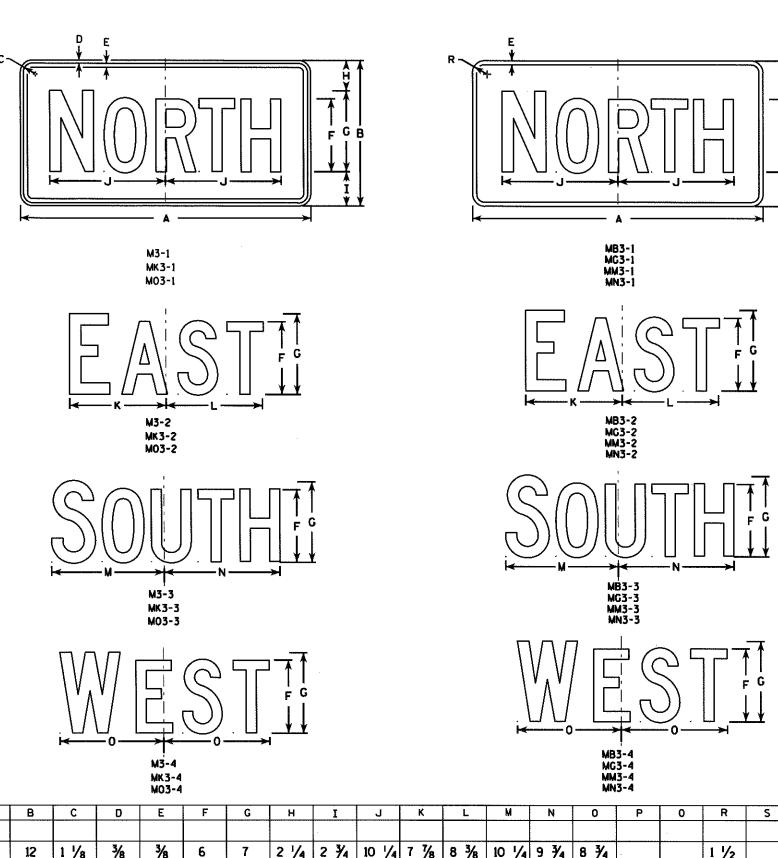
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

for State Traffic Engineer

PLATE NO. M1-6.9

SHEET NO: 156



- 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	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	T	U	٧	₩	x	Y	Z	Areg eq. ft.
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 1/4	10 1/4	7 1/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	¾	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

COUNTY:

STANDARD SIGNS M3-1 thur M3-4 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew & Rauch
State Traffic Engineer

DATE 11/10/10

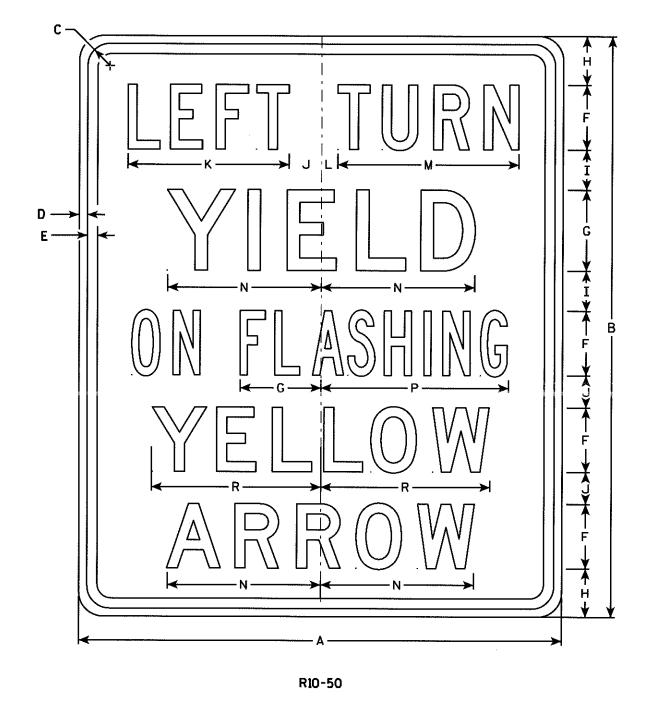
SHEET NO: 157

PROJECT NO:

HWY:

PLOT NAME :

PLATE NO. M3-1.12



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

Background - White Message - Black

- 3. Message Series see note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Line 1 is Series C. Lines 2, 4 and 5 are Series D. Line 3 is Series B.

PROJEC	ROJECT NO: HWY:										COL	NTY:						-									
5													=														
4																											
3															, , ,									*****			
2M 30	0	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2									7.5
2S 30	0	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2									7.5
1																											
SIZE A		В	С	D	E	F	G	Н	I	J	K	L	M	N	0	P	0	R	S	T	U	٧	₩	X	Y	Z	Areo

STANDARD SIGN R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 9/21/10

PLATE NO. R10-50.1

SHEET NO: 158

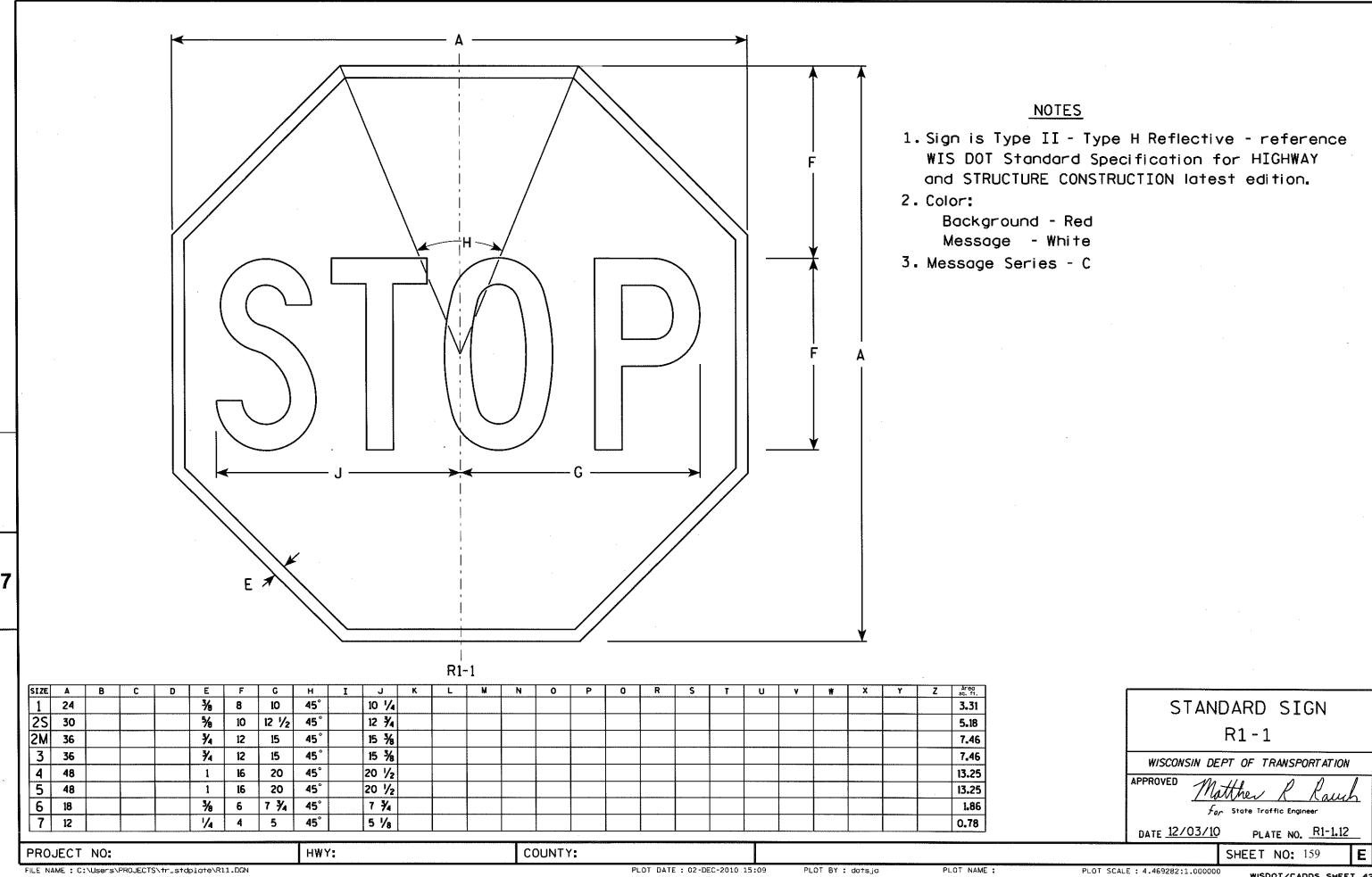
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R1050.DGN

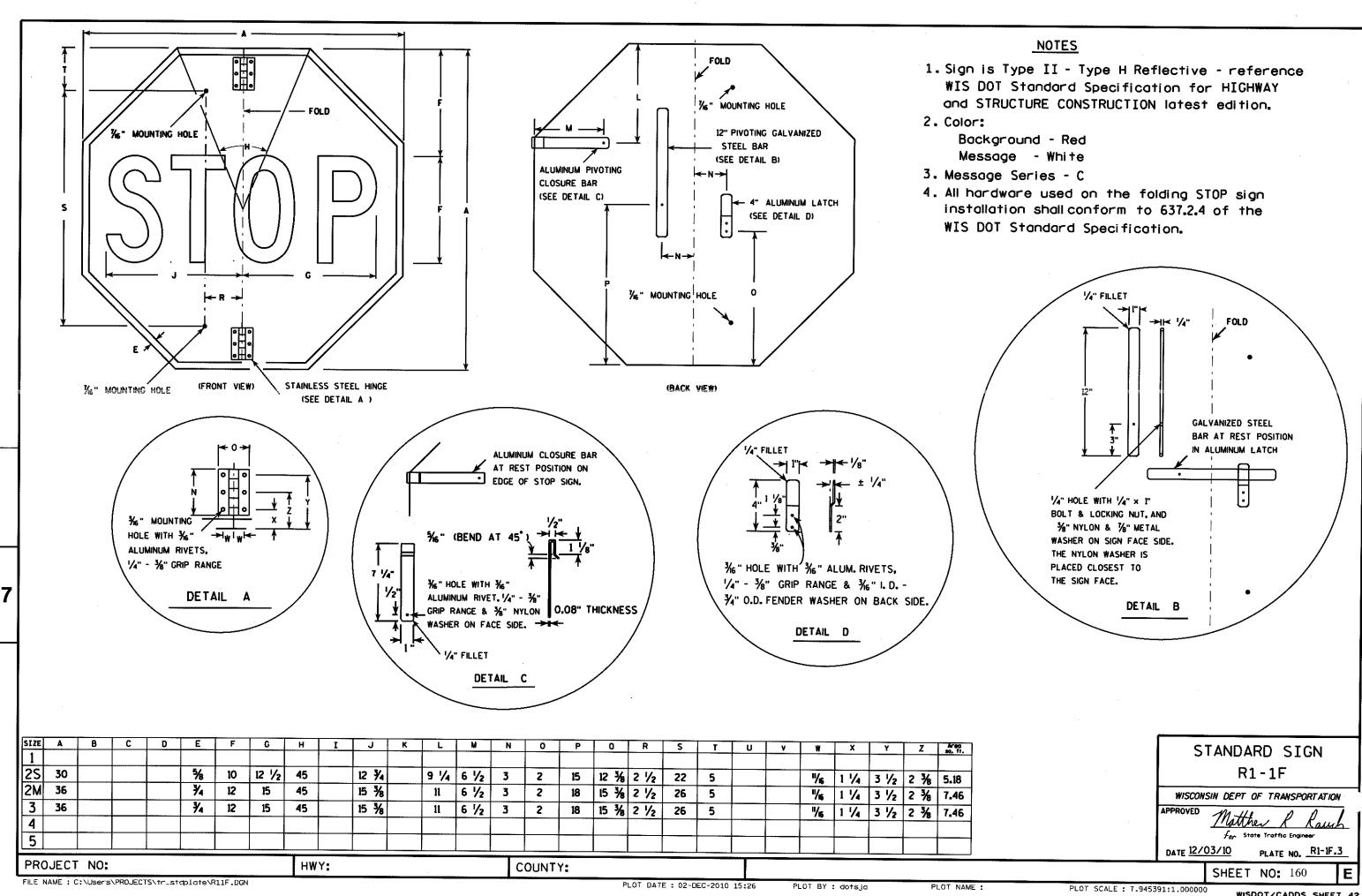
PLOT DATE : 21-SEP-2010 16:13

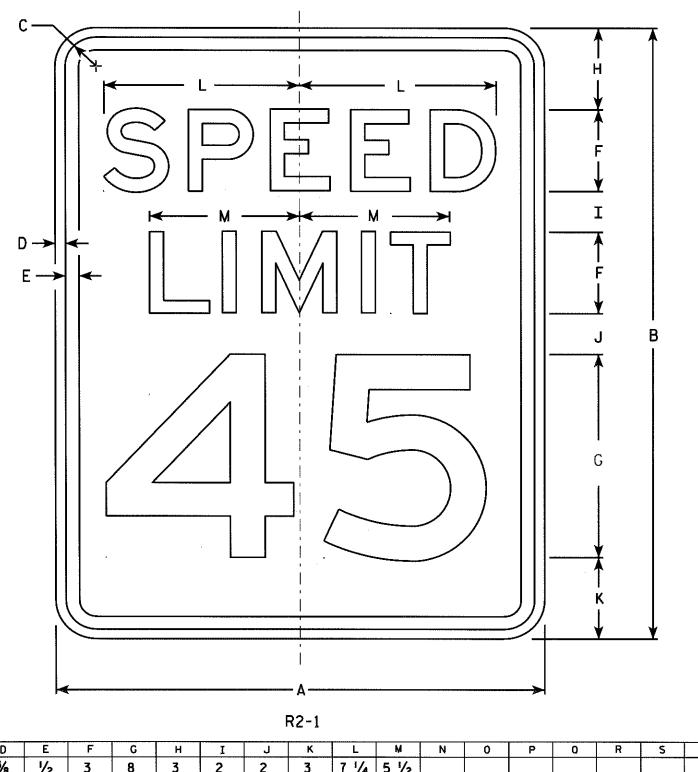
PLOT BY : dotsja

PLOT NAME :

PLOT SCALE : 5.959043:1.000000







- 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.

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

COUNTY:

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew

For state Traffile

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

SHEET NO: 161

FILE NAME : C:\users\PROJECTS\tr_stdplate\R21.DGN

PROJECT NO:

HWY:

PLOT DATE : 28-MAY-2010 08:32

PLOT NAME :

PLOT BY : ditjph

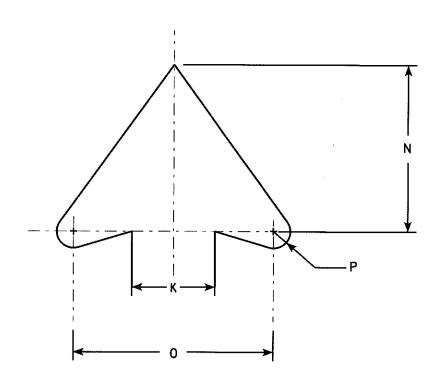
PLOT SCALE: 4.717577:1.000000

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

NOTES

- 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	4	В	С	D	E	F	G	H	I	J	K	L	M	N	0	P	0	R	S	T	U	٧	₩	Х	Y	Z	Arec sq. f
1 24	4		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	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	6		1 1/8	5/8	₹4	15 🛂	6	11 1/4	3	2 1/4	3 3/4	45°	12 1/4	7 1/2	9	₹4											9.0
3 36	6		1 %	5/8	₹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	6	·	1 5/8	5/8	3/4	15 ¾	6	11 1/4	3	2 1/4	3 3/4	45°	12 ¾	7 1/2	9	₹4											9.0
5 48	18		2 1/4	₹4	1	21	8	15	4	3	5	45°	17	10	12	1				* ********							16.

R3-2

STANDARD SIGN R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED For State Traffic Engineer

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

SHEET NO: 162

FILE NAME : C:\Users\PROJECTS\tr_stdp1ate\R32.DGN

PLOT DATE: 08-DEC-2010 14:41

PLOT BY : dotsja

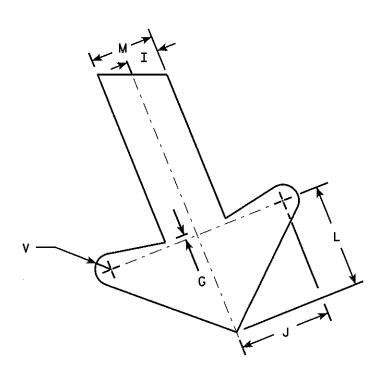
PLOT NAME :

PLOT SCALE: 5.760408:1.000000

- 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

		1 _						1		1 :	T			1		T =	T .						T I		Ι	***	Area
SIZE	A	В	С	D	<u> </u>	F	G	Н	I	J	K	<u> </u>	M	Ŋ	U	Р	U	К	3	ı	U	V	W	Х	Y	4	Area sq. ft.
1																											
25	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 1/8	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 1/8	2 %	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 %	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3%	3 ¾	1 1/2	4 1/4	4	4 1/8	3	2 1/4	10 1/8	11 1/4		12 1/4	11 1/2	12	22°	₹4	13 1/4				13.5
4																											
5																											

COUNTY:

R3-20L

HWY:

STANDARD SIGN R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rause for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

SHEET NO: 163

FILE NAME : C:\Users\PROJECTS\tr_stdplote\R320L.DGN

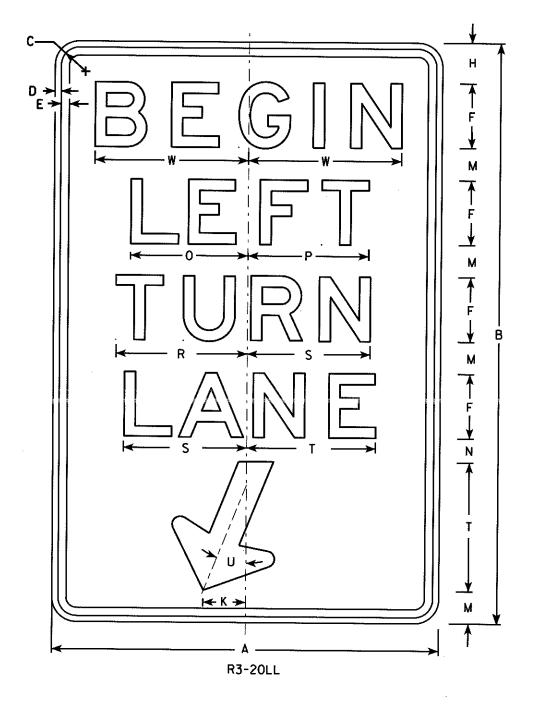
PROJECT NO:

PLOT DATE: 15-OCT-2010 14:45

PLOT BY : dotsje

PLOT NAME :

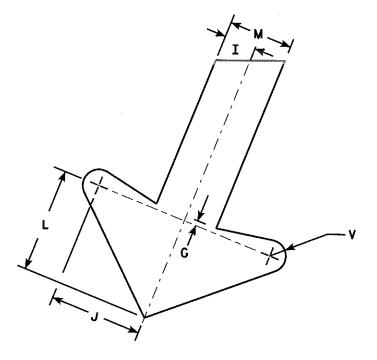
PLOT SCALE : 5.959043:1.000000



- 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

PRO	JECT	NO:					-	НΜ	Y:					COUN	ITY•												
5																											
4																								/-			 100
3	36	54	1 3/4	1	<u></u>	<u></u> 5∕8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 1/8	3	2 1/4	10 1/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4			 13.
2M	24	36	1 1/8	3/	8	1/2	4	1/4	2 1/2	1	2 1/8	2 %	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
2S	24	36	1 1/8		/8	1/2	4	1/4	2 1/2	1	2 1/8	2 1/8	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
1	1 1011																<u>'</u>	V	<u> </u>	,		. U	v	7		Y	 Are
SIZE	A	B	C	[D	Ē	F	G	Н	I	J	K	L	M	N	n	Р	<u> </u>	R	· ·	т				v		 Are

COUNTY:

STANDARD SIGN R3-20LL

WISCONSIN DEPT OF TRANSPORTATION

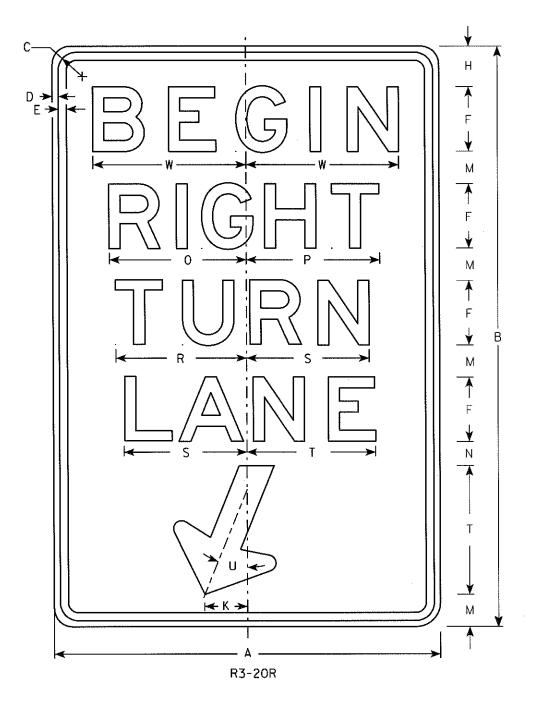
APPROVED

DATE 10/18/10

SHEET NO: 164

HWY:

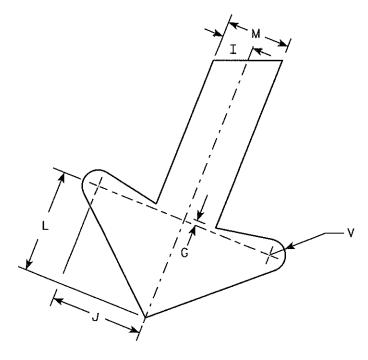
PLATE NO. R3-20LL.



- 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.



٨	DD	\cap	W	חב	T /	l II
А	π	יט	"	IJГ	1 4	ΝH

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	۵	R	S	T	U	٧	₩	X	Y	Z	Areg sq. ft.
1																											
25	24	36	1 1/8	3∕8	1/2	4	1/4	2 1/2	1	2 1/8	2 %	3 1/4	2	1 1/2	8 ½	8 1/4		8 1/8	7 %	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 1/8	2 %	3 1/4	2	1 1/2	8 1/2	8 1/4		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 1/8	3	2 1/4	12 ¾	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

COUNTY:

STANDARD SIGN R3-20R

WISCONSIN DEPT OF TRANSPORTATION

Matthew & Kauc APPROVED ForState Traffic Engineer

DATE 10/18/10

PLATE NO. R3-20R.6

SHEET NO: 165

FILE NAME: C:\Users\PROJECTS\tr_stdplate\R320R.DGN

PROJECT NO:

HWY:

PLOT DATE: 15-0CT-2010 14:59

PLOT BY : dotsja

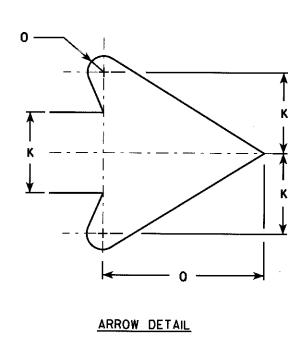
PLOT NAME :

PLOT SCALE: 5.959043:1.000000

- 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.



	G + A I I
R3-4]

D H N 0 0 Z 2S 24 3/8 1 1/8 1/2 4 3/4 13 1/4 6 2 2 ½ 5 ¼ 10 ½ 45° 4.0 2M 36 5/8 ₹4 3 3/4 7 7/8 15 3/4 1 5/8 7 1/8 19 7/8 9 3/4 45° 7 % 9.0 3 5/8 7 1/8 19 7/8 9 36 1 5/8 ₹4 3 3/4 7 1/8 15 3/4 45° 7 % 9.0 4 1 5/8 5∕8 ₹4 7 1/8 19 7/8 3 3/4 7 1/8 15 3/4 36 7 5/8 9.0 5 7 1/8 19 7/8 9 3 3/4 7 1/8 15 3/4 36 1 5/8 5/8 45° 9.0

COUNTY:

STANDARD SIGN R3-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED M 1/1 D D

For State Traffic Engineer

DATE 12/08/10 PLATE NO.

10 PLATE NO. R3-4.11
SHEET NO: 166

FILE NAME : C:\Users\PROJECTS\tr_stdplote\R34.DGN

HWY:

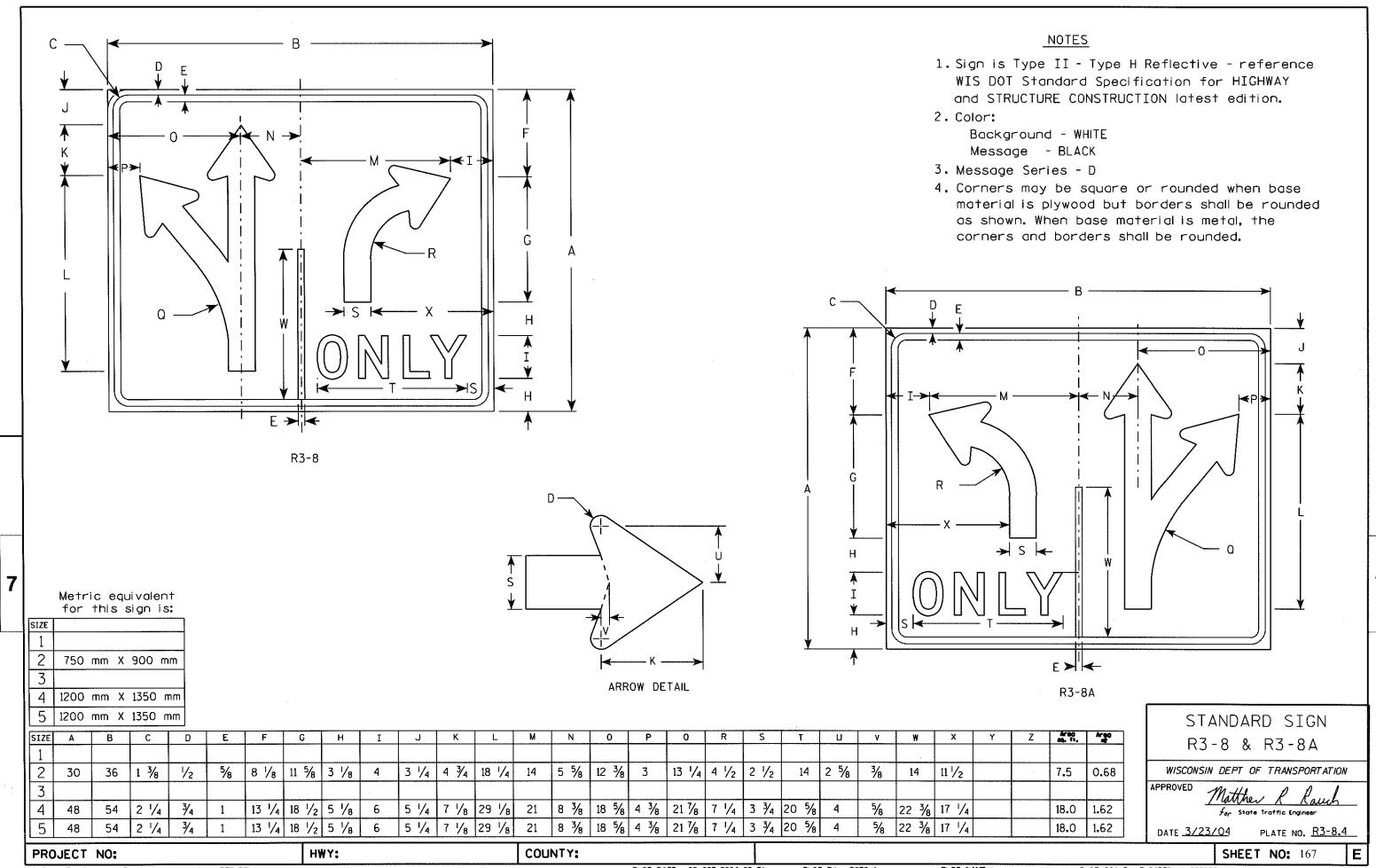
PROJECT NO:

PLOT DATE: 08-DEC-2010 15:34

PLOT BY: dotsja

PLOT NAME :

PLOT SCALE: 5.959043:1.000000



FILE NAME : C:\Users\Projects\tr_stcpicte\R38.DCN

PLOT DATE : 08-001-2004 09:51

PLOT BY : DOTSJA

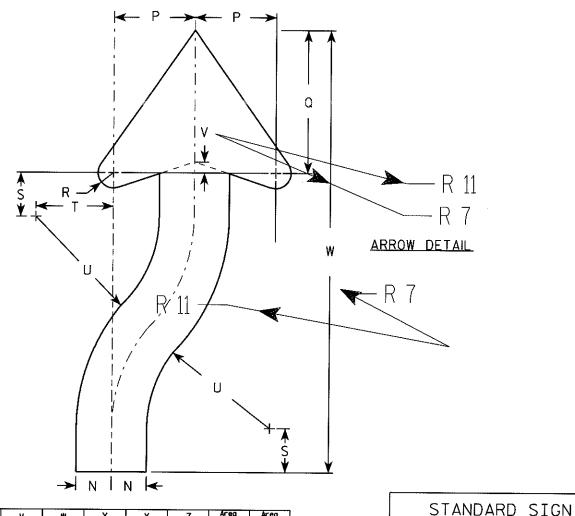
PLOT NAME :

PLOT SCALE : 7.945391:1.000000

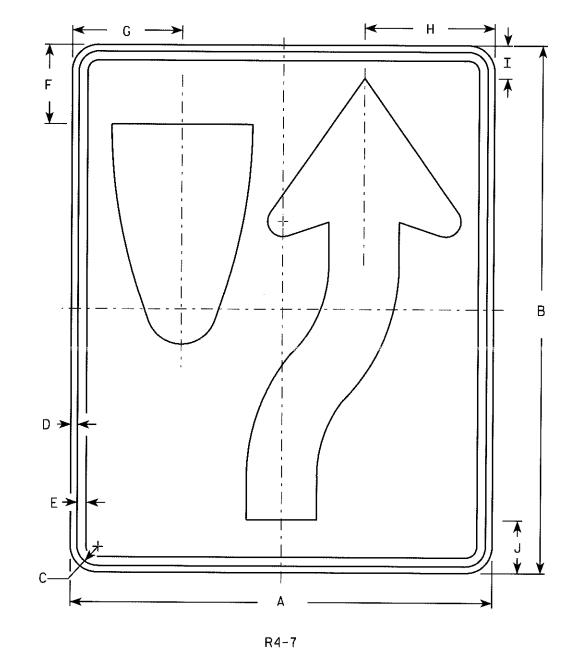
- 1. Sign is Type II Type H Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
- 2. Color:

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.



← L →	K
1	
N	



Metric equivalent for this sign is:

SIZE				
1	450	mm	Х	600 mm
2	600	mm	Х	750 mm
3	900	mm	X	1200 mm
4	900	mm	Х	1200 mm
5	900	mm	Х	1200 mm

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	Ļ	М	N	0	Р	0	R	S	Т	U	٧	₩	х	Y	Z	Area sq. ff.	Areo
1 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 1/8	3 1/4	6 3/4	1/2	20 3/8				3.0	.27
<u> 2</u>	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 1/8	3	8	4	12 1/2	2	30	4 %	8 1/8	½ 8	2 1/2	4 3/8	9	5/8	25 1/8				5.0	.45
3	36	48	1 3/4	1/2	5∕8	6 3/4	9 3/8	11 1/8	2 1/8	4 1/2	12	5	18 3/4	3	45	6 1/8	12 1/4	1 1/4	3 3/4	6 %	13 1/2	1	40 3/4				12.0	1.08
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 1/8	4 1/2	12	6	18 3/4	3	45	6 1/8	12 1/4	1 1/4	3 3/4	6 %	13 1/2		40 3/4				12.0	1.08
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	1.08

COUNTY:

PROJECT NO:

FILE NAME: C:\Users\Projects\tr_stdplate\R47.DCN

HWY:

PLOT DATE: 03-0CT-2005 16:17

PLOT BY : DITJPH

PLOT NAME :

SHEET NO: 168

DATE 2/6/02

R4-7 & R4-8
WISCONSIN DEPT OF TRANSPORTATION

₩hi te Red Whi te R5-1

NOTES

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

Background - 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 cornors shall be rounded.

SIZE	Α	В	С	D	E	F	G	Н	I	Ĵ	K	L	М	N	0	Р	0	R	S	T	U	V	₩	Х	Y	Z	Area sq. ft.
1																											
25	30		1 1/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5%	14 1/2	12 1/2	8 1/2	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 %	10 ¾											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 %	10 ¾											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 %	10 ¾											9.0
5	48		3		8	-6	11	3	5/8	9 3/4	3 %	14 1/2	23 1/2	20	12 3/4	12 1/8											16.0
PRO	JECT	NO:					нМ	/Y:					COUN	ITY:		500000 married									in consumer and a second	eren eren eren eren eren eren eren eren	

STANDARD SIGN R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

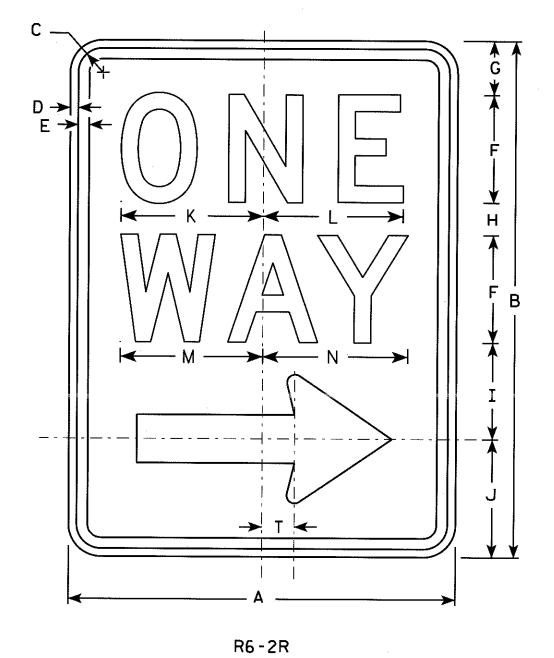
DATE 12/17/10

PLATE NO. R5-1.15 **SHEET NO:** 169

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R51.DGN

PLOT DATE: 17-DEC-2010 12:11

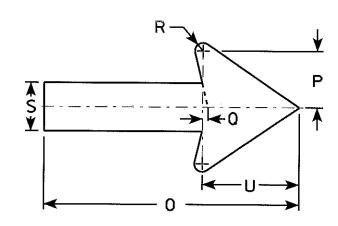
PLOT SCALE : 5.959043:1.000000



- 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.



PROJE(СТ	NO:					Н	NY:					СОП	NTY:												
5																										
4 3	16	48	1 1/8	1/2	5∕8	10	5 1/4	3 1/4	9	10 1/2	12 ¾	12 3/4	13 1/4	13 1/2	24	5 %	1/2	₹4	4 1/4	3	9					
3 3	36	48	1 1/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/2	13 1/4	13 1/2	24	5 %	1/2	₹4	4 3/4	3	9					1
M 3	30	36	1 3/8	1/2	5⁄8	8	2 1/2	2 %	6 %	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					
?S 2	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 %	16	3 1/2	3/8	1/2	3	2	6					
1 18	8	24	1 1/8	- 3⁄8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 %	6 1/2	6 1/8	6 ¾	11 %	2 %	1/4	3∕8	2 1/4	1 1/2	4 1/2					T
IZE A	4	В	C	D	E	F	G	Н	I	J	K	L.	M	N	0	P	0	R	S	T	Ü	٧	₩	Х	Y	T

STANDARD SIGN R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew & Law for State Traffic Engineer

DATE 11/2/10

SHEET NO: 170

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R62.DGN

PLOT DATE : 02-NOV-2010 15:25

PLOT BY : ditjph

PLOT NAME

PLOT SCALE: 4.469282:1.000000

WISDOT/CADDS SHEET 42

PLATE NO. R6-2.8

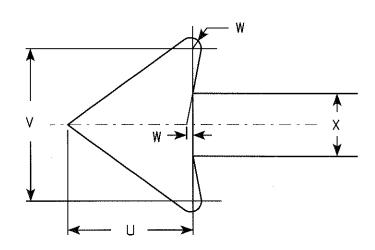
D→ Ι

NOTES

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

Background - White Message - Red

- 3. Message Series See Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Lines 1, 3 and 4 are series C, line 2 is series B.
- 6. R7-1D (double arrow) R7-1L (left arrow)
 - R7-1R (right arrow)



Metric equivalent for this sign is:

SIZÉ					
1	300	mm	Χ	450	mm
2	450	mm	Х	600	mm
3	600	mm	Х	750	mm
4					
5					

R7-1

SIZE	Α	В	С	D	E	F	G	Н	I	J	К	L	M	N	0	Ρ	۵	R	S	T	U	٧	₩	Х	Y	Z	Area sa. ft.	Areo
1	12	18	1 1/8	3/8	3/8	3	1 1/8	2	7∕8	5/8	1 1/2	2 1/2	2	2	4 1/ ₈	4 1/8	2 1/4	2 1/8	2 1/2	3 1/8	1 1/2	1 3/4	1/8	3∕4			1.5	0.14
2	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 %	3 1/8	5 1/8	2 1/4	2 5/8	1/4	1 1/8			3.0	0.27
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3 .	3 ½	1/4	1 1/2			5.0	0.45
4																												-
5																												

STANDARD SIGN R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

DATE 2/7/02 PLATE NO. R7-1.8

PROJECT NO:

HWY:

COUNTY:

PLOT NAME :

PLOT SCALE : 3.477154:1.000000

SHEET NO: 171

FILE NAME : C:\Users\Projects\tr_stdplote\R71.DGN

PLOT DATE: 04-OCT-2005 09:43 PLOT BY: DITJPH

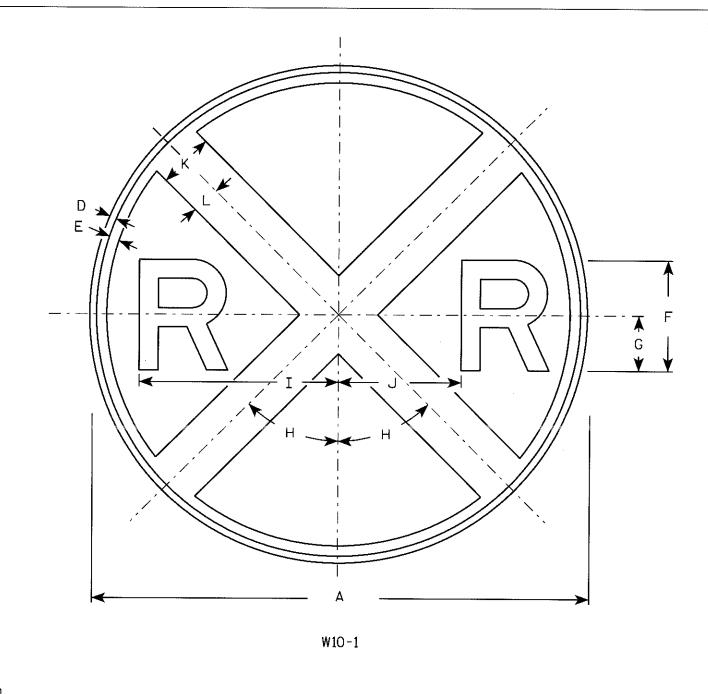
PL

<u>NOTES</u>

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

Background - Yellow Message - Black

3. Message Series - E



Metric equivalent for this sign is:

SIZE	
1	750 mm
2	900 mm
3	
4	1200 mm

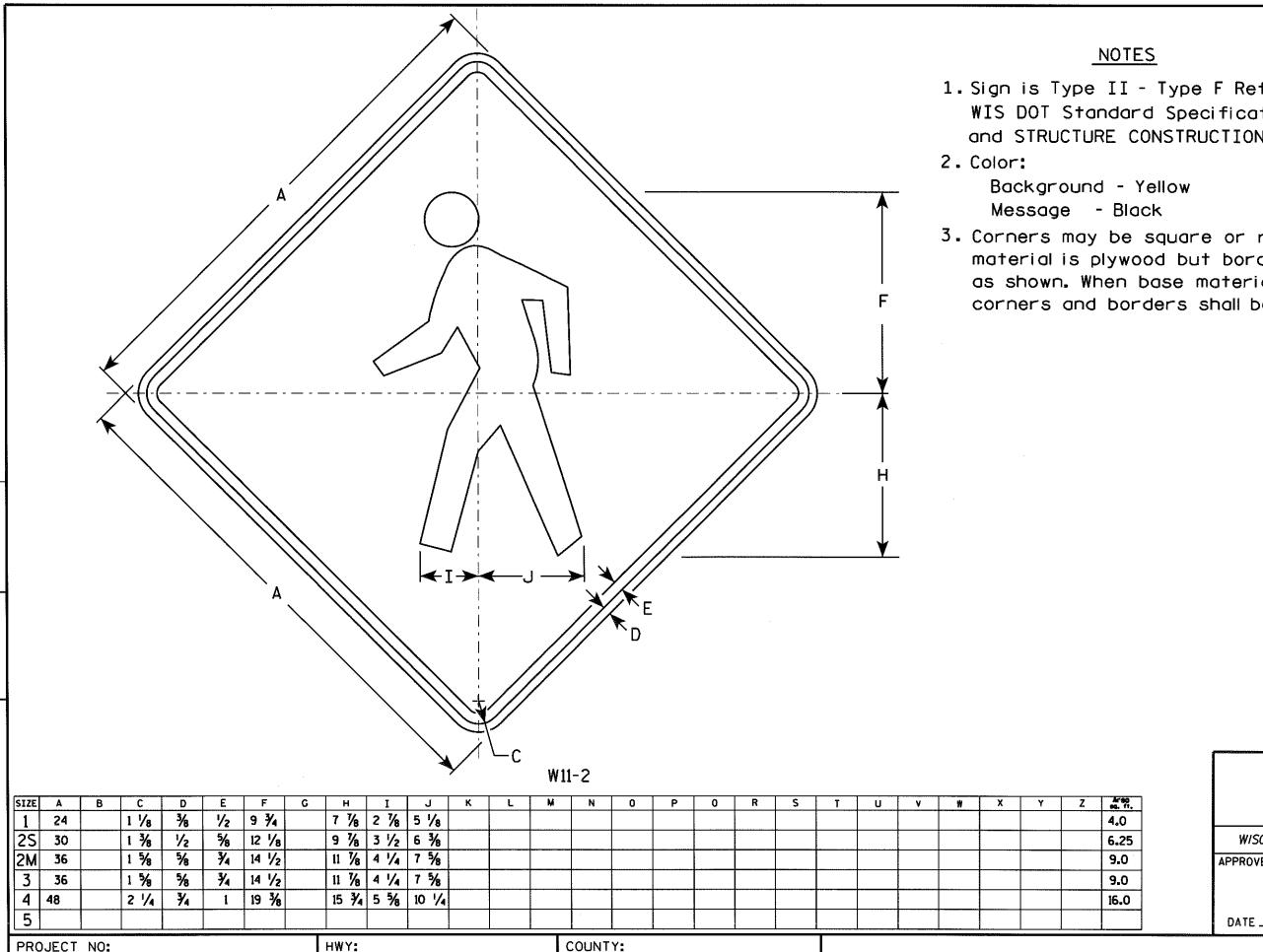
SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р	a	R	S	T	U	l v	W	X	Υ	Z	Area sq. ft.	Area
1	30			3/8	5/8	7	3 ½	45°	12 3/8	7 1/8	3	1 1/2											-					0.44
2	36			5/8	₹/4	8	4	45°	14 3/8	8 5/8	4	2																
3																												
4	48			3/4	1 1/4	10	5	45°	18 3/8	11 5/8	5	2 1/2															12.57	1.13
5																								-				
	150T	N.10-																	1		l		L					
PRO.	JECT	NU:					HW	Υ:					COUN	TY:														

STANDARD SIGN W10-1

WISCONSIN DEPT OF TRANSPORTATION

State Traffic Engineer
PLATE NO. W10-1.E

SHEET NO: 172



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

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.

> STANDARD SIGN W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 6/7/10

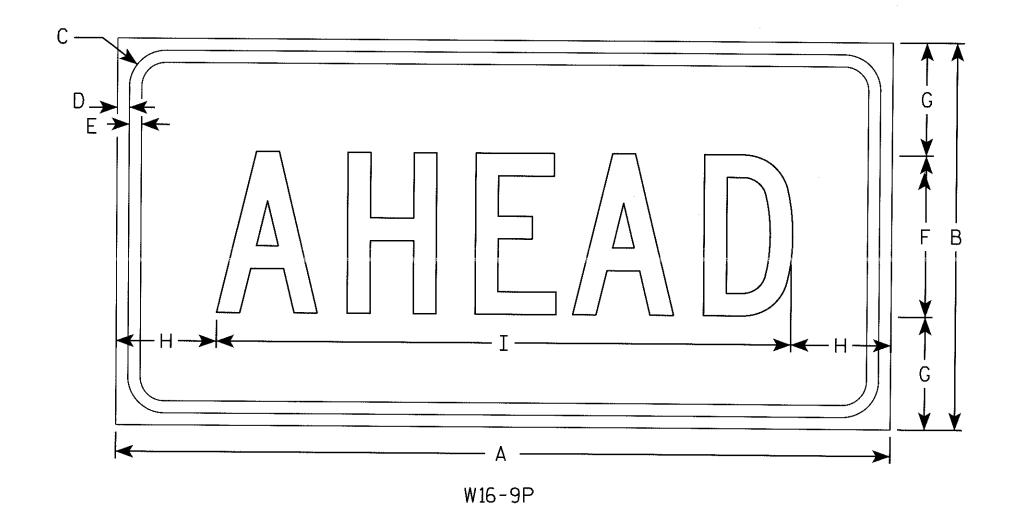
PLATE NO. W11-2.7

SHEET NO: 173

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

Background - Yellow Message - Black

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	Α	В	C	D	E	F	G	Н	I	כ	K	L	M	N	0	Р	Q	R	S	Ť	U	v	w	X	Y	7	Ar 80
1																		İ									#Q, 11,
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4												<u></u>						2.0
2M	30	18	1 1/8	3∕⁄8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3∕8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 ¾																		8.0
5																											3.0
PO I	ECT	NO.					HW	V.					COUNT	- \ -													

STANDARD SIGN W16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther & Rauch

DATE 12/28/10

O PLATE NO. W16-9P.6

SHEET NO: 174

FILE NAME : C:\Users\PROJECTS\tr_stdplote\W169P.DGN

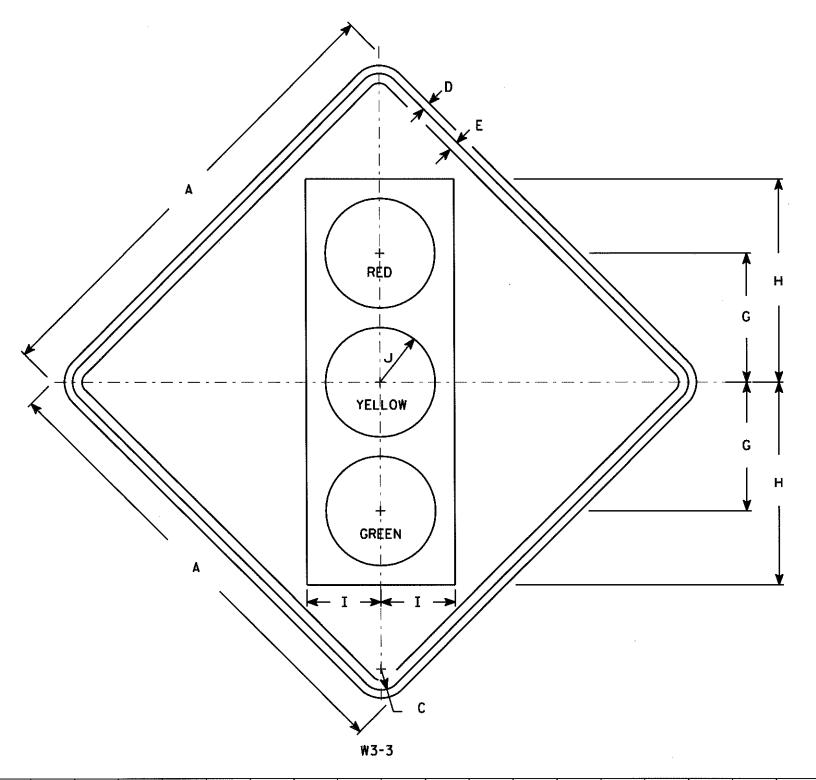
PLOT DATE: 28-DEC-2010 13:39

PLOT BY : dotsja

PLOT NAME :

PLOT SCALE: 2.979524:1.000000

WISDOT/CADDS SHEET 42



- 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 - 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. 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 D 1 3/8 1/2 5/8 8 3/4 13 3/4 5 3 3/4 30 6.25 1 % 10 | 15 3/4 | 5 3/4 | 4 1/4 36 5∕8 3/4 9.0 2M 36 1 % 5/8 ₹4 15 3/4 5 3/4 4 1/4 9.0 15 3/4 5 3/4 4 1/4 ₹4 36 9.0 ₹4 20 7 1/2 5 2 1/4 12 1/2 48 16.0 12 1/2 20 7 1/2 5 48 2 1/4 3/4 16.0 HWY: COUNTY:

STANDARD SIGN W3 - 3

WISCONSIN DEPT OF TRANSPORTATION

DATE 6/7/10 PLATE NO. W3-3.11 SHEET NO: 175

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN

PROJECT NO:

PLOT DATE: 07-JUN-2010 13:07

PLOT BY : ditjph

PLOT NAME :

PLOT SCALE: 7.448805:1.000000

WISDOT/CADDS SHEET 42

