JUN 2015

ORDER OF SHEETS

Section No. 1 T1†le Section No. 2 Typical Sections and Details Estimate of Quantities

Miscellaneous Quantitles Section No. 4 Right of Way Plat

Plan and Profile

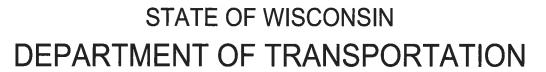
Section No. 6 Standard Detail Drawings

Sign Plates Section No. 7

Section No. 9 Computer Earthwork Data

Cross Sections Section No. 9

TOTAL SHEETS = 196



PLAN OF PROPOSED IMPROVEMENT

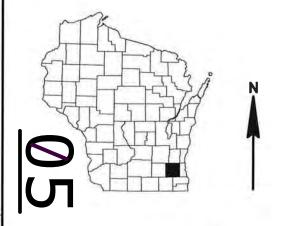
CTH JJ

INTERSECTIONS WITH CTH J & CTH SR

CTH JJ

WAUKESHA COUNTY

STATE PROJECT NUMBER 2758-01-70



BEGIN PROJECT STA. 187+67.90 Y = 172,297.12 X = 684,460.55

DESIGN	DESIGNATIO	N	CTH JJ	СТН Ј	CTH SR (NORTH)	SPRINGDALE RD (SOUTH)
A.A.D.T.	2015	=	7,900-13,800	19,800-22,100	14,500	12,700
A.A.D.T.	2035	=	8,800-15,300	21,800-25,900	16,600	14,500
D.H.V.		=	1,012-1,760	2,507-2,979	1,909	1,668
D.D.		=	59/41	59/41	59/41	59/41
T.		=	3.3%	3.3%	3,3%	3.3%
DESIGN	SPEED	=	45 MPH	45 MPH	45 MPH	30 MPH
ESALS		=	4	· ·	-	-

CONVENTIONAL SYMBOLS

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

COMBUSTIBLE FLUIDS

WOODED OR SHRUB AREA

MARSH AREA

1////// --- 623---

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

UTILITY PEDESTAL

POWER POLE

PROFILE

LABEL

STA. 301+94.84BK= END CONSTRUCTION STA. 50+00.00 AH STA. 196+58.74 J T-7-N END PROJECT STA. 53+99.27 BEGIN CONSTRUCTION STA. 298+02.80 R-19-E LAYOUT

> HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATES, WAUKESHA COUNTY, NADB3 (2011), IN U.S. SURVEY FEET. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN 2012 VERTICAL DATUM OF 1988 NAVD88 (2012).

FEDERAL PROJECT

CONTRACT

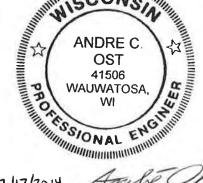
PROJECT

WISC 2015319

STATE PROJECT

2758-01-70

ACCEPTED FOR ORIGINAL PLANS PREPARED BY GRAEF 125 S. 841H STREET, SUITE MILWAUKEE, WI 53214 SCONS



(Signature) STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

REPARED BY Surveyor Designer

MANAGEMENT CONSULTANT DAAR ENGINEERING, INC.

TOTAL NET LENGTH OF CENTERLINE = 0.319 MI

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL

THE EXACT LOCATION OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES OR FROM GRUBBING OF TREES STUMPS SHALL BE BACKFILLED WITH GRANULAR BACKFILL. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

ALL RADIUS DIMENSIONS FOR CURB & GUTTER ARE GIVEN TO THE FLANGE. ALL ELEVATIONS ALONG CURB & GUTTER ARE GIVEN TO THE FLANGE. OFFSETS NOTED ARE TO THE FLANGE OR EDGE OF LANE IF NO CURB, UNLESS

CONTRACTOR SHALL CONTACT WAUKESHA COUNTY SURVEYOR BEFORE DISTURBING ANY PUBLIC SURVEY MONUMENTS. CONTACT JASON MAYER AT (262) 548-7749 FOR

THE LOCATION OF KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITIES IN THE AREA THAT ARE NOT SHOWN.

HMA PAVEMENT, TYPE E-3, WHERE INDICATED ON THE PLANS, SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

2" DEPTH

2" OF 12.5mm HMA PAVEMENT TYPE E-3

PERFORMANCE GRADE 64-28

5½" DEPTH

3½" OF 19.0mm HMA PAVEMENT TYPE E-3 PERFORMANCE GRADE 64-28. AS THE LOWER LAYER

2" OF 12.5mm HMA PAVEMENT TYPE E-3 PERFORMANCE GRADE 64-28, AS THE UPPER LAYER

3" ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES SHALL BE CONSTRUCTED AS ONE

SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

ASPHALT AND CONCRETE DRIVEWAYS SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY

EROSION CONTROL DEVICES ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER

STANDARD ABBREVIATIONS

APRON END WALL AGGREGATE
BASE AGGREGATE DENSE BENCH MARK

CURB AND GUTTER CENTER OR CONSTRUCTION LINE

CONC CONCRETE CULVERT PIPE

AGG BAD

ВМ

CULVERT PIPE CORRUGATED METAL CPRC

CULVERT PIPE REINFORCED CONCRETE
CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CPRCHE

CSCP CORRUGATED STEEL CULVERT PIPE **CSPA** CORRUGATED STEEL PIPE ARCH

CSD CY CONCRETE SURFACE DRAIN CUBIC-YARD DEGREE OF CURVE

DISCHARGE DISCH FIELD ENTRANCE

HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE HERCP

HMA HOT MIX ASPHALT INV INVERT

LENGTH OF CURVE LHF LEFT HAND FORWARD

1 T LEFT MINIMUM NORTHBOUND NORMAL CROWN NTS NOT TO SCALE PAVEMENT PULL BOX

POINT-OF-CURVE PCC POINT OF COMPOUND CURVE PRIVATE ENTRANCE POINT OF INTERSECTION PERMANENT LIMITED EASEMENT

POINT OF VERTICAL CURVE
POINT OF VERTICAL INTERSECTION PVC PVI PVT POINT OF VERTICAL TANGENT

R/I REFERENCE LINE RIGHT OF WAY R/W RAD

REVERSE CROWN APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE **RCAFW RCHESS** REINFORCED CONCRETE HORIZONTAL ELLIPTICAL STORM SEWER

REINFORCED CONCRETE PIPE - STORM SEWER REQUIRED

REQD RHF RIGHT HAND FORWARD RUN OFF LENGTH

SALVAGED SALV SIGNAL BASE SB SDD STANDARD DETAIL DRAWING

SUPER ELEVATION SQUARE FOOT

STA STATION SQUARE YARD TANGENT LENGTH TOP OF CURB

TEMPORARY LIMITED EASEMENT

AGENCIES

WAUKESHA COUNTY MS. ALLISON BUSSLER 515 W. MORELAND BLVD. WAUKESHA, WI 53188 ABUSSLER@WAUKESHACOUNTY.GOV

WAUKESHA COUNTY MR. BRUCE BARNES 515 W MORFLAND BLVD WAUKESHA, WI 53188 BGBARNES@WAUKESHACOUNTY.GOV

DEPT. OF NATURAL RESOURCES

WISCONSIN DEPT. OF NATURAL RESOURCES MR. CRAIG WEBSTER 141 NW BARSTOW STREET WAUKESHA, WI 53187 (262) 574-2141 CRAIG.WEBSTER@WISCONSIN.GOV

DESIGN CONTACT

GRAFE MR. ANDRE OST HONEY CREEK CORPORATE CENTER 125 S. 84TH STREET, SUITE 401 MILWAUKEE, WI 53212 (414) 266-9256 ANDRE.OST@GRAEF-USA.COM

UTILITIES

CITY OF WAUKESHA - WATER MS. KELLY ZYLSTRA 115 DELAFIELD STREET WAUKESHA, WI 53188 (262) 521-5272×536 KZYLSTRA@WAUKESHA-WATER.COM

CITY OF WAUKESHA - SANITARY, STORM, LIGHTING MR. CHRIS LANGEMAK 130 DELAFIELD STREET WAUKESHA, WI 53188 (262) 524-3598 CLANGEMAK@CI.WAUKESHA.WI.US

CITY OF PEWAUKEE - WATER & SANITARY MS. JANE MUELLER W240 N3065 PEWAUKEE ROAD PEWAUKEE, WI 53072 (262) 691-0804 JEM@PEWAUKEE.WI.US

UTILITIES

TOWN OF BROOKFIELD SANITARY DISTRICT NO.4 MR. TONY SKOF 150 S. BARKER ROAD, P.O. BOX 1296 BROOKFIELD, WI 53008 TONYSD4@GMAIL.COM

WAUKESHA COUNTY - TRAFFIC SIGNAL MR. FRED PATZER 515 W MORELAND BLVD WAUKESHA, WI 53188 FPATZER@WAUKESHACOUNTY.GOV

AT&T WISCONSIN MR. ALPER KOLCU 2005 PEWAUKEE ROAD WAUKESHA, WI 53188 (262) 970-8494 AK308X@ATT.COM

TDS METROCOM MR. MICHAEL JOHNSON 20875 CROSSROADS CIRCLE, SUITE 800 WAUKESHA, WI 53186 MICHAEL.JOHNSON@TDSTELECOM.COM

TIMER WARNER CABLE MR. STEVE STORM 1320 N. MARTIN LUTHER KING JR. DRIVE MILWAUKEE, WI 53212 (414) 277-4045 STEVE.STORM@TWC-CONTRACTOR.COM

LEVEL 3 COMMUNICATIONS (FORMERLY TW TELECOM) MR. BRAHIM GADDOUR 3235 INTERTECH DRIVE, SUITE 600 BROOKFIELD, WI 53045-5140 (414) 908-1027 BRAHIM.GADDOUR@TWTELECOM.COM

WE ENERGIES-ELECTRIC SEND ALL CORRESPONDENCE TO:

MR. LATROY BRUMFIELD 333 W. EVERETT STREET MILWAUKEE, WI 53203 (414) 221-5617 LATROY.BRUMFIELD@WE-ENERGIES.COM

WE ENERGIES-GAS/PETROLEUM SEND ALL CORRESPONDENCE TO:

MR. LATROY BRUMFIELD 333 W. EVERETT STREET MILWAUKEE, WI 53203 (414) 221-5617 LATROY.BRUMFIELD@WE-ENERGIES.COM

WINDSTREAM KDL, INC. MR. JIM KOSTRUCH 13935 BISHOPS DRIVE BROOKFIELD, WI 53005 JAMES.KOSTRUCH@WINDSTREAM.COM



PROJECT NO: 2758-01-70

HWY: CTH JJ

COUNTY: WAUKESHA

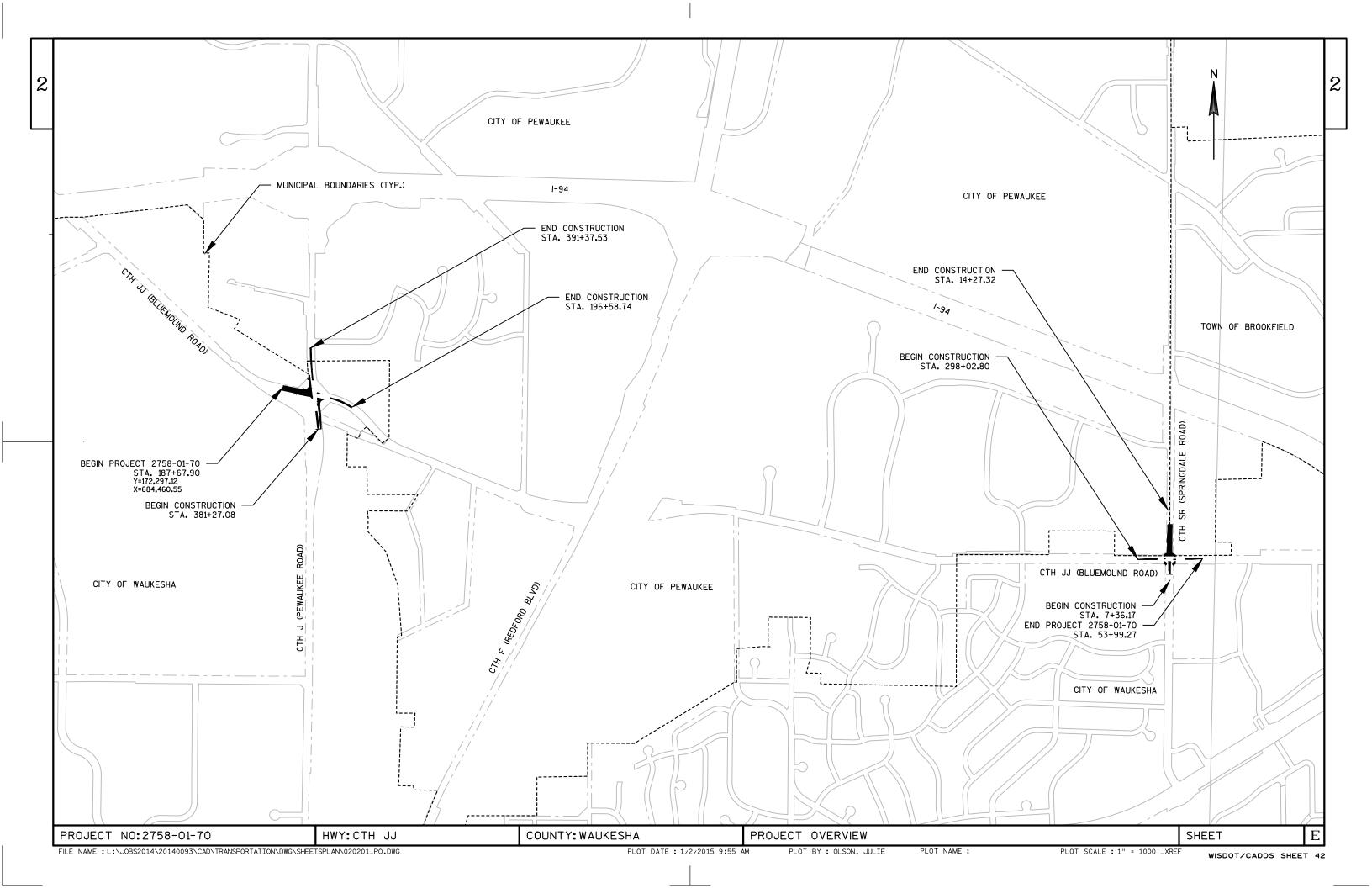
GENERAL NOTES

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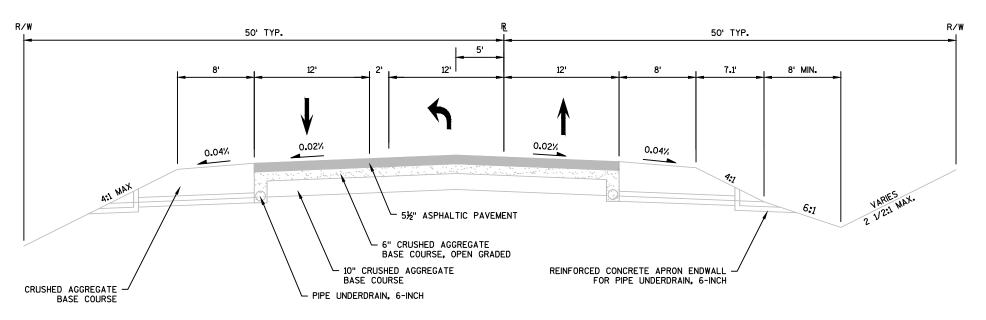
PLOT BY : OLSON, JULIE

Ε

SHEET



2



EXISTING TYPICAL SECTION CTH JJ (BLUEMOUND ROAD) WEST OF CTH J STA 186+67.90 TO STA 191+67.82

R/W R/W 50' TYP. 50' TYP. 12' 12' 0.04% 0.04% 0.02% 0.02% 0.02% 0.02% 5½" ASPHALTIC PAVEMENT 2' (TYP.) - 6" CRUSHED AGGREGATE BASE COURSE, OPEN GRADED - 30" CONCRETE CURB & GUTTER TYPE D - 10" CRUSHED AGGREGATE BASE COURSE └ PIPE UNDERDRAIN, 6-INCH

PROJECT NO:2758-01-70 HWY:CTH JJ COUNTY:WAUKESHA EXISTING TYPICAL SECTION SHEET E

EXISTING TYPICAL SECTION CTH JJ (BLUEMOUND ROAD)

EAST OF CTH J

STA 191+67.82 TO STA 196+58.74

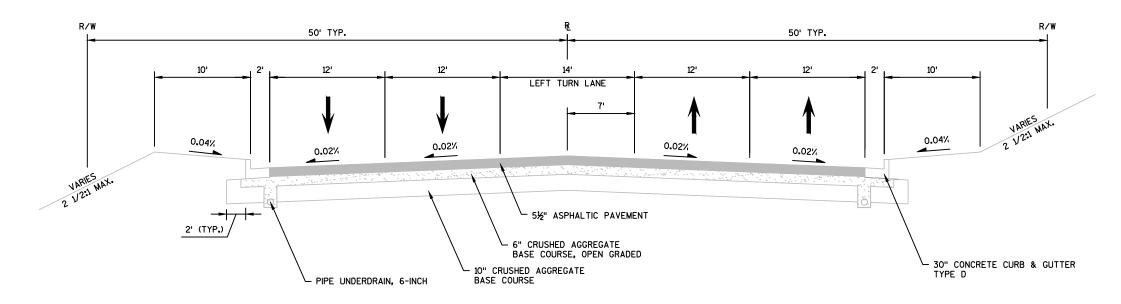
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PLOT DATE: 1/2/2015 9:55 AM PL

PLOT BY: OLSON, JULIE PLOT NAME:

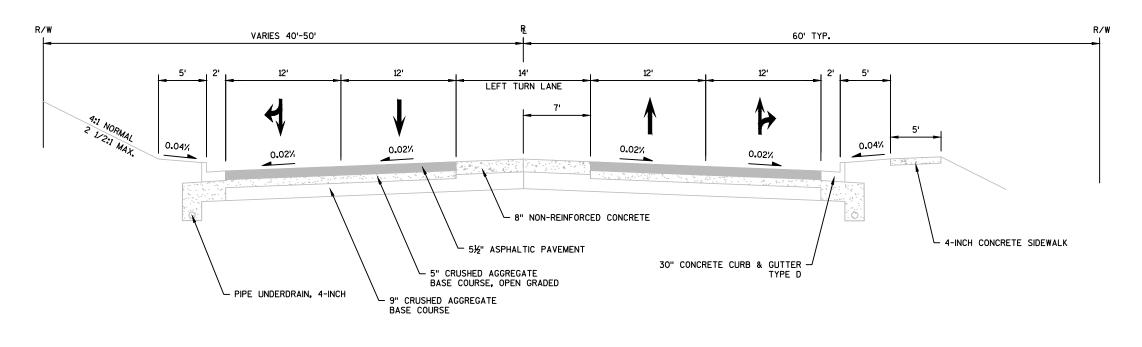
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EXISTING TYPICAL SECTION CTH J (PEWAUKEE ROAD) AT CTH JJ

STA 381+27.08 TO STA 391+37.53

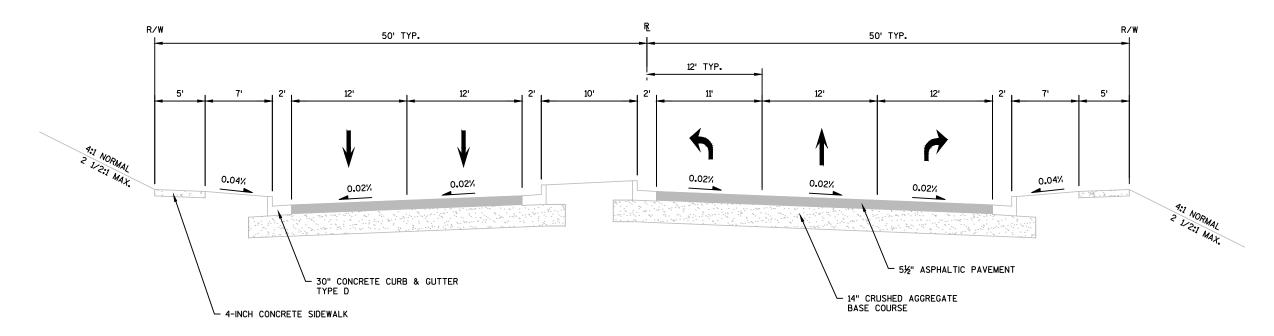


EXISTING TYPICAL SECTION CTH JJ (BLUEMOUND ROAD)

AT CTH SR STA 298+02.80 TO STA 53+99.27

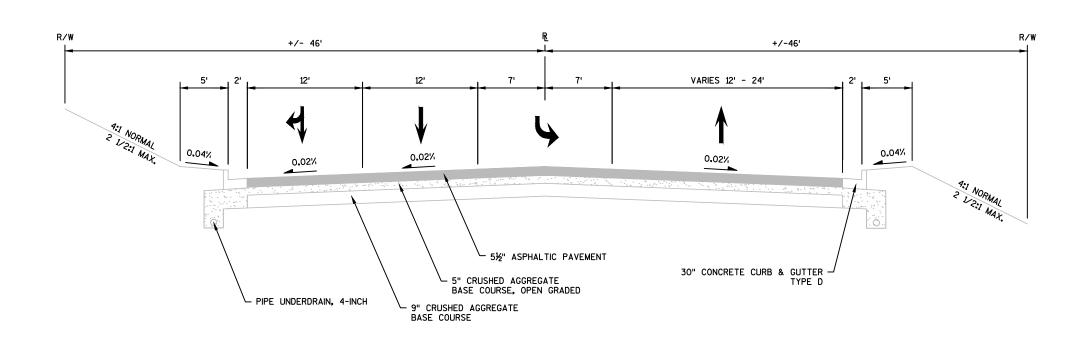
PROJECT NO:2758-01-70 HWY:CTH JJ COUNTY:WAUKESHA EXISTING TYPICAL SECTION SHEET E





EXISTING TYPICAL SECTION SPRINGDALE ROAD

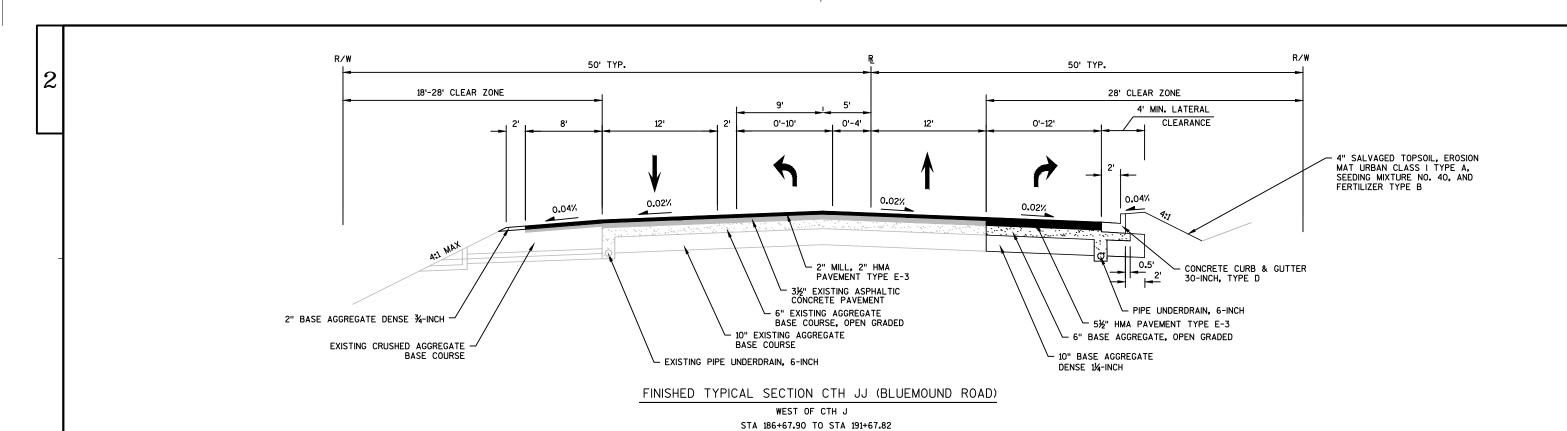
SOUTH OF CTH JJ STA 8+11.76 TO STA 10+00.00

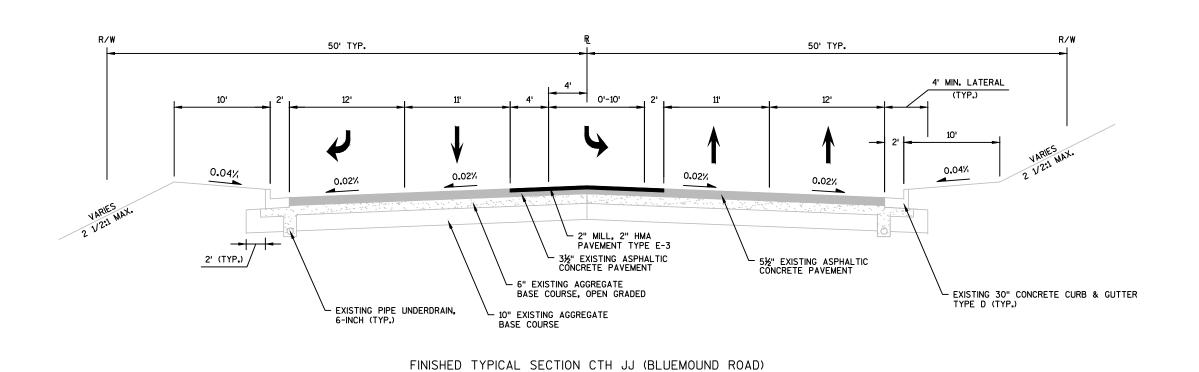


EXISTING TYPICAL SECTION CTH SR (SPRINGDALE ROAD)

NORTH OF CTH JJ STA 10+00.00 TO STA 14+27.32

PROJECT NO:2758-01-70 HWY:CTH JJ COUNTY:WAUKESHA EXISTING TYPICAL SECTION SHEET I





FILE NAME : L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\020302_TS.DWG

HWY: CTH JJ

PROJECT NO: 2758-01-70

PLOT DATE : 1/2/2015 9:55 AM

COUNTY: WAUKESHA

EAST OF CTH J STA 191+67.82 TO STA 196+58.74

FINISHED TYPICAL SECTION

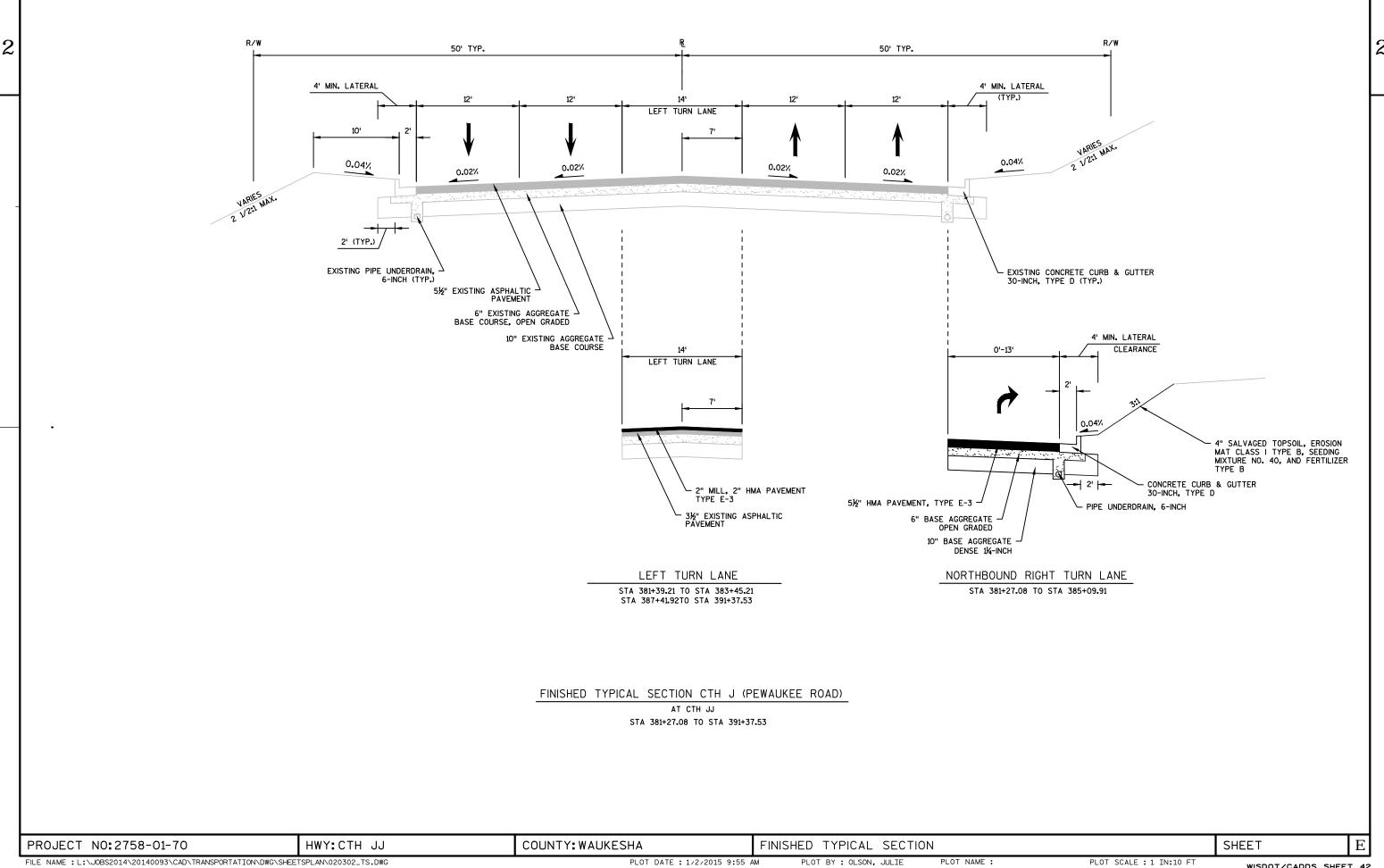
PLOT BY: OLSON, JULIE

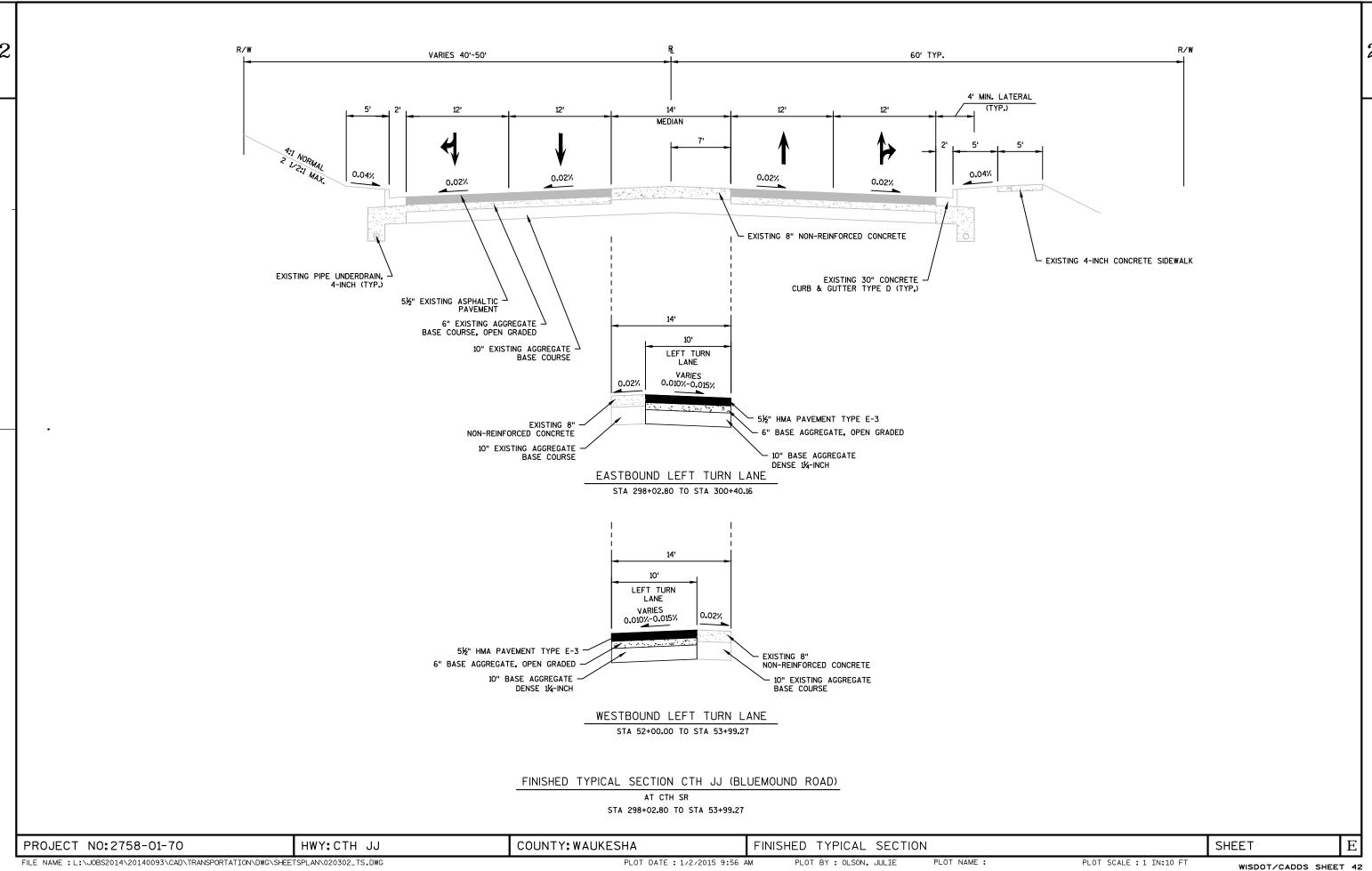
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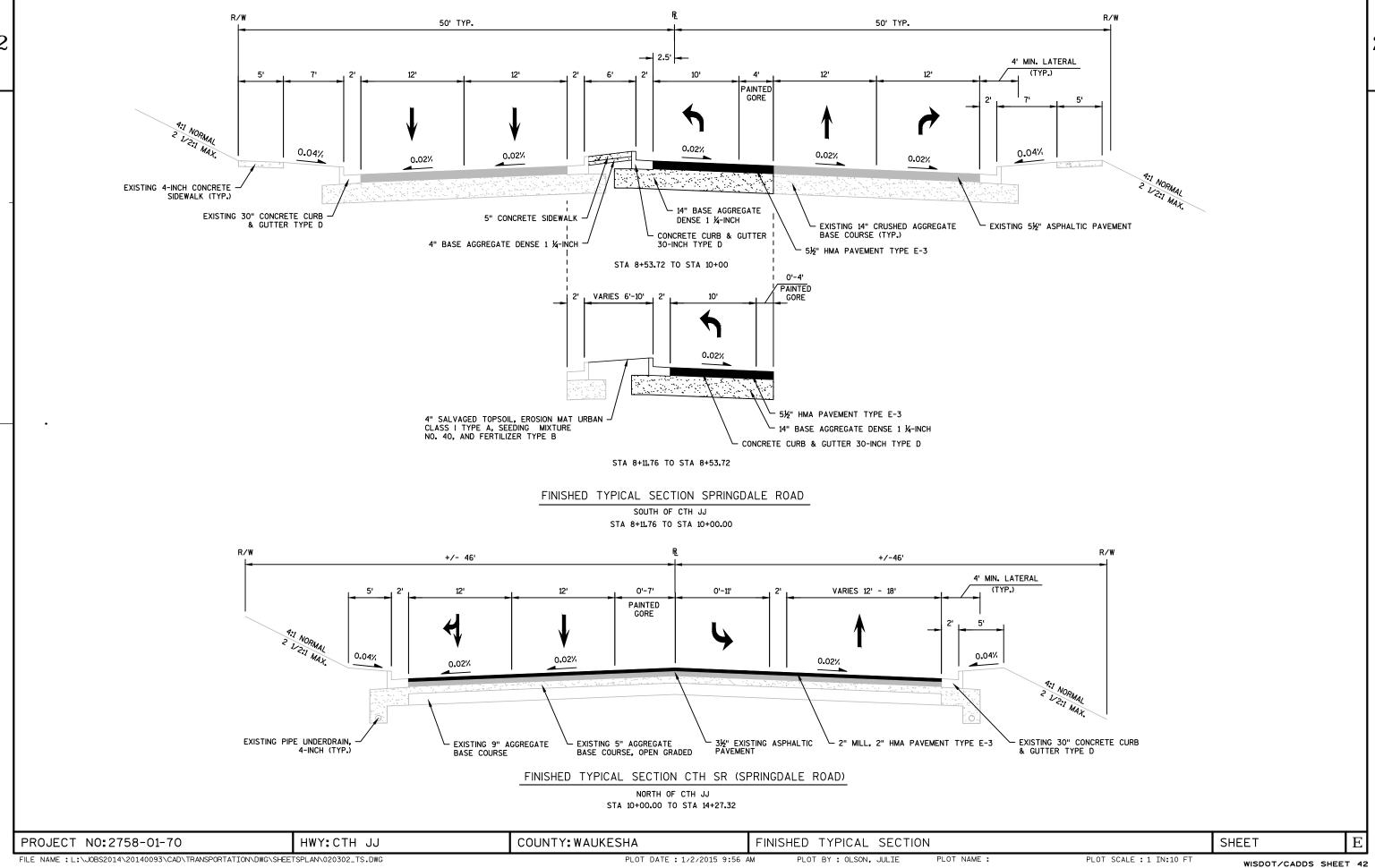
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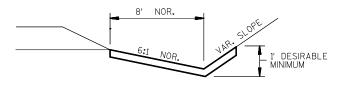
WISDOT/CADDS SHEET 42

SHEET

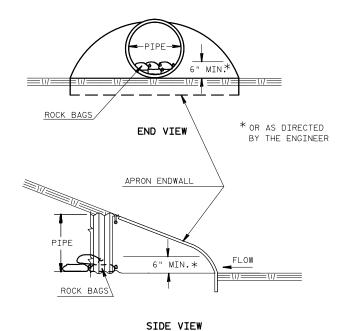




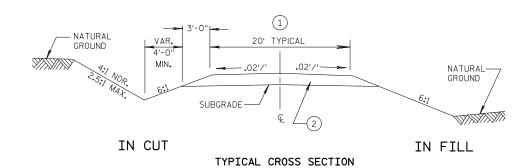


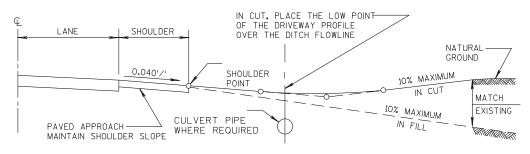


EROSION MAT DETAIL FOR DITCHES



CULVERT PIPE CHECK





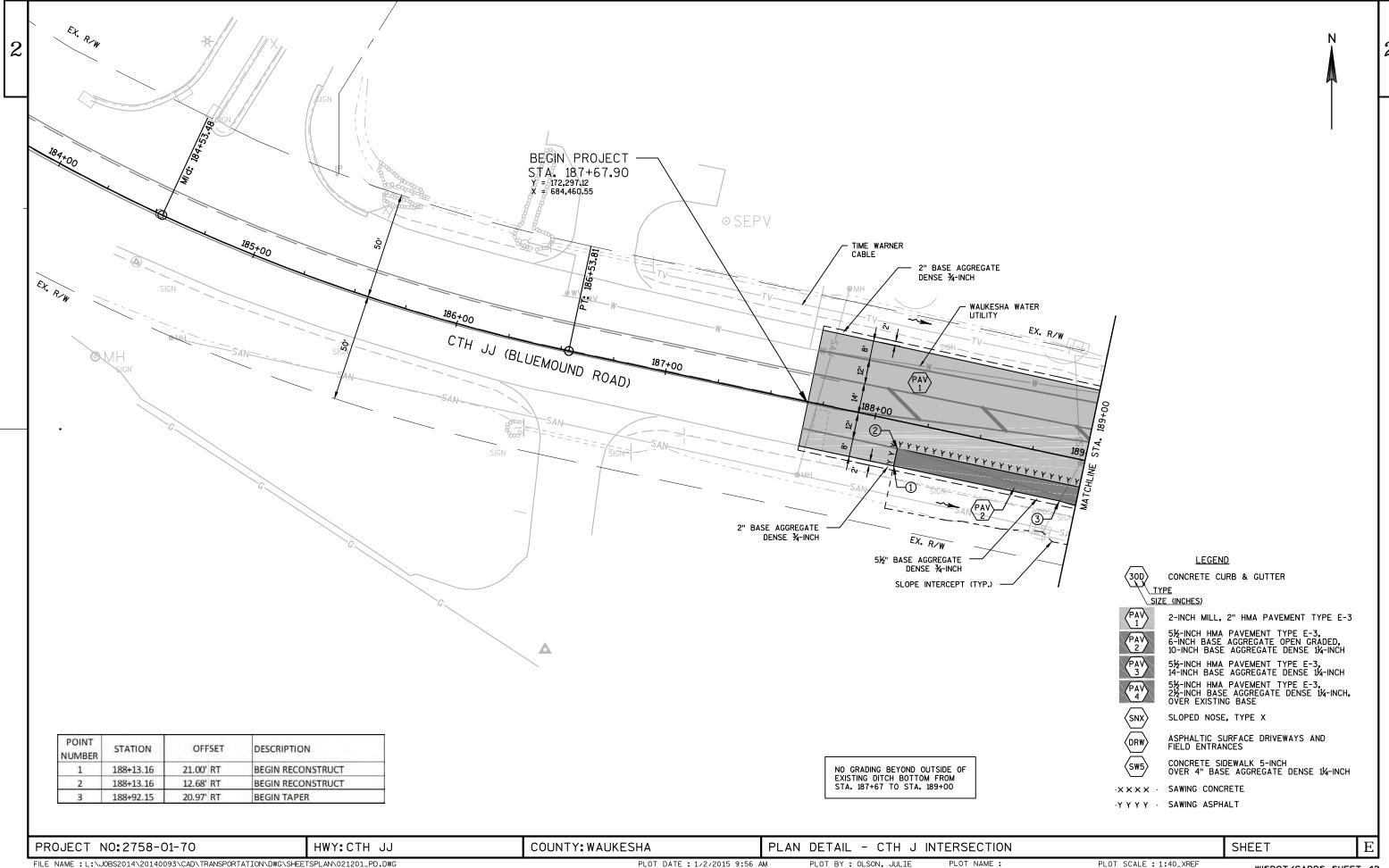
TYPICAL PROFILE

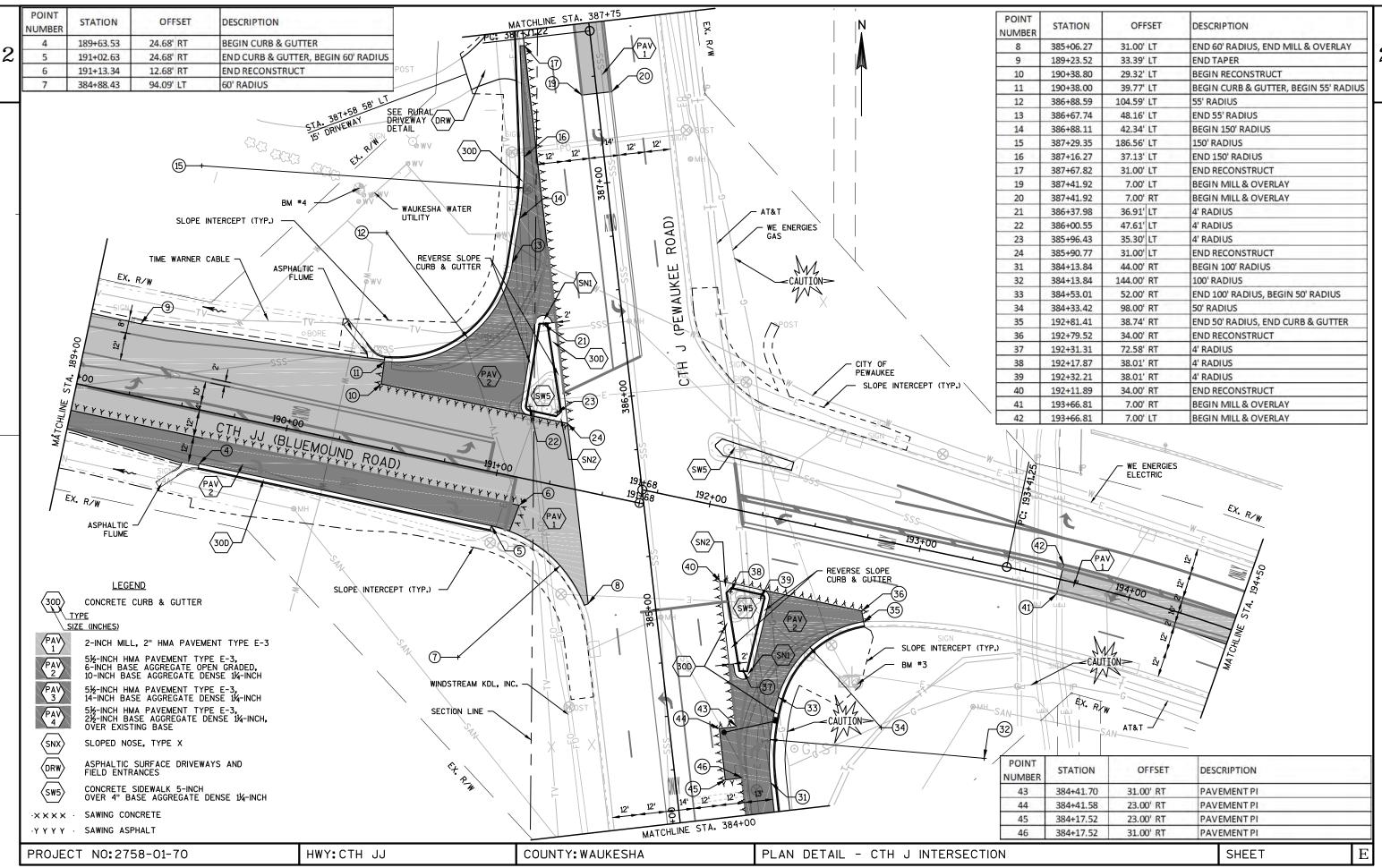
RURAL DRIVEWAY DETAIL

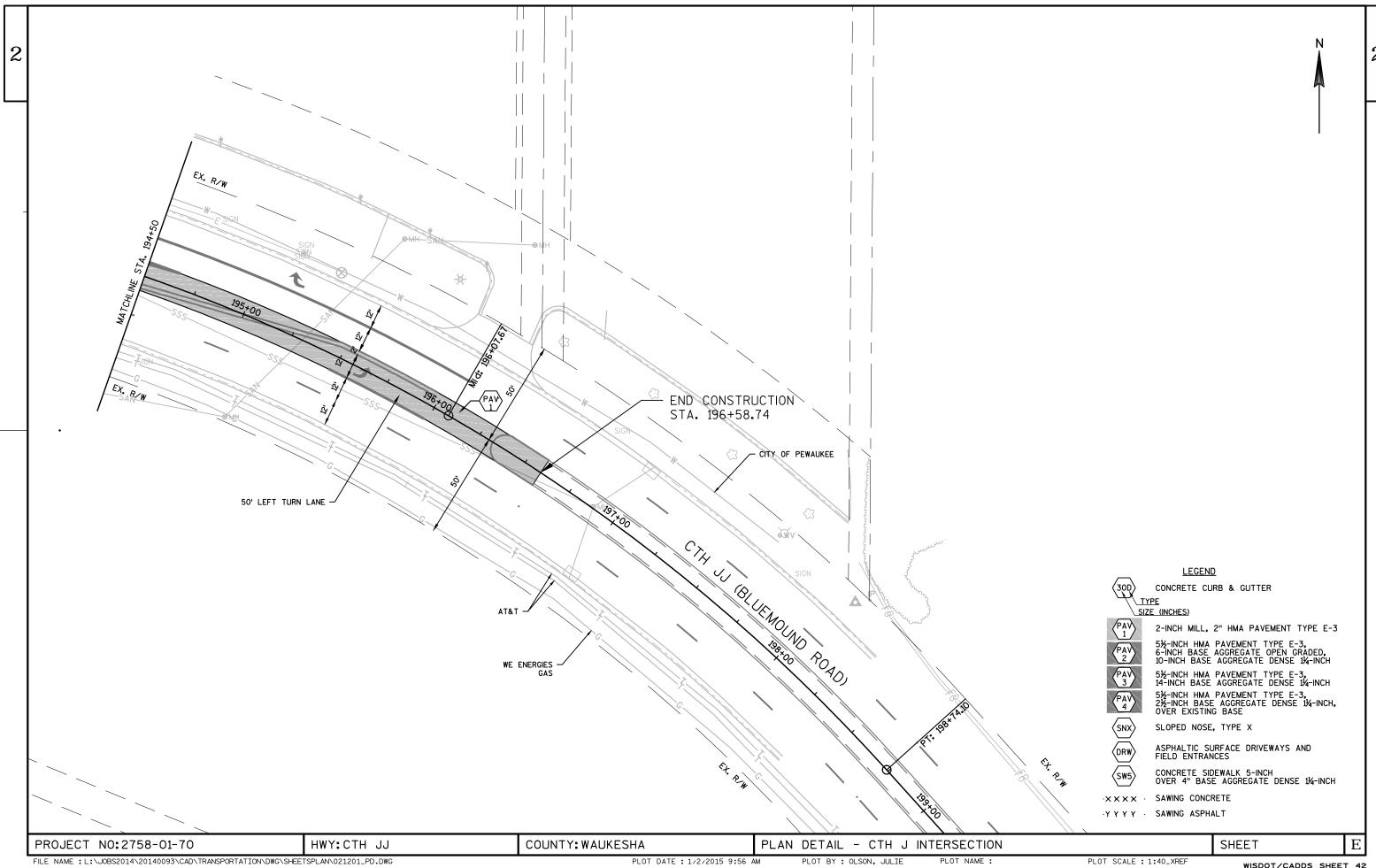
- 1 DRIVEWAY WIDTHS: COMMERCIAL, 35' MAX, 12' MIN NON-COMMERCIAL, 24' MAX, 12' MIN SEE PAVING DETAIL SHEETS FOR WIDTH REQUIRED
- 2) DRIVEWAY SURFACE SHALL BE REPLACED IN-KIND WITH MINIMUM SECTION OF: 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES CONSTRUCTED AS ONE LAYER, OVER 6" BASE AGGREGATE DENSE 11/4-INCH

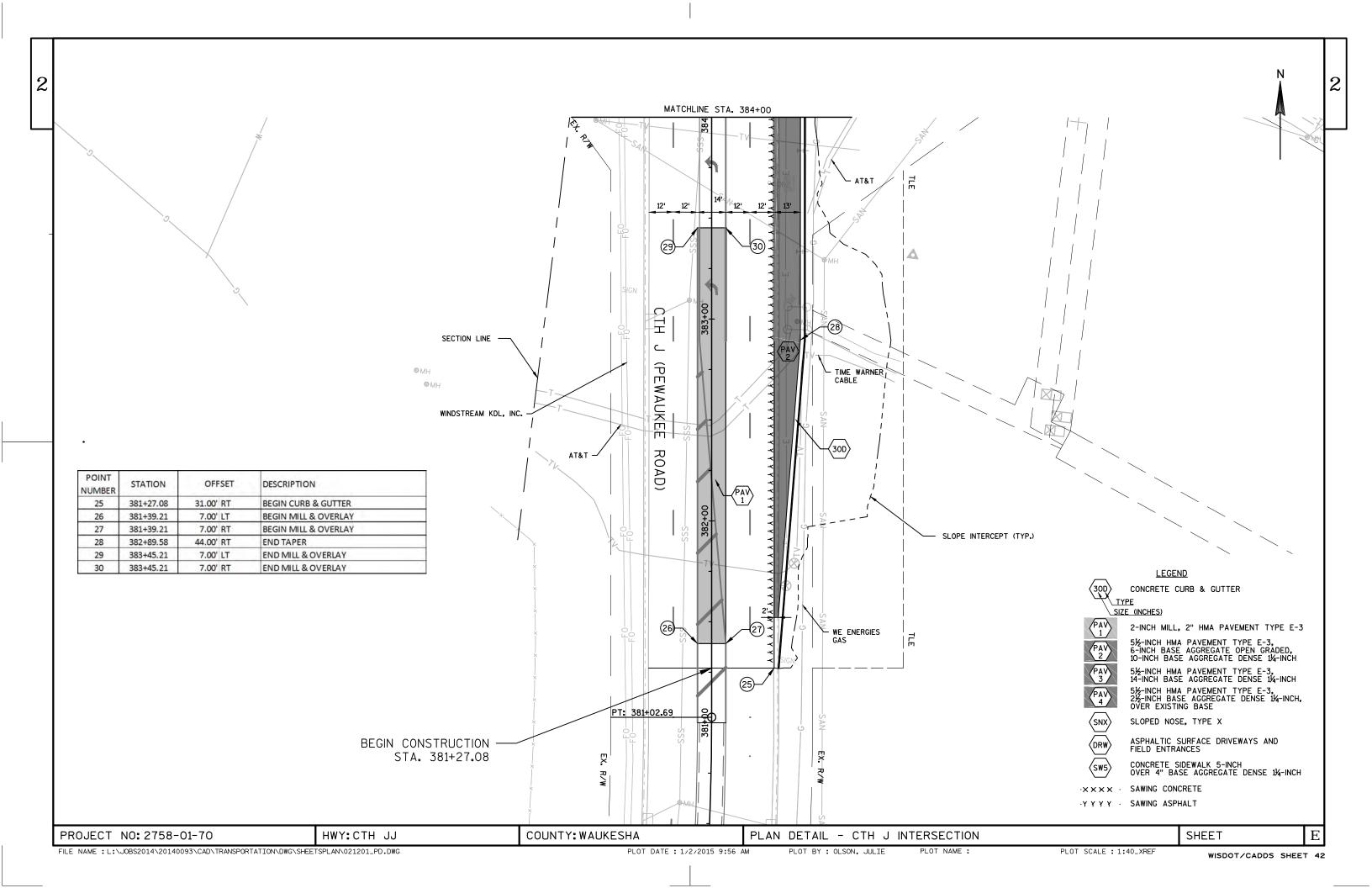
PROJECT NO:2758-01-70 COUNTY: WAUKESHA CONSTRUCTION DETAILS HWY: CTH JJ SHEET PLOT NAME :

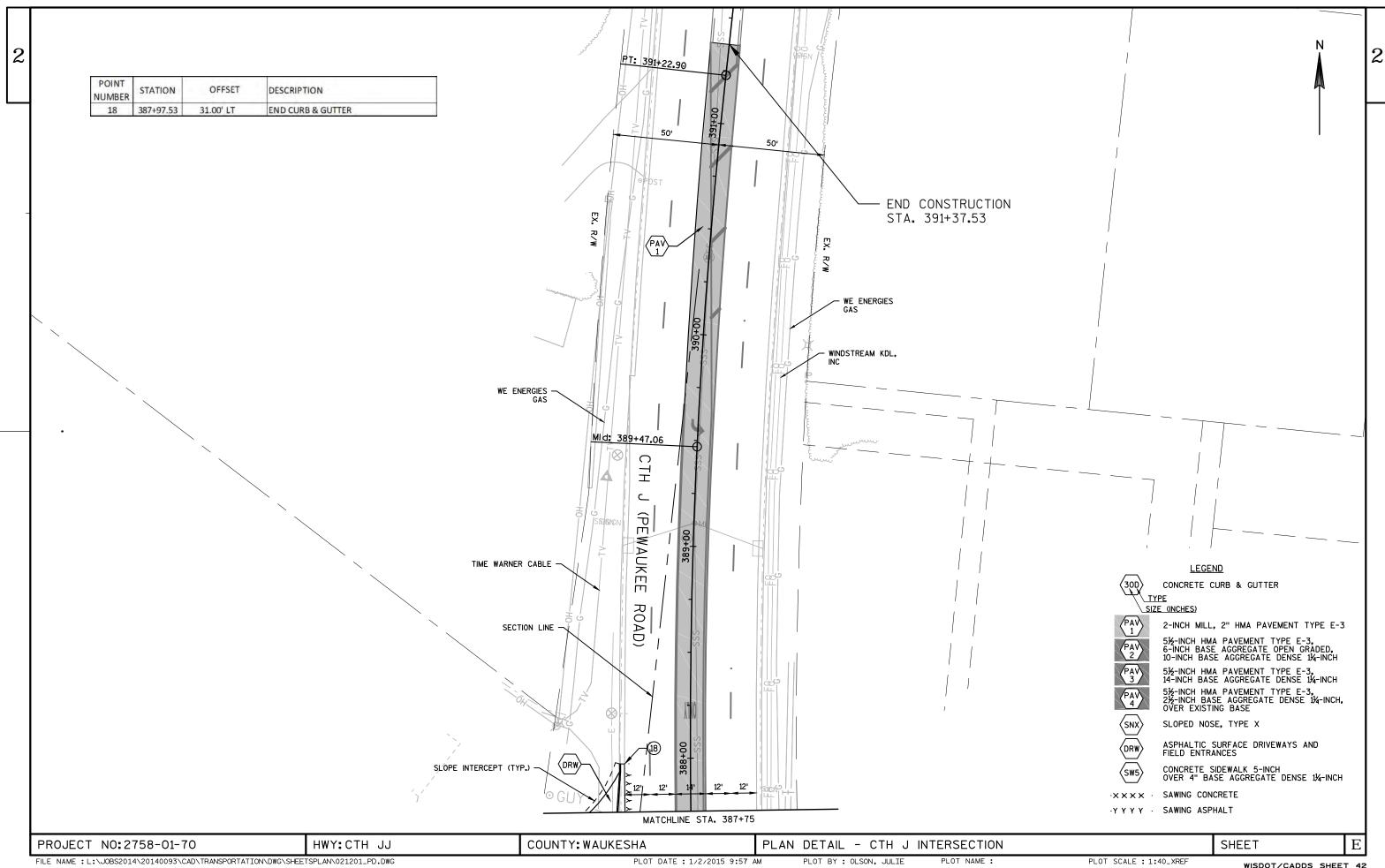
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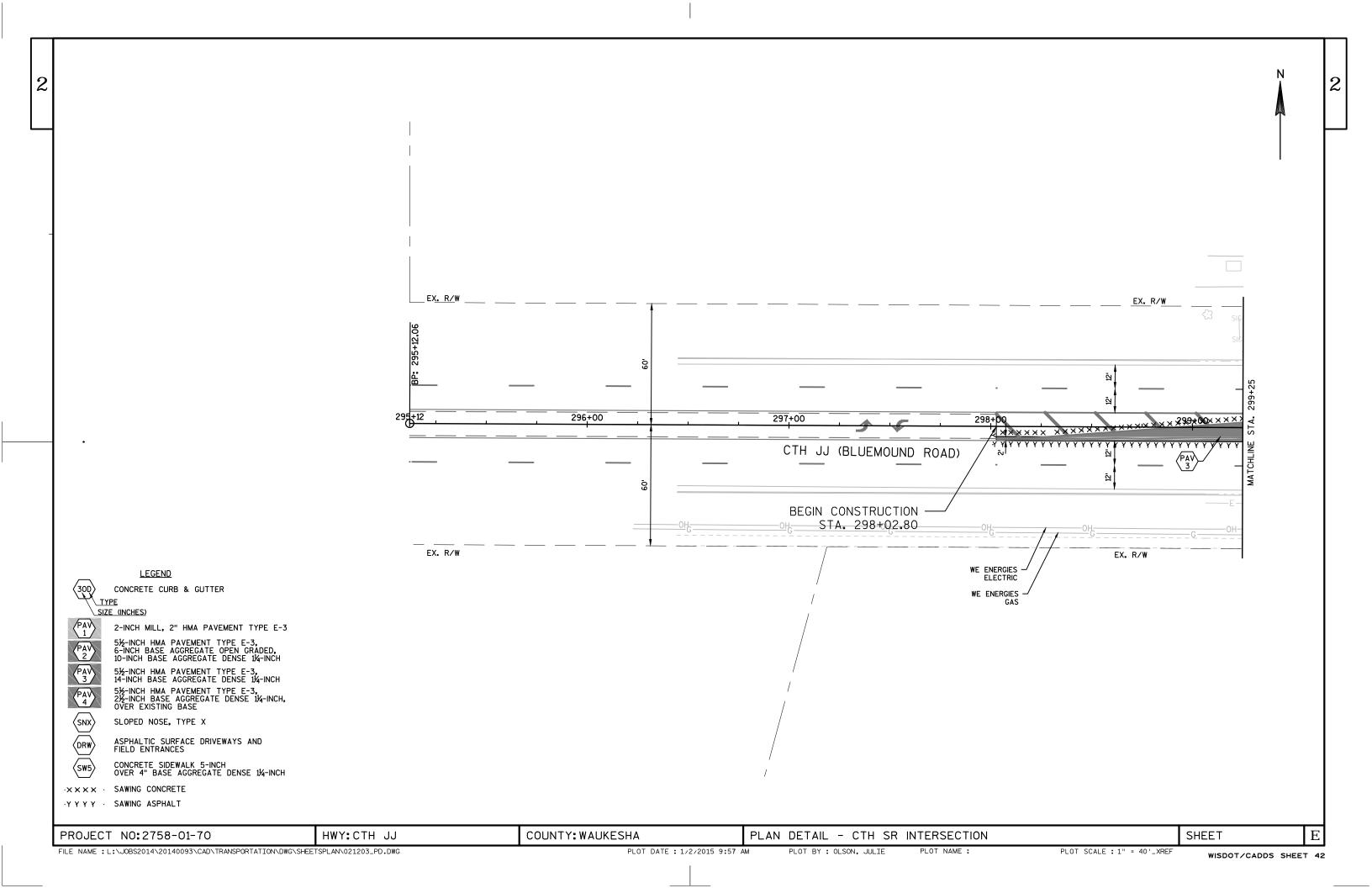


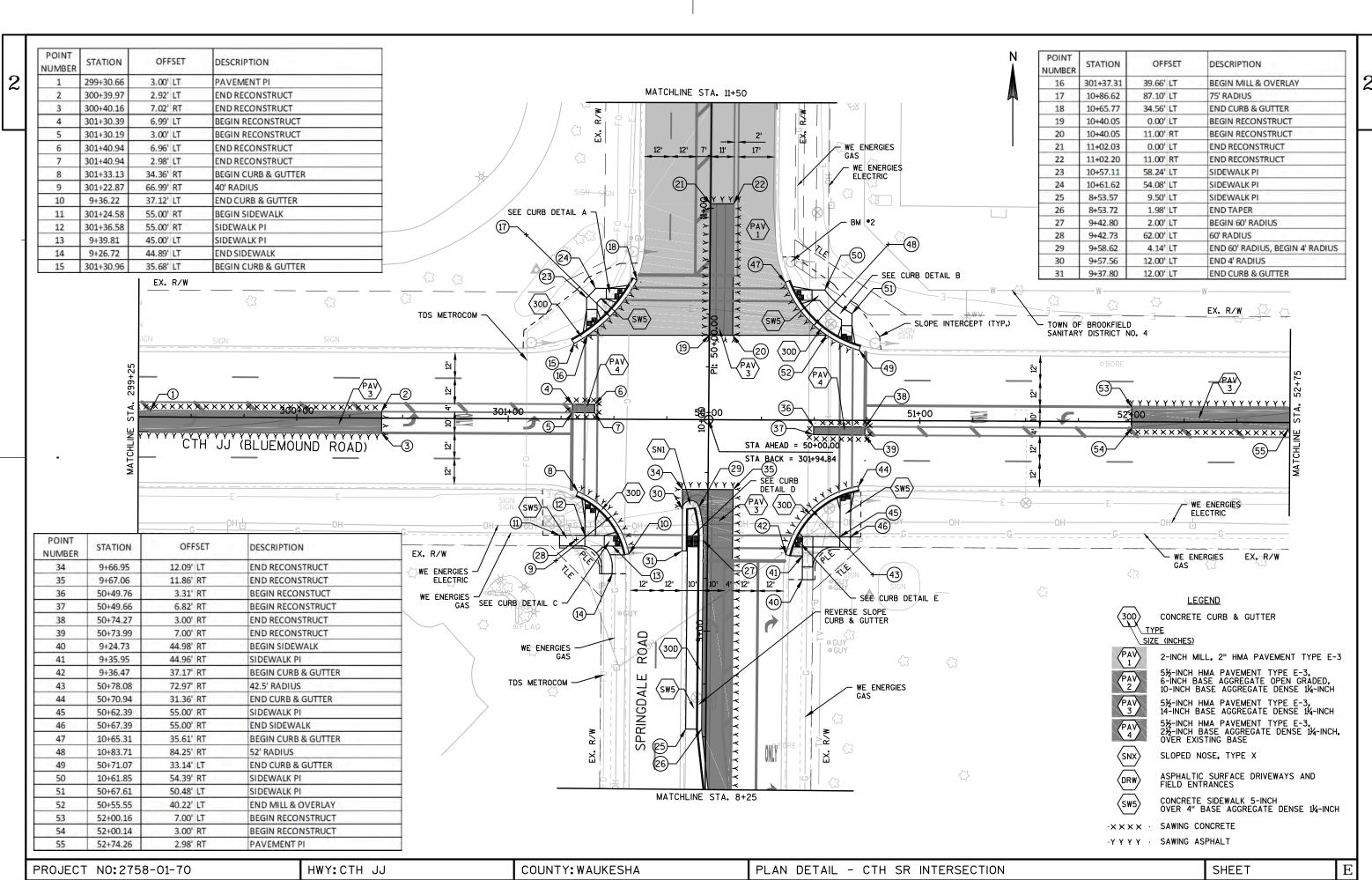












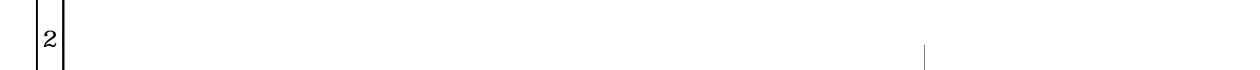
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PLOT DATE : 1/2/2015 9:57 AM

PLOT BY : OLSON, JULIE

PLOT NAME :

PLOT SCALE : 1" = 40'_XREF





EX. R/W EX. R/W 55+00 55-63 CXXXXXXXXXX CTH JJ (BLUEMOUND ROAD) EX. R/W WE ENERGIES EX. R/W ELECTRIC END PROJECT WE ENERGIES STA. 53+99.27 GAS

<u>LEGEND</u>

CONCRETE CURB & GUTTER

SIZE (INCHES)

2-INCH MILL, 2" HMA PAVEMENT TYPE E-3

PAV 5½-INCH HMA PAVEMENT TYPE E-3, 6-INCH BASE AGGREGATE OPEN GRADED, 10-INCH BASE AGGREGATE DENSE 1½-INCH

5½-INCH HMA PAVEMENT TYPE E-3, 14-INCH BASE AGGREGATE DENSE 1½-INCH 5½-INCH HMA PAVEMENT TYPE E-3, 2½-INCH BASE ACCRECATE DENSE 1½-INCH

5½-INCH HMA PAVEMENT TYPE E-3, 2½-INCH BASE AGGREGATE DENSE 1½-INCH, OVER EXISTING BASE

SNX SLOPED NOSE, TYPE X

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 11/4-INCH

·×××× · SAWING CONCRETE
·Y Y Y Y · SAWING ASPHALT

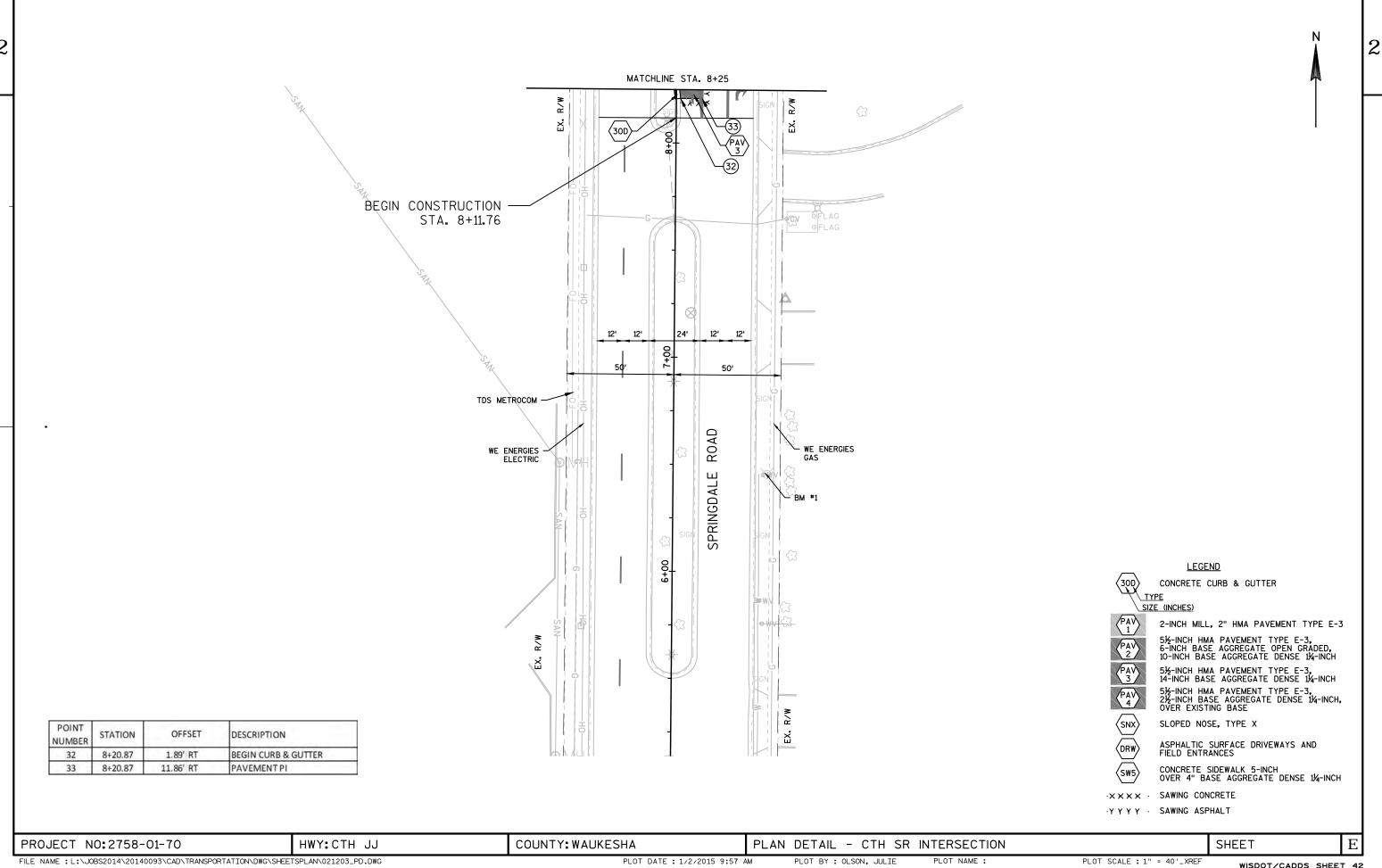
PROJECT NO: 2758-01-70 HWY: CTH JJ

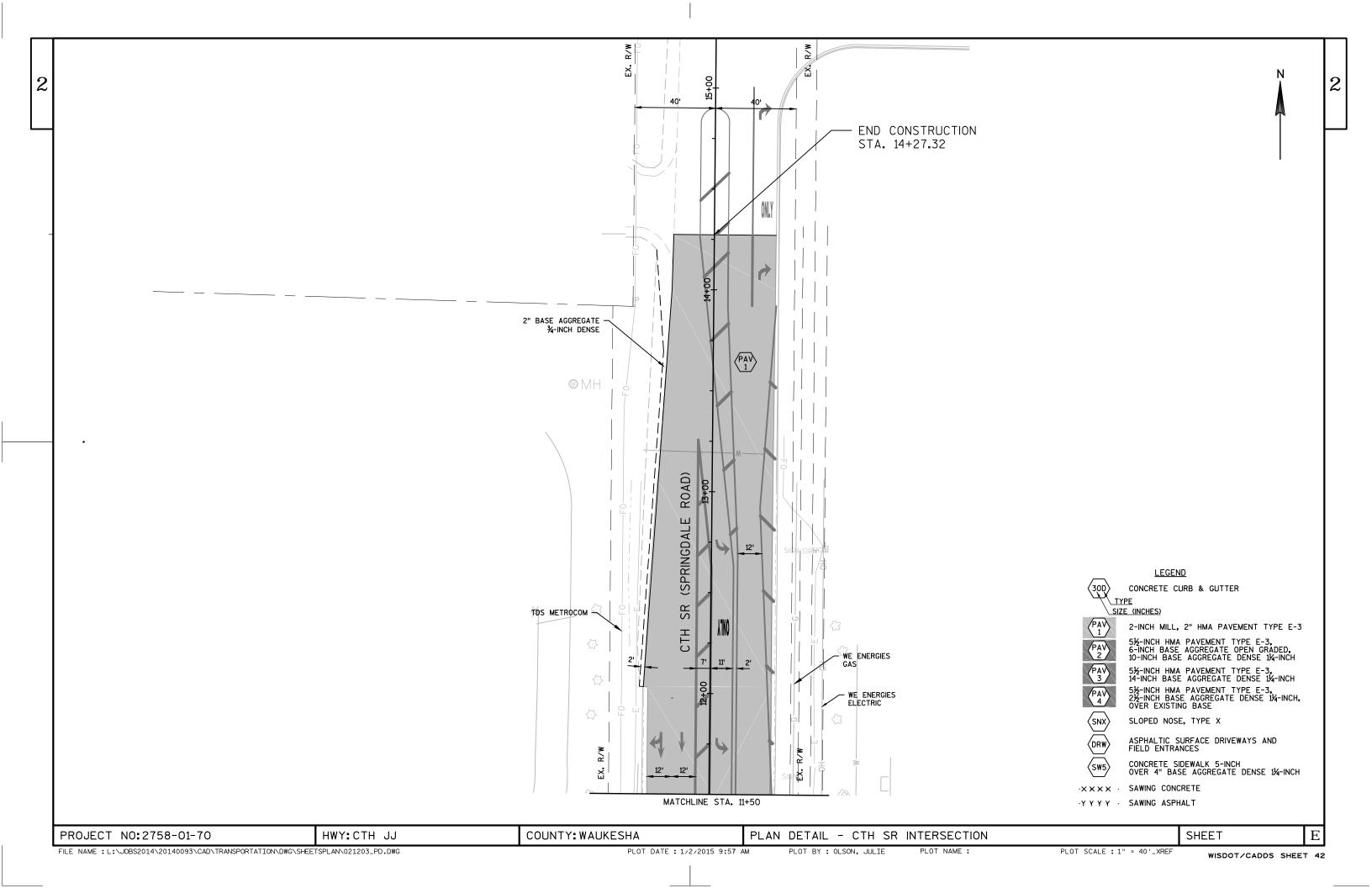
COUNTY: WAUKESHA

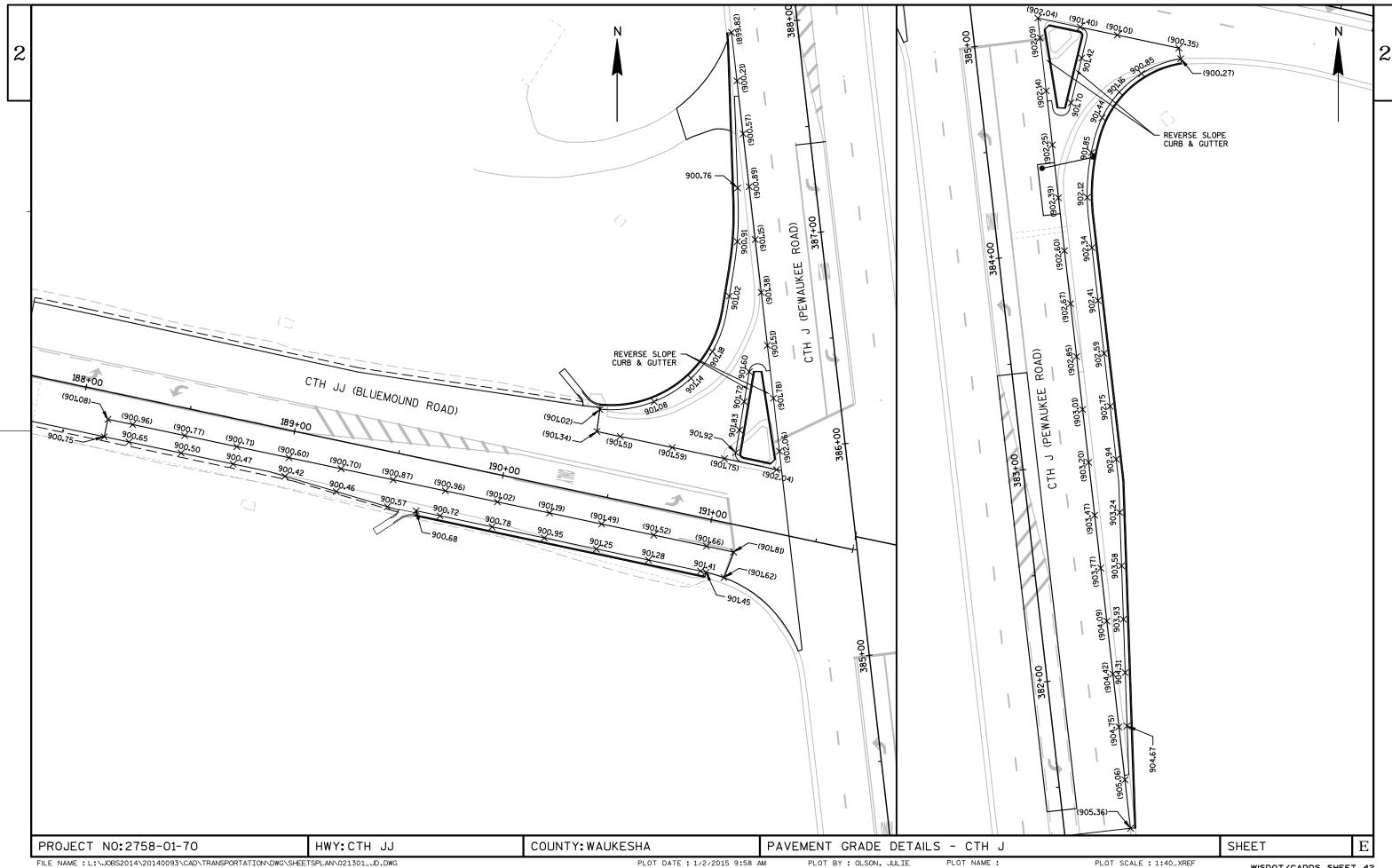
PLAN DETAIL - CTH SR INTERSECTION

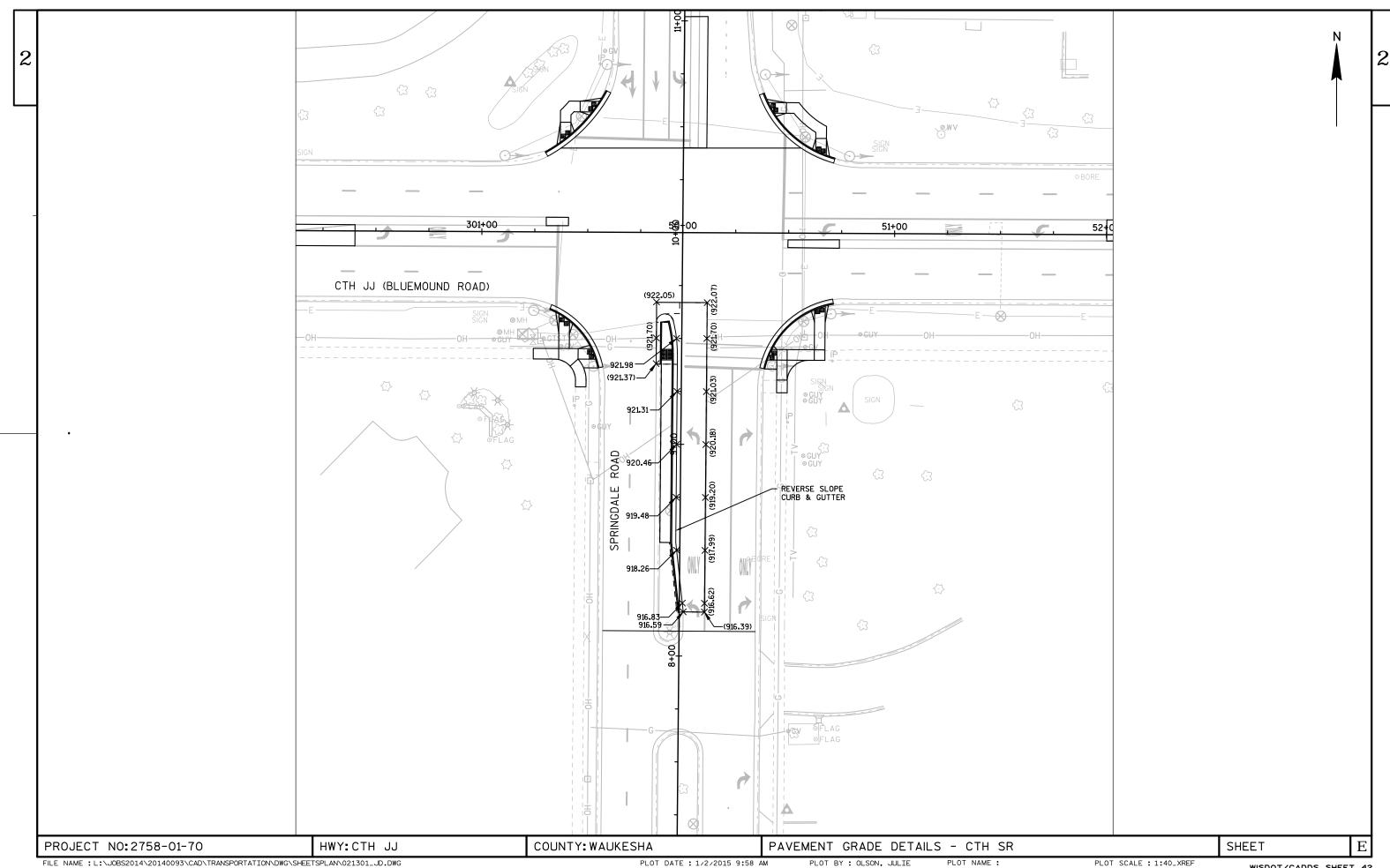
| 3

SHEET E





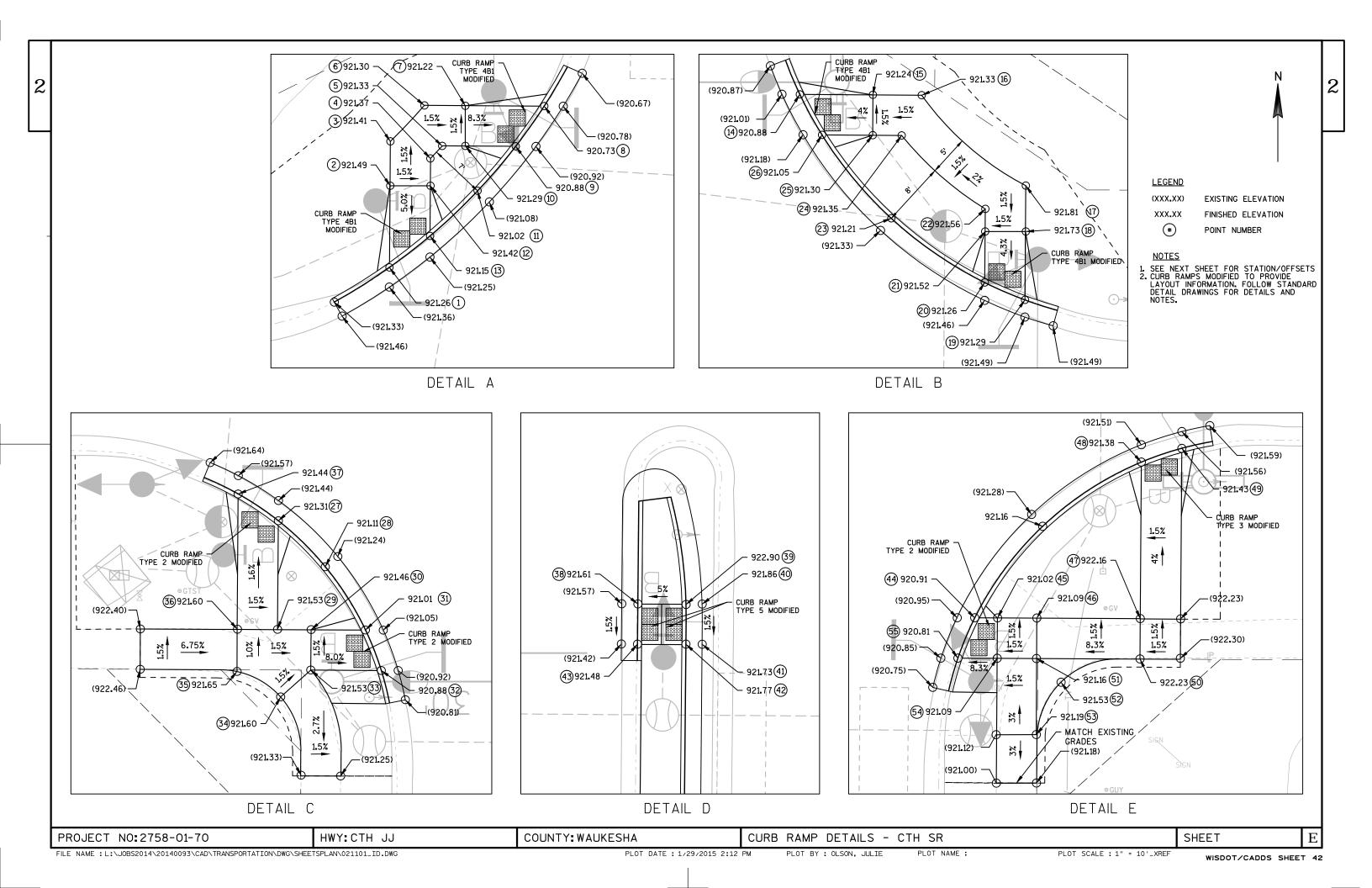




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PLOT DATE: 1/2/2015 9:58 AM

PLOT SCALE : 1:40_XREF



Point STATION OFFSET Number 301+36.80 41.75' LT 1 2 301+36.85 51.86' LT 3 301+36.84 57.36' LT 4 301+41.83 55.29' LT 5 301+43.29 56.84' LT 301+41.02 61.83' LT 6 301+46.10 61.80' LT 301+55.87 61.82' LT 8 9 301+52.37 56.82' LT 10 301+46.13 56.84' LT 11 301+47.66 51.30' LT 12 301+41.83 51.88' LT 13 301+41.81 45.67' LT 14 50+39.56 61.66' LT 15 50+48.62 61.63' LT 61.62' LT 16 50+54.66 17 50+67.61 50.48' LT 18 50+67.64 44.81' LT 19 50+67.58 36.34' LT 20 50+62.58 38.46' LT 21 50+62.60 44.78' LT 22 50+62.60 47.57' LT 23 50+50.96 46.36' LT 24 50+52.20 56.63' LT 50+48.61 56.63' LT 25 56.65' LT 26 50+42,33 27 301+41.61 41.52' RT 28 301+47.46 47.19' RT 29 301+41.58 54.97' RT 30 301+45.74 55.00' RT 301+52.47 55.00' RT 31 32 60.00' RT 301+54.46 33 301+45.73 60.00' RT 34 301+42.00 63.33' RT 35 301+36.58 60.21' RT 301+36.58 55.00' RT 37 301+36.62 38.22' RT 38 301+84.61 55.15' RT 39 301+90.57 55.18' RT 40 301+92.57 55.12' RT 41 301+92.59 60.10' RT 42 301+90.59 60.10' RT 43 301+84.59 60.13' RT 44 50+41.88 55.00' RT 50+44.71 45 55.00' RT 50+49.58 55.00' RT 47 50+62.39 55.00' RT 48 50+62.42 35.62' RT 49 50+67.43 33.88' RT 60.00' RT 50 50+62.38 51 50+49.58 60.00' RT 52 50+52.61 62.92' RT 53 50+49.58 69.42' RT 54 50+44.70 60.00' RT 55 50+39.82 60.00' RT

COUNTY: WAUKESHA

CURB RAMP DETAILS - CTH SR

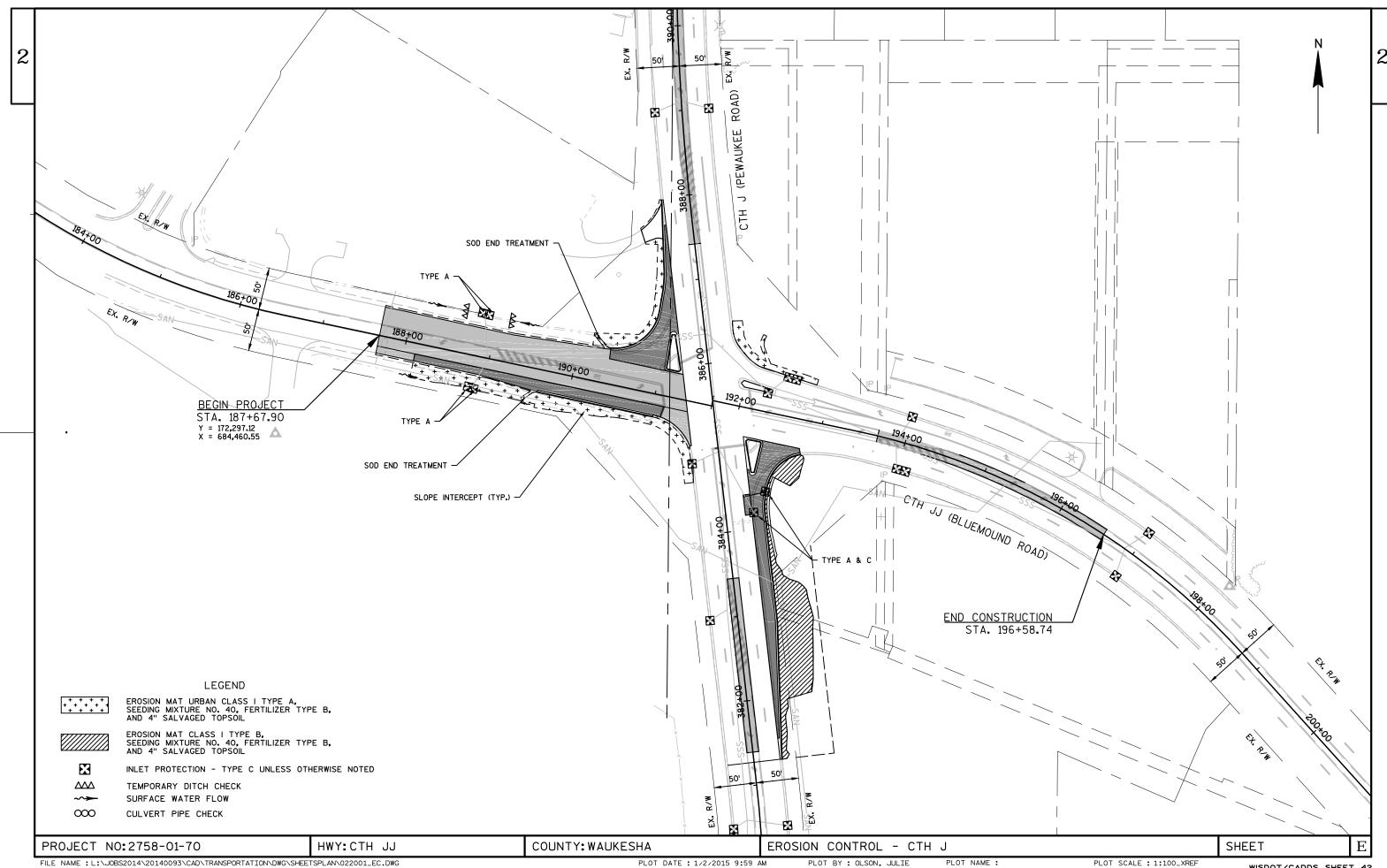
PLOT BY : OLSON, JULIE

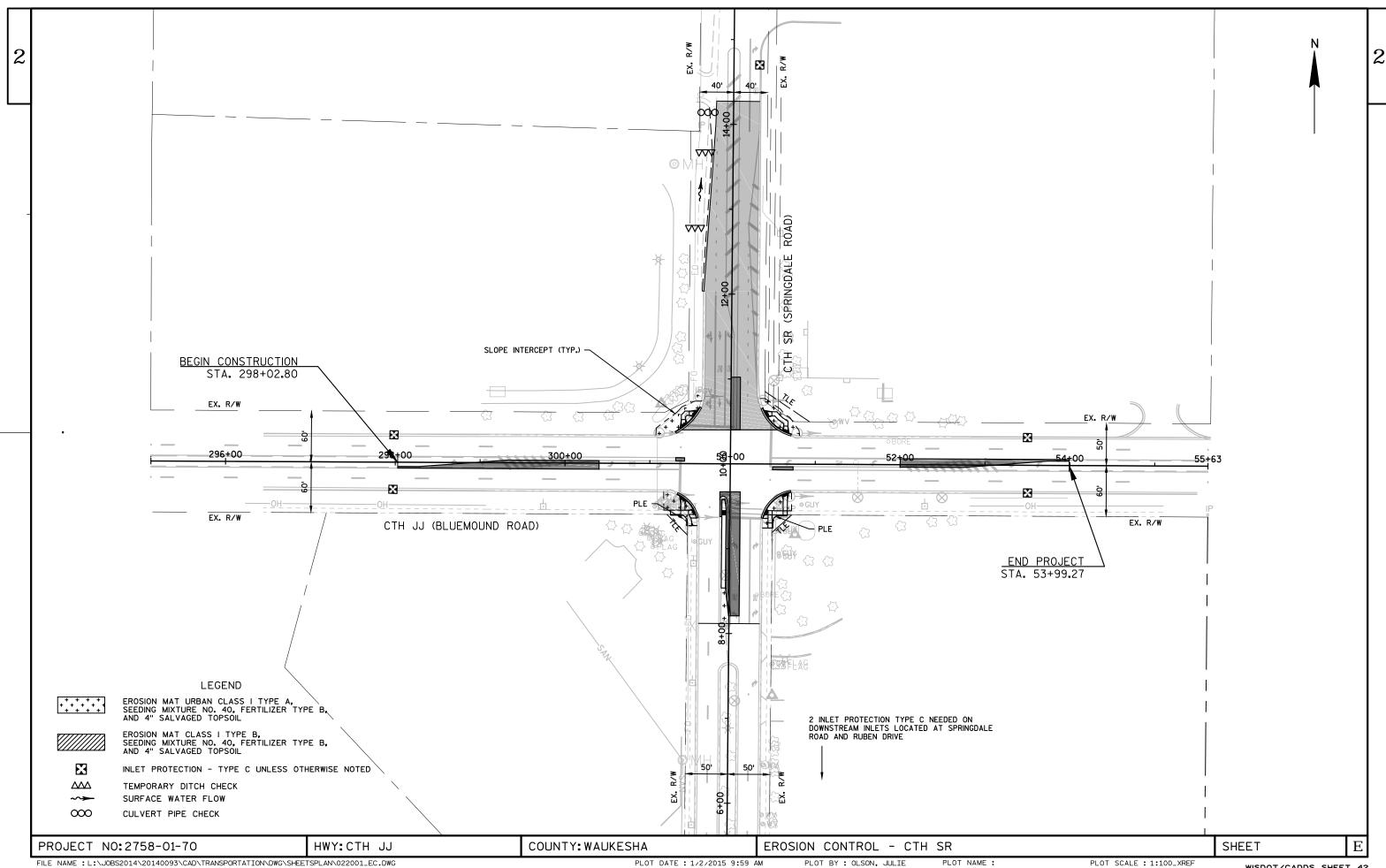
SHEET

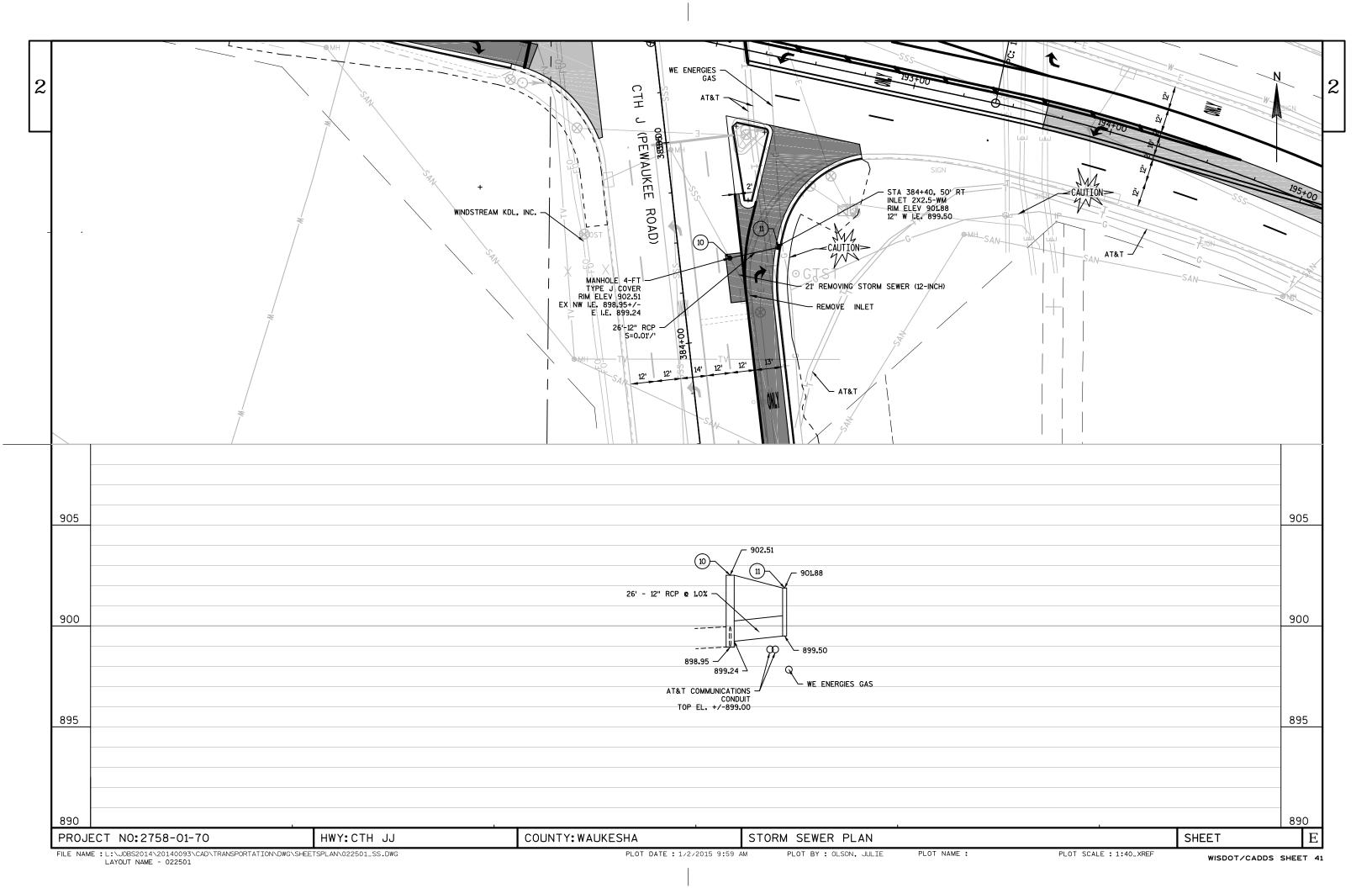
HWY: CTH JJ

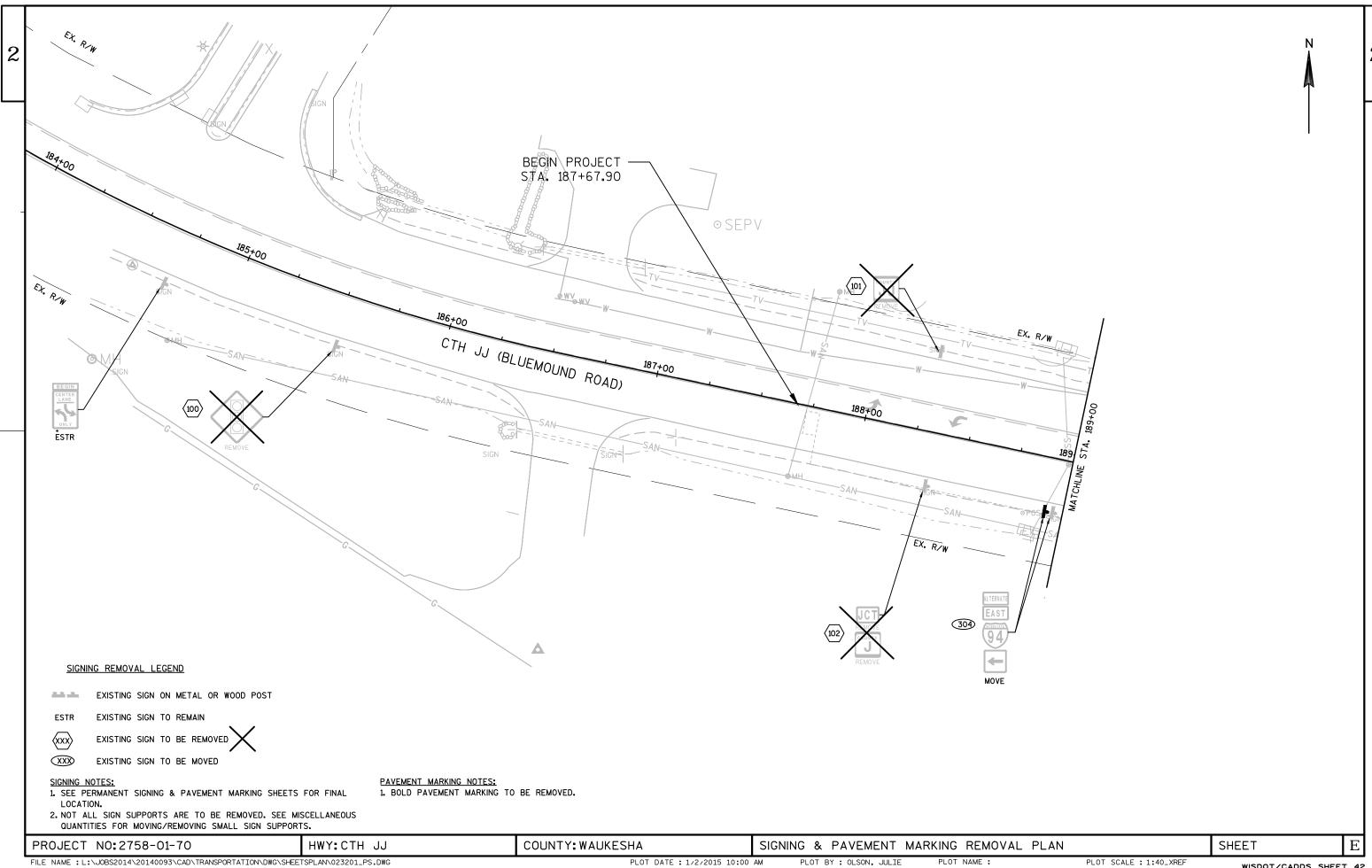
PROJECT NO: 2758-01-70

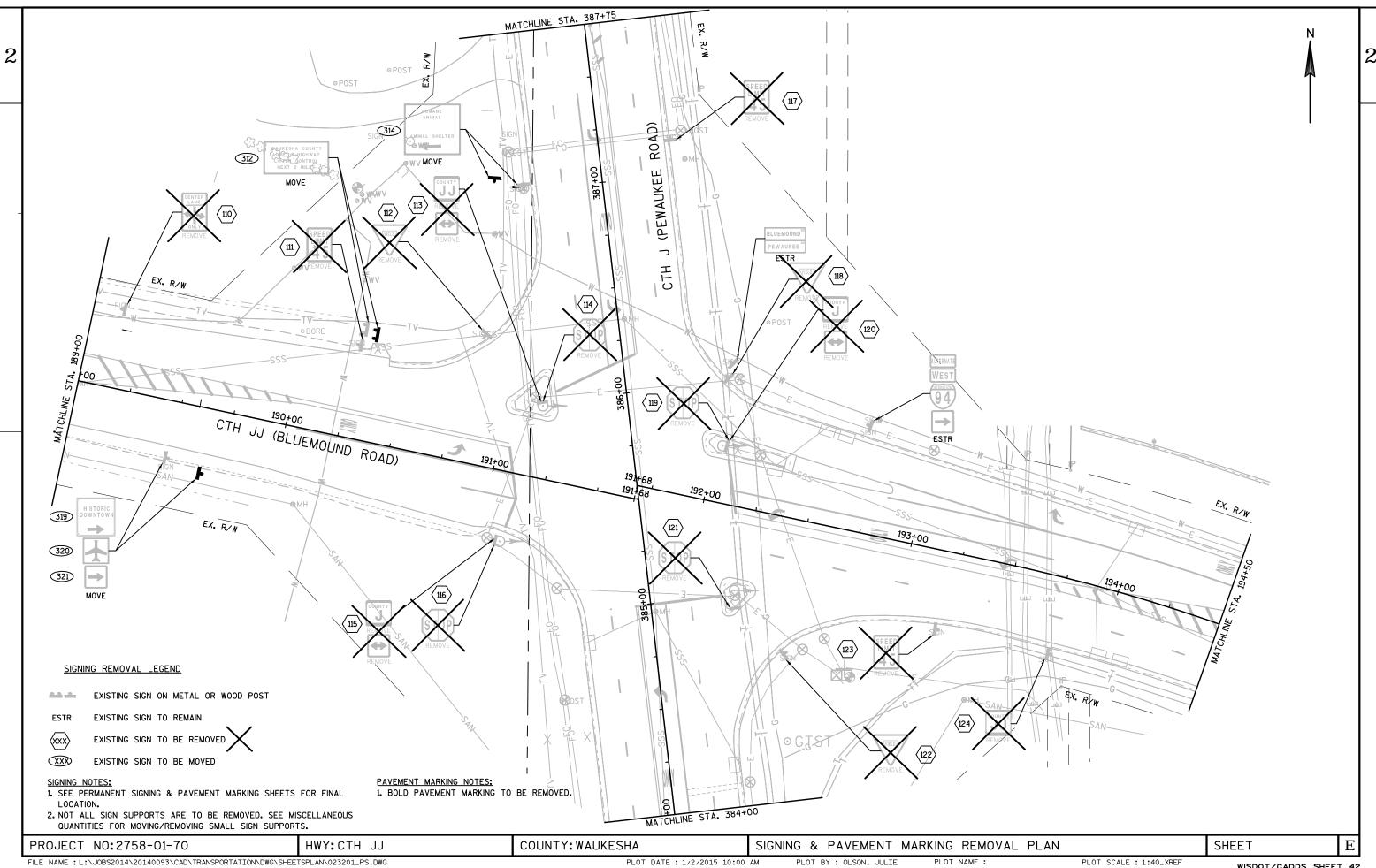
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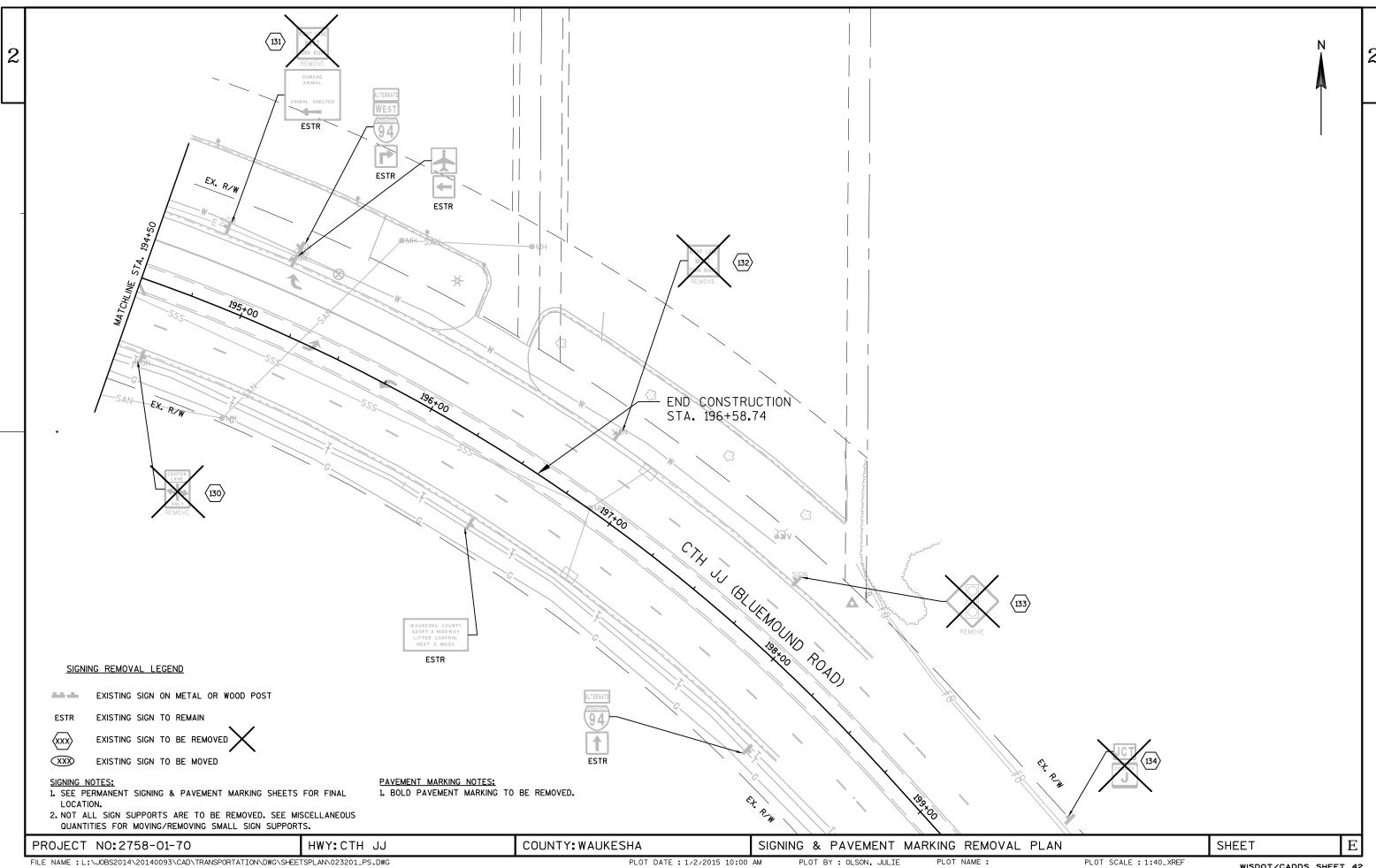


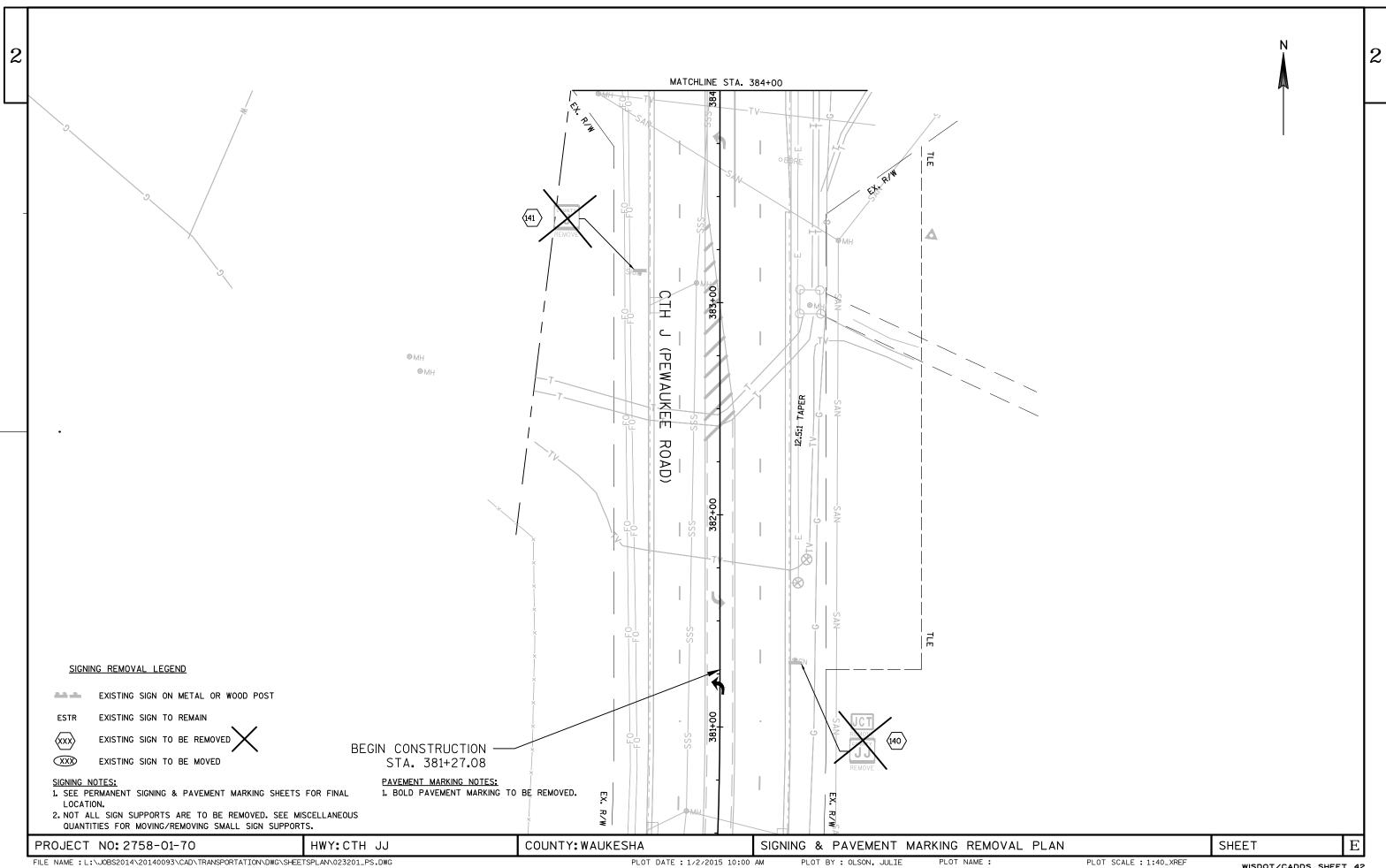


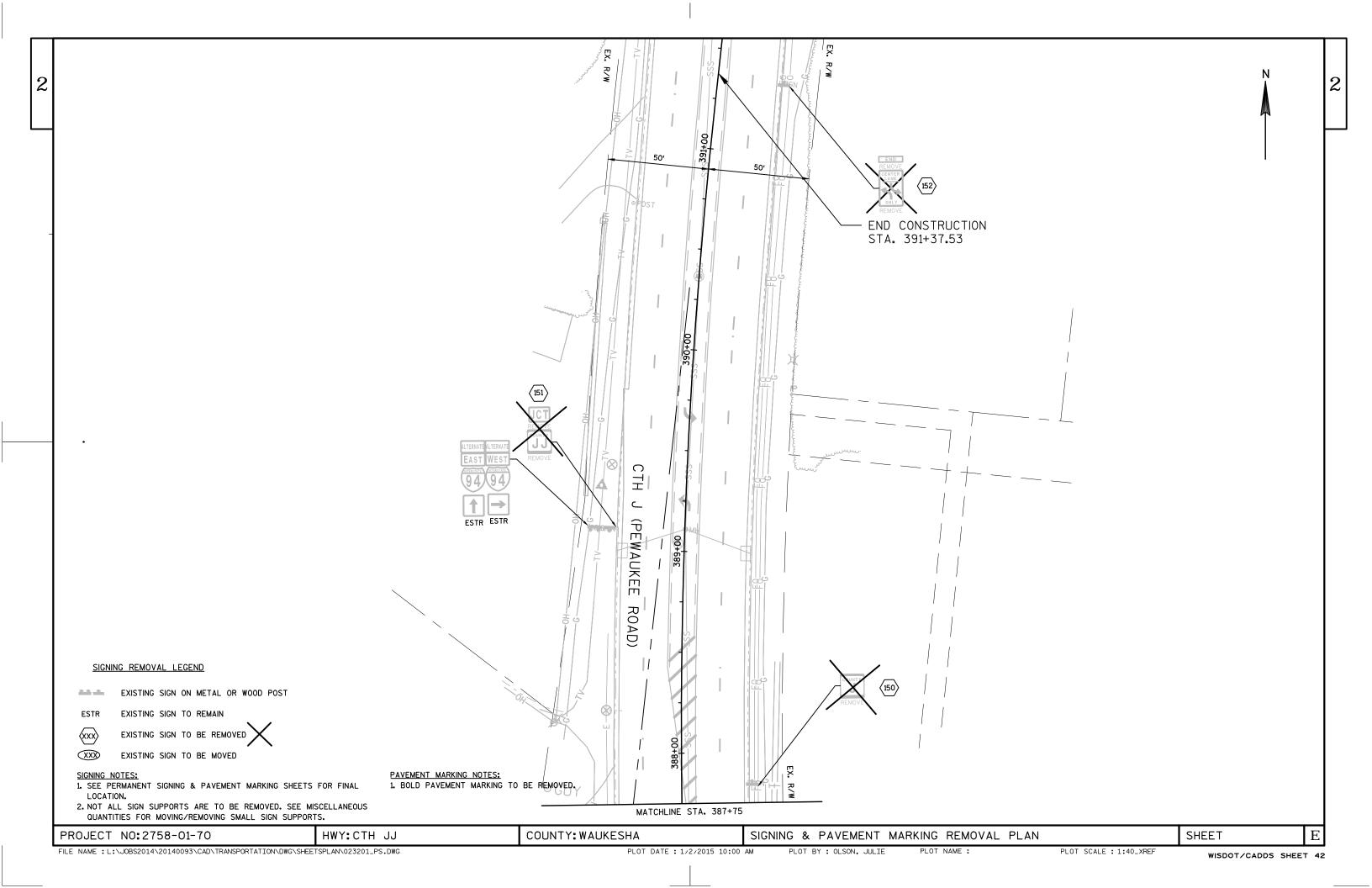




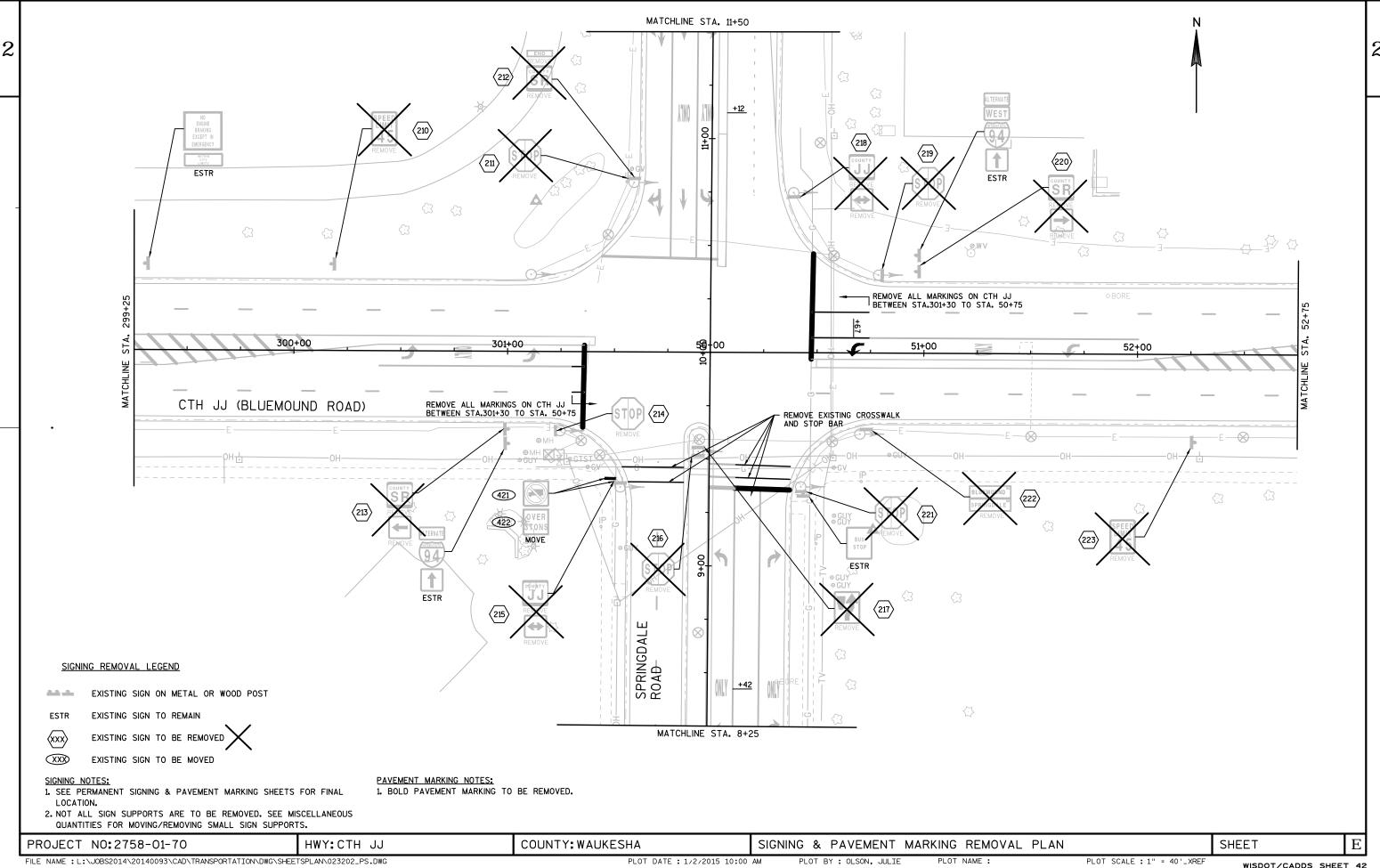


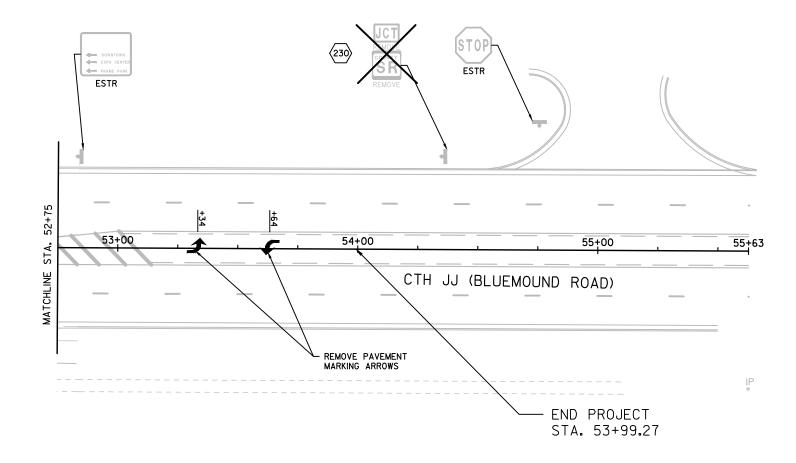






295+12 296+00 297+00 298+00 CTH JJ (BLUEMOUND ROAD) BEGIN CONSTRUCTION REMOVE PAVEMENT -MARKING ARROWS STA. 298+02.80 SIGNING REMOVAL LEGEND EXISTING SIGN ON METAL OR WOOD POST ESTR EXISTING SIGN TO REMAIN $\langle xxx \rangle$ EXISTING SIGN TO BE REMOVED (XXX) EXISTING SIGN TO BE MOVED SIGNING NOTES: PAVEMENT MARKING NOTES: 1. SEE PERMANENT SIGNING & PAVEMENT MARKING SHEETS FOR FINAL 1. BOLD PAVEMENT MARKING TO BE REMOVED. 2. NOT ALL SIGN SUPPORTS ARE TO BE REMOVED. SEE MISCELLANEOUS QUANTITIES FOR MOVING/REMOVING SMALL SIGN SUPPORTS. COUNTY: WAUKESHA PROJECT NO:2758-01-70 SIGNING & PAVEMENT MARKING REMOVAL PLAN SHEET HWY: CTH JJ PLOT NAME : FILE NAME : L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\023202_PS.DWG PLOT DATE: 1/2/2015 10:00 AM PLOT BY : OLSON, JULIE PLOT SCALE : 1" = 40'_XREF WISDOT/CADDS SHEET 42





SIGNING REMOVAL LEGEND

EXISTING SIGN ON METAL OR WOOD POST

ESTR EXISTING SIGN TO REMAIN

 $\langle xxx \rangle$ EXISTING SIGN TO BE REMOVED

(XXX) EXISTING SIGN TO BE MOVED

SIGNING NOTES:

1. SEE PERMANENT SIGNING & PAVEMENT MARKING SHEETS FOR FINAL

PAVEMENT MARKING NOTES:

1. BOLD PAVEMENT MARKING TO BE REMOVED.

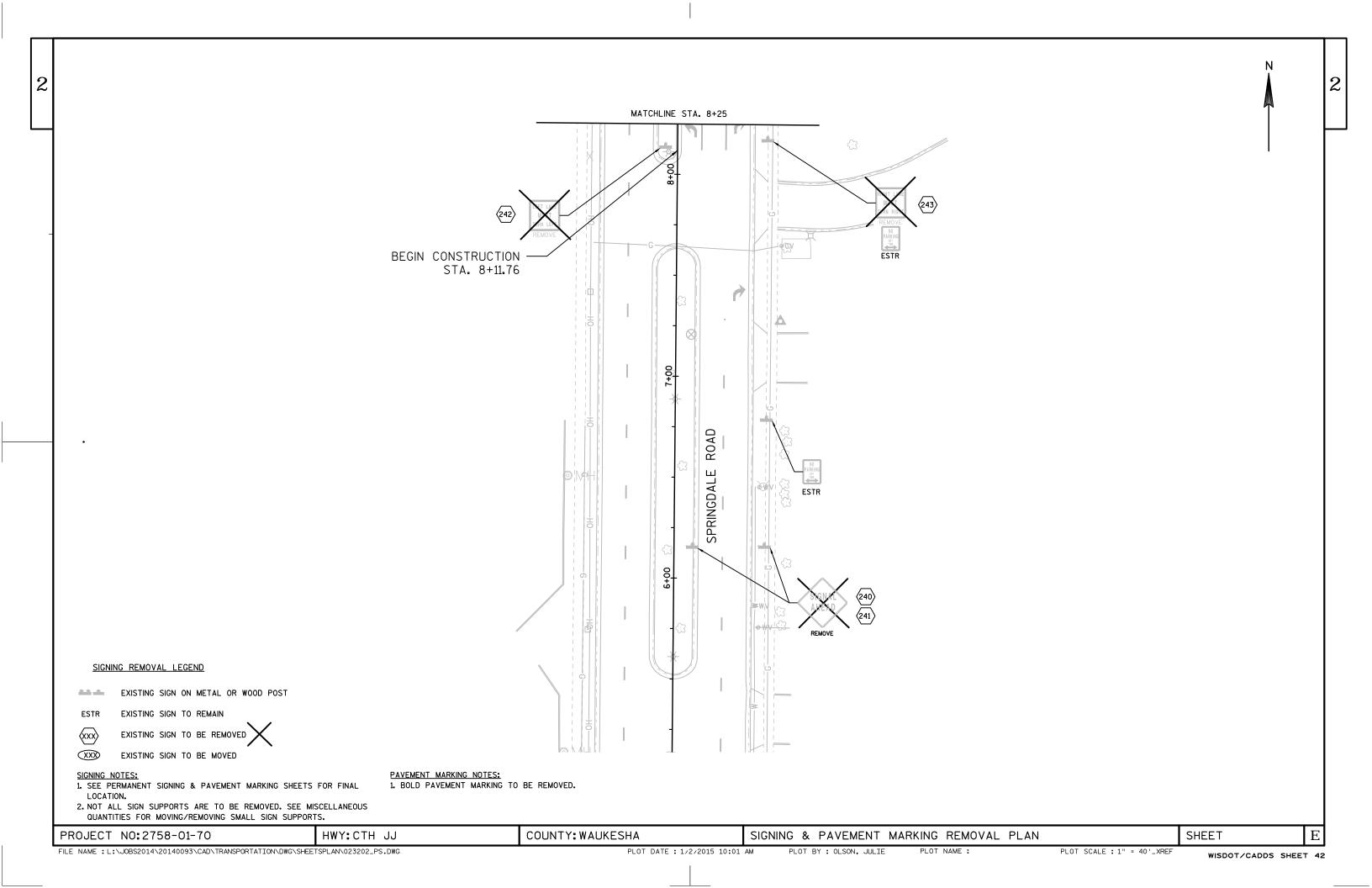
2. NOT ALL SIGN SUPPORTS ARE TO BE REMOVED. SEE MISCELLANEOUS QUANTITIES FOR MOVING/REMOVING SMALL SIGN SUPPORTS.

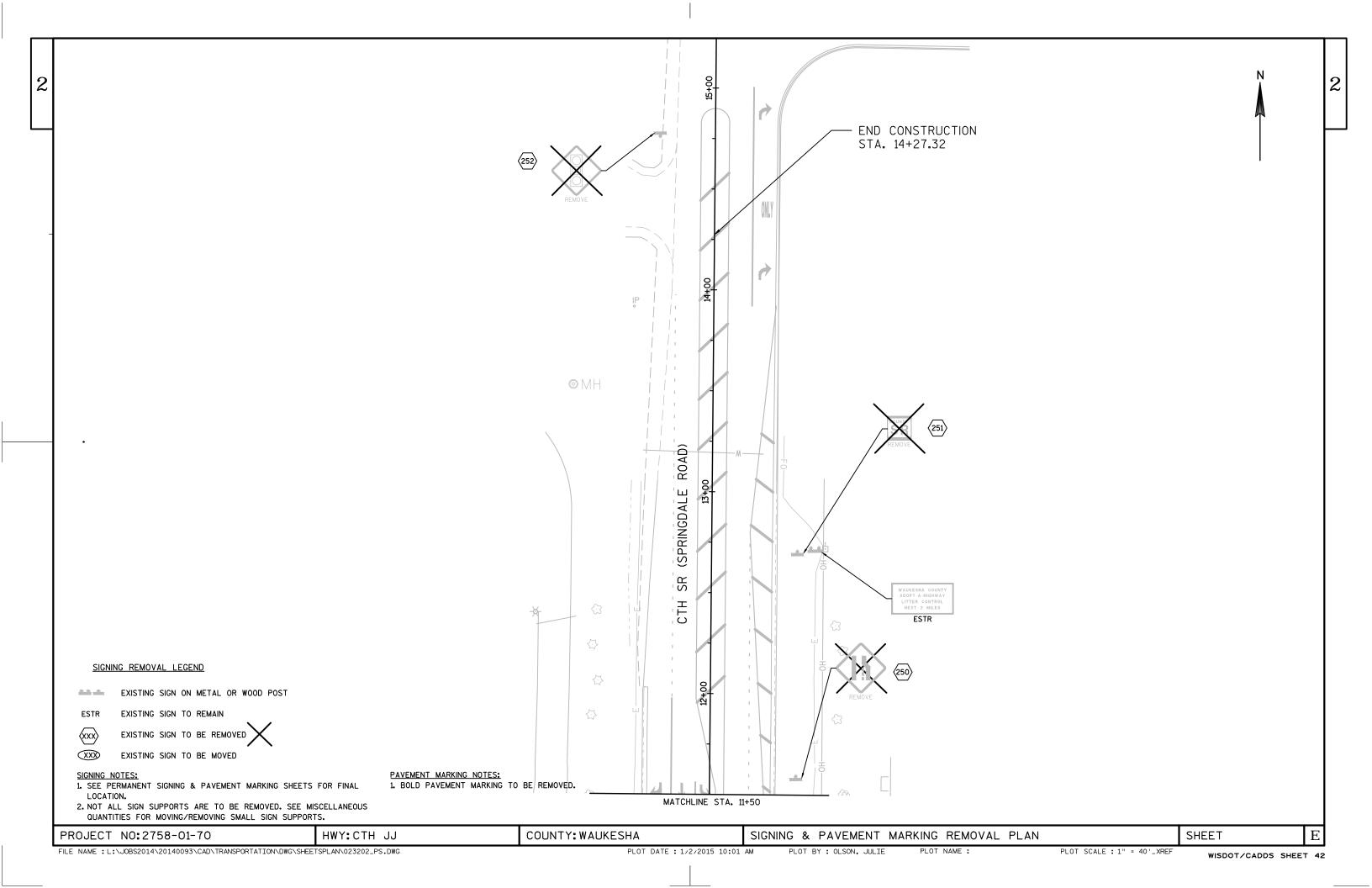
COUNTY: WAUKESHA PROJECT NO:2758-01-70 SIGNING & PAVEMENT MARKING REMOVAL PLAN HWY: CTH JJ PLOT BY : OLSON, JULIE

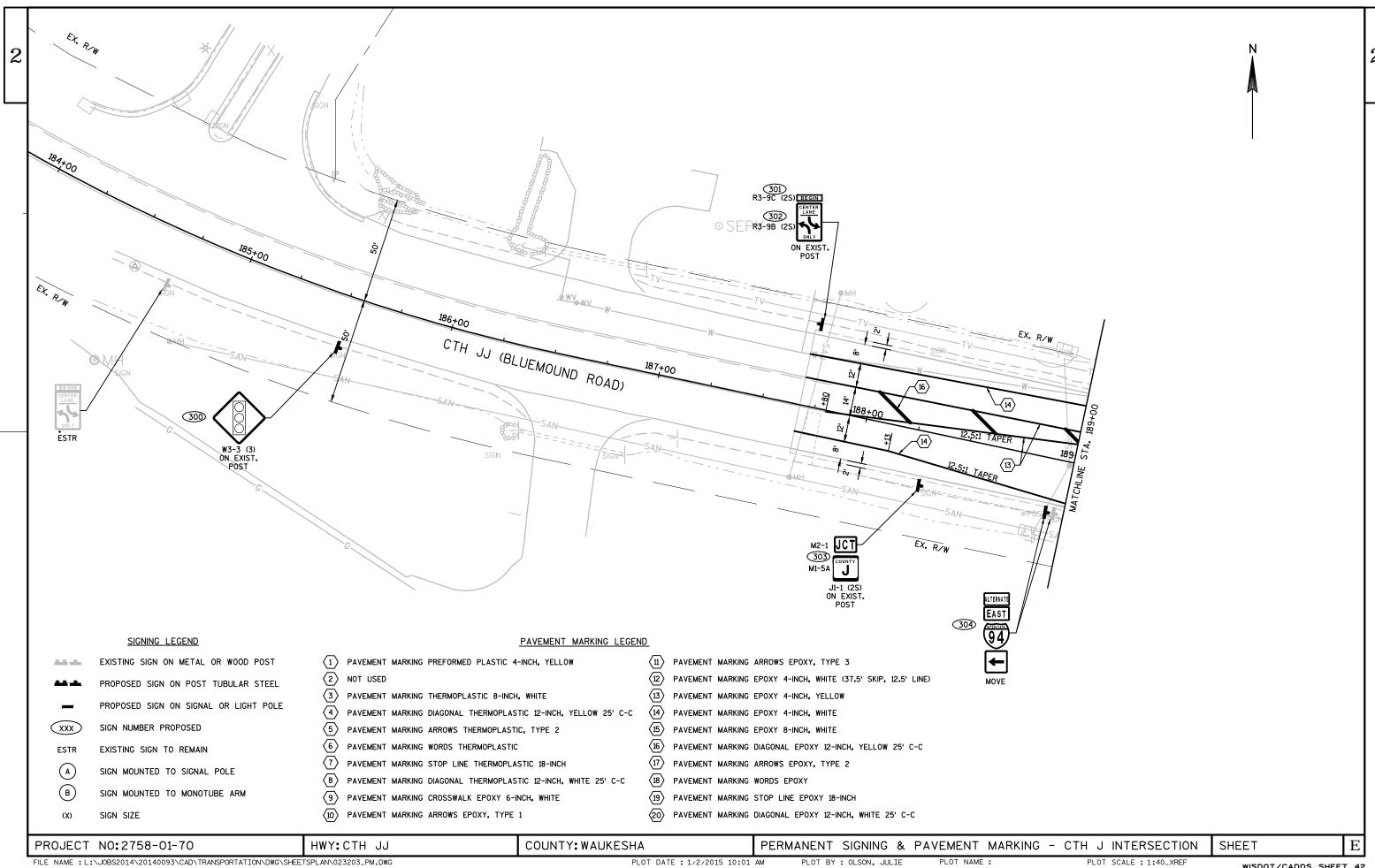
PLOT SCALE : 1" = 40'_XREF

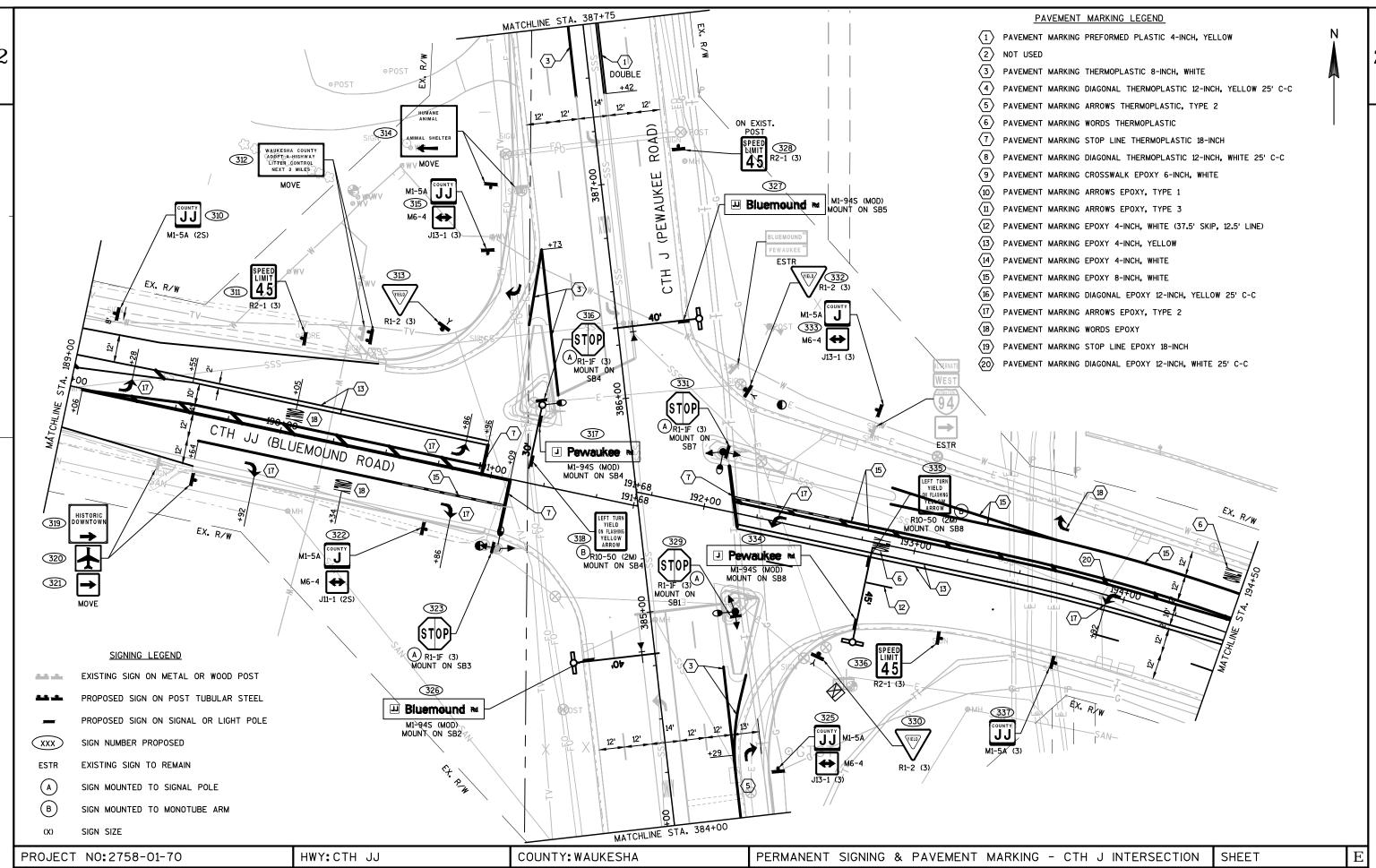
WISDOT/CADDS SHEET 42

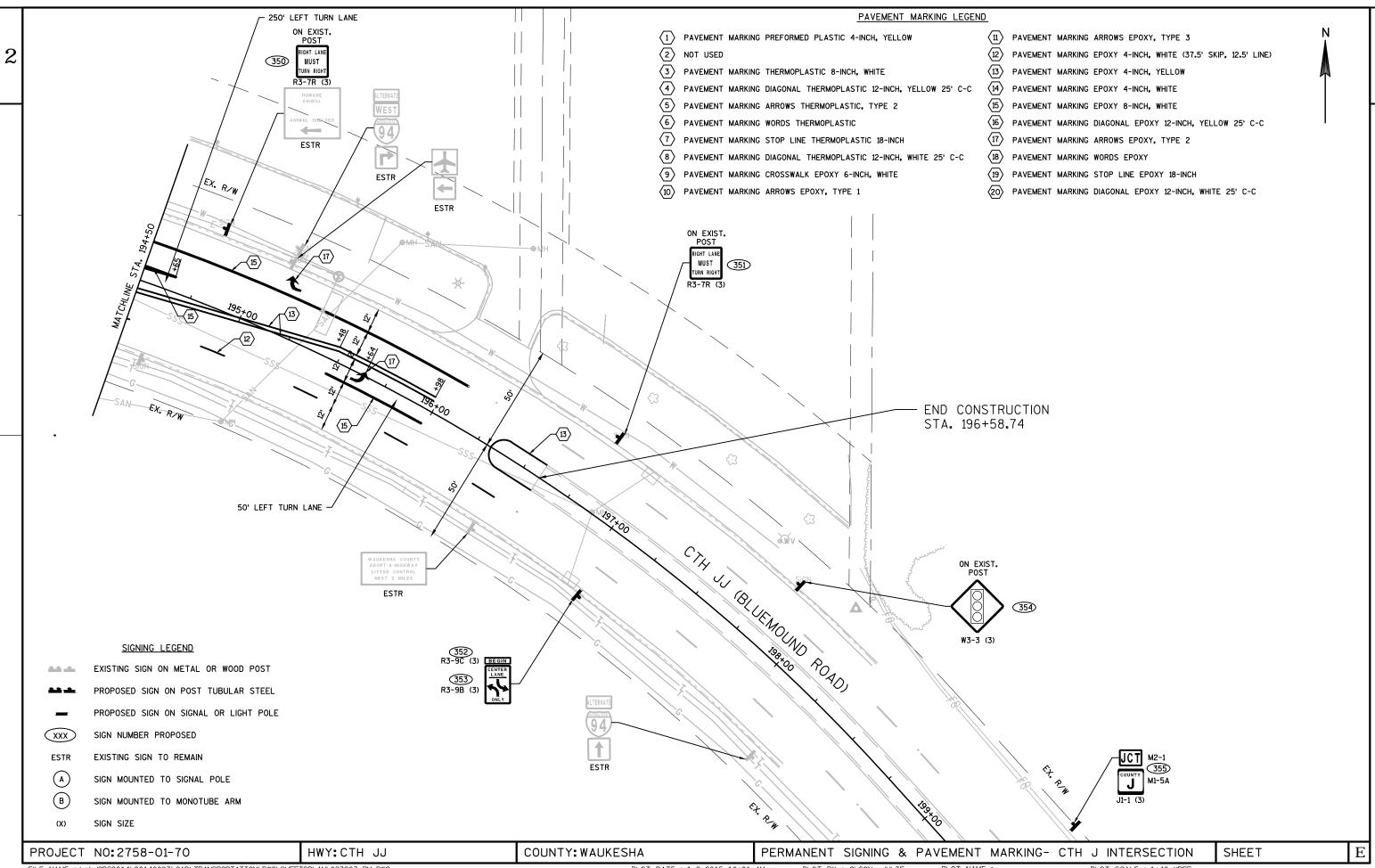
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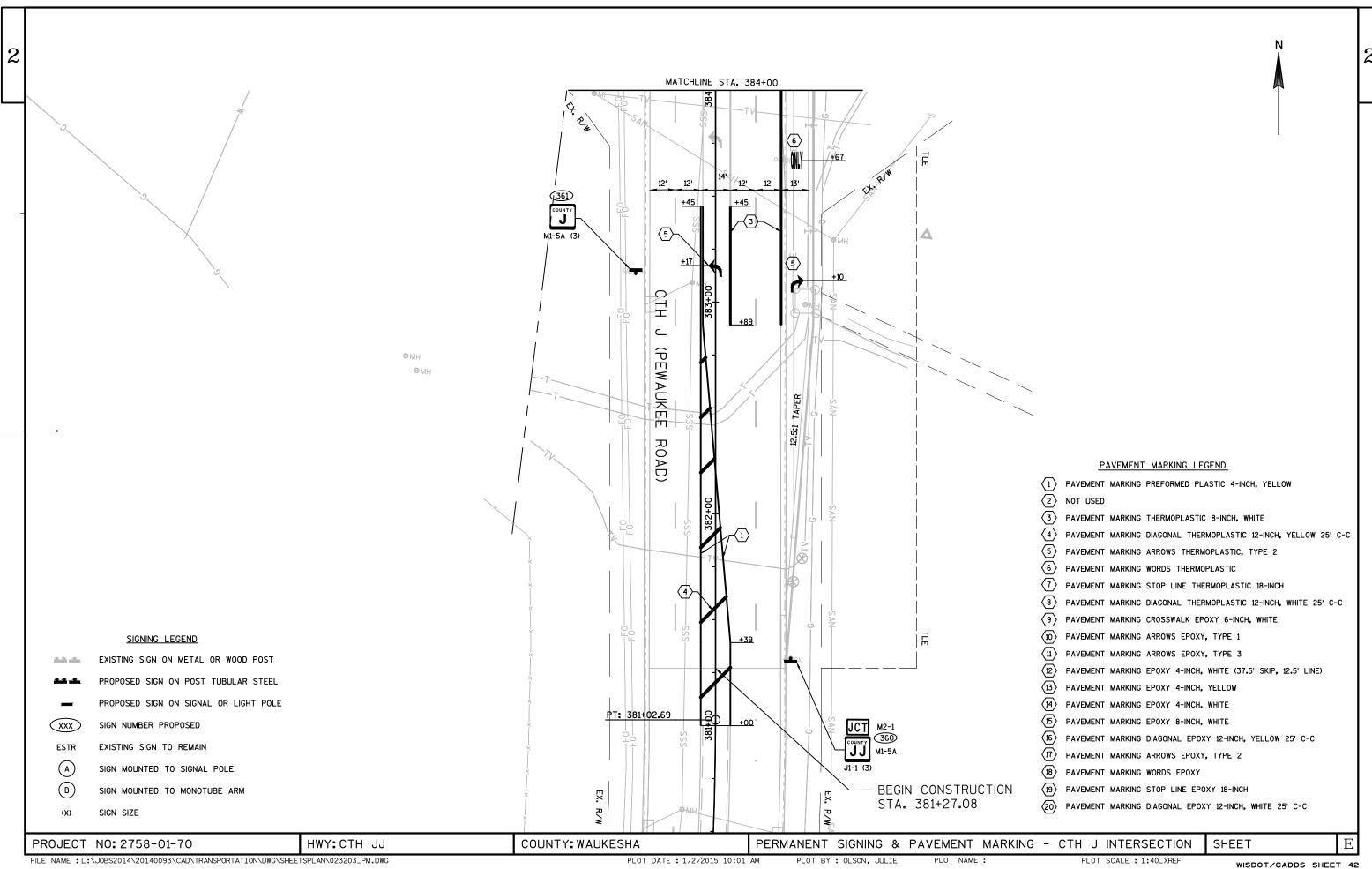


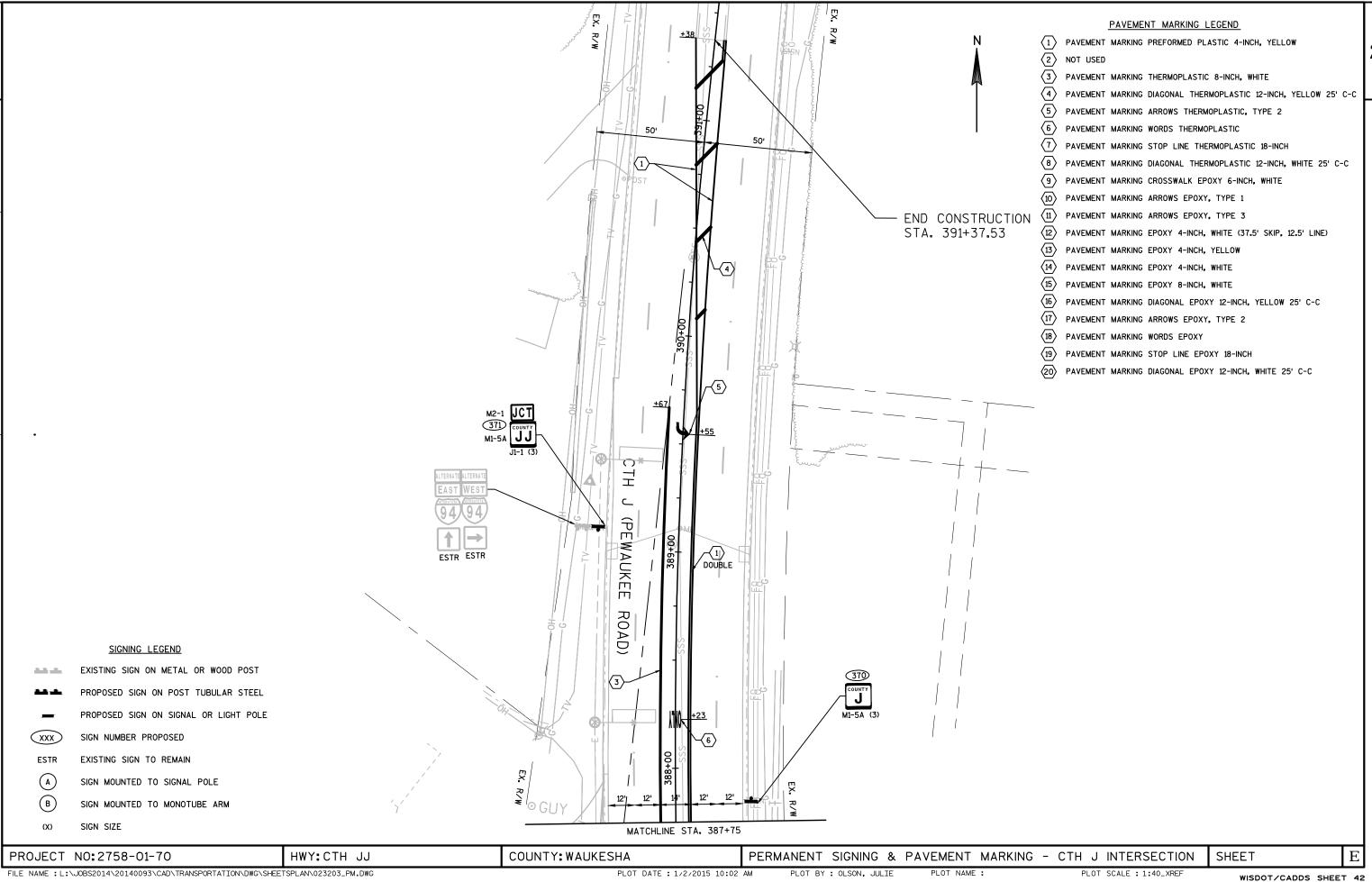


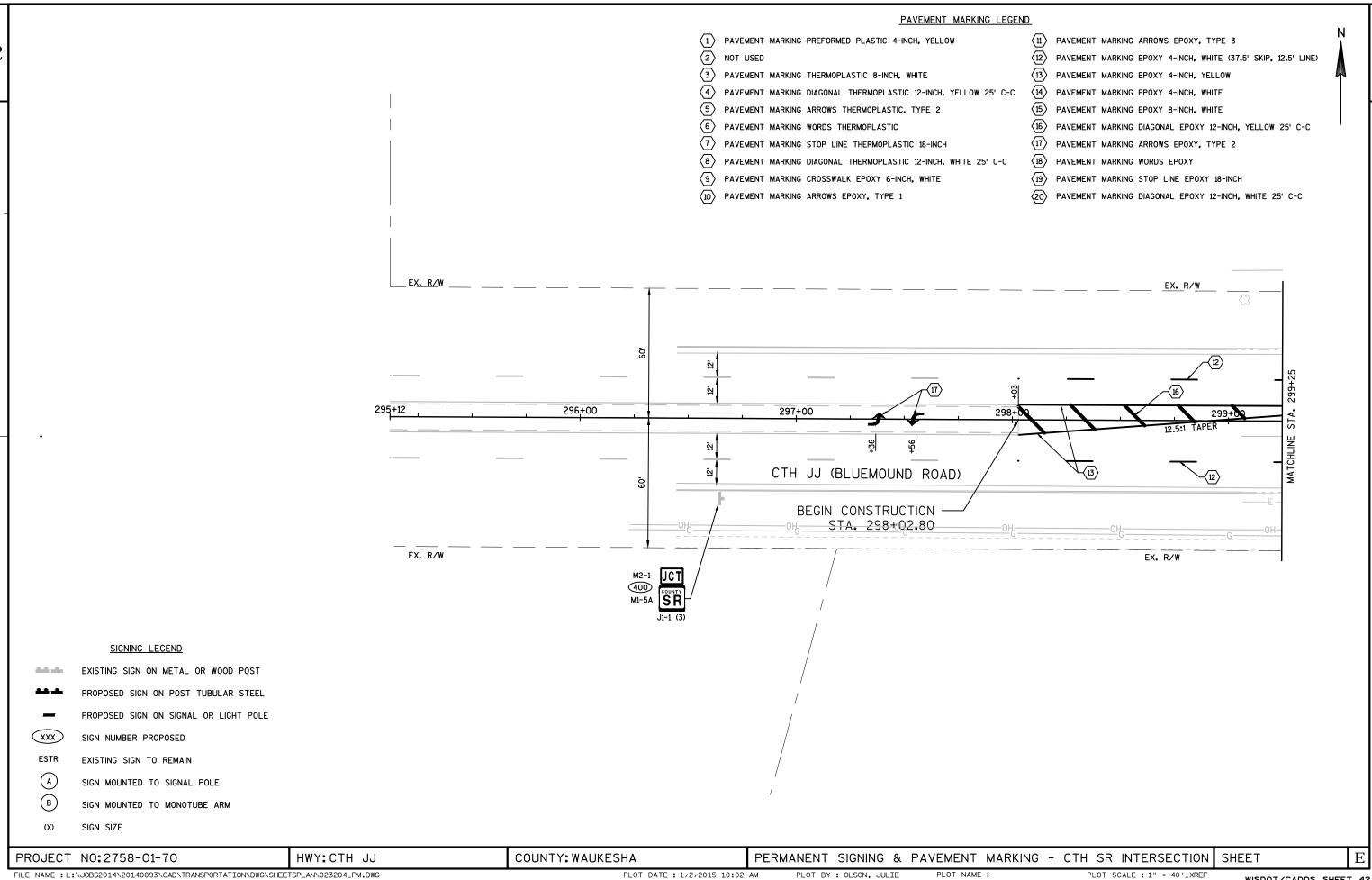


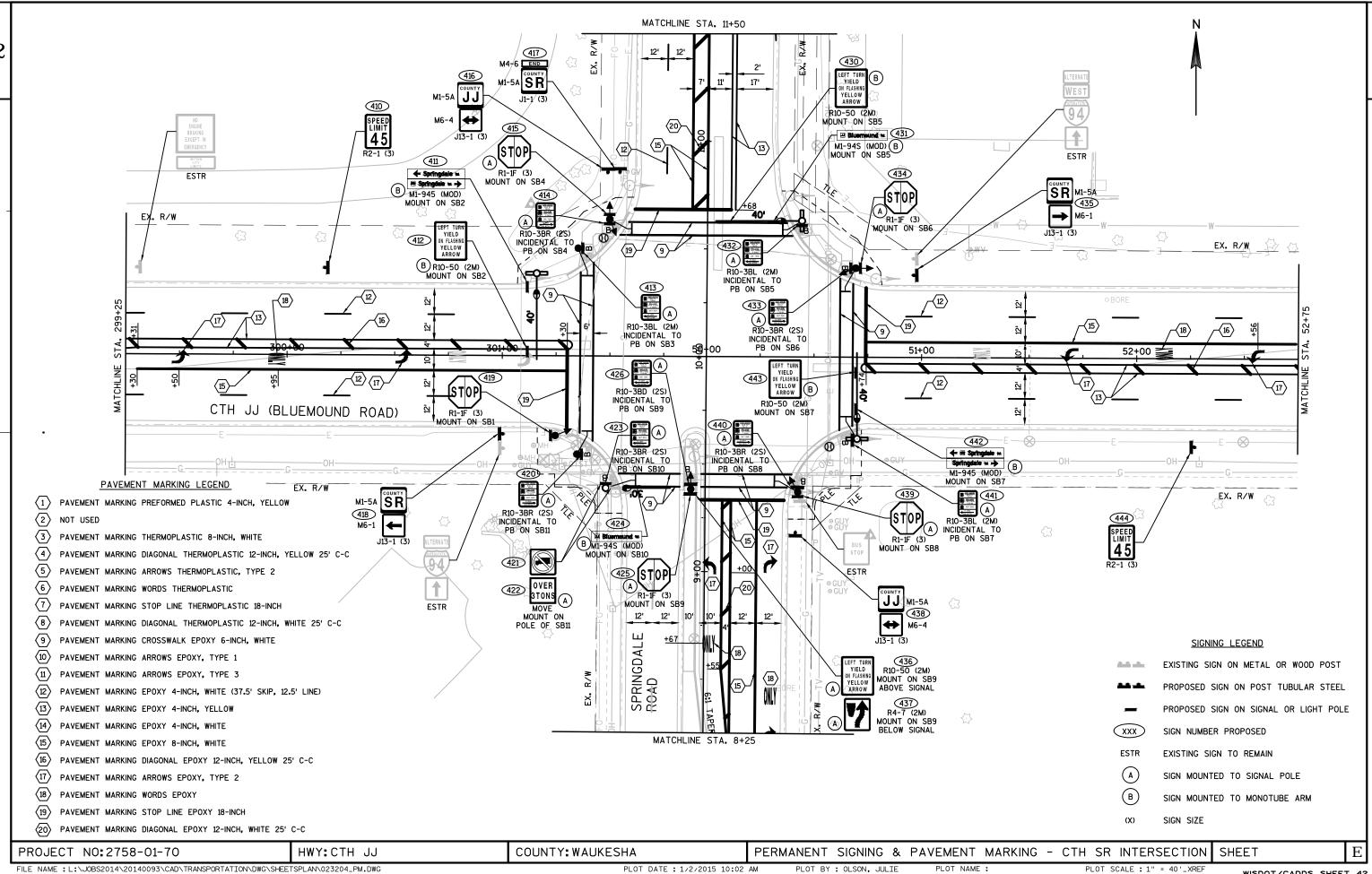














1 PAVEMENT MARKING PREFORMED PLASTIC 4-INCH, YELLOW

 $\langle 2 \rangle$ NOT USED

 $\overline{3}$ PAVEMENT MARKING THERMOPLASTIC 8-INCH, WHITE

4 PAVEMENT MARKING DIAGONAL THERMOPLASTIC 12-INCH, YELLOW 25' C-C

5 PAVEMENT MARKING ARROWS THERMOPLASTIC, TYPE 2

6 PAVEMENT MARKING WORDS THERMOPLASTIC

7 PAVEMENT MARKING STOP LINE THERMOPLASTIC 18-INCH

PAVEMENT MARKING DIAGONAL THERMOPLASTIC 12-INCH, WHITE 25' C-C

9 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH, WHITE

 $\langle 10 \rangle$ PAVEMENT MARKING ARROWS EPOXY, TYPE 1

11 PAVEMENT MARKING ARROWS EPOXY, TYPE 3

PAVEMENT MARKING EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)

(13) PAVEMENT MARKING EPOXY 4-INCH, YELLOW

14 PAVEMENT MARKING EPOXY 4-INCH, WHITE

15 PAVEMENT MARKING EPOXY 8-INCH, WHITE

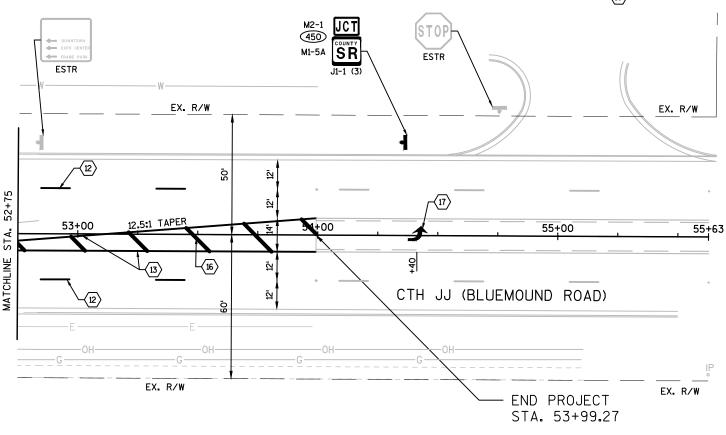
(16) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH, YELLOW 25' C-C

17 PAVEMENT MARKING ARROWS EPOXY, TYPE 2

18 PAVEMENT MARKING WORDS EPOXY

(19) PAVEMENT MARKING STOP LINE EPOXY 18-INCH

20 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH, WHITE 25' C-C



SIGNING LEGEND

EXISTING SIGN ON METAL OR WOOD POST

PROPOSED SIGN ON POST TUBULAR STEEL

PROPOSED SIGN ON SIGNAL OR LIGHT POLE

(xxx)SIGN NUMBER PROPOSED

ESTR EXISTING SIGN TO REMAIN

(A)SIGN MOUNTED TO SIGNAL POLE

B SIGN MOUNTED TO MONOTUBE ARM

(X) SIGN SIZE

PROJECT NO: 2758-01-70

HWY: CTH JJ COUNTY: WAUKESHA

PERMANENT SIGNING & PAVEMENT MARKING- CTH SR INTERSECTION

SHEET

FILE NAME : L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\023204_PM.DWG

PLOT DATE: 1/2/2015 10:02 AM

PLOT BY : OLSON, JULIE

PLOT NAME : PLOT SCALE : 1" = 40'_XREF



3 PAVEMENT MARKING THERMOPLASTIC 8-INCH, WHITE

4 PAVEMENT MARKING DIAGONAL THERMOPLASTIC 12-INCH, YELLOW 25' C-C

(5) PAVEMENT MARKING ARROWS THERMOPLASTIC, TYPE 2

6 PAVEMENT MARKING WORDS THERMOPLASTIC

7 PAVEMENT MARKING STOP LINE THERMOPLASTIC 18-INCH

8 PAVEMENT MARKING DIAGONAL THERMOPLASTIC 12-INCH, WHITE 25' C-C

9 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH, WHITE

10 PAVEMENT MARKING ARROWS EPOXY, TYPE 1

11 PAVEMENT MARKING ARROWS EPOXY, TYPE 3

(12) PAVEMENT MARKING EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)

13 PAVEMENT MARKING EPOXY 4-INCH, YELLOW

14 PAVEMENT MARKING EPOXY 4-INCH, WHITE

15 PAVEMENT MARKING EPOXY 8-INCH, WHITE

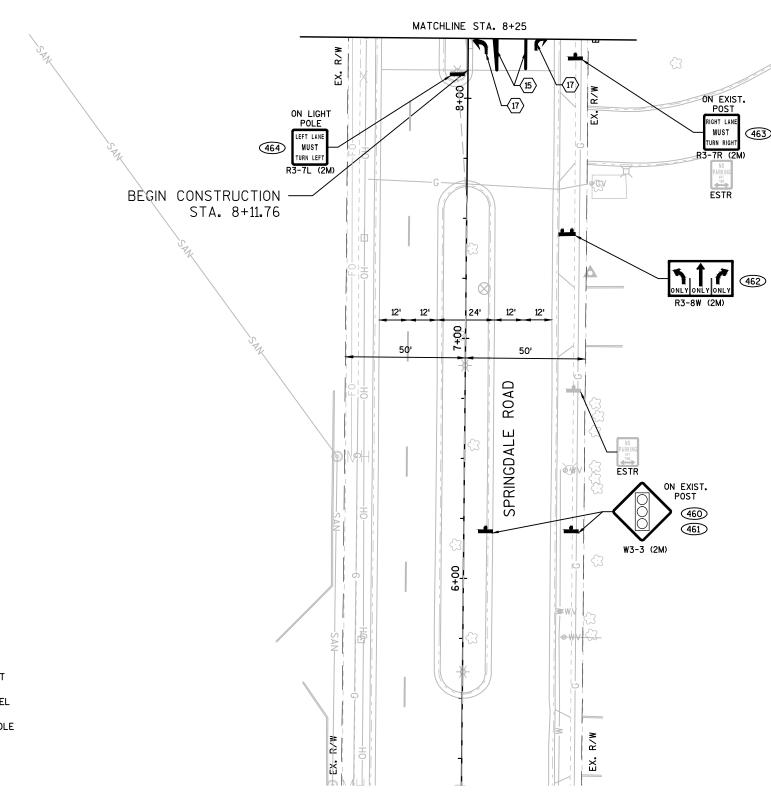
PAVEMENT MARKING DIAGONAL EPOXY 12-INCH, YELLOW 25' C-C

17 PAVEMENT MARKING ARROWS EPOXY, TYPE 2

PAVEMENT MARKING WORDS EPOXY

(19) PAVEMENT MARKING STOP LINE EPOXY 18-INCH

PAVEMENT MARKING DIAGONAL EPOXY 12-INCH, WHITE 25' C-C



SIGNING LEGEND

EXISTING SIGN ON METAL OR WOOD POST

PROPOSED SIGN ON POST TUBULAR STEEL

PROPOSED SIGN ON SIGNAL OR LIGHT POLE

(XXX) SIGN NUMBER PROPOSED

ESTR EXISTING SIGN TO REMAIN

(A)SIGN MOUNTED TO SIGNAL POLE

В SIGN MOUNTED TO MONOTUBE ARM

SIGN SIZE (X)

PROJECT NO: 2758-01-70

COUNTY: WAUKESHA HWY: CTH JJ

PERMANENT SIGNING & PAVEMENT MARKING - CTH SR INTERSECTION

PLOT NAME :

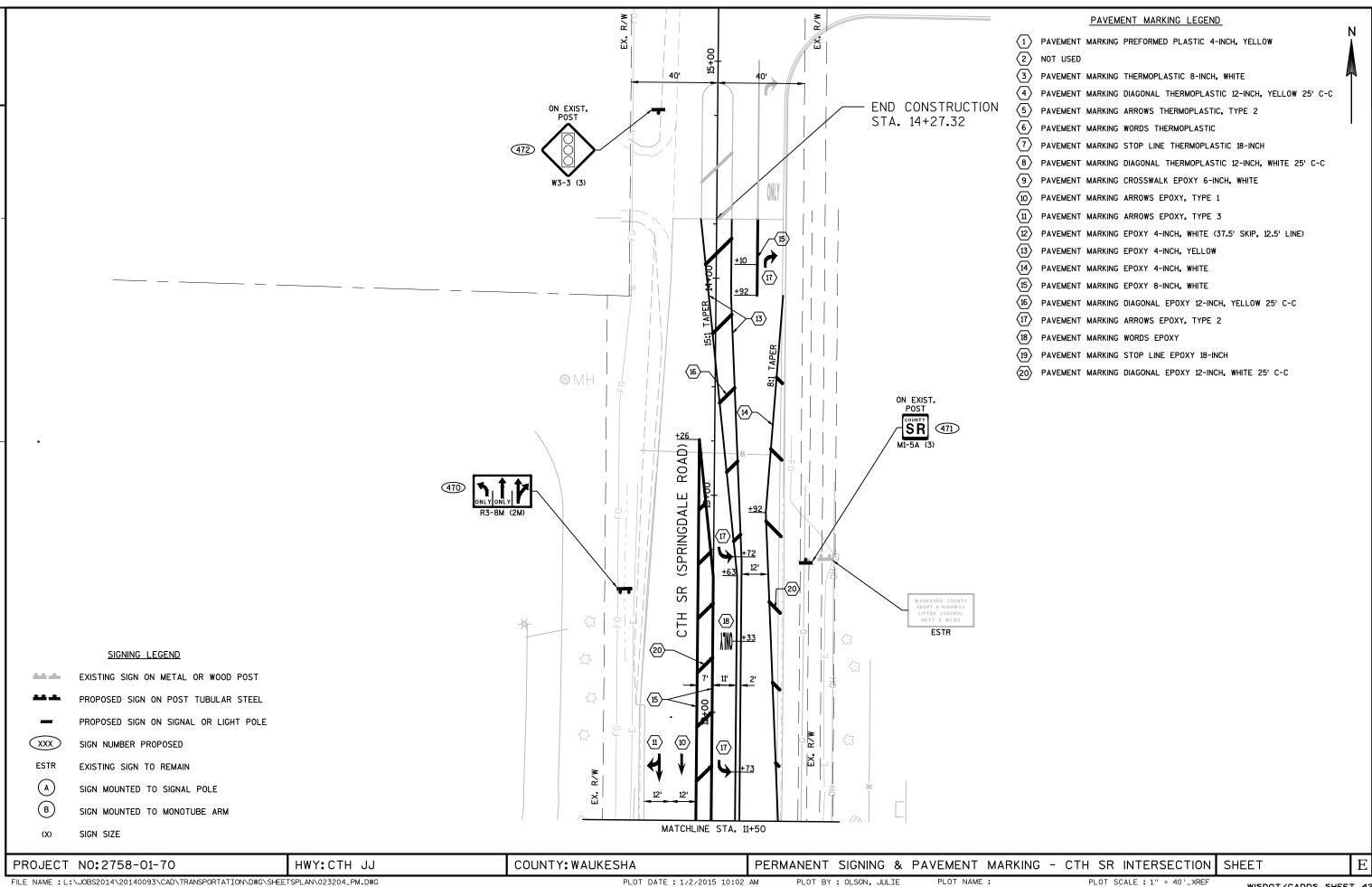
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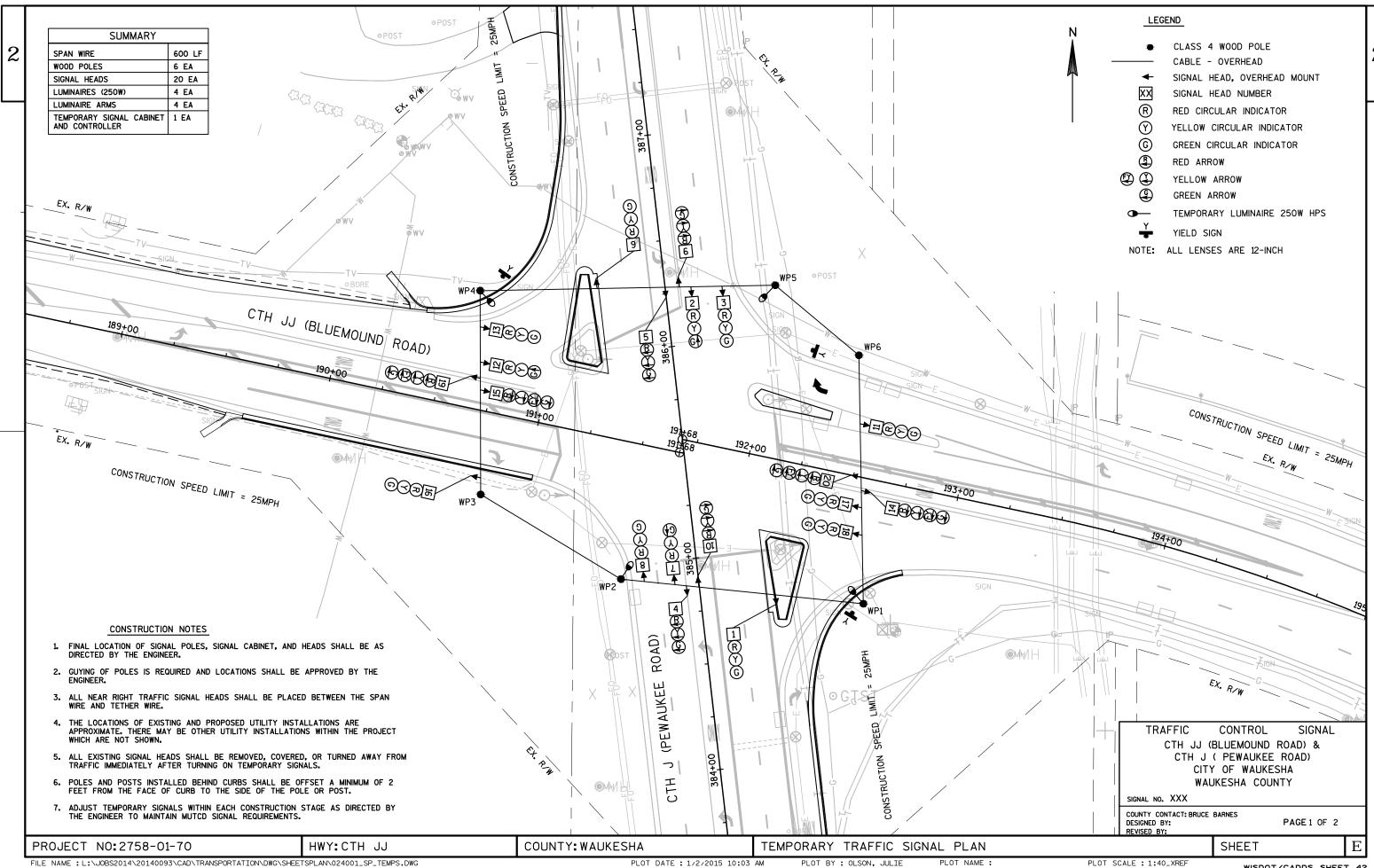
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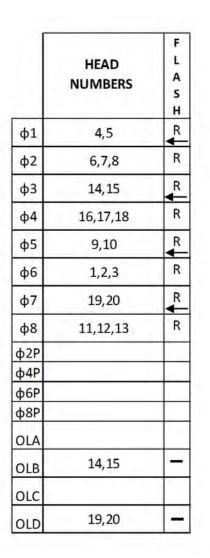
PLOT DATE: 1/2/2015 10:02 AM

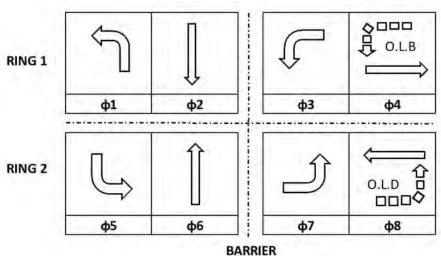
PLOT BY : OLSON, JULIE

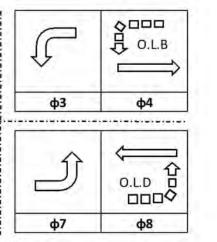
PLOT SCALE : 1" = 40'_XREF











CONTROLLER LOGIC							
PHASE NUMBER	PHASE LOCKING	DUAL ENTRY	PHASE RECALL	PHASE			
1		6		X			
2	Х	6	MAX.	X			
3		8		Х			
4		8		X			
5		2		X			
6	Х	2	MAX.	X			
100		12 12 1					

NONE	X
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATI	ON
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	-
CONTROLLER NO: S-	
SIGNAL SYSTEM NO: SS-	

TYPE OF LIGHTIN	G
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CA	ABINET

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

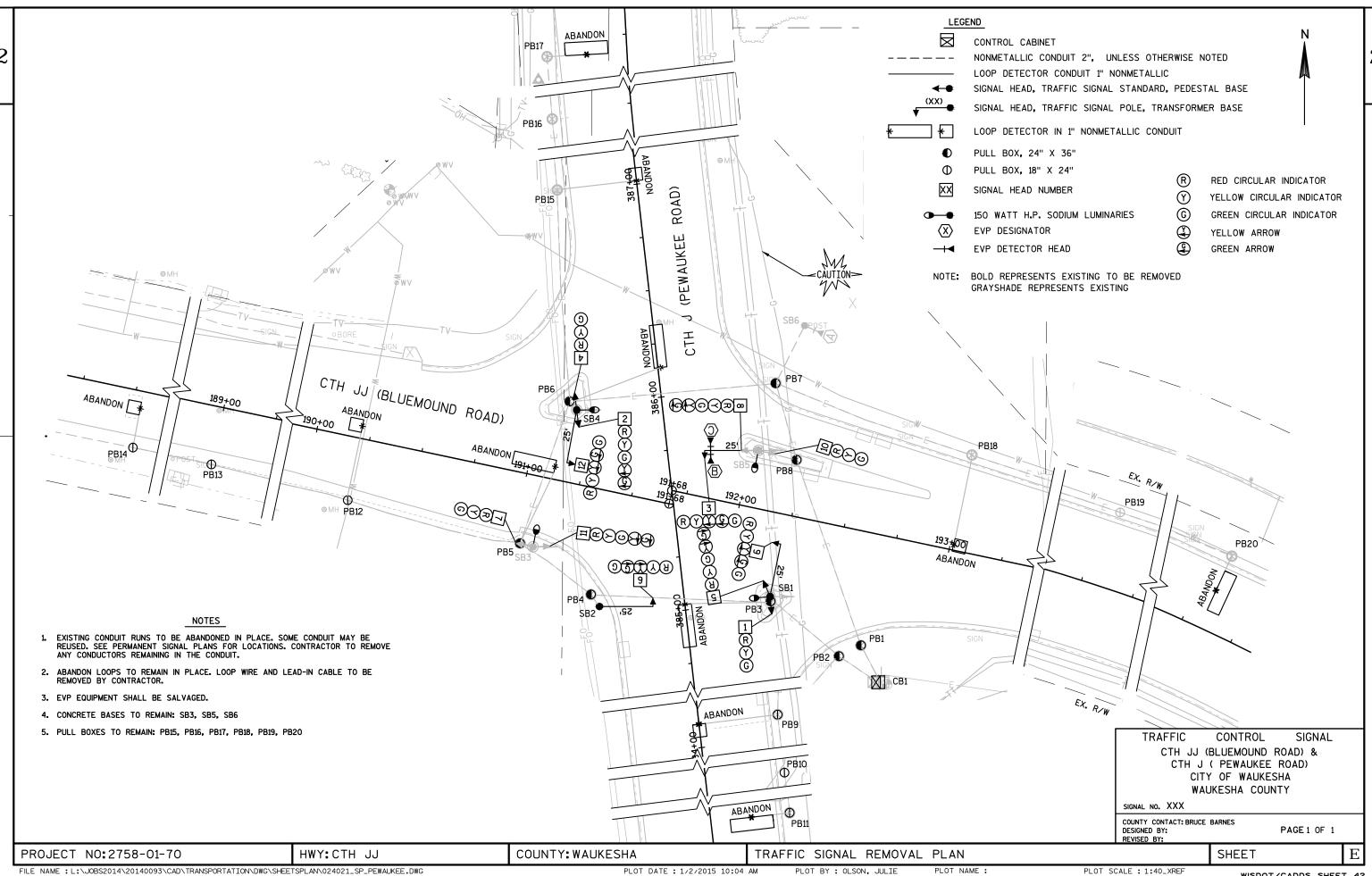
TRAFFIC CONTROL CTH JJ (BLUEMOUND ROAD) &
CTH J (PEWAUKEE ROAD)
CITY OF WAUKESHA
WAUKESHA COUNTY SIGNAL NO. XXX CONTROLLER TYPE: EPAC PAGE 2 OF 2 DATE: 1/15

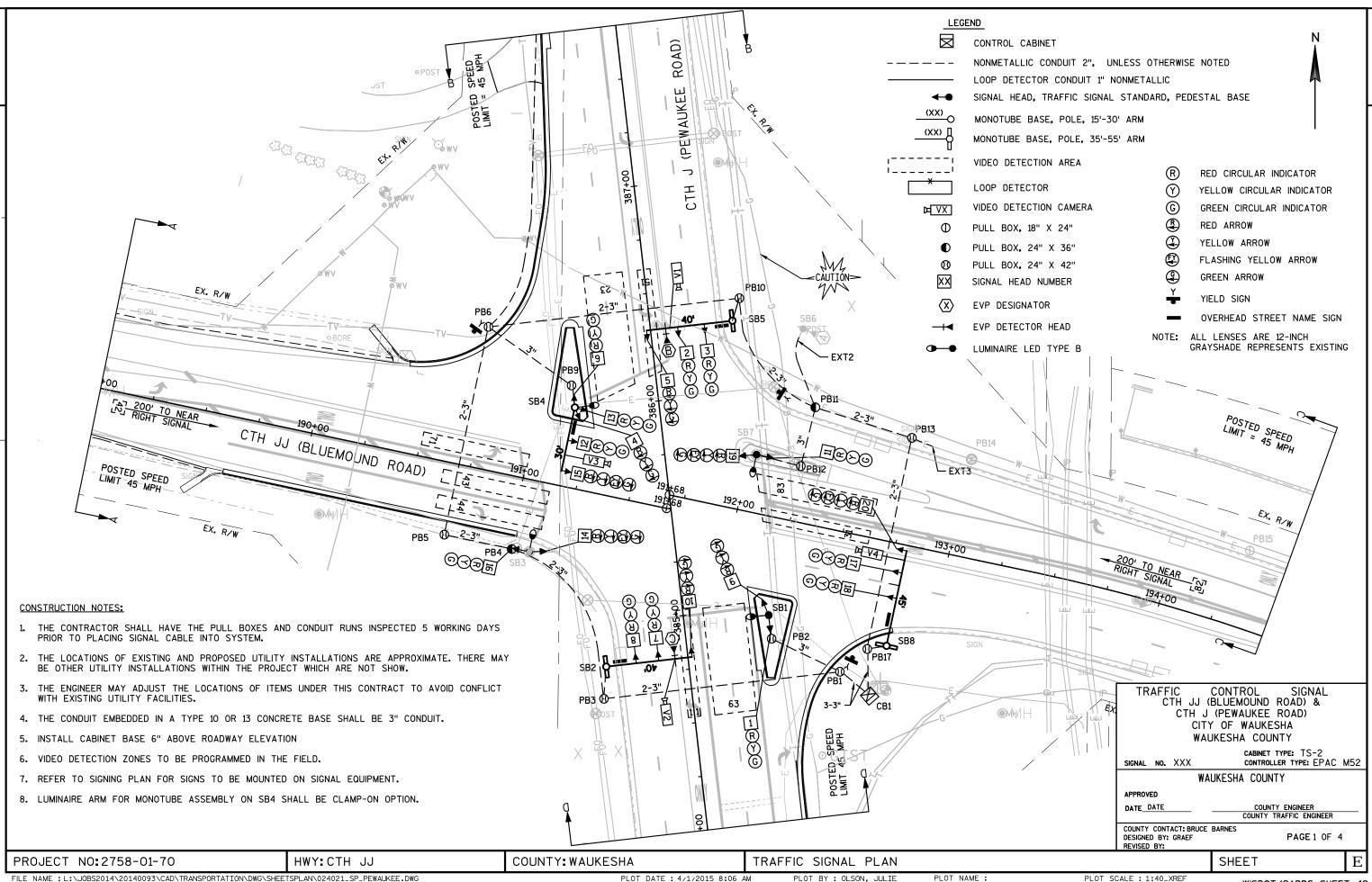
PROJECT NO:2758-01-70 HWY: CTH JJ COUNTY: WAUKESHA

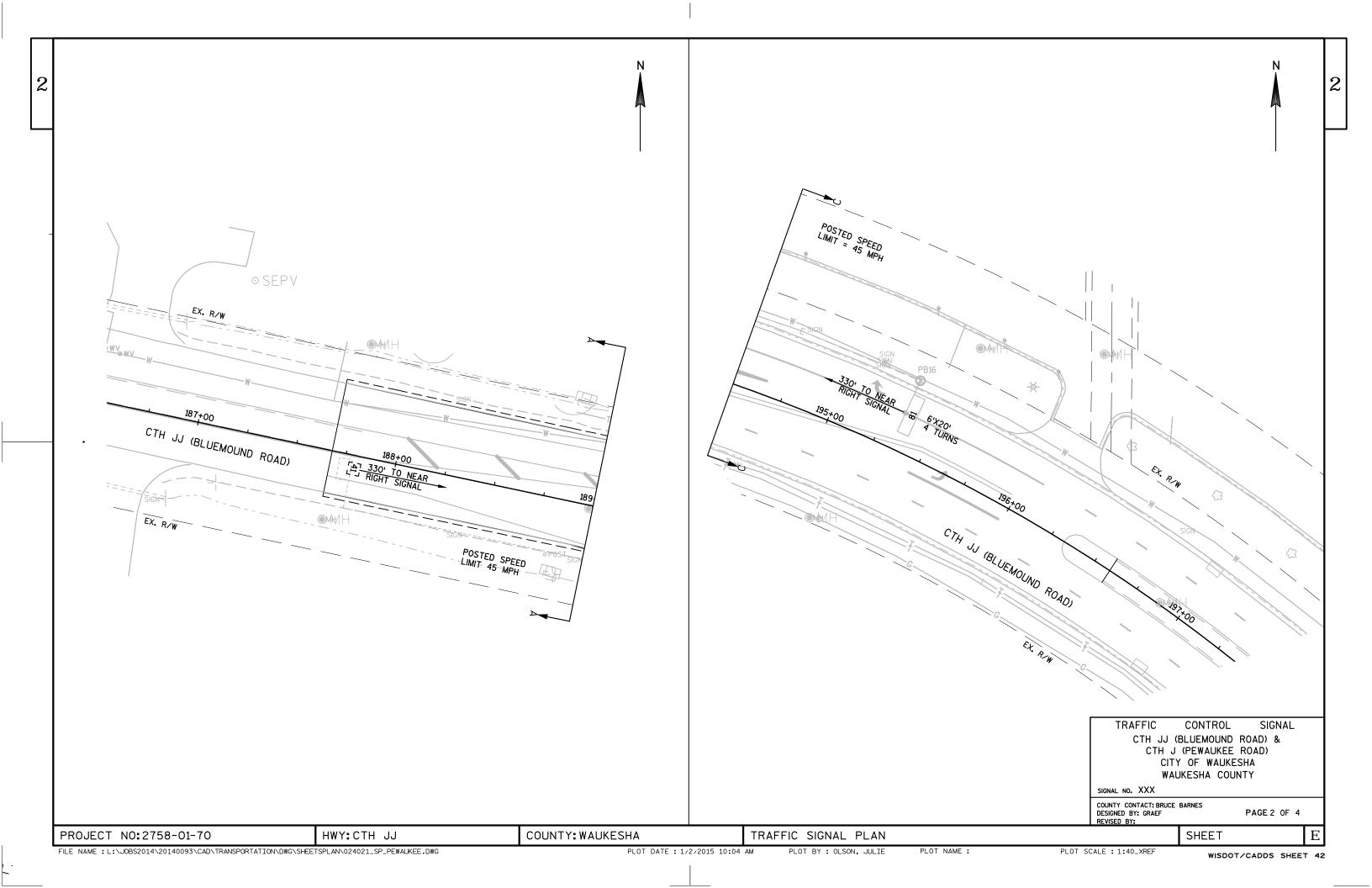
TEMPORARY SEQUENCE OF OPERATIONS

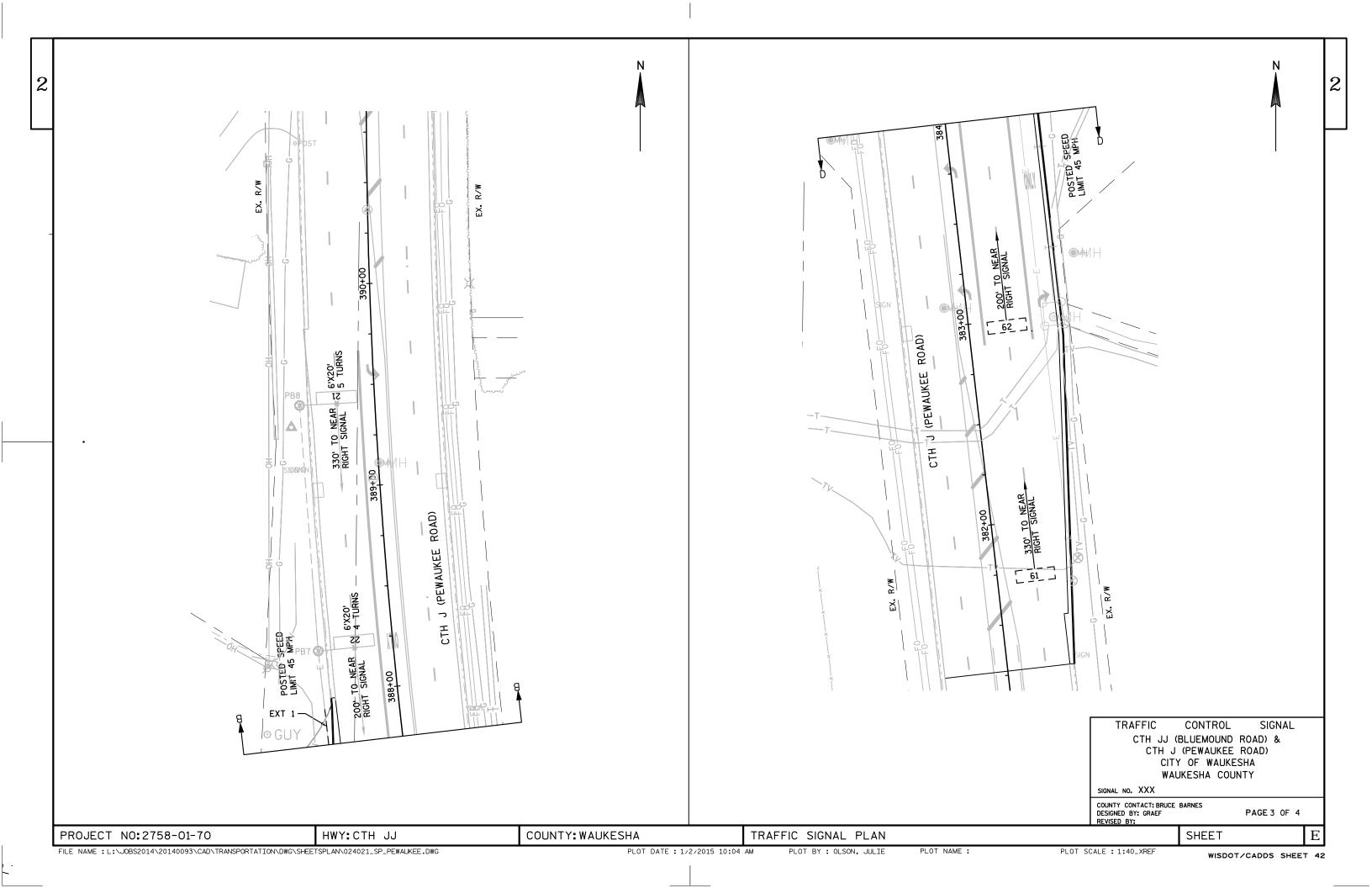
PLOT BY : OLSON, JULIE

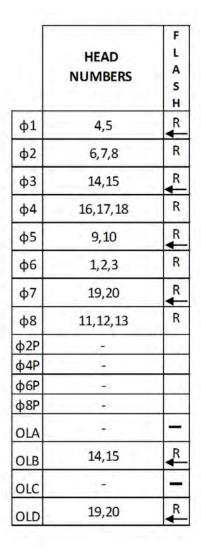
PLOT SCALE :

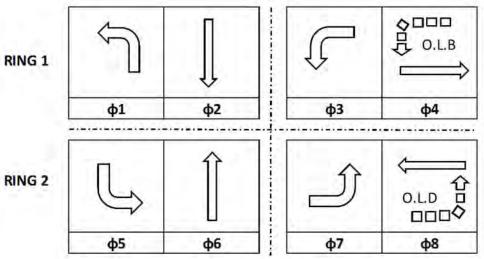












BARRIER

CONTROLLER LOGIC						
PHASE NUMBER	PHASE LOCKING	DUAL ENTRY	PHASE RECALL	PHASE ACTIVE		
1		6		X		
2	X	6	MIN.	X		
3		8		X		
4		8		X		
5		2		X		
6	X	2	MIN.	Х		
7		4		Х		
8		4		×		

TYPE OF INTERCONNECT\COMMUNICATION NONE **CLOSED LOOP** TWISTED PAIR FIBER OPTIC* FIBER OPTIC (ETHERNET) RADIO

NONE	X
TBC	
TRAFFIC RESPONSIVE	- 1/1
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM NO: SS-	

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMRGENCY VEHICLE	IICEE FRE	LIVIFICIA	JEQUE
PREEMPTOR	Α	В	С
MOVEMENT		71	IL
PHASE	8+3	6+1	2+5

AFTER PREEMPTION SEQUENCE 6+1 or 2+5, CONTROLLER SHALL RETURN TO PHASES 2+6

AFTER PREEMPTION SEQUENCE 8+3 CONTROLLER SHALL RETURN TO PHASES 4+8

DETECTOR LOGIC

COUNTY: WAUKESHA

OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	Χ	X				7 7 7	1	. = 1
DELAY								
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETCTOR*(S)	22				1===1			
ASSIGNED PHASE	2							
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH		1 - 1						
EXTEND	X							
DELAY		4 - 1			1 1			A = A

HWY: CTH JJ

1

81

8

21

5

11

9

15

13

19	17	23	21	27	25	31	29	DETECTOR INPUT
11	31	42	44	61	63	82	12.0	PLAN LOOP DETCTOR*(S)
1	3	4	4	6	6	8		ASSIGNED PHASE
VEH	OPERATION MODE							
	4							SWITCH
X	X	X	1	X		X		EXTEND
X	X		X					DELAY
								Tarren en
20	18	24	22	28	26	32	30	DETECTOR INPUT
23	41	43	51	62	71	83		PLAN LOOP DETCTOR*(S)
2	4	4	5	6	7	8		ASSIGNED PHASE
VEH	OPERATION MODE							
					8			SWITCH
		Х	Х	X	X			EXTEND
			Х		Х			DELAY

TRAFFIC	CONTROL	SIGNAL	
CTH CI	(BLUEMOUND J (PEWAUKEE TY OF WAUKE AUKESHA COU	ROAD) SHA	
SIGNAL NO. XXX			
CONTROLLER TYPE: EPAC			
DATE: 10/14		PAGE 4 OF 4	
	SHEET		Е

FILE NAME : L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\024021_SP_PEWAUKEE.DWG

PROJECT NO:2758-01-70

SEQUENCE OF OPERATIONS PLOT BY: OLSON, JULIE

PLOT SCALE : #######

WISDOT/CADDS SHEET 42

DETECTOR INPUT

ASSIGNED PHASE

PLAN LOOP DETCTOR*(S)

PROJECT ID:	2758-01-70	SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
INTERSECTION:	CTH JJ (BLUEMOUND RD) & CTH J (PEWAUKEE RD)	COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

			SIGNAL INDICATION WIRE COLOR							117.7.7.7		
СВ1 ТО	AWG14 # OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<red></red>	<yellow></yellow>	<green></green>	FLASHING <yellow></yellow>	D/WALK	WALK	PED BUTTON
SB1	12							5				
		1	RED	ORG	GRN			1.0				
		9				RED/BLK	ORG/BLK	GRN/BLK				
SB2	12				11 15 17 11	T M V		7,7 673				1
		7	RED	ORG	GRN							
		8	RED	ORG	GRN	I Land to the land		L.Charle				
		10				RED/BLK	ORG/BLK	GRN/BLK				
SB3	12					l delaka	ALTERNATION AND ADMINISTRA	100				
	4	14			F 75 7 7 1	RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		16	RED	ORG	GRN		, 100	1822	10000			
SB4	19				77.74.71							
		12	RED/WHT	BLU/WHT	GRN/WHT			21		4		
		13	RED	ORG	GRN		M. J. S. Santa			1		
		15			12 2 2 2 2 1 2 1	BLK/RED	BLU/RED	ORG/RED	WHT/RED			
		4				RED/BLK	ORG/BLK	GRN/BLK				
		6	RED	ORG	GRN							
SB5	12				1							
		2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		5				RED/BLK	ORG/BLK	GRN/BLK				
SB7	12											
		11	RED	ORG	GRN	DED /DI K	000/014	CDN /DLW	DI WANTE			
500	40	19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT		-	-
SB8	12	47	DED	one	CDM		1					
		17	RED	ORG	GRN							
		18	RED	ORG	GRN	DED /DLV	ODC/DLV	CDN /DLV	DIV AMUT			
		20				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			

NOTES:

*USE WHITE CONDUCTOR IN THE SIGNAL CABLE 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.

EQUIP	MENT
GROUNDING	CONDUCTOR
10 AWG	GRN XLP
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB7
SB7	SB8
SB8	CB1

VIDEO						
DETE	DETECTION CABLE					
CA						
FROM	ТО					
CB1	V1 (SB5)					
CB1	V2 (SB2)					
CB1	V3 (SB4)					
CB1	V4 (SB8)					

PULL BOX	BONDING			
JUMPER				
10 AWG GRN XLP				
FROM TO				
PB1	CB1			
PB2	SB1			
PB3	SB2			
PB4	SB3			
PB5	SB3			
PB6	SB4			
PB9	SB4			
PB10	SB5			
PB11	SB7			
PB12	SB7			
PB13	SB7			
PB17	SB8			

	RGENCY			
VEHICLE PREEMPTION				
FROM	ТО			
CB1	HEAD A (SB6)			
CB1	HEAD B (SB5)			
CB1	HEAD C (SB2)			

LIGHT UF 10 W/ GR	AWG
FROM	ТО
CB1	SB1
SB1	SB3
CB1	SB7
SB7	SB4

TRAFFIC CONTROL SIGNAL
CTH JJ (BLUEMOUND ROAD) &
CTH J (PEWAUKEE ROAD)
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. XXX

COUNTY CONTACT: BRUCE BARNES
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 1

PROJECT NO:2758-01-70

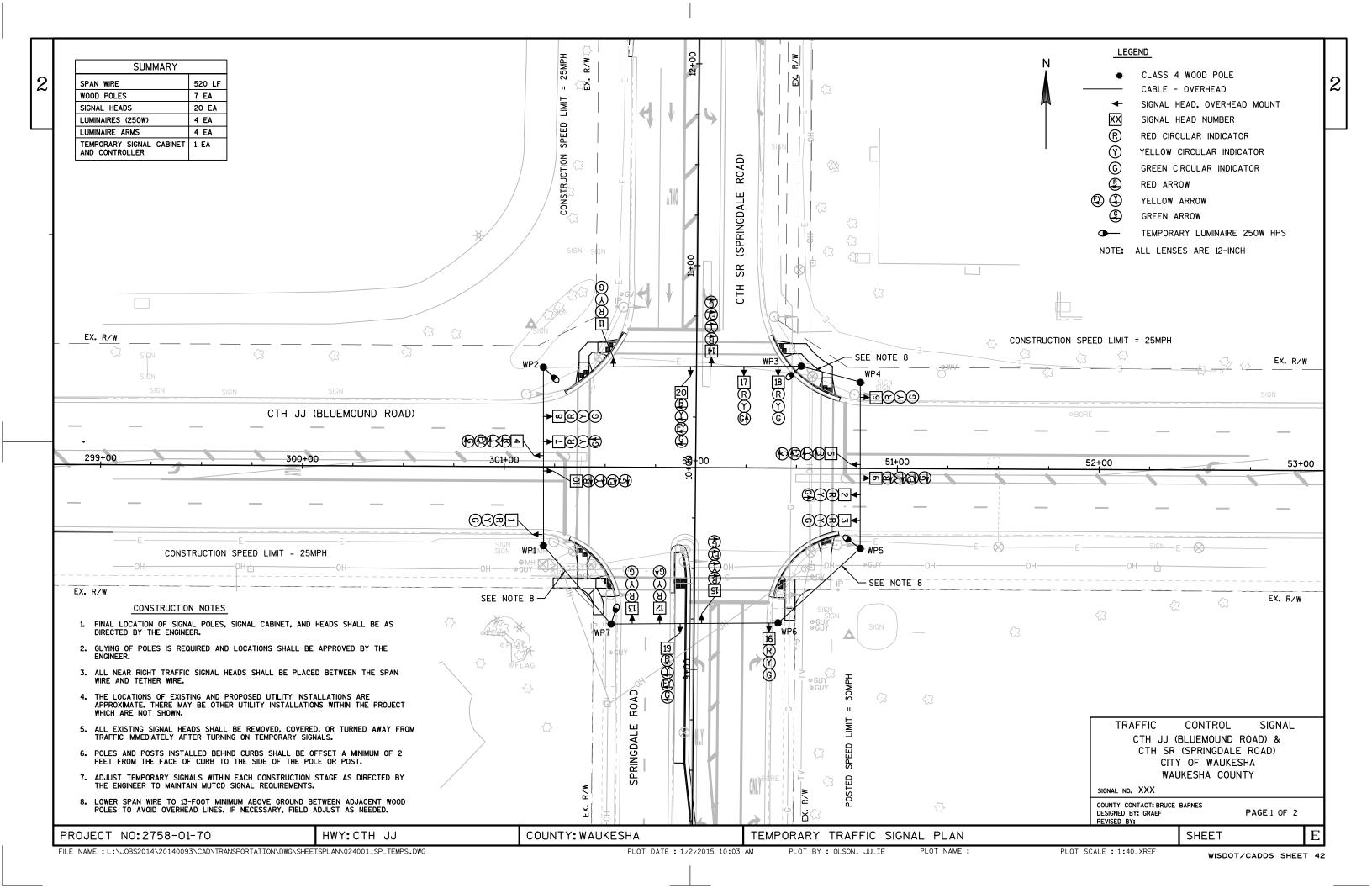
HWY:CTH JJ

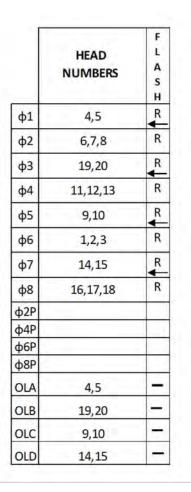
COUNTY: WAUKESHA

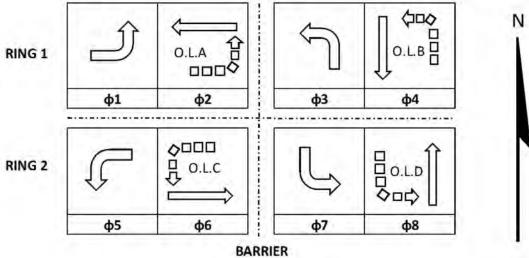
CABLE ROUTING

PLOT BY : OLSON, JULIE

^{*}RECONNECT THE GROUNDING CONDUCTORS WHENEVER THE CIRCUIT HAS BEEN INTERRUPTED TO ENSURE THE GROUNDING CIRCUIT IS COMPLETE.







ф3	ф4]
<u>L</u>		
ф7	ф8	

CONTROLLE	ER LOGIC
-----------	----------

	CONT	ROLLER	LOGIC	
PHASE NUMBER	PHASE LOCKING	DUAL ENTRY	PHASE RECALL	PHASE ACTIVE
1		6	1 7 1	Х
2	X	6	MAX.	Х
3		8		X
4		8	1	X
5		2		X
6	Х	2	MAX.	X
7	-	4	1.1	X
8		4		X

NONE	X
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

NONE	Х
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM NO: SS-	

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

TYPE OF PRE-EMP	T
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

TRAFFIC CONTROL CTH JJ (BLUEMOUND ROAD) & CTH SR (SPRINGDALE ROAD) CITY OF WAUKESHA WAUKESHA COUNTY SIGNAL NO. XXX

CONTROLLER TYPE: EPAC DATE: 1/15 PAGE 2 OF 2

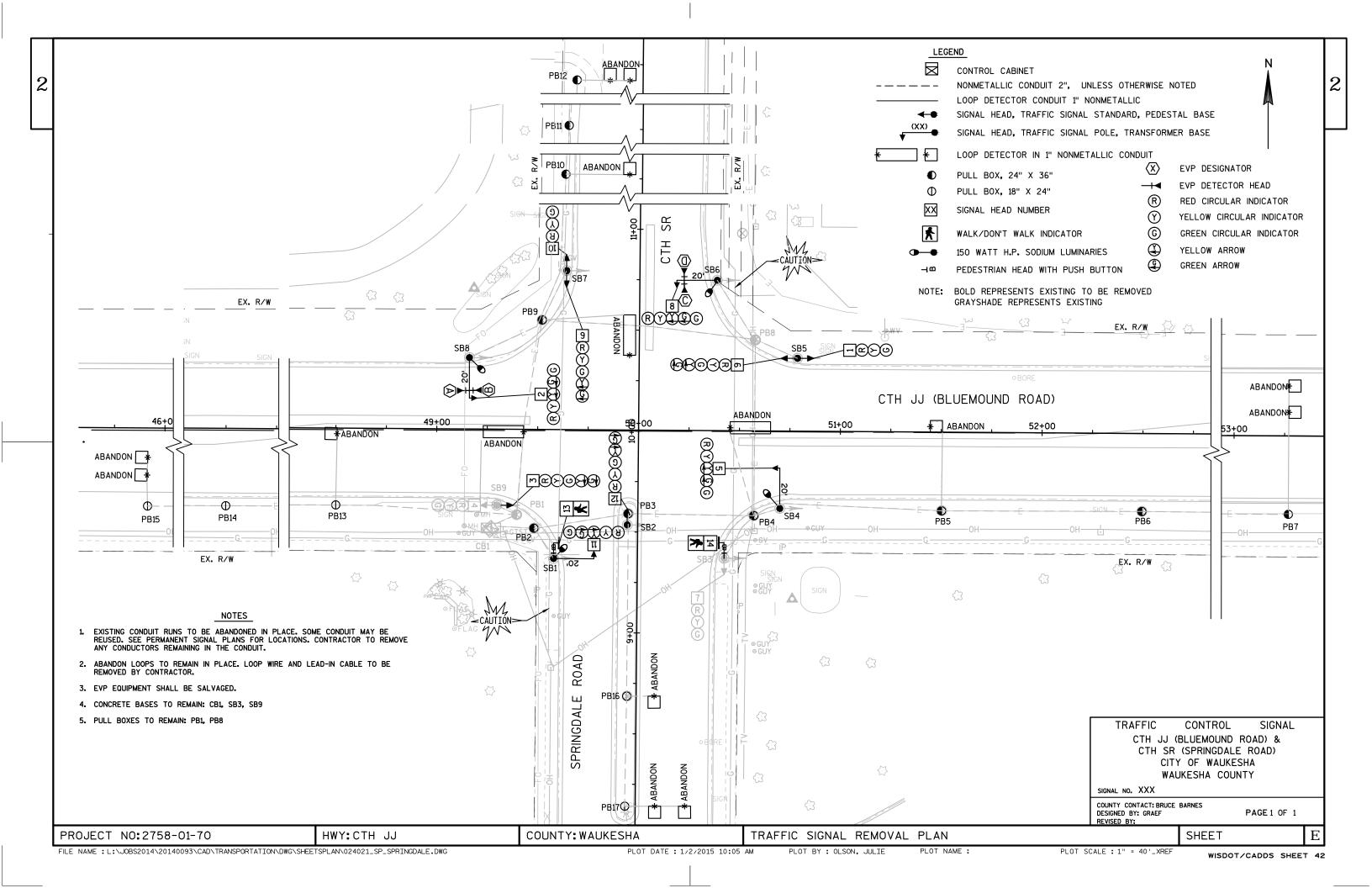
PROJECT NO:2758-01-70

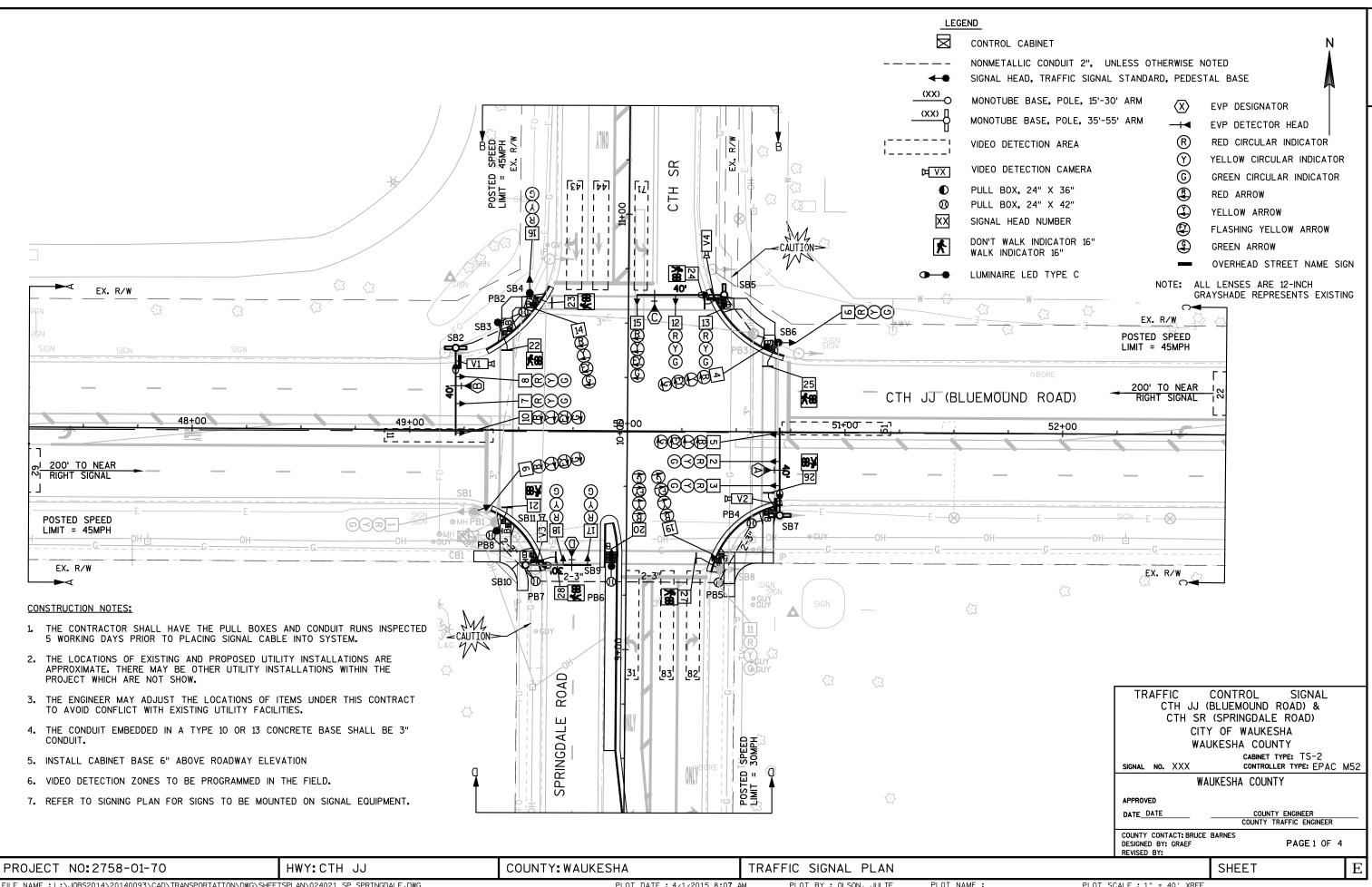
HWY: CTH JJ

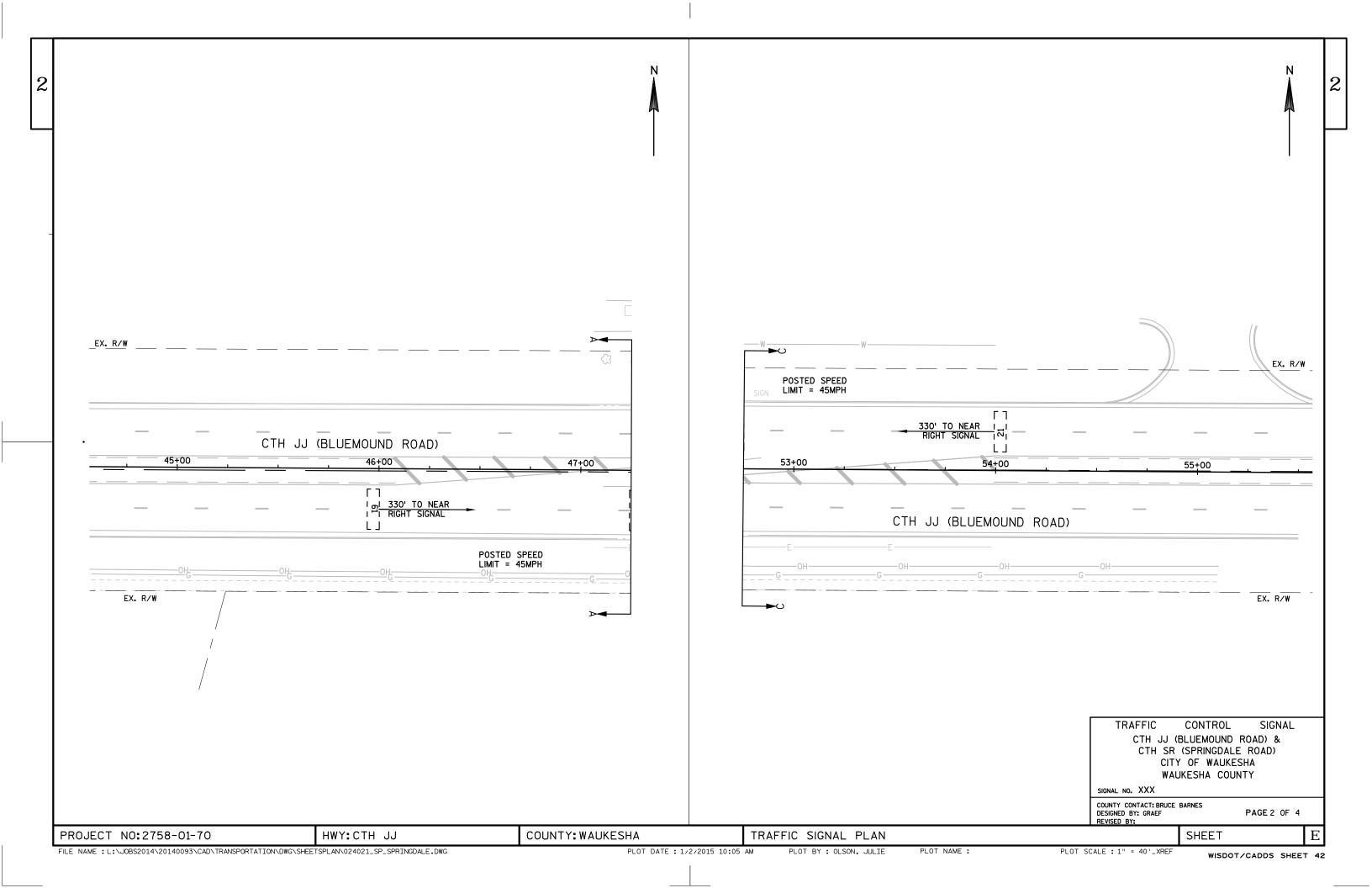
COUNTY: WAUKESHA

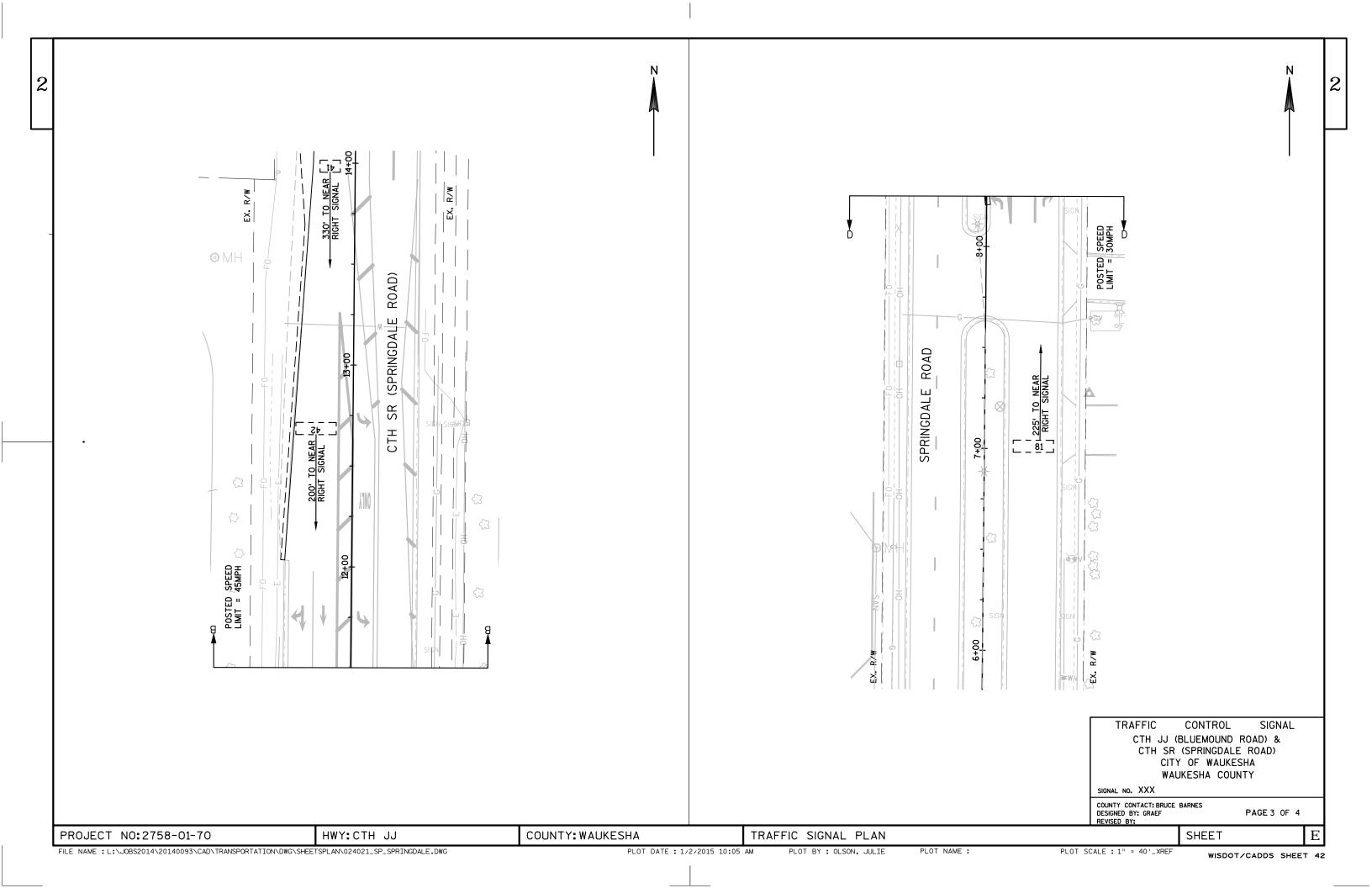
TEMPORARY SEQUENCE OF OPERATIONS

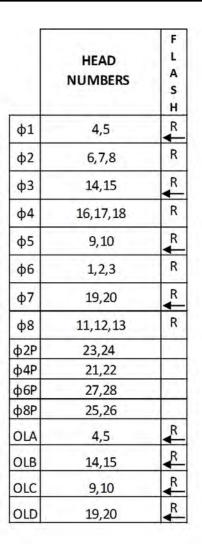
PLOT NAME :

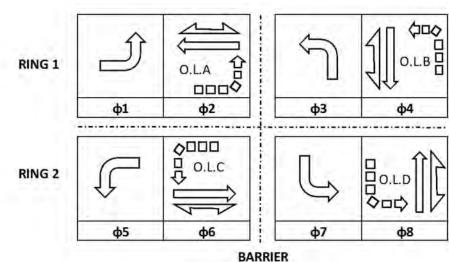












CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY	PHASE RECALL	PHASE ACTIVE
1		6		Х
2	X	6	MIN.	Х
3		8		X
4		8		Х
5		2		Х
6	X	2	MIN.	X
7		4		Х
8		4		X

TYPE OF INTERCONNECT\COMMUNICATION NONE CLOSED LOOP TWISTED PAIR FIBER OPTIC* FIBER OPTIC (ETHERNET) RADIO

NONE	X
ТВС	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM NO: SS-	

TYPE OF LIGHTIN	IG
BY OTHER AGENCY	
IN TRAFFIC CABINET	Х
IN SEPARATE DOT LIGHTING CA	ABINET

TYPE OF LIGHTIN	G
BY OTHER AGENCY	
IN TRAFFIC CABINET	Х
IN SEPARATE DOT LIGHTING CA	BINET

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

QUEUE DETECTION

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMRGENCY VEHICLE PREEMPTOR	Α	В	С	D
MOVEMENT	***			
PHASE	6+1	2+5	8+3	4+7

AFTER PREEMPTION SEQUENCE 6+1 OR 2+5, CONTROLLER SHALL RETURN TO PHASES 2+6

AFTER PREEMPTION SEQUENCE 8+3 or 4+7, CONTROLLER SHALL RETURN TO PHASES 4+8

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETCTOR*(S)	11	22	41	43	51	62	81	83
ASSIGNED PHASE	1	2	4	4	5	6	8	8
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH	2	10.0			6		14	
EXTEND		Х	Х		X	Х	Х	
DELAY		7 -	J 1	X	X			
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETCTOR*(S)	21	31	42	44	61	71	82	
ASSIGNED PHASE	2	3	4	4	6	7	8	
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH		4				8		
and a second second	X	X	X		X	X		
EXTEND								

HWY: CTH JJ

DETECTOR INPUT	29	31	25	27	21	23	17	19
PLAN LOOP DETCTOR*(
ASSIGNED PHASE	14511	ven	VEU	MEN	1.0001	MEN	14511	
OPERATION MODE SWITCH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
EXTEND	-							
DELAY								
DETECTOR INPUT	30	32	26	28	22	24	18	20
PLAN LOOP DETCTOR*(: ASSIGNED PHASE								
and the second second second second	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
OPERATION MODE	VLII							
OPERATION MODE SWITCH	VLII							
	VLII							

CONTROL TRAFFIC SIGNAL CTH JJ (BLUEMOUND ROAD) & CTH SR (SPRINGDALE ROAD) CITY OF WAUKESHA WAUKESHA COUNTY SIGNAL NO. XXX CONTROLLER TYPE: EPAC PAGE 4 OF 4 DATE: 10/14

SHEET

PROJECT NO: 2758-01-70

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS

PLOT BY : OLSON, JULIE

PLOT SCALE : #######

2

PROJECT ID: 2758-01-70 SIGNAL WIRE BLK-BLACK RED-RED GRN-GREEN
INTERSECTION: CTH JJ (BLUEMOUND RD) & CTH SR (SPRINGDALE RD) COLOR CODING WHT-WHITE BLU-BLUE ORG-ORANGE

	100000000000000000000000000000000000000					SIGNAL IN	NDICATION W	RE COLOR				
СВ1 ТО	AWG14 # OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<red></red>	<yellow></yellow>	<green></green>	FLASHING <yellow></yellow>	D/WALK	WALK	PED BUTTO
SB1	12											
301		1	RED ORG GRN	ODG CDN	PED ORG GPN	DED OPG GPN	PED OPG CPN					
		9	ILLD	Ond	Citiv	RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB2	12					112722	0	,				
552		7	RED	ORG	GRN					1		
		8	RED	ORG	GRN							
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB3	7								-			
		22			7.		1			BLK	BLU	
. 73		В										WHT/B
SB4	12											
		14				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		16	RED	ORG	GRN							
		23								BLK	BLU	150 - 27
		В										WHT/B
SB5	12											
		12	RED	ORG	GRN)						
		13	RED	ORG	GRN		J 4					
		15				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		24								BLK	BLU	
		В										WHT/B
SB6	12					7 1 7 7 7 1						
		4				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		6	RED	ORG	GRN							
		25			7 - 1				111	BLK	BLU	
		В										WHT/B
SB7	12				7							
		2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		26								BLK	BLU	111117/0
		В					-					WHT/B
SB8	12		255	000	CON							
		11	RED	ORG	GRN	DED /DUE	ODC/DLK	CON /DIE	DI W/MATER			
		19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT	DIV	DILL	1
		27 B		-		-	-			BLK	BLU	WHT/B
SB9	12	В										WHI/B
צסכ	12	20				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		B B				KED/BLK	UNG/BLK	GRIV/BLK	DLK/WHI			WHT/B
SB10	12											WIII/B
3010	12	17	RED	ORG	GRN							
		18	RED	ORG	GRN							
		28	NED	UNG	GNIV					BLK	BLU	
		B								DEN	DEU	WHT/B
SB11	7	-				1						
2011		21			5					BLK	BLU	
		B		1						DEIN	DEU	WHT/BI

EQUIP	MENT
GROUNDING	CONDUCTOR
10 AWG	GRN XLP
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	CB1
SB11	CB1

DETE	DEO ECTION ABLE
FROM	TO
CB1	V1 (SB2)
CB1	V2 (SB7)
CB1	V3 (SB10)
CB1	V4 (SB5)

PULL BOX JUM 10 AWG	PER
FROM	TO
PB1	SB1
PB2	SB4
PB3	SB6
PB4	SB7
PB5	SB8
PB6	SB9
PB7	SB10
PB8	SB11

EME	RGENCY
VE	HICLE
PREE	MPTION
FROM	TO
CB1	HEAD A (SB7)
CB1	HEAD B (SB2)
CB1	HEAD C (SB5)
CB1	HEAD D (SB10

LIGH	TING
UF 10	AWG
W/ GR	OUND
FROM	TO
CB1	SB2
SB2	SB5
CB1	SB10
SB10	SB7

NOTES:

*USE WHITE CONDUCTOR IN THE SIGNAL CABLE 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 ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

*RECONNECT THE GROUNDING CONDUCTORS WHENEVER THE CIRCUIT HAS BEEN INTERRUPTED TO ENSURE THE GROUNDING CIRCUIT IS COMPLETE.

TRAFFIC CONTROL SIGNAL
CTH JJ (BLUEMOUND ROAD) &
CTH SR (SPRINGDALE ROAD)
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. XXX

COUNTY CONTACT: BRUCE BARNES DESIGNED BY: GRAEF REVISED BY:

PAGE 1 OF 1

PROJECT NO: 2758-01-70

HWY:CTH JJ

COUNTY: WAUKESHA

CABLE ROUTING

PLOT BY : OLSON, JULIE

TRAFFIC CONTROL DRUM

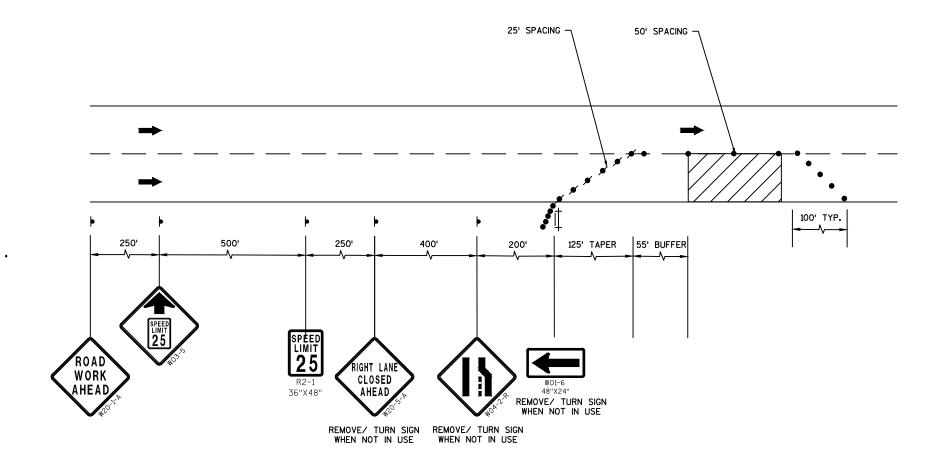
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

WORK AREA

DIRECTION OF TRAFFIC

SIGN OF PERMANENT SUPPORT

TYPE III BARRICADE WTH ATTACHED SIGN



GENERAL NOTES:

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

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

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

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

ANY SIGN TEMPORARY OF EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS DIRECTED BY THE ENGINEER.

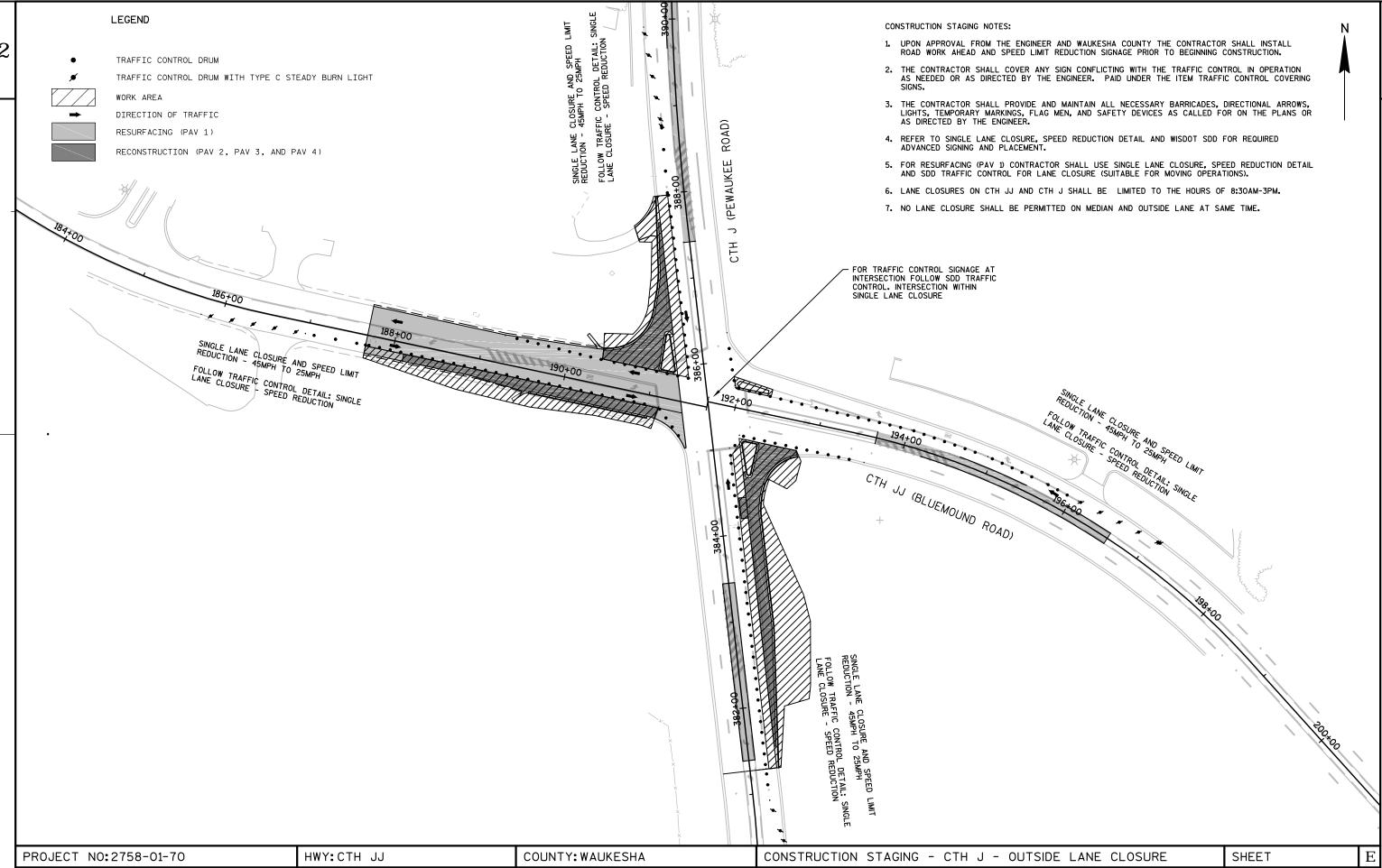
CONSIDER GEOMETRICS WHEN LOCATING THE ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

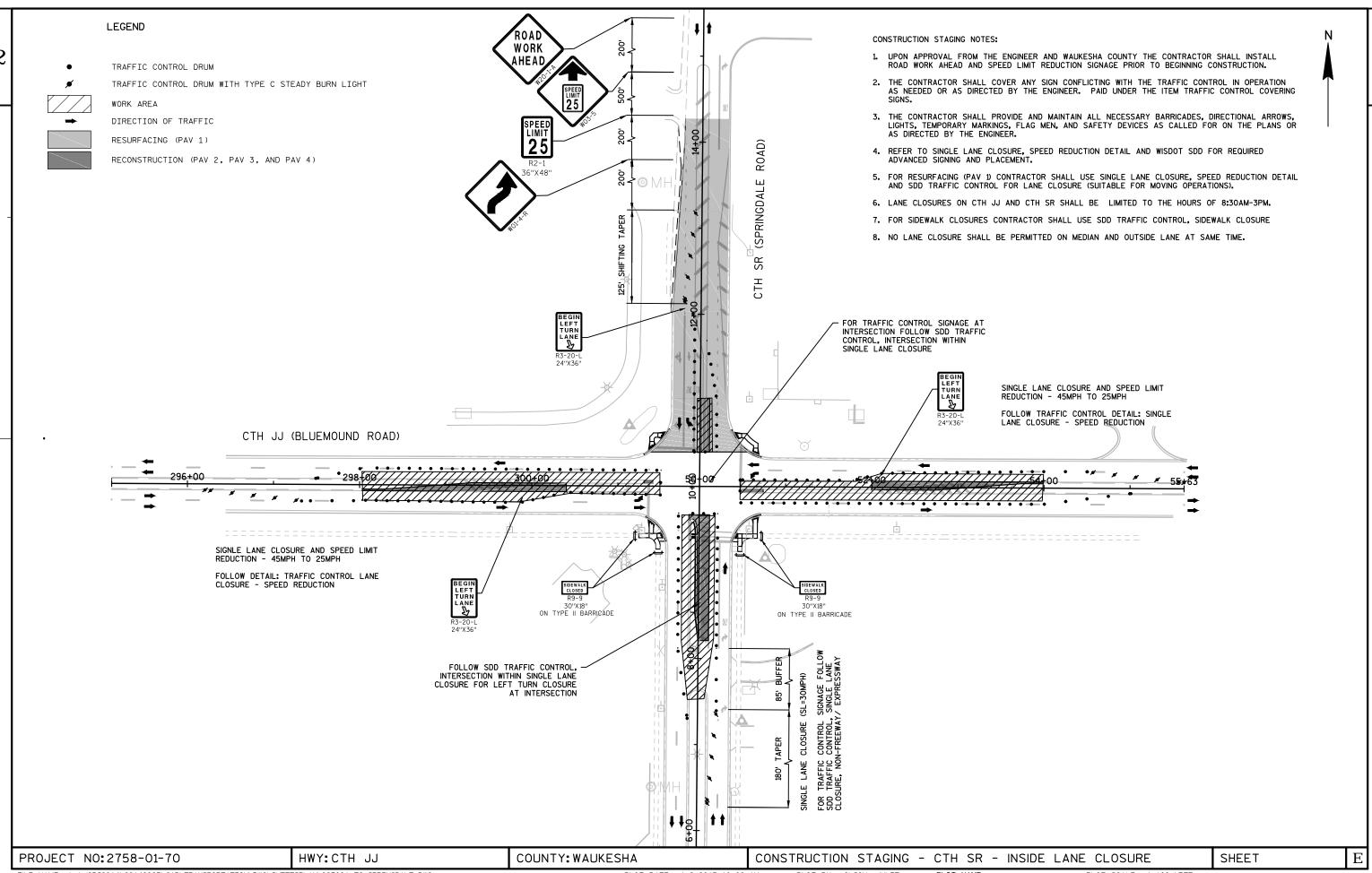
PLACE THE ARROW BOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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 COMPLEATION OF THE OPERATIONS OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WOKRING DAY.

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







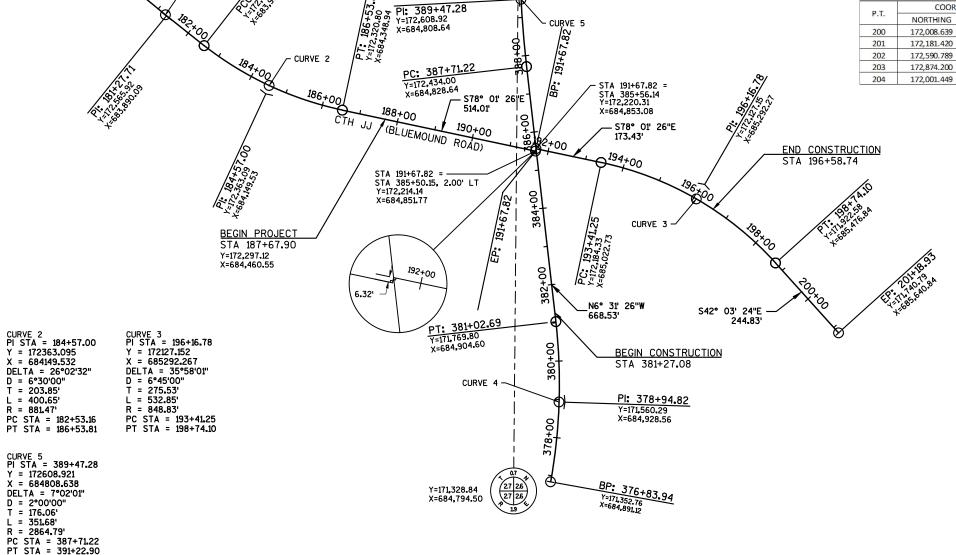


BENCHMARKS

BM#	STATION	OFFSET	DESCRIPTION	ELEVATION
3	384+54.93	89' RT	BM-3 CHISELED SQUARE AT THE EASTERLY CORNER OF THE CONCRETE BASE OF A SIGNAL SWITCH UNIT AT THE SOUTHEAST CORNER OF CTH J & CTH JJ.	901.97
4	387+10.57	115' LT	BM-4 NORTHERN FLANGE BOLT OF YELLOW FIRE HYDRANT (WESTERLY FIRE HYDRANT) AT THE NORTHWEST CORNER OF CTH J & CTH J J.	905.55

HORIZONTAL CONTROL POINTS

P.T.	COORDI	NATES	TYPE	STATION	OFFSET
P.1.	NORTHING	EASTING	TIPE	STATION	OFFSET
200	172,008.639	684,977.659	CP REBAR WITH YELLOW GRAEF CAP	383+31.68	99.72' RT
201	172,181.420	684,337.872	CP MAG NAIL	186+71.91	138.62' RT
202	172,590.789	684,773.023	CP REBAR WITH YELLOW GRAEF CAP	389+31.05	41.97' LT
203	172,874.200	684,765.790	CP REBAR WITH YELLOW GRAEF CAP	392+11.72	45.21' LT
204	172,001.449	685,462.048	CP REBAR WITH YELLOW GRAEF CAP	198+08.97	44.48' LT



(PEWAUKEE

 \neg

END CONSTRUCTION STA 391+37.53

2.75'--

Y=173,012.07

X=684,812.23

PT: 391+22.90 Y=172,784.97 X=684,810.20

- CURVE 1

NO° 30' 35"E 227.10'

PROJECT NO: 2758-01-70

PC STA = 376+83.94 PT STA = 381+02.69

CURVE 1 PI STA = 181+27.71

Y = 172565.923 X = 683890.094 DELTA = 1°53'00"

PC STA = 180+02.25 PT STA = 182+53.16

PI STA = 378+94.82 Y = 171560.287X = 684928.558 DELTA = 16°45'00"

 $D = 0^{\circ}45'02''$

T = 125.47'

L = 250.91' R = 7633.85'

D = 4°00'00" T = 210.88' L = 418.75' R = 1432.39'

CURVE 4

HWY: CTH JJ

COUNTY: WAUKESHA

ALIGNMENT PLAN - CTH JJ & CTH J INTERSECTION

PLOT NAME :

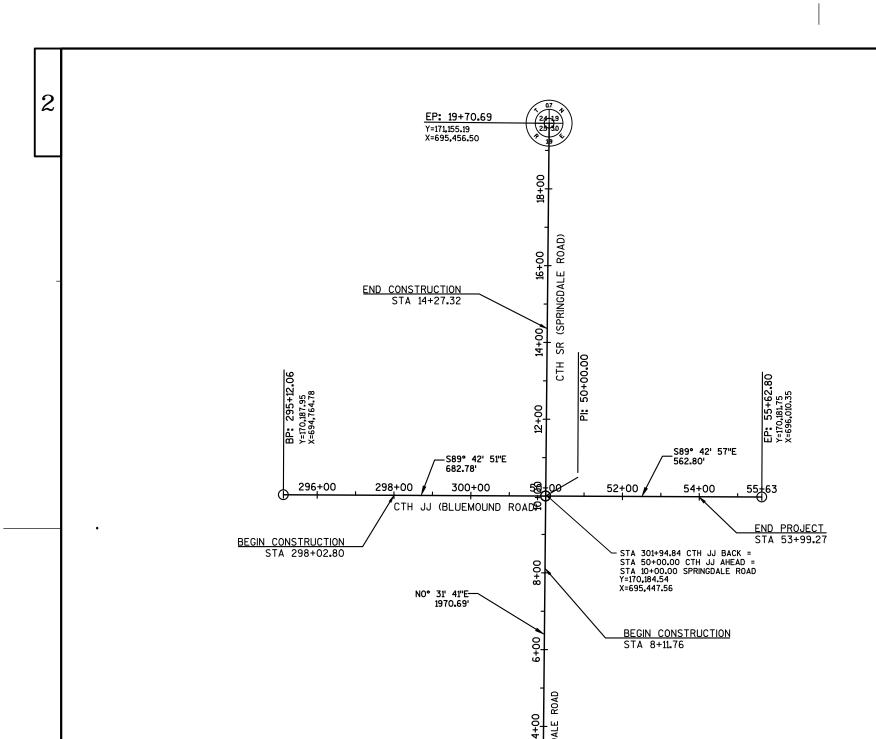
SHEET

D = 6°30'00"

T = 203.85' L = 400.65'

R = 881.47'

L = 351.68'



BP: 0+00.00 Y=169,184.58 X=695,438.34

HWY: CTH JJ

Y=168,516.61 X=695,432.18

COUNTY: WAUKESHA



BENCHMARKS

BM#	STATION	OFFSET	DESCRIPTION	ELEVATION
1	6+45.60	44' RT	BM-1 NW TOP FLANGE BOLT (NEXT TO "O" OF OPEN) 150' +/- SOUTH OF CTH JJ ON THE EAST SIDE OF SPRINGDALE ROAD	904.26
2	10+75.03	38' RT	BM-2 SE CORNER OF METAL BASE OF A TRAFFIC/STREET LIGHT POLE AT THE NORTHEAST CORNER OF CTH JJ & CTH SR.	923.04

HORIZONTAL CONTROL POINTS

P.T.	COORDI	NATES	TYPE	STATION	OFFSET
P. I.	NORTHING	EASTING	TTPE	STATION	UFFSET
100	169,672.478	695,497.038	CP REBAR WITH YELLOW GRAEF CAP	4+12.45	2.45' LT
101	170,255.386	695,366.047	CP REBAR WITH YELLOW CAP	10+70.12	82.12' LT
102	169,911.760	695,496.728	CP REBAR WITH YELLOW GRAEF CAP	7+27.69	51.68' RT
103	170,101.362	695,523.652	CP REBAR WITH YELLOW GRAEF CAP	9+17.52	76.87' RT

PLOT DATE: 1/2/2015 10:06 AM PLOT NAME :

ALIGNMENT PLAN - CTH JJ & CTH SR INTERSECTION

E

SHEET

PROJECT NO:2758-01-70

DATE 09	APR15	E S	TIMATE	OF QUAN		
LI NE NUMBER	ITEM	ITEM DESCRIPTION	UNI T	TOTAL	2758-01-70 QUANTI TY	
0010	204. 0100	Removing Pavement	SY	441. 000	441. 000	
0020	204. 0120	Removing Asphaltic Surface Milling	SY	5, 941. 000	5, 941. 000	
0030	204. 0150	Removing Curb & Gutter	LF	1, 099. 000	1, 099. 000	
0040	204. 0155	Removing Concrete Sidewalk	SY	202.000	202.000	
0050	204. 0195	Removing Concrete Bases	EACH	11. 000	11. 000	
0060	204. 0220	Removing Inlets	EACH	1. 000	1.000	
0070	204. 0245	Removing Storm Sewer (size) 01. 12-Inch	LF	21. 000	21. 000	
0800	205. 0100	Excavation Common	CY	1, 991. 000	1, 991. 000	
0090	205. 0501. S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	10. 000	10. 000	
0100	213. 0100	Finishing Roadway (project) 01. Project ID 2758-01-70	EACH	1. 000	1. 000	
0110	305. 0110	Base Aggregate Dense 3/4-Inch	TON	24. 000	24. 000	
0120	305. 0120	Base Aggregate Dense 1 1/4-Inch	TON	1, 976. 000	1, 976. 000	
0130	310. 0110	Base Aggregate Open Graded	TON	524. 000	524. 000	
0140	455. 0120	Asphaltic Material PG64-28	TON	74. 000	74. 000	
0150	455. 0605	Tack Coat	GAL	431. 000	431. 000	
0160	460. 1103	HMA Pavement Type E-3	TON	1, 226. 000	1, 226. 000	
0170	460. 2000	Incentive Density HMA Pavement	DOL	790.000	790.000	
0180	465. 0120	Asphaltic Surface Driveways and Field Entrances	TON	13. 000	13. 000	
0190	465. 0315	Asphaltic Flumes	SY	17. 000	17. 000	
0200	601. 0411	Concrete Curb & Gutter 30-Inch Type D	LF	1, 336. 000	1, 336. 000	
0210	602. 0410	Concrete Sidewalk 5-Inch	SF	2, 468. 000	2, 468. 000	
0220	602. 0515	Curb Ramp Detectable Warning Field	SF	80. 000	80. 000	
		Natural Patina				
0230	608. 0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	26. 000	26. 000	
0240	611. 0530	Manhole Covers Type J	EACH	1. 000	1. 000	
0250	611. 0660	Inlet Covers Type WM	EACH	1. 000	1. 000	
0260	611. 2004	Manholes 4-FT Diameter	EACH	1. 000	1. 000	
0270	611. 3225	Inlets 2x2.5-FT	EACH	1. 000	1. 000	
0280	612. 0106	Pi pe Underdrai n 6-1 nch	LF	848. 000	848. 000	
0290	619. 1000	Mobilization	EACH	1. 000	1. 000	
0300	620. 0300	Concrete Median Sloped Nose	SF	121. 000	121. 000	
0310	624. 0100	Water	MGAL	24. 000	24. 000	
0320	625. 0100	Topsoi I	SY	500.000	500.000	
0330	625. 0500	Sal vaged Topsoi I	SY	1, 761. 000	1, 761. 000	
0340	628. 1104	Erosi on Bal es	EACH	10.000	10.000	
0350	628. 1905	Mobilizations Erosion Control	EACH	3. 000	3. 000	
0360	628. 1910	Mobilizations Emergency Erosion Control	EACH	2. 000	2.000	
0370	628. 2004	Erosion Mat Class Type B	SY	1, 004. 000	1, 004. 000	
0380	628. 2006	Erosion Mat Urban Class I Type A	SY	1, 807. 000	1, 807. 000	
0390	628. 7005	Inlet Protection Type A	EACH	6. 000	6. 000	
0400	628. 7015	Inlet Protection Type C	EACH	25. 000	25. 000	
0410	628. 7504	Temporary Ditch Checks	LF	60.000	60.000	
0420	628. 7555	Cul vert Pipe Checks	EACH	10.000	10. 000	
0430	628. 7560	Tracking Pads	EACH	2.000	2. 000	
0440	628. 7570	Rock Bags	EACH	10.000	10.000	
0450	629. 0210	Fertilizer Type B	CWT	1. 700	1. 700	
0460	630. 0140	Seeding Mixture No. 40	LB	51. 000	51. 000	
0470	630. 0200	Seeding Temporary	LB	76. 000	76. 000	
0480	631. 1100	Sod Erosi on Control	SY	54.000	54. 000	
0490	634. 0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	8. 000	8.000	
0500	634. 0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	17. 000	17. 000	

DATE 09 LINE	APR15	EST	IMAT	E OF QUAN	T I T I E S 2758-01-70	
NUMBER	ITEM	ITEM DESCRIPTION	UNI T	TOTAL	QUANTITY	
0510	634. 0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	7. 000	7. 000	
0520	637. 2210	Signs Type II Reflective H	SF	622. 800	622. 800	
0530 0540	637. 2215 638. 2102	Signs Type II Reflective H Folding Moving Signs Type II	SF EACH	67. 100 8. 000	67. 100 8. 000	
0550	638. 2602	Removing Signs Type II	EACH	65. 000	65. 000	
						
0560 0570	638. 3000 638. 4000	Removing Small Sign Supports Moving Small Sign Supports	EACH EACH	23. 000 5. 000	23. 000 5. 000	
0580	642. 5001	Field Office Type B	EACH	1. 000	1. 000	
0590	643.0200	Traffic Control Surveillance and	DAY	53.000	53.000	
		Maintenance (project) 01. Project ID				
0600	643. 0300	2758-01-70 Traffic Control Drums	DAY	10, 176. 000	10, 176. 000	
				·	·	
0610	643. 0410	Traffic Control Barricades Type II	DAY	212.000	212.000	
0620 0630	643. 0420 643. 0705	Traffic Control Barricades Type III Traffic Control Warning Lights Type A	DAY DAY	1, 272. 000 2, 544. 000	1, 272. 000 2, 544. 000	
0640	643. 0715	Traffic Control Warning Lights Type C	DAY	2, 120. 000	2, 120. 000	
0650	643. 0900	Traffic Control Signs	DAY	3, 392. 000	3, 392. 000	
0660	643. 0920	Traffic Control Covering Signs Type II	EACH	8. 000	8. 000	
0670	645. 0111	Geotextile Fabric Type DF Schedule A	SY	589. 000	589. 000	
0680	646. 0106	Pavement Marking Epoxy 4-Inch	LF	4, 687. 000	4, 687. 000	
0690	646. 0109	Pavement Marking Preformed Plastic 4-Inch	LF	801. 000	801. 000	
0700	646. 0126	Pavement Marking Epoxy 8-Inch	LF	2, 776. 000	2, 776. 000	
0710	646. 0128	Pavement Marking Preformed	LF	612. 000	612. 000	
		Thermoplastic 8-Inch				
0720	646.0600	Removing Pavement Markings	LF	500.000	500.000	
0730 0740	647. 0156 647. 0166	Pavement Marking Arrows Epoxy Type 1 Pavement Marking Arrows Epoxy Type 2	EACH EACH	1. 000 23. 000	1. 000 23. 000	
0750	647. 0168	Pavement Marking Arrows Preformed	EACH	5. 000	5. 000	
		Thermoplastic Type 2				
0760	647. 0176	Pavement Marking Arrows Epoxy Type 3	EACH	1. 000	1. 000	
0770	647. 0356	Pavement Marking Words Epoxy	EACH	7. 000	7. 000	
0780	647. 0358	Pavement Marking Words Preformed	EACH	4. 000	4. 000	
0790	647. 0566	Thermoplastic Pavement Marking Stop Line Epoxy 18-Inch	LF	156. 000	156. 000	
0800	647. 0568	Pavement Marking Stop Line Preformed	LF	67. 000	67. 000	
		Thermoplastic 18-Inch				
0810	647. 0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	554. 000	554.000	
0820	647. 0728	Pavement Marking Diagonal Preformed	LF	115. 000	115. 000	
		Thermoplastic 12-Inch				
0830	647. 0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	580.000	580.000	
0840 0850	647. 0955 647. 0965	Removing Pavement Markings Arrows Removing Pavement Markings Words	EACH EACH	6. 000 1. 000	6. 000 1. 000	
0860	652. 0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	324. 000	324. 000	
0870	652. 0235	Conduit Rigid Nonmetallic Schedule 40	LF	874. 000	874.000	
0000		3-Inch		1 050 000	1 050 000	
0880 0890	652. 0615 653. 0135	Conduit Special 3-Inch Pull Boxes Steel 24x36-Inch	LF EACH	1, 052. 000 2. 000	1, 052. 000 2. 000	
0900	653. 0135	Pull Boxes Steel 24x42-Inch	EACH	16. 000	16. 000	
0910 0920	653. 0905 654. 0101	Removing Pull Boxes Concrete Bases Type 1	EACH EACH	29. 000 4. 000	29. 000 4. 000	
0920	654. 0101	Concrete Bases Type 2	EACH	2. 000	2. 000	
0940	654. 0110	Concrete Bases Type 10	EACH	2. 000	2. 000	
0950	654. 0113	Concrete Bases Type 13	EACH	6. 000	6. 000	

DATE 09 LINE	APR15	EST	I M A T	E OF QUAN	T I T I E S 2758-01-70
NUMBER	ITEM	ITEM DESCRIPTION	UNI T	TOTAL	QUANTI TY
0960	654. 0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1. 000	1. 000
0970	655. 0230	Cable Traffic Signal 5-14 AWG	LF	1, 193. 000	1, 193. 000
0980 0990	655. 0240 655. 0260	Cable Traffic Signal 7-14 AWG Cable Traffic Signal 12-14 AWG	LF LF	437. 000 3, 080. 000	437. 000 3, 080. 000
1000	655. 0280	Cable Traffic Signal 19-14 AWG	LF	450. 000	450. 000
1010	655. 0315	Cable Type UF 2-10 AWG	LF	1, 555. 000	1, 555. 000
1020 1030	655. 0515 655. 0610	Electrical Wire Traffic Signals 10 AWG Electrical Wire Lighting 12 AWG	LF LF	2, 662. 000 966. 000	2, 662. 000 966. 000
1040	655. 0700	Loop Detector Lead In Cable	LF	1, 630. 000	1, 630. 000
1050	655. 0800	Loop Detector Wire	LF	885. 000	885. 000
1060	656. 0200	Electrical Service Meter Breaker Pedestal (location) 01. CTH JJ and CTH J	LS	1. 000	1. 000
1070	657. 0100	Pedestal Bases	EACH	4.000	4. 000
1080	657. 0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	4. 000	4. 000
1090	657. 0305	Pol es Type 2	EACH	1.000	1.000
1100	657. 0315	Pol es Type 4	EACH	3. 000	3. 000
1110	657. 0410	Traffic Signal Standards Aluminum 9-FT	EACH	2.000	2.000
1120 1130	657. 0425 657. 0609	Traffic Signal Standards Aluminum 15-FT Luminaire Arms Single Member 4-Inch	EACH EACH	2. 000 3. 000	2. 000 3. 000
		Clamp 6-FT			
1140 1150	658. 0110 658. 0115	Traffic Signal Face 3-12 Inch Vertical Traffic Signal Face 4-12 Inch Vertical	EACH EACH	26. 000 12. 000	26. 000 12. 000
1160 1170	658. 0215 658. 0220	Backplates Signal Face 3 Section 12-Inch Backplates Signal Face 4 Section 12-Inch	EACH EACH	26. 000 12. 000	26. 000 12. 000
1170	658. 0416	Pedestrian Signal Face 16-Inch	EACH	8. 000	8. 000
1190	658. 0500	Pedestrian Push Buttons	EACH	9.000	9. 000
1200	658. 0600	Led Modules 12-Inch Red Ball	EACH	22. 000	22. 000
1210	658. 0605	Led Modules 12-Inch Yellow Ball	EACH	22. 000	22. 000
1220 1230	658. 0610 658. 0615	Led Modules 12-Inch Green Ball Led Modules 12-Inch Red Arrow	EACH EACH	22. 000 16. 000	22. 000 16. 000
1230	658. 0620	Led Modules 12-Inch Yellow Arrow	EACH	28. 000	28. 000
1250	658. 0625	Led Modules 12-Inch Green Arrow	EACH	16. 000	16. 000
1260	658. 0635	Led Modules Pedestrian Countdown Timer	EACH	8. 000	8. 000
1270	658. 5069	16-Inch Signal Mounting Hardware (location) 01.	LS	1. 000	1. 000
1280	658. 5069	CTH JJ and CTH J Signal Mounting Hardware (location) 02.	LS	1. 000	1. 000
1290	659. 1120	CTH JJ and CTH SR Luminaires Utility LED B	EACH	4. 000	4. 000
1300	659. 1125	Luminaires Utility LED C	EACH	4. 000	4. 000
1310	661. 0200	Temporary Traffic Signals for	LS	1. 000	1. 000
		Intersections (location) 01. CTH JJ and CTH J			
1320	661. 0200	Temporary Traffic Signals for	LS	1. 000	1. 000
		Intersections (location) 02. CTH JJ and CTH SR			
1330	690. 0150	Sawing Asphalt	LF	1, 998. 000	1, 998. 000
1340 1350	690. 0250 ASP. 1T0A	Sawing Concrete On-the-Job Training Apprentice at \$5.	LF HRS	276. 000 400. 000	276. 000 400. 000
		00/HR		.55. 555	.55. 555
1360	ASP. 1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	400.000	400.000
1370	SPV. 0060	Special 01. Monotube Poles Type 10	EACH	2. 000	2.000
1380	SPV. 0060	Special 02. Monotube Poles Type 12	EACH	3. 000	3. 000
500	J. V. 0000	Special 02. monortube roles Type 12	LAUII	3.000	3.000

DATE O	9APR15	E S	TIMATE	E OF QUANT	T T I E S 2758-01-70
NUMBER	ITEM	ITEM DESCRIPTION	UNI T	TOTAL	QUANTI TY
1390	SPV. 0060	Special 03. Monotube Poles Type 13	EACH	3. 000	3. 000
1400	SPV. 0060	Special 04. Monotube Arms 30-Ft	EACH	2. 000	2. 000
1410	SPV. 0060	Special 05. Monotube Arms 40-Ft	EACH	5. 000	5. 000
1420	SPV. 0060	Special 06. Monotube Arms 45-Ft	EACH	1. 000	1.000
1430	SPV. 0060	Special 07. Luminaire Arms Steel 8-Ft	EACH	4.000	4.000
1440	SPV. 0060	Special 08. Clamp-on Luminaire Arms Steel 8-FT	EACH	1. 000	1. 000
1450	SPV. 0060	Special 09. Traffic Signal Controller and Cabinet (CTH JJ and CTH J)	EACH	1. 000	1. 000
1460	SPV. 0060	Special 10. Traffic Signal Controller and Modify Cabinet (CTH JJ and CTH SR)	EACH	1. 000	1. 000
1470	SPV. 0105	Special O1. Remove Traffic Signals (CTH JJ and CTH J)	LS	1. 000	1. 000
1480	SPV. 0105	Special O2. Remove Traffic Signals (CTH JJ and CTH SR)	LS	1. 000	1. 000
1490	SPV. 0105	Special O3. Vehicular Video Detection System (CTH JJ and CTH J)	LS	1. 000	1. 000
1500	SPV. 0105	Special 04. Vehicular Video Detection System (CTH JJ and CTH SR)	LS	1. 000	1. 000
1510	SPV. 0105	Special O5. Reinstall Emergency Vehicle Preemption System (CTH JJ and CTH J)	LS	1. 000	1. 000
1520	SPV. 0105	Special O6. Reinstall Emergency Vehicle Preemption System (CTH JJ and CTH SR)	LS	1. 000	1. 000
1530	SPV. 0105	Special 07. Construction Staking (Project ID 2758-01-70)	LS	1. 000	1. 000
1540	SPV. 0120	Special 01. Water For Seeded Areas	MGAL	62. 000	62. 000

				EXCAVATION, HA	AULING, AND DISPOSAL OF PETRO	
	REMOVING PAVEMENT			CATEGORY	STREET	205.0501.S TON
		204.0100	REMOVING CONCRETE SIDEWALK	0010	CTH J	10
CATEGORY 0010	STREET CTH JJ & CTH J	SY	204.0155		PROJECT TOTAL	10
	CTH JJ & CTH SR	441	CATEGORY STREET SY 0010 CTH JJ & CTH J 109			
	PROJECT TOTAL	441	CTH JJ & CTH SR 93			
			PROJECT TOTAL 202			
					BASE AGGREGATE DE	NSE 3/4 INCH
						305.0110
				CATEG		TON 16
				001	CTH JJ & CTH SR	8
					PROJECT TOTAL	L 24
	REMOVING ASPHALTIC SURFA	CE MILLING				
			REMOVING INLETS			
CATEGORY	STREET	204.0120 SY	204.0220 CATEGORY STREET STATION LOCATION EACH			
0010	CTH JJ & CTH J	3,395	0010 CTH JJ & CTH J 384+20 RT 1			
	CTH JJ & CTH SR	2,546 FOTAL 5,941	PROJECT TOTAL 1			
		5,541			BASE AGGREGATE DEN	CE 1 1/4 TNCH
					DASE AGGREGATE DEN	305.0120
				CATE	GORY STREET	TON
				00	O10 CTH JJ & CTH J CTH JJ & CTH SR	1,300 676
					PROJECT TO	
	REMOVING CURB & GUTTER		REMOVING STORM SEWER (12-INCH)			
CATEGORY	STREET	204.0150 LF	204.0245.01 Category street station location lf		BASE AGGREGATE (DEN CDADED
0010	CTH JJ & CTH J	733	0010 CTH JJ & CTH J 384+25 RT 21		BASE AGGREGATE (310.0110
	CTH JJ & CTH SR PROJECT TOTAL	366 L 1,099	PROJECT TOTAL 21	CAT	EGORY STREET	TON
	. ROOLOT TOTAL	,===		0	O1O CTH JJ & CTH J CTH JJ & CTH SR	408 116
					PROJECT TO	
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Division	From/To Station	Location	Common Excavation (1)	(item # 205.0100) EBS Excavation	Salvaged/ Unusable Pavement Material	Available Material (3)	Unexpanded Fill	Expanded Fill Factor 1.11	Mass Ordinate +/- (4)	Waste	Borrow (item #208.0100)	Comment:
CTH JJ (EB RIGHT TURN LANE)	188+13 to 191+13	Mainline	309	0	0	309	60	66	243	243	-	
CTH J (NB RIGHT TURN LANE) CTH J (NB RIGHT TURN LANE)	381+13 to 384+50 384+50 to 385+10	Mainline Mainline	700 149	0	0	700 149	0.4	0.5	700 149	700 149	-	
CTH J (SB RIGHT TURN LANE) CTH J (SB RIGHT TURN LANE)	385+90 to 386+50 386+50 to 387+31	Mainline Mainline	194 123	0	0	194 123	0	0	194 123	194 123	-	
CTH J (SB RIGHT TURN LANE)	387+31 to 387+98	Mainline	60	0	0	60	0	0	60	60	-	
CTH JJ (EB LEFT TURN LANE) CTH JJ (EB LEFT TURN LANE)	298+03 to 300+40 301+30 to 301+41	Mainline Mainline	106 1	0	0	106 1	0	0	106 1	106 1		
CTH JJ (WB LEFT TURN LANE) CTH JJ (WB LEFT TURN LANE)	50+50 to 50+74 52+00 to 53+99	Mainline Mainline	2 84	0	0	2 84	0	0	2 84	2 84	-	
CTH SR (NB LEFT TURN LANE)	8+11 to 9+67	Mainline	180	0	0	180	3	3	177	177	-	
CTH SR (SB LEFT TURN LANE)	10+40 to 11+02	Mainline	41	0	0	41	0	0	41	41	-	
CTH SR (INTERSECTION RADII)	9+27 to 10+66	Curb/Sidewalk	42	0	0	42	0	0	42	42	-	
CATEGORY 0010 SUBTOTAL			Total Common Exc	0 1991	0	1991	63	70	1921	1921	0	

¹⁾ Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

ASPHALTIC PAVEMENT

		455.0120	460.1103	455.0605
		ASPHALTIC	HMA	TACK COAT
		MATERIAL	PAVEMENT	
		PG64-28	TYPE E-3	
CATEGORY	STREET	TON	TON	GAL
0010				
	CTH JJ & CTH J	45	744	254
	CTH JJ & CTH SR	29	482	177
	PROJECT TOTALS	74	1,226	431

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

					465.0120
CATEGORY	STREET	STATION	OFFSET	LOCATION	(TON)
0010	CTH J	387+58	59' LT	DRIVEWAY	13
PR	OJECT TOTALS				13

PROJECT NO:2758-01-70 COUNTY: WAUKESHA MISCELLANEOUS QUANTITIES SHEET Ε HWY: CTH JJ

²⁾ Salvaged/Unusable Pavement Material is included in Cut.

³⁾ Available Material = Cut - Salvaged/Unusuable Pavement Material

⁴⁾ The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

CATEGORY STREET 0010 CTH JJ CTH JJ PROJECT TOTAL	PHALTIC FLUMES 465.0 STATION LOCATION SY 189+59 27' RT 10 190+34 41' LT 7)	CATEGOR 0010	CTH JJ & CTH	60	URAL PATINA 2.0515 SF 0 80		CATEGORY 0010	CONCRETE MEDIA STREET CTH JJ & CTH J CTH JJ & CTH SR PROJECT T	620.0300 SF 98 23	=
CONCRETE CURB & G CATEGORY STREET O010 CTH JJ & CTH J CTH JJ & CTH SR PROJECT		CATEGORY 0010	STREET CTH JJ & CTH J CTH JJ & CTH SR PROJECT TOTAL	REINFORCED CONCRETE CLASS IV 12-INCH LF 26	611.0530	611.0660 611.: NLET COVERS MANH TYPE WM 4- EACH EA 1 1 1 1	OLE INLETS FT 2X2.5-FT CH EACH 1 -	-	CATEGORY 0010	STREET CTH JJ & CTH J CTH JJ & CTH SR PROJECT 1	624.01 MGAL 17.2 6.8
CATEGORY 0010 C	CONCRETE SIDEWALK 5-INCH 602.04 STREET SF TH JJ & CTH J 981 'H JJ & CTH SR 1,48		CATEGORY 0010	PIPE UNDERDRAII STREET CTH JJ & CTH J	N QUANTITIES 612.0106 PIPE UNDERDRAIN 6-INCH LF 848	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A SY 589	<u>CATEGO</u> 0010	CTH JJ	TOPSOIL QU/ REET & CTH J & CTH SR	625.0100 6 TOPSOIL 8	25.0500 ALVAGED TOPSOIL SY 1,362 399

REDICTION BALES SEC. 1104 STREET EACH SEC. 1104 SEC. 1	SEEDING TEMPORARY FE	629.0210 FERTILIZE TYPE B CWT 1.1 0.3 0.3	WATE LIZER SEE E B AR IT M 1 3
OO10	46 15 15	1.1 0.3 0.3	1 3 3
PROJECT TOTALS 10 CTH JJ CTH SR	15 15	0.3 0.3	3
EROSION CONTROL MOBILIZATIONS 28. 1905 028. 1905 028. 1905 038. 1905 038. 1905 038. 1905 040. 1001	15	0.3	3
EROSION CONTROL MOBILIZATIONS Call	76	1.7	7
CATEGORY LOCATION EACH EACH			
	631.1100 SOD EROSION CONTROL SY J 29 SR 25	ON	

REMOVING SIGNS TYPE II

						REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
CATEGORY	REMOVAL NO.	LOCATION	MESSAGE	STATION	OFFSET	EACH	EACH	REMARKS
0010	100	CTH JJ	SIGNAL AHEAD	185+53	25' RT	1		POST TO REMAIN
	101	CTH JJ	CTH JJ	188+27	38' LT	. 1		POST TO REMAIN
	102	CTH JJ	JCT, CTH J	188+35	25' RT	1		POST TO REMAIN
	110	CTH JJ	TWLTL	189+13	37' LT	1	1	
	111	CTH JJ	SL = 45	190+26	44' LT	1	1	
	112	CTH JJ	YIELD	190+83	60' LT	1	1	
	113	CTH JJ	CTH JJ, D ARROW	191+16	35' LT	2		
	114	CTH J	FOLDING SS	385+00	40' LT	1		
	115	CTH JJ	CTH J, D ARROW	191+08	33' RT	2		
	116	CTH JJ	FOLDING SS	191+08	33' RT	1		
	117	CTH J	SL= 45	387+16	34 ' RT	1		POST TO REMAIN
	118	CTH JJ	YIELD	191+98	59 LT	1	1	
	119	CTH JJ	FOLDING SS	192+05	27' LT	1		
	120	CTH JJ	CTH J, D ARROW	198+05	27' LT	2		
	121	CTH J	FOLDING SS	384+94	39 ' RT	1		
	122	CTH J	YIELD	384+70	61' RT	1	1	
	123	CTH JJ	SL = 45	193+21	37' RT	1	1	
	124	CTH JJ	CTH JJ	193+76	37' RT	1	1	
	130	CTH JJ	TWLTL	194+64	35' RT	1	1	
	131	CTH JJ	RT LANE MUST TURN RT	194+04	36' LT	1		POST TO REMAIN
	132	CTH JJ	RT LANE MUST TURN RT	196+78	36 ' LT	1		POST TO REMAIN
	133	CTH JJ	SIGNAL AHEAD	197+83	35' LT	1		POST TO REMAIN
	134	CTH JJ	JCT, CTH J	199+49	50' LT	2	1	
	140	CTH J	JCT, CTH JJ	381+32	36' RT	2	1	
	141	CTH J	CTH J	383+14	38' LT	1	1	
	150	CTH J	CTH J	387+86	35' RT	1	1	
	151	CTH J	JCT, CTH JJ	389+09	37' LT	2	1	
	152	CTH J	END, TWLTL	391+37	33' RT	2	1	
	200	CTH JJ	JCT SR	296+66	37' RT	2	1	
	210	CTH JJ	SL = 45	300+17	41' LT	. 1	1	
	211	SPRINGDALE ROAD	FOLDING SS	10+81	36' LT	1		
	212	SPRINGDALE ROAD	END, CTH SR	10+81	36' LT	2		
	213	SPRINGDALE ROAD	CTH SR, LT ARROW	9+63	96' LT	2	1	
	214	CTH JJ	FOLDING SS	301+23	37' RT	1		
	215	SPRINGDALE ROAD	CTH JJ, D ARROW	9+38	42' LT	2		
	216	SPRINGDALE ROAD	FOLDING SS	9+52	5' LT	1		
	217	SPRINGDALE ROAD	KEEP RT	9+55	5' LT	1		
	218	SPRINGDALE ROAD	CTH JJ, D ARROW	10+73	38' RT	2		
	219	CTH JJ	FOLDING SS	50+80	36' LT	1		
	220	CTH JJ	CTH SR, RT ARROW	50+96	38' LT	2	1	
	221	SPRINGDALE ROAD	FOLDING SS	9+35	43 ' RT	1	-	
	222	CTH JJ	STREET NAME SIGNS	50+73	36' RT	2	1	
	223	CTH JJ	SL = 45	52+27	41' RT	1	1	
	230	CTH JJ	JCT SR	54+35	39' LT	1	1	
	240	SPRINGDALE ROAD	SIGNAL AHEAD	6+17	9' RT	1	•	POST TO REMAIN
	241	SPRINGDALE ROAD	SIGNAL AHEAD	6+17	45' RT	- 1		POST TO REMAIN
	242	SPRINGDALE ROAD	LT LANE MUST TURN LT	8+15	6' LT	1	1	FOOT TO REMAIN
	242	SPRINGDALE ROAD	RT LANE MUST TURN RT	8+18	45' RT	1		POST TO REMAIN
								FUSI IU KEMAIN
	250	SPRINGDALE ROAD	RT LANE MERGE	11+59	43' RT	1	1	DOOT TO DEPARE
	251	SPRINGDALE ROAD	CTH SR	12+71	42 ' RT	1		POST TO REMAIN
	252	SPRINGDALE ROAD	SIGNAL AHEAD	14+76	27' LT	1		POST TO REMAIN
							- 1.2	

FILE NAME : L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\030201_MQ.DWG LAYOUT NAME - 030201_MQ - 030205_MQ

HWY:CTH JJ

PROJECT NO:2758-01-70

PLOT DATE : 4/1/2015 8:07 AM

COUNTY: WAUKESHA

PLOT SCALE :

WISDOT/CADDS SHEET 42

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SHEET

MISCELLANEOUS QUANTITIES

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SIGN								634.0810 POSTS TUBULAR STEEL 2x2-INCH X 10-FT	634.0812 POSTS TUBULAR STEEL 2x2-INCH X 12-FT	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-FT	637.2210 SIGNS TYPE II REFLECTIVE H	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING	638.2102 MOVING SIGNS TYPE II	638.4000 MOVING SMALL SIGN SUPPORTS		ALL SIGNS CATEGORY 0010 UNLESS OTHERWISE NOTED
NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE		SIZE	EACH	EACH	EACH	SF	SF	EACH	EACH	REMARKS	
300	CTH JJ	158+53	25' RT	W3-3			X 36	-	-	-	9.0	-	-	•	EXISTING POST	
301	CTH JJ	187+69	39' LT	R3-9C		24	X 6	-	-	-	1.0	-	-	-	EXISTING POST	
302	CTH JJ	187+69	39' LT	R3-9B		24	X 36	-	=	-	6.0	-	-	-	EXISTING POST	
303	CTH JJ	188+32	26' RT	J1-1	JCT, CTH J	24	X 39	-	1	-	6.5	-	-	-		
304	CTH JJ	188+93	26' RT	9450W 11.70M	ALT IH 94	-	-			-		-	1	1		
310	CTH JJ	189+13	37' LT	M1-5A	CTH JJ	24	X 24	1	-	-	4.0	-	-	-		
311	CTH JJ	190+01	44' LT	R2 - 1	SPEED LIMIT 45	36	X 48	-	1	-	12.0	-	-	-		
312	CTH JJ	190+31	51' LT		ADOPT-A-HWY	-	-	-		-	-	-	1	2		
313	CTH J	386+42	81' LT	R1-2		48	X 24	-	1	-	7.0	-	-	•		
314	CTH J	387+05	51' LT		ANIMAL SHELTER	-	-	•	-	•		-	1	1		
315	CTH J	386+74	56' LT	J13-1	CTH JJ, DOUBLE ARROW	36	X 66	-	-	1	16.5	-	-	-		
316	CTH J	386+10	37' LT	R1-1F	44.00	36	X 36	-	-	-	-	7.5	-	-	MOUNT ON SB4	
317	CTH JJ	191+13	29' LT	M1-94S MOD.	PEWAUKEE RD	18	X 84	-	-	-	10.5	-	-	-	MOUNT ON SB4	
318	CTH JJ	191+13	10' LT	R10-50		30	X 36	-	-	-	7.5	-	-	-	MOUNT ON SB4	
319	CTH JJ	189+66	31' RT		HIST DOWNTOWN	•	-	-	-	-	-		1	1		
320	CTH JJ	189+66	31' RT		AIRPORT	-	-	-	-	-	-	-	1	-	SAME POST AS 319	
321	CTH JJ	189+66	31' RT		RT ARROW	-	-	-	-	•	-	-	1	-	SAME POST AS 319	
322	CTH JJ	190+76	31' RT	J11-1	CTH J, DOUBLE ARROW	24	X 48	-	1	•	8.0		-	-		
323	CTH JJ	191+08	33' RT	R1-1F	NAME AND ADDRESS OF THE PARTY O	36	X 36	-	-	-	-	7.5	-	-	MOUNT ON SB3	
325	CTH J	384+21	51' RT	J13-1	CTH JJ, DOUBLE ARROW	36	X 66	-	-	1	16.5	-	-	-		
326	CTH J	384+81	31' LT	M1-94S MOD.	BLUEMOUND RD	18	X 90	-	=	-	11.3	-	-	-	MOUNT ON SB2	
327	CTH J	386+32	31' RT	M1-94S MOD.	BLUEMOUND RD	18	X 90	-	-	-	11.3		-	•	MOUNT ON SB5	
328	CTH J	387+14	38' RT	R2 - 1	SPEED LIMIT 45	36	X 48	-	1	-	12.0		-	-		
329	CTH J	384+94	39' RT	R1-1F		36	X 36	-	-	-	-	7.5	-	-	MOUNT ON SB1	
330	CTH J	384+72	76' RT	R1-2		48	X 24	-	1	1-	7.0		-	-		
331	CTH JJ	192+05	27' LT	R1-1F		36	X 36	-	-	=	-	7.5	=	-	MOUNT ON SB7	
332	CTH JJ	192+07	57' LT	R1-2		48	X 24	-	1	-	7.0	-	-	-		
333	CTH JJ	192+69	61' LT	J13-1	CTH J, DOUBLE ARROW	36	X 66	-	-	1	16.5	-	-	-		
334	CTH JJ	192+80	39' RT	M1-94S MOD.	PEWAUKEE RD	18	X 84	-	-	-	10.5	-	-	-	MOUNT ON SB8	
335	CTH JJ	192+80	9' RT	R10-50		30	X 36	-	-		7.5	-	•	-	MOUNT ON SB8	
336	CTH JJ	193+21	37' RT	R2-1	SPEED LIMIT 45	36	X 48	-	1	-	12.0	-	-	•		
337	CTH JJ	193+76	37' RT	M1-5A	CTH JJ	36	X 36	1	-	-	9.0	-	-	-		
350	CTH JJ	194+78	36' LT	R3-7R		36	X 36	-	-	-	9.0	-	-	-	ON EXISTING POST	
351	CTH JJ	196+78	37' LT	R3-7R		36	X 36	-	-	-	9.0	-	-	-	ON EXISTING POST	
352	CTH JJ	197+07	35' RT	R3-9C		36	X 9	-	1	-	2.3	-	-	-	04HE BOOT 40 655	
353	CTH JJ	197+07	35' RT	R3-9B		36	X 48	•	-	-	12.0	-	-	-	SAME POST AS 352	
354	CTH JJ	197+83	35' LT	W3-3	107 0711 1	36	X 36	-	2	-	9.0	-	-	-	ON EXISTING POST	
355	CTH JJ	199+49	50' LT	J1-1	JCT, CTH J	36	X 57	-	1	-	14.3	-	-	-		
360	CTH J	381+32	35' RT	J1-1	JCT, CTH JJ	36	X 57	-	1	-	14.3	-	-	-		
361 370	CTH J	383+14	38' LT 35' RT	M1-5A	CTH J	36		1		-	9.0	-		-		
-		387+86		M1-5A	CTH J	36	X 36	1								
371	CTH J	389+09	37' LT	J1-1	JCT, CTH JJ		X 57	-	1	-	14.3	(-			_
					CTH JJ & CTH J SU	BIOT	AL	4	12	3	311				CONTINUE TO NEXT PAGE	

TYPE II SIGNS

PROJECT NO:2758-01-70 HWY:CTH JJ COUNTY:WAUKESHA MISCELLANEOUS QUANTITIES SHEET **E**

	ALL SIGNS CATEGORY 0010 UNLESS OTHERWISE NOTED	
ON SB3 ON SB4		
N SB11 SB11		
N SB10		
N SB9		
ON SB5 ON SB6		
SIGNAL SIGNAL		
ON SB8 ON SB7		

SIGN	LOGATTON	07477011	OFFSET	07011 0005	WEGGLOS			634.0810 POSTS TUBULAR STEEL 2x2-INCH X 10-FT	634.0812 POSTS TUBULAR STEEL 2x2-INCH X 12-FT	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-FT	637.2210 SIGNS TYPE II REFLECTIVE H	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING	638.2102 MOVING SIGNS TYPE II	638.4000 MOVING SMALL SIGN SUPPORTS	DEMONO	ALL SIGNS CATEGORY 0010 UNLESS OTHERWISE NOTED
NO.	LOCATION	STATION	UFFSEI	SIGN CODE	MESSAGE		SIZE	EACH	EACH	EACH	SF	SF	EACH	EACH	REMARKS	
400	CTH JJ	296+66	37' RT	J1-1	JCT, CTH SR	36	X 57		1		14.3	-	-	-		
410	CTH JJ	300+17	40' LT	R2-1	SPEED LIMIT 45	36	X 48	-	1	-	12.0	-	-	-		
411	CTH JJ	301+11	32' LT	M1-94S MOD.	SPRINGDALE DR	36	X 102	-	-	-	25.5		-	-	MOUNT ON SB2	
412	CTH JJ	301+12	2' LT	R10-50		30	X 36	-	-	-	7.5	TE.	Del	-	MOUNT ON SB2	
413	CTH JJ	301+37	50' LT	R10-3BL		9	X 12	-	-	-	N/A	-	-	-	INCIDENTAL TO PB ON SB3	
414	SPRINGDALE RD	10+61	46' LT	R10-3BR		9	X 12	-	-	-	N/A	-	-	-	INCIDENTAL TO PB ON SB4	
415	SPRINGDALE RD	10+66	46' LT	R1-1F		36	X 36	-	-	-	-	7.5	-	-	MOUNT ON SB4	
416	SPRINGDALE RD	10+85	47' LT	J13-1	CTH JJ, DOUBLE ARROW	36	X 66	=		1	16.5	E	=	=		
417	SPRINGDALE RD	10+85	41' LT	J1-1	END, CTH SR	36	X 57	-	1	-	14.3	-	-	-		
418	CTH JJ	301+00	36' RT	J13-1	CTH SR, LT ARROW	36	X 66	-	5	1	16.5		-	-		
419	CTH JJ	301+23	37' RT	R1 - 1F		36	X 36	-	-	-	-	7.5	-	-	MOUNT ON SB1	
420	CTH JJ	301+37	46' RT	R10-3BR		9	X 12	-	-	-	N/A	-	-	-	INCIDENTAL TO PB ON SB11	
421	SPRINGDALE RD	9+40	46' LT		NO TRUCKS			-	-	-	-		1		MOUNT ON POLE OF SB11	
422	SPRINGDALE RD	9+40	46' LT	240 022	OVER 3 TONS			-	-	-		-	1	-		
423	SPRINGDALE RD	9+40	46' LT	R10-3BR	DI UEMOUND DD	9	X 12	-	-	-	N/A	-	-	-	INCIDENTAL TO PB ON SB10	
424	SPRINGDALE RD	9+39	33' LT	M1-94S MOD.	BLUEMOUND RD	18	X 90	-	-	-	11.3	7 5	-	-	MOUNT ON SB10	
425	SPRINGDALE RD	9+36	7' LT	R1 - 1F		36	X 36	-	-	-		7.5	-	-	MOUNT ON SB9	
426	SPRINGDALE RD	9+40	7' LT	R10 - 3BD		9	X 12	-	-	-	N/A	•	-	-	INCIDENTAL TO PB ON SB9	
430	SPRINGDALE RD	10+63	8' RT 31' RT	R10-50	BLUE MOUND DD	30	X 36	-	-	-	7.5	-	-	-	MOUNT ON SB5	
431 432	SPRINGDALE RD SPRINGDALE RD	10+63 10+61	31 KI 44' RT	M1-94S MOD. R10-3BL	BLUEMOUND RD	18 9	X 90 X 12	-	-	-	11.3 N/A	-	-	-	MOUNT ON SB5 INCIDENTAL TO PB ON SB5	
432	CTH JJ	50+67	44 KI	R10-3BL		9	X 12	-	-	-	N/A	-	-	-	INCIDENTAL TO PB ON SB6	
434	CTH JJ	50+71	41' LT	R1-1F		36	X 36	-	-	-	N/A	7.5	-	-	MOUNT ON SB6	
435	CTH JJ	50+96	38' LT	J13-1	CTH SR, RT ARROW	36	X 66			1	16.5	7.3	-		MOUNT ON SEC	
436	SPRINGDALE RD	9+36	7' LT	R10-50	OTH SR, RI ARROW	30	X 36	-		-	7.5	-	-	_	MOUNT ON SB9 ABOVE SIGNAL	
437	SPRINGDALE RD	9+36	7' LT	R4-7		24	X 30	_	_	_	5.0	-	_	_	MOUNT ON SB9 BELOW SIGNAL	
438	SPRINGDALE RD	9+18	42' RT	J13-1	CTH JJ, DOUBLE ARROW	36	X 66	_		1	16.5	_	12	_	MOUNT ON OBS BEEST STANKE	
439	SPRINGDALE RD	9+35	43' RT	R1 - 1F	om so, booble minor	36	X 36	_	-	-	-	7.5	-	-	MOUNT ON SB8	
440	SPRINGDALE RD	9+40	43' RT	R10-3BR		9	X 12	-	-	-	N/A	-	-	-	INCIDENTAL TO PB ON SB8	
441	CTH JJ	50+68	39' RT	R10-3BL		9	X 12	-	_	-	N/A	-	-	-	INCIDENTAL TO PB ON SB7	
442	CTH JJ	50+69	24' RT	M1-94S MOD.	SPRINGDALE DR	36	X 102	-	=	=	25.5		-	-	MOUNT ON SB7	
443	CTH JJ	50+69	7' RT	R10-50		30	X 36	-	=	_	7.5	1-	-	-	MOUNT ON SB7	
444	CTH JJ	52+27	41' RT	R2-1	SPEED LIMIT 45	36	X 48	-	1	-	12.0	1-	1-	-		
450	CTH JJ	54+35	39' LT	J1-1	JCT, CTH SR	36	X 57	-	1	-	14.3	-	-	-		
460	SPRINGDALE RD	6+21	9' RT	W3-3		36	X 36	-	<u> </u>	=	9.0	1-	1-	-	ON EXISTING POST	
461	SPRINGDALE RD	6+21	45' RT	W3-3		36	X 36	-	U	-	9.0	-	-	-	ON EXISTING POST	
462	SPRINGDALE RD	7+45	42' RT	R3 - 8W		30	X 54	2	×	=	11.3	-	-	-		
463	SPRINGDALE RD	8+18	45' RT	R3-7R		30	X 30	-	-	-	6.3			-	ON EXISTING POST	
464	SPRINGDALE RD	8+10	4' LT	R3-7L		30	X 30	-	-	-	6.3	-	-	-	ON LIGHT POLE	
470	SPRINGDALE RD	12+55	41' LT	R3-8M		30	X 54	2	-	-	11.3	-	-	-		
471	SPRINGDALE RD	12+71	43' RT	M1-5A	CTH SR	36	X 36	-	-	-	9.0	-	-	-	ON EXISTING POST	
472	SPRINGDALE RD	14+76	27' LT	W3-3		36	X 36	-	-	-	9.0	-	-	-	ON EXISTING POST	=
					CTH JJ & CTH SR S	UBTOT	AL	4	5	4	312.3					
					PROJECT TOTA	L.		8	17	7	622.8	67.1	8	5		

COUNTY: WAUKESHA SHEET Ε PROJECT NO:2758-01-70 HWY: CTH JJ MISCELLANEOUS QUANTITIES

TRAFFIC CONTROL

			TRA CON	.0300 FFIC Trol UMS	TRAFFIC BARR	.0410 CONTROL ICADES PE II	TRAFFIC BARR	.0420 CONTROL ICADES	TRAFFIC WARNING	.0705 CONTROL G Lights PE A	TRAFFIC WARNING	.0715 CONTROL G LIGHTS PE C	TRA CON	0900 FFIC TROL GNS
CATEGORY	STREET	DAYS	DRUM	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS
0010	CTH JJ & CTH J	53	96	5,088	0	0	12	636	24	1,272	20	1,060	32	1,696
	CTH JJ & CTH SR	53	96	5,088	4	212	12	636	24	1,272	20	1,060	32	1,696
	PROJECT TOTAL	106	192	10,176	4	212	24	1,272	48	2,544	40	2,120	64	3,392

			643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	NUMBER OF CYCLES	NUMBER OF SIGNS
CATEGORY	STREET	DAYS	EACH	EACH	EACH
0010	CTH JJ & CTH J	53	4	1	4
	CTH JJ & CTH SR	53	4	1	4
	PROJECT TOTAL	106	8	2	8

PAVEMENT MARKING

		646. EPOXY 4-INCH WHITE	0106 EPOXY 4-INCH YELLOW	The state of the s	O109 PREFORMED PLASTIC 4-INCH YELLOW	646.0126 EPOXY 8-INCH WHITE	646.0128 PREFORMED THERMOPLASTIC 8-INCH WHITE	647.0156 ARROWS EPOXY TYPE 1	647.0166 ARROWS EPOXY TYPE 2	647.0168 ARROWS PREFORMED THERMOPLASTIC TYPE 2	647.0176 ARROWS EPOXY TYPE 3	647.0356 WORDS EPOXY	647.0358 WORDS PREFORMED THERMOPLASTIC	647.0566 STOP LINE EPOXY 18-INCH	647.0568 STOP LINE PREFORMED THERMOPLASTIC 18-INCH	647. DIAGONAL EPOXY 12-INCH WHITE	0726 DIAGONAL EPOXY 12-INCH YELLOW	647. DIAGONAL PREFORMED THERMOPLASTIC 12-INCH WHITE	0728 DIAGONAL PREFORMED THERMOPLASTIC 12-INCH YELLOW	647.0766 CROSSWALK EPOXY 6-INCH
CATEGORY	STREET	LF	LF	LF	LF	LF	LF	EACH	EACH	EACH	EACH	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
	CTH JJ & CTH J CTH JJ & CTH SR	575 607	1,467 2,038	-	801	1,462 1,314	612 -	- 1	9 14	5 -	- 1	2 5	4 -	- 156	67 -	77 150	52 275		115 -	- 580
	SUBTOTAL Project total	1,182	3,505 687	0 8	801 01	2,776 2,776	612 612	1	23 23	5 5	1	7	4	156 156	67 67	227 55	327 54	0	115 15	580 580

REMOVING PAVEMENT MARKING

		646.0600 REMOVING PAVEMENT MARKING	647.0955 REMOVING PAVEMENT MARKING ARROWS	647.0965 REMOVING PAVEMENT MARKING WORDS
CATEGORY	STREET	LF	EACH	EACH
0010				
	CTH JJ & CTH J		1	-
	CTH JJ & CTH SR	500	5	1
-	PROJECT TOTAL	500	6	1

CATEGORY	STREET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
0010	CTH JJ & CTH J	1,100	
	CTH JJ & CTH SR	898	276
	PROJECT TOTAL	1,998	276

CONSTRUCTION STAKING

	CATEGORY	STREET	LS
	0010	PROJECT 2758-01-70	1
-		PROJECT TOTAL	1

COUNTY: WAUKESHA SHEET Ε PROJECT NO:2758-01-70 HWY: CTH JJ MISCELLANEOUS QUANTITIES

PLOT DATE : 4/1/2015 8:07 AM

INTERSECTION OF: CTH JJ & CTH J ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

EXISTING BASE NO.	STATION	LOCATION	204.0195 REMOVING CONCRETE BASES EACH	
CB1	192+78.37	68.38' RT	1	
SB1	192+22.86	38.98' RT	1	
SB2	385+06.20	39.76' LT	1	
SB4	385+98.49	39.86' LT	1	
		*** TOTAL	4	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES TYPE 2
CONCRETE BASES TYPE 10
CONCRETE BASES TYPE 13
CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL

BASE NO.	STATION	LOCA TION	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BA SES TY PE 13 EA CH	654.0217 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL EACH
CD4	100.77.00	71.21' RT				4
CB1	192+77.00					1
SB1	192+24.31	44.90' RT	1			
SB2	384+80.48	38.07' LT			1	
SB4	386+01.35	39.0' LT		1		
SB5	386+33.00	38.12' RT			1	
SB8	192+80.59	47.50' RT			1	
		TOTALS	*** 1	*** 1	*** 3	1

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

CONDUIT RIGID NONMETA LLIC SCHEDULE 40 2-INCH CONDUIT RIGID NONMETA LLIC SCHEDULE 40 3-INCH CONDUIT SPECIA L 3-INCH

FROM	то	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETA LLIC SCHEDUE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
PROW	10	F.(F)	L.F.	L.F.,
CB1	PB1		51	
PB1	PB2		35	
PB1	PB3			220
PB3	PB4		176	
PB4	PB5		64	
PB5	PB6			198
PB6	PB9		47	
PB6	PB10			234
PB10	PB11		130	
PB11	PB12			28
PB12	PB13		22	
PB11	PB13		94	7157
PB13	PB17			200
PB17	CB1		63	
PB2	SB1	11		
PB3	SB2		15	
PB4	SB3	8		
PB6	EXT1	159	65	
PB9	SB4		10	
PB10	SB5		11	
PB11	EXT2	35		
PB12	SB7	22		
PB13	EXT3	11		
PB17	SB8	77	9	
***	TOTALS	246	727	880

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X36-INCH PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STA TION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EA CH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	192+62.00	63.71' RT		1
PB2	192+27.88	55.34' RT		1
PB3	191+57.66	92.32' RT		1
PB4	191+01.67	33.29' RT	1	
PB5	190+69.72	33.26' RT		1
PB6	386+42.98	74.40' LT		1
PB9	386+11.64	39.24' LT		1
PB10	386+42.99	42.52' RT		1
PB11	192+25.49	53.70' LT	1	
PB12	192+24.57	25,67' LT		1
PB13	192+72.14	49.12' LT		1
PB17	192+72.15	50.79' RT		1
		TOTALS	2	*** 10

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

REMOVING PULL BOXES

PULL BOX NO.	STA TION	LOCATION	653.0905 RBMOVING PULL BOXES EACH
PB1	192+69.00	52.39' RT	1
PB2	192+60.03	59.45' RT	1
PB3	192+23.63	41.06' RT	1
PB4	191+40.97	48.98' RT	1
PB5	191+03.69	32.50' RT	1
PB6	191+12.59	37,12' LT	1
PB7	192+04.88	59.02' LT	1
PB8	192+21.74	29.04' LT	1
PB9	384+11.19	36.96' RT	1
PB10	382+81.80	36.94' RT	1
PB11	381+67.89	36.77' RT	1
PB12	190+20.87	29.52' RT	1
PB13	188+99.79	27.11' RT	1
PB14	187+79.10	26.65' RT	1
		*** TOTAL	14

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 4

PROJECT NO: 2758-01-70 HWY: CTH JJ COUNTY: WAUKESHA MISCELLANEOUS QUANTITIES SHEET E

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF: CTH JJ & CTH J
ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED CONDUIT LOOP DETECTOR LOOP DETECTOR LEAD IN CABLE LOOP DETECTOR WIRE 655.0700 CABLE TYPE UF 2-10 AWG LOOP 655.0800 ELECTRICAL WIRE LIGHTING 12 AWG DETECTOR LOOP **LEAD IN** DETECTOR 655.0315 655.0610 NO. OF LOOP HOME CABLE WIRE CABLE TYPE UF ELECTRICAL LOCATION NO. **RUN PB** STATION. SIZE TURNS INSTALLATION NOTE L.F. L.F. 2-10 AWG WIRE LIGHTING (W/ GROUND) 12 AWG 6'X20' EXISTING LOOP DETECTOR WITH PULL (SPLICE) BOX OFF ROADWAY 672 21 389+41.48 37.31' LT 5 345 L.F. L.F. 388+21.08 37.26' LT 6'X20' EXISTING LOOP DETECTOR WITH PULL (SPLICE) BOX OFF ROADWAY 272 EXISTING LOOP DETECTOR WITH PULL (SPLICE) BOX OFF ROADWAY 268 81 PB16 195+33.58 36.50' LT 6'X20' CB1 SB1 86 SB1 LUMIN 117 TOTALS 1,630 885 SB1 SB3 284 * STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP SB3 LUMIN 117 ** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD CB1 SB7 253 SB7 LUMIN 117 SB7 322 SB4 SB4 LUMIN 123 *** TOTALS 945 474 *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE CABLE TRAFFIC SIGNAL 5-14 AWG CABLE TRAFFIC SIGNAL 7-14 AWG CABLE TRAFFIC SIGNAL 12-14 AWG CABLE TRAFFIC SIGNAL 19-14 AWG 655.0230 655.0240 655.0260 655.0280 CABLE CABLE CABLE CABLE TRAFFIC SIGNAL TRAFFIC SIGNAL TRAFFIC SIGNAL TRAFFIC SIGNAL 5-14 AWG 7-14 AWG 12-14 AWG 19-14 AWG FROM TO L.F. L.F. L.F. L.F. ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG CB1 SB1 86 21 SB1 HEAD 1 655.0515 SB1 HEAD9 21 FROM TO L.F. CB1 165 SB2 SB2 HEAD 7 39 SB2 HEAD 8 50 SB1 SB2 197 SB2 HEAD 10 65 SB2 SB3 131 CB1 SB3 252 SB3 SB4 230 ELECTRICAL SERVICE METER BREAKER PEDESTAL SB3 HEAD 14 22 INTERSECTION OF CTH JJ & CTH J **SB4** SB5 213 21 SB3 HEAD 16 SB5 SB7 152 CB1 SB4 450 656.0200.01 SB7 SB8 238 BASE SB4 HEAD 12 41 NO. L.S. SB8 CB₁ 47 SB4 HEAD 13 21 SB4 HEAD 15 56 PB1 CB₁ 30 CB₁ SB4 HEAD 4 21 PB2 SB1 21 SB4 HEAD 6 21 PB3 SB2 TOTAL 279 CB1 SB5 PB4 SB3 18 SB5 HEAD 2 38 * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD PB5 SB3 56 SB5 51 HEAD 3 PB6 SB4 SB5 HEAD 5 66 PB9 SB4 22 CB1 253 SB7 PB10 SB5 21 21 SB7 HEAD 11 PB11 SB7 SB7 HEAD 19 22 PB12 SB7 32 CB1 SB8 PB13 SB7 119 SB8 HEAD 17 60 PB17 SB8 19 SB8 HEAD 18 48 SB8 HEAD 20 51 ***TOTAL 1541 TOTALS *** 605 *** 151 *** 1,082 450 *** ADDITIONAL QUANTIES SHOWN ELSEWHERE *** ADDITIONAL QUANTITES SHOWN ELSEWHERE PAGE 2 OF 4

HWY: CTH JJ

PROJECT NO: 2758-01-70

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET

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INTERSECTION OF: CTH JJ & CTH J ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED SIGNAL MOUNTING HARDWARE TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS 658.5069.01 661.0200.01 **LOCATION** L.S. LOCATION L.S. CTH JJ & CTH J CTH JJ & CTH J TOTAL TOTAL 3

> TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE POLES TYPE 4 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT MONOTUBE POLES TYPE 10 MONOTUBE POLES TYPE 12 MONOTUBEARMS 30-FT MONOTUBEARMS 40-FT MONOTUBE ARMS 45-FT CLAMP-ON LUMINA IRE ARM STEEL 8-FT LUMINAIRES UTILITY LED CATEGORY B

SIGNA L BASE NO.	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0315 POLES TYPE4 EACH	657.0609 LUMNAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	SPV .0060.01 MONOTUBE POLES TY PE 10 EACH	SPV.0060.02 MONOTUBE POLES TY PE 12 EACH	SPV.0060.04 MONOTUBE ARMS 30-FT EA CH	SPV.0060.05 MONOTUBE ARMS 40-FT EACH	SPV.0060.06 MONOTUBE ARMS 45-FT EACH	SPV.0060.08 CLAMP-ON LUMINAIRE ARM STEEL 8-FT EACH	659.1120 LUMINAIRES UTILITY LED B EACH
SB1	1	1	1							1
SB2					1		1			
SB3	1	1	1							1
SB4				1		1			1	1
SB5					1		1			
SB7	1	1	1							1
SB8					1			1		
TOTALS	*** 3	3	3	*** 1	3	*** 1	*** 2	1	1	4

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 3 OF 4

WISDOT/CADDS SHEET 42

PLOT SCALE :

COUNTY: WAUKESHA SHEET Ε PROJECT NO: 2758-01-70 HWY: CTH JJ MISCELLANEOUS QUANTITIES PLOT NAME : PLOT DATE: 1/5/2015 8:38 AM

PLOT BY : OLSON, JULIE

INTERSECTION OF: CTH JJ & CTH J ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED TRAFFIC SIGNAL FACE 3-12 INCH V ERTICAL TRAFFIC SIGNAL FACE 4-12 INCH V ERTICAL BACKPLATES SIGNAL FACE 3 SECTION 12-INCH BA CKPLATES SIGNAL FACE 4 SECTION 12-INCH LED MODULES 12-INCH RED BALL LED MODULES 12-INCH YELLOW BALL LED MODULES 12-INCH GREEN BALL LED MODULES 12-INCH RED A RROW LED MODULES 12-INCH YELLOW A RROW LED MODULES 12-INCH GREEN A RROW 658.0110 658.0115 658.0215 658.0220 658.0600 658.0605 658.0610 658.0615 658.0620 658.0625 TRAFFIC SIGNAL TRAFFIC SIGNAL **BACKPLATES BACKPLATES** LED MODULES LED MODULES LED MODULES LED MODULES LED MODULES LED MODULES FACE 3-12 INCH FACE 4-12 INCH SIGNAL FACE SIGNAL FACE 12-INCH 12-INCH 12-INCH 12-INCH 12-INCH 12-INCH RED A RROW YELLOW A RROW GREEN A RROW SIGNAL SIGNAL VERTICAL VERTICAL 3 SECTION 12-INCH 4 SECTION 12-INCH RED BALL YELLOW BALL GREEN BALL BASE NO. HEAD NO. EA CH EA CH EA CH **EACH** EACH **EACH EACH EACH** EA CH EACH SB5 SB5 TRAFFIC SIGNAL CONTROLLER AND CABINET (CTH JJ & CTH J) SB4 SB5 SPV.0060.09 BASE SB4 NO. **EACH** SB2 SB2 CB1 SB1 SB2 TOTAL SB7 SB4 SB4 SB3 15 SB4 SB3 17 SB8 18 SB8 SB8 TOTALS *** 12 *** A DDITIONA L QUANTITIES SHOWN ELSEWHERE VEHICULAR VIDEO DETECTION SYSTEM SPV.0105.03 REMOVE TRAFFIC SIGNALS REINSTALL EMERGENCY VEHICLE PREEMPTION SYSTEM LOCATION L.S. SPV.0105.01 SPV.0105.05 LOCATION L.S. CTH JJ & CTH J LOCA TION L.S. CTH JJ & CTH J TOTAL CTH JJ & CTH J TOTAL VIDEO CAMERA NUMBER SIGNAL BASENO. TOTAL V DC1 SB6 VDC2 SB2 VDC3 SB4 SB8 VDC4 PAGE 4 OF 4 COUNTY: WAUKESHA Ε PROJECT NO: 2758-01-70 HWY: CTH JJ MISCELLANEOUS QUANTITIES SHEET FILE NAME : L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\030202_MQ.DWG PLOT DATE: 2/2/2015 8:49 AM PLOT BY : OLSON, JULIE PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

INTERSECTION OF: CTH JJ & CTH SR ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH CONDUIT SPECIAL 3-INCH

FROM	то	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
PB4	PB5	32		
PB5	PB6			100
PB6	PB7			72
PB7	PB8		60	
PB2	SB2		41	
PB2	SB3	13		
PB2	SB4	10		
PB3	SB5		23	
PB3	SB6	12		
PB4	SB7		14	
PB6	SB9	7		
PB7	SB10		9	
PB8	SB11	4		
	*** TOTALS	78	147	172

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING CONCRETE BASES	

EXISTING BASE			204.0195 REMOVING CONCRETE BASES
NO.	STATION	LOCATION	EACH
SB1	9+36.40	41.53' LT	1
SB2	9+53.45	5.22' LT	1
SB4	50+70.22	38.36' RT	1
SB5	50+78.52	36.12° LT	1
SB6	10+75.03	38.33' RT	1
SB7	10+79.09	36.39' LT	- 1
SB8	49+15.89	35.35' LT	1
		*** TOTAL	7

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING PULL BOXES

ILL BOXES	STEEL 24X42-INOH			PULL BOX NO.	STATION	LOCATION	PULL BOXES EACH
			653.0140	PB2	49+48.55	49.20' RT	1
			PULL BOXES	PB3	49+95.10	41.46' RT	1
PULL			STEEL	PB4	50+57.36	42.05' RT	1
BOX			24X42-INCH	PB5	51+50.38	38.96' RT	1
NO.	STATION	LOCATION	EA CH	PB6	52+49.68	38.82' RT	1
				PB7	53+27.07	38.89' RT	-1
PB2	10+54.58	48.30° LT	1	PB9	10+54.58	48.30' LT	1
PB4	50+57.29	41.68' RT	1	PB10	11+26.99	37.96' LT	1
PB5	9+31.21	42.45' RT	1	PB11	12+26.77	36.72' LT	1
PB6	9+31.11	6.84' LT	1	PB12	14+17.10	32.73' LT	1
PB7	9+31.03	41.52' LT	1	PB13	48+50.13	38.18' RT	1
PB8	301+32.24	47.85' RT	1	PB14	47+50.08	38.33' RT	-1
				PB15	45+91.59	38.70' RT	1
		*** TOTALS	6	PB16	8+68.64	4.73' LT	1
ENAL LO	A TION TO BE DETE	BANKED BY THE EN	GINEER IN THE FIELD	PB17	8+14.08	5.25' LT	1
	L QUANTITIES SHO		GINEER IN THE PIELD			*** TOTAL	15

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES TYPE 1 CONCRETE BASES TYPE 2 CONCRETE BASES TYPE 10 CONCRETE BASES TYPE 13

BASE NO.	STA TION	LOCA TION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BA SES TY PE 10 EA CH	654.0113 CONCRETE BASES TYPE 13 EACH
SB2	301+15.70	38.50' LT				1
SB3	301+35.05	49.98' LT	1			
SB4	10+63.37	45.48' LT	i			
SB5	10+63.37	43.86' RT				1
SB6	50+69.15	41.35' LT	1			
SB7	50+70.15	38.00' RT				1
SB9	9+38.31	6.84' LT		1		
SB10	9+38.40	46.28' LT			1	
SB11	301+34.86	45.77' RT	1			
		TOTALS	4	*** 1	*** 1	*** 3

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

PAGE 1 OF 4

PROJECT NO: 2758-01-70

HWY: CTH JJ

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES PLOT BY : OLSON, JULIE

SHEET

Ε WISDOT/CADDS SHEET 42

653.0905 REMOVING

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF: CTH JJ & CTH SR ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

610

123

492

LUMIN

*** TOTALS

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

		655.0515
FROM	ТО	L.F.
CB1	SB1	42
SB1	SB2	170
SB2	SB3	68
SB3	SB4	37
SB4	SB5	160
SB5	SB6	49
SB6	SB7	134
SB7	SB8	72
SB8	SB9	82
SB9	SB10	71
SB10	SB11	63
SB11	CB1	31
PB1	SB1	21
PB2	SB3	23
PB3	SB6	22
PB4	SB7	24
PB5	SB8	16
PB6	SB9	17
PB7	SB10	19
PB8	SB11	14
	***TOTAL	1,121

^{***} A DDITIONAL QUANTIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE

LOCA TION		658.5069.02 L.S.
CTH JJ & CTH SR		1
	TOTAL	1

PAGE 2 OF 4

PROJECT NO: 2758-01-70

HWY: CTH JJ

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT SCALE :

WISDOT/CADDS SHEET 42

Ε

SHEET

FILE NAME : L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\030203_MQ.DWG

CABLE TRAFFIC SIGNAL 5-14 AWG

CABLE TRAFFIC SIGNAL 7-14 AWG

FROM

CB1

SB1

SB1

CB1

SB2

SB2

SB2

CB1 SB3

CB1

SB4

SB4

SB4

CB1

SB5 SB5

SB5

SB5

CB1

SB6

SB6

SB6

CB1

SB7

SB7

SB7

SB7

CB1

SB8

SB8

SB8

CB1 SB9

CB1

SB10

SB10

SB10

CB1

SB11

CABLE TRAFFIC SIGNAL 12-14 AWG

TO

SB1

HEAD 1

HEAD9

SB2

HEAD 7

HEAD 8

HEAD 10

HEAD 22

HEAD 14

HEAD 16

HEAD 23

HEAD 12

HEAD 13

HEAD 15

HEAD 24

HEAD 4

HEAD 6

HEAD 25

HEAD 2

HEAD 3

HEAD 5

HEAD 26

HEAD 11

HEAD 19

HEAD 27

HEAD 20

SB10

HEAD 17

HEAD 18

HEAD 28

SB11

HEAD 21 ***TOTALS

*** A DOTTONAL QUANTITES SHOWN ELSEWHERE

655.0230

CABLE

TRAFFIC SIGNAL

5-14 AWG

L.F.

21

50

38

18

21

18

21

18

21

18

50

39

18

21

18

18

42

18

18

655,0240

CABLE

TRAFFIC SIGNAL

7-14 AWG

L.F.

22

66

22

22

22

655.0260

CABLE

TRAFFIC SIGNAL

12-14 AWG

L.F.

42

145

271

260

165

1,998

PLOT DATE: 1/5/2015 8:38 AM

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF: CTH JJ & CTH SR ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

PEDESTAL BA SES TRANSFORMER BA SES BREAKAWAY 11 1/2 INCH BOLT CIRCLE POLES TYPE 2 TRAFFIC SIGNAL STANDARDS ALUMINUM 9-FT TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT MONOTUBE POLES TYPE 10 MONOTUBE POLES TYPE 13 MONOTUBE A RMS 30-FT MONOTUBE ARMS 40-FT LUMINAIRE ARMS STEEL 8-FT PEDESTRIAN PUSH BUTTONS LUMINAIRES UTILITY LED CATEGORY C

SIGNAL BASENO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0410 TRAFFIC SIGNAL STANDARDS ALUMINUM 9-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	SPV.0060.01 MONOTUBE POLES TYPE 10 EACH	SPV.0060.03 MONOTUBE POLES TYPE 13 EACH	SPV.0060.04 MONOTUBE ARMS 30-FT EACH	SPV.0060.05 MONOTUBE ARMS 40-FT EACH	SPV.0060.07 LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIA N PUSH BUTTONS EA CH	659.1125 LUMINAIRES UTILITY LED C EACH
SB2							1		1	1		1
SB3	1			1			ı,		·		1	·
SB4	1				1						1	
SB5							1		1	1	1	1
SB6	1				1						1	
SB7							1		1	1	1	1
SB8											1	
SB9		1	1								1	
SB10						1		1		1	1	1
SB11	1			1							1	
TOTALS	4	*** 1	1	2	2	*** 1	3	*** 1	*** 3	4	9	4

^{***} A DDITIONA L QUANTITIES SHOWN ELSEWHERE

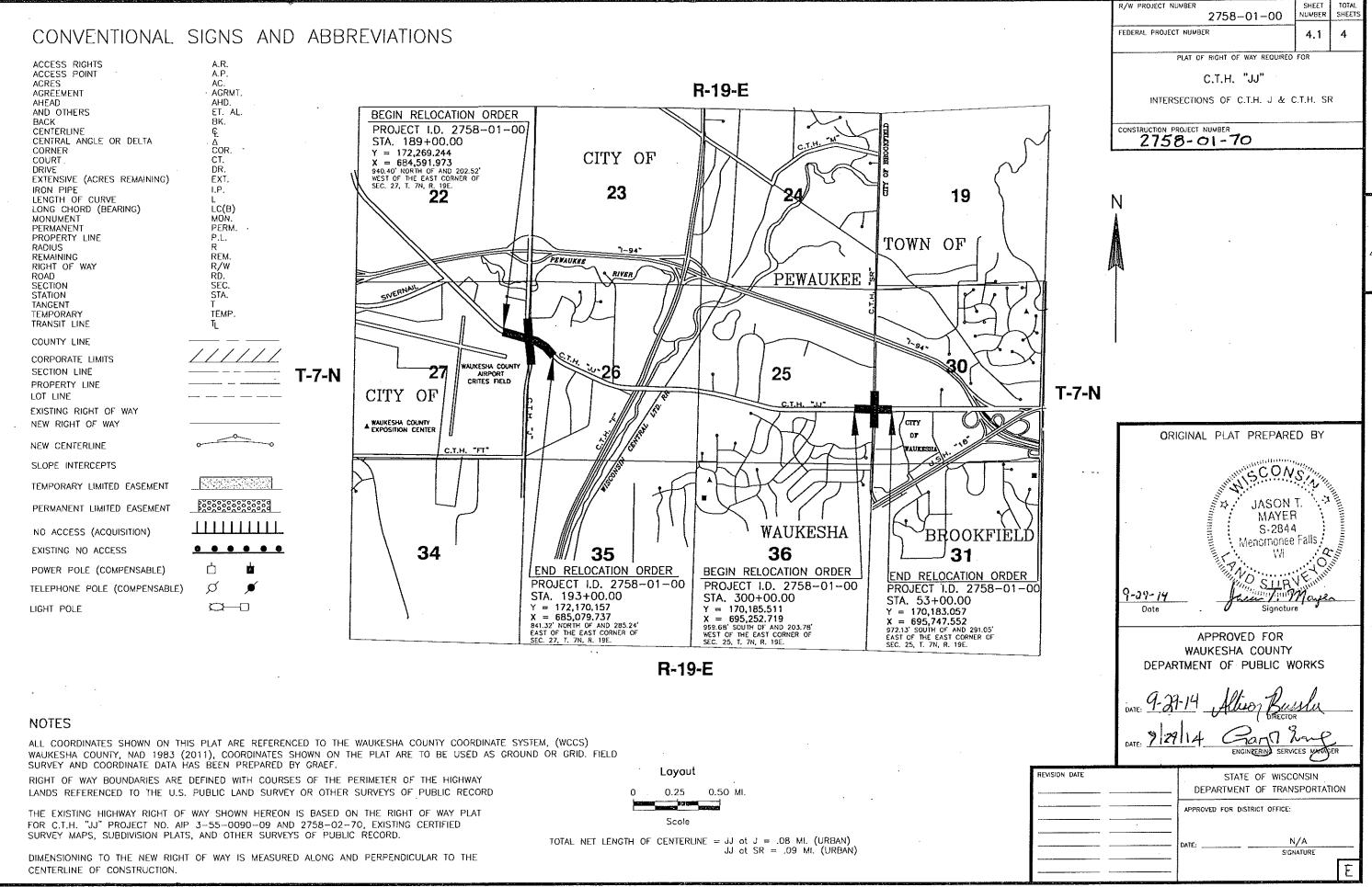
PAGE 3 OF 4

WISDOT/CADDS SHEET 42

SHEET Ε COUNTY: WAUKESHA PROJECT NO:2758-01-70 HWY: CTH JJ MISCELLANEOUS QUANTITIES PLOT DATE : 1/5/2015 8:38 AM PLOT BY : OLSON, JULIE PLOT NAME : PLOT SCALE :

INTERSECTION OF: CTH JJ & CTH SR ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL BACKPLATES SIGNAL FACE 3 SECTION 12-INCH BA CKPLATES SIGNAL FACE 4 SECTION 12-INCH PEDESTRIAN SIGNAL FACE 16-INCH LED MODULES 12-INCH RED BALL LED MODULES 12-INCH YELLOW BALL LED MODULES 12-INCH GREEN BALL LED MODULES 12-INCH RED A RROW LED MODULES 12-INCH YELLOW ARROW LED MODULES 12-INCH GREEN A RROW LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH 658.0110 658.0115 658.0215 658.0220 658.0416 658.0600 658.0605 658.0610 658.0615 658.0620 658.0625 658.0635 TRAFFIC SIGNAL TRAFFIC SIGNAL **BACKPLATES PEDESTRIAN** LED MODULES **BACKPLATES** LED MODULES LED MODULES LED MODULES LED MODULES LED MODULES LED MODULES FACE 3-12 INCH FACE 4-12 INCH SIGNAL FACE SIGNAL FACE SIGNAL FACE 12-INCH 12-INCH 12-INCH 12-INCH 12-INCH 12-INCH PEDESTRIA N COUNTDOWN SIGNAL SIGNAL VERTICAL VERTICAL 3 SECTION 12-INCH 4 SECTION 12-INCH 16-INCH RED BALL YELLOW BALL GREEN BALL **RED A RROW** YELLOW ARROW GREEN A RROW TIMER 16-INCH BASENO. HEAD NO. **EACH** EA CH EA CH **EACH** EA CH EA CH **EACH** EA CH **EACH** EA CH EA CH EA CH SB7 SB7 SB6 SB7 SB6 SB2 SB2 SB1 SB2 SB5 SB5 SB4 15 SB5 SB4 17 SB10 SB10 SB8 SB9 21 SB11 22 SB3 23 SR4 24 SB5 SB6 25 SB7 SB8 **SB10** *** 10 *** 10 *** 10 TOTALS *** A DDITIONAL QUANTITIES SHOWN ELSEWHERE REMOVE TRAFFIC SIGNALS TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS SPV.0105.02 661.0200.02 LOCATION L.S. LOCATION L.S. VEHCULAR VIDEO DETECTION SYSTEM CTH JJ & CTH SR CTH JJ & CTH SR SPV.0105.04 LOCATION L.S. TOTAL TOTAL CTH JJ & CTH SR TOTAL 1 SIGNAL BASENO. VIDEO CAMERA NUMBER SB2 VDC1 TRAFFIC SIGNAL CONTROLLER AND MODIFY CABINET (CTH JJ & CTH SR) REINSTALL EMERGENCY VEHICLE PREEMPTION SYSTEM **SB7** VDC2 BASE SPV.0060.10 SPV.0105.06 VDC3 SB10 VDC4 SB5 LOCATION L.S. NO. EA CH CB1 CTH JJ & CTH SR TOTAL TOTAL PAGE 4 OF 4 PROJECT NO: 2758-01-70 Ε HWY: CTH JJ COUNTY: WAUKESHA MISCELLANEOUS QUANTITIES SHEET FILE NAME : L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\030203_MQ.DWG PLOT DATE: 1/5/2015 8:39 AM PLOT BY : OLSON, JULIE PLOT NAME : PLOT SCALE :

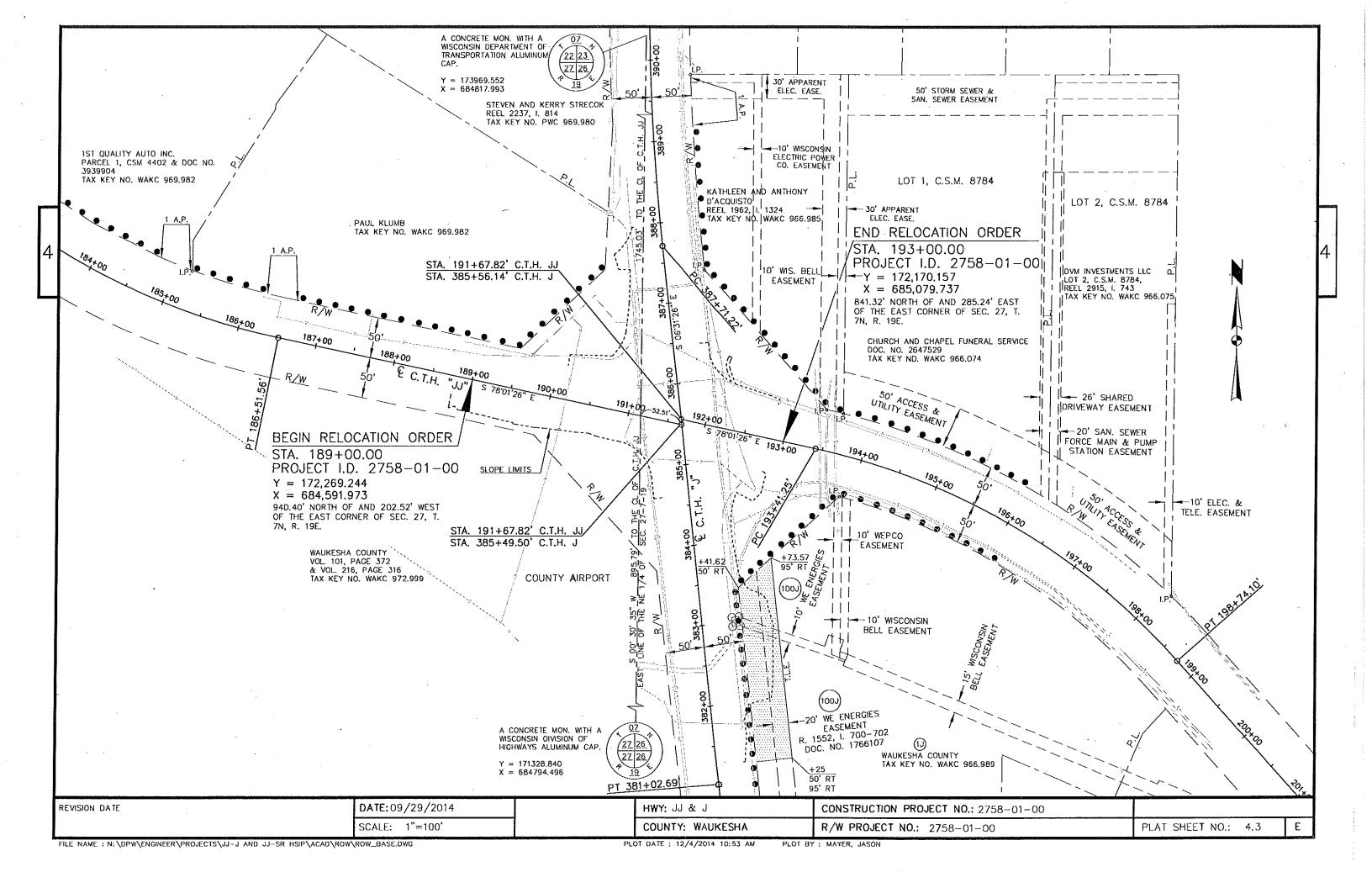
WISDOT/CADDS SHEET 42

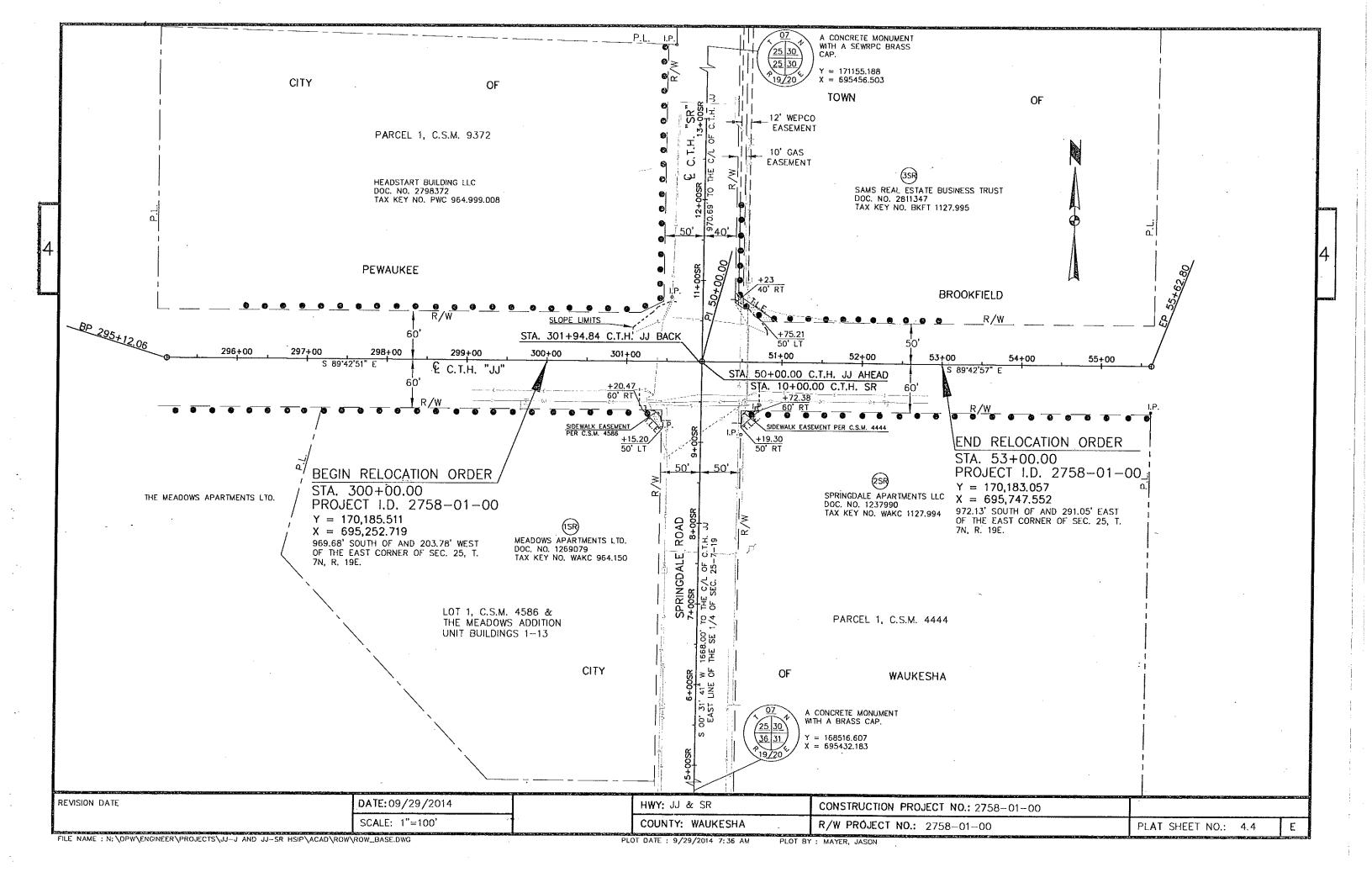


SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL AREA MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

	en e				<u> </u>		· .
PARCEL NO.	SHEET NO.	OWNERS	INTEREST REQ'D.	TOTAL AREA ACRES	EASEMENT ACRES REQUIRED	R/W ACRES REQUIRED	REM.
				Action	T.L.E. P.L.E.	NEW EXIST.	TOTAL
· 1J	. 4.3	WAUKESHA COUNTY	TLE	VAST	0.24	·	
					· · · · · · · · · · · · · · · · · · ·		
1SR	4.4	MEADOWS APARTMENTS LTD	πE	4.05	0.007		ALAVOISMIV
2SR	- 4.4	SPRINGDALE APARTMENTS LLC	TLE .	13.85	0.005		Mercent and the second of the
3SR	4.4	SAMS REAL ESTATE BUSINESS TRUST	TLE	11.20	0.01		
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100J	4.3	WE ENGERIES	TEMPORARY CONSTRUCTION	N PERMIT			
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REVISION DATE:		DATE: 09/29/2014 SQ	ALE, FEET HWY: ·C.T.H.	"JJ"	CONSTRUCTION PROJECT NO.:	2758-01-00	
		<u> </u>	COUNTY: WA		R/W PROJECT NO.: 2758-0		LAT SHEET NO: 4.2

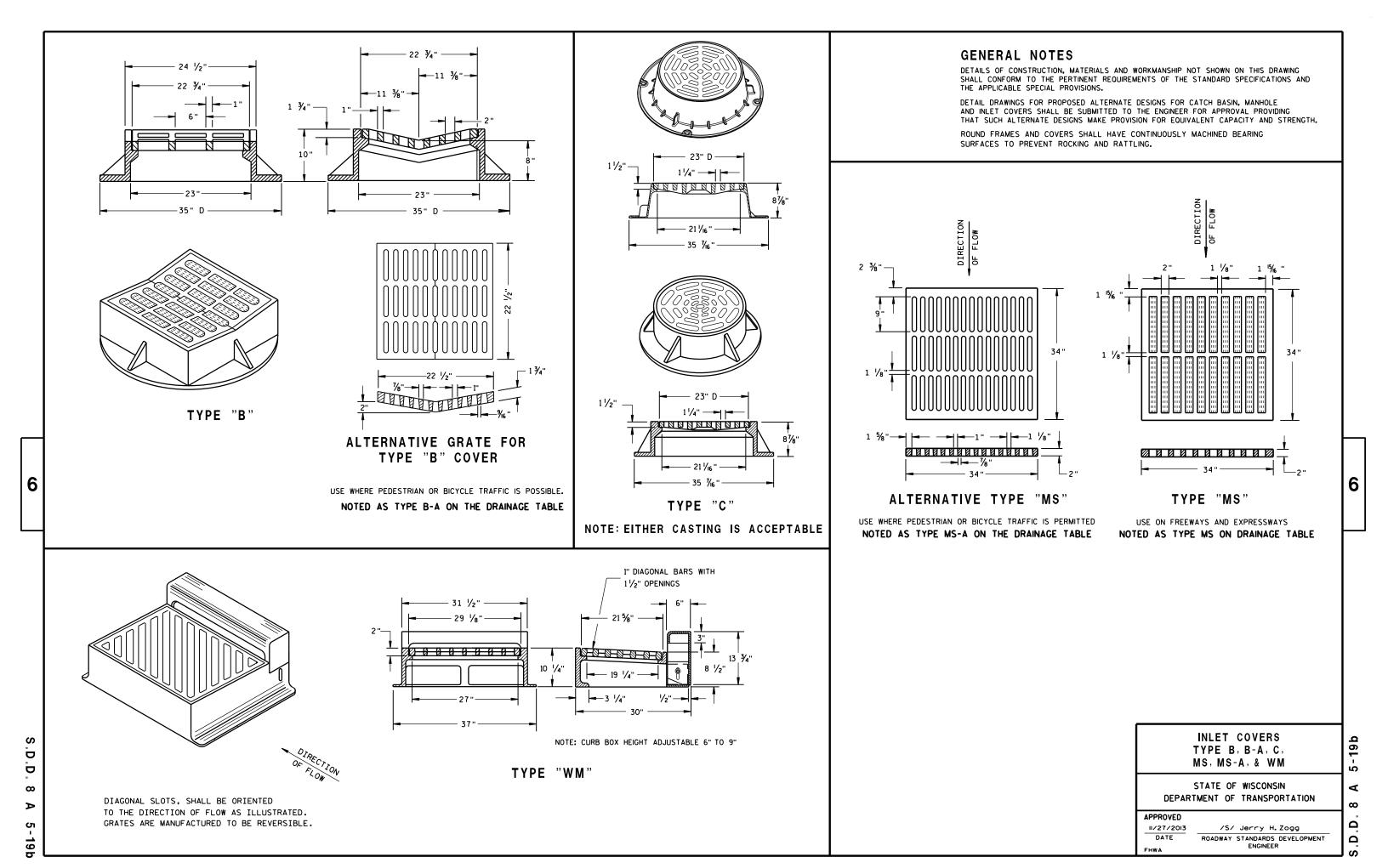


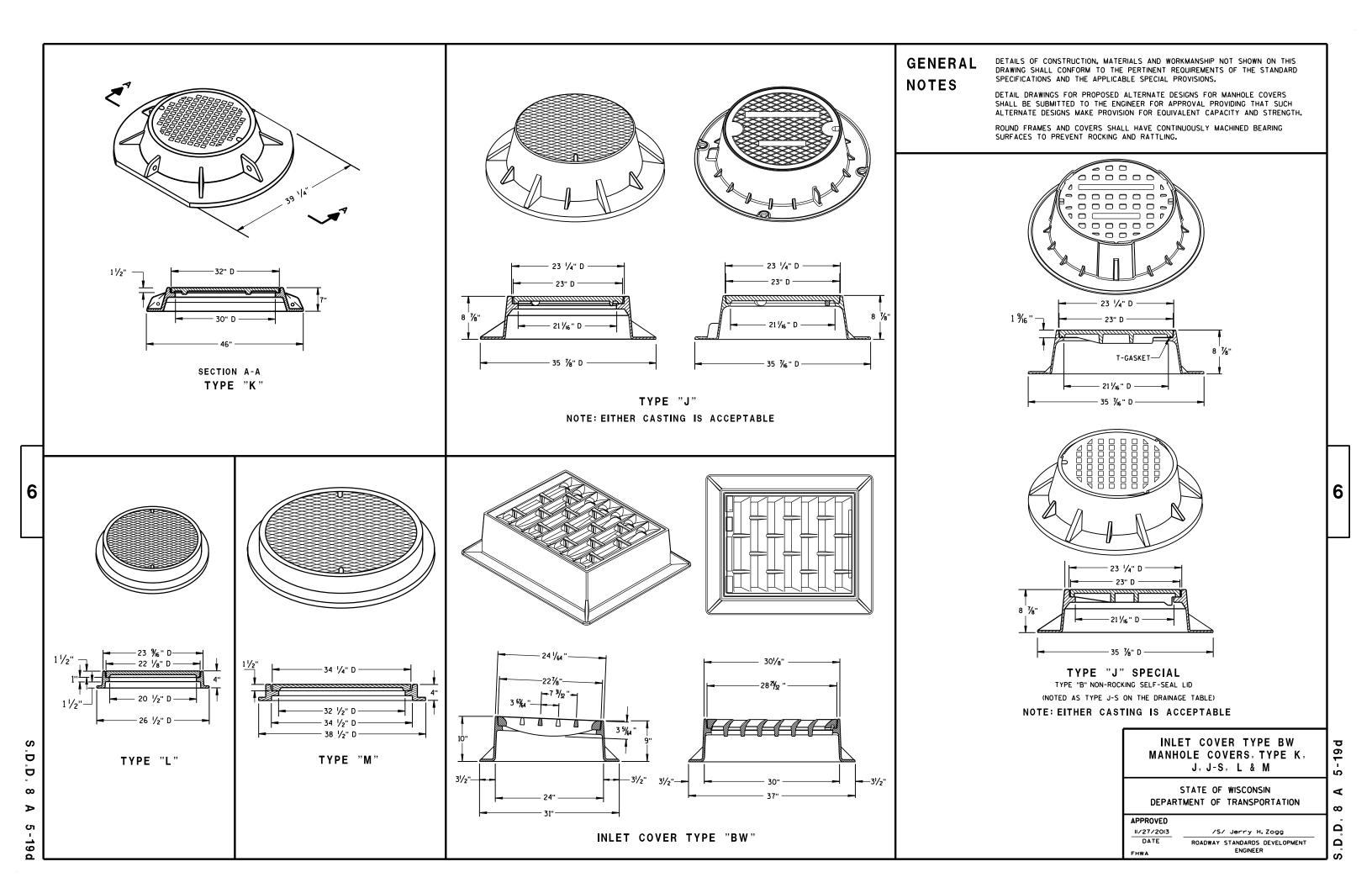


Standard Detail Drawing List

```
08A05-19B
              INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D
               INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01
               MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
               INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C07-01
08D01-17
               CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05
               CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
              CURB RAMPS TYPES 1 AND 1-A
08D05-15A
08D05-15B
              CURB RAMPS TYPES 2 AND 3
08D05-15C
              CURB RAMPS TYPES 4A AND 4A1
08D05-15D
               CURB RAMPS TYPE 4B AND 4B1
08D05-15E
               CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D15-04A
               EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-04B
               EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-04C
               EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08E08-03
               TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E10-02
               INLET PROTECTION TYPE A, B, C AND D
08E14-01
               TRACKING PAD
09A01-13A
               AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B
               AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
09B02-08
               CONDUIT UNDER PAVED HIGHWAYS
09B04-11
               PULL BOX
               CONCRETE BASES, TYPES 1, 2, 5, & 6
09C02-07
09C03-04
               TRANSFORMER/PEDESTAL BASES
               CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C06-07
09C10-03
               TRANSFORMER BASE FOR 15" BOLT CIRCLE
09C11-05
               CONCRETE BASE TYPE 10
09C12-05B
               CONCRETE BASE TYPE 13
               CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09C13-02
09D01-05
               CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03
               SIGNAL CONTROL CABINET
               POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-13A
09E01-13C
               POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-13G
               HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05
               NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05
               TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT
09E07-05
               TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-06A
               TYPE 9 POLE 15' -30' MONOTUBE ARM
09E08-06B
               TYPE 10 POLE 15'-30' MONOTUBE ARM
               TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-06C
09E08-06D
               TYPE 13 POLE 35' -55' MONOTBE ARM
09E08-06E
               GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-04B
               LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09G01-03A
               SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03B
               SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03C
               SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03D
               SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03E
               SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03F
               SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03G
               SPAN WIRE TEMPORARY TRAFFIC SIGNAL
               CONCRETE MEDIAN NOSE
11B02-02
15C07-12A
               PAVEMENT MARKING SYMBOLS
15C07-12B
               PAVEMENT MARKING WORDS
               PAVEMENT MARKING ARROWS
15C07-12C
               PAVEMENT MARKING (MAINLINE)
15C08-16A
               PAVEMENT MARKING (INTERSECTIONS)
15C08-16B
15C08-16E
               PAVEMENT MARKING (LEFT TURN LANÉ)
15C12-04
               TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
               STOP LINE AND CROSSWALK PAVEMENT MARKING
15C33-01
               TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D20-02
15D21-02
               TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
               TRAFFIC CONTROL, SIDEWALK CLOSURE
15D30-01
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6





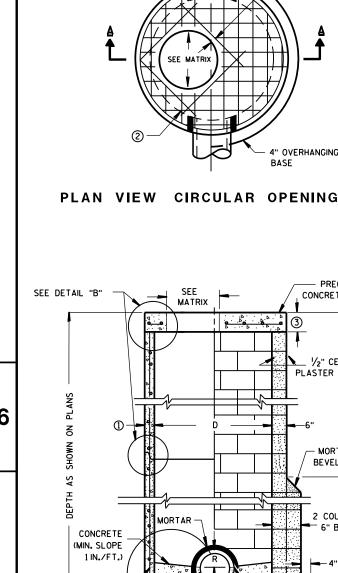






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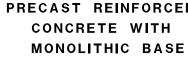
SEE

MORTAR -

MATRIX

• 4° • •

PRECAST REINFORCED — CONCRETE FLAT SLAB TOP



②-

CONTRACTOR TO PROVIDE DRAWING(S)

STAMPED BY A PROFESSIONAL ENGINEER

SEE DETAIL "A"

(I)·

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

2" (TYP)

" OVERHANGING

- PRECAST REINFORCED

CONCRETE FLAT SLAB TOP

1/2" CEMENT

- MORTAR

BEVEL 45°

2 COURSES 으는

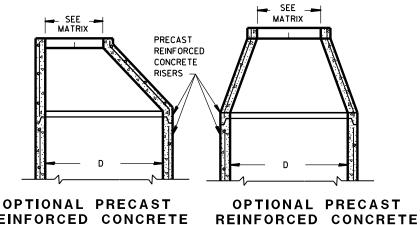
12'. EPT

6" BLOCK

4" MIN

SPLIT PIPE OR FORM CONCRETE TO FIT

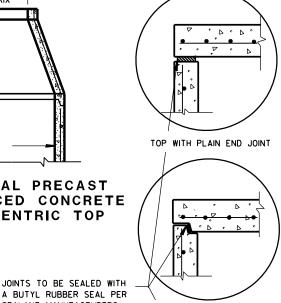
PLASTER COAT



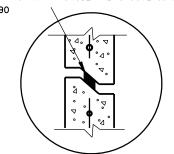
REINFORCED CONCRETE **ECCENTRIC TOP** CONCENTRIC TOP

PRECAST

WALL

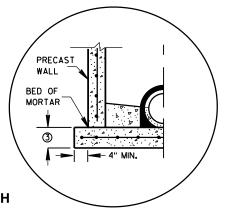


A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS TOP WITH TONGUE AND GROOVE JOINT RECOMMENDATIONS CONFORMING TO ASTM C990



RISER WITH TONGUE AND GROOVE JOINT

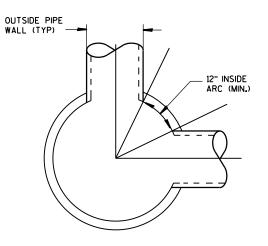
DETAIL "B"



PRECAST REINFORCED

CONCRETE WITH INTEGRAL BASE OPTION

SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION DETAIL "A"



DETAIL "C"

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

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

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

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

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

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

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

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

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

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

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

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

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	С	ALL J'S	К	L	M
OPENING SIZE (FT)					
2 DIA.	х	х		х	
3 DIA.			×		Х

PIPE MATRIX

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

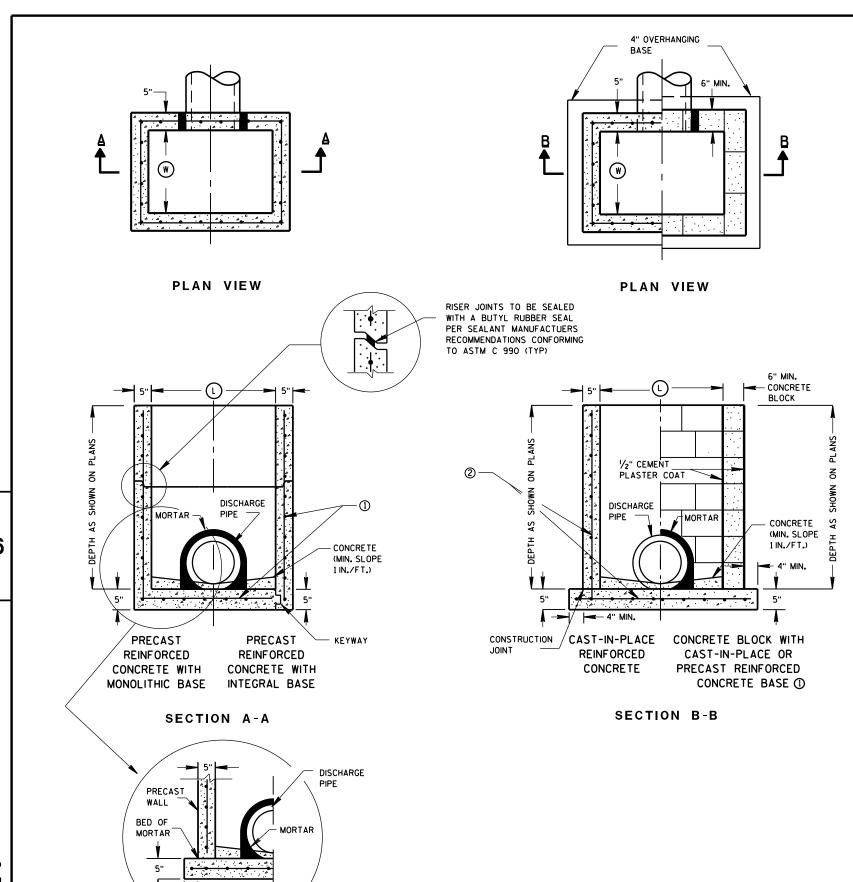
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

> STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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

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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.

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

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

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

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

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

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

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

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

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

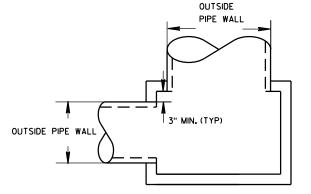
- 1) FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- (2) CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

	INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	s	т	v	WM
		WIDTH (W) (FT)	LENGTH (L) (FT)									
	2X2-FT	2	2	X	х				Х		Х	
ſ	2X2.5-FT	2	2.5			Х			Х	Х	Х	Х
[2X3-FT	2	3					Х				
	2.5X3-FT	2.5	3				Х					

PIPE MATRIX

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



DETAIL "A"

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 6/5/2012 DATE

FHWA

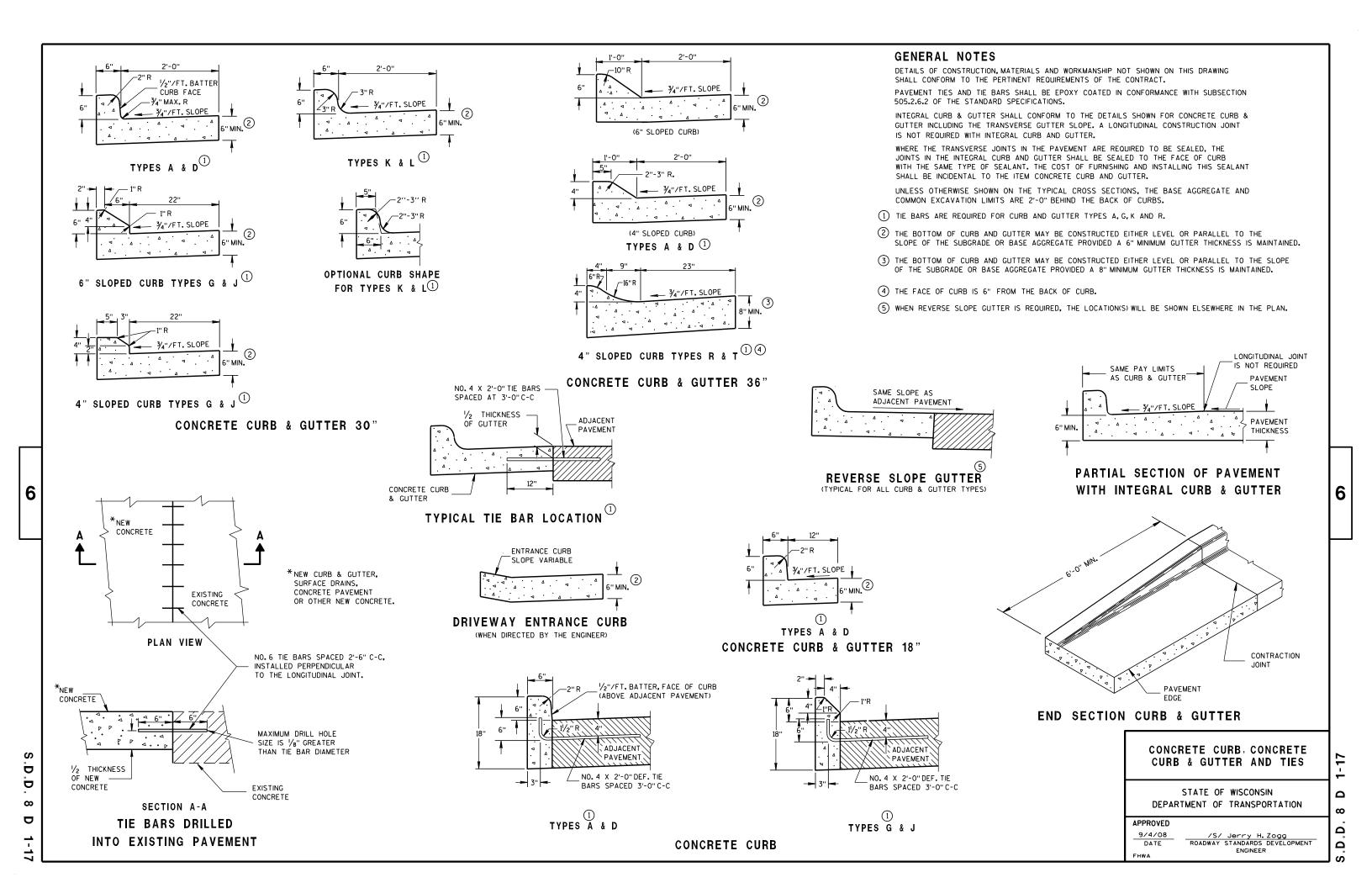
/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT

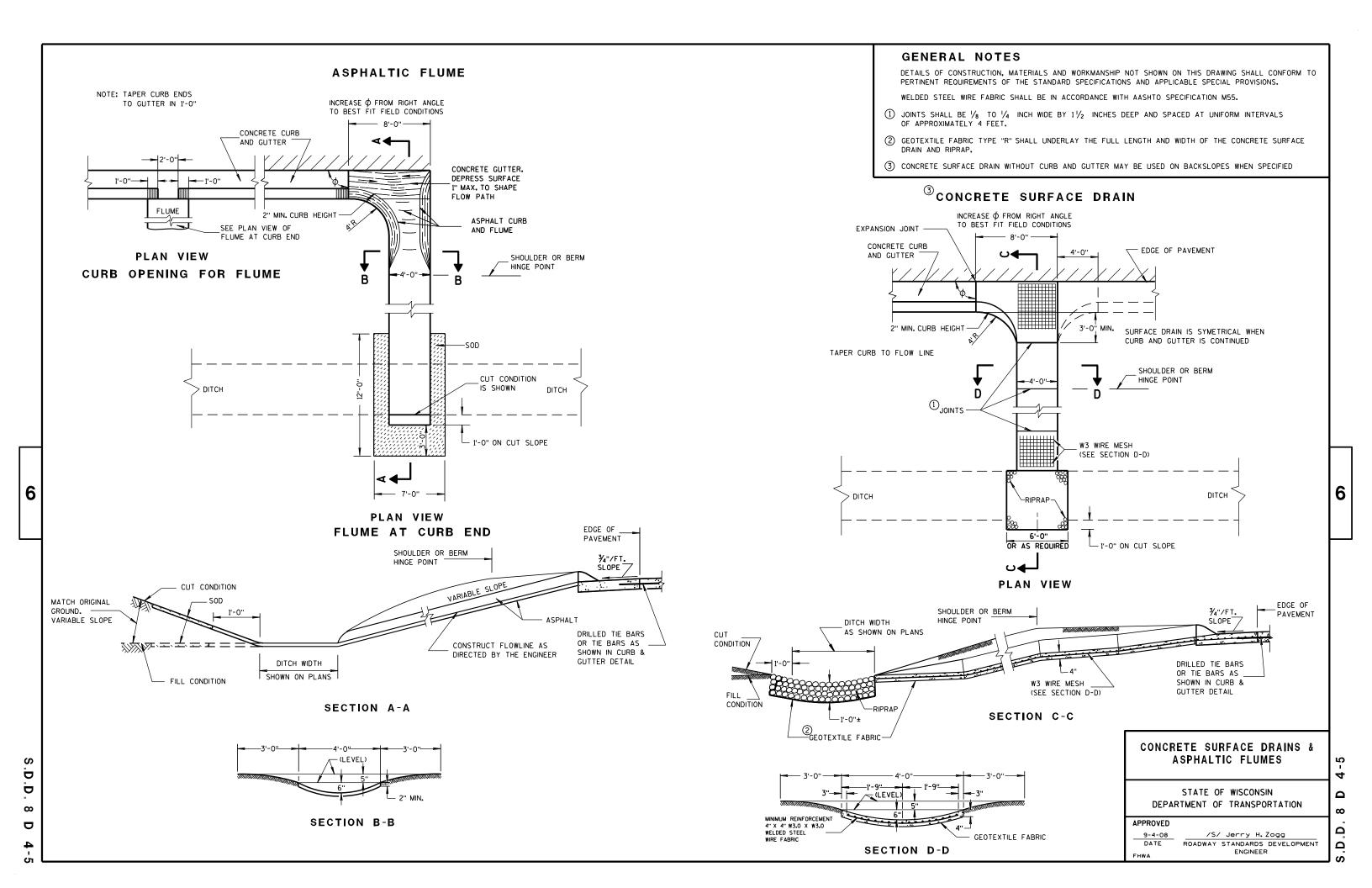
ENGINEER

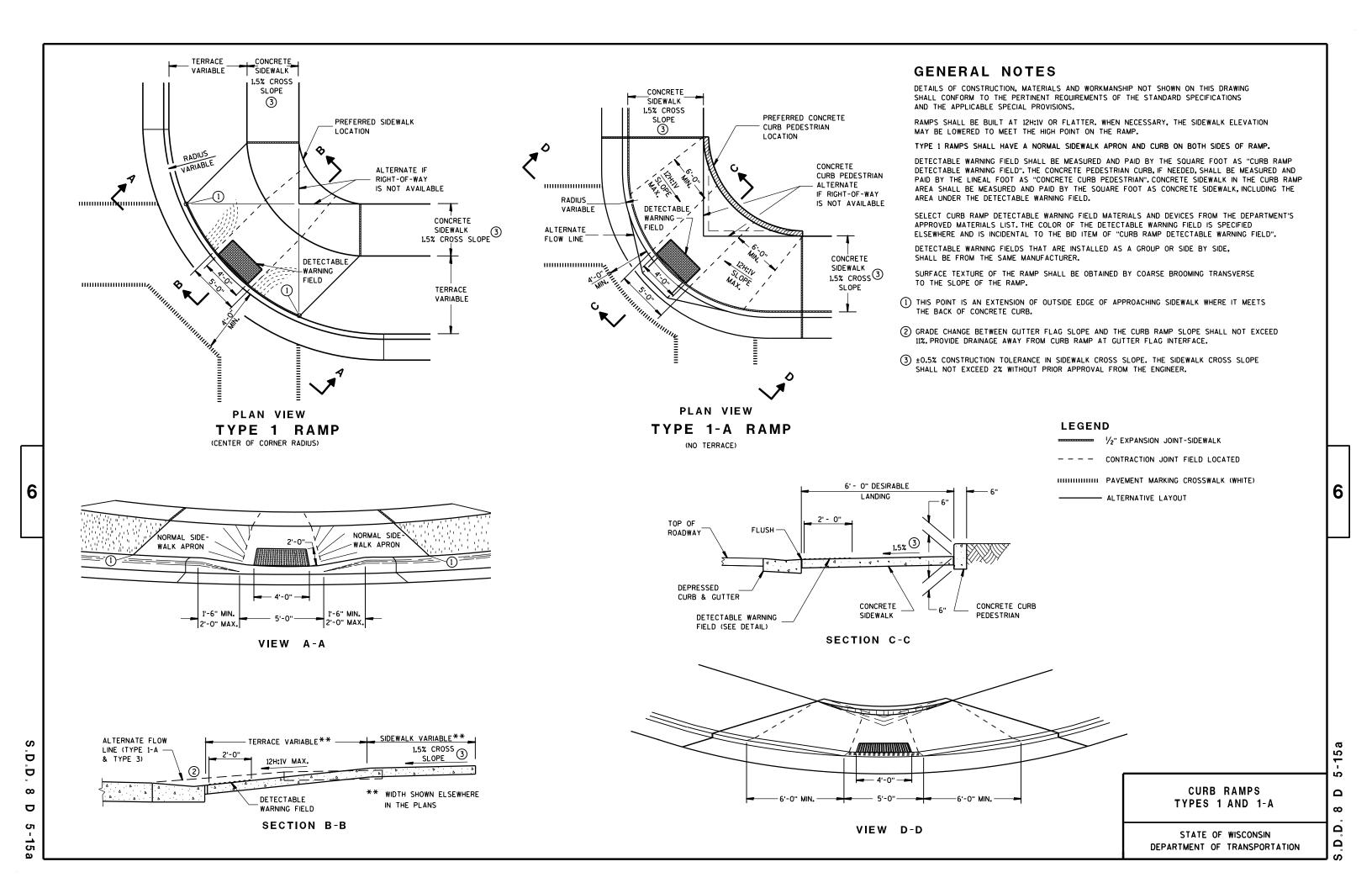
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

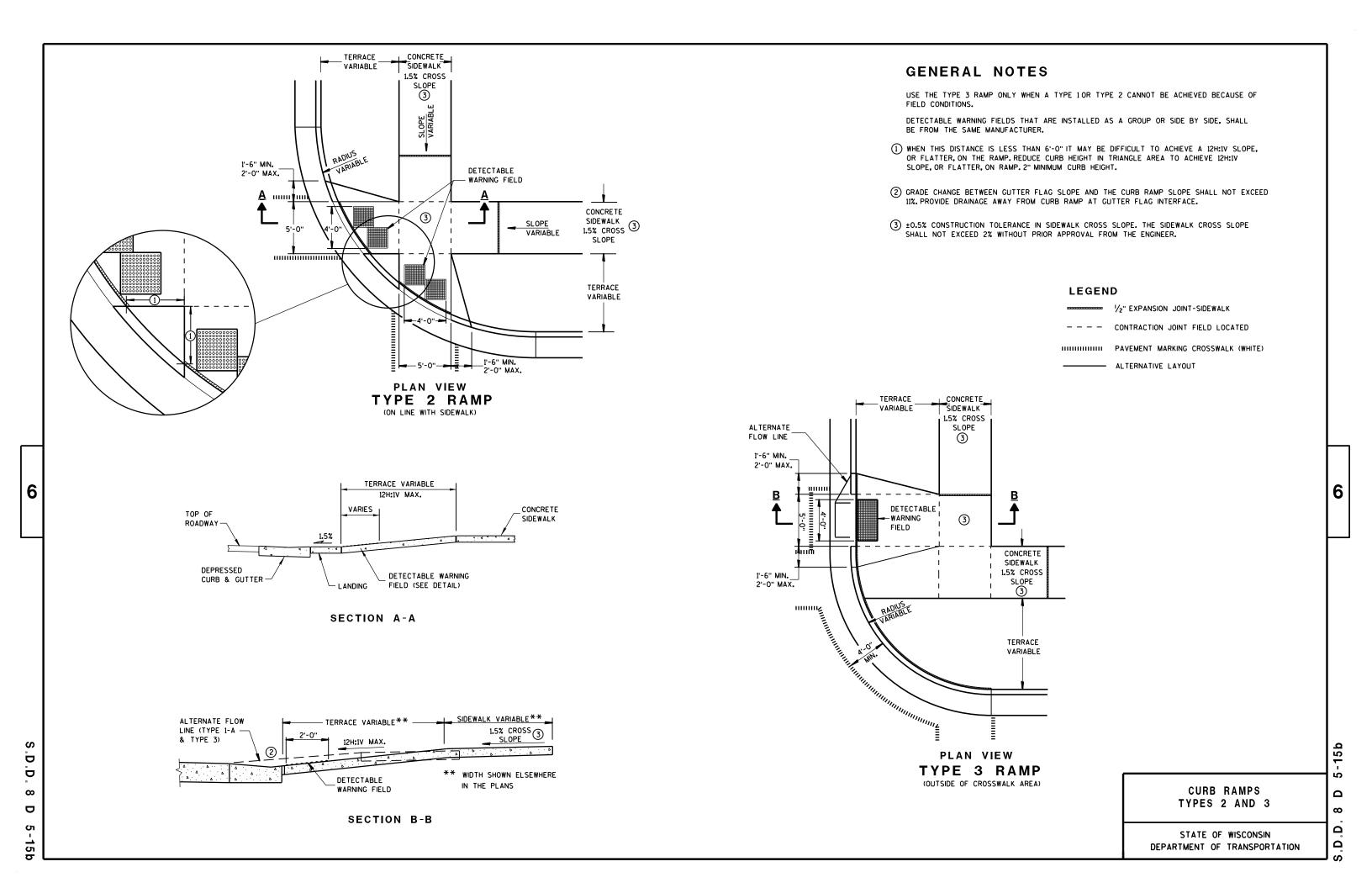
SEPARATE PRECAST REINFORCED

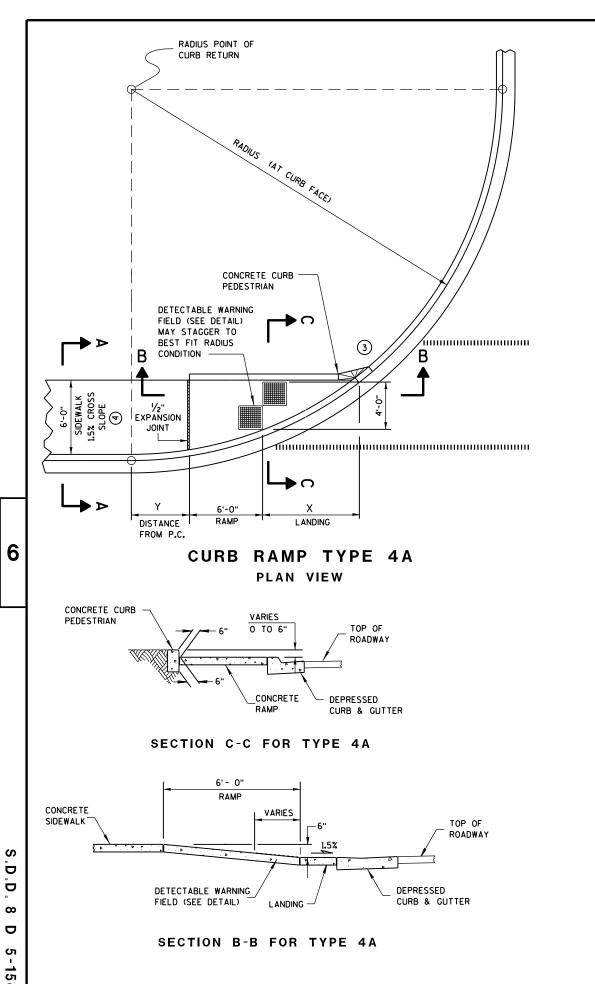
CONCRETE BASE OPTION

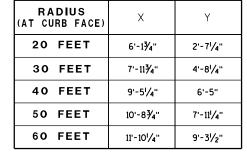












GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE.

4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS

SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

ISOMETRIC VIEW FOR TYPE 4A

ISOMETRIC VIEW FOR TYPE 4A1

₩ 1/2" EXPANSION JOINT-SIDEWALK

HIHIHIHIH PAVEMENT MARKING CROSSWALK (WHITE)

CONTRACTION JOINT FIELD LOCATED

CURB RAMPS

TYPES 4A AND 4A1

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

LEGEND

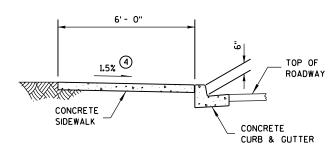
OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

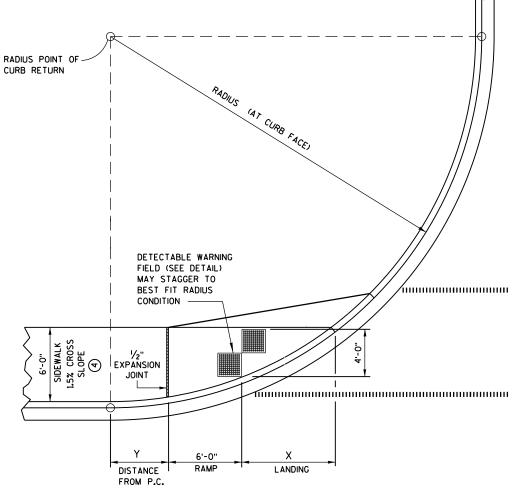
(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

SHALL BE FROM THE SAME MANUFACTURER.

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

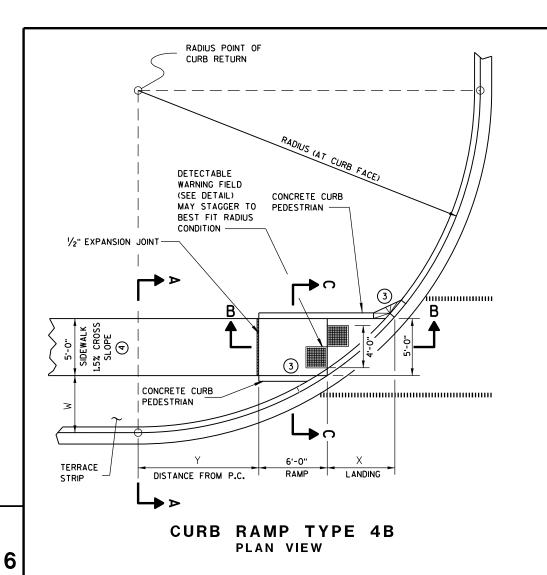


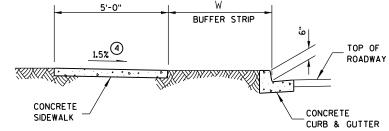
CURB RAMP TYPE 4A1
PLAN VIEW

15c

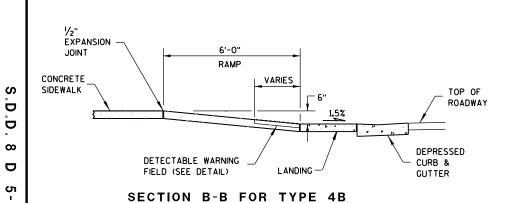
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SECTION A-A FOR TYPE 4B



LEGEND

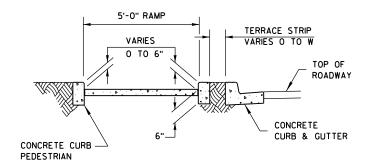
/2" EXPANSION JOINT-SIDEWALK

---- CONTRACTION JOINT FIELD LOCATED

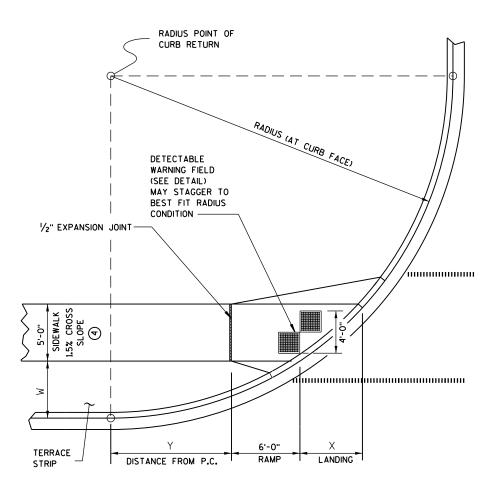
HIHIHIHIH PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS	W = 3' - 0"		W = 4' - ∅"		W = 5' - Ø"		W = 6' - Ø"		W = 7' - 0"	
(AT CURB FACE)	X	Y	X	Υ	X	Y	X	Y	X	Y
20 FEET	5'-51/2"	4'-61/2"	4'-81/2"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-31/2"	3'-11/2"	9'-21/2"
30 FEET	7'-3¾"	7'-1"	6'-51/2"	8'-11'/2"	5'-91/4"	10'-7"	5'-21/2"	12'-0"	4'-8¾"	13'-3'/4"
40 FEET	8'-91/2"	9'-21/2"	7'-10"	11'-5'/4"	7'-1"	13'-41/2"	6'-5¾"	15'-¾"	5'-111/2"	16'-7'/4"
50 FEET	10'-¾"	11'-3⁄4''	9'-1/4"	13'-7'/4"	8'-21/2"	15'-91/2"	7'-61/2"	17'-9"	6'-11¾"	19'-6'/4"
60 FEET	11'-21/2"	12'-8¾"	10'-¾"	15'-61/2"	9'-21/4"	17'-11¾"	8'-5¾"	20'-1¾"	7'-101/2"	22'-11/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B



CURB RAMP TYPE 4B1
PLAN VIEW

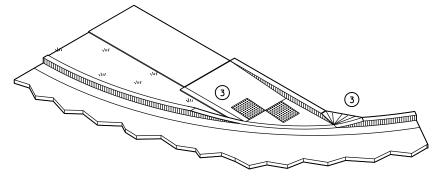
GENERAL NOTES

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

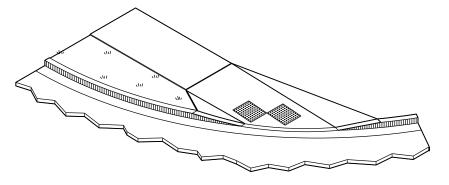
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

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

- (3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4B



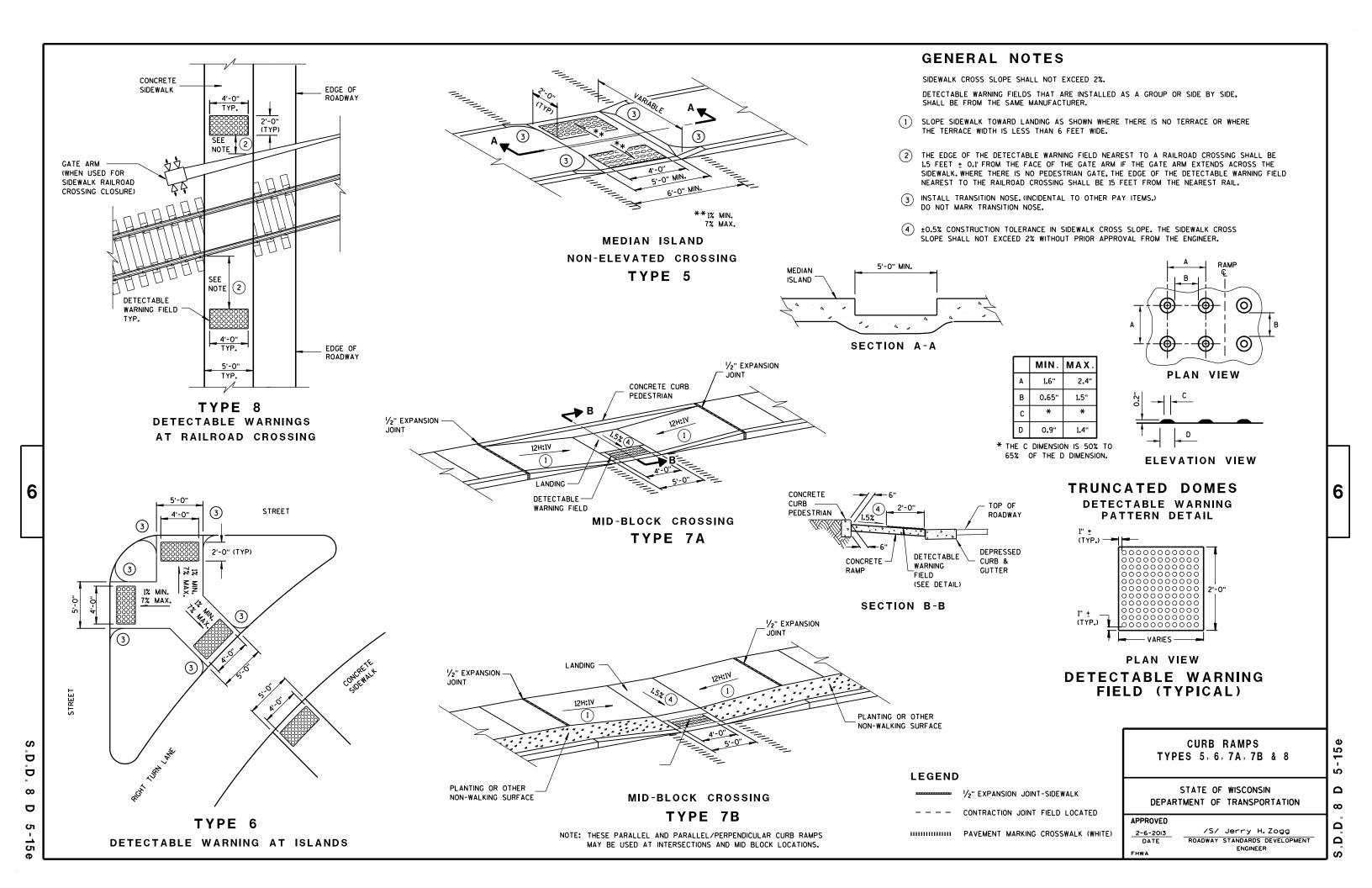
ISOMETRIC VIEW FOR TYPE 4B1

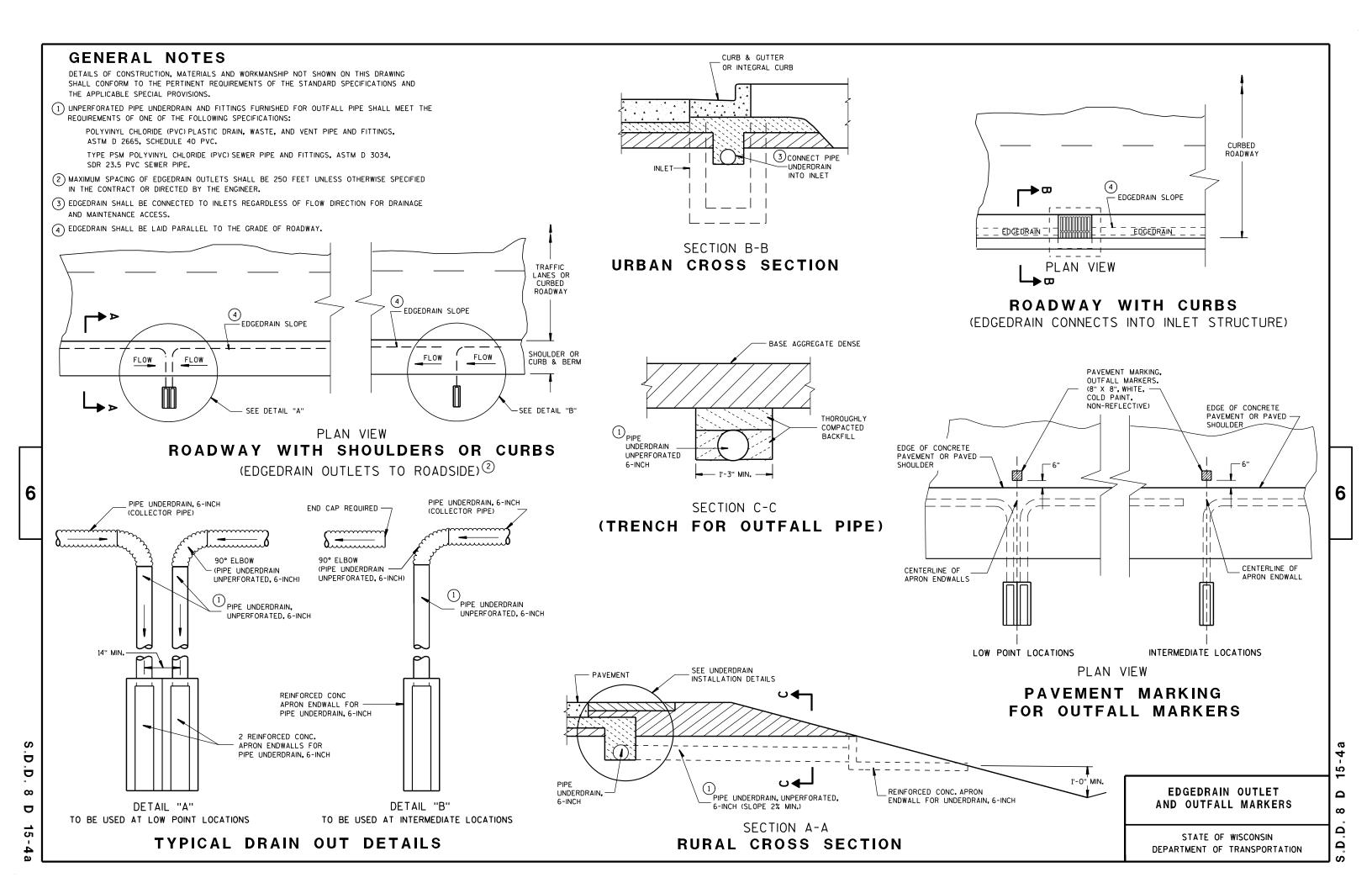
CURB RAMPS Type 4B and 4B1

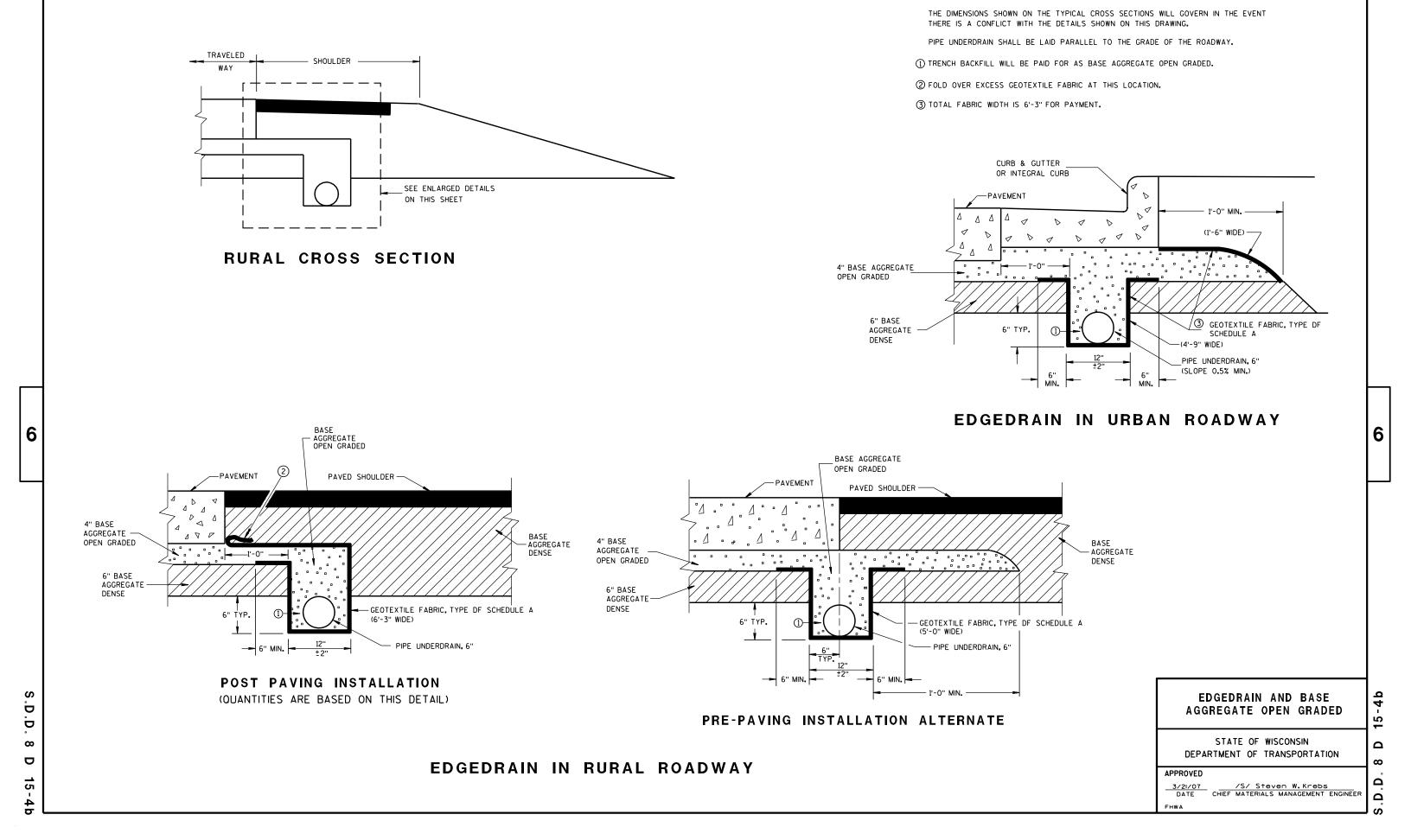
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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GENERAL NOTES

RURAL CROSS SECTION

SHOULDER

TRAVELED

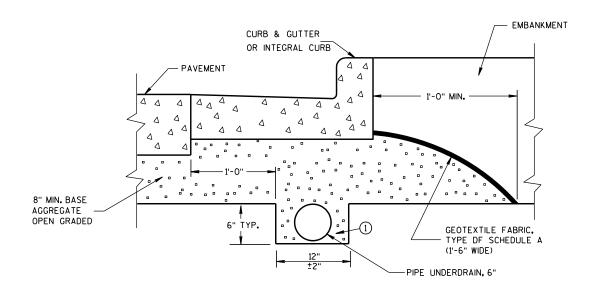
WAY

GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

1 TRENCH BACKFILL WILL BE PAID FOR AS BASE AGGREGATE OPEN GRADED.

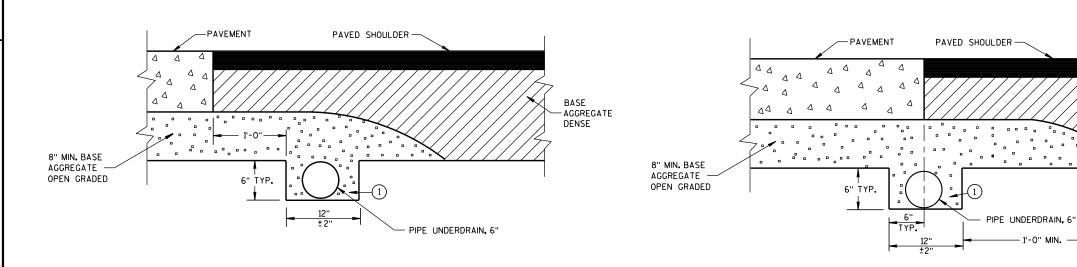


EDGEDRAIN IN URBAN ROADWAY

BASE

DENSE

AGGREGATE



POST PAVING INSTALLATION (QUANTITIES ARE BASED ON THIS DETAIL)

PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

3/21/07 /S/ Steven W. Krebs

DATE CHIEF MATERIALS MANAGEMENT ENGINEER

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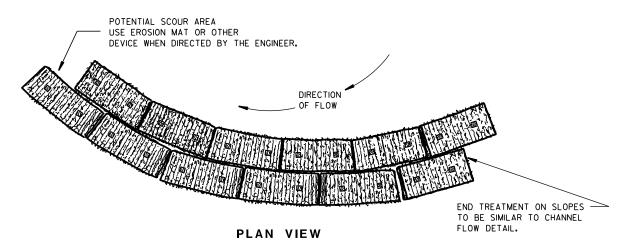
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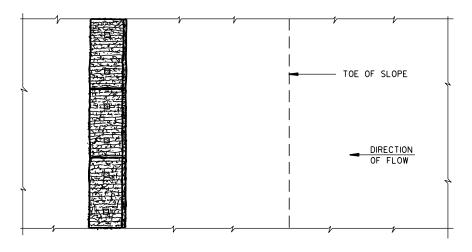
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DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

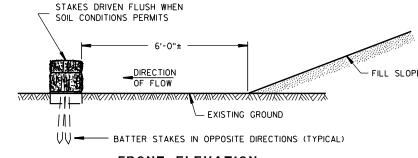
TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.



WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF **EROSION BALES / TEMPORARY** DITCH CHECKS

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 /S/ Beth Connestro
CHIEF ROADWAY DEVELOPMENT ENGINEER

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INLET PROTECTION, TYPE A

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

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

APPROVED

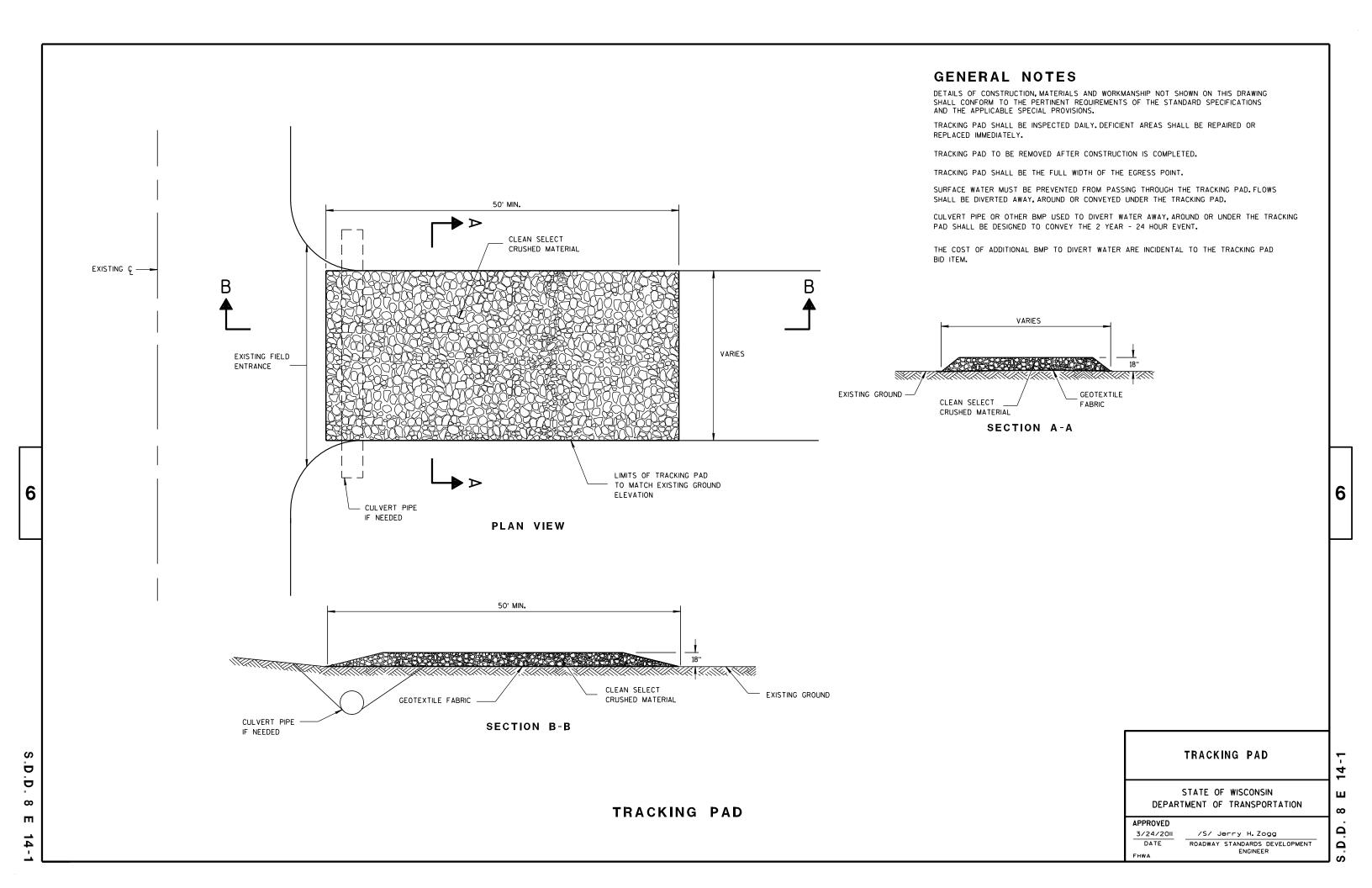
10/16/02

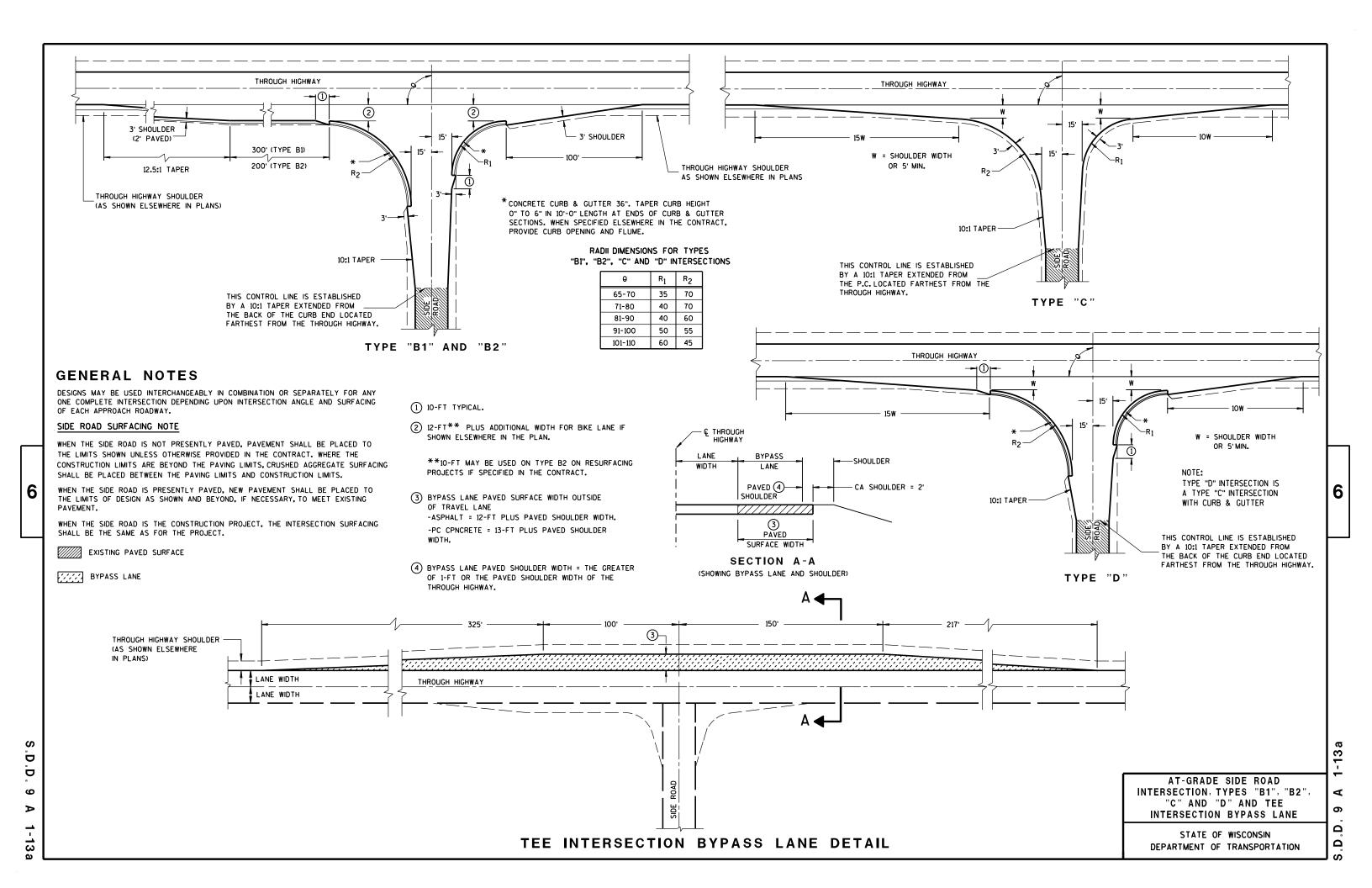
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER 6

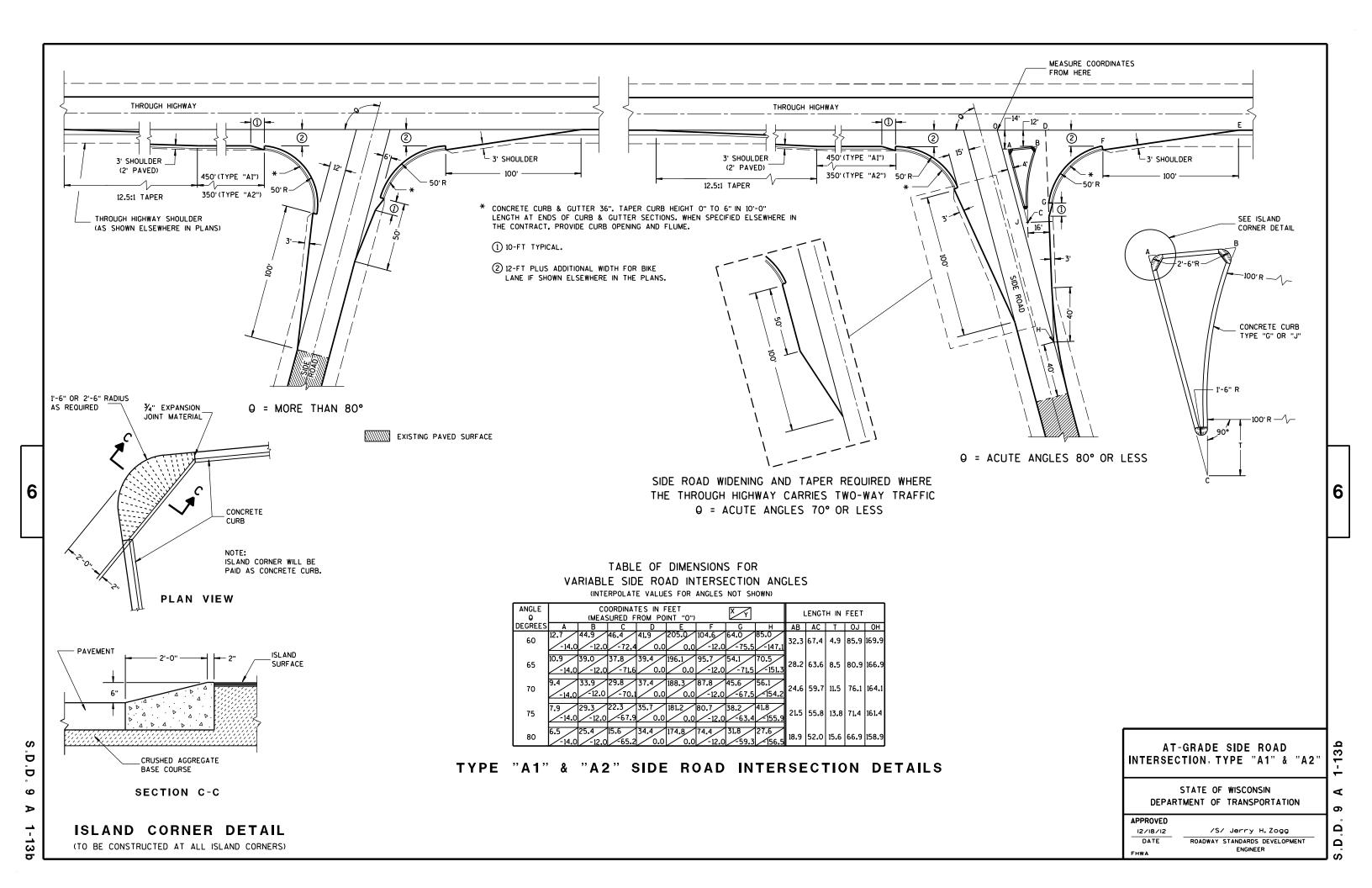
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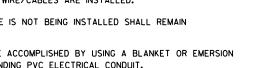
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DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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 REIN-STALLED 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

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.

BOTTOM OF ¼" HOLE PVC CONDUIT-CONDUIT TRENCH BOTTOM OF METALLIC CONDUIT-FOR DRAINAGE CONDUIT TRENCH 1" DIA. X 6" NIPPLE NO. 2 COARSE NO. 2 COARSE AGGREGATE FILL AGGREGATE FILL I'-0" DIA. OR SQUARE → —1'-0" DIA. OR SQUARE —>

NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS

CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT DRAIN SUMP FOR PVC CONDUIT

NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS

CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

ARROW MARK INSCRIBED IN PAVEMENT SURFACE OVER € OF CONDUIT (BOTH ENDS) — 2'-0"*—* — 2'-0" NORMAL PAVEMENT EDGE OF PAVEMENT THICKNESS PAVEMENT OR BACK OF CURB BASE COURSE BACKFILL SLOPE 1/8"/FT. EITHER DIRECTION *DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES CONDUIT, PITCH TO DRAIN WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT UNDER PAVED HIGHWAYS

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6

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4" TO 3/8"

DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER

PLAN VIEW

ARROW MARK

CONDUIT

THE PAVEMENT

EDGE OF

PAVEMENT OR BACK

OF CURB

DIMENSION IN INCHES				COF	RRUGAT	ED ST	EEL P	IPE		
PIPE DIAMETER (INSIDE)	Α	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 ½	20 ½	20 ½	26 ½	26 ½	26 ½
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 ½	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 ½	23 ½
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** TOP OF ORIGINAL CORRUGATED PIPE (3) BOLTS, NUTS & LOCKWASHERS REQUIRED

ELECTRIC

FINAL GRADE

ALL METALLIC CONDUIT

AND THREADED

CUT OPENINGS

THE FIELD

2" PVC PIPE CAP ON BOTH ENDS

WITH 7, 8 1/4" HOLES DRILLED

IN EACH END.

PULL BOX

AS REQUIRED IN

ENDS SHALL BE REAMED

ALL CONDUIT PITCHED

4 TO 8 BRICKS

EQUALLY SPACED

TO DRAIN TO PULL BOXES

2" DRAIN DUCT TO

DITCH OR SEWER

WHEN SPECIFIED

CORRUGATED PIPE EXTENDER

HEAVY DUTY FRAME -

6" MIN.

(TYP.)

AND COVER

WHEN A PULL BOX IS INSTALLED IN CRUSHED

AGGREGATE SHOULDERS, PLACE IT 2-3

2-3 INCHES OF CRUSHED AGGREGATE

NO. 2 COARSE

(SEE SECTION 501

OF THE STANDARD

WIRE AND/OR CABLE.

INSTALL END BELLS (U.L. LISTED FOR

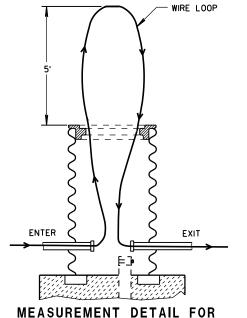
CONDUIT BEFORE INSTALLATION OF

ELECTRICAL USE) ON ALL NONMETALLIC

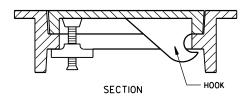
SPECIFICATIONS)

AGGREGATE

INCHES BELOW GRADE AND COVER IT WITH

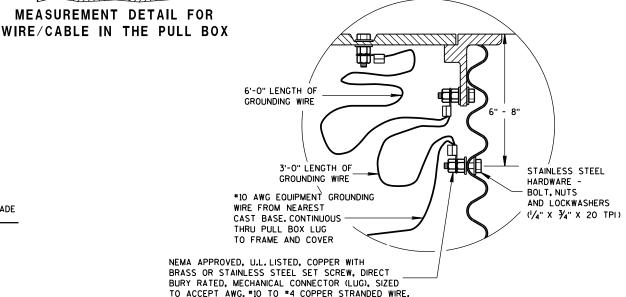


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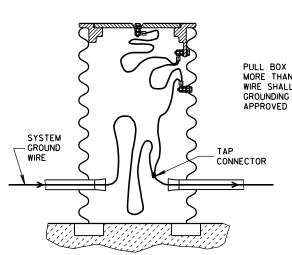


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

PULL BOX

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 CONTRACT.

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

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

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

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

TRAFFIC LOADS.

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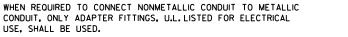
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IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL. THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE.
BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1FOOT OR LESS. A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL

BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE

(GROUND ROD) FOR TYPE 1. TYPE 2. TYPE 5. AND TYPE 6 BASES.

GENERAL NOTES (CONTINUED)

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE

OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

FORMING DETAIL

1'-8"

a)

- FORM

FORMING SHALL BE

CONCRETE HAS SET

REMOVED AFTER

FORM DEPTH SHALL BE

GRADE ON THE LOWER

SIDE OF BASE

4" MAX.

CONDUIT WITHIN

6" DIA.

ANCHOR RODS SHALL BE

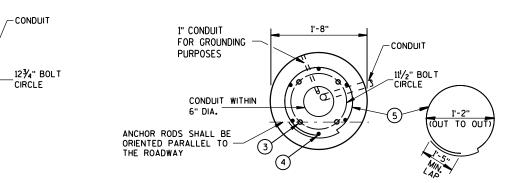
ORIENTED PARALLEL TO

1" CHAMFER ALL AROUND

FORM ALL EXPOSED

CONCRETE, PROVIDE

NO MORE THAN 6" BELOW



QUANTITY

REQUIREMENTS

ARDS OF CONCRETE

APPROX. CUBIC

LBS. OF HOOP

LBS. OF VERTICAL

BAR STEEL

BAR STEEL

CONCRETE BASE TYPE

0.57

23

60

0.40

NONE

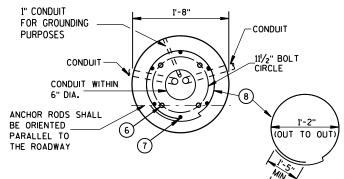
NONE

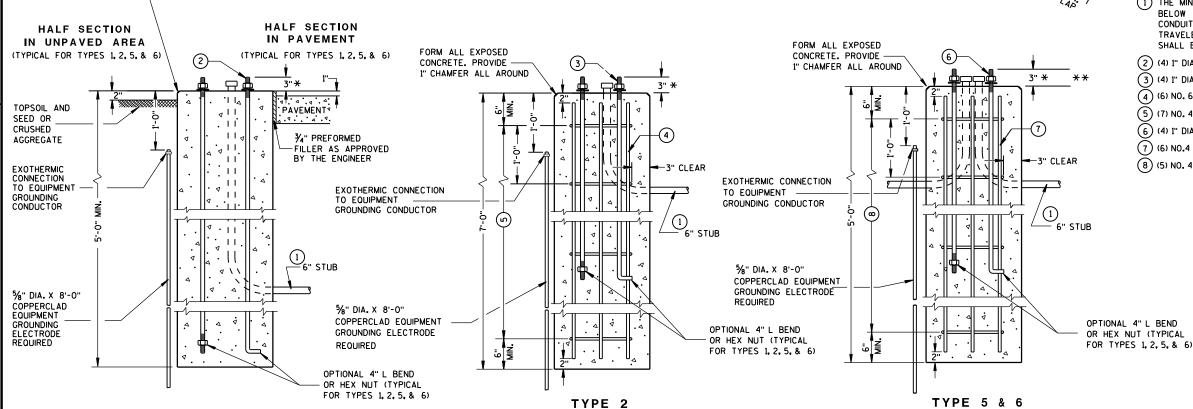
5 & 6

0.40

16

18





CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 31/4" 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.

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

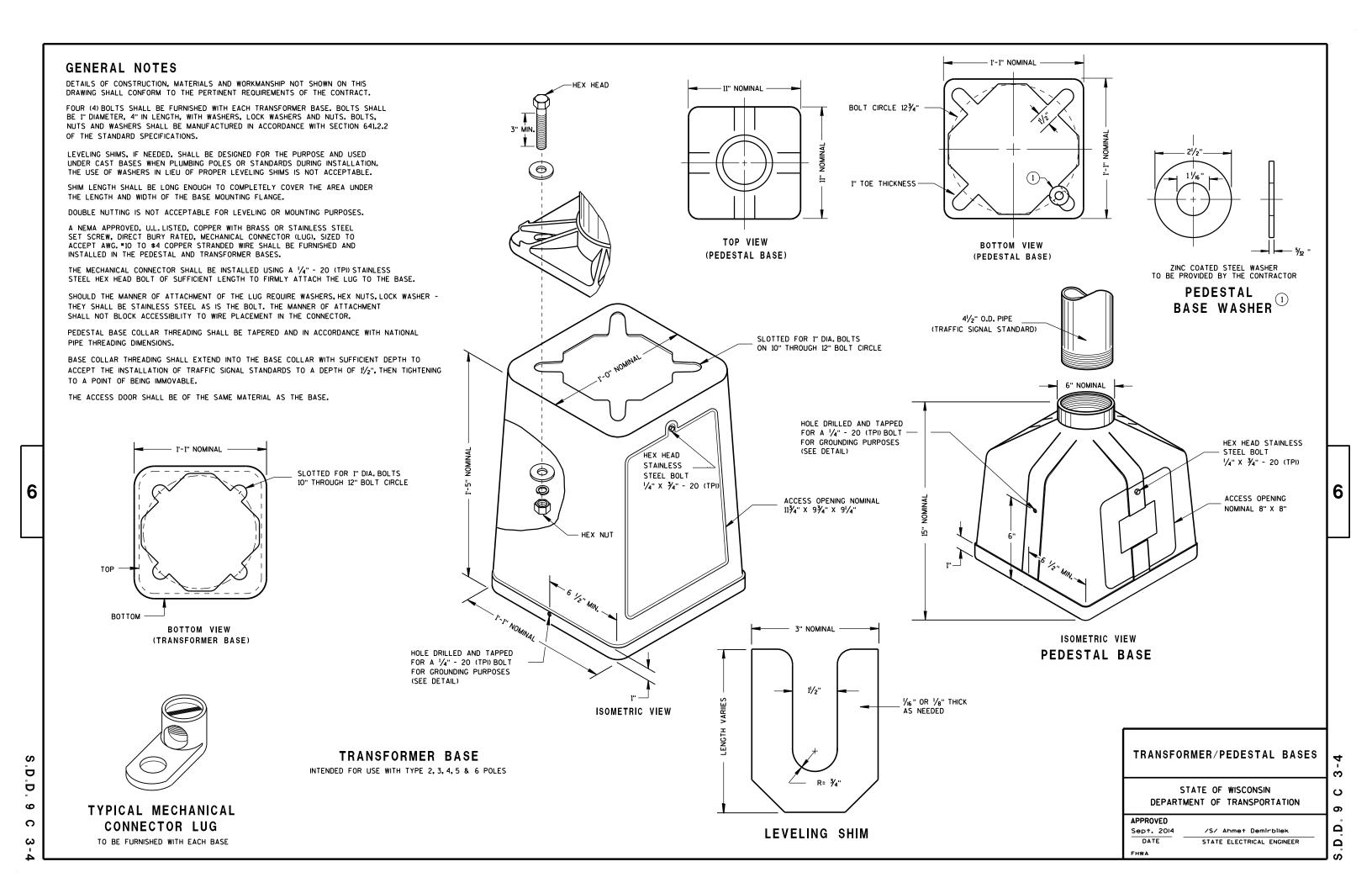
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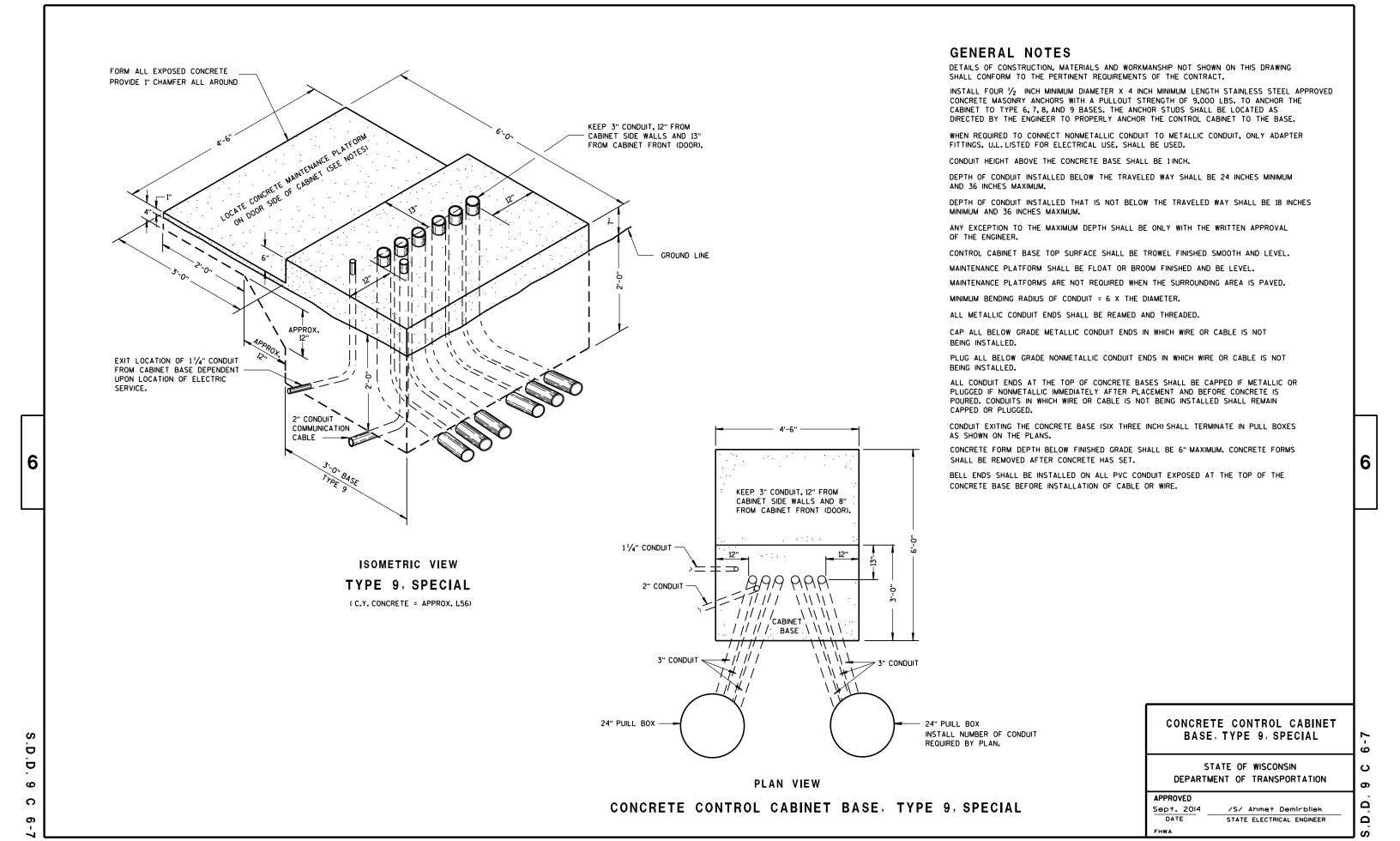
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DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BREAKAWAY BASES (WHERE REQUIRED) WILL BE MEASURED AND PAID AS SEPARATE ITEMS OF WORK IN ADDITION TO THE LIGHT POLE.

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

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

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

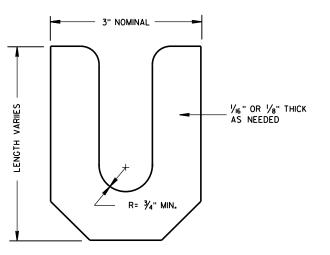
A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. *10 TO \$4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE TRANSFORMER BASE.

THE MECHANICAL CONNECTOR (GROUNDING LUG) SHALL BE INSTALLED USING THE TAPPED HOLE PROVIDED BY THE MANUFACTURER, THE MOUNTING BOLT HEXHEAD), NUT, WASHER AND LOCK WASHER SHALL BE STAINLESS STEEL, SIZED TO FIT THE THREADING AND HOLE SIZE, AND BE OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD A GROUNDING LUG MOUNTING HOLE NOT BE PROVIDED, THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" X 3/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE. IT SHALL BE MOUNTED IN THE SAME LOCATION AS IS SHOWN ON THE DRAWING.

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

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



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE FOR 15" BOLT CIRCLE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED			
Sept. 2014	/\$/	Ahmet	Demirb

STATE ELECTRICAL ENGINEER DATE

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BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

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

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

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

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

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

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

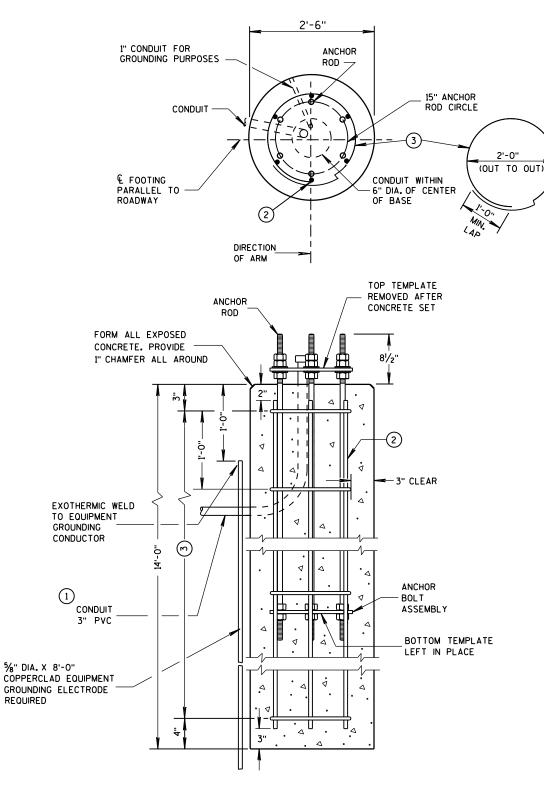
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

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

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

- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.
- (2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.
- (3) (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

CONCRETE MASONRY	fc=3,500 p).S.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000	p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000	p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000	p.s.i.



CONCRETE BASE TYPE 10 (FOR TYPE 9 & 10 POLES)

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

€ FOOTING PARALLEL TO-1/2" THICK TEMPLATES ROADWAY 11/2" ANCHOR RODS DIRECTION TOP AND BOTTOM TEMPLATES TOP TEMPLATE REMOVED AFTER CONCRETE SET TOP OF CONCRETE THREAD TOP 81/2" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 51/2" FOR 2 NUTS PER ANCHOR ROD. HOT-DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR RODS (AASHTO M111) AND HOT-DIP NUTS AND WASHERS (AASHTO M232). USE ZINC COATED NUTS MANUFACTURED WITH (6) - 1¹/₂" X 50" SUFFICIENT ALLOWANCE TO ALLOW NUTS ANCHOR RODS TO RUN FREELY ON THE THREADS. BOTTOM TEMPLATE LEFT IN PLACE THREAD BOTTOM OF ANCHOR ROD 51/2" ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10

ANCHOR ASSEMBLY

NO MORE THAN 4" BELOW

GRADE ON THE LOWER

SIDE OF BASE

4" MAX.

ANCHOR ROD CIRCLE

DIAMETER = 15"

APPROX. CUBIC YARDS OF CONCRETE 2.5

VARDS OF CONCRETE

LBS. OF HOOP
BAR STEEL

LBS. OF VERTICAL
BAR STEEL

122

CONCRETE BASE TYPE 10

TROWEL FINISH

OF CONCRETE

2" MAX.-

- FORM

4" MAX.

FORMING DETAIL

AND LEVEL TOP

FORMING SHALL BE REMOVED AFTER

CONCRETE HAS SET

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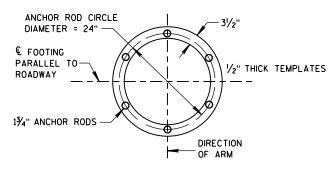
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DATE STATE ELECTRICAL ENGINEER

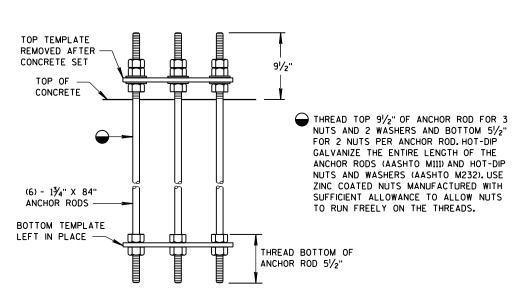
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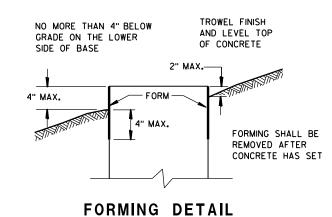


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



CONCRETE BASE TYPE 13

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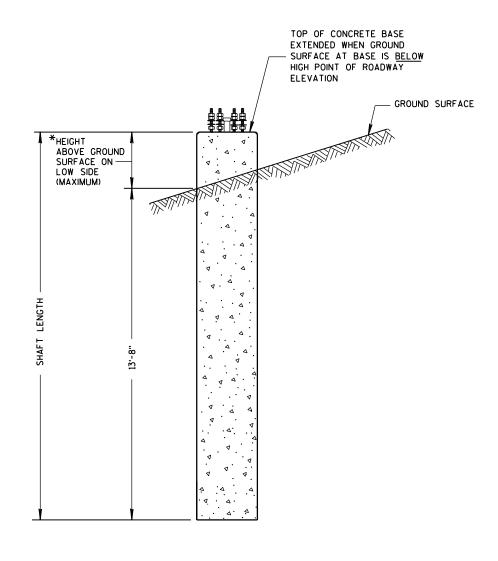
REINFORCEMENT AND CONCRETE QUANTITIES ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF *6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS.OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141

REINFORCEMENT AND CONCRETE QUANTITIES ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF *6 VERTICAL REINF.	NO.OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476

TOP OF CONCRETE BASE EXTENDED WHEN GROUND SURFACE AT BASE IS BELOW



CONCRETE BASE TYPE 10 (EXTENDED)

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HIGH POINT OF ROADWAY ELEVATION GROUND SURFACE *HEIGHT ABOVE GROUND SURFACE ON-LOW SIDE (MAXIMUM) 1'-9" MIN. & & FOOTING TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

CONCRETE BASE

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APPROVED 11-26-2013 /S/ Ahmet Demirbilek DATE STATE ELECTRICAL ENGINEER FHWA

CONCRETE BASE TYPE 13 (EXTENDED)

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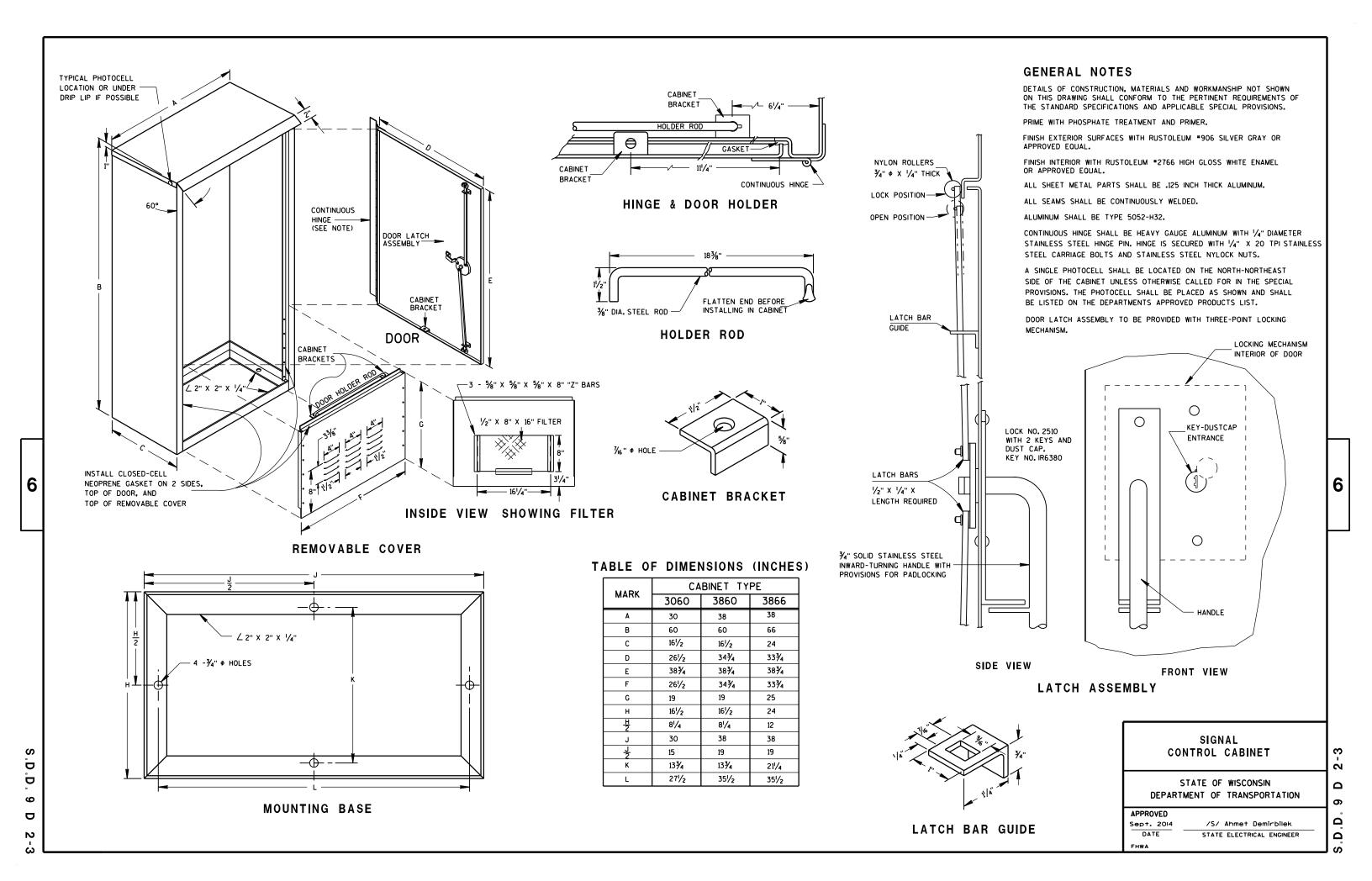
/S/ Ahmet Demirbilek

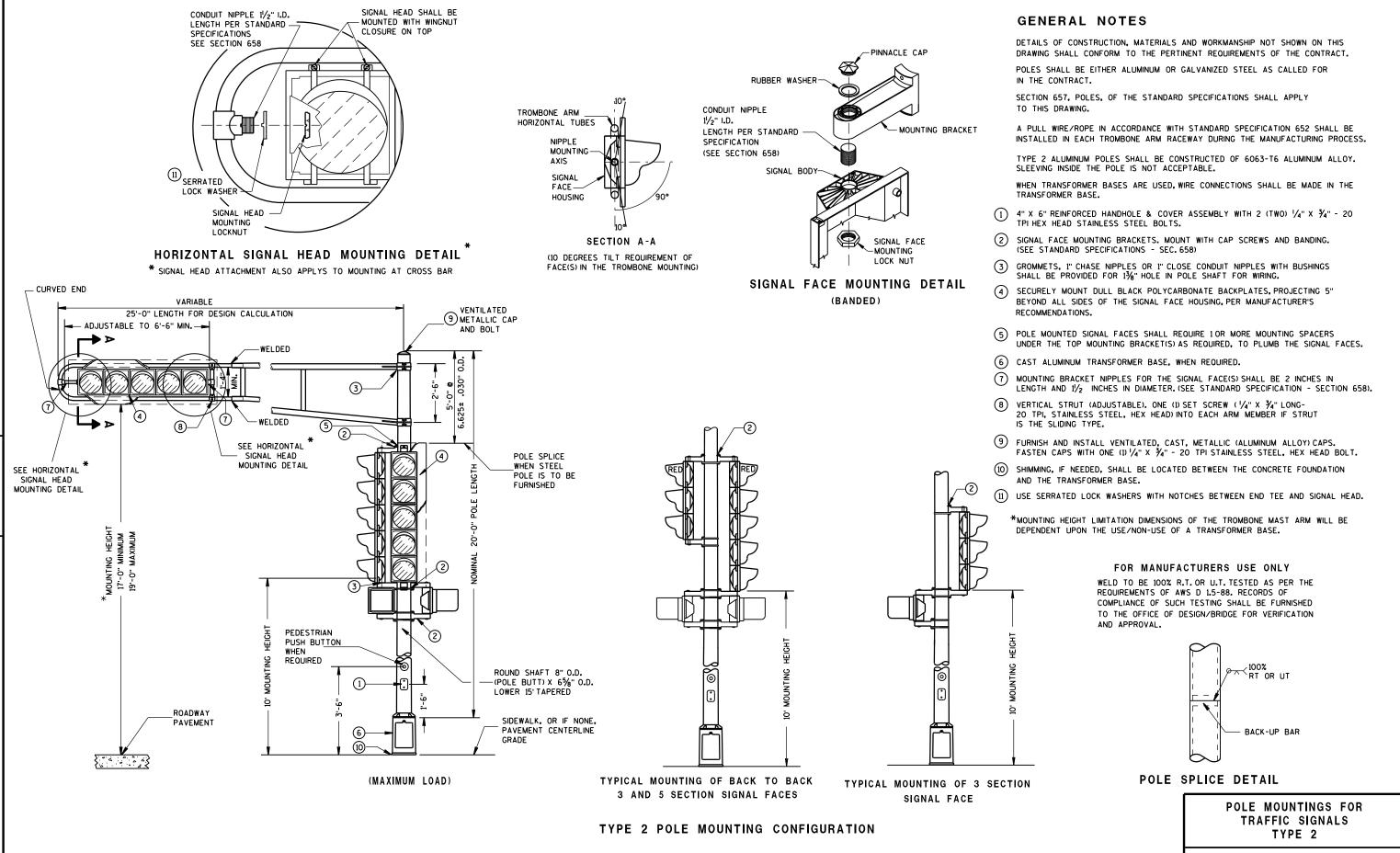
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STATE OF WISCONSIN

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 CONTRACT.

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

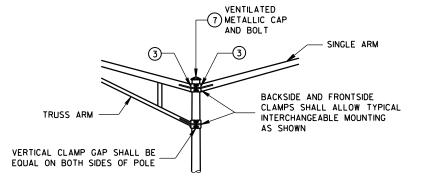
POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 23/6 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.

- 1 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- (2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS SEC. 658).
- GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1%" 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) 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.

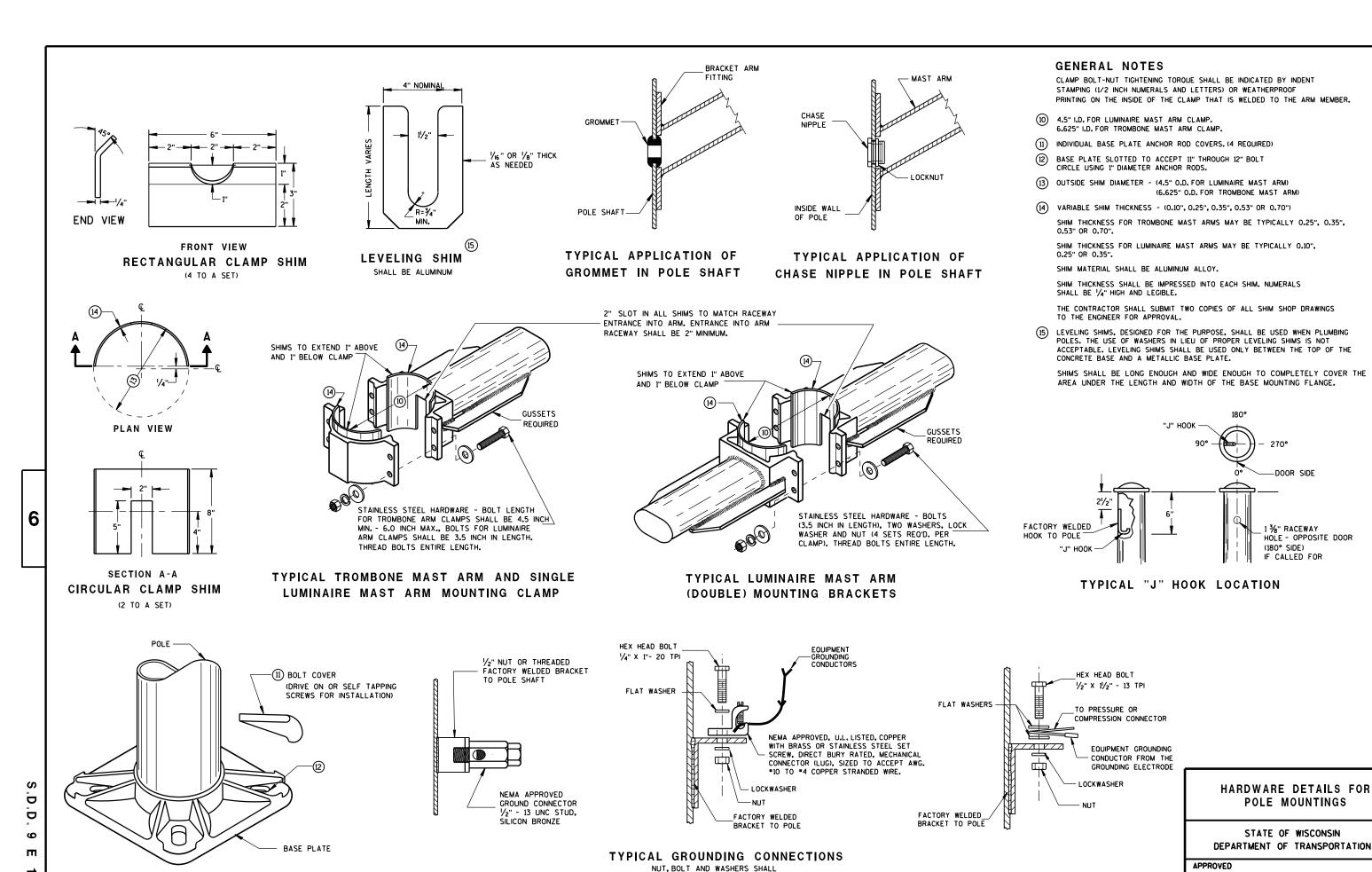


INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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BE STAINLESS STEEL

BASE PLATE

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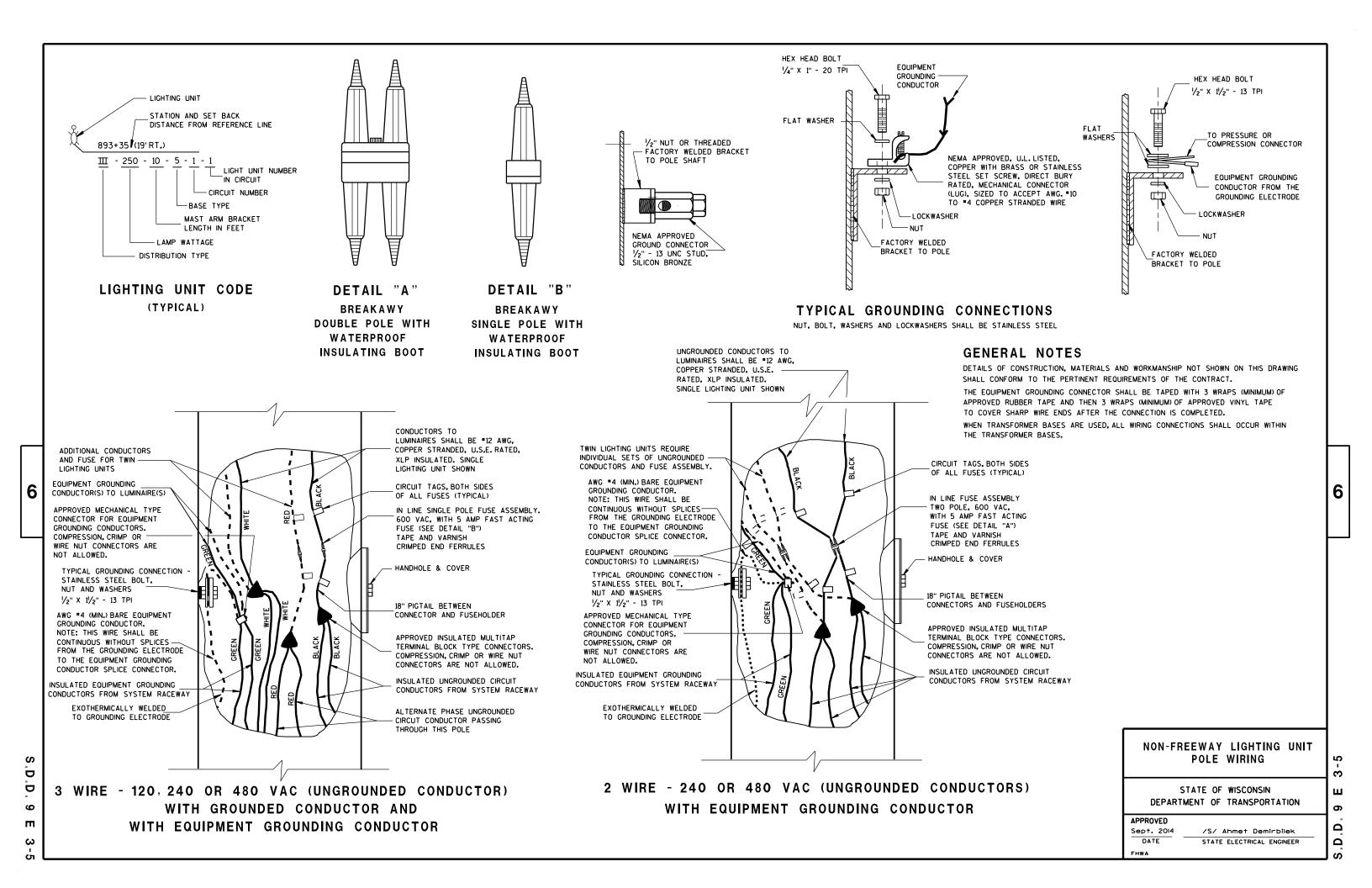
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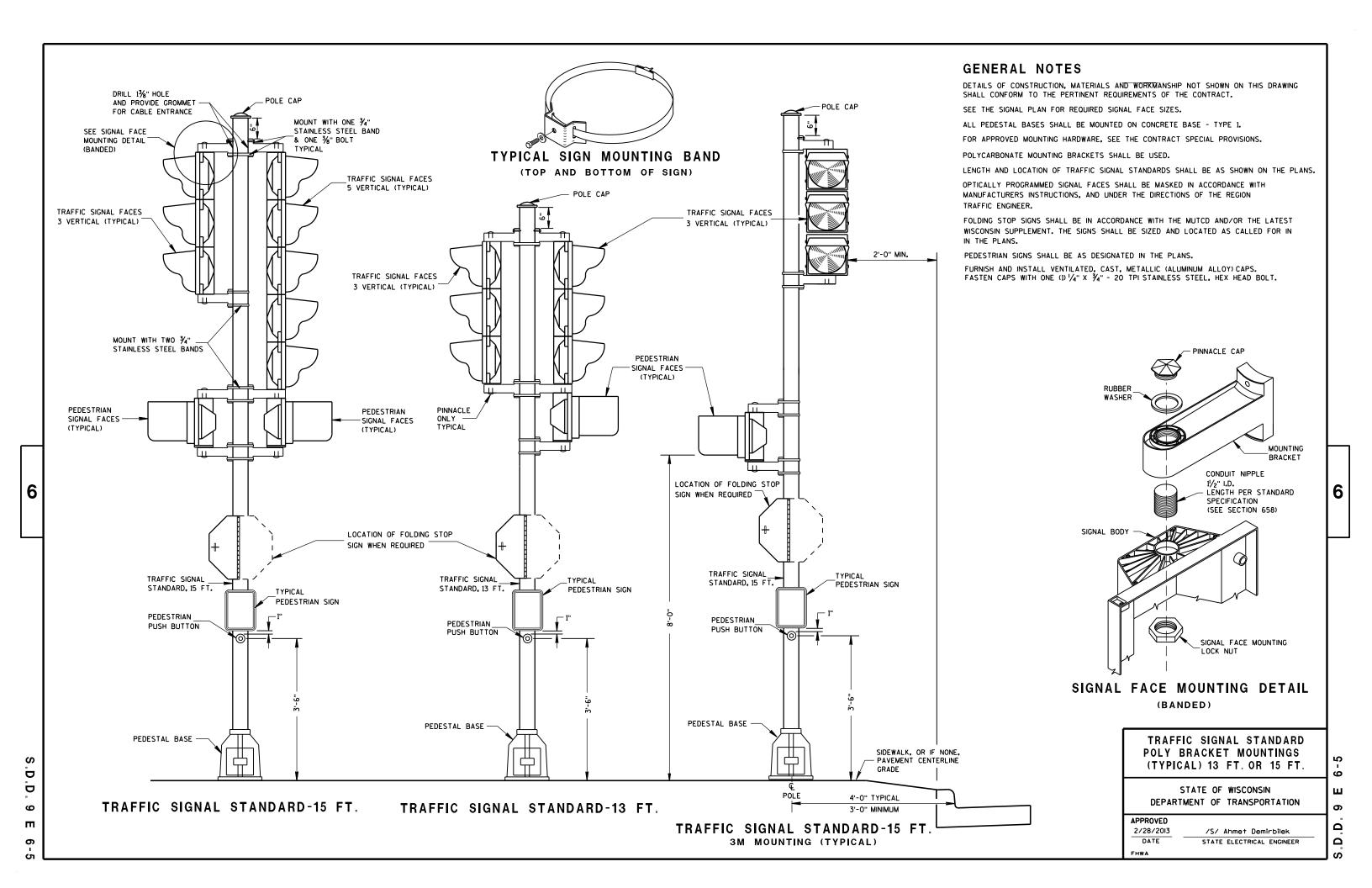
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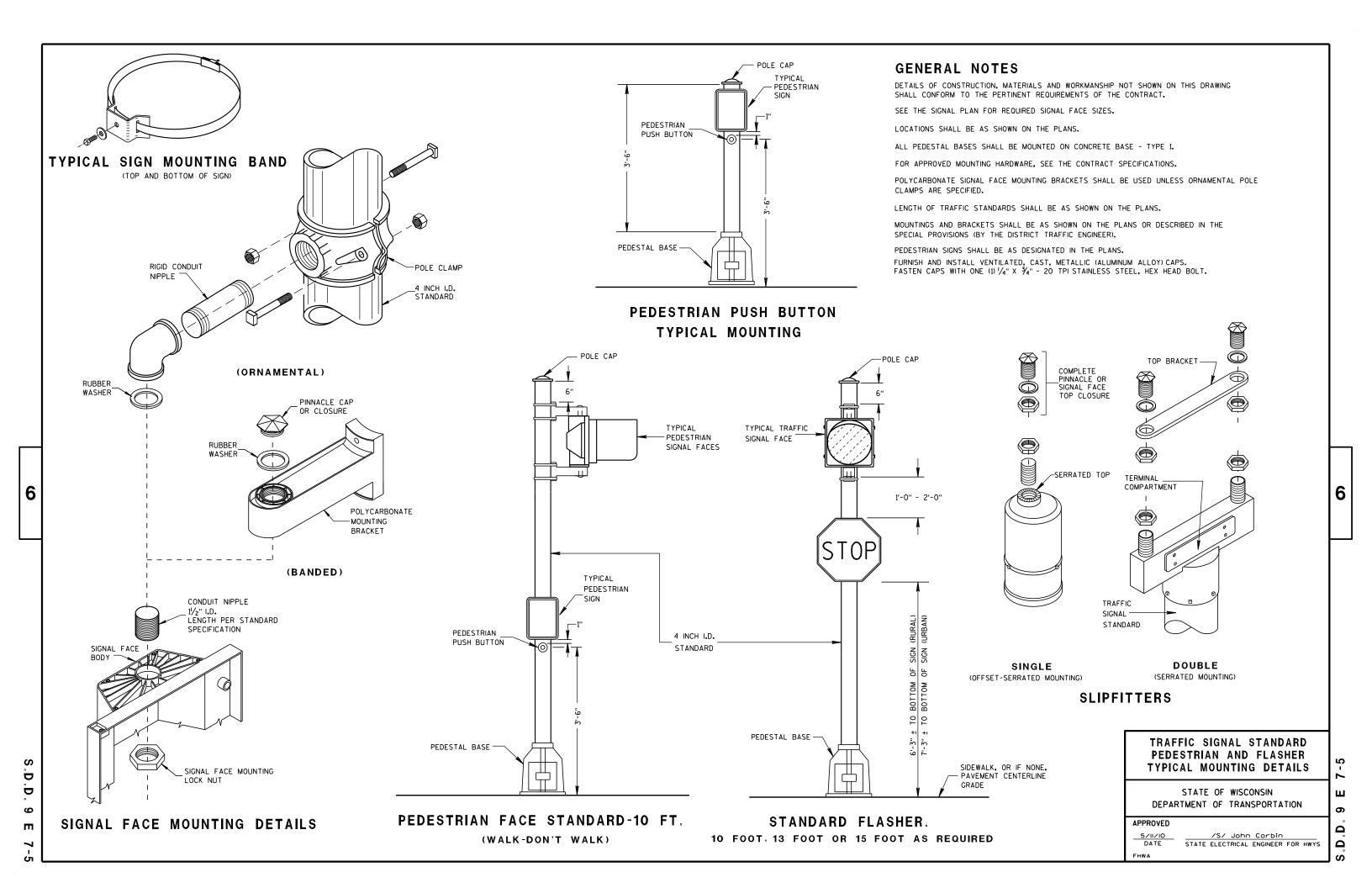
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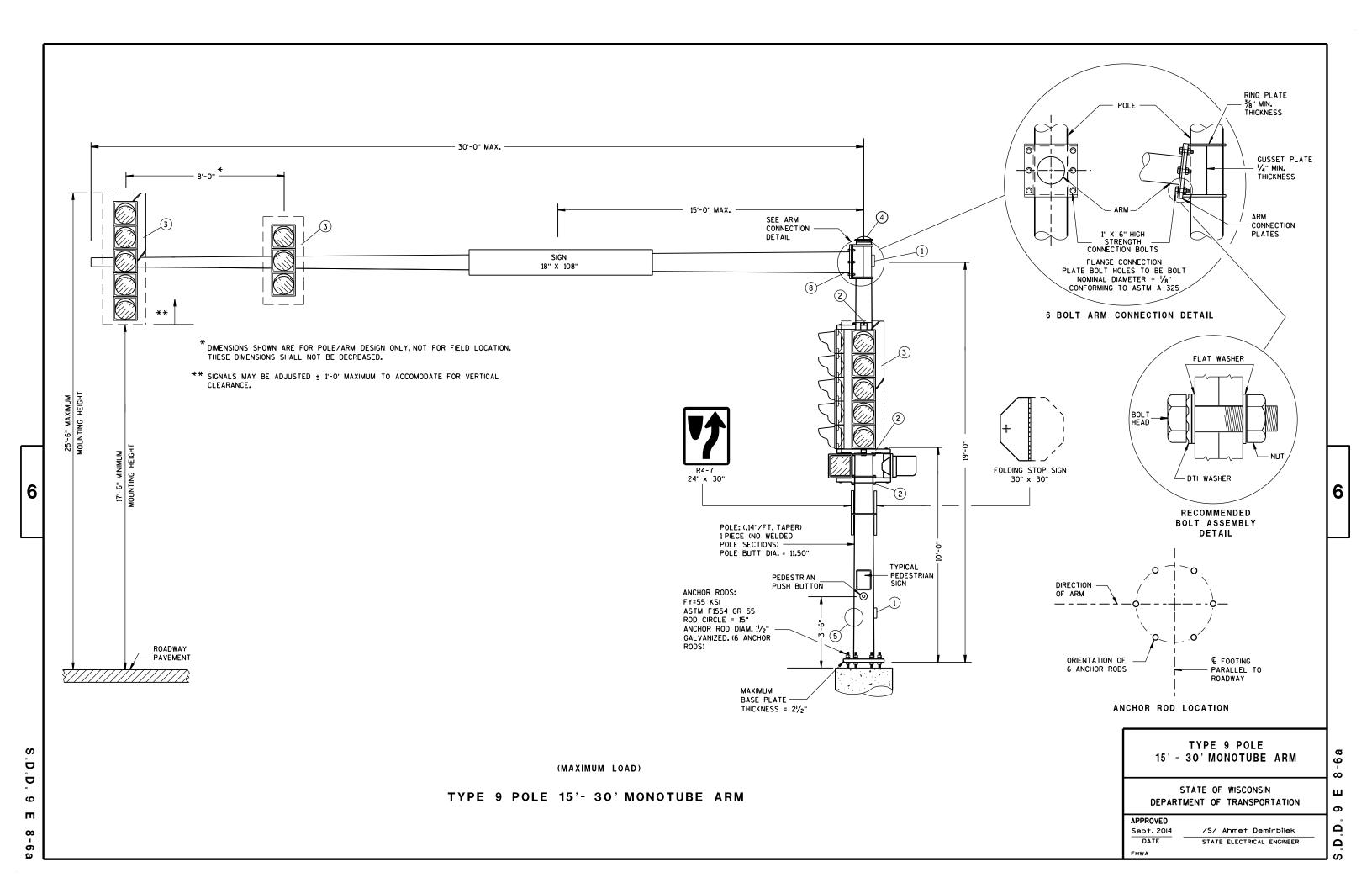
/S/ Ahmet Demirbilek

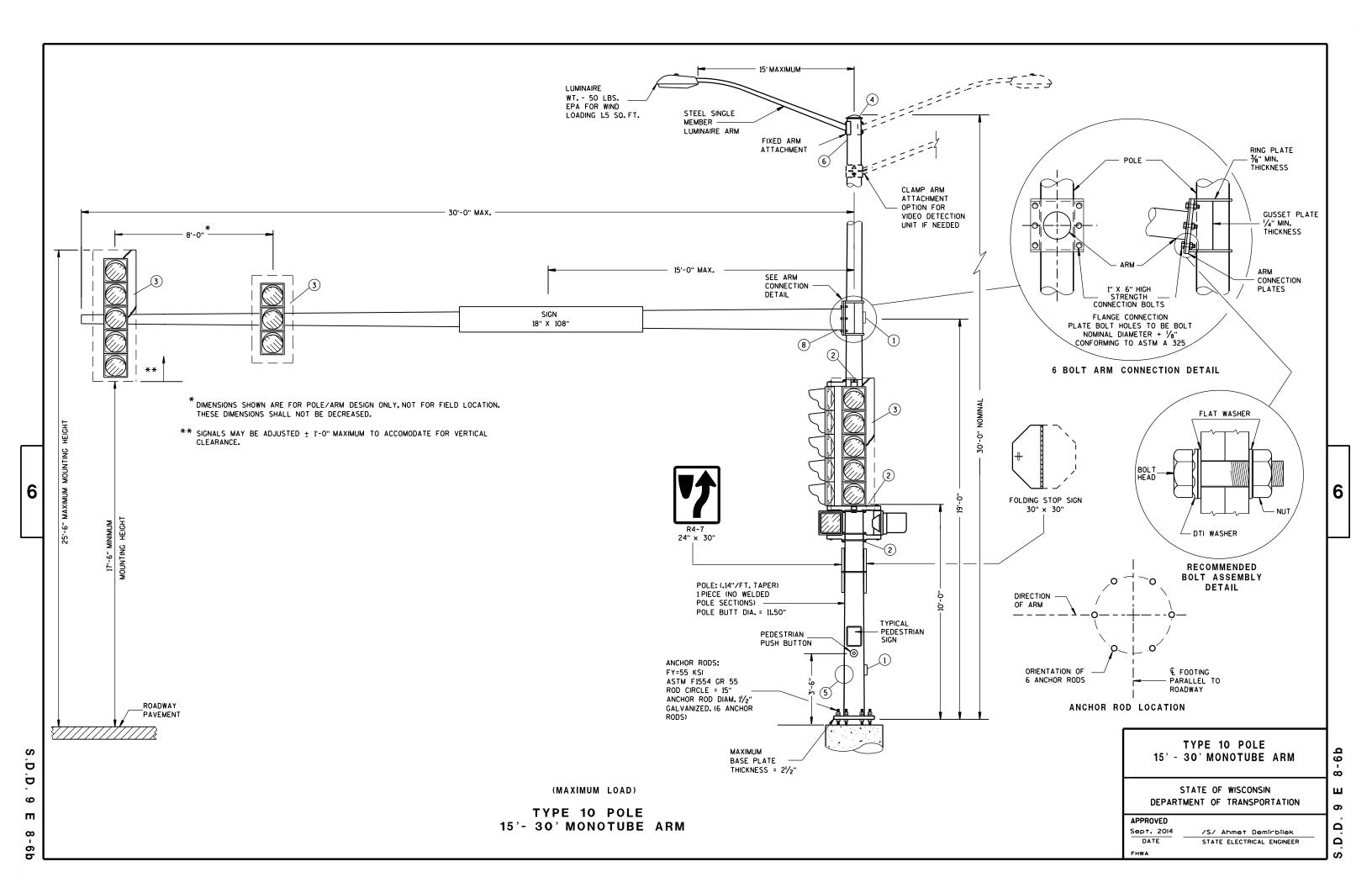
STATE ELECTRICAL ENGINEER

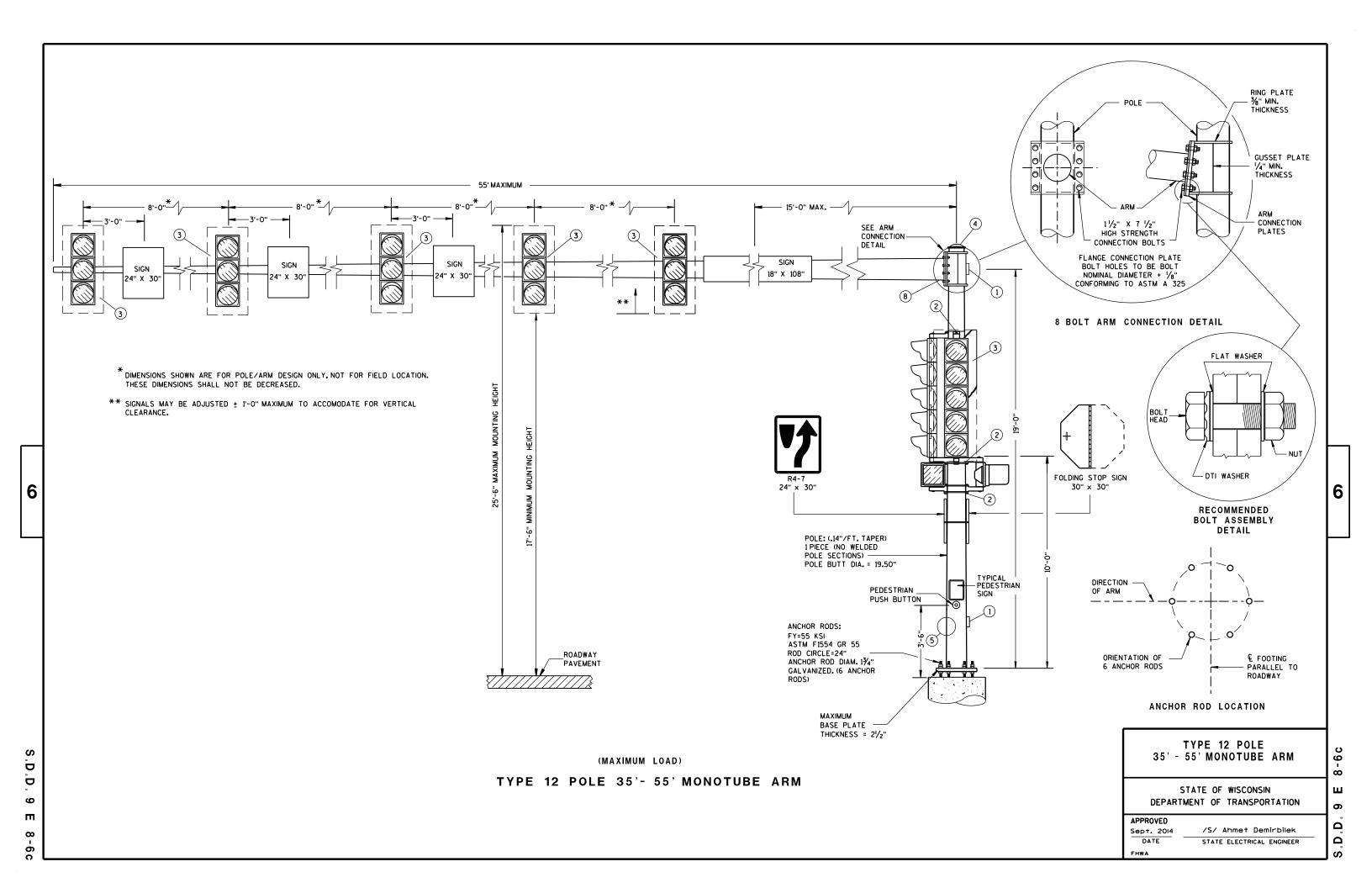


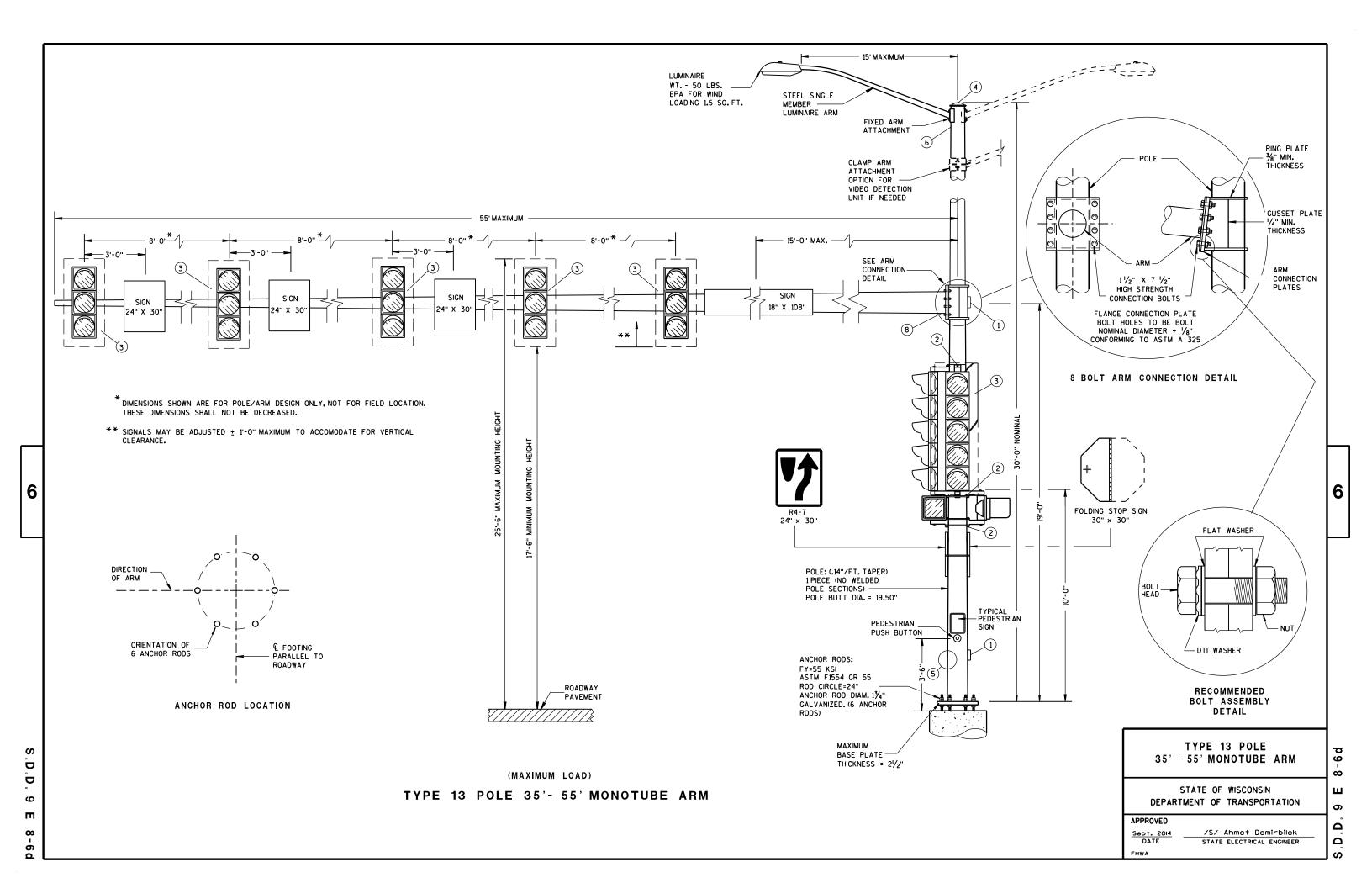












POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

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 AASHTO 2013 6TH EDITION 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 I FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH $\frac{3}{4}$ " 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.

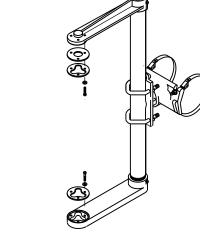
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- 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.

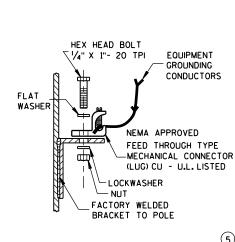
MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER .ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

8 FACTORY DRILLED 1/2" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



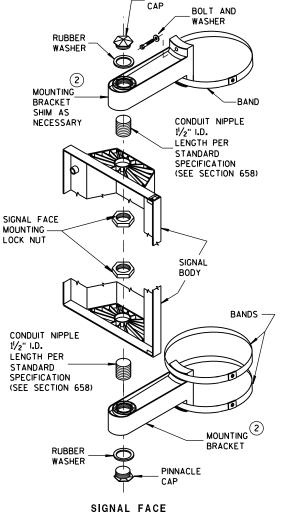
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)



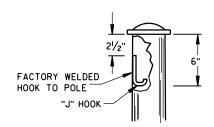
TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



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VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT

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

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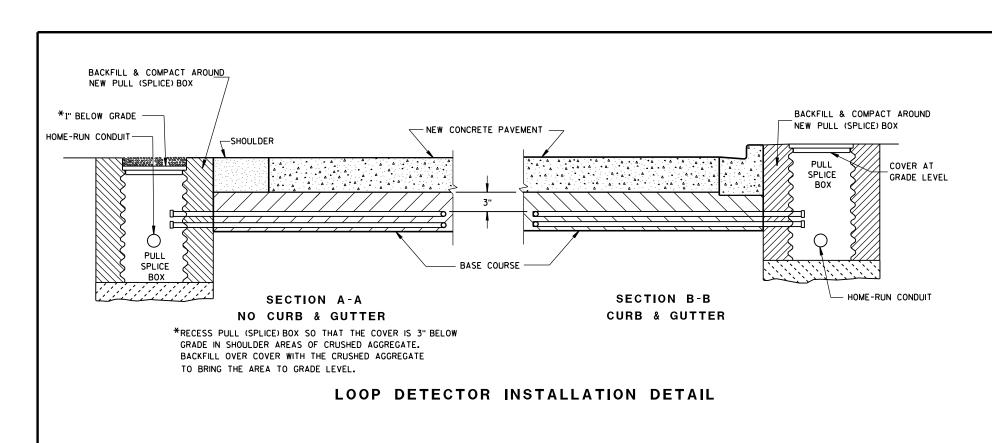
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

5'-0"

APPROVED
Sept. 2014
DATE
STATE ELECTRICAL ENGINEER
FHWA



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

LOOP SIZE, CONFIGURATION 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 (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER 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.

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 IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

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

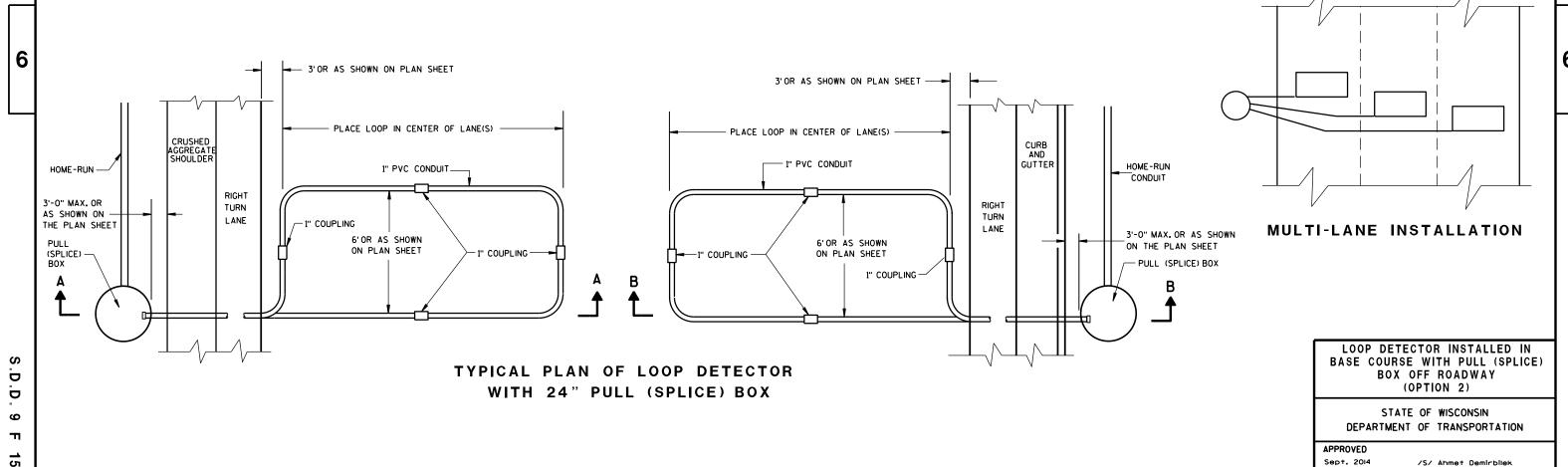
PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

DATE

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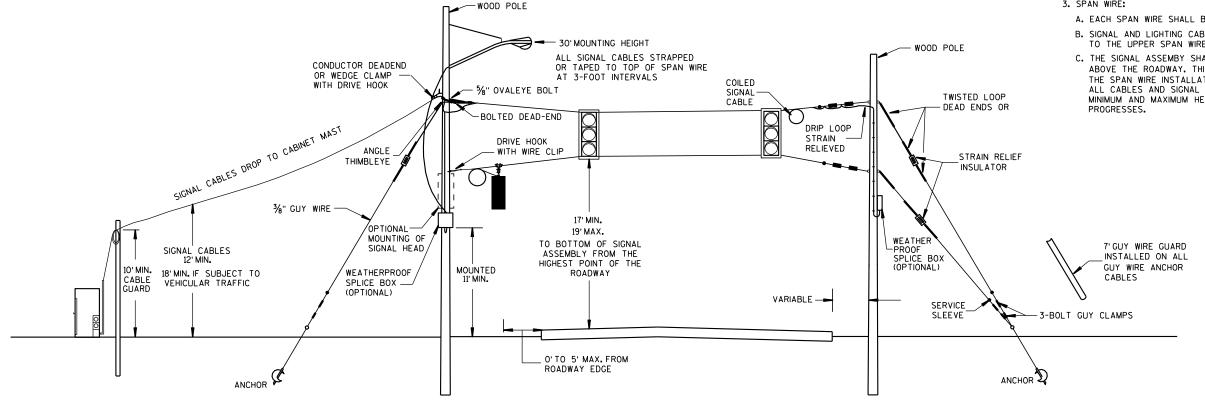
STATE ELECTRICAL ENGINEER



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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. IF 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 TO THE UPPER SPAN WIRE.
- 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

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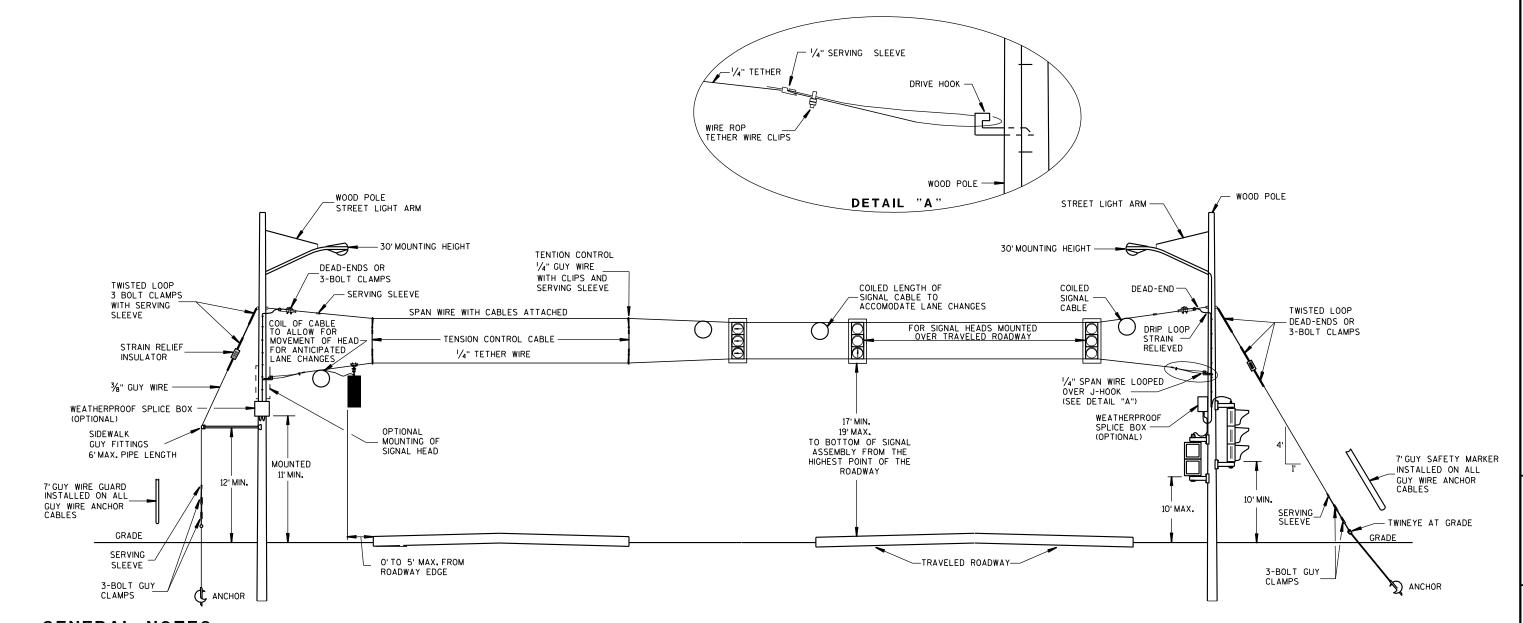
7-14-08 /S/ Balu Ananthanarayanan STATE ELECTRICAL ENGINEER FOR HWYS DATE

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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:

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- 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. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
- E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
- 3. SPAN WIRE:
- A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
- B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
- 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 PROGRESSES.

SPAN WIRE TEMPORARY SIGNALS

4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	¥	5'
30'	\mathbf{x}	6'
35'	TV.	7'
40'	IV.	8'
45'	IV.	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

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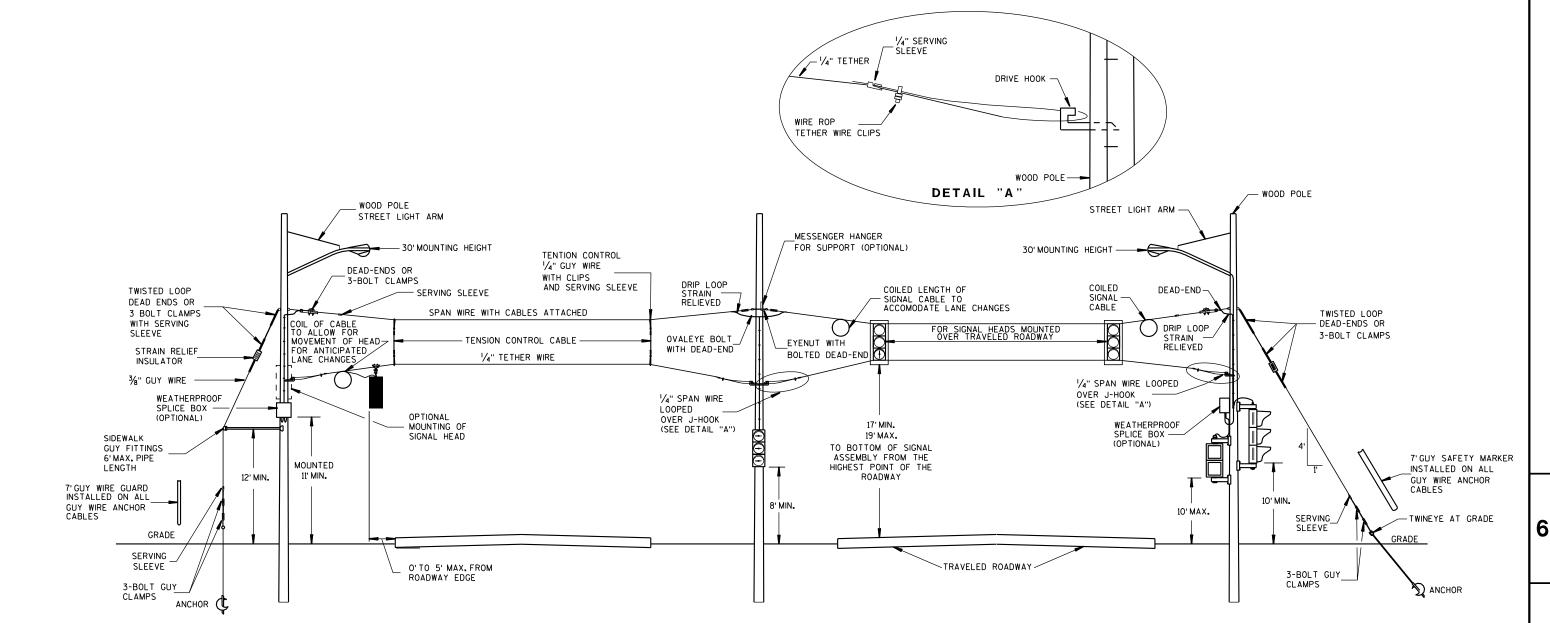
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08
DATE
STATE ELECTRICAL ENGINEER FOR HWYS



SPAN WIRE TEMPORARY SIGNALS

4 LANE ROADWAYS

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.
- 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, IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
- E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.

3. SPAN WIRE:

- A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
- B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
- 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

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	¥	5'
30'	$\mathbf{\Sigma}$	6'
35'	$\mathbf{I}\!\mathbf{X}$	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

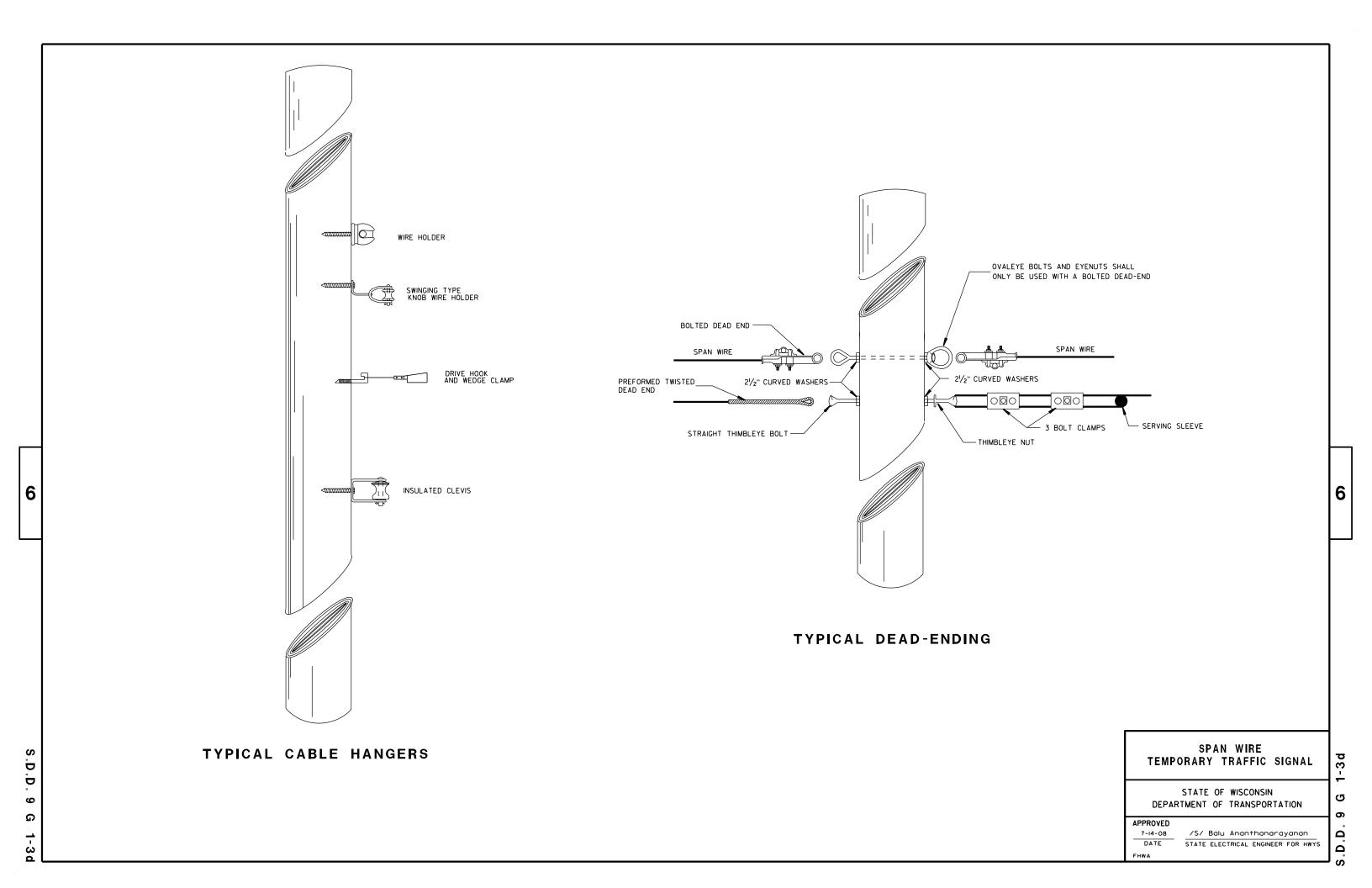
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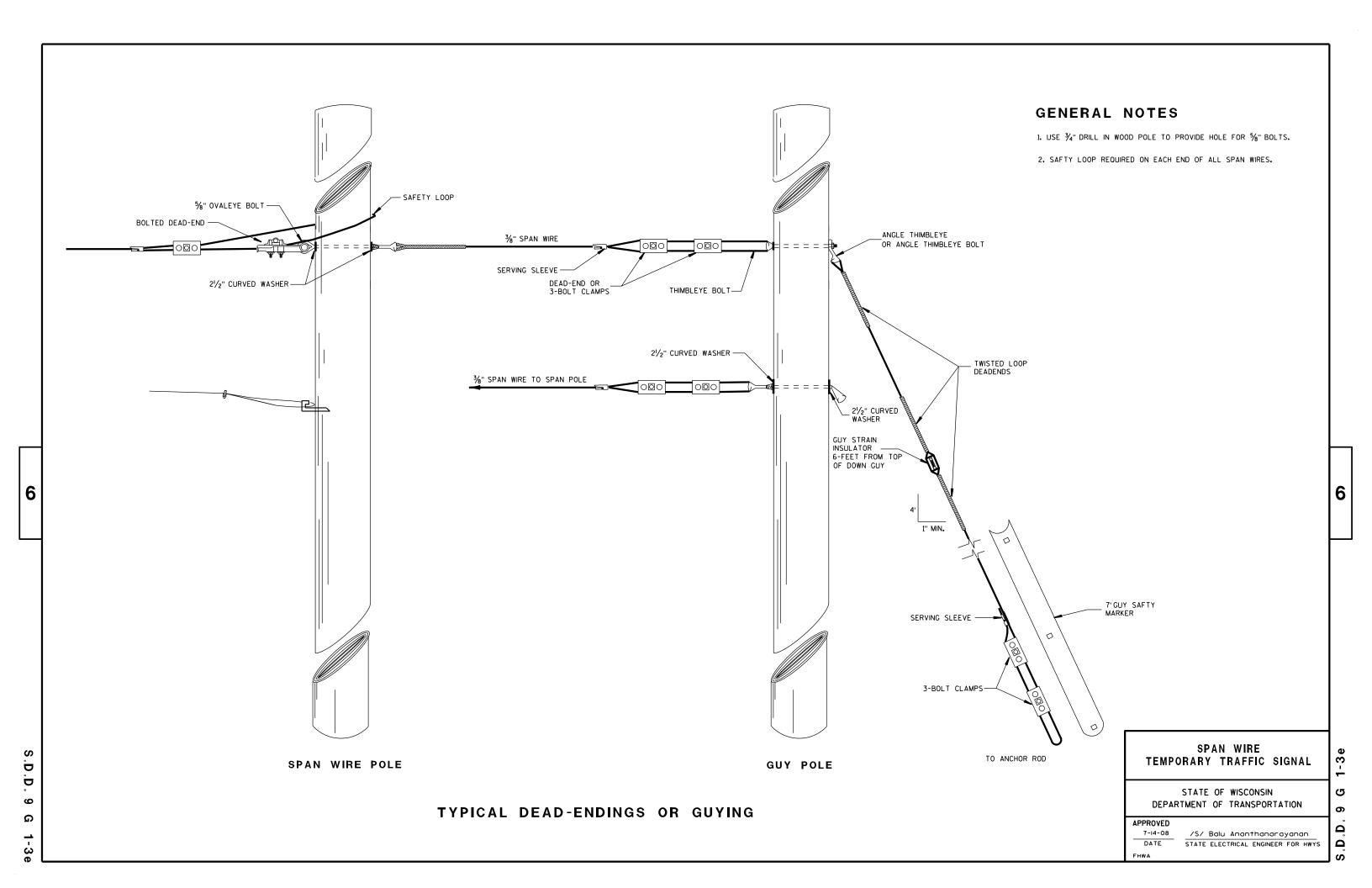
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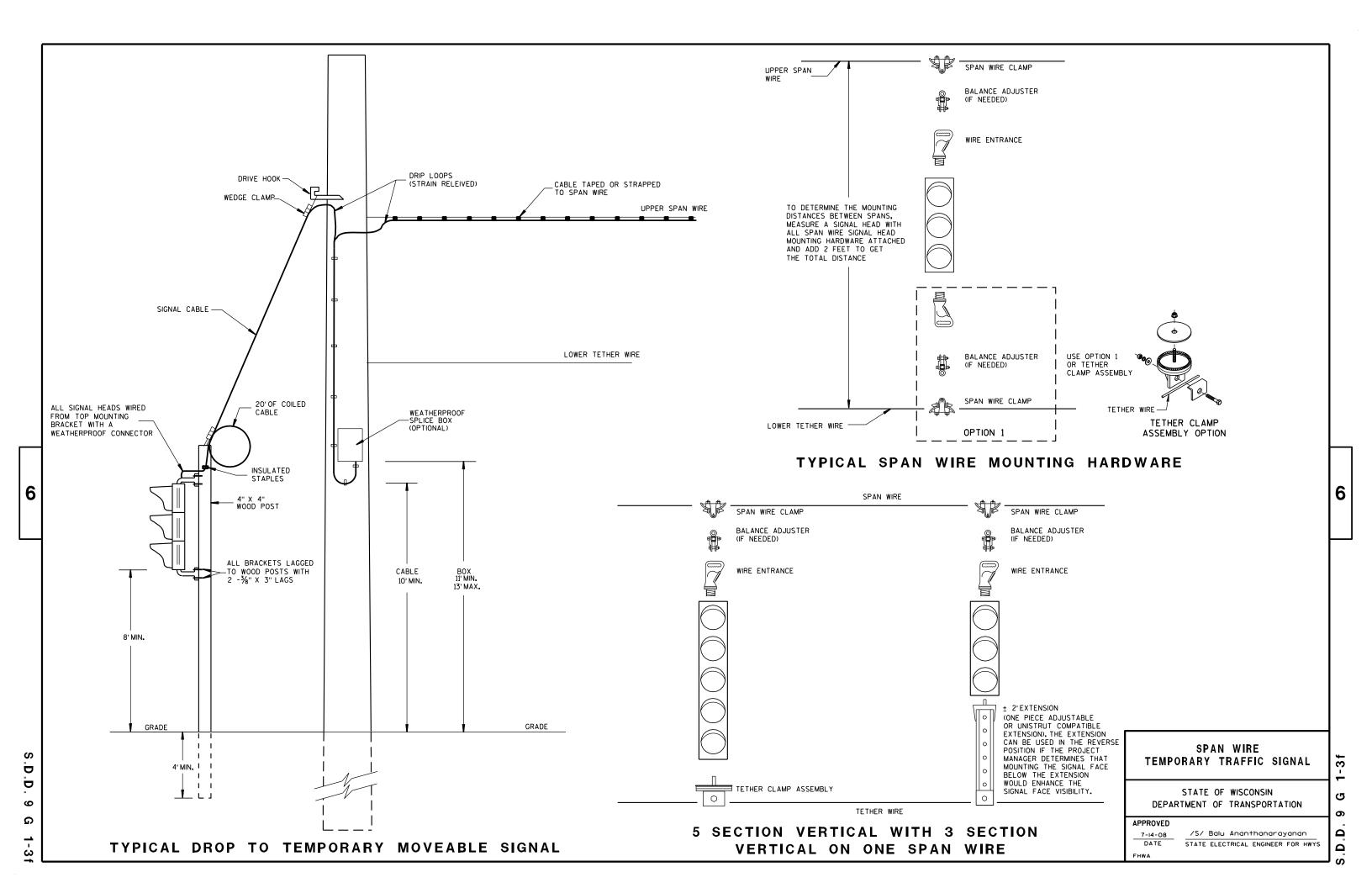
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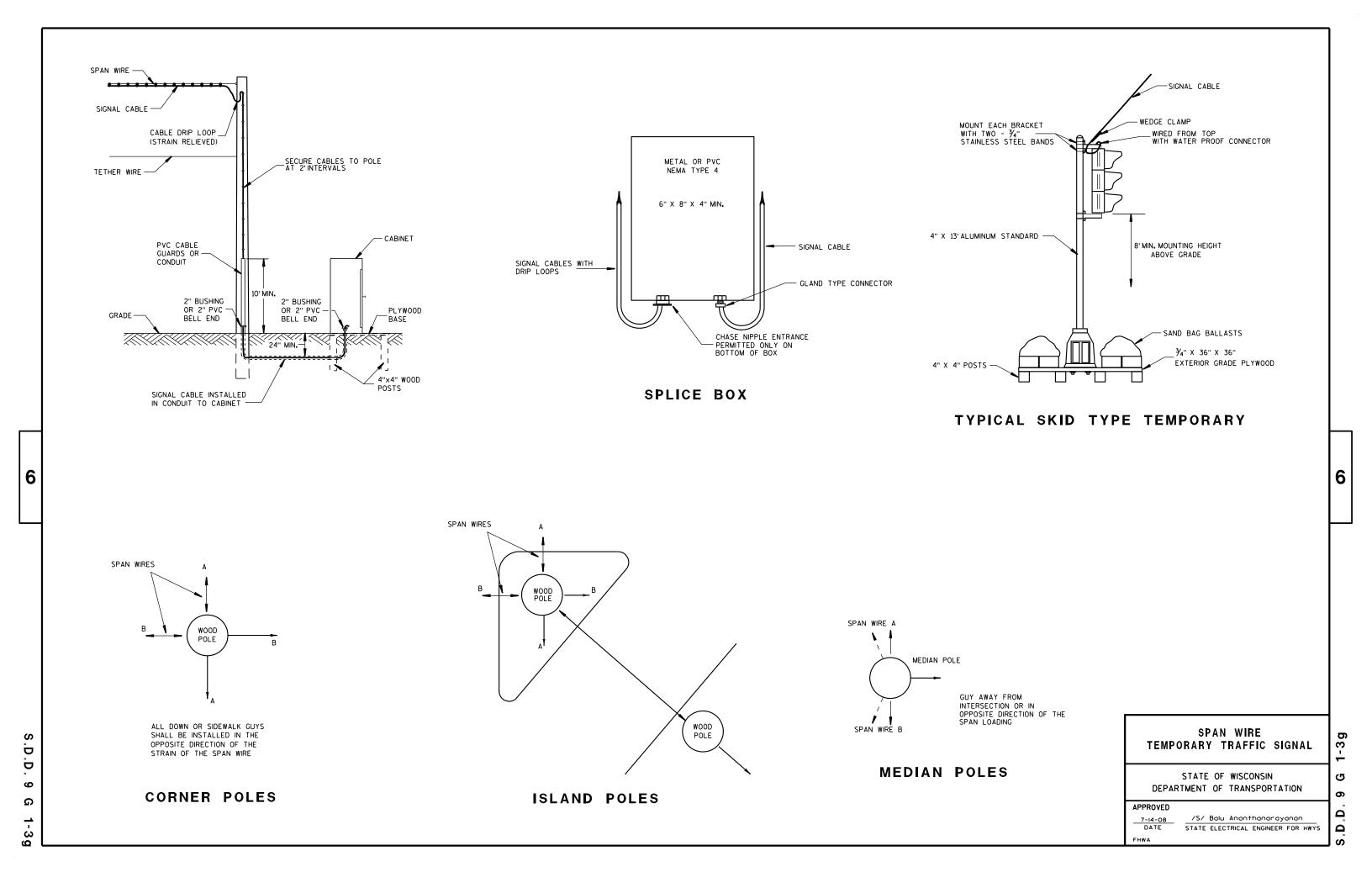
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7-14-08	/S/ Balu Ananthanarayanan
DATE	STATE ELECTRICAL ENGINEER FOR HWYS

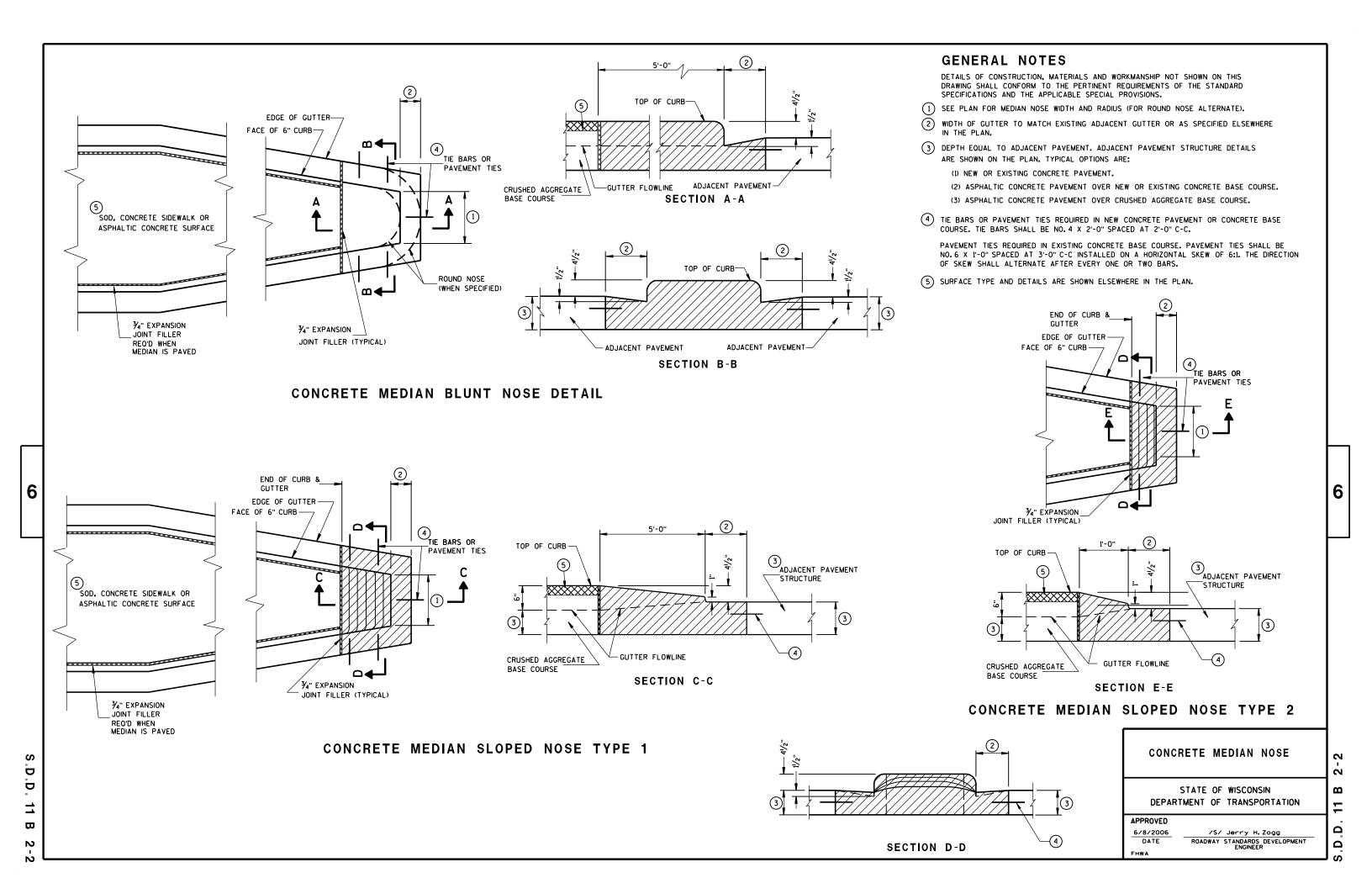
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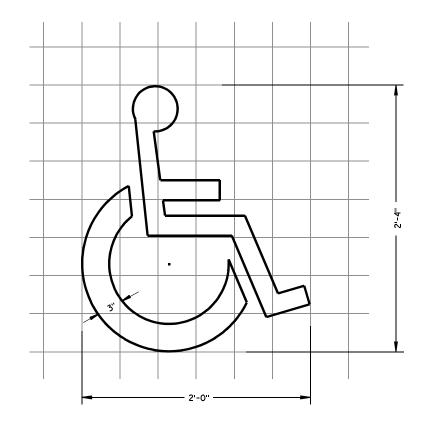


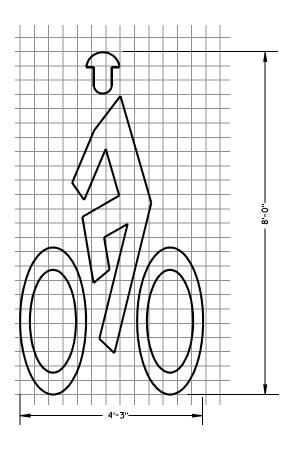
GENERAL NOTES

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

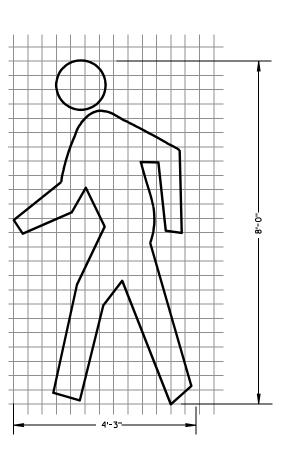
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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

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

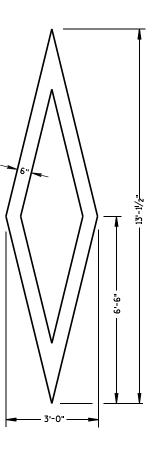




BIKE CROSSING SYMBOL



PEDESTRIAN SYMBOL



PREFERENTIAL LANE SYMBOL

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

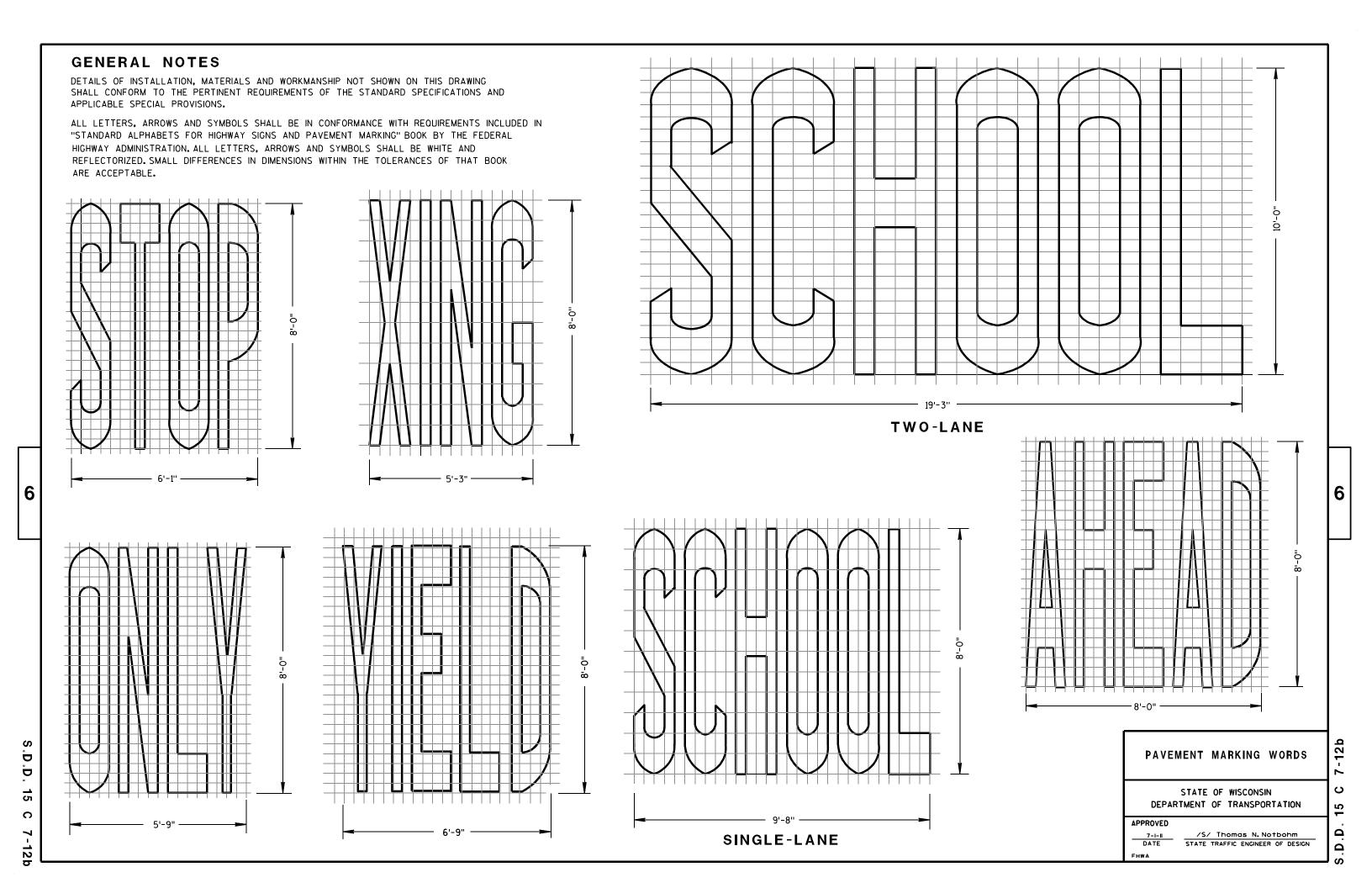
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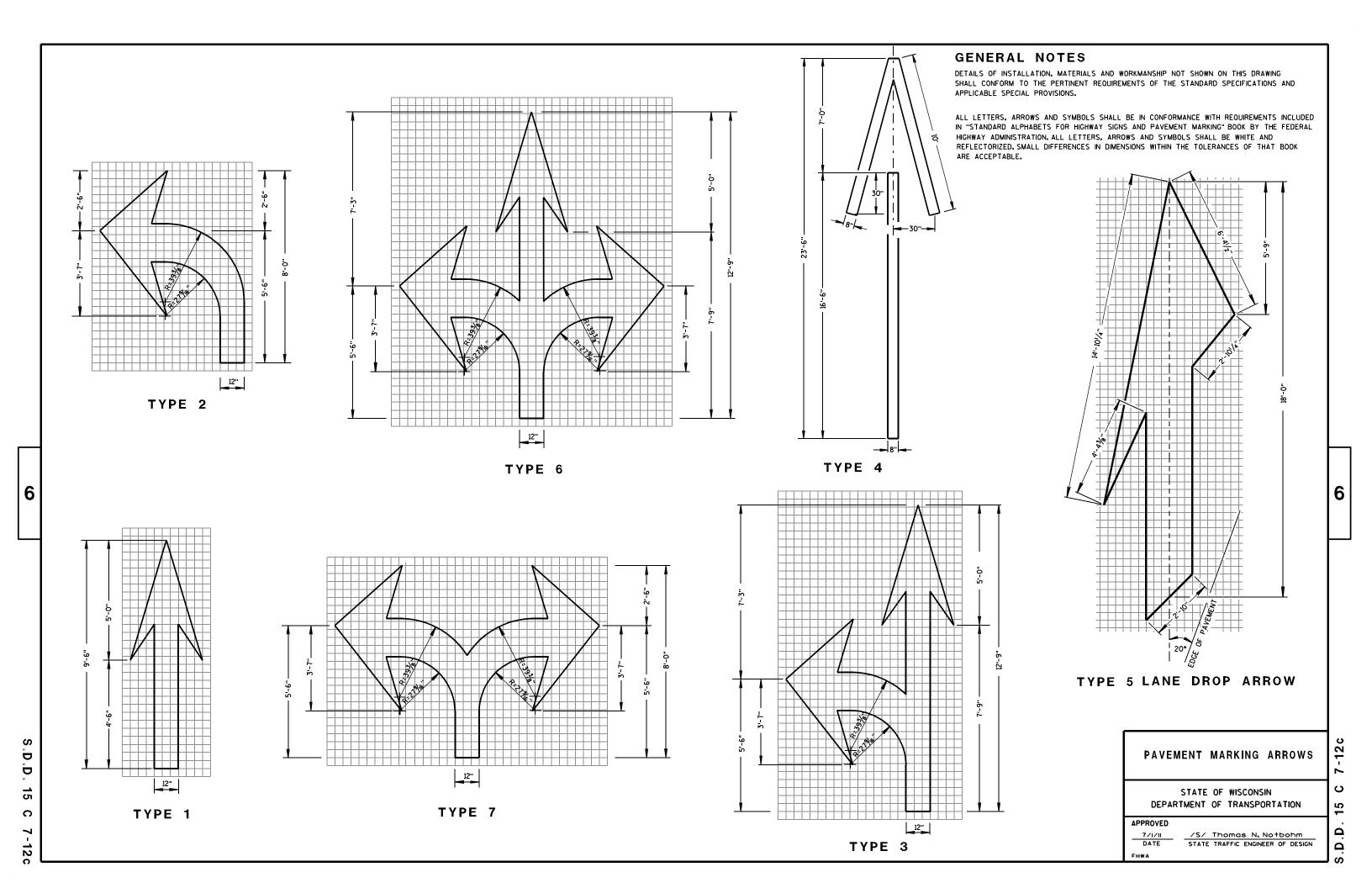
/S/ Thomas N Notbohm STATE TRAFFIC ENGINEER OF DESIGN 6

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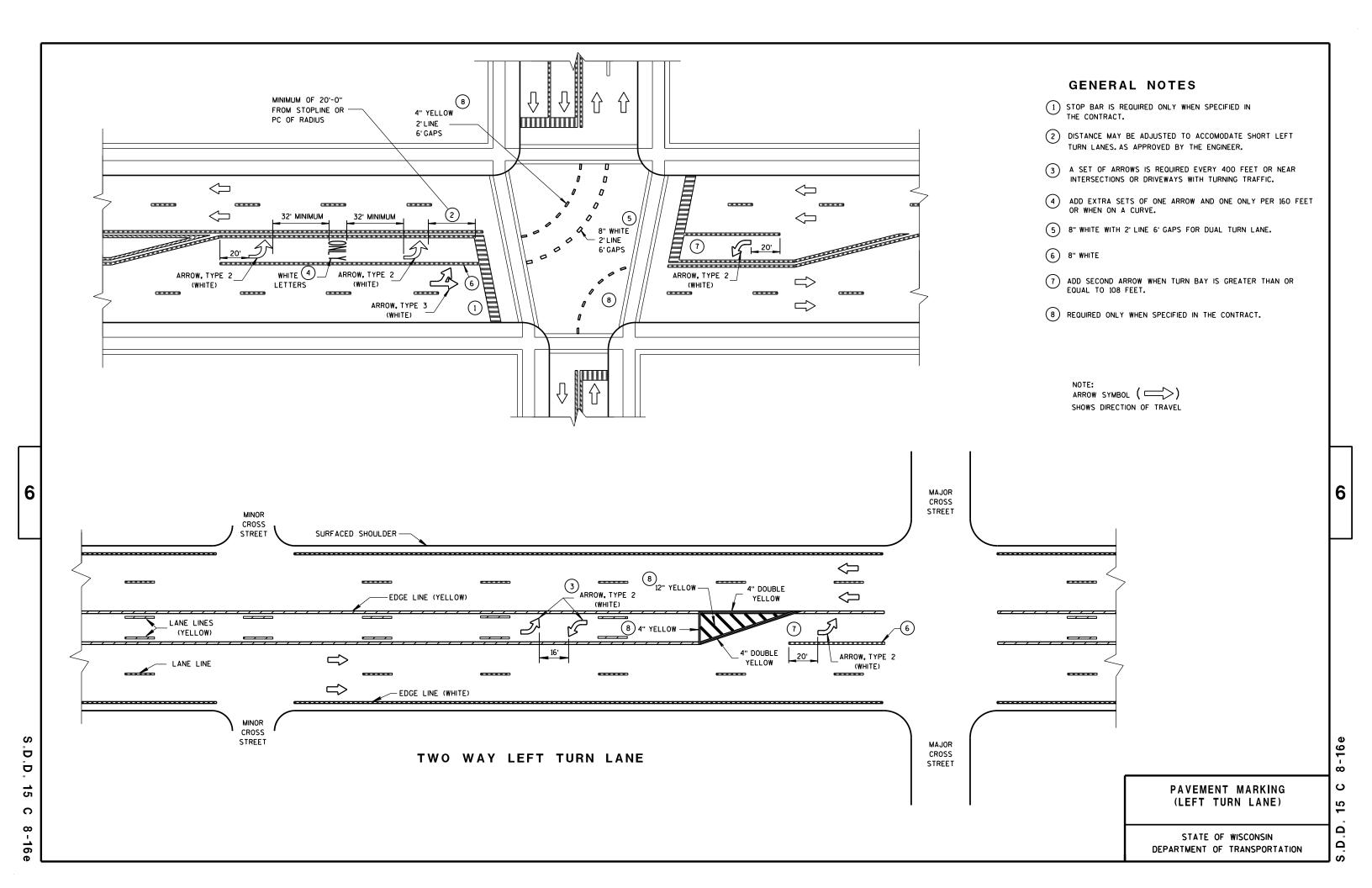
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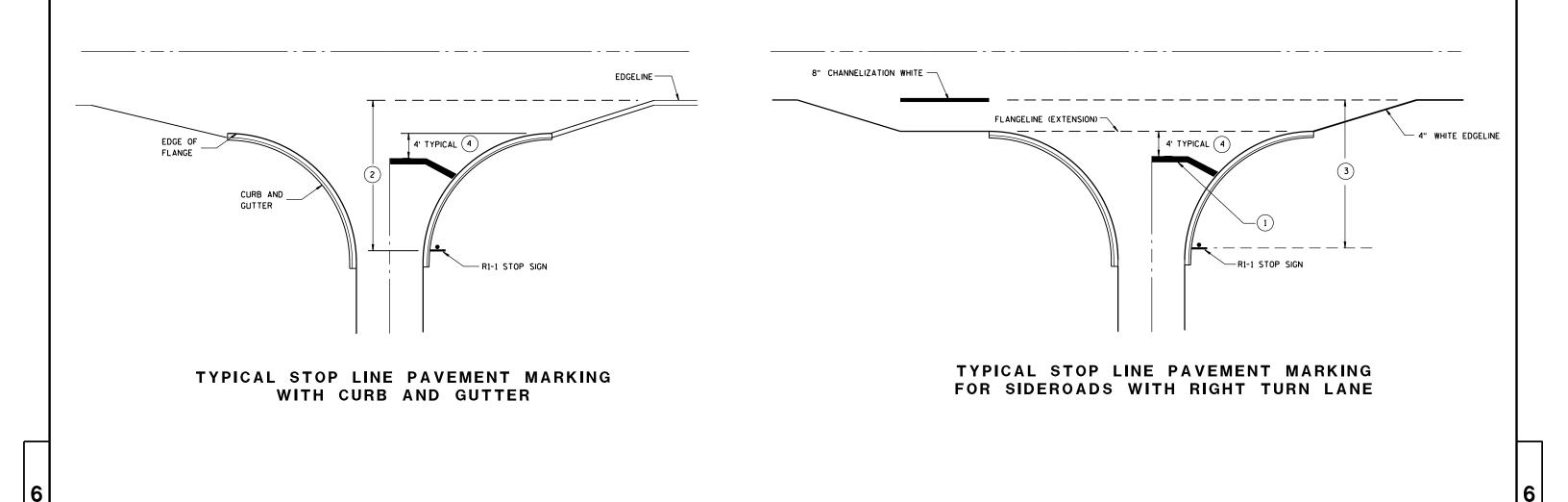


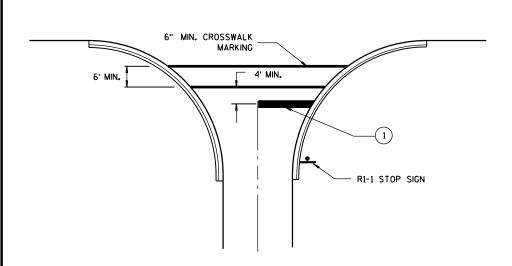




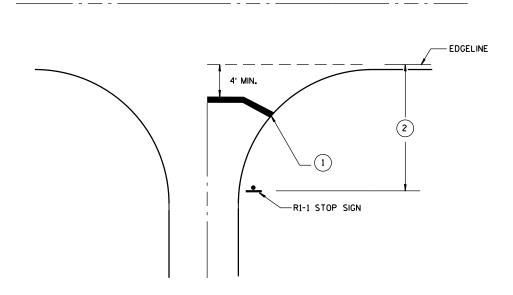








TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
- (3) IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

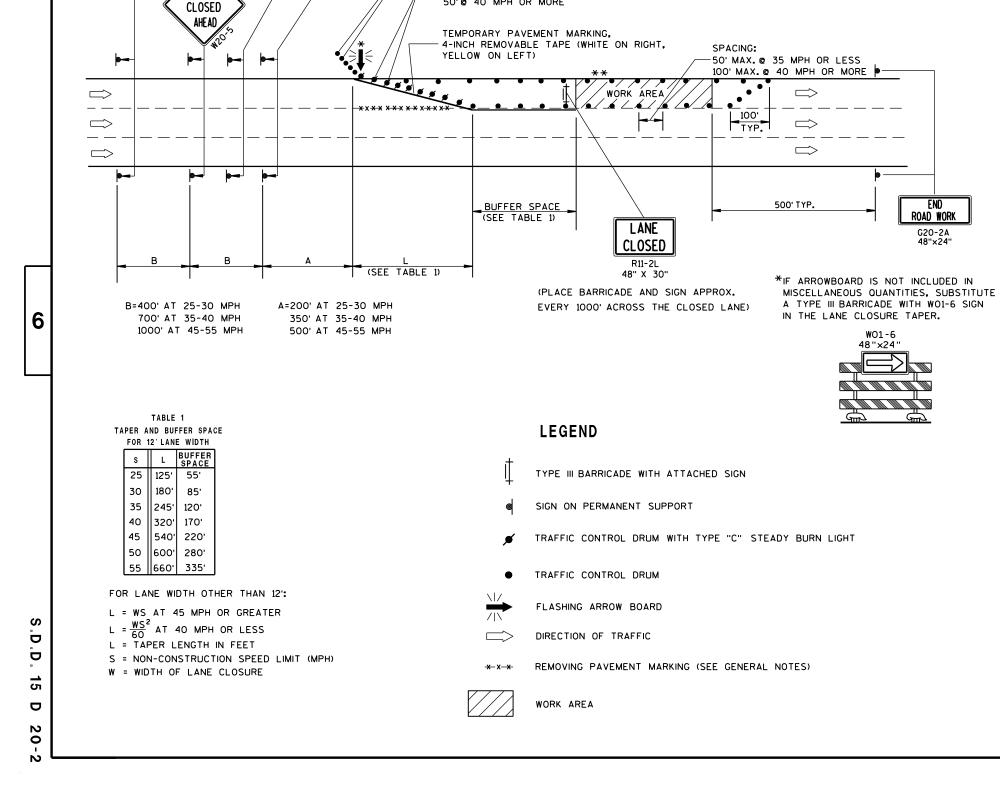
APPROVED	
4/30/2013	/S/ Travis Feltes
DATE	STATE TRAFFIC ENGINEER
FHWA	

.D.D. 15 C 33-1

S.D.D.

33





(5) DRUMS SPACED @ 10'

INTERVALS AS NEEDED IN

FRONT OF ARROW BOARD

25' @ 35 MPH OR LESS 50' @ 40 MPH OR MORE

SPACING:

ROAD WORK

NEXT___MILES

G20-1

60" X 24"

AHEAD

GENERAL NOTES

**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE

ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL

W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF

IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC

TRAFFIC. IN ADVANCE OF THE WORK AREA.

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 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

W2O-1, G2O-1 AND G2O-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

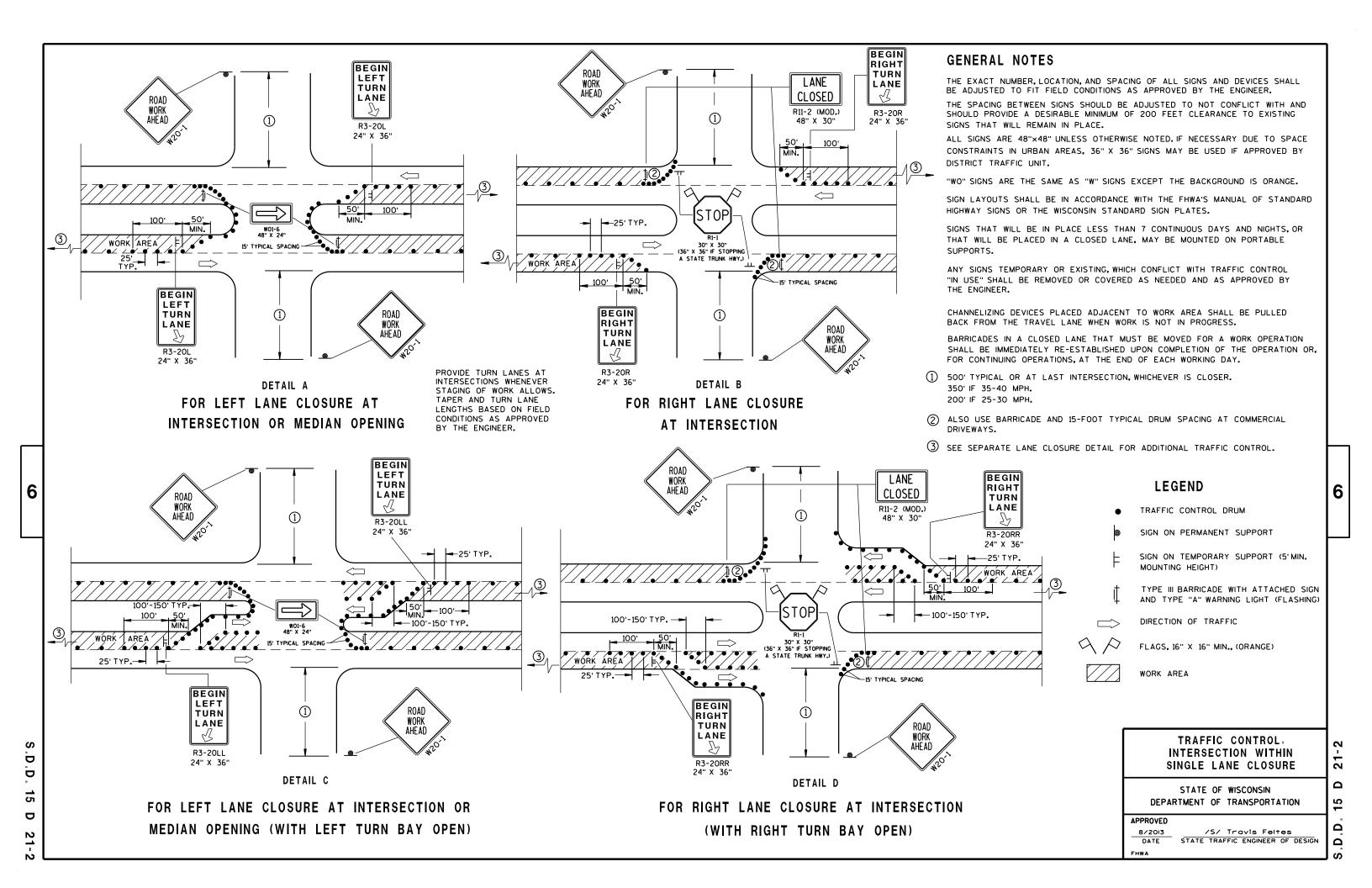
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

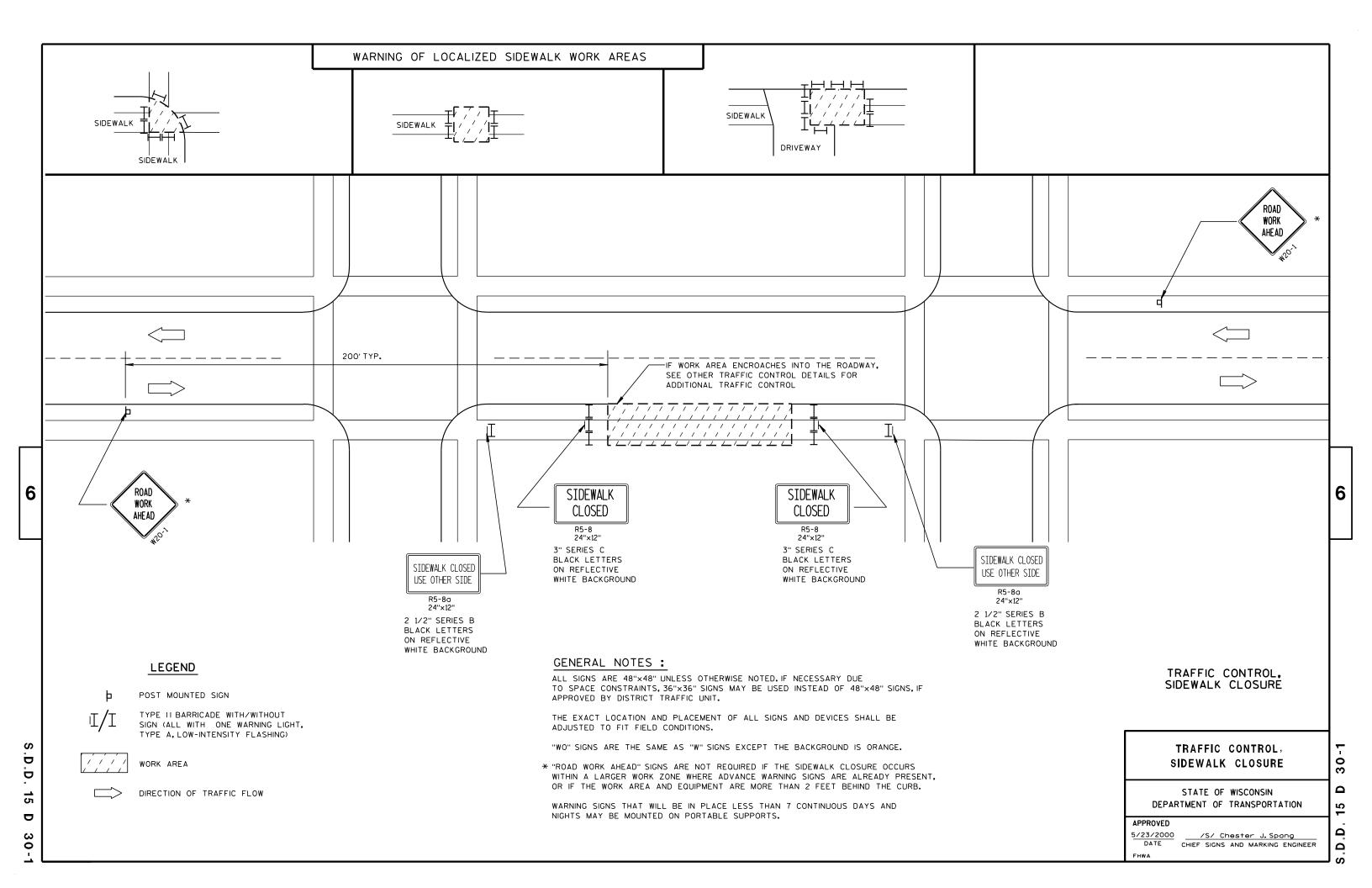
APPROVED

8/2013 /S/ Travis Feites

DATE TRAFFIC ENGINEER OF DESIGN

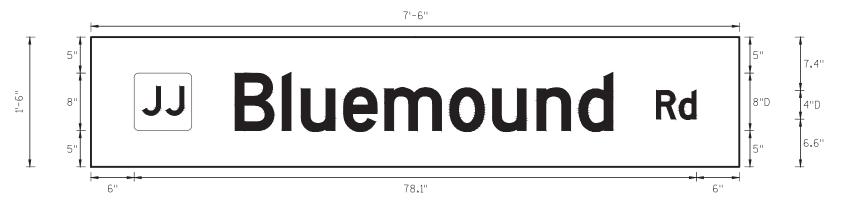
S.D.D. 15 D 2





7'-0" Pewaukee Rd 4"D 72"

Panel Style: WisDOT Street Sign.ssi M.U.T.C.D.: 2009 Edition



Panel Style: WisDOT Street Sign.ssi M.U.T.C.D.: 2009 Edition

- 1. SIGN IS TYPE II TYPE H REFLECTIVE REFERENCE WISDOT STANDARD SPECIFICATION FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.
- BACKGROUND GREEN
 MESSAGE WHITE TYPE H REFLECTIVE
- 3. MESSAGE D
- 4. BASE MATERIAL SHALL BE 0.125 ALUMINUM

SHEET

5. WIDTH MAY BE NO MORE THAN 108".

PROJECT NO: 2758-01-70

COUNTY: WAUKESHA

SIGN DETAIL

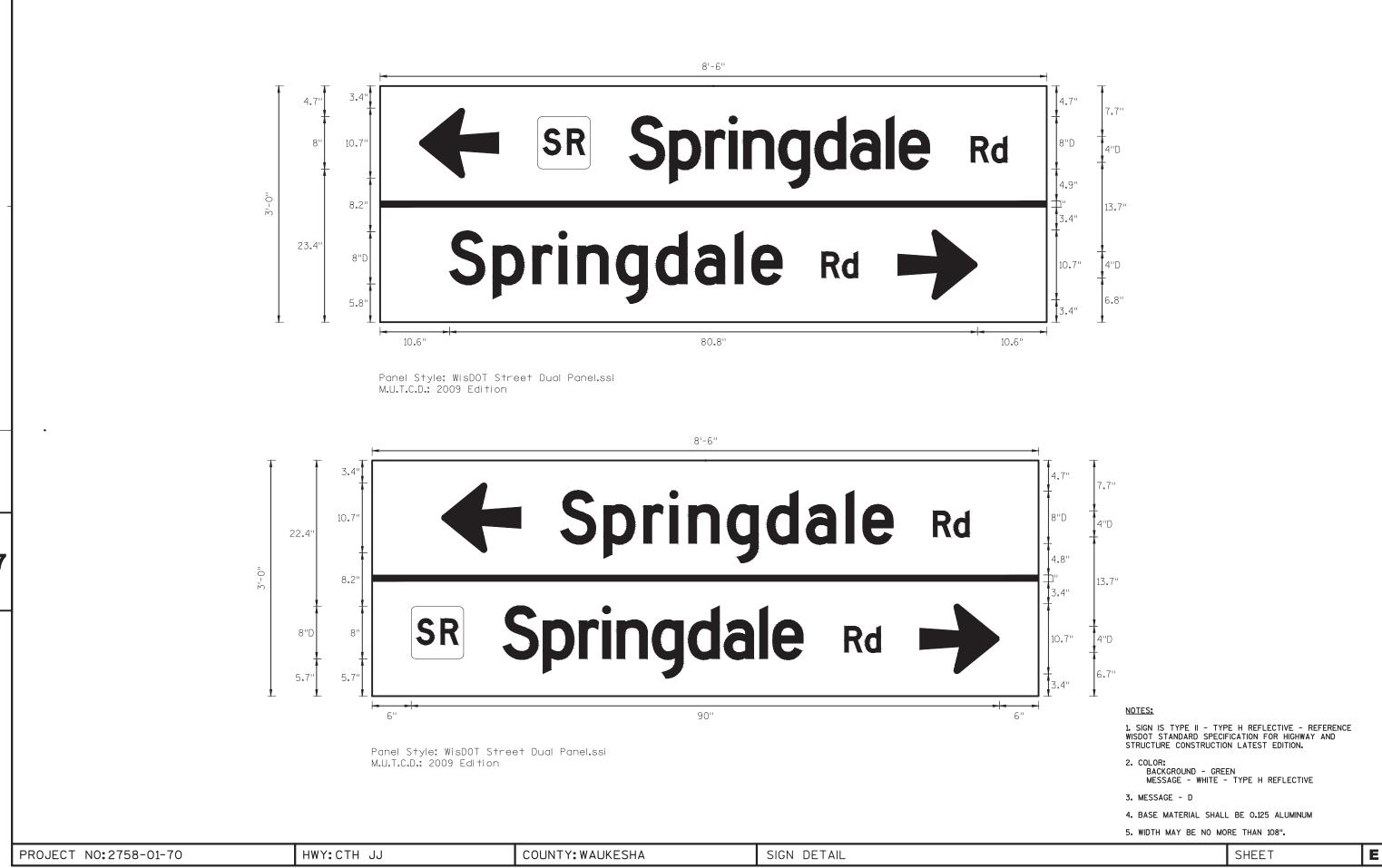
PLOT BY : OLSON, JULIE

PLOT NAME :

PLOT SCALE :

E

HWY: CTH JJ



FILE NAME :L:\JOBS2014\20140093\CAD\TRANSPORTATION\DWG\SHEETSPLAN\070101_SD.DWG LAYOUT NAME - 070101_SD - 070102_SD

PLOT DATE : 1/2/2015 10:06 AM

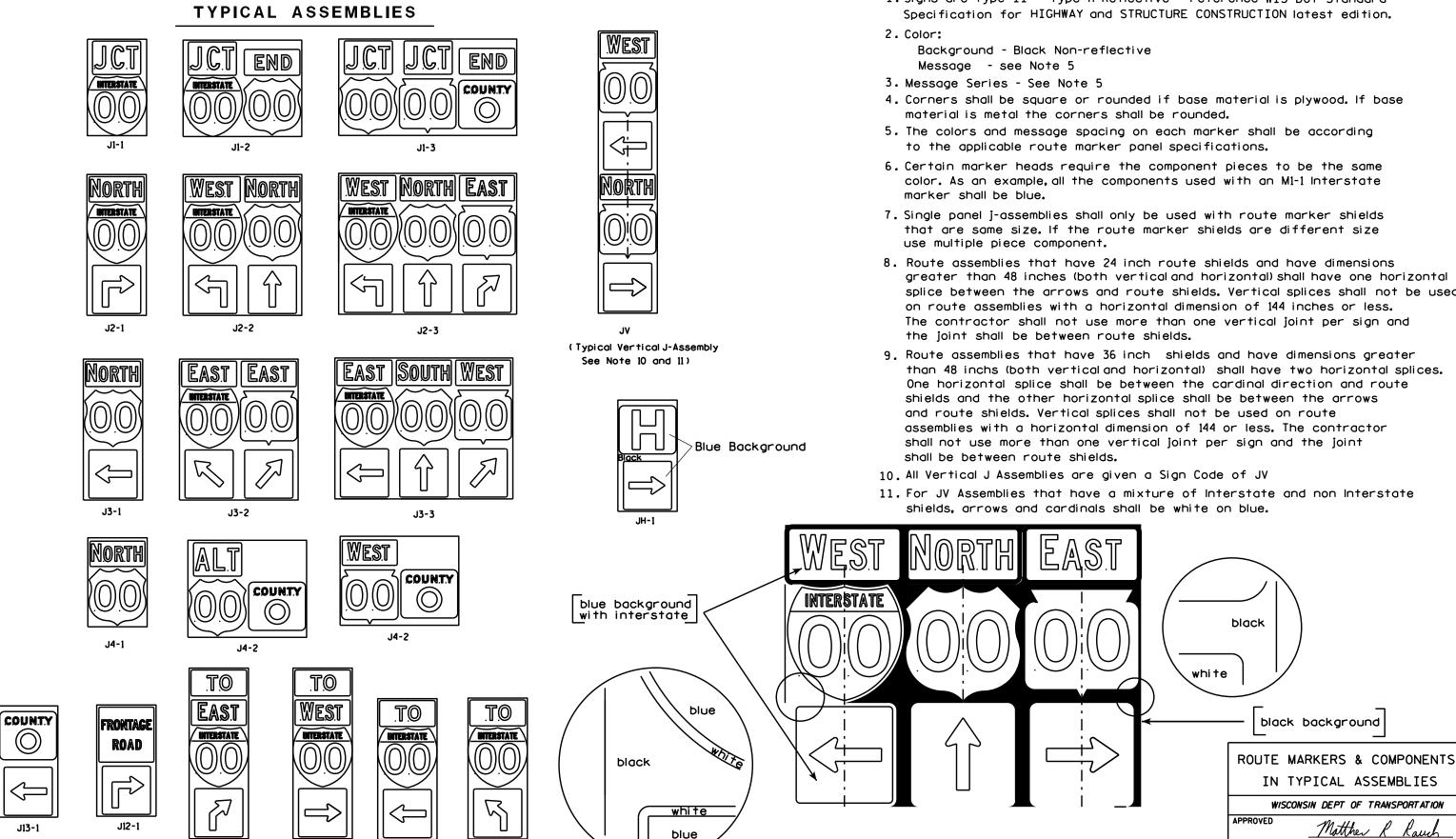
PLOT BY: OLSON, JULIE

PLOT NAME :

PLOT SCALE :

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

areater 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.



PROJECT NO:

J32-1

J22-1

J23-1

J33-1

PLOT BY: mscsja

PLATE NO. __A2-15.8

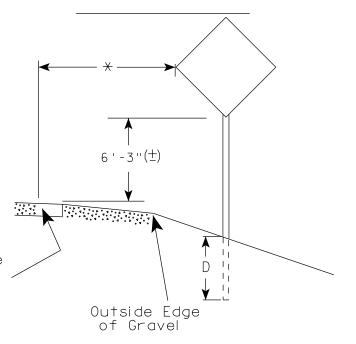
DATE 2/06/14

SHEET NO:

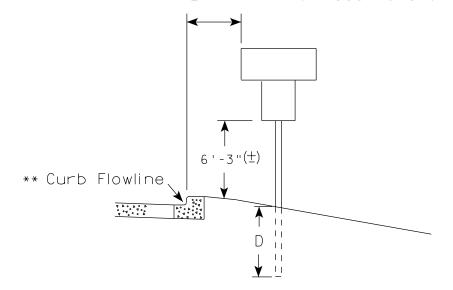
URBAN ARFA

2' Min - 4' Max (See Note 6) 7'-3"(士) ** Curb Flowline. White Edgeline Location

RURAL AREA (See Note 2)



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



5'-3"(生) D^{-1} Outside Edae of Gravel

White Edgeline Location

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated.

HWY:

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.

PLOT DATE: 12-NOV-2014 14:03

GENERAL NOTES

- 1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 2. If signs are mounted on barrier wall, see A4-10 sign plate.
- 3. For expressways and freeways, mounting height is $7'-3''(\pm)$ or 6'-3" (±) depending upon existence of a sub-sign.
- 4. Minimum mounting height for J assemblies (A2-1S) 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 (+) tolerance for mounting height is 3 inches.
- 8. Folding signs shall be mounted at a height of 5'-3'' (\pm) or as directd by the Engineer.
- 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (\pm) . The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3'' (\pm).

POST EMBEDMENT DEPTH

D
(Min)
4'
5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

for State Traffic Engineer

DATE 11/12/14

PROJECT NO: FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43.DGN COUNTY:

PLOT BY: mscsja

PLOT NAME :

WISDOT/CADDS SHEET 42

PLOT SCALE: 99.237937:1.000000



NOTES: 1. ALL MATERIAL TO BE APPROVED

BY ENGINEER PRIOR TO INSTALLATION

- 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
- 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

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



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

HWY:



PLAN VIEW

COUNTY:

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

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

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN

PROJECT NO:

PLOT DATE: 27-JAN-2014 09:48

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 13.659812:1.000000

APPROVED

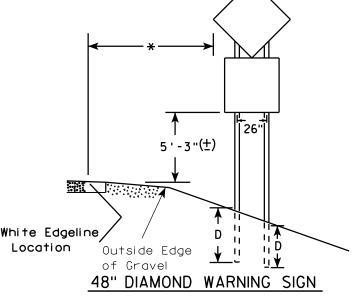
GENERAL NOTES

- 1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- 2. See tables below for required number of posts.
- 3. For expressways and freeways. mounting height is 7'-3'' (±) or 6'-3'' (±) depending upon existence of sub-sign.
- 4. The (±) tolerance for mounting height is 3 inches.
- 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3'' (±) or 6'-3'' (±) per urban or rural detail respectively.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8). Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).
- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- *** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

URBAN AREA RURAL AREA (See Note 3) 2'Min - 4'Max (See Note 6) ₩E# FF# 6'-3"(±) 6'-3"(±) 7'-3"(±) ** Curb ********\ Flowline D **7000** White Edgeline

2'Min - 4'Max (See Note 6) 6'-3"(±) Curb Flowline. 48" DIAMOND WARNING SIGN

D 11



COUNTY:

Outside Edge

of Gravel

	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:

White Edgeline,

Location

SIGN SHAPE OTHER THAN (FOUR POSTS REQUIRE	
L	E
168" and greater	12"

Location

Outside Edae

of Gravel

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

Matther

PLATE NO. A4-4.13

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN

PROJECT NO:

PLOT DATE: 12-NOV-2014 14:01

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 107.021305:1.000000

WISDOT/CADDS SHEET 42

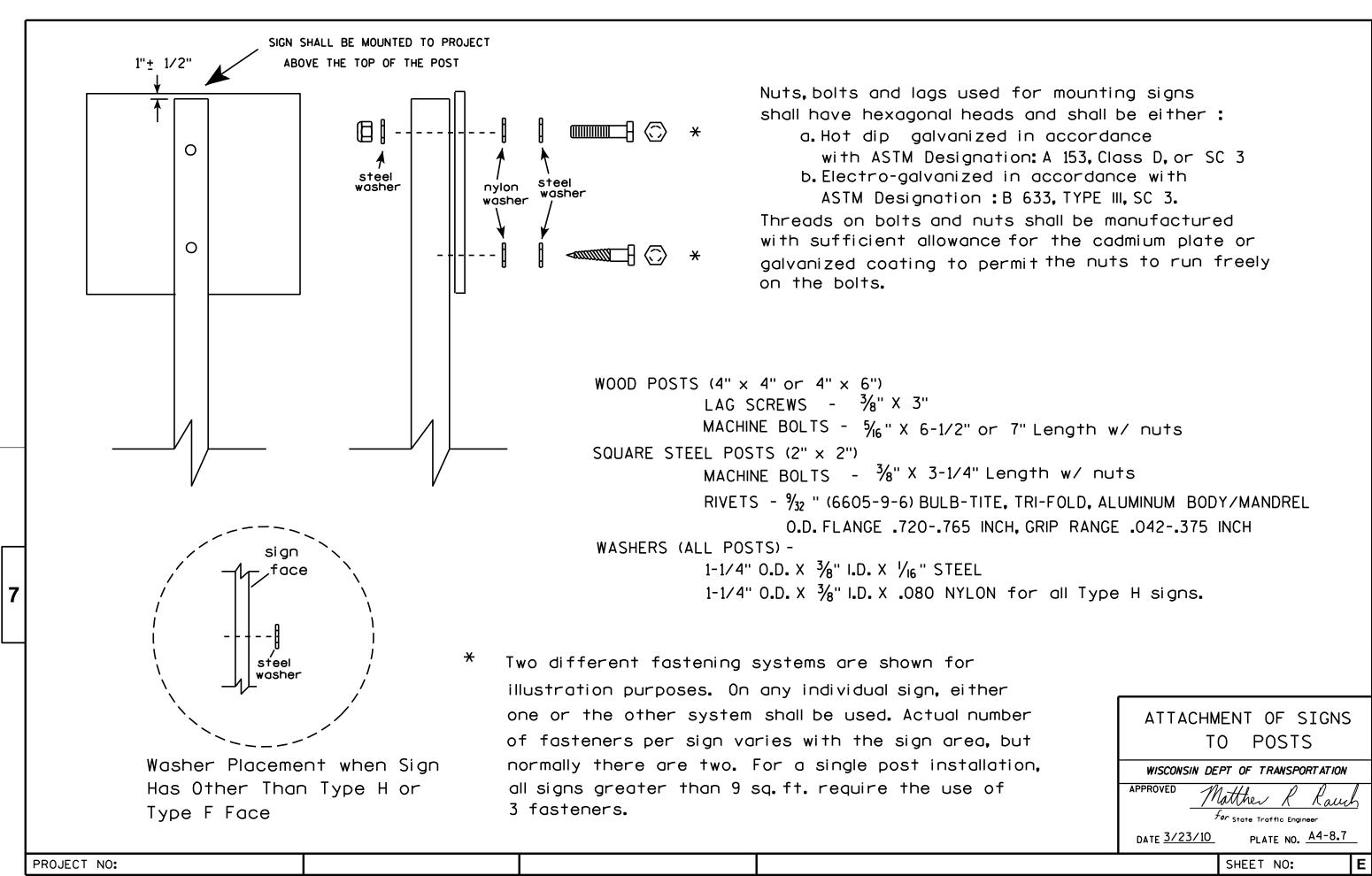
SHEET NO:

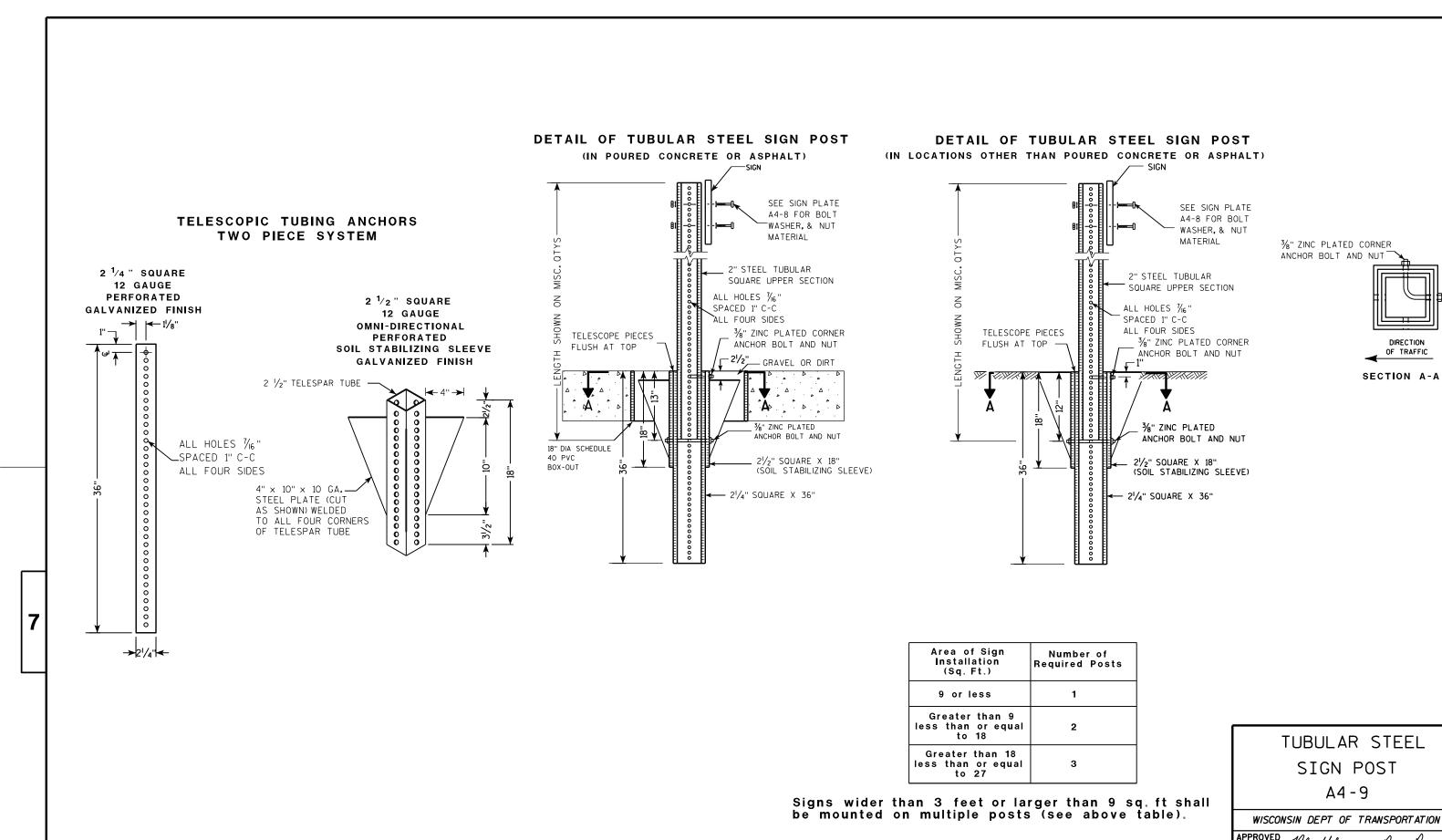
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 11/12/14





PROJECT NO: SHEET NO: E

FILE NAME: C:\CAEFiles\Projects\tr_stdplate\A49.DGN

PLOT DATE: 05-FEB-2015 17:09

PLOT DATE: 05-FEB-2015 17:09

PLOT NAME: PLOT NAME: PLOT SCALE: 13.659812:1.000000

WISDOT/CADDS SHEET 42

For State Traffic Engineer

PLATE NO. <u>A4-9.9</u>

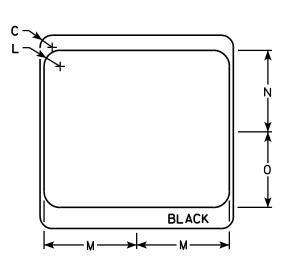
DATE 2/05/15

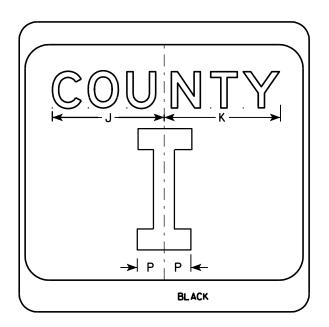
- 1. Sign is Type II see Note 7 reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

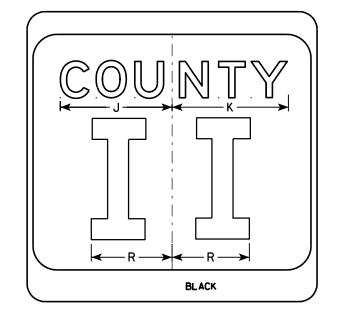
Background - White & Black - See Note 7 Message - Black

- 3. Message Series see Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Message Series E for 1 letter. Message Series D for 2 letters unless message is too big then Series C. Message Series C for 3 letters unless message is too big then Series B.
- 6. Substitute appropriate letters & optically center to achieve proper balance.
- 7. Permanent Signs

Background - Type H Reflective Detour or temporary Signs Background - Reflective







PLOT NAME :

Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	a	R	S	T	U	٧	W	X	Y	Z	Area sq. ft.
24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 %	2	11 1/2	10 1/8	9 3/8	2 1/4		6 %									4.0
36		2 1/4			16	4	7 5/8	5 %	12 1/4	12 1/8	3	17 1/8	15 1/4	14	3 %		10									9.0
36		2 1/4			16	4	7 5/8	5 %	12 1/4	12 1/8	3	17 1/8	15 1/4	14	3 %		10									9.0
36		2 1/4			16	4	7	5 %	12 1/4	12 1/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
IECT	NO.					Luv	A/V•	·			·	COLIA	TV.													
	36 36 36	24 36 36 36	24 1 ½ 36 2 ¼ 36 2 ¼ 36 2 ¼ 36 2 ¼	24 1 ½ 36 2 ¼ 36 2 ¼ 36 2 ¼ 36 2 ¼	24 1 ½ 36 2 ¼ 36 2 ¼ 36 2 ¼ 36 2 ¼ 36 2 ¼ 36 36 2 ¼ 36 36 36 36 36 36 36 36 36 36 36 36 36	24 1 ½ 10 36 2 ¼ 16 36 2 ¼ 16 36 2 ¼ 16	24 1 ½ 10 3 36 2 ¼ 16 4 36 2 ¼ 16 4 36 2 ¼ 16 4	24 1 ½ 10 3 5 ⅓ 36 2 ¼ 16 4 7 ⅙ 36 2 ¼ 16 4 7 ⅙ 36 2 ¼ 16 4 7 ⅙ 36 2 ¼ 16 4 7 ⅙	24 1 ½ 10 3 5 ½ 4 ½ 36 2 ¼ 16 4 7 ½ 5 5% 36 2 ¼ 16 4 7 ½ 5 5% 36 2 ¼ 16 4 7 ½ 5 5% 36 2 ¼ 16 4 7 ½ 5 5%	24 1 ½ 10 3 5 ⅓ 4 ⅓ 9 ⅓ 36 2 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓ 36 2 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓ 36 2 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓ 36 2 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓	24 1 ½ 10 3 5 ½ 4 ½ 9 ½ 15 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 12 ½ 16 4 7 ½ 5 ½ 12 ¼ 12 ½ 12 ½ 12 ½ 12 ½ 12 ½ 12 ½ 12	24 1 ½ 10 3 5 ⅓ 4 ⅓ 9 ⅓ 9 ⅓ 2 36 2 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓ 12 ⅓ 3 36 2 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓ 12 ⅓ 3 36 2 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓ 12 ⅓ 3 36 2 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓ 3	24 1 ½ 10 3 5 ½ 4 ½ 9 ½ 2 11 ½ 36 2 ¼ 16 4 7 ½ 5 ½ 12 ¼ 12 ⅓ 3 17 ⅓ 36 2 ¼ 16 4 7 ½ 5 ½ 12 ¼ 12 ⅓ 3 17 ⅓ 36 2 ¼ 16 4 7 ½ 5 ½ 12 ¼ 12 ⅓ 3 17 ⅓ 36 2 ¼ 16 4 7 ½ 5 ½ 12 ¼ 12 ⅓ 3 17 ⅓ 36 2 ¼ 16 4 7 ½ 5 ½ 12 ¼ 12 ⅓ 3 17 ⅓	24	24	24	24	24	24	24	24	24	24	24 1 ½ 10 3 5 ⅓ 4 ⅓ 9 ⅓ 9 ⅓ 2 11 ½ 10 ⅓ 9 ⅓ 2 ⅓ 6 ⅓ 13 3 ⅓ 16 4 7 ⅓ 5 ⅓ 12 ⅓ 12 ⅓ 3 17 ⅓ 15 ⅓ 14 3 ⅓ 10 3 10 3 10 3 16 4 7 ⅓ 5 ⅓ 12 ⅓ 12 ⅓ 3 17 ⅓ 15 ⅓ 14 3 ⅓ 10 3 10 3 10 3 10 3 10 3 10 3 10 3	24 1 ½ 10 3 5 ⅓ 4 ⅓ 9 ⅓ 9 ⅓ 2 11 ½ 10 ⅓ 9 ⅓ 2 ⅓ 6 ⅙ 3 10 3 5 ⅓ 16 4 7 ⅙ 5 ⅙ 12 ⅓ 12 ⅓ 3 17 ⅓ 15 ⅓ 14 4 3 ⅓ 10 3 10 3 10 3 16 4 7 ⅙ 5 ⅙ 5 ⅙ 12 ⅓ 12 ⅓ 3 17 ⅓ 15 ⅓ 14 3 ⅓ 10 3 10 3 10 3 10 3 10 3 10 3 10 3	24

CTH MARKER M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

FerState Traffic Engineer PLATE NO. M1-5A.8 DATE 9/27/11

SHEET NO:

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M15A.DGN

BLACK

M1-5A

PLOT DATE: 29-SEP-2011 11:25

PLOT BY: mscsja

PLOT SCALE: 5.959043:1.000000



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

Background - See note 5 Message - See note 5

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M2-1 Background White

Message – Black

MB2-1 Background - Blue

Message - White

MK2-1 Background - Green

Message - White

MM2-1 Background - White

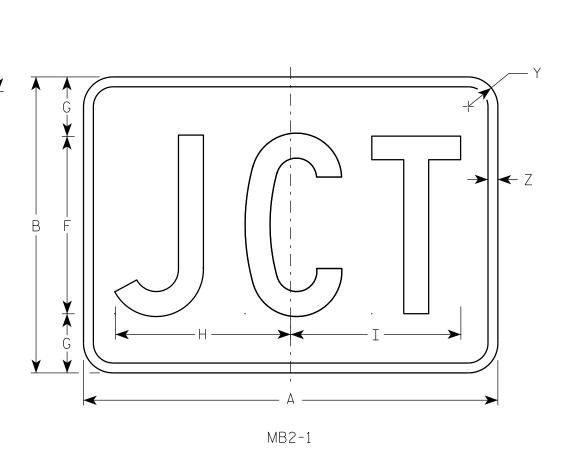
Message - Green

MN2-1 Background - Brown

Message - White

MR2-1 Background - Brown

Message - Yellow



7

SIZE G Н Ν 0 Α 1 1/8 3/8 8 1/8 8 5/8 1 1/2 1/2 3/8 21 15 9 2.20 3 30 21 1 1/8 3/8 3/8 13 12 $\frac{7}{8}$ 12 $\frac{3}{8}$ $1 \frac{1}{2}$ 1/2 4.40 12 $\frac{7}{8}$ 12 $\frac{3}{8}$ 4 30 21 1 1/8 3/8 3/8 13 1 1/2 1/24.40 12 $\frac{7}{8}$ 12 $\frac{3}{8}$ 5 3/8 3/8 30 21 1 1/8 13 4 1 1/2 1/2 4.40

COUNTY:

В

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther & Rauch

DATE <u>6/30/14</u>

PLATE NO. M2-1.11

SHEET NO:

PROJECT NO:

M2-1

MK2-1 MM2-1

MN2-1 MR2-1

HWY:

- 1. Signs are Type II Type H except as Shown
- 2. Color:

Background - See Note 4 Message - See Note 4

- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. M6-4 and M6-6 Background White

Message - Black

MB6-4 and MB6-6 Background - Blue

Message - White

MK6-4 and MK6-6 Background - Green

Message - White

and MM6-6 Background - White MM6-4

Message - Green

MN6-4 and MN6-6 Background - Brown

Message - White

and M06-6 Background - Orange - Type F Reflective

Message - Black

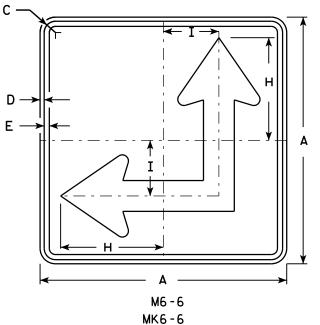
MP6-4 and MP6-6 Background - White

Message - Blue

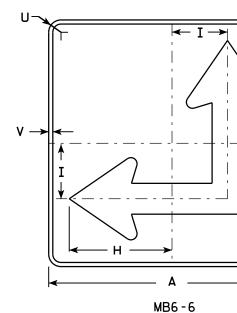
MR6-4 and MR6-6 Background - Brown

Message - Yellow

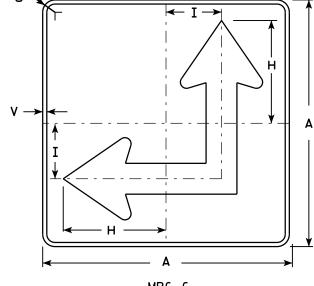
5. M6-6R same as M6-6L except arrow points ahead and right.











	0	
M M	/	
<u> </u>	<u>- /</u> - <u>-</u> → <mark>← E</mark>	\
←	- L → ˈ	

SIZE	Ε Α	Δ	В	С	D	E	F	G	н	I	J	K	L	М	N	0	Р	0	R	S	T	J	٧	W	X	Y	Z	Area sq. ft.
1																												
2	2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3∕4						1 %	1/2					6.25
4	3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 1/8	1/2					6.25
5	3	30		1 3/8	1/2	5/8		10 ¾	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 1/8	1/2					6.25

COUNTY:

STANDARD SIGN M6-4 & M6-6 **SERIES**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

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

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M64.DGN

PROJECT NO:

M6 - 4

MK6-4

MM6 - 4

MN6 - 4

M06 - 4

MP6-4

MR6-4

MB6 - 4

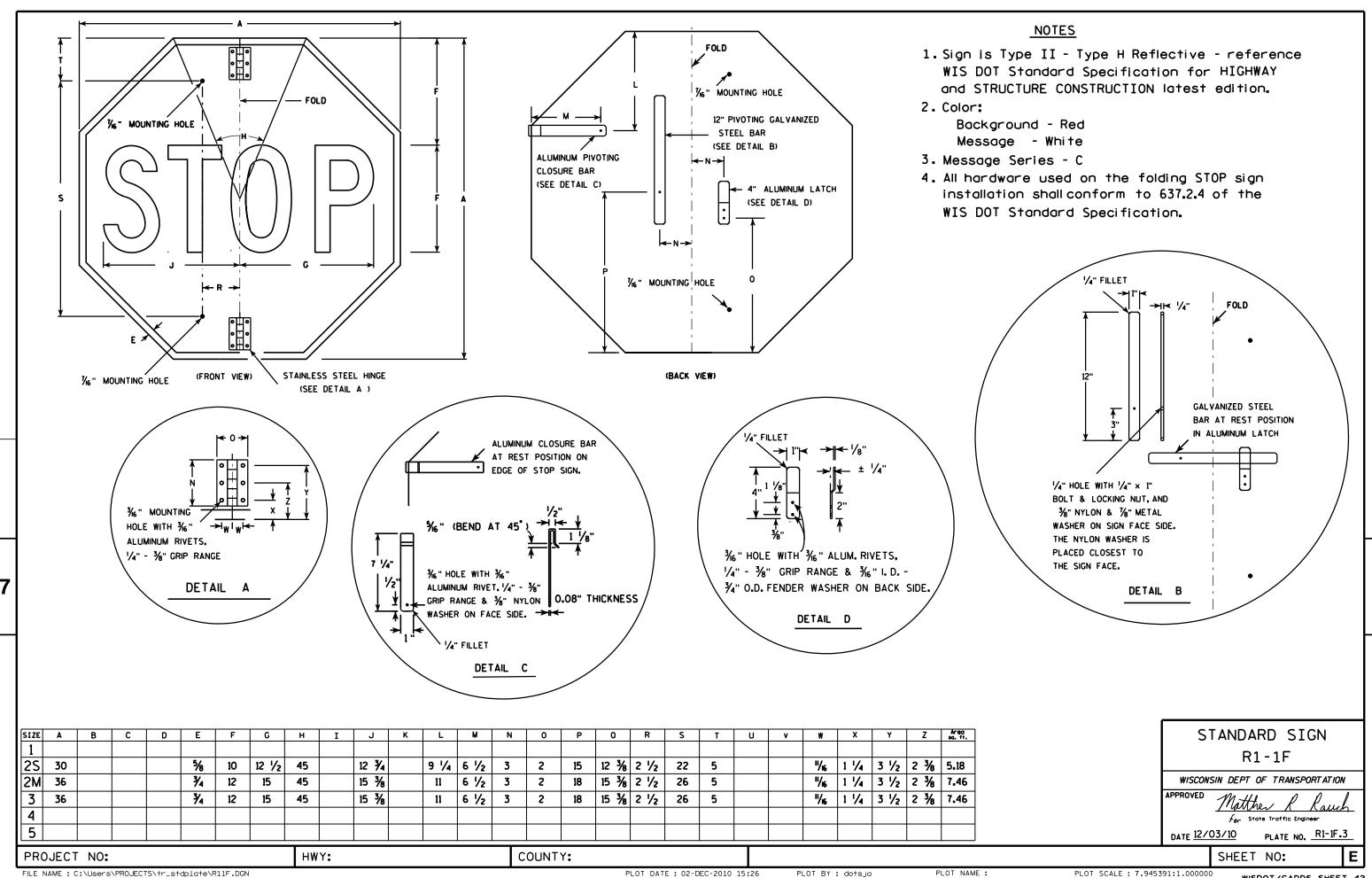
HWY:

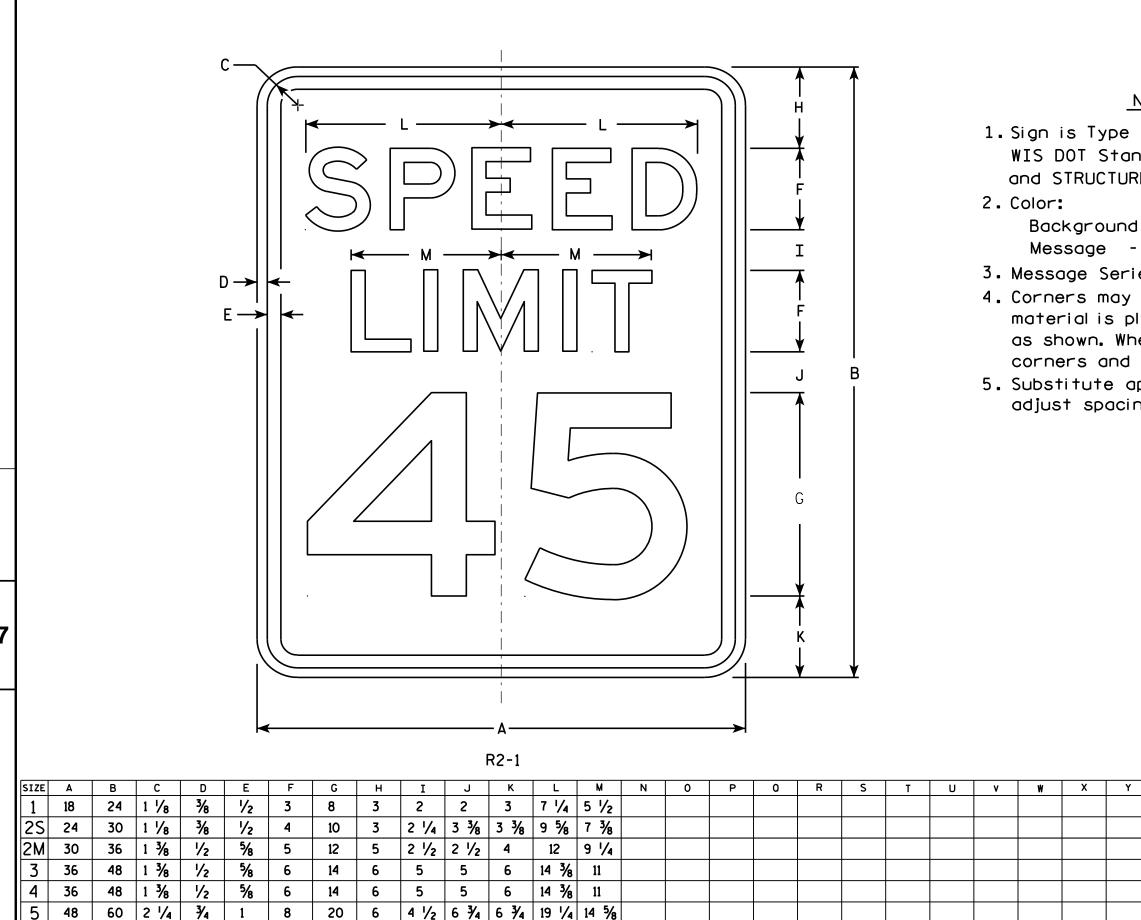
PLOT DATE: 03-JUL-2014 14:56

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 11.675051:1.000000





COUNTY:

NOTES

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

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.

3.0

5.0

7.5

12.0

12.0

20.0

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matther R Raus

For State Traffic Engineer DATE <u>5/26/1</u>0 PLATE NO. R2-1.13

SHEET NO:

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

PROJECT NO:

HWY:

PLOT DATE: 28-MAY-2010 08:32

PLOT BY : ditjph

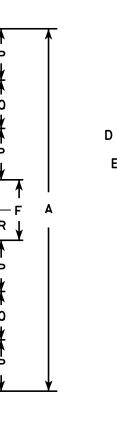
PLOT NAME :

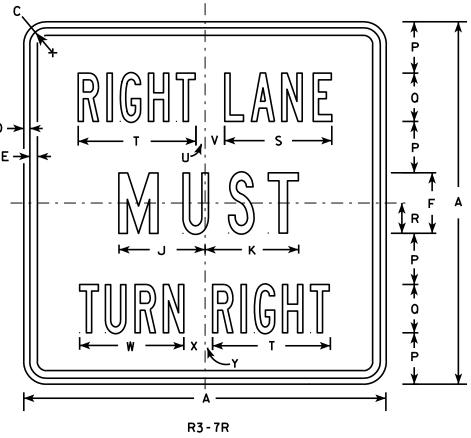
PLOT SCALE: 4.717577:1.000000

- 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 - Black

- 3. Message Series Line 1 is Series B. Line 2 is Series C. Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.





SIZE	Α	В	С	D	Ε	F	G	H	I	J	K	L	М	N	0	Р	0	R	S	Т	U	V	W	X	Y	Z	Areo sq. f1.
1 2S 2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 %	4 1/4	4	2 1/2	8 %	9 3/4	3/4	1 %	8 %	1 %	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 %	4 1/4	4	2 1/2	8 1/8	9 ¾	3/4	1 %	8 %	1 %	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 %	4 1/4	4	2 1/2	8 1/8	9 3/4	3/4	1 %	8 %	1 %	5/8		6.25
3	36		1 %	5/8	3/4	6	9 %	2	1 1/8	8 ¾	9	13 ½	3 %	1 1/2	12 1/2	5	5	3	10 %	12	%	2 1/4	10 %	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 ½	11 ½	11 1/8	17 3/4	3 %	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 1/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

COUNTY:

STANDARD SIGN R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch

DATE 3/18/2011 PLATE NO. R3-7.3

SHEET NO:

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R37.DGN

PROJECT NO:

R3-7L

HWY:

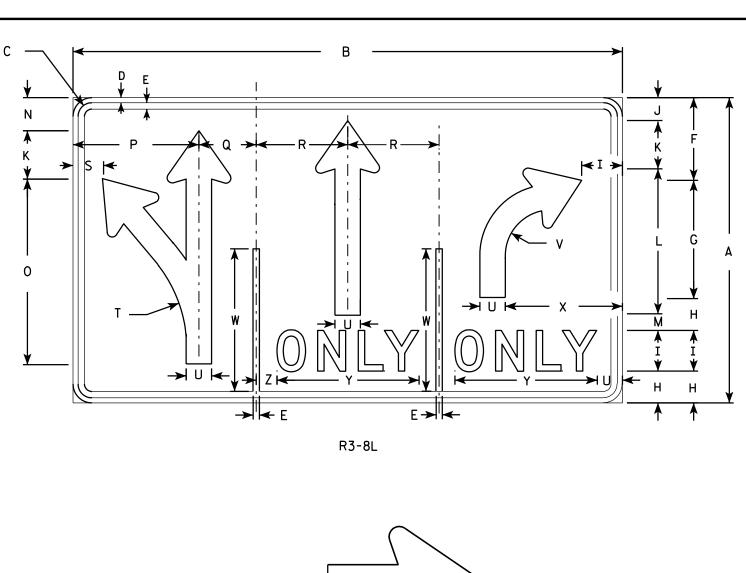
PLOT DATE: 18-MAR-2011 09:43

PLOT BY: mscsja

PLOT SCAL

PLOT NAME :

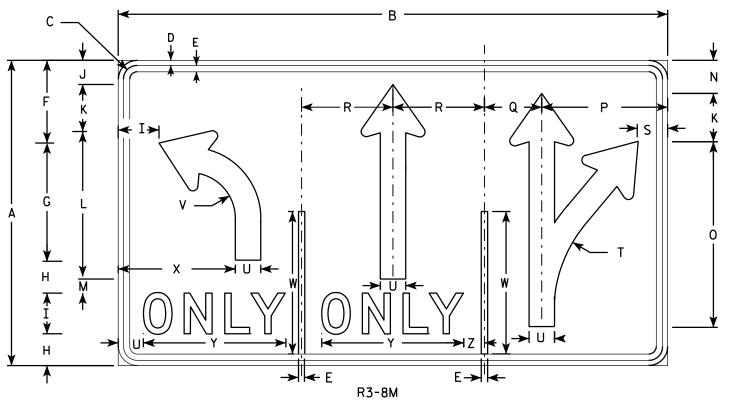
PLOT SCALE: 7.945391:1.000000



- 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.



SEE R3-8 FOR ARROW DETAIL

SIZE	Α	В	С	D	Е	F	G	Н	I	J	K	L	М	Ν	0	Р	0	R	S	Т	U	٧	W	×	Y	Ζ	Area sq. ft.
1																											
2S	30	54	1 3/8	1/2	5%	8 1/8	11 %	3 1/8	4	2 1/4	4 3/4	14 1/4	1 %	3 1/4	18 1/4	12 3/8	5 %	9	3	13 1/4	2 1/2	4 1/2	14	11 1/2	14	2	11.25
2M	30	54	1 3/8	1/2	5%	8 1/8	11 %	3 1/8	4	2 1/4	4 3/4	14 1/4	1 %	3 1/4	18 1/4	12 3/8	5 %	9	3	13 1/4	2 1/2	4 1/2	14	11 1/2	14	2	11.25
3																											
4	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7	29 1/8	2 1/8	5 1/4	29 1/8	18 %	8 3/4	14	4 3/8	21 1/8	3 3/4	7 1/4	22 ¾	17 1/4	20 %	3 1/4	28.0
5	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7	29 1/8	2 1/8	5 1/4	29 1/8	18 %	8 3/4	14	4 3/8	21 1/8	3 3/4	7 1/4	22 3/8	17 1/4	20 %	3 1/4	28.0

STANDARD SIGN R3-8L & R3-8M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

DATE 3/21/2011 PLATE NO. R3-8L.2

SHEET NO:

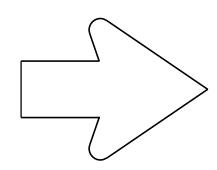
PLOT DATE: 21-MAR-2011 14:39 PLOT BY: mscsja PLOT NAME:

PROJECT NO:

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

Background - WHITE Message - BLACK

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



SEE R3-8 FOR ARROW DETAIL

SIZE	Α	В	С	D	E	F	G	н	I	J	К	L	M	N	0	Р	0	R	S	Т	U	v	W	х	Y	Z	Area sq. ft.
1																											
25	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 %	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
3																											
4	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 3/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0
5	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 1/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0
5	48	84	2 1/4	₹4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 1/8	14	3 ¾	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4				L.		

R3-8W

STANDARD SIGN R3-8W

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 3/24/2011

SHEET NO:

PROJECT NO:

PLOT NAME :

PLATE NO. R3-8W.4

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

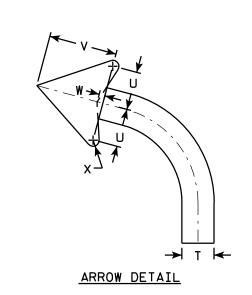
Ε

G

Ε

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.



SIZE	Α	В	С	D	E	F	G	Н	I	J	К	L	M	N	0	Р	0	R	S	Т	U	٧	W	Х	Y	Z	Area sq. ft.
1 2S																											
2S	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 ½	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
2M	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
3	36	48	5/8	1 /8	3 1/2	5	1 1/2	20		2 1/4	14 1/8	9 1/2	12	3		4	3	9 %	2		3 1/2	6 1/8	1/2				12.0
2M 3 4																											
5																								1	1		

COUNTY:

R3-9B

STANDARD SIGN R3-9B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9B.5

SHEET NO:

PLOT DATE: 24-MAR-2011 11:24 PLOT NAME : PLOT BY: mscsja

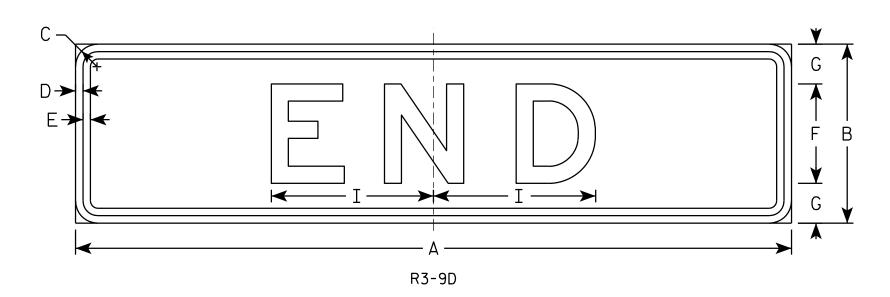
PROJECT NO:

HWY:

- 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.



SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	T	U	٧	W	X	Y	Z	Area sq. ft
1																											
2S	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 1/8																		1.0
2M	24	6	11/8	3/8	3/8	3	1 1/2	7 3/4	4 1/8																		1.0
3	36	9	1 1/8	3∕8	3∕8	5	2	12 3/4	8 1/8																		1.86
4																											
5																											

COUNTY:

R3-9C

HWY:

STANDARD SIGN R3-9C & R3-9D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Race

State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9C.2

SHEET NO:

PROJECT NO:

FILE NAME: C:\Users\PROJECTS\tr_stdplate\R39C.DGN

PLOT DATE: 24-MAR-2011 13:02

PLOT BY: mscsja

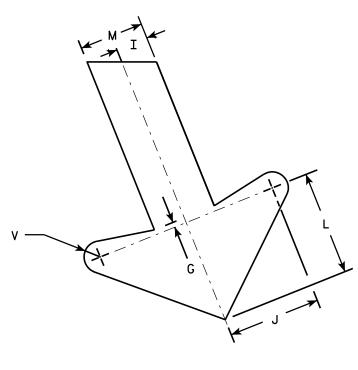
PLOT NAME :

PLOT SCALE: 4.826826:1.000000

- 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.



|--|

PLOT NAME :

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	T	U	٧	W	Х	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	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	3/8	3 3/4	1 1/2	4 1/4	4	4 %	3	2 1/4	10 %	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

COUNTY:

R3-20L

HWY:

М

М

0

STANDARD SIGN R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew K

for State Traffic Engineer

DATE 10/18/10

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

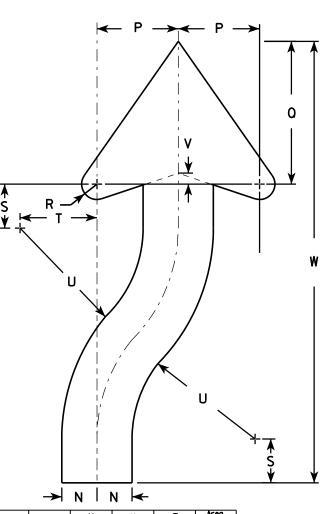
SHEET NO: E

PROJECT NO:

- 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.



PLOT NAME :

ARROW DETAIL

																							→	N I	N 		
SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	T	U	٧	W	X	Y	Z	Areo sq. ft
1	18	24	1 1/8	3∕8	1/2	3 %	4 3/4	5 ½	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 %	3 1/4	6 3/4	1/2	20 ¾				3.0
2S	24	30	1 1/8	3∕8	1/2	4 1/2	6 1/4	7 3/8	1 %	3	8	4	12 1/2	2	30	4 %	8 1/8	1 /8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 1/8	3	8	4	12 1/2	2	30	4 %	8 1/8	7∕8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 1/8	4 1/2	12	6	18 ¾	3	45	6 %	12 1/4	1 1/4	3 3/4	6 %	13 1/2	1	40 ¾				12.0
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 ¾	3	45	6 %	12 1/4	1 1/4	3 3/4	6 %	13 ½	1	40 ¾				12.0
5	48	60	2 1/4	₹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 3/4	18	1 1/4	50 1/4				20.0

COUNTY:

R4-7

STANDARD SIGN R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

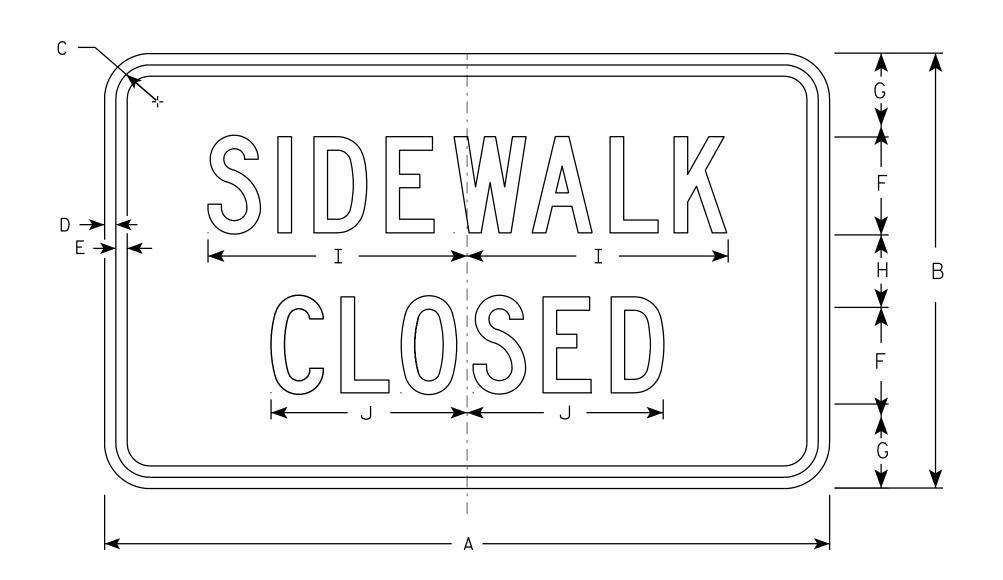
DATE 3/25/2011 PLATE NO. R4-7.8

SHEET NO:

PROJECT NO:

D→

HWY:



R9-9

NOTES

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

Background - White Message - Black

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

SIZE A В Ε 0 S 2S 1 3/4 3 10 3/4 8 1/8 1/2 3 1/2 30 18 1/2 4 3.75 2M 1 3/4 10 3/4 8 1/8 30 3 1/2 3 3.75 3 4 5

COUNTY:

STANDARD SIGN R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauh
For State Traffic Engineer

DATE 4/1/2011

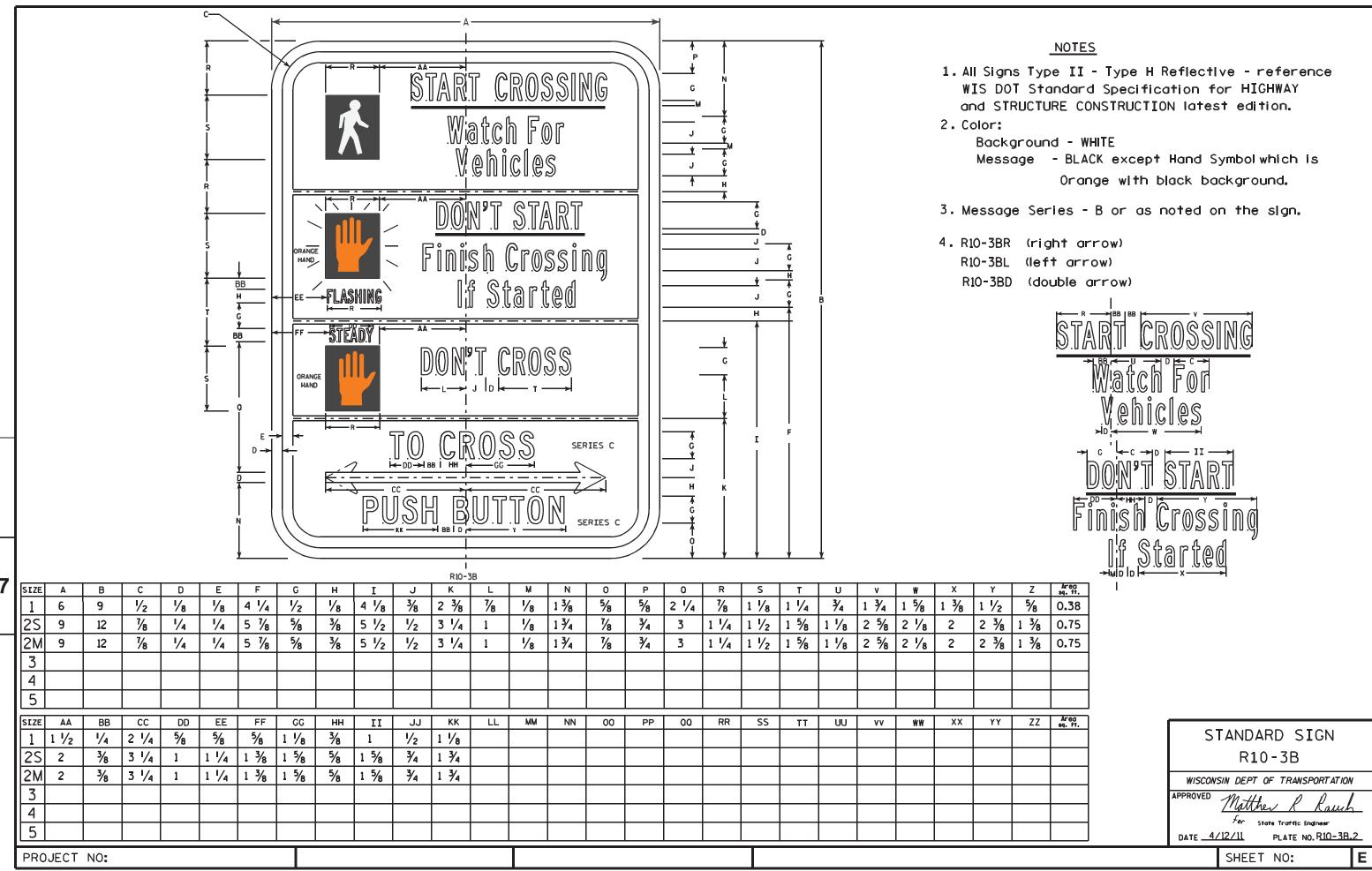
11 PLATE NO. R9-9.5

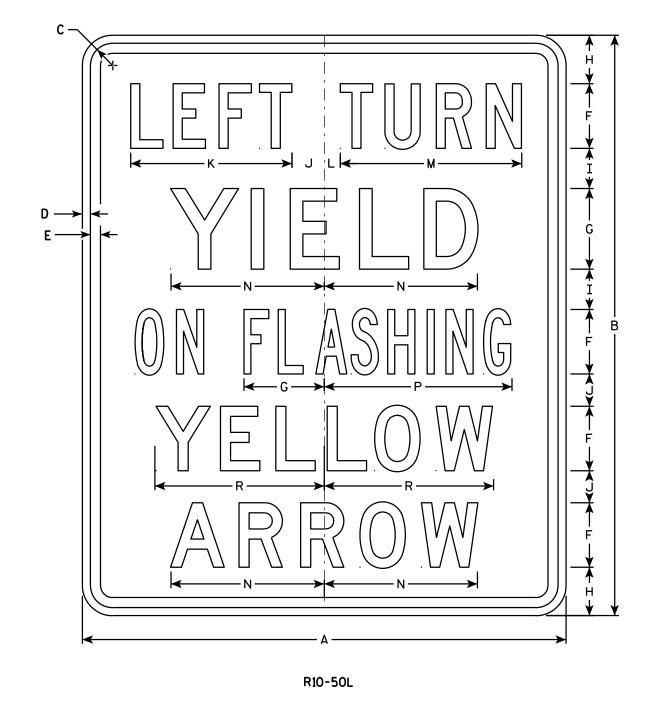
SHEET NO:

PROJECT NO:

HWY:

PLOT NAME :

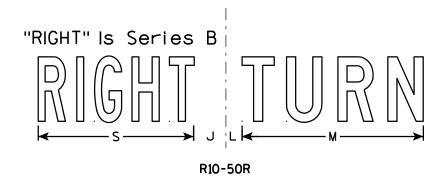




- 1. Sign is Type II Type H Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

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.



SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	T	د	٧	W	X	Y	Z	Areo sq. ft.
1																											
2S	30	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 %		10 1/2	9 %								7.5
2M	30	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 %		10 1/2	9 %								7.5
3																											
4																											
5																											

COUNTY:

STANDARD SIGN R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 4/11/13

PLATE NO. R10-50.2

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1050.DGN

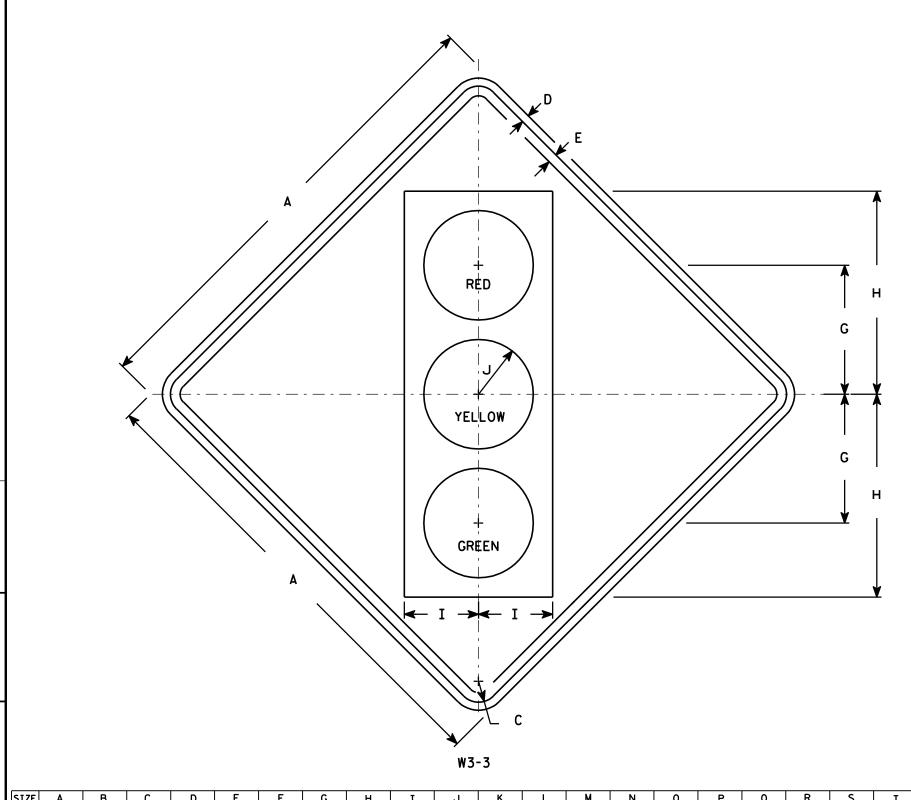
PROJECT NO:

HWY:

PLOT DATE: 11-APR-2013 11:17

PLOT BY: mscsja

PLOT SCALE: 5.954276:1.000000



- 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 Α 1 3/8 1/2 13 3/4 5 5/8 8 3/4 3 3/4 30 6.25 25 1 % 5/8 15 3/4 5 3/4 4 1/4 36 3/4 9.0 2M 15 3/4 5 3/4 4 1/4 36 1 % 5/8 9.0 3 36 1 % 5/8 15 3/4 5 3/4 4 1/4 9.0 3/4 4 12 1/2 20 7 1/2 5 48 2 1/4 16.0 12 1/2 5 20 7 1/2 5 48 2 1/4 16.0

COUNTY:

STANDARD SIGN W3 - 3

WISCONSIN DEPT OF TRANSPORTATION

for State Traffic Engineer DATE 6/7/10 PLATE NO. W3-3.11

SHEET NO:

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

HWY:

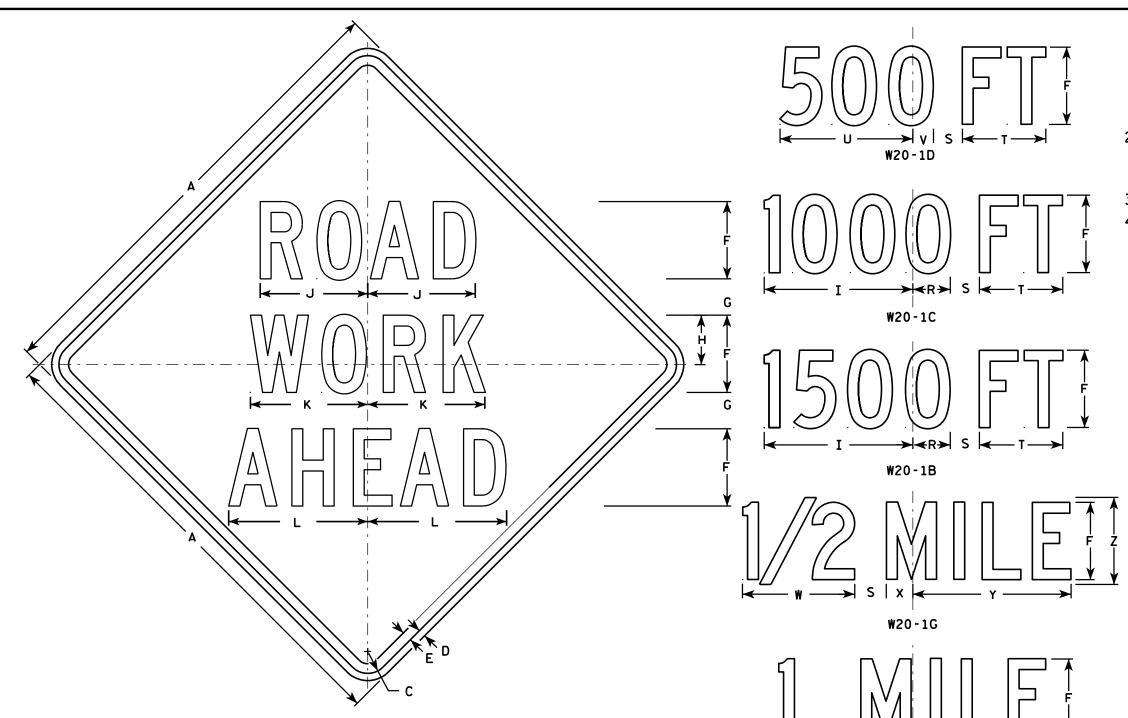
PROJECT NO:

PLOT DATE: 07-JUN-2010 13:07

PLOT BY: ditjph

PLOT NAME :

PLOT SCALE: 7.448805:1.000000



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

Background - Orange Message - Black

- 3. Message Series 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.

SIZ	E	Α	В	С	D	Ε	F	G	Н	I	7	K	L	М	N	0	Р	0	R	S	T	U	٧	W	X	Y	Z	Area sq. ft.
1	:	36		1 3/8	1/2	5⁄8	5	2 %	3 1/4	10 1/8	7	7 5/8	8 %	1 1/8	4 1/2	3 1/2	9		2 1/2	1 1/8	5 %	9	1 3/8	8	1 3/4	10 3/4	6	9.0
25	3 4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 %	6 %	5	13 %		3 %	3	8 %	13 ¾	2 1/8	11 1/8	2 3/4	16 3/8	9	16.0
21	1 4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 %	6 %	5 3/8	13 %		3 %	3	8 %	13 3/4	2 1/8	11 1/8	2 3/4	16 3/8	9	16.0
3	4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 %	6 %	5 3/8	13 %		3 %	3	8 %	13 3/4	2 1/8	11 1/8	2 3/4	16 3/8	9	16.0
4	1	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 %	6 %	5 3/8	13 %		3 %	3	8 %	13 3/4	2 1/8	11 1/8	2 3/4	16 3/8	9	16.0
5		48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 1/8	6 1/8	5 3/8	13 %		3 1/8	3	8 %	13 3/4	2 1/8	11 1/8	2 3/4	16 3/8	9	16.0

W20-1A

STANDARD SIGN W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED DATE 3/18/11 PLATE NO. W20-1.9

SHEET NO:

PROJECT NO:

W20-1F

<u>NOTES</u>

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

Background - Orange Message - Black

- 3. Message Series See Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. " LANE" is Series B. Allother copy is Series C.

500 FT

W20-5C

1500 FT



PLOT BY: mscj9h



	W20-5A															W 4	20-3F											
SI	ZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р	0	R	S	T	U	V	W	Х	Y	Z	Area sq. ft.
	1	36	6	1 5/8	5/8	₹4	5	1 /8	2 1/2	13 1/8	10 ¾	9 1/2	14 1/4	13 %	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 %	10 1/8	2 1/2	1 3/4	8	9.0
2	?S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 1/8	1 1/2	6	4 %	12	2 %	7 1/2	13 1/2	3 3/8	2 3/8	10 %	16.0
2	M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 1/8	1 1/2	6	4 %	12	2 %	7 1/2	13 1/2	3 3/8	2 3/8	10 %	16.0
	3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 1/8	1 1/2	6	4 %	12	2 %	7 1/2	13 1/2	3 3/8	2 3/8	10 %	16.0
	4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 %	19	18 3/8	16	14 1/4	1 %	1 1/2	6	4 5/8	12	2 %	7 1/2	13 1/2	3 %	2 3/8	10 %	16.0
	5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 %	19	18 3/8	16	14 1/4	1 1/8	1 1/2	6	4 %	12	2 %	7 1/2	13 1/2	3 3/8	2 3/8	10 %	16.0

COUNTY:

STANDARD SIGN W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew & Rauch

For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

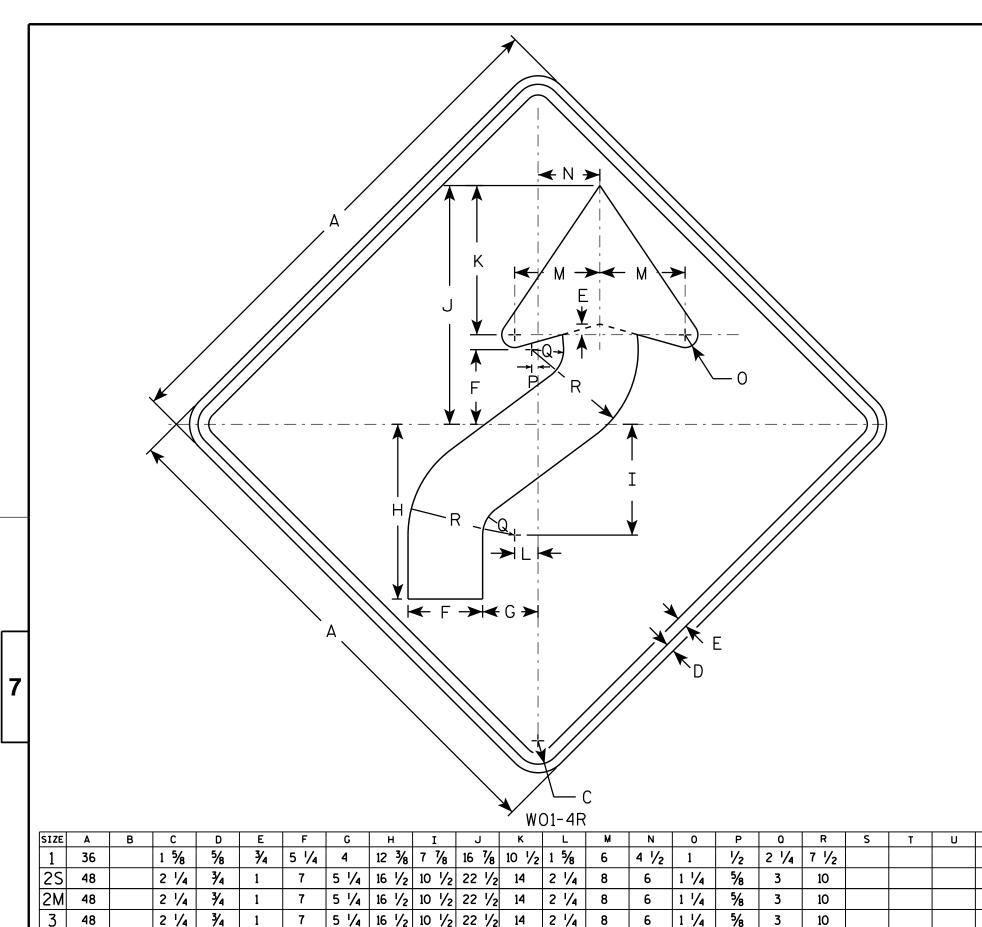
SHEET NO:

PROJECT NO:

HWY:

W20-56A

W20-55A



5 1/4 16 1/2 10 1/2 22 1/2 14

5 1/4 16 1/2 10 1/2 22 1/2 14

HWY:

2 1/4

2 1/4

NOTES

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

Background - Orange Message - Black

- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

9.0 16.0 16.0 16.0 16.0 STANDARD SIGN W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch

For State Traffic Engineer

DATE <u>11/18/1</u>3

PLATE NO. WO1-4.1
SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN

48

48

PROJECT NO:

2 1/4 3/4

2 1/4 | 3/4

PLOT DATE : 28-FEB-2014 11:35

10

1 1/4

1 1/4

COUNTY:

5/8

PLOT NAME :

PLOT BY: mscj9h

PLOT SCALE: 6.755110:1.000000

WISDOT/CADDS SHEET 42

NOTES

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

Background - Orange Message - Black

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

c —	
D -> E ->	
M —	→ I ← I
N	Н — Н
Α	· · · · · · · · · · · · · · · · · · ·
WO:	1-6

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р	0	R	S	T	U	٧	W	X	Y	Z	Areg sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 ¾													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 ¾													12.5

COUNTY:

STANDARD SIGN WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch
For State Traffic Engineer

DATE <u>11/18/13</u>

SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN

HWY:

PROJECT NO:

PLOT DATE: 28-FEB-2014 11:37

PLOT NAME :

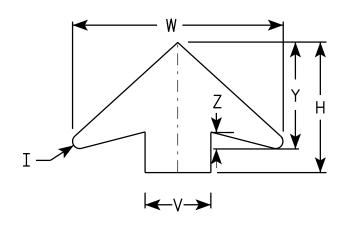
PLOT BY: mscj9h

PLOT SCALE: 5.837526:1.000000

<u>NOTES</u>

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color: * Background - ORANGE* Message - BLACK
- 3. Message Series C for numbers Series E for wording
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	Α	В	С	D	Ε	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	Т	C	٧	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3∕8	9 3/4	1 5/8	9.0
2S	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	½	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3%	12	8	25 %	3∕8	13	2	16.0
2M	48		2 1/4	3/4	1	19 1/4	10 ¾	17 3/8	1 / ₈	30	2 1/4	4	1 1/4	15	10	1 %	1/2	8	9 1/4	9 3/8	12	8	25 %	3⁄8	13	2	16.0
3	48		2 1/4	3/4	1	19 1/4	10 ¾	17 3/8	7 ⁄8	30	2 1/4	4	1 1/4	15	10	1 %	1/2	8	9 1/4	9 3%	12	8	25 %	3∕8	13	2	16.0
4	48		2 1/4	3/4	1	19 1/4	10 ¾	17 3/8	7 ⁄8	30	2 1/4	4	1 1/4	15	10	1 %	1/2	8	9 1/4	9 3%	12	8	25 %	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 ¾	17 3/8	1 / ₈	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 %	3∕8	13	2	16.0

STANDARD SIGN W03 - 5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Raul

DATE 11/20/13

PLATE NO. W03-5.1

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W035.DGN

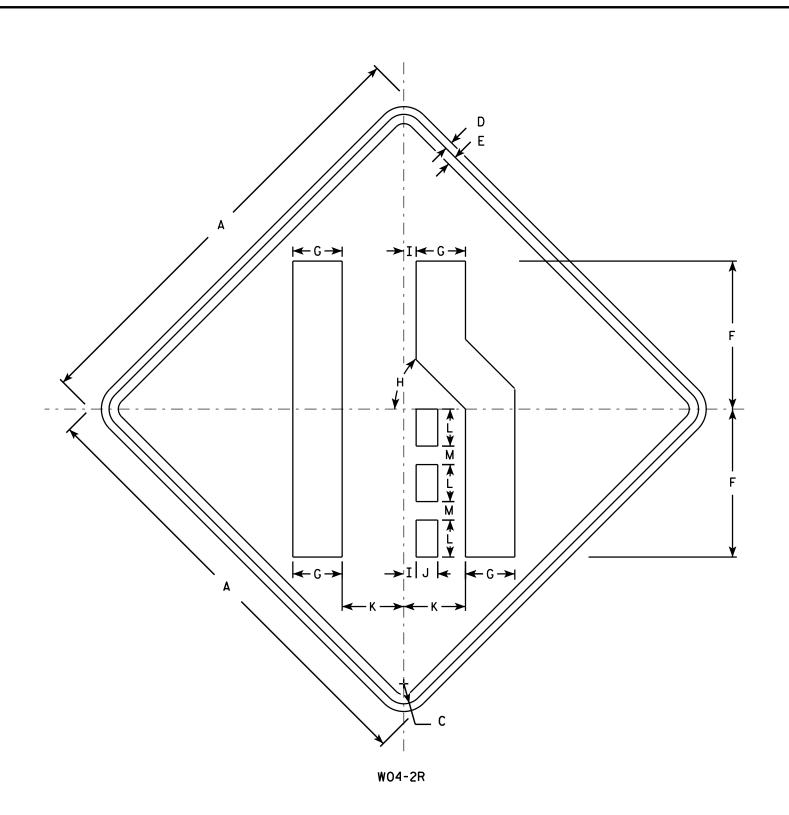
PROJECT NO:

NOTES

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

Background - Orange Message - Black

- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W04-2L is the same as W04-2R except the symbolis reversed along the vertical centerline.



SIZE 1 % 5/8 3/4 12 45° 1 3/4 5 1 1/2 4 36 3 9.0 2S 2 1/4 5 3/8 45° 1 ¼ 2 ¾ 6 ¾ 3/4 48 16.0 45° 1 ¼ 2 ¾ 6 ¾ 3/4 5 3/8 48 2 1/4 2 16.0 2 1/4 3 48 3/4 5 % 45° | 1 1/4 | 2 3/8 | 6 3/4 2 16.0 2 1/4 3/4 5 3/8 45° | 1 1/4 | 2 3/8 | 6 3/4 48 2 16.0 5 2 1/4 3/4 5 3/8 45° | 1 1/4 | 2 3/8 | 6 3/4 48 2 16.0

STANDARD SIGN W04 - 2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

ForState Traffic Engineer

DATE 11/20/13 PLATE NO. <u>WO4-2.1</u>

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W042.DGN

PROJECT NO:

PLOT DATE: 20-NOV-2013 11:43

WISDOT/CADDS SHEET 42

CTH JJ (EB RIGHT TURN LANE)

					Incremental Vol (C	Y) (Unadjusted)	Cumulative V		
STATION	Real Station	Distance	Cuit	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
188+13.16	18813		36	0	0	0	0	0	0
188+49.99	18850	37	31	0	46	0	46	0	46
189+00.00	18900	50	25	3	52	3	98	3	95
189+50.00	18950	50	25	2	47	4	144	8	137
190+00.00	19000	50	25	18	46	18	191	28	163
190+50.00	19050	50	28	8	50	24	241	55	186
191+00.00	19100	50	30	2	54	9	295	65	229
191+13.34	19113	13	30	2	15	1	309		243
					309	60			

CTH J (NB RIGHT TURN LANE) **

			AREA (SF)		Incremental Vol (C	Y) (Unadjusted)	Cumulative V	ol (CY)	
STATION	Real Station	Distance	Cut	Fill	Cult	Fill	Cut 1.00	Expanded Fill 1.11	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
381+27.08	38127		10	0.0	0	0.0	0	0.0	0
381+50.00	38150	23	16	0.0	11	0.0	11	0.0	11
382+00.00	38200	50	30	0.1	43	0.1	53	0.1	53
382+50.00	38250	50	96	0.0	117	0.1	170	0.2	170
383+00.00	38300	50	128	0.0	207	0.0	378	0.2	377
383+50.00	38350	50	48	0.0	163	0.0	540	0.2	540
384+00.00	38400	50	41	0.1	82	0.1	623	0.3	622
384+50.00	38450	50	43	0.1	78	0.1	700	0.5	700
					700	0.4			

^{**} ADDITIONAL EARTHWORK SHOWN IN MISCELLANEOUS QUANTITIES

CTH J (SB RIGHT TURN LANE) **

			AREA (SF)		Incremental Vol (C	Y) (Unadjusted)	Cumulative \		
STATION	Real Station	Distance	Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
386+50.00	38650		58	0	0	0	0	0	0
387+00.00	38700	50	37	0	88	0	88	0	88
387+31.87	38 <i>7</i> 32	32	23	0	35	0	123	0	123
					123	0			

** ADDITIONAL EARTHWORK SHOWN IN MISCELLANEOUS QUANTITIES

COUNTY: WAUKESHA SHEET PROJECT NO: 2758-01-70 HWY: CTH JJ EARTHWORK Ε

CTH SR (NB LEFT TURN LANE)

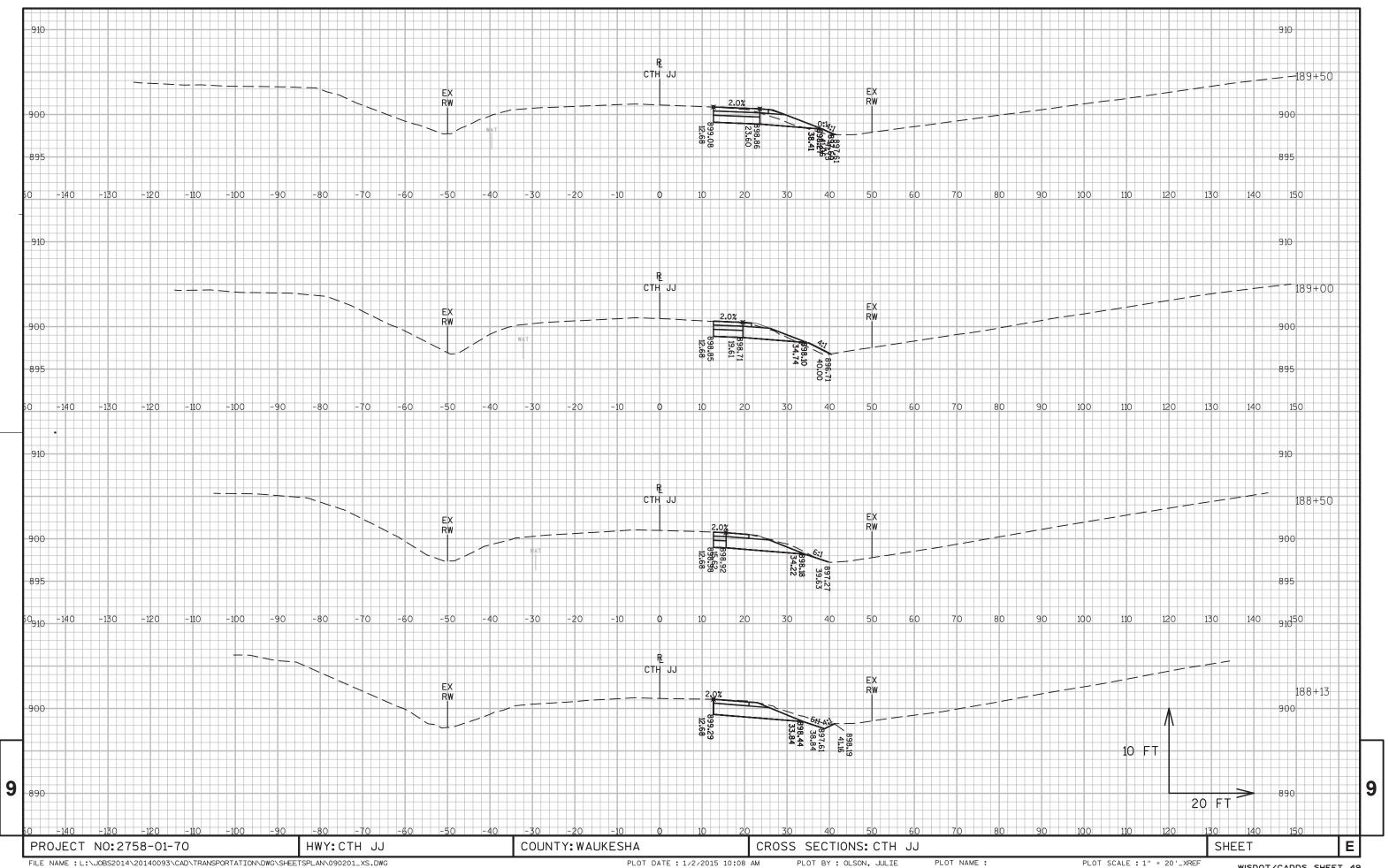
			AREA (SF)		Incremental Vol (C	Y)(Unadjusted)	Cumulative V		
STATEON	Real Station	Distance	Cuit	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
8+11.76	812		23	0	0	0	0	0	0
8+50.00	850	38	30	0	37	0	37	0	37
9+00.00	900	50	31	1	57	1	94	1	93
9+50.00	950	50	38	1	64	2	158	3	155
9+67.06	967	17	32	0	22	0	180	3	177
					180	3			

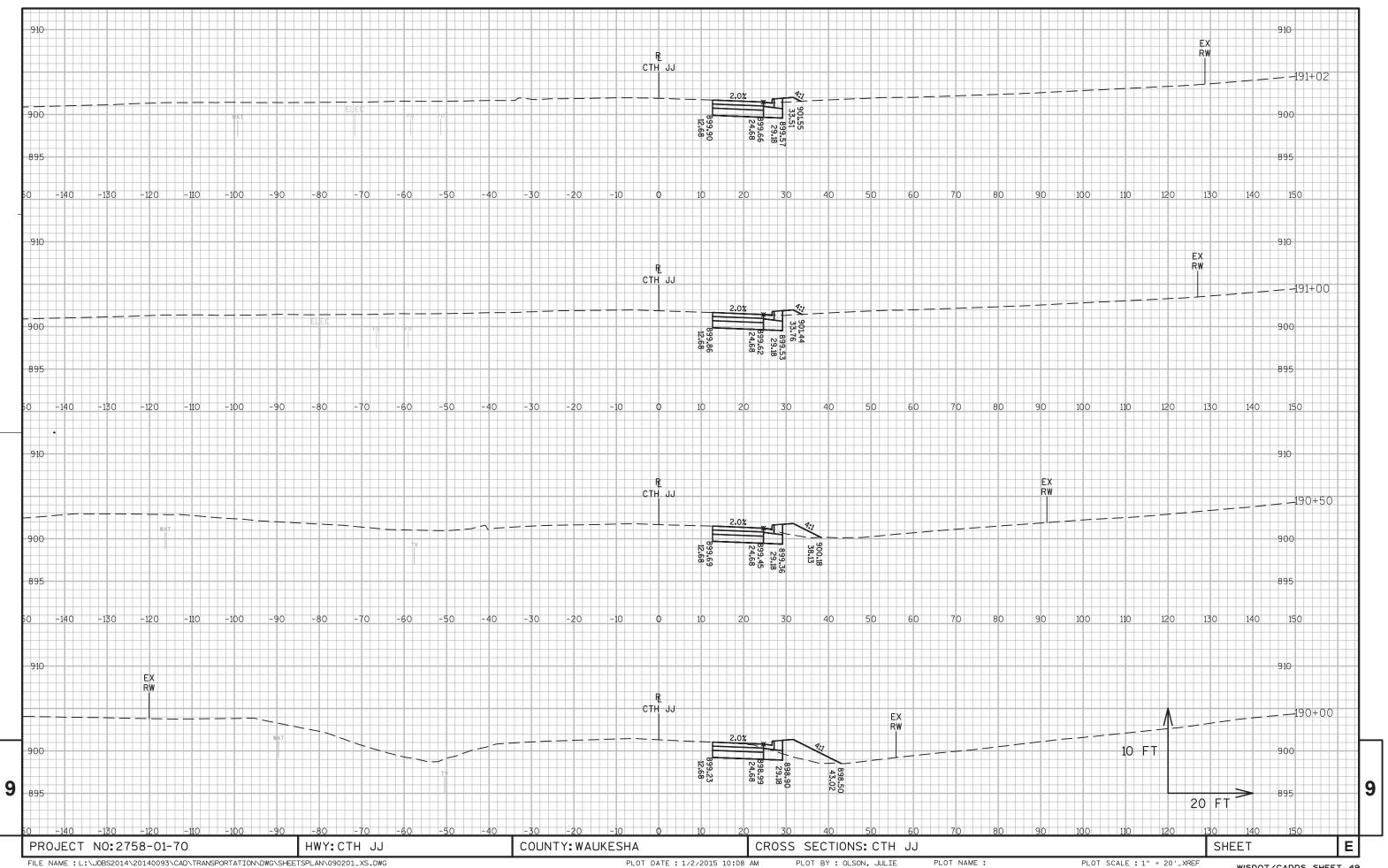
9

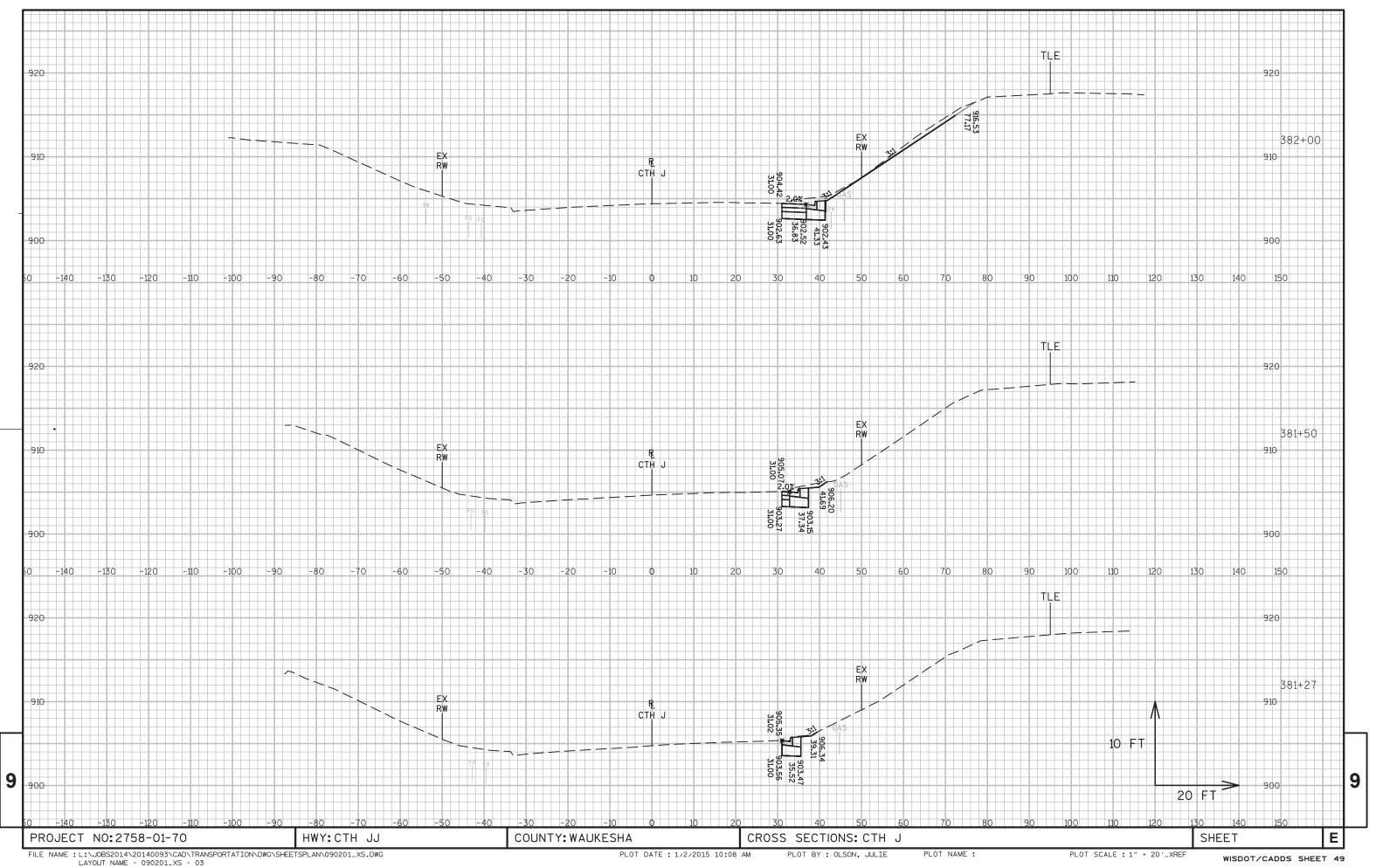
PROJECT NO: 2758-01-70 HWY: CTH JJ COUNTY: WAUKESHA EARTHWORK SHEET **E**

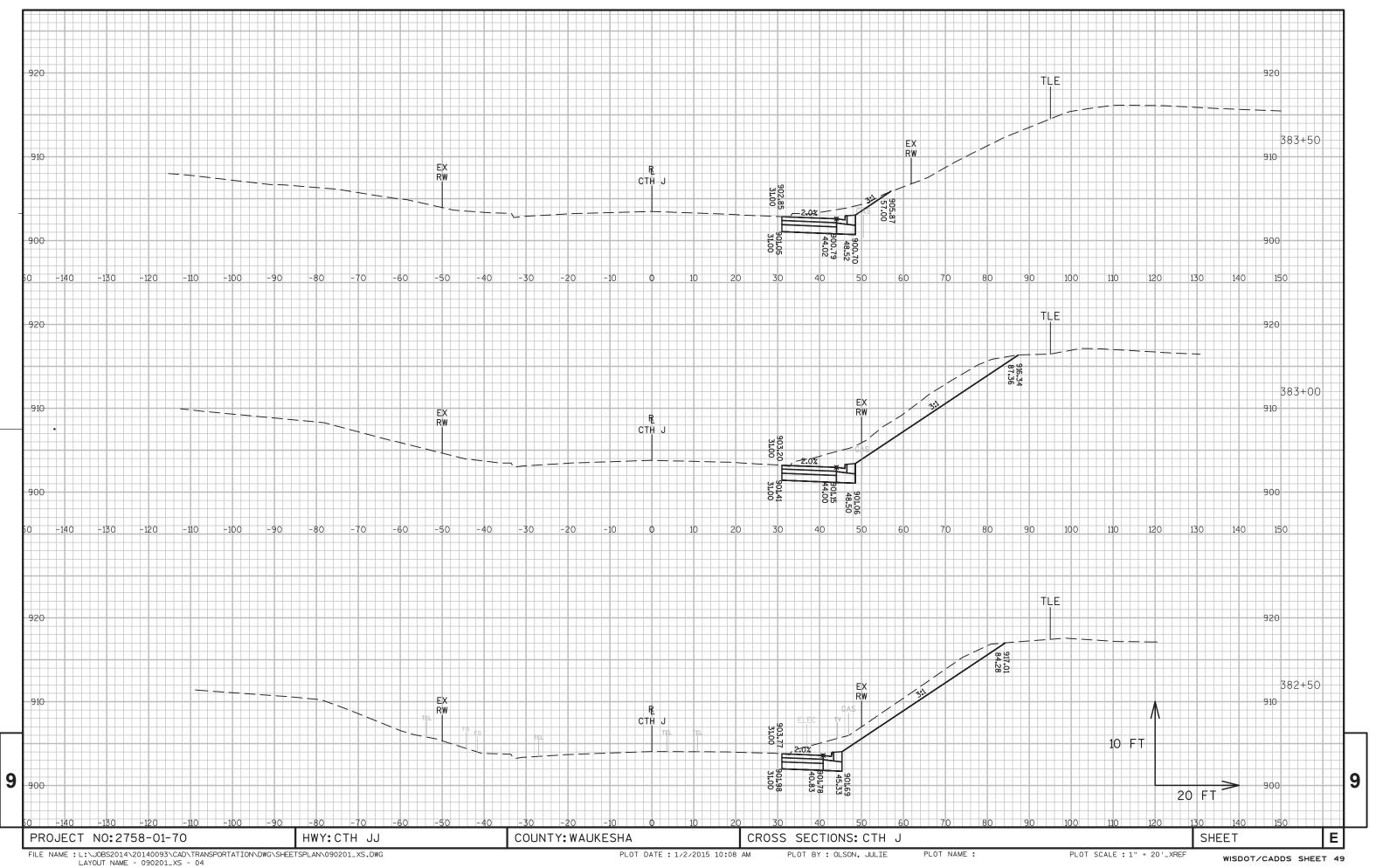
PLOT BY: MESSER, JACKIE

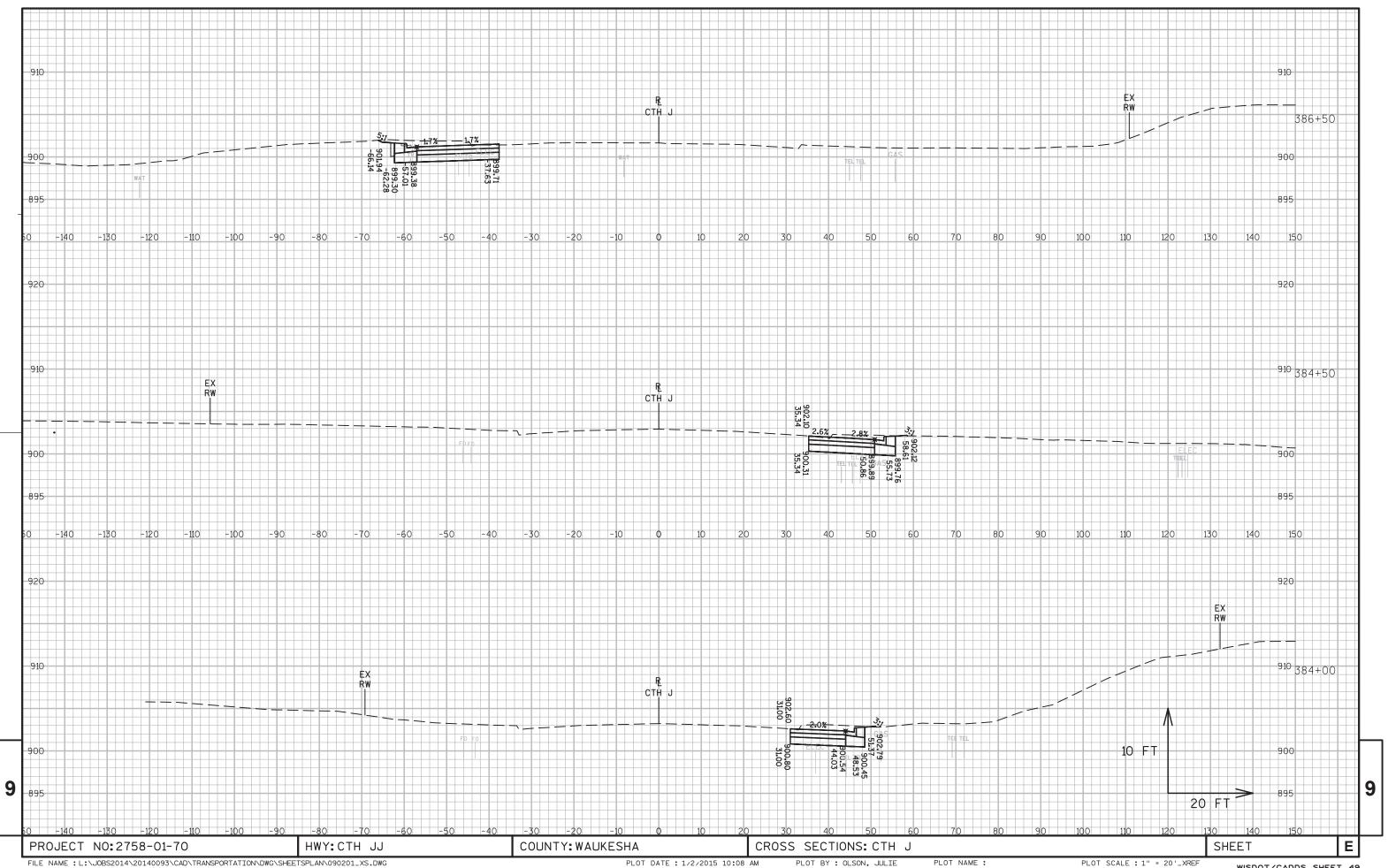
9

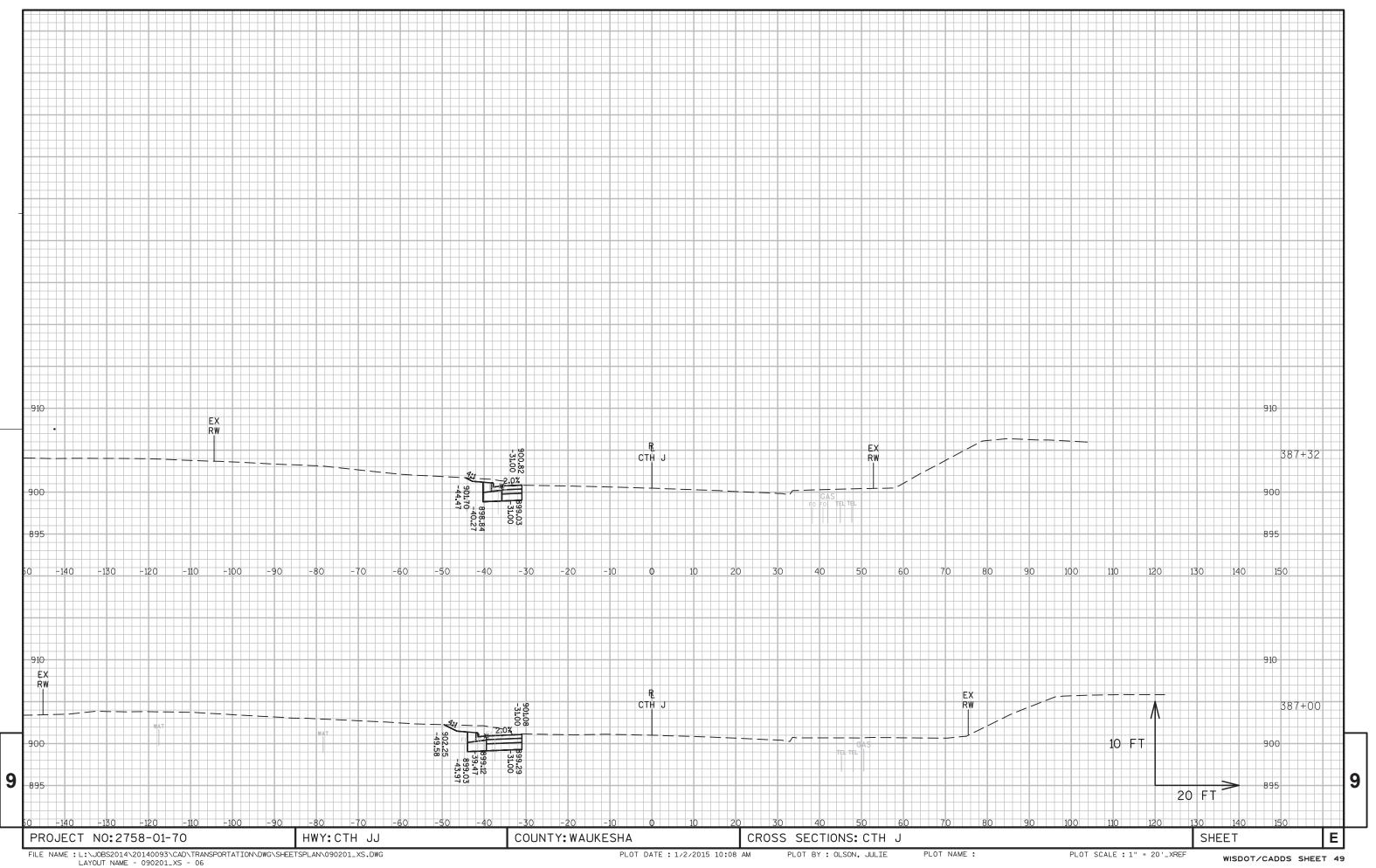


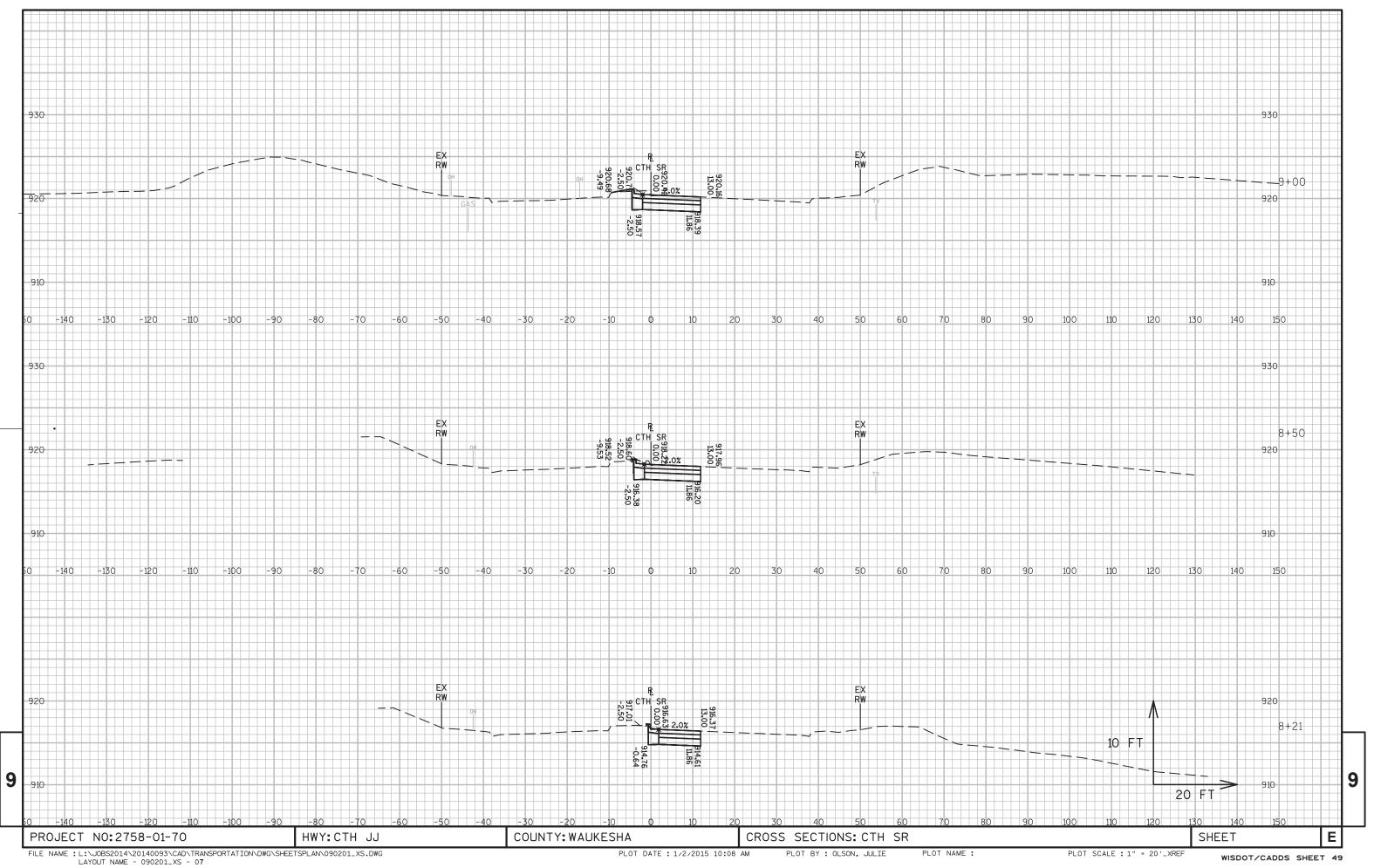


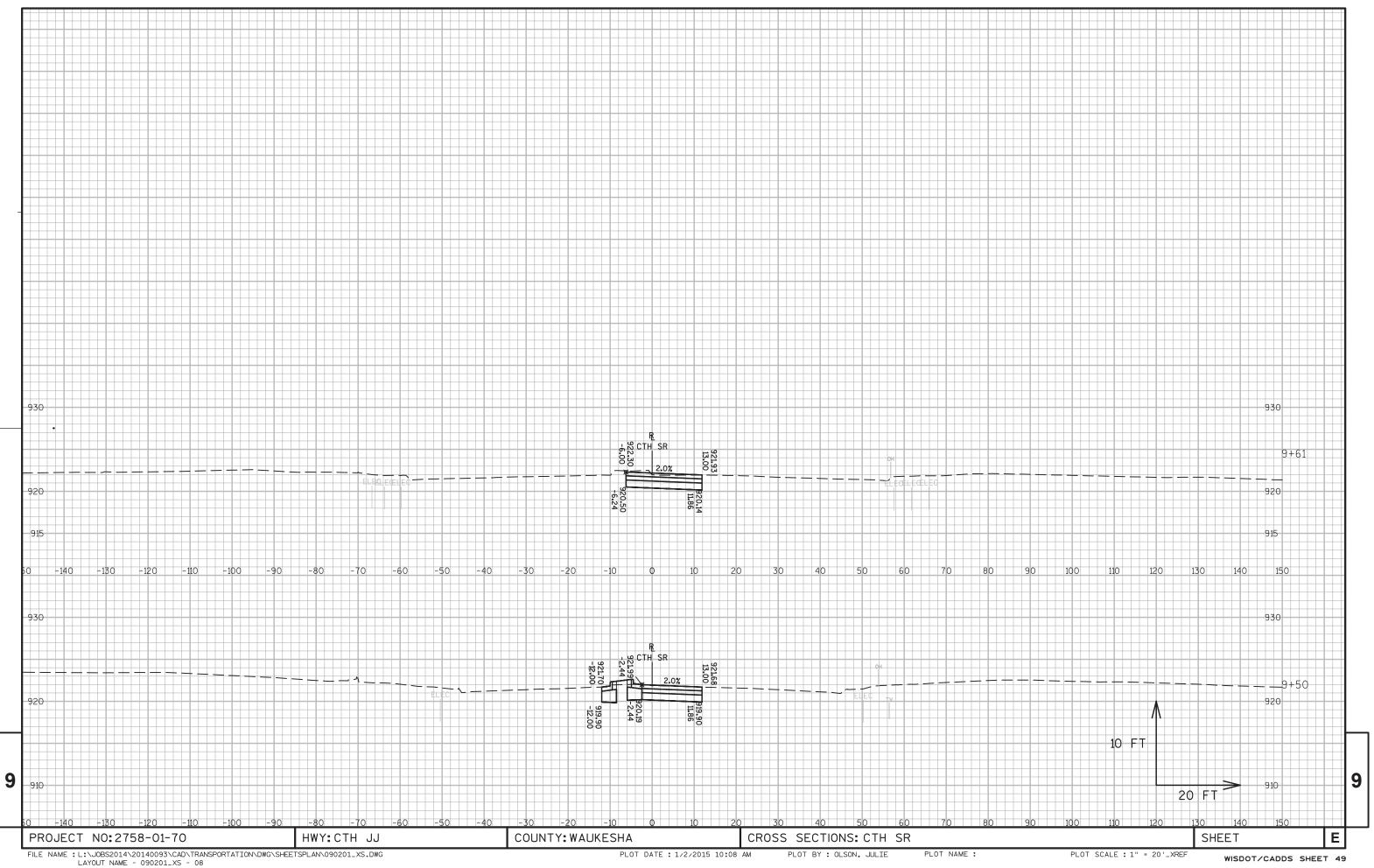














Wisconsin Department of Transportation

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