WKE

MAR 2018

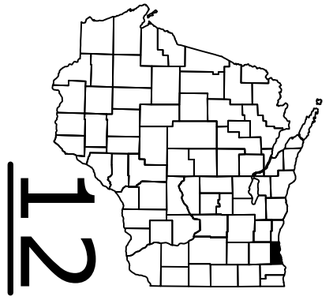
PROJECT ID: 1228-16-71

COUNTY: MILWAUKEE

ORDER OF SHEETS

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

TOTAL SHEETS = 462



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

NORTH - SOUTH FREEWAY

GREEN TREE RD BRIDGE B-40-0149

IH 43

MILWAUKEE COUNTY

STATE PROJECT NUMBER
1228-16-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1228-16-71	WISC 2018142	1

DESIGN DESIGNATION

A.A.D.T.	2016	=	4,800
A.A.D.T.	2040	=	9,400
D.H.V.		=	
D.D.		=	
T. (% A.A.D.T)		=	AM 8%EB, 3%WB: PM 1% EB, 3% WB
DESIGN SPEED		=	30 MPH
ESALS		=	

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

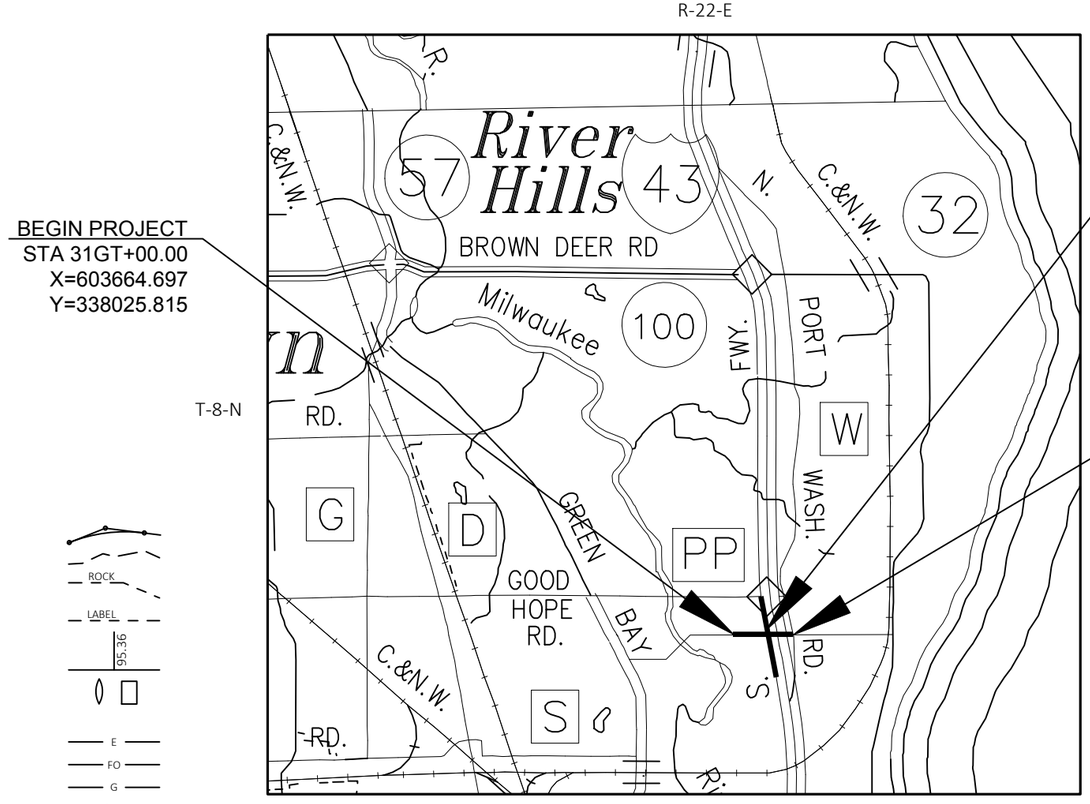
PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

R-22-E



BEGIN PROJECT
STA 31GT+00.00
X=603664.697
Y=338025.815

END PROJECT
STA 42GT+85.00
X=604849.528
Y=338009.529

STRUCTURES
B-40-917

R-40-641
R-40-642

LAYOUT
SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 0.224 MI

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

ORIGINAL PLANS PREPARED BY

HNTB

11414 W. PARK PLACE, SUITE 300
MILWAUKEE, WI 53224
(414) 359-2300

WISCONSIN PROFESSIONAL ENGINEER
RYAN D. JANKE
E-42442
PORT WASHINGTON, WI

11/01/2017 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT, AYRES, KAPUR
Designer	HNTB
Project Manager	STEVE HOFF
Regional Examiner	
Regional Supervisor	MANOJOY NAG

APPROVED FOR THE DEPARTMENT
DATE: 11/01/2017 (Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER. ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WILL BE FILLED WITH GRANULAR BACKFILL.

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

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

ALL PRIVATE EXISTING UTILITIES NOT INCLUDED IN THE PLAN ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED. STORM SEWER MANHOLES WILL BE ADJUSTED AND PAID FOR AS A CONTRACT BID ITEM.

THE LOCATION AND LIMITS OF EBS (EXCAVATION BELOW SUBGRADE), WHERE REQUIRED, WILL BE DETERMINED BY THE ENGINEER. SUCH EBS SHALL NOT BE USED TO BALANCE YARDAGE.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN THE FLOODPLAIN OR WETLAND AREAS.

CURB AND GUTTER ELEVATIONS ARE GIVEN TO THE FLANGE LINE, CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE LINE OF CURB.

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

1/2-INCH FELT EXPANSION JOINT MATERIAL IS REQUIRED BETWEEN BACK OF CURB AND FRONT OF WALK OR DRIVEWAY APRON.

EXISTING INLET AND MANHOLE COVERS THAT ARE NOT REQUIRED TO BE REUSED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE RESPECTIVE MUNICIPALITY.

ADJUSTING MANHOLES TO FINAL GRADE SHALL BE COMPLETED AFTER PAVING OF THE LOWER ASPHALTIC PAVEMENT LAYER.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR MUST VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

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

ELEVATIONS OF STORM SEWER STRUCTURES IN CURB AND GUTTER SECTIONS REFER TO FLOW LINE OF THE CURB AND GUTTER.

LOCATIONS AND ELEVATIONS OF STORM SEWER STRUCTURES NOT IN CURB AND GUTTER SECTIONS REFER TO THE CENTER OF THE COVER.

PLAN LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND IS USED FOR ESTIMATING. PIPE LENGTH USED TO COMPUTE PIPE SLOPE IS MEASURED ALONG THE WALL OF THE STRUCTURE.

SALVAGED TOPSOIL SHALL NOT BE PLACED ON SUBGRADE UNTIL APPROVED BY ENGINEER.

DO NOT USE FERTILIZER IN AREAS THAT ARE WITHIN 10 FEET OF WETLANDS.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED BY DIRECTION OF THE ENGINEER WITH THE FOLLOWING FINISHING ITEMS: SALVAGED TOPSOIL, SEED, FERTILIZER, AND MULCH. QUANTITIES FOR FINISHING ITEMS INCLUDE RESTORATION EXTENDING 5 FEET BEYOND THE SLOPE.

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

EROSION CONTROL DEVICES WILL BE PLACED IN SEQUENCE WITH CONSTRUCTION ACTIVITIES AS DETERMINED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER. REMOVAL OF EROSION CONTROL DEVICES IS INCIDENTAL TO THE COST OF THEIR RESPECTIVE BID ITEMS. EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

MUNICIPAL OWNED STREET SIGNS WILL BE REMOVED, STORED AND REINSTALLED BY THE MUNICIPALITY.

NON-MUNICIPAL OWNED SIGNS TO BE MOVED WILL BE STORED AND PROTECTED BY THE CONTRACTOR, FREE FROM DAMAGE, UNTIL SUCH TIME AS THEY ARE REINSTALLED.

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

A CONVERSION FACTOR OF 2.1 TONS/CY WAS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 3/4-INCH, 2.0 TONS/CY FOR BASE AGGREGATE DENSE 1 1/4-INCH AND 1.9 TONS/CY FOR SELECT CRUSHED MATERIAL

A CONVERSION FACTOR OF 118 LB/SY/IN WAS USED TO ESTIMATE QUANTITIES FOR HMA PAVEMENT.

EXISTING DRIVEWAYS WILL BE RESTORED IN KIND OR AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC
AE, AEW	APRON ENDWALL
BC	BACK OF CURB
BIT	EXISTING BITUMINOUS
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CONST	CONSTRUCTION
ESMT	EASEMENT
FC	FACE OF CURB
FHWA	FEDERAL HIGHWAY
HE	HORIZONTAL ELLIPTICAL
HP	HIGH POINT
K	RATE OF VERTICAL CURVATURE
LP	LOW POINT
MAX	MAXIMUM
MGAL	1000 GALLONS
MIN	MINIMUM
PASS	PIPE ARCH SMOOTH STEEL
PGL	PROFILE GRADE LINE
SSRPC	STORM SEWER PIPE REINFORCED CONCRETE
VLV	VALVE

2

UTILITY CONTACTS

AT&T WISCONSIN
MR. JAY BULANEK
2005 PEWAUKEE RD
WAUKESHA, WI 53188
PHONE: (262) 896-7669
CELL: (414) 491-2855
jb5175@att.com

MILWAUKEE METORPOLITAN SEWERAGE DISTRICT-SEWER
MICKI KLAPPA-SULLIVAN
260 W SEEBOTH ST
MILWAUKEE, WI 53204
PHONE: (414)225-2178
mklappasullivan@mmsd.com

GLENDALE, CITY OF
MR. DAVE EASTMAN
ASSISTANT TO THE CITY ADMINISTRATOR
DIRECTOR OF CITY SERVICES
5909 N. MILWAUKEE RIVER PARKWAY
GLENDALE, WI 53209
PHONE: (414) 228-1746
d.eastman@glendale-wi.org

CENTURYLINK COMMUNICATIONS
MR. KIRK THOELKE
11111 DORSETT ROAD
MARYLAND HEIGHTS, MD 63043
PHONE: (636) 887-4752
kirk.thoelke@centurylink.com

CHARTER COMMUNICATIONS (TIME WARNER CABLE)
MR. STEVE CRAMER
UTILITY COORDINATOR
1320 N. MARTIN LUTHER KING JR. DR
MILWAUKEE, WI 53212
PHONE: (414) 277-4045
CELL: (414) 688-2385
wis.engineering@charter.com

RIVER HILLS, VILLAGE OF
MR. KURT FREDRICKSON
SUPT. OF PUBLIC WORKS
7650 N. PHEASANT LANE
RIVER HILLS, WI 53217
PHONE: (414) 352-0080
kfredrickson@vil.river-hills.wi.us

WE ENERGIES - ELECTRICITY
MR. DAN SANDE
333 WEST EVERETT ST.
MILWAUKEE, WI 53203
PHONE: (414) 221-4578
Dan.sande@we-energies.com

WE ENERGIES - GAS
MR. DAN SANDE
333 WEST EVERETT ST.
MILWAUKEE, WI 53203
PHONE: (414) 221-4578
Dan.sande@we-energies.com

WISCONSIN DEPARTMENT OF TRANSPORTATION- STOC
MR. JEFF MADSON
433 W. ST. PAUL AVENUE, SUITE 300
MILWAUKEE, WI 53203-3007
PHONE: (414) 225-3723
jeffrey.madson@dot.wi.gov

WISCONSIN DEPARTMENT OF TRANSPORTATION-LIGHTING
MR. ERIC PEREA
SE REGION LIGHTING ENGINEER
141 NW BARSTOW STREET
PO BOX 798
WAUKESHA, WI 53187-0798
PHONE: (262) 574-5422
eric.perea@dot.wi.gov

STATE AGENCIES

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
MS. KRISTINA BETZOLD
DNR SOUTHEAST REGION HQ
2300 N. DR. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
(414) 263-8517
kristina.betzold@wisconsin.gov

WISCONSIN DEPARTMENT OF TRANSPORTATION
MR. STEVE HOFF
DESIGN PROJECT MANAGER
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
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steve.hoff@dot.wi.gov

BRENDA RUENGER
SOUTHEAST REGION ENVIRONMENTAL COORDINATOR
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
PHONE: (262) 548-6709
brenda.ruenger@dot.wi.gov

WISCONSIN DEPARTMENT OF TRANSPORTATION – MILWAUKEE COUNTY MAINTENANCE COORDINATOR
MR. KEVIN PEIFFER
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
PHONE: (414) 257-6567
kevin.peiffer@dot.wi.gov

WISCONSIN DEPARTMENT OF TRANSPORTATION – UTILITY COORDINATOR
MS. ABBY SCHMIDT
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
PHONE: (262) 548-5925
abby.schmidt@dot.wi.gov

WISCONSIN DEPARTMENT OF TRANSPORTATION SIGNAL OPERATIONS UNIT
141 NW BARSTOW STREET
PO Box 798
WAUKESHA, WI 53187-0798
PHONE: (414) 750-2605

2

ASPHALT SPECIFICATIONS

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIUM AGGREGATE GRADATIONS	TRAFFIC	ASPHALT BINDER AND DESIGNATION LEVEL
5.0"	2.0" UPPER	4	MT	58-28-S
	3.0" LOWER	3	MT	58-28-S

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
PAVING GRADES
CURB RAMP DETAILS
EROSION CONTROL
STORM SEWER
SIGNING REMOVAL PLAN
PERMANENT SIGNING PLAN
LIGHTING PLANS
FTMS PLAN
PAVEMENT MARKING PLANS
TRAFFIC CONTROL / STAGE CONSTRUCTION
DETOUR PLANS
ALIGNMENT PLAN

ALIGNMENT NAMING ABBREVIATIONS

ROAD	ABBREVIATION
JEAN NICOLET ROAD	JN
GREEN TREE ROAD	GT
GOOD HOPE SOUTHBOUND ENTRANCE RAMP	GHC

OTHER AGENCIES

MILWAUKEE COUNTY DPW
MR. GREG HEISEL
HWY MAINTENANCE MANAGER
MILWAUKEE COUNTY DPW
10320 W WATERTOWN PLK ROAD
WAUWATOSA WI 53226
PHONE (414)257-6566
FAX (414)257-6501
Greg.heisel@milwcnty.com

NORTH SHORE WATER COMMISSION
MR. ERIC KIEFER
MANAGER
400 W. BENDER ROAD
GLENDALE, WI 53217
PHONE: (414) 963-0160
ekiefer@northshorewc.com

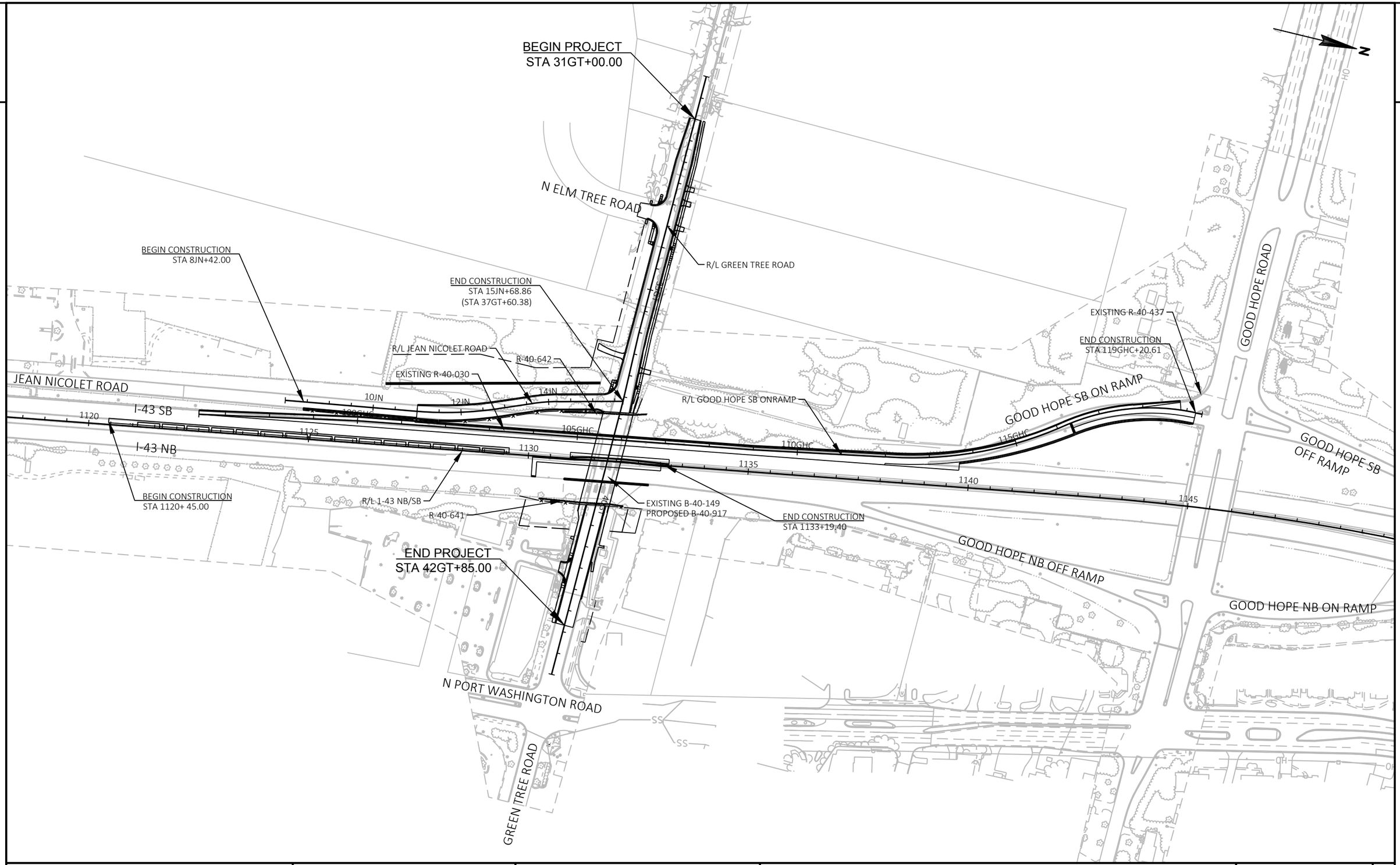
MILWAUKEE COUNTY TRANSIT SYSTEM
MS. MELANIE FLYNN
1942 N 17TH STREET
MILWAUKEE, WI 53205
PHONE: (414) 343-1764
mflynn@mcts.org

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

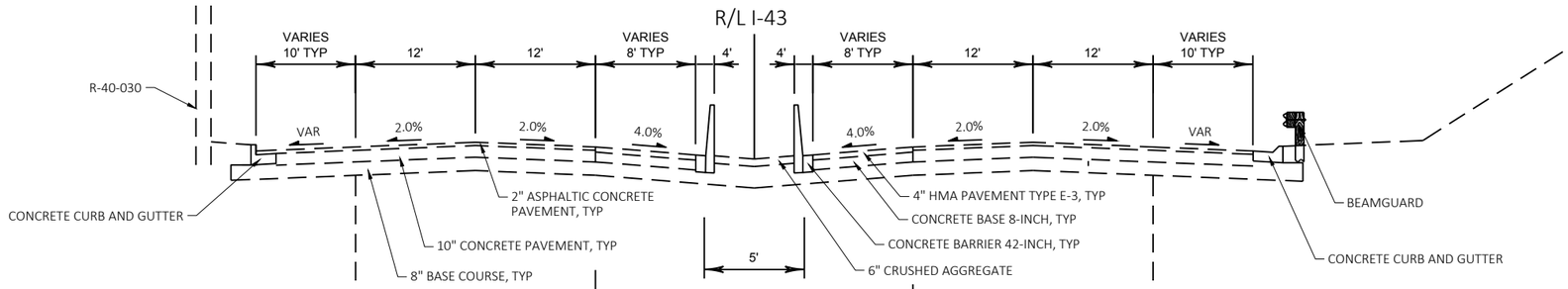
WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

2

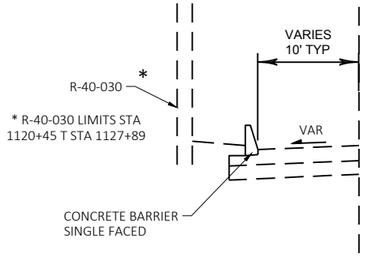


PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 4	E

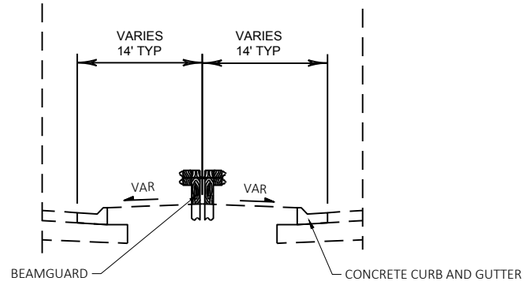


TYPICAL EXISTING SECTION
IH 43

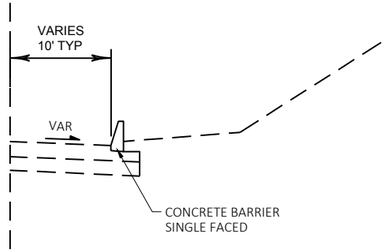
STA 1120+45 TO 1133+50



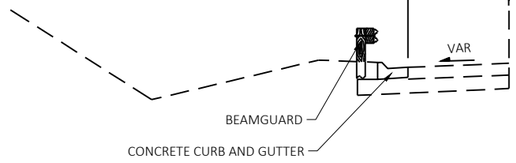
STA 1131+39 TO 1132+73



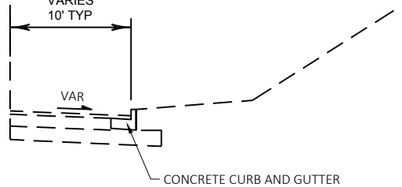
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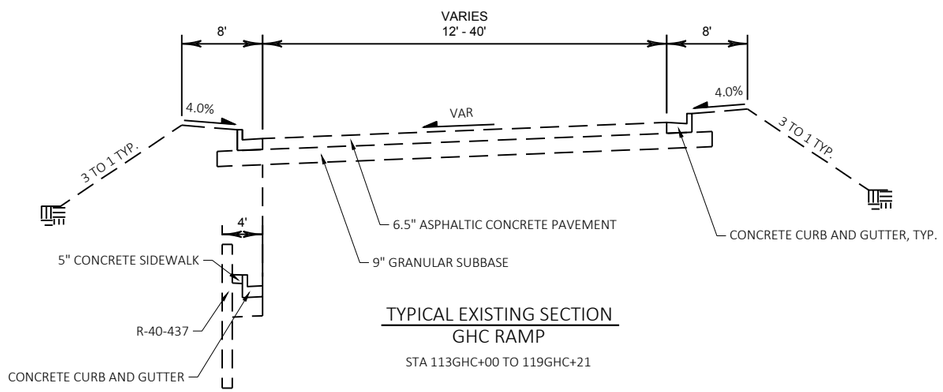
STA 1130+85 TO 1132+76



STA 1120+45 TO 1127+89



STA 1120+45 TO 1127+80
1132+76 TO 1133+50



TYPICAL EXISTING SECTION
GHC RAMP

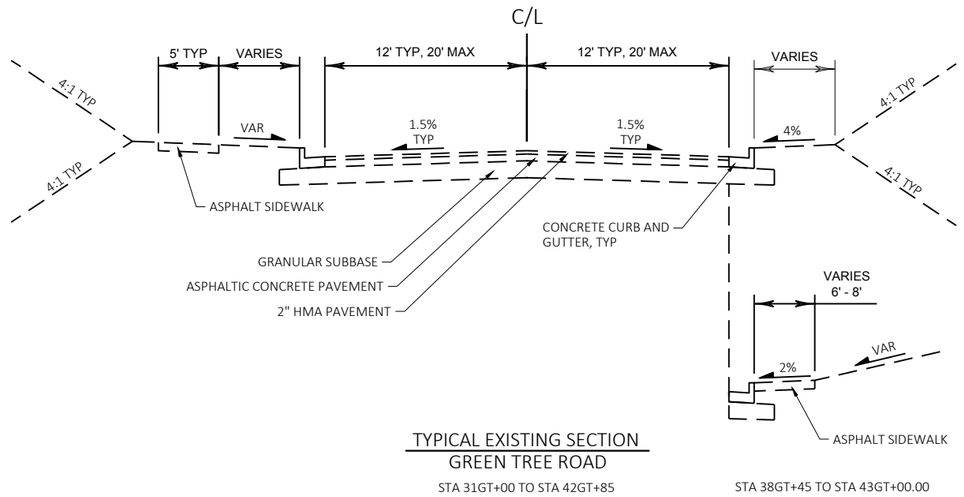
STA 113GHC+00 TO 119GHC+21

STA 118GHC+83 TO 119GHC+21

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\020301_TS.DWG
LAYOUT NAME - 020301_ts
PLOT DATE : 10/26/2017 8:43 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

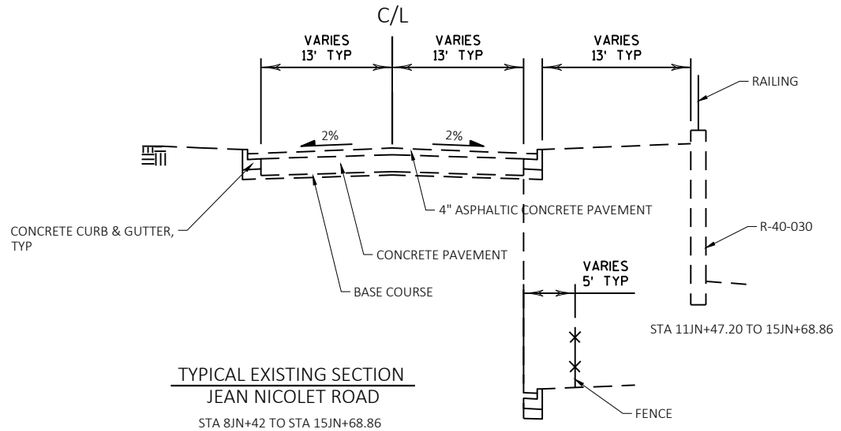
2



TYPICAL EXISTING SECTION
GREEN TREE ROAD

STA 31GT+00 TO STA 42GT+85

STA 38GT+45 TO STA 43GT+00.00



TYPICAL EXISTING SECTION
JEAN NICOLET ROAD

STA 8JN+42 TO STA 15JN+68.86

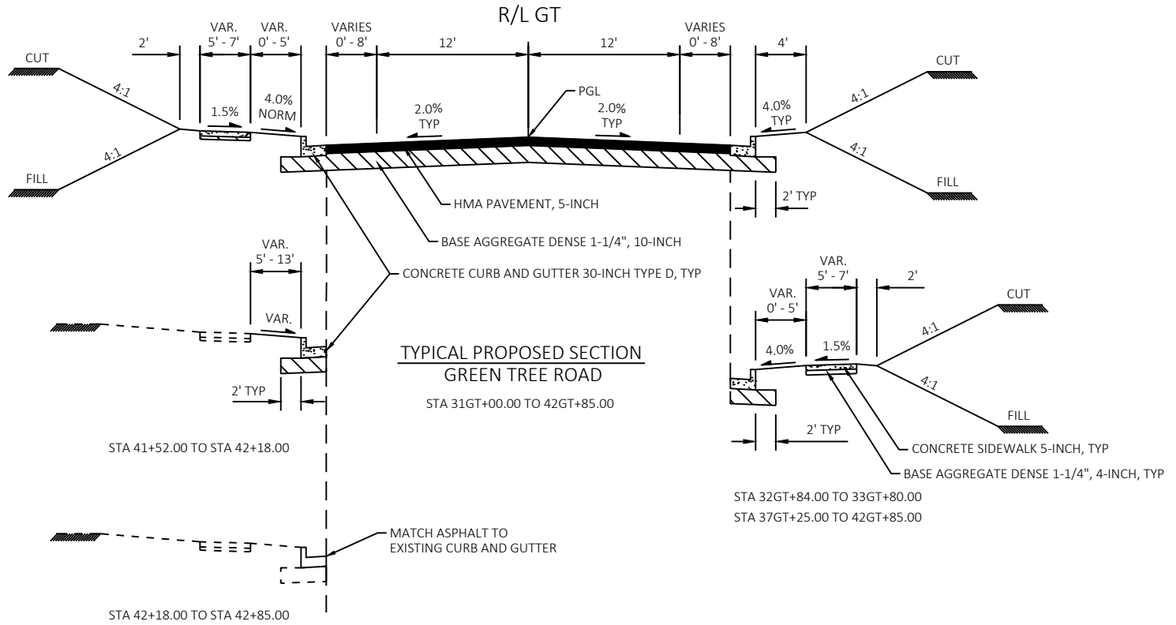
STA 11JN+47.20 TO 15JN+68.86

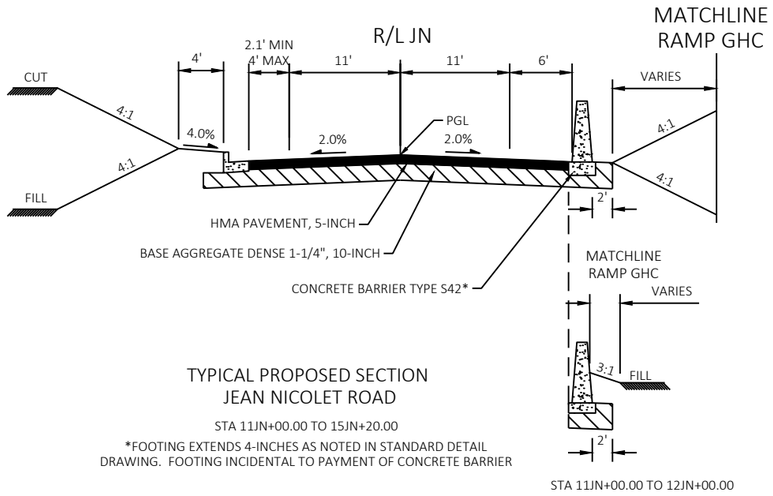
STA 8JN+42 TO 11JN+47.20

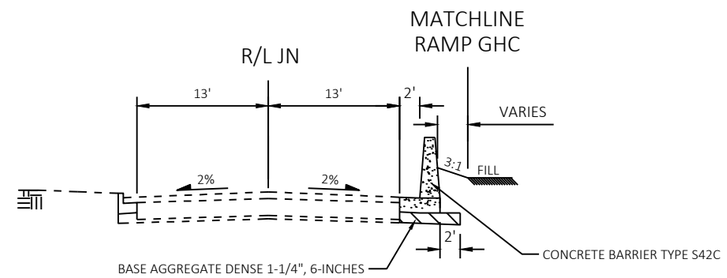
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 6	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\020301_TS.DWG
LAYOUT NAME - 020302_ts

PLOT DATE : 10/26/2017 8:44 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########





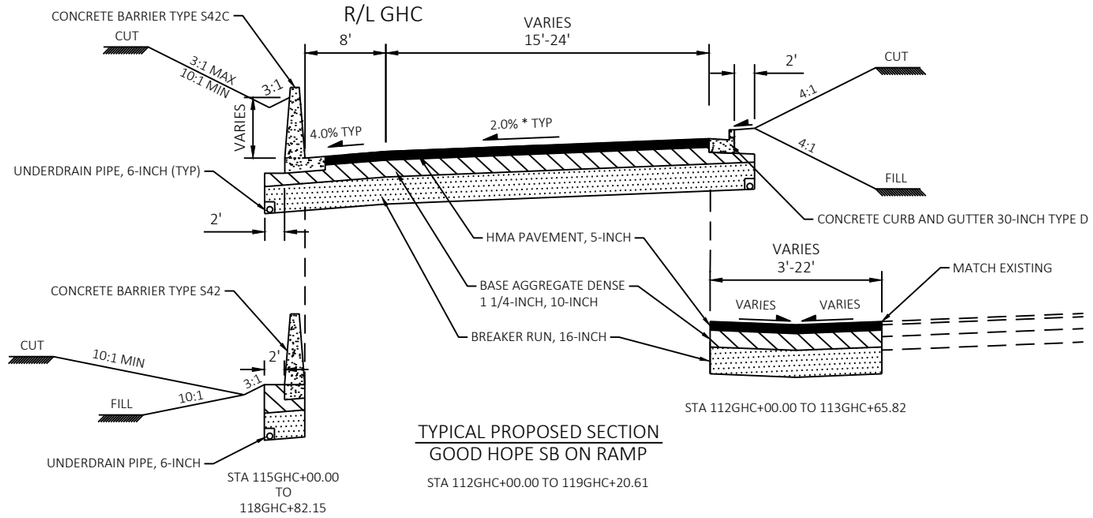


SHEET NOTES:

PGL = POINT REFERRED TO ON PROFILE AND PIVOT POINT FOR SUPER ELEVATION

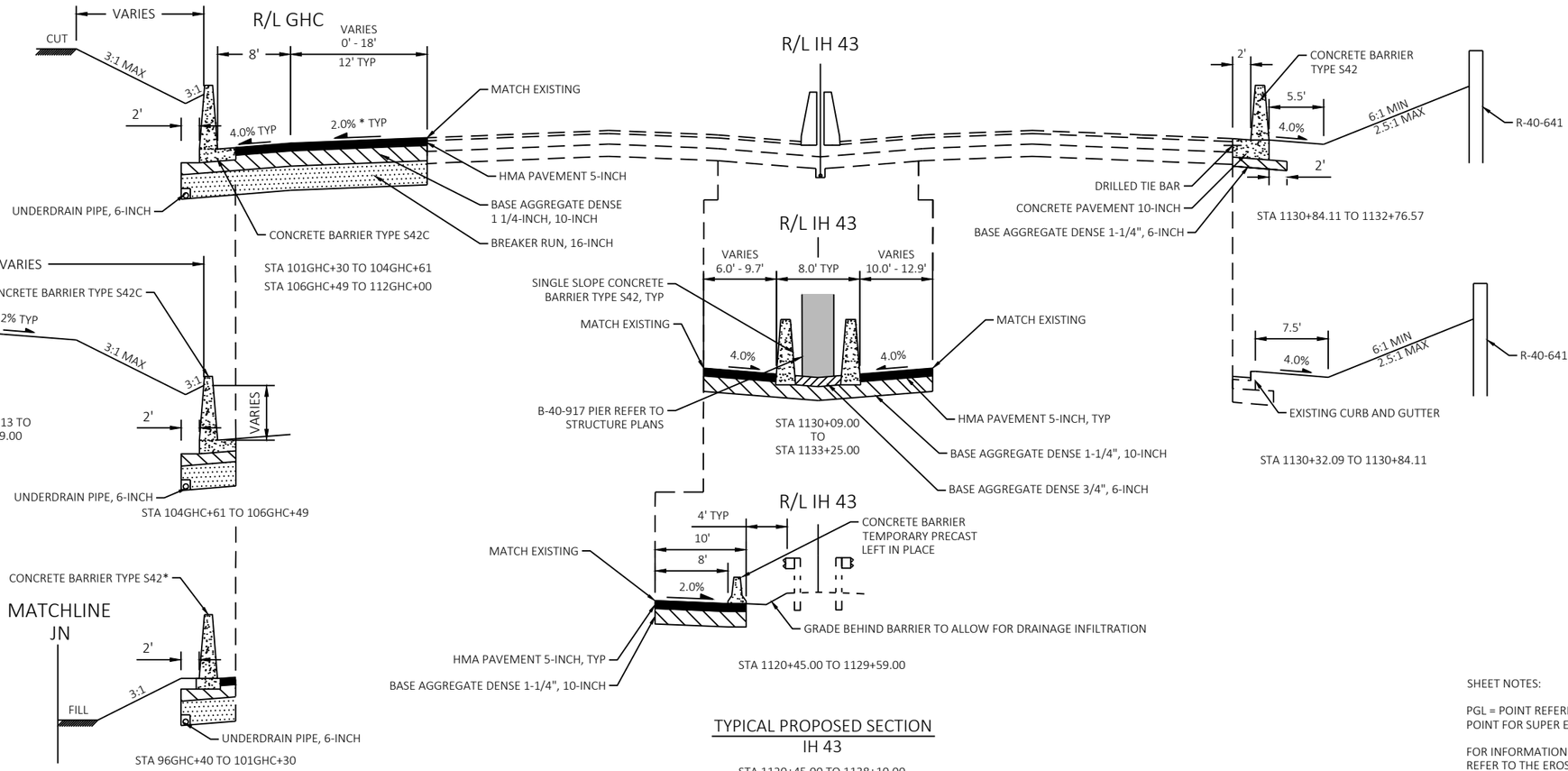
FOR INFORMATION REGARDING RESTORATION REFER TO THE EROSION CONTROL PLANS AND FINISHING ITEMS WITHIN THE QUANTITY TABLES

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 7	E



TYPICAL PROPOSED SECTION
GOOD HOPE SB ON RAMP

STA 112GHC+00.00 TO 119GHC+20.61



TYPICAL PROPOSED SECTION
IH 43

STA 1120+45.00 TO 1138+10.00

*FOOTING EXTENDS 4-INCHES AS NOTED IN STANDARD DETAIL DRAWING. FOOTING INCIDENTAL TO PAYMENT OF CONCRETE BARRIER

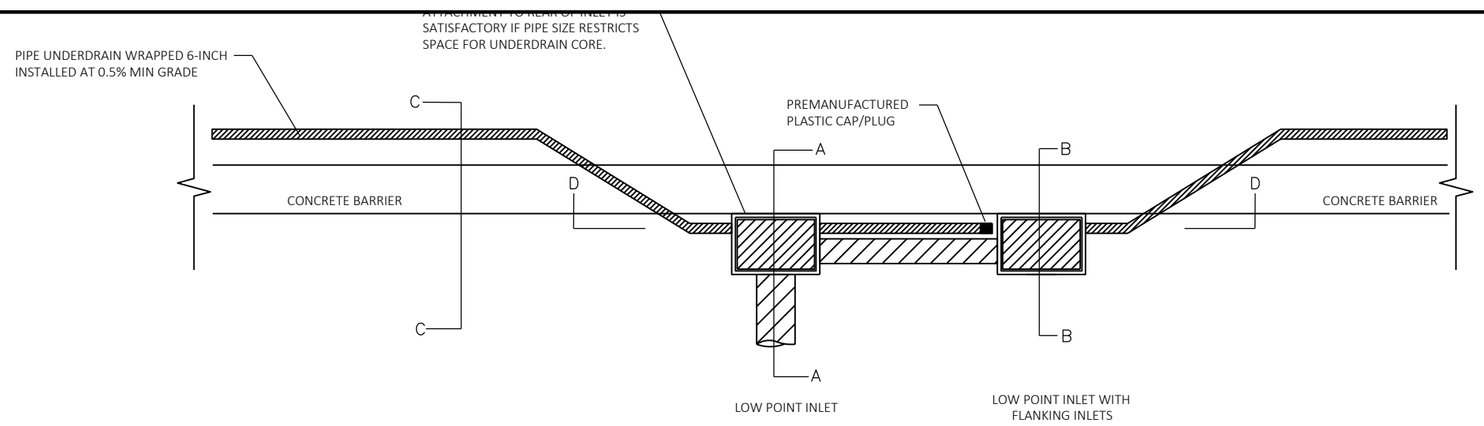
SHEET NOTES:

PGL = POINT REFERRED TO ON PROFILE AND PIVOT POINT FOR SUPER ELEVATION

FOR INFORMATION REGARDING RESTORATION REFER TO THE EROSION CONTROL PLANS AND FINISHING ITEMS WITHIN THE QUANTITY TABLES

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 8	E

2



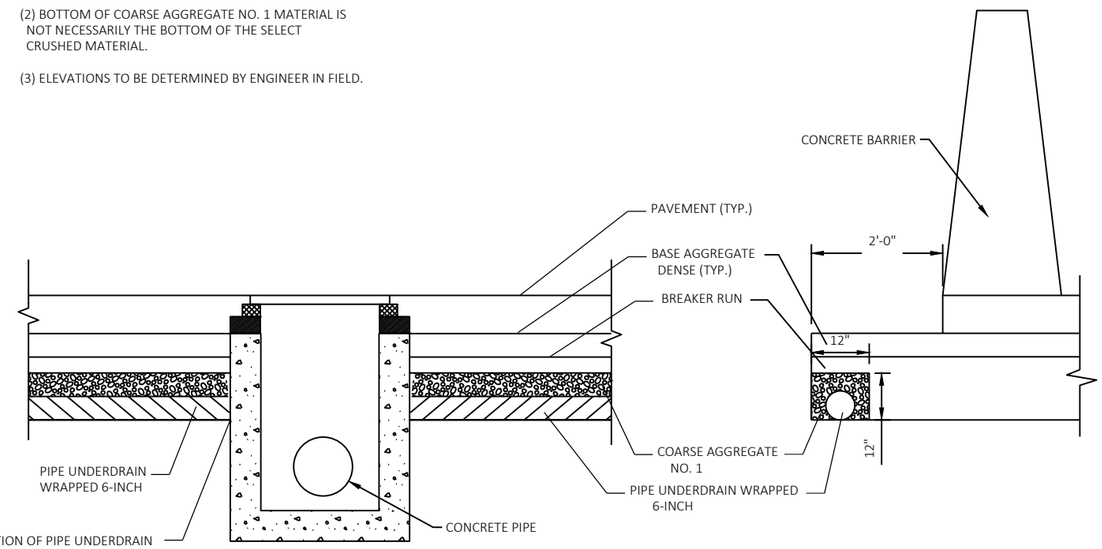
TOP VIEW

UNDERDRAIN DETAIL NOTES:

(1) BOTTOM OF PIPE SHALL BE PLACED AT THE BOTTOM OF COARSE AGGREGATE NO. 1 MATERIAL.

(2) BOTTOM OF COARSE AGGREGATE NO. 1 MATERIAL IS NOT NECESSARILY THE BOTTOM OF THE SELECT CRUSHED MATERIAL.

(3) ELEVATIONS TO BE DETERMINED BY ENGINEER IN FIELD.

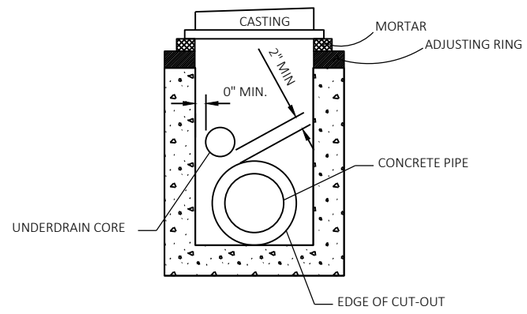


SECTION D-D

SECTION C-C

CROSS-SECTION VIEW

TYPICAL INLET CONFIGURATION WITH UNDERDRAIN CORED INTO WALL WITH NO PIPE



SECTION B-B

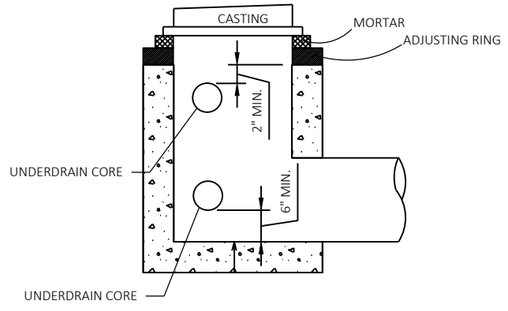
CROSS-SECTION VIEW

TYPICAL INLET IN SUMP CONDITION WITH UNDERDRAIN CORED INTO WALL WITH PIPE

SECTION B-B NOTES:

(1) CORE HOLES SHALL PROVIDE FOR A MINIMUM OF 2" OF CONCRETE BETWEEN THE CUTOUT FOR A CONCRETE PIPE AND THE EDGE OF THE CORE HOLE.

(2) CORE HOLES MAY HAVE 0" CLEARANCE FROM THE INSIDE WALLS OF A STRUCTURE.



SECTION A-A

CROSS-SECTION VIEW

TYPICAL INLET CONFIGURATION WITH UNDERDRAIN CORED INTO WALL WITH CROSSPIPE ONLY

FOUND AT LOW POINTS WITHOUT FLANKING INLETS

SECTION A-A NOTES:

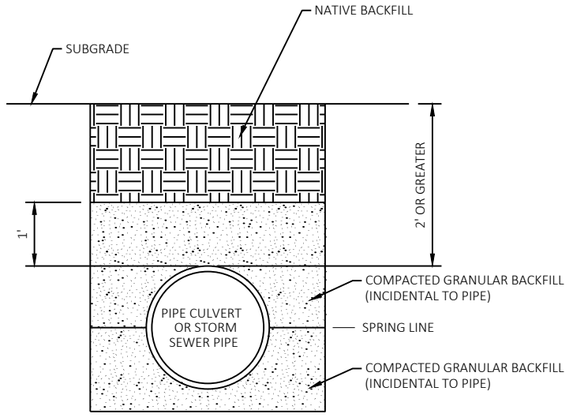
(1) BOTTOM OF CORE PLACED A MINIMUM OF 6" ABOVE THE INVERT OF THE CROSS PIPE.

(2) TOP OF CORE HOLES WILL BE A MINIMUM OF 2" BELOW THE TOP OF THE INLET STRUCTURES (BOTTOM OF RINGS)

(3) DRAIN TILES SHALL NOT BE ALLOWED IN THE RING OF THE STRUCTURE OF INLETS

PIPE UNDERDRAIN DETAIL

NOT TO SCALE

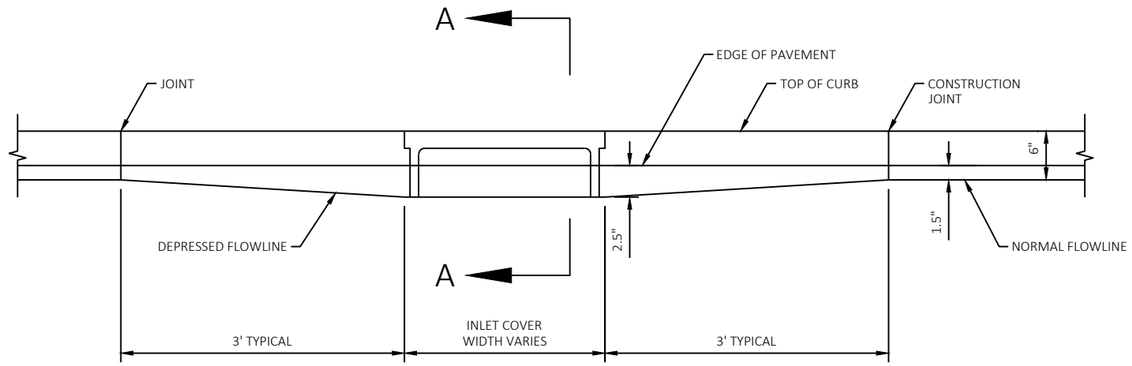


NOTES:

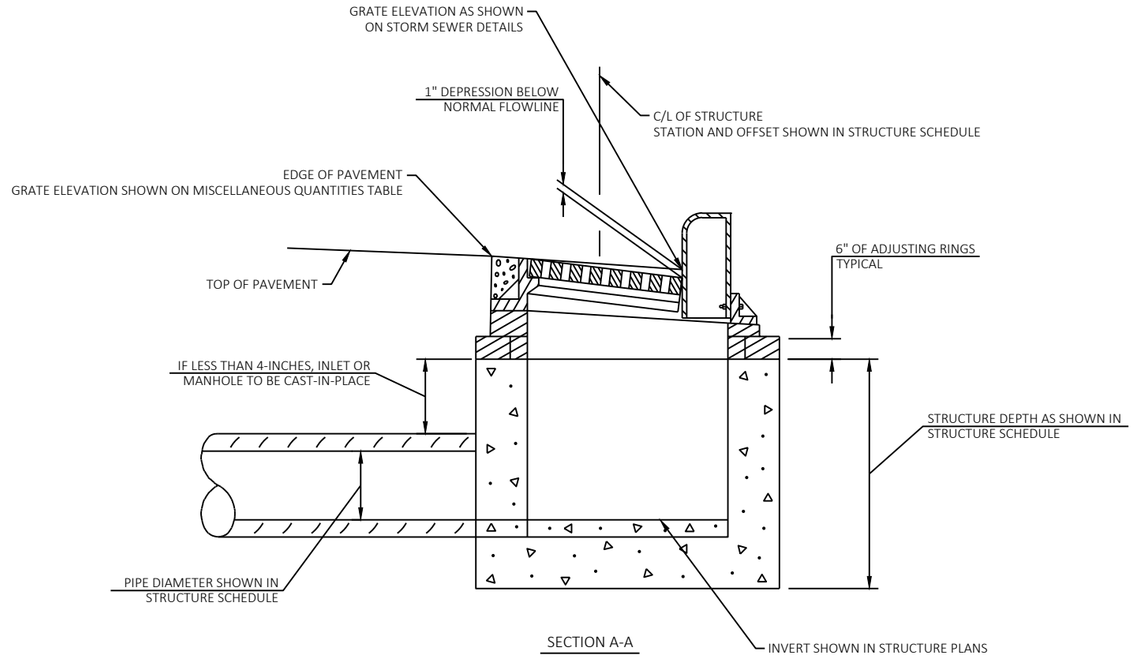
(1) NATIVE BACKFILL SHALL BE FREE OF LARGE LUMPS, CLODS, ORGANICS, OR ROCK.

TRENCH BACKFILL DETAIL FOR NORMAL DEPTH PIPE CULVERTS AND STORM SEWER PIPE INSTALLATIONS

(FOR PIPES THAT ARE PLACED 2 FEET OR GREATER FROM THE SUBGRADE)

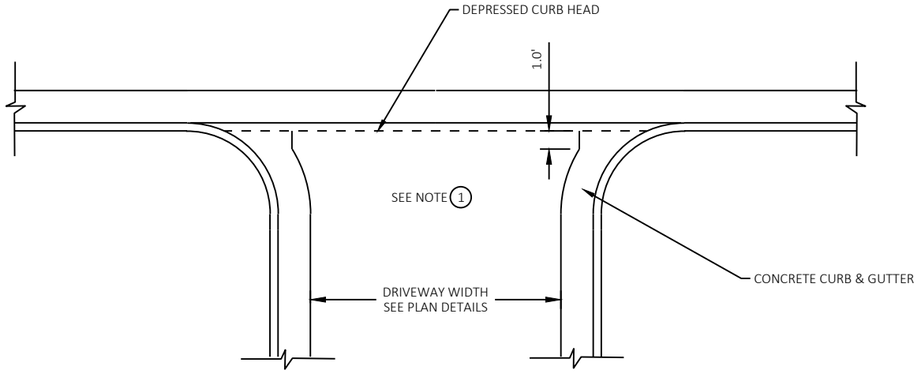


ELEVATION VIEW



SECTION A-A

CURB AND GUTTER AT INLETS

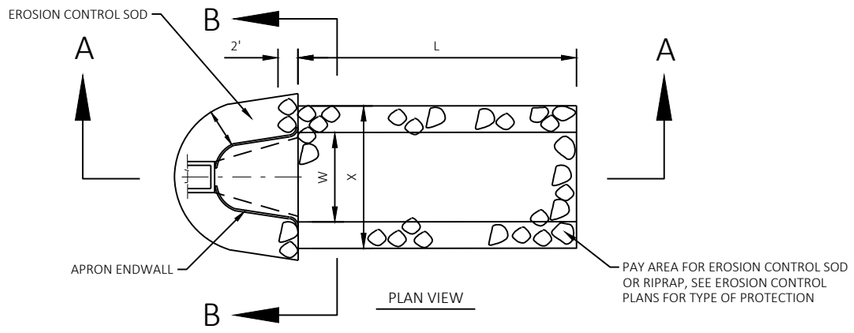


COMMERCIAL DRIVEWAY WITH CONCRETE CURB & GUTTER

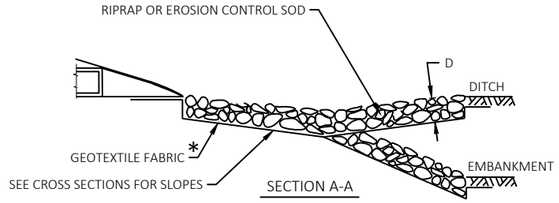
1 DRIVEWAY SURFACE TO BE REPLACED IN-KIND WITH MINIMUM SECTION OF:
- HMA PAVEMENT 5-INCH (SEE PLAN DETAILS) OVER BASE AGGREGATE DENSE 1-1/4 INCH (10-INCH)

OR

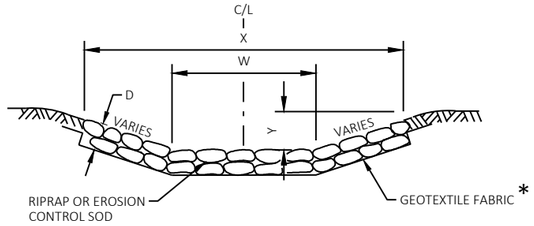
- CONCRETE DRIVEWAY 7-INCH OVER BASE AGGREGATE DENSE 1-1/4 INCH (4-INCHES)



PLAN VIEW



SECTION A-A



SECTION B-B

L = 3 x W (NOR) OR 10' MIN
OR AS INDICATED IN THE PLANS
OR AS DIRECTED BY THE ENGINEER

D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

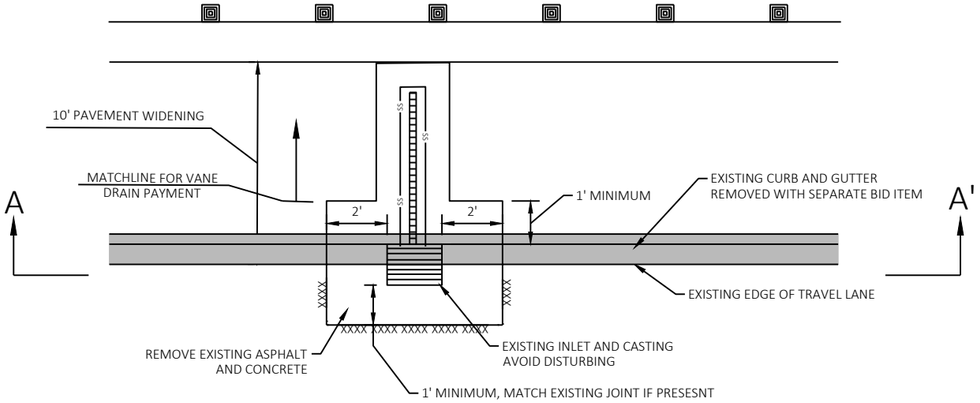
X = W+2' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
12" FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

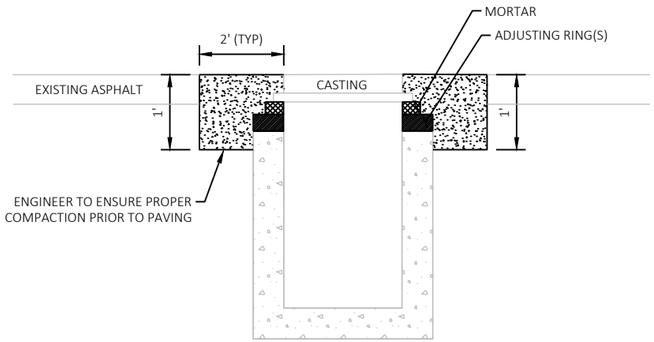
* TYPE R (FOR RIPRAP LIGHT ONLY)
TYPE HR (FOR RIPRAP HEAVY AND MEDIUM ONLY)

SOD RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

SEE EROSION CONTROL PLAN FOR LOCATIONS



PLAN VIEW



SECTION A-A'

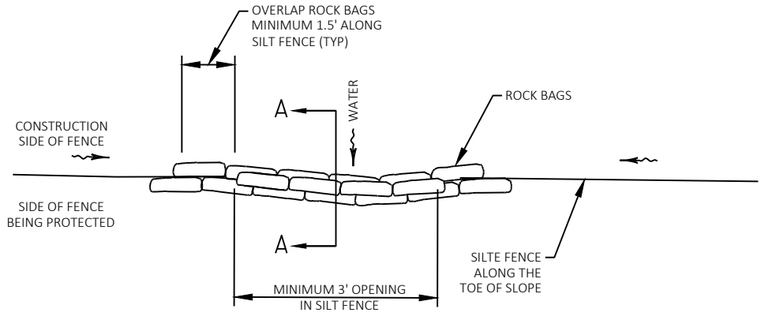
INLET COVER REPAIR MAINTENANCE SPECIAL

LEGEND

- SS — EXTERIOR LIMITS OF VANE DRAIN PIPE (SEPARATE PAY ITEM)
- XX — SAWCUT (INCIDENTAL)
- VANE DRAIN CASTING (SEPARATE PAY ITEM)
- EXISTING GUARDRAIL

NOTES

1) FOR VANE DRAIN REFER TO SEPARATE STANDARD DETAIL DRAWING , PAID UNDER SEPARATE ITEM
2) REMOVALS THROUGH PAVEMENT WIDENING PAID FOR WITH SEPARATE ITEMS
3) PAYMENT INCLUDES SAWCUTS, PAVEMENT REMOVAL, ADJUSTMENTS AS NEEDED TO THE EXISTING CASTING (INCLUDING BUT NOT LIMITED TO ADJUSTING RINGS AND MORTAR), COMPACTING AND PREPARING THE SUBBASE, SUPPLYING, PLACING, AND FINISHING CONCRETE, AND ALL OTHER ITEMS AS NOTED IN THE SPECIALS.
4) INLET COVER REPAIR WILL BE COMPLETED UNDER NIGHTLY LANE CLOSURE IN CONJUNCTION WITH PAVEMENT WIDENING. CONTRACTOR SHALL NOT REMOVE EXISTING PAVEMENT AND LEAVE A VOID IN THE PAVEMENT DURING DAYTIME PEAK HOURS. ANY METHODS USED TO TEMPORARY FILL HOPES IN THE PAVEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.



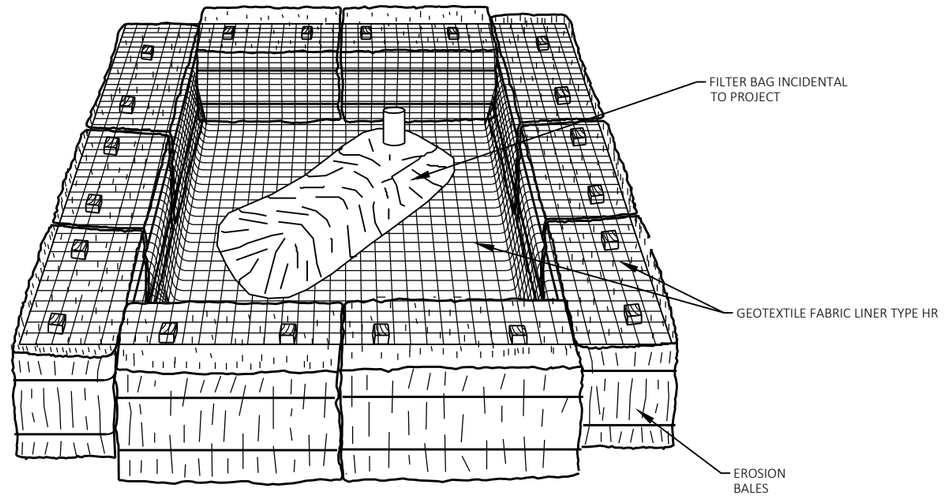
PLAN VIEW



SECTION A-A

ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

2



(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

$\frac{800 \text{ C.F.}}{1.5 \text{ FT.}}$ = 533 S.F.

USE A 20 FT. X 27 FT. BASIN

NOTES

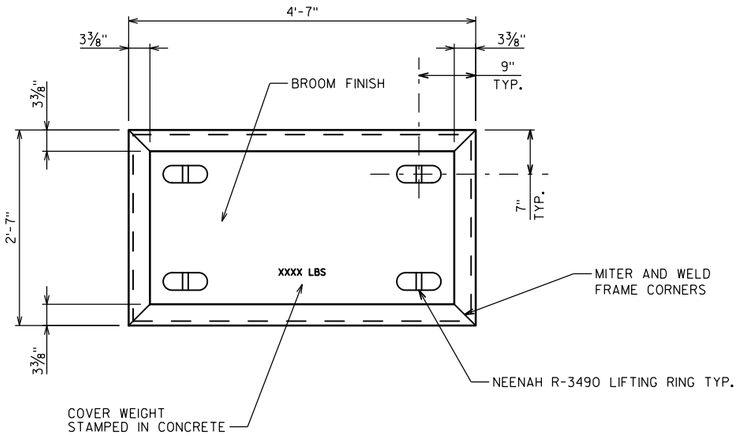
1) CONTRACTOR SHALL PUMP FROM DEWATERING OPERATIONS INTO TEMPORARY SETTLING BASINS PRIOR TO DISCHARGING INTO ROADSIDE DITCHES.

2) BASIN SHALL BE KEPT LESS THAN 10% FULL OF SEDIMENT. GEOTEXTILE FABRIC AND SEDIMENTS SHALL BE DISPOSED BY THE CONTRACTOR OFF OF THE PROJECT SITE.

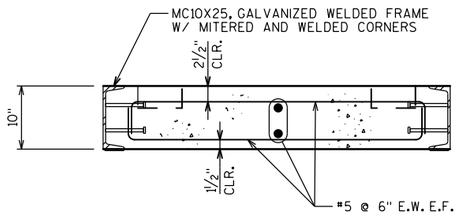
3) TEMPORARY SETTLING BASIN SHALL BE PAID FOR AS EROSION BALES AND GEOTEXTILE FABRIC HR.

TEMPORARY SETTLING BASIN

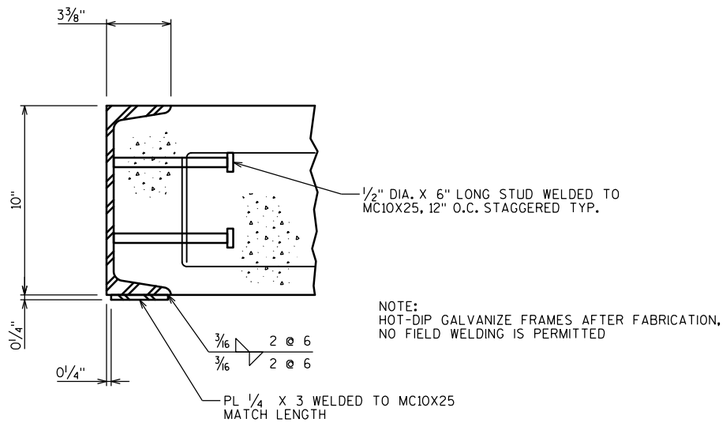
UNDISTRIBUTED



PRECAST CONC. GATE ACCESS COVER - PLAN

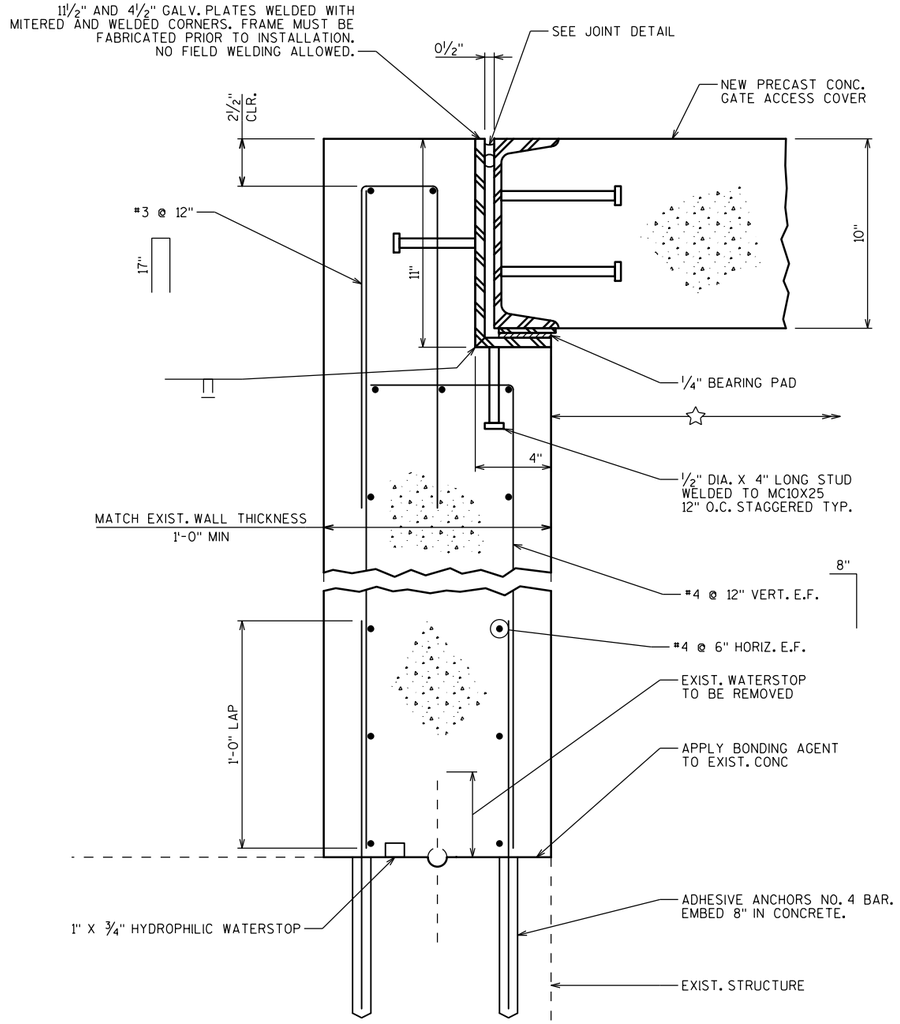


PRECAST CONC. GATE ACCESS COVER - SECTION



NOTE:
HOT-DIP GALVANIZE FRAMES AFTER FABRICATION. NO FIELD WELDING IS PERMITTED

PRECAST CONC. GATE ACCESS COVER - DETAIL



GATE FRAME AND RISER DETAIL

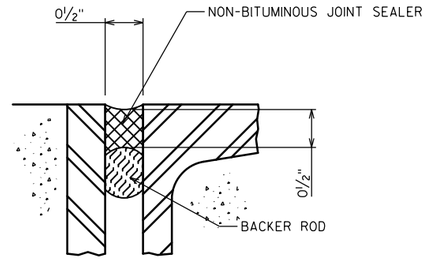
☆ VERIFY INSIDE OPENING DIMENSIONS OF EXIST. GATE RISER IN FIELD

NOTES

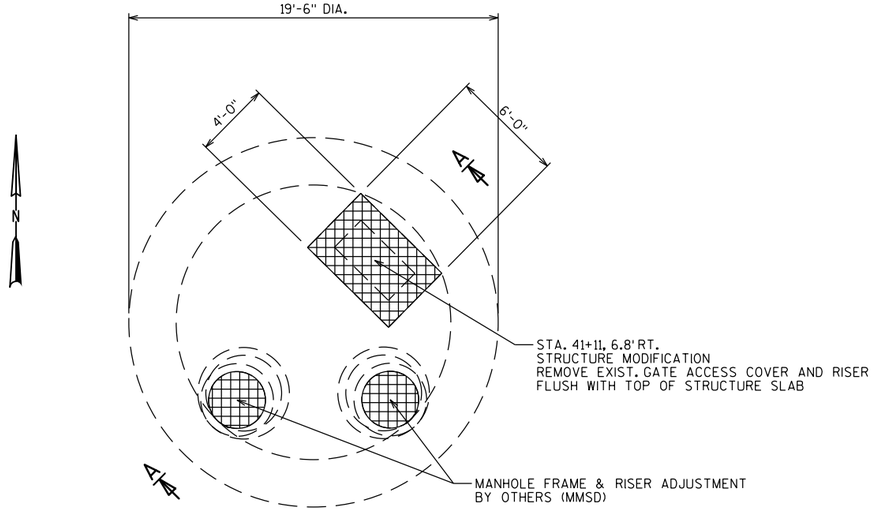
THE WORK SHOWN ON THIS SHEET SHALL BE MEASURED AND PAID FOR AS STRUCTURE MODIFICATION MMSD DC0406.

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.

☆ VERIFY INSIDE OPENING DIMENSIONS OF EXIST. GATE RISER IN FIELD BEFORE ORDERING THE PRECAST CONC. GATE ACCESS COVER & FRAME.

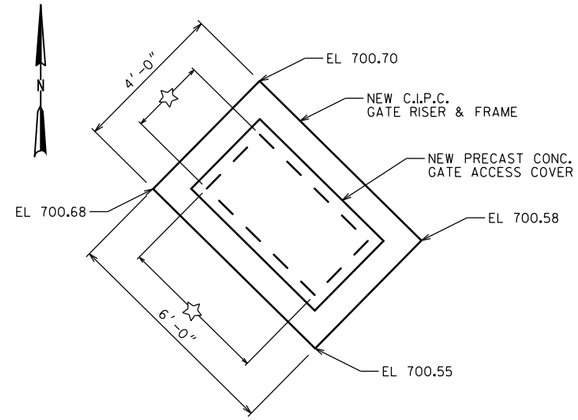


JOINT DETAIL



REMOVAL PLAN - MMSD STRUCTURE DC0406

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS



GATE RISER PLAN

☆ VERIFY INSIDE OPENING DIMENSIONS OF EXIST. GATE RISER IN FIELD

NOTES

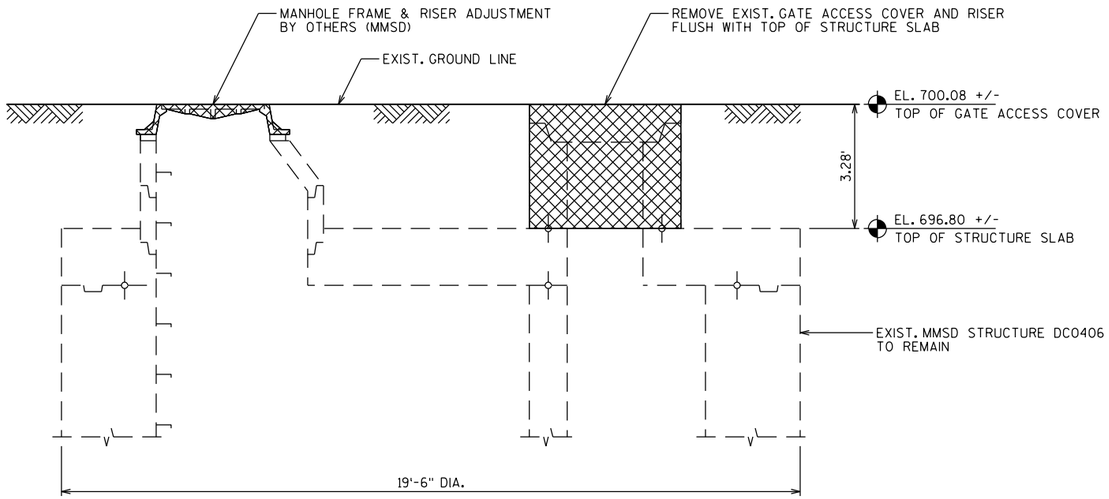
THE WORK SHOWN ON THIS SHEET SHALL BE MEASURED AND PAID FOR AS STRUCTURE MODIFICATION MMSD DC0406.

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.

☆ VERIFY INSIDE OPENING DIMENSIONS OF EXIST. GATE RISER IN FIELD BEFORE ORDERING THE PRECAST CONC. GATE ACCESS COVER & FRAME.

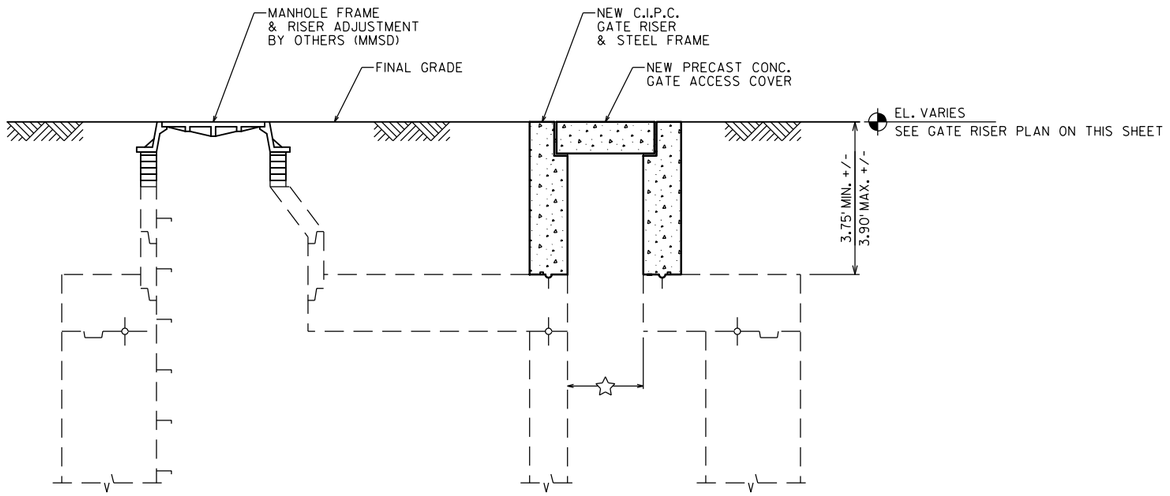
SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED TO THE BOTTOM OF THE NEW CONCRETE BASE PAVEMENT WITH BACKFILL STRUCTURE TYPE A OR TYPE B.

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



REMOVAL SECTION A-A

DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS

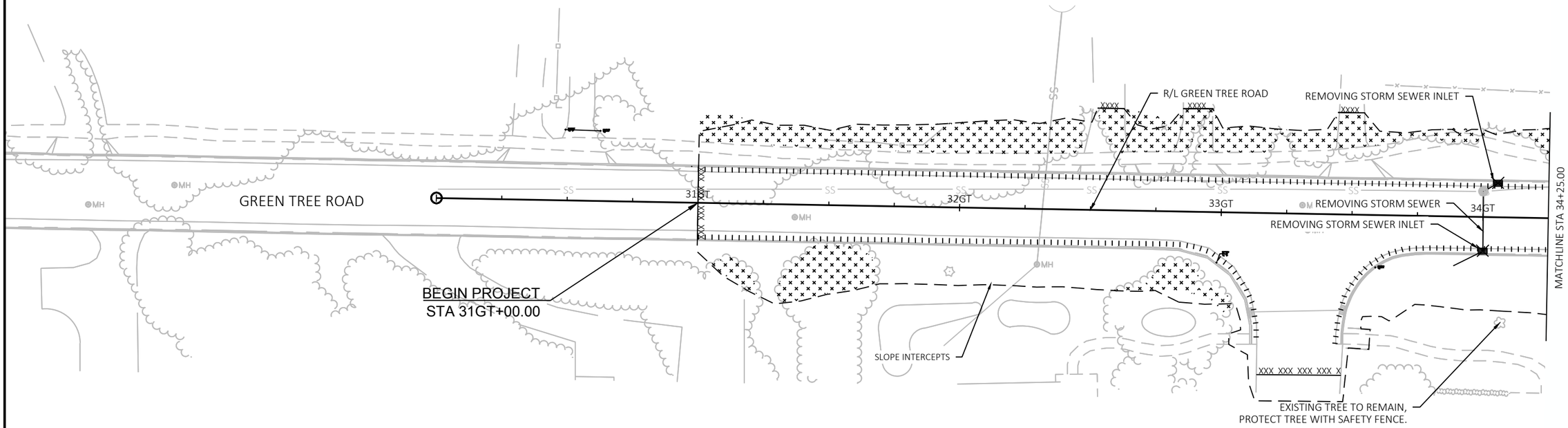


CONSTRUCTION SECTION A-A

☆ VERIFY INSIDE OPENING DIMENSIONS OF EXIST. GATE RISER IN FIELD

PROJECT NO: 1228-16-71	HWY: IH 43	COUNTY: MILWAUKEE	STRUCTURE MODIFICATION MMSD DC0406	SHEET 15	E

2



LEGEND

SS	REMOVING STORM SEWER
	REMOVING STORM SEWER INLET
	REMOVING STORM SEWER MANHOLE
	CLEAR AND GRUB
	REMOVING PAVEMENT
	REMOVING GUARDRAIL / EAT
	REMOVING CURB AND GUTTER
XXX XXX XXX XXX XXX	SAWING PAVEMENT

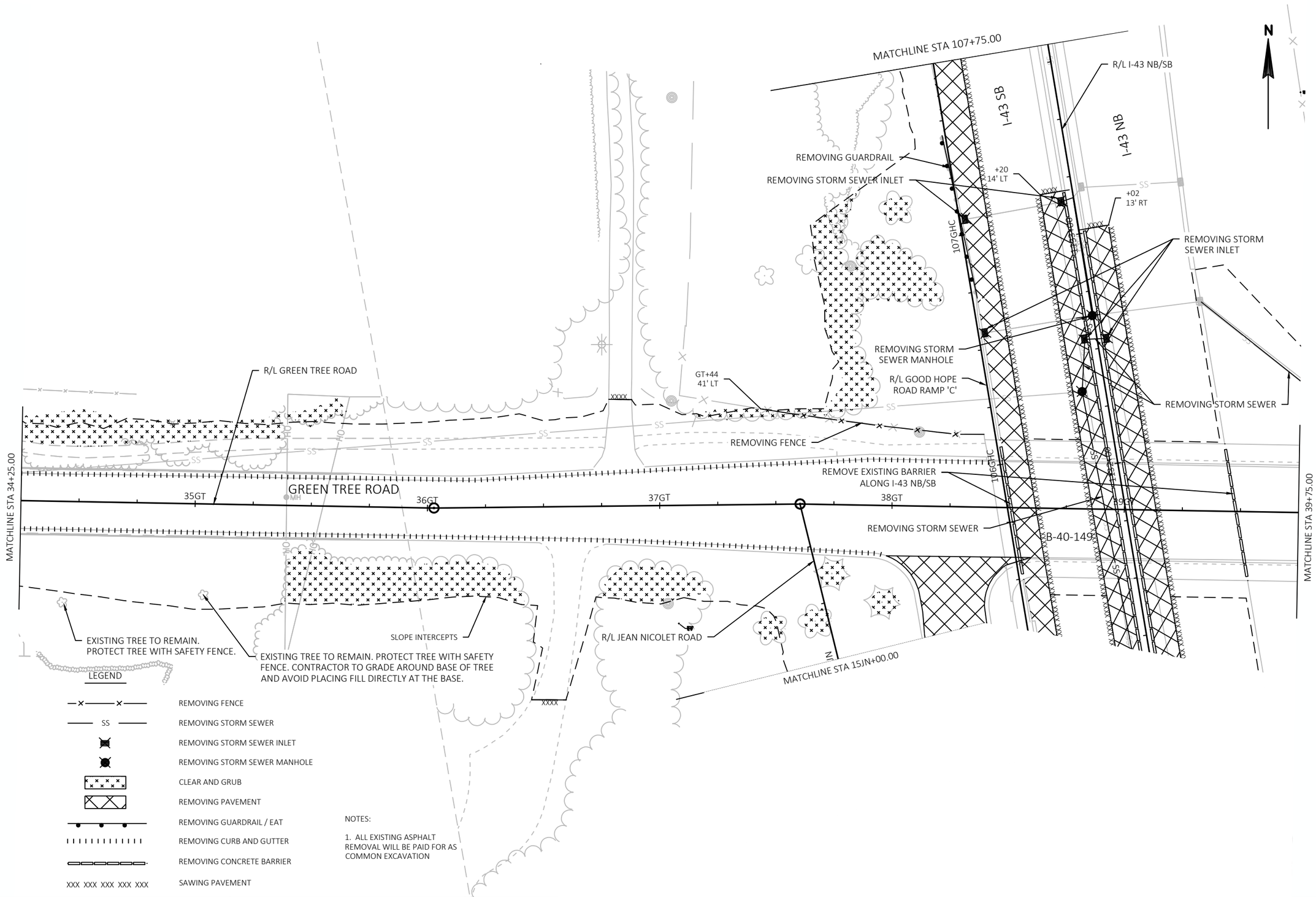
NOTES:

1. ALL EXISTING ASPHALT REMOVAL WILL BE PAID FOR AS COMMON EXCAVATION

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 16	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021101_RM.DWG
LAYOUT NAME - 021101_RM
PLOT DATE : 12/13/2017 10:34 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 17	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021101_RM.DWG
LAYOUT NAME - 021102_RM

PLOT DATE : 12/13/2017 10:35 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

N

GT+85
104' LT

REMOVING FENCE

R/L GREEN TREE ROAD

SLOPE INTERCEPTS

END PROJECT
STA 42GT+85.00

MATCHLINE STA 39+75.00

40GT

41GT

42GT

43GT

GREEN TREE ROAD

N PORT
WASHINGTON ROAD

REMOVING FENCE

GT+25
174' RT

LEGEND

SS	REMOVING STORM SEWER
	REMOVING STORM SEWER INLET
	REMOVING STORM SEWER MANHOLE
	CLEAR AND GRUB
	REMOVING PAVEMENT
	REMOVING GUARDRAIL / EAT
	REMOVING CURB AND GUTTER
XXX XXX XXX XXX XXX	SAWING PAVEMENT

NOTES:

1. ALL EXISTING ASPHALT REMOVAL WILL BE PAID FOR AS COMMON EXCAVATION

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 18	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021101_RM.DWG
LAYOUT NAME - 021103_RM

PLOT DATE : 12/13/2017 10:36 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

LEGEND

—×——×—	REMOVING FENCE
—— SS ——	REMOVING STORM SEWER
	REMOVING STORM SEWER INLET
	REMOVING STORM SEWER MANHOLE
	CLEAR AND GRUB
	REMOVING PAVEMENT
	REMOVING GUARDRAIL / EAT
	REMOVING CURB AND GUTTER
	REMOVING CONCRETE BARRIER
XXX XXX XXX XXX XXX	SAWING PAVEMENT

NOTES:

1. ALL EXISTING ASPHALT REMOVAL WILL BE PAID FOR AS COMMON EXCAVATION

ASPHALT
PAID FOR AS
TION

N

REMOVING STORM SEWER INLET

SLOPE INTERCEPTS

R/L JEAN NICOLET ROAD

MATCHLINE STA 15+00.00

10IN

JEAN NICOLET ROAD

11IN

12IN

13IN

14IN

15

MATCHLINE STA 100+00.00

GHC

REMOVING FENCE

101GHC

102GHC

103GHC

104GHC

105GHC

REMOVING STORM SEWER

R/L GOOD HOPE
ROAD RAMP 'C'

I-43 SB

1127+00

1128+00

1129+00

1130+00

R/L I-43 NB/SB

ABANDON EXISTING STORM SEWER

+95
14' LT

+20
13' RT

REMOVING GUARDRAIL/EAT

I-43 NB

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 19	E

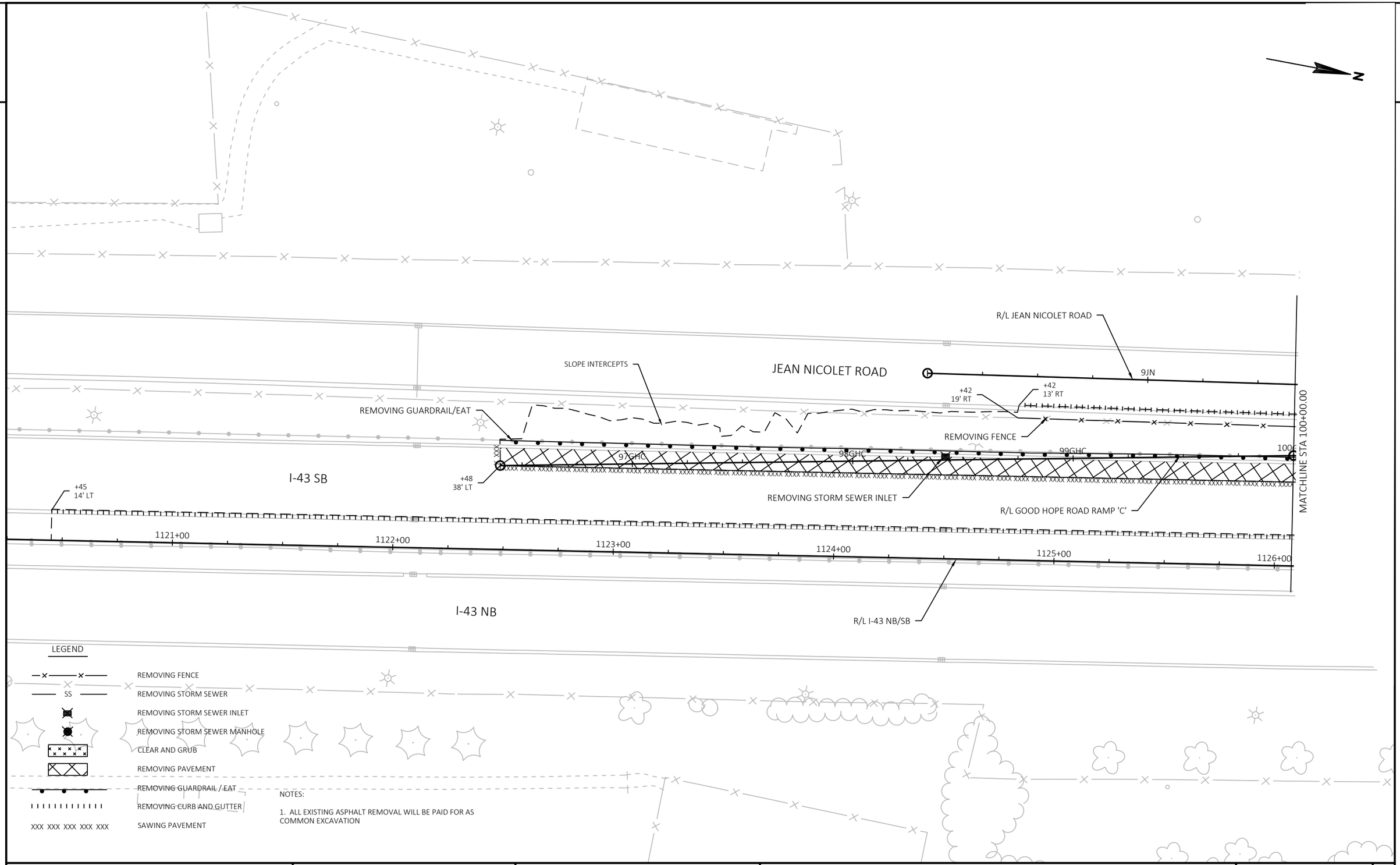
FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021101_RM.DWG
LAYOUT NAME - 021105_RM

PLOT DATE : 12/13/2017 10:36 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2



LEGEND

- REMOVING FENCE
- SS — REMOVING STORM SEWER
- REMOVING STORM SEWER INLET
- REMOVING STORM SEWER MANHOLE
- CLEAR AND GRUB
- REMOVING PAVEMENT
- REMOVING GUARDRAIL / EAT
- REMOVING CURB AND GUTTER
- XXX XXX XXX XXX XXX — SAWING PAVEMENT

NOTES:

1. ALL EXISTING ASPHALT REMOVAL WILL BE PAID FOR AS COMMON EXCAVATION

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 20	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021101_RM.DWG
LAYOUT NAME - 021104_RM
PLOT DATE : 12/13/2017 10:37 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING FENCE
- SS — REMOVING STORM SEWER
- REMOVING STORM SEWER INLET
- REMOVING STORM SEWER MANHOLE
- CLEAR AND GRUB
- REMOVING PAVEMENT
- REMOVING GUARDRAIL / EAT
- REMOVING CURB AND GUTTER
- XXX XXX XXX XXX XXX — SAWING PAVEMENT

NOTES:

1. ALL EXISTING ASPHALT REMOVAL WILL BE PAID FOR AS COMMON EXCAVATION

N

MATCHLINE STA 107+75.00

108GHC

109GHC

110GHC

111GHC

112GHC

113GHC

MATCHLINE STA 113+50.00

FO

REMOVING STORM SEWER INLET

I-43 SB

REMOVING STORM SEWER INLET

R/L GOOD HOPE ROAD RAMP 'C'

REMOVING STORM SEWER INLET

1134+00

1135+00

1136+00

1137+00

1138+00

1139+00

I-43 NB

R/L I-43 NB/SB

GOOD HOPE ROAD NB OFF RAMP

SS

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 21	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021101_RM.DWG
LAYOUT NAME - 021106_RM

PLOT DATE : 12/13/2017 10:38 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING FENCE
- SS — REMOVING STORM SEWER
- REMOVING STORM SEWER INLET
- REMOVING STORM SEWER MANHOLE
- CLEAR AND GRUB
- REMOVING PAVEMENT
- REMOVING GUARDRAIL / EAT
- REMOVING CURB AND GUTTER
- XXX XXX XXX XXX XXX — SAWING PAVEMENT

NOTES:

1. ALL EXISTING ASPHALT REMOVAL WILL BE PAID FOR AS COMMON EXCAVATION

N

REMOVING STORM SEWER INLET

SEAL OPENING IN INLET, COST INCIDENTAL TO THE PIPE REMOVAL

MATCHLINE STA 113+50.00

114GHC

115GHC

116GHC

117GHC

118GHC

119GHC

GOOD HOPE ROAD RAMP 'C'

R/L GOOD HOPE ROAD RAMP 'C'

I-43 SB

I-43 NB

1140+00

1141+00

1142+00

1143+00

1144+00

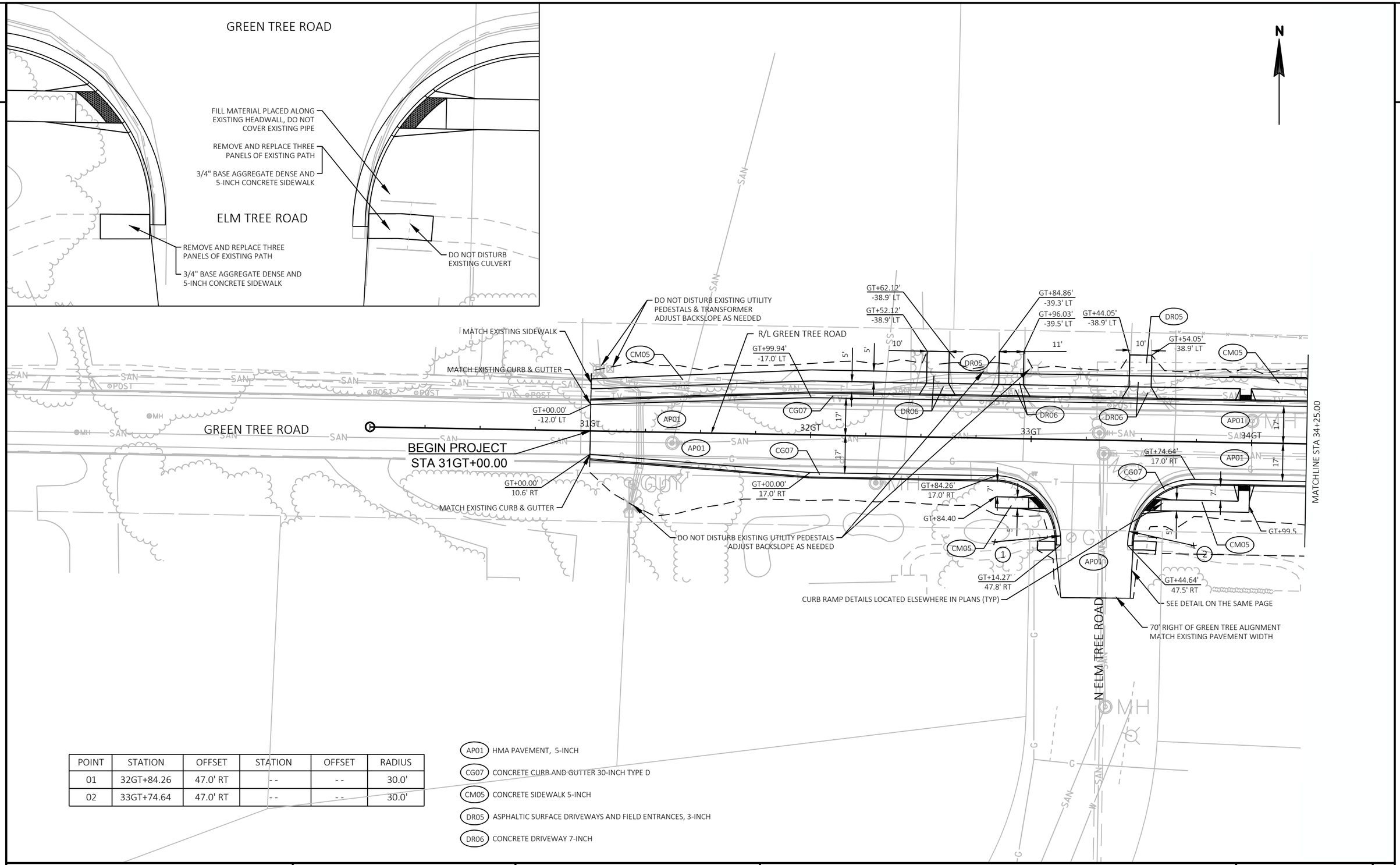
1145+00

R/L I-43 NB/SB

GOOD HOPE ROAD

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 22	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021101_RM.DWG
LAYOUT NAME - 021107_RM
PLOT DATE : 12/13/2017 10:39 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
01	32GT+84.26	47.0' RT	- -	- -	30.0'
02	33GT+74.64	47.0' RT	- -	- -	30.0'

- AP01 HMA PAVEMENT, 5-INCH
- CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CM05 CONCRETE SIDEWALK 5-INCH
- DR05 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- DR06 CONCRETE DRIVEWAY 7-INCH

2

AP01 HMA PAVEMENT, 5-INCH

CB06 CONCRETE BARRIER TYPE S42

CG06 CONCRETE CURB TYPE A

CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D

CM05 CONCRETE SIDEWALK 5-INCH

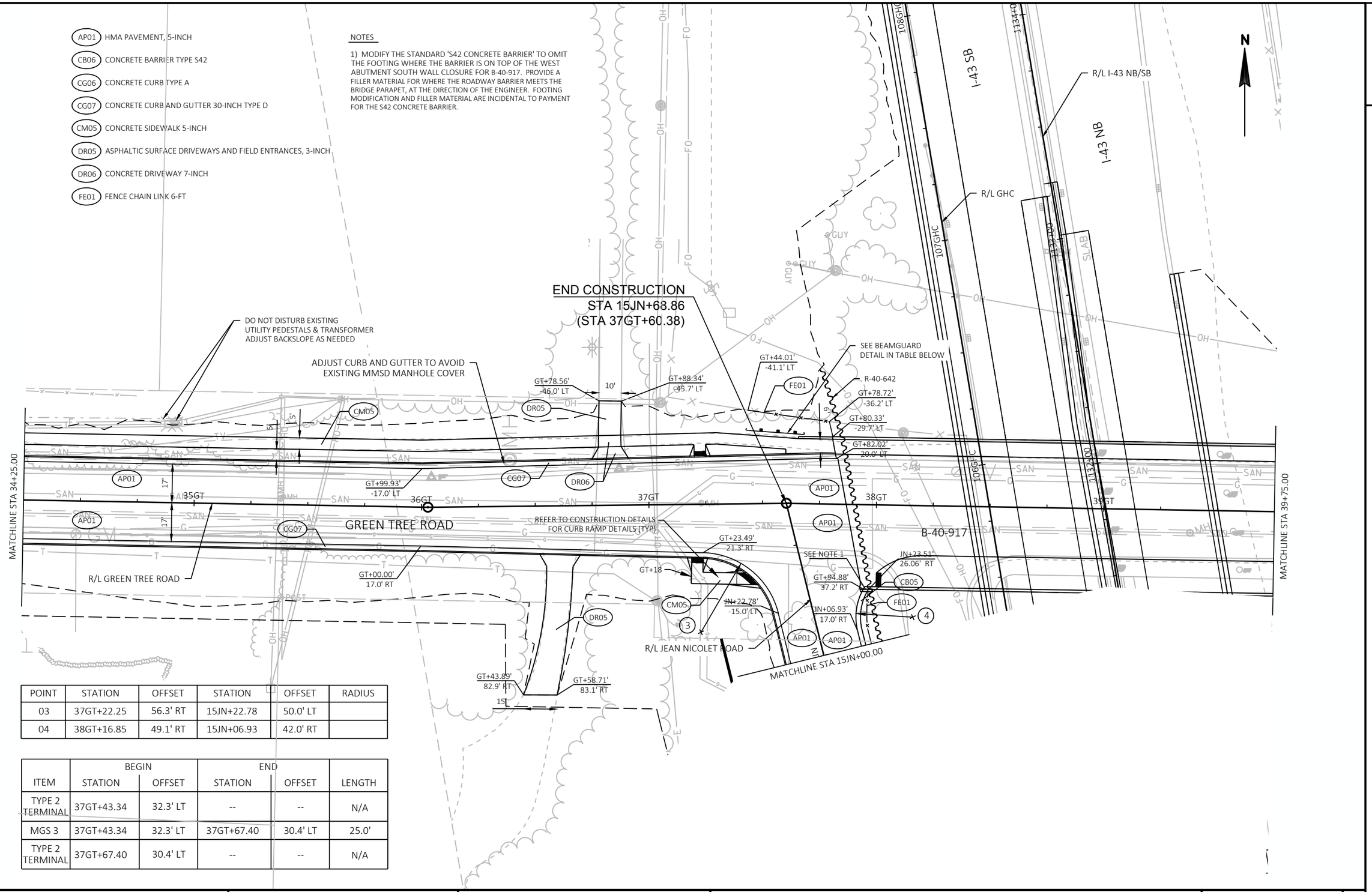
DR05 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH

DR06 CONCRETE DRIVEWAY 7-INCH

FE01 FENCE CHAIN LINK 6-FT

NOTES

1) MODIFY THE STANDARD 'S42 CONCRETE BARRIER' TO OMIT THE FOOTING WHERE THE BARRIER IS ON TOP OF THE WEST ABUTMENT SOUTH WALL CLOSURE FOR B-40-917. PROVIDE A FILLER MATERIAL FOR WHERE THE ROADWAY BARRIER MEETS THE BRIDGE PARAPET, AT THE DIRECTION OF THE ENGINEER. FOOTING MODIFICATION AND FILLER MATERIAL ARE INCIDENTAL TO PAYMENT FOR THE S42 CONCRETE BARRIER.



POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
03	37GT+22.25	56.3' RT	15JN+22.78	50.0' LT	
04	38GT+16.85	49.1' RT	15JN+06.93	42.0' RT	

ITEM	BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	LENGTH
TYPE 2 TERMINAL	37GT+43.34	32.3' LT	--	--	N/A
MGS 3	37GT+43.34	32.3' LT	37GT+67.40	30.4' LT	25.0'
TYPE 2 TERMINAL	37GT+67.40	30.4' LT	--	--	N/A

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 24	E

AP01 HMA PAVEMENT, 5-INCH

CG06 CONCRETE CURB TYPE A

CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D

CG50 CONCRETE CURB AND GUTTER SHES 30-INCH TYPE D

CM05 CONCRETE SIDEWALK 5-INCH

DR05 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH

FE01 FENCE CHAIN LINK 6-FT

NOTES

1) REPLACEMENT OF DAMAGED PAVEMENT AND CURB WITHIN THE HOTEL PARKING LOT SHALL BE AT THE DIRECTION OF THE ENGINEER. NO WORK IS ALLOWED WITHOUT PRIOR APPROVAL BY THE ENGINEER. EVERYTHING SHALL BE REPLACED IN-KIND AND MATCH EXISTING CONDITIONS. PAYMENT SHALL BE PER THE ITEMS LISTED IN THE MISC. QUANTITY TABLES. ANY DEVIATION FROM THE STANDARD ITEMS AT THE DIRECTION OF THE ENGINEER SHALL BE INCIDENTAL TO THOSE ITEMS.

N

+66.81'
102.4' RT

REPLACE ALL DAMAGED CURB & GUTTER AND HMA PAVEMENT WITHIN EASEMENT; SEE NOTE 1

PROTECT EXISTING LIGHT POLE

R/L GREEN TREE ROAD

R-40-641

GT+13.28'
-29.5' LT

GT+30.98'
-24.5' LT

GT+51.81'
-27.1' LT

GT+18.00'
-20.0' LT

GT+85.00'
-20.0' LT

END PROJECT
STA 42GT+85.00

GT+99.93'
-20.0' LT

40GT

41GT

42GT

43GT

20'

MATCHLINE STA 39+75.00

GREEN TREE ROAD

B-40-917

GT+07.91'
20.0' RT

GT+85.00'
20.0' RT

GT+43.62'
29.5' RT

GT+26.14'
36.0' RT

GT+48.68'
45.0' RT

GT+70.09'
44.6' RT

21'

REPLACE EXISTING PAVER SIDEWALK

CURB RAMP DETAILS LOCATED ELSEWHERE IN PLANS (TYP)

N PORT WASHINGTON ROAD

+33.61'
100.16' RT

+86.21'
92.94' RT

POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
05	41GT+28.60	40.0' RT	- -	- -	20.0'
06	41GT+99.60	50.0' RT	- -	- -	30.0'
07	42GT+11.31	45.0' LT	- -	- -	25.0'
08	42GT+80.31	45.0' LT	- -	- -	25.0'

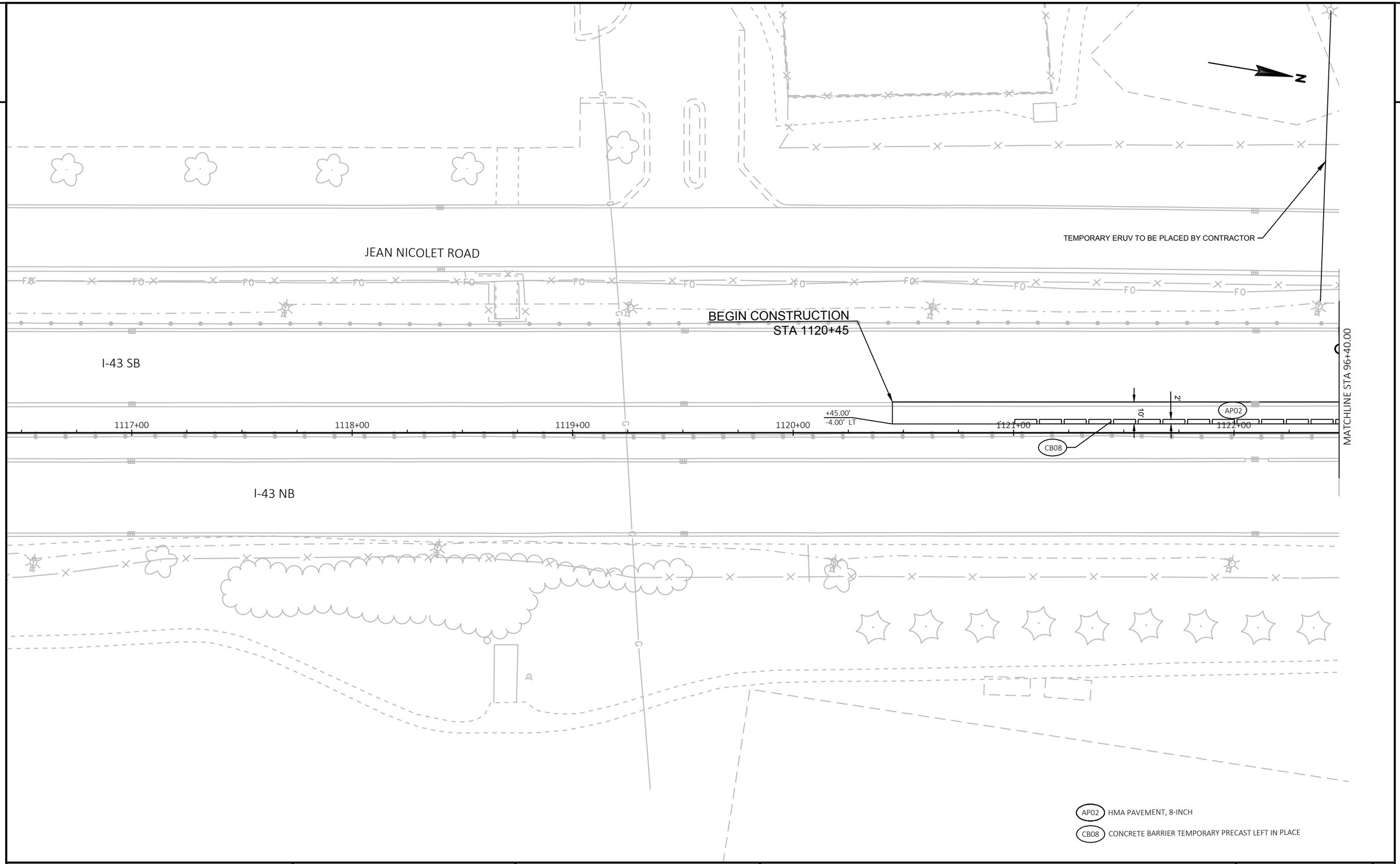
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 25	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021201_PD.DWG
LAYOUT NAME - 021203_pd

PLOT DATE : 12/18/2017 3:17 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

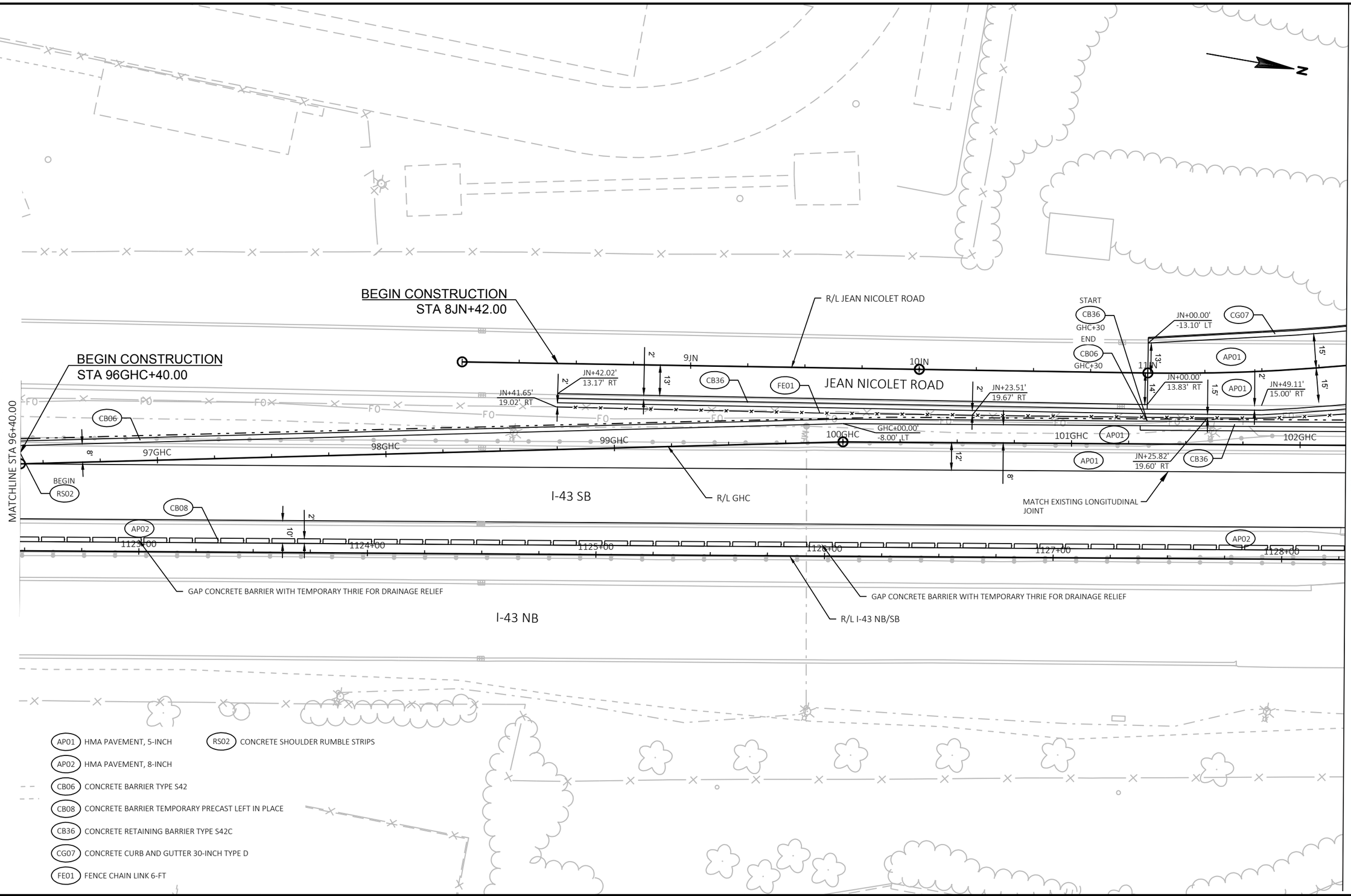
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 26	E

2



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 27	E

2

2

MATCHLINE STA 102+20.00

MATCHLINE STA 108+00.00

N

JEAN NICOLET ROAD

GREEN TREE ROAD

R/L JEAN NICOLET ROAD

R/L GREEN TREE ROAD

START CB06 JN+00

END CB36 JN+00

12JN

13JN

14JN

15JN

CG07

AP01

CB06

JN+23.51' 26.06' RT

JN+08.93' 21.50' RT

FE01

R-40-642

JN+16.99' 21.50' RT

RS02

CB36

103GHC

104GHC

105GHC

106GHC

107GHC

MATCH EXISTING LONGITUDINAL JOINT

R/L GOOD HOPE ROAD RAMP 'C'

I-43 SB

I-43 NB

+55.58' -14.04' LT

TEMPORARY THRIE BEAM CONNECTION (BOTH SIDES OF THE BARRIER)

+95.00' -4.26' LT

+95.02' -14.04' LT

+35.81' -6.88' LT

AP02

+18.80' -8.05' LT

+19.37' -14.09' LT

+19.39' -4.45' LT

1128+00

1130+00

1131+00

1132+00

1133+00

1134+00

+09.99' 2.92' RT

+20.00' 12.98' RT

+04.37' 2.90' RT

PV14

B-40-917

+18.91' -0.05' LT

+25.01' 2.90' RT

+01.64' 12.92' RT

SLAB

GAP CONCRETE BARRIER WITH TEMPORARY THRIE FOR DRAINAGE RELIEF

R/L I-43 NB/SB

CG50

+84.11' 44.96' RT

+76.57' 44.92' RT

CP10

SALVAGE AND REINSTALL EXISTING BEAMGUARD

RECONNECT EXISTING BEAMGUARD COST INCIDENTAL TO "REPLACING GUARDRAIL RAIL AND HARDWARE"

R-40-641

MAINTAIN ERUV DURING CONSTRUCTION

AP01	HMA PAVEMENT, 5-INCH
AP02	HMA PAVEMENT, 8-INCH
CP10	CONCRETE PAVEMENT, 10-INCH
CB06	CONCRETE BARRIER TYPE S42
CB36	CONCRETE RETAINING BARRIER TYPE S42C
CG07	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG50	CONCRETE CURB AND GUTTER SHES 30-INCH TYPE D
PV14	SLOPE PAVING CRUSHED AGGREGATE
FE01	FENCE CHAIN LINK 6-FT
RS02	CONCRETE SHOULDER RUMBLE STRIPS

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 28	E

2

N

MATCHLINE STA 108+00.00

MATCHLINE STA 113+75.00

OH

FO

E

T

V

AP01

CB36

RS02

END

109GHC

110GHC

111GHC

112GHC

113GHC

12'

8'

15'

3'

GHC+99.75'
15.00' RT

GHC+65.83'
17.49' RT

GHC+63.10'
34.22' RT

MATCH EXISTING LONGITUDINAL JOINT

R/L GOOD HOPE ROAD RAMP 'C'

I-43 SB

1135+00

1136+00

1137+00

1138+00

1139+00

SLAB

R/L I-43 NB/SB

I-43 NB

AP01 HMA PAVEMENT, 5-INCH

CB36 CONCRETE RETAINING BARRIER TYPE S42C

RS02 CONCRETE SHOULDER RUMBLE STRIPS

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 29	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021202_PD.DWG
LAYOUT NAME - 021207_pd

PLOT DATE : 12/18/2017 3:43 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

AP01 HMA PAVEMENT, 5-INCH

CB06 CONCRETE BARRIER TYPE S42

CB36 CONCRETE RETAINING BARRIER TYPE S42C

CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D

WETLAND BOUNDARY, TYP.

R/L GOOD HOPE ROAD RAMP 'C'

GOOD HOPE ROAD RAMP 'C'

START CB06 GHC+00

END CB36 GHC+00

114GHC

115GHC

116GHC

117GHC

118GHC

119GHC

GHC+83.00' -17.49' LT

MATCH EXISTING

GHC+10.04' 26.00' RT

GHC+20.61' 24.00' RT

MATCH EXISTING

R = 1000.00'

MATCHLINE STA 113+75.00

I-43 SB

I-43 NB

SLAB

GOOD HOPE ROAD

40+00

1141+00

1142+00

1143+00

1144+00

1145+00

R/L I-43 NB/SB

2

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 30	E

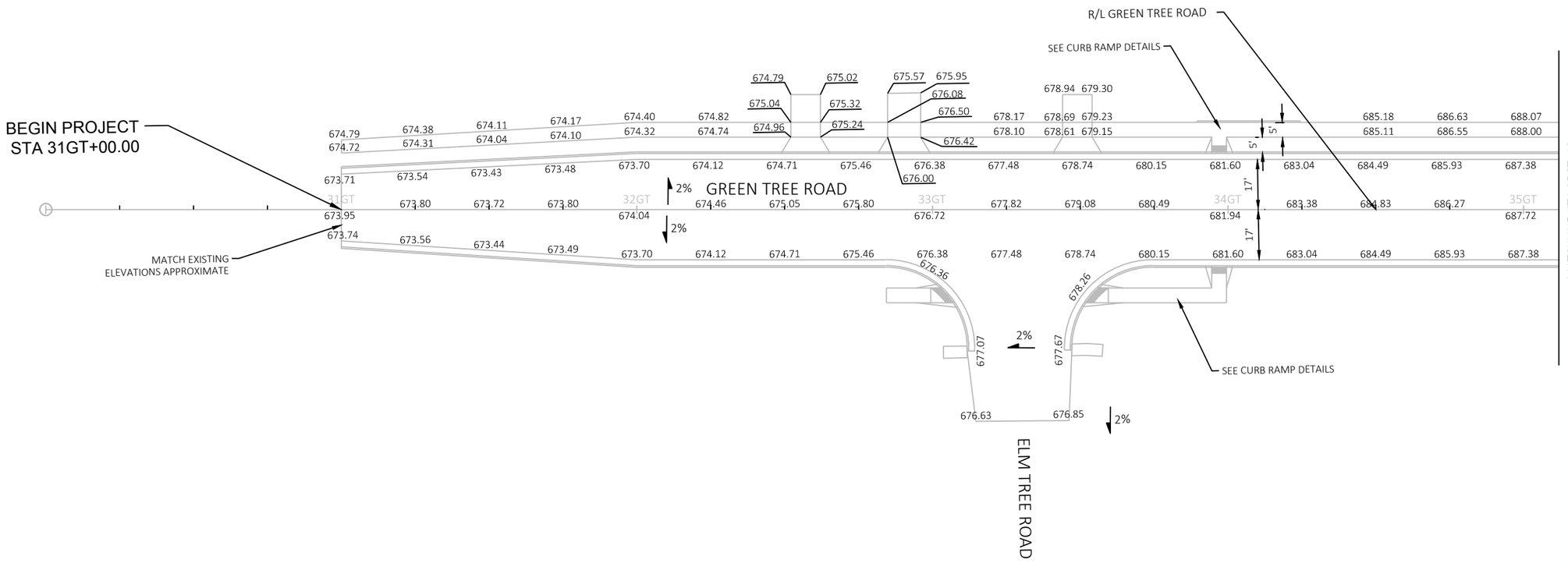
FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021202_PD.DWG
LAYOUT NAME - 021208_pd

PLOT DATE : 12/18/2017 3:44 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 31	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021301_PG.DWG
LAYOUT NAME - 021301pg

PLOT DATE : 12/14/2017 4:02 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

R/L GOOD HOPE SB ON RAMP

SEE CURB RAMP DETAILS

R-40-642

R-40-641

MATCHLINE STA 35GT+12

MATCHLINE STA 40GT+00

GREEN TREE ROAD

R/L GREEN TREE ROAD

R/L JEAN NICOLET ROAD

JEAN NICOLET ROAD

B-40-917

GOOD HOPE SB ON RAMP

I-43 NB

I-43 SB

MATCH EXISTING

MATCH EXISTING

R/L I-43 NB/SB

2%

2%

4%

4%

17'

17'

5'

5'

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 32	E

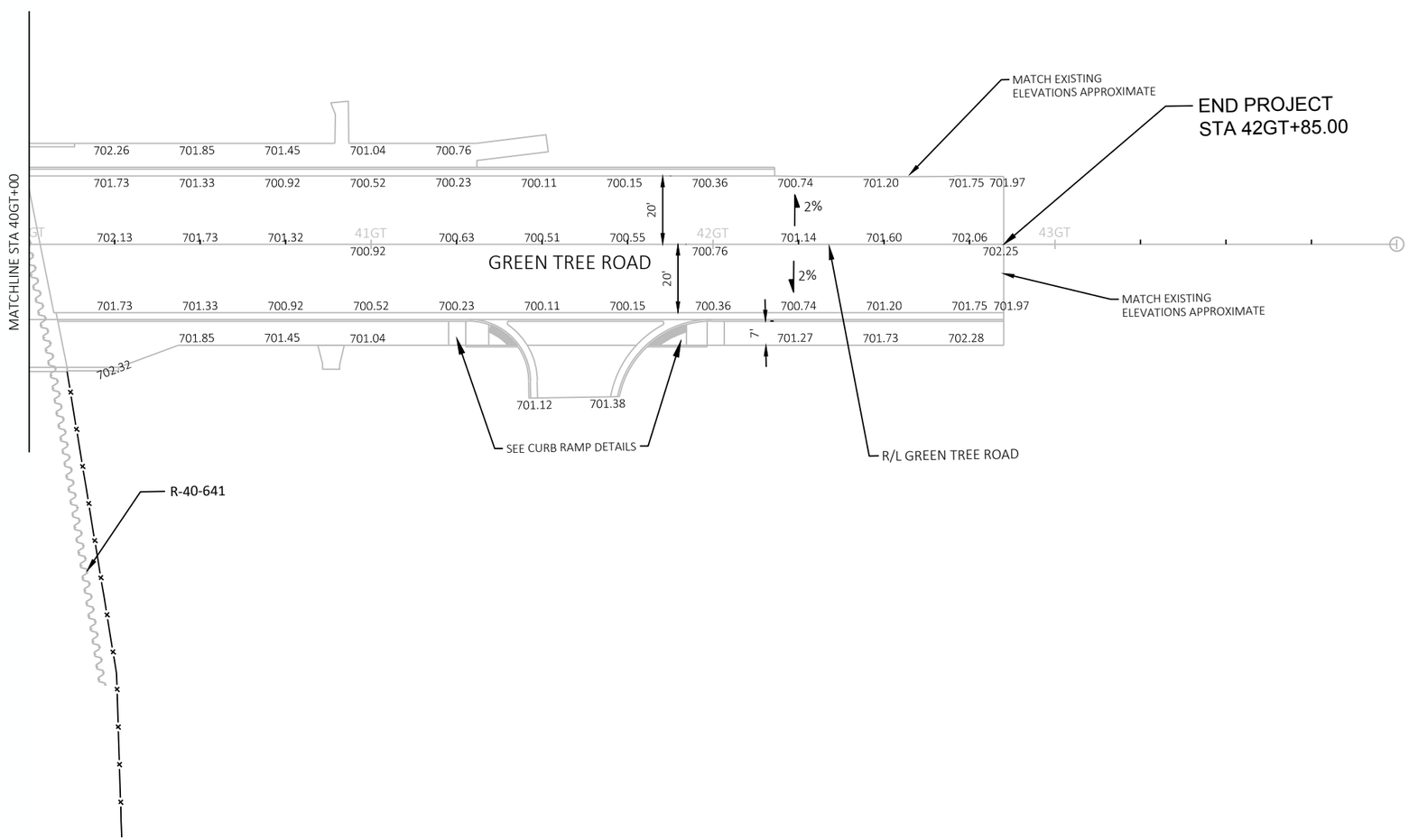
FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\122290401_MILWAUKEE\GREEN TREE\021301_PG.DWG
LAYOUT NAME - 021302pg

PLOT DATE : 12/14/2017 4:02 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

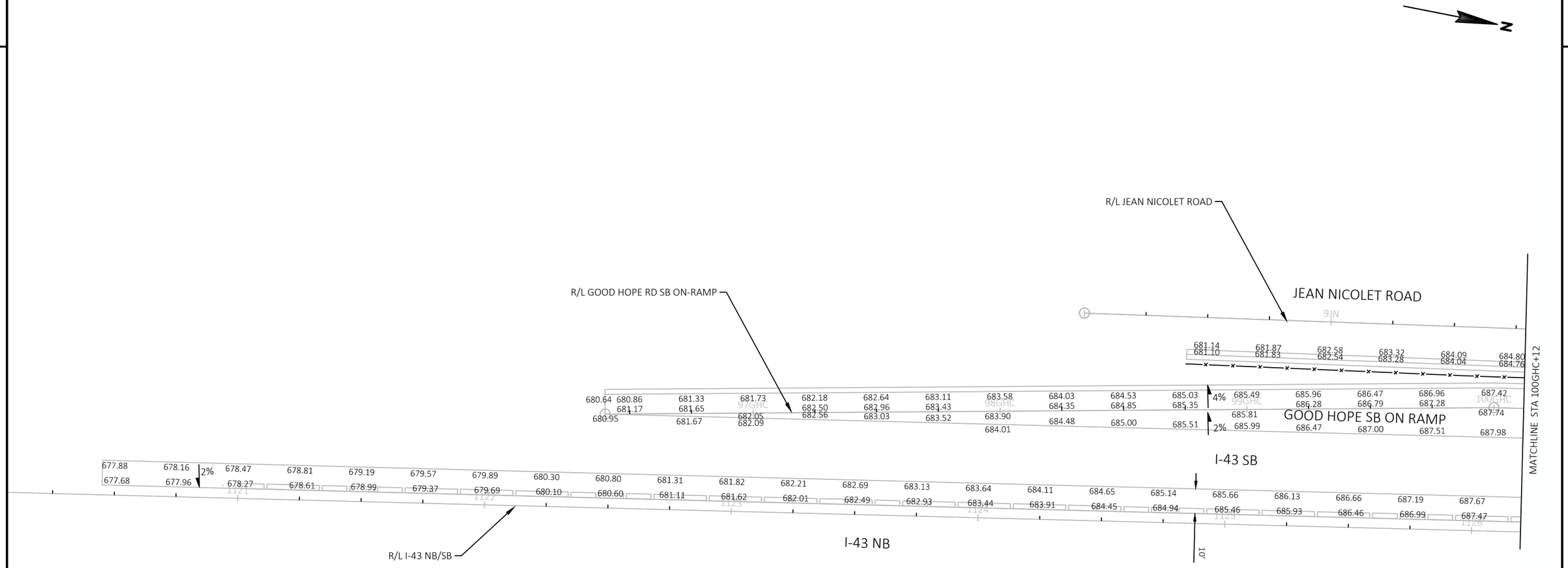
2

N



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 33	E

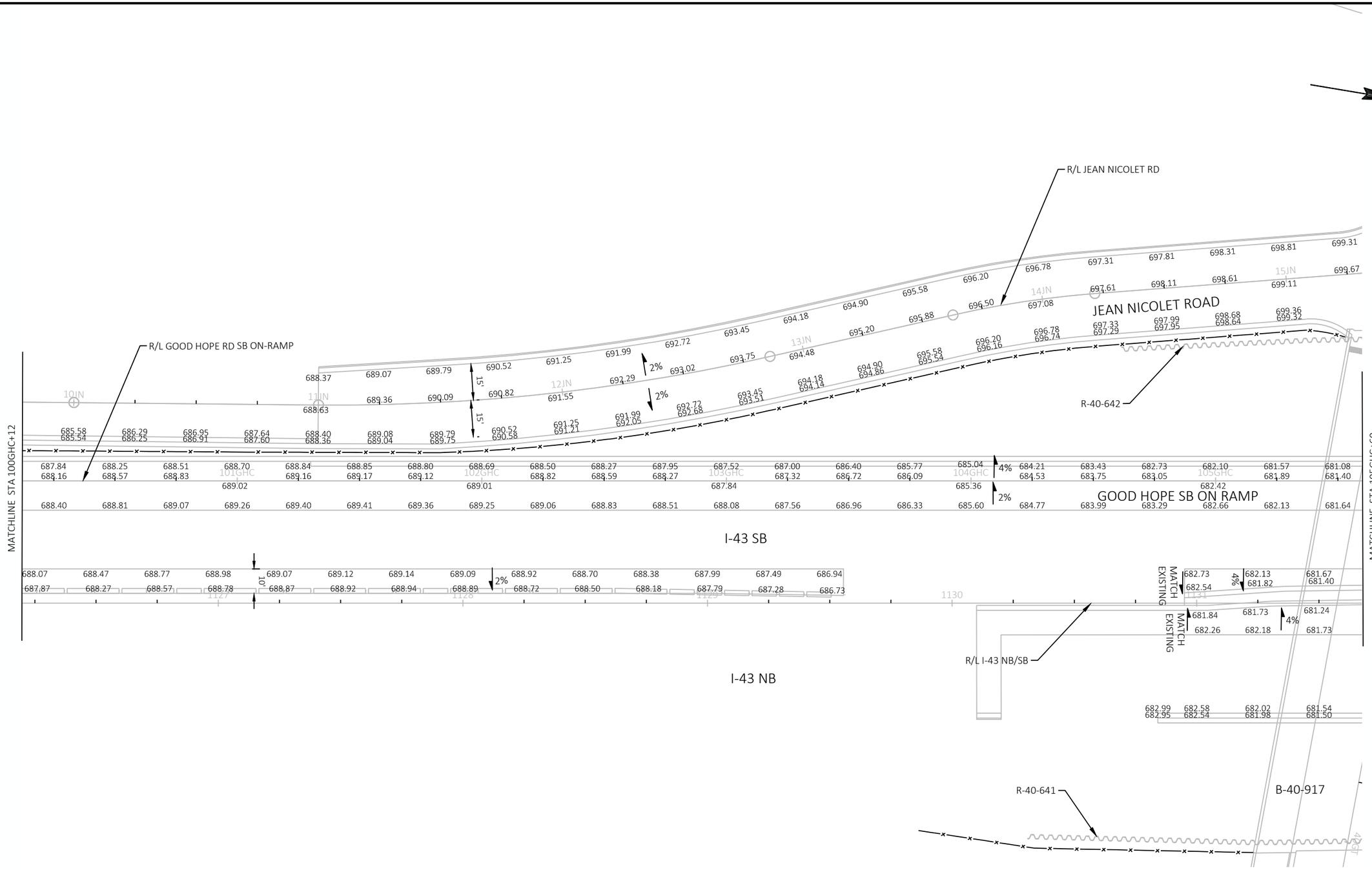
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 34	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021301_PG.DWG
LAYOUT NAME - 021304pg
PLOT DATE : 12/14/2017 4:02 PM
PLOT BY : ANDREW ROSEMEYER
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 35	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021301_PG.DWG
LAYOUT NAME - 021305pg

PLOT DATE : 12/14/2017 4:02 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

GREEN TREE ROAD

R/L GREEN TREE ROAD

R-40-642

B-40-917

MATCHLINE STA 105GHC+60

MATCHLINE 111GHC+10

GOOD HOPE SB ON RAMP

I-43 SB

I-43 NB

R/L I-43 NB/SB

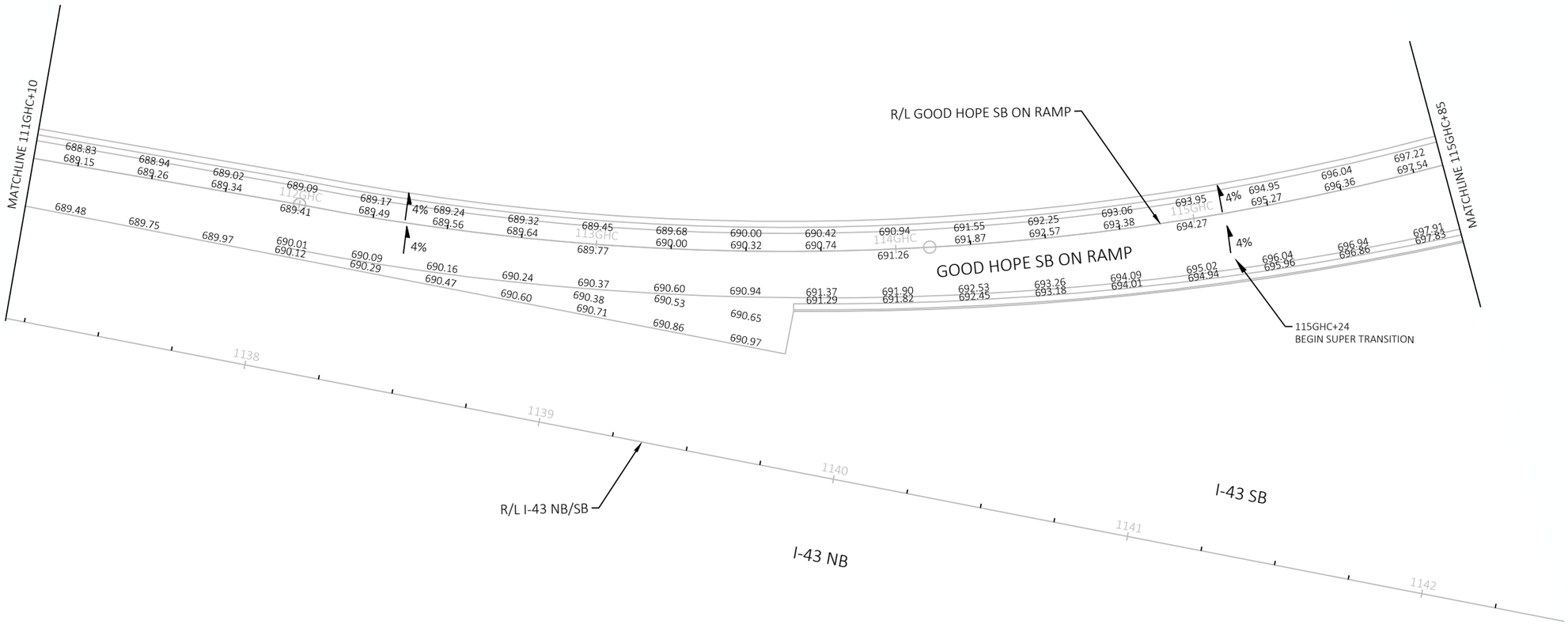
R/L GOOD HOPE RD SB ON-RAMP

R-40-641

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 36 E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021301_PG.DWG
LAYOUT NAME - 021306pg
PLOT DATE : 12/14/2017 4:02 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

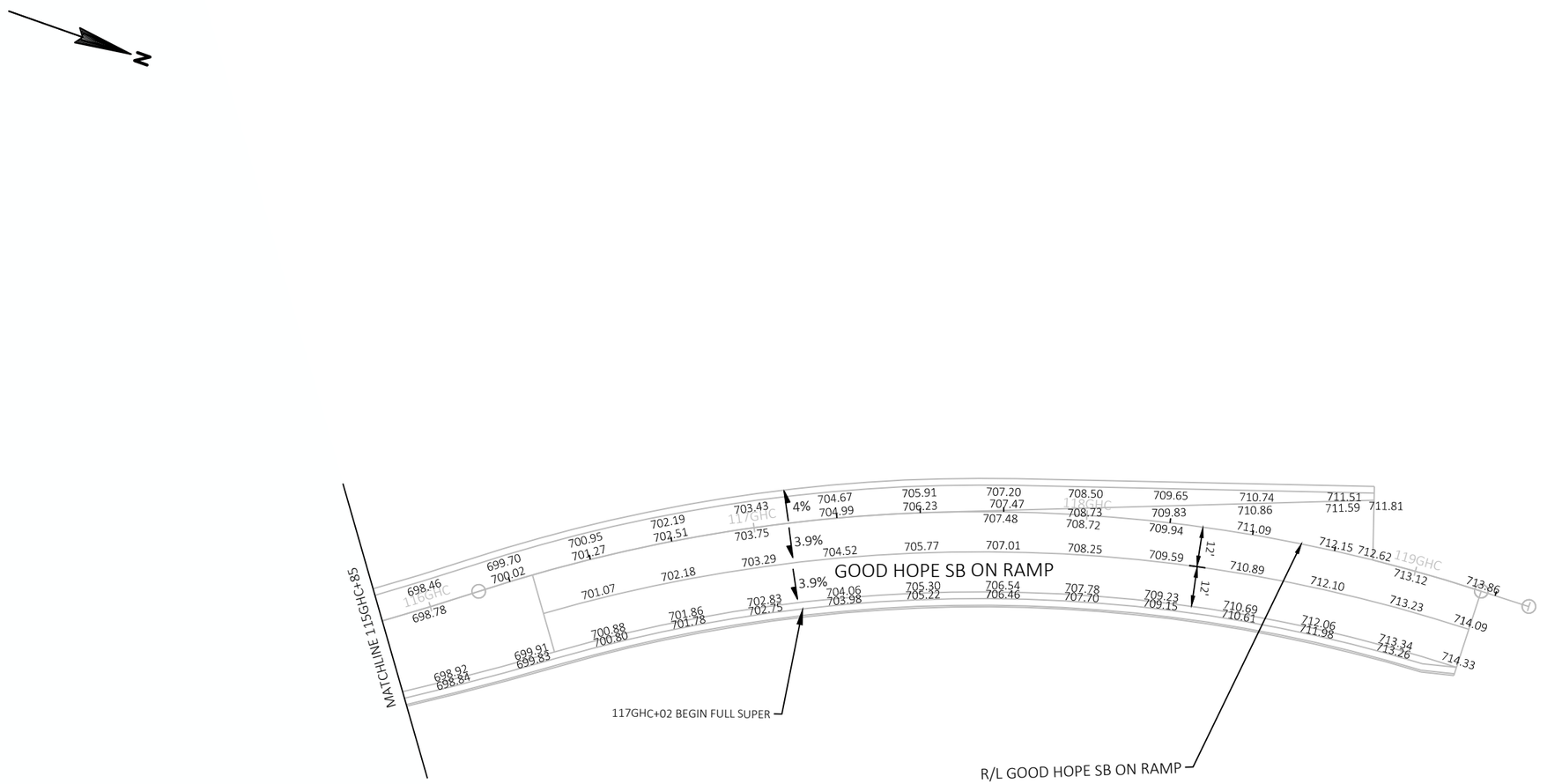
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 37	E

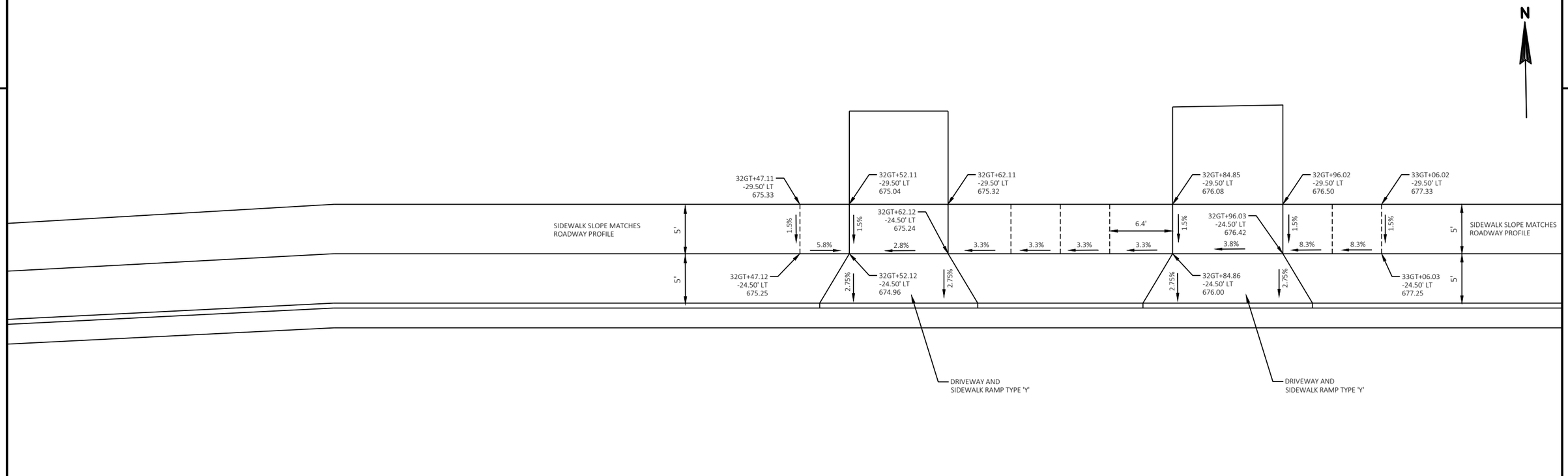
2

2

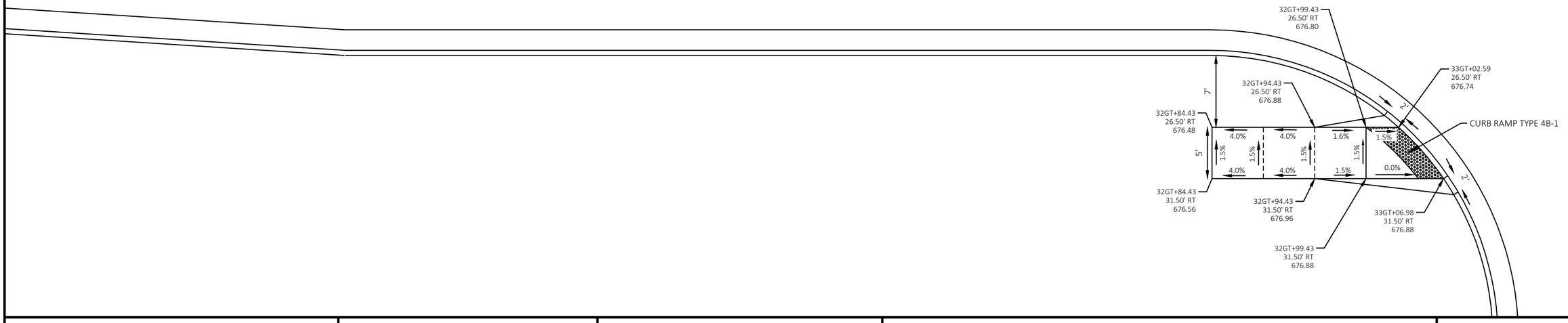


PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 38	E

2



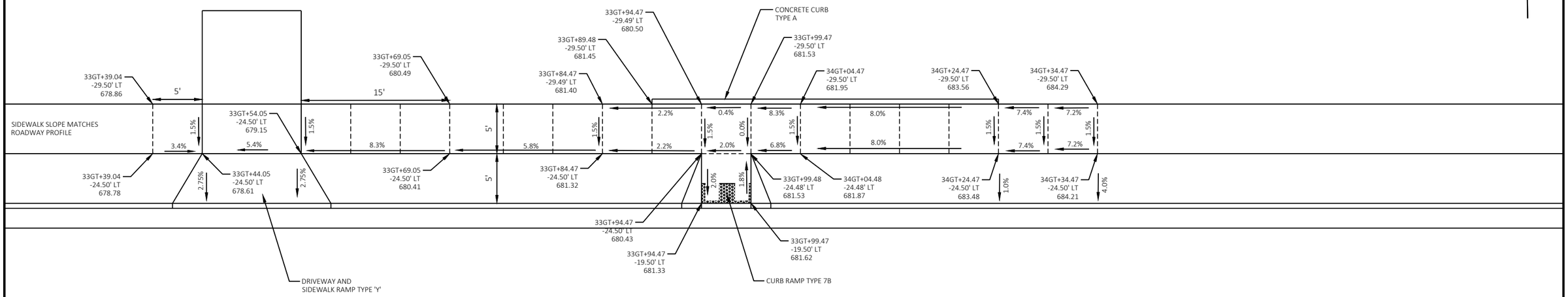
GREEN TREE ROAD



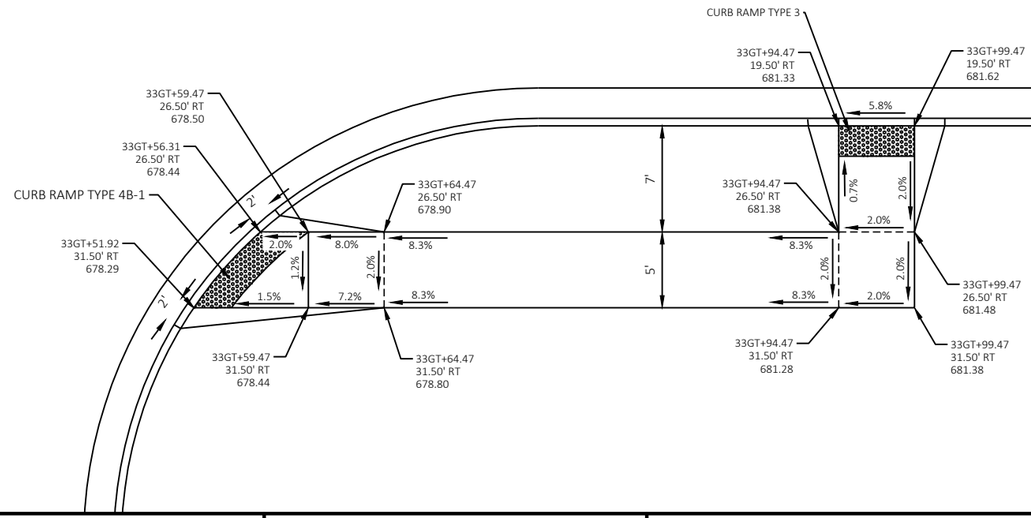
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CURB RAMP AND SIDEWALK DETAILS: GREEN TREE AT ELM TREE ROAD	SHEET 39	E

2

N



34GT



ELM TREE
ROAD

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CURB RAMP AND SIDEWALK DETAILS: GREEN TREE AT ELM TREE ROAD	SHEET 40	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021401_CRD.DWG
LAYOUT NAME - 021401B_crd
PLOT DATE : 11/22/2017 11:28 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:10 FT_3
WISDOT/CADDS SHEET 42

2

N

36GT+78.11
-30.66' LT
697.65

36GT+73.11
-30.59' LT
697.85

36GT+87.92
-30.79' LT
698.07

36GT+97.92
-30.93' LT
698.90

37GT+15.04
-31.18' LT
699.51

37GT+25.05
-31.32' LT
699.29

37GT+20.04
-31.25' LT
699.19

CONCRETE CURB
TYPE A

37GT+30.05
-31.39' LT
699.69

37GT+35.53
-30.92' LT
700.09

SIDEWALK SLOPE MATCHES
ROADWAY PROFILE

36GT+87.99
-25.79' LT
697.99

37GT+35.11
-25.94' LT
700.01

36GT+73.18
-25.59' LT
697.77

36GT+78.18
-25.66' LT
697.57

36GT+97.99
-25.93' LT
698.82

37GT+15.11
-26.18' LT
699.43

37GT+20.11
-26.25' LT
699.11

37GT+25.12
-26.31' LT
699.19

37GT+30.12
-26.37' LT
699.60

37GT+20.18
-21.25' LT
699.03

37GT+25.18
-21.32' LT
699.18

DRIVEWAY AND SIDEWALK RAMP TYPE 'Y'

CURB RAMP TYPE 7B

37GT

38GT

GREEN TREE ROAD

CURB RAMP TYPE 3

37GT+18.58
23.64' RT
698.93

37GT+23.58
23.82' RT
699.14

37GT+33.35
30.25' RT
699.72

37GT+18.18
24.56' RT
699.02

37GT+23.35
29.96' RT
699.09

37GT+42.01
30.49' RT
699.63

CURB RAMP TYPE 4B-1

37GT+18.36
29.82' RT
699.01

37GT+18.18
34.82' RT
699.09

37GT+23.21
34.96' RT
699.17

37GT+33.20
35.24' RT
699.80

37GT+47.34
35.64' RT
699.62

SEE STRUCTURE
PLAN FOR CURB
RAMP DETAIL

JEAN NICOLET ROAD

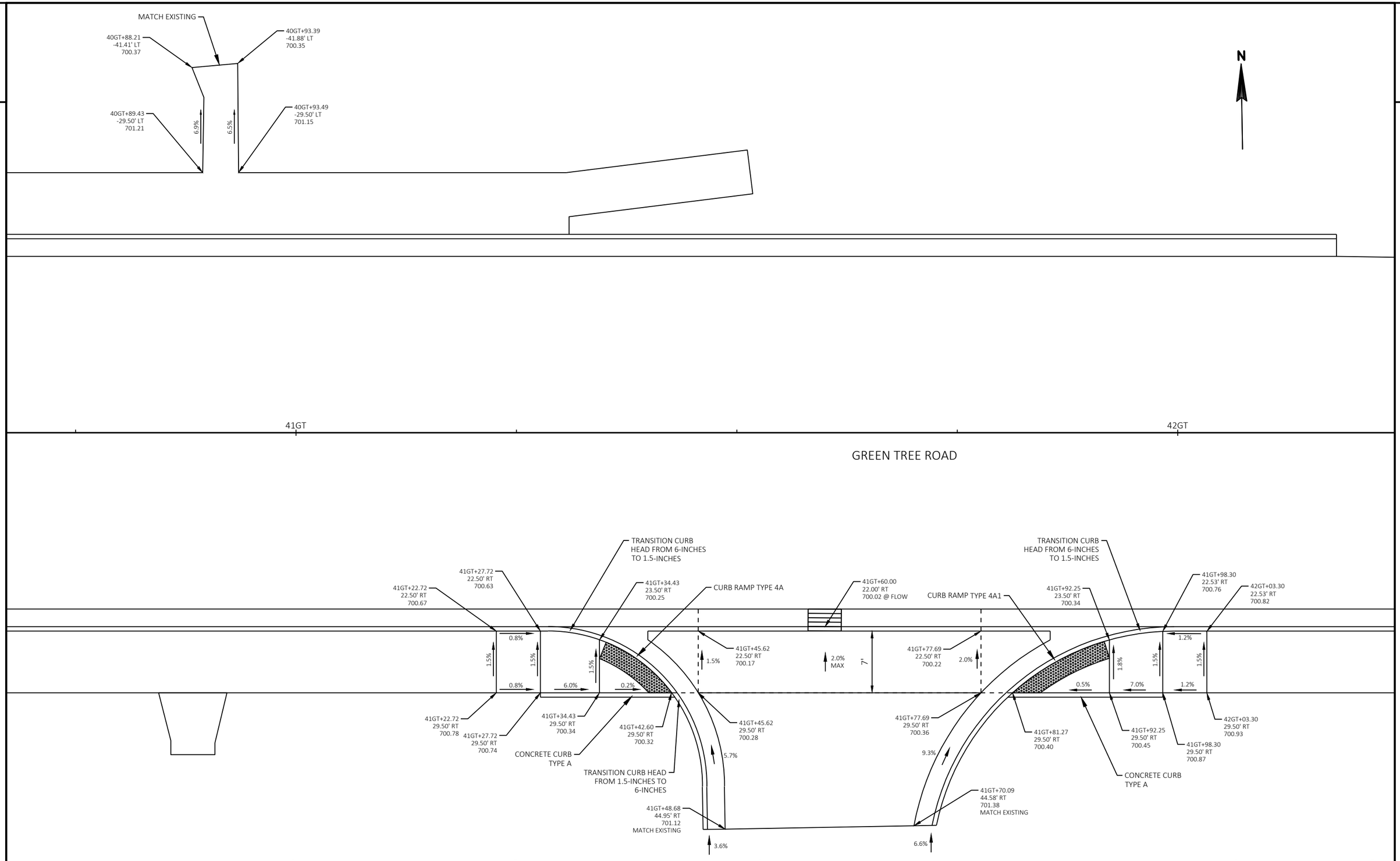
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CURB RAMP AND SIDEWALK DETAILS: JEAN NICOLET ROAD	SHEET 41	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021401_CRD.DWG
LAYOUT NAME - 021402_crd

PLOT DATE : 11/22/2017 11:28 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:10 FT_3

2

2



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CURB RAMP AND SIDEWALK DETAILS: GREEN TREE ROAD EAST OF I-43	SHEET 42	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\021401_CRD.DWG
LAYOUT NAME - 021403_crd
PLOT DATE : 11/22/2017 11:28 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:10 FT_3
WISDOT/CADDS SHEET 42

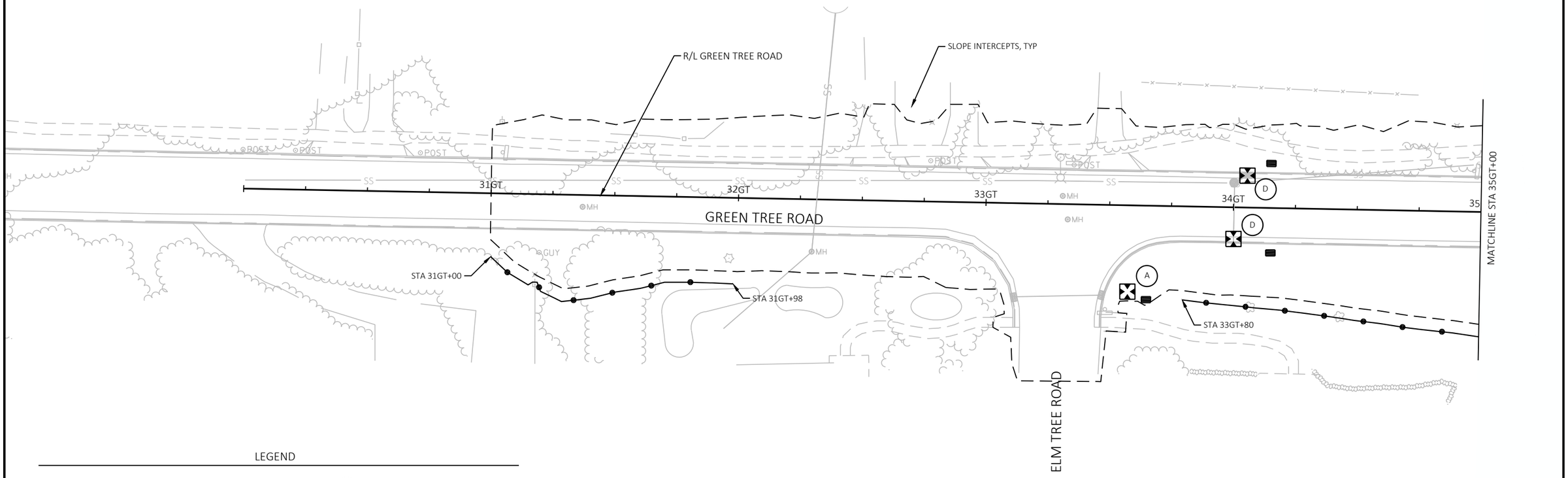
NOTES

1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) AREAS BETWEEN THE BACK OF CURB AND SLOPE INTERCEPTS REQUIRE TOPSOIL (OR SALVAGED TOPSOIL), FERTILIZER, SEED, AND EROSION MAT OR MULCH.

3) ALL AREAS ARE TO RESTORED WITH DOT SEEDING MIXTURE NO. 20. IF A DISTURBED LOCATION WILL NOT BE PERMANENTLY SEEDED AND RESTORED WITHIN 14 CALENDAR DAYS, THE CONTRACTOR SHALL USE TEMPORARY SEED.

4) WHEN INLET PROTECTION TYPE A & TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.



LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- INLET PROTECTION FROM PREVIOUS STAGE (XX)
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR — SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 1A	SHEET 43	E

2

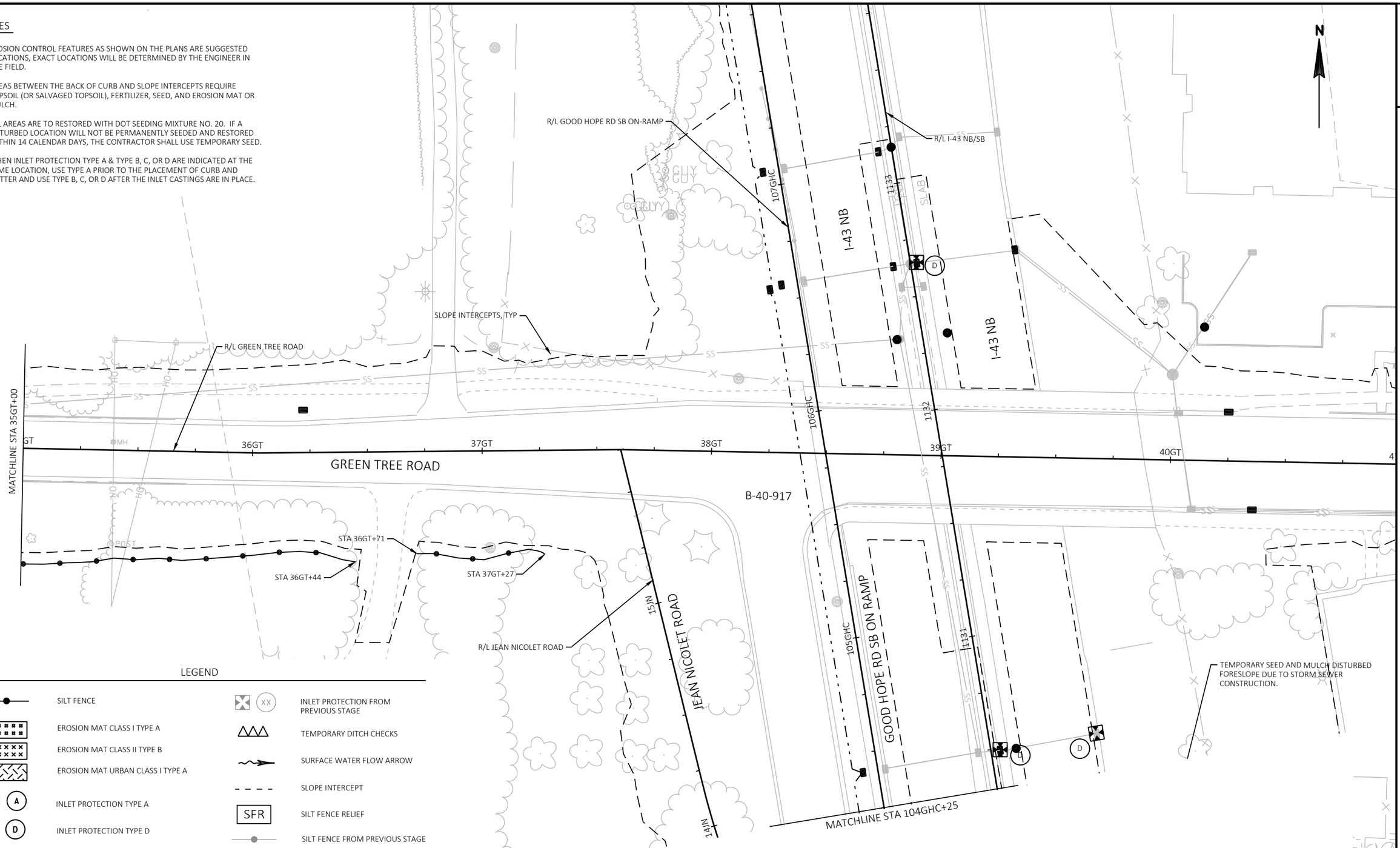
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4) WHEN INLET PROTECTION TYPE A & TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.



LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- (A) INLET PROTECTION TYPE A
- (D) INLET PROTECTION TYPE D
- (XX) INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 1A	SHEET 44	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022101_EC_ST1A.DWG
LAYOUT NAME - 022102_ec-st1

PLOT DATE : 12/12/2017 7:34 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

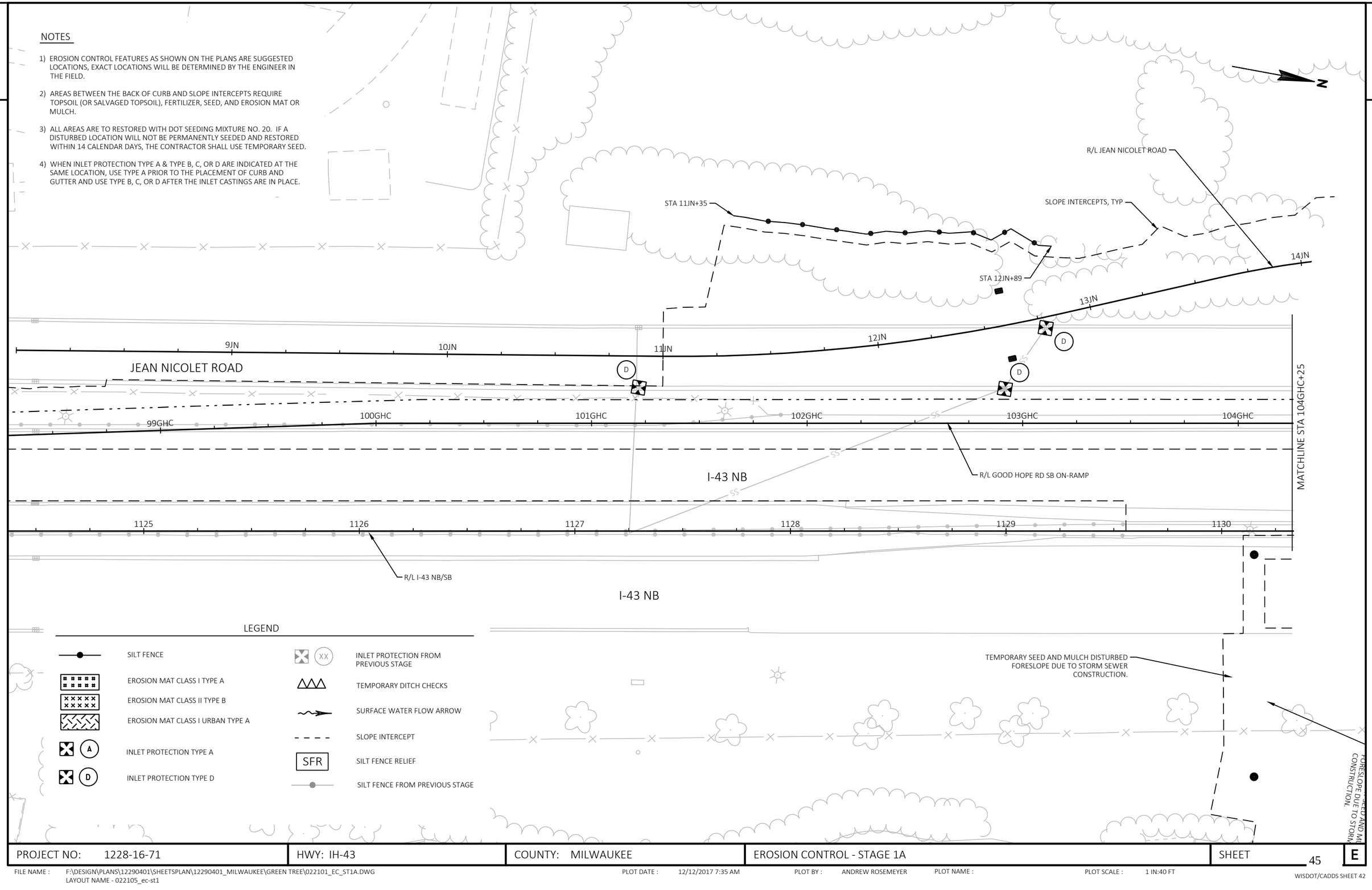
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1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) AREAS BETWEEN THE BACK OF CURB AND SLOPE INTERCEPTS REQUIRE TOPSOIL (OR SALVAGED TOPSOIL), FERTILIZER, SEED, AND EROSION MAT OR MULCH.

3) ALL AREAS ARE TO RESTORED WITH DOT SEEDING MIXTURE NO. 20. IF A DISTURBED LOCATION WILL NOT BE PERMANENTLY SEEDED AND RESTORED WITHIN 14 CALENDAR DAYS, THE CONTRACTOR SHALL USE TEMPORARY SEED.

4) WHEN INLET PROTECTION TYPE A & TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.



LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT CLASS I URBAN TYPE A
- A — INLET PROTECTION TYPE A
- D — INLET PROTECTION TYPE D
- XX — INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR — SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 1A	SHEET 45	E

2

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT CLASS I URBAN TYPE A
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

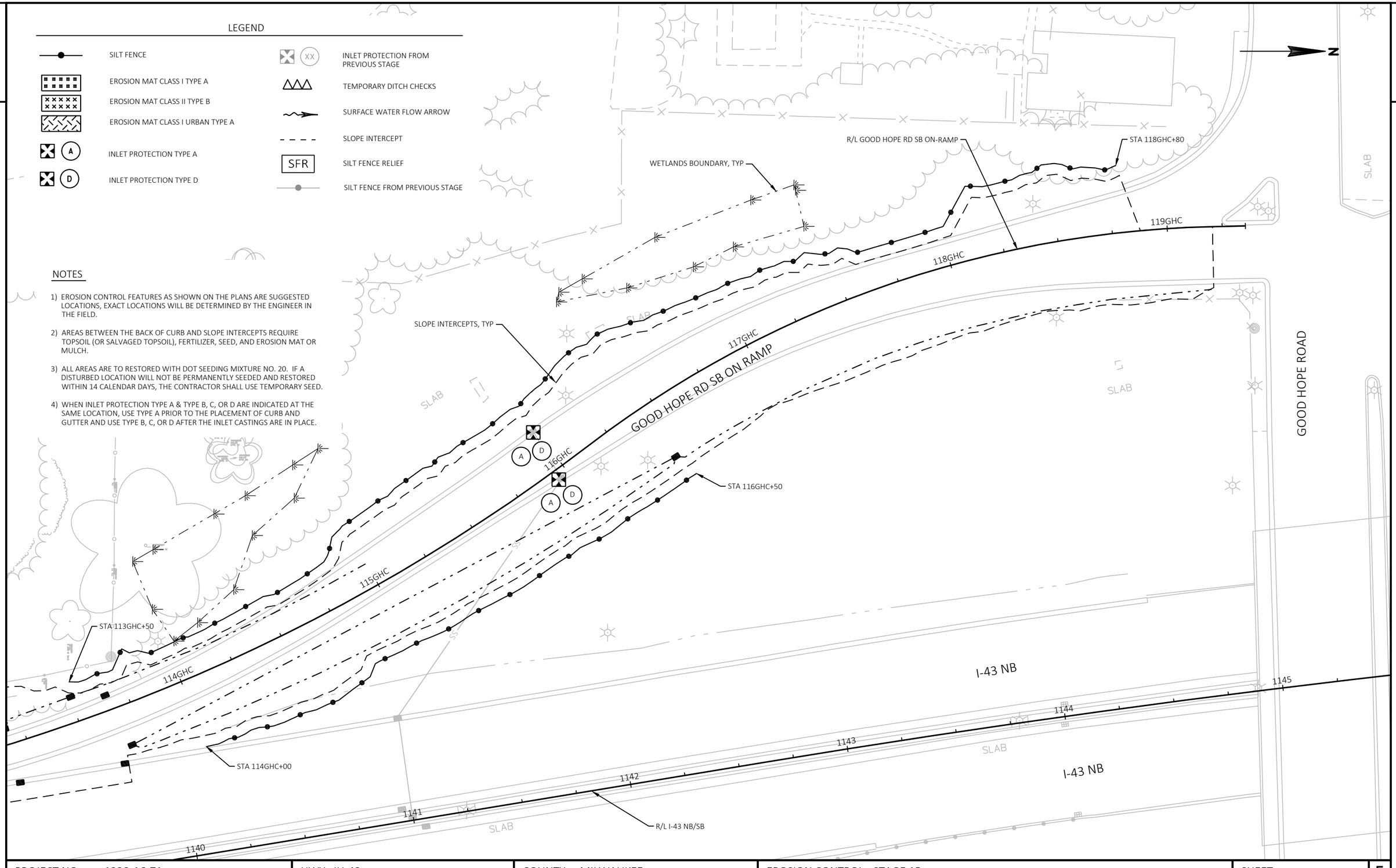
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 1B	SHEET 46	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022102_EC_ST1B.DWG
LAYOUT NAME - 022157_ec-st1B

PLOT DATE : 12/12/2017 7:41 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

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NOTES

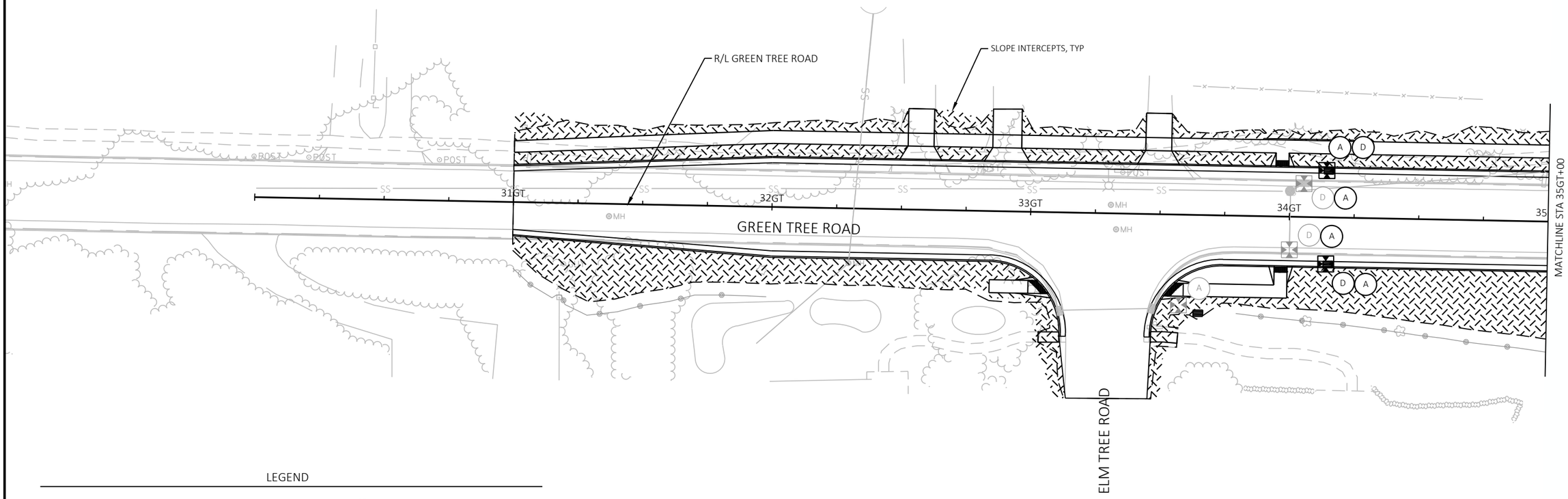
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N



LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- A — INLET PROTECTION TYPE A
- D — INLET PROTECTION TYPE D
- XX — INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR — SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2A	SHEET 47	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022201_EC_ST2A.DWG
LAYOUT NAME - 022201_ec-st2a

PLOT DATE : 12/13/2017 7:28 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

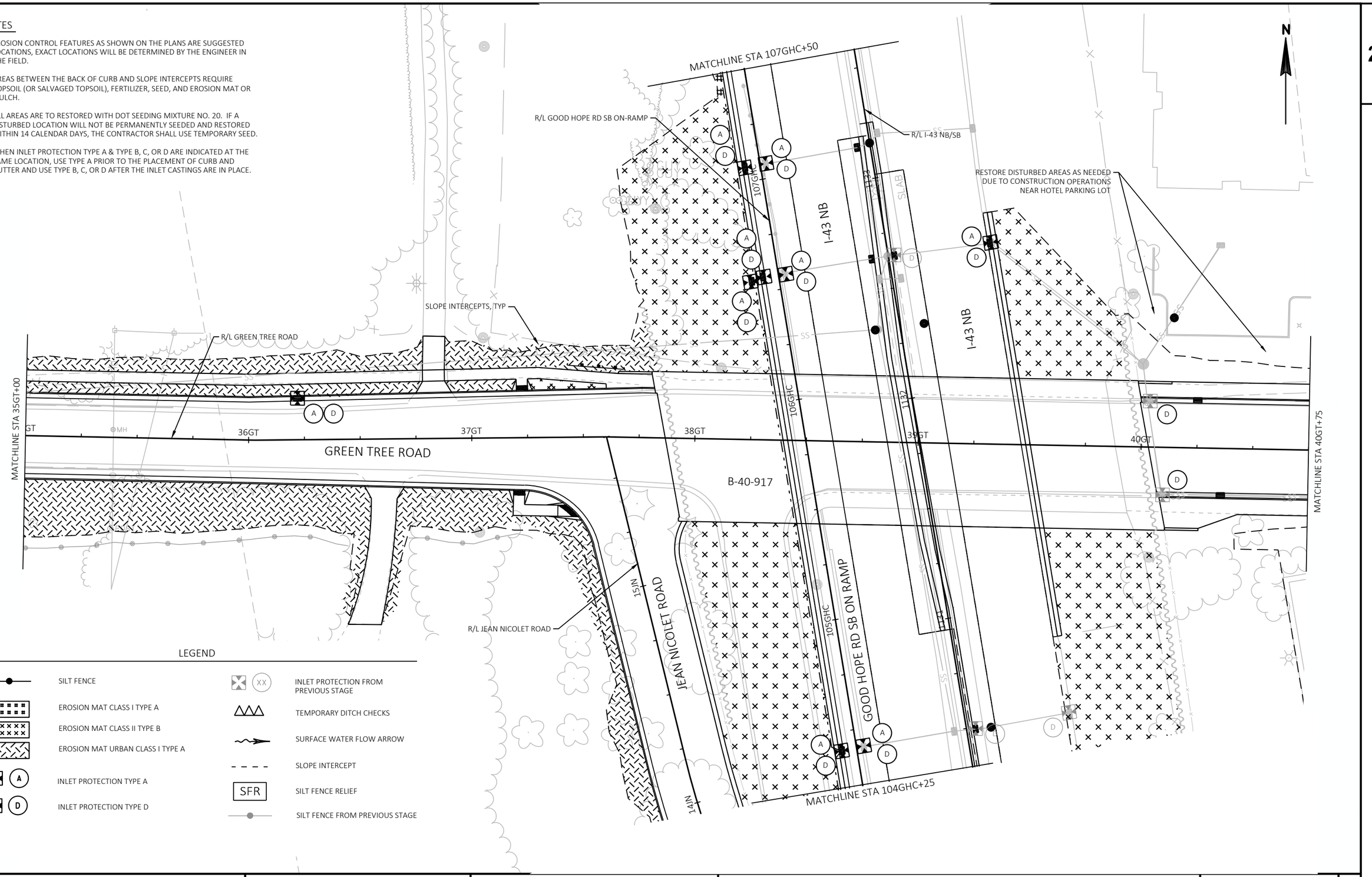
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LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2A	SHEET 48	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022201_EC_ST2A.DWG
LAYOUT NAME - 022202_ec-st2a

PLOT DATE : 12/13/2017 7:29 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

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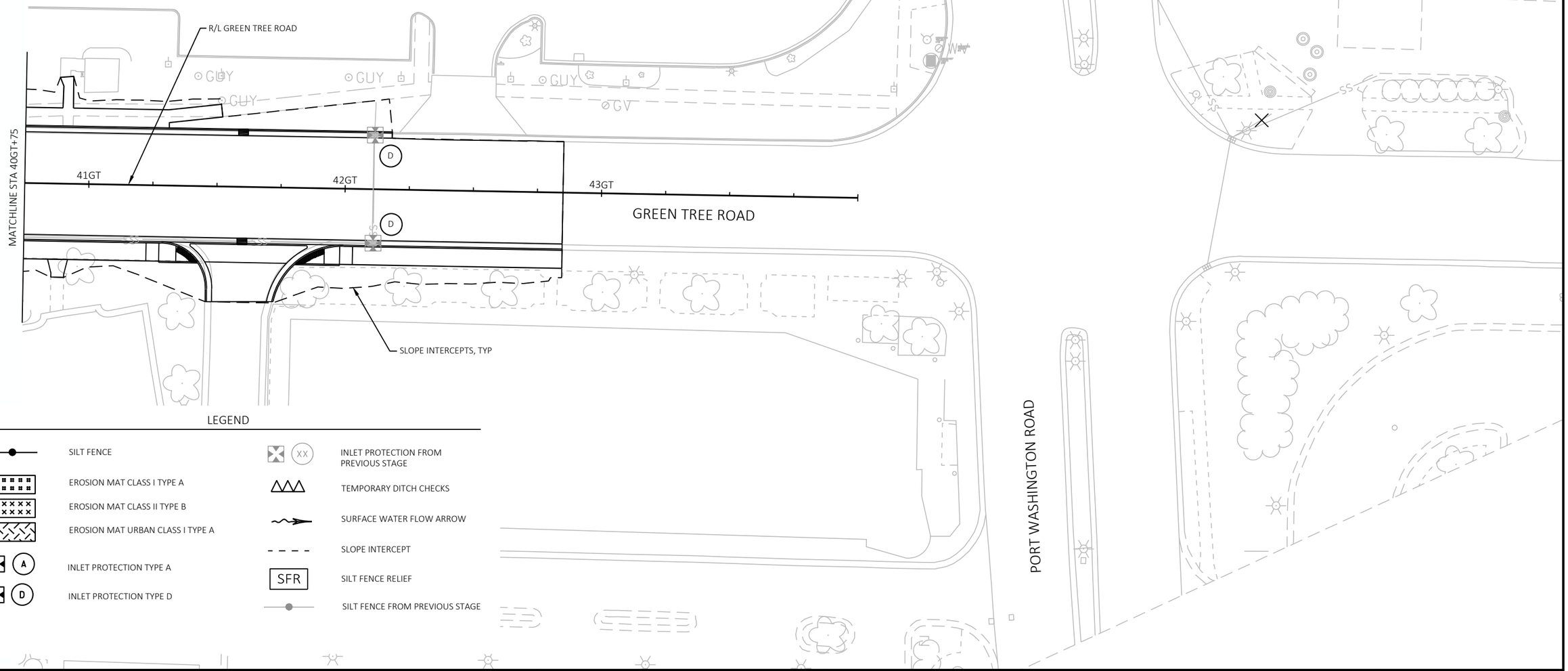
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LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- A — INLET PROTECTION TYPE A
- D — INLET PROTECTION TYPE D
- XX — INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR — SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

2

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2A	SHEET 49	E

2

2

NOTES

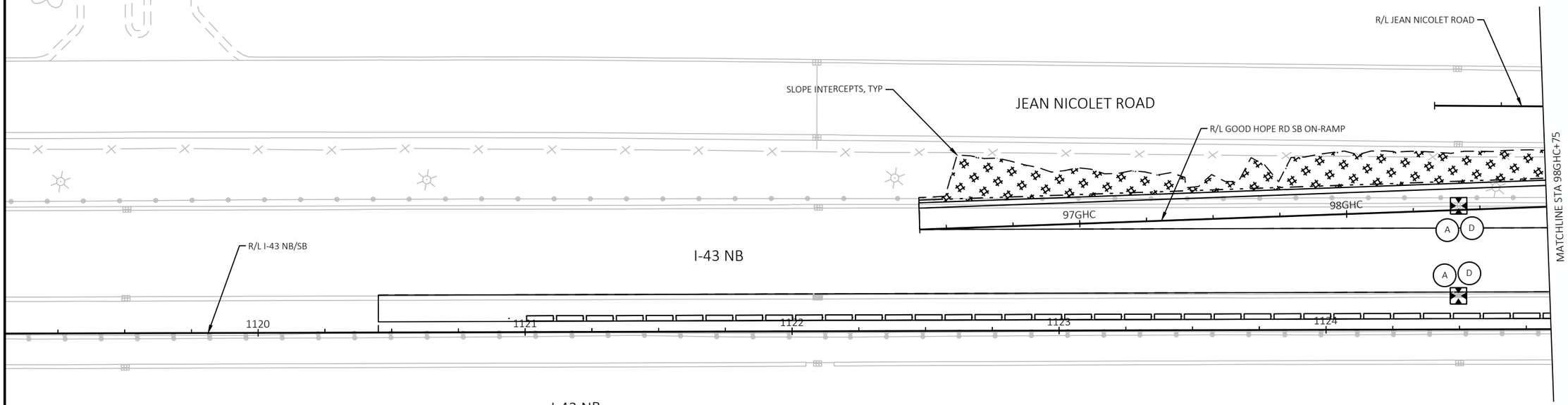
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N



LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- A — INLET PROTECTION TYPE A
- D — INLET PROTECTION TYPE D
- XX — INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR — SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2A	SHEET 50	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022201_EC_ST2A.DWG
LAYOUT NAME - 022204_ec-st2a

PLOT DATE : 12/13/2017 7:31 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

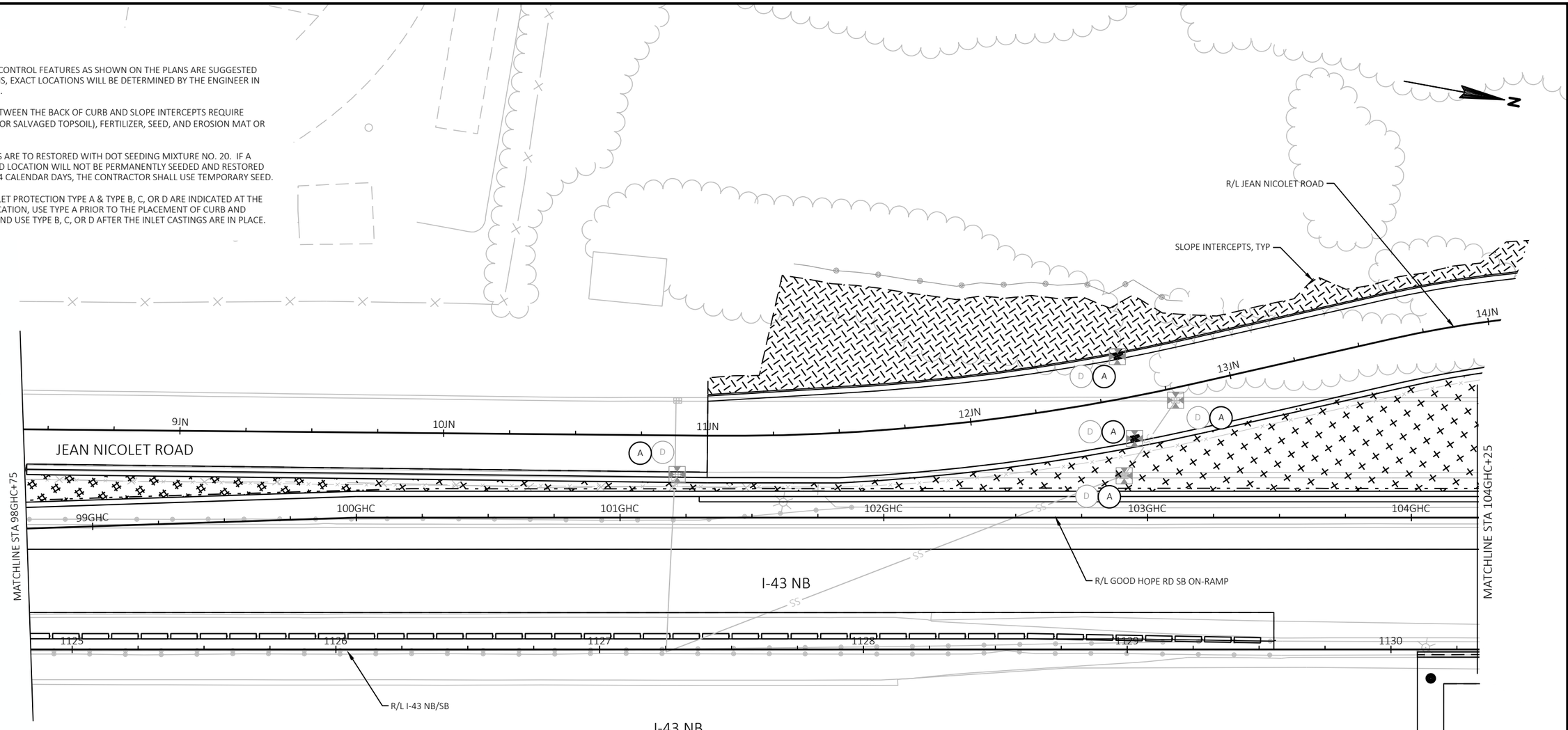
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LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- A — INLET PROTECTION TYPE A
- D — INLET PROTECTION TYPE D
- XX — INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR — SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2A	SHEET 51	E

2

2

NOTES

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N

SLOPE INTERCEPTS, TYP

R/L GOOD HOPE RD SB ON-RAMP

MATCHLINE STA 113GHC+45

MATCHLINE STA 107GHC+50

GOOD HOPE RD SB ON RAMP

I-43 NB

I-43 NB

R/L I-43 NB/SB

113GHC

112GHC

111GHC

110GHC

109GHC

108GHC

1139

1138

1137

1136

1135

1134

SLAB

SLAB

SS

FO

LEGEND

SILT FENCE	INLET PROTECTION FROM PREVIOUS STAGE
EROSION MAT CLASS I TYPE A	TEMPORARY DITCH CHECKS
EROSION MAT CLASS II TYPE B	SURFACE WATER FLOW ARROW
EROSION MAT URBAN CLASS I TYPE A	SLOPE INTERCEPT
INLET PROTECTION TYPE A	SILT FENCE RELIEF
INLET PROTECTION TYPE D	SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2A	SHEET 52	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022201_EC_ST2A.DWG
LAYOUT NAME - 022206_ec-st2a

PLOT DATE : 12/13/2017 7:33 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

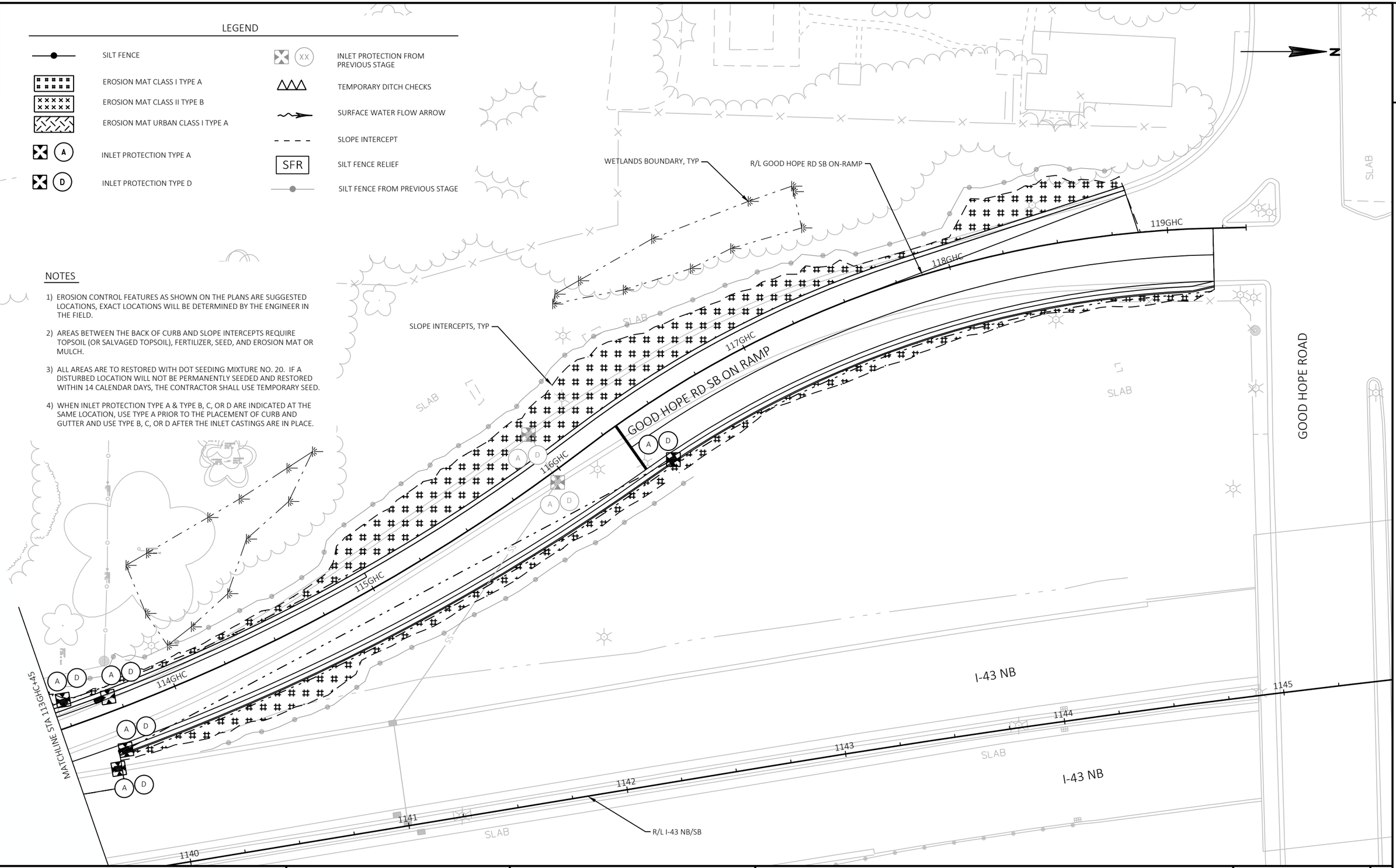
2

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

NOTES

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3) ALL AREAS ARE TO RESTORED WITH DOT SEEDING MIXTURE NO. 20. IF A DISTURBED LOCATION WILL NOT BE PERMANENTLY SEEDED AND RESTORED WITHIN 14 CALENDAR DAYS, THE CONTRACTOR SHALL USE TEMPORARY SEED.
4) WHEN INLET PROTECTION TYPE A & TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2A	SHEET 53	E

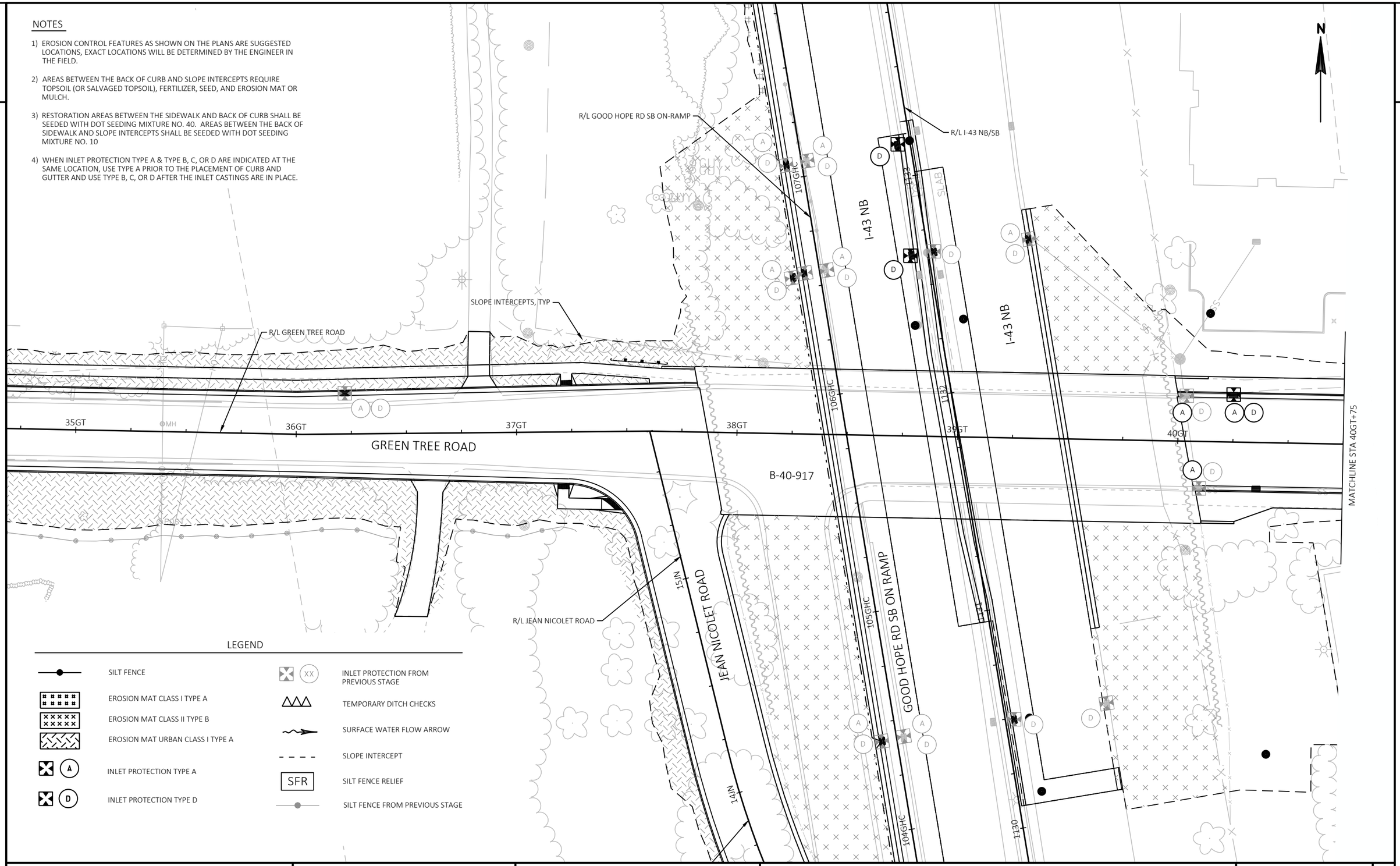
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3) RESTORATION AREAS BETWEEN THE SIDEWALK AND BACK OF CURB SHALL BE SEEDED WITH DOT SEEDING MIXTURE NO. 40. AREAS BETWEEN THE BACK OF SIDEWALK AND SLOPE INTERCEPTS SHALL BE SEEDED WITH DOT SEEDING MIXTURE NO. 10

4) WHEN INLET PROTECTION TYPE A & TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.



LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- A — INLET PROTECTION TYPE A
- D — INLET PROTECTION TYPE D
- XX — INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR — SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2B	SHEET 54 E

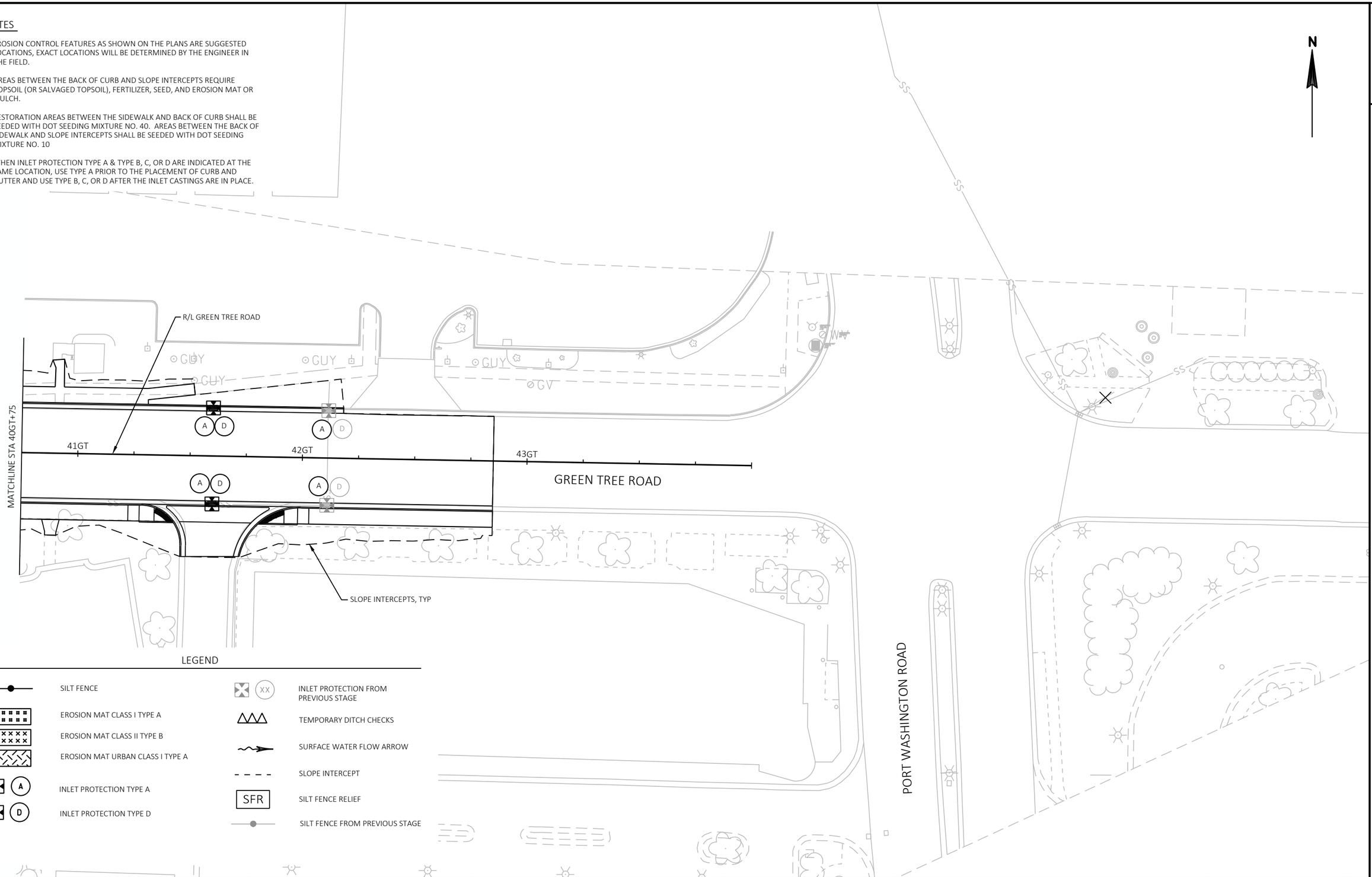
NOTES

1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) AREAS BETWEEN THE BACK OF CURB AND SLOPE INTERCEPTS REQUIRE TOPSOIL (OR SALVAGED TOPSOIL), FERTILIZER, SEED, AND EROSION MAT OR MULCH.

3) RESTORATION AREAS BETWEEN THE SIDEWALK AND BACK OF CURB SHALL BE SEEDED WITH DOT SEEDING MIXTURE NO. 40. AREAS BETWEEN THE BACK OF SIDEWALK AND SLOPE INTERCEPTS SHALL BE SEEDED WITH DOT SEEDING MIXTURE NO. 10

4) WHEN INLET PROTECTION TYPE A & TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.



LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SFR — SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 2B	SHEET 55 E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022202_EC_ST2B.DWG
LAYOUT NAME - 022253_ec-st2b

PLOT DATE : 12/12/2017 8:21 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

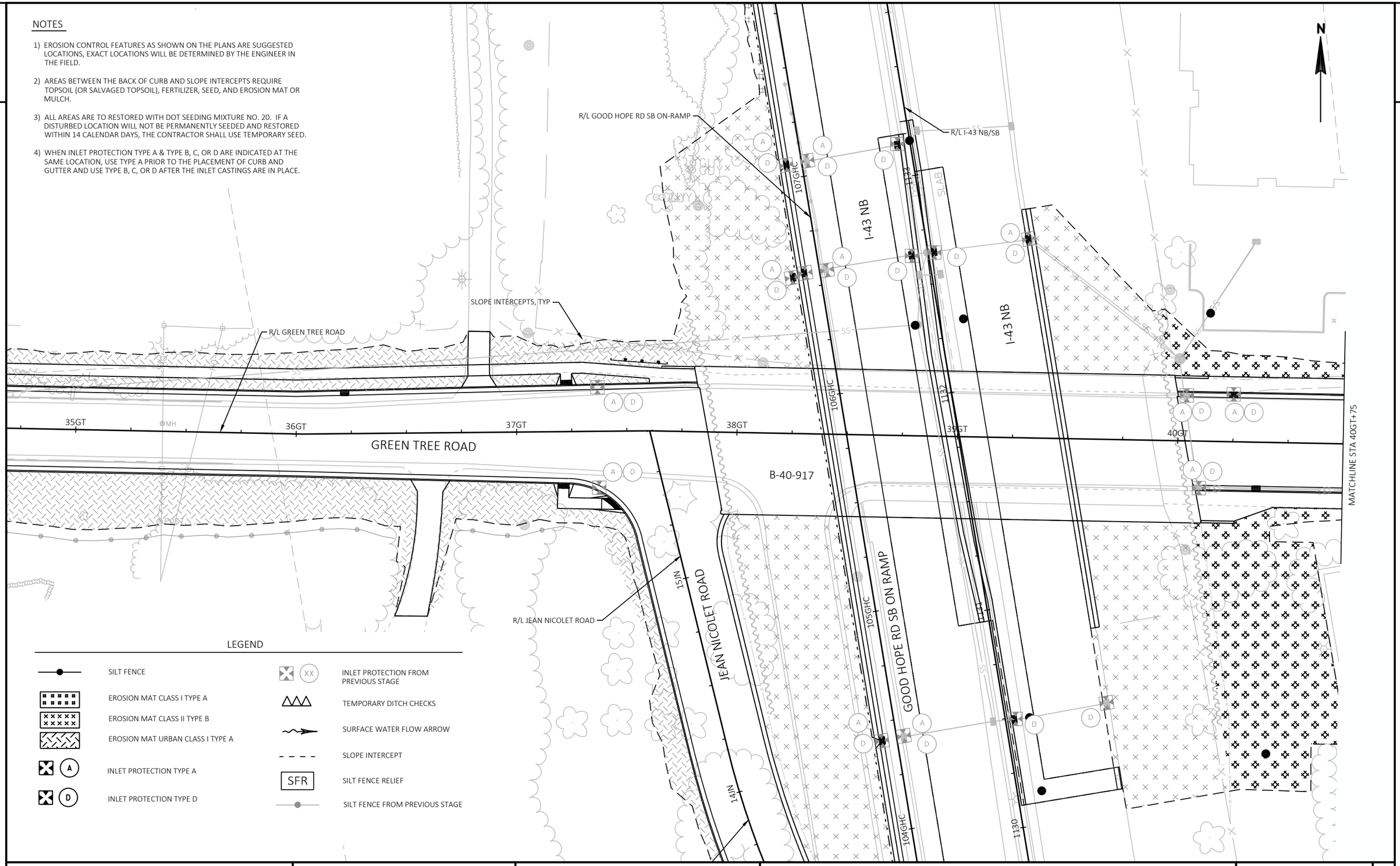
NOTES

1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) AREAS BETWEEN THE BACK OF CURB AND SLOPE INTERCEPTS REQUIRE TOPSOIL (OR SALVAGED TOPSOIL), FERTILIZER, SEED, AND EROSION MAT OR MULCH.

3) ALL AREAS ARE TO RESTORED WITH DOT SEEDING MIXTURE NO. 20. IF A DISTURBED LOCATION WILL NOT BE PERMANENTLY SEEDED AND RESTORED WITHIN 14 CALENDAR DAYS, THE CONTRACTOR SHALL USE TEMPORARY SEED.

4) WHEN INLET PROTECTION TYPE A & TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 3	SHEET 56	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022202_EC_ST3.DWG
LAYOUT NAME - 022202_ec-st3

PLOT DATE : 12/12/2017 10:02 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

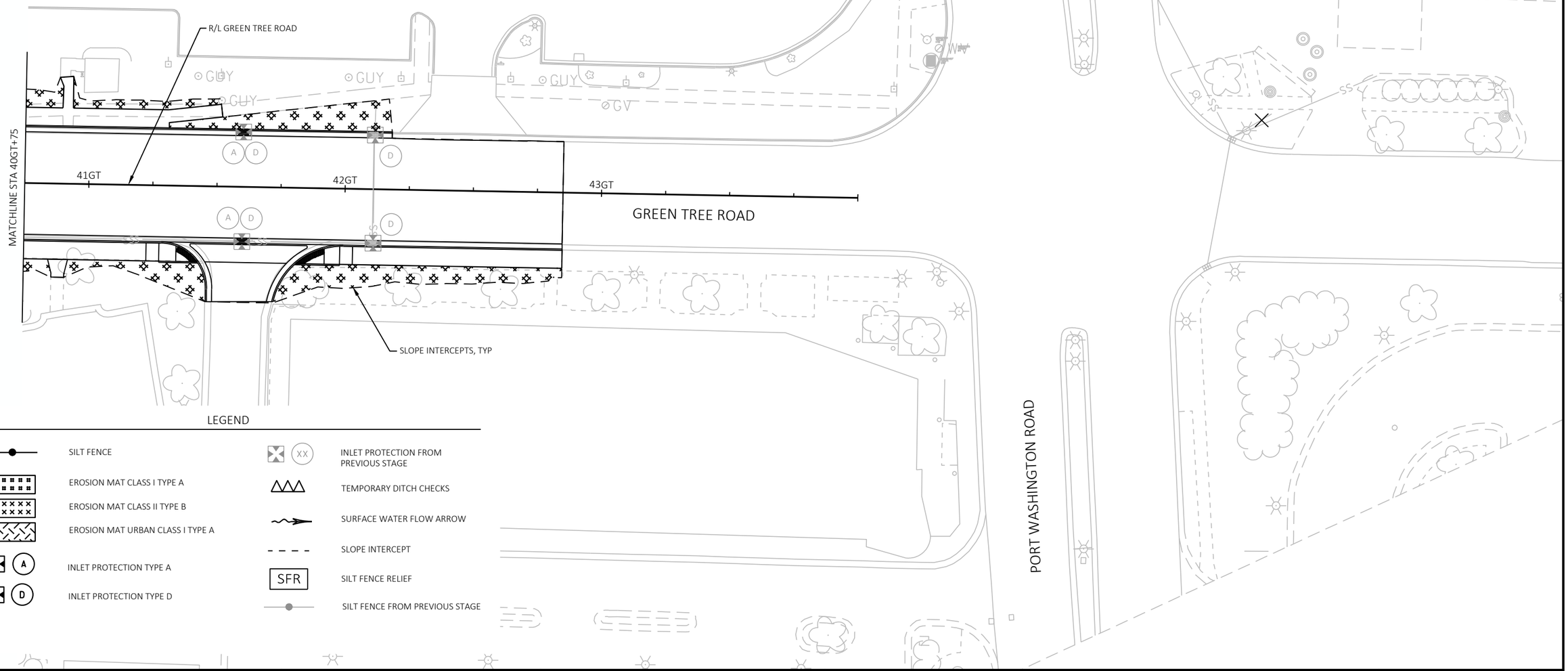
NOTES

1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) AREAS BETWEEN THE BACK OF CURB AND SLOPE INTERCEPTS REQUIRE TOPSOIL (OR SALVAGED TOPSOIL), FERTILIZER, SEED, AND EROSION MAT OR MULCH.

3) ALL AREAS ARE TO RESTORED WITH DOT SEEDING MIXTURE NO. 20. IF A DISTURBED LOCATION WILL NOT BE PERMANENTLY SEEDED AND RESTORED WITHIN 14 CALENDAR DAYS, THE CONTRACTOR SHALL USE TEMPORARY SEED.

4) WHEN INLET PROTECTION TYPE A & TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.



LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- INLET PROTECTION FROM PREVIOUS STAGE
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPT
- SILT FENCE RELIEF
- SILT FENCE FROM PREVIOUS STAGE

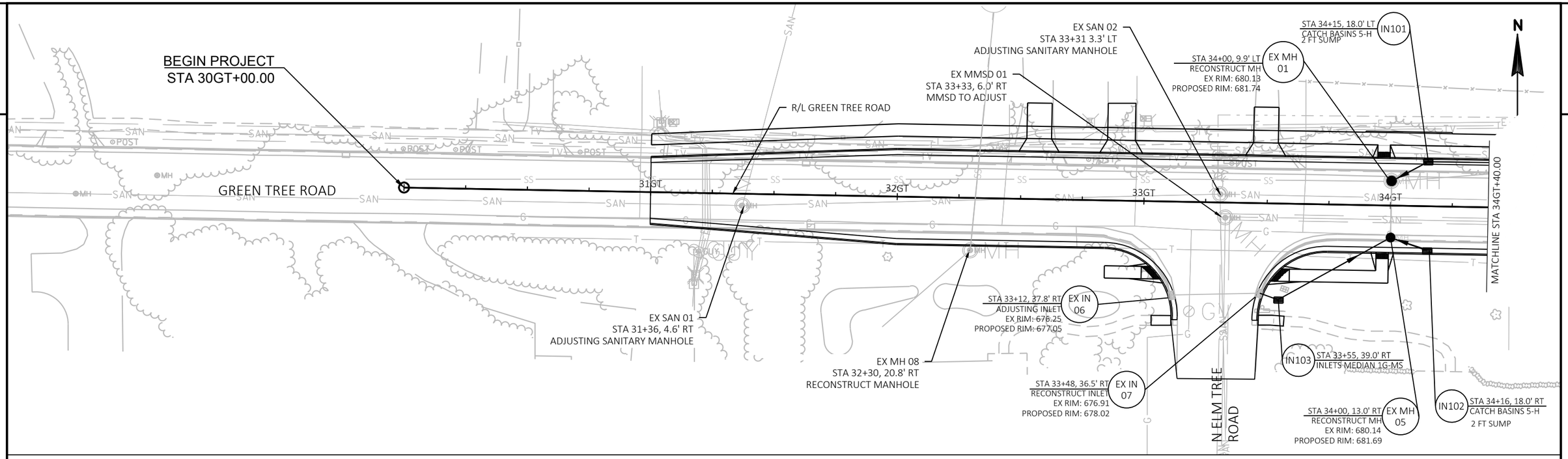
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EROSION CONTROL - STAGE 3	SHEET 57	E

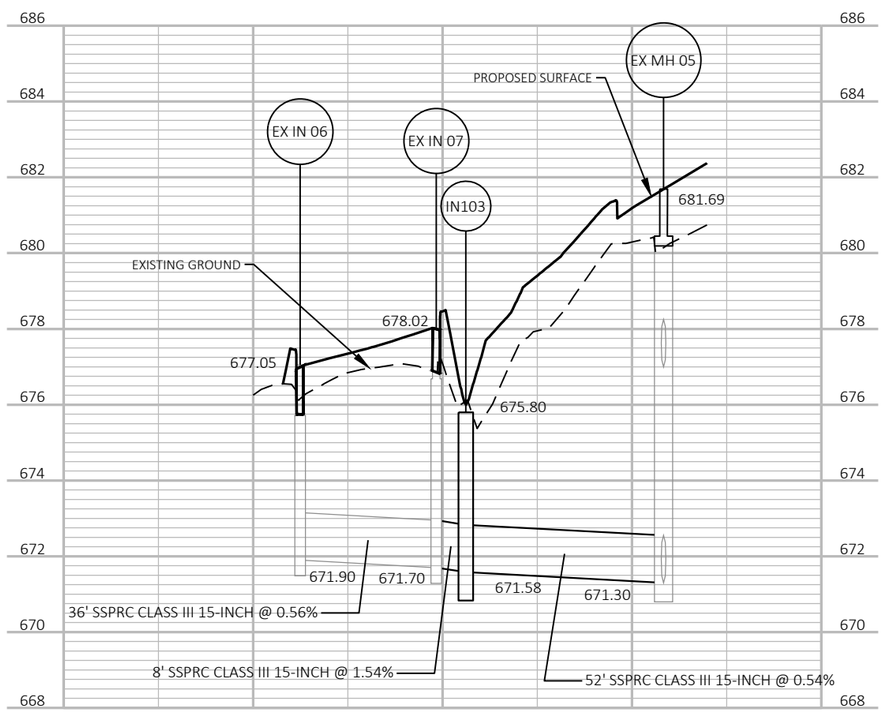
FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022202_EC_ST3.DWG
LAYOUT NAME - 022203_ec-st3

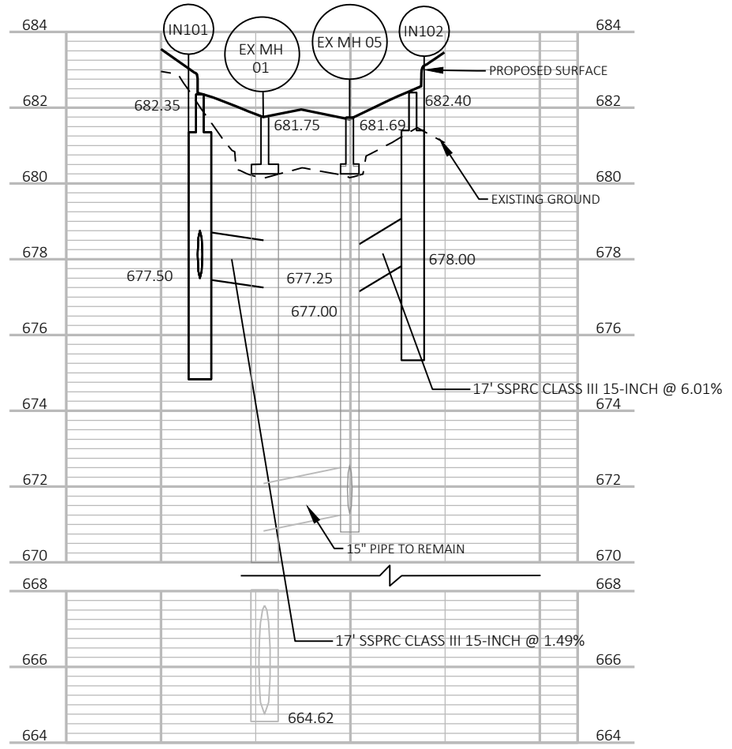
PLOT DATE : 12/12/2017 10:03 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

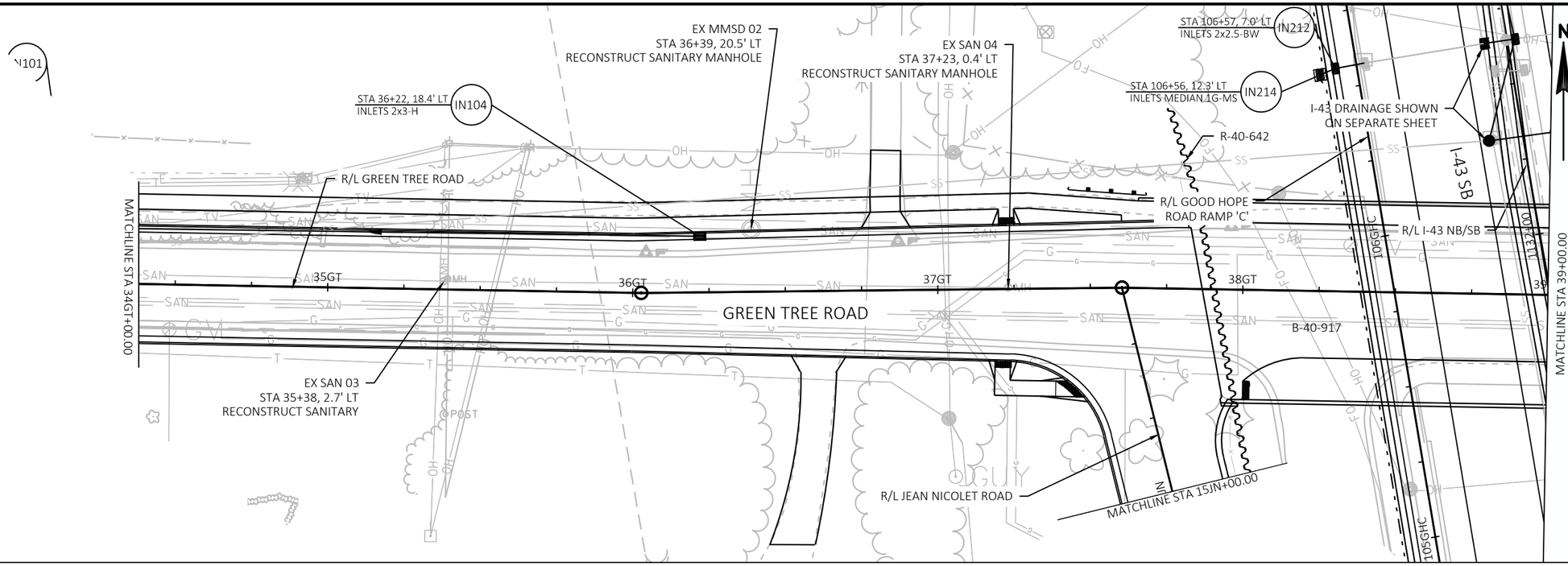
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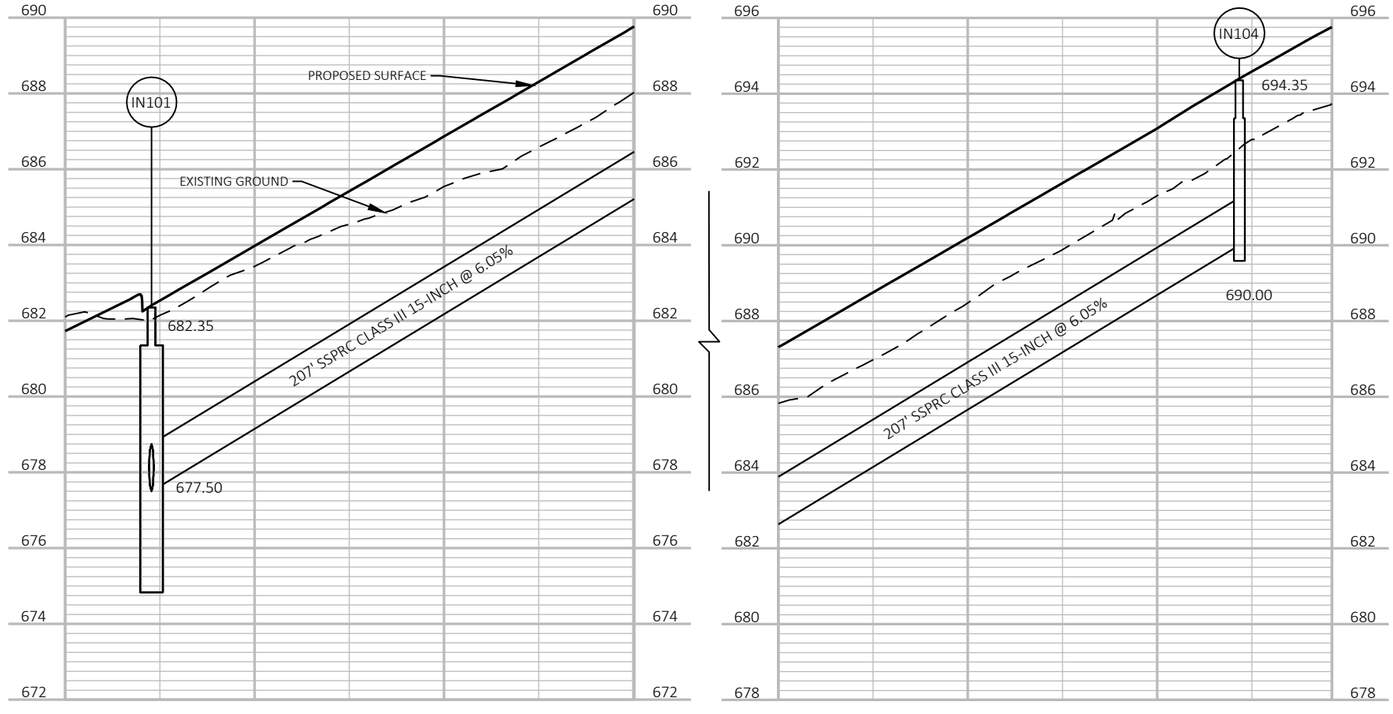






PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	SEWER	SHEET 58	E





PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	SEWER	SHEET 59	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022501_SS.DWG
LAYOUT NAME - 022501b_ss
PLOT DATE : 12/15/2017 2:11 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

EXISTING DRAINAGE FROM PARKING LOT

MH110 STA 40+14, 58.1' LT MANHOLES 4-J

EX MMSD 03
STA 40+83, 24.4' LT
MMSD TO ADJUST

EX IN222 STA 42+11, 21.0' LT
ADJUSTING INLET
EX RIM: 700.59
PROPOSED RIM: 700.51

IN105 STA 41+60, 21.0' LT
INLETS 2x3-H

IN108 STA 40+25, 21.0' LT
INLETS 2x3-H

R/L GREEN TREE ROAD

EX MMSD 07
STA 42+02, 10.7' RT
MMSD TO ADJUST

I-43 SB

NB/SB

CAUTION

CAUTION

39GT

42GT

41GT

42GT

43GT

GREEN TREE ROAD

EX MMSD 04
STA 41+.04, 14.7' RT
MMSD TO ADJUST

IN106 STA 41+60, 21.0' RT
MANHOLE 4-S

R/L I-43 NB/SB

I-43 NB

EX MMSD 05
STA 41+12, 14.5' RT
MMSD TO ADJUST

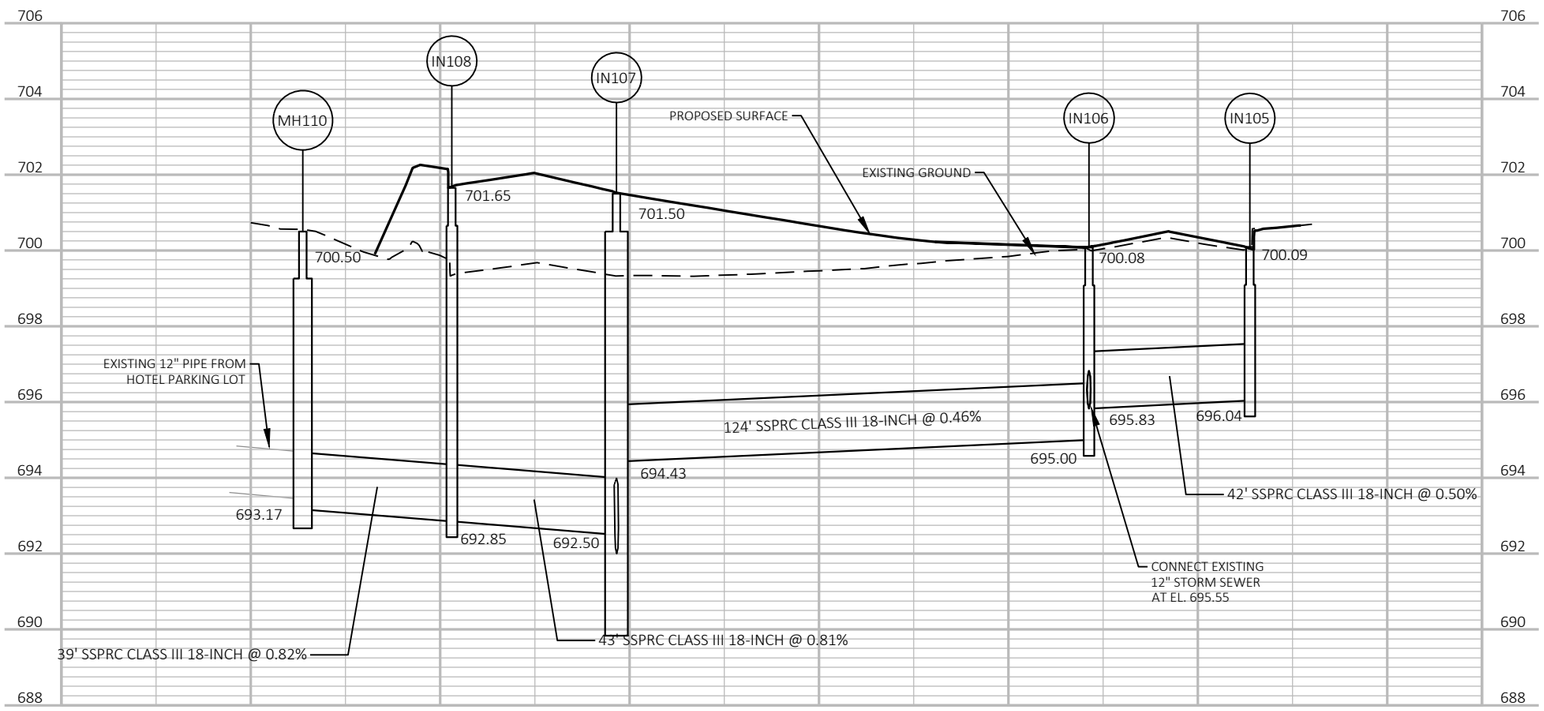
EX MMSD 06
STA 41+11, 6.8' RT
STRUCTURE MODIFICATION

EX IN223 STA 42+11, 21.0' RT
ADJUSTING INLET
EX RIM: 700.68
PROPOSED RIM: 700.51

IN107 STA 40+36, 21.0' RT
CATCH BASINS 5-H
2 FT SUMP

R-40-641

N



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	SEWER	SHEET 60	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022501_SS.DWG
LAYOUT NAME - 022502_ss

PLOT DATE : 12/15/2017 2:13 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

STA 12+60, 16.0' LT
INLETS 2x3-H
IN114

STA 12+60, 16.0' RT
INLETS 2x2.5-BW
IN115

STA 102+91, 16.1' LT
REMOVE EX COVER
RECONSTRUCT WITH J COVER
EX IN 116

R/L JEAN NICOLET ROAD

JEAN NICOLET ROAD

MATCHLINE STA 15+00.00

10IN
11IN
12JN
13JN
14JN
15

100GHC
101GHC
102GHC
103GHC
104GHC
105GHC

STA 104+42, 7.0' LT
6" UNDERDRAIN
INLETS 2X2.5-BW
IN 202

R-40-642

6" UNDERDRAIN

R/L I-43 NB/SB

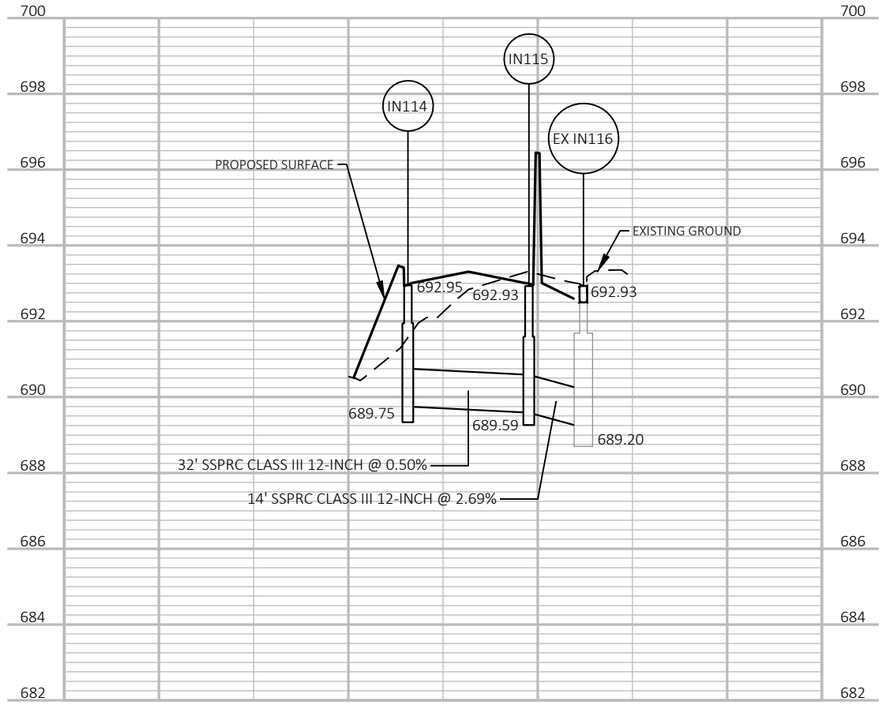
R/L GOOD HOPE ROAD RAMP 'C'

6" UNDERDRAIN

I-43 SB

I-43 NB

1126+00
1127+00
1128+00



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	STORM SEWER	SHEET 61	E

2

2

I-43 SB

I-43 NB

1117+00

1118+00

1119+00

1120+00

1121+00

1122+00

9"

6" UNDERDRAIN

MATCHLINE STA 1123+00

STA 1122+10, 13.0' LT
DRAIN SLOTTED VANE
INLET COVER
MAINTENANCE SPECIAL

EX IN
219

97GHC

98GHC

99GHC

100GHC

101GHC

102GHC

6" UNDERDRAIN

I-43 SB

I-43 NB

MATCHLINE STA 1123+00

1124+00

1125+00

1126+00

1127+00

1128+00

MATCHLINE STA 1128+75

STA 1124+50, 13.0' LT
DRAIN SLOTTED VAIN
INLET COVER
MAINTENANCE SPECIAL

EX IN
211

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	SEWER	SHEET 62	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022502_SS.DWG
LAYOUT NAME - 022504A_ss

PLOT DATE : 12/15/2017 2:36 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : Custom

2

MATCHLINE STA 1128+75

103GHC 104GHC 105GHC 106GHC 107GHC 108GHC

6" UNDERDRAIN 6" UNDERDRAIN 6" UNDERDRAIN

CONCRETE COLLAR CONCRETE COLLAR CONCRETE COLLAR

STA 104+42, 7.0' LT
INLETS 2x2.5-BW
IN202

STA 1130+50, 5.3' LT
RIM:683.78
EX IN204

EX IN203

STA 106+57, 7.0' LT
INLETS 2x2.5-BW
IN212

EX IN210

IN208 STA 1132+65, 7.4' LT
INLETS 2x2.5-BW

IN215 STA 1133+14, 57.0' LT
INLETS 2x2.5-BW

IN213 STA 1133+15, 5.6' LT
INLETS 2x2.5-BW

I-43 SB

R/L GOOD HOPE ROAD RAMP 'C'

R/L I-43 NB/SB

1129+00 1130+00 1131+00 1132+00 1133+00 1134+00

SS SS SS SS SS SS

SLAB

STA 1130+15, 11.0' RT
MANHOLES 6-JS
ROTATE LID TO WEST
EDGE OF STRUCTURE
MH201

IN205 STA 1130+49, 4.0' RT
INLETS 2x2.5-BW

MH216 STA 1133+16, 0.2' LT
MANHOLE 5-JS

IN209 STA 1132+64, 2.6' RT
CATCH BASINS 6-BW

I-43 NB

GREEN TREE ROAD

MH207 STA 1132+33, 11.2' LT
MANHOLES 7-JS

STA 1130+49, 11.0' RT
MANHOLES 5-JS
ROTATE LID TO WEST
EDGE OF STRUCTURE
MH203

IN 224 STA 1132+63, 45.9' RT
INLETS 2x2.5-BW

MH206 STA 1132+32, 11.0' RT
MANHOLES 6-JS
ROTATE LID TO WEST
EDGE OF STRUCTURE

R/L GREEN TREE

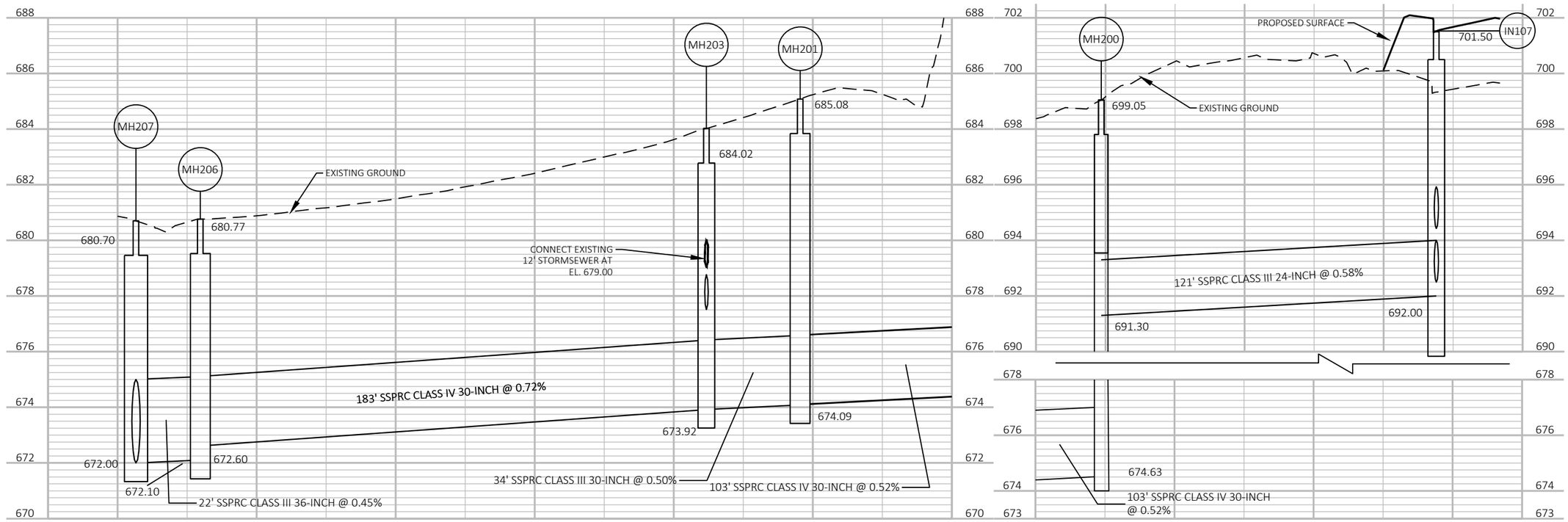
STA 40+43, 141.3' RT
MANHOLES 6-J
MH200

STA 40+36, 21.0' RT
CATCH BASINS 5-H
IN107

NOTE: ADDITIONAL PROFILES ON NEXT SHEET

MATCHLINE STA 108+50.00

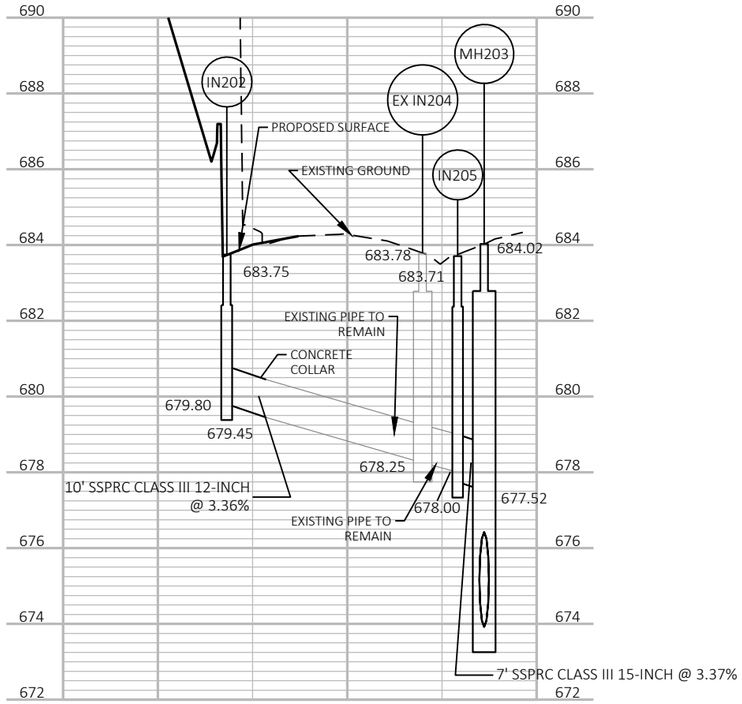
2

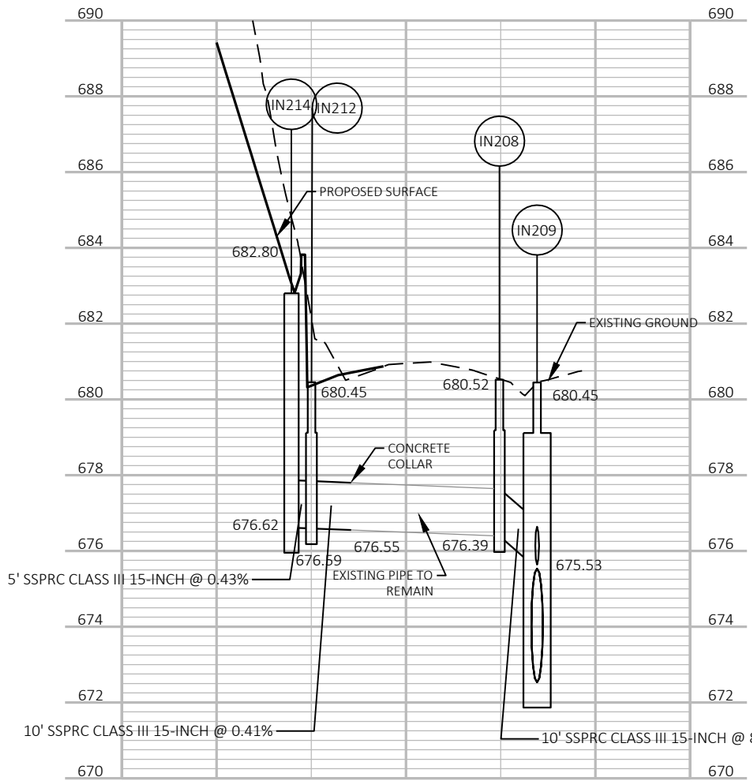


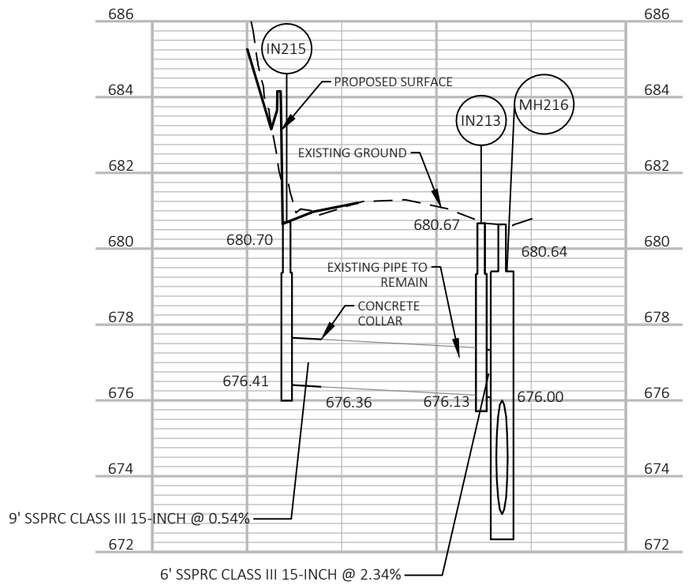
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	SEWER	SHEET 63	E

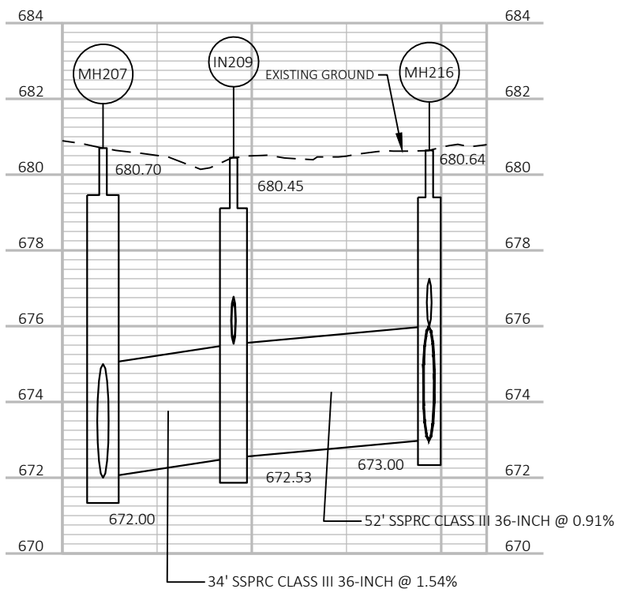
FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022502_SS.DWG
LAYOUT NAME - 022504B_ss

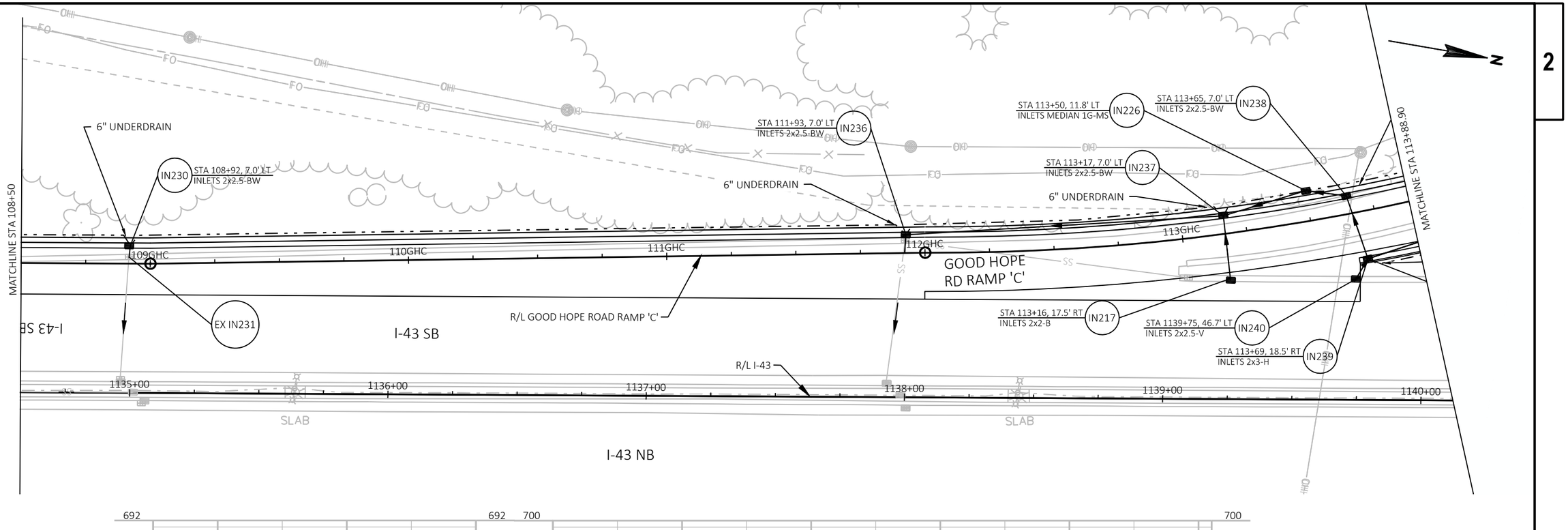
PLOT DATE : 12/15/2017 2:38 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : Custom

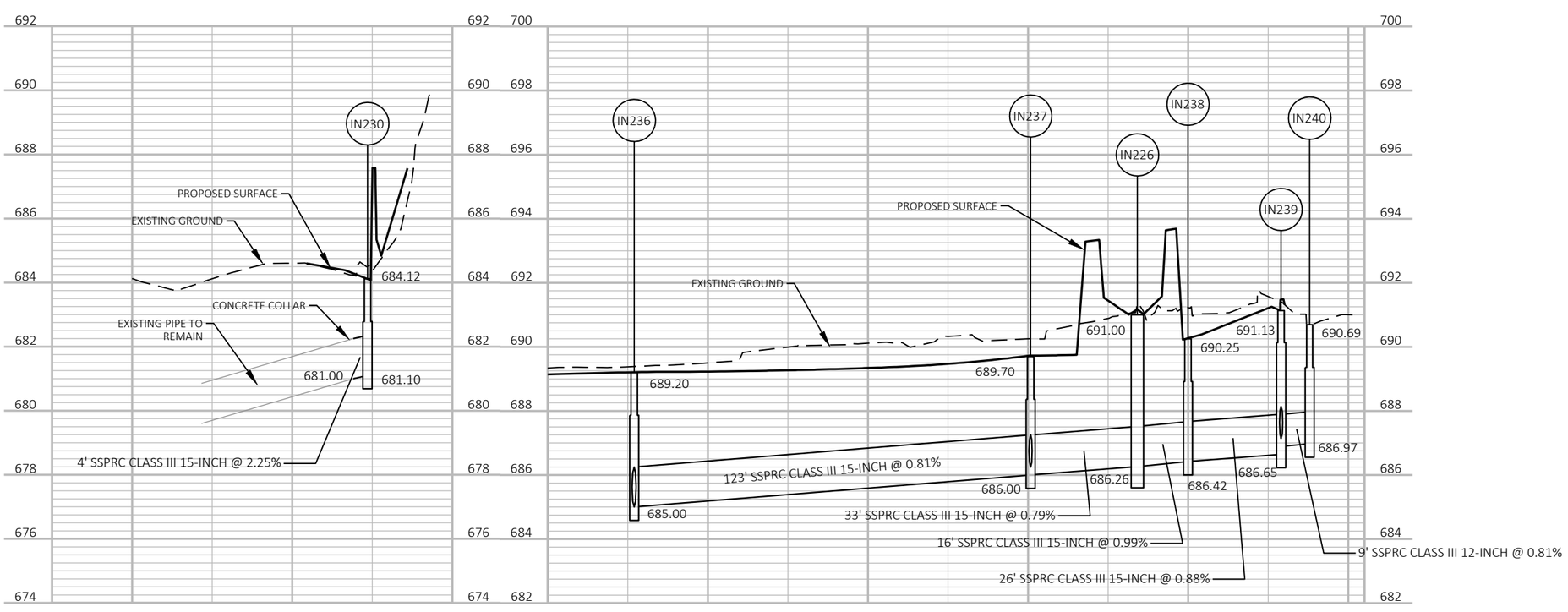

690
688
686
684
682
680
678
676
674
672
IN202
EX IN204
MH203
IN205
PROPOSED SURFACE
EXISTING GROUND
683.75
683.78
683.71
684.02
EXISTING PIPE TO REMAIN
CONCRETE COLLAR
679.80
679.45
678.25
678.00
677.52
10' SSPRC CLASS III 12-INCH @ 3.36%
EXISTING PIPE TO REMAIN
7' SSPRC CLASS III 15-INCH @ 3.37%


690
688
686
684
682
680
678
676
674
672
670
IN214
IN212
IN208
IN209
PROPOSED SURFACE
682.80
680.45
680.52
680.45
EXISTING GROUND
CONCRETE COLLAR
676.62
676.59
676.55
676.39
675.53
5' SSPRC CLASS III 15-INCH @ 0.43%
EXISTING PIPE TO REMAIN
10' SSPRC CLASS III 15-INCH @ 0.41%
10' SSPRC CLASS III 15-INCH @ 8.62%


686
684
682
680
678
676
674
672
IN215
PROPOSED SURFACE
IN213
MH216
EXISTING GROUND
680.70
680.67
680.64
EXISTING PIPE TO REMAIN
CONCRETE COLLAR
676.41
676.36
676.13
676.00
9' SSPRC CLASS III 15-INCH @ 0.54%
6' SSPRC CLASS III 15-INCH @ 2.34%


684
682
680
678
676
674
672
670
MH207
IN209
EXISTING GROUND
MH216
680.70
680.45
680.64
672.53
673.00
672.00
52' SSPRC CLASS III 36-INCH @ 0.91%
34' SSPRC CLASS III 36-INCH @ 1.54%

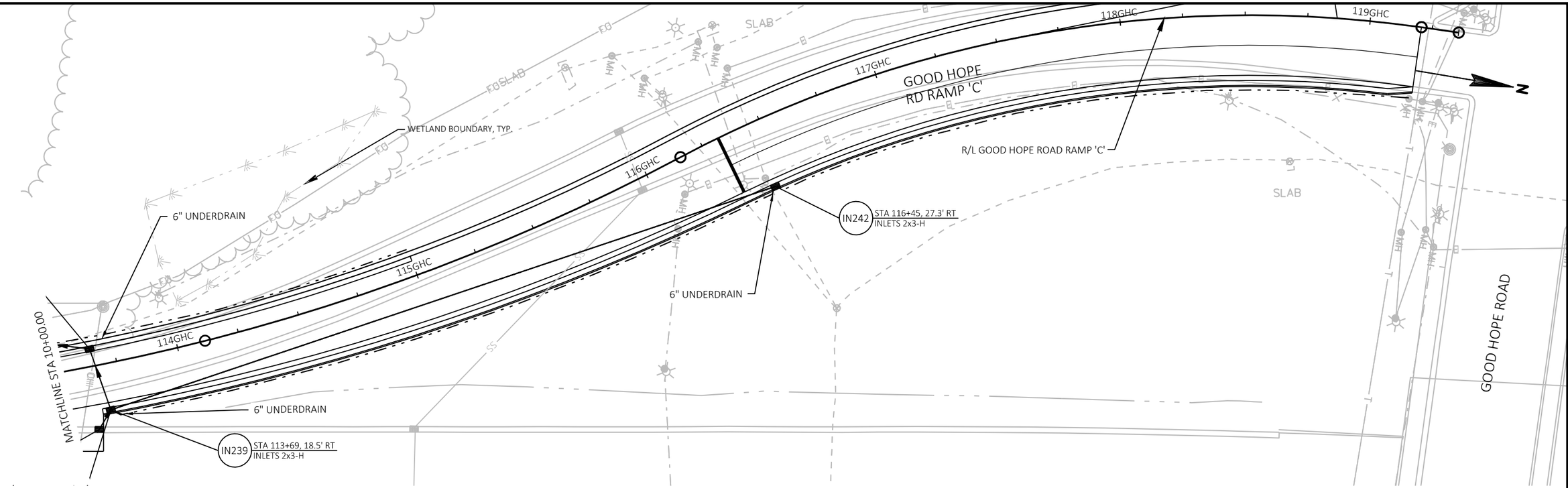


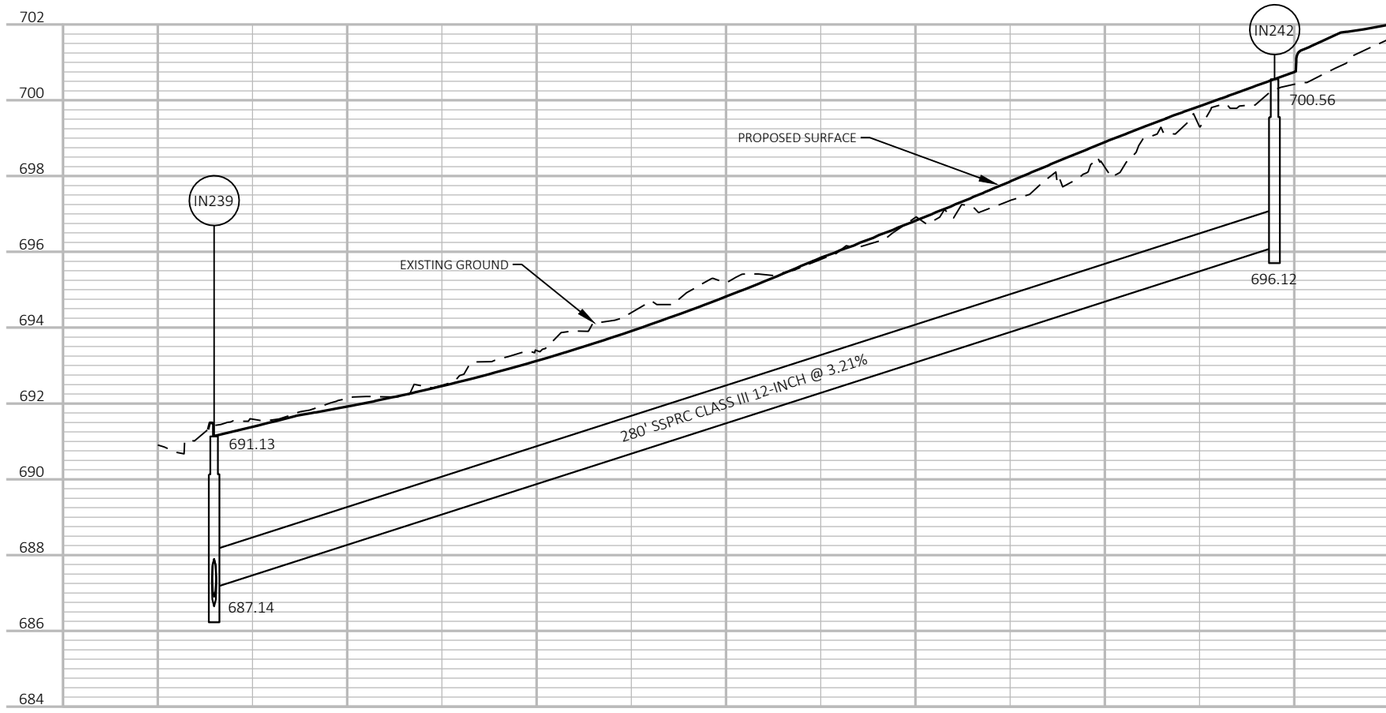


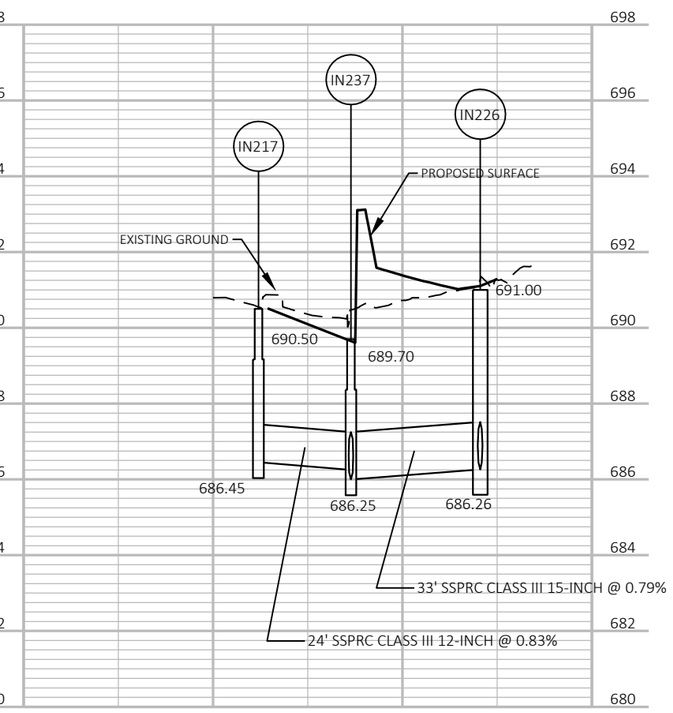
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	SEWER	SHEET 65	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022502_SS.DWG
LAYOUT NAME - 022505_ss
PLOT DATE : 12/15/2017 2:42 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41

2







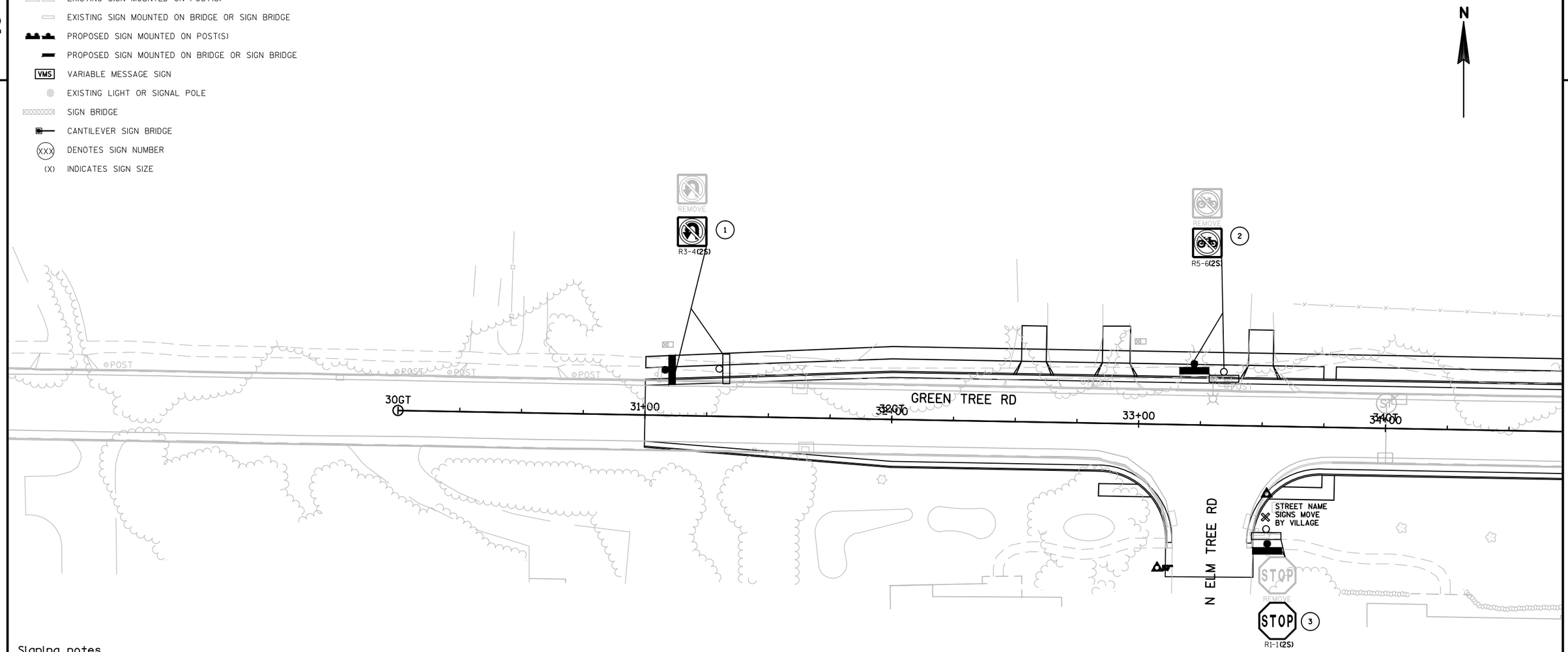
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	SEWER	SHEET 66	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\022502_SS.DWG
LAYOUT NAME - 022506_ss
PLOT DATE : 12/15/2017 2:44 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : Custom
WISDOT/CADDS SHEET 41

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



Signing notes

Type II aluminum signs removed under the contract shall be delivered to the County sign shop. Contact Dennis Newton, 414-266-1165 for distribution county location.

Signs shall be carefully removed from sign supports. The signs shall be palletized for handling with a forklift (see standard spec 638.3.4). The Regional sign shop (414-266-1165) shall be notified three working days prior to delivery of the signs.

When an existing stop sign support is to be removed and a new stop sign and support erected, the work shall be done concurrently. For other signs and supports that are to be removed and new signs and supports erected, the removal of the existing sign/support and erection of the new sign/support should be done as concurrently as possible. In no case shall a new sign/support be down for more than 24 hours and there shall not be more than one sign of the same legend missing in a row.

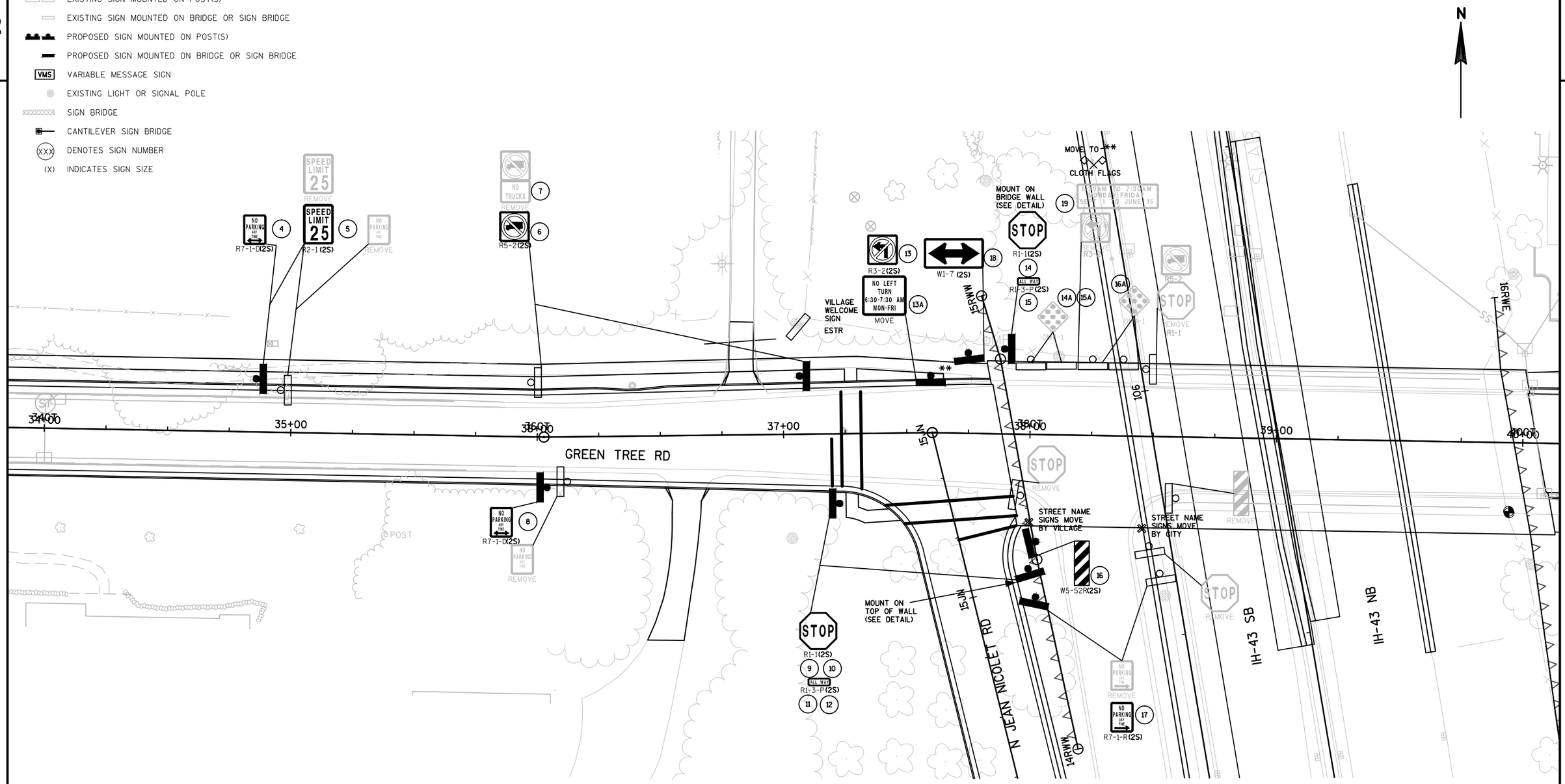
Wood posts sizes, for type II signs are estimated lengths and the actual length will be determined in the field.

Street name signs are property of the municipality (city, village or town). The municipality shall be contacted to remove their street name signs prior to construction and it is their responsibility to reinstall the old signs or replace them following construction. WisDOT does not furnish or install street name signs. The street name signs shall not be placed on top of the STOP signs.

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



SHEET 2 OF 8

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 68	E

FILE NAME : N:\PDS\C3D\CAD\12281601\SIGN\023201_PS.DWG
LAYOUT NAME - 023202_PS

PLOT DATE : 10/27/2017 10:08 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

40GT 41+00 42GT 43+00 44GT

GREEN TREE RD

IH-43 NB

PORT WASHINGTON RD

REMOVE

20 W5-52R(2S)

16RWE

NO PARKING ANY TIME

24 25 R7-1-D(2S)

21 R7-1-L(2S)

22 R7-1-R(2S)

23 R7-1-D(2S)

GLENDALE MARKET CUSTOMER PARKING ONLY ESTR

TRUCKS LEFT TURN ABSOLUTELY PROHIBITED

CITY OWNED SIGNS MOVE BY CITY

STOP 26 R1-1(2S)

27 R7-1-R(2S)

28 R7-1-D(2S) MOUNT ON POLE

29 R7-1-D(2S)

30 R7-1-R(2S) MOUNT ON POLE

SHEET 3 OF 8

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 69 E

FILE NAME : N:\PDS\C3D\CAD\12281601\SIGN\023201_PS.DWG
LAYOUT NAME - 023203_PS

PLOT DATE : 10/27/2017 10:09 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

REMOVE
NO PARKING ANY TIME
31
R7-1-D(2S)

REMOVE
SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT
SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT
32
S4-5(2S)

REMOVE
NO PARKING ANY TIME
33
R7-1-D(2S)

NO PARKING (SEARS TO 4:30PM ON SCHOOL DAYS)
ESTR

N JEAN NICOLET RD

CITY OF GLENDALE
34
I2-3A(5)

8JN
9JN
END SCHOOL ZONE
36
S5-2(2S)
10JN

98
100

IH-43 SB

112S

IH-43 NB

REMOVE
SPEED LIMIT 55

SPEED LIMIT 55
35
R2-1(5)

RIDESHARE INFO CALL 1-800-455-POOL
ESTR

SHEET 4 OF 8

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 70	E

FILE NAME : N:\PDS\C3D\CAD\12281601\SIGN\023201_PS.DWG
LAYOUT NAME - 023204_PS

PLOT DATE : 10/27/2017 10:09 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

AHEAD
REMOVE

38 39
S1-1 (2S)
AHEAD
S16-9P
FINES HIGHER
41
R2-6P(2S)

NO PARKING 2AM TO 4:30PM OR SCHOOL DAYS
ESTR

SCHOOL SPEED LIMIT 15
40
S4-5 (2S)

REMOVE
45
W6-3 (2S)

SPEED LIMIT 35
REMOVE

SPEED LIMIT 35
46
R2-1 (2S)

37+00
GREEN TREE RD
15JN
15JN
14JN
13JN
14JWW
38+00
10JN
11JN
12JN
N JEAN NICOLET RD

CLOTH FLAGS
NO LEFT TURN 6:30AM TO 7:30AM MONDAY-FRIDAY SEPT. 1 THRU JUNE 15
47
CITY OWNED SIGN
MOVE

SIGN POST TO BE REMOVED

100
102
104
106

NO PARKING ANY TIME
REMOVE
NO PARKING ANY TIME
37
R7-1-D(2S)

CITY OF GLENDALE
REMOVE
I2-3A(5)

IH-43 SB

NO PARKING ANY TIME
REMOVE
NO PARKING ANY TIME
43 44
R7-1-D(2S)

1130

39+00

SOUTH INTERSTATE 43
REMOVE

IH-43 NB

SOUTH INTERSTATE 43
42
J4-1 (5)

EXIT 80
61
PP
GOOD HOPE RD
E4-1A
MOVE
NEW STEEL POSTS

GREEN TREE RD 7000 NORTH
REMOVE
GREEN TREE RD 7000 NORTH
48
M1-94 (MOD)
ON BRIDGE

SHEET 5 OF 8

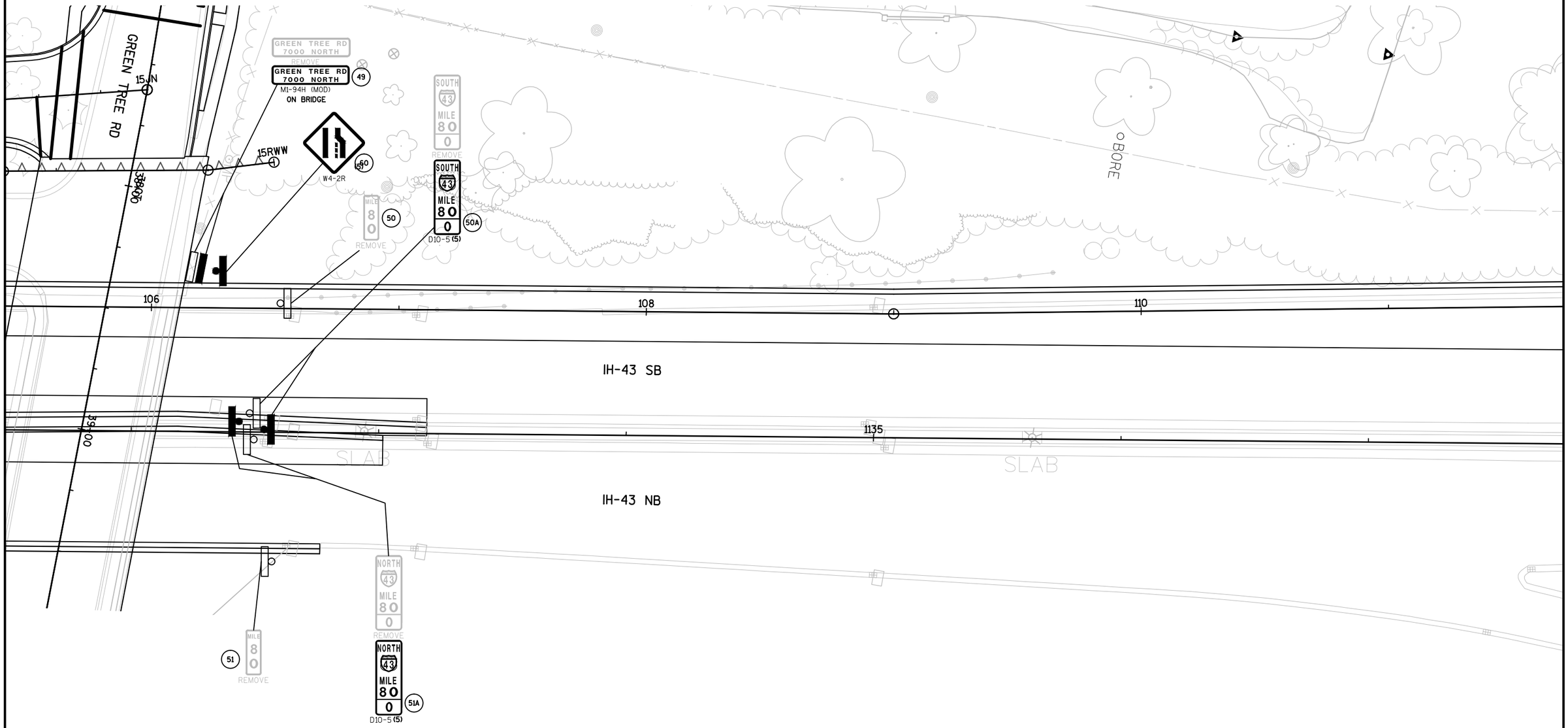
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 71	E

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



SHEET 6 OF 8

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 72	E

FILE NAME : N:\PDS\C3D\CAD\12281601\SIGN\023201_PS.DWG
LAYOUT NAME - 023206_PS

PLOT DATE : 10/27/2017 10:10 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

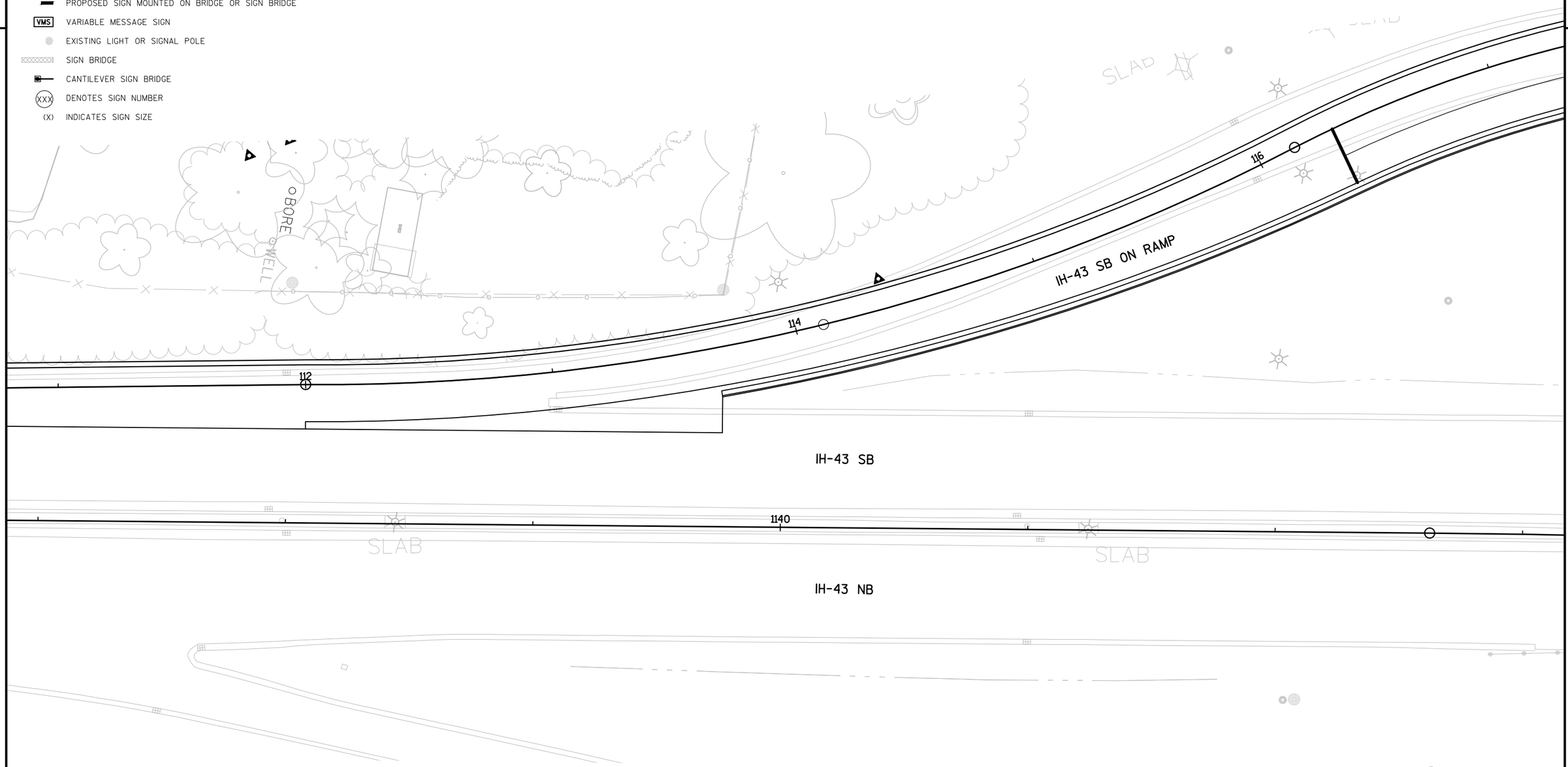
WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

NO SIGNS ON THIS SHEET



2

SHEET 7 OF 8

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 73	E

FILE NAME : N:\PDS\C3D\CAD\12281601\SIGN\023201_PS.DWG
LAYOUT NAME - 023207_PS

PLOT DATE : 10/27/2017 10:10 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

REMOVE
W4-2R (2S)
59

REMOVE
STOP HERE ON RED
MOUNT ON SIGNAL POLE
55
R10-6 (2S)

REMOVE
RIGHT LANE SIGNAL
56
R10-65 (2S)
MOUNT ON SIGNAL POLE

REMOVE
PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED
54
R5-57 (5)

REMOVE
RAMP METERED WHEN FLASHING
52
W3-8(5)
MOUNT ON BEACON POLE

REMOVE
FORM TWO LINES
53
R3-59 (2S)

REMOVE
LEFT LANE SIGNAL
58
R10-65(2S)
MOUNT ON SIGNAL POLE

REMOVE
STOP HERE ON RED
57
R10-6(2S)
MOUNT ON SIGNAL POLE

IH-43 SB ON RAMP

116

118

SLAB

GOOD HOPE RD

IH-43 SB

1145

IH-43 NB

SHEET 8 OF 8

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 74	E

FILE NAME : N:\PDS\C3D\CAD\12281601\SIGN\023201_PS.DWG
LAYOUT NAME - 023208_PS

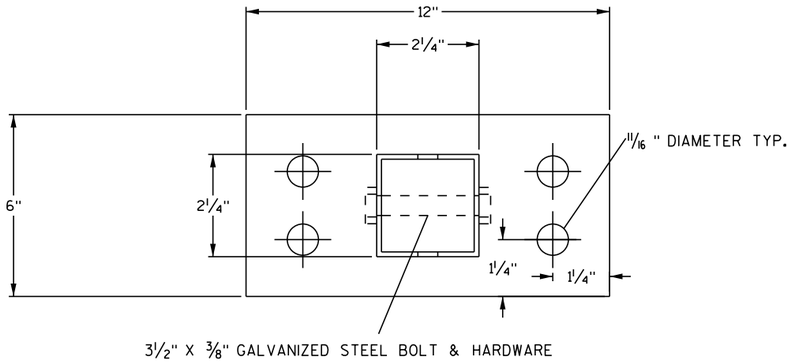
PLOT DATE : 10/27/2017 10:11 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

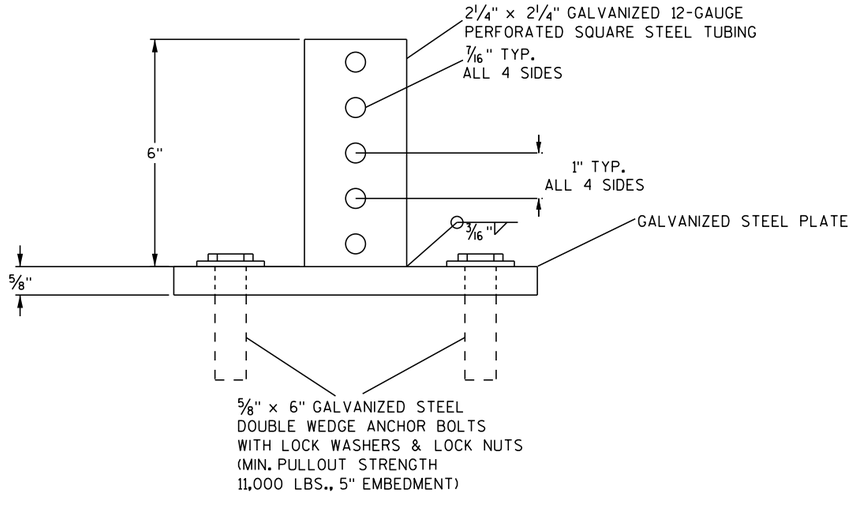
2

MOUNTING DETAILS FOR SIGN MOUNTED TO MEDIAN BARRIER

BARRIER WALL SIGN BRACKET ASSEMBLY
NOT TO SCALE

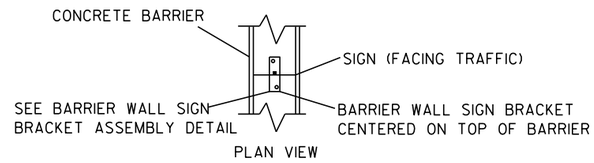


PLAN VIEW



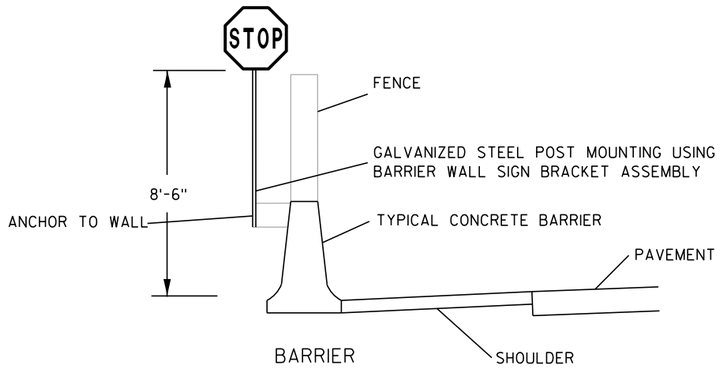
SIDE VIEW

TYPICAL SIGN PLACEMENT DETAILS



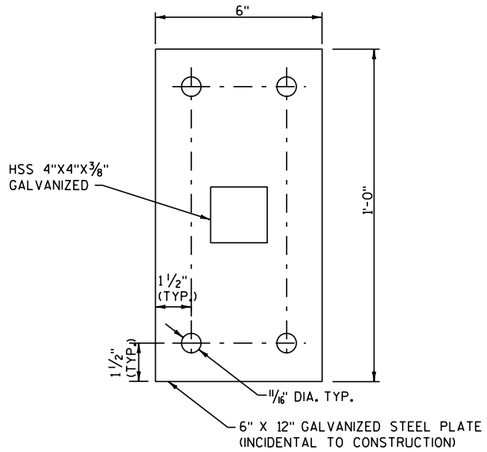
PLAN VIEW

MEDIAN BARRIER MOUNTING DETAIL



NOTES

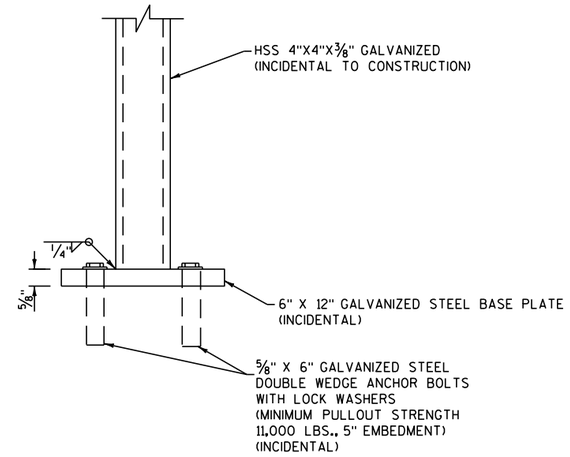
1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION.
2. ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION.
3. SEE SIGN PLATE A4-8 FOR BOLT REQUIREMENTS.



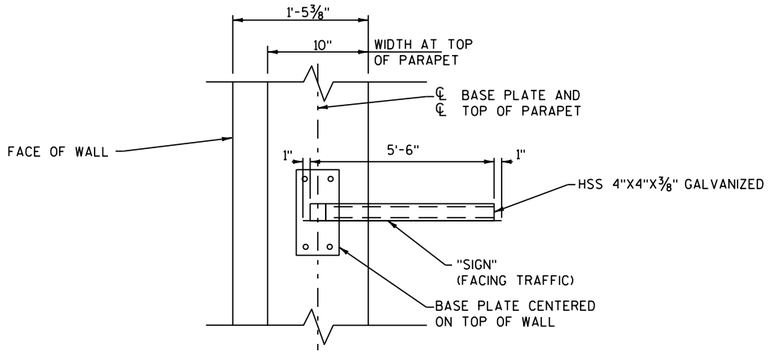
PLAN VIEW - BASE PLATE

NOTES:

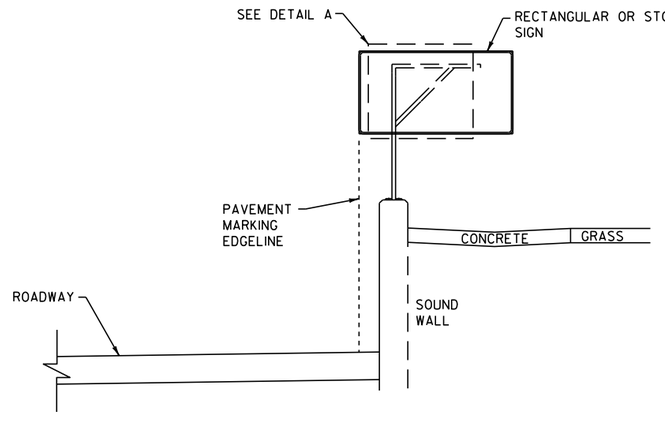
1. MOUNTING HARDWARE, FABRICATING, FURNISHING, AND INSTALLATION ARE INCIDENTAL.



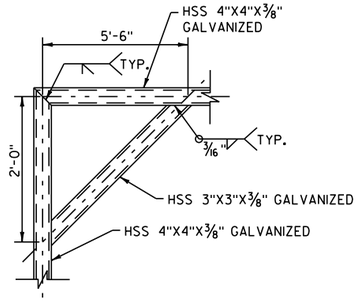
SIDE VIEW - SIGN POST & BASE PLATE



PLAN VIEW - OVERALL



SIDE VIEW - OVERALL

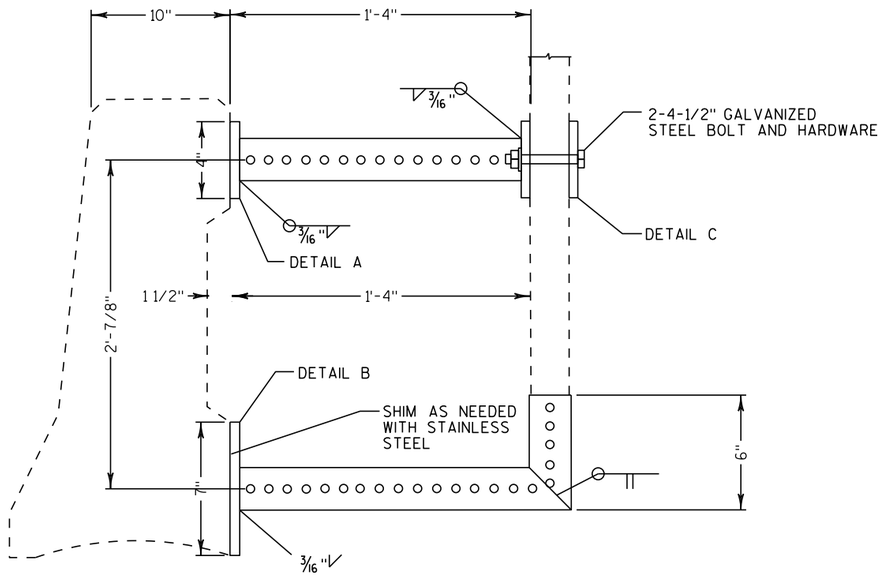


DETAIL A
SIGN NOT SHOWN FOR CLARITY

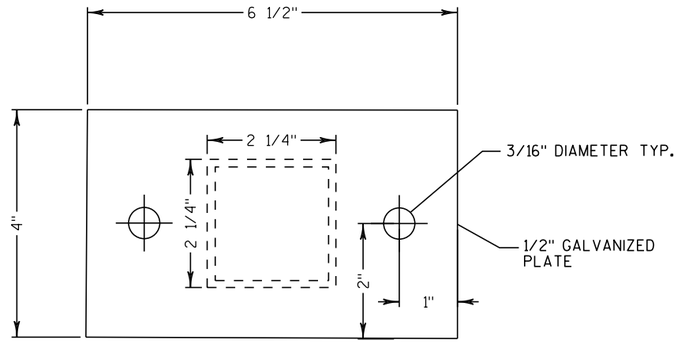
MOUNTING TRAFFIC SIGNS ON TOP OF WALL

N.T.S.

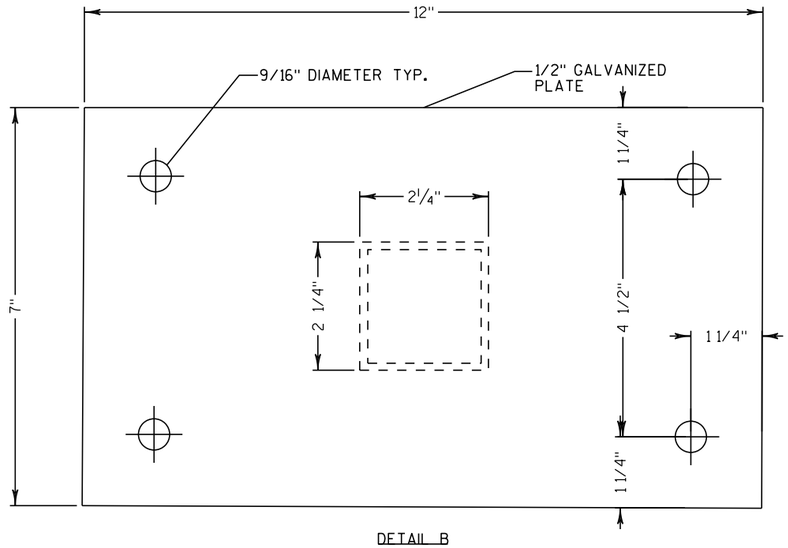
SIGN BRACKET ASSEMBLY TO PARAPET
ON WALL OR BRIDGE
NOT TO SCALE



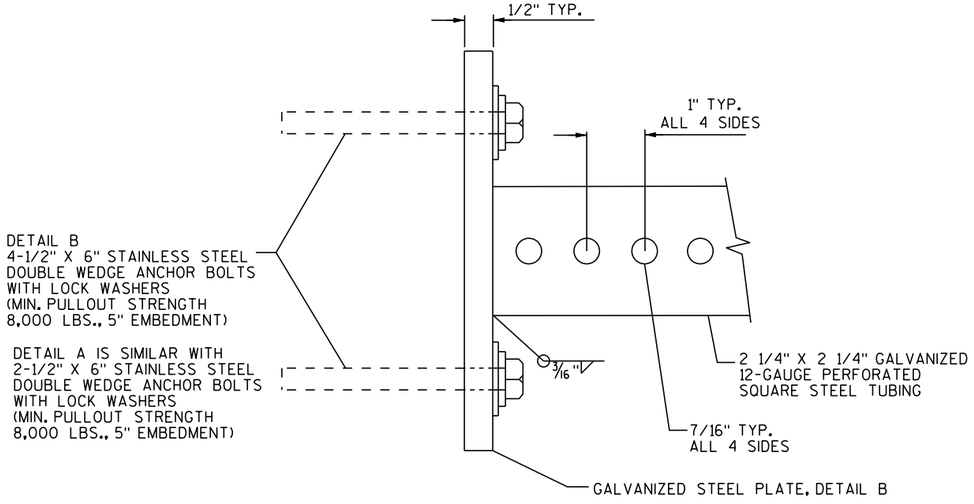
SIDE VIEW



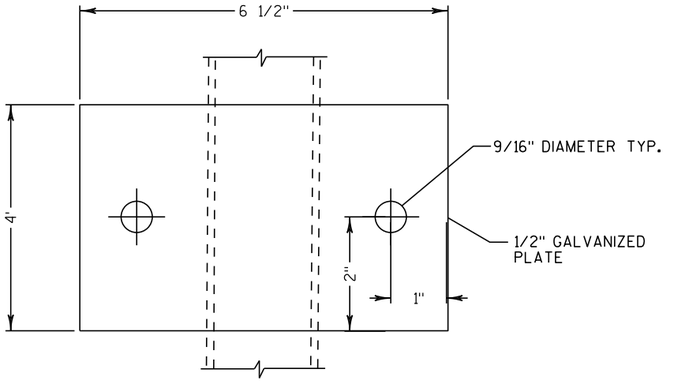
DETAIL A



DETAIL B



DETAIL



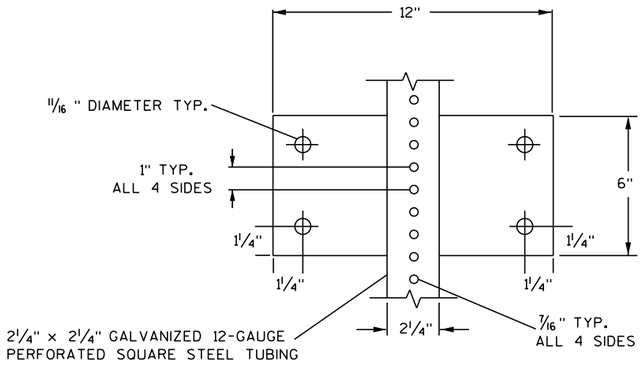
DETAIL C

NOTES

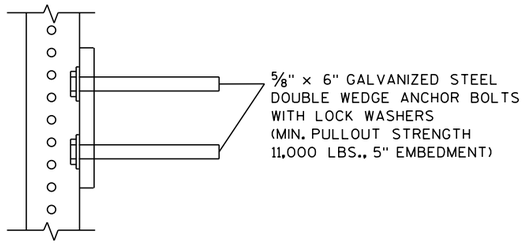
1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION.
2. ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION.
3. THE TOP AND BOTTOM WELDMENT WITH ALL HARDWARE ARE INCIDENTAL TO BID ITEM "POSTS TUBULAR STEEL 2X2-INCH."

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS-PARAPET SIGN POST ATTACHMENT	SHEET 77	E

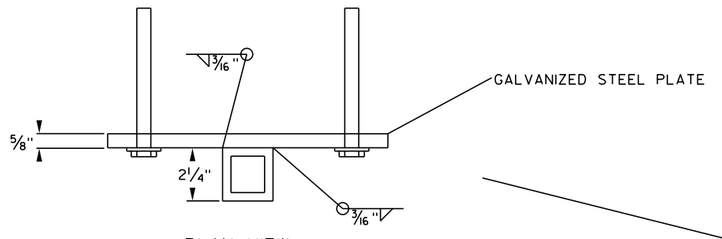
MOUNTING DETAILS FOR SIGNS MOUNTED TO BARRIER WITH TYPE "G" RAIL



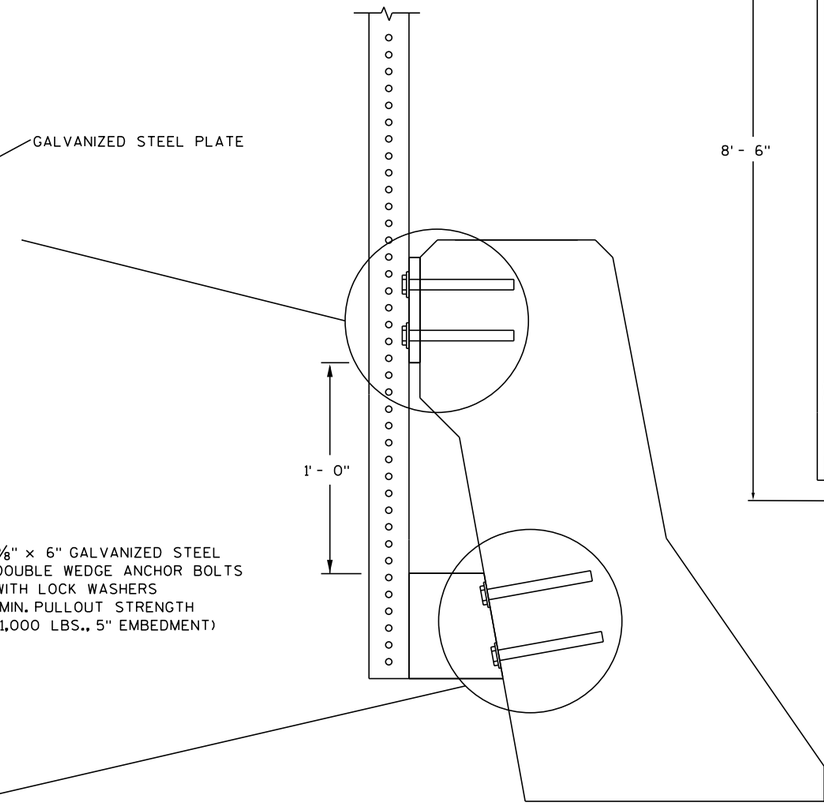
SIDE VIEW

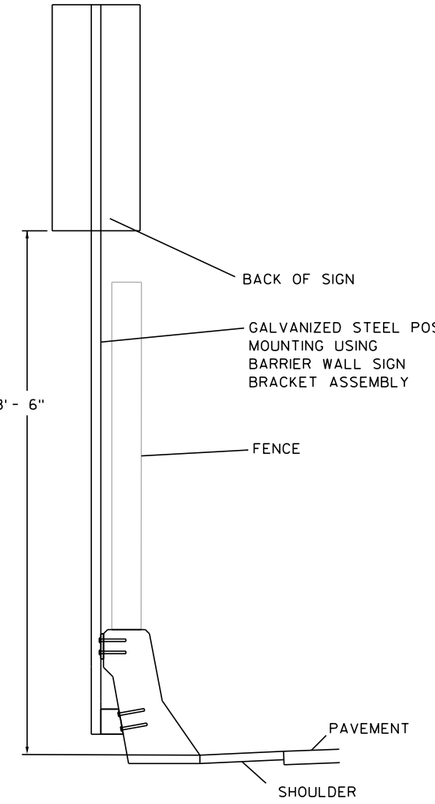


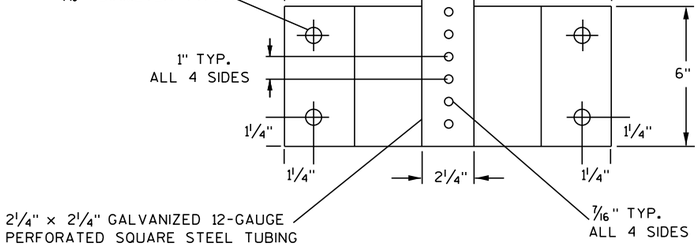
ELEVATION VIEW



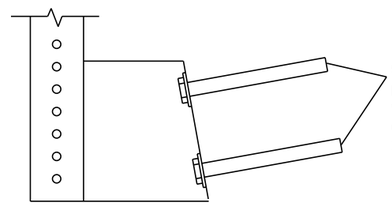
PLAN VIEW



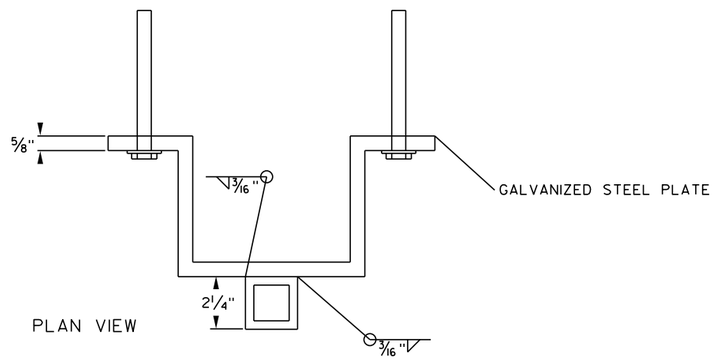




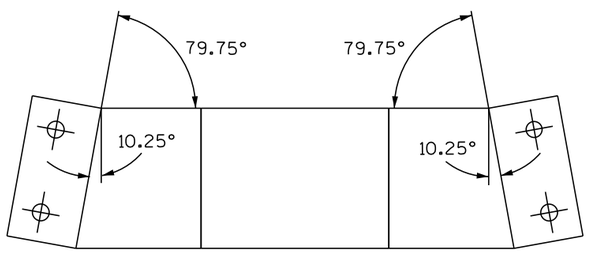
SIDE VIEW



ELEVATION VIEW



PLAN VIEW



STEEL PLATE BEFORE BENDING TO BRACKET SHAPE

NOTES

1) ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION
2) ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION
3) SEE SIGN PLATE A4-8 FOR BOLT REQUIREMENTS.

PROJECT NO: 1228-16-71	HWY: 143	COUNTY: MILWAUKEE	SIGNING PLAN CONSTRUCTION DETAIL	SHEET 78	E

2

N

1122+38.60, -57.34' LT
GNC20

1124+63.77, -53.24' LT
BGH63
TO BE RELOCATED
SEE LIGHTING PLAN

1127+69.52, -55.83' LT
AGH64
TO BE RELOCATED
SEE LIGHTING PLAN

LPB101
TO BE
REMOVED

ATHLETIC TRACK

N JEAN NICOLET RD

GREEN TREE RD

3" CONDUIT
SWEEPS N&S
TYP. "B" BASES
128+30 TO 153+50
MEDIAN C.I.D.
4-4 AWG (TYP.)

8JN 9JN 10JN 11JN 12JN 13JN 14JN 15JN 15JN

14RWW 15RWW

3867

AGH50

BGH51

AGH52

98 100 102 104 106 108 110

IH-43 SB

1125 1130 1135

IH-43 NB

LPB103

LPB102

SLAB SLAB

1130+13.11, -0.66' LT
BGH50

18RWE 16RWE

4067

1132+94.21, -0.69' LT
AGH51

1135+64.15, -0.58' LT
BGH52

1121+99.00, 59.40' RT
BNC20

1123+88.49, 62.74' RT
AGH60

1125+92.84, 68.02' RT
BGH61

1127+93.96, 66.78' RT
AGH62

SHEET 1 OF 2

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING PLAN - REMOVAL	SHEET 79	E

2

2

N

1144+20.64, -180.24' LT
HGH86

1139+98.39, -99.33' LT
HGH88

LPB108

118

1138+44.34, -0.67' LT
BGH53

N JEAN NICOLET RD

116

114

112

1142+31.66, -144.28' LT
GGH87
TO BE RELOCATED
SEE LIGHTING PLAN

1141+24.44, -0.41' LT
AGH54

1144+88.84, -1.25' LT
HGH85

GOOD HOPE RD.

1146+90.85, -240.29' LT
GGH92

1148+61.01, -193.64' LT
GHG93

1150+98.53, -132.91' LT
GGH94

LPB109

1146+01.68, -1.17' LT
GGH90

CGH56

DGH57

1151+22.49, 1.90' RT
CGH58

IH-43 SB

1140

LPB104

DGH55

1145

1150

IH-43 NB

AGH53

BGH54

LPB

LPB

LPB

LPB

1138+20.49, 106.04' RT
FGH70

LPB110

1140+20.63, 150.73' RT
EGH71

LPB105

1143+79.34, -1.02' LT
CGH55

LPB106

1146+79.85, -0.58' LT
DGH56

1149+02.05, 0.42' RT
CGH57

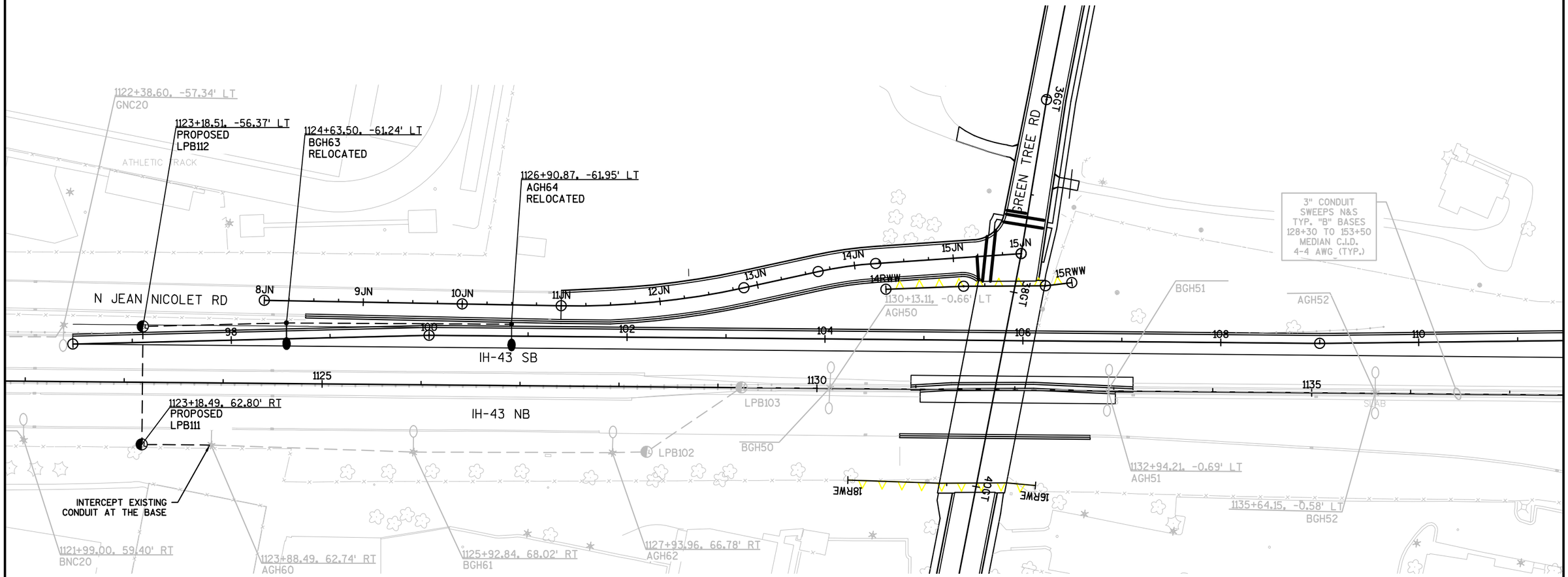
DGH58

SLAB

SHEET 2 OF 2

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING PLAN - REMOVAL	SHEET 80	E

2



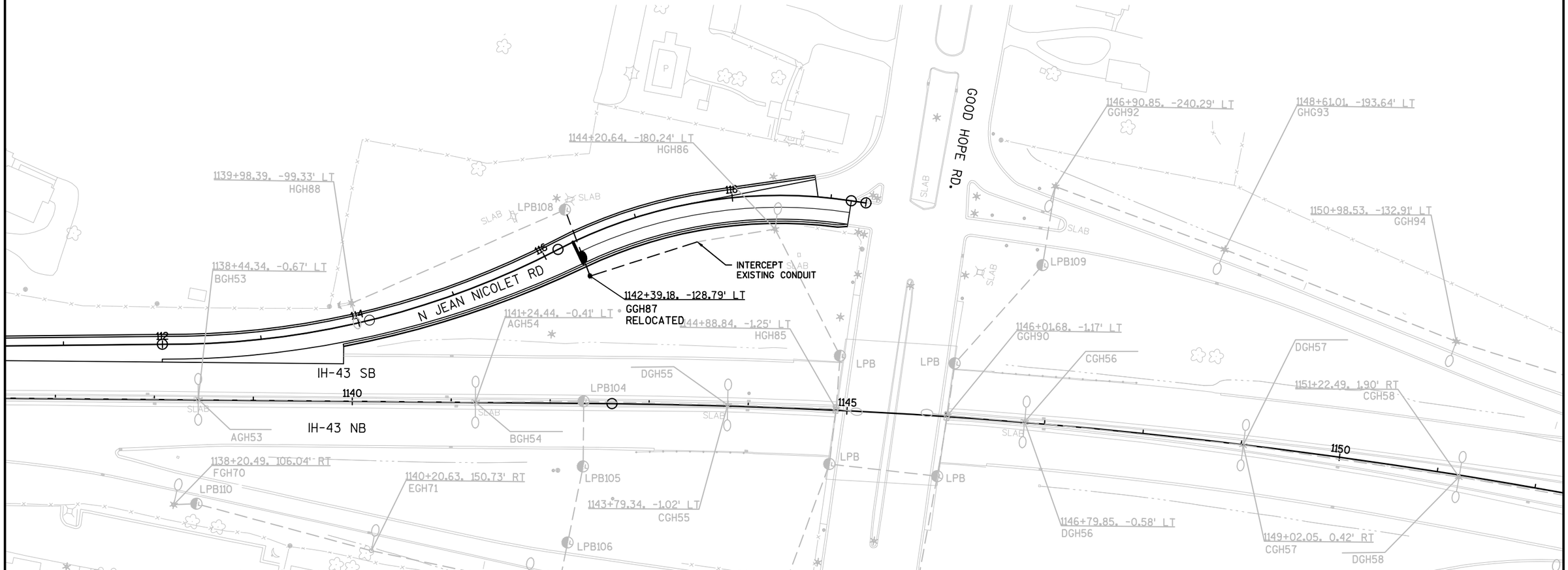
SHEET 1 OF 2

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING PLAN	SHEET 81	E

FILE NAME : N:\PDS\C3D\CAD\12281601\LTG\023601_LP.DWG
LAYOUT NAME - 023601_LP

PLOT DATE : 5/26/2017 12:48 PM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



SHEET 2 OF 2

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING PLAN	SHEET 82	E

FILE NAME : N:\PDS\C3D\CAD\12281601\LTG\023601_LP.DWG
LAYOUT NAME - 023602_LP

PLOT DATE : 5/26/2017 12:48 PM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

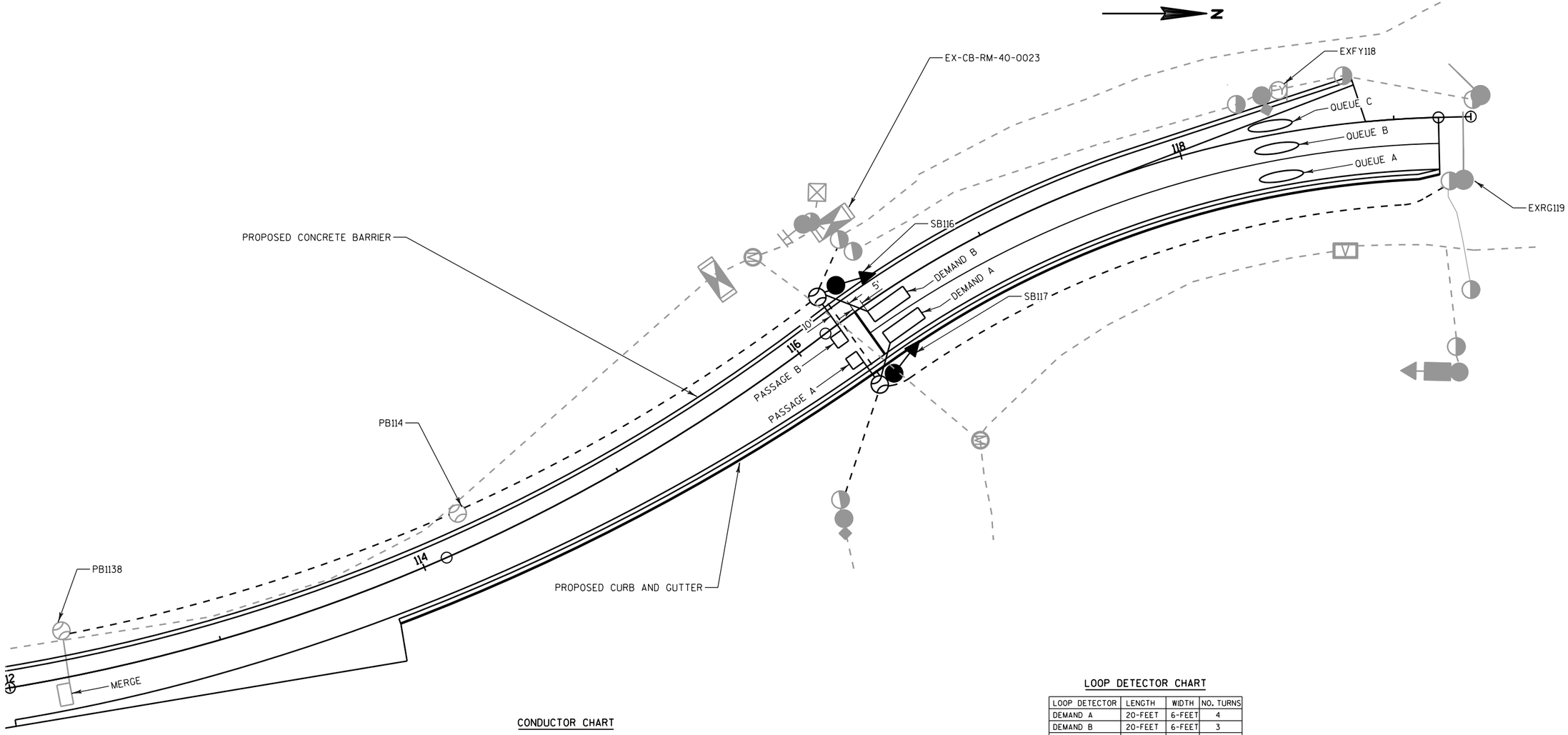
	EXISTING	PROPOSED
FTMS CONVENTIONAL SYMBOLS		
TYPE 1 CONCRETE MANHOLE		
CCTV CAMERA AND POLE		
FTMS FIELD CABINET AND BASE		
POLE MOUNTED CABINET		
METER BREAKER PEDESTAL		
STEEL PULL BOX		
24X42-INCH CSCP PULL BOX		
FTMS (ITS) CONDUIT		
TYPE 1 MANHOLE		
COMMUNICATIONS VAULT, TYPE 1		
ON-RAMP CLOSURE GATE		
TYPE 5 POLE AND MICROWAVE DETECTOR		
RAMP CONTROL SIGNAL ASSEMBLY SIDE MOUNT		
RAMP METER ADVANCE FLASHER ASSEMBLY		

FTMS STANDARD ABBREVIATIONS

CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
PB	PULL BOX
EX	EXISTING
SDS	SYSTEM DETECTOR STATION
RM	RAMP METER
DMS	DYNAMIC MESSAGE SIGN
MH	MANHOLE
FOC	FIBER OPTIC CABLE
F.O.	FIBER OPTIC
MD	MICROWAVE DETECTOR

FTMS GENERAL NOTES

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.



CONDUCTOR CHART

FROM	TO	CABLE SIZE	HEAD NO.	COLOR CODE
EX-CB-RM-40-0023	SB116	7C	1	WHITE, RED, GREEN
EX-CB-RM-40-0023	SB117	7C	1	RED, BLUE, GREEN
EX-CB-RM-40-0023	EXFY118	EXISTING - DO NOT DISTURB		
EX-CB-RM-40-0023	EXRG119	3C	N/A	WHITE, RED, GREEN
EX-CB-RM-40-0023	EXRG118	EXISTING - DO NOT DISTURB		

LOOP DETECTOR CHART

LOOP DETECTOR	LENGTH	WIDTH	NO. TURNS
DEMAND A	20-FEET	6-FEET	4
DEMAND B	20-FEET	6-FEET	3
PASSAGE A	6-FEET	6-FEET	6
PASSAGE B	6-FEET	6-FEET	5
QUEUE A/B/C	MICROWAVE DETECTOR		
MERGE	10-FEET	6-FEET	6

INSTALL ALL LOOP DETECTORS CENTERED IN RESPECTIVE LANES

RAMP METER LAYOUT

W. GOOD HOPE RD. SB ENTRANCE RAMP
(RM-40-0023)
NOT TO SCALE

2

FIBER OPTIC SEQUENCE:

STEP 1: INSTALL NEW CONDUIT FROM EXMH1112NB TO EXCV1148SB.
STEP 2: INSTALL NEW 72-COUNT FOC IN NEWLY INSTALLED CONDUIT BETWEEN EXMH1112NB AND EX-HUB-40-0011.
STEP 3: TERMINATE NEW 72-COUNT FOC IN EXISTING TERMINATION PANEL IN EX-HUB-40-0011.
STEP 4: REMOVE EXISTING 72-COUNT FOC AS SHOWN IN REMOVAL PLANS.
(STEP 3 MUST BE COMPLETED WITHIN 8 HOURS OF CUTTING THE EXISTING CABLE AND MUST BE SCHEDULED WITH THE STOC A MINIMUM OF 14-DAYS IN ADVANCE AND MAY NOT BE DONE DURING HOIDAYS OR SPECIAL EVENTS.)
(ENTIRE SEQUENCE MUST BE COMPLETED PRIOR TO ANY WORK THAT MAY JEOPARDIZE THE EXISTING FIBER OPTIC CABLE.)

LEGEND

(1) REMOVE PULL BOX

(2) REMOVE RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT AND CONCRETE BASE

(3) REMOVE CABLE

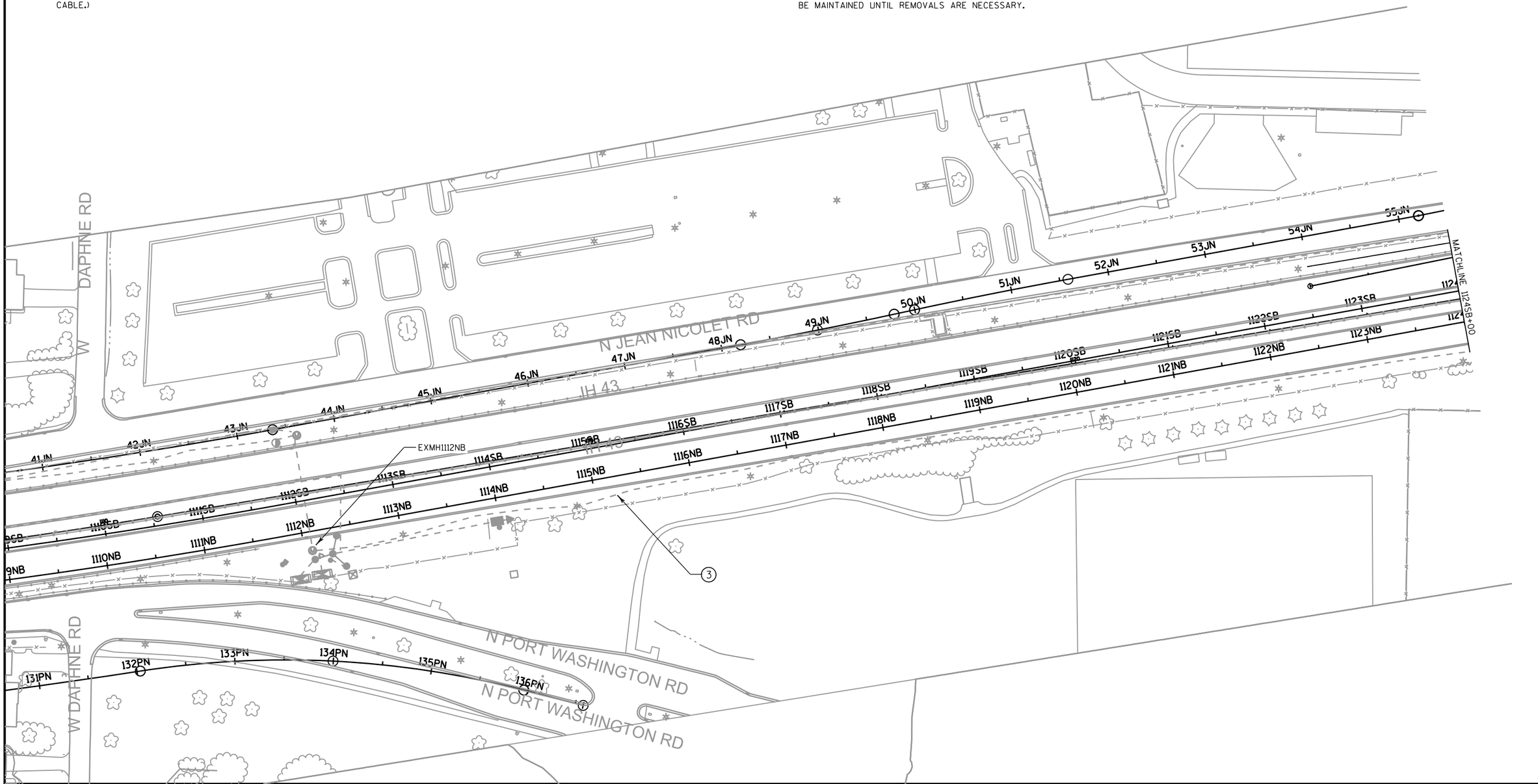
NOTES

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

FOR REMOVAL OF LIGHTING, BRIDGE, OR SIGN ITEMS, REFER TO RESPECTIVE REMOVAL PLAN SECTIONS.

REMOVALS AND DISCONNECTION OF EQUIPMENT OR UTILITY SERVICES MUST BE PROPOSED TO WISDOT STOC A MINIMUM OF TWO WEEKS PRIOR TO SCHEDULED REMOVAL WORK. UNLESS FTMS REMOVALS WORK IS DEMONSTRATED TO BE CRITICAL TO PROJECT COMPLETION SCHEDULE, STOC MAY DENY PROPOSED SCHEDULE AND REQUIRE THAT LOCATIONS BE MAINTAINED UNTIL REMOVALS ARE NECESSARY.

N



PROJECT NO: 1228-16-71	HWY: IH 43	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET 85 E

FILE NAME : \\mlww400\ingrproj\68580\12290401_43-greentree\cds\12290401_fmREM001.dgn PLOT DATE : 7/25/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

LEGEND

(1) REMOVE PULL BOX

(2) REMOVE RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT AND CONCRETE BASE

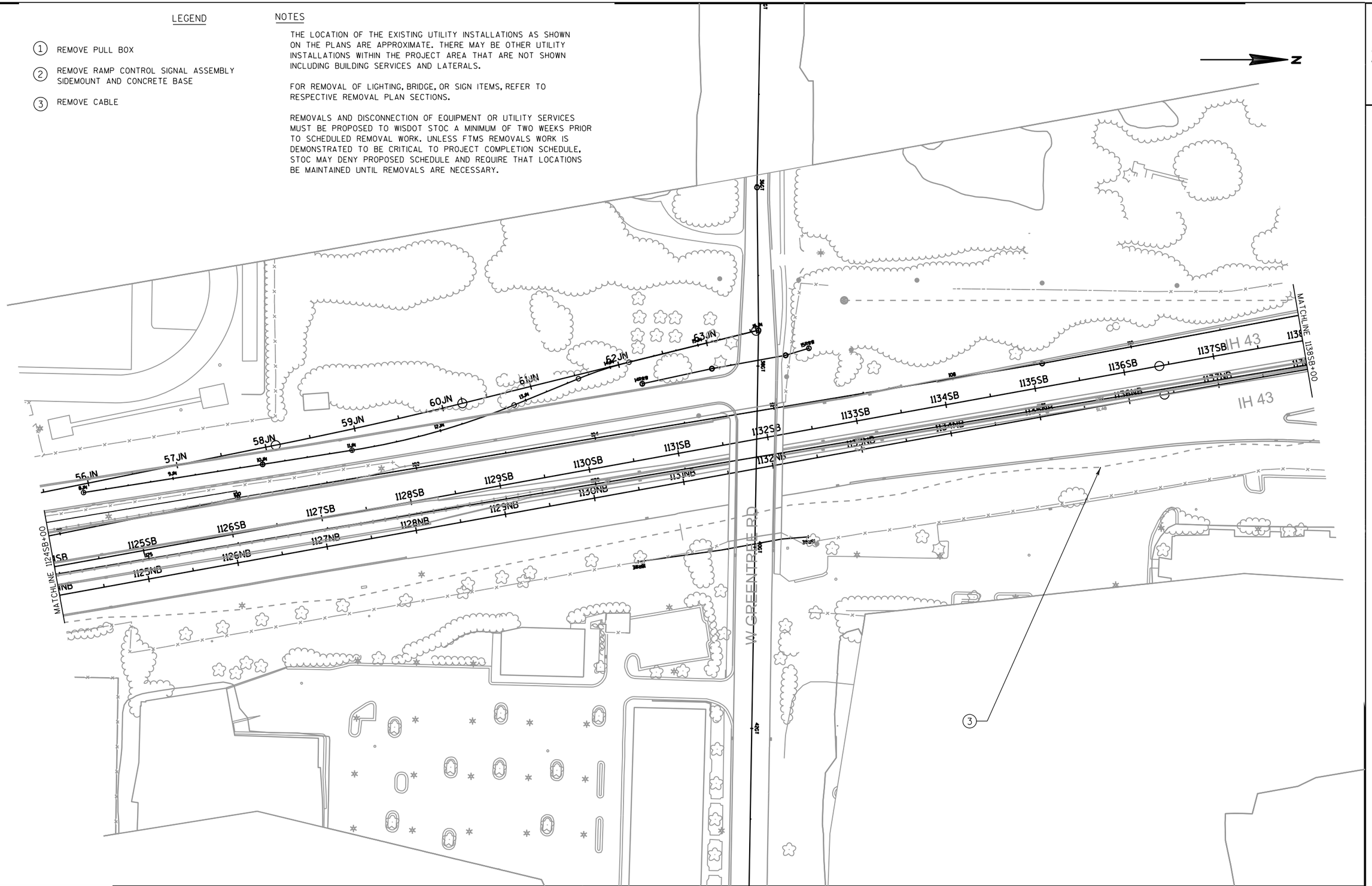
(3) REMOVE CABLE

NOTES

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

FOR REMOVAL OF LIGHTING, BRIDGE, OR SIGN ITEMS, REFER TO RESPECTIVE REMOVAL PLAN SECTIONS.

REMOVALS AND DISCONNECTION OF EQUIPMENT OR UTILITY SERVICES MUST BE PROPOSED TO WISDOT STOC A MINIMUM OF TWO WEEKS PRIOR TO SCHEDULED REMOVAL WORK. UNLESS FTMS REMOVALS WORK IS DEMONSTRATED TO BE CRITICAL TO PROJECT COMPLETION SCHEDULE, STOC MAY DENY PROPOSED SCHEDULE AND REQUIRE THAT LOCATIONS BE MAINTAINED UNTIL REMOVALS ARE NECESSARY.



PROJECT NO: 1228-16-71	HWY: IH 43	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET 86 E

FILE NAME : \\mlww400\ingrproj\68580\12290401_43-greentree\cds\12290401_fmREM002.dgn PLOT DATE : 7/25/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

LEGEND

(1) REMOVE PULL BOX

(2) REMOVE RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT AND CONCRETE BASE

(3) REMOVE CABLE

NOTES

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

FOR REMOVAL OF LIGHTING, BRIDGE, OR SIGN ITEMS, REFER TO RESPECTIVE REMOVAL PLAN SECTIONS.

REMOVALS AND DISCONNECTION OF EQUIPMENT OR UTILITY SERVICES MUST BE PROPOSED TO WISDOT STOC A MINIMUM OF TWO WEEKS PRIOR TO SCHEDULED REMOVAL WORK. UNLESS FTMS REMOVALS WORK IS DEMONSTRATED TO BE CRITICAL TO PROJECT COMPLETION SCHEDULE, STOC MAY DENY PROPOSED SCHEDULE AND REQUIRE THAT LOCATIONS BE MAINTAINED UNTIL REMOVALS ARE NECESSARY.

EX-CB-RM-40-0023
EXPB115
EXMH116GH
REMOVE EXISTING 72-COUNT FOC TO SOUTH ON IH 43. DO NOT REMOVE OTHER EXISTING CABLES. CONDUIT TO REMAIN IN USE AFTER CABLE REMOVAL.
EX-HUB-40-0011
DISCONNECT EXISTING 72-COUNT FOC FROM EXISTING TERMINATION PANEL. TERMINATION PANEL TO BE RE-USED WHEN NEW 72-COUNT FOC IS INSTALLED.
EXPB114
EXPB113
EXPB1142SB (REMAINS)
EXDP1142SB
REMOVE ALL EXISTING CABLES EXCEPT ADVANCE FLASHER ASSEMBLY CABLES, AND 6-COUNT FOC. CONDUIT TO REMAIN IN PLACE FOR NEW CABLES TO BE INSTALLED IN.
EXPB117
EXPB118
EXSB02
EXSB01
EXPB119 (REMAINS)
EXRG119 (REMAINS)
EXPB120
EXPB121
EX-CCTV-40-0080
EXPB116
PREVIOUSLY ABANDONED CONDUIT
EX1143SB
EX1143NB
ONLY REMOVE EXISTING 72-COUNT FOC TO SOUTH ON IH 43. DO NOT REMOVE OTHER EXISTING CABLES. CONDUIT TO REMAIN IN USE AFTER CABLE REMOVAL.
MATCHLINE 1138SB+00
1139SB
1140SB
1141SB
1142SB
1143SB
1144SB
1145SB
1146SB
1147SB
1148SB
1149SB
1150SB
1151SB
1152SB
1139NB
1140NB
1141NB
1142NB
1143NB
1144NB
1145NB
1146NB
1147NB
1148NB
1149NB
1150NB
1151NB
1152NB
N PORT WASHINGTON RD

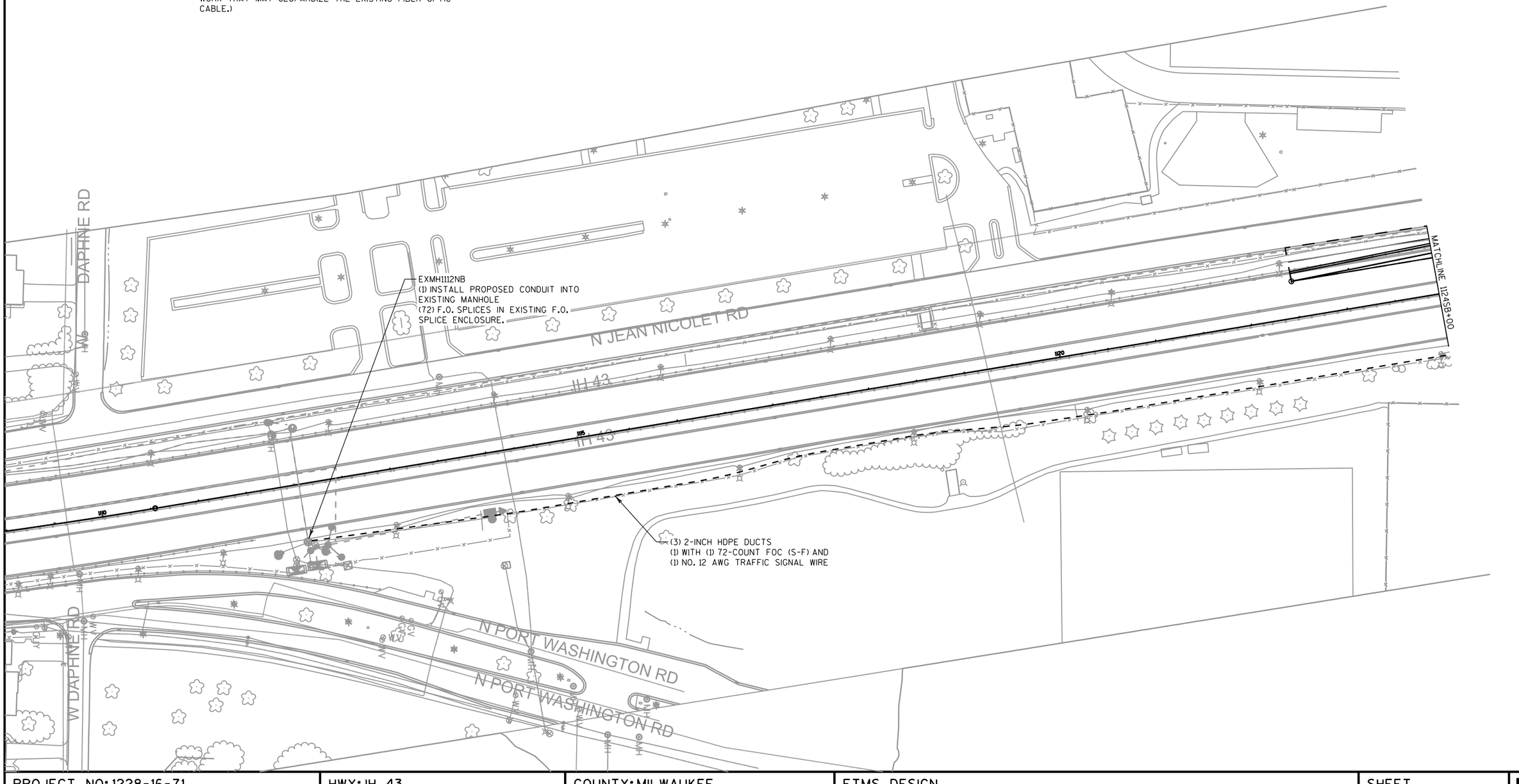
PROJECT NO: 1228-16-71	HWY: IH 43	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET 87	E

2

FIBER OPTIC SEQUENCE:

STEP 1: INSTALL NEW CONDUIT FROM EXMH1112NB TO EXCV1148SB.
STEP 2: INSTALL NEW 72-COUNT FOC IN NEWLY INSTALLED CONDUIT BETWEEN EXMH1112NB AND EX-HUB-40-0011.
STEP 3: TERMINATE NEW 72-COUNT FOC IN EXISTING TERMINATION PANEL IN EX-HUB-40-0011.
STEP 4: REMOVE EXISTING 72-COUNT FOC AS SHOWN IN REMOVAL PLANS.
(STEP 3 MUST BE COMPLETED WITHIN 8 HOURS OF CUTTING THE EXISTING CABLE AND MUST BE SCHEDULED WITH THE STOC A MINIMUM OF 14-DAYS IN ADVANCE AND MAY NOT BE DONE DURING HOIDAYS OR SPECIAL EVENTS.)
(ENTIRE SEQUENCE MUST BE COMPLETED PRIOR TO ANY WORK THAT MAY JEOPARDIZE THE EXISTING FIBER OPTIC CABLE.)

N



2

PROJECT NO: 1228-16-71	HWY: IH 43	COUNTY: MILWAUKEE	FTMS DESIGN	SHEET 88	E

FILE NAME : \\mlww400\ingrproj\68580\12290401_43-greentree\cds\12290401_fm001.dgn PLOT DATE : 7/25/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

(3) 2-INCH HDPE DUCTS, DIRECTIONAL BORE
(1) WITH (1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

MATCHLINE 1135SB+00

IH 43

IH 43

CV1134NB

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

CV1130NB

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

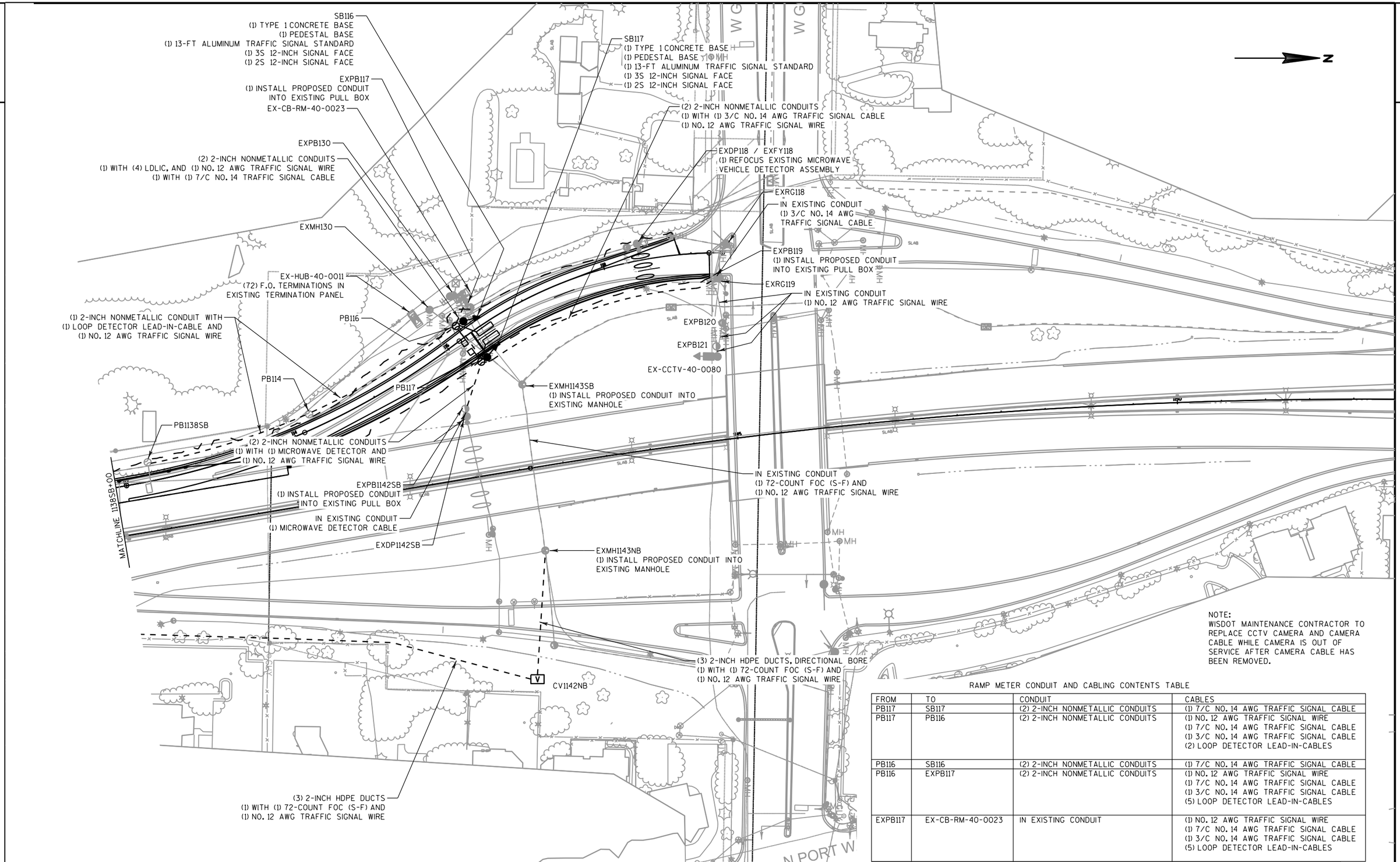
MATCHLINE 1124SB+00

PROJECT NO: 1228-16-71	HWY: IH 43	COUNTY: MILWAUKEE	FTMS DESIGN	SHEET 89	E

FILE NAME : \\mlww400\ingrproj\68580\12290401_43-greentree\cds\12290401_fm002.dgn PLOT DATE : 7/25/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



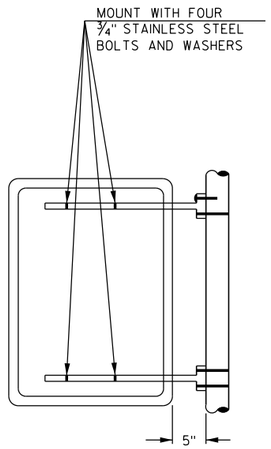
NOTE:
WISDOT MAINTENANCE CONTRACTOR TO REPLACE CCTV CAMERA AND CAMERA CABLE WHILE CAMERA IS OUT OF SERVICE AFTER CAMERA CABLE HAS BEEN REMOVED.

RAMP METER CONDUIT AND CABLING CONTENTS TABLE

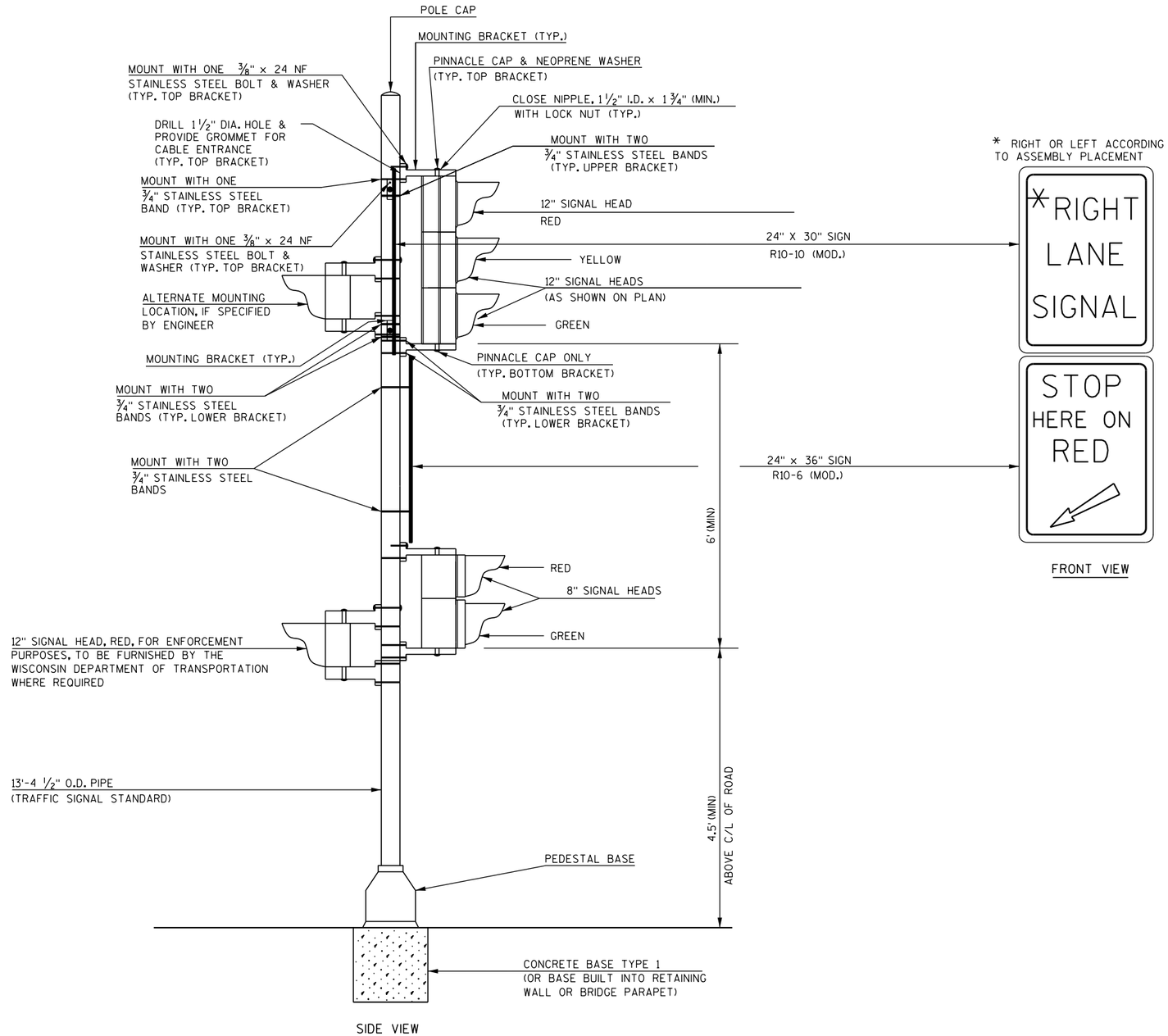
FROM	TO	CONDUIT	CABLES
PB117	SB117	(2) 2-INCH NONMETALLIC CONDUITS	(1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
PB117	PB116	(2) 2-INCH NONMETALLIC CONDUITS	(1) NO. 12 AWG TRAFFIC SIGNAL WIRE (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE (1) 3/C NO. 14 AWG TRAFFIC SIGNAL CABLE (2) LOOP DETECTOR LEAD-IN-CABLES
PB116	SB116	(2) 2-INCH NONMETALLIC CONDUITS	(1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
PB116	EXPB117	(2) 2-INCH NONMETALLIC CONDUITS	(1) NO. 12 AWG TRAFFIC SIGNAL WIRE (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE (1) 3/C NO. 14 AWG TRAFFIC SIGNAL CABLE (5) LOOP DETECTOR LEAD-IN-CABLES
EXPB117	EX-CB-RM-40-0023	IN EXISTING CONDUIT	(1) NO. 12 AWG TRAFFIC SIGNAL WIRE (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE (1) 3/C NO. 14 AWG TRAFFIC SIGNAL CABLE (5) LOOP DETECTOR LEAD-IN-CABLES

NOTE

1) R10-6 SIGN: AN ARROW POINTING LEFT SHALL BE USED ON A RIGHT SIDE SIGNAL & AN ARROW POINTING RIGHT SHALL BE USED ON A LEFT SIDE SIGNAL.



REAR VIEW



SIDE VIEW

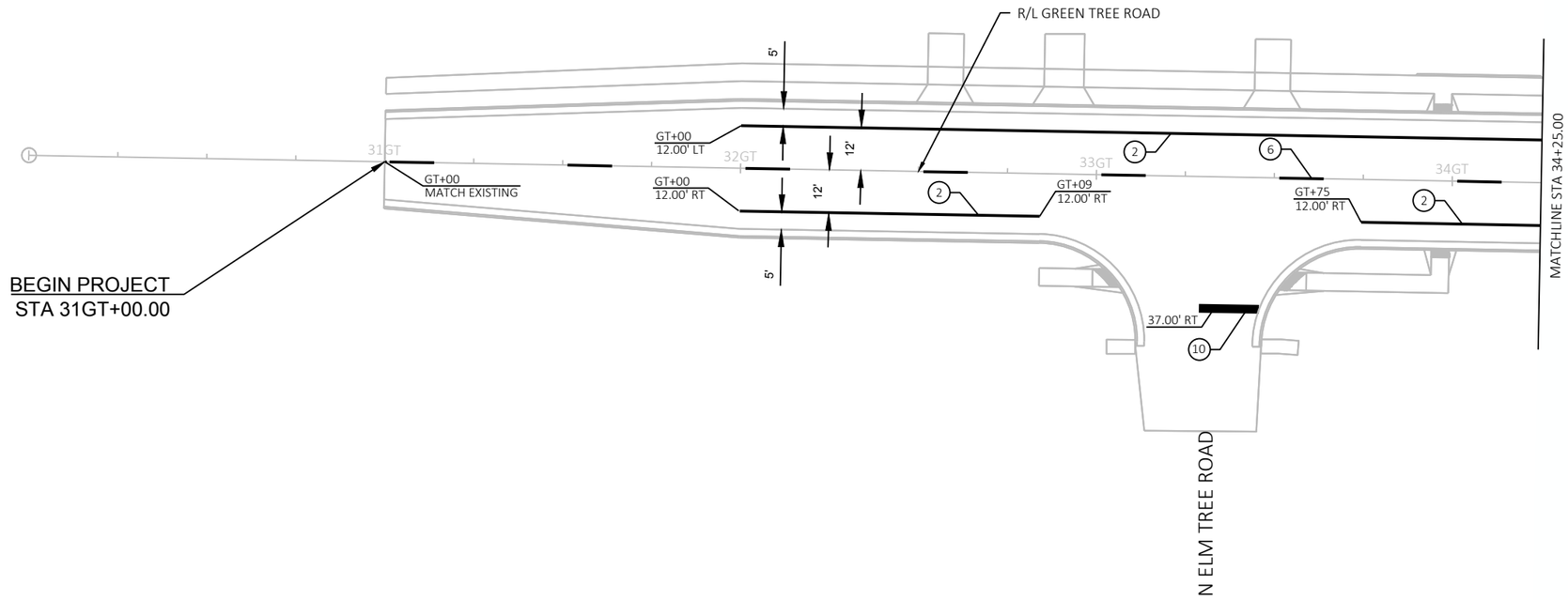
FRONT VIEW

SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET 91	E

2

N



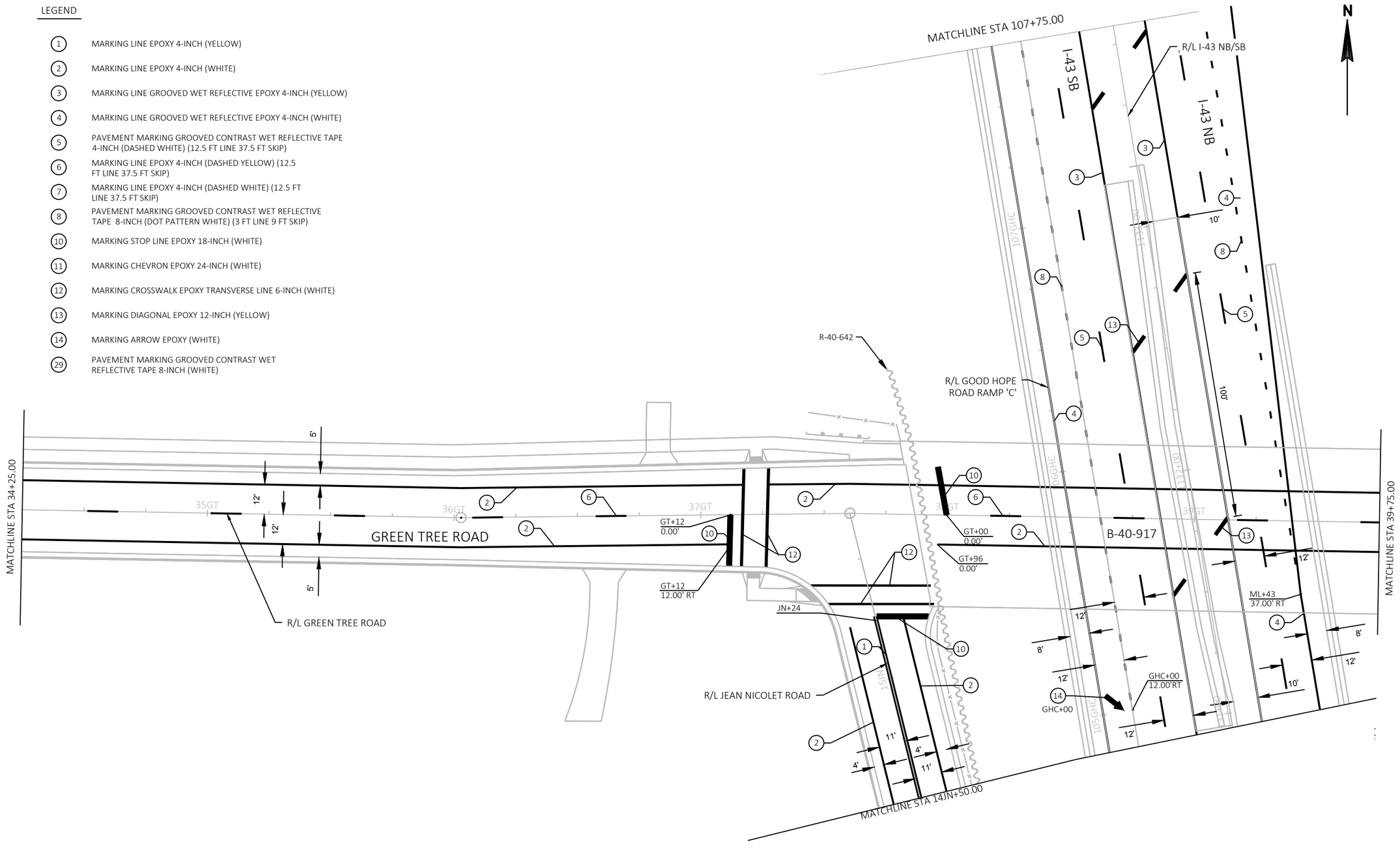
LEGEND

1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
5	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6	MARKING LINE EPOXY 4-INCH (DASHED YELLOW) (12.5 FT LINE 37.5 FT SKIP)
7	MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
8	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
10	MARKING STOP LINE EPOXY 18-INCH (WHITE)
11	MARKING CHEVRON EPOXY 24-INCH (WHITE)
12	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
13	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
14	MARKING ARROW EPOXY (WHITE)
29	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (WHITE)

2

LEGEND

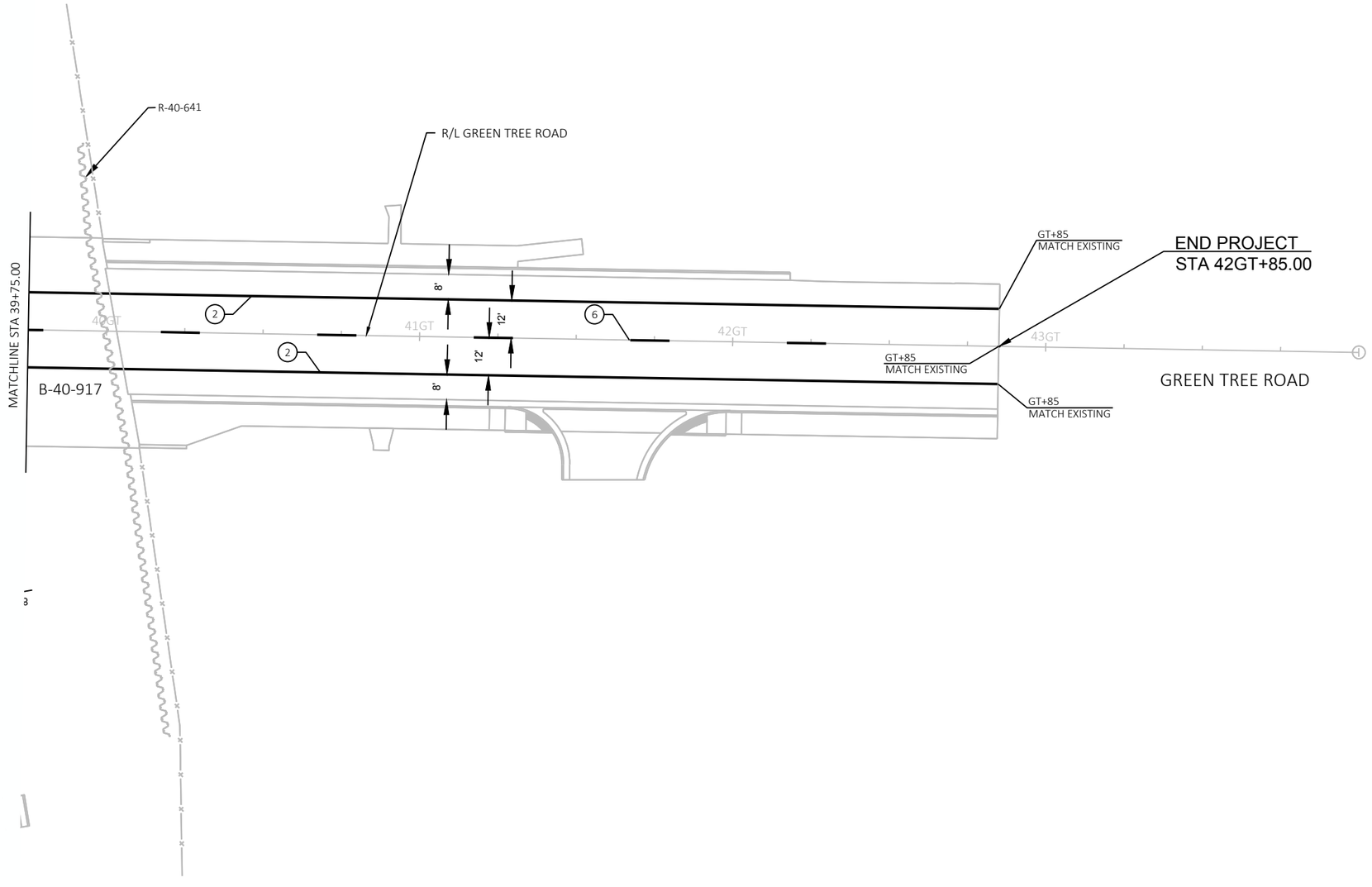
1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
5	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6	MARKING LINE EPOXY 4-INCH (DASHED YELLOW) (12.5 FT LINE 37.5 FT SKIP)
7	MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
8	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
10	MARKING STOP LINE EPOXY 18-INCH (WHITE)
11	MARKING CHEVRON EPOXY 24-INCH (WHITE)
12	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
13	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
14	MARKING ARROW EPOXY (WHITE)
29	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (WHITE)



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 93	E

2

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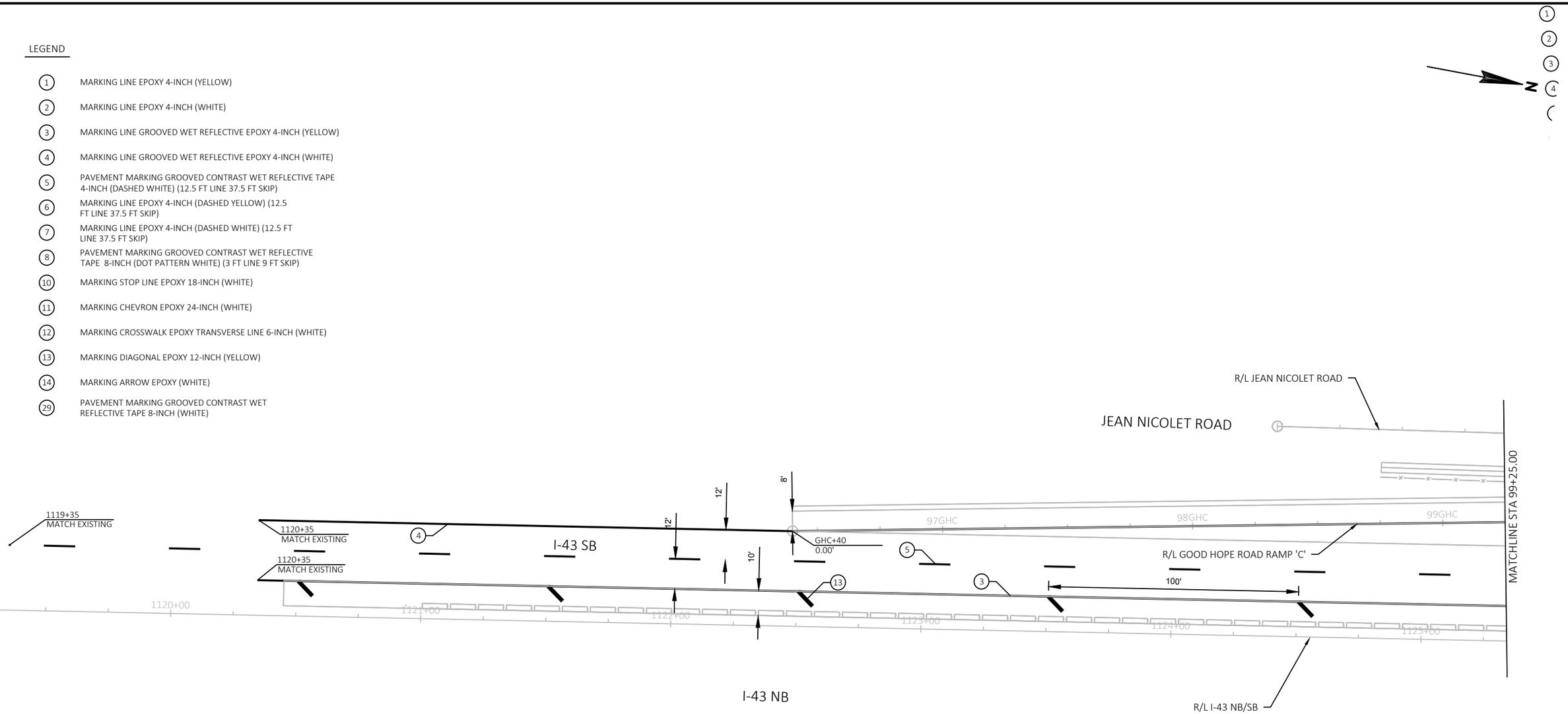


LEGEND

1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
5	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6	MARKING LINE EPOXY 4-INCH (DASHED YELLOW) (12.5 FT LINE 37.5 FT SKIP)
7	MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
8	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
10	MARKING STOP LINE EPOXY 18-INCH (WHITE)
11	MARKING CHEVRON EPOXY 24-INCH (WHITE)
12	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
13	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
14	MARKING ARROW EPOXY (WHITE)
29	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (WHITE)

LEGEND

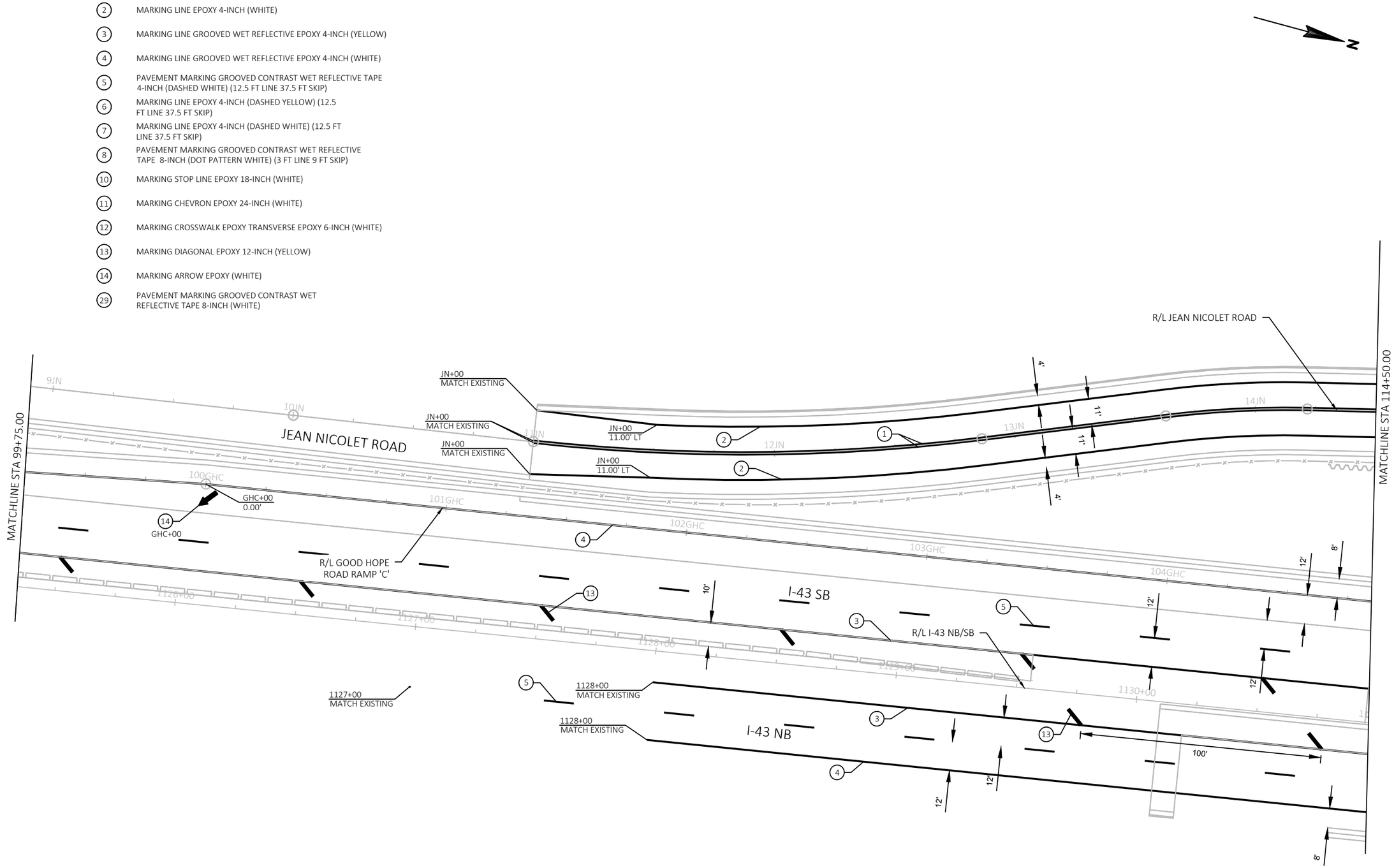
1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
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13	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
14	MARKING ARROW EPOXY (WHITE)
29	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (WHITE)



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 95	E

LEGEND

1. MARKING LINE EPOXY 4-INCH (YELLOW)
2. MARKING LINE EPOXY 4-INCH (WHITE)
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
4. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
5. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6. MARKING LINE EPOXY 4-INCH (DASHED YELLOW) (12.5 FT LINE 37.5 FT SKIP)
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13. MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
14. MARKING ARROW EPOXY (WHITE)
29. PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (WHITE)



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 96	E

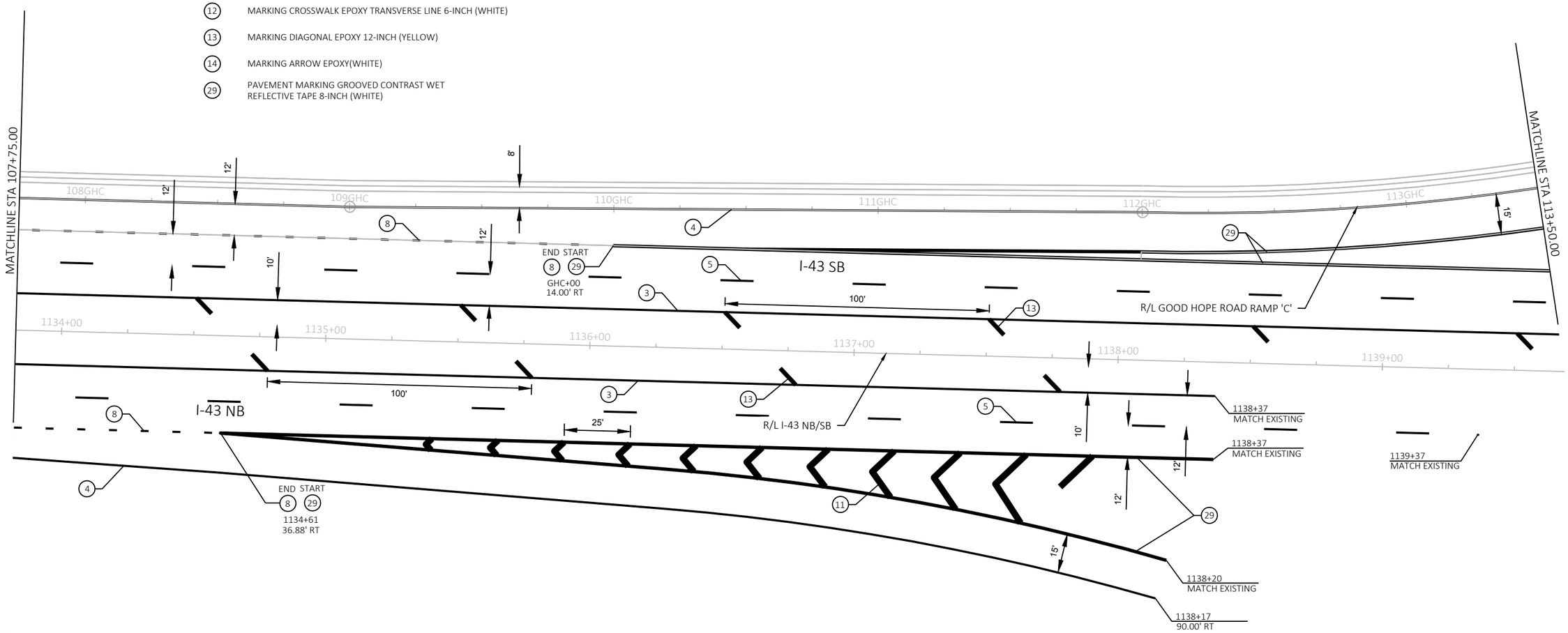
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PLOT DATE : 12/13/2017 12:39 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

2

LEGEND

1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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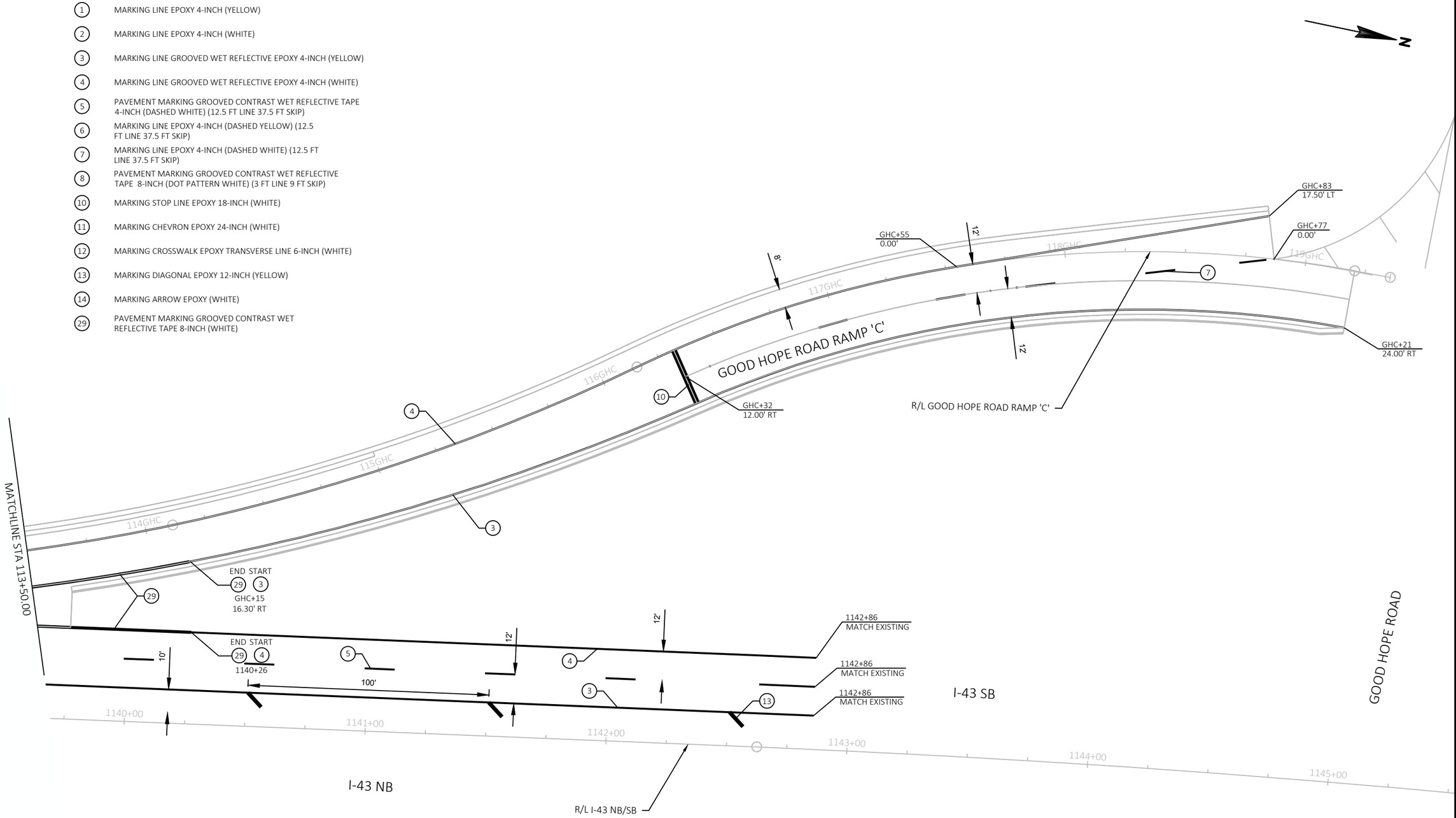


PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 97	E

2

LEGEND

1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
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14	MARKING ARROW EPOXY (WHITE)
29	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE TAPE 8-INCH (WHITE)



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 98	E

GENERAL NOTES FOR TRAFFIC CONTROL

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

2) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER.

3) ALL SIGNS ARE 45" X 48" UNLESS OTHERWISE NOTED.

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

5) FOR NIGHTTIME OPERATIONS ALL DRUMS IN TAPERS SHALL HAVE A TYPE C STEADY BURN WARNING LIGHT.

6) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

7) DIMENSION TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER ADJACENT TO TRAFFIC. STATION CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE CENTER OF THE BARRIER.

8) CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR MINIMUM 500' IN FRONT OF DRUMS.

9) ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE ROADWAY IS RESTORED TO A SAFE OPERATING CONDITION.

10) USE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE FOR ALL TEMPORARY PAVEMENT MARKING PLACED ON FINISHED HMA PAVEMENT SURFACE LAYERS.

LEGEND

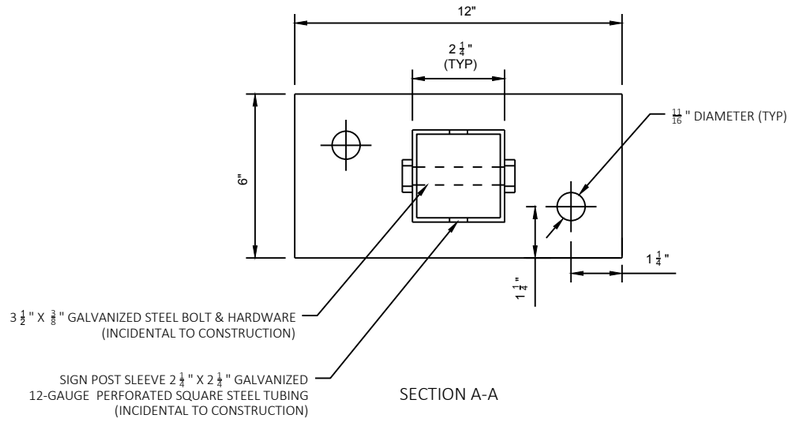
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK ZONE
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- S — TEMPORARY PAVEMENT MARKING STOP LINE, 18-INCH
- WT — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH
- YT — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH
- CC — CRASH CUSHIONS TEMPORARY
- XXX — FIXED MESSAGE SIGN NUMBER (REFER TO TRAFFIC CONTROL - DETAILS FOR SIGN DETAILS)

2

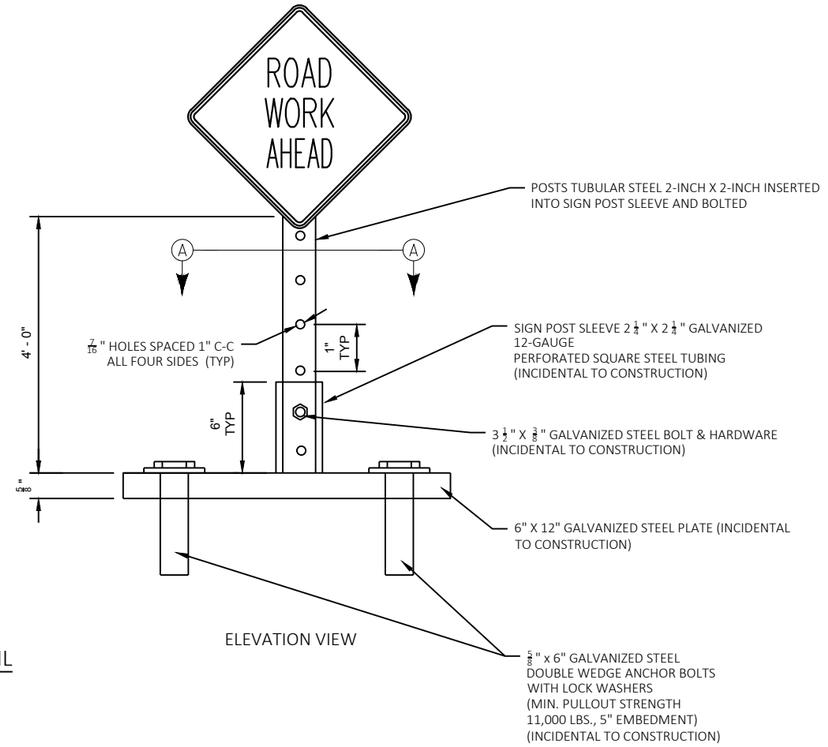
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL GENERAL NOTES	SHEET 99	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\025001_TC.DWG
LAYOUT NAME - 025001_tc
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WISDOT/CADDS SHEET 42

2

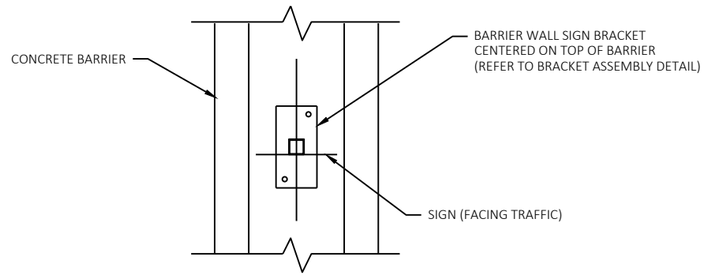


SECTION A-A

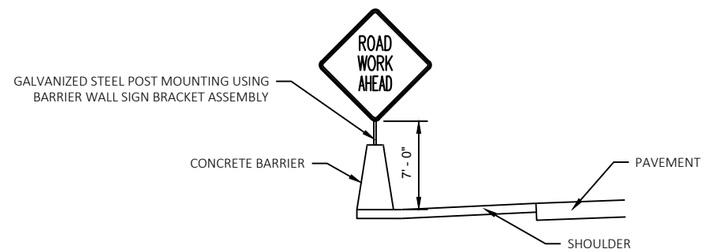


ELEVATION VIEW

BRACKET ASSEMBLY DETAIL



PLAN VIEW



ELEVATION VIEW

MEDIAN BARRIER MOUNTING DETAIL

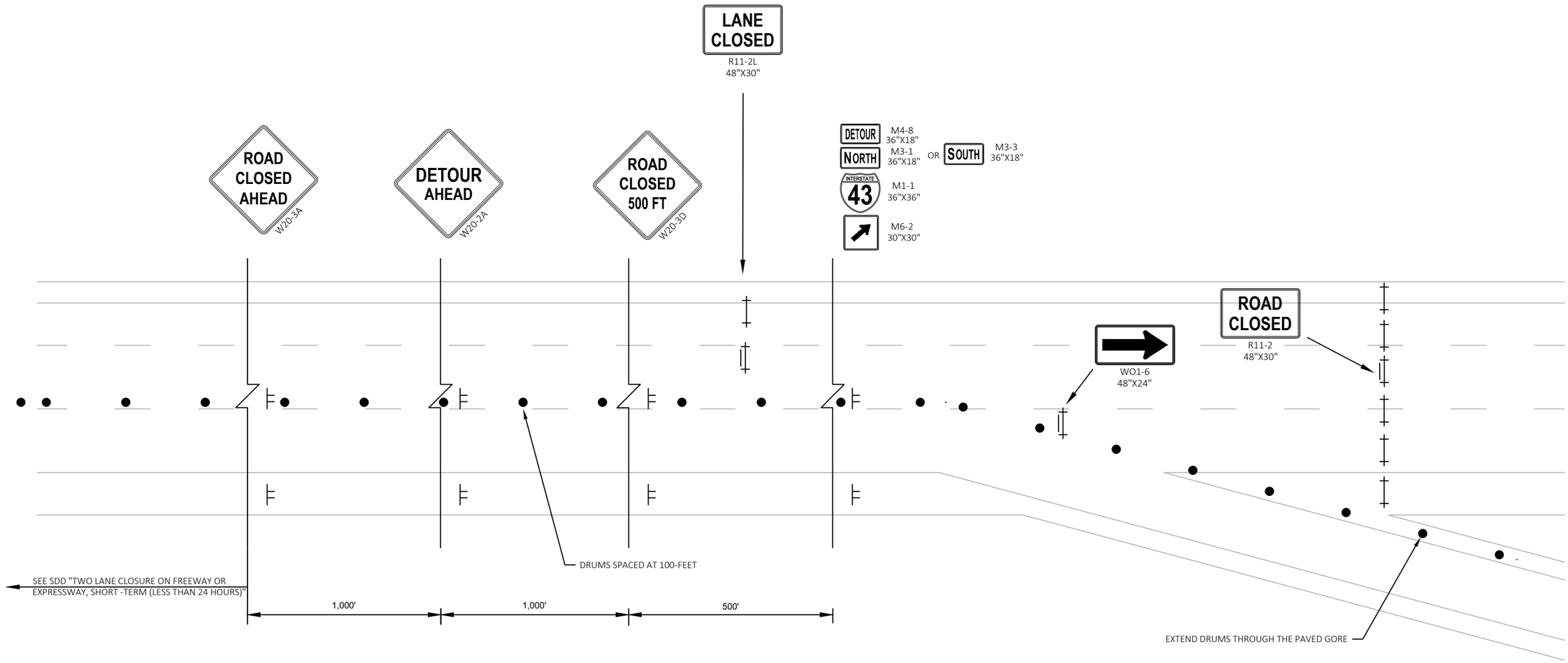
NOTES:

1. SIGNS SHALL NOT BE MOUNTED ON MEDIAN BARRIER WHEN DISTANCE IS LESS THAN 4' FROM BASE OF BARRIER TO EDGE OF TRAVEL LANE.
2. IF SIGNS ENCROACH ONTO TRAVEL WAY, REDUCE SIZE OF SIGN TO 36" X 36"

MOUNTING DETAILS FOR SIGNS MOUNTED TO MEDIAN BARRIER

NOT TO SCALE

2



NOTES:

1) USE OF PERMANENT SIGN POSTS MUST BE COORDINATED WITH THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR COVERING SIGNS IF THE CONTRACTOR LEAVES SIGNS EXPOSED DURING NOT CLOSURE TIMES.

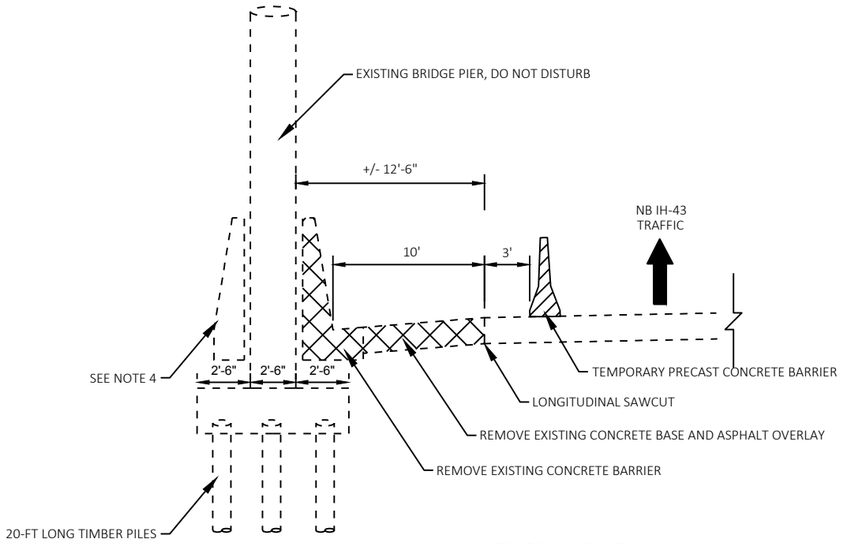
2) DOUBLE LANE CLOSURE MUST BE ESTABLISHED PRIOR TO THE FULL ROADWAY CLOSURE. REFER TO THE PROSECUTION AND PROGRESS FOR DETAILS REGARDING ALLOWABLE CLOSURE TIME PERIODS.

3) FOR ADDITIONAL DETOUR SIGNING, REFER TO SEPARATE DETOUR SHEETS.

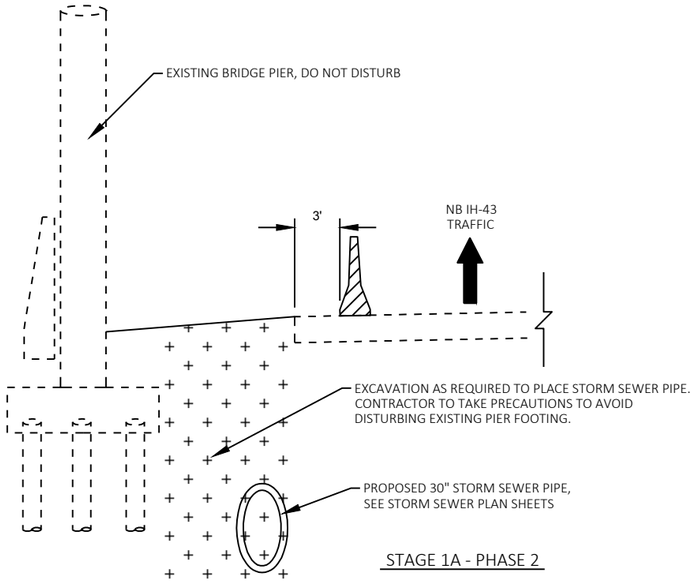
FULL MAINLINE CLOSURE FOR DETOUR

FOR USE WITH BOTH DIRECTIONS OF MAINLINE TRAFFIC

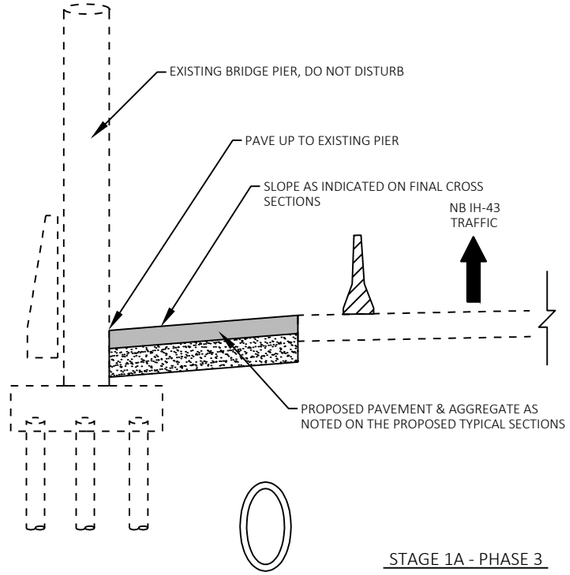
NOT TO SCALE



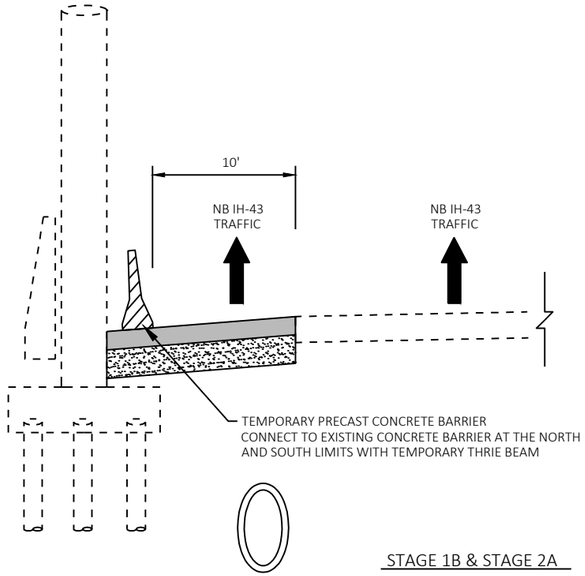
STAGE 1A - PHASE 1



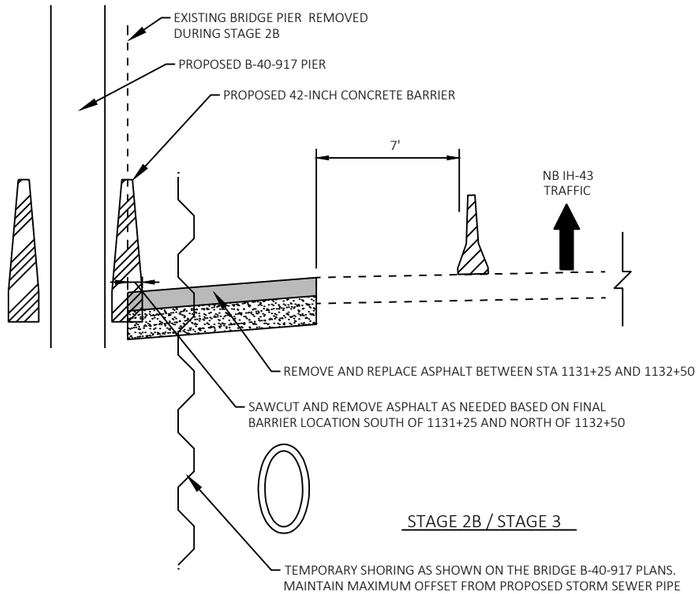
STAGE 1A - PHASE 2



STAGE 1A - PHASE 3



STAGE 1B & STAGE 2A

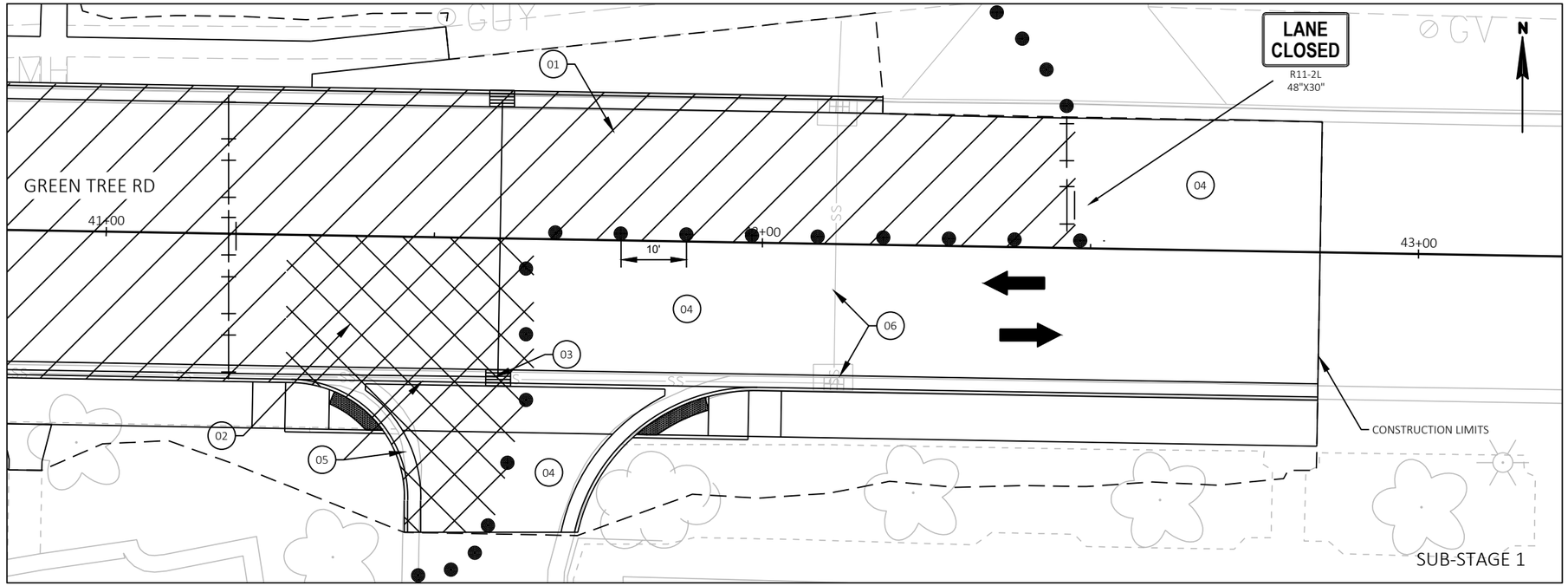


STAGE 2B / STAGE 3

NB IH-43 MEDIAN CONSTRUCTION DETAILS

NOTES:

1) INFORMATION ABOVE IS BASED ON STAGING PLAN AS SHOWN AND AS DISCUSSED IN THE PROSECUTION AND PROGRESS. ANY DEVIATIONS TO THE PROPOSED STAGING PLAN WILL ALTER THE DETAILS AS SHOWN ABOVE. THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO DETERMINE THE APPROPRIATE STEPS TO UPDATE THIS DETAIL AS NEEDED.
2) OFFSETS MAY VARY SLIGHTLY AND NEED TO BE FIELD VERIFIED PRIOR TO ANY CONSTRUCTION ACTIVITIES.
3) REFER TO THE GENERAL NOTES FOR INSTRUCTIONS RELATED TO EXISTING UTILITIES.
4) REMOVE BARRIER AS NEEDED TO CONSTRUCT STORM PIPE BETWEEN MH206 AND MH207



SUB-STAGE 1 NOTES

(1) HATCHED AREA REPRESENTS WORKZONE CLOSED FOR THE DURATION OF THIS STAGE

(2) CROSSHATCHED AREA REPRESENTS WORKZONE WHICH NEEDS TO BE OPEN DURING NON-WORKING HOURS TO ALLOW FOR TRUCK MOVEMENTS TURNING INTO THE SOUTH DRIVEWAY. EXCEPTIONS ARE AS FOLLOWS:
- * 1 DAY FOR INSTALLING INLET AND STORM SEWER PIPE
- * 2 DAYS FOR SETTING CURB AND GUTTER STRING LINE AND PAVING CURB AND GUTTER
- * UP TO 1 DAY FOR CURB AND GUTTER TO CURE

ONCE THE EXISTING PAVEMENT IS REMOVED, MAINTAIN A DRIVEABLE SURFACE AS DIRECTED BY THE ENGINEER.

(3) PROPOSED STORM SEWER INLET, SEE SEPARATE STORM SEWER PLANS

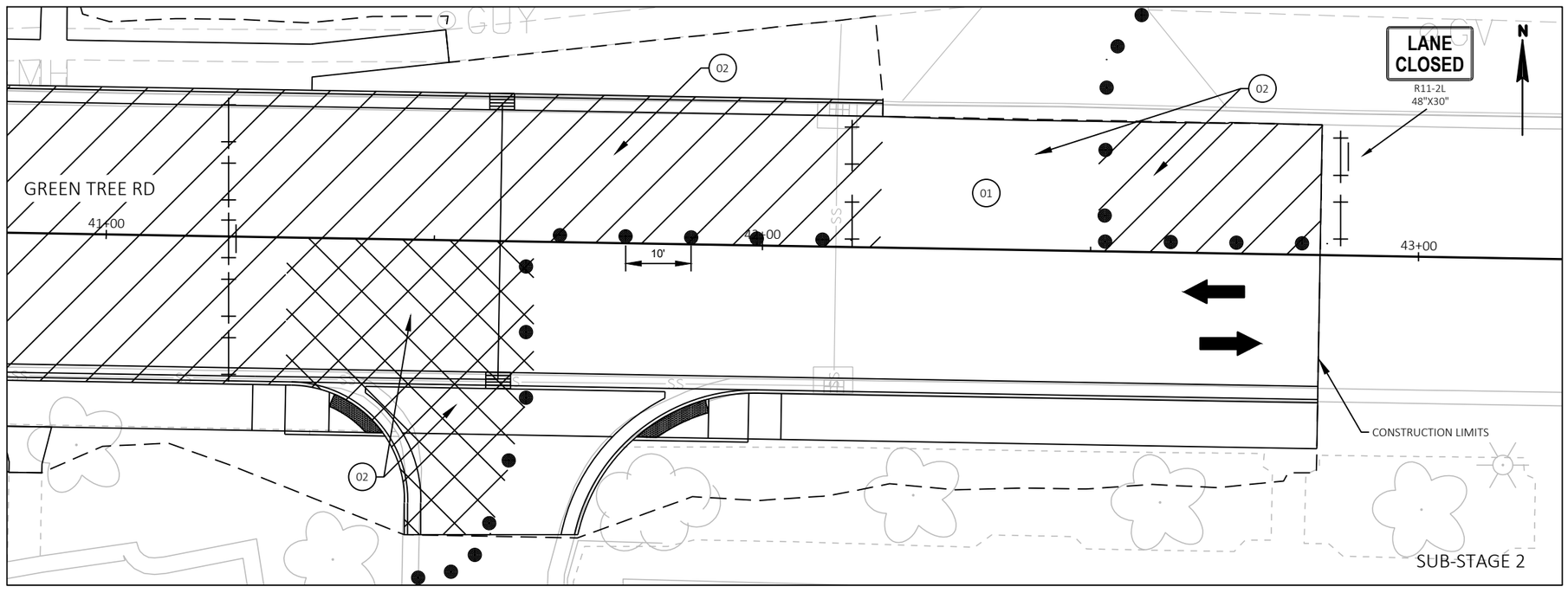
(4) TRAFFIC REMAINS ON EXISTING PAVEMENT.

(5) HIGH EARLY STRENGTH CONCRETE AS NOTED IN THE PLAN DETAIL SHEETS.

(6) EXISTING STORM SEWER TO REMAIN

REFER TO TRAFFIC CONTROL STAGING SHEETS FOR ADDITIONAL INFORMATION NOT SHOWN HERE. SUB-STAGE NUMBERING DOES NOT MATCH STAGE NUMBERING USED WITH THE TRAFFIC CONTROL STAGING SHEETS. CONTRACTOR TO WORK WITH THE ENGINEER TO DETERMINE THE BEST TIMELINE TO COMPLETE THESE SUB-STAGES.

ALL WORK REQUIRED TO MAINTAIN A DRIVEABLE SURFACE WILL BE CONSIDERED INCIDENTAL TO THE ITEM "TRAFFIC CONTROL, 1228-16-71"



SUB-STAGE 2 NOTES

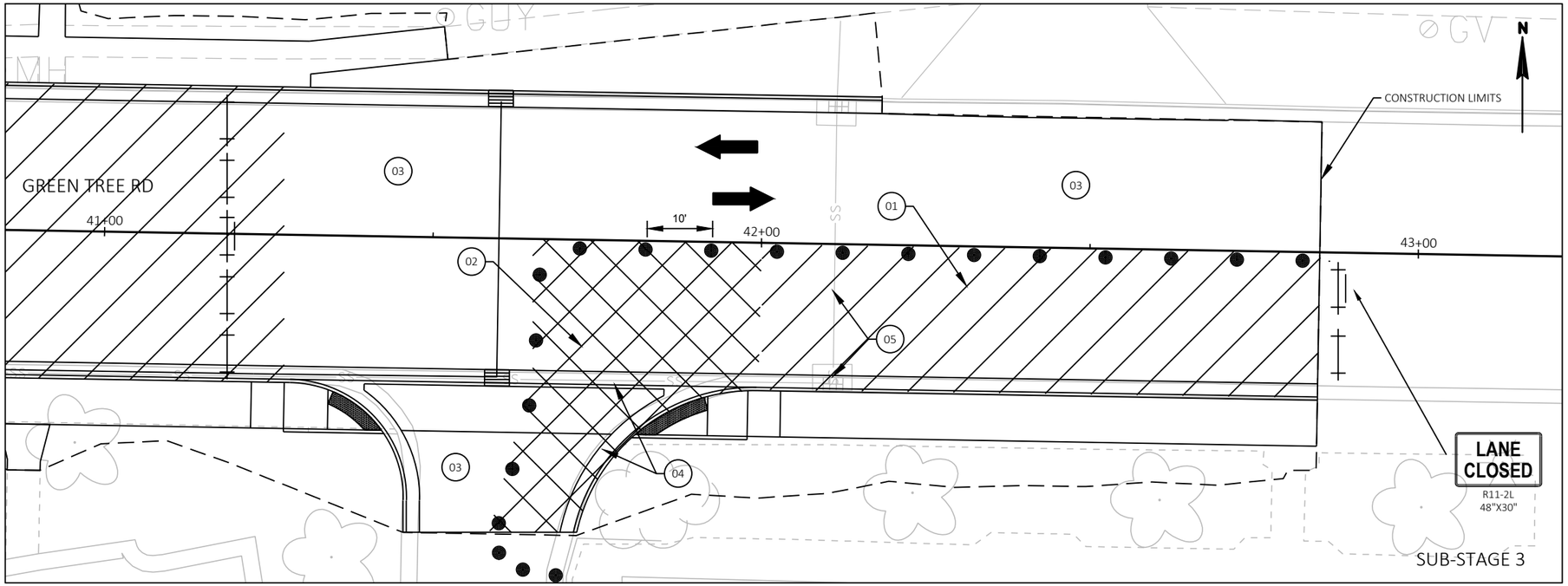
UNLESS OTHERWISE NOTED, ALL NOTES SHOWN IN SUB-STAGE 1 APPLY TO SUB-STAGE 2

(1) AREA MAY REMAIN UNPAVED FOR A MAXIMUM DURATION OF 1 CALENDAR WEEK

(2) PAVE ALL AREAS DISTURBED DURING SUB-STAGES 1 AND 2 WITH THE BINDER LIFT OF ASPHALT PRIOR TO SWITCHING TO THE NEXT SUB-STAGE.

REFER TO TRAFFIC CONTROL STAGING SHEETS FOR ADDITIONAL INFORMATION NOT SHOWN HERE. SUB-STAGE NUMBERING DOES NOT MATCH STAGE NUMBERING USED WITH THE TRAFFIC CONTROL STAGING SHEETS. CONTRACTOR TO WORK WITH THE ENGINEER TO DETERMINE THE BEST TIMELINE TO COMPLETE THESE SUB-STAGES.

ALL WORK REQUIRED TO MAINTAIN A DRIVEABLE SURFACE WILL BE CONSIDERED INCIDENTAL TO THE ITEM "TRAFFIC CONTROL, 1228-16-71"



SUB-STAGE 3 NOTES

(1) HATCHED AREA REPRESENTS WORKZONE CLOSED FOR THE DURATION OF THIS STAGE

(2) CROSSHATCHED AREA REPRESENTS WORKZONE WHICH NEEDS TO BE OPEN DURING NON-WORKING HOURS TO ALLOW FOR TRUCK MOVEMENTS TURNING INTO THE SOUTH DRIVEWAY. EXCEPTIONS ARE AS FOLLOWS:

* 1/2 DAY FOR REMAINING STORM SEWER WORK NOT COMPLETED IN PREVIOUS SUB-STAGE (IF NEEDED)
* 2 DAYS FOR SETTING CURB AND GUTTER STRING LINE AND PAVING CURB AND GUTTER
* UP TO 1 DAY FOR CURB AND GUTTER TO CURE

ONCE THE EXISTING PAVEMENT IS REMOVED, MAINTAIN A DRIVEABLE SURFACE AS DIRECTED BY THE ENGINEER.

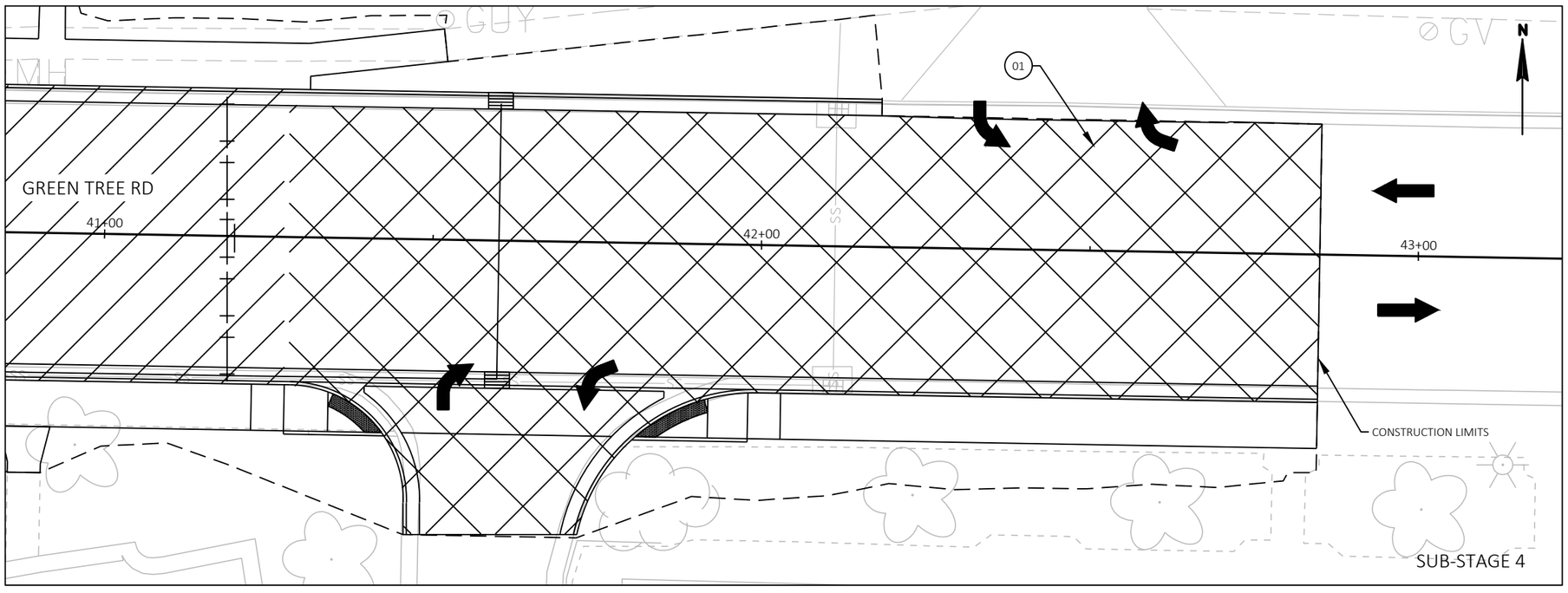
(3) TRAFFIC ON THE BINDER LIFT OF ASPHALT PLACED IN THE PREVIOUS SUB-STAGE

(4) HIGH EARLY STRENGTH CONCRETE AS NOTED IN THE PLAN DETAIL SHEETS.

(5) EXISTING STORM SEWER TO REMAIN

REFER TO TRAFFIC CONTROL STAGING SHEETS FOR ADDITIONAL INFORMATION NOT SHOWN HERE. SUB-STAGE NUMBERING DOES NOT MATCH STAGE NUMBERING USED WITH THE TRAFFIC CONTROL STAGING SHEETS. CONTRACTOR TO WORK WITH THE ENGINEER TO DETERMINE THE BEST TIMELINE TO COMPLETE THESE SUB-STAGES.

ALL WORK REQUIRED TO MAINTAIN A DRIVEABLE SURFACE WILL BE CONSIDERED INCIDENTAL TO THE ITEM "TRAFFIC CONTROL, 1228-16-71"

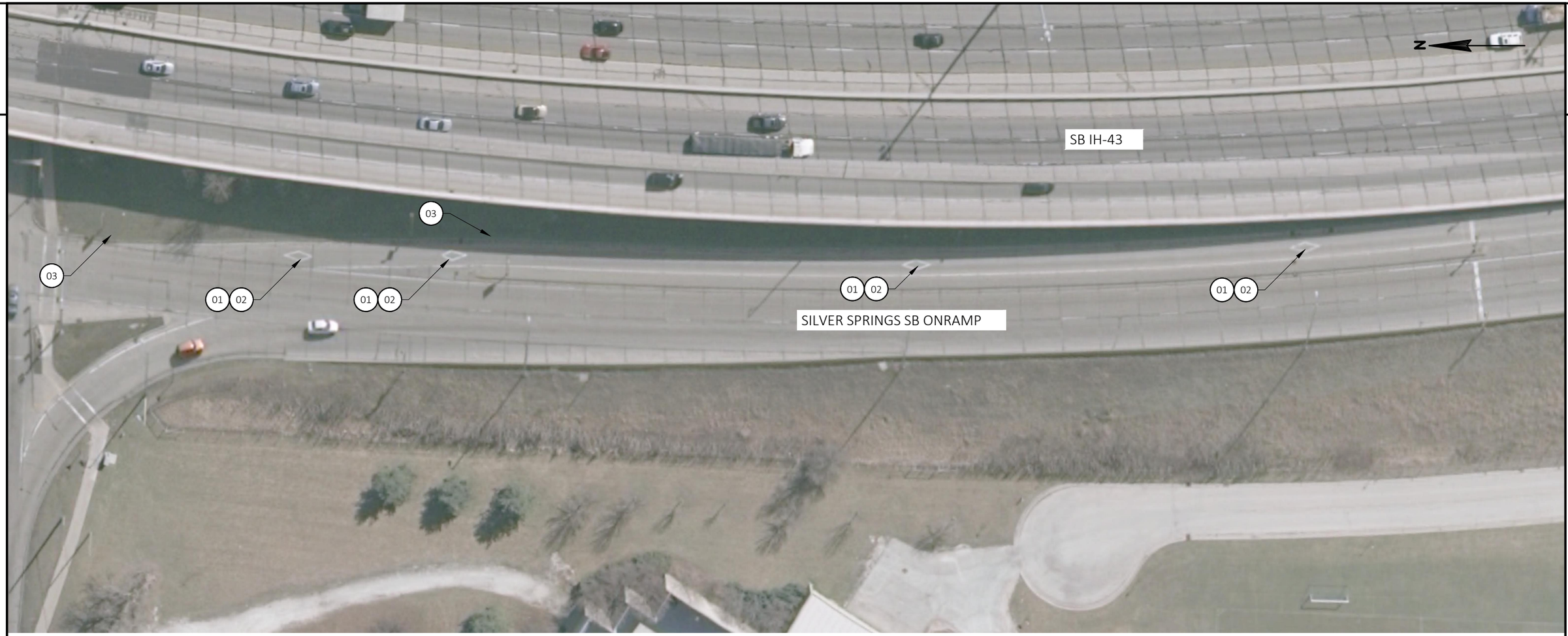


SUB-STAGE 4 NOTES

(1) COMPLETE THE SURFACE LIFT OF ASPHALT. PRIOR TO PAVING OPERATIONS THE ROAD SHALL REMAIN OPEN TO TRAFFIC AS NOTED IN SUB-STAGE 3. CONTRACTOR IS TO AVOID DISTURBING TRAFFIC PATTERNS AS MUCH AS POSSIBLE.

REFER TO TRAFFIC CONTROL STAGING SHEETS FOR ADDITIONAL INFORMATION NOT SHOWN HERE. SUB-STAGE NUMBERING DOES NOT MATCH STAGE NUMBERING USED WITH THE TRAFFIC CONTROL STAGING SHEETS. CONTRACTOR TO WORK WITH THE ENGINEER TO DETERMINE THE BEST TIMELINE TO COMPLETE THESE SUB-STAGES.

ALL WORK REQUIRED TO MAINTAIN A DRIVEABLE SURFACE WILL BE CONSIDERED INCIDENTAL TO THE ITEM "TRAFFIC CONTROL, 1228-16-71"



NOTES

01 REMOVE EXISTING HOV DIAMOND PAVEMENT MARKINGS PRIOR TO THE CLOSURE OF THE SB IH-43 ONRAMP FROM GOOD HOPE ROAD.

02 REPLACE PAVEMENT MARKINGS AT THEIR CURRENT LOCATION. SEE MISCELLANEOUS QUANTITIES FOR ADDITIONAL DETAILS. MARKINGS SHALL BE REPLACED AFTER THE SB-IH-43 ONRAMP FROM GOOD HOPE ROAD IS OPEN TO TRAFFIC. REPLACE MARKINGS DURING A NON PEAK HOUR APPROVED BY THE ENGINEER. ALL TRAFFIC CONTROL REQUIRED SHALL BE INCIDENTAL TO THE PAY ITEM FOR THE HOV MARKINGS.

03 COVER EXISTING R3-51L SIGN AS SHOWN TO THE RIGHT.



R3-51L
48"X78"

LEGEND

COVERING SIGN

CONTRACTOR TO NOTIFY THE ENGINEER AT LEAST 14 DAYS PRIOR TO MODIFICATIONS TO THE RAMP.
ENGINEER TO NOTIFY STOC TO ALLOW FOR CHANGES TO THE RAMP METER SIGNAL TIMING.

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILSSILVER SPRINGS SOUTHBOUND ON-RAMP	SHEET 105	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\025502_TC.DWG
LAYOUT NAME - 025507_tc
PLOT DATE : 11/1/2017 9:47 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:50 FT



2

NOTES

PLACE TYPE 3 BARRICADE WITH SIGN SHOWN ALONG FAIRFIELD CT PRIOR TO THE CLOSURE OF THE GREEN TREE BRIDGE. MODIFY AS NEEDED BASED ON DIRECTION FROM THE ENGINEER.



TYPE III BARRICADE

01

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS	SHEET 106	E

2

MATCHLINE

FAIRFIELD CT.

JEAN NICOLET

IH-43

BENDER RD

GOOD HOPE ROAD

GOOD HOPE SB ON RAMP

I-43 SB

I-43 NB

PORT WASHINGTON ROAD

SB IH 43 UTILIZE WISDOT SDD "TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED HIGHWAY"

PLACE IN GRASS SHOULDER SOUTH OF RADISSON ENTRANCE. SEE NOTE 3

SEE NOTE 2

SEE NOTE 3

GREEN TREE ROAD

700'

500'

1,000'

200'

200'

200'

ROAD CLOSED 1000 FT W20-3C

ROAD CLOSED 500 FT W20-3D

PLACE IN GRASS MEDIAN NORTH OF ENTRANCE TO PICK&SAVE. SEE NOTE 3

PICK 'N SAVE

JEAN NICOLET ROAD

ELM TREE ROAD

CARDINAL STRITCH UNIVERSITY

BRIDGE OUT
0.5 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3B
60"X30"

JEAN NICOLET HIGH SCHOOL

MILWAUKEE RIVER

MILWAUKEE RIVER PARKWAY

DAPHNE ROAD

COVENTRY COURT

1,000'

MATCHLINE (SEE DETAIL ON THIS SHEET)

GREEN TREE RD CLOSED AT I-43 USE GOOD HOPE
101

JEAN NICOLET CLOSED AT GREEN TREE
102

W GREEN TREE CLOSED AT JEAN NICOLET
103

N

ROAD WORK AHEAD W20-1A
A

R3-8F
36"X30"
FLAGS FOR ADDED VISABILITY
B

END ROAD WORK
G20-2A
48"X24"
C

ROAD CLOSED AHEAD W20-3A
D

MAX. 11' WIDTH
W12-52
48"X48"

EACH LANE
W12-52P
42"X36"
F

W24-14R
E

TRUCKS USE LEFT LANE
R4-5L
24"X30"
G

BEGIN SHIFTING TAPER

500' 500' 1,500'

DETAIL 1: I-43 NB LANE SHIFT

NOTES:
1) SEE TRAFFIC CONTROL DETAILS FOR ADDITIONAL INFORMATION FOR FIXED MESSAGE SIGNS.

2) MESSAGE BOARD PLACED PRIOR TO CONSTRUCTION AND REMOVED ONCE CONSTRUCTION HAS STARTED.

3) FIXED MESSAGE SIGN 104 WILL BE ADDED TO THE SAME SUPPORT AS 103 DURING STAGE 2A.

LEGEND

- TRAFFIC CONTROL SIGN
- TYPE 3 BARRICADE WITH SIGN
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- XXX — FIXED MESSAGE SIGN NUMBER (REFER TO TRAFFIC CONTROL - DETAILS FOR SIGN DETAILS)
- WORKZONE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A ADVANCED SIGNING	SHEET 107	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026100_ST1A OVERVIEW.DWG
LAYOUT NAME - 026100_ST1A

PLOT DATE : 10/25/2017 10:50 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

N

SEE PEDESTRIAN DETOUR FOR ADDITIONAL SIDEWALK SIGNAGE

SIDEWALK CLOSED
R9-9
30"X18"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

SEE ADVANCED SIGNING SHEET

PROVIDE GAP IN BARRICADES

R/L GREEN TREE ROAD

GREEN TREE ROAD

500'

31GT

32GT

33GT

34GT

MATCHLINE STA 34+25.00

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

MAINTAIN ACCESS AT ALL TIMES

N ELM TREE ROAD

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A	SHEET 108	E

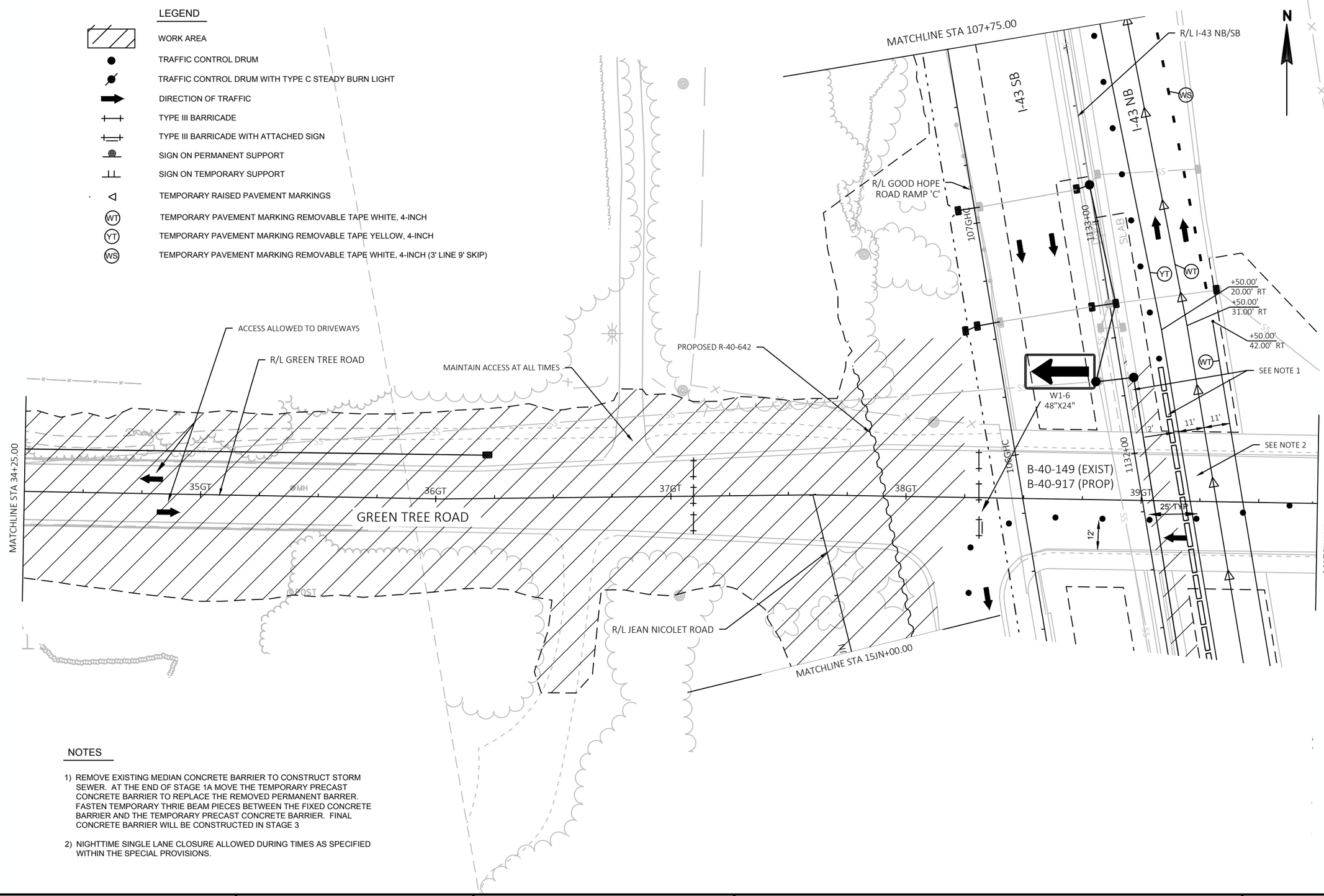
FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026101_ST1A.DWG
LAYOUT NAME - 026101_ST1A

PLOT DATE : 10/25/2017 12:48 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKINGS
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH
- (WS) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH (3' LINE 9' SKIP)



NOTES

1) REMOVE EXISTING MEDIAN CONCRETE BARRIER TO CONSTRUCT STORM SEWER. AT THE END OF STAGE 1A MOVE THE TEMPORARY PRECAST CONCRETE BARRIER TO REPLACE THE REMOVED PERMANENT BARRER. FASTEN TEMPORARY THRIE BEAM PIECES BETWEEN THE FIXED CONCRETE BARRIER AND THE TEMPORARY PRECAST CONCRETE BARRIER. FINAL CONCRETE BARRIER WILL BE CONSTRUCTED IN STAGE 3

2) NIGHTTIME SINGLE LANE CLOSURE ALLOWED DURING TIMES AS SPECIFIED WITHIN THE SPECIAL PROVISIONS.

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A	SHEET 109	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026101_ST1A.DWG
LAYOUT NAME - 026102_ST1A
PLOT DATE : 10/25/2017 12:49 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

N

W1-6
48"X24"

W1-4L
30"X30"

ROAD
CLOSED
500 FT

W20-3D

SEE ADVANCED SIGNING SHEET

10'

40GT

41GT

42GT

43GT

R/L GREEN TREE ROAD

GREEN TREE ROAD

MATCHLINE STA 39+75.00

SS

SEE NOTE 1

SEE NOTE 3

SEE NOTE 2

SEE NOTE 4

+75.00'

N PORT
WASHINGTON ROAD

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A	SHEET 110	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026101_ST1A.DWG
LAYOUT NAME - 026103_ST1A

PLOT DATE : 10/25/2017 12:50 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

DAPHNE ROAD

N

10'

DRIVEWAY TO JEAN
NICOLET HIGH SCHOOL

ST

PLACE SPEED TRAILER AS DIRECTED BY
THE ENGINEER. FACING SOUTH

JEAN NICOLET ROAD

R3-2
24"X24"

COVER EXISTING SIGN

ROAD
CLOSED
1000 FT
W20-3C

I-43 SB

R3-2
24"X24"

ONE
WAY
R6-2R
24"X30"

COVER EXISTING SIGN

END
ROAD WORK
G20-2A
48"X24"

ROAD
CLOSED
500 FT
W20-3D

1110+00 1111+00 1112+00 1113+00 1114+00 1115+00

I-43 NB

MATCHLINE STA 1115+25.00

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- ST SPEED TRAILER

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A	SHEET 111	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026101_ST1A.DWG
LAYOUT NAME - 026104_ST1A

PLOT DATE : 10/25/2017 12:51 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

N

DRIVEWAY TO JEAN NICOLET HIGH SCHOOL

DO NOT ENTER
R5-1
30"X30"

WRONG WAY
R5-1A
36"X24"

10'

12'

JEAN NICOLET ROAD

LANE CLOSED
R11-2L
48"X30"

ONE WAY
R6-2R
24"X30"

R3-2
24"X24"

COVER EXISTING SIGN

ONLY
R3-5L
30"X36"

I-43 SB

MATCHLINE STA 1115+25.00

1116+00 1117+00 1118+00 1119+00 1120+00

MATCHLINE STA 1120+75

I-43 NB

CONSTRUCTION DURING NIGHT TIME SINGLE LANE CLOSURE OF SB I-43 INSIDE LANE.
SEE SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM"

2

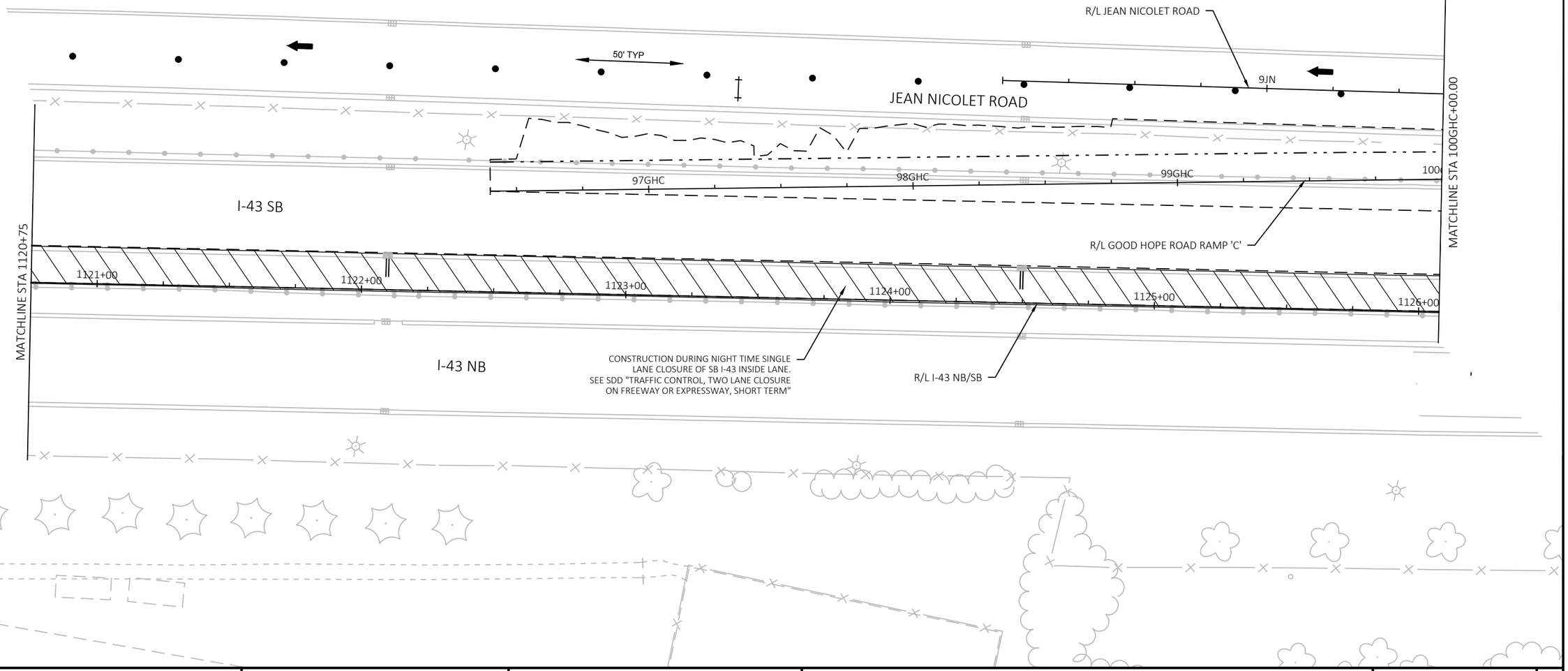
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A	SHEET 112	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026101_ST1A.DWG
LAYOUT NAME - 026105_ST1A
PLOT DATE : 10/25/2017 12:52 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A	SHEET 113	E

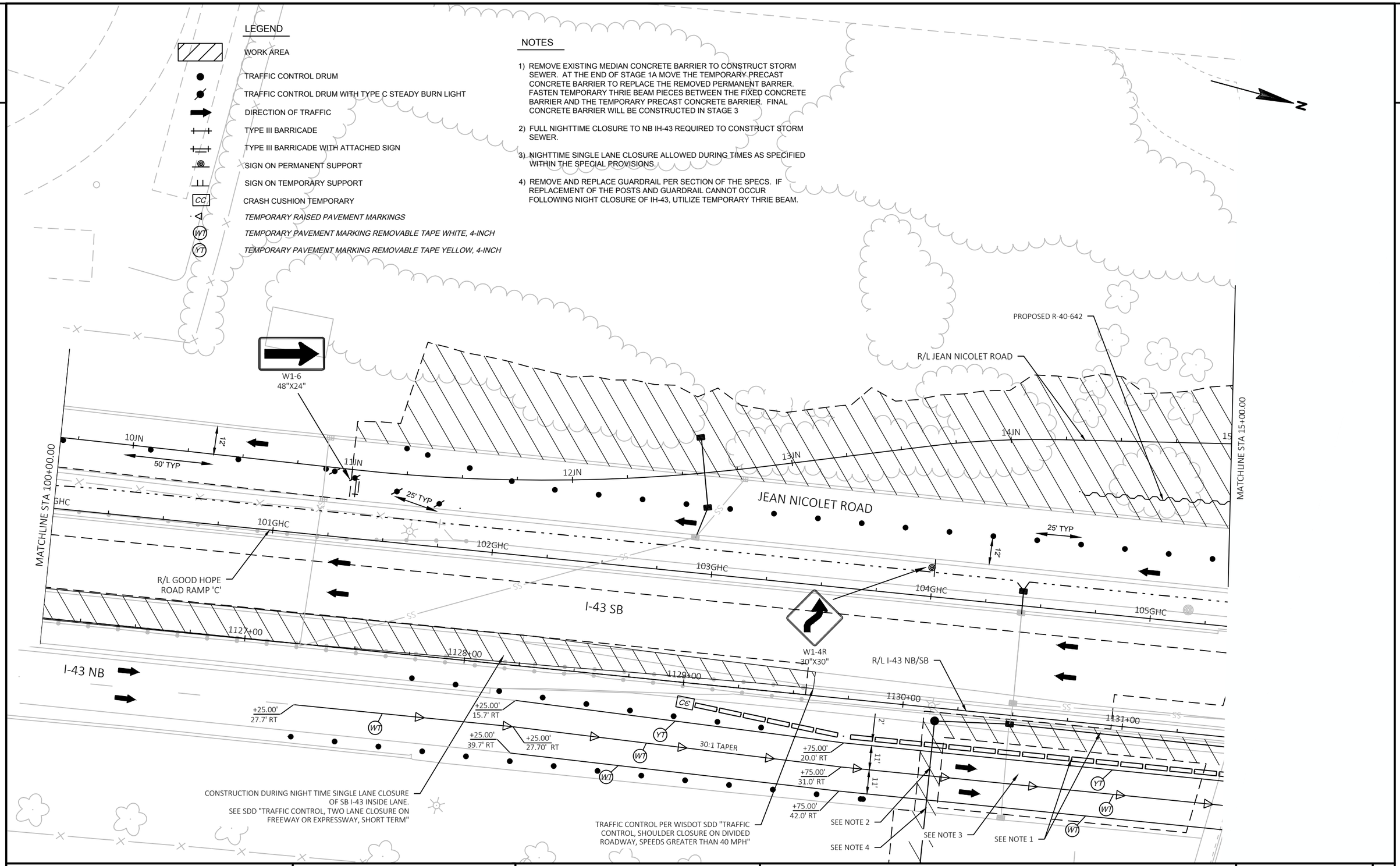
FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026101_ST1A.DWG
LAYOUT NAME - 026106_ST1A
PLOT DATE : 10/25/2017 12:53 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CC — CRASH CUSHION TEMPORARY
- *TEMPORARY RAISED PAVEMENT MARKINGS*
- WT — *TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH*
- YT — *TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH*

NOTES

1) REMOVE EXISTING MEDIAN CONCRETE BARRIER TO CONSTRUCT STORM SEWER. AT THE END OF STAGE 1A MOVE THE TEMPORARY PRECAST CONCRETE BARRIER TO REPLACE THE REMOVED PERMANENT BARRER. FASTEN TEMPORARY THRIE BEAM PIECES BETWEEN THE FIXED CONCRETE BARRIER AND THE TEMPORARY PRECAST CONCRETE BARRIER. FINAL CONCRETE BARRIER WILL BE CONSTRUCTED IN STAGE 3
2) FULL NIGHTTIME CLOSURE TO NB IH-43 REQUIRED TO CONSTRUCT STORM SEWER.
3) NIGHTTIME SINGLE LANE CLOSURE ALLOWED DURING TIMES AS SPECIFIED WITHIN THE SPECIAL PROVISIONS.
4) REMOVE AND REPLACE GUARDRAIL PER SECTION OF THE SPECS. IF REPLACEMENT OF THE POSTS AND GUARDRAIL CANNOT OCCUR FOLLOWING NIGHT CLOSURE OF IH-43, UTILIZE TEMPORARY THRIE BEAM.



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A	SHEET 114	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026101_ST1A.DWG
LAYOUT NAME - 026107_ST1A

PLOT DATE : 10/25/2017 12:54 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY RAISED PAVEMENT MARKINGS

WT TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

YT TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

WS TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH (3' LINE 9' SKIP)

N

MATCHLINE STA 107+75.00

108GHC

109GHC

110GHC

111GHC

112GHC

113GHC

I-43 SB

R/L GOOD HOPE ROAD RAMP 'C'

1134+00

1135+00

1136+00

1137+00

1138+00

1139+00

+64.00'
MATCH EXISTING

+64.00'
24.88' RT

+64.00'
MATCH EXISTING

+61.14'
MATCH EXISTING

I-43 NB

R/L I-43 NB/SB

EXIT RAMP TO GOOD HOPE ROAD

END ROAD WORK
G20-2A
48"X24"

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1A	SHEET 115	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026101_ST1A.DWG
LAYOUT NAME - 026108_ST1A

PLOT DATE : 10/25/2017 12:56 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

MATCHLINE

FAIRFIELD CT.

102

JEAN NICOLET

IH-43

BENDER RD

102

102

BEGIN SHOULDER TAPER FOR LANE CLOSURE (SEE SEPARATE SHEET FOR DETAILS)

SEE NOTE 2

GOOD HOPE ROAD

SEE WISDOT SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY" FOR ADVANCED SIGNING

MB

GOOD HOPE SB ON RAMP

I-43 SB

I-43 NB

PORT WASHINGTON ROAD

C

A

200'

103

GREEN TREE ROAD

C

700'

500'

1,000'

ROAD CLOSED 1000 FT

W20-3C

ROAD CLOSED 500 FT

W20-3D

C

A

A

B

103

A

200'

200'

200'

C

103

200'

A

PICK 'N SAVE

JEAN NICOLET ROAD

ELM TREE ROAD

101

BRIDGE OUT
0.5 MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3B
60"X30"

101

101

MILWAUKEE RIVER PARKWAY

MILWAUKEE RIVER

JEAN NICOLET HIGH SCHOOL

CARDINAL STRITCH UNIVERSITY

COVENTRY COURT

DAPHNE ROAD

DAPHNE ROAD

C

1,000'

D

MATCHLINE (SEE DETAIL ON THIS SHEET)

GREEN TREE RD CLOSED AT I-43 USE GOOD HOPE

101

JEAN NICOLET CLOSED AT GREEN TREE

102

W GREEN TREE CLOSED AT JEAN NICOLET

103

N

ROAD WORK AHEAD

W20-1A

A

ONLY ONLY

R3-8F
36"X30"

B

END ROAD WORK

G20-2A
48"X24"

C

ROAD CLOSED AHEAD

W20-3A

D

NOTES:
1) SEE TRAFFIC CONTROL DETAILS FOR ADDITIONAL INFORMATION FOR FIXED MESSAGE SIGNS.

2) PLACED PRIOR TO CLOSING THE RAMP AS NOTED IN THE PROSECUTION AND PROGRESS. REMOVED ONCE THE RAMP IS CLOSED.

LEGEND

- TRAFFIC CONTROL SIGN
- TYPE 3 BARRICADE WITH SIGN
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- XXX — FIXED MESSAGE SIGN NUMBER (REFER TO TRAFFIC CONTROL - DETAILS FOR SIGN DETAILS)
- WORKZONE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B ADVANCED SIGNING	SHEET 116	E

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY PRECAST CONCRETE BARRIER

NOTE: AREAS ALONG GREEN TREE, JEAN NICOLET, AND IH-43 NOT SHOWN ARE TO REMAIN AS SHOWN ON STAGE 1A

N

BORE

BORE

R/L GOOD HOPE ROAD RAMP 'C'

FO

FO

108GHC

109GHC

110GHC

111GHC

112GHC

113GHC

I-43 SB

1134+00

1135+00

1136+00

1137+00

1138+00

1139+00

SLAB

SLAB

R/L I-43 NB/SB

I-43 NB

SS

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET 117	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026151_ST1B.DWG
LAYOUT NAME - 026158_ST1b

PLOT DATE : 10/24/2017 10:06 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY PRECAST CONCRETE BARRIER

NOTE: AREAS ALONG GREEN TREE, JEAN NICOLET, AND IH-43 NOT SHOWN ARE TO REMAIN AS SHOWN ON STAGE 1A

N

SLAB

SLAB

SLAB

SLAB

GOOD HOPE ROAD RAMP 'C'

R/L GOOD HOPE ROAD RAMP 'C'

MATCHLINE STA 119GHC+20

MATCHLINE STA 113+50.00

116GHC

117GHC

118GHC

119GHC

115GHC

114GHC

1140+00

1141+00

1142+00

1143+00

1144+00

I-43 NB

I-43 SB

R/L I-43 NB/SB

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET 118	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026151_ST1B.DWG
LAYOUT NAME - 026159_ST1b

PLOT DATE : 10/24/2017 10:07 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

N

END
ROAD WORK
G20-2A
48"X24"

OH
OH

GOOD HOPE ROAD

MH
MH
MH

SLAB

POST

MATCHLINE GOOD HOPE ROAD

LEAVE DRUM OPENING FOR DRIVEWAY

25'

SEE WISDOT SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY" FOR ADDITIONAL DETAILS

LANE
CLOSED
R11-2L
48"X30"

ONLY ONLY

COVER PORTION OF
EXISTING SIGN

Green Bay
Downtown
Milwaukee

COVER PORTION OF
EXISTING SIGN

LANE
CLOSED
R11-2L
48"X30"

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT

SEE SEPARATE DETOUR SHEET FOR SIGNING RELATED TO THE CLOSURE OF THE SB IH-43 ONRAMP FROM GOOD HOPE ROAD

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET 119	E

2

2

N

I-43 SB

I-43 NB

1147+00

1146+00

1145+00

SLAB

TYPE 3 BARRICADE WITH
RAMP CLOSED
R11-2R
48"X30"

R3-2
24"X24"

TYPE 3 BARRICADE WITH
RAMP CLOSED
R11-2R
48"X30"

TYPE 3 BARRICADE WITH
RAMP CLOSED
R11-2R
48"X30"

25'

25'

MATCHLINE GOOD HOPE ROAD

GOOD HOPE ROAD

MATCHLINE STA 119GHC+20

LEGEND

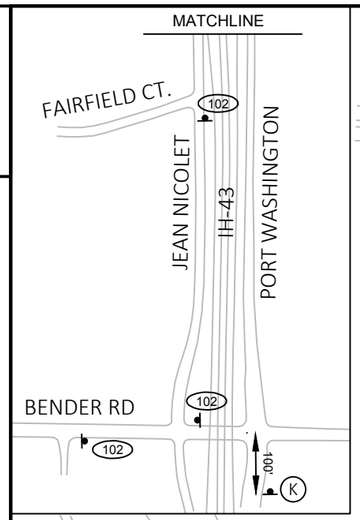
- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET 120	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026151_ST1B.DWG
LAYOUT NAME - 026161_ST1b

PLOT DATE : 10/24/2017 10:09 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



BEGIN SHOULDER TAPER FOR LANE CLOSURE (SEE SEPARATE SHEET FOR DETAILS)

SEE DETAIL 1 FOR SB 43 ADVANCED SIGNING PRIOR TO LANE SHIFT

SEE SEPARATE SHEET FOR TURN LANE CLOSURE DETAILS

SEE WISDOT SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY" FOR ADVANCED SIGNING

GOOD HOPE ROAD

GOOD HOPE SB ON RAMP

I-43 SB

I-43 NB

PORT WASHINGTON ROAD

J — 200' — C — 200' — J

103 SEE NOTE 2

G 100' NORTH OF TURN BAY

A F 103 SEE NOTE 2 A

200' 200' 200'

C H ON LIGHT POLE SOUTH OF TURN BAY

103 SEE NOTE 3

MB SEE NOTE 3

GREEN TREE ROAD

C 700' 500' 1,000'

C A

ROAD CLOSED 1000 FT W20-3C

ROAD CLOSED 500 FT W20-3D

ELM TREE ROAD

JEAN NICOLET ROAD

PICK 'N SAVE

SEE DETAIL 1 FOR NB 43 ADVANCED SIGNING PRIOR TO LANE SHIFT

J 100'

CARDINAL STRITCH UNIVERSITY

101

BRIDGE OUT
0.5 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3B
60"X30"

101

101

MILWAUKEE RIVER PARKWAY

MILWAUKEE RIVER

JEAN NICOLET HIGH SCHOOL

100' NORTH OF STOP SIGN

C

DAPHNE ROAD

1,000'

D

COVENTRY COURT

DAPHNE ROAD

MATCHLINE (SEE DETAIL ON THIS SHEET)

GREEN TREE RD CLOSED AT I-43 USE GOOD HOPE
101

JEAN NICOLET CLOSED AT GREEN TREE
102

W GREEN TREE CLOSED AT JEAN NICOLET
103

N

BRIDGE OUT
R11-2B
48"X30"

ROAD WORK AHEAD W20-1A
A

ROAD WORK 1/2 MILE W20-1G
B

END ROAD WORK
G20-2A
C

ROAD CLOSED AHEAD W20-3A
D

W1-4BL
48"X48"
E

ONLY ONLY
R3-8F
36"X30"
FLAGS FOR ADDED VISABILITY
F

R3-1

104 GREEN TREE

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"
G

R3-2

104 GREEN TREE

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"
H

104 GREEN TREE

BRIDGE OUT
.2 MILES AHEAD
R11-3C
60"X24"
J

104 GREEN TREE

BRIDGE OUT
1 MILES AHEAD
R11-3C
60"X24"
K

MAX. 11' WIDTH
W12-52
48"X48"

EACH LANE
W12-52P
42"X36"

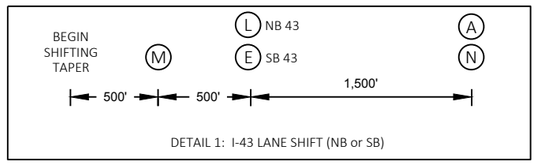
TRUCKS USE RIGHT LANE
R4-5
24"X30"
N

W24-1AL
L

NOTES:
1) SEE TRAFFIC CONTROL DETAILS FOR ADDITIONAL INFORMATION FOR FIXED MESSAGE SIGNS.

2) COVER BOTTOM TWO LINES OF FMS WITH SIGN R11-2B "BRIDGE OUT" 48"x30"

3) MESSAGE BOARD PLACED PRIOR TO CLOSING JEAN NICOLET AND REMOVED ONCE CONSTRUCTION BEGINS.



DETAIL 1: I-43 LANE SHIFT (NB or SB)

LEGEND

- TRAFFIC CONTROL SIGN
- BARRICADE TYPE 3 WITH SIGN
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- XXX FIXED MESSAGE SIGN NUMBER (REFER TO TRAFFIC CONTROL - DETAILS FOR SIGN DETAILS)
- WORKZONE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A ADVANCED SIGNING	SHEET 121	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026200_ST2A OVERVIEW.DWG
LAYOUT NAME - 026200_ST2A
PLOT DATE : 10/20/2017 7:50 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

N

SEE PEDESTRIAN DETOUR FOR ADDITIONAL SIDEWALK SIGNAGE

SIDEWALK CLOSED
R9-9
30"X18"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

SEE ADVANCED SIGNING SHEET

PROVIDE GAP IN BARRICADES

R/L GREEN TREE ROAD

GREEN TREE ROAD

500'

31GT

32GT

33GT

34GT

MATCHLINE STA 34+25.00

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

MAINTAIN ACCESS AT ALL TIMES

N ELM TREE ROAD

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 122	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026201_ST2a

PLOT DATE : 11/1/2017 10:39 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY RAISED PAVEMENT MARKINGS

TEMPORARY PRECAST CONCRETE BARRIER

(WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

(YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

N

MATCHLINE STA 107+75.00

I-43 SB

I-43 NB

30:1 TAPER

+75.00'
34.4' RT

R/L GOOD HOPE
ROAD RAMP 'C'

106GHC

1133+00

1132+00

+00.00'
7.5' RT

+00.00'
18.5' RT

+00.00'
29.5' RT

4'
TO FOB

5'
TO FOB

1'

11'

(YT)

(WT)

R/L I-43 NB/SB

PROPOSED R-40-642

MAINTAIN ACCESS AT ALL TIMES

R/L GREEN TREE ROAD

MATCHLINE STA 34+25.00

35GT

36GT

37GT

38GT

39GT

B-40-149
(EXIST)
B-40-917
(PROP)

GREEN TREE ROAD

MH

R/L JEAN NICOLET ROAD

MATCHLINE STA 15JN+00.00

MATCHLINE STA 39+75.00

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 123	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026202_ST2a

PLOT DATE : 11/1/2017 10:40 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

N

PROPOSED R-40-641

R/L GREEN TREE ROAD

BRIDGE OUT
R11-2B
48"X30"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

SIDEWALK CLOSED
R9-9
30"X18"

40GT

41GT

42GT

43GT

GREEN TREE ROAD

SEE PEDESTRIAN DETOUR FOR ADDITIONAL SIGNS RELATED TO THE SIDEWALK CLOSURE

SIDEWALK CLOSED
R9-9
30"X18"

SEE SEPARATE TRAFFIC CONTROL DETAILS FOR MAINTAINING ACCESS TO DRIVEWAYS

MATCHLINE STA 39+75.00

FOB

N PORT WASHINGTON ROAD

2

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 124	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026203_ST2a

PLOT DATE : 11/1/2017 10:41 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

2

DAPHNE ROAD

DRIVEWAY TO JEAN
NICOLET HIGH SCHOOL

REFER TO STAGE 1 FOR
SIGNING ALONG JEAN
NICOLET ROAD

JEAN NICOLET ROAD

I-43 SB

END
ROAD WORK
G20-2A
48"X24"

1110+00 1111+00 1112+00 1113+00 1114+00 1115+00

MATCHLINE STA 1115+25.00

I-43 NB

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 125	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026204_ST2a

PLOT DATE : 11/1/2017 10:42 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKINGS
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

N

DRIVEWAY TO JEAN NICOLET HIGH SCHOOL

10'

ROAD CLOSED

R11-2
48"X30"

REFER TO STAGE 1 FOR SIGNING ALONG JEAN NICOLET ROAD

JEAN NICOLET ROAD

+35.00'
MATCH EXIST

30:1 TAPER

+35.00'
-25.7' LT

+35.00'
MATCH EXIST

+35.00'
MATCH EXIST

I-43 SB

MATCHLINE STA 1115+25.00

1116+00 1117+00 1118+00 1119+00 1120+00

MATCHLINE STA 1120+75

I-43 NB

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 126	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026205_ST2a

PLOT DATE : 11/1/2017 10:42 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

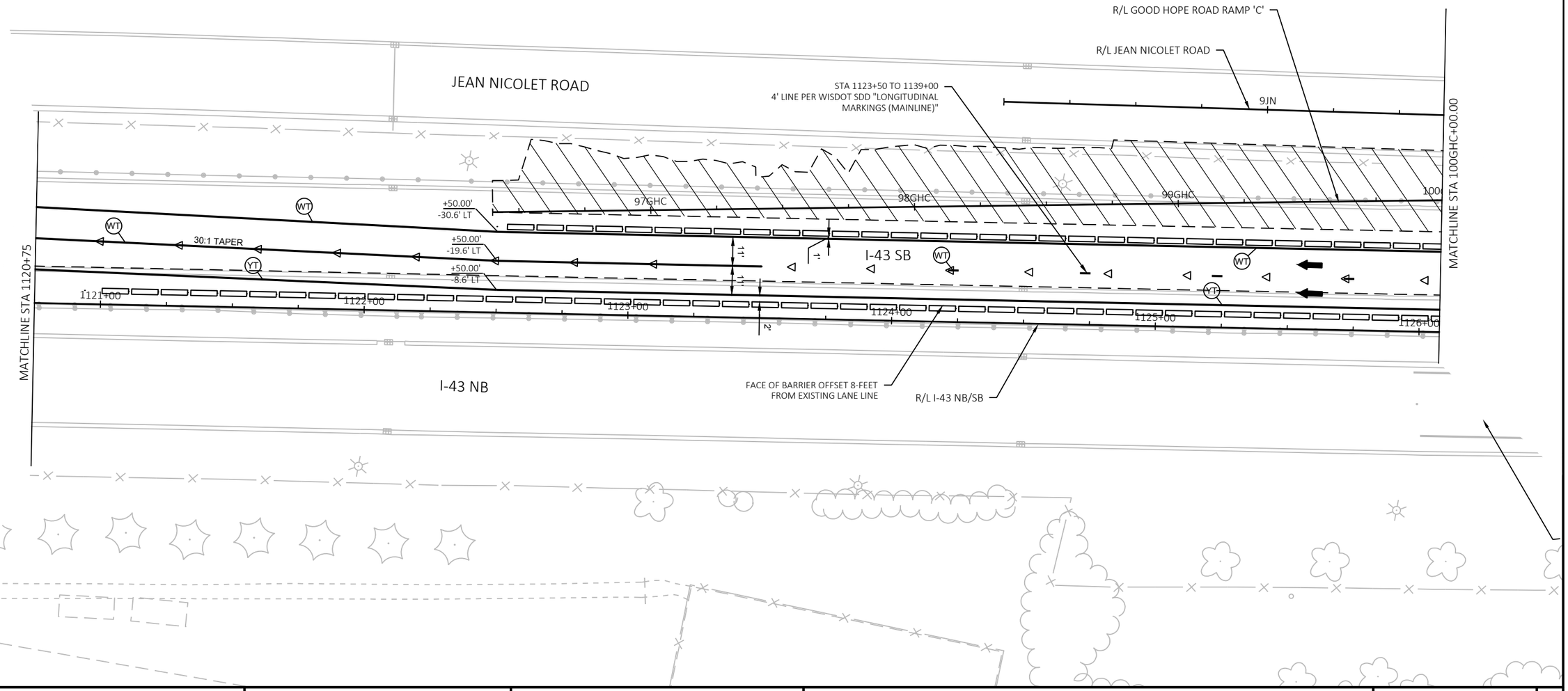
SIGN ON TEMPORARY SUPPORT

TEMPORARY RAISED PAVEMENT MARKINGS

WT TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

YT TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

N



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 127	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026206_ST2a

PLOT DATE : 11/1/2017 10:43 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY PRECAST CONCRETE BARRIER

TEMPORARY RAISED PAVEMENT MARKINGS

WT TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

YT TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

N

R/L GOOD HOPE ROAD RAMP 'C'

MATCHLINE STA 100+00.00

MATCHLINE STA 115+00.00

PROPOSED R-40-642

EXISTING R-40-30 TO BE REMOVED

R/L JEAN NICOLET ROAD

JEAN NICOLET ROAD

10JN 11JN 12JN 13JN 14JN

GHC 101GHC 102GHC 103GHC 104GHC 105GHC

W1-4BR 48"X48"

11' 12' 11' 1'

1127+00 1128+00 1129+00 1130+00 1131+00

I-43 SB

I-43 NB

+65.00' -5.0' LT

+00.00' MATCH EXIST

+00.00' 27.7' RT

+00.00' MATCH EXIST

+00.00' MATCH EXIST

30:1 TAPER

25'

+50.00' 8.5' RT

+50.00' 19.5' RT

+50.00' 30.5' RT

MATCH FACE OF EXISTING BARRIER TO FACE OF TEMPORARY CONCRETE BARRIER

TEMPORARY THRIE BEAM TRANSITION

STA 1123+50 TO 1139+00 4' LINE PER WISDOT SDD "LONGITUDINAL MARKINGS (MAINLINE)"

4' TO FOB

5' TO FOB

WT YT CC

SEE ADVANCED SIGNING SHEET FOR APPROACH SIGNS FOR THE LANE SHIFT

R/L I-43 NB/SB

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 128	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026207_ST2a

PLOT DATE : 11/1/2017 10:44 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY RAISED PAVEMENT MARKINGS

TEMPORARY PRECAST CONCRETE BARRIER

(WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

(YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

(WS) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH (3' LINE 9' SKIP)

N

MATCHLINE STA 107+75.00

108GHC

109GHC

110GHC

111GHC

112GHC

113GHC

MATCHLINE STA 113+50.00

R/L GOOD HOPE ROAD RAMP 'C'

STA 1123+50 TO 1139+00
4' LINE PER WISDOT SDD "LONGITUDINAL MARKINGS (MAINLINE)"

FO

4" TO FOG

11'

11'

I-43 SB

+99.98'
-19.1' LT

1134+00

1135+00

1136+00

1137+00

1138+00

1139+00

SLAB

SLAB

+00.00'
MATCH EXIST

+88.68'
33.0' RT

30:1 TAPER

+00.00'
29.1' RT

+00.00'
MATCH EXIST

+00.00'
MATCH EXIST

R/L I-43 NB/SB

I-43 NB

EXIT

E5-1
72"X60"

REMOVE CONFLICTING MARKINGS
PRIOR TO TRAFFIC BEING PLACED ON
NEW CONFIGURATION

3-FOOT MARKING, 9-FOOT SKIP
8-INCHES THICK, PLACE 4-INCH TAPE SIDE BY SIDE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 129	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026208_ST2a

PLOT DATE : 11/1/2017 10:45 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKINGS
- TEMPORARY PRECAST CONCRETE BARRIER
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

NOTE: TRAFFIC CONTROL ITEMS ON GOOD HOPE ROAD NOT SHOWN ARE TO REMAIN AS SHOWN ON STAGE 1B

N

SLAB

116GHC

117GHC

118GHC

119GHC

GOOD HOPE ROAD RAMP 'C'

R/L GOOD HOPE ROAD RAMP 'C'

SLAB

115GHC

114GHC

MATCHLINE STA 113+50.00

+00.00'
-30.0' LT

25'

+75.00'
MATCH EXIST

+00.00'
-19.0' LT

11'

30:1 TAPER

+75.00'
-26.5' LT

+75.00'
MATCH EXIST

+00.00'
-8.0' LT

11'

+75.00'
MATCH EXIST

1140+00

1141+00

1142+00

1143+00

1144+00

1145+00

I-43 NB

I-43 SB

SLAB

SLAB

GOOD HOPE ROAD

END
ROAD WORK
G20-2A
48"X24"

R/L I-43 NB/SB

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2A	SHEET 130	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026201_ST2A.DWG
LAYOUT NAME - 026209_ST2a

PLOT DATE : 11/1/2017 10:46 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

MATCHLINE

FAIRFIELD CT.

JEAN NICOLET

IH-43

PORT WASHINGTON

BENDER RD

GOOD HOPE ROAD

GOOD HOPE SB ON RAMP

I-43 SB

I-43 NB

PORT WASHINGTON ROAD

SEE DETAIL 1
FOR SB 43 ADVANCED SIGNING
PRIOR TO LANE SHIFT

GREEN TREE ROAD

JEAN NICOLET ROAD

ELM TREE ROAD

PICK 'N SAVE

SEE DETAIL 1
FOR NB 43 ADVANCED SIGNING PRIOR TO LANE SHIFT

CARDINAL STRITCH UNIVERSITY

JEAN NICOLET HIGH SCHOOL

COVENTRY COURT

DAPHNE ROAD

DAPHNE ROAD

MILWAUKEE RIVER PARKWAY

MILWAUKEE RIVER

MATCHLINE (SEE DETAIL ON THIS SHEET)

GREEN TREE RD CLOSED AT I-43 USE GOOD HOPE (101)

JEAN NICOLET CLOSED AT GREEN TREE (102)

W GREEN TREE BRIDGE OUT R11-2B 48"X30" (103)

ROAD WORK AHEAD W20-1A (A)

ROAD WORK 1/2 MILE W20-1G (B)

END ROAD WORK G20-2A (C)

ROAD CLOSED AHEAD W20-3A (D)

W1-4BR (E)

R3-8F 36"X30" FLAGS FOR ADDED VISABILITY (F)

R3-1 — 104 **GREEN TREE** / **ROAD CLOSED TO THRU TRAFFIC** R11-4 60"X30" (G)

R3-2 — 104 **GREEN TREE** / **ROAD CLOSED TO THRU TRAFFIC** R11-4 60"X30" (H)

104 **GREEN TREE** / **BRIDGE OUT .2 MILES AHEAD** R11-3C 60"X24" (J)

104 **GREEN TREE** / **BRIDGE OUT 1 MILES AHEAD** R11-3C 60"X24" (K)

BRIDGE OUT 0.5 MILES AHEAD LOCAL TRAFFIC ONLY R11-3B 60"X30"

W24-1AR (L)

MAX. 11' WIDTH W12-52 48"X48" (M)

EACH LANE W12-52P 42"X36"

TRUCKS USE LEFT LANE R4-5L 24"X30" (N)

ROAD CLOSED 1000 FT W20-3C

ROAD CLOSED 500 FT W20-3D

BEGIN SHIFTING TAPER (M) — 500' — 500' — 1,500'

L NB 43 / E SB 43 — A / N NB 43 ONLY

DETAIL 1: I-43 LANE SHIFT (NB or SB)

NOTES:
1) SEE TRAFFIC CONTROL DETAILS FOR ADDITIONAL INFORMATION FOR FIXED MESSAGE SIGNS.

LEGEND

- TRAFFIC CONTROL SIGN
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- XXX — FIXED MESSAGE SIGN NUMBER (REFER TO TRAFFIC CONTROL - DETAILS FOR SIGN DETAILS)
- WORKZONE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B ADVANCED SIGNING	SHEET 131	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026250_ST2B OVERVIEW.DWG
LAYOUT NAME - 026250_ST2B
PLOT DATE : 10/25/2017 10:51 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

N

SEE PEDESTRIAN DETOUR FOR ADDITIONAL SIDEWALK SIGNAGE

SIDEWALK CLOSED
R9-9
30"X18"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

SEE ADVANCED SIGNING SHEET

PROVIDE GAP IN BARRICADES

R/L GREEN TREE ROAD

GREEN TREE ROAD

500'

31GT

32GT

33GT

34GT

MATCHLINE STA 34+25.00

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

MAINTAIN ACCESS AT ALL TIMES

N ELM TREE ROAD

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 132	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026251_ST2B

PLOT DATE : 11/1/2017 10:12 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

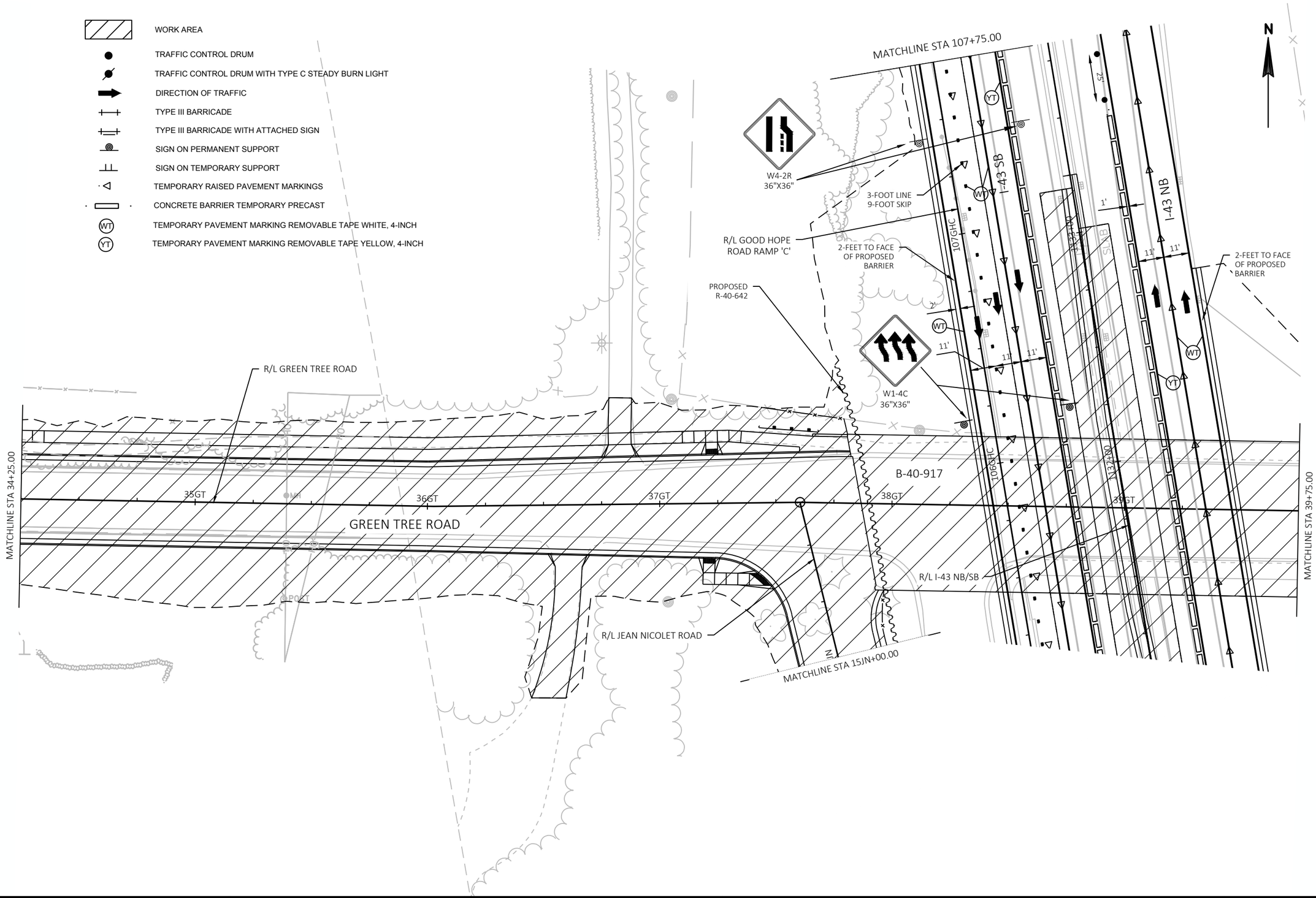
SIGN ON TEMPORARY SUPPORT

TEMPORARY RAISED PAVEMENT MARKINGS

CONCRETE BARRIER TEMPORARY PRECAST

(WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

(YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 133	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026252_ST2B

PLOT DATE : 11/1/2017 10:13 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

N

PROPOSED B-40-917

R/L GREEN TREE ROAD

BRIDGE OUT
R11-2B
48"X30"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

SIDEWALK CLOSED
R9-9
30"X18"

MATCHLINE STA 39+75.00

40GT

41GT

42GT

43GT

GREEN TREE ROAD

SEE PEDESTRIAN DETOUR FOR ADDITIONAL SIGNS RELATED TO THE SIDEWALK CLOSURE

SIDEWALK CLOSED
R9-9
30"X18"

SEE SEPARATE TRAFFIC CONTROL DETAILS FOR MAINTAINING ACCESS TO DRIVEWAYS

PROPOSED R-40-641

N PORT WASHINGTON ROAD

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 134	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026253_ST2B

PLOT DATE : 11/1/2017 10:14 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

DAPHNE ROAD

DRIVEWAY TO JEAN
NICOLET HIGH SCHOOL

REFER TO STAGE 1A
FOR SIGNING ALONG
JEAN NICOLET ROAD

JEAN NICOLET ROAD

I-43 SB

END
ROAD WORK
G20-2A

1110+00 1111+00 1112+00 1113+00 1114+00 1115+00

MATCHLINE STA 1115+25.00

I-43 NB

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 135	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026254_ST2B

PLOT DATE : 11/1/2017 10:14 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKINGS
- (F) FINAL PAVEMENT MARKINGS, REFER TO OTHER PLAN SHEETS

N

DRIVEWAY TO JEAN NICOLET HIGH SCHOOL

ROAD CLOSED
R11-2
48"X30"

REFER TO STAGE 1A FOR SIGNING ALONG JEAN NICOLET ROAD

JEAN NICOLET ROAD

+35.00' MATCH EXIST (F)

+35.00' MATCH EXIST (F)

+35.00' MATCH EXIST (F)

I-43 SB

I-43 NB

MATCHLINE STA 1115+25.00

MATCHLINE STA 1120+75

1116+00 1117+00 1118+00 1119+00 1120+00

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 136	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026255_ST2B
PLOT DATE : 11/1/2017 10:15 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

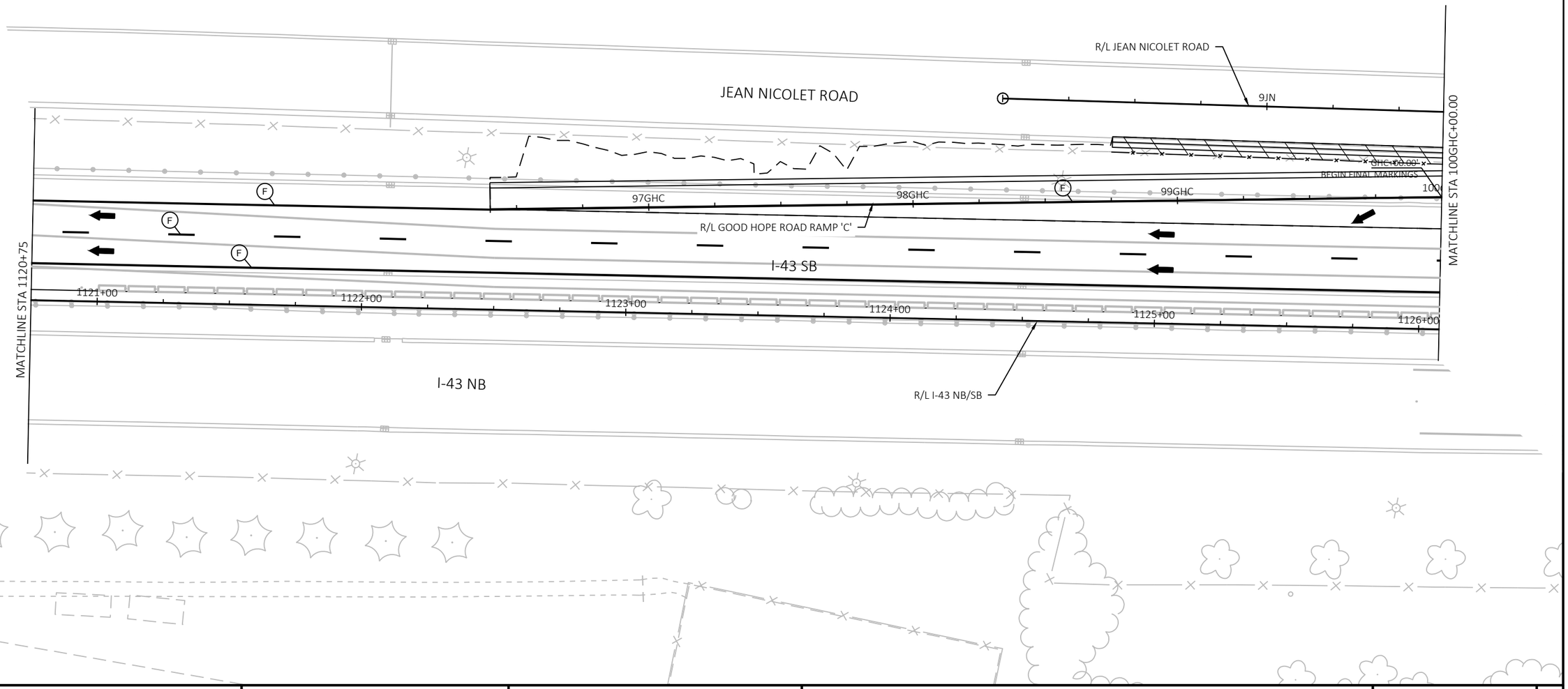
TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

F FINAL PAVEMENT MARKINGS, REFER TO OTHER PLAN SHEETS



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 137	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026256_ST2B

PLOT DATE : 11/1/2017 10:16 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY RAISED PAVEMENT MARKINGS

CONCRETE BARRIER TEMPORARY PRECAST

(WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

(YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

(F) FINAL PAVEMENT MARKINGS, REFER TO OTHER PLAN SHEETS

N

R/L GOOD HOPE ROAD RAMP 'C'

R/L JEAN NICOLET ROAD

JEAN NICOLET ROAD

MATCHLINE STA 100+00.00

MATCHLINE STA 15+00.00

10JN

11JN

12JN

13JN

14JN

GHC

101GHC

102GHC

103GHC

104GHC

105GHC

3-FOOT LINE, 9-FOOT SKIP

GHC+00.00'
0.0'

25'

GHC+75.00'
12.0' RT

GHC+50.00'
24.0' RT

GHC+50.00'
BEGIN FINAL MARKINGS

GHC+25.00'
BEGIN FINAL MARKINGS

I-43 SB

30:1 TAPER

1127+00

1128+00

1129+00

1130+00

1131+00

+00.00'
MATCH EXISTING

+00.00'
27.7' RT

+00.00'
MATCH EXISTING

I-43 NB

25'

30:1 TAPER

SEE ADVANCED SIGNING SHEET FOR APPROACH SIGNS FOR THE LANE SHIFT

R/L I-43 NB/SB

RIGHT LANE ENDS
W09-1R

GHC+00.00'
-6.0' LT

2-FEET TO FACE OF PROPOSED BARRIER

GHC+00.00'
5.0' RT

GHC+00.00'
16.0' RT

GHC+00.00'
27.0' RT

+00.00'
23.0' RT

+00.00'
34.0' RT

+00.00'
45.0' RT

2-FEET TO FACE OF PROPOSED BARRIER

12'

11'

1'

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 138	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026257_ST2B

PLOT DATE : 11/1/2017 10:17 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKINGS
- CONCRETE BARRIER TEMPORARY PRECAST
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH
- (F) FINAL PAVEMENT MARKINGS, REFER TO OTHER PLAN SHEETS

N

MATCHLINE STA 107+75.00

2-FEET TO FACE OF PROPOSED BARRIER

3-FOOT MARKING, 9-FOOT SKIP

GHC+42.29' -6.0' LT

GHC+50.00' 5.0' RT

108GHC

109GHC

110GHC

111GHC

112GHC

113GHC

R/L GOOD HOPE ROAD RAMP 'C'

GHC+00.00' 0.0'

GHC+00.00' BEGIN FINAL MARKINGS

GHC+00.00' BEGIN FINAL MARKINGS

MATCHLINE STA 113+50.00

GHC+50.00' 16.0' RT

GHC+50.00' 27.0' RT

35:1 TAPER

30:1 TAPER

GHC+00.00' 12.0' RT

+50.00' -38.7' LT

+75.00' -26.7' LT

+00.00' BEGIN FINAL MARKINGS

+75.00' BEGIN FINAL MARKINGS

+00.00' BEGIN FINAL MARKINGS

I-43 SB

+00.00' BEGIN FINAL MARKINGS

CC

YT

25'

12'

1134+00

1135+00

1136+00

1137+00

1138+00

1139+00

SLAB

R/L I-43 NB/SB

SLAB

+42.00' 23.0' RT

+42.00' 34.0' RT

+42.00' 45.0' RT

+00.00' 45.0' RT

+36.99' MATCH EXISTING

+37.00' 28.7' RT

I-43 NB

+37.00' MATCH EXISTING

+37.00' MATCH EXISTING

3-FOOT MARKING, 9-FOOT SKIP
8-INCHES THICK, PLACE 4-INCH TAPE SIDE BY SIDE

I-43 NB OFFRAMP TO GOOD HOPE ROAD

END ROAD WORK
G20-2A

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 139	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026258_ST2B

PLOT DATE : 11/1/2017 10:18 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TEMPORARY RAISED PAVEMENT MARKINGS

CONCRETE BARRIER TEMPORARY PRECAST

(WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE, 4-INCH

(YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW, 4-INCH

(F) FINAL PAVEMENT MARKINGS, REFER TO OTHER PLAN SHEETS

N

ROAD WORK AHEAD
W20-1A

W4-6
36"X36"

W4-3R
30"X30"

END ROAD WORK
G20-2A

R/L GOOD HOPE ROAD RAMP 'C'

R/L I-43 NB/SB

GOOD HOPE ROAD RAMP 'C'

I-43 NB

I-43 SB

GOOD HOPE ROAD

SLAB

114GHC

115GHC

116GHC

117GHC

118GHC

119GHC

MATCHLINE STA 113+50.00

1140+00

1141+00

1142+00

1143+00

1144+00

1145+00

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2B	SHEET 140	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026251_ST2B.DWG
LAYOUT NAME - 026259_ST2B

PLOT DATE : 11/1/2017 10:18 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

MATCHLINE

FAIRFIELD CT.

JEAN NICOLET

IH-43

PORT WASHINGTON

BENDER RD

SEE DETAIL 1
FOR SB 43 ADVANCED SIGNING PRIOR TO LANE SHIFT

GOOD HOPE ROAD

GOOD HOPE SB ON RAMP

I-43 SB

I-43 NB

PORT WASHINGTON ROAD

*MAINTAIN SAME LOCATIONS AS PREVIOUS STAGE, SWAP SIGNS AS NEEDED

BEGIN SHIFTING TAPER — E — A — B

500' — 500' — 1,640'

DETAIL 2 - SB I-43

700'

500' — 200'

GREEN TREE ROAD

ROAD CLOSED 1000 FT
W20-3C

ROAD CLOSED 500 FT
W20-3D

JEAN NICOLET ROAD

200' — 200' — 200'

PICK 'N SAVE

SEE DETAIL 1
FOR NB 43 ADVANCED SIGNING PRIOR TO LANE SHIFT

CARDINAL STRITCH UNIVERSITY

100'

ELM TREE ROAD

JEAN NICOLET HIGH SCHOOL

COVENTRY COURT

DAPHNE ROAD

DAPHNE ROAD

1,500'

BRIDGE OUT
0.5 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3B
60"X30"

MILWAUKEE RIVER PARKWAY

MILWAUKEE RIVER

BEGIN SHIFTING TAPER — M — L NB 43 — E SB 43 — A — N

500' — 500' — 1,500'

DETAIL 1: I-43 LANE SHIFT (NB or SB)

NOTES:
1) SEE TRAFFIC CONTROL DETAILS FOR ADDITIONAL INFORMATION FOR FIXED MESSAGE SIGNS.

MATCHLINE (SEE DETAIL ON THIS SHEET)

GREEN TREE RD
CLOSED AT I-43
USE GOOD HOPE
101

JEAN NICOLET
CLOSED AT
GREEN TREE
102

W GREEN TREE
BRIDGE OUT
R11-2B
103

N

ROAD WORK AHEAD
W20-1A
A

ROAD WORK 1/2 MILE
W20-1G
B

END ROAD WORK
G20-2A
C

ROAD CLOSED AHEAD
W20-3A
D

W1-4BR
E

ONLY ONLY
R3-8F
36"X30"
FLAGS FOR ADDED VISABILITY
F

R3-1
104 GREEN TREE
ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"
G

R3-2
104 GREEN TREE
ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"
H

104 GREEN TREE
BRIDGE OUT
.2 MILES AHEAD
R11-3C
60"X24"
J

104 GREEN TREE
BRIDGE OUT
1 MILES AHEAD
R11-3C
60"X24"
K

W24-1AR
L

MAX. 11' WIDTH
W12-52
48"X48"

EACH LANE
W12-52P
42"X36"
M

TRUCKS USE RIGHT LANE
R4-5
24"X30"
N

LEGEND

- TRAFFIC CONTROL SIGN
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- XXX — FIXED MESSAGE SIGN NUMBER (REFER TO TRAFFIC CONTROL - DETAILS FOR SIGN DETAILS)
- WORKZONE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3 ADVANCED SIGNING	SHEET 141	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026300_ST3 OVERVIEW.DWG
LAYOUT NAME - 026300_ST3

PLOT DATE : 10/20/2017 8:24 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

N

SEE ADVANCED SIGNING SHEET

R/L GREEN TREE ROAD

GREEN TREE ROAD

31GT

32GT

33GT

34GT

MATCHLINE STA 34+25.00

N ELM TREE ROAD

POST

MH

SS

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 142	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026301_ST3.DWG
LAYOUT NAME - 026301_ST3

PLOT DATE : 10/25/2017 4:45 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

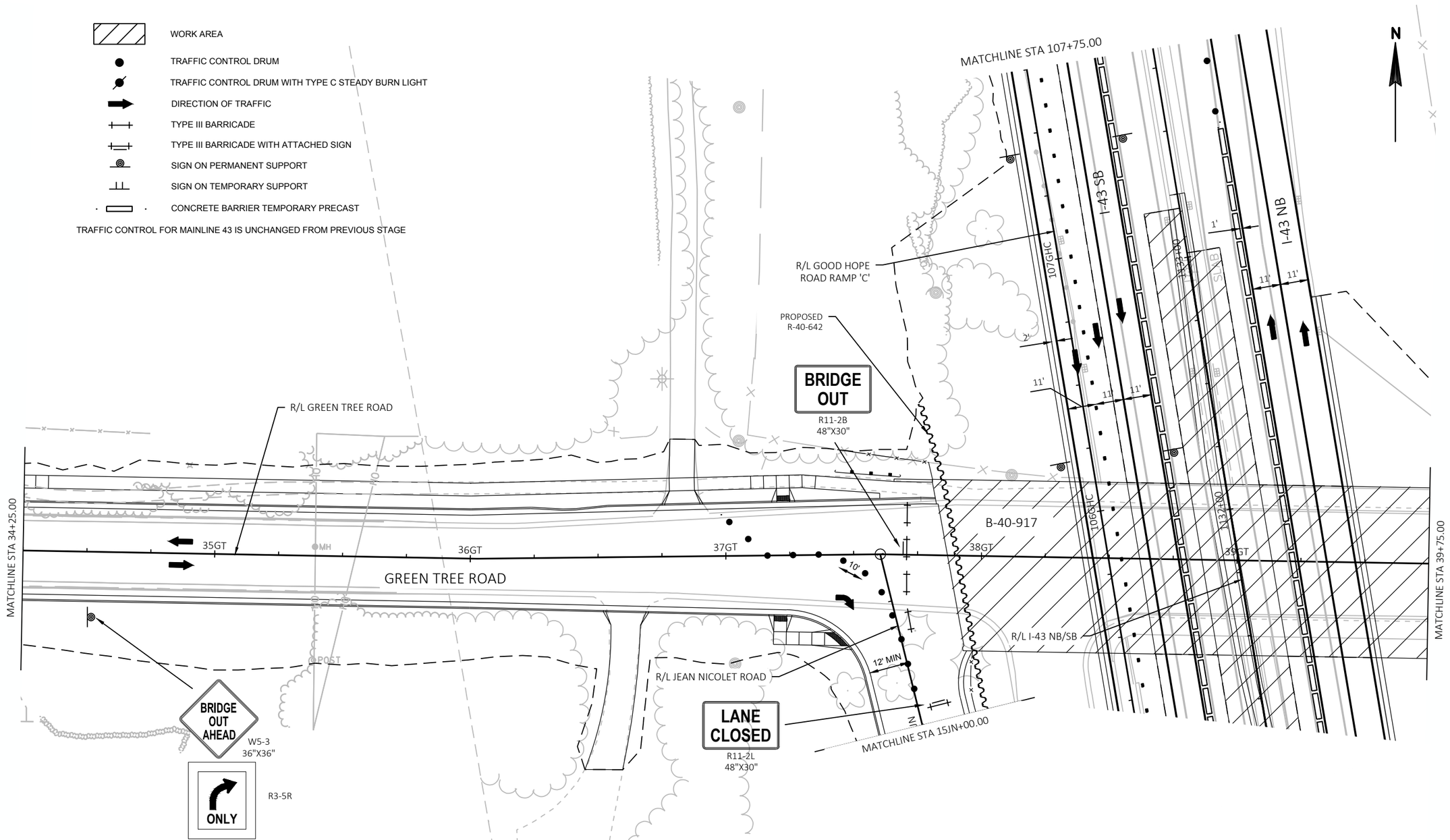
TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

CONCRETE BARRIER TEMPORARY PRECAST

TRAFFIC CONTROL FOR MAINLINE 43 IS UNCHANGED FROM PREVIOUS STAGE



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 143	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026301_ST3.DWG
LAYOUT NAME - 026302_ST3

PLOT DATE : 10/25/2017 4:45 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

N

PROPOSED B-40-917

R/L GREEN TREE ROAD

BRIDGE OUT
R11-2B
48"X30"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

SIDEWALK CLOSED
R9-9
30"X18"

40GT

41GT

42GT

43GT

MATCHLINE STA 39+75.00

GREEN TREE ROAD

SEE PEDESTRIAN DETOUR FOR ADDITIONAL SIGNS RELATED TO THE SIDEWALK CLOSURE

SIDEWALK CLOSED
R9-9
30"X18"

SEE SEPARATE TRAFFIC CONTROL DETAILS FOR MAINTAINING ACCESS TO DRIVEWAYS

PROPOSED R-40-641

N PORT WASHINGTON ROAD

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 144	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026301_ST3.DWG
LAYOUT NAME - 026303_ST3

PLOT DATE : 10/25/2017 4:46 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

DAPHNE ROAD

DRIVEWAY TO JEAN NICOLET HIGH SCHOOL

REFER TO STAGE 1A FOR SIGNING ALONG JEAN NICOLET ROAD

JEAN NICOLET ROAD

I-43 SB

REFER TO STAGE 2B FOR SIGNING ALONG IH-43

END ROAD WORK
G20-2A

1110+00 1111+00 1112+00 1113+00 1114+00 1115+00

MATCHLINE STA 1115+25.00

I-43 NB

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

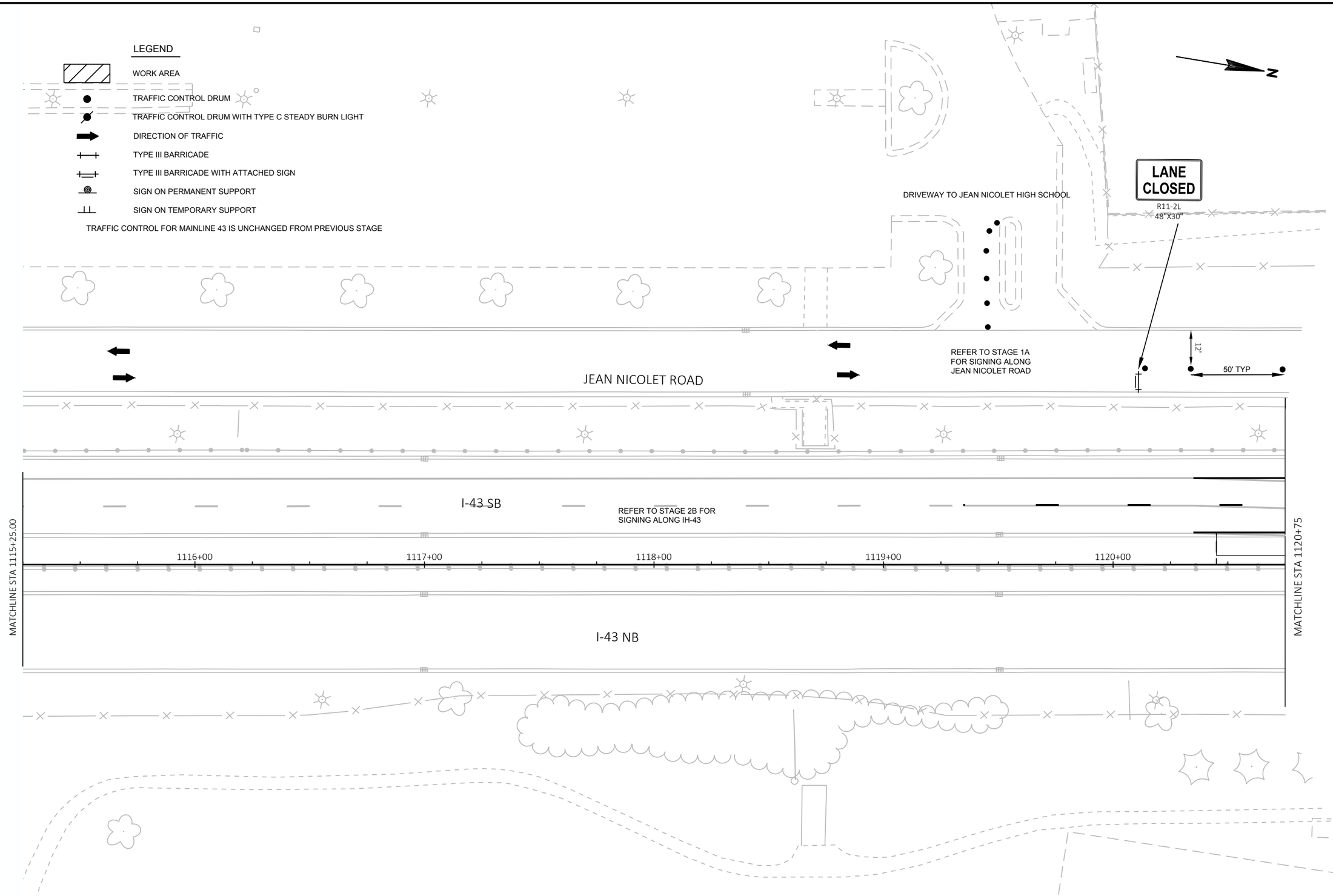
TRAFFIC CONTROL FOR MAINLINE 43 IS UNCHANGED FROM PREVIOUS STAGE

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 145	E

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL FOR MAINLINE 43 IS UNCHANGED FROM PREVIOUS STAGE



2

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 146	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026301_ST3.DWG
LAYOUT NAME - 026305_ST3
PLOT DATE : 10/25/2017 4:47 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

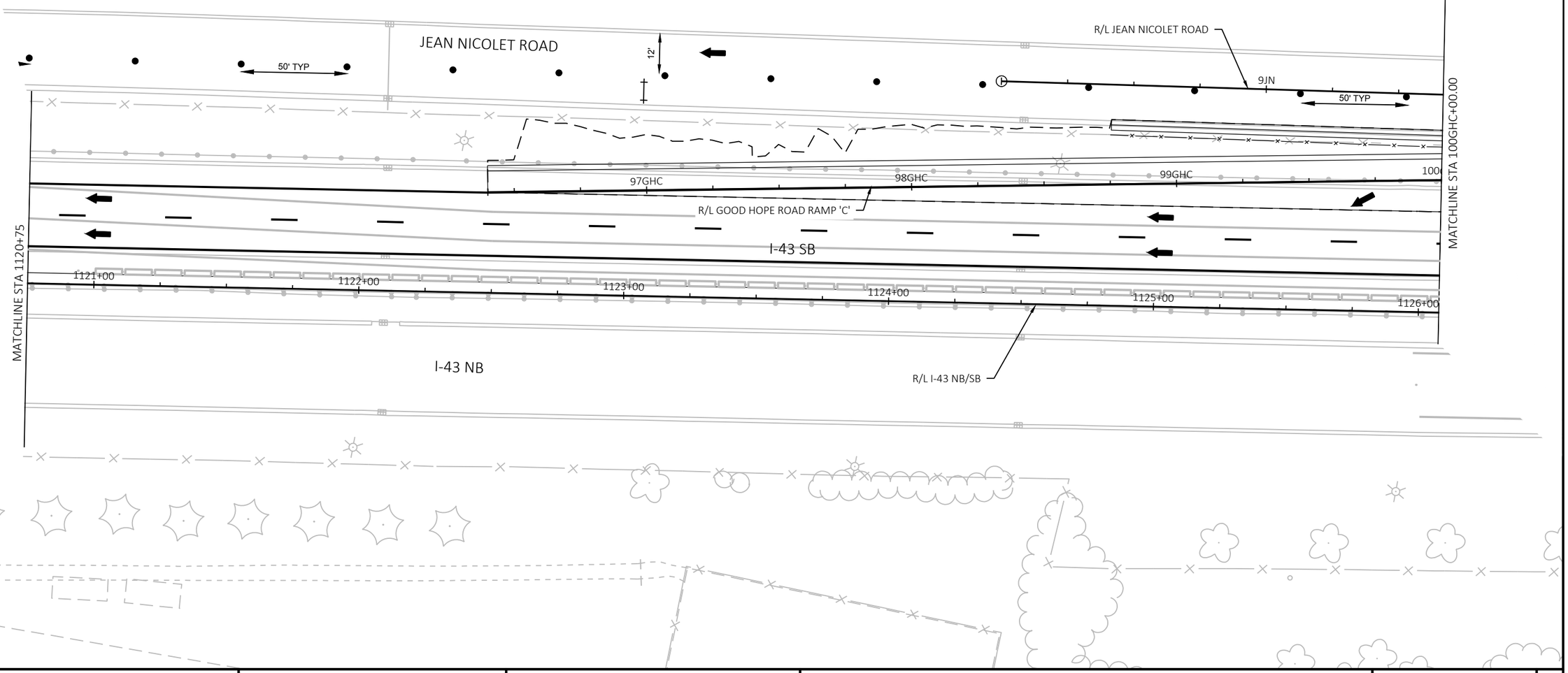
TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL FOR MAINLINE 43 IS UNCHANGED FROM PREVIOUS STAGE



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 147	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026301_ST3.DWG
LAYOUT NAME - 026306_ST3

PLOT DATE : 10/25/2017 4:48 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK AREA

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

CONCRETE BARRIER TEMPORARY PRECAST

TRAFFIC CONTROL FOR MAINLINE 43 IS UNCHANGED FROM PREVIOUS STAGE

N

R/L GOOD HOPE ROAD RAMP 'C'

R/L JEAN NICOLET ROAD

MATCHLINE STA 100+00.00

MATCHLINE STA 15+00.00

JEAN NICOLET ROAD

10JN

11JN

12JN

13JN

14JN

50' TYP

12' MIN

GHC

101GHC

102GHC

103GHC

104GHC

105GHC

12'

11'

I-43 SB

I-43 NB

1127+00

1128+00

1129+00

1130+00

1131+00

CC

SEE ADVANCED SIGNING SHEET FOR APPROACH SIGNS FOR THE LANE SHIFT

R/L I-43 NB/SB

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 148	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\026301_ST3.DWG
LAYOUT NAME - 026307_ST3

PLOT DATE : 10/25/2017 4:49 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ##########

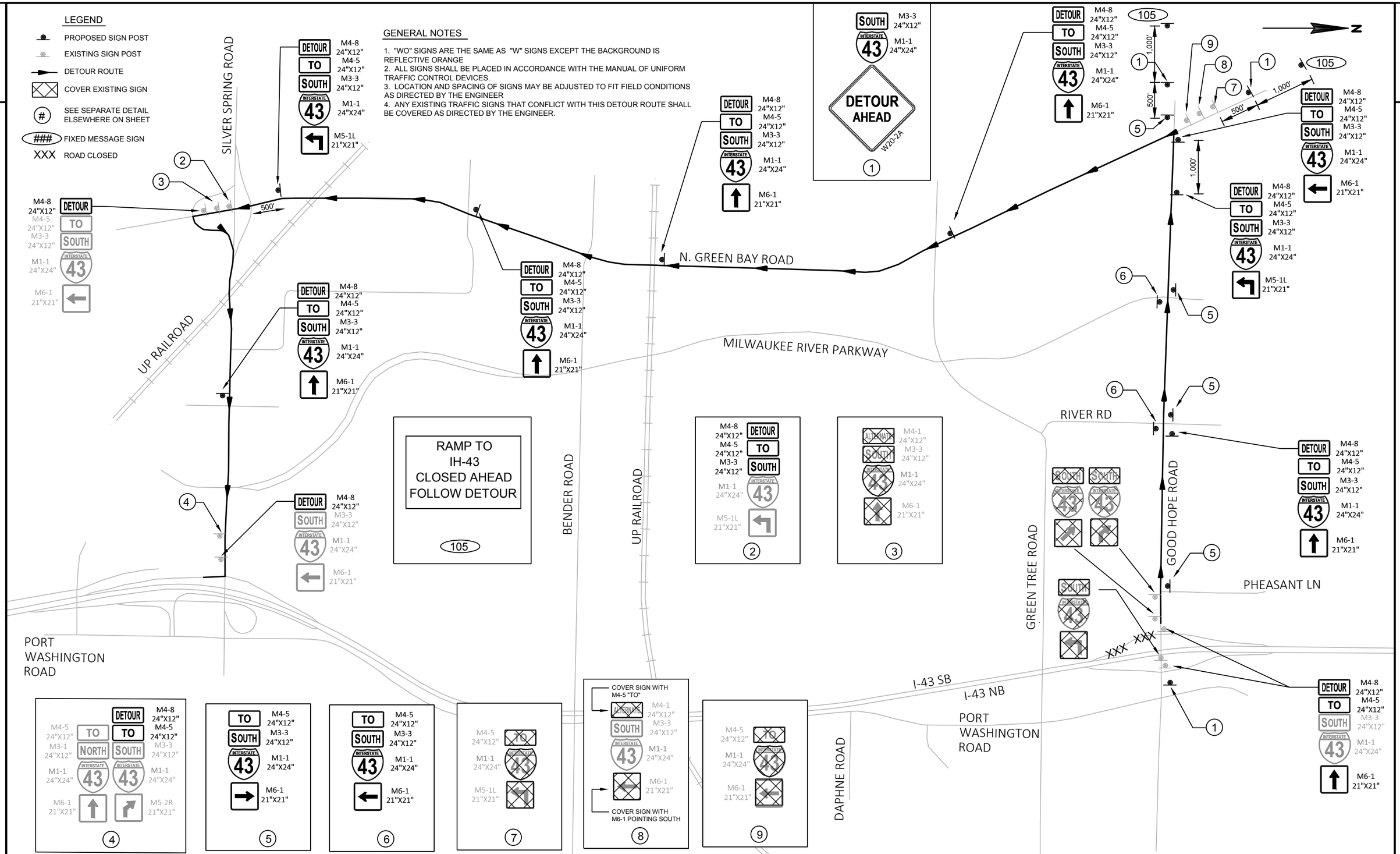
WISDOT/CADDS SHEET 42

LEGEND

- PROPOSED SIGN POST
- EXISTING SIGN POST
- DETOUR ROUTE
- COVER EXISTING SIGN
- (#) SEE SEPARATE DETAIL ELSEWHERE ON SHEET
- (###) FIXED MESSAGE SIGN
- XXX ROAD CLOSED

GENERAL NOTES

1. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE
2. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
3. LOCATION AND SPACING OF SIGNS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER
4. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR ROUTE SHALL BE COVERED AS DIRECTED BY THE ENGINEER.



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	DETOUR - GOOD HOPE SB I43 ON RAMP	SHEET 149	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\122904O1_MILWAUKEE\GREEN TREE\027001_DT.DWG
LAYOUT NAME - 027001_dt

PLOT DATE : 10/18/2017 4:37 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

LEGEND

- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN SUPPORT
- DETOUR ROUTE
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- (#) — SEE SEPARATE DETAIL ELSEWHERE ON SHEET

01 — M4-8 24"X12" — DETOUR / ALTERNATE / INTERSTATE 43
COVER 'ALTERNATE' SIGN WITH 'DETOUR' SIGN

02 — M4-8 24"X12" — DETOUR; M4-21R 24"X21" — NEXT RIGHT
PLACE 200-FEET PRIOR TO EXISTING SIGN "02"

03 — M4-8 24"X12" — DETOUR / ALTERNATE / NORTH / INTERSTATE 43
COVER 'ALTERNATE' SIGN WITH 'DETOUR' SIGN

DETOUR NB I-43 | FOLLOW N GREEN BAY AVE
GRASS TERRACE AT TOYOTA DEALERSHIP

DETOUR NB I-43 | FOLLOW EAST HWY PP
PLACE SOUTH OF 7040 GREEN BAY RD

M4-8 24"X12" DETOUR
M1-1 24"X24" INTERSTATE 43
R3-54L 24"X24" USE LEFT LANE
PLACE ALONG RIGHT SHOULDER PRIOR TO EAST SILVER SPRINGS EXIT

DETOUR M4-9R 30"X24"
PLACE IN THE GORE AT THE LOOP RAMP

SEE TRAFFIC CONTROL DETAIL FOR ADVANCED SIGNING AND TRAFFIC CONTROL

M4-8 24"X12" DETOUR
M1-1 24"X24" INTERSTATE 43
R3-54R 24"X24" USE RIGHT LANE
PLACE ALONG RIGHT SHOULDER UNDER SIGN STRUCTURE

SILVER SPRING ROAD
UP RAILROAD
N. GREEN BAY ROAD
MILWAUKEE RIVER PARKWAY
RIVER RD
BENDER ROAD
UP RAILROAD
GREEN TREE ROAD
GOOD HOPE ROAD
PORT WASHINGTON ROAD
I-43 SB
I-43 NB
PORT WASHINGTON ROAD
DAPHNE ROAD

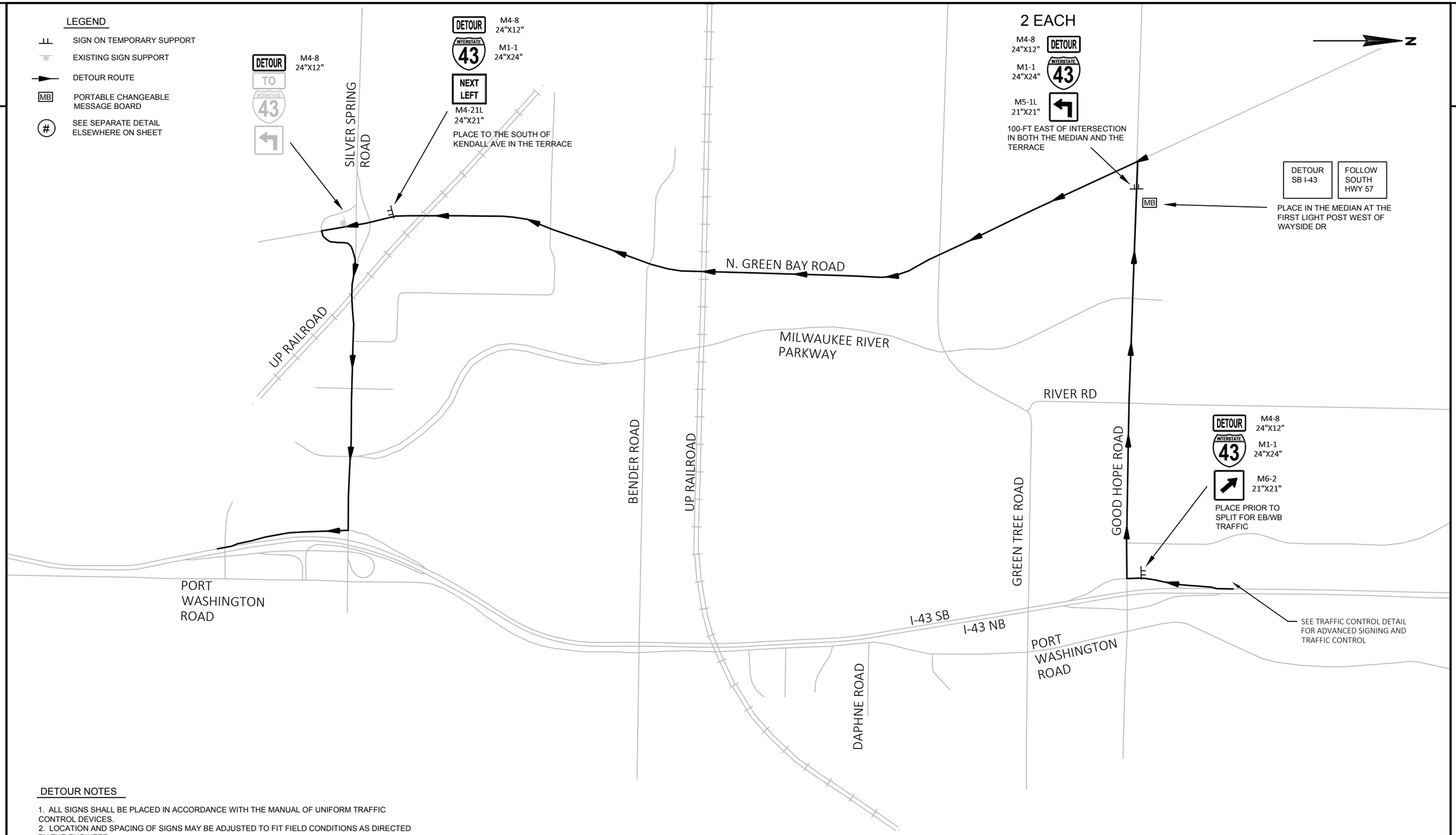
N

DETOUR NOTES

1. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. LOCATION AND SPACING OF SIGNS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER
3. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR ROUTE SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN SUPPORT
- DETOUR ROUTE
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- # — SEE SEPARATE DETAIL ELSEWHERE ON SHEET



DETOUR NOTES

1. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. LOCATION AND SPACING OF SIGNS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER
3. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR ROUTE SHALL BE COVERED AS DIRECTED BY THE ENGINEER.
4. MODIFICATIONS MAY BE REQUIRED TO THIS SHEET IF THE INTERSTATE CLOSURE OCCURS DURING THE GOOD HOPE SB ON-RAMP CLOSURE. WORK WITH THE ENGINEER A MINIMUM OF 7-DAYS PRIOR TO THE CLOSURE TO DETERMINE WHAT MODIFICATIONS ARE NEEDED.

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	DETOUR - INTERSTATE FULL CLOSURE	SHEET 151	E

LEGEND

BARRICADE WITH SIGN (TYPE 2 OR 3 AS INDICATED)

DETOUR ROUTE

N

N. GREEN BAY ROAD

MILWAUKEE RIVER PARKWAY

RIVER RD

GOOD HOPE ROAD

BENDER ROAD

UP RAILROAD

GREEN TREE ROAD

ELM TREE ROAD

PHEASANT LN

I-43 SB

I-43 NB

PORT WASHINGTON ROAD

DAPHNE ROAD

DIRECT PEDESTRIANS ONTO BENDER ROAD SIDEWALK
TYPE II W/
M4-9BL 30"X24"

DIRECT PEDESTRIANS ONTO GREEN TREE ROAD SIDEWALK
TYPE II W/
M4-9BR 30"X24"

DIRECT PEDESTRIANS ONTO OAK LEAF TRAIL MULTIUSE PATH
TYPE II W/
M4-9BL 30"X24"

DIRECT PEDESTRIANS ONTO EXISTING CROSSWALK AT SUNNY POINT ROAD
TYPE II W/
M4-9BR 30"X24"
R9-3BR 18"X12"

DIRECT PEDESTRIANS ONTO OAK LEAF TRAIL MULTIUSE PATH
TYPE II W/
M4-9BR 30"X24"

TYPE II W/
M4-9BR 30"X24"
M6-1 21"X21"
SEE NOTE 1

TYPE III W/
SIDEWALK CLOSED
R9-9 30"X18"
W1-11L 30"X30"

DIRECT PEDESTRIANS ONTO PORT WASH. SIDEWALK
TYPE II W/
M4-9BL 30"X24"
R9-3BL 18"X12"

DIRECT PEDESTRIANS ONTO BENDER ROAD SIDEWALK
TYPE II W/
M4-9BR 30"X24"
R9-3BR 18"X12"

UTILIZE EXISTING CROSSWALK NEAR PICK N' SAVE AND BUS STOP
TYPE II W/
M4-9BL 30"X24"
R9-3BL 18"X12"

TYPE II W/
M4-9BR 30"X24"

TYPE II W/
M4-9BR 30"X24"
M6-1 21"X21"
SEE NOTE 1

TYPE II W/
M4-9BL 30"X24"
R9-3BL 18"X12"

GENERAL NOTES

1. COVER THE ARROW DISPLAYED ON SIGN M4-9BR WITH THE ARROW SPECIFIED.

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	DETOUR - PEDESTRIANS	SHEET 152	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\027003_DT.DWG
LAYOUT NAME - 027004_dt
PLOT DATE : 10/9/2017 2:40 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : Custom
WISDOT/CADDS SHEET 42

2

N

GREEN TREE ROAD

POB STA 31GT+00.00
X = 603564.713
Y = 338027.624

R/L GREEN TREE ROAD

BEGIN PROJECT
STA 31GT+00.00
X = 603664.697
Y = 338025.815

31GT
32GT
33GT
34GT
35GT
36GT
37GT
38GT
39GT
40GT
41GT
42GT
43GT

S 88° 57' 49 E"

N 89° 21' 18 E"

S 89° 01' 14 E"

PI STA 36GT+02.77
X = 604167.381
Y = 338016.721

CP 13061202

STA 15JN+68.86 =
STA 37GT+60.38
X = 604324.989
Y = 338018.495

POE STA 15RWW+92.57
X = 604343.72
Y = 338078.25

PI STA 15RWW+61.36
X = 604352.67
Y = 338048.35

N16° 44' 01"W

CP 13061201

R/L RETAINING WALL R-40-642

106GHC

1132

N10° 17' 46"W

15RWW

N10° 17' 46"W

PI STA 14RWW+78.66
X = 604367.45
Y = 337966.98

15JN

N12° 13' 17"W

14JN

POB STA 14RWW+00.85
X = 604383.92
Y = 337890.94

13JN

12JN

11JN

JEAN NICOLET ROAD

10JN

R/L JEAN NICOLET ROAD

I-43 SB

108GHC

1135

1134

1133

1131

104GHC

1130

1129

I-43 NB

102GHC

1128

1127

100GHC

1126

POB STA 16RWE+09.64
X = 604553.02
Y = 338073.94

N04° 48' 14"W

PI STA 16RWE+39.45
X = 604555.52
Y = 338044.23

N10° 17' 46"W

BM 71102

17RWE

PI STA 17RWE+07.60
X = 604567.70
Y = 3337977.17

N07° 56' 20"W

PI STA 17RWE+37.79
X = 604571.87
Y= 337947.28

S07° 59' 36"E

18RWE

R/L RETAINING WALL R-40-641

POE STA 18RWE+01.09
X = 604580.67
Y = 337884.59

R/L I-43 NB/SB

R/L GOOD HOPE ROAD RAMP 'C'

R/L GREEN TREE ROAD

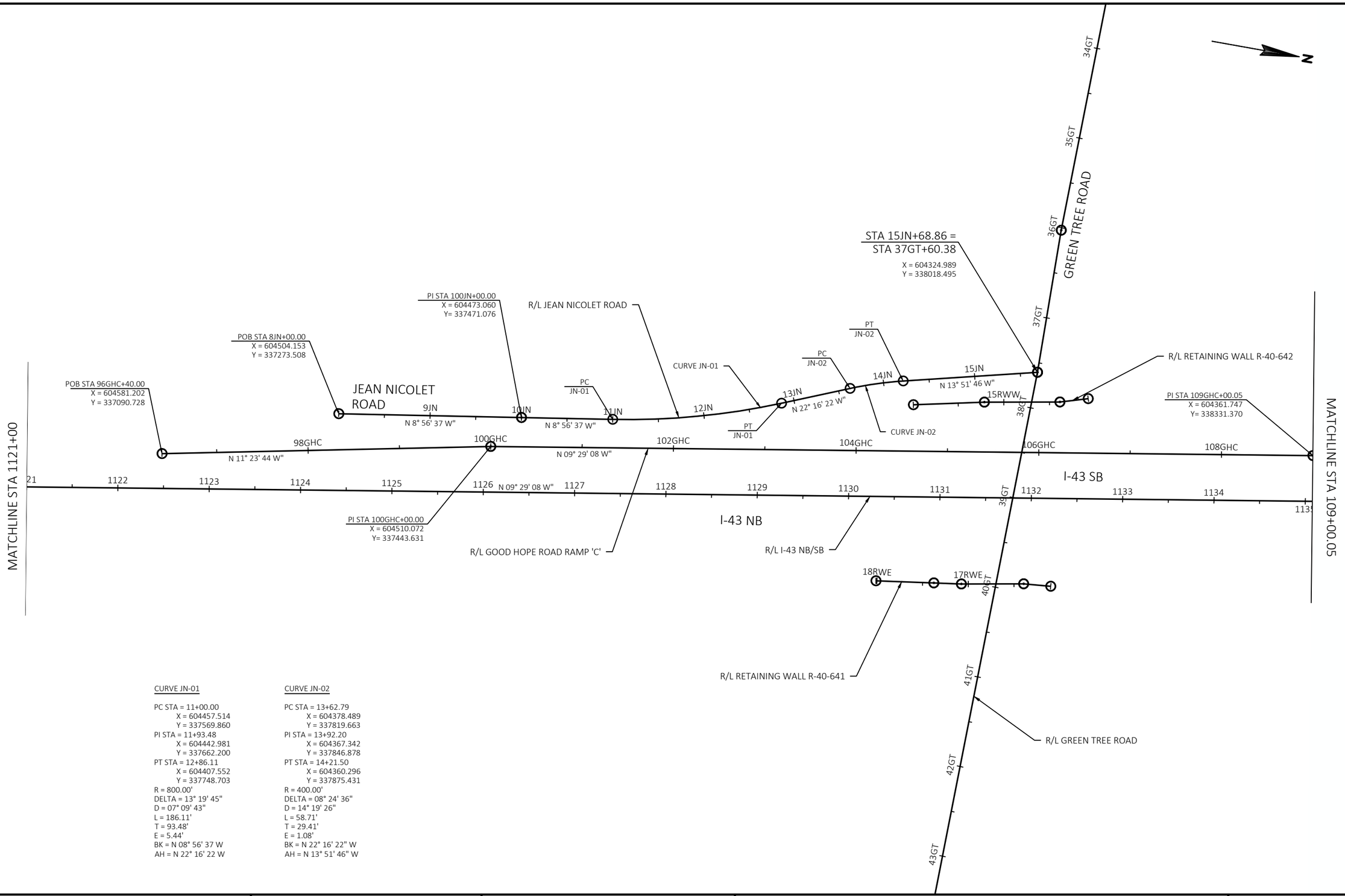
END PROJECT
STA 42GT+85.00
X = 604879.528
Y = 338009.529

POE STA 44GT+00.00
X = 604964.509
Y = 338007.563

CP/BM NAME	NORTHING	EASTING	ELEVATION
BM 71102	337986.560'	604558.800'	699.92'
CP 13061201	338038.620'	604360.870'	698.67'
CP 13061202	338033.770'	604251.520'	695.40'

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	ALIGNMENT DETAILS	SHEET 153	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\027201_AD.DWG
LAYOUT NAME - 027201_ad
PLOT DATE : 12/14/2017 3:03 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : ############
WISDOT/CADDS SHEET 42



CURVE JN-01

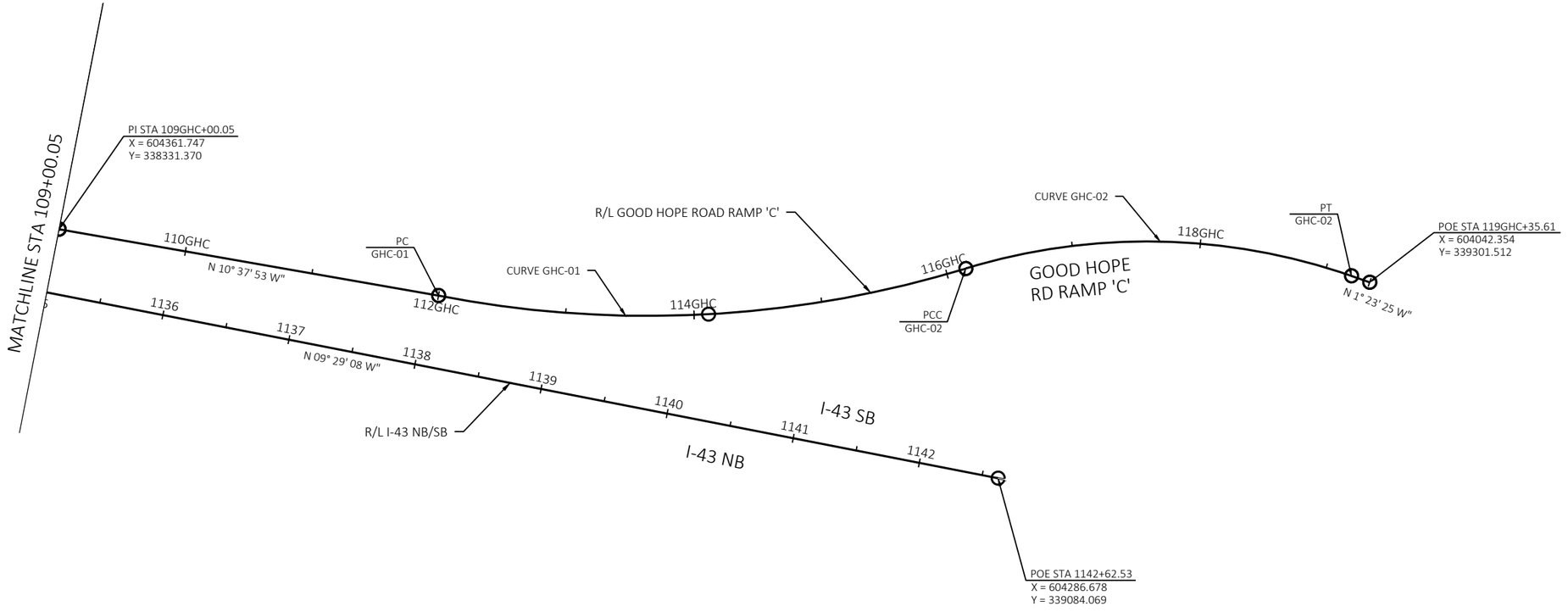
PC STA = 11+00.00
X = 604457.514
Y = 337569.860
PI STA = 11+93.48
X = 604442.981
Y = 337662.200
PT STA = 12+86.11
X = 604407.552
Y = 337748.703
R = 800.00'
DELTA = 13° 19' 45"
D = 07° 09' 43"
L = 186.11'
T = 93.48'
E = 5.44'
BK = N 08° 56' 37 W
AH = N 22° 16' 22 W

CURVE JN-02

PC STA = 13+62.79
X = 604378.489
Y = 337819.663
PI STA = 13+92.20
X = 604367.342
Y = 337846.878
PT STA = 14+21.50
X = 604360.296
Y = 337875.431
R = 400.00'
DELTA = 08° 24' 36"
D = 14° 19' 26"
L = 58.71'
T = 29.41'
E = 1.08'
BK = N 22° 16' 22" W
AH = N 13° 51' 46" W

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	ALIGNMENT DETAILS	SHEET 154	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\027202_AD.DWG
LAYOUT NAME - 027203_ad
PLOT DATE : 12/14/2017 3:03 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:100 FT



CURVE GHC-01

PC STA = 112+00.05
X = 604306.400
Y = 338626.220
PI STA = 114+11.85
X = 604271.495
Y = 338835.131
PCC STA = 116+15.20
X = 604142.643
Y = 339003.236
R = 850.00'
DELTA = 27° 59' 04"
D = 06° 44' 26"
L = 415.16'
T = 211.81'
BK = N 10° 37' 53 W
AH = N 37° 28' 12 W

CURVE GHC-02

PCC STA = 116+15.20
X = 604142.643
Y = 339003.236
PI STA = 119+20.61
X = 604042.717
Y = 339286.516
PT STA = 117+73.16
X = 604046.550
Y = 339128.603
R = 485.00'
DELTA = 36° 04' 47"
D = 11° 48' 49"
L = 305.41'
T = 157.96'
BK = N 37° 28' 12 W
AH = N 01° 23' 25 W

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	ALIGNMENT DETAILS	SHEET 155	E

1228-16-71

Line	Item	Item Description	Unit	Total	Qty
0002	108.4400	CPM Progress Schedule	EACH	1.000	1.000
0004	201.0105	Clearing	STA	18.000	18.000
0006	201.0205	Grubbing	STA	18.000	18.000
0008	203.0200	Removing Old Structure (station) 01. 40GT+00	LS	1.000	1.000
0010	203.0200	Removing Old Structure (station) 02. 14RWW+00	LS	1.000	1.000
0012	203.0210.S	Abatement of Asbestos Containing Material (structure) 01. R-40-30	LS	1.000	1.000
0014	204.0100	Removing Pavement	SY	4,366.000	4,366.000
0016	204.0150	Removing Curb & Gutter **P**	LF	4,471.000	4,471.000
0018	204.0157	Removing Concrete Barrier	LF	637.000	637.000
0020	204.0165	Removing Guardrail **P**	LF	680.000	680.000
0022	204.0170	Removing Fence	LF	490.000	490.000
0024	204.0195	Removing Concrete Bases	EACH	5.000	5.000
0026	204.0210	Removing Manholes	EACH	4.000	4.000
0028	204.0220	Removing Inlets	EACH	16.000	16.000
0030	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	189.000	189.000
0032	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	359.000	359.000
0034	204.0245	Removing Storm Sewer (size) 03. 36-Inch	LF	90.000	90.000
0036	204.9060.S	Removing (item description) 20. Ramp Control Signal Assembly Sidemount	EACH	2.000	2.000
0038	205.0100	Excavation Common	CY	16,082.000	16,082.000
0040	206.1000	Excavation for Structures Bridges (structure) 01. B-40-917	LS	1.000	1.000
0042	206.3000	Excavation for Structures Retaining Walls (structure) 01. R-40-641	LS	1.000	1.000
0044	206.3000	Excavation for Structures Retaining Walls (structure) 02. R-40-642	LS	1.000	1.000
0046	208.0100	Borrow	CY	3,087.000	3,087.000
0048	209.0300.S	Backfill Coarse Aggregate (size) 04. No. 1	CY	74.000	74.000
0050	210.1500	Backfill Structure Type A	TON	2,083.000	2,083.000
0052	213.0100	Finishing Roadway (project) 05. 1228-16-71	EACH	1.000	1.000
0054	305.0110	Base Aggregate Dense 3/4-Inch	TON	37.000	37.000
0056	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	9,305.000	9,305.000
0058	311.0110	Breaker Run	TON	5,704.000	5,704.000
0060	312.0110	Select Crushed Material	TON	173.000	173.000
0062	371.1000.S	QMP Base Aggregate Dense 1 1/4-Inch Compaction	TON	9,305.000	9,305.000
0064	415.0100	Concrete Pavement 10-Inch	SY	86.000	86.000
0066	416.0170	Concrete Driveway 7-Inch	SY	53.000	53.000
0068	416.0610	Drilled Tie Bars	EACH	65.000	65.000
0070	416.1110	Concrete Shoulder Rumble Strips	LF	1,400.000	1,400.000
0072	440.4410	Incentive IRI Ride	DOL	2,503.000	2,503.000

1228-16-71

Line	Item	Item Description	Unit	Total	Qty
0074	450.4000	HMA Cold Weather Paving	TON	300.000	300.000
0076	455.0605	Tack Coat	GAL	927.000	927.000
0078	460.2000	Incentive Density HMA Pavement	DOL	2,978.000	2,978.000
0080	460.6223	HMA Pavement 3 MT 58-28 S	TON	2,305.000	2,305.000
0082	460.6224	HMA Pavement 4 MT 58-28 S	TON	1,556.000	1,556.000
0084	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	47.000	47.000
0086	495.1000.S	Cold patch	TON	20.000	20.000
0088	502.0100	Concrete Masonry Bridges **P**	CY	949.000	949.000
0090	502.3200	Protective Surface Treatment **P**	SY	1,578.000	1,578.000
0092	502.3210	Pigmented Surface Sealer	SY	200.000	200.000
0094	503.0146	Prestressed Girder Type I 45W-Inch **P**	LF	1,933.000	1,933.000
0096	505.0400	Bar Steel Reinforcement HS Structures **P**	LB	17,270.000	17,270.000
0098	505.0600	Bar Steel Reinforcement HS Coated Structures **P**	LB	159,280.000	159,280.000
0100	506.0605	Structural Steel HS	LB	38,110.000	38,110.000
0102	506.2605	Bearing Pads Elastomeric Non-Laminated **P**	EACH	36.000	36.000
0104	506.4000	Steel Diaphragms (structure) 01. B-40-917 **P**	EACH	32.000	32.000
0106	511.1200	Temporary Shoring (structure) 01. B-40-917	SF	2,340.000	2,340.000
0108	511.1200	Temporary Shoring (structure) 02. R-40-642	SF	920.000	920.000
0110	511.1200	Temporary Shoring (structure) 03. R-40-641	SF	1,520.000	1,520.000
0112	512.0500	Piling Steel Sheet Permanent Delivered	SF	16,620.000	16,620.000
0114	512.0600	Piling Steel Sheet Permanent Driven	SF	16,620.000	16,620.000
0116	513.4091	Railing Tubular Screening (structure) 01. B-40-917	LF	475.000	475.000
0118	516.0500	Rubberized Membrane Waterproofing **P**	SY	30.000	30.000
0120	517.0600	Painting Epoxy System (structure) 01. R-40-641	LS	1.000	1.000
0122	517.0600	Painting Epoxy System (structure) 02. R-40-642	LS	1.000	1.000
0124	520.8000	Concrete Collars for Pipe	EACH	4.000	4.000
0126	550.2166	Piling CIP Concrete 16 X 0.375-Inch	LF	3,390.000	3,390.000
0128	601.0105	Concrete Curb Type A	LF	67.000	67.000
0130	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	2,808.000	2,808.000
0132	602.0410	Concrete Sidewalk 5-Inch	SF	6,788.000	6,788.000
0134	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	52.000	52.000
0136	602.0615	Curb Ramp Detectable Warning Field Radial Natural Patina	SF	108.000	108.000
0138	603.1142	Concrete Barrier Type S42 **P**	LF	2,034.000	2,034.000
0140	603.1442	Concrete Barrier Type S42C **P**	LF	1,727.000	1,727.000
0142	603.8000	Concrete Barrier Temporary Precast Delivered	LF	3,986.000	3,986.000
0144	603.8125	Concrete Barrier Temporary Precast Installed	LF	4,361.000	4,361.000
0146	604.0500	Slope Paving Crushed Aggregate	SY	770.000	770.000
0148	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	369.000	369.000

1228-16-71

Line	Item	Item Description	Unit	Total	Qty
0150	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	552.000	552.000
0152	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	248.000	248.000
0154	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	121.000	121.000
0156	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	34.000	34.000
0158	608.0336	Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	LF	108.000	108.000
0160	608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	LF	286.000	286.000
0162	611.0420	Reconstructing Manholes	EACH	2.000	2.000
0164	611.0530	Manhole Covers Type J	EACH	3.000	3.000
0166	611.0535	Manhole Covers Type J-Special	EACH	7.000	7.000
0168	611.0606	Inlet Covers Type B	EACH	1.000	1.000
0170	611.0610	Inlet Covers Type BW	EACH	13.000	13.000
0172	611.0624	Inlet Covers Type H	EACH	9.000	9.000
0174	611.0642	Inlet Covers Type MS	EACH	3.000	3.000
0176	611.0651	Inlet Covers Type S	EACH	1.000	1.000
0178	611.0654	Inlet Covers Type V	EACH	1.000	1.000
0180	611.1005	Catch Basins 5-FT Diameter	EACH	3.000	3.000
0182	611.1006	Catch Basins 6-FT Diameter	EACH	1.000	1.000
0184	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000
0186	611.2005	Manholes 5-FT Diameter	EACH	2.000	2.000
0188	611.2006	Manholes 6-FT Diameter	EACH	3.000	3.000
0190	611.2007	Manholes 7-FT Diameter	EACH	1.000	1.000
0192	611.3220	Inlets 2x2-FT	EACH	1.000	1.000
0194	611.3225	Inlets 2x2.5-FT	EACH	13.000	13.000
0196	611.3230	Inlets 2x3-FT	EACH	6.000	6.000
0198	611.3901	Inlets Median 1 Grate	EACH	3.000	3.000
0200	611.8115	Adjusting Inlet Covers	EACH	3.000	3.000
0202	611.9900.S	Drain Slotted Vane	EACH	6.000	6.000
0204	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	370.000	370.000
0206	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	2,685.000	2,685.000
0208	614.0905	Crash Cushions Temporary	EACH	5.000	5.000
0210	614.0920	Salvaged Rail	LF	89.000	89.000
0212	614.0950	Replacing Guardrail Posts and Blocks	EACH	25.000	25.000
0214	614.0951	Replacing Guardrail Rail and Hardware	LF	89.000	89.000
0216	614.1100	MGS Guardrail Temporary Thrie Beam Transition **P**	LF	99.000	99.000
0218	614.2300	MGS Guardrail 3	LF	25.000	25.000

1228-16-71

Line	Item	Item Description	Unit	Total	Qty
0220	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000	2.000
0222	616.0206	Fence Chain Link 6-FT	LF	940.000	940.000
0224	616.0600.S	Fence Temporary	LF	183.000	183.000
0226	616.0700.S	Fence Safety	LF	15.000	15.000
0228	618.0100	Maintenance And Repair of Haul Roads (project) 06. 1228-16-71	EACH	1.000	1.000
0230	619.1000	Mobilization	EACH	1.000	1.000
0232	623.0200	Dust Control Surface Treatment	SY	13,800.000	13,800.000
0234	624.0100	Water	MGAL	140.000	140.000
0236	625.0500	Salvaged Topsoil	SY	8,898.000	8,898.000
0238	627.0200	Mulching	SY	451.000	451.000
0240	628.1104	Erosion Bales	EACH	30.000	30.000
0242	628.1504	Silt Fence	LF	1,405.000	1,405.000
0244	628.1520	Silt Fence Maintenance	LF	1,405.000	1,405.000
0246	628.1905	Mobilizations Erosion Control	EACH	7.000	7.000
0248	628.1910	Mobilizations Emergency Erosion Control	EACH	8.000	8.000
0250	628.2002	Erosion Mat Class I Type A	SY	3,396.000	3,396.000
0252	628.2006	Erosion Mat Urban Class I Type A	SY	2,778.000	2,778.000
0254	628.2023	Erosion Mat Class II Type B	SY	3,073.000	3,073.000
0256	628.6510	Soil Stabilizer Type B	ACRE	0.250	0.250
0258	628.7005	Inlet Protection Type A	EACH	38.000	38.000
0260	628.7020	Inlet Protection Type D	EACH	44.000	44.000
0262	628.7504	Temporary Ditch Checks	LF	35.000	35.000
0264	628.7560	Tracking Pads	EACH	3.000	3.000
0266	628.7570	Rock Bags	EACH	30.000	30.000
0268	629.0210	Fertilizer Type B	CWT	11.000	11.000
0270	630.0120	Seeding Mixture No. 20	LB	268.000	268.000
0272	630.0200	Seeding Temporary	LB	109.000	109.000
0274	633.0200	Delineators Flexible **P**	EACH	59.000	59.000
0276	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	22.000	22.000
0278	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	17.000	17.000
0280	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	28.000	28.000
0282	635.0200	Sign Supports Structural Steel HS	LB	1,000.000	1,000.000
0284	636.0100	Sign Supports Concrete Masonry	CY	1.600	1.600
0286	636.0500	Sign Supports Steel Reinforcement	LB	98.000	98.000
0288	637.2210	Signs Type II Reflective H	SF	256.400	256.400
0290	637.2230	Signs Type II Reflective F	SF	91.500	91.500
0292	638.2101	Moving Signs Type I	EACH	1.000	1.000
0294	638.2102	Moving Signs Type II	EACH	3.000	3.000
0296	638.2601	Removing Signs Type I	EACH	1.000	1.000

1228-16-71

Line	Item	Item Description	Unit	Total	Qty
0298	638.2602	Removing Signs Type II	EACH	49.000	49.000
0300	638.3000	Removing Small Sign Supports	EACH	45.000	45.000
0302	638.3100	Removing Structural Steel Sign Supports	EACH	2.000	2.000
0304	643.0300	Traffic Control Drums	DAY	23,065.000	23,065.000
0306	643.0410	Traffic Control Barricades Type II	DAY	2,460.000	2,460.000
0308	643.0420	Traffic Control Barricades Type III	DAY	6,350.000	6,350.000
0310	643.0705	Traffic Control Warning Lights Type A	DAY	12,330.000	12,330.000
0312	643.0715	Traffic Control Warning Lights Type C	DAY	1,980.000	1,980.000
0314	643.0800	Traffic Control Arrow Boards	DAY	260.000	260.000
0316	643.0900	Traffic Control Signs	DAY	27,260.000	27,260.000
0318	643.0920	Traffic Control Covering Signs Type II	EACH	36.000	36.000
0320	643.1000	Traffic Control Signs Fixed Message	SF	237.300	237.300
0322	643.1050	Traffic Control Signs PCMS	DAY	375.000	375.000
0324	643.5000	Traffic Control	EACH	1.000	1.000
0326	645.0111	Geotextile Type DF Schedule A	SY	155.000	155.000
0328	645.0120	Geotextile Type HR	SY	67.000	67.000
0330	646.1020	Marking Line Epoxy 4-Inch **P**	LF	4,019.000	4,019.000
0332	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch **P**	LF	7,522.000	7,522.000
0334	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	897.000	897.000
0336	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	1,729.000	1,729.000
0338	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0340	646.5220	Marking Symbol Epoxy	EACH	4.000	4.000
0342	646.6120	Marking Stop Line Epoxy 18-Inch **P**	LF	95.000	95.000
0344	646.7120	Marking Diagonal Epoxy 12-Inch **P**	LF	265.000	265.000
0346	646.7220	Marking Chevron Epoxy 24-Inch **P**	LF	186.000	186.000
0348	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch **P**	LF	172.000	172.000
0350	646.9000	Marking Removal Line 4-Inch	LF	4,307.000	4,307.000
0352	646.9100	Marking Removal Line 8-Inch	LF	166.000	166.000
0354	646.9300	Marking Removal Special Marking	EACH	4.000	4.000
0356	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	18,613.000	18,613.000
0358	649.0760	Temporary Marking Raised Pavement Marker Type I	EACH	169.000	169.000
0360	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch **P**	LF	1,495.000	1,495.000
0362	652.0615	Conduit Special 3-Inch **P**	LF	190.000	190.000
0364	652.0700.S	Install Conduit into Existing Item	EACH	6.000	6.000
0366	653.0140	Pull Boxes Steel 24x42-Inch	EACH	6.000	6.000
0368	653.0905	Removing Pull Boxes	EACH	4.000	4.000
0370	654.0101	Concrete Bases Type 1	EACH	2.000	2.000
0372	654.0108	Concrete Bases Type 8	EACH	3.000	3.000
0374	655.0210	Cable Traffic Signal 3-14 AWG **P**	LF	670.000	670.000
0376	655.0240	Cable Traffic Signal 7-14 AWG **P**	LF	100.000	100.000

1228-16-71

Line	Item	Item Description	Unit	Total	Qty
0378	655.0510	Electrical Wire Traffic Signals 12 AWG **P**	LF	4,005.000	4,005.000
0380	655.0610	Electrical Wire Lighting 12 AWG **P**	LF	522.000	522.000
0382	655.0615	Electrical Wire Lighting 10 AWG **P**	LF	210.000	210.000
0384	655.0620	Electrical Wire Lighting 8 AWG **P**	LF	5,180.000	5,180.000
0386	655.0700	Loop Detector Lead In Cable **P**	LF	450.000	450.000
0388	657.0100	Pedestal Bases	EACH	2.000	2.000
0390	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	2.000	2.000
0392	658.0172	Traffic Signal Face 2S 12-Inch	EACH	2.000	2.000
0394	658.0173	Traffic Signal Face 3S 12-Inch	EACH	2.000	2.000
0396	670.0100	Field System Integrator	LS	1.000	1.000
0398	670.0200	ITS Documentation	LS	1.000	1.000
0400	671.0132	Conduit HDPE 3-Duct 2-Inch **P**	LF	2,670.000	2,670.000
0402	671.0232	Conduit HDPE Directional Bore 3-Duct 2-Inch **P**	LF	535.000	535.000
0404	671.0300	Fiber Optic Cable Marker	EACH	9.000	9.000
0406	673.0105	Communication Vault Type 1	EACH	3.000	3.000
0408	674.0200	Cable Microwave Detector **P**	LF	155.000	155.000
0410	674.0300	Remove Cable **P**	LF	4,015.000	4,015.000
0412	678.0072	Install Fiber Optic Cable Outdoor Plant 72-CT **P**	LF	4,255.000	4,255.000
0414	678.0300	Fiber Optic Splice	EACH	72.000	72.000
0416	678.0400	Fiber Optic Termination	EACH	72.000	72.000
0418	678.0500	Communication System Testing	LS	1.000	1.000
0420	690.0150	Sawing Asphalt	LF	2,855.000	2,855.000
0422	690.0250	Sawing Concrete	LF	201.000	201.000
0424	715.0502	Incentive Strength Concrete Structures	DOL	5,694.000	5,694.000
0426	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000
0428	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	3,600.000	3,600.000
0430	SPV.0045	Special 01. Portable Speed Trailer	DAY	245.000	245.000
0432	SPV.0060	Special 02. Tieback Anchors	EACH	112.000	112.000
0434	SPV.0060	Special 03. Tieback Anchors Performance Tests	EACH	7.000	7.000
0436	SPV.0060	Special 04. Tieback Anchors Extended Creep Tests	EACH	4.000	4.000
0438	SPV.0060	Special 05. Pile Dynamic Analyzer (PDA) Testing	EACH	8.000	8.000
0440	SPV.0060	Special 06. Pile Dynamic Analyzer (PDA) Restrikes	EACH	8.000	8.000
0442	SPV.0060	Special 07. Case Pile Wave Analysis Program (CAPWAP) Evaluation	EACH	3.000	3.000
0444	SPV.0060	Special 08. Adjusting Sanitary Manhole	EACH	2.000	2.000
0446	SPV.0060	Special 09. Reconstruct Sanitary Manhole	EACH	3.000	3.000
0448	SPV.0060	Special 10. Field Facility Office Space	EACH	1.000	1.000
0450	SPV.0060	Special 11. Inlet Cover Repair Maintenance Special	EACH	2.000	2.000
0452	SPV.0060	Special 21. Lamp Disposal High Intensity Discharge	EACH	3.000	3.000
0454	SPV.0060	Special 22. Lighting Units Salvaged	EACH	3.000	3.000

1228-16-71

Line	Item	Item Description	Unit	Total	Qty
0456	SPV.0075	Special 01. Pavement Cleanup Project (1228-16-71)	HRS	250.000	250.000
0458	SPV.0075	Special 02. Flagging Special	HRS	264.000	264.000
0460	SPV.0090	Special 01. Concrete Barrier Temporary Precast Left In Place	LF	862.000	862.000
0462	SPV.0090	Special 04. Concrete Curb & Gutter SHES 30-Inch Type D	LF	153.000	153.000
0464	SPV.0105	Special 01. Survey Project 1228-16-71	LS	1.000	1.000
0466	SPV.0105	Special 02. Structure Modification MMSD DC0406	LS	1.000	1.000
0468	SPV.0105	Special 03. Maintenance of Lighting System	LS	1.000	1.000
0470	SPV.0165	Special 01. Salvage and Replace Brick Pavers	SF	43.000	43.000
0472	SPV.0180	Special 01. Geogrid Reinforcement	SY	260.000	260.000
0474	SPV.0195	Special 01. Excavation, Hauling, and Disposal of Creosote Contaminated Soil	TON	2,110.000	2,110.000

3

CLEARING AND GRUBBING

ROADWAY	STATION BEGIN		STATION END	OFFSET	CLEARING 201.0105 STA	GRUBBING 201.0205 STA
GOOD HOPE SB ON RAMP	106GHC+41	-	107GHC+26	LT	1	1
	108GHC+65	-	109GHC+20	LT	.5	.5
	109GHC+99	-	113GHC+85	LT	4	4
GREEN TREE ROAD	31GT+00	-	35GT+63	LT	4.5	4.5
	31GT+05	-	31GT+68	RT	.5	.5
	32GT+60	-	33GT+03	RT	.5	.5
	35GT+40	-	36GT+40	RT	1	1
	36GT+75	-	37GT+20	RT	.5	.5
	37GT+15	-	37GT+92	LT	1	1
	39GT+92	-	40GT+46	RT	.5	.5
JEAN NICOLET ROAD	11JN+36	-	15JN+42	LT/RT	4	4
PROJECT 1228-16-71 TOTALS					18.0	18.0

REMOVING CURB & GUTTER

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0150 **P** REMOVING CURB & GUTTER LF
PROJECT 1228-16-71					
GOOD HOPE SB ON RAMP	112GHC+97	3.8' LT	118GHC+83	17.6' LT	589
	113GHC+00	10.6' RT	119GHC+30	25.9' RT	614
GREEN TREE ROAD	31GT+00	13.8' LT	38GT+41	20.2' LT	742
	31GT+00	14' RT	33GT+13	50' RT	236
	33GT+45	49.3' RT	37GT+98	22.8' RT	475
	39GT+85	20.1' LT	42GT+85	19.4' LT	300
	39GT+93	21.5' RT	42GT+85	21.5' RT	292
	41GT+37	20.7' RT	41GT+48	39.9' RT	24
	41GT+73	40.5' RT	41GT+96	22.3' RT	30
I-43	1120+45	12.1' LT	1129+56	10.8' LT	911
JEAN NICOLET ROAD	8JN+42	12' RT	11JN+00	12.8' RT	258
PROJECT 1228-16-71 TOTAL					4,471

REMOVING PAVEMENT

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0100 REMOVING PAVEMENT SY
PROJECT 1228-16-71					
GOOD HOPE SB ON RAMP	96GHC+40	LT	113GHC+65	LT/RT	2,442
I-43	1130+95	LT	1133+19	LT	244
	1130+10	RT	1133+02	RT	361
JEAN NICOLET ROAD	11JN+00	LT/RT	15JN+38	RT	1,319
PROJECT 1228-16-71 TOTAL					4,366

REMOVING CONCRETE BARRIER

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0157 REMOVING CONCRETE BARRIER LF
PROJECT 1228-16-71					
I-43 NB	1130+10	2.5' RT	1133+02	2.4' RT	292
	1131+41	46.8' RT	1132+01	46.8' RT	60
I-43 SB	1130+95	3.6' LT	1133+19	3.7' LT	224
	1131+57	48.3' LT	1132+18	48.5' LT	61
PROJECT 1228-16-71 TOTAL					637

REMOVING GUARDRAIL

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0165 **P** REMOVING GUARDRAIL LF
PROJECT 1228-16-71					
GOOD HOPE SB ON RAMP	96GHC+40	11.5' LT	101GHC+89	3.7' LT	549
	106GHC+72	2.1' RT	107GHC+44	1.4' LT	72
I-43	1129+00	2.5' LT	1130+09	3.2' LT	59
PROJECT 1228-16-71 TOTAL					680

ALL ITEMS CATEGORY 0010

REMOVING DRAIN ITEMS

ROADWAY	FROM STATION	FROM OFFSET	204.0210 REMOVING MANHOLES EACH	204.0220 REMOVING INLETS EACH
PROJECT 1228-16-71				
GOOD HOPE SB ON RAMP	102GHC+91	16.2' LT	--	1
	106GHC+57	2.8' RT	--	1
	107GHC+07	2.6' RT	--	1
	108GHC+92	1.1' LT	--	1
	111GHC+93	4.4' LT	--	1
	113GHC+01	15.6 RT	--	1
	115GHC+98	20.3' LT	--	1
	115GHC+97	4.8' LT	--	1
GREEN TREE ROAD	34GT+00	13' RT	--	1
	34GT+06	13' LT	--	1
	40GT+10	21.1' RT	--	1
	40GT+00	37.2' LT	1	--
	40GT+03	20.6' LT	--	1
I-43	1131+54	4' RT	--	1
	1131+55	5.5' LT	--	1
	1132+33	10.1' LT	1	--
	1132+64	0.4' LT	1	--
	1133+15	5.6' LT	--	1
JEAN NICOLET ROAD	12JN+78	4.6' RT	--	1
PROJECT 1228-16-71 TOTAL			3	16

FINISHING ROADWAY

ROADWAY	213.0100 FINISHING ROADWAY 1228-16-71 EACH
PROJECT 1228-16-71	1
PROJECT 1228-16-71 TOTAL	1

REMOVING STORM SEWER

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0245 REMOVING STORM SEWER 12-INCH LF	204.0245 REMOVING STORM SEWER 15-INCH LF	204.0245 REMOVING STORM SEWER 36-INCH LF
PROJECT 1228-16-71							
GOOD HOPE SB ON RAMP	115GHC+96	19.5' LT	115GHC+96	5' RT	25	--	--
	114GHC+81	55.0' RT	115GHC+96	5' RT	130	--	--
GREEN TREE ROAD	33GT+89	18.8' RT	34GT+06	13.2' RT	--	42	--
	40GT+00	36.7' LT	40GT+10	21.8' RT	--	59	--
JEAN NICOLET ROAD	12JN+54	28.6' RT	12JN+78	4.8' RT	34	--	--
I-43	1130+93	6.6' LT	1132+33	10.0' LT	--	139	--
	1132+16	120.9' RT	1132+62.5	46.8' RT	--	110	--
	1132+33	10.0' LT	1133+15	5.8' LT	--	--	90
	1132+54	5.2' LT	1132+54	3.4' RT	--	9	--
PROJECT 1228-16-71 TOTAL					189	359	90

REMOVING FENCE

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0170 REMOVING FENCE LF
PROJECT 1228-16-71					
GOOD HOPE SB ON RAMP	98GHC+75	18.6' LT	101GHC+88	3.9' LT	315
GREEN TREE ROAD	37GT+44	41' LT	38GT+39	31.3' LT	97
I-43	1131+94	87.2' RT	1132+67	102.4' RT	78
PROJECT 1228-16-71 TOTAL					490

ALL ITEMS CATEGORY 0010

FILE NAME: F:\Design\Plans\12290401\SheetsPlan\12290401_Milwaukee\Green Tree\PDF PLOT DATE : 12/18/2017 12:50:19 PM PLOT BY : HNTB Corp PLOT NAME : 030201_mq2 PLOT SCALE : 1:1

CATEGORY	DIVISION	LOCATION	FROM/TO STATION	COMMON EXCAVATION (CY) (1) (2) 205.0100	EXCAVATION BELOW SUBGRADE (1)	FILL (CY)	MASS ORDINATE +/- (5)	BACKFILL STRUCTURE TYPE A (TON) 210.1500	BORROW 1.25 EX FACTOR (CY) 208.0100	EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL (TON) SPV.0195.01	COMMENTS
0010	1	GREEN TREE ROAD	31GT+00 TO 37GT+89	513	0	1,706	-1,193	0	2,132	0	
		JEAN NICOLET ROAD	8JN+42 TO 15JN+00	893	0	158	735	0	197	0	
	DIVISION 1 SUBTOTAL			1,406	0	1,864	-458	0	2,330	0	
0010	2	GREEN TREE ROAD	40GT+08 TO 42GT+85	446	0	190	256	0	237	0	
	DIVISION 2 SUBTOTAL			446	0	190	256	0	237	0	
0010	3	IH-43	1120+45 TO 1133+19	2,295	230	10	2,285	0	12	0	
		GOOD HOPE ROAD SOUTHBOUND ENTRANCE RAMP	96GHC+50 TO 119+00	11,768	1,177	406	11,362	741	508	0	
		CONTAMINATED SOIL ALONG IH-43	1131+27 TO 1132+59	-1,239	0	0	0	0	0	2,110	
	DIVISION 3 SUBTOTAL			12,824	1,406	416	13,647	741	520	2,110	
	PROJECT 1228-16-71 TOTAL			16,082		2,470	13,445	741	3,087	2,110	

1) EXCAVATION COMMON = CUT + EBS EXCAVATION. ITEM NUMBER 205.0100. EBS ASSUMES 10% OF THE COMMON EXCAVATION AT THE PARTICULAR STATION.
2) CUT VOLUME INCLUDES CONCRETE AND ASPHALTIC SURFACE MATERIAL.
3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL UNLESS OTHERWISE NOTED IN PLANS.
4) ROADWAY EMBANKMENT = FILL
5) MASS ORDINATE = CUT - FILL. THE MASS ORDINATE IS FOR INFORMATION PURPOSES ONLY AS COMMON EXCAVATION AND ROADWAY EMBANKMENT (BORROW) ARE NOT BALANCED FOR QUANTITY PURPOSES AND DOES NOT GUARANTEE THE QUALITY OF COMMON EXCAVATION, AND IF IT CAN BE REUSED ONSITE. ALL EBS MATERIAL IS ASSUMED TO BE WASTED OFFSITE.
6) EXCAVATED CRESOTE CONTAMINATED SOILS ARE QUANTIFIED AS SHOWN WITH STATION RANGES AND ELEVATIONS DEPTHS SUPPLIED WITHIN THE SPECIALS. DISPOSAL IS PAID UNDER ITEM SPV.0195.01. CONVERSION FACTOR ESTIMATED AT 1.7 TONS PER CY.
7) DIVISON NUMBERING IS INDEPENDENT OF CONSTRUCTION STAGING NUMBERING

ALL ITEMS CATEGORY 0010

SUBSTRUCTURE

ROADWAY	STATION FROM		STATION TO	OFFSET	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	311.0110 BREAKER RUN TON	312.0110 SELECT CRUSHED MATERIAL TON	371.1000.S QMP BASE AGGREGATE DENSE 1 1/4 INCH COMPACTION TON	624.0100 WATER MGAL	SPV.0180.01 GEOGRID REINFORCEMENT SY	COMMENTS
STAGE 1A												
I-43 NB	1130+10		1133+02	RT	--	239	--	--	239	3.6	--	
I-43 SB	1120+45		1129+59	LT	--	564	--	--	564	8.5	--	
STAGE 1A SUBTOTALS					--	803	--	--	803	12.0	--	
STAGE 2A												
GOOD HOPE SB ON RAMP	96GHC+40	-	112GHC+00	LT/RT	--	2,233	--	--	2,233	33.5	--	
	96GHC+40	-	112GHC+00	LT/RT	--	--	3,216	--	--	--	--	
	112GHC+00	-	119GHC+21	LT/RT	--	1,728	--	--	1,728	25.9	260	EBS
	112GHC+00	-	119GHC+21	LT/RT	--	--	2,488	--	--	--	--	
	112GHC+00	-	119GHC+21	LT/RT	--	--	--	173	--	--	--	
STAGE 2A SUBTOTALS					--	3,961	5,704	173	3,961	59.4	260	
STAGE 2B												
GREEN TREE ROAD	31GT+00	-	37GT+87	LT/RT	--	2,008	--	--	2,008	30.1	--	
	31GT+00	-	37GT+82	LT	--	92	--	--	92	1.4	--	SIDEWALK LEFT
	32GT+52	-	32GT+62	LT	--	6	--	--	6	0.1	--	DRIVEWAY LEFT
	32GT+84	-	33GT+08	RT	--	3	--	--	3	0.1	--	SIDEWALK RIGHT
	32GT+85	-	32GT+96	LT	--	7	--	--	7	0.1	--	DRIVEWAY LEFT
	33GT+04	-	33GT+12	RT	1	--	--	--	--	--	--	RESIDENT PATH
	33GT+44	-	33GT+54	LT	--	6	--	--	6	0.1	--	DRIVEWAY LEFT
	33GT+47	-	33GT+58	RT	3	--	--	--	--	--	--	RESIDENT PATH
	33GT+51	-	34GT+01	RT	--	7	--	--	7	0.1	--	SIDEWALK RIGHT
	36GT+52	-	36GT+69	RT	--	45	--	--	45	0.7	--	DRIVEWAY RIGHT
	36GT+78	-	36GT+88	LT	--	9	--	--	9	0.1	--	DRIVEWAY LEFT
	37GT+17	-	37GT+49	RT	--	5	--	--	5	0.1	--	SIDEWALK RIGHT
JEAN NICOLET ROAD	8JN+42	-	11JN+00	RT	--	96	--	--	96	1.4	--	
	11JN+00	-	15JN+35	LT/RT	--	1,076	--	--	1,076	16.1	--	
I-43 NB	1130+84	-	1132+77	RT	--	29	--	--	29	0.4	--	
STAGE 2B SUBTOTALS					4	3,389	--	--	3,389	50.9	--	
STAGE 3												
GREEN TREE ROAD	39GT+98	-	42GT+34	LT	--	26	--	--	26	0.4	--	SIDEWALK LEFT
	40GT+03	-	42GT+85	LT/RT	--	833	--	--	833	12.5	--	
	40GT+08	-	41GT+43	RT	--	26	--	--	26	0.4	--	SIDEWALK RIGHT
	41GT+37	-	41GT+89	RT	--	43	--	--	43	0.6	--	
	41GT+81	-	42GT+85	RT	--	17	--	--	17	0.3	--	SIDEWALK RIGHT
I-43 SB	1130+95		1133+19	LT	33	207	--	--	207	3.1	--	
STAGE 3 SUBTOTALS					33	1,152	--	--	1,152	17.3	--	
PROJECT 1228-16-71 TOTALS					37	9,305	5,704	173	9,305	140.0	260	

ALL ITEMS CATEGORY 0010

3

CONCRETE ITEMS

ROADWAY	STATION			OFFSET	415.0100 CONCRETE PAVEMENT 10-INCH SY	416.0170 CONCRETE DRIVEWAY 7-INCH SY	416.0610 DRILLED TIE BARS EACH	602.0410 CONCRETE SIDEWALK 5-INCH SF	SPV.0165.01 SALVAGE AND REPLACE BRICK PAVERS SF	COMMENTS
STAGE 2B										
GREEN TREE ROAD	31GT+00	-	32GT+52	LT	--	--	--	736	--	SIDEWALK LEFT
	32GT+49	-	32GT+65	LT	--	13	--	--	--	
	32GT+62	-	32GT+85	LT	--	--	--	114	--	SIDEWALK LEFT
	32GT+82	-	32GT+99	LT	--	14	--	--	--	
	32GT+84	-	33GT+08	RT	--	--	--	117	--	SIDEWALK RIGHT
	32GT+96	-	33GT+44	LT	--	--	--	240	--	SIDEWALK LEFT
	33GT+04	-	33GT+12	RT	--	--	--	50	--	RESIDENT PATH
	33GT+41	-	33GT+57	LT	--	13	--	--	--	
	33GT+47	-	33GT+58	RT	--	--	--	50	--	RESIDENT PATH
	33GT+51	-	34GT+01	RT	--	--	--	290	--	SIDEWALK RIGHT
	33GT+54	-	36GT+78	LT	--	--	--	1,651	--	SIDEWALK LEFT
	36GT+75	-	36GT+91	LT	--	13	--	--	--	
	36GT+88	-	37GT+82	LT	--	--	--	534	--	SIDEWALK LEFT
	37GT+17	-	37GT+49	RT	--	--	--	192	--	SIDEWALK RIGHT
IH -43 NB	1130+84	-	1132-77	RT	86	--	65	--	--	UNDER BARRIER
STAGE 2B SUBTOTALS					86	53	65	3,974	--	
STAGE 3										
GREEN TREE ROAD	39GT+99	-	41GT+52	LT	--	--	--	1,064	--	SIDEWALK LEFT
	40GT+08	-	41GT+42	RT	--	--	--	1,064	--	SIDEWALK RIGHT
	41GT+81	-	42GT+85	RT	--	--	--	686	--	SIDEWALK RIGHT
	40GT+88			RT	--	--	--	--	43	
STAGE 3 SUBTOTALS					--	--	--	2,814	43	
PROJECT 1228-16-71 TOTALS					86	53	65	6,788	43	

ALL ITEMS CATEGORY 0010

FILE NAME: F:\Design\Plans\12290401\SheetsPlan\12290401_Milwaukee\Green Tree\PDF PLOT DATE : 12/18/2017 12:50:19 PM PLOT BY : HNTB Corp PLOT NAME : 030201_mq5 PLOT SCALE : 1:1

ASPHALT ITEMS

ROADWAY		STATION			OFFSET	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	495.1000.S COLD PATCH TON
STAGE 1A											
I-43 NB	1130+10	-	1133+02	RT		--	28	--	47	--	--
	1130+10	-	1133+02	RT		--	--	71	--	--	--
I-43 SB	1120+45	-	1129+56	LT		--	71	--	120	--	--
	1120+45	-	1129+56	LT		--	--	180	--	--	--
STAGE 1A SUBTOTALS						--	99	251	167	--	--
STAGE 2A											
GOOD HOPE SB ON RAMP	96GHC+40	-	119GHC+21	RT/LT		--	389	--	656	--	--
	96GHC+40	-	119GHC+21	RT/LT		--	--	983	--	--	--
STAGE 2A SUBTOTALS						--	389	983	656	--	--
STAGE 2B											
GREEN TREE ROAD	31GT+00	-	37GT+54	RT/LT		--	207	--	349	--	--
	31GT+00	-	37GT+54	RT/LT		--	--	524	--	--	--
	32GT+52	-	32GT+62	LT		--	1	--	--	2	--
	32GT+85	-	32GT+96	LT		--	1	--	--	2	--
	33GT+44	-	33GT+54	LT		--	1	--	--	2	--
	36GT+52	-	36GT+69	RT		--	6	--	--	15	--
	36GT+78	-	36GT+88	LT		--	1	--	--	3	--
JEAN NICOLET ROAD	11JN+00	-	15JN+26	RT/LT		--	106	--	178	--	--
	11JN+00	-	15JN+26	RT/LT		--	--	267	--	--	--
STAGE 2B SUBTOTALS						--	323	791	527	24	--
STAGE 3 SUBTOTALS											
GREEN TREE ROAD	40GT+03	-	42GT+85	RT/LT		--	88	--	148	--	--
	40GT+03	-	42GT+85	RT/LT		222	--	222	--	--	--
	41GT+40	-	41GT+85	RT		--	5	--	--	13	--
HOTEL PARKING LOT	40GT+05	-	40GT+50	LT		20	--	--	20	--	--
I-43 NB	1131+25	-	1132+50	RT		--	10	--	16	--	--
	1131+25	-	1132+50	RT		25	--	25	--	--	--
I-43 SB	1130+95	-	1133+19	LT		--	13	--	22	--	--
	1130+95	-	1133+19	LT		33	--	33	--	--	--
STAGE 3 SUBTOTALS						300	116	280	206	13	--
UNDISTRIBUTED							--	--	--	10	20
PROJECT 1228-16-71 TOTALS						300	927	2,305	1,556	47	20

ALL ITEMS CATEGORY 0010

CURB & GUTTER ITEMS

ROADWAY	STATION			OFFSET	601.0105 CONCRETE CURB TYPE A LF	601.0411 CONCRETE CURB AND GUTTER 30-INCH TYPE D LF	SPV.0090.04 CONCRETE CURB AND GUTTER SHES 30-INCH TYPE D LF
STAGE 1A							
I-43 NB	1130+10	-	1130+20	RT	--	--	10
STAGE 1A SUBTOTALS					--	--	10
STAGE 2A							
GOOD HOPE SB ON RAMP	113GHC	-	119GHC+21		--	544	--
STAGE 2A SUBTOTALS					--	544	--
STAGE 2B							
GREEN TREE ROAD	31GT+00	-	33GT+12	RT	--	229	--
	31GT+00	-	37GT+82	LT	--	682	--
	33GT+47	-	37GT+54	RT	--	434	--
	33GT+89	-	34GT+24	LT	35	--	--
JEAN NICOLET ROAD	11JN+00	-	15JN+26	LT	--	424	--
STAGE 2B SUBTOTALS					35	1,770	--
STAGE 3							
GREEN TREE ROAD	40GT+00	-	42GT+85	LT	--	218	--
	40GT+08	-	41GT+29	RT	--	120	--
	41GT+27	-	41GT+42	RT	15	--	--
	41GT+29	-	42GT+00	RT	--	--	143
	42GT+00	-	42GT+85	RT	--	85	--
	41GT+81	-	41GT+98	RT	17	--	--
HOTEL PARKING LOT	40GT+05	-	40GT+50	LT	--	70	--
STAGE 3 SUBTOTALS					32	494	143
PROJECT 1228-16-71 TOTAL					67	2,808	153

DETECTABLE WARNING FIELDS

ROADWAY	STATION	OFFSET	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	602.0615 CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL PATINA SF	NOTES
GREEN TREE ROAD	33GT+03	26.5' RT	--	20	
	33GT+56	26.5' RT	--	20	
	33GT+94	19.5' RT	10	--	
	33GT+94	19.5' LT	10	--	
	37GT+19	24.6' RT	10	--	
	37GT+20	21.3' LT	10	--	
	37GT+42	30.5' RT	--	24	
	38GT+00	30.0' RT	12	--	ON STRUCTURE B-40-917
	41GT+34	23.5' RT	--	20	
	41GT+92	23.5' RT	--	24	
PROJECT 1228-16-71 TOTALS			52	108	

ALL ITEMS CATEGORY 0010

CONCRETE BARRIER

ROADWAY	STATION			OFFSET	603.1142 **P** CONCRETE BARRIER TYPE S42 LF	603.1442 **P** CONCRETE BARRIER TYPE S42C LF	633.0200 **P** DELINEATORS FLEXIBLE EACH	SPV.0090.01 CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE LF
STAGE 1A								
I-43 SB	1120+94	-	1129+56	LT	--	--	10	862
STAGE 1A SUBTOTALS					--	--	10	862
STAGE 2A								
GOOD HOPE SB ON RAMP	96GHC+40	-	101GHC+30	LT	490	--	6	--
	101GHC+30	-	115GHC+00	LT	--	1,367	15	--
	115GHC+00	-	118GHC+82	LT	388	--	5	--
STAGE 2A SUBTOTALS					878	1,367	26	--
STAGE 2B								
JEAN NICOLET ROAD	8JN+42	-	12JN+00	RT	--	360	5	--
	12JN+00	-	15JN+24	RT	424	--	6	--
I-43 NB	1130+84	-	1132+77	RT	192	--	3	--
STAGE 2B SUBTOTALS					616	360	14	--
STAGE 3								
I-43 NB	1130+10	-	1133+25	RT/LT	315	--	5	--
I-43 SB	1130+95	-	1133+19	LT	225	--	4	--
STAGE 3 SUBTOTALS					540	--	9	--
PROJECT 1228-16-71 TOTAL					2,034	1,727	59	862

CONCRETE BARRIER TEMPORARY PRECAST ITEMS

ROADWAY	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
STAGE 1A		
I-43 NB	375	570
I-43 SB	862	862
STAGE 1A SUBTOTAL	1,432	1,432
STAGE 2A		
I-43 NB	--	375
I-43 SB	1,762	1,762
STAGE 2A SUBTOTAL	1,762	2,137
STAGE 2B		
I-43 NB	350	350
I-43 SB	442	442
STAGE 2B SUBTOTAL	792	792
PROJECT 1228-16-71 TOTA	3,986	4,361

ALL ITEMS CATEGORY 0010

3

CRASH CUSHION TEMPORARY ITEMS

ROADWAY	STATION	OFFSET	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
STAGE 1A									
NB	1129+02	9' RT	1	4	OM-3R (WO5-58M)	TL-3	UNIDIRECTIONAL	L	BLUNT END OF TEMPORARY BARRIER
STAGE 1A SUBTOTAL			1						
STAGE 2A									
NB	1130+50	32' RT	1	4	OM-3L (WO5-58L)	TL-3	UNIDIRECTIONAL	R	BLUNT END OF TEMPORARY BARRIER
SB	1140+00	32' LT	1	4	OM-3L (WO5-58L)	TL-3	UNIDIRECTIONAL	R	BLUNT END OF TEMPORARY BARRIER
STAGE 2A SUBTOTAL			2						
STAGE 2B									
NB	1130+00	21' RT	1	4	OM-3R (WO5-58M)	TL-3	UNIDIRECTIONAL	L	BLUNT END OF TEMPORARY BARRIER
SB	1134+50	21' LT	1	4	OM-3R (WO5-58M)	TL-3	UNIDIRECTIONAL	L	BLUNT END OF TEMPORARY BARRIER
STAGE 2B SUBTOTAL			2						
PROJECT 1128-16-71 TOTAL			5						

3

SALVAGE AND REPLACE GUARDRAIL

ROADWAY	BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	614.0920 SALVAGED RAIL LF	614.0950 REPLACING GUARDRAIL POSTS AND BLOCKS EACH	614.0951 REPLACING GUARDRAIL RAIL AND HARDWARE EACH
PROJECT 1228-16-71							
I-43 NB	1130+05.0	47.0' RT	1130+84.1	47.0' RT	89	25	89
PROJECT 1228-16-71 TOTAL					89	25	89

GUARDRAIL

	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH
STAGE 2B							
	37GT+43	32.3' LT	37GT+67	30.4' LT	GREEN TREE ROAD	25	2
STAGE 2B SUBTOTALS						25	2
PROJECT 1228-16-71 TOTALS						25	2

3

TEMPORARY THRIE BEAM

ROADWAY	STATION	OFFSET	614.1100 **P** MGS GUARDRAIL TEMPORARY THRIE BEAM TRANSITION LF	NOTES
I-43 SB INSIDE SHOULDER	1123+00	RT	6	DRAINAGE RELIEF FOR TEMP BARRIER
I-43 SB INSIDE SHOULDER	1126+00	RT	6	DRAINAGE RELIEF FOR TEMP BARRIER
I-43 SB INSIDE SHOULDER	1129+00	RT	6	DRAINAGE RELIEF FOR TEMP BARRIER
I-43 NB INSIDE SHOULDER	1132+40	2.5' RT	28	*
I-43 NB OUTSIDE SHOULDER	1130+15	48' RT	13	**
I-43 SB INSIDE SHOULDER	1130+10	2.5' RT	14	FRONT AND BACK FACE*
I-43 SB INSIDE SHOULDER	1133+33	2.5' RT	26	**
PROJECT 1228-16-71 TOTALS			99	

*TEMPORARY THRIE BEAM TRANSITION PIECES ARE 6'3" IN LENGTH.
**TEMPORARY THRIE BEAM TRANSITION PIECES ARE 12'6" IN LENGTH.

FENCING

LOCATION	STATION		STATION	OFFSET	616.0206 FENCE CHAIN LINK 6-FT LF
PROJECT 1228-16-71					
NW OF BRIDGE	37GT+44	-	37GT+80	LT	43
SW OF BRIDGE	8JN+42	-	15JN+24	RT	684
NE OF BRIDGE	1131+91	-	1132+67	RT	76
SE OF BRIDGE	1129+86	-	1131+23	RT	137
PROJECT 1228-16-71 TOTALS					940

MOBILIZATION

ROADWAY	619.1000 MOBILIZATION EACH
PROJECT 1228-16-71	1
PROJECT 1228-16-71 TOTAL	1

DUST CONTROL SURFACE TREATMENT

ROADWAY	623.0200 DUST CONTROL SURFACE TREATMENT SY
PROJECT 1228-16-71	13,800
PROJECT 1228-16-71 TOTAL	13,800

TREE PROTECTION

ROADWAY	STATION	OFFSET	616.0700.S FENCE SAFETY LF
STAGE 1A			
GREEN TREE ROAD	34GT+7.2	40.2' RT	5
	34GT+43.5	43.4' RT	5
	35GT+4.2	39.1' RT	5
STAGE 1A SUBTOTALS			15
PROJECT 1228-16-71 TOTALS			15

ALL ITEMS CATEGORY 0010

FILE NAME: F:\Design\Plans\12290401\SheetsPlan\12290401_Milwaukee\Green Tree\PDF PLOT DATE : 12/18/2017 12:50:20 PM PLOT BY : HNTB Corp PLOT NAME : 030201_mq10 PLOT SCALE : 1:1

EROSION CONTROL

ROADWAY	START STATION	START OFFSET	END STATION	END OFFSET	616.0600.S FENCE TEMPORARY* LF	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2002 EROSION MAT CLASS I TYPE A SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.2023 EROSION MAT CLASS II TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH
PROJECT 1228-16-71														
STAGE 1A														
GREEN TREE ROAD	31GT+00	25.6' RT	31GT+98	34.7' RT	--	107	107	--	--	--	--	--	--	--
	33GT+80	37.8' RT	36GT+44	47.8' RT	--	268	268	--	--	--	--	--	--	--
	36GT+71	44.5' RT	37GT+27	45.3' RT	--	57	57	--	--	--	--	--	--	--
JEAN NICOLET ROAD	11JN+35	64.8' LT	12JN+89	31.5' LT	--	153	153	--	--	--	--	--	--	--
GOOD HOPE SB ON RAMP	113GHC+50	18.4' LT	118GHC+80	30.6' LT	--	563	563	--	--	--	--	--	--	--
	114GHC+00	31.7' RT	116GHC+50	31.7' RT	--	259	259	--	--	--	--	--	--	--
STAGE 1A SUBTOTALS					--	1,405	1,405	--	--	--	--	--	--	--
STAGE 2A														
GREEN TREE ROAD	31GT+00	24' LT	32GT+52	30' LT	--	--	--	--	--	--	78	--	--	--
	31GT+00	15' LT	32GT+49	20' LT	--	--	--	--	--	--	82	--	--	--
	31GT+00	13' RT	33GT+07	32' RT	--	--	--	--	--	--	315	--	--	--
	32GT+62	30' LT	32GT+85	30' LT	--	--	--	--	--	--	21	--	--	--
	32GT+65	20' LT	32GT+82	20' LT	--	--	--	--	--	--	11	--	--	--
	32GT+96	30' LT	33GT+44	30' LT	--	--	--	--	--	--	18	--	--	--
	32GT+99	20' LT	33GT+41	20' LT	--	--	--	--	--	--	25	--	--	--
	33GT+52	32' RT	36'GT+52	21' RT	--	--	--	--	--	--	672	--	--	--
	33GT+54	30' LT	36GT+78	31' LT	--	--	--	--	--	--	208	--	--	--
	33GT+57	20' LT	33GT+73	20' LT	--	--	--	--	--	--	21	--	--	--
	33GT+82	20' LT	36GT+75	21' LT	--	--	--	--	--	--	155	--	--	--
	36GT+69	22' RT	37GT+49	38' RT	--	--	--	--	--	--	135	--	--	--
	36GT+88	31' LT	37GT+84	30' LT	--	--	--	--	--	--	130	--	--	--
	36GT+91	21' LT	37GT+25	21' LT	--	--	--	--	--	--	16	--	--	--
	37GT+32	21' LT	37GT+61	22' LT	--	--	--	--	--	--	14	--	--	--
	37GT+80	28.5' LT	37GT+93	37.2' RT	67	--	--	--	--	--	--	--	--	--
	39GT+99	28.5' LT	40GT+11	36' RT	66	--	--	--	--	--	--	--	--	--
JEAN NICOLET ROAD	11JN+00	16' LT	15JN+35	20' LT	--	--	--	--	--	--	745	--	--	--
GOOD HOPE SB ON RAMP	96GHC+40	10' LT	100GHC+00	10' LT	--	--	--	--	--	--	--	1,270	--	--
	100GHC+00	10' LT	105GHC+45	10' LT	--	--	--	--	--	371	--	--	--	--
	106GHC+13	10' LT	107GHC+39	10' LT	--	--	--	--	--	--	--	646	--	--
	107GHC+39	10' LT	118GHC+82	22' LT	--	--	--	--	--	1,507	--	--	--	--
	113GHC+66	20' RT	19GHC+21	27' RT	--	--	--	--	--	291	--	--	--	--
I-43	1130+00	45' RT	1131+33	49' RT	--	--	--	--	--	--	--	698	--	--
	1132+01	49' RT	1132+77	49' RT	--	--	--	--	--	--	--	313	--	--
STAGE 2A SUBTOTALS					133	--	--	--	--	2,170	2,645	2,927	--	--
STAGE 3														
GREEN TREE ROAD	39GT+95	30' LT	40GT+89	30' LT	--	--	--	--	--	122	--	--	--	--
	40GT+07	37' RT	41GT+43	30' RT	--	--	--	--	--	719	--	--	--	--
	40GT+92	30' RT	41GT+43	30' RT	--	--	--	--	--	40	--	--	--	--
	40GT+93	30' LT	41GT+51	32' LT	--	--	--	--	--	22	--	--	--	--
	41GT+31	23' LT	42GT+18	23' LT	--	--	--	--	--	71	--	--	--	--
	41GT+81	30' RT	42GT+85	30' RT	--	--	--	--	--	91	--	--	--	--
STAGE 3 SUBTOTALS					--	--	--	--	--	1,064	--	--	--	--
UNDISTRIBUTED					50	--	--	7	8	162	132	146	35	30
PROJECT 1228-16-71 TOTALS					183	1,405	1,405	7	8	3,396	2,778	3,073	35	30

*TEMPORARY FENCE TO BE PLACED ACROSS GREEN TREE AT EAST AND WEST ENDS OF BRIDGE LIMITS AFTER THE BRIDGE IS REMOVED.

ALL ITEMS CATEGORY 0010

FILE NAME: F:\Design\Plans\12290401\SheetsPlan\12290401_Milwaukee\Green Tree\PDF PLOT DATE : 12/18/2017 12:50:20 PM PLOT BY : HNTB Corp PLOT NAME : 030201_mq11 PLOT SCALE : 1:1

RESTORATION ITEMS

ROADWAY	START STATION	START OFFSET	END STATION	END OFFSET	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.6510 SOIL STABILIZER TYPE B ACRE	628.7560 TRACKING PADS EACH	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
STAGE 2A											
I-43	1130+00	48' RT	1130+36	48' RT	--	351	--	--	--	--	9
STAGE 2A SUBTOTALS					--	351	--	--	--	--	9
STAGE 2A											
GREEN TREE ROAD	31GT+00	24' RT	32GT+52	30' LT	90	--	--	--	0.25	2	--
	31GT+00	15' LT	32GT+49	20' LT	82	--	--	--	0.25	2	--
	31GT+00	13' RT	33GT+07	32' RT	303	--	--	--	0.25	8	--
	32GT+62	30' LT	32GT+85	30' LT	19	--	--	--	0.25	1	--
	32GT+65	20' LT	32GT+82	20' LT	11	--	--	--	0.25	--	--
	32GT+96	30' LT	33GT+44	30' LT	21	--	--	--	0.25	1	--
	32GT+99	20' LT	33GT+41	20' LT	25	--	--	--	0.25	1	--
	33GT+52	32' RT	36'GT+52	21' RT	695	--	--	--	0.50	19	--
	33GT+54	30' LT	36GT+78	31' LT	274	--	--	--	0.25	7	--
	33GT+57	20' LT	33GT+73	20' LT	10	--	--	--	0.25	--	--
	33GT+82	20' LT	36GT+75	21' LT	166	--	--	--	0.25	4	--
	36GT+69	22' RT	37GT+49	38' RT	143	--	--	--	0.25	4	--
	36GT+88	31' LT	37GT+84	30' LT	117	--	--	--	0.25	3	--
	36GT+91	21' LT	37GT+25	21' LT	20	--	--	--	0.25	1	--
	37GT+32	21' LT	37GT+61	22' LT	12	--	--	--	0.25	--	--
NEAR HOTEL PARKING LOT	40GT+00	LT	40GT+60	LT	--	50	--	--	--	10	--
JEAN NICOLET ROAD	11JN+00	16' LT	15JN+35	20' LT	745	--	--	--	0.50	20	--
GOOD HOPE SB ON RAMP	96GHC+40	10' LT	105GHC+45	10' LT	1,645	--	--	--	1.25	44	--
	106GHC+13	10' LT	107GHC+39	10' LT	646	--	--	--	0.50	17	--
	107GHC+39	10' LT	118GHC+82	22' LT	1,507	--	--	--	1.00	41	--
	113GHC+66	20' RT	19GHC+21	27' RT	291	--	--	--	0.25	8	--
STAGE 2A SUBTOTALS					6,823	50	--	--	7.50	193	--
STAGE 2B											
I-43 NB	1130+00	45' RT	1131+33	49' RT	698	--	--	--	0.50	19	--
	1132+01	49' RT	1132+77	49' RT	313	--	--	--	0.25	8	--
STAGE 2B SUBTOTALS					1,011	--	--	--	0.75	27	--
STAGE 3											
GREEN TREE ROAD	39GT+95	30' LT	40GT+89	30' LT	122	--	--	--	0.25	3	--
	40GT+07	37' RT	41GT+43	30' RT	719	--	--	--	0.50	19	--
	40GT+92	30' RT	41GT+43	30' RT	40	--	--	--	0.25	1	--
	40GT+93	30' LT	41GT+51	32' LT	22	--	--	--	0.25	1	--
	41GT+31	23' LT	42GT+18	23' LT	71	--	--	--	0.25	2	--
	41GT+81	30' RT	42GT+85	30' RT	91	--	--	--	0.25	2	--
STAGE 3 SUBTOTALS					1,064	--	--	--	1.75	28	--
UNDISTRIBUTED					--	50	0.25	3	1	20	100
PROJECT 1228-16-71 TOTALS					8,898	451	0.25	3	11.00	268	109

ALL ITEMS CATEGORY 0010

INLET PROTECTION

ROADWAY	STATION	OFFSET	628.7005 INLET PROTECTION TYPE A EACH	628.7020 INLET PROTECTION TYPE D EACH
STAGE 1A				
GREEN TREE ROAD	33GT+58	35' RT	1	--
	34GT+00	13' RT	--	1
	34GT+06	13' LT	--	1
	10JN+78	15' RT	--	1
	12JN+54	29' RT	--	1
	12JN+78	5' RT	--	1
I-43	1130+49	5' RT	--	1
	1130+49	47' RT	--	1
	1132+63	3' RT	--	1
STAGE 1A SUBTOTALS			1	8
STAGE 1B				
GOOD HOPE SB ON RAMP	115GHC+96	5' RT	1	1
	115GHC+98	20' LT	1	1
STAGE 1B SUBTOTALS			2	2
STAGE 2A				
GREEN TREE ROAD	34GT+00	13' RT	1	--
	34GT+05	18' T	1	--
	34GT+17	17' LT	1	1
	34GT+14	18' RT	1	1
	37GT+37	26' RT	1	1
	37GT+37	20' LT	1	1
	40GT+04	20' LT	--	1
	40GT+10	21' RT	--	1
	42GT+11	21' LT	--	1
	42GT+11	21' RT	--	1
GOOD HOPE SB ON RAMP	98GHC+42	2' LT	1	1
	104GHC+41	7' LT	1	1
	104GHC+42	3' LT	1	1
	106GHC+55	13' LT	1	1
	106GHC+56	4' LT	1	1
	106GHC+57	6' LT	1	1
	107GHC+06	7' LT	1	1
	107GHC+07	3' LT	1	1
	108GHC+92	2' LT	1	1
	108GHC+92	7' LT	1	1
	111GHC+93	5' LT	1	1
GOOD HOPE SB ON RAMP CONT.	113GHC+17	5' LT	1	1
	113GHC+50	12' LT	1	1
	113GHC+70	7' LT	1	1
	116GHC+45	27' RT	1	1
I-43	1124+50	13' LT	1	1
	1132+63	46' RT	1	1
	1139+10	47' LT	1	1
	1139+26	46' LT	1	1
	1139+75	47' LT	1	1
	1139+79	55' LT	1	1
JEAN NICOLET ROAD	10JN+89	15' RT	1	--
	12JN+54	29' RT	1	--
	12JN+78	5' RT	1	--
STAGE 2A SUBTOTALS			30	29

INLET PROTECTION (CONT.)

ROADWAY	STATION	OFFSET	628.7005 INLET PROTECTION TYPE A EACH	628.7020 INLET PROTECTION TYPE D EACH
STAGE 2B				
GREEN TREE ROAD	40GT+04	21' LT	1	--
	40GT+10	22' RT	1	--
	40GT+25	21' LT	1	1
	41GT+60	21' LT	1	1
	41GT+60	21' RT	1	1
I-43	1130+49	5' RT	--	1
	1133+15	6' LT	--	1
STAGE 2B SUBTOTALS			5	5
PROJECT 1228-16-71 TOTALS			38	44

TEMPORARY SETTLING BASIN

ROADWAY	628.1104 EROSION BALES EACH	645.0120 GEOTEXTILE TYPE HR SY
PROJECT 1228-16-71		
SETTLING BASIN	30	67
PROJECT 1228-16-71 TOTALS	30	67

MAINTENANCE AND REPAIR OF HAUL ROADS (1228-16-71)

ROADWAY	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS 1228-16-71 EACH
PROJECT 1228-16-71	1
PROJECT 1228-16-71 TOTALS	1

ALL ITEMS CATEGORY 0010

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PLOT DATE : 12/18/2017 12:50:20 PM PLOT BY : HNTB Corp PLOT NAME : 030201_mq13 PLOT SCALE : 1:1

TRAFFIC CONTROL ITEMS

ROADWAY	DURATION DAYS	643.5000 TRAFFIC CONTROL 1228-16-71 EACH	643.0300 TRAFFIC CONTROL DRUMS EACH*	DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH*	DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH*	DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH*	DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH*	DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH*	DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH*	DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH*	DAYS
STAGE 1A CONSTRUCTION																			
GREEN TREE ROAD	30	--	19	570	--	--	16	480	32	960	12	360	--	--	8	240	--	--	--
JEAN NICOLET ROAD	30	--	48	1,440	--	--	2	60	4	120	3	90	--	--	12	360	3	--	--
I-43 NB	30	--	31	930	--	--	--	--	--	--	--	--	--	--	4	120	--	--	--
I-43 NB NIGHT LANE CLOSURE	10	--	50	500	--	--	2	20	4	40	15	150	2	20	12	120	--	--	--
I-43 SB NIGHT LANE CLOSURE	10	--	50	500	--	--	2	20	4	40	15	150	2	20	12	120	--	--	--
I-43 SB SHOULDER CLOSURE	30	--	21	630	--	--	--	--	--	--	--	--	--	--	8	240	--	--	--
ADVANCED SIGNING	30	--	--	--	--	--	1	30	2	60	--	--	--	--	20	600	--	1	30
STAGE 1A SUBTOTAL		--		4,570		--		610		1,220		750		40		1,800	3		30
STAGE 1B CONSTRUCTION																			
GREEN TREE ROAD	20	--	19	380	--	--	16	320	32	640	12	240	--	--	8	160	--	--	--
JEAN NICOLET ROAD	20	--	48	960	--	--	2	40	4	80	3	60	--	--	12	240	--	--	--
GOOD HOPE ROAD	20	--	37	740	--	--	10	200	20	400	8	160	2	40	8	160	2	--	--
ADVANCED SIGNING	20	--	--	--	--	--	1	20	2	40	--	--	--	--	15	300	--	1	20
GOOD HOPE RAMP VEHICULAR DETOUR	20	--	--	--	--	--	--	--	--	--	--	--	--	--	85	1,700	19	--	--
GREEN TREE PEDESTRIAN DETOUR	20	--	--	--	13	260	1	20	--	--	--	--	--	--	23	460	--	--	--
SILVER SPRING DRIVE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	--	--
STAGE 1B SUBTOTAL		--		2,080		260		600		1,160		460		40		3,020	23		20
STAGE 2A CONSTRUCTION																			
GREEN TREE ROAD	85	--	--	--	--	--	21	1,785	42	3,570	--	--	--	--	8	680	--	--	--
JEAN NICOLET ROAD	85	--	13	1,105	--	--	4	340	8	680	--	--	--	--	1	85	--	--	--
GOOD HOPE ROAD	85	--	37	3,145	--	--	9	765	18	1,530	8	680	2	170	9	765	--	--	--
I-43	85	--	30	2,550	--	--	2	170	4	340	--	--	--	--	7	595	--	--	--
ADVANCED SIGNING	85	--	--	--	--	--	1	85	2	170	--	--	--	--	30	2,550	--	1	85
GOOD HOPE RAMP VEHICULAR DETOUR	85	--	--	--	--	--	--	--	--	--	--	--	--	--	85	7,225	--	--	--
GREEN TREE PEDESTRIAN DETOUR	85	--	--	--	13	1,105	1	85	--	--	--	--	--	--	23	1,955	--	--	--
I-43 NB MAINLINE DETOUR	5	--	--	--	--	--	--	--	--	--	--	--	--	--	11	55	--	2	10
I-43 SB MAINLINE DETOUR	5	--	--	--	--	--	--	--	--	--	--	--	--	--	13	65	--	1	5
STAGE 2A SUBTOTAL		--		6,800		1,105		3,230		6,290		680		170		13,975	--		100

ALL ITEMS CATEGORY 0010

3

TRAFFIC CONTROL ITEMS (CONTINUED)

ROADWAY	DURATION DAYS	643.0100 TRAFFIC CONTROL 1228-16-71 EACH	643.0300 TRAFFIC CONTROL DRUMS EACH*	DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH*	DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH*	DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH*	DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH*	DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH*	DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH*	DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH*	DAYS
STAGE 2B CONSTRUCTION																			
GREEN TREE ROAD	55	--	--	--	--	--	18	990	36	1,980	--	--	--	--	8	440	--	--	--
JEAN NICOLET ROAD	55	--	13	715	--	--	2	110	4	220	--	--	--	--	12	660	--	--	--
GOOD HOPE NB OFF RAMP	55	--	--	--	--	--	--	--	--	--	--	--	--	--	2	110	--	--	--
GOOD HOPE SB ON RAMP	55	--	--	--	--	--	--	--	--	--	--	--	--	--	4	220	--	--	--
I-43	55	--	62	3,410	--	--	--	--	--	--	--	--	--	--	11	605	--	--	--
ADVANCED SIGNING	55	--	--	--	--	--	1	55	2	110	--	--	--	--	28	1,540	--	--	--
GREEN TREE PEDESTRIAN DETOUR	55	--	--	--	13	715	1	55	--	--	--	--	--	--	23	1,265	--	--	--
STAGE 2B SUBTOTAL		--		4,125		715		1,210		2,310		--		--		4,840	--		--
STAGE 3 CONSTRUCTION																			
GREEN TREE ROAD	20	--	--	--	--	--	14	280	28	560	--	--	--	--	7	140	--	--	--
JEAN NICOLET ROAD	20	--	49	980	--	--	4	80	8	160	--	--	--	--	12	240	--	--	--
GOOD HOPE NB OFF RAMP	20	--	--	--	--	--	--	--	--	--	--	--	--	--	2	40	--	--	--
GOOD HOPE SB ON RAMP	20	--	--	--	--	--	--	--	--	--	--	--	--	--	4	80	--	--	--
I-43	55	--	62	3,410	--	--	--	--	--	--	--	--	--	--	11	605	--	--	--
ADVANCED SIGNING	20	--	--	--	--	--	1	20	2	40	--	--	--	--	32	640	--	--	--
GREEN TREE PEDESTRIAN DETOUR	20	--	--	--	13	260	1	20	--	--	--	--	--	--	23	460	--	--	--
I-43 NB MAINLINE DETOUR	5	--	--	--	--	--	--	--	--	--	--	--	--	--	11	55	--	2	10
I-43 SB MAINLINE DETOUR	5	--	--	--	--	--	--	--	--	--	--	--	--	--	13	65	--	1	5
STAGE 3 SUBTOTAL		--		4,390		260		400		760		--		--		2,325	--		15
UNDISTRIBUTED		1		1,100		120		300		590		90		10		1,300	10	1	210
PROJECT1228-16-71 TOTAL		1		23,065		2,460		6,350		12,330		1,980		260		27,260	36		375

* PROVIDED FOR INFORMATION ONLY

ALL ITEMS CATEGORY 0010

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TRAFFIC CONTROL FIXED MESSAGE SIGNS

LOCATION	FMS NO.	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
PROJECT 1228-16-71			
EB GREEN TREE ROAD	101	2	19.5
NB MILWAUKEE RIVER PKWY	101	2	19.5
SB MILWAUKEE RIVER PWKY	101	2	19.5
WB BENDER ROAD	102	2	18.0
EB BENDER ROAD	102	2	18.0
NB JEAN NICOLET ROAD	102	2	18.0
NB PORT WASHINGTON ROAD	103	2	18.0
SB PORT WASHINGTON ROAD	103	2	18.0
WB GREEN TREE ROAD	103	2	18.0
NB PORT WASHINGTON ROAD	104	--	6.3
NB PORT WASHINGTON ROAD	104	--	6.3
NB PORT WASHINGTON ROAD	104	--	6.3
SB PORT WASHINGTON ROAD	104	--	6.3
SB PORT WASHINGTON ROAD	104	--	6.3
SB PORT WASHINGTON ROAD	104	--	6.3
EB GOOD HOPE ROAD	105	2	16.5
SB GREEN BAY ROAD	105	2	16.5
PROJECT 1228-16-71 TOTALS		22	237.3

INLET COVER REPAIR MAINTENANCE SPECIAL

ROADWAY	STATION	OFFSET	SPV.0060.11 INLET COVER REPAIR MAINTENANCE SPECIAL EACH
PROJECT 1228-16-71			
I-43 SB	1122+10	13' LT	1
	1124+50	13' LT	1
PROJECT 1228-16-71 TOTALS			2

3

PORTABLE SPEED TRAILER

ROADWAY	SPV.0045.01 SPEED TRAILER DAYS
JEAN NICOLET ROAD	245
PROJECT 1228-16-71 TOTAL	245

FIELD FACILITY OFFICE SPACE

ROADWAY	SPV.0060.10 OFFICE SPACE EACH
PROJECT 1228-16-71	1
PROJECT 1228-16-71 TOTAL	1

PAVEMENT CLEANUP (PROJECT 1228-16-71)

ROADWAY	SPV.0075.01 PAVEMENT CLEANUP PROJECT 1228-16-71 HOURS
PROJECT 1228-16-71	250
PROJECT 1228-16-71 TOTAL	250

NOTE: QUANTITY ASSUMES 10 HOURS/WEEK

SURVEY PROJECT

ROADWAY	SPV.0105.01 SURVEY PROJECT (1228-16-71) LS
PROJECT 1228-16-71	1
PROJECT 1228-16-71 TOTAL	1

ALL ITEMS CATEGORY 0010

FILE NAME: F:\Design\Plans\12290401\SheetsPlan\12290401_Milwaukee\Green Tree\PDF PLOT DATE : 1/19/2018 10:29:13 AM PLOT BY : HNTB Corp PLOT NAME : 030201_mq16 PLOT SCALE : 1:1

PAVEMENT MARKINGS

ROADWAY	STATION	TO	STATION	416.1110 CONCRETE SHOULDER RUMBLE STRIPS LF	646.1020 **P** MARKING LINE EPOXY 4-INCH (WHITE) LF	646.1020 **P** MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.1040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE) LF	646.1040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW) LF	646.5020 MARKING ARROW EPOXY (WHITE) EACH
PROJECT 1228-16-71									
GREEN TREE ROAD	31GT+00	-	42GT+85	--	1,986	274	--	--	--
JEAN NICOLET ROAD	11JN+00	-	15JN+69	--	848	848	--	--	--
GOOD HOPE SB ON RAMP	96GHC+40	-	118GHC+87	1,400	63	--	2,246	495	--
I-43 NB	1127+00	-	1139+37	--	--	--	1,020	1,037	--
I-43 SB	1119+35	-	1142+86	--	--	--	473	2,251	2
SILVER SPRING SB ON RAMP	---	-	---	--	--	--	--	--	--
PROJECT 1228-16-71 TOTAL				1,400	4,019		7,522		2

PAVEMENT MARKINGS (CONTINUED)

646.5220 MARKING SYMBOL EPOXY (WHITE) EACH	646.6120 **P** MARKING STOP LINE EPOXY 18-INCH (WHITE) LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF	646.7220 **P** MARKING CHEVRON EPOXY 24-INCH (WHITE) LF	646.7420 **P** MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE) LF	646.3555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE) LF
--	50	--	--	80	--	--
--	21	--	--	92	--	--
--	24	--	--	--	--	494
--	--	76	186	--	309	817
--	--	189	--	--	588	418
4	--	--	--	--	--	--
4	95	265	186	172	897	1,729

ALL ITEMS CATEGORY 0010

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TEMPORARY PAVEMENT MARKINGS

					646.9000 MARKING REMOVAL LINE 4-INCH	646.9100 MARKING REMOVAL LINE 8-INCH	646.9300 MARKING REMOVAL SPECIAL MARKING	649.0150 TEMPORARY MARKING REMOVABLE TAPE 4-INCH			649.0760 TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I
	ROADWAY	STATION	TO	STATION	LF	LF	EACH	(WHITE) LF	(YELLOW) LF	DASH (WHITE) LF	(WHITE) EACH
STAGE 1A											
	I-43 NB	1128+25	-	1134+64	1,500	--	--	1,266	639	55	17
STAGE 1A SUBTOTAL					1,500	--	--		1,960		17
STAGE 1B											
	SILVER SPRING SB ON RAMP	---	-	---	--	--	4	--	--	--	--
STAGE 1B SUBTOTAL					--	--	4		--		--
STAGE 2A											
	I-43 NB	1127+00	-	1139+37	--	--	--	1,801	800	--	20
	I-43 SB	1119+35	-	1142+86	2,807	166	--	3,131	2,240	124	49
STAGE 2A SUBTOTAL					2,807	166	--		8,096		69
STAGE 2B											
	I-43 NB	1127+00	-	1139+37	--	--	--	1,856	1,037	60	23
	I-43 SB	1119+35	-	1142+86	--	--	--	3,723	1,554	327	40
STAGE 2B SUBTOTAL					--	--	--		8,557		63
UNDISTRIBUTED					--	--	--		--		20
PROJECT 1228-16-71 TOTAL					4,307	166	4		18,613		169

ALL ITEMS CATEGORY 0010

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PLOT DATE : 12/18/2017 12:50:20 PM PLOT BY : HNTB Corp PLOT NAME : 030201_mq18 PLOT SCALE : 1:1

SAWCUTS

ROADWAY	STATION			OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	NOTES
PROJECT 1228-16-71							
GOOD HOPE SB ON RAMP	104GHC+55	-	104GHC+55	RT	--	11	
	118GHC+82	-	1118GHC+82	LT	22	--	
	118GHC+82	-	119GHC+21	RT	60	--	
GREEN TREE ROAD	31GT+00	-	31GT+00	LT	27	--	
	32GT+50	-	32GT+63	LT	12	--	
	32GT+85	-	32GT+96	LT	11	--	
	33GT+15	-	33GT+47	RT	--	32	
	33GT+44	-	33GT+54	LT	10	--	
	36GT+44	-	36GT+59	RT	--	15	
	36GT+79	-	16GT+88	LT	10	--	
	41GT+46	-	41GT+73	RT	27	--	
	42GT+34	-	42GT+58	LT	24	--	
	42GT+85	-	42GT+85	LT	45	--	
I-43	1122+48	-	1139+76	LT	1,728	20	
	1130+10	-	1133+02	RT	356	20	
	1130+94	-	1133+19	LT	222	22	STAGE 3, NB INSIDE SHOULDER
	1131+00	-	1133+00	RT	200	--	
JEAN NICOLET ROAD	11JN+00	-	11JN+00	LT/RT	--	30	
UNDISTRIBUTED	---	-	---	---	100	50	
PROJECT 1228-16-71 TOTAL					2,855	201	

FLAGGING SPECIAL

ROADWAY	STAGE	ESTIMATED NO. OF FLAGGERS	SPV.0075.02 HOURS
JEAN NICOLET / GREEN TREE	1	2	100
JEAN NICOLET / GREEN TREE	3	2	164
PROJECT 1228-16-71 TOTAL			264

NOTE: QUANTITY ASSUMES 2 HOURS/DAY

ALL ITEMS CATEGORY 0010

3

SANITARY SEWER ITEMS

CATEGORY	STRUCTURE NUMBER	STATION	OFFSET	SPV.0060.08 ADJUSTING SANITARY MANHOLE EACH	SPV.0060.09 RECONSTRUCT SANITARY MANHOLE EACH	SPV.0105.02 STRUCTURE MODIFICATION MMSD DC0406 LS	EXISTING RIM ELEVATION	PROPOSED RIM ELEVATION	ELEVATION CHANGE	NOTES
	GREEN TREE ROAD									
RIVER HILLS										
7010	SAN 01	31GT+36.3	4.3'RT	1	--	--	673.65	673.65	0.00	SEE NOTE 1
7010	SAN 02	33GT+31.2	3.3'LT	1	--	--	677.27	678.03	0.76	SEE NOTE 1
7010	SAN 03	35GT+38.0	2.7'LT	--	1	--	687.27	689.87	2.60	SEE NOTE 1
7010	SAN 04	37GT+23.1	.4'LT	--	1	--	697.11	699.43	2.32	SEE NOTE 1
CATEGORY 7010 SUBTOTALS				2	2	--				
MMSD										
--	MMSD 01	33GT+33.1	6.0'RT	--	--	--	677.41	678.09	0.68	SEE NOTE 2
7047	MMSD 02	36GT+39.1	20.5'LT	--	1	--	693.50	695.84	2.34	SEE NOTE 3
--	MMSD 03	40GT+83.1	24.4'LT	--	--	--	699.95	701.24	1.29	SEE NOTE 2
--	MMSD 04	41GT+04.1	14.7'RT	--	--	--	699.67	700.57	0.90	SEE NOTE 2
--	MMSD 05	41GT+12.1	14.5'RT	--	--	--	699.77	700.47	0.70	SEE NOTE 2
7047	MMSD 06	41GT+11.1	6.8'RT	--	--	1	700.08	700.63	0.55	SEE NOTE 4
--	MMSD 07	42GT+02.	11.1'RT	--	--	--	700.69	700.57	-0.12	SEE NOTE 2
CATEGORY 7047 SUBTOTALS				--	1	1				
PROJECT 1228-16-71 TOTALS				2	3	1				

NOTE 1 - CONTRACTOR TO PERFORM ADJUSTMENT / RECONSTRUCT. PROVIDE MINIMUM 5-DAY NOTICE TO VILLAGE OF RIVER HILLS PRIOR TO PERFORMING WORK. CONTACT KURT FREDERICKSON: 414-352-0080 (OFFICE), 414-651-8586 (CELL).

NOTE 2 - MMSD CREWS WILL PERFORM THE REQUIRED ADJUSTMENT DURING CONSTRUCTION. PROVIDE MINIMUM 5-DAY NOTICE TO MMSD. CONTACT ANTHONY JACKSON: 414-747-3867 (OFFICE), 414-841-9553 (CELL).

NOTE 3 - THE MANHOLE STRUCTURE WILL BE RECONSTRUCTED AND RAISED BY THE THE CONTRACTOR. THE PROPOSED CONCRETE CURB AND GUTTER ALIGNMENT ON THE NORTH SIDE OF GREEN TREE ROAD WILL BE ADJUSTED TO ACCOMMODATE THE MANHOLE FRAME LOCATION. WITH THE CURB ADJUSTMENT, IT IS STILL ANTICIPATED TO REQUIRE THE MANHOLE FRAME TO BE OFFSET TO THE NORTH A MAXIMUM OF 6-INCHES. DUE TO THIS OFFSET, A STANDARD INTERNAL FRAME/CHIMNEY SEAL CAN NOT BE USED. MMSD WILL REQUIRE APPLYING TWO LAYERS OF ELASTOMERIC WATERPROOFING SEALER TO THE EXTERIOR OF THE PRECAST CONCRETE ADJUSTING RINGS AND TWO LAYERS OF 4-MIL PLASTIC. SEE SPECIAL PROVISIONS FOR PRODUCT SPEC FOR THE SEALER. PROVIDE MINIMUM 5-DAY NOTICE TO MMSD BEFORE PERFORMING WORK. CONTACT ANTHONY JACKSON: 414-747-3867 (OFFICE), 414-841-9553 (CELL).

NOTE 4 - MMSD CREWS WILL REMOVE THE EXISTING CONCRETE SLAB COVER AND WILL BE DISPOSED OF BY THE CONTRACTOR. PROVIDE MINIMUM 5-DAY NOTICE TO MMSD PRIOR TO PERFORMING WORK. CONTACT ANTHONY JACKSON: 414-747-3867 (OFFICE), 414-841-9553 (CELL). THE CONTRACTOR WILL REMOVE THE EXISTING CONCRETE RISER TO THE STRUCTURE ROOF DECK. THE CONTRACTOR WILL RECONSTRUCT A NEW CONCRETE RISER TO THE PROPOSED FINISH ELEVATION. CONTRACTOR WILL PROVIDE AND INSTALL A NEW REMOVABLE CONCRETE SLAB COVER.

ALL ITEMS CATEGORY 0010

FILE NAME: F:\Design\Plans\12290401\SheetsPlan\12290401_Milwaukee\Green Tree\PDF PLOT DATE : 12/18/2017 12:50:20 PM PLOT BY : HNTB Corp PLOT NAME : 030201_mq20 PLOT SCALE : 1:1

3

STORM SEWER STRUCTURES

STRUCTURE NUMBER	STATION	OFFSET	FLANGE OR RIM ELEV	EXISTING RIM ELEV	LOWEST INVERT	DEPTH	520.8000 CONCRETE COLLARS FOR PIPE EACH	611.0420 RECONSTRUCT MANHOLE EACH	611.053 MANHOLE COVERS TYPE J EACH	611.0535 MANHOLE COVERS TYPE JS EACH	611.0606 INLET COVERS TYPE B EACH	611.061 INLET COVERS TYPE BW EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.0651 INLET COVER TYPE S EACH	611.0654 INLET COVERS TYPE V EACH	611.1005 CATCH BASIN 5-FT DIAMETER EACH	611.1006 CATCH BASIN 6-FT DIAMETER EACH
W. GREEN TREE ROAD																		
101	34GT+15	18.0' LT	682.35	--	675.50	5.60	--	--	--	--	--	--	1	--	--	--	1	--
EX MH01	34GT+00	9.9' LT	681.74	680.13	664.62	15.87	--	--	--	1	--	--	--	--	--	--	--	--
EX MH05	34GT+00	13.0' RT	681.69	680.14	671.30	9.14	--	--	--	1	--	--	--	--	--	--	--	--
EX MH 08	32GT+30	20.8' RT	674.72	673.77	--	--	--	1	--	--	--	--	--	--	--	--	--	--
102	34GT+16	18.0' RT	682.40	--	676.00	5.15	--	--	--	--	--	--	1	--	--	--	1	--
EX IN06	33GT+12	37.8' RT	677.05	676.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX IN07	33GT+48	36.5' RT	678.02	676.91	--	--	--	1	--	--	--	--	--	--	--	--	--	--
103	33GT+55	39.0' RT	675.80	--	671.58	2.97	--	--	--	--	--	--	--	1	--	--	--	--
104	36GT+22	18.4' LT	694.35	--	690.00	3.10	--	--	--	--	--	--	1	--	--	--	--	--
MH110	40GT+14	58.1' LT	700.50	--	693.17	6.08	--	--	1	--	--	--	--	--	--	--	--	--
108	40GT+25	21.0' LT	701.65	--	692.85	7.55	--	--	--	--	--	--	1	--	--	--	--	--
107	40GT+36	21.0' RT	701.50	--	690.50	9.75	--	--	--	--	--	--	1	--	--	--	1	--
EX IN222	42GT+11	21.0' LT	700.51	700.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX IN223	42GT+11	21.0' RT	700.51	700.68	--	--	--	--	--	--		--	--	--	--	--	--	--
105	41GT+60	21.0' LT	700.09	--	696.04	2.80	--	--	--	--	--	--	1	--	--	--	--	--
106	41GT+60	21.0' RT	700.08	--	695.00	4.08	--	--	--	--	--	--	--	--	1	--	--	--
W. GREEN TREE ROAD SUBTOTALS							--	2	1	2	--	--	6	1	1	--	3	--
N. JEAN NICOLET ROAD SUBTOTALS																		
114	12JN+60	16.0' LT	692.95	--	689.75	1.95	--	--	--	--	--	--	1	--	--	--	--	--
115	12JN+60	16.0' RT	692.93	--	689.68	2.00	--	--	--	--	--	1	--	--	--	--	--	--
EX IN116	102GHC+91	16.1' LT	692.93	--	689.20	2.48	--	--	1	--	--	--	--	--	--	--	--	--
N. JEAN NICOLET ROAD SUBTOTALS							--	--	1	--	--	1	1	--	--	--	--	--

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3

STORM SEWER STRUCTURES (CONT.)

STRUCTURE NUMBER	STATION	OFFSET	FLANGE OR RIM ELEV	EXISTING RIM ELEV	LOWEST INVERT	DEPTH	520.8000 CONCRETE COLLARS FOR PIPE EACH	611.0420 RECONSTRUCT MANHOLE EACH	611.053 MANHOLE COVERS TYPE J EACH	611.0535 MANHOLE COVERS TYPE JS EACH	611.0606 INLET COVERS TYPE B EACH	611.061 INLET COVERS TYPE BW EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.0651 INLET COVER TYPE S EACH	611.0654 INLET COVERS TYPE V EACH	611.1005 CATCH BASIN 5-FT DIAMETER EACH	611.1006 CATCH BASIN 6-FT DIAMETER EACH
I-43																		
MH200	40GT+43	141.3' RT	699.05	--	674.63	23.17	--	--	1	--	--	--	--	--	--	--	--	--
MH201	1130+15	11.0' RT	685.08	--	674.09	9.74	--	--	--	1	--	--	--	--	--	--	--	--
205	1130+49	4.0' RT	683.71	--	677.75	4.71	--	--	--	--	--	1	--	--	--	--	--	--
MH203	1130+49	11.0' RT	684.02	--	673.92	8.85	--	--	--	1	--	--	--	--	--	--	--	--
MH206	1132+32	11.0' RT	680.76	--	672.10	7.41	--	--	--	1	--	--	--	--	--	--	--	--
MH207	1132+33	11.2' RT	680.70	--	672.00	7.45	--	--	--	1	--	--	--	--	--	--	--	--
224	1132+63	45.9' RT	680.87	--	676.25	3.37	--	--	--	--	--	1	--	--	--	--	--	--
202	104GHC+42	7.0' LT	683.75	--	679.80	2.70	--	--	--	--	--	1	--	--	--	--	--	--
EX IN203	104GHC+42	3.4' RT	684.07	--	679.45	3.37	1	--	--	--	--	--	--	--	--	--	--	--
214	106GHC+56	12.3' LT	682.80	--	676.62	4.93	--	--	--	--	--	--	--	1	--	--	--	--
212	106GHC+57	7.0' LT	680.45	--	676.59	2.61	--	--	--	--	--	1	--	--	--	--	--	--
EX IN210	1132+65	46.5' LT	680.43	--	676.55	2.63	1	--	--	--	--	--	--	--	--	--	--	--
208	1132+65	7.4' LT	680.52	--	676.39	2.88	--	--	--	--	--	1	--	--	--	--	--	--
209	1132+64	2.6' RT	680.45	--	672.53	6.67	--	--	--	--	--	1	--	--	--	--	--	1
215	1133+14	57.0' LT	680.70	--	676.41	3.04	--	--	--	--	--	1	--	--	--	--	--	--
EX IN214	1133+14	47.8' LT	680.91	--	676.36	3.30	1	--	--	--	--	--	--	--	--	--	--	--
213	1133+15	5.6' LT	680.67	--	676.13	3.29	--	--	--	--	--	1	--	--	--	--	--	--
EX IN211	1124+50	13.0' LT	684.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX IN219	1122+10	13.0' LT	680.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MH216	1133+16	0.2' LT	680.64	--	673.00	6.39	--	--	--	1	--	--	--	--	--	--	--	--
230	108GHC+92	7.0' LT	684.12	--	681.10	1.77	--	--	--	--	--	1	--	--	--	--	--	--
EX IN231	1134+99	52.6' LT	684.23	--	681.00	1.98	1	--	--	--	--	--	--	--	--	--	--	--
236	111GHC+93	7.0' LT	689.20	--	685.00	2.95	--	--	--	--	--	1	--	--	--	--	--	--
237	113GHC+17	7.0' LT	689.70	--	686.00	2.45	--	--	--	--	--	1	--	--	--	--	--	--
226	113GHC+50	11.8' LT	691.00	--	686.26	3.49	--	--	--	--	--	--	--	1	--	--	--	--
238	113GHC+65	7.0' LT	690.25	--	686.42	2.58	--	--	--	--	--	1	--	--	--	--	--	--
239	113GHC+69	18.5' RT	691.13	--	686.65	3.23	--	--	--	--	--	--	1	--	--	--	--	--
240	1139+75	46.7' LT	690.69	--	686.97	2.47	--	--	--	--	--	--	--	--	--	1	--	--
217	113GHC+16	17.5' RT	690.50	--	686.45	2.80	--	--	--	--	1	--	--	--	--	--	--	--
242	116GHC+45	27.3' RT	700.56	--	696.12	3.19	--	--	--	--	--	--	1	--	--	--	--	--
I-43 SUBTOTALS							4	--	1	5	1	12	2	2	--	1	--	1
PROJECT 1228-16-71 TOTALS							4	2	3	7	1	13	9	3	1	1	3	1

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STORM SEWER STRUCTURES (CONT.)

STRUCTURE NUMBER	STATION	OFFSET	FLANGE OR RIM ELEV	EXISTING RIM ELEV	LOWEST INVERT	DEPTH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT EACH	611.3220 INLETS 2x2-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT DIAMETER EACH	611.3230 INLETS 2x3-FT DIAMETER EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.8115 ADJUSTING INLET COVERS EACH	611.9900 DRAIN SLOTTED VAIN EACH
W. GREEN TREE ROAD																
101	34GT+15	18.0' LT	682.35	--	675.50	5.60	--	--	--	--	--	--	--	--	--	--
EX MH01	34GT+00	9.9' LT	681.74	680.13	664.62	15.87	--	--	--	--	--	--	--	--	--	--
EX MH05	34GT+00	13.0' RT	681.69	680.14	671.30	9.14	--	--	--	--	--	--	--	--	--	--
EX MH 08	32GT+30	20.8' RT	674.72	673.77	--	--	--	--	--	--	--	--	--	--	--	--
102	34GT+16	18.0' RT	682.40	--	676.00	5.15	--	--	--	--	--	--	--	--	--	--
EX IN06	33GT+12	37.8' RT	677.05	676.25	--	--	--	--	--	--	--	--	--	--	1	--
EX IN07	33GT+48	36.5' RT	678.02	676.91	--	--	--	--	--	--	--	--	--	--	--	--
103	33GT+55	39.0' RT	675.80	--	671.58	2.97	--	--	--	--	--	--	--	1	--	--
104	36GT+22	18.4' LT	694.35	--	690.00	3.10	--	--	--	--	--	--	1	--	--	--
MH110	40GT+14	58.1' LT	700.50	--	693.17	6.08	1	--	--	--	--	--	--	--	--	--
108	40GT+25	21.0' LT	701.65	--	692.85	7.55	--	--	--	--	--	--	1	--	--	--
107	40GT+36	21.0' RT	701.50	--	690.50	9.75	--	--	--	--	--	--	--	--	--	--
EX IN222	42GT+11	21.0' LT	700.51	700.59	--	--	--	--	--	--	--	--	--	--	1	--
EX IN223	42GT+11	21.0' RT	700.51	700.68	--	--	--	--	--	--	--	--	--	--	1	--
105	41GT+60	21.0' LT	700.09	--	696.04	2.80	--	--	--	--	--	--	1	--	--	--
106	41GT+60	21.0' RT	700.08	--	695.00	4.08	1	--	--	--	--	--	--	--	--	--
W. GREEN TREE ROAD SUBTOTALS							2	--	--	--	--	--	3	1	3	--
N. JEAN NICOLET ROAD SUBTOTALS																
114	12JN+60	16.0' LT	692.95	--	689.75	1.95	--	--	--	--	--	--	1	--	--	--
115	12JN+60	16.0' RT	692.93	--	689.68	2.00	--	--	--	--	--	1	--	--	--	--
EX IN116	102GHC+91	16.1' LT	692.93	--	689.20	2.48	--	--	--	--	--	--	--	--	--	--
N. JEAN NICOLET ROAD SUBTOTALS							--	--	--	--	--	1	1	--	--	--

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STORM SEWER STRUCTURES (CONT.)

STRUCTURE NUMBER	STATION	OFFSET	FLANGE OR RIM ELEV	EXISTING RIM ELEV	LOWEST INVERT	DEPTH	611.2004 MANHOLES 4-FT DIAMETER	611.2005 MANHOLES 5-FT DIAMETER	611.2006 MANHOLES 6-FT DIAMETER	611.2007 MANHOLES 7-FT	611.3220 INLETS 2x2-FT DIAMETER	611.3225 INLETS 2x2.5-FT DIAMETER	611.3230 INLETS 2x3-FT DIAMETER	611.3901 INLETS MEDIAN 1 GRATE	611.8115 ADJUSTING INLET COVERS	611.9900 DRAIN SLOTTED VAIN
I-43							EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
MH200	40GT+43	141.3' RT	699.05	--	674.63	23.17	--	--	1	--	--	--	--	--	--	--
MH201	1130+15	11.0' RT	685.08	--	674.09	9.74	--	--	1	--	--	--	--	--	--	--
205	1130+49	4.0' RT	683.71	--	677.75	4.71	--	--	--	--	--	1	--	--	--	--
MH203	1130+49	11.0' RT	684.02	--	673.92	8.85	--	1	--	--	--	--	--	--	--	--
MH206	1132+32	11.0' RT	680.76	--	672.10	7.41	--	--	1	--	--	--	--	--	--	--
MH207	1132+33	11.2' RT	680.70	--	672.00	7.45	--	--	--	1	--	--	--	--	--	--
224	1132+63	45.9' RT	680.87	--	676.25	3.37	--	--	--	--	--	1	--	--	--	--
202	104GHC+42	7.0' LT	683.75	--	679.80	2.70	--	--	--	--	--	1	--	--	--	--
EX IN203	104GHC+42	3.4' RT	684.07	--	679.45	3.37	--	--	--	--	--	--	--	--	--	--
214	106GHC+56	12.3' LT	682.80	--	676.62	4.93	--	--	--	--	--	--	--	1	--	--
212	106GHC+57	7.0' LT	680.45	--	676.59	2.61	--	--	--	--	--	1	--	--	--	--
EX IN210	1132+65	46.5' LT	680.43	--	676.55	2.63	--	--	--	--	--	--	--	--	--	--
208	1132+65	7.4' LT	680.52	--	676.39	2.88	--	--	--	--	--	1	--	--	--	--
209	1132+64	2.6' RT	680.45	--	672.53	6.67	--	--	--	--	--	--	--	--	--	--
215	1133+14	57.0' LT	680.70	--	676.41	3.04	--	--	--	--	--	1	--	--	--	--
EX IN214	1133+14	47.8' LT	680.91	--	676.36	3.30	--	--	--	--	--	--	--	--	--	--
213	1133+15	5.6' LT	680.67	--	676.13	3.29	--	--	--	--	--	1	--	--	--	--
EX IN211	1124+50	13.0' LT	684.61	--	--	--	--	--	--	--	--	--	--	--	--	3
EX IN219	1122+10	13.0' LT	680.02	--	--	--	--	--	--	--	--	--	--	--	--	3
MH216	1133+16	0.2' LT	680.64	--	673.00	6.39	--	1	--	--	--	--	--	--	--	--
230	108GHC+92	7.0' LT	684.12	--	681.10	1.77	--	--	--	--	--	1	--	--	--	--
EX IN231	1134+99	52.6' LT	684.23	--	681.00	1.98	--	--	--	--	--	--	--	--	--	--
236	111GHC+93	7.0' LT	689.20	--	685.00	2.95	--	--	--	--	--	1	--	--	--	--
237	113GHC+17	7.0' LT	689.70	--	686.00	2.45	--	--	--	--	--	1	--	--	--	--
226	113GHC+50	11.8' LT	691.00	--	686.26	3.49	--	--	--	--	--	--	--	1	--	--
238	113GHC+65	7.0' LT	690.25	--	686.42	2.58	--	--	--	--	--	1	--	--	--	--
239	113GHC+69	18.5' RT	691.13	--	686.65	3.23	--	--	--	--	--	--	1	--	--	--
240	1139+75	46.7' LT	690.69	--	686.97	2.47	--	--	--	--	--	1	--	--	--	--
217	113GHC+16	17.5' RT	690.50	--	686.45	2.80	--	--	--	--	1	--	--	--	--	--
242	116GHC+45	27.3' RT	700.56	--	696.12	3.19	--	--	--	--	--	--	1	--	--	--
I-43 SUBTOTALS							--	2	3	1	1	12	2	2	--	6
PROJECT 1228-16-71 TOTALS							2	2	3	1	1	13	6	3	3	6

STORM SEWER PIPES

FROM STR	TO STR	INVERT ELEV FT	DISCH ELEV FT	SLOPE	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF
W. GREEN TREE ROAD											
101	EX MH01	677.50	677.25	1.47%	--	17	--	--	--	--	--
102	EX MH05	678.00	677.00	5.88%	--	17	--	--	--	--	--
103	EX MH05	671.58	671.30	0.65%	--	52	--	--	--	--	--
104	101	690.00	677.50	6.04%	--	207	--	--	--	--	--
EX IN07	103	671.70	671.58	0.67%	--	9	--	--	--	--	--
MH110	108	693.17	692.85	0.82%	--	--	39	--	--	--	--
108	107	692.85	692.50	0.81%	--	--	43	--	--	--	--
106	107	695.00	694.43	0.46%	--	--	124	--	--	--	--
105	106	696.04	695.83	0.50%	--	--	42	--	--	--	--
W. GREEN TREE SUBTOTALS					--	302	248	--	--	--	--
N JEAN NICOLET ROAD											
114	115	689.75	689.59	0.50%	32	--	--	--	--	--	--
115	EX IN116	689.59	689.20	2.79%	14	--	--	--	--	--	--
N JEAN NICOLET ROAD SUBTOTALS					46	--	--	--	--	--	--
I-43											
107	MH200	692.00	691.30	0.58%	--	--	--	121	--	--	--
MH200	MH201	674.63	674.09	0.52%	--	--	--	--	--	--	103
MH201	MH203	674.09	673.92	0.50%	--	--	--	--	34	--	--
MH203	MH206	673.92	672.60	0.72%	--	--	--	--	--	--	183
MH206	MH207	672.10	672.00	0.45%	--	--	--	--	--	22	--
202	CC1	679.80	679.45	3.50%	10	--	--	--	--	--	--
205	MH203	677.75	677.52	3.36%	--	7	--	--	--	--	--
214	212	676.62	676.59	0.60%	--	5	--	--	--	--	--
212	CC2	676.59	676.55	0.40%	--	10	--	--	--	--	--
208	209	676.39	675.53	8.60%	--	10	--	--	--	--	--
215	CC3	676.41	676.36	0.54%	--	9	--	--	--	--	--
213	MH216	676.13	676.00	2.17%	--	6	--	--	--	--	--
216	209	673.00	672.53	0.90%	--	--	--	--	--	52	--
209	MH207	672.53	672.00	1.56%	--	--	--	--	--	34	--
230	CC4	681.10	681.00	2.25%	--	4	--	--	--	--	--
237	236	686.00	685.00	0.81%	--	123	--	--	--	--	--
226	237	686.26	686.00	0.79%	--	33	--	--	--	--	--
238	226	686.42	686.26	1.00%	--	16	--	--	--	--	--
239	238	686.65	686.42	0.88%	--	26	--	--	--	--	--
240	239	686.97	686.89	0.89%	9	--	--	--	--	--	--
217	237	686.45	686.25	0.85%	24	--	--	--	--	--	--
242	239	696.12	687.14	3.21%	280	--	--	--	--	--	--
I-43 SUBTOTALS					323	250	--	121	34	108	286
PROJECT 1228-16-71 TOTAL					369	552	248	121	34	108	286

3

PIPE UNDERDRAIN

ROADWAY	STRUCTURE NUMBER	STATION	OFFSET	209.0300.S BACKFILL COARSE AGGREGATE SIZE NO. 1 CY	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF
GOOD HOPE ON-RAMF	242	116GHC+45	27.3' RT	8	259
	239	113GHC+69	18.5' RT	9	283
	238	113GHC+70	6.9' LT	4	130
	237	113GHC+17	7.0' LT	2	56
	236	111GHC+93	7.0' LT	4	127
	230	108GHC+92	7.0' LT	9	304
	215	107GHC+07	7.0' LT	6	190
	212	106GHC+57	7.0' LT	8	272
	202	104GHC+42	7.0' LT	24	804
PROJECT 1228-16-71 TOTAL				74	2,425

FILE NAME: F:\Design\Plans\12290401\SheetsPlan\12290401_Milwaukee\Green Tree\PDF
PLOT DATE : 12/15/2017 3:02:32 PM PLOT BY : HNTB Corp PLOT NAME : 030201_mq6 PLOT SCALE : 1:1

1228-16-71 IH43 AT GREEN TREE RD AND GOOD HOPE RD

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x	x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x	x H [FT.]	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
1	R3-4 (2S)		24 X	24	4.000		1	1		1																	
2	R5-6 (2S)		24 X	24	4.000		1	1			1																
3	R1-1 (2S)		30 X	30	5.180		1	1			1																
4	R7-1D (2S)		18 X	24	3.000		1	1			1																
5	R2-1 (2S)	SPEED LIMIT 25	24 X	30	5.000							4															
6	R5-2 (2S)		24 X	24	4.000		1	1			1		REMOVES NO TRUCKS PLAQUE ALSO														
7	NOT USED																										
8	R7-1D (2S)		18 X	24	3.000		1	1			1																
9	R1-1 (2S)		30 X	30	5.180		1	1		1																	
10	R1-1 (2S)		30 X	30	5.180		1	1			1		MOUNT ON WALL; INCIDENTAL TO POST														
11	R1-3P (2S)		18 X	6	0.750							9															
12	R1-3P (2S)		18 X	6	0.750							10															
13	R3-2 (2S)		24 X	24	4.000		1	1		1			REMOVES END-OF-ROAD MARKER ALSO														
13A		TIME OF DAY SIGN	X		0.000				1			13															
14	R1-1 (2S)		30 X	30	5.180		1	1			1		MOUNT ON WALL; INCIDENTAL TO POST														
14A	W5-56						1	1																			
15	R1-3P (2S)		18 X	6	0.750							14															
15A	W5-56						1	1																			
16	W5-52R (2S)		12 X	36		3.000	1	1		1																	
16A	W5-56						1	1																			
17	R7-1R (2S)		18 X	24	3.000		1	1			1																
18	W1-7 (2S)		48 X	24		8.000				1																	
19	SP	6:30 AM TO 7:30 AM [...] JUNE 15							1			13	MOUNT ABOVE R3-2; INCLUDE CLOTH FLAGS														
20	W5-52R (2S)		12 X	36		3.000	1	1		1			SHEET 3 OF 8														
21	R7-1L (2S)		18 X	24	3.000		1	1			1																
22	R7-1R (2S)		18 X	24	3.000		1	1			1																
23	R7-1D (2S)		18 X	24	3.000		1	1			1																
24	R7-1D (2S)		18 X	24	3.000		1	1			1																
25	R7-1D (2S)		18 X	24	3.000		1	1			1																
26	R1-1 (2S)		30 X	30	5.180		1	1			1																
27	R7-1R (2S)		18 X	24	3.000		1	1			1																
28	R7-1D (2S)		18 X	24	3.000		1						MOUNT ON LIGHT POLE														
29	R7-1D (2S)		18 X	24	3.000		1	1			1																
30	R7-1R (2S)		18 X	24	3.000		1						MOUNT ON LIGHT POLE														
31	R7-1D (2S)		18 X	24	3.000		1	1			1																
32	S4-51 (2S)	SCHOOL SPEED LIMIT 15	24 X	48		8.000	1	1			1																
33	R7-1D (2S)		18 X	24	3.000		1	1			1																
34	I2-3A (5)	CITY OF GLENDALE	66 X	30	13.750		1	2		2			MOUNT FACING SOUTHBOUND INTERSTATE TRAFFIC														
35	R2-1 (5)	SPEED LIMIT 55	48 X	60	20.000		1			2			MOUNT FACING SOUTHBOUND INTERSTATE TRAFFIC														
36	S5-2 (2S)		24 X	30	5.000						1																
37	R7-1D (2S)		18 X	24	3.000		1	1			1		SHEET 5 OF 8														
38	S1-1 (2S)		36 X	36		6.750	1	1			1																
39	S16-9P (2S)		30 X	18		3.750						38															
40	S4-5 (2S)	SCHOOL SPEED LIMIT 15	36 X	36		9.000					1																
41	R2-6P (2S)		24 X	18	3.000							38															
42	J4-1 (5)		36 X	54	13.500		1	1		1			MOUNT FACING SOUTHBOUND INTERSTATE TRAFFIC														
	MB3-3		36 x	18																							
	M1-1	IH 43	36 x	36																							
43	R7-1D (2S)		18 X	24	3.000		1	1			1																
44	R7-1D (2S)		18 X	24	3.000		1	1			1																
45	W6-3 (2S)		36 X	36		9.000	1	1			1																
46	R2-1 (2S)	SPEED LIMIT 35	24 X	30	5.000		1	1			1																
47	SP	NO LEFT TURN [...] JUNE 15						1	1	1			PROPERTY OF CITY OF GLENDALE														
48	M1-94 (MOD)	GREEN TREE RD 7000 NORTH	102 X	30	21.250		1						MOUNT ON SIDE OF BRIDGE WITH BRACKETS INCIDENTAL TO SIGN														

TYPE II SIGNING - **1228-16-71 IH43 AT GREEN TREE RD AND GOOD HOPE RD**

1228-16-71 IH43 AT GREEN TREE RD AND GOOD HOPE RD

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	SIGN SIZE H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / SIGN LOCATION	TYPE I SIGN SIZE W [FT.]	x	TYPE I SIGN SIZE H [FT.]	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
49	M1-94 (MOD)	GREEN TREE RD 7000 NORTH	102	X	30	21.250		1						MOUNT ON SIDE OF BRIDGE WITH BRACKETS INCIDENTAL TO SIGN SHEET 6 OF 8														
50	D10-2	MILE 80						1	1																			
50A	D10-5 (5)	SOUTH IH 43 MILE 80 | 0	21	X	60	8.750		1	1		1																	
51	D10-2	MILE 80						1	1																			
51A	D10-5 (5)	NORTH IH 43 MILE 80 | 0	21	X	60	8.750		1	1		1																	
52	W3-8 (5)		48	X	48		16.000	1	1					MOUNT ON BEACON POLE; SHEET 8 OF 8														
53	R3-59 (2S)		24	X	30	5.000							52	MOUNT ON BEACON POLE BELOW SIGN NO. 52														
54	R5-57 (5)		36	X	36	9.000		1	1		1																	
55	R10-6 (2S)		24	X	36	6.000		1						MOUNT ON SIGNAL POLE														
56	R10-65R (2S)		24	X	30	5.000							56	MOUNT ON SIGNAL POLE														
57	R10-6 (2S)		24	X	36	6.000		1						MOUNT ON SIGNAL POLE														
58	R10-65L (2S)		24	X	30	5.000							58	MOUNT ON SIGNAL POLE														
59	W4-2R (2S)		36	X	36		9.000	1	1		1																	
60	W4-2R (5)		48	X	48		16.000				1																	
61	E4-1a																	1	1	2	B	1.6	98	1000				
UNDISTRIBUTED						--			1			1	--	--		X									--	--	--	--
TOTALS						256.400	91.500	49.000	45.000	3.000	17.000	28.000	--	--				1	1	2	0	1.6	98	1000				

3

FTMS EACH ITEM REMOVALS

CATEGORY 1300

ROADWAY	ITEM	204.0195 REMOVING CONCRETE BASES EACH	204.0210 REMOVING MANHOLES EACH	204.9060.S.20 REMOVING RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT EACH	653.0905 REMOVING PULLBOXES EACH
IH 43	EXMH1112NB	--	1	--	--
	EXPB113	--	--	--	1
	EXPB114	--	--	--	1
	EXSB01	1	--	1	--
	EXPB115	--	--	--	1
	EXSB02	1	--	1	--
TOTALS		2	1	2	3

FTMS LINEAR FOOT REMOVALS

CATEGORY 1300

ROADWAY	ITEM ID	LINEAR DISTANCE	**P** 674.0300 REMOVE CABLE LF
IH 43	EXMH1112NB - EXMH1143NB	3065	3065
	EXMH1143NB - EXMH1143SB	190	190
	EXMH1143SB - EXMH116GH	140	140
	EXMH116GH - EX-HUB-40-0011	25	25
	EX-CB-RM-40-0023 - EXPB117	10	10
	EXPB117 - EXPB115	30	30
	EXPB115 - EXSB02	10	10
	EXPB115 - EXSB114	50	50
	EXSB114 - EXSB01	10	10
	EXPB114 - EXPB113	25	25
	EXPB113 - EXPB1142SB	50	50
	EXPB1142SB - EXDP1142SB	10	10
	EXPB114 - EXPB119	300	300
	EXPB119 - EXRG119	10	10
	EXPB119 - EXPB120	50	50
	EXPB120 - EXPB121	30	30
	EXPB121 - EX-CCTV-40-0080	10	10
TOTALS			4015

FTMS LUMP SUM ITEMS

CATEGORY 1300

ROADWAY	LOCATION	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS	678.0500 COMMUNICATION SYSTEM TESTING LS
IH 43	IH 43	1	1	1
TOTALS		1	1	1

3

FTMS EACH ITEMS AND VAULTS

CATEGORY 1300

ROADWAY	ITEM ID	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH	654.0101 CONCRETE BASES TYPE 1 EACH	657.0100 PEDESTAL BASES EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	658.0172 TRAFFIC SIGNAL FACE 2S 12-INCH EACH	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	673.0105 COMMUNICATION VAULT TYPE 1 ITEM EACH	678.0300 FIBER OPTIC SPLICE EACH	678.0400 FIBER OPTIC TERMINATION EACH
IH 43	EXMH1112NB	1	--	--	--	--	--	--	--	72	--
	CV1130NB	--	--	--	--	--	--	--	1	--	--
	CV1134NB	--	--	--	--	--	--	--	1	--	--
	CV1142NB	--	--	--	--	--	--	--	1	--	--
	EXMH1143NB	1	--	--	--	--	--	--	--	--	--
	EXMH1143SB	1	--	--	--	--	--	--	--	--	--
	PB117	--	1	--	--	--	--	--	--	--	--
	SB117	--	--	1	1	1	1	1	--	--	--
	PB116	--	1	--	--	--	--	--	--	--	--
	SB116	--	--	1	1	1	1	1	--	--	--
	EXPB1142SB	1	--	--	--	--	--	--	--	--	--
	EXPB117	1	--	--	--	--	--	--	--	--	--
	EXPB119	1	--	--	--	--	--	--	--	--	--
	PB114	--	1	--	--	--	--	--	--	--	--
	PB1138SB	--	1	--	--	--	--	--	--	--	--
	EX-HUB-40-0011	--	--	--	--	--	--	--	--	--	72
	EXDP1142SB	--	--	--	--	--	--	--	--	--	--
TOTALS		6	4	2	2	2	2	2	3	72	72

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FTMS LINEAR FOOT ITEMS

CATEGORY	1300		**p** 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	**p** 655.0210 CABLE TRAFFIC SIGNAL 3-14 AWG	**p** 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	**p** 655.0510 ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG	**p** 655.0700 LOOP DETECTOR LEAD IN CABLE	**p** 671.0132 CONDUIT HDPE 3-DUCT 2-INCH	**p** 671.0132 CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-INCH	671.0300 FIBER OPTIC CABLE MARKER	**p** 674.0200 CABLE MICROWAVE DETECTOR	**p** 678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT
ROADWAY	ITEM ID	LINEAR DISTANCE	LF	LF	LF	LF	LF	LF	LF	EA	LF	LF
IH 43	EXMH1112NB - CV1130NB	1800	--	--	--	1800	--	1800	--	3	--	1900
	CV1130NB - CV1134NB	385	--	--	--	385	--	--	385	2	--	485
	CV1134NB - CV1142NB	870	--	--	--	870	--	870	--	2	--	970
	CV1142NB - EXMH1143NB	150	--	--	--	150	--	--	150	1	--	250
	EXMH1143NB - EXMH1143SB	190	--	--	--	190	--	--	--	1	--	290
	EXMH1143SB - EXMH116GH	135	--	--	--	135	--	--	--	--	--	235
	EXMH116GH - EX-HUB-40-0011	25	--	--	--	25	--	--	--	--	--	125
	EX-CB-RM-40-0023 - EXPB117	10	--	10	10	10	50	--	--	--	10	--
	EXPB117 - PB116	30	60	30	30	30	150	--	--	--	30	--
	PB116 - PB117	50	100	50	50	50	250	--	--	--	50	--
	PB116 - SB116	10	20	--	10	--	--	--	--	--	--	--
	PB117 - EXPB1142SB	55	110	--	--	55	--	--	--	--	55	--
	EXPB1142SB - EXDP1142SB	10	--	--	--	10	--	--	--	--	10	--
	PB117 - EXPB119	285	570	570	--	285	--	--	--	--	--	--
	EXPB119 - EXRG119	10	--	10	--	10	--	--	--	--	--	--
TOTALS			860	670	100	4005	450	2670	535	9	155	4255

3

3

CATEGORY 1100
LIGHTING - REMOVALS

204.0195	REMOVING CONCRETE BASES
653.0905	REMOVING PULL BOXES
SPV.0060.21	LAMP DISPOSAL HIGH INTENSITY DISCHARGE
SPV.0060.22	LIGHTING UNITS SALVAGED

SYSTEM	LOCATION	OFFSET	204.0195 REMOVING CONCRETE BASES	653.0905 REMOVING PULL BOXES	SPV.0060.21 LAMP DISPOSAL HIGH INTENSITY DISCHARGE	SPV.0060.22 LIGHTING UNITS SALVAGED	COMMENTS
			EACH	EACH	EACH	EACH	
HL-40-GH	1124+63.77	53.24' LT	1	--	1	1	--
HL-40-GH	1126+00.00	56.00' LT	--	1	--	--	--
HL-40-GH	1127+69.52	55.83' LT	1	--	1	1	--
HL-40-GH	1142+31.66	144.28' LT	1	--	1	1	--
	TOTAL (1100)		3	1	3	3	

PROJECT NO: 1228-16-71	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

3

CATEGORY 1100
LIGHTING - CONDUIT AND WIRE
240/480 VAC 3-WIRE ISOLATED NEUTRAL SYSTEM

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
652.0615 CONDUIT SPECIAL 3-INCH
655.0620 ELECTRICAL WIRE LIGHTING 8 AWG

SYSTEM	FROM	TO	**P** 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	**P** 652.0615 CONDUIT SPECIAL 3-INCH	**P** 655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	COMMENTS
			LF	LF	LF	
HL-40-GH	BGH61	AGH60	--	--	860	USE EXISTING CONDUIT
HL-40-GH	AGH60	LPB111	70	--	320	INTERCEPT EXISTING CONDUIT AT THE BASE
HL-40-GH	LPB111	LPB112	--	120	520	--
HL-40-GH	LPB112	BGH63	150	--	640	--
HL-40-GH	BGH63	AGH64	220	--	920	--
HL-40-GH	AGH64	STUBOUT NORTH	25	--	--	--
HL-40-GH	HGH86	GGH87	170	--	720	INTERCEPT EX. CONDUIT FROM HGH86 AND EXTEND TO GGH87
HL-40-GH	GGH87	LPB108	--	70	240	USE EXISTING PULL BOX
HL-40-GH	LPB108	HGH88	--	--	960	--
	TOTAL (1100)		635	190	5,180	

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CATEGORY 1100
LIGHTING - PULL BOXES

653.0140 PULL BOXES STEEL 24 X 42-INCH
655.0615 ELECTRICAL WIRE LIGHTING 10 AWG (GROUNDING WIRE)

P

SYSTEM	LOCATION	LABEL	653.0140 PULL BOXES STEEL 24X42 INCH	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG	COMMENTS
			EACH	LF	
HL-40-GH	1123+18.49, 62.80' RIGHT	LPB111	1	70	--
HL-40-GH	1123+18.51, 56.37' LEFT	LPB112	1	140	--
	TOTAL (1100)		2	210	

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CATEGORY 1100
LIGHTING - FINAL UNITS

654.0108 CONCRETE BASES TYPE 8
655.0610 ELECTRICAL WIRE LIGHTING 12 AWG

P

SYSTEM	STATION	OFFSET	654.0108 CONCRETE BASES TYPE 8	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	COMMENTS
			EACH	L.F.	
HL-40-GH	1124+63.50	61.24' LT	1	189	SALVAGED LIGHTING UNIT
HL-40-GH	1126+90.87	61.95' LT	1	189	"
HL-40-GH	1142+39.18	128.79' LT	1	144	SALVAGED LIGHTING UNIT
	TOTAL (1100)		3	522	

CATEGORY 1100
LIGHTING - SYSTEMS
240/480 VAC 3-WIRE

SPV.0105.1001 MAINTENANCE OF LIGHTING SYSTEMS

SYSTEM	LOCATION	SPV.0105.03 MAINTENANCE OF LIGHTING SYSTEMS
		LS
HL-40-GH	SE QUADRANT OF GOOD HOPE RD AND IH 43	1
	TOTAL (1100)	1

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE BASED ON THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD-83 (2007) ADJUSTMENT (IN US SURVEY FEET). COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY. PROPERTY OWNERSHIP INFORMATION OBTAINED FROM "OWNERSHIP REPORTS" PERFORMED BY A LOCAL TITLE COMPANY.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. THE TLE's DEPICTED ON THIS PLAT SHALL EXPIRE UPON COMPLETION OF EACH TASK.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

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

BASIS OF EXISTING RIGHT-OF-WAY
DECLARATION OF EXCESS LANDS: SOLD 7-31-1975 R.873 I.2133, DOC. 4941119
DECLARATION OF EXCESS LANDS: SOLD 7-17-1968 R.442 I.1308, DOC. 4420152
DEDICATED BY THE SUBDIVISION PLAT OF GREEN TREE VALLEY
CSM 4957 R.2109 I.1578; CSM 5808 R.2974 I.644
HWY I-43 PROJECT ID FO77-11-1 DEC. 16, 1953

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 ACQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED (ACRES)			REMAINING ACRES	PLE (ACRES)	TLE (ACRES)
				NEW	EXISTING	TOTAL			
1	ANR GLENDALE HOTEL 2, LLC	PLE, TLE	1.113	-	-	-	1.113	0.034	0.046
2	ANR PNC, LLC	TLE	0.677	-	-	-	0.677	-	0.014
4	Patricia C. Condon	TLE	0.399	-	-	-	0.399	-	0.041
5	Nicolet High School District	FEE, TLE	2.011	-	0.171	0.171	1.840	-	0.092
6	General Capital/LaMacchia Shores, LLC	PLE	5.416	-	-	-	5.416	0.158	-

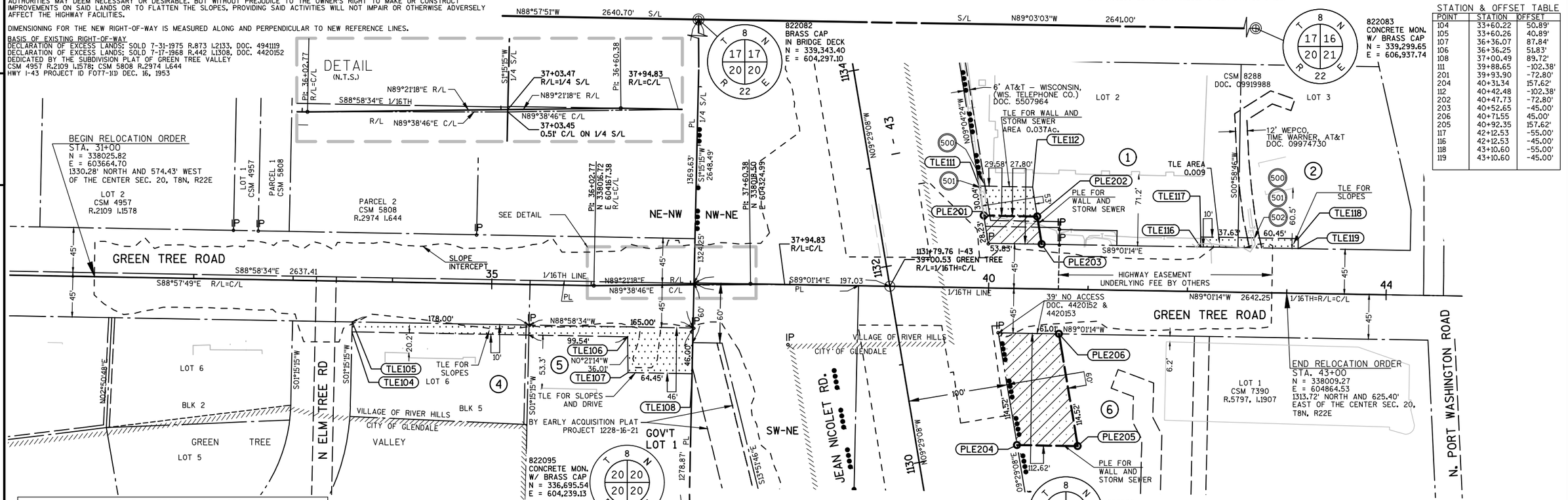
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

GN
0 50 100

FOR ACCESS CONTROL
SEE DOC. 10024078 - VACATION ORDER 118.
ALTERNATE ACCESS CONTROLS REMAIN IN PLACE ON THIS SEGMENT OF HIGHWAY. THIS PORTION OF USH 141 IS NOW A DESIGNATED FREEWAY AND ACCESS IS CONTROLLED UNDER STATUE 84.295. THIS SEGMENT OF HIGHWAY IS ALSO PART OF IH 43 WITH ACCESS BEING CONTROLLED UNDER STATUE 84.29.

R/W PROJECT NUMBER 1228-16-22 | SHEET NUMBER 4.1

PLAT OF RIGHT OF WAY REQUIRED FOR
I-43 NORTH - SOUTH FREEWAY
GREEN TREE ROAD BRIDGE B-40-0149
MILWAUKEE COUNTY



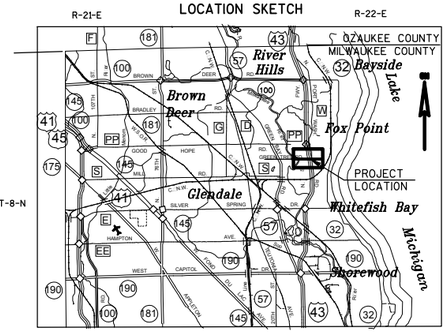
STATION & OFFSET TABLE

POINT	STATION	OFFSET
104	33+60.22	50.89'
105	33+60.26	40.89'
107	36+36.07	87.84'
106	36+36.25	51.83'
108	37+00.49	89.72'
111	39+88.65	-102.38'
201	39+93.90	-72.80'
204	40+31.34	157.62'
112	40+42.48	-102.38'
202	40+47.73	-72.80'
203	40+52.65	-45.00'
206	40+71.55	45.00'
205	40+92.35	157.62'
117	42+12.53	-55.00'
116	42+12.53	-45.00'
118	43+10.60	-55.00'
119	43+10.60	-45.00'

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
500	AT&T WISCONSIN	RELEASE OF RIGHTS
501	WE ENERGIES - ELECTRIC	RELEASE OF RIGHTS
502	TIME WARNER CABLE	RELEASE OF RIGHTS

LOCATION SKETCH



TOTAL NET LENGTH OF CENTERLINE = 0.23 MI.

CONVENTIONAL UTILITY SYMBOLS

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

CURVE DATA

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

CONVENTIONAL ABBREVIATIONS

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

CONVENTIONAL SYMBOLS

- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- NEW REFERENCE LINE
- NEW R/W LINE
- EXISTING R/W OR HE LINE
- PROPERTY LINE
- LOT, TIE & OTHER MINOR LINES
- SLOPE INTERCEPT
- CORPORATE LIMITS
- UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
- NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
- TEMPORARY LIMITED EASEMENT AREA
- EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
- TRANSMISSION STRUCTURES
- BUILDING — TO BE REMOVED
- BRIDGE
- SECTION CORNER SYMBOL
- SECTION CORNER MONUMENT
- R/W MONUMENT (TO BE SET)
- NON-MONUMENTED R/W POINT
- FOUND IRON PIN (1-INCH UNLESS NOTED)
- GEODETIC SURVEY MONUMENT
- SIGN
- OFF-PREMISE SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

- ACCESS RESTRICTED BY ACQUISITION
- NO ACCESS (BY STATUTORY AUTHORITY)
- ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
- NO ACCESS (NEW HIGHWAY)
- PARCEL NUMBER (25) — UTILITY NUMBER (40)
- PARALLEL OFFSETS

500 AT&T WISCONSIN
DOC. 5507964
PARCEL 1
NO RECORDED EASEMENT
PARCEL 1
DOC. 09974730
PARCEL 2

501 WE ENERGIES - ELECTRIC
NO RECORDED EASEMENT
PARCEL. 1
DOC. 09974730
PARCEL 2

502 TIME WARNER CABLE
DOC. 09974730
PARCEL 2

ORIGINAL PLANS PREPARED BY
KAPUR & ASSOCIATES CONSULTING ENGINEERS
414.751.7200

WISCONSIN GARY D. SCHNEIDER S-1297 West Bend Wisconsin LAND SURVEYOR

July 20, 2017 (Date) (Signature)

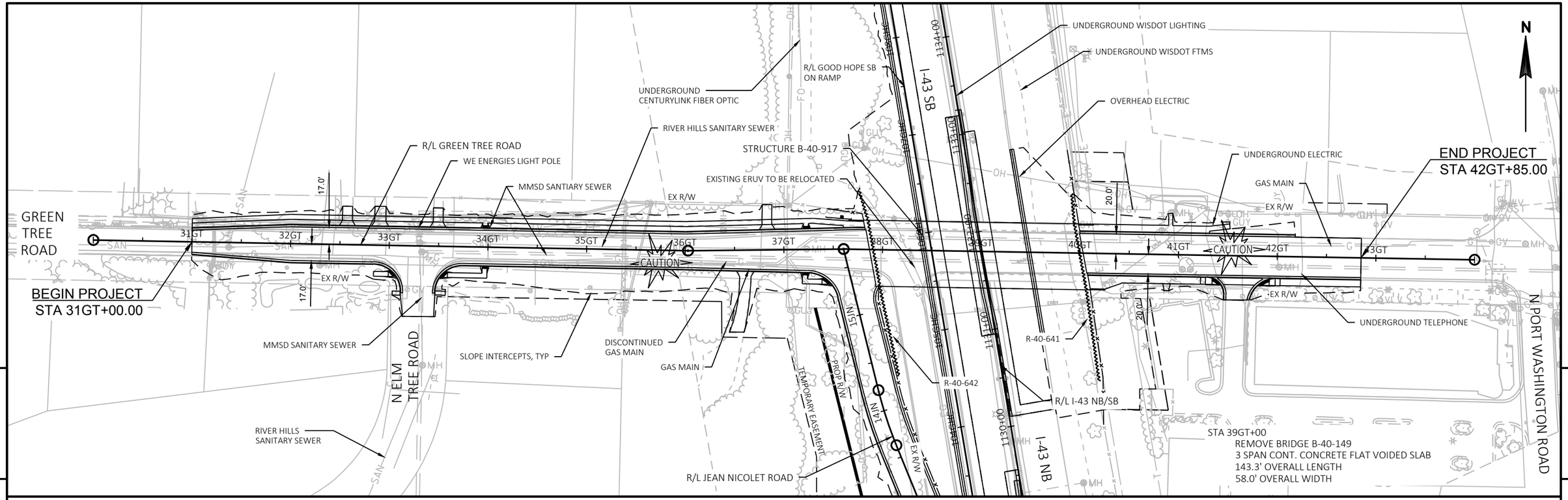
REVISION DATE

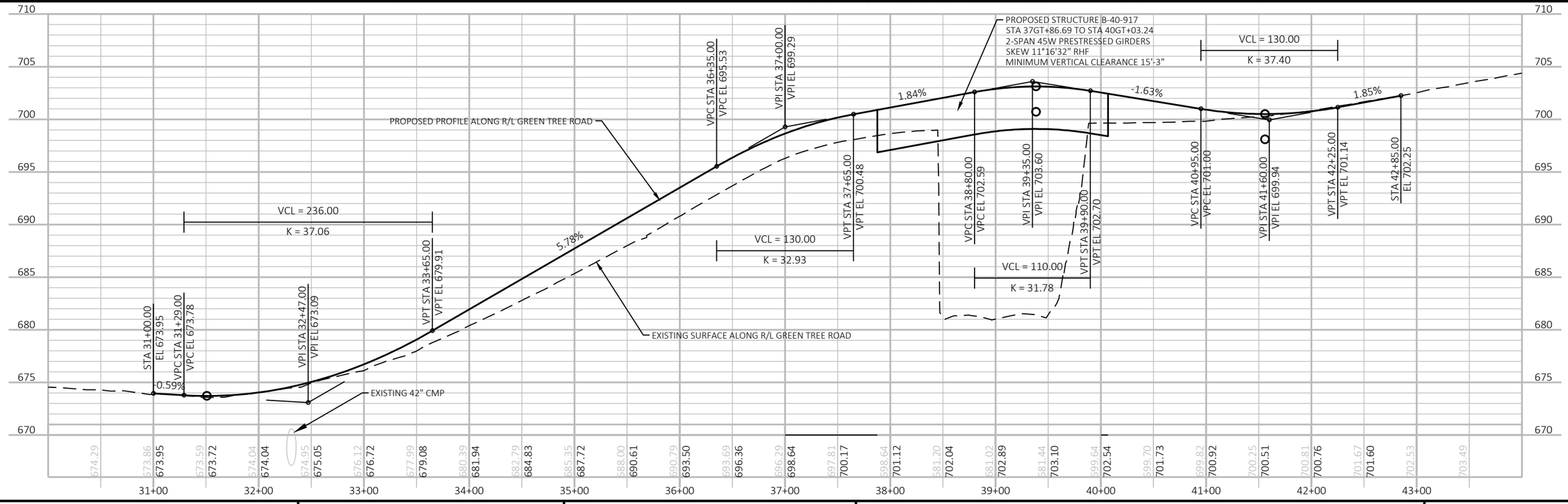
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT
DATE: 08/22/17 (Signatu

FILE NAME : S:\DOT\DOT_SE\160267- IH 43 GREEN TREE ROAD BRIDGE\SURVEY\RW_PLAT_GREENTREERD\GREENTREE-04-RP.DWG PLOT DATE : 7/20/2017 11:35 AM PLOT BY : RAISA KHAYTINA PLOT NAME :

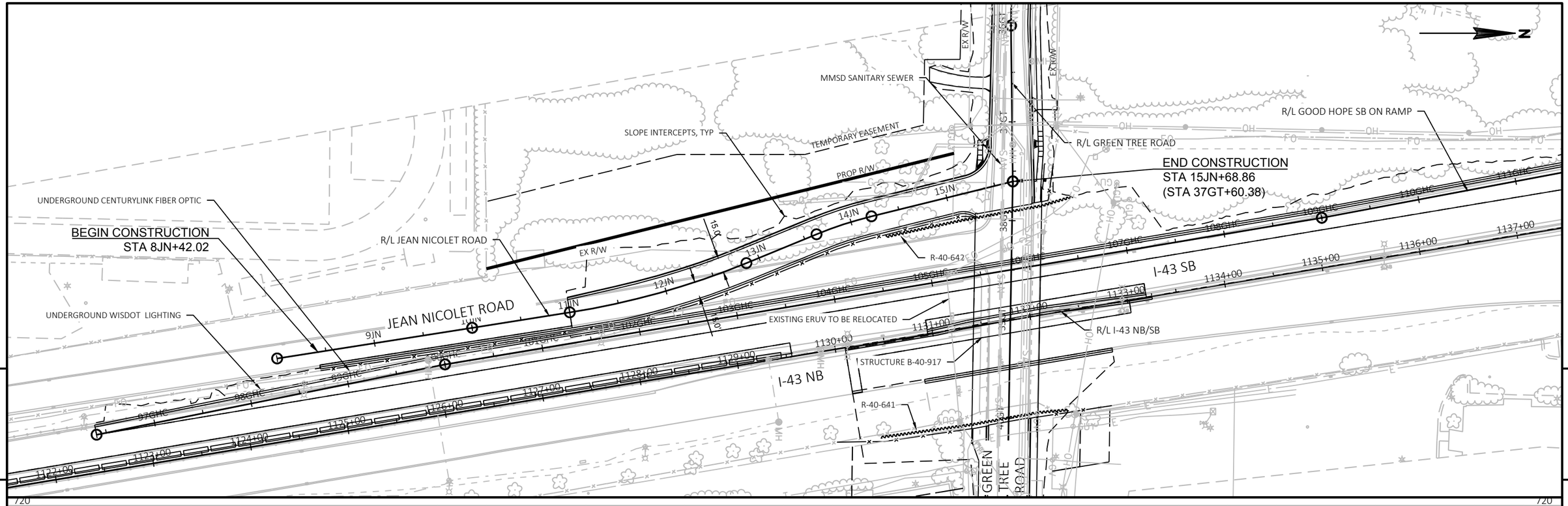
WISDOT/CADDS SHEET 75
I-43 / 1228-16-22

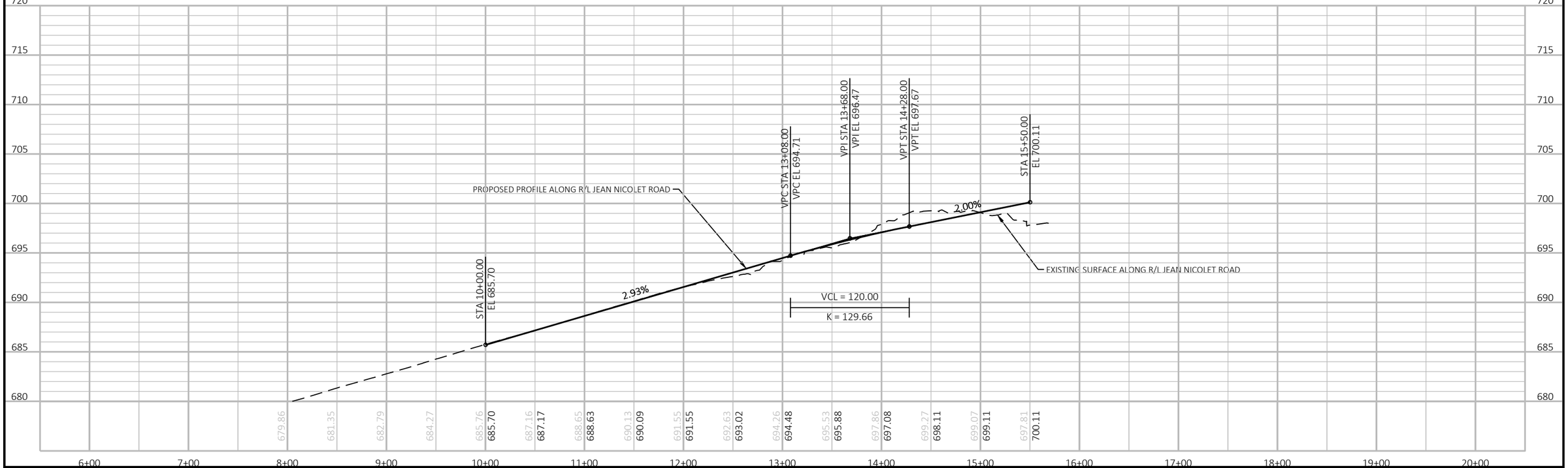




PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN AND PROFILE: GREEN TREE ROAD	SHEET 198	E

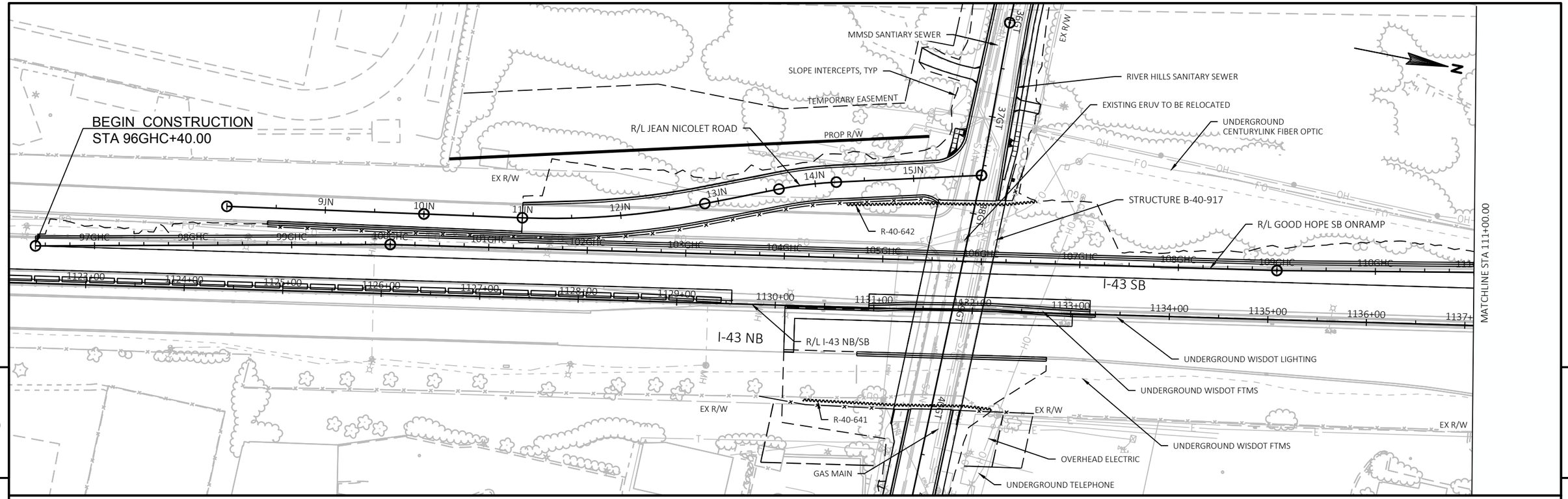
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LAYOUT NAME - 050101_pp
PLOT DATE : 12/12/2017 2:14 PM
PLOT BY : ANDREW ROSEMEYER
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

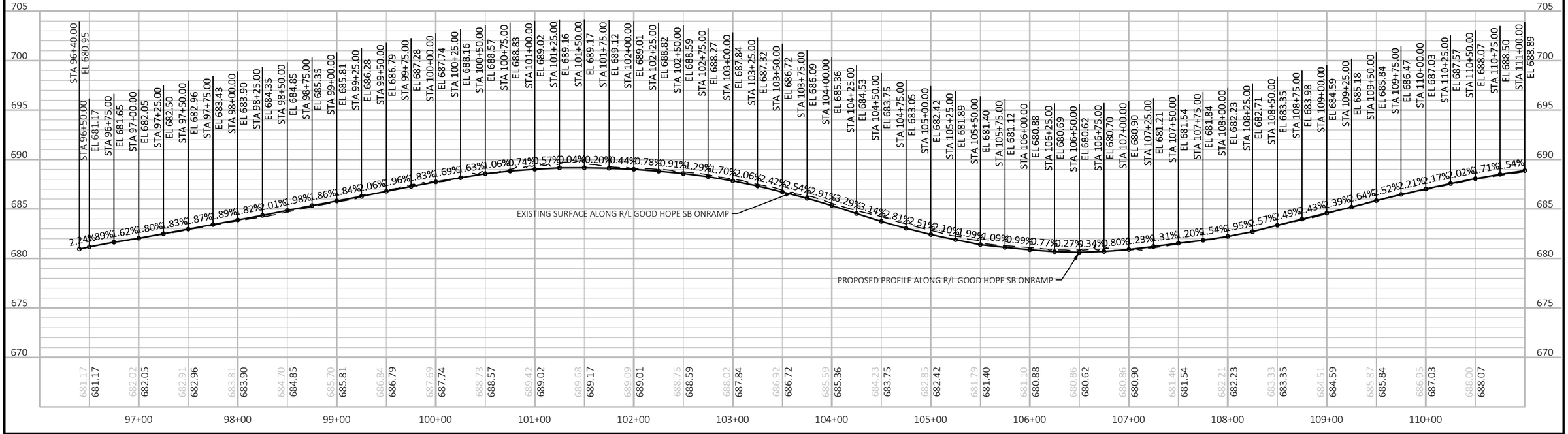




PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN AND PROFILE: JEAN NICOLET ROAD	SHEET 199	E

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LAYOUT NAME - 050102_pp
PLOT DATE : 10/23/2017 10:59 AM
PLOT BY : CODY TOMSAK
PLOT NAME :
PLOT SCALE : ############
WISDOT/CADDS SHEET 44

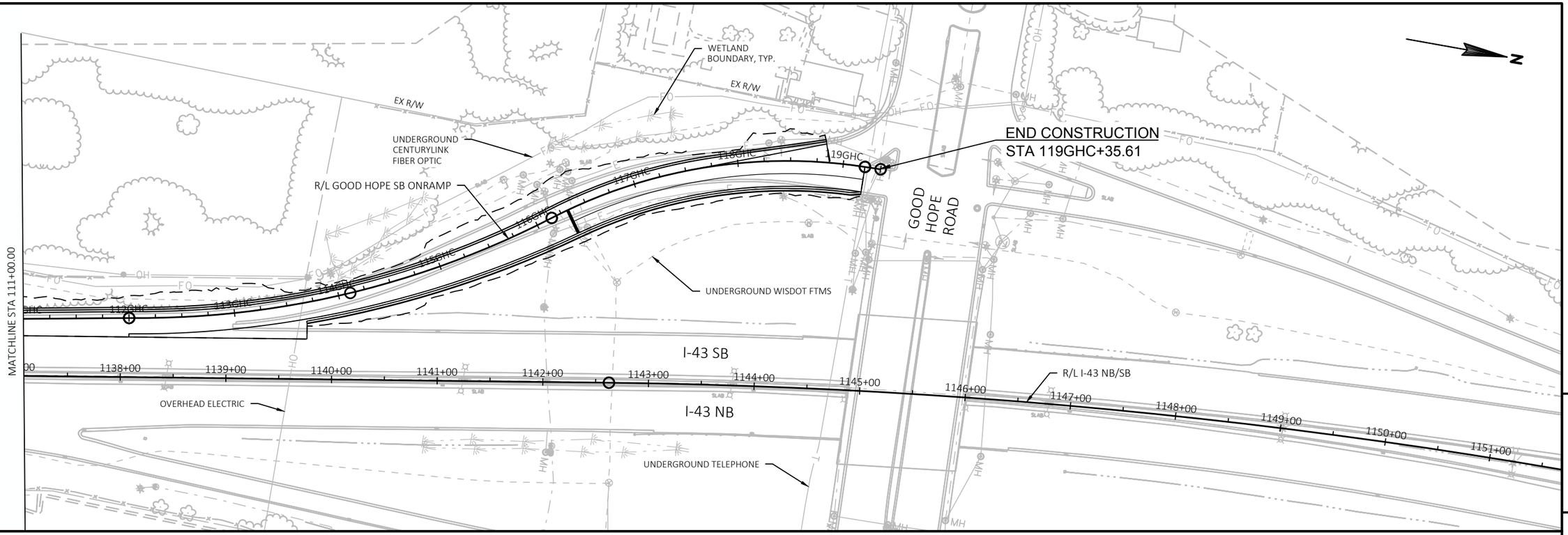


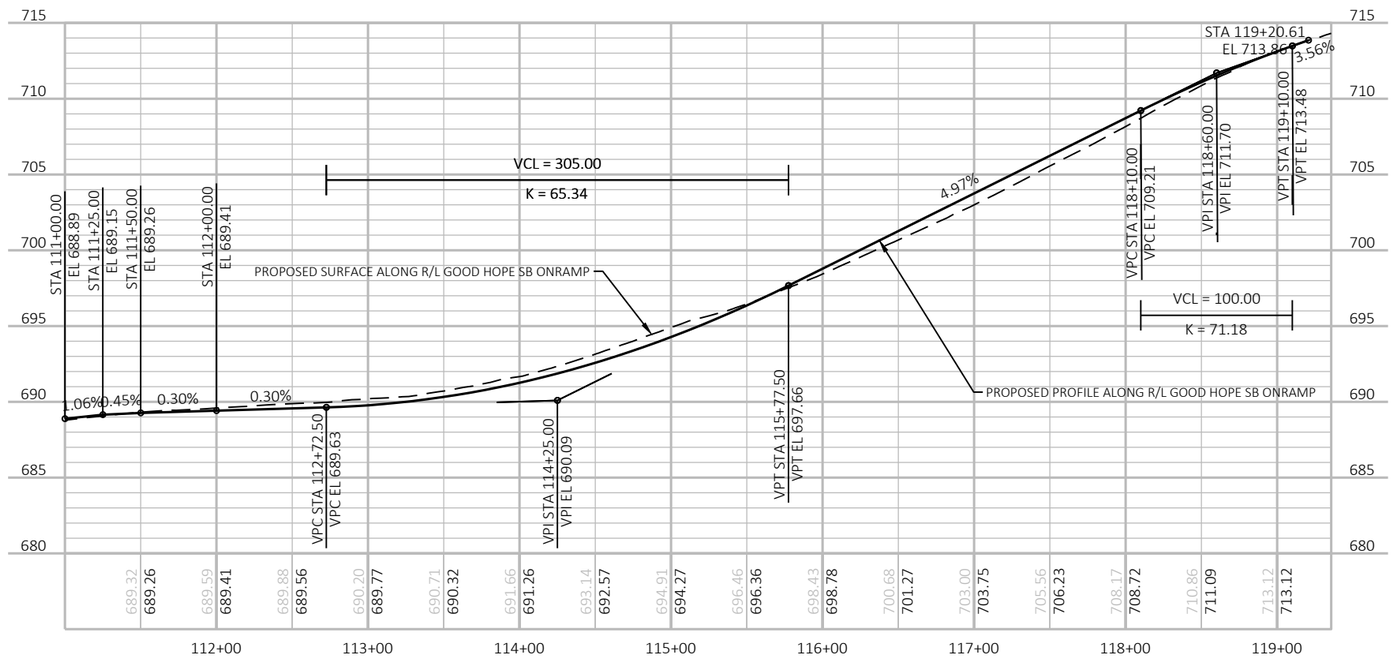


PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN AND PROFILE: GOOD HOPE ROAD SB ONRAMP	SHEET 200	E

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LAYOUT NAME - 050103_pp_GHC
PLOT DATE : 10/23/2017 11:14 AM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44





PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	PLAN AND PROFILE: GOOD HOPE ROAD SB ONRAMP	SHEET 201	E

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LAYOUT NAME - 050104_pp_GHC
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WISDOT/CADDS SHEET 44

Standard Detail Drawing List

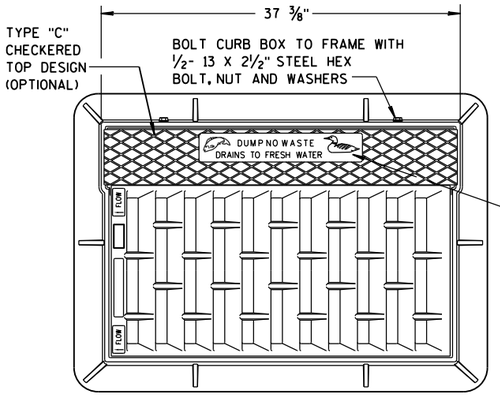
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D14-01	SLOTTED VANE DRAIN
08D18-01	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C09-05	CONCRETE BASE, TYPE 8
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E02-04	FREEWAY LIGHTING UNIT POLE WIRING
09H07-01	SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT
09H09-01	COMMUNICATION VAULT
10A01-03	ELECTRICAL HANDHOLE WIRING
10A05-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B15-10A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-10B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-10C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B32-04A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-04B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-04C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-04D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-04E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B41-02A	SINGLE SLOPE ROADSIDE RETAINING WALL
14B41-02B	SINGLE SLOPE ROADSIDE RETAINING WALL
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A04-03A	FLEXIBLE DELINEATOR POST

6

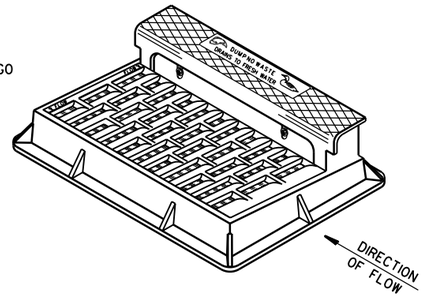
Standard Detail Drawing List

15A04-03B	DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C07-13A	PAVEMENT MARKING SYMBOLS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C08-17C	PAVEMENT MARKING (ISLANDS)
15C31-02A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-02C	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D14-03	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

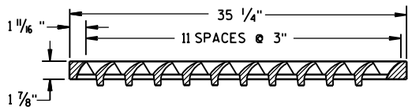
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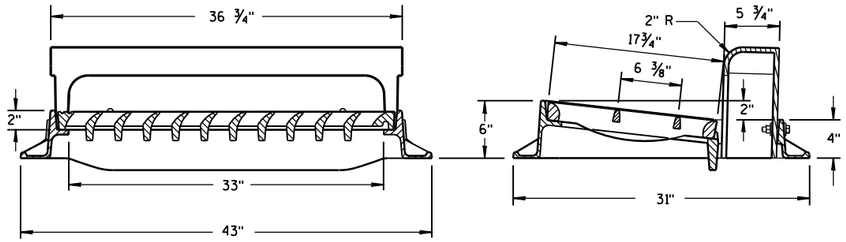


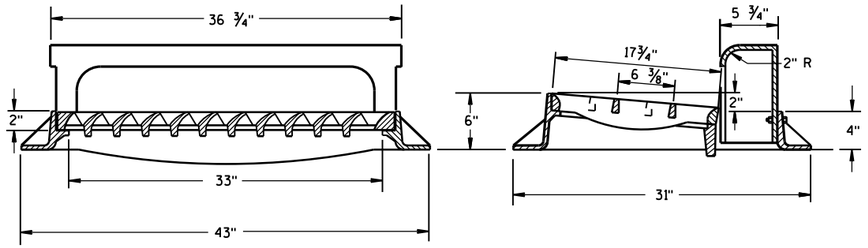
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

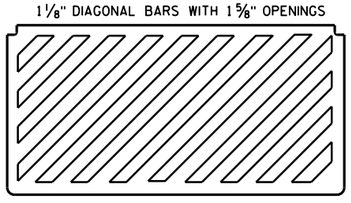






TYPE "H"

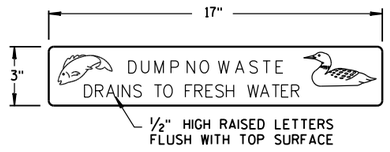
NOTE: EITHER CASTING IS ACCEPTABLE



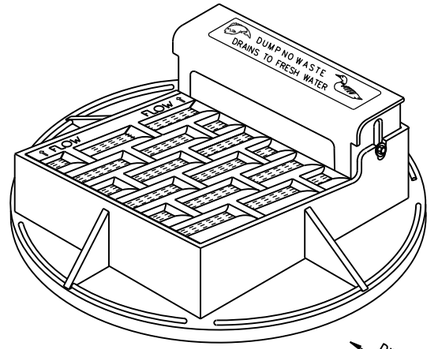
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

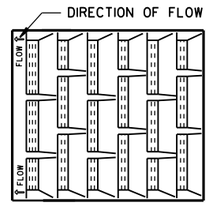
NOTE:
GRATE IS REVERSIBLE.

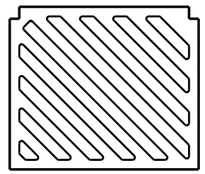
GENERAL NOTES

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

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

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

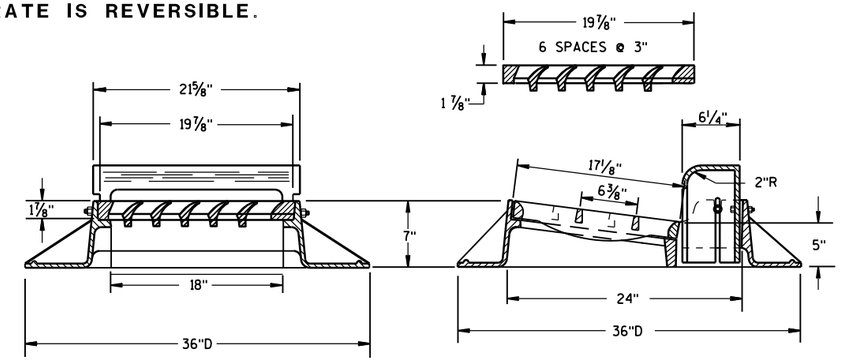




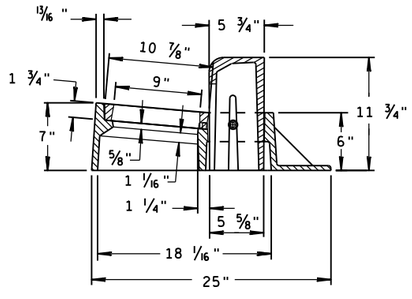
SPECIAL GRATE FOR TYPE "A" COVER

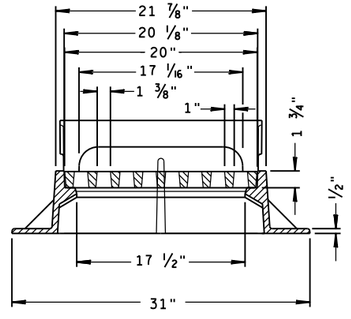
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

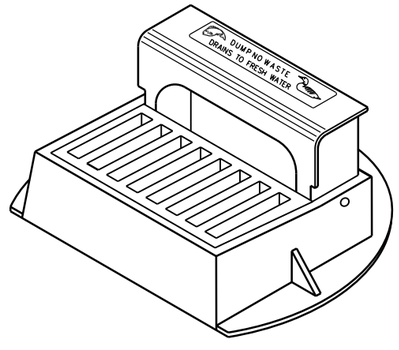


TYPE "A"





TYPE "Z"



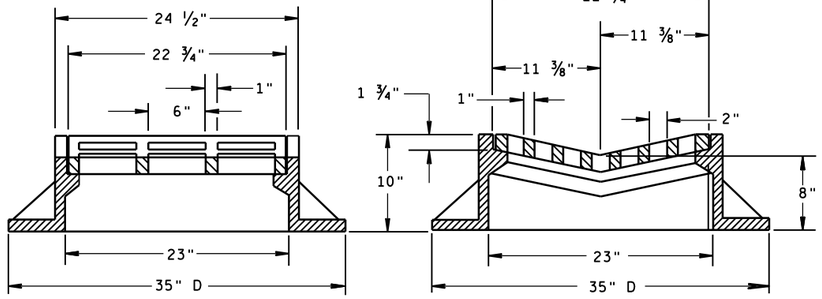
INLET COVERS
TYPE A, H, A-S, H-S & Z

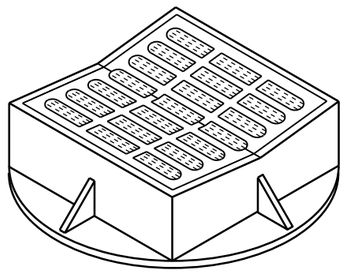
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

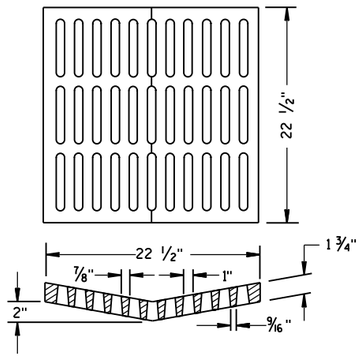
6

S.D.D. 8 A 5-19a



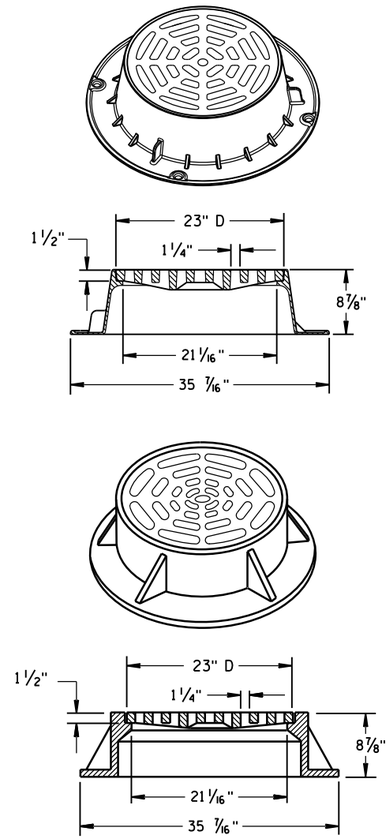


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

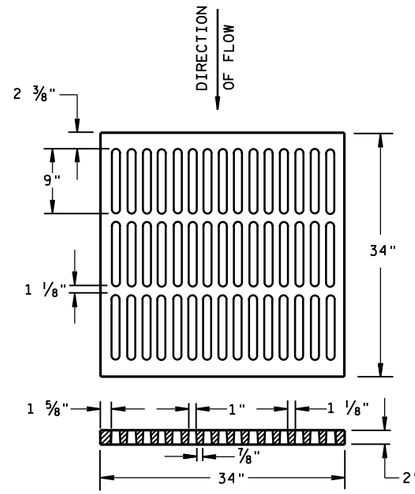
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

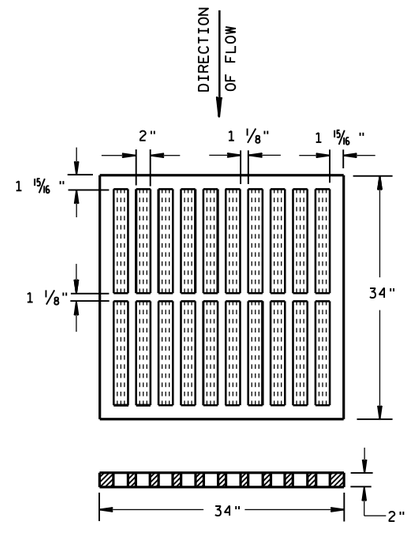
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



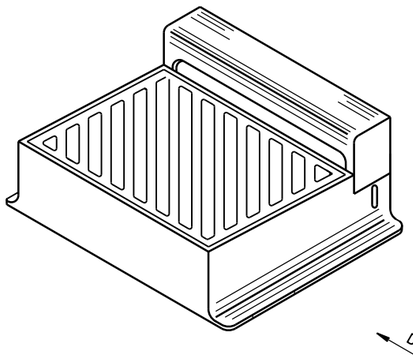
ALTERNATIVE TYPE "MS"

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

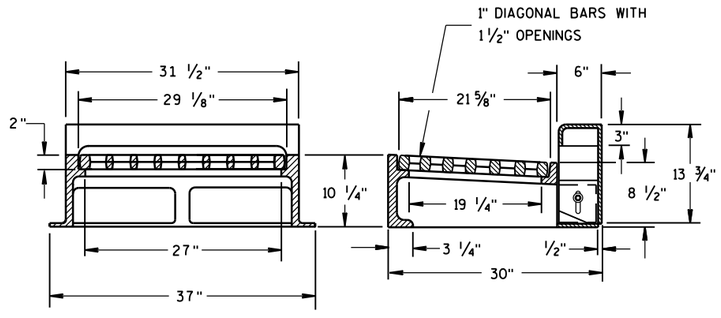


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

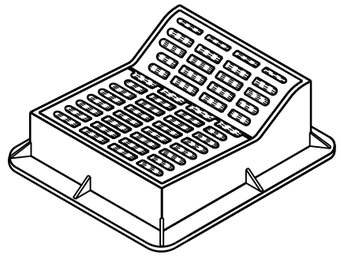
INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM

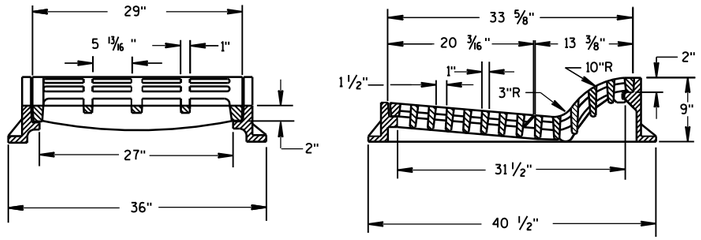
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

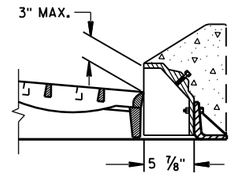
S.D.D. 8 A 5-19b





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

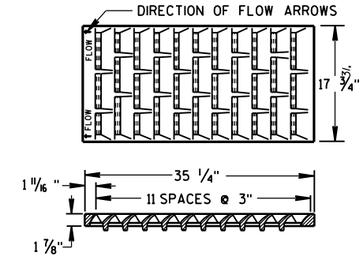
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

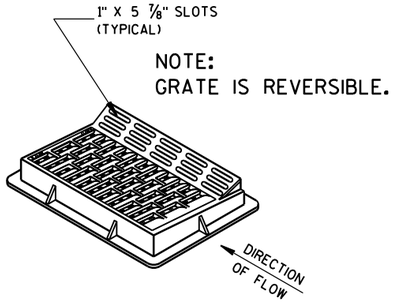
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

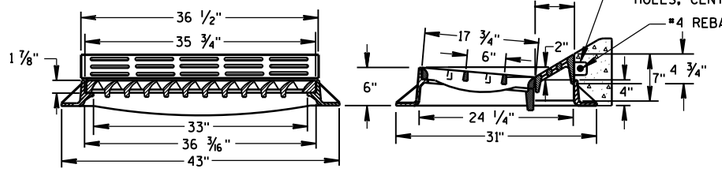
GENERAL NOTES

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

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



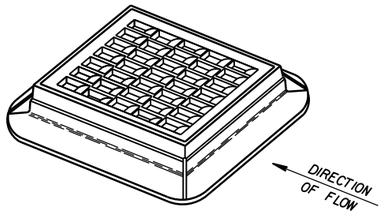


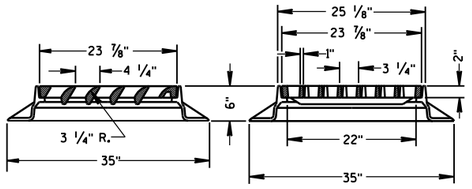


TYPE "HM"

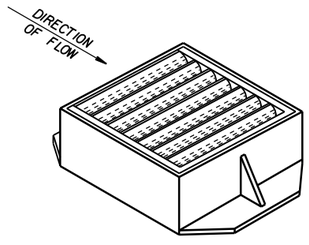
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

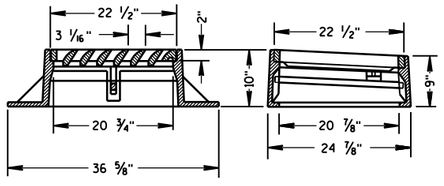
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



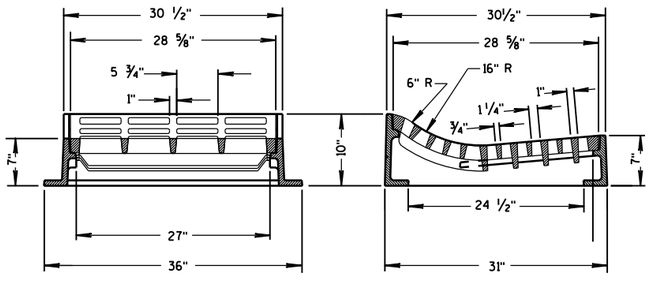


TYPE "S"



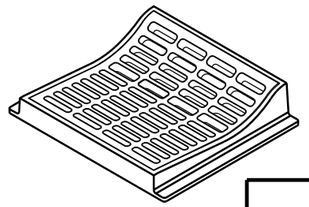


TYPE "V"



TYPE "T"

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

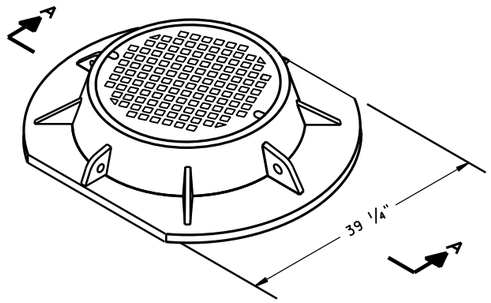
FHWA

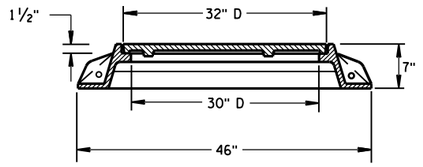
6

S.D.D. 8 A 5-19c

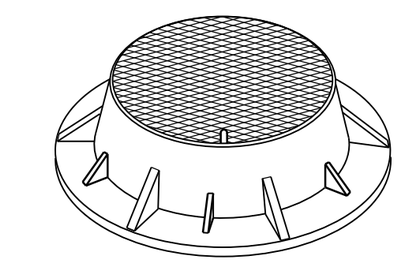
6

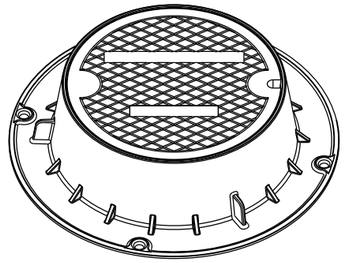
S.D.D. 8 A 5-19c

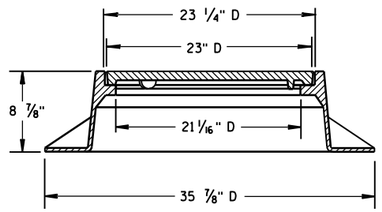


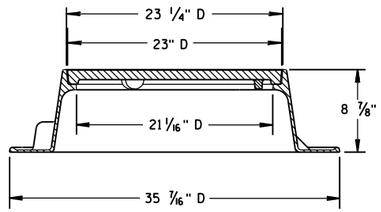


SECTION A-A
TYPE "K"









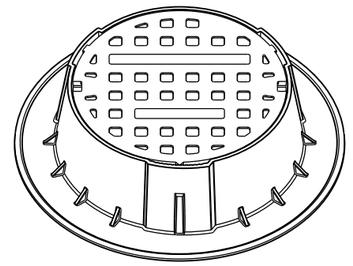
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

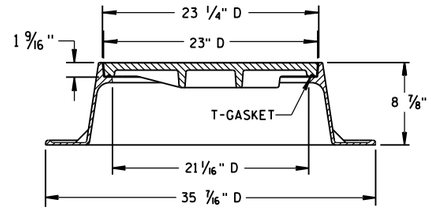
GENERAL NOTES

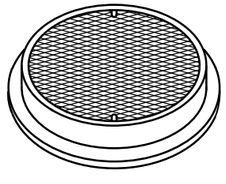
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

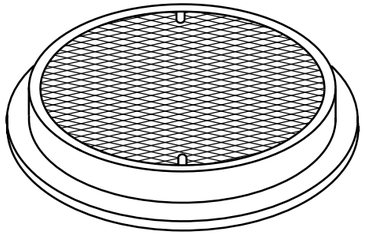
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

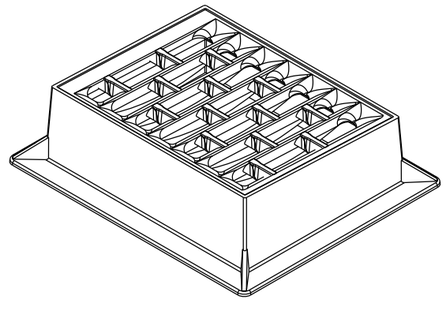
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

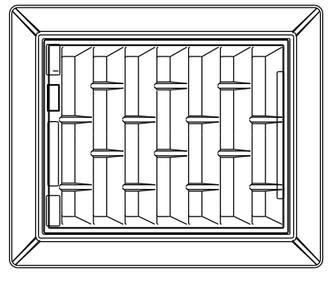


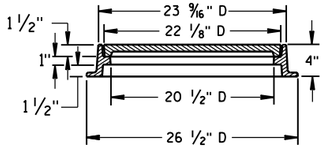




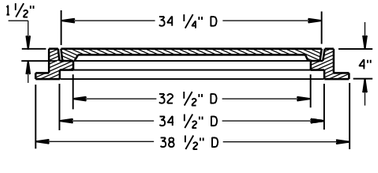




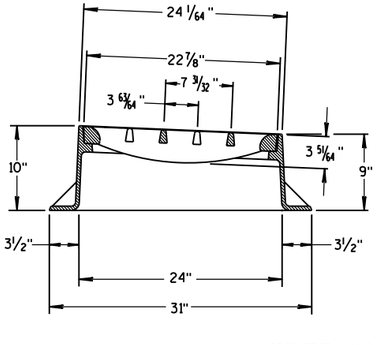


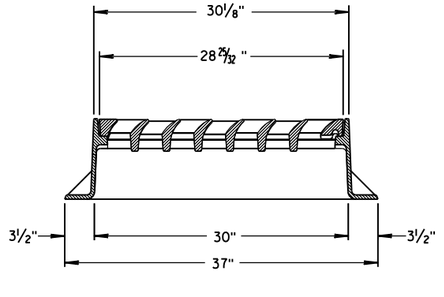


TYPE "L"

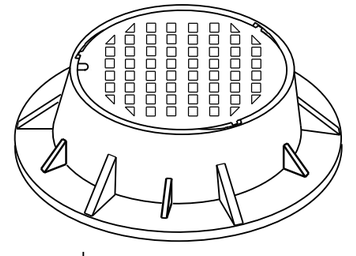


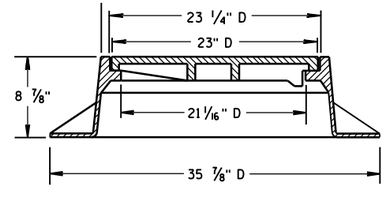
TYPE "M"





INLET COVER TYPE "BW"





TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

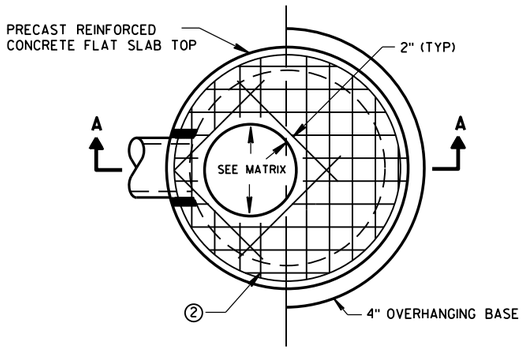
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

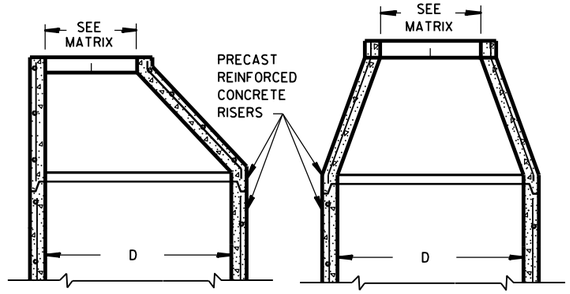
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S.D.D. 8 A 5-19d

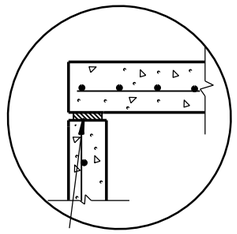


PLAN VIEW CIRCULAR OPENING

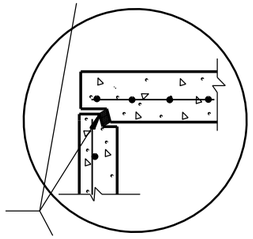


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

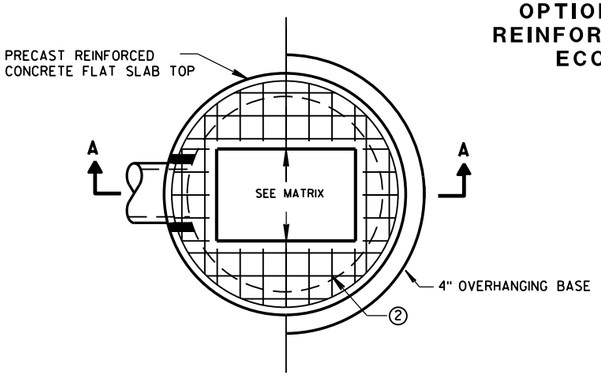
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



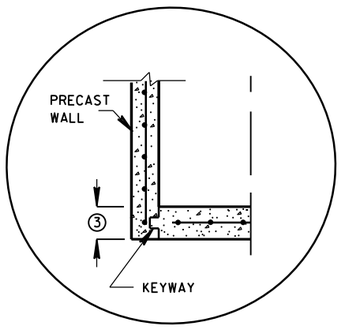
TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT

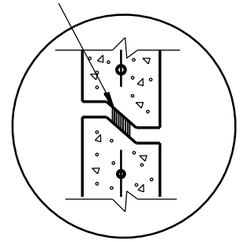


PLAN VIEW RECTANGULAR OPENING



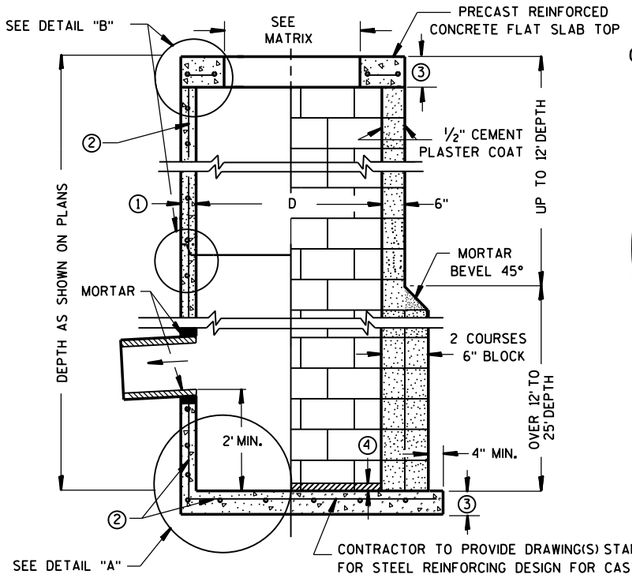
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

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



RISER WITH TONGUE AND GROOVE JOINT

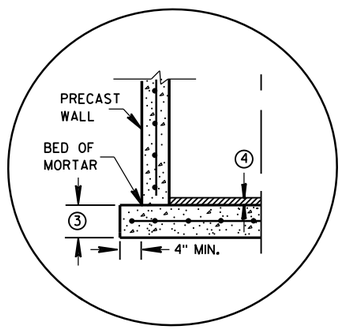
DETAIL "B"



SECTION A-A

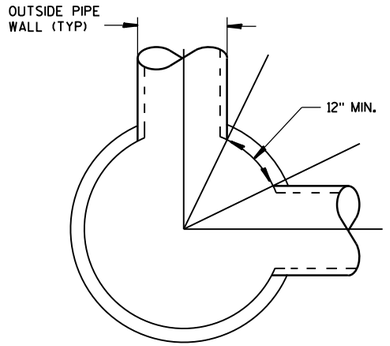
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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 CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

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

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH 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.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

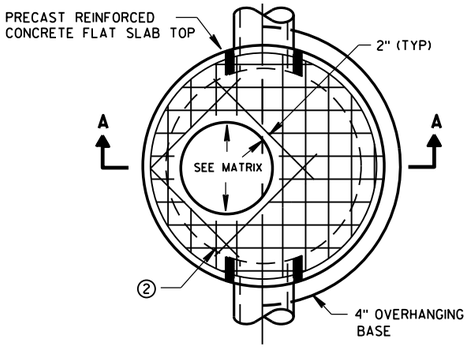
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

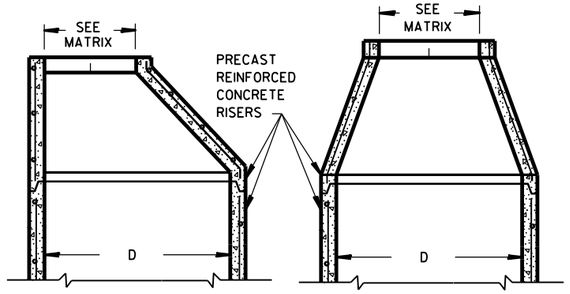
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

S.D.D. 8 A 8-2

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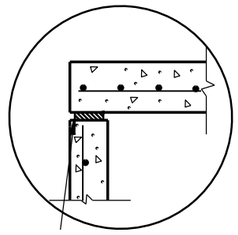


PLAN VIEW CIRCULAR OPENING

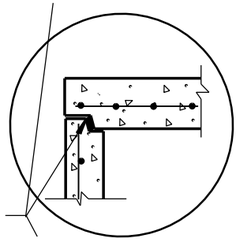


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

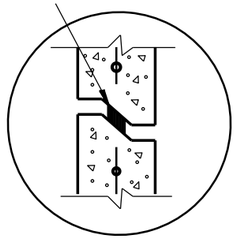


TOP WITH PLAIN END JOINT



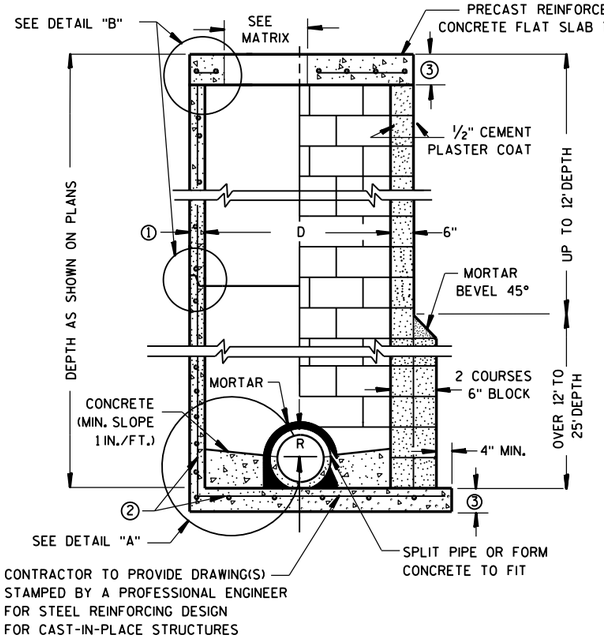
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



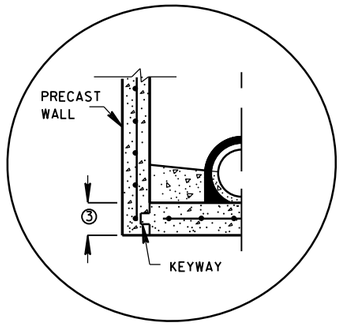
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

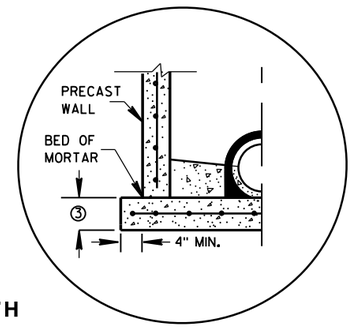


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

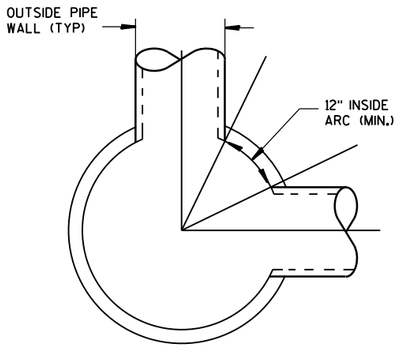


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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.

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

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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 ½" 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.

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

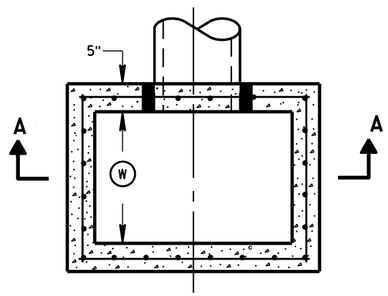
APPROVED

Sept., 2016
DATE

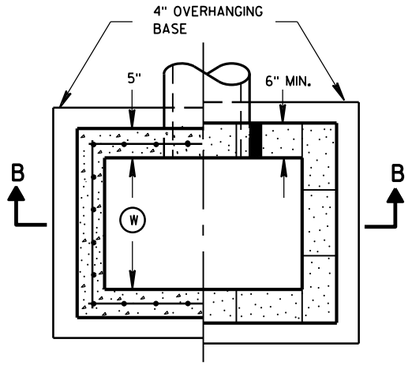
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

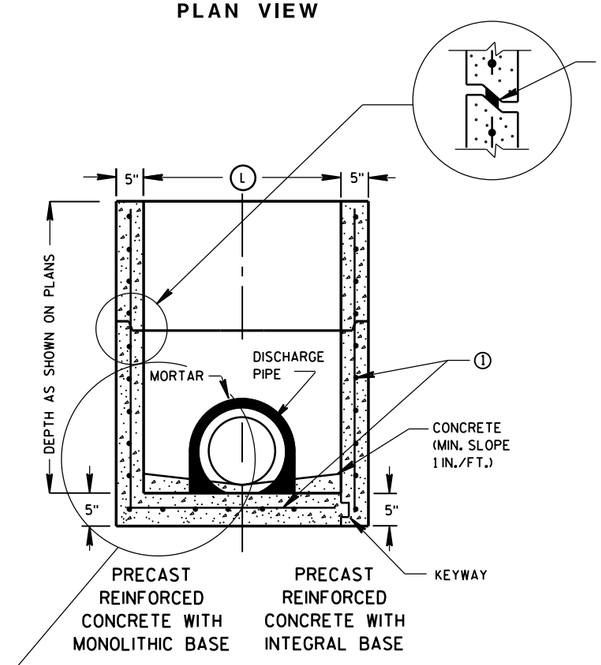
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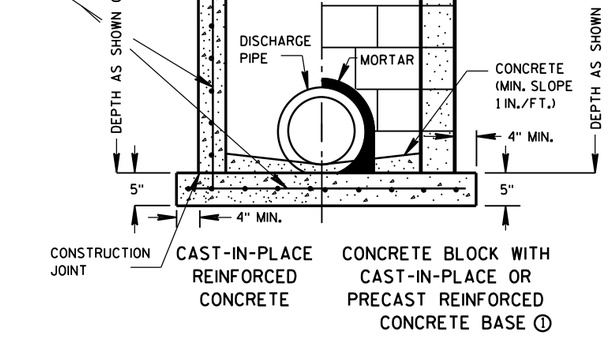
PLAN VIEW



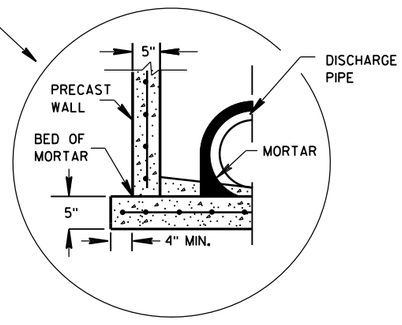
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

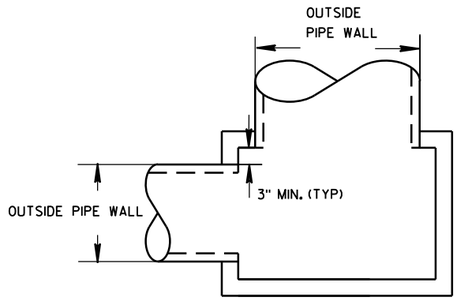
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



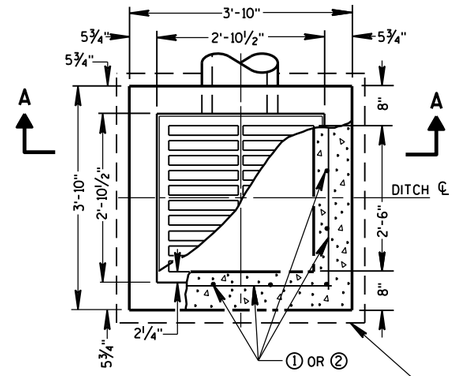
DETAIL "A"

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

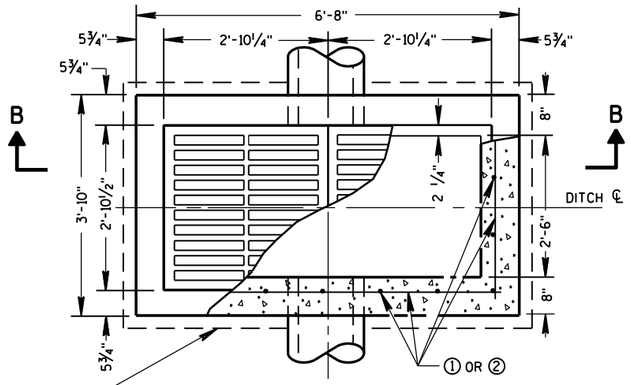
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
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INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

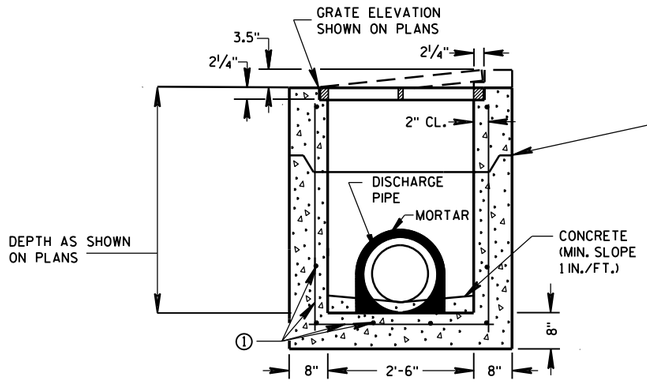


PLAN VIEW

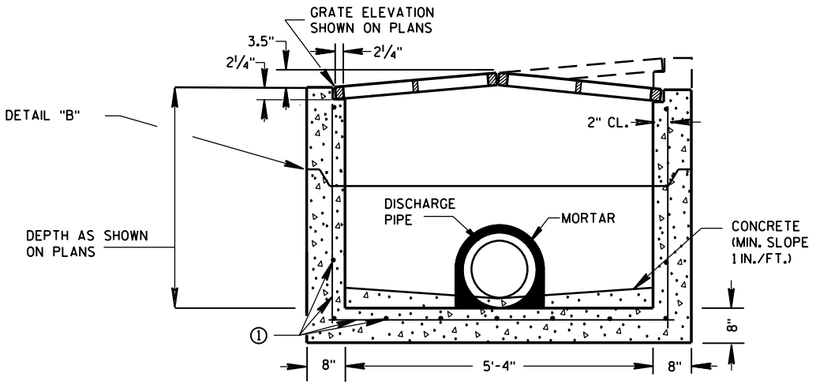


PLAN VIEW

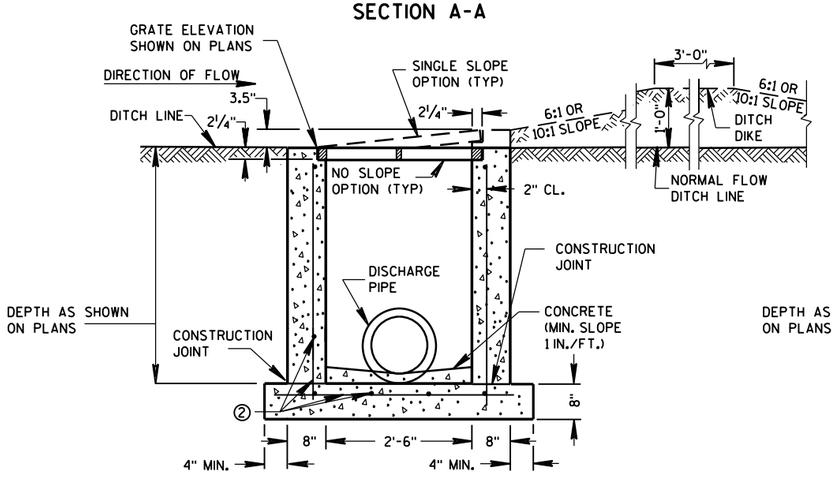
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



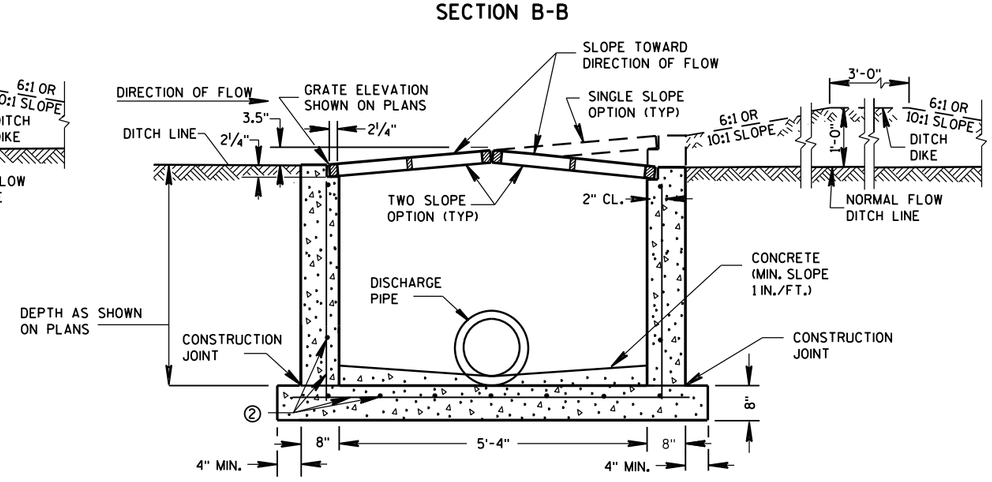
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

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 INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

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

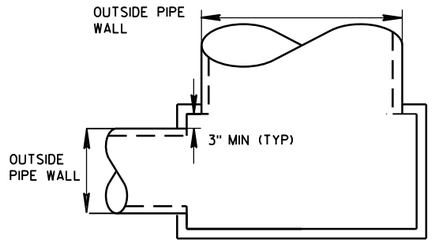
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

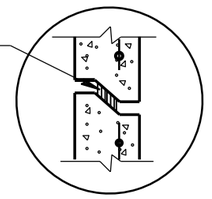
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

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



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

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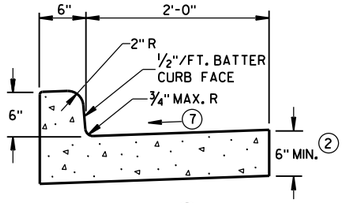
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FHWA

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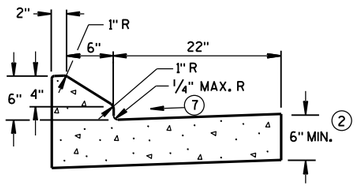
S.D.D. 8 C 8-2

6

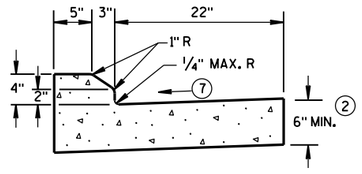
S.D.D. 8 C 8-2



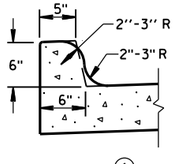
TYPES A (1) & D



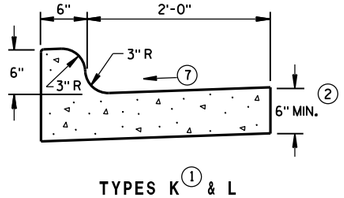
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

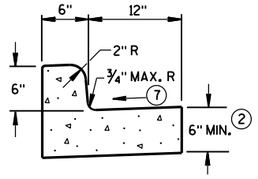


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



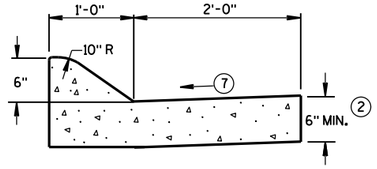
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

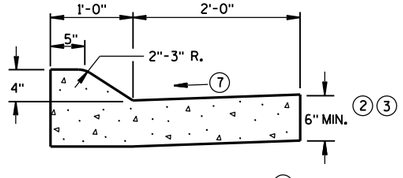


TYPES A (1) & D

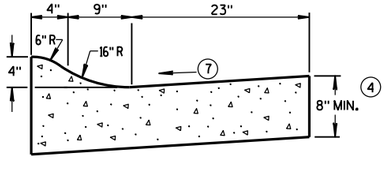
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

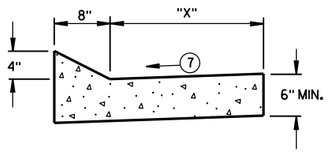


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

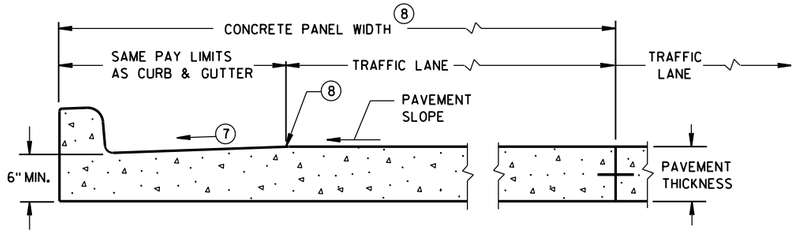
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

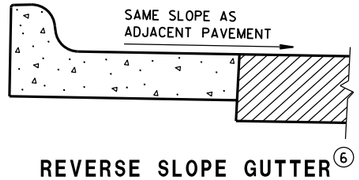
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.

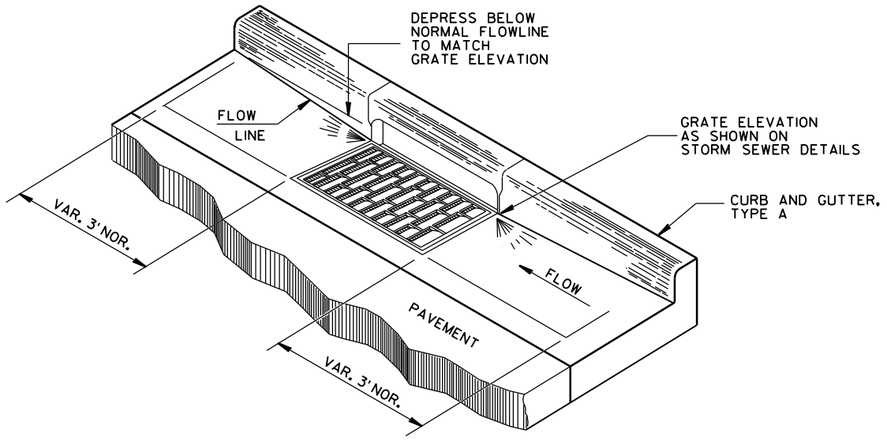


REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

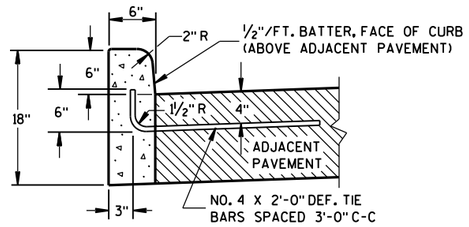
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

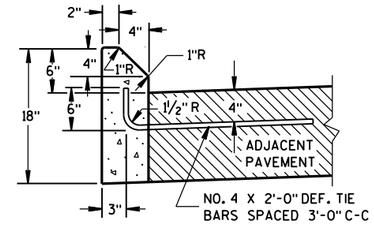
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

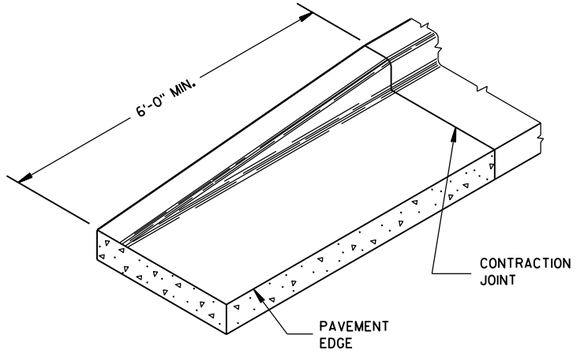


TYPES A(1) & D

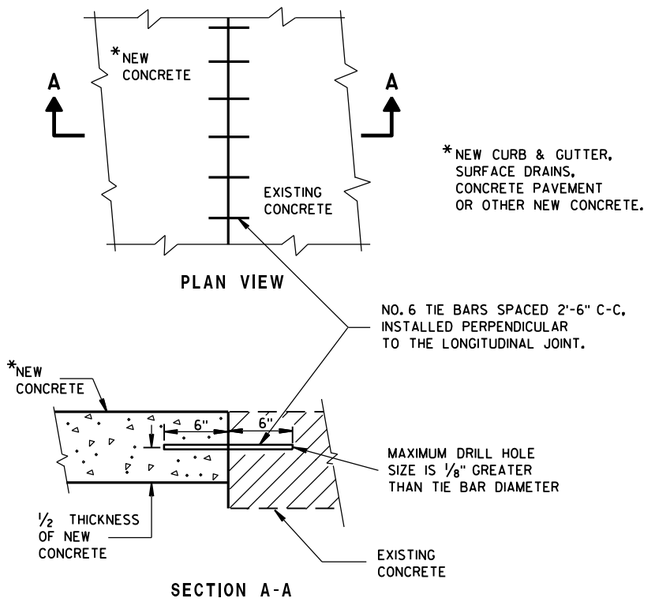


TYPES G(1) & J

CONCRETE CURB



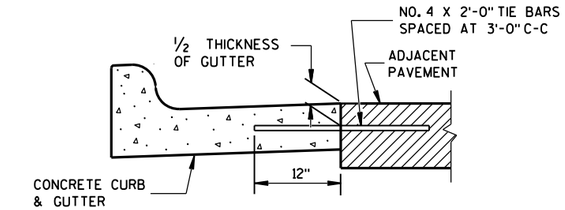
END SECTION CURB & GUTTER



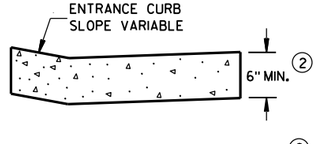
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

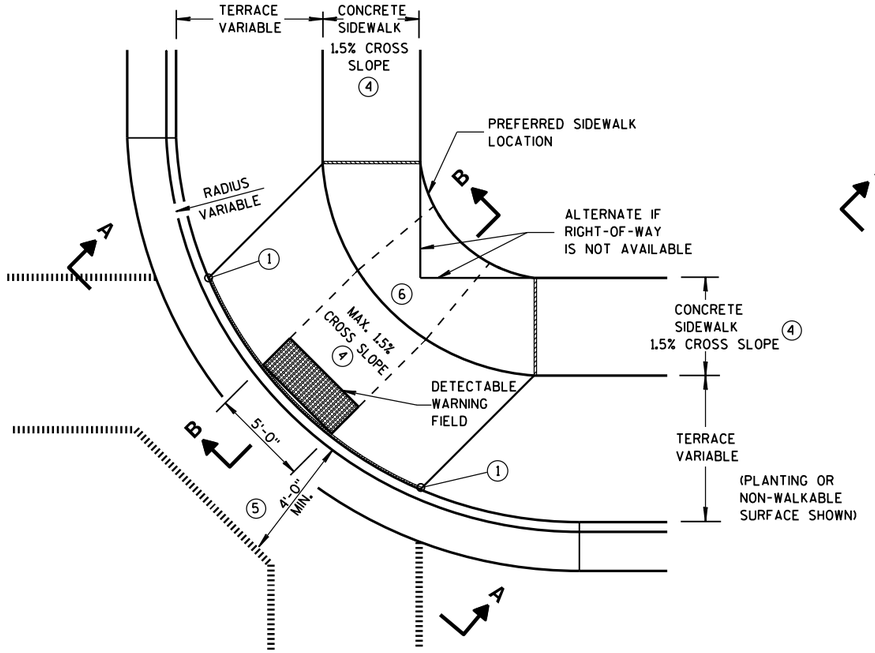
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
213
ENT
FHWA

6

S.D.D. 8 D 1-20b

6

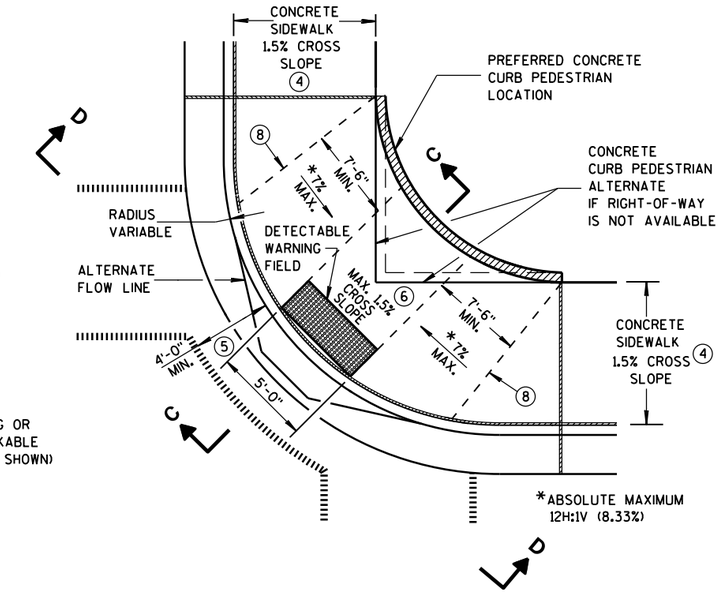
S.D.D. 8 D 1-20b



PLAN VIEW

TYPE 1 RAMP

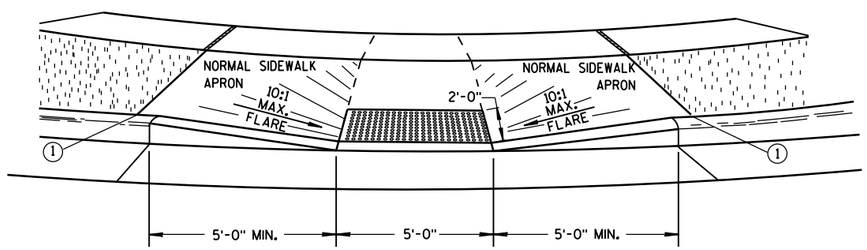
(CENTER OF CORNER RADIUS)



PLAN VIEW

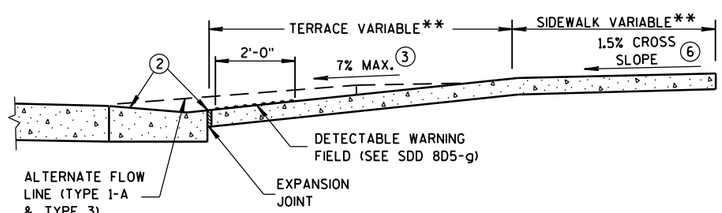
TYPE 1-A RAMP

(NO TERRACE)

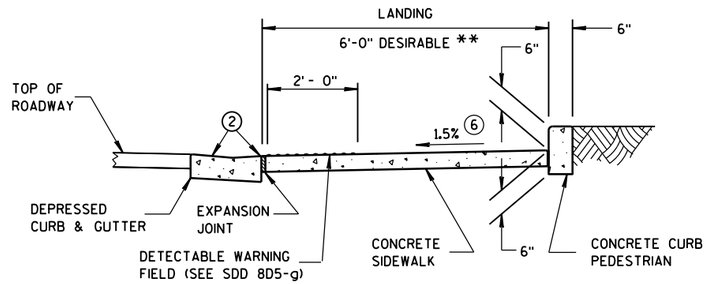


VIEW A-A

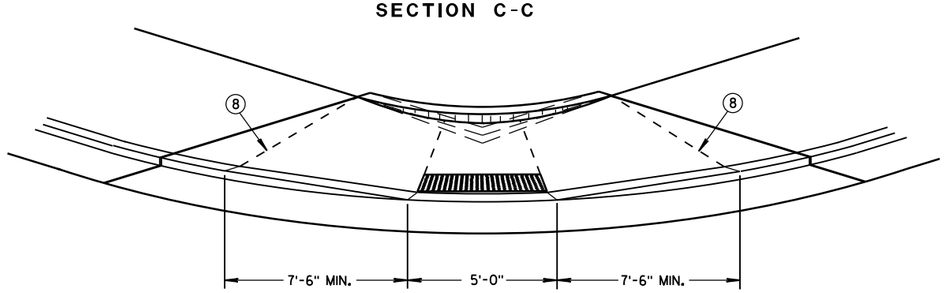
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

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

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

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

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

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

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

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

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

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

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

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

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

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

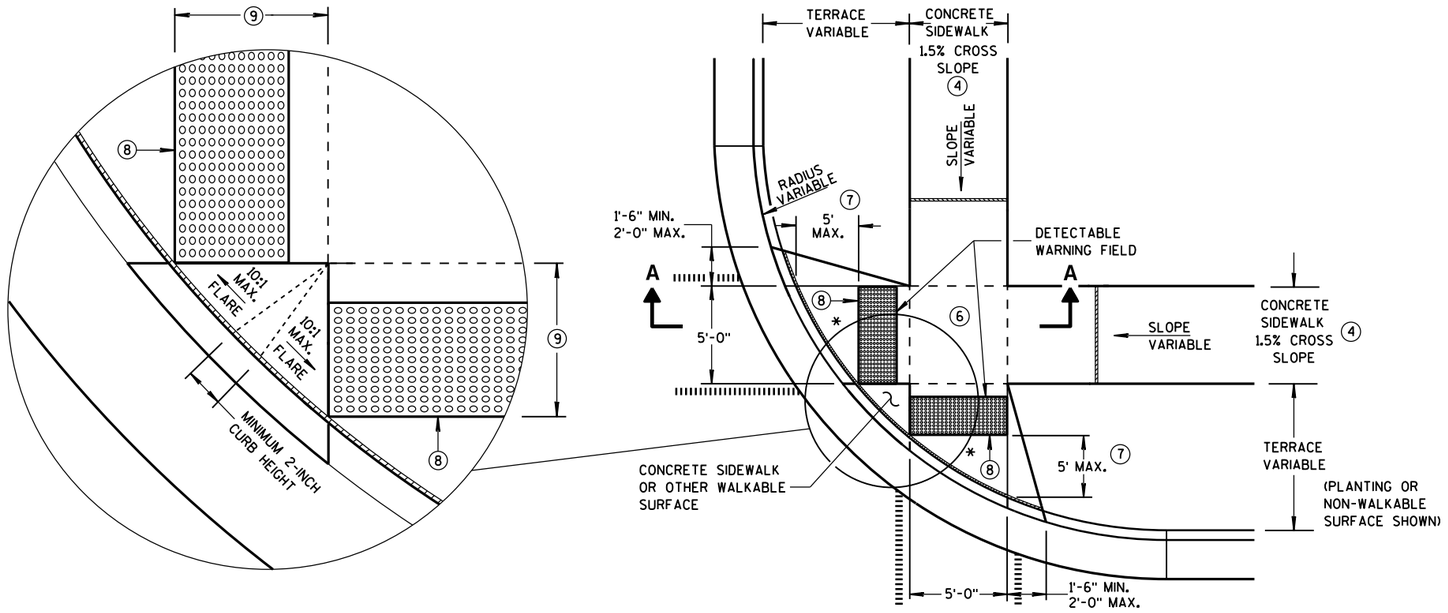
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

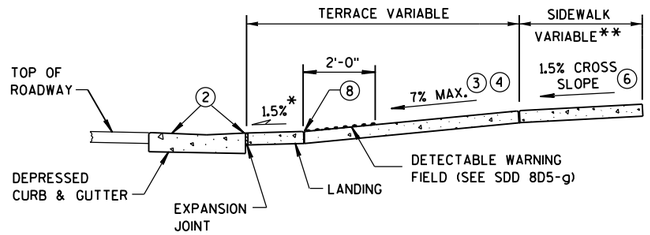
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S.D.D. 8 D 5-19a



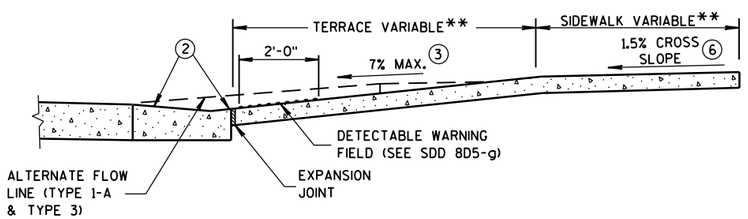
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

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

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

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

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

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

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

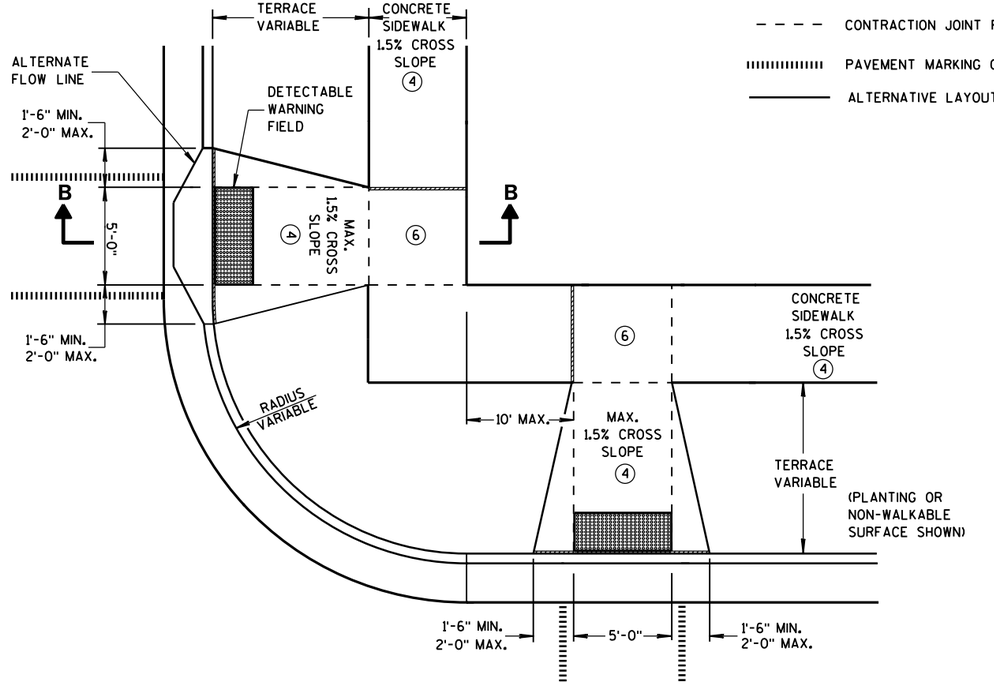
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

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



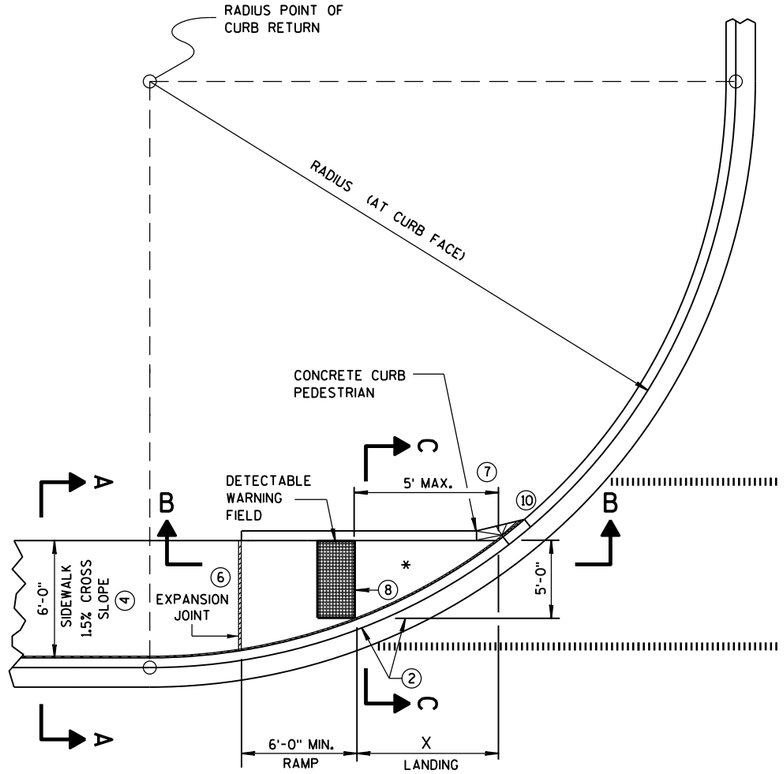
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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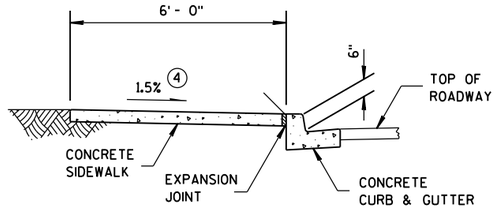
S.D.D. 8 D 5-19b



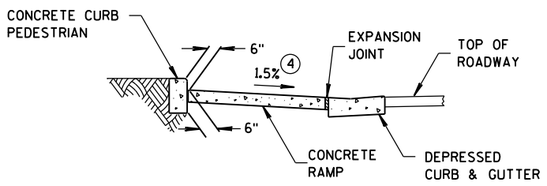
CURB RAMP TYPE 4A
PLAN VIEW

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

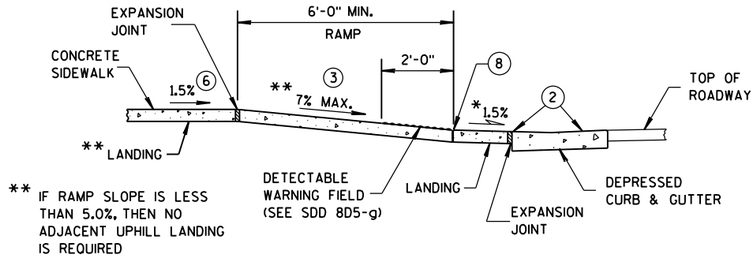
INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



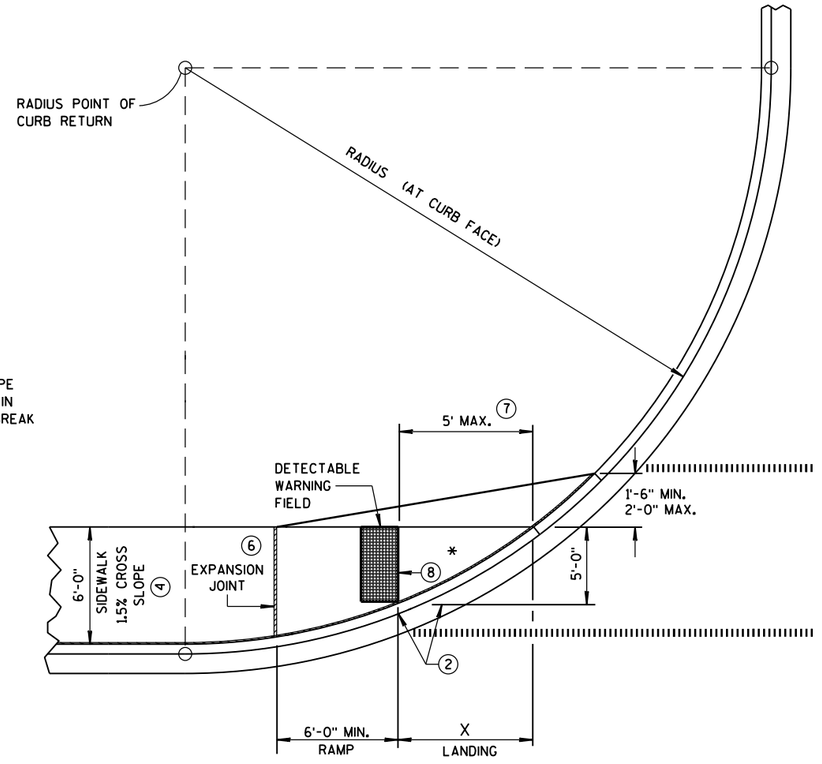
SECTION C-C FOR TYPE 4A



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

SECTION B-B FOR TYPE 4A

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



CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

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

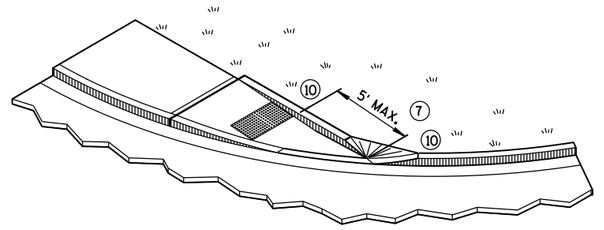
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

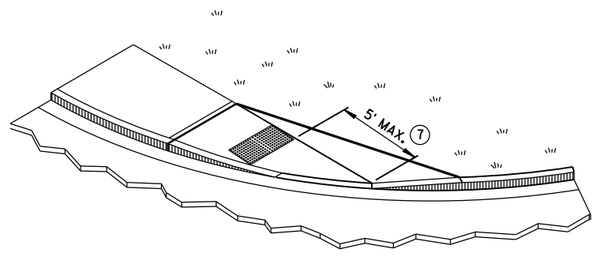
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

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



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

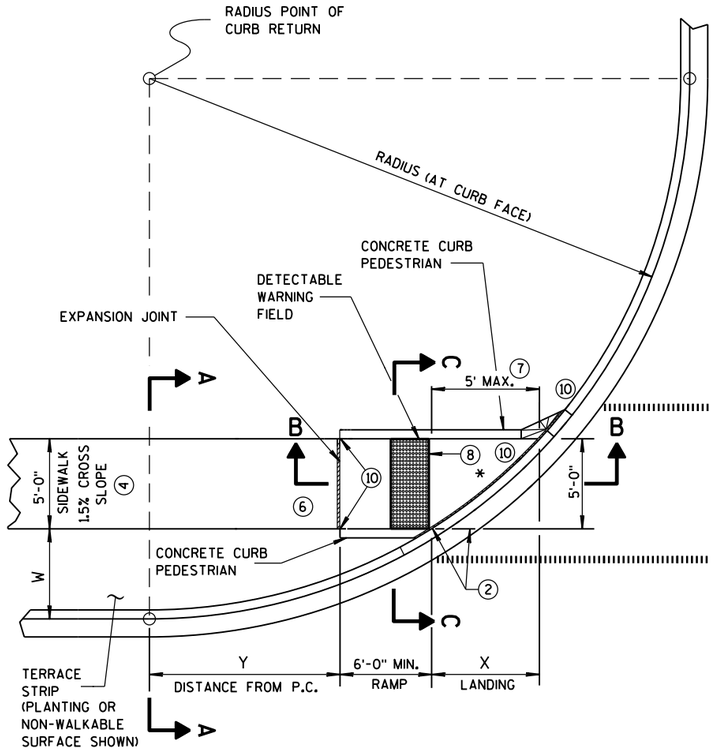
CURB RAMPS TYPES 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

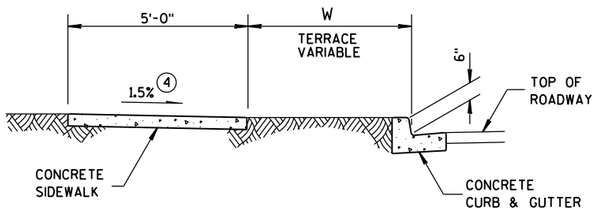
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S.D.D. 8 D 5-19c

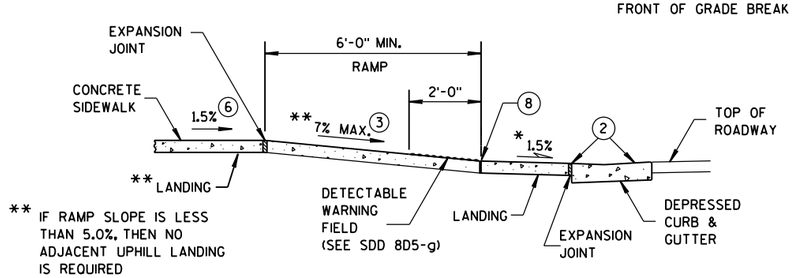
S.D.D. 8 D 5-19c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



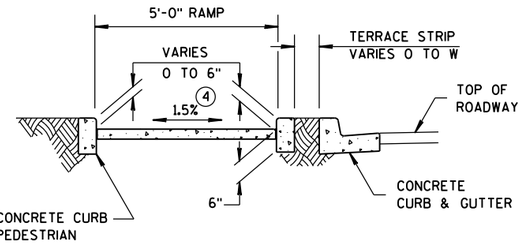
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

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

SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10¼"	0'-5"	2'-1"	1'-4½"	1'-5"	2'-1"	0'-10"	2'-7½"	0'-3¼"	3'-0¼"						
15 FEET	4'-6¾"	2'-1¾"	3'-9"	3'-5¼"	3'-1¼"	4'-6"	2'-6¾"	5'-4½"	2'-1"	6'-1"	1'-8"	6'-8½"	1'-3¼"	7'-2½"	0'-10¾"	7'-7¼"
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-7"	3'-3"	8'-6½"	2'-10"	9'-4½"	2'-5½"	10'-1¼"	2'-1¼"	10'-9"
30 FEET			6'-9¼"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"	4'-5½"	13'-7¾"	4'-0¾"	14'-8½"	3'-8½"	15'-8¼"
40 FEET									6'-1¾"	15'-8½"	5'-8"	17'-2"	5'-3"	18'-5¾"	4'-10¾"	19'-8¼"
50 FEET															5'-10¼"	23'-2"

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



SECTION C-C FOR TYPE 4B

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

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

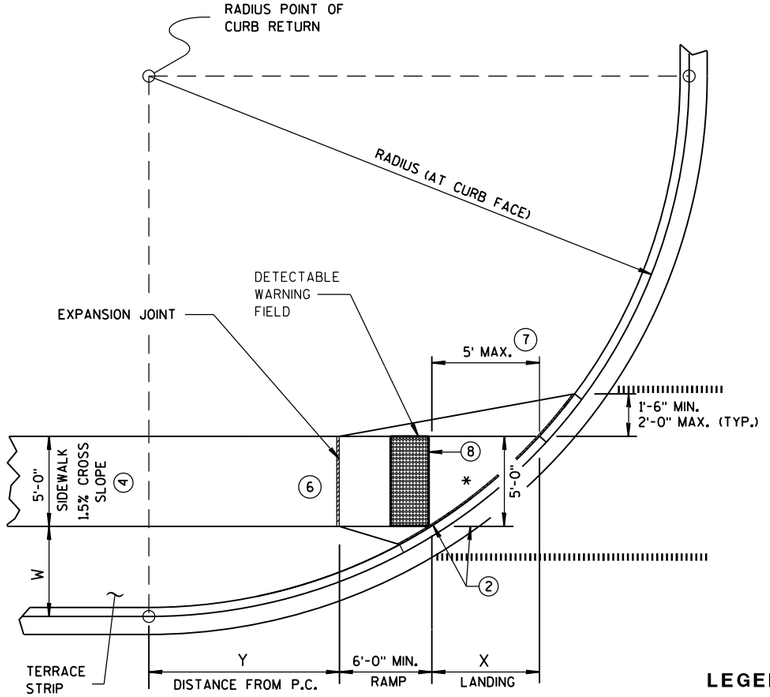
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

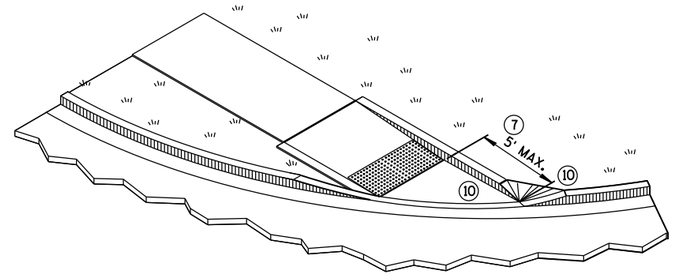
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

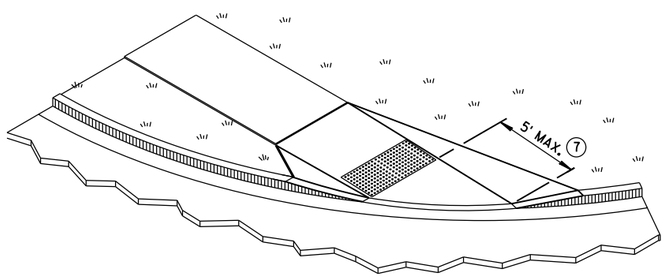
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

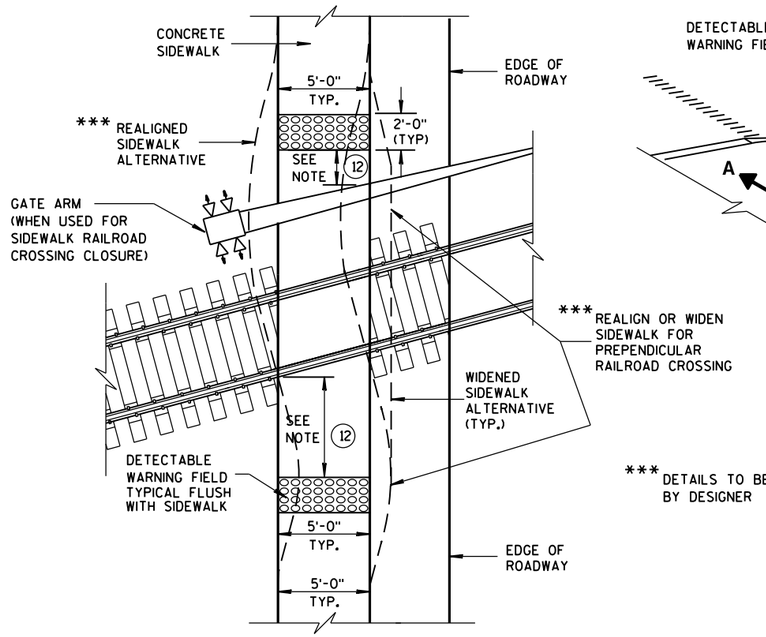
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

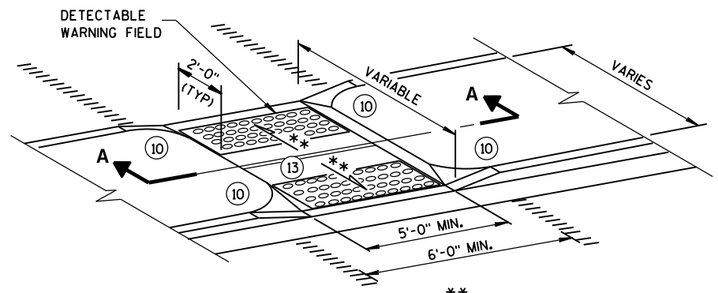
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S.D.D. 8 D 5-19d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

GENERAL NOTES

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

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

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

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

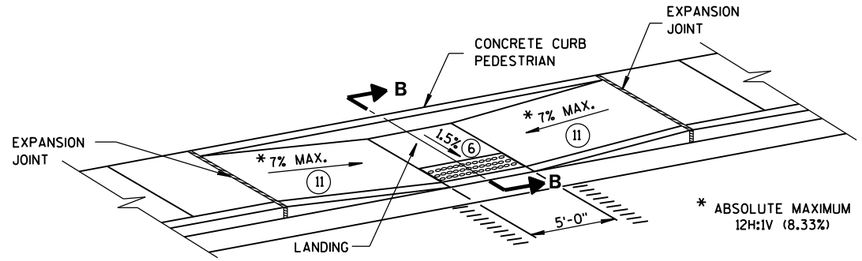
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

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

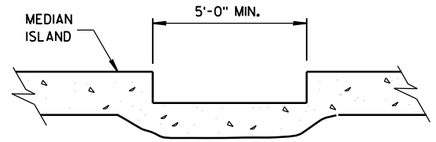
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

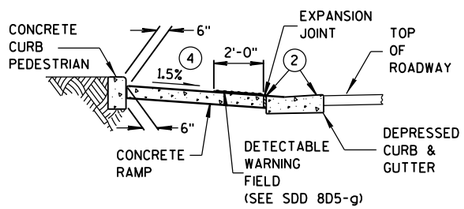
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



MID-BLOCK CROSSING
TYPE 7A

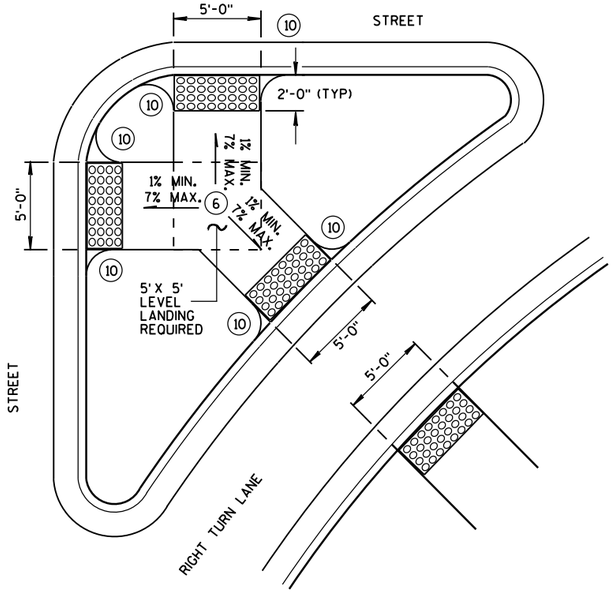


SECTION A-A

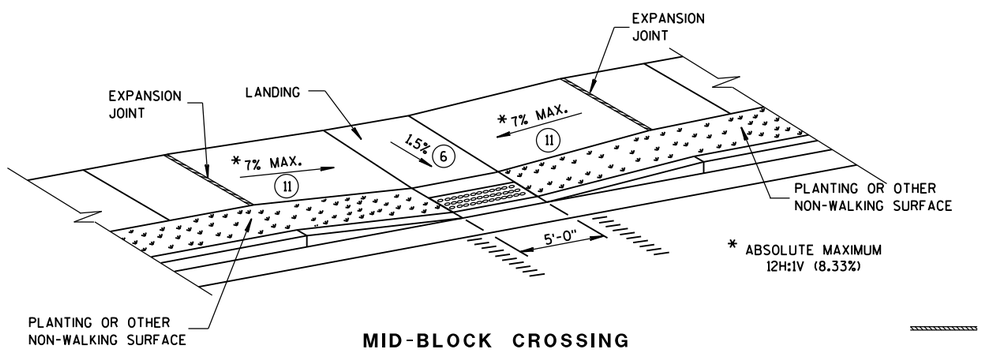


SECTION B-B

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



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

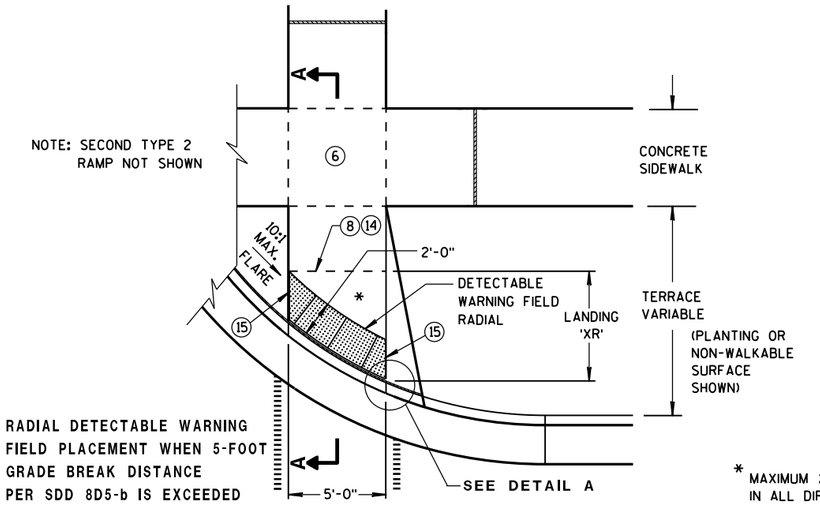
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

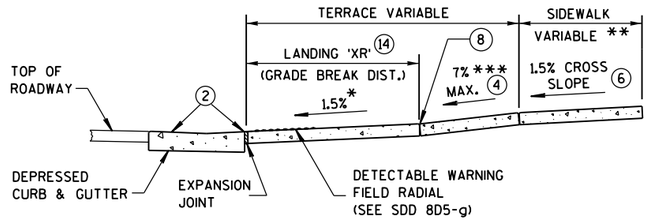
S.D.D. 8 D 5-19e



TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

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



** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION A-A

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

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

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

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

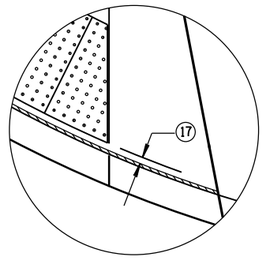
(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

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

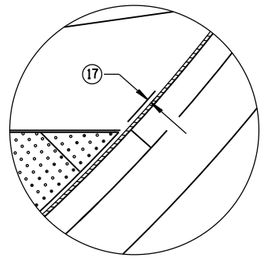
(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

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

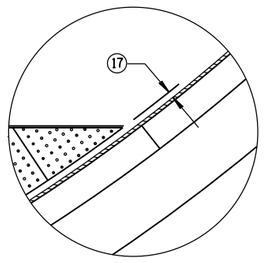
(17) A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.



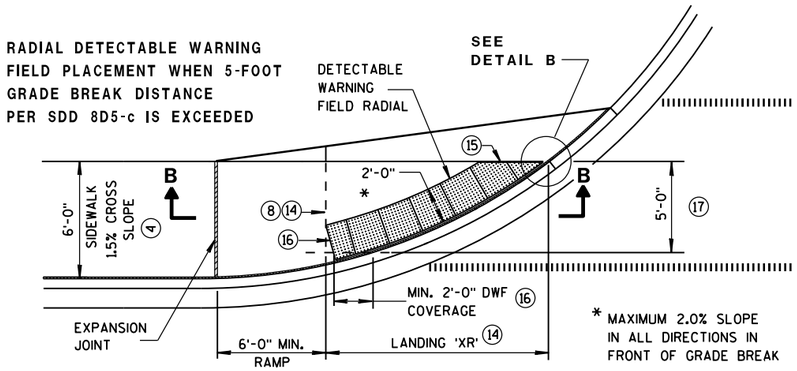
DETAIL A



DETAIL C

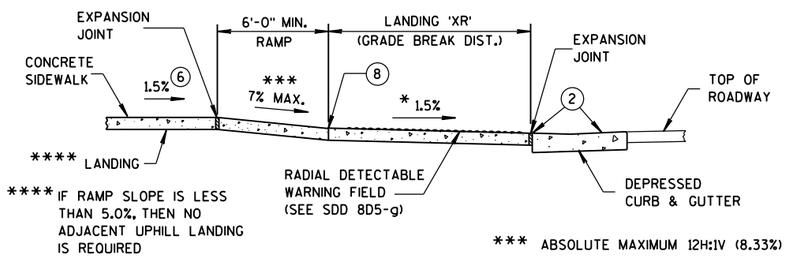


DETAIL B



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

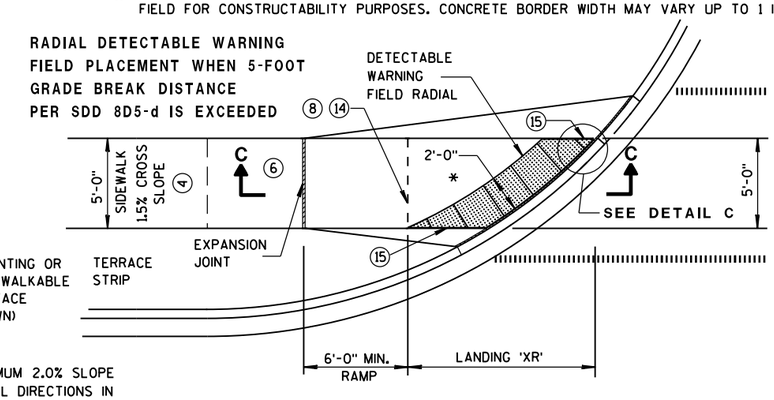
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



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

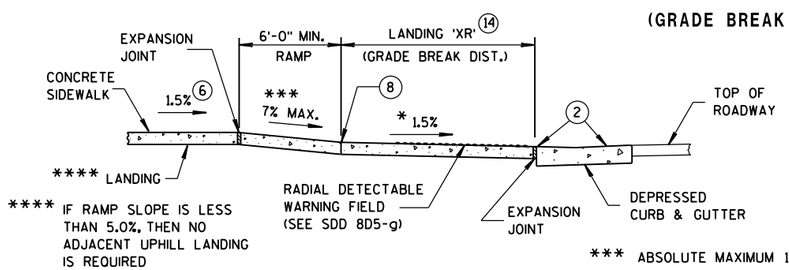
*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION B-B FOR TYPE 4A1



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

CURB RAMP TYPE 4B1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



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

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

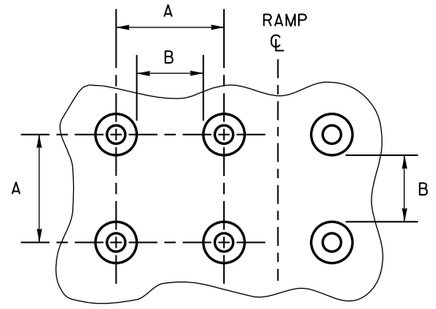
S.D.D. 8 D 5-19f

6

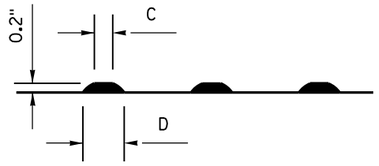
S.D.D. 8 D 5-19f

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

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



PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL

GENERAL NOTES

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

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

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

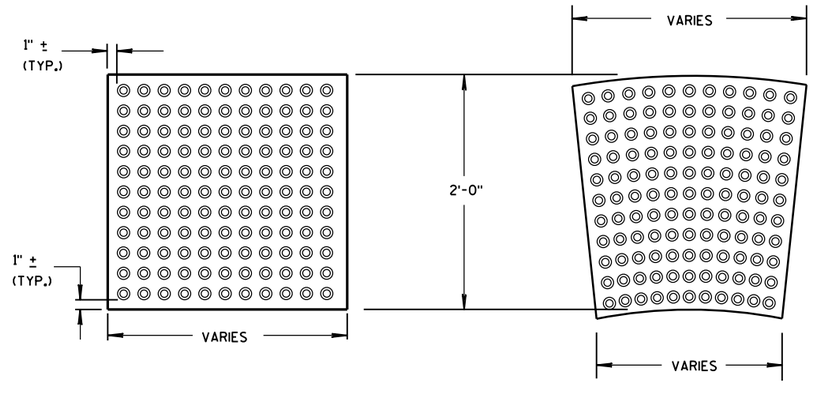
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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

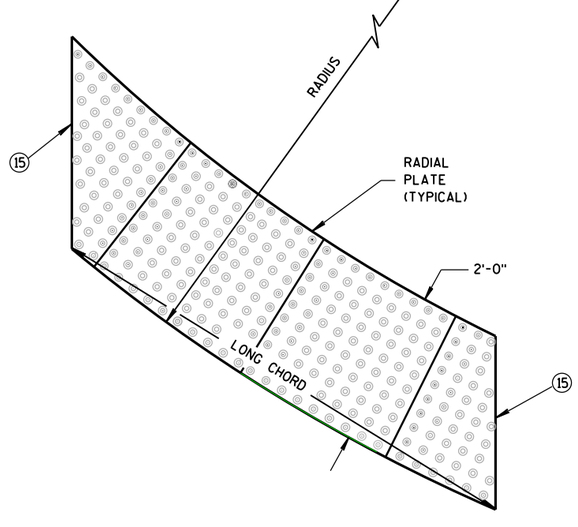


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

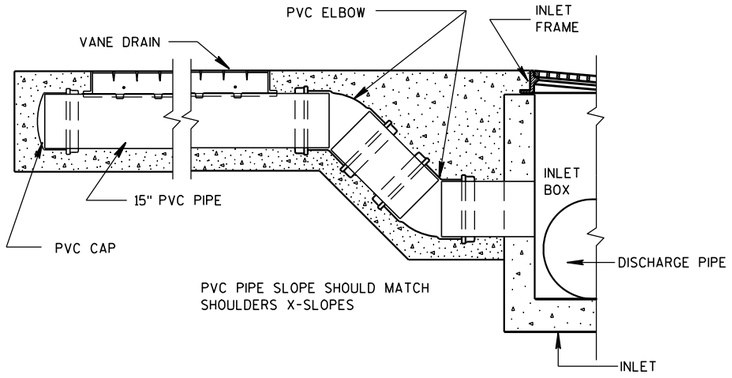
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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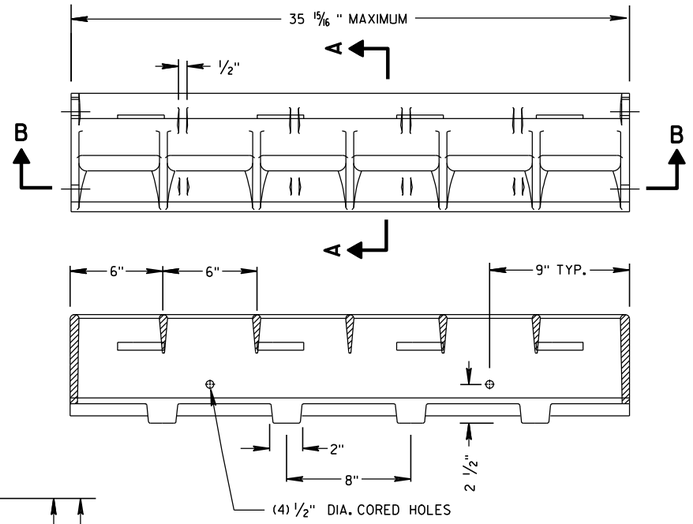
S.D.D. 8 D 5-19g

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S.D.D. 8 D 5-19g



TYPICAL SLOTTED VANE DRAIN CONFIGURATION



SECTION B-B

SLOTTED VANE DRAIN DETAIL

(APPROXIMATE WEIGHT 87 LBS.)

GENERAL NOTES

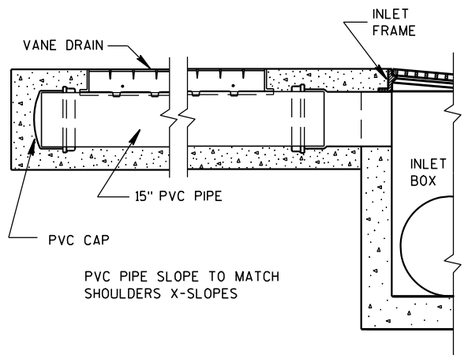
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ENCASEMENT: THE ENCASING MATERIAL AROUND THE PIPE SHALL BE IN ACCORDANCE WITH SPECIFICATIONS OF 501.4.3.3 FOR CONCRETE PAVEMENT.

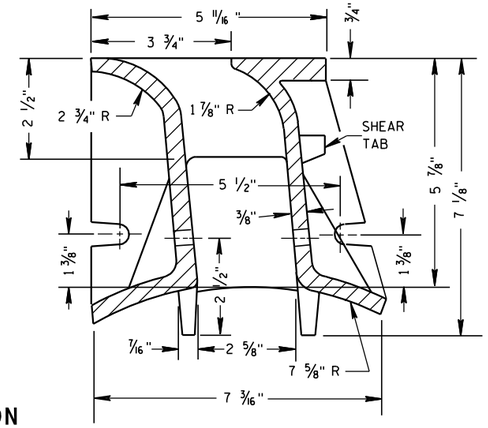
THE PIPE USED SHALL BE A 15" DIAMETER SDR-35 POLYVINYL CHLORIDE SEWER PIPE. THE PIPE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN STANDARD SPECIFICATION 612.2.6

SURFACE DRAIN: BEFORE PAVING OVER THE DRAIN, COVER THE TOP OF THE DRAIN TO KEEP MATERIAL OUT OF THE PIPE. THE FINISHED GRADE SHOULD BE FLUSH WITH THE TOP OF THE DRAIN.

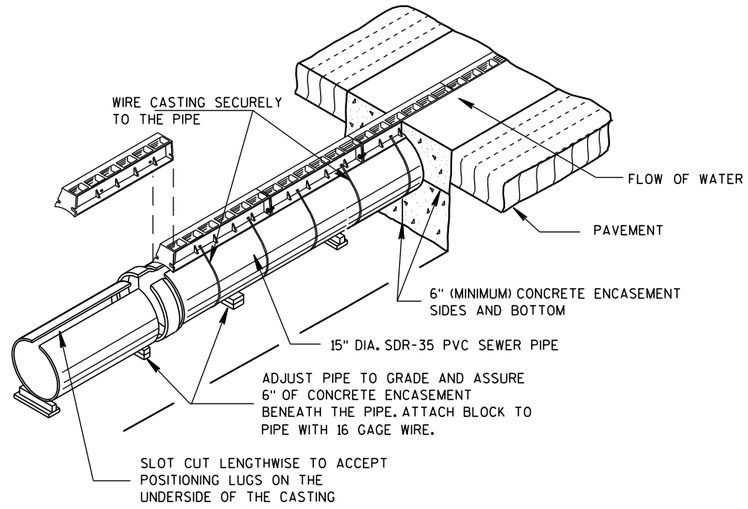
THE ANGLE OF THE DRAIN TO THE FLOW OF WATER SHOULD BE AS CLOSE TO 90° AS POSSIBLE.



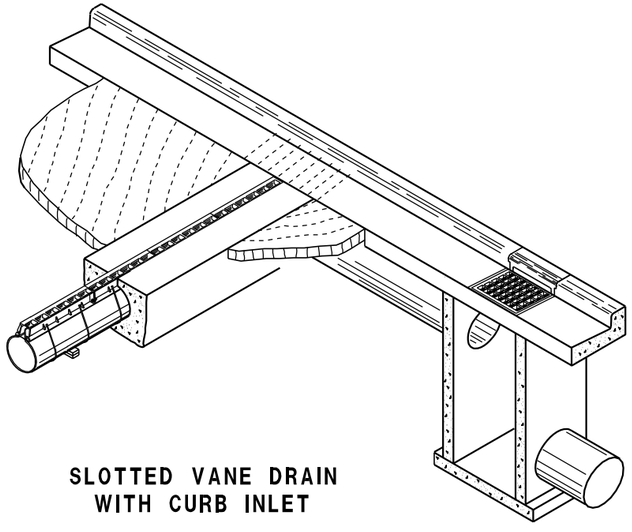
TYPICAL SLOTTED VANE DRAIN CONFIGURATION



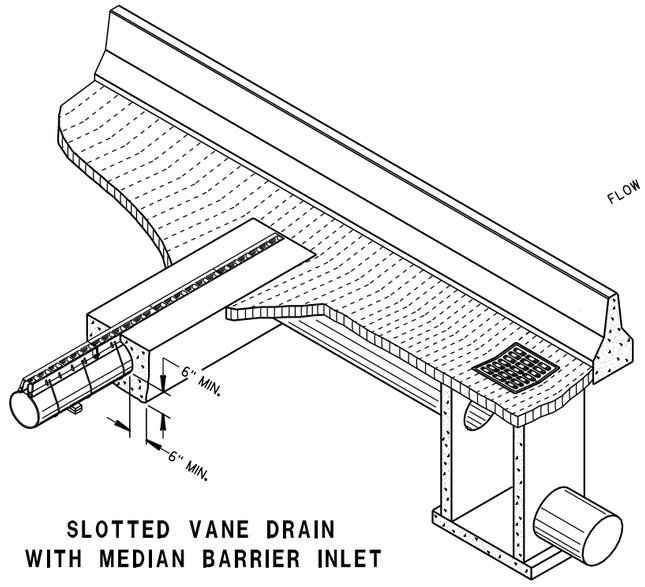
SECTION A-A



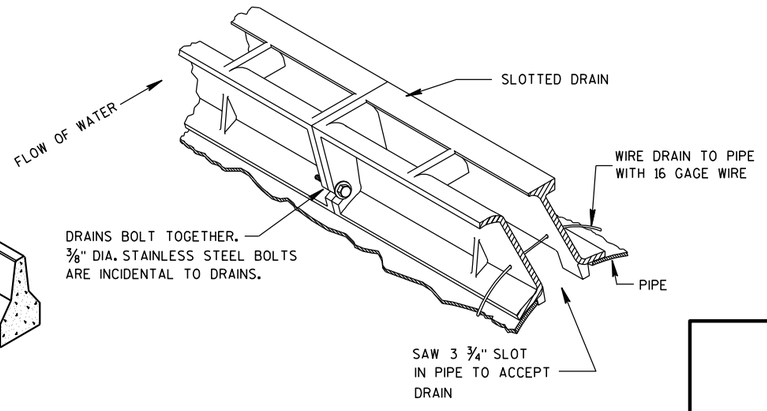
INSTALLATION OF SLOTTED VANE DRAIN



SLOTTED VANE DRAIN WITH CURB INLET



SLOTTED VANE DRAIN WITH MEDIAN BARRIER INLET



ISOMETRIC VIEW

SLOTTED VANE DRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/13/00 DATE — /S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOPMENT ENGINEER

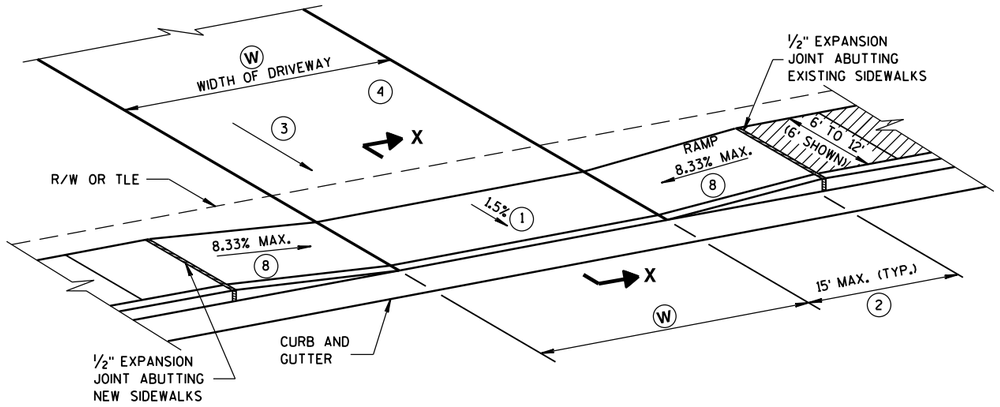
FHWA

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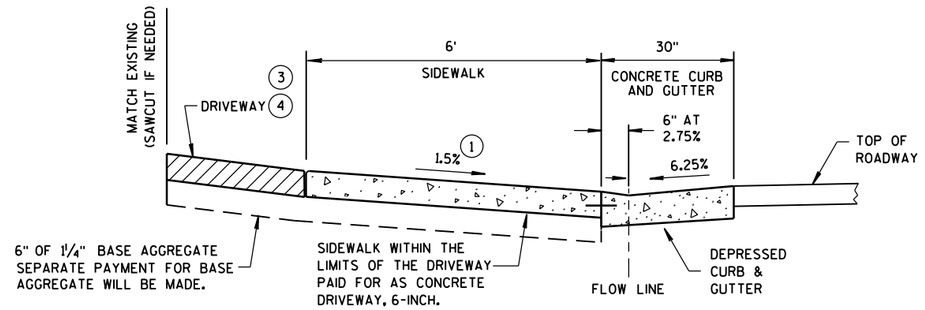
S.D.D. 8 D 14-1

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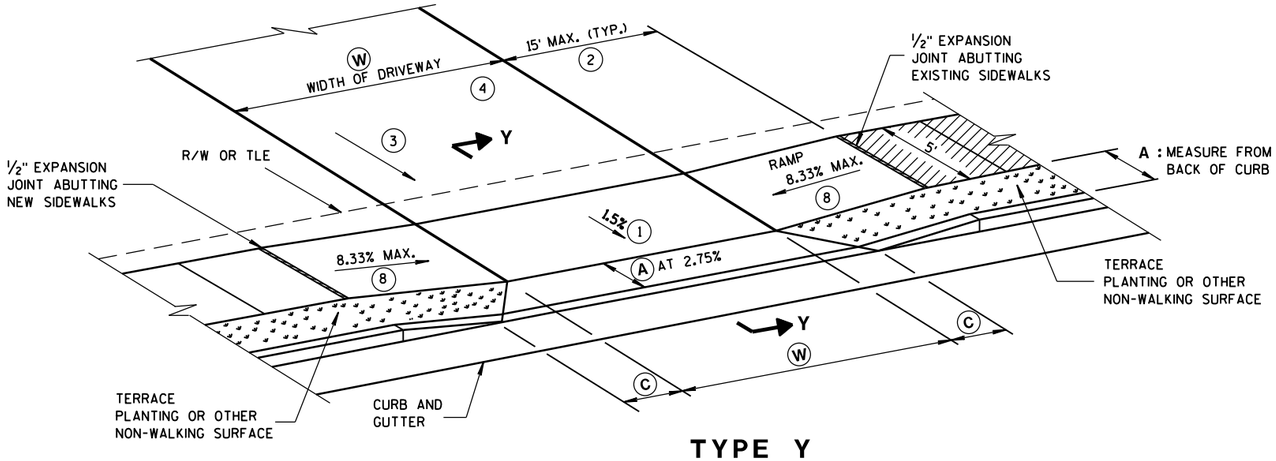
S.D.D. 8 D 14-1



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



SECTION X-X

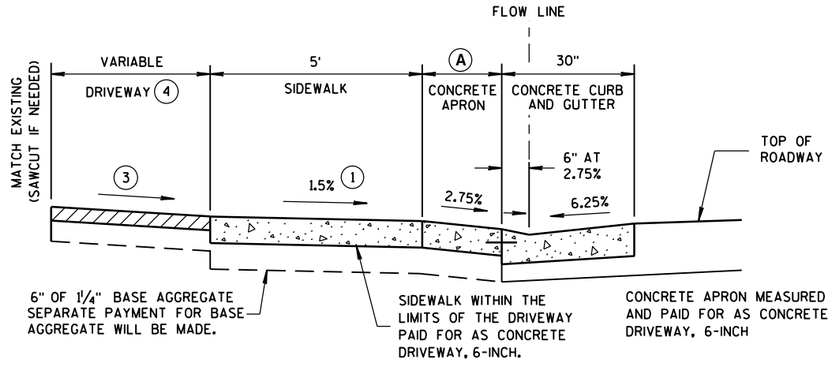


TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

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

GENERAL NOTES

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



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y-Y

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

TABLE Y

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

NOT TO SCALE

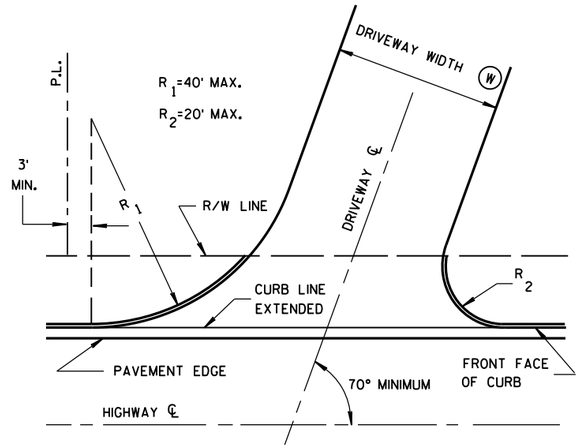
DRIVEWAY AND SIDEWALK RAMPS
TYPES X & Y

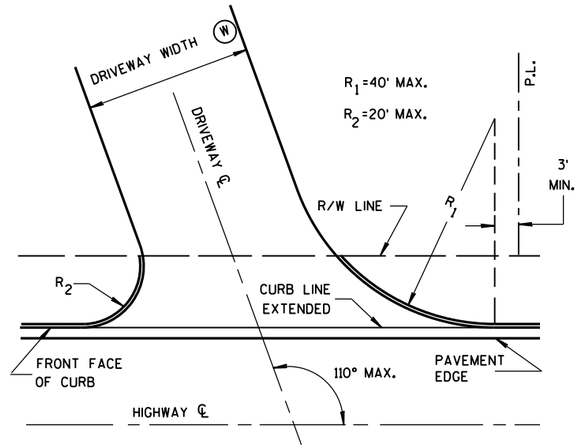
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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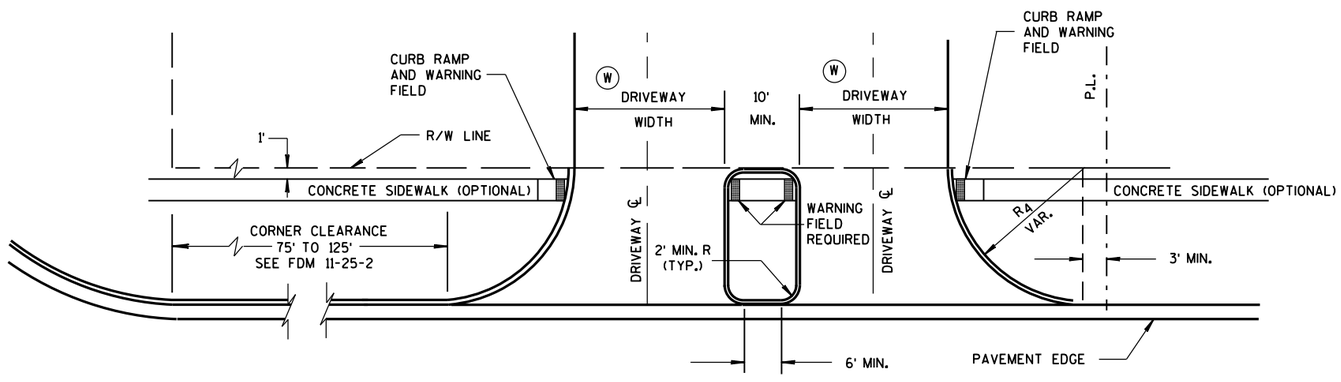
S.D.D. 8 D 18-1





SKEWED DRIVEWAY DETAILS
(COMMERCIAL AND NON-COMMERCIAL)

SIDEWALK NOT SHOWN



DRIVEWAY LOCATION AND SPACING DETAILS

SIDEWALK SHOWN

NOTES

A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE HIGHWAY R/W.

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

Ⓦ DRIVEWAY WIDTHS:

COMMERCIAL - 35' MAX., 16' MIN.

RESIDENTIAL AND NON-COMMERCIAL - 24' MAX., 12' MIN.

DRIVEWAYS WITH CURB & GUTTER RETURNS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

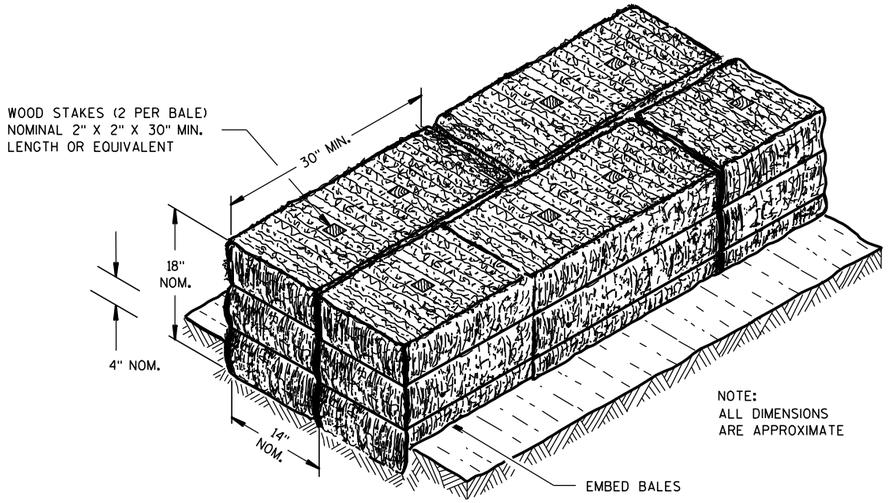
APPROVED
December, 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV
FHWA

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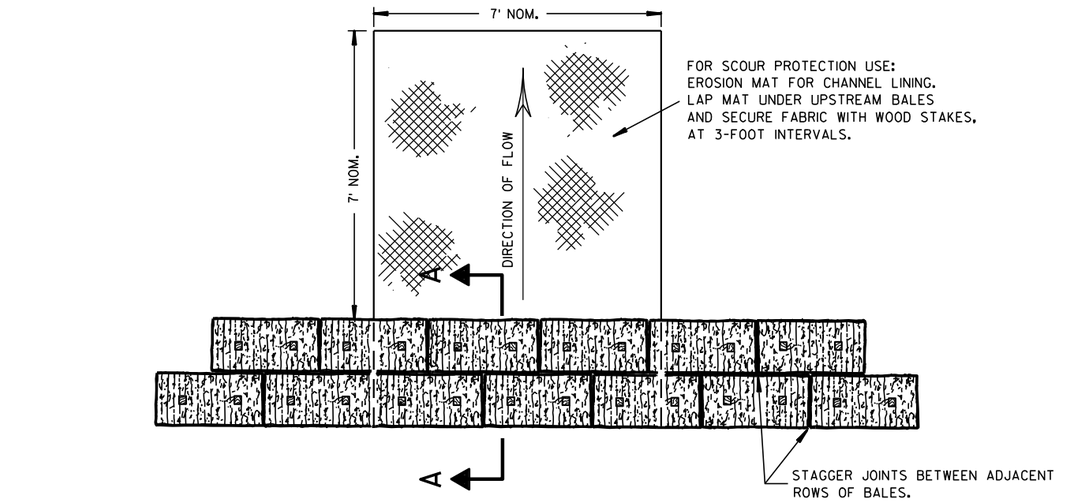
S.D.D. 8 D 20-1

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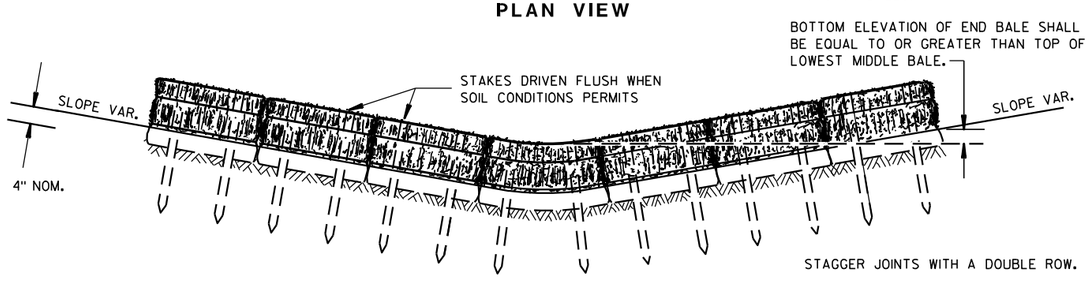
S.D.D. 8 D 20-1



SECTION A-A



PLAN VIEW



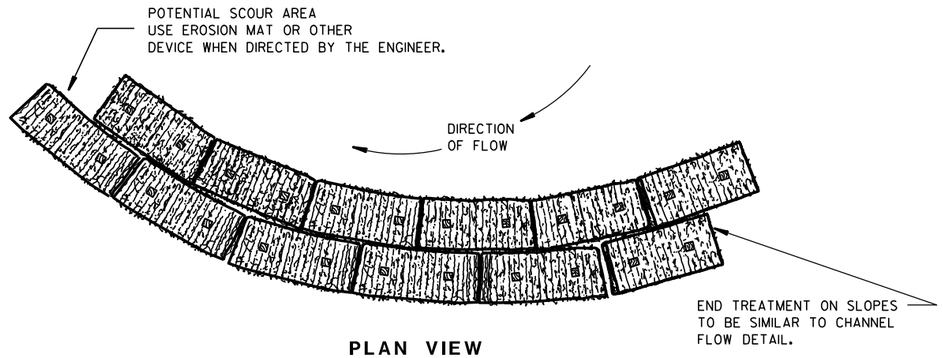
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

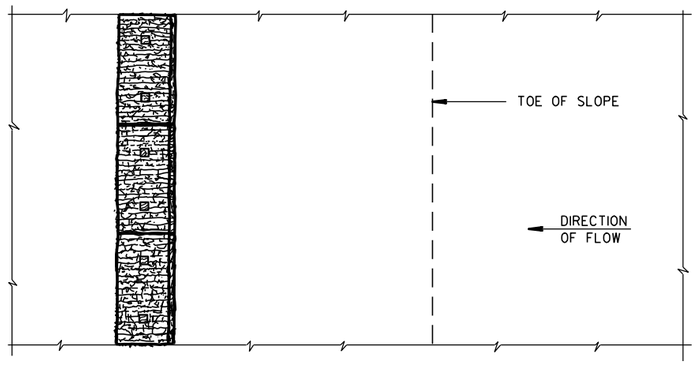
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① 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.

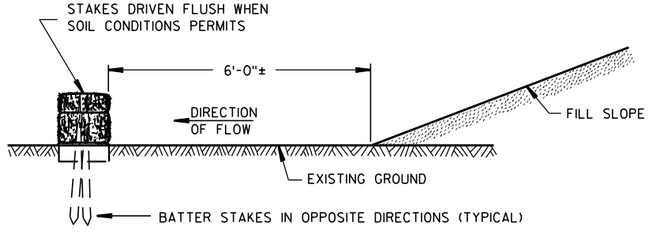


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

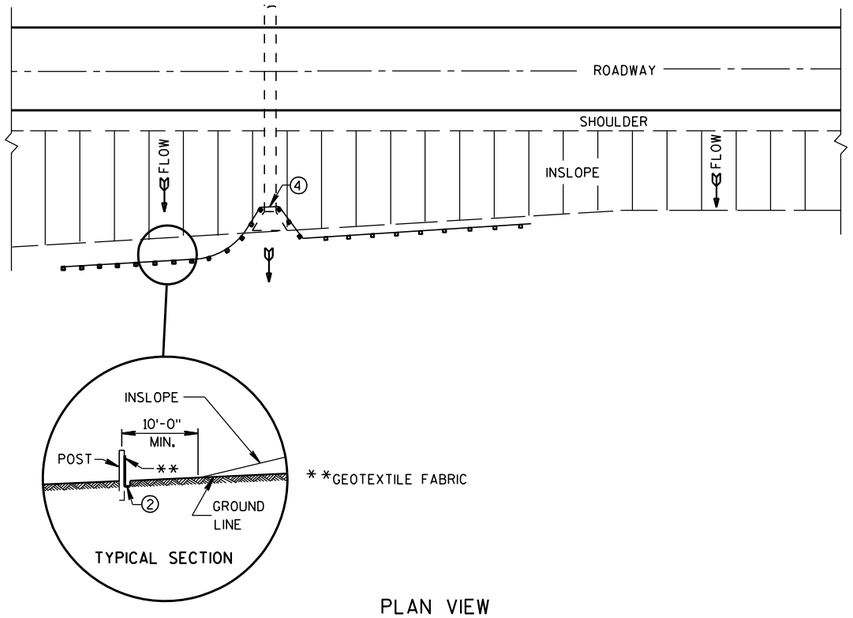
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

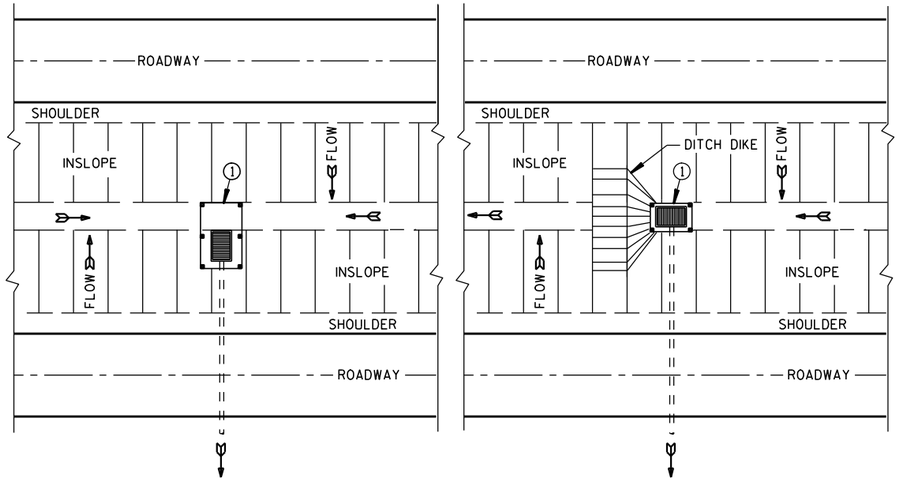
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6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



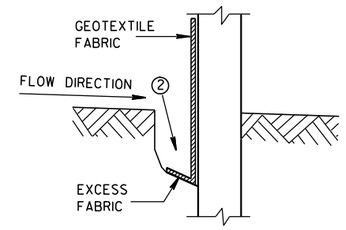
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

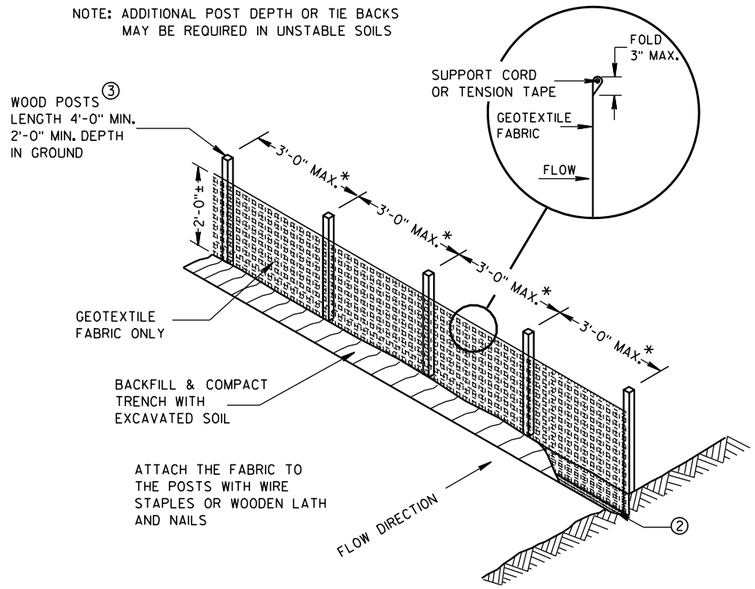
GENERAL NOTES

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

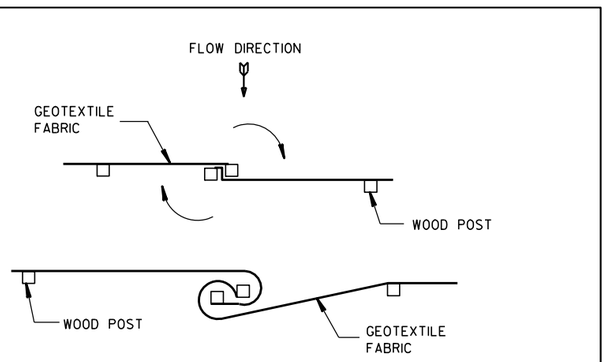
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



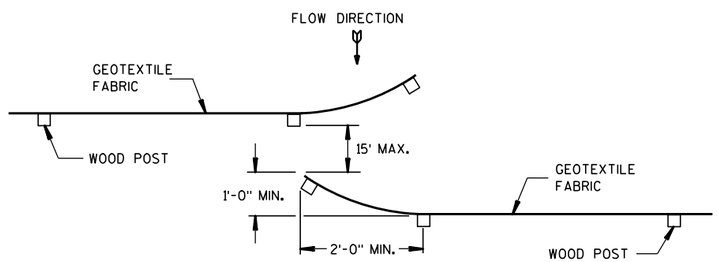
TRENCH DETAIL



SILT FENCE

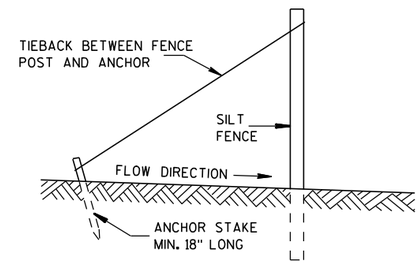


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

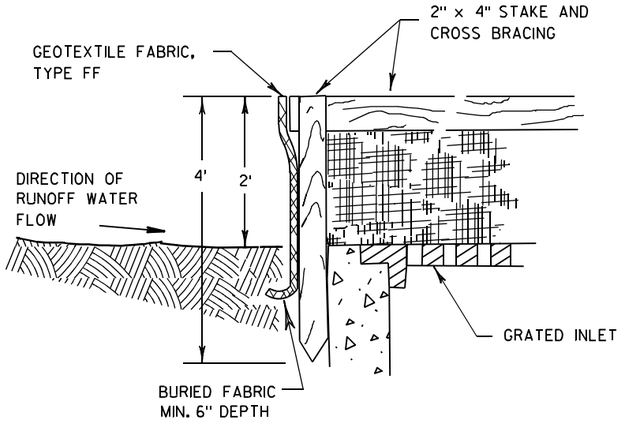
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4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

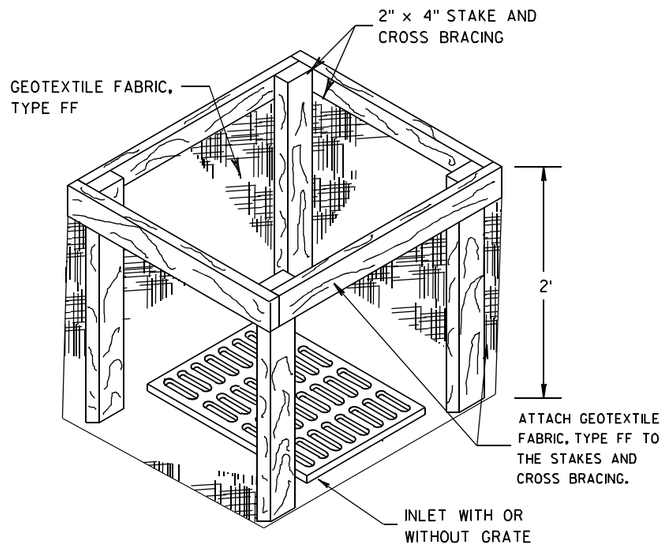
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S.D.D. 8 E 9-6

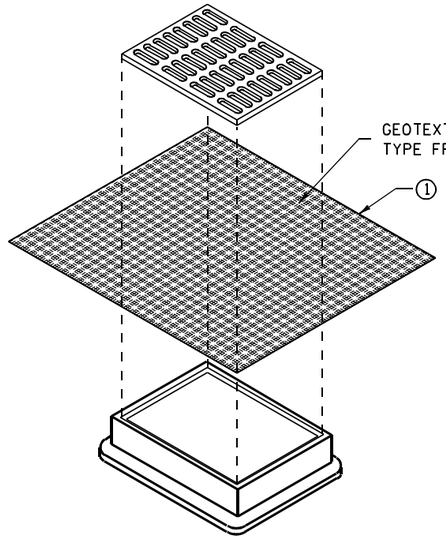
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S.D.D. 8 E 9-6



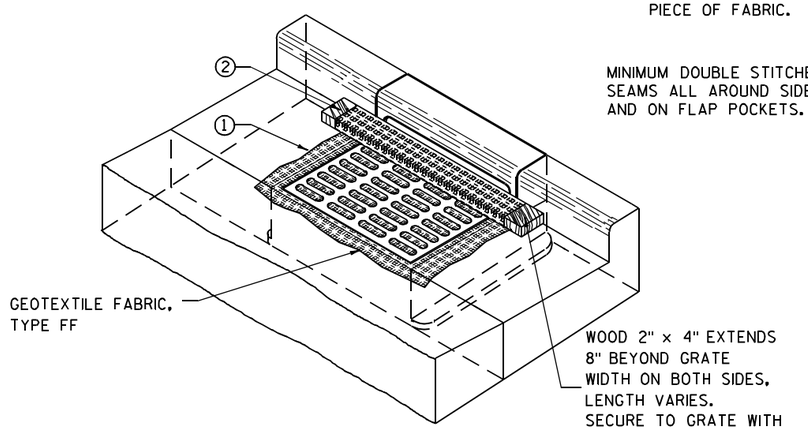


INLET PROTECTION, TYPE A

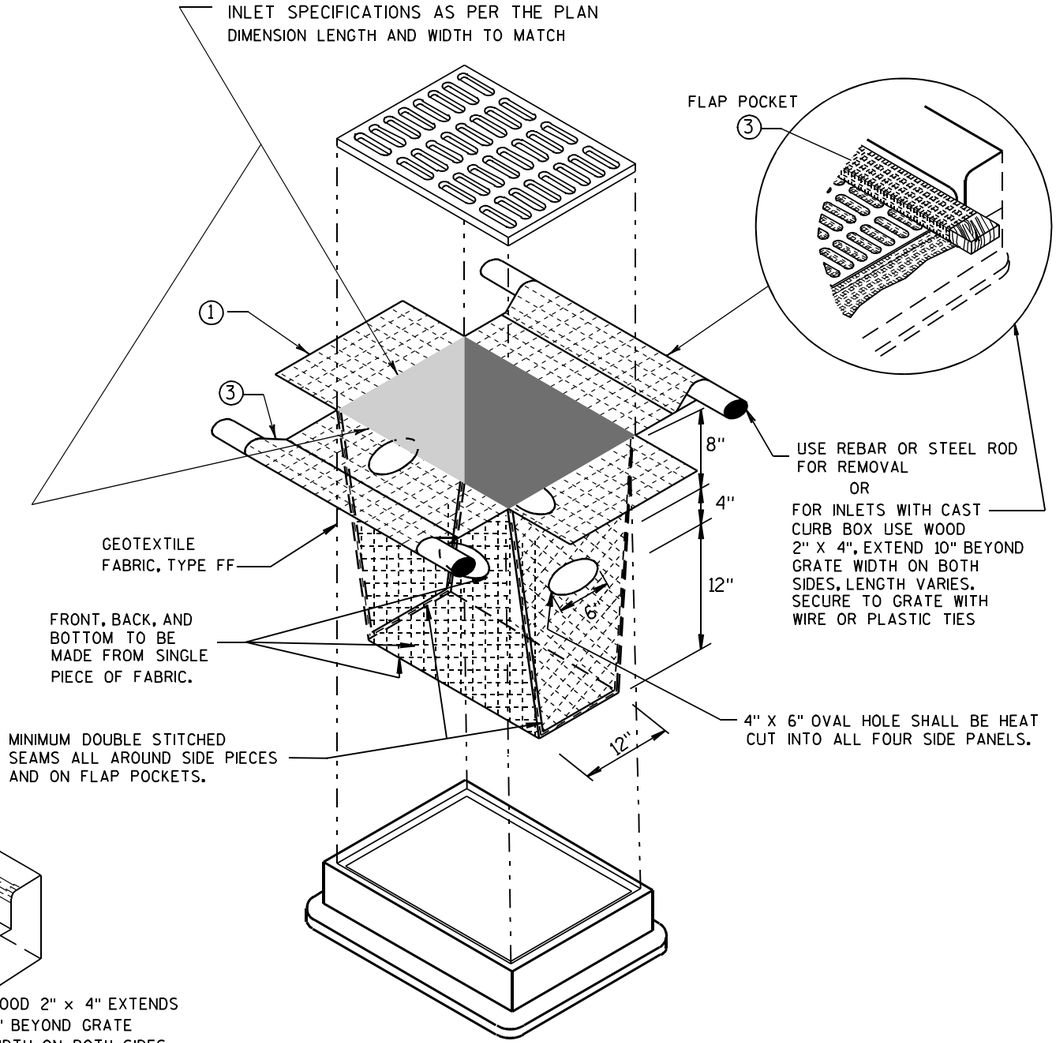


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

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

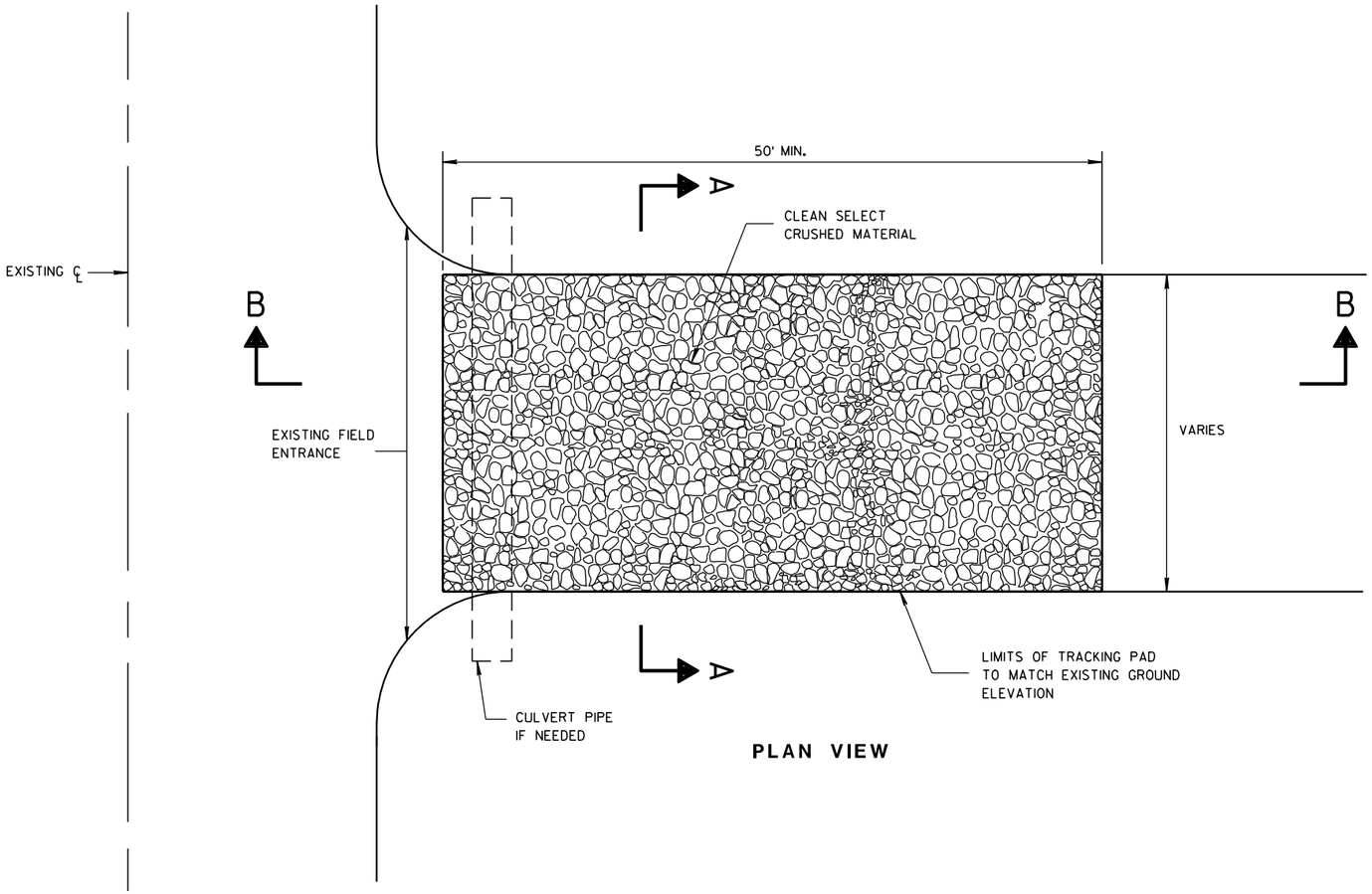
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10/16/02
DATE
/S/ Beth Cannestra
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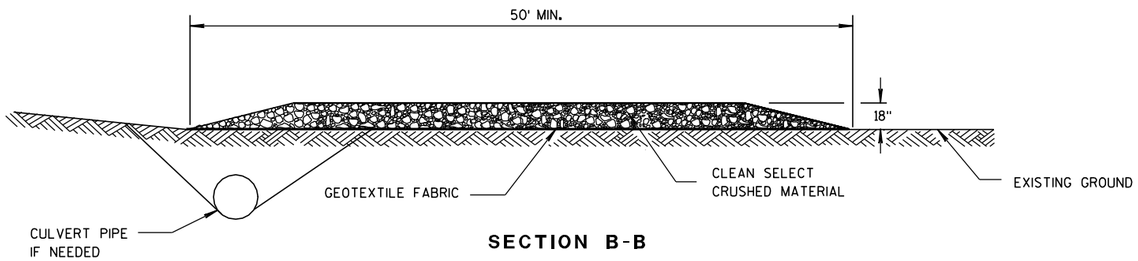
S.D.D. 8 E 10-2

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S.D.D. 8 E 10-2



PLAN VIEW



SECTION B-B

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

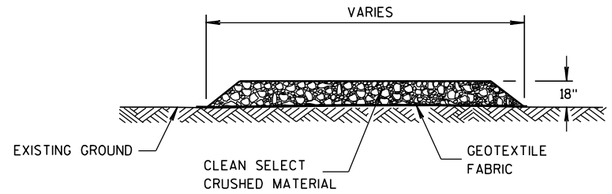
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

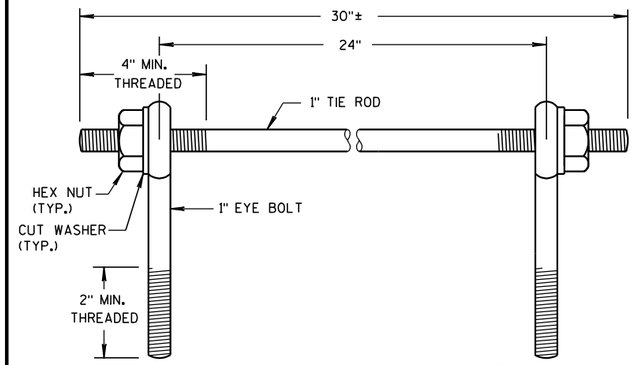
TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER
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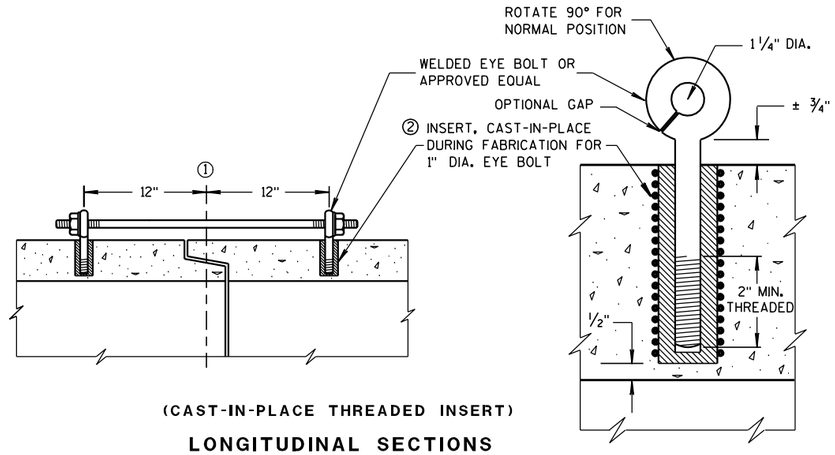
S.D.D. 8 E 14-1

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S.D.D. 8 E 14-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

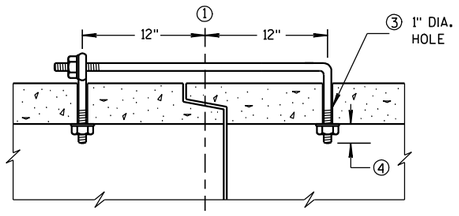
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

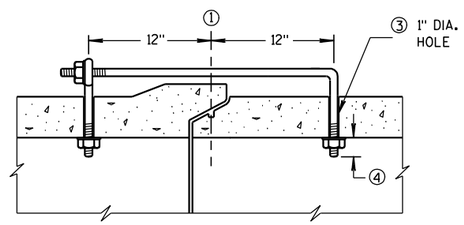
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

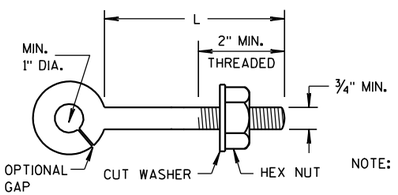


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

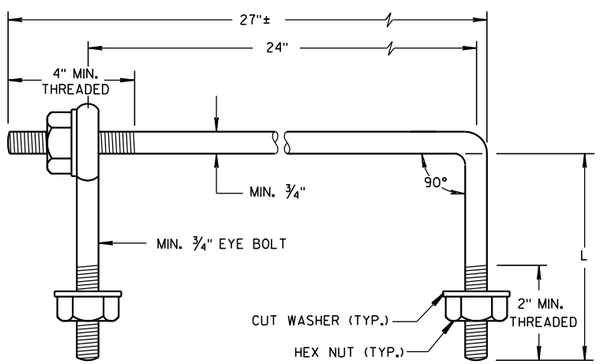
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

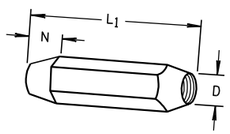
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

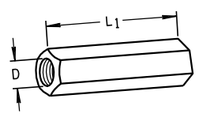
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



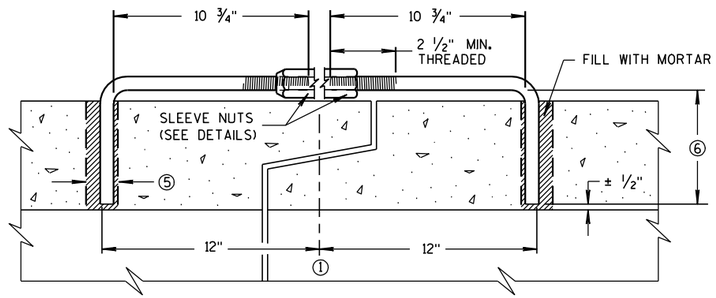
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PLAIN

RIGHT AND LEFT THREADS

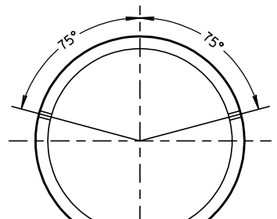
SLEEVE NUTS



LONGITUDINAL SECTION

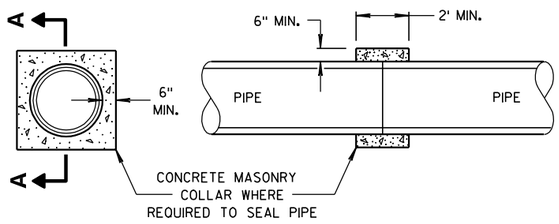
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

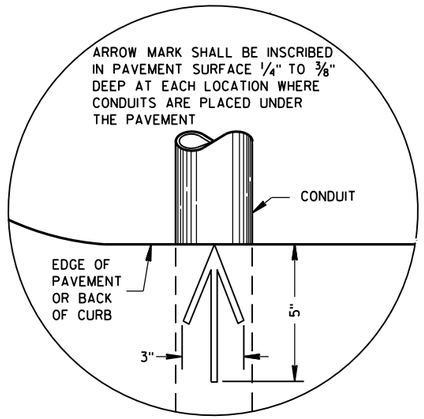
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
228
FHWA

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S.D.D. 8 F 4-7

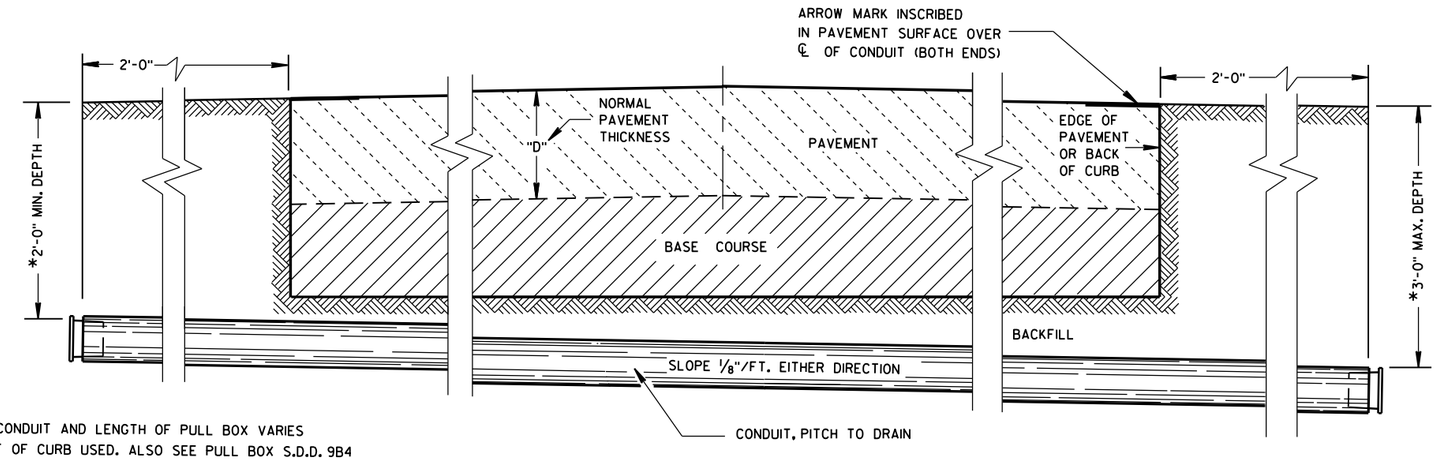
6

S.D.D. 8 F 4-7



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

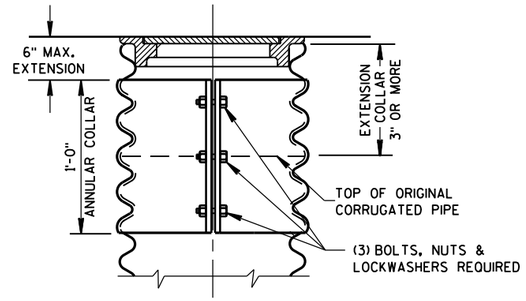
APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 229
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TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

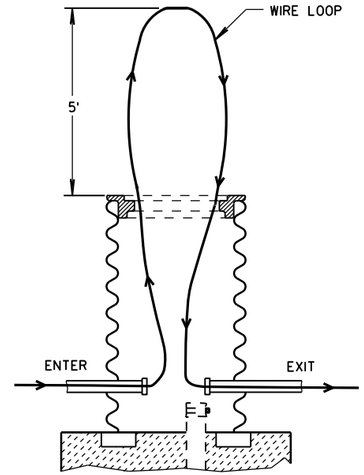
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

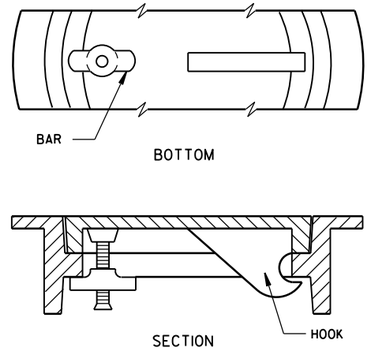
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

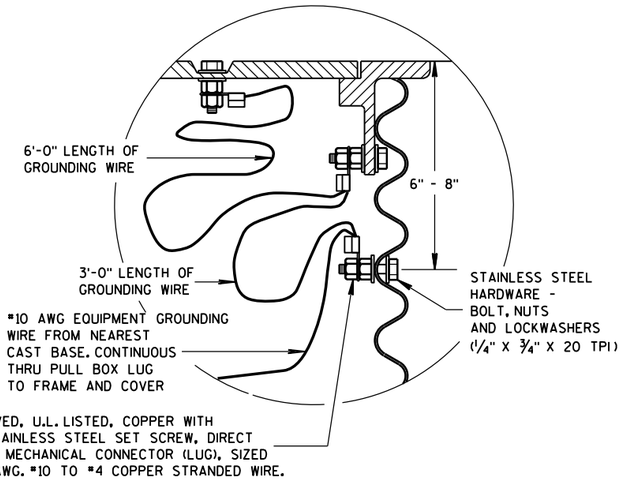


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

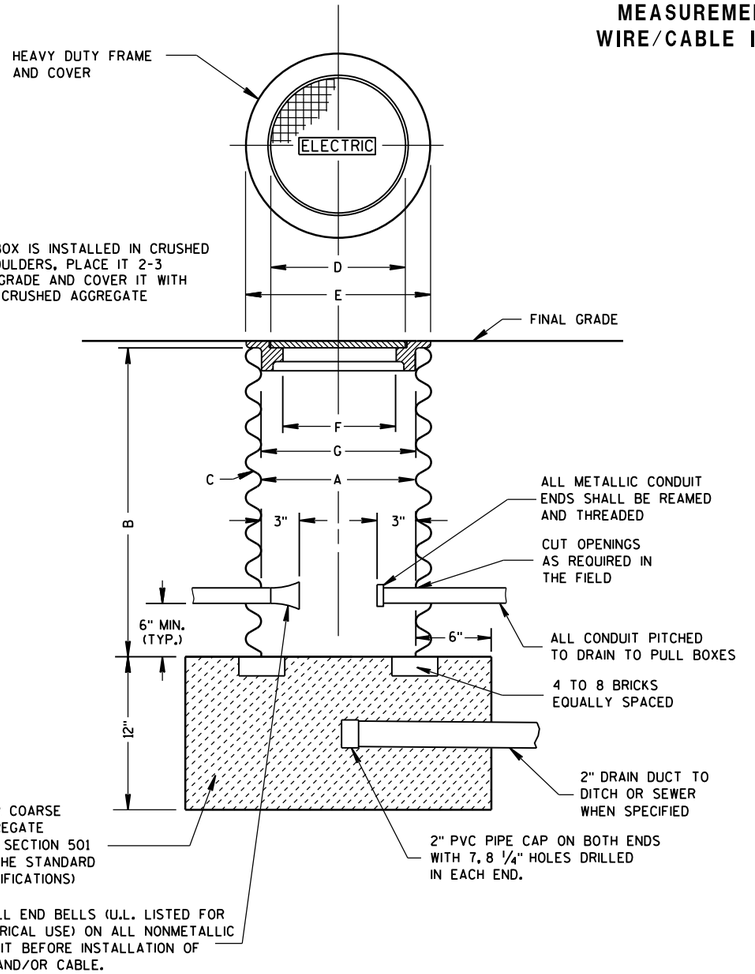


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

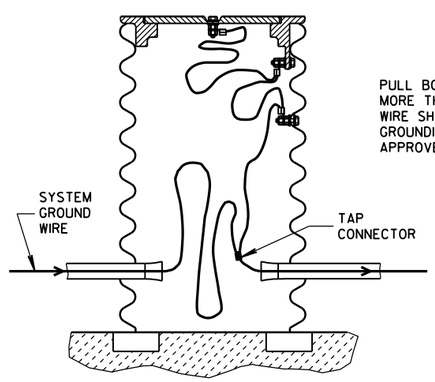
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

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



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

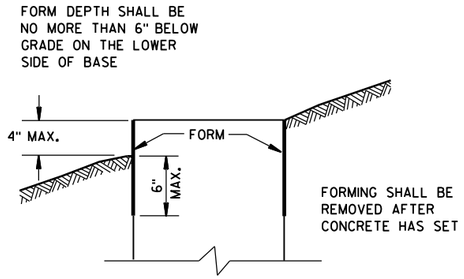
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

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

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

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

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

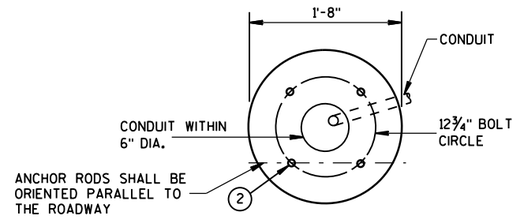
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

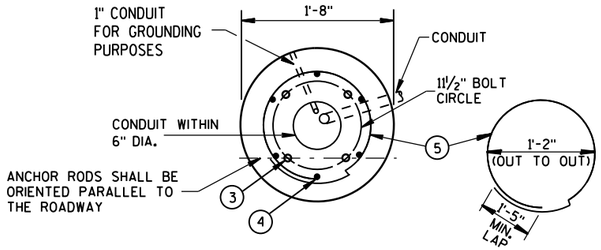
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

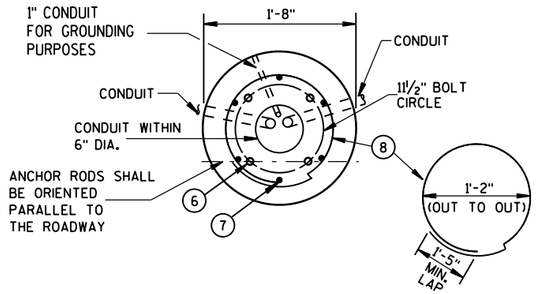
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

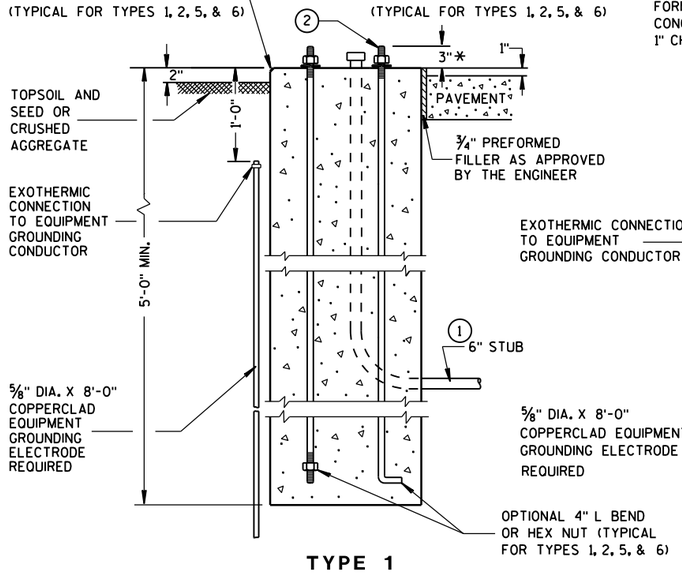




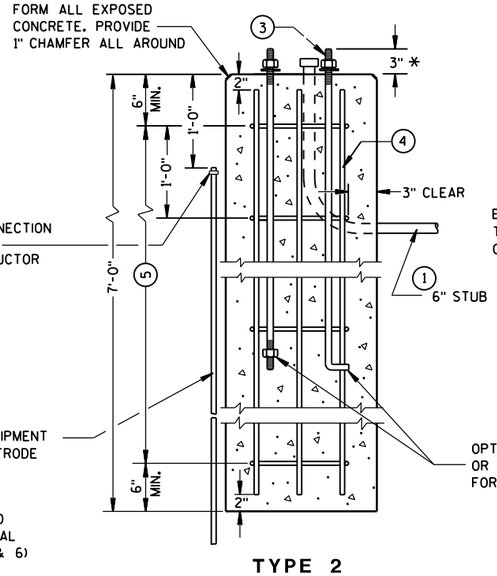


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

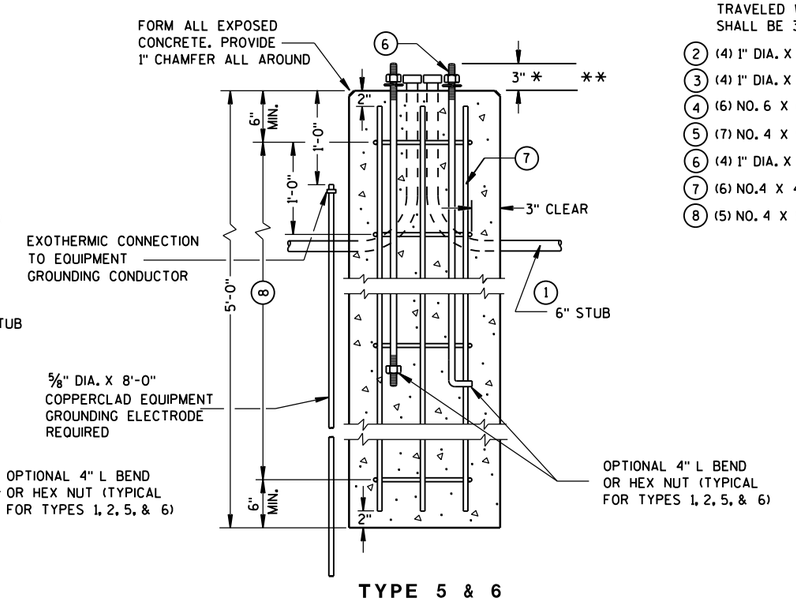
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

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

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 231
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6

S.D.D. 9 C 2-7

6

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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.

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

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

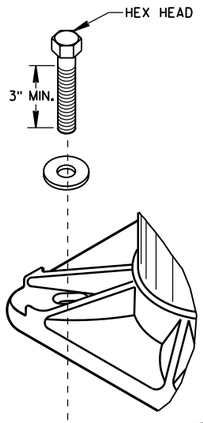
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

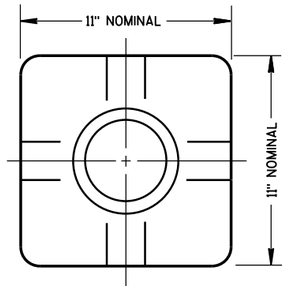
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

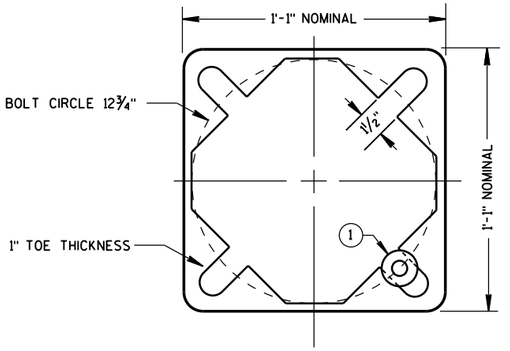
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

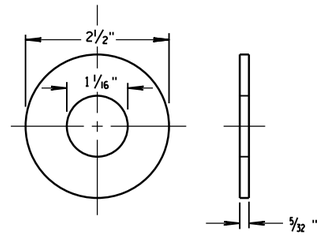




TOP VIEW
(PEDESTAL BASE)

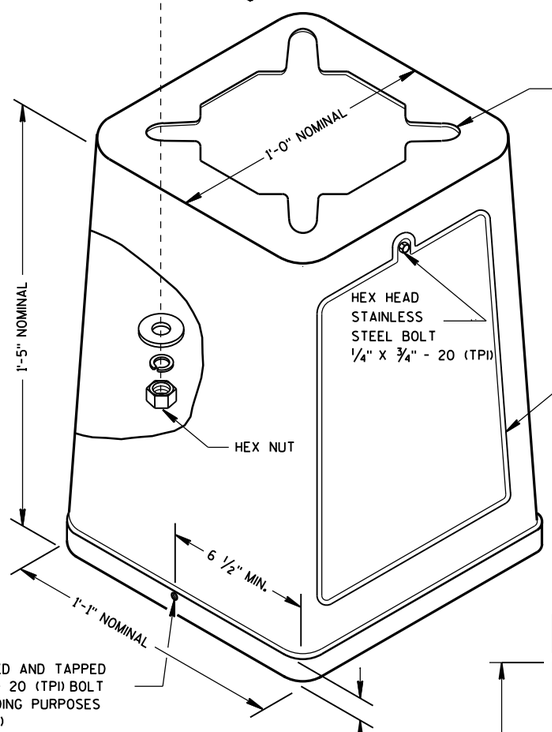


BOTTOM VIEW
(PEDESTAL BASE)

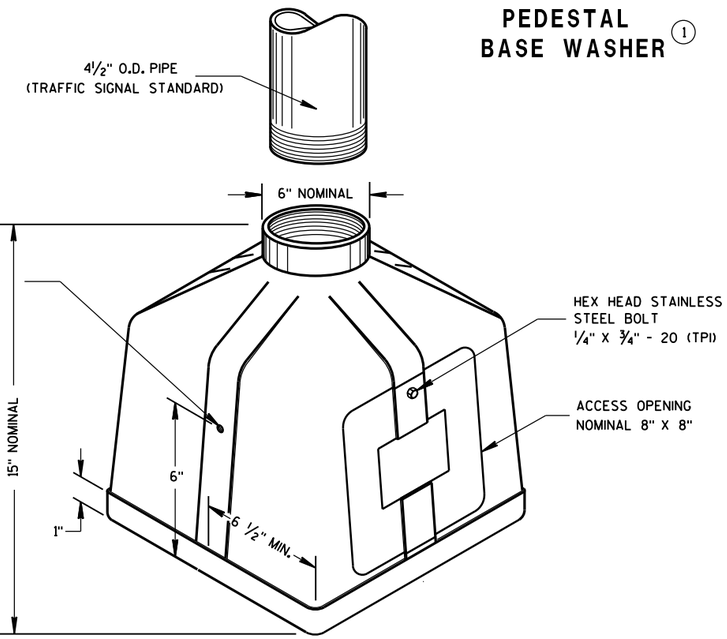


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

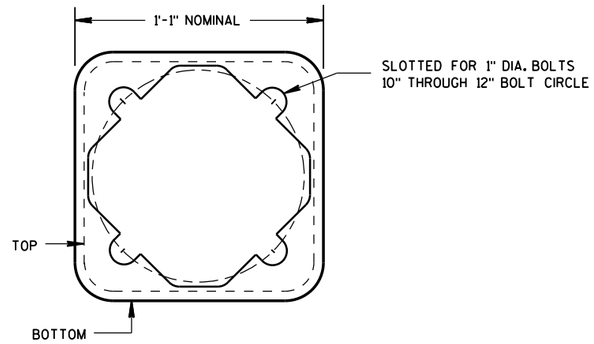


ISOMETRIC VIEW

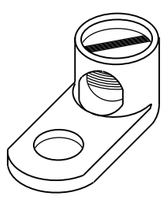


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

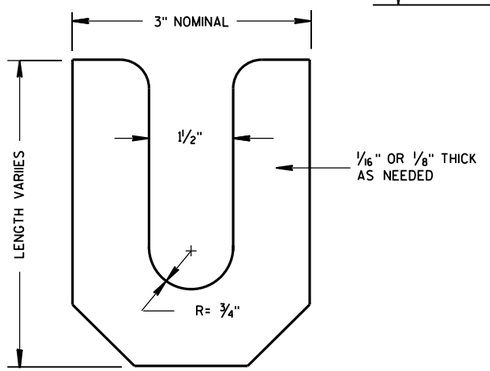


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED 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.

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.

ANCHOR RODS SHALL BE 1" X 60".

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.

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.

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

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

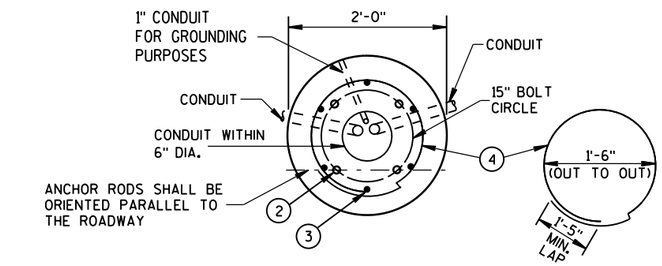
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

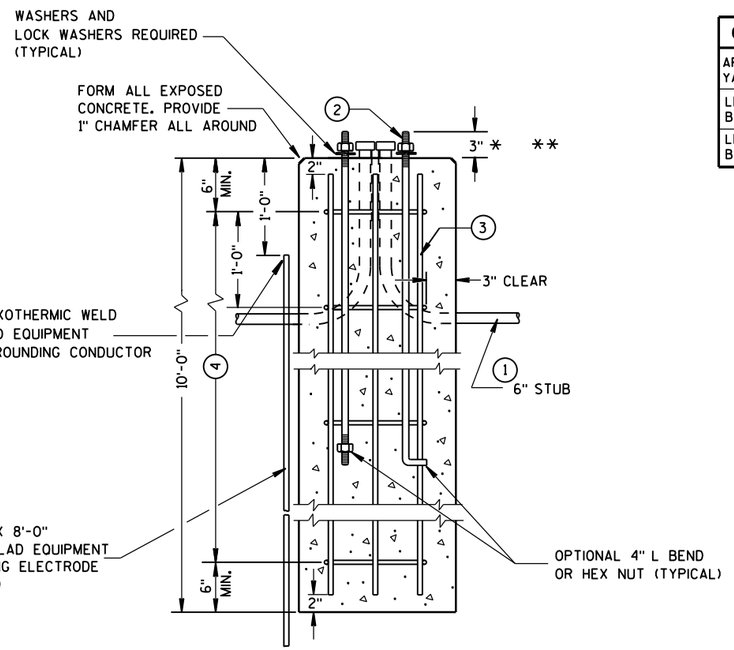
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN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

(2) (4) 1" DIA. X 5'-0" ANCHOR RODS

(3) (6) NO. 6 X 9'-8" BAR STEEL REINFORCEMENT.

(4) (10) NO. 4 X 6'-2" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



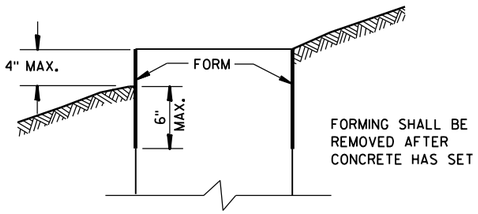


CONCRETE BASE, TYPE 8 (FOR 50' LIGHT POLES)

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

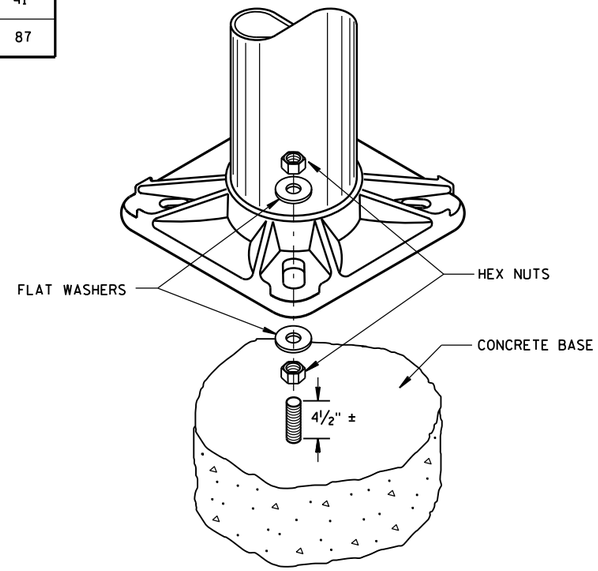
** FOR NONBREAKAWY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	1.2
LBS. OF HOOP BAR STEEL	41
LBS. OF VERTICAL BAR STEEL	87



NON-BREAKAWAY INSTALLATION (LEVELING NUT)

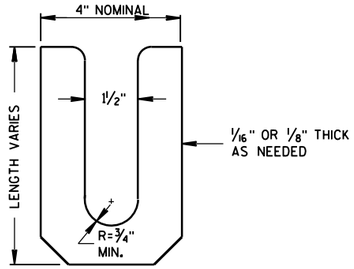
CONCRETE BASE, TYPE 8

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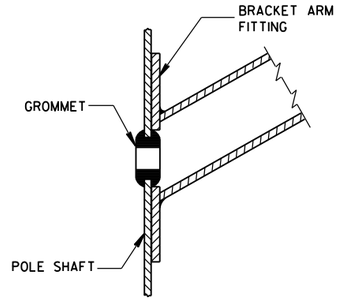
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SDD 9 C 9-5

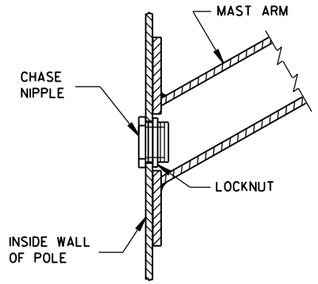


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

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

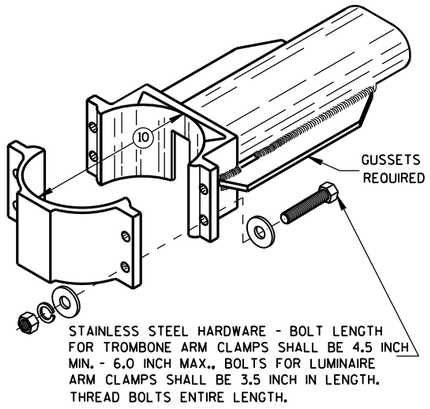
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

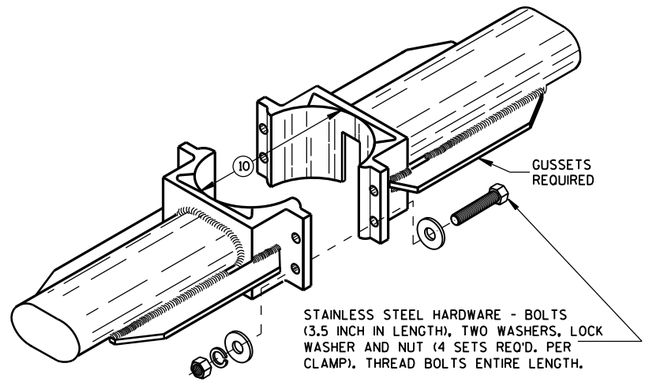
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

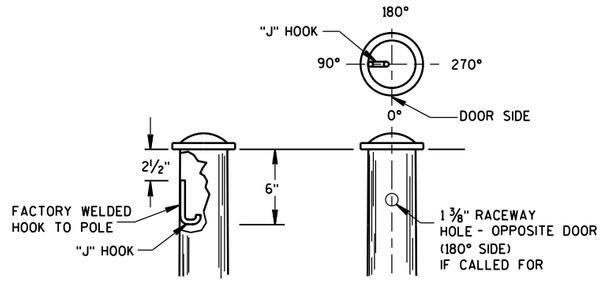
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



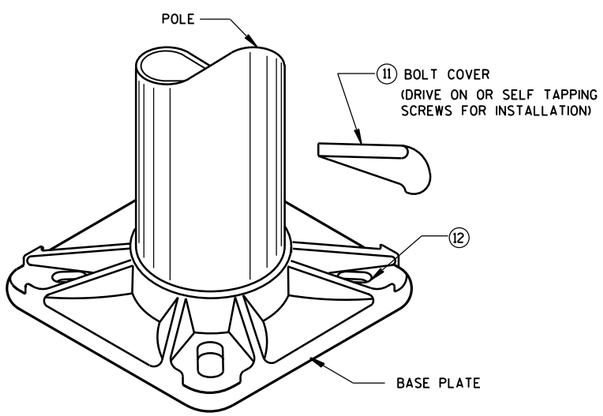
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



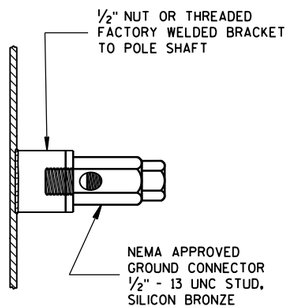
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

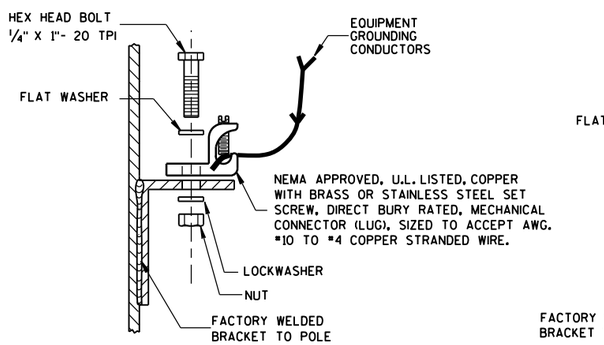


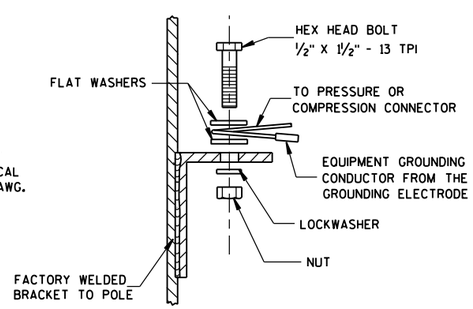
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

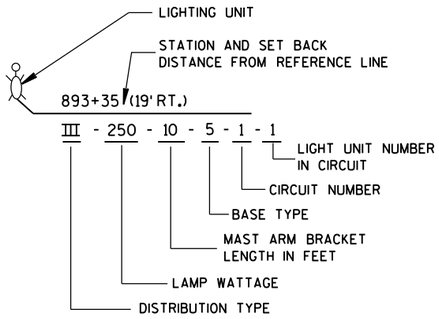
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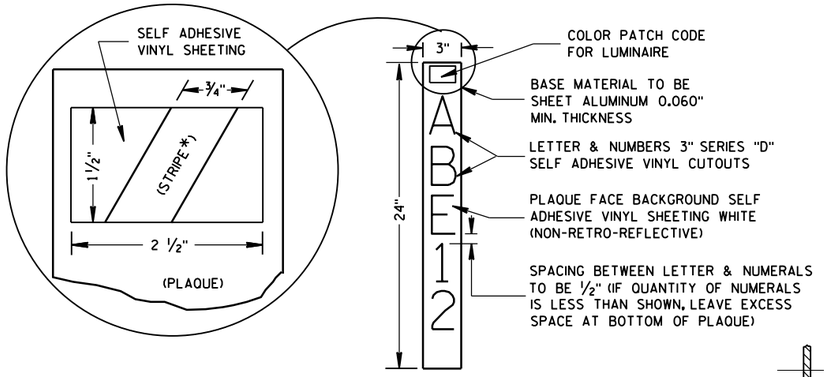
S.D.D. 9 E 1-14g

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S.D.D. 9 E 1-14g



LIGHTING UNIT CODE
(TYPICAL)



COLOR PATCH CODE FOR LUMINAIRES

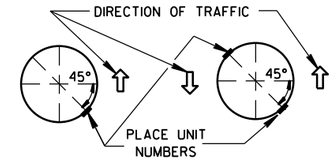
(HIGH PRESSURE SODIUM)

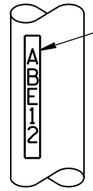
1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE W/WHITE STRIPE*
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN

(MERCURY VAPOR)

400 WATT - (NO PATCH)
250 WATT - YELLOW

IDENTIFICATION PLAQUE





FASTEN TOP, CENTER AND BOTTOM OF PLAQUE WITH 3 ALUMINUM POP RIVETS (ALUM. POLES) OR STAINLESS STEEL POP RIVETS (STEEL POLES)

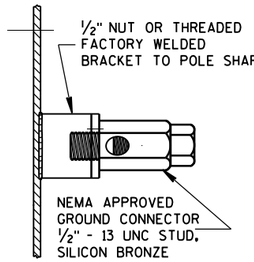
NOTES:

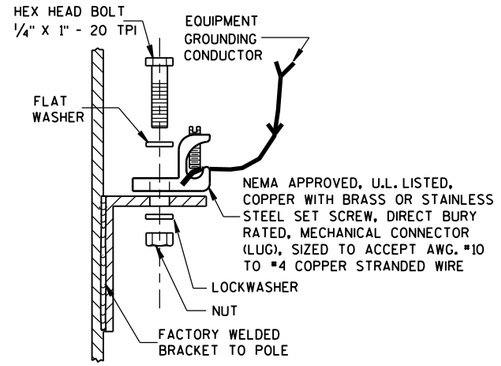
1) PLACE BOTTOM OF UNIT NUMBER PLAQUE 5'-0" ABOVE ELEVATION OF ADJACENT CURB OR SHOULDER.

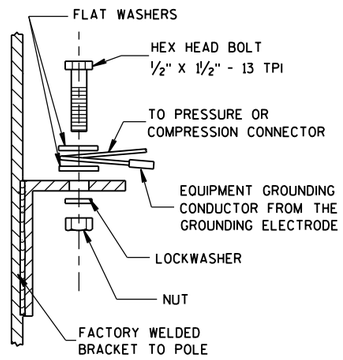
2) UNIT NUMBERS: ONE REQUIRED FOR SINGLE ARM POLES TWO REQUIRED FOR MEDIAN MOUNT POLES.

LIGHTING UNIT IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENT
(TYPICAL ALL LIGHTING UNITS)

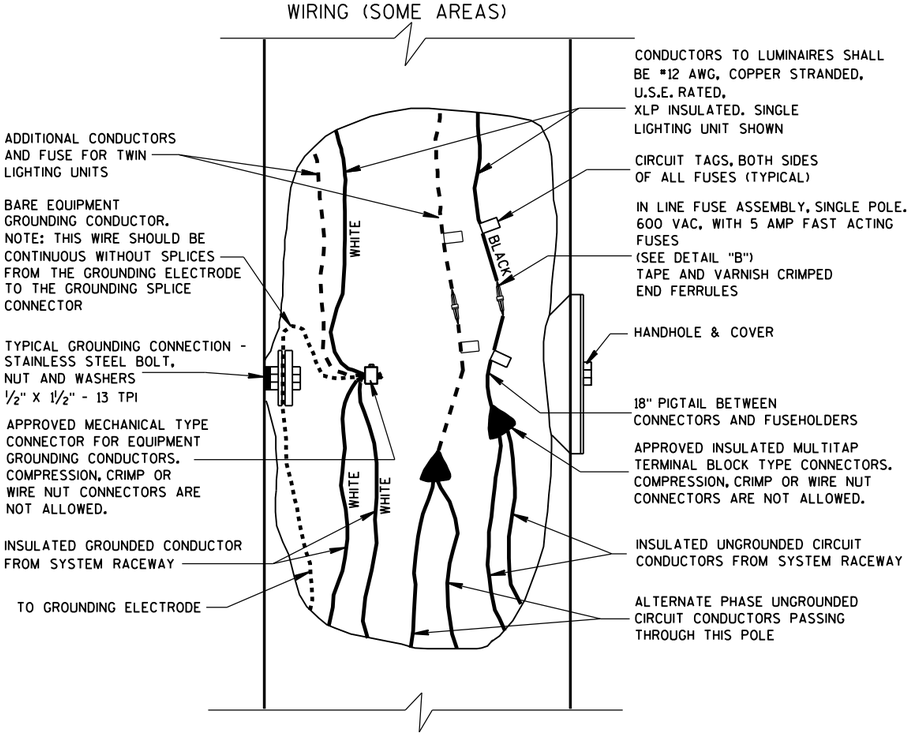
FURNISH PLAQUE WHEN CALLED FOR BY SPECIAL PROVISIONS



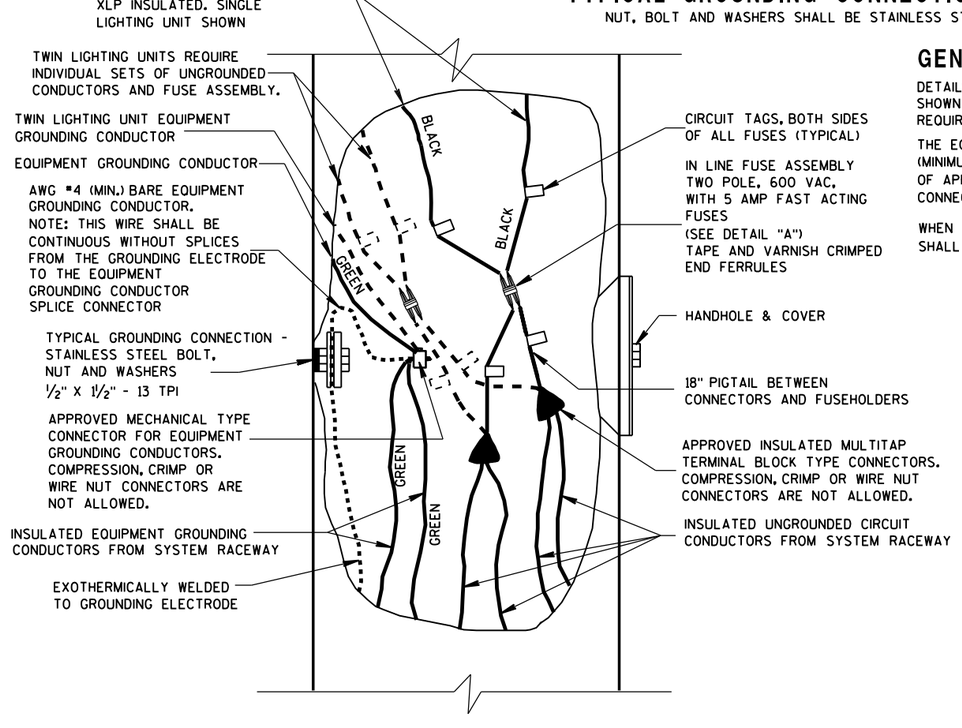




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



2 WIRE - 120, 240 OR 480 VAC TO GROUND



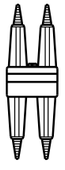
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

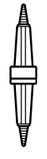
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT

FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

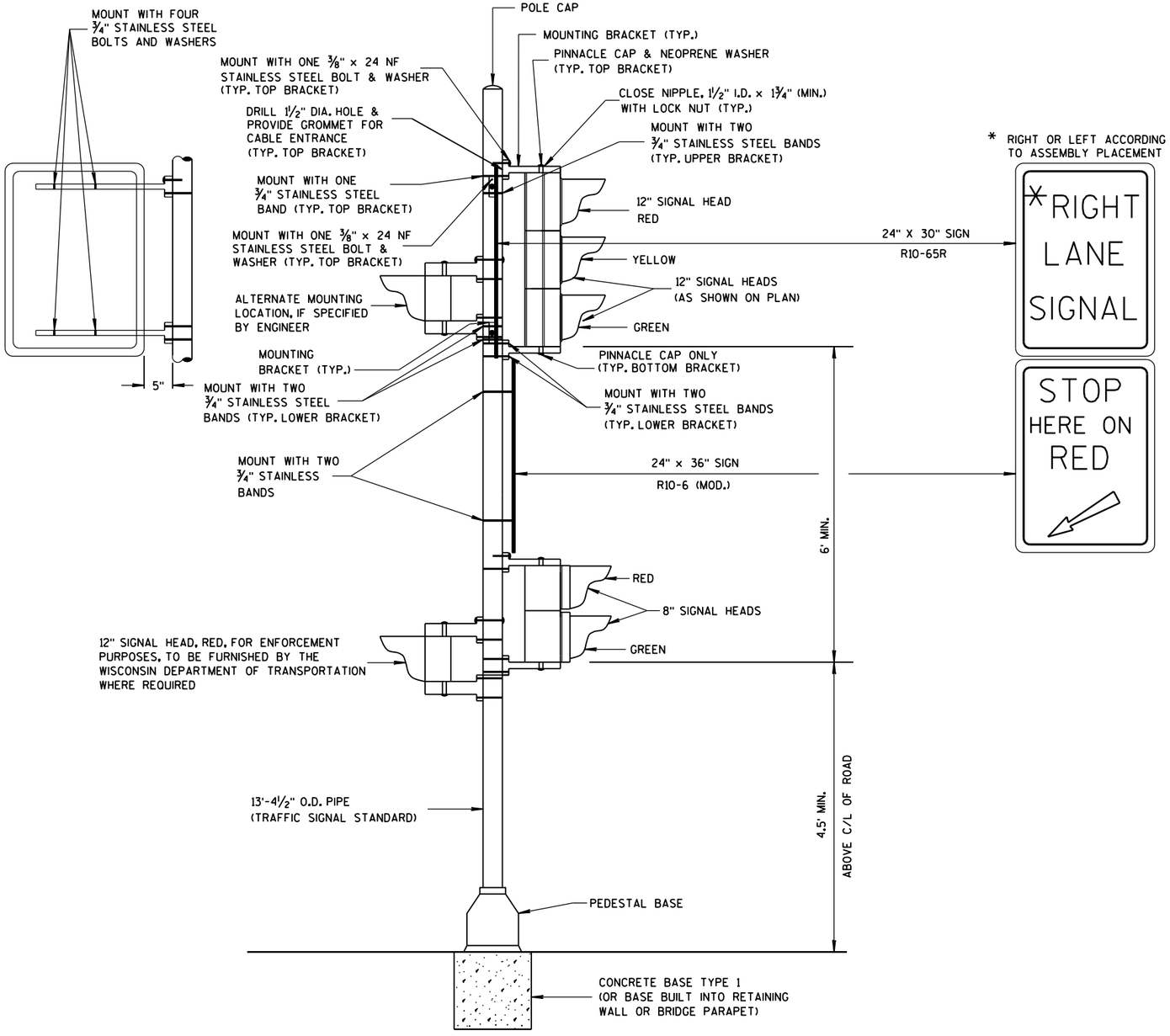
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NOTE

R10-6 SIGN; AN ARROW POINTING LEFT SHALL BE USED ON A RIGHT SIDE SIGNAL & AN ARROW POINTING RIGHT SHALL BE USED ON A LEFT SIDE SIGNAL.

REAR VIEW



SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT

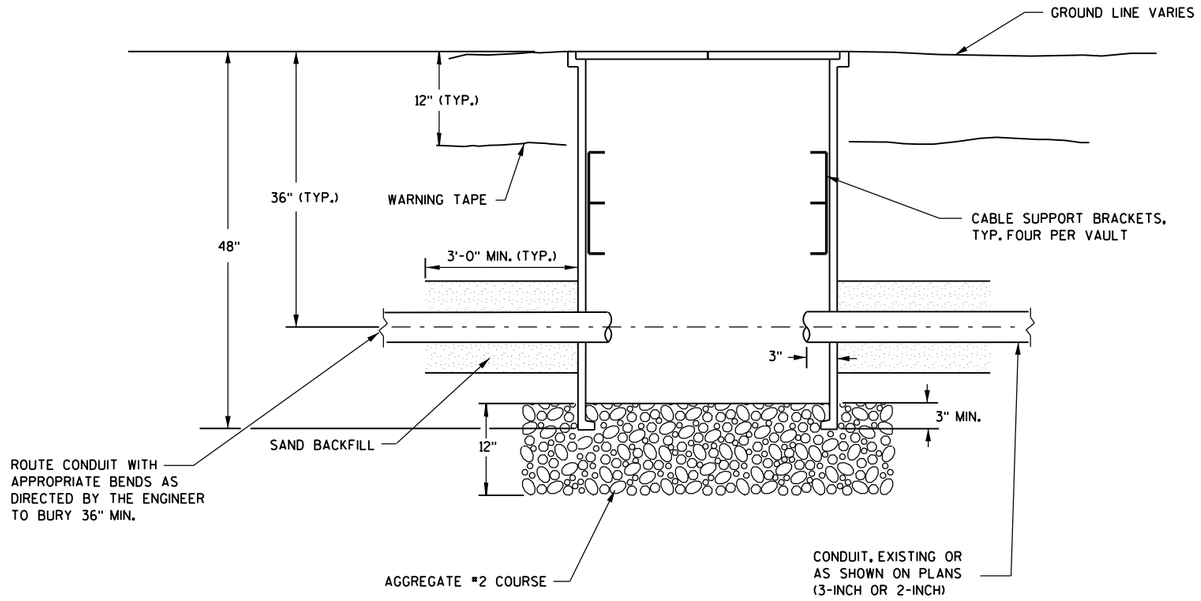
SIGNAL ASSEMBLY
RAMP CONTROL SIDEMOUNT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

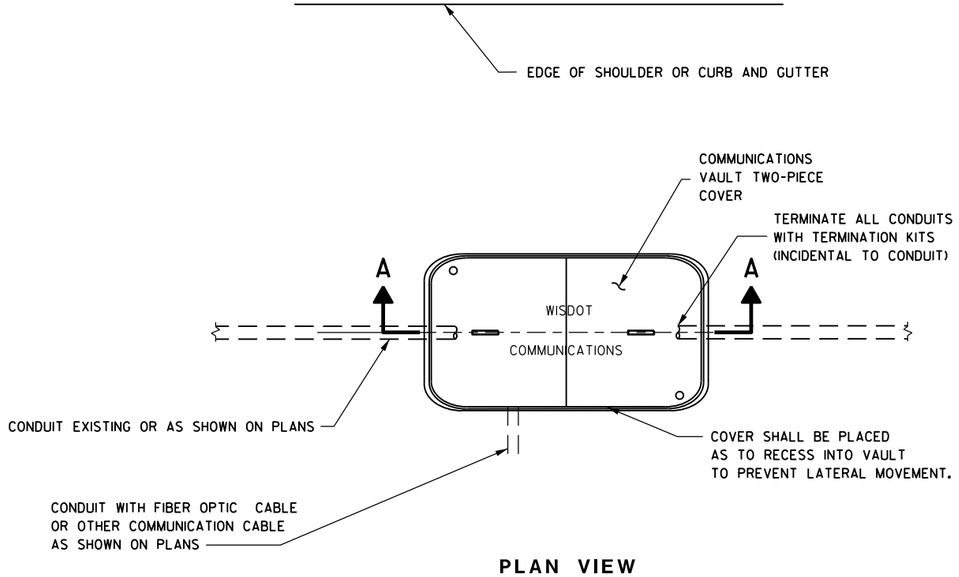
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SECTION A-A



PLAN VIEW

COMMUNICATIONS VAULT

GENERAL NOTES

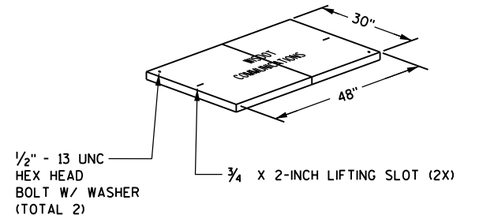
BOX SHALL HAVE AN OPEN BASE.

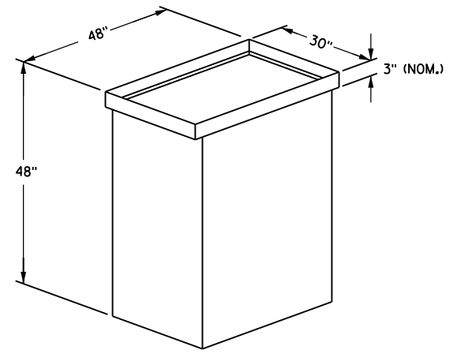
COVER SHALL BE DETECTABLE, AND HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.



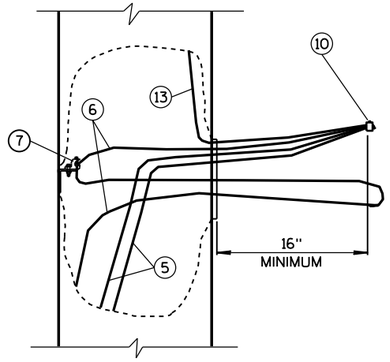


ISOMETRIC VIEW

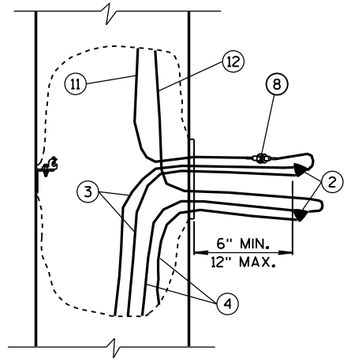
COMMUNICATION VAULT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA

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S.D.D. 9 H 9-1

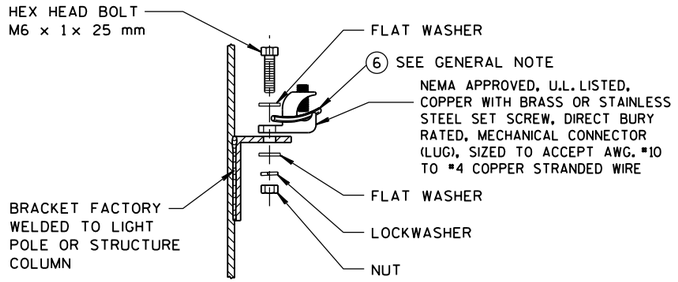


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



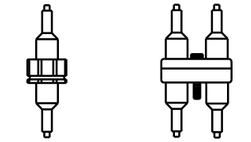
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



FUSE ASSEMBLIES

GENERAL NOTES

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

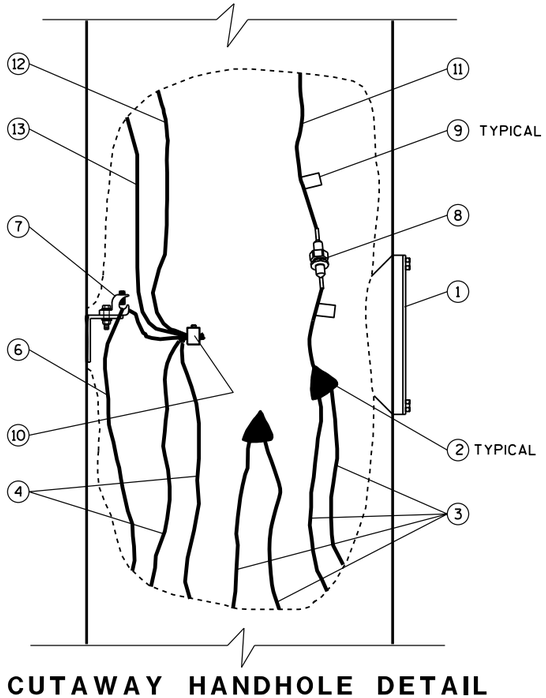
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

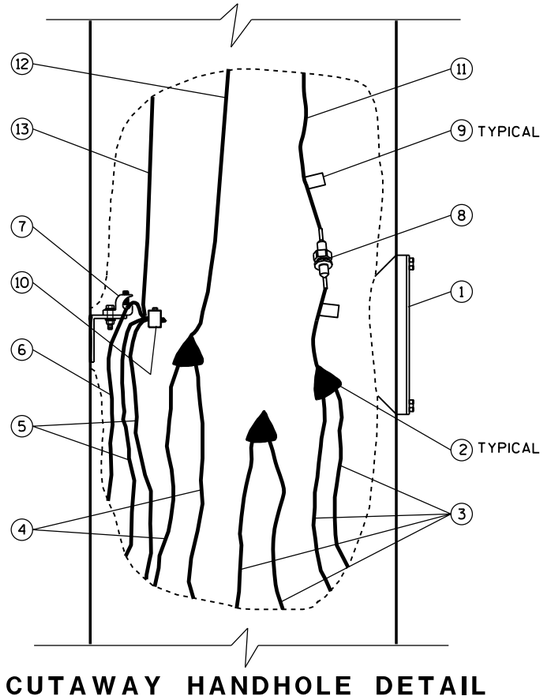
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



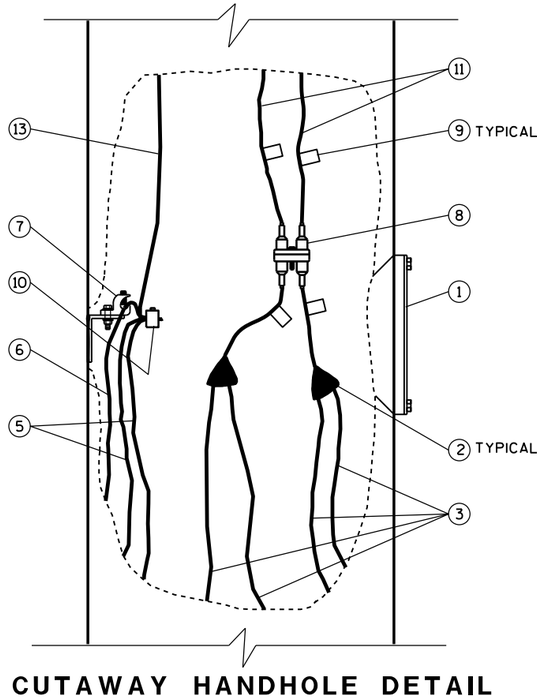
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 10 A 1-3

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

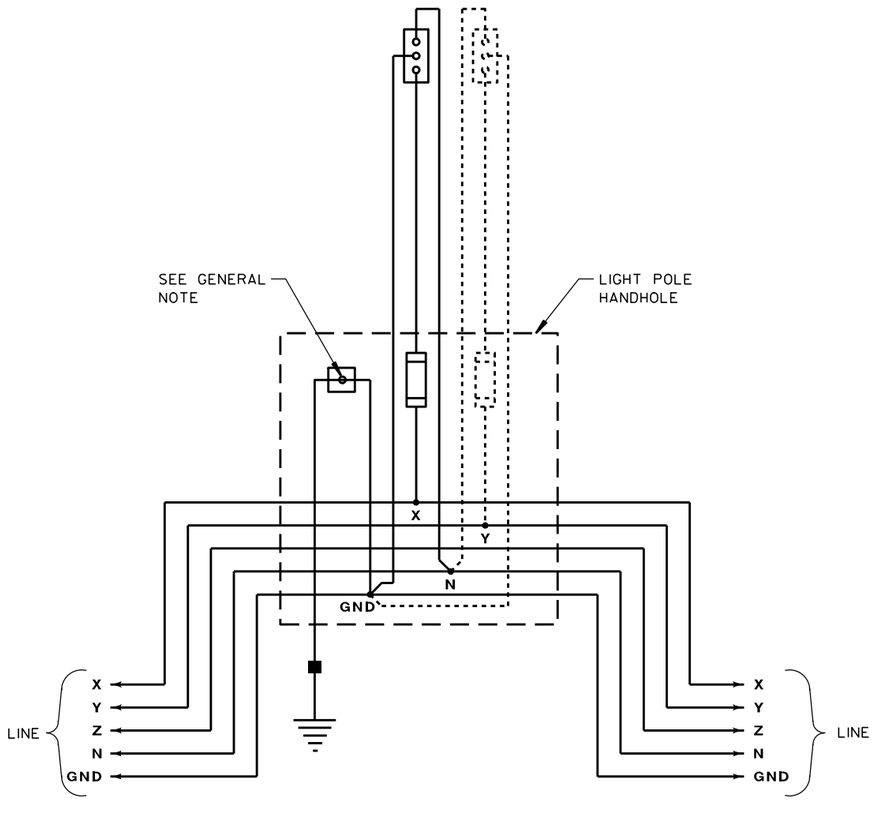
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

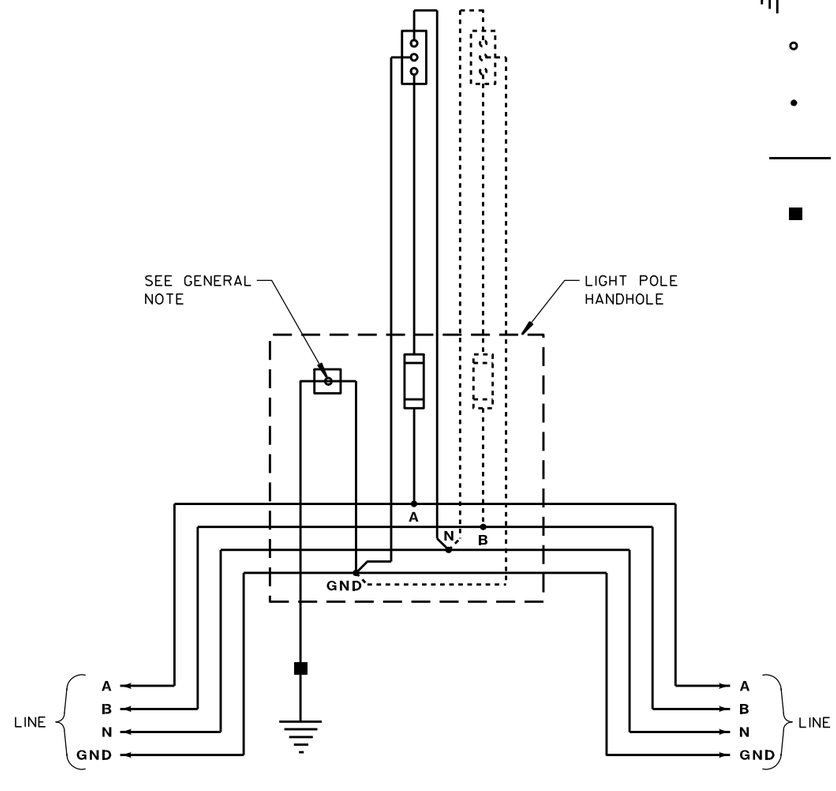
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

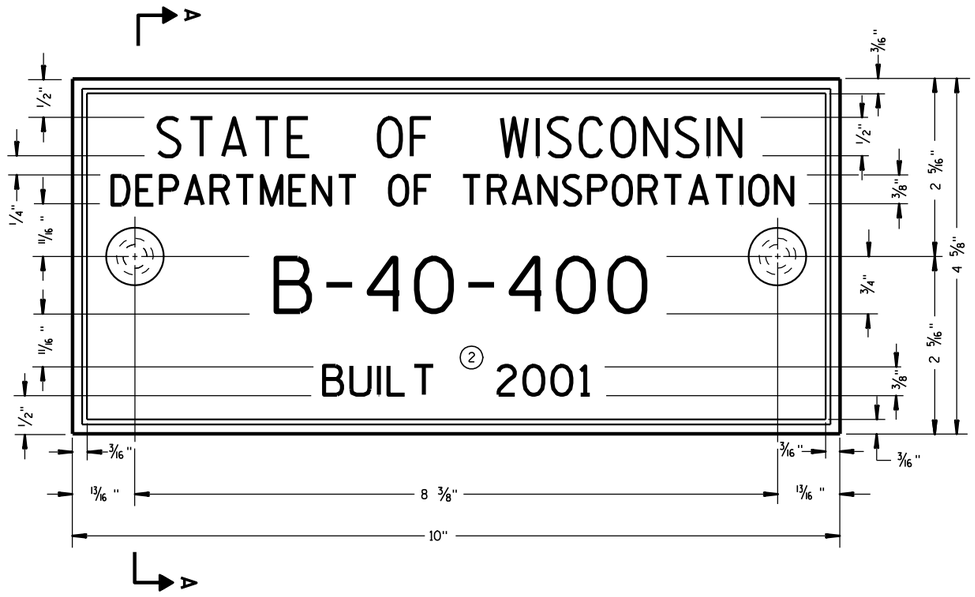
APPROVED
10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI
FHWA
239
HWYS

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S.D.D. 10 A 5-2

6

S.D.D. 10 A 5-2



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

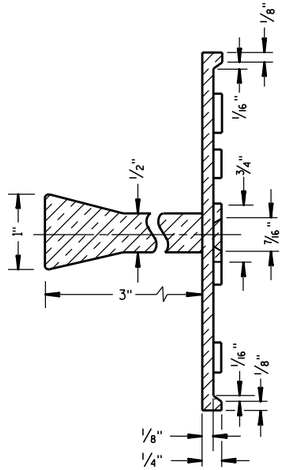
GENERAL NOTES

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

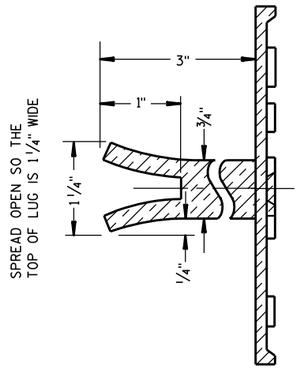
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

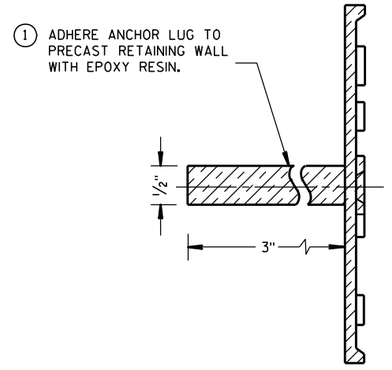
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

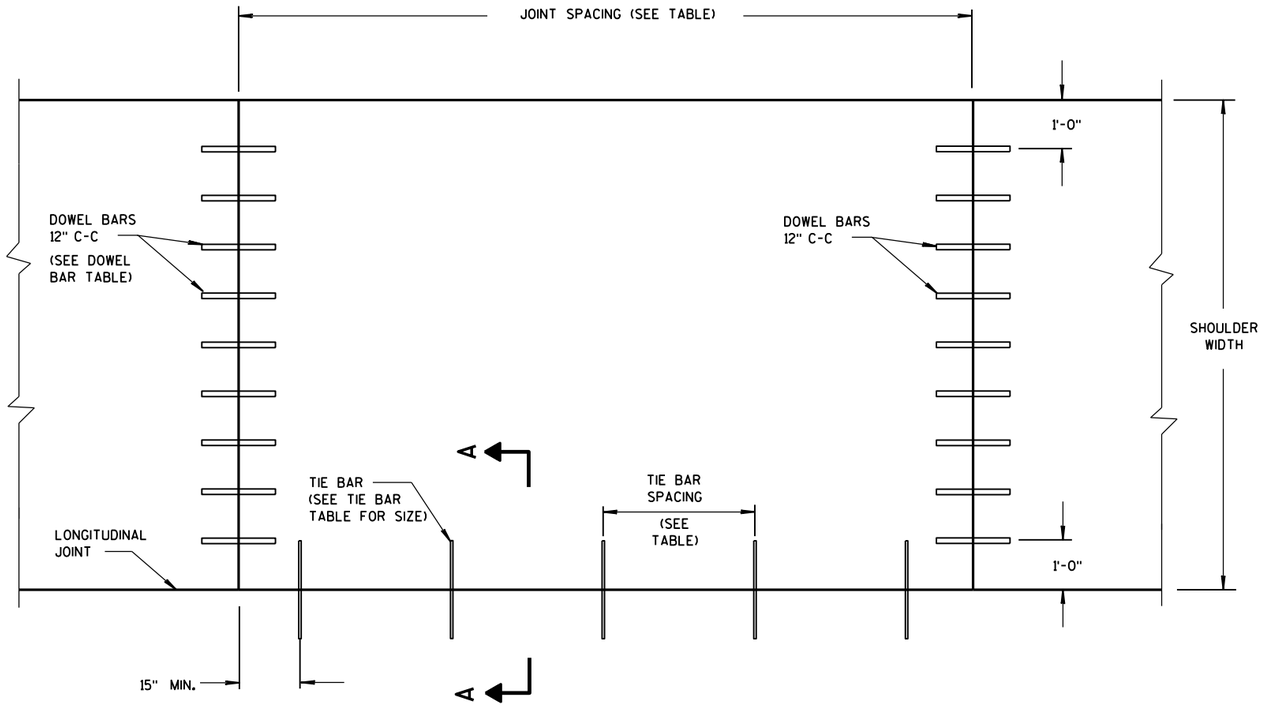
/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

240

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S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

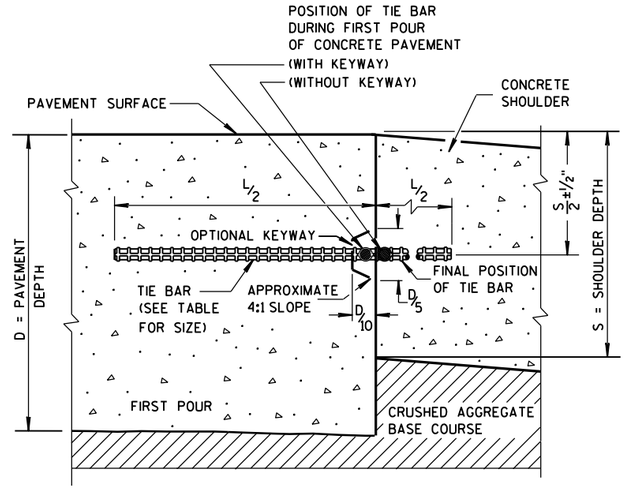
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

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

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

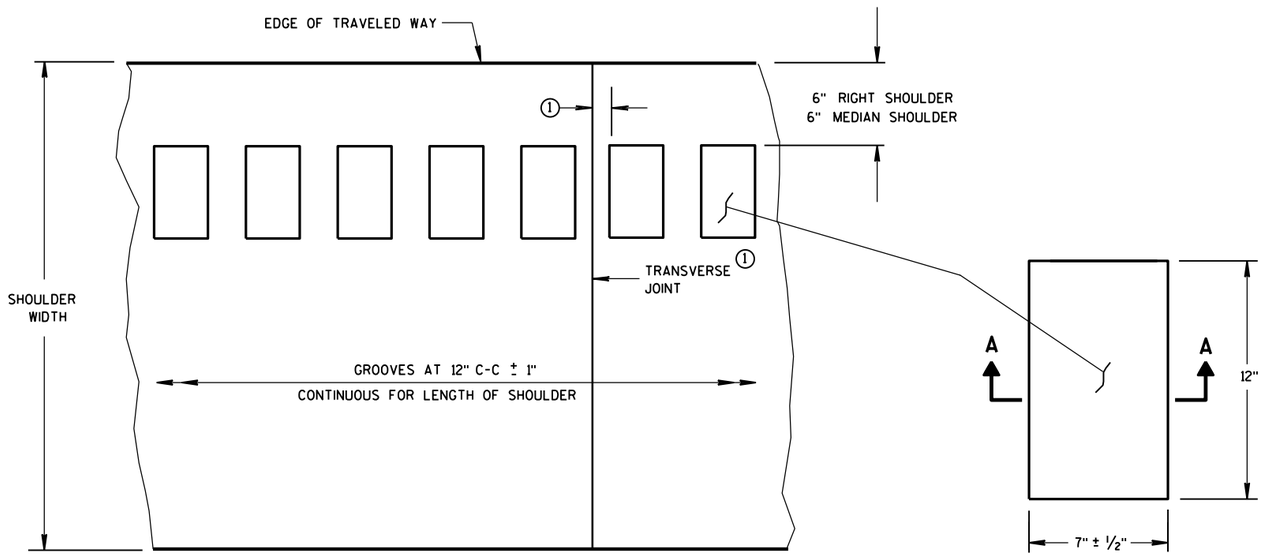
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

6

S.D.D. 13 A 3-6

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S.D.D. 13 A 3-6



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

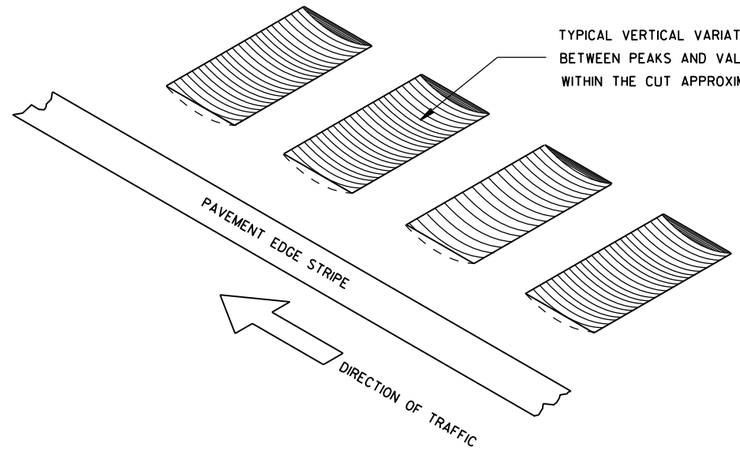
GENERAL NOTES

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

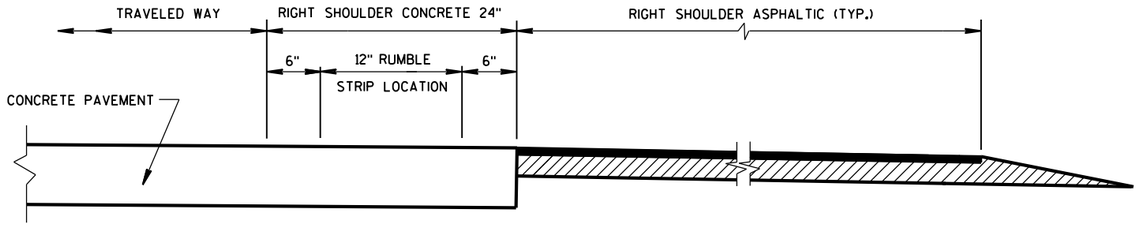
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

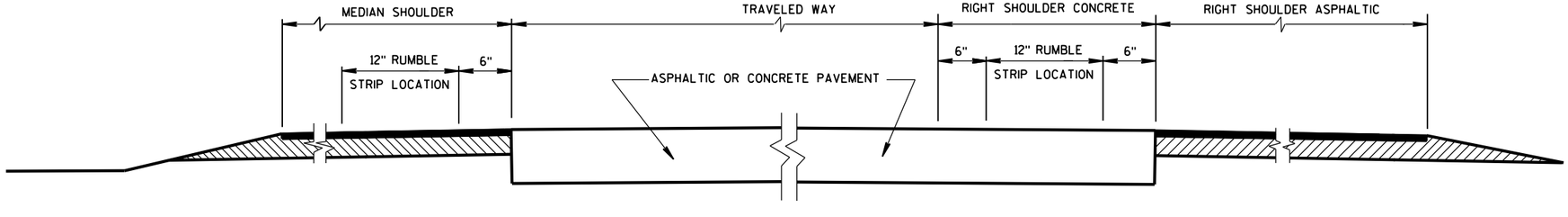
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



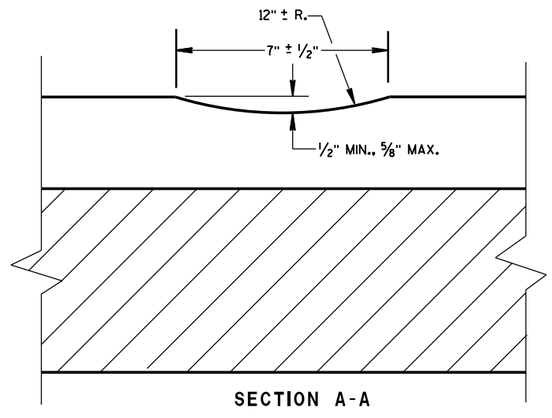
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

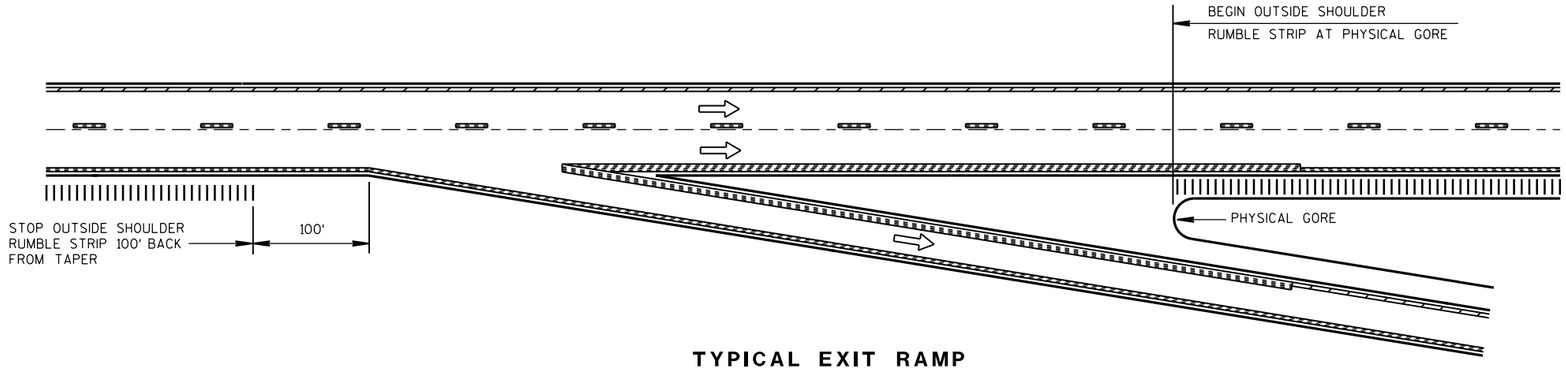
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 A 5-5a

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S.D.D. 13 A 5-5a



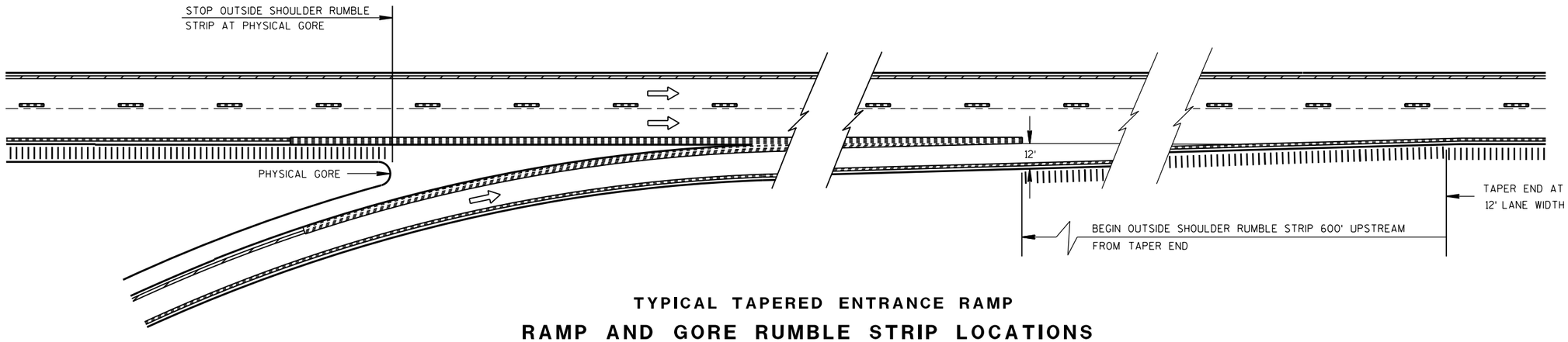
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

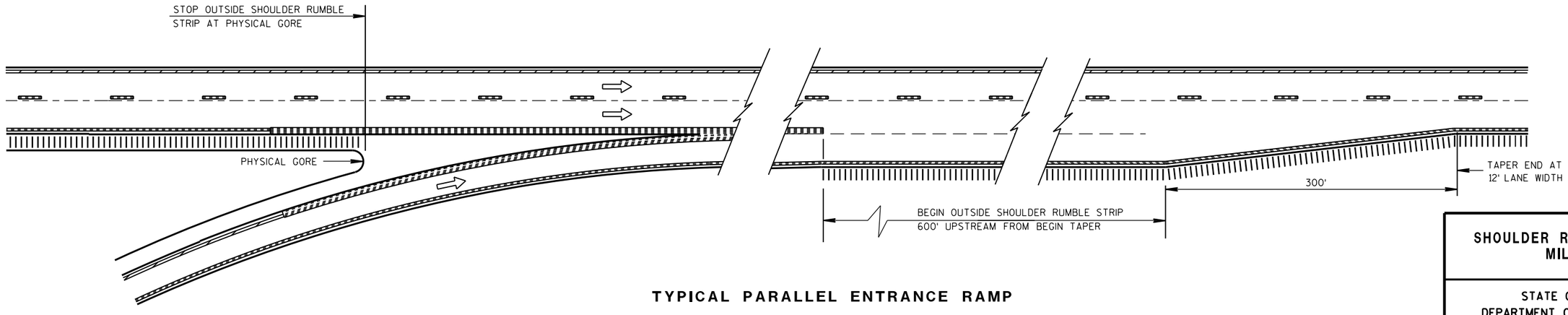
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

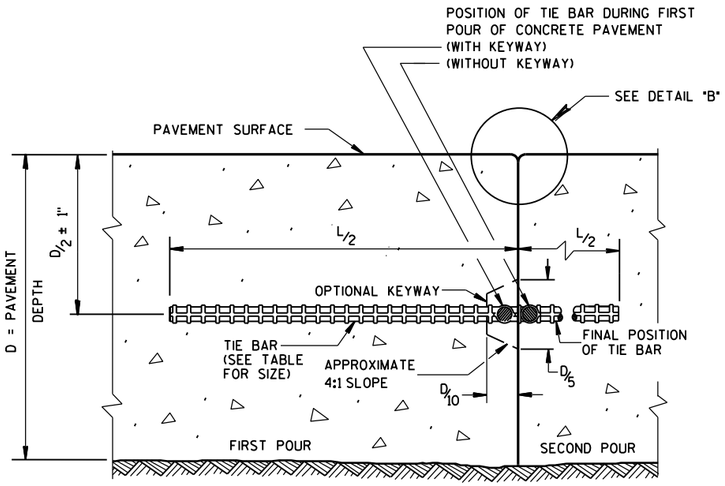
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

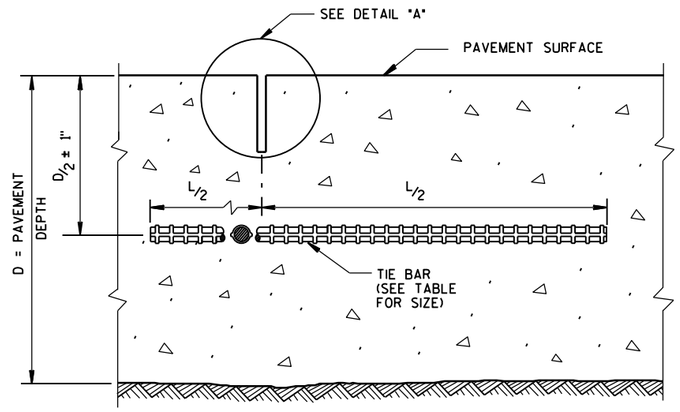
APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 13 A 5-5b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

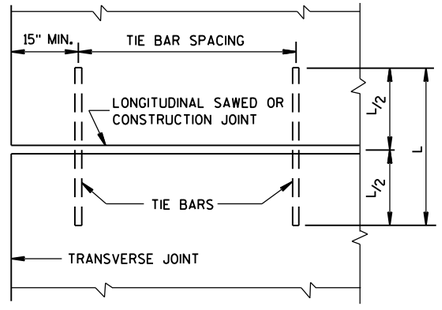
DETAIL "C"

TIE BAR TABLE

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

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

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

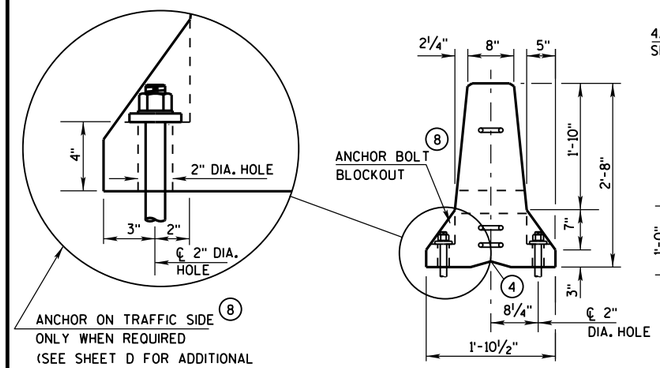
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

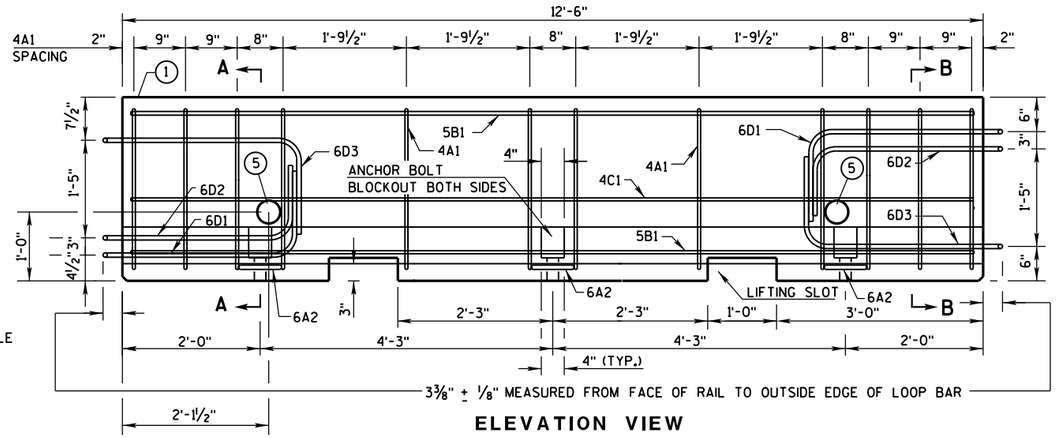
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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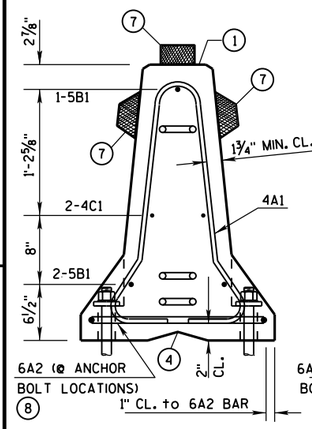
S.D.D. 13 C 1-18



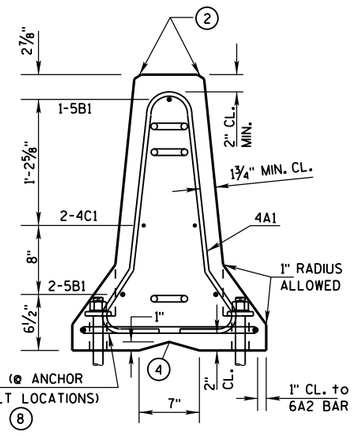
END VIEW



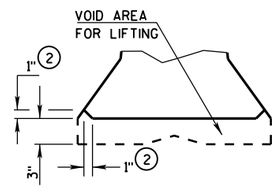
ELEVATION VIEW



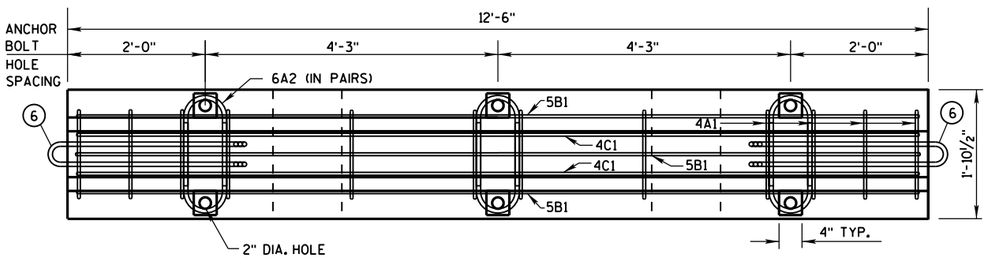
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

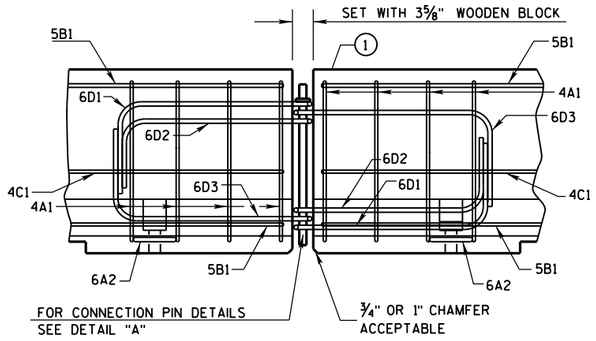


DETAIL "B"
LIFTING SLOT DETAIL

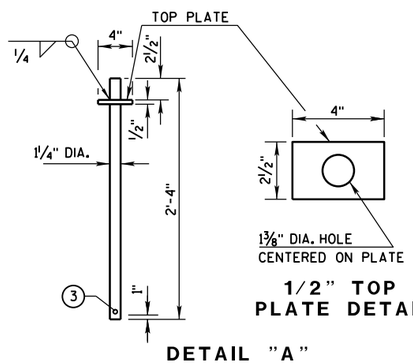


PLAN VIEW

DETAILS OF BARRIER SECTION

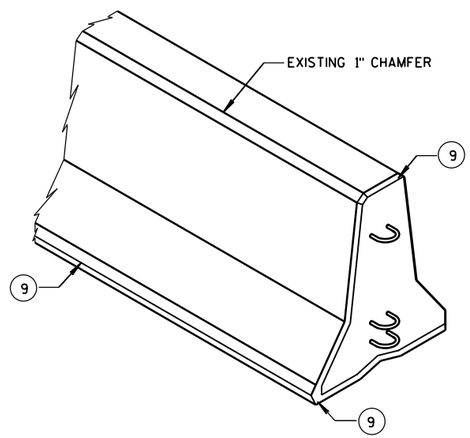


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

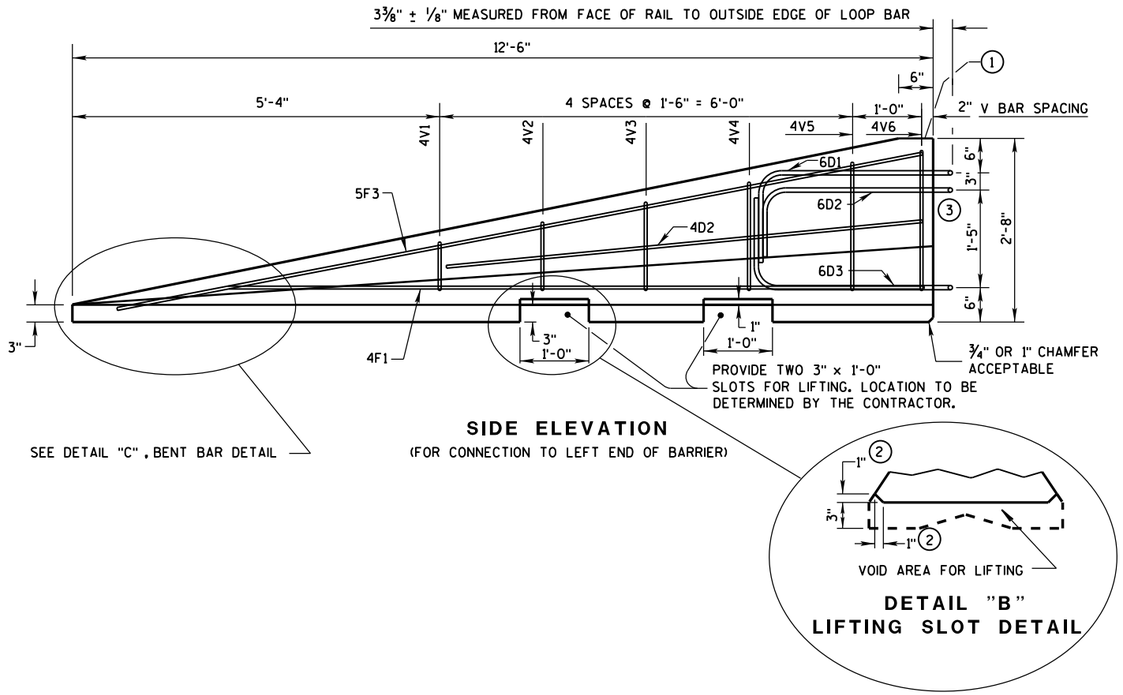
f'c = 4,000 psi

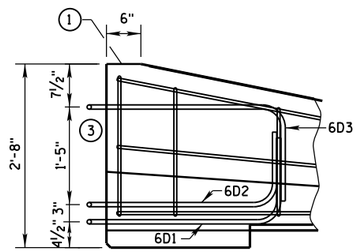
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

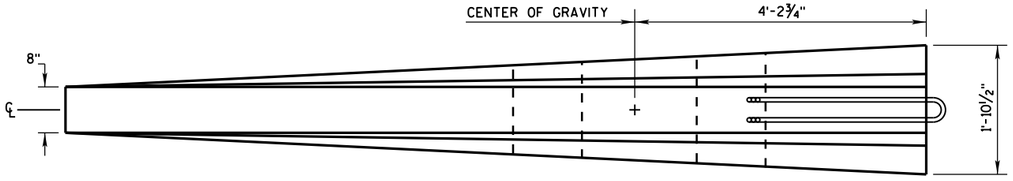
S.D.D. 14 B 7-15a

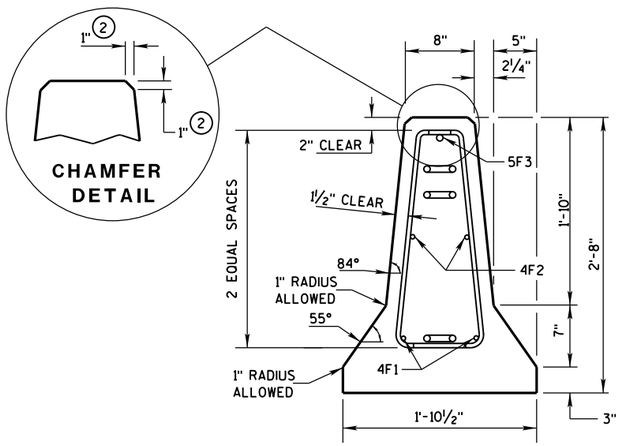


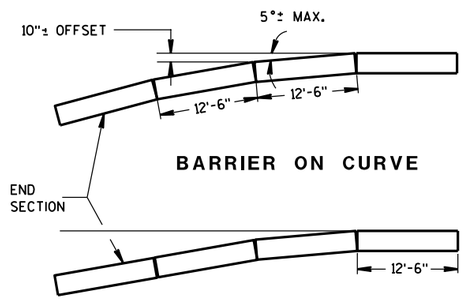


GENERAL NOTES

1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.







POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

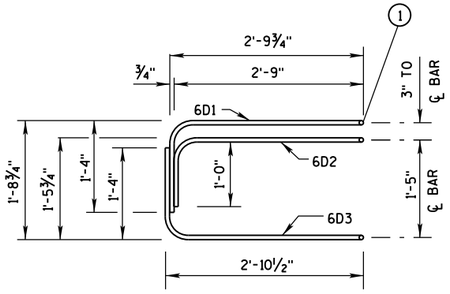
6

S.D.D. 14 B 7-15b

BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY

DETAIL "C"
BENT BAR DETAIL

BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION BILL OF MATERIALS

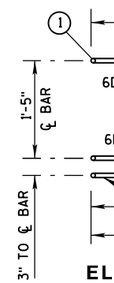
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

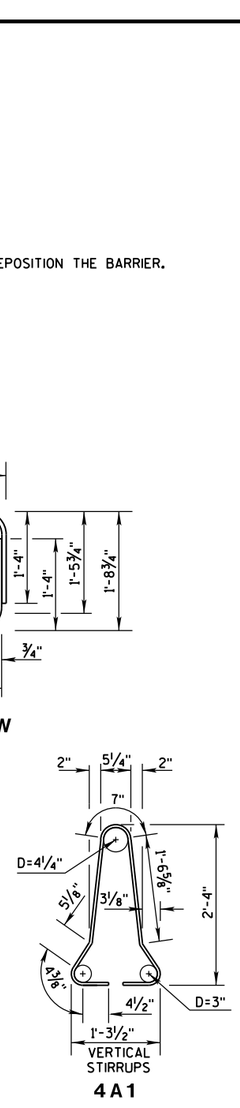
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



4A1

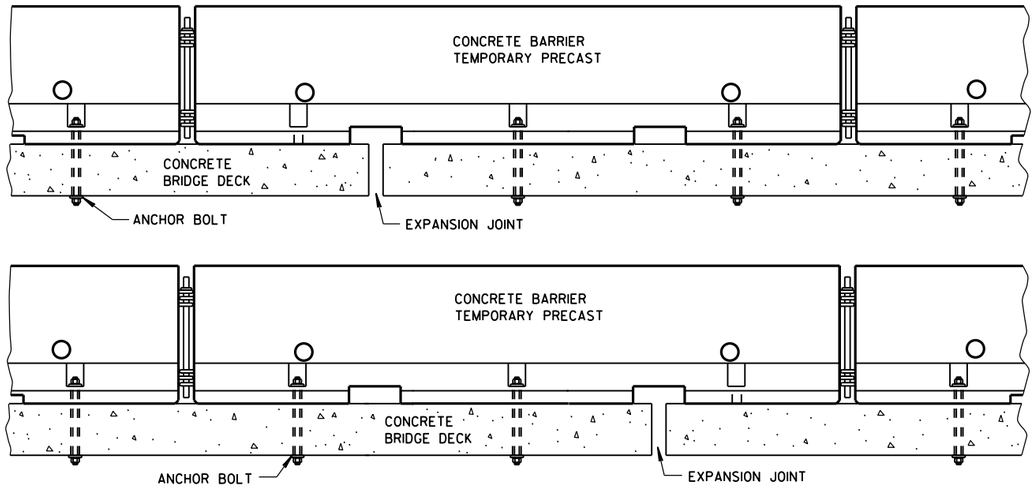
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)

GENERAL NOTES

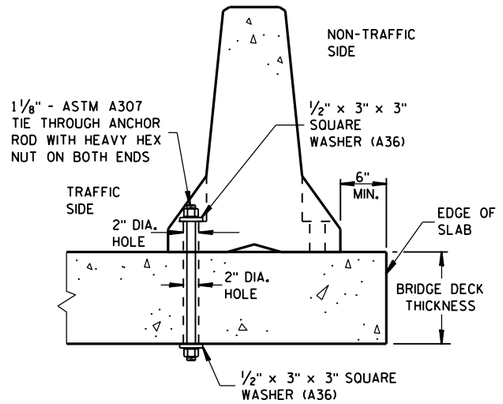
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

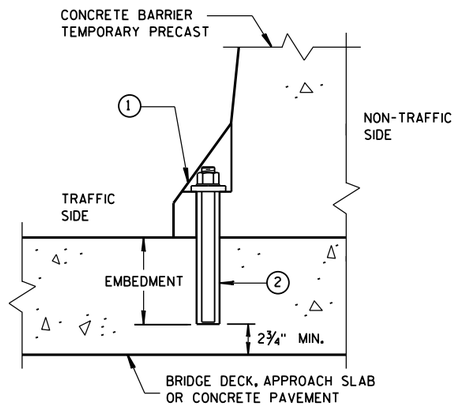
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



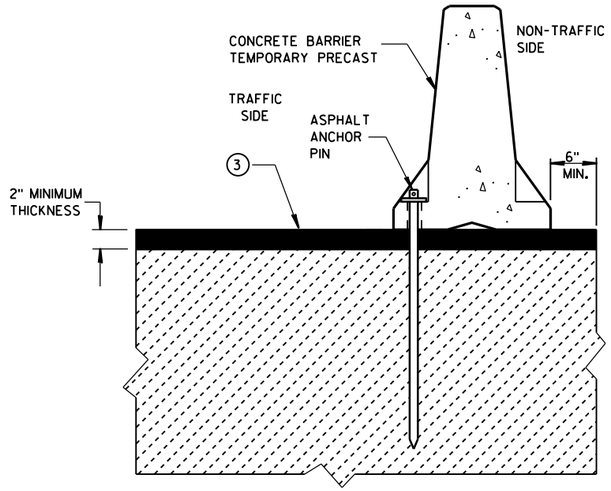
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

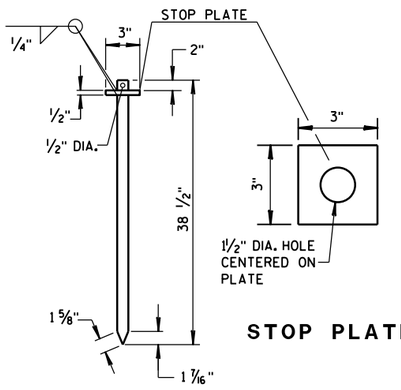


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



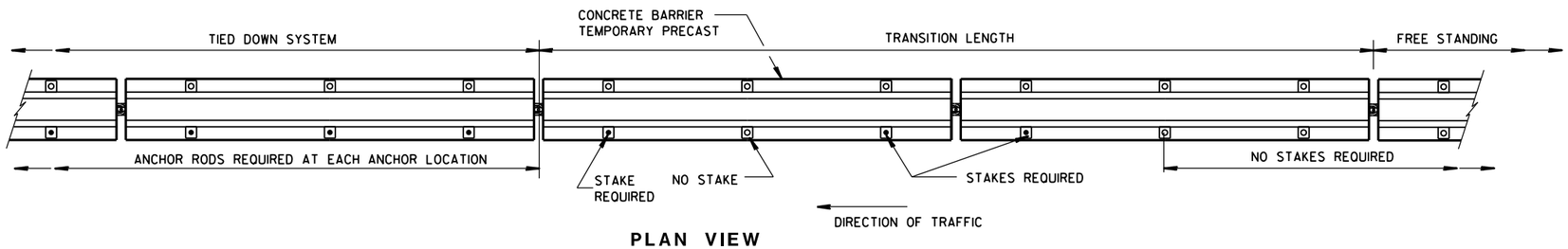
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

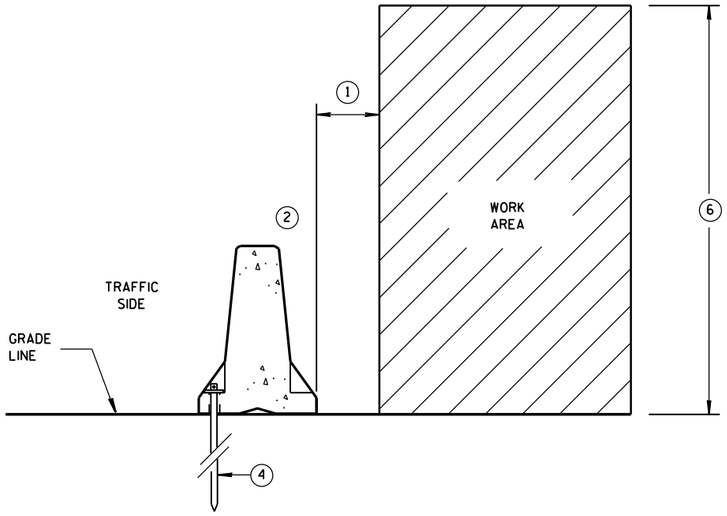
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

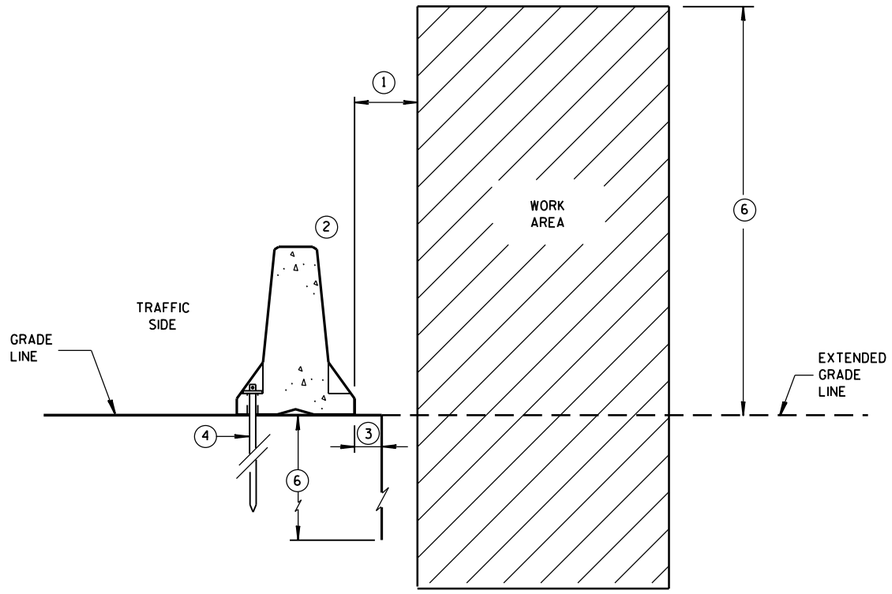
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

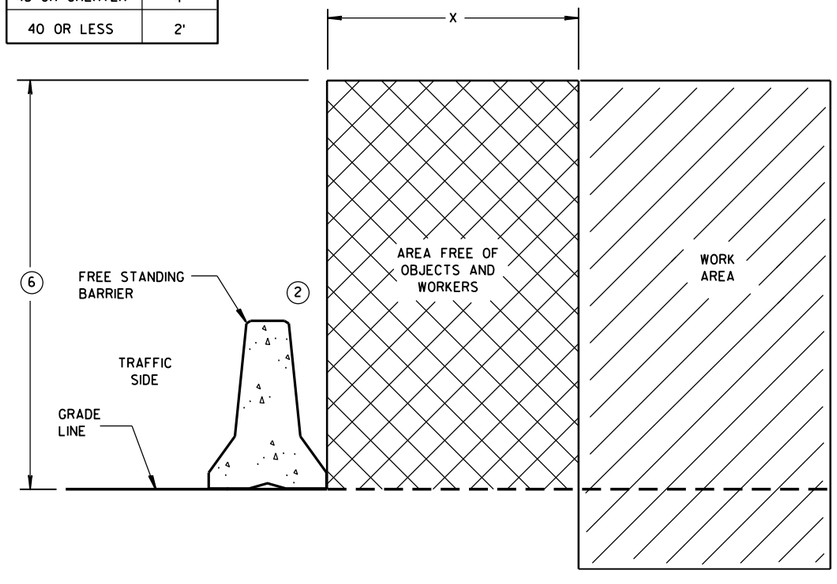


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

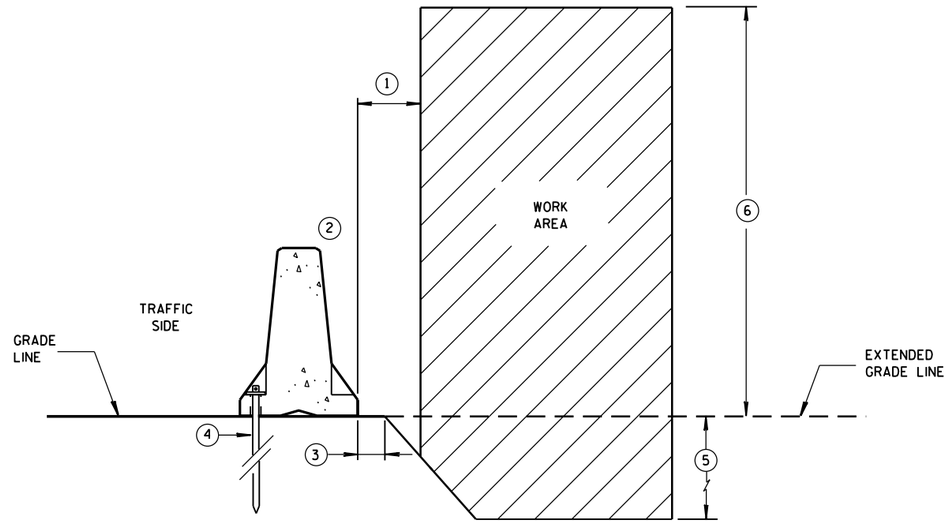
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



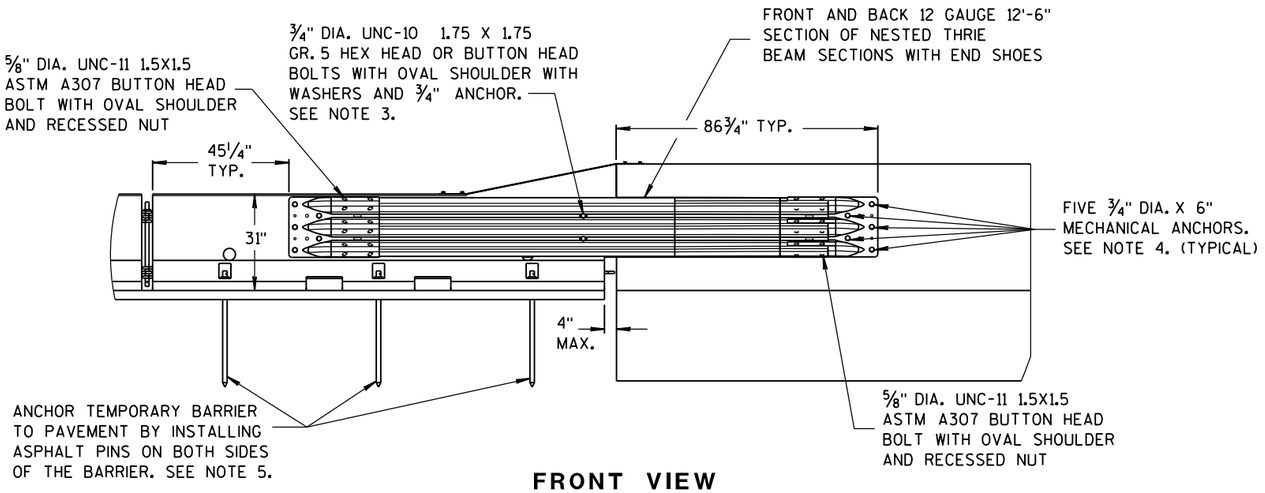
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

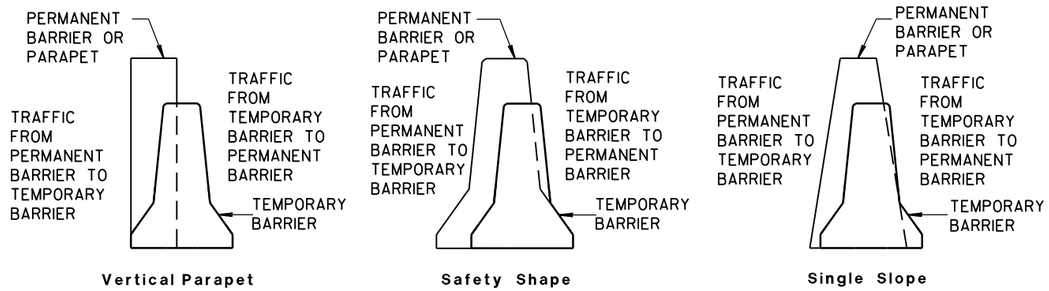
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

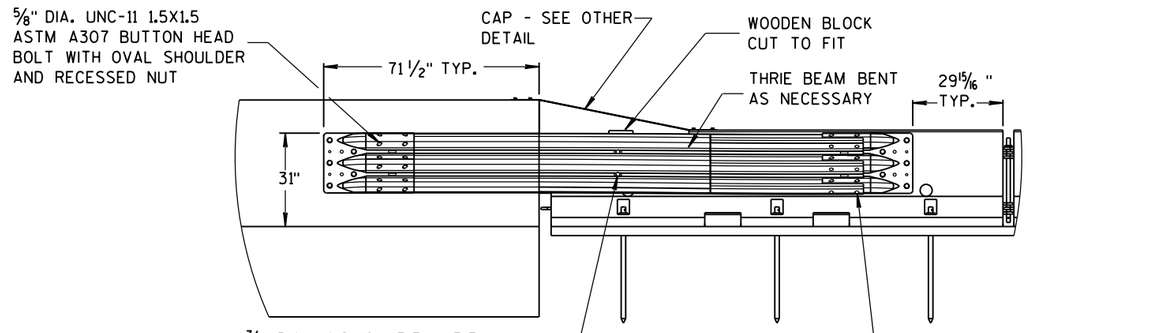


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

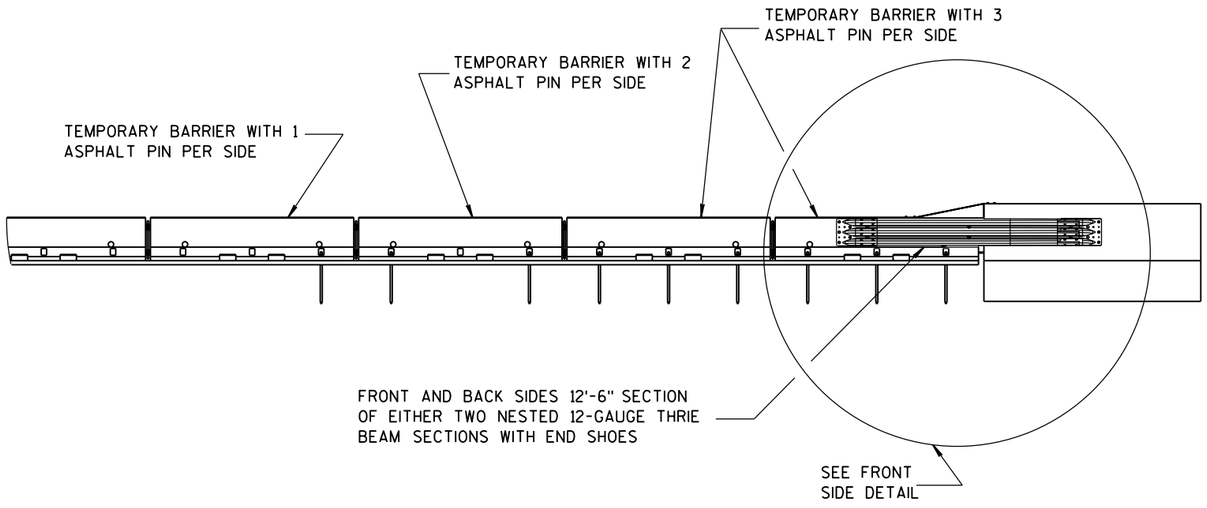
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

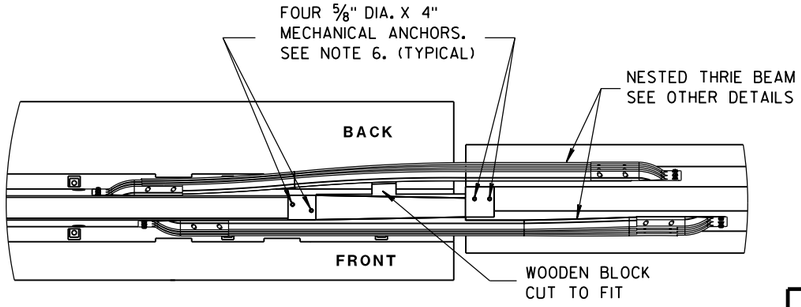
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



PLAN VIEW

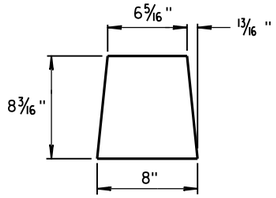
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

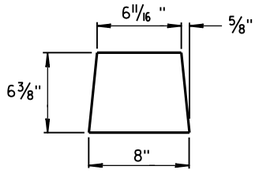
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

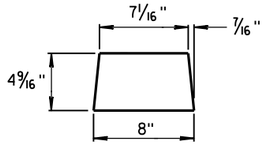
S.D.D. 14 B 7-15f



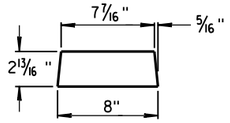
GUSSET 1



GUSSET 2

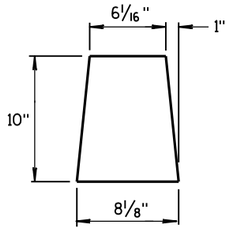


GUSSET 3

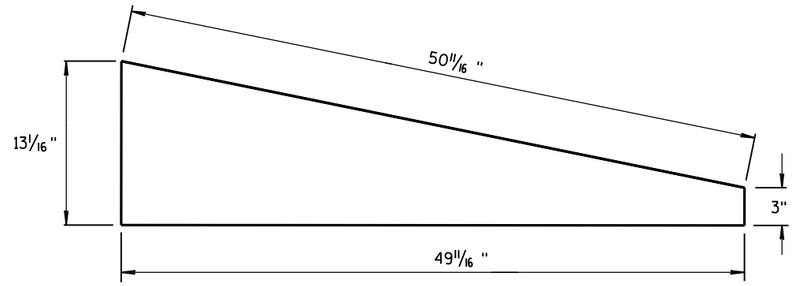


GUSSET 4

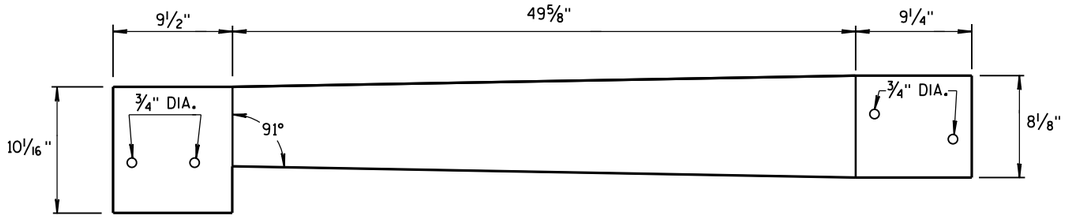
GUSSETS

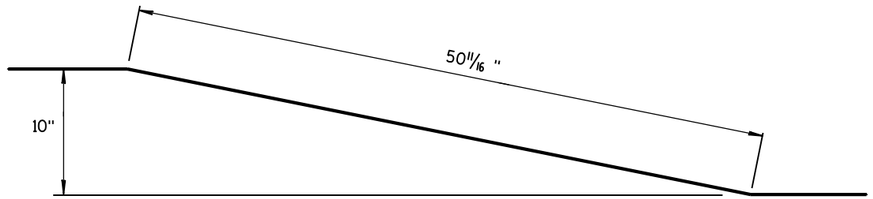


END PLATE



SIDE PLATE

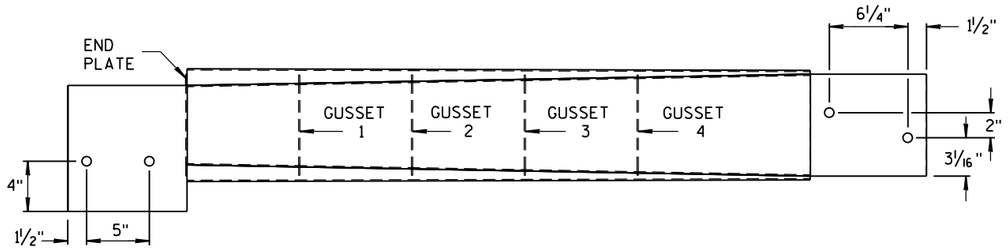


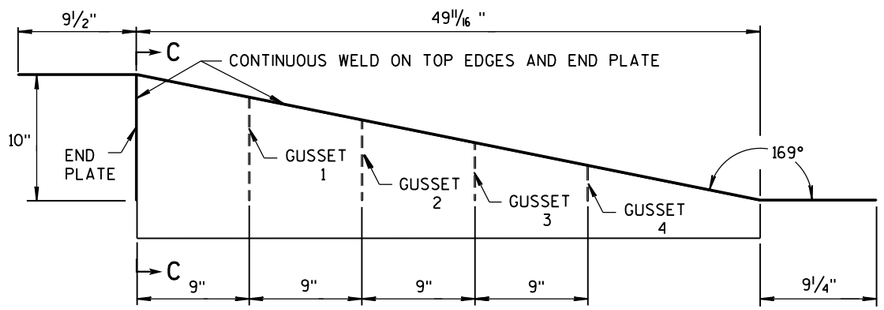


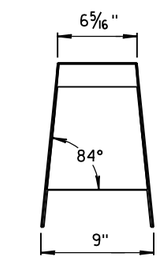
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

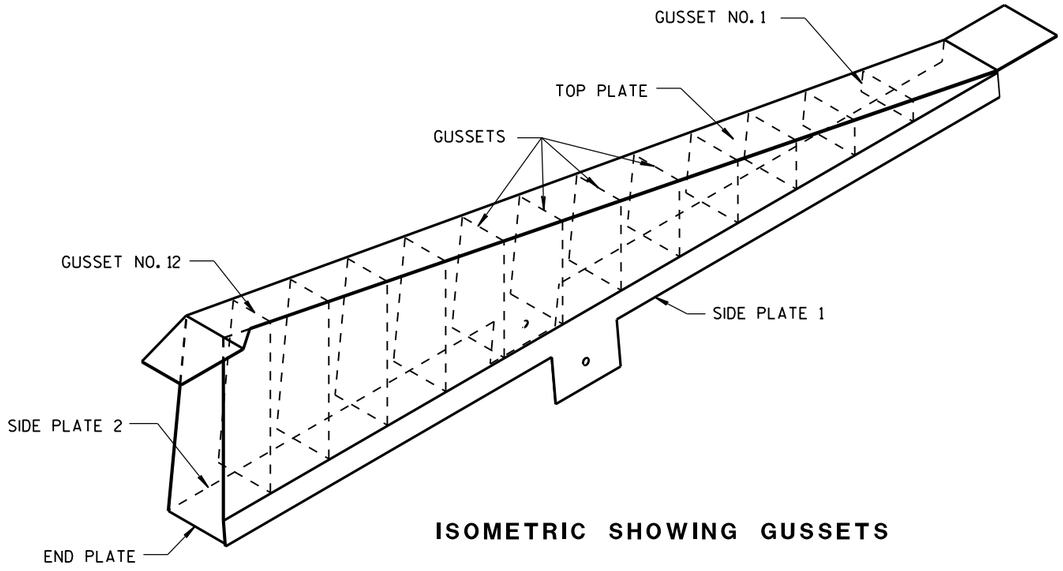
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

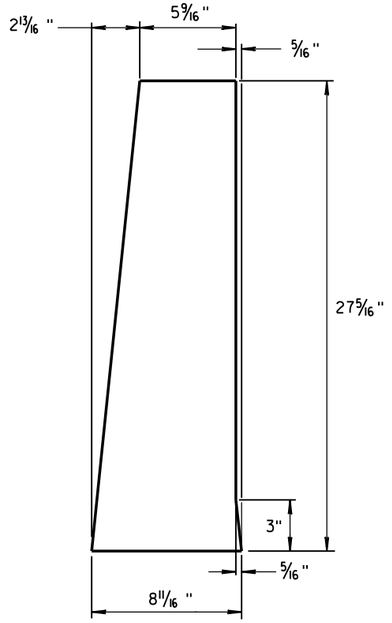
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15g

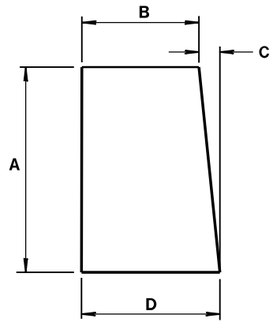


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



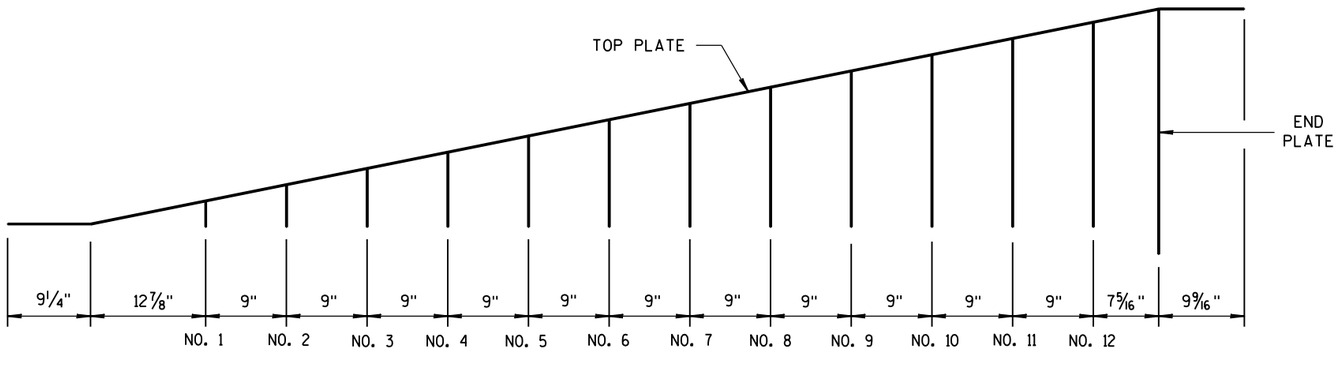
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

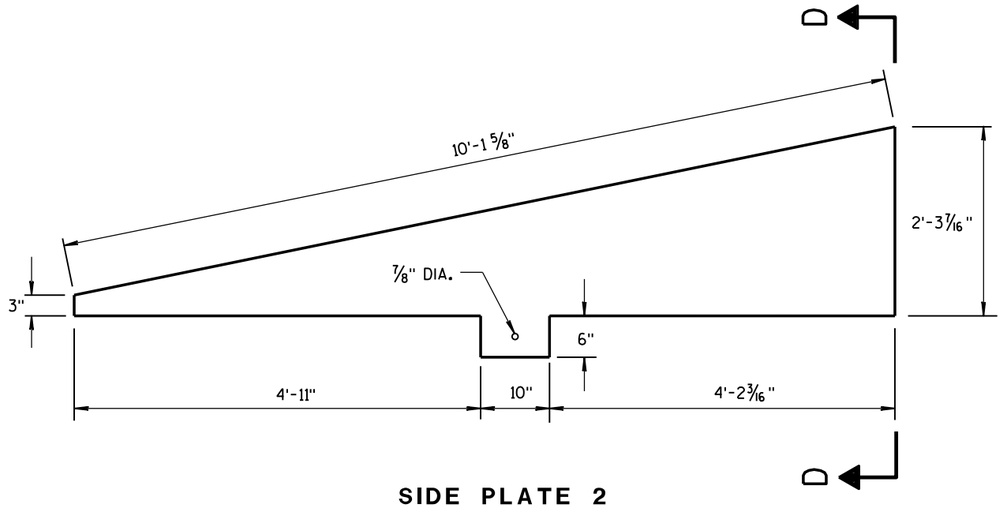
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

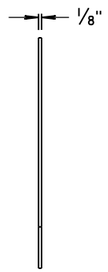
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

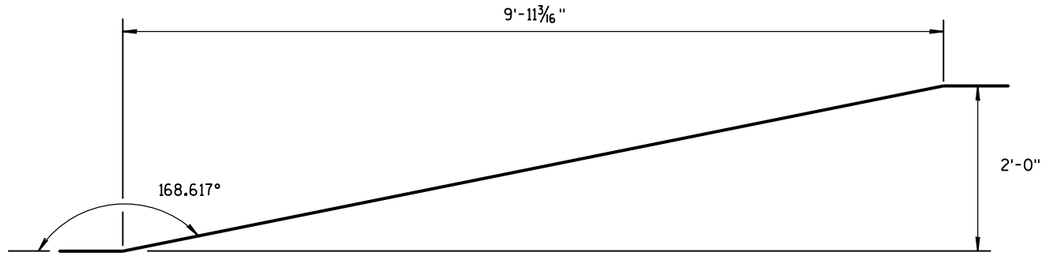
S.D.D. 14 B 7-15h



SIDE PLATE 2

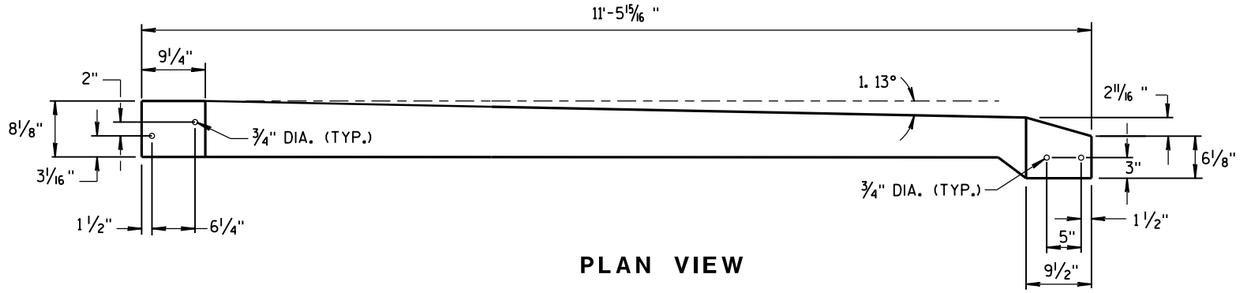


END VIEW



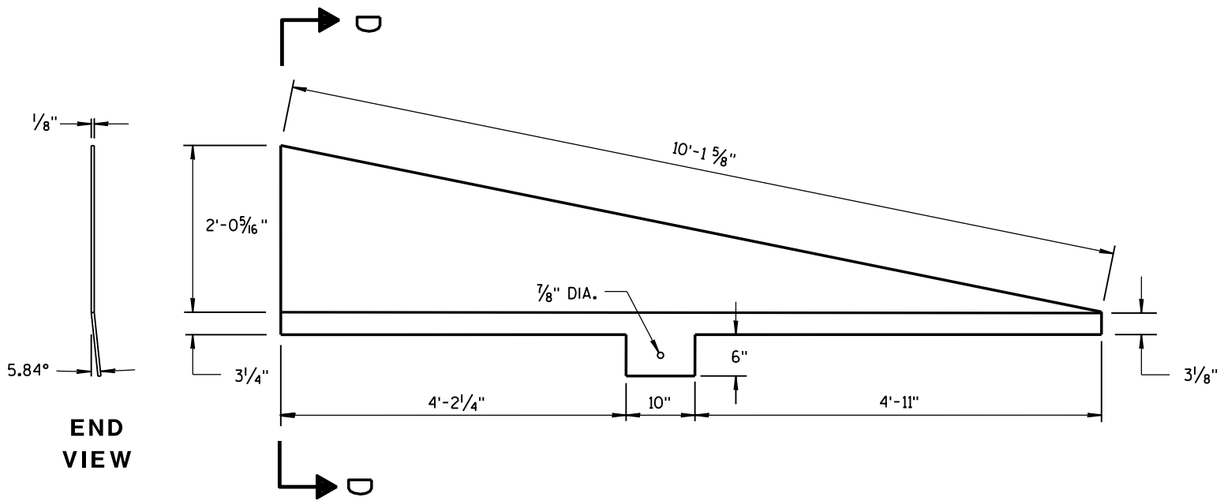
SIDE VIEW

TOP PLATE



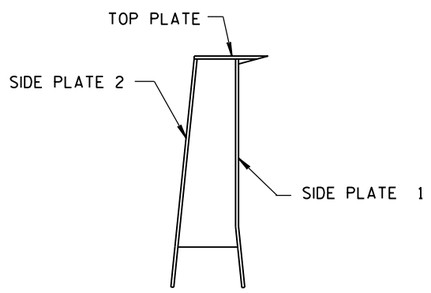
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 B 7-15i

6

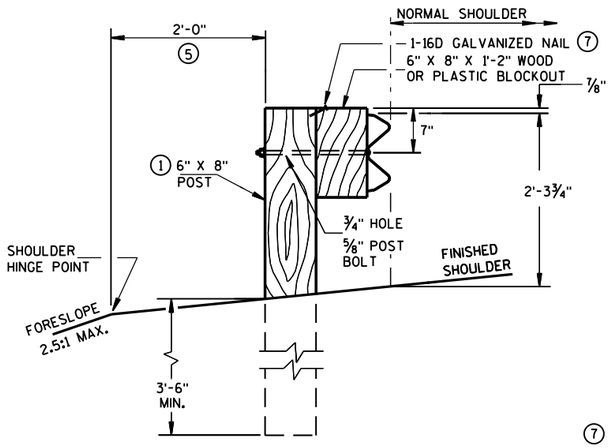
S.D.D. 14 B 7-15i

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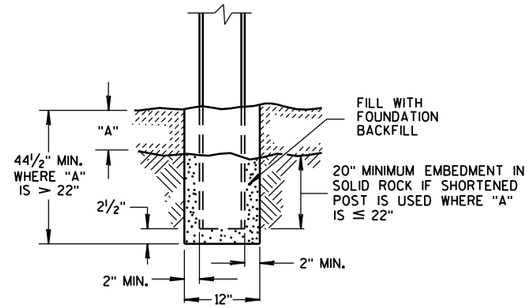
GENERAL NOTES

1. W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
   DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
2. USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
3. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
4. USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
5. IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
6. IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.
7. WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

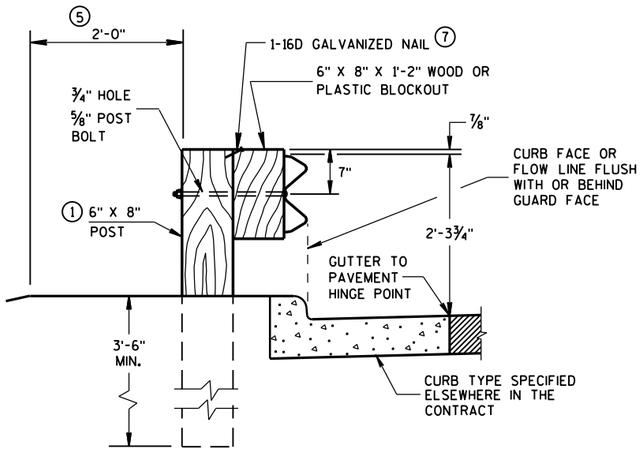
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



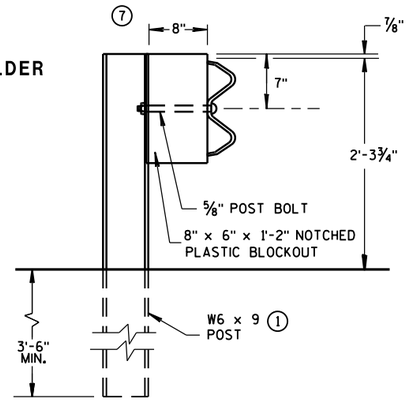
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



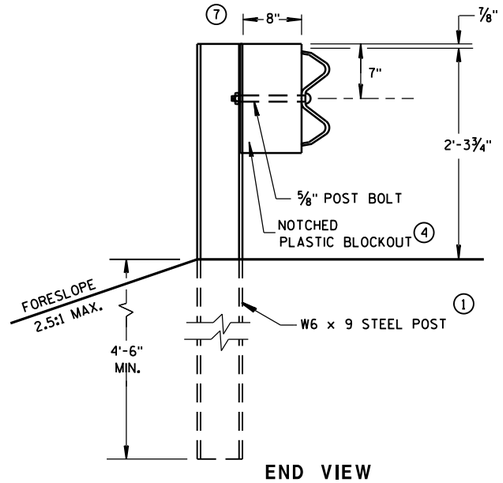
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



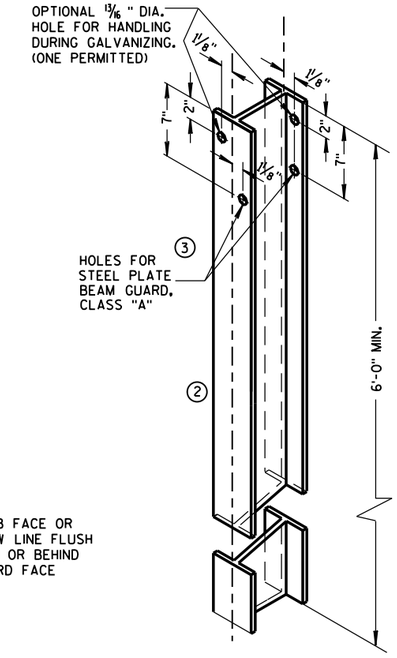
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION

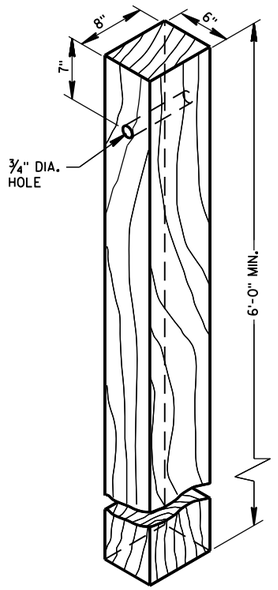


END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

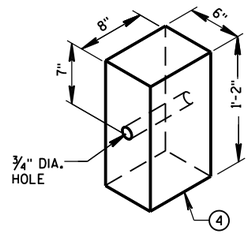


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①

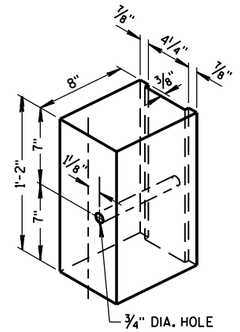
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



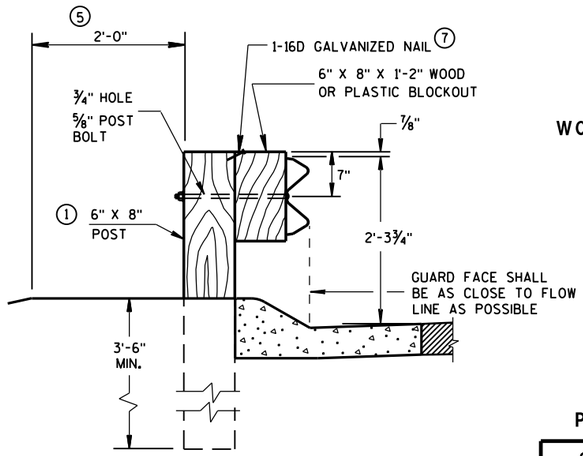
WOOD POST
(6"X8") NOMINAL



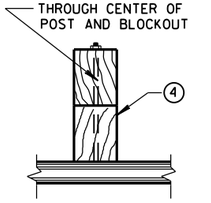
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



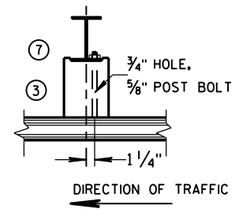
TYPICAL NOTCHED ①
PLASTIC BLOCKOUT
FOR STEEL POSTS



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



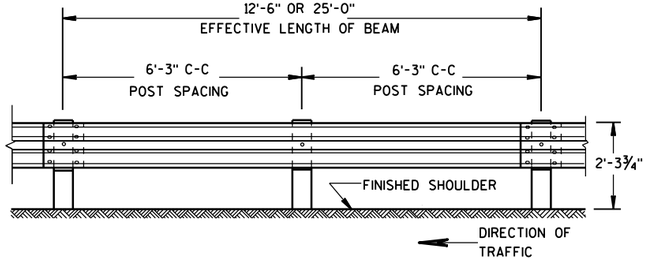
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

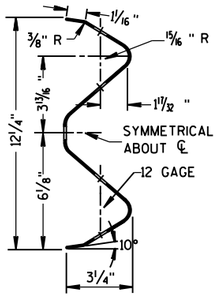
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

6
S.D.D. 14 B 15-10a

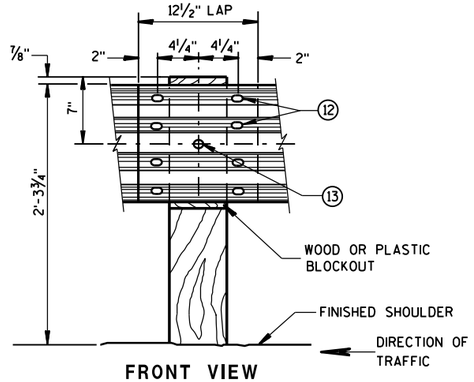


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

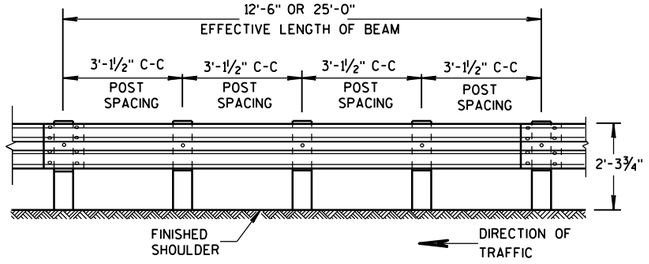
BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

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

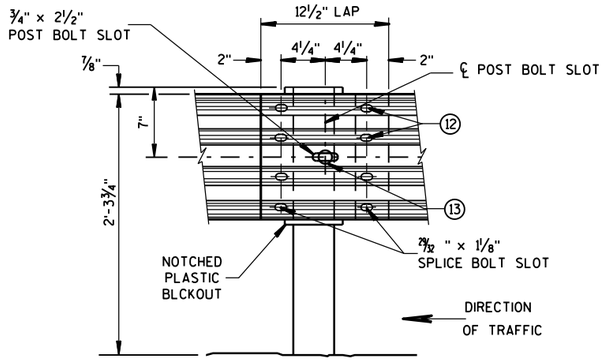
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



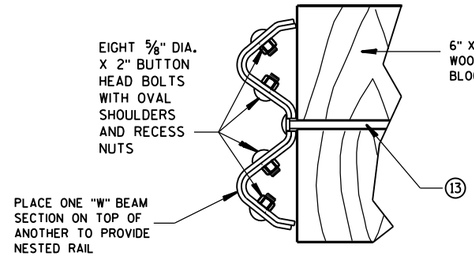
FRONT VIEW

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



FRONT VIEW

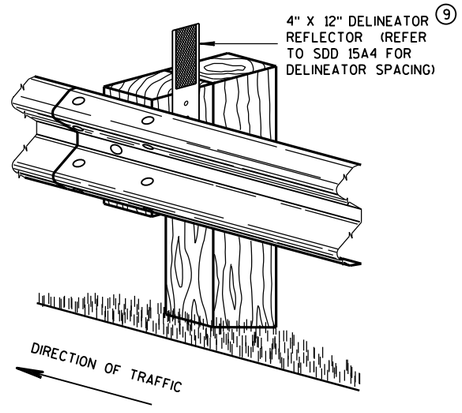
BEAM SPLICE AT STEEL POST



NESTED W BEAM (NW)

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

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



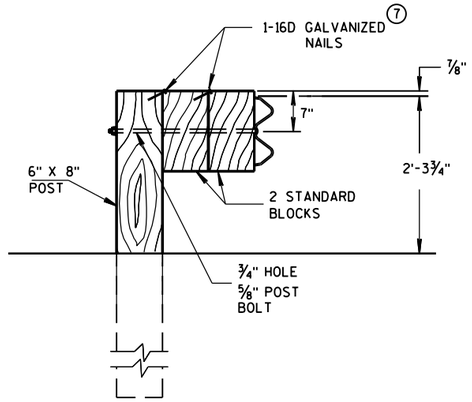
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

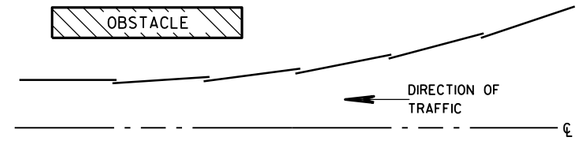
6

S.D.D. 14 B 15-10b

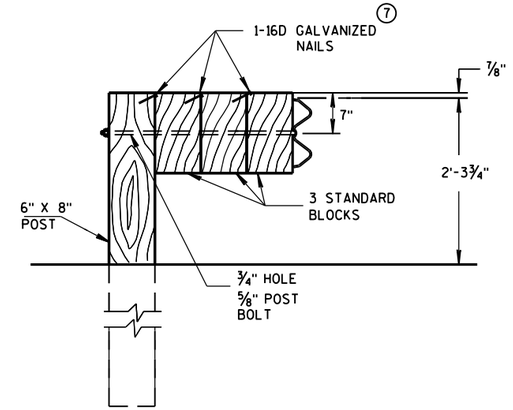


DETAIL FOR DOUBLE BLOCKS

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

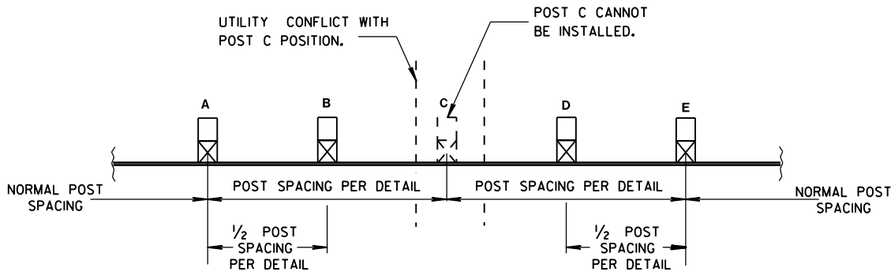


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

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



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

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

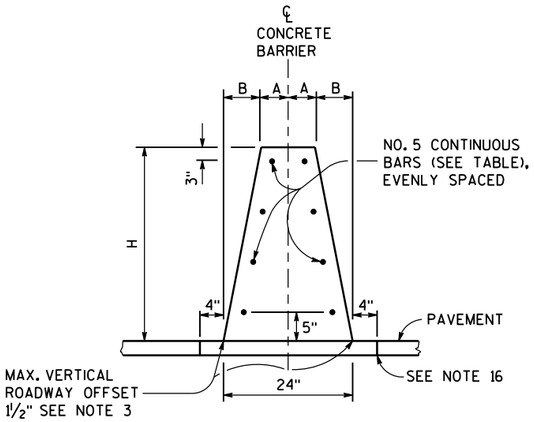
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

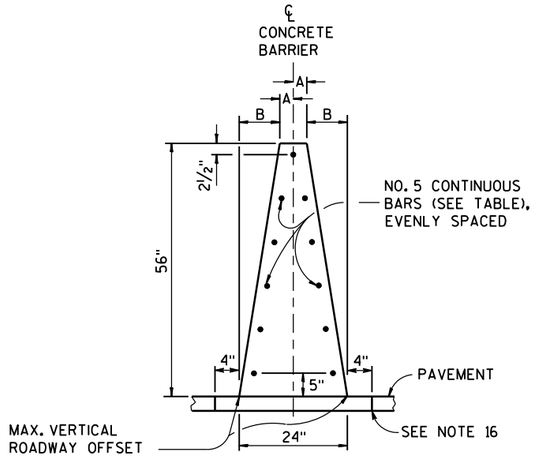
APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

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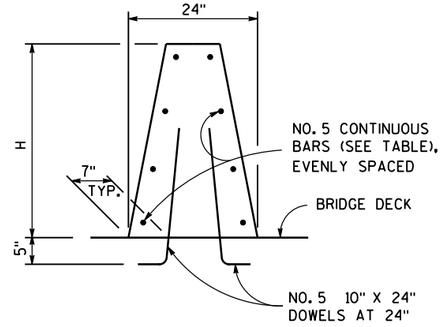
S.D.D. 14 B 15-10c



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



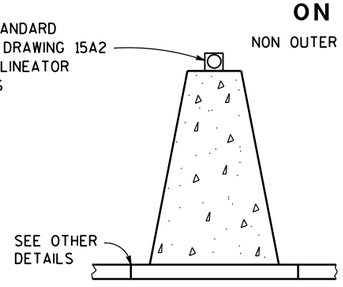
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



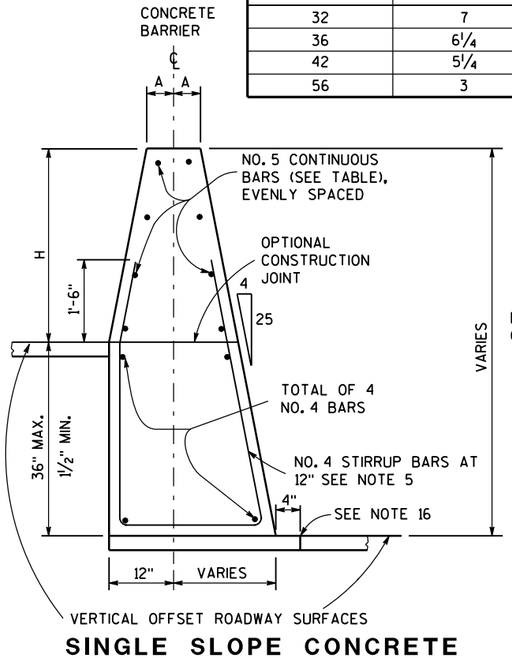
DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

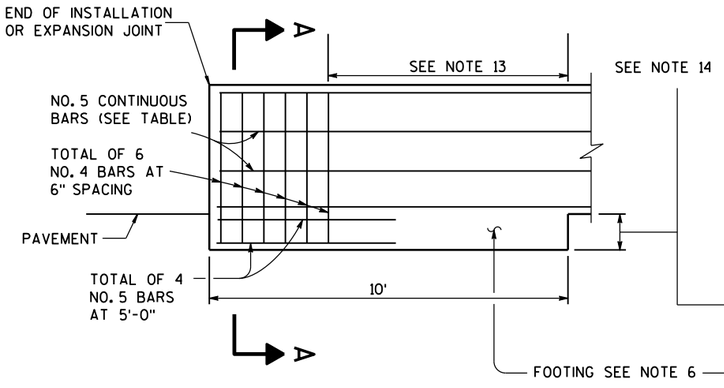
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

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



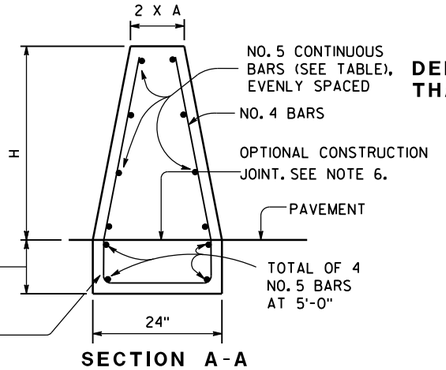
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT



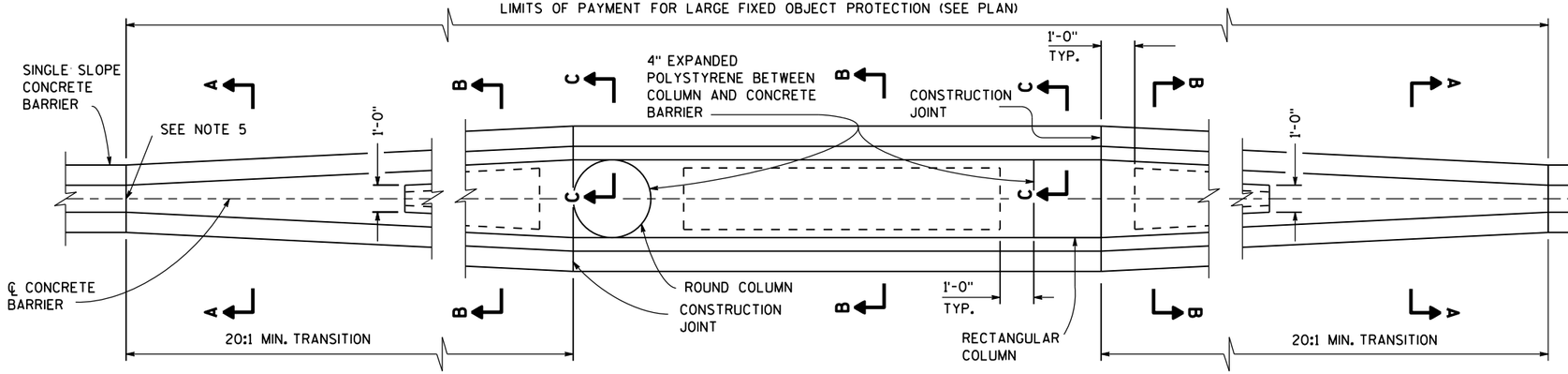
SECTION A-A

CONCRETE BARRIER SINGLE SLOPE (CBSS)

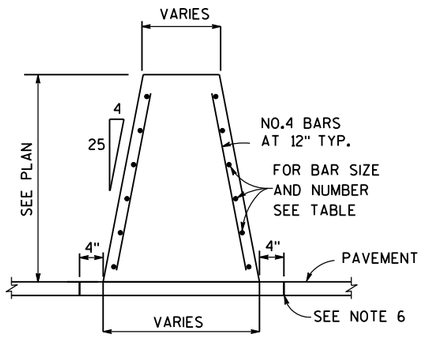
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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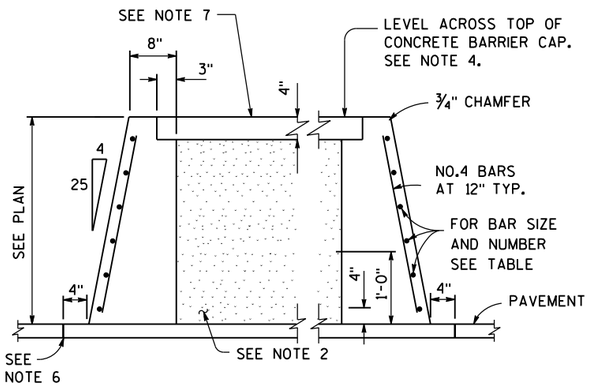
S.D.D. 14 B 32-4a



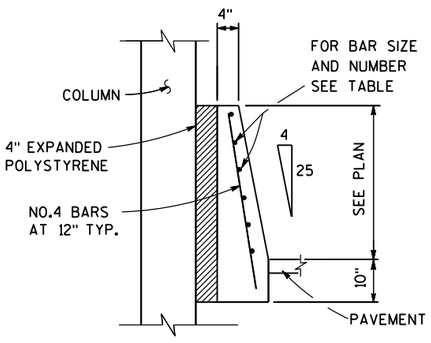
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



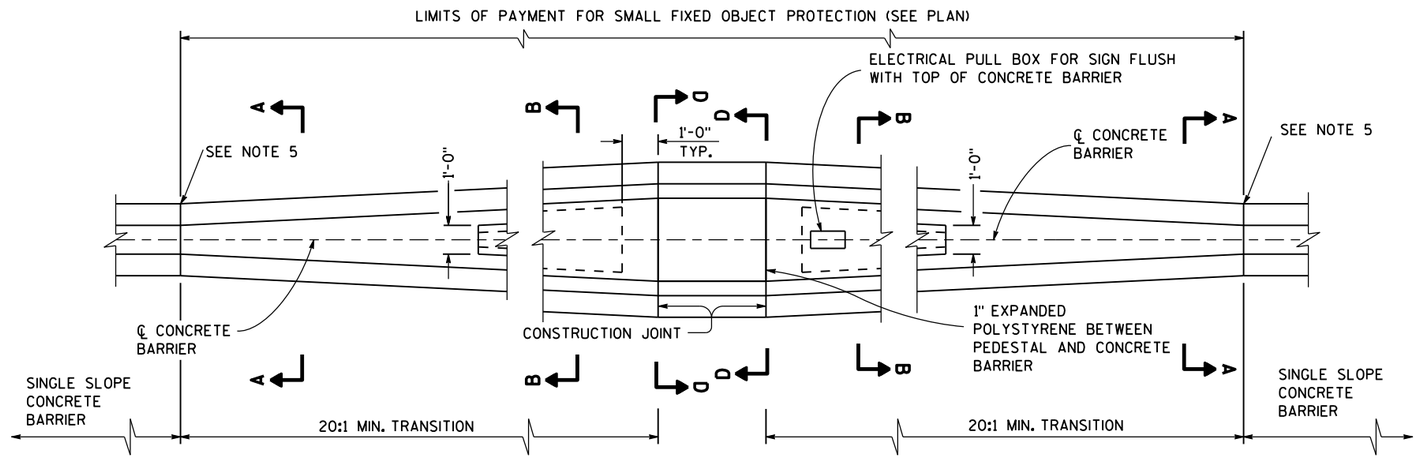
SECTION A-A



SECTION B-B



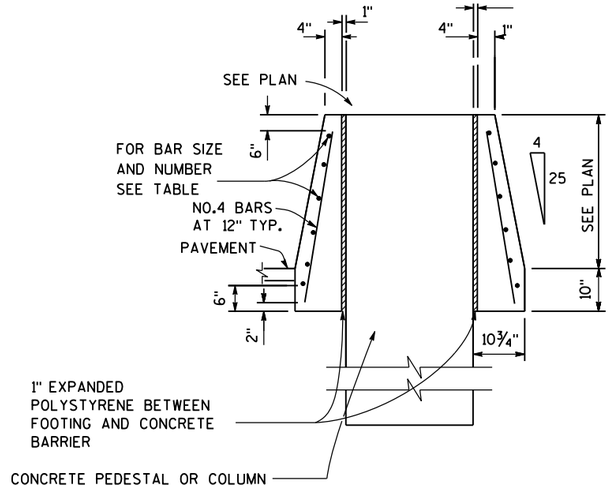
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.



SECTION D-D

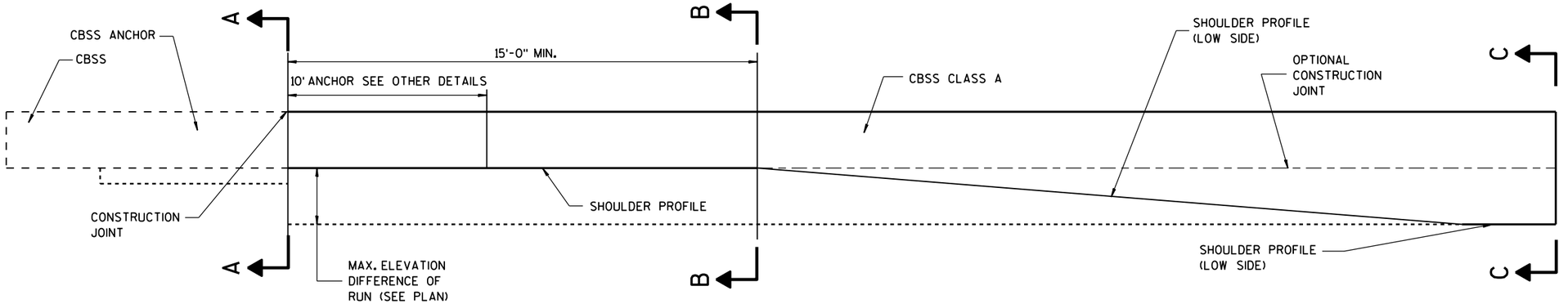
BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

CONCRETE BARRIER SINGLE SLOPE (CBSS)

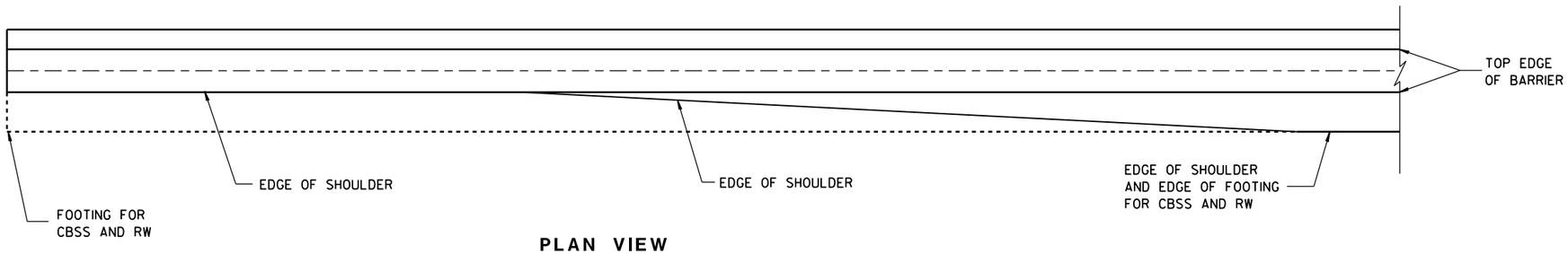
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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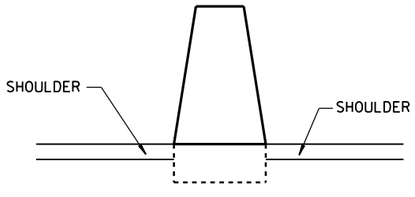
S.D.D. 14 B 32-4b



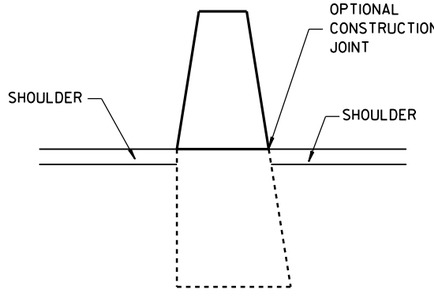
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



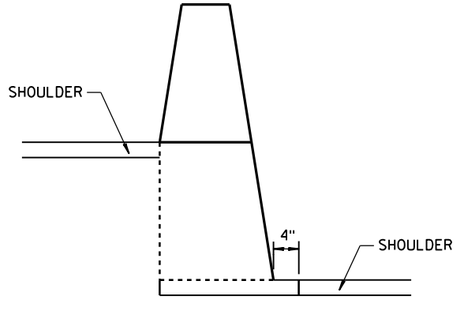
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



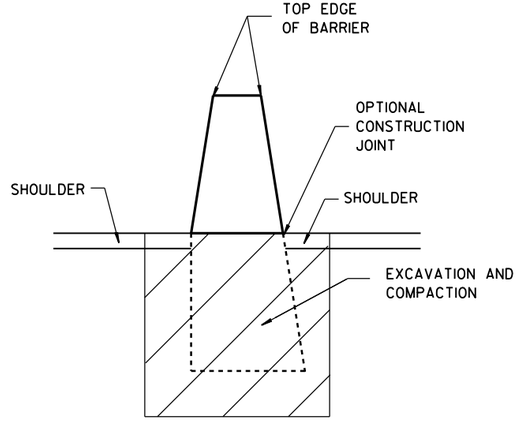
SECTION A-A



SECTION B-B



SECTION C-C

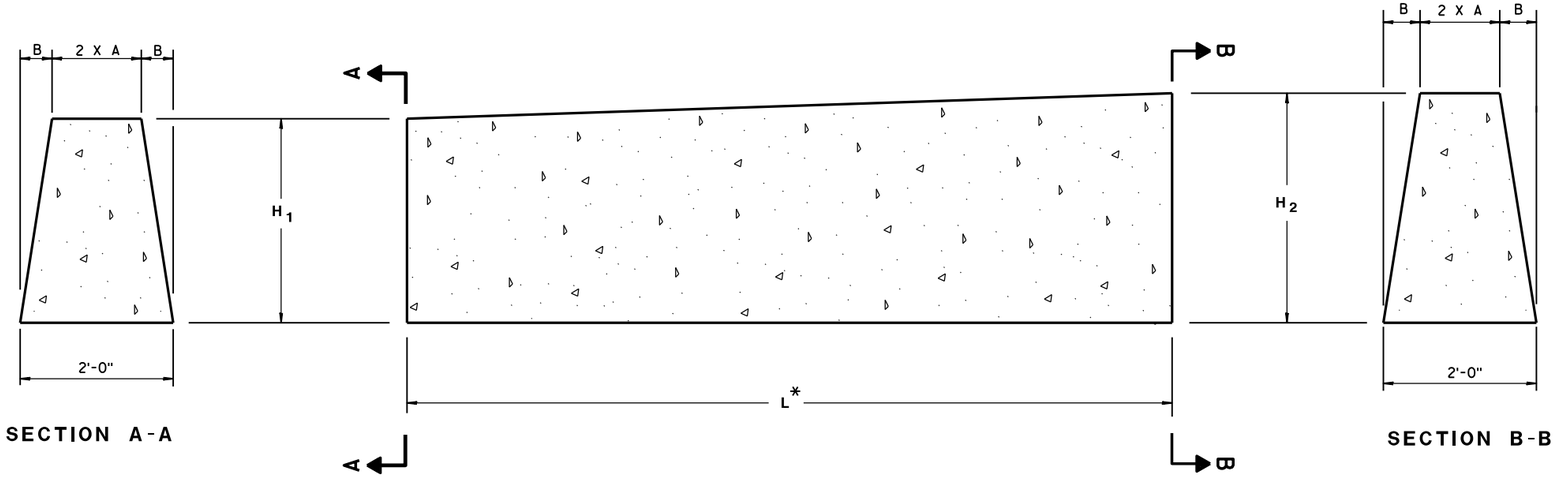


CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 32-4c



SECTION A-A

SECTION B-B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 1/4	5 3/4
42	5 1/4	6 3/4
56	3	9

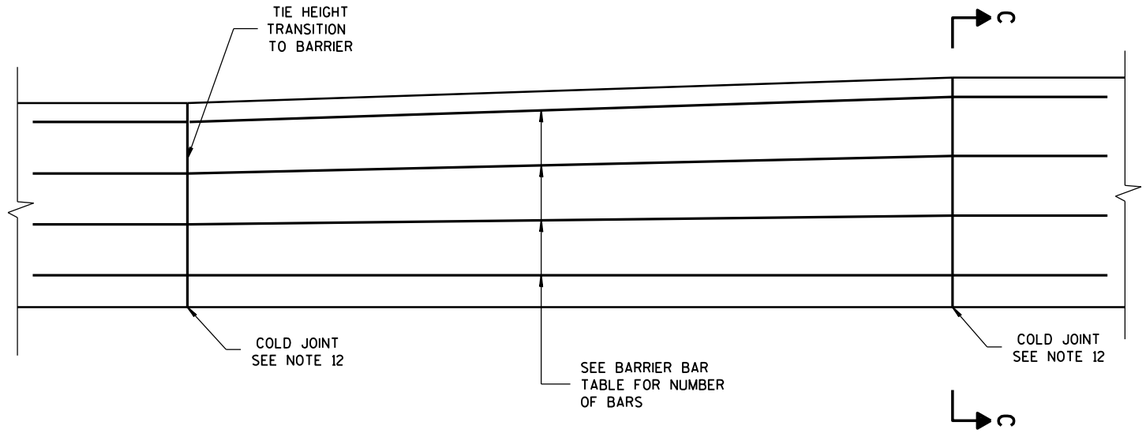
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

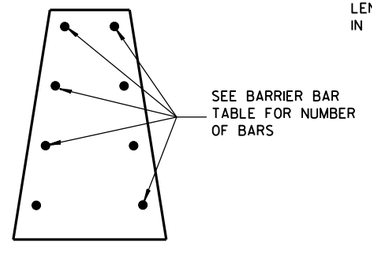
BARRIER BARS

H_1	H_2	L*	NUMBER OF NO. 5 BARS
32"	36"	10'-0"	8
36"	42"	10'-6"	10
42"	56"	24'-6"	11

* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.



STEEL REINFORCEMENT DETAIL



SECTION C-C

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

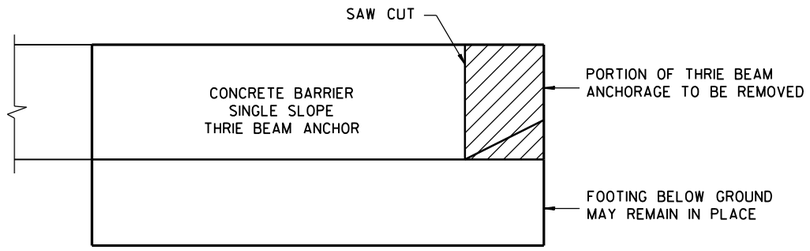
FHWA

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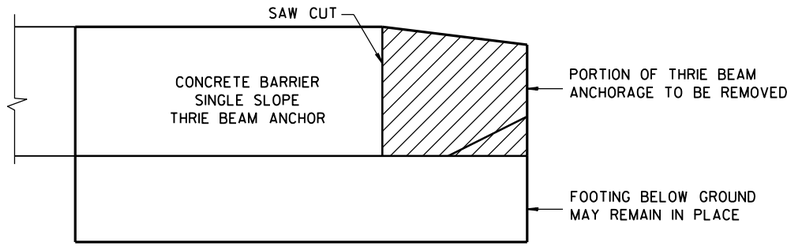
S.D.D. 14 B 32-4d

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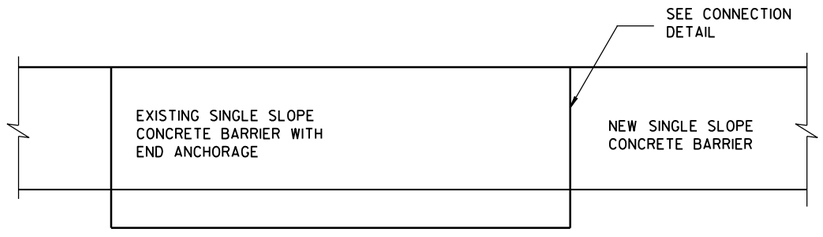
S.D.D. 14 B 32-4d



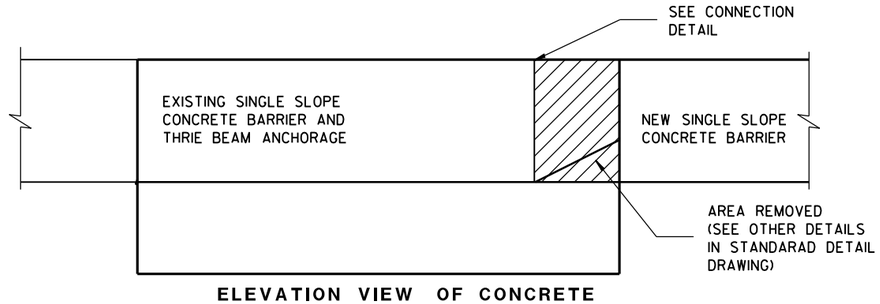
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



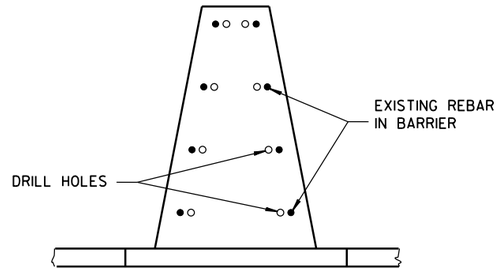
REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR END ANCHORAGE



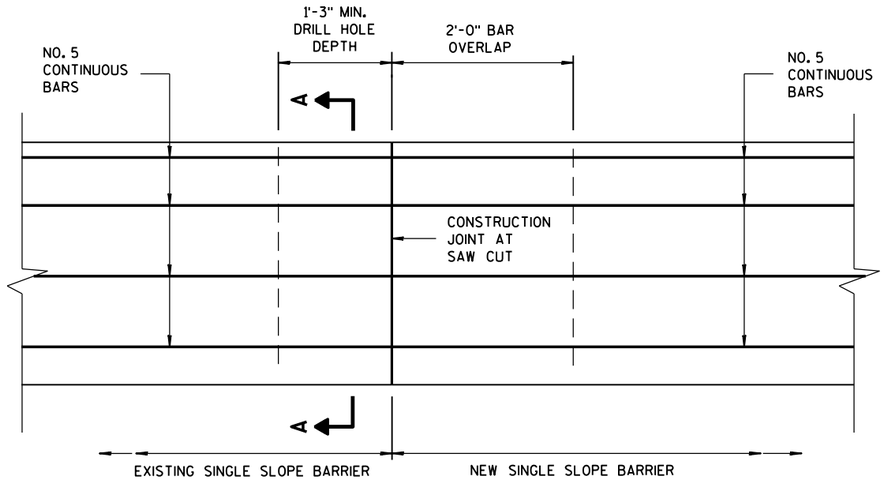
ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR THRIE BEAM TERMINAL



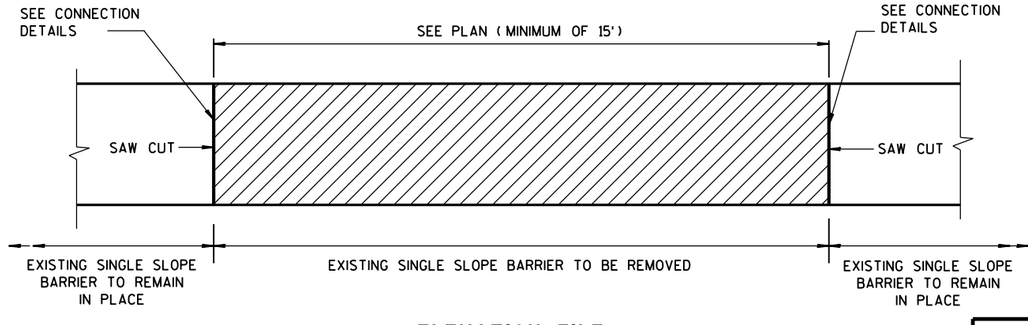
SECTION A-A

GENERAL NOTES

1. THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF REBAR IN BARRIER (SEE OTHER DETAILS).
2. MINIMUM DEPTH OF DRILL HOLES IS 1'-3".
3. DRILL HOLES TO BE A MINIMUM OF 4 INCHES FROM THE EDGE OF CONCRETE.
4. INSTALL EPOXY COATED NO. 5 BARS IN DRILL HOLES.
5. END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.
6. REMOVE THRIE BEAM ANCHORAGE AS SHOWN.



CONNECTION OF EXISTING SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



ELEVATION FILE
BARRIER REMOVAL AND REPLACEMENT

CONCRETE BARRIER
SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

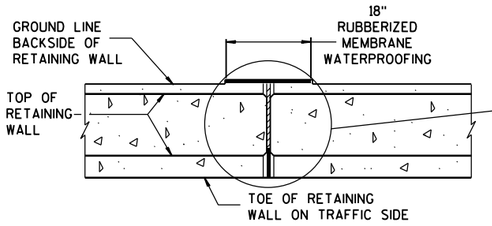
RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

6

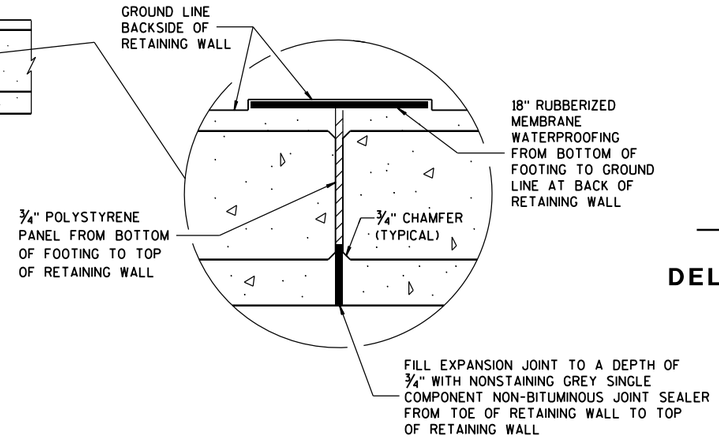
S.D.D. 14 B 32-4e

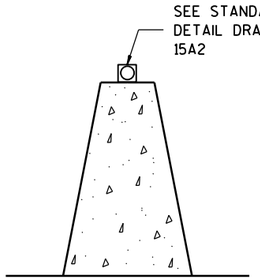
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S.D.D. 14 B 32-4e



VERTICAL EXPANSION JOINT PLAN VIEW





DELINEATION

SPACING FOR DELINEATORS ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

GENERAL NOTES

PROVIDE EXPANSION JOINTS WHERE THERE ARE EXISTING EXPANSION JOINTS OR AT THE END OF EACH POUR.

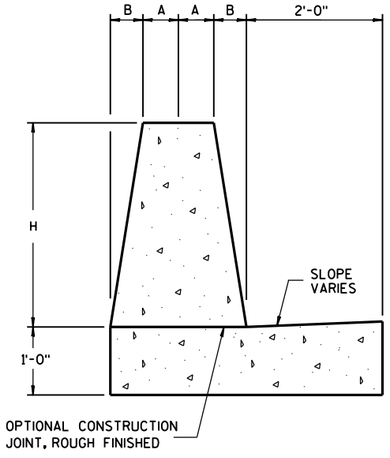
NO HORIZONTAL STEEL CROSSES EXPANSION JOINTS.

CONSTRUCT PER STANDARD SPECIFICATION 603. SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASETENED TOGETHER UNLESS NOTED OTHERWISES.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

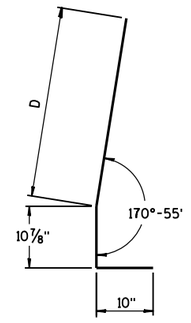
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR.



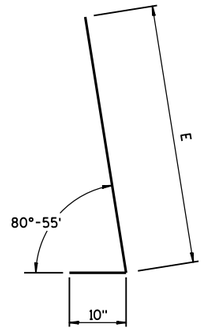
ROADSIDE RETAINING WALL

BARRIER WALL DIMENSIONS

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



V1 BAR BENDING DETAIL



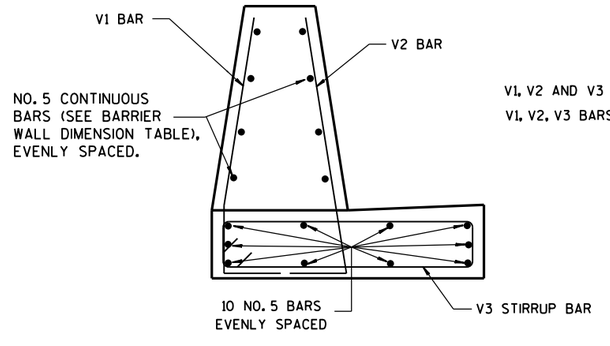
V2 BAR BENDING DETAIL

REFLECTOR SPACING

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

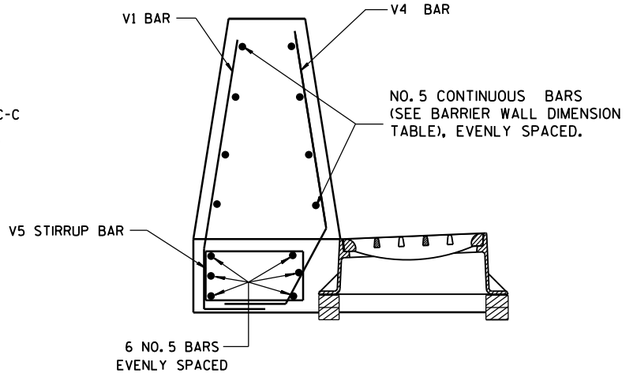
BAR CHART ROADSIDE RETAINING WALL

BARRIER HEIGHT	V1 BAR D	V2 BAR E	V4 BAR F
32"	2'-5½"	3'-4½"	2'-6½"
36"	2'-9½"	3'-9¾"	2'-10¾"
42"	3'-3½"	4'-2½"	3'-4¾"
56"	4'-5¾"	5'-4¾"	4'-6¾"

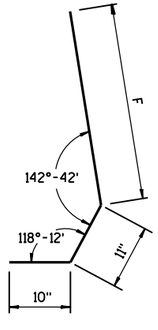


V1, V2 AND V3 ARE SPACED 18" C-C
V1, V2, V3 BARS ARE NO. 5 BARS

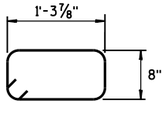
ROADSIDE RETAINING WALL NORMAL BAR PLACEMENT



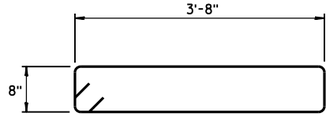
ROADSIDE RETAINING WALL BAR PLACEMENT NEAR INLET



V4 BAR BENDING DETAIL



V5 STIRRUP BAR BENDING DETAIL

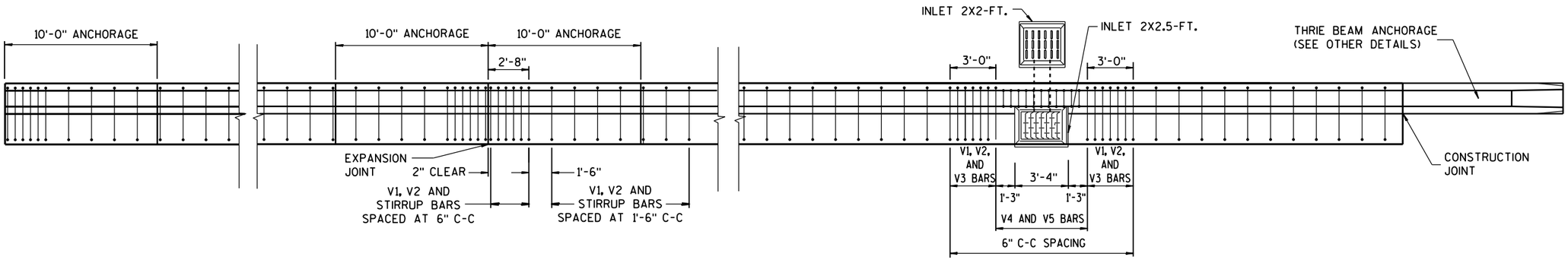


V3 STIRRUP BAR BENDING DETAIL

SINGLE SLOPE ROADSIDE RETAINING WALL

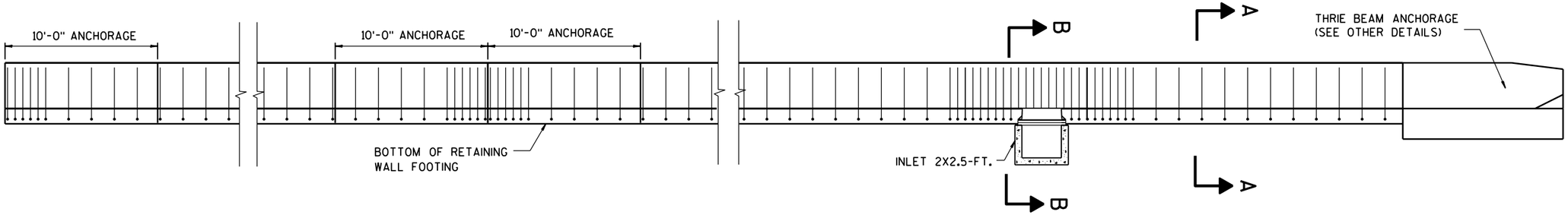
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 41-2a



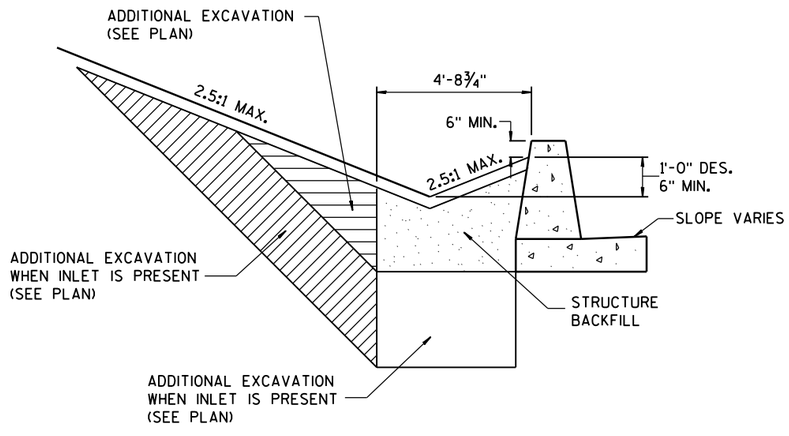
PLAN VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

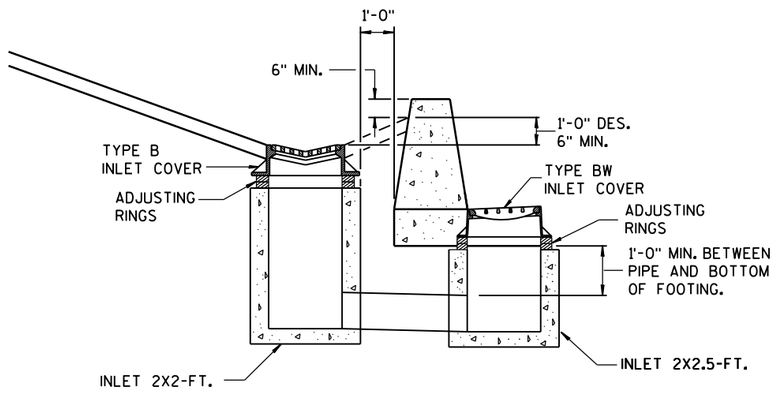


ELEVATION VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

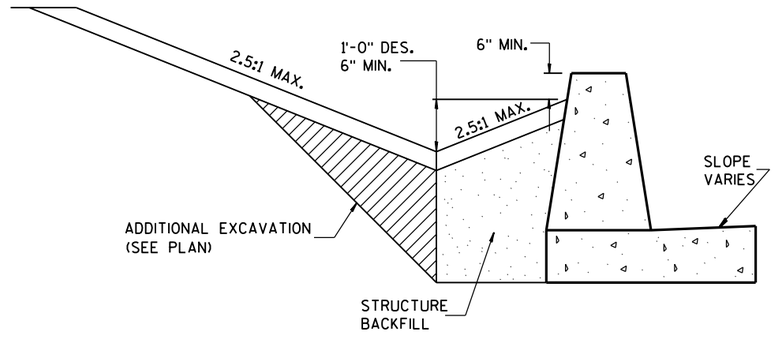


SECTION A-A



SECTION B-B

MINIMUM DESIGN OF EARTH WORK FOR INLET



MINIMUM DESIGN OF EARTH WORK

SINGLE SLOPE ROADSIDE RETAINING WALL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 41-2b

6

S.D.D. 14 B 41-2b

① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

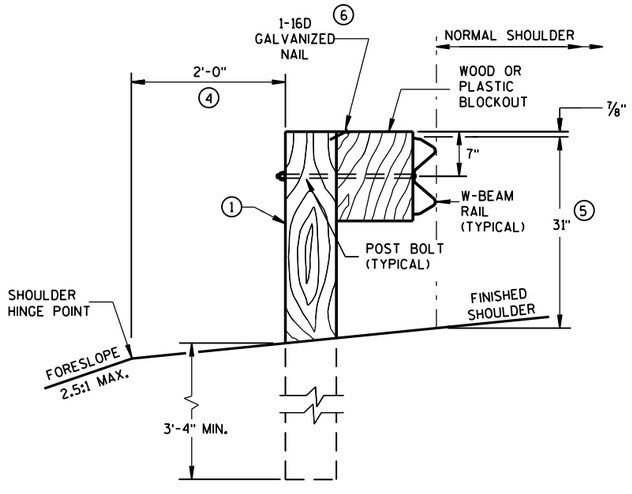
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

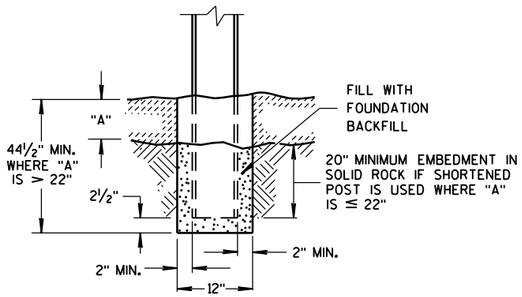
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



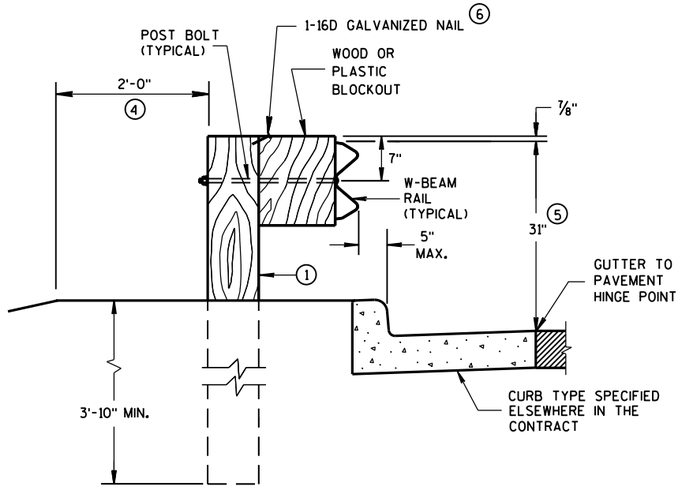
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



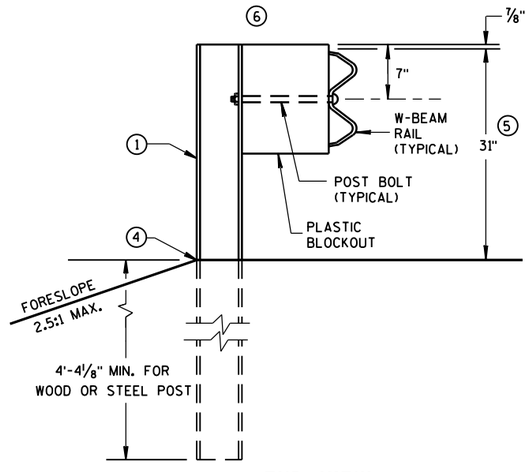
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



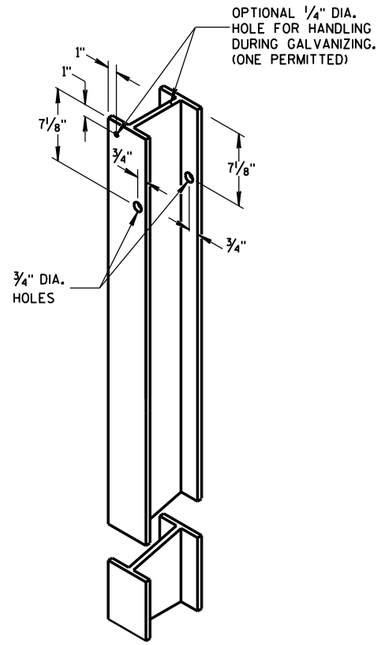
END VIEW

LOCATED ALONG A CURBED ROADWAY

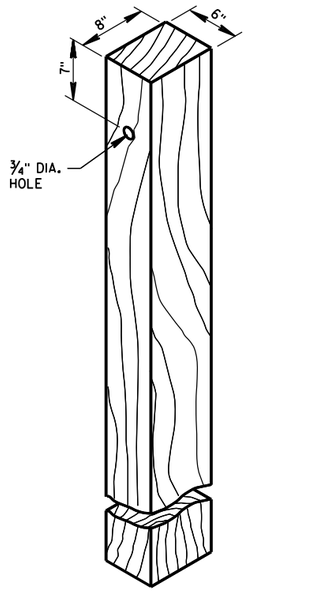


END VIEW

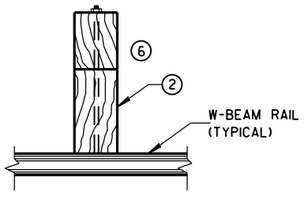
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



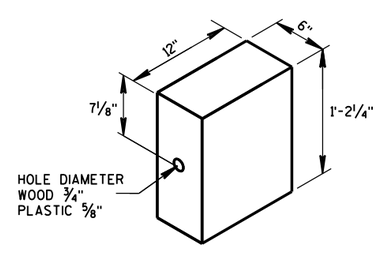
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



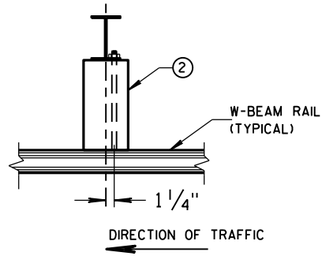
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



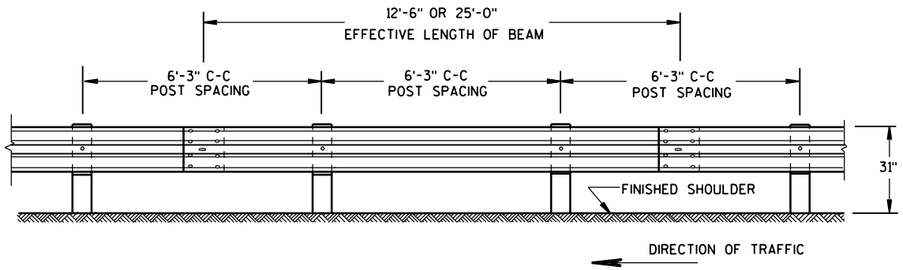
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

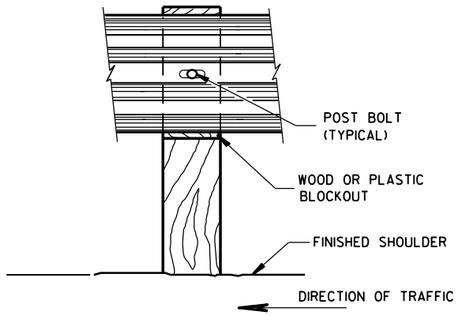
6

S.D.D. 14 B 42-4a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

8. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

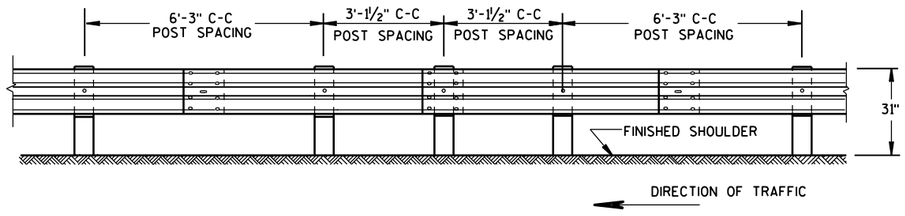
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

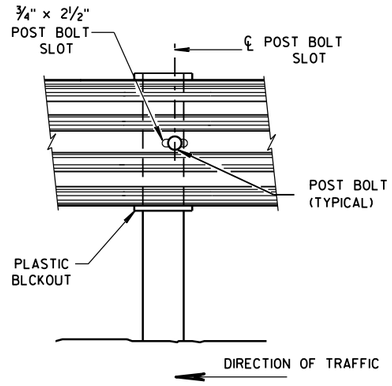
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

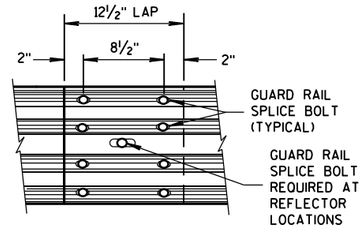


FRONT VIEW

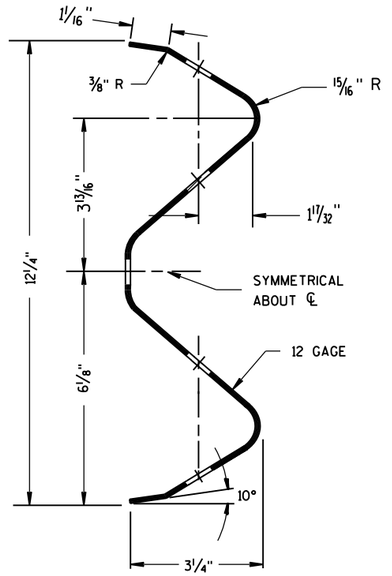
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



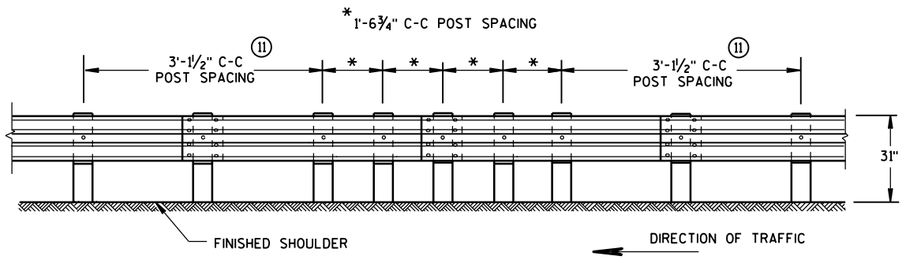
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

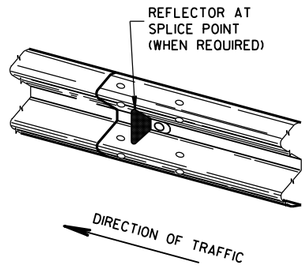


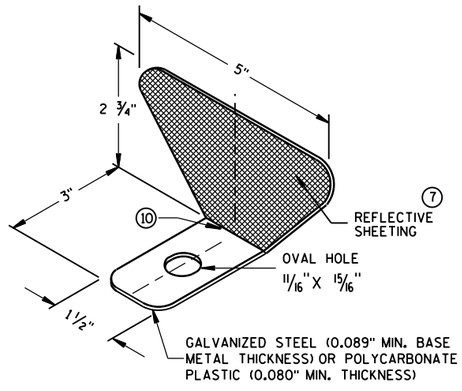
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION 7

REFLECTOR SPACING 8

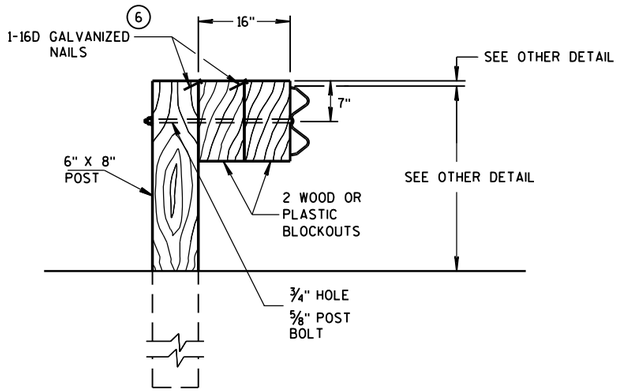
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 9	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 10	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

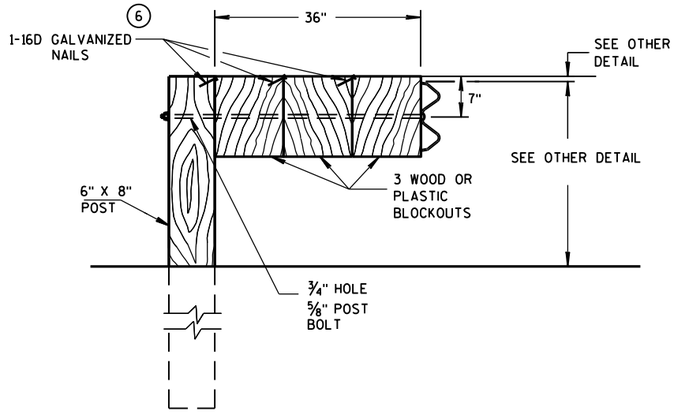
6

S.D.D. 14 B 42-4b



DETAIL FOR 16" BLOCKOUT DEPTH

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

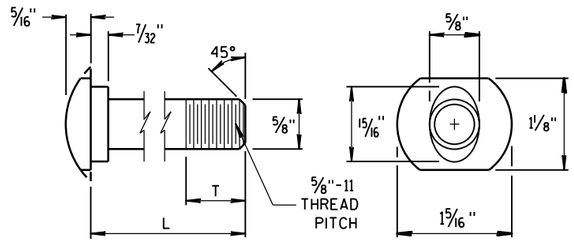


DETAIL FOR 36" BLOCKOUT DEPTH

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

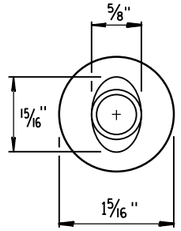
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

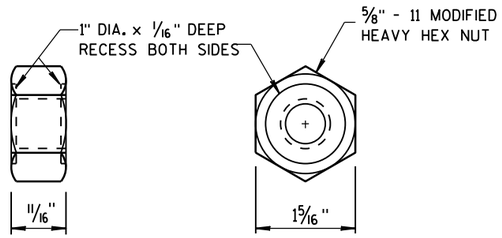


POST BOLT TABLE

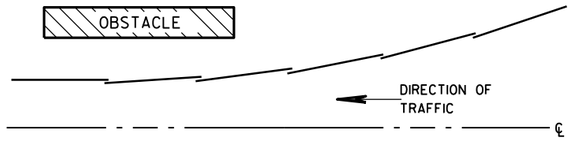
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

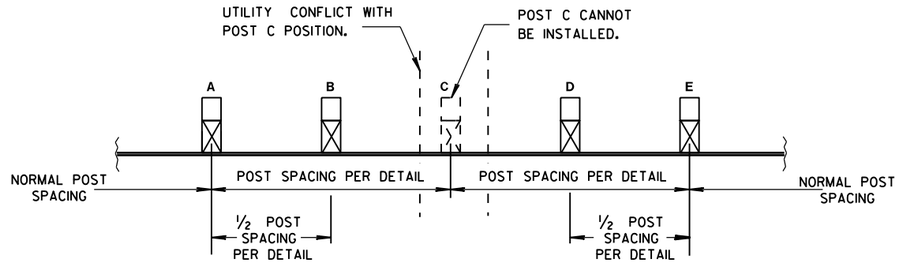


POST BOLT, SPLICE BOLT AND RECESS NUT

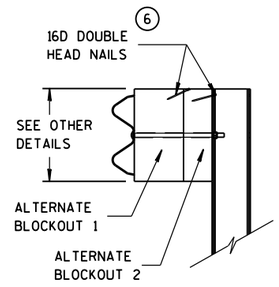


PLAN VIEW

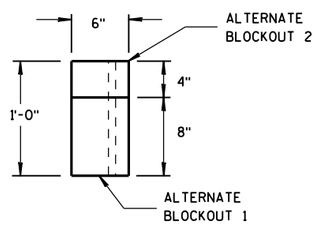
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

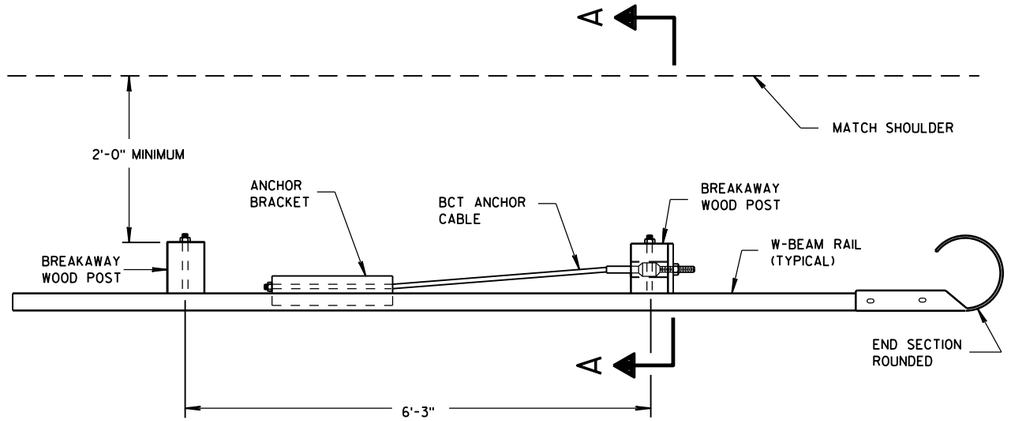
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

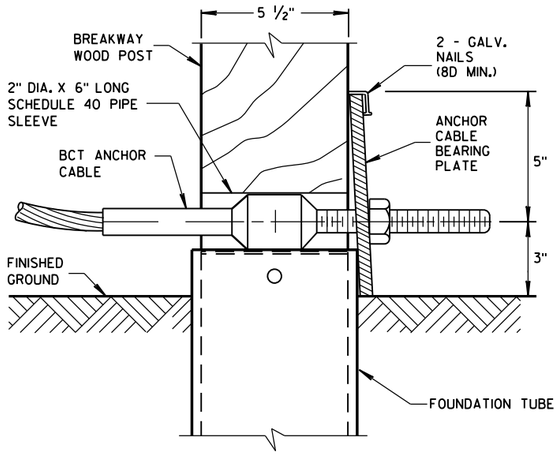
APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 42-4c



PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

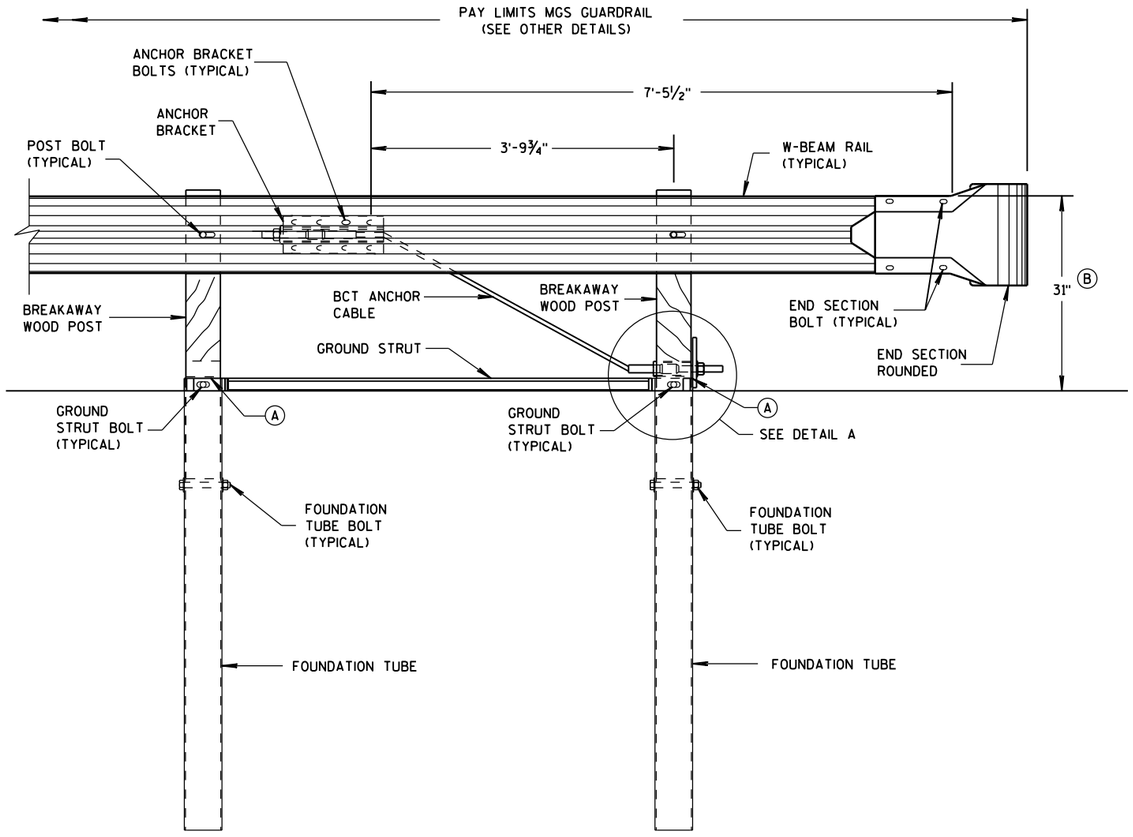
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

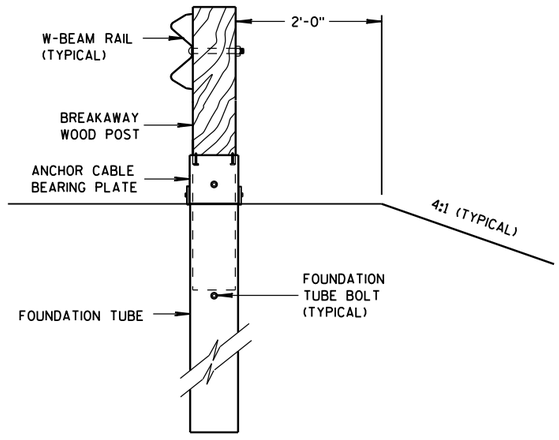
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

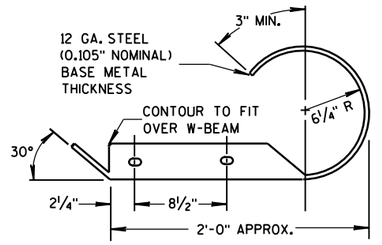


FRONT VIEW

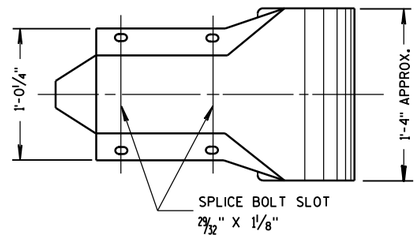
END RAIL DETAIL



SECTION A-A



PLAN VIEW



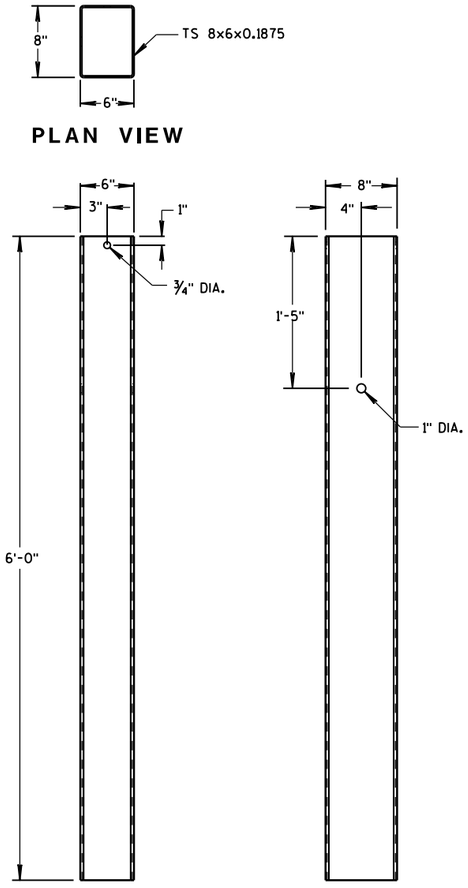
FRONT VIEW

W BEAM END SECTION ROUNDED

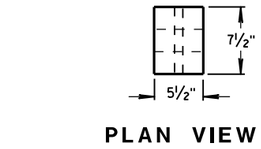
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

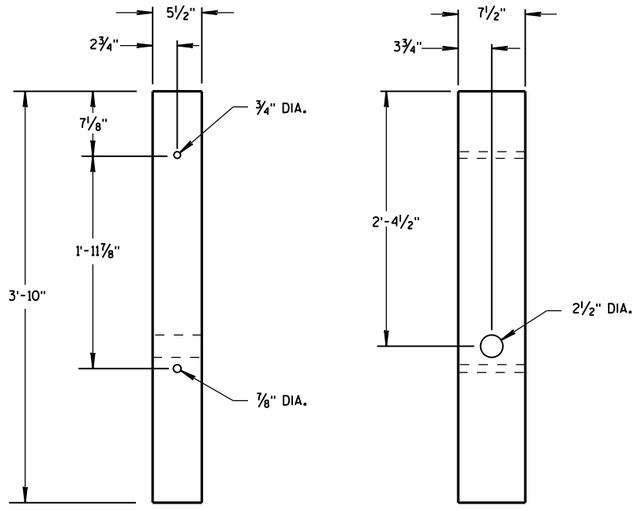
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a



FOUNDATION TUBE



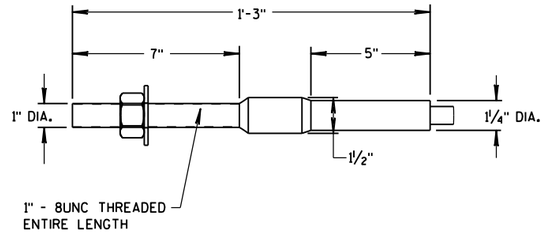


BREAKAWAY WOOD POST

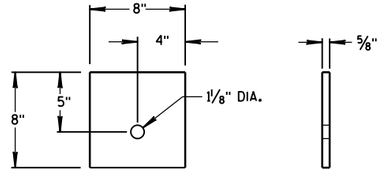
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

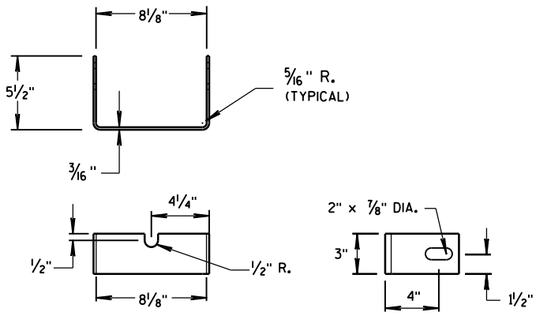
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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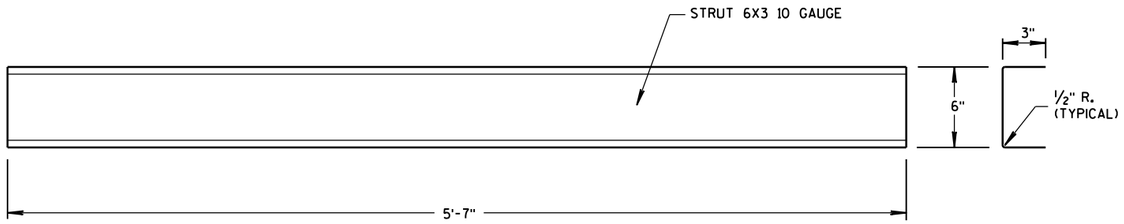
S.D.D. 14 B 47-2b

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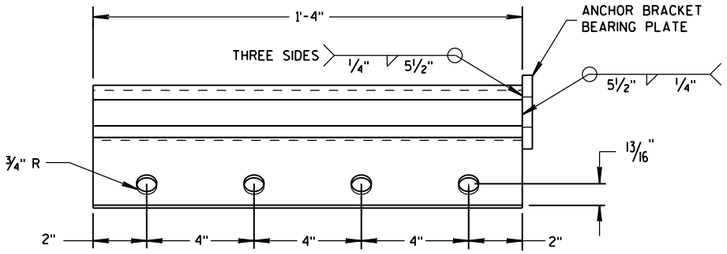
S.D.D. 14 B 47-2b

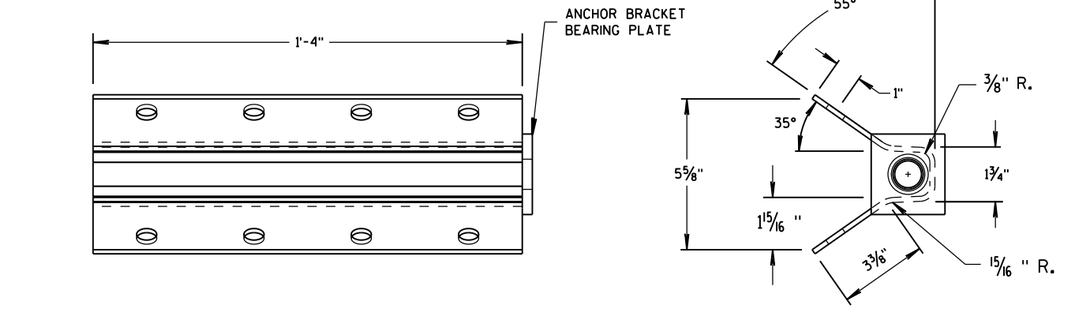


YOKE DETAIL

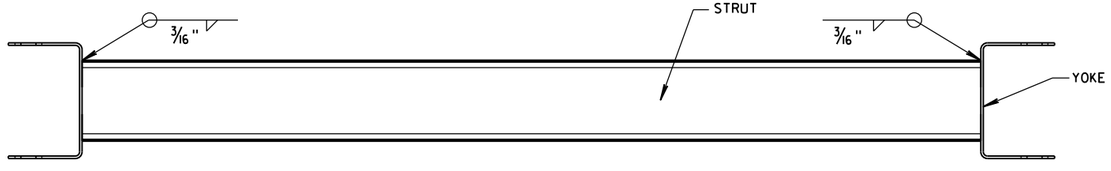


STRUT DETAIL

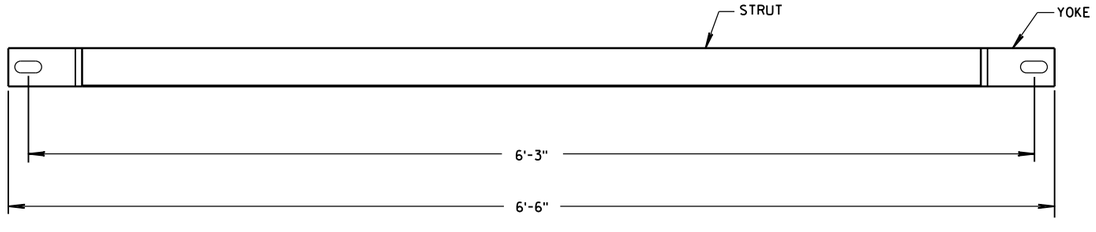




ANCHOR BRACKET

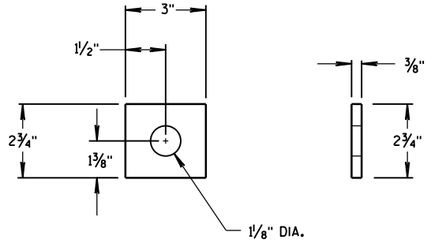


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

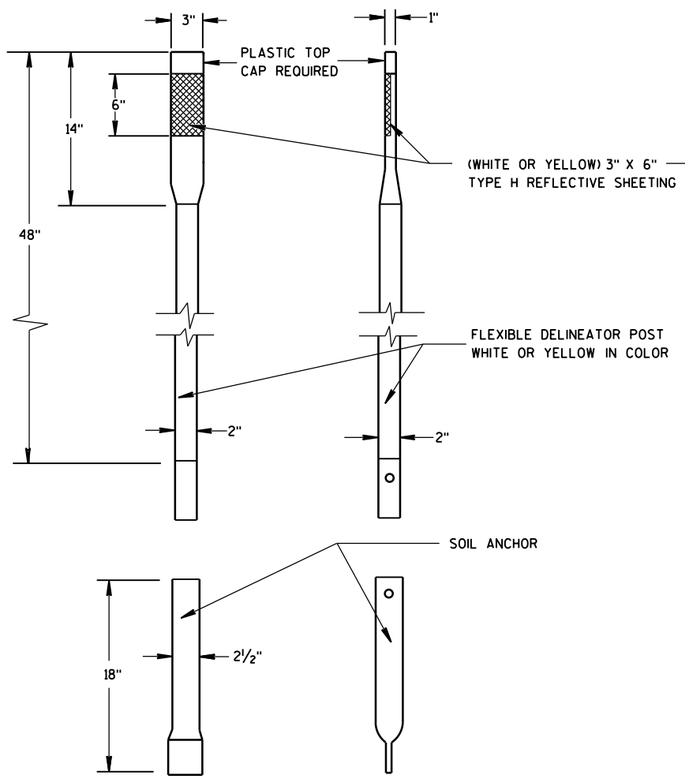
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

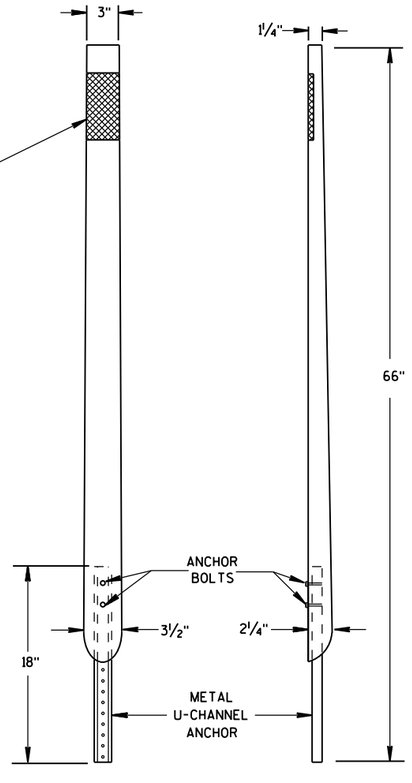
APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

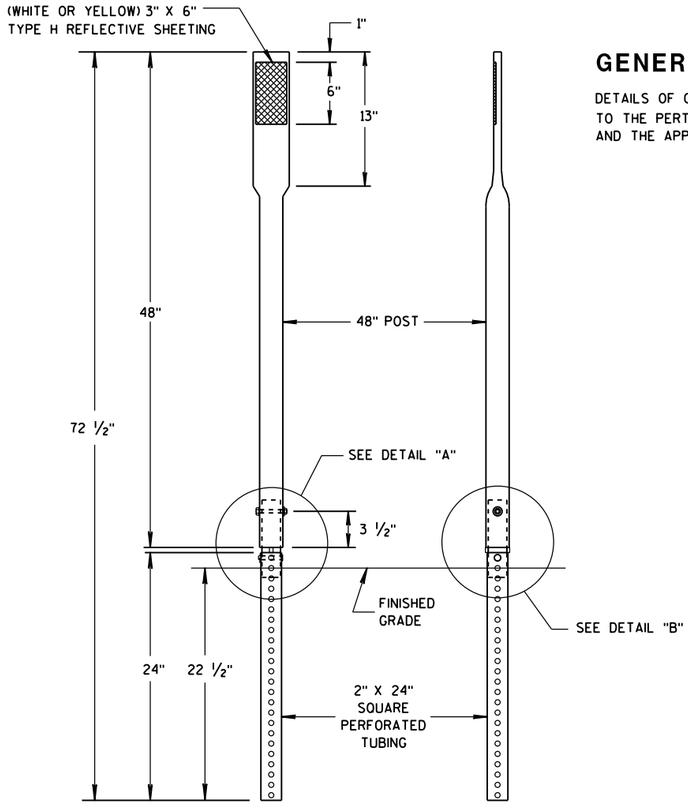
S.D.D. 14 B 47-2c



ALTERNATE 1



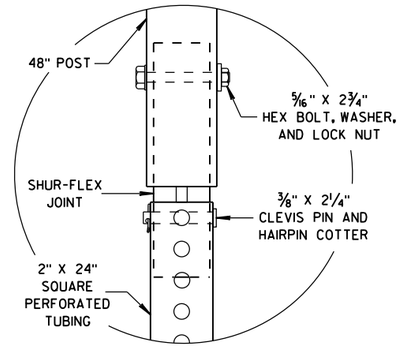
ALTERNATE 2
FLEXIBLE DELINEATOR POSTS



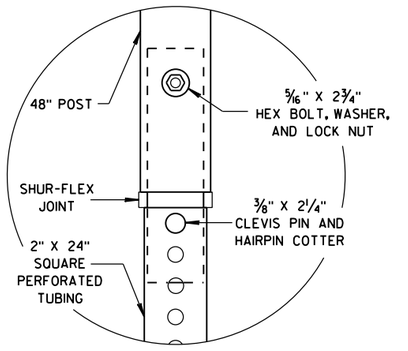
ALTERNATE 3

GENERAL NOTES

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



DETAIL A

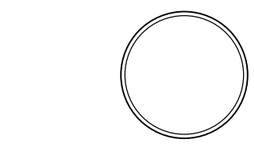


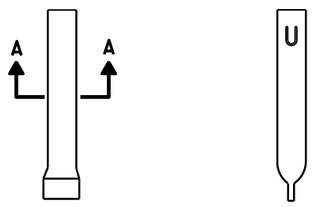
DETAIL B

REFLECTOR SPACING TABLE

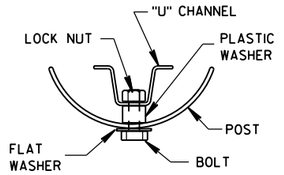
REFLECTOR SPACING	LOCATION
*100' C-C	RAMPS
400' C-C	MAINLINE

*START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER

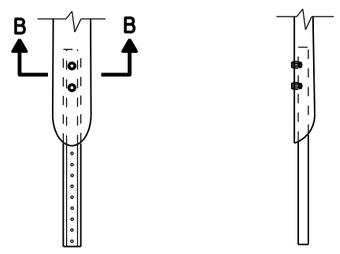




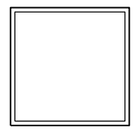
ALTERNATE 1



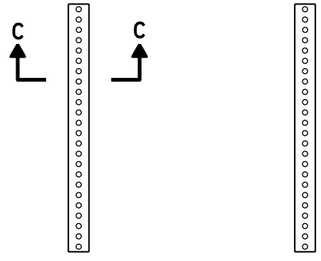
SECTION B-B



ALTERNATE 2
FLEXIBLE MARKER POST ANCHORS



SECTION C-C



ALTERNATE 3

FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

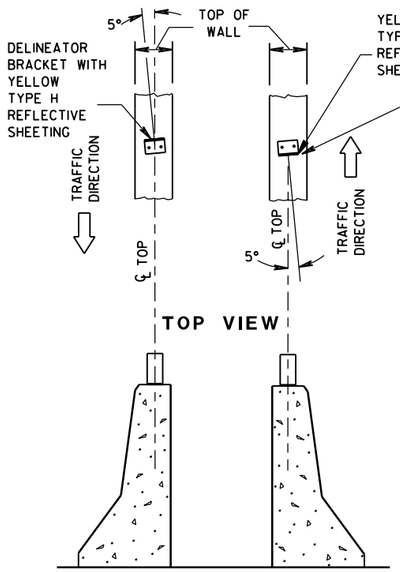
APPROVED
June 2017
DATE
/S/ Andrew Heidtke
STATE SIGNING AND MARKING ENGINEER
FHWA

6

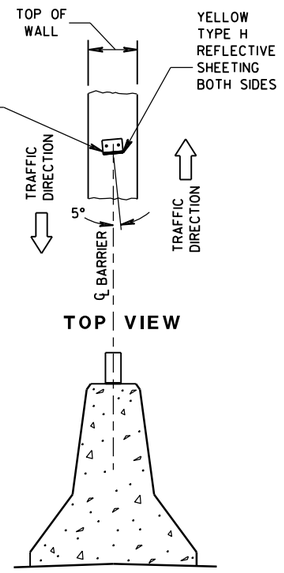
S.D.D. 15 A 4-3a

6

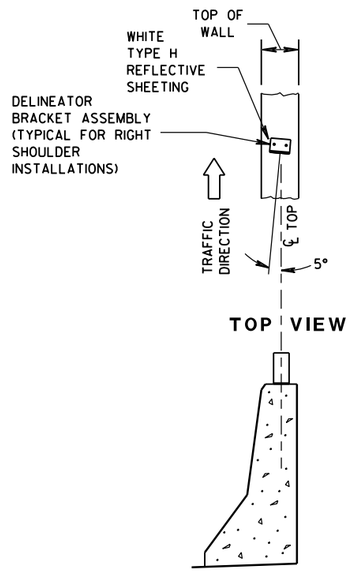
S.D.D. 15 A 4-3a



DOUBLE BARRIERS IN MEDIAN

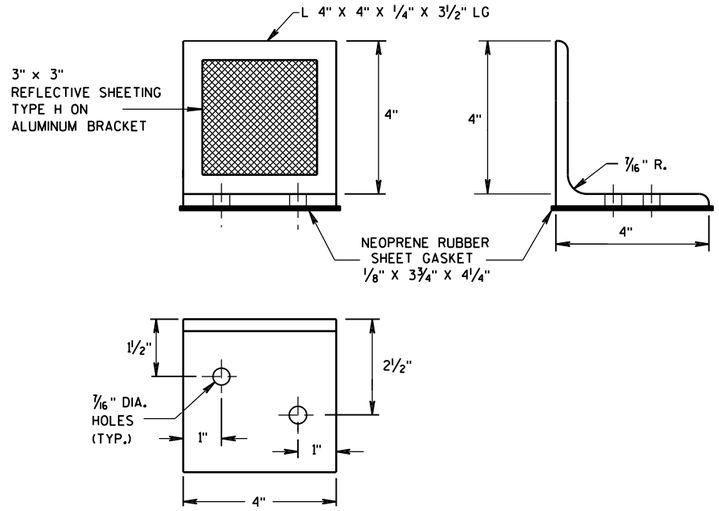


MEDIAN BARRIER

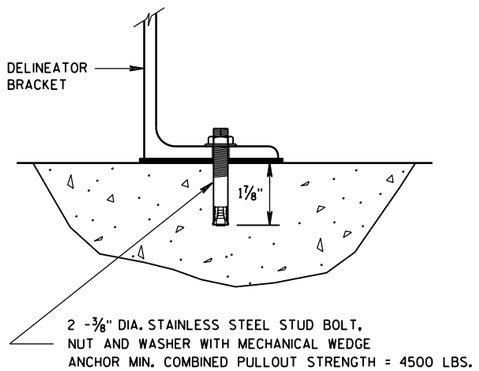


BARRIER LOCATED
TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET



DELINEATOR BRACKET
MOUNTING DETAIL

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

DELINEATOR BRACKET
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAI[illegible] GINEER

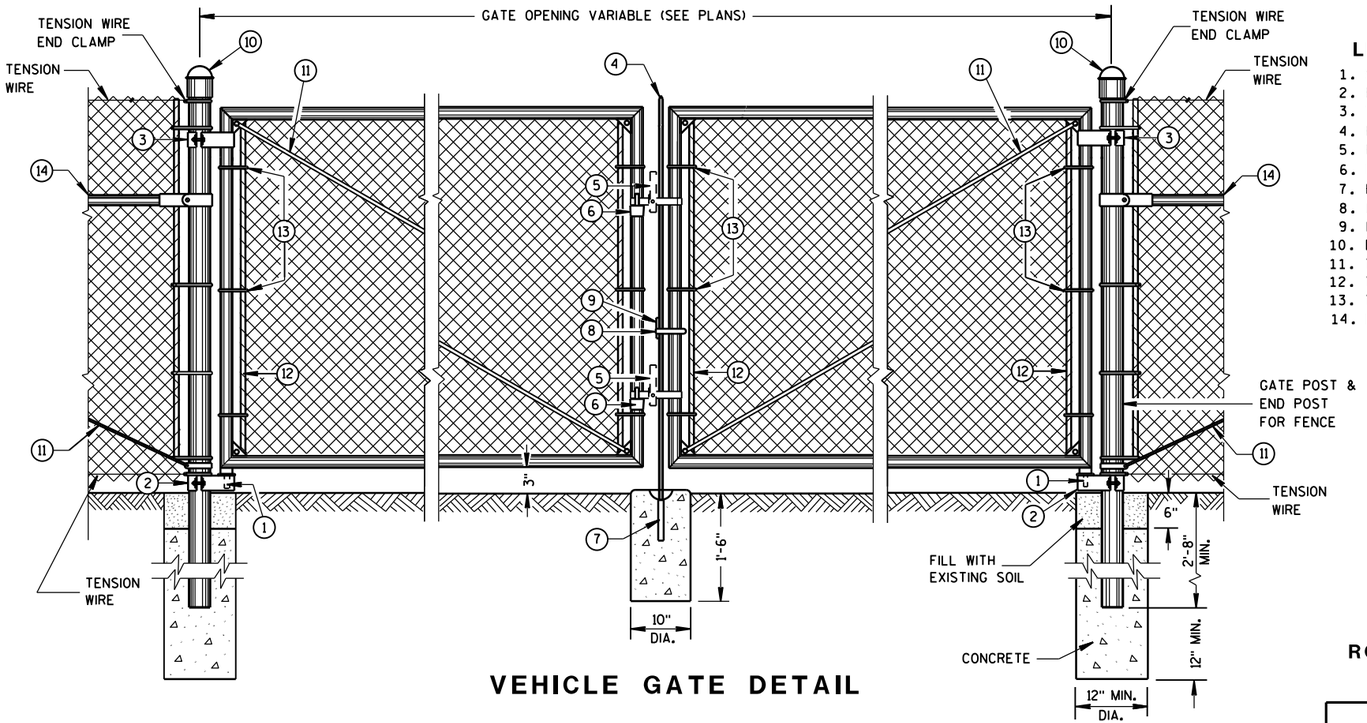
FHWA

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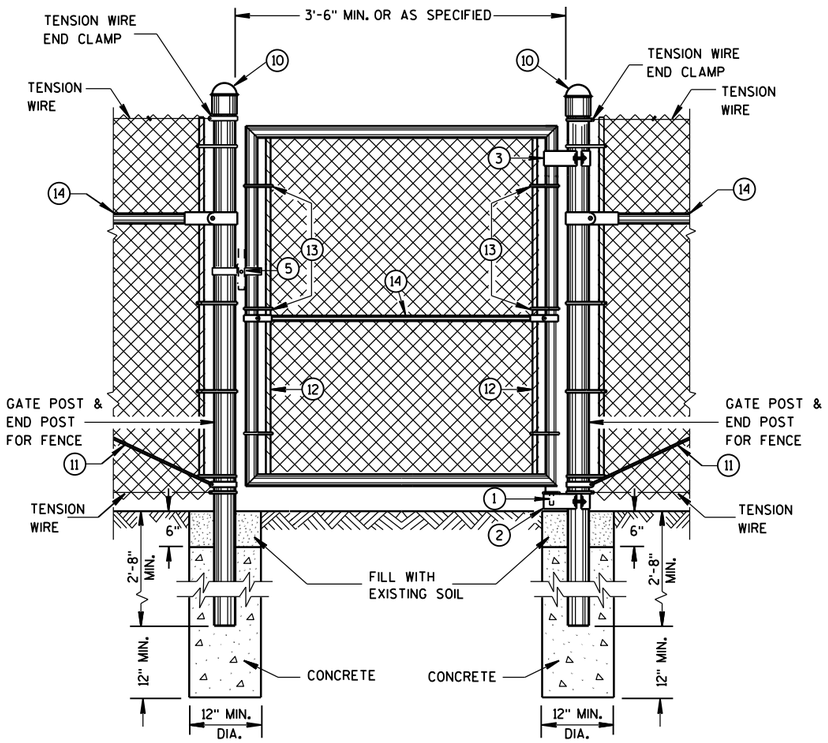
S.D.D. 15 A 4-3b

6

S.D.D. 15 A 4-3b



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

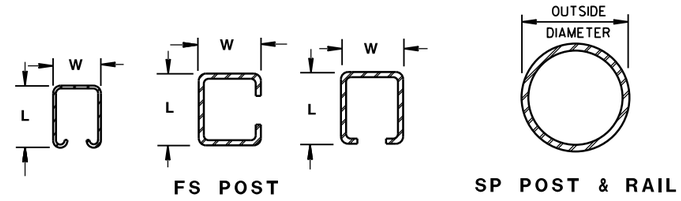
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST — SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

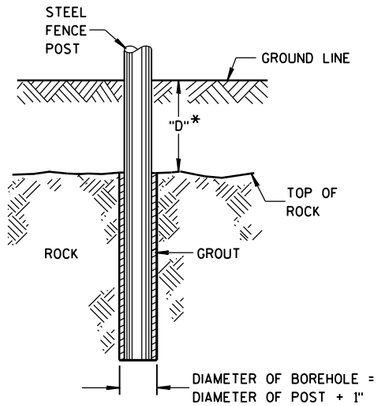
POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

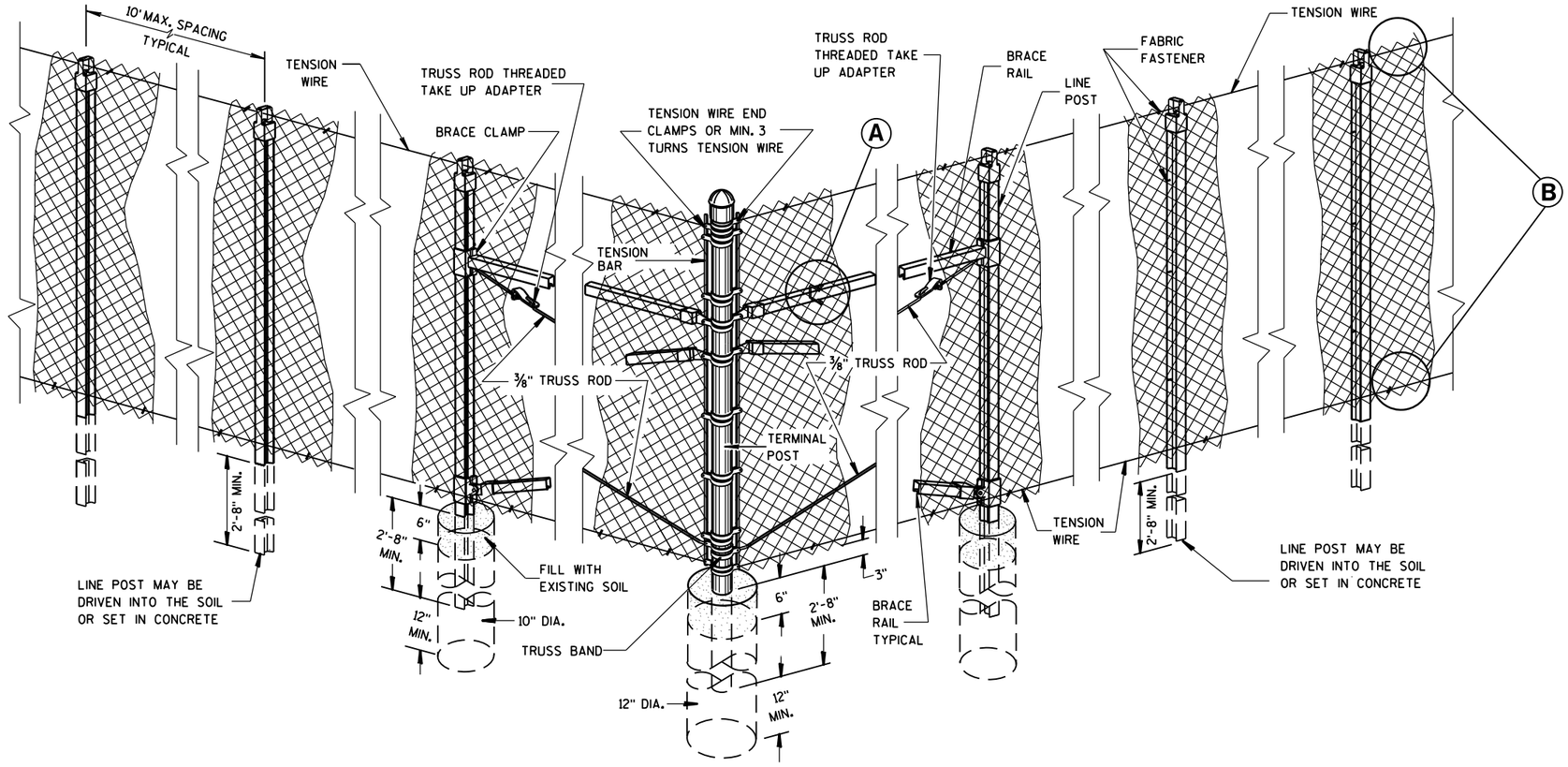
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S.D.D. 15 B 3-15a
S.D.D. 15 B 3-15a

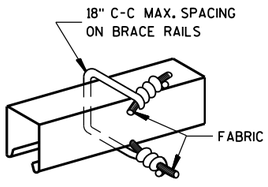


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



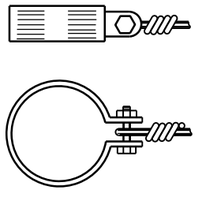
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



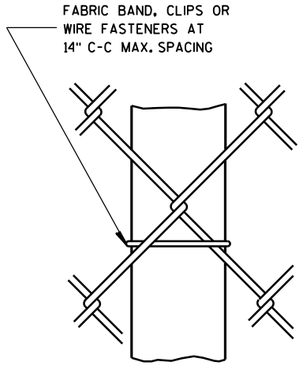
BRACE RAIL

FABRIC FASTENER

Ⓐ



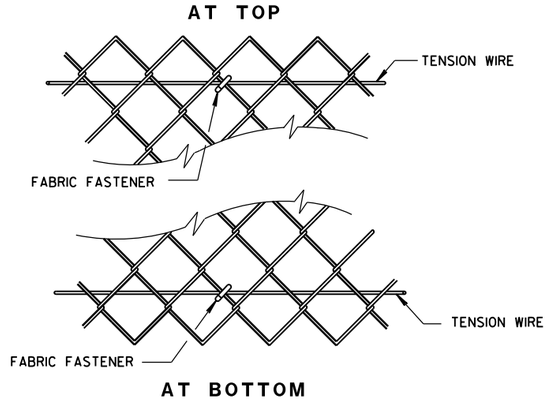
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

273

6

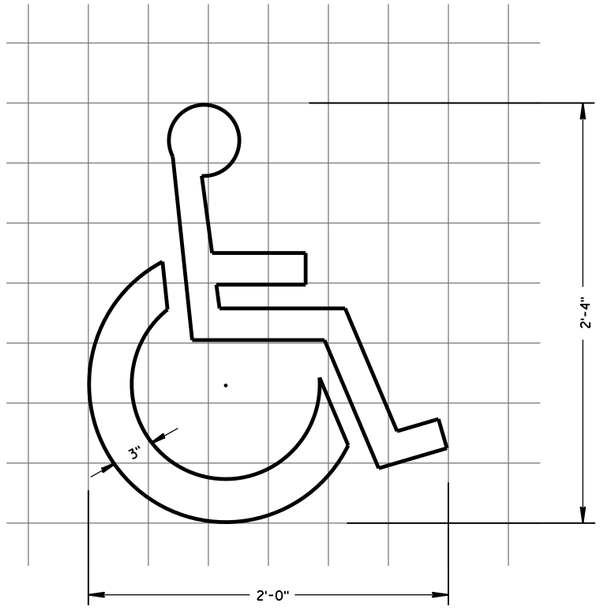
S.D.D. 15 B 3-15b

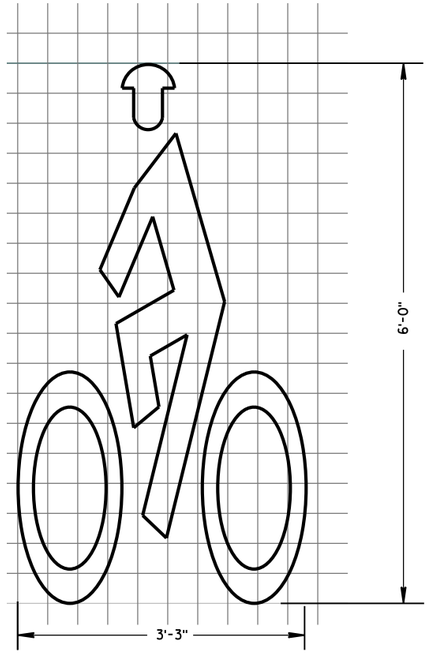
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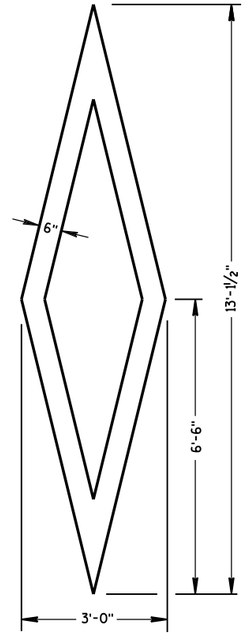
GENERAL NOTES

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.





BIKE CROSSING SYMBOL



PREFERENTIAL LANE SYMBOL

6

6

S.D.D. 15 C 7-13a

S.D.D. 15 C 7-13a

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

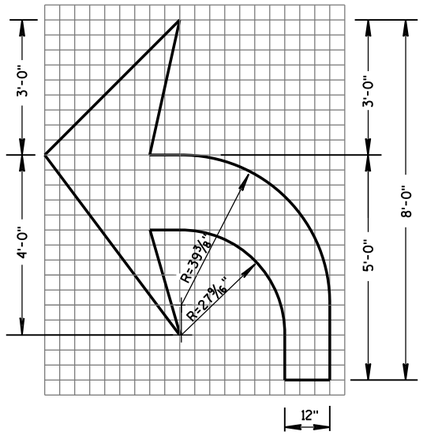
APPROVED

4/18/16	/S/ Matthew R. Rauch
DATE	STATE SIGNING AND MARKING ENGINEER

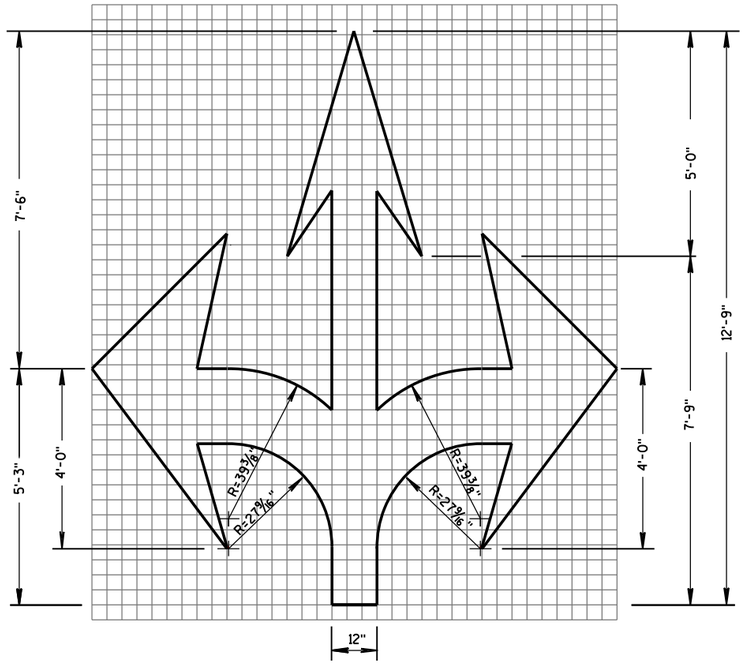
FHWA

GENERAL NOTES

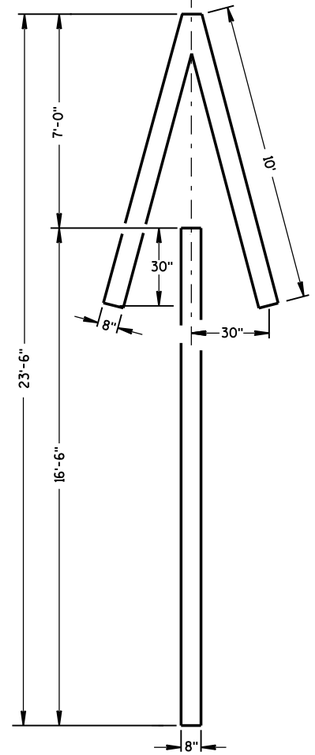
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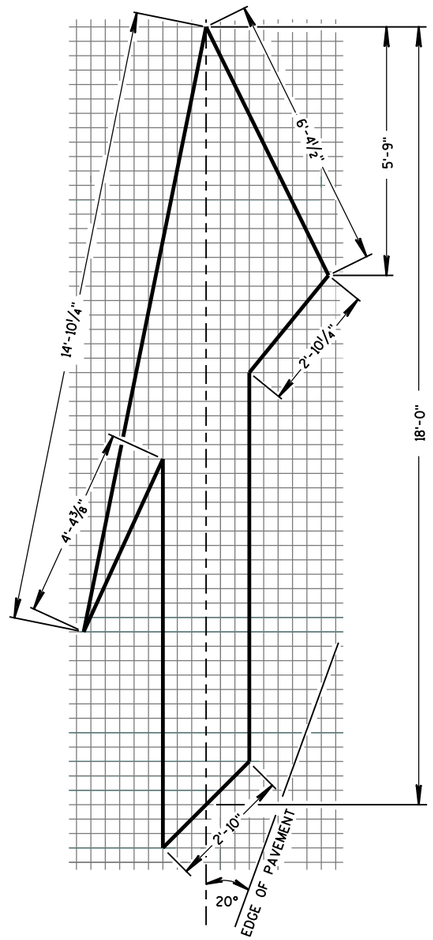
TYPE 2



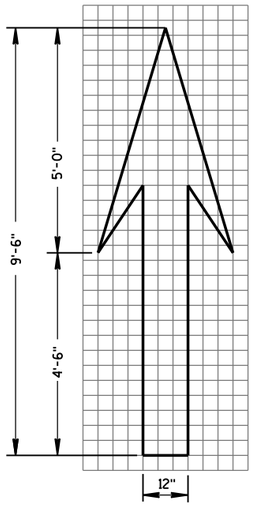
TYPE 6



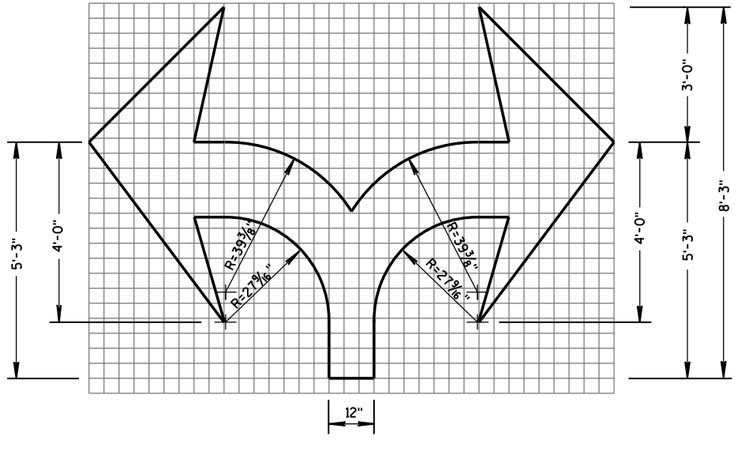
TYPE 4



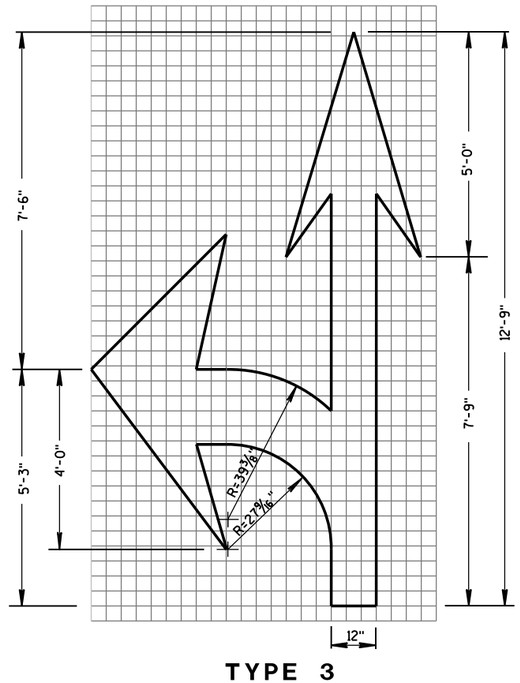
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

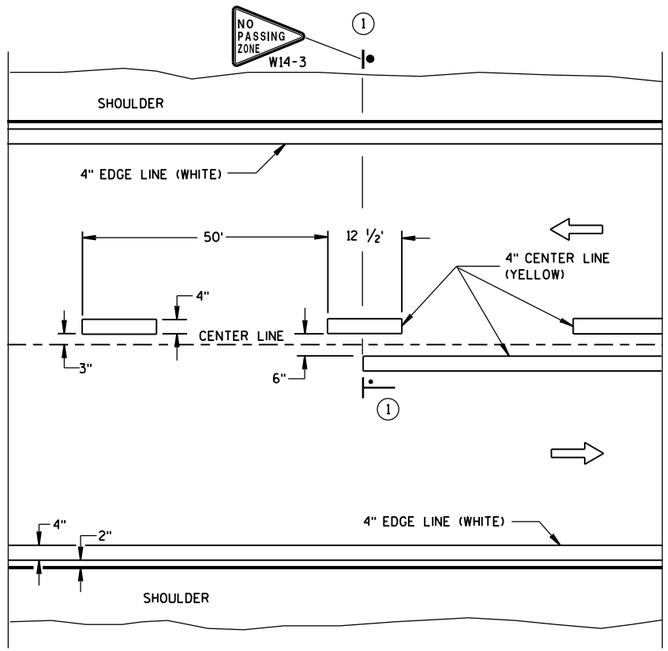
APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER
FHWA

6

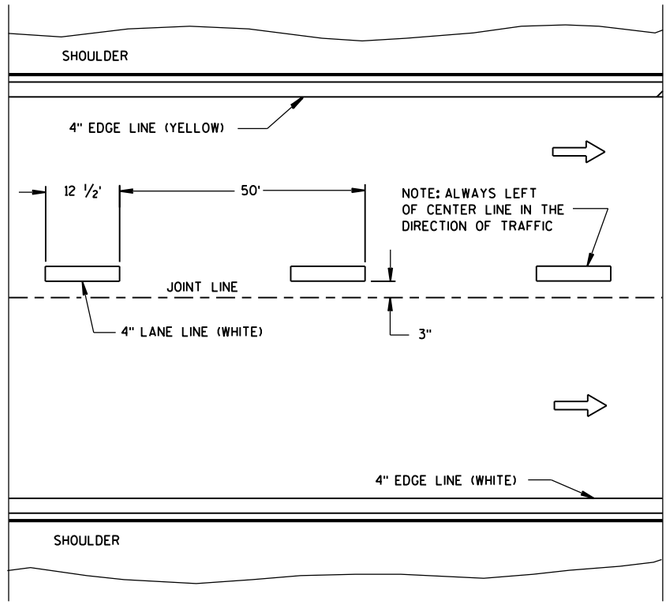
S.D.D. 15 C 7-13c

6

S.D.D. 15 C 7-13c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

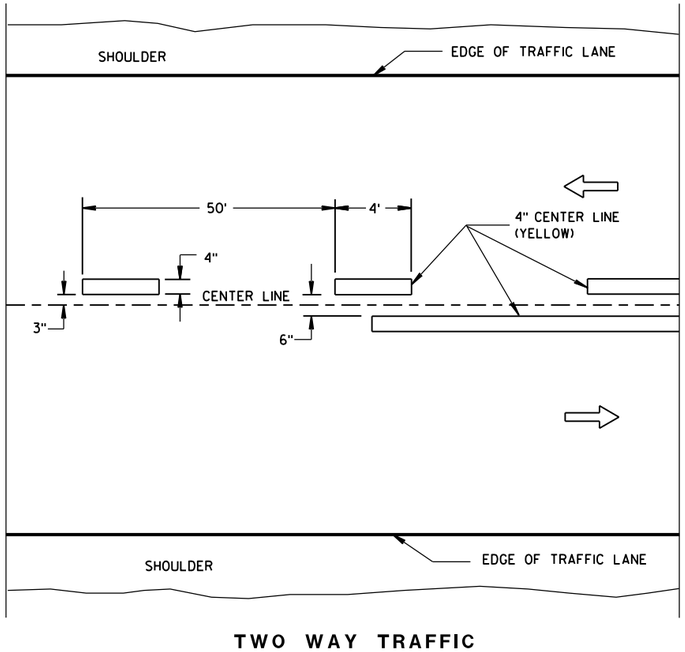
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

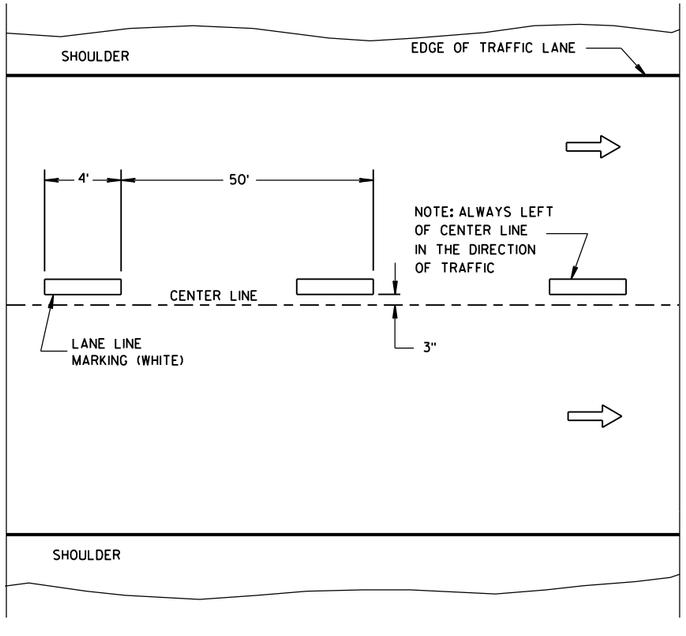
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

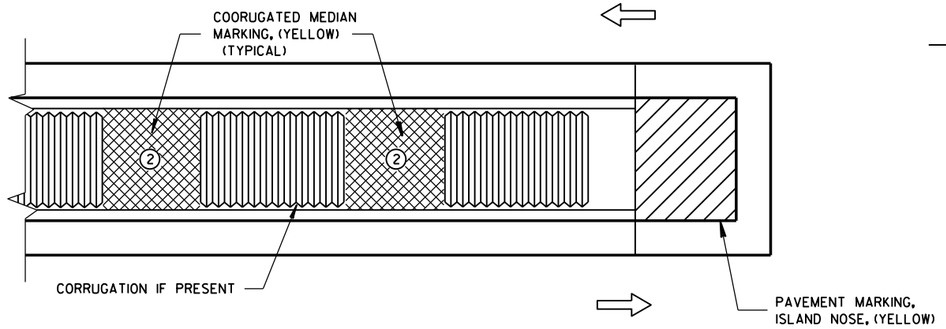
APPROVED
Sept., 2016 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

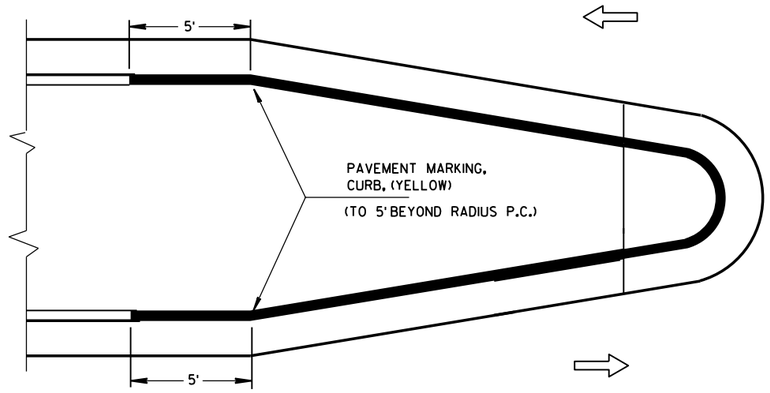
S.D.D. 15 C 8-17a

6

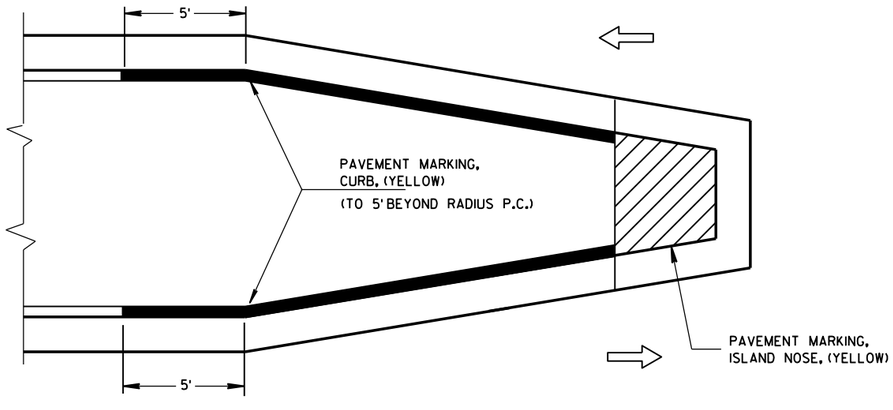
S.D.D. 15 C 8-17a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

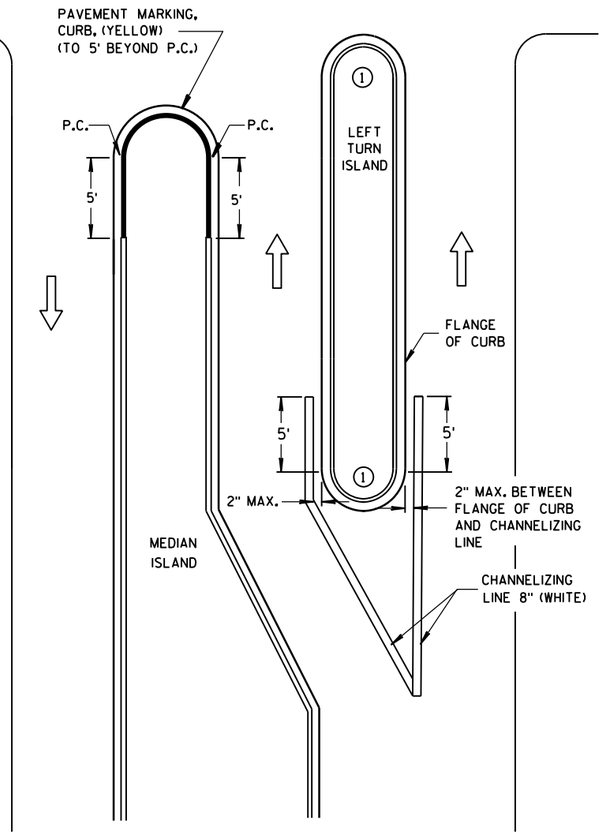


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

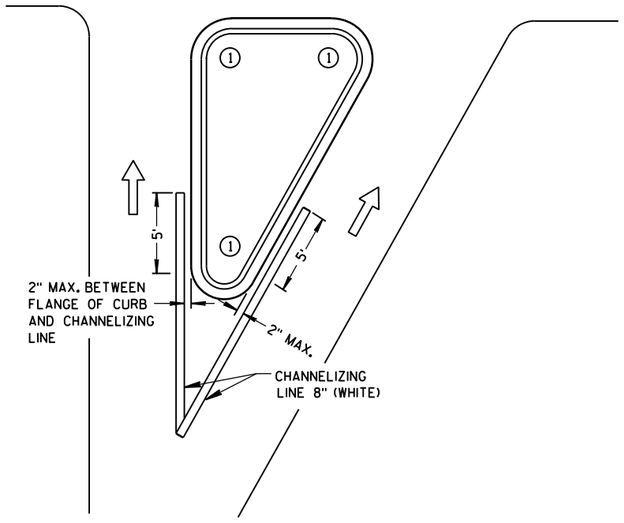


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

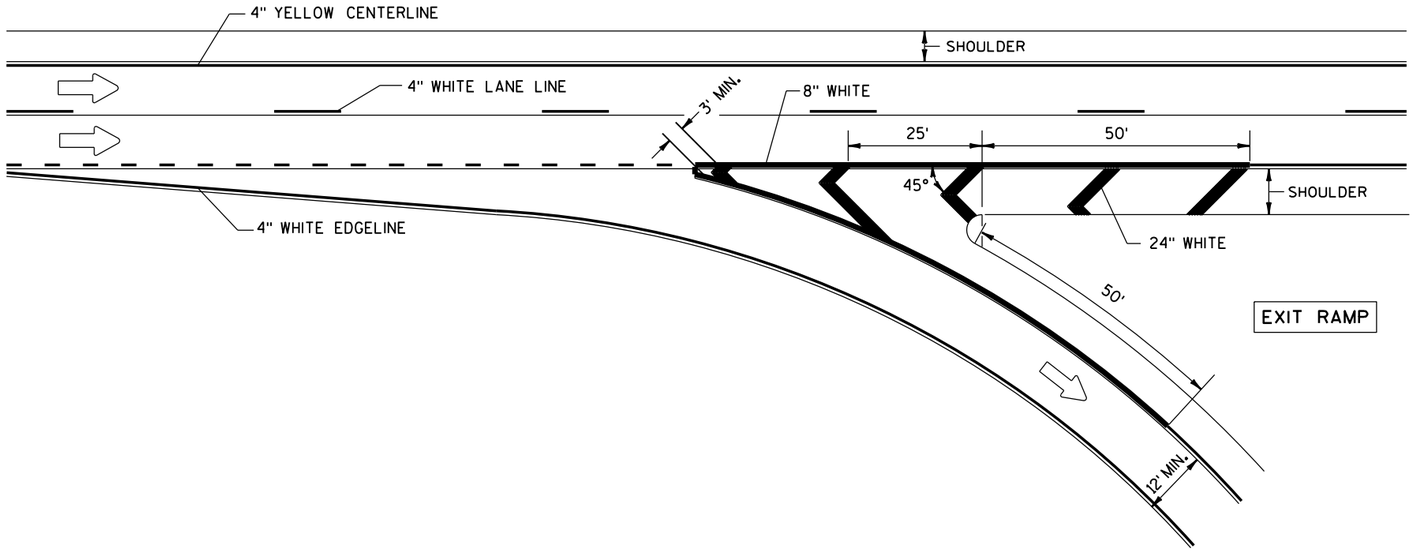
- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-17c



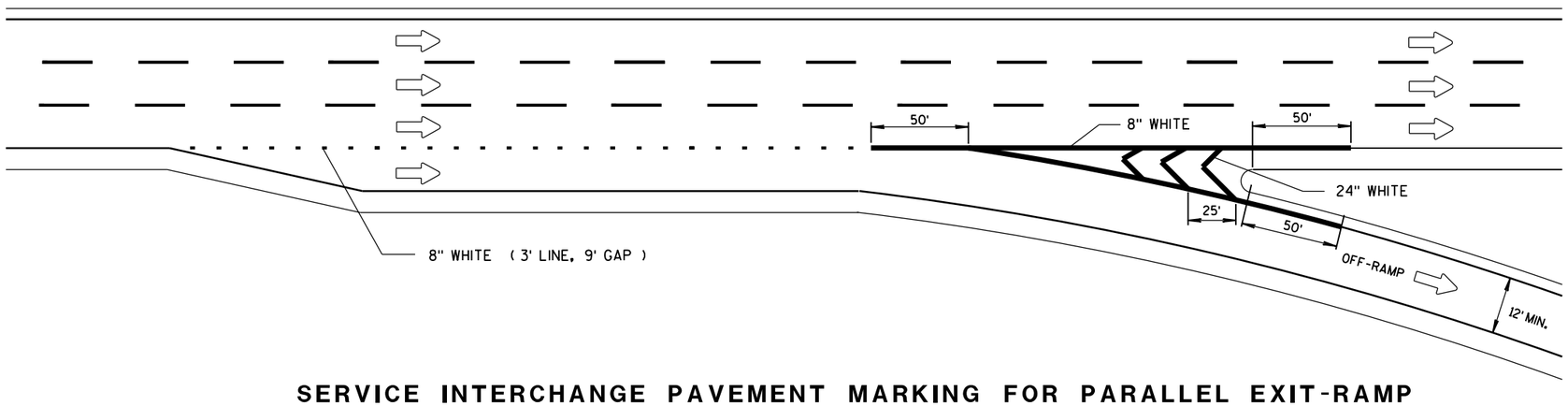
PAVEMENT MARKING FOR EXIT RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

6

S.D.D. 15 C 31-2a

PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

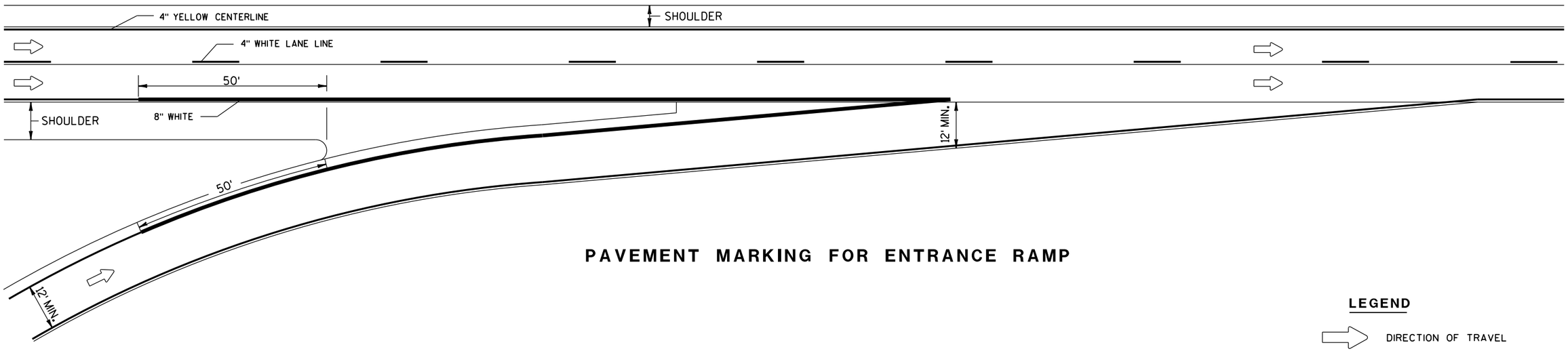
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S.D.D. 15 C 31-2a

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

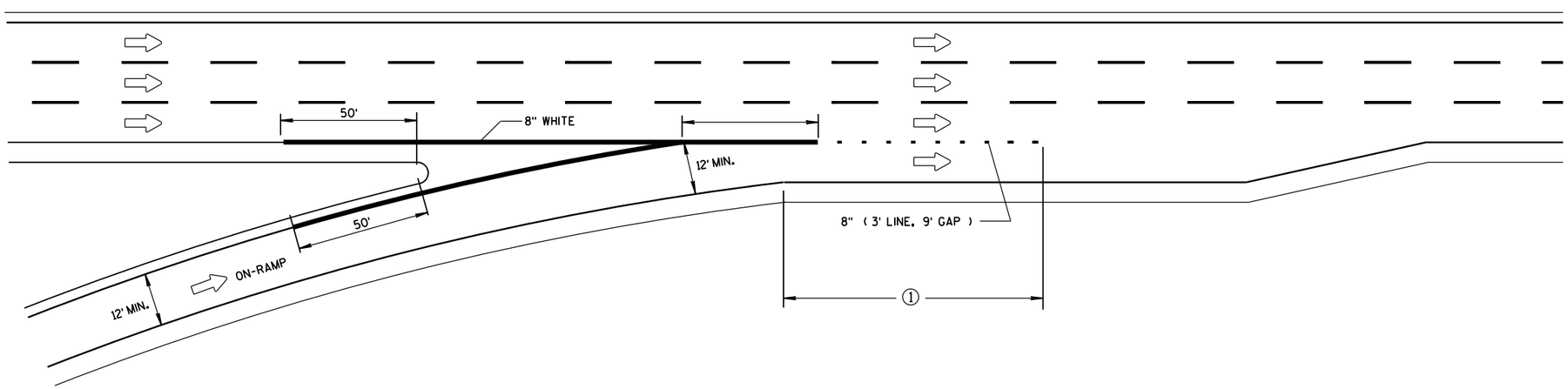
① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.



PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR 279 NEER

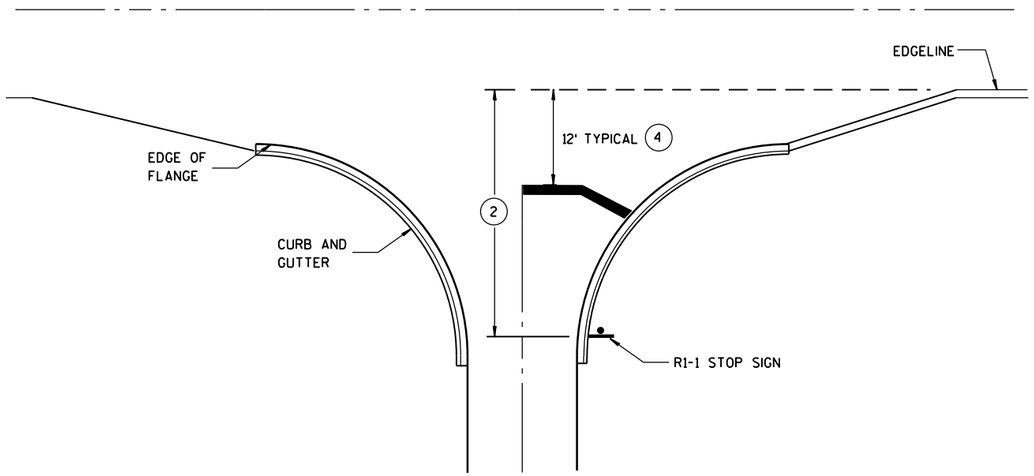
FHWA

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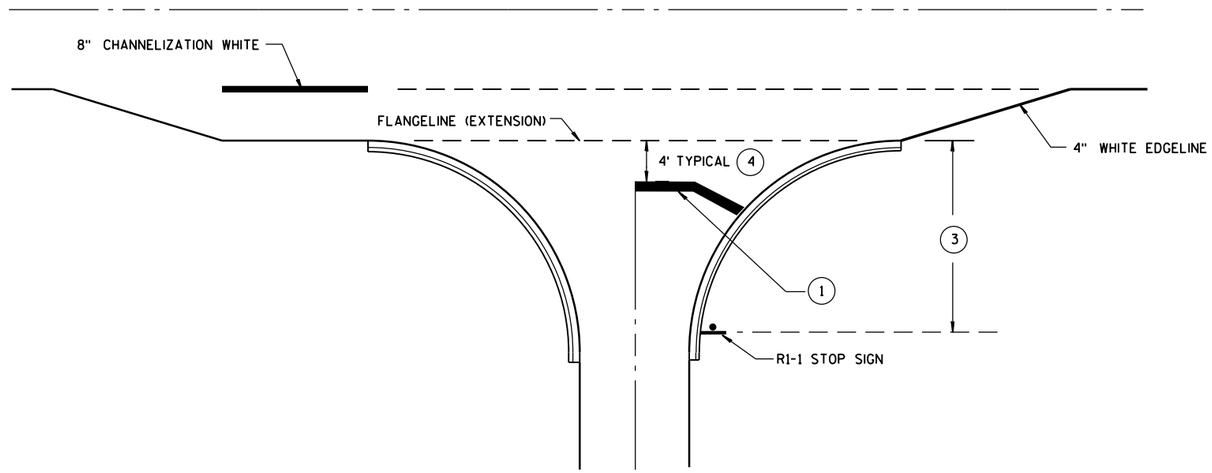
S.D.D. 15 C 31-2c

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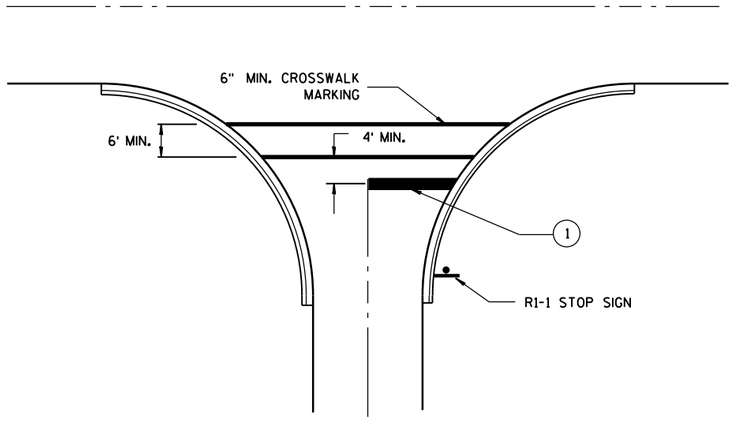
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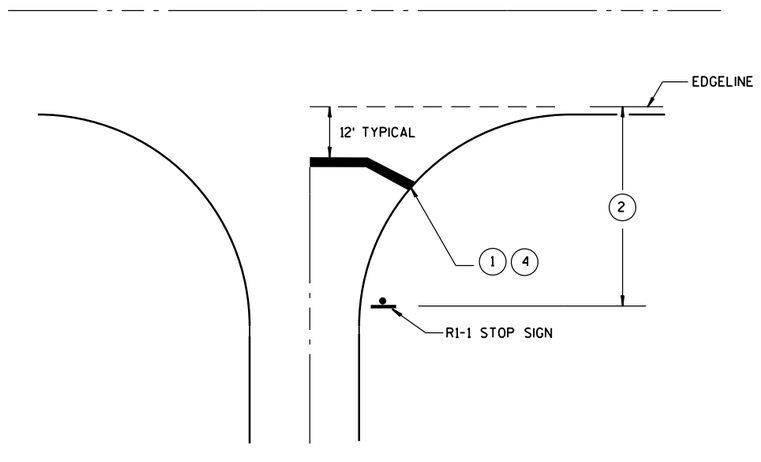
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE 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.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

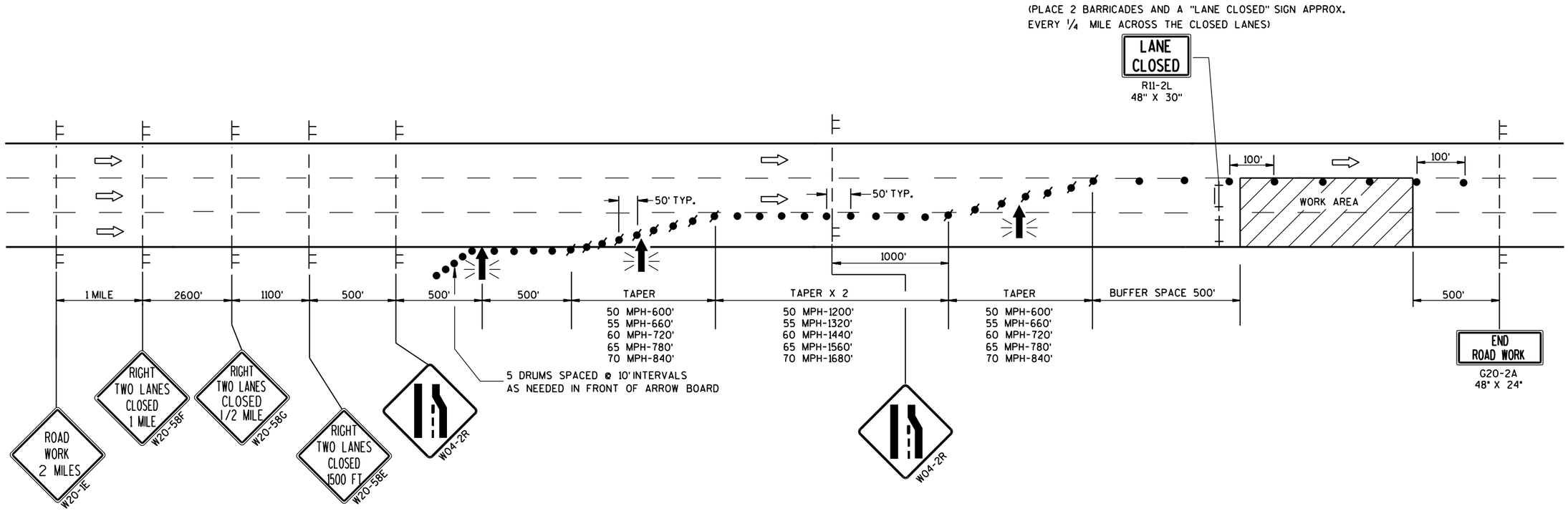
4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR 280 NEER

FHWA

6

S.D.D. 15 C 33-2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

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

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

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

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

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

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

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

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

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.

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

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

TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

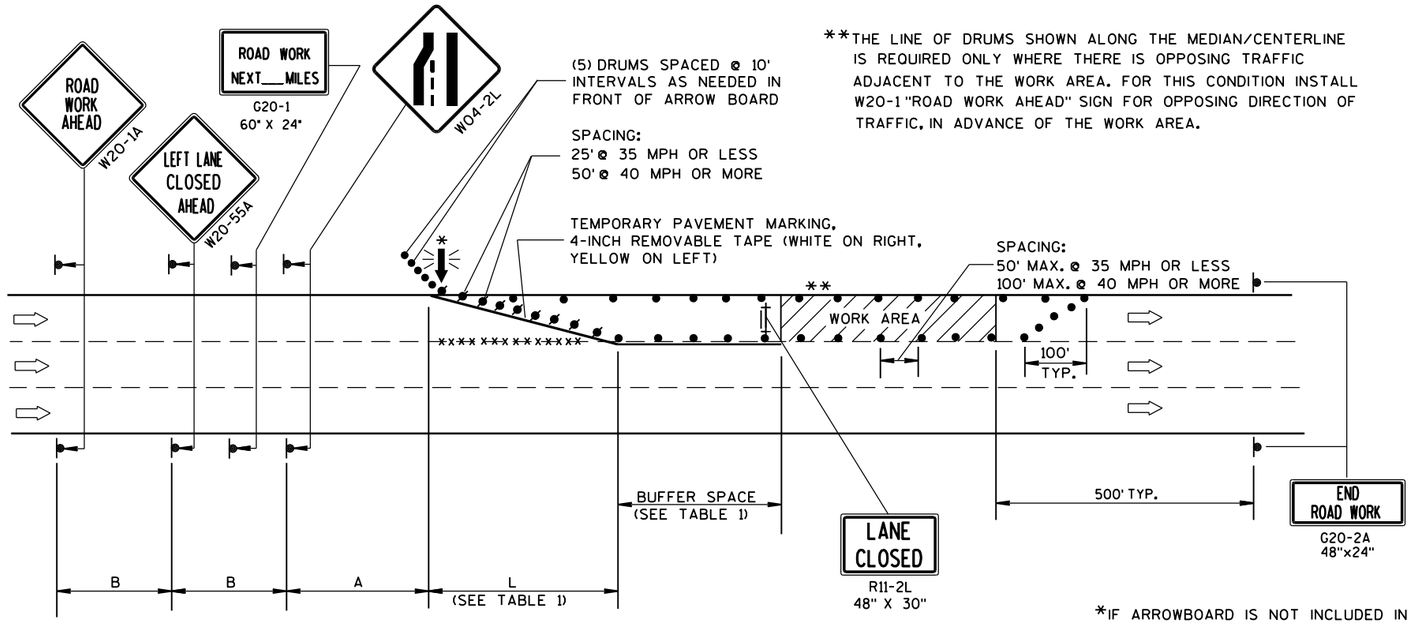
APPROVED
July 14, 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 14-3

6

S.D.D. 15 D 14-3



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

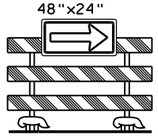


TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

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

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER — IC

6

S.D.D. 15 D 20-4

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

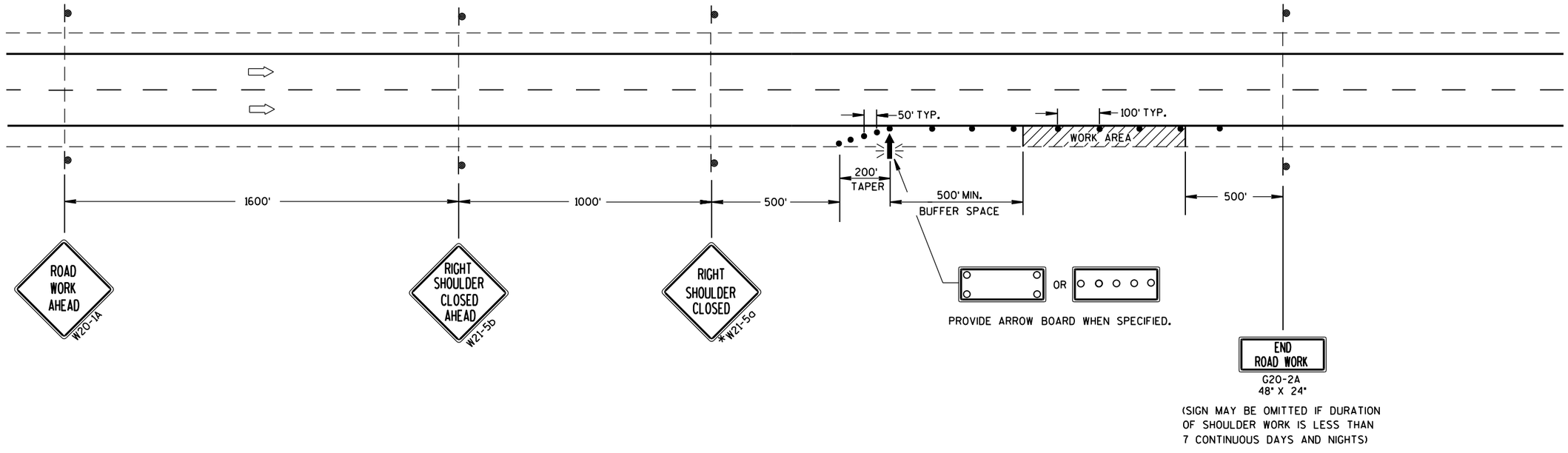
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

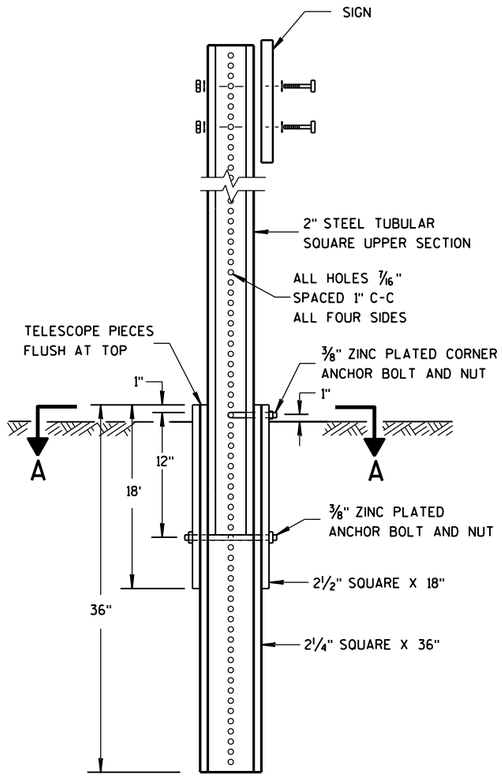
June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

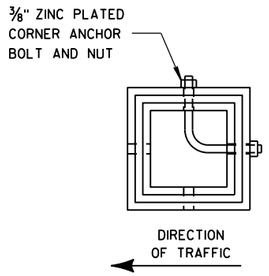
FHWA

6

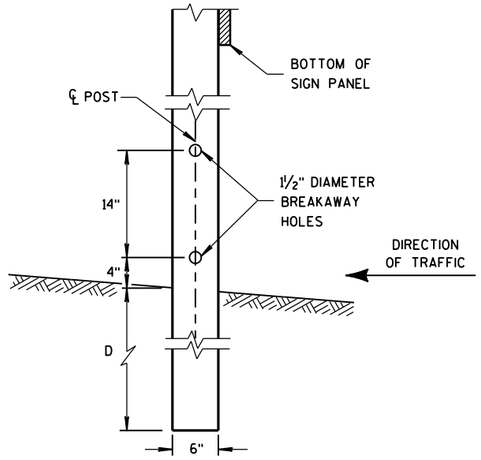
S.D.D. 15 D 27-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



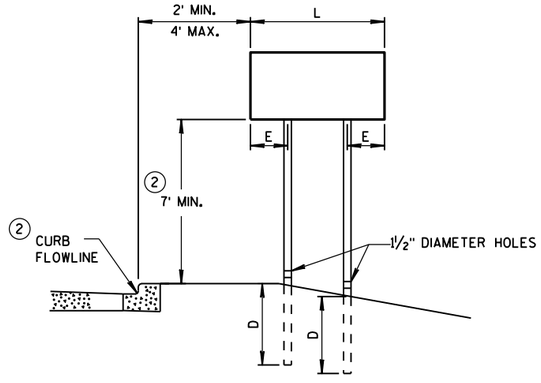
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

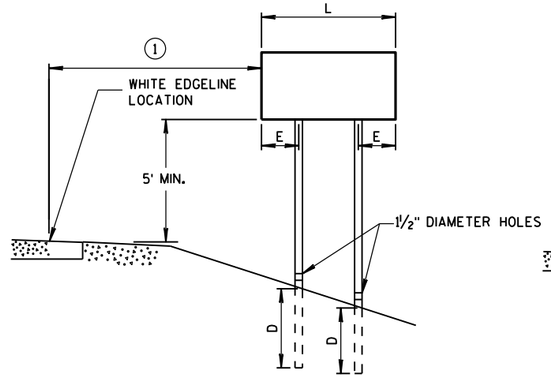
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

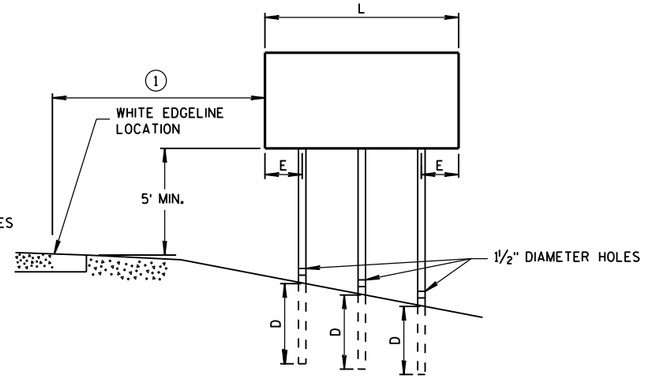
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

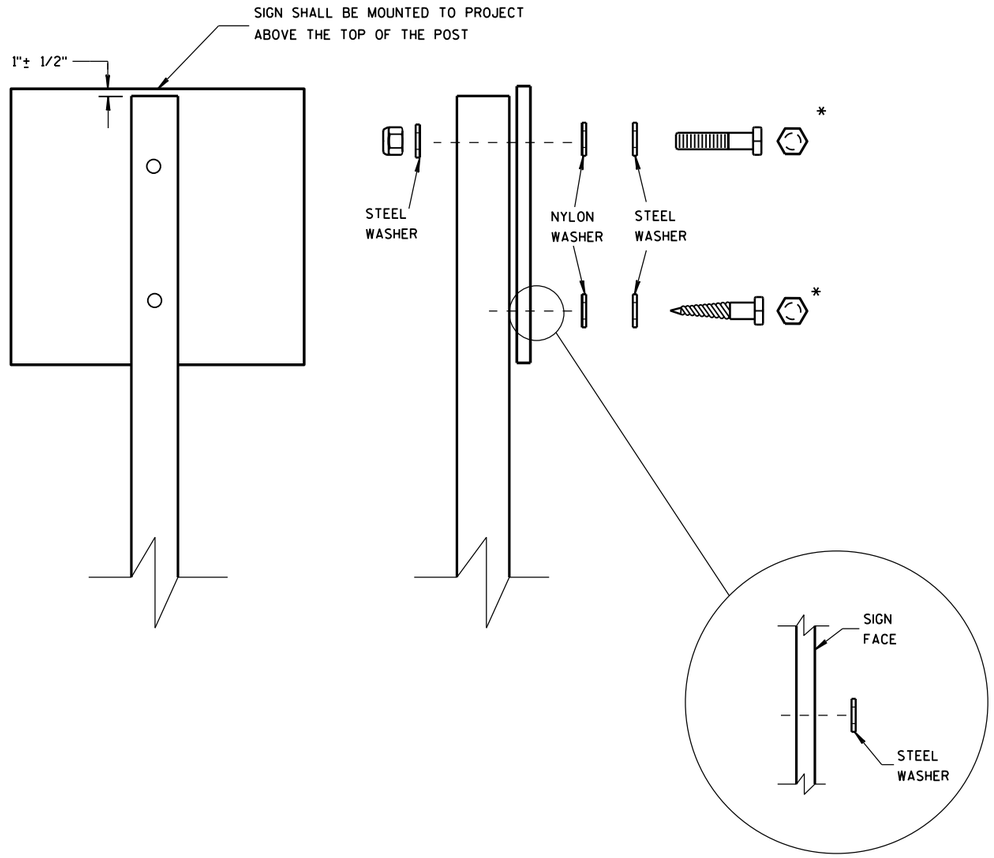
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPO

6

S.D.D. 15 D 38-1a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

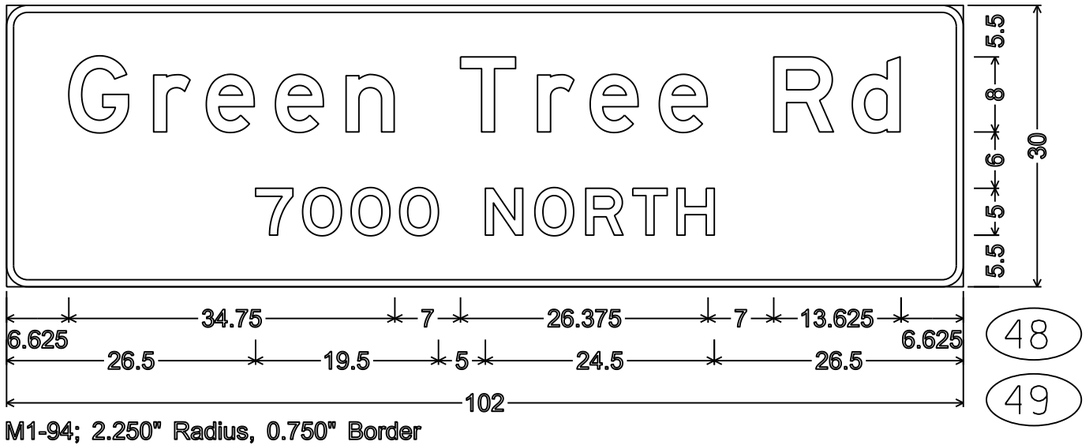
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

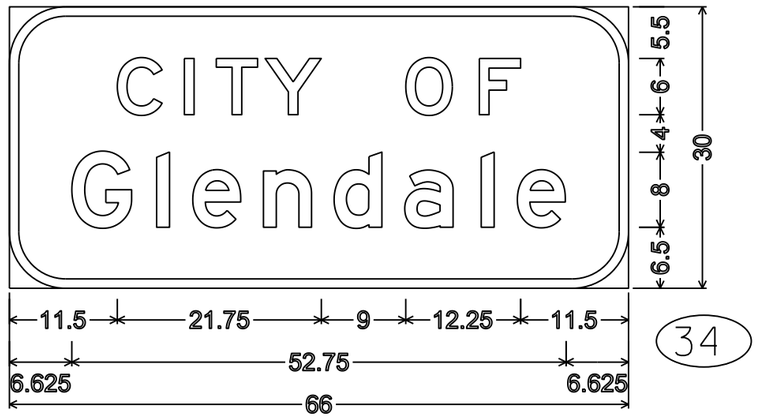
SIGN

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



M1-94; 2.250" Radius, 0.750" Border



I2-3A; 6.000" Radius, 1.000" Border

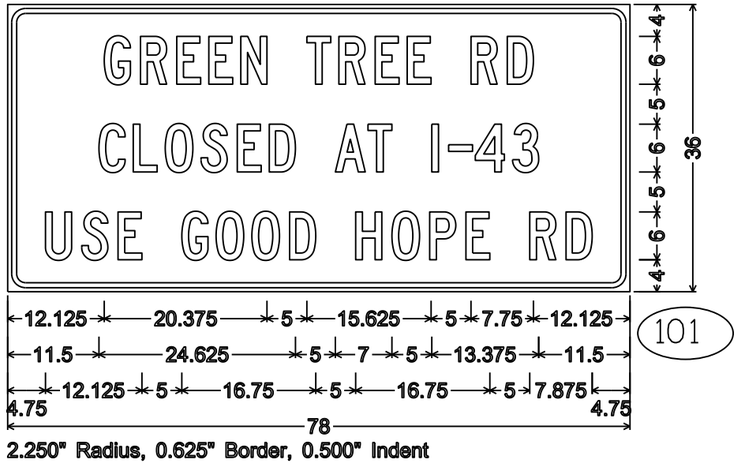
7

7

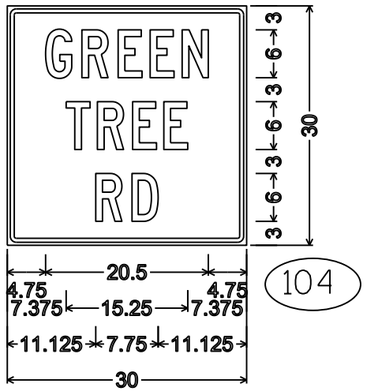
PROJECT NO: 1228-16-71	HWY: IH 43	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET NO: 286	E

NOTES

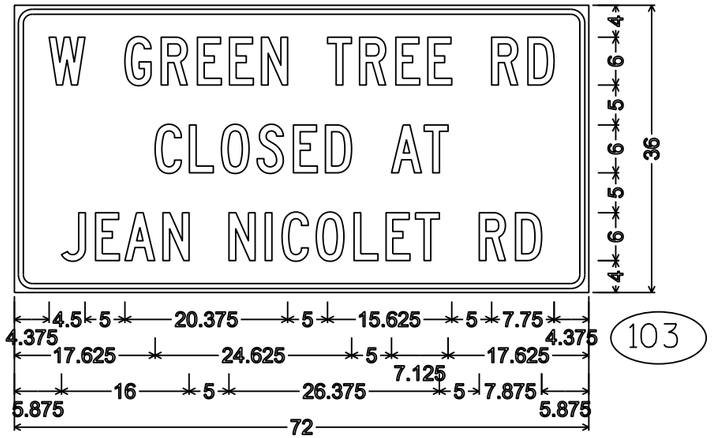
1. All Signs Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



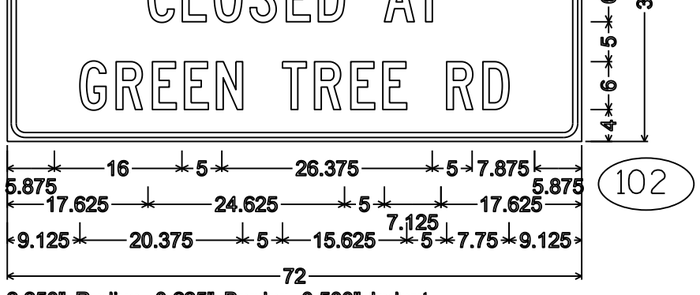
2.250" Radius, 0.625" Border, 0.500" Indent



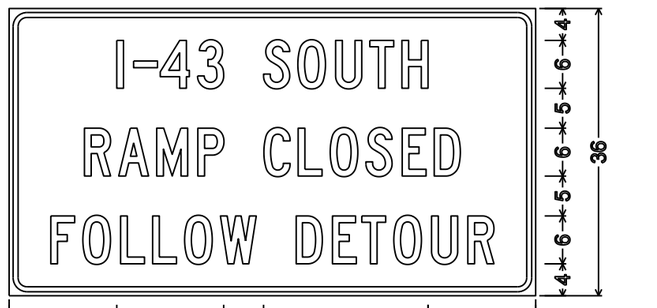
1.125" Radius, 0.500" Border, 0.375" Indent



2.250" Radius, 0.625" Border, 0.500" Indent



2.250" Radius, 0.625" Border, 0.500" Indent

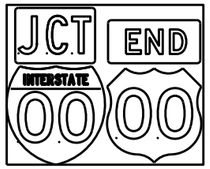


2.250" Radius, 0.625" Border, 0.500" Indent

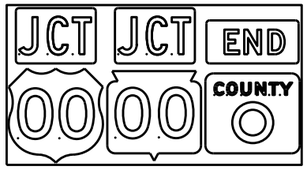
TYPICAL ASSEMBLIES



J1-1



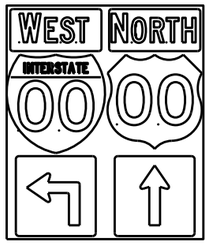
J1-2



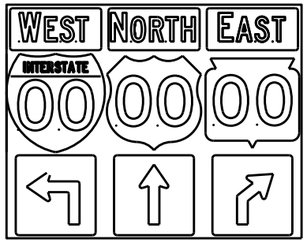
J1-3



J2-1



J2-2

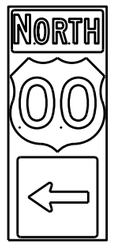


J2-3

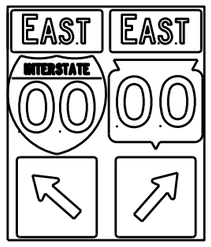


JV

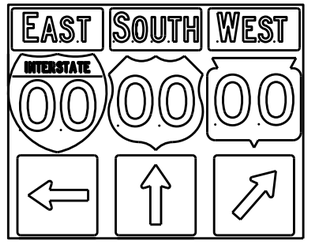
(Typical Vertical J-Assembly
See Note 10 and 11)



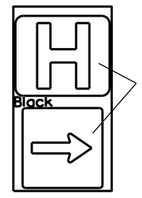
J3-1



J3-2



J3-3

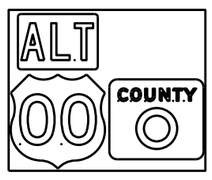


Blue Background

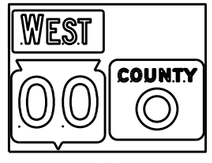
JH-1



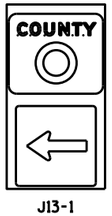
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

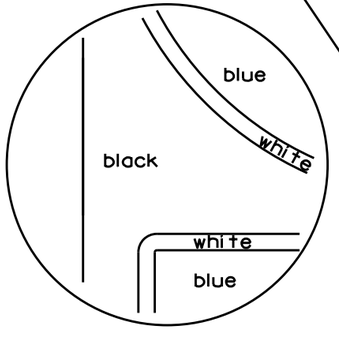


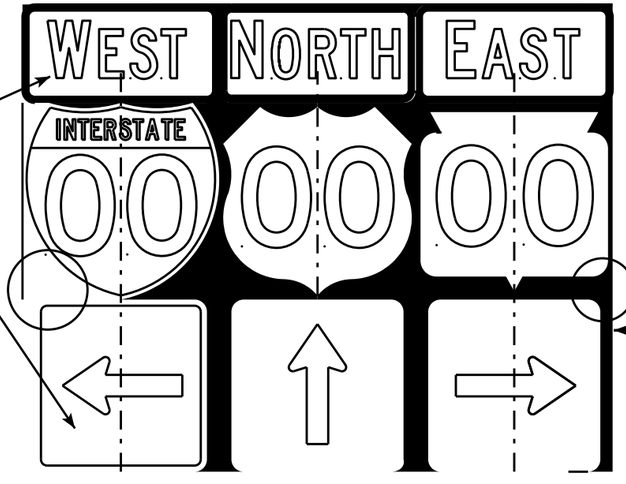
J23-1

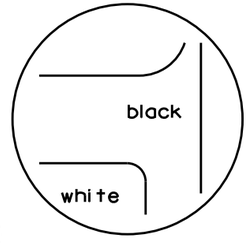


J22-1

[blue background with interstate]







[black background]

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

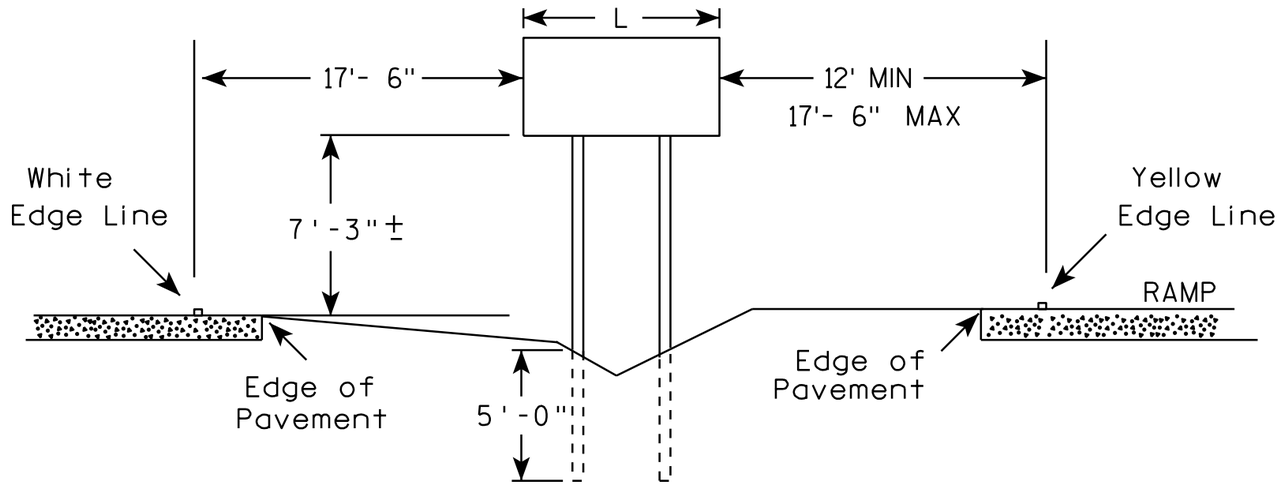
APPROVED Matthew R Rauch
for State Traffic Engineer

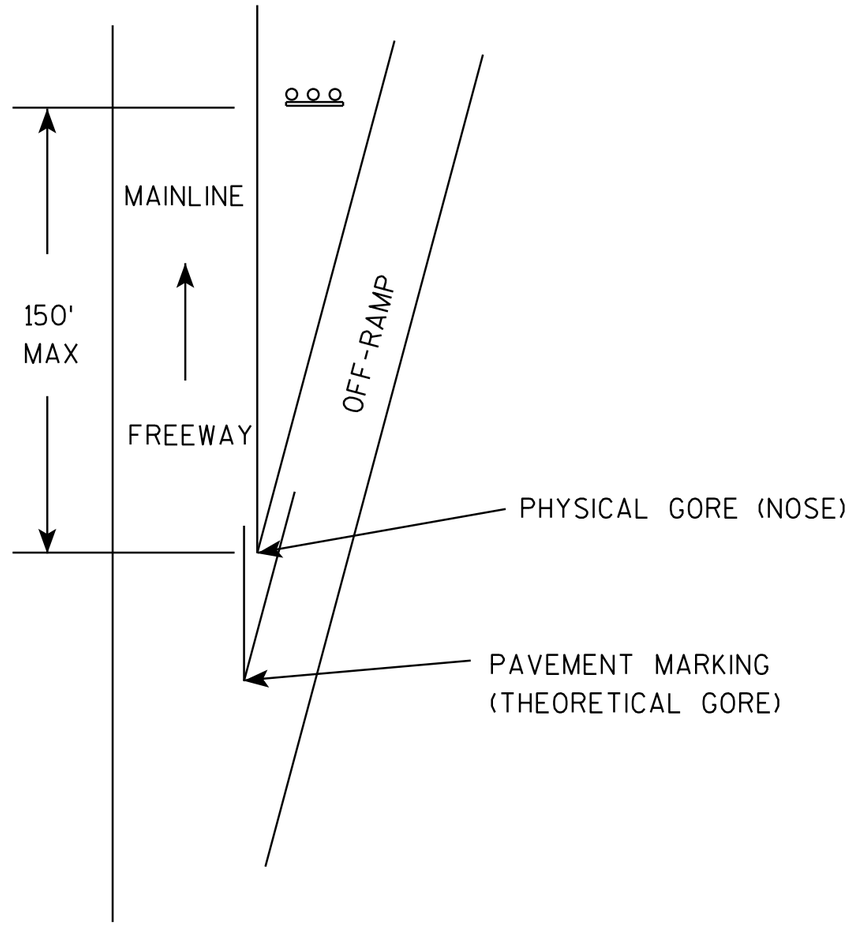
DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

7

7

TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

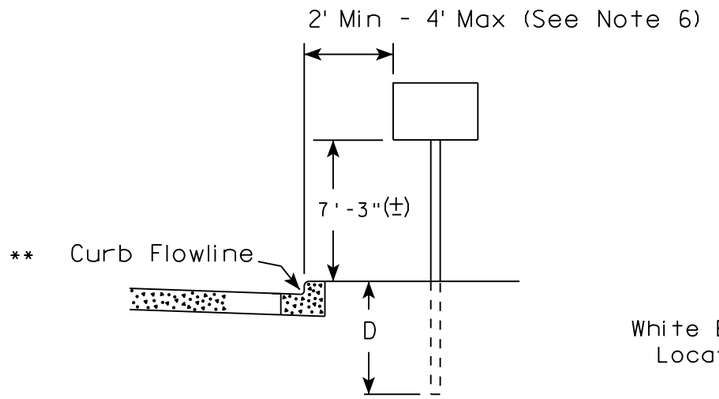
DATE 2/06/14 PLA... A4-2.3

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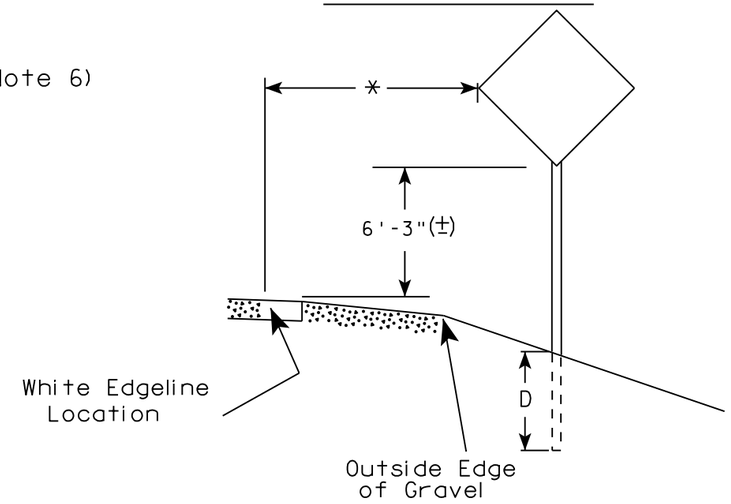
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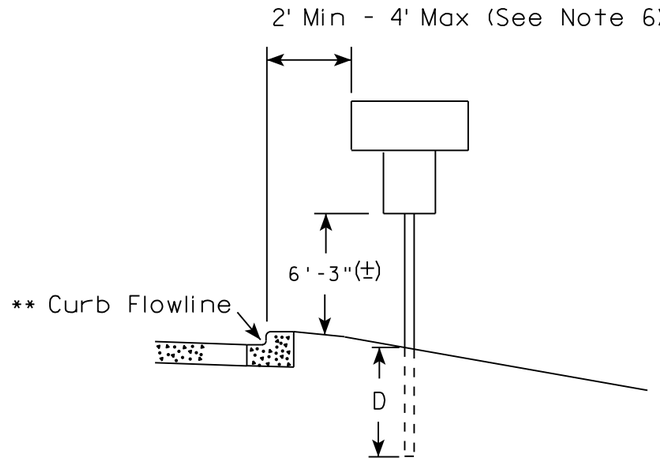
WISDOT/CADDS SHEET 42

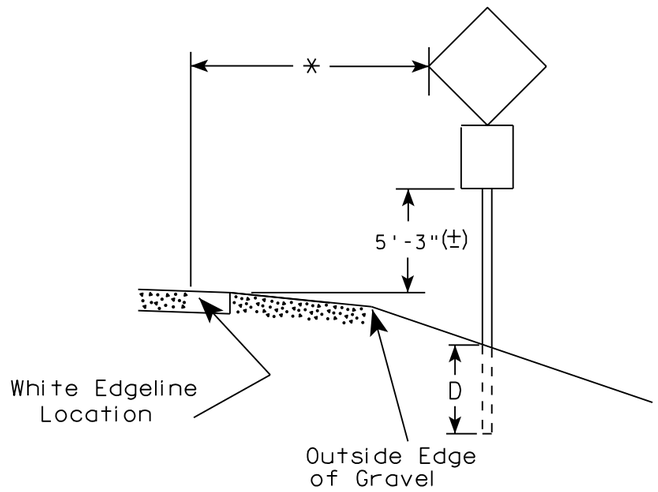
URBAN AREA



RURAL AREA (See Note 2)







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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

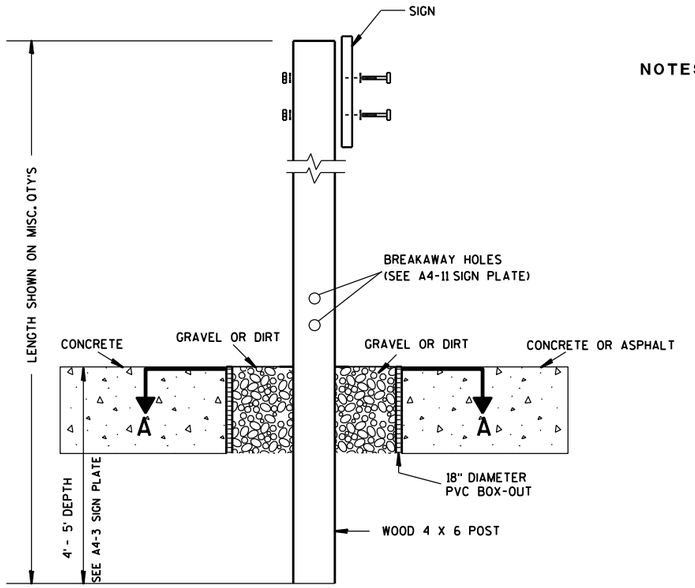
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

7 7

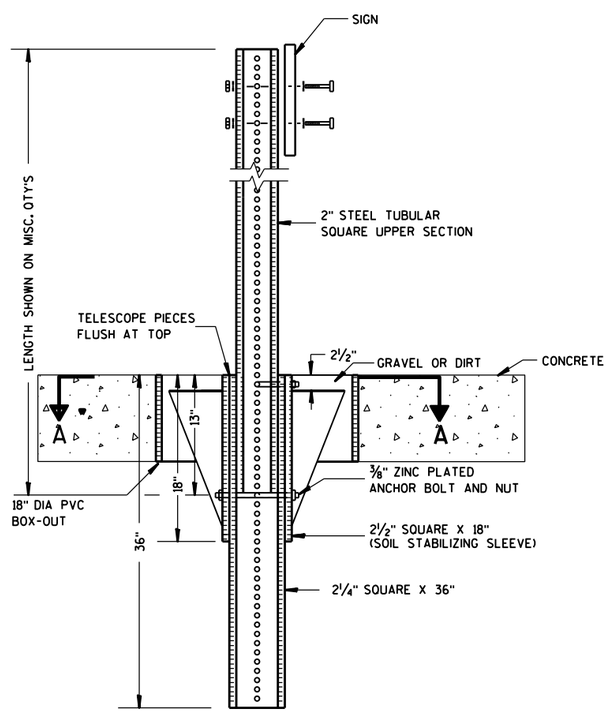
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 290	E



ELEVATION VIEW

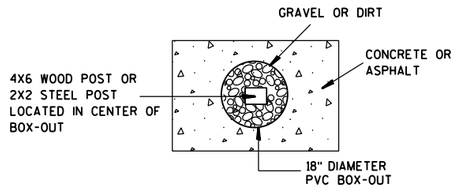
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

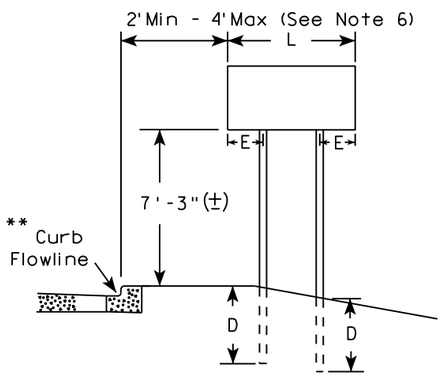
APPROVED Matthew R Rauch
for State Traffic Engineer

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

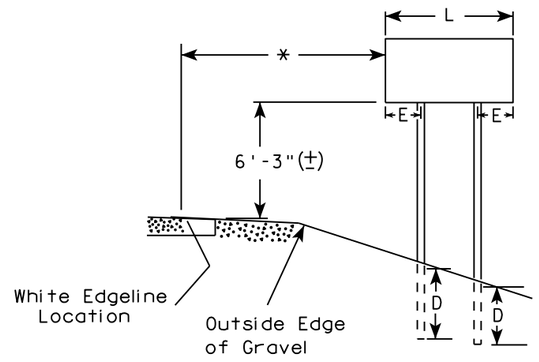
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

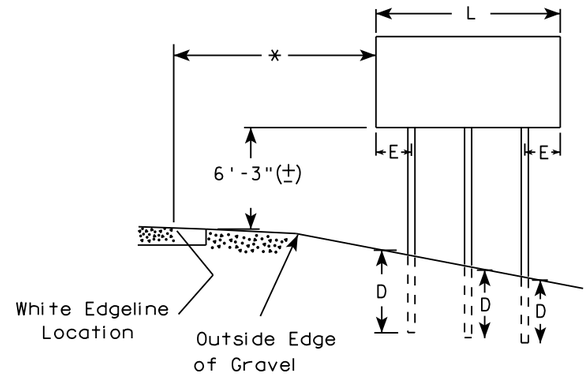
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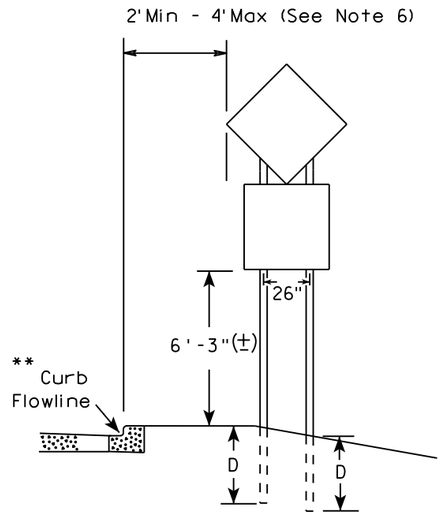
URBAN AREA



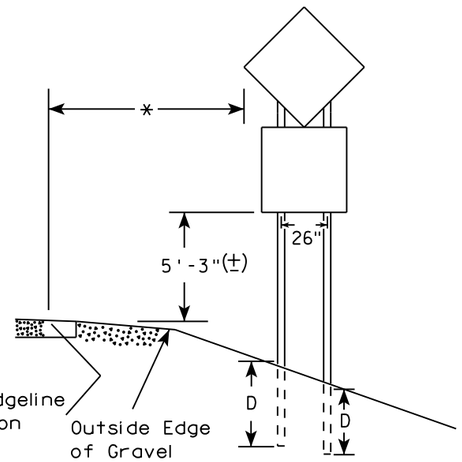
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

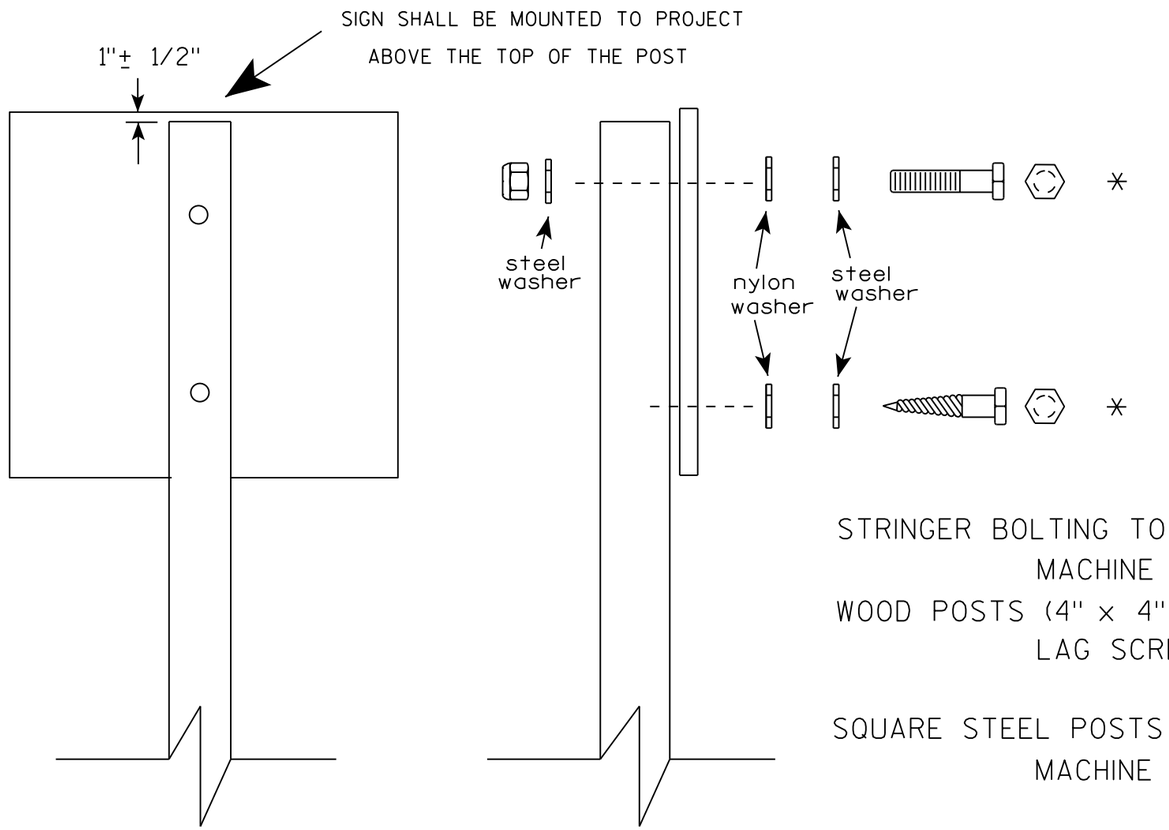
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 292	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)

3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)

3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

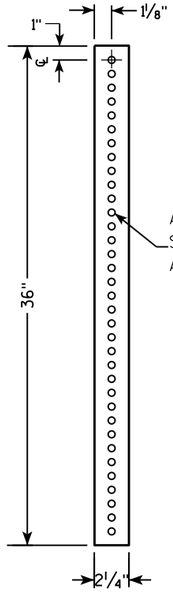
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

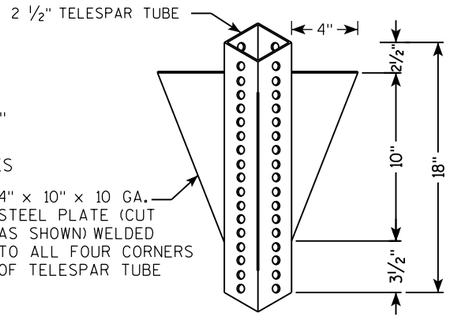
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

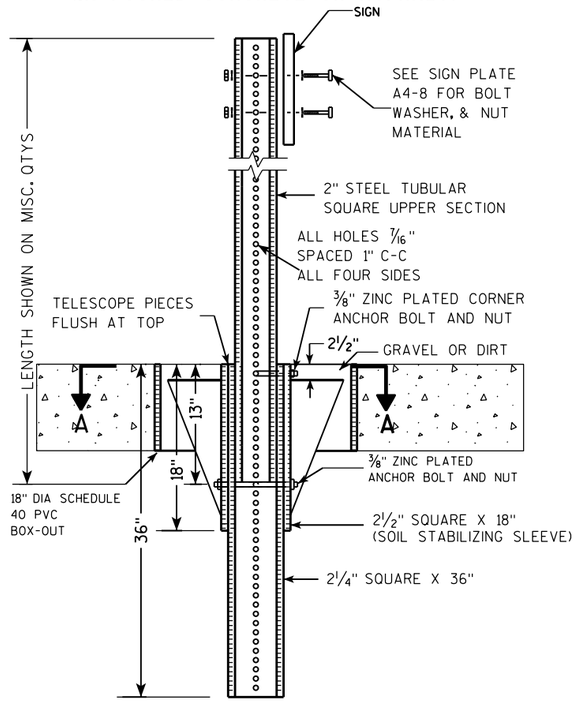
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



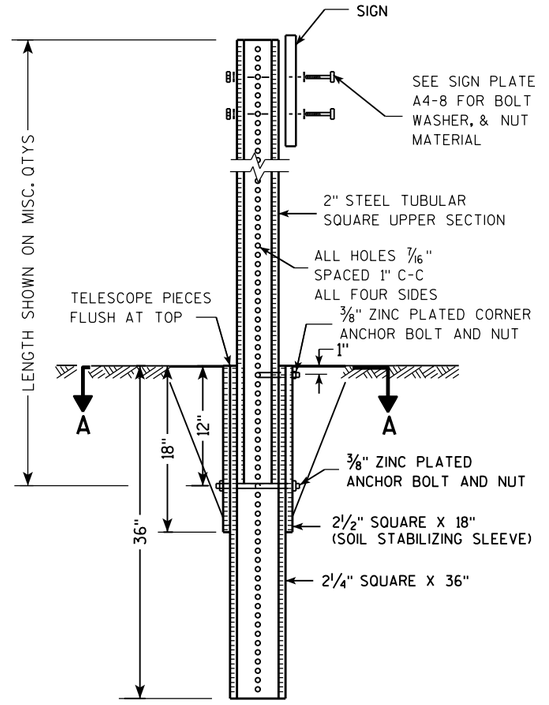
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

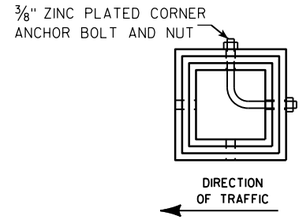


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

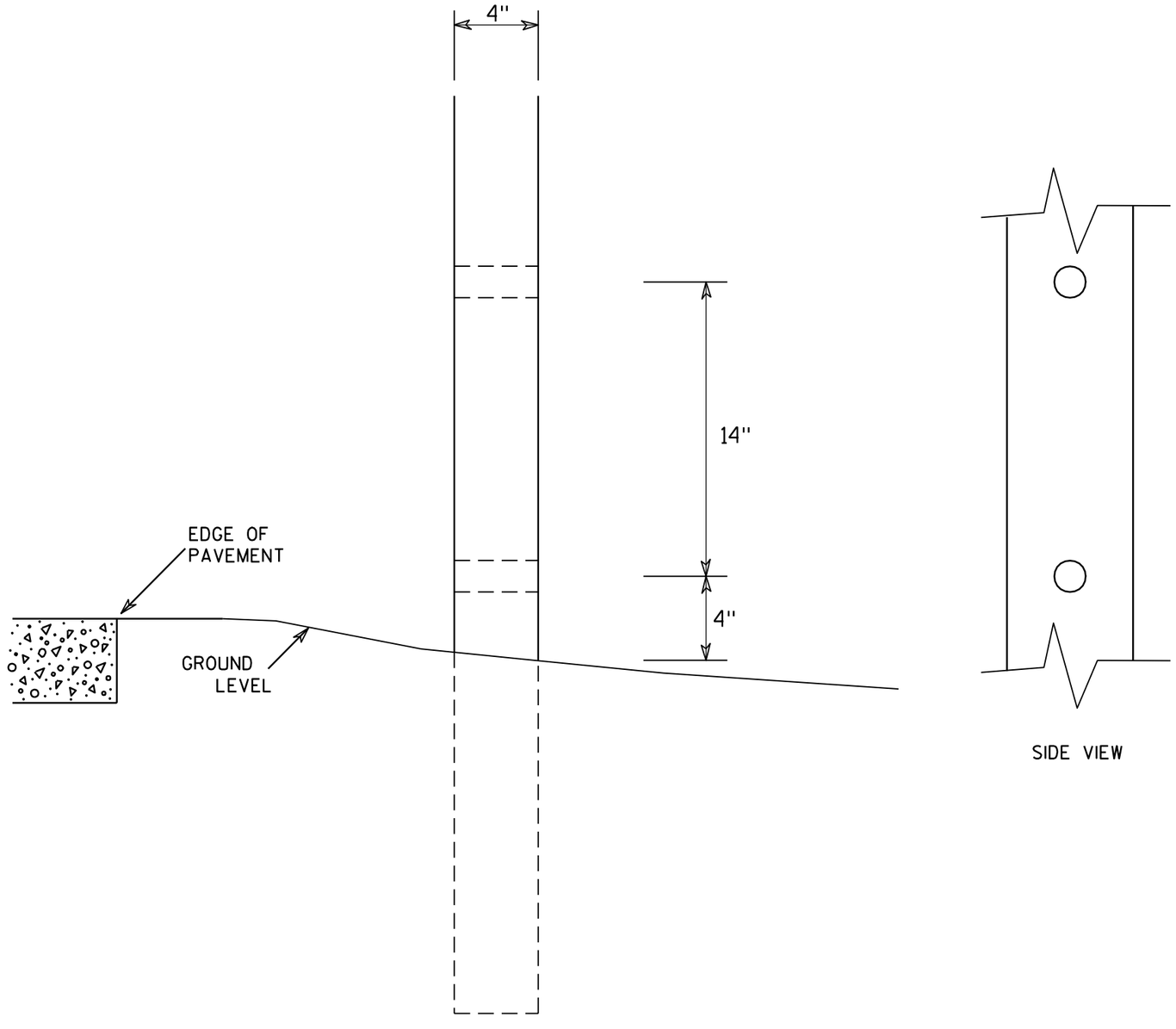
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 294 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

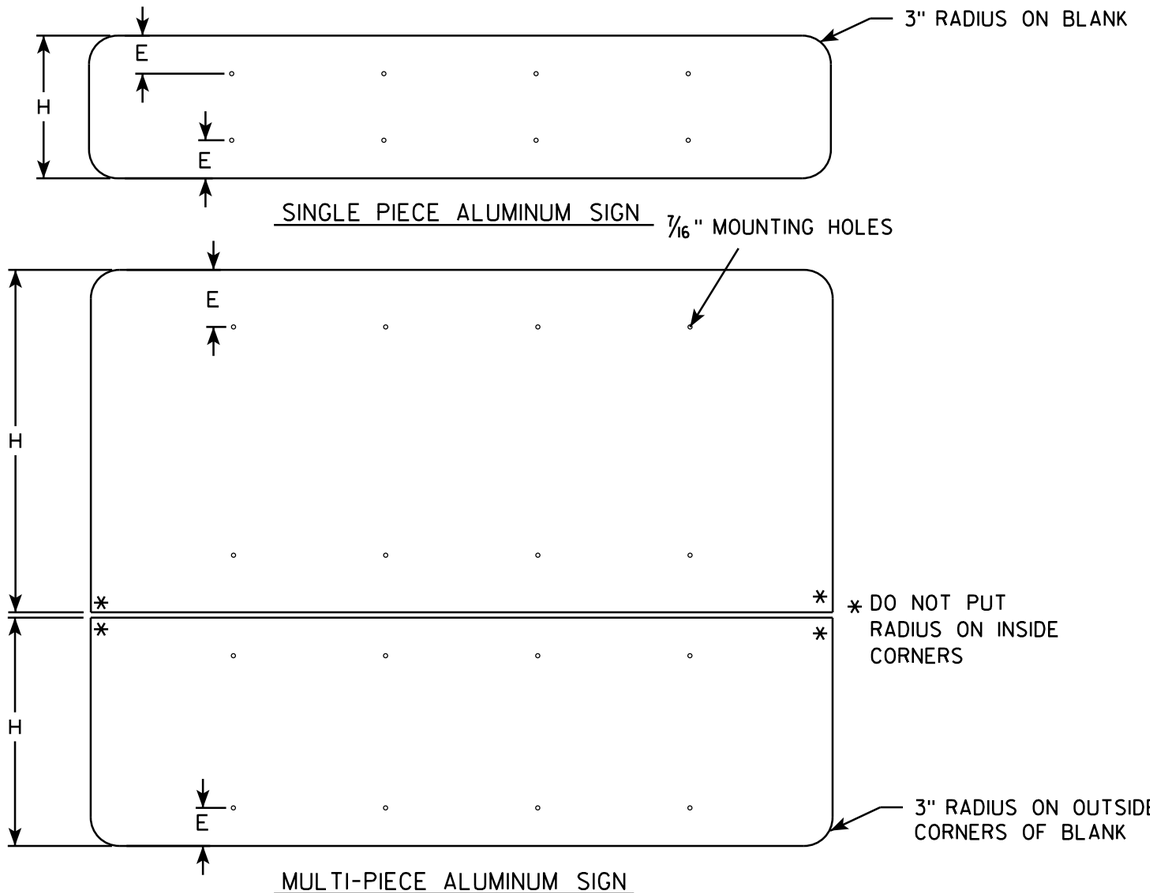
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

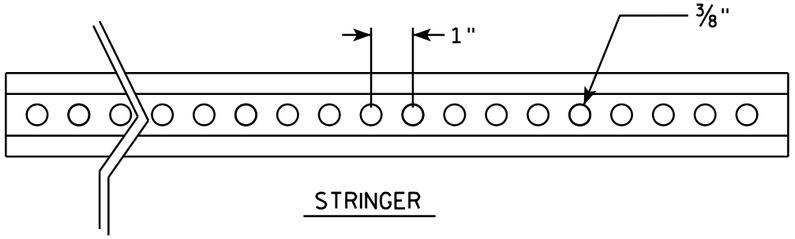
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 295	E



GENERAL NOTES

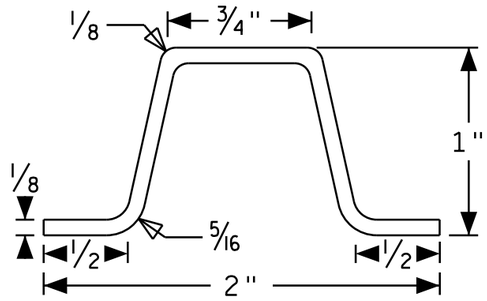
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

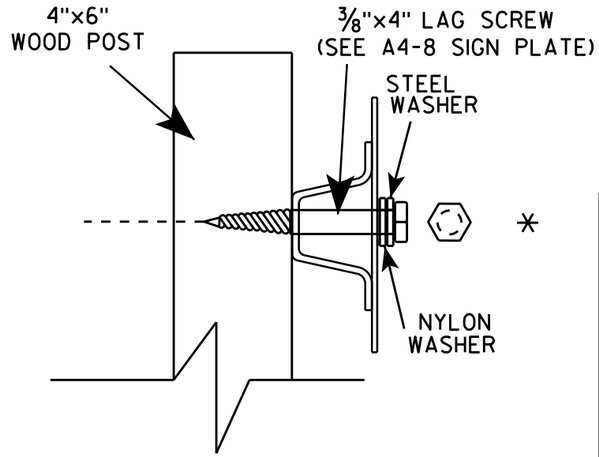


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

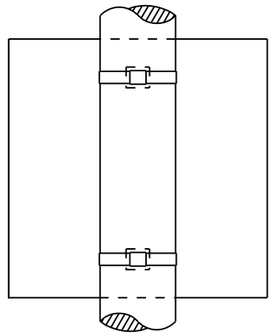
DATE 4/26/16 PLATE NO A4-18.1

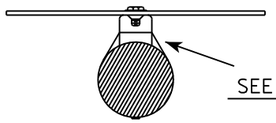
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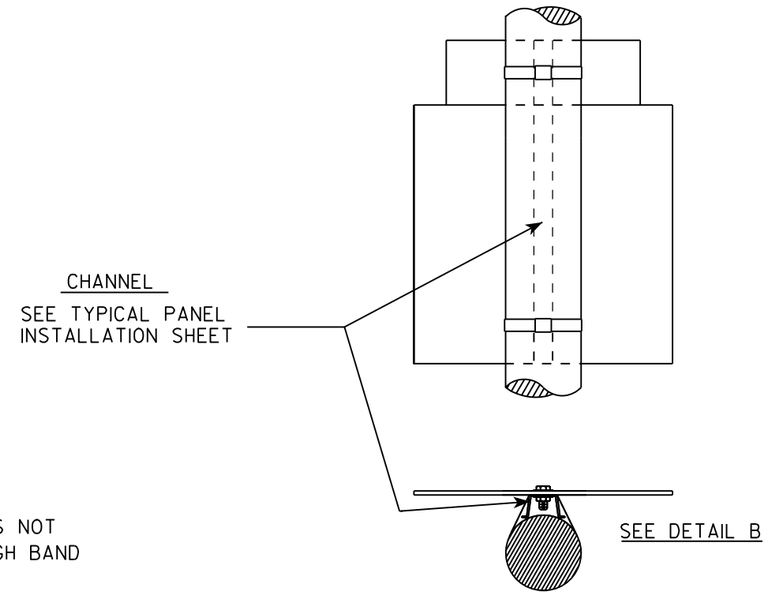
BANDING

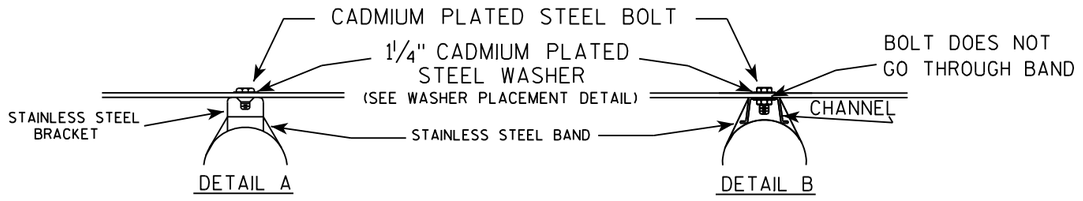
SINGLE SIGN



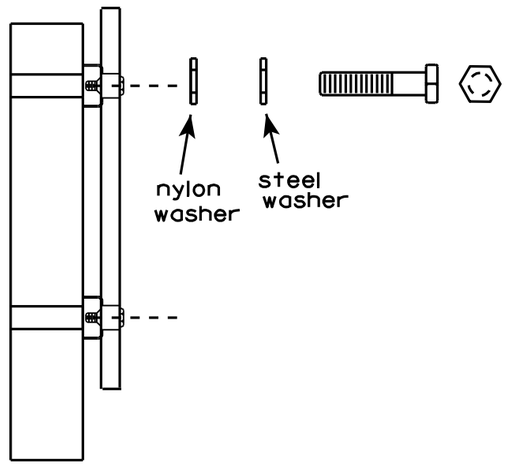


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

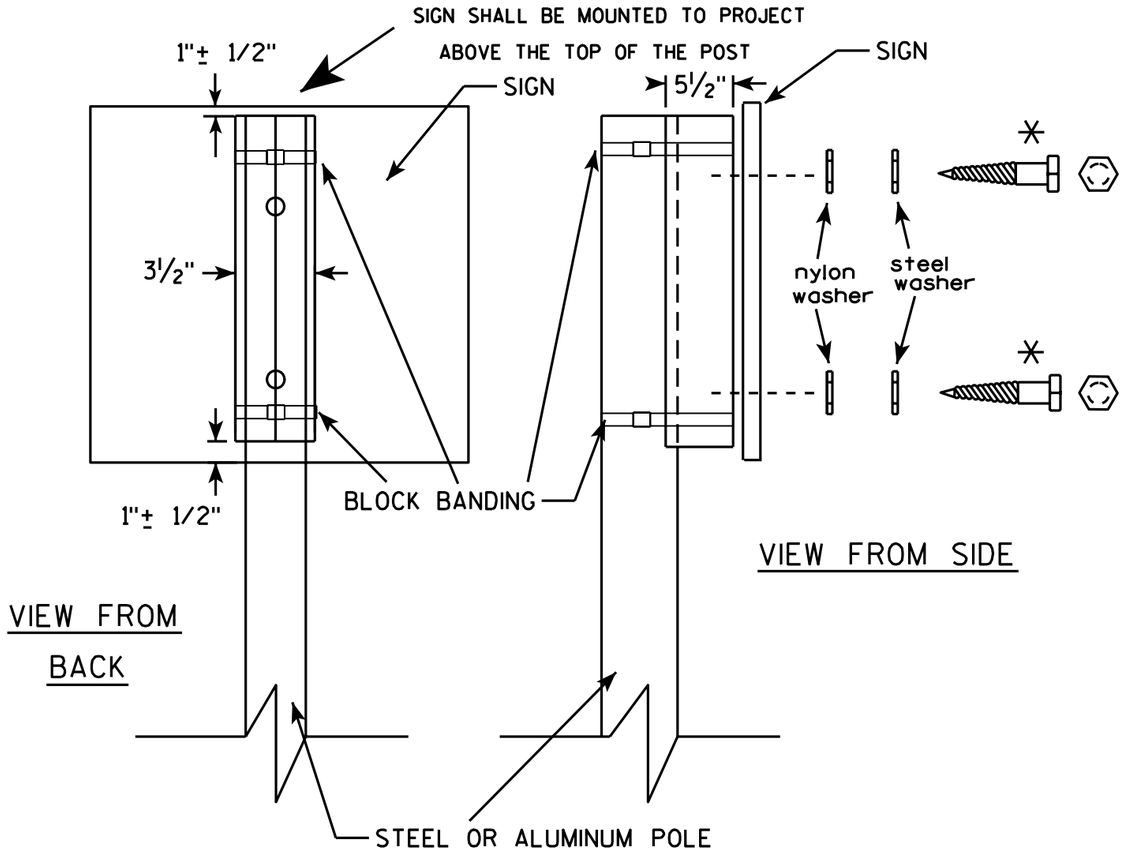
STANDARD SIGN
SIGN BANDING DETAILS

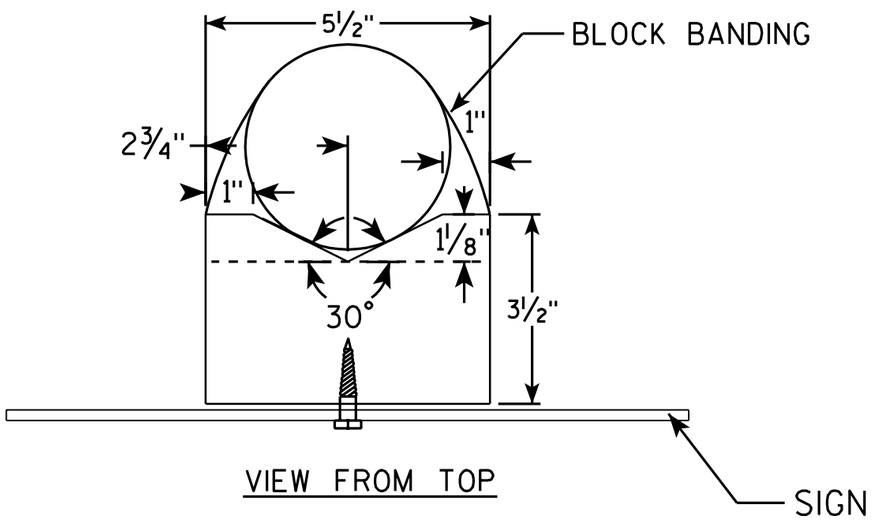
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 297	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

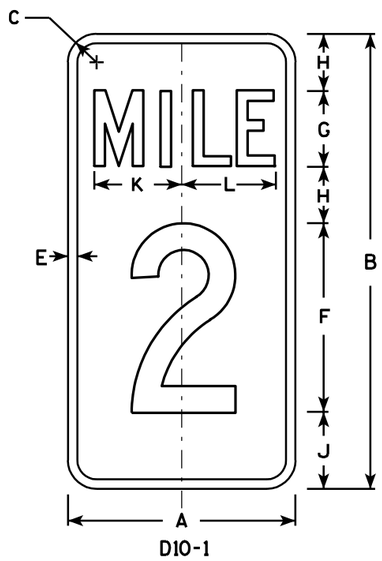
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

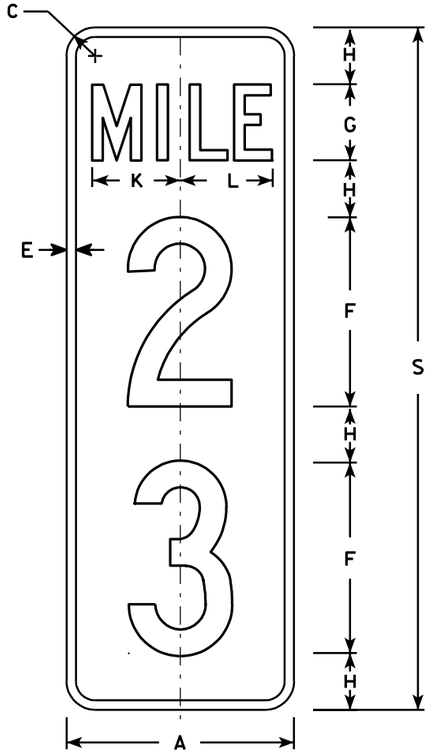
SHEET NO: 298 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

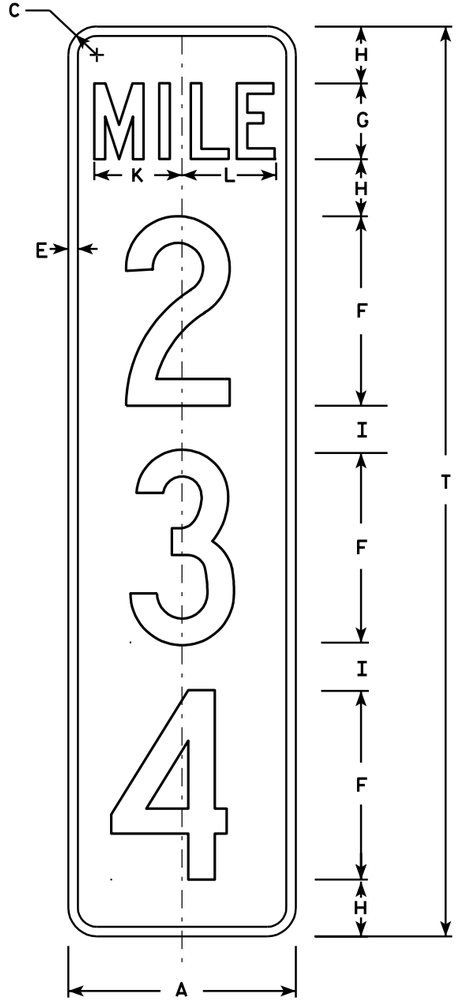
WISDOT/CADDS SHEET 42



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1																										
2																										
3																										
4	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						
5	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

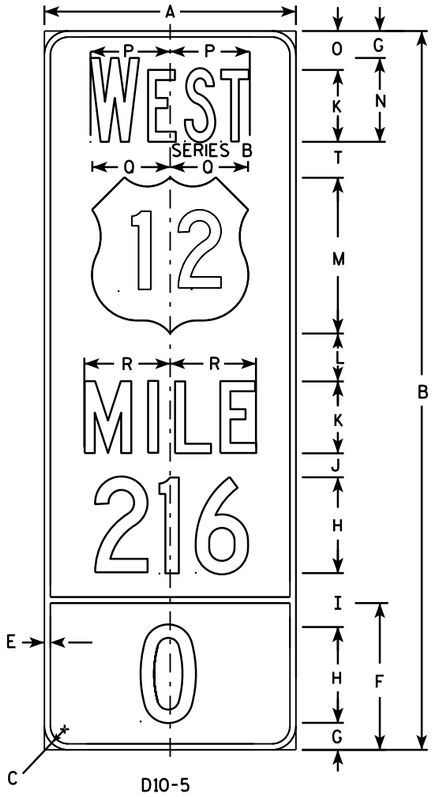
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

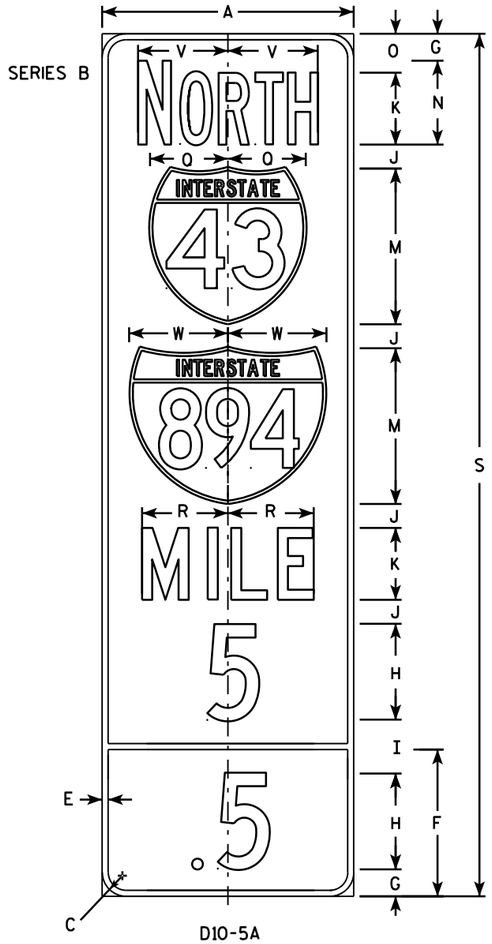
DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

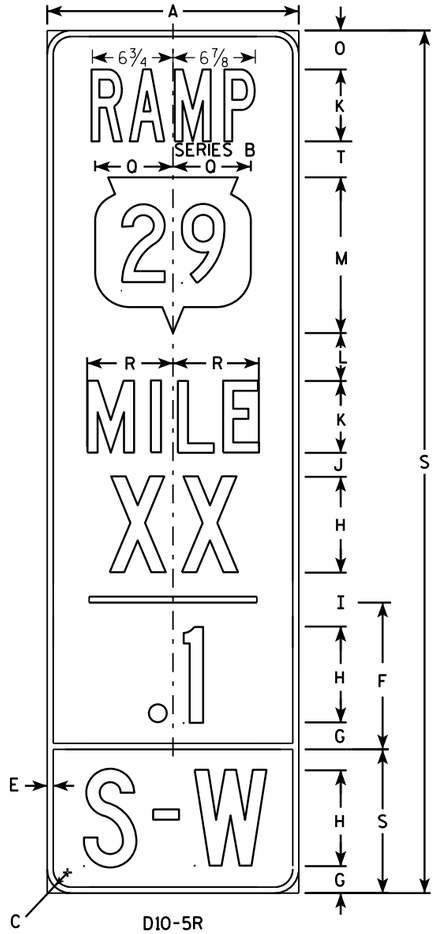
SHEET NO: 299 E



D10-5



D10-5A



D10-5R

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - BLUE
   Message - WHITE
3. Interstate Shield Color
   Background - Top Red
   - Bottom Blue
   Message - White
4. Message Series - C or as noted on the Sign.
5. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
6. The decimal point is required for all digits except "0".
7. Optically adjust mileage numbers about the centerline of the sign to achieve proper balance.
8. Optically adjust Ramp direction letters about the centerline of the sign to achieve proper balance.



SERIES B



SERIES B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	D10-5 Area sq. ft.	D10-5A Area sq. ft.	D10-5R Area sq. ft.
1																													
2																													
3																													
4	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5
5	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5

STANDARD SIGN
D10-5

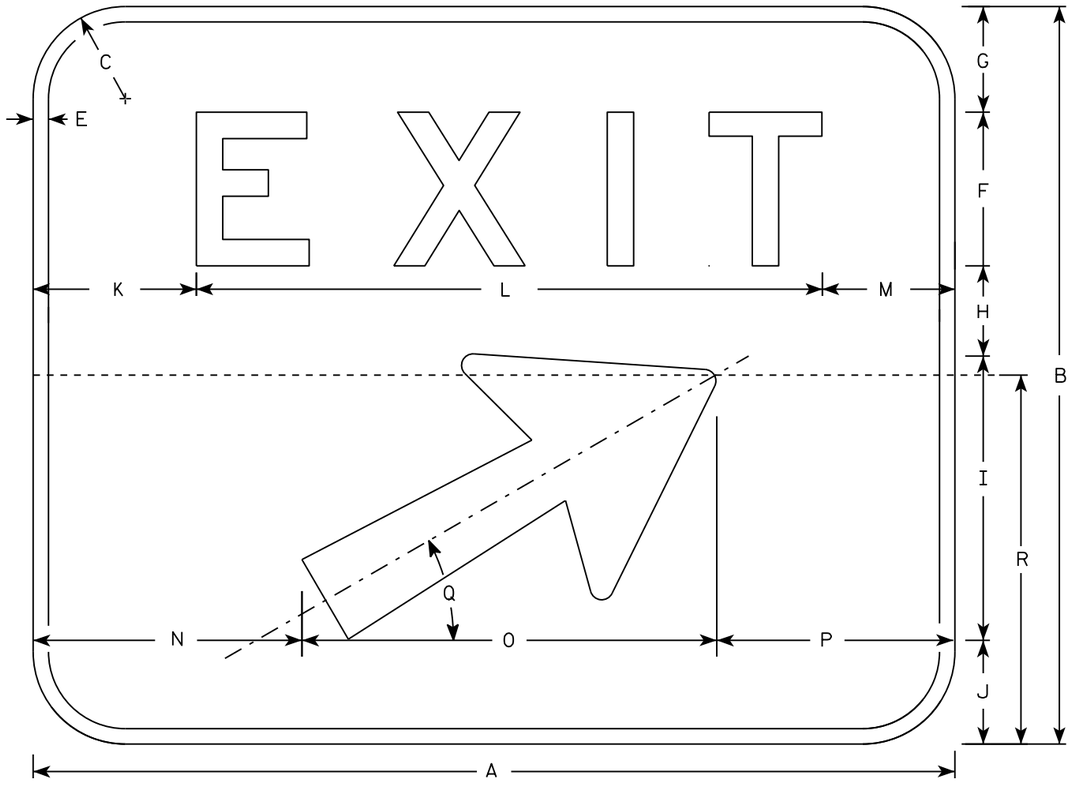
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/26/14 PL 300 D10-5.2

PROJECT NO:

SHEET NO: E



E5-1

NOTES

1. Sign is Type II - Type H reflective
2. Color:
   Background - Green
   Message - White
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. When Base material for this sign is plywood sign shall be split into two seperate pieces for the 72 x 60 size as shown on the detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. As per the Standard Spec's, this sign shall not have a vertical joint.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	60	48	6		1	10	6 7/8	5 7/8	18 1/2	6 3/4	10 5/8	40 3/4	8 5/8	17 1/2	27	15 1/2	30°	30									20.0
5	72	60	6		1	12	9 3/4	10	18 1/2	9 3/4	13 1/4	48 1/2	10 1/4	23 1/2	27	21 1/2	30°	30									30.0

STANDARD SIGN
E5 - 1

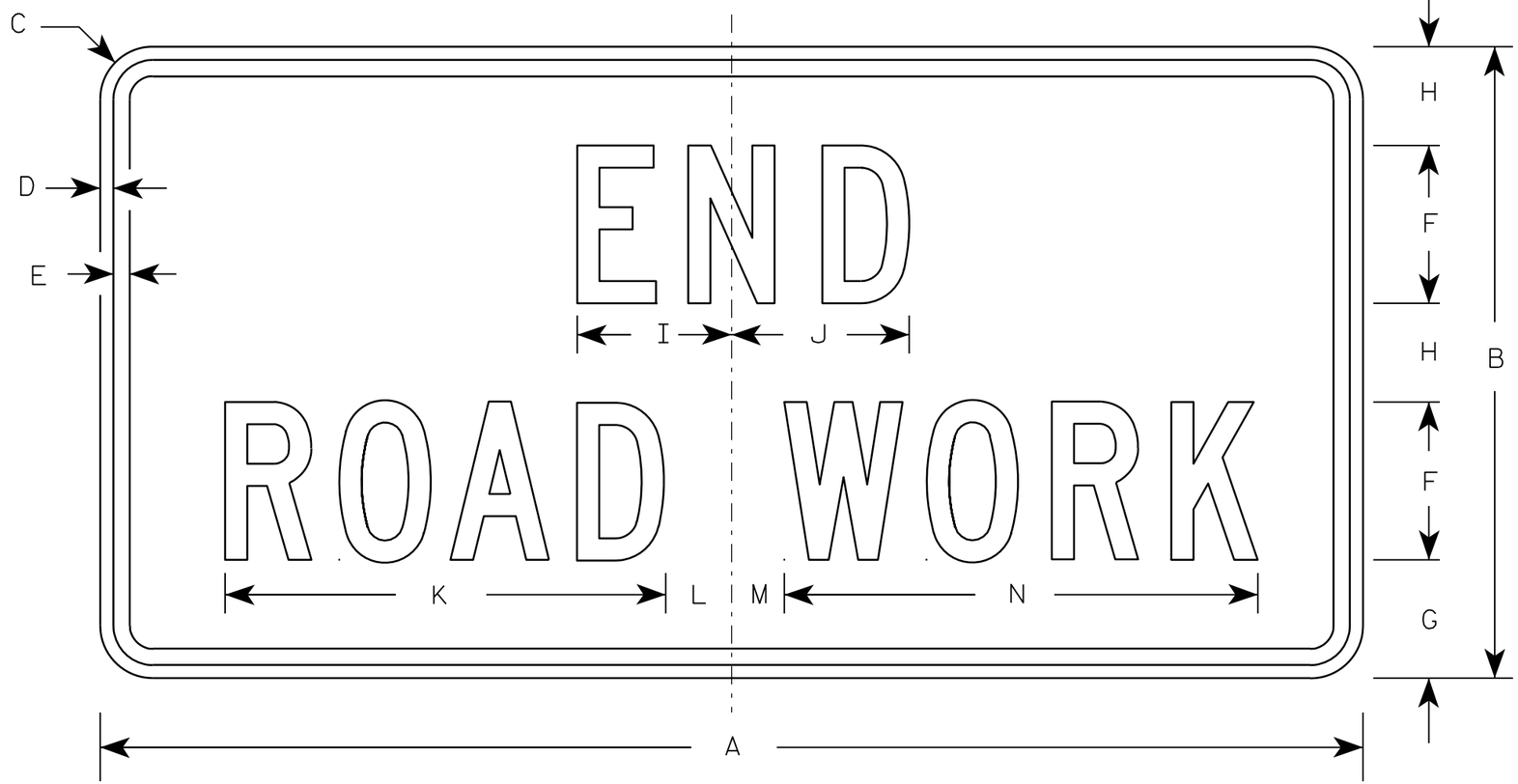
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. E5-1.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 301 | E

7



G20-2A

NOTES

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

Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

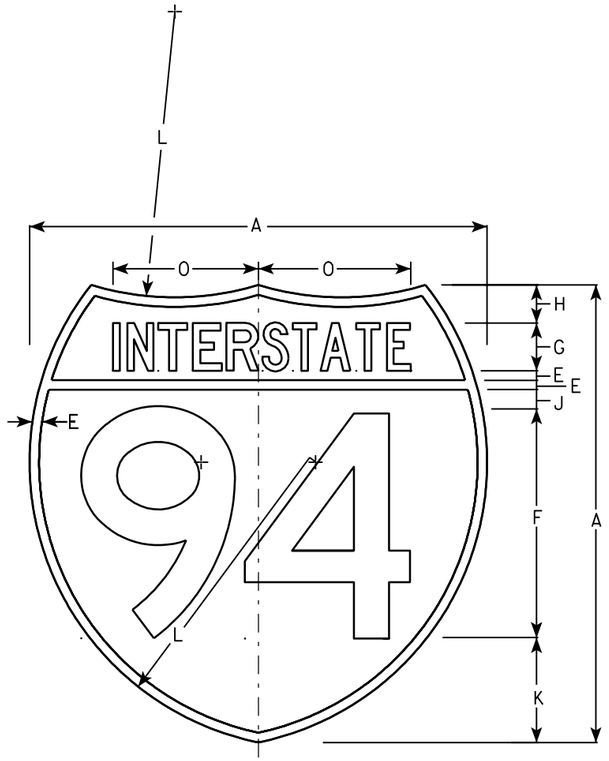
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

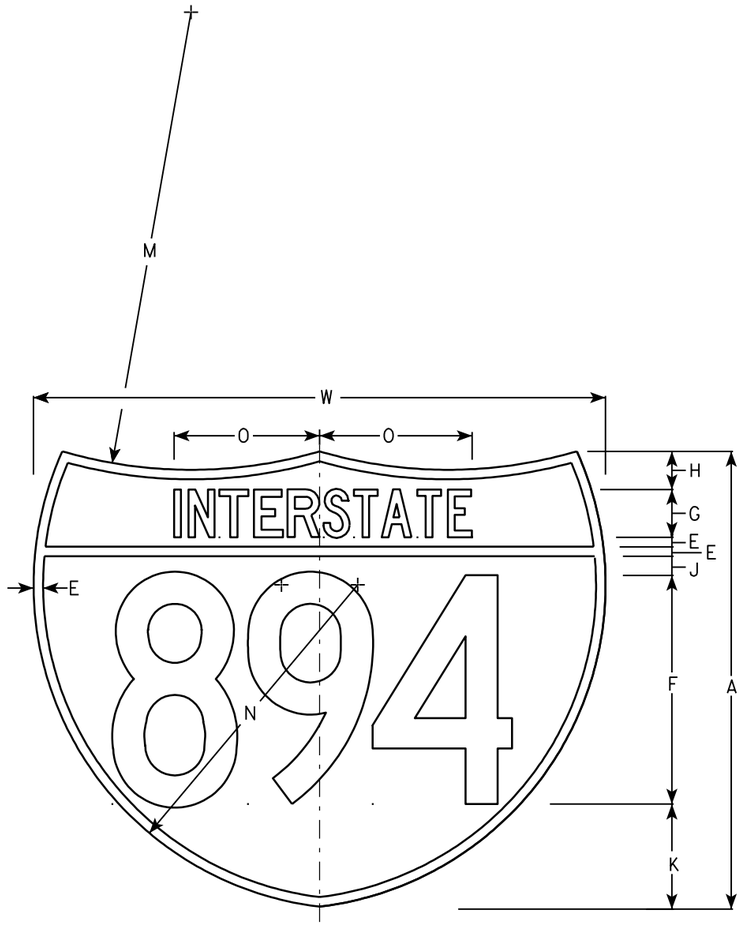
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 302	E



M1-1



M1-1A

NOTES

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

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

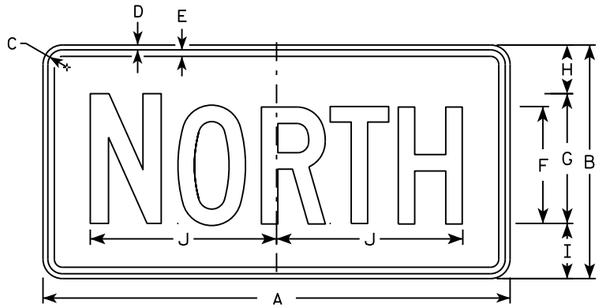
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

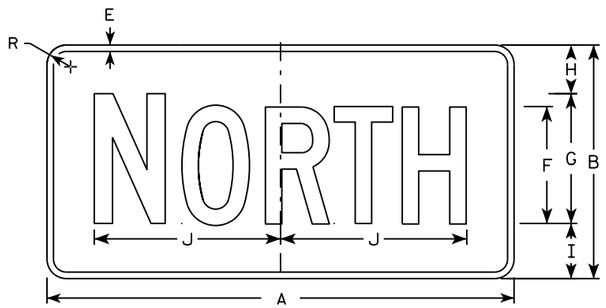
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 303	E



M3-1
MM3-1
MP3-1



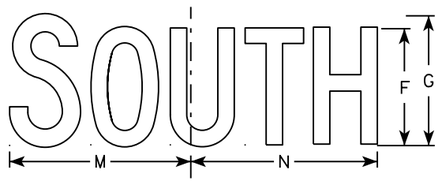
MB3-1
MK3-1
MN3-1



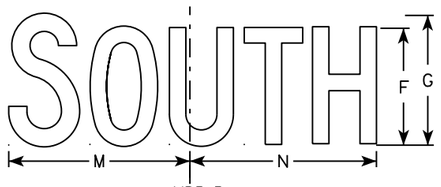
M3-2
MM3-2
MP3-2



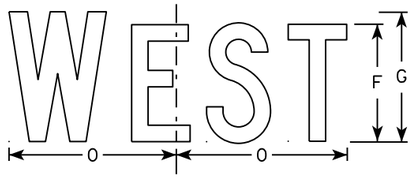
MB3-2
MK3-2
MN3-2



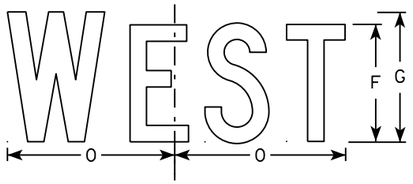
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

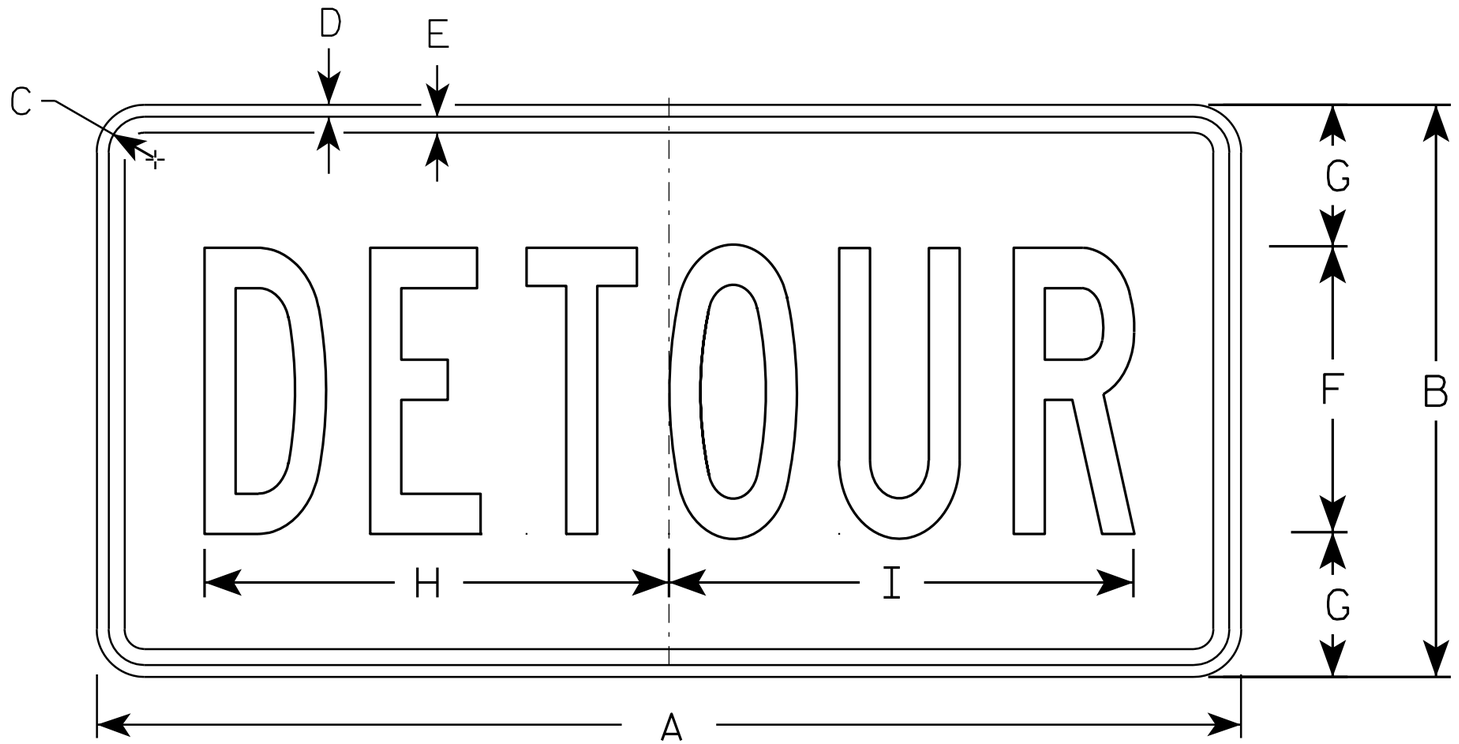
APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000

7



M4-8

NOTES

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

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

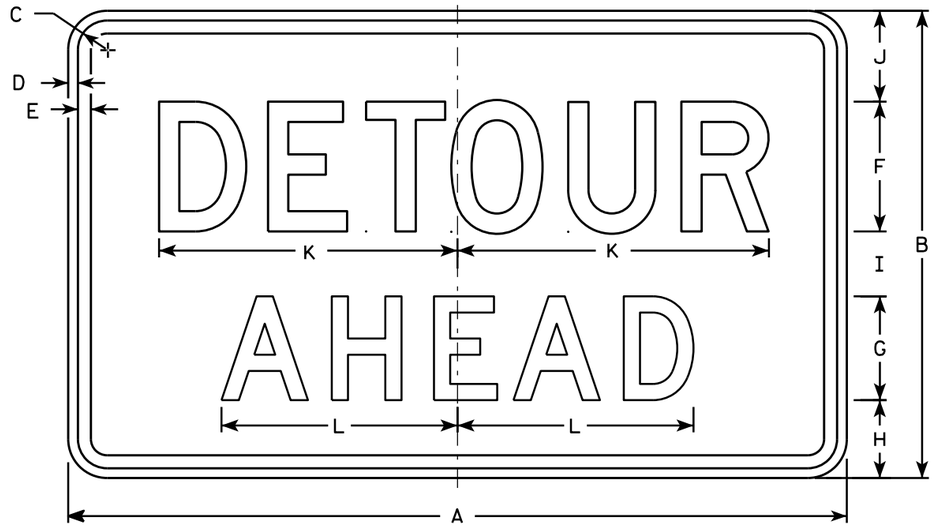
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 305	E



M4-9A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	18	1 1/8	3/8	1/2	5	4	3	2 1/2	3 1/2	11 3/4	9 1/8															5.0
3																											
4																											
5																											

STANDARD SIGN
M4-9A

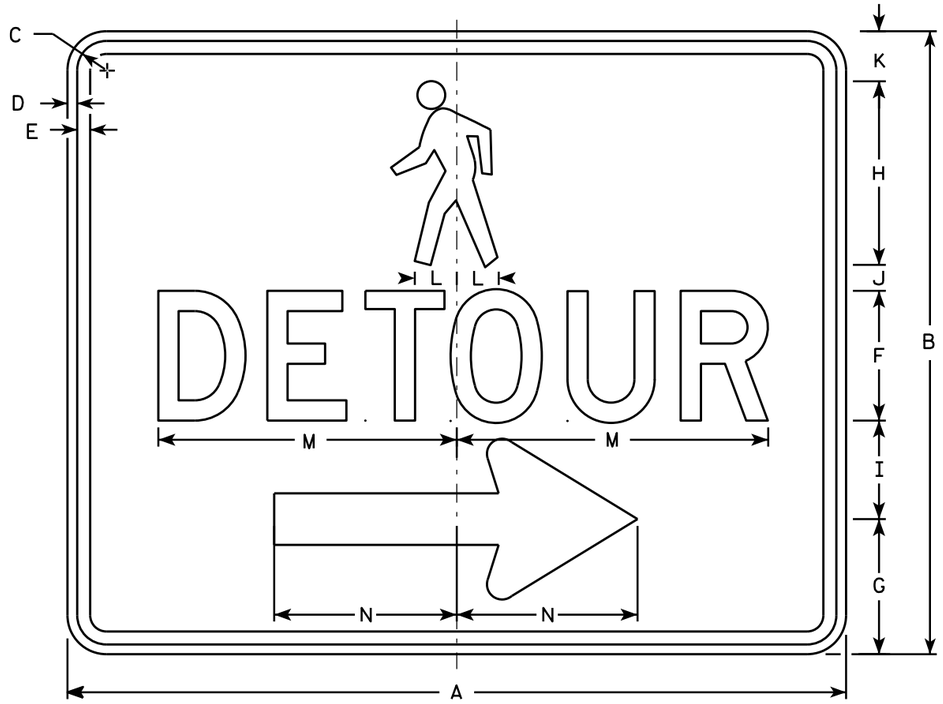
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/16 PLATE 306 4-9A.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

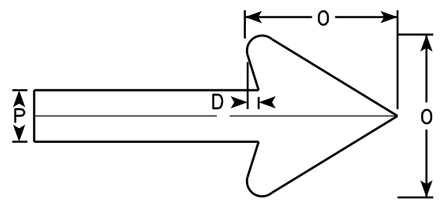
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M49A.dgn PLOT DATE : 24-MAR-2016 16:26 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



M4-9BR

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

STANDARD SIGN
M4-9B L&R

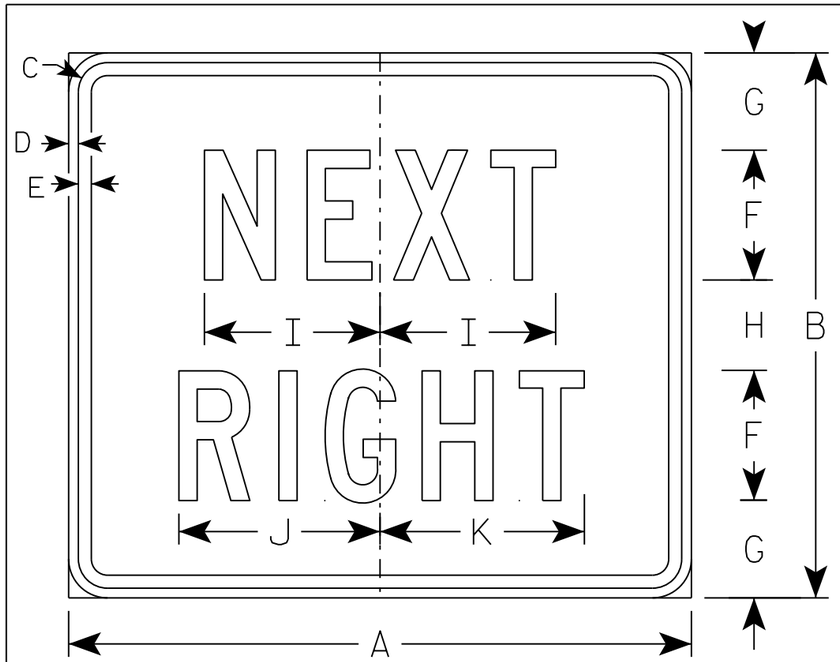
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

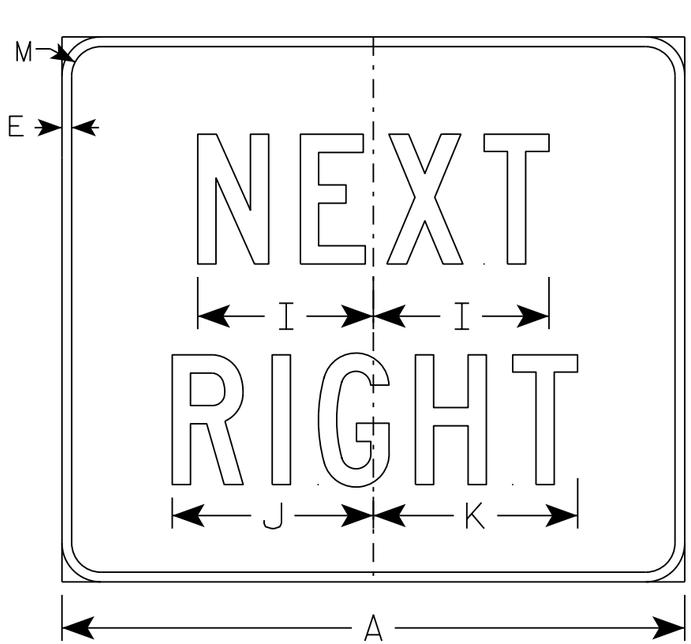
DATE 9/30/13 PLATE NO. M4-9B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

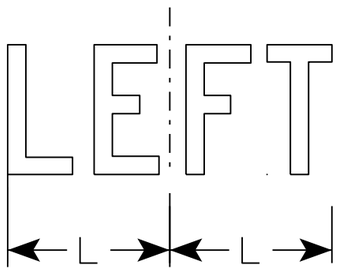
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49B.DGN PLOT DATE : 01-OCT-2013 13:44 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



M4-21R
MM4-21R
MO4-21R
MP4-21R



MB4-21R
MK4-21R
MN4-21R
MR4-21R



M4-21L
MB4-21L
MK4-21L
MM4-21L
MN4-21L
MO4-21L
MP4-21L
MR4-21L

NOTES

1. Sign is Type II - Type H except as Shown
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. M4-21 Background - White
   Message - Black
   MB4-21 Background - Blue
   Message - White
   MK4-21 Background - Green
   Message - White
   MM4-21 Background - White
   Message - Green
   MN4-21 Background - Brown
   Message - White
   MO4-21 Background - Orange - Type F Reflective
   Message - Black
   MP4-21 Background - White
   Message - Blue
   MR4-21 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	21	1 1/8	3/8	1/2	5	3 3/4	3 1/2	6 3/4	7 3/4	7 7/8	6 1/4	1 1/2														3.5
3	36	30	1 5/8	5/8	3/4	8	4 3/4	4 1/2	10 7/8	12 5/8	12 1/2	10 1/8	1 7/8														7.5
4																											
5																											

STANDARD SIGN
M4-21

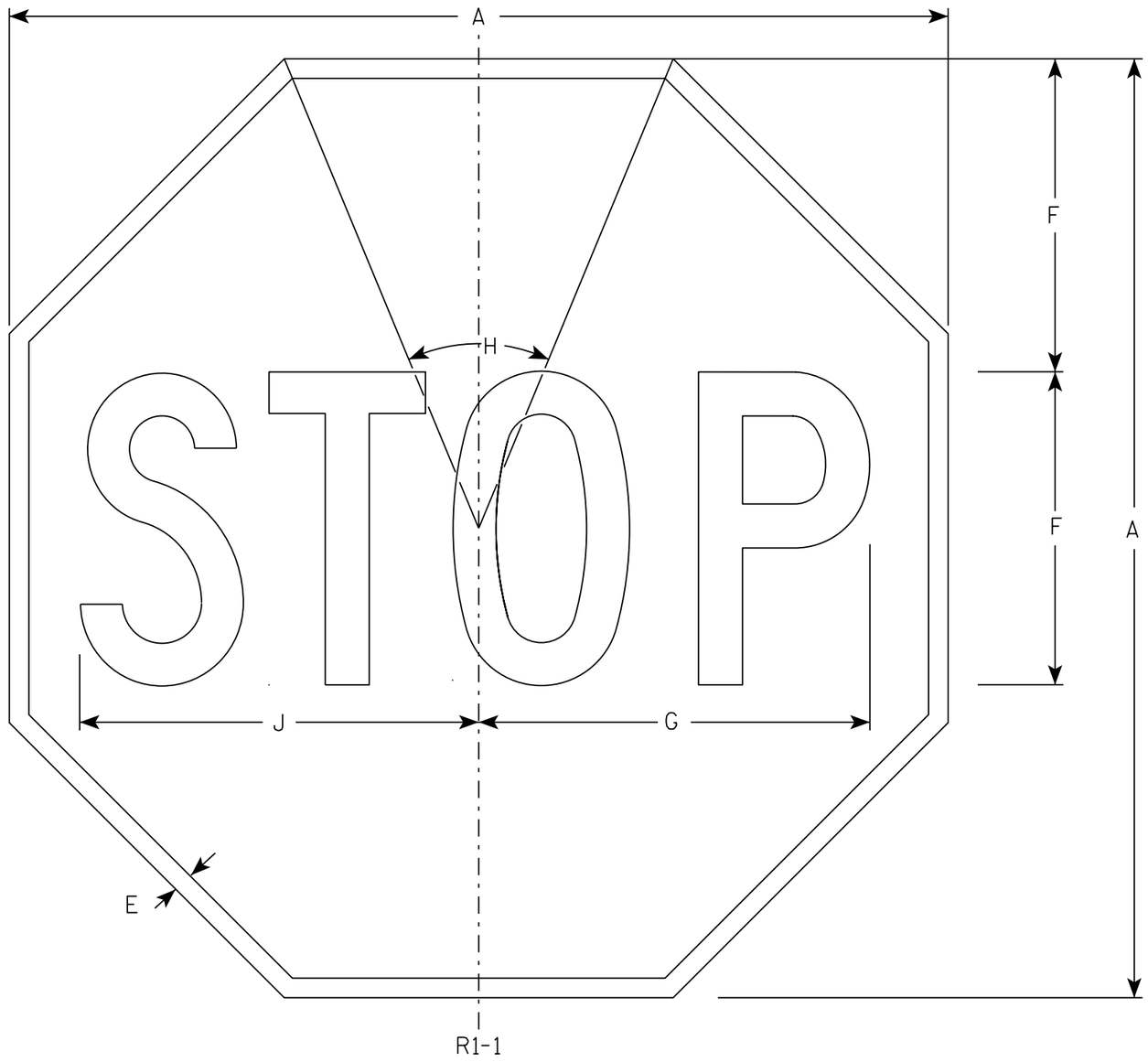
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M4-21.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M421.DGN PLOT DATE : 01-DEC-2015 18:03 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 5.837526:1.000000



NOTES

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

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

STANDARD SIGN

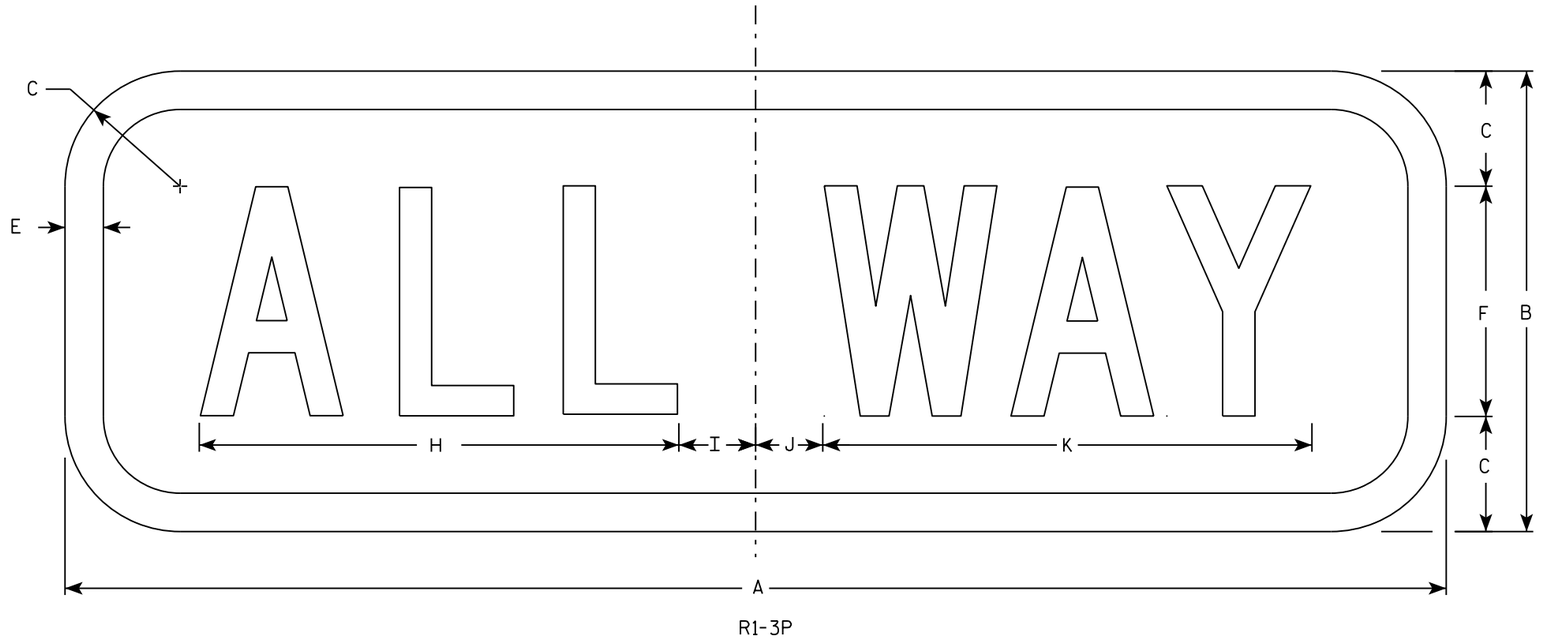
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 309	E



R1-3P

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. For 30"x30" R1-1 use 18"x6" R1-3P sign
   For 36"x36" R1-1 use 24"x9" R1-3P sign
   For 48"x48" R1-1 use 30"x12" R1-3P sign

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																0.75
2S	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																1.5
2M	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
3	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
4	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5
5	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5

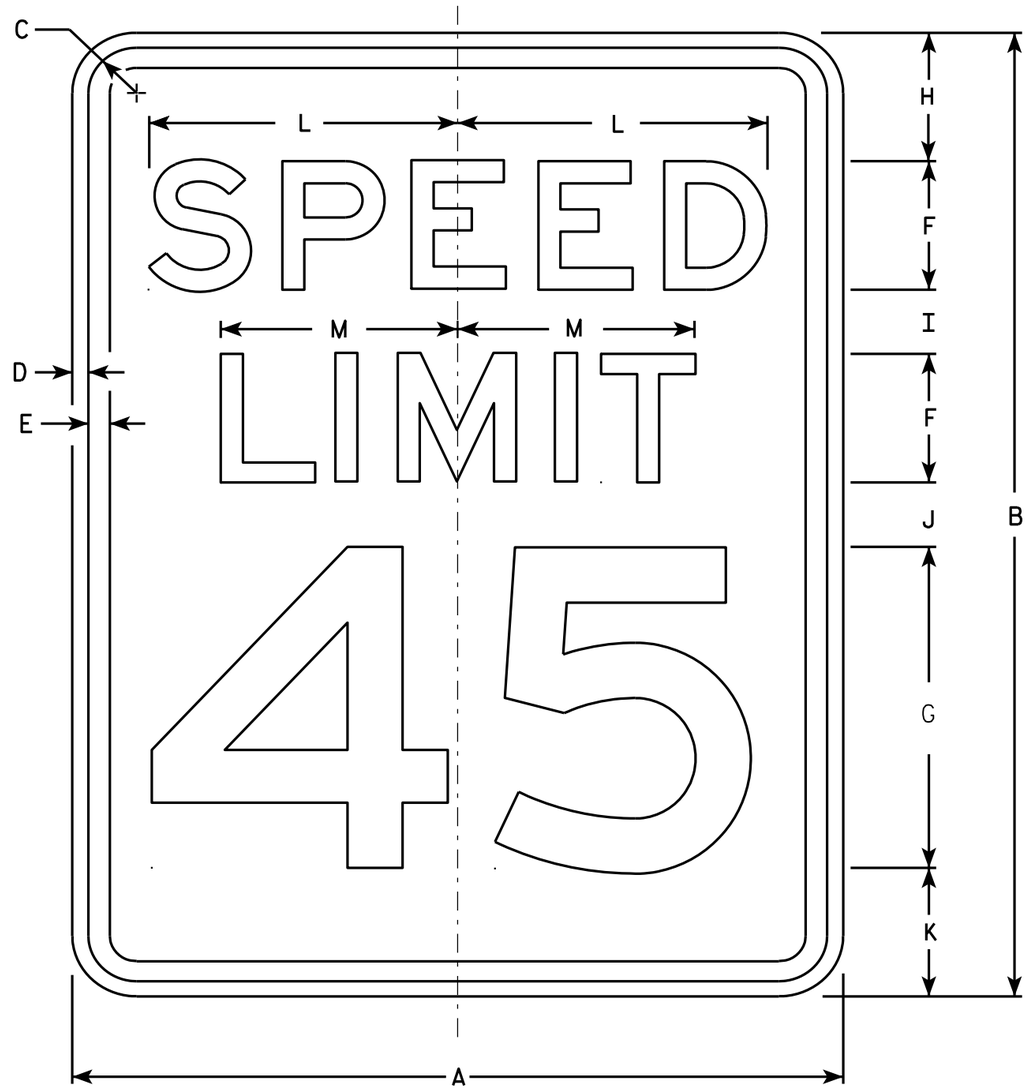
STANDARD SIGN
R1-3P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R1-3P.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 310 | E



R2-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

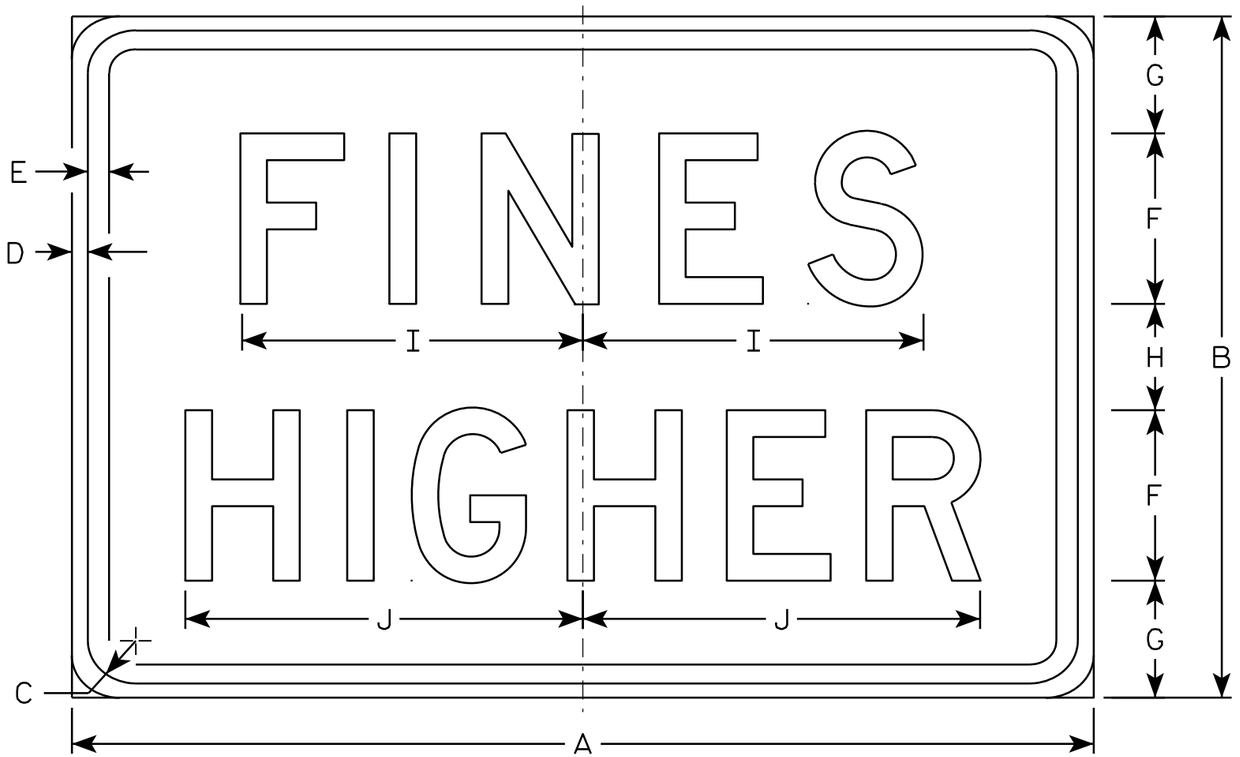
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 311 | E



R2-6P

NOTES

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

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

STANDARD SIGN
R2-6P

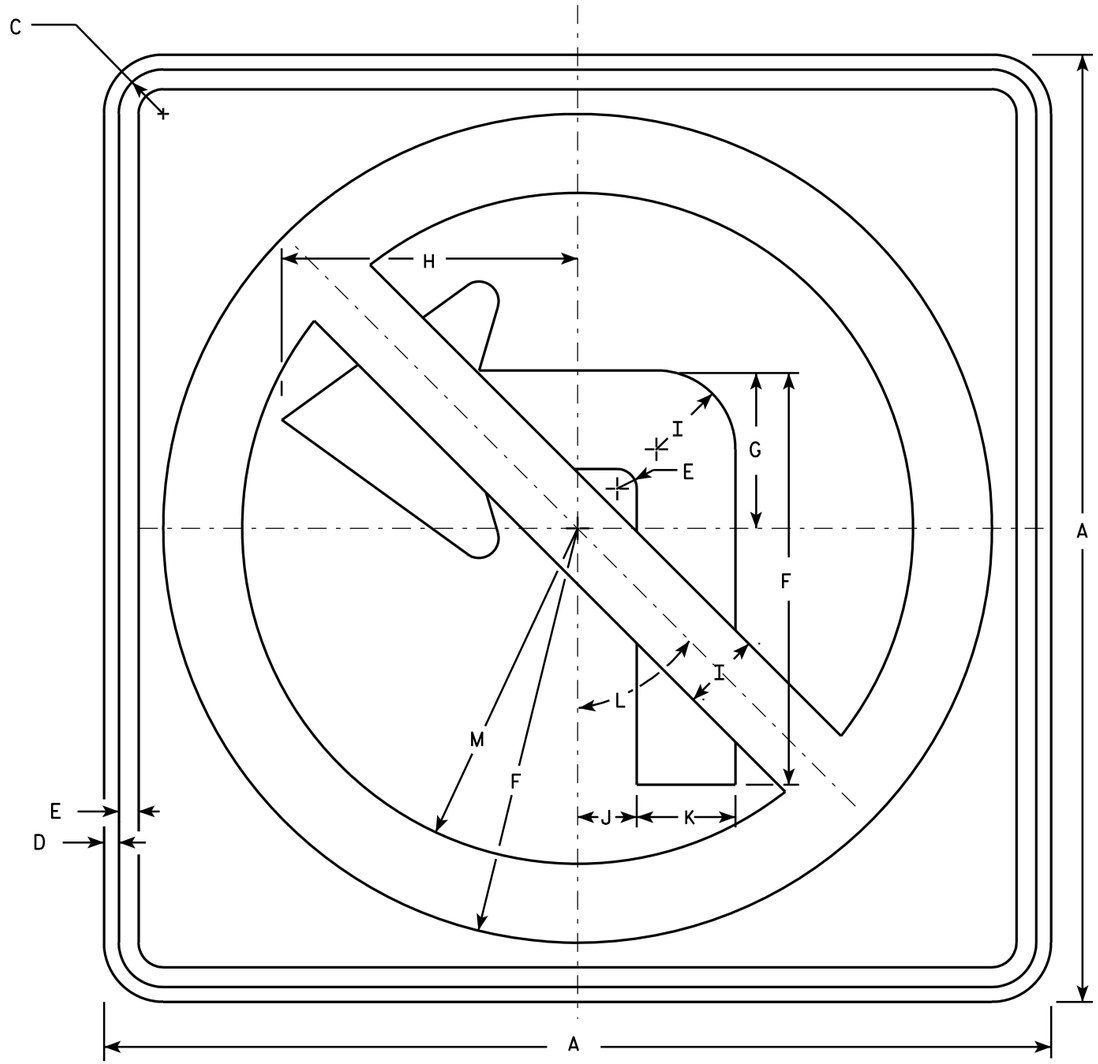
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 312 | E

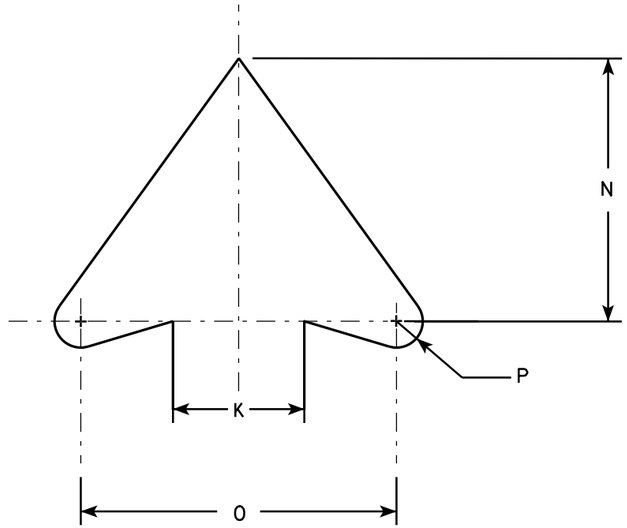
7



R3-2

NOTES

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



ARROW DETAIL

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

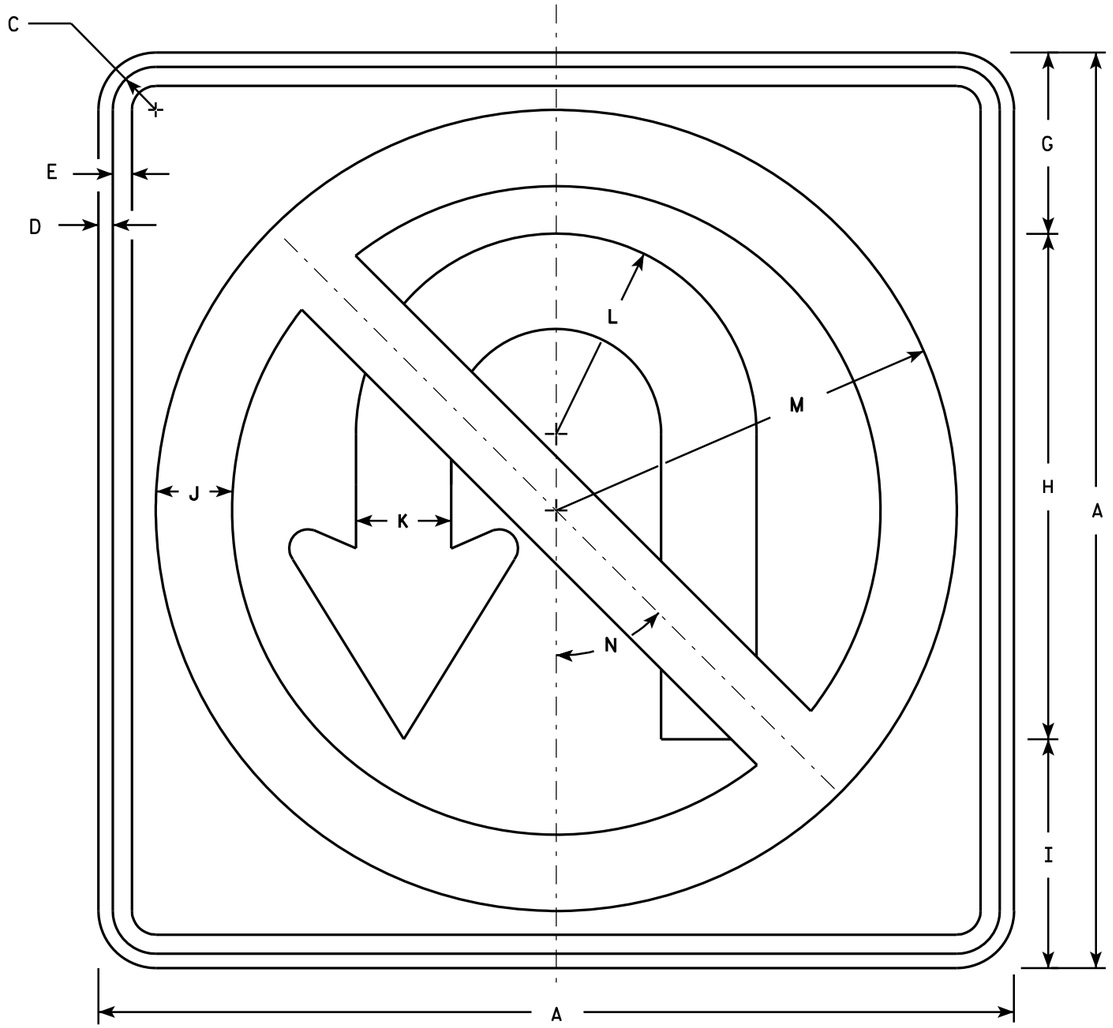
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

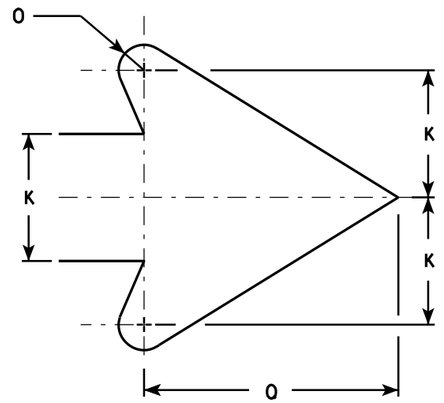
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 313	E



R3-4

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

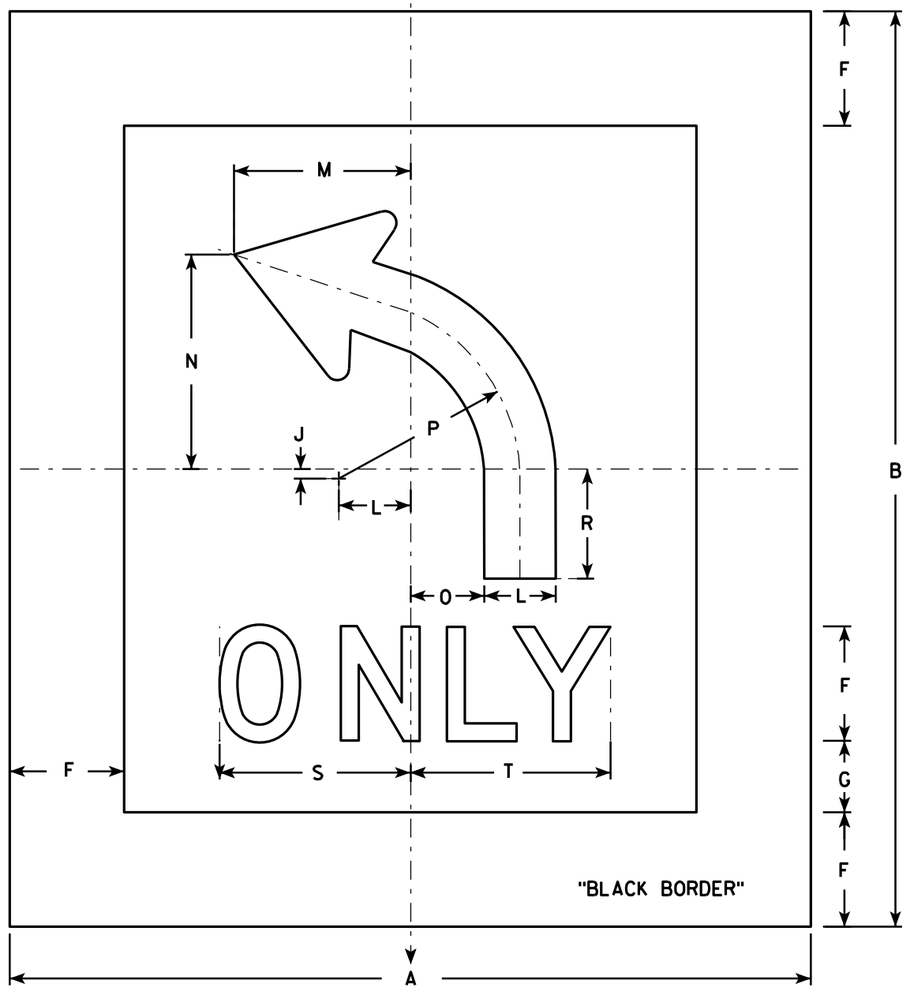
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-4.11

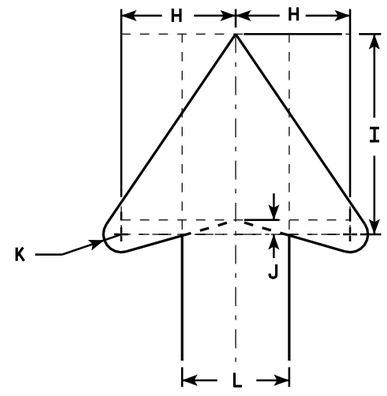
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 314	E



R3-5L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

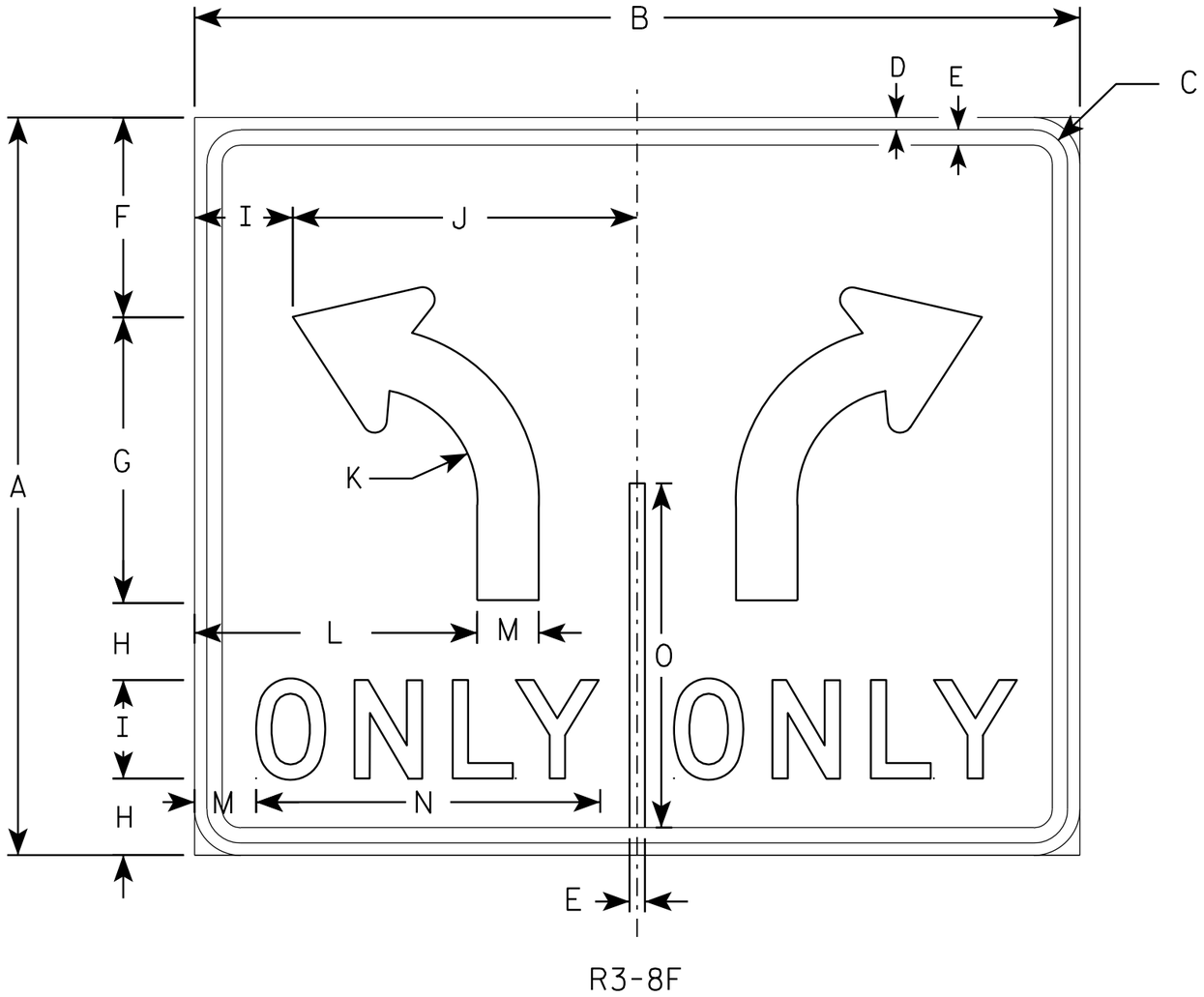
STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

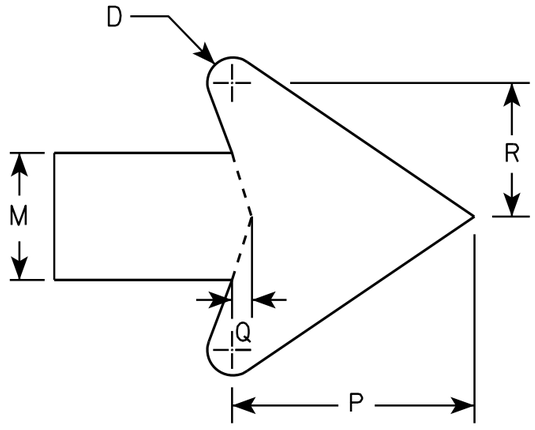
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 315 | E



R3-8F

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	14	4 1/2	11 1/2	2 1/2	14	14	4 3/4	3/8	2 5/8									7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	14	4 1/2	11 1/2	2 1/2	14	14	4 3/4	3/8	2 5/8									7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	21	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	7 1/8	5/8	4									18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	21	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	7 1/8	5/8	4									18.0

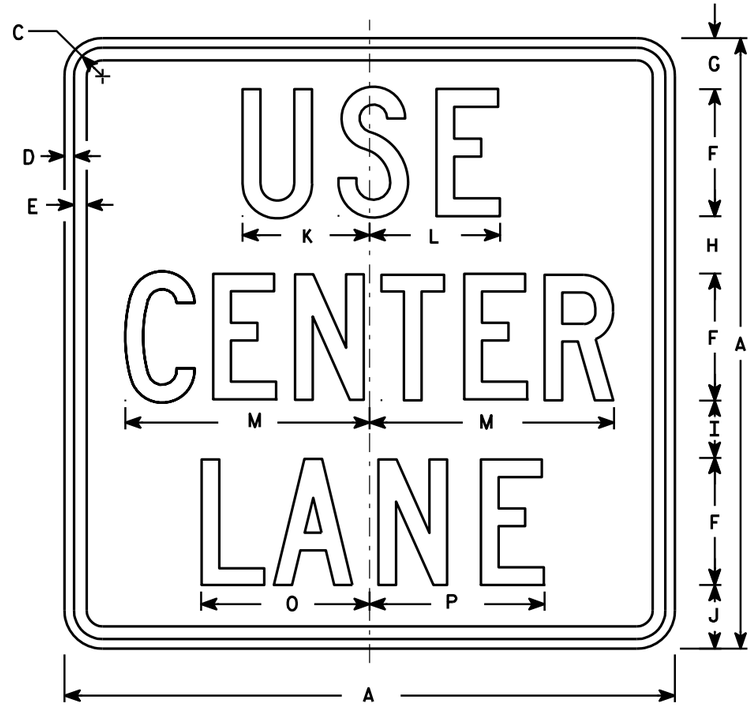
STANDARD SIGN
R3-8F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8F.2

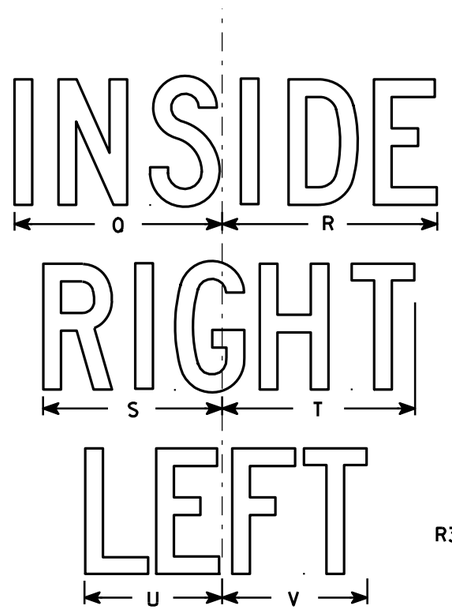
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 316 | E



R3-54C

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.



R3-54I

R3-54R

R3-54L

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

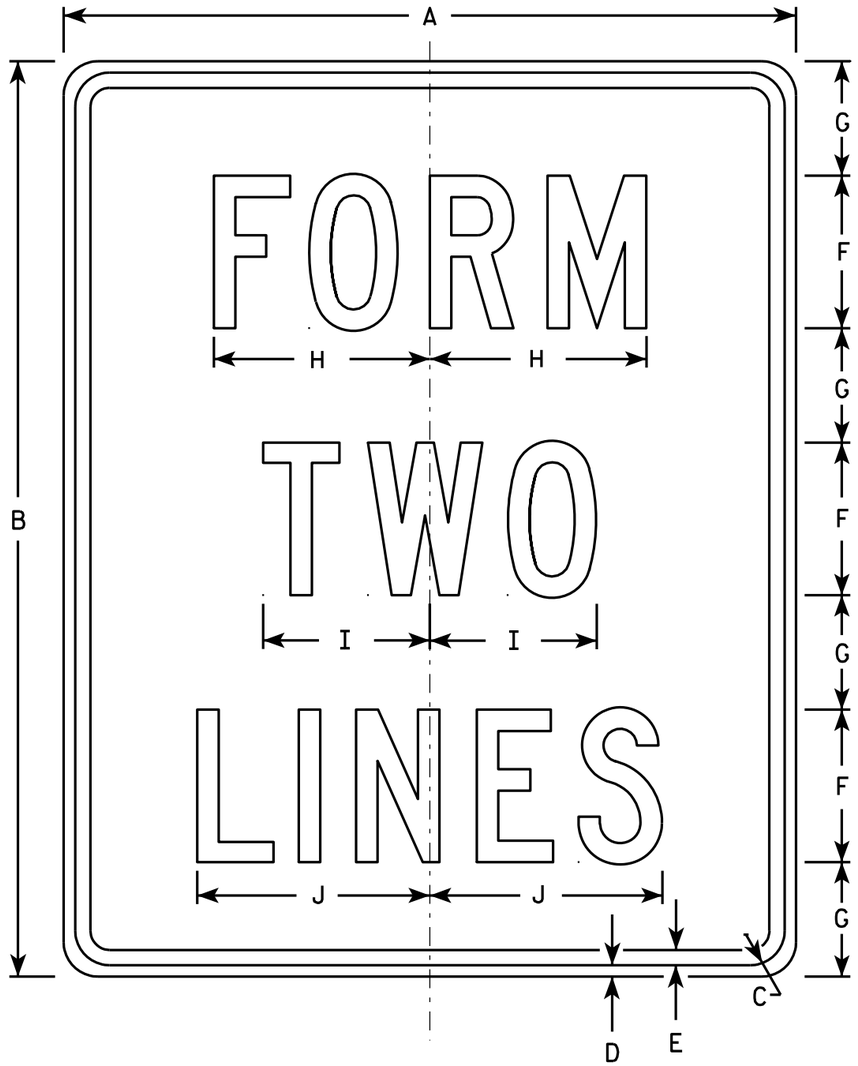
STANDARD SIGN
R3-54C, I ,L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 317 | E



R3-59

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	5 1/2	7 5/8																	5.0
2S	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	5 1/2	7 5/8																	5.0
2M	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	5 1/2	7 5/8																	5.0
3	36	48	1 3/8	1/2	5/8	8	6	11 3/8	8 3/4	12 1/4																	12.0
4	36	48	1 3/8	1/2	5/8	8	6	11 3/8	8 3/4	12 1/4																	12.0
5																											

STANDARD SIGN
R3-59

WISCONSIN DEPT OF TRANSPORTATION

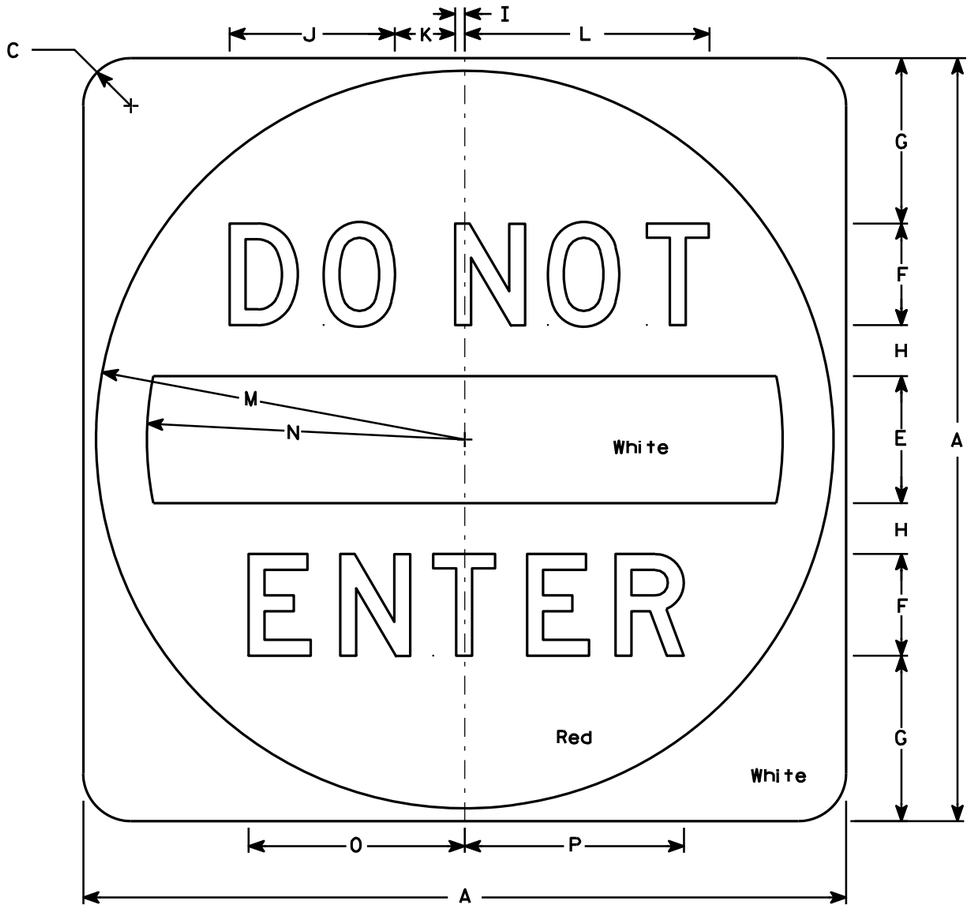
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-59.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 318 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R359.DGN PLOT DATE : 24-MAR-2011 15:34 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.965868:1.000000
WISDOT/CADDS SHEET 42



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

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

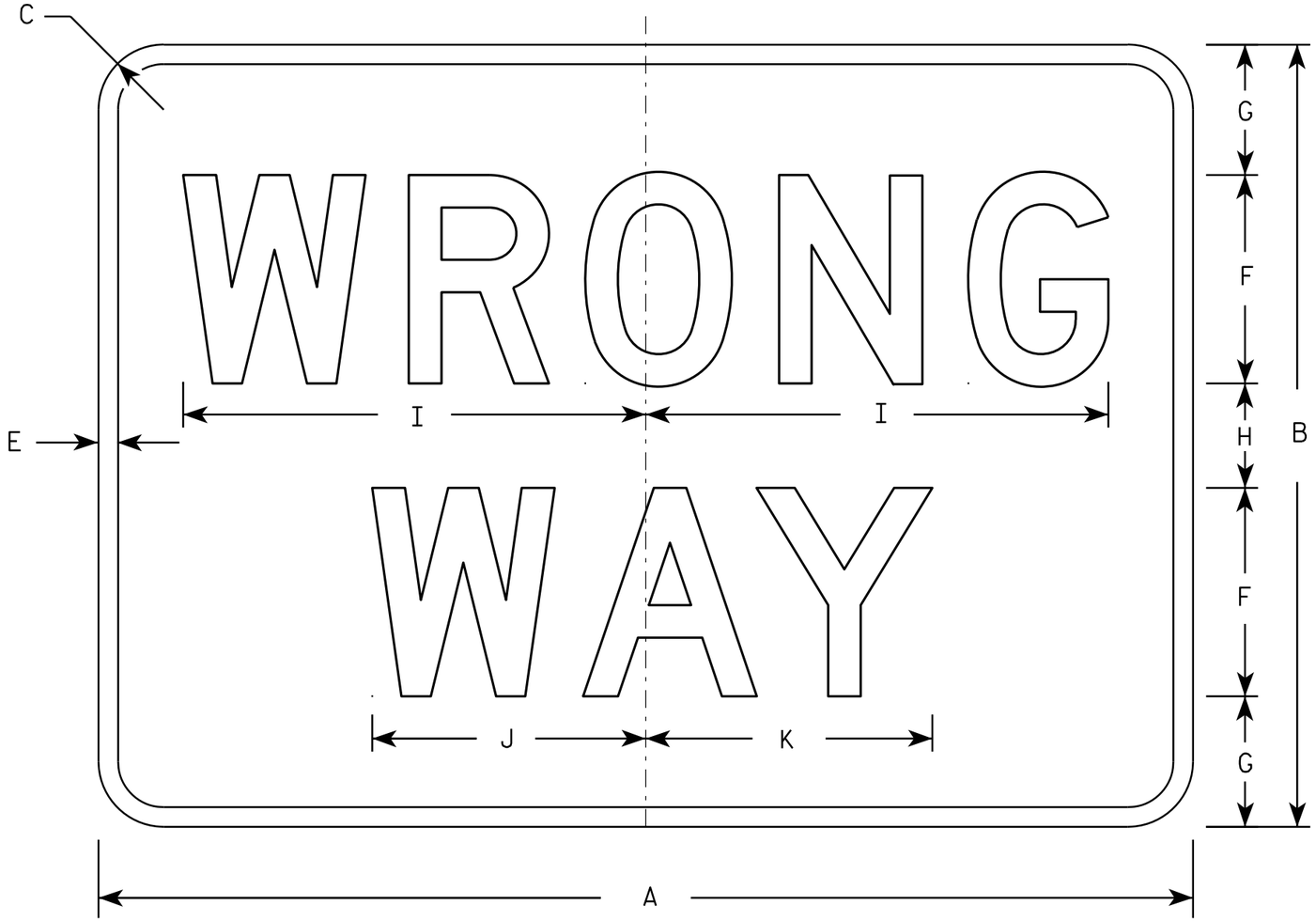
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 319 | E



R5-1A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

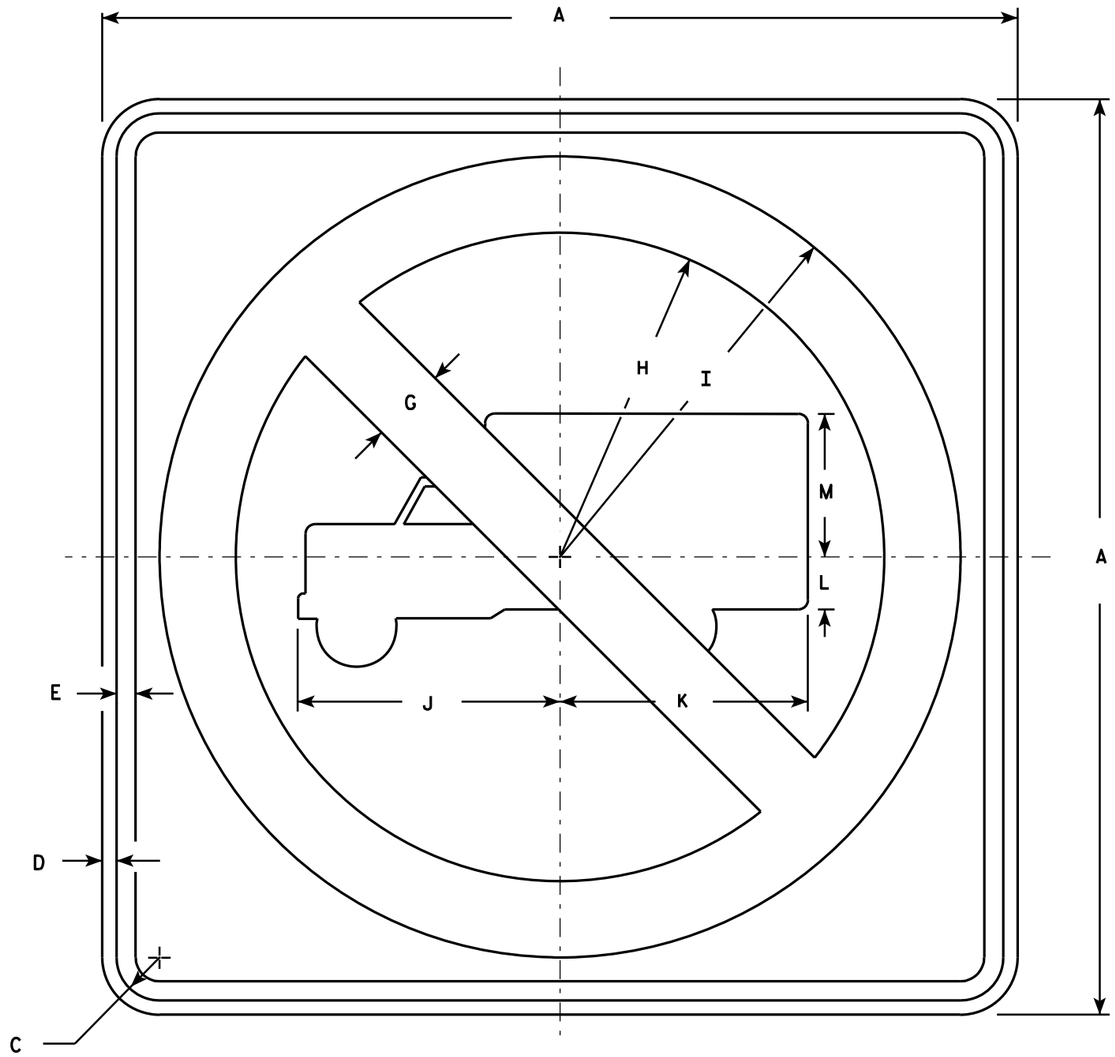
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 320	E



R5-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Circle & Diagonal - Reflective red.
   Truck Symbol & Border - Non-reflective black.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

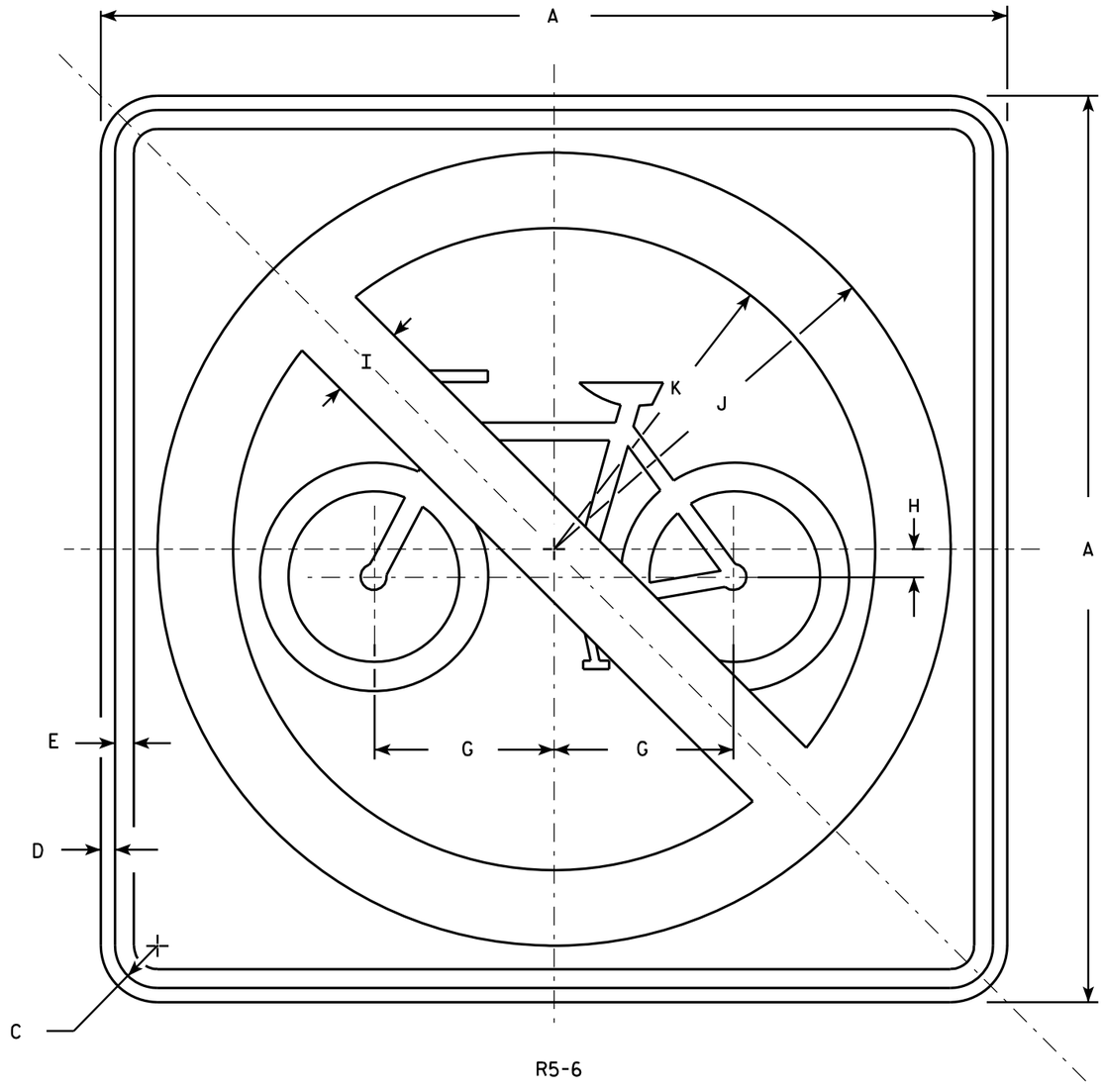
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 321	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R52.DGN PLOT DATE : 29-MAR-2011 11:02 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

7



R5-6

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Circle & Diagonal - Reflectorized Red.
   Bicycle Symbol & Border - Non-reflective Black.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	3/4	2	10 1/2	8 1/2																4.0
2M	24		1 1/8	3/8	1/2		4 3/4	3/4	2	10 1/2	8 1/2																4.0
3	30		1 3/8	1/2	5/8		5 7/8	7/8	2 1/2	13 1/8	10 5/8																6.25
4	36		1 5/8	5/8	3/4		7 1/8	1 1/8	3	15 3/4	12 3/4																9.0
5	48		2 1/4	3/4	1		9 1/2	1 1/2	4	21	17																16.0

STANDARD SIGN
R5-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-6.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 322	E



R5-57

NOTES

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

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

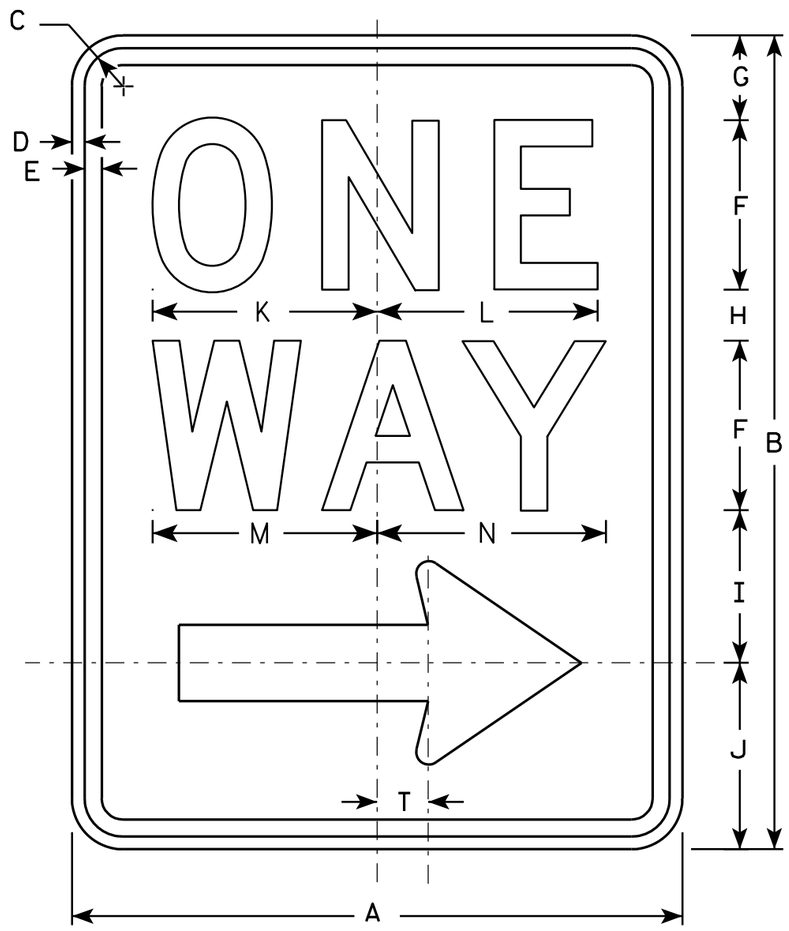
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

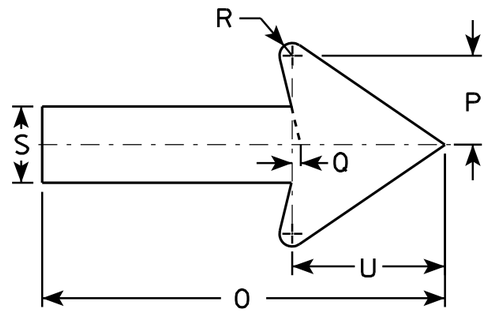
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 323 | E



R6-2R

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

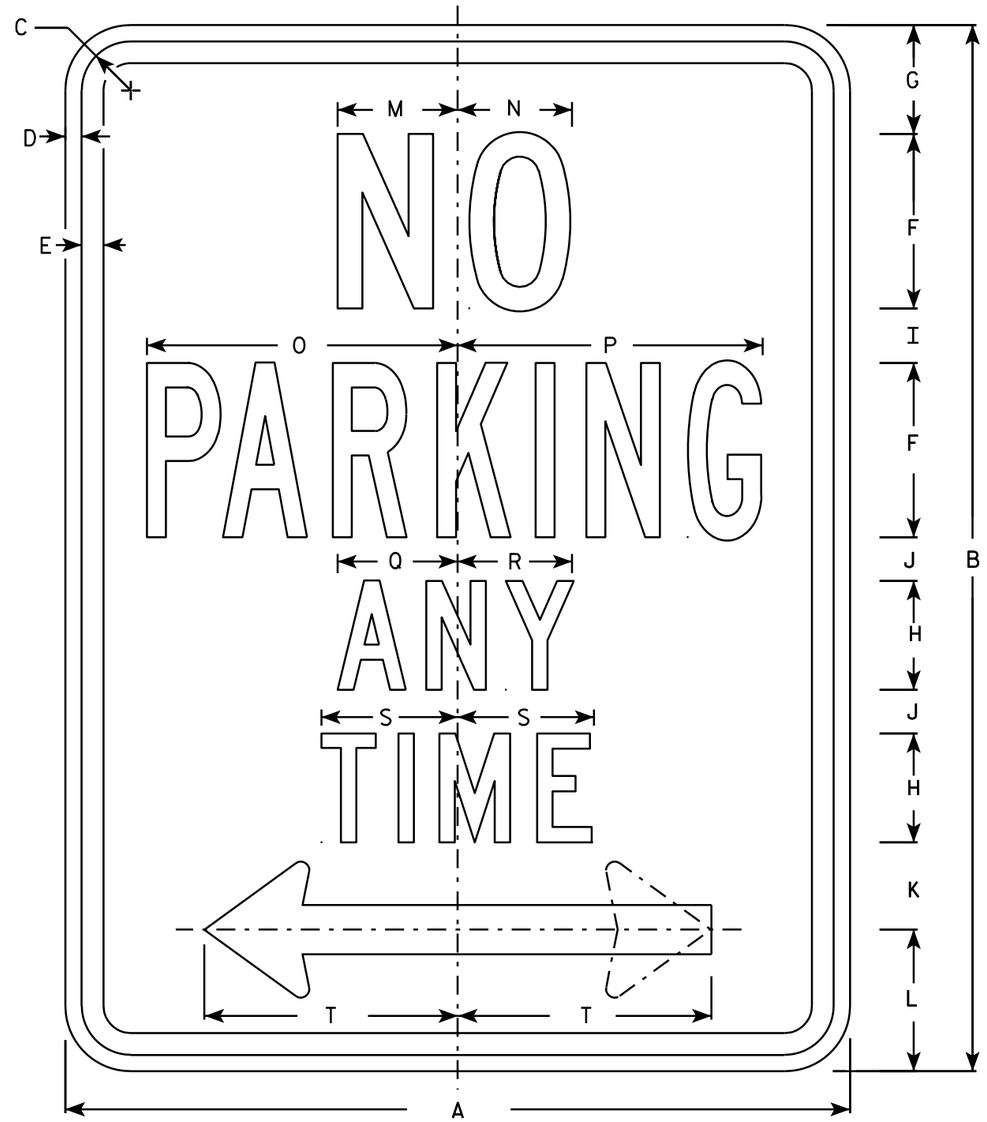
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

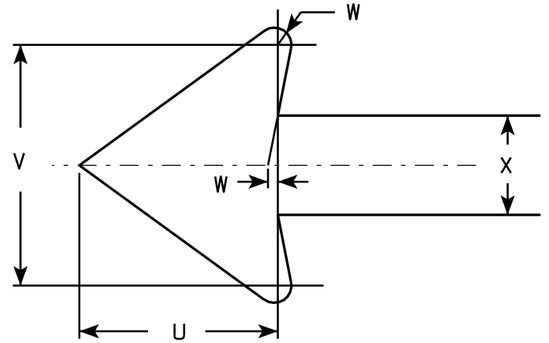
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 324	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

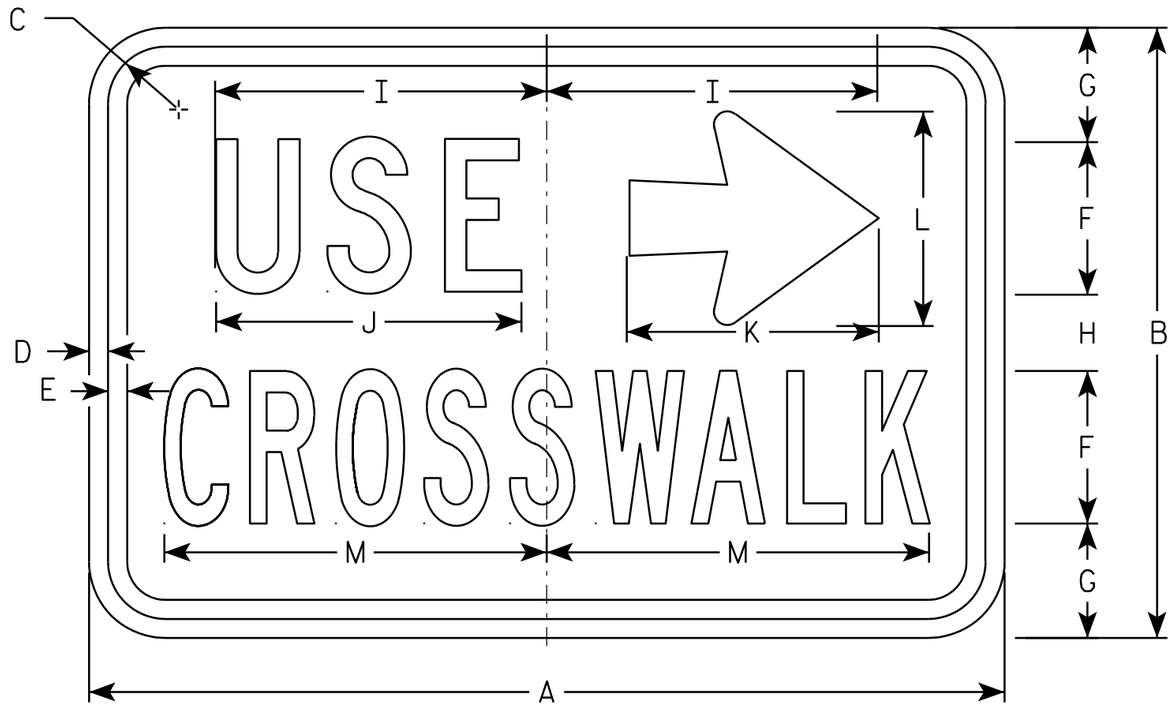
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 325	E



R9-3BR

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 Line 1, Series B Line 2
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. R9-3BL is the same as R9-3BR except USE and the arrow are switched.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	6 1/2	6	5	4 1/4	7 1/2														1.5
2M	18	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	6 1/2	6	5	4 1/4	7 1/2														1.5
3																											
4																											
5																											

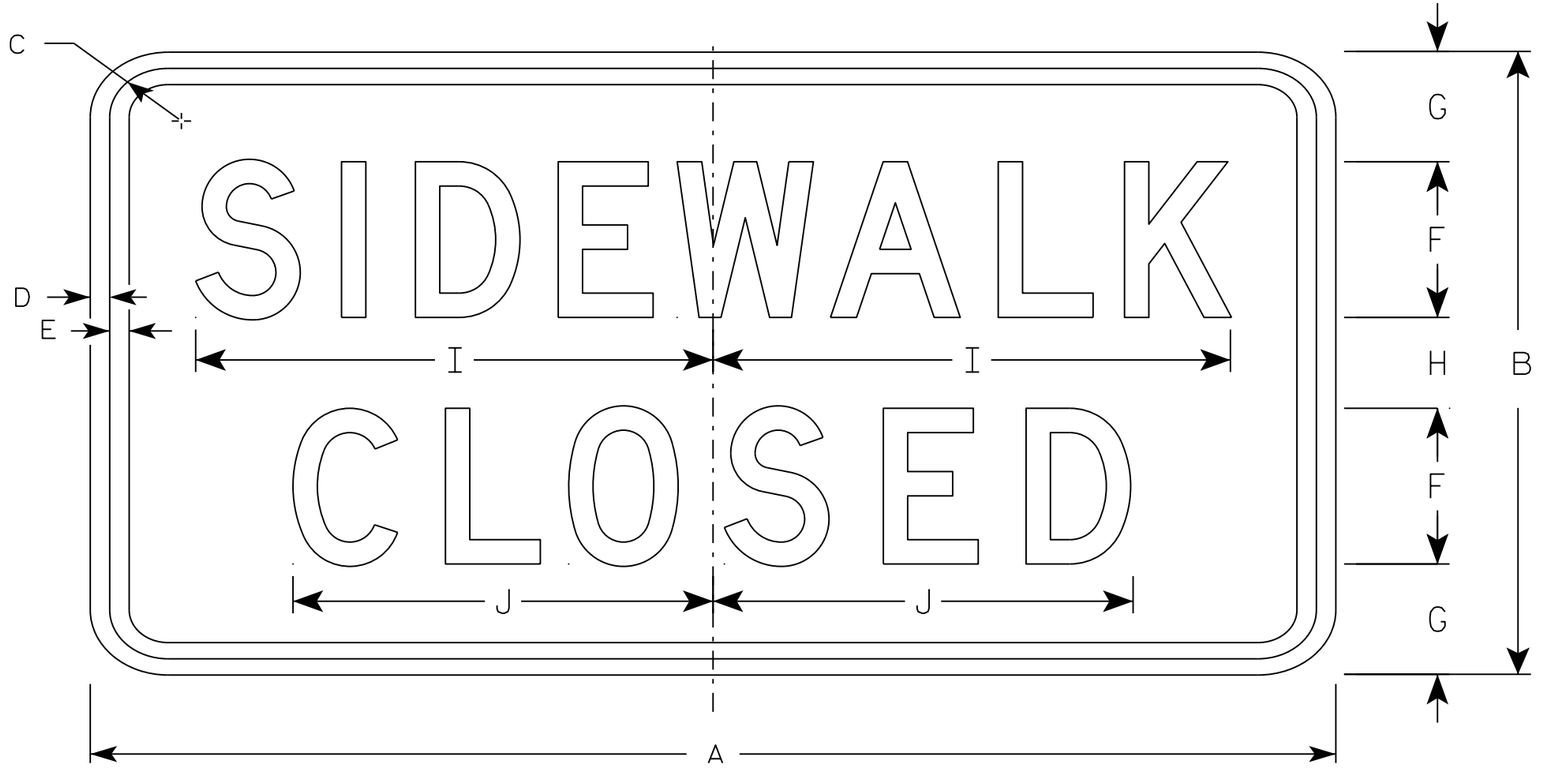
STANDARD SIGN
R9-3BR&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/4/10 PLATE NO. R9-3B.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 326 | E



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.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

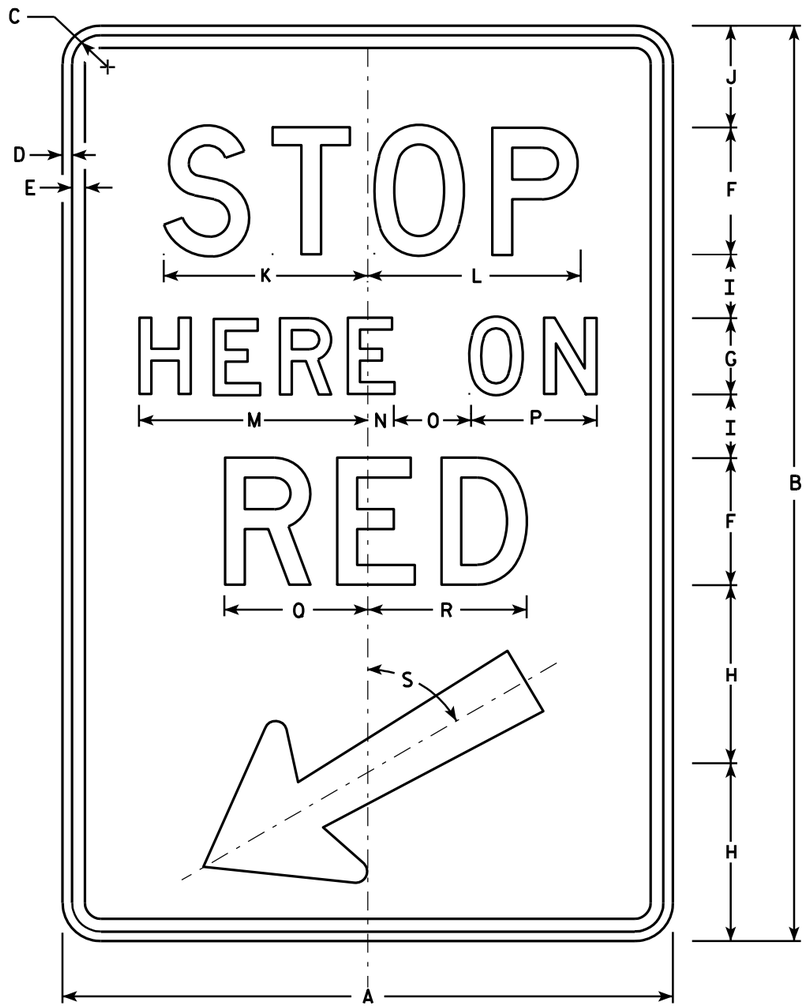
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 327 R9-9.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

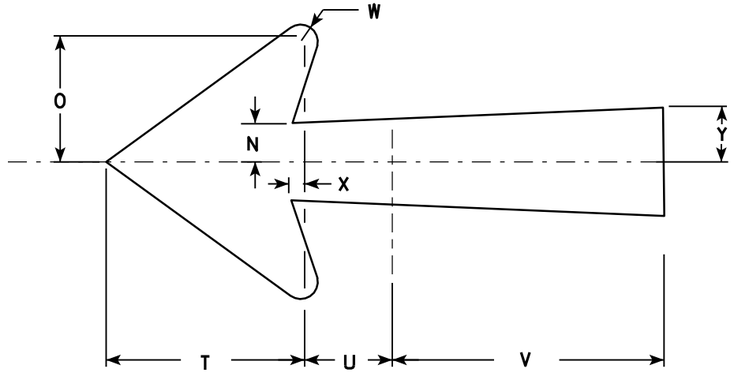
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R10-6

NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

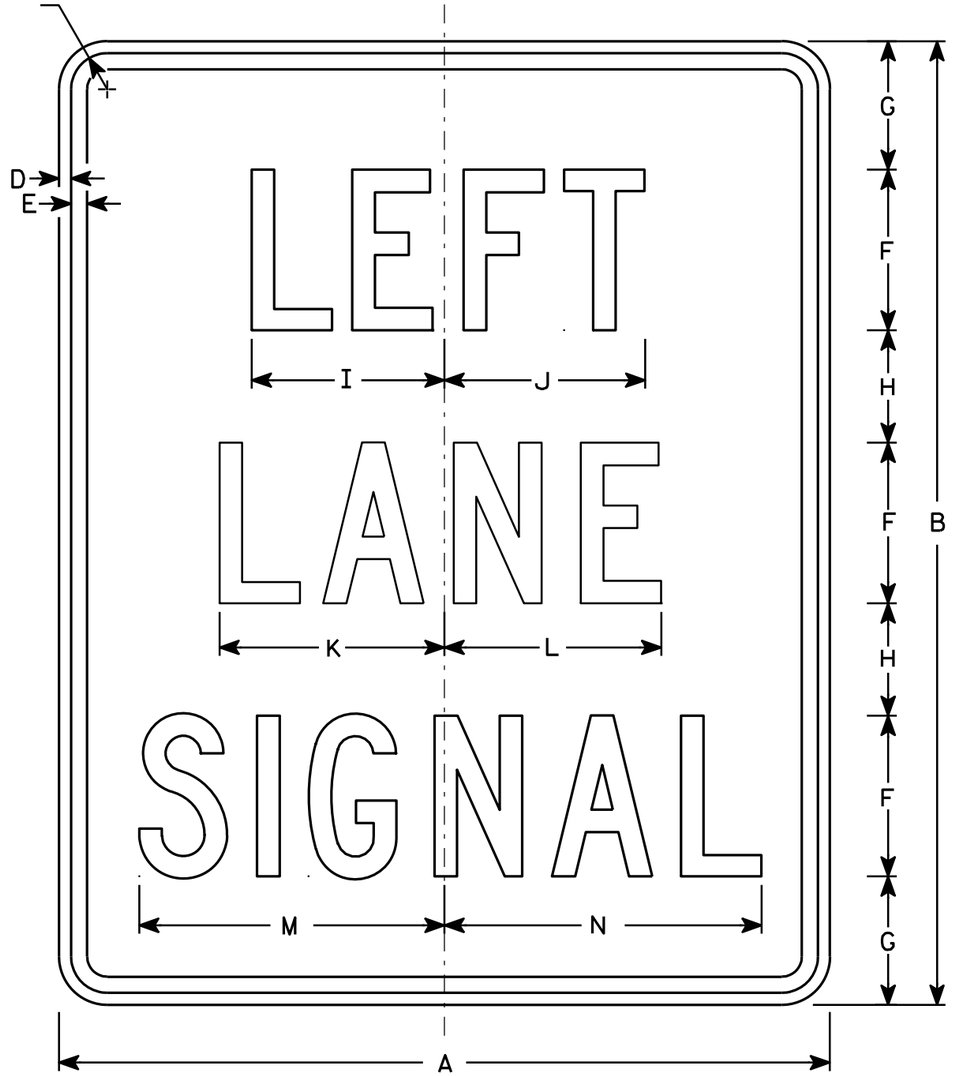
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 328	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R106.DGN PLOT DATE : 05-APR-2011 09:50 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

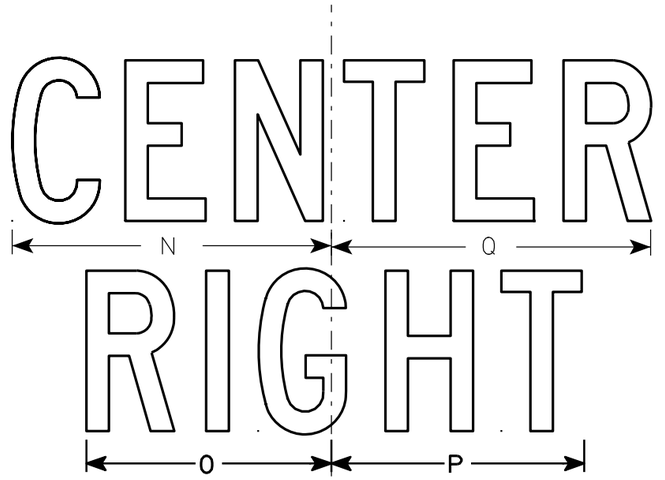
7



R10-65L

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.



R10-65C

R10-65R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8	10										5.0
2M	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8	10										5.0
3																											
4																											
5																											

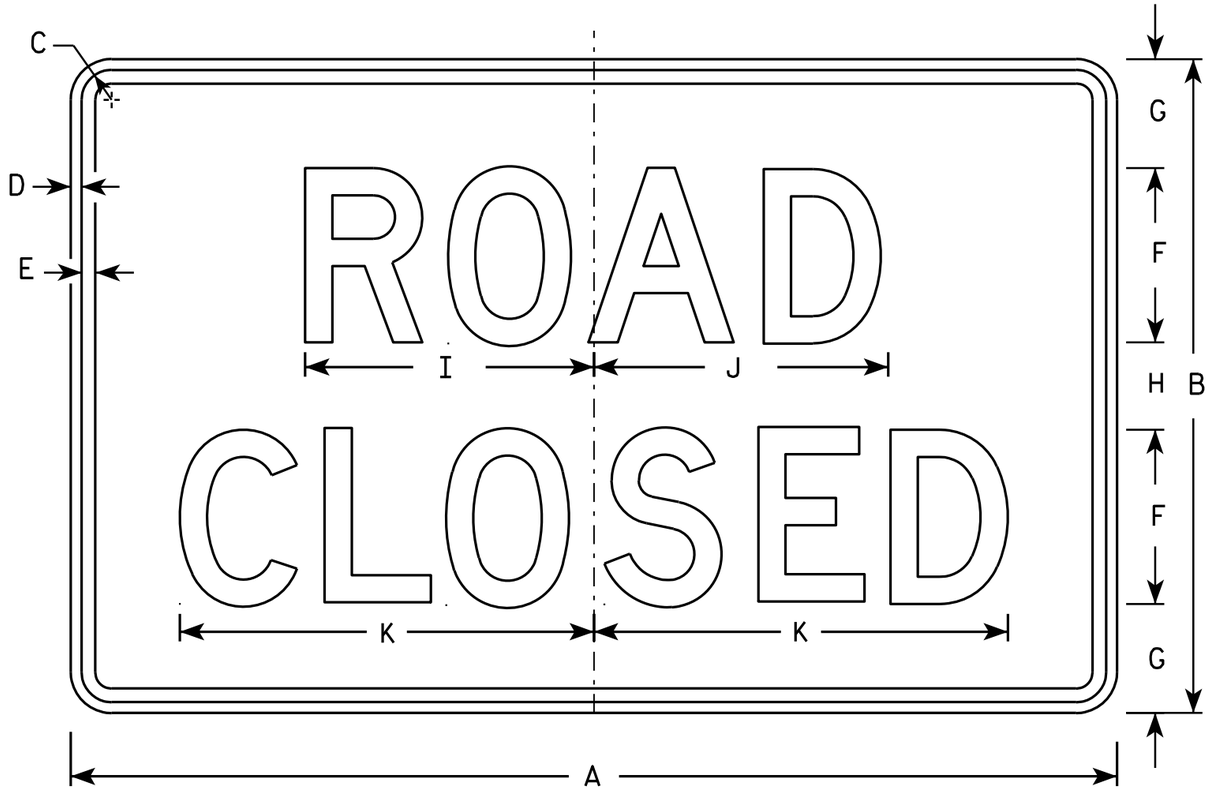
STANDARD SIGN
R10-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-65.2

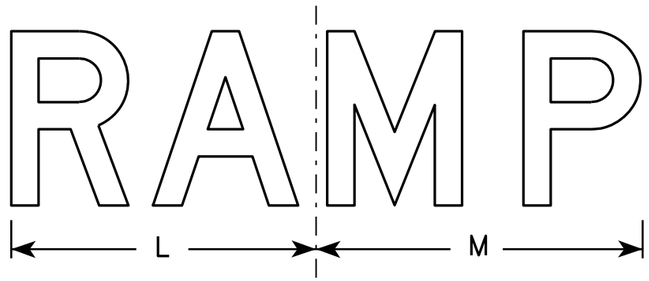
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 329	E



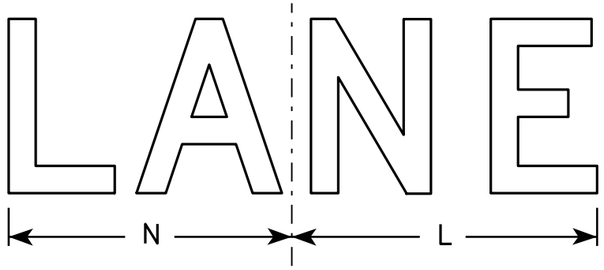
R11-2

NOTES

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



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

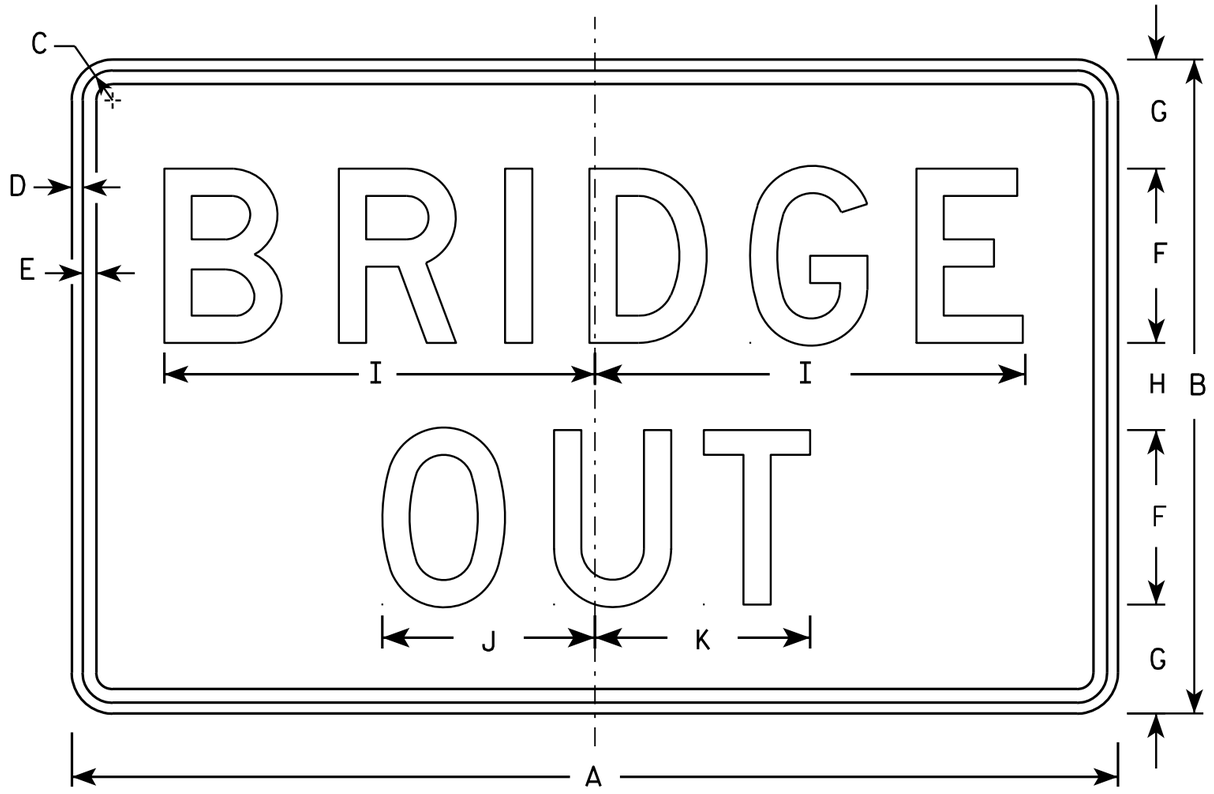
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 330	E



R11-2B

NOTES

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

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

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

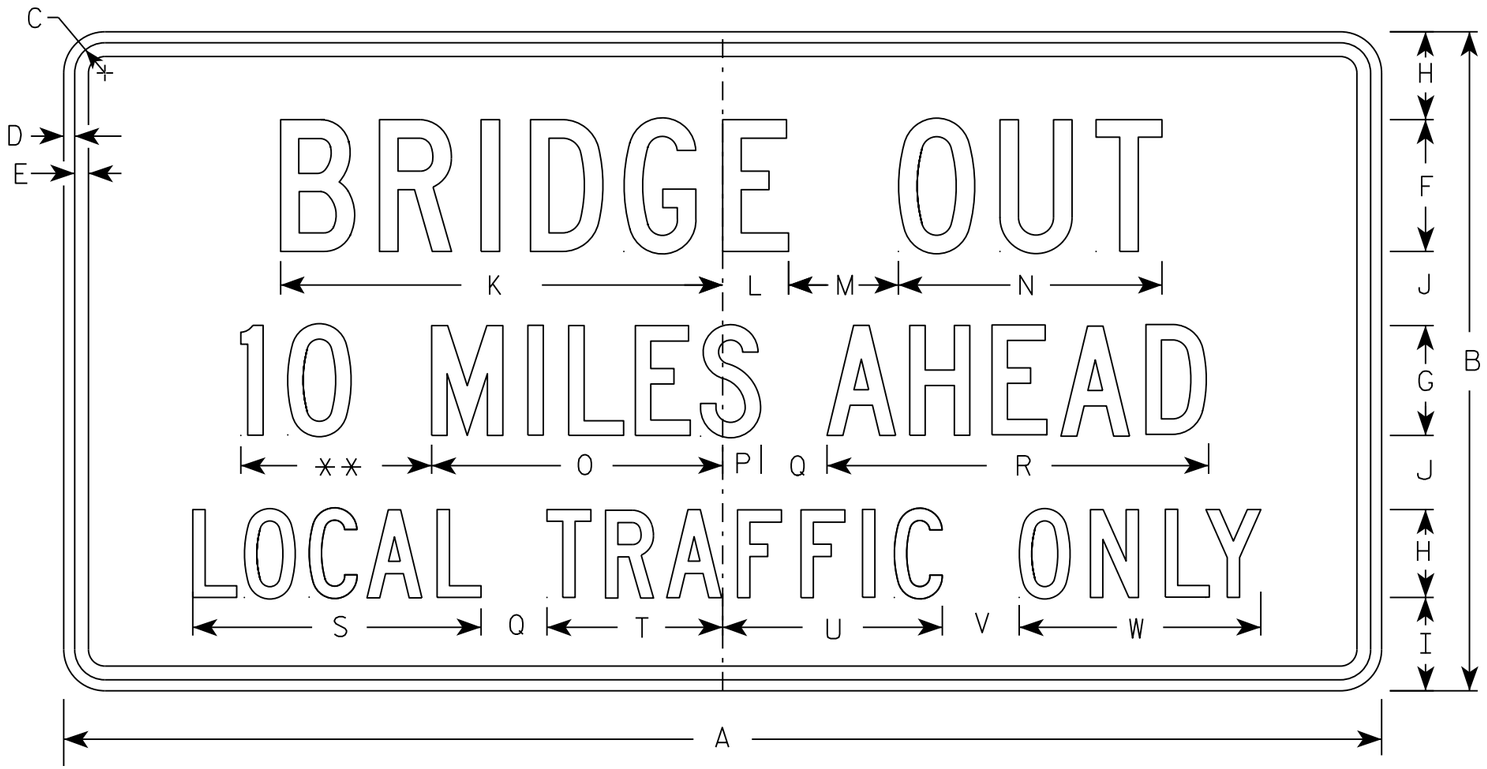
PROJECT NO:

SHEET NO: 331 E

7

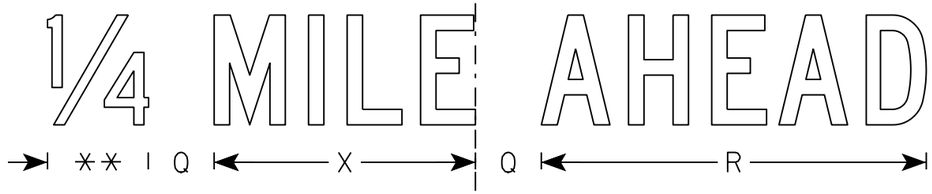
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42



R11-3B

** See Note 5



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

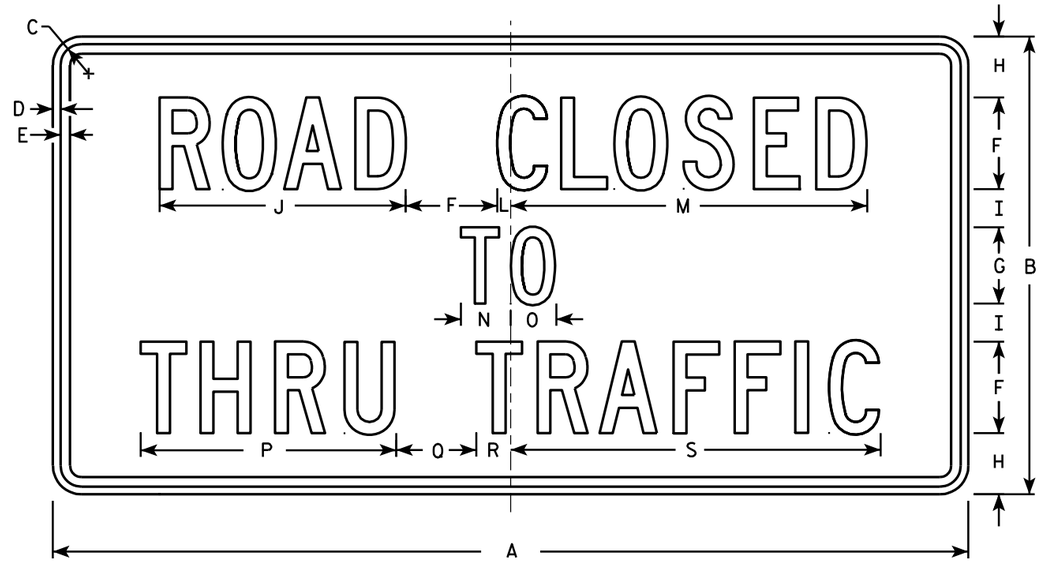
STANDARD SIGN
R11-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. R11-3B.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 332 | E



R11-4

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

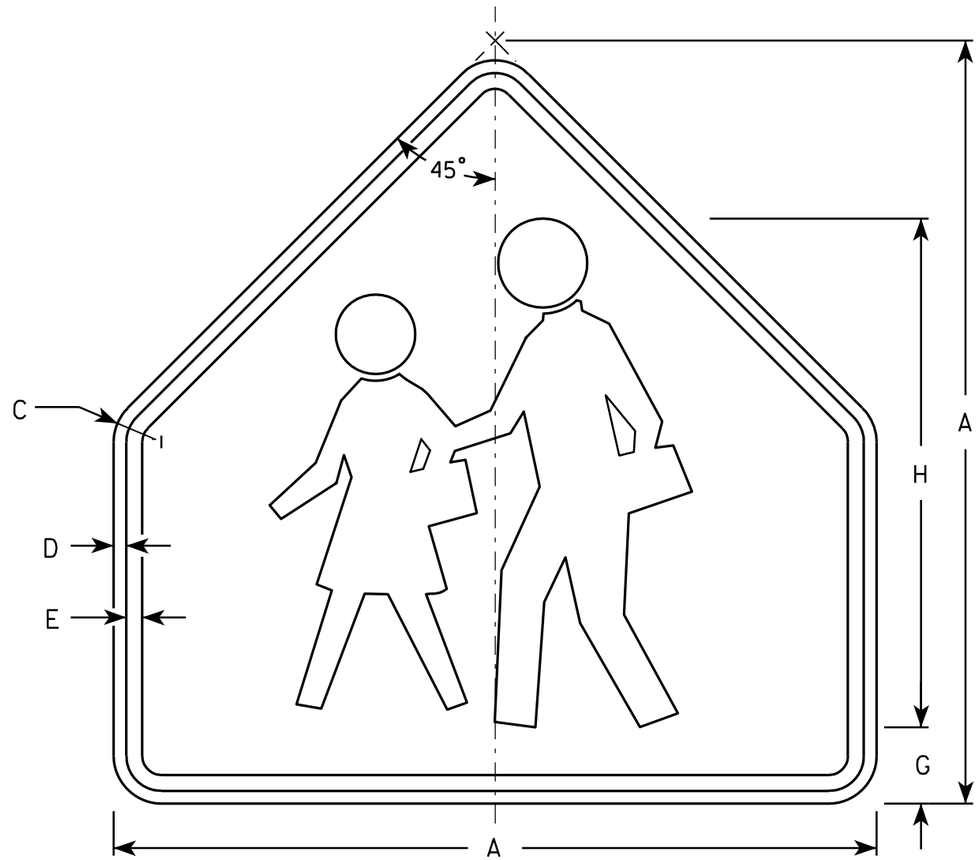
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 333 | E



S1-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow-Green
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

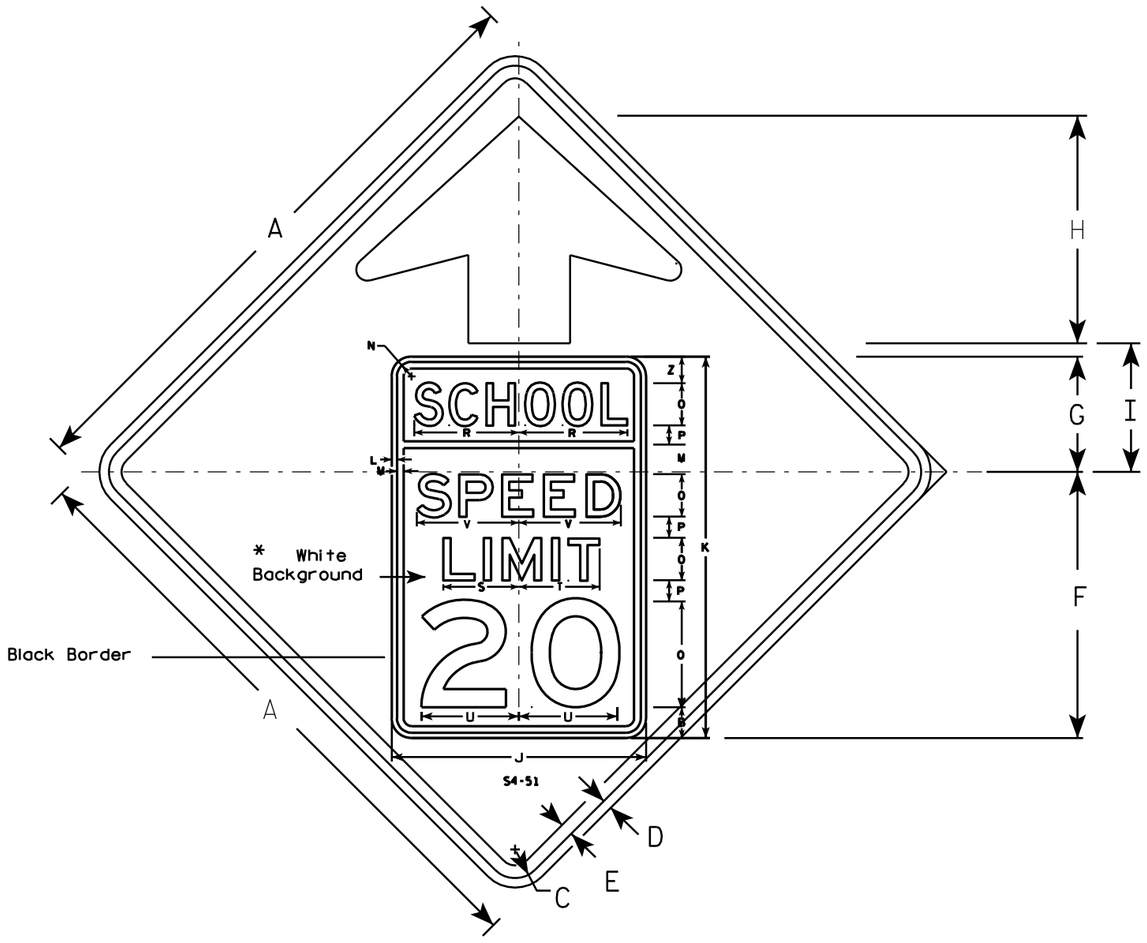
STANDARD SIGN
S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/05 PLATE NO. S1-1.8

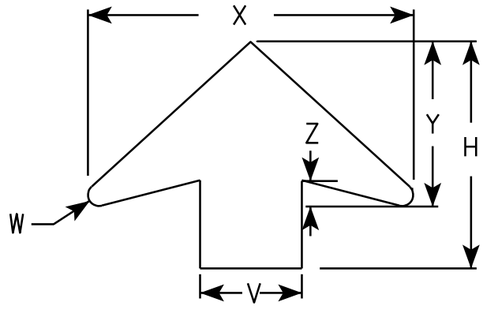
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 334	E



S4-5

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: See Note 5
   Background - Flourescent Yellow Green
   Message - BLACK
3. Message Series - See note 6
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance
5. SCHOOL background - Yellow Green -Type F Reflective.
   Speed Limit panel background - White -Type H Reflective.
6. From top to bottom:
   School is series D
   All other lines are series E
7. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	36	1 7/8	1 5/8	5/8	3/4	15 3/4	6 3/4	13 3/8	7 5/8	15	22 1/2	1/4	3/8	7/8	6 1/4	1 1/4	2 1/2	6 3/8	4 1/2	4 3/4	5 3/4	6	5/8	19 1/4	9 3/4	1 5/8	9.0
3	48	2 3/8	2 1/4	3/4	1	18 3/4	10 1/8	17 7/8	10 1/8	20	30	3/8	1/2	1 1/8	8 3/8	1 5/8	3 3/8	8 1/2	5 7/8	6 3/8	7 3/4	8	7/8	25 5/8	13	2	16.0
4	48	2 3/8	2 1/4	3/4	1	18 3/4	10 1/8	17 7/8	10 1/8	20	30	3/8	1/2	1 1/8	8 3/8	1 5/8	3 3/8	8 1/2	5 7/8	6 3/8	7 3/4	8	7/8	25 5/8	13	2	16.0
5																											

STANDARD SIGN
S4-5

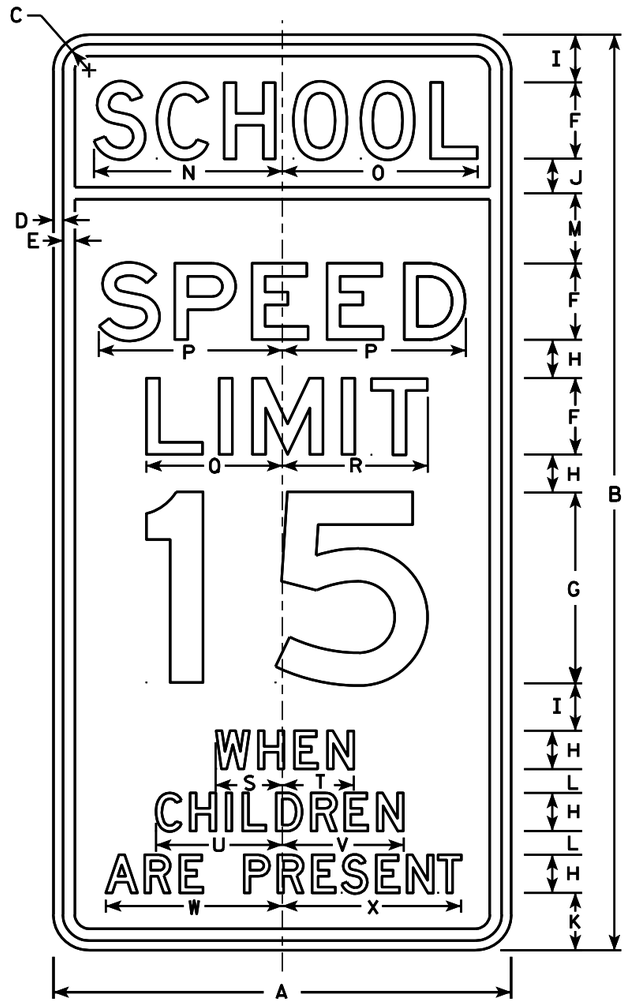
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/21/10 PLATE NO. S4-5.3

PROJECT NO:

SHEET NO: 335 E



S4-51

NOTES

1. Sign is Type II - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. (See note 5).
2. Color:
   Background - See note 5
   Message - Black
3. Message Series - See note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Top panel (SCHOOL) background - Yellow Green -Type F Reflective.
   Lower panel background - White -Type H Reflective.
6. From top to bottom:
   Lines 1, 5, 6 & 7 are series D
   Lines 2, 3 & 4 are series E
7. Line 4 substitute appropriate numerals and adjust spacing to achieve proper balance.

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 1200 mm
3	900 mm X 1800 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	48	1 3/8	1/2	5/8	4	10	2	2 1/2	1 3/4	3	1 1/4	3 3/4	9 7/8	10 1/4	9 5/8	7 1/8	7 5/8	3 1/2	3 3/8	6 5/8	6 3/8	9 1/4	9 3/8			8.00	0.72
3	36	72	2 1/4	3/4	1	6	15	3	3 3/4	2 3/4	4 1/2	1 7/8	5 1/2	15	15 1/4	14 1/2	11 1/4	11 1/2	5 1/2	5 3/4	10	9 3/4	14	14 1/8			18.00	1.62
4																												
5																												

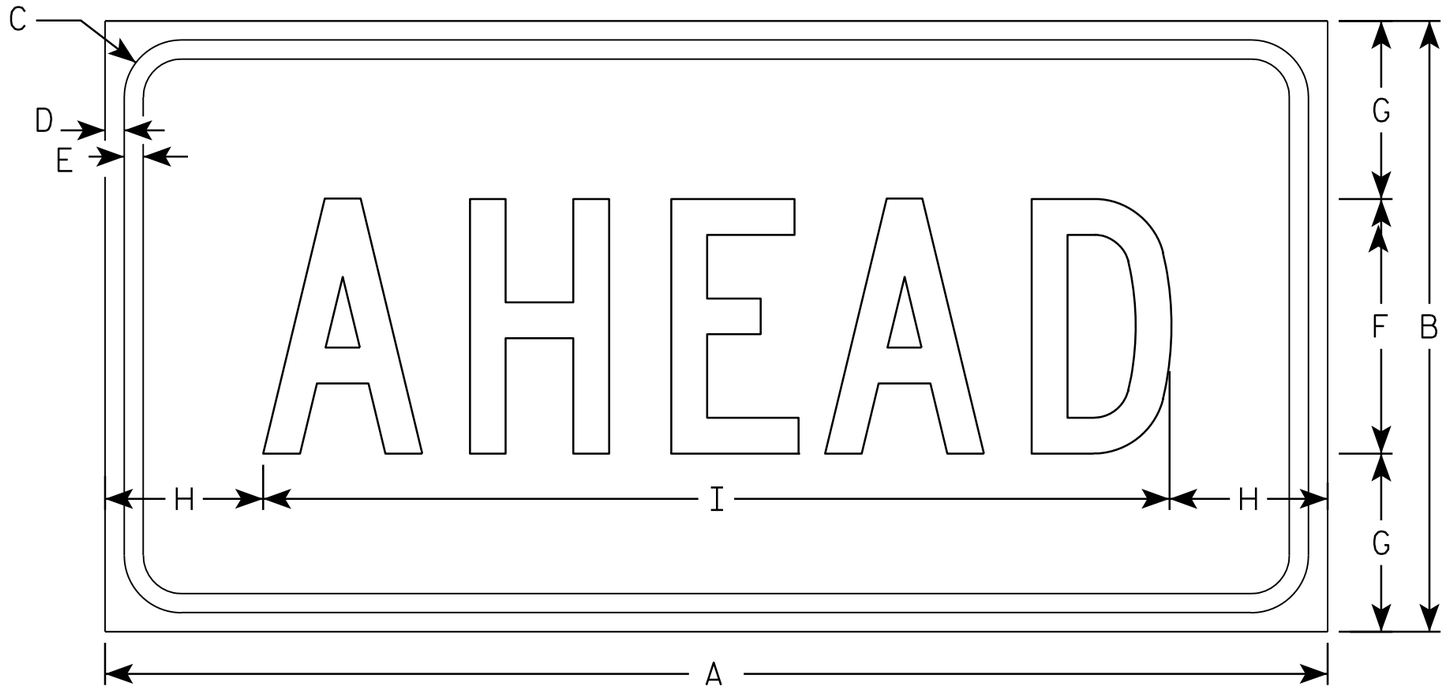
STANDARD SIGN
S4-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/26/10 PLATE NO. S4-51.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 336	E



S16-9P

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
S16-9P

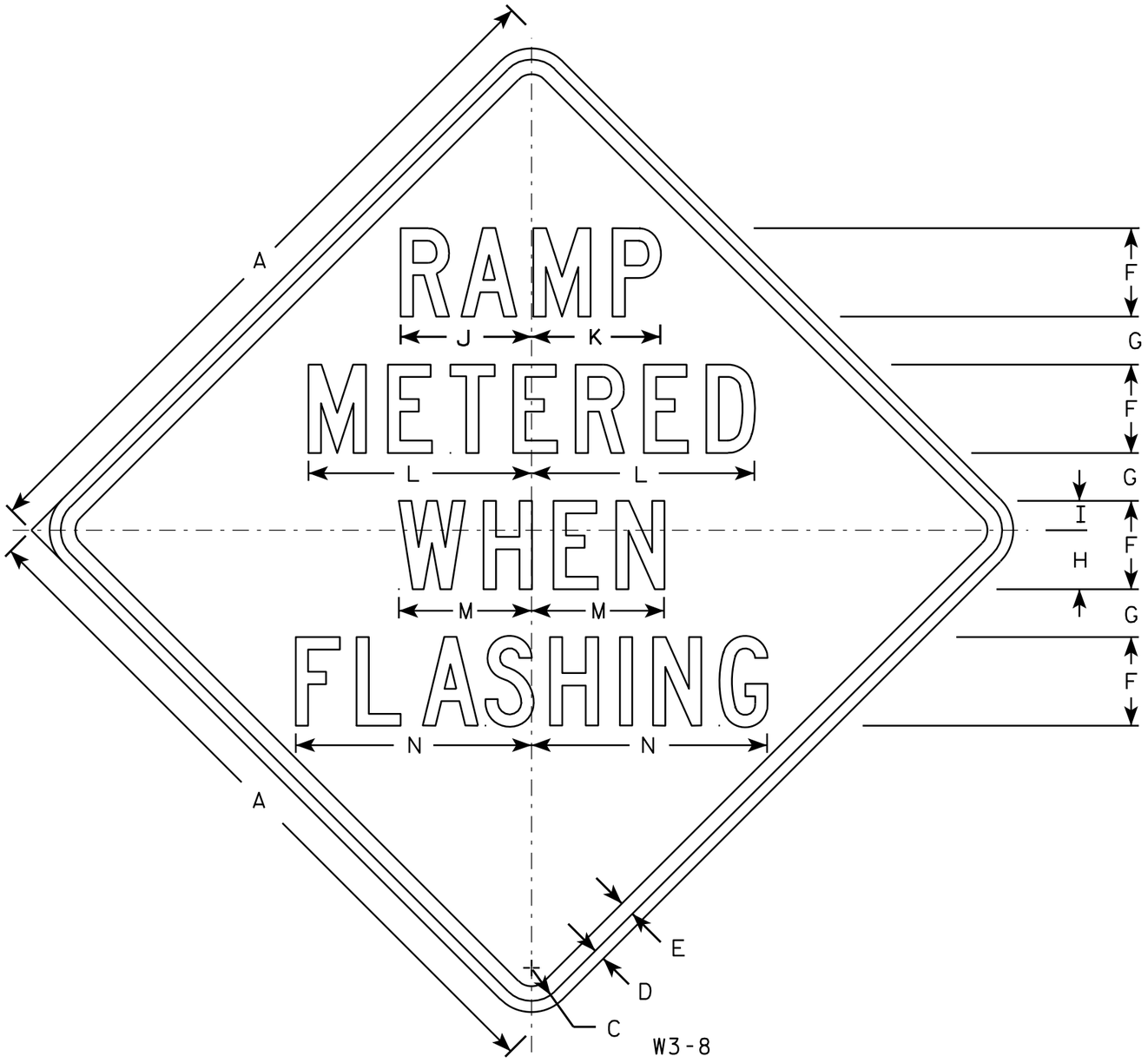
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 337 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\S169P.dgn PLOT DATE : 22-JUL-2013 10:32 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 2.977140:1.000000
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 - Yellow
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
2M	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
3	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
4	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
5	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0

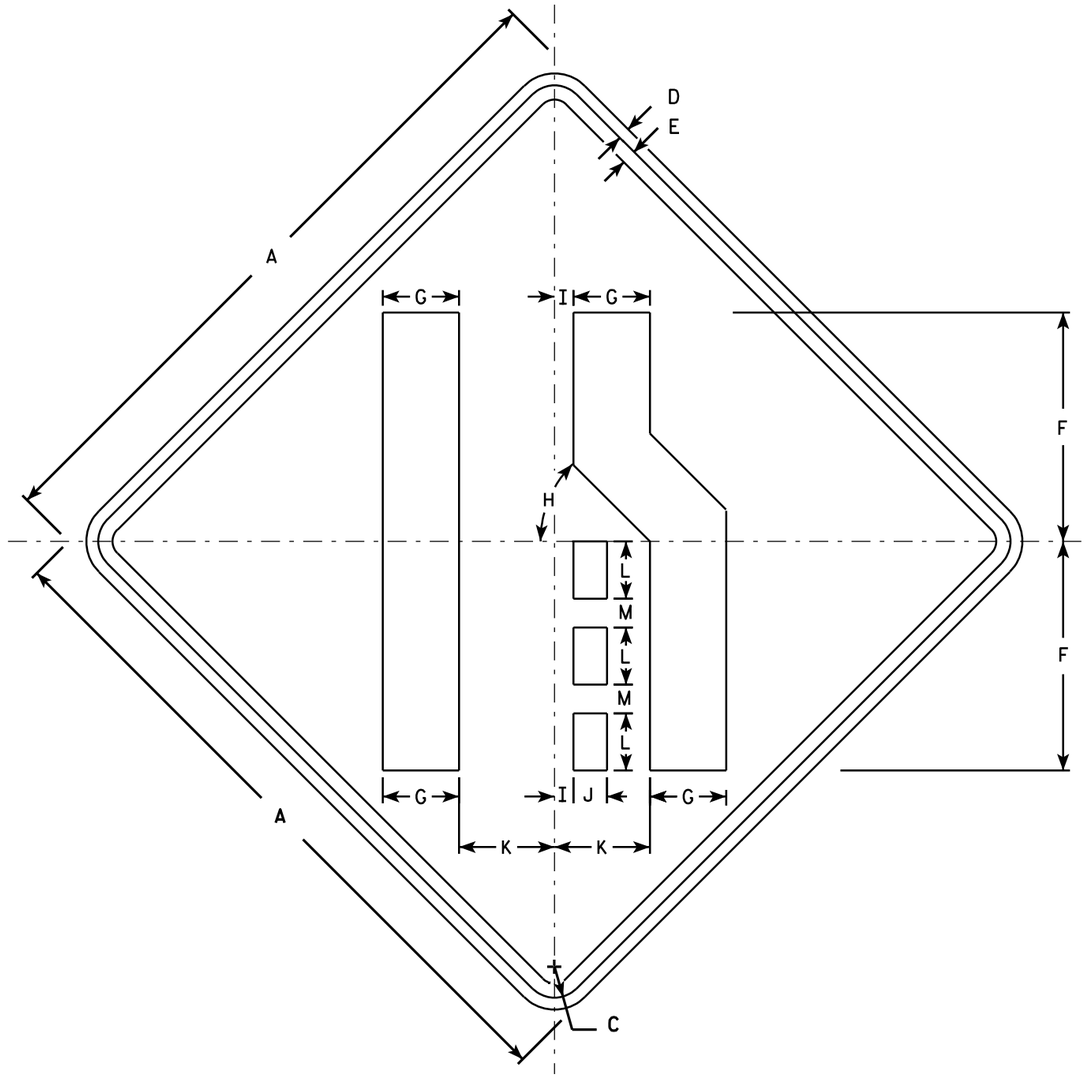
STANDARD SIGN
W3-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W3-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 338	E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

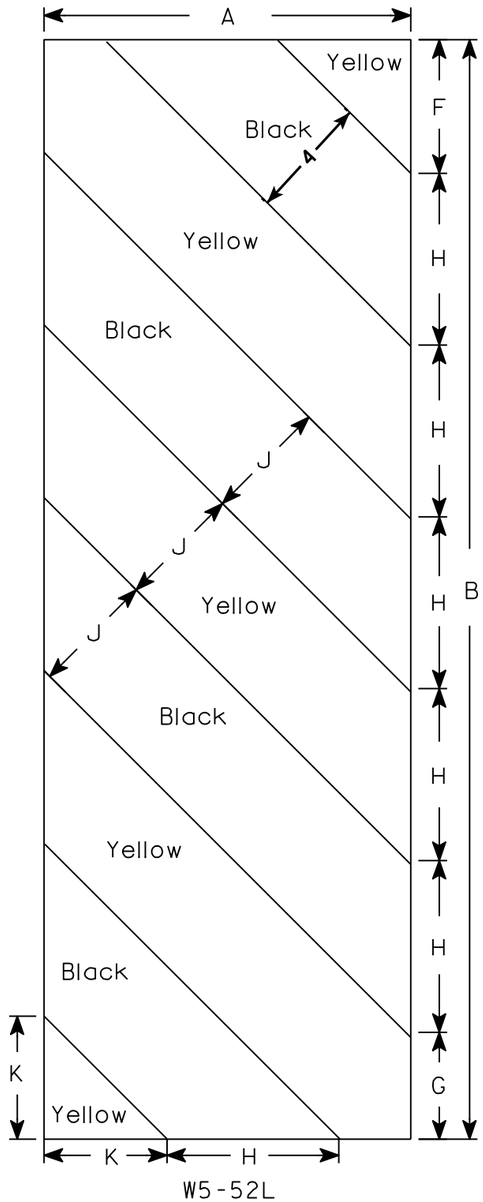
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

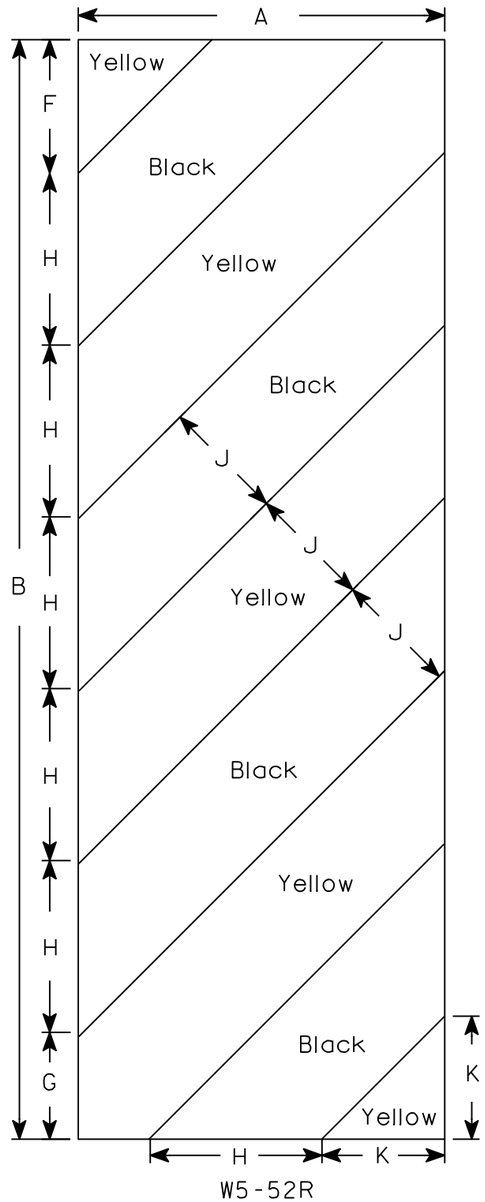
DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 339 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

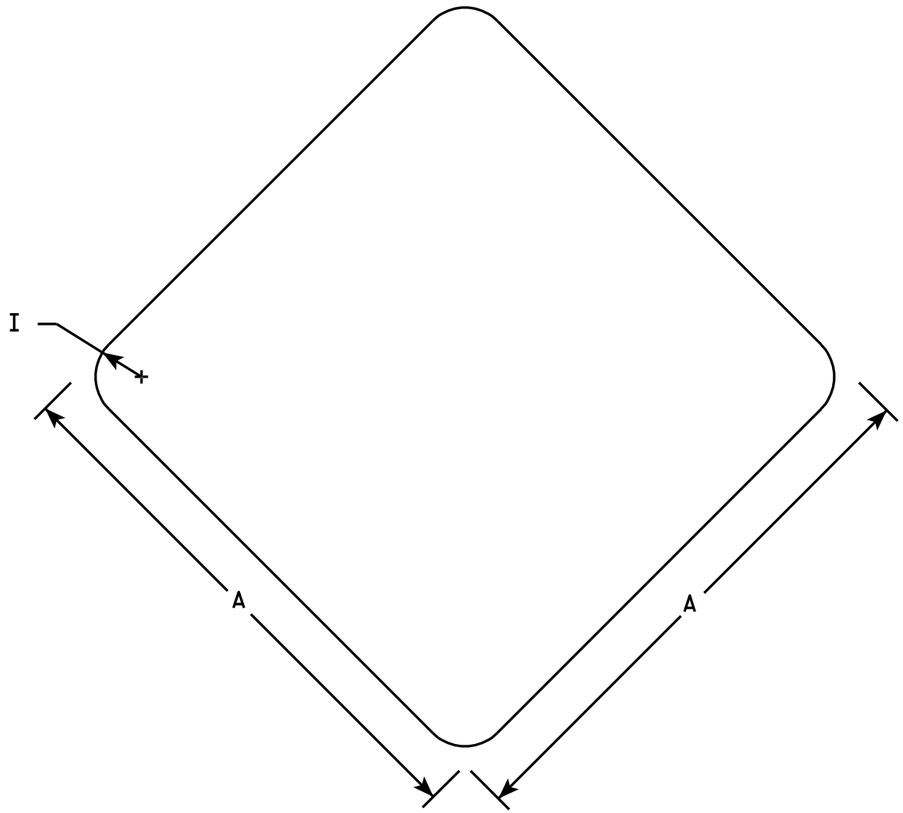
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 340	E



W5-56

NOTES

1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

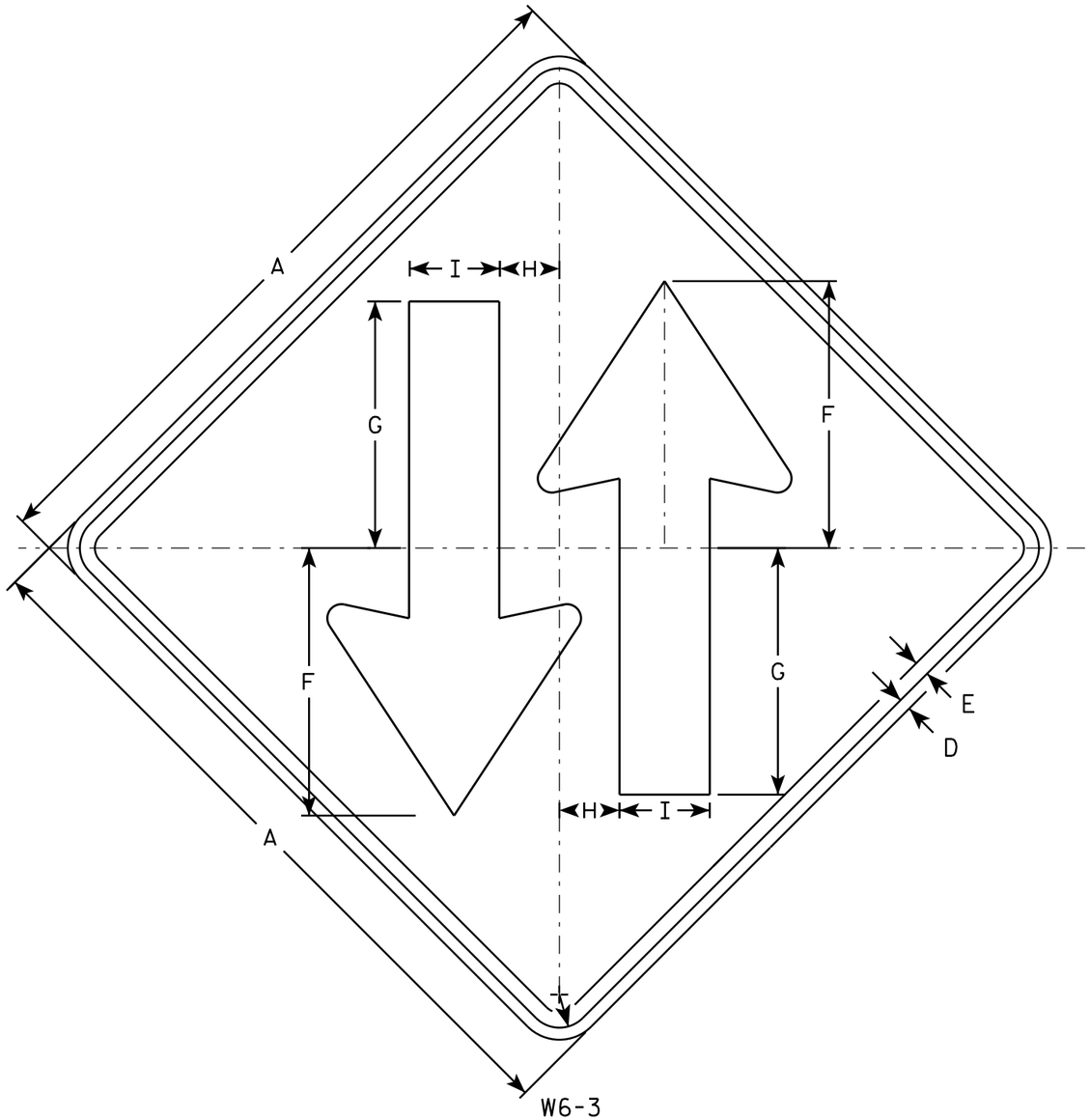
STANDARD SIGN
W5-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. W5-56.6

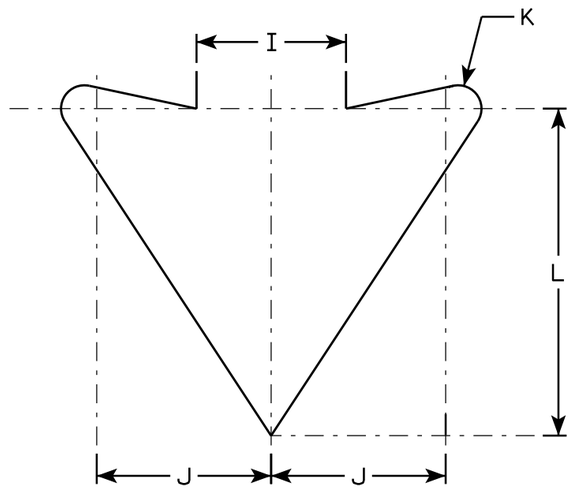
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 341	E



W6-3

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 1/8	10 1/4	2 1/2	3 3/4	4 3/8	5/8	8 1/4															6.25
2S	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
2M	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
3																											
4	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0
5	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0

STANDARD SIGN
W6-3

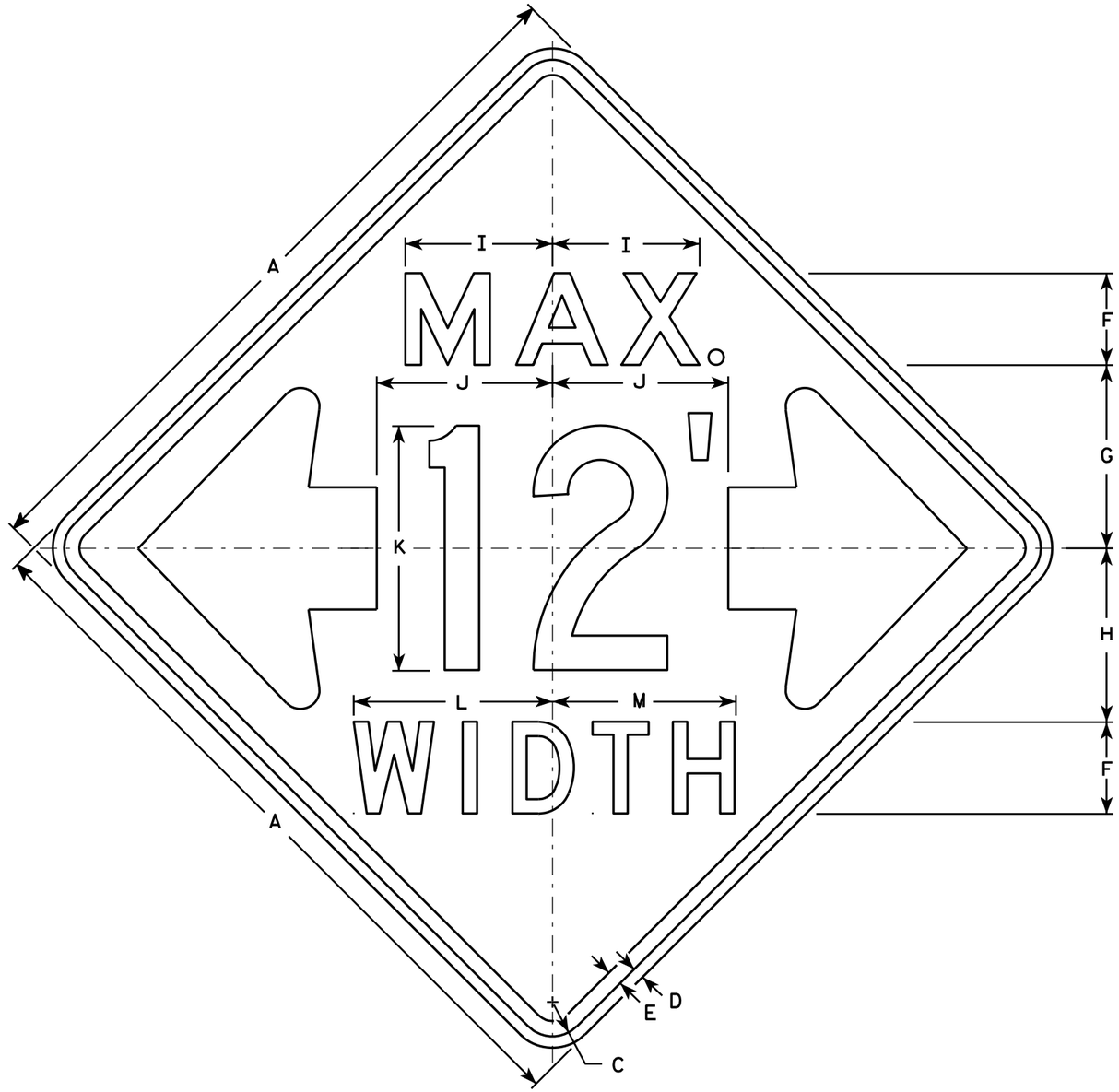
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/16 PLATE 16-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

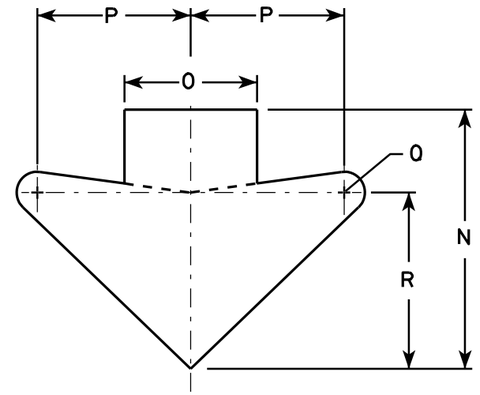
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W63.DGN PLOT DATE : 10-MAR-2016 14:01 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.080757:1.000000
WISDOT/CADDS SHEET 42



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

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

STANDARD SIGN
W12-52

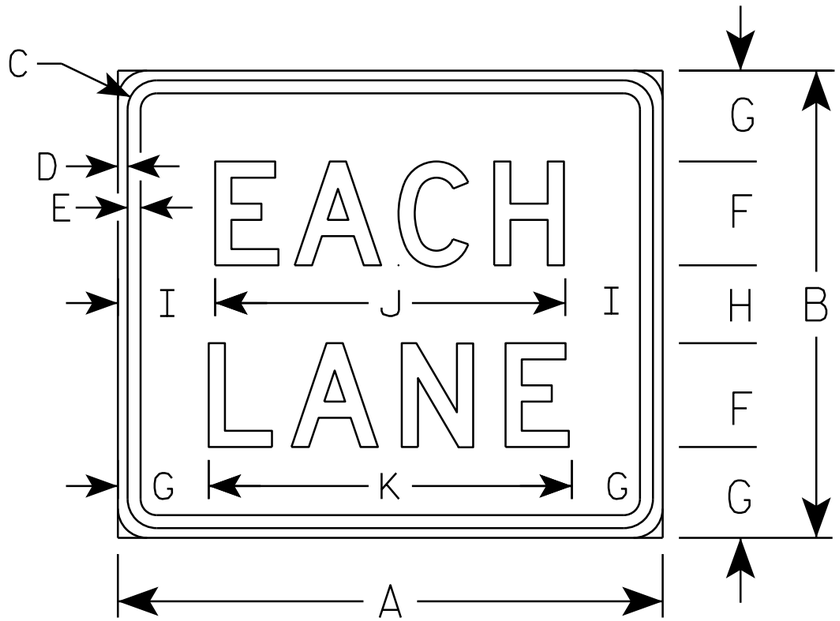
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 343 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



W12-52P

NOTES

1. Sign is Type II - Type F Reflective - reference
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	36	2 1/4	3/4	1	8	7	6	7 1/2	27	28																10.5
2M	42	36	2 1/4	3/4	1	8	7	6	7 1/2	27	28																10.5
3																											
4																											
5																											

STANDARD SIGN
W12-52P

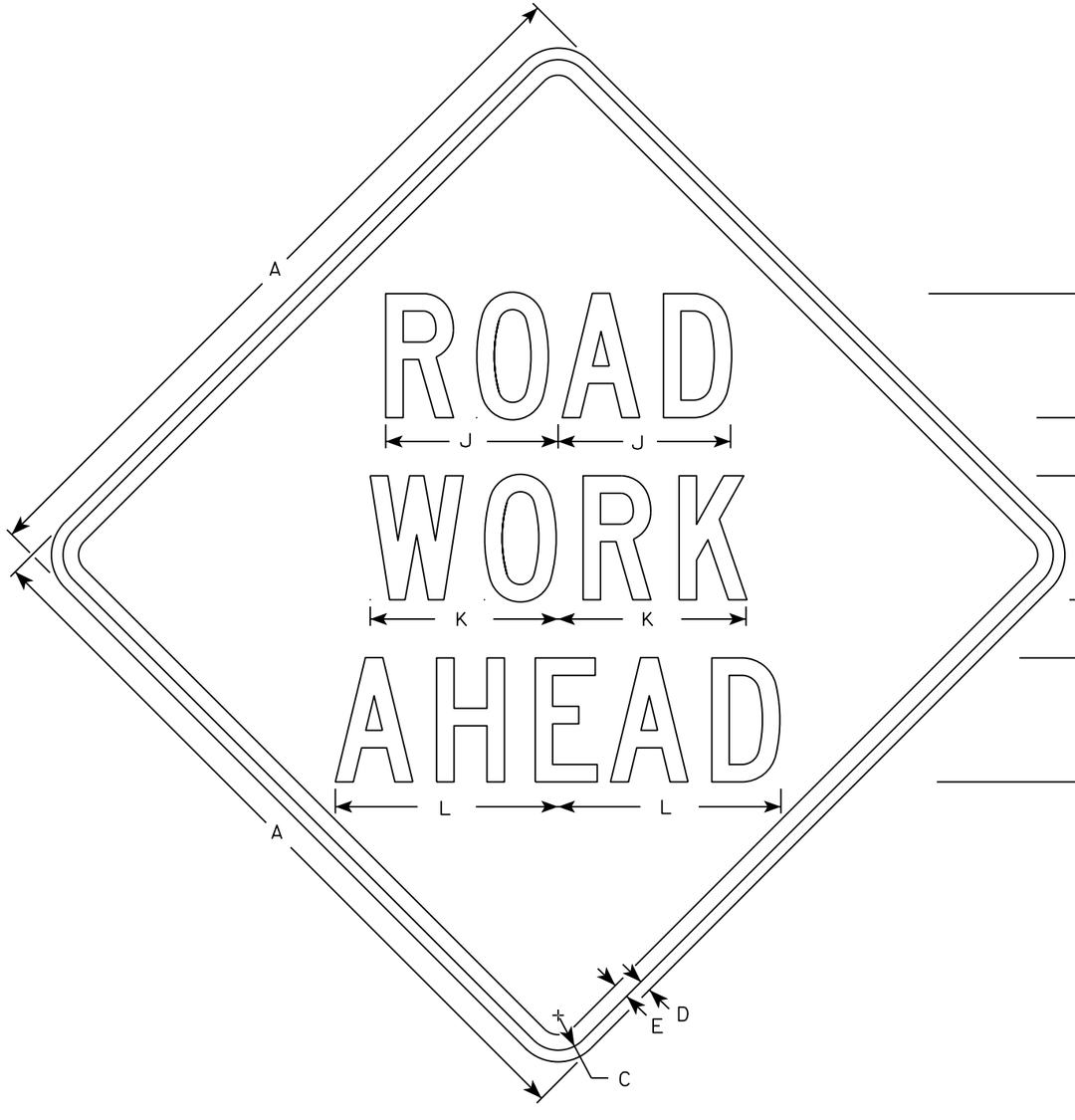
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

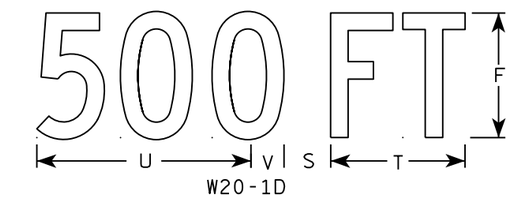
DATE 12/16/13 PLATE NO. W12-52P.1

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

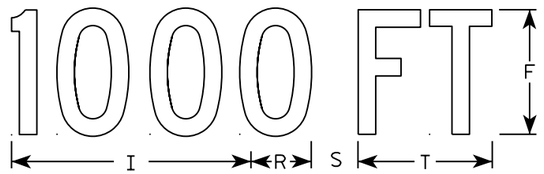
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W1252P.dgn PLOT DATE : 16-DEC-2013 11:01 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000 WISDOT/CADDS SHEET 42



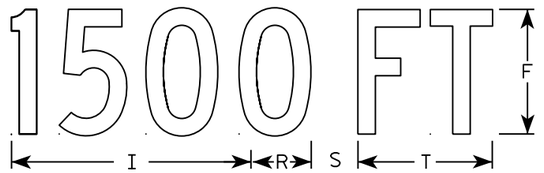
W20-1A



W20-1D



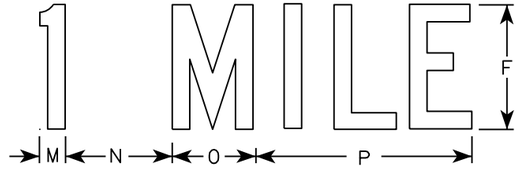
W20-1C



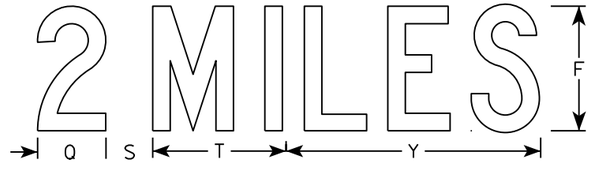
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

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

WISCONSIN DEPT OF TRANSPORTATION

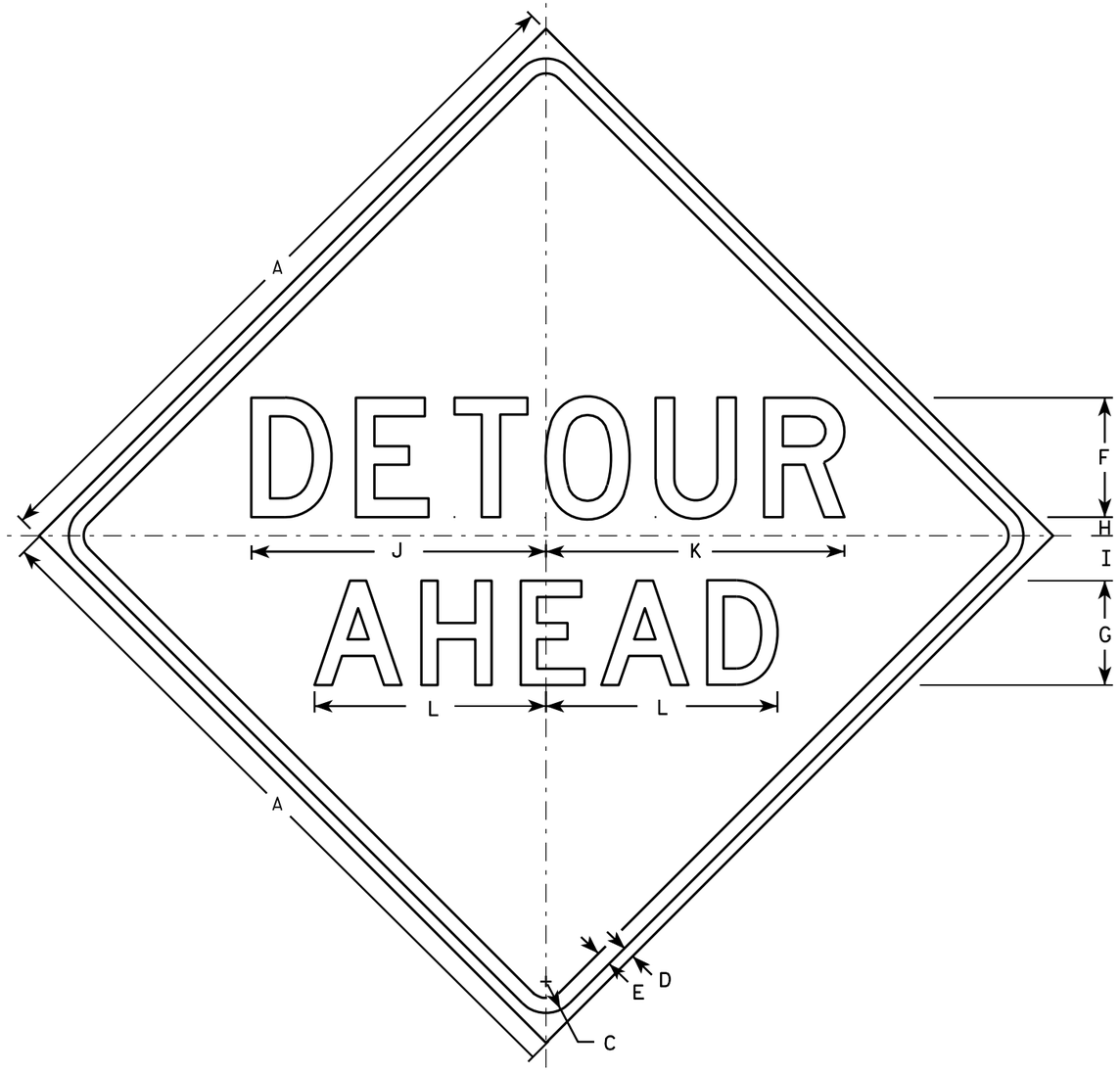
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

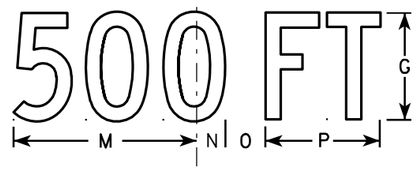
PROJECT NO:

SHEET NO: E

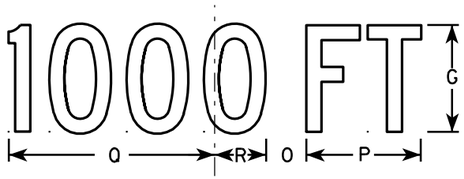
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



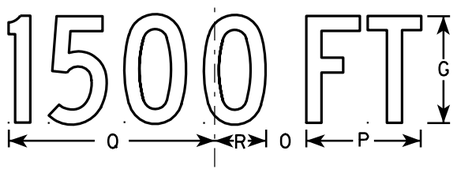
W20-2A



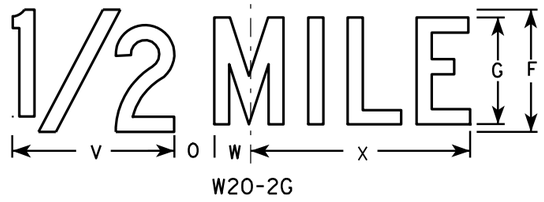
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

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

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

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

WISCONSIN DEPT OF TRANSPORTATION

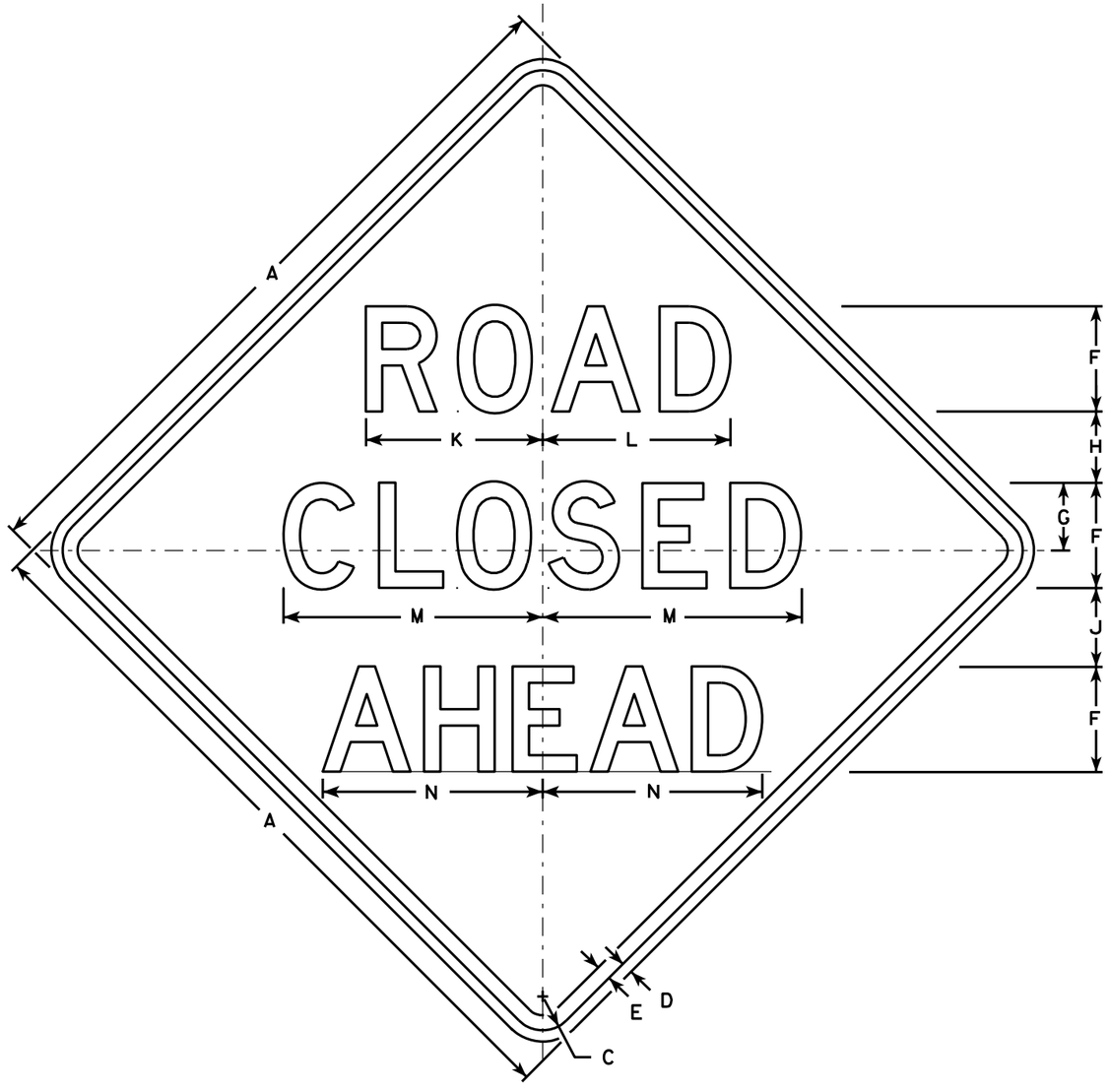
APPROVED Matthew R Rauch
for State Traffic Engineer

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

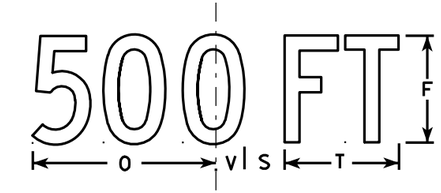
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 346 | E

7

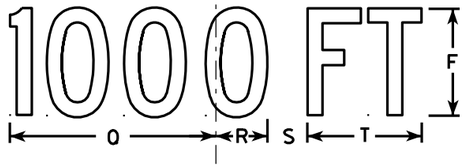
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W202.DGN PLOT DATE : 18-MAR-2011 10:00 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



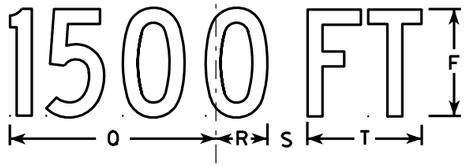
W20-3A



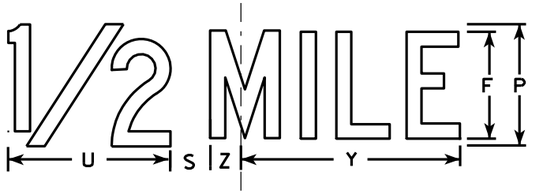
W20-3D



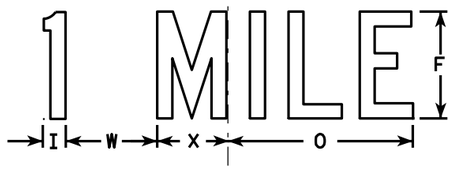
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

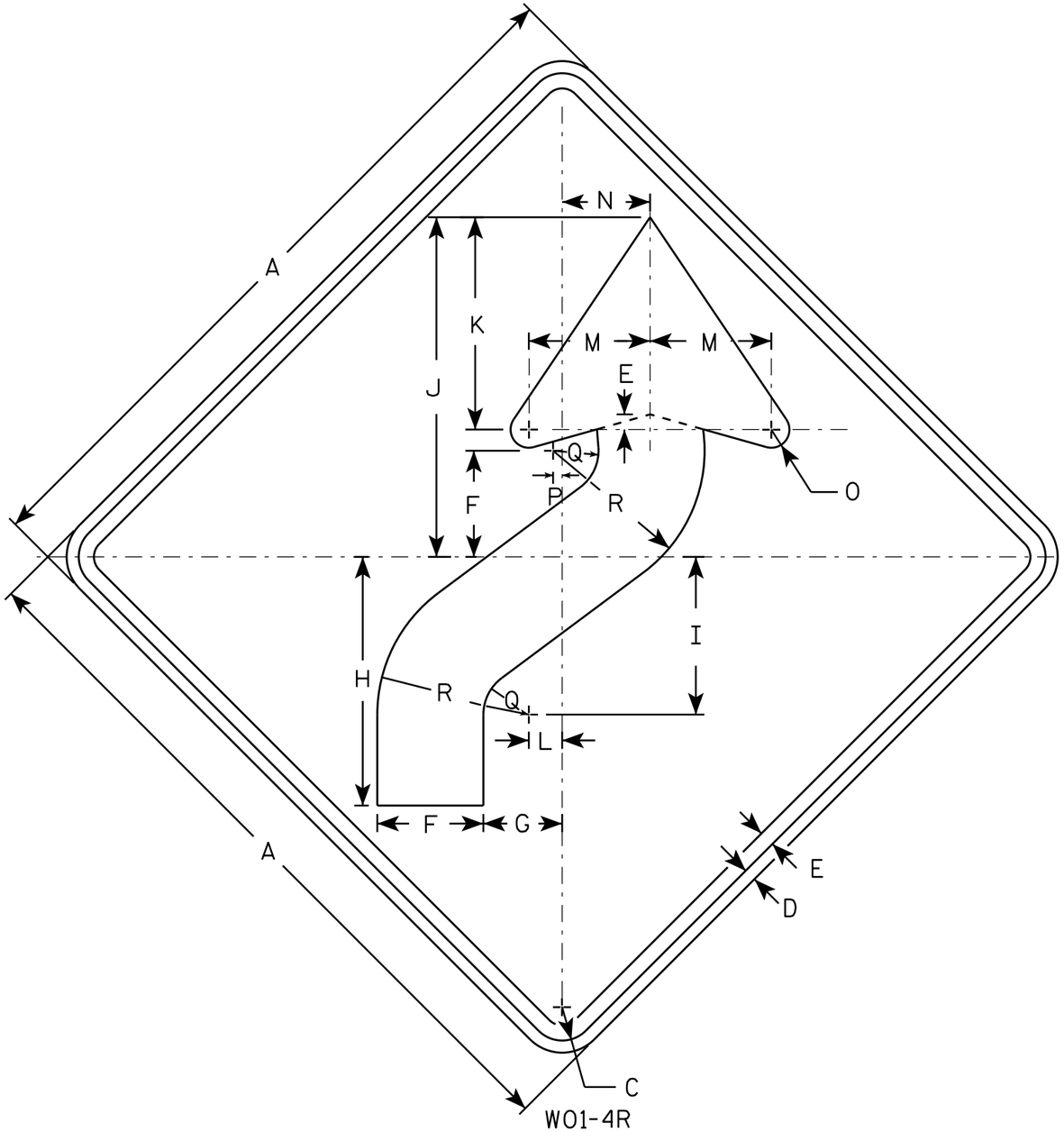
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 347 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000

WISDOT/CADDS SHEET 42

7

7



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

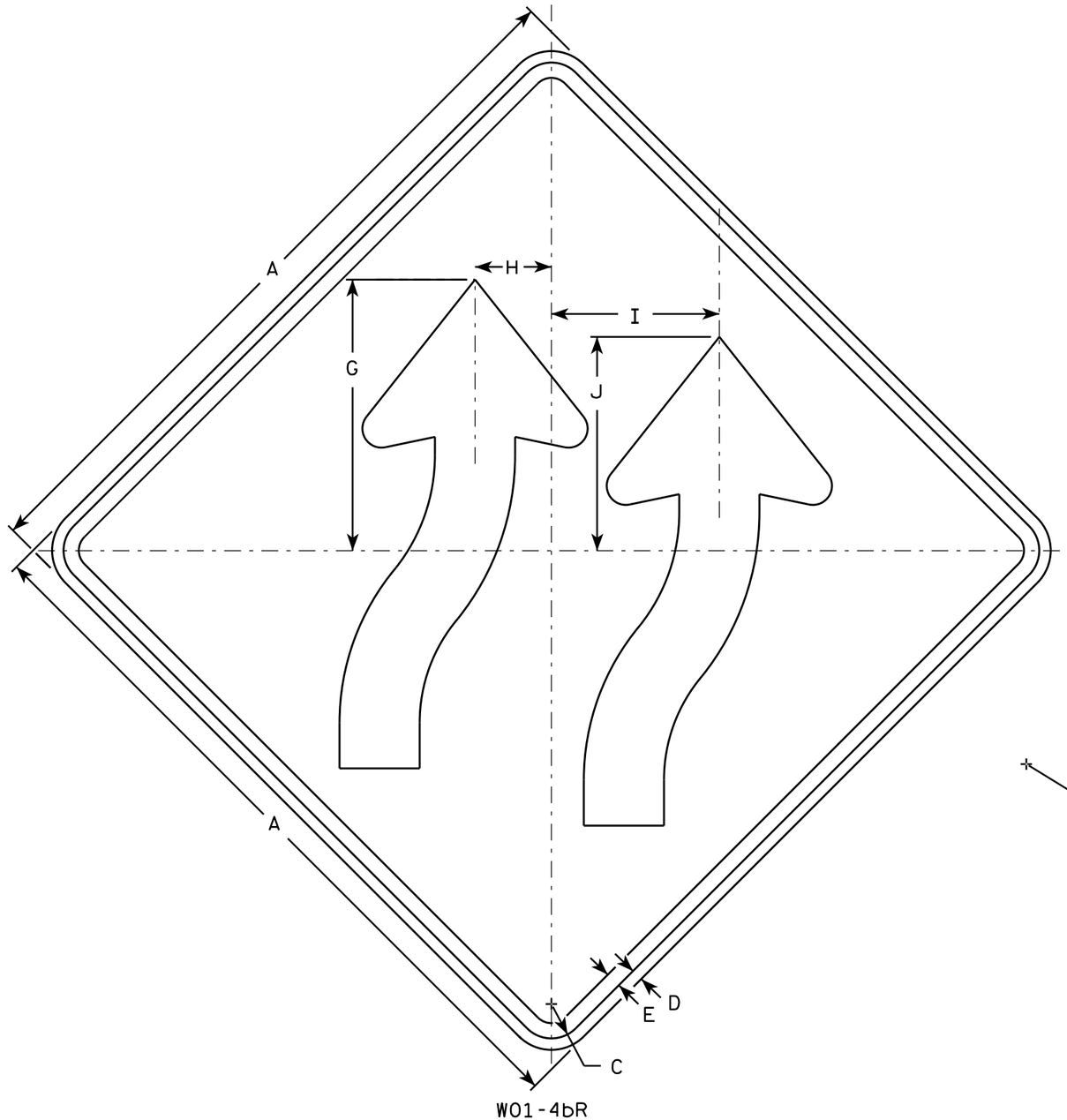
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

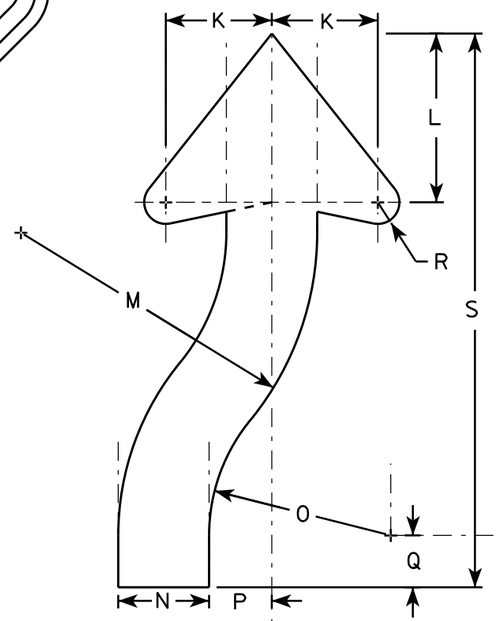
DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W01-4bR



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. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

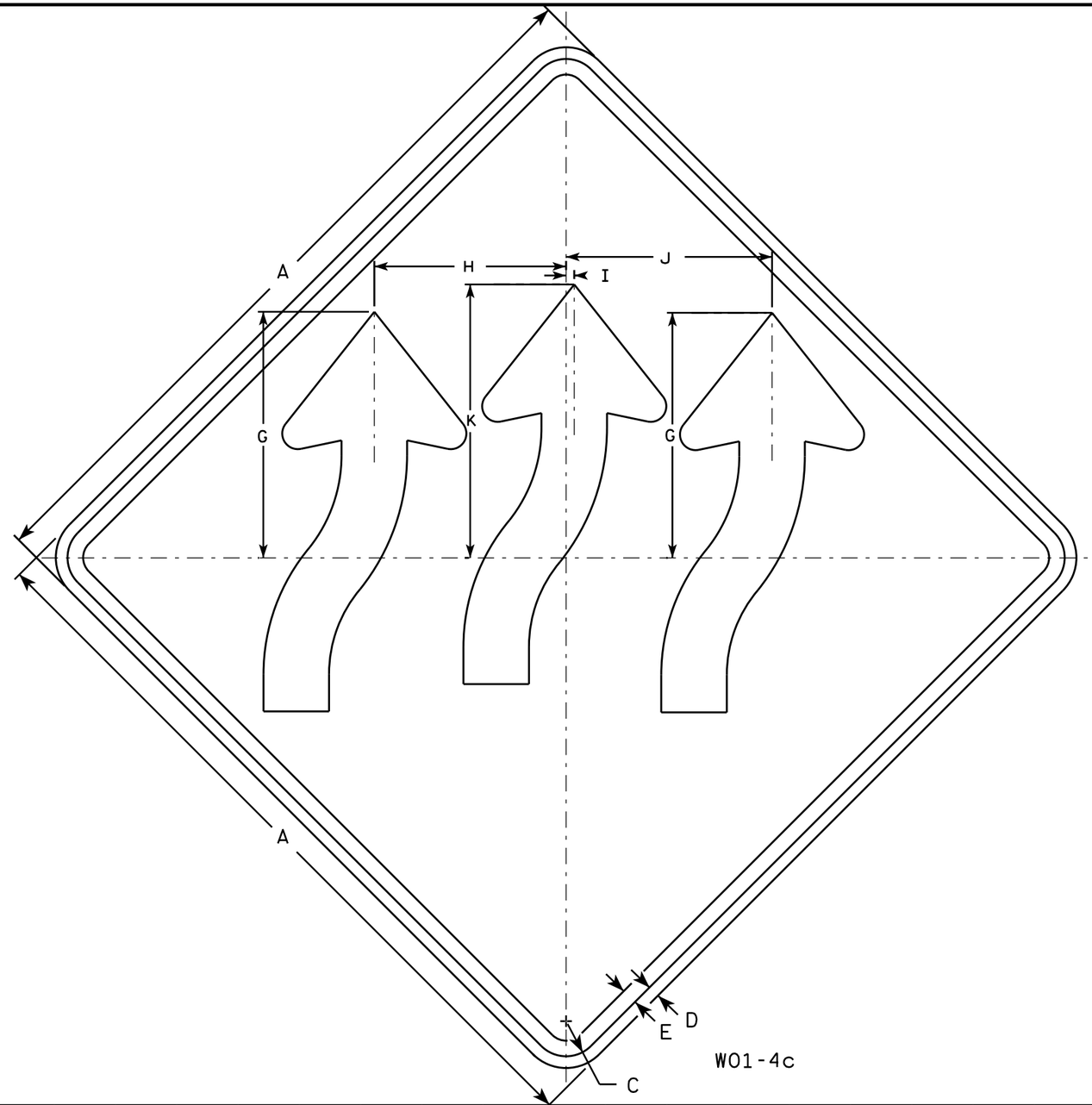
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

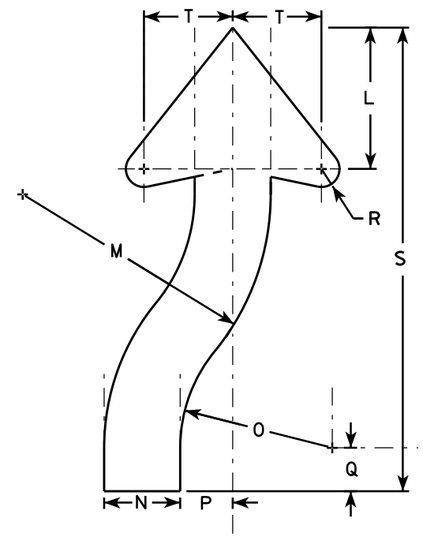
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-4c



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		11 3/4	9 1/4	3/8	9 7/8	13 1/8	5 7/8	10 1/4	3 1/8	6 1/4	2 1/4	1 7/8	3/4	19 1/4	3 3/4							9.0
2S	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0
2M	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0
3	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0
4	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0
5	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0

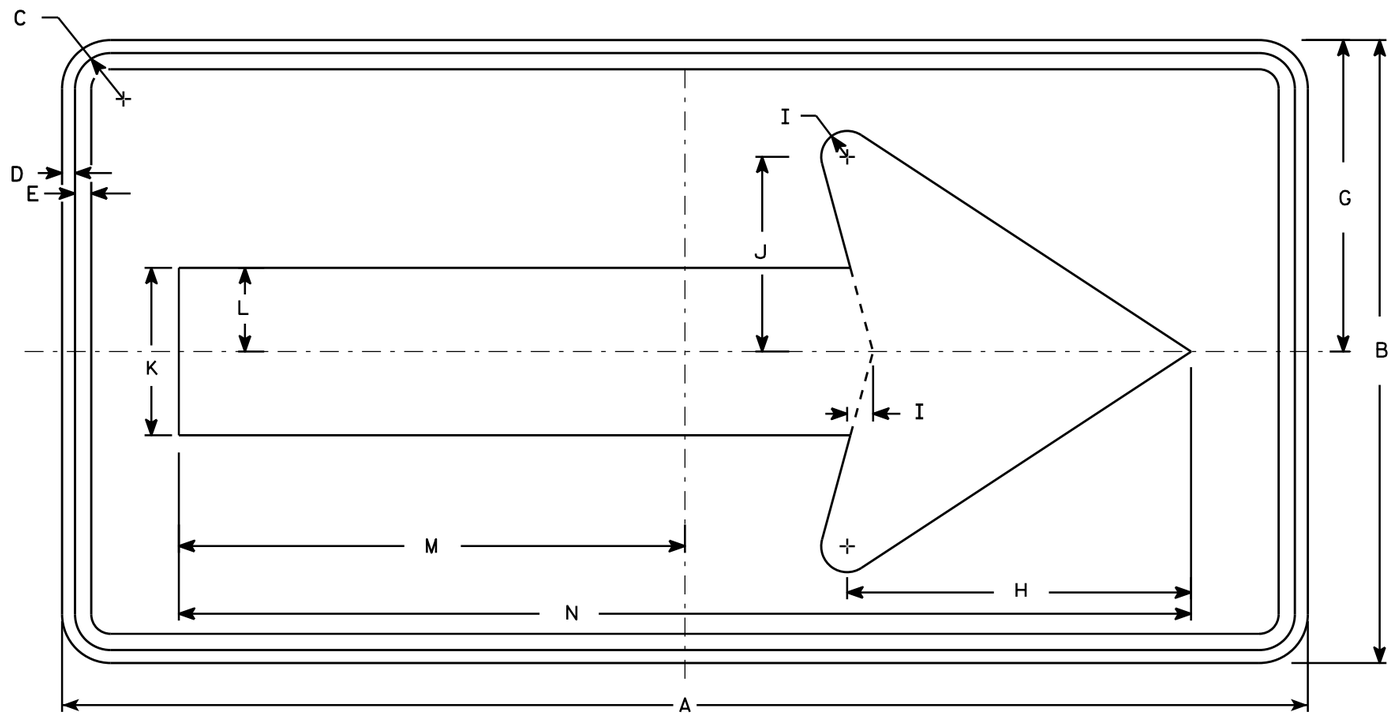
STANDARD SIGN
W01-4c

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE 350 "01-4c.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

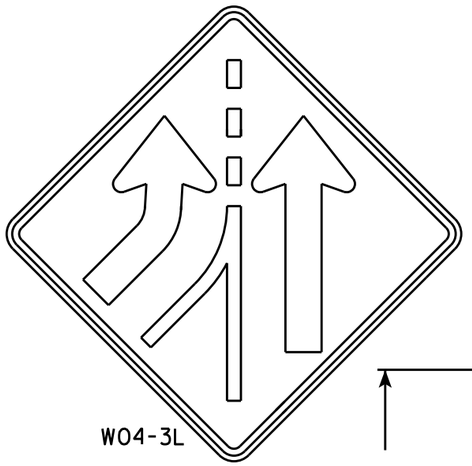
WISCONSIN DEPT OF TRANSPORTATION

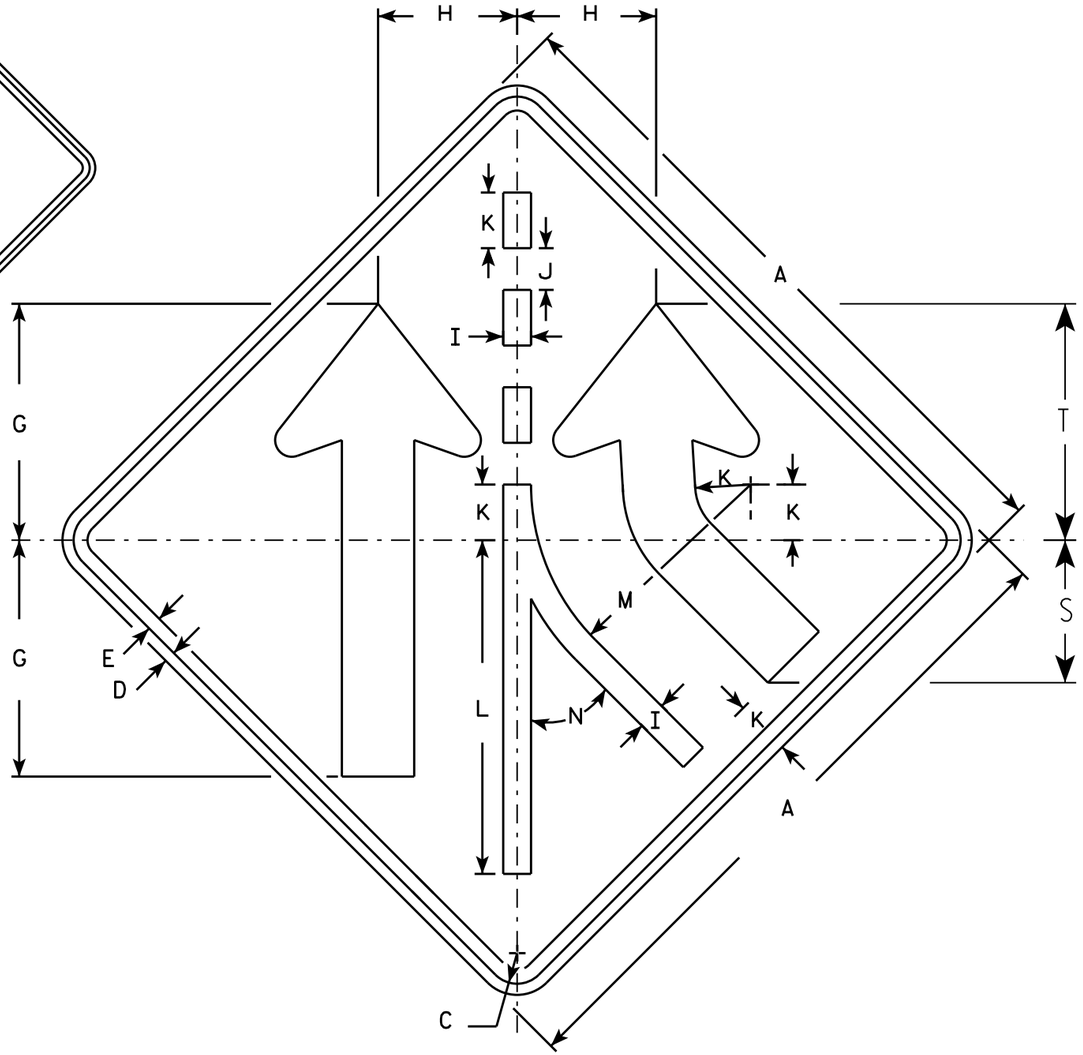
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

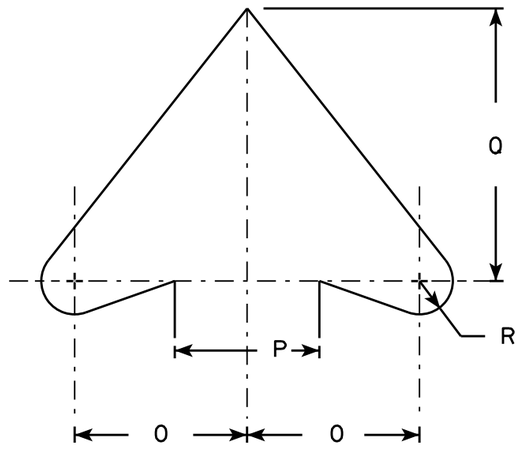
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42





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.
4. W04-3 L is the same as W04-3 R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

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

STANDARD SIGN

W0433

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

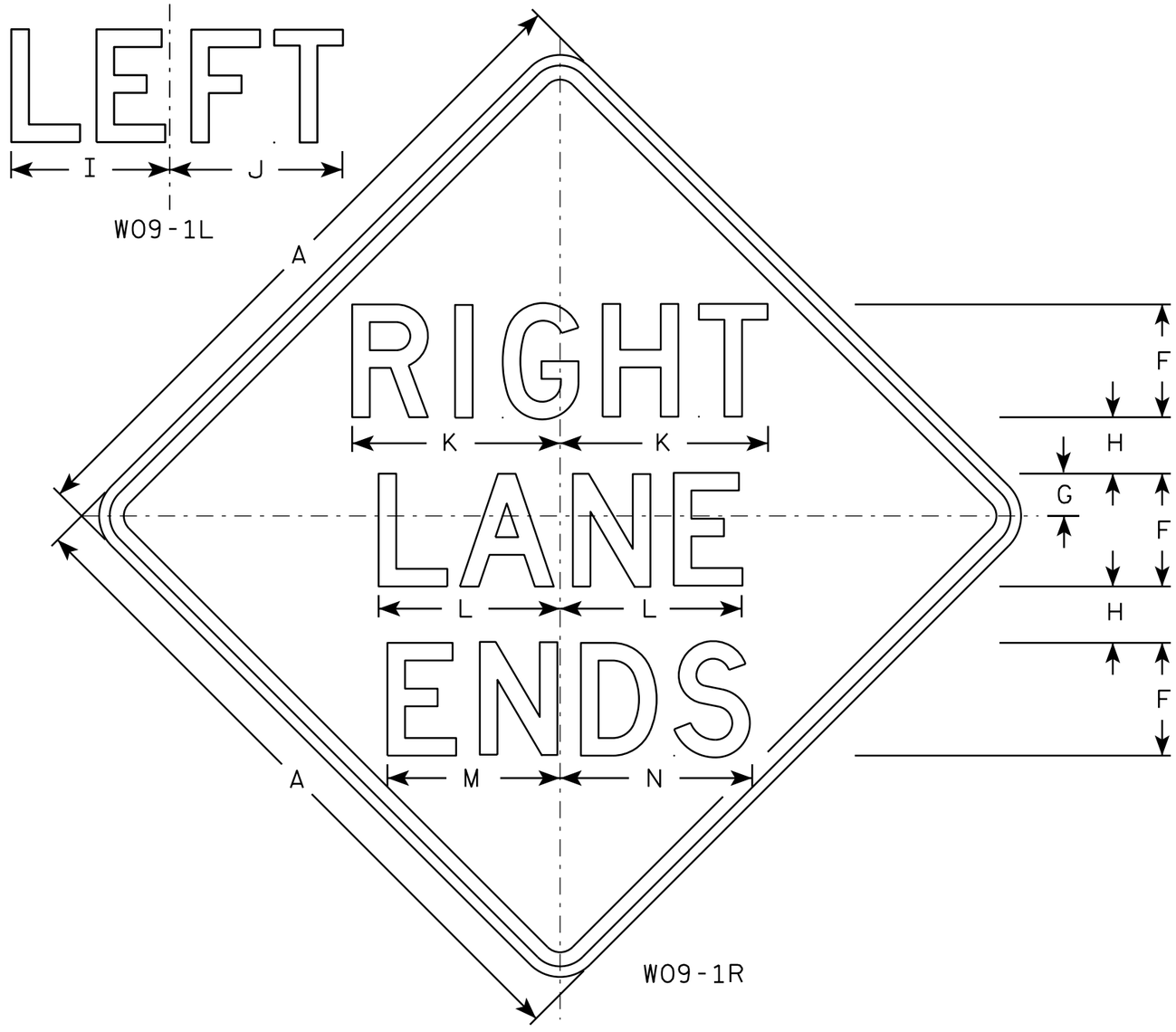
DATE 11/20/13 PLATE W04-3.1

PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W043.DGN PLOT DATE : 20-NOV-2013 11:49 PLOT BY : mscsja 6.810449:1.000000

7 7



NOTES

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

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

STANDARD SIGN
W09-1

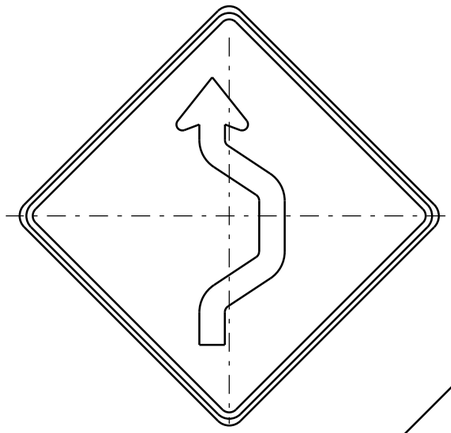
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

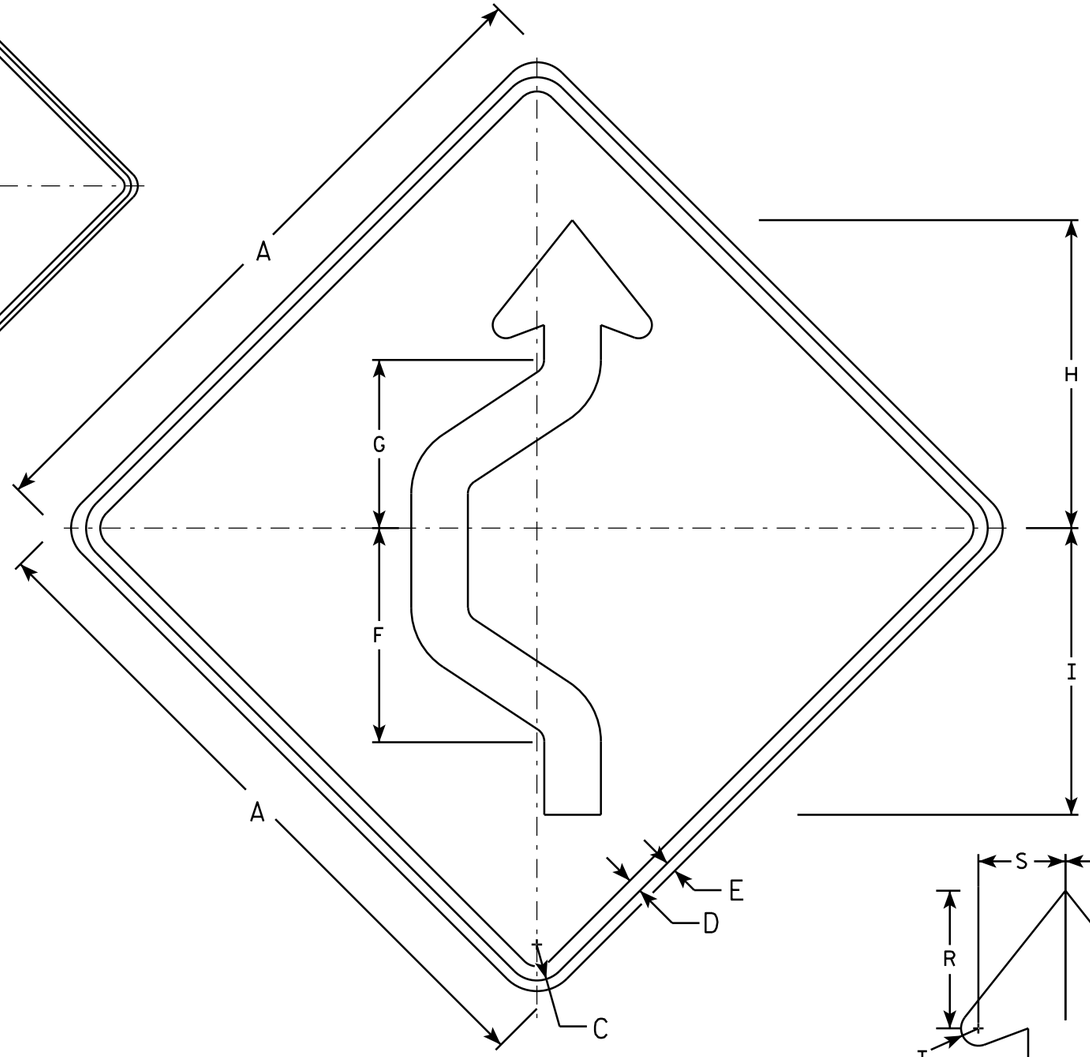
DATE 11/20/13 PLATE W09-1.1

PROJECT NO: | SHEET NO: E

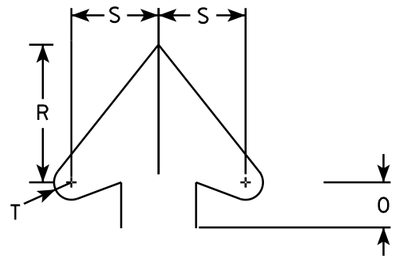
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W091.DGN PLOT DATE : 20-NOV-2013 14:18 PLOT BY : mscsja
WISDOT/CADDS SHEET 42



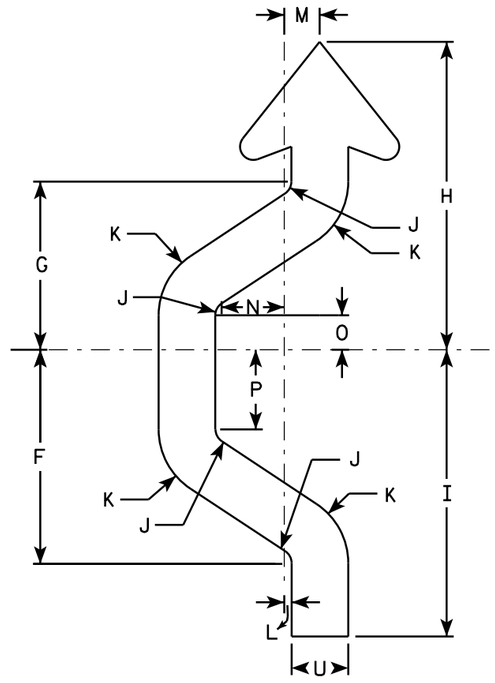
W024-1R



W024-1L



Arrowhead Detail



Arrow Detail

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. W024-1R is the same as W024-1L except reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	5/8	1/2	11 3/8	8 7/8	16 3/8	15 1/4	3/4	3 3/4	3/8	2	3 3/8	1 7/8	4 1/4		5 1/2	3 1/2	5/8	3						9
2S	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
2M	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
3	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
4	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
5	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16

STANDARD SIGN
W024-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

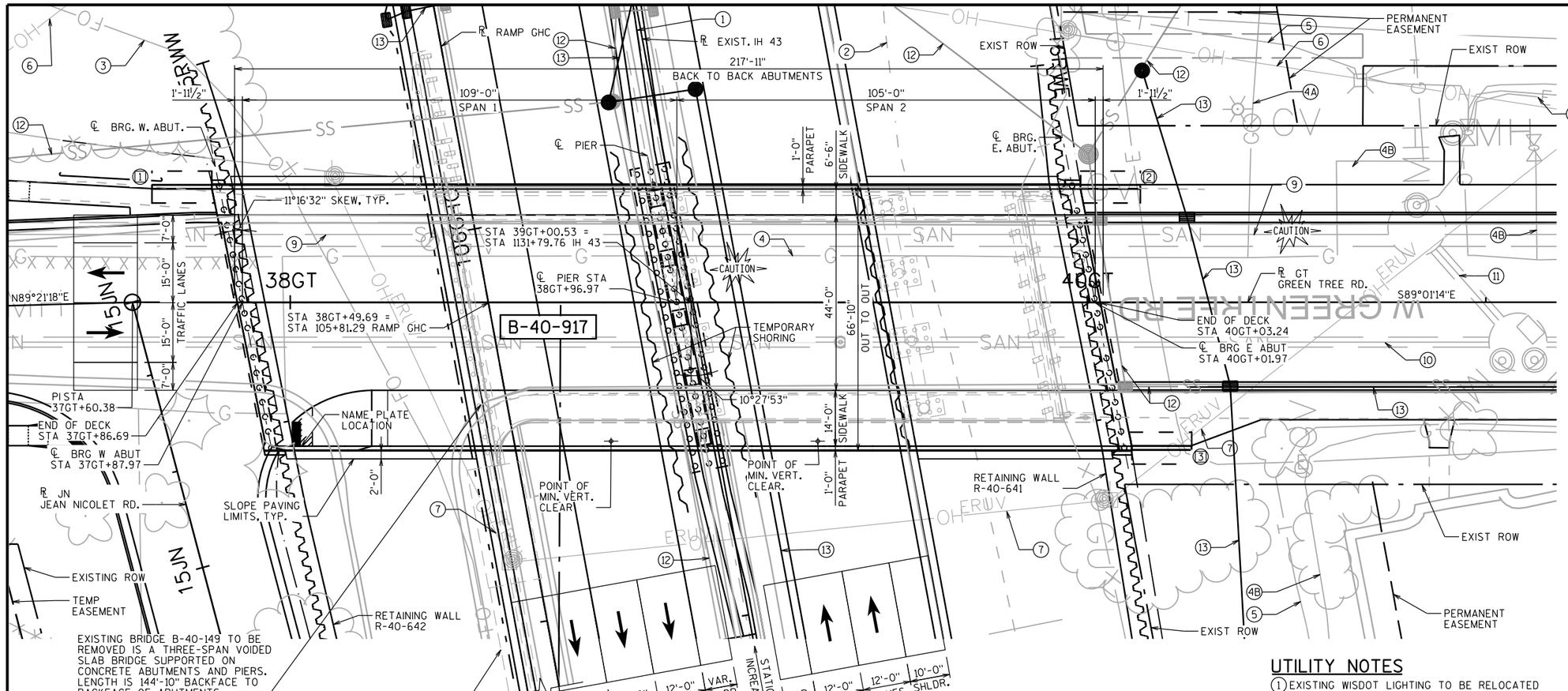
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/25/2013 PLATE NO. W024-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

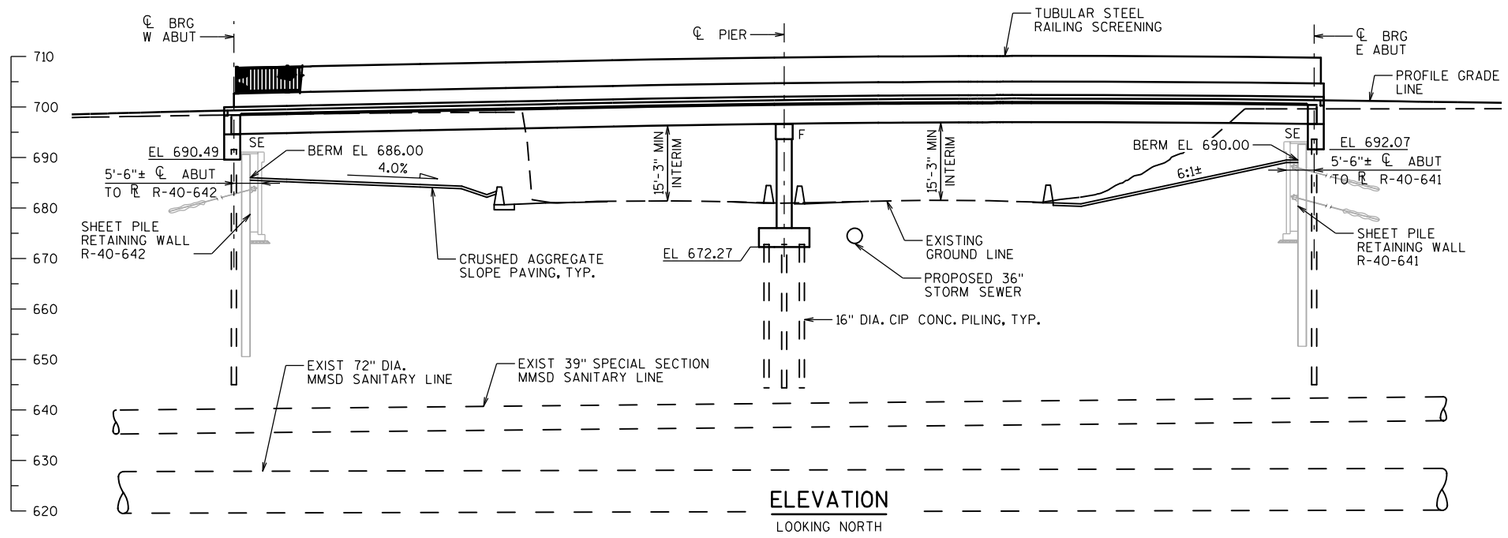
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0241.DGN PLOT DATE : 25-SEP-2013 13:08 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 10.702132:1.000000
WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER
1228-16-71



PLAN

2 SPAN 45W" GIRDER



ELEVATION

LOOKING NORTH

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTION
3. QUANTITIES, NOTES & DESIGN DATA
4. IH 43 SECTIONS
5. PROFILE GRADE LINES
6. STRUCTURE REMOVAL & EXCAVATION LIMITS
7. STRUCTURE BACKFILL LIMITS
8. SUBSURFACE EXPLORATION
9. WEST ABUTMENT
10. WEST ABUTMENT DETAILS (1 OF 2)
11. WEST ABUTMENT DETAILS (2 OF 2)
12. EAST ABUTMENT
13. EAST ABUTMENT DETAILS (1 OF 2)
14. EAST ABUTMENT DETAILS (2 OF 2)
15. WINGWALLS
16. WINGWALL REINFORCEMENT
17. PIER
18. PIER DETAILS & REINFORCEMENT
19. 45W" PRESTRESSED GIRDER
20. 45W" PRESTRESSED GIRDER DETAILS
21. SUPERSTRUCTURE FRAMING PLAN
22. SUPERSTRUCTURE REINFORCEMENT
23. SUPERSTRUCTURE CROSS SECTION
24. SUPERSTRUCTURE DETAILS
25. CURB RAMP DETAILS
26. SUPERSTRUCTURE BILL OF BARS
27. MODIFIED VERTICAL FACE PARAPET 'A'
28. STEEL DIAPHRAGM
29. TUBULAR STEEL RAILING SCREENING
30. SLOPE PAVING CRUSHED AGGREGATE

LEGEND

(X) INDICATES WING NUMBER

INDICATES DIRECTION OF TRAFFIC

UTILITY NOTES

1. EXISTING WISDOT LIGHTING TO BE RELOCATED
2. EXISTING WISDOT FTMS TO BE RELOCATED
3. EXISTING CENTURYLINK FIBER OPTIC LINE TO BE RELOCATED
4. EXISTING GAS LINE TO BE DISCONTINUED IN PLACE
4A. EXISTING GAS LINE DISCONTINUED
4B. EXISTING GAS LINE TO REMAIN
5. EXISTING TELEPHONE LINE TO REMAIN
6. EXISTING OVERHEAD UTILITY LINE TO REMAIN
7. EXISTING OVERHEAD ERUV TO BE RELOCATED (NOT A UTILITY)
8. EXISTING ELECTRIC LINE TO REMAIN
9. EXISTING MMSD SANITARY 72-INCH TO REMAIN
10. EXISTING MMSD SANITARY 39-INCH TO REMAIN
11. EXISTING MMSD SANITARY 36-INCH TO REMAIN
12. EXISTING WISDOT STORM SEWER
13. PROPOSED WISDOT STORM SEWER



STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

HNTB 11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 01/04/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-917

GREEN TREE RD OVER IH 43

COUNTY	VILLAGE
MILWAUKEE	RIVER HILLS

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

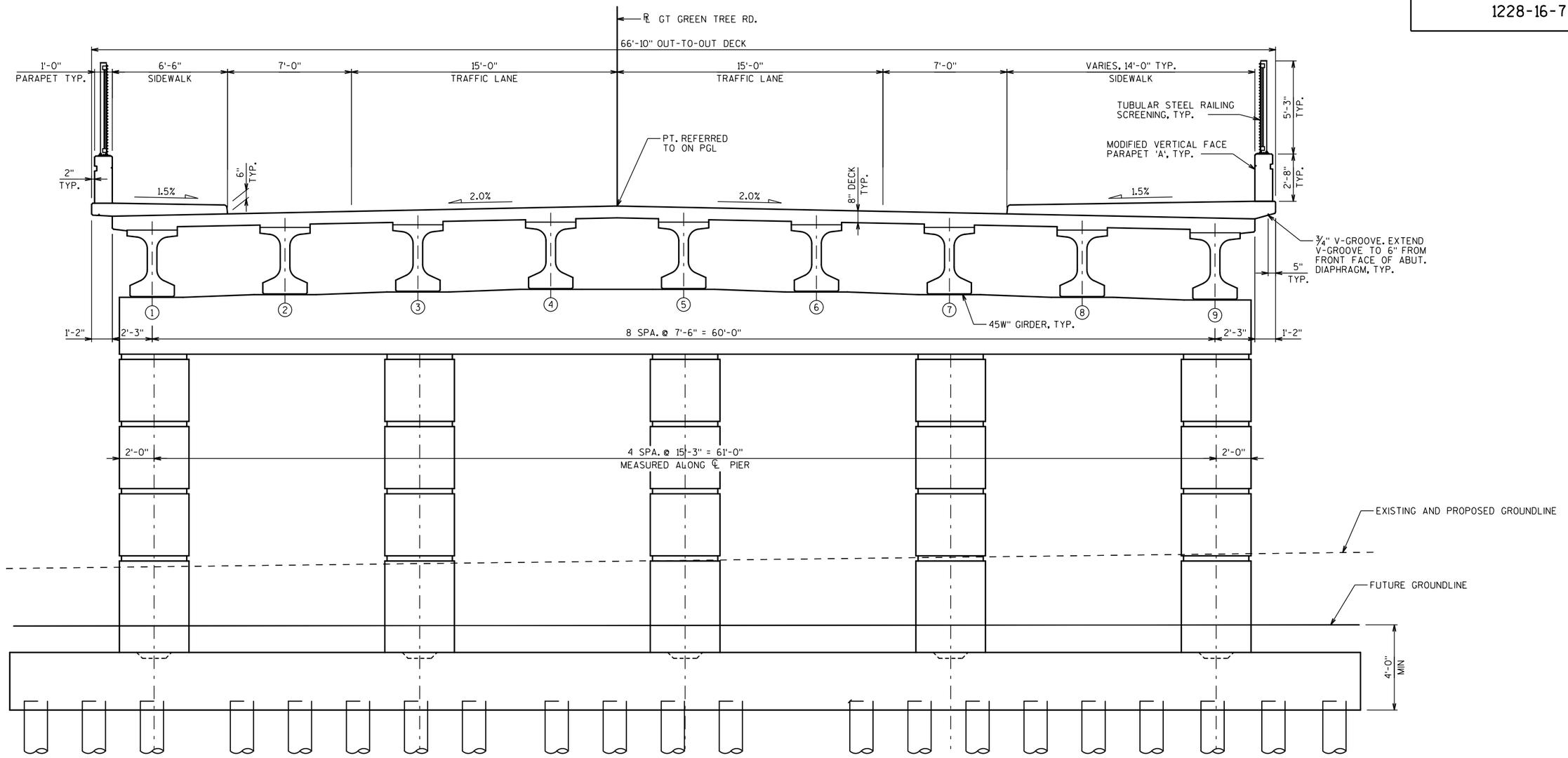
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
HDA	EAJ	HDA	EAJ

GENERAL PLAN & ELEVATION

SHEET 1 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080101_GT.dgn PLOT DATE : 10/30/2017 10:59:09 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 30:1

STATE PROJECT NUMBER
1228-16-71



PROPOSED TYPICAL SECTION

LOOKING EAST

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

DRAWN BY HDA | PLANS CK'D. EAJ

TYPICAL SECTION

SHEET 2 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080102_PSQ.dgn PLOT DATE : 10/30/2017 10:59:11 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 6:1

STATE PROJECT NUMBER
1228-16-71

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SUPER	WEST ABUT.	PIER	EAST ABUT.	TOTAL
203.0200.01	REMOVING OLD STRUCTURE STA. 40GT+00	LS					1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-40-917	LS					1
210.1500	BACKFILL STRUCTURE TYPE A	TON		372	563	407	1,342
502.0100	CONCRETE MASONRY BRIDGES	CY	650	56	175	68	949
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1578				1,578
502.3210	PIGMENTED SURFACE SEALER	SY	180	7		13	200
503.0146	PRESTRESSED GIRDER TYPE I45W-INCH	LF	1933				1,933
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB		4,000	8,530	4,740	17,270
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	135,070	1,270	20,700	2,240	159,280
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH		9	18	9	36
506.4000.01	STEEL DIAPHRAGMS B-40-917	EACH	32				32
511.1200.01	TEMPORARY SHORING B-40-917	SF			2340		2,340
513.4091.01	RAILING TUBULAR SCREENING B-40-917	LF	431	15		29	475
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY		15		15	30
550.2166	PILING CIP CONCRETE 16 X 0.375-INCH	LF		805	1750	835	3,390
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY		380		390	770
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF		260		110	370
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF		110		150	260
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY		70		85	155
SPV.0060.05	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH		2	4	2	8
SPV.0060.06	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH		2	4	2	8
SPV.0060.07	CASE PILE WAVE ANALYSIS PROGRAM (CAPWAP) EVALUATION	EACH		1	1	1	3
	NON-BID ITEMS						
	NAME PLATE	EACH					1
	RODENT SHIELD	EACH					1
	PREFORMED JOINT FILLER	SIZE					½", ¾"
	CORK FILLER	SIZE					¾"

ALL ITEMS ARE CATEGORY 0020

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.07
OPERATING RATING FACTOR: RF = 1.64
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
- SUPERSTRUCTURE ..... f'c = 4,000 psi
- SUBSTRUCTURE ..... f'c = 3,500 psi
- CIP CONCRETE PILING ..... f'c = 3,500 psi
- 45W-INCH PRESTRESSED GIRDERS ..... f'c = 8,500 psi, f'ci = 6,800 psi

BAR STEEL REINFORCEMENT ..... fy = 60,000 psi
PRESTRESSING STRANDS ..... ULTIMATE TENSILE STRENGTH = 270,000 psi

TRAFFIC DATA

GREEN TREE RD

AADT = 4,800 (2016)
AADT = 9,400 (2040)
RDS = 30 MPH

IH 43 NB

AADT = 38,900 (2010)
AADT = 60,250 (2040)
RDS = 70 MPH

IH 43 SB

AADT = 41,550 (2010)
AADT = 60,250 (2040)
RDS = 70 MPH

FOUNDATION DATA

USING THE PDA/CAPWAP ACCEPTANCE METHOD:

THE ABUTMENTS AND PIER ARE SUPPORTED ON 16" DIA. CIP CONCRETE PILING. REQUIRED TIP ELEVATIONS:

WEST ABUTMENT 645

EAST ABUTMENT 645

PIER 645

REQUIRED DRIVING RESISTANCE:

WEST ABUTMENT ..... 100 TONS PER PILE

EAST ABUTMENT ..... 100 TONS PER PILE

PIER ..... 95 TONS PER PILE

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE ESTIMATED REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING PDA/CAPWAP METHOD TO DETERMINE DRIVEN PILE CAPACITY.

DRIVE PILING AT ABUTMENTS BEFORE R-40-641 AND R-40-642 SHEET PILING.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

AT THE BACKFACE OF THE ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-917".

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT.

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

EXISTING BRIDGE B-40-149 TO BE REMOVED IS A THREE SPAN CONCRETE VOIDED SLAB SUPPORTED ON CONCRETE PIERS AND ABUTMENTS. LENGTH IS APPROXIMATELY 145' BACKFACE TO BACKACE OF ABUTMENTS, WIDTH IS 58' OUT TO OUT. EXISTING RETAINING WALL R-40-30 TO BE REMOVED (PAID FOR UNDER WALL R-40-642) IS A 360' LONG CAST-IN-PLACE CONCRETE WALL FOUNDED ON SPREAD FOOTINGS SOUTH OF THE WEST ABUTMENT WALL.

COORDINATE THE REMOVAL OF B-40-149, REMOVAL OF R-40-30, AND CONSTRUCTION OF NEW BRIDGE B-40-917 WITH RETAINING WALLS R-40-641 AND R-40-642 AND WITH NEW STORM SEWERS. SEE R-40-641 AND R-40-642 PLANS FOR CONSTRUCTION SEQUENCE INFORMATION.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES:
- TOP OF DECK SLAB
- EXPOSED SIDEWALK SURFACES
- PAVING NOTCH (PRIOR TO PLACING APPROACH PAVEMENT)

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES:
- TOP AND INSIDE FACES OF PARAPETS

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER, PER AWS D1.1.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M153 TYPE 1, 2, OR 3, OR AASHTO M213.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" JOINT FILLER WITH NON-STAINING, NON-ASPHALTIC JOINT SEALER (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE). COLOR TO MATCH ADJACENT SURFACES.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE GENERAL PLAN & ELEVATION SHEET AND ON THE SLOPE PAVING CRUSHED AGGREGATE SHEET.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO ITEM 502.0100 "CONCRETE MASONRY BRIDGES". FABRICATE IN ACCORDANCE TO S.D.D. 12 A 3-10.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

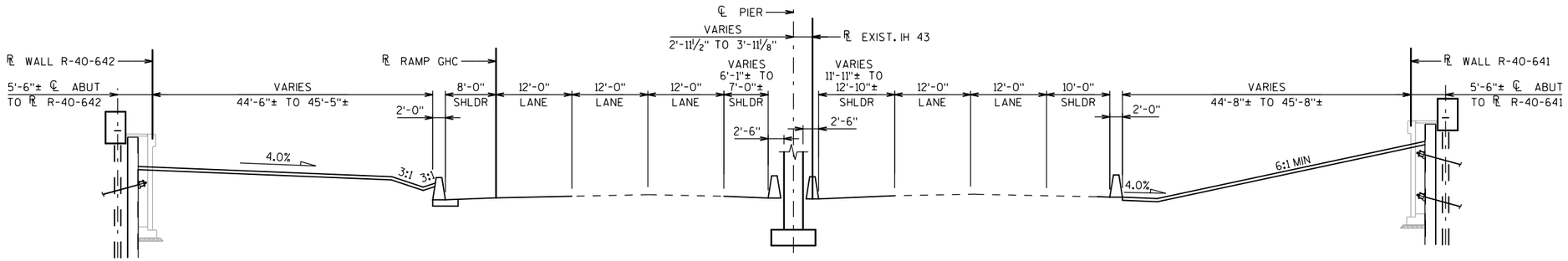
DRAWN BY HDA | PLANS CK'D. EAJ

QUANTITIES, NOTES & DESIGN DATA

SHEET 3 OF 30

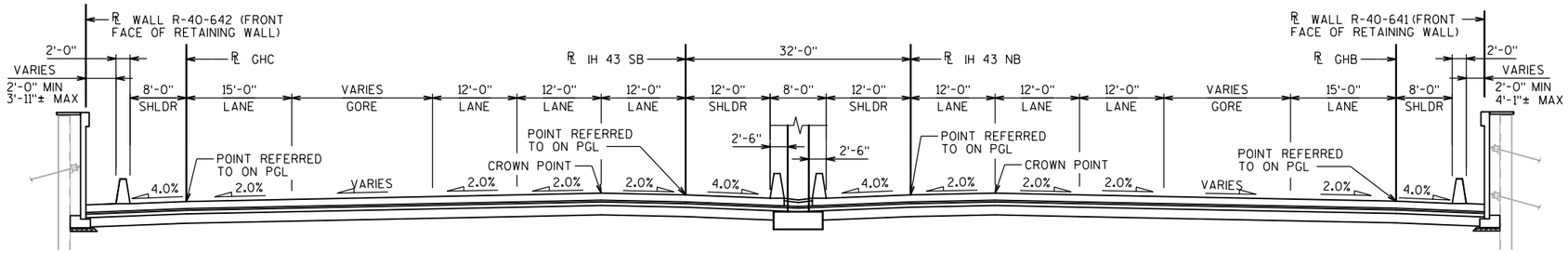
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STATE PROJECT NUMBER
1228-16-71



PROPOSED (INTERIM) IH 43 SECTION UNDER GREEN TREE RD. BRIDGE

LOOKING NORTH



FUTURE (ULTIMATE) IH 43 SECTION UNDER GREEN TREE RD. BRIDGE

LOOKING NORTH

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

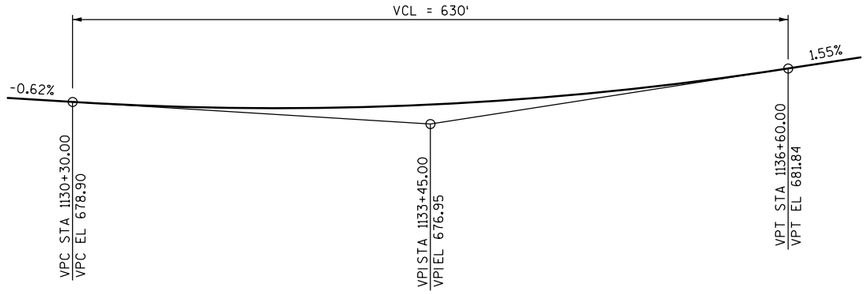
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IH 43 SECTIONS

SHEET 4 OF 30

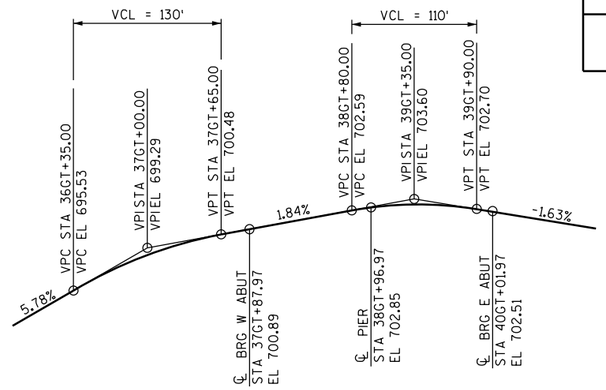
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STATE PROJECT NUMBER
1228-16-71

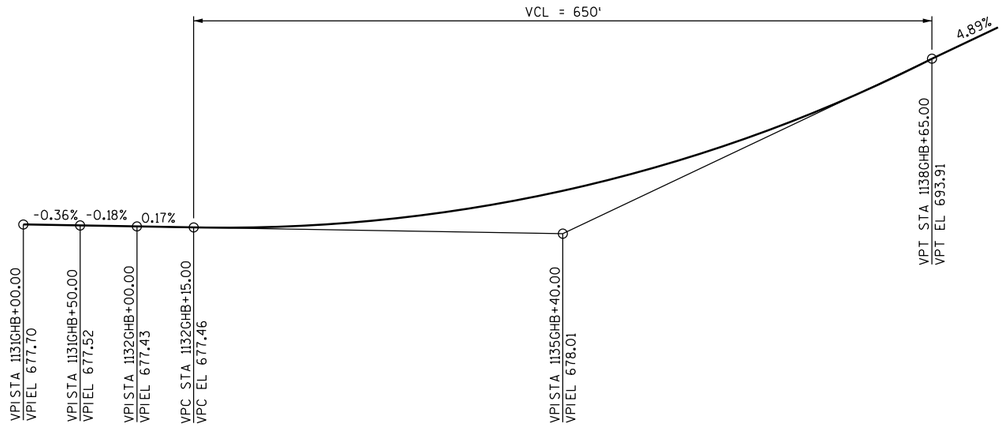


FUTURE (ULTIMATE) PROFILE GRADE LINE - IH 43 NB (℄ NB) & IH 43 SB (℄ SB)

FOR INFORMATION ONLY

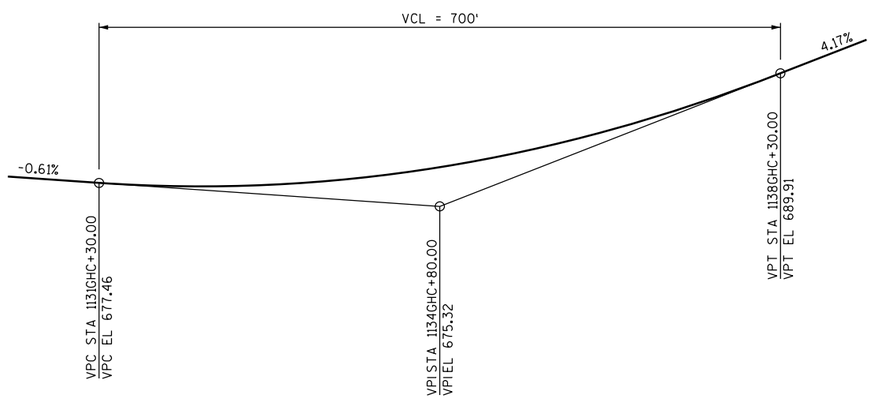


PROFILE GRADE LINE - GREEN TREE RD. (GT)



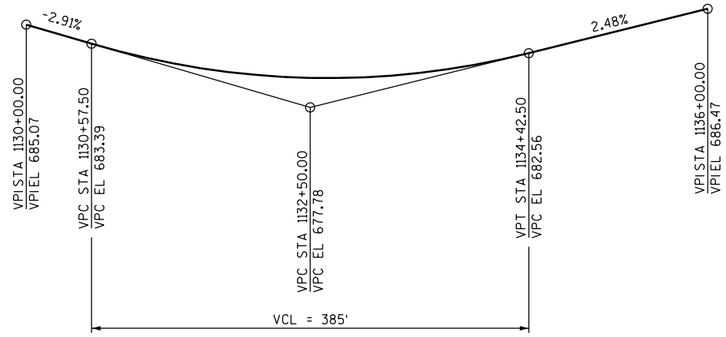
FUTURE (ULTIMATE) PROFILE GRADE LINE - RAMP GHB

FOR INFORMATION ONLY

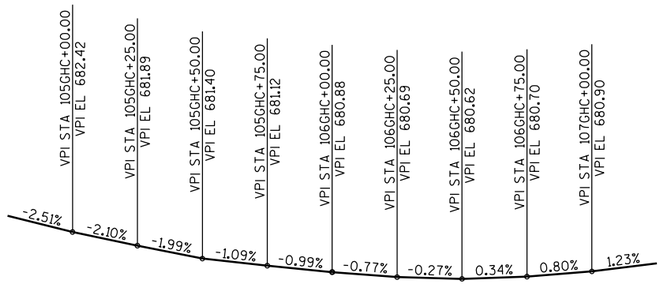


FUTURE (ULTIMATE) PROFILE GRADE LINE - RAMP GHC

FOR INFORMATION ONLY



PROFILE GRADE LINE - EXIST. IH 43



PROFILE GRADE LINE - RAMP GHC

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

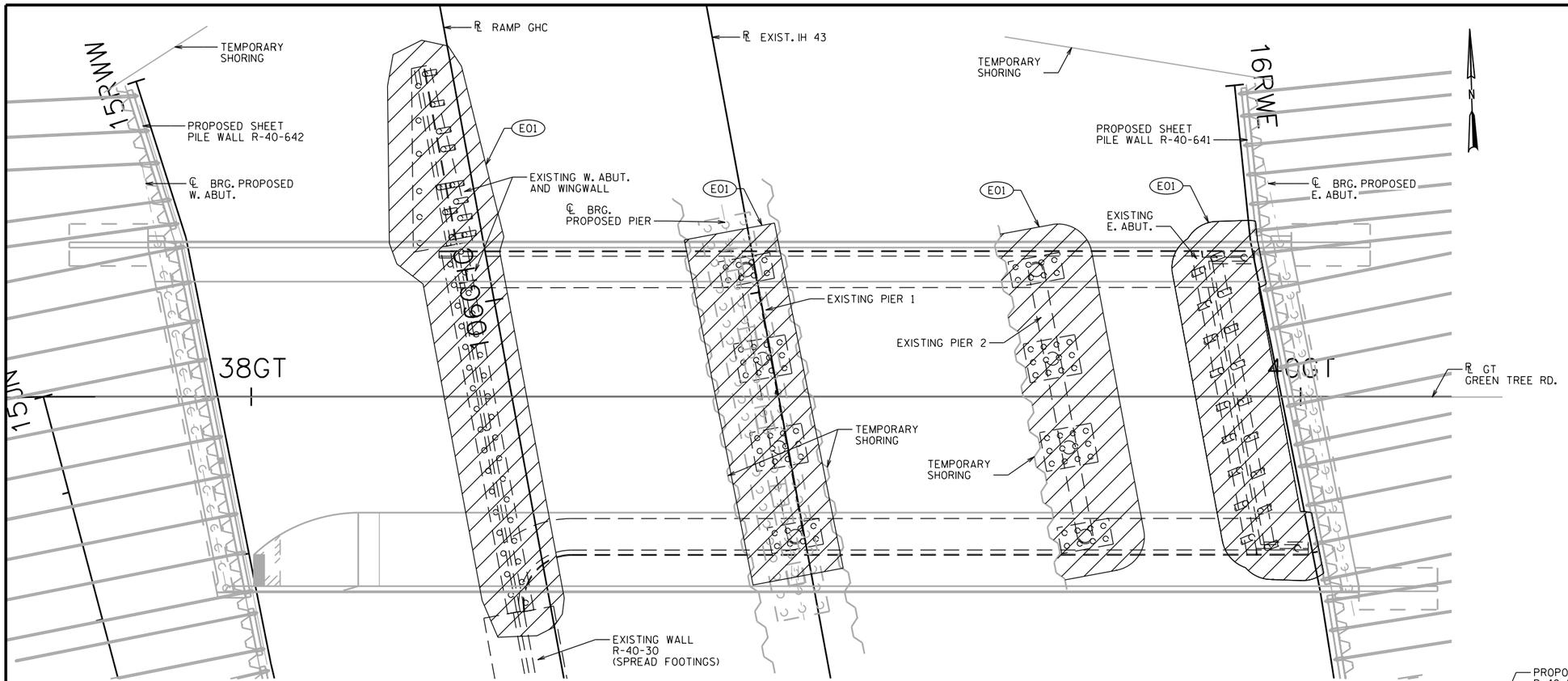
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PROFILE GRADE LINES

SHEET 5 OF 30

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STATE PROJECT NUMBER
1228-16-71



PLAN LIMITS - EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL

COMMON EXCAVATION, EXCAVATION FOR STRUCTURES, AND REMOVING OLD STRUCTURE LIMITS NOT SHOWN

LEGEND

- COMMON EXCAVATION (ROADWAY PAY ITEM)
- EXCAVATION FOR STRUCTURES B-40-917
- EXCAVATION FOR RETAINING WALLS (PAID FOR UNDER R-40-641 OR R-40-642)
- REMOVING OLD STRUCTURE - (EXISTING B-40-149) (ONLY PORTIONS BELOW GRADE SHADED)
- EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL (ROADWAY PAY ITEM) (E01)

(E01) SOIL LOCATED WITHIN THIS FOOTPRINT BELOW THE BOTTOM OF THE EXISTING PILE CAPS TO THE TERMINAL DEPTH OF THE EXISTING PILES SHOULD BE CONSIDERED CONTAMINATED. ANY SOIL EXCAVATED FROM THIS SPACE FOR THE PROJECT WILL NEED TO BE CONSIDERED SOLID WASTE SOIL AND STOCKPILED ON THE PROJECT WITHIN WISDOT ROW UNTIL LAB TESTING AND LANDFILL PROPERTY CAN BE COORDINATED BY THE WISDOT ENVIRONMENTAL CONSULTANT.

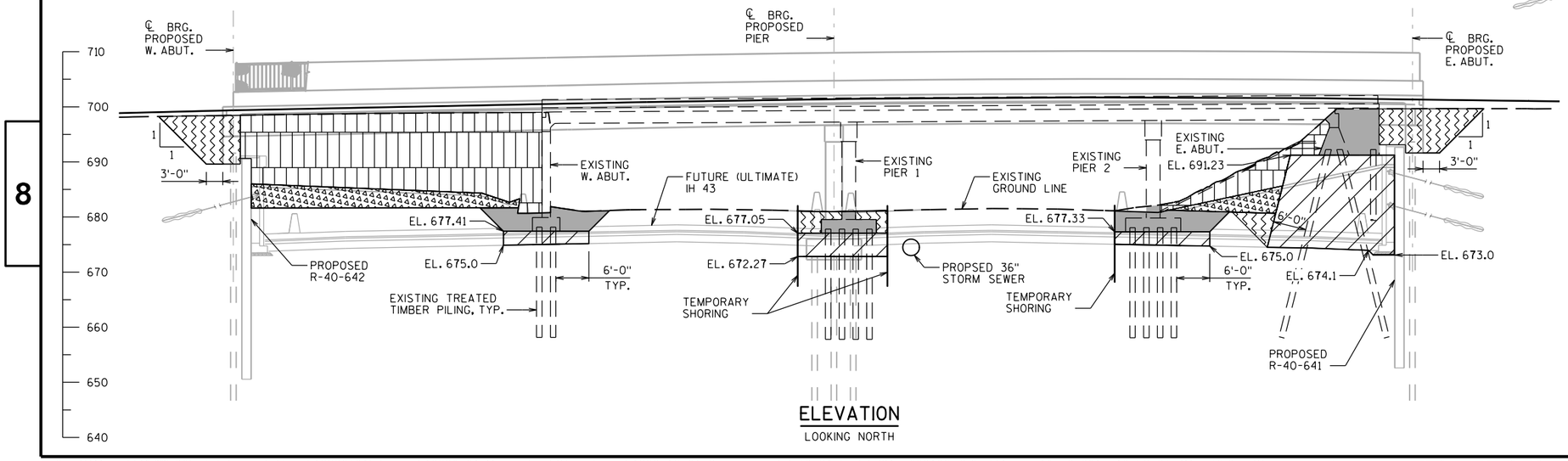
HORIZONTAL LIMITS DEFINING FOOTPRINT BASED ON 6'-0" OFFSET FROM EDGES OF EXISTING TREATED PILING UNLESS BOUNDED BY TEMPORARY SHORING OR PERMANENT SHEET PILE RETAINING WALL.

DO NOT STOCKPILE WITHIN THE AREA EXTENDING 60 FEET BEHIND THE TOP OF WALL.

STRUCTURE REMOVAL AND EXCAVATION NOTES

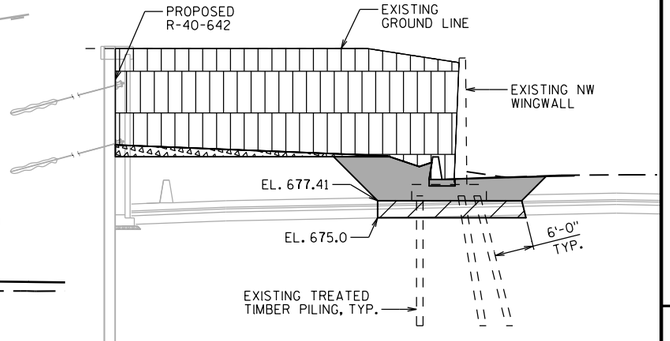
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-917" SHALL BE THE EXISTING GROUNDLINE.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL.



ELEVATION

LOOKING NORTH



SECTION THRU EXISTING NW WING

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

DRAWN BY HDA | PLANS CK'D. JWC

STRUCTURE REMOVAL & EXCAVATION LIMITS

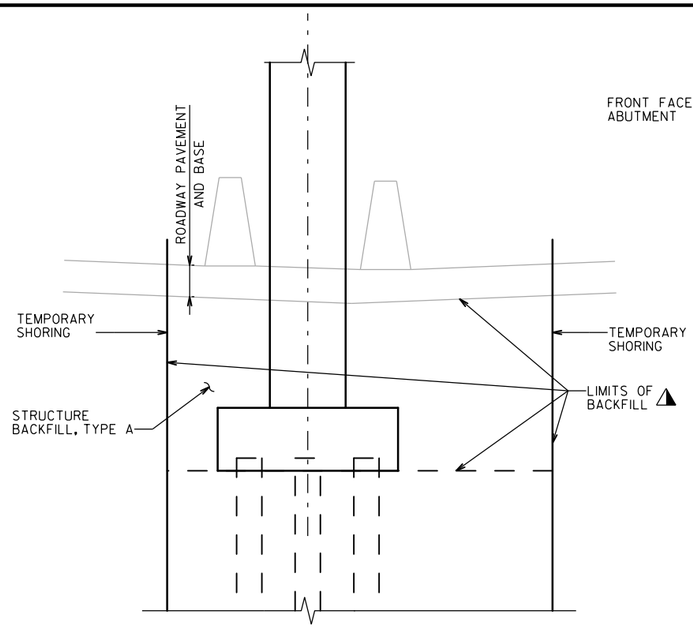
SHEET 6 OF 30

360

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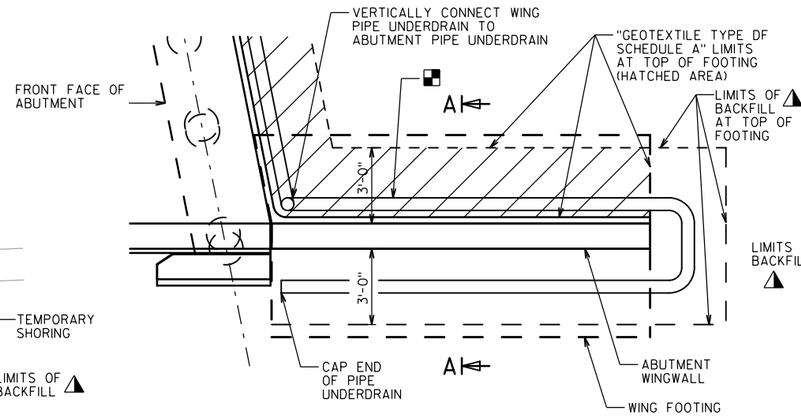
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STATE PROJECT NUMBER
1228-16-71



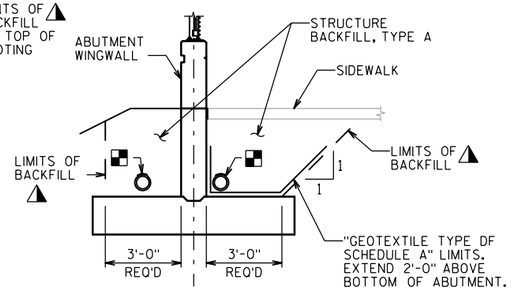
PIER BACKFILL LIMITS

LOOKING NORTH



ABUTMENT PLAN WITH WING

WING 3 SHOWN, OTHERS SIMILAR



SECTION A-A

TYPICAL SECTION THRU WING

STRUCTURE EXCAVATION AND BACKFILL NOTES

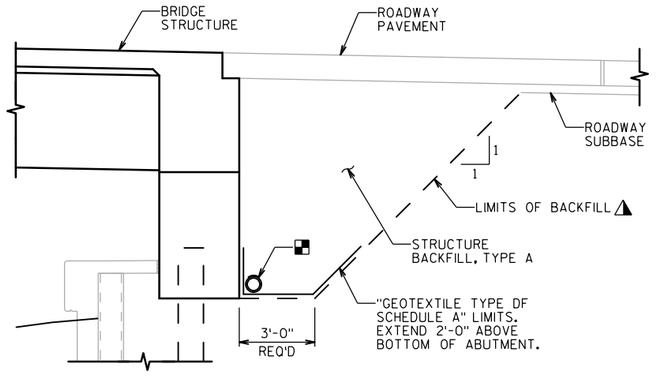
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-917" SHALL BE THE EXISTING GROUNDLINE.

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

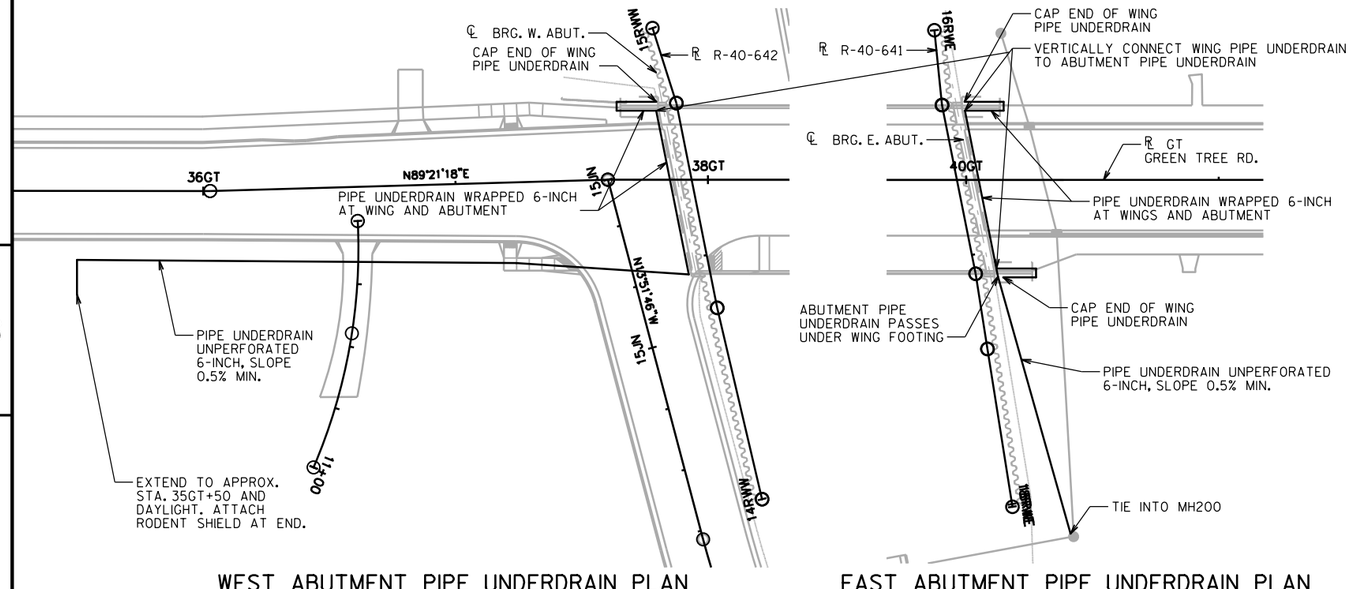
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

▪ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. OUTLET AS SHOWN ON ABUTMENT PIPE UNDERDRAIN PLAN DETAILS ON THIS SHEET.



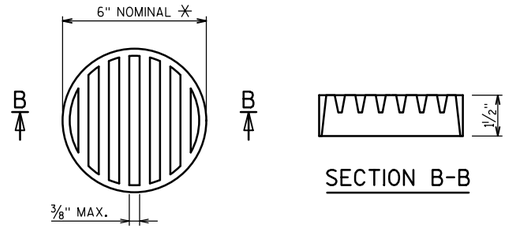
ABUTMENT BACKFILL LIMITS

SECTION THRU ABUTMENT



WEST ABUTMENT PIPE UNDERDRAIN PLAN

EAST ABUTMENT PIPE UNDERDRAIN PLAN



RODENT SHIELD DETAIL

SECTION B-B

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS C OMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

DRAWN BY HDA | PLANS CK'D. JWC

STRUCTURE BACKFILL LIMITS

SHEET 7 OF 30

8

8

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080107_PKG1.dgn PLOT DATE : 10/30/2017 10:59:31 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 6:1

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL EXPLORATION AND ANALYSIS REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

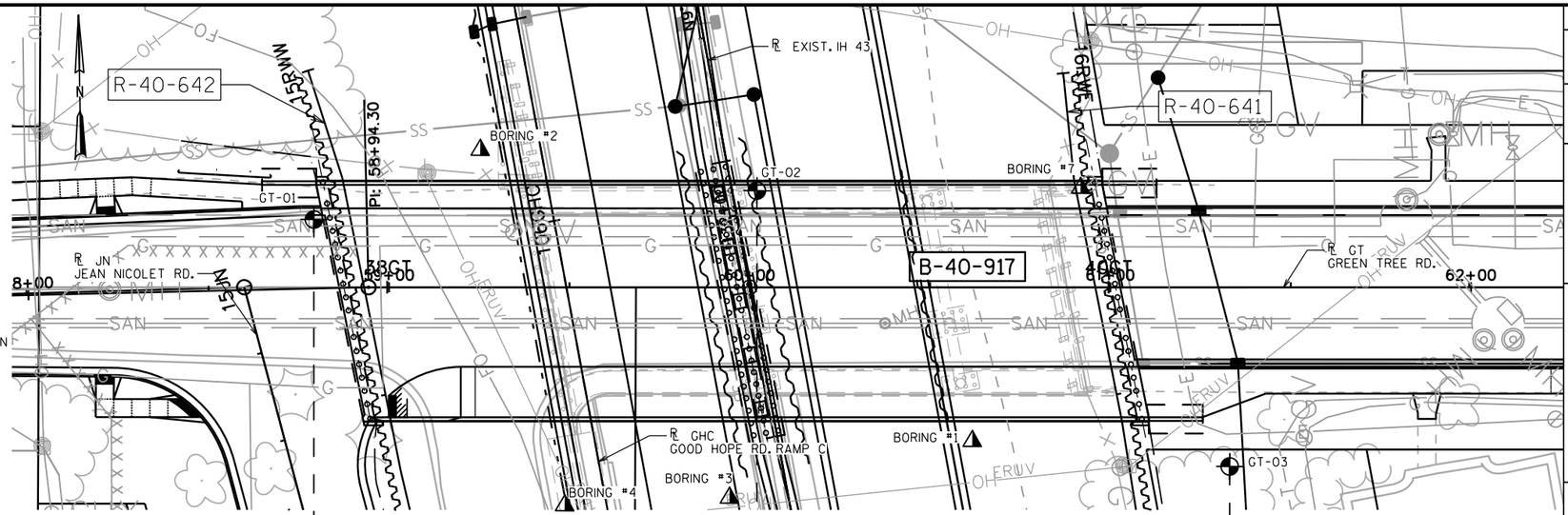
WATER LEVELS INDICATED MAY NOT BE REPRESENTATIVE OF HYDROSTATIC WATER LEVELS.

HISTORICAL BORING LOCATIONS ARE APPROXIMATE. ADDITIONAL INFORMATION IS AVAILABLE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

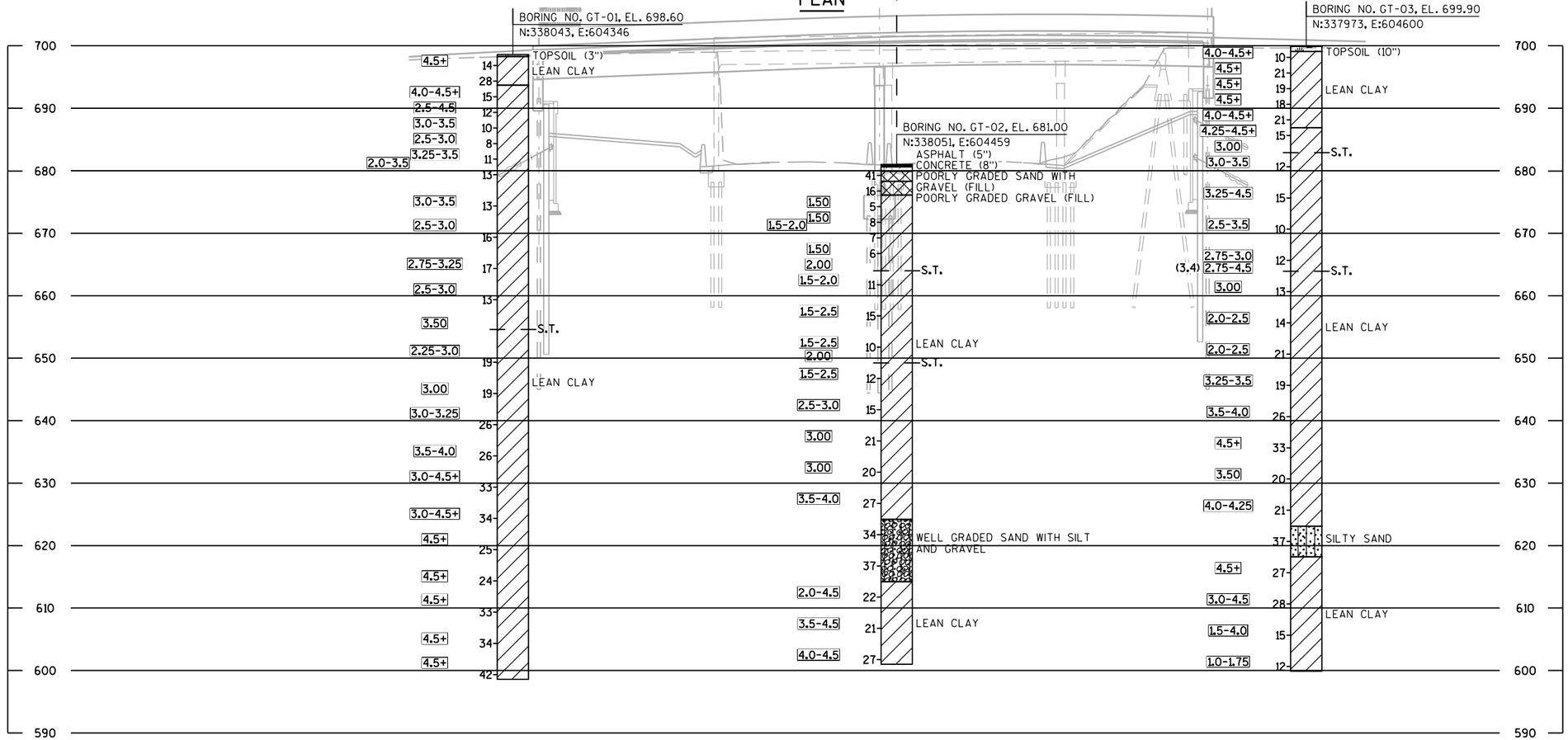
- DENOTES SOIL BORING LOCATION
- DENOTES MONITORING WELL LOCATION
- DENOTES HISTORICAL BORING

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
APRIL 25TH, 2014 - BORING GT-01
JULY 21ST, 2014 - BORING GT-02
JUNE 23RD, 2014 - BORING GT-03



PLAN



ELEVATION
LOOKING NORTH

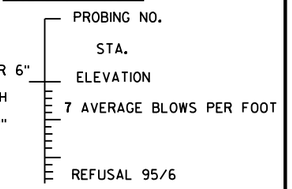
STATE PROJECT NUMBER
1228-16-71

ABBREVIATIONS
F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

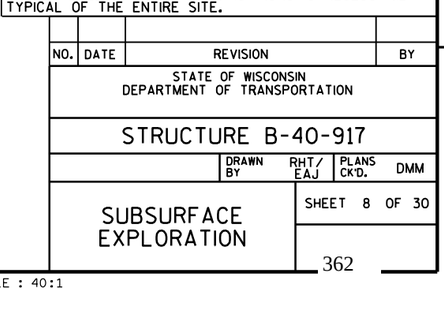
SAND	PEAT	FILL
GRAVEL	CLAY	SANDSTONE
ASPHALT	SILT	LIMESTONE
CONCRETE	TOPSOIL	BOULDERS/ COBBLES

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

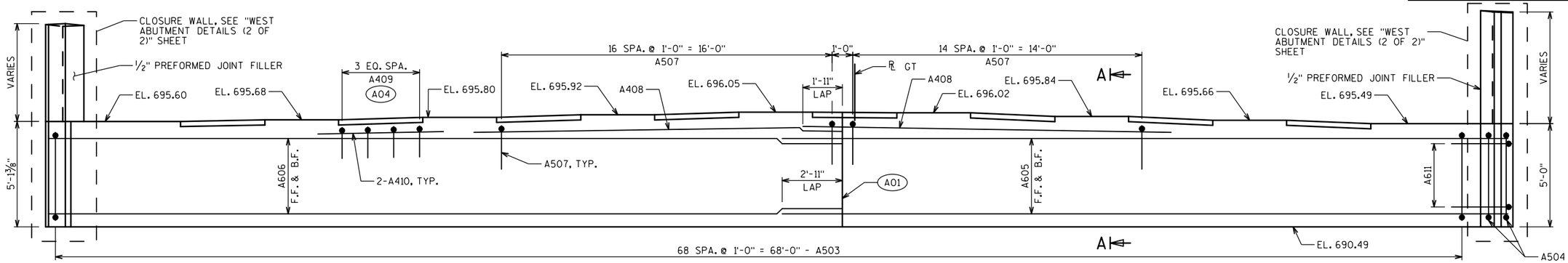
DRAWN BY	RHT/ EAJ	PLANS CK'D.	DMM

SUBSURFACE EXPLORATION

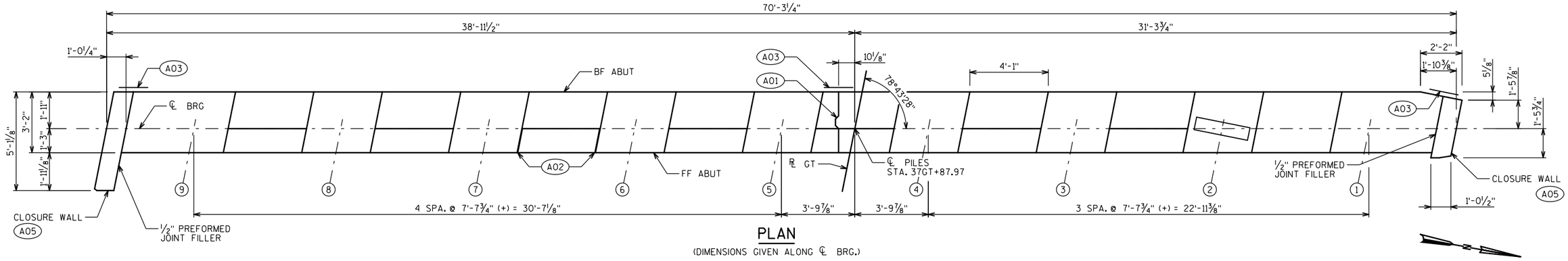
SHEET 8 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080201_Sht08.dgn PLOT DATE : 10/30/2017 10:59:39 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 40:1

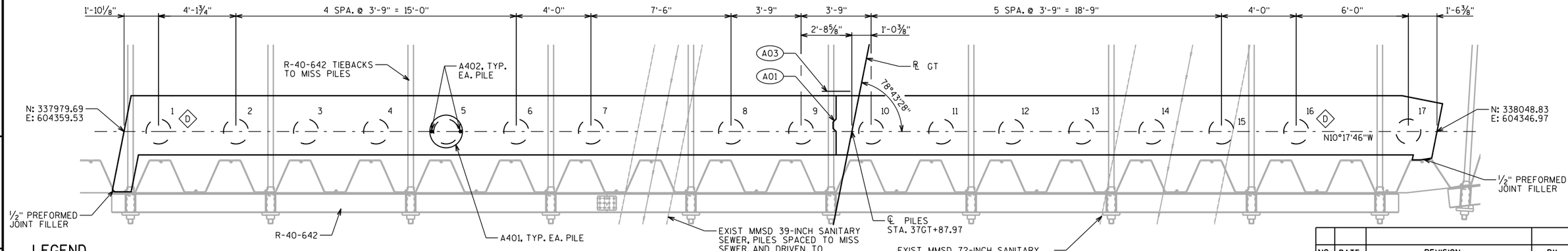
STATE PROJECT NUMBER
1228-16-71



ELEVATION
(LOOKING WEST)



PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)



PILE PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)

LEGEND

- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8"
- (A02) ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- (A03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A04) TYP. BETWEEN EACH BEAM SEAT
- (A05) SEE CLOSURE WALL NOTE ON "WEST ABUTMENT DETAILS (2 OF 2)" SHEET

NOTES

(ABUTMENT SUPPORTED ON 16" DIA. x 0.375" CIP PILING DRIVEN TO EL. 645.0 OR A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE, WHICHEVER COMES FIRST. USE THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE REQUIRED DRIVING RESISTANCE.

◇D DYNAMIC PILE LOAD TESTING

NOTIFY THE ENGINEER IF THE LOAD TESTED PILING INDICATE A CAPACITY OF LESS THAN THE REQUIRED DRIVING RESISTANCE.

NOTES, CONTINUED

DRIVE ABUTMENT PILING BEFORE R-40-642 SHEET PILING

SEE "WEST ABUTMENT DETAILS (1 OF 2)" SHEET FOR SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

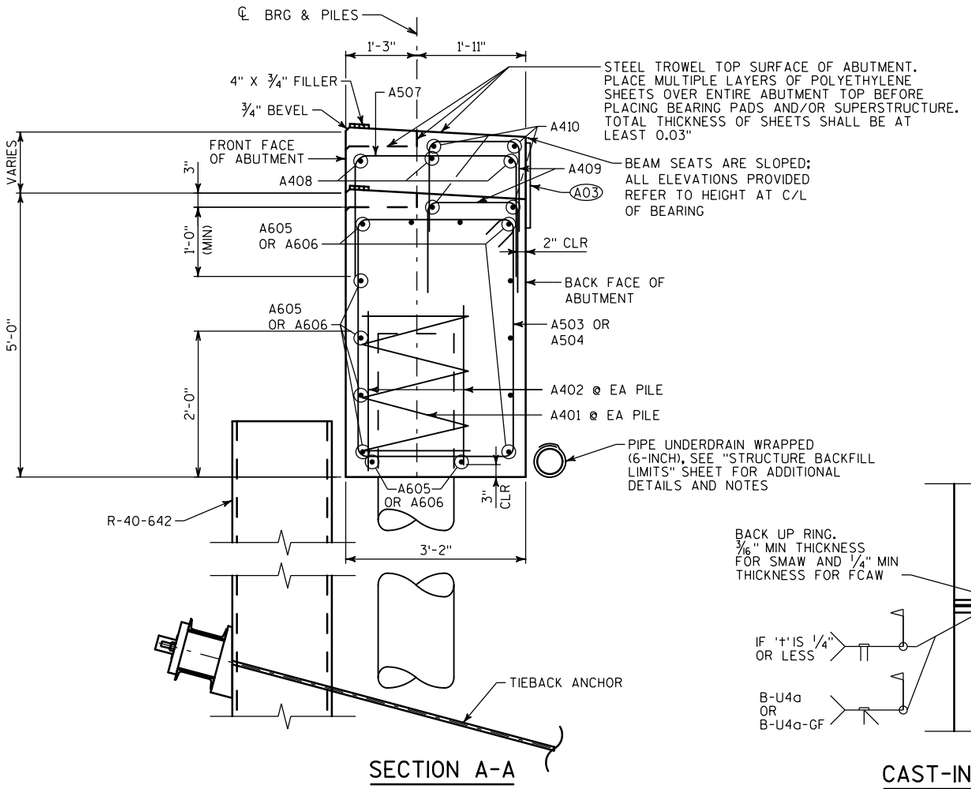
DRAWN BY MSS | PLANS CK'D. HDA

WEST ABUTMENT

SHEET 9 OF 30

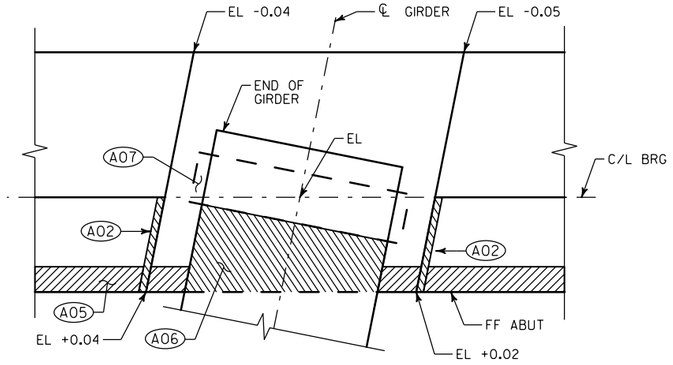
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STATE PROJECT NUMBER
1228-16-71



SECTION A-A

(SECTION THRU ABUTMENT BODY - LOOKING SOUTH)



TYPICAL BEAM SEAT DETAIL

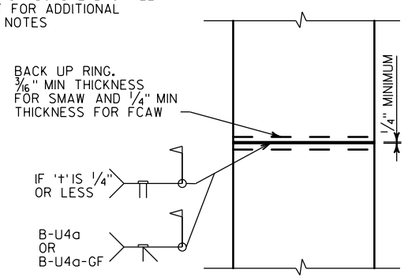
(ELEVATION CORRECTIONS GIVEN IN FEET)

LEGEND

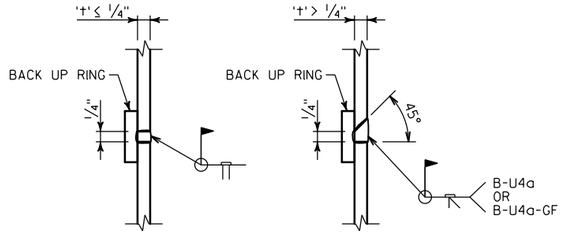
- (A02) ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- (A03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A05) 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- (A06) ¾" FILLER UNDER GIRDERS, TYP.
- (A07) ½" THICK X 8" X 2'-10" ELASTOMERIC BEARING PAD, TYP.

NOTES

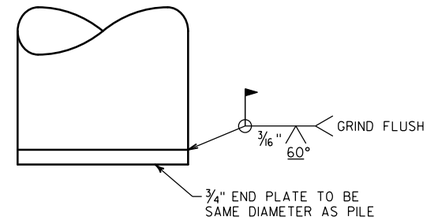
SEE "EAST ABUTMENT DETAILS (1 OF 2)" SHEET FOR ALTERNATE CONSTRUCTION JOINT AT ABUTMENT DETAIL



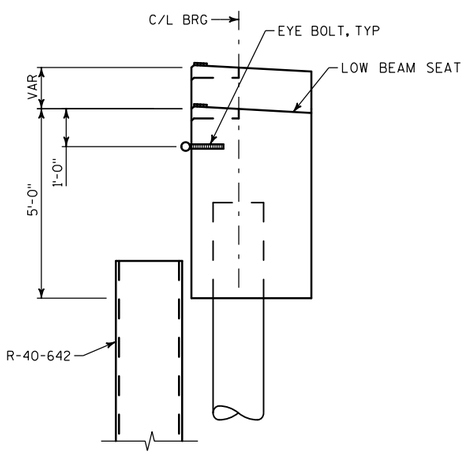
CAST-IN-PLACE 'PIPE PILE'



CIP PILE WELD DETAIL

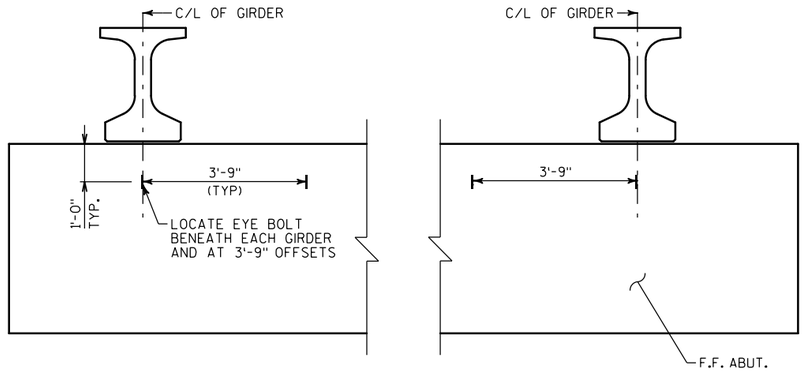


END PLATE DETAIL



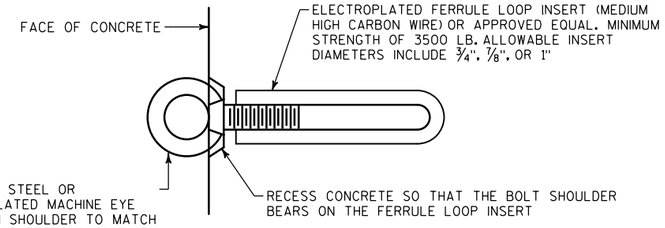
FALL PROTECTION ANCHOR

(LOOKING SOUTH)



FALL PROTECTION ELEVATION

(LOOKING WEST)



EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-917

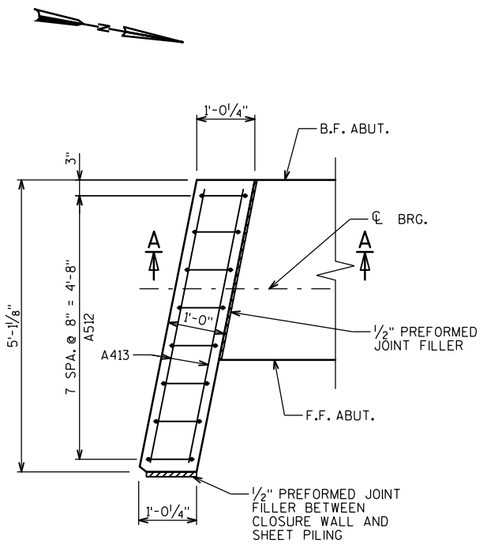
DRAWN BY MSS | PLANS CK'D. HDA

WEST ABUTMENT DETAILS (1 OF 2)

SHEET 10 OF 30

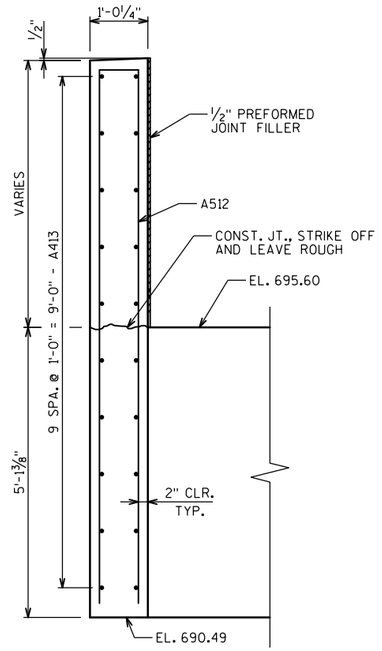
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STATE PROJECT NUMBER
1228-16-71



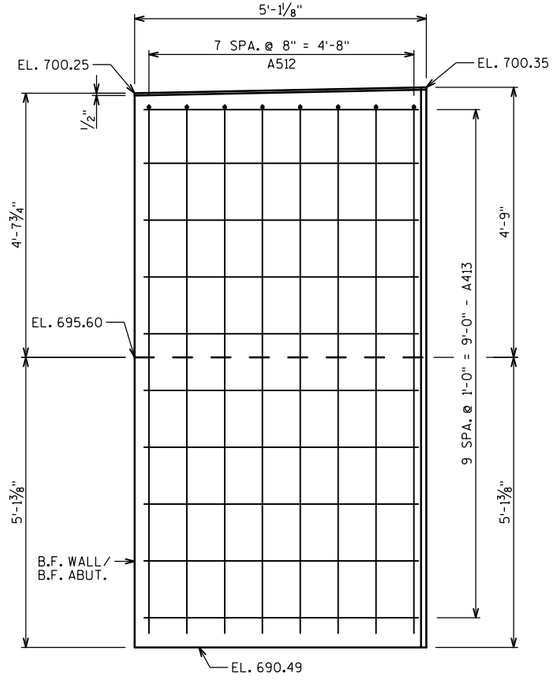
SOUTH CLOSURE WALL PLAN

(ABUT. BODY REINF. NOT SHOWN FOR CLARITY)



SECTION A-A

(ABUT. BODY REINF. NOT SHOWN FOR CLARITY)

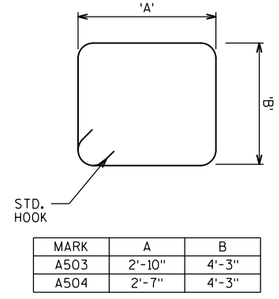


SOUTH CLOSURE WALL OUTSIDE ELEVATION

(ELEVATIONS AND DIMENSIONS GIVEN AT NORTH FACE OF WALL)

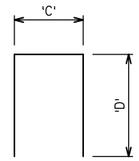
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A401		17	28'-0"	X		PILE BARS - SPIRAL
A402		34	2'-3"			PILE BARS - VERT
A503		69	14'-10"	X		ABUTMENT BODY - STIRRUP
A504		2	14'-4"	X		ABUTMENT BODY - STIRRUP
A605		14	34'-3"			ABUTMENT BODY - LONG.
A606		14	37'-7"			ABUTMENT BODY - LONG.
A507		32	6'-11"	X		ABUTMENT BODY - STIRRUP TOP
A408		6	17'-10"			ABUTMENT BODY - LONG. TOP
A409		32	4'-5"	X		ABUTMENT BODY - TRANS. BTWN BEAM SEATS
A410		16	6'-2"			ABUTMENT BODY - LONG. BTWN BEAM SEATS
A611		5	10'-8"	X		ABUTMENT BODY - END
A512	X	8	18'-11"	X		SOUTH CLOSURE WALL - VERT.
A413	X	20	4'-9"			SOUTH CLOSURE WALL - HORIZ.
A514	X	5	13'-11"	X		NORTH CLOSURE WALL - VERT.
A415	X	12	2'-8"			NORTH CLOSURE WALL - HORIZ.



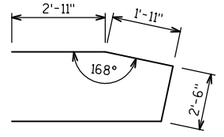
MARK	A	B
A503	2'-10"	4'-3"
A504	2'-7"	4'-3"

A503, A504

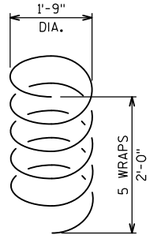


MARK	C	D
A507	2'-10"	2'-2"
A409	1'-7"	1'-6"
A512	8"	9'-3"
A514	8"	6'-9"

A507, A409, A512, A514



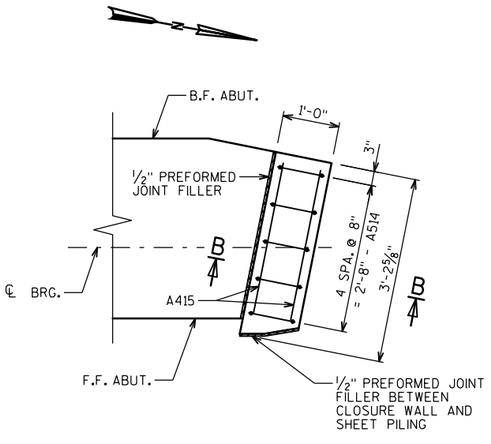
A611



A401

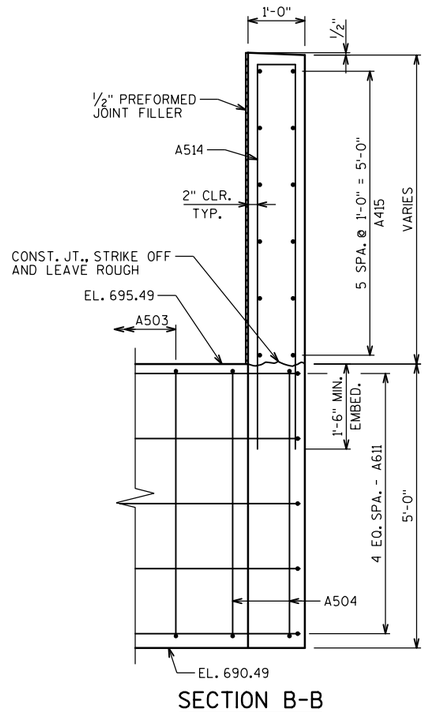
CLOSURE WALL NOTE

CLOSURE WALL DIMENSIONS AND REINFORCING BASED ON R-40-642 SHEET PILING LAYOUT AS SHOWN. ADJUST CLOSURE WALL DIMENSIONS AND REINFORCING FOR ACTUAL SHEET PILING CONDITIONS AT NO ADDITIONAL COST.

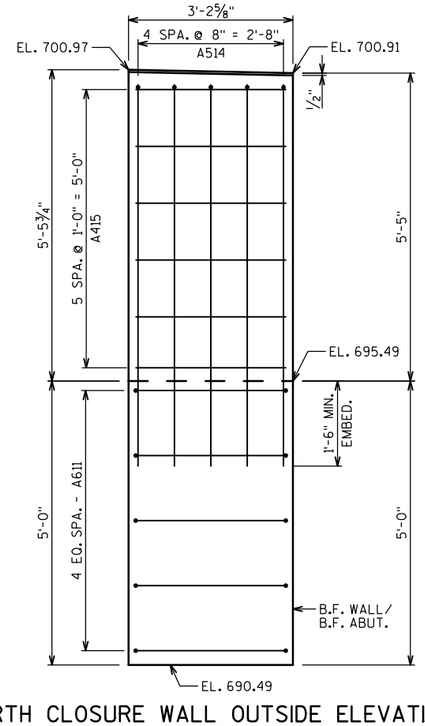


NORTH CLOSURE WALL PLAN

(ABUT. BODY REINF. NOT SHOWN FOR CLARITY)



SECTION B-B



NORTH CLOSURE WALL OUTSIDE ELEVATION

(ELEVATIONS AND DIMENSIONS GIVEN AT SOUTH FACE OF WALL)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

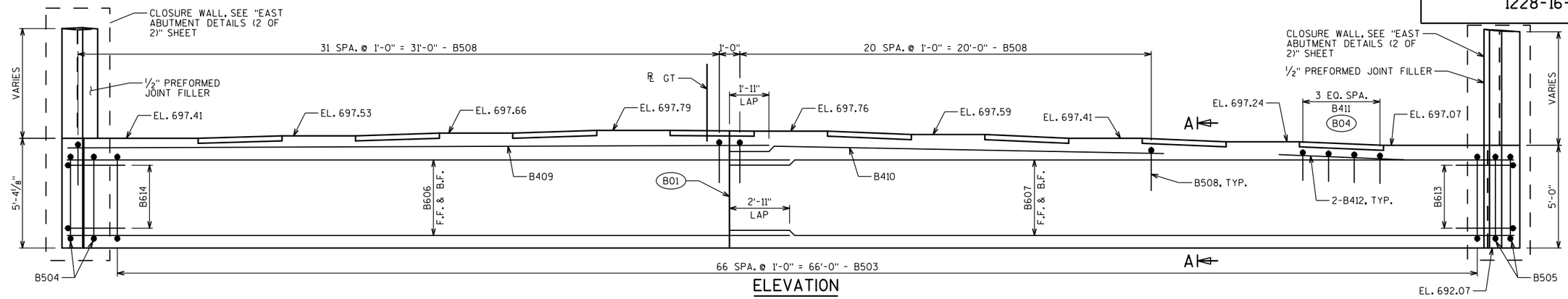
DRAWN BY MSS | PLANS CK'D. HDA

WEST ABUTMENT DETAILS (2 OF 2)

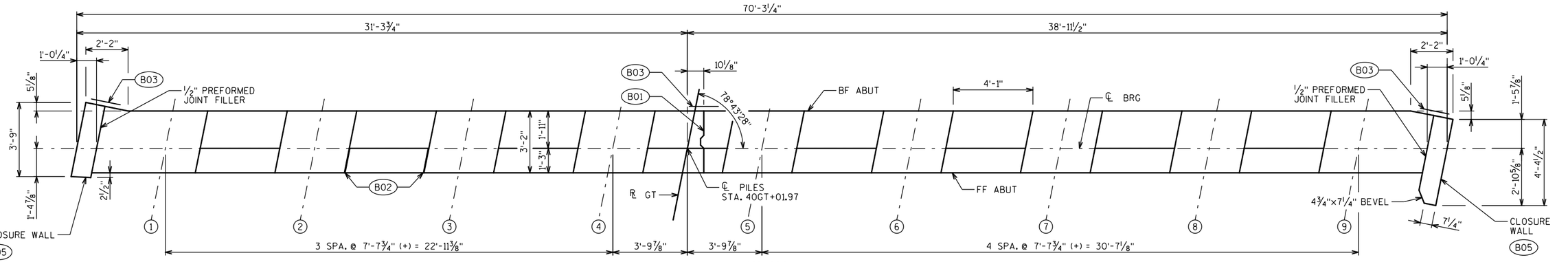
SHEET 11 OF 30

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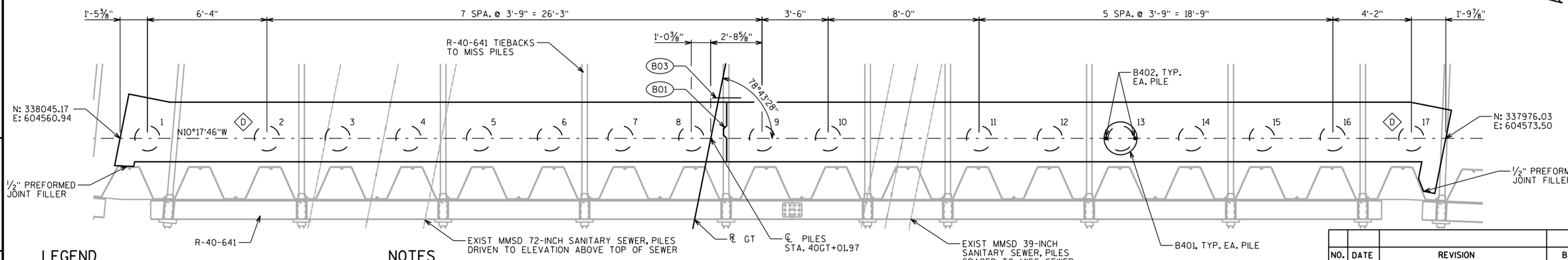
STATE PROJECT NUMBER
1228-16-71



ELEVATION
(LOOKING EAST)



PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)



PILE PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)

LEGEND

- (B01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8"
- (B02) ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- (B03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (B04) TYP. BETWEEN EACH BEAM SEAT
- (B05) SEE CLOSURE WALL NOTE ON "EAST ABUTMENT DETAILS (2 OF 2)" SHEET

NOTES

- ABUTMENT SUPPORTED ON 16" DIA. x 0.375" CIP PILING DRIVEN TO EL. 645.0 OR A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE, WHICHEVER COMES FIRST. USE THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE REQUIRED DRIVING RESISTANCE.
- (D) DYNAMIC PILE LOAD TESTING

  NOTIFY THE ENGINEER IF THE LOAD TESTED PILING INDICATE A CAPACITY OF LESS THAN THE REQUIRED DRIVING RESISTANCE.

NOTES, CONTINUED

DRIVE ABUTMENT PILING BEFORE R-40-641 SHEET PILING

SEE "EAST ABUTMENT DETAILS (1 OF 2)" SHEET FOR SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

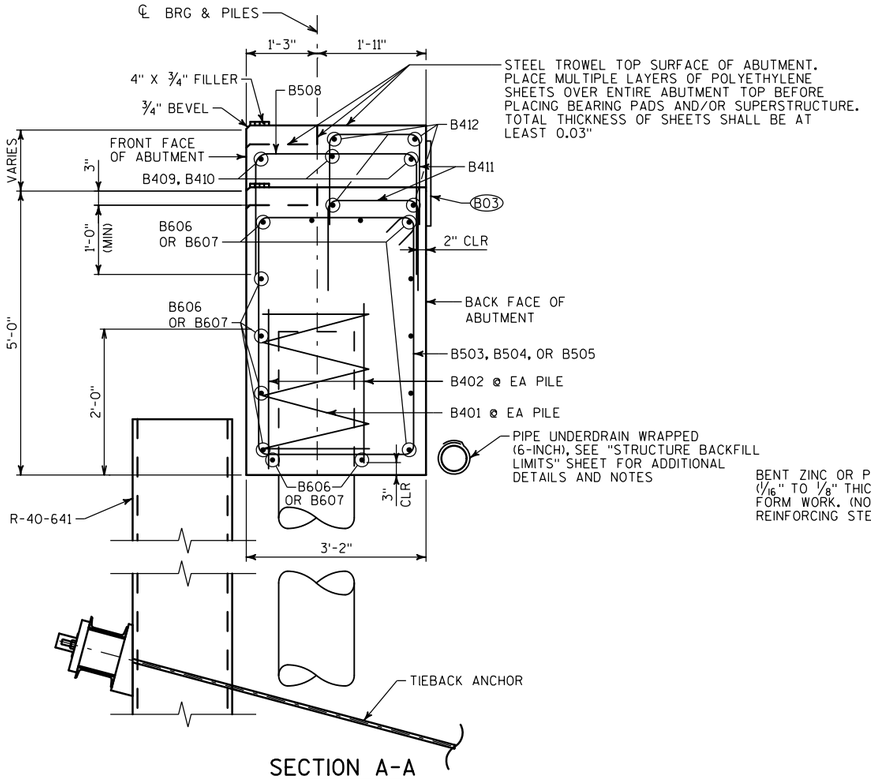
DRAWN BY	MSS	PLANS CK'D.	HDA

EAST ABUTMENT

SHEET 12 OF 30

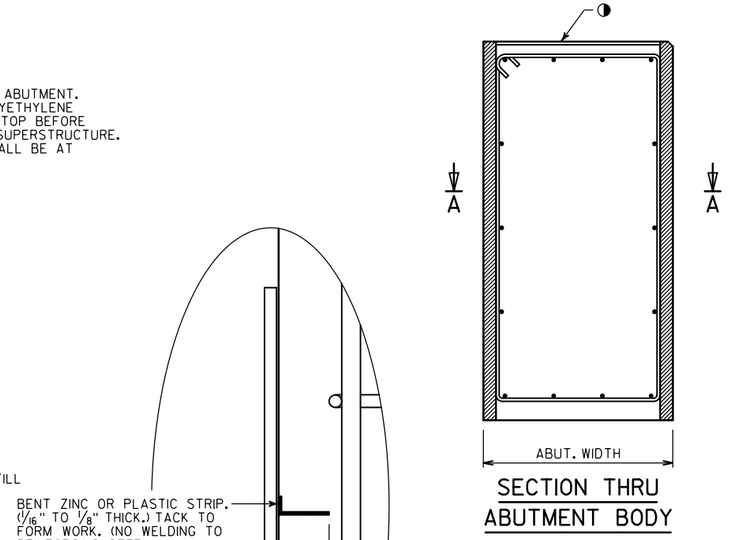
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080304_PLOT.dgn PLOT DATE : 10/30/2017 10:59:46 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 5.33333:1

STATE PROJECT NUMBER
1228-16-71

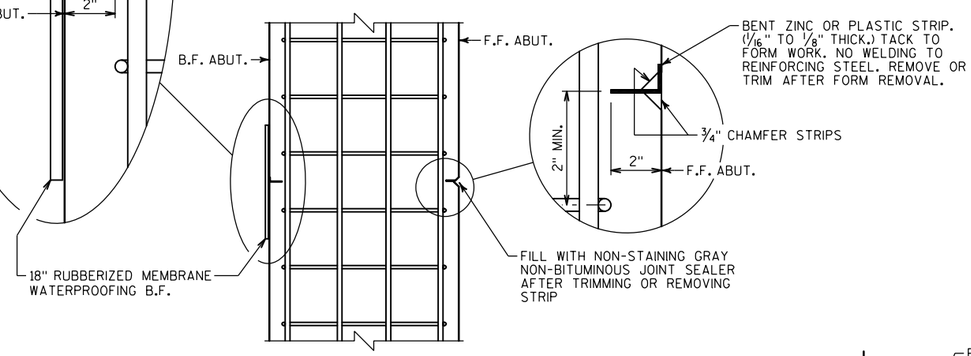


SECTION A-A

(SECTION THRU ABUTMENT BODY - LOOKING NORTH)



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

LEGEND

(B03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY ½" DEEP.

NOTES

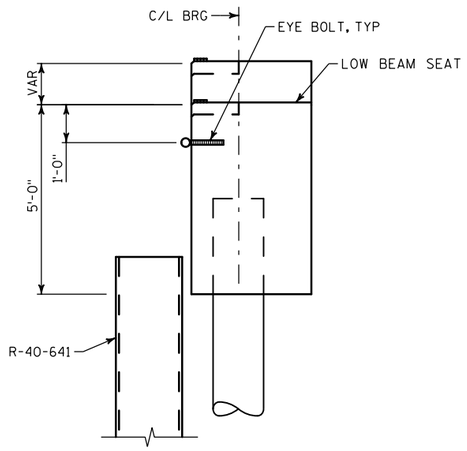
SEE "WEST ABUTMENT DETAILS (1 OF 2)" SHEET FOR PILE SPLICE AND END PLATE DETAILS

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

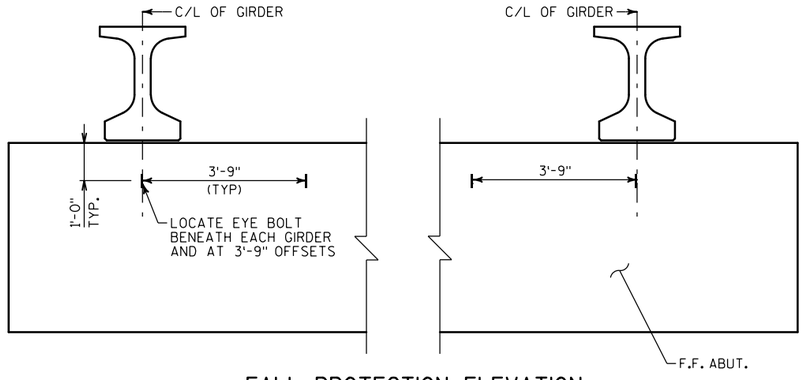
CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.



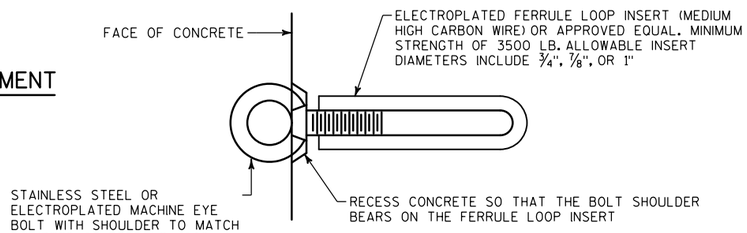
FALL PROTECTION ANCHOR

(LOOKING NORTH)



FALL PROTECTION ELEVATION

(LOOKING EAST)



EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-917

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EAST ABUTMENT DETAILS (1 OF 2)

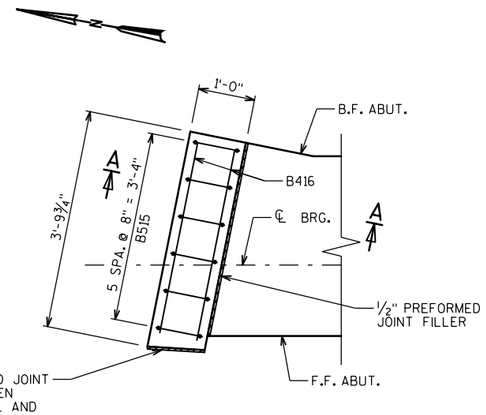
SHEET 13 OF 30

8

8

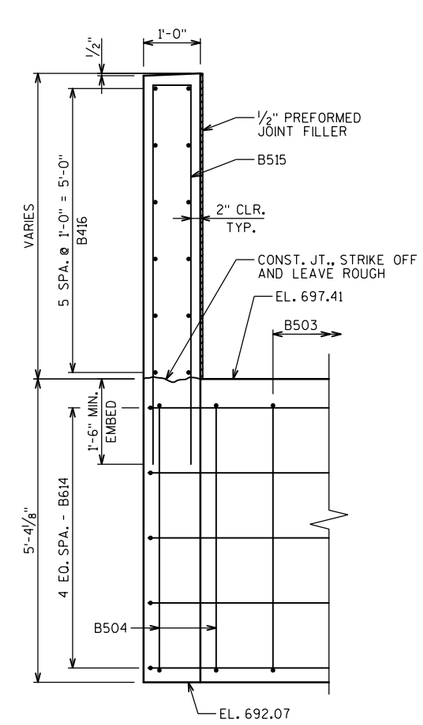
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080305_ED01.dgn PLOT DATE : 10/30/2017 10:59:48 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 2:1

STATE PROJECT NUMBER
1228-16-71

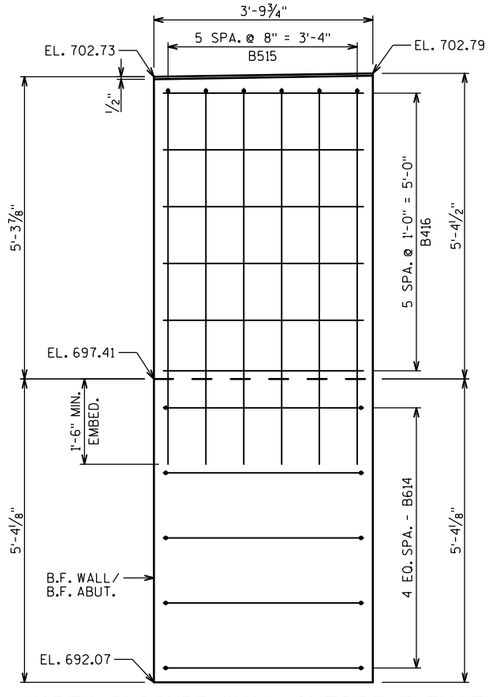


NORTH CLOSURE WALL PLAN

(ABUT. BODY REINF. NOT SHOWN FOR CLARITY)



SECTION A-A

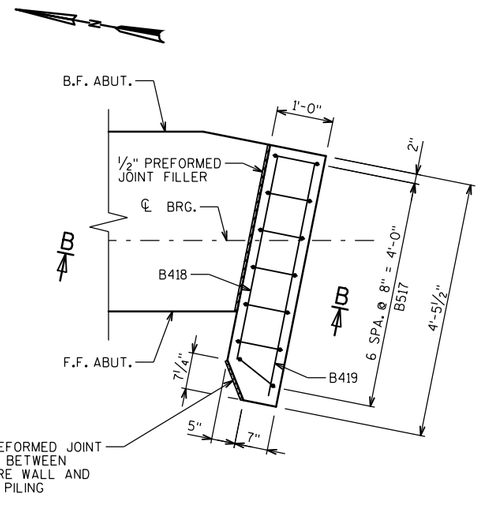


NORTH CLOSURE WALL OUTSIDE ELEVATION

(ELEVATIONS AND DIMENSIONS GIVEN AT SOUTH FACE OF WALL)

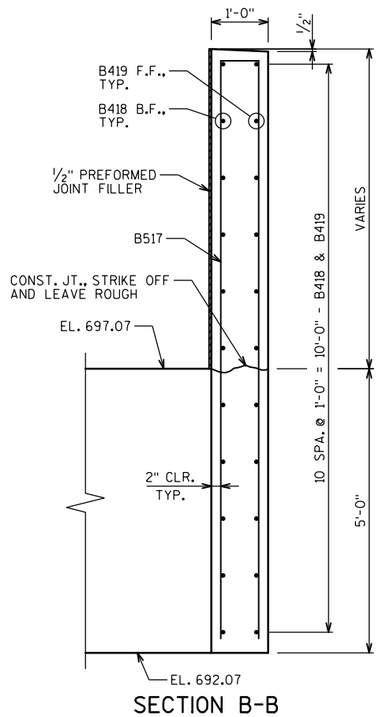
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
B401		17	28'-0"	X		PILE BARS - SPIRAL
B402		34	2'-3"			PILE BARS - VERT
B503		67	14'-10"	X		ABUTMENT BODY - STIRRUP
B504		2	15'-6"	X		ABUTMENT BODY - STIRRUP
B505		2	14'-4"	X		ABUTMENT BODY - STIRRUP
B606		14	35'-2"			ABUTMENT BODY - LONG.
B607		14	36'-7"			ABUTMENT BODY - LONG.
B508		53	6'-11"	X		ABUTMENT BODY - STIRRUP TOP
B409		3	34'-2"			ABUTMENT BODY - LONG. TOP
B410		3	21'-0"			ABUTMENT BODY - LONG. TOP
B411		32	4'-5"	X		ABUTMENT BODY - TRANS. BTWN BEAM SEATS
B412		16	6'-2"			ABUTMENT BODY - LONG. BTWN BEAM SEATS
B613		5	10'-10"	X		ABUTMENT BODY - END
B614		5	10'-7"	X		ABUTMENT BODY - END
B515	X	6	13'-9"	X		NORTH CLOSURE WALL - VERT.
B416	X	12	3'-5"			NORTH CLOSURE WALL - HORIZ.
B517	X	7	20'-7"	X		SOUTH CLOSURE WALL - VERT.
B418	X	11	3'-6"			SOUTH CLOSURE WALL - HORIZ. B.F.
B419	X	11	4'-2"			SOUTH CLOSURE WALL - HORIZ. F.F.



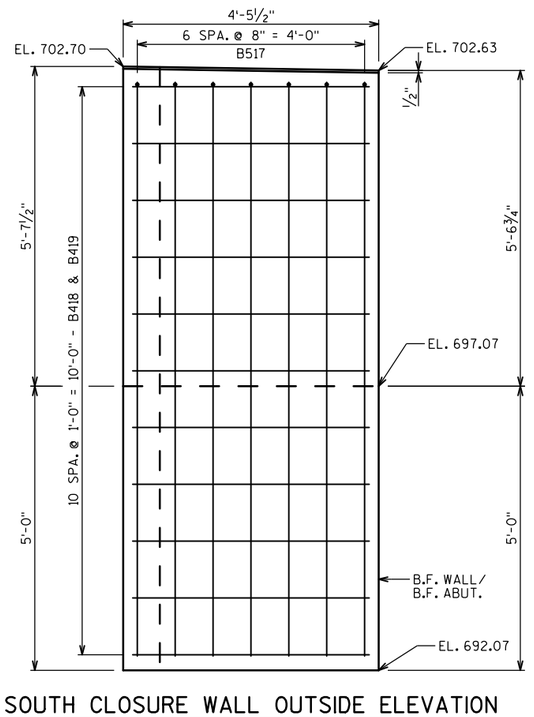
SOUTH CLOSURE WALL PLAN

(ABUT. BODY REINF. NOT SHOWN FOR CLARITY)



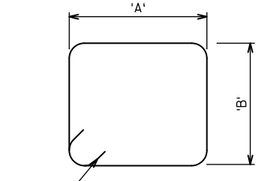
SECTION B-B

(ABUT. BODY REINF. NOT SHOWN FOR CLARITY)



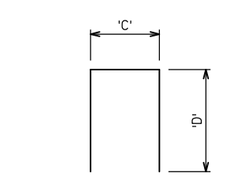
SOUTH CLOSURE WALL OUTSIDE ELEVATION

(ELEVATIONS AND DIMENSIONS GIVEN AT NORTH FACE OF WALL)



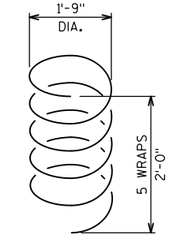
MARK	A	B
B503	2'-10"	4'-3"
B504	3'-2"	4'-3"
B505	2'-7"	4'-3"

B503, B504, B505

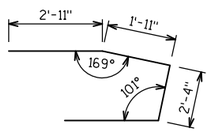


MARK	C	D
B508	2'-10"	2'-2"
B411	1'-7"	1'-6"
B515	8"	6'-8"
B517	8"	10'-1"

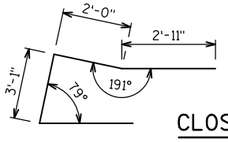
B508, B411, B515, B517



B401



B613



B614

CLOSURE WALL NOTE

CLOSURE WALL DIMENSIONS AND REINFORCING BASED ON R-40-641 SHEET PILING LAYOUT AS SHOWN. ADJUST CLOSURE WALL DIMENSIONS AND REINFORCING FOR ACTUAL SHEET PILING CONDITIONS AT NO ADDITIONAL COST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

DRAWN BY MSS | PLANS CK'D. HDA

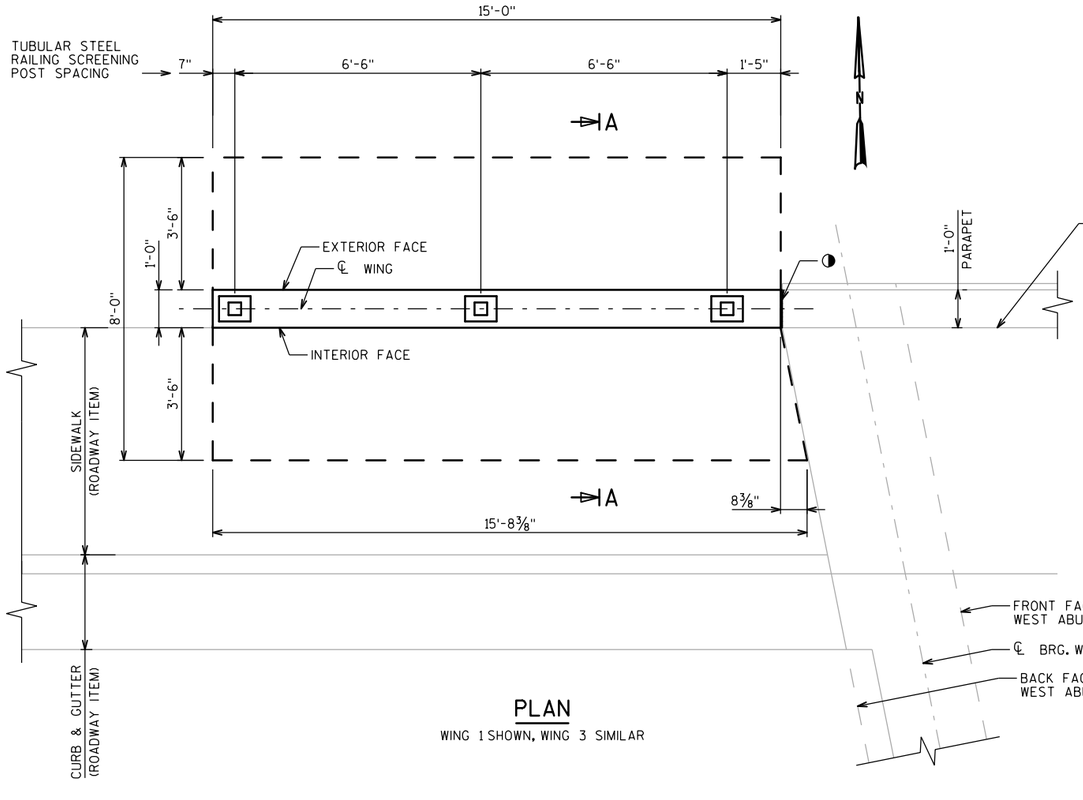
EAST ABUTMENT DETAILS (2 OF 2)

SHEET 14 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080306_EAST.dgn
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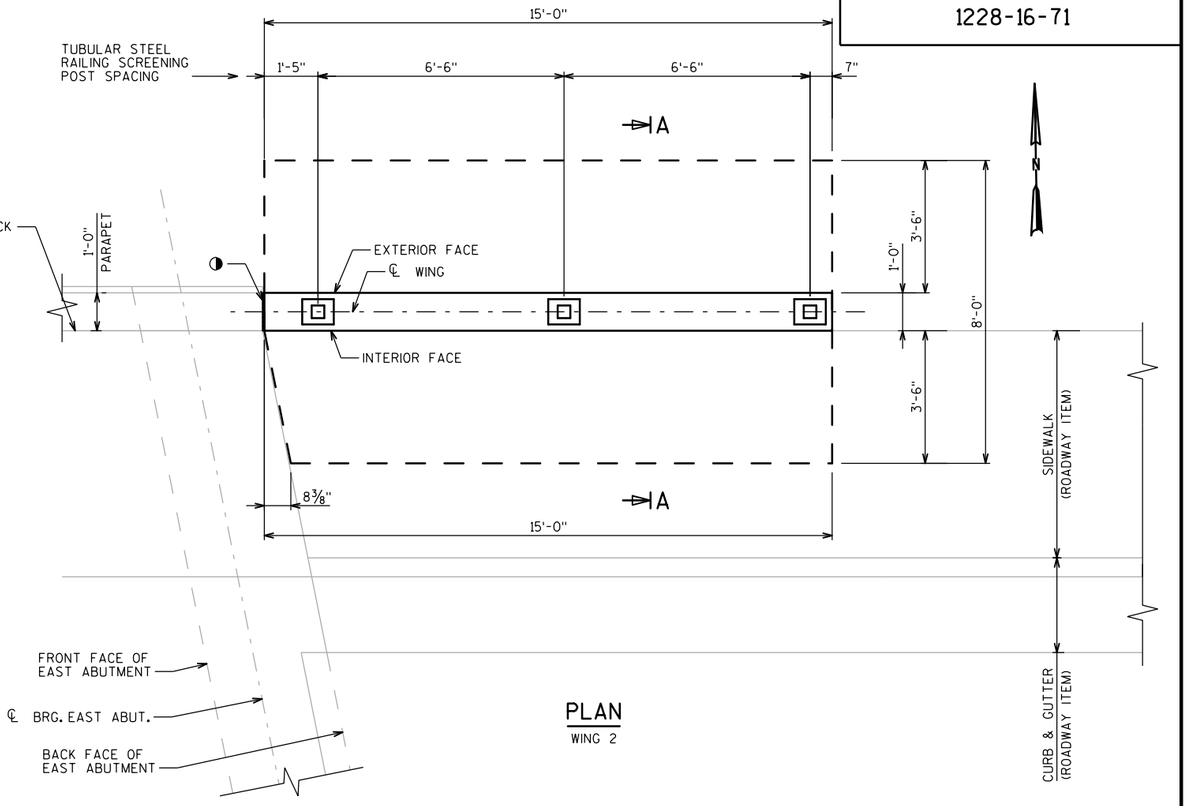
STATE PROJECT NUMBER

1228-16-71



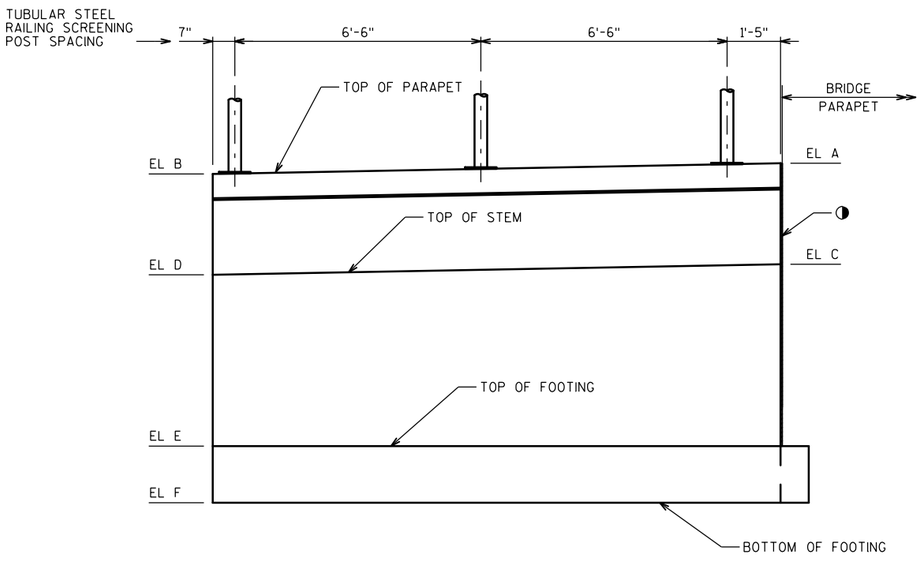
PLAN

WING 1 SHOWN, WING 3 SIMILAR



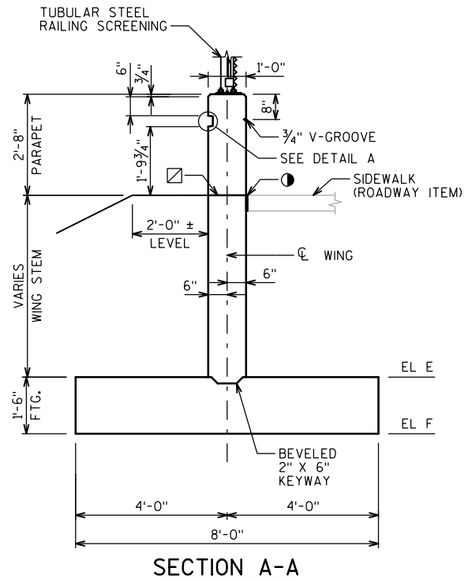
PLAN

WING 2



ELEVATION

LOOKING AT INTERIOR FACE
WING 1 SHOWN, WINGS 2 AND 3 SIMILAR



SECTION A-S

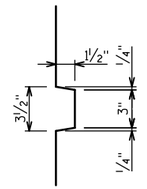
WINGWALL ELEVATION TABLE

POINT	WING 1	WING 2	WING 3
EL A	703.53	705.40	705.25
EL B	703.26	705.10	705.01
EL C	700.86	702.73	702.58
EL D	700.59	702.43	702.34
EL E	696.16	698.08	697.74
EL F	694.66	696.58	696.24

LEGEND

◑ 1/2" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER 1/8" BELOW SURFACE)

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.



DETAIL A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

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WINGWALLS

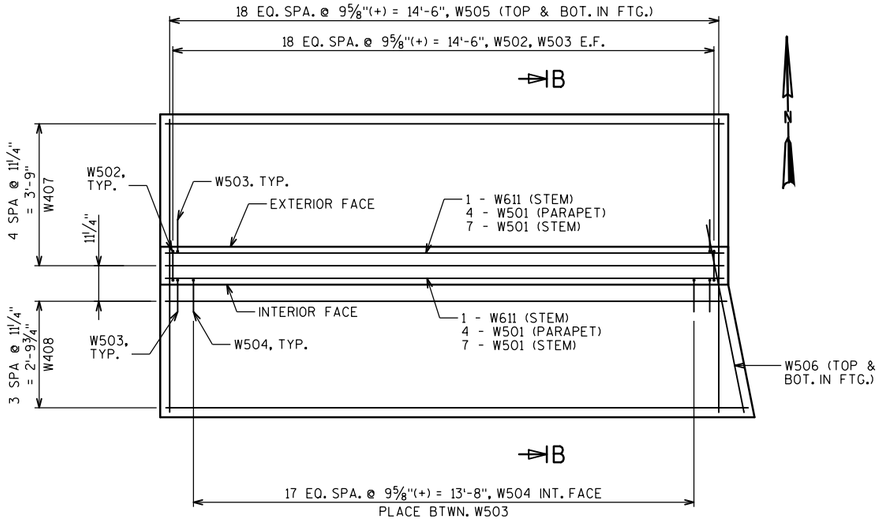
SHEET 15 OF 30

8

8

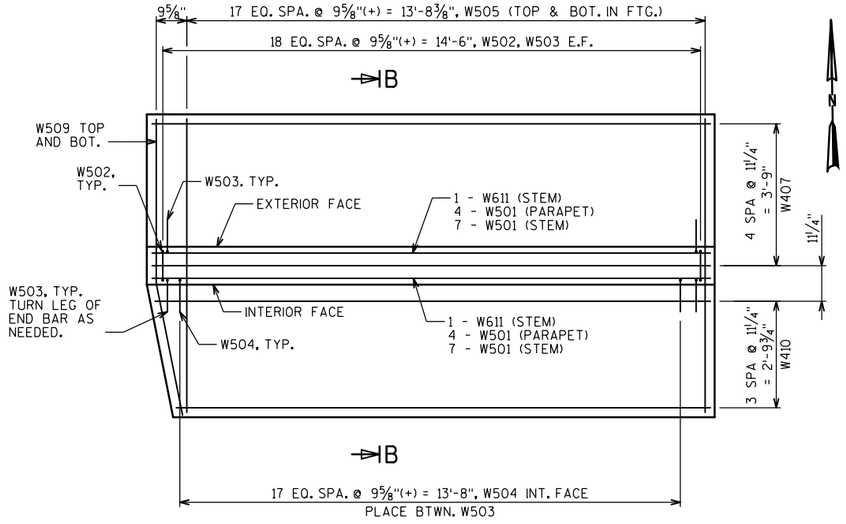
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080307_Wing.dgn PLOT DATE : 10/30/2017 10:59:51 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 4:1

STATE PROJECT NUMBER
1228-16-71



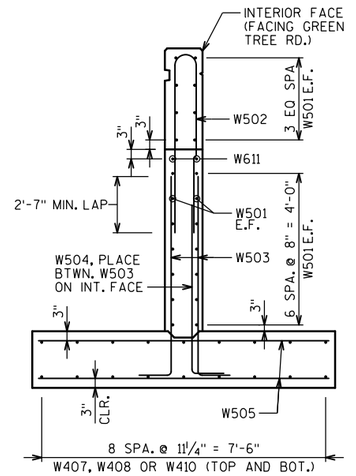
REINFORCEMENT PLAN - WINGS 1 AND 3

WING 1 SHOWN, WING 3 SIMILAR



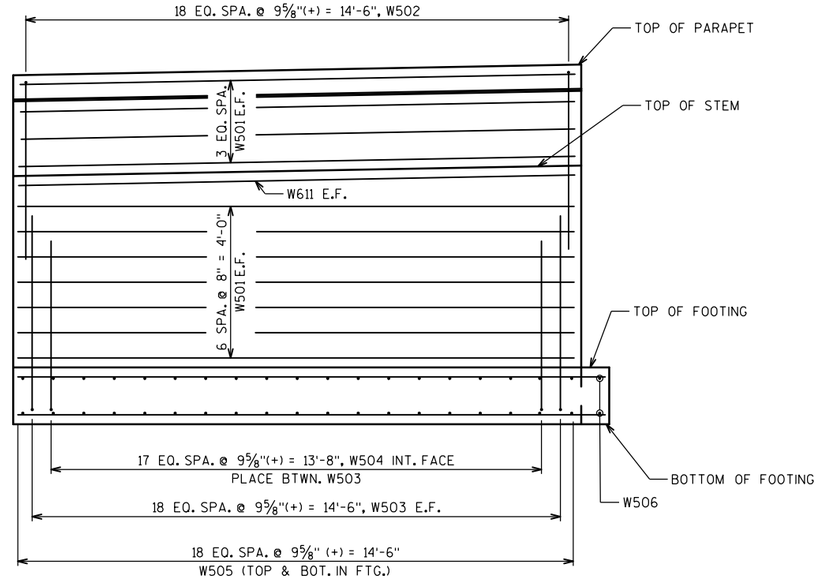
REINFORCEMENT PLAN - WING 2

WING 2



SECTION B-B

SHOWING REINFORCEMENT



REINFORCEMENT ELEVATION

LOOKING AT INTERIOR FACE
WING 1 SHOWN, WINGS 2 AND 3 SIMILAR

BILL OF BARS

BAR MARK	COAT	NO. REQ'D. WING 1	WING 2	WING 3	LENGTH	BENT	SERIES	LOCATION
W501	X	22	22	22	14'-6"			PARAPET AND STEM HORIZ.
W502	X	19	19	19	12'-2"	X		PARAPET VERT.
W503	X	38	38	38	6'-1"	X		STEM VERT.
W504	X	18	18	18	5'-4"	X		STEM VERT.
W505		38	36	38	7'-6"			FOOTING TRANS.
W506		2		2	5'-0"			FOOTING TRANS. WINGS 1 AND 3
W407		10	10	10	14'-6"			FOOTING LONG.
W408		8		8	14'-10"		⚠	FOOTING LONG. WINGS 1 AND 3
W509			2		7'-7"	X		FOOTING TRANS. WING 2
W410			8		14'-1"		⚠	FOOTING LONG. WING 2
W611	X	2	2	2	14'-6"			STEM TOP HORIZ.

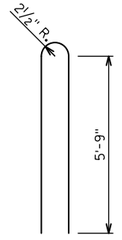
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

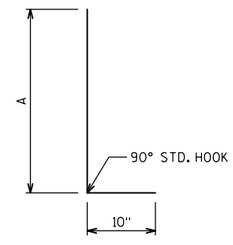
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
W408	WING 1 - 2 SERIES OF 4 WING 3 - 2 SERIES OF 4	14'-7" TO 15'-1"
W410	WING 2 - 2 SERIES OF 4	13'-10" TO 14'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

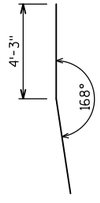


W502



MARK	A
W503	5'-4"
W504	4'-7"

W503, W504



W509

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

DRAWN BY HDA | PLANS CK'D. MSS

WINGWALL REINFORCEMENT

SHEET 16 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080308_RL03.DGN
PLOT DATE : 10/30/2017 10:59:52 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 4:1

STATE PROJECT NUMBER
1228-16-71

LEGEND

PIER SUPPORTED ON 16" DIA. x 0.375" CIP PILING DRIVEN TO EL. 645.0 OR A REQUIRED DRIVING RESISTANCE OF 95 TONS PER PILE, WHICHEVER COMES FIRST. USE THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE REQUIRED DRIVING RESISTANCE.

NOTE - PROPOSED PILES MAY BE MOVED UP TO 6" EACH WAY TO AVOID CONFLICTS WITH EXISTING PILES. IF 6" ADJUSTMENT IS NOT SUFFICIENT, EXISTING PILES MAY BE EXTRACTED AND THE HOLE THEN FILLED WITH SAND. REMOVAL OF EXISTING PILES AND PLACEMENT OF SAND IS INCLUDED IN THE PAY ITEM "REMOVING OLD STRUCTURE STA. 40GT+00".

EXISTING TIMBER PILE

(D) DYNAMIC PILE LOAD TESTING

NOTIFY THE ENGINEER IF THE LOAD TESTED PILING INDICATE A CAPACITY OF LESS THAN THE REQUIRED DRIVING RESISTANCE.

NOTE - IF ANY PILE IS PLACED AT THE LOCATION OF AN EXTRACTED PILE, ONE OF THE DYNAMIC PILE LOAD TESTS SHALL BE DONE AT AN EXTRACTION LOCATION.

(P01) 1'-3" x 2'-0" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P02) KEYED CONSTRUCTION JOINT FORMED BY A SURFACED BEVELED 2" x 6" BETWEEN BEAM SEATS.

(P03) ¾" PREFORMED FILLER

(P04) ½" x 8" x 2'-6" NON-LAMINATED ELASTOMERIC BEARING PAD.

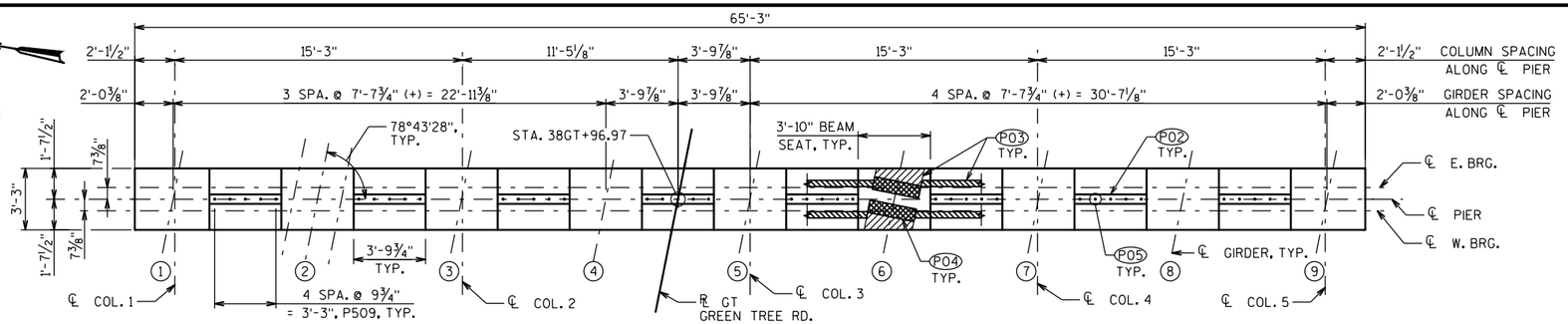
(P05) P509 BARS AT 1'-0" CENTERS, BETWEEN BEAM SEATS, MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBEDED 1'-0" INTO CONCRETE.)

(P06) LOCATION OF EXISTING PILES IS SHOWN BASED ON AS-BUILT DRAWINGS ONLY. FIELD VERIFY PILE LOCATIONS IMMEDIATELY AFTER EXPOSURE AND NOTIFY THE ENGINEER OF ANY DEVIATIONS NOTED.

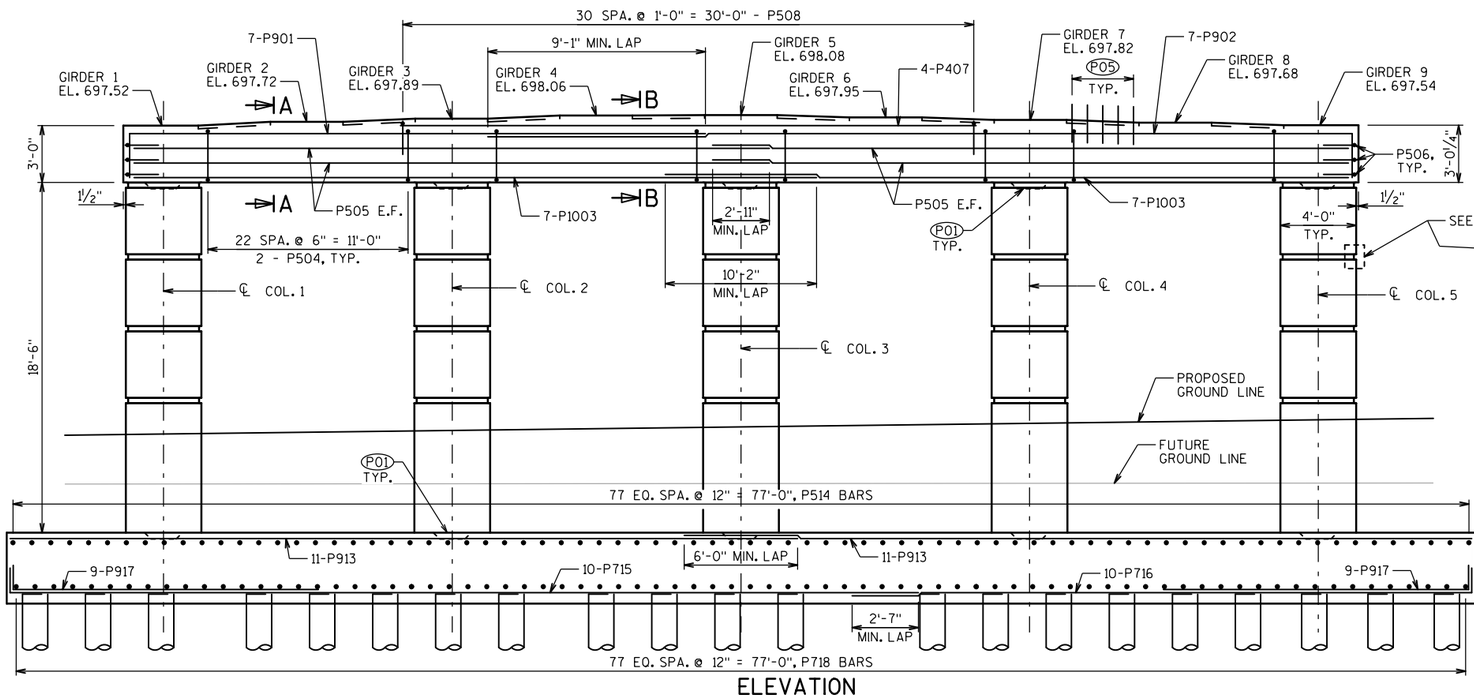
(P07) CUTOFF PILING IN EXISTING FOOTING THAT IS IN THE FOOTPRINT OF THE PROPOSED FOOTING 2'-0" BELOW BOTTOM OF PROPOSED FOOTING. DO NOT INCORPORATE EXISTING PILING INTO PROPOSED FOOTING.

NOTES

1. GIRDER ELEVATIONS ARE GIVEN AT THE TOP OF THE PIER AT THE INTERSECTION OF THE ℄ GIRDER AND THE ℄ PIER.
2. FOR DETAIL X, ADDITIONAL DETAILS AND SECTIONS A-A AND B-B SEE "PIER DETAILS & REINFORCEMENT" SHEET.
3. REFER TO "PIER DETAILS & REINFORCEMENT" SHEET FOR COLUMN REINFORCEMENT.

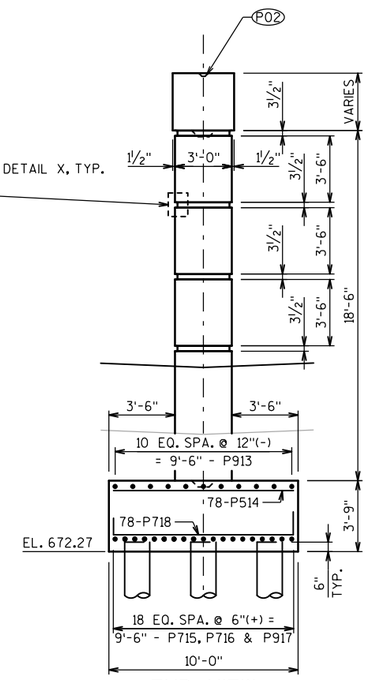


PLAN OF PIER CAP



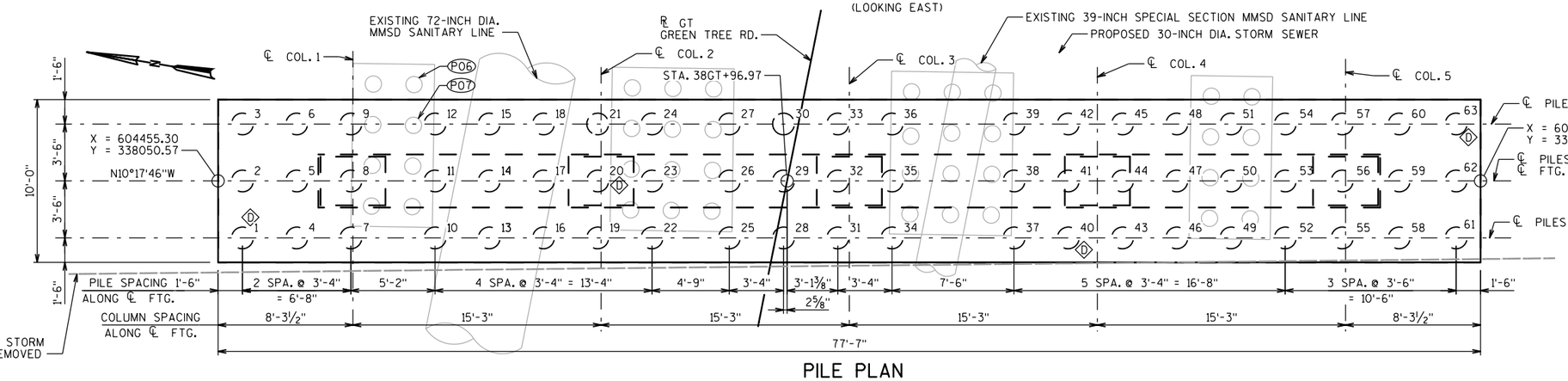
ELEVATION

(LOOKING EAST)



END VIEW

(LOOKING NORTH)



PILE PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

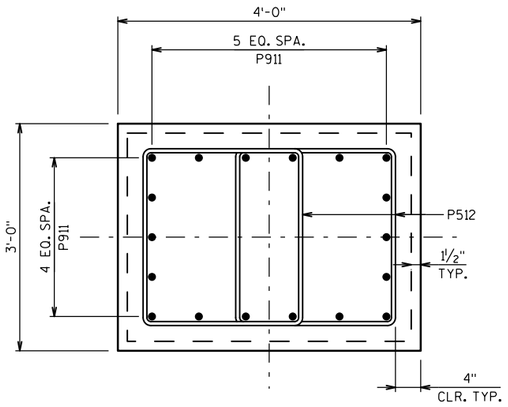
DRAWN BY JJO | PLANS CK'D. EAJ

PIER

SHEET 17 OF 30

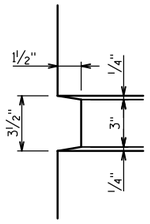
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080401_PLOT.dgn PLOT DATE : 10/30/2017 10:59:56 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 8:1

STATE PROJECT NUMBER
1228-16-71

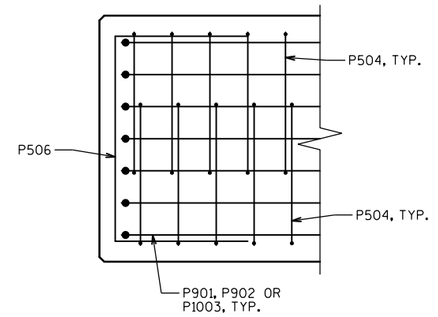


SECTION D-D

P910 & P911



DETAIL X

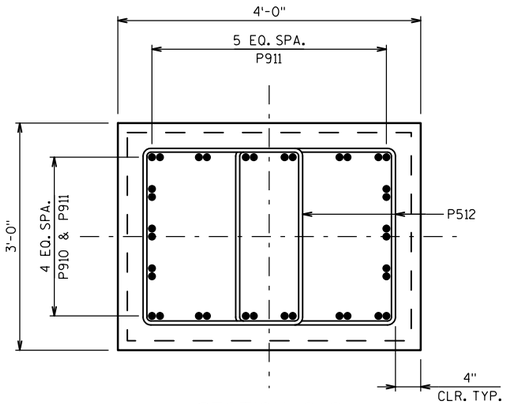


PLAN VIEW SHOWING END OF CAP REINFORCEMENT

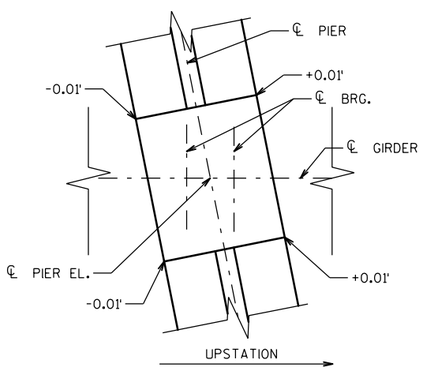
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

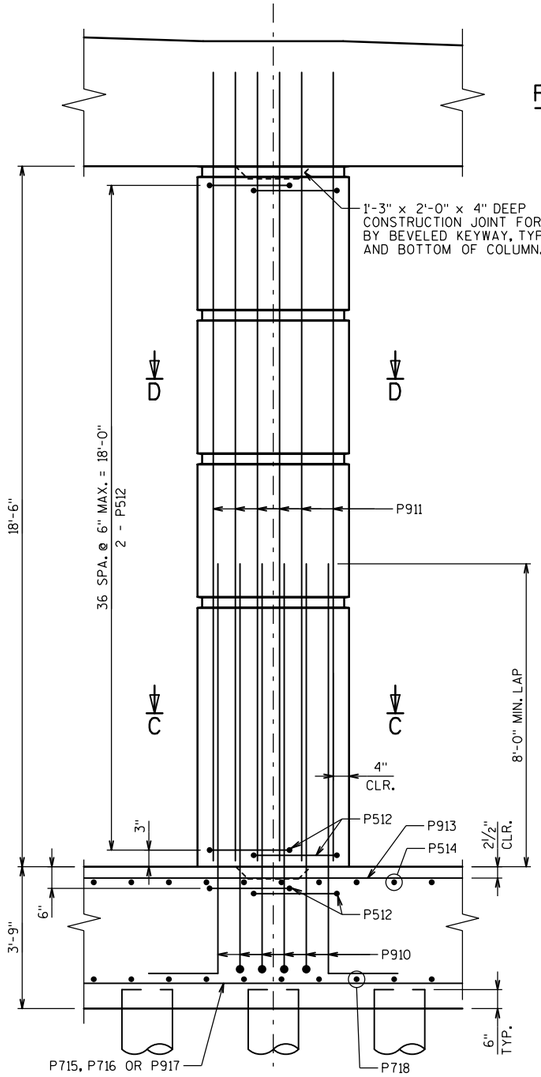
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P901	X	7	31'-4"	X		CAP - HORIZ. TOP
P902	X	7	44'-10"	X		CAP - HORIZ. TOP
P1003	X	14	37'-7"			CAP - HORIZ. BOTTOM
P504	X	184	9'-10"	X		CAP - VERT. STIRRUP
P505	X	8	34'-0"			CAP - HORIZ. SIDES
P506	X	6	5'-11"	X		CAP - HORIZ. ENDS
P407	X	4	30'-6"			CAP - HORIZ. TOP
P508	X	31	5'-9"	X		CAP - VERT. TOP
P509	X	40	2'-0"			CAP - VERT. TIE
P910	X	90	12'-0"	X		COLUMN - VERT.
P911	X	90	21'-0"			COLUMN - VERT.
P512	X	380	10'-0"	X		COLUMN - HORIZ. STIRRUP
P913		22	41'-7"			FOOTING - HORIZ. TOP
P514		78	9'-7"			FOOTING - HORIZ. TOP
P715		10	48'-7"	X		FOOTING - HORIZ. BOTTOM
P716		10	33'-4"	X		FOOTING - HORIZ. BOTTOM
P917		18	17'-8"	X		FOOTING - HORIZ. BOTTOM
P718		78	11'-10"	X		FOOTING - HORIZ. BOTTOM



SECTION C-C

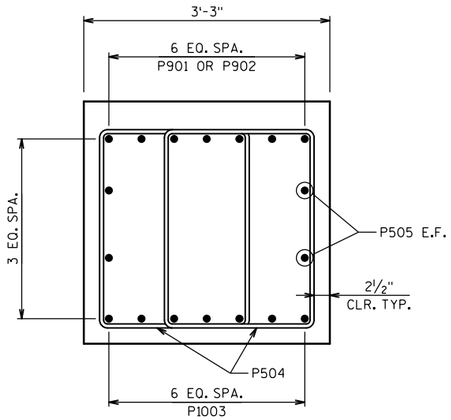


SLOPED BEAM SEAT DETAIL

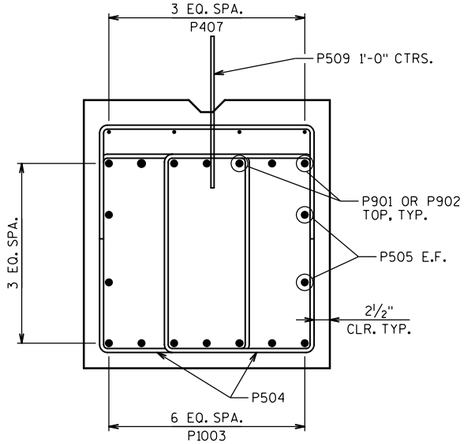


COLUMN SECTION

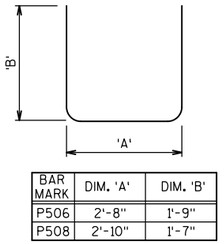
(LOOKING EAST)



SECTION A-A

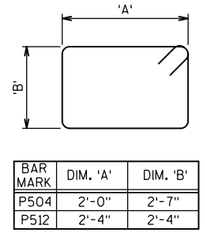


SECTION B-B



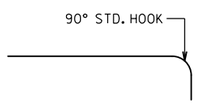
BAR MARK	DIM. 'A'	DIM. 'B'
P506	2'-8"	1'-9"
P508	2'-10"	1'-7"

P506 & P508

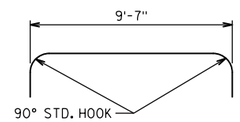


BAR MARK	DIM. 'A'	DIM. 'B'
P504	2'-0"	2'-7"
P512	2'-4"	2'-4"

P504 & P512



P901, P902, P910,
P715, P716 & P917



P718

NO.	DATE	REVISION	BY

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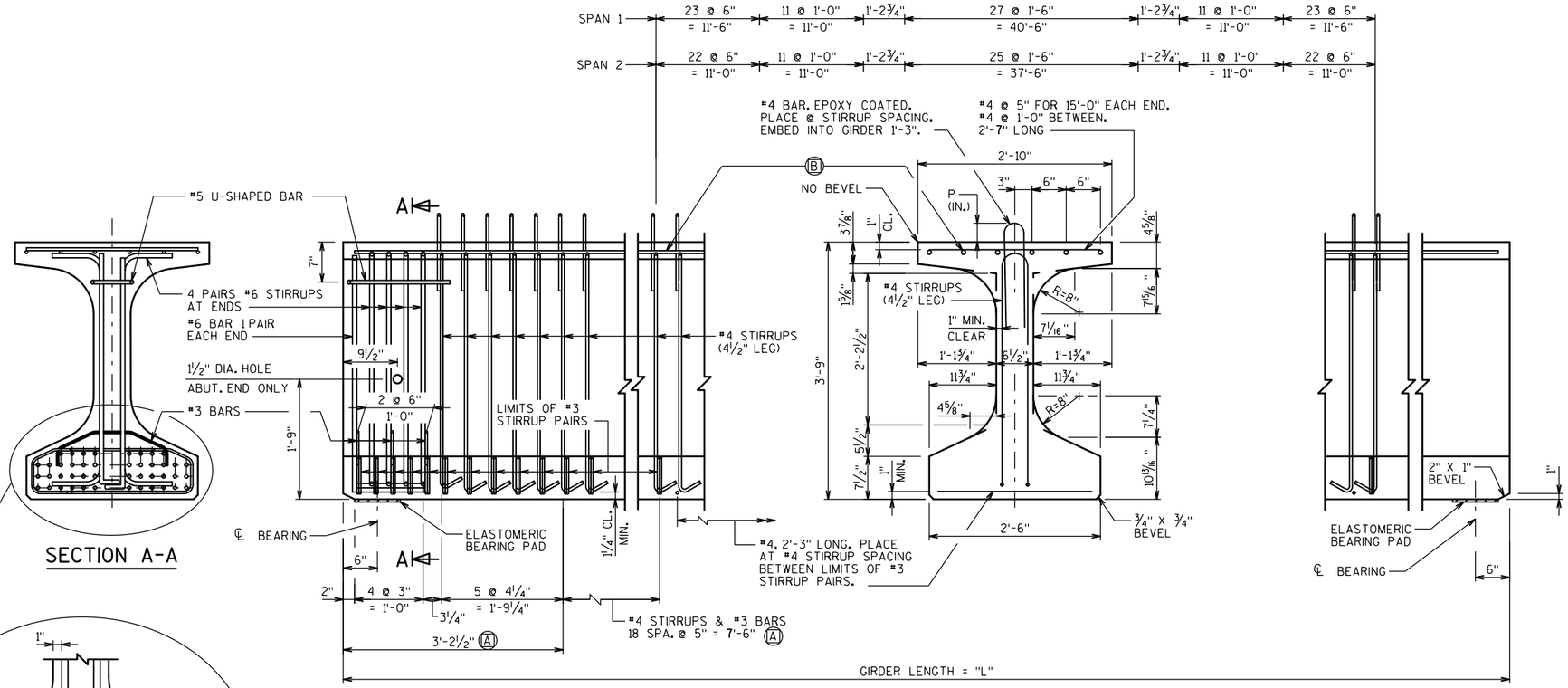
STRUCTURE B-40-917

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PIER DETAILS & REINFORCEMENT

SHEET 18 OF 30

STATE PROJECT NUMBER
1228-16-71



SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP AT EACH END

(B) 6 - #4 BARS, FULL LENGTH, MIN. LAP = 1'-8"

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF THE STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

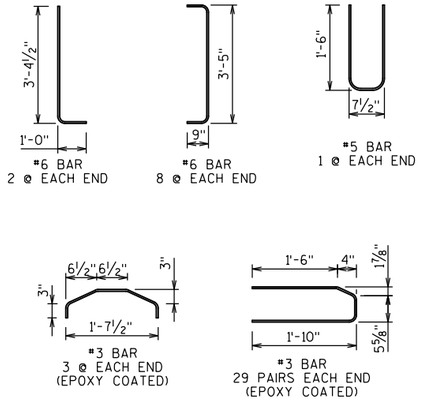
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.) - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS, SEE "STEEL DIAPHRAGM" SHEET.



GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) ** 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅕ OF GIRDER	"P" 2ND ⅕ OF GIRDER	"P" 3RD ⅕ OF GIRDER	"P" 4TH ⅕ OF GIRDER	"P" 5TH ⅕ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	NO OF DEBONDED STRANDS ***
1	1,9	109'-4½"	0.68	1.32	1.81	2.12	2.20	2.08	1.74	1.23	0.62	8,500	7.25"	7"	7"	7"	7.25"	0.6	36	6,800	39	13.5	16.5	5	8
1	2-7	109'-4½"	0.78	1.51	2.08	2.43	2.53	2.39	2.01	1.43	0.72	8,500	7"	7"	7"	7"	7"	0.6	36	6,800	39	13.5	16.5	5	-
1	8	109'-4½"	0.78	1.51	2.08	2.43	2.53	2.39	2.01	1.43	0.72	8,500	7"	7"	7"	7"	7"	0.6	36	6,800	39	13.5	16.5	5	8
2	1,9	105'-4½"	0.57	1.13	1.60	1.91	2.03	1.95	1.67	1.22	0.63	8,500	9"	10.375"	11"	9.75"	7.75"	0.6	34	6,800	39	13.5	16.5	5	8
2	2-7	105'-4½"	0.66	1.30	1.83	2.18	2.32	2.22	1.90	1.38	0.71	8,500	8.25"	10"	10.75"	9.75"	7.75"	0.6	34	6,800	39	13.5	16.5	5	-
2	8	105'-4½"	0.66	1.30	1.83	2.18	2.32	2.22	1.90	1.38	0.71	8,500	8.25"	10"	10.75"	9.75"	7.75"	0.6	34	6,800	39	13.5	16.5	5	8

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE
** SEE DEAD LOAD DEFLECTION DIAGRAM ON "45W" PRESTRESSED GIRDER DETAILS" SHEET
*** DEBOND STRANDS AT THE PIER END OF THE GIRDER ONLY. THE DEBONDED END OF GIRDER SHALL BE MARKED TO BE EASILY IDENTIFIABLE DURING ERECTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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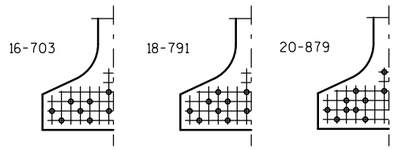
STRUCTURE B-40-917

DRAWN BY MSS | PLANS CK'D. HDA

45W" PRESTRESSED GIRDER

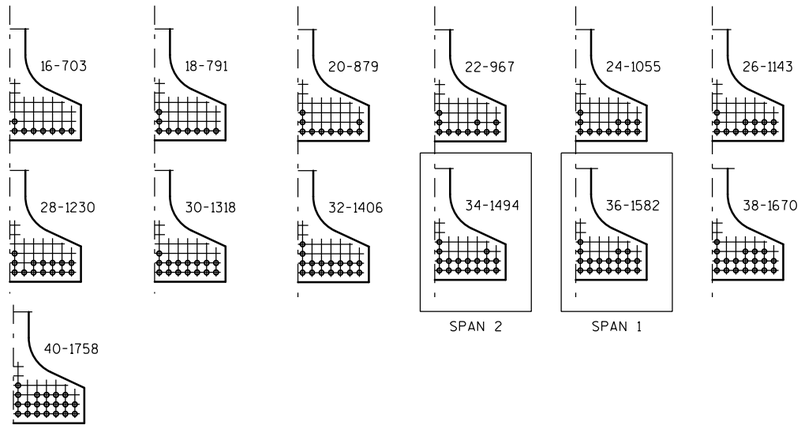
SHEET 19 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080501_Rev08.dgn DATE : 10/30/2017 10:59:59 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 2:1



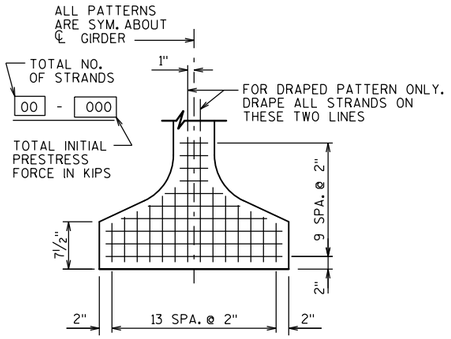
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

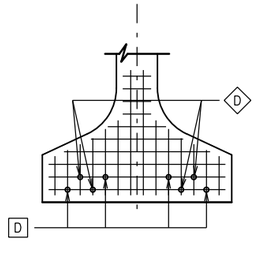


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN

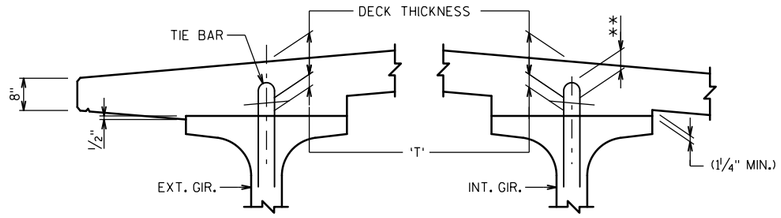


DEBONDED STRANDS
GIRDERS 1, 8 & 9

DEBOND AT PIER END ONLY

[D] DEBOND LENGTH = 6'-0" (4 STRANDS)

◇D DEBOND LENGTH = 4'-0" (4 STRANDS)



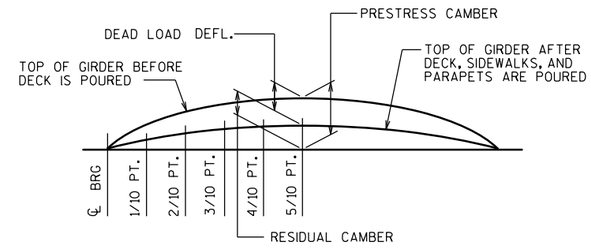
DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION
* IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,
** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

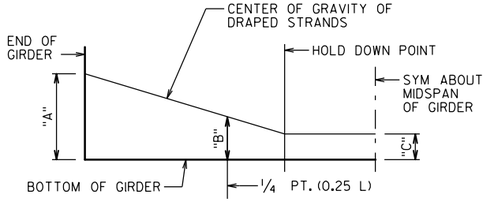


DEAD LOAD DEFLECTION & CAMBER DIAGRAM

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.77
2	3.41

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS. THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DRAPED STRAND PROFILE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

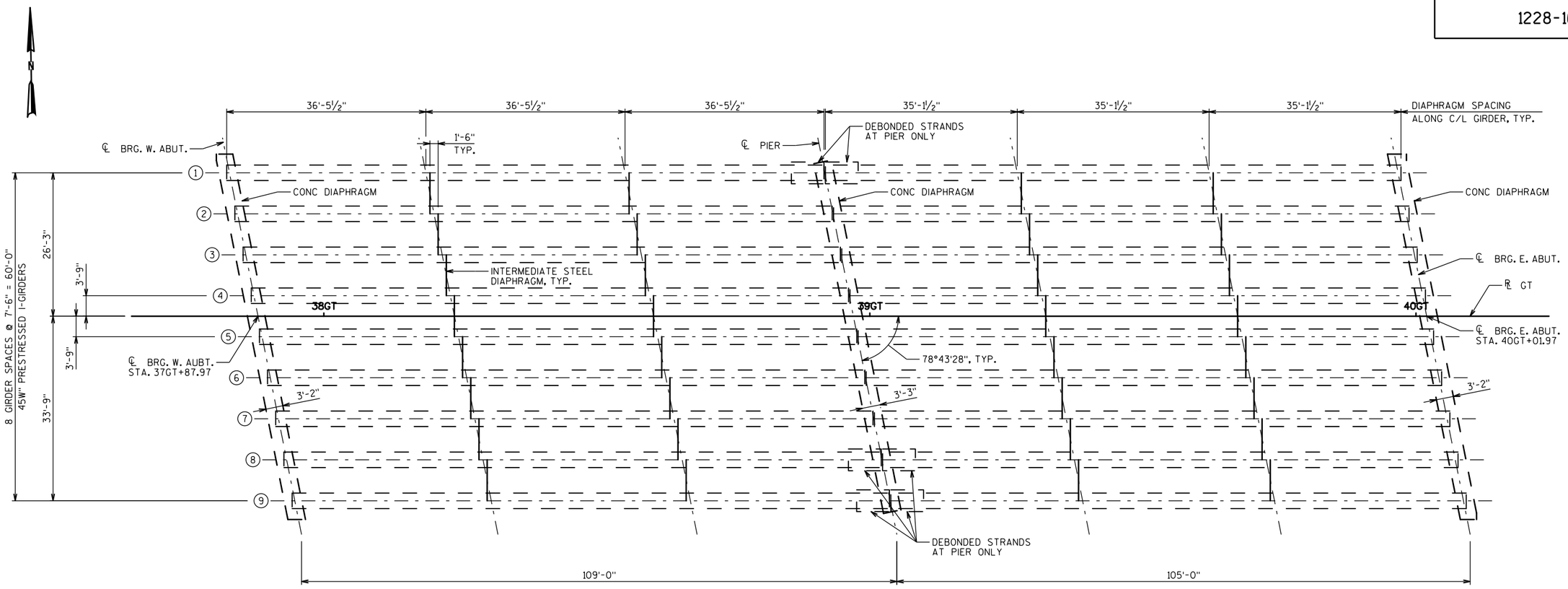
DRAWN BY MSS | PLANS CK'D. HDA

45W" PRESTRESSED GIRDER DETAILS

SHEET 20 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080502_Rev.dgn PLOT DATE : 10/30/2017 11:00:01 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 2:1

STATE PROJECT NUMBER
1228-16-71



FRAMING PLAN

TOP OF DECK ELEVATIONS

LOCATION	℄ BRG. W. ABUT.	SPAN 1									℄ PIER	SPAN 2									℄ BRG. E. ABUT.
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
NORTH EDGE OF DECK	700.22	700.42	700.62	700.82	701.02	701.22	701.42	701.62	701.82	702.02	702.21	702.34	702.45	702.52	702.55	702.55	702.51	702.44	702.34	702.20	702.03
GIRDER 1	700.27	700.47	700.67	700.87	701.08	701.28	701.48	701.68	701.88	702.08	702.26	702.39	702.50	702.56	702.60	702.59	702.56	702.49	702.38	702.24	702.07
GIRDER 2	700.45	700.65	700.85	701.05	701.25	701.45	701.65	701.85	702.06	702.26	702.43	702.56	702.66	702.72	702.75	702.74	702.70	702.62	702.51	702.36	702.19
GIRDER 3	700.63	700.83	701.03	701.23	701.43	701.63	701.83	702.03	702.23	702.43	702.60	702.73	702.82	702.88	702.90	702.89	702.84	702.76	702.64	702.49	702.32
GIRDER 4	700.81	701.01	701.21	701.41	701.61	701.81	702.01	702.21	702.41	702.61	702.77	702.89	702.98	703.03	703.05	703.03	702.98	702.89	702.77	702.62	702.45
R/L GT	700.89	701.10	701.30	701.50	701.70	701.90	702.10	702.30	702.50	702.69	702.85	702.97	703.06	703.11	703.12	703.11	703.05	702.96	702.84	702.68	702.51
GIRDER 5	700.83	701.03	701.23	701.43	701.64	701.84	702.04	702.24	702.44	702.63	702.79	702.91	702.99	703.04	703.05	703.03	702.97	702.88	702.75	702.59	702.42
GIRDER 6	700.71	700.91	701.11	701.31	701.51	701.71	701.91	702.11	702.32	702.51	702.66	702.77	702.85	702.89	702.90	702.87	702.81	702.71	702.58	702.42	702.25
GIRDER 7	700.59	700.79	700.99	701.19	701.39	701.59	701.79	701.99	702.19	702.38	702.53	702.63	702.71	702.74	702.75	702.71	702.65	702.55	702.41	702.24	702.07
GIRDER 8	700.47	700.67	700.87	701.07	701.27	701.47	701.67	701.87	702.07	702.25	702.39	702.50	702.56	702.60	702.59	702.56	702.49	702.38	702.24	702.07	701.90
GIRDER 9	700.34	700.54	700.74	700.94	701.15	701.35	701.55	701.75	701.95	702.12	702.26	702.36	702.42	702.45	702.44	702.40	702.32	702.21	702.07	701.90	701.72
SOUTH EDGE OF DECK	700.31	700.51	700.71	700.91	701.11	701.31	701.51	701.71	701.91	702.08	702.22	702.32	702.38	702.40	702.39	702.35	702.27	702.16	702.01	701.84	701.67

SEE "CURB RAMP DETAILS" SHEET FOR DECK DEPRESSION AREAS AT SOUTHWEST CORNER OF BRIDGE DECK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

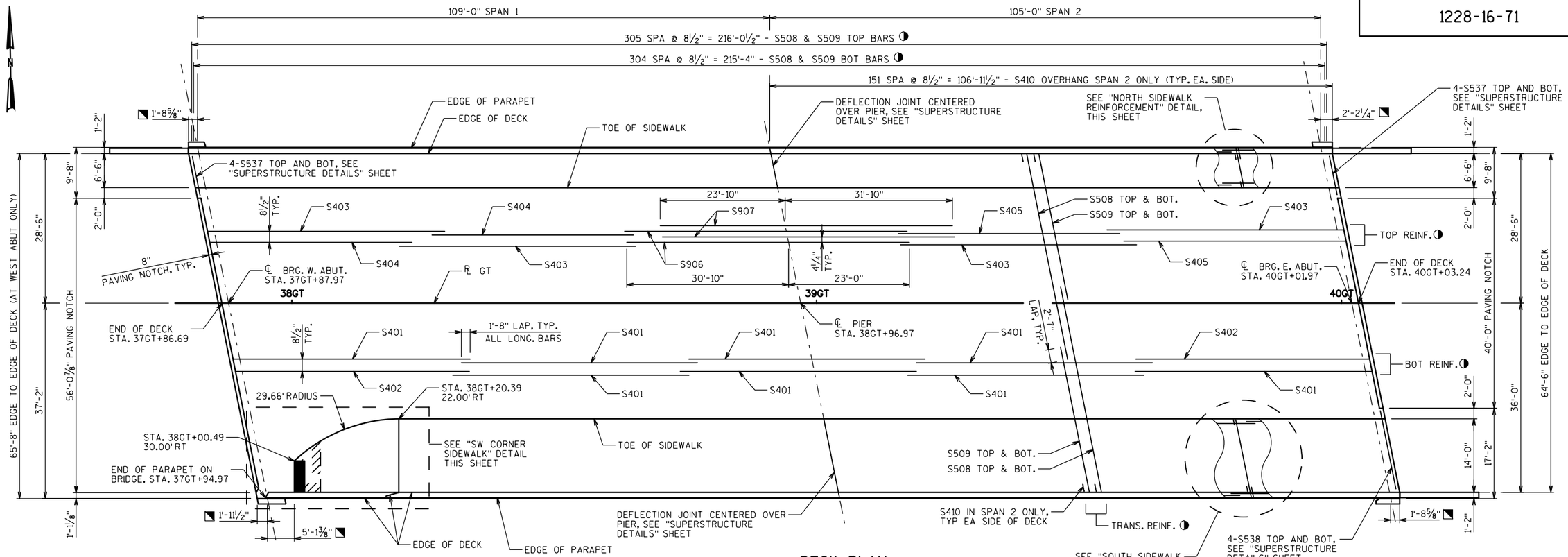
DRAWN BY MSS | PLANS CK'D. HDA

SUPERSTRUCTURE FRAMING PLAN

SHEET 21 OF 30

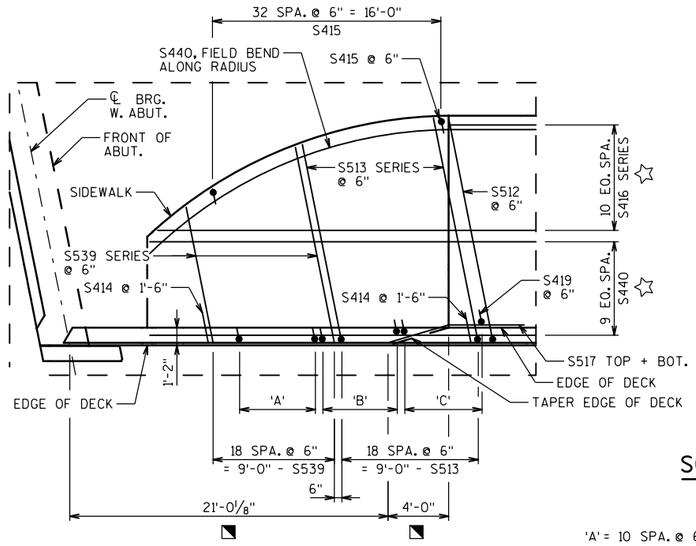
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080503_Rpt08.dgn DATE : 10/30/2017 11:00:02 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 20:1

STATE PROJECT NUMBER
1228-16-71



DECK PLAN

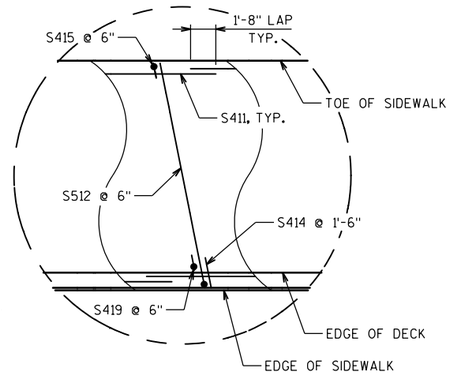
(PARAPET REINFORCEMENT NOT SHOWN)



SW CORNER SIDEWALK

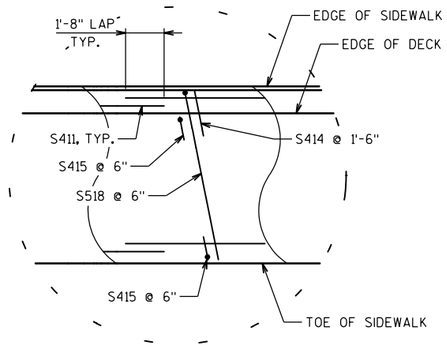
(PARAPET REINFORCEMENT NOT SHOWN)
(FOR CURB RAMP DETAILS AND ELEVATIONS SEE "CURB RAMP DETAILS" SHEET)

'A' = 10 SPA. @ 6" = 5'-0" - S441
'B' = 10 SPA. @ 6" = 5'-0" - S442
'C' = 10 SPA. @ 6" = 5'-0" - S419



SOUTH SIDEWALK REINFORCEMENT

(PARAPET REINFORCEMENT NOT SHOWN)



NORTH SIDEWALK REINFORCEMENT

(PARAPET REINFORCEMENT NOT SHOWN)

LEGEND

- ◥ MEASURED FROM ℄ BRG. AT EDGE OF RAISED SIDEWALK
- ◑ ALTERNATE LAPS AS SHOWN
- ☆ LAP WITH S411 BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

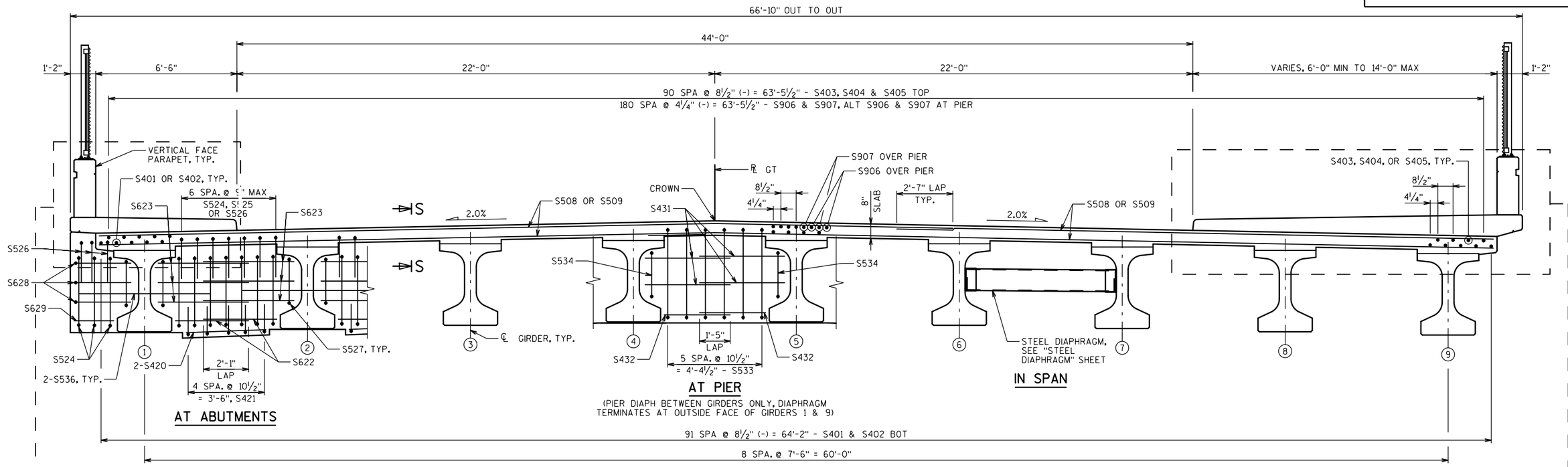
DRAWN BY MSS | PLANS CK'D. HDA

SUPERSTRUCTURE REINFORCEMENT

SHEET 22 OF 30

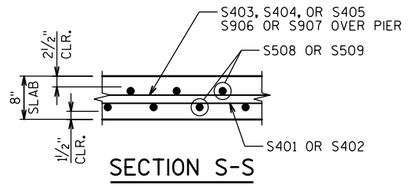
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080504_SS02.dgn PLOT DATE : 10/30/2017 11:00:03 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 20:1

STATE PROJECT NUMBER
1228-16-71

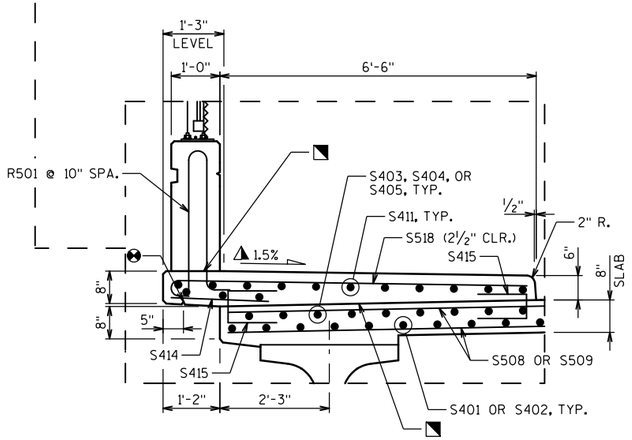


CROSS SECTION THRU SUPERSTRUCTURE

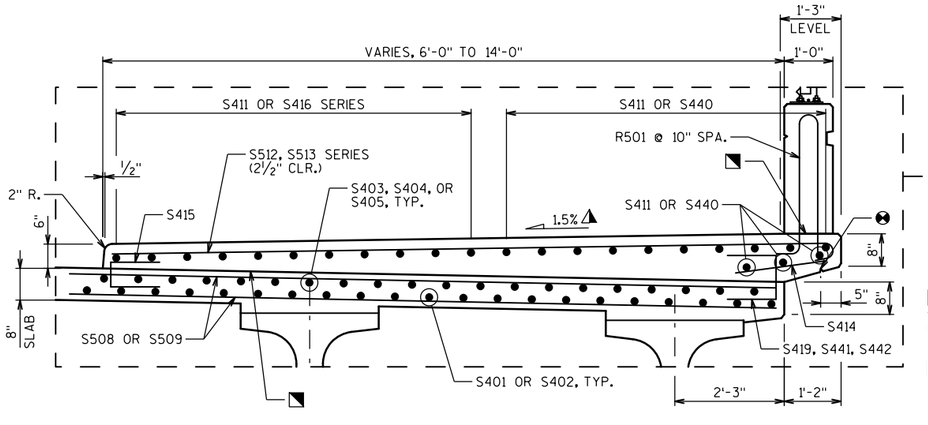
(LOOKING EAST)



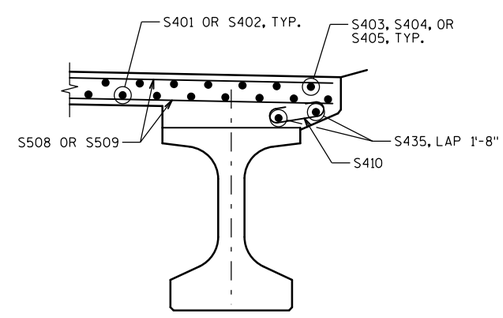
SECTION S-S



NORTH SIDEWALK DETAIL



SOUTH SIDEWALK DETAIL



OVERHANG DETAIL - SPAN 2

TYP. EA. EXTERIOR GIRDER

LEGEND

- ¾" V-GROOVE REQ'D. EXTEND TO 6" FROM F.F. OF ABUT. DIAPH.
- CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.
- ± 0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

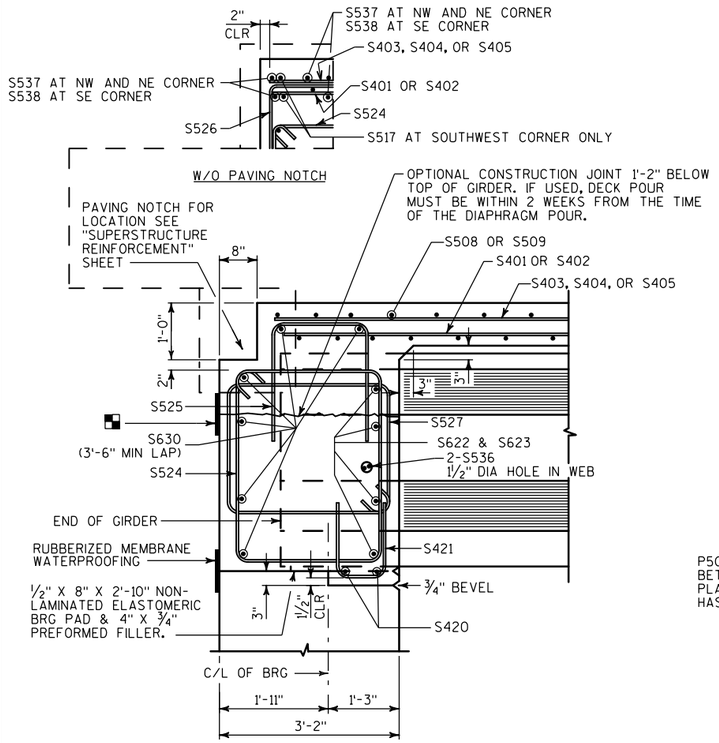
DRAWN BY MSS | PLANS CK'D. HDA

SUPERSTRUCTURE CROSS SECTION

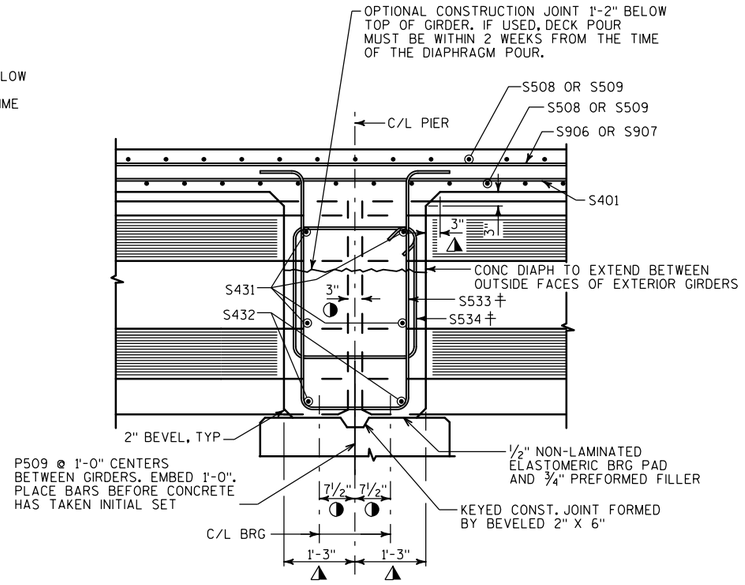
SHEET 23 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080505_RSO.dgn
PLOT DATE : 10/30/2017 11:00:05 AM
PLOT BY : ejelinek
PLOT NAME : $FILE$
PLOT SCALE : 4.66667:1

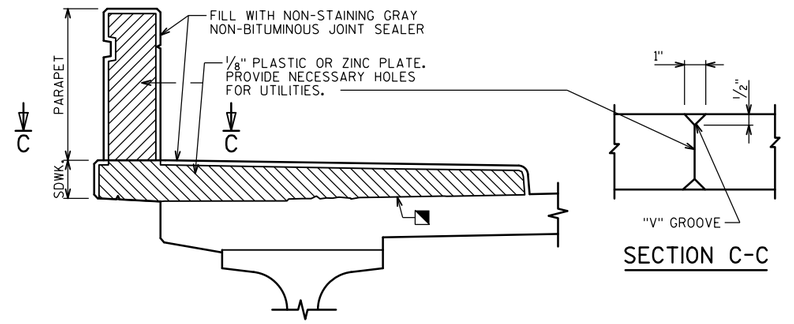
STATE PROJECT NUMBER
1228-16-71



PARTIAL LONGITUDINAL SECTION AT ABUTMENT



PARTIAL LONGITUDINAL SECTION AT PIER



SECTION C-C

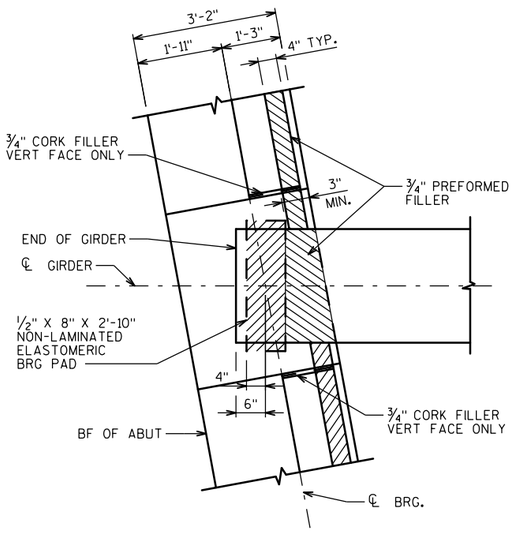
DEFLECTION JOINT DETAIL

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

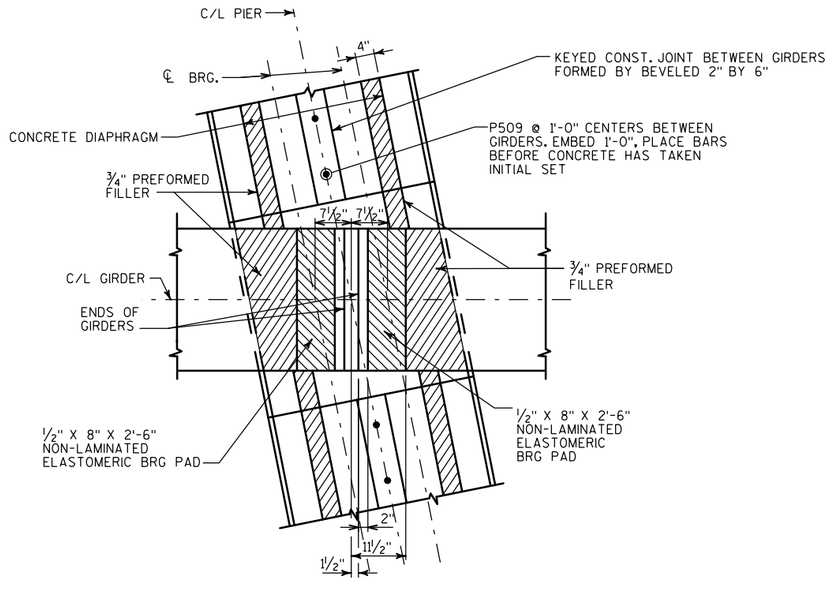
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN ABOVE BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

LEGEND

- ◥ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.
- ◑ DIMENSION IS TAKEN PARALLEL TO ℄ GIRDER.
- ◭ DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.
- ‡ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ GIRDERS.
- ◪ RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES")



BEARING PAD DETAIL AT ABUTMENT



BEARING PAD DETAIL AT PIER

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

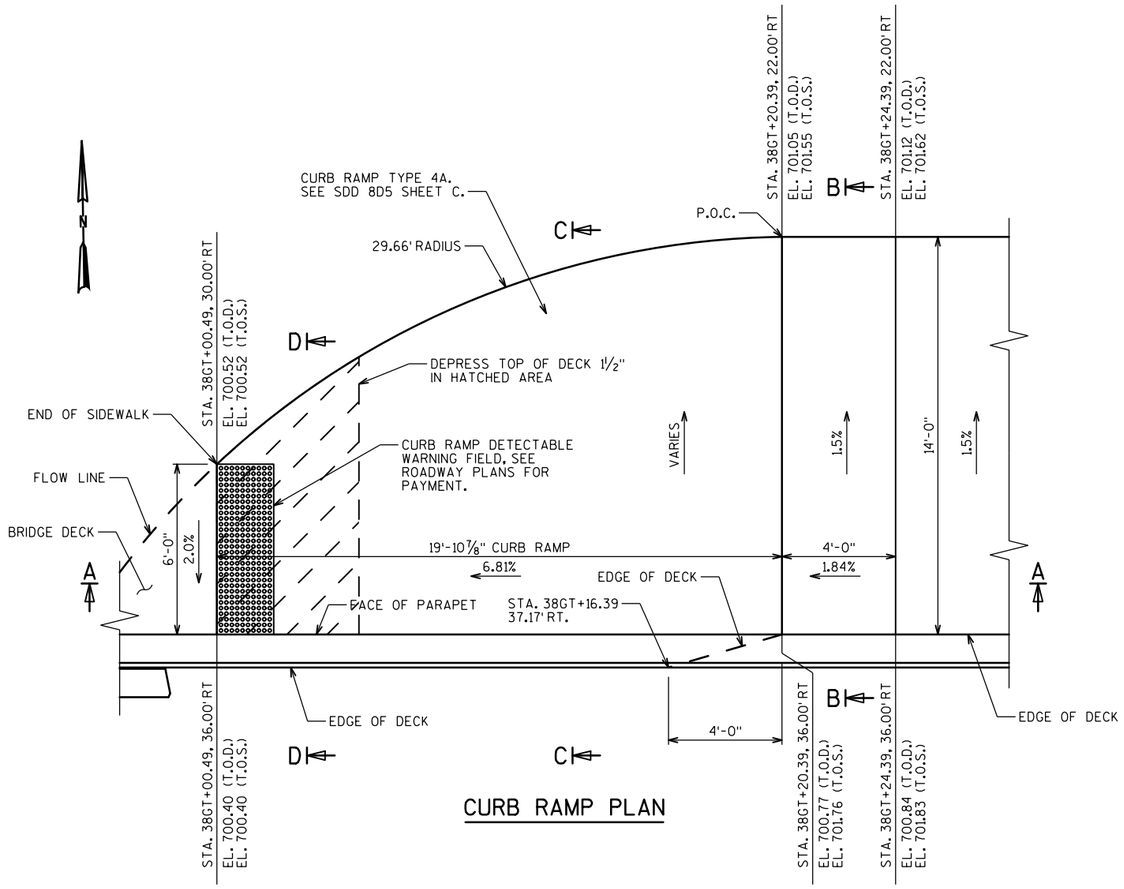
DRAWN BY MSS | PLANS CK'D. HDA

SUPERSTRUCTURE DETAILS

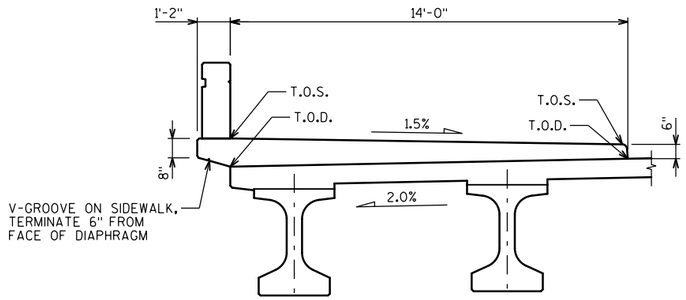
SHEET 24 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080506_SUP.dgn PLOT DATE : 10/30/2017 11:00:06 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 2.66667:1

STATE PROJECT NUMBER
1228-16-71

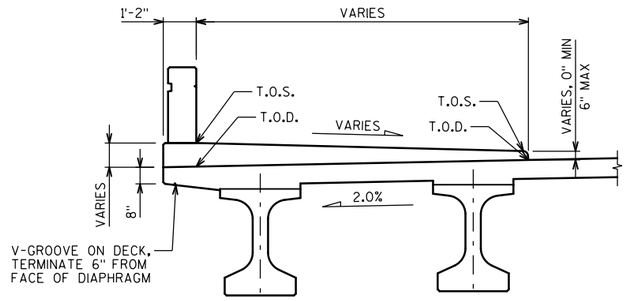


CURB RAMP PLAN



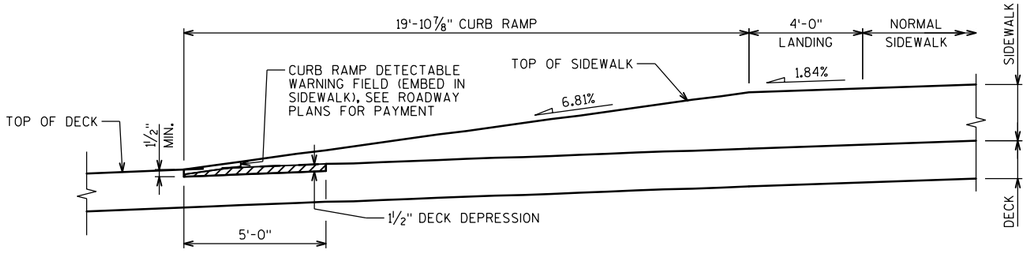
SECTION B-B

(SECTION THROUGH RAMP LANDING)

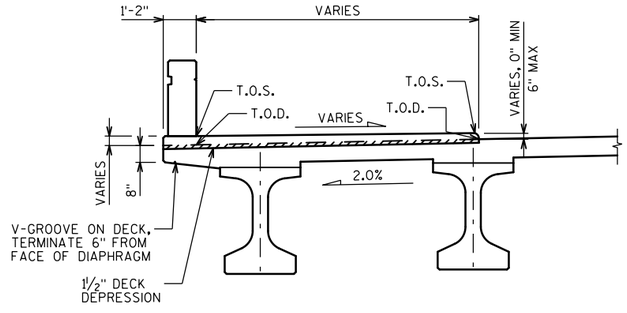


SECTION C-C

(SECTION THROUGH CURB RAMP)



SECTION A-A



SECTION D-D

(SECTION THROUGH CURB RAMP AT DEPRESSED DECK)

NOTES

T.O.D. = TOP OF DECK

T.O.S. = TOP OF SIDEWALK

P.O.C. = POINT OF CURVATURE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

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CURB RAMP DETAILS

SHEET 25 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080507_RLOT.DGN PLOT DATE : 10/30/2017 11:00:08 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 5.33333:1

STATE PROJECT NUMBER
1228-16-71

BILL OF BARS

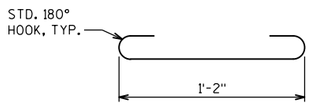
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
S401	X	368	45'-0"			SLAB LONG - BOT.
S402	X	92	44'-5"			SLAB LONG - BOT.
S403	X	182	45'-0"			SLAB LONG - TOP
S404	X	91	38'-5"			SLAB LONG - TOP
S405	X	91	42'-3"			SLAB LONG - TOP
S906	X	91	53'-10"			SLAB LONG - TOP CONTINUITY STEEL OVER PIER
S907	X	90	55'-8"			SLAB LONG - TOP CONTINUITY STEEL OVER PIER
S508	X	611	39'-10"			SLAB TRANS. - TOP AND BOT.
S509	X	611	28'-3"			SLAB TRANS. - TOP AND BOT.
S410	X	304	2'-2"	X		SLAB OVERHANG - SPAN 2
S411	X	166	45'-0"			SIDEWALK LONG
S512	X	376	15'-8"	X		SOUTH SIDEWALK TRANS.
S513	X	19	14'-10"	X	⚠	CURB RAMP - TRANS.
S414	X	288	2'-0"			SIDEWALK BOTTOM TRANS.
S415	X	1280	2'-5"	X		SIDEWALK TRANS. TIE TO DECK
S416	X	11	25'-4"		⚠	CURB RAMP - LONG.
S517	X	2	32'-0"	X		SLAB LONG. - TAPER AT SW CORNER
S518	X	436	8'-1"	X		NORTH SIDEWALK TRANS.
S419	X	387	2'-9"	X		SOUTH SIDEWALK TRANS. TIE TO DECK
S420	X	32	3'-8"			ABUT. DIAPH HORIZ. - BETWEEN BEAM SEATS
S421	X	80	3'-5"	X		ABUT. DIAPH TRANS. - BETWEEN BEAM SEATS
S622	X	32	3'-5"			ABUT. DIAPH HORIZ. - BETWEEN GIRDERS
S623	X	96	4'-2"			ABUT. DIAPH HORIZ. - BETWEEN GIRDERS
S524	X	124	13'-0"	X		ABUT. DIAPH STIRRUP
S525	X	84	5'-9"	X		ABUT. DIAPH STIRRUP - W/PAVING NOTCH
S526	X	40	6'-5"	X		ABUT. DIAPH STIRRUP - W/O PAVING NOTCH
S527	X	36	10'-8"	X		ABUT. DIAPH STIRRUP
S628	X	12	7'-8"	X		ABUT. DIAPH - END
S629	X	4	1'-10"			ABUT. DIAPH - END
S630	X	24	35'-10"			ABUT. DIAPH - HORIZ.
S431	X	64	3'-11"			PIER DIAPH - HORIZ.
S432	X	32	3'-1"			PIER DIAPH - HORIZ.
S533	X	48	11'-0"	X		PIER DIAPH - STIRRUP
S534	X	16	9'-4"	X		PIER DIAPH - STIRRUP
S435	X	12	36'-9"			SLAB LONG. - SPAN 2 OVERHANG
S536	X	36	6'-0"			ABUT DIAPH - THRU GIRDER
S537	X	8	8'-4"			SLAB TRANS. AT NW AND NE CORNER
S538	X	4	15'-9"			SLAB TRANS. AT SE CORNER
S539	X	19	11'-2"		⚠	CURB RAMP - TRANS.
S440	X	14	35'-5"			CURB RAMP - LONG.
S441	X	11	2'-4"	X		CURB RAMP - TRANS. TIE TO DECK
S442	X	11	2'-7"	X		CURB RAMP - TRANS. TIE TO DECK

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

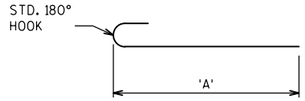
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
S513	1 SERIES OF 19	13'-11" TO 15'-8"
S416	1 SERIES OF 11	15'-8" TO 34'-11"
S539	1 SERIES OF 19	9'-2" TO 13'-2"

BUNDLE AND TAG EACH SERIES SEPARATELY.

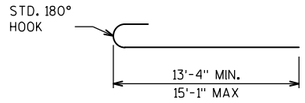


S410

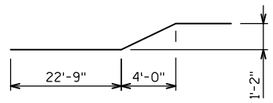


MARK	A
S512	15'-1"
S518	7'-6"

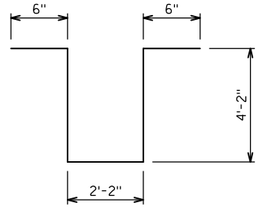
S512, S518



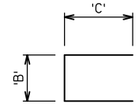
SERIES S513



S517

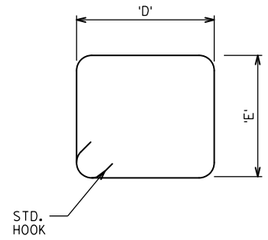


S533



MARK	B	C
S415	7"	1'-0"
S419	11"	1'-0"
S421	11"	1'-4"
S525	2'-2"	1'-11"
S526	2'-10"	1'-11"
S628	2'-10"	2'-7"
S441	6"	1'-0"
S442	9"	1'-0"

S415, S419, S421, S525, S526, S628, S441, S442



MARK	D	E
S524	2'-10"	3'-4"
S527	2'-10"	2'-2"
S534	2'-2"	2'-2"

S524, S527, S534

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

DRAWN BY MSS | PLANS CK'D. HDA

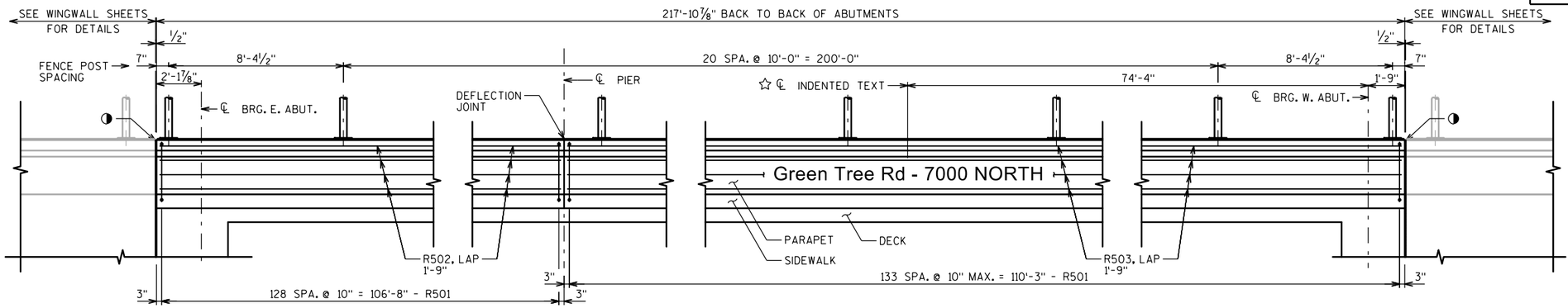
SUPERSTRUCTURE BILL OF BARS

SHEET 26 OF 30

8

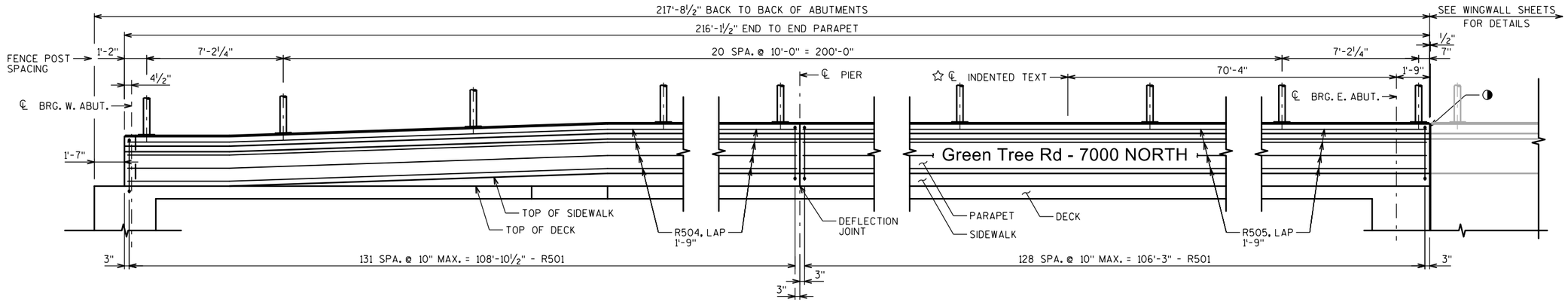
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080508_bbq.dgn PLOT DATE : 10/30/2017 11:00:09 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 2:1

STATE PROJECT NUMBER
1228-16-71



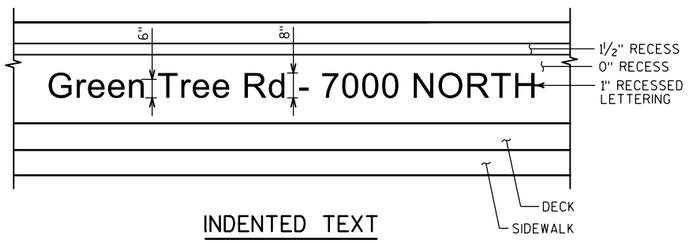
OUTSIDE ELEVATION OF NORTH PARAPET

(LOOKING SOUTH)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



OUTSIDE ELEVATION OF SOUTH PARAPET

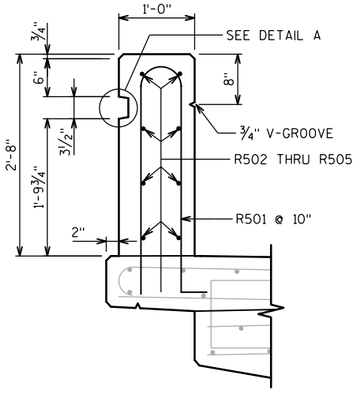
(LOOKING NORTH)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



INDENTED TEXT

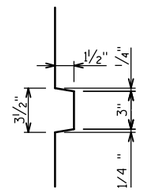
EXTERIOR FACE OF PARAPET ONLY

INDENTED TEXT NOTES:
1. LETTERING SHALL BE HELVETICA. 8" UPPER CASE AND 6" LOWER CASE.
2. LETTERING IS ONLY ON EXTERIOR FACE OF PARAPET.
3. SEE VERTICAL FACE PARAPET SHEETS FOR LOCATIONS.
4. FORMING OF LETTERING INCIDENTAL TO "CONCRETE MASONRY BRIDGES".
5. STAIN RECESSED LETTERING BLACK, FEDERAL COLOR #37038. INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

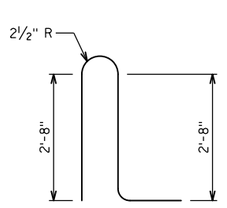


SECTION THRU PARAPET

(SHOWN ON BRIDGE, WINGWALL SIMILAR)



DETAIL A



R501

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
R501	X	524	6'-9"	X	PARAPET - VERT.
R502	X	16	54'-4"		NORTH PARAPET - HORIZ. SPAN 2
R503	X	16	56'-1"		NORTH PARAPET - HORIZ. SPAN 1
R504	X	16	55'-5"		SOUTH PARAPET - HORIZ. SPAN 1
R505	X	16	54'-1"		SOUTH PARAPET - HORIZ. SPAN 2

NOTES

SEE "SUPERSTRUCTURE DETAILS" SHEET FOR DEFLECTION JOINT DETAILS THRU PARAPET

LEGEND

◑ ½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER ⅛" BELOW SURFACE)

☆ INDENTED TEXT TO BE CENTERED OVER FUTURE I-43 THRU LANES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

DRAWN BY MSS | PLANS CK'D. HDA

MODIFIED VERTICAL FACE PARAPET 'A'

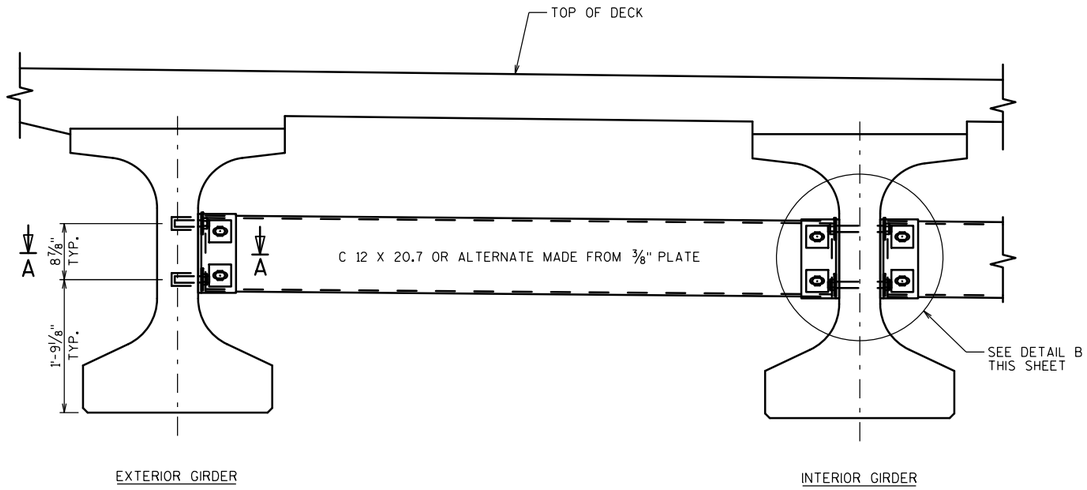
SHEET 27 OF 30

8

8

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080509_PLT.dgn PLOT DATE : 10/30/2017 11:00:11 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 2:1

STATE PROJECT NUMBER
1228-16-71



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

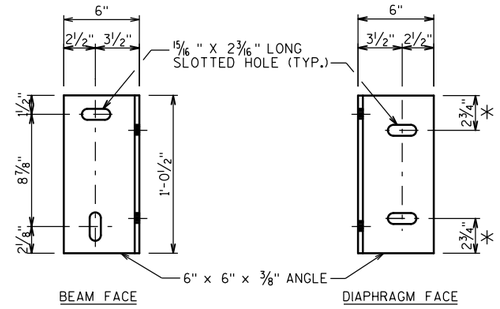
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-917", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

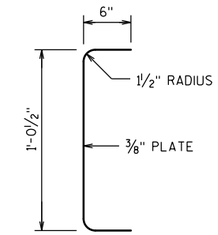
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

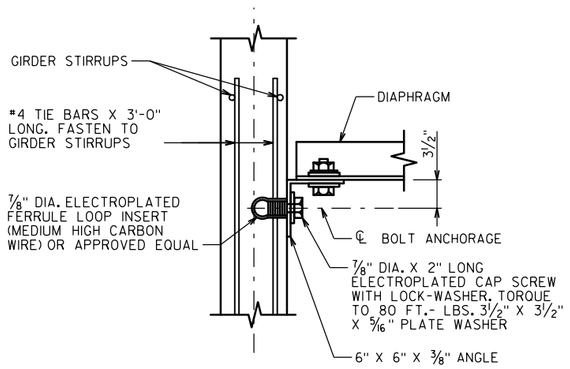


DIAPHRAGM SUPPORT



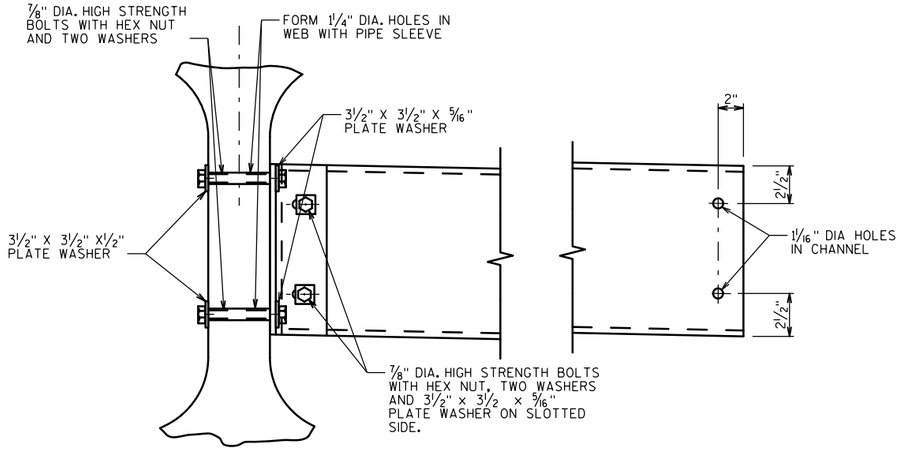
SECTION THRU ALTERNATE DIAPHRAGM

✳ 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

(FOR STAGGERED DIAPHRAGMS)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

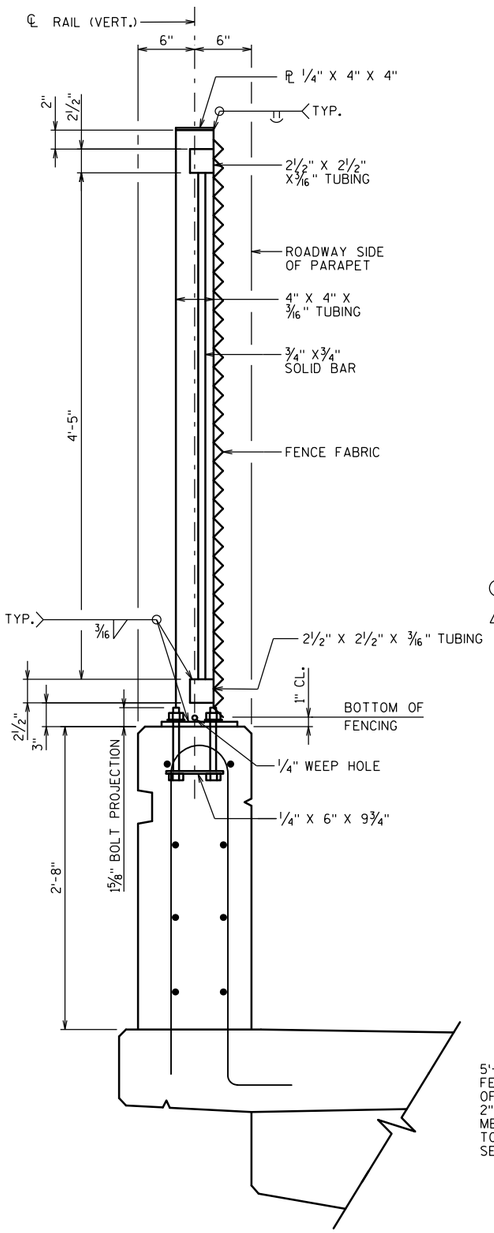
DRAWN BY HDA | PLANS CK'D. MSS

STEEL DIAPHRAGM

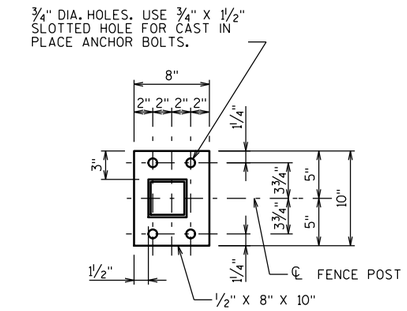
SHEET 28 OF 30

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080510_STEELDIA.dgn PLOT DATE : 10/30/2017 11:00:12 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 2:1

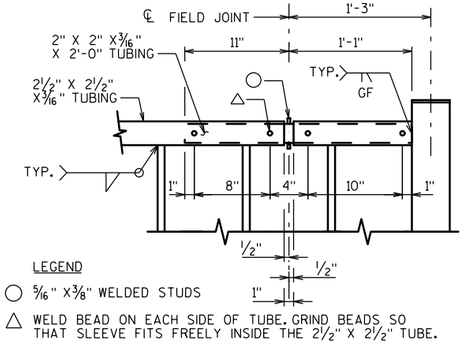
STATE PROJECT NUMBER
1228-16-71



SECTION THRU RAILING



BASE PLATE

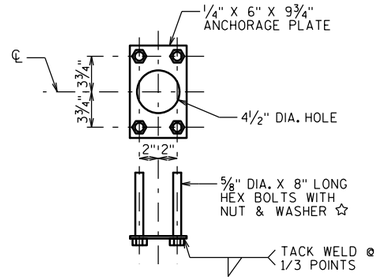


LEGEND

○ 5/16" X 3/8" WELDED STUDS

△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY INSIDE THE 2 1/2" X 2 1/2" TUBE.

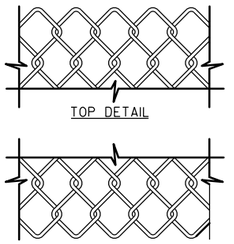
RAILING EXPANSION JOINT DETAIL



ANCHORAGE DETAIL

☆ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS 5/8-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

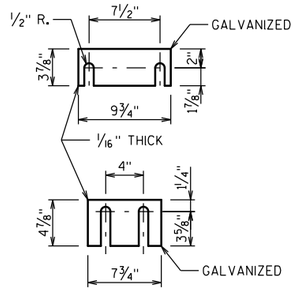
NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



TOP DETAIL

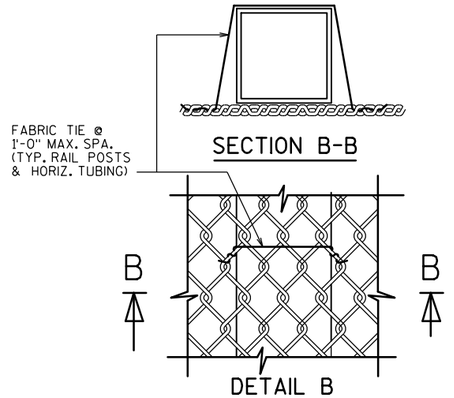
BOTTOM DETAIL

FENCE FABRIC



SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



SECTION B-B

DETAIL B

NOTES

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36. FENCE FABRIC SHALL CONFORM TO F668, CLASS 2B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ☆

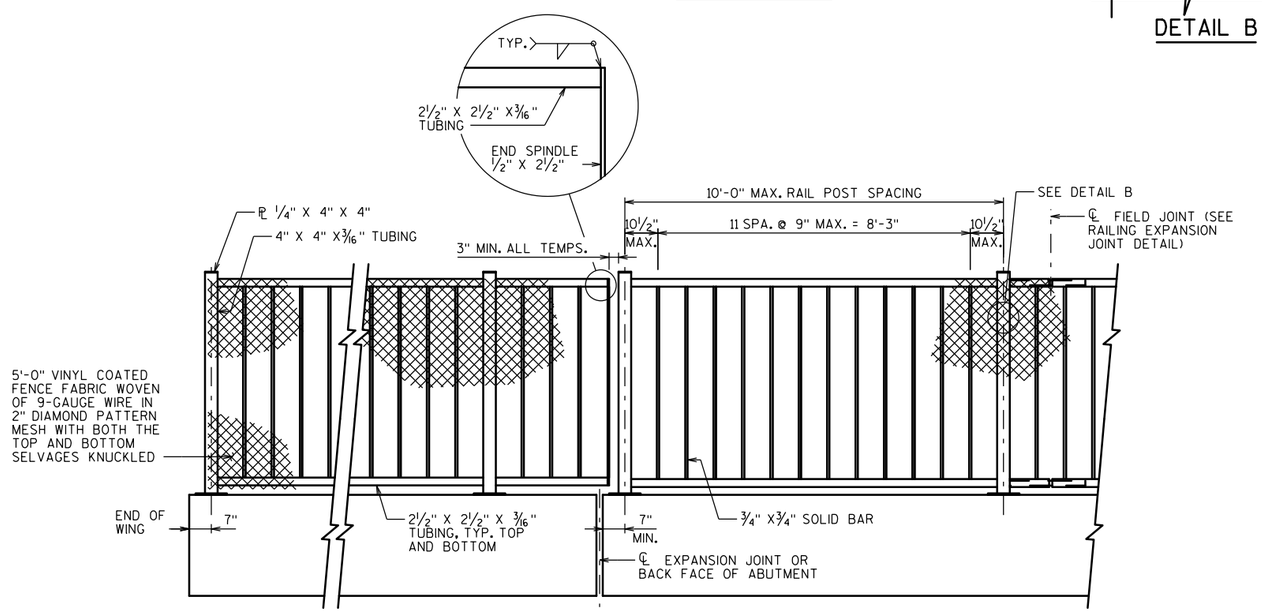
THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING B-40-917" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038, BLACK. FENCE FABRIC AND TIES TO BE VINYL-COATED. COLOR SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.



INSIDE ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

DRAWN BY	HDA	PLANS CK'D.	MSS

TUBULAR STEEL RAILING SCREENING

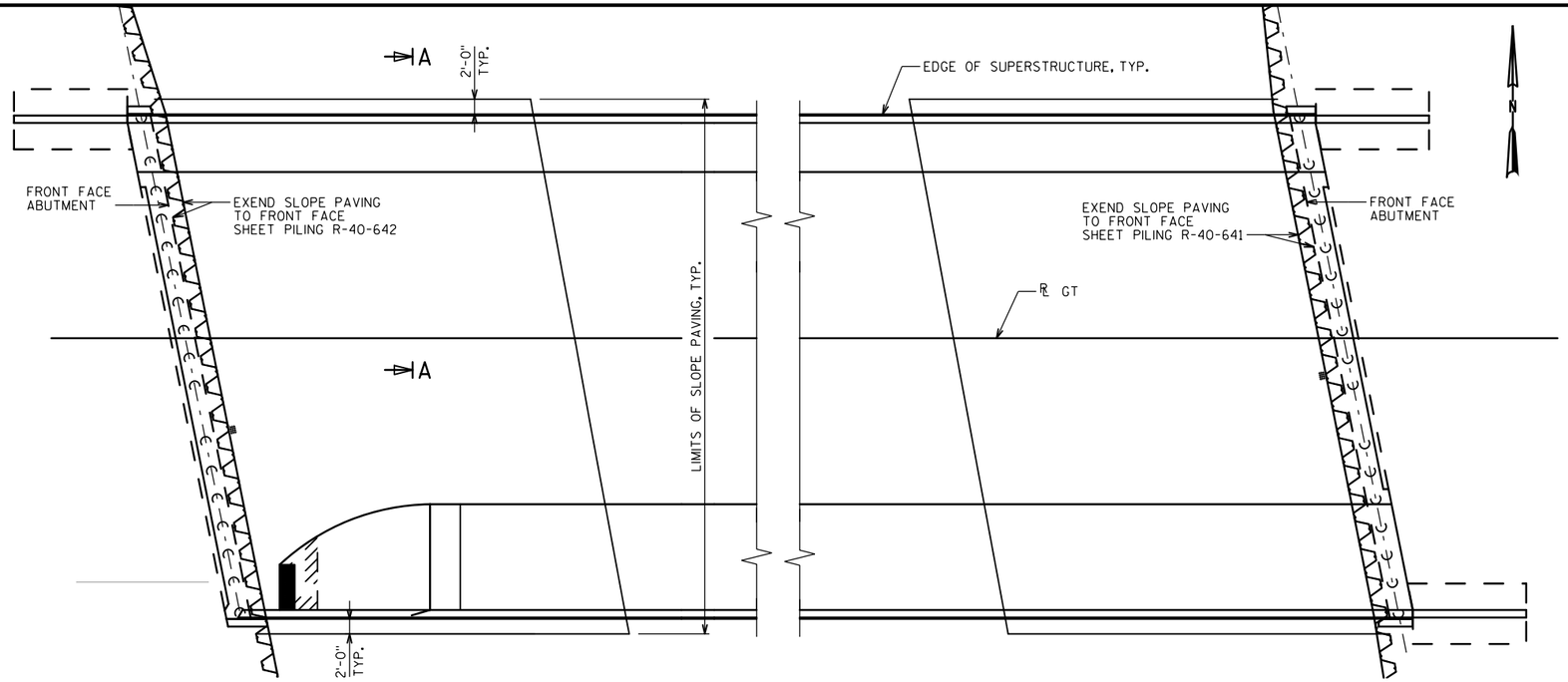
SHEET 29 OF 30

383

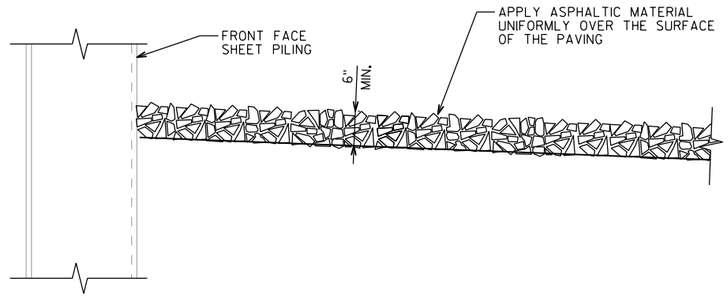
8

8

STATE PROJECT NUMBER
1228-16-71

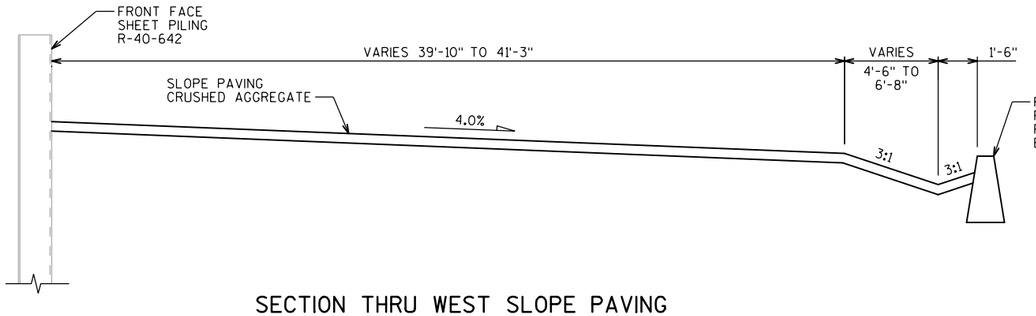


PLAN - SLOPE PAVING CRUSHED AGGREGATE



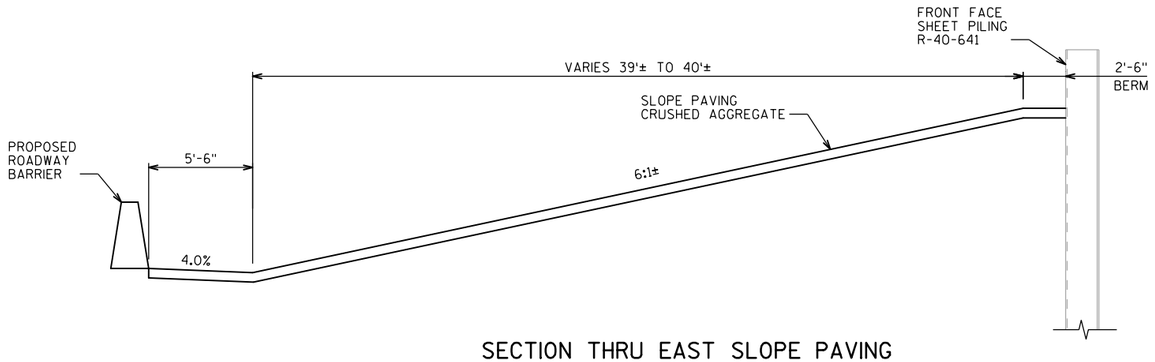
STANDARD CROSS SECTION THRU CRUSHED AGGREGATE

ROUND STONE WILL NOT BE ACCEPTED



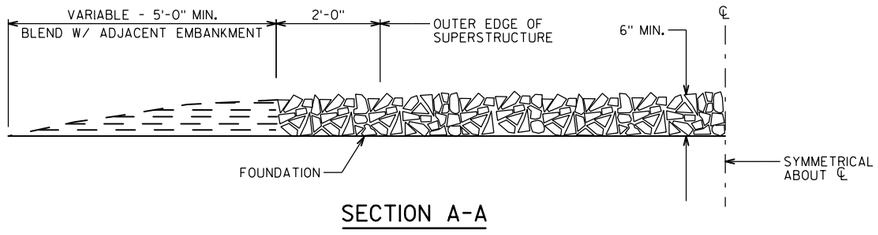
SECTION THRU WEST SLOPE PAVING

LOOKING NORTH
(DIMENSIONS NORMAL TO PROPOSED ROADWAY BARRIER)



SECTION THRU EAST SLOPE PAVING

LOOKING NORTH
(DIMENSIONS NORMAL TO PROPOSED ROADWAY BARRIER)



SECTION A-A

GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-917

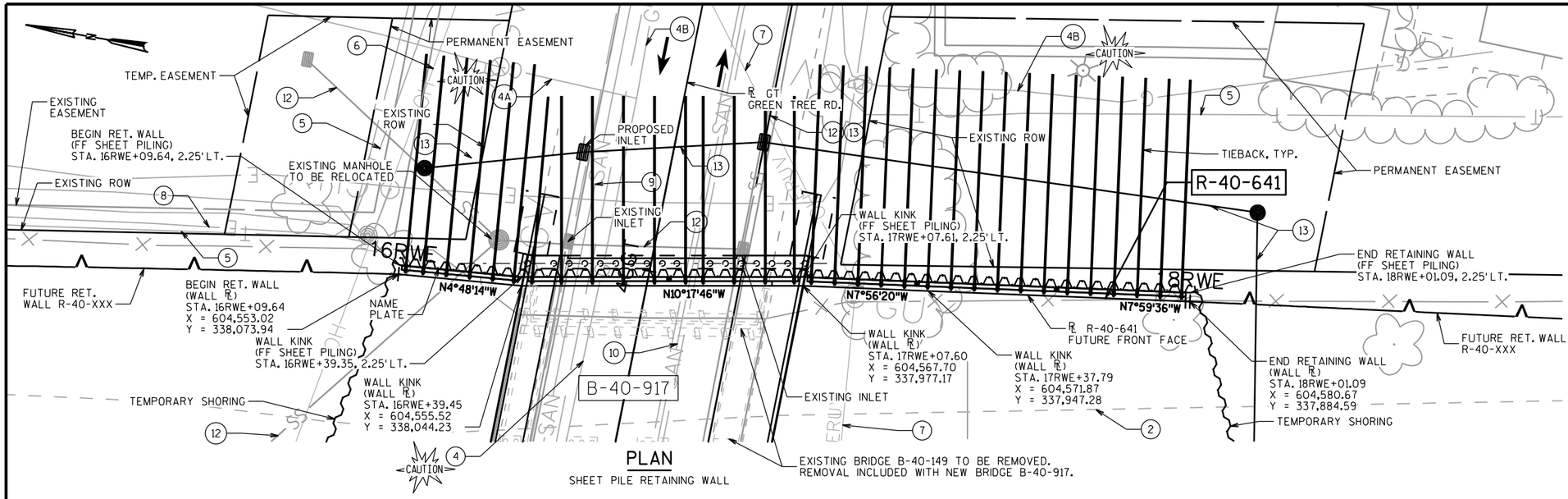
DRAWN BY HDA | PLANS CK'D. MSS

SLOPE PAVING CRUSHED AGGREGATE

SHEET 30 OF 30

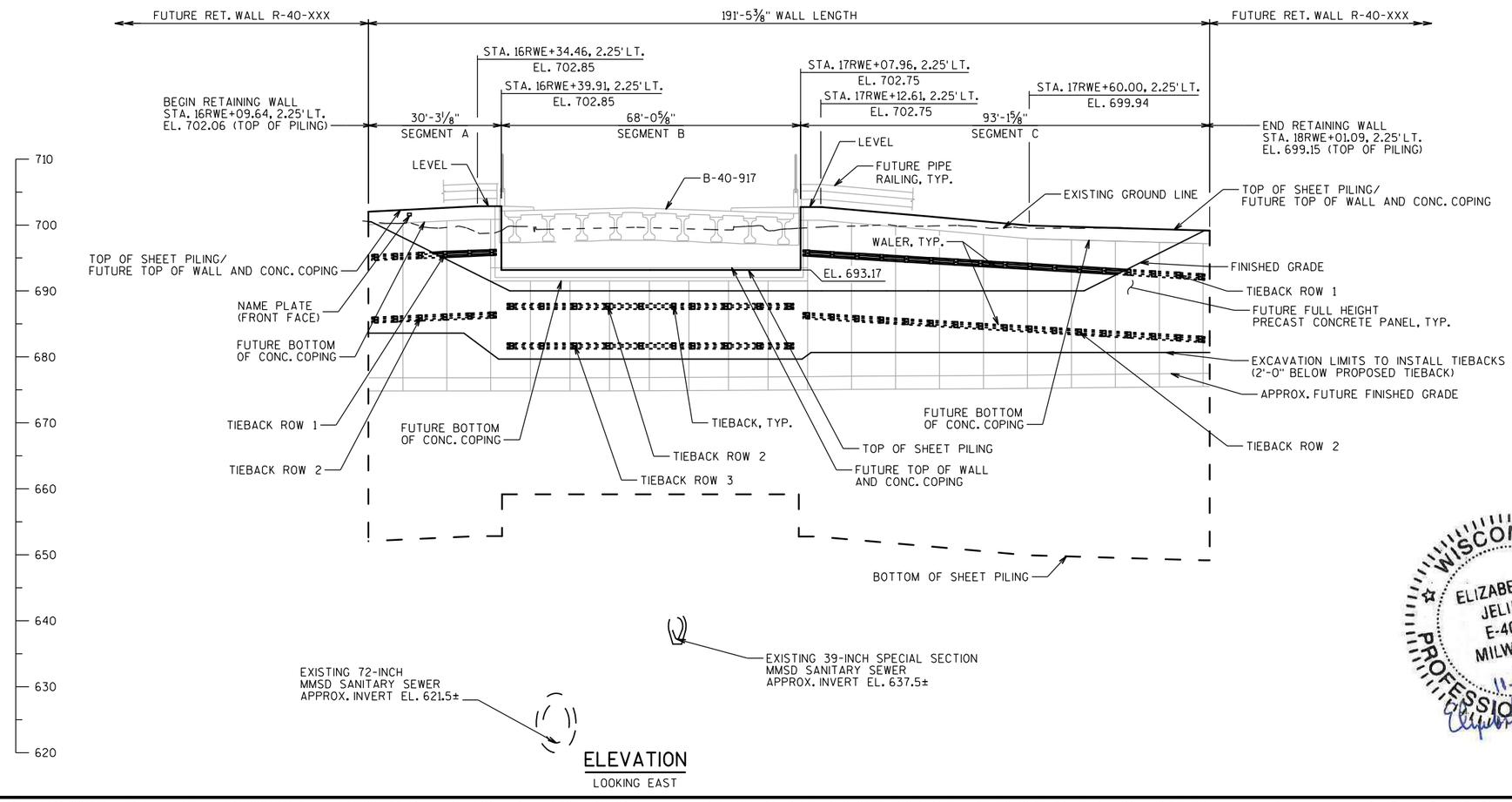
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\B-40-917\cds\B917_080602_SlopePaving.dgn
PLOT DATE : 10/30/2017 11:00:15 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 20:1

STATE PROJECT NUMBER
1228-16-71



PLAN

SHEET PILE RETAINING WALL



ELEVATION

LOOKING EAST

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES, DESIGN DATA & QUANTITIES
3. TYPICAL SECTIONS
4. REMOVAL LIMITS & CONSTRUCTION SEQUENCE (1 OF 2)
5. CONSTRUCTION SEQUENCE (2 OF 2)
6. TIEBACK ANCHOR DETAILS (1 OF 2)
7. TIEBACK ANCHOR DETAILS (2 OF 2) & WALL DATA TABLES
8. TIEBACK ANCHOR DATA TABLES
9. SUBSURFACE EXPLORATION

UTILITY NOTES

(2) EXISTING WISDOT FTMS TO BE RELOCATED
(4) EXISTING GAS LINE TO BE DISCONTINUED IN PLACE
(4A) EXISTING GAS LINE DISCONTINUED
(4B) EXISTING GAS LINE TO REMAIN
(5) EXISTING TELEPHONE LINE TO REMAIN
(6) EXISTING OVERHEAD UTILITY LINE TO REMAIN
(7) EXISTING OVERHEAD ERUV TO BE RELOCATED (NOT A UTILITY)
(8) EXISTING ELECTRIC LINE TO REMAIN
(9) EXISTING MMSD SANITARY 72-INCH TO REMAIN
(10) EXISTING MMSD SANITARY 39-INCH TO REMAIN
(12) EXISTING WISDOT STORM SEWER
(13) PROPOSED WISDOT STORM SEWER

LEGEND

TRAFFIC DIRECTION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

HNTB
11414 W. PARK PLACE
MILWAUKEE, WI 53224
(414) 359-2300

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — CHIEF STRUCTURES DESIGN ENGINEER — 01/04/18 DATE

WISCONSIN PROFESSIONAL ENGINEER
ELIZABETH A. JELINEK
E-40123
MILWAUKEE
WI
11-1-2017

STRUCTURE R-40-641

RETAINING WALL E. OF IH 43 UNDER GREEN TREE RD.

COUNTY	CITY
MILWAUKEE	GLENDALE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EAJ	HDA	EAJ	HDA

GENERAL PLAN & ELEVATION

SHEET 1 OF 9

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-641\cds\R641_080101_gp01.dgn DATE : 10/30/2017 11:45:15 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 30:1

STATE PROJECT NUMBER
1228-16-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS AND DIMENSIONS ARE ALONG ℄ R-40-641 RETAINING WALL UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A SHEET PILE RETAINING WALL WITH TIEBACKS. FUTURE CONSTRUCTION WILL INCLUDE WALLS EXTENDING NORTH AND SOUTH OF R-40-641. FUTURE CONSTRUCTION WILL ALSO INCLUDE PRECAST CONCRETE FACING PANELS, CAST-IN-PLACE CONCRETE COPING, AND RAILING FOR R-40-641.

COORDINATE THE CONSTRUCTION OF WALL R-40-641 WITH THE REMOVAL OF EXISTING BRIDGE B-40-149, THE CONSTRUCTION OF BRIDGE B-40-917 AND STORM SEWER CONSTRUCTION.

REMOVAL OF EXISTING STRUCTURE B-40-149 IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-40-917 BRIDGE QUANTITIES.

THE FUTURE EXPOSED FACE OF SHEET PILE SHALL BE PAINTED PER STANDARD SPECIFICATION 550.3.11.3 TO APPROXIMATE ELEVATION 674.5. PAINT COLOR TO BE FEDERAL COLOR #26293 LIGHT GRAY.

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL EXPLORATION AND ANALYSIS REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL EXPLORATION ANALYSIS REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO BID ITEM 512.0600 "PILING STEEL SHEET PERMANENT DRIVEN". REFER TO S.D.D. "NAME PLATE (STRUCTURES)" FOR NAME PLATE DETAILS.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEG. A	SEG. B	SEG. C	TOTAL
206.3000.01	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-641	LS	-	-	-	1
506.0605	STRUCTURAL STEEL HS	LB	3,480	7,270	10,550	21,300
511.1200.03	TEMPORARY SHORING R-40-641	SF	800	-	720	1,520
512.0500	PILING STEEL SHEET PERMANENT DELIVERED	SF	1,510	2,310	4,660	8,480
512.0600	PILING STEEL SHEET PERMANENT DRIVEN	SF	1,510	2,310	4,660	8,480
517.0600.01	PAINTING EPOXY SYSTEM R-40-641	LS	-	-	-	1
SPV.0060.02	TIEBACK ANCHORS	EACH	12	20	34	66
SPV.0060.03	TIEBACK ANCHORS PERFORMANCE TESTS	EACH	1	1	2	4
SPV.0060.04	TIEBACK ANCHORS EXTENDED CREEP TESTS	EACH	-	2	-	2
	NON BID ITEMS					
	NAME PLATE	EACH				1

ALL ITEMS ARE CATEGORY 0030

DESIGN DATA

LIVE LOAD

LIVE LOAD SURCHARGE (ROADWAY)	240 PSF
LIVE LOAD SURCHARGE (NON-ROADWAY)	100 PSF
LIVE LOAD SURCHARGE (CONSTRUCTION)	100 PSF

MATERIAL PROPERTIES

STEEL SHEET PILING (ASTM A328)	Fy = 50,000 PSI
STRUCTURAL STEEL HS	Fy = 50,000 PSI
TIEBACK TENDONS (5-15MM DIAMETER STRANDS)	ULTIMATE STRENGTH = 270,000 PSI

MINIMUM SHEET PILE SECTION MODULUS Sx = 72.3 IN^3/FT

MINIMUM SHEET PILE SECTION DEPTH 21.05"

SHEET PILE WALL SOIL PARAMETERS

SOIL LAYER DESCRIPTION	LAYER ELEVATION		TOTAL UNIT WEIGHT (PCF)	UNDRAINED	DRAINED (EFFECTIVE)	
	TOP	BOTTOM		COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
LEAN CLAY (BROWN) HARD	699.1	686.9	135	4,500	32	0
LEAN CLAY (GRAY) VERY STIFF TO HARD	686.9	623.1	130	3,250	32	0
SILTY SAND (GRAY) DENSE	623.1	618.2	130	---	34	0
LEAN CLAY (GRAY) STIFF TO HARD	618.2	599.9	130	3,000	31	0

NOTE: SOIL DATA BASED ON BORING GT-03

GROUNDWATER = OBSERVATION WELL GHB-03MW INDICATER

GROUNDWATER AT ELEVATION 688.5 FEET

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-641

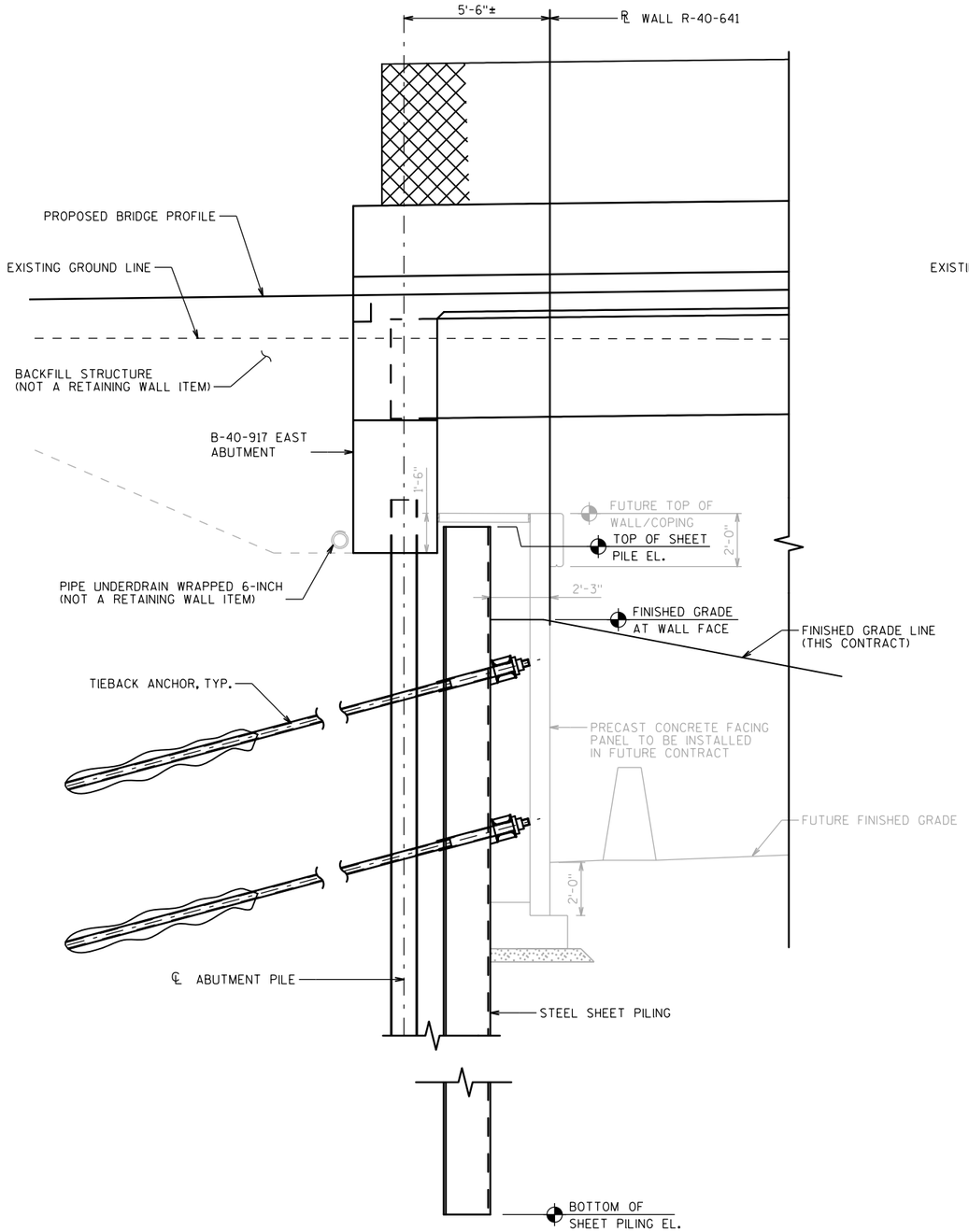
DRAWN BY EAJ | PLANS CK'D. HDA

GENERAL NOTES, DESIGN DATA & QUANTITIES

SHEET 2 OF 9

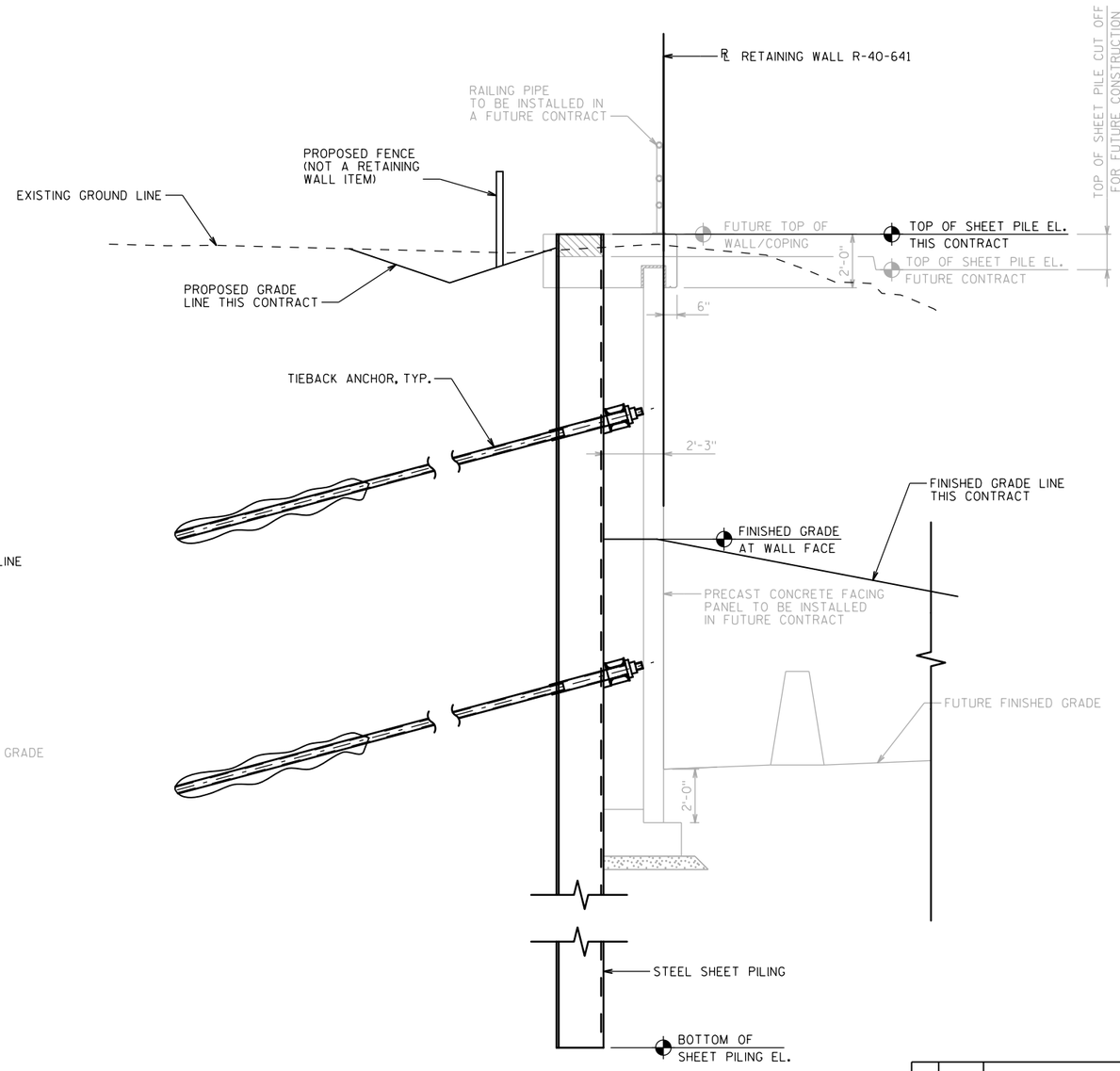
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STATE PROJECT NUMBER
1228-16-71



SEGMENT B TYPICAL SECTION

(LOOKING SOUTH)
STA. 16RWE+39.45 TO STA. 17RWE+07.60



SEGMENTS A AND C TYPICAL SECTION

(LOOKING SOUTH)
SEGMENT A STA. 16RWE+09.64 TO STA. 16RWE+39.45
SEGMENT C STA. 17RWE+07.60 TO STA. 18RWE+01.09

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NO.	DATE	REVISION	BY

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STRUCTURE R-40-641

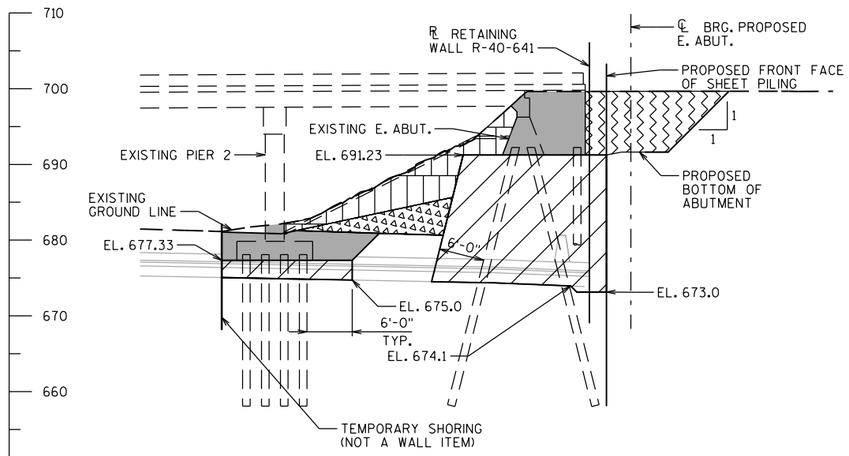
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TYPICAL SECTIONS

SHEET 3 OF 9

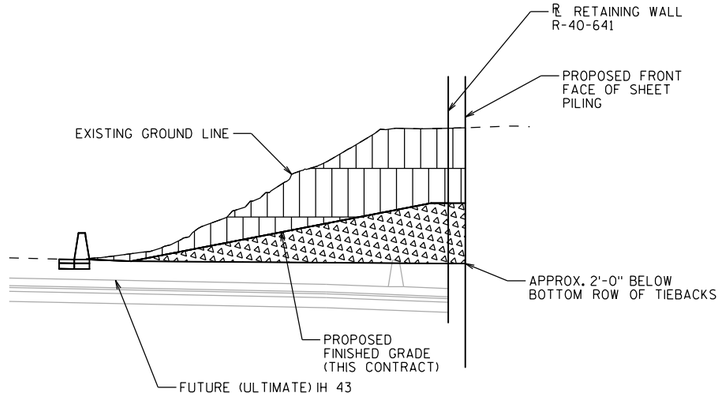
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STATE PROJECT NUMBER
1228-16-71



SECTION THRU PROPOSED WALL AT BRIDGE

LOOKING NORTH
(PROPOSED WALL SEGMENT B)



SECTION THRU PROPOSED WALL

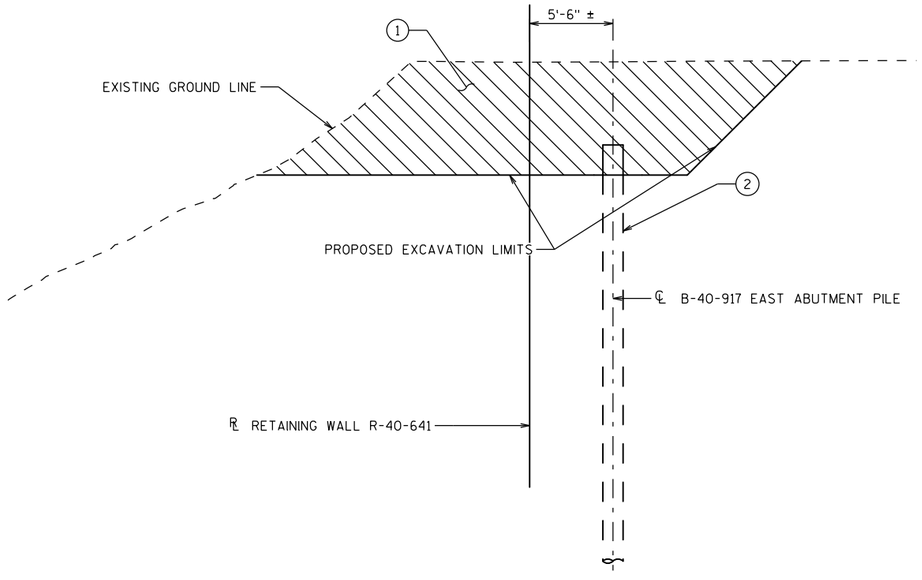
LOOKING NORTH
(PROPOSED WALL SEGMENTS A & C)

LEGEND

- COMMON EXCAVATION (ROADWAY PAY ITEM)
- EXCAVATION FOR STRUCTURES B-40-917 (PAID FOR UNDER B-40-917)
- EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-641
- REMOVING OLD STRUCTURE - (EXISTING B-40-149) (PAID FOR UNDER B-40-917, ONLY PORTIONS BELOW GRADE SHADED)
- EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL (ROADWAY PAY ITEM) (E01)
- (E01) SOIL LOCATED WITHIN THIS FOOTPRINT BELOW THE BOTTOM OF THE EXISTING PILE CAPS TO THE TERMINAL DEPTH OF THE EXISTING PILES SHOULD BE CONSIDERED CONTAMINATED. ANY SOIL EXCAVATED FROM THIS SPACE FOR THE PROJECT WILL NEED TO BE CONSIDERED SOLID WASTE SOIL AND STOCKPILED ON THE PROJECT WITHIN WISDOT ROW UNTIL LAB TESTING AND LANDFILL PROPERTY CAN BE COORDINATED BY THE WISDOT ENVIRONMENTAL CONSULTANT.

  HORIZONTAL LIMITS DEFINING FOOTPRINT BASED ON 6'-0" OFFSET FROM EDGES OF EXISTING TREATED PILING UNLESS BOUNDED BY TEMPORARY SHORING OR PERMANENT SHEET PILE RETAINING WALL.

  DO NOT STOCKPILE WITHIN THE AREA EXTENDING 60 FEET BEHIND THE TOP OF WALL.



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE 1

SEGMENT B (LOOKING SOUTH)
STEPS 1 AND 2

PROPOSED CONSTRUCTION SEQUENCE

PROPOSED CONSTRUCTION SEQUENCE 1

(1) FOR SEGMENT B, EXCAVATE TO BOTTOM OF B-40-917 EAST ABUTMENT. FOR SEGMENTS A AND C, EXCAVATE ANY ADDITIONAL EXISTING SOIL ABOVE PROPOSED TOP OF SHEET PILING.

(2) INSTALL EAST ABUTMENT PILES.

REFER TO B-40-917 BRIDGE PLANS FOR BOTTOM OF EAST ABUTMENT ELEVATION AND PROPOSED PILE SPACING

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-641

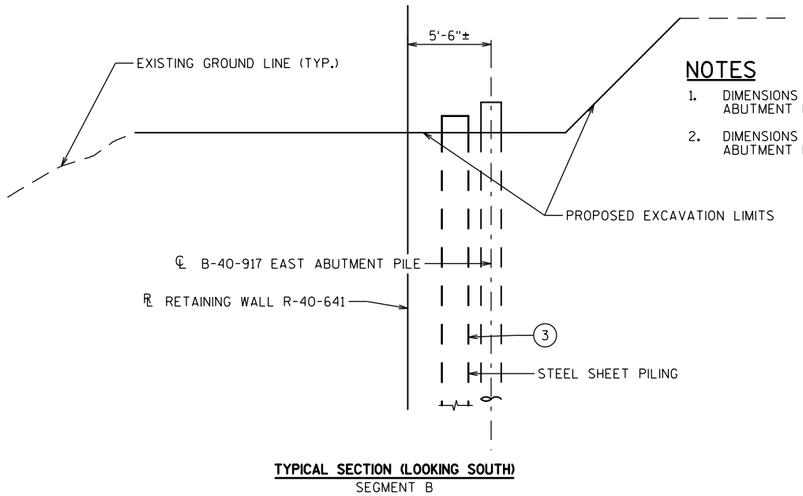
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REMOVAL LIMITS & CONSTRUCTION SEQUENCE (1 OF 2)

SHEET 4 OF 9

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-641\cds\R641_080104_RSQ.dgn PLOT DATE : 10/30/2017 11:45:25 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 20:1

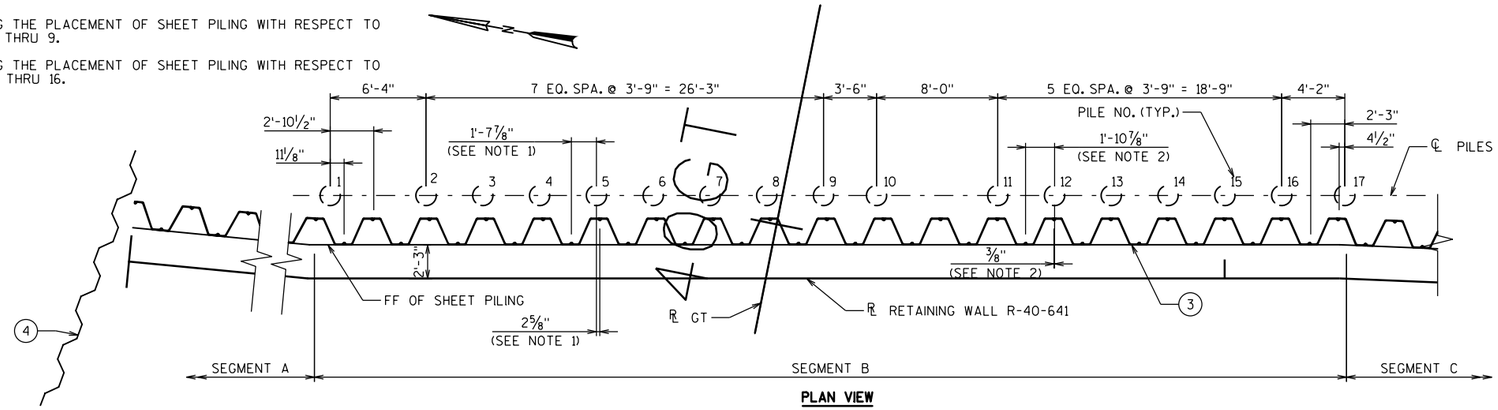
STATE PROJECT NUMBER
1228-16-71



TYPICAL SECTION (LOOKING SOUTH)
SEGMENT B

NOTES

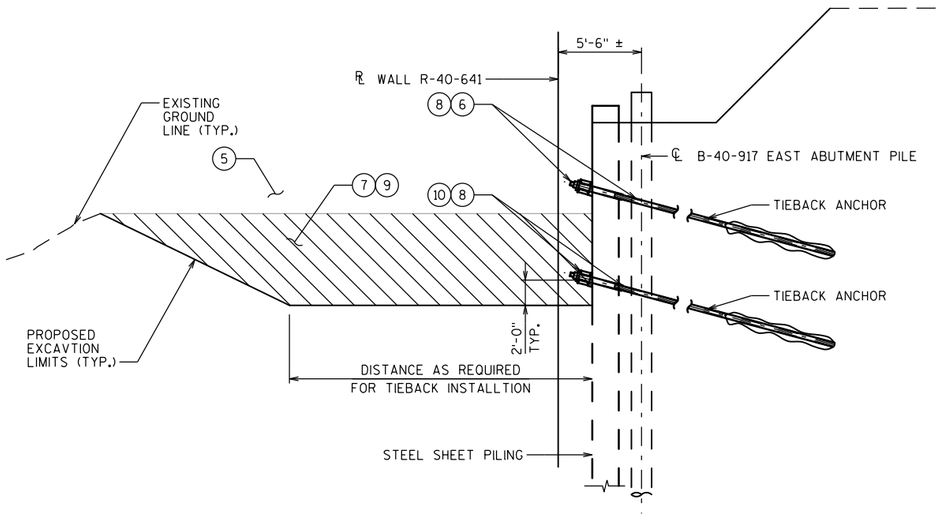
1. DIMENSIONS SHOWING THE PLACEMENT OF SHEET PILING WITH RESPECT TO ABUTMENT PILES 2 THRU 9.
2. DIMENSIONS SHOWING THE PLACEMENT OF SHEET PILING WITH RESPECT TO ABUTMENT PILES 11 THRU 16.



PLAN VIEW

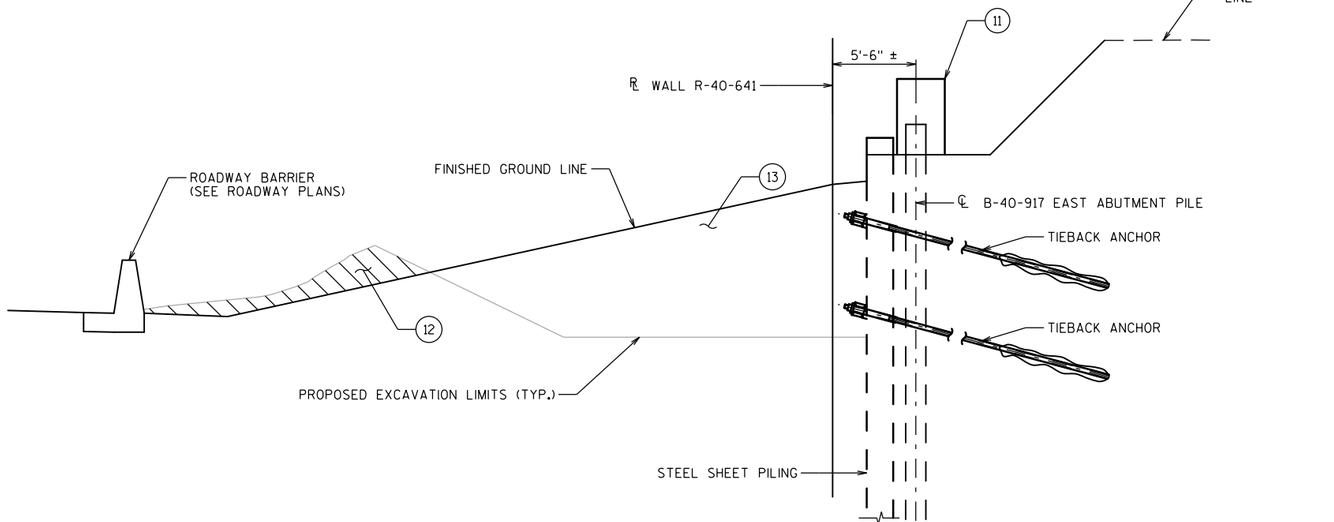
PROPOSED CONSTRUCTION SEQUENCE 2

STEPS 3 AND 4



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCES 3, 4 & 5

SEGMENT B (LOOKING SOUTH)
SEGMENTS A AND C SIMILAR
STEPS 5 THRU 10



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE 6

SEGMENT B (LOOKING SOUTH)
SEGMENTS A AND C SIMILAR
STEPS 11 THRU 15

8

PROPOSED CONSTRUCTION SEQUENCE CON'T

PROPOSED CONSTRUCTION SEQUENCE 2

(3) INSTALL SHEET PILING.
(SHEET PILING IN FRONT OF EAST ABUTMENT (SEGMENT B) TO BE DRIVEN PRIOR TO SEGMENT A AND SEGMENT C SHEET PILING. ALIGN SHEET PILING WITH PILES AS SHOWN IN PLAN VIEW OF PROPOSED CONSTRUCTION SEQUENCE 2.)

(4) INSTALL TEMPORARY SHORING AS NEEDED AT BEGINNING OF SEGMENT A AND END OF SEGMENT C.

PROPOSED CONSTRUCTION SEQUENCE 3

(5) EXCAVATE IN FRONT OF THE SHEET PILING OF SEGMENTS A & C TO 2'-0" MAX. BELOW TOP ROWS OF TIEBACKS.

(6) INSTALL WALING SYSTEM AND TIEBACKS.

PROPOSED CONSTRUCTION SEQUENCE 4

(7) EXCAVATE IN FRONT OF THE SHEET PILING TO 2'-0" MAX. BELOW BOTTOM ROWS OF TIEBACKS (SEGMENTS A AND C) AND 2'-0" MAX. BELOW TOP ROW OF TIEBACKS (SEGMENT B).

(8) INSTALL ADDITIONAL TIEBACKS AND WALING SYSTEM.

PROPOSED CONSTRUCTION SEQUENCE 5

(9) EXCAVATE IN FRONT OF THE SHEET PILING TO 2'-0" MAX. BELOW BOTTOM ROWS OF TIEBACKS (SEGMENT B).

(10) INSTALL ADDITIONAL TIEBACKS AND WALING SYSTEM.

PROPOSED CONSTRUCTION SEQUENCE 6

(11) CONSTRUCT B-40-917 EAST ABUTMENT.

(12) EXCAVATE ANY ADDITIONAL SOIL AS NEEDED. DO NOT EXCAVATE BELOW ELEVATION 673.00.

(13) REGRADE TO FINISHED GRADE LIMITS. (REFER TO ROADWAY PLANS FOR FINAL GRADING)

(14) REMOVE TEMPORARY SHORING AT BEGINNING OF SEGMENT A AND END OF SEGMENT C ONCE GRADING IS COMPLETED.

(15) DO NOT PLACE SPAN 2 GIRDERS OF B-40-917 UNTIL EXCAVATION ACTIVITIES HAVE BEEN COMPLETED.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-641

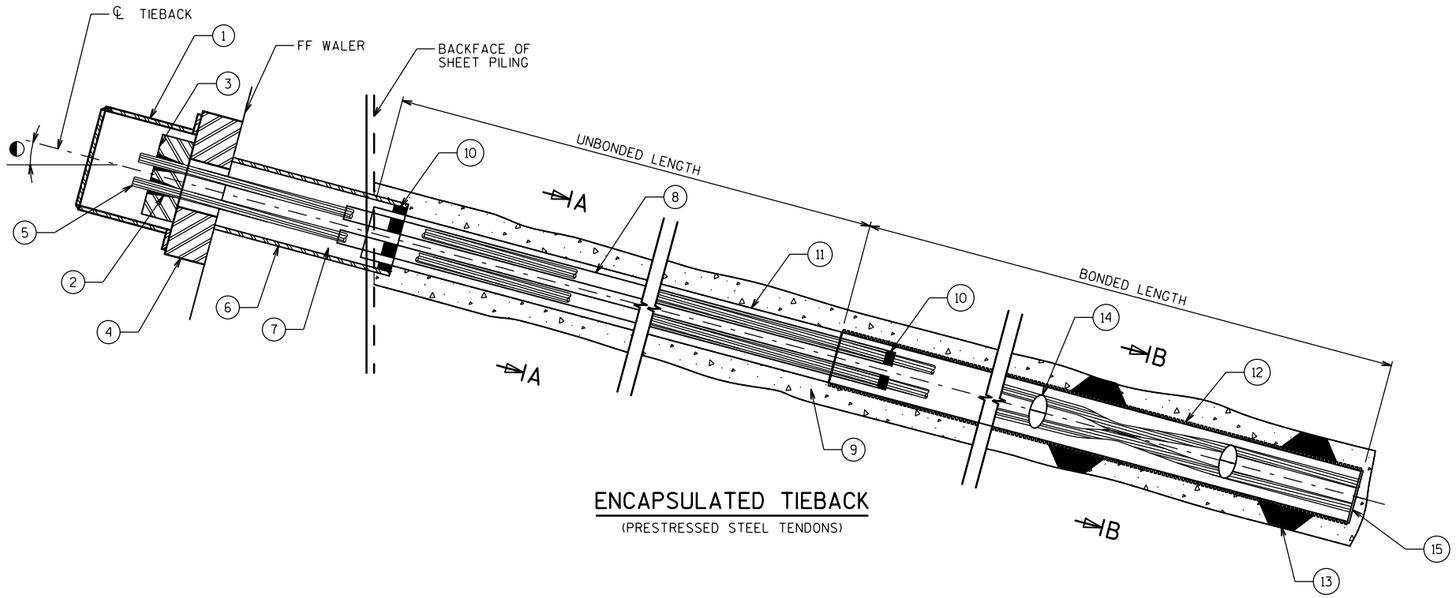
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CONSTRUCTION SEQUNCE (2 OF 2)

SHEET 5 OF 9

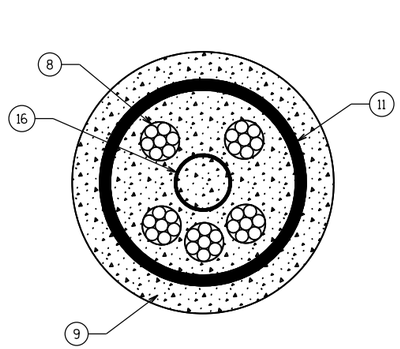
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STATE PROJECT NUMBER
1228-16-71

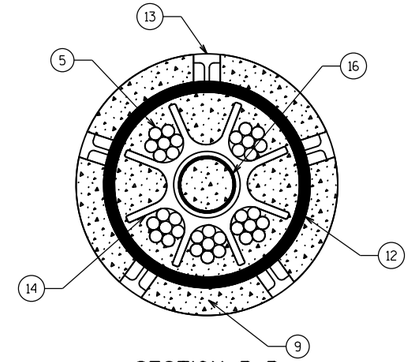


ENCAPSULATED TIEBACK

(PRESTRESSED STEEL TENDONS)



SECTION A-A



SECTION B-B

LEGEND

1. ANCHORAGE COVER
2. WEDGE
3. WEDGE PLATE
4. BEARING PLATE *
5. BARE PRESTRESSING STRAND
6. TRUMPET
7. GROUT OR CORROSION INHIBITING COMPOUND
8. GREASE FILLED STRAND SHEATH
9. GROUT
10. SEAL
11. SHEATH (GROUT FILLED FOR NON-EXTRUDED STRAND SHEATHS)
12. CORRUGATED ENCAPSULATION
13. EXTERNAL CENTRALIZER
14. INTERNAL SPACER/CENTRALIZER
15. END CAP
16. GROUT TUBE

A. DOUBLE PAIR OF CHANNEL STIFFENER PLATES 5/8"x2 1/2"xCUT TO FIT BETWEEN CHANNEL FLANGES
B. DOUBLE CHANNEL WALE (2) C12x20.7
C. SINGLE SHIM PLATE (CUT TO REQUIRED ANGLE)
D. PAIR OF SHIM PLATES (CUT TO REQUIRED ANGLE)

NOTE

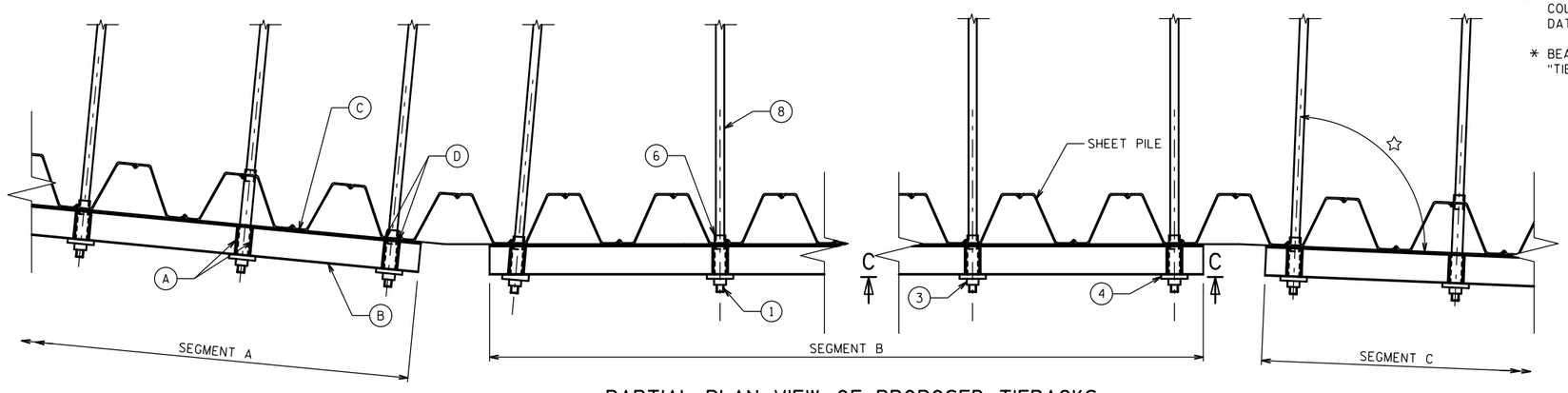
ALL STEEL ITEMS INCLUDING ITEMS A THRU D, BEARING PLATE, AND ANCHORAGE COVER TO BE PAINTED AFTER INSTALLATION OF TIEBACK AND WALE SYSTEM IS COMPLETE BUT PRIOR TO BACKFILLING TO FINISHED GRADE AS PER BID ITEM "PAINTING EPOXY SYSTEM R-40-641".

ITEMS 1 THRU 16 INCLUDED IN BID ITEM TIEBACK ANCHORS,
ITEMS A THRU D INCLUDED IN BID ITEM STRUCTURAL STEEL HS

◐ ANGLE FROM VERTICAL, SEE TIEBACK ANCHOR DATA TABLES ON SHEET "TIEBACK ANCHOR DATA TABLES".

☆ HORIZONTAL ORIENTATION IS MEASURED FROM SHEET PILE ℄ IN COUNTER-CLOCKWISE DIRECTION. REFER TO TIEBACK ANCHOR DATA TABLES ON SHEET "TIEBACK ANCHOR DATA TABLES".

* BEARING PLATE SHALL BE DESIGNED IN ACCORDANCE WITH THE "TIEBACK ANCHORS" SPECIAL PROVISION (SPV.0060.02)



PARTIAL PLAN VIEW OF PROPOSED TIEBACKS

(LOOKING DOWN AT TOP OF TOP ROW)
REFER TO SHEET "TIEBACK ANCHOR DETAILS (2 OF 2) & WALL DATA TABLES" FOR SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-641

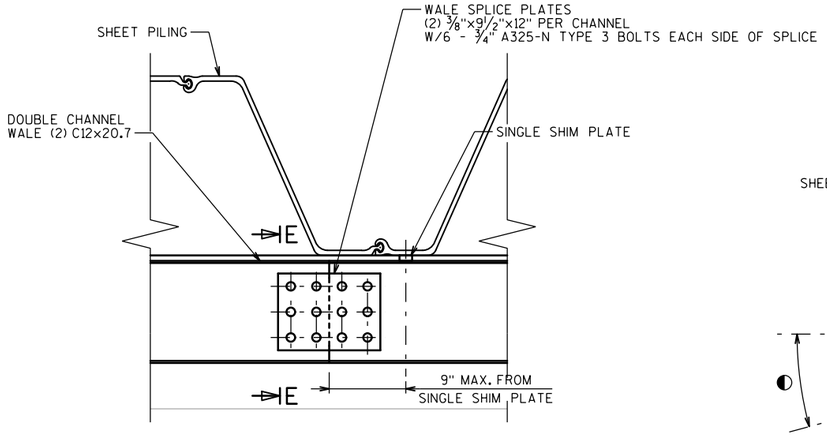
DRAWN BY	EAJ	PLANS CK'D.	HDA/ JWC

TIEBACK ANCHOR DETAILS (1 OF 2)

SHEET 6 OF 9

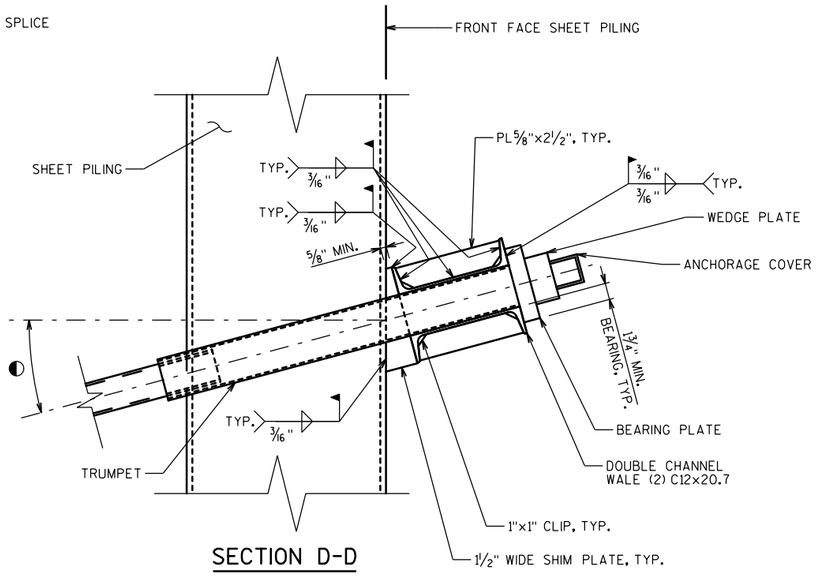
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1228-16-71



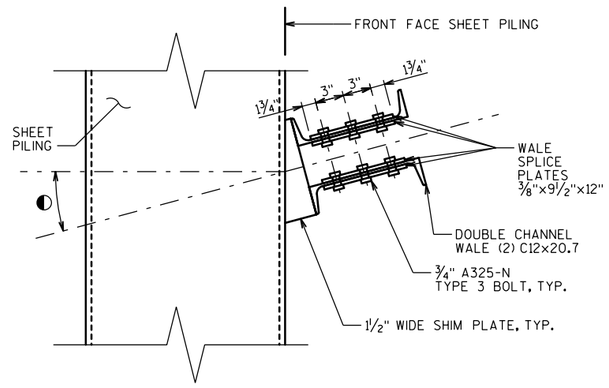
WALE SPLICE PLATE DETAIL PLAN VIEW

USE 1 MAX. SPLICE PALTE PER CHANNEL WALE PER SEGMENT

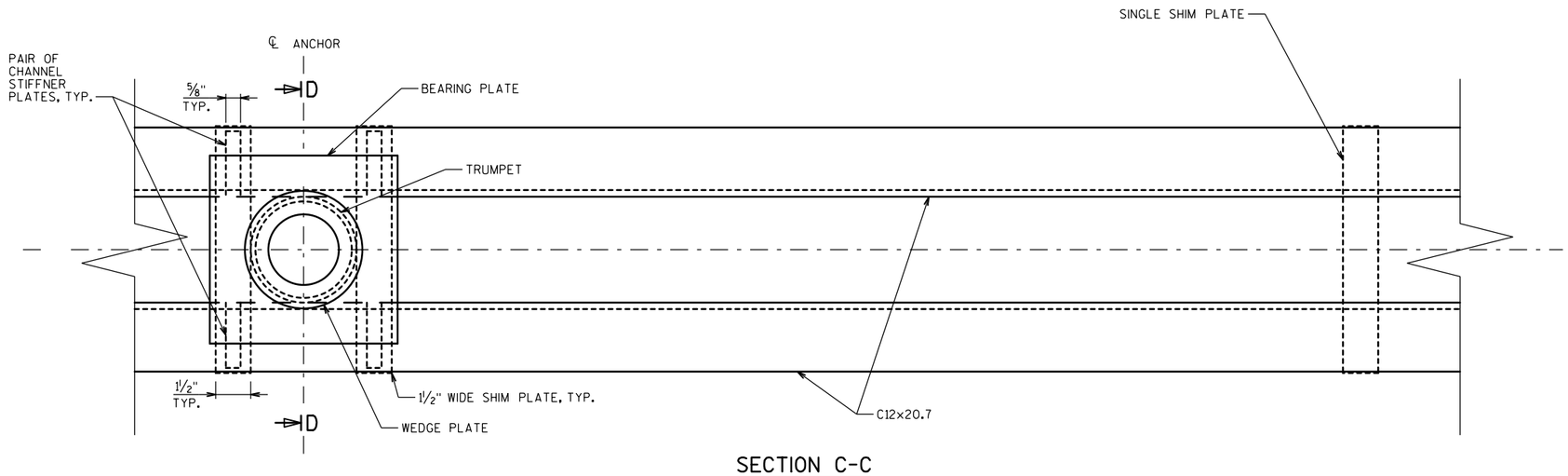


SECTION D-D

◐ ANGLE FROM VERTICAL, SEE TIEBACK ANCHOR DATA TABLES ON SHEET "TIEBACK ANCHOR DATA TABLES".



SECTION E-E



SECTION C-C

SEGMENT A WALL ELEVATIONS ◥

STATION	OFFSET	TOP OF SHEET PILING EL.	BOTTOM OF SHEET PILING EL.	SHEET PILE SECTION	FINISHED GRADE EL. (AT FF OF SHEET PILING)	EXISTING GROUND EL. (AT FF OF SHEET PILING)
16+09.64	2'-3", LT.	702.06	652.06	PZC-39	700.53	700.53
16+25.00	2'-3", LT.	702.55	652.55	PZC-39	695.58	699.54
16+34.46	2'-3", LT.	702.85	652.85	PZC-39	692.43	698.87
16+39.35	2'-3", LT.	702.85	652.85	PZC-39	690.80	699.09
16+39.91	2'-3", LT.	702.85	652.85	PZC-39	690.61	699.17

SEGMENT B WALL ELEVATIONS ◥

STATION	OFFSET	TOP OF SHEET PILING EL.	BOTTOM OF SHEET PILING EL.	SHEET PILE SECTION	FINISHED GRADE EL. (AT FF OF SHEET PILING)	EXISTING GROUND EL. (AT FF OF SHEET PILING)
16+39.91	2'-3", LT.	693.17	659.17	PZC-39	690.61	699.17
16+41.75	2'-3", LT.	693.17	659.17	PZC-39	690.00	699.83
16+50.00	2'-3", LT.	693.17	659.17	PZC-39	690.00	699.34
16+75.00	2'-3", LT.	693.17	659.17	PZC-39	690.00	699.57
17+00.00	2'-3", LT.	693.17	659.17	PZC-39	690.00	699.33
17+07.96	2'-3", LT.	693.17	659.17	PZC-39	690.00	699.52

SEGMENT C WALL ELEVATIONS ◥

STATION	OFFSET	TOP OF SHEET PILING EL.	BOTTOM OF SHEET PILING EL.	SHEET PILE SECTION	FINISHED GRADE EL. (AT FF OF SHEET PILING)	EXISTING GROUND EL. (AT FF OF SHEET PILING)
17+07.96	2'-3", LT.	702.75	652.75	PZC-39	690.00	699.52
17+12.61	2'-3", LT.	702.75	652.75	PZC-39	690.00	699.69
17+25.00	2'-3", LT.	702.01	652.01	PZC-39	690.00	699.99
17+50.00	2'-3", LT.	700.53	650.53	PZC-39	690.00	699.60
17+60.00	2'-3", LT.	699.94	649.94	PZC-39	690.00	699.55
17+72.48	2'-3", LT.	699.70	649.70	PZC-39	690.00	699.51
17+75.00	2'-3", LT.	699.65	649.65	PZC-39	690.84	699.08
18+00.00	2'-3", LT.	699.17	649.17	PZC-39	699.17	699.17
18+01.09	2'-3", LT.	699.15	649.15	PZC-39	649.15	699.17

◥ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-641

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TIEBACK ANCHOR DETAILS (2 OF 2) & WALL DATA TABLES

SHEET 7 OF 9

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-641\cds\R641_080107_Rev08.dgn PLOT DATE : 10/30/2017 11:45:31 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 4:1

STATE PROJECT NUMBER
1228-16-71

TIEBACK ANCHOR DATA TABLE - ROW 1

◹ PROPOSED TIEBACK STATION	OFFSET FROM R/L	⏚ PROPOSED SPACING	MAX. ALLOWABLE SPACING	TIEBACK NUMBER	◭ TIEBACK ELEV. (FT)	☆ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ TIEBACK VERTICAL ORIENTATION (DEGREES)	TIEBACK UNBONDED LENGTH (FT)	TIEBACK BONDED LENGTH (FT)	TIEBACK TOTAL LENGTH (FT)	TIEBACK DESIGN LOAD (KIPS)	TIEBACK TEST LOAD (KIPS)
16+11.27	2'-3", LT.	-	-	101	695.11	90	25	18	35	53	95	127
16+15.52	2'-3", LT.	4'-3"	6'-0"	102	695.23	90	25	18	35	53	95	127
16+21.14	2'-3", LT.	5'-7 1/2"	6'-0"	103	695.39	90	25	18	35	53	95	127
16+26.77	2'-3", LT.	5'-7 1/2"	6'-0"	104	695.55	90	25	18	35	53	95	127
16+32.39	2'-3", LT.	5'-7 1/2"	6'-0"	105	695.71	90	25	18	35	53	95	127
16+37.52	2'-3", LT.	5'-1 1/2"	6'-0"	106	695.85	90	25	18	35	53	95	127
17+09.47	2'-3", LT.	-	6'-0"	107	695.75	90	25	18	35	53	95	127
17+15.09	2'-3", LT.	5'-7 1/2"	6'-0"	108	695.53	90	25	18	35	53	95	127
17+20.72	2'-3", LT.	5'-7 1/2"	6'-0"	109	695.30	90	25	18	35	53	95	127
17+26.34	2'-3", LT.	5'-7 1/2"	6'-0"	110	695.08	90	25	18	35	53	95	127
17+31.97	2'-3", LT.	5'-7 1/2"	6'-0"	111	694.85	90	25	18	35	53	95	127
17+37.59	2'-3", LT.	5'-7 1/2"	6'-0"	112	694.63	90	25	18	35	53	95	127
17+43.22	2'-3", LT.	5'-7 1/2"	6'-0"	113	694.41	90	25	18	35	53	95	127
17+48.84	2'-3", LT.	5'-7 1/2"	6'-0"	114	694.18	90	25	18	35	53	95	127
17+54.47	2'-3", LT.	5'-7 1/2"	6'-0"	115	693.96	90	25	18	35	53	95	127
17+60.09	2'-3", LT.	5'-7 1/2"	6'-0"	116	693.74	90	25	18	35	53	95	127
17+65.72	2'-3", LT.	5'-7 1/2"	6'-0"	117	693.51	90	25	18	35	53	95	127
17+71.34	2'-3", LT.	5'-7 1/2"	6'-0"	118	693.29	90	25	18	35	53	95	127
17+76.97	2'-3", LT.	5'-7 1/2"	6'-0"	119	693.06	90	25	18	35	53	95	127
17+82.59	2'-3", LT.	5'-7 1/2"	6'-0"	120	692.84	90	25	18	35	53	95	127
17+88.22	2'-3", LT.	5'-7 1/2"	6'-0"	121	692.62	90	25	18	35	53	95	127
17+93.84	2'-3", LT.	5'-7 1/2"	6'-0"	122	692.39	90	25	18	35	53	95	127
17+98.97	2'-3", LT.	5'-1 1/2"	6'-0"	123	692.19	90	25	18	35	53	95	127

TIEBACK ANCHOR DATA TABLE - ROW 2

◹ PROPOSED TIEBACK STATION	OFFSET FROM R/L	⏚ PROPOSED SPACING	MAX. ALLOWABLE SPACING	TIEBACK NUMBER	◭ TIEBACK ELEV. (FT)	☆ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ TIEBACK VERTICAL ORIENTATION (DEGREES)	TIEBACK UNBONDED LENGTH (FT)	TIEBACK BONDED LENGTH (FT)	TIEBACK TOTAL LENGTH (FT)	TIEBACK DESIGN LOAD (KIPS)	TIEBACK TEST LOAD (KIPS)
16+11.27	2'-3", LT.	-	-	201	685.61	90	25	18	35	53	147	196
16+15.52	2'-3", LT.	4'-3"	6'-0"	202	685.73	90	25	18	35	53	147	196
16+21.14	2'-3", LT.	5'-7 1/2"	6'-0"	203	685.89	90	25	18	35	53	147	196
16+26.77	2'-3", LT.	5'-7 1/2"	6'-0"	204	686.05	90	25	18	35	53	147	196
16+32.39	2'-3", LT.	5'-7 1/2"	6'-0"	205	686.21	90	25	18	35	53	147	196
16+37.52	2'-3", LT.	5'-1 1/2"	6'-0"	206	686.35	90	25	18	35	53	147	196
16+42.12	2'-3", LT.	4'-7 1/4"	8'-0"	207	688.01	85	15	15	30	45	125	167
16+49.12	2'-3", LT.	7'-0"	8'-0"	208	688.01	90	15	15	30	45	125	167
16+56.62	2'-3", LT.	7'-6"	8'-0"	209	688.01	90	15	15	30	45	125	167
16+64.12	2'-3", LT.	7'-6"	8'-0"	210	688.01	90	15	15	30	45	125	167
16+71.62	2'-3", LT.	7'-6"	8'-0"	211	688.01	90	15	15	30	45	125	167
16+79.12	2'-3", LT.	7'-6"	8'-0"	212	688.01	90	15	15	30	45	125	167
16+83.37	2'-3", LT.	4'-3"	8'-0"	213	688.01	90	15	15	30	45	125	167
16+90.87	2'-3", LT.	7'-6"	8'-0"	214	688.01	90	15	15	30	45	125	167
16+98.37	2'-3", LT.	7'-6"	8'-0"	215	688.01	90	15	15	30	45	125	167
17+05.37	2'-3", LT.	7'-0"	8'-0"	216	688.01	90	15	15	30	45	125	167
17+09.47	2'-3", LT.	4'-1 1/8"	6'-0"	217	686.25	90	25	18	35	53	147	196
17+15.09	2'-3", LT.	5'-7 1/2"	6'-0"	218	686.03	90	25	18	35	53	147	196
17+20.72	2'-3", LT.	5'-7 1/2"	6'-0"	219	685.80	90	25	18	35	53	147	196
17+26.34	2'-3", LT.	5'-7 1/2"	6'-0"	220	685.58	90	25	18	35	53	147	196
17+31.97	2'-3", LT.	5'-7 1/2"	6'-0"	221	685.35	90	25	18	35	53	147	196
17+37.59	2'-3", LT.	5'-7 1/2"	6'-0"	222	685.13	90	25	18	35	53	147	196
17+43.22	2'-3", LT.	5'-7 1/2"	6'-0"	223	684.91	90	25	18	35	53	147	196
17+48.84	2'-3", LT.	5'-7 1/2"	6'-0"	224	684.68	90	25	18	35	53	147	196
17+54.47	2'-3", LT.	5'-7 1/2"	6'-0"	225	684.46	90	25	18	35	53	147	196
17+60.09	2'-3", LT.	5'-7 1/2"	6'-0"	226	684.24	90	25	18	35	53	147	196
17+65.72	2'-3", LT.	5'-7 1/2"	6'-0"	227	684.01	90	25	18	35	53	147	196
17+71.34	2'-3", LT.	5'-7 1/2"	6'-0"	228	683.79	90	25	18	35	53	147	196
17+76.97	2'-3", LT.	5'-7 1/2"	6'-0"	229	683.56	90	25	18	35	53	147	196
17+82.59	2'-3", LT.	5'-7 1/2"	6'-0"	230	683.34	90	25	18	35	53	147	196
17+88.22	2'-3", LT.	5'-7 1/2"	6'-0"	231	683.12	90	25	18	35	53	147	196
17+93.84	2'-3", LT.	5'-7 1/2"	6'-0"	232	682.89	90	25	18	35	53	147	196
17+98.97	2'-3", LT.	5'-1 1/2"	6'-0"	233	682.69	90	25	18	35	53	147	196

TIEBACK ANCHOR DATA TABLE - ROW 3

◹ PROPOSED TIEBACK STATION	OFFSET FROM R/L	⏚ PROPOSED SPACING	MAX. ALLOWABLE SPACING	TIEBACK NUMBER	◭ TIEBACK ELEV. (FT)	☆ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ TIEBACK VERTICAL ORIENTATION (DEGREES)	TIEBACK UNBONDED LENGTH (FT)	TIEBACK BONDED LENGTH (FT)	TIEBACK TOTAL LENGTH (FT)	TIEBACK DESIGN LOAD (KIPS)	TIEBACK TEST LOAD (KIPS)
16+42.12	2'-3", LT.	-	8'-0"	301	682.01	85	15	15	30	45	124	165
16+49.12	2'-3", LT.	7'-0"	8'-0"	302	682.01	90	15	15	30	45	124	165
16+56.62	2'-3", LT.	7'-6"	8'-0"	303	682.01	90	15	15	30	45	124	165
16+64.12	2'-3", LT.	7'-6"	8'-0"	304	682.01	90	15	15	30	45	124	165
16+71.62	2'-3", LT.	7'-6"	8'-0"	305	682.01	90	15	15	30	45	124	165
16+79.12	2'-3", LT.	7'-6"	8'-0"	306	682.01	90	15	15	30	45	124	165
16+83.37	2'-3", LT.	4'-3"	8'-0"	307	682.01	90	15	15	30	45	124	165
16+90.87	2'-3", LT.	7'-6"	8'-0"	308	682.01	90	15	15	30	45	124	165
16+98.37	2'-3", LT.	7'-6"	8'-0"	309	682.01	90	15	15	30	45	124	165
17+05.37	2'-3", LT.	7'-0"	8'-0"	310	682.01	90	15	15	30	45	124	165

8

8

TIEBACK ANCHOR DATA TABLES NOTES

REFER TO THE GEOTECHNICAL EXPLORATION AND ANALYSIS REPORT FOR THIS STRUCTURE FOR ADDITIONAL TIEBACK ANCHOR INFORMATION.

◹ THIS IS AN APPROXIMATE STATION AND IS DEPENDANT UPON THE LAYOUT OF THE DRIVEN PILE IN THE FIELD.

⏚ MEASURED ALONG WALL ℄

◭ ELEVATION GIVEN AT FRONT FACE OF SHEET PILING

◑ REFER TO "TIEBACK ANCHOR DETAILS (1 OF 2)" AND "TIEBACK ANCHOR DETAILS (2 OF 2) & WALL DATA TABLES" SHEETS.

☆ HORIZONTAL OREINTATION IS MEASURED FROM FRONT FACE OF SHEET PILING IN COUNTERCLOCKWISE DIRECTION. REFER TO "TIEBACK ANCHOR DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-641

DRAWN BY EAJ | PLANS CK'D. HDA

TIEBACK ANCHOR DATA TABLES

SHEET 8 OF 9

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-641\cds\R641_080108_Ret03.dgn PLOT DATE : 10/30/2017 11:45:32 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 10:1

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL EXPLORATION AND ANALYSIS REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

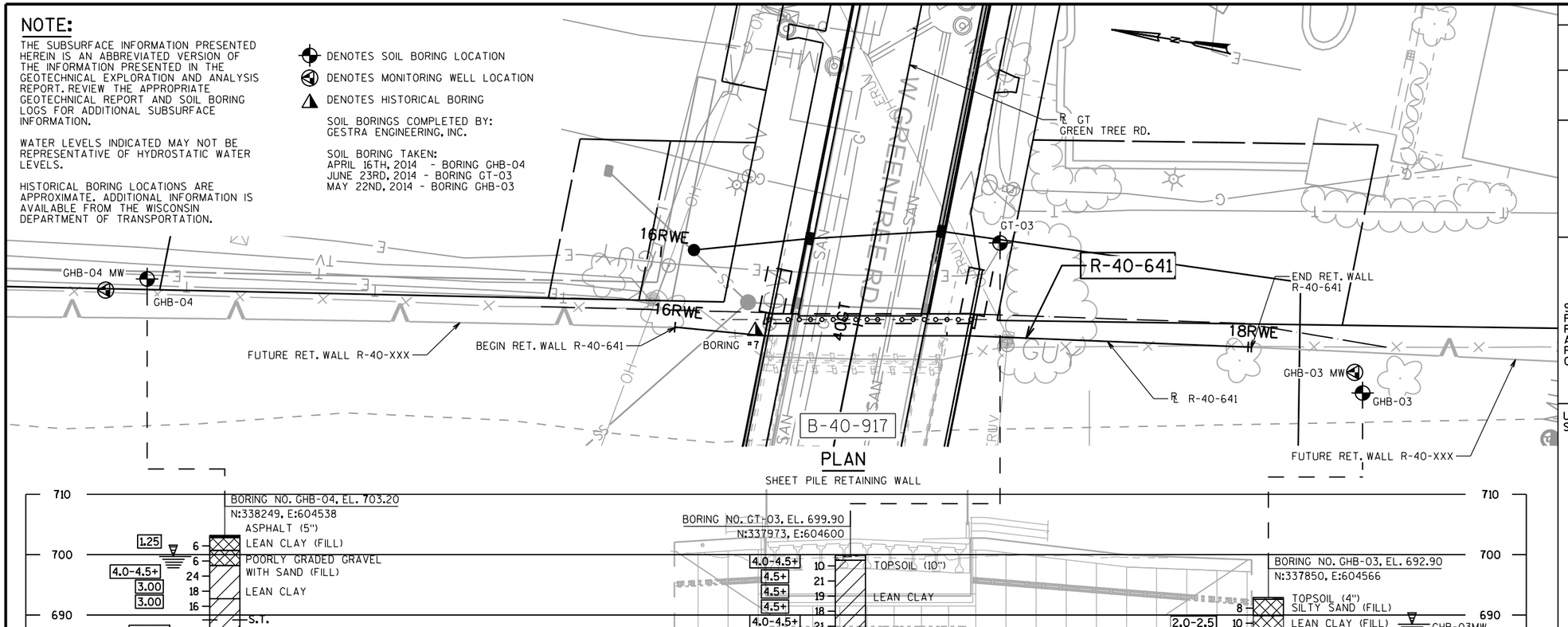
WATER LEVELS INDICATED MAY NOT BE REPRESENTATIVE OF HYDROSTATIC WATER LEVELS.

HISTORICAL BORING LOCATIONS ARE APPROXIMATE. ADDITIONAL INFORMATION IS AVAILABLE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

DENOTES SOIL BORING LOCATION
DENOTES MONITORING WELL LOCATION
DENOTES HISTORICAL BORING

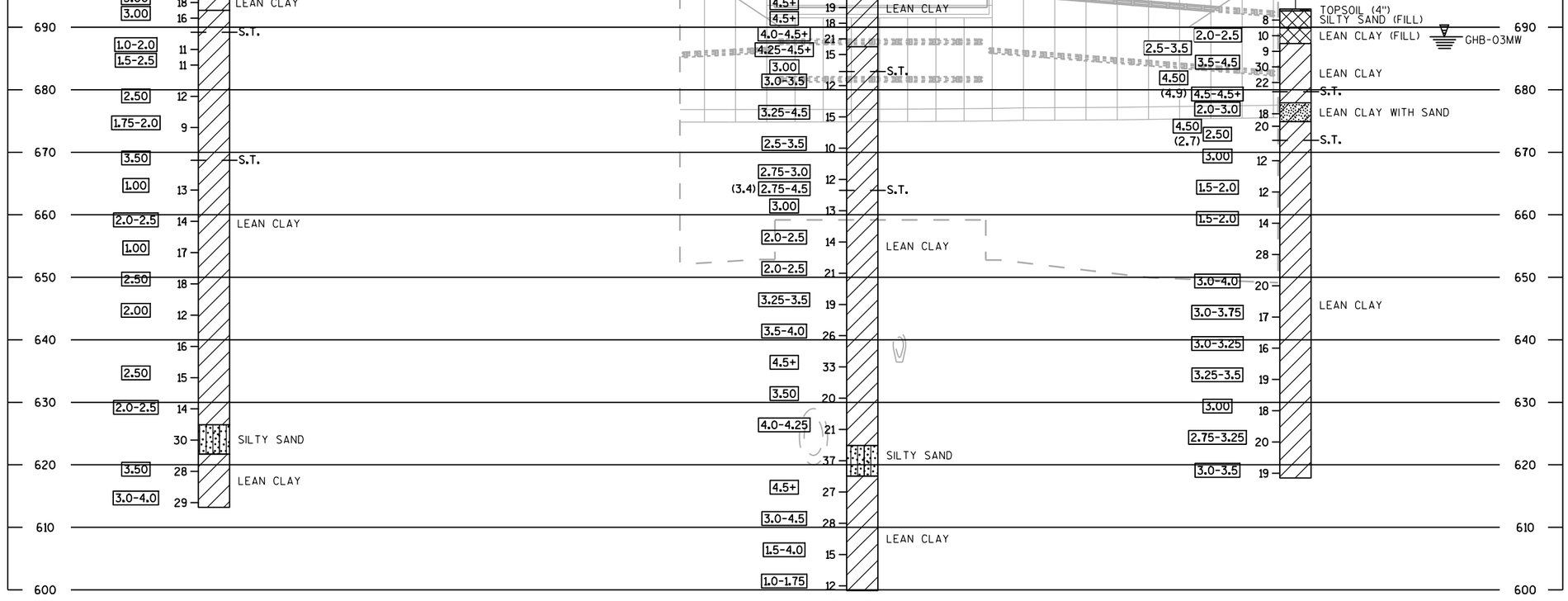
SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
APRIL 16TH, 2014 - BORING GHB-04
JUNE 23RD, 2014 - BORING GT-03
MAY 22ND, 2014 - BORING GHB-03



PLAN

SHEET PILE RETAINING WALL



ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

STATE PROJECT NUMBER
1228-16-71

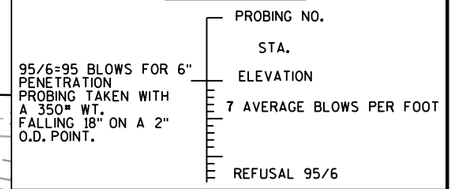
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

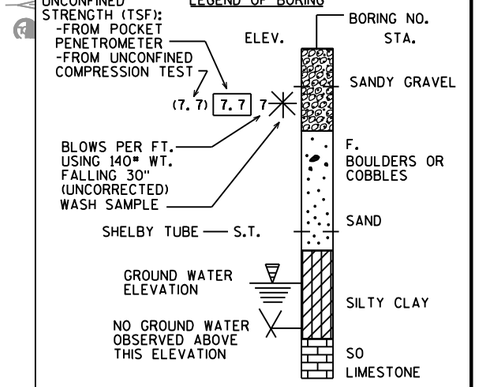
MATERIAL SYMBOLS

SAND	PEAT	FILL
GRAVEL	CLAY	SANDSTONE
ASPHALT	SILT	LIMESTONE
CONCRETE	TOPSOIL	BEDROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-641

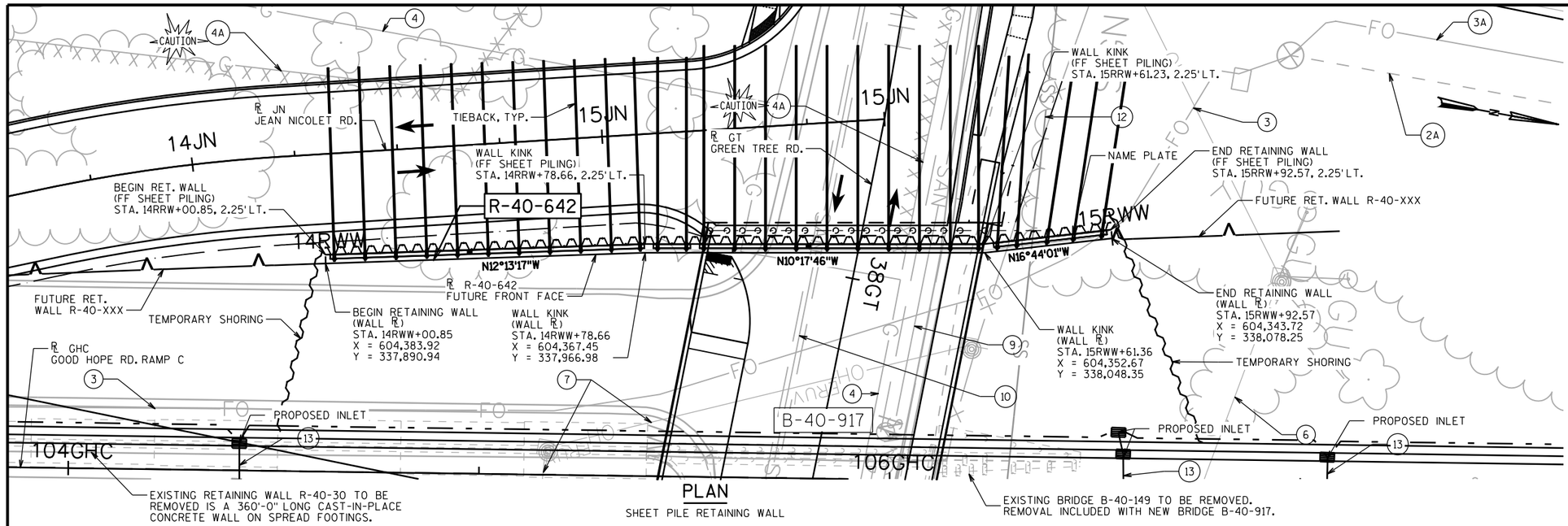
DRAWN BY	EAJ	PLANS CK'D.	DMM/HDA

SUBSURFACE EXPLORATION

SHEET 9 OF 9

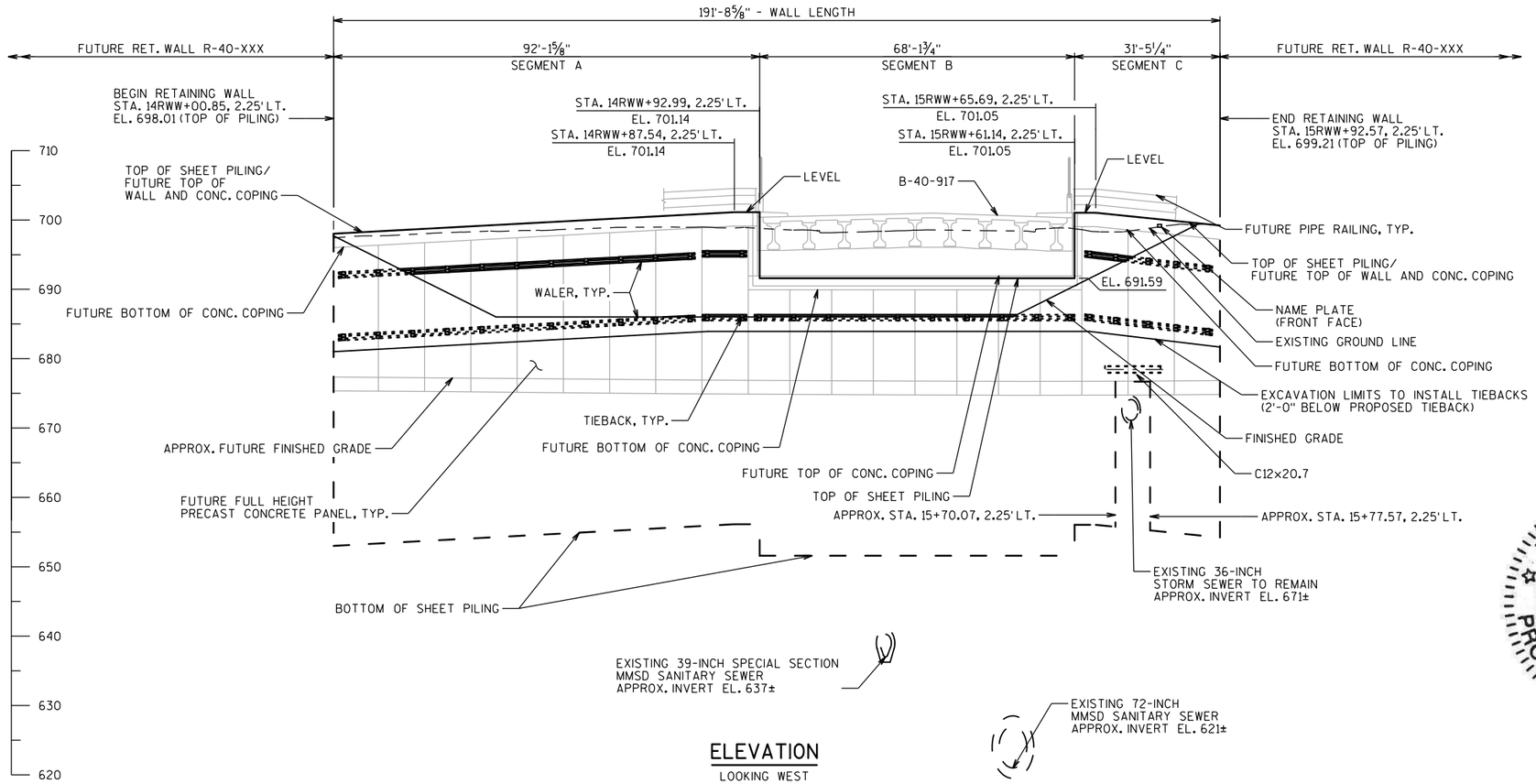
FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-641\cds\R641_080201_SE07.dgn PLOT DATE : 10/30/2017 11:45:47 AM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 40:1

STATE PROJECT NUMBER
1228-16-71



PLAN

SHEET PILE RETAINING WALL



ELEVATION

LOOKING WEST

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES, DESIGN DATA & QUANTITIES
3. TYPICAL SECTIONS (1 OF 2)
4. TYPICAL SECTIONS (2 OF 2)
5. REMOVAL LIMITS & CONSTRUCTION SEQUENCE (1 OF 2)
6. CONSTRUCTION SEQUENCE (2 OF 2)
7. TIEBACK ANCHOR DETAILS (1 OF 2)
8. TIEBACK ANCHOR DETAILS (2 OF 2)
9. WALL & TIEBACK ANCHOR DATA TABLES
10. SUBSURFACE EXPLORATION

UTILITY NOTES

(2A) EXISTING WISDOT FTMS TO REMAIN

(3) EXISTING CENTURYLINK FIBER OPTIC LINE TO BE RELOCATED

(3A) EXISTING CENTURYLINK FIBER OPTIC LINE TO REMAIN

(4) EXISTING GAS LINE TO BE DISCONTINUED IN PLACE

(4A) EXISTING GAS LINE DISCONTINUED

(6) EXISTING OVERHEAD UTILITY LINE TO REMAIN

(7) EXISTING OVERHEAD ERUV TO BE RELOCATED (NOT A UTILITY)

(9) EXISTING MMSD SANITARY 72-INCH TO REMAIN

(10) EXISTING MMSD SANITARY 39-INCH TO REMAIN

(12) EXISTING WISDOT STORM SEWER

(13) PROPOSED WISDOT STORM SEWER

LEGEND

TRAFFIC DIRECTION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
HEATHER ANDERS (414) 359-2300

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

HNTB 11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2300

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 11/02/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN ELIZABETH A. JELINEK E-40123 MILWAUKEE WI 11-1-2017 PROFESSIONAL ENGINEER

STRUCTURE R-40-642

RETAINING WALL W. OF IH 43 UNDER GREEN TREE RD.

COUNTY	VILLAGE
MILWAUKEE	RIVER HILLS

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EAJ	HDA	EAJ	HDA

GENERAL PLAN & ELEVATION

SHEET 1 OF 10

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-642\cds\R642_080101_gp03.dgn DATE : 10/30/2017 12:12:11 PM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 30:1

STATE PROJECT NUMBER
1228-16-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS AND DIMENSIONS ARE ALONG ℄ R-40-642 RETAINING WALL UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A SHEET PILE RETAINING WALL WITH TIEBACKS. FUTURE CONSTRUCTION WILL INCLUDE WALLS EXTENDING NORTH AND SOUTH OF R-40-642. FUTURE CONSTRUCTION WILL ALSO INCLUDE PRECAST CONCRETE FACING PANELS, CAST-IN-PLACE CONCRETE COPING, AND RAILING FOR R-40-642.

COORDINATE THE CONSTRUCTION OF WALL R-40-642 WITH THE REMOVAL OF EXISTING BRIDGE B-40-149, REMOVAL OF EXISTING RETAINING WALL R-40-30 AND THE CONSTRUCTION OF BRIDGE B-40-917.

REMOVAL OF EXISTING STRUCTURE B-40-149 IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-40-917 BRIDGE QUANTITIES.

REMOVAL OF EXISTING STRUCTURE R-40-30 IS PAID FOR AS BID ITEM "REMOVING OLD STRUCTURE STA. 14RWW+00".

THE FUTURE EXPOSED FACE OF SHEET PILE SHALL BE PAINTED PER STANDARD SPECIFICATION 550.3.11.3 TO APPROXIMATE ELEVATION 674.5. PAINT COLOR TO BE FEDERAL COLOR #26293 LIGHT GRAY.

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL EXPLORATION AND ANALYSIS REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL EXPLORATION ANALYSIS REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

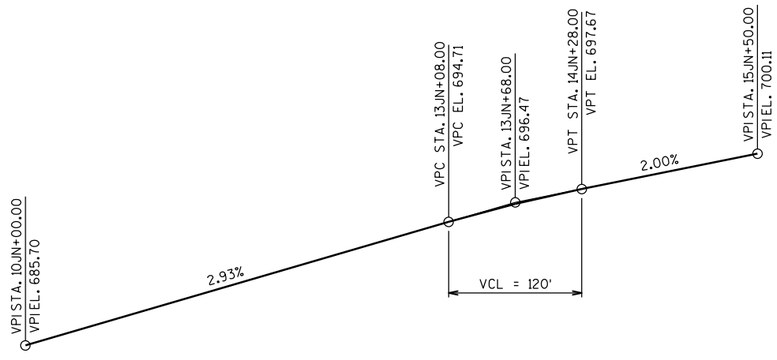
THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO BID ITEM 512.0600 "PILING STEEL SHEET PERMANENT DRIVEN". REFER TO S.D.D. "NAME PLATE (STRUCTURES)" FOR NAME PLATE DETAILS.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEG. A	SEG. B	SEG. C	TOTAL
203.2000.02	REMOVING OLD STRUCTURE STA. 14RWW+00	LS	-	-	-	1
203.0210.S.01	ABATEMENT OF ASBESTOS CONTAINING MATERIAL R-40-30	LS	-	-	-	1
206.3000.02	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-642	LS	-	-	-	1
506.0605	STRUCTURAL STEEL HS	LB	9,520	3,820	3,470	16,810
511.1200.02	TEMPORARY SHORING R-40-642	SF	410	-	510	920
512.0500	PILING STEEL SHEET PERMANENT DELIVERED	SF	4,150	2,740	1,250	8,140
512.0600	PILING STEEL SHEET PERMANENT DRIVEN	SF	4,150	2,740	1,250	8,140
517.0600.02	PAINTING EPOXY SYSTEM R-40-642	LS	-	-	-	1
SPV.0060.02	TIEBACK ANCHORS	EACH	26	10	10	46
SPV.0060.03	TIEBACK ANCHORS PERFORMANCE TESTS	EACH	1	1	1	3
SPV.0060.04	TIEBACK ANCHORS EXTENDED CREEP TESTS	EACH	-	2	-	2
	NON BID ITEMS					
	NAME PLATE	EACH				1

ALL ITEMS ARE CATEGORY 0040



PROFILE GRADE LINE JEAN NICOLET RD.
℄ 'JN'

SHEET PILE WALL SOIL PARAMETERS

SOIL LAYER DESCRIPTION	LAYER ELEVATION		TOTAL UNIT WEIGHT (PCF)	UNDRAINED	DRAINED (EFFECTIVE)	
	TOP	BOTTOM		COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
LEAN CLAY (BROWN)	698.3	691.0	130	4,500	32	0
LEAN CLAY (BROWN)	691.0	642.0	125	3,000	31	0
LEAN CLAY (GRAY)	642.0	598.6	130	4,000	32	0

NOTE: SOIL DATA BASED ON BORING GT-01

GROUNDWATER ASSUMED AT ELEVATION 674.00

DESIGN DATA

LIVE LOAD

LIVE LOAD SURCHARGE (ROADWAY)	240 PSF
LIVE LOAD SURCHARGE (NON-ROADWAY)	100 PSF
LIVE LOAD SURCHARGE (CONSTRUCTION)	100 PSF

MATERIAL PROPERTIES

STEEL SHEET PILING (ASTM A328)	Fy = 50,000 PSI
STRUCTURAL STEEL HS	Fy = 50,000 PSI
TIEBACK TENDONS (5-15MM DIAMETER STRANDS)	ULTIMATE STRENGTH = 270,000 PSI
MINIMUM SHEET PILE SECTION MODULUS	Sx = 72.3 IN^3/FT
MINIMUM SHEET PILE SECTION DEPTH	21.05"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-642

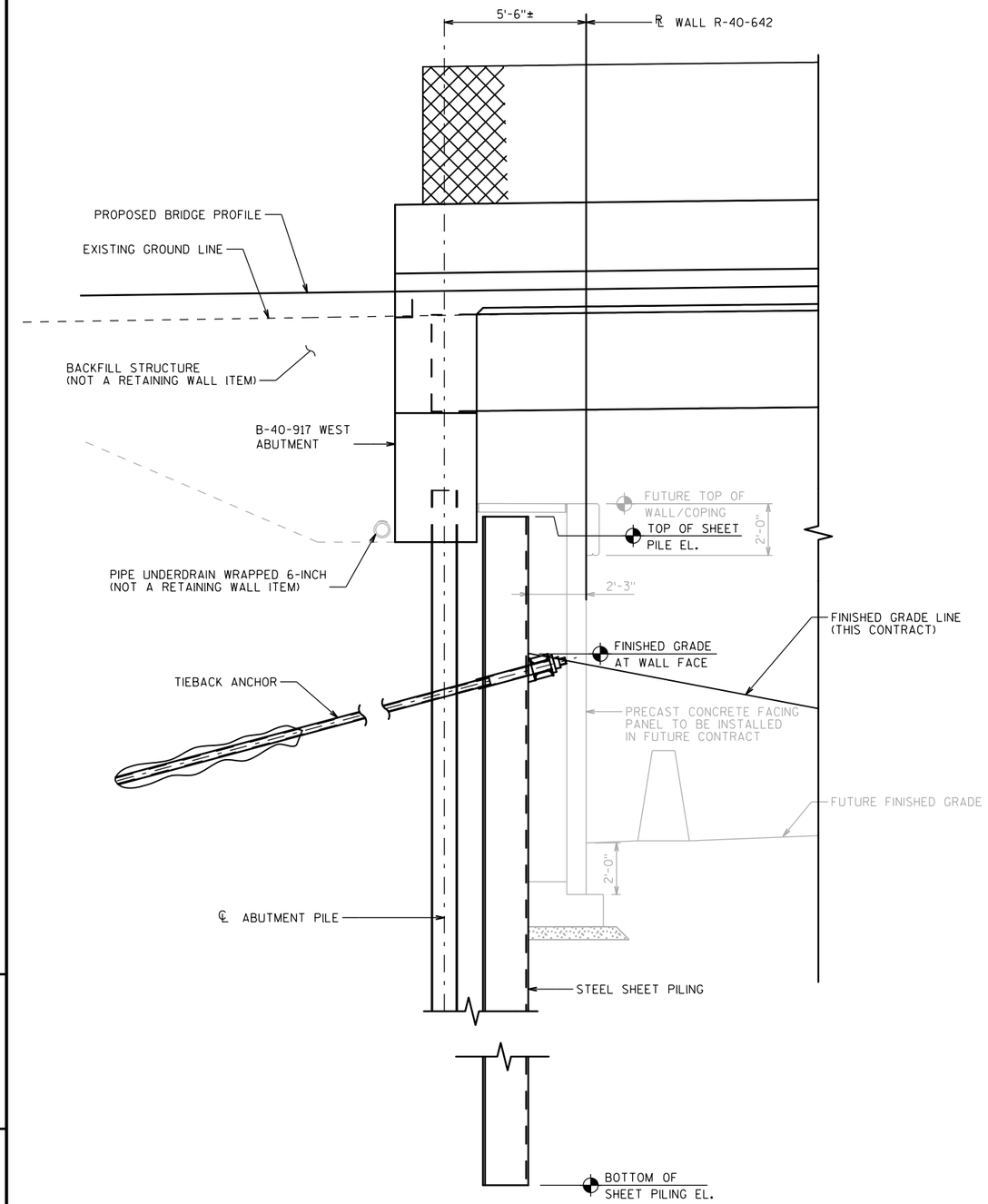
DRAWN BY EAJ | PLANS CK'D. HDA

GENERAL NOTES, DESIGN DATA & QUANTITIES

SHEET 2 OF 10

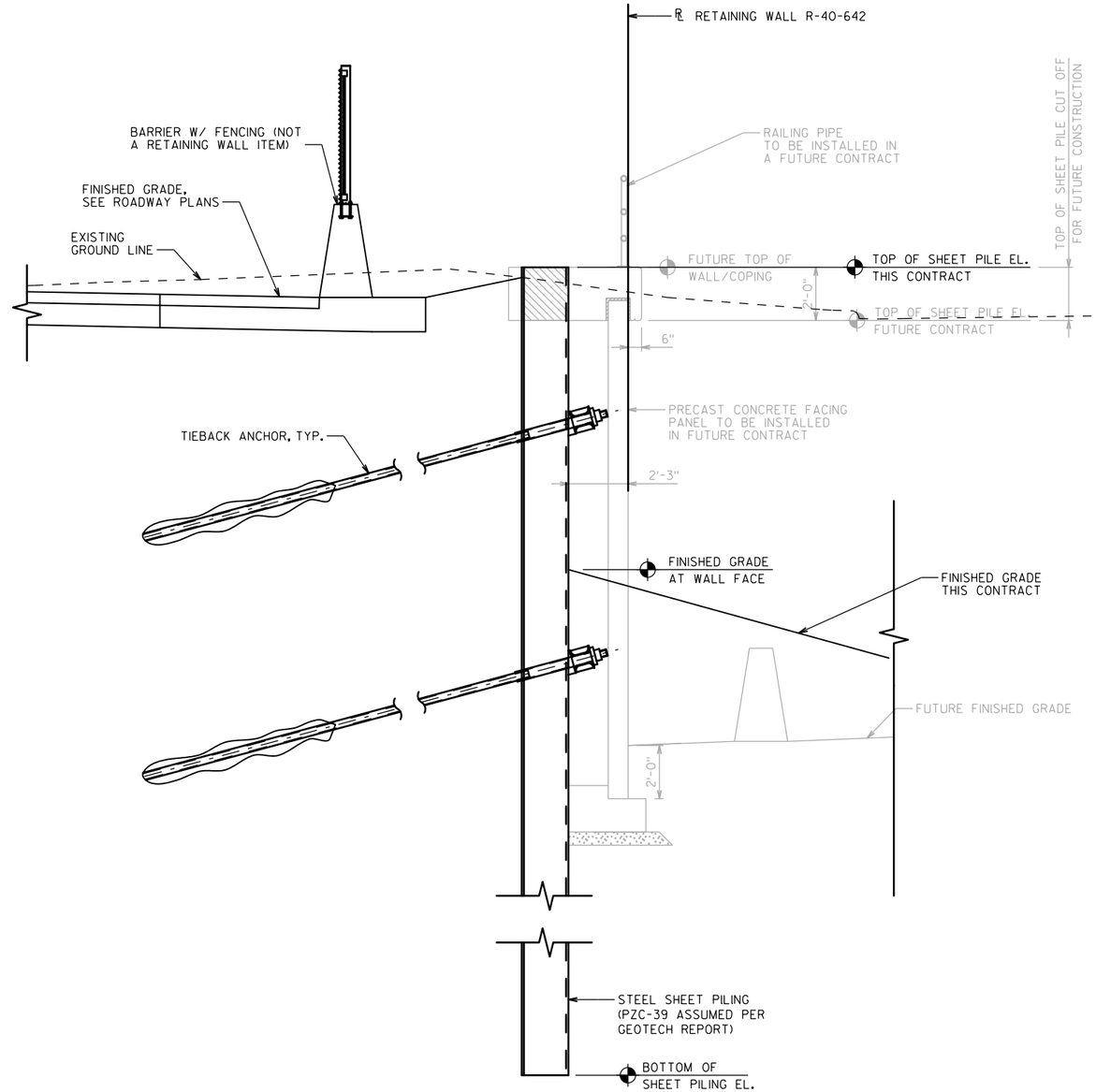
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STATE PROJECT NUMBER
1228-16-71



SEGMENT B TYPICAL SECTION

(LOOKING NORTH)
STA. 14RRW+92.54 TO STA. 15RRW+60.69



SEGMENT A TYPICAL SECTION

(LOOKING NORTH)
STA. 14RRW+00.85 TO STA. 14RRW+92.54

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-642

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TYPICAL SECTIONS
(1 OF 2)

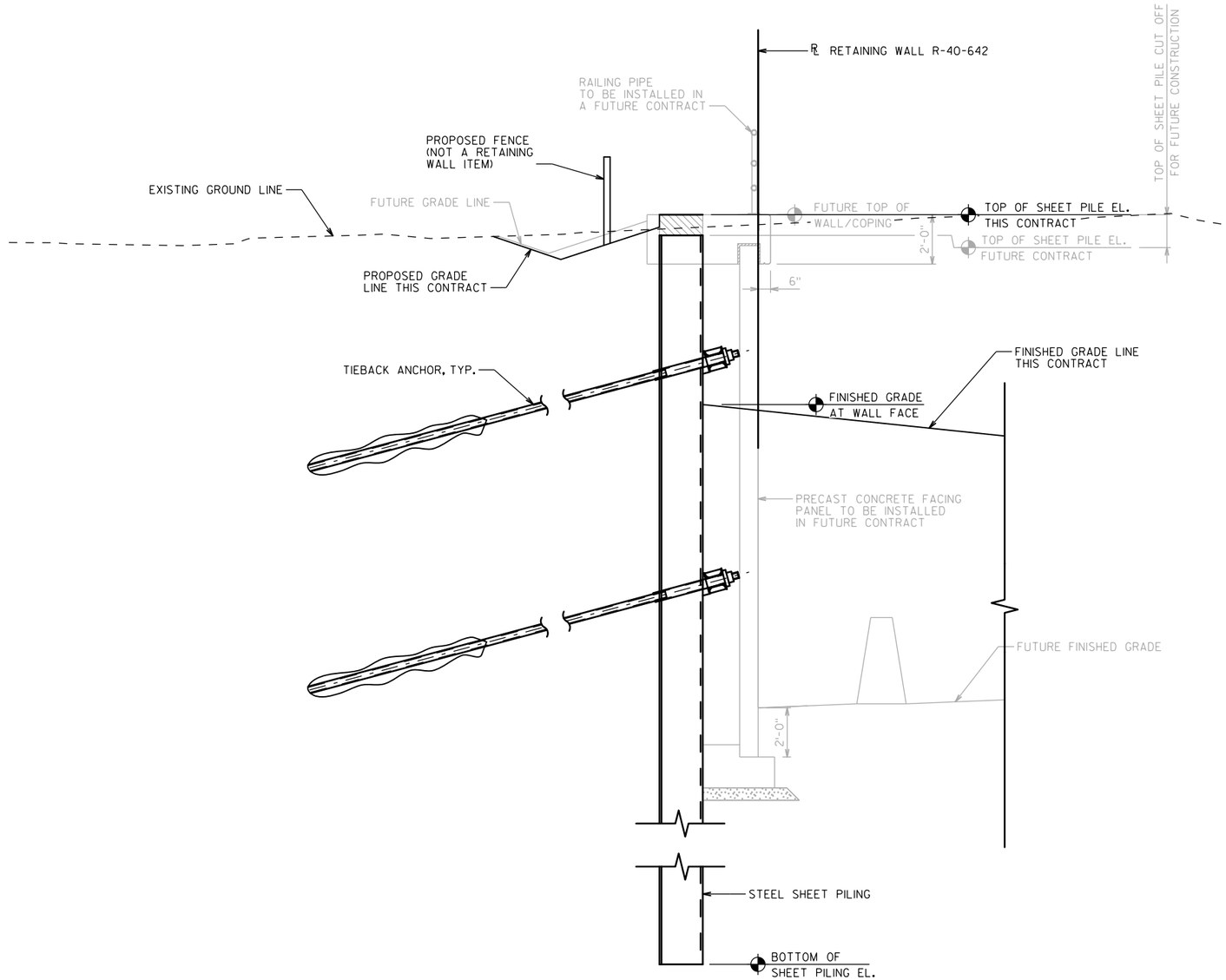
SHEET 3 OF 10

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8

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-642\cds\R642_080103_PLOT.dgn PLOT DATE : 10/30/2017 12:12:16 PM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 5.33333:1

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1228-16-71



SEGMENT C TYPICAL SECTION

(LOOKING NORTH)
STA. 15RWW+60.69 TO STA. 15RWW+92.57

8

8

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-642

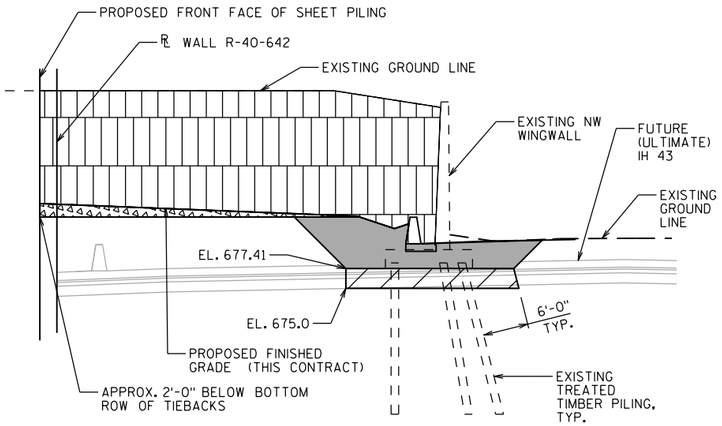
DRAWN BY EAJ | PLANS CK'D. HDA

TYPICAL SECTIONS (2 OF 2)

SHEET 4 OF 10

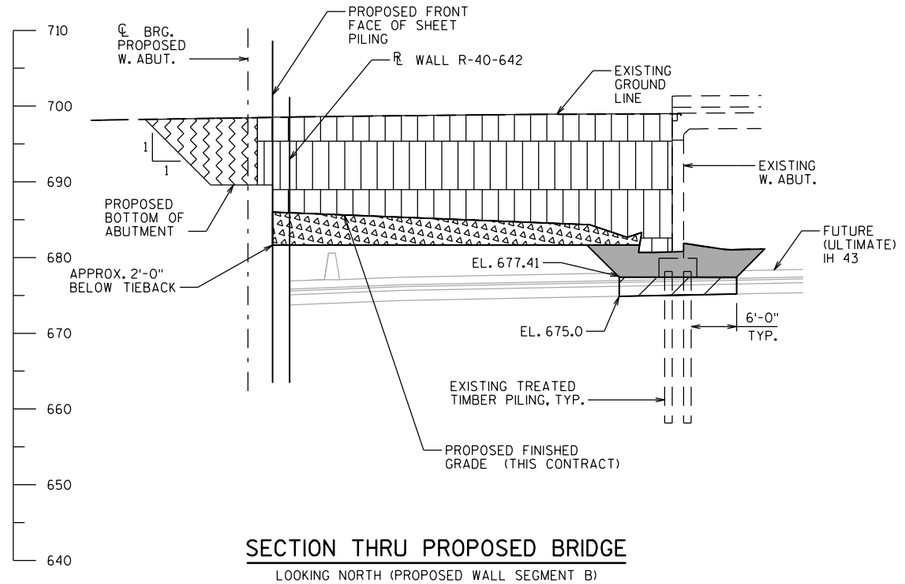
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STATE PROJECT NUMBER
1228-16-71



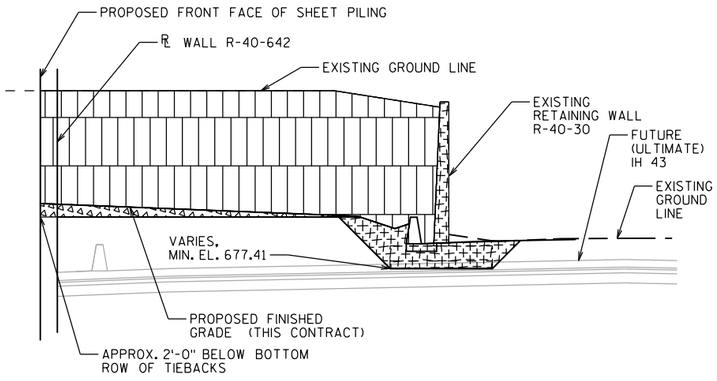
SECTION THRU EXISTING NW WING

LOOKING NORTH (PROPOSED WALL SEGMENT C)



SECTION THRU PROPOSED BRIDGE

LOOKING NORTH (PROPOSED WALL SEGMENT B)



SECTION THRU EXISTING WALL

LOOKING NORTH (PROPOSED WALL SEGMENT A)

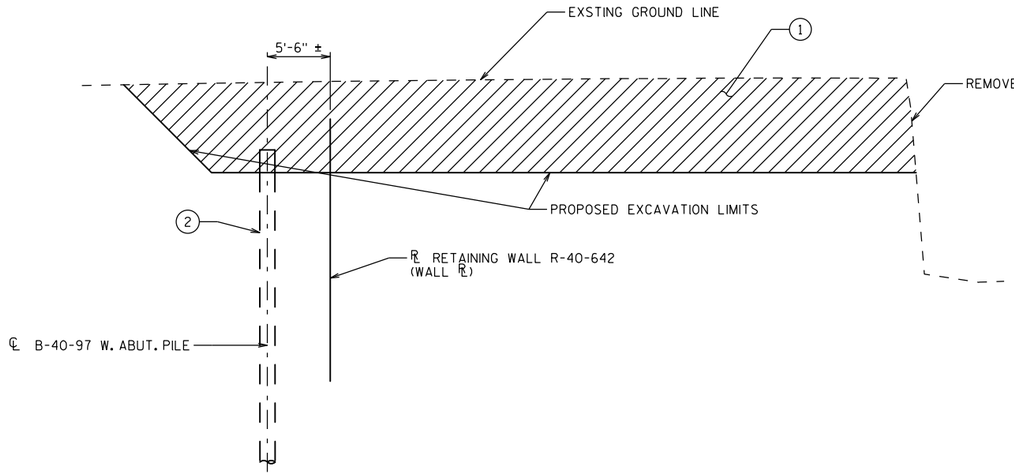
LEGEND

- COMMON EXCAVATION (ROADWAY PAY ITEM)
- EXCAVATION FOR STRUCTURES B-40-917 (PAID FOR UNDER B-40-917)
- EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-642
- REMOVING OLD STRUCTURE - (EXISTING B-40-149) (PAID FOR UNDER B-40-917, ONLY PORTIONS BELOW GRADE SHADED)
- REMOVING OLD STRUCTURE - (EXISTING R-40-30)
- EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL (ROADWAY PAY ITEM) (E01)

(E01) SOIL LOCATED WITHIN THIS FOOTPRINT BELOW THE BOTTOM OF THE EXISTING PILE CAPS TO THE TERMINAL DEPTH OF THE EXISTING PILES SHOULD BE CONSIDERED CONTAMINATED. ANY SOIL EXCAVATED FROM THIS SPACE FOR THE PROJECT WILL NEED TO BE CONSIDERED SOLID WASTE SOIL AND STOCKPILED ON THE PROJECT WITHIN WISDOT ROW UNTIL LAB TESTING AND LANDFILL PROPERTY CAN BE COORDINATED BY THE WISDOT ENVIRONMENTAL CONSULTANT.

HORIZONTAL LIMITS DEFINING FOOTPRINT BASED ON 6'-0" OFFSET FROM EDGES OF EXISTING TREATED PILING UNLESS BOUNDED BY TEMPORARY SHORING OR PERMANENT SHEET PILE RETAINING WALL.

DO NOT STOCKPILE WITHIN THE AREA EXTENDING 60 FEET BEHIND THE TOP OF WALL.



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE 1

SEGMENT B (LOOKING NORTH)
STEPS 1 AND 2

PROPOSED CONSTRUCTION SEQUENCE

PROPOSED CONSTRUCTION SEQUENCE 1

1. FOR SEGMENT B, EXCAVATE TO BOTTOM OF B-40-917 WEST ABUTMENT. FOR SEGMENTS A AND C, EXCAVATE ANY ADDITIONAL EXISTING SOIL ABOVE PROPOSED TOP OF SHEET PILING.
2. INSTALL WEST ABUTMENT PILES.

   REFER TO B-40-917 BRIDGE PLANS FOR BOTTOM OF WEST ABUTMENT ELEVATION AND PROPOSED PILE SPACING

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-642

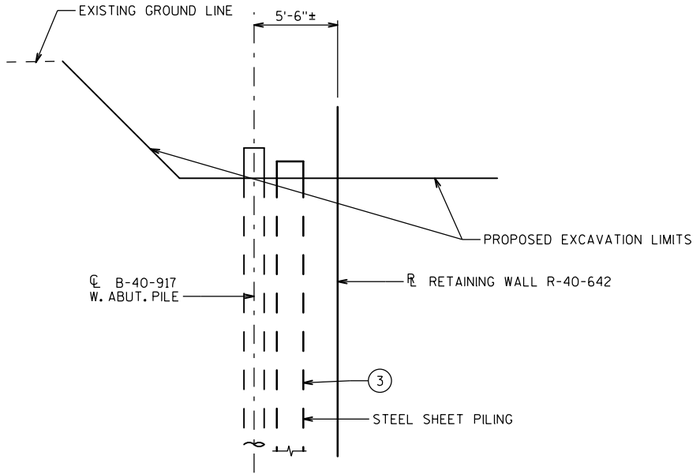
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REMOVAL LIMITS & CONSTRUCTION SEQUENCE (1 OF 2)

SHEET 5 OF 10

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-642\cds\R642_080105_RSQ.dgn PLOT DATE : 10/30/2017 12:12:20 PM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 20:1

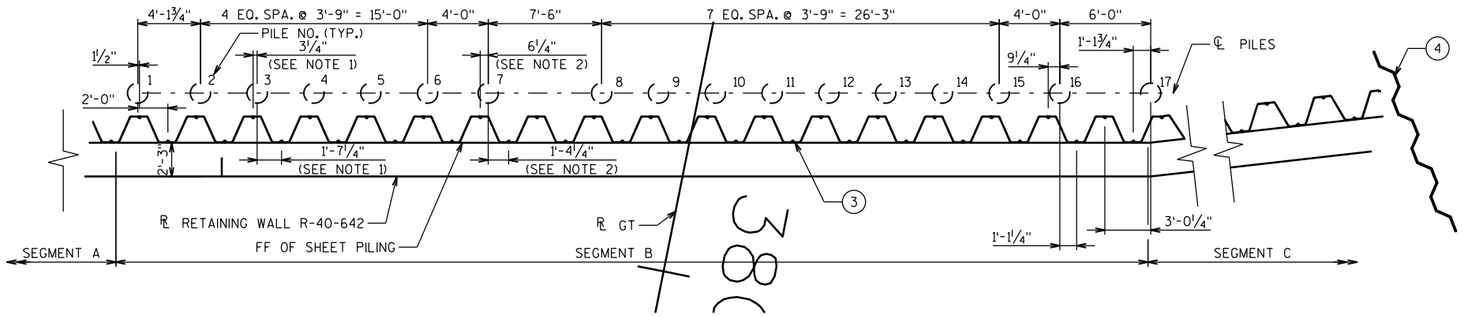
STATE PROJECT NUMBER
1228-16-71



TYPICAL SECTION (LOOKING NORTH)
SEGMENT B

NOTES

1. DIMENSIONS SHOWING THE PLACEMENT OF SHEET PILING WITH RESPECT TO ABUTMENT PILES 2 THRU 6.
2. DIMENSIONS SHOWING THE PLACEMENT OF SHEET PILING WITH RESPECT TO ABUTMENT PILES 7 THRU 15.



PLAN VIEW

PROPOSED CONSTRUCTION SEQUENCE 2

STEPS 3 AND 4

PROPOSED CONSTRUCTION SEQUENCE CON'T

PROPOSED CONSTRUCTION SEQUENCE 2

(3) INSTALL SHEET PILING.
(SHEET PILING IN FRONT OF WEST ABUTMENT (SEGMENT B) TO BE DRIVEN PRIOR TO SEGMENT A AND SEGMENT C SHEET PILING. ALIGN SHEET PILING WITH PILES AS SHOWN IN PLAN VIEW OF PROPOSED CONSTRUCTION SEQUENCE 2.)

(4) INSTALL TEMPORARY SHORING AS NEEDED AT BEGINNING OF SEGMENT A AND END OF SEGMENT C.

PROPOSED CONSTRUCTION SEQUENCE 3

(5) EXCAVATE IN FRONT OF THE SHEET PILING OF SEGMENTS A & C TO 2'-0" MAX. BELOW TOP ROWS OF TIEBACKS.

(6) INSTALL WALING SYSTEM AND TIEBACKS.

PROPOSED CONSTRUCTION SEQUENCE 4

(7) EXCAVATE IN FRONT OF THE SHEET PILING TO 2'-0" MAX. BELOW BOTTOM ROWS OF TIEBACKS (SEGMENTS A AND C) AND 2'-0" MAX. BELOW ROW OF TIEBACKS (SEGMENT B).

(8) INSTALL ADDITIONAL TIEBACKS AND WALING SYSTEM.

PROPOSED CONSTRUCTION SEQUENCE 5

(9) CONSTRUCT B-40-917 WEST ABUTMENT.

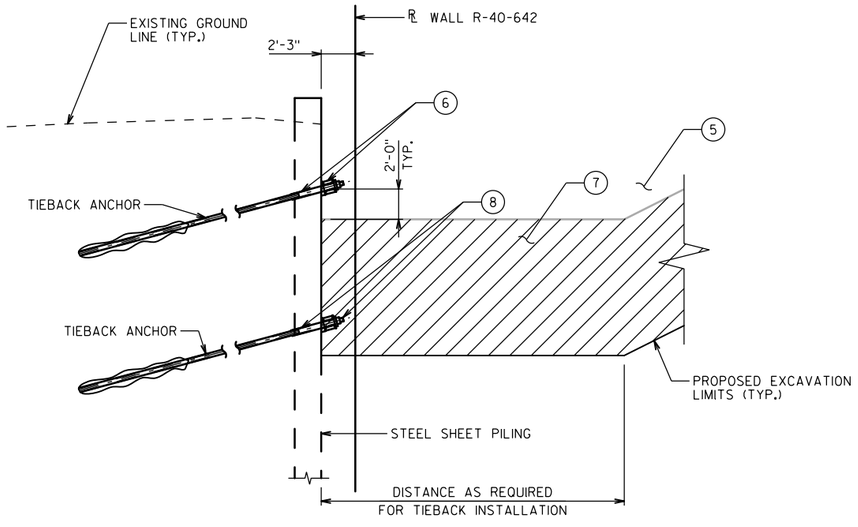
(10) EXCAVATE SEGMENT C AT UTILITY GAP TO ATTACH A SECTION OF CHANNEL TO THE SHEET PILING OVER THE UTILITY GAP. DO NOT EXCAVATE BELOW ELEVATION 673.00.

(11) EXCAVATE ANY ADDITIONAL SOIL AS NEEDED. DO NOT EXCAVATE BELOW ELEVATION 673.00.

(12) REGRADE TO FINISHED GRADE LIMITS. (REFER TO ROADWAY PLANS FOR FINAL GRADING)

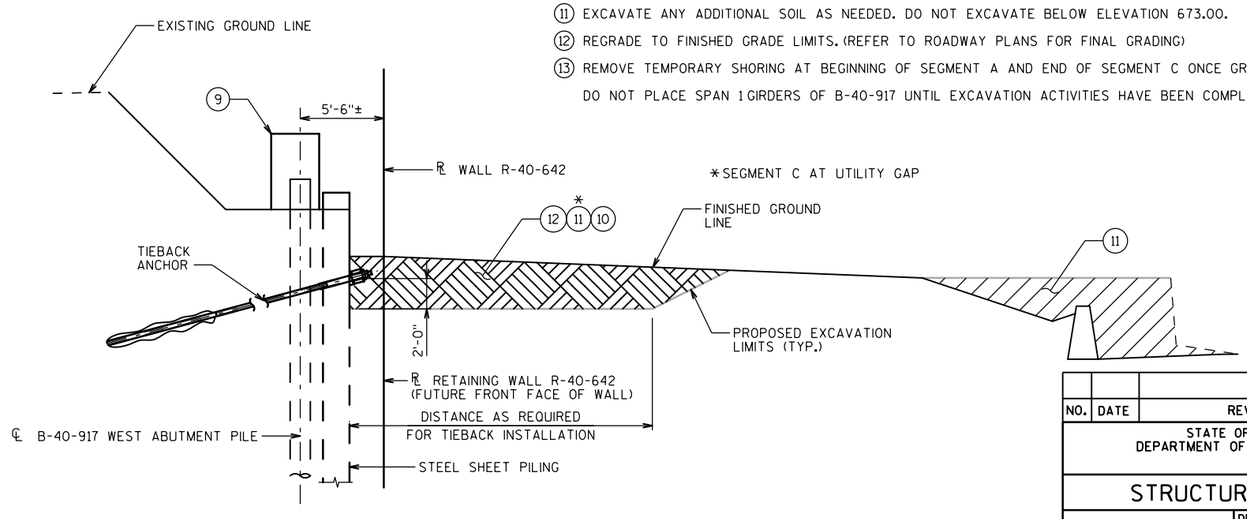
(13) REMOVE TEMPORARY SHORING AT BEGINNING OF SEGMENT A AND END OF SEGMENT C ONCE GRADING IS COMPLETED.

DO NOT PLACE SPAN 1 GIRDERS OF B-40-917 UNTIL EXCAVATION ACTIVITIES HAVE BEEN COMPLETED.



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCES 3 & 4

SEGMENT A (LOOKING NORTH)
SEGMENT C SIMILAR, SEGMENT B SIMILAR BUT NO SECOND ROW OF TIEBACK ANCHORS
STEPS 5 THRU 8



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE 5

SEGMENT B (LOOKING NORTH)
SEGMENTS A AND C SIMILAR BUT WITH SECOND ROW OF TIEBACK ANCHORS
STEPS 9 THRU 13

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-642

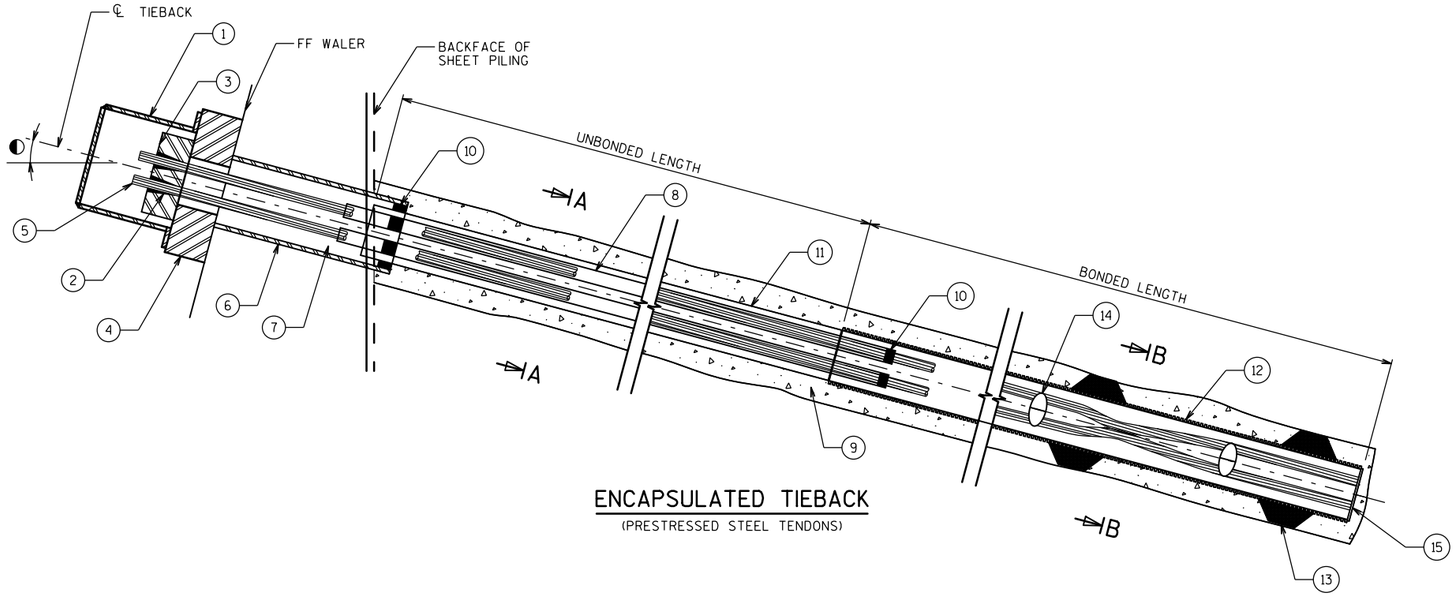
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CONSTRUCTION SEQUNCE (2 OF 2)

SHEET 6 OF 10

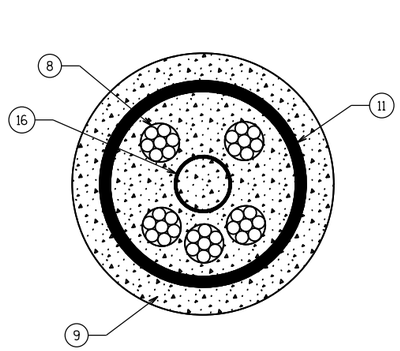
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STATE PROJECT NUMBER
1228-16-71

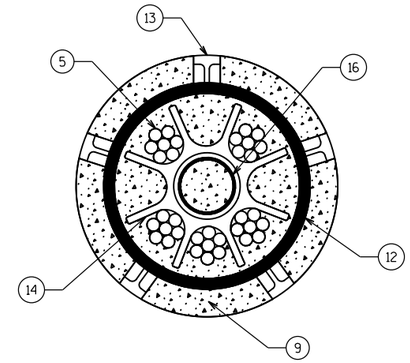


ENCAPSULATED TIEBACK

(PRESTRESSED STEEL TENDONS)



SECTION A-A



SECTION B-B

LEGEND

1. ANCHORAGE COVER
2. WEDGE
3. WEDGE PLATE
4. BEARING PLATE *
5. BARE PRESTRESSING STRAND
6. TRUMPET
7. GROUT OR CORROSION INHIBITING COMPOUND
8. GREASE FILLED STRAND SHEATH
9. GROUT
10. SEAL
11. SHEATH (GROUT FILLED FOR NON-EXTRUDED STRAND SHEATHS)
12. CORRUGATED ENCAPSULATION
13. EXTERNAL CENTRALIZER
14. INTERNAL SPACER/CENTRALIZER
15. END CAP
16. GROUT TUBE

ITEMS 1 THRU 16 INCLUDED IN BID ITEM TIEBACK ANCHORS,
ITEMS A THRU D INCLUDED IN BID ITEM STRUCTURAL STEEL HS

◐ ANGLE FROM VERTICAL, SEE TIEBACK ANCHOR DATA TABLES ON SHEET "WALL & TIEBACK ANCHOR DATA TABLES".

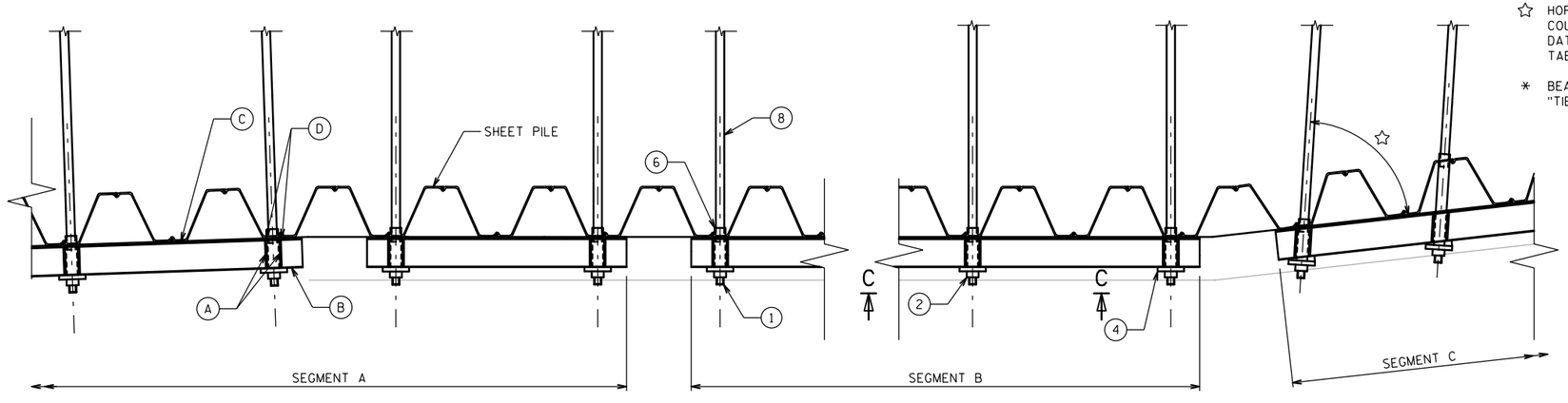
☆ HORIZONTAL ORIENTATION IS MEASURED FROM SHEET PILE ℞ IN COUNTER-CLOCKWISE DIRECTION. REFER TO TIEBACK ANCHOR DATA TABLES ON SHEET "WALL & TIEBACK ANCHOR DATA TABLES".

* BEARING PLATE SHALL BE DESIGNED IN ACCORDANCE WITH THE "TIEBACK ANCHORS" SPECIAL PROVISION (SPV.0060.02)

A. DOUBLE PAIR OF CHANNEL STIFFENER PLATES ⅝"x2½"xCUT TO FIT BETWEEN CHANNEL FLANGES
B. DOUBLE CHANNEL WALE (2) C12x20.7
C. SINGLE SHIM PLATE (CUT TO REQUIRED ANGLE)
D. PAIR OF SHIM PLATES (CUT TO REQUIRED ANGLE)

NOTE

ALL STEEL ITEMS INCLUDING ITEMS A THRU D, BEARING PLATE, AND ANCHORAGE COVER TO BE PAINTED AFTER INSTALLATION OF TIEBACK AND WALE SYSTEM IS COMPLETE BUT PRIOR TO BACKFILLING TO FINISHED GRADE AS PER BID ITEM "PAINTING EPOXY SYSTEM R-40-642".



PARTIAL PLAN VIEW OF PROPOSED TIEBACKS

(LOOKING DOWN AT TOP OF TOP ROW)
REFER TO SHEET "TIEBACK ANCHOR DETAILS (2 OF 2)" FOR SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE R-40-642

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TIEBACK ANCHOR DETAILS (1 OF 2)

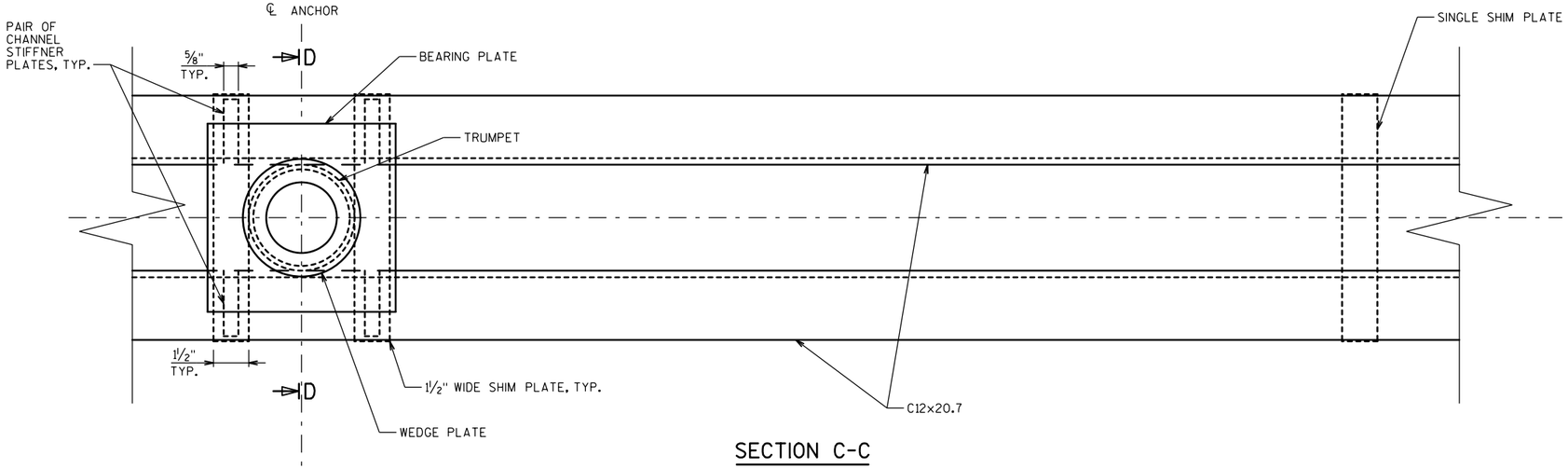
SHEET 7 OF 10

400

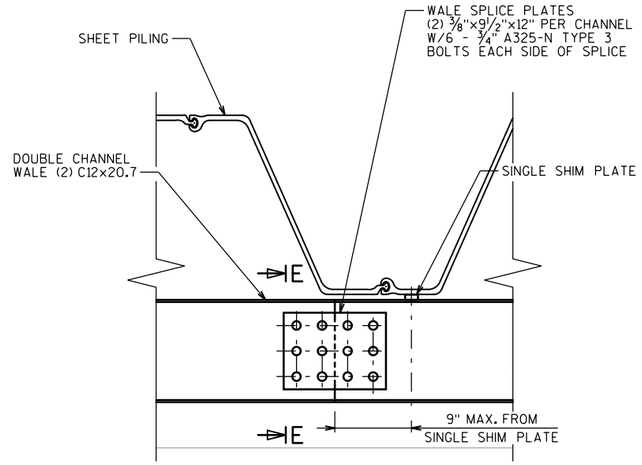
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FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-642\cds\R642_080107_Rev08.dgn DATE : 10/30/2017 12:12:24 PM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 5:1

STATE PROJECT NUMBER
1228-16-71

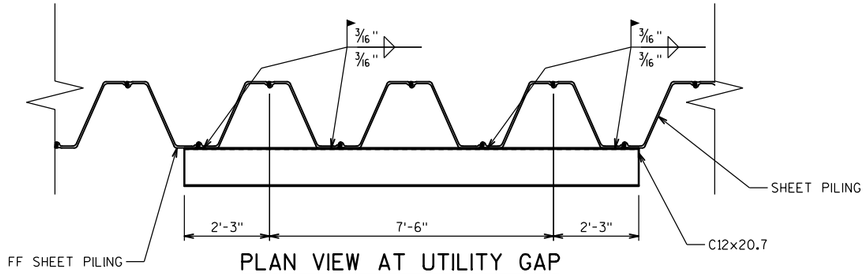


SECTION C-C

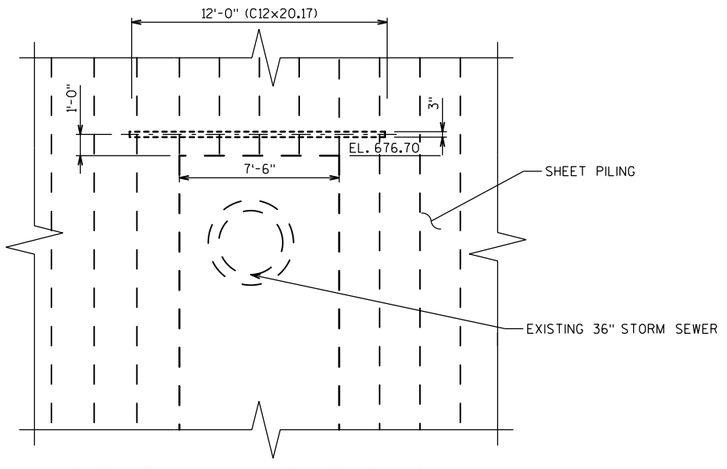


WALE SPLICE PLATE DETAIL PLAN VIEW

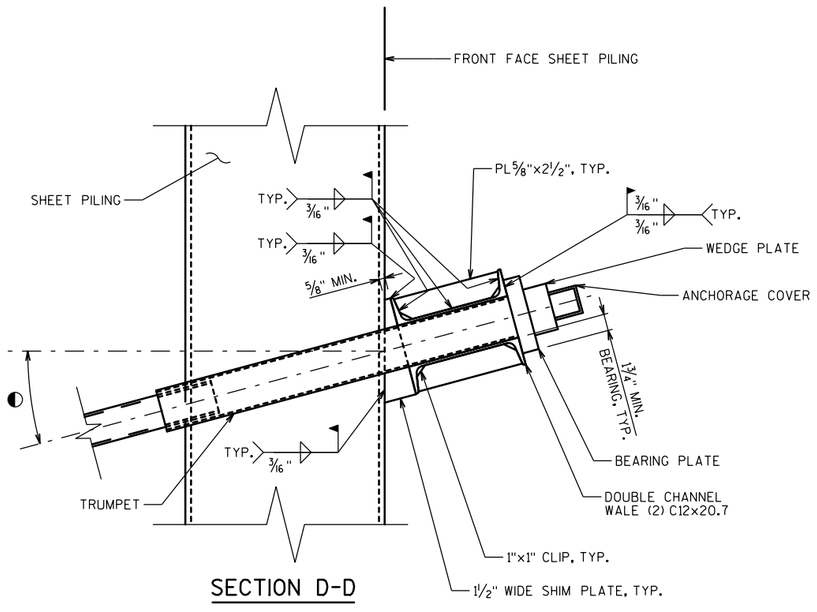
USE 1 MAX. SPLICE PALTE PER CHANNEL WALE PER SEGMENT



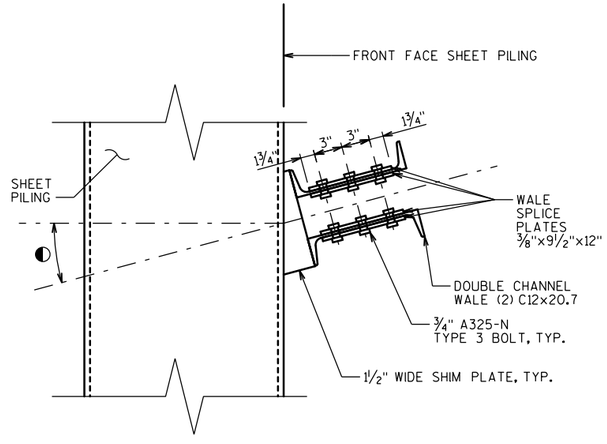
PLAN VIEW AT UTILITY GAP



ELEVATION VIEW AT UTILITY GAP



SECTION D-D



SECTION E-E

◐ ANGLE FROM VERTICAL, SEE TIEBACK ANCHOR DATA TABLES ON SHEET "WALL & TIEBACK ANCHOR DATA TABLES".

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-642

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TIEBACK ANCHOR DETAILS (2 OF 2)

SHEET 8 OF 10

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-642\cds\R642_080108_Rev03.dgn PLOT DATE : 10/30/2017 12:12:26 PM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 4:1

STATE PROJECT NUMBER
1228-16-71

TIEBACK ANCHOR DATA TABLE - ROW 1

◹ PROPOSED TIEBACK STATION	OFFSET FROM R/L	† PROPOSED SPACING	MAX. ALLOWABLE SPACING	TIEBACK NUMBER	◭ TIEBACK ELEV. (FT)	☆ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ TIEBACK VERTICAL ORIENTATION (DEGREES)	TIEBACK UNBONDED LENGTH (FT)	TIEBACK BONDED LENGTH (FT)	TIEBACK TOTAL LENGTH (FT)	TIEBACK DESIGN LOAD (KIPS)	TIEBACK TEST LOAD (KIPS)
14+02.98	2'-3", LT.	-	-	101	692.09	90	15	17	30	47	122	163
14+10.48	2'-3", LT.	7'-6"	7'-6"	102	692.36	90	15	17	30	47	122	163
14+17.98	2'-3", LT.	7'-6"	7'-6"	103	692.63	90	15	17	30	47	122	163
14+25.48	2'-3", LT.	7'-6"	7'-6"	104	692.90	90	15	17	30	47	122	163
14+32.98	2'-3", LT.	7'-6"	7'-6"	105	693.17	90	15	17	30	47	122	163
14+40.48	2'-3", LT.	7'-6"	7'-6"	106	693.44	90	15	17	30	47	122	163
14+47.98	2'-3", LT.	7'-6"	7'-6"	107	693.71	90	15	17	30	47	122	163
14+55.48	2'-3", LT.	7'-6"	7'-6"	108	693.98	90	15	17	30	47	122	163
14+62.98	2'-3", LT.	7'-6"	7'-6"	109	694.25	90	15	17	30	47	122	163
14+70.48	2'-3", LT.	7'-6"	7'-6"	110	694.53	90	15	17	30	47	122	163
14+77.48	2'-3", LT.	7'-0"	7'-6"	111	694.78	90	15	17	30	47	122	163
14+81.67	2'-3", LT.	4'-2 3/8"	7'-6"	112	695.14	90	15	17	30	47	122	163
14+88.67	2'-3", LT.	7'-0"	7'-6"	113	695.14	90	15	17	30	47	122	163
14+92.92	2'-3", LT.	4'-3"	7'-6"	-	-	-	-	-	-	-	-	-
15+00.42	2'-3", LT.	7'-6"	7'-6"	-	-	-	-	-	-	-	-	-
15+07.92	2'-3", LT.	7'-6"	7'-6"	-	-	-	-	-	-	-	-	-
15+15.42	2'-3", LT.	7'-6"	7'-6"	-	-	-	-	-	-	-	-	-
15+22.92	2'-3", LT.	7'-6"	7'-6"	-	-	-	-	-	-	-	-	-
15+30.42	2'-3", LT.	7'-6"	7'-6"	-	-	-	-	-	-	-	-	-
15+37.92	2'-3", LT.	7'-6"	7'-6"	-	-	-	-	-	-	-	-	-
15+45.42	2'-3", LT.	7'-6"	7'-6"	-	-	-	-	-	-	-	-	-
15+52.92	2'-3", LT.	7'-6"	7'-6"	-	-	-	-	-	-	-	-	-
15+59.80	2'-3", LT.	6'-10 1/2"	7'-6"	-	-	-	-	-	-	-	-	-
15+64.69	2'-3", LT.	4'-10 3/4"	7'-6"	114	695.05	80	15	17	30	47	122	163
15+69.48	2'-3", LT.	4'-9 1/2"	7'-6"	115	694.73	80	15	17	30	47	135	180
15+76.98	2'-3", LT.	7'-6"	7'-6"	116	694.24	75	15	17	30	47	135	180
15+83.44	2'-3", LT.	6'-5 1/2"	7'-6"	117	693.82	75	15	17	30	47	122	163
15+90.40	2'-3", LT.	6'-11 1/2"	7'-6"	118	693.36	75	15	17	30	47	122	163

TIEBACK ANCHOR DATA TABLE - ROW 2

◹ PROPOSED TIEBACK STATION	OFFSET FROM R/L	† PROPOSED SPACING	MAX. ALLOWABLE SPACING	TIEBACK NUMBER	◭ TIEBACK ELEV. (FT)	☆ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ TIEBACK VERTICAL ORIENTATION (DEGREES)	TIEBACK UNBONDED LENGTH (FT)	TIEBACK BONDED LENGTH (FT)	TIEBACK TOTAL LENGTH (FT)	TIEBACK DESIGN LOAD (KIPS)	TIEBACK TEST LOAD (KIPS)
14+02.98	2'-3", LT.	-	-	201	683.09	90	15	15	30	45	122	163
14+10.48	2'-3", LT.	7'-6"	7'-6"	202	683.36	90	15	15	30	45	122	163
14+17.98	2'-3", LT.	7'-6"	7'-6"	203	683.63	90	15	15	30	45	122	163
14+25.48	2'-3", LT.	7'-6"	7'-6"	204	683.90	90	15	15	30	45	122	163
14+32.98	2'-3", LT.	7'-6"	7'-6"	205	684.17	90	15	15	30	45	122	163
14+40.48	2'-3", LT.	7'-6"	7'-6"	206	684.44	90	15	15	30	45	122	163
14+47.98	2'-3", LT.	7'-6"	7'-6"	207	684.71	90	15	15	30	45	122	163
14+55.48	2'-3", LT.	7'-6"	7'-6"	208	684.98	90	15	15	30	45	122	163
14+62.98	2'-3", LT.	7'-6"	7'-6"	209	685.25	90	15	15	30	45	122	163
14+70.48	2'-3", LT.	7'-6"	7'-6"	210	685.53	90	15	15	30	45	122	163
14+77.48	2'-3", LT.	7'-0"	7'-6"	211	685.78	90	15	15	30	45	122	163
14+81.67	2'-3", LT.	4'-2 3/8"	7'-6"	212	685.93	90	15	15	30	45	122	163
14+88.67	2'-3", LT.	7'-0"	7'-6"	213	685.93	90	15	15	30	45	122	163
14+92.92	2'-3", LT.	4'-3"	7'-6"	214	685.93	90	15	15	35	50	153	204
15+00.42	2'-3", LT.	7'-6"	7'-6"	215	685.93	90	15	15	35	50	153	204
15+07.92	2'-3", LT.	7'-6"	7'-6"	216	685.93	90	15	15	35	50	153	204
15+15.42	2'-3", LT.	7'-6"	7'-6"	217	685.93	90	15	15	35	50	153	204
15+22.92	2'-3", LT.	7'-6"	7'-6"	218	685.93	90	15	15	35	50	153	204
15+30.42	2'-3", LT.	7'-6"	7'-6"	219	685.93	90	15	15	35	50	153	204
15+37.92	2'-3", LT.	7'-6"	7'-6"	220	685.93	90	15	15	35	50	153	204
15+45.42	2'-3", LT.	7'-6"	7'-6"	221	685.93	90	15	15	35	50	153	204
15+52.92	2'-3", LT.	7'-6"	7'-6"	222	685.93	90	15	15	35	50	153	204
15+59.80	2'-3", LT.	6'-10 1/2"	7'-6"	223	685.93	90	15	15	35	50	153	204
15+64.69	2'-3", LT.	4'-10 3/4"	7'-6"	224	685.93	80	15	15	30	45	122	163
15+69.48	2'-3", LT.	4'-9 1/2"	7'-6"	225	685.61	80	15	15	30	45	135	180
15+76.98	2'-3", LT.	7'-6"	7'-6"	226	685.12	75	15	15	30	45	135	180
15+83.44	2'-3", LT.	6'-5 1/2"	7'-6"	227	684.70	75	15	15	30	45	122	163
15+90.40	2'-3", LT.	6'-11 1/2"	7'-6"	228	684.24	75	15	15	30	45	122	163

SEGMENT A WALL ELEVATIONS ◨

STATION	OFFSET	TOP OF SHEET PILING EL.	BOTTOM OF SHEET PILING EL.	SHEET PILE SECTION	FINISHED GRADE EL. (AT FF OF SHEET PILING)	EXISTING GROUND EL. (AT FF OF SHEET PILING)
14+00.85	2'-3", LT.	698.01	653.01	PZC-39	698.01	697.41
14+25.00	2'-3", LT.	698.88	653.88	PZC-39	689.76	698.16
14+36.00	2'-3", LT.	699.28	654.28	PZC-39	686.00	698.37
14+50.00	2'-3", LT.	699.79	654.79	PZC-39	686.00	698.62
14+75.00	2'-3", LT.	700.69	655.69	PZC-39	686.00	698.97
14+78.66	2'-3", LT.	700.82	655.82	PZC-39	686.00	698.97
14+87.54	2'-3", LT.	701.14	656.14	PZC-39	686.00	698.85
14+92.99	2'-3", LT.	701.14	656.14	PZC-39	686.00	698.79

SEGMENT B WALL ELEVATIONS ◨

STATION	OFFSET	TOP OF SHEET PILING EL.	BOTTOM OF SHEET PILING EL.	SHEET PILE SECTION	FINISHED GRADE EL. (AT FF OF SHEET PILING)	EXISTING GROUND EL. (AT FF OF SHEET PILING)
14+92.99	2'-3", LT.	691.59	651.59	PZC-39	686.00	698.79
15+00.00	2'-3", LT.	691.59	651.59	PZC-39	686.00	698.54
15+25.00	2'-3", LT.	691.59	651.59	PZC-39	686.00	698.49
15+47.67	2'-3", LT.	691.59	651.59	PZC-40	686.00	698.43
15+50.00	2'-3", LT.	691.59	651.59	PZC-39	686.78	698.41
15+61.14	2'-3", LT.	691.59	651.59	PZC-39	690.49	698.35

SEGMENT C WALL ELEVATIONS ◨

STATION	OFFSET	TOP OF SHEET PILING EL.	BOTTOM OF SHEET PILING EL.	SHEET PILE SECTION	FINISHED GRADE EL. (AT FF OF SHEET PILING)	EXISTING GROUND EL. (AT FF OF SHEET PILING)
15+61.14	2'-3", LT.	701.05	656.05	PZC-39	690.49	698.35
15+61.23	2'-3", LT.	701.05	656.05	PZC-39	690.52	698.34
15+65.69	2'-3", LT.	701.05	656.05	PZC-39	692.01	698.33
15+70.07	2'-3", LT.	700.75	655.75	PZC-39	693.47	698.27
15+70.07	2'-3", LT.	700.75	676.70	PZC-39	693.47	698.27
15+75.00	2'-3", LT.	700.41	676.70	PZC-39	695.11	698.60
15+77.57	2'-3", LT.	700.24	676.70	PZC-39	695.97	698.84
15+77.57	2'-3", LT.	700.24	655.24	PZC-39	695.97	698.84
15+92.57	2'-3", LT.	699.21	654.21	PZC-39	699.21	699.21

◨ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

TIEBACK ANCHOR DATA TABLES NOTES

REFER TO THE GEOTECHNICAL EXPLORATION AND ANALYSIS REPORT FOR THIS STRUCTURE FOR ADDITIONAL TIEBACK ANCHOR INFORMATION.

◹ THIS IS AN APPROXIMATE STATION AND IS DEPENDANT UPON THE LAYOUT OF THE DRIVEN PILE IN THE FIELD.

† MEASURED ALONG WALL ℄

◭ ELEVATION GIVEN AT FRONT FACE OF SHEET PILING

◑ REFER TO "TIEBACK ANCHOR DETAILS" SHEET

☆ HORIZONTAL OREINTATION IS MEASURED FROM FRONT FACE OF SHEET PILING IN COUNTERCLOCKWISE DIRECTION. REFER TO "TIEBACK ANCHOR DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-642

DRAWN BY EAJ | PLANS CK'D. HDA

WALL & TIEBACK ANCHOR DATA TABLES

SHEET 9 OF 10

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-642\cds\R642_080109_Rev3.dgn DATE : 10/30/2017 12:12:27 PM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 10:1

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL EXPLORATION AND ANALYSIS REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

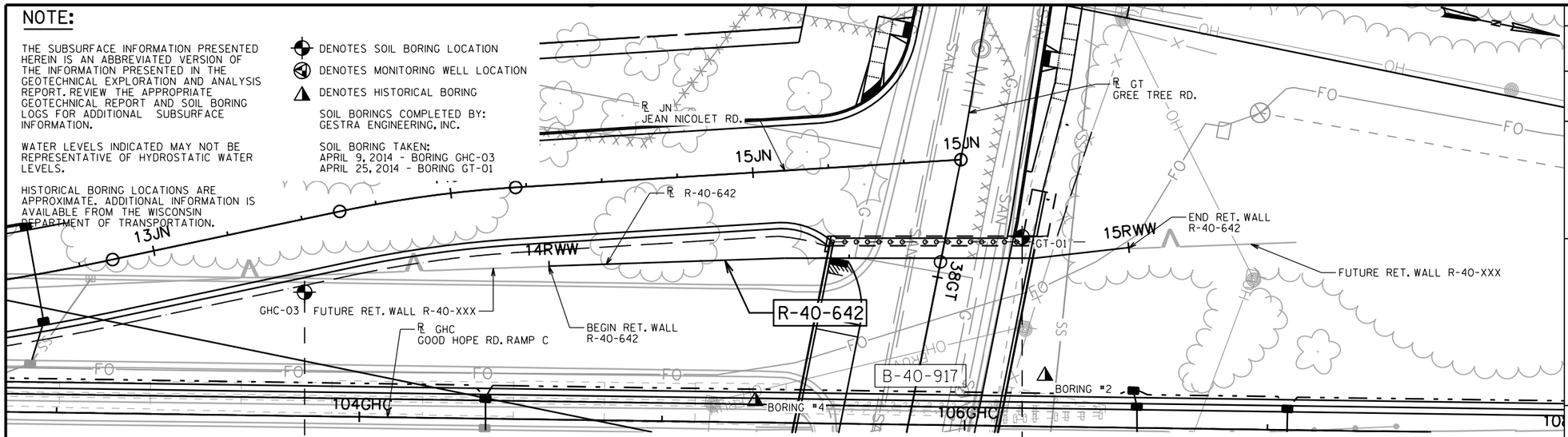
WATER LEVELS INDICATED MAY NOT BE REPRESENTATIVE OF HYDROSTATIC WATER LEVELS.

HISTORICAL BORING LOCATIONS ARE APPROXIMATE. ADDITIONAL INFORMATION IS AVAILABLE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

DENOTES SOIL BORING LOCATION
DENOTES MONITORING WELL LOCATION
DENOTES HISTORICAL BORING

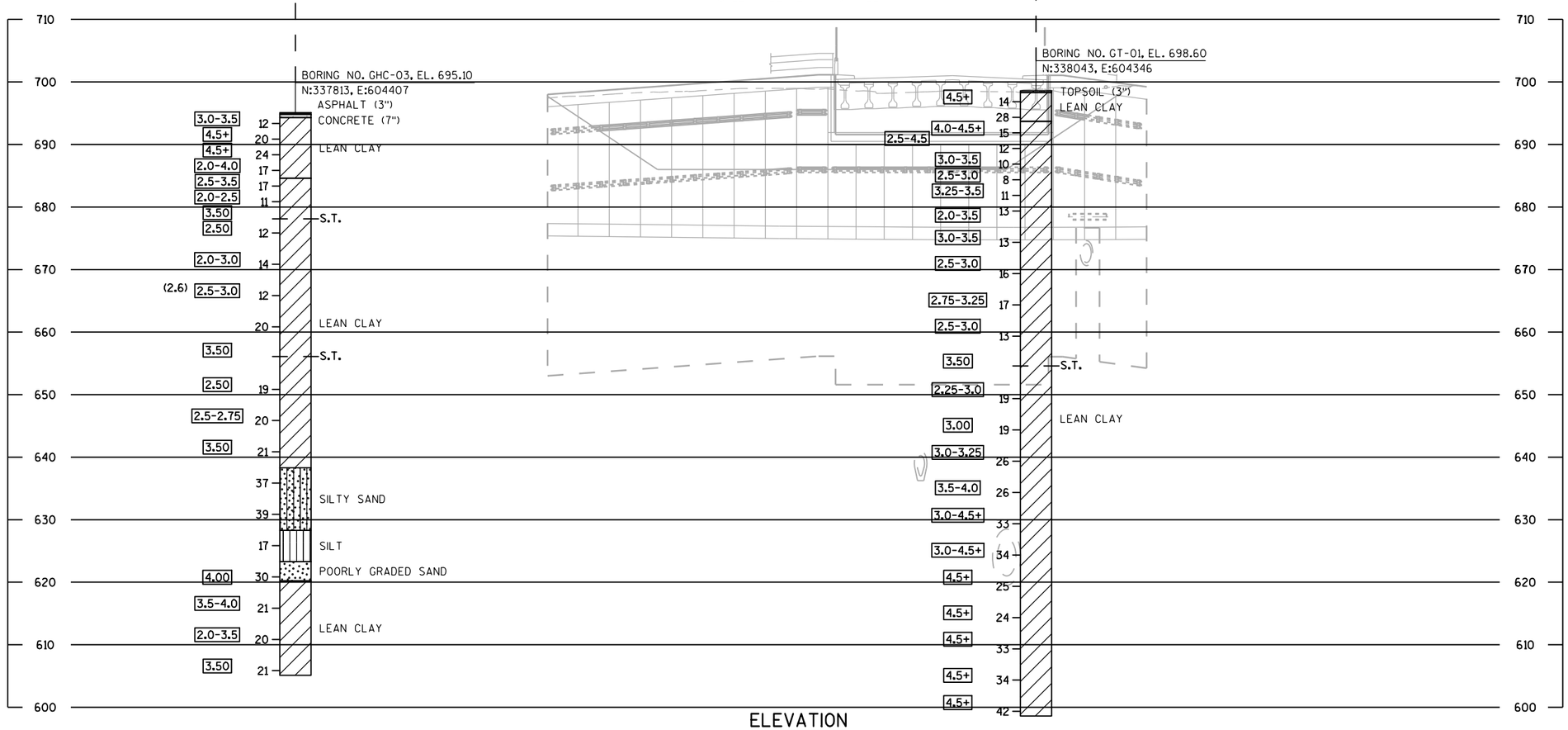
SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
APRIL 9, 2014 - BORING GHC-03
APRIL 25, 2014 - BORING GT-01



PLAN

SHEET PILE RETAINING WALL



ELEVATION

LOOKING WEST AT FRONT FACE OF WALL

STATE PROJECT NUMBER

1228-16-71

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

SAND, PEAT, FILL
GRAVEL, CLAY, SANDSTONE
ASPHALT, SILT, LIMESTONE
CONCRETE, TOPSOIL, BEDROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

UNCONFINED STRENGTH (TSF):
-FROM POCKET PENETROMETER
-FROM UNCONFINED COMPRESSION TEST

BORING NO.
ELEV.
STA.
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

(7.7) 7.7 7

BLOWS PER FT. USING 140# WT. FALLING 30" (UNCORRECTED)
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-642

DRAWN BY EAJ | PLANS CK'D. DMM/HDA

SUBSURFACE EXPLORATION

SHEET 10 OF 10

8

8

FILE NAME : \\MLWW400\i43\Design\Plans\12290401\Design\12290401_Milwaukee\Structures\1228-16-01 Green Tree\R-40-642\cds\R642_080201_Sht.dgn PLOT DATE : 10/30/2017 12:12:41 PM PLOT BY : ejelinek PLOT NAME : $FILE$ PLOT SCALE : 40:1

Project ID: 1228-16-71
Division 1: Green Tree Road

STATION		Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	EBS	Fill	Cut	Fill	
31+00	AH	0	54.20	0.66	0.00	0.00	0.00	0	0	0
31+50		50	53.00	12.00	99.26	0.00	11.72	99.3	11.7	88
32+00		50	59.62	9.78	104.28	0.00	20.17	203.5	31.9	172
32+50		50	48.49	10.65	100.10	0.00	18.92	303.6	50.8	253
32+58		8	48.41	9.74	14.36	0.00	3.02	318.0	53.8	264
33+00		42	37.74	6.36	67.01	0.00	12.52	385.0	66.3	319
33+50		50	24.77	5.70	57.88	0.00	11.17	442.9	77.5	365
34+00		50	12.39	32.16	34.41	0.00	35.06	477.3	112.6	365
34+50		50	9.05	74.37	19.85	0.00	98.64	497.1	211.2	286
35+00		50	0.00	125.96	8.38	0.00	185.49	505.5	396.7	109
35+50		50	0.00	122.58	0.00	0.00	230.13	505.5	626.8	-121
36+00		50	0.00	113.75	0.00	0.00	218.82	505.5	845.7	-340
36+50		50	3.48	162.38	3.22	0.00	255.68	508.7	1,101.3	-593
36+60		10	2.45	169.32	1.10	0.00	61.43	509.8	1,162.8	-653
36+85		25	1.57	115.25	1.86	0.00	131.75	511.7	1,294.5	-783
37+00		15	0.00	116.95	0.44	0.00	64.50	512.1	1,359.0	-847
37+50		50	0.33	100.65	0.31	0.00	201.48	512.4	1,560.5	-1,048
37+89	BK	39	0.33	100.65	0.48	0.00	145.38	512.9	1,705.9	-1,193
					512.92	0.00	1,705.87			

Project ID: 1228-16-71
Division 1: Jean Nicolet Road

STATION		Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	EBS	Fill	Cut	Fill	
8+42	AH	0	5.66	5.66	0	0	0	0	0	0
8+50		8	5.51	5.63	1.7	0.0	1.7	1.7	1.7	0
9+00		50	5.49	6.39	10.2	0.0	11.1	11.8	12.8	-1
9+50		50	5.62	4.72	10.3	0.0	10.3	22.1	23.1	-1
10+00		50	5.56	3.25	10.4	0.0	7.4	32.5	30.5	2
10+50		50	5.54	2.63	10.3	0.0	5.4	42.8	35.9	7
11+00		50	5.90	0.55	10.6	0.0	2.9	53.3	38.9	14
11+50		50	52.45	0.79	54.0	0.0	1.2	107.4	40.1	67
12+00		50	55.58	37.65	100.0	0.0	35.6	207.4	75.7	132
12+50		50	39.80	21.82	88.3	0.0	55.1	295.7	130.8	165
13+00		50	42.12	1.25	75.9	0.0	21.4	371.6	152.1	219
13+50		50	53.27	1.21	88.3	0.0	2.3	459.9	154.4	306
14+00		50	80.79	0.37	124.1	0.0	1.5	584.0	155.9	428
14+50		50	102.93	0.00	170.1	0.0	0.3	754.1	156.2	598
15+00	BK	50	46.73	1.70	138.6	0.0	1.6	892.7	157.8	735
					892.7	0.0	157.8			

Project ID: 1228-16-71
Division 2: Green Tree Road

STATION		Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	EBS	Fill	Cut	Fill	
40+06	AH		0.00	71.65	0.00	0.00	0.00	0	0	0
40+50		44	0.00	71.65	0.00	0.00	116.76	0.0	116.8	-117
41+00		50	12.25	3.67	11.34	0.00	69.74	11.3	186.5	-175
41+50		50	77.78	0.00	83.36	0.00	3.40	94.7	189.9	-95
42+00		50	74.24	0.00	140.76	0.00	0.00	235.5	189.9	46
42+50		50	66.09	0.00	129.94	0.00	0.00	365.4	189.9	175
42+85	BK	35	58.40	0.00	80.69	0.00	0.00	446.1	189.9	256
					446.09	0.00	189.90			

9

9

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	EARTHWORK	SHEET: 406	E

Project ID: 1228-16-71
Division 3: IH-43 Median and NB Outside Shoulder

STATION		Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	EBS	Fill	Cut	Fill	
1120+45	AH	0	14.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1120+50		5	14.07	0.00	2.6	0.3	0.0	2.6	0.0	3
1120+75		25	14.19	0.00	13.1	1.3	0.0	15.7	0.0	16
1121+00		25	14.15	0.00	13.1	1.3	0.0	28.8	0.0	29
1121+25		50	13.10	0.00	25.2	2.5	0.0	54.0	0.0	54
1121+50		25	13.20	0.00	12.2	1.2	0.0	66.2	0.0	66
1121+75		25	13.10	0.00	12.2	1.2	0.0	78.4	0.0	78
1122+00		25	13.79	0.00	12.4	1.2	0.0	90.8	0.0	91
1122+25		25	15.36	0.00	13.5	1.3	0.0	104.3	0.0	104
1122+50		25	14.54	0.00	13.8	1.4	0.0	118.2	0.0	118
1122+75		25	13.31	0.00	12.9	1.3	0.0	131.1	0.0	131
1123+00		25	13.43	0.00	12.4	1.2	0.0	143.4	0.0	143
1123+25		25	13.83	0.00	12.6	1.3	0.0	156.1	0.0	156
1123+50		25	13.97	0.00	12.9	1.3	0.0	168.9	0.0	169
1123+75		25	13.99	0.00	12.9	1.3	0.0	181.9	0.0	182
1124+00		25	14.03	0.00	13.0	1.3	0.0	194.9	0.0	195
1124+25		25	13.96	0.00	13.0	1.3	0.0	207.8	0.0	208
1124+50		25	13.27	0.00	12.6	1.3	0.0	220.4	0.0	220
1124+75		25	14.37	0.00	12.8	1.3	0.0	233.2	0.0	233
1125+00		25	15.99	0.00	14.1	1.4	0.0	247.3	0.0	247
1125+25		25	15.41	0.00	14.5	1.5	0.0	261.8	0.0	262
1125+50		25	16.31	0.00	14.7	1.5	0.0	276.5	0.0	276
1125+75		25	14.27	0.00	14.2	1.4	0.0	290.7	0.0	291
1126+00		25	14.32	0.00	13.2	1.3	0.0	303.9	0.0	304
1126+25		25	14.30	0.00	13.3	1.3	0.0	317.1	0.0	317
1126+50		25	14.35	0.00	13.3	1.3	0.0	330.4	0.0	330
1126+75		25	14.90	0.00	13.5	1.4	0.0	343.9	0.0	344
1127+00		25	14.29	0.00	13.5	1.4	0.0	357.5	0.0	357
1127+25		25	13.95	0.00	13.1	1.3	0.0	370.5	0.0	371
1127+50		25	14.16	0.00	13.0	1.3	0.0	383.5	0.0	384
1127+75		25	14.21	0.00	13.1	1.3	0.0	396.7	0.0	397
1128+00		25	15.45	0.00	13.7	1.4	0.0	410.4	0.0	410
1128+25		25	11.97	0.00	12.7	1.3	0.0	423.1	0.0	423
1128+50		25	12.18	0.00	11.2	1.1	0.0	434.3	0.0	434
1128+75		25	12.40	0.00	11.4	1.1	0.0	445.7	0.0	446
1129+00		25	12.14	0.00	11.4	1.1	0.0	457.0	0.0	457
1129+25		25	12.40	0.00	11.4	1.1	0.0	468.4	0.0	468
1129+50		25	13.04	0.00	11.8	1.2	0.0	480.2	0.0	480
1129+56	BK	6	13.15	0.00	2.7	0.3	0.0	482.9	0.0	483

Project ID: 1228-16-71
Division 3: IH-43 Median and NB Outside Shoulder

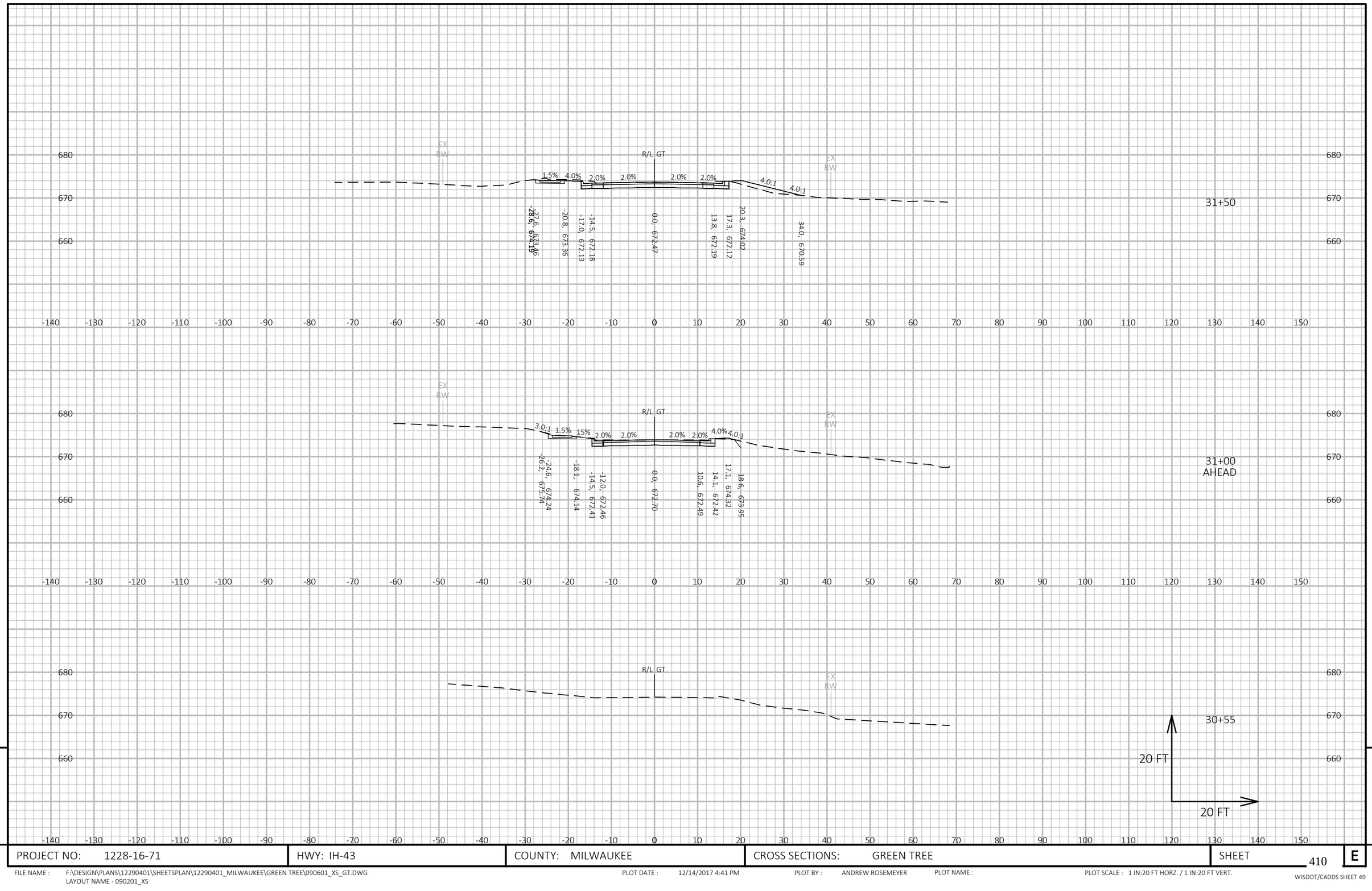
STATION		Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	EBS	Fill	Cut	Fill	
1130+32	AH	77	50.74	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1130+50		18	177.85	0.00	75.8	7.6	0.0	75.8	0.0	76
1130+75		25	267.49	0.00	206.2	20.6	0.0	281.9	0.0	282
1131+00		25	283.89	0.00	255.3	25.5	0.0	537.2	0.0	537
1131+25		25	302.76	0.00	271.6	27.2	0.0	808.8	0.0	809
1131+50		25	289.92	0.00	274.4	27.4	0.0	1,083.2	0.0	1,083
1132+00		50	215.88	0.00	468.3	46.8	0.0	1,551.5	0.0	1,552
1132+25		25	48.62	1.54	122.5	12.2	0.7	1,674.0	0.7	1,673
1132+50		25	42.34	9.07	42.1	4.2	4.9	1,716.1	5.6	1,710
1132+76		26	48.70	0.00	43.8	4.4	4.4	1,759.9	10.0	1,750
1133+00		24	32.34	0.00	36.0	3.6	0.0	1,796.0	10.0	1,786
1133+19	BK	19	13.99	0.00	16.6	1.7	0.0	1,812.6	10.0	1,803
					2,295.5	229.5	10.0			

Project ID: 1228-16-71
Divison 3: Good Hope Road Southbound Entrance Ramp

STATION		Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)			Structure Backfill (for Barrier S42C)	Mass Ordinate
			Cut	Fill	Structure Backfill (for Barrier S42C)	Cut	EBS	Fill	Structure Backfill (for Barrier S42C)	Cut	Fill	Structure Backfill (for Barrier S42C)	TON	
96+50	AH	0	26.74	0.00	0	0	0	0	0	0	0	0	0	0
97+00		50	36.20	0.00	0	58.3	5.8	0.0	0.0	58.3	0.0	0.0	0	58
97+50		50	37.32	0.00	0	68.1	6.8	0.0	0.0	126.4	0.0	0.0	0	126
98+00		50	40.69	3.69	0	72.2	7.2	3.4	0.0	198.6	3.4	0.0	0	195
98+50		50	43.47	7.60	0	77.9	7.8	10.5	0.0	276.5	13.9	0.0	0	263
99+00		50	46.70	9.55	0	83.5	8.3	15.9	0.0	360.0	29.8	0.0	0	330
99+50		50	49.24	9.45	0	88.8	8.9	17.6	0.0	448.8	47.3	0.0	0	401
100+00		50	49.93	6.77	0	91.8	9.2	15.0	0.0	540.7	62.4	0.0	0	478
100+50		50	54.02	5.22	0	96.3	9.6	11.1	0.0	636.9	73.5	0.0	0	563
101+00		50	59.41	1.82	0	105.0	10.5	6.5	0.0	741.9	80.0	0.0	0	662
101+50		50	65.49	0.00	0	115.6	11.6	1.7	0.0	857.6	81.7	0.0	0	776
102+00		50	69.45	0.00	8	124.9	12.5	0.0	14.8	982.5	81.7	14.8	30	901
102+50		50	83.47	0.00	8	141.6	14.2	0.0	14.8	1,124.1	81.7	29.6	59	1,042
103+00		50	115.47	0.00	8	184.2	18.4	0.0	14.8	1,308.3	81.7	44.4	89	1,227
103+50		50	162.74	0.00	8	257.6	25.8	0.0	14.8	1,565.9	81.7	59.3	119	1,484
104+00		50	236.99	0.00	8	370.1	37.0	0.0	14.8	1,936.0	81.7	74.1	148	1,854
104+50		50	331.01	0.00	8	525.9	52.6	0.0	14.8	2,462.0	81.7	88.9	178	2,380
105+00		50	717.98	0.00	8	971.3	97.1	0.0	14.8	3,433.3	81.7	103.7	207	3,352
105+50		50	784.46	0.00	8	1,391.1	139.1	0.0	14.8	4,824.4	81.7	118.5	237	4,743
106+00		50	805.39	0.00	8	1,472.1	147.2	0.0	14.8	6,296.5	81.7	133.3	267	6,215
106+50		50	275.77	0.00	8	1,001.1	100.1	0.0	14.8	7,297.6	81.7	148.1	296	7,216
107+00		50	234.19	0.00	8	472.2	47.2	0.0	14.8	7,769.8	81.7	163.0	326	7,688
107+50		50	59.72	4.24	8	272.1	27.2	3.9	14.8	8,041.9	85.6	177.8	356	7,956
108+00		50	61.98	5.42	8	112.7	11.3	8.9	14.8	8,154.6	94.5	192.6	385	8,060
108+50		50	60.24	4.67	8	113.2	11.3	9.3	14.8	8,267.7	103.9	207.4	415	8,164
109+00		50	58.37	8.69	8	109.8	11.0	12.4	14.8	8,377.6	116.3	222.2	444	8,261
109+50		50	61.73	14.26	8	111.2	11.1	21.3	14.8	8,488.8	137.5	237.0	474	8,351
110+00		50	64.00	28.79	8	116.4	11.6	39.9	14.8	8,605.2	177.4	251.9	504	8,428
110+50		50	65.95	30.16	8	120.3	12.0	54.6	14.8	8,725.5	231.9	266.7	533	8,494
111+00		50	66.06	12.80	8	122.2	12.2	39.8	14.8	8,847.7	271.7	281.5	563	8,576
111+50		50	72.17	7.11	8	128.0	12.8	18.4	14.8	8,975.7	290.2	296.3	593	8,686
112+00		50	75.92	10.75	8	137.1	13.7	16.5	14.8	9,112.9	306.7	311.1	622	8,806
112+50		50	85.50	17.41	8	149.5	14.9	26.1	14.8	9,262.3	332.8	325.9	652	8,930
113+00		50	99.26	11.22	8	171.1	17.1	26.5	14.8	9,433.4	359.3	340.7	681	9,074
113+50		50	118.74	0.35	8	201.9	20.2	10.7	14.8	9,635.2	370.0	355.6	711	9,265
114+00		50	92.78	1.88	8	195.9	19.6	2.1	14.8	9,831.1	372.1	370.4	741	9,459
114+50		50	96.68	5.21	0	175.4	17.5	6.6	0.0	10,006.5	378.6	370.4	741	9,628
115+00		50	109.64	0.76	0	191.0	19.1	5.5	0.0	10,197.6	384.1	370.4	741	9,813
115+50		50	108.71	1.77	0	202.2	20.2	2.3	0.0	10,399.7	386.5	370.4	741	10,013
116+00		50	89.83	2.55	0	183.8	18.4	4.0	0.0	10,583.6	390.5	370.4	741	10,193
116+50		50	95.07	2.02	0	171.2	17.1	4.2	0.0	10,754.8	394.7	370.4	741	10,360
117+00		50	100.50	1.96	0	181.1	18.1	3.7	0.0	10,935.9	398.4	370.4	741	10,537
117+50		50	107.21	2.03	0	192.3	19.2	3.7	0.0	11,128.2	402.1	370.4	741	10,726
118+00		50	112.78	1.10	0	203.7	20.4	2.9	0.0	11,331.9	405.0	370.4	741	10,927
118+50		50	136.80	0.00	0	231.1	23.1	1.0	0.0	11,563.0	406.0	370.4	741	11,157
119+00	BK	50	84.34	0.00	0	204.8	20.5	0.0	0.0	11,767.7	406.0	370.4	741	11,362
						11,767.7	1,176.5	406.0	370.4				741	

PROJECT NO: 1228-16-71 | HWY: IH-43 | COUNTY: MILWAUKEE | EARTHWORK | SHEET: 409 | E

FILE NAME: \\milw00\ingrproj\1517-75-76\ti\cds\090101_ew.ppt PLOT DATE : 10/31/2017 3:58:58 PM PLOT BY : HNTB. CORP PLOT NAME : 090101_ew6 PLOT SCALE : 1:1



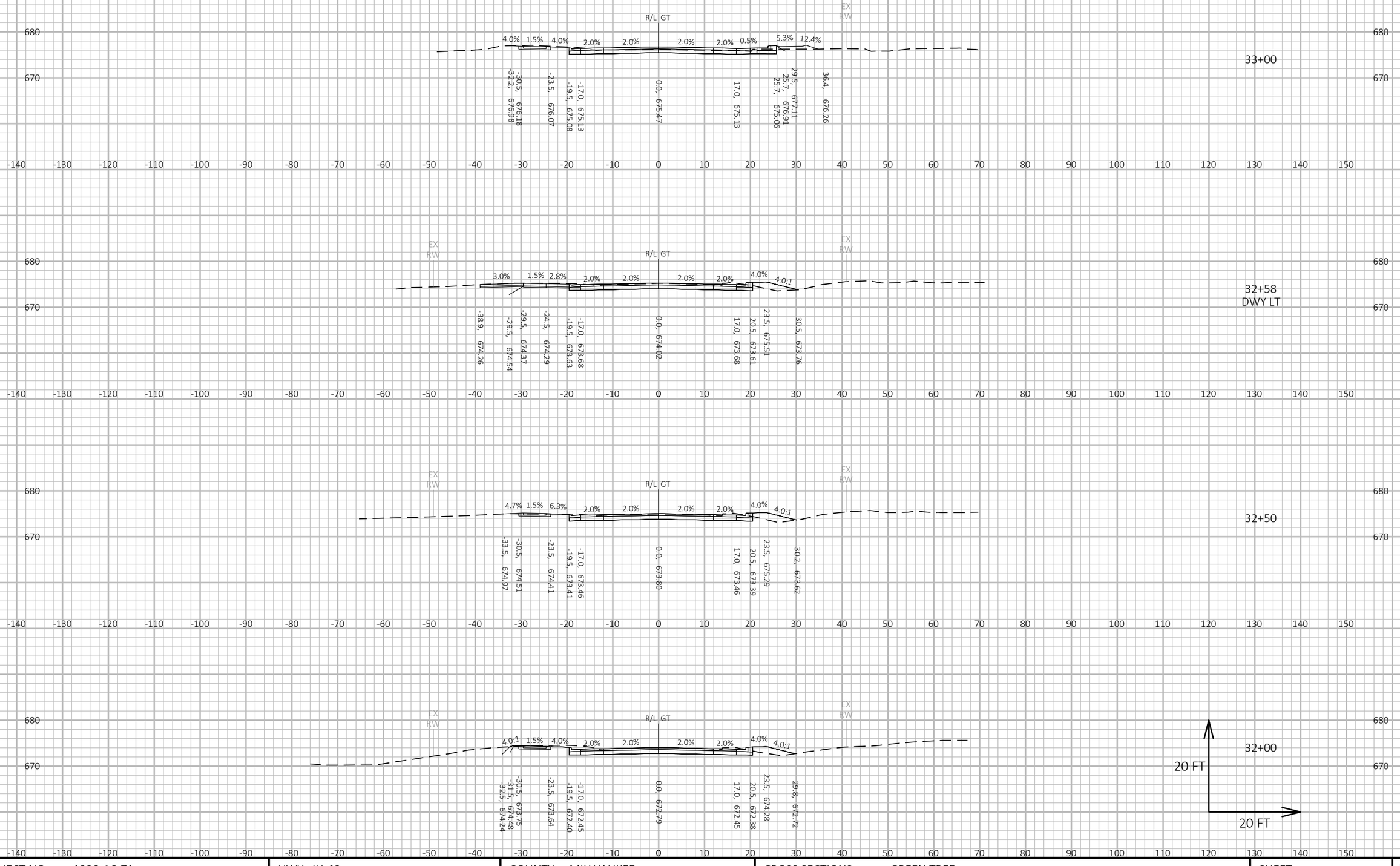
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9

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 410	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090201_XS

PLOT DATE : 12/14/2017 4:41 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

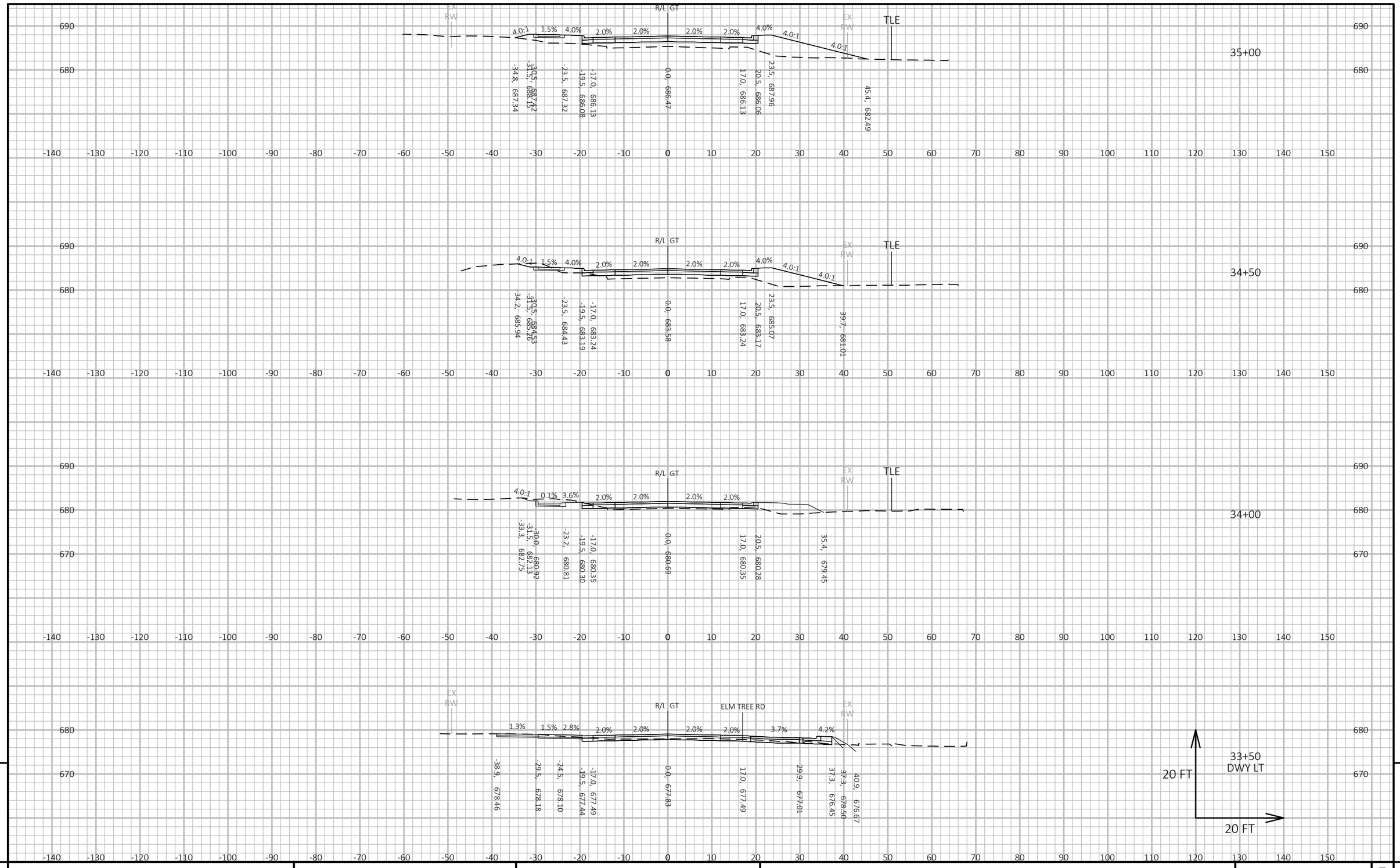
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 411	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090202_XS

PLOT DATE : 12/14/2017 4:42 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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9

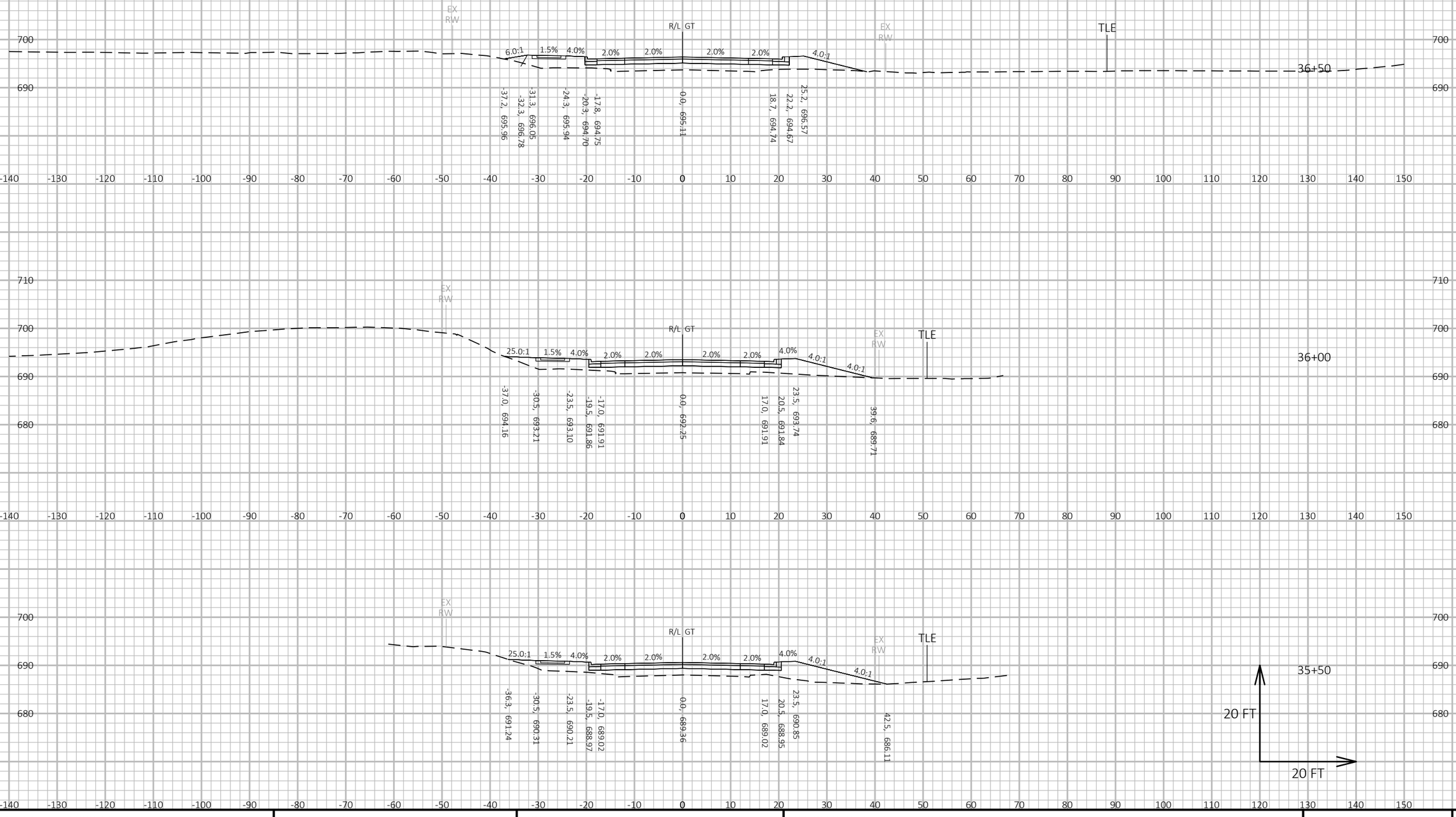
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 412	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090203_XS

PLOT DATE : 12/14/2017 4:42 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

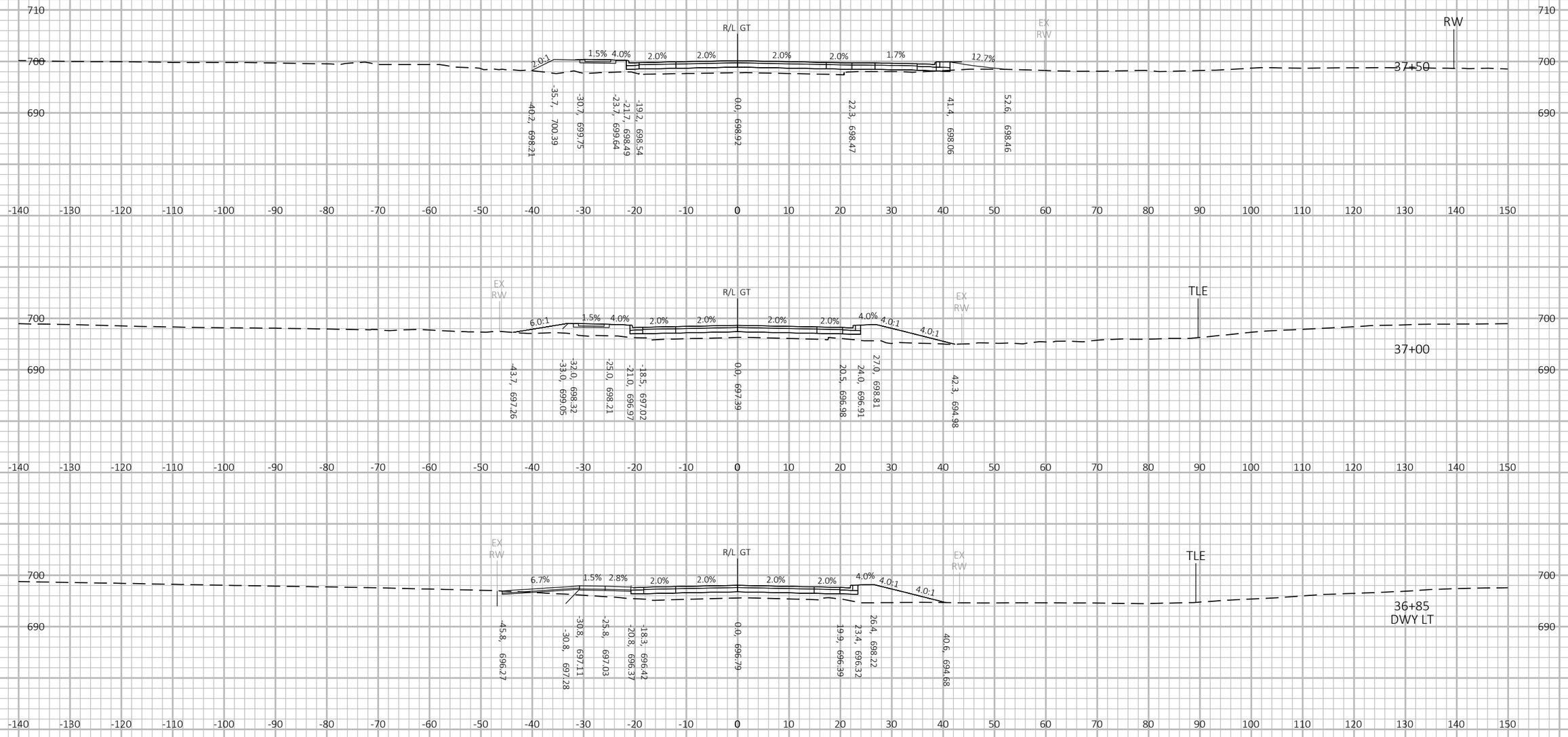


PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 413	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090204_XS

PLOT DATE : 12/14/2017 4:42 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



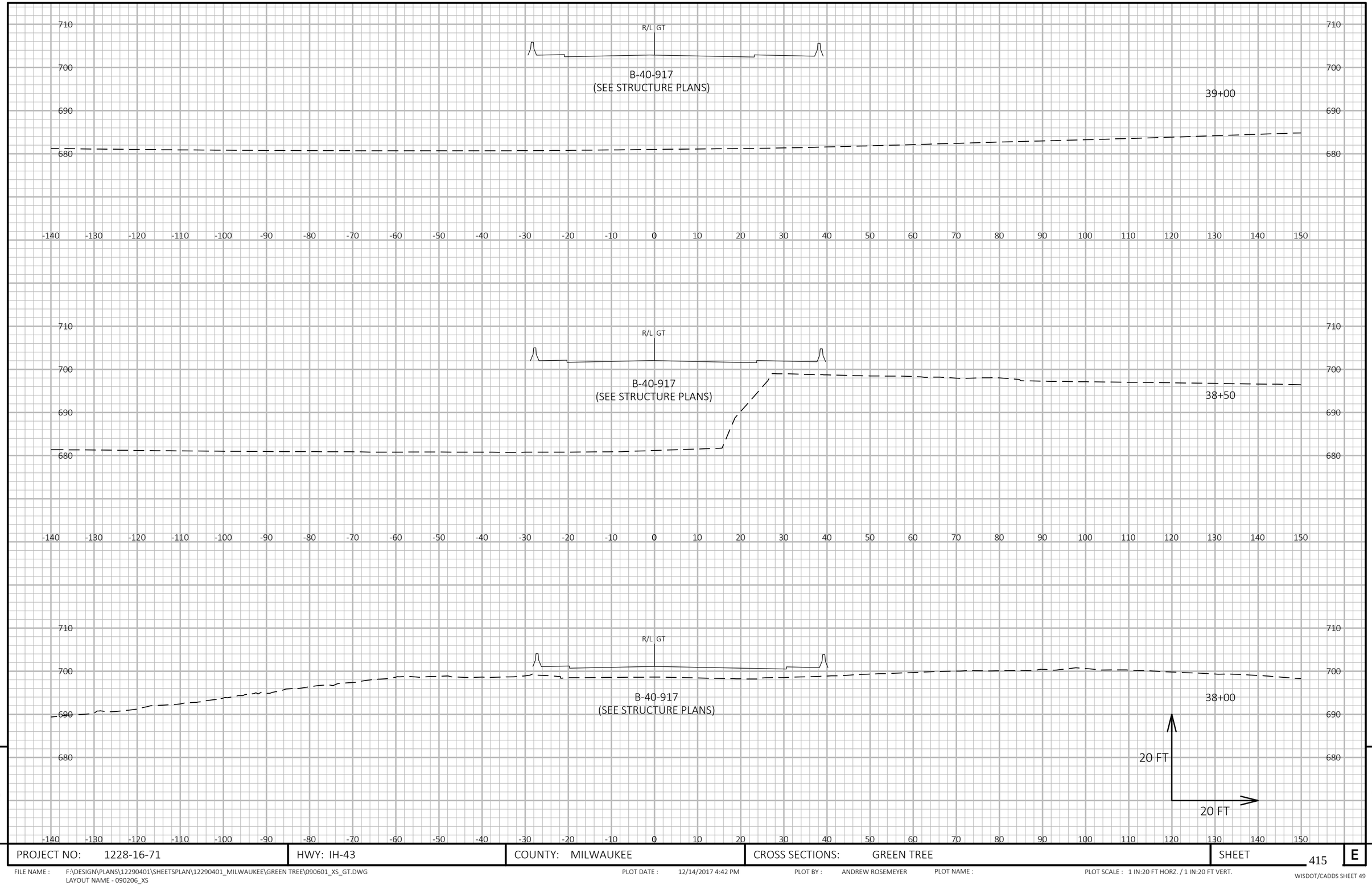
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 414	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090205_XS

PLOT DATE : 12/14/2017 4:42 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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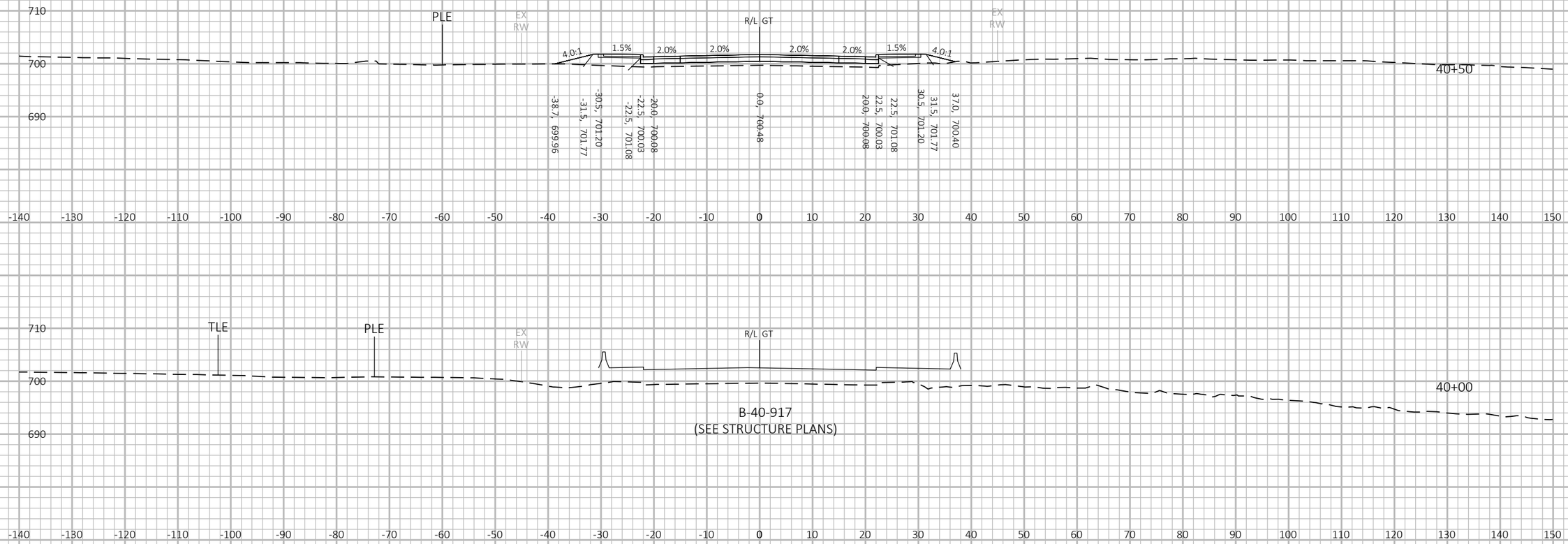
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 415	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090206_XS

PLOT DATE : 12/14/2017 4:42 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

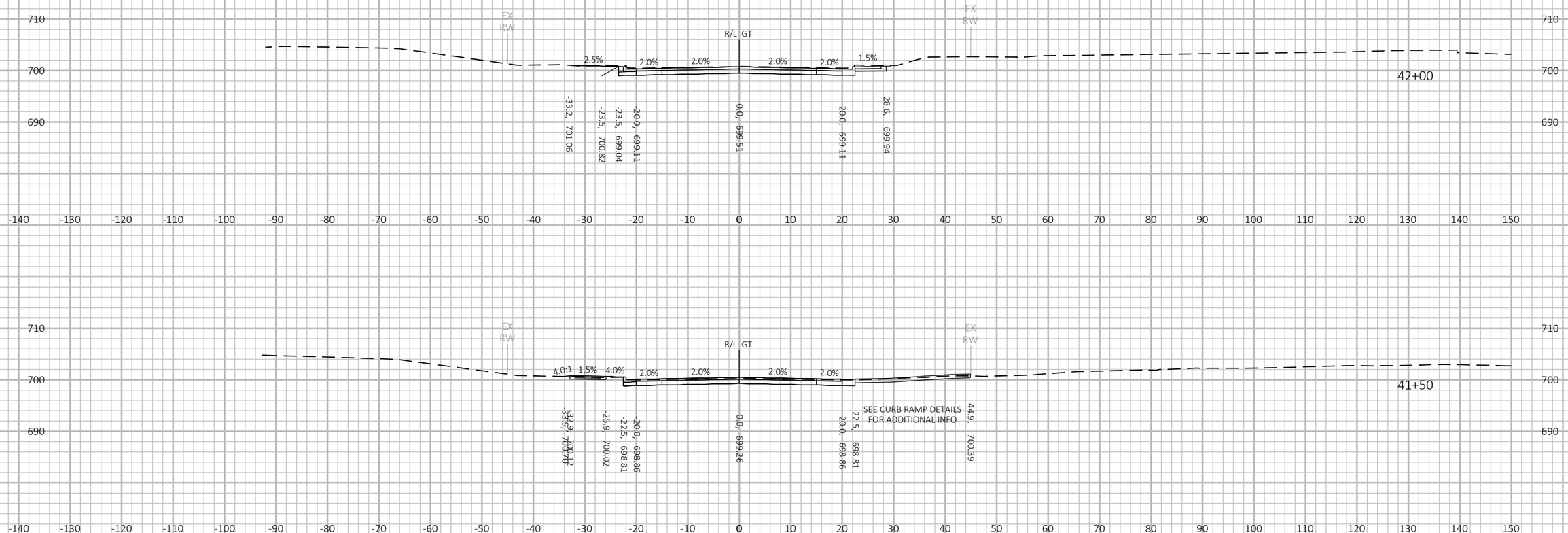
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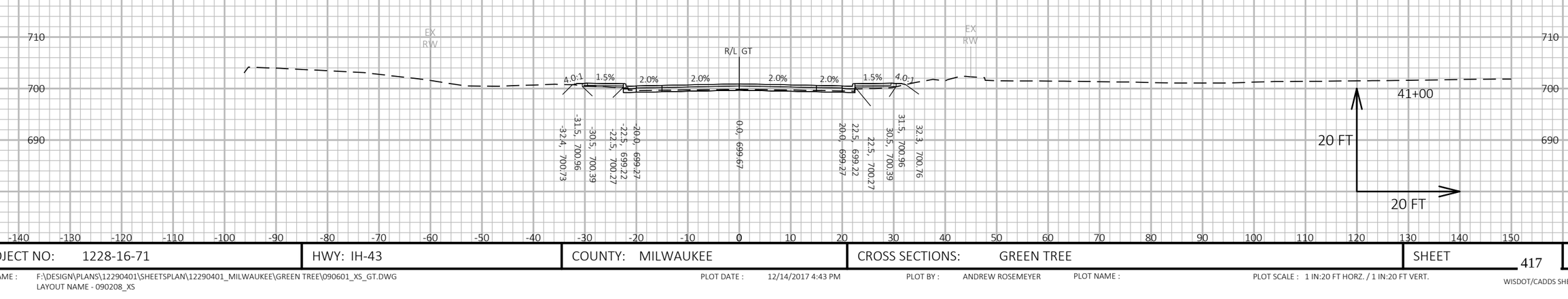
PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 416	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090207_XS

PLOT DATE : 12/14/2017 4:42 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





9

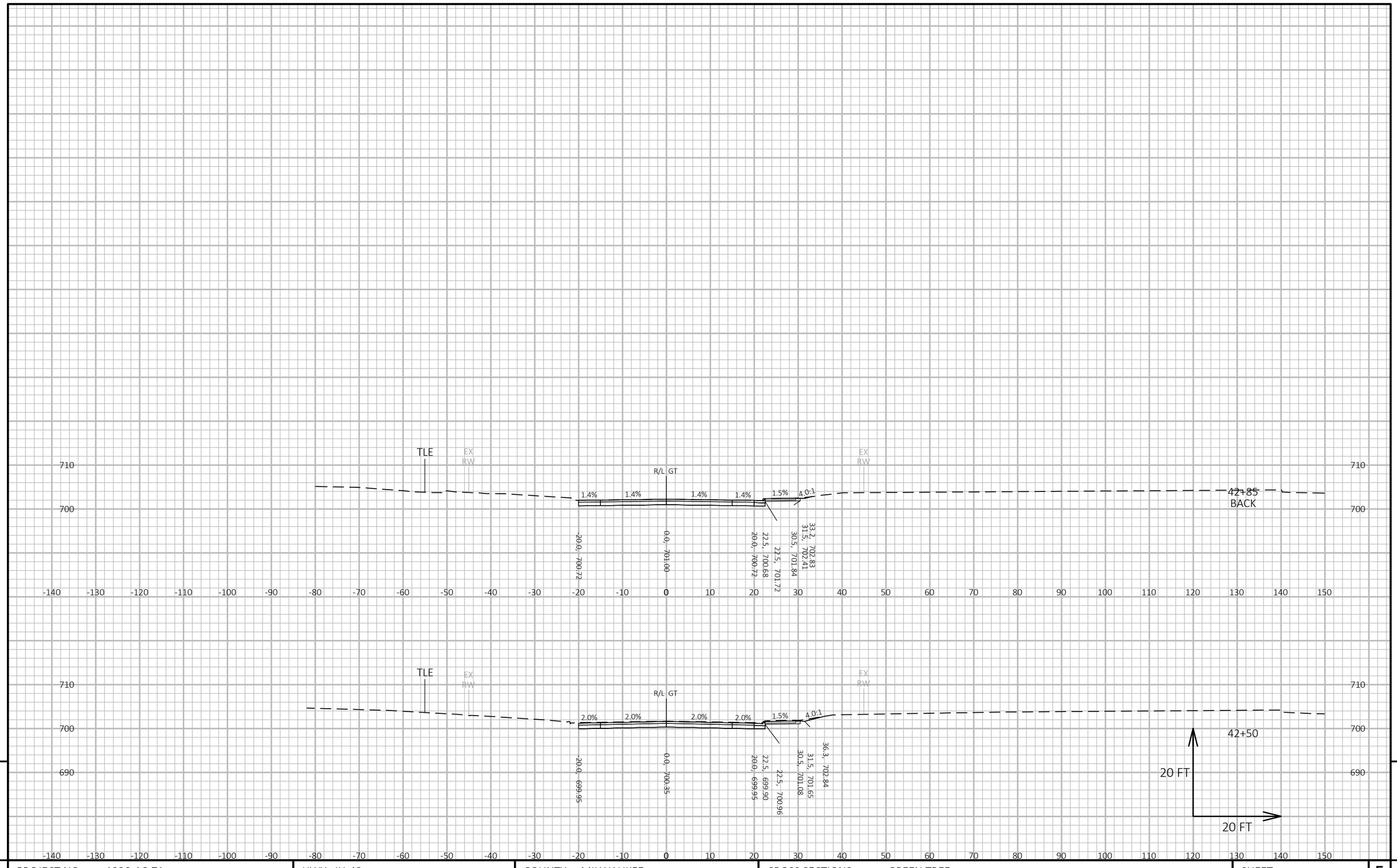
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 417	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090208_XS

PLOT DATE : 12/14/2017 4:43 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

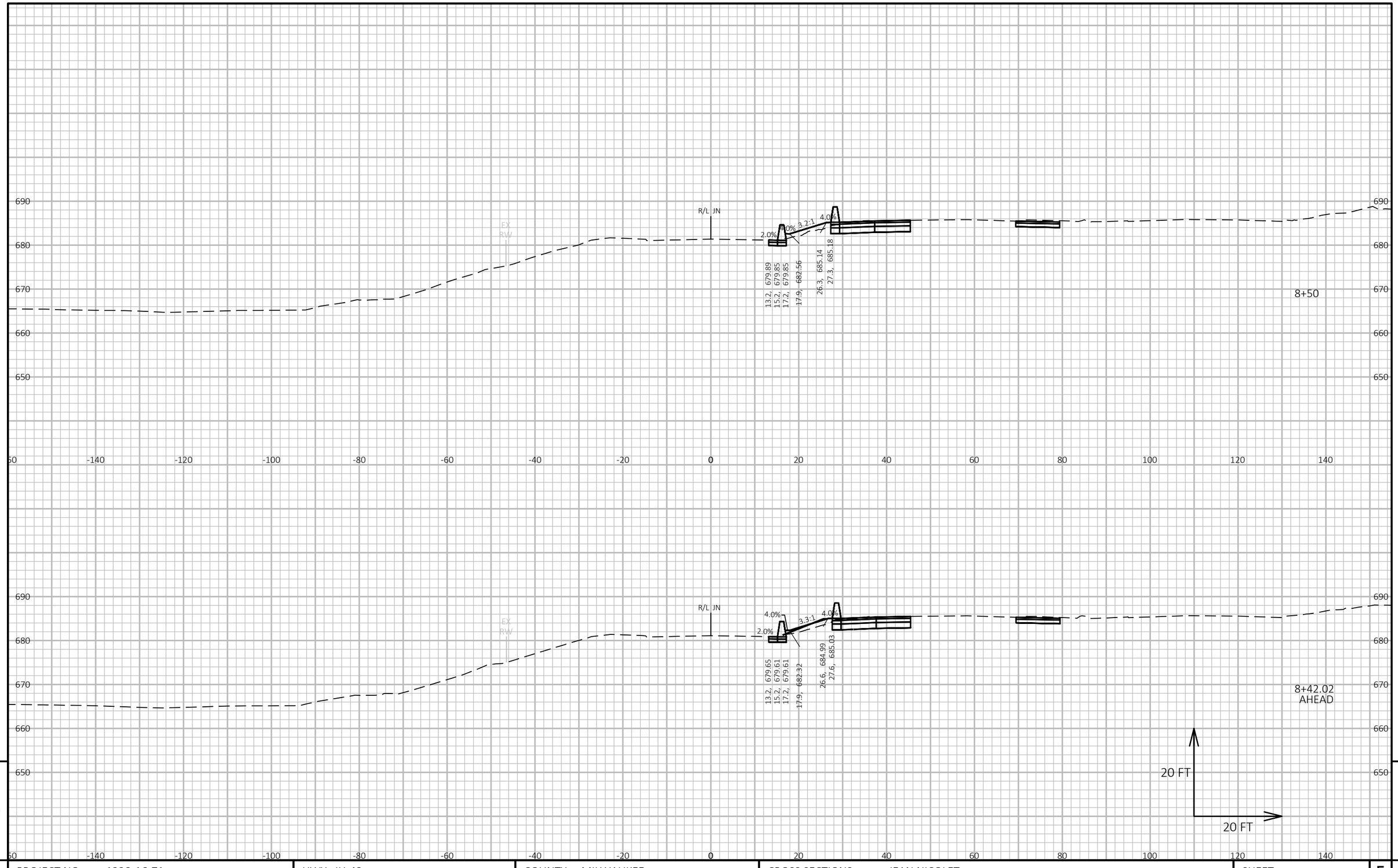


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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREEN TREE	SHEET 418	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090601_XS_GT.DWG
LAYOUT NAME - 090209_XS

PLOT DATE : 12/14/2017 4:43 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

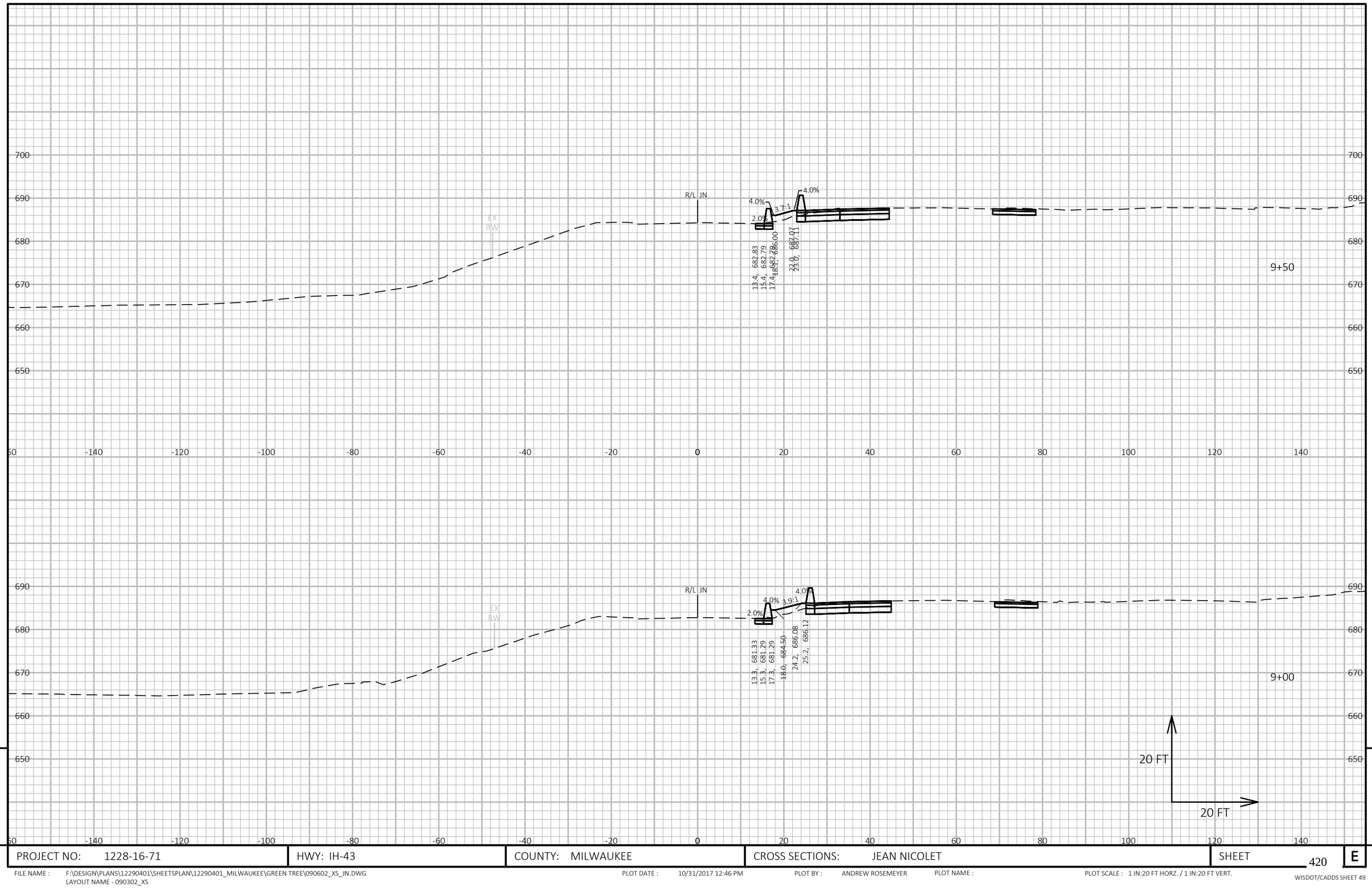


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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: JEAN NICOLET	SHEET 419 E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090602_XS_JN.DWG
LAYOUT NAME - 090301_XS

PLOT DATE : 10/31/2017 12:46 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

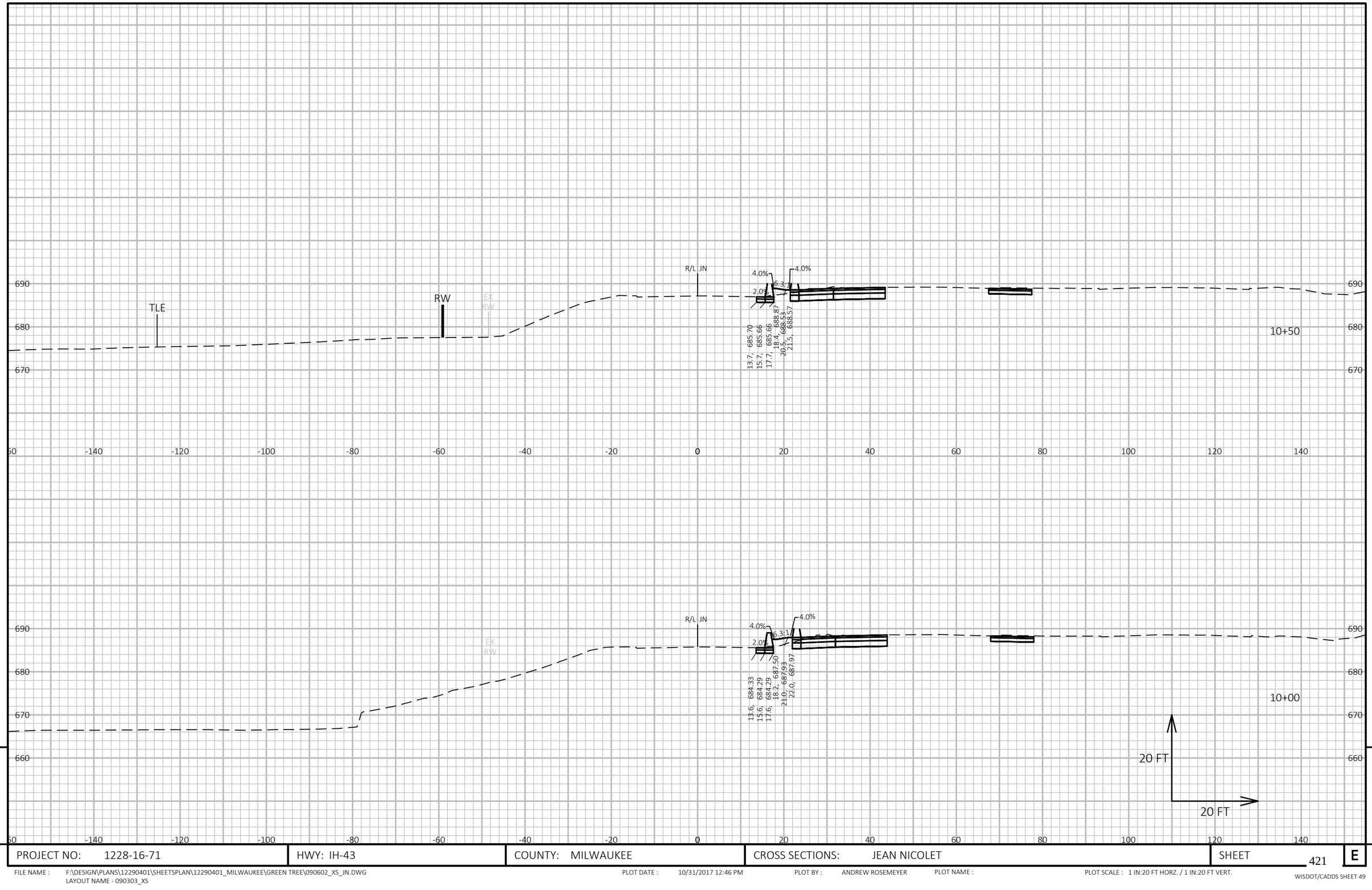
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: JEAN NICOLET	SHEET 420	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090602_XS_JN.DWG
LAYOUT NAME - 090302_XS

PLOT DATE : 10/31/2017 12:46 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



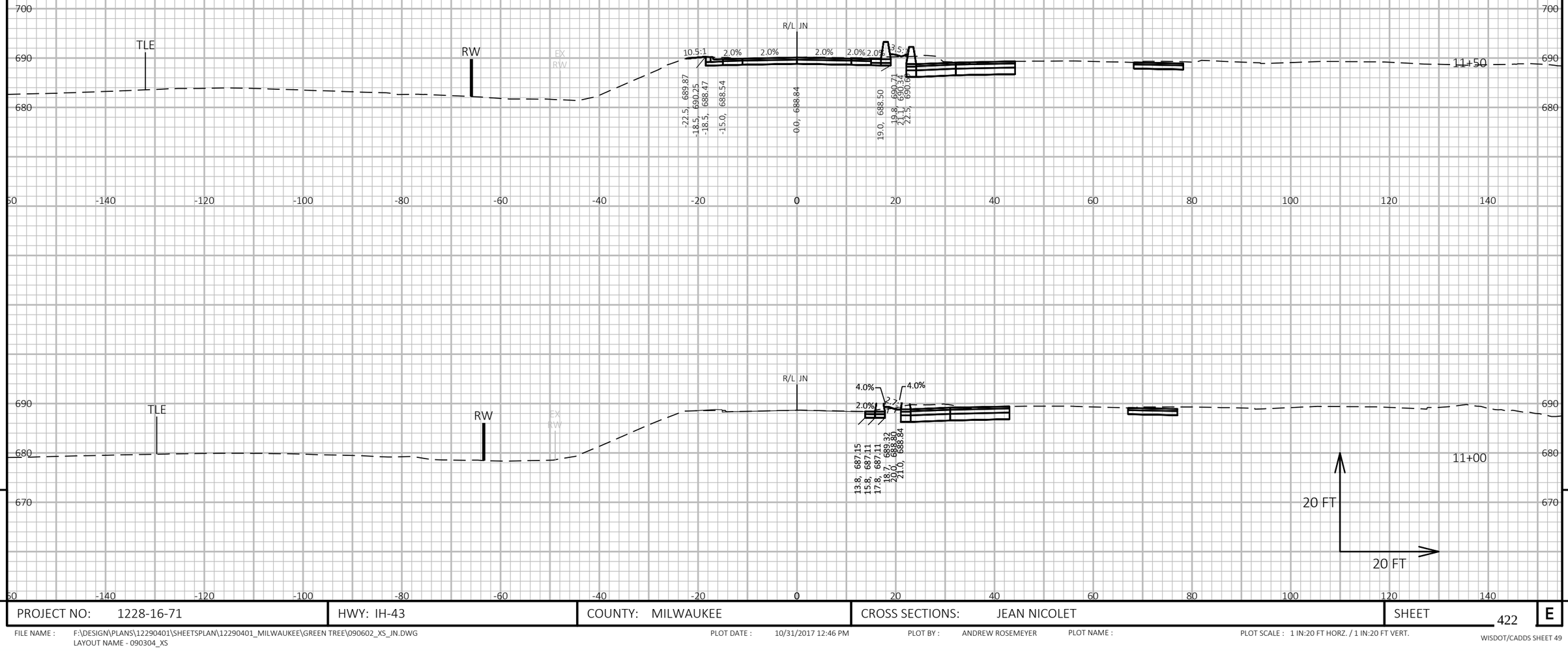
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: JEAN NICOLET	SHEET 421	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090602_XS_JN.DWG
LAYOUT NAME - 090303_XS

PLOT DATE : 10/31/2017 12:46 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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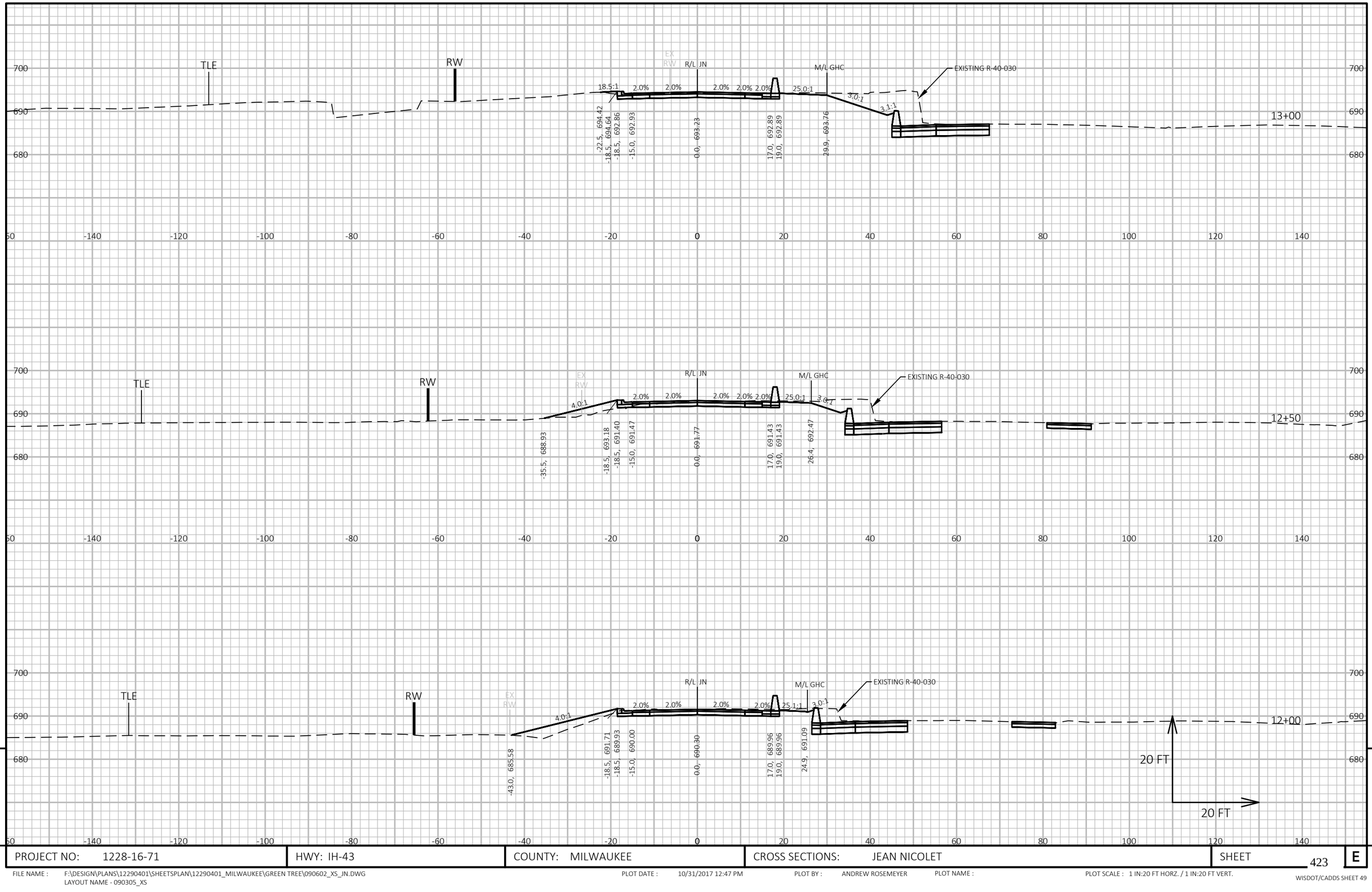
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: JEAN NICOLET	SHEET 422	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090602_XS_JN.DWG
LAYOUT NAME - 090304_XS

PLOT DATE : 10/31/2017 12:46 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

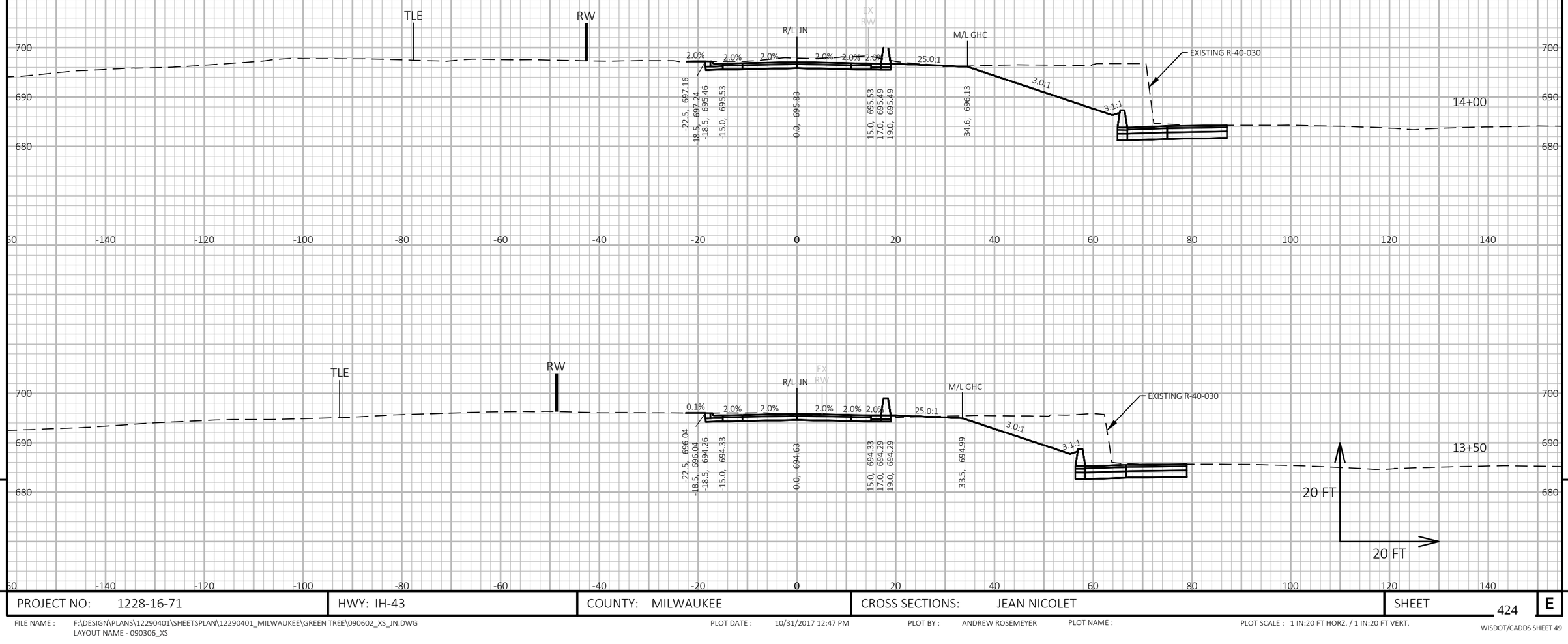


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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: JEAN NICOLET	SHEET 423	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090602_XS_JN.DWG
LAYOUT NAME - 090305_XS

PLOT DATE : 10/31/2017 12:47 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



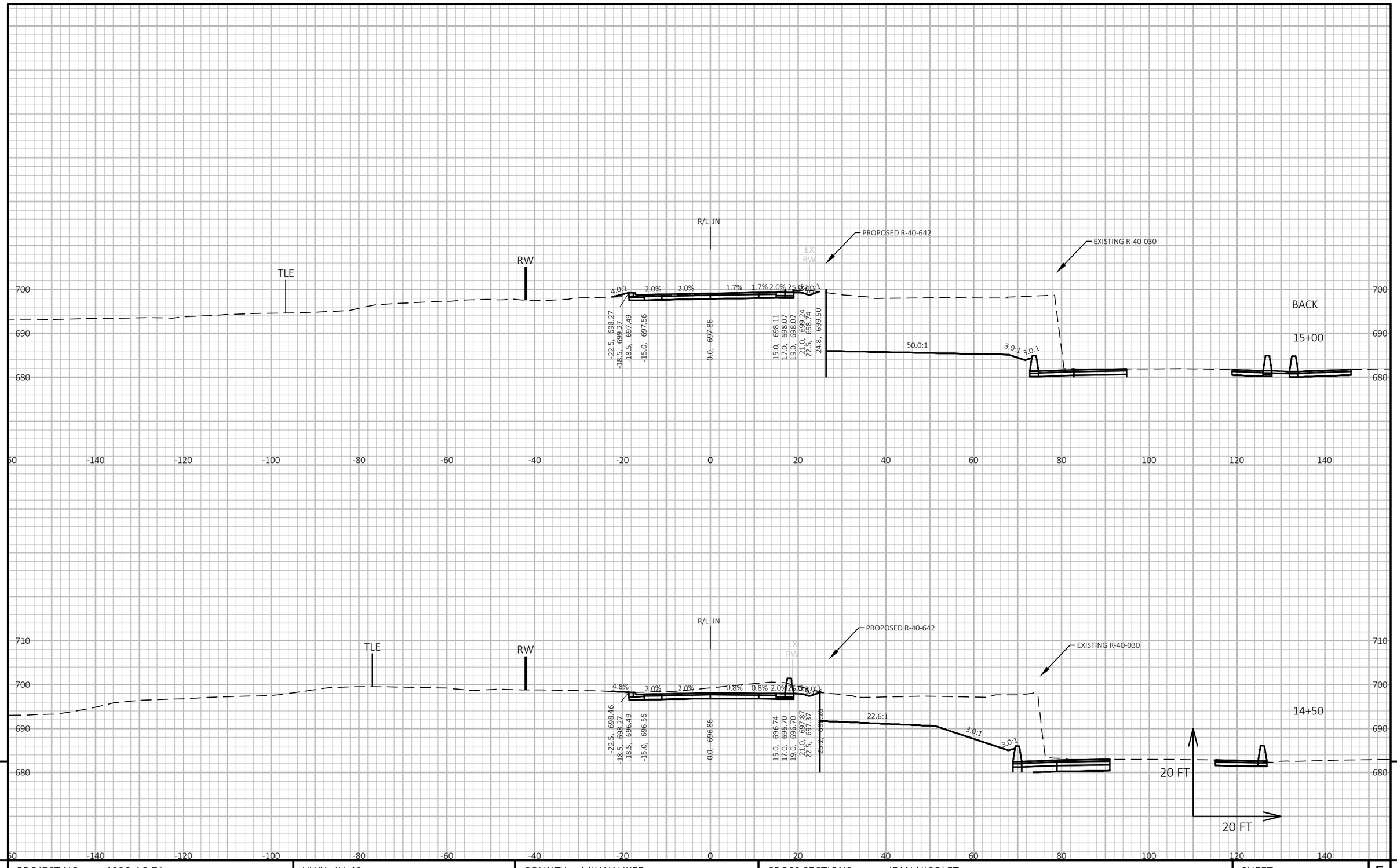
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: JEAN NICOLET	SHEET 424	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090602_XS_JN.DWG
LAYOUT NAME - 090306_XS

PLOT DATE : 10/31/2017 12:47 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



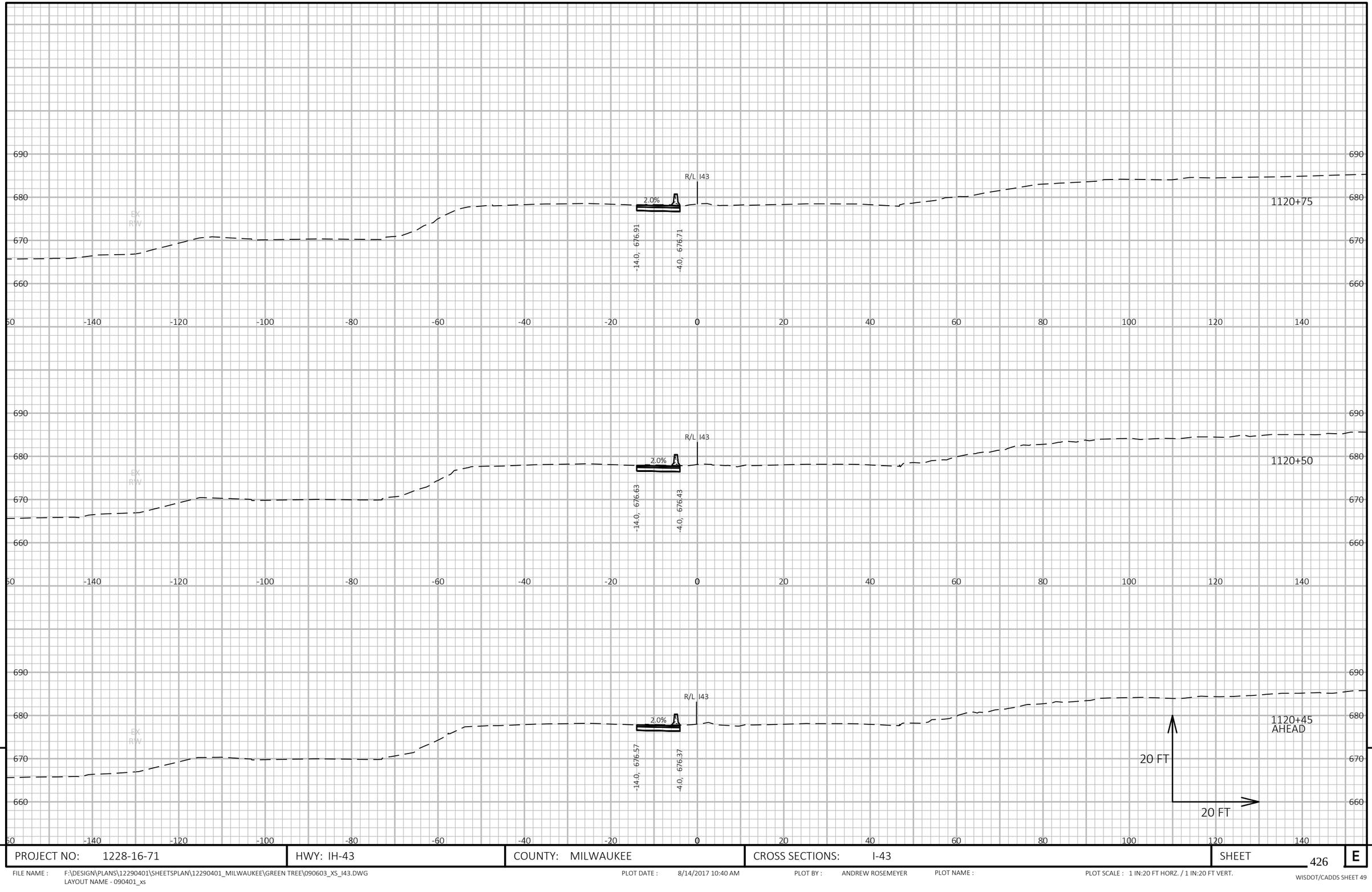
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: JEAN NICOLET	SHEET 425	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090602_XS_JN.DWG
LAYOUT NAME - 090307_XS

PLOT DATE : 10/31/2017 12:47 PM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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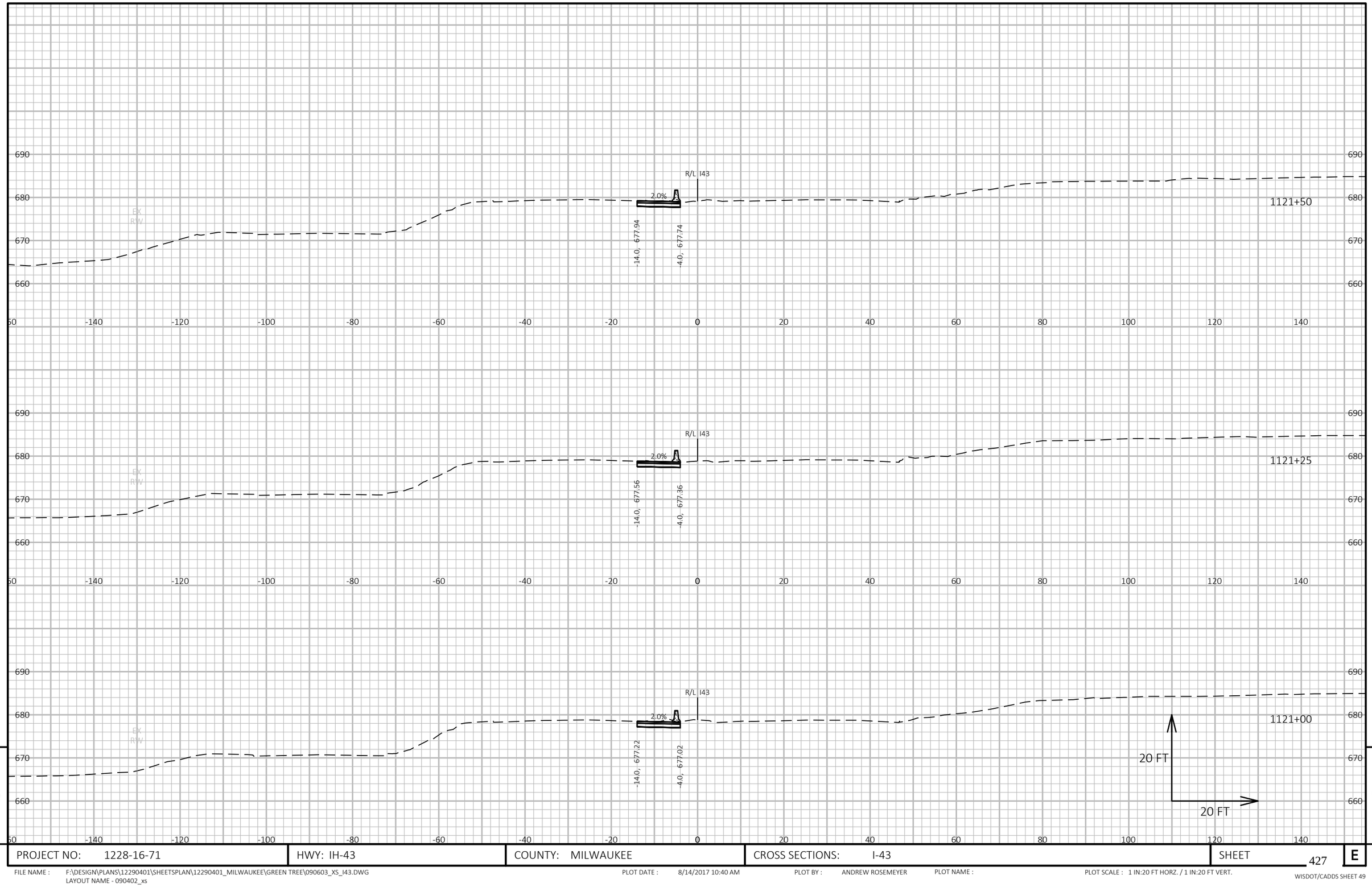
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 426	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090401_xs

PLOT DATE : 8/14/2017 10:40 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

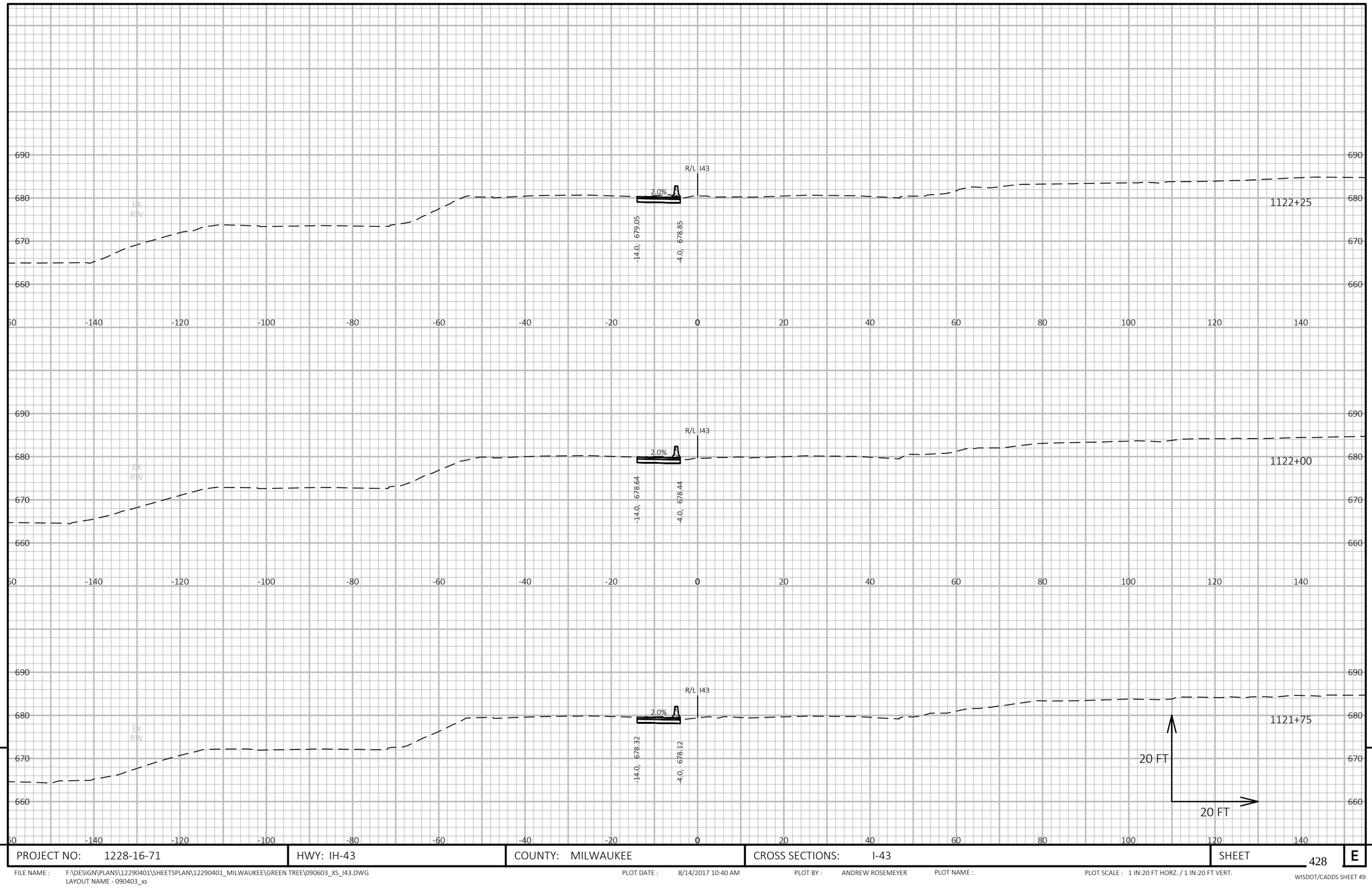
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 427	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090402_xs

PLOT DATE : 8/14/2017 10:40 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



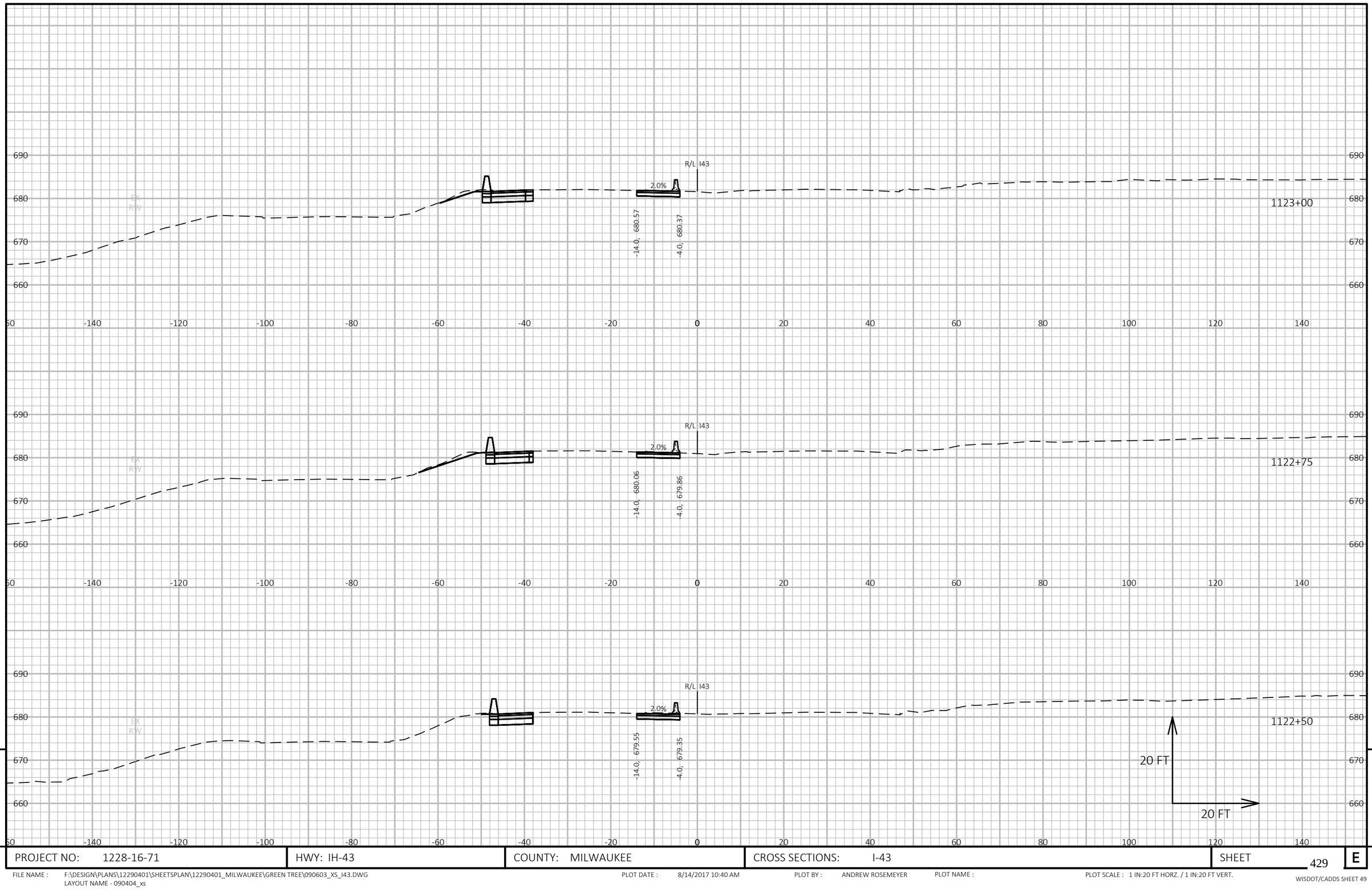
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 428	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090403_xs

PLOT DATE : 8/14/2017 10:40 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



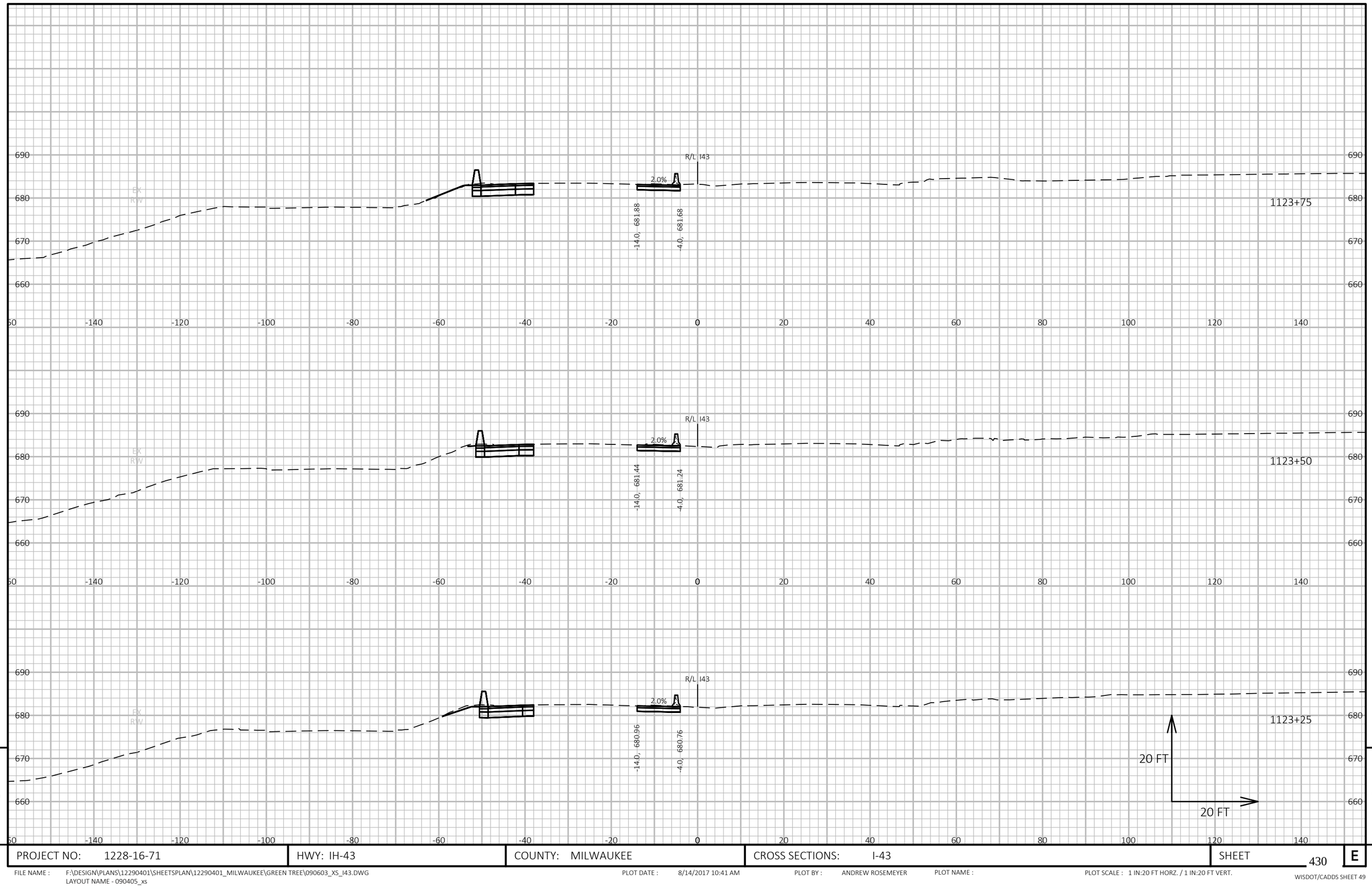
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 429	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090404_xs

PLOT DATE : 8/14/2017 10:40 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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9

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 430	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090405_xs

PLOT DATE : 8/14/2017 10:41 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

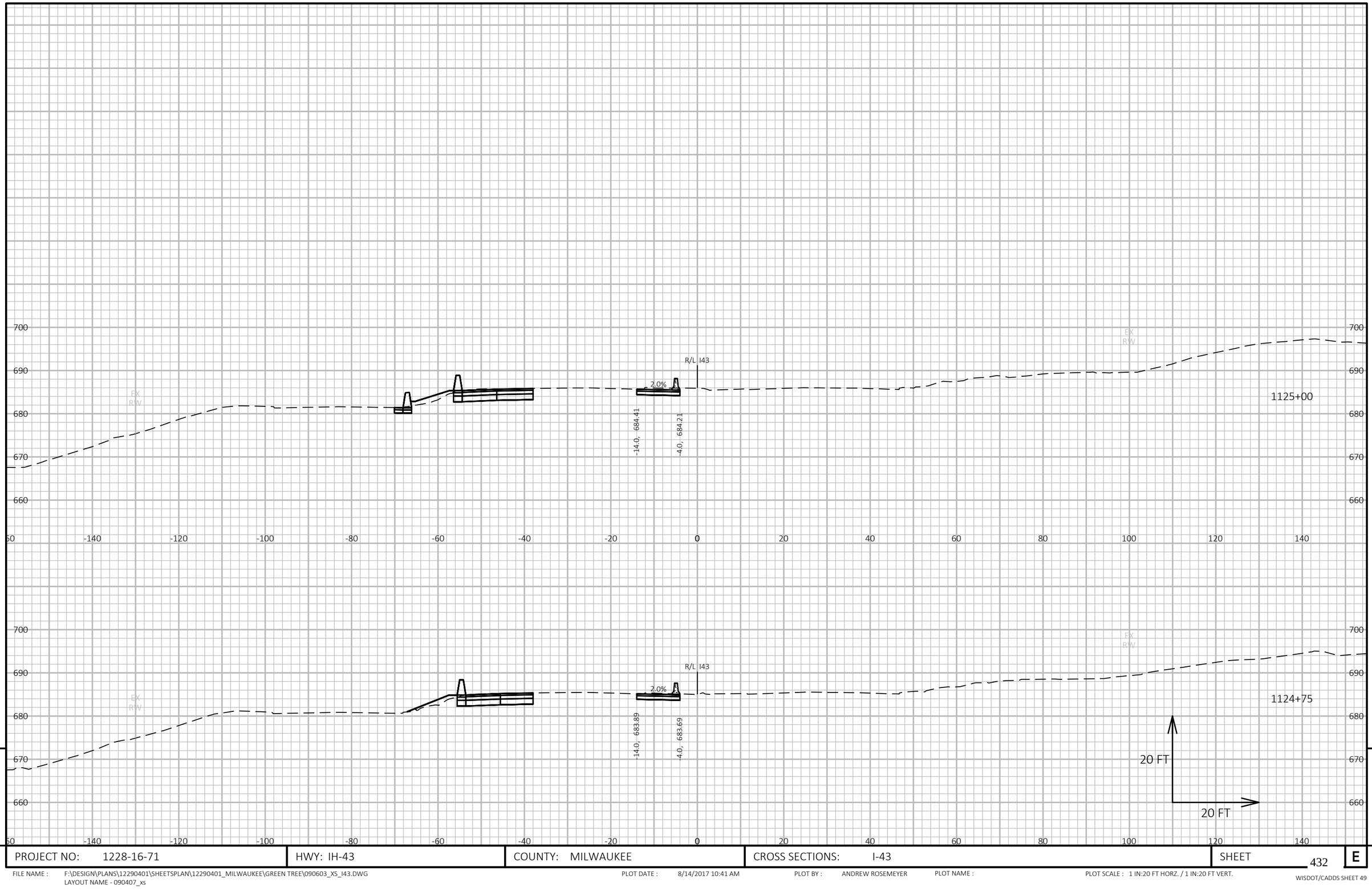
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 431	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090406_xs

PLOT DATE : 8/14/2017 10:41 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



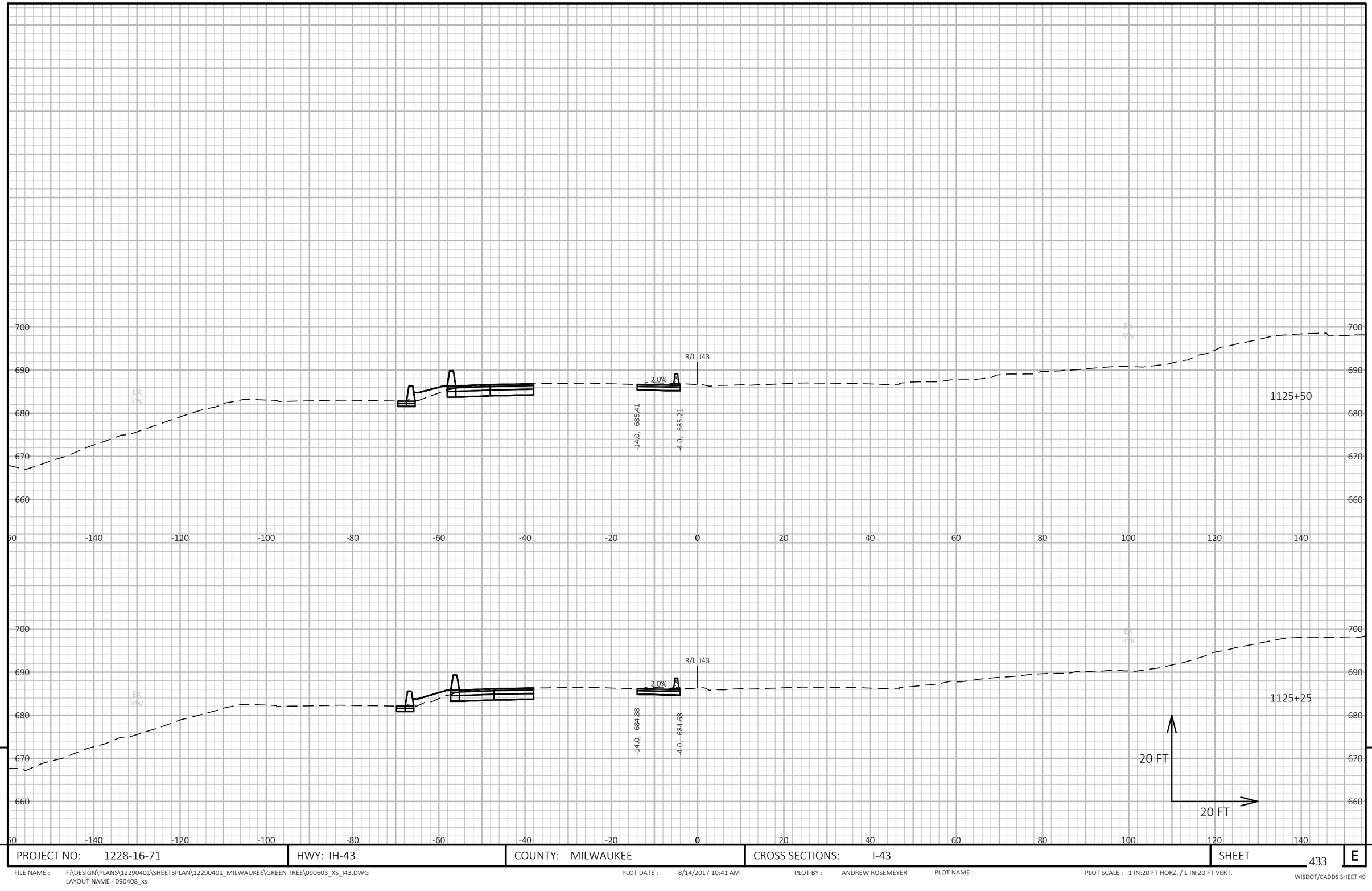
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 432	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090407_xs

PLOT DATE : 8/14/2017 10:41 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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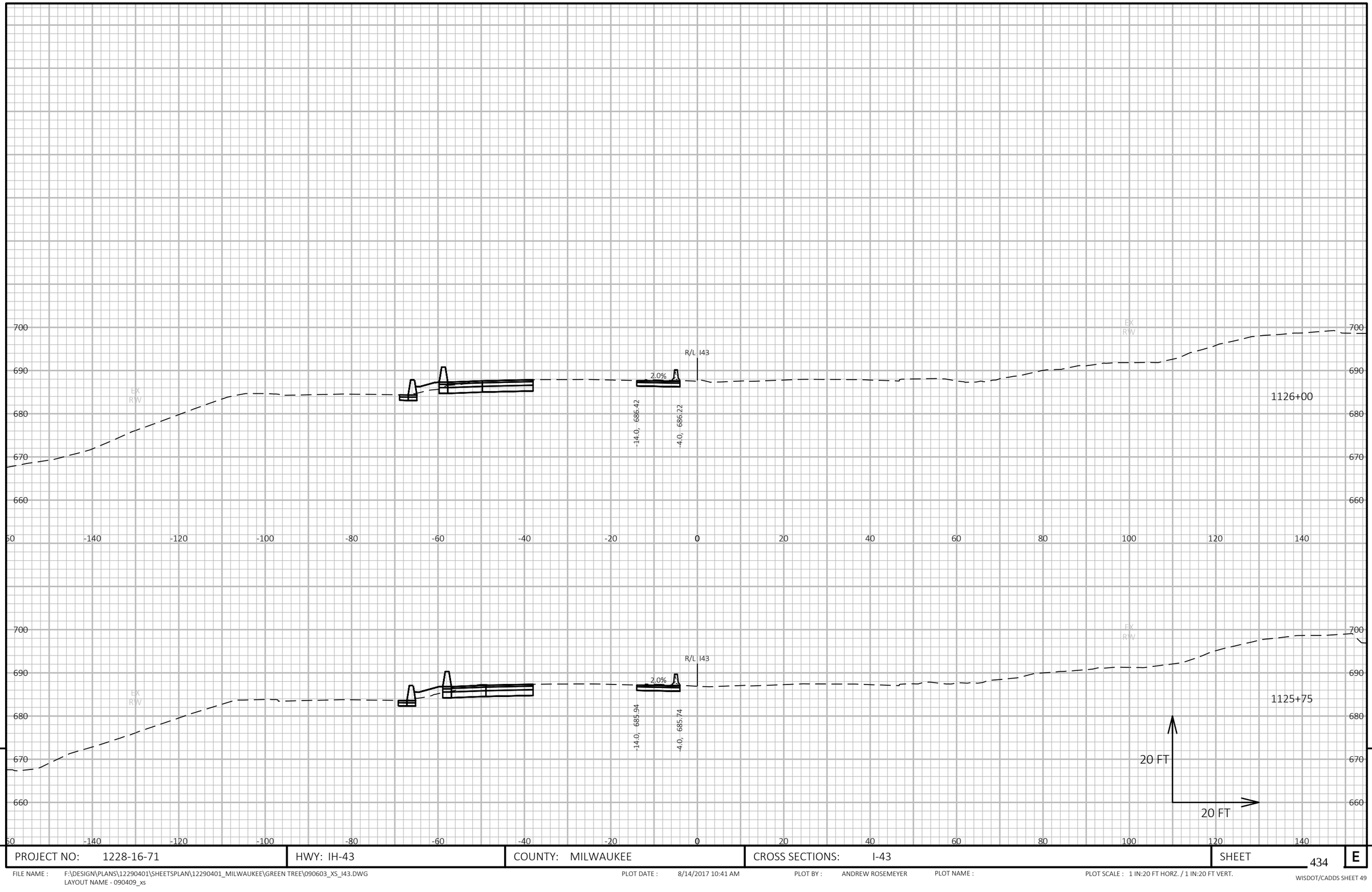
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 433	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090408_xs

PLOT DATE : 8/14/2017 10:41 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



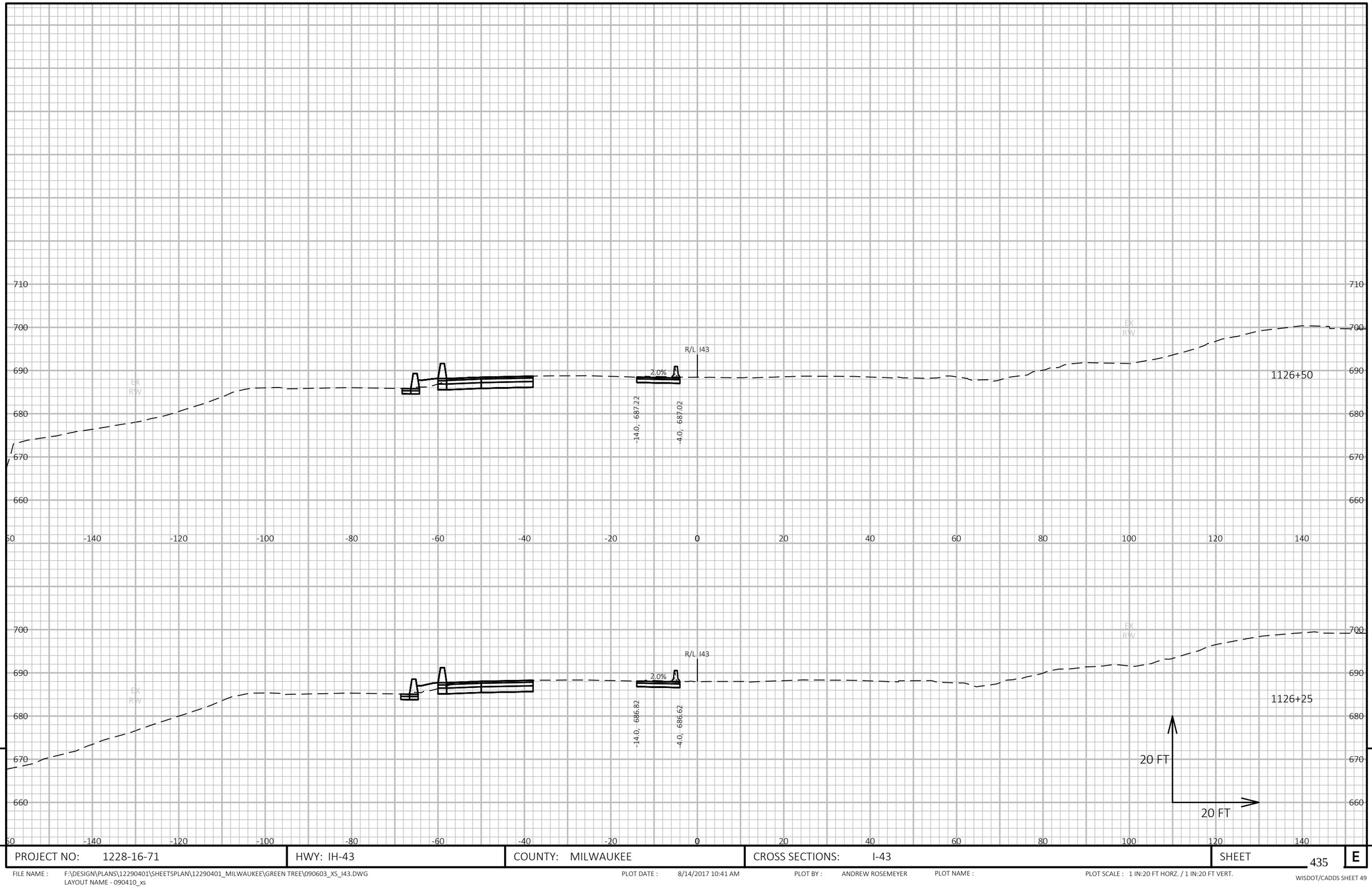
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 434	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090409_xs

PLOT DATE : 8/14/2017 10:41 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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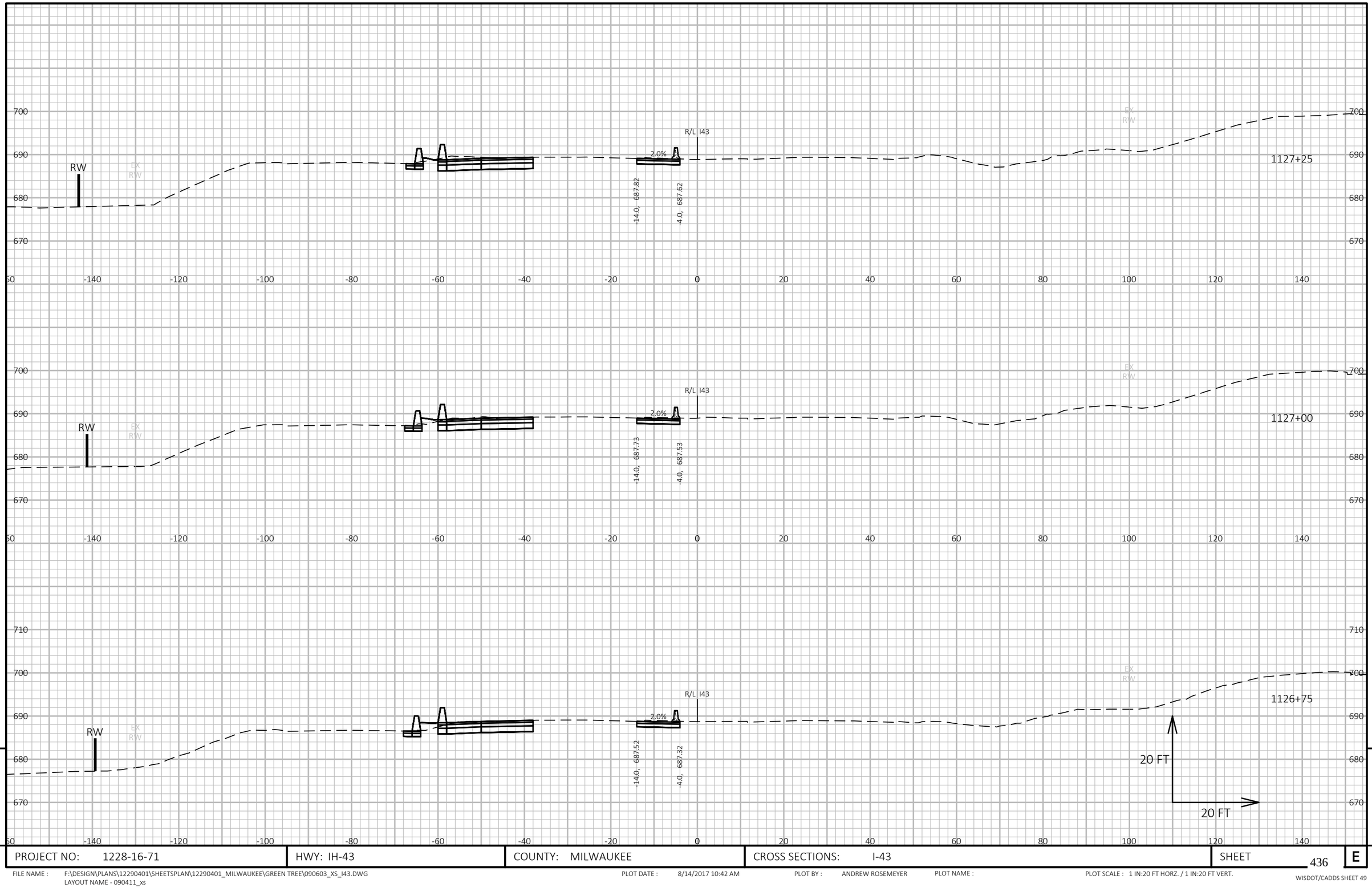
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 435	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090410_xs

PLOT DATE : 8/14/2017 10:41 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



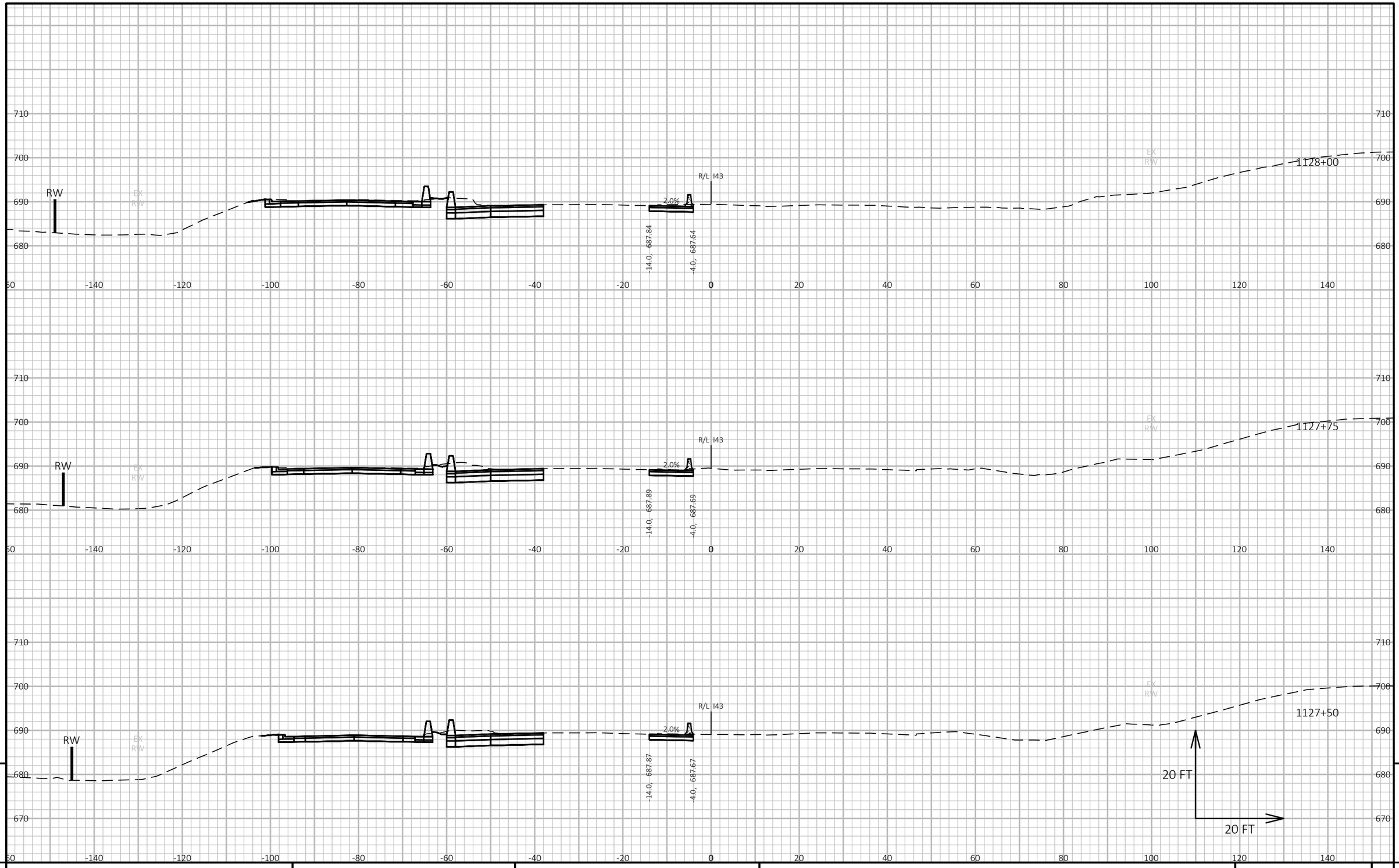
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 436	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090411_xs

PLOT DATE : 8/14/2017 10:42 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



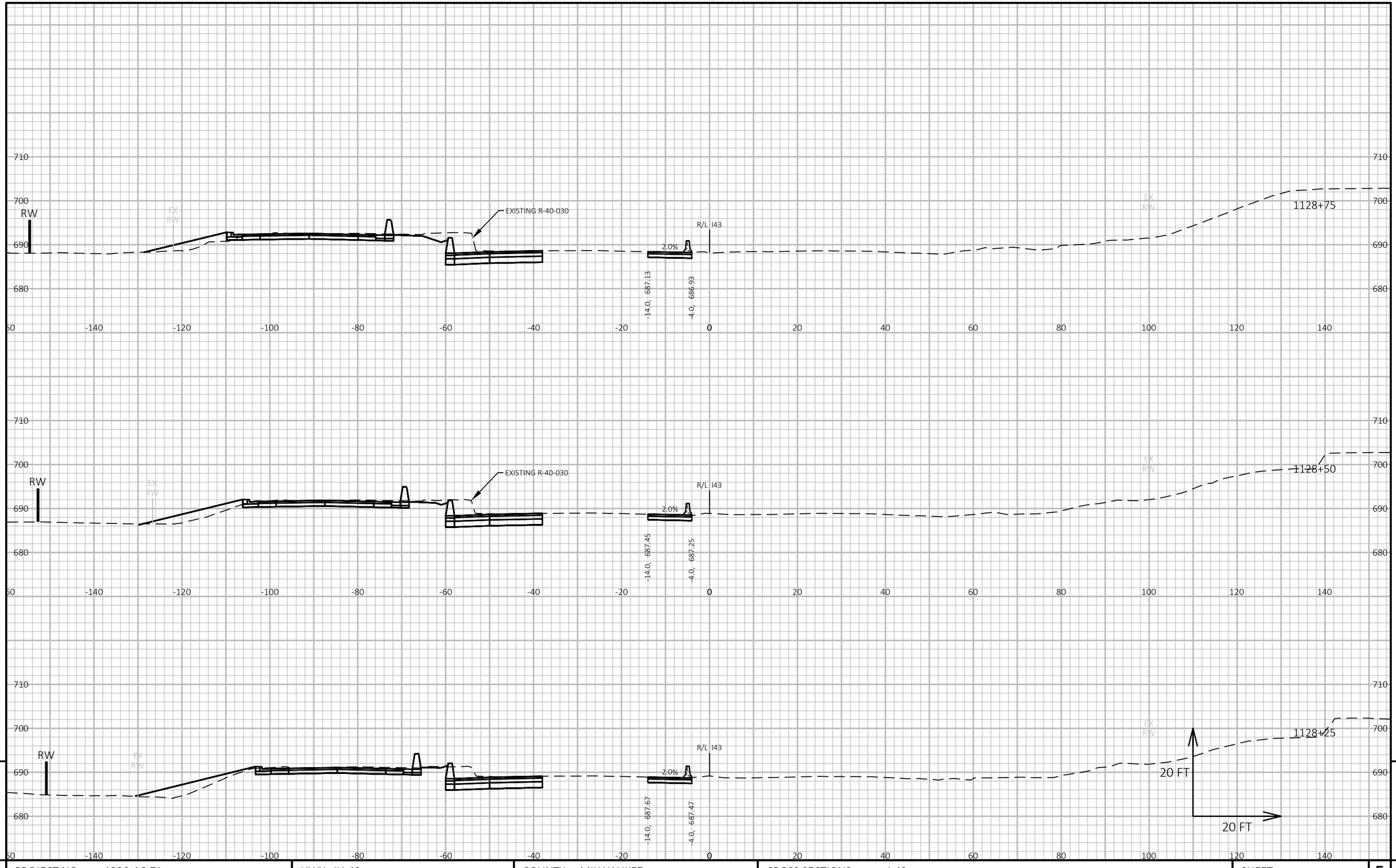
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 437	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090412_xs

PLOT DATE : 8/14/2017 10:42 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

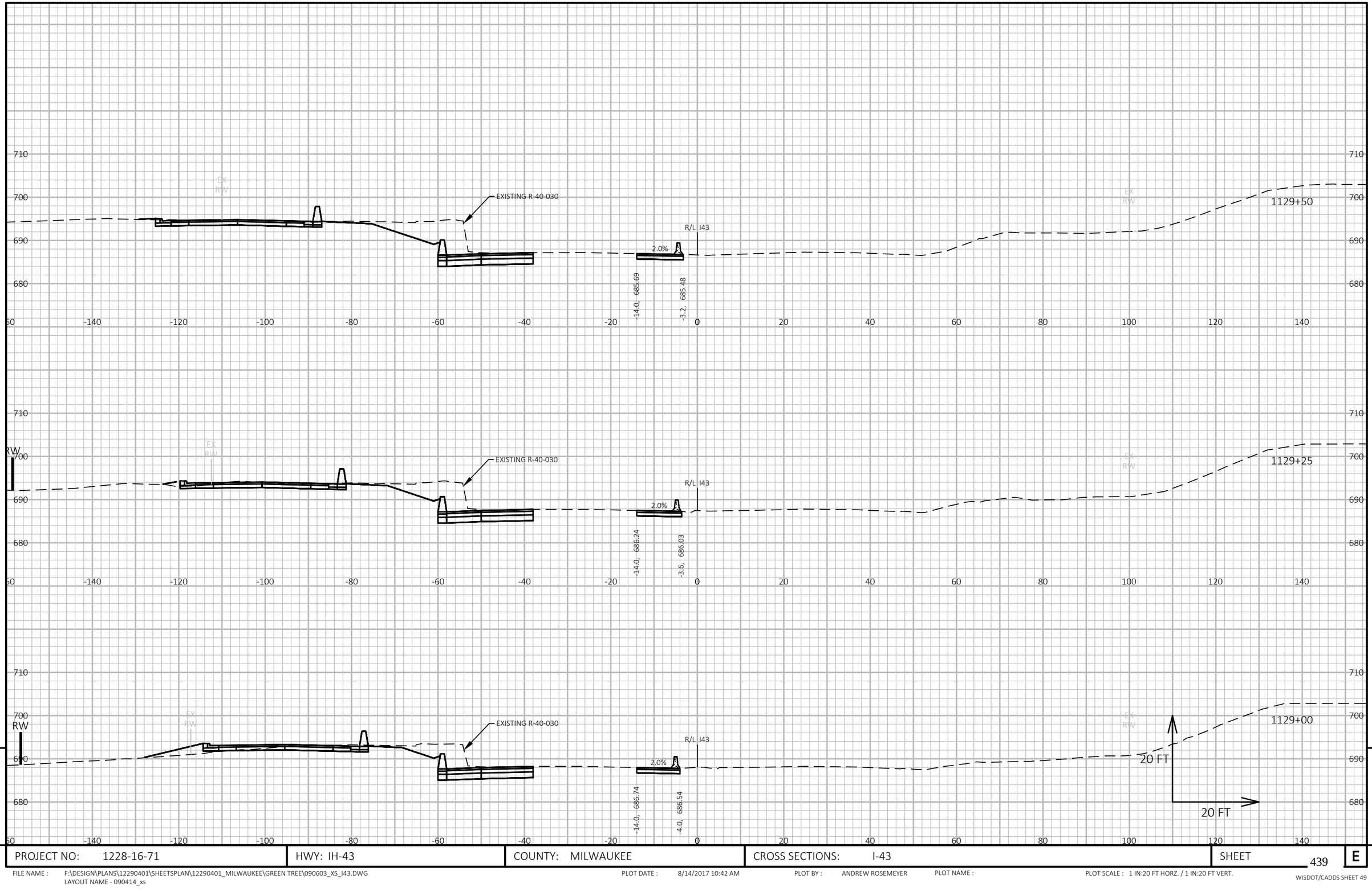


PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 438	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090413_xs

PLOT DATE : 8/14/2017 10:42 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



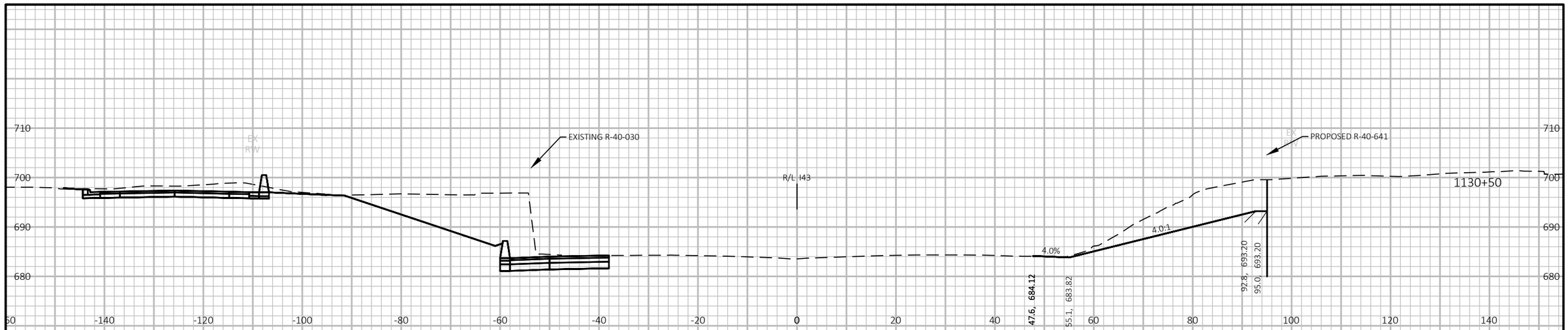
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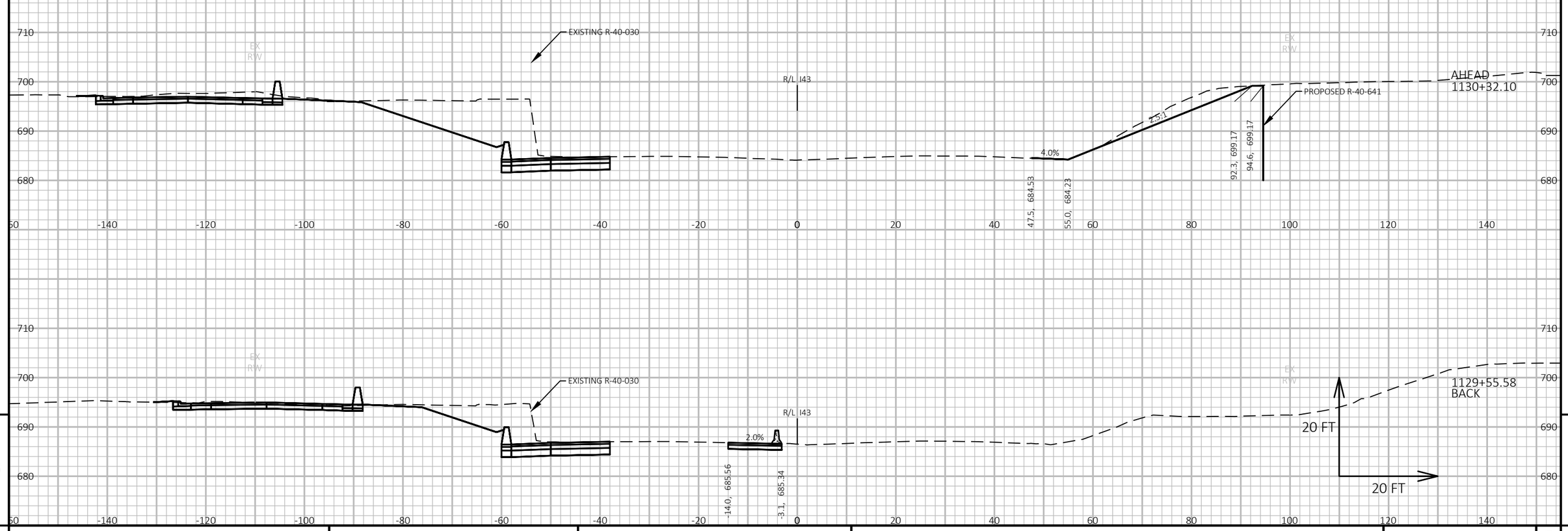
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 439	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090414_xs

PLOT DATE : 8/14/2017 10:42 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





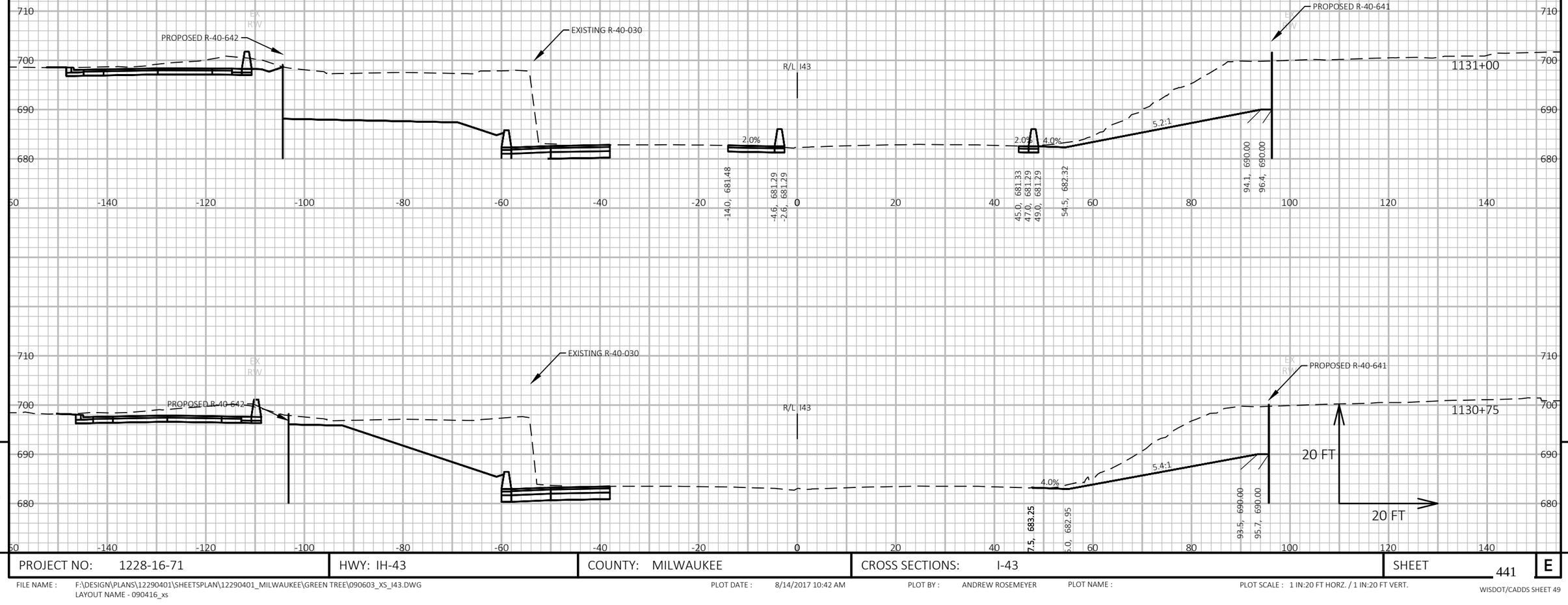
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 440	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090415_xs

PLOT DATE : 8/14/2017 10:42 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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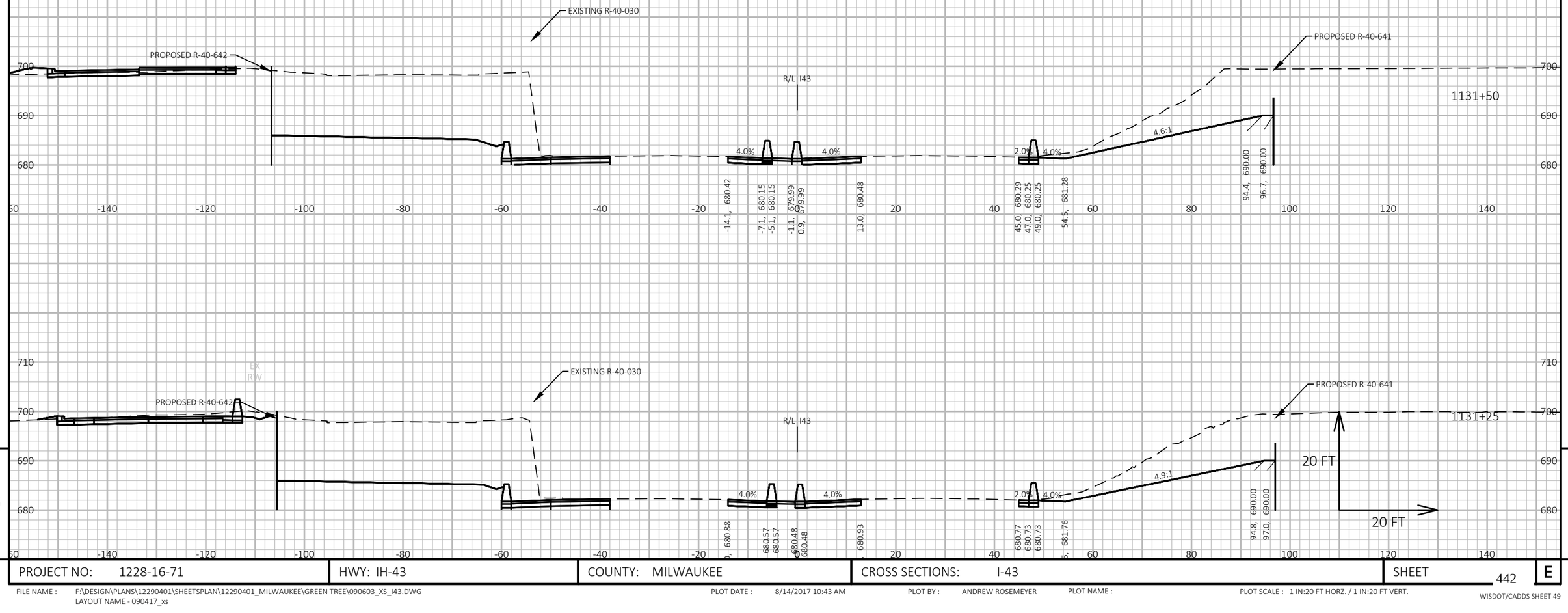
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 441	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090416_xs

PLOT DATE : 8/14/2017 10:42 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

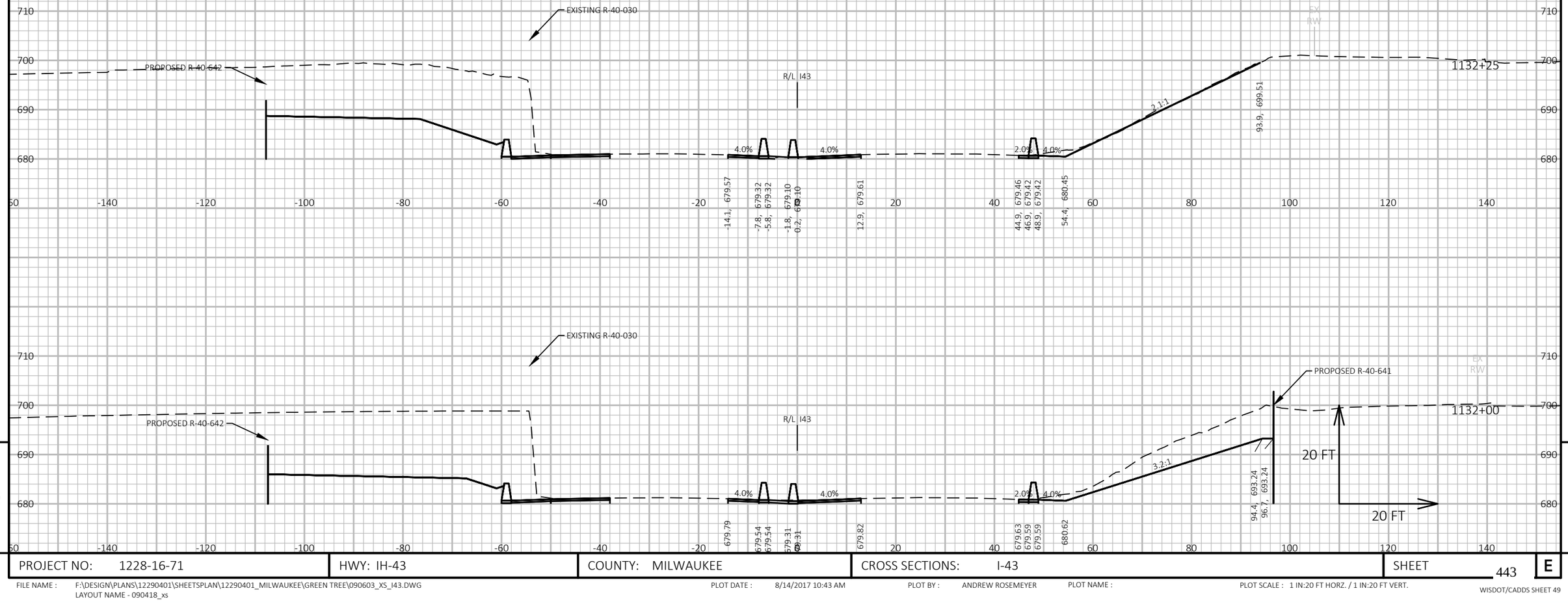
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 442	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090417_xs

PLOT DATE : 8/14/2017 10:43 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



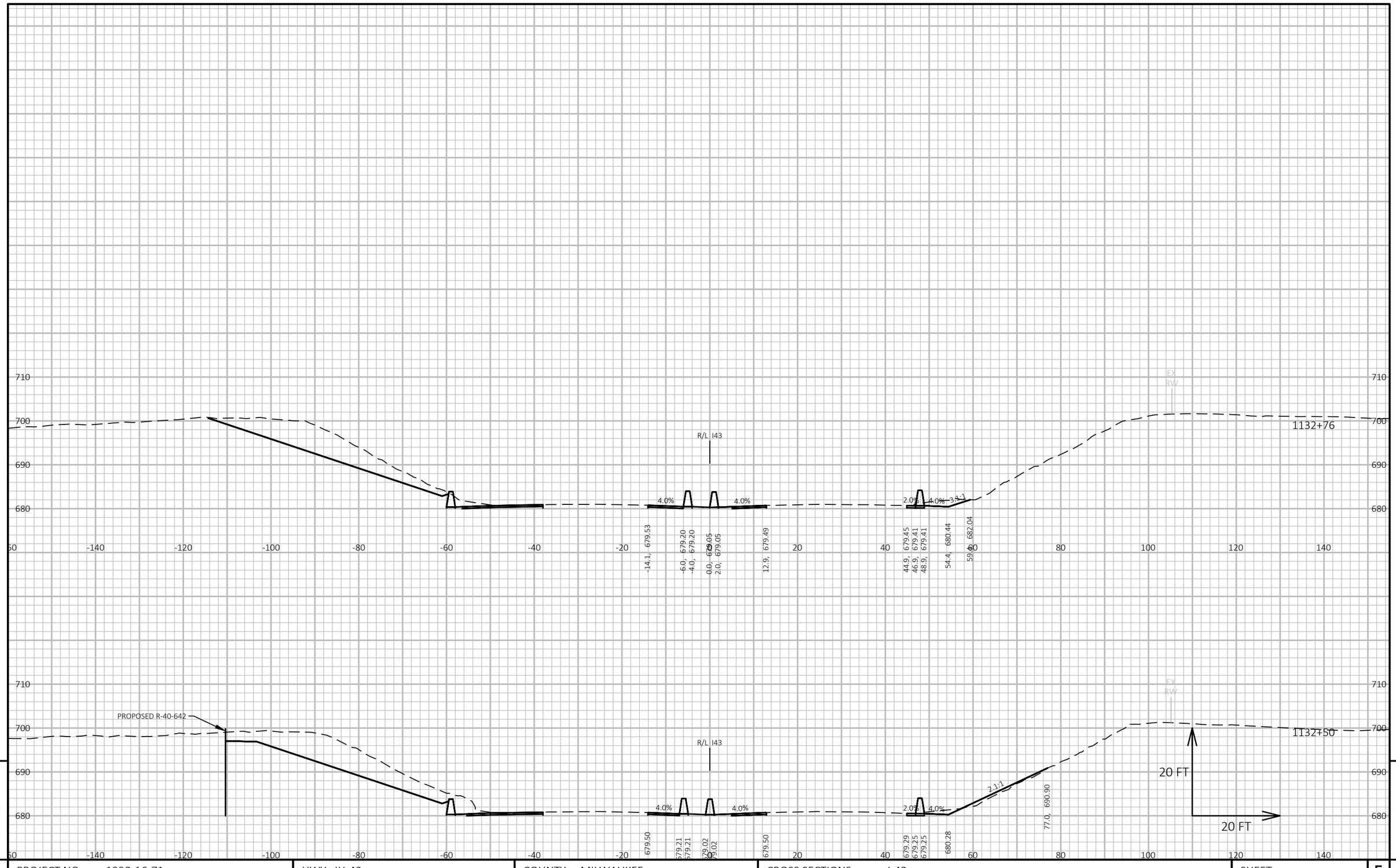
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 443	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090418_xs

PLOT DATE : 8/14/2017 10:43 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



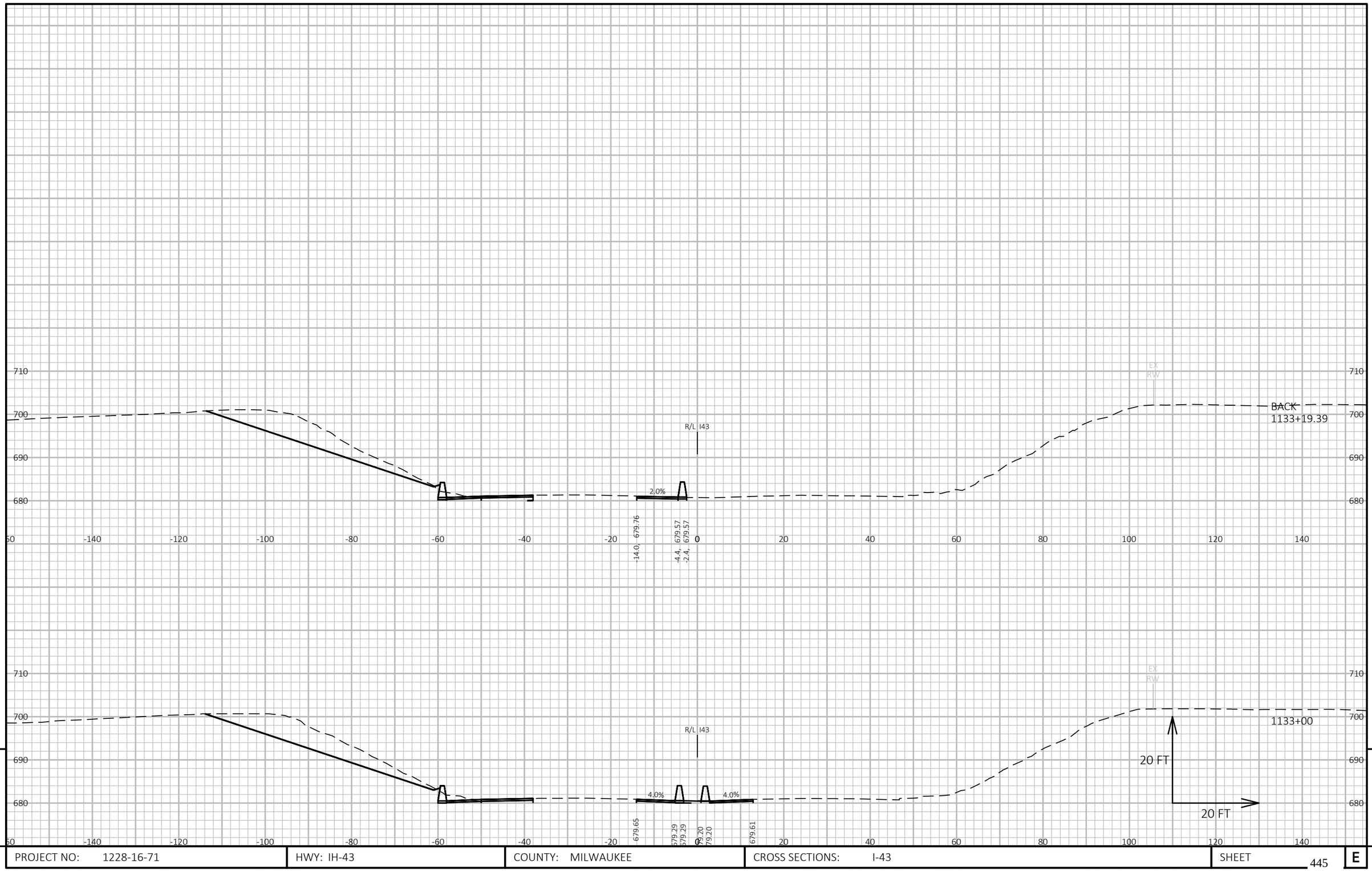
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 444	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090419_xs

PLOT DATE : 8/14/2017 10:43 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



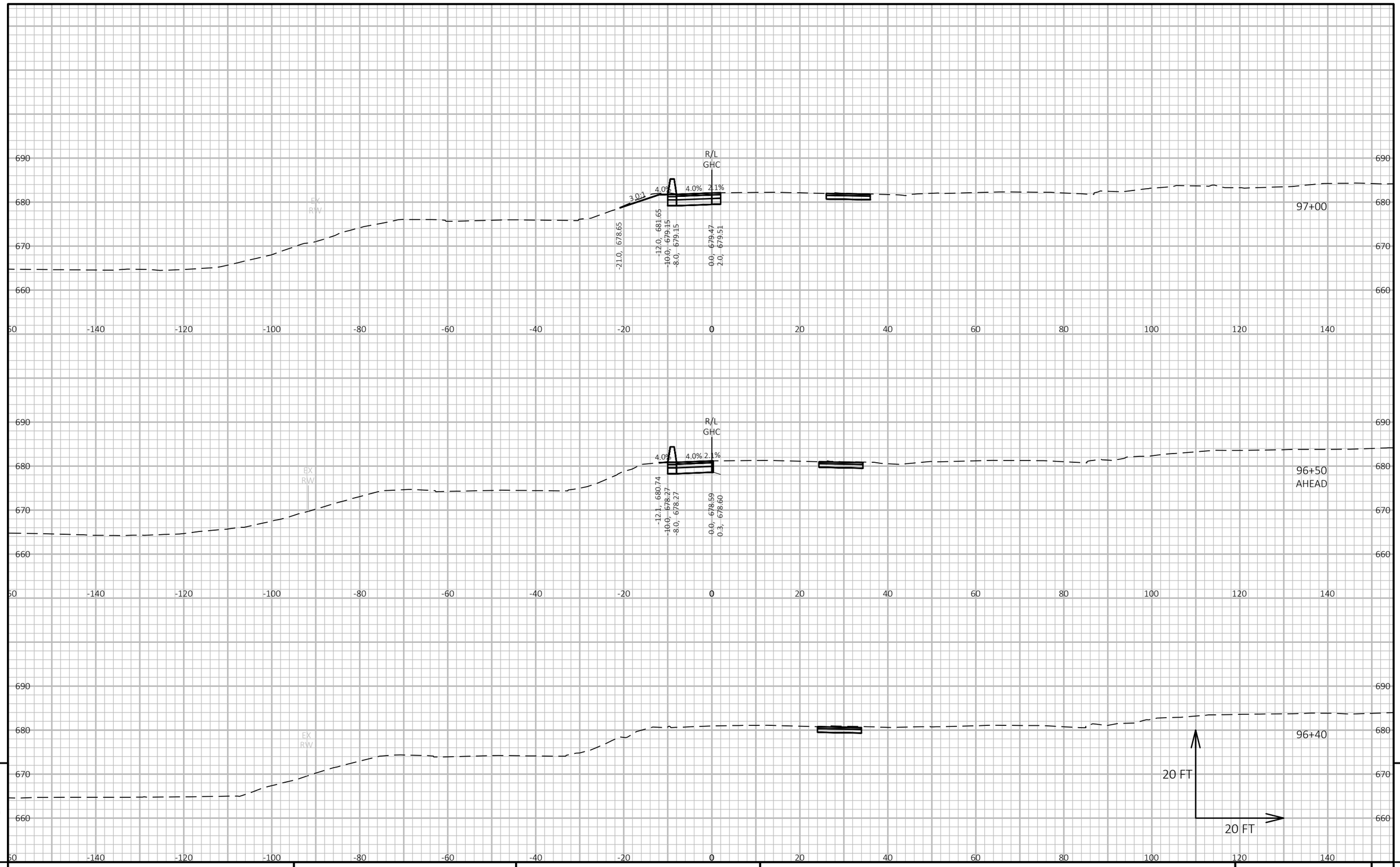
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: I-43	SHEET 445	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090603_XS_I43.DWG
LAYOUT NAME - 090420_xs

PLOT DATE : 8/14/2017 10:43 AM PLOT BY : ANDREW ROSEMEYER PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



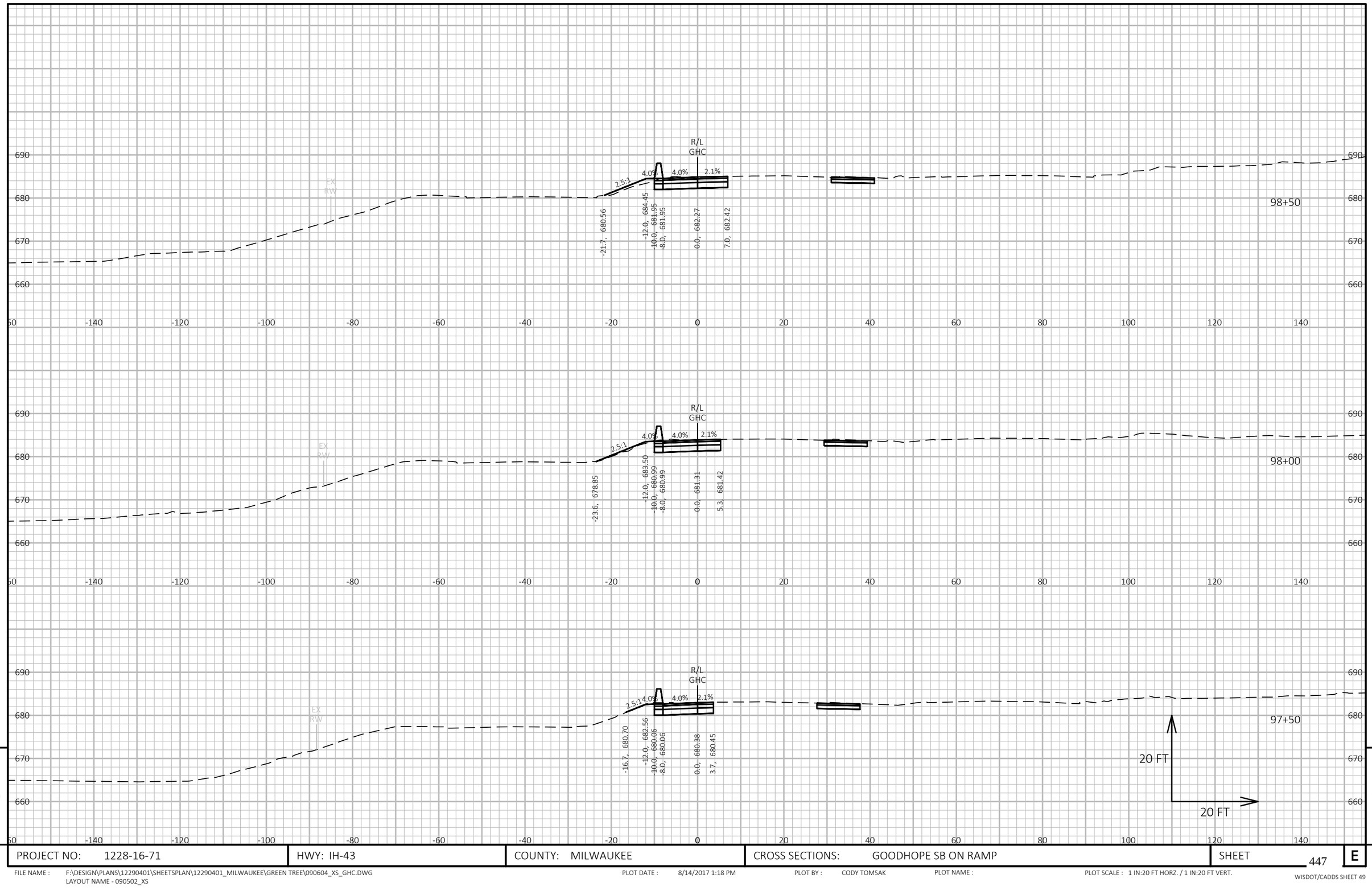
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 446	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090501_XS

PLOT DATE : 8/14/2017 1:17 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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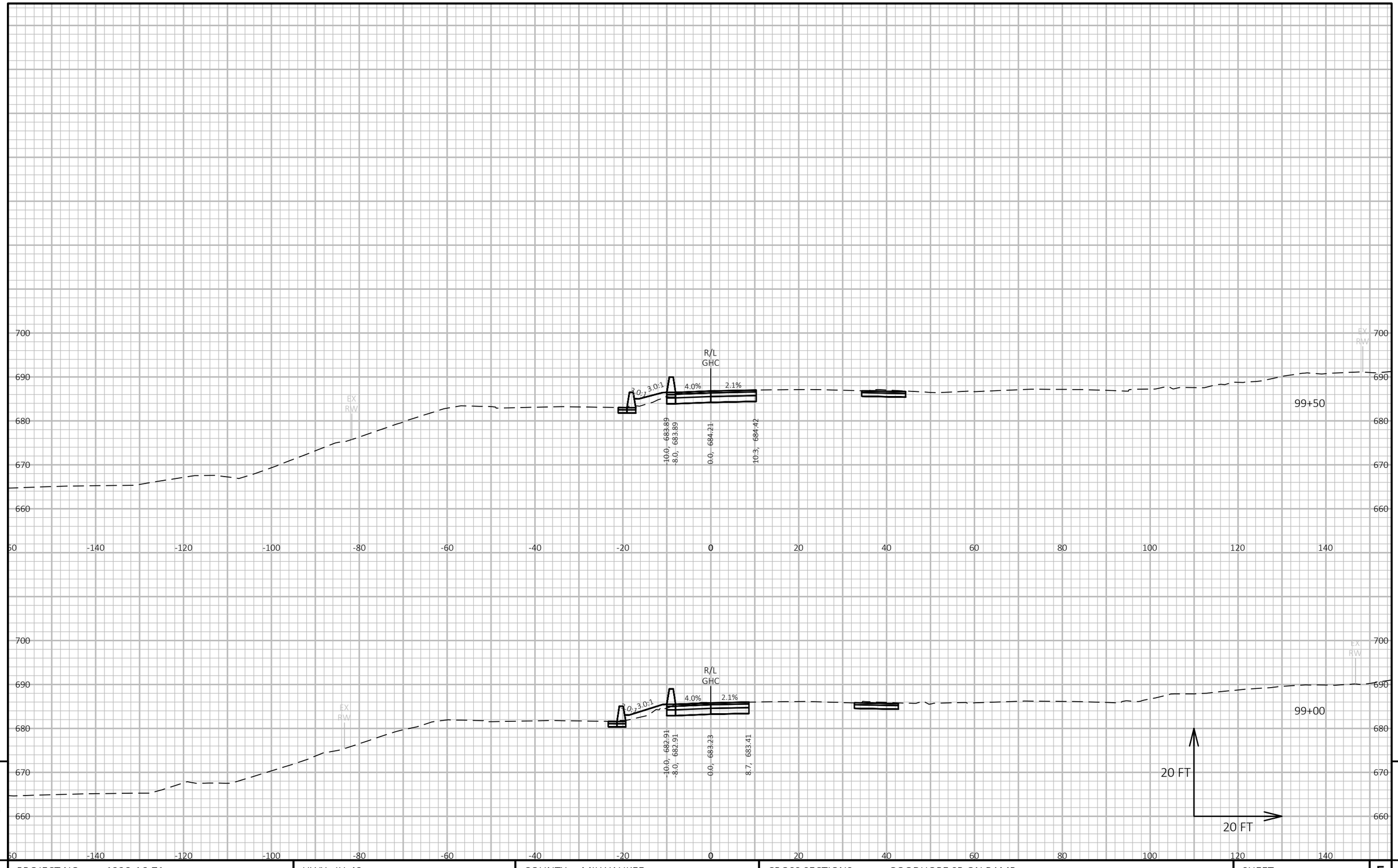
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 447	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090502_XS

PLOT DATE : 8/14/2017 1:18 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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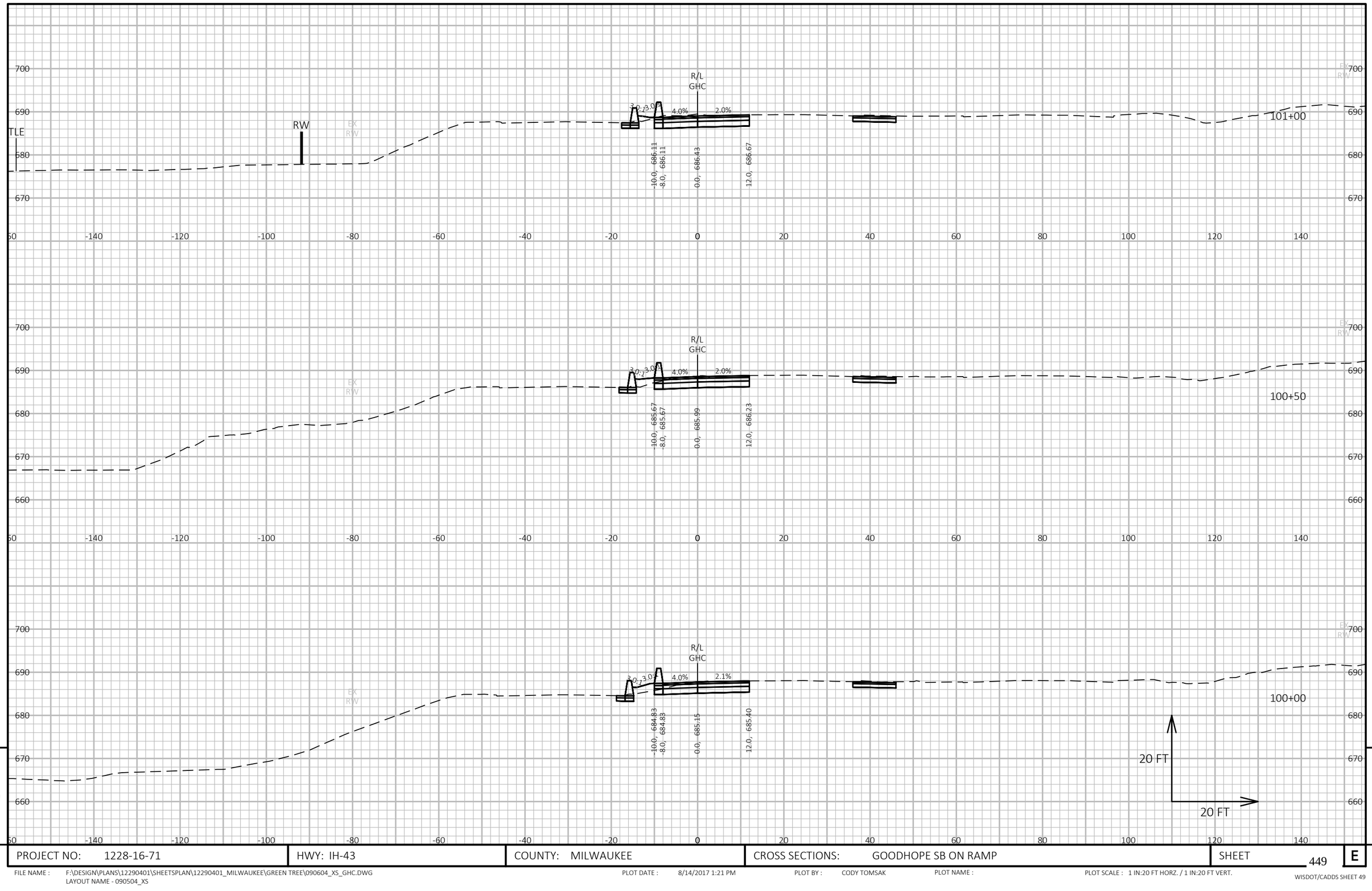
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 448	E

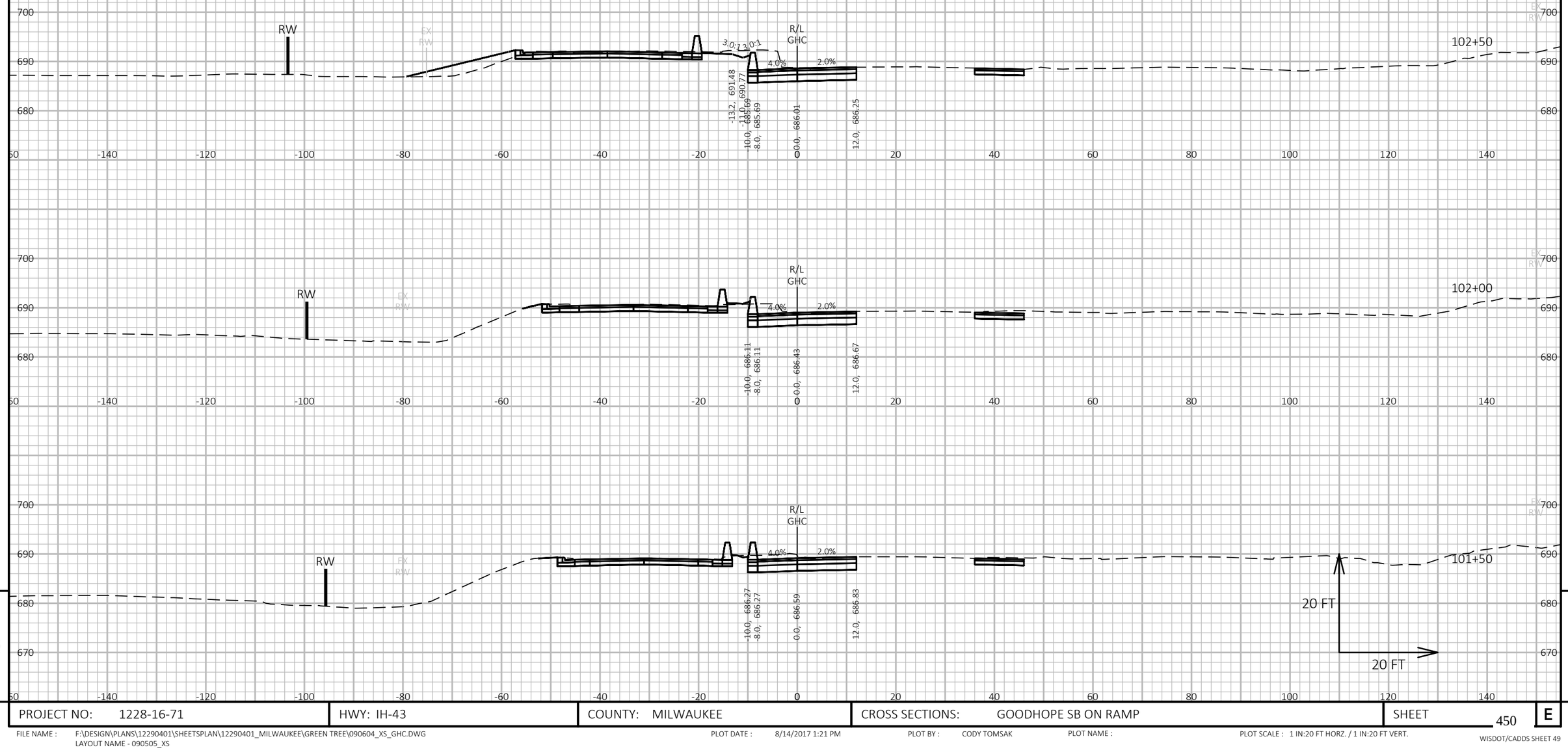
FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090503_XS

PLOT DATE : 8/14/2017 1:20 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 449	E



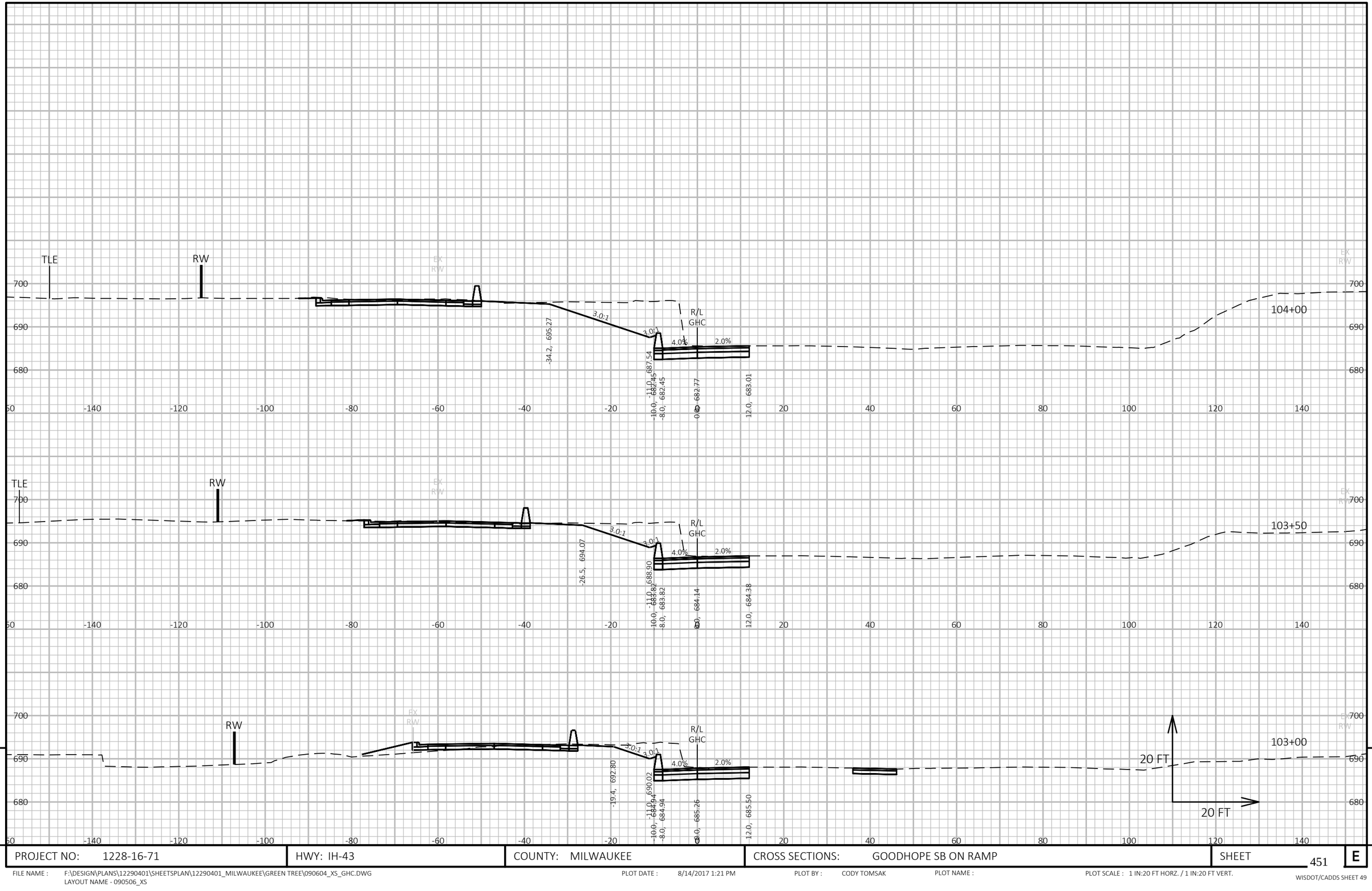
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 450	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090505_XS

PLOT DATE : 8/14/2017 1:21 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 451	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090506_XS

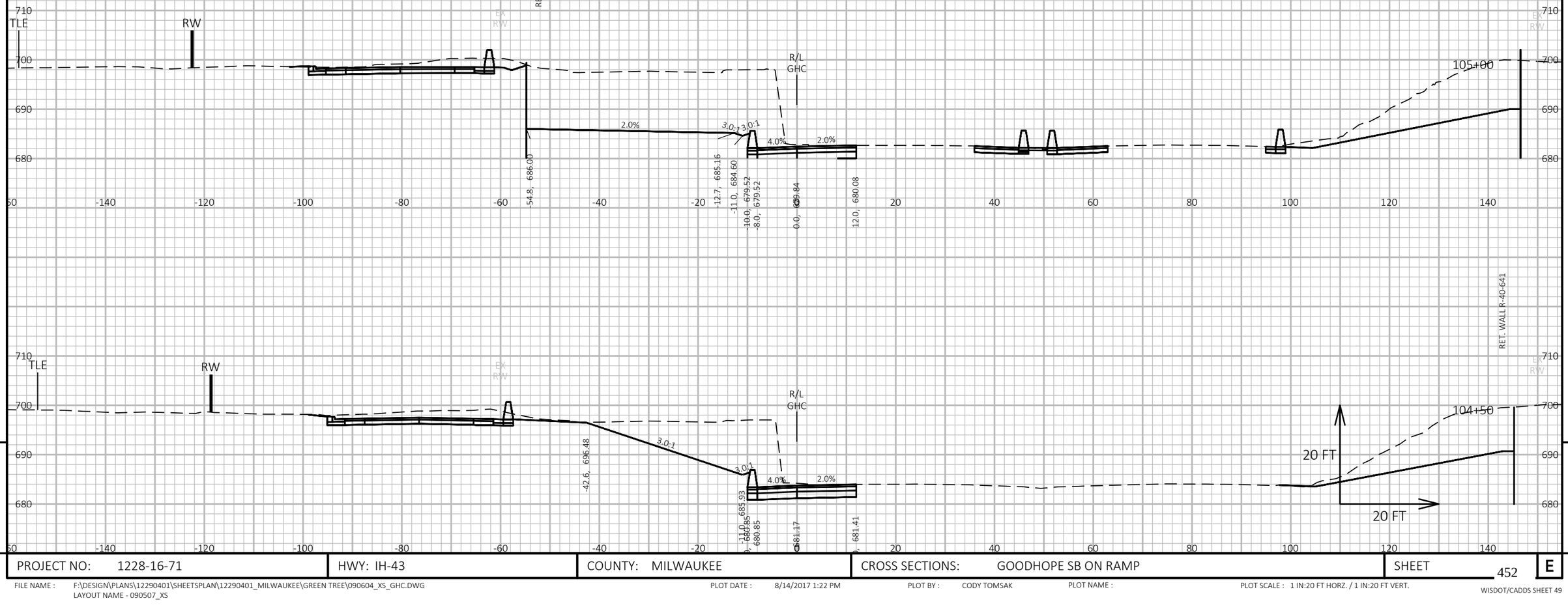
PLOT DATE : 8/14/2017 1:21 PM

PLOT BY : CODY TOMSAK

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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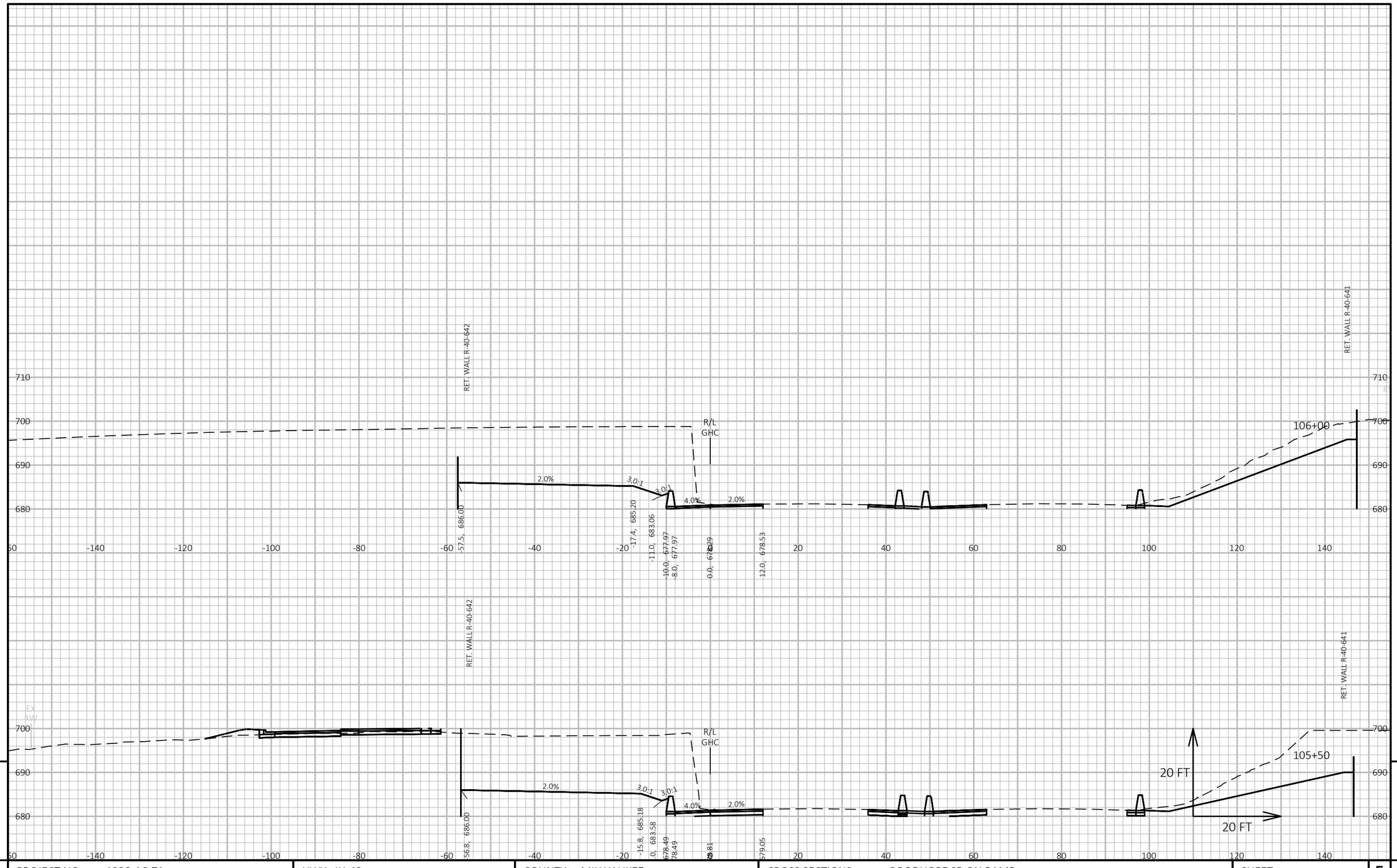
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 452	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090507_XS

PLOT DATE : 8/14/2017 1:22 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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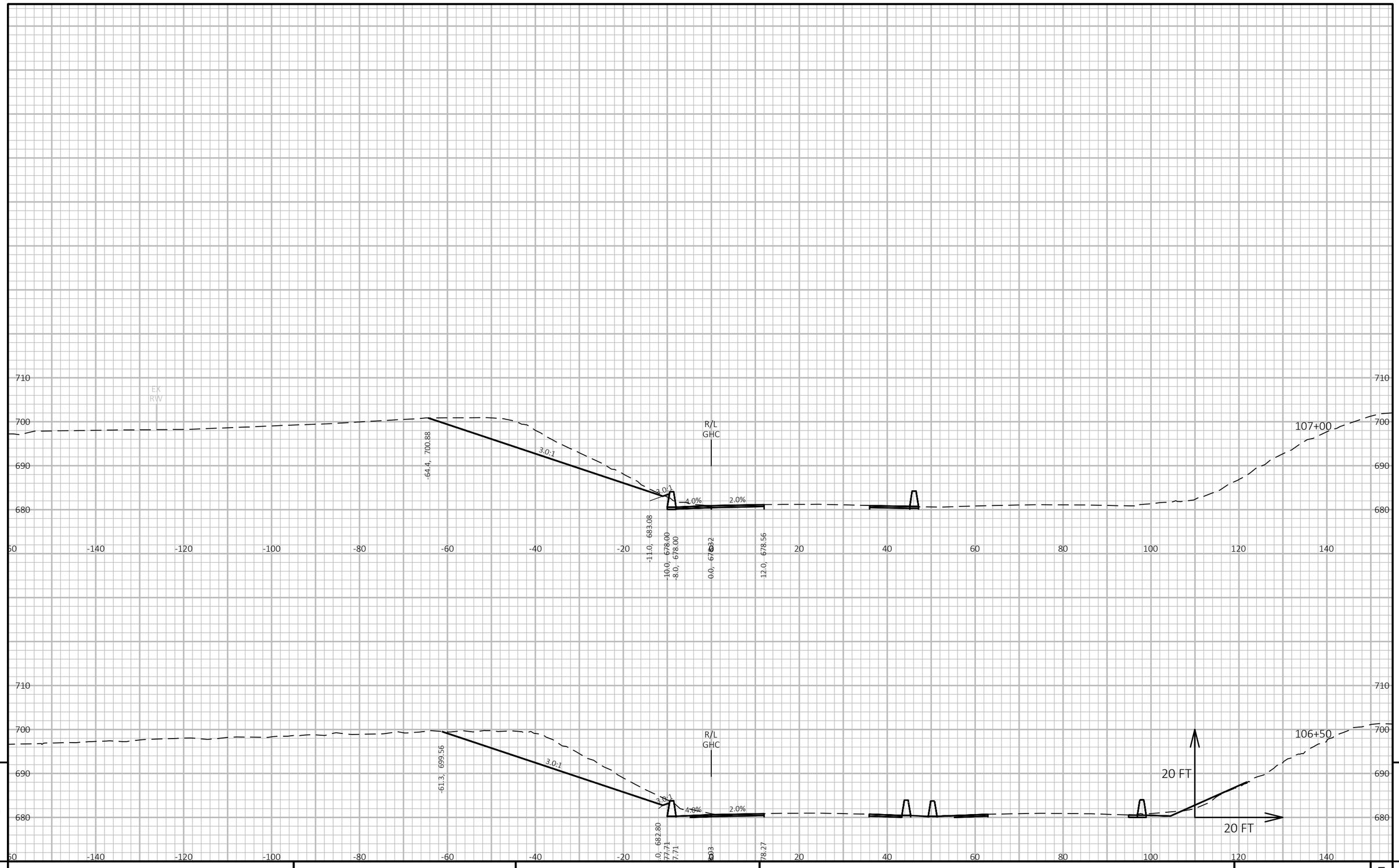
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 453	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090508_XS

PLOT DATE : 8/14/2017 1:22 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

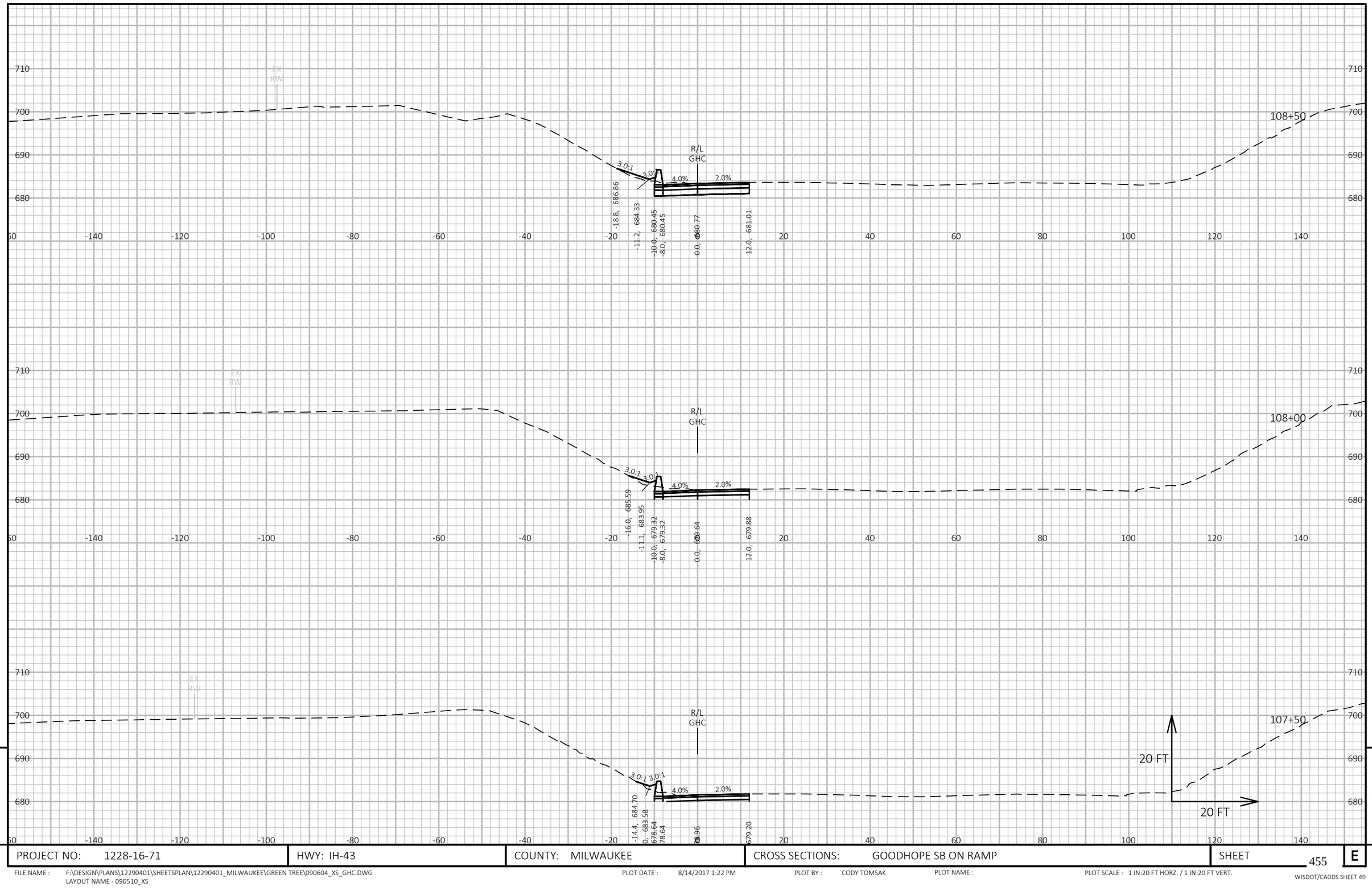
9

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 454	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090509_XS

PLOT DATE : 8/14/2017 1:22 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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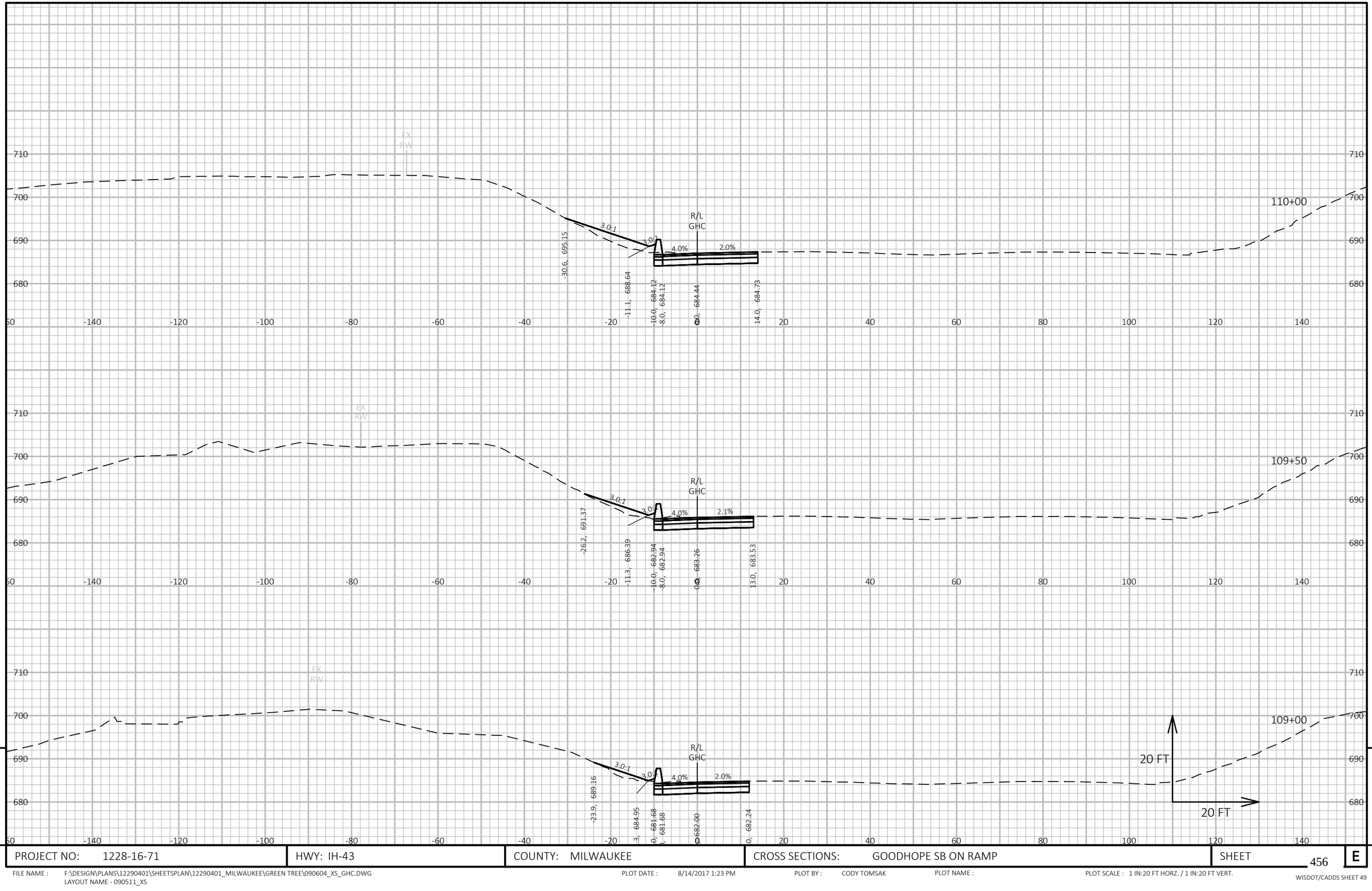
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 455	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090510_XS

PLOT DATE : 8/14/2017 1:22 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



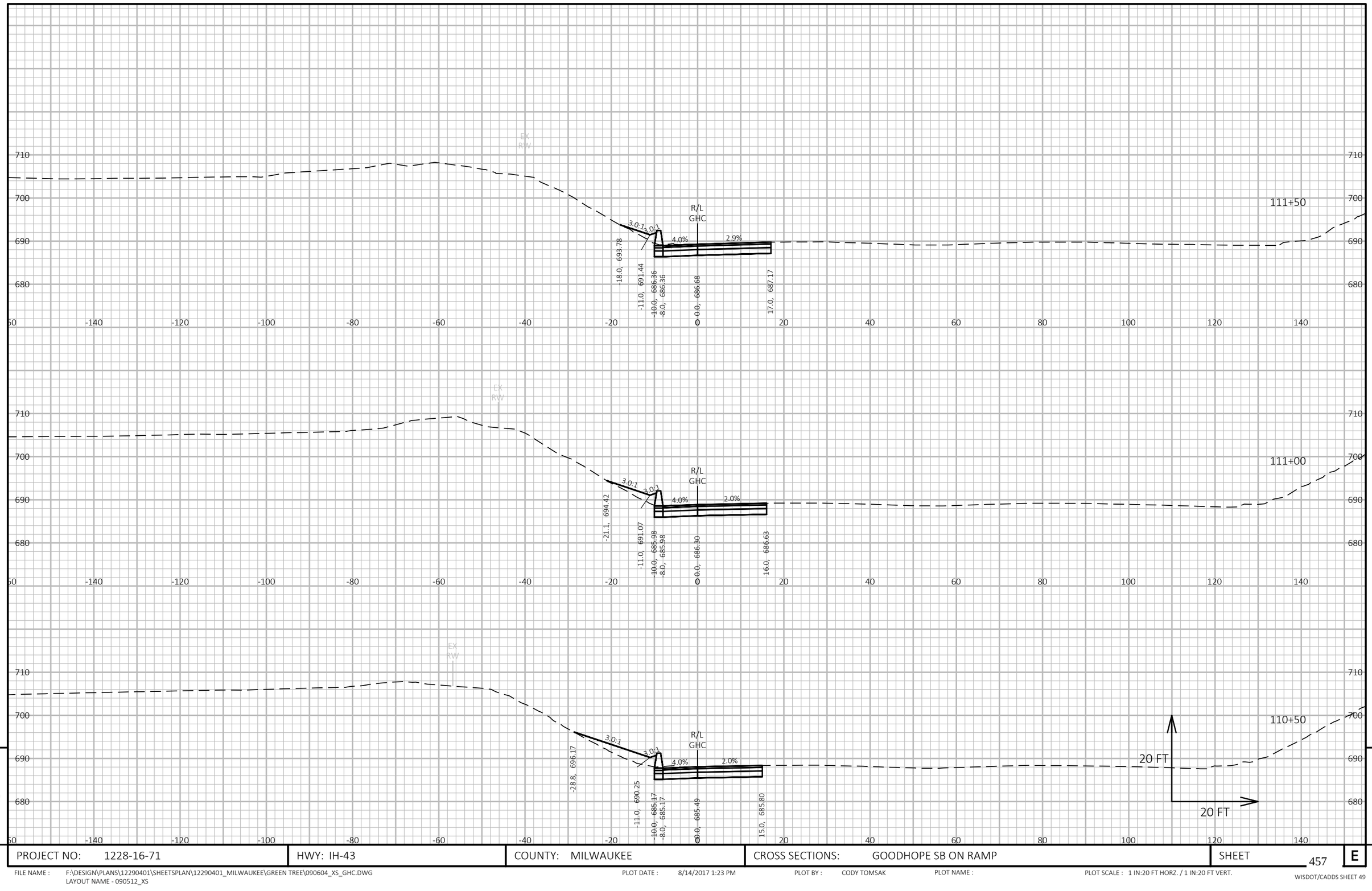
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 456	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090511_XS

PLOT DATE : 8/14/2017 1:23 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



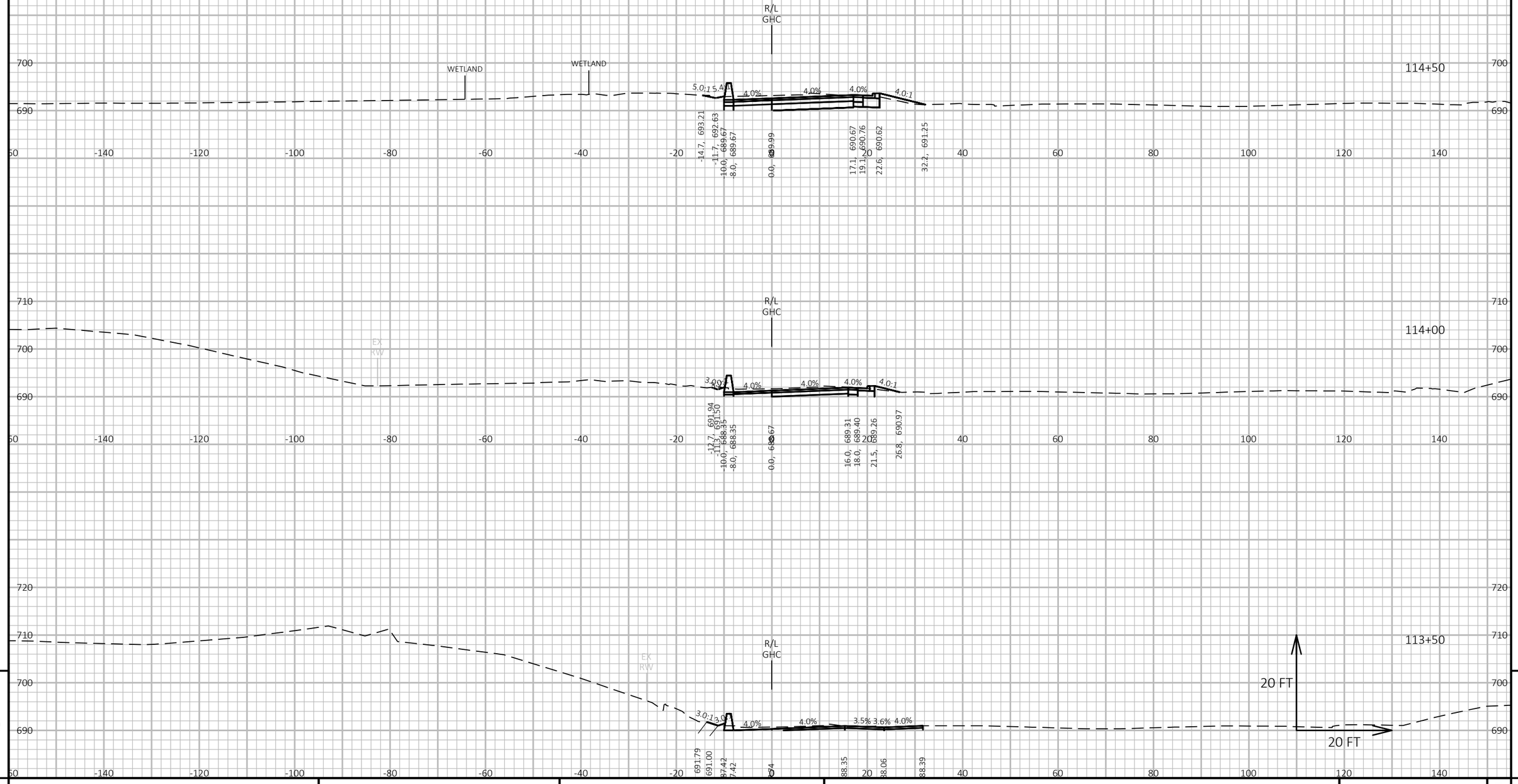
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 457	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090512_XS

PLOT DATE : 8/14/2017 1:23 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



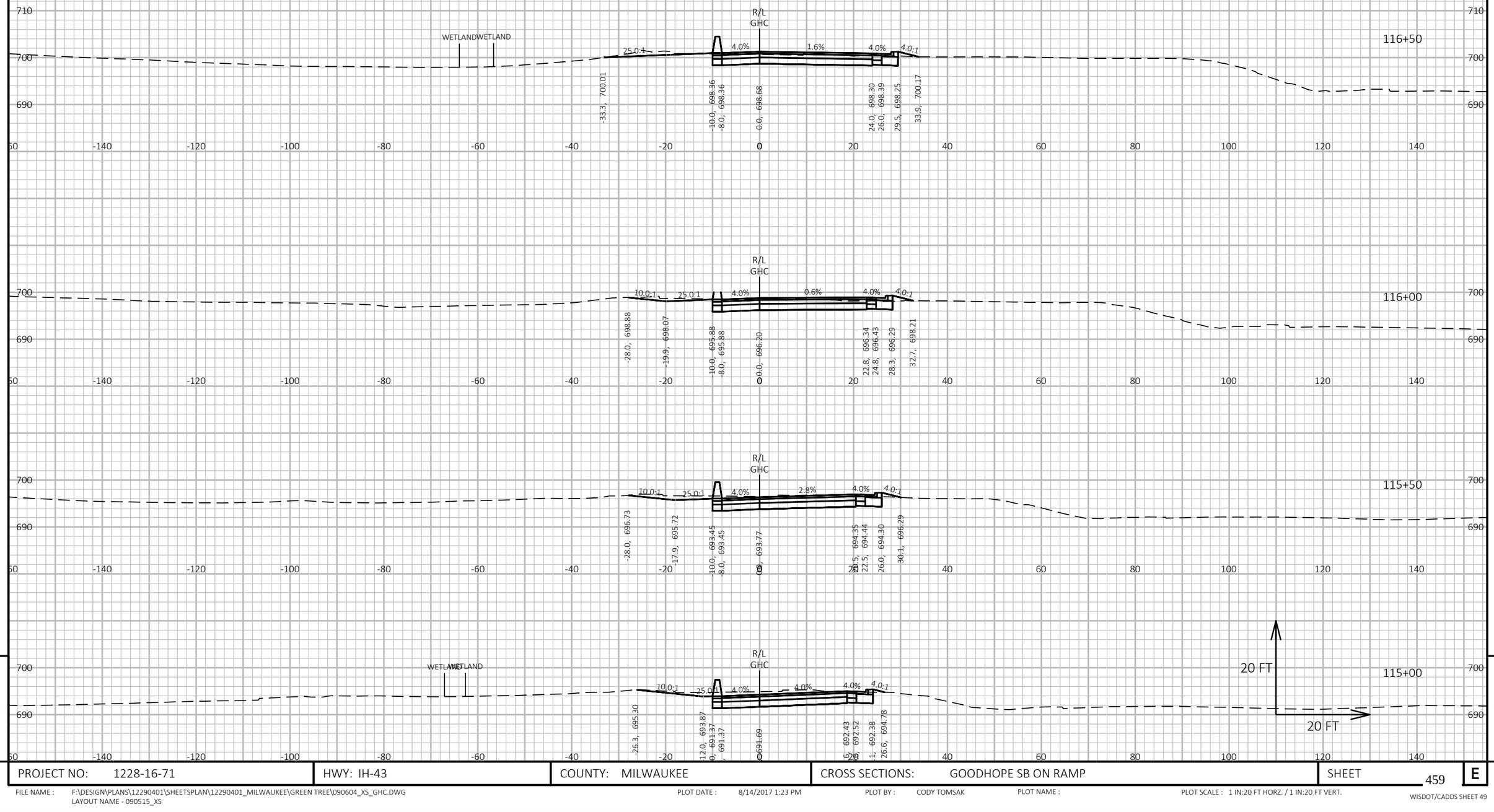
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 458	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090514_XS

PLOT DATE : 8/14/2017 1:23 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



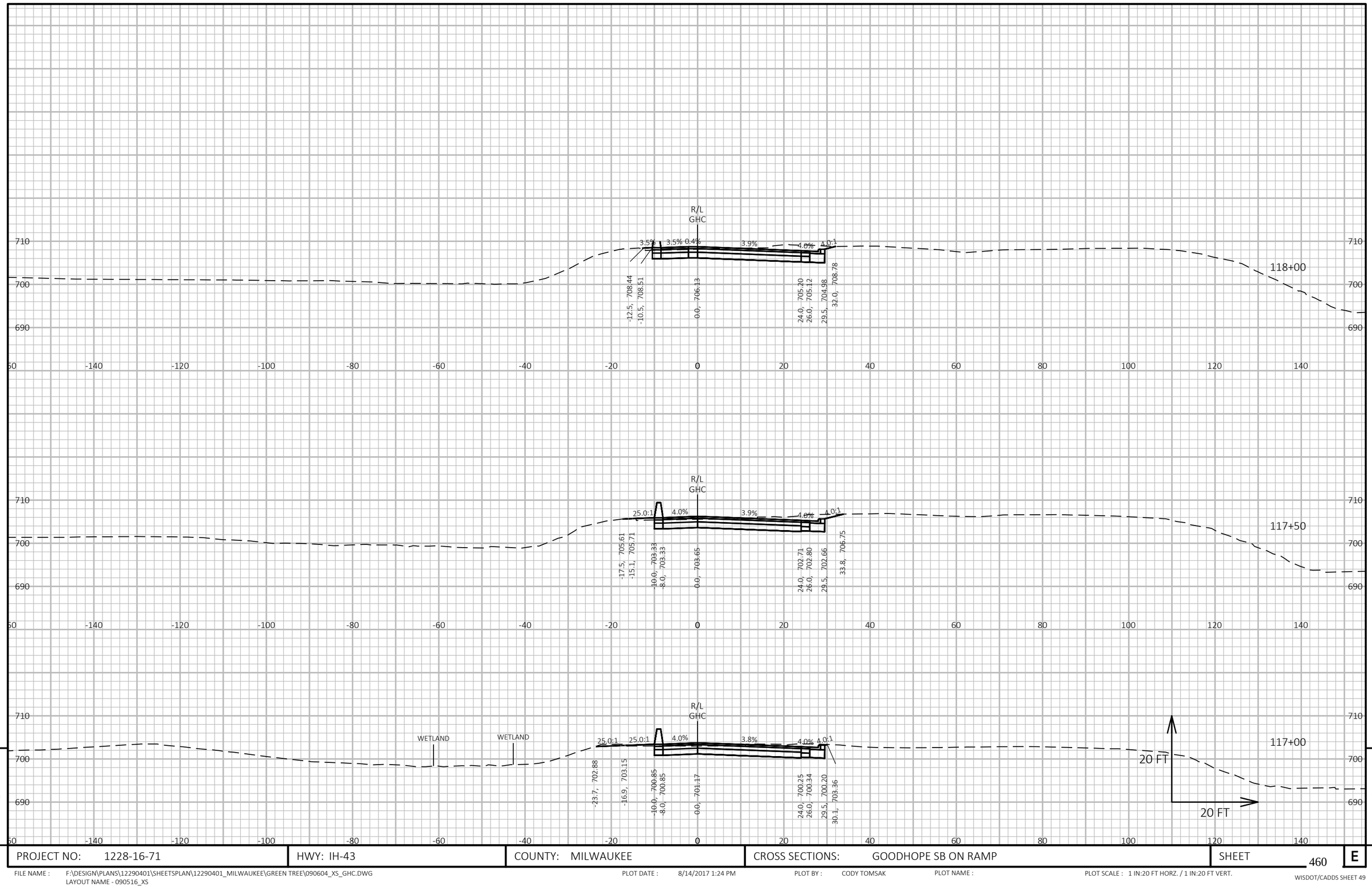
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 459	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090515_XS

PLOT DATE : 8/14/2017 1:23 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

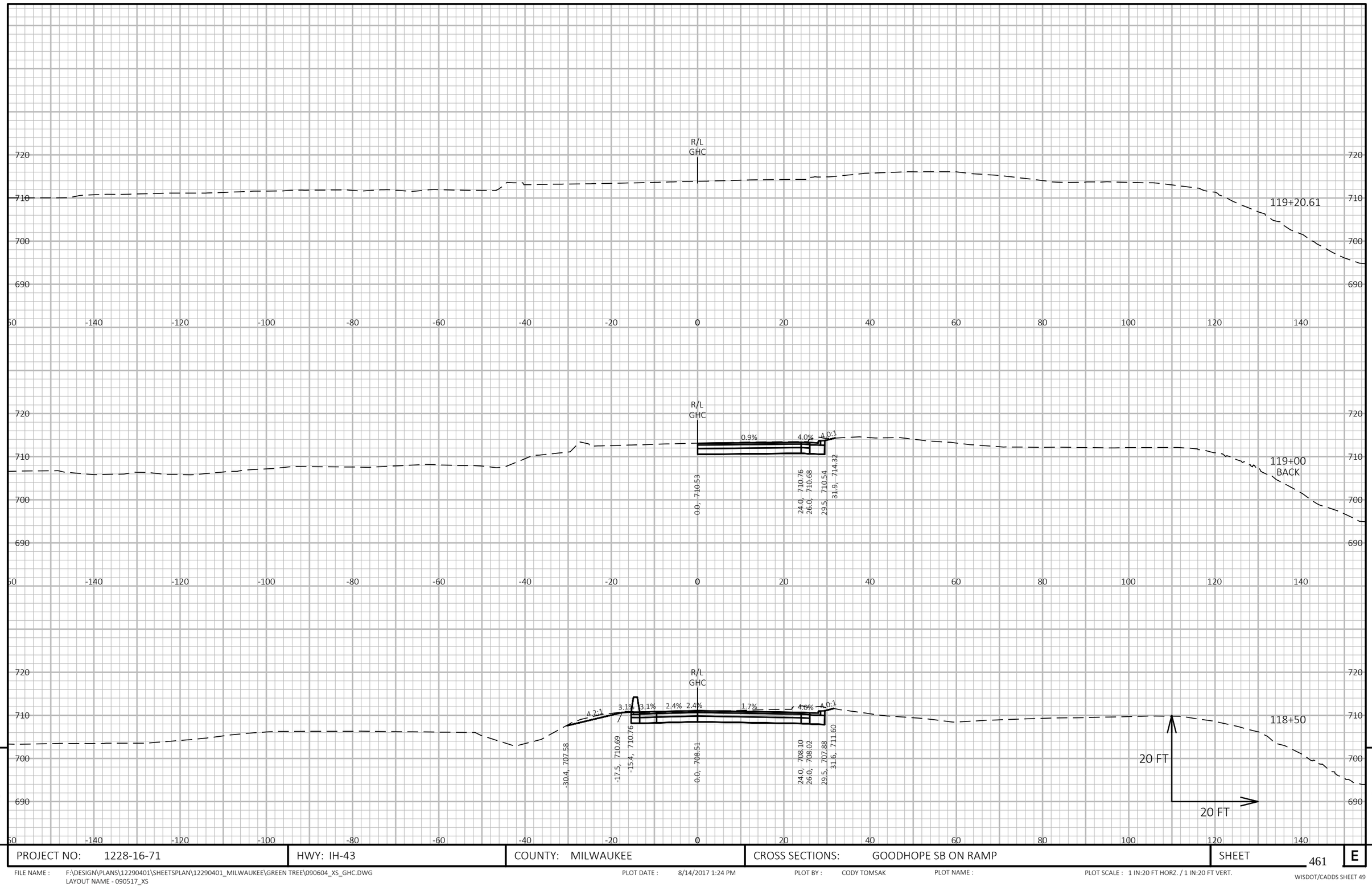
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PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 460	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090516_XS

PLOT DATE : 8/14/2017 1:24 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1228-16-71	HWY: IH-43	COUNTY: MILWAUKEE	CROSS SECTIONS: GOODHOPE SB ON RAMP	SHEET 461	E

FILE NAME : F:\DESIGN\PLANS\12290401\SHEETSPLAN\12290401_MILWAUKEE\GREEN TREE\090604_XS_GHC.DWG
LAYOUT NAME - 090517_XS

PLOT DATE : 8/14/2017 1:24 PM PLOT BY : CODY TOMSAK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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