WKE

FEB 13

PROJECT ID: 1060-45-70

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 = 380



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

EAST - WEST FREEWAY

STADIUM IC TO JACKSON ST ON RAMP

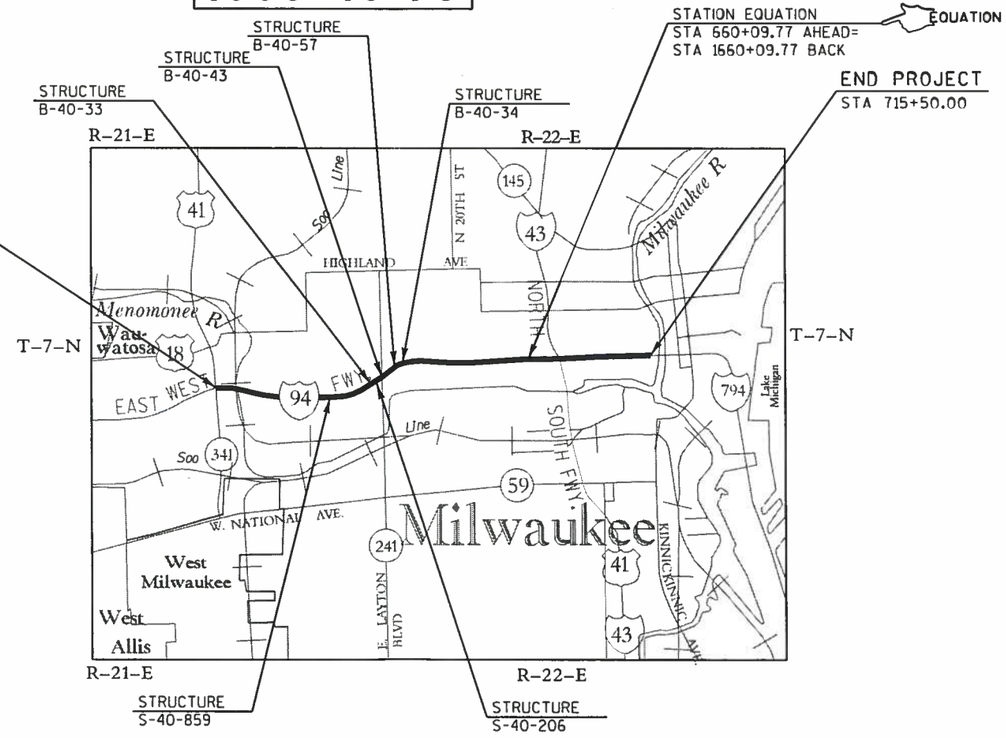
IH 94

MILWAUKEE COUNTY

RESTRIPING

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-45-70		

STATE PROJECT NUMBER
1060-45-70



N

LAYOUT
SCALE 0 1.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 2.643 MI.

Elevations shown on this plan are referenced to the National Geodetic Vertical Datum (NGVD29). Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), MILWAUKEE County, NAD 1983 (97)

DESIGN DESIGNATION

		IH 94
A.A.D.T. 2013	=	152,100
A.A.D.T. 2023	=	162,400
D.H.V.	=	X.X
D.D.	=	58/42
T.	=	8.1
DESIGN SPEED	=	55 MPH
ESALS	=	XX,XXX,XXX

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- SAWCUT XXXXX XXXXX
- 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 PLACED PER PLAN XX(P)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

WISCONSIN
PRASAD S. NARAYAN
E-26170
BROOKFIELD, WI.
PROFESSIONAL ENGINEER

11/27/12 Prasad Narayan
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT / KAPUR & ASSOCIATES
Designer	KAPUR & ASSOCIATES
Project Manager	MIKE TREAZISE
Regional Examiner	
Regional Supervisor	MANOJOY NAG
C.O. Examiner	CWB

APPROVED FOR THE REGIONAL OFFICE
DATE: 11/27/12 (Signature)

E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\010101_ti.dgn

PLOT DATE : 11/27/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10560

WISDOT/CADDS SHEET 10

GENERAL NOTES

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

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

FILL AND COMPACT ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WITH GRANULAR BACKFILL. BACKFILLING IS INCIDENTAL TO CORRESPONDING ABANDONMENT OR REMOVAL ITEM.

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

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. REMOVAL OF EROSION CONTROL ITEMS IS INCIDENTAL TO THE COST OF THE RESPECTIVE BID ITEM.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, FERTILIZED, SEEDED, AND COVERED WITH EROSION MAT AS DIRECTED BY THE ENGINEER.

PLACE SALVAGED TOPSOIL OR TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. SEED, EROSION MAT, AND FERTILIZE ALL AREAS 7 DAYS AFTER PLACEMENT OF SALVAGED TOPSOIL.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. SALVAGED TOPSOIL SHALL BE REPLACED WITH 4-INCH TYPICAL DEPTH.

STATIONING, DISTANCES AND OFFSETS FOR SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.

ALL TRAFFIC CONTROL DEVICES, DETOURS, FIXED MESSAGE SIGNS, CLOSURES AND ADVANCED WARNING SIGNS FOR CONSTRUCTION UNDER THIS PROJECT SHALL BE PLACED PER THE TRAFFIC CONTROL OR AS DIRECTED BY THE ENGINEER.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL “IN USE” SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM ‘TRAFFIC CONTROL COVERING SIGNS TYPE I OR TYPE II.’

NO ASPHALTIC SURFACE MILLING OR ASPHALTIC OVERLAYS SHALL OCCUR ON BRIDGE STRUCTURES.

CONCRETE JOINTS SHALL MATCH ABUTTING PAVEMENT AND CURB AND GUTTER JOINTS UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

THE LOCATIONS OF LONGITUDINAL JOINTS IN HMA PAVEMENT SHALL BE APPROVED BY THE ENGINEER.

LIMITS OF MILL AND OVERLAY ON RAMPS MAY BE ADJUSTED BY THE ENGINEER.

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS THE MINIMUM REQUIRED AND THE ACTUAL THICKNESS OR DEPTH WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

STATION AND OFFSETS ARE CALLED OUT AT THE FACE OF BARRIER AND THE FACE OF CURB AND GUTTER.

ALL TYPES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
E-30	2”	2” UPPER	12.5 MM	PG 70-28P
E-30	4”	2” LOWER 2” UPPER	12.5 MM 12.5 MM	PG 64-22 PG 70-28P

STANDARD ABBREVATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT-OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASMENT
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCE CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TC	TOP OF CURB
TLE	TEMPORARY LIMITED EASEMENT

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
UTILITY CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVALS
PLAN DETAILS
FTMS
ATR
STORM SEWER
PERMANENT SIGNING
LIGHTING
PAVEMENT MARKING
CONSTRUCTION STAGING
TRAFFIC CONTROL
DETOURS
ALIGNMENT DIAGRAM

2

UTILITY CONTACTS

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

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

WE Energies (Electric)
Mr. Dan Sande
Project Manager
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Fax (414) 221-2336
dan.sande@we-energies.com

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Project Manager
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Fax (414) 221-2336
dan.sande@we-energies.com

Milwaukee Metro Sewerage District
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Planning Services Supervisor
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Utility Coordinator
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Fax (414) 277-0638
steve.cramer@twcable.com

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Fax (847) 244-9597
cd8729@att.com

AT&T Corp.
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W277 S4747 Saylesville Rd
Waukesha, WI 53189
Phone (262) 547-6738

American Transmission Company LLC
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801 O'Keefe Road
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DePere, WI 54115 6113
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Fax (414) 286-5994
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OSP Engineer
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rtgovec@midwestfibernetworks.com

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Fax (262) 896-7435
ka8421@att.com

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SE Region Lighting Engineer
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matthew.pfeifer@dot.wi.gov

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West Allis , WI 53214 3362
Phone (414) 266-1165
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WisDOT STOC
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WISDOT ATR Pull Boxes
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Phone (414) 266-1157
clifford.serowski@dot.wi.gov

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Milwukee, WI 53212
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Milwaukee County Transit System

Mr. Dave Ziarek
Milwaukee County Transit System
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DESIGN CONTACTS

Wisconsin Department of Transportation
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Phone (414) 751-7200
prasad@kapur-assoc.com

2

BEGIN PROJECT
STA 1575+92.34

BEGIN CONSTRUCTION
STA 90+21.21

R/L IH 94 WB

R/L 35TH STREET ON RAMP

END CONSTRUCTION
STA 94+28.01

S-40-859

W PARK HILL AVE

N 35TH ST

N 44TH ST

MATCHLINE STA 1601+00

IH 94 WB

IH 94 EB

1580 1585 1590 1595 1600

85 90 95

MATCHLINE STA 1601+00

N 35TH ST

W PARK HILL AVE

N 32ND ST

END CONSTRUCTION
STA 21+50.00

R/L 28TH STREET ON RAMP

BEGIN CONSTRUCTION
STA 16+77.74

B-40-33

B-40-43

S-40-206

R/L IH 94 WB

W ST. PAUL AVE

N 27TH ST

MATCHLINE STA 1631+00

IH 94 WB

IH 94 EB

1600 1605 1610 1615 1620 1625 1630

20

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 4	E

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2

N 25TH ST

W CLYBOURN ST

R/L IH 94 WB

MATCHLINE STA 663+00

N 26TH ST

B-40-34

B-40-57

1640

1645

IH 94 WB

1650

1655

IH 94 EB

1660

EQUATION

STATION EQUATION
STA 660+9.77 AHEAD=
STA 1660+9.77 BACK

1635

W ST. PAUL AVE

ABANDONED

MATCHLINE STA 1631+00

MATCHLINE STA 663+00

N 16TH ST

W CLYBOURN ST

IH 94 WB

665

670

675

680

685

690

IH 94 EB

70SW

65NW

75SW

70NW

80SW

75NW

85SW

90SW

80NW

W TORY HILL ST

R/L RAMP NW

R/L RAMP SW

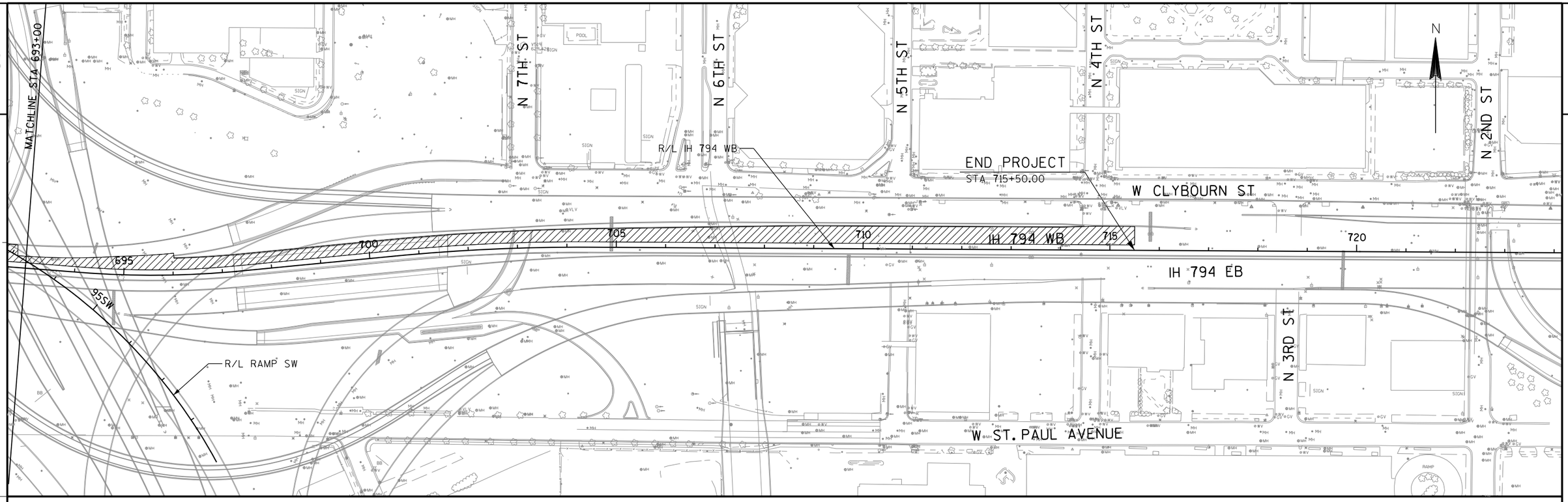
R/L IH 94 WB

N 13TH ST

MATCHLINE STA 693+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 5	E

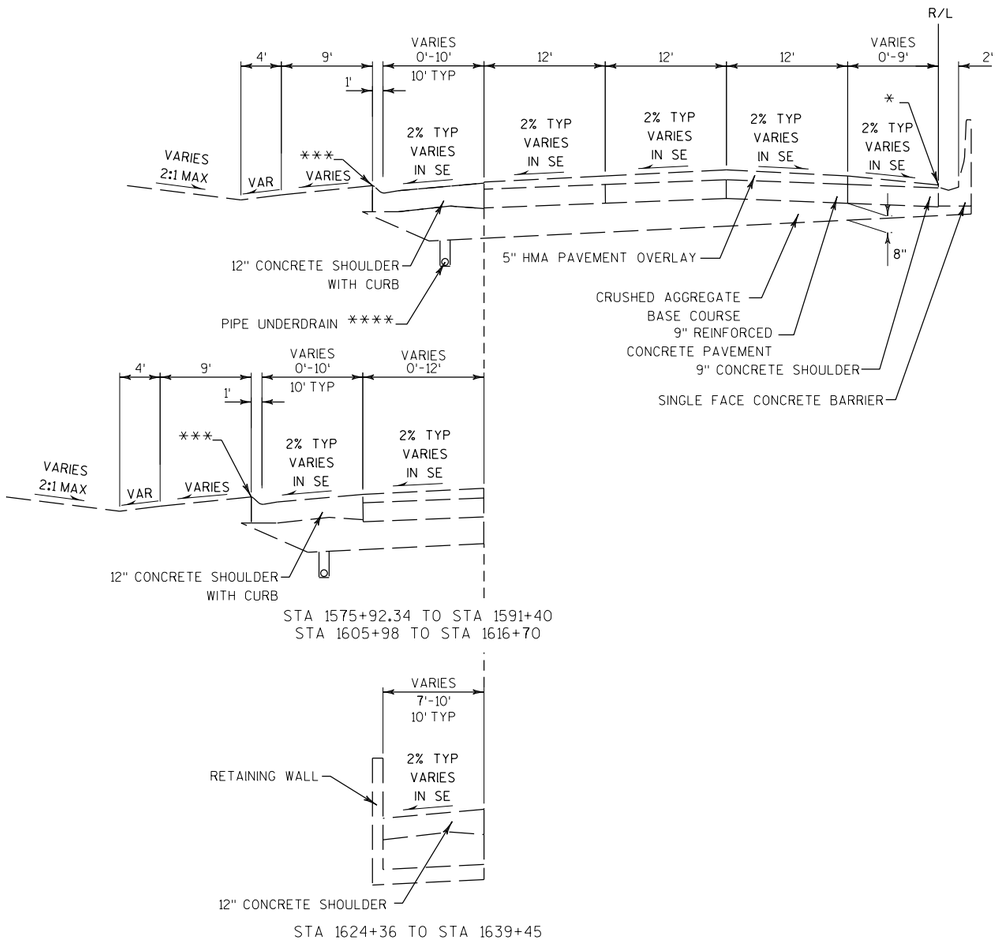
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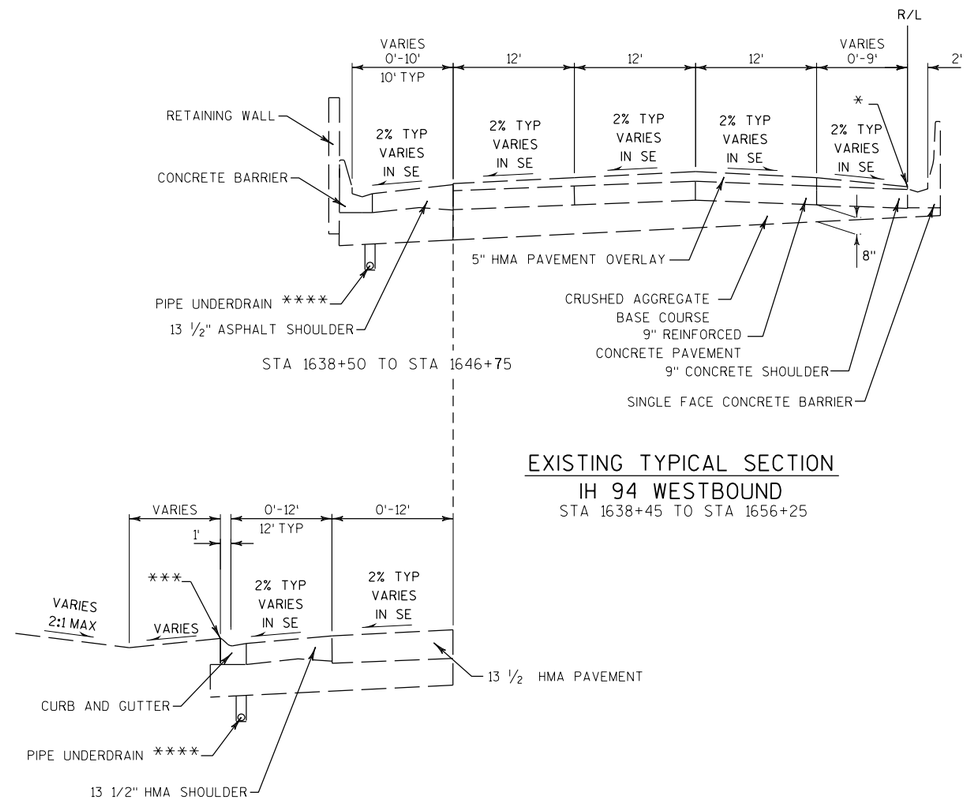
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PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 6	E

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PLOT BY : wally_w
PLOT NAME :
PLOT SCALE : 1:200
WISDOT/CADDS SHEET 42



EXISTING TYPICAL SECTION
IH 94 WESTBOUND
STA 1575+92.34 TO STA 1638+45



EXISTING TYPICAL SECTION
IH 94 WESTBOUND
STA 1638+45 TO STA 1656+25

NOTES:

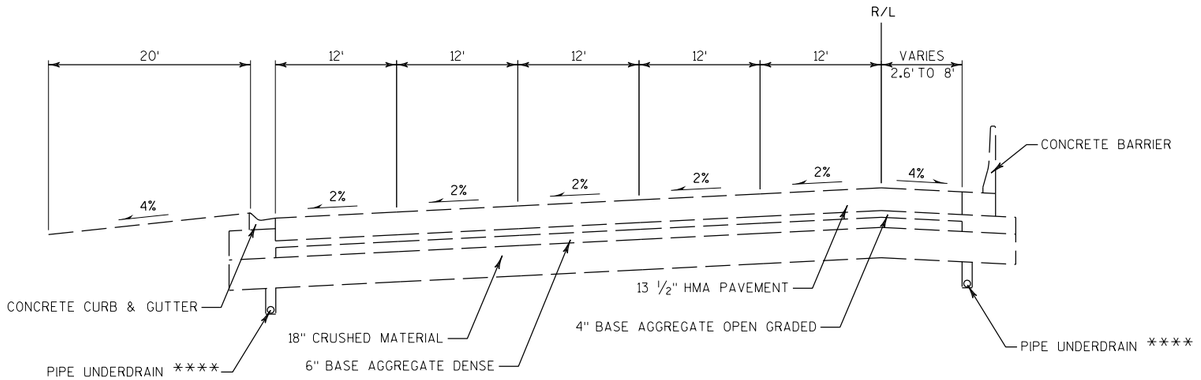
1) MILL OFF 2" HMA PAVMENT

FOOTNOTES:

*** CONCRETE CURB, 6-INCH SLOPED.
**** PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.

STATION EQUATIONS

STA 1660+09.77 BACK = STA 660+09.77 AHEAD



EXISTING TYPICAL SECTION
IH 94 WESTBOUND
SSTA 1656+25 TO STA 673+51

NOTES:

1) MILL OFF 2" HMA PAVMENT

FOOTNOTES:

*** CONCRETE CURB, 6-INCH SLOPED.

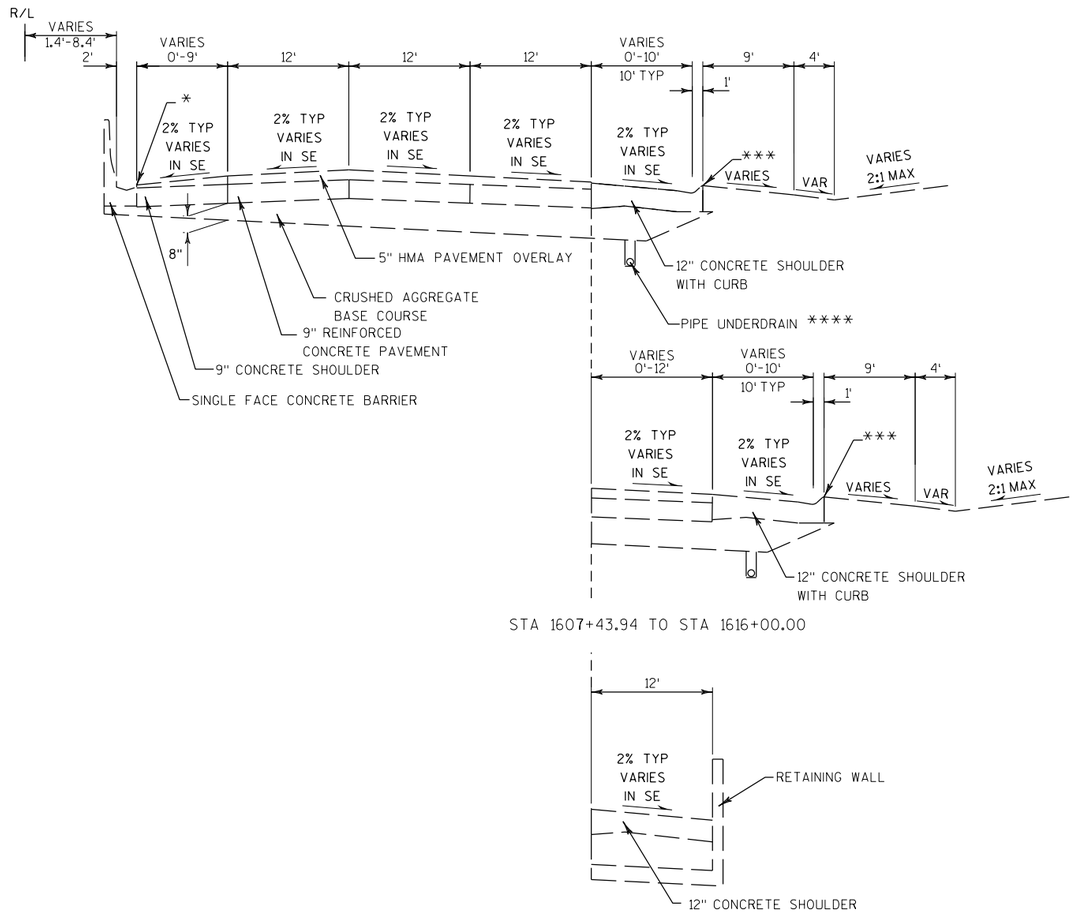
**** PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.

STATION EQUATIONS

STA 1660+09.77 BACK = STA 660+09.77 AHEAD

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	EXISTING TYPICAL SECTIONS	SHEET 8	E

2



STA 1607+43.94 TO STA 1616+00.00

STA 1631+71 TO STA 1632+50

EXISTING TYPICAL SECTION
IH 94 EASTBOUND
STA 1598+00 TO STA 1632+50

NOTES:

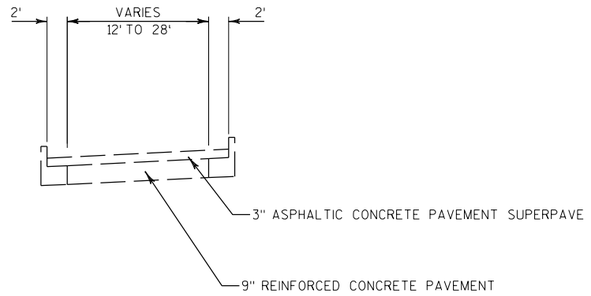
1) MILL OFF 2" HMA PAVMENT

FOOTNOTES:

*** CONCRETE CURB, 6-INCH SLOPED.
**** PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.

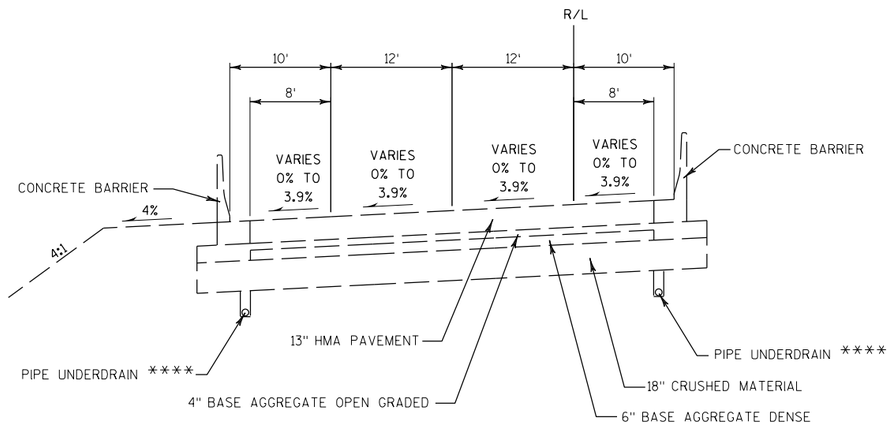
STATION EQUATIONS

STA 1660+09.77 BACK = STA 660+09.77 AHEAD



EXISTING TYPICAL SECTION - RAMP

SERVICE INTERCHANGE RAMPS



EXISTING TYPICAL SECTION

IH 794 MAINLINE

SSTA 697+40 TO STA 701+42

NOTES:

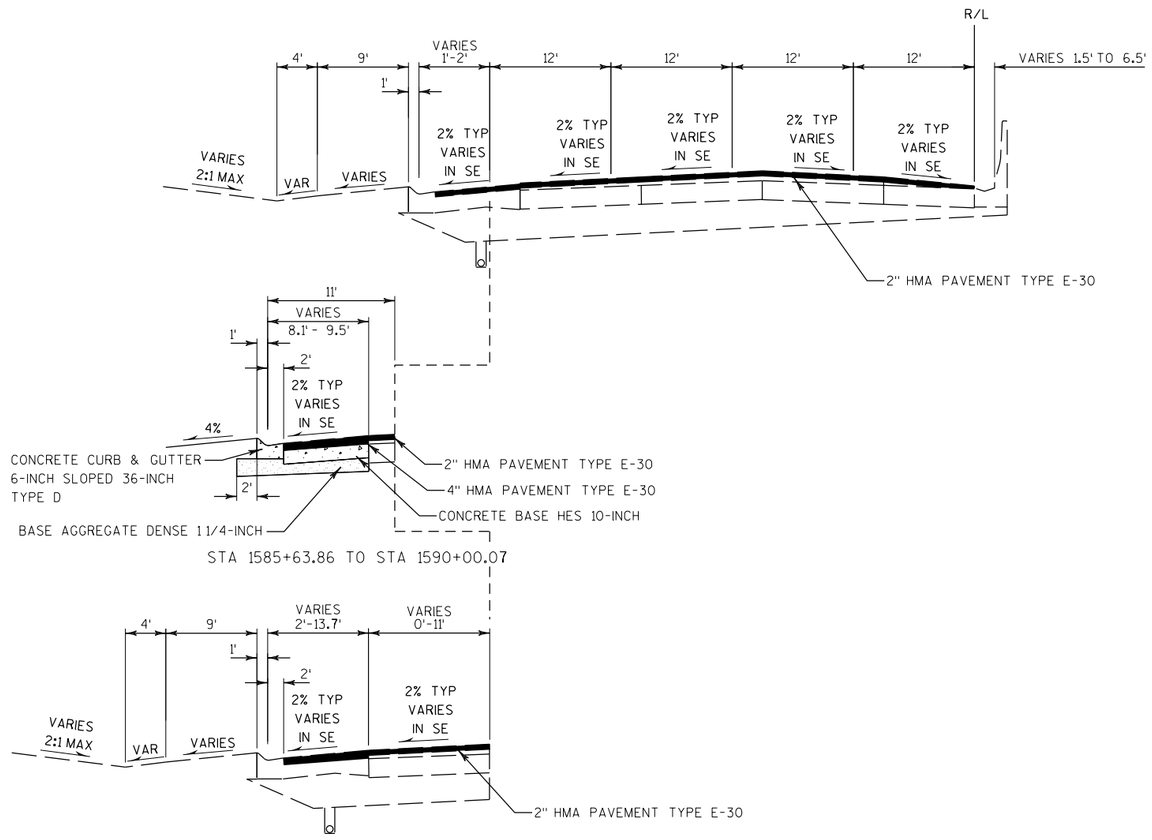
1) MILL OFF 2" HMA PAVMENT

FOOTNOTES:

*** CONCRETE CURB, 6-INCH SLOPED.

**** PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.

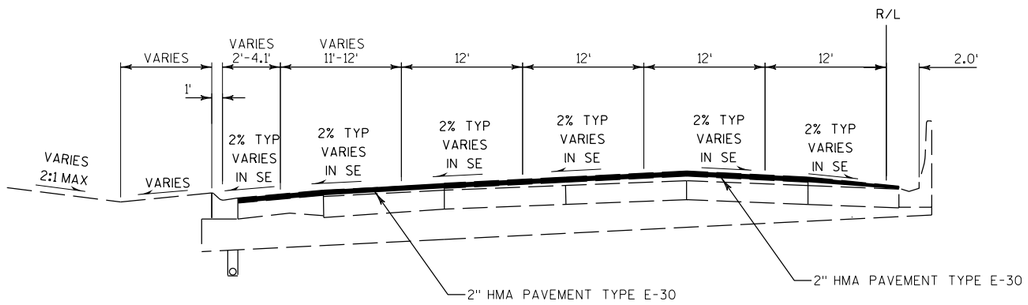
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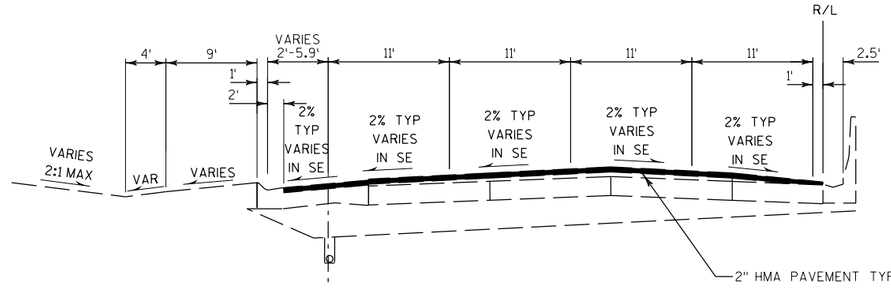
STA 1585+63.86 TO STA 1590+00.07

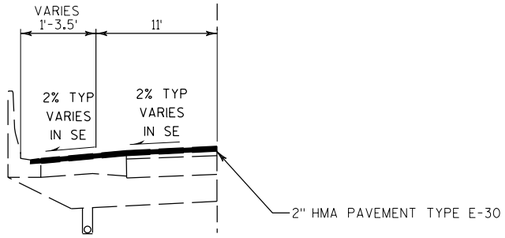
STA 1575+92.34 TO STA 1585+63.86

PROPOSED TYPICAL SECTION
IH 94 WESTBOUND
STA 1575+92.34 TO STA 1605+53.88

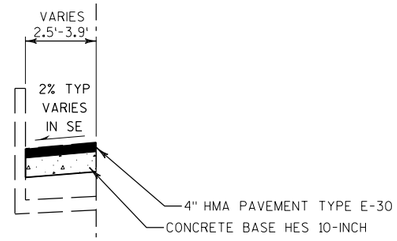


PROPOSED TYPICAL SECTION
IH 94 WESTBOUND
STA 1646+75 TO STA 1656+25

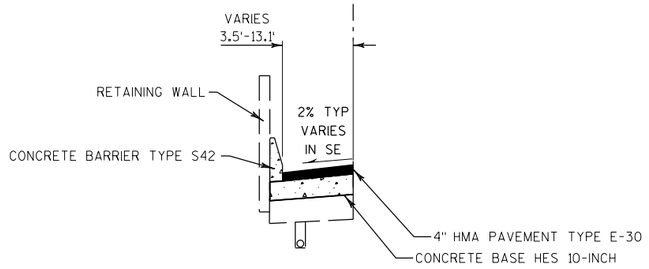




STA 1605+98 TO STA 1616+70



STA 1624+36 TO STA 1638+45



STA 1638+45 TO STA 1646+75

PROPOSED TYPICAL SECTION
IH 94 WESTBOUND
STA 1605+53.88 TO STA 1646+75

NOTES:

1) MILL OFF 2" OF EXISTING HMA PAVMENT

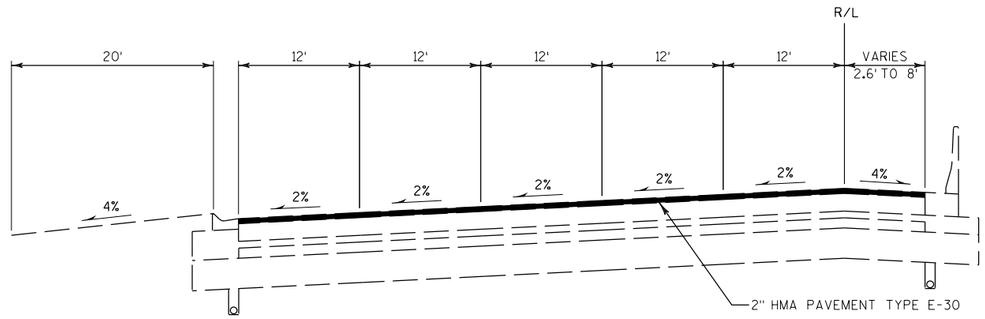
2) REMOVE CONCRETE SURFACE PARTIAL DEPTH (2") OF EXISTING CONCRETE PAVEMENT

STATION EQUATIONS

STA 1660+09.77 BACK = STA 660+09.77 AHEAD

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PROPOSED TYPICAL SECTIONS	SHEET 11	E

2



PROPOSED TYPICAL SECTION
IH 94 WESTBOUND
SSTA 1656+25 TO STA 673+51

NOTES:

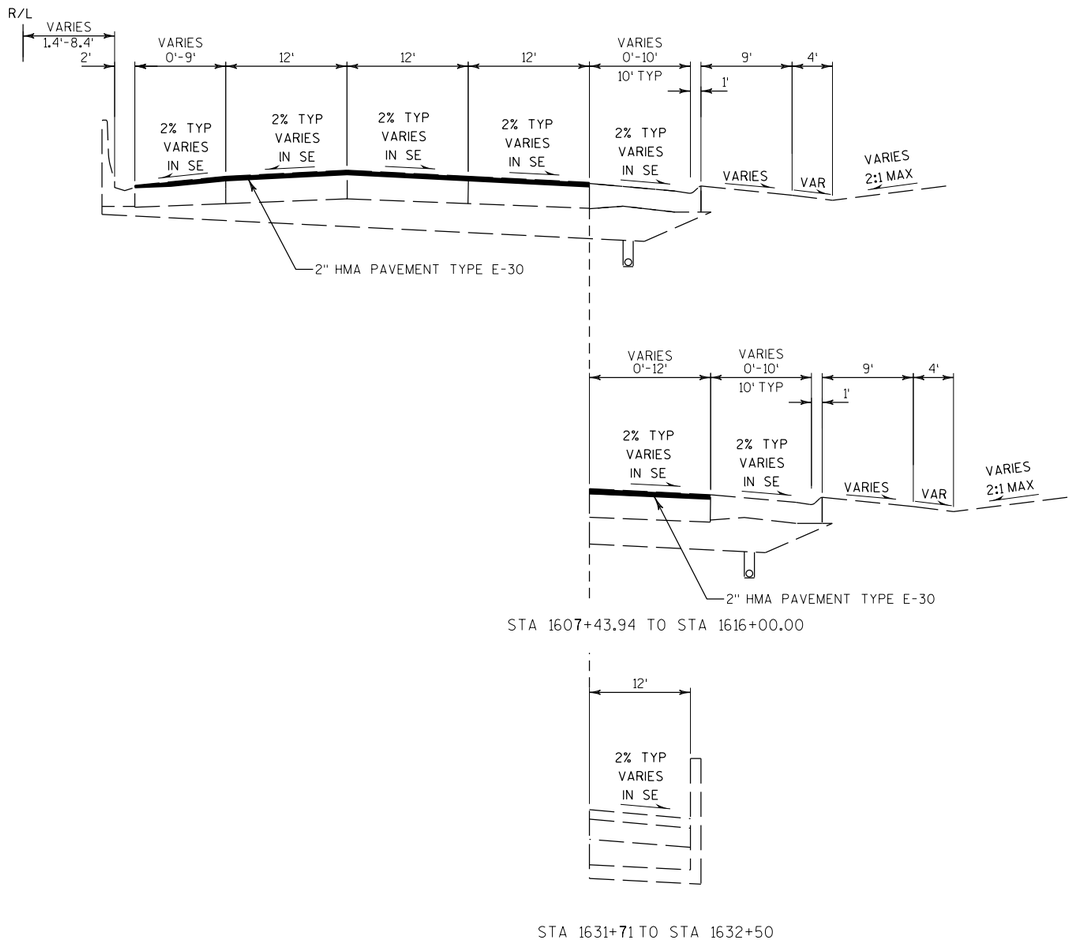
1) MILL OFF 2" OF EXISTING HMA PAVMENT

2) REMOVE CONCRETE SURFACE PARTIAL DEPTH (2") OF EXISTING CONCRETE PAVEMENT

STATION EQUATIONS

STA 1660+09.77 BACK = STA 660+09.77 AHEAD

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PROPOSED TYPICAL SECTIONS	SHEET 12	E



PROPOSED TYPICAL SECTION
IH 94 EASTBOUND
STA 1598+00 TO STA 1632+50

NOTES:

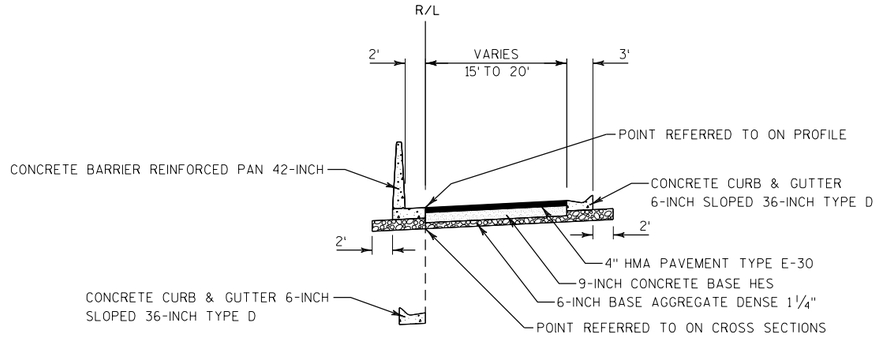
1) MILL OFF 2" OF EXISTING HMA PAVMENT

2) REMOVE CONCRETE SURFACE PARTIAL DEPTH (2") OF EXISTING CONCRETE PAVEMENT

STATION EQUATIONS

STA 1660+09.77 BACK = STA 660+09.77 AHEAD

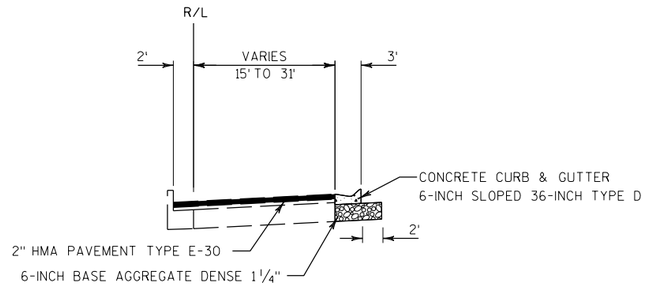
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PROPOSED TYPICAL SECTIONS	SHEET 13	E



STA 92+50.00 TO STA 94+28.01

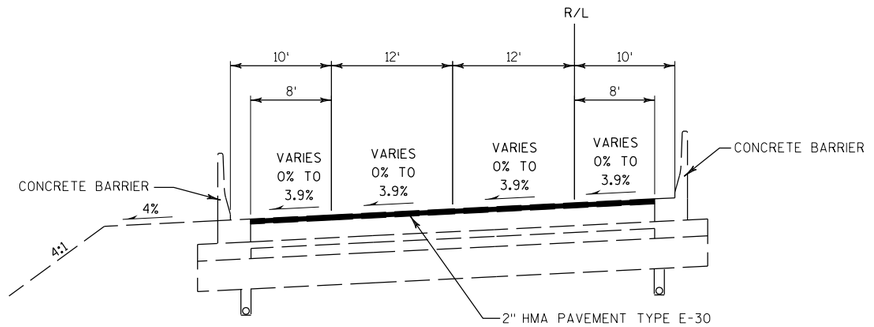
PROPOSED TYPICAL SECTION - RAMP

35TH STREET ON RAMP
STA 90+21.21 TO STA 94+28.01



PROPOSED TYPICAL SECTION - RAMP

28TH STREET ON RAMP
STA 16+77.74 TO STA 21+50.00



PROPOSED TYPICAL SECTION

IH 794 MAINLINE
SSTA 697+40 TO STA 701+42

NOTES:

1) MILL OFF 2" OF EXISTING HMA PAVMENT

2) REMOVE CONCRETE SURFACE PARTIAL DEPTH (2") OF EXISTING CONCRETE PAVEMENT

STATION EQUATIONS

STA 1660+09.77 BACK = STA 660+09.77 AHEAD

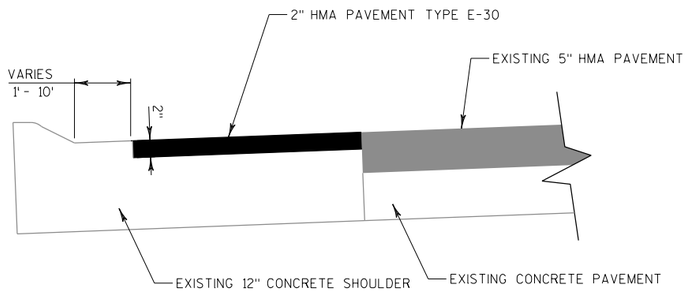
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PROPOSED TYPICAL SECTIONS	SHEET 14	E

2

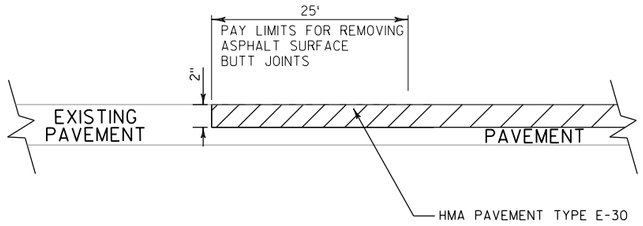
CONSTRUCTION SEQUENCE

STAGE 1A/1B

- REMOVE 2" EXISTING CONCRETE SHOULDER
- OVERLAY WITH 2" HMA PAVEMENT TYPE E-30



SHOULDER OVERLAY DETAIL



BUTT JOINT DETAIL

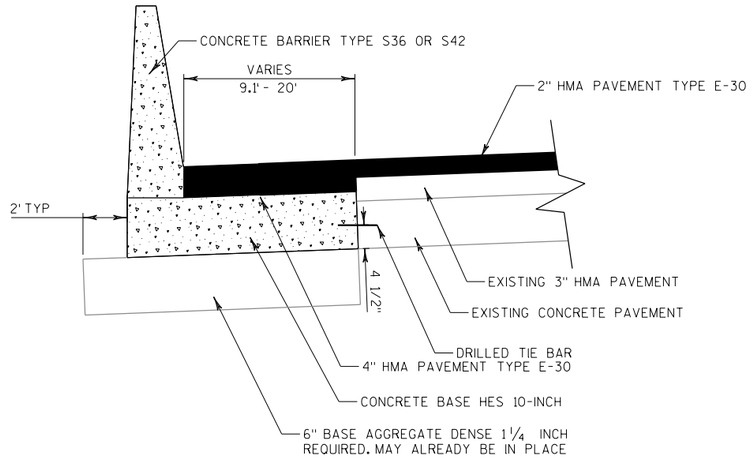
CONSTRUCTION SEQUENCE

STAGE 1A/1B OR 2

- REMOVE SHOULDER
- POUR CONCRETE BASE HES 10-INCH
- PLACE CONCRETE BARRIER
- OVERLAY BASE WITH 3" HMA PAVEMENT TYPE E-30
- SEE APHALTIC OVERLAY WEDGE DETAIL

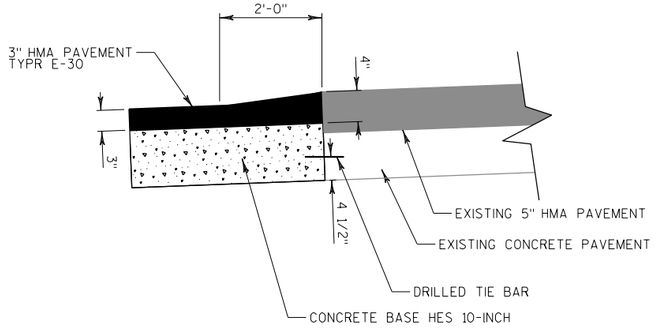
STAGE 3A OR 3B

- MILL OFF 1" NEWLY OVERLAID HMA PAVEMENT
- MILL OFF 2" OF EXISTING HMA PAVEMENT
- OVERLAY WITH 2" HMA PAVEMENT TYPE E-30



SHOULDER REPLACEMENT AT BARRIER WALL

2



ASPHALTIC OVERLAY WEDGE DETAIL

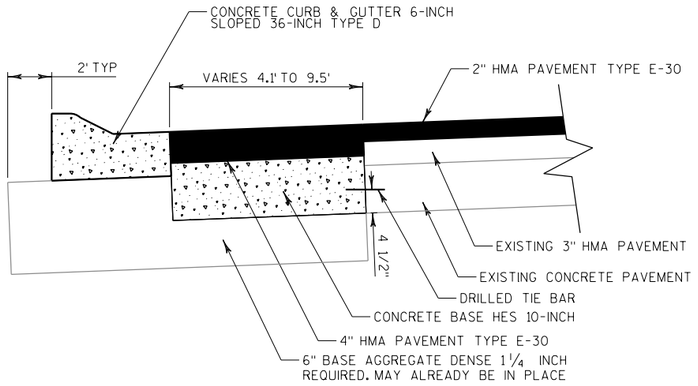
CONSTRUCTION SEQUENCE

STAGE 1A/1B

- REMOVE SHOULDER
- POUR CONCRETE BASE HES 10-INCH
- PLACE CONCRETE BARRIER
- OVERLAY BASE WITH 3" HMA PAVEMENT TYPE E-30
- SEE APHALTIC OVERLAY WEDGE DETAIL

STAGE 3B

- MILL OFF 1" NEWLY OVERLAID HMA PAVEMENT
- MILL OFF 2" OF EXISTING HMA PAVEMENT
- OVERLAY WITH 2" HMA PAVEMENT TYPE E-30



SHOULDER REPLACEMENT WITH CURB & GUTTER

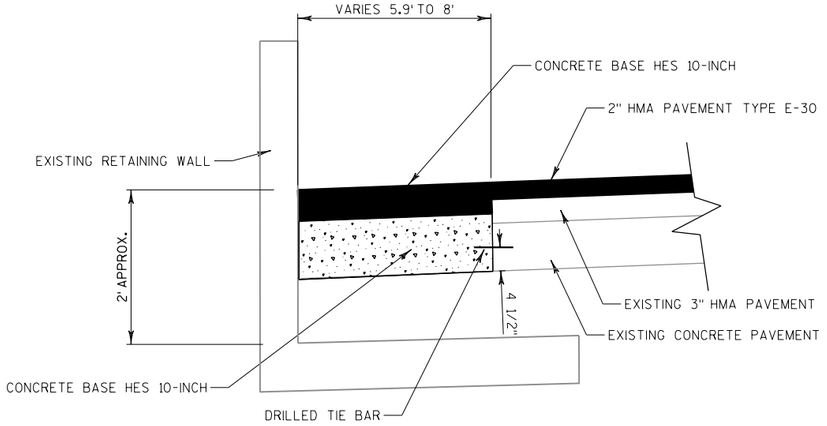
CONSTRUCTION SEQUENCE

STAGE 1A/1B

- REMOVE SHOULDER
- POUR CONCRETE BASE HES 10-INCH
- PLACE CONCRETE BARRIER
- OVERLAY BASE WITH 3" HMA PAVEMENT TYPE E-30
- SEE APHALTIC OVERLAY WEDGE DETAIL

STAGE 3B

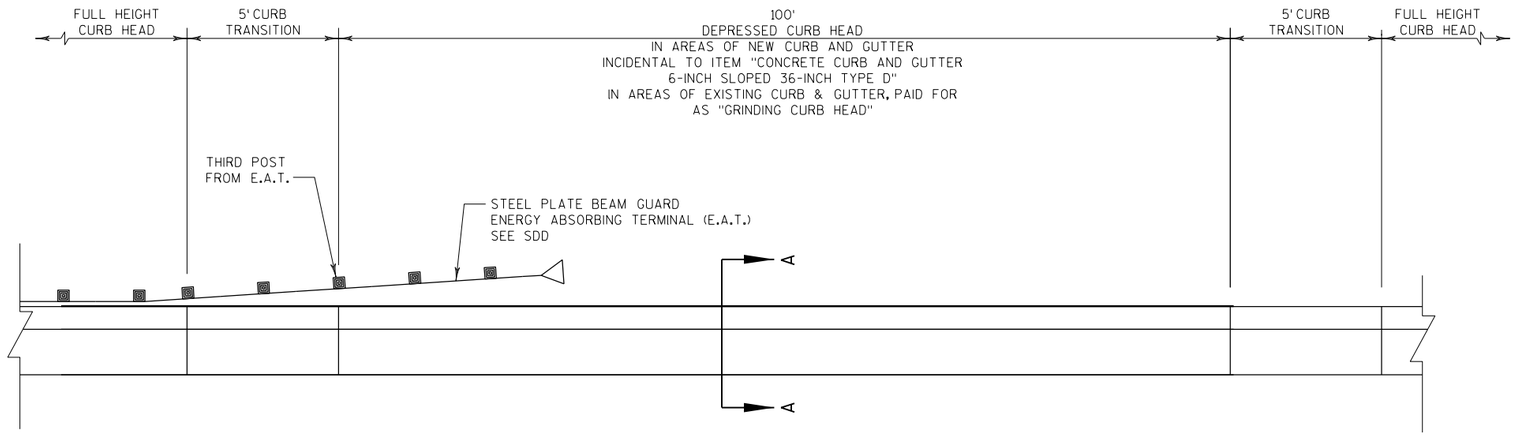
- MILL OFF 1" NEWLY OVERLAID HMA PAVEMENT
- MILL OFF 2" OF EXISTING HMA PAVEMENT
- OVERLAY WITH 2" HMA PAVEMENT TYPE E-30

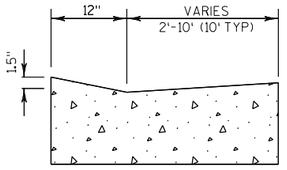


SHOULDER REPLACEMENT AT RETAINING WALL

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 15	E

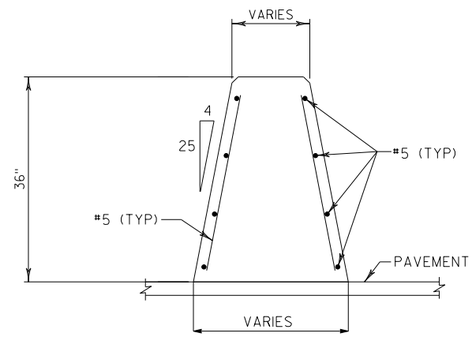
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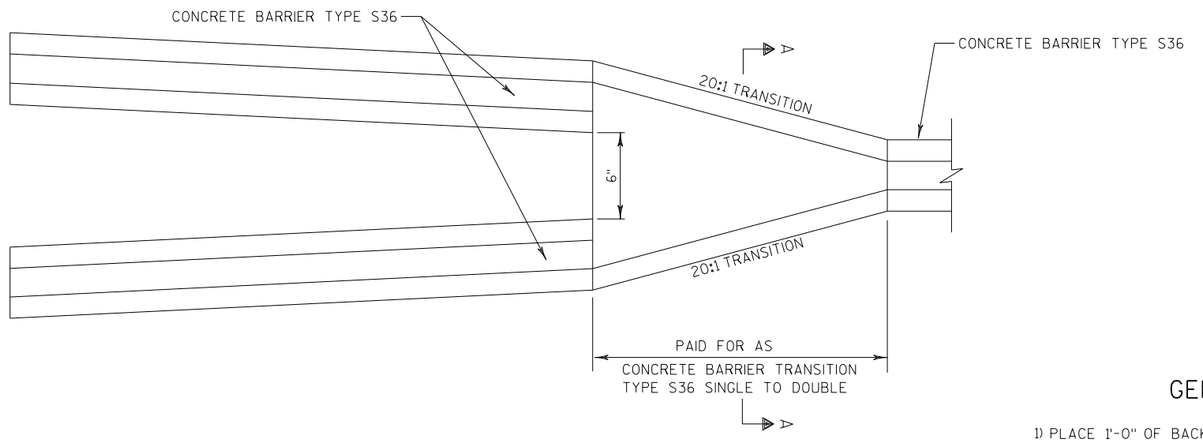


SECTION A-A
DEPRESSED CURB HEAD

DEPRESSED CURB HEAD AT BEAM GUARD TERMINAL



SECTION A-A

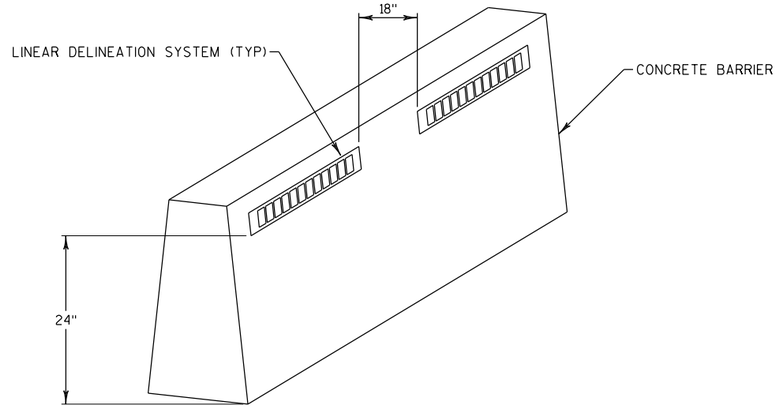


TRANSITION FROM ONE CONCRETE BARRIER TO TWO CONCRETE BARRIER

SEE PLAN DETAILS FOR LOCATION, LENGTH, AND OFFSETS

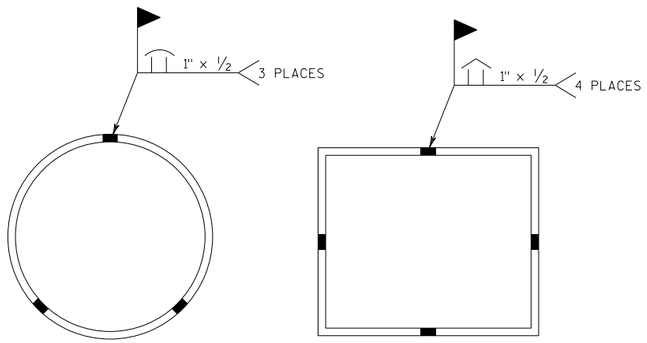
GENERAL NOTES

1) PLACE 1'-0" OF BACKFILL GRAINULAR GRADE 2 AT BASE BETWEEN WALLS.
2) REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
3) ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.



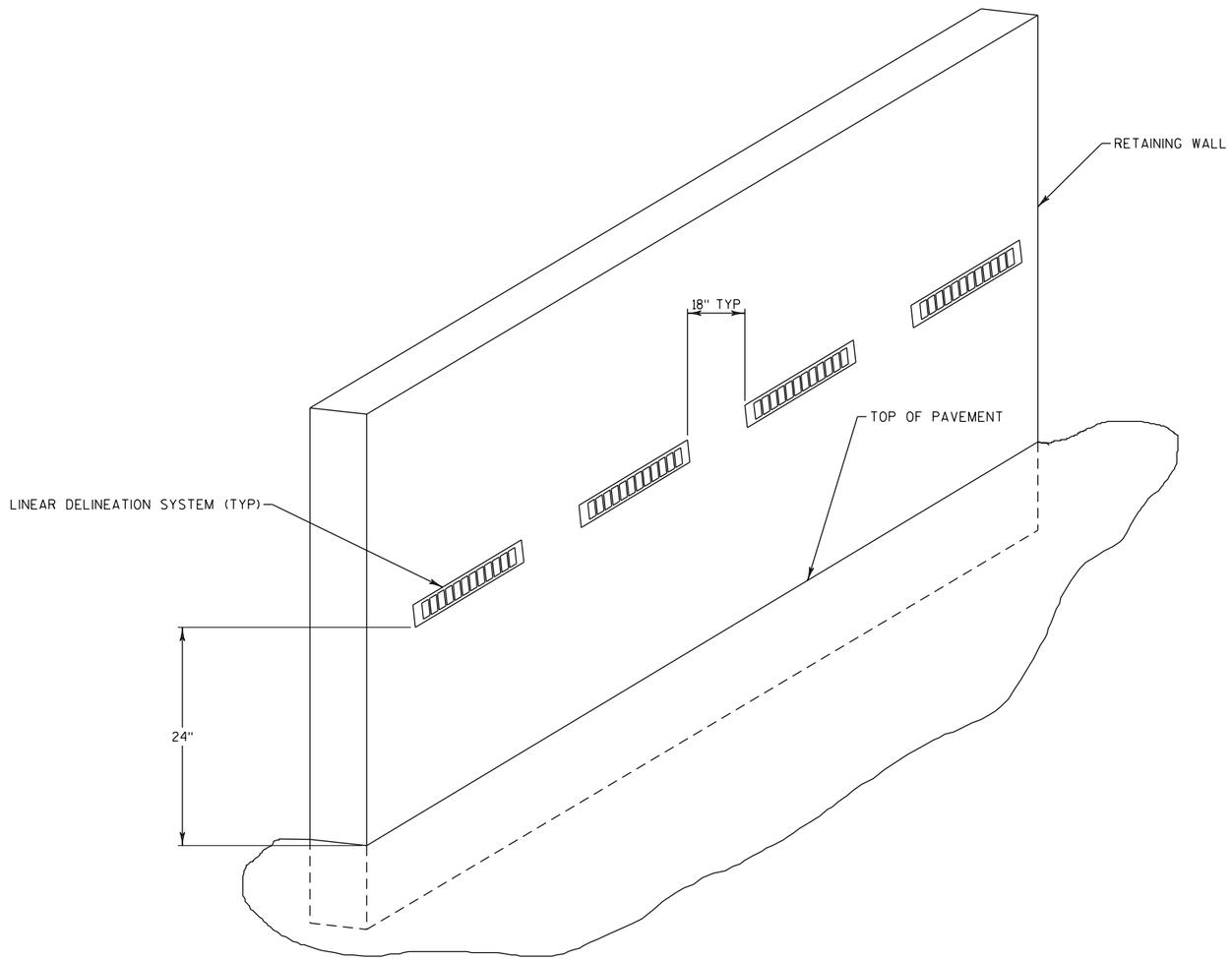
LINEAR DELINEATION SYSTEM FOR CONCRETE BARRIER

WESTBOUND
STA 1607+85 TO STA 1618+58 MEDIAN BARRIER
STA 1638+45 TO STA 1645+50 OUTSIDE BARRIER



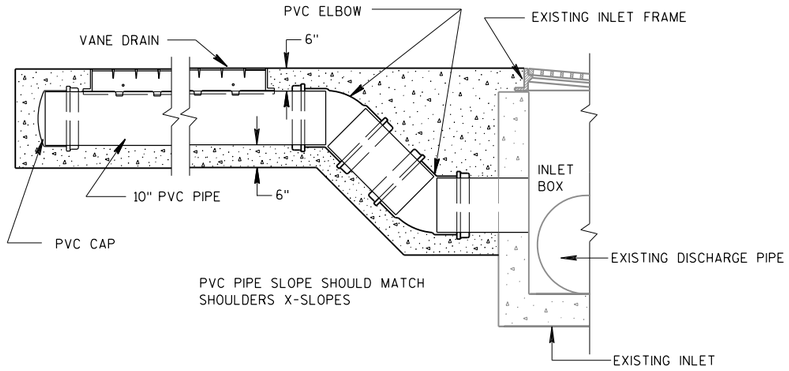
WELDING STORM SEWER COVERS

WELD EACH STORM SEWER COVER
WITH A 1/2 WIDE WELD 1" LONG

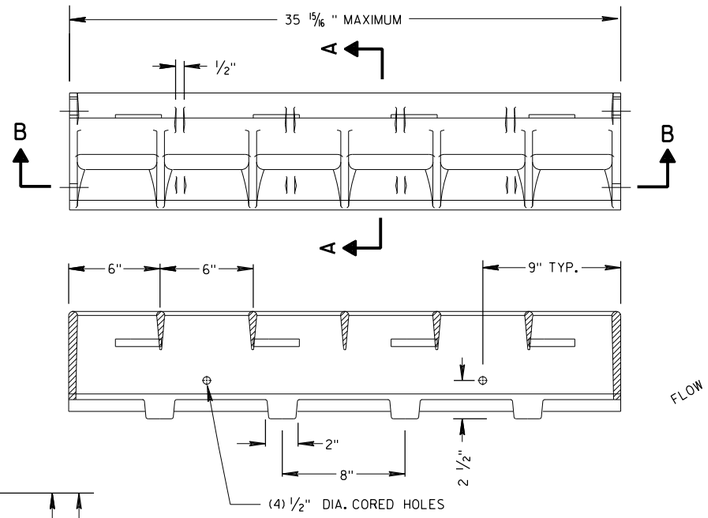


LINEAR DELINEATION SYSTEM FOR RETAINING WALL

WESTBOUND
STA 1624+35 TO STA 1638+45 OUTSIDE SHOULDER



TYPICAL SLOTTED VANE DRAIN CONFIGURATION



SECTION B-B
SLOTTED VANE DRAIN DETAIL
(APPROXIMATE WEIGHT 87 LBS.)

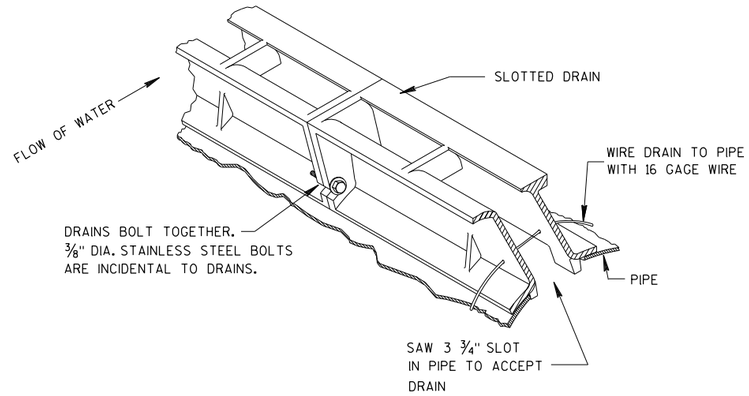
GENERAL NOTES

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.

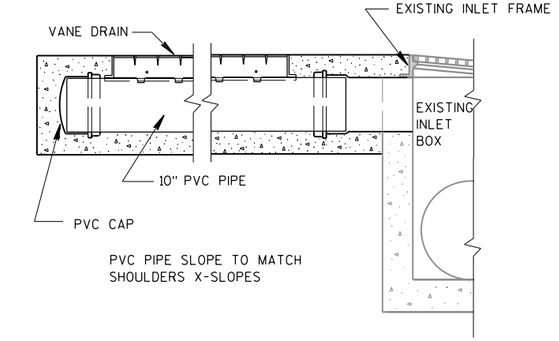
ENCASEMENT: THE ENCASING MATERIAL AROUND THE PIPE SHALL BE IN ACCORDANCE WITH SPECIFICATIONS OF 501.4.3.3 FOR CONCRETE PAVEMENT.

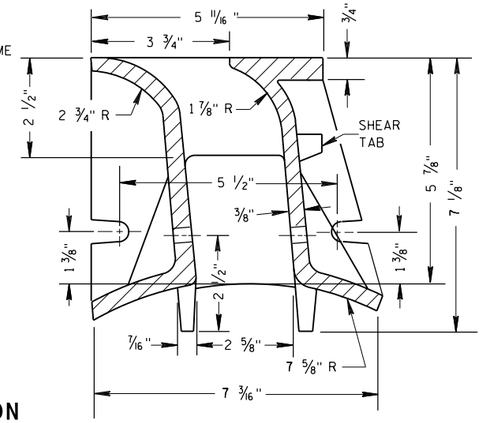
THE PIPE USED SHALL BE A 10" DIAMETER SDR-35 POLYVINYL CHLORIDE SEWER PIPE. THE PIPE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN STANDARD SPECIFICATION 612.2.6

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.



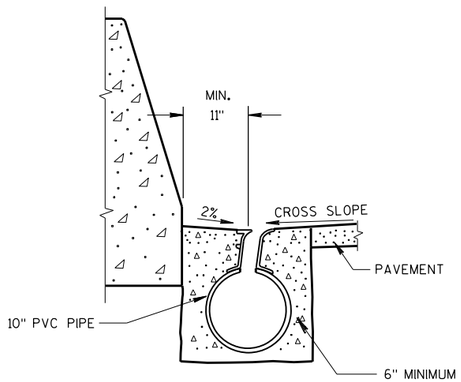
ISOMETRIC VIEW



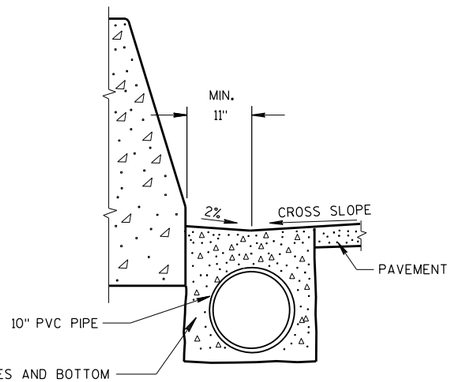


TYPICAL SLOTTED VANE DRAIN CONFIGURATION

SECTION A-A

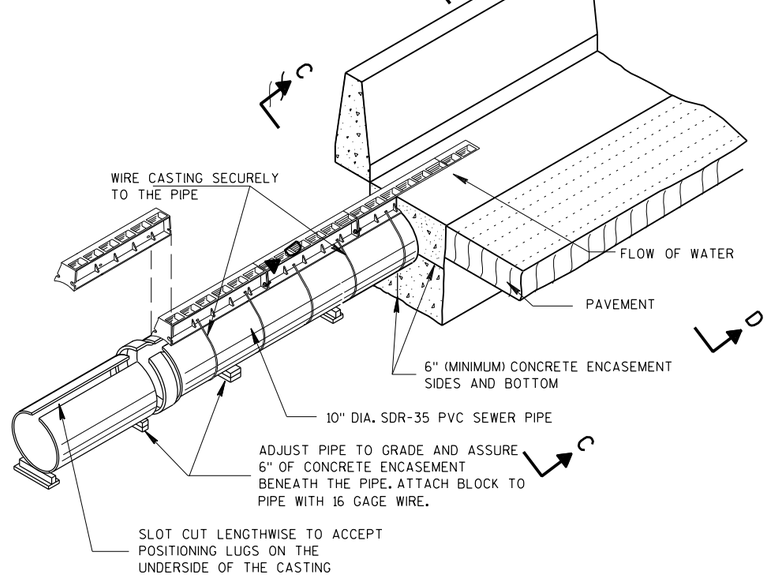


SECTION C-C



SECTION D-D
PAID FOR AS DRAIN SLOTTED VANE PIPE

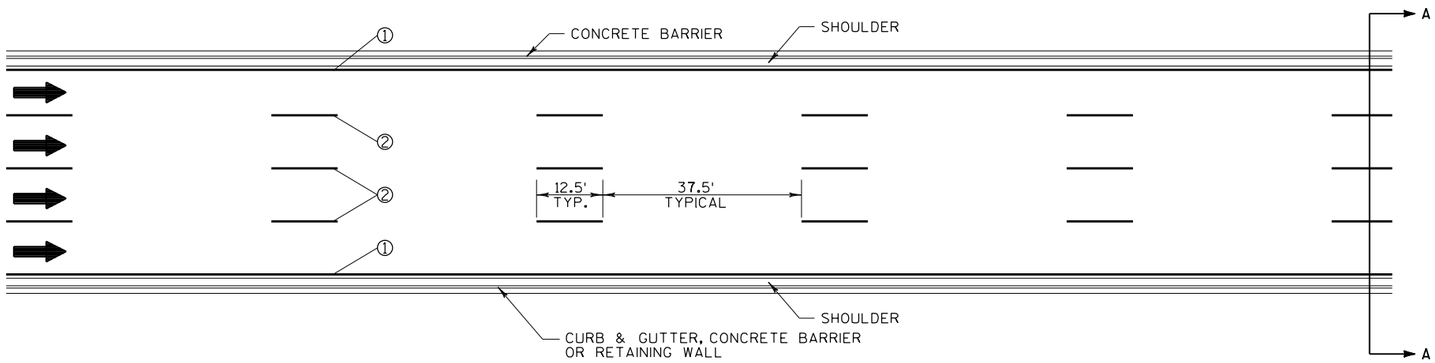
SLOTTED DRAIN INSTALLATION AT MEDIAN BARRIER



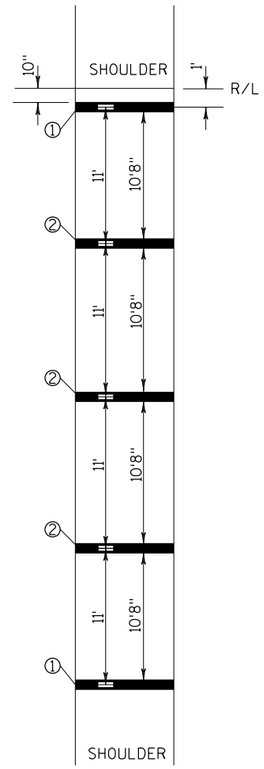
INSTALLATION OF SLOTTED VANE DRAIN AT MEDIAN BARRIER

DRAIN SLOTTED VANE SPECIAL & DRAIN SLOTTED VANE PIPE

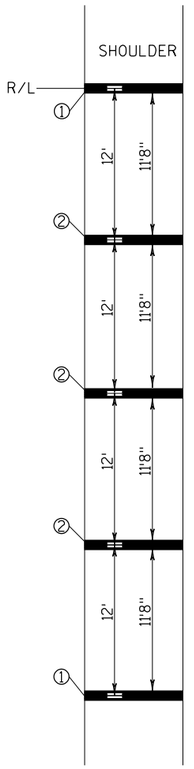
2



4 LANE CONFIGURATION



SECTION A-A
LAYOUT 1

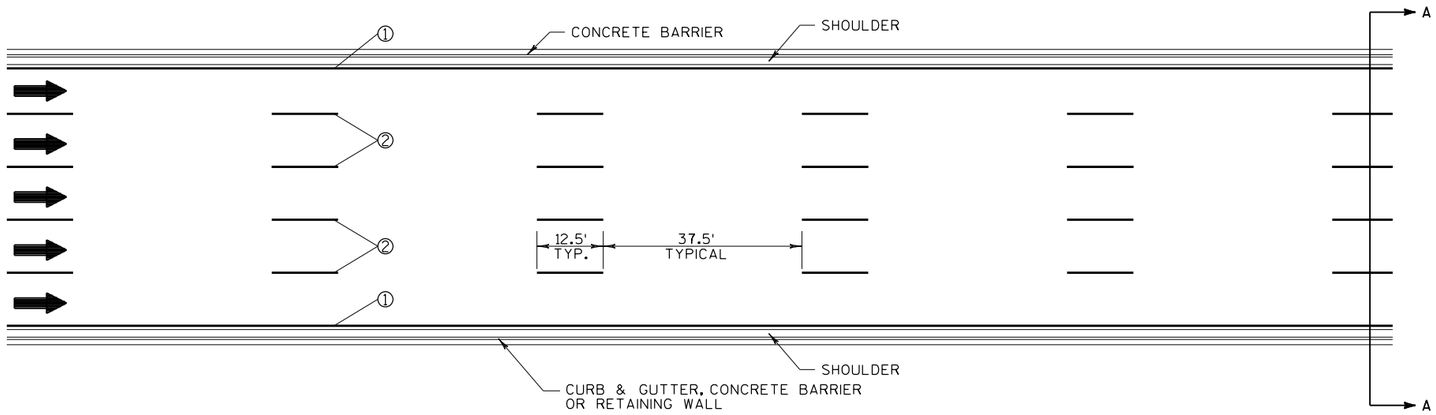


SECTION A-A
LAYOUT 2

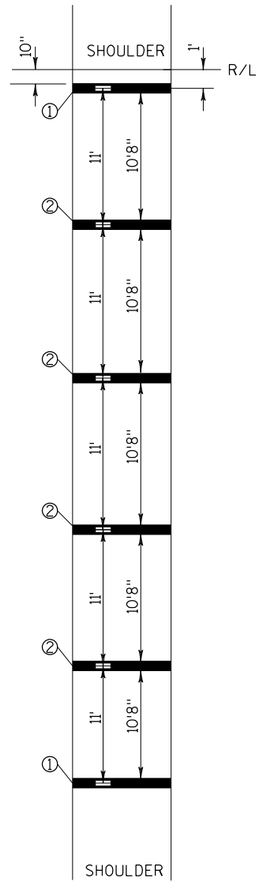
4-LANE PAVEMENT MARKING LAYOUT

SEE PAVEMENT MARKING PLAN FOR LOCATION

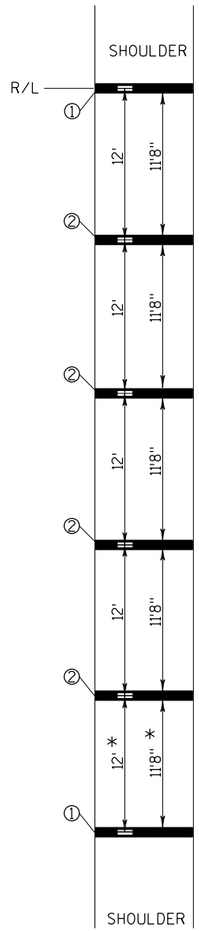
2



5 LANE CONFIGURATION



SECTION A-A
LAYOUT 1

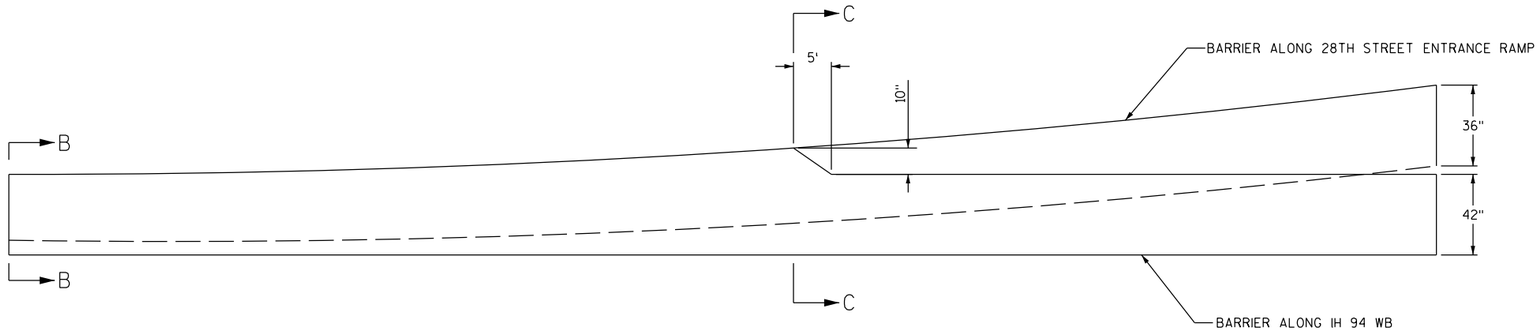


SECTION A-A
LAYOUT 1

5-LANE PAVEMENT MARKING LAYOUT

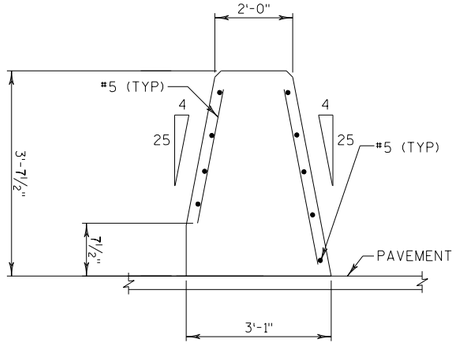
SEE PAVEMENT MARKING PLAN FOR LOCATION

* 11' (10'8") BETWEEN STATIONS:
STA 1583+88.62 TO STA 1590+40.86
STA 1648+85.13 TO STA 1652+13.33

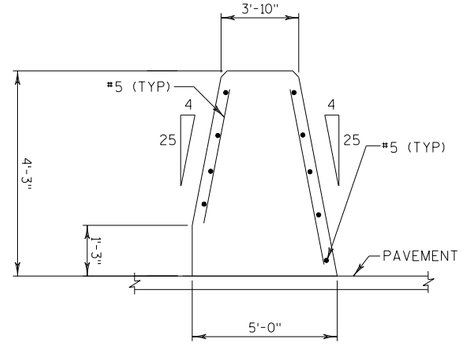


CONCRETE BARRIER TRANSITION DETAIL - SECTION A-A

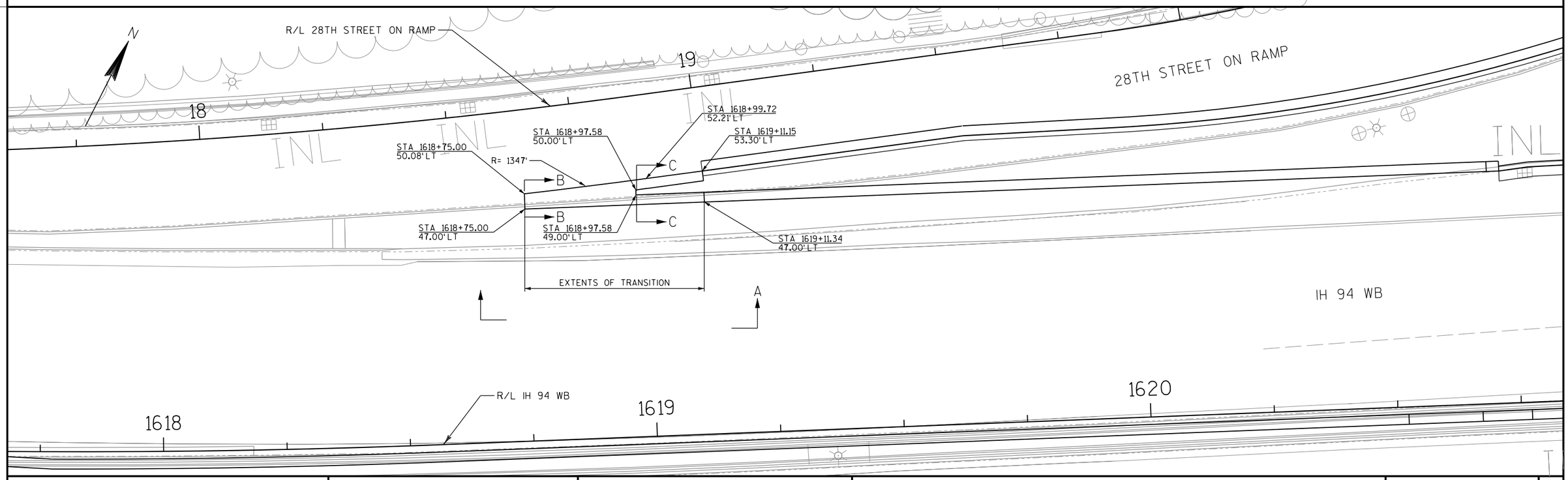
NTS - VERTICAL SCALE EXAGGERATED FOR CLARITY



SECTION B-B

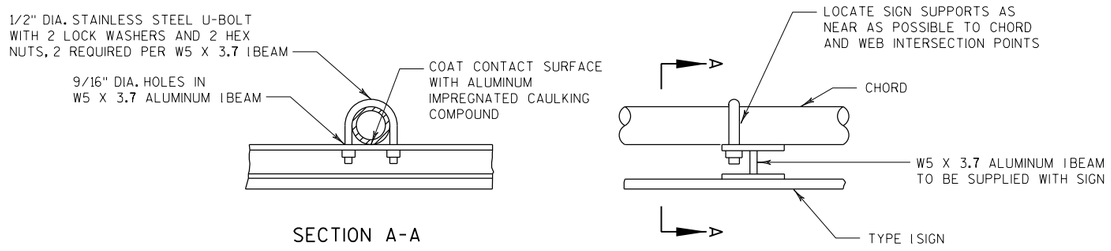


SECTION C-C



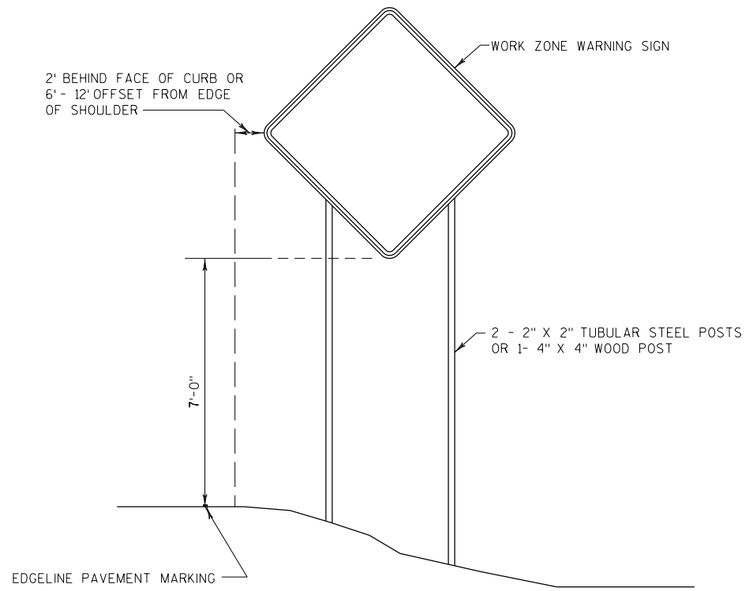
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL: 28TH STREET ON RAMP	SHEET 21	E

2



TYPICAL SIGN CONNECTION

FOR USE WHEN MOUNTING SIGNS TO EXISTING SIGN BRIDGE TRUSS
INCIDENTAL TO OTHER SIGN ITEMS

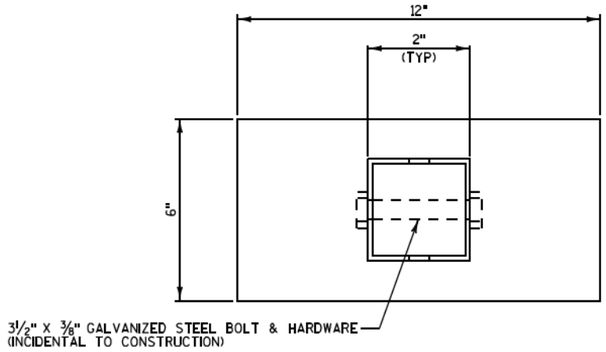


TYPICAL TEMPORARY TRAFFIC CONTROL SIGN MOUNTING ON FIXED SUPPORT

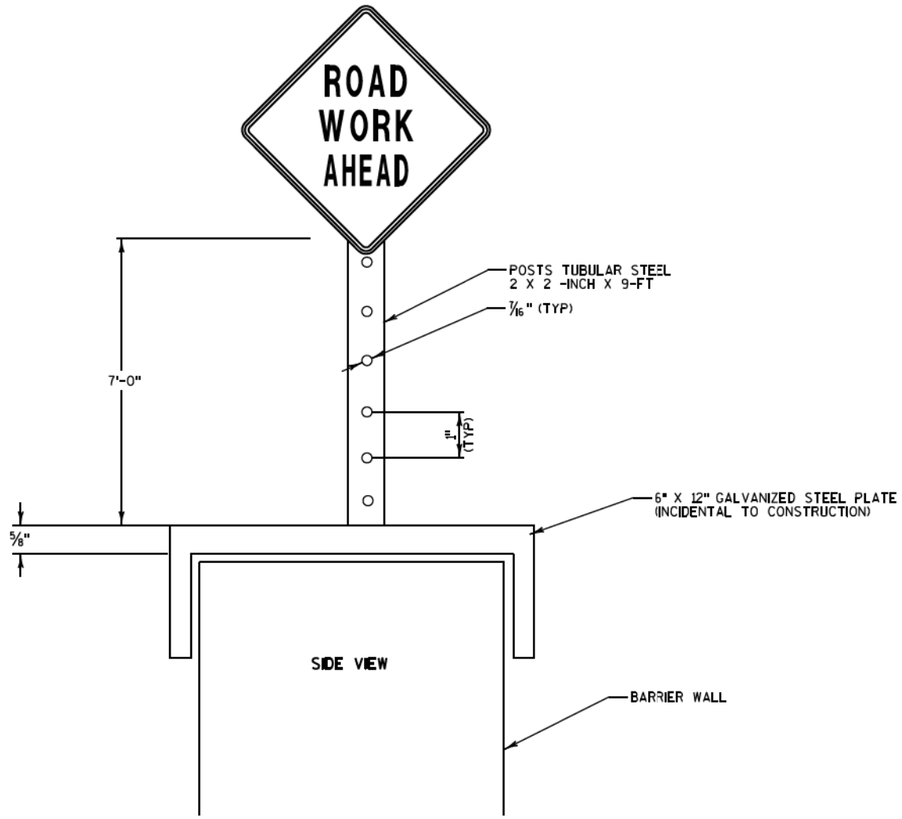
LONG TERM
7 DAYS OR MORE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 22	E

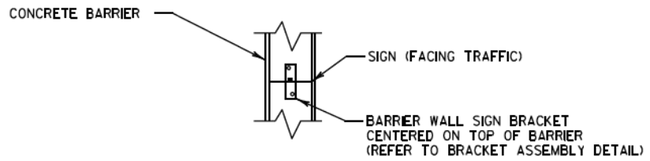
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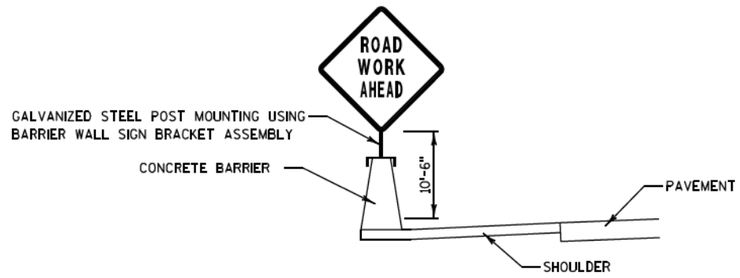
PLAN VIEW



BRACKET ASSEMBLY DETAIL



PLAN VIEW

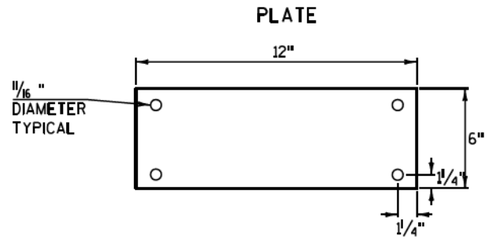


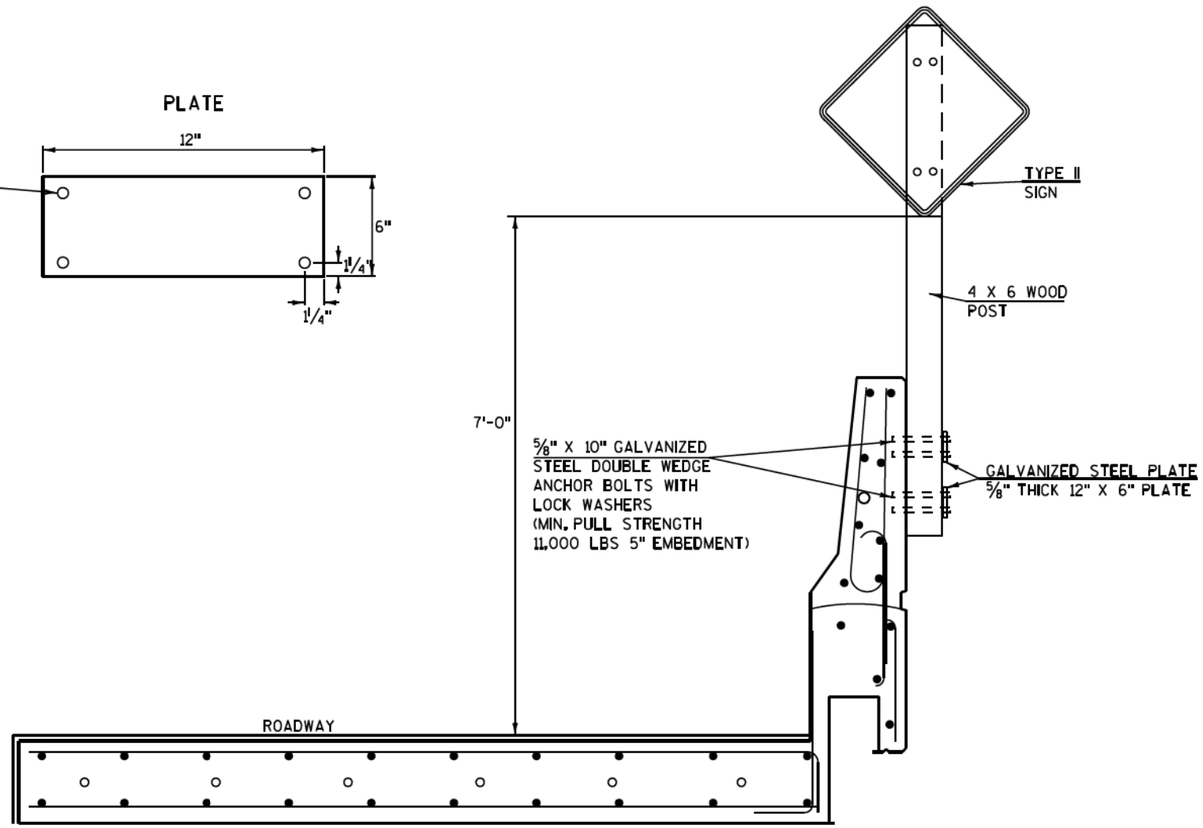
SIDE VIEW

MEDIAN BARRIER MOUNTING DETAIL

MOUNTING DETAILS FOR SIGNS MOUNTED TO MEDIAN BARRIER

2

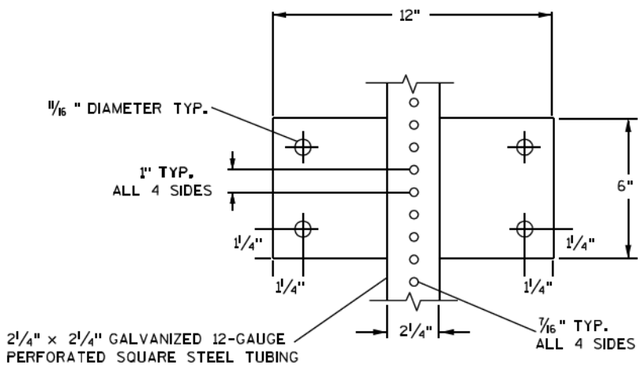




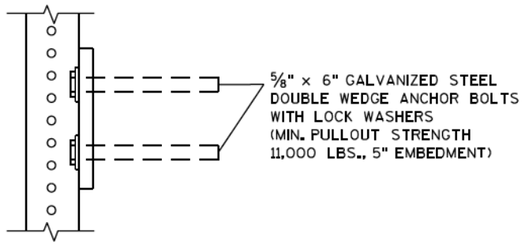
MOUNTING DETAIL FOR SIGNS MOUNTED TO PARAPETS (DETAIL 1)

2

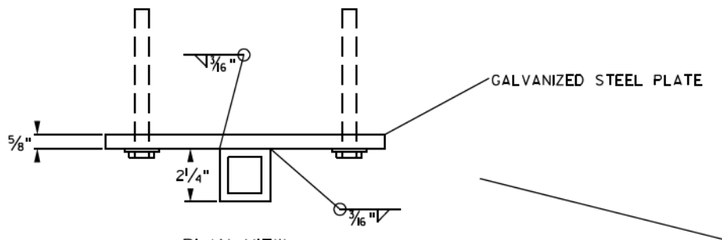
MOUNTING DETAILS FOR SIGNS MOUNTED TO BARRIER WITH TYPE "G" RAIL



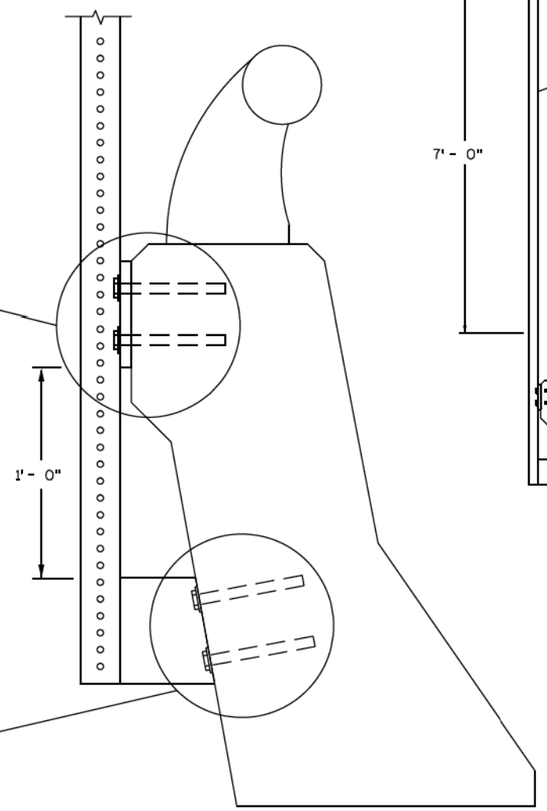
SIDE VIEW

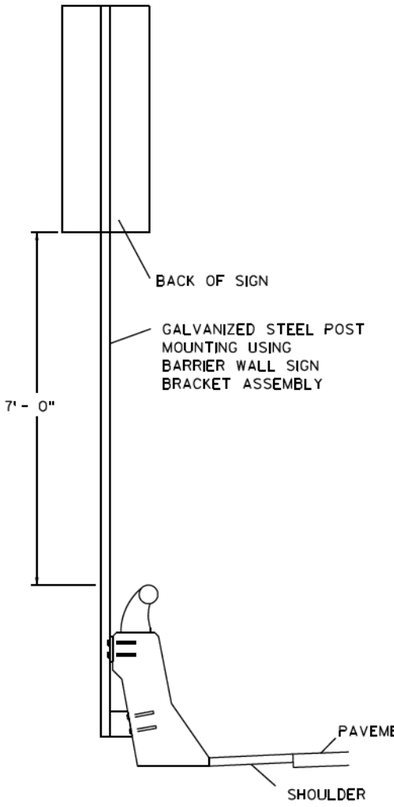


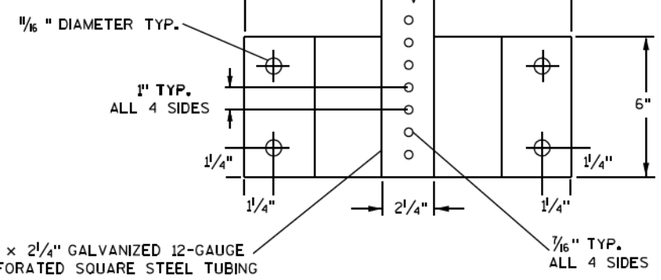
ELEVATION VIEW



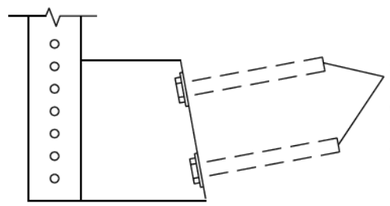
PLAN VIEW



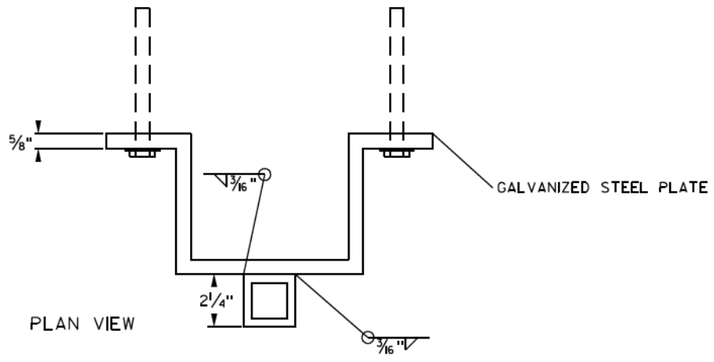




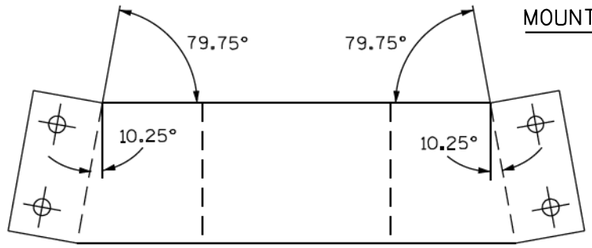
SIDE VIEW



ELEVATION VIEW



PLAN VIEW



STEEL PLATE BEFORE BENDING TO BRACKET SHAPE

MOUNTING DETAIL FOR SIGNS MOUNTED TO PARAPETS (DETAIL 2)

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: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 25	E

2

NOTES

1) 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. SEE SDD CONCRETE BARRIER TYPE S42, FOR OTHER PERTINENT FEATURES.

2) BARRIER SHALL CONSIST OF CAST-IN-PLACE CONSTRUCTION.

3) ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED AT LEAST 2-INCHES, UNLESS OTHERWISE SHOWN ON PLANS.

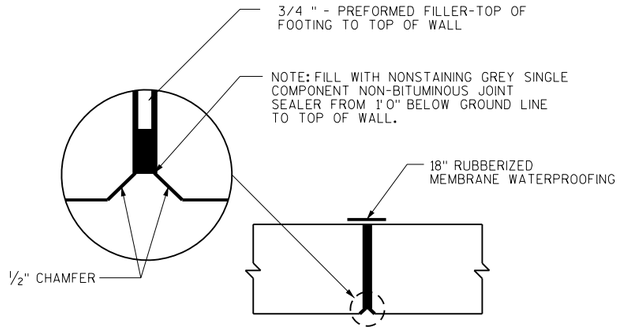
4) PROVIDE 1/2-INCH CHAMFER AT BARRIER ENDS WITH CONSTRUCTION JOINTS OR WITH EXPANSION JOINTS. PROVIDE 3/4-INCH EXPANSION JOINT MATERIAL AT EXPANSION JOINTS. EXPANSION JOINTS SHALL BE PLACED AT EXISTING EXPANSION JOINTS IN CONCRETE PAVEMENT, AT LIGHT BASES AND AT SIGN BRIDGE FOOTINGS. DO NOT CEMENT CONDUIT COUPLINGS AT EXPANSION JOINTS.

5) FILL BEHIND CONCRETE BARRIER TYPE 42 ANCHORED SHALL BE LIMITED TO A MAXIMUM HEIGHT OF 3 FEET ABOVE FOOTING. FILL SHALL BE PLACED AFTER ADJACENT PAVEMENT HAS BEEN PLACED.

6) CONCRETE BARRIER TYPE 42 ANCHORED FOOTING SHALL BE SUPPORTED ON A MINIMUM 25 INCHES OF BASE AGGREGATE AND/OR SELECT CRUSHED MATERIAL.

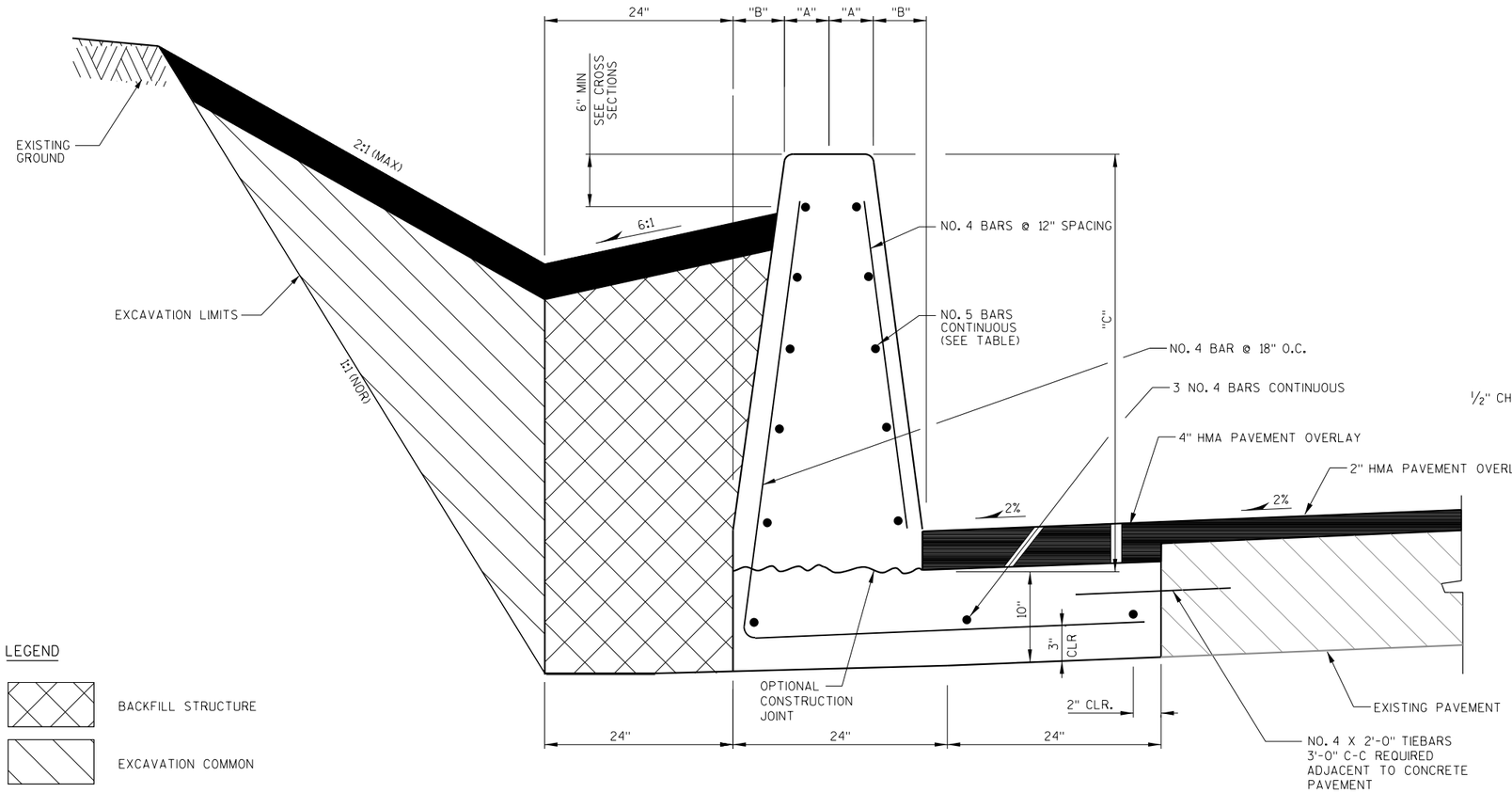
7) BACKFILL STRUCTURE SHALL BE INCIDENTAL TO CONCRETE BARRIER TYPE S42 ANCHORED AND SHALL MEET SPECIFICATIONS DEFINED IN SECTION 210 OF THE STANDARD SPECIFICATIONS.

8) SEE LIGHTING PLANS FOR CONDUIT LOCATIONS.



VERTICAL EXPANSION JOINT IN BARRIER

DO NOT RUN ANY BAR STEEL THRU EXPANSION JOINT



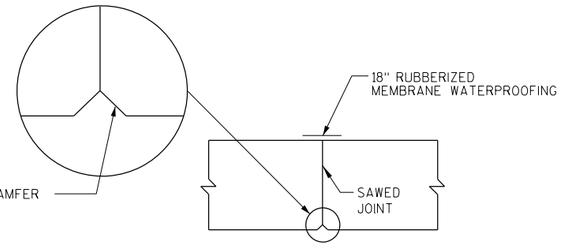
LEGEND

BACKFILL STRUCTURE

EXCAVATION COMMON

SALVAGED TOPSOIL 4-INCH OR SLOPE PAVING

CONCRETE BARRIER TYPE S42 ANCHORED & CONCRETE BARRIER TYPE S32 ANCHORED



VERTICAL CONTRACTION JOINT IN BARRIER

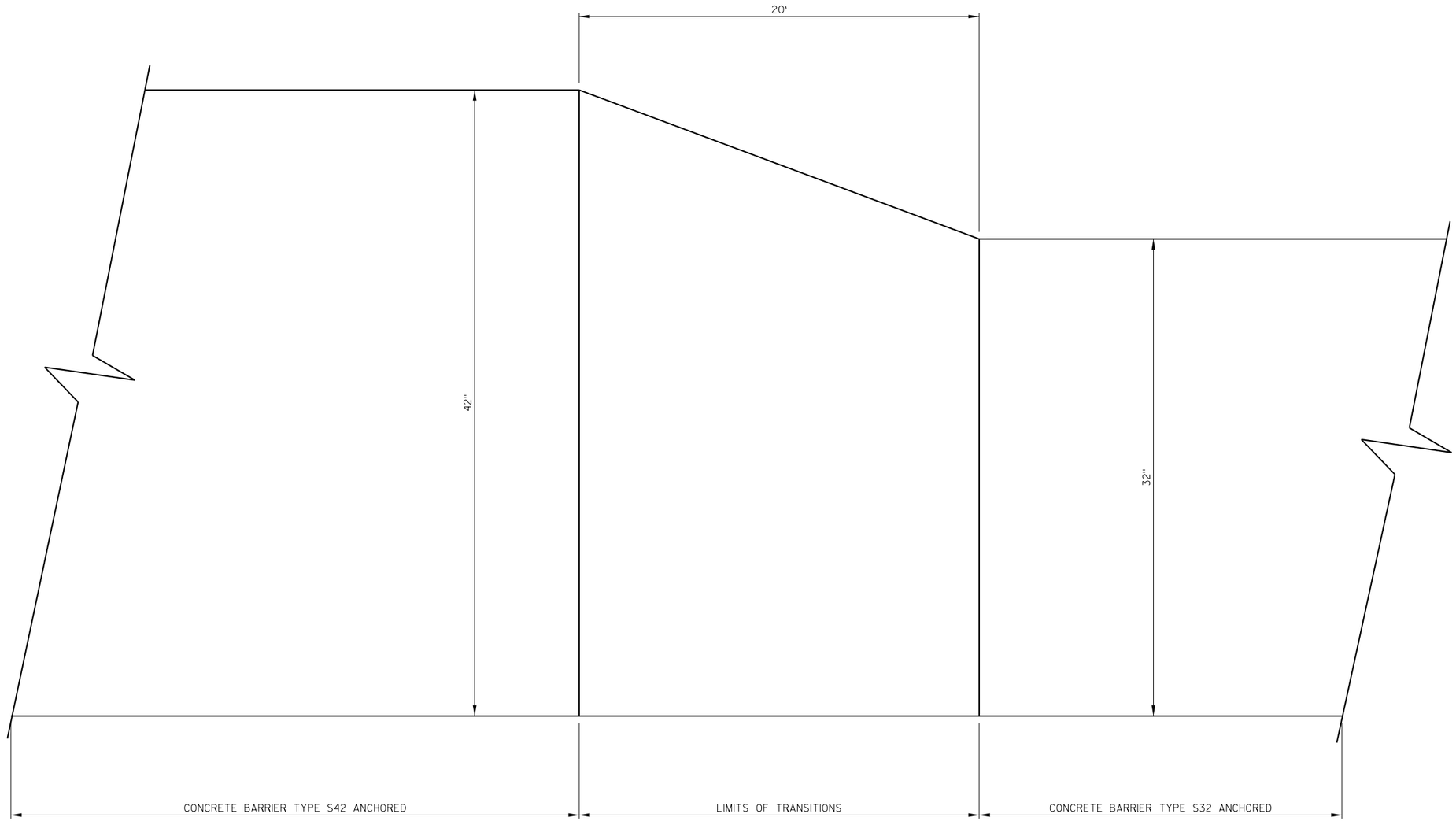
MAX. SPACING OF JOINT = 25-0"

ALLOWABLE STRESSES

CONCRETE: F'_c=4,000 PSI
HIGH STRENGTH BAR STEEL REINFORCED, GRADE 60 F_y=60,000 PSI

BARRIER TYPE	DIM "A"	DIM "B"	DIM "C"	NUMBER OF NO. 5 BARS (EACH)
S32	7"	5"	32"	8
S42	5 1/4"	6 3/4"	42"	10

2



CONCRETE BARRIER TRANSITION S32 TO S42 ANCHORED

SEE DETAIL CONCRETE BARRIER TYPE S42 ANCHORED & CONCRETE BARRIER TYPE S32 ANCHORED FOR CROSS SECTION DIMENSIONS
FOLLOW CONCRETE BARRIER TYPE S42 ANCHORED DETAIL FOR BAR REINFORCEMENT IN TRANSITION

2

LEGEND
XXXXX SAWCUT
REMOVING PAVEMENT

BEGIN PROJECT
STA 1575+92.34

MATCHLINE STA 1585+00

R/L IH 94 WB

IH 94 WB

IH 94 EB

MENOMONEE

N 44TH ST

SUBSTATION

MATCHLINE STA 1585+00

REMOVING CURB & GUTTER (PAID FOR AS REMOVING PAVMENT)

BEGIN CONSTRUCTION
STA 90+21.21

35TH STREET ON RAMP

END CONSTRUCTION
STA 94+28.01

W PARK HILL AVE

N 35TH ST

REMOVING GUARDRAIL

35TH STREET ON RAMP

REMOVING CURB & GUTTER (PAID FOR AS REMOVING PAVMENT)

REMOVING CURB & GUTTER (PAID FOR AS REMOVING PAVMENT)

IH 94 WB

IH 94 EB

R/L IH 94 WB

MATCHLINE STA 1600+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET 28	E

2

N 35TH ST

MATCHLINE STA 1600+00

W PARK HILL AVE

CANOPY

RUINS

POOL

RAMP

LEGEND

XXXXX SAWCUT

REMOVING PAVEMENT

MATCHLINE STA 1615+00

REMOVE IH 94 WB BARRIER FROM STA 1614+18.42 TO STA 1617+47.50

B-40-33

R/L IH 94 WB

REMOVING CONCRETE BASES

1600 1602 1604 1606 1608 1610 1612 1614

IH 94 EB

REMOVE IH 94 EB AND WB BARRIER FROM STA 1610+40.59 TO STA 1614+18.42

REMOVE IH 94 WB BARRIER FROM STA 1603+09.14 TO STA 1606+01.47

REMOVE IH 94 EB AND WB BARRIER FROM STA 1606+0147 TO STA 1609+04.97

SEE STRUCTURE PLANS

N 32ND ST

MATCHLINE STA 1615+00

BEGIN CONSTRUCTION
STA 16+77.74

28TH STREET ON RAMP

END CONSTRUCTION
STA 21+50.00

28TH STREET ON RAMP

16 18 20 22

1616 1618 1620 1622 1624 1626 1628 1630

IH 94 EB

IH 94 WB

REMOVE IH 94 WB BARRIER FROM STA 1614+18.42 TO STA 1617+47.50

REMOVE IH 94 WB BARRIER FROM STA 1617+67.48 TO STA 1621+44.10

REMOVE IH 94 WB BARRIER FROM STA 1626+72.88 TO STA 1643+86.78

B-40-43

REMOVE IH 94 EB AND WB BARRIER FROM STA 1621+44.10 TO STA 1627+72.88

+68 (R/L IH 94 WB) 1+68 (R/L 28TH STREET)

+50 (R/L 28TH STREET)

+31 (R/L IH 94 WB)

REMOVING CURB & GUTTER (PAID FOR AS REMOVING PAVMENT)

REMOVING CONCRETE CURB (PAID FOR AS REMOVING PAVMENT)

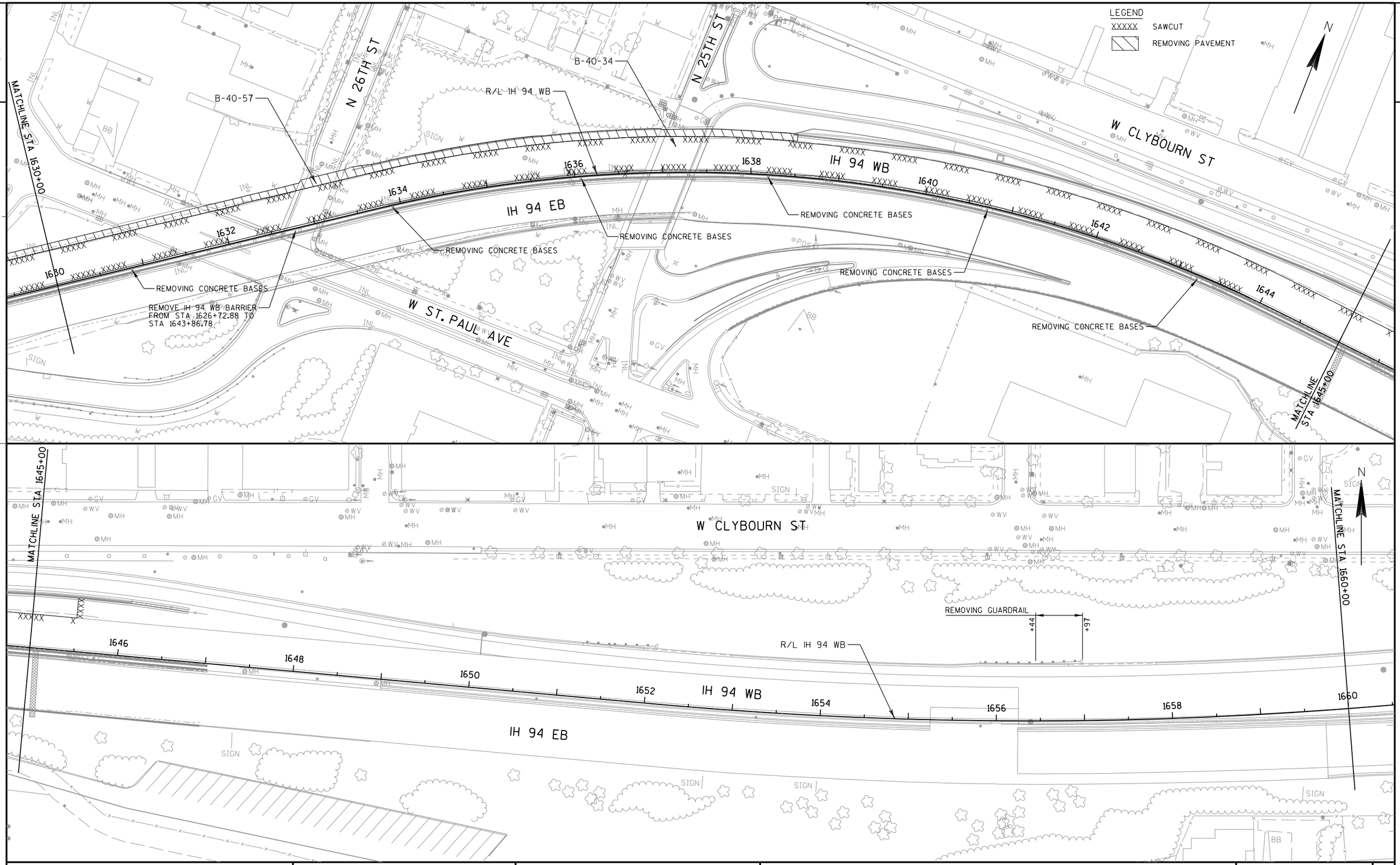
O/H STRUCTURE

O/H STRUCTURE

N 27TH ST

MATCHLINE STA 1630+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET 29	E



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET 30	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\021103_rm.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

PLAN DETAIL LEGEND

- ASPHALT MILL AND OVERLAY AREA
- REMOVING CONCRETE SURFACE PARTIAL DEPTH
- #### EROSION MAT URBAN CLASS 1 TYPE B
- INLET PROTECTION TYPE B
- INLET PROTECTION TYPE D
- PROPOSED LIGHT POLE

- CB01 CONCRETE BARRIER TYPE S36
- CB02 CONCRETE BARRIER TYPE S42
- CB03 CONCRETE BARRIER TRANSITION TYPE S36 SINGLE TO DOUBLE
- CB04 CONCRETE BARRIER TRANSITION TYPE S32 TO S42 AT GORE
- CB05 CONCRETE BARRIER TYPE S42 ANCHORED
- CB06 CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
- CB07 CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S42
- CB08 CONCRETE BARRIER TYPE V36
- CB09 CONCRETE BARRIER TRANSITION TYPE V36 TO S36
- CB10 CONCRETE BARRIER TYPE 32 ANCHORED
- CB11 CONCRETE BARRIER TRANSITION TYPE S32 TO S42 ANCHORED
- CG01 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D
- CP01 CONCRETE PAVEMENT 7-INCH
- BG01 MGS GUARDRAIL 3
- BG02 MGS GUARDRAIL TERMINAL EAT
- BG03 MGS GUARDRAIL TERMINAL TYPE 2
- BG04 MGS THRIE BEAM TRANSITION

2

2

BEGIN PROJECT
STA 1575+92.34

1576

1578

IH 94 WB

R/L IH 94 WB

1580

84

1582

1584

IH 94 EB

MATCHLINE STA 1585+00

N

MENOMONEE

RIVER

SIGN

SIGN

C.P. RAIL SYSTEM

N 44TH ST

SUBSTATION

MATCHLINE STA 1585+00

BEGIN CONSTRUCTION
STA 90+21.21

W PARK HILL AVE

STA 85+58.48, 2.00'LT
R/L 35TH ST ON RAMP =
STA 1585+63.86, 61.00'LT
R/L IH 94 WB

STA 88+68.50, 2.00'LT
R/L 35TH ST ON RAMP =
STA 1588+83.71, 61.00'LT
R/L IH 94 WB

STA 89+81.40, 2.00'LT
R/L 35TH ST ON RAMP =
STA 1590+00.00, 62.89'LT
R/L IH 94 WB

R/L 35TH STREET ON RAMP

STA 91+25.69
17.00'RT

STA 91+89.35
17.00'RT

STA 92+50.00
2.00'LT

STA 94+28.02
2.00'LT

END CONSTRUCTION
STA 94+28.01

35TH STREET ON RAMP

STA 94+28.02
22.00'RT

S-40-859

STA 1596+40.00
68.00'LT

STA 1596+65.00
68.00'LT

STA 1597+05.17
62.77'LT

STA 1597+25.00
60.20'LT

STA 1599+35.61
50.30'LT

STA 1594+95.00
50.00'LT

STA 1594+32.31
50.00'LT

STA 1598+03.46
50.00'LT

STA 91+25.69
20.00'RT

STA 91+25.38
22.98'RT

STA 92+51.59
32.60'RT

STA 92+42.88
35.62'RT

R/L IH 94 WB

N 35TH ST

MATCHLINE STA 1600+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 32	E

MATCHLINE STA 1600+00

N 35TH ST

W PARK HILL AVE

CANOPY

R/L IH 94 WB

B-40-33

1600 1602 1604 1606 1608 1610 1612 1614

IH 94 WB

IH 94 EB

CB01 CB03 CB06 CB08 CB09

STA 1603+63
APH7 & BPH7

STA 1603+80
PB-1

STA 1606+62
APH3 & BPH3

STA 1608+70
APH2 & BPH2

SEE STRUCTURE PLANS

S-40-206

STA 1611+62
APH1 & BPH1

STA 1612+67
PB-2

STA 1641+61
CPH1 & DPH1

MATCHLINE STA 1615+00

N 32ND ST

POOL

RAMP

MATCHLINE STA 1615+00

BEGIN CONSTRUCTION
STA 16+77.74

R/L 28TH STREET ON RAMP

STA 19+53.29
17.00' RT

STA 19+00.00
17.00' RT

STA 18+64.02
17.00' RT

STA 19+84.29
19.48' RT

END CONSTRUCTION
STA 21+50.00

R=376'

28TH STREET ON RAMP

STA 21+50.00
32.76' RT

STA 1620+78.22
47.62' LT

STA 1620+72.27
47.00' LT

STA 1618+75.00
47.00' LT

STA 1619+11.34
47.00' LT

STA 1617+47.50
4.03' RT

STA 1617+67.48
1.01' RT

STA 1616+77
CPH2 & DPH2

STA 1619+37
CPH3 & DPH3

STA 1620+72
PB-3

STA 1622+06
CPH20 & DPH20

STA 1623+90.60
50.94' LT

STA 1624+31.08
47.67' LT

STA 1627+02
CPH22 & DPH22

STA 1629+27
CPH23 & DPH23

STA 1629+42
PB-4

B-40-43

MATCHLINE STA 1630+00

O/H STRUCTURE

O/H STRUCTURE

RAMP

N 27TH ST

1616 1618 1620 1622 1624 1626 1628 1630

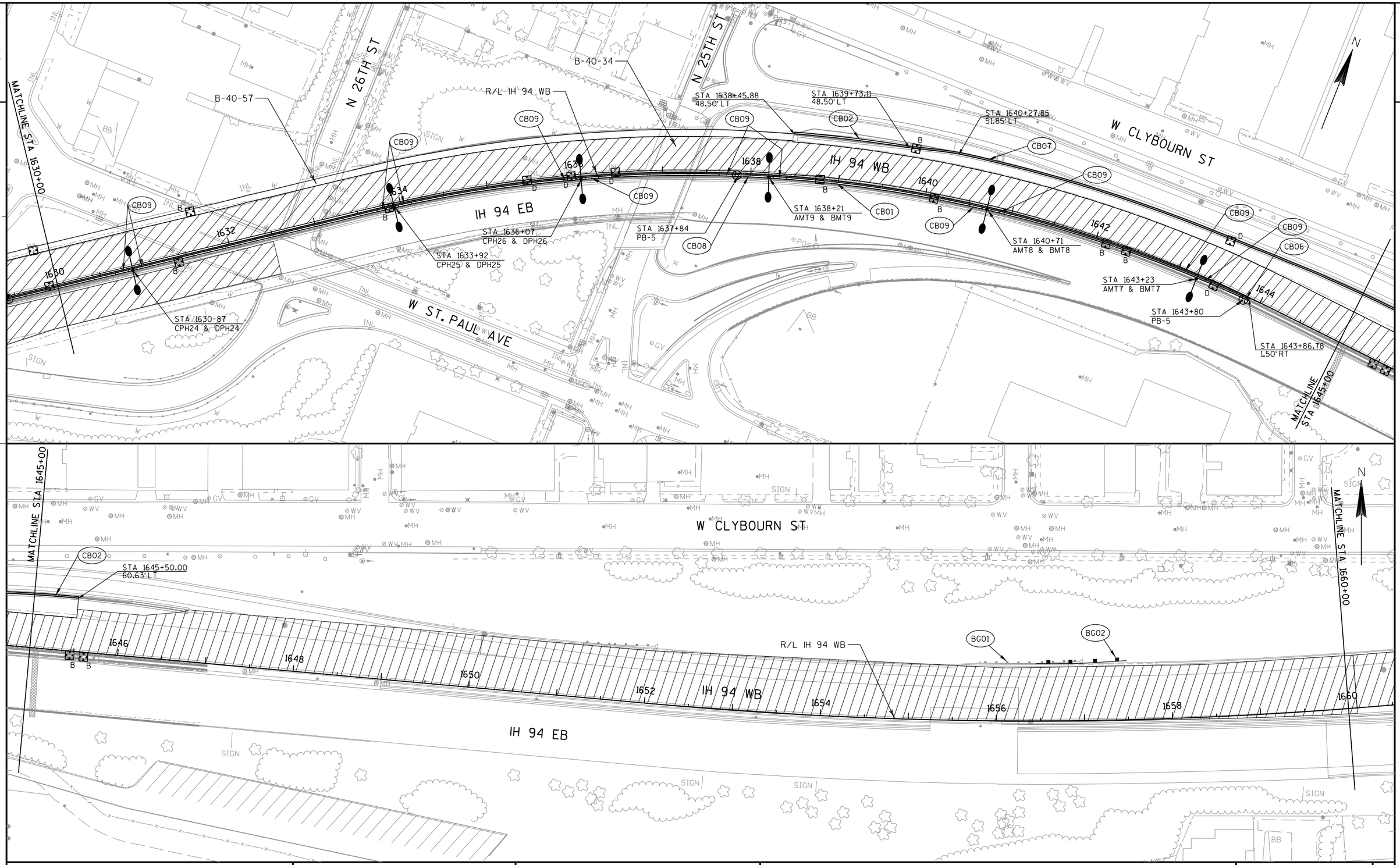
IH 94 WB

IH 94 EB

R/L IH 94 WB

CB01 CB03 CB04 CB05 CB06 CB08 CB09 BG01 BG02 BG04 CG01

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 33	E



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 34	E

2

MATCHLINE STA 1660+00

W CLYBOURN ST

R/L IH 94 WB

IH 94 WB

660 662 664 666 668 670 672 674

+62.08

+89.30

R/L RAMP NW

R/L RAMP SW

64NW 68SW 70SW 72SW 74SW

IH 94 EB

STATION EQUATION
STA 660+9.77 AHEAD=
STA 1660+9.77 BACK

EQUATION

N 16TH ST

MATCHLINE STA 675+00

2

MATCHLINE STA 675+00

W TORY HILL ST

R/L RAMP NW

66NW 68NW 70NW 72NW 74NW 76SW 78SW 80SW 82SW 84SW 86SW 88SW 90SW

+00.00

R/L IH 94 WB

R/L RAMP SW

676 678 680 682 684 686 688 690

IH 94 WB

IH 94 EB

N 13TH ST

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 35	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\021204_pd.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

90SW

92SW

94SW

96SW

690

692

694

696

698

700

702

704

R/L IH 794 WB

R/L RAMP SW

MATCHLINE STA 690+00

MATCHLINE STA 705+00

N 7TH ST

W CLYBOURN ST

IH 794 WB

IH 794 EB

SIGN

N 6TH ST

N 5TH ST

N 4TH ST

706

708

710

712

714

716

718

720

END PROJECT
STA 715+50.00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 36	E

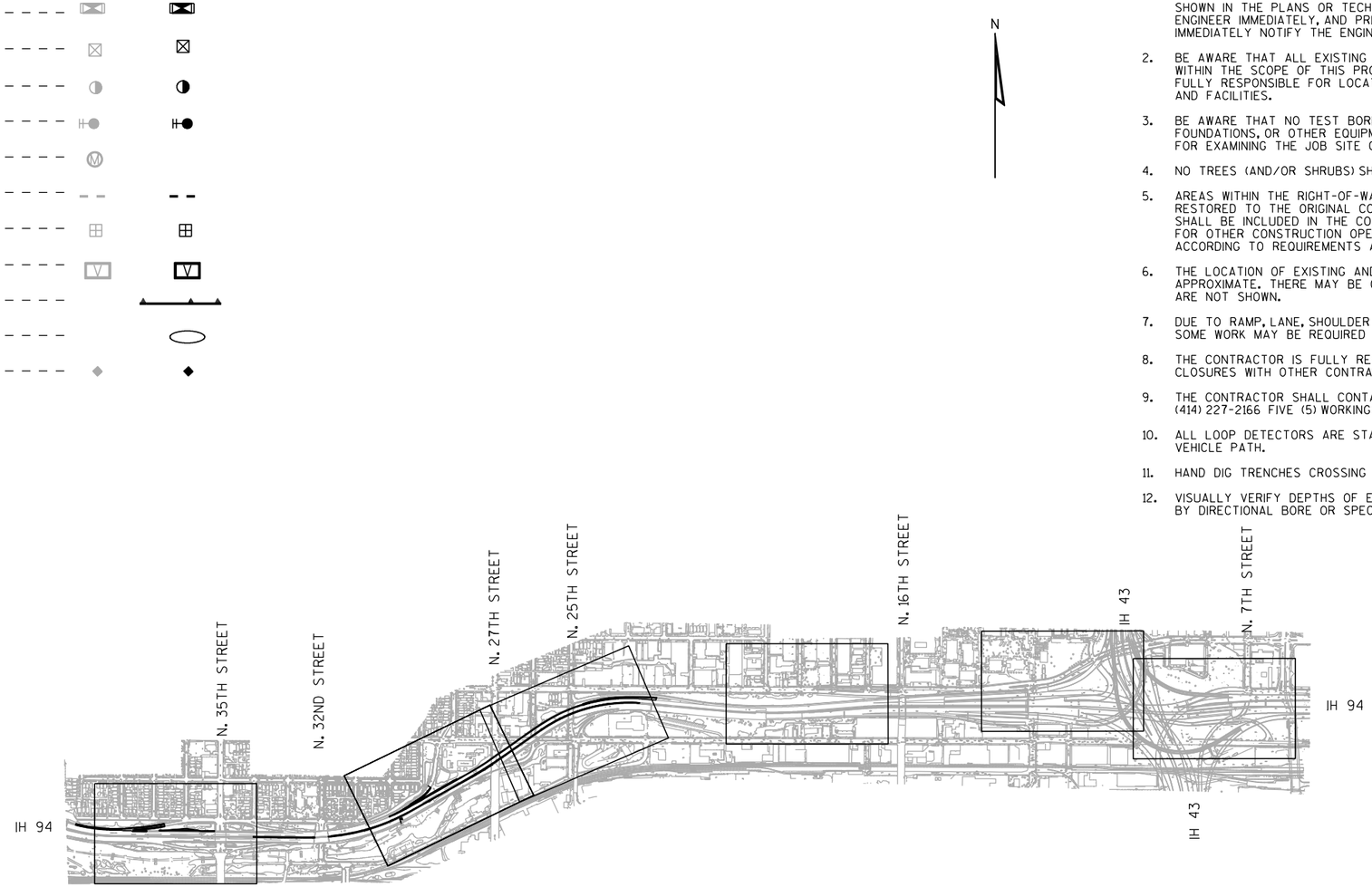
2

LEGEND

FTMS CONVENTIONAL SYMBOLS	EXISTING	PROPOSED
JUNCTION BOX	▬	
CCTV CAMERA AND POLE	◀▬●	
FTMS FIELD CABINET AND BASE	▣	▣
METER BREAKER PEDESTAL	⊠	⊠
24"X36" STEEL PULL BOX	◑	◑
ANTENNA POLE	⊢●	⊢●
MANHOLE	Ⓜ	
FTMS (ITS) CONDUIT	– –	– –
BREAKER DISCONNECT BOX	⊞	⊞
COMMUNICATIONS VAULT, TYPE 1	V	V
RETAINING WALL		▲▲▲
VEHICLE DETECTION ZONE		⬭
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 EORSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEM. 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.

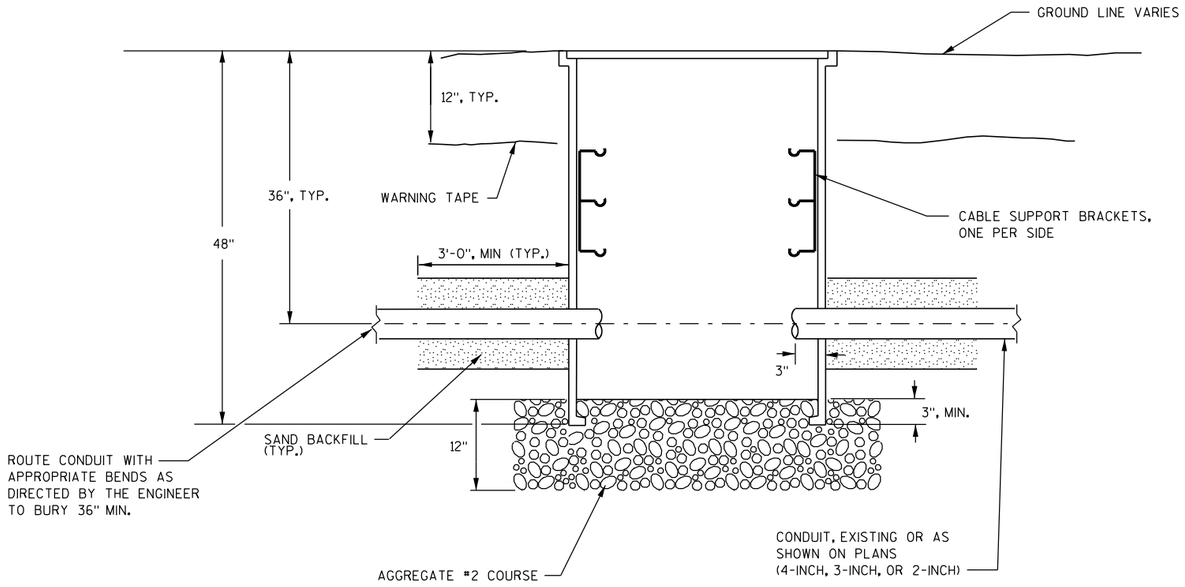


FTMS STANDARD ABBREVIATIONS

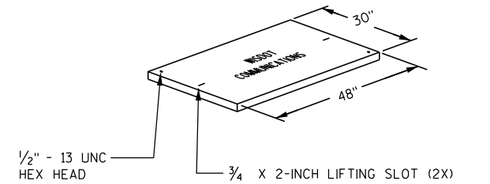
SB	SIGNAL BASE
CB	CONTROLLER CABINET
CV	COMMUNICATIONS VAULT
PB	PULL BOX
MH	MANHOLE
MD	MICROWAVE DETECTOR
FOC	FIBER OPTIC CABLE
EX	EXISTING
DMS	DYNAMIC MESSAGE SIGN

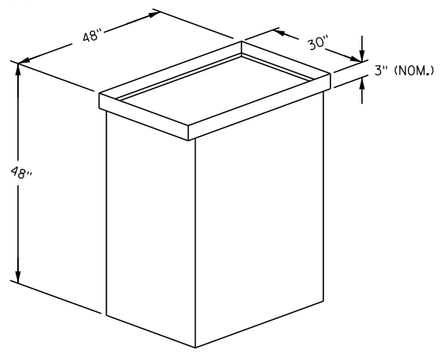
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS - OVERVIEW	SHEET	E

2

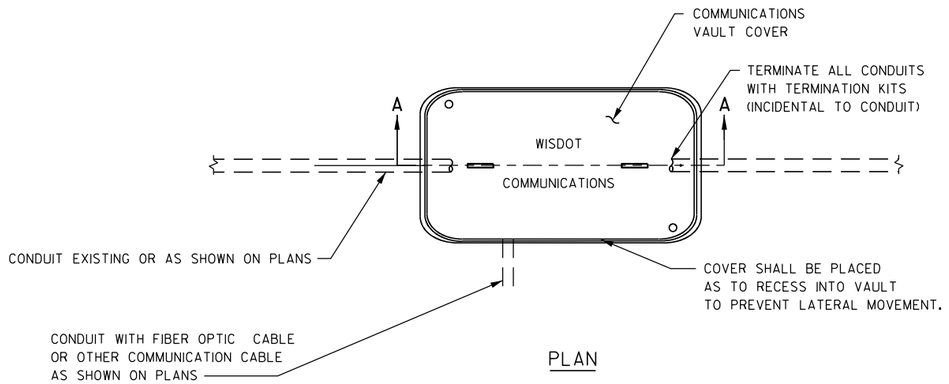


SECTION A-A





ISOMETRIC



PLAN

COMMUNICATIONS VAULT

NOTES

1) BOX SHALL HAVE AN OPEN BASE.

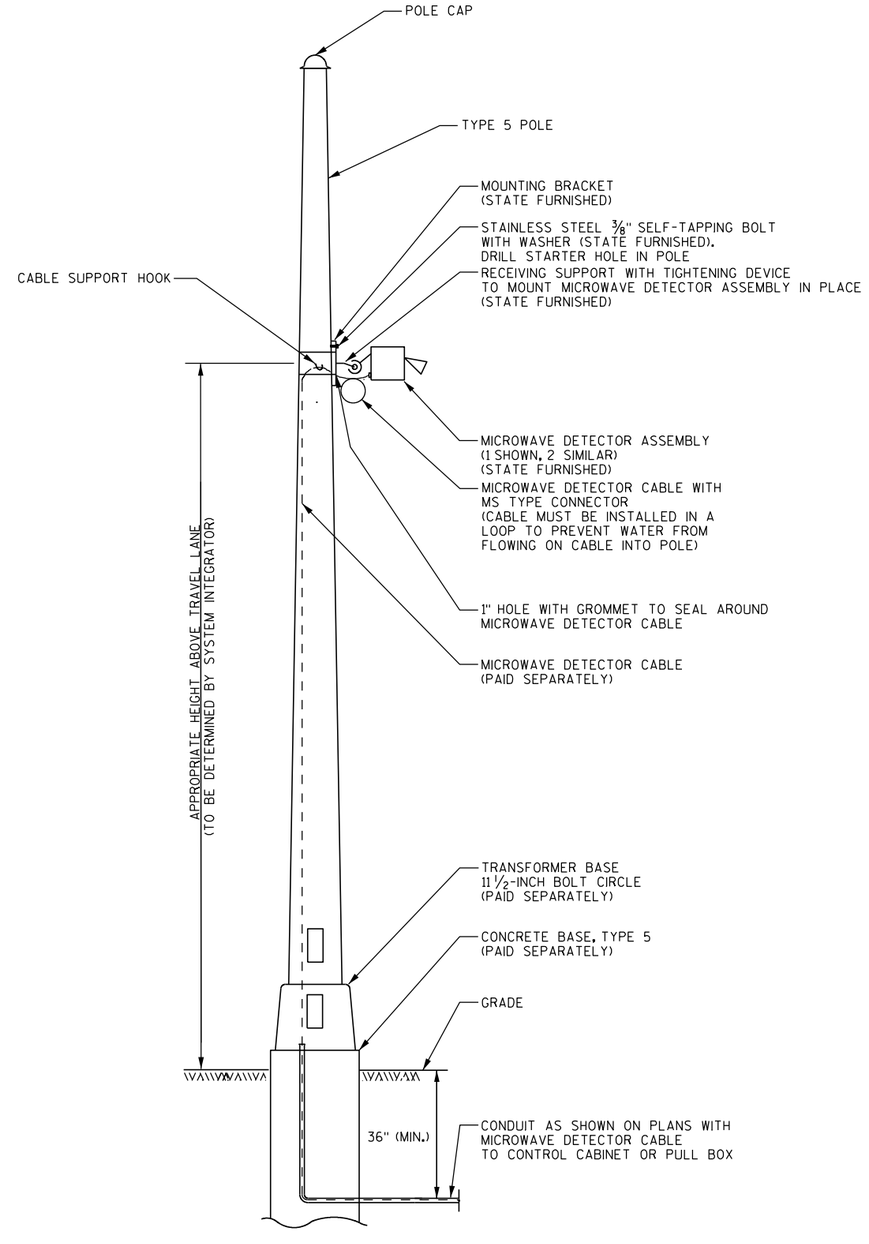
2) COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

3) ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

4) VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

5) FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

2

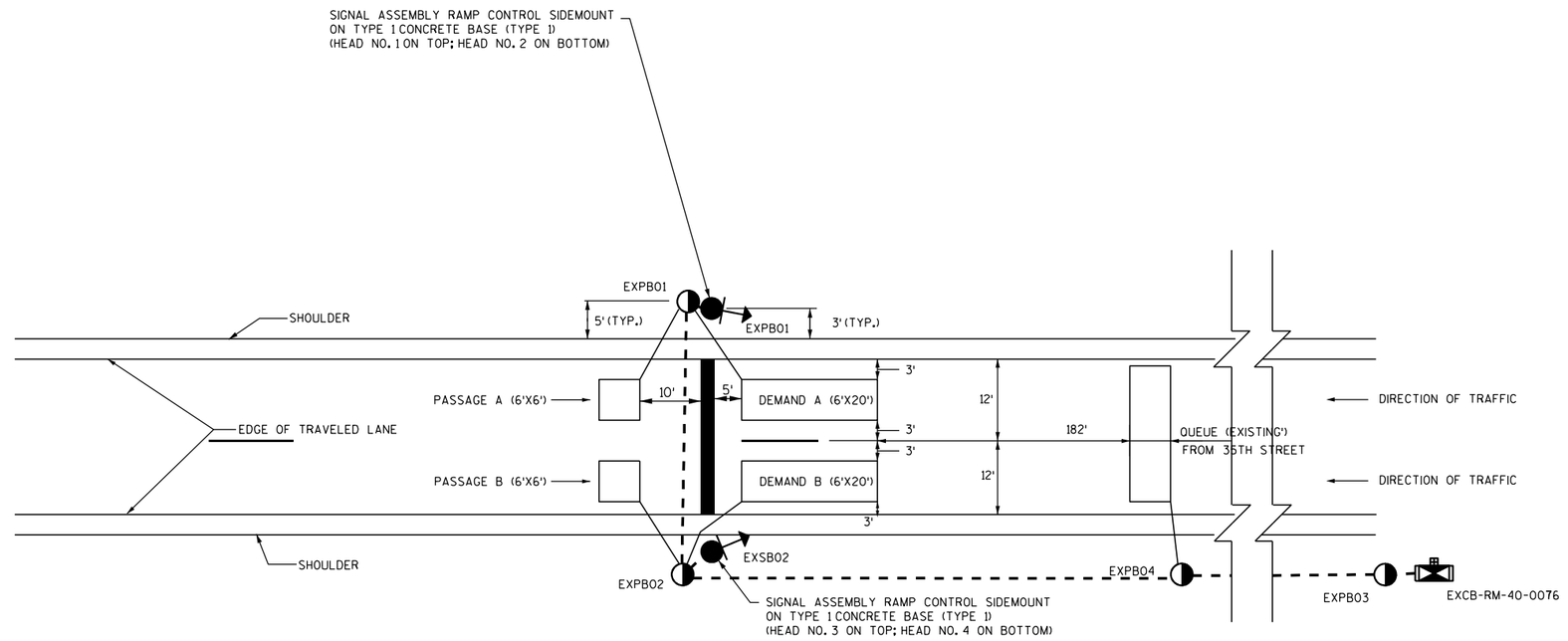


MICROWAVE DETECTOR INSTALLATION

ON TYPE 5 POLE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

2



DEMAND/PASSAGE LAYOUT

N. 35TH STREET WB ENTRANCE RAMP
(RM-40-0076)
NOT TO SCALE

CONDUCTOR CHART

FROM	TO	CABLE SIZE	HEAD NO.	COLOR CODE
CB-RM-40-0076	SB01	7C	1	WHITE, RED, GREEN
CB-RM-40-0076	SB01	7C	2	WHITE, GREEN
SB01	SB02	7C	3	ORANGE, BLUE, WHITE-BLK
SB01	SB02	7C	4	ORANGE, WHITE-BLK

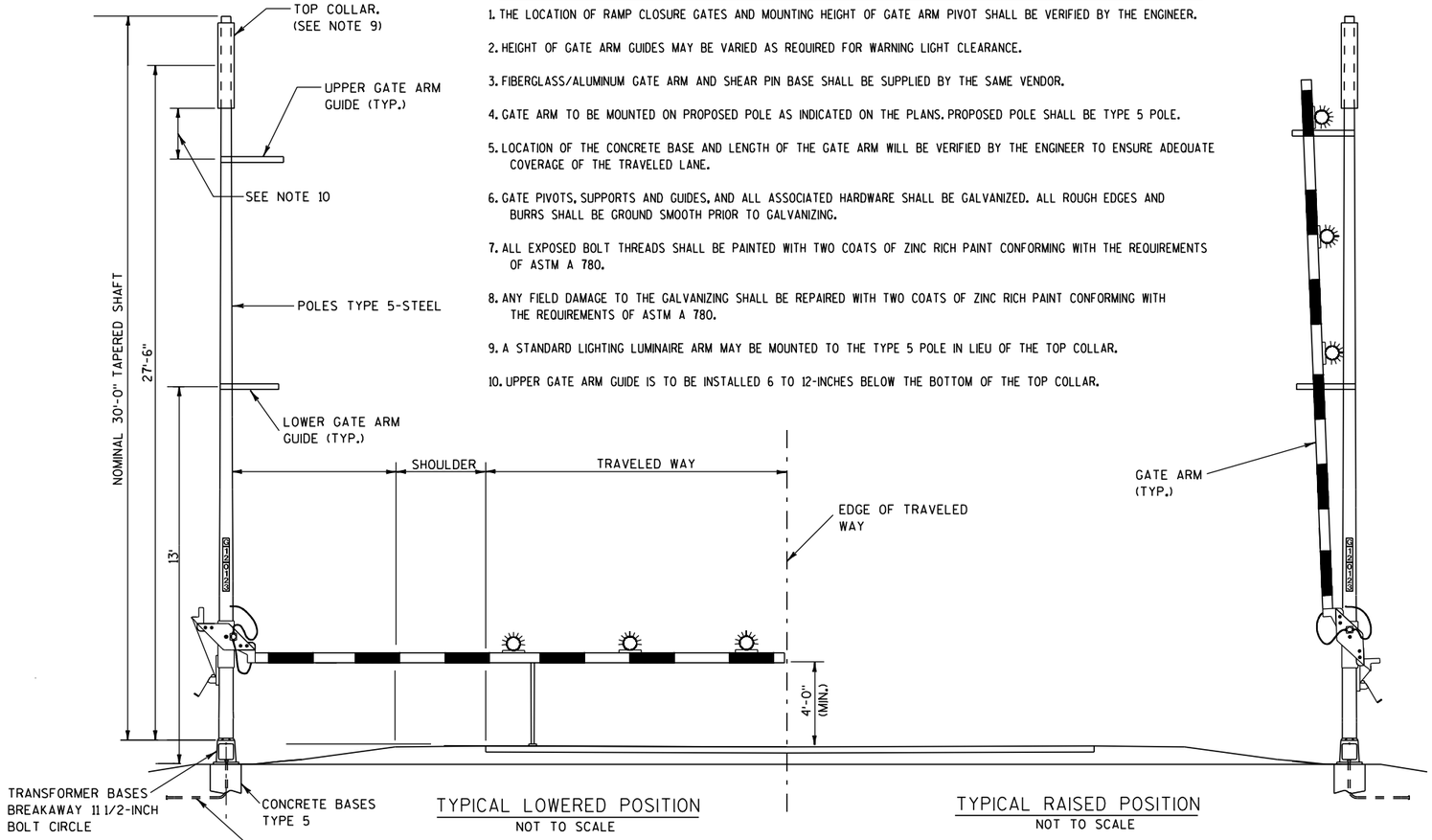
LOOP DETECTOR CHART

LOOP DETECTOR	LENGTH	WIDTH	NO. TURNS
DEMAND A	20-FEET	6-FEET	3
DEMAND B	20-FEET	6-FEET	4
PASSAGE A	6-FEET	6-FEET	5
PASSAGE B	6-FEET	6-FEET	6

2

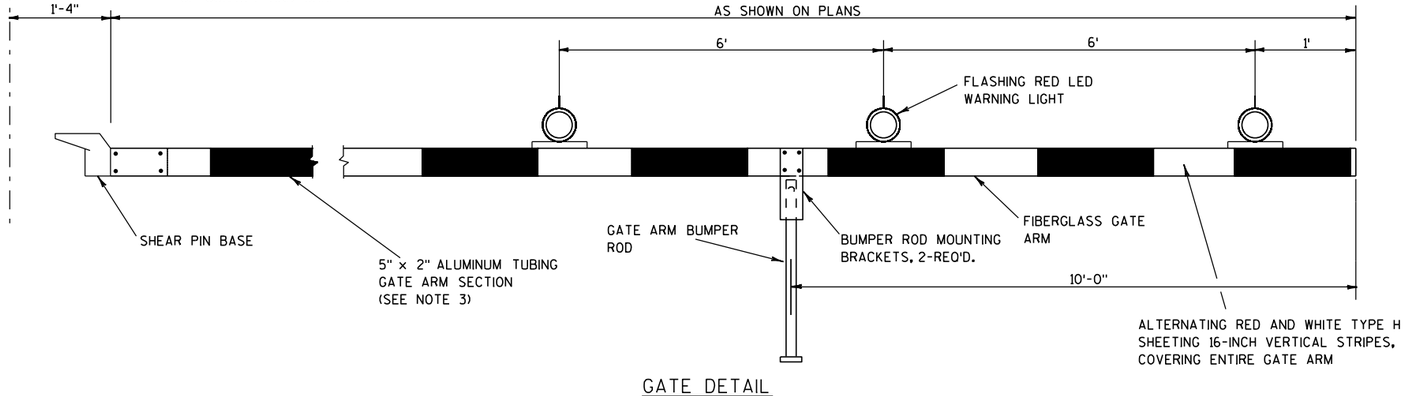
GENERAL NOTES

1. THE LOCATION OF RAMP CLOSURE GATES AND MOUNTING HEIGHT OF GATE ARM PIVOT SHALL BE VERIFIED BY THE ENGINEER.
2. HEIGHT OF GATE ARM GUIDES MAY BE VARIED AS REQUIRED FOR WARNING LIGHT CLEARANCE.
3. FIBERGLASS/ALUMINUM GATE ARM AND SHEAR PIN BASE SHALL BE SUPPLIED BY THE SAME VENDOR.
4. GATE ARM TO BE MOUNTED ON PROPOSED POLE AS INDICATED ON THE PLANS. PROPOSED POLE SHALL BE TYPE 5 POLE.
5. LOCATION OF THE CONCRETE BASE AND LENGTH OF THE GATE ARM WILL BE VERIFIED BY THE ENGINEER TO ENSURE ADEQUATE COVERAGE OF THE TRAVELED LANE.
6. GATE PIVOTS, SUPPORTS AND GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED. ALL ROUGH EDGES AND BURRS SHALL BE GROUND SMOOTH PRIOR TO GALVANIZING.
7. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
8. ANY FIELD DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
9. A STANDARD LIGHTING LUMINAIRE ARM MAY BE MOUNTED TO THE TYPE 5 POLE IN LIEU OF THE TOP COLLAR.
10. UPPER GATE ARM GUIDE IS TO BE INSTALLED 6 TO 12-INCHES BELOW THE BOTTOM OF THE TOP COLLAR.

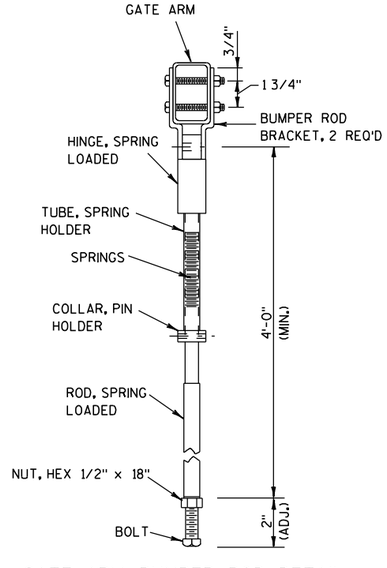


TYPICAL LOWERED POSITION
NOT TO SCALE

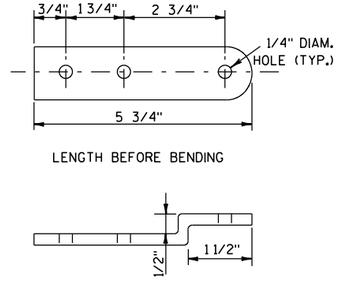
TYPICAL RAISED POSITION
NOT TO SCALE



GATE DETAIL
(SOLAR POWER OPTION)



GATE ARM BUMPER ROD DETAIL



BUMPER ROD MOUNTING BRACKET DETAIL

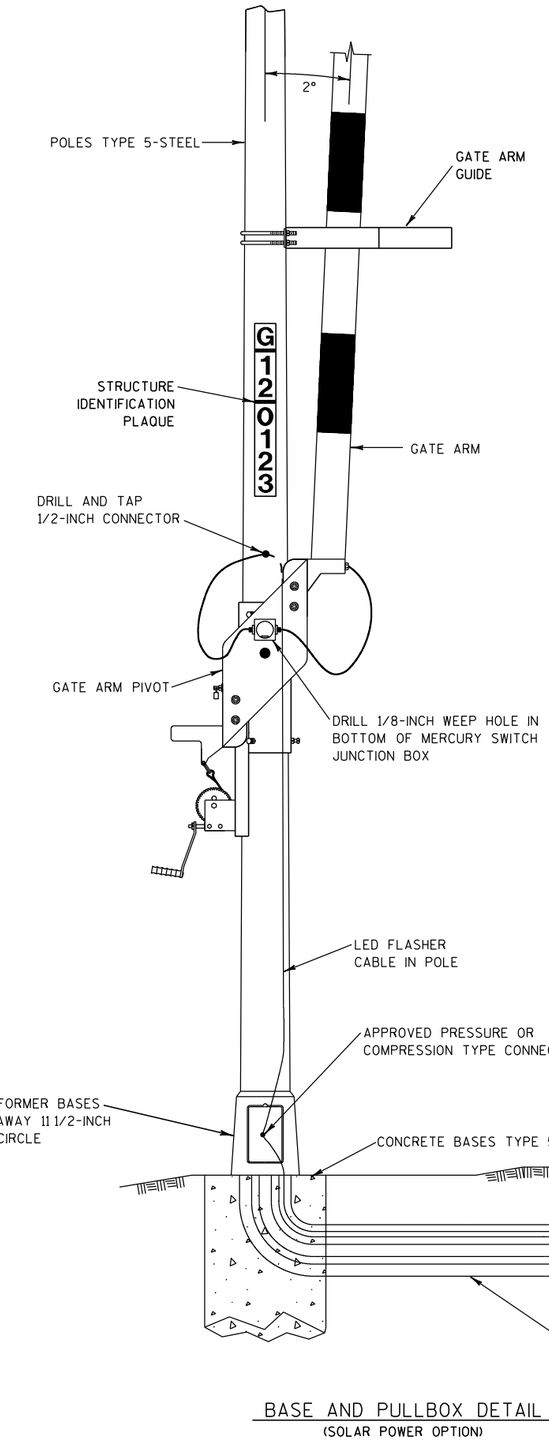
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

FILE NAME : W:\HomeWork\Kian Chai\1060-45-70_East-West Freeway\CDS\021401_fm.dgn PLOT DATE : 13-DEC-2012 19:18 PLOT BY : MSCKKC PLOT NAME : 021401_fm3 PLOT SCALE : 2:1

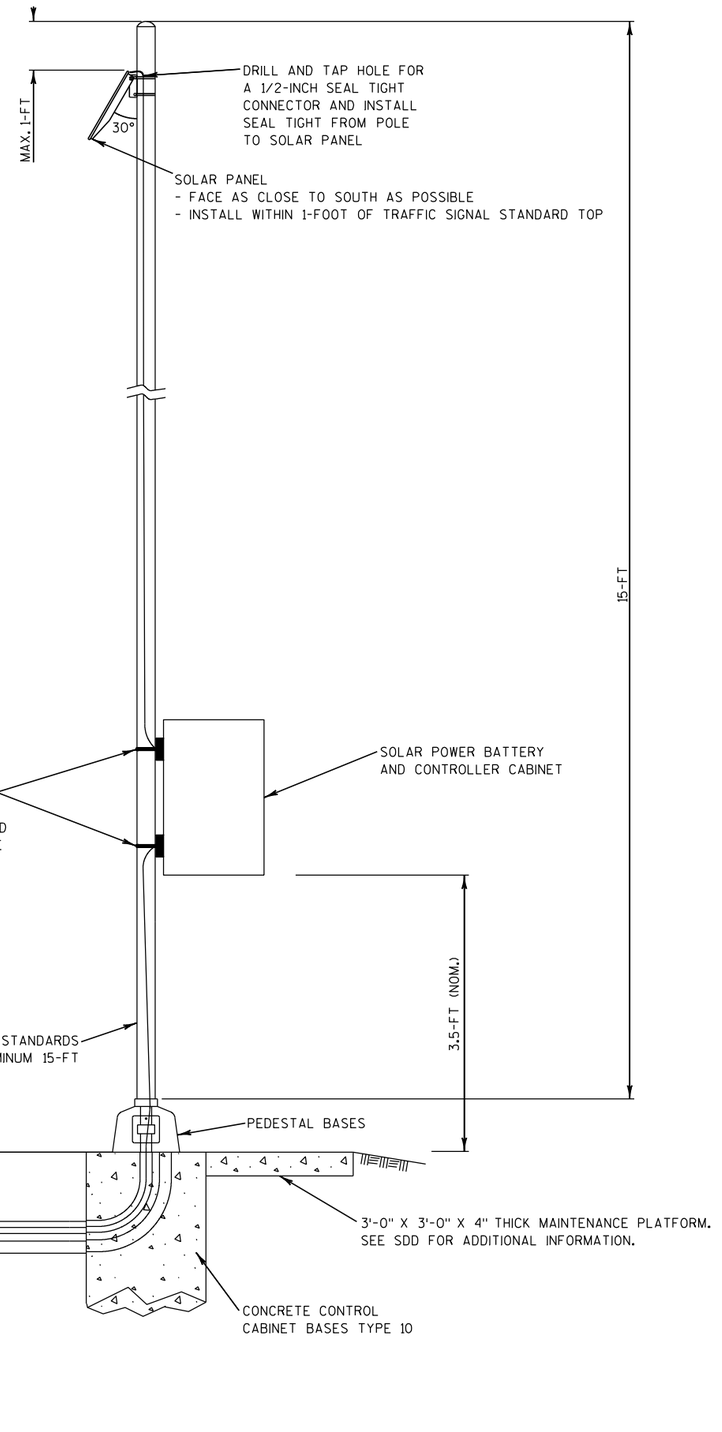
WIRING NOTES

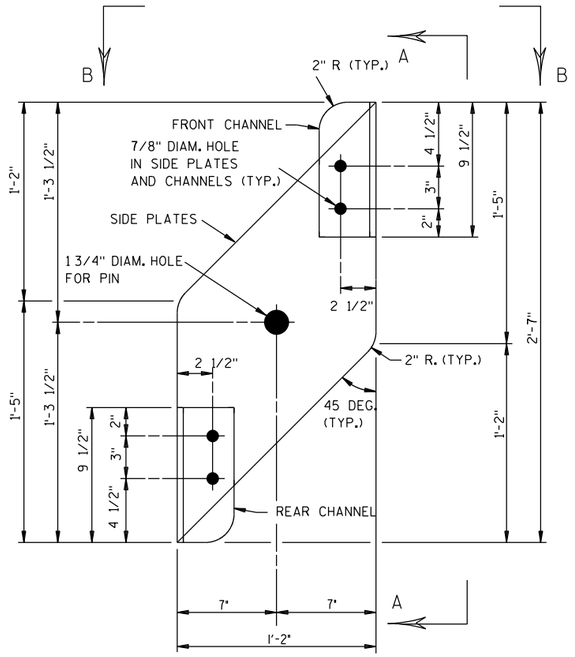
1. WIRING FROM SOLAR PANEL TO CABINET SHALL BE BLUE #10 XLP WIRE FOR POSITIVE CONDUCTOR AND WHITE #10 XLP FOR NEGATIVE CONDUCTOR.

2. WIRING FROM CABINET TO GATE ARM SHALL BE WHITE #10 XLP FOR COMMON, RED #10 XLP FOR FLASHER CIRCUIT 1, AND BLUE #10 XLP FOR FLASHER CIRCUIT 2.

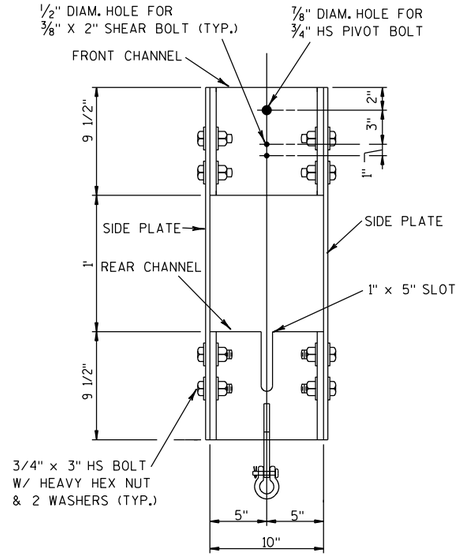


BASE AND PULLBOX DETAIL
(SOLAR POWER OPTION)

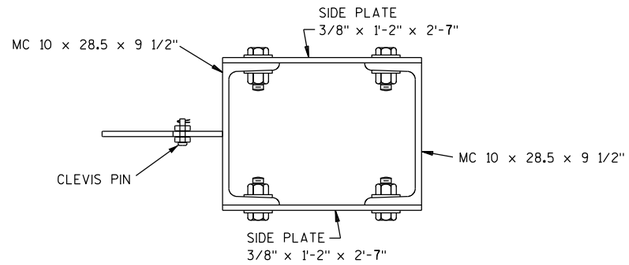




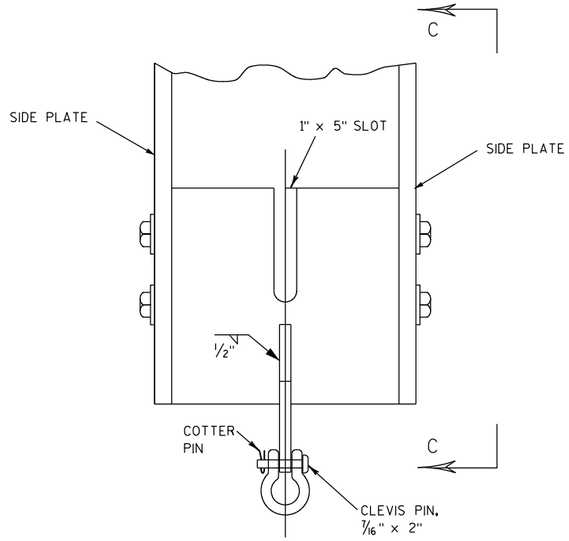
SIDE PLATE DETAIL



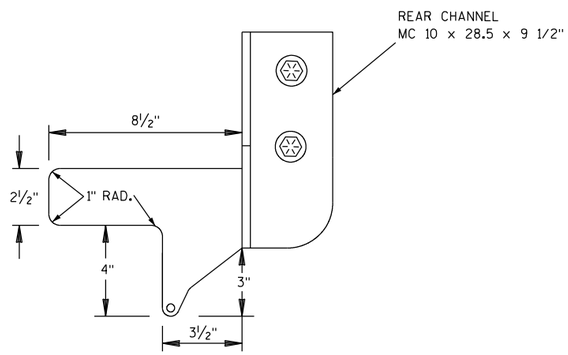
SECTION A-A



SECTION B-B



YOKE ASSEMBLY DETAIL

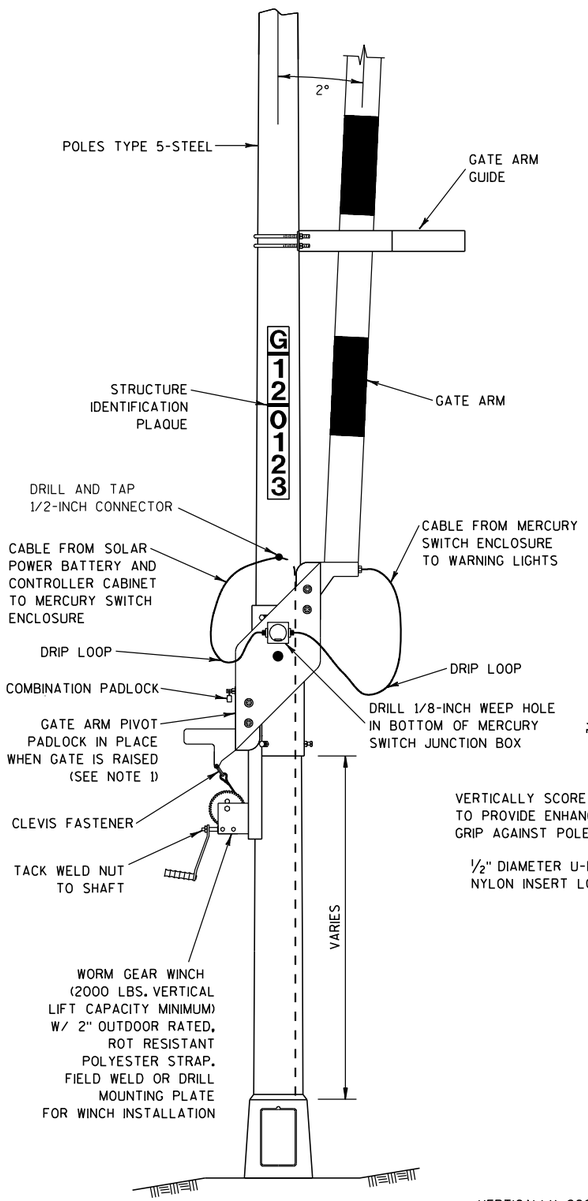


SECTION C-C

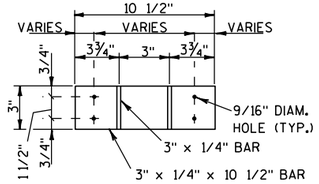
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

GENERAL NOTES

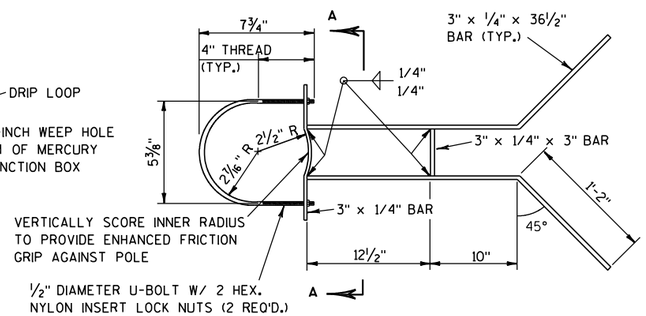
1. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL AND PADLOCKED IN PLACE.
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL AND PADLOCKED INTO PLACE.
3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF 1/2" NOMINAL DIAMTER OR LESS MAY BE STAINLESS STEEL.



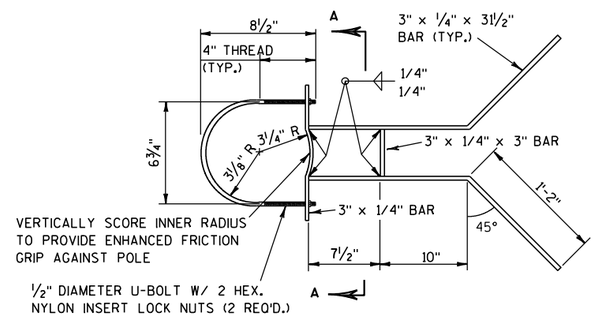
GATE PIVOT ASSEMBLY



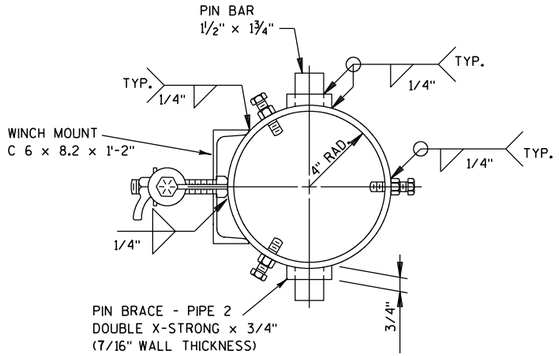
SECTION A-A
U-BOLTS NOT SHOWN



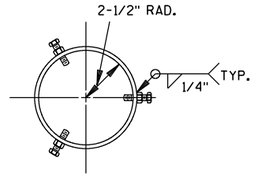
UPPER GATE ARM GUIDE DETAIL



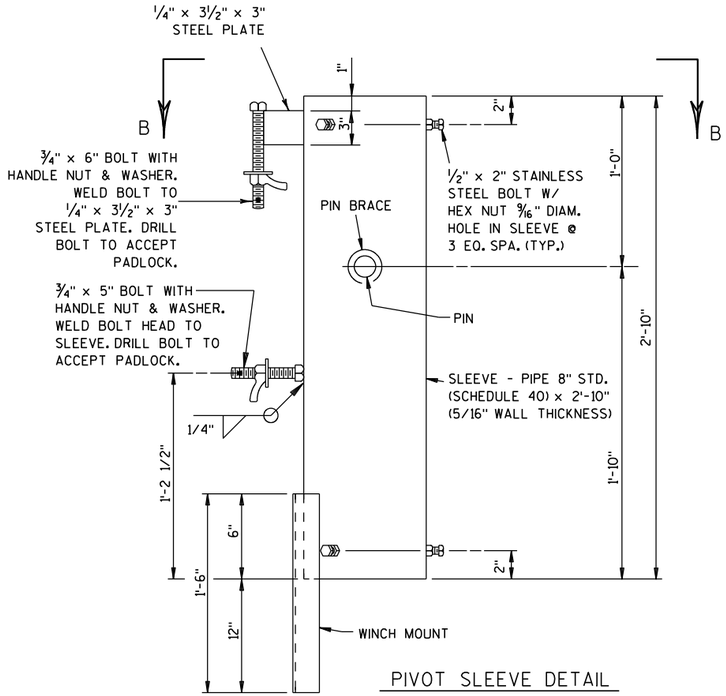
LOWER GATE ARM GUIDE DETAIL



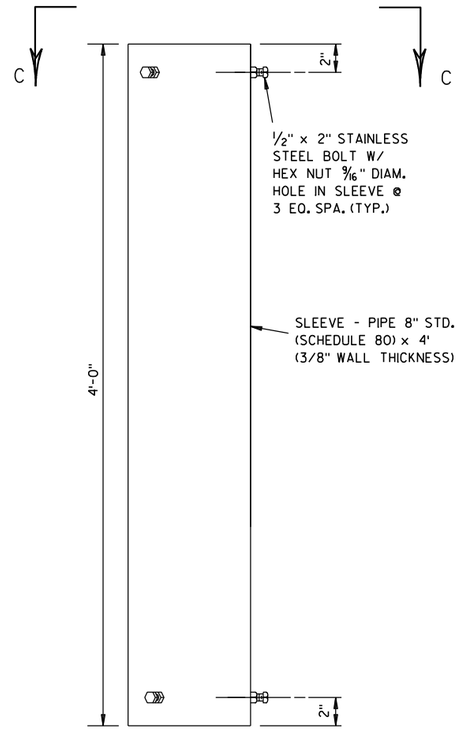
SECTION B-B



SECTION C-C



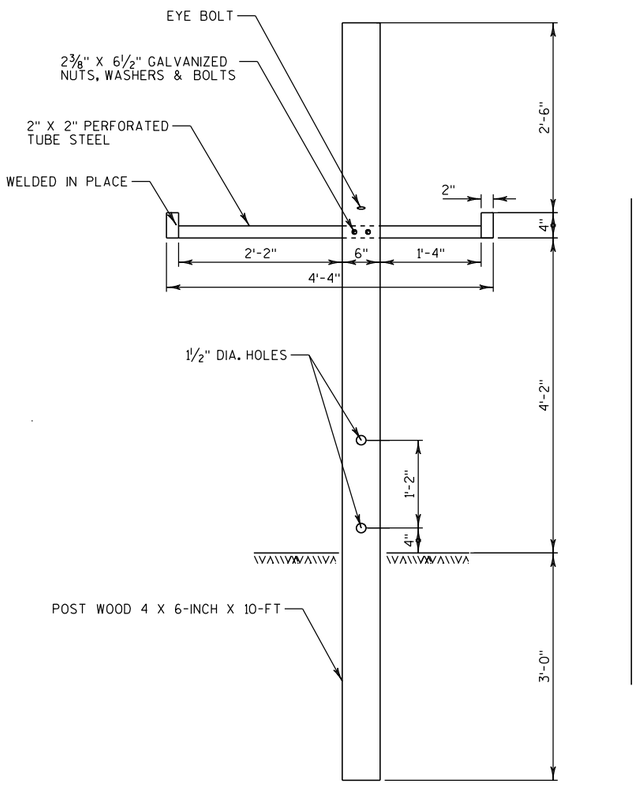
PIVOT SLEEVE DETAIL



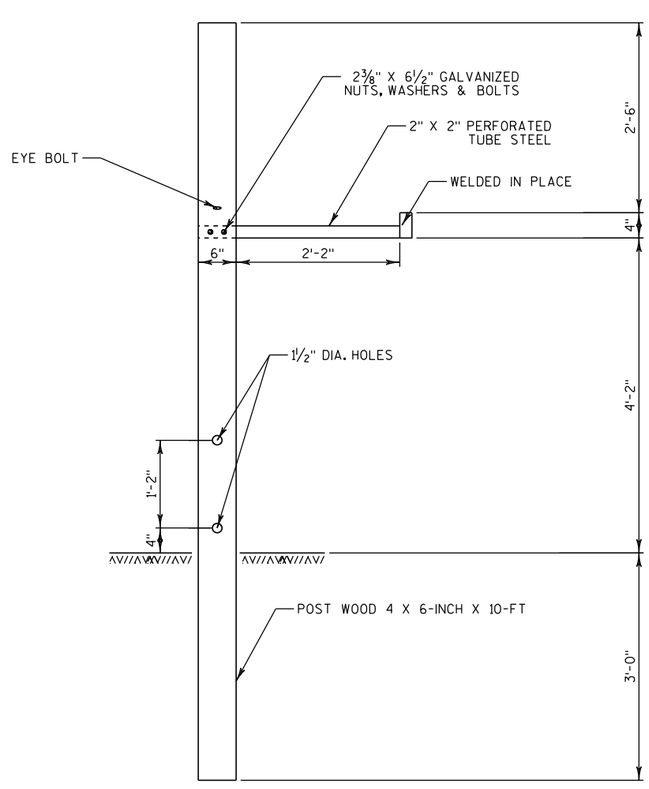
TOP COLLAR

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

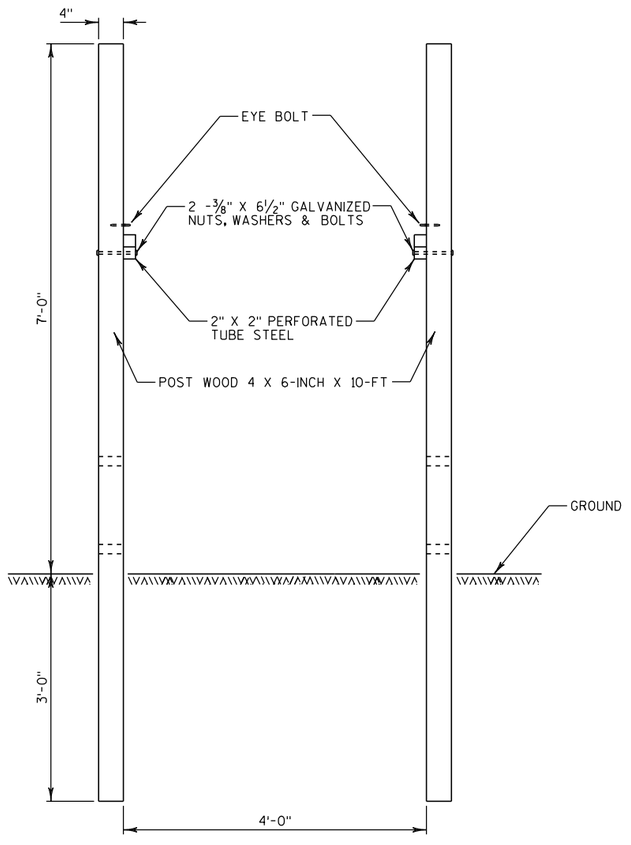
2



SIDE VIEW
(3 BARRICADE SYSTEM)



SIDE VIEW
(2 BARRICADE SYSTEM)



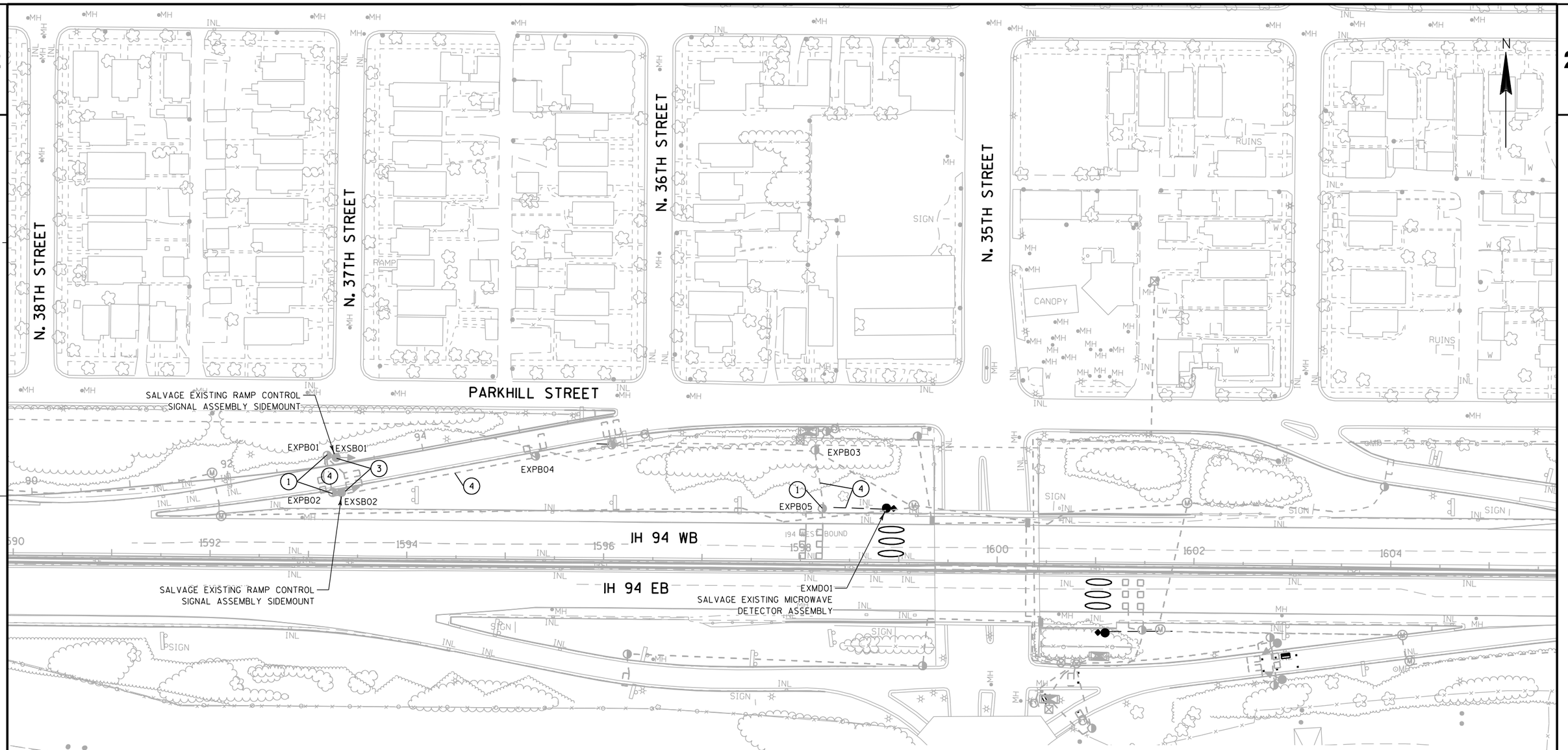
FRONT VIEW

BARRICADE RACK

* LOCATE OUTSIDE CLEAR ZONE AS DIRECTED BY ENGINEER

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

2



LEGEND

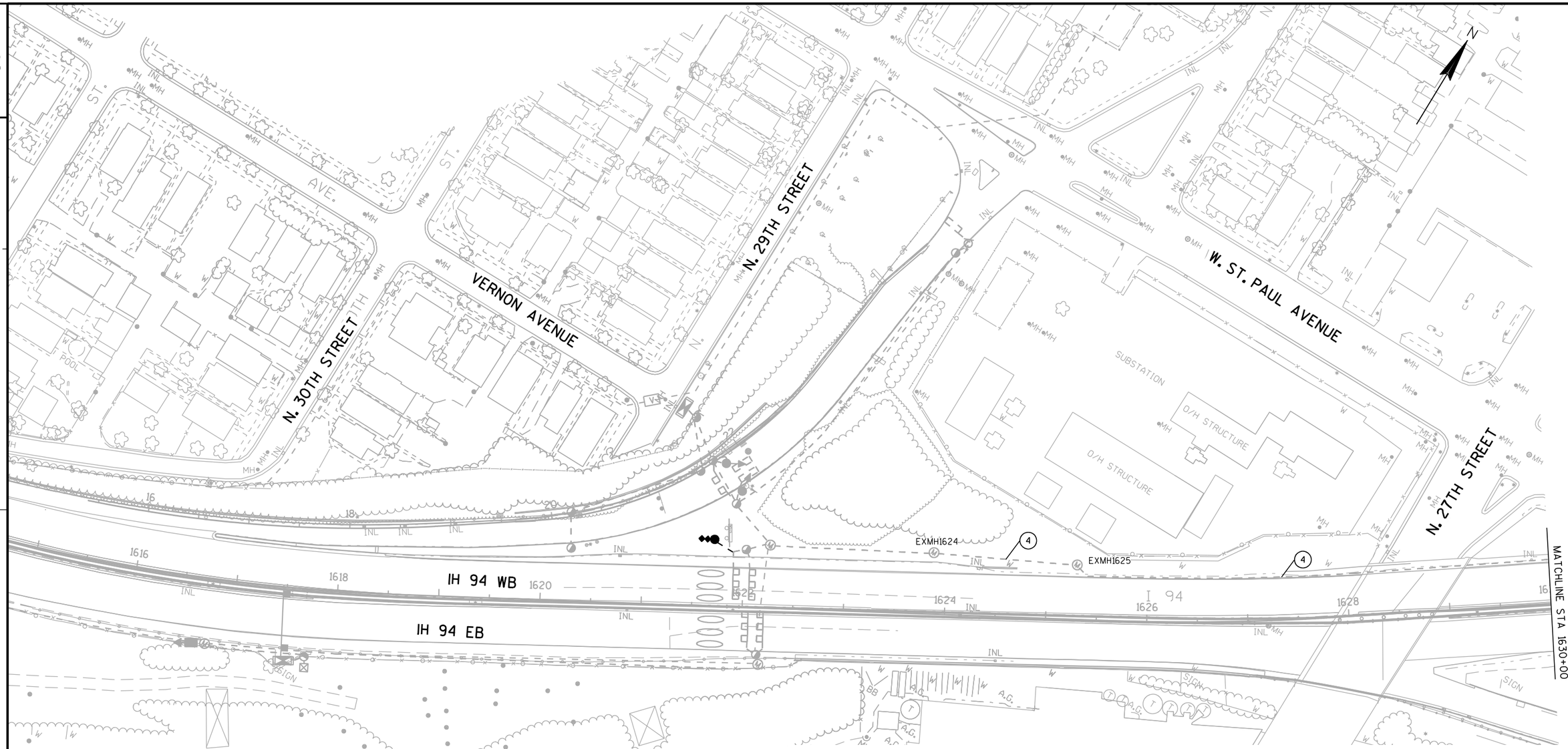
1. REMOVE PULL BOX
2. REMOVE ADVANCE FLASHER ASSEMBLY
3. REMOVE SIGN BASE ONLY AND SALVAGE EXISTING RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT
4. REMOVE CABLE
5. REMOVE CONTROLLER CABINET AND CONTROLLER CABINET BASE
6. REMOVE CCTV CAMERA, CAMERA POLE, AND CONCRETE BASE
7. REMOVE ELECTRICAL SERVICE METER BREAKER PEDESTAL
8. REMOVE COMMUNICATION VAULT
9. REMOVE MANHOLE

NOTES

1. 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.
2. FOR REMOVAL OF LIGHTING, BRIDGE, OR SIGN ITEMS, REFER TO RESPECTIVE REMOVAL PLAN SECTIONS.
3. 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 REMOVAL 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: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2



LEGEND

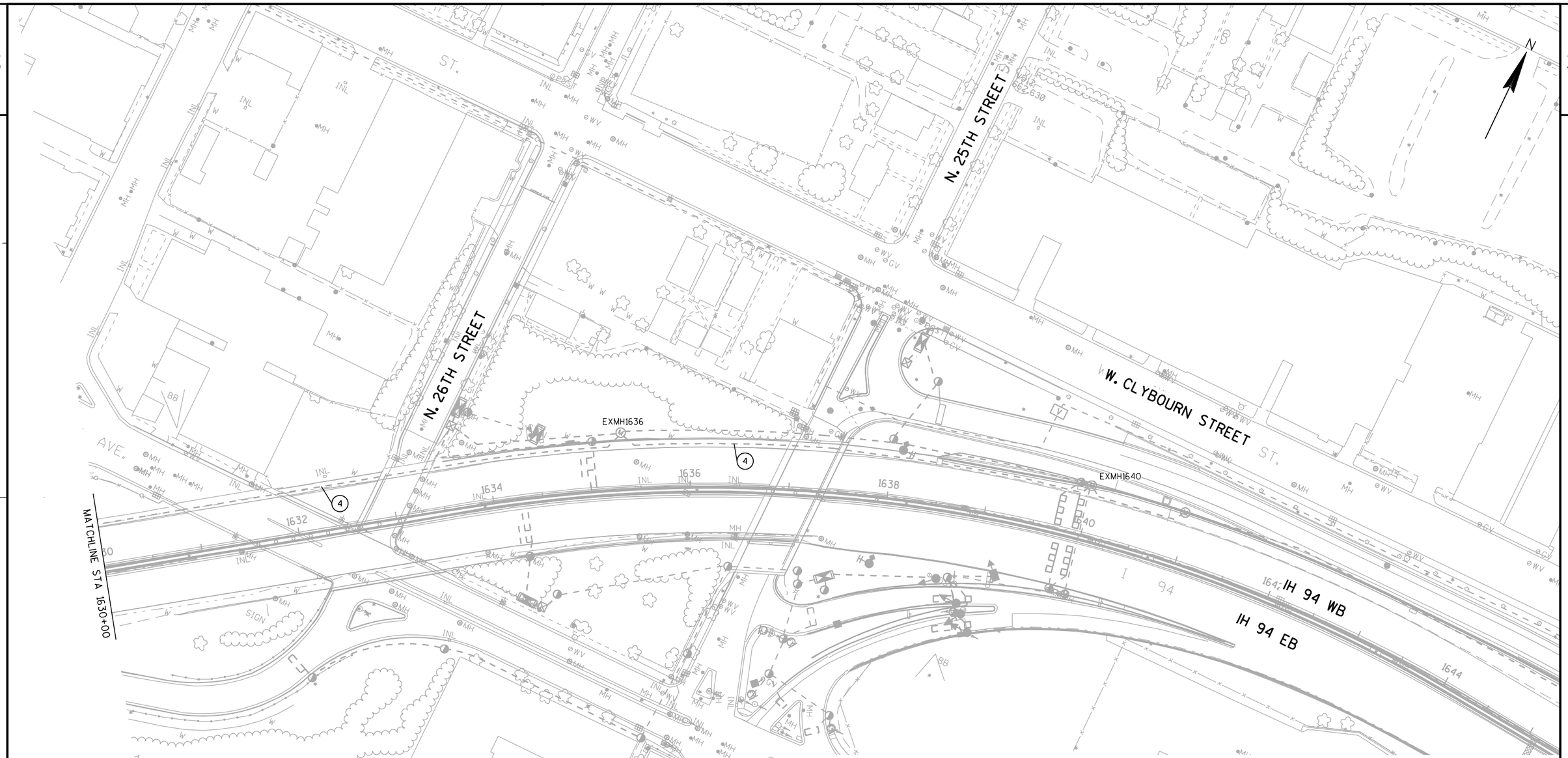
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PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2



LEGEND

1. REMOVE PULL BOX
2. REMOVE ADVANCE FLASHER ASSEMBLY
3. REMOVE SIGN BASE ONLY AND SALVAGE EXISTING RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT
4. REMOVE CABLE
5. REMOVE CONTROLLER CABINET AND CONTROLLER CABINET BASE
6. REMOVE CCTV CAMERA, CAMERA POLE, AND CONCRETE BASE
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PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

N

N. 38TH STREET

N. 37TH STREET

N. 36TH STREET

N. 35TH STREET

PARKHILL STREET

IH 94 WB

IH 94 EB

194 WEST BOUND

194 EAST BOUND

SB2001
(1) CONCRETE BASE TYPE 1
(1) INSTALL SALVAGED EXISTING SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT

(2) 2-INCH CONDUITS
(1) WITH (2) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 10 AWG LIGHTING WIRE

PB2001

(3) 3-INCH CONDUITS
(1) WITH (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
(1) WITH (2) LDLIC
AND (1) NO. 10 AWG LIGHTING WIRE

PB2002

(2) 2-INCH CONDUITS
(1) WITH (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 10 AWG LIGHTING WIRE

SB2002
(1) CONCRETE BASE TYPE 1
INSTALL SALVAGED EXISTING SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT

(2) 3-INCH CONDUIT
(1) WITH (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 10 AWG LIGHTING WIRE
(1) WITH (4) LDLIC

CV01

EXPB2003
SPLICE NEW LDLIC TO EXISTING LOOP DETECTORS

IN EXISTING CONDUITS
(1) WITH (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 10 AWG LIGHTING WIRE
(1) WITH (6) LDLIC

EXPB2001
(1) INSTALL CONDUITS INTO EXISTING PULL BOX
SPLICE NEW LDLIC TO EXISTING LOOP DETECTORS

IN EXISTING CONDUITS
(1) WITH (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 10 AWG LIGHTING WIRE
(1) WITH (8) LDLIC

EXCB-RM-40-0076

EXPB2002
(2) INSTALL CONDUITS INTO EXISTING PULL BOX

IN EXISTING CONDUITS
(1) WITH (1) 7/C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 10 AWG LIGHTING WIRE
(1) WITH (1) MD CABLE
AND (1) WITH (8) LDLIC

PB2004

(2) 3-INCH CONDUITS
(1) WITH (1) MD CABLE
AND (1) NO. 10 AWG LIGHTING WIRE

(2) 2-INCH CONDUITS
(1) WITH (1) MD CABLE
AND (1) NO. 10 AWG LIGHTING WIRE

MD01
SALVAGE EXISTING MICROWAVE DETECTOR ASSEMBLY AND INSTALL SALVAGED MICROWAVE DETECTOR ASSEMBLY

RAMP
CANOPY
RUINS
SIGN
MH
INL

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\HomeWork\Kian Chai\1060-45-70_East-West Freeway\CDS\021420_fm.dgn PLOT DATE : 13-DEC-2012 19:21 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

STA 1623+90.0, 443.4'LT
RAMP CLOSURE GATES
SOLAR POWERED 24-FT

(2) 2-INCH CONDUITS
(1) WITH (1) 2/C NO. 12 UF GROUNDED CABLE
AND (1) NO. 10 AWG LIGHTING CABLE

(2) 3-INCH CONDUITS
(1) WITH (2) 2/C NO. 12 UF GROUNDED CABLES
AND (1) NO. 10 AWG LIGHTING CABLE

RG02

PB2202

SB2201
(1) TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT
(1) CONCRETE CONTROL CABINET BASES TYPE 10
(1) PEDESTAL BASES

PB2201

RG01

STA 1624+60.7, 413.3'LT
RAMP CLOSURE GATES
SOLAR POWERED 30-FT

BARRIACE RACK
(FINAL LOCATION TO BE DETERMINED BY ENGINEER IN FIELD)

(2) 2-INCH CONDUITS
(1) WITH (1) 2/C NO. 12 UF GROUNDED CABLE
AND (1) NO. 10 AWG LIGHTING CABLE

(2) 3-INCH CONDUITS
(1) WITH (1) 2/C NO. 12 UF GROUNDED CABLE
AND (1) NO. 10 AWG LIGHTING CABLE

EXMD01
REFOCUS EXISTING MICROWAVE DETECTOR
FOR PROPOSED ROADWAY

MATCHLINE 1630+00

N. 28TH STREET
W. ST. PAUL AVENUE
N. 30TH STREET
MT. VERNON AVENUE
N. 29TH STREET
N. 27TH STREET
W. GREVES ST.
IH 94 WB
IH 94 EB
I 94
SUBSTATION
O/H STRUCTURE
O/H SIGN
POOL
RAMP

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\HomeWork\Kian Chai\1060-45-70_East-West Freeway\CDS\021422_fm.dgn PLOT DATE : 13-DEC-2012 19:21 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

N. 26TH STREET

W. CLYBOURN STREET

IH 94 WB

IH 94 EB

EXMD02
REFOCUS EXISTING MICROWAVE DETECTOR
FOR PROPOSED ROADWAY

MATCHLINE 1630+00

1632 1634 1636 1638 1640 1642 1644

N. 25TH STREET

W. ST. PAUL AVENUE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\HomeWork\Kian Chai\1060-45-70_East-West Freeway\CDS\021423_fm.dgn PLOT DATE : 13-DEC-2012 19:22 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

N. 20TH STREET

N. 19TH STREET

N. 18TH STREET

N. 17TH STREET

W. CLYBOURN ST.

W. ST. PAUL AVENUE

EXMD03
REFOCUS EXISTING MICROWAVE DETECTOR
FOR PROPOSED ROADWAY

IH 94 WB

IH 94 EB

I 94

RAMP

SIGN

BB

1654 1658 1660 662 664 666 668

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\HomeWork\Kian Chai\1060-45-70_East-West Freeway\CDS\021424_fm.dgn PLOT DATE : 13-DEC-2012 19:22 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

STA 688+64.2, 414.2'LT
RAMP CLOSURE GATES
SOLAR POWERED 30-FT
(2) 2-INCH CONDUITS
(1) WITH (1) 2/C NO. 12 UF GROUNDED CABLE
AND (1) NO. 10 AWG LIGHTING CABLE

PB2502

SB2501
(1) TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT
(1) CONCRETE CONTROL CABINET BASES TYPE 10
(1) PEDESTAL BASES

RG04

(2) 2-INCH CONDUITS
(1) WITH (2) 2/C NO. 12 UF GROUNDED CABLE
AND (2) NO. 10 AWG LIGHTING CABLE

STA 688+19.8, 364.9'LT
RAMP CLOSURE GATES
SOLAR POWERED 30-FT

RG03

PB2501

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 2/C NO. 12 UF GROUNDED CABLE
AND (1) NO. 10 AWG LIGHTING CABLE

(2) 3-INCH CONDUITS
(1) WITH (1) 2/C NO. 12 UF GROUNDED CABLE
AND (1) NO. 10 AWG LIGHTING CABLE

IH 43 NB

IH 43 SB

W. TORY HILL STREET

IH 94 WB

IH 94 EB

MATCHLINE 692+50

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

N

N. 7TH STREET

N. 6TH STREET

W. CLYBOURN STREET

W. ST. PAUL AVENUE

IH 94 WB

IH 94 EB

PB2501
SB2601
(1) TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT
(1) CONCRETE CONTROL CABINET BASES TYPE 10
(1) PEDESTAL BASES.
RG05
(2) 2-INCH CONDUITS
(1) WITH (1) 2/C NO. 12 UF GROUNDED CABLE
AND (2) NO. 10 AWG LIGHTING CABLE
STA 702+77.5, 131.2'LT
RAMP CLOSURE GATES
SOLAR POWERED 37-FT

MATCHLINE 692+50

694 696 698 700 702 704 706

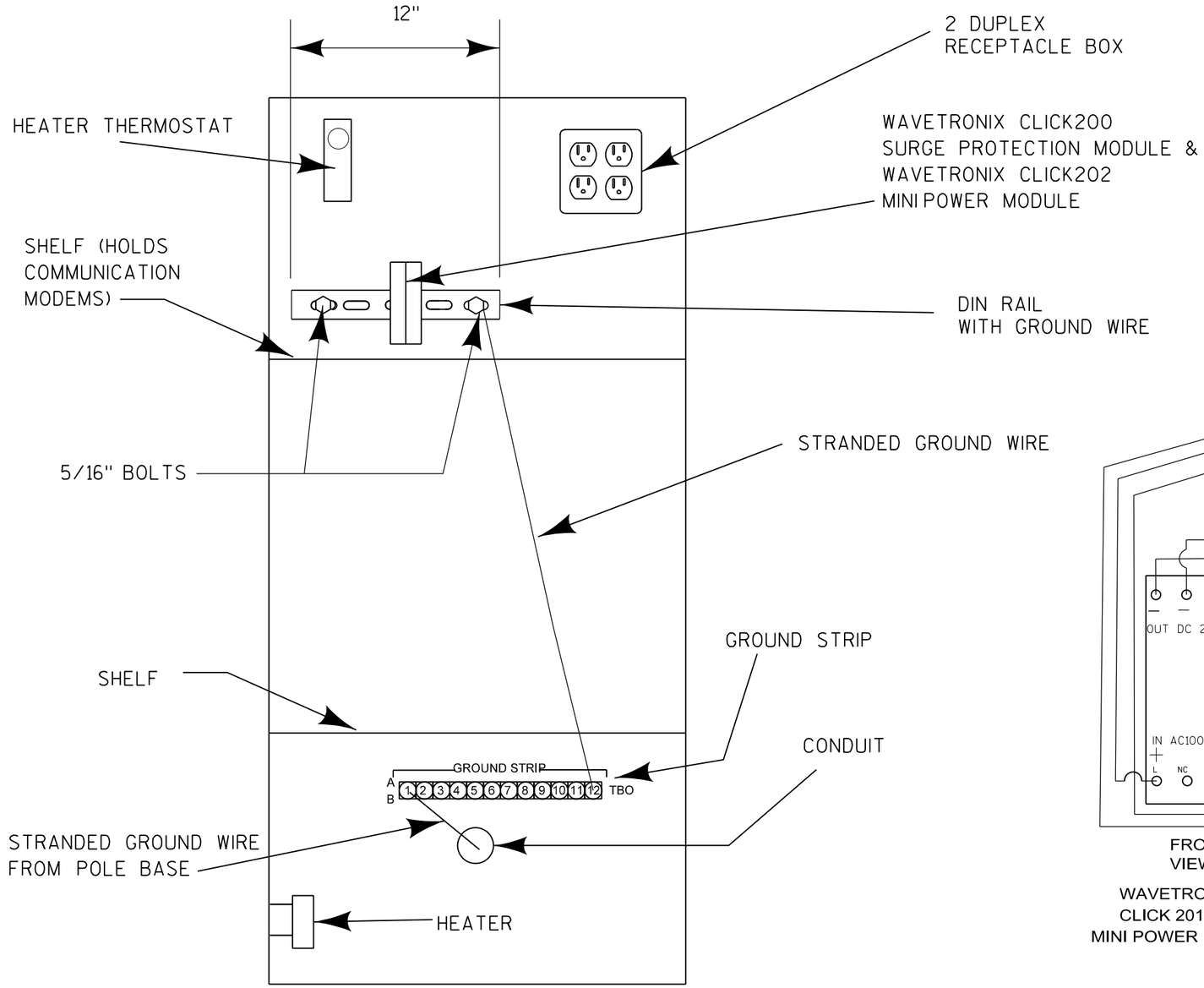
I 43

95SW 96SW 98SW

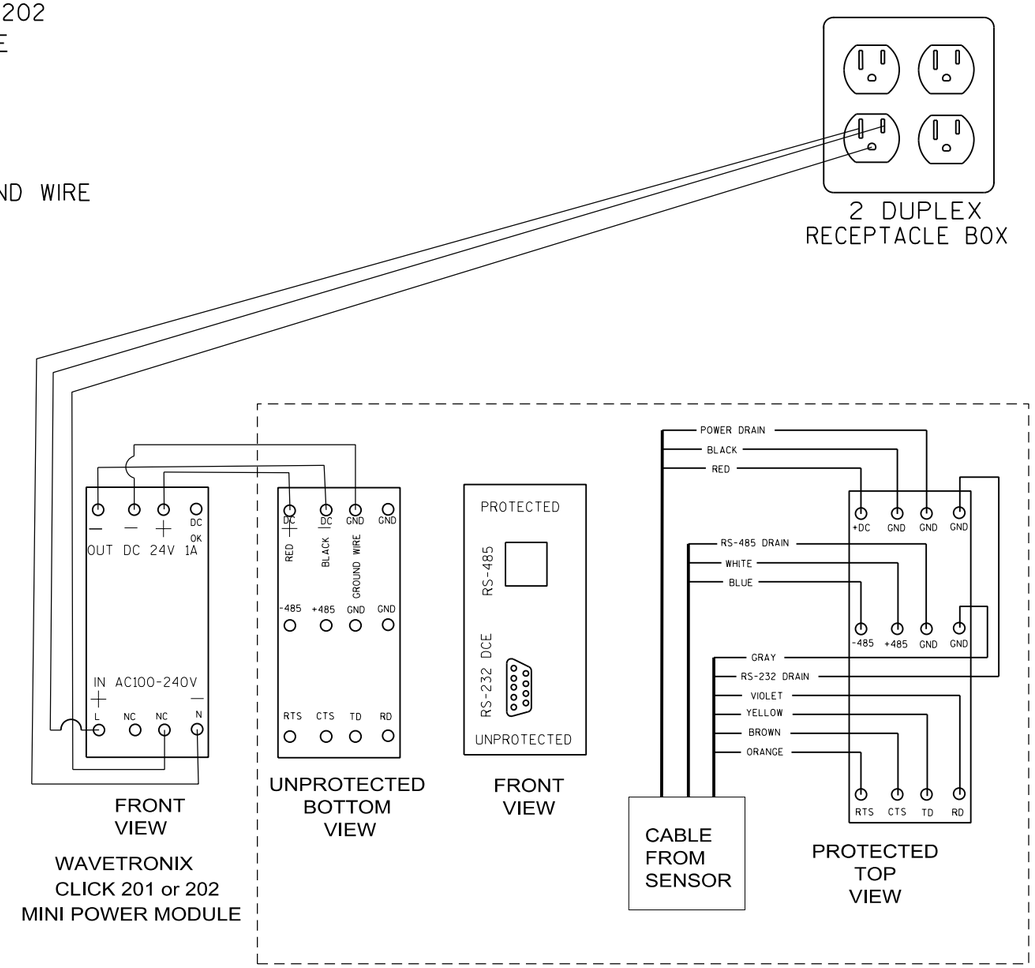
POOL

SIGN

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E



FRONT VIEW/LAYOUT
(NOT TO SCALE)



ATR POLE-MOUNTED CABINET LAYOUT

ATR - WAVETRONIX

WIRING DIAGRAM
(NOT TO SCALE)

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	INSTALLATION OF ATR - WAVETRONIX DETECTOR	SHEET 55	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\ATR\ACWavetronixCabinetLayout.dgn PLOT DATE : 11/1/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:200

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, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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 AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

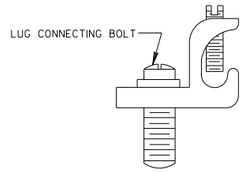
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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.

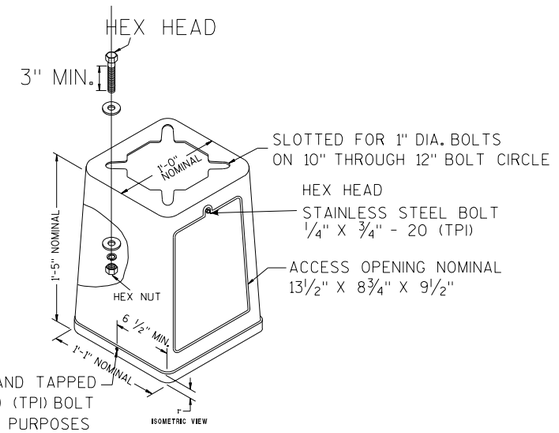
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

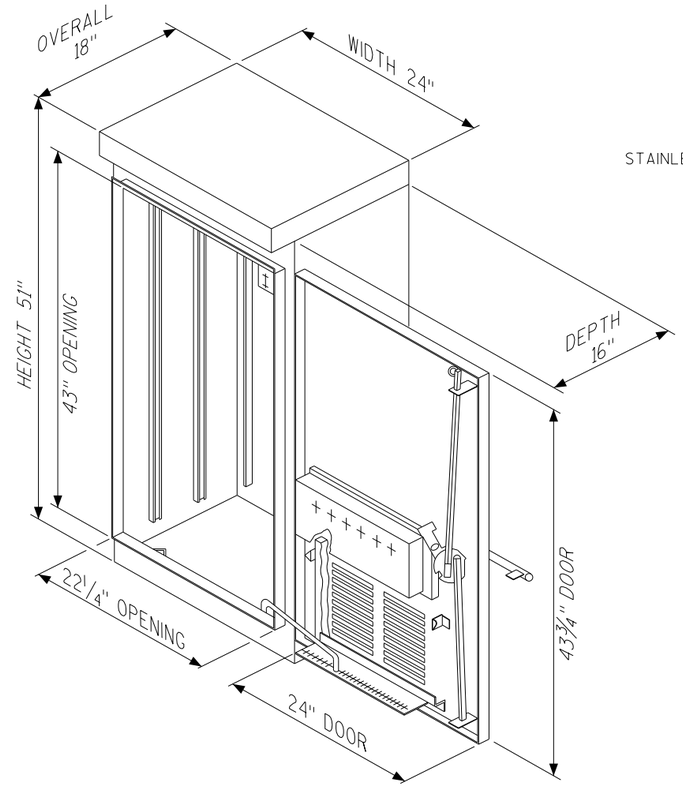


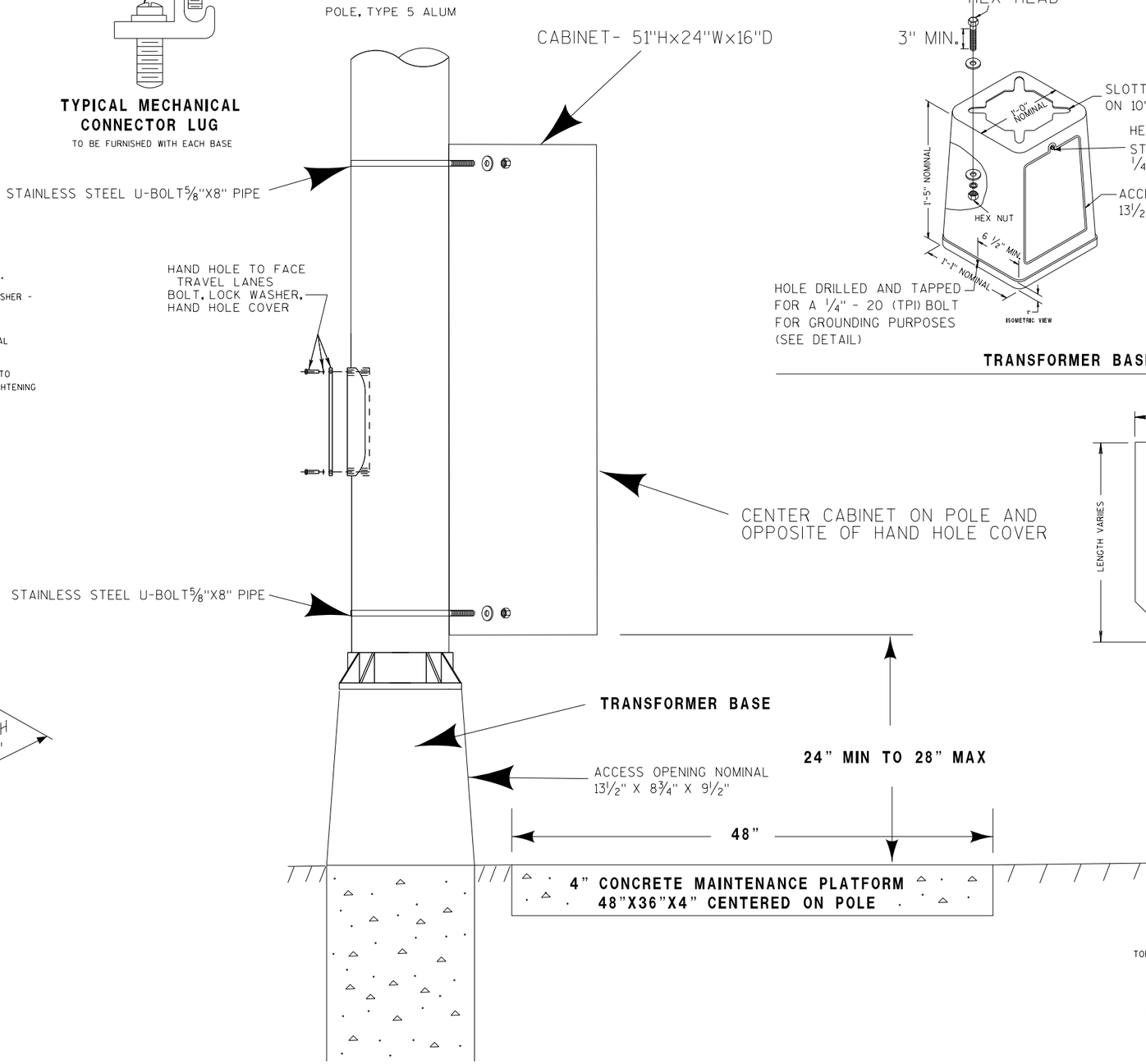
TYPICAL MECHANICAL CONNECTOR LUG

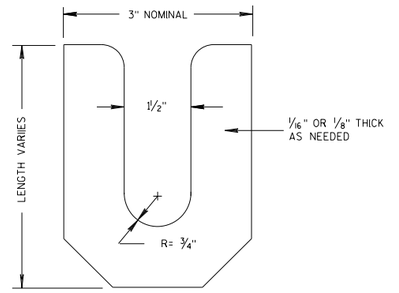
TO BE FURNISHED WITH EACH BASE



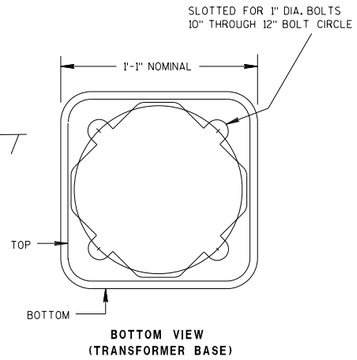
TRANSFORMER BASE







LEVELING SHIM

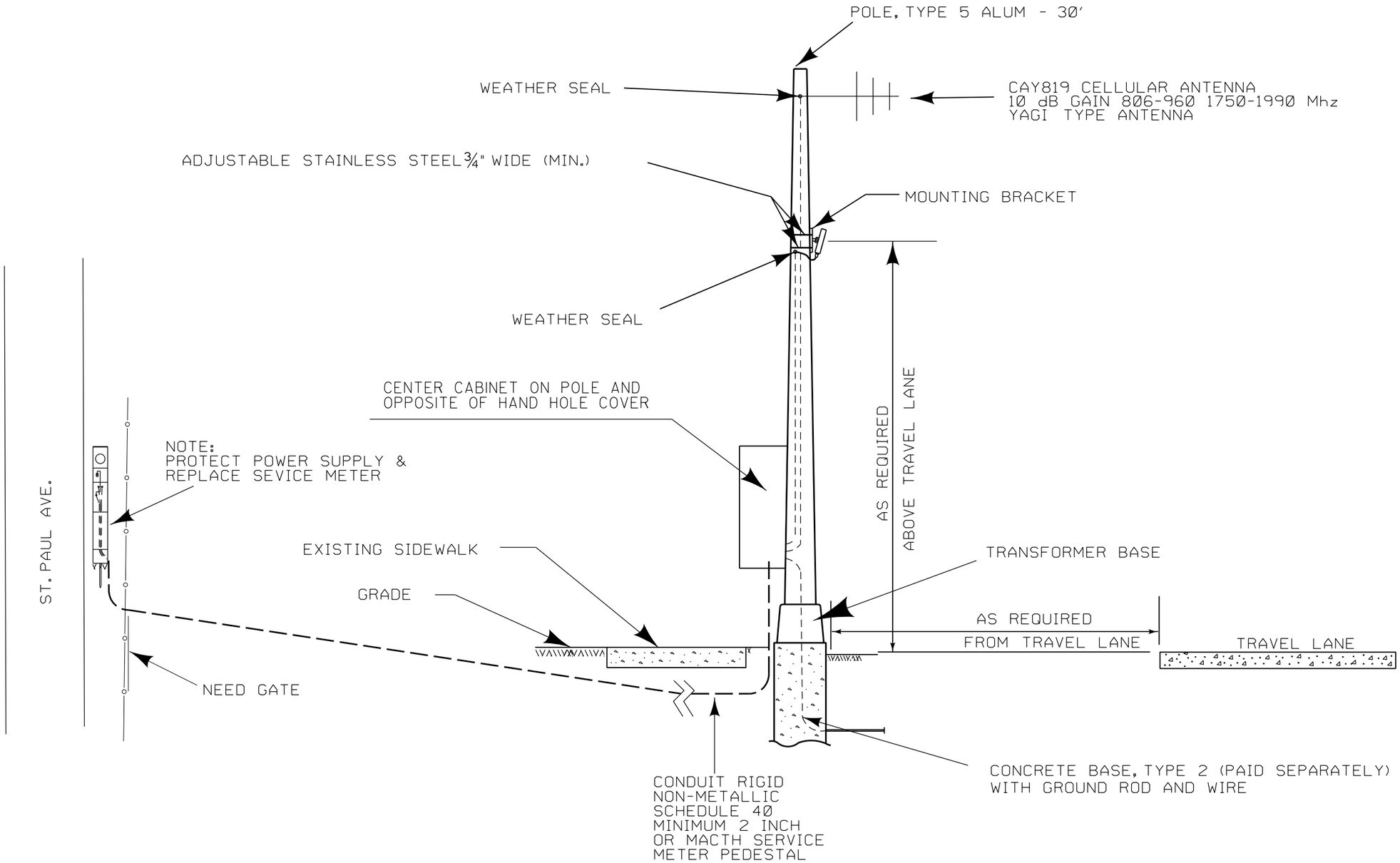


BOTTOM VIEW (TRANSFORMER BASE)

INSTALLATION OF ATR CABINET ON POLE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	INSTALLATION OF ATR CABINET ON POLE	SHEET 56	E

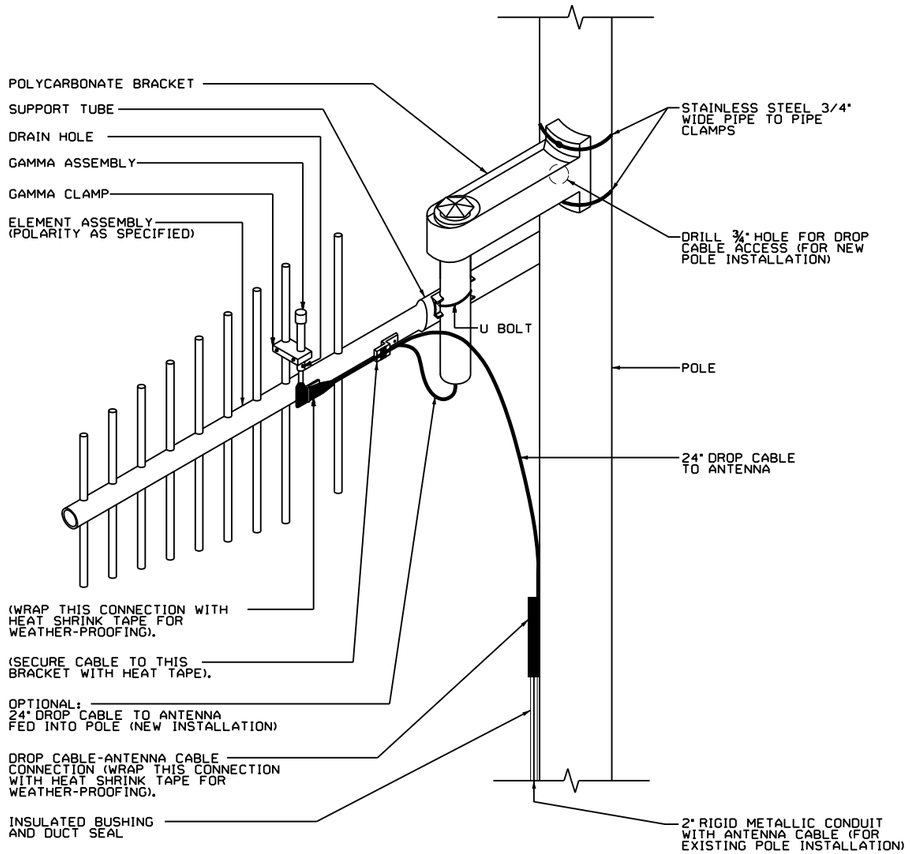
2



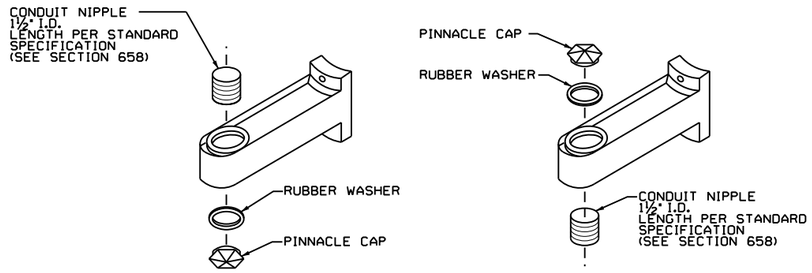
WAVETRONIX DETECTOR WITH CELLULAR ANTENNA INSTALLATION ON TYPE 5 POLE

(NOT TO SCALE)

2

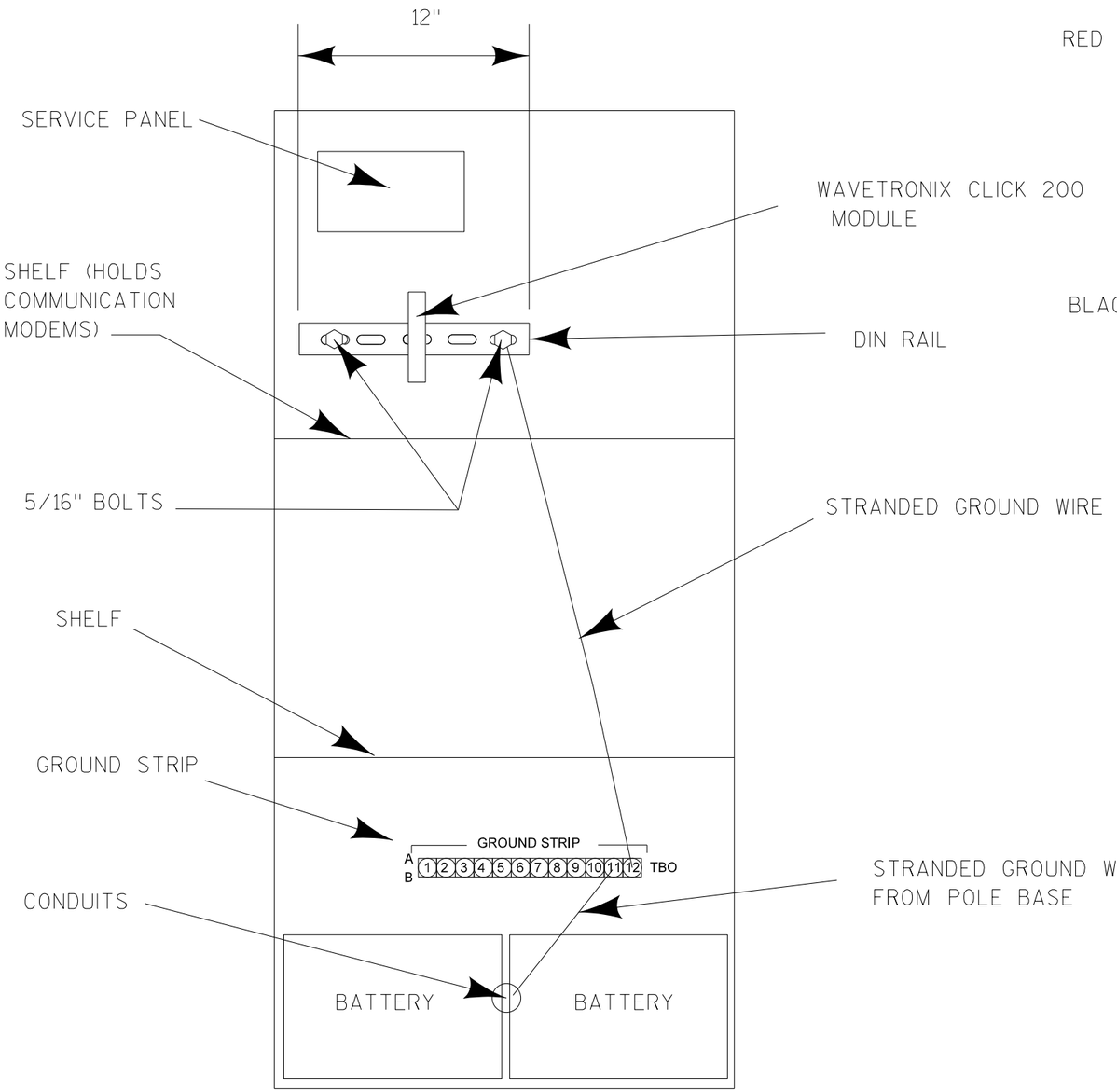


CELLULAR ANTENNA
MOUNTING ASSEMBLY DETAIL
(YAGI TYPE)
(NOT TO SCALE)



POLYCARBONATE BRACKET
(NOT TO SCALE)

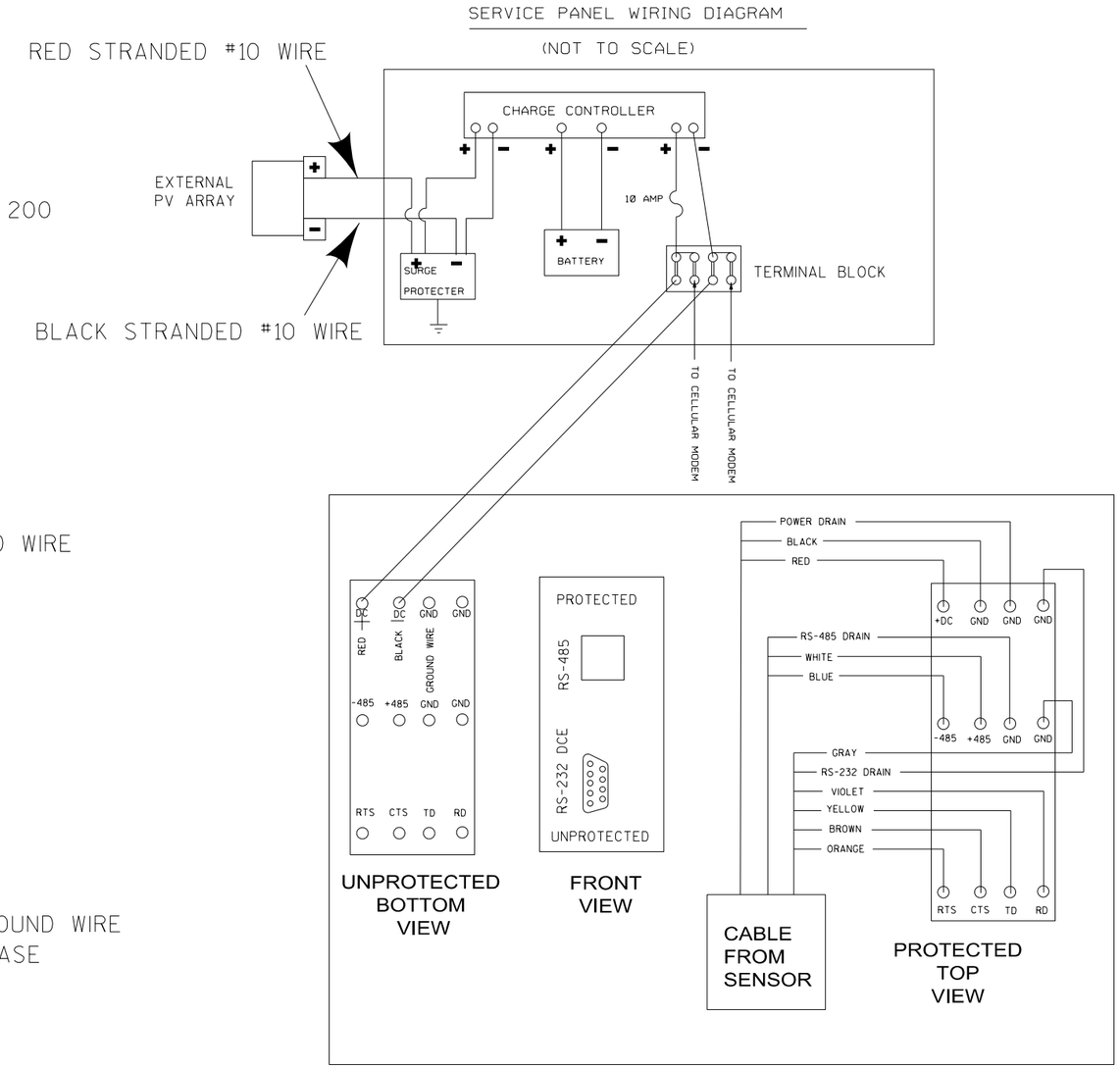
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	INSTALLATION OF CELLULAR ANTENNA - ATR 40-0033 & 40-0050	SHEET 58	E



FRONT VIEW/LAYOUT
(NOT TO SCALE)

SERVICE PANEL WIRING DIAGRAM

(NOT TO SCALE)



WAVETRONIX CLICK 200 MODULE
WIRING DIAGRAM

(NOT TO SCALE)

ATR POLE-MOUNTED CABINET SOLAR INSTALLATION LAYOUT

ATR - WAVETRONIX

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	INSTALLATION OF ATR - WAVETRONIX DETECTOR 40-0033, 40-0050	SHEET 59	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\ATR\SolarWavetronixCabinetLayout.dgn PLOT DATE : 11/1/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

GENERAL NOTES

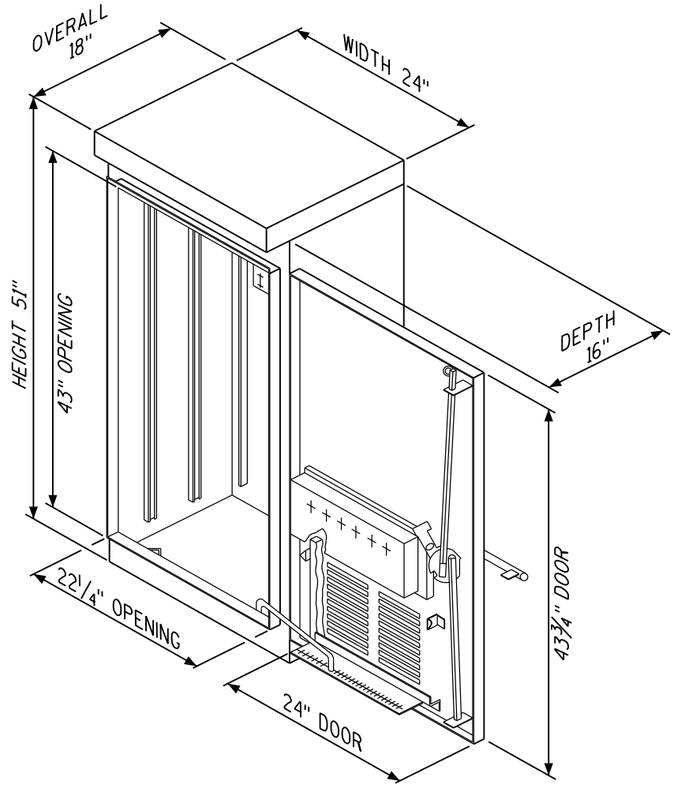
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

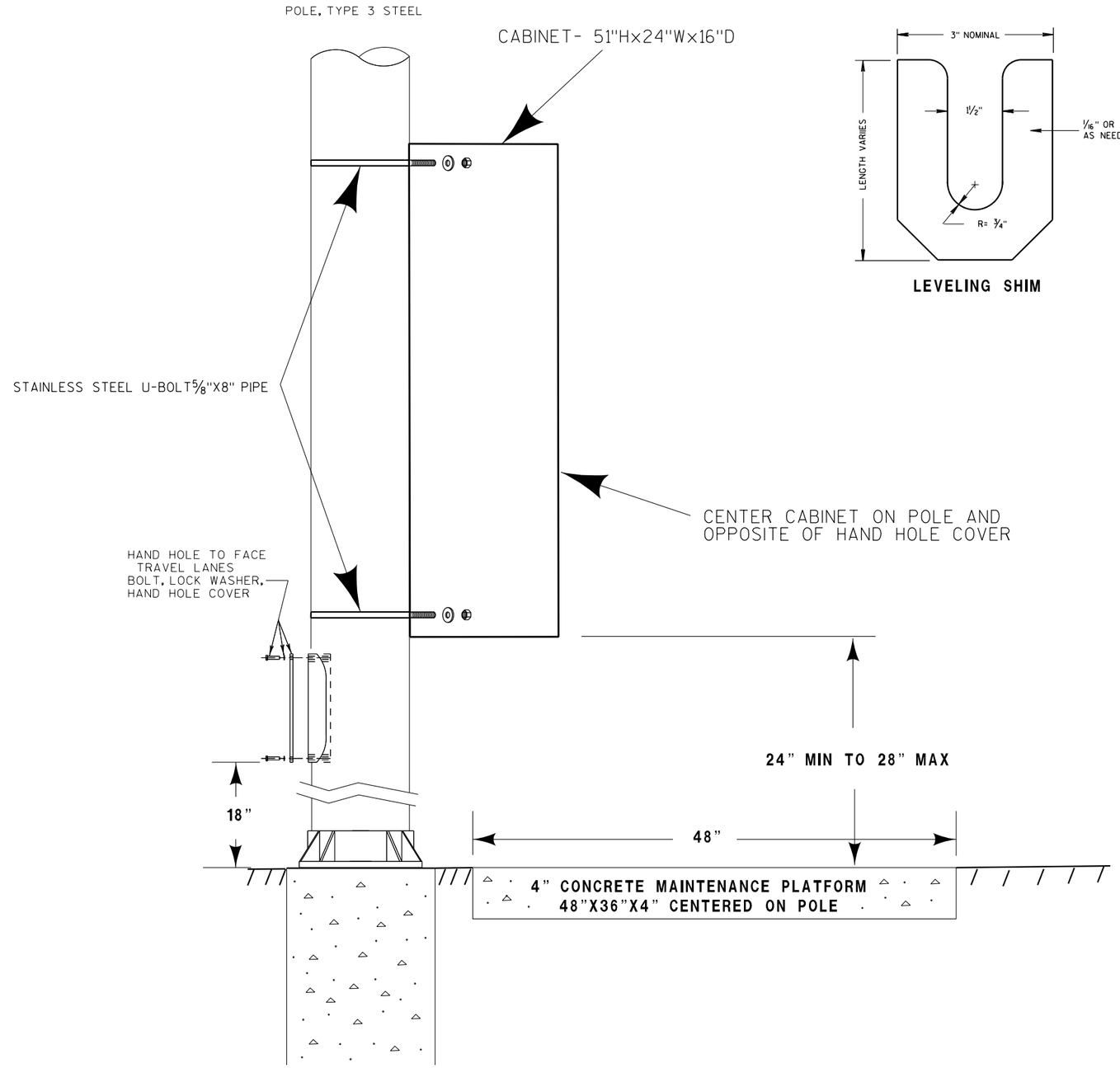
LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

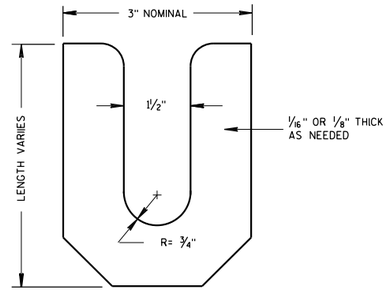
SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

CONNECTION BETWEEN THE SOLAR PANELS AND THE SOLAR CONTROLLER WIRE SIZE TO BE #10 AWG STRANDED WIRE.



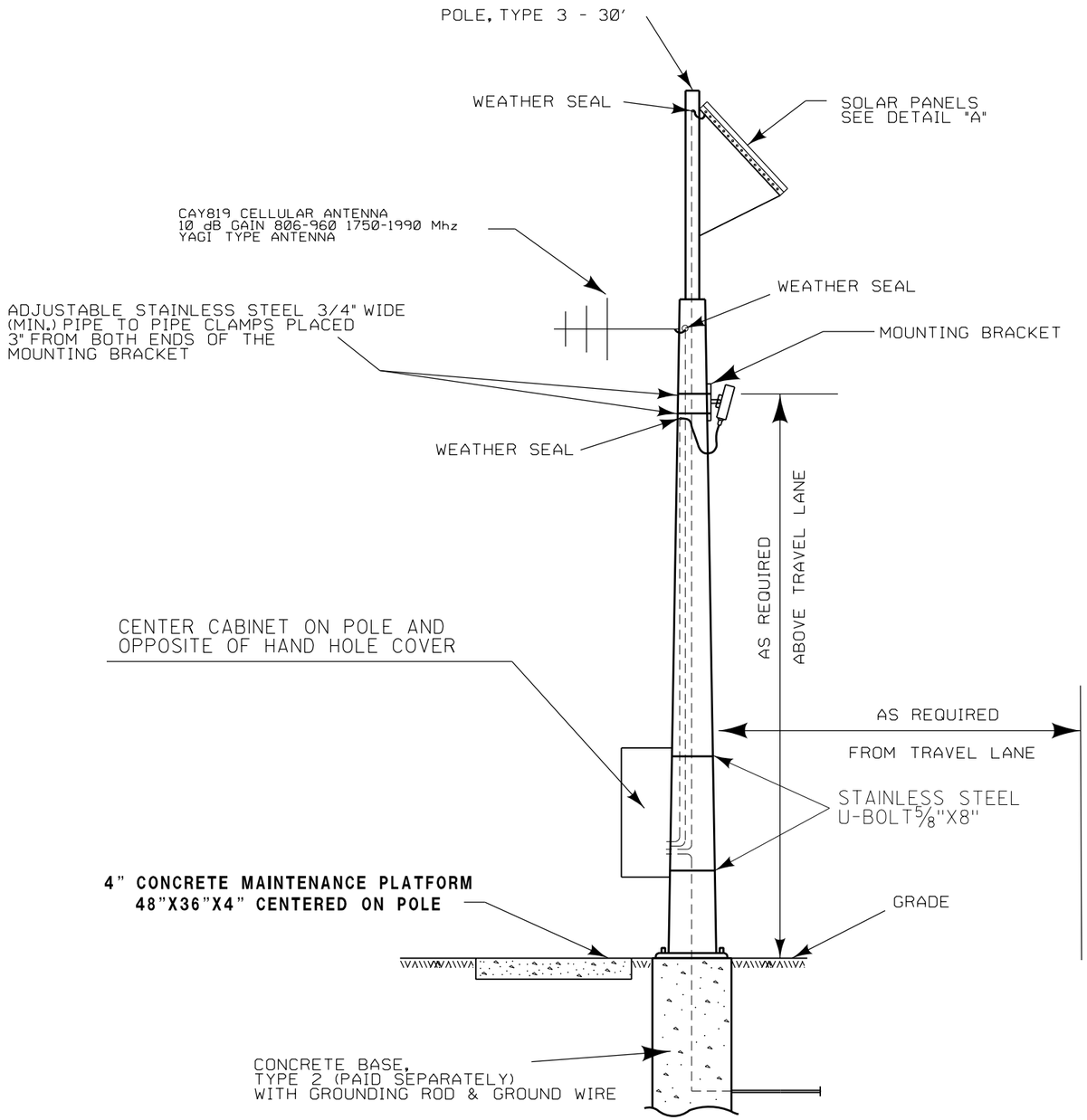


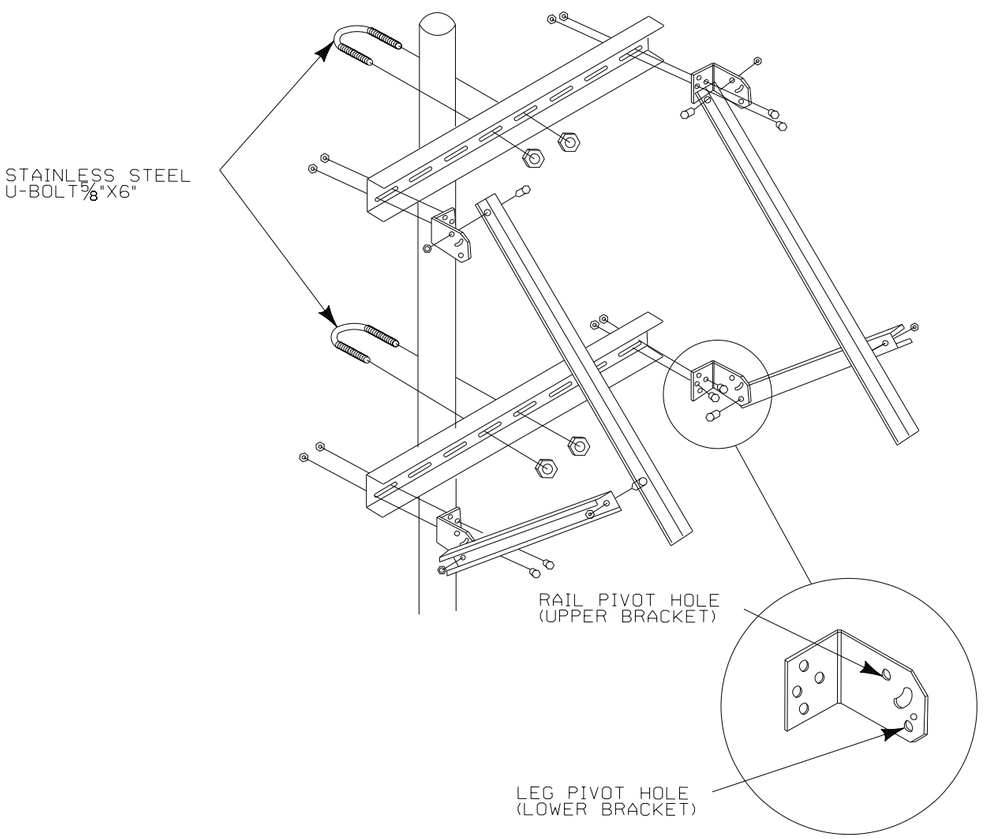


LEVELING SHIM

INSTALLATION OF ATR CABINET ON POLE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	INSTALLATION OF ATR	SHEET 60	E





SOLAR PANELS
DETAIL "A"

NOTE: SOLAR PANELS TO BE
POINTED DUE SOUTH

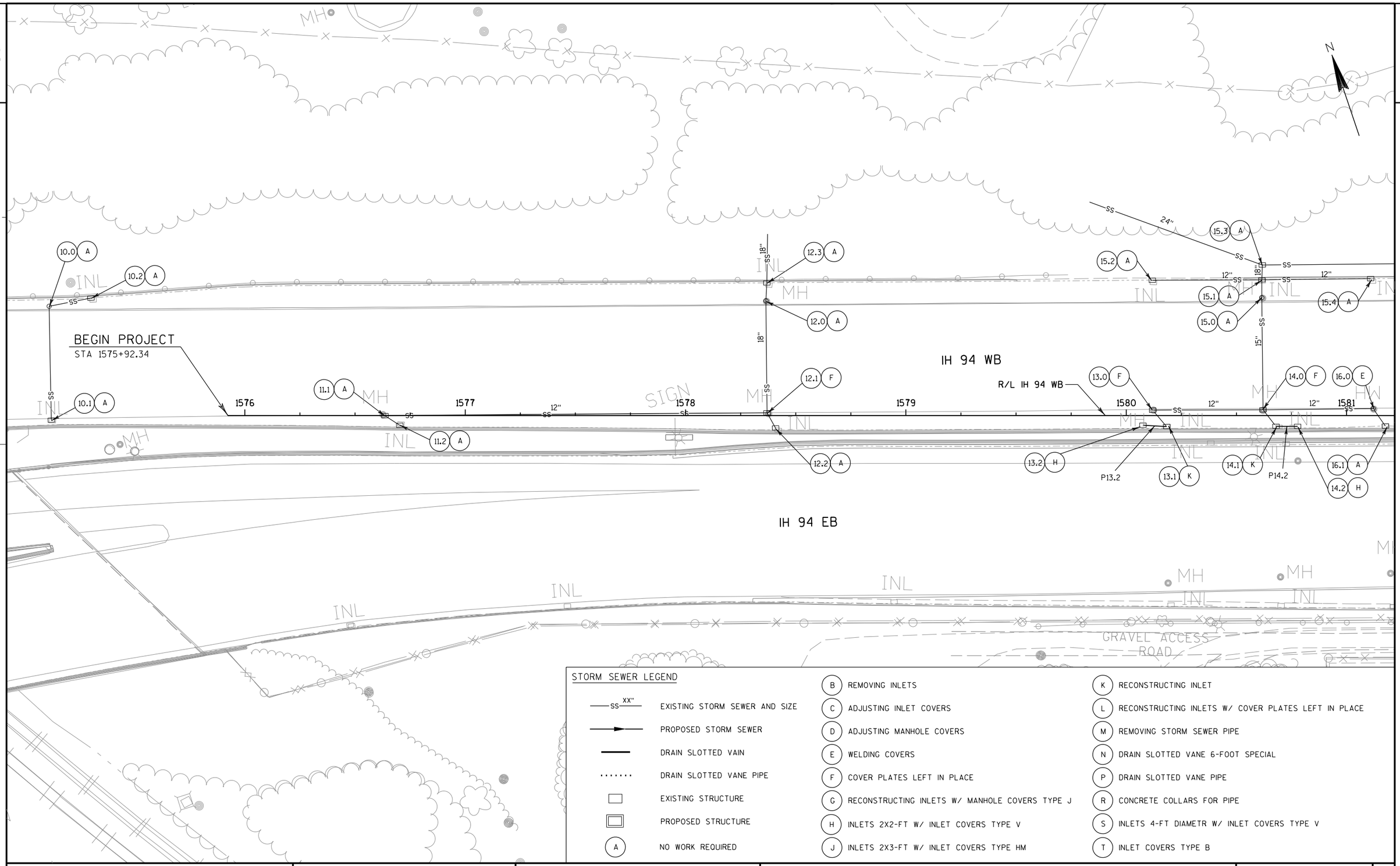
WAVETRONIX DETECTOR INSTALLATION

INCLUDES SOLAR POWER, CELLULAR ANTENNA ON TYPE 3 POLE

(NOT TO SCALE)

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	INSTALLATION OF ATR - WAVETRONIX DETECTOR POLE LAYOUT	SHEET 61	E

2



STORM SEWER LEGEND

SS XX"	EXISTING STORM SEWER AND SIZE
	PROPOSED STORM SEWER
	DRAIN SLOTTED VAIN
.....	DRAIN SLOTTED VANE PIPE
	EXISTING STRUCTURE
	PROPOSED STRUCTURE
(A)	NO WORK REQUIRED

(B)	REMOVING INLETS
(C)	ADJUSTING INLET COVERS
(D)	ADJUSTING MANHOLE COVERS
(E)	WELDING COVERS
(F)	COVER PLATES LEFT IN PLACE
(G)	RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
(H)	INLETS 2X2-FT W/ INLET COVERS TYPE V
(J)	INLETS 2X3-FT W/ INLET COVERS TYPE HM

(K)	RECONSTRUCTING INLET
(L)	RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
(M)	REMOVING STORM SEWER PIPE
(N)	DRAIN SLOTTED VANE 6-FOOT SPECIAL
(P)	DRAIN SLOTTED VANE PIPE
(R)	CONCRETE COLLARS FOR PIPE
(S)	INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
(T)	INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 62	E

2

W PARK HILL AVE

N

35TH STREET ON RAMP

IH 94 WB

R/L IH 94 WB

IH 94 EB

SUBSTATION

SIGN

INL

MH

HW

SS

18"

15"

12"

84

85

86

87

1581

1582

1583

1584

1585

1586

1587

15.4 A

17.2 A

17.1 A

17.0 E

18.2 A

18.1 A

18.0 E

16.0 E

16.1 A

17.3 A

18.3 A

STORM SEWER LEGEND

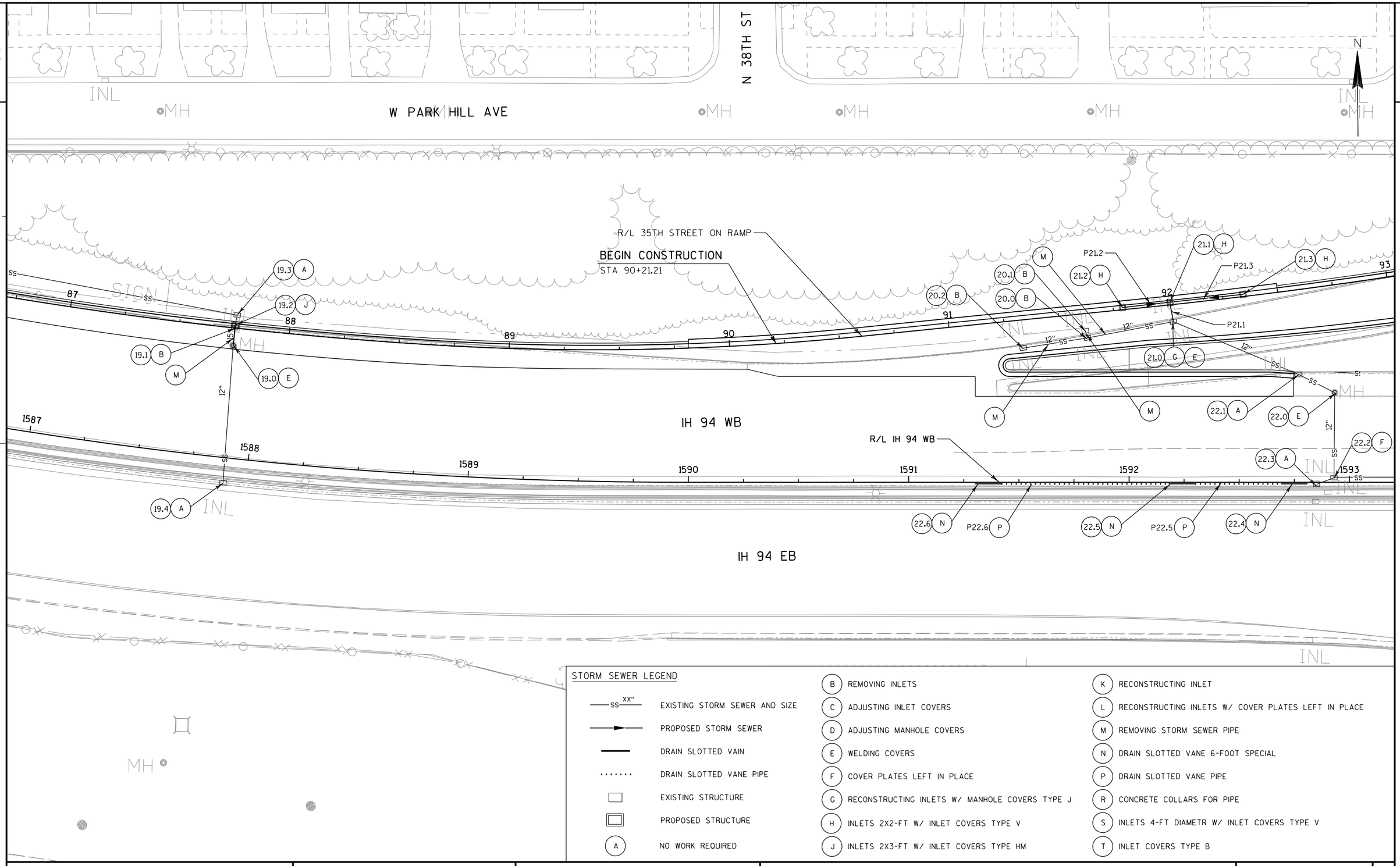
——SS——XX"	EXISTING STORM SEWER AND SIZE
——→——	PROPOSED STORM SEWER
———	DRAIN SLOTTED VAIN
·····	DRAIN SLOTTED VANE PIPE
▭	EXISTING STRUCTURE
▣	PROPOSED STRUCTURE
(A)	NO WORK REQUIRED

(B)	REMOVING INLETS
(C)	ADJUSTING INLET COVERS
(D)	ADJUSTING MANHOLE COVERS
(E)	WELDING COVERS
(F)	COVER PLATES LEFT IN PLACE
(G)	RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
(H)	INLETS 2X2-FT W/ INLET COVERS TYPE V
(J)	INLETS 2X3-FT W/ INLET COVERS TYPE HM

(K)	RECONSTRUCTING INLET
(L)	RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
(M)	REMOVING STORM SEWER PIPE
(N)	DRAIN SLOTTED VANE 6-FOOT SPECIAL
(P)	DRAIN SLOTTED VANE PIPE
(R)	CONCRETE COLLARS FOR PIPE
(S)	INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
(T)	INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 63	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\022502_ss.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40



STORM SEWER LEGEND

SS XX"	EXISTING STORM SEWER AND SIZE	(B)	REMOVING INLETS
	PROPOSED STORM SEWER	(C)	ADJUSTING INLET COVERS
	DRAIN SLOTTED VAIN	(D)	ADJUSTING MANHOLE COVERS
	DRAIN SLOTTED VANE PIPE	(E)	WELDING COVERS
	EXISTING STRUCTURE	(F)	COVER PLATES LEFT IN PLACE
	PROPOSED STRUCTURE	(G)	RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
(A)	NO WORK REQUIRED	(H)	INLETS 2X2-FT W/ INLET COVERS TYPE V
		(J)	INLETS 2X3-FT W/ INLET COVERS TYPE HM
		(K)	RECONSTRUCTING INLET
		(L)	RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
		(M)	REMOVING STORM SEWER PIPE
		(N)	DRAIN SLOTTED VANE 6-FOOT SPECIAL
		(P)	DRAIN SLOTTED VANE PIPE
		(R)	CONCRETE COLLARS FOR PIPE
		(S)	INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
		(T)	INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 64	E

N 37TH ST

N 36TH ST

W PARK HILL AVE

R/L 35TH STREET ON RAMP

35TH STREET ON RAMP

BEGIN CONSTRUCTION
94+98.01

IH 94 WB

IH 94 EB

R/L IH 94 WB

1593 1594 1595 1596 1597 1598 1599

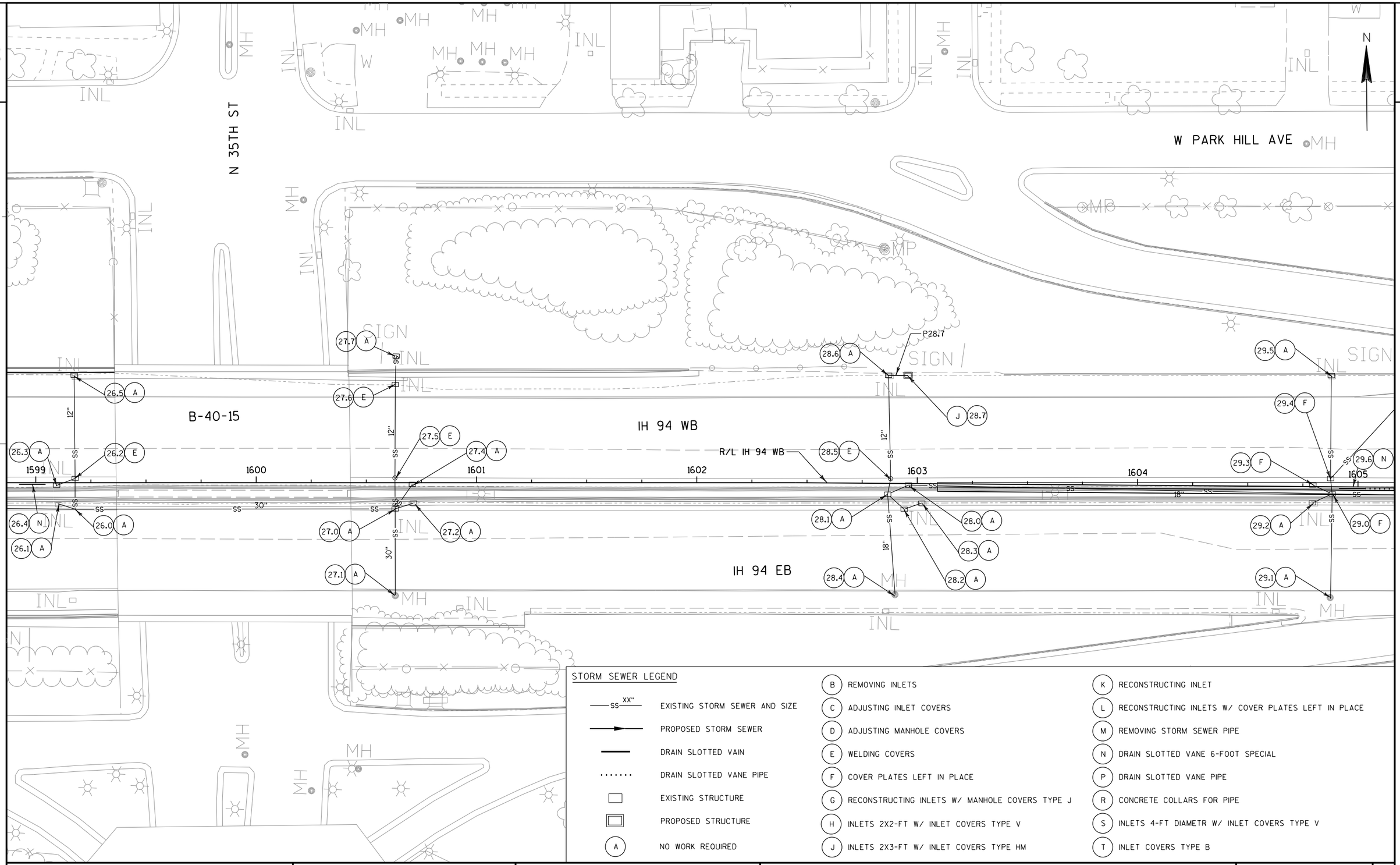
93 94 95

SIGN

STORM SEWER LEGEND

- EXISTING STORM SEWER AND SIZE (SS XX")
- PROPOSED STORM SEWER
- DRAIN SLOTTED VAIN
- DRAIN SLOTTED VANE PIPE
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- (A) NO WORK REQUIRED
- (B) REMOVING INLETS
- (C) ADJUSTING INLET COVERS
- (D) ADJUSTING MANHOLE COVERS
- (E) WELDING COVERS
- (F) COVER PLATES LEFT IN PLACE
- (G) RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
- (H) INLETS 2X2-FT W/ INLET COVERS TYPE V
- (J) INLETS 2X3-FT W/ INLET COVERS TYPE HM
- (K) RECONSTRUCTING INLET
- (L) RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
- (M) REMOVING STORM SEWER PIPE
- (N) DRAIN SLOTTED VANE 6-FOOT SPECIAL
- (P) DRAIN SLOTTED VANE PIPE
- (R) CONCRETE COLLARS FOR PIPE
- (S) INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
- (T) INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 65	E



STORM SEWER LEGEND

SS XX"	EXISTING STORM SEWER AND SIZE
	PROPOSED STORM SEWER
	DRAIN SLOTTED VAIN
.....	DRAIN SLOTTED VANE PIPE
	EXISTING STRUCTURE
	PROPOSED STRUCTURE
A	NO WORK REQUIRED

B	REMOVING INLETS
C	ADJUSTING INLET COVERS
D	ADJUSTING MANHOLE COVERS
E	WELDING COVERS
F	COVER PLATES LEFT IN PLACE
G	RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
H	INLETS 2X2-FT W/ INLET COVERS TYPE V
J	INLETS 2X3-FT W/ INLET COVERS TYPE HM
K	RECONSTRUCTING INLET
L	RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
M	REMOVING STORM SEWER PIPE
N	DRAIN SLOTTED VANE 6-FOOT SPECIAL
P	DRAIN SLOTTED VANE PIPE
R	CONCRETE COLLARS FOR PIPE
S	INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
T	INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 66 E

2

W PARK HILL AVE

N 32ND ST

IH 94 WB

IH 94 EB

R/L IH 94 WB

B-40-33

1605 1606 1607 1608 1609 1610 1611

30.0 A · 30.1 A · 30.2 A · 30.3 A · 31.1 A · 32.1 A · 29.5 A · 29.4 F · 29.6 N · P P29.7 · P P29.8 · 32.0 L · 29.0 F · 29.7 N · 29.8 N · 31.0 C · 32.2 C · 29.1 A

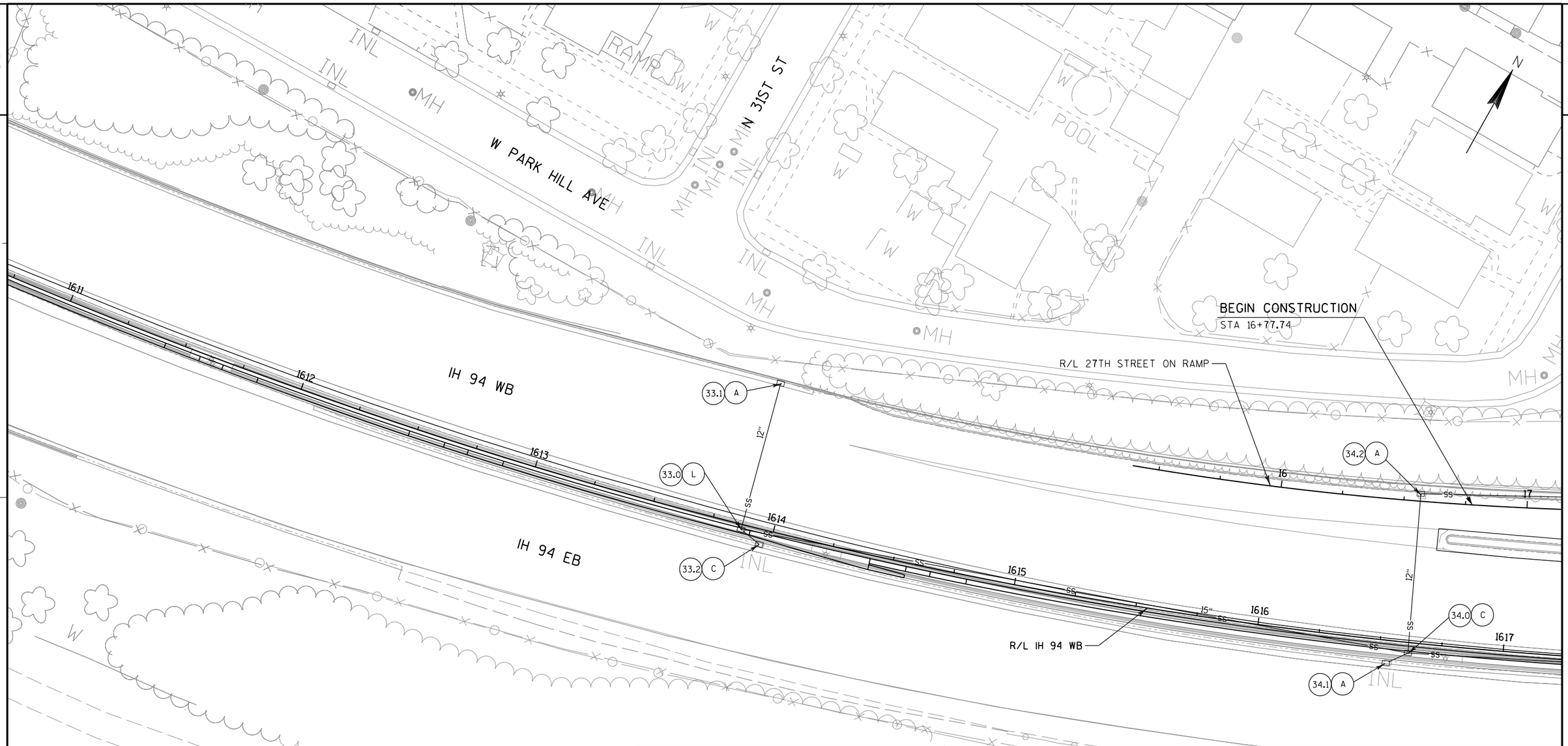
12" SS · 15" SS · SS

STORM SEWER LEGEND

- SS XX" — EXISTING STORM SEWER AND SIZE
- PROPOSED STORM SEWER
- DRAIN SLOTTED VAIN
- DRAIN SLOTTED VANE PIPE
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- (A) NO WORK REQUIRED
- (B) REMOVING INLETS
- (C) ADJUSTING INLET COVERS
- (D) ADJUSTING MANHOLE COVERS
- (E) WELDING COVERS
- (F) COVER PLATES LEFT IN PLACE
- (G) RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
- (H) INLETS 2X2-FT W/ INLET COVERS TYPE V
- (J) INLETS 2X3-FT W/ INLET COVERS TYPE HM
- (K) RECONSTRUCTING INLET
- (L) RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
- (M) REMOVING STORM SEWER PIPE
- (N) DRAIN SLOTTED VANE 6-FOOT SPECIAL
- (P) DRAIN SLOTTED VANE PIPE
- (R) CONCRETE COLLARS FOR PIPE
- (S) INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
- (T) INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 67	E

2



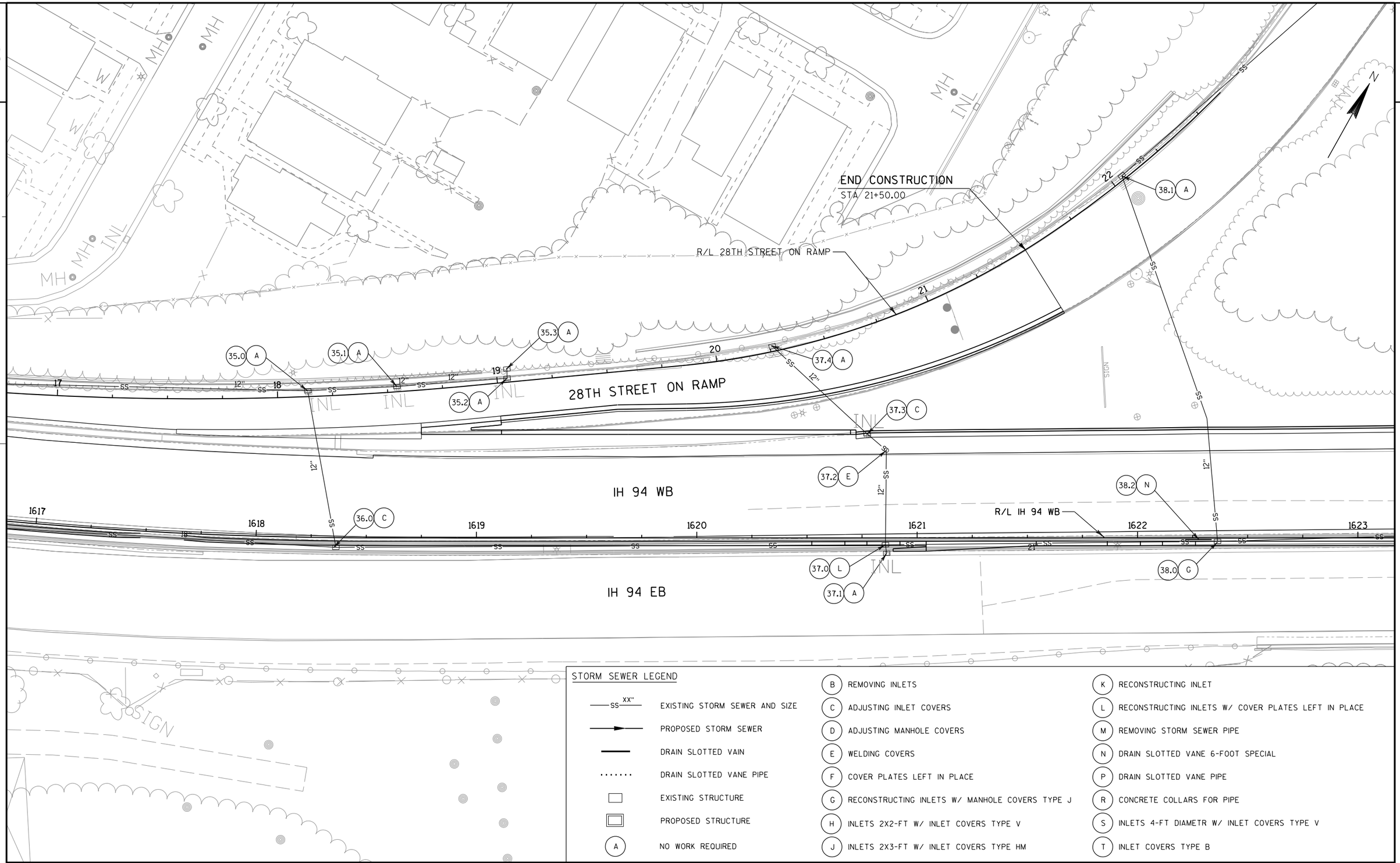
STORM SEWER LEGEND

SS XX"	EXISTING STORM SEWER AND SIZE
	PROPOSED STORM SEWER
	DRAIN SLOTTED VAIN
.....	DRAIN SLOTTED VANE PIPE
	EXISTING STRUCTURE
	PROPOSED STRUCTURE
(A)	NO WORK REQUIRED

(B)	REMOVING INLETS
(C)	ADJUSTING INLET COVERS
(D)	ADJUSTING MANHOLE COVERS
(E)	WELDING COVERS
(F)	COVER PLATES LEFT IN PLACE
(G)	RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
(H)	INLETS 2X2-FT W/ INLET COVERS TYPE V
(J)	INLETS 2X3-FT W/ INLET COVERS TYPE HM

(K)	RECONSTRUCTING INLET
(L)	RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
(M)	REMOVING STORM SEWER PIPE
(N)	DRAIN SLOTTED VANE 6-FOOT SPECIAL
(P)	DRAIN SLOTTED VANE PIPE
(R)	CONCRETE COLLARS FOR PIPE
(S)	INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
(T)	INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 68	E



STORM SEWER LEGEND

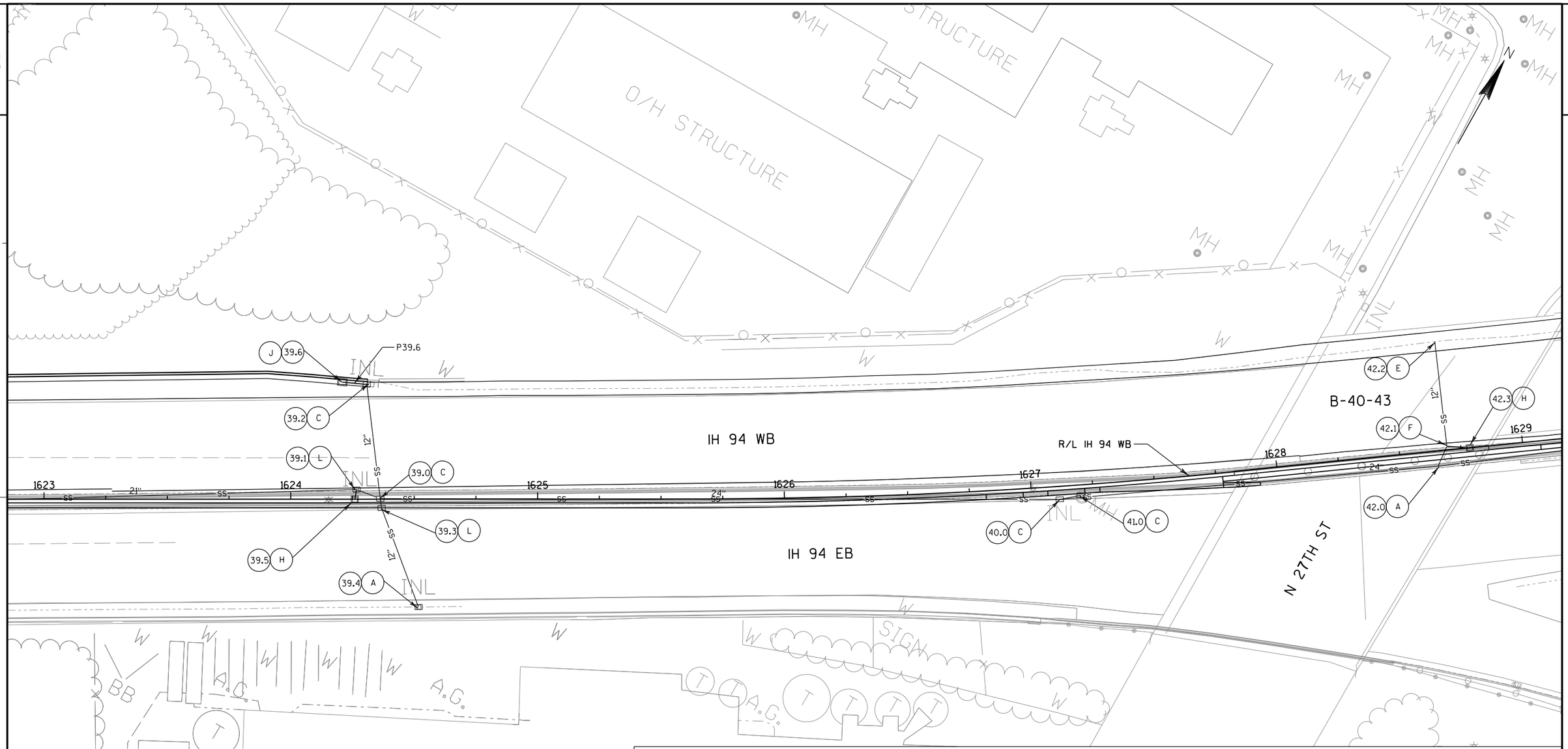
SS XX"	EXISTING STORM SEWER AND SIZE
	PROPOSED STORM SEWER
	DRAIN SLOTTED VAIN
.....	DRAIN SLOTTED VANE PIPE
	EXISTING STRUCTURE
	PROPOSED STRUCTURE
(A)	NO WORK REQUIRED

(B)	REMOVING INLETS
(C)	ADJUSTING INLET COVERS
(D)	ADJUSTING MANHOLE COVERS
(E)	WELDING COVERS
(F)	COVER PLATES LEFT IN PLACE
(G)	RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
(H)	INLETS 2X2-FT W/ INLET COVERS TYPE V
(J)	INLETS 2X3-FT W/ INLET COVERS TYPE HM

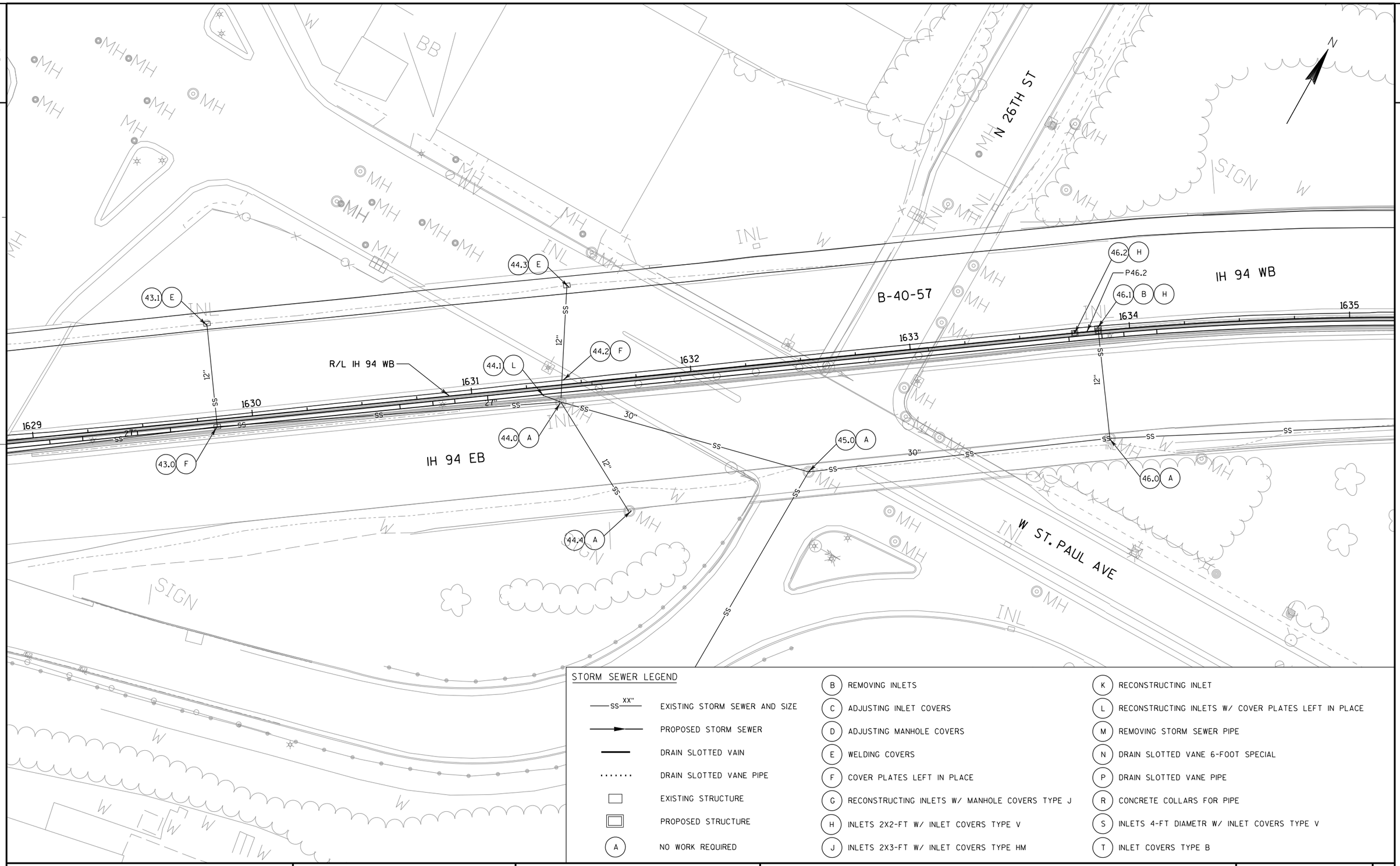
(K)	RECONSTRUCTING INLET
(L)	RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
(M)	REMOVING STORM SEWER PIPE
(N)	DRAIN SLOTTED VANE 6-FOOT SPECIAL
(P)	DRAIN SLOTTED VANE PIPE
(R)	CONCRETE COLLARS FOR PIPE
(S)	INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
(T)	INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 69	E

2


O/H STRUCTURE
O/H STRUCTURE
MH
MH
MH
MH
MH
MH
MH
MH
INL
INL
INL
INL
INL
W
W
W

2

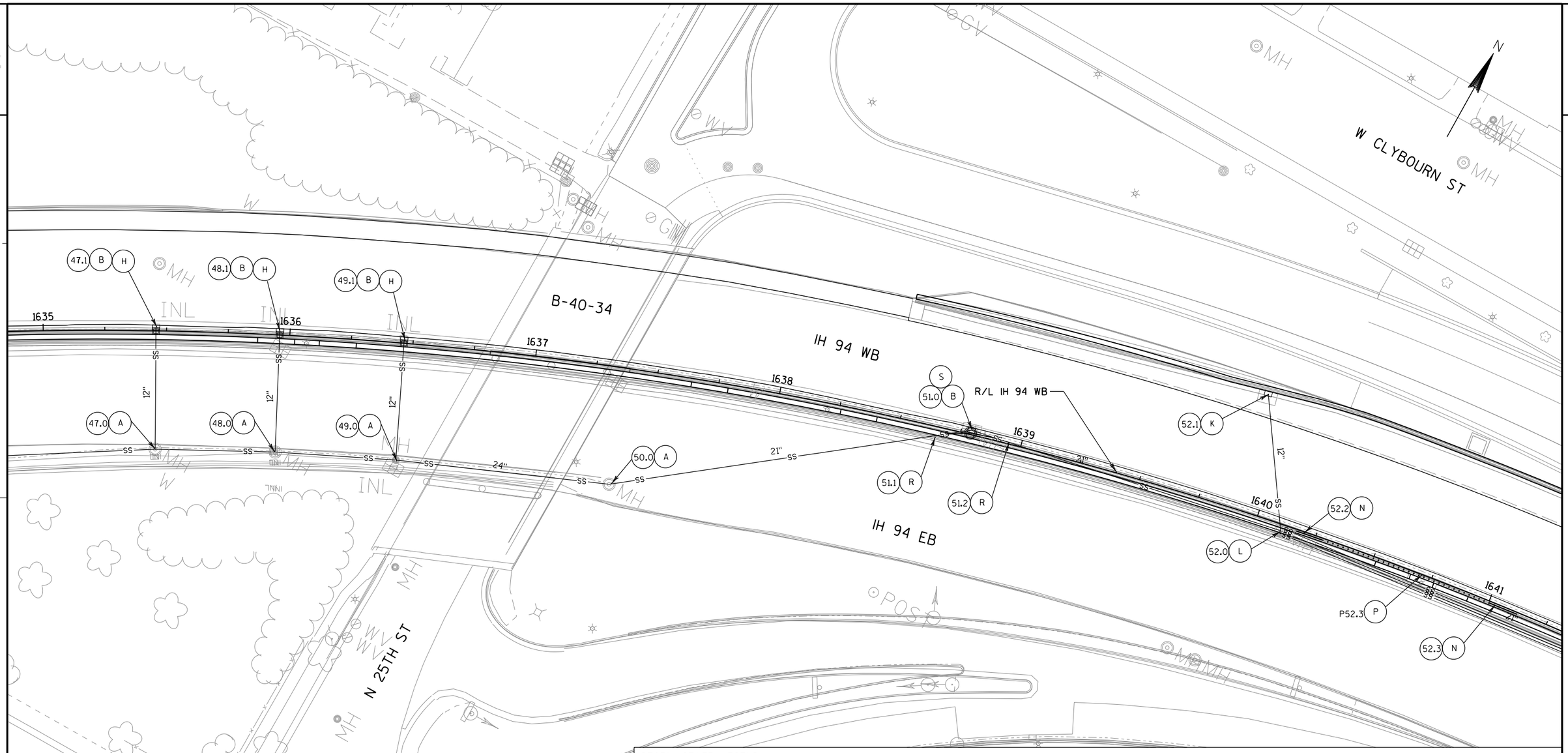


STORM SEWER LEGEND

- SS XX" — EXISTING STORM SEWER AND SIZE
- PROPOSED STORM SEWER
- DRAIN SLOTTED VAIN
- DRAIN SLOTTED VANE PIPE
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- (A) NO WORK REQUIRED
- (B) REMOVING INLETS
- (C) ADJUSTING INLET COVERS
- (D) ADJUSTING MANHOLE COVERS
- (E) WELDING COVERS
- (F) COVER PLATES LEFT IN PLACE
- (G) RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
- (H) INLETS 2X2-FT W/ INLET COVERS TYPE V
- (J) INLETS 2X3-FT W/ INLET COVERS TYPE HM
- (K) RECONSTRUCTING INLET
- (L) RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
- (M) REMOVING STORM SEWER PIPE
- (N) DRAIN SLOTTED VANE 6-FOOT SPECIAL
- (P) DRAIN SLOTTED VANE PIPE
- (R) CONCRETE COLLARS FOR PIPE
- (S) INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
- (T) INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 71	E

2

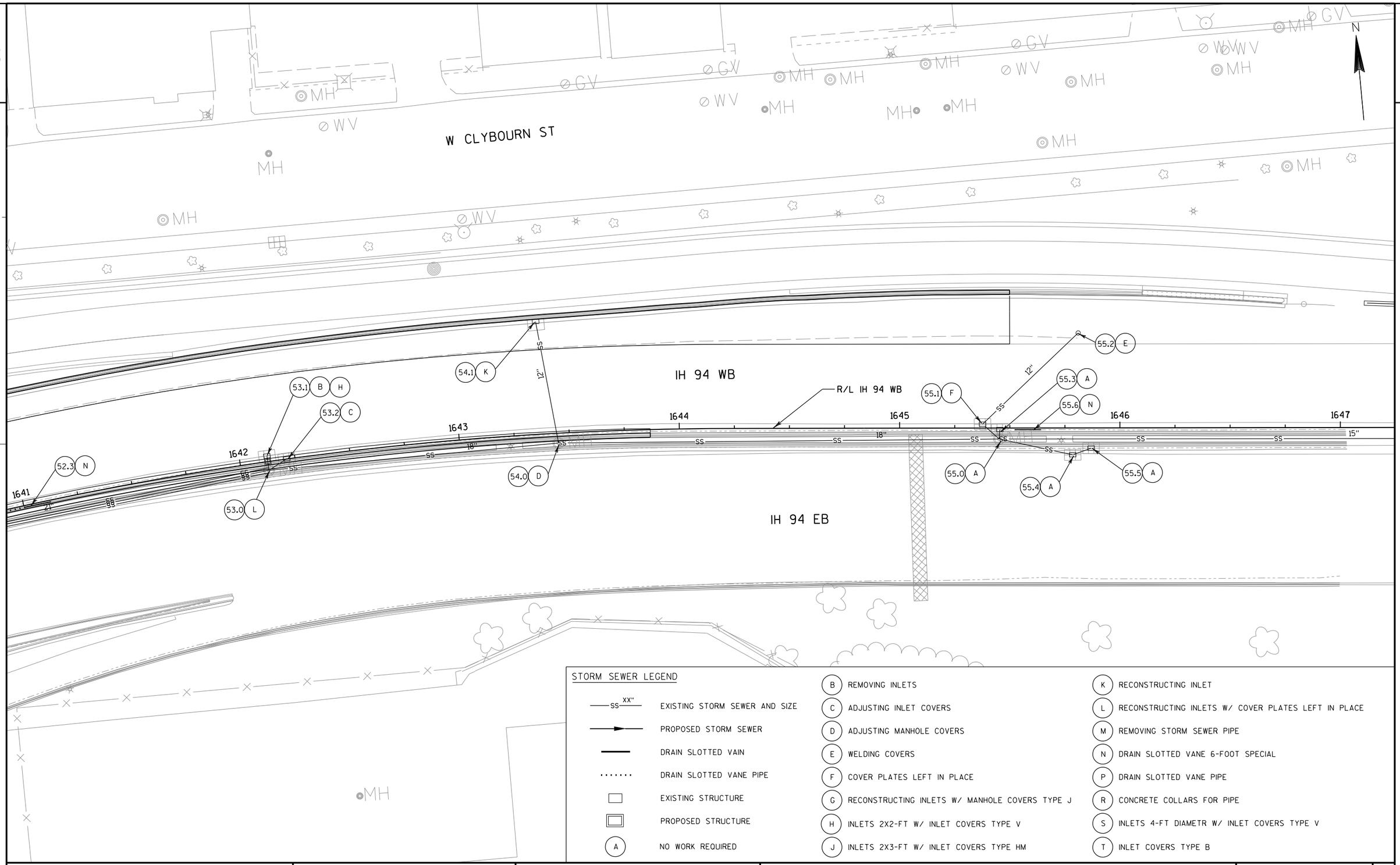


STORM SEWER LEGEND

- SS XX" — EXISTING STORM SEWER AND SIZE
- PROPOSED STORM SEWER
- DRAIN SLOTTED VAIN
- DRAIN SLOTTED VANE PIPE
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- (A) NO WORK REQUIRED
- (B) REMOVING INLETS
- (C) ADJUSTING INLET COVERS
- (D) ADJUSTING MANHOLE COVERS
- (E) WELDING COVERS
- (F) COVER PLATES LEFT IN PLACE
- (G) RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
- (H) INLETS 2X2-FT W/ INLET COVERS TYPE V
- (J) INLETS 2X3-FT W/ INLET COVERS TYPE HM
- (K) RECONSTRUCTING INLET
- (L) RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
- (M) REMOVING STORM SEWER PIPE
- (N) DRAIN SLOTTED VANE 6-FOOT SPECIAL
- (P) DRAIN SLOTTED VANE PIPE
- (R) CONCRETE COLLARS FOR PIPE
- (S) INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
- (T) INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 72	E

2



STORM SEWER LEGEND

SS XX"	EXISTING STORM SEWER AND SIZE	(B)	REMOVING INLETS
	PROPOSED STORM SEWER	(C)	ADJUSTING INLET COVERS
	DRAIN SLOTTED VAIN	(D)	ADJUSTING MANHOLE COVERS
	DRAIN SLOTTED VANE PIPE	(E)	WELDING COVERS
	EXISTING STRUCTURE	(F)	COVER PLATES LEFT IN PLACE
	PROPOSED STRUCTURE	(G)	RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
(A)	NO WORK REQUIRED	(H)	INLETS 2X2-FT W/ INLET COVERS TYPE V
		(J)	INLETS 2X3-FT W/ INLET COVERS TYPE HM
		(K)	RECONSTRUCTING INLET
		(L)	RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
		(M)	REMOVING STORM SEWER PIPE
		(N)	DRAIN SLOTTED VANE 6-FOOT SPECIAL
		(P)	DRAIN SLOTTED VANE PIPE
		(R)	CONCRETE COLLARS FOR PIPE
		(S)	INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
		(T)	INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 73	E

2

W CLYBOURN ST

IH 94 WB

IH 94 EB

R/L IH 94 WB

1647 1648 1649 1650 1651 1652 1653

15" SS 15" SS SS SS

12" SS

56.2 A

56.1 A

56.0 A

57.0 A

SIGN

SIGN

STORM SEWER LEGEND

SS XX"	EXISTING STORM SEWER AND SIZE
	PROPOSED STORM SEWER
	DRAIN SLOTTED VAIN
	DRAIN SLOTTED VANE PIPE
	EXISTING STRUCTURE
	PROPOSED STRUCTURE
A	NO WORK REQUIRED
B	REMOVING INLETS
C	ADJUSTING INLET COVERS
D	ADJUSTING MANHOLE COVERS
E	WELDING COVERS
F	COVER PLATES LEFT IN PLACE
G	RECONSTRUCTING INLETS W/ MANHOLE COVERS TYPE J
H	INLETS 2X2-FT W/ INLET COVERS TYPE V
J	INLETS 2X3-FT W/ INLET COVERS TYPE HM
K	RECONSTRUCTING INLET
L	RECONSTRUCTING INLETS W/ COVER PLATES LEFT IN PLACE
M	REMOVING STORM SEWER PIPE
N	DRAIN SLOTTED VANE 6-FOOT SPECIAL
P	DRAIN SLOTTED VANE PIPE
R	CONCRETE COLLARS FOR PIPE
S	INLETS 4-FT DIAMETR W/ INLET COVERS TYPE V
T	INLET COVERS TYPE B

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 74	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\022513_ss.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40

2

2

PERMANENT SIGNING 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
- (MXXX) EXISTING SIGN TO BE MOVED
- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

N

ESTR
EXIT 308A
VA Medical Ctr
Mitchell Blvd
1/2 MILE

ESTR
WEST
94
MILE
308
6
D10-5(5)

ESTR
EXIT
308B
E5-1A(5)

ESTR
EXIT
308C
E5-1A(5)

ESTR
LEFT
EXIT
308B
Miller Park
Way

ESTR
EXIT 308C
NORTH
41
EXIT ONLY

ESTR
INTERSTATE 94 WEST INTERSTATE 94
Madison

ESTR
To
45
Fond du Lac
VIA Freeway
Follow
INTERSTATE 94

ESTR
W4-2L(5)
ON POLE

ESTR
RAMP
35
M.P.H.
W13-3(5)

ESTR
EXIT 309A
35th Street
1/2 MILE

ESTR
W4-3R(5)

ESTR
EXIT 310
EXIT 310B
INTERSTATE 794 EAST
43 NORTH
Lakefront
Green Bay
AHEAD
RIGHT
2 Miles

ESTR
EAST
94
MILE
308
6
D10-5(5)

ESTR
W4-1

ESTR
EXIT 309A
Right Lane
35th Street
1/2 MILE
EXIT ONLY

ESTR
35th Street 1/4
26th Street 1
13th Street 2

UNDERGRD TANK
MENOMONEE
194 WEST BOUND
194 EAST BOUND
S-40-127
IH 94 WB
IH 94 EB
1576
1578
1580
N 44TH ST
RIVER
C.P. RAIL SYSTEM
SUBSTATION
SIGN
INL
MH
W
HW

SHEET 1 OF 10

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 75	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023211_ps.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

PERMANENT SIGNING 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
- (MXXX) EXISTING SIGN TO BE MOVED
- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

ESTR
To 45
Fond du Lac
VIA Freeway
Follow 94

ESTR
LEFT EXIT 308B
EXIT 308C
54
WEST
Miller Park Way
NORTH
41
EXIT ONLY

P101A
EXIT 308 B
41 NORTH
1/2 MILE
EXIT ONLY
P101
S-40-859

ESTR
RAMP CLOSED USE ALT. ROUTE
R11-54R(2)

ESTR
Miller Visitor Center
EXIT 308C

P100
W4-1(5)
48" X 48"

35TH STREET ON RAMP

IH 94 WB

IH 94 EB

194 WEST BOUND

194 EAST BOUND

1580 1582 1584 1586 1588 1590 1592 1594

S-40-7

S-40-8

SUBSTATION

14'-4" ESTR

ESTR
EAST 94
MILE 308 8
D10-5

ESTR
WEST 94
MILE 308 8
D10-5

ESTR
EXIT 309A
35th Street
EXIT ONLY

ESTR
EMERGENCY STOPPING ONLY
R8-7(5)

ESTR
SPEED LIMIT 50
R2-1(5)

ESTR
EAST 94
J4-1(5)

ESTR
WEST 94
J4-1(5)

ESTR
EXIT 309A
E5-1A(5)
108" X 60"

ESTR
EXIT 309A
35th Street

SHEET 2 OF 10

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 76	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023212_ps.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

PERMANENT SIGNING 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
- (MXXX) EXISTING SIGN TO BE MOVED
- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

ESTR
Miller Park Way LEFT 1/2
41 NORTH RIGHT 1/2
Mitchell Blvd

M201
EMERGENCY STOPPING ONLY
R8-7(5)

ESTR
EXIT 309A
35th Street

ESTR EAST 94 MILE 309 0 D10-5

ESTR WEST 94 MILE 309 0 D10-5

R201 REMOVE
W4-3R(5)

ESTR
35th Street
M1-94-H

N 35TH ST

N 32ND ST

W PARK HILL AVE

M203
SPEED LIMIT 50
R2-1(5)

IH 94 WB

IH 94 EB
194 EAST BOUND

194 WEST BOUND

1596 1598 1600 1602 1604 1606 1608 1610

S-40-205

M206 EAST 94 MILE 309 2 D10-5

M205 WEST 94 MILE 309 2 D10-5

ESTR
EXIT 309 B
26 th Street
St Paul Ave
1/2 MILE

ESTR
35th Street
M1-94-H
ON BRIDGE

ESTR
RAMP CLOSED
USE
ALT ROUTE
R11-54F(2)
PLACE IN FRONT OF
RAMP GATE UPRIGHT

ESTR
W4-1

ESTR
RIDESHARE
INFORMATION
www.rideshare.wi.gov
D12-2B

ESTR
EXIT
309A
E5-1A(5)

M204 EAST INTERSTATE 94
J4-1(5)

SIGN, RUINS, CANOPY, A/C, MH, INL, W

SHEET 3 OF 10

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 77	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023213_ps.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

PERMANENT SIGNING 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
- (MXXX) EXISTING SIGN TO BE MOVED
- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

N

O/H STRUCTURE

ESTR
EXIT 308 B
EXIT 308 C
Miller Park Way
NORTH
41
LEFT
RIGHT
1 MILE

P303
W4-3R(5)
48" X 48"

P302
W4-3R(3)
36" X 36"

28TH STREET ON RAMP

IH 94 WB

1626
1624
1622
1620
1618
1616
1614
1612
1610

N 32ND ST

P301
RIGHT LANE MUST EXIT
R3-33R
78" X 36"

M304 EAST 94 MILE 309 4 D10-5
M305 WEST 94 MILE 309 4 D10-5

M303 WEST INTERSTATE 94
J4-1(5)

M301 SPEED LIMIT 50 R2-1(5)
M302 SPEED LIMIT 50 R2-1(5)
S-40-206

POOL
RAMP

A.G.
BB
T
MH
INL
W

SUBSTATION

SIGN

VMS STRUCTURE
S-40-430 TO REMAIN

ESTR
Mitchell Park Domes
Potawatomi Casino
EXIT 309 B

M306
26th Street 1/4
13th Street 1 1/4
43 - 794 1 1/4
S-40-206

IH 94 EB

C.P. RAIL
ABANDONED

SHEET 4 OF 10

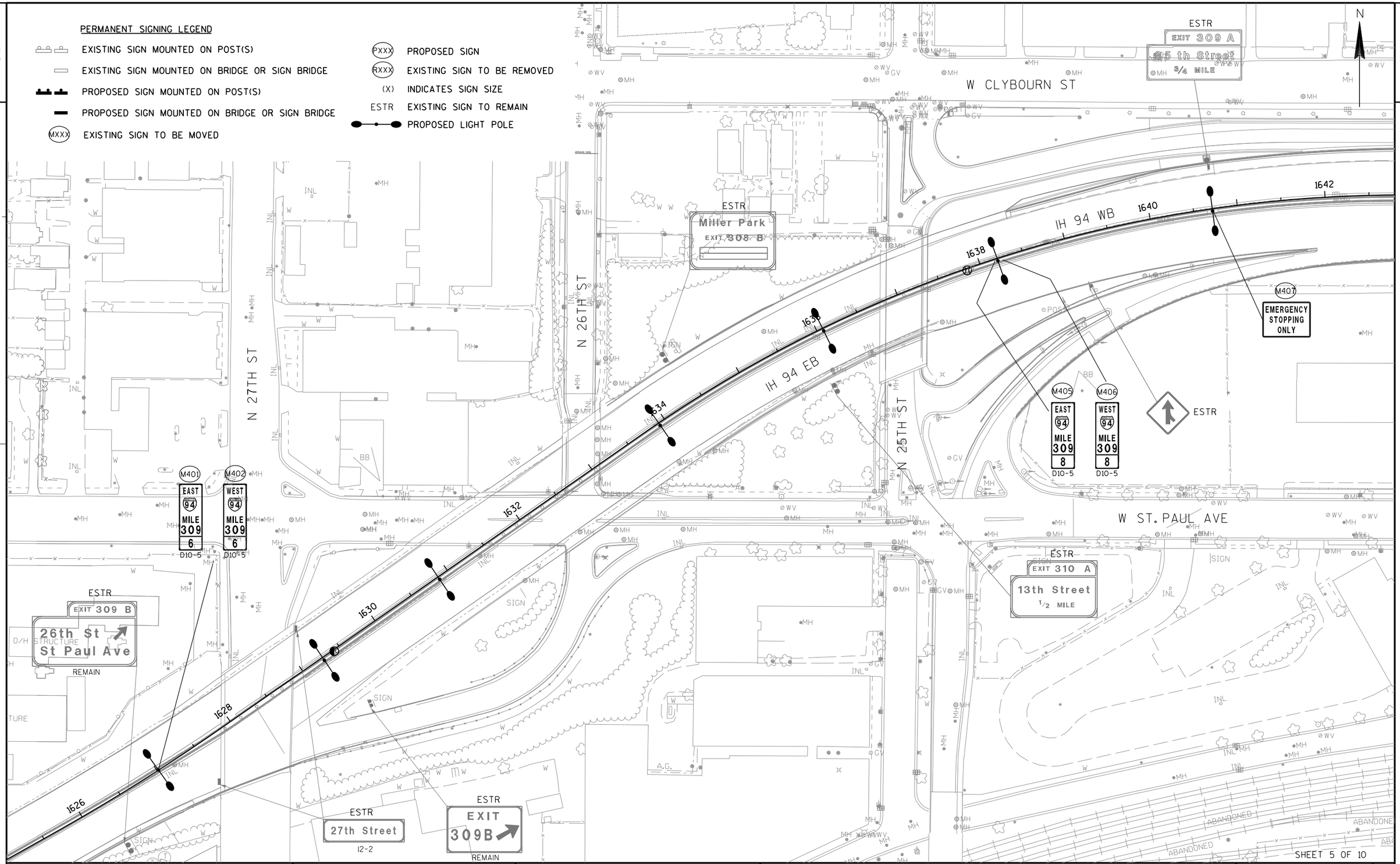
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 78	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023214_ps.dgn
PLOT DATE : 11/28/2012
PLOT BY : wally_w
PLOT NAME :
PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

PERMANENT SIGNING 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
- (MXXX) EXISTING SIGN TO BE MOVED
- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

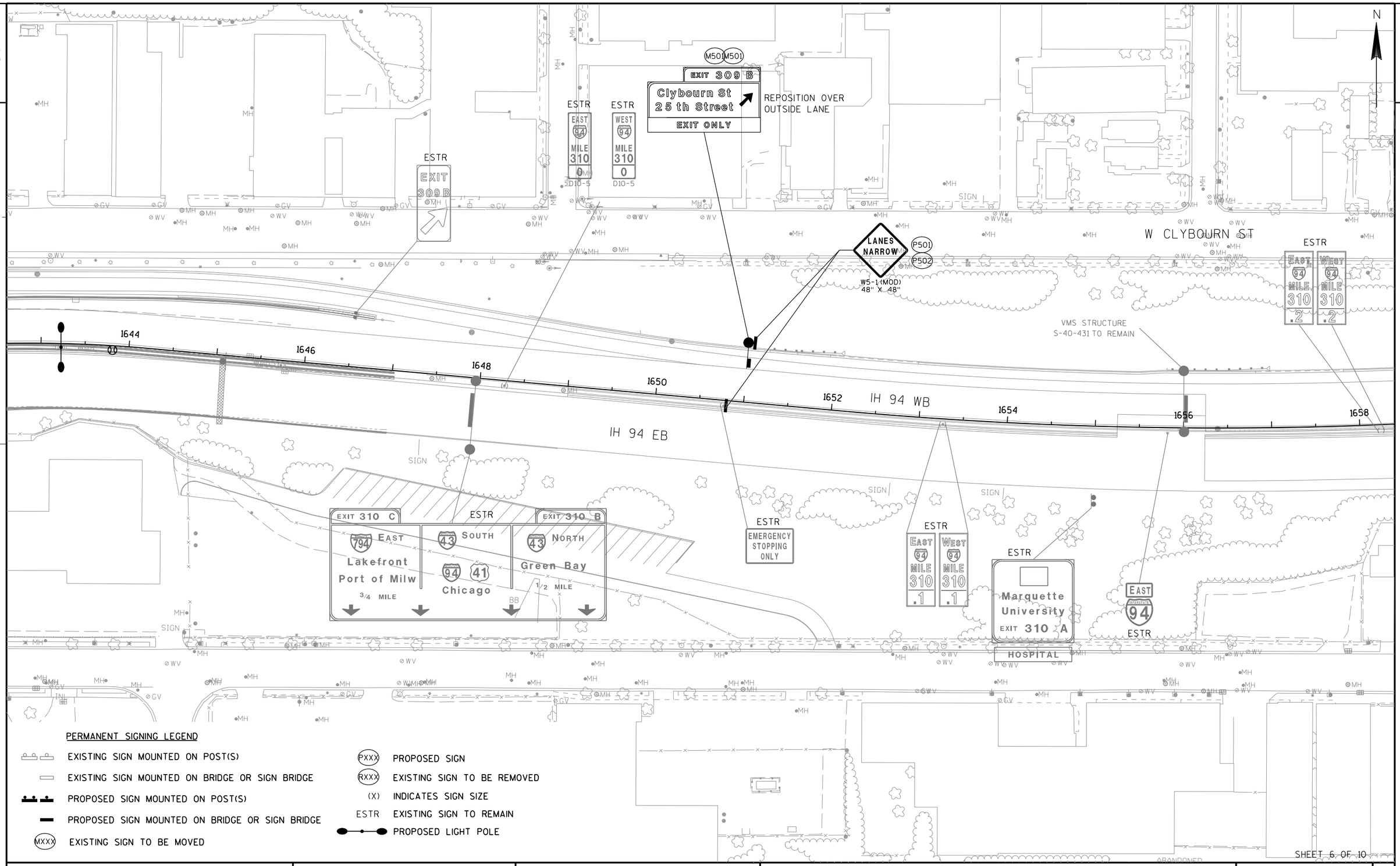


PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 79 E

SHEET 5 OF 10

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023215_ps.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



PERMANENT SIGNING 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
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- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

SHEET 6 OF 10

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 80 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023216_ps.dgn PLOT DATE : 12/14/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2

N

ESTR
Potawatomi Casino
Mitchell Park Domes
EXIT 309 B

ESTR
SPEED LIMIT 50
SIGN

ESTR
25th Street 1/4
35th Street 1
41 NORTH RIGHT 1 3/4

ESTR
EXIT 309 B
Clybourn St
25 th Street
RAMP
EXIT ONLY

ESTR
EXIT 310 C
794 EAST
Lakefront
Port of Milw
43 SOUTH
94 41 Chicago

ESTR
EXIT 310 B
43 NORTH
Green Bay
EXIT ONLY

ESTR
HOSPITAL
EXIT 309 B

ESTR
EAST 94 MILE 310 .4
WEST 94 MILE 310 .4

ESTR
EAST 94 MILE 310 .3
WEST 94 MILE 310 .3

W CLYBOURN ST

IH 94 WB

IH 94 EB

1660 662 664 666 668 670 672 674

ESTR
EAST 94

ESTR
EXIT 310 C
794 EAST
Lakefront
Port of Milw
43 SOUTH
94 41 Chicago

ESTR
EXIT 310 B
43 NORTH
Green Bay

ESTR
Amtrak Station
EXIT 310 A

ESTR
SPEED LIMIT 50
R2-1 (5)

ESTR
EXIT 310 A
13th Street

ESTR
CRASH INVESTIGATION SITE
EXIT 1H

N 16TH ST

ESTR
EAST 94 MILE 310 .5
WEST 94 MILE 310 .5

PERMANENT SIGNING 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
- (MXXX) EXISTING SIGN TO BE MOVED
- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

SHEET 7 OF 10

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 81	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023217_ps.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2

ESTR
EXIT 1 H
St Paul Ave
James Lovell St
USE INTERSTATE 794 EAST
1/4 MILE

ESTR
US 43 NORTH
Green Bay

ESTR
EXIT 72 C
Kilbourn Avenue
1/4 MILE

ESTR
EXIT 309 B
Clybourn St
25th Street
1/2 MILE

ESTR
WEST I-94 MILE 310 .6

ESTR
WEST I-794 MILE 0 0

EXIT ONLY
3/4 MILE

ESTR
WEST I-94 MILE 310 .7

ESTR
LEFT LANE SIGNAL
R10-10L (2) (MOD 2)

ESTR
CENTER LANE SIGNAL
R10-10C (2) (MOD 2)

R703
REMOVE
W4-2L (2)

ESTR
EXIT 309 B
Clybourn St
25 th Street
3/4 MILE

ESTR
END
INTERSTATE 794
M4-6 (5)
M1-1A (5)

ESTR
RIGHT LANE ENDS
W9-1R (2)

ESTR
STOP HERE ON RED
R10-6R (2)

ESTR
WEST I-794 MILE 0 .1

674 676 678 680 682 684 686 688

R701
REMOVE
RIGHT LANE ENDS

R702
REMOVE
TWO RIGHT LANES END

ESTR
W4-2R
36" X 36"

ESTR
EAST I-94 MILE 310 .6

ESTR
EXIT 310B

ESTR
EAST I-94 MILE 310 .7

ESTR
40 MPH

ESTR
EAST I-794 MILE 0 0

ESTR
EXIT 310 C
EAST I-794
Lakefront
Port of Milw

ESTR
US 43 Beloit
I-94 US 41 Chicago

ESTR
EAST I-94 MILE 310 .8

ESTR
EAST I-794 MILE 0 .1

PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
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- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

SHEET 8 OF 10

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 82	E

PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
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- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

ESTR
WEST 794 MILE 0 .1

R802 REMOVE

STAY IN LANE

690 692 694 696 698 700 702 704

EAST 794 MILE 0 .1
ESTR

STAY IN LANE

R801 REMOVE

LANE ENDS 1000 FT

I 794

I 43

SIGN

POOL

SHEET 9 OF 10

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 83	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023219_ps.dgn PLOT DATE : 12/14/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

EXIT 1 B
ESTR
43 SOUTH
94 41 Chicago
40 MPH

ESTR
EXIT 1 C
43 NORTH
Green Bay
40 MPH

N 6TH ST

ESTR
EAST 794 MILE 0.4

ESTR
WEST 794 MILE 0.4

N 5TH ST

ESTR
EXIT 1 B
43 SOUTH
94 41 Chicago
1/4 MILE
EXIT ONLY

ESTR
EXIT 1 C
43 NORTH
Green Bay
1/4 MILE
EXIT ONLY

ESTR
EAST 794 MILE 0.5

ESTR
WEST 794 MILE 0.5

N 4TH ST

ESTR
EXITS 1 B-C

ESTR
EXIT 1 A
94 WEST 41
Madison

R902
REMOVE
LANE ENDS 1000 FT

REMOVE PLAQUE
R901

EXISTING SIGN WITH PLAQUE REMOVED

ESTR
EXIT 1 B
43 SOUTH
94 EAST 41
Chicago

ESTR
EXIT 1 C
43 NORTH
Green Bay

ESTR
SPEED LIMIT 50

W CLYBOURN ST

ESTR
EAST 794 MILE 0.6

ESTR
WEST 794 MILE 0.6

706 708 710 712 IH 794 WB 714 716 718 720

IH 794 EB

R905 R906
REMOVE

R903
REMOVE

R904
REMOVE

W4-2R

W16-7L

W4-2R

ESTR
EXIT 1 D

ESTR
EAST 794 Lakefront
Plankinton Avenue

ESTR
Jackson St LEFT 1/2
Lakefront 3/4
Port of Milwaukee 3

NOT AN EXIT

ESTR
EAST 794 Lakefront
147 SF 14' X 10.5'

ESTR
EXIT 1 D
Plankinton Avenue

ESTR
EXIT 1 E
Jackson St
Van Buren St
EXIT ONLY

ESTR
EXIT 1 F
Lakefront
1/2 MILE

ESTR
EAST 794
Port of Milw
2 RIGHT LANES

ESTR
EXIT 1 D

ESTR
EAST 794

SIGN

PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
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- (PXXX) PROPOSED SIGN
- (RXXX) EXISTING SIGN TO BE REMOVED
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- PROPOSED LIGHT POLE

SHEET 10 OF 10

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 84	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023220_ps.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

GENERAL NOTES

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

LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION WILL REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED.

THE TRENCH SHALL NOT BE BACK FILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION 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 ALL CONDUITS.

PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX-OR-BASE TO BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWING FOR ALL THE WORK BEING DONE.

INSTALLATION OF LATERAL UNDERGROUND CONDUIT UNDER PAVEMENT SHALL BE INSTALLED MINIMUM 30 INCHES BELOW PROPOSED GRADE. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ROADWAY CONSTRUCTION FOR CONDUIT LATERALS INSTALLATION.

PITCH ALL CONDUITS TOWARD PULL BOXES. INSTALL A 2" DRAIN DUCT TO STORM SEWER OR DRAIN SUMP AS REQUIRED FOR DAMAGE. THE 2" DRAIN DUCT OR SUMP IS INCIDENTAL TO THE PULL BOX BID ITEM AND IS NOT SHOWN.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED & WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM. COORDINATE ALL WORK NEAR GAS LINE WITH WE ENERGIES.

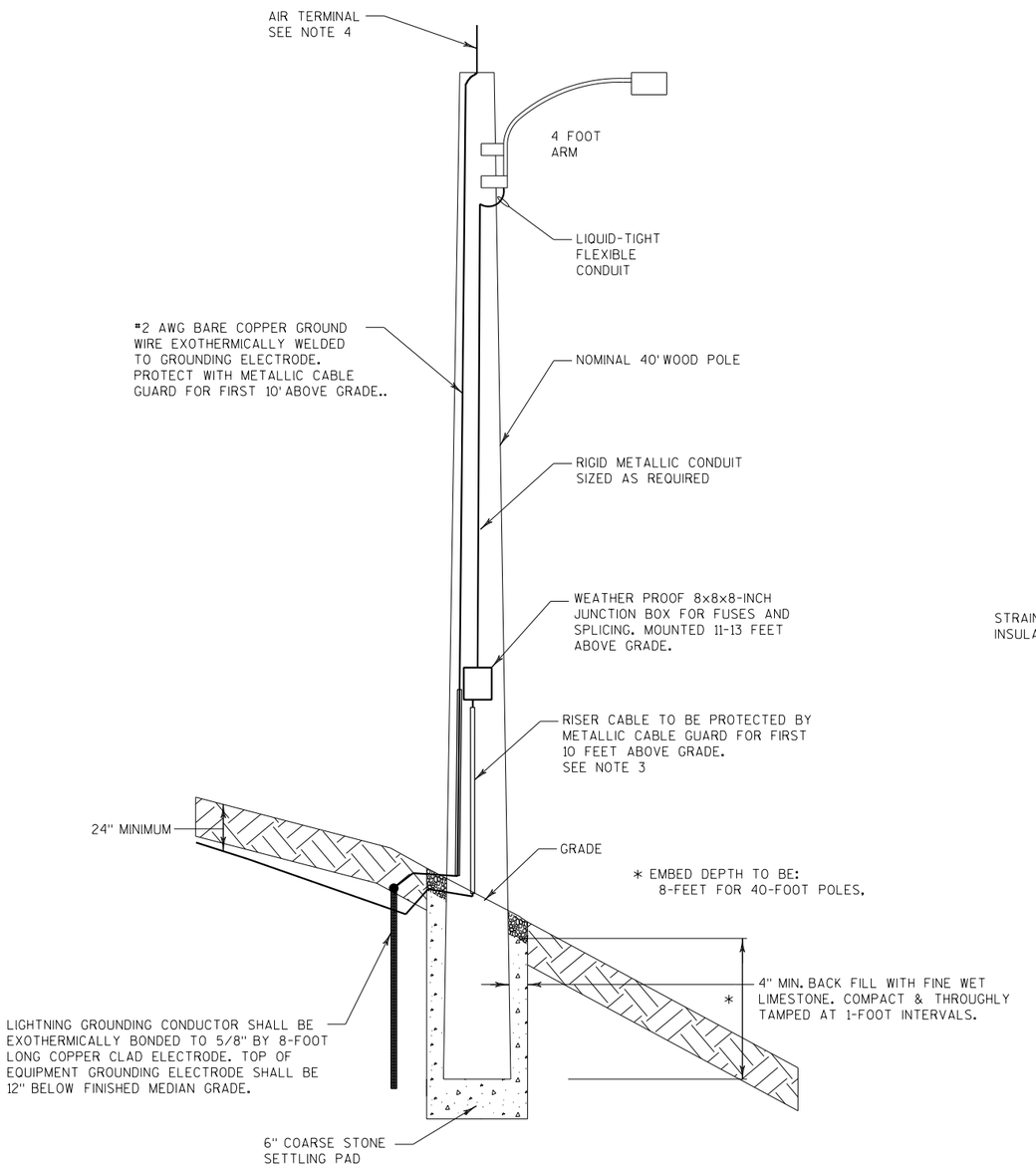
STAGING NOTES

MAINTAIN LIGHTING AT ALL TIMES DURING CONSTRUCTION USING EXISTING LIGHTING, TEMPORARY LIGHTING, PROPOSED LIGHTING OR COMBINATIONS.

DO NOT REMOVE EXISTING LIGHTING UNTIL THE NEW OR TEMPORARY LIGHTING IS OPERATIONAL. REFER TO DRAWINGS FOR STAGING INFORMATION.

MAINTAINING SYSTEM CONTINUITY SHALL BE INCIDENTAL TO THE "REMOVE EXISTING STREET LIGHTS" BID ITEM.

DUE TO THE PHASING OF CONSTRUCTION SOME FINAL LIGHTING UNITS MAY BE ORPHANED UNTIL A LATER STAGE IS COMPLETE. IT IS AT THE DISCRETION OF THE CONTRACTOR TO SCHEDULE THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF RACEWAY THAT SPANS TWO DIFFERENT PHASES OF CONSTRUCTION.



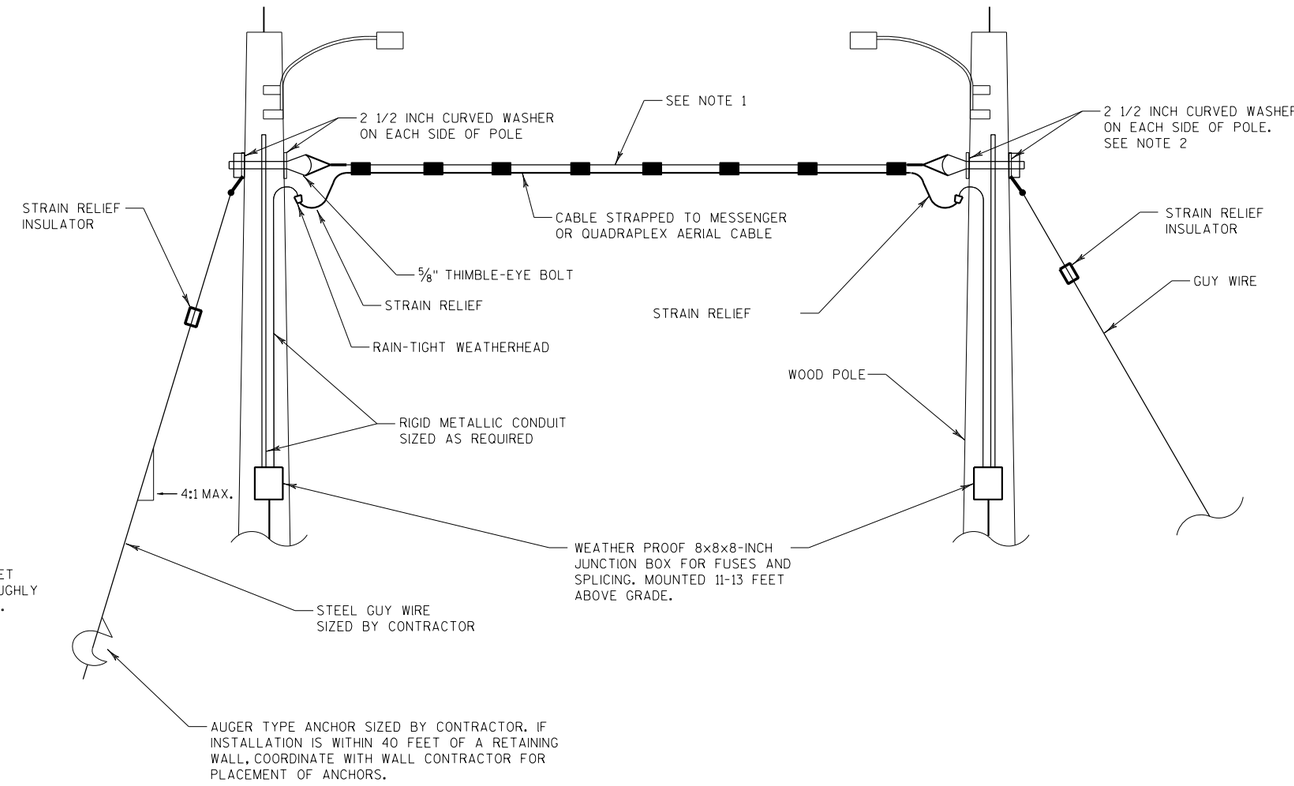
WOODEN POLE INSTALLATION DETAIL

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION

NTS

NOTES

1. MINIMUM CLEARANCE AT CENTER OF SPAN: 20-FT. ABOVE ROADWAY OR GRADE.
2. CONSTRUCT DEAD ENDS WITH SECONDARY RACK, CLEVISES, OR OTHER APPROVED METHOD.
3. SECURELY BAND OR CLAMP RISERS TO POLES. USE METALLIC CABLE GUARD TO PROTECT RISERS FOR 10-FEET ABOVE GRADE.
4. PROVIDE AIR TERMINAL PROTRUDING 18" ABOVE HIGHEST FIXTURE WITH #2 AWG DOWN CONDUCTOR TO A 5/8" X 8-FOOT COPPER CLAD ELECTRODE FOR LIGHTNING PROTECTION. DOWN CONDUCTOR MAY TRAVEL ONLY IN A DOWNWARD DIRECTION UNTIL IT IS CONNECTED TO THE GROUNDING ELECTRODE. LIGHTNING PROTECTION GROUNDING ELECTRODE TO BE BONDED TO EQUIPMENT GROUNDING ELECTRODE WITH BARE, SOLID #2 COPPER CONDUCTOR; EXOTHERMIC WELDS ON BOTH ENDS.

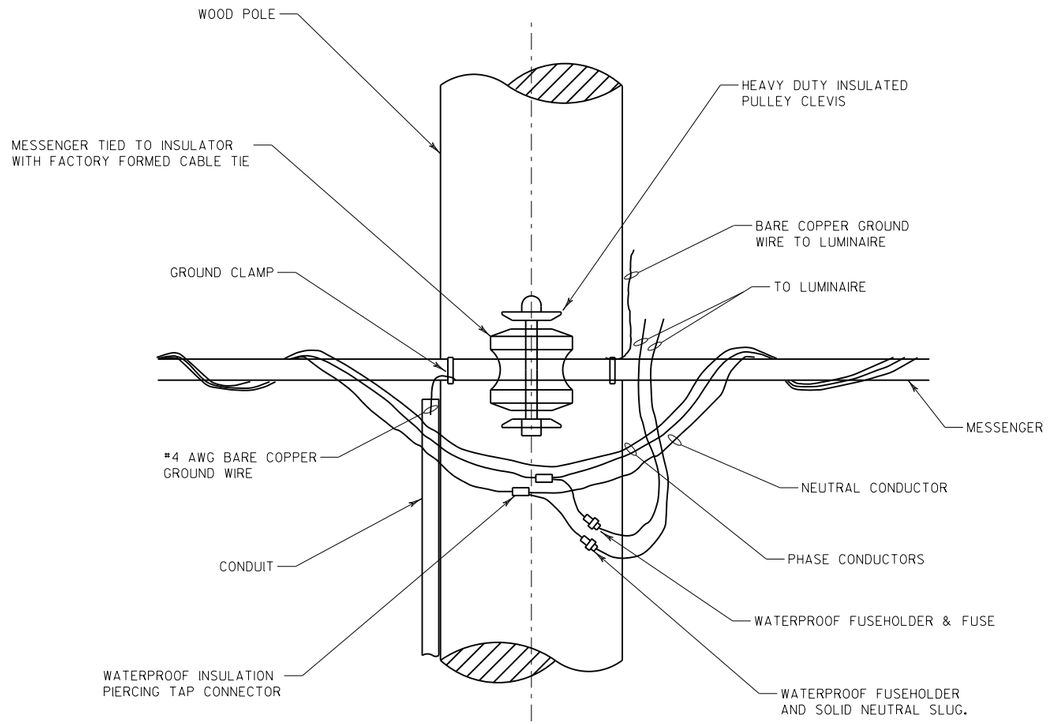


OVERHEAD WIRE DETAIL

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION

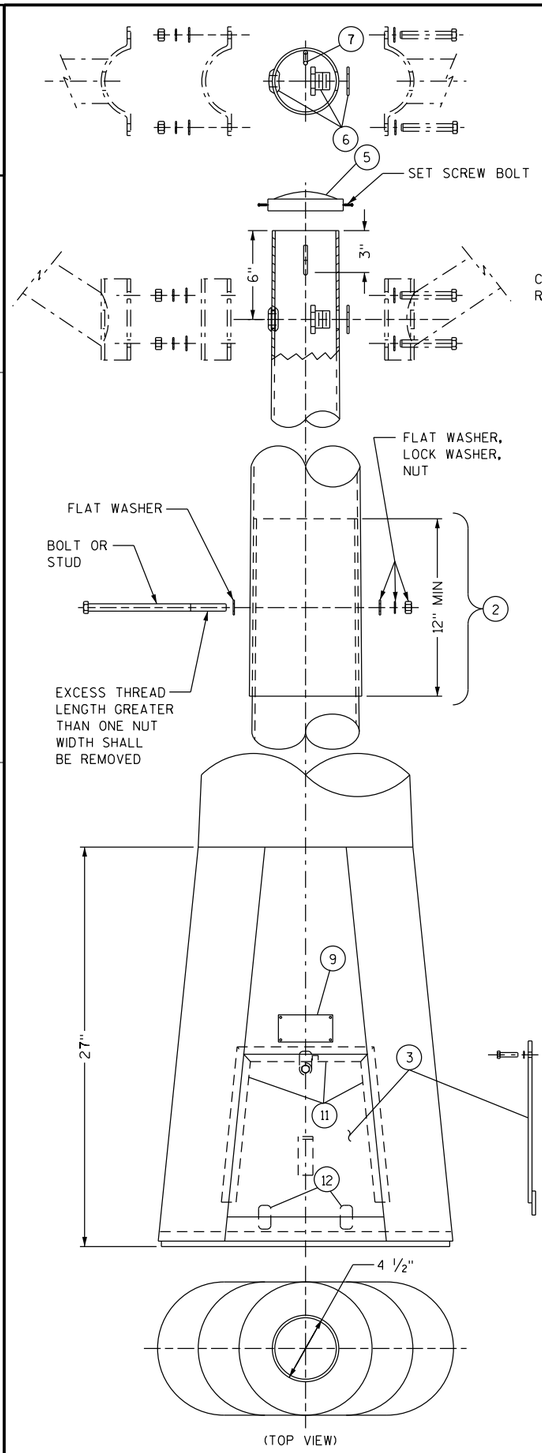
NTS

2

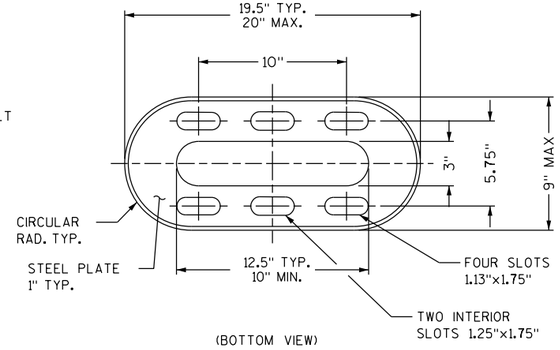


OVERHEAD CABLE SPLICE AT WOOD POLE

NTS

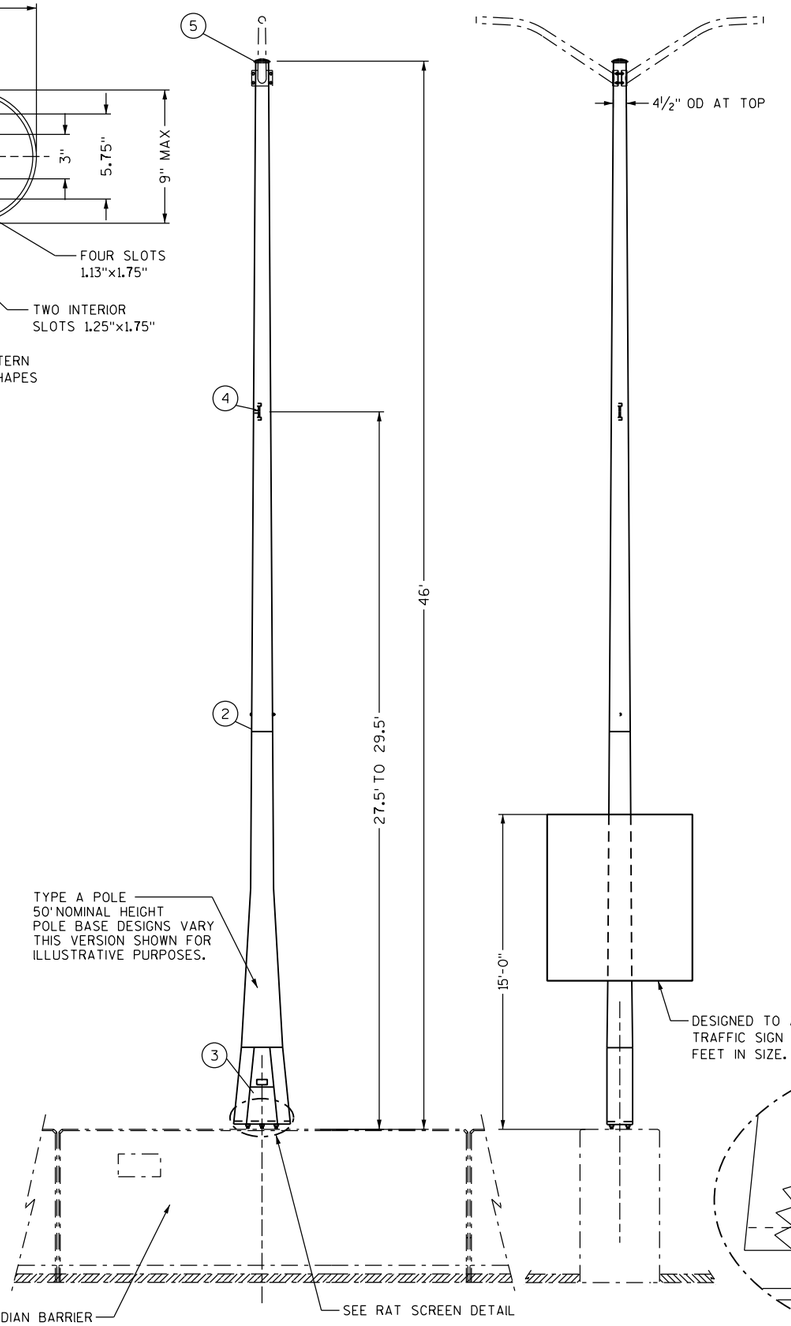


(TOP VIEW)



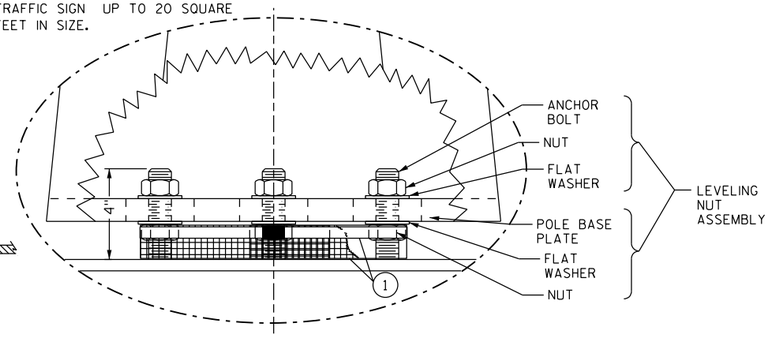
(BOTTOM VIEW)

MAX DIMENSIONS AND BOLT PATTERN REQ'D. OTHER DIMENSIONS AND SHAPES VARY. THIS VERSION SHOWN FOR ILLUSTRATIVE PURPOSES.



DETAIL - LIGHT POLE WITH SINGLE BARRIER

N.T.S.



RAT SCREEN DETAIL

NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF SECTION 654 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS. POLES SHALL BE CONSTRUCTED OF HIGH STRENGTH STEEL, GALVANIZED PER ASTM A123.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

COLLAR-MOUNT LUMINAIRE ARMS AND CLAMP ASSEMBLIES, MEDIAN BARRIER, AND ANCHOR BOLT ASSEMBLIES SHOWN FOR INFORMATION ONLY (PAID SEPARATELY).

POLES SHALL BE MOUNTED WITH ANCHOR BOLT ASSEMBLIES. ANCHOR BOLT ASSEMBLIES AND LEVELING PLATES ARE INCIDENTAL TO CONCRETE BASE OR STUCTURE ANCHORAGE ITEM. THE REQUIRED RAT SCREEN SHALL BE INCIDENTAL TO THE INSTALLATION OF THE POLE.

LUMINAIRE LOADING FOR DESIGN CALCULATIONS SHALL BE 50-LB, 1.5 SQ FEET EPA.

(1) GALVINIZED STEEL MESH (RAT SCREEN) AND 3/4" STAINLESS STEEL BANDING.

(2) OPTIONAL TELESCOPING FIELD JOINT SECURED BY A 5/8"-11 UNC THROUGH BOLT OR STUD. THE OVERLAP OF THE UPPER AND LOWER SECTIONS SHALL BE NOT LESS THAN 12".

(3) HATCH COVER, SECURED BY 1/4"-20 UNC HEX HEAD BOLT. THE POLE SHALL BE INSTALLED SUCH THAT THE HATCH IS ON THE RIGHT SIDE OF THE BARRIER UNLESS OTHERWISE SHOWN IN THE PLANS.

(4) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER. MOUNT AT ELEVATION 27.5' TO 29.5' +/-.

(5) VENTILATED POLE CAP. SECURE WITH ONE OR MORE 1/4"-20 UNC SET SCREW BOLTS.

(6) HOLE (FACTORY DRILLED PRIOR TO GALVINIZING, 2 EACH) AND 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET), PER EACH REQUIRED LUMINAIRE ARM.

(7) FACTORY-WELDED "J" HOOK FOR POLE WIRE STRAIN RELIEF.

(8) FACTORY-WELDED L-CLIP FOR GROUNDING LUG, OPPOSITE HANDHOLE. PROVIDE HOLE IN L-CLIP FOR 1/4"-20 UNC THROUGH BOLT.

(9) MANUFACTURER'S PLATE SHOWING WISDOT POLE TYPE, MANUFACTURER, AND DATE.

(10) HATCH COVER LOCKING CLIP *

(11) HATCH COVER BACKING STRAPS *

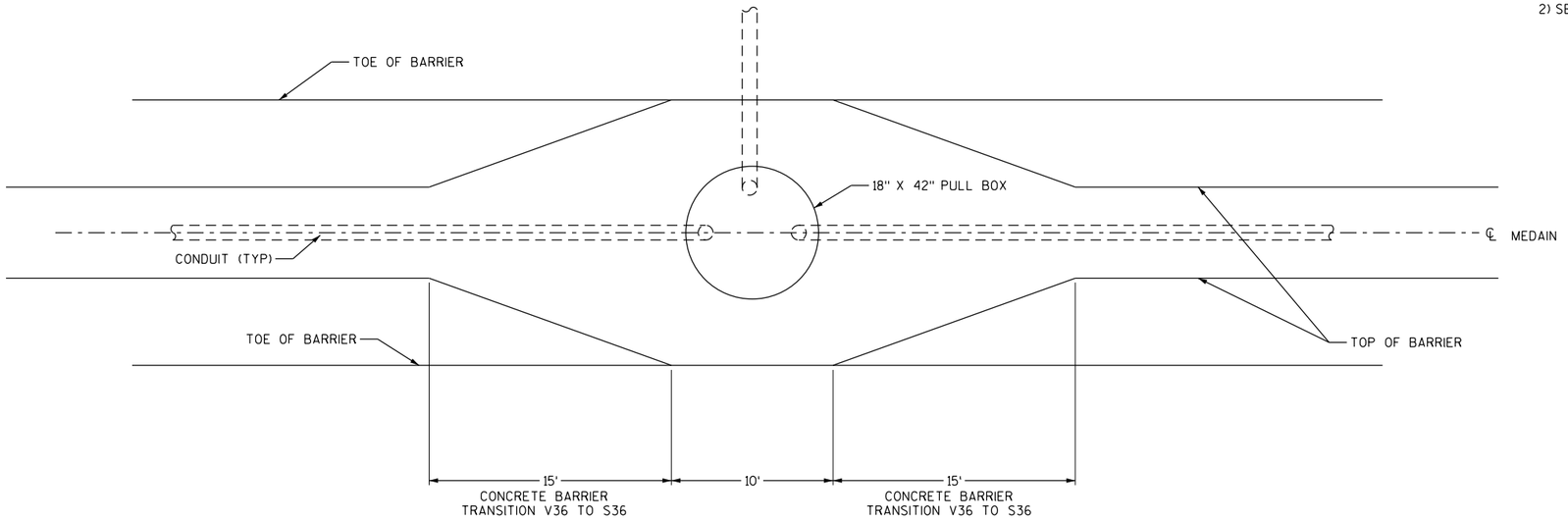
(12) HATCH COVER MOUNTING CLIPS, OR STRAP *

* ARRANGEMENTS VARY - SHOWN FOR ILLUSTRATIVE PURPOSES ONLY

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 88	E

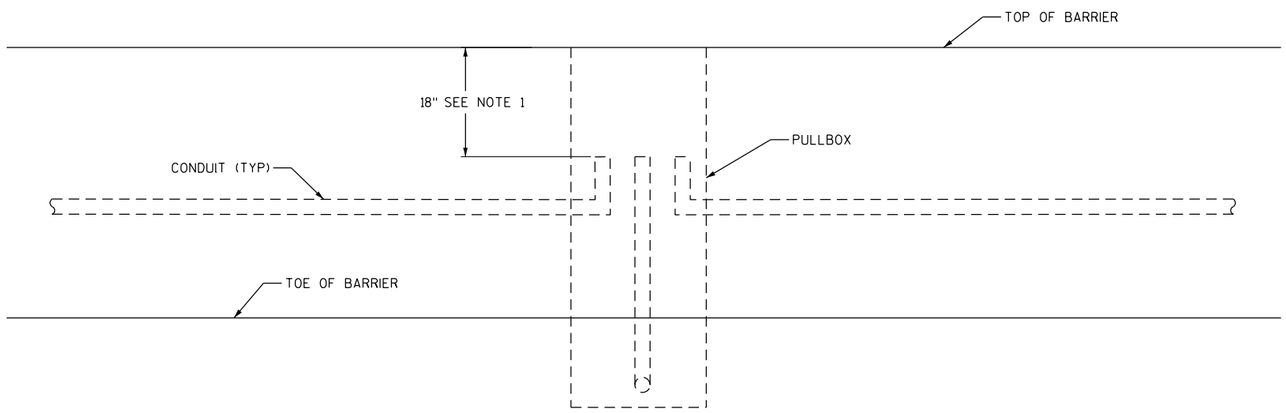
NOTES

1) EXTEND CONDUITS TO WITHIN 18" OF THE TOP OF PULLBOX. CONDUITS EMBEDDED IN BARRIER ARE ALSO TO BE EXTENDED TO WITHIN 18" OF THE TOP OF PULLBOX.
2) SEE SDD "PULL BOX" FOR ADDITIONAL REQUIREMENTS.



PLAN

LIGHTING BASE PAID FOR AS CONCRETE BARRIER TYPE V36

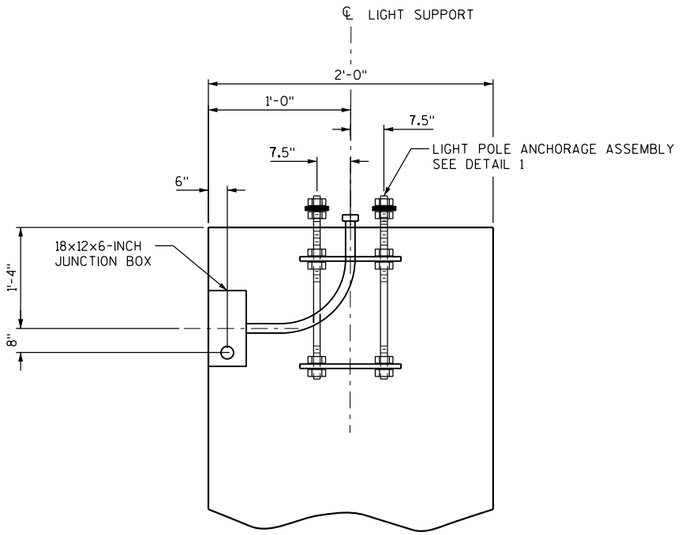


ELEVATION

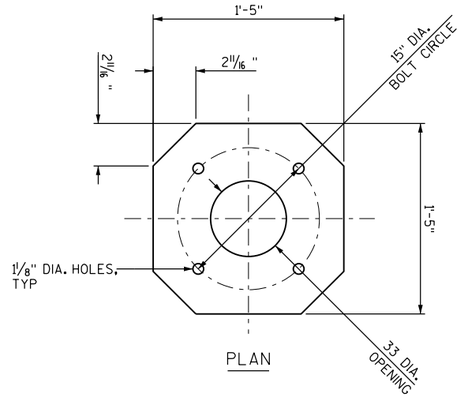
DETAIL - SINGLE BARRIER PULL BOX

N.T.S.

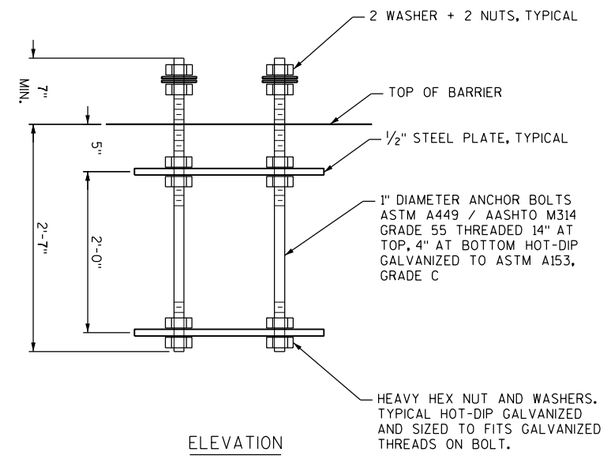
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 89	E



PARTIAL SECTION B-B
ENLARGED FOR CLARITY

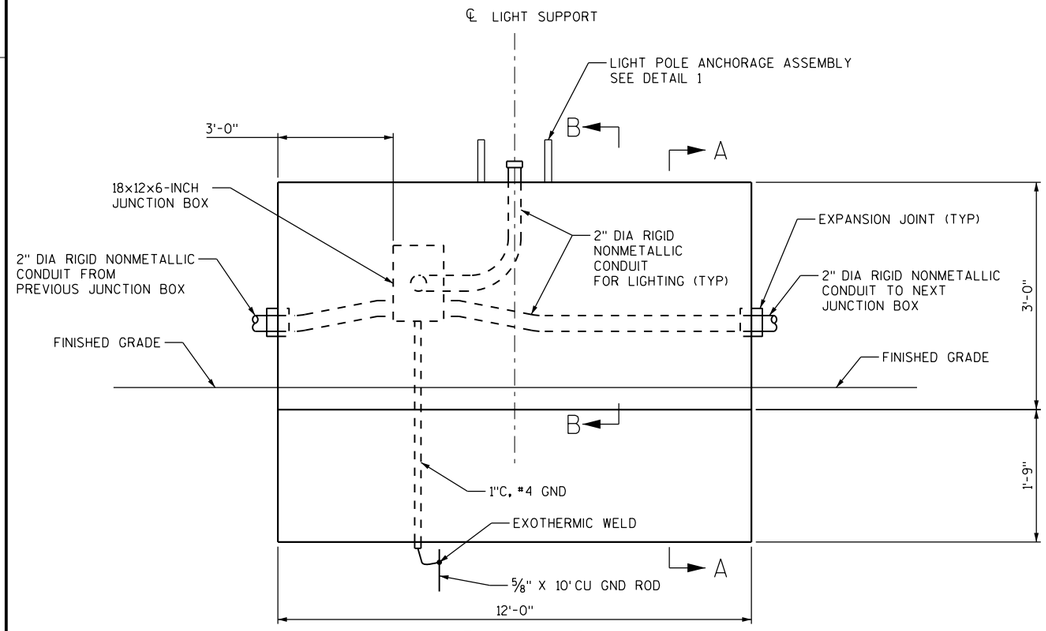


PLAN

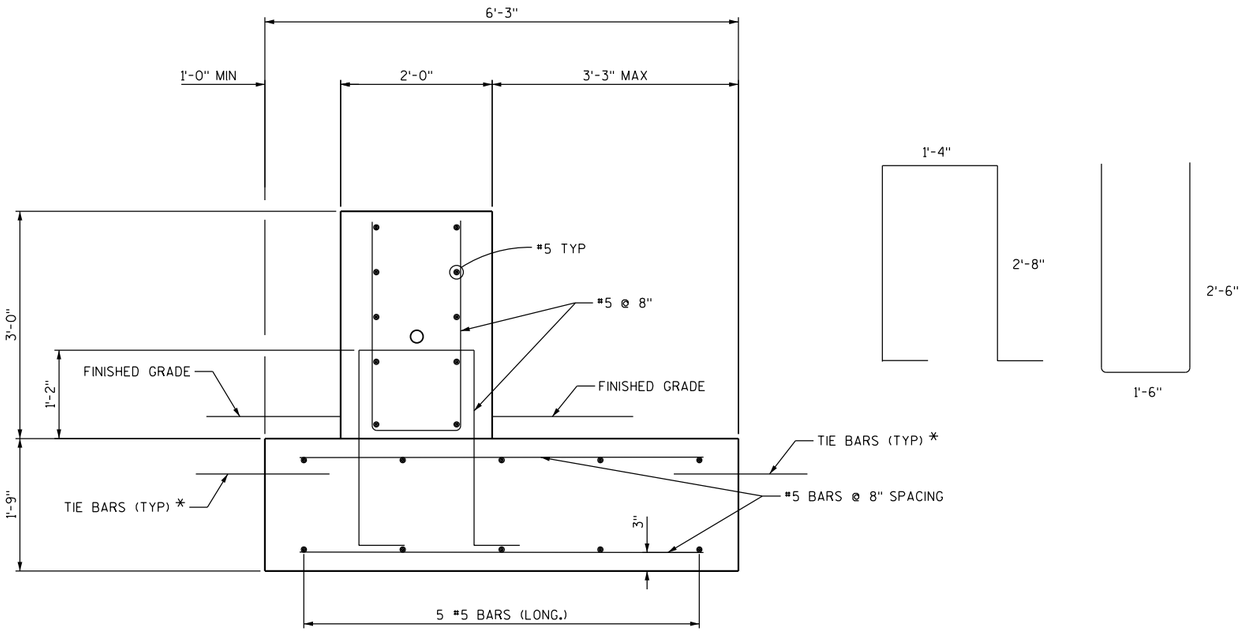


ELEVATION

DETAIL 1 - LIGHT POLE ANCHORAGE ASSEMBLY



ELEVATION VIEW



SECTION A-A

* SEE STANDARD SPECIFICATION "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES"

DETAIL - CONCRETE BASES MEDIAN BARRIER
N.T.S.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 90	E

2

W PARK HILL AVE

N 32ND ST

N 34TH ST

STA 1605+72.78, 97.69' LT
WPL-3

STA 1602+92.76, 67.32' LT
WPL-5

MINIMUM CLEARANCE OF 25'
TO ROADWAY

STA 1607+19.33, 83.91' LT
WPL-2

STA 1608+72.23, 69.11' LT
WP-2

STA 1604+29.47, 64.10' LT
WPL-4

#4 AL QUADUPLEX A,B,N AERIAL
WPL-1 TO TPB-1

STA 1610+80.09, 69.11' LT
WP-1

STA 1612+32.85, 68.28 LT
WPL-1

SELF CONTAINED
(GENERATOR)
TOWER LIGHT (SCTL)

STA 1602+74.09
TPB-1
SEE NOTE 1

STA 1602+93.84
WP-3

IH 94 WB

IH 94 EB

1600 1602 1604 1606 1608 1610 1612 1614

1616 1618 1620 1622 1624 1626 1628 1630

STA 1621+00.62, 65.45' LT
LIGHT BOOM

GEN-1

STA 1624+23.76, 63.06' LT
SCTL-1
SEE NOTE 4

STA 1628+36.11, 62.96' LT
SCTL-2
SEE NOTES 2, 3 AND 4

O/H STRUCTURE

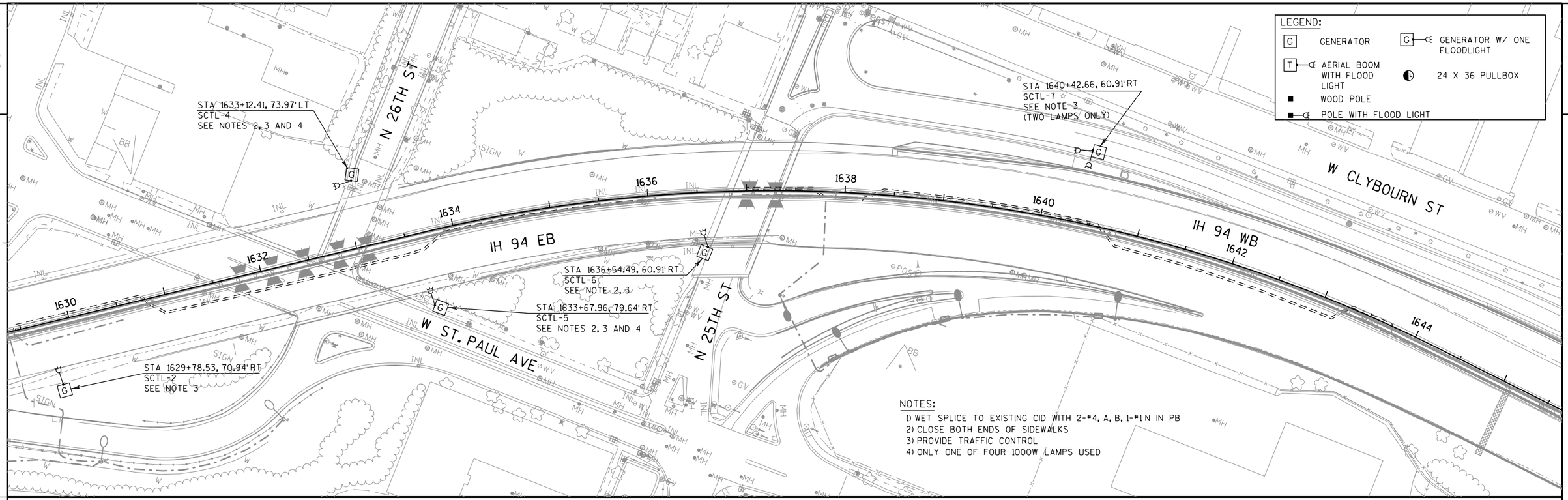
LEGEND:

- G — GENERATOR
- G — GENERATOR W/ ONE FLOODLIGHT
- T — AERIAL BOOM WITH FLOOD LIGHT
- 24 X 36 PULLBOX
- WOOD POLE
- POLE WITH FLOOD LIGHT

NOTES:

1) WET SPLICE TO EXISTING CID WITH 2-#4, A, B, 1-#1 N IN PB
2) CLOSE BOTH ENDS OF SIDEWALKS
3) PROVIDE TRAFFIC CONTROL
4) ONLY ONE OF FOUR 1000W LAMPS USED

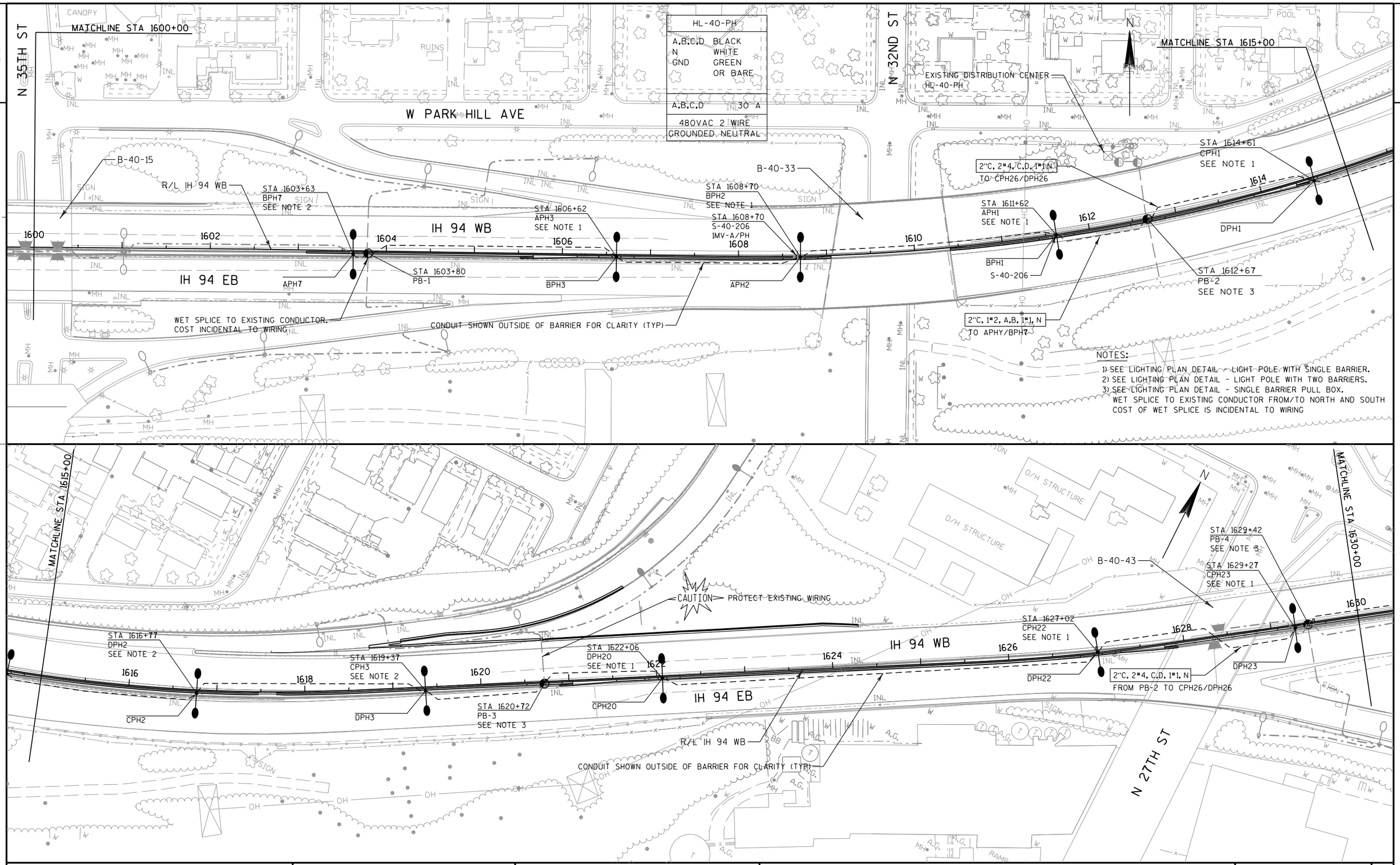
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	LIGHTING PLAN TEMPORARY	SHEET 91	E



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	LIGHTING PLAN TEMPORARY	SHEET 92	E

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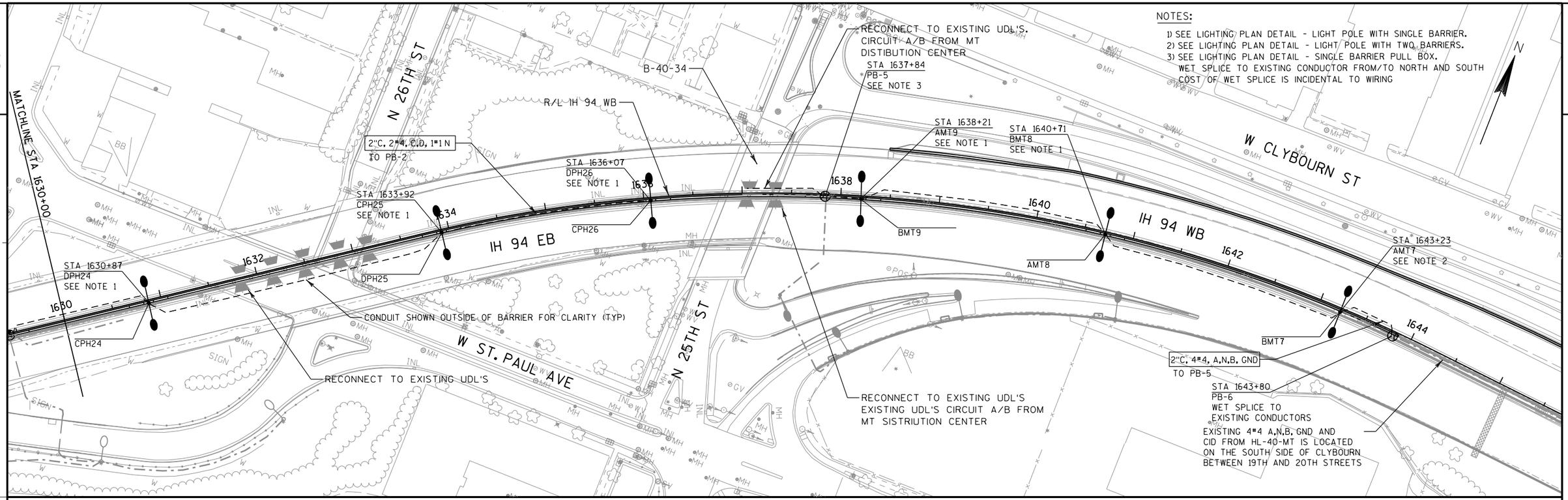
WISDOT/CADDS SHEET 42



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	LIGHTING PLAN FINAL	SHEET 93	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\023551_lp.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	LIGHTING PLAN FINAL	SHEET 94	E

2

W TORY HILL ST

IH 94 WB

IH 94 EB

676 678 680 682 684 686 688 690

REMOVE 24" DIAGONALS

REMOVE 8" CHANNELIZING SOLID

REMOVE 8" CHANNELIZING SOLID

REMOVE 8" CHANNELIZING (3' LINE, 9' SPACE)

REMOVE 24" DIAGONALS

R/L IH 94 WB

MATCHLINE STA 690+00

N 13TH ST

N 7TH ST

MATCHLINE STA 705+25

W CLYBOURN ST

IH 794 WB

IH 794 EB

690 692 694 696 698 700 702 704

REMOVE 8" CHANNELIZING SOLID

REMOVE 24" DIAGONALS

REMOVE 12" DIAGONALS FROM EDGELINE TO 12'LT OF EDGELINE

R/L IH 794 WB

REMOVE 4" EDGELINE

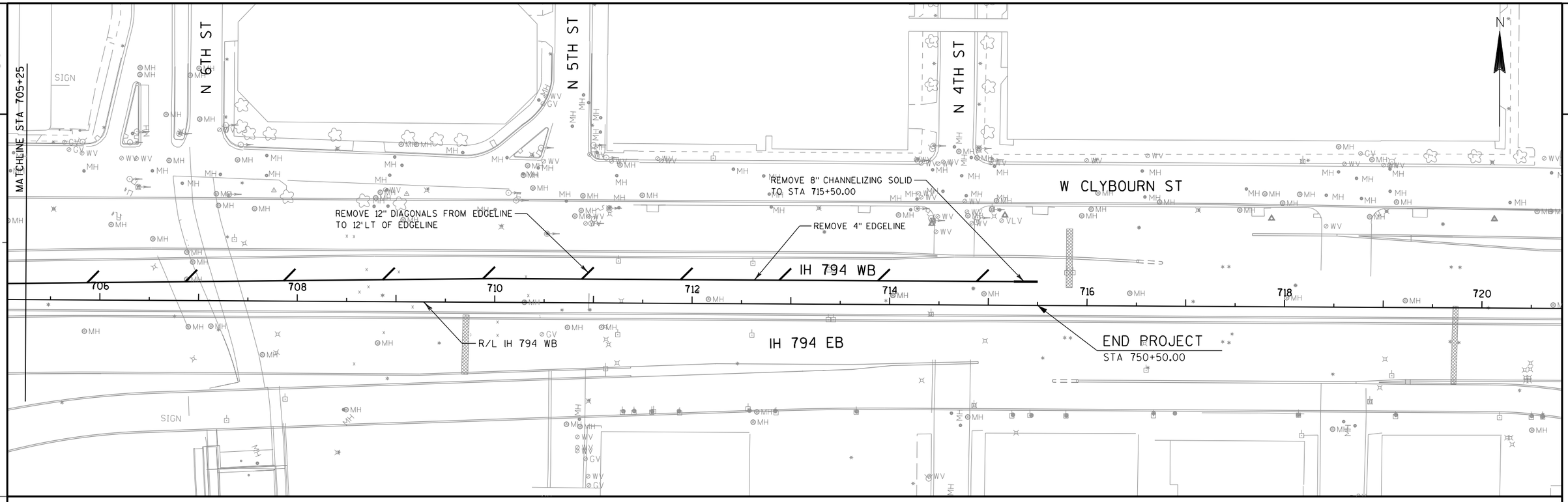
MATCHLINE STA 690+00

SHEET 1 OF 2

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PAVEMENT MARKING REMOVAL ON STRUCTURES	SHEET 95	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024501_pm.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2



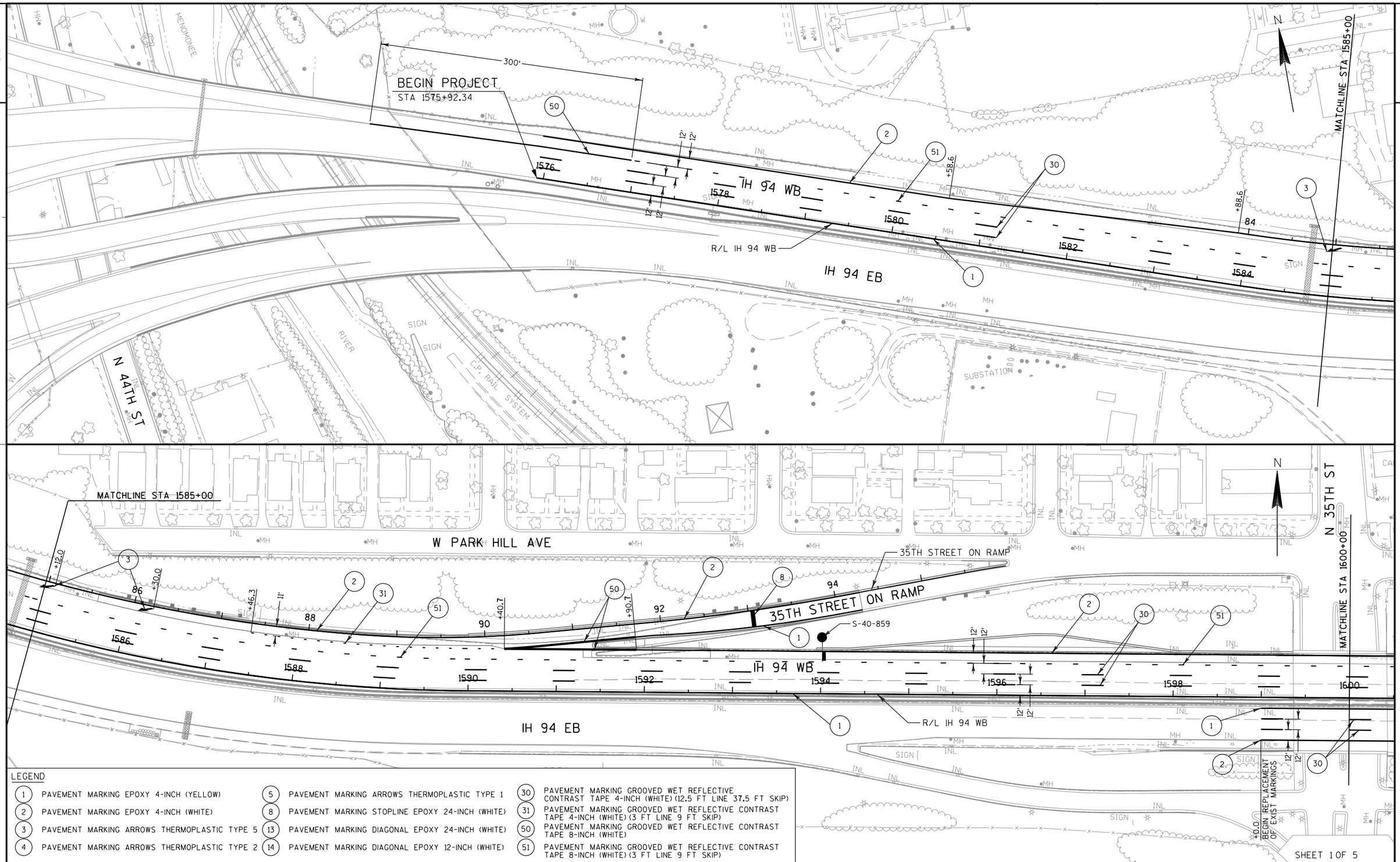
2

SHEET 2 OF 2

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PAVEMENT MARKING REMOVAL ON STRUCTURES	SHEET 96	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024502_pm.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)	5	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 1	30	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE)	8	PAVEMENT MARKING STOPLINE EPOXY 24-INCH (WHITE)	31	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (3 FT LINE 9 FT SKIP)
3	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 5	13	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)	50	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
4	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 2	14	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)	51	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)

+0.0 BEGIN REPLACEMENT OF EXIST MARKINGS

SHEET 1 OF 5

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 97	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024551_pm.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2

MATCHLINE STA 1600+00

N 35TH ST

CANOPY

RUINS

W PARK HILL AVE

150' LANE SHIFT FROM 12' TO 11'
MEDIAN PAVEMENT MARKING
SHIFTS TO 1'-0" LT OF ℄

BEGIN LANE SHIFT +54.0

END LANE SHIFT +4.0

300'

+53.6

+59.0

B-40-33

MATCHLINE STA 1615+00

N 32ND ST

POOL

SIGN

+45.4

+36.4

+3.8

+99.3

+25.0

15'

11'

12'

1600 1602 1604 1606 1608 1610 1612 1614

IH 94 WB

IH 94 EB

R/L IH 94 WB

+23.7

+25.2

+2.19

+77.47

S-40-206

STA 1607+85 TO STA 1618+58
LINEAR DELINEATION SYSTEM (YELLOW)
MOUNTED ON WB MEDIAN BARRIER

MATCHLINE STA 1615+00

28TH STREET ON RAMP

+50.0

+82.3

+25.0

+0.0

16 18 20 22

1616 1618 1620 1622 1624 1626 1628 1630

STA 1624+35 TO STA 1638+45
LINEAR DELINEATION SYSTEM (WHITE)
MOUNTED ON WB RETAINING WALL

O/H STRUCTURE

B-40-43

MATCHLINE STA 1630+00

+78.7

END REPLACEMENT OF EXIST MARKINGS

R=3475'

+34.37
4.5' RT

+11.17
10.7' RT

BEGIN REPLACEMENT OF EXIST MARKINGS

N 27TH ST

A.G.

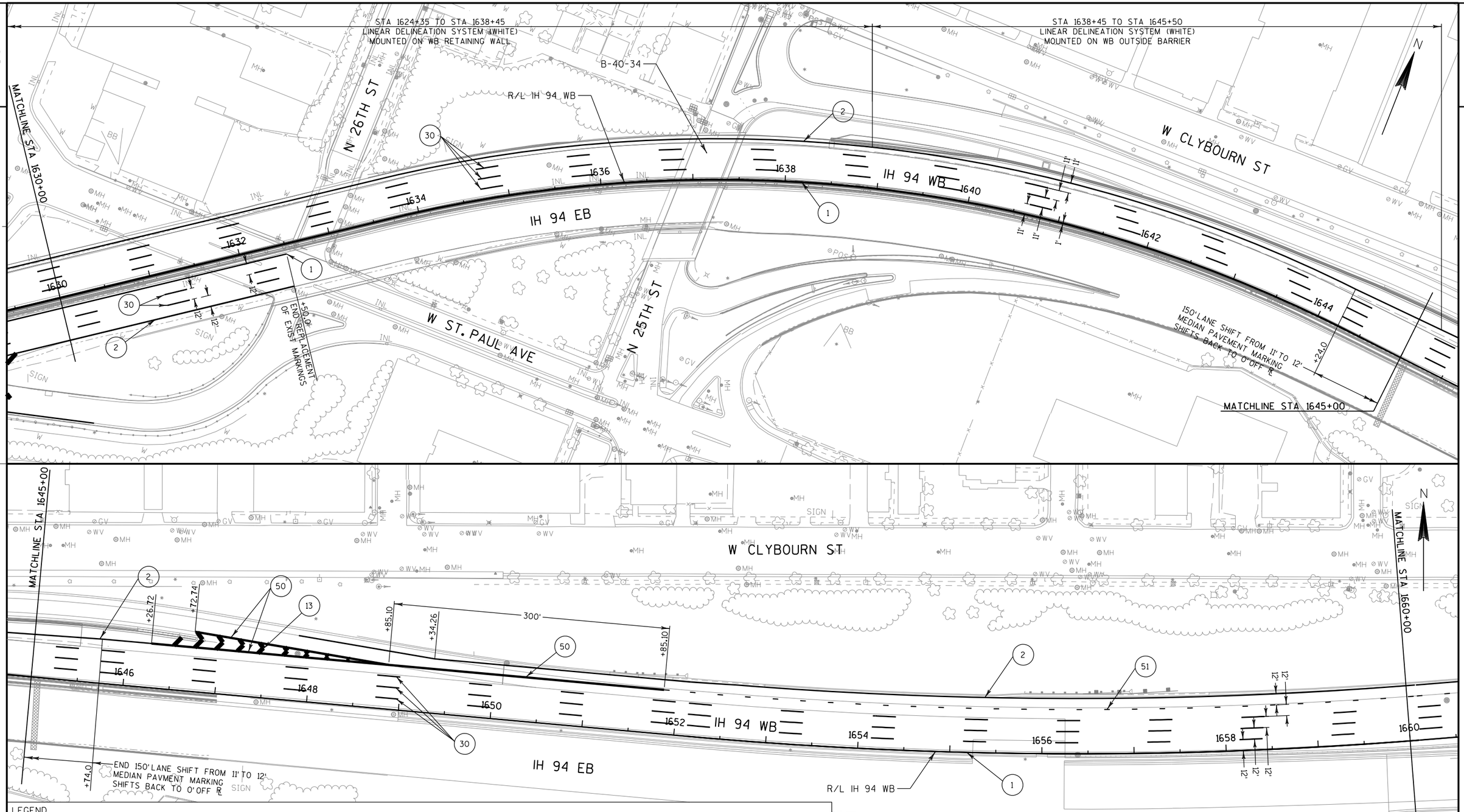
RAMP

SHEET 2 OF 5

LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)	5	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 1	30	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE)	8	PAVEMENT MARKING STOPLINE EPOXY 24-INCH (WHITE)	31	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (3 FT LINE 9 FT SKIP)
3	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 5	13	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)	50	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
4	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 2	14	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)	51	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 98	E

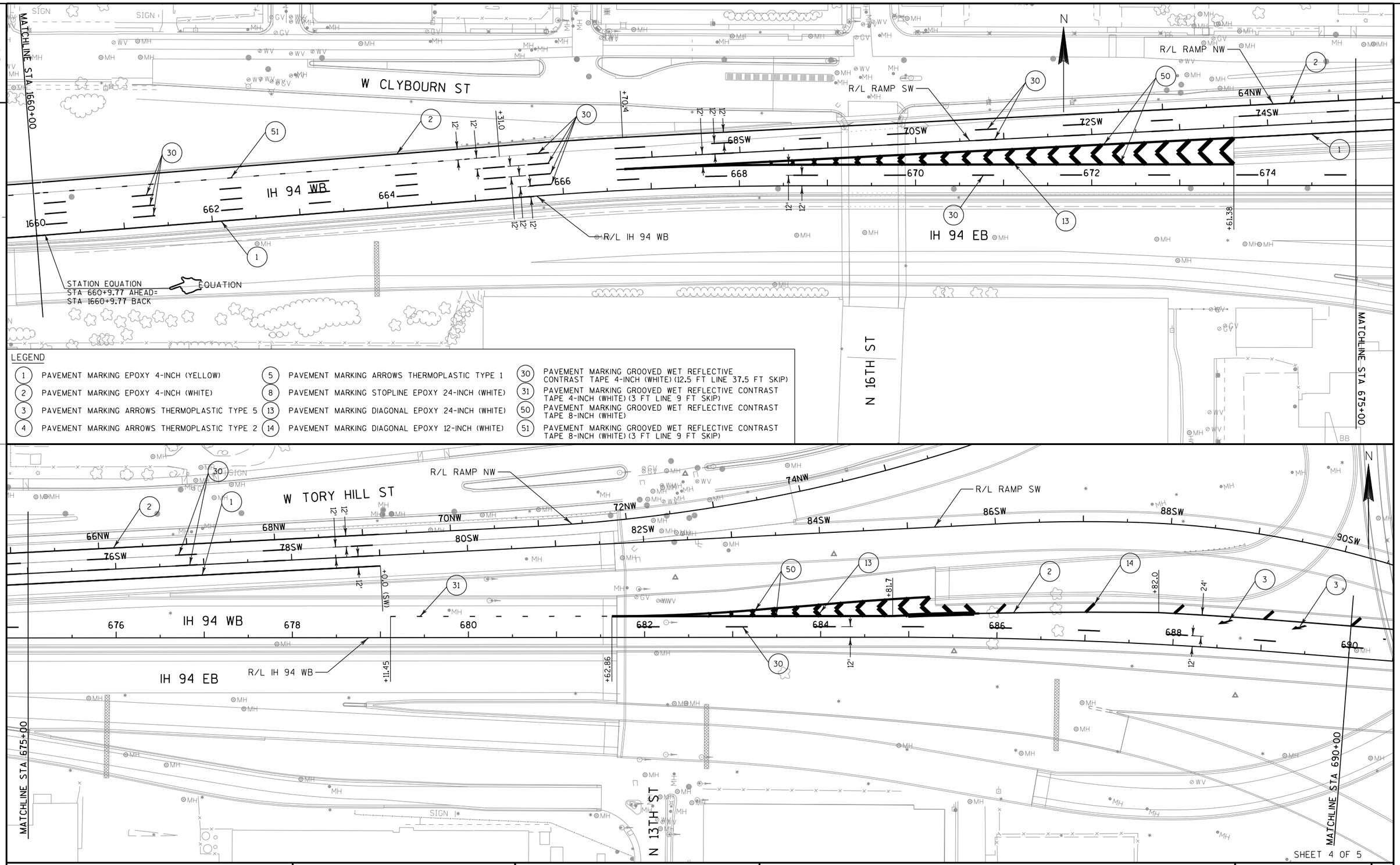


LEGEND

(1)	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)	(5)	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 1	(30)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
(2)	PAVEMENT MARKING EPOXY 4-INCH (WHITE)	(8)	PAVEMENT MARKING STOPLINE EPOXY 24-INCH (WHITE)	(31)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (3 FT LINE 9 FT SKIP)
(3)	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 5	(13)	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)	(50)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
(4)	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 2	(14)	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)	(51)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 99	E

SHEET 3 OF 5



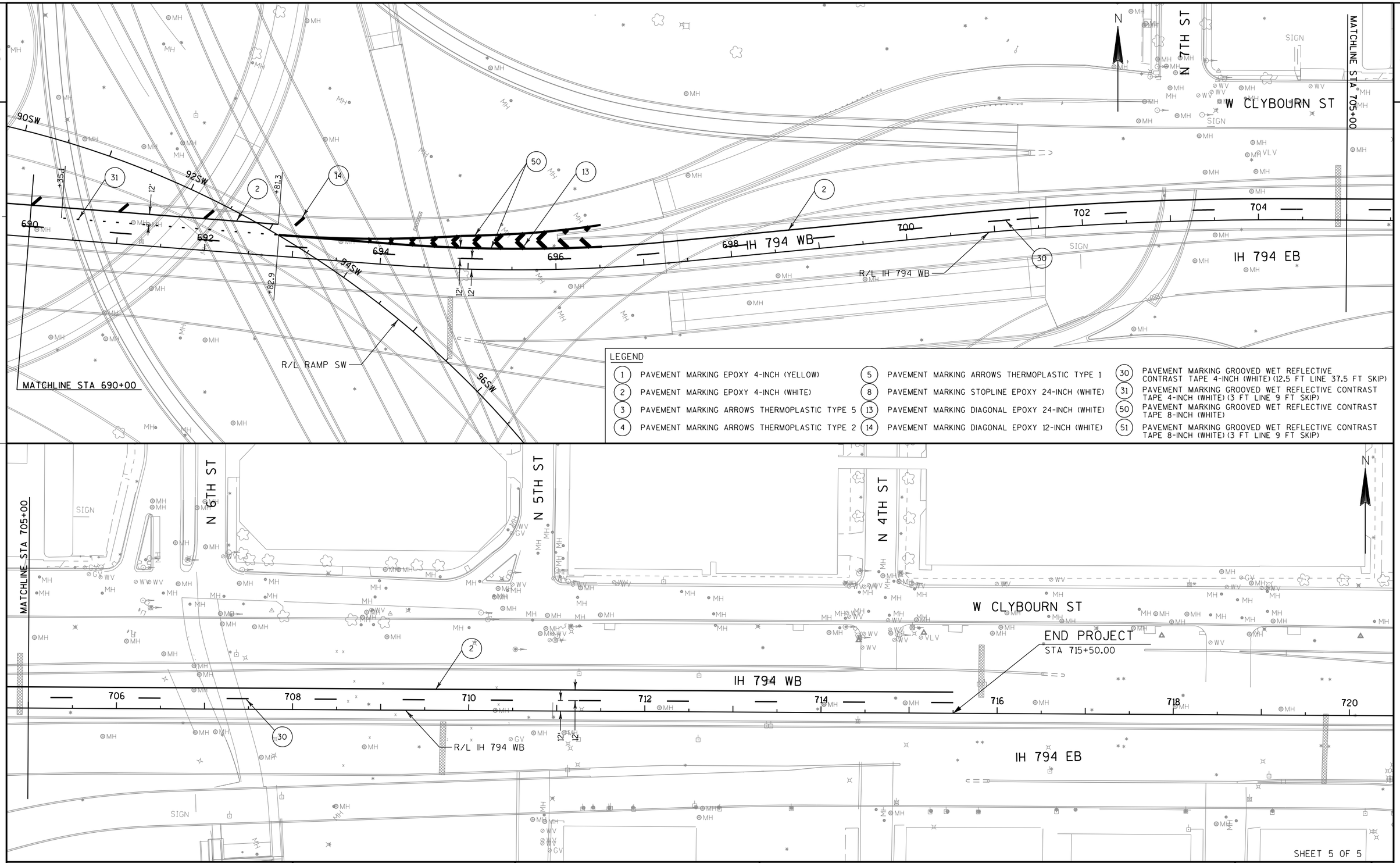
LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)	5	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 1	30	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE)	8	PAVEMENT MARKING STOPLINE EPOXY 24-INCH (WHITE)	31	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (3 FT LINE 9 FT SKIP)
3	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 5	13	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)	50	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
4	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 2	14	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)	51	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)

SHEET 4 OF 5

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 100	E

2



LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)	5	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 1	30	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE)	8	PAVEMENT MARKING STOPLINE EPOXY 24-INCH (WHITE)	31	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) (3 FT LINE 9 FT SKIP)
3	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 5	13	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)	50	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
4	PAVEMENT MARKING ARROWS THERMOPLASTIC TYPE 2	14	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)	51	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)

SHEET 5 OF 5

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 101	E

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STAGE 1A

WORKZONE

CONSTRUCTION

- 35TH STREET WB ENTRANCE RAMP
- MAINLINE SHOULDER WEST OF 35TH STREET ENTRANCE RAMP
- 94 WB SHOULDER REPLACEMENT BETWEEN 25TH STREET EXIT & 28TH STREET ENTRANCE RAMP
- PARAPET REPLACEMENT ON THE 32ND STREET STRUCTURE EB B-40-33
- DRAINAGE ALONG OUTSIDE WB SHOULDER
- FTMS ALONG WESTBOUND WB SHOULDER
- SIGN STRUCTURE S-40-859

TRAFFIC

- MAINTAIN THREE LANES ON 94 EB
- NIGHT TIME LANE CLOSURES OF 94 EB
- 35TH STREET WB ENTRANCE RAMP CLOSED
- 94 WB TRAFFIC REDUCED TO TWO EXISTING INSIDE LANES BETWEEN 25TH STREET EXIT AND 28TH STREET ENTRANCE
- NIGHT TIME LANE CLOSURES OF 94 WB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- CLOSURE OF 32ND STREET
- 35TH STREET WB EXIT RAMP CLOSED
- 35TH STREET EB ENTRANCE RAMP CLOSED

BEGIN PROJECT
STA 1575+92.34

S-40-859

STAGE 1A WORKZONE

STAGE 1A WORKZONE

S-40-206

B-40-33

B-40-34

B-40-57

B-40-43

STAGE 1A WORKZONE

N 35TH ST

N 25TH ST

N 27TH ST

IH 94

IH 794

IH 43

N 16TH ST

N 13TH ST

W ST. PAUL AVENUE

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

END PROJECT
STA 715+50.00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STAGE CONSTRUCTION 1A	SHEET 102 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024901A_cs.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:500

WISDOT/CADDS SHEET 42

STAGE 1B

WORKZONE

CONSTRUCTION

- 28TH STREET WB ENTRANCE RAMP
- 94 WB SHOULDER REPLACEMENT BETWEEN 25TH STREET EXIT & 28TH STREET ENTRANCE RAMP
- PLACE TEMPORAY BARRIER ALONG EASTBOUND SHOULDER
- DRAINAGE ALONG OUTSIDE WB SHOULDER
- FTMS ALONG WESTBOUND WB SHOULDER

TRAFFIC

- 94 WB TRAFFIC REDUCED TO TWO EXISTING INSIDE LANES
- 28TH STREET WB ENTRANCE RAMP CLOSED
- 35TH STREET WB EXIT RAMP CLOSED
- NIGHT TIME LANE CLOSURES OF 94 WB
- MAINTAIN THREE LANES ON 94 EB
- NIGHT TIME LANE CLOSURES OF 94 EB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- 35TH STREET EB ENTRANCE RAMP CLOSED

BEGIN PROJECT
STA 1575+92.34

S-40-859

STAGE 1B WORKZONE

S-40-206

B-40-33

STAGE 1B WORKZONE

B-40-34

B-40-57

B-40-43

STAGE 1B WORKZONE

N

N 35TH ST

N 25TH ST

N 27TH ST

IH 94

IH 43

N 16TH ST

N 13TH ST

IH 794

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

END PROJECT
STA 715+50.00

W ST. PAUL AVENUE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STAGE CONSTRUCTION 1B	SHEET 103 E

STAGE 2

WORKZONE

CONSTRUCTION

- MEDIAN BARRIER REPLACEMENT BETWEEN 25TH STREET EXIT & 35TH STREET ENTRANCE RAMP
- CONTRUCT BARRIER CRASH WALL AT 25TH STREET STRUCTURE B-40-34, 28TH STREET STRUCTURE B-40-43 AND 26TH STREET/ST PAUL AVE STRUCTURE B-40-57
- DRAINAGE AND LIGHTING IN MEDIAN
- SIGN STRUCTURE S-40-206

TRAFFIC

- 94 WB TRAFFIC REDUCED TO TWO RESTRIPED OUTSIDE LANES
- NIGHT TIME LANE CLOSURES OF 94 WB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- MAINTAIN THREE LANES ON 94 EB

BEGIN PROJECT
STA 1575+92.34

STAGE 2 WORKZONE

STAGE 2 WORKZONE

STAGE 2 WORKZONE

S-40-859

S-40-206

B-40-33

B-40-34

B-40-57

B-40-43

N 35TH ST

N 27TH ST

N 25TH ST

N 16TH ST

N 13TH ST

IH 94

IH 794

IH 43

W ST. PAUL AVENUE

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

END PROJECT
STA 715+50.00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STAGE CONSTRUCTION 2	SHEET 104 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024902_cs.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:500

WISDOT/CADDS SHEET 42

STAGE 3A

WORKZONE

CONSTRUCTION

- MILL AND OVERLAY TWO INSIDE LANES OF 94 WB AND 94 EB
- PLACE TEMPORARY PAVEMENT MARKING IN PERMANENT LOCATION

TRAFFIC

- 94 WB TRAFFIC MAINTAIN THREE OUTSIDE LANES DURING PEAK HOURS
- 94 EB TRAFFIC MAINTAIN THREE OUTSIDE LANES DURING PEAK HOURS
- NIGHT TIME LANE CLOSURES OF 94 WB
- NIGHT TIME LANE CLOSURES OF 94 EB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- NIGHT TIME CLOSURE OF STADIUM S-E RAMP

BEGIN PROJECT
STA 1575+92.34

STAGE 3A WORKZONE

S-40-859

B-40-34

B-40-57

B-40-43

S-40-206

B-40-33

N 35TH ST

N 27TH ST

N 25TH ST

IH 94

IH 43

IH 794

N 16TH ST

N 13TH ST

W ST. PAUL AVENUE

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

END PROJECT
STA 715+50.00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STAGE CONSTRUCTION 3A	SHEET 105 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024903A_cs.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:500

WISDOT/CADDS SHEET 42

STAGE 3B

WORKZONE

CONSTRUCTION

- MILL AND OVERLAY TWO OUTSIDE LANES OF 94 WB AND 94 EB
- OVERLAY ASPHALT SURFACE ON RECONSTUCTED ON 35TH & 28TH STREET WB ENTRANCE RAMPS
- PLACE TEMPORARY PAVEMENT MARKING IN PERMANENT LOCATION

TRAFFIC

- 94 WB TRAFFIC MAINTAIN THREE INSIDE LANES DURING PEAK HOURS
- 94 EB TRAFFIC MAINTAIN THREE INSIDE LANES DURING PEAK HOURS
- NIGHT TIME LANE CLOSURES OF 94 WB
- NIGHT TIME LANE CLOSURES OF 94 EB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- 28TH STREET WB ENTRANCE RAMP CLOSED DURING RAMP OVERLAY
- 35TH STREET WB ENTRANCE RAMP CLOSED DURING RAMP OVERLAY
- 35TH STREET WB EXIT RAMP CLOSED DURING RAMP OVERLAY
- 35TH STREET EB ENTRANCE RAMP CLOSED DURING RAMP OVERLAY
- 26TH STREET/ST PAUL AVE EB EXIT RAMP CLOSED DURING RAMP OVERLAY
- NIGHT TIME CLOSURE OF STADIUM N-E RAMP

BEGIN PROJECT
STA 1575+92.34

S-40-859

STAGE 3B WORKZONE

N 35TH ST

STAGE 3B WORKZONE

S-40-206

B-40-33

STAGE 3B WORKZONE

IH 94

B-40-34

B-40-57

N 25TH ST

STAGE 3B WORKZONE

B-40-43

IH 94

N 27TH ST

IH 43

STAGE 3B WORKZONE

N 16TH ST

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

IH 94

IH 794

N 13TH ST

IH 43

END PROJECT
STA 715+50.00

IH 794

W ST PAUL AVENUE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STAGE CONSTRUCTION 3B	SHEET 106 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024903B_cs.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:500

WISDOT/CADDS SHEET 42

STAGE 4A

WORKZONE

CONSTRUCTION

- MILL AND OVERLAY TWO INSIDE WB LANES BETWEEN 19TH STREET AND 13TH STREET

TRAFFIC

- IH794 WB OPEN TO TRAFFIC
- MARQUETTE INTERCHANGE N-W RAMP CLOSED
- MARQUETTE INTERCHANGE S-W RAMP CLOSED
- 94 EB OPEN TO THREE LANES
- 94 WB BETWEEN 19TH STREET AND STADIUM INTERCHANGE OPEN TO FOUR LANES

BEGIN PROJECT
STA 1575+92.34

S-40-859

B-40-33

S-40-206

B-40-34

B-40-57

B-40-43

N 35TH ST

N 25TH ST

N 27TH ST

N 16TH ST

N 13TH ST

IH 94

IH 43

IH 794

W ST. PAUL AVENUE

STAGE 4A WORKZONE

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

END PROJECT
STA 715+50.00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STAGE CONSTRUCTION 4A	SHEET 107 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024904A_cs.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:500

WISDOT/CADDS SHEET 42

STAGE 4B

WORKZONE

CONSTRUCTION

- WATERBLAST AND REMOVE EXISTING PAVEMENT MARKING ON STRUCTURES
- RESTRIPING BETWEEN 4TH STREET & 13TH STREET
- MILL AND OVERLAY TWO INSIDE LANES BETWEEN 19TH STREET AND 13TH STREET

TRAFFIC

- IH794 WB CLOSED TO TRAFFIC
- MARQUETTE INTERCHANGE N-W RAMP OPEN
- MARQUETTE INTERCHANGE S-W RAMP OPEN
- 94 EB OPEN TO THREE LANES
- 94 WB BETWEEN 19TH STREET AND STADIUM INTERCHANGE OPEN TO FOUR LANES
- 7TH STREET ENTRANCE RAMP CLOSED
- 11TH STREET ENTRANCE RAMP CLOSED

BEGIN PROJECT
STA 1575+92.34

S-40-859

S-40-206

B-40-33

B-40-34

B-40-57

B-40-43

N 35TH ST

N 25TH ST

N 27TH ST

N 16TH ST

N 13TH ST

IH 94

IH 794

IH 43

STAGE 4B WORKZONE

STAGE 4B WORKZONE

STAGE 4B WORKZONE

END PROJECT
STA 715+50.00

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

W ST PAUL AVENUE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STAGE CONSTRUCTION 4B	SHEET 108 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024904B_cs.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:500

STAGE 5

WORKZONE

CONSTRUCTION

- PLACE PERMANENT PAVEMENT MARKING

TRAFFIC

- 94 EB OPEN TO THREE LANES DURING PEAK HOURS
- 94 WB OPEN TO FOUR LANES DURING PEAK HOURS
- MARQUETTE INTERCHANGE N-W RAMP OPEN TO TWO LANES DURING PEAK HOURS
- MARQUETTE INTERCHANGE S-W RAMP OPEN TO ONE LANE DURING PEAK HOURS
- IH794 WB OPEN TO TWO LANES DURING PEAK HOURS
- SEE SDD "MOVING PAVEMENT MARKING OPERATIONS"
- SERVICE RAMPS TO REMAIN OPEN DURING PEAK HOURS

BEGIN PROJECT
STA 1575+92.34

STAGE 5 WORKZONE

S-40-859

B-40-33

S-40-206

B-40-34

B-40-57

B-40-43

N 35TH ST

N 27TH ST

N 25TH ST

IH 94

IH 794

IH 43

N 16TH ST

N 13TH ST

W ST. PAUL AVENUE

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

END PROJECT
STA 715+50.00

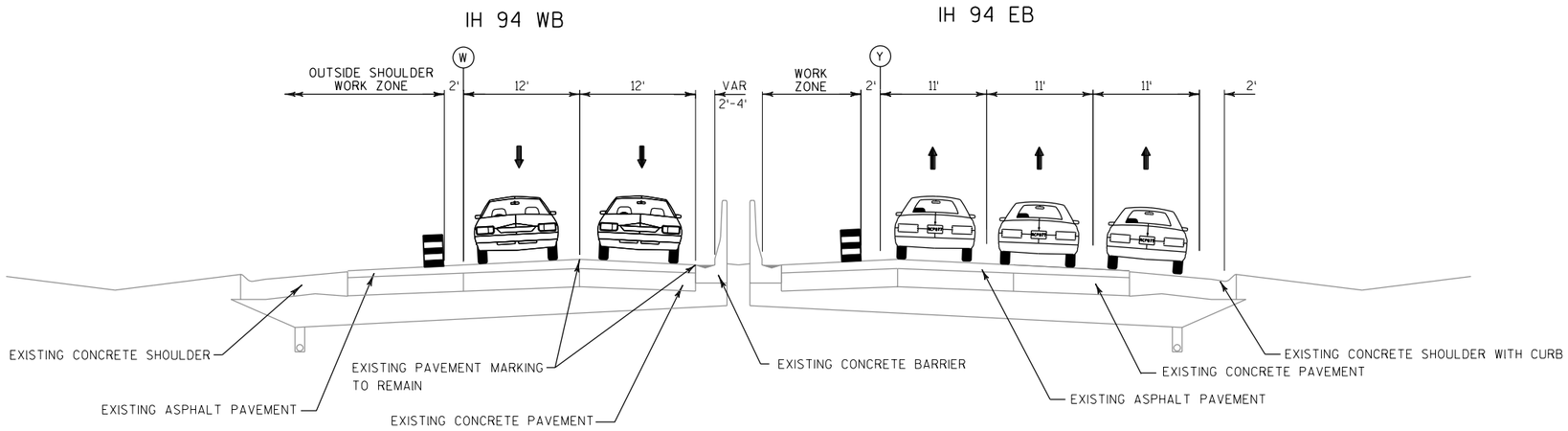
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PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	STAGE CONSTRUCTION 5	SHEET 109 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\024905_cs.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:500

WISDOT/CADDS SHEET 42

2



IH 94 MAINLINE TYPICAL SECTION STAGE 1A

25TH STREET EXIT RAMP TO 28TH STREET ENTRANCE RAMP (WB)
26TH STREET TO 35TH STREET (EB)

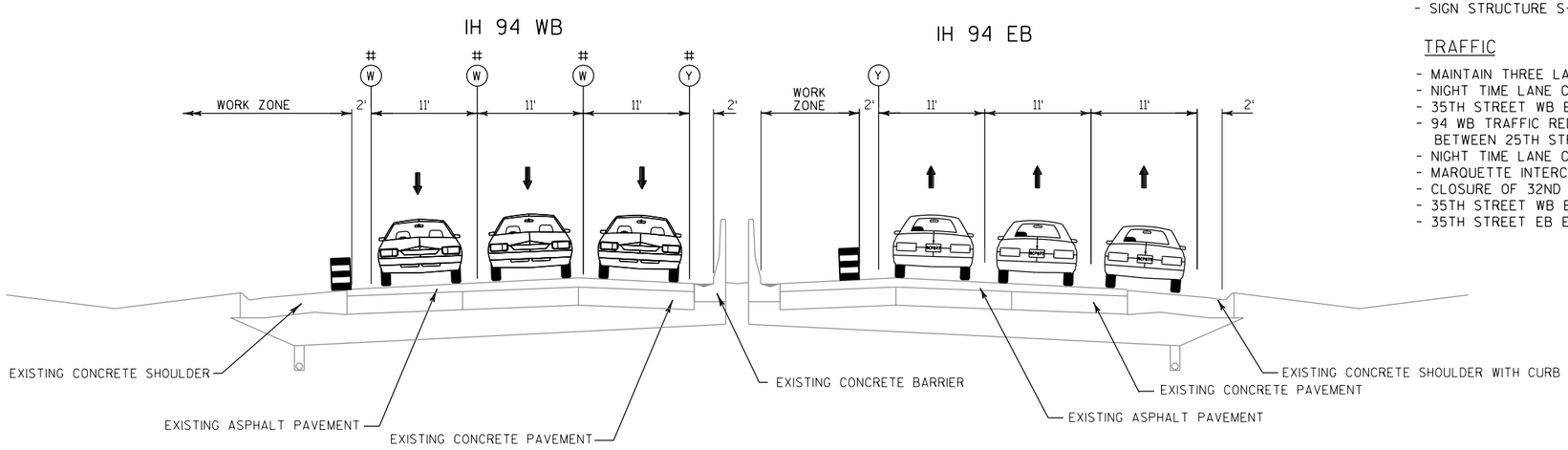
STAGE 1A

CONSTRUCTION

- 35TH STREET WB ENTRANCE RAMP
- MAINLINE SHOULDER WEST OF 35TH STREET ENTRANCE RAMP
- 94 WB SHOULDER REPLACEMENT BETWEEN 25TH STREET EXIT & 28TH STREET ENTRANCE RAMP
- PARAPET REPLACEMENT ON THE 32ND STREET STRUCTURE EB B-40-33
- DRAINAGE ALONG OUTSIDE WB SHOULDER
- FTMS ALONG WESTBOUND WB SHOULDER
- SIGN STRUCTURE S-40-859

TRAFFIC

- MAINTAIN THREE LANES ON 94 EB
- NIGHT TIME LANE CLOSURES OF 94 EB
- 35TH STREET WB ENTRANCE RAMP CLOSED
- 94 WB TRAFFIC REDUCED TO TWO EXISTING INSIDE LANES BETWEEN 25TH STREET EXIT AND 28TH STREET ENTRANCE
- NIGHT TIME LANE CLOSURES OF 94 WB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- CLOSURE OF 32ND STREET
- 35TH STREET WB EXIT RAMP CLOSED
- 35TH STREET EB ENTRANCE RAMP CLOSED



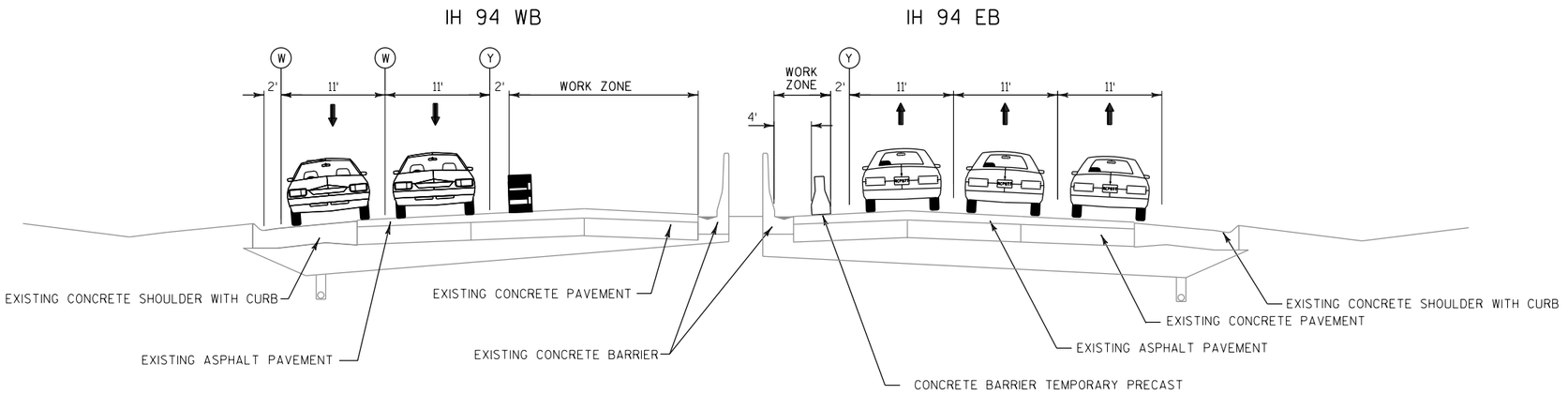
IH 94 MAINLINE TYPICAL SECTION STAGE 1A

28TH STREET ENTRANCE RAMP TO STADIUM INTERCHANGE (WB)
26TH STREET TO 35TH STREET (EB)

LEGEND

(W) - WHITE 4-INCH
(Y) - YELLOW 4-INCH
\# - RAISED PAVEMENT MARKER (50' SPACING)

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SHEET 110	E



IH 94 MAINLINE TYPICAL SECTION STAGE 2

28TH STREET ENTRANCE RAMP TO STADIUM INTERCHANGE (WB)
26TH STREET TO 35TH STREET (EB)

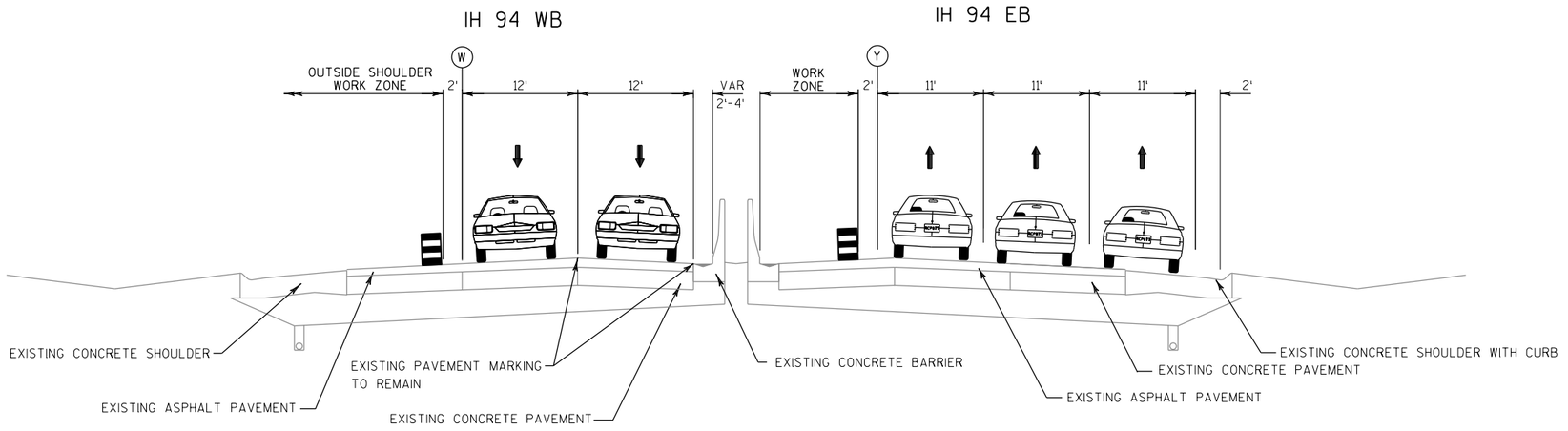
STAGE 2

CONSTRUCTION

- MEDIAN BARRIER REPLACEMENT BETWEEN 25TH STREET EXIT & 35TH STREET ENTRANCE RAMP
- CONTRUCT BARRIER CRASH WALL AT 25TH STREET STRUCTURE B-40-34, 28TH STREET STRUCTURE B-40-43 AND 26TH STREET/ST PAUL AVE STRUCTURE B-40-57
- DRAINAGE AND LIGHTING IN MEDIAN
- SIGN STRUCTURE S-40-206

TRAFFIC

- 94 WB TRAFFIC REDUCED TO TWO RESTRIPED OUTSIDE LANES
- NIGHT TIME LANE CLOSURES OF 94 WB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- MAINTAIN THREE LANES ON 94 EB



IH 94 MAINLINE TYPICAL SECTION STAGE 1B

25TH STREET EXIT RAMP TO 35TH STREET ENTRANCE RAMP (WB)
26TH STREET TO 35TH STREET (EB)

STAGE 1B

CONSTRUCTION

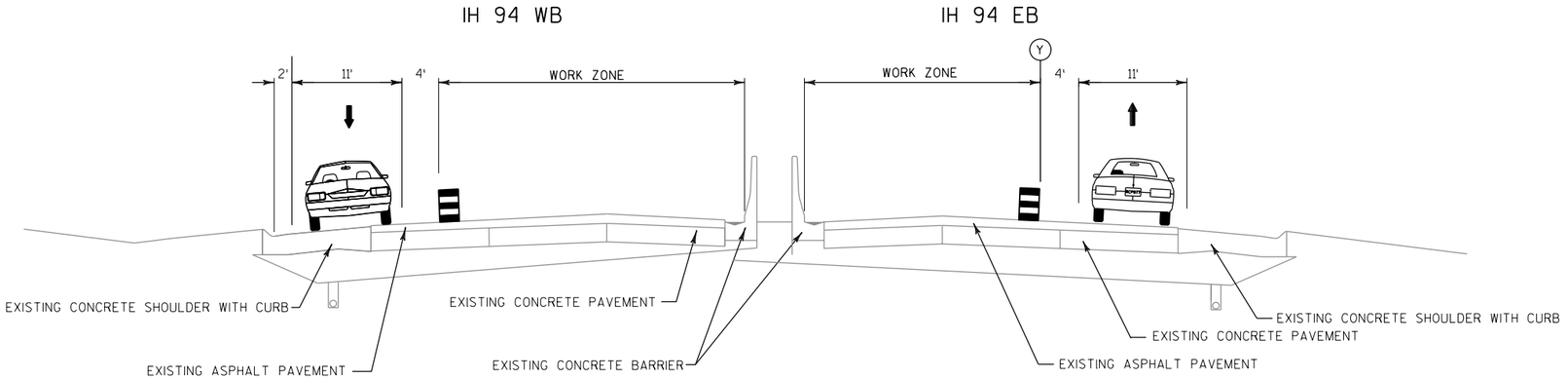
- 28TH STREET WB ENTRANCE RAMP
- 94 WB SHOULDER REPLACEMENT BETWEEN 25TH STREET EXIT & 28TH STREET ENTRANCE RAMP
- PLACE TEMPORAY BARRIER ALONG EASTBOUND SHOULDER
- DRAINAGE ALONG OUTSIDE WB SHOULDER
- FTMS ALONG WESTBOUND WB SHOULDER

TRAFFIC

- 94 WB TRAFFIC REDUCED TO TWO EXISTING INSIDE LANES
- 28TH STREET WB ENTRANCE RAMP CLOSED
- 35TH STREET WB EXIT RAMP CLOSED
- NIGHT TIME LANE CLOSURES OF 94 WB
- MAINTAIN THREE LANES ON 94 EB
- NIGHT TIME LANE CLOSURES OF 94 EB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- 35TH STREET EB ENTRANCE RAMP CLOSED

LEGEND

(W) - WHITE 4-INCH
(Y) - YELLOW 4-INCH
\# - RAISED PAVEMENT MARKER (50' SPACING)



IH 94 MAINLINE TYPICAL SECTION STAGE 3A - NIGHTTIME

MARQUETTE INTERCHANGE TO STADIUM INTERCHANGE (WB)
26TH STREET TO 35TH STREET (EB)

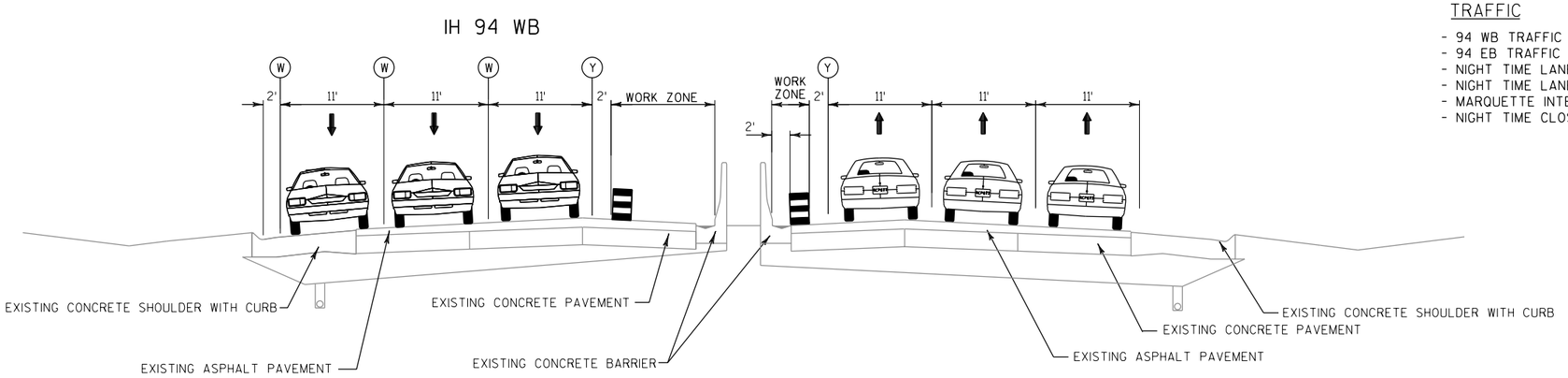
STAGE 3A

CONSTRUCTION

- MILL AND OVERLAY TWO INSIDE LANES OF 94 WB AND 94 EB
- PLACE TEMPORARY PAVEMENT MARKING IN PERMANENT LOCATION

TRAFFIC

- 94 WB TRAFFIC MAINTAIN THREE OUTSIDE LANES DURING PEAK HOURS
- 94 EB TRAFFIC MAINTAIN THREE OUTSIDE LANES DURING PEAK HOURS
- NIGHT TIME LANE CLOSURES OF 94 WB
- NIGHT TIME LANE CLOSURES OF 94 EB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- NIGHT TIME CLOSURE OF STADIUM S-E RAMP



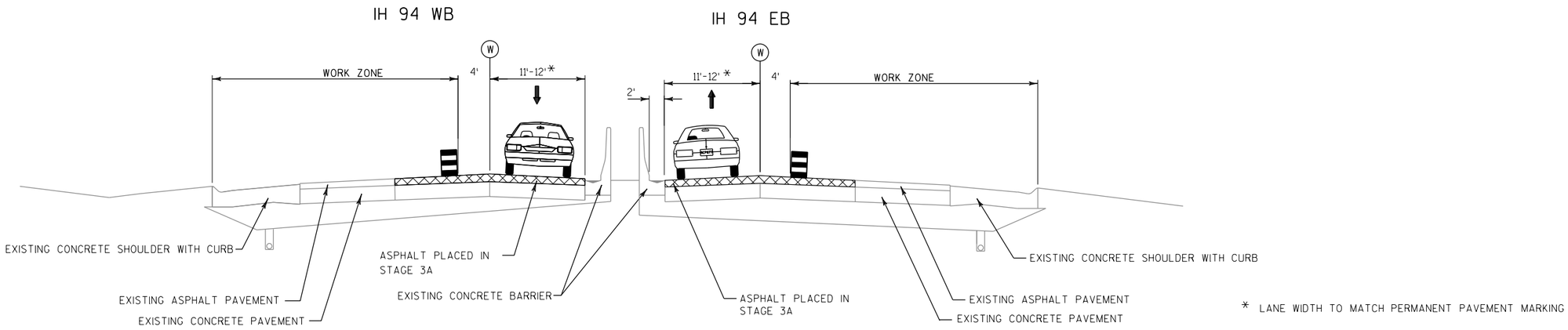
IH 94 MAINLINE TYPICAL SECTION STAGE 3A

MARQUETTE INTERCHANGE TO STADIUM INTERCHANGE (WB)
26TH STREET TO 35TH STREET (EB)

LEGEND

(W) - WHITE 4-INCH
(Y) - YELLOW 4-INCH
- RAISED PAVEMENT MARKER (50' SPACING)

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SHEET 112	E



* LANE WIDTH TO MATCH PERMANENT PAVEMENT MARKING

IH 94 MAINLINE TYPICAL SECTION STAGE 3B - NIGHTTIME

MARQUETTE INTERCHANGE TO STADIUM INTERCHANGE (WB)
26TH STREET TO 35TH STREET (EB)

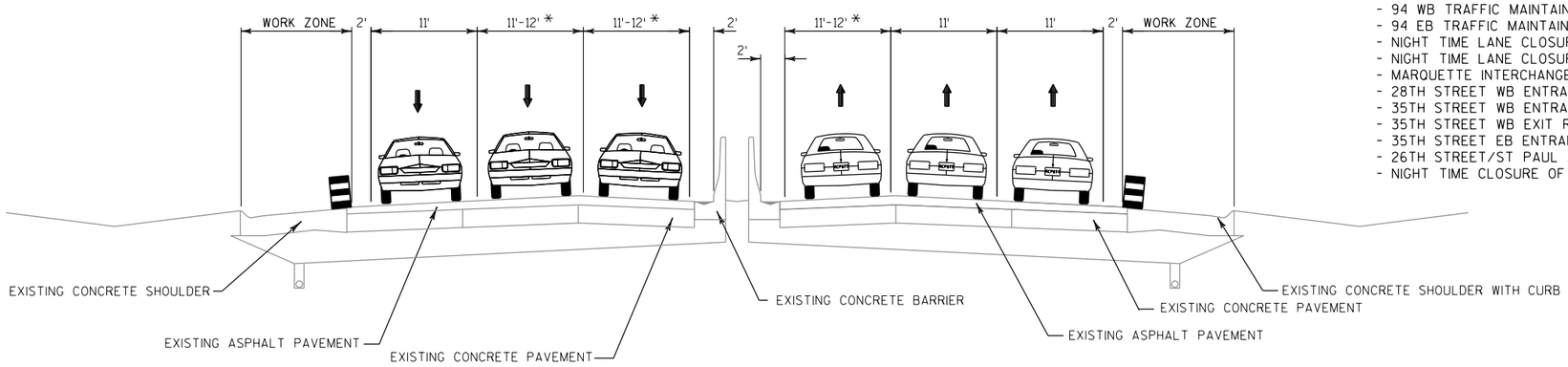
STAGE 3B

CONSTRUCTION

- MILL AND OVERLAY TWO OUTSIDE LANES OF 94 WB AND 94 EB
- OVERLAY ASPHALT SURFACE ON RECONSTUCTED ON 35TH & 28TH STREET WB ENTRANCE RAMPS
- PLACE TEMPORARY PAVEMENT MARKING IN PERMANENT LOCATION

TRAFFIC

- 94 WB TRAFFIC MAINTAIN THREE INSIDE LANES DURING PEAK HOURS
- 94 EB TRAFFIC MAINTAIN THREE INSIDE LANES DURING PEAK HOURS
- NIGHT TIME LANE CLOSURES OF 94 WB
- NIGHT TIME LANE CLOSURES OF 94 EB
- MARQUETTE INTERCHANGE N-W RAMP REDUCED TO ONE LANE
- 28TH STREET WB ENTRANCE RAMP CLOSED DURING RAMP OVERLAY
- 35TH STREET WB ENTRANCE RAMP CLOSED DURING RAMP OVERLAY
- 35TH STREET WB EXIT RAMP CLOSED DURING RAMP OVERLAY
- 35TH STREET EB ENTRANCE RAMP CLOSED DURING RAMP OVERLAY
- 26TH STREET/ST PAUL AVE EB EXIT RAMP CLOSED DURING RAMP OVERLAY
- NIGHT TIME CLOSURE OF STADIUM N-E RAMP



IH 94 MAINLINE TYPICAL SECTION STAGE 3B

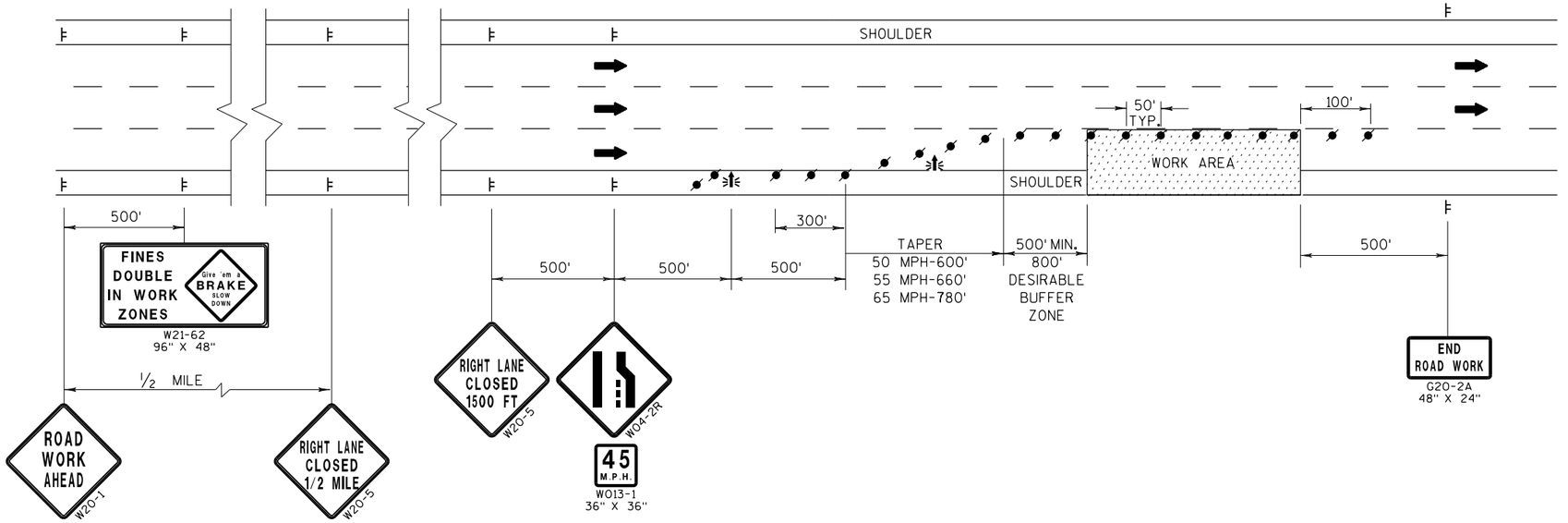
MARQUETTE INTERCHANGE TO STADIUM INTERCHANGE (WB)
26TH STREET TO 35TH STREET (EB)

LEGEND

(W) - WHITE 4-INCH
(Y) - YELLOW 4-INCH
- RAISED PAVEMENT MARKER (50' SPACING)

2

TYPICAL ONE-LANE CLOSURE



LEGEND

- DRUM W/ TYPE A OR C LIGHT
- SIGN ON TEMPORARY SUPPORT
- ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMILAR.

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

ALL DRUMS IN TAPERS OR LANE SHIFTS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN). ALL OTHER DRUMS SHALL HAVE A WARNING LIGHT, TYPE A (FLASHING).

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

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

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 DIRECTED BY THE ENGINEER.

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 LANE IS RESTORED TO A SAFE OPERATING CONDITION.

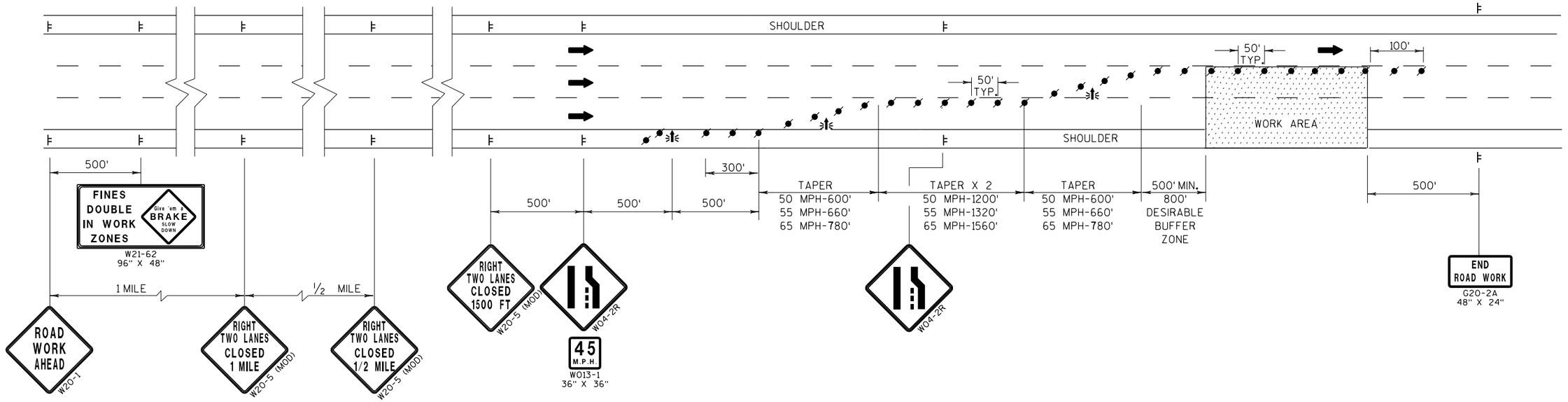
IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.

ONE LANE CLOSURE SPEEDS 45 MPH OR GREATER

2

TYPICAL TWO-LANE CLOSURE



LEGEND

- DRUM W/ TYPE A OR C LIGHT
- SIGN ON TEMPORARY SUPPORT
- ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

TWO LANE CLOSURE SPEEDS 45 MPH OR GREATER

TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMILAR.

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

ALL DRUMS IN TAPERS OR LANE SHIFTS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN). ALL OTHER DRUMS SHALL HAVE A WARNING LIGHT, TYPE A (FLASHING).

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

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

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 DIRECTED BY THE ENGINEER.

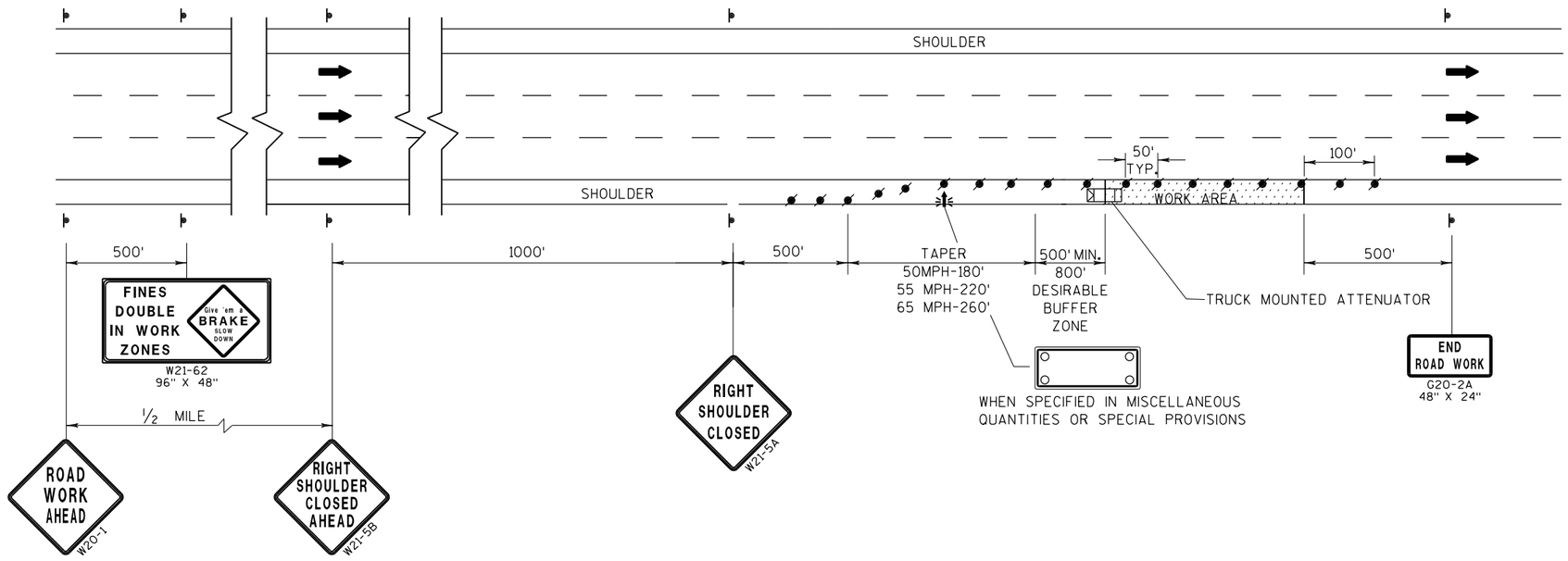
ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.

2

TYPICAL SHOULDER CLOSURE



LEGEND

- DRUM W/ TYPE A OR C LIGHT
- SIGN ON PERMANENT SUPPORT 4 DAYS OR MORE (LONG TERM)
- SIGN ON TEMPORARY SUPPORT
- ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

SHOULDER CLOSURE-SPEEDS 45 MPH OR GREATER

TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMILAR.

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

ALL DRUMS IN TAPERS OR LANES SHIFTS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN). ALL OTHER DRUMS SHALL HAVE A WARNING LIGHT, TYPE A (FLASHING).

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

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

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 DIRECTED BY THE ENGINEER.

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 LANE IS RESTORED TO A SAFE OPERATING CONDITION.

2

N

IH 94

WELLS ST

WISCONSIN AVE

MICHIGAN ST

STATE ST

N 6TH ST

HIGHLAND AVE

FOND DU LAC AVE

IH 794

IH 43

W04-2R

RIGHT LANE CLOSED 1500 FT
W20.5
WEST M03-4
INTERSTATE 94 M1-1

RIGHT LANE CLOSED 1/2 MILE
W20.5
WEST M03-4
INTERSTATE 94 M1-1

ROAD WORK 1 MILE
W20.1
WEST M03-4
INTERSTATE 94 M1-1

MATCHLINE STA 78NW+25
(SEE TRAFFIC CONTROL PLANS)

70SW
65SW
60SW
55SW
15NW
90SW
90NW
85NW
80NW
85SE

MATCHLINE STA 78NW+25
(SEE TRAFFIC CONTROL PLANS)

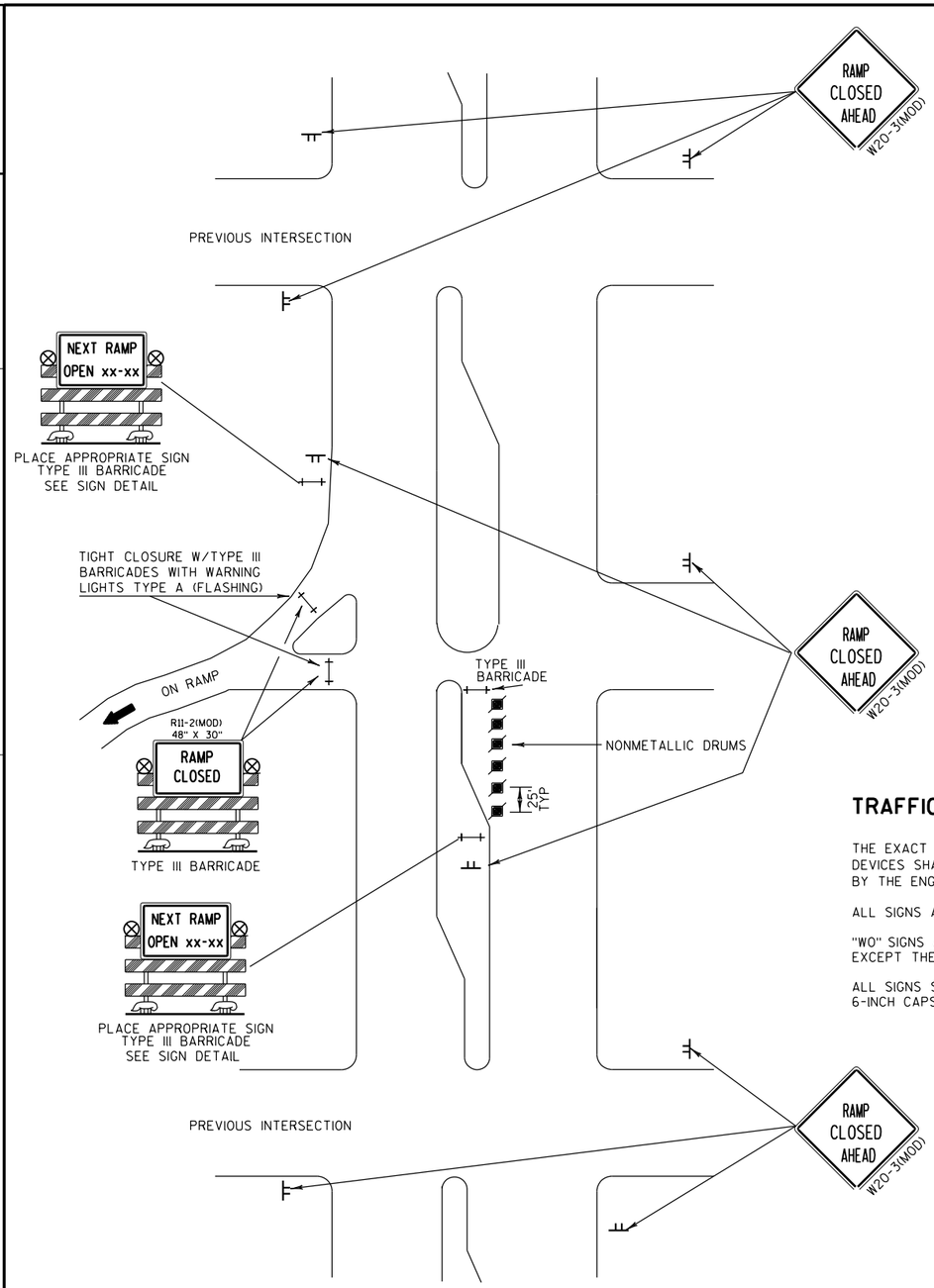
R/L NW RAMP

4 DRUMS SPACED @ 10' INTERVALS AS NEEDED IN FRONT OF ARROW BOARD

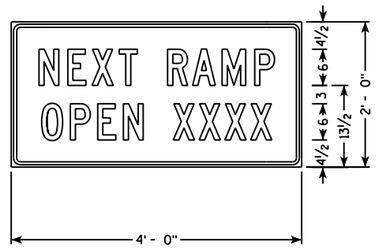
25'
250'
50' TYP
82NW
80NW
78NW
76NW
86SW

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL: MARQUETTE INTERCHANGE N-W RAMP LANE CLOSURE	SHEET 117	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025003_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:600



TRAFFIC CONTROL FOR ON-RAMP CLOSURE



SIGN DETAIL

TRAFFIC CONTROL NOTES

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

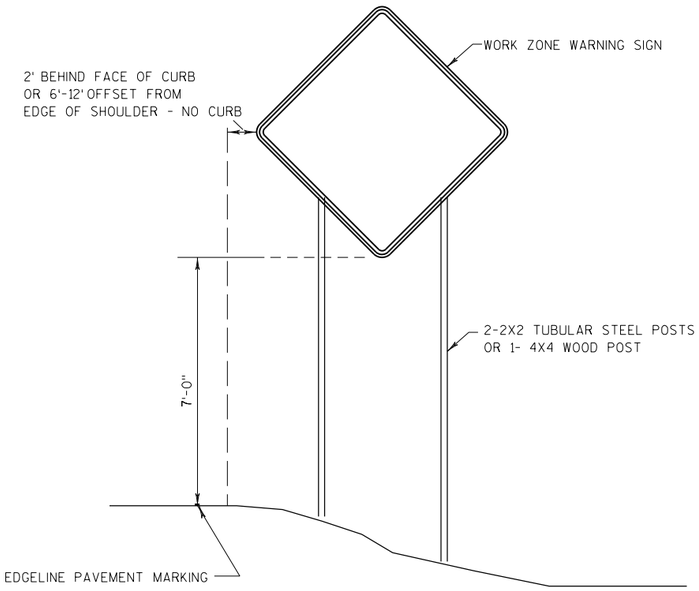
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS. 6-INCH CAPS SHALL BE SERIES C.

LEGEND

- DRUM WITH WARNING LIGHT, TYPE C
- SIGN ON TEMPORARY SUPPORT FOR SHORT TERM 3 DAYS OR LESS
- TYPE III BARRICADE
- WARNING LIGHT, TYPE A (FLASHING)



TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE

2

TRAFFIC CONTROL LEGEND

- WORK ZONE
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- SIGN ON POST OR PORTABLE SUPPORT
- BARRACADE TYPE III
- BARRACADE TYPE III WITH SIGN
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- CC CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- RAISED PAVEMENT MARKER 50'SPACING
- (W) TEMPORARY PAVEMENT MARKING 4-INCH WHITE
- (WL) TEMPORARY PAVEMENT MARKING 4-INCH WHITE (12.5'LINE W/ 37.5'SPACE)
- (Y) TEMPORARY PAVEMENT MARKING 4-INCH YELLOW
- (WS) TEMPORARY PAVEMENT MARKING 4-INCH WHITE (3'LINE W/ 9'SPACE)
- (W8) TEMPORARY PAVEMENT MARKING 8-INCH WHITE

TRAFFIC CONTROL NOTES

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

END ROAD WORK
G20-2A
48" X 24"

R/L IH 94 WB

500'

MATCHLINE STA 1585+00

IH 94 WB

IH 94 EB

MENOMONEE RIVER

C.P. RAIL SYSTEM

N 44TH ST

SUBSTATION

MATCHLINE STA 1585+00

+50 BEGIN TAPER

50' TYP

W PARK HILL AVE

RAMP CLOSED
R11-2 (MOD)
48" X 30"

SEE TRAFFIC CONTROL DETAIL FOR ON RAMP CLOSURE

N 35TH ST

+50 END TAPER

IH 94 EB

+00 END TAPER

W1-4C

+00 BEGIN TAPER

R/L IH 94 WB

IH 94 WB

SEE TRAFFIC CONTROL DETAIL-SHOULDER CLOSURE, SPEEDS 45 MPH OR GREATER

MATCHLINE STA 1600+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1A	SHEET 120 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025101_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

NOTES:
1. REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

N 35TH ST
MATCHLINE STA 1600+00
W PARK HILL AVE
N 32ND ST
MATCHLINE STA 1615+00
RAMP CLOSED
R11-2 (MOD)
48" X 30"
W1-4C
50' TYP
25'
12'
B-40-33
R/L IH 94 WB
IH 94 WB
IH 94 EB
1600
1602
1604
1606
1608
1610
1612
1614
11'
+00 BEGIN TAPER
+00 END TAPER
21.28' RT
SEE TRAFFIC CONTROL DETAIL FOR ON RAMP CLOSURE
ROAD WORK AHEAD
W20-1
W4-3R
30" X 30"
LANE CLOSED
R11-2(MOD)
48" X 30"
MATCHLINE STA 1630+00
B-40-43
1616
1618
1620
1622
1624
1626
1628
1630
+25 END TAPER
10.58' RT
+00 BEGIN TAPER
23.24' RT
+00 BEGIN TAPER
15.64' RT
N 27TH ST
O/H STRUCTURE
RAMP

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1A	SHEET 121	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025102_tc.dgn
PLOT DATE : 11/28/2012
PLOT BY : wally_w
PLOT NAME :
PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

B-40-57
B-40-34
R/L IH 94 WB
N 26TH ST
LANE CLOSED
R11-2(MOD)
48" X 30"
RAMP CLOSED AHEAD
W20.3 (MOD)
W CLYBOURN ST
IH 94 WB
IH 94 EB
W ST. PAUL AVE
N 25TH ST
50' TYP
END ROAD WORK
G20-2A
48" X 24"
+50 END TAPER
10.39' RT
+35 END TAPER
MATCHLINE STA 1630+00
MATCHLINE STA 1645+00
MATCHLINE STA 1645+00
MATCHLINE STA 1660+00
+75
+36 BEGIN TAPER
W1-4B
25:1
1630
1632
1634
1636
1638
1640
1642
1644
1646
1648
1650
1652
1654
1656
1658
1660
12'

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1A	SHEET 122 E

2

MATCHLINE STA 1660+00

W CLYBOURN ST

LANE CLOSED
R11-2(MOD)
48" X 30"

50 TYP'

RIGHT LANE FOR EXIT ONLY
R3-75
48" X 60"

R/L RAMP SW

B-50-550

LANE CLOSED
R11-2(MOD)
48" X 30"

R/L RAMP NW

64NW

72SW

70SW

68SW

74NW

IH 94 WB

50:1

1660

662

664

666

668

670

672

674

12'

+00 END TAPER

+00 BEGIN TAPER

R/L IH 94 WB

SEE TRAFFIC CONTROL DETAIL
SHOULDER CLOSURE 45 MPH OR GREATER

IH 94 EB

W1-4C

N

STATION EQUATION
STA 660+9.77 AHEAD=
STA 1660+9.77 BACK

EQUATION

N 16TH ST

MATCHLINE STA 675+00

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

LANE CLOSED
R11-2(MOD)
48" X 30"

+25 (NW) BEGIN TAPER

78NW

SEE TRAFFIC CONTROL DETAIL
MARQUETTE INTERCHANGE
N-W RAMP LANE CLOSURE

N

MATCHLINE STA 675+00

MATCHLINE STA 690+00

+77 (NW) END TAPER

R/L RAMP NW

W TORY HILL ST

50' TYP

66NW

68NW

70NW

72NW

74NW

76NW

76SW

78SW

80SW

82SW

84SW

86SW

88SW

90SW

ROAD WORK AHEAD
W20-1

IH 94 WB

676

678

680

682

684

686

688

690

IH 794 WB

IH 94 EB

R/L IH 94 WB

R/L RAMP SW

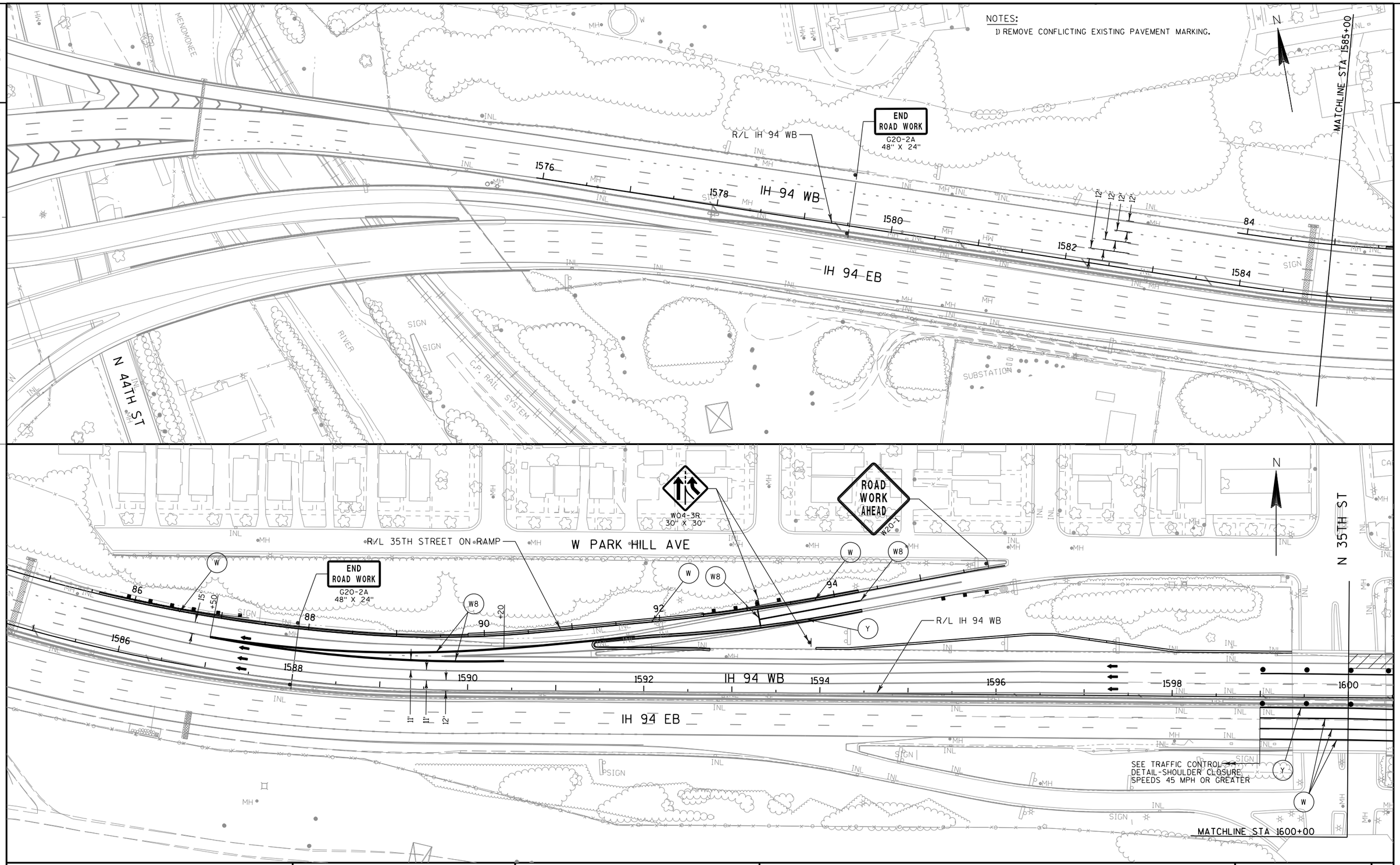
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1A	SHEET 123 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025104_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1B	SHEET 124	E

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

MATCHLINE STA 1600+00

MATCHLINE STA 1615+00

MATCHLINE STA 1630+00

N 35TH ST

N 32ND ST

N 27TH ST

W PARK HILL AVE

IH 94 WB

IH 94 EB

LANE CLOSED
R11-2(MOD)
48" X 30"

RAMP CLOSED
R11-2 (MOD)
48" X 30"

RAMP CLOSED
1000 FT
W20-3 (MOD)

COVER SIGN

50' TYP

25' TYP

B-40-33

B-40-43

R/L IH 94 WB

R/L 28TH STREET ON RAMP

SEE TRAFFIC CONTROL DETAIL FOR ON RAMP CLOSURE

+00 END TAPER
21.28' RT

+00 BEGIN TAPER
23.24' RT

+25 END TAPER
18.58' RT

+00 BEGIN TAPER
15.64' RT

CANOPY

RUINS

POOL

O/H STRUCTURE

SIGN

A.G.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1B	SHEET 125	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025112_tc.dgn

PLOT DATE : 11/28/2012

PLOT BY : wally_w

PLOT NAME :

PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

B-40-57
B-40-34
R/L IH 94 WB
N 26TH ST
W CLYBOURN ST
IH 94 WB
IH 94 EB
W ST. PAUL AVE
N 25TH ST
MATCHLINE STA 1630+00
MATCHLINE STA 1645+00
MATCHLINE STA 1660+00
LANE CLOSED
R11-2(MOD)
48" X 30"
END ROAD WORK
G20-2A
48" X 24"
+50 END TAPER
10.39' RT
+50 TYP
+5 END TAPER
+00
+36 BEGIN TAPER
25:1
50' TYP
W1-4B
1630
1632
1634
1636
1638
1640
1642
1644
1646
1648
1650
1652
1654
1656
1658
1660
12'
SIGN
BB
MH
GV
WV
INL
W
SAN
POLE

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1B	SHEET 126 E

2

MATCHLINE STA 1660+00

W CLYBOURN ST

LANE CLOSED
R11-2(MOD)
48" X 30"

RIGHT LANE FOR EXIT ONLY
R3-75
48" X 60"

LANE CLOSED
R11-2(MOD)
48" X 30"

R/L RAMP SW

B-50-550

R/L RAMP NW

50' TYP

IH 94 WB

50:1

1650 662 664 666 668 670 672 674

68SW 70SW 72SW 74SW 64NW

12' 12' 12' 12' 12'

+00 END TAPER

+00 BEGIN TAPER

R/L IH 94 WB

SEE TRAFFIC CONTROL DETAIL
SHOULDER CLOSURE 45 MPH OR GREATER

IH 94 EB

W1-4C

STATION EQUATION
STA 660+9.77 AHEAD=
STA 1660+9.77 BACK

EQUATION

N 16TH ST

MATCHLINE STA 675+00

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

+25 (NW) BEGIN TAPER

SEE TRAFFIC CONTROL DETAIL
MARQUETTE INTERCHANGE
N-W RAMP LANE CLOSURE

78NW

MATCHLINE STA 675+00

LANE CLOSED
R11-2(MOD)
48" X 30"

+77 (NW) END TAPER

R/L RAMP NW

W TORY HILL ST

50' TYP

66NW 68NW 70NW 72NW 74NW 76NW

76SW 78SW 80SW 82SW 84SW 86SW 88SW 90SW

12' 12' 12'

ROAD WORK AHEAD
W20-1

IH 94 WB

676 678 680 682 684 686 688 690

IH 794 WB

R/L RAMP SW

IH 94 EB

R/L IH 94 WB

MATCHLINE STA 690+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1B	SHEET 127	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025114_tc.dgn
PLOT DATE : 11/28/2012
PLOT BY : wally_w
PLOT NAME :
PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

END ROAD WORK
G20-2A
48" X 24"

W
+00 BEGIN TAPER
12' LT
Y
WS
R/L IH 94 WB
+00 END TAPER
24' LT
MATCHLINE STA 1585+00

12' 12' 12' 12'

1576 1578 1580 1582 1584

IH 94 WB
IH 94 EB

N 44TH ST
RIVER
SIGN
SIGN
C.P. RAIL SYSTEM
SUBSTATION

N

MATCHLINE STA 1585+00

W01-4B
W04-1
ROAD WORK AHEAD
W20-1

W PARK HILL AVE
N 35TH ST

R/L 35TH STREET ON RAMP
WS
W8

86 88 90 92 94

1586 1588 1590 1592 1594 1596 1598 1600

IH 94 WB
IH 94 EB

50' TYP
Y
W
12' 12'

R/L IH 94 WB

SEE TRAFFIC CONTROL DETAIL-SHOULDER CLOSURE SPEEDS 45 MPH OR GREATER

11' 11' 11'
W
Y
+00 BEGIN TAPER
11.92' RT

MATCHLINE STA 1600+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 128 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025201_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

MATCHLINE STA 1600+00

MATCHLINE STA 1615+00

MATCHLINE STA 1615+00

MATCHLINE STA 1630+00

N 35TH ST

N 32ND ST

N 27TH ST

W PARK HILL AVE

IH 94 WB

IH 94 EB

R/L IH 94 WB

R/L 28TH STREET ON RAMP

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

W04-3R
30" X 30"

50' TYP

+54

+70

+00 END TAPER
16.84' RT

+25 END TAPER

+00 BEGIN TAPER
16' R

B-40-33

B-40-43

1600 1602 1604 1606 1608 1610 1612 1614 1616 1618 1620 1622 1624 1626 1628 1630

CANOPY RUINS O/H STRUCTURE O/H STRUCTURE POOL SIGN RAMP

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 129 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025202_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

MATCHLINE STA 1630+00

MATCHLINE STA 1645+00

MATCHLINE STA 1645+00

MATCHLINE STA 1660+00

N 26TH ST

N 25TH ST

W CLYBOURN ST

W ST. PAUL AVE

IH 94 WB

IH 94 EB

R/L IH 94 WB

B-40-34

B-40-57

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

50' TYP

+50 END TAPER

+00 END TAPER

+00 BEGIN TAPER

50:1

1630 1632 1634 1636 1638 1640 1642 1644 1646 1648 1650 1652 1654 1656 1658 1660

11' 11' 12' 12' 12'

W Y

N

SIGN

BB

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 130 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025203_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

MATCHLINE STA 1660+00

W CLYBOURN ST

LANE CLOSED
R11-2(MOD)
48" X 30"

RIGHT LANE FOR EXIT ONLY
R3-75
48" X 60"

LANE CLOSED
R11-2(MOD)
48" X 30"

R/L RAMP SW

B-50-550

R/L RAMP NW

50' TYP

IH 94 WB

50:1

+00 END TAPER

+00 BEGIN TAPER

R/L IH 94 WB

SEE TRAFFIC CONTROL DETAIL
SHOULDER CLOSURE 45 MPH OR GREATER

IH 94 EB

W1-4C

N 16TH ST

MATCHLINE STA 675+00

STATION EQUATION
STA 660+9.77 AHEAD=
STA 1660+9.77 BACK

EQUATION

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

+25 (NW) BEGIN TAPER

SEE TRAFFIC CONTROL DETAIL
MARQUETTE INTERCHANGE
N-W RAMP LANE CLOSURE

LANE CLOSED
R11-2(MOD)
48" X 30"

+77 (NW) END TAPER

W TORY HILL ST

50' TYP

R/L RAMP NW

R/L RAMP SW

ROAD WORK AHEAD
W20-1

R/L IH 94 WB

IH 794 WB

IH 94 EB

MATCHLINE STA 690+00

2

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 131	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025204_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

END ROAD WORK
G20-2A
48" X 24"

IH 94 WB

+00 BEGIN TAPER

+00 END TAPER

R/L IH 94 WB

MATCHLINE STA 1585+00

RAMP CLOSURE - SEE DETOUR PLAN
SEE TRAFFIC CONTROL DETAIL "ONE LANE CLOSURE SPEEDS 45 MPH OR GREATER" FOR TRAFFIC CONTROL ON USH 41 SB

N 44TH ST

RIVER

C.P. RAIL SYSTEM

SUBSTATION

MATCHLINE STA 1585+00

W PARK HILL AVE

W1-4L
36" X 36"

ROAD WORK AHEAD
W20-1

R/L 35TH STREET ON RAMP

W04-1

N 35TH ST

IH 94 WB

IH 94 EB

R/L IH 94 WB

50' TYP

SEE TRAFFIC CONTROL DETAIL
TWO LANE CLOSURE

MATCHLINE STA 1600+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3A (NIGHTTIME)	SHEET 132 E

2

N 35TH ST

MATCHLINE STA 1600+00

CANOPY

RUINS

W PARK HILL AVE

N 32ND ST

MATCHLINE STA 1615+00

N

POOL

SIGN

50' TYP

12'

+36

+4

+99

+46

B-40-33

11'

10'

1600

1602

1604

1606

IH 94 WB

1608

1610

1612

IH 94 EB

1614

R/L IH 94 WB

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

MATCHLINE STA 1615+00

R/L 28TH STREET ON RAMP

W04-3R
30" X 30"

ROAD WORK AHEAD
W20-1

O/H STRUCTURE

O/H STRUCTURE

R/L IH 94 WB

B-40-43

MATCHLINE STA 1630+00

22

20

18

16

+82.3

1616

1618

1620

1622

IH 94 EB

1624

IH 94 WB

1626

1628

1630

A.G.

BB

RAMP

N 27TH ST

+80

+25

+20

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3A (NIGHTTIME)	SHEET 133	E

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

MATCHLINE STA 1630+00

MATCHLINE STA 1645+00

MATCHLINE STA 1645+00

MATCHLINE STA 1660+00

N 26TH ST

N 25TH ST

W ST. PAUL AVE

W CLYBOURN ST

IH 94 EB

IH 94 WB

R/L IH 94 WB

B-40-34

B-40-57

1630 1632 1634 1636 1638 1640 1642 1644 1646 1648 1650 1652 1654 1656 1658 1660

50' TYP

12'

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3A (NIGHTTIME)	SHEET 134 E

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3A (NIGHTTIME)	SHEET 135 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025304_tc.dgn
PLOT DATE : 11/28/2012
PLOT BY : wally_w
PLOT NAME :
PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

END ROAD WORK
G20-2A
48" X 24"

+00 BEGIN TAPER
1'LT

+00 END TAPER
13'LT

R/L IH 94 WB

IH 94 WB

IH 94 EB

MATCHLINE STA 1585+00

MATCHLINE STA 1585+00

N 44TH ST

N 35TH ST

W PARK HILL AVE

R/L 35TH STREET ON RAMP

ROAD WORK AHEAD
W20-1

W4-1

W1-4C

50' TYP

SEE TRAFFIC CONTROL DETAIL-SHOULDER CLOSURE SPEEDS 45 MPH OR GREATER

MATCHLINE STA 1600+00

SUBSTATION

RIVER

C.P. RAIL SYSTEM

SIGN

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3A (3 LANES)	SHEET 136 E

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.
2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

N 35TH ST
MATCHLINE STA 1600+00
CANOPY
RUINS
W PARK HILL AVE
N 32ND ST
MATCHLINE STA 1615+00
POOL
LANE CLOSED
R11-2(MOD)
48" X 30"
SIGN
50' TYP
IH 94 WB
IH 94 EB
R/L IH 94 WB
B-40-33
1600
1602
1604
1606
1608
1610
1612
1614
+00
+54
+70
W8
W
WS
Y
11'

R/L 28TH STREET ON RAMP
W04-3R
30" X 30"
ROAD WORK AHEAD
W20-1
MATCHLINE STA 1615+00
MATCHLINE STA 1630+00
O/H STRUCTURE
B-40-43
1616
1618
1620
1622
1624
1626
1628
1630
+00
+09
+75
+80
+20
+32
16
18
20
22
A.G.
BB
RAMP
N 27TH ST
+00 BEGIN TAPER

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3A (3 LANES)	SHEET 137	E

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

MATCHLINE STA 1630+00

MATCHLINE STA 1645+00

MATCHLINE STA 1645+00

MATCHLINE STA 1660+00

N 26TH ST

N 25TH ST

W CLYBOURN ST

W ST. PAUL AVE

IH 94 WB

IH 94 EB

B-40-34

B-40-57

R/L IH 94 WB

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

50' TYP

+50 END TAPER

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3A (3 LANES)	SHEET 138 E

2

MATCHLINE STA 1660+00

SIGN

W CLYBOURN ST

+00 BEGIN TAPER

W4-1L
36" X 36"

R/L RAMP SW

R/L RAMP NW

64NW

74SW

72SW

70SW

68SW

50' TYP

12'

662

664

666

668

670

672

674

IH 94 WB

IH 94 EB

R/L IH 94 WB

SEE TRAFFIC CONTROL DETAIL
SHOULDER CLOSURE
45 MPH OR GREATER

STATION EQUATION
STA 660+9.77 AHEAD=
STA 1660+9.77 BACK

EQUATION

N 16TH ST

MATCHLINE STA 675+00

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

2

MATCHLINE STA 675+00

LANE CLOSED
R11-2(MOD)
48" X 30"

+0.0 (SW) END TAPER

+77 (NW) END TAPER

W TORY HILL ST

+25 (NW) BEGIN TAPER

SEE TRAFFIC CONTROL DETAIL
MARQUETTE INTERCHANGE
N-W RAMP LANE CLOSURE

R/L RAMP NW

78NW

76NW

74NW

72NW

70NW

66NW

68NW

80SW

82SW

84SW

86SW

88SW

90SW

ROAD WORK AHEAD
W20-1

R/L RAMP SW

IH 94 WB

IH 794 WB

IH 94 EB

R/L IH 94 WB

SEE TRAFFIC CONTROL DETAIL
SHOULDER CLOSURE 45 MPH OR GREATER

50' TYP

676

678

680

682

684

686

688

690

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3A (3 LANES)	SHEET 139	E

END ROAD WORK
G20-2A
48" X 24"

IH 94 WB

IH 94 EB

R/L IH 94 WB

WL

50' TYP

MATCHLINE STA 1585+00

RAMP CLOSURE - SEE DETOUR PLAN
SEE TRAFFIC CONTROL DETAIL "ONE LANE
CLOSURE SPEEDS 45 MPH OR GREATER"
FOR TRAFFIC CONTROL ON MILLER PARKWAY NB

N 44TH ST

RIVER

C.P. RAIL SYSTEM

SUBSTATION

MATCHLINE STA 1585+00

SEE TRAFFIC CONTROL DETAIL
FOR ON RAMP CLOSURE

W PARK HILL AVE

N 35TH ST

R/L 35TH STREET ON RAMP

RAMP CLOSED
R11-2 (MOD)
48" X 30"

SEE TRAFFIC CONTROL
DETAIL TWO LANE CLOSURE
SPEEDS 45 MPH OR GREATER

Y

MATCHLINE STA 1600+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3B (NIGHTTIME)	SHEET 140 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025351_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2

N 35TH ST

MATCHLINE STA 1600+00

CANOPY

RUINS

W PARK HILL AVE

RAMP CLOSED
R11-2 (MOD)
48" X 30"

N 32ND ST

MATCHLINE STA 1615+00

POOL

B-40-33

WL

SIGN

12'

50' TYP

IH 94 WB

IH 94 EB

1600 1602 1604 1606 1608 1610 1612 1614

Y

WL

50' TYP

R/L IH 94 WB

MATCHLINE STA 1615+00

R/L 28TH STREET ON RAMP

22'

SEE TRAFFIC CONTROL DETAIL FOR ON RAMP CLOSURE

RAMP CLOSED
R11-2 (MOD)
48" X 30"
PLACE SIGN AT INTERSECTION OF W. ST PAUL AVE

O/H STRUCTURE

O/H STRUCTURE

B-40-43

MATCHLINE STA 1630+00

20'

16 18 1616 1618 1620 1622 1624 1626 1628 1630

R/L IH 94 WB

50' TYP

IH 94 WB

IH 94 EB

WL

Y

50' TYP

A.G.

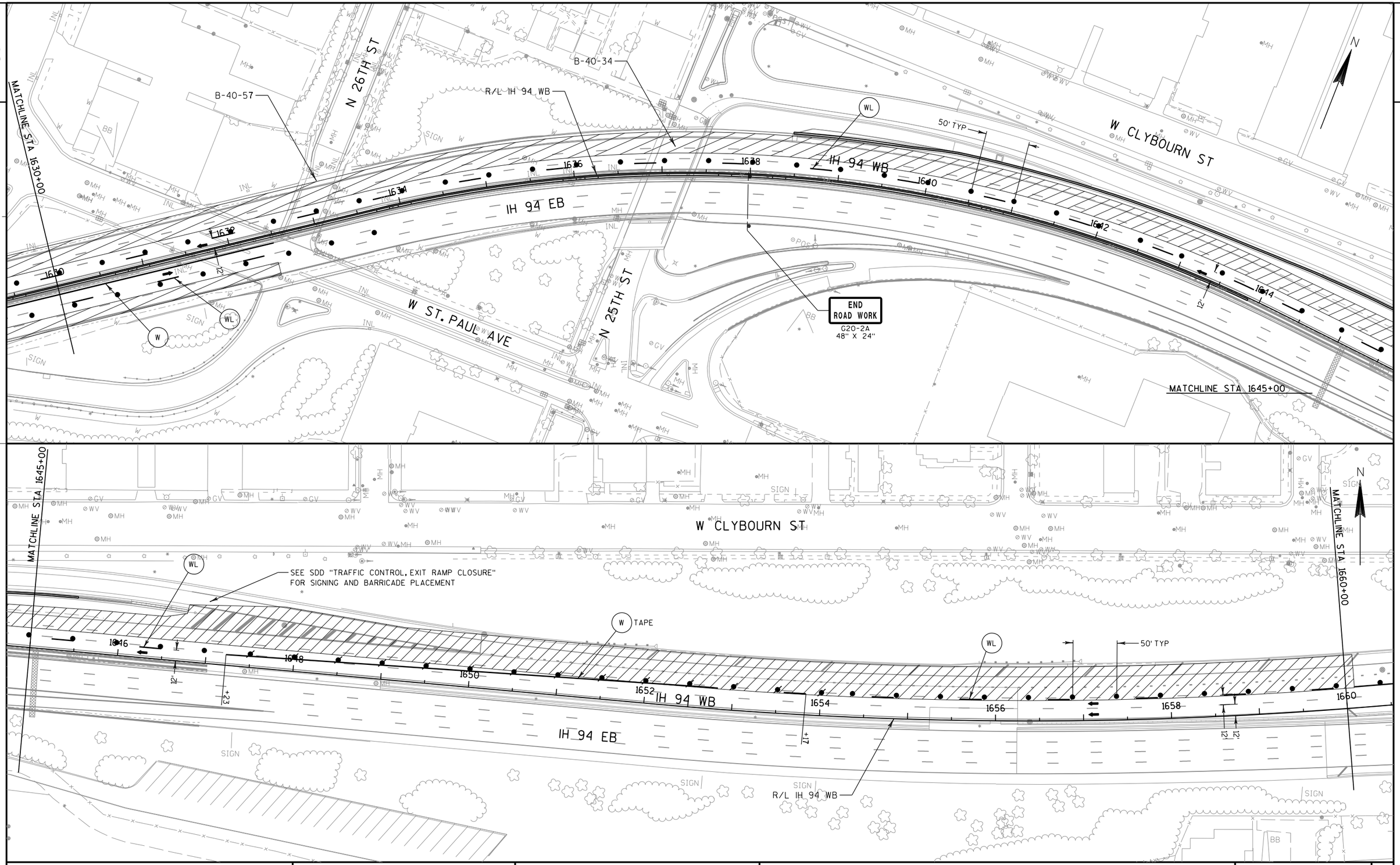
RAMP CLOSED
R11-2 (MOD)
48" X 30"

N 27TH ST

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3B (NIGHTTIME)	SHEET 141	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025352_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3B (NIGHTTIME)	SHEET 142 E

2

MATCHLINE STA 1660+00

SIGN

SIGN

W CLYBOURN ST

W04-2R

W

50' TYP

W

1660

662

664

666

12'

12'

12'

68SW

IH 94 WB

668

670

672

674

R/L IH 94 WB

STATION EQUATION
STA 660+9.77 AHEAD=
STA 1660+9.77 BACK

EQUATION

N

R/L RAMP NW

R/L RAMP SW

64NW

74SW

72SW

70SW

+00 END TAPER

IH 94 EB

N 16TH ST

MATCHLINE STA 675+00

MATCHLINE STA 675+00

SIGN

SIGN

N

LANE CLOSED
R11-2(MOD)
48" X 30"

+77 (NW) END TAPER

R/L RAMP NW

W TORY HILL ST

50' TYP

66NW

68NW

70NW

72NW

74NW

76NW

78NW

76SW

78SW

80SW

82SW

84SW

86SW

88SW

90SW

12'

12'

W

R/L RAMP SW

IH 94 WB

W04-1

ROAD WORK AHEAD

W20-1

SEE TRAFFIC CONTROL DETAIL
MARQUETTE INTERCHANGE
N-W RAMP LANE CLOSURE

676

678

680

IH 794 WB

682

684

686

688

690

+62 BEGIN TAPER

SEE TRAFFIC CONTROL DETAIL
SHOULDER CLOSURE
45 MPH OR GREATER

IH 94 EB

R/L IH 94 WB

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3B (NIGHTTIME)	SHEET 143	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025354_tc.dgn

PLOT DATE : 11/28/2012

PLOT BY : wally_w

PLOT NAME :

PLOT SCALE : 1:100

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

END ROAD WORK
G20-2A
48" X 24"

BEGIN PROJECT
STA 1575+92.34

IH 94 WB

IH 94 EB

R/L IH 94 WB

MATCHLINE STA 1585+00

N 44TH ST

RIVER

C.P. RAIL SYSTEM

SUBSTATION

35TH STREET ON RAMP

W04-3R
30" X 30"

ROAD WORK AHEAD
W20-1

W PARK HILL AVE

35TH STREET ON RAMP

50' TYP

B-40-15

N 35TH ST

MATCHLINE STA 1600+00

SEE TRAFFIC CONTROL DETAIL-SHOULDER CLOSURE SPEEDS 45 MPH OR GREATER

MATCHLINE STA 1600+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3B (3 LANES)	SHEET 144 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025371_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:
1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.
2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY.

N 35TH ST
MATCHLINE STA 1600+00
CANOPY
RUINS
W PARK HILL AVE
N 32ND ST
MATCHLINE STA 1615+00
POOL
EXIT
E5-1
60" X 48"
50' TYP
SIGN
WL
WS
W
Y
WB
1600
1602
1604
1606
1608
1610
1612
1614
IH 94 WB
IH 94 EB
B-40-15
B-40-33
R/L IH 94 WB
12'
11'
+23.7
+25.2
BEGIN LANE SHIFT
+54.0
END LANE SHIFT
+4.0
150' LANE SHIFT FROM 12' TO MEDIAN PAVMENT MARKING SHIFTS TO 1'-0" LT OF R

MATCHLINE STA 1615+00
ROAD WORK AHEAD
W20-1
W04-3R
30" X 30"
28TH STREET ON RAMP
W8
+82.3
+3.3
16
18
20
22
1616
1618
1620
1622
1624
1626
1628
1630
B-40-43
50' TYP
R=3475'
+78.7
+34.37
4.5' RT
+11.17
10.7' RT
A.G.
GB
RAMP
O/H STRUCTURE
N 27TH ST
MATCHLINE STA 1630+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3B (3 LANES)	SHEET 145	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025372_tc.dgn
PLOT DATE : 11/28/2012
PLOT BY : wally_w
PLOT NAME :
PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

MATCHLINE STA 1630+00

N 26TH ST

B-40-34

R/L IH 94 WB

50' TYP

IH 94 EB

IH 94 WB

W CLYBOURN ST

W ST. PAUL AVE

N 25TH ST

1630 1632 1634 1636 1638 1640 1642 1644

BEGIN 150' LANE SHIFT FROM 11' TO 12' MEDIAN PAVMENT MARKING SHIFTS TO BACK TO 0' OFF R

+24.0

MATCHLINE STA 1645+00

MATCHLINE STA 1645+00

MATCHLINE STA 1660+00

1646 1648 1650 1652 1654 1656 1658 1660

+74.0

END 150' LANE SHIFT FROM 11' TO 12' MEDIAN PAVMENT MARKING SHIFTS BACK TO 0' OFF R

R/L IH 94 WB

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3B (3 LANES)	SHEET 146 E

2

MATCHLINE STA 660+00

W CLYBOURN ST

LANE CLOSED
R11-2(MOD)
48" X 30"

RIGHT LANE FOR EXIT ONLY
R3-75
48" X 60"

LANE CLOSED
R11-2(MOD)
48" X 30"

R/L RAMP SW

B-50-550

R/L RAMP NW

64NW

72SW

74SW

70SW

68SW

50' TYP

IH 94 WB

662

664

666

668

670

672

674

1660

50:1

12'

+00 END TAPER

+00 BEGIN TAPER

R/L IH 94 WB

IH 94 EB

W1-4C

STATION EQUATION
STA 660+9.77 AHEAD=
STA 1660+9.77 BACK

EQUATION

N 16TH ST

NOTES:

1) REMOVE CONFLICTING EXISTING PAVEMENT MARKING.

2) PLEASE SEE PERMANENT PAVEMENT MARKING PLACED ON AREAS OF COMPLETED MILL & HMA PAVEMENT OVERLAY

MATCHLINE STA 675+00

+25 (NW) BEGIN TAPER

78NW

SEE TRAFFIC CONTROL DETAIL
MARQUETTE INTERCHANGE
N-W RAMP LANE CLOSURE

LANE CLOSED
R11-2(MOD)
48" X 30"

+77 (NW) END TAPER

R/L RAMP NW

W TORY HILL ST

50' TYP

66NW

68NW

70NW

72NW

74NW

76NW

76SW

78SW

80SW

82SW

84SW

86SW

88SW

90SW

ROAD WORK AHEAD
W20-1

IH 94 WB

IH 794 WB

676

678

680

682

684

686

688

690

R/L IH 94 WB

IH 94 EB

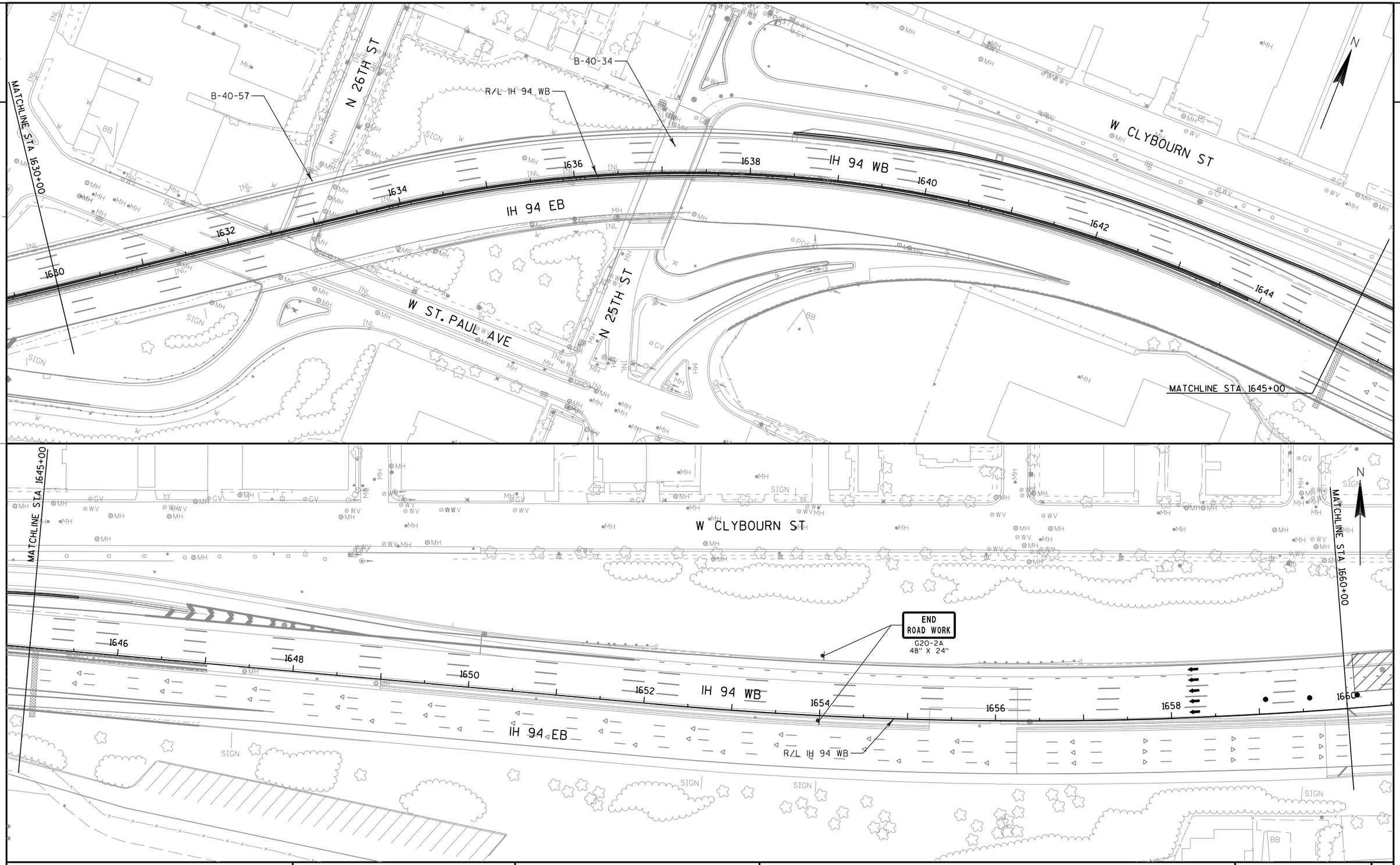
MATCHLINE STA 690+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3B (3 LANES)	SHEET 147 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025374_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4A	SHEET 148 E

NOTE:
1) CONDUCT PAVEMENT MARKING OPERATIONS IN ACCORDANCE WITH SDD TRAFFIC CONTROL: MOVING PAVEMENT MARKING OPERATIONS

W CLYBOURN ST

R/L IH 94 WB

IH 94 WB

IH 94 EB

STATION EQUATION
STA 660+9.77 AHEAD =
STA 1660+9.77 BACK

EQUATION

+00 END TAPER

N 16TH ST

MATCHLINE STA 675+00

W TORY HILL ST

RAMP CLOSURE - SEE DETAIL PLAN
SEE TRAFFIC CONTROL "DETAIL ONE LANE CLOSURE SPEEDS 45 MPH OR GREATER" FOR TRAFFIC CONTROL ON 43 SB

RAMP CLOSURE - SEE DETAIL PLAN
SEE TRAFFIC CONTROL "DETAIL ONE LANE CLOSURE SPEEDS 45 MPH OR GREATER" FOR TRAFFIC CONTROL ON 94 WB

IH 794 WB

+62 BEGIN TAPER
SEE TRAFFIC CONTROL DETAIL
SHOULDER CLOSURE
45 MPH OR GREATER

R/L IH 94 WB

N 13TH ST

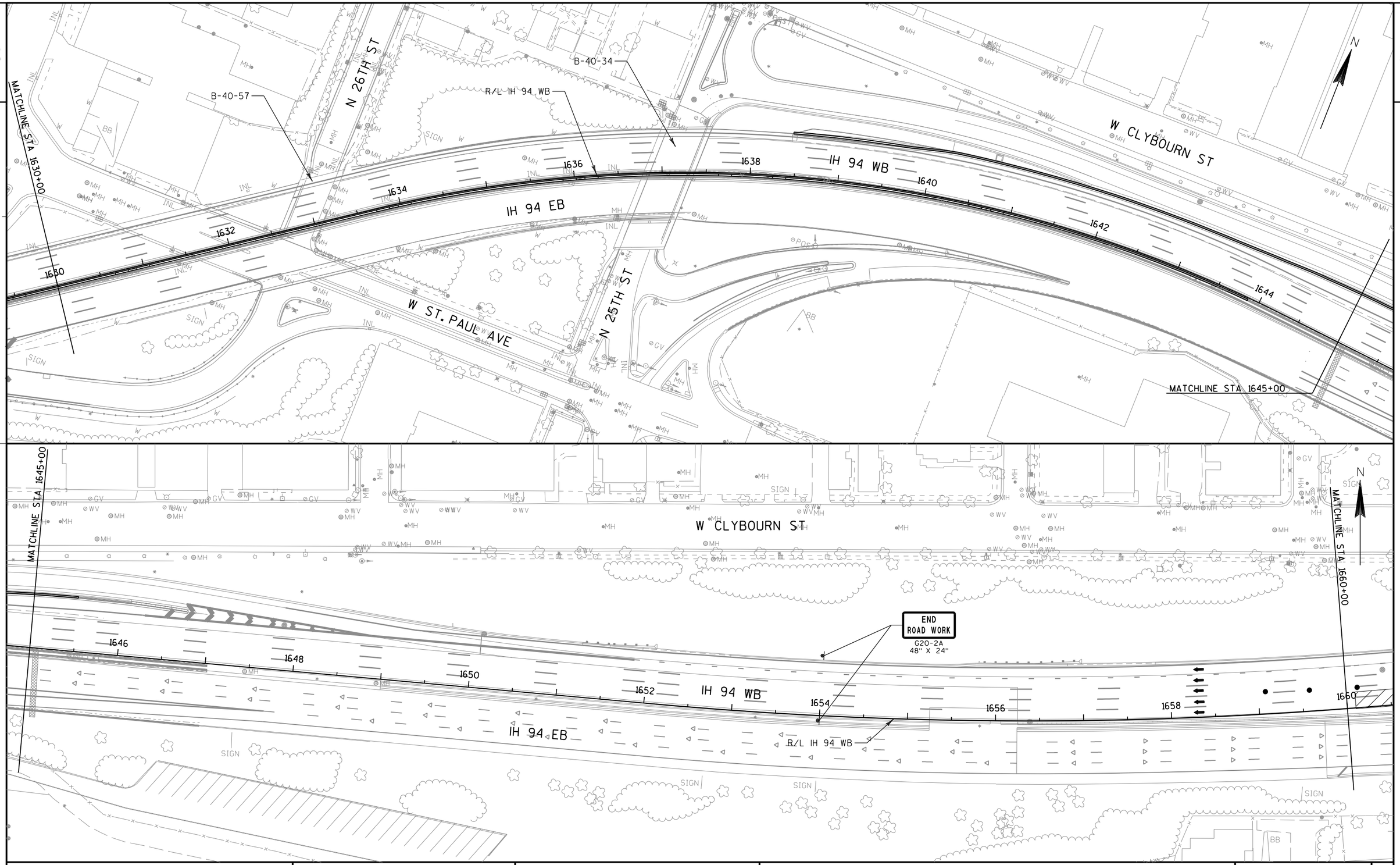
MATCHLINE STA 690+00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4A	SHEET 149 E

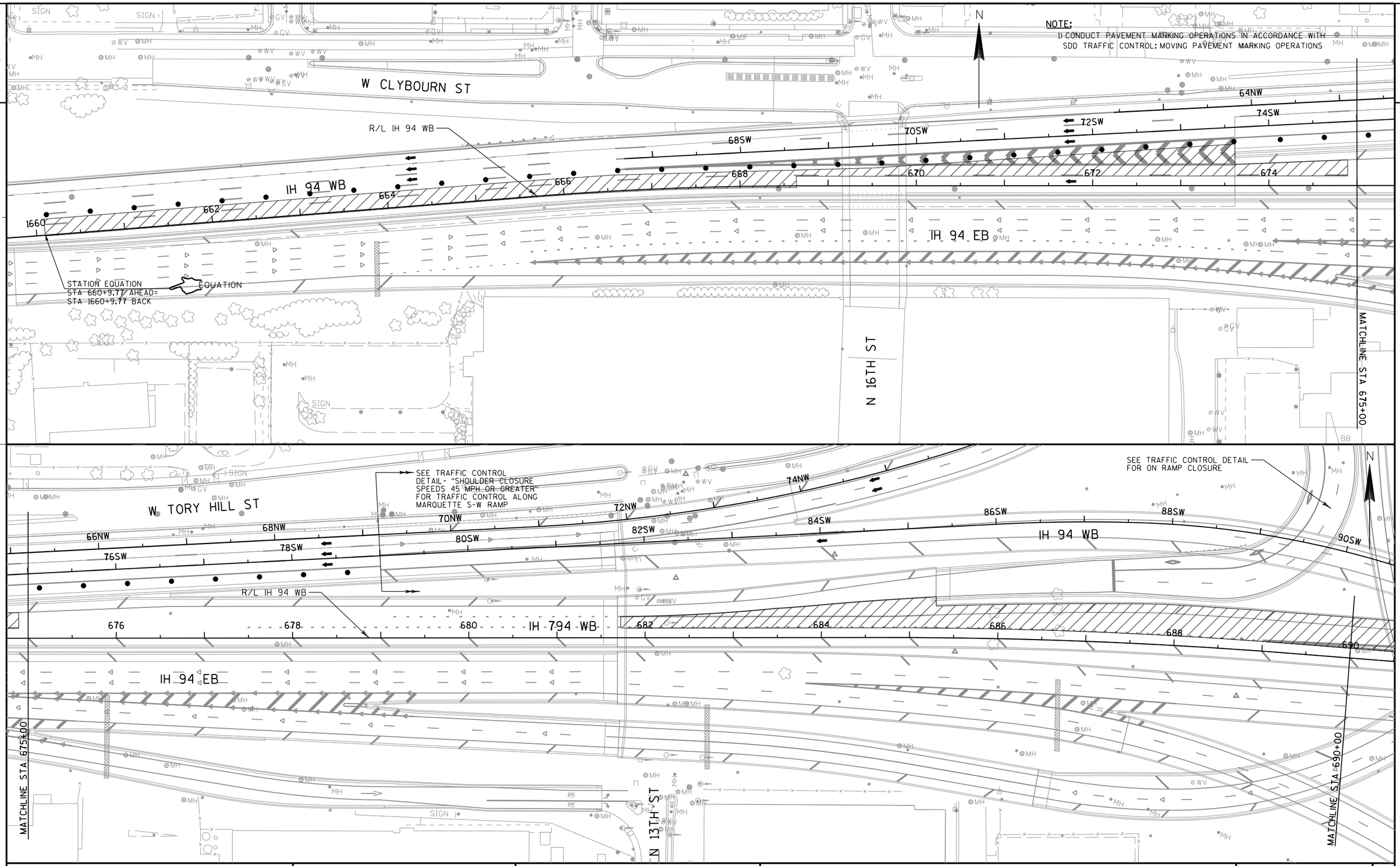
FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025454_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4B	SHEET 150 E



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4B	SHEET 151 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\025474_tc.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTE:
1) CONDUCT PAVEMENT MARKING OPERATIONS IN ACCORDANCE WITH SDD TRAFFIC CONTROL: MOVING PAVEMENT MARKING OPERATIONS

SEE TRAFFIC CONTROL DETAIL FOR ON RAMP CLOSURE

N 7TH ST

W CLYBOURN ST

MATCHLINE STA 705+00

R/L IH 794 WB

IH 794 WB

IH 794 EB

90SW

92SW

94SW

96SW

690 692 694 696 698 700 702 704

MATCHLINE STA 690+00

N 6TH ST

N 5TH ST

N 4TH ST

Ⓐ LANE CLOSED Ⓐ
R11-2(MOD)
48" X 30"

706 708 710 712 714 716 718 720

END PROJECT
STA 715+50.00

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4B	SHEET 152 E

2

MATCHLINE STA 705+00

N 2ND ST

N PLANKINTON AVE

MILWAUKEE

N WATER ST

MATCHLINE STA 735+00

2

SIGN

RAMP

WALLS

E CLYBOURN ST

R/L IH 794 WB

IH 794 WB

IH 794 EB

700

722

724

726

728

730

732

734

LANE CLOSED
R11-2(MOD)
48" X 30"

MILWAUKEE RIVER

N BROADWAY ST

N MILWAUKEE ST

N JEFFERSON ST

N JACKSON ST

N

MATCHLINE STA 735+00

R1-2
36" X 31"

736

SEE TRAFFIC CONTROL DETAIL SHOULDER CLOSURE 45 MPH OR GREATER

ROAD WORK AHEAD
W20-1

S.D.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4B	SHEET 153	E

2

ROAD WORK AHEAD
W20-1

W01-4R

SEE TRAFFIC CONTROL DETAIL "ONE LANE CLOSURE SPEED 45 MPH OR GREATER"

LANE CLOSED
R11-2(MOD)
48" X 30"

IH 794 WB

IH 794 EB

N

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4B	SHEET 154	E

2

WISCONSIN AVE

60TH ST

N. MITCHELL BLVD.

35TH ST

NATIONAL AVE

IH 94/IH 41

RAMP CLOSURE

DETOUR AHEAD

M4-8 DETOUR
M4-5 TO
M03-4 WEST
M1-1 94

M06-1

M05-1L

M05-1R

M4-8A END DETOUR

(SIZE 3)

SEE 35TH ST AND NATIONAL AVE INSET FOR ADDITIONAL SIGNING

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (SIZE X) INDICATES SIGN SIZE
- DETOUR ROUTE / WORK ZONE

GENERAL NOTES

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

2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

35TH ST AND NATIONAL AVE INSET

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - LONG TERM RAMP CLOSURES: 35TH ST WB ENTRANCE	SHEET 155	E

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(SIZE X) INDICATES SIGN SIZE

DETOUR ROUTE

WORK ZONE

WISCONSIN AVE

N. MITCHELL BLVD.

35TH ST

27TH ST

IH 94/IH 41

IH 341

RAMP CLOSURE

DETOUR AHEAD

TO M4-5
WEST MO3-4
INTERSTATE 94 M1-1

DETOUR M4-8
TO M4-5
WEST MO3-4
INTERSTATE 94 M1-1
MO6-1

DETOUR M4-8
TO M4-5
WEST MO3-4
INTERSTATE 94 M1-1
MO5-1L

DETOUR M4-8
TO M4-5
WEST MO3-4
INTERSTATE 94 M1-1
MO5-1R

M4-8A END DETOUR
MO3-4 WEST
M1-1 INTERSTATE 94
(SIZE 3)

GENERAL NOTES

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

2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - LONG TERM RAMP CLOSURES: 28TH ST WB ENTRANCE	SHEET 156 E

2

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(SIZE X) INDICATES SIGN SIZE

DETOUR ROUTE
WORK ZONE

N

WISCONSIN AVE

N. MITCHELL BLVD.

35TH ST

27TH ST

IH 94/IH 41

IH 341

RAMP CLOSURE

DETOUR M4-8
TO M4-5
35TH STREET FMS
M06-1

DETOUR M4-8
TO M4-5
35TH STREET FMS
M06-1

DETOUR M4-8
TO M4-5
35TH STREET FMS
M05-1R

DETOUR M4-8
TO M4-5
35TH STREET FMS
M06-2
(SIZE 3)

M4-8
M4-5
DETOUR
TO
FMS 35TH STREET
M06-1

M4-8A END DETOUR
FMS 35TH STREET

DETOUR M4-8
TO M4-5
35TH STREET FMS
M05-2R
(SIZE 3)

DETOUR M4-8
TO M4-5
35TH STREET FMS
M06-2
(SIZE 3)

DETOUR M4-8
TO M4-5
35TH STREET FMS
M05-2R
(SIZE 3)

DETOUR M4-8
TO M4-5
35TH STREET FMS
M06-1
(SIZE 3)

DETOUR AHEAD

TO M4-5
35TH STREET FMS

GENERAL NOTES

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

2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - LONG TERM RAMP CLOSURES: 35TH ST WB EXIT	SHEET 157	E

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(SIZE X) INDICATES SIGN SIZE

DETOUR ROUTE
WORK ZONE

N

WISCONSIN AVE

35TH ST

ST. PAUL AVE

27TH ST

26TH ST

IH 94/IH 41

RAMP CLOSURE

SEE 35TH ST AND NATIONAL AVE INSET FOR ADDITIONAL SIGNING

35TH ST AND NATIONAL AVE INSET

NATIONAL AVE

35TH ST

GENERAL NOTES

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

2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - LONG TERM RAMP CLOSURES: 35TH ST EB ENTRANCE	SHEET 158	E

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(SIZE X) INDICATES SIGN SIZE

DETOUR ROUTE

WORK ZONE

N

WISCONSIN AVE

35TH ST

27TH ST

26TH ST

ST. PAUL AVE

IH 94/IH 41

IH 341

RAMP CLOSURE

DETOUR AHEAD

M4-5 TO FMS 26TH STREET ST. PAUL AVE

M4-8 DETOUR M4-5 TO FMS 26TH STREET ST. PAUL AVE M05-2R (SIZE 3)

M4-8 DETOUR M4-5 TO FMS 26TH STREET ST. PAUL AVE M06-2 (SIZE 3)

M4-8 DETOUR M4-5 TO FMS 26TH STREET ST. PAUL AVE M05-1L

M4-8 DETOUR M4-5 TO FMS 26TH STREET ST. PAUL AVE M06-1

M4-8 DETOUR M4-5 TO FMS 26TH STREET M06-1

M4-8 DETOUR M4-5 TO FMS 26TH STREET M06-1

M4-8 DETOUR M4-5 TO FMS 26TH STREET M5-1R

M4-5 TO M4-8A END DETOUR FMS ST. PAUL AVE

M4-8 DETOUR M4-5 TO FMS ST. PAUL AVE M06-1

M4-8 DETOUR M4-5 TO FMS 26TH STREET ST. PAUL AVE M06-1

M4-5 TO M4-8A END DETOUR FMS 26TH STREET

M4-8 DETOUR M4-5 TO FMS 26TH STREET M06-1

GENERAL NOTES

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

2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - SHORT TERM RAMP CLOSURES: 26TH ST/ST. PAUL EB EXIT	SHEET 159	E

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(SIZE X) INDICATES SIGN SIZE

DETOUR ROUTE
WORK ZONE

N

FOND DU LAC AVE

IH 43

JUNEAU AVE

HIGHLAND AVE

WISCONSIN AVE

16TH ST

IH 94

IH 794

RAMP CLOSURE

PLACE ON JACKSON ST ON RAMP

GENERAL NOTES

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

2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - SHORT TERM RAMP CLOSURES: IH 794 WB	SHEET 160	E

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(SIZE X) INDICATES SIGN SIZE

DETOUR ROUTE
WORK ZONE

N

HIGHLAND AVE

WISCONSIN AVE

MICHIGAN ST

CLYBOURN ST

IH 43

IH 94

IH 794

16TH ST

N 6TH ST

N 4TH ST

RAMP CLOSURE

DETOUR AHEAD
M03-4 WEST
M1-1 INTERSTATE 94 (SIZE 3)

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M05-2R (SIZE 3)

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-2 (SIZE 3)

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-1

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-1

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-1

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-1

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-1

M4-8A END DETOUR
M03-4 WEST
M1-1 INTERSTATE 94 (SIZE 3)

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-1 (SIZE 3)

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M05-2R (SIZE 3)

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-2 (SIZE 3)

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M05-1L

GENERAL NOTES

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

2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - SHORT TERM RAMP CLOSURES: MARQUETTE N-W RAMP	SHEET 161	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (SIZE X) INDICATES SIGN SIZE
- DETOUR ROUTE
  WORK ZONE

N

WISCONSIN AVE

16TH ST

IH 43

N 11TH ST

N 7TH ST

N 6TH ST

MICHIGAN ST

CLYBOURN ST

IH 94

IH 94/IH 41

CANAL ST

RAMP CLOSURE

SOUTH MENOMONEE CANAL

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-1

M4-8A END DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
(SIZE 3)

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M05-1L

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-1

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M05-1L

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M06-2
(SIZE 3)

DETOUR AHEAD
M03-4 WEST
M1-1 INTERSTATE 94

M4-8 DETOUR
M03-4 WEST
M1-1 INTERSTATE 94
M05-2R
(SIZE 3)

GENERAL NOTES

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

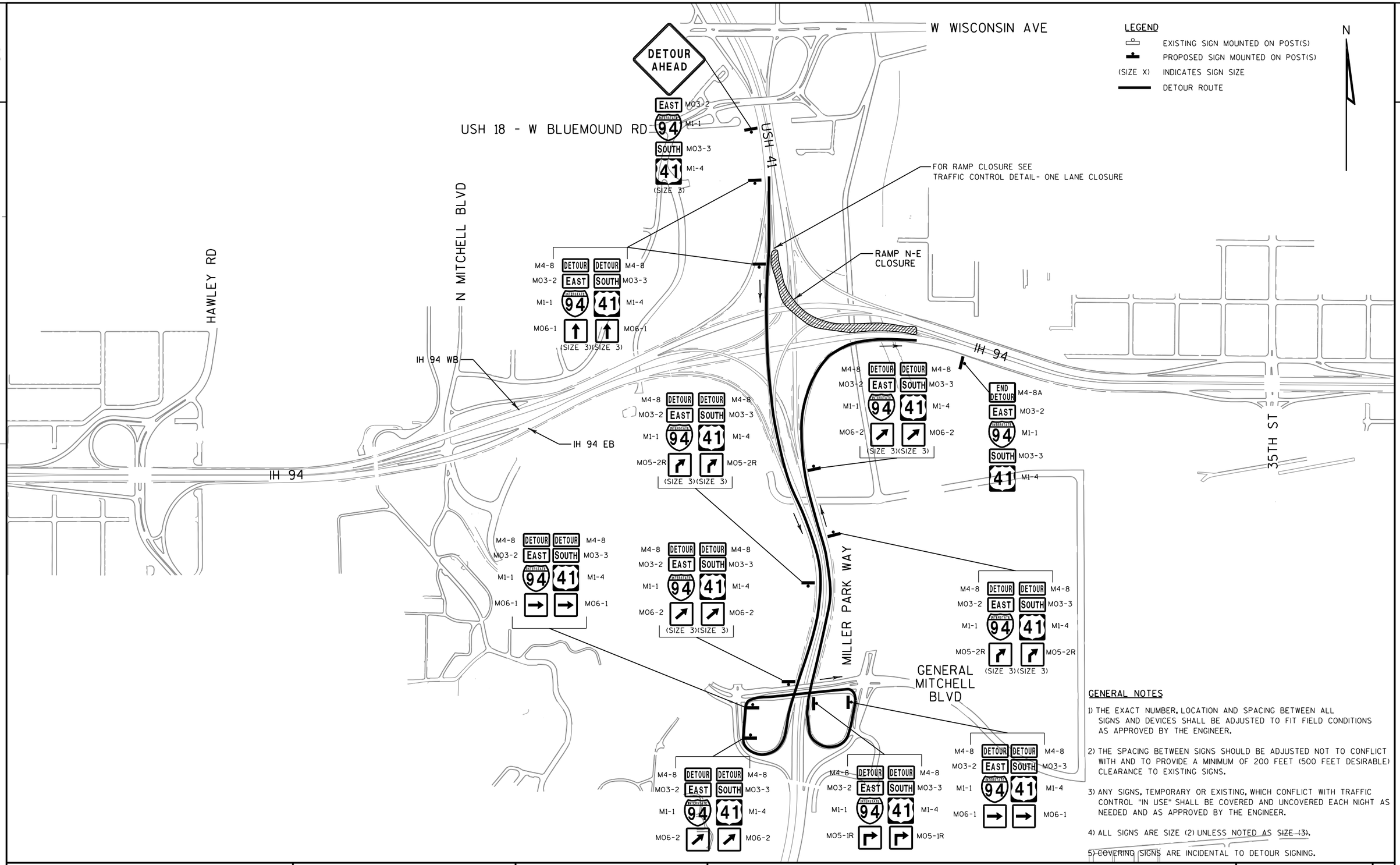
2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - SHORT TERM RAMP CLOSURES: MARQUETTE S-W RAMP	SHEET 162	E



GENERAL NOTES

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

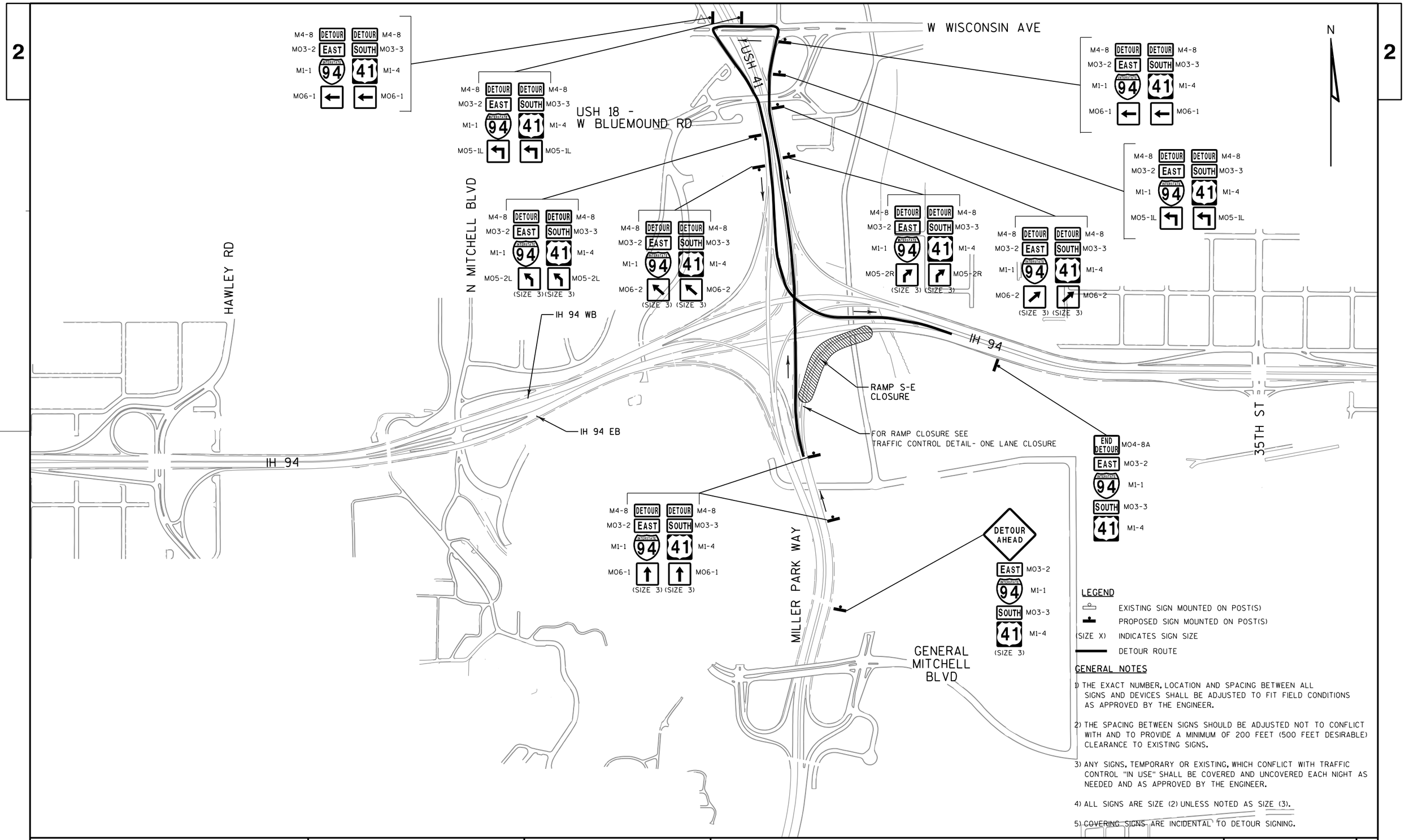
2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - SHORT TERM RAMP CLOSURES: STADIUM N-E RAMP	SHEET 163	E



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - SHORT TERM RAMP CLOSURES: STADIUM S-E RAMP	SHEET 164	E

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(SIZE X) INDICATES SIGN SIZE

DETOUR ROUTE
WORK ZONE

N

N 27TH ST
16TH ST
N 11TH ST
IH 43
N 7TH ST
N 6TH ST
N 5TH ST
N 4TH ST
WISCONSIN AVE
MICHIGAN ST
CLYBOURN ST
IH 94
ST PAUL AVE
CANAL ST
SOUTH MENOMONEE CANAL

RAMP CLOSURE

M4-8 DETOUR
M4-5 TO
M03-4 WEST
M1-1 INTERSTATE 94
M06-1
M05-1L
M05-1R

M4-8A END DETOUR
M03-4 WEST
M1-1 INTERSTATE 94 (SIZE 3)

DETOUR AHEAD

GENERAL NOTES

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

2) THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

4) ALL SIGNS ARE SIZE (2) UNLESS NOTED AS SIZE (3).

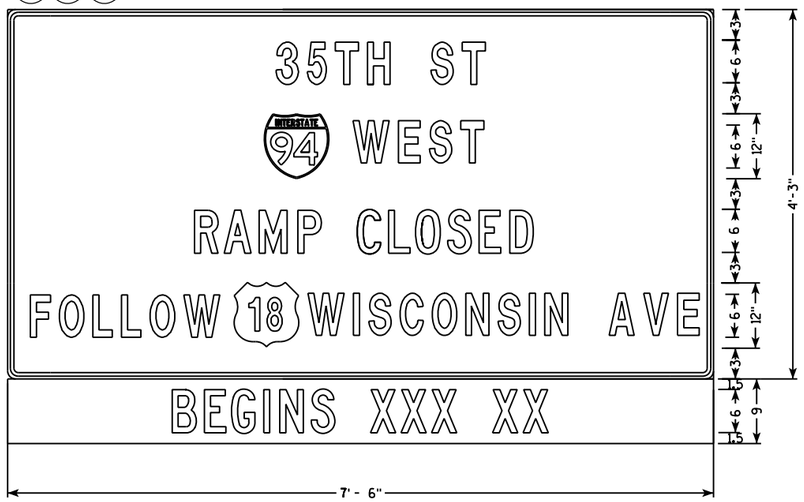
5) COVERING SIGNS ARE INCIDENTAL TO DETOUR SIGNING.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	DETOUR PLAN - SHORT TERM RAMP CLOSURES: 7TH ST & 11TH ST ENTRANCE	SHEET E

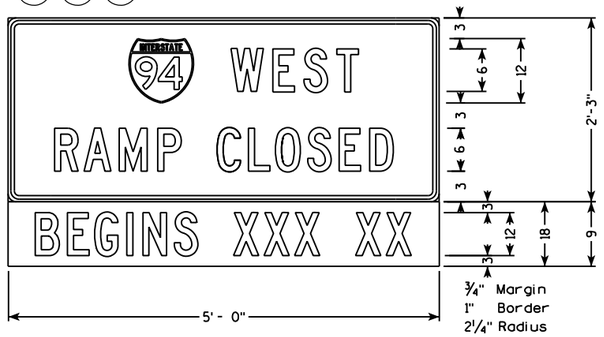
FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\027043_DT.dgn PLOT DATE : 12/14/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:600

WISDOT/CADDS SHEET 42

140 141 142



136 236 237



NOTES:

1) ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION." LATEST EDITION.

2) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.

3) ALL FIXED MESSAGE SIGNS TO BE MOUNTED ON WOODEN SUPPORT POSTS (4"X6"). POSTS ARE INCIDENTAL TO ITEM "FIXED MESSAGE SIGN. STEEL POSTS (2"X2") MAY BE USED FOR SIGNS ON SURFACE STREETS.

4) SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "FIXED MESSAGE SIGNS." OR "SPECIAL MESSAGE SIGNS"

5) SIGNS SHALL BE BLACK NON- REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.

6) ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:

6-IN CAPS SHALL BE SERIES C
12-IN CAPS SHALL BE SERIES D

7) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8) SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

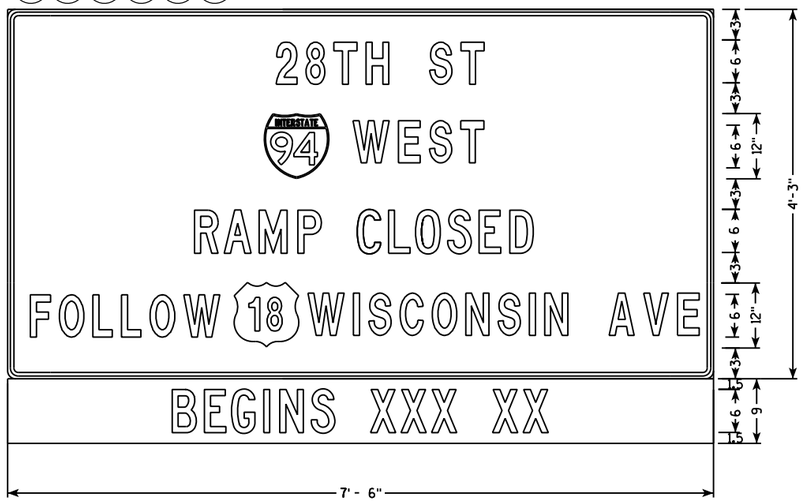
9) SIGN NUMBERS SHOWN BY .... (XX)

10) BEGIN XXX XX SIGNS TO BE IN PLACE 7 DAYS PRIOR TO CONSTRUCTION.

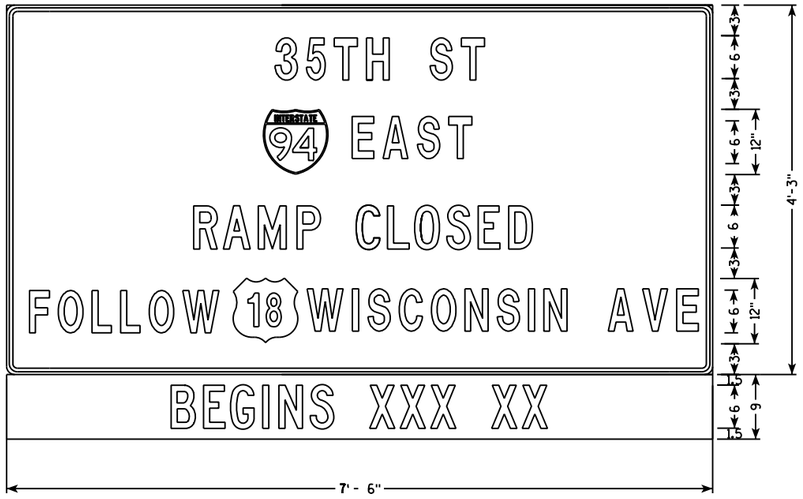
11) BEGIN XXX XX SIGNS SHALL BE SEPERATE PANELS, BUT SHALL BE CONSIDERED AS PART OF THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER IN THE FIELD.

12) DO NOT SCALE.

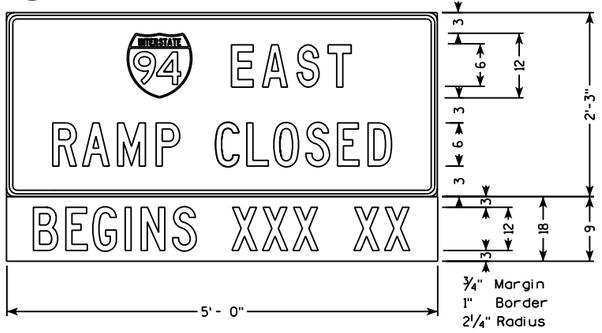
240 241 242 243 244 245



130 131



132

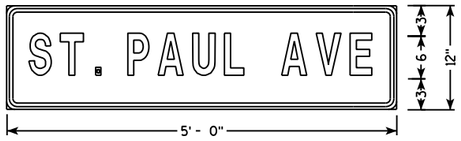


PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	FIXED MESSAGE SIGN DETAILS	SHEET 166	E

11 SIGNS



2 SIGNS



5 SIGNS



6 SIGNS



19 SIGNS



NOTES:

1) ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION." LATEST EDITION.

2) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.

3) ALL FIXED MESSAGE SIGNS TO BE MOUNTED ON WOODEN SUPPORT POSTS (4"X6"). POSTS ARE INCIDENTAL TO ITEM "FIXED MESSAGE SIGN. STEEL POSTS (2"X2") MAY BE USED FOR SIGNS ON SURFACE STREETS.

4) SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "FIXED MESSAGE SIGNS." OR "SPECIAL MESSAGE SIGNS"

5) SIGNS SHALL BE BLACK NON- REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.

6) ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:

6-IN CAPS SHALL BE SERIES C
12-IN CAPS SHALL BE SERIES D

7) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8) SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

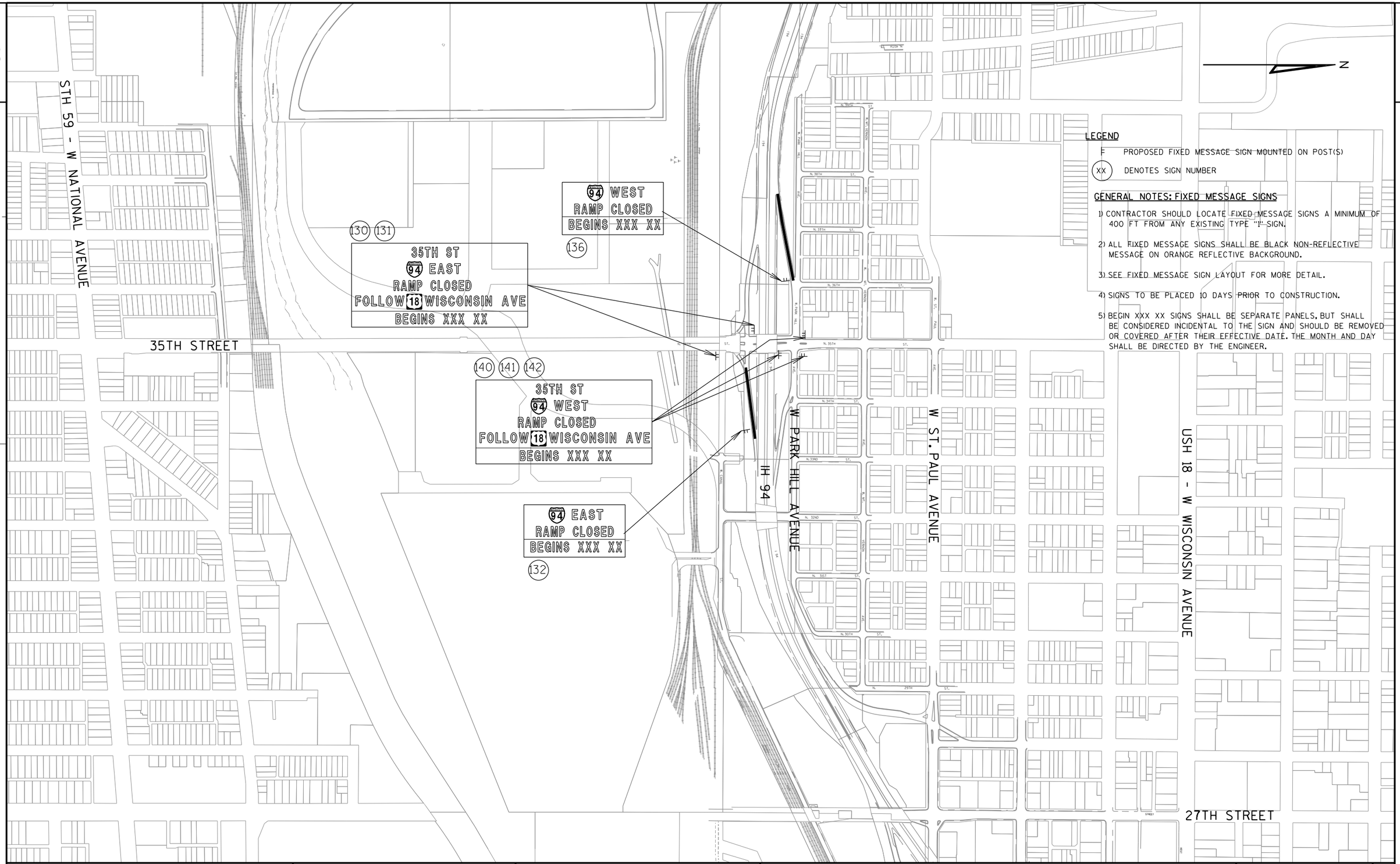
9) SIGN NUMBERS SHOWN BY .... (XX)

10) BEGIN XXX XX SIGNS TO BE IN PLACE 7 DAYS PRIOR TO CONSTRUCTION.

11) BEGIN XXX XX SIGNS SHALL BE SEPERATE PANELS, BUT SHALL BE CONSIDERED AS PART OF THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER IN THE FIELD.

12) DO NOT SCALE.

2



LEGEND

F PROPOSED FIXED MESSAGE SIGN MOUNTED ON POST(S)

(XX) DENOTES SIGN NUMBER

GENERAL NOTES: FIXED MESSAGE SIGNS

1) CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400 FT FROM ANY EXISTING TYPE "I" SIGN.

2) ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.

3) SEE FIXED MESSAGE SIGN LAYOUT FOR MORE DETAIL.

4) SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

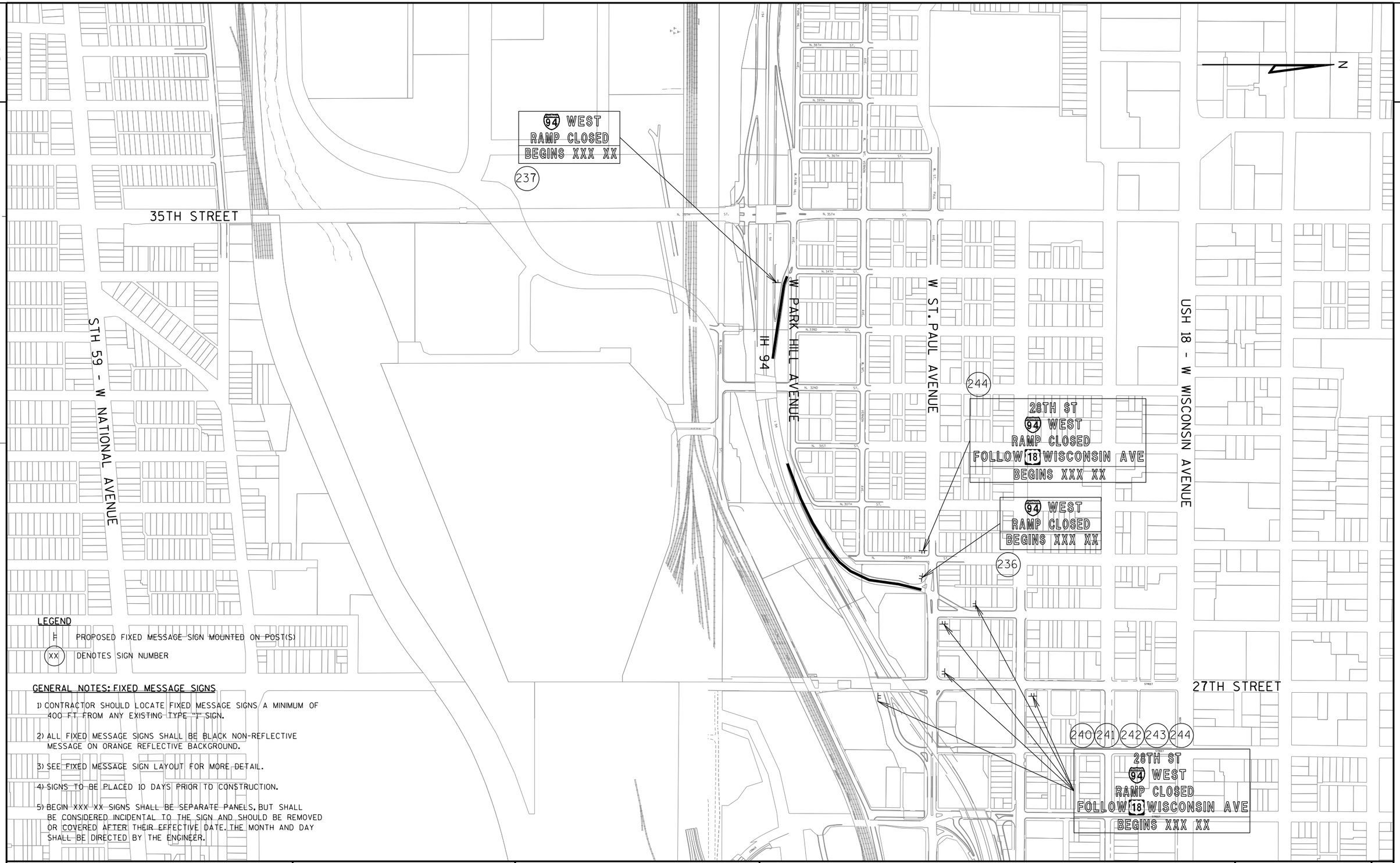
5) BEGIN XXX XX SIGNS SHALL BE SEPARATE PANELS, BUT SHALL BE CONSIDERED INCIDENTAL TO THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	RAMP CLOSURE 35TH STREET ENTRANCE	SHEET	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\027078_DT.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:500

WISDOT/CADDS SHEET 42

2



LEGEND

F PROPOSED FIXED MESSAGE SIGN MOUNTED ON POST(S)

(XX) DENOTES SIGN NUMBER

GENERAL NOTES: FIXED MESSAGE SIGNS

1) CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400 FT FROM ANY EXISTING TYPE "I" SIGN.

2) ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.

3) SEE FIXED MESSAGE SIGN LAYOUT FOR MORE DETAIL.

4) SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

5) BEGIN XXX XX SIGNS SHALL BE SEPARATE PANELS, BUT SHALL BE CONSIDERED INCIDENTAL TO THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER.

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	RAMP CLOSURE-28TH STREET ENTRANCE/35TH STREET EXIT	SHEET 169	E

2

N

W MT VERNON AVE

W PARK HILL AVE

N 35TH ST

N 34TH ST

N 33RD ST

N 32ND ST

N 31ST ST

N 30TH ST

IH 94 WB

IH 94 EB

W CANAL STREET

ROAD CLOSED AHEAD W20-3

ROAD CLOSED R11-2 48" X 30"

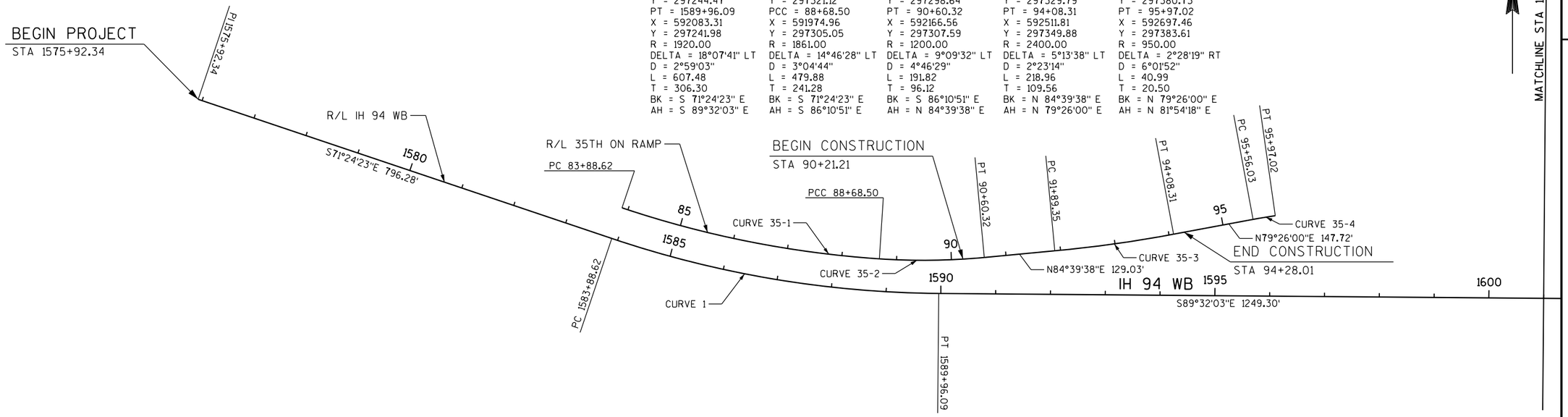
ROAD WORK AHEAD W20-1

SIDEWALK CLOSED R9-9 24" X 12"

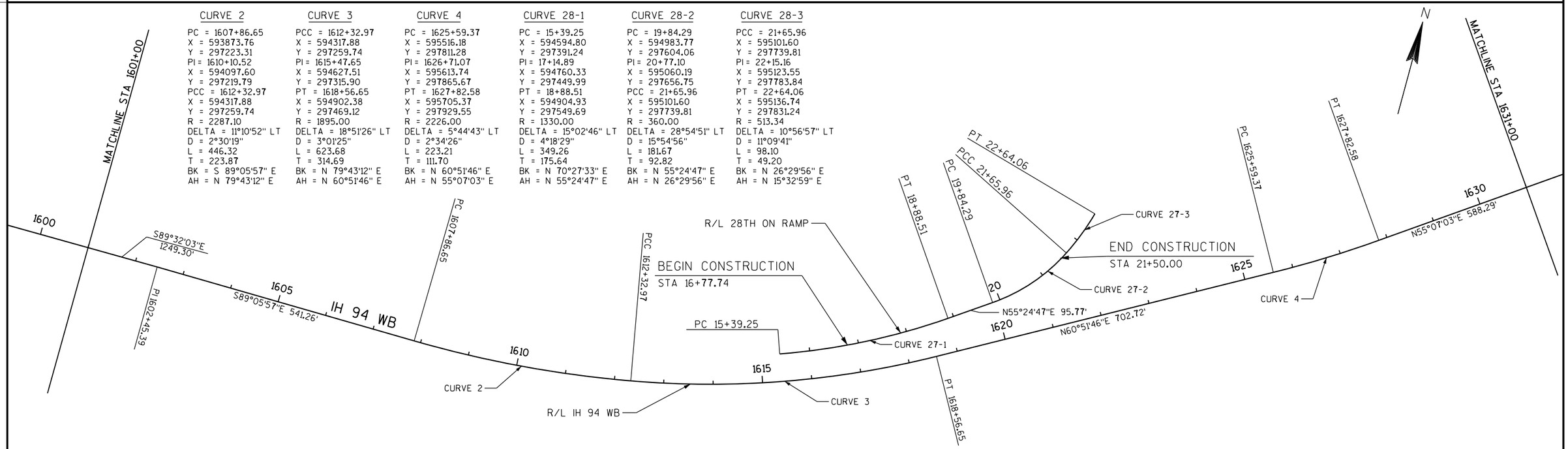
500' PLACE SIGN ALONG W CANAL STREET

PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	ROAD CLOSURE: 32ND STREET	SHEET 170 E

CURVE 1	CURVE 35-1	CURVE 35-2	CURVE 35-3	CURVE 35-4
PC = 1583+88.62	PC = 83+88.62	PCC = 88+68.50	PC = 91+89.35	PC = 95+56.03
X = 591486.72	X = 591505.53	X = 591974.96	X = 592295.03	X = 592657.02
Y = 297342.13	Y = 297398.05	Y = 297305.05	Y = 297319.59	Y = 297376.97
PI = 1586+94.91	PI = 86+29.90	PI = 89+64.62	PI = 92+98.91	PI = 95+76.53
X = 591777.03	X = 591734.22	X = 592070.86	X = 592404.11	X = 592677.17
Y = 297244.47	Y = 297321.12	Y = 297298.64	Y = 297329.79	Y = 297380.73
PT = 1589+96.09	PCC = 88+68.50	PT = 90+60.32	PT = 94+08.31	PT = 95+97.02
X = 592083.31	X = 591974.96	X = 592166.56	X = 592511.81	X = 592697.46
Y = 297241.98	Y = 297305.05	Y = 297307.59	Y = 297349.88	Y = 297383.61
R = 1920.00	R = 1861.00	R = 1200.00	R = 2400.00	R = 950.00
DELTA = 18°07'41" LT	DELTA = 14°46'28" LT	DELTA = 9°09'32" LT	DELTA = 5°13'38" LT	DELTA = 2°28'19" RT
D = 2°59'03"	D = 3°04'44"	D = 4°46'29"	D = 2°23'14"	D = 6°01'52"
L = 607.48	L = 479.88	L = 191.82	L = 218.96	L = 40.99
T = 306.30	T = 241.28	T = 96.12	T = 109.56	T = 20.50
BK = S 71°24'23" E	BK = S 71°24'23" E	BK = S 86°10'51" E	BK = N 84°39'38" E	BK = N 79°26'00" E
AH = S 89°32'03" E	AH = S 86°10'51" E	AH = N 84°39'38" E	AH = N 79°26'00" E	AH = N 81°54'18" E



CURVE 2	CURVE 3	CURVE 4	CURVE 28-1	CURVE 28-2	CURVE 28-3
PC = 1607+86.65	PCC = 1612+32.97	PC = 1625+59.37	PC = 15+39.25	PC = 19+84.29	PCC = 21+65.96
X = 593873.76	X = 594317.88	X = 595516.18	X = 594594.80	X = 594983.77	X = 595101.60
Y = 297223.31	Y = 297259.74	Y = 297811.28	Y = 297391.24	Y = 297604.06	Y = 297739.81
PI = 1610+10.52	PI = 1615+47.65	PI = 1626+71.07	PI = 17+14.89	PI = 20+77.10	PI = 22+15.16
X = 594097.60	X = 594627.51	X = 595613.74	X = 594760.33	X = 595060.19	X = 595123.55
Y = 297219.79	Y = 297315.90	Y = 297865.67	Y = 297449.99	Y = 297656.75	Y = 297783.84
PCC = 1612+32.97	PT = 1618+56.65	PT = 1627+82.58	PT = 18+88.51	PCC = 21+65.96	PT = 22+64.06
X = 594317.88	X = 594902.38	X = 595705.37	X = 594904.93	X = 595101.60	X = 595136.74
Y = 297259.74	Y = 297469.12	Y = 297929.55	Y = 297549.69	Y = 297739.81	Y = 297831.24
R = 2287.10	R = 1895.00	R = 2226.00	R = 1330.00	R = 360.00	R = 513.34
DELTA = 11°10'52" LT	DELTA = 18°51'26" LT	DELTA = 5°44'43" LT	DELTA = 15°02'46" LT	DELTA = 28°54'51" LT	DELTA = 10°56'57" LT
D = 2°30'19"	D = 3°01'25"	D = 2°34'26"	D = 4°18'29"	D = 15°54'56"	D = 11°09'41"
L = 446.32	L = 623.68	L = 223.21	L = 349.26	L = 181.67	L = 98.10
T = 223.87	T = 314.69	T = 111.70	T = 175.64	T = 92.82	T = 49.20
BK = S 89°05'57" E	BK = N 79°43'12" E	BK = N 60°51'46" E	BK = N 70°27'33" E	BK = N 55°24'47" E	BK = N 26°29'56" E
AH = N 79°43'12" E	AH = N 60°51'46" E	AH = N 55°07'03" E	AH = N 55°24'47" E	AH = N 26°29'56" E	AH = N 15°32'59" E



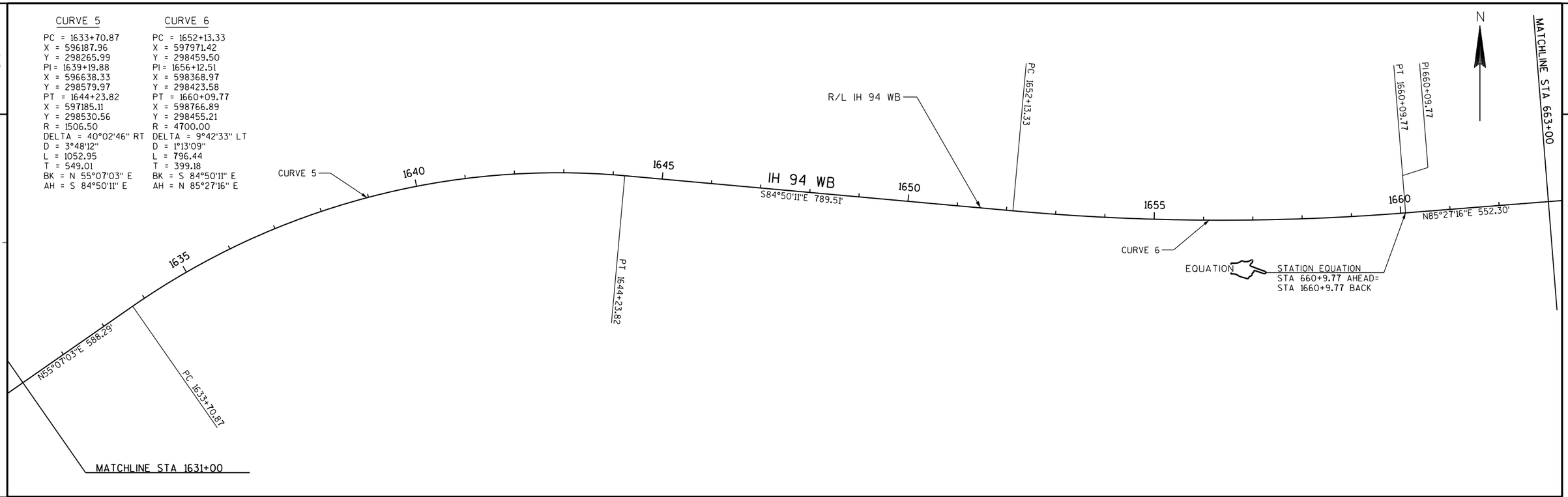
PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	ALIGNMENTS	SHEET 171	E

CURVE 5

PC = 1633+70.87
X = 596187.96
Y = 298265.99
PI = 1639+19.88
X = 596638.33
Y = 298579.97
PT = 1644+23.82
X = 597185.11
Y = 298530.56
R = 1506.50
DELTA = 40°02'46" RT
D = 3°48'12"
L = 1052.95
T = 549.01
BK = N 55°07'03" E
AH = S 84°50'11" E

CURVE 6

PC = 1652+13.33
X = 597971.42
Y = 298459.50
PI = 1656+12.51
X = 598368.97
Y = 298423.58
PT = 1660+09.77
X = 598766.89
Y = 298455.21
R = 4700.00
DELTA = 9°42'33" LT
D = 1°13'09"
L = 796.44
T = 399.18
BK = S 84°50'11" E
AH = N 85°27'16" E



CURVE 7

PC = 665+62.08
X = 599317.46
Y = 298498.98
PI = 667+13.24
X = 599468.14
Y = 298510.96
PT = 668+64.24
X = 599619.30
Y = 298511.08
R = 3846.26
DELTA = 4°30'04" RT
D = 1°29'23"
L = 302.16
T = 151.16
BK = N 85°27'16" E
AH = N 89°57'20" E

CURVE 8

PC = 684+74.32
X = 601229.38
Y = 298512.33
PI = 686+99.07
X = 601454.13
Y = 298512.50
PT = 689+23.59
X = 601678.21
Y = 298495.07
R = 5729.58
DELTA = 4°29'34" RT
D = 1°00'00"
L = 449.27
T = 224.75
BK = N 89°57'20" E
AH = S 85°33'07" E

CURVE NW1

PC = 70NW+94.09
X = 600828.61
Y = 298637.97
PI = 73NW+38.06
X = 601072.27
Y = 298650.43
PCC = 75NW+79.40
X = 601304.96
Y = 298723.74
R = 1909.86
DELTA = 14°33'34" LT
D = 3°00'00"
L = 485.31
T = 243.97
BK = N 87°04'21" E
AH = N 72°30'48" E

CURVE NW2

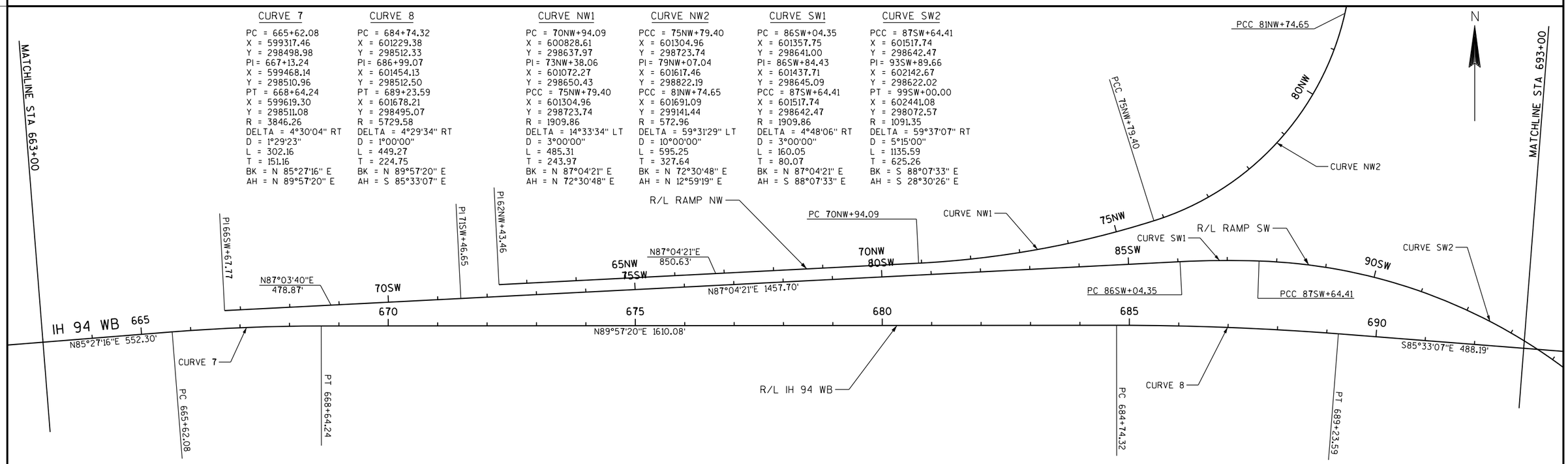
PCC = 75NW+79.40
X = 601304.96
Y = 298723.74
PI = 79NW+07.04
X = 601617.46
Y = 298822.19
PCC = 81NW+74.65
X = 601691.09
Y = 299141.44
R = 572.96
DELTA = 59°31'29" LT
D = 10°00'00"
L = 595.25
T = 327.64
BK = N 72°30'48" E
AH = N 12°59'19" E

CURVE SW1

PC = 86SW+04.35
X = 601357.75
Y = 298641.00
PI = 86SW+84.43
X = 601437.71
Y = 298645.09
PCC = 87SW+64.41
X = 601517.74
Y = 298642.47
R = 1909.86
DELTA = 4°48'06" RT
D = 3°00'00"
L = 160.05
T = 80.07
BK = N 87°04'21" E
AH = S 88°07'33" E

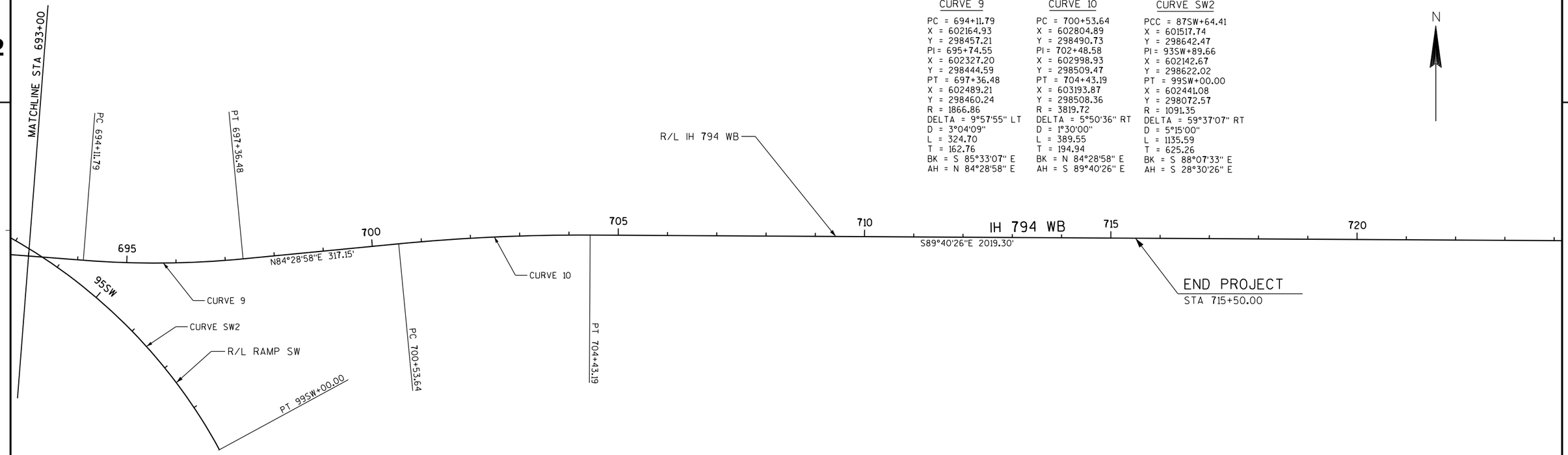
CURVE SW2

PCC = 87SW+64.41
X = 601517.74
Y = 298642.47
PI = 93SW+89.66
X = 602142.67
Y = 298622.02
PT = 99SW+00.00
X = 602441.08
Y = 298072.57
R = 1091.35
DELTA = 59°37'07" RT
D = 5°15'00"
L = 1135.59
T = 625.26
BK = S 88°07'33" E
AH = S 28°30'26" E



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	ALIGNMENTS	SHEET 172	E

2



CURVE 9

PC = 694+11.79
X = 602164.93
Y = 298457.21
PI = 695+74.55
X = 602327.20
Y = 298444.59
PT = 697+36.48
X = 602489.21
Y = 298460.24
R = 1866.86
DELTA = 9°57'55" LT
D = 3°04'09"
L = 324.70
T = 162.76
BK = S 85°33'07" E
AH = N 84°28'58" E

CURVE 10

PC = 700+53.64
X = 602804.89
Y = 298490.73
PI = 702+48.58
X = 602998.93
Y = 298509.47
PT = 704+43.19
X = 603193.87
Y = 298508.36
R = 3819.72
DELTA = 5°50'36" RT
D = 1°30'00"
L = 389.55
T = 194.94
BK = N 84°28'58" E
AH = S 89°40'26" E

CURVE SW2

PCC = 87SW+64.41
X = 601517.74
Y = 298642.47
PI = 93SW+89.66
X = 602142.67
Y = 298622.02
PT = 99SW+00.00
X = 602441.08
Y = 298072.57
R = 1091.35
DELTA = 59°37'07" RT
D = 5°15'00"
L = 1135.59
T = 625.26
BK = S 88°07'33" E
AH = S 28°30'26" E

DATE 03JAN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-45-70 QUANTITY
0010	108.3100.S	INCENTIVE/DISINCENTIVE FOR INTERIM COMPLETION OF WORK 01. STAGE 2	CD	1.000	1.000
0020	201.0105	CLEARING	STA	11.000	11.000
0030	201.0205	GRUBBING	STA	11.000	11.000
0040	203.0200	REMOVING OLD STRUCTURE (STATION) 01. 1609+80	LS	1.000	1.000
0050	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 01. B-40-33	LS	1.000	1.000
0060	204.0100	REMOVING PAVEMENT	SY	4,024.000	4,024.000
0070	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH	SF	13,126.000	13,126.000
0080	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	634.000	634.000
0090	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	68,703.000	68,703.000
0100	204.0157	REMOVING CONCRETE BARRIER	LF	5,232.000	5,232.000
0110	204.0165	REMOVING GUARDRAIL	LF	167.000	167.000
0120	204.0195	REMOVING CONCRETE BASES	EACH	19.000	19.000
0130	204.0220	REMOVING INLETS	EACH	10.000	10.000
0140	204.0245	REMOVING STORM SEWER (SIZE) 01. 12-INCH	LF	73.000	73.000
0150	204.0245	REMOVING STORM SEWER (SIZE) 02. 15-INCH	LF	8.000	8.000
0160	204.9060.S	REMOVING (ITEM DESCRIPTION) 01. INLET COVERS	EACH	18.000	18.000
0170	205.0100	EXCAVATION COMMON	CY	3,841.000	3,841.000
0180	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-40-34	LS	1.000	1.000
0190	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-40-43	LS	1.000	1.000
0200	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 03. B-40-57	LS	1.000	1.000
0210	213.0100	FINISHING ROADWAY (PROJECT) 01. 1060-45-70	EACH	1.000	1.000
0220	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	3,841.000	3,841.000
0230	320.0355	CONCRETE BASE HES 9-INCH	SY	1,513.000	1,513.000
0240	320.0365	CONCRETE BASE HES 10-INCH	SY	6,441.000	6,441.000
0250	390.0403	BASE PATCHING CONCRETE SHES	SY	300.000	300.000
0260	415.0070	CONCRETE PAVEMENT 7-INCH	SY	517.000	517.000
0270	416.0610	DRILLED TIE BARS	EACH	2,805.000	2,805.000
0280	416.0620	DRILLED DOWEL BARS	EACH	144.000	144.000
0290	440.4410.S	INCENTIVE IRI RIDE	DOL	20,648.000	20,648.000
0300	455.0115	ASPHALTIC MATERIAL PG64-22	TON	76.000	76.000
0310	455.0150	ASPHALTIC MATERIAL PG70-28P	TON	476.000	476.000
0320	455.0605	TACK COAT	GAL	2,614.000	2,614.000
0330	460.1130	HMA PAVEMENT TYPE E-30	TON	11,524.000	11,524.000
0340	502.0100	CONCRETE MASONRY BRIDGES	CY	215.490	215.490
0350	502.3100	EXPANSION DEVICE (STRUCTURE) 01. B-40-33	LS	1.000	1.000
0360	502.3200	PROTECTIVE SURFACE TREATMENT	SY	200.000	200.000
0370	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	11,960.000	11,960.000
0380	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	8,820.000	8,820.000
0390	509.1500	CONCRETE SURFACE REPAIR	SF	20.000	20.000
0400	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 01. B-40-33	LS	1.000	1.000
0410	520.8000	CONCRETE COLLARS FOR PIPE	EACH	2.000	2.000
0420	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	1,710.000	1,710.000
0430	603.1136	CONCRETE BARRIER TYPE S36	LF	2,795.000	2,795.000
0440	603.1142	CONCRETE BARRIER TYPE S42	LF	173.000	173.000

3

DATE 03JAN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-45-70 QUANTITY
0450	603.2142	CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S42	LF	481.000	481.000
0460	603.3113	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36	EACH	6.000	6.000
0470	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	1,625.000	1,625.000
0480	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	2,225.000	2,225.000
0490	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	94.000	94.000
0500	611.0430	RECONSTRUCTING INLETS	EACH	15.000	15.000
0510	611.0530	MANHOLE COVERS TYPE J	EACH	2.000	2.000
0520	611.0606	INLET COVERS TYPE B	EACH	1.000	1.000
0530	611.0627	INLET COVERS TYPE HM	EACH	3.000	3.000
0540	611.0654	INLET COVERS TYPE V	EACH	15.000	15.000
0550	611.3004	INLETS 4-FT DIAMETER	EACH	1.000	1.000
0560	611.3220	INLETS 2X2-FT	EACH	14.000	14.000
0570	611.3230	INLETS 2X3-FT	EACH	3.000	3.000
0580	611.8110	ADJUSTING MANHOLE COVERS	EACH	1.000	1.000
0590	611.8115	ADJUSTING INLET COVERS	EACH	11.000	11.000
0600	611.8120.S	COVER PLATES TEMPORARY	EACH	1.000	1.000
0610	614.0905	CRASH CUSHIONS TEMPORARY	EACH	1.000	1.000
0620	614.2300	MGS GUARDRAIL 3	LF	313.000	313.000
0630	614.2500	MGS THRIE BEAM TRANSITION	LF	120.000	120.000
0640	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	6.000	6.000
0650	614.2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	1.000	1.000
0660	616.0700.S	FENCE SAFETY	LF	500.000	500.000
0670	619.1000	MOBILIZATION	EACH	1.000	1.000
0680	625.0105	TOPSOIL	CY	3,464.000	3,464.000
0690	628.1504	SILT FENCE	LF	300.000	300.000
0700	628.1520	SILT FENCE MAINTENANCE	LF	300.000	300.000
0710	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	3.000	3.000
0720	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	3.000	3.000
0730	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	2,944.000	2,944.000
0740	628.7010	INLET PROTECTION TYPE B	EACH	66.000	66.000
0750	628.7020	INLET PROTECTION TYPE D	EACH	54.000	54.000
0760	629.0210	FERTILIZER TYPE B	CWT	2.200	2.200
0770	630.0120	SEEDING MIXTURE NO. 20	LB	94.000	94.000
0780	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	6.000	6.000
0790	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	16.000	16.000
0800	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,598.000	2,598.000
0810	637.0101	SIGNS TYPE I	SF	197.500	197.500
0820	637.0202	SIGNS REFLECTIVE TYPE II	SF	92.500	92.500
0830	638.2101	MOVING SIGNS TYPE I	EACH	2.000	2.000
0840	638.2102	MOVING SIGNS TYPE II	EACH	15.000	15.000
0850	638.2601	REMOVING SIGNS TYPE I	EACH	1.000	1.000
0860	638.2602	REMOVING SIGNS TYPE II	EACH	13.000	13.000
0870	641.1200	SIGN BRIDGE CANTILEVERED (STRUCTURE) 01. S-40-859	LS	1.000	1.000
0880	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1060-45-70	DAY	60.000	60.000
0890	643.0300	TRAFFIC CONTROL DRUMS	DAY	17,155.000	17,155.000
0900	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	497.000	497.000
0910	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	2,629.000	2,629.000

3

DATE 03JAN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-45-70 QUANTITY
0920	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,514.000	1,514.000
0930	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	245.000	245.000
0940	643.0900	TRAFFIC CONTROL SIGNS	DAY	3,063.000	3,063.000
0950	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	5.000	5.000
0960	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	50.000	50.000
0970	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1060-45-70	EACH	1.000	1.000
0980	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	4,478.000	4,478.000
0990	646.0103	PAVEMENT MARKING PAINT 4-INCH	LF	13,318.000	13,318.000
1000	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	83,690.000	83,690.000
1010	646.0123	PAVEMENT MARKING PAINT 8-INCH	LF	10,157.000	10,157.000
1020	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	650.000	650.000
1030	646.0600	REMOVING PAVEMENT MARKINGS	LF	94,812.000	94,812.000
1040	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	10,989.000	10,989.000
1050	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	8,639.000	8,639.000
1060	647.0576	PAVEMENT MARKING STOP LINE EPOXY 24-INCH	LF	20.000	20.000
1070	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	125.000	125.000
1080	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	LF	1,506.000	1,506.000
1090	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	55,068.000	55,068.000
1100	649.0701	TEMPORARY PAVEMENT MARKING 8-INCH	LF	2,254.000	2,254.000
1110	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	4,420.000	4,420.000
1120	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	821.000	821.000
1130	652.0700.S	INSTALL CONDUIT INTO EXISTING ITEM	EACH	2.000	2.000
1140	652.0800	CONDUIT LOOP DETECTOR	LF	220.000	220.000
1150	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	11.000	11.000
1160	653.0905	REMOVING PULL BOXES	EACH	3.000	3.000
1170	654.0101	CONCRETE BASES TYPE 1	EACH	2.000	2.000
1180	654.0102	CONCRETE BASES TYPE 2	EACH	3.000	3.000
1190	654.0105	CONCRETE BASES TYPE 5	EACH	6.000	6.000
1200	654.0220	CONCRETE CONTROL CABINET BASES TYPE 10	EACH	4.000	4.000
1210	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	672.000	672.000
1220	655.0305	CABLE TYPE UF 2-12 AWG GROUNDED	LF	573.000	573.000
1230	655.0505	ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	LF	338.000	338.000
1240	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	4,096.000	4,096.000
1250	655.0615	ELECTRICAL WIRE LIGHTING 10 AWG	LF	717.000	717.000
1260	655.0620	ELECTRICAL WIRE LIGHTING 8 AWG	LF	528.000	528.000
1270	655.0630	ELECTRICAL WIRE LIGHTING 4 AWG	LF	10,288.000	10,288.000
1280	655.0640	ELECTRICAL WIRE LIGHTING 1 AWG	LF	3,808.000	3,808.000
1290	655.0700	LOOP DETECTOR LEAD IN CABLE	LF	3,431.000	3,431.000
1300	655.0800	LOOP DETECTOR WIRE	LF	802.000	802.000
1310	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. 11.ATR ATR 40-0003	LS	1.000	1.000
1320	657.0100	PEDESTAL BASES	EACH	3.000	3.000
1330	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	22.000	22.000
1340	657.0321	POLES TYPE 5-STEEL	EACH	1.000	1.000
1350	657.0425	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	EACH	3.000	3.000
1360	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	32.000	32.000
1370	670.0100	FIELD SYSTEM INTEGRATOR 01. FTMS	LS	1.000	1.000
1380	670.0200	ITS DOCUMENTATION 01. FTMS	LS	1.000	1.000

3

DATE 03JAN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-45-70 QUANTITY
1390	674.0200	CABLE MICROWAVE DETECTOR	LF	131.000	131.000
1400	674.0300	REMOVE CABLE	LF	2,030.000	2,030.000
1410	678.0500	COMMUNICATION SYSTEM TESTING 01. FTMS	LS	1.000	1.000
1420	690.0250	SAWING CONCRETE	LF	11,993.000	11,993.000
1430	SPV.0045	SPECIAL 01. PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) CELLULAR COMMUNICATIONS	DAY	13,274.000	13,274.000
1440	SPV.0060	SPECIAL 01. SAWING CONCRETE BARRIER	EACH	12.000	12.000
1450	SPV.0060	SPECIAL 02. WELDING STORM SEWER COVERS	EACH	16.000	16.000
1460	SPV.0060	SPECIAL 03. COVER PLATES LEFT IN PLACE	EACH	21.000	21.000
1470	SPV.0060	SPECIAL 04. EXPOSING EXISTING UTILITY	EACH	2.000	2.000
1480	SPV.0060	SPECIAL 05. CONCRETE BARRIER TRANSITION TYPE S32 TO S42 AT GORE	EACH	1.000	1.000
1490	SPV.0060	SPECIAL 06. CONCRETE BARRIER TRANSITION TYPE S36 SINGLE TO DOUBLE	EACH	4.000	4.000
1500	SPV.0060	SPECIAL 07. CONCRETE BARRIER TRANSITION TYPE V36 TO S36	EACH	35.000	35.000
1510	SPV.0060	SPECIAL 08. CONCRETE BARRIER TRANSITION TYPE S32 TO TYPE S42 ANCHORED	EACH	1.000	1.000
1520	SPV.0060	SPECIAL 09. PAVEMENT MARKING GROVED PREFORMED THERMOPLASTIC ARROWS TYPE 1	EACH	2.000	2.000
1530	SPV.0060	SPECIAL 10. PAVEMENT MARKING GROVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	EACH	2.000	2.000
1540	SPV.0060	SPECIAL 11. PAVEMENT MARKING GROVED PREFORMED THERMOPLASTIC ARROWS TYPE 5	EACH	4.000	4.000
1550	SPV.0060	SPECIAL 12. LINEAR DELINATION SYSTEM	EACH	736.000	736.000
1560	SPV.0060	SPECIAL 21. GROUND ROD	EACH	1.000	1.000
1570	SPV.0060	SPECIAL 22. SALVAGE EXISTING MICROWAVE DETECTOR ASSEMBLY	EACH	1.000	1.000
1580	SPV.0060	SPECIAL 23. REINSTALL SALVAGED MICROWAVE DETECTOR ASSEMBLY	EACH	1.000	1.000
1590	SPV.0060	SPECIAL 24. REFOCUS EXISTING MICROWAVE DETECTOR ASSEMBLY	EACH	3.000	3.000
1600	SPV.0060	SPECIAL 25. SALVAGE EXISTING & INSTALL SALVAGED SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT	EACH	2.000	2.000
1610	SPV.0060	SPECIAL 26. BARRICADE RACK	EACH	1.000	1.000
1620	SPV.0060	SPECIAL 27. RAMP CLOSURE GATES SOLAR POWERED 24-FT	EACH	1.000	1.000
1630	SPV.0060	SPECIAL 28. RAMP CLOSURE GATES SOLAR POWERED 30-FT	EACH	3.000	3.000
1640	SPV.0060	SPECIAL 29. RAMP CLOSURE GATES SOLAR POWERED 37-FT	EACH	1.000	1.000
1650	SPV.0060	SPECIAL 30. RAMP CLOSURE GATES ARM STOCKPILE 24-FT	EACH	1.000	1.000
1660	SPV.0060	SPECIAL 31. RAMP CLOSURE GATES ARM STOCKPILE 30-FT	EACH	3.000	3.000
1670	SPV.0060	SPECIAL 32. RAMP CLOSURE GATES ARM STOCKPILE 37-FT	EACH	1.000	1.000
1680	SPV.0060	SPECIAL 33. RAMP CLOSURE GATES FLASHERS STOCKPILE	EACH	3.000	3.000
1690	SPV.0060	SPECIAL 40. INSTALL TYPE 5 POLE	EACH	1.000	1.000
1700	SPV.0060	SPECIAL 41. INSTALL CCTV POLE MOUNTED CABINET 24"X51"	EACH	3.000	3.000
1710	SPV.0060	SPECIAL 42. CONCRETE MAINTENANCE PLATFORM 48"X36"X4"	EACH	3.000	3.000
1720	SPV.0060	SPECIAL 43. INSTALL WAVETRONIX CLICK 202 MODULE	EACH	1.000	1.000

3

DATE 03JAN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-45-70 QUANTITY
1730	SPV.0060	SPECIAL 44. INSTALL WAVETRONIX CLICK 200 MODULE	EACH	3.000	3.000
1740	SPV.0060	SPECIAL 45. INSTALL WAVETRONIX HD 125 & CABLE	EACH	1.000	1.000
1750	SPV.0060	SPECIAL 46. INSTALL CABINET HEATER & THERMOSTAT	EACH	1.000	1.000
1760	SPV.0060	SPECIAL 47. INSTALL TYPE 3 POLE	EACH	2.000	2.000
1770	SPV.0060	SPECIAL 48. INSTALL SOLAR POWER PANELS & RACK	EACH	2.000	2.000
1780	SPV.0060	SPECIAL 49. INSTALL CELLULAR ANTENNA	EACH	2.000	2.000
1790	SPV.0060	SPECIAL 51. INSTALL WAVETRONIX HD 125	EACH	2.000	2.000
1800	SPV.0060	SPECIAL 52. INSTALL TRANSFORMER BASES 11 1/2-INCH BOLT CIRCLE	EACH	1.000	1.000
1810	SPV.0060	SPECIAL 80. WOOD POLE LIGHTING 40-FT	EACH	5.000	5.000
1820	SPV.0060	SPECIAL 81. WOOD POLE 40-FT	EACH	3.000	3.000
1830	SPV.0060	SPECIAL 82. LUMINAIRES FLOODLIGHT 400W HPS	EACH	5.000	5.000
1840	SPV.0060	SPECIAL 83. BOOM LIGHT AND GENERATOR	EACH	1.000	1.000
1850	SPV.0060	SPECIAL 84. SELF CONTAINED TOWER LIGHT	EACH	7.000	7.000
1860	SPV.0060	SPECIAL 85. LAMP DISPOSAL HIGH INTENSITY DISCHARGE	EACH	33.000	33.000
1870	SPV.0060	SPECIAL 86. SALVAGING LIGHT POLES, LUMINAIRES AND ARMS	EACH	16.000	16.000
1880	SPV.0060	SPECIAL 87. PULL BOX STEEL 18X42-INCH SPECIAL	EACH	4.000	4.000
1890	SPV.0060	SPECIAL 88. CONCRETE BASES MEDIAN BARRIER	EACH	15.000	15.000
1900	SPV.0075	SPECIAL 01. PAVEMENT CLEANUP	HRS	100.000	100.000
1910	SPV.0075	SPECIAL 02. TRUCK MOUNTED ATTENUATOR WITH OPERATOR	HRS	250.000	250.000
1920	SPV.0075	SPECIAL 03. TRUCK MOUNTED ATTENUATOR WITHOUT OPERATOR	HRS	250.000	250.000
1930	SPV.0090	SPECIAL 01. REMOVING PAVEMENT MARKINGS WATER BLASTING	LF	4,565.000	4,565.000
1940	SPV.0090	SPECIAL 02. DRAIN SLOTTED VANE 6-FT SPECIAL	LF	216.000	216.000
1950	SPV.0090	SPECIAL 03. CONCRETE BARRIER TYPE S42 ANCHORED	LF	758.000	758.000
1960	SPV.0090	SPECIAL 04. DRAIN SLOTTED VANE PIPE	LF	561.000	561.000
1970	SPV.0090	SPECIAL 05. CONC C&G AND BARRIER COLD WEATHER COVERING PLASTIC/HAY/PLASTIC OR BLANKETS	LF	2,600.000	2,600.000
1980	SPV.0090	SPECIAL 06. CONCRETE CURB & GUTTER AND BARRIER COLD WEATHER COVERING PLASTIC 1 LAYER	LF	2,600.000	2,600.000
1990	SPV.0090	SPECIAL 07. CONCRETE CURB & GUTTER AND BARRIER COLD WEATHER COVERING PLASTIC 2 LAYERS	LF	2,600.000	2,600.000
2000	SPV.0090	SPECIAL 08. CONCRETE BARRIER TYPE V36	LF	129.000	129.000
2010	SPV.0090	SPECIAL 09. CONCRETE BARRIER TYPE S32 ANCHORED	LF	211.000	211.000
2020	SPV.0090	SPECIAL 80. CABLE AERIAL ALUMINUM 4 AWG QUADRUPLEX TEMPORARY	LF	1,075.000	1,075.000
2030	SPV.0105	SPECIAL 01. SURVEY PROJECT I.D. 1060-45-70	LS	1.000	1.000
2040	SPV.0105	SPECIAL 80. MAINTENANCE OF LIGHTING SYSTEM	LS	1.000	1.000

3

DATE 03JAN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-45-70 QUANTITY
2050	SPV.0180	SPECIAL 01. CONCRETE PAVEMENT COLD WEATHER COVERING PLASTIC 1 LAYER	SY	2,800.000	2,800.000
2060	SPV.0180	SPECIAL 02. CONCRETE PAVEMENT COLD WEATHER COVERING PLASTIC 2 LAYERS	SY	2,800.000	2,800.000
2070	SPV.0180	SPECIAL 03. CONCRETE PAVEMENT COLD WEATHER COVERING PLASTIC/HAY/PLASTIC OR BLANKETS	SY	2,800.000	2,800.000
2080	SPV.0180	SPECIAL 07. EPOXY OVERLAY	SY	45.000	45.000

REMOVING PAVEMENT

STATION			OFFSET	LOCATION	204.0100 REMOVING PAVEMENT SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY
STAGE 1A SUBTOTAL								
1585+40	-	1592+74	WB LT	IH 94	855	--	--	--
91+21	-	94+28	RT	35TH ST ON RAMP	1,043	--	--	--
1620+72	-	1638+45	WB LT	IH 94	1,608		--	--
STAGE 1A SUBTOTAL					3,506	--	--	--
STAGE 1B								
1616+65	-	1620+72	WB LT	IH 94	518	--	--	--
STAGE 1B SUBTOTAL					518	--	--	--
STAGE 3A								
1575+92	-	1576+17	WB	IH 94	--	--	--	66
1575+92	-	1609+07	WB	IH 94	--	8,357	--	--
1608+80	-	1609+05	WB	IH 94	--	--	--	53
1610+41	-	1610+66	WB	IH 94	--	--	--	58
1610+66	-	1616+54	WB	IH 94	--	2,072	--	--
1616+54	-	1638+48	WB	IH 94	--	4,889	--	--
1638+48	-	1645+00	WB	IH 94	--	1,524	--	--
1645+00	-	1660+10	WB	IH 94	--	4,179	--	--
665+62	-	679+00	WB	IH 94	--	1,789	--	--
1599+00	-	1609+05	EB	IH 94		2,455	--	--
1610+66	-	1632+50	EB	IH 94	--	5,117	--	--
STAGE 3A SUBTOTAL					--	30,381	--	177

REMOVING PAVEMENT (CONTINUED)

STATION			OFFSET	LOCATION	204.0100 REMOVING PAVEMENT	204.0120 REMOVING ASPHALTIC SURFACE MILLING	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS
STAGE 3B								
1575+92	-	1576+17	WB	IH 94	--	--	--	73
1575+92	-	1609+07	WB	IH 94	--	8,184	--	--
1581+00	-	1585+40	WB	IH 94	--	--	1,890	--
1592+74	-	1606+00	WB	IH 94	--	--	11,126	--
1608+80	-	1609+05	WB	IH 94	--	--	--	92
1610+41	-	1610+66	WB	IH 94	--	--	--	88
1610+66	-	1616+54	WB	IH 94	--	1,337	--	--
1616+54	-	1638+48	WB	IH 94	--	4,242	--	--
1645+00	-	1660+10	WB	IH 94	--	5,808	--	--
1657+06	-	1658+11	WB	IH 94	--	--	110	--
1599+00	-	1609+05	EB	IH 94	--	2,152	--	--
1610+66	-	1632+50	EB	IH 94	--	4,726	--	--
16+47	-	21+50	R/L	28TH ST ON RAMP	--	1,151	--	--
STAGE 3B SUBTOTAL					--	27,599	13,126	254
STAGE 4A								
660+10	-	665+62	WB	IH 94	--	4,111	--	--
65+58	-	78+75	WB	IH 43	--	3,451	--	--
78+75	-	79+00	WB	IH 43	--	--	--	100
STAGE 4A SUBTOTAL					--	7,562	--	100
STAGE 4B								
674+64	-	674+89	WB	IH 794	--	--	--	46
665+62	-	674+89	WB	IH 794	--	1,231	--	--
697+50	-	701+35	WB	IH 794		1,930	--	56
STAGE 4B SUBTOTAL					--	3,161	--	102
PROJECT TOTAL					4,024	68,703	13,126	634

3

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

FINISHING ROADWAY

STATION			OFFSET	LOCATION	213.0100.01 FINISHING ROADWAY PROJECT I.D. 1060-45-70 EACH
1575+92	TO	715+50	R/L	IH 94	1
PROJECT TOTAL					1

BASE AGGREGATE DENSE

STATION			OFFSET	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
STAGE 1A					
85+58	-	89+81	R/L	35TH ST ON RAMP	383
89+81	-	94+28	R/L	35TH ST ON RAMP	203
1591+30	-	1592+75	WB LT	IH 94	146
1620+72	-	1624+31	WB LT	IH 94	258
1624+31	-	1638+45	WB LT	IH 94	585
1638+45	-	1645+50	WB LT	IH 94	503
STAGE 1A SUBTOTAL					2,077
STAGE 1B					
17+54	-	21+50	R/L	28TH ST ON RAMP	458
1616+69	-	1620+72	WB LT	IH 94	204
STAGE 1B SUBTOTAL					661
STAGE 2					
1603+09	-	1609+07	WB RT	IH 94	49
1610+66	-	1643+87	WB RT	IH 94	811
STAGE 2 SUBTOTAL					860
STAGE 3B					
1594+32	-	1599+36	WB LT	IH 94	242
STAGE 4B SUBTOTAL					242
PROJECT TOTAL					3,841

CLEARING AND GRUBBING

STATION			OFFSET	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA	NOTES
STAGE 1A							
87+20	-	91+35	LT	35TH ST ON RAMP	5	5	
92+04	-	94+02	LT	35TH ST ON RAMP	2	2	
1595+37	-	1599+03	WB LT	IH 94	4	4	FTMS
STAGE 1A SUBTOTAL					11	11	
PROJECT TOTAL					11	11	

REMOVING GUARDRAIL

STATION			OFFSET	LOCATION	204.0165 REMOVING GUARDRAIL LF
STAGE 1A					
85+58	-	86+92	LT	35TH ST ON RAMP	114
STAGE 1 SUBTOTAL					114
STAGE 3B					
1656+44	-	1656+97	WB LT	IH 94	53
STAGE 4B SUBTOTAL					53
PROJECT TOTAL					167

REMOVING CONCRETE BARRIER

STATION			OFFSET	LOCATION	204.0157 REMOVING CONCRETE BARRIER LF	SPV.0060.01 SAWING CONCRETE BARRIER EACH
STAGE 2						
1603+09	-	1609+05	WB RT	IH 94	596	2
1610+41	-	1617+48	WB RT	IH 94	707	2
1617+67	-	1643+87	WB RT	IH 94	2619	2
1606+01	-	1609+05	EB LT	IH 94	304	2
1610+41	-	1614+18	EB LT	IH 94	378	2
1621+44		1627+73	EB LT	IH 94	629	2
STAGE 2 SUBTOTAL					5,232	12
PROJECT TOTAL					5,232	12

REMOVING CONCRETE BASES

STATION	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
1624+15	IH 94	1
PROJECT TOTAL		1

REMOVING STORM SEWER PIPES

STATION	OFFSET	-	STATION	OFFSET	LOCATION	PIPE SIZE INCH	204.0245.01 REMOVING STORM SEWER 12-INCH LF	204.0245.02 REMOVING STORM SEWER 15-INCH LF
STAGE 1A								
1587+87	59.3' LT	-	1587+87	51.1' LT	IH 94	15	--	8
91+33	12.8' RT	-	91+62	11.1' RT	35TH ST ON RAMP	12	30	--
91+61	7.8' RT	-	91+62	11.1' RT	35TH ST ON RAMP	12	3	--
91+62	11.1' RT	-	92+01	7.8' RT	35TH ST ON RAMP	12	40	--
STAGE 1A SUBTOTAL							73	8
PROJECT TOTAL							73	8

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

EARTHWORK SUMMARY

STAGE	Location	205.0100 . Excavation Common (1)		Salvaged/ Unusable Pavement Material	Available Material (4)	Unexpanded Fill	Expanded Fill (7)	Mass Ordinate +/- (8)	Waste .
		Cut (2)	EBS Excavation (3)				Factor 1.25		
		CY	CY	CY	CY	CY	CY	CY	CY
STAGE 1A									
	IH 94 AT 35TH ST ON RAMP	797	0	641	156	13	16	140	
	IH 94 AT 25TH STREET	583	0	583	0	0	0	0	
	35TH STREET ON RAMP	816	0	776	40	11	13	27	
STAGE 1A SUBTOTAL		2197	0	2001	196	23	29	167	167
STAGE 1B									
	IH 94 AT 28TH ST ON RAMP	621	0	389	233	0	0	233	
	28TH STREET ON RAMP	67	0	67	0	2	3	-3	
STAGE 1B SUBTOTAL		688	0	456	233	2	3	230	230
STAGE 3B									
	IH 94 AT ENFORCEMENT PAD	956	0	0	956	403	504	452	
STAGE 3B SUBTOTAL		956	0	0	956	403	504	452	452
Project 1060-45-70 Total		3841	0	2456	1385	429	536	849	849
	Total Excavation Common		3841						

(1) Excavation Common => sum of the Cut and EBS Excavation columns.
(2) Salvaged/Unsuable Pavement Material => included in Cut.
(3) EBS Excavation => to be backfilled with Backfill Granular.
(4) Available Material = Cut - Salvaged/Unusuable Pavement Material
(7) Expanded Fill = (Unexpanded Fill - Reduced EBS) * Fill Factor. Expanded Fill Factor = 1.25
(8) The Mass Ordinate (+ or -) = [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced EBS in Fill) * Fill Fact
=> plus indicates an excess of material; minus indicates a shortage of material.

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

PAVEMENT ITEMS

STATION			OFFSET	LOCATION	320.0355 CONCRETE BASE HES 9-INCH SY	320.0365 CONCRETE BASE HES 10-INCH SY	415.0070 CONCRETE PAVEMENT 7-INCH SY	416.0610 DRILLED TIE BARS EACH	455.0115 ASPHALTIC MATERIAL PG64-22 TON	455.0150 ASPHALTIC MATERIAL PG70-28P TON	455.0605 TACK COAT GAL	460.1130 HMA PAVEMENT TYPE E-30 TON
STAGE 1A												
85+58	-	94+28	R/L	35TH ST ON RAMP	1513	--	--	--	14	--	79	457
1591+30	-	1592+75	WB LT	IH 94	--	1050	--	58	10	--	55	317
1620+72	-	1645+50	WB LT	IH 94	--	2028	--	991	19	--	53	612
STAGE 1A SUBTOTAL					1,513	3,078	--	1,049	44	--	188	1,386
STAGE 1B												
1616+69	-	1624+36	WB LT	IH 94	--	933	--	307	9	--	24	282
STAGE 1B SUBTOTAL					--	933	--	307	9	--	24	282
STAGE 2												
1603+04	-	1609+05	WB RT	IH 94	--	401	--	241	4	--	22	127
1610+41	-	1627+83	WB RT	IH94	--	1,268	--	697	12	--	68	393
1628+87	-	1631+49	WB RT	IH 94	--	148	--	105	2	--	8	49
1633+12	-	1636+79	WB RT	IH 94	--	230	--	147	2	--	13	73
1637+37		1643+87	WB RT	IH 94	--	384	--	260	4	--	21	122
STAGE 2 SUBTOTAL					--	2,430	--	1,449	24	--	133	765
STAGE 3A												
1575+92	-	1609+07	WB	IH 94	--	--	--	--	--	56	230	1,060
1610+41	-	1660+10	WB	IH 94	--	--	--	--	--	93	388	1,784
665+62	-	679+00	WB	IH 94	--	--	--	--	--	11	47	216
1599+00	-	1609+05	EB	IH 94	--	--	--	--	--	16	193	296
1610+66	-	1632+50	EB	IH 94	--	--	--	--	--	32	134	618
STAGE 3A SUBTOTAL					--	--	--	--	--	208	993	3,975

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

PAVEMENT ITEMS (CONTINUED)

STATION			OFFSET	LOCATION	320.0355 CONCRETE BASE HES 9-INCH SY	320.0365 CONCRETE BASE HES 10-INCH SY	415.0070 CONCRETE PAVEMENT 7-INCH SY	416.0610 DRILLED TIE BARS EACH	455.0115 ASPHALTIC MATERIAL PG64-22 TON	455.0150 ASPHALTIC MATERIAL PG70-28P TON	455.0605 TACK COAT GAL	460.1130 HMA PAVEMENT TYPE E-30 TON
STAGE 3B												
1575+92	-	1609+07	WB	IH 94	--	--	--	--	--	58	242	1,115
1610+41	-	1638+48	WB	IH 94	--	--	--	--	--	41	171	786
1620+72	-	1645+50	WB	IH 94	--	--	--	--	--	13	53	245
1645+00	-	1660+10	WB	IH 94	--	--	--	--	--	37	152	701
1599+00	-	1609+05	EB	IH 94	--	--	--	--	--	14	170	260
1610+66	-	1632+50	EB	IH 94	--	--	--	--	--	30	124	571
1593+95	-	1599+36	WB	ENFORCEMENT PAD	--	--	517	--	--	--	--	--
16+47	-	21+50	R/L	28TH ST ON RAMP	--	--	--	--	--	7	30	139
STAGE 3B SUBTOTAL					--	--	517	--	--	200	943	3,817
STAGE 4A												
660+10	-	665+62	WB	IH 94	--	--	--	--	--	26	108	496
65+58	-	78+75	WB	IH 43	--	--	--	--	--	22	91	417
STAGE 4A SUBTOTAL					--	--	--	--	--	48	199	913
STAGE 4B												
674+64	-	674+89	WB	IH 794	--	--	--	--	--	0	1	6
665+62	-	674+89	WB	IH 794	--	--	--	--	--	8	32	149
697+50	-	701+35	WB	IH 794					--	12	101	233
STAGE 4B SUBTOTAL					--	--	--	--	--	20	135	387
PROJECT TOTAL					1,513	6,441	517	2,805	76	476	2,614	11,524

BASE PATCHING CONCRETE

STATION	LOCATION	390.0403 BASE PATCHING CONCRETE SHES SY
UNDISTRIBUTED	IH 94	300
PROJECT TOTAL		300

CONCRETE CURB & GUTTER

STATION			OFFSET	LOCATION	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF
STAGE 1A					
85+58	-	89+81	LT	35TH ST ON RAMP	423
92+50	-	94+28	LT	35TH ST ON RAMP	182
91+80	-	94+28	RT	35TH ST ON RAMP	248
1591+45	-	1592+75	WB LT	IH 94	248
1620+72	-	1624+31	WB LT	IH 94	359
STAGE 1A SUBTOTAL					1460
STAGE 1B					
19+00	-	21+50	RT	28TH ST ON RAMP	250
STAGE 1B SUBTOTAL					250
PROJECT TOTAL					1,710

CONCRETE BARRIER TEMPORARY

LOCATION			603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH
STAGE 1A					
1606+00	-	1612+00	600	600	1
STAGE 1A TOTAL			600	600	1
STAGE 2					
1612+00	-	1628+25	1025	1625	--
STAGE 2 TOTAL			1025	1625	--
PROJECT TOTAL			1625	2225	1

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

CONCRETE BARRIER

STATION			OFFSET	LOCATION	603.1136 CONCRETE BARRIER TYPE S36 LF	603.1142 CONCRETE BARRIER TYPE S42 LF	603.2142 CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S42 LF	603.3113 CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36 EACH	SPV.0060.05 CONCRETE BARRIER TRANSITION TYPE S32 TO S42 AT GORE EACH	SPV.0060.06 CONCRETE BARRIER TRANSITION TYPE S36 SINGLE TO DOUBLE EACH	SPV.0060.07 CONCRETE BARRIER TRANSITION TYPE V36 TO S36 EACH	SPV.0060.08 CONCRETE BARRIER TRANSITION TYPE S32 TO S42 ANCHORED EACH	SPV.0090.03 CONCRETE BARRIER TYPE S42 ANCHORED LF	SPV.0090.08 CONCRETE BARRIER TYPE V36 LF	SPV.0090.09 CONCRETE BARRIER TYPE S32 ANCHORED LF
STAGE 1A															
89+81	-	92+50	LT	35TH ST ON RAMP	--	--	--	--	--	--	--	--	269	--	--
1638+46	-	1640+19	WB LT	IH 95	--	173	--	--	--	--	--	--	--	--	--
1640+19	-	1645+00	WB LT	IH 94	--	--	481	--	--	--	--	--	--	--	--
STAGE 1A SUBTOTAL					--	173	481	--	--	--	--	--	269	--	--
STAGE 1B															
1618+75	-	1619+11	WB LT	IH 94	--	--	--	--	1	--	--	--	--	--	--
1619+11	-	1620+72	WB LT	IH 94	--	--	--	--	--	--	--	--	161	--	--
STAGE 1B SUBTOTAL					--	--	--	--	1	--	--	--	161	--	--
STAGE 2															
1603+09	-	1605+67	WB RT	IH 94	196	--	--	1	--	--	2	--	--	17	--
1605+67	-	1609+05	WB/EB	IH 94	228	--	--	1	--	1	4	--	--	--	--
1610+41	-	1614+41	WB/EB	IH 94	290	--	--	1	--	1	4	--	--	10	--
1614+41	-	1617+48	WB RT	IH 94	247	--	--	--	--	--	4	--	--	--	--
1617+67	-	1621+04	WB RT	IH 94	277	--	--	--	--	--	4	--	--	10	--
1621+04	-	1627+78	WB/EB	IH 94	514	--	--	2	--	2	4	--	--	--	--
1628+90	-	1631+50	WB RT	IH 94	260	--	--	--	--	--	4	--	--	15	--
1633+15	-	1636+77	WB RT	IH 94	302	--	--	--	--	--	4	--	--	--	--
1637+39	-	1643+87	WB RT	IH 94	481	--	--	1	--	--	5	--	--	77	--
STAGE 2 SUBTOTAL					2795	--	--	6	--	4	35	--	--	129	--
STAGE 3B															
1593+95	-	1599+36	WB LT	IH 94	--	--	--	--	--	--	--	1	328	--	211
STAGE 4B SUBTOTAL					--	--	--	--	--	--	--	1	328	--	211
PROJECT TOTAL					2,795	173	481	6	1	4	35	1	758	129	211

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

STORM SEWER

STRUCTURE #	STATION	OFFSET	LOCATION	204.0220 REMOVING INLETS EACH	204.9060.01 REMOVING INLETS COVERS EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3220 INLETS 2x2-FT EACH	611.3230 INLETS 2x3-FT EACH	611.0430 RECONSTRUCTING INLETS EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0606 INLET COVERS TYPE B EACH	611.0654 INLET COVERS TYPE V EACH	611.0627 INLET COVERS TYPE HM EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH	611.8120.S COVER PLATES TEMPORARY EACH	SPV.0060.02 WELDING STORM SEWER COVERS EACH	SPV.0060.03 COVER PLATES LEFT IN PLACE EACH	SPV.0090.02 DRAIN SLOTTED VANE 6-FT SPECIAL LF
STAGE 1A																				
17.0	1582+87	55.2' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
18.0	1585+39	53.5' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
19.0	87+75	7.9' RT	35TH ST ON RAMP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
19.1	87+75	0.3' LT	35TH ST ON RAMP	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19.2	87+75	1.7' LT	35TH ST ON RAMP	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--
20.0	91+62	11.1' RT	35TH ST ON RAMP	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20.1	91+61	7.8' RT	35TH ST ON RAMP	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20.2	91+33	12.8' RT	35TH ST ON RAMP	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
21.0	92+01	7.8' RT	35TH ST ON RAMP	--	--	--	--	--	--	1	1	--	--	--	--	--	--	1	--	--
21.1	92+10	6.2' RT	35TH ST ON RAMP	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
21.2	91+85	6.7' RT	35TH ST ON RAMP	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
21.3	92+35	5.0' RT	35TH ST ON RAMP	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
22.0	1592+93	40.7' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
25.7	1597+25	54.0' LT	IH 94	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
25.8	1598+67	56.1' RT	IH 94	--	--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--
27.6	1600+63	44.5' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
28.7	1602+96	49.0' LT	IH 94	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--
37.3	1620+77	47.3' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
37.2	1620+86	39.8' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
39.2	1624+31	46.6' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
39.6	1624+21	47.5' LT	IH 94	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--
42.2	1628+69	44.3' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
43.1	1629+84	43.7' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
44.3	1631+48	44.6' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
52.1	1639+89	48.5' LT	IH 94	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
54.1	1643+38	51.2' LT	IH 94	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
55.2	1645+81	43.1' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
STAGE 1A SUBTOTAL				4	--	--	--	4	3	4	1	1	4	3	--	2	--	11	--	--
STAGE 2																				
12.1	1578+37	1.3' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
13.0	1580+12	2.5' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
13.1	1580+18	5.0' RT	IH 94	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
13.2	1580+08	4.3' RT	IH 94	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
14.0	1580+62	2.6' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
14.1	1580+68	4.9' RT	IH 94	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
14.2	1580+78	5.0' RT	IH 94	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
16.0	1581+12	3.2' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
22.6	1591+30	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
22.5	1592+18	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

STORM SEWER (CONTINUED)

STRUCTURE #	STATION	OFFSET	LOCATION	204.0220 REMOVING INLETS EACH	204.9060.01 REMOVING INLETS COVERS EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3220 INLETS 2x2-FT EACH	611.3230 INLETS 2x3-FT EACH	611.0430 RECONSTRUCTING INLETS EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0606 INLET COVERS TYPE B EACH	611.0654 INLET COVERS TYPE V EACH	611.0627 INLET COVERS TYPE HM EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH	611.8120.S COVER PLATES TEMPORARY EACH	SPV.0060.02 WELDING STORM SEWER COVERS EACH	SPV.0060.03 COVER PLATES LEFT IN PLACE EACH	SPV.0090.02 DRAIN SLOTTED VANE 6-FT SPECIAL LF
22.4	1592+69	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
22.2	1592+93	2.1' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
23.0	1595+48	2.1' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
23.3	1595+25	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
23.5	1594+73	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
23.6	1593+85	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
24.7	1596+40	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
24.6	1597+28	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
24.5	1597+89	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
24.3	1598+03	1.6' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
25.5	1598+51	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
25.3	1598+67	2.1' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
26.4	1598+92	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
26.2	1599+18	1.9' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
27.5	1600+61	2.1' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
28.5	1602+88	2.1' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
29.3	1604+80	0.6' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
29.4	1604+88	3.6' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
29.0	1604+88	3.3' RT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
29.6	1604+91	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
29.7	1605+69	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
29.8	1606+47	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
31.0	1607+30	5.7' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
32.2	1608+97	5.0' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
32.0	1608+97	1.0' RT	IH 94	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--
33.0	1613+87	1.9' RT	IH 94	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--
33.2	1613+96	6.1' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
34.0	1616+62	4.3' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
36.0	1618+36	4.4' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
37.0	1620+86	3.1' RT	IH 94	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--
38.2	1622+22	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
38.0	1622+36	1.6' RT	IH 94	--	--	--	--	--	--	1	1	--	--	--	--	--	--	--	--	--
39.5	1624+25	0.3' LT	IH 94	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
39.1	1624+27	3.9' LT	IH 94	--	1	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--
39.0	1624+36	0.2' LT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
39.3	1624+37	3.6' RT	IH 94	--	1	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--
40.0	1627+11	5.3' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
41.0	1627+20	4.2' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
42.1	1628+69	1.6' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
42.3	1628+79	0' RT	IH 94	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
43.0	1629+83	3.6' RT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
44.1	1631+31	3.5' RT	IH 94	--	1	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--
44.2	1631+41	2.6' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
46.1	1633+86	1.4' LT	IH 94	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
46.2	1633+75	0.1' RT	IH 94	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

STORM SEWER (CONTINUED)

STRUCTURE #	STATION	OFFSET	LOCATION	204.0220 REMOVING INLETS EACH	204.9060.01 REMOVING INLETS COVERS EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3220 INLETS 2x2-FT EACH	611.3230 INLETS 2x3-FT EACH	611.0430 RECONSTRUCTING INLETS EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0606 INLET COVERS TYPE B EACH	611.0654 INLET COVERS TYPE V EACH	611.0627 INLET COVERS TYPE HM EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH	611.8120.S COVER PLATES TEMPORARY EACH	SPV.0060.02 WELDING STORM SEWER COVERS EACH	SPV.0060.03 COVER PLATES LEFT IN PLACE EACH	SPV.0090.02 DRAIN SLOTTED VANE 6-FT SPECIAL LF
47.1	1635+46	1.4' LT	IH 94	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
48.1	1635+96	1.5' LT	IH 94	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
49.1	1636+46	1.5' LT	IH 94	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
51.1	1638+66	3.6' RT	IH 94	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
51.0	1638+79	1.7' LT	IH 94	1	--	--	1	--	--	--	--	--	1	--	--	--	--	--	--	--
51.2	1683+96	0.5' LT	IH 94	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
52.0	1640+11	2.7' RT	IH 94	--	1	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--
52.2	1640+16	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
52.3	1641+01	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
53.0	1642+13	4.0' RT	IH 94	--	1	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--
53.1	1642+13	2.6' LT	IH 94	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
53.2	1642+21	0.9' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
54.0	1643+45	4.5' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--	--	--
55.1	1645+38	1.8' LT	IH 94	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
55.6	1645+52	0.8' RT	IH 94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
STAGE 2 SUBTOTAL				6	18	2	1	10	--	11	1	--	11	--	1	9	1	5	21	216
PROJECT TOTAL				10	18	2	1	14	3	15	2	1	15	3	1	11	1	16	21	216

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

STORM SEWER PIPES

PIPE NUMBER	LOCATION (A)	STATION (A)	FLOWS FROM	FLOWS TO	SPV.0090.04 DRAIN SLOTTED VANE PIPE LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF
STAGE 1A						
P21.1	35TH ST ONRAMP	92+01	21.1	21.0	--	9
P21.2	35TH ST ONRAMP	91+79	21.2	21.1	--	22
P21.3	35TH ST ONRAMP	92+34	21.3	21.1	--	33
P39.6	IH 94	1624+21	39.6	39.2	--	10
STAGE 1A SUBTOTAL					--	74
STAGE 2						
P13.2	IH 94	1580+08	13.2	13.1	--	11
P14.2	IH 94	1580+78	14.2	14.1	--	10
P22.6	IH 94	1591+30	22.6	22.5	76	--
P22.5	IH 94	1592+69	22.5	22.4	39	--
P23.6	IH 94	1593+85	23.6	23.5	76	--
P23.5	IH 94	1594+73	23.5	23.3	40	--
P24.7	IH 94	1596+40	24.7	24.6	76	--
P24.6	IH 94	1597+28	24.6	24.5	50	--
P29.7	IH 94	1605+69	29.7	29.6	66	--
P29.8	IH 94	1606+47	29.8	29.7	66	--
P52.3	IH 94	1641+01	52.3	52.2	72	--
STAGE 2 SUBTOTAL					561	21
PROJECT TOTAL					561	94

A) LOCATION AND STATION FOR "FLOWS FROM" STRUCTURE

BEAM GUARD

STATION	OFFSET	LOCATION	614.2500 MGS THRIE BEAM TRANSITION LF	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH
STAGE 1A						
85+78 - 87+31	LT	35TH ST ON RAMP	--	100	1	--
92+48 - 93+40	LT	35TH ST ON RAMP	40	--	1	--
95+07 - 95+86	RT	35TH ST ON RAMP	--	25	1	1
STAGE 1A SUBTOTAL			40	125	3	1
STAGE 1B						
18+97 - 21+22	RT	28TH ST ON RAMP	40	138	1	--
1620+70 - 1621+62	WB LT	IH 94	40	--	1	--
STAGE 1B SUBTOTAL			80	138	2	--
STAGE 4B						
1656+45 - 1657+49	LT	IH 94	--	50	1	--
STAGE 4B SUBTOTAL			--	50	1	--
PROJECT TOTAL			120	313	6	1

FENCE SAFETY

STATION	OFFSET	LOCATION	616.0700.S FENCE SAFETY LF
UNDISTRIBUTED	WB	IH 94	500
PROJECT TOTAL			500

MOBILIZATIONS

LOCATION	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 1060-45-70	1	3	3
PROJECT TOTAL	1	3	3

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

RESTORATION

LOCATION	625.0105 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB
STAGE 1A				
35TH ST ON RAMP	1,528	1,299	1.0	41
STAGE 1A SUBTOTAL	1,528	1,299	1.0	41
STAGE 1B				
28TH ST ON RAMP	356	302	0.2	10
STAGE 1B SUBTOTAL	356	302	0.2	10
STAGE 3B				
ENFORCEMENT PAD	888	755	0.6	24
STAGE 3B SUBTOTAL	888	755	0.6	24
UNDISTRIBUTED	693	589	0.4	19
PROJECT TOTAL	3,464	2,944	2.2	94

TRAFFIC CONTROL

LOCATION	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE PROJECT 1060-45-70 DAYS	643.2000 TRAFFIC CONTROL DETOUR PROJECT 1060-45-70 EACH
IH 94	60	1
PROJECT TOTAL	60	1

INLET PROTECTION

LOCATION	628.7010 INLET PROTECTION TYPE B EACH	628.7020 INLET PROTECTION TYPE D EACH
STAGE 1A	19	14
STAGE 1B	4	1
STAGE 2	29	24
STAGE 4B	1	4
UNDISTRIBUTED	13	11
PROJECT TOTAL	66	54

SILT FENCE

STATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
UNDISTRIBUTED	300	300
PROJECT TOTAL	300	300

PERMANENT SIGNING

SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE IN	637.0101 SIGNS TYPE I SF	637.0202 SIGNS REFLECTIVE TYPE II SF	634.0616 POSTS WOOD 4X6-INCH 16-FT EACH	638.2601 REMOVE SIGNS TYPE I EACH	638.2602 REMOVE SIGNS TYPE II EACH	638.2101 MOVING SIGNS TYPE 1 EACH	638.2102 MOVING SIGNS TYPE II EACH
P100	W4-1	(3)	48X48	--	16.00	1	--	--	--	--
P101A	E1-5P	--	156X30	32.50	--	--	--	--	--	--
P101	E1-1A(MOD)	--	180X132	165.00	--	--	--	--	--	--
R201	W4-3	--	--	--	--	--	--	1	--	--
M201	R8-7	--	--	--	--	--	--	--	--	1
M203	R2-1	--	--	--	--	--	--	--	--	1
M204	J4-1	--	--	--	--	--	--	--	--	1
M205	D10-5	--	--	--	--	--	--	--	--	1
M206	D10-5	--	--	--	--	--	--	--	--	1
M301	R2-1	--	--	--	--	--	--	--	--	1
M302	R2-1	--	--	--	--	--	--	--	--	1
M303	J4-1	--	--	--	--	--	--	--	--	1
P301	R3-33R	(5)	78X36	--	19.50	3	--	--	--	--
M304	D10-5	--	--	--	--	--	--	--	--	1
M305	D10-5	--	--	--	--	--	--	--	--	1
M306	--	--	--	--	--	--	--	--	1	--
P302	W4-3R	(3)	36X36	--	9.00	1	--	--	--	--
P303	W4-3R	(5)	48X48	--	16.00	1	--	--	--	--
M401	D10-5	--	--	--	--	--	--	--	--	1
M402	D10-5	--	--	--	--	--	--	--	--	1
R401	D10-5	--	--	--	--	--	--	1	--	--
R402	D10-5	--	--	--	--	--	--	1	--	--
M405	D10-5	--	--	--	--	--	--	--	--	1
M406	D10-5	--	--	--	--	--	--	--	--	1
M407	--	--	--	--	--	--	--	--	--	1
M501	--	--	--	--	--	--	--	--	1	--
P501	W5-1(MOD)	--	48X48	--	16.00	--	--	--	--	--
P502	W5-1(MOD)	--	48X48	--	16.00	--	--	--	--	--
R701	--	--	--	--	--	--	--	1	--	--
R702	--	--	--	--	--	--	--	1	--	--
R703	--	--	--	--	--	--	--	1	--	--
R801	--	--	--	--	--	--	--	1	--	--
R802	--	--	--	--	--	--	--	1	--	--
R901	--	--	--	--	--	--	1	--	--	--
R902	--	--	--	--	--	--	--	1	--	--
R903	W4-2R	--	--	--	--	--	--	1	--	--
R904	W16-7L	--	--	--	--	--	--	1	--	--
R905	W4-2R	--	--	--	--	--	--	1	--	--
R906	W4-2R	--	--	--	--	--	--	1	--	--
PROJECT TOTAL				197.50	92.50	6	1	13	2	15

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

TRAFFIC CONTROL

LOCATION	TOTAL DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH	643.0800 TRAFFIC CONTROL ARROW BOARDS DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS	SPV.0045.01 PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) CELLULAR COMMUNICATIONS EACH	SPV.0045.01 PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) CELLULAR COMMUNICATIONS DAYS
STAGE 1A															
IH 94	7	357	2499	16	112	52	364	21	147	4	28	71	497	2	14
STAGE 1A SUBTOTAL		357	2499	16	112	52	364	21	147	4	28	71	497	2	14
STAGE 1B															
IH 94	7	319	2233	19	133	56	392	27	189	4	28	70	490	2	14
STAGE 1B SUBTOTAL		319	2233	19	133	56	392	27	189	4	28	70	490	2	14
STAGE 2															
IH 94	14	310	4340	7	98	42	588	21	294	4	56	53	742	2	28
STAGE 2 SUBTOTAL		310	4340	7	98	42	588	21	294	4	56	53	742	2	28
STAGE 3A															
IH 94	14	392	5488	5	70	52	728	31	434	5	70	55	770	2	10976
STAGE 3A SUBTOTAL		392	5488	5	70	52	728	31	434	5	70	55	770	2	10976
STAGE 3B															
IH 94	14	240	3360	3	42	20	280	17	238	3	42	38	532	2	6720
STAGE 3B SUBTOTAL		240	3360	3	42	20	280	17	238	3	42	38	532	2	6720
STAGE 4A															
IH 94	3	126	378	--	--	46	138	53	159	5	15	30	90	1	378
STAGE 4A SUBTOTAL		126	378	--	--	46	138	53	159	5	15	30	90	1	378
STAGE 4B															
IH 94	3	219	657	13	39	60	180	51	153	4	12	50	150	1	657
STAGE 4B SUBTOTAL		219	657	13	39	60	180	51	153	4	12	50	150	1	657
STAGE 5															
IH 94	5	--	--	--	--	--	--	--	--	3	15	10	50	--	--
STAGE 5 SUBTOTAL		--	--	--	--	--	--	--	--	3	15	10	50	--	--
UNDISTRIBUTED		172	1560	6	45	31	239	20	138	3	21	33	274	1	1207
PROJECT TOTAL			17,155		497		2,629		1,514		245		3,063		13,274

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

TRAFFIC CONTROL COVERING SIGNS

LOCATION	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH
UNDISTRIBUTED	5	50
PROJECT TOTAL	5	50

TRAFFIC CONTROL DETOUR SIGNS

LOCATION	TOTAL DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	DAYS
STAGE 1A			
DETOUR 35TH ST WB ENTRANCE	7	79	553
DETOUR 35TH ST WB EXIT	7	30	210
DETOUR 35TH ST EB ENTRANCE	7	87	609
STAGE 1A SUBTOTAL		196	1372
STAGE 1B			
DETOUR 28TH ST WB ENTRANCE	7	82	574
DETOUR 35TH ST WB EXIT	7	30	210
DETOUR 35TH ST EB ENTRANCE	7	87	609
STAGE 1B SUBTOTAL		199	1393
STAGE 3A			
DETOUR STADIUM S-E RAMP	2	89	178
STAGE 3A SUBTOTAL		89	178
STAGE 3B			
DETOUR 35TH ST WB ENTRANCE	2	71	142
DETOUR 28TH ST WB ENTRANCE	2	82	164
DETOUR 35TH ST WB EXIT	2	30	60
DETOUR STADIUM N-E RAMP	2	89	178
DETOUR 26TH ST/ ST. PAUL EB EXIT	2	34	68
DETOUR 35TH ST EB ENTRANCE	2	87	174
STAGE 3B SUBTOTAL		393	786
STAGE 4A			
DETOUR MARQUETTE N-W RAMP	2	49	98
DETOUR MARQUETTE S-W RAMP	2	29	58
STAGE 4A SUBTOTAL	4	78	156
STAGE 4B			
DETOUR IH 794 WB	2	98	196
DETOUR 7TH ST & 11TH ST ENTRANCE	2	81	162
STAGE 4B SUBTOTAL		179	358
UNDISTRIBUTED		97	391
PROJECT TOTAL			4,478

3

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

PAVEMENT MARKING

STATION			OFFSET	LOCATION	LOCATION	646.0103 PAVEMENT MARKING PAINT 4-INCH (WHITE) LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF	646.0123 PAVEMENT MARKING PAINT 8- INCH (WHITE) LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE) LF	SPV.0060.09 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1 (WHITE) LF	SPV.0060.10 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 (WHITE) LF	SPV.0060.11 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 5 (WHITE) LF	647.0576 PAVEMENT MARKING STOP LINE EPOXY 24-INCH LF	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12- INCH (WHITE) LF	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE) LF
1575+92	-	1665+62	WB	IH 94	WB MEDIAN EDGE LINE	--	--	8,970	--	--	--	--	--	--	--	--	--
1575+92	-	1622+05	WB	IH 94	WB LANE LINE	2,306	--	--	--	2,306	--	--	--	--	--	--	--
1574+00	-	1577+00	WB	IH 94	WB GORE	--	--	--	300	--	300	--	--	--	--	--	--
1577+00	-	1622+05	WB	IH 94	WB AUXILARY LANE LINE	--	--	--	1,126	--	1,126	--	--	--	--	--	--
1622+05	-	1665+62	WB	IH 94	WB LANE LINE	3,268	--	--	--	3,268	--	--	--	--	--	--	--
1575+92	-	1590+30	WB	IH 94	WB OUTSIDE EDGE LINE	--	1,438	--	--	--	--	--	--	--	--	--	--
1585+00			WB	IH 94	WB LANE ARROWS	--	--	--	--	--	--	--	--	1	--	--	--
1568+21			WB	IH 94	WB LANE ARROWS	--	--	--	--	--	--	--	--	1	--	--	--
1587+46	-	1590+41	WB	IH 94	WB AUXILARY LANE LINE	74	--	--	--	74	--	--	--	--	--	--	--
1592+93	-	1605+45	WB	IH 94	WB OUTSIDE EDGE LINE	--	1,252	--	--	--	--	--	--	--	--	--	--
1608+22			WB	IH 94	WB LANE ARROWS	--	--	--	--	--	--	1	1	--	--	--	--
1608+07	-	1615+38	WB	IH 94	WB OUTSIDE EDGE LINE	--	731	--	--	--	--	--	--	--	--	--	--
1607+54	-	1616+82	WB	IH 94	WB AUXILIRY LANE LINE	--	--	--	232	--	232	--	--	--	--	--	--
1615+50			WB	IH 93	WB LANE ARROWS	--	--	--	--	--	--	1	1	--	--	--	--
1618+88	-	1646+24	WB	IH 94	WB OUTSIDE EDGE LINE	--	2,736	--	--	--	--	--	--	--	--	--	--
1651+85	-	1678+50	WB	IH 94	WB OUTSIDE EDGE LINE	--	2,665	--	--	--	--	--	--	--	--	--	--
1648+80	-	1665+62	WB	IH 94	WB AUXILARY LANE LINE	421	--	--	--	421	--	--	--	--	--	--	--
660+10		665+62	WB	IH 94	WB LANE LINE	138	--	--	--	138	--	--	--	--	--	--	--
1599+00	-	1632+50	EB	IH 94	EB MEDIAN LANE LINE	--	--	3,350	--	--	--	--	--	--	--	--	--
1599+00	-	1604+24	EB	IH 94	EB OUTSIDE EDGE LINE	--	524	--	--	--	--	--	--	--	--	--	--
1607+87	-	1627+15	EB	IH 94	EB OUTSIDE EDGE LINE	--	1,929	--	--	--	--	--	--	--	--	--	--
1629+30	-	1632+50	EB	IH 94	EB OUTSIDE EDGE LINE	--	320	--	--	--	--	--	--	--	--	--	--
1599+00	-	1632+50	EB	IH 94	EB LANE LINE	1,675	--	--	--	1,675	--	--	--	--	--	--	--
665+62	-	674+89	WB	IH 794	WB LANE LINE	232	--	--	--	232	--	--	--	--	--	--	--
681+92	-	715+11	WB	IH 794	WB LANE LINE	830	--	--	--	830	--	--	--	--	--	--	--
686+00	-	693+05	WB	IH 794	WB OUTSIDE EDGE LINE	--	--	--	--	--	--	--	--	--	--	114	--
684+82	-	692+81	WB	IH 794	WB OUTSIDE EDGE LINE	--	800	--	--	--	--	--	--	--	--	--	--
688+50			WB	IH 794	WB LANE ARROWS	--	--	--	--	--	--	--	--	1	--	--	--
689+50			WB	IH 794	WB LANE ARROWS	--	--	--	--	--	--	--	--	1	--	--	--
690+33	-	692+81	WB	IH 794	WB AUXILARY LANE LINE	62	--	--	--	62	--	--	--	--	--	--	--
696+53	-	715+50	WB	IH 794	WB OUTSIDE EDGE LINE	--	1,897	--	--	--	--	--	--	--	--	--	--
708+78	-	715+16	WB	IH 794	WB AUXILARY LANE LINE	160	--	--	--	160	--	--	--	--	--	--	--
665+62	-	678+92	WB	IH 43N	WB LANE LINE	665	--	--	--	665	--	--	--	--	--	--	--
673+61	-	679+00	WB	IH 43N	WB MEDIAN EDGE LINE	--	--	539	--	--	--	--	--	--	--	--	--
WESTBOUND ON RAMP				28TH ST INT	EDGELINES	-	550	217	406	-	406	--	--	--	--	--	--

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

PAVEMENT MARKING (CONTINUED)

STATION	OFFSET	LOCATION	LOCATION	646.0103 PAVEMENT MARKING PAINT 4-INCH (WHITE) LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF	646.0123 PAVEMENT MARKING PAINT 8- INCH (WHITE) LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE) LF	SPV.0060.09 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1 (WHITE) LF	SPV.0060.10 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 (WHITE) LF	SPV.0060.11 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 5 (WHITE) LF	647.0576 PAVEMENT MARKING STOP LINE EPOXY 24-INCH LF	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12- INCH (WHITE) LF	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE) LF
WESTBOUND ON RAMP		35TH ST INT	EDGELINES	--	514	--	346	--	346	--	--	--	20	--	--
WESTBOUND OFF RAMP		35TH ST INT	EDGELINES	--	260	--	428	--	428	--	--	--	--	--	87
WESTBOUND OFF RAMP		25TH ST INT	EDGELINES	--	132	--	771	--	771	--	--	--	--	--	119
WESTBOUND ON RAMP		13th ST INT	EDGELINES				772		772	--	--	--		--	225
WESTBOUND ON RAMP		7TH ST INT	EDGELINES	--	--	--	734	--	734	--	--	--	--	--	195
WESTBOUND OFF RAMP		11TH ST INT	EDGELINES	--	--	--	1,385	--	1,385	--	--	--	--	--	523
EASTBOUND ON RAMP		35TH ST INT	EDGELINES	--	--	--	1,020	--	1,020	--	--	--		--	--
EASTBOUND OFF RAMP		26TH ST INT	EDGELINES	161	417	--	333	161	333	--	--	--		--	220
TOTAL				12,108	16,165	13,076	9,233	9,990	7,854	2	2	4	20	114	1,369
UNDISTRIBUTED				1,211	1,616	1,308	923	999	785					11	137
PROJECT TOTAL				13,318	17,781	14,384	10,157	10,989	8,639	2	2	4	20	125	1,506
					32,165										

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

REMOVING PAVEMENT MARKINGS

LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF
STAGE 1A	
IH 94	21138
STAGE 1A SUBTOTAL	21138
STAGE 1B	
IH 94	5450
STAGE 1B SUBTOTAL	5450
STAGE 2	
IH 94	25226
STAGE 2 SUBTOTAL	25226
STAGE 3A	
IH 94	9200
STAGE 3A SUBTOTAL	9200
STAGE 3B	
IH 94	33798
STAGE 3B SUBTOTAL	33798
PROJECT TOTAL	94,812

3

TEMPORARY PAVEMENT MARKING

DESCRIPTION	LOCATION	646.0106* PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH (WHITE) LF	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH (WHITE) LF	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW) LF	649.0701 TEMPORARY PAVEMENT MARKING 8-INCH (WHITE) LF
STAGE 1A							
--	IH 94	21115	8400	--	--	--	--
STAGE 1A SUBTOTAL		21115	8400	--	--	--	--
STAGE 1B							
--	IH 94	2650	300	500	--	--	--
STAGE 1B SUBTOTAL		2650	300	500	--	--	--
STAGE 2							
--	IH 94	12310	6750	150	--	--	--
STAGE 2 SUBTOTAL		12310	6750	150	--	--	--
STAGE 3A							
--	IH 94	--	--	--	12650	10500	275
STAGE 3A SUBTOTAL		--	--	--	12650	10500	275
STAGE 3B							
--	IH 94	--	--	--	19361	12558	1979
STAGE 3B SUBTOTAL		--	--	--	19361	12558	1979
PROJECT TOTAL		36,075	15,450	650	32,011	23,058	2,254
		51,525			55,068		

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

LIGHTING AND MISCELLANEOUS - TEMPORARY

CATEGORY	STAGE	DESCRIPTION	LOCATION	** 653.0135 PULL BOXES STEEL 24-36-INCH EACH	SPV.0060.80 WOOD POLE LIGHTING 40-FT EACH	SPV.0060.81 WOOD POLE 40-FT EACH	SPV.0060.82 LUMINAIRES FLOODLIGHT 400W HPS EACH	SPV.0060.83 BOOM LIGHT AND GENERATOR EA	SPV.0060.84 SELF CONTAINED TOWER LIGHT EA	SPV,0105.80 MAINTENANCE OF LIGHTING SYSTEM LS	REMARKS
10	1	MAINTENANCE	SYSTEM	--	--	--	--	--	--	1	
		TPB-1	1602+74.09	1	--	--	--	--	--	--	
		WP-3	1602+93.84	--	--	1	--	--	--	--	
		WPL-5	1602+92.76, 67.32' LT	--	1	--	1	--	--	--	
		WPL-4	1604+29.47, 64.1' LT	--	1	--	1	--	--	--	
		WPL-3	1605+72.78, 97.69' LT	--	1	--	1	--	--	--	
		WPL-2	1607+19.33, 83.91' LT	--	1	--	1	--	--	--	
		WP-2	1608+72.23, 69.11' LT	--	--	1	--	--	--	--	
		WP-1	1610+80.09, 65.8' LT	--	--	1	--	--	--	--	
		WPL-1	1612+32.85, 68.28' LT	--	1	--	1	--	--	--	
		BOOM LIGHT	1623+00.62, 65.45' LT	--	--	--	--	1	--	--	
		SCTL-1	1624+23.76, 63.06' LT	--	--	--	--	--	1	--	
		SCTL-2	1628+36.11, 62.96' LT	--	--	--	--	--	1	--	
		SCTL-3	1629+78.53, 70.94' RT	--	--	--	--	--	1	--	
		SCTL-4	1633+12.41, 73.97' RT	--	--	--	--	--	1	--	
		SCTL-5	1633+67.96, 79.64' RT	--	--	--	--	--	1	--	
		SCTL-6	1636+54.49, 60.91' RT	--	--	--	--	--	1	--	
		SCTL-7	1640.42.66, 73.57' LT	--	--	--	--	--	1	--	
10	1		TOTAL	1	5	3	5	1	7	1	

** = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

LIGHTING AND MISCELLANEOUS - FINAL

CATEGORY	STAGE	DESCRIPTION	LOCATION	204.0195 REMOVING CONCRETE BASES (NOTE 1) EACH	** 653.0135 PULL BOXES STEEL 24x36-INCH EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	SPV.0060.85 LAMP DISPOSAL HIGH INTENSITY DISCHARGE EACH	SPV.0060.86 SALVAGING LIGHT POLES, LUMINAIRES AND ARMS EACH	SPV.0060.87 PULL BOX STEEL 18X42-INCH SPECIAL EACH	SPV.0060.88 CONCRETE BASES MEDIAN BARRIER EACH	REMARKS
10	2	APH7/BPH7	1603+63	1	--	256	1	2	2	1	--	1	
		PB-1	1603+80	--	1	--	--	--	--	--	--	--	WET SPLICE
		APH3/BPH3	1606+62	1	--	256	1	2	2	1	--	1	
		APH2/BPH2	1608+70	1	--	256	1	2	3	1	--	1	
		APH1/BPH1	1611+62	1	--	256	1	2	2	1	--	--	MOUNTED ON S-40-0206
		PB-2	1612+67	--	--	--	--	--	--	--	1	--	WET SPLICE
		CPH1/DPH1	1614+61	1	--	256	1	2	2	1	--	1	
		CPH2/DPH2	1616+77	1	--	256	1	2	2	1	--	1	
		CPH3/DPH3	1619+37	1	--	256	1	2	2	1	--	1	
		PB-3	1620+72	--	--	--	--	--	--	--	1	--	WET SPLICE
		CPH20/DPH20	1622+06	1	--	256	1	2	2	1	--	1	
		CPH22/DPH22	1627+02	1	--	256	1	2	2	1	--	1	
		CPH23/DPH23	1629+27	1	--	256	1	2	2	1	--	1	
		PB-4	1629+42	--	--	--	--	--	--	--	1	--	WET SPLICE
		CPH24/DPH24	1630+87	1	--	256	1	2	2	1	--	1	
		CPH25/DPH25	1633+92	1	--	256	1	2	2	1	--	1	
		CPH26/DPH26	1636+07	1	--	256	1	2	2	1	--	1	
		PB-5	1637+84	--	--	--	--	--	--	--	1	--	WET SPLICE
		AMT9/BMT9	1638+21	1	--	256	1	2	2	1	--	1	
		AMT8/BMT8	1640+71	1	--	256	1	2	2	1	--	1	
		AMT7/BMT7	1642+23	1	--	256	1	2	2	1	--	1	
		PB-5	1643+80	--	1	--	--	--	--	--	--	--	WET SPLICE
		TOTAL		16	2	4096	16	32	33	16	4	15	

NOTES
1. REMOVAL OF EXISTING BASE IN THE SAME LOCATION AS PROPOSED

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

LIGHTING - WIRE AND CONDUIT - TEMPORARY

CAT.	STAGE	FROM	TO	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3 -INCH LF	** 655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	** 655.06340 ELECTRICAL WIRE LIGHTING 1 AWG LF	SPV.0090.80 CABLE AERIAL ALUMINUM 4 AWG QUADRUPLEX TEMPORARY LF	REMARKS
1100	1	HL-40-PH - PB	WPL-1	65	144	72	--	PB TO TOP OF POLE. WET SPLICE PB
		WPL-1	WP-1	--	--	--	160	
		WP-1	WP-2	--	--	--	195	
		WP-2	WPL-2	--	--	--	170	
		WPL-2	WPL-3	--	--	--	160	
		WPL-3	WPL-4	--	--	--	160	
		WPL-4	WPL-5	--	--	--	160	
		WPL-5	WP-3	--	--	--	70	
		WP-3	TPB-1	65	144	72	--	NOTE 1
			TOTAL	130	288	144	1075	

** = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

NOTE 1 - FROM TOP OF POLE TO PB . WET SPLICE IN PB. FINAL WIRING TO TPB-1

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

LIGHTING - WIRE AND CONDUIT - FINAL

CAT.	STAGE	FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	** 655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	** 655.0640 ELECTRICAL WIRE LIGHTING 1 AWG LF
10	2	TPB-1	APH7/BPH7	115	--	244	122
		APH7/BPH7	PB-1	25	--	64	32
		PB-1	APH3/BPH3	305	--	624	312
		APH3/BPH3	APH2/BPH2	215	--	444	222
		APH2/BPH2	APH1/BPH1	305	--	624	312
		APH1/BPH1	PB-2	115	--	244	122
		PB-2	CHP1/DHP1	175	--	364	182
		CHP1/DHP1	CHP2/DHP2	305	--	624	312
		CHP2/DHP2	CHP3/DHP3	265	--	544	272
		CHP3/DHP3	PB-3	140	--	294	147
		PB-3	CHP20/DHP20	140	--	294	147
		CHP20/DHP20	CHP22/DHP22	505	--	1024	512
		CHP22/DHP22	CHP23/DHP23	230	--	474	237
		CHP23/DHP23	PB-4	25	--	64	32
		PB-4	CHP24/DHP24	150	--	314	157
		CHP24/DHP24	CHP25/DHP25	305	--	624	312
		CHP25/DHP25	CHP26/DHP26	225	--	464	232
		25TH STREET UDL'S	PB-5	125	528	--	--
		PB-5	AMT9/BMT9	45	--	208	--
		AMT9/BMT9	AMT8/BMT8	265	--	1088	--
		AMT8/BMT8	AMT7/BMT7	265	--	1088	--
		AMT7/BMT7	PB-6	65	--	288	--
10	2		TOTAL	4310	528	10000	3664

** = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

SAWCUTS

STATION			OFFEST	LOCATION	690.0250 SAWING CONCRETE LF
STAGE 1A					
85+58			R\L	35TH ST ON RAMP	8
85+58	-	91+10	RT	35TH ST ON RAMP	556
1591+30			WB LT	IH 94	9
1591+30	-	1592+75	WB LT	IH 94	144
1592+75			WB LT	IH 94	8
94+28			WB LT	IH 94	26
1620+72	-	1645+50	WB LT	IH 94	2,478
1645+50			WB LT	IH 94	22
STAGE 1A SUBTOTAL					3,252
STAGE 1B					
16+65	-	21+50	RT	28TH ST ON RAMP	500
21+50			R/L	28TH ST ON RAMP	33
1616+69			WB LT	IH 94	9
1616+69	-	1620+72	WB LT	IH 94	403
STAGE 1B SUBTOTAL					945
STAGE 2					
1603+09			WB RT	IH 94	2
1603+09	-	1609+05	WB RT	IH 94	596
1609+05			WB RT	IH 94	2
1610+61			WB RT	IH 94	2
1610+61	-	1643+87	WB RT	IH 94	3,326
1643+87			WB RT	IH 94	2
1605+53	-	1609+04	EB LT	IH 94	354
1610+41	-	1614+55	EB LT	IH 94	408
1620+85	-	1627+90	EB LT	IH 94	705
STAGE 2 SUBTOTAL					5,397
UNDISTRIBUTED					2,399
PROJECT TOTAL					11,993

EXPOSING EXISTING UTILITY

STATION	LOCATION	SPV.0060.04 EXPOSING EXISTING UTILITY EACH	NOTES
95+50	35TH ST ON RAMP	1	AT&T
1657+00	IH 94	1	FTMS
PROJECT TOTAL		2	

PAVEMENT CLEANUP

STATION	OFFSET	LOCATION	SPV.0075.01 PAVEMENT CLEANUP HOURS
UNDISTRIBUTED	WB	IH 94	100
PROJECT TOTAL			100

TRUCK MOUNTED ATTENUATOR

	LOCATION	SPV.0075.02 TRUCK MOUNTED ATTENUATOR WITH OPERATOR HRS	SPV.0075.03 TRUCK MOUNTED ATTENUATOR WITHOUT OPERATOR HRS
UNDISTRIBUTED	IH 94	250	250
PROJECT TOTAL		250	250

REMOVING PAVEMENT MARKINGS WATER BLASTING

LOCATION	SPV.0090.01 REMOVING PAVEMENT MARKINGS WATER BLASTING LF
STAGE 4B	
IH 94	4,565
STAGE 4B SUBTOTAL	4,565
PROJECT TOTAL	4,565

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

3

CONCRETE CURB & GUTTER AND BARRIER COLD WEATHER COVERING

LOCATION	SPV.0090.06 CONCRETE CURB & GUTTER AND BARRIER COLD WEATHER COVERING PLASTIC 1 LAYER LF	SPV.0090.07 CONCRETE CURB & GUTTER AND BARRIER COLD WEATHER COVERING PLASTIC 2 LAYERS LF	SPV.0090.05 CONCRETE CURB & GUTTER AND BARRIER COLD WEATHER COVERING PLASTIC/HAY/PLASTIC OR BLANKETS LF
UNDISTRIBUTED	2,600	2,600	2,600
PROJECT TOTAL	2,600	2,600	2,600

SURVEY PROJECT

LOCATION	SPV.0105.01 SURVEY PROJECT ID 1060-45-70 LS
PROJECT 1060-45-70	1
PROJECT TOTAL	1

CONCRETE PAVEMENT COLD WEATHER COVERING

LOCATION	SPV.0180.01 CONCRETE PAVEMENT COLD WEATHER COVERING PLASTIC 1 LAYER SY	SPV.0180.02 CONCRETE PAVEMENT COLD WEATHER COVERING PLASTIC 2 LAYERS SY	SPV.0180.03 CONCRETE PAVEMENT COLD WEATHER COVERING PLASTIC/HAY/PLASTIC OR BLANKETS SY
UNDISTRIBUTED	2,800	2,800	2,800
PROJECT TOTAL	2,800	2,800	2,800

LINEAR DELINEATION SYSTEM

STATION	TO	STATION	OFFSET	LOCATION	SPV.0060.12 LINEAR DELINEATION SYSTEM (WHITE) EACH	SPV.0060.12 LINEAR DELINEATION SYSTEM (YELLOW) EACH	NOTES
1607+85	-	1618+58	WB RT	IH 94	--	248	MOUNTED ON BARRIER
1624+35	-	1638+45	WB LT	IH 94	325	--	MOUNTED ON RETAINING WALL
1638+45	-	1645+50	WB LT	IH 94	163	--	MOUNTED ON BARRIER
PROJECT TOTAL					488	248	
					736		

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

CONTRACTOR

ATR - WAVETRONIX DETECTOR

LOCATION	STATION	654.0102 CONCRETE BASE TYPE 2 (EACH)	SPV.0060.52 INSTALL TRANSFORMER BASES 11 1/2 BOLT CIRCLE (EACH)	SPV.0060.40 INSTALL TYPE 5 POLE (EACH)	SPV.0060.41 INSTALL CCTV POLE MOUNTED CABINET 24"X51" (EACH)	SPV.0060.42 CONCRETE MAINTENANCE PLATFORM 48" X 36"X 4" (EACH)	SPV.0060.43 INSTALL WAVETRONIX CLICK 202 MODULE (EACH)	SPV.0060.44 INSTALL WAVETRONIX CLICK 200 MODULE (EACH)	SPV.0060.45 INSTALL WAVETRONIX HD 125 MODULE & CABLE (EACH)	SPV.0060.46 INSTALL CABINET HEATER & THERMOSTAT (EACH)	656.0200 ELECTICAL Service METER BREAKER PEDESTAL 11. ATR ATR 40-0003 (EACH)
ATR-40-0003	1634 + 80	1	1	1	1	1	1	1	1	1	1
Totals		1	1	1	1	1	1	1	1	1	1

STATE FURNISHED MATERIAL - NON BID ITEMS

ATR - WAVETRONIX DETECTOR

LOCATION	STATION	TYPE 5 POLE (EACH)	TRANSFORMER BASES 11 1/2 BOLT CIRCLE (EACH)	WAVETRONIX HD 125 UNIT (EACH)	WAVETRONIX HD 125 CABLE (L.F.)	WAVETRONIX CLICK 202 MODULE (EACH)	WAVETRONIX CLICK 200 MODULE (EACH)	CABINET HEATER & THERMOSTAT (EACH)	CCTV POLE MOUNTED CABINET 24"X51" (EACH)
ATR-40-0003	1634 + 80	1	1	1	40	1	1	1	1
Totals		1	1	1	40	1	1	1	1

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE SPECIFIED.

3

CONTRACTOR

ATR - WAVETRONIX DETECTOR

LOCATION	STATION	654.0102 CONCRETE BASE TYPE 2 (EACH)	SPV.0060.47 INSTALL TYPE 3 POLES (EACH)	SPV.0060.42 CONCRETE MAINTENANCE PLATFORM 48" X 36"X 4" (EACH)	SPV.0060.41 INSTALL CCTV POLE MOUNTED CABINET 24"X51" (EACH)	SPV.0060.48 INSTALL SOLAR POWER PANELS & RACK (EACH)	SPV.0060.49 INSTALL CELLULAR ANTENNA (EACH)	FOR INFORMATION ONLY CELLULAR ANTENNA CABLE (L.F.)	SPV.0060.44 INSTALL WAVETRONIX CLICK 200 MODULE (EACH)	SPV.0060.51 INSTALL WAVETRONIX HD 125 (EACH)	FOR INFORMATION ONLY WAVETRONIX HD 125 CABLE (L.F.)
ATR-40-0050	1582+00 +/-	1	1	1	1	1	1	33	1	1	40
ATR-40-0033	1658+00 +/-	1	1	1	1	1	1	33	1	1	40
Totals		2	2	2	2	2	2		2	2	

STATE FURNISHED MATERIAL - NON BID ITEMS

ATR - WAVETRONIX DETECTOR

LOCATION	STATION	POLE TYPE 3 (EACH)	SOLAR PANELS & RACK (EACH)	WAVETRONIX HD 125 UNIT (EACH)	WAVETRONIX HD 125 CABLE (L.F.)	WAVETRONIX CLICK 200 MODULE (EACH)	CELLULAR MODEM (EACH)	CCTV POLE MOUNTED CABINET 24"X51" (EACH)	CELLULAR ANTENNA (EACH)	CELLULAR ANTENNA CABLE (L.F.)	STAINLESS STEEL U-BOLT 5/8'X6" (EACH)	STAINLESS STEEL U-BOLT 5/8'X8" (EACH)
ATR-40-0050	1582+00 +/-	1	1	1	40	1	1	1	1	33	2	2
ATR-40-0033	1658+00 +/-	1	1	1	40	1	1	1	1	33	2	2
Totals		2	2	2	80	2	2	2	2	66	4	4

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE SPECIFIED.

FTMS PULLBOXES & COMMUNICATION VAULTS

CATEGORY	ROADWAY	ITEM ID	STATION	OFFSET	653.0135* PULL BOXES STEEL 24 X 36 - INCH EACH	652.0700.S INSTALLING CONDUIT INTO EXISTING ITEM EACH
20	IH 94					
		PB2001	1593+16	101'LT	1	--
		PB2002	1593+20	67'LT	1	--
		EXPB2001	1595+30	105'LT	--	1
		EXPB2002	1598+14	114'LT	--	1
		PB2004	1598+52	71'LT	1	--
		PB2201	1624+54	406'LT	1	--
		PB2202	1623+90	434'LT	1	--
		PB2501	688+26	357'LT	1	--
		PB2502	688+78	409'LT	1	--
		PB2601	702+66	132'LT	1	--
	TOTALS				8	2

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS CONDUIT AND TRACER WIRE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	655.0505 ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG LF
20	IH 94					
		PB2001 - SB2002	10	32	--	10
		PB2001 - PB2002	35	--	123	35
		PB2002 - SB2002	11	34	--	11
		PB2002 - EXPB2001	215	--	442	215
		EXPB2002 - PB2004	57	--	126	57
		PB2004 - MD01	10	44	--	10
		TOTALS		110	691	338

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

FTMS CABLE AND WIRE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	655.0700 LOOP DETECTOR LEAD IN CABLE LF	674.0200 CABLE MICROWAVE DETECTOR LF
20	IH 94						
		PB2001 - SB2001	10	44	16	--	--
		PB2001 - PB2002	35	41	41	70	--
		PB2002 - SB2002	11	23	17	--	--
		PB2002 - EXPB2001	215	221	221	860	--
		EXPB2001 - EXPB2003	78	84	84	468	--
		EXPB2003 - EXPB2002	207	213	213	1656	--
		PB2004 - MD01	10	--	16	--	22
		EXPB2002 - EXCB-RM-40-0076	40	46	46	320	46
		PB2004 - EXPB2002	57	--	63	57	63
		TOTALS		672	717	3431	131

3

RAMP GATES

CATEGORY	ROADWAY	STATION	OFFSET	ITEM ID	SPV.0060.27 RAMP CLOSURE GATES SOLAR POWERED 24-FT EACH	SPV.0060.28 RAMP CLOSURE GATES SOLAR POWERED 30-FT EACH	SPV.0060.29 RAMP CLOSURE GATES SOLAR POWERED 37-FT EACH	SPV.0060.30 RAMP CLOSURE GATES ARMS STOCKPILE 24-FT EACH	SPV.0060.31 RAMP CLOSURE GATES ARMS STOCKPILE 30-FT EACH	SPV.0060.32 RAMP CLOSURE GATES ARMS STOCKPILE 37-FT EACH	SPV.0060.33 RAMP CLOSURE GATE FLASHERS STOCKPILE EACH
20	IH 94										
	28TH ST. WB ON RAMP	1618+72	413 'LT	RG01	--	1	--	--	--	--	--
		1618+04	443 'LT	RG02	1	--	--	--	--	--	--
	11TH ST. WB ON RAMP	688+20	365 'LT	RG03	--	1	--	--	--	--	--
		688+64	414 'LT	RG04	--	1	--	--	--	--	--
	7TH ST. WB ON RAMP	702+76	131 'LT	RG05	--	--	1	--	--	--	--
				UNDISTRIBUTED				1	3	1	3
	TOTALS				1	3	1	1	3	1	3

RAMP GATE CABLE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED LF
20	IH 94			
	28TH ST. WB ON RAMP	RG01	96	108
		RG02	25	37
	11TH ST. WB ON RAMP	RG03	111	246
		RG04	40	104
	7TH ST. WB ON RAMP	RG05	27	78
		TOTALS		573

BARRICADE RACK

CATEGORY	ROADWAY	SPV.0060.26 BARRICADE RACK EACH
20		
	28TH ST. WB ON RAMP	1
	TOTALS	1

FTMS SIGNAL, FLASHER ASSEMBLY

CATEGORY	ROADWAY	ITEM ID	LOCATION	OFFSET	654.0101 CONCRETE BASES TYPE 1 EACH	SPV.0060.25 SALVAGE EXISTING AND INSTALL SALVAGED SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT EACH
20	IH 94					
		SB01	1593+26	100'LT	1	1
		SB02	1593+30	70'LT	1	1
		TOTALS			2	2

FTMS RAMP METER DETECTORS

CATEGORY	ROADWAY	ITEM ID	LOOP NUMBER	LENGTH	WIDTH	NUMBER OF TURNS	652.0800 CONDUIT LOOP DETECTOR LF	655.0800 LOOP DETECTOR WIRE LF
20	IH 94							
	35TH SB ON RAMP	RM-40-0076	DEMAND A	20	6	3	54	201.6
			DEMAND B	20	6	4	62	262.5
			PASSAGE A	6	6	5	46	151.2
			PASSAGE B	6	6	6	58	186.9
		TOTALS					220	802

3

FTMS BASES, POLES AND EQUIPMENT

CATEGORY	ROADWAY	ITEM ID	LOCATION	OFFSET	654.0105 CONCRETE BASE TYPE 5 EACH	654.0220 CONCRETE CONTROL CABINET BASES TYPE 10 EACH	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0321 POLES TYPE 5 STEEL EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	SPV.0060.21 GROUND ROD EACH	SPV.0060.22 SALVAGE EXISTING MICROWAVE DETECTOR ASSEMBLY EACH	SPV.0060.23 REINSTALL SALVAGED MICROWAVE DETECTOR ASSEMBLY EACH	SPV.0060.24 REFOCUS EXISTING MICROWAVE DETECTOR ASSEMBLY EACH
20	IH 94													
		MD01	1598+60	65 'LT	1	1	--	1	1	--	1	1	1	--
		EXMD01	1621+70	66 'LT	--	--	--	--	--	--	--	--	--	1
		EXMD02	1638+10	50 'LT	--	--	--	--	--	--	--	--	--	1
		EXMD03	1659+91	105 'LT	--	--	--	--	--	--	--	--	--	1
		RG01	1618+72	413 'LT	1	--	--	1	--	--	--	--	--	--
		RG02	1618+04	443 'LT	1	--	--	1	--	--	--	--	--	--
		RG03	688+20	365 'LT	1	--	--	1	--	--	--	--	--	--
		RG04	688+64	414 'LT	1	--	--	1	--	--	--	--	--	--
		RG05	702+76	131 'LT	1	--	--	1	--	--	--	--	--	--
		SB2201	1623+76	429 'LT	--	1	1	--	--	1	--	--	--	--
		SB2501	688+95	425 'LT	--	1	1	--	--	1	--	--	--	--
		SB2601	702+52	128 'LT	--	1	1	--	--	1	--	--	--	--
		TOTALS			6	4	3	6	1	3	1	1	1	3

ITS REMOVALS

CATEGORY	ROADWAY	ITEM ID	674.0300 REMOVE CABLE LF
20	IH 94		
		EXPB01 - EXSB01	9
		EXPB01 - EXPB02	34
		EXPB02 - EXSB02	9
		EXPB02 - EXPB04	211
		EXMD01 - EXPB05	65
		EXPB05 - EXPB03	56
		EXMH1624 - EXMH1625	142
		EXMH1625 - EXMH1636	1,014
		EXMH1636 - EXMH1640	490
		TOTALS	2,030

FIELD SYSTEM INTEGRATOR

CATEGORY	ROADWAY	670.0100.01 FTMS LS
20		
	IH 94	1
	TOTALS	1

ITS DOCUMENTATION

CATEGORY	ROADWAY	670.0200.01 FTMS LS
20		
	IH 94	1
	TOTALS	1

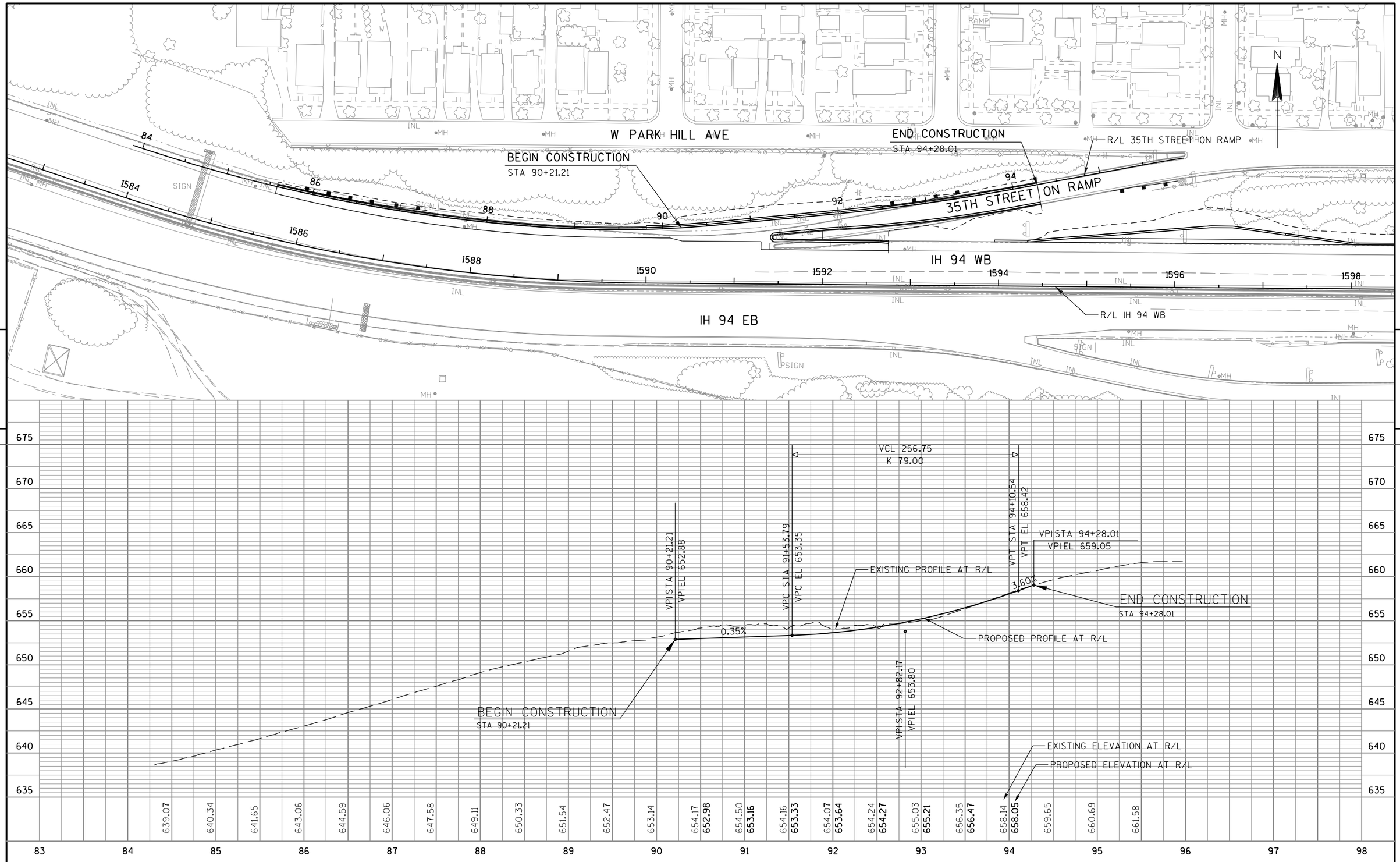
ITS REMOVALS

CATEGORY	ROADWAY	ITEM	DESCRIPTION	STATION	OFFSET	204.0195* REMOVING CONCRETE BASE EACH	653.0905* REMOVING PULL BOXES EACH
20	IH 94						
		EXPB01	PULL BOX	1593+18	104'LT	--	1
		EXPB02	PULL BOX	1593+24	67'LT	--	1
		EXSB01	SIGN BASE	1593+27	102'LT	1	--
		EXSB02	SIGN BASE	1593+33	67'LT	1	--
		EXPB05	PULL BOX	1598+22	54'LT	--	1
					TOTALS	2	3

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

COMMUNICATION SYSTEM TESTING

CATEGORY	ROADWAY	678.0500.01 FTMS LS
20		
	IH 94	1
	TOTALS	1



PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	PLAN AND PROFILE: 35TH STREET ON RAMP	SHEET 208	E

Standard Detail Drawing List

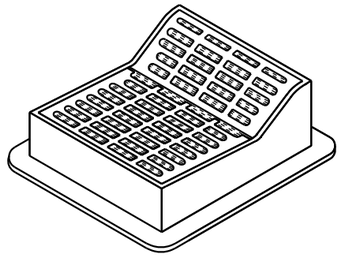
08A05-17C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-17D	INLET COVER, TYPE Z MANHOLE COVERS, TYPE K, J, J-S, J-H, J-H-S, L & M
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-07	CONDUIT
09B04-09	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C05-07	CONCRETE CONTROL CABINET BASES
09C09-04	CONCRETE BASE, TYPE 8
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09F08-03	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)
10A01-02	ELECTRICAL HANDHOLE WIRING
10A02-02	IDENTIFICATION PLAQUES LIGHT POLES
13C01-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C15-05A	CONCRETE BASE
13C15-05B	CONCRETE BASE
13C18-01A	CONCRETE PAVEMENT JOINTING
13C18-01B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-01C	CONCRETE PAVEMENT JOINT TIES
13C18-01D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B32-01A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-01B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-01D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B35-01A	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B35-01B	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B35-01C	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B35-01D	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B35-01E	42-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B35-01F	42-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B40-01A	32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B40-01B	32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B40-01C	32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B40-01D	32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B40-01E	42-INCH VERTICAL SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B40-01F	42-INCH VERTICAL SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B40-01G	51-INCH VERTICAL SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B40-01H	51-INCH VERTICAL SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B40-01I	56-INCH VERTICAL SHAPE CONCRETE BARRIER TO 56-INCH SSCB TRANSITION
14B40-01J	56-INCH VERTICAL SHAPE CONCRETE BARRIER TO 56-INCH SSCB TRANSITION
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-02A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES

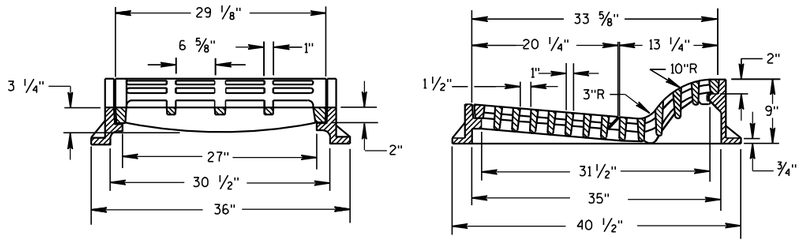
6

Standard Detail Drawing List

15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C10-10	PAVEMENT MARKINGS FOR DROP LANES FREEWAY/EXPRESSWAY
15C19-01C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01B	LANE DROP PAVEMENT MARKING
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D16-01	TRAFFIC CONTROL, EXIT RAMP CLOSURE

6



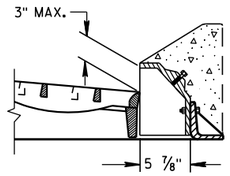


TYPE "F"

(APPROXIMATE WEIGHT 645 LBS.)

FRAME.....300 LBS.
GRATE..... 165 LBS.
GRATE..... 180 LBS.

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT 79 LBS.)
CURB BOX..... 79 LBS.

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

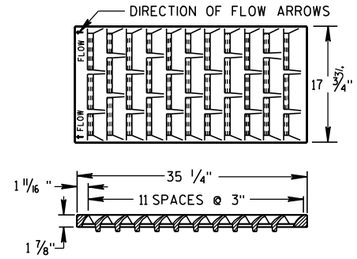
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

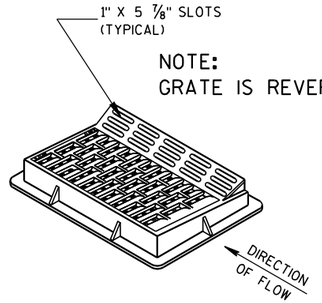
GENERAL NOTES

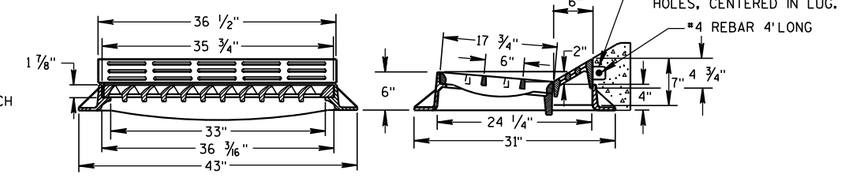
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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





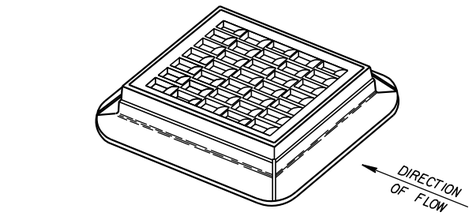


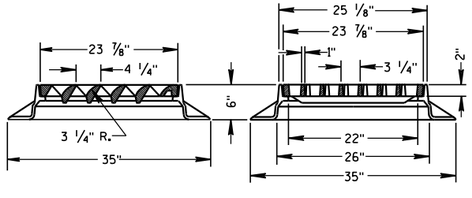
TYPE "HM"

(APPROXIMATE WEIGHT 375 LBS.)
FRAME.....175 LBS.
GRATE..... 138 LBS.
CURB BOX..... 62 LBS.

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

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

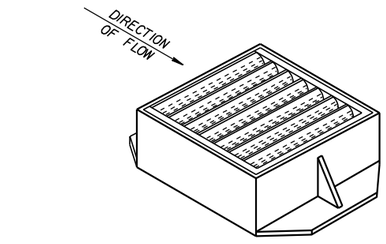


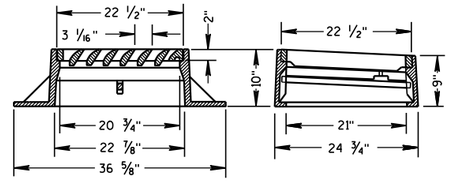


TYPE "S"

(APPROXIMATE WEIGHT 334 LBS.)

FRAME.....165 LBS.
GRATE..... 169 LBS.

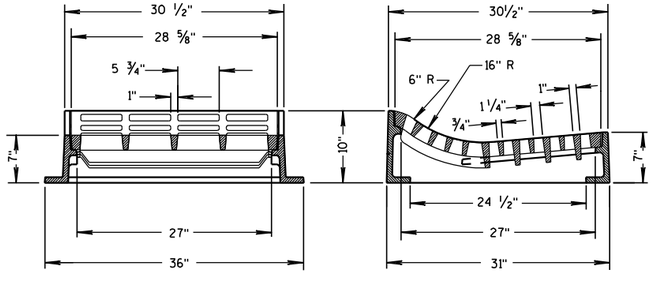


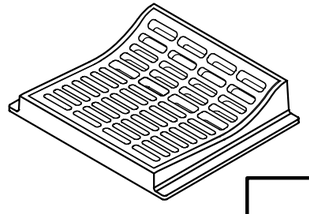


TYPE "V"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME..... 270 LBS.
GRATE..... 130 LBS.
SAFETY BAR..... 5 LBS.





TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)
FRAME.....270 LBS.
GRATE.....260 LBS.
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

1/7/08 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS DEVELOPMENT ENGINEER

211

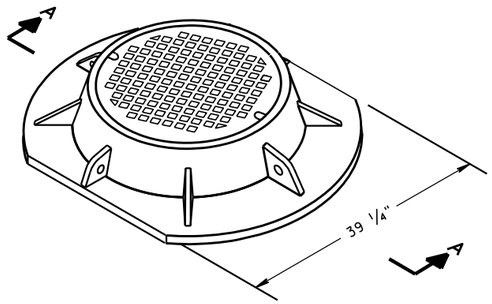
FHWA

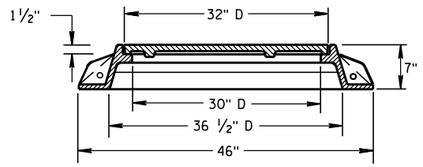
6

S.D.D. 8 A 5-17c

6

S.D.D. 8 A 5-17c



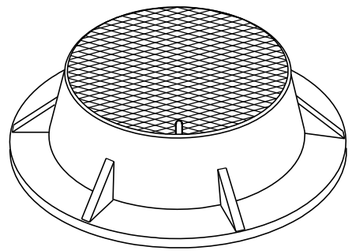


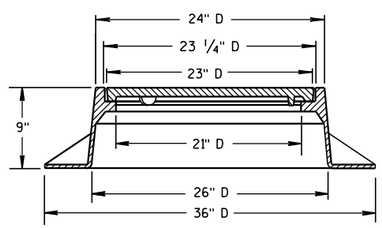
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 415 LBS.)

FRAME.....210 LBS.
LID.....205 LBS.

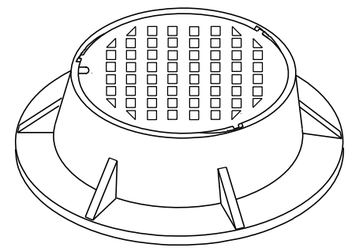


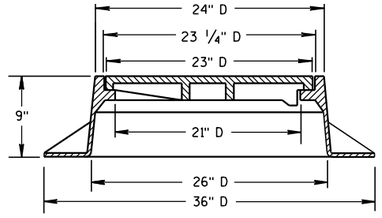


TYPE "J"

(APPROXIMATE WEIGHT 250 LBS.)

FRAME.....135 LBS.
LID.....115 LBS.





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 245 LBS.)

FRAME.....145 LBS.
LID.....100 LBS.

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

GENERAL NOTES

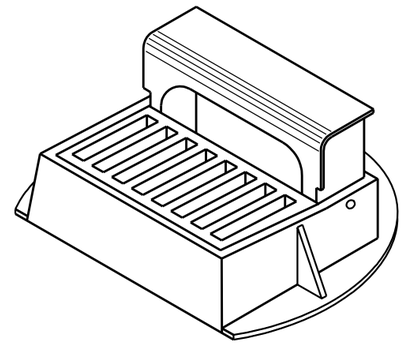
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

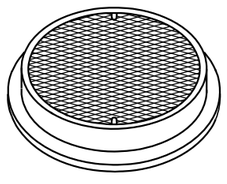
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

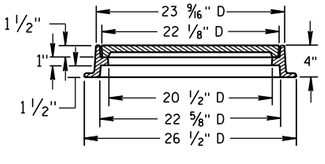
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

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

(1) MANUFACTURER MAY PROVIDE ADDITIONAL SEALS OR GASKETS.



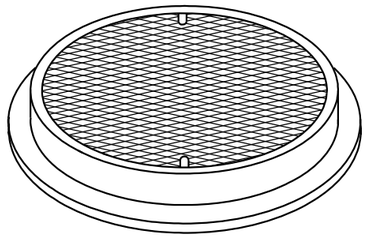


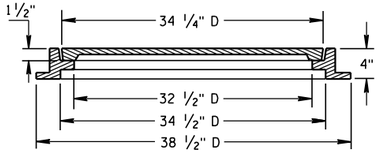


TYPE "L"

(APPROXIMATE WEIGHT 145 LBS.)

FRAME.....75*
LID.....70*

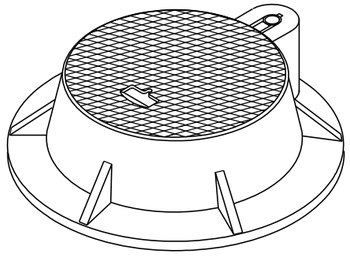


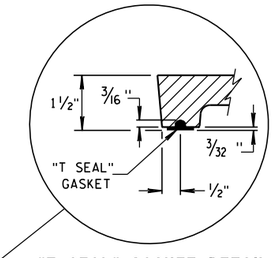


TYPE "M"

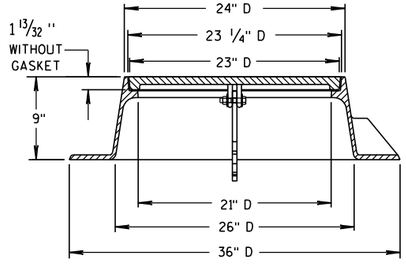
(APPROXIMATE WEIGHT 385 LBS.)

FRAME.....125*
LID.....260*





"T SEAL" GASKET DETAIL



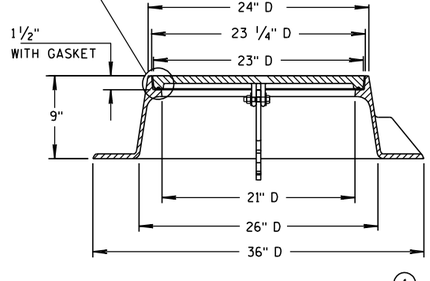
TYPE "J" HINGED

LID WITHOUT "T SEAL" GASKET

(APPROXIMATE WEIGHT 310 LBS.)

FRAME.....190 LBS.
LID.....120 LBS.

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



TYPE "J" HINGED-SPECIAL (1)

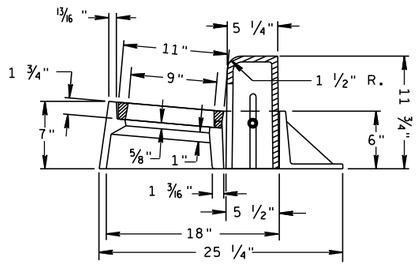
LID WITH "T SEAL" GASKET

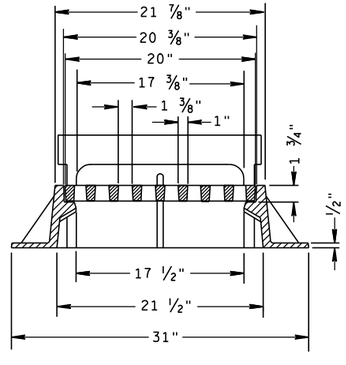
(APPROXIMATE WEIGHT 310 LBS.)

FRAME.....190 LBS.
LID.....120 LBS.

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

CURB BOX ADJUSTABLE 4" TO 10"





INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 340 LBS.)

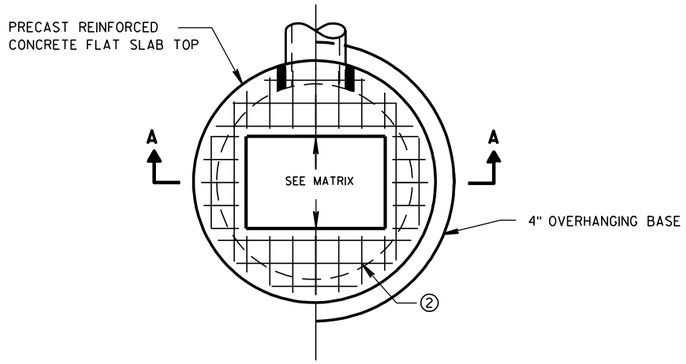
FRAME.....198 LBS.
GRATE.....50 LBS.
CURB BOX.....92 LBS.

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

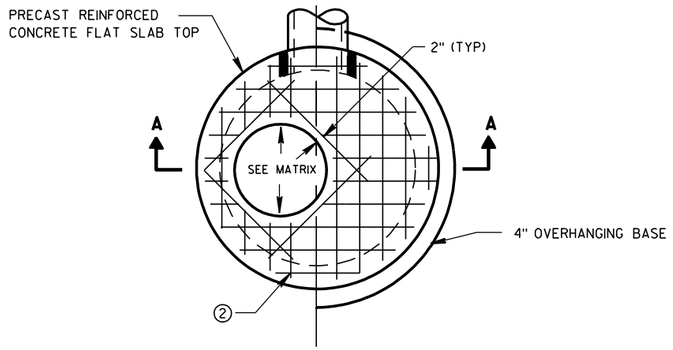
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/24/2005 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

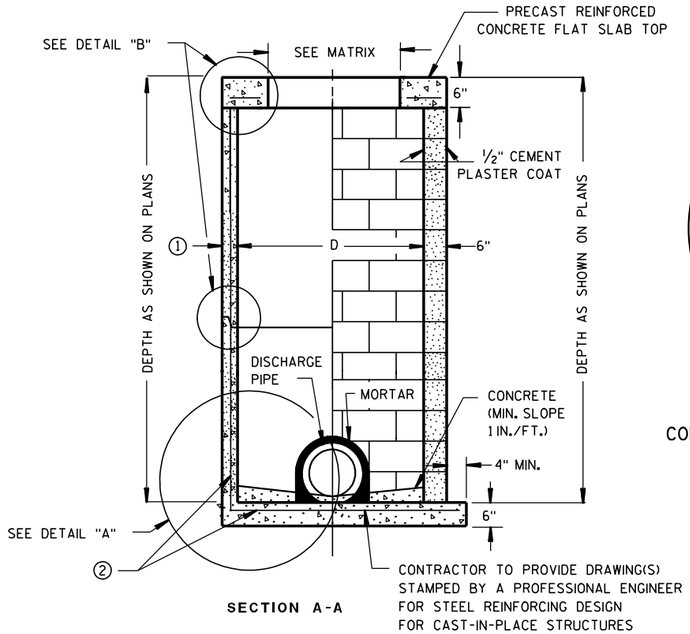
6
S.D.D. 8 A 5-17d



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

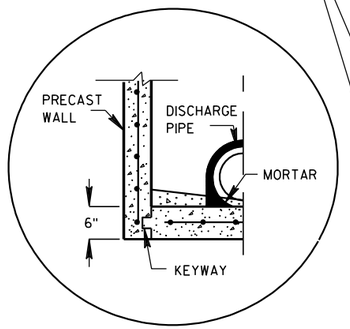


SECTION A-A

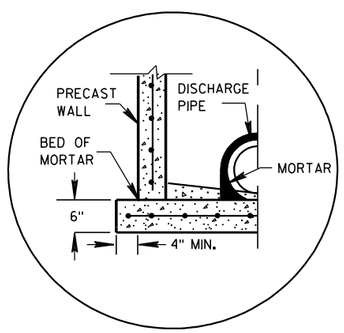
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

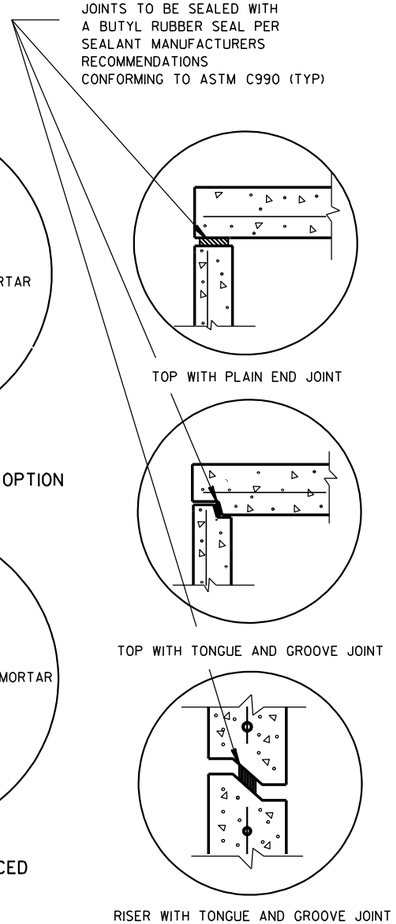


PRECAST REINFORCED
CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE PRECAST REINFORCED
CONCRETE BASE OPTION

DETAIL "A"



DETAIL "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.

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

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

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

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

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.

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

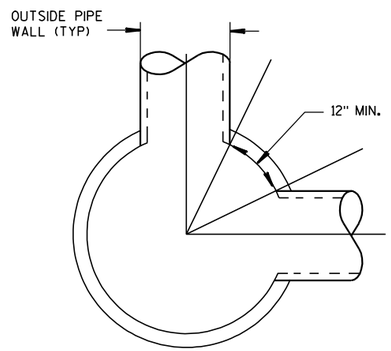
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

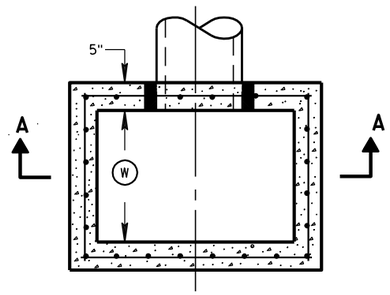
INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

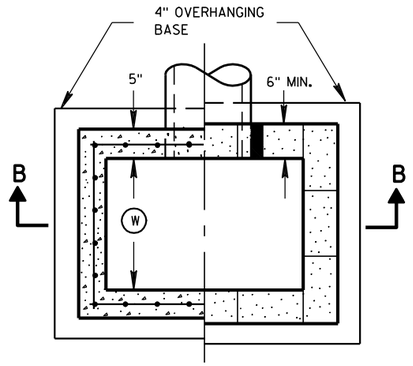
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6/5/2012 — DATE
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FHWA

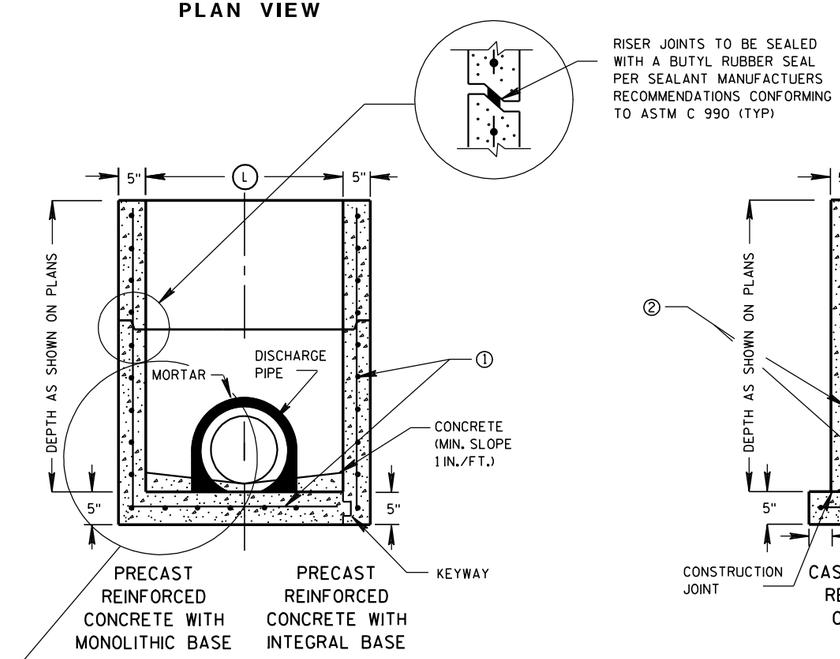
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S.D.D. 8 C 6-1



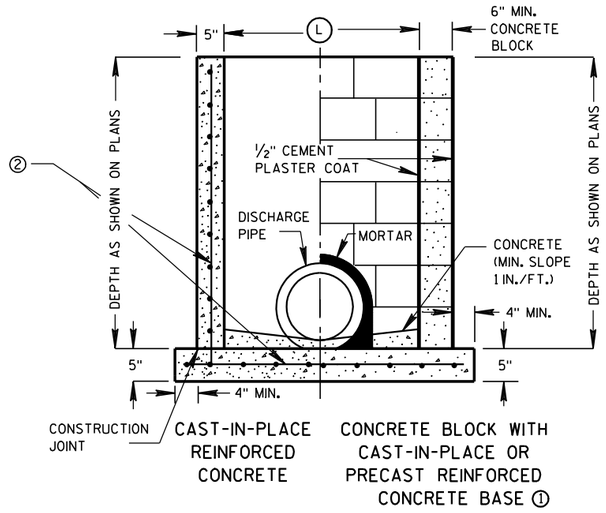
PLAN VIEW



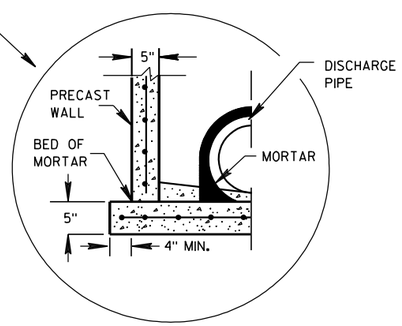
PLAN VIEW



SECTION A-A



SECTION B-B



SEPERATE 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.

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

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

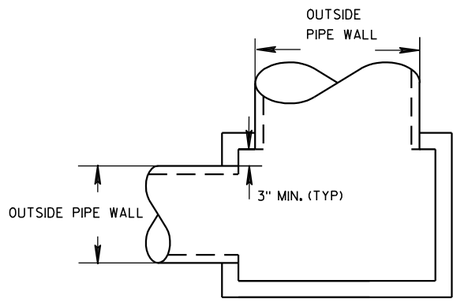
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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

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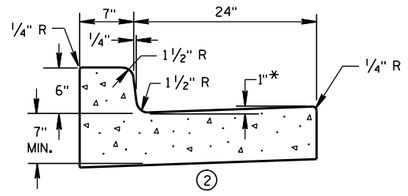
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6/5/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS D 214 — ENGINEER
FHWA
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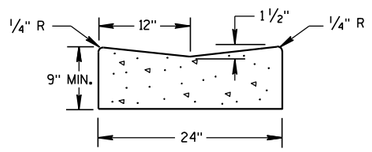
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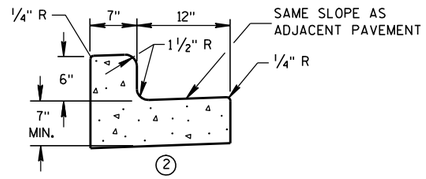
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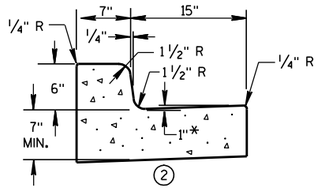
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

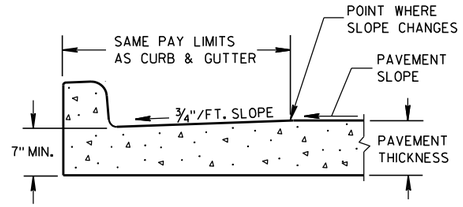


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

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

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

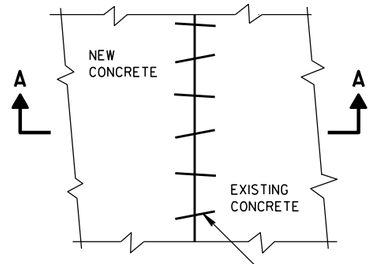
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

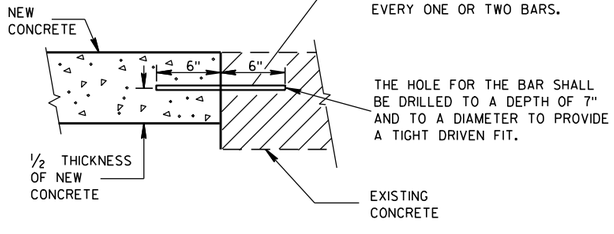
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

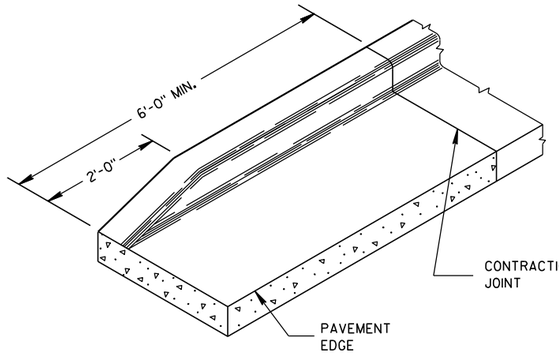
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



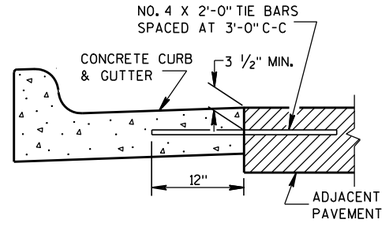
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

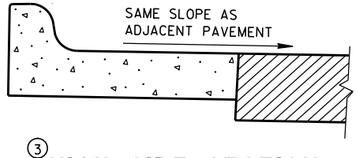
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

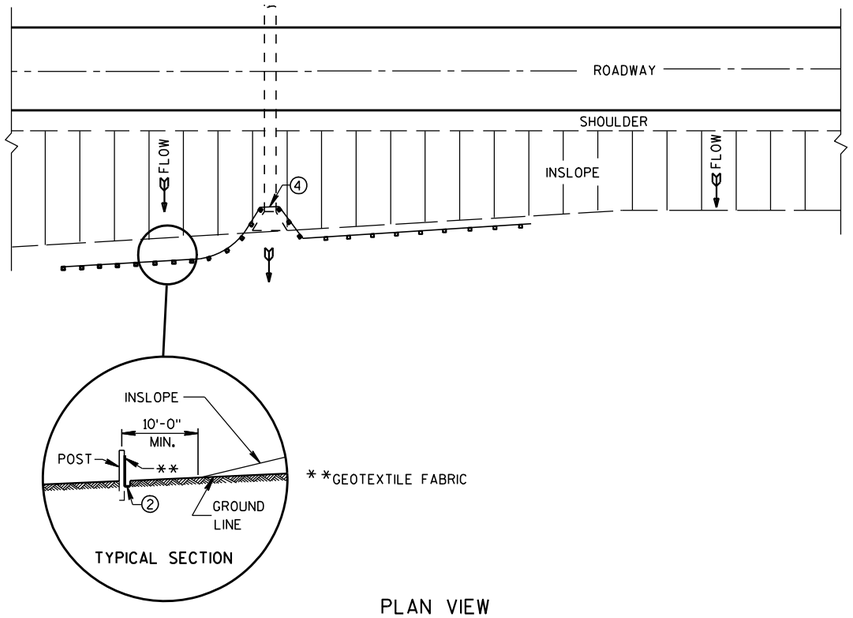
/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

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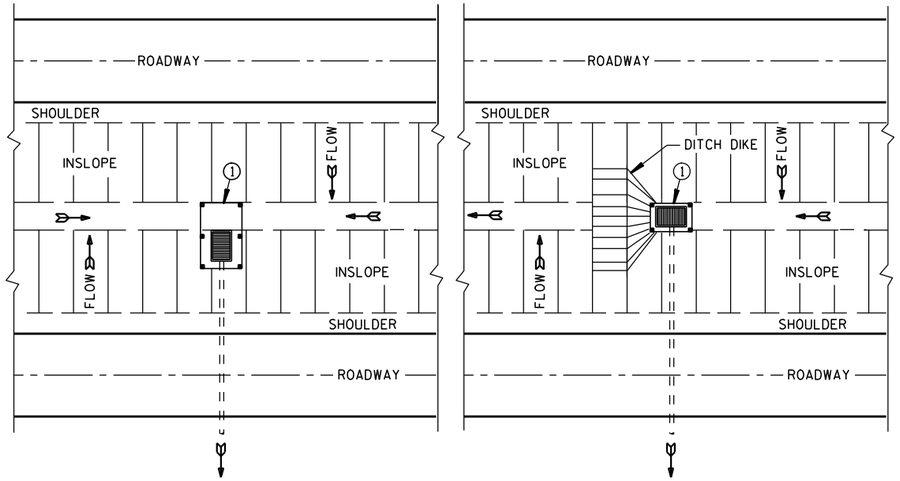
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PLAN VIEW

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.

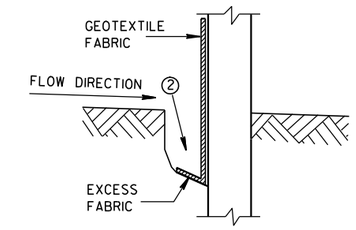
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

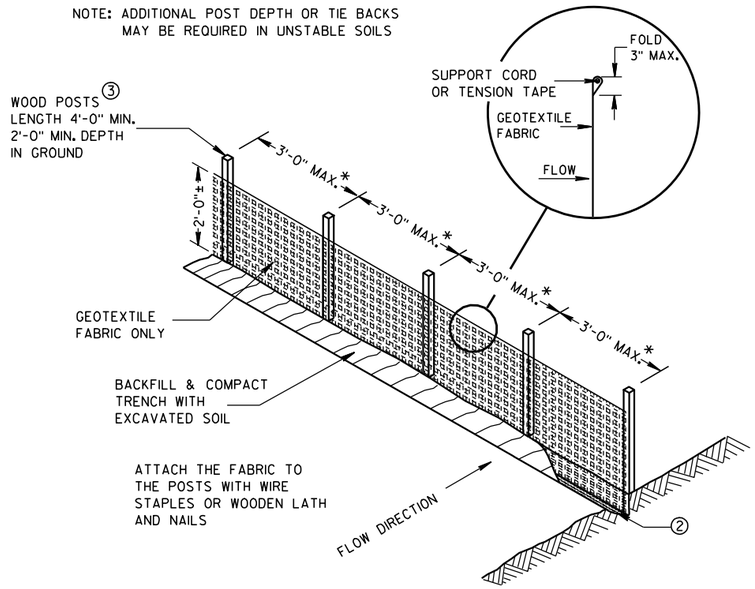
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

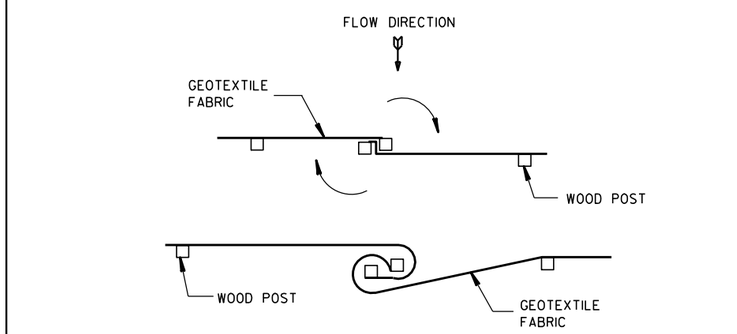
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



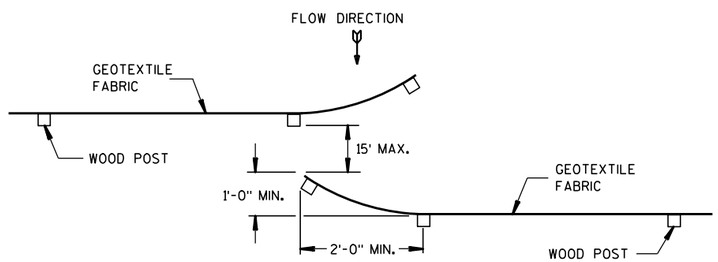
TRENCH DETAIL



SILT FENCE

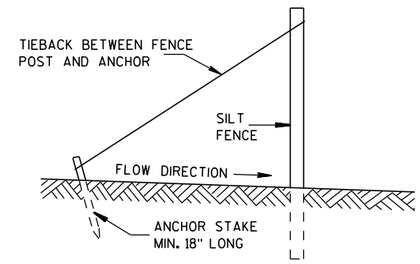


TWIST METHOD



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

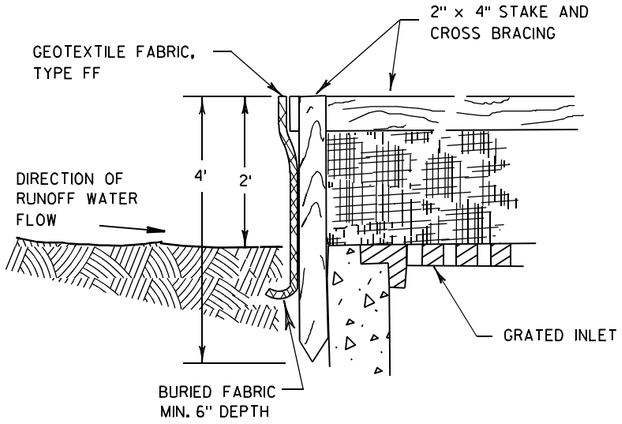
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

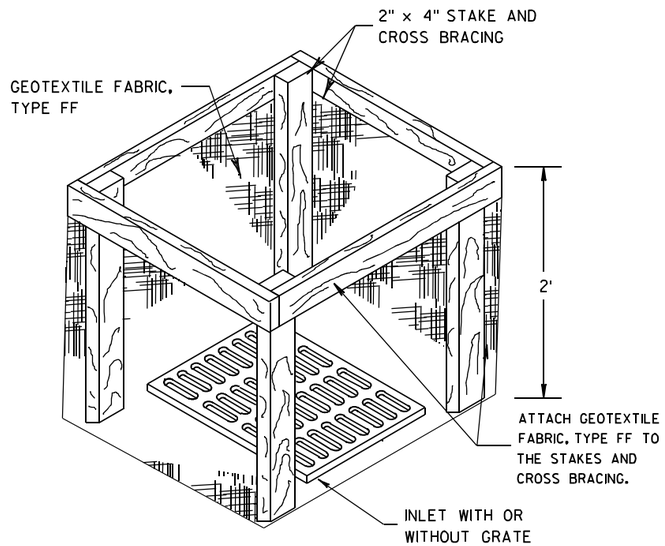
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S.D.D. 8 E 9-6

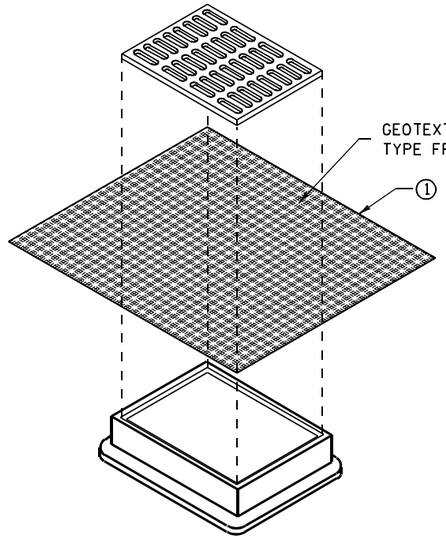
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S.D.D. 8 E 9-6



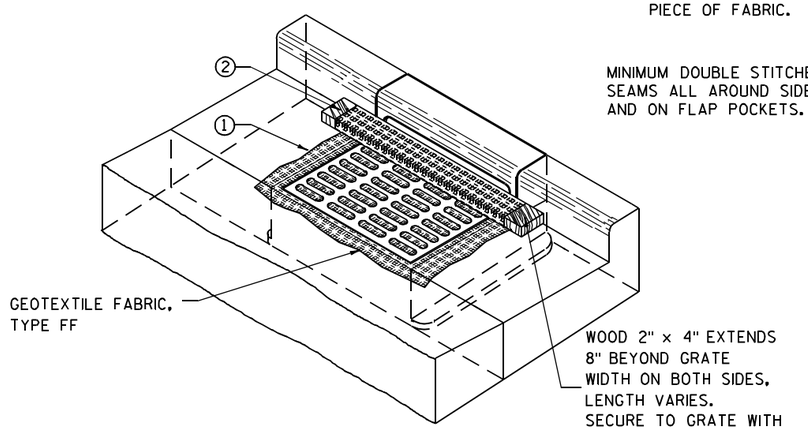


INLET PROTECTION, TYPE A

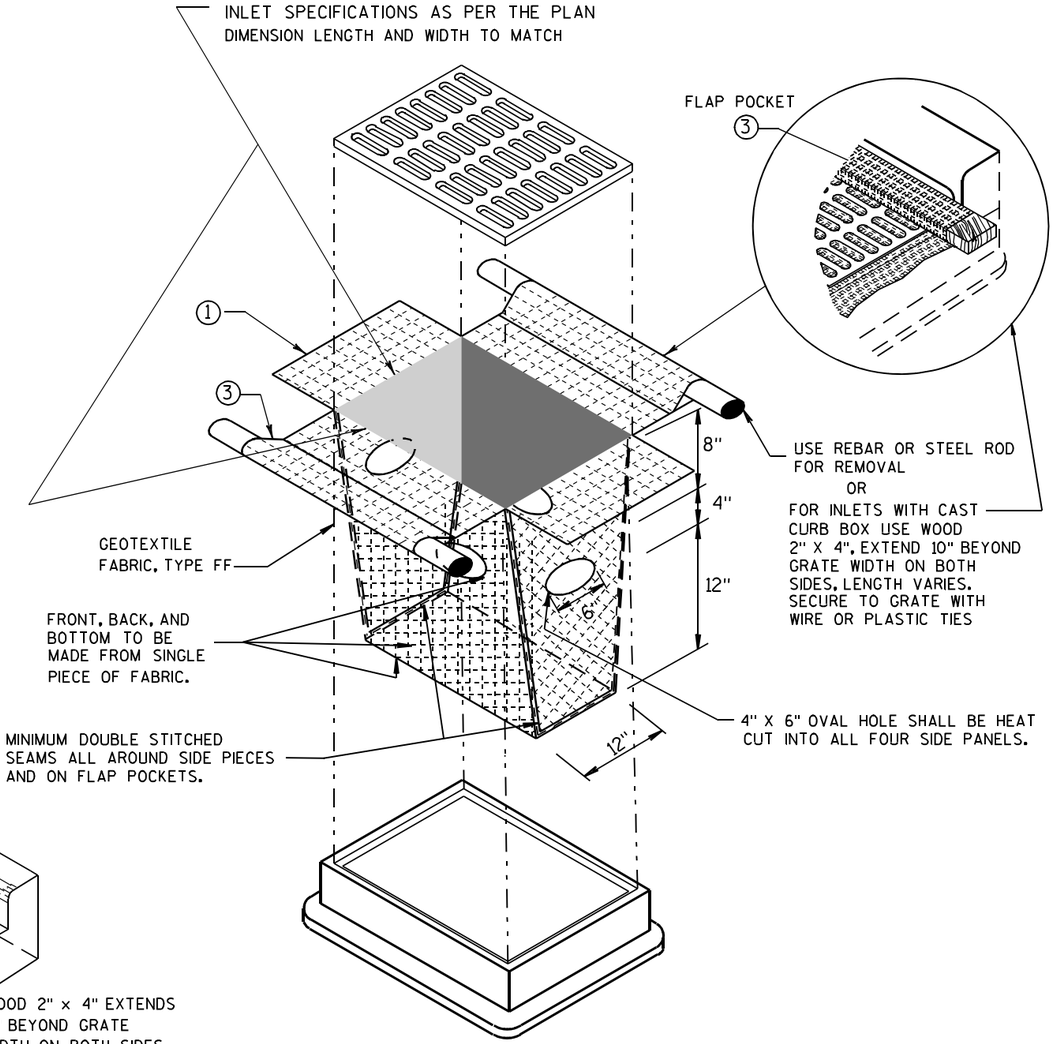


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

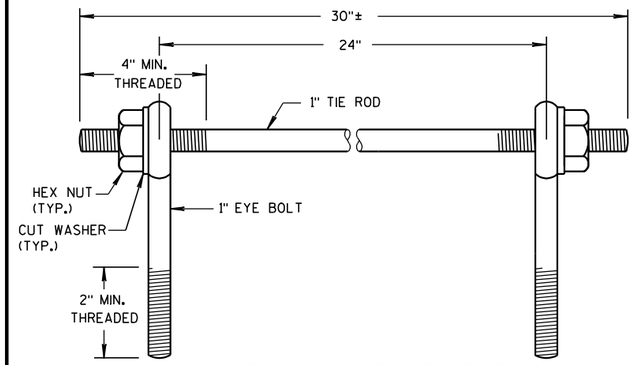
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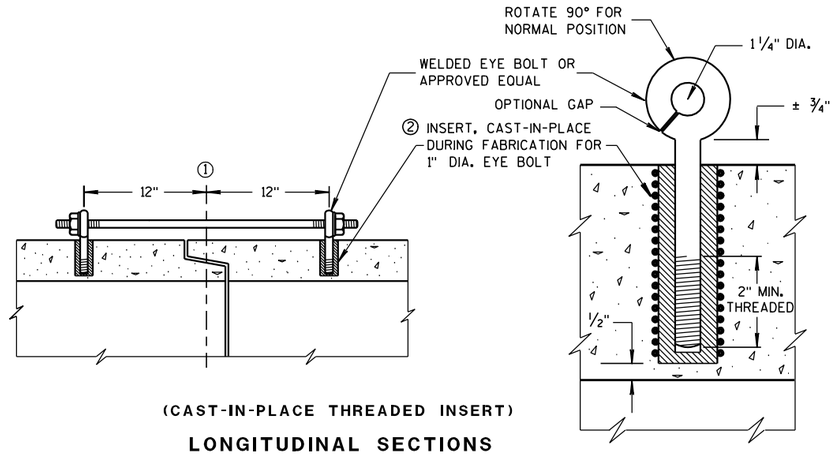
S.D.D. 8 E 10-2

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S.D.D. 8 E 10-2



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.

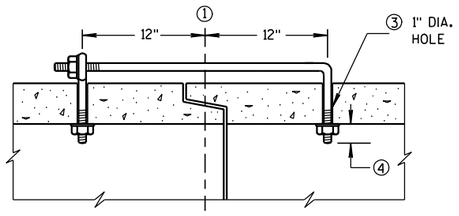
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

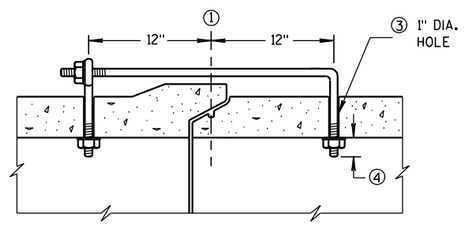
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

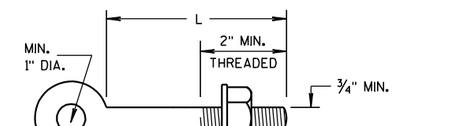


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

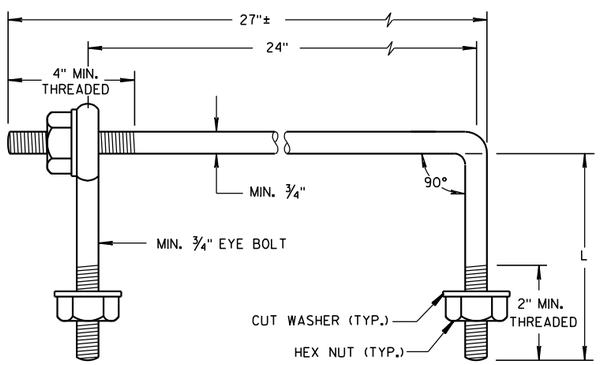
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

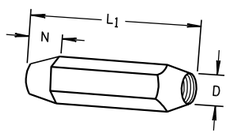
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

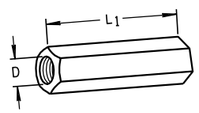
ADJUSTABLE TIE ROD TABLE

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



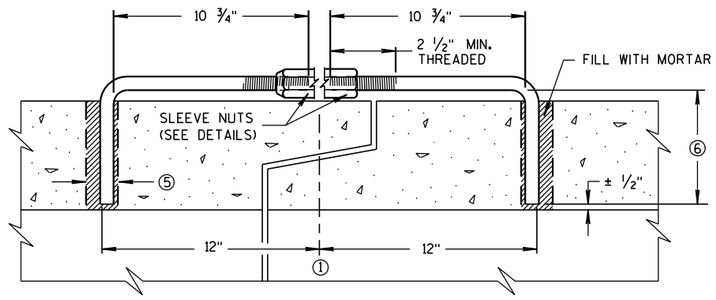
TAPERED



PLAIN

RIGHT AND LEFT THREADS

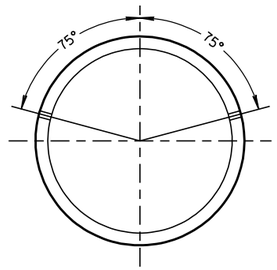
SLEEVE NUTS



LONGITUDINAL SECTION

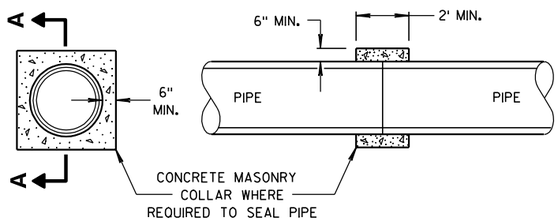
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

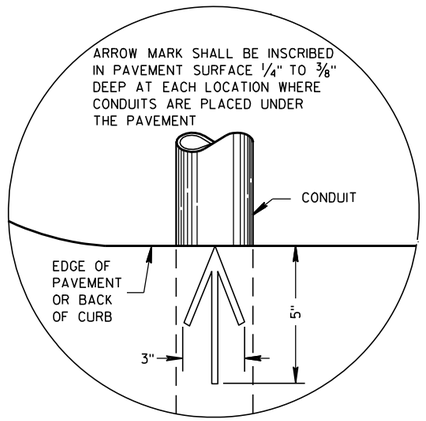
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
218
FHWA

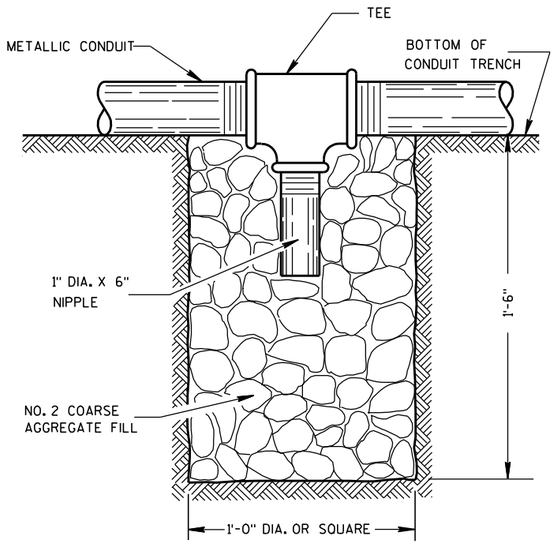
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S.D.D. 8 F 4-7



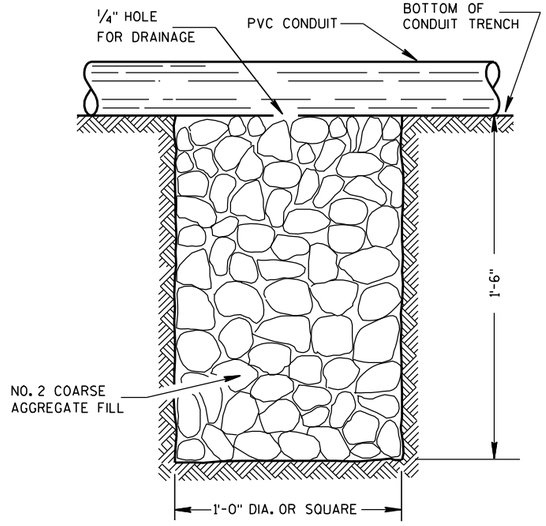
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

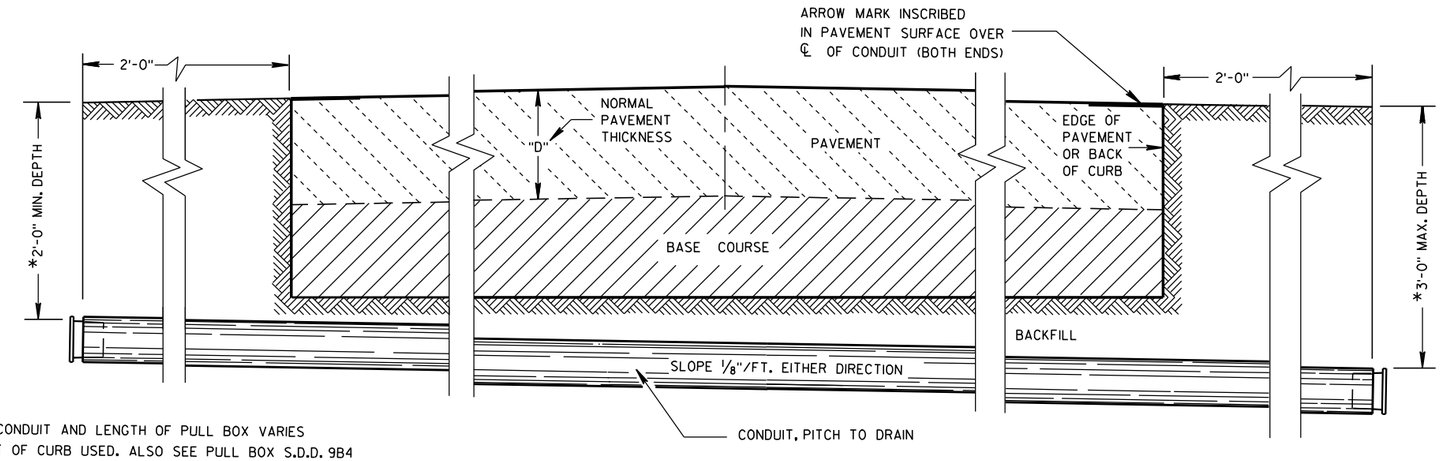
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

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

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



*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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

FHWA

6

S.D.D. 9 B 2-7

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.

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

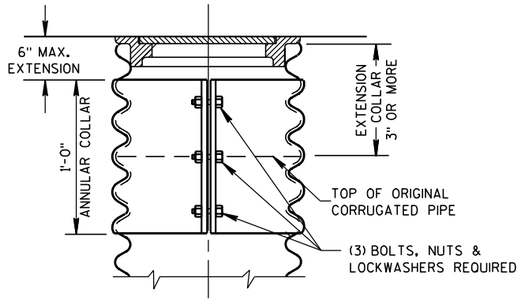
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

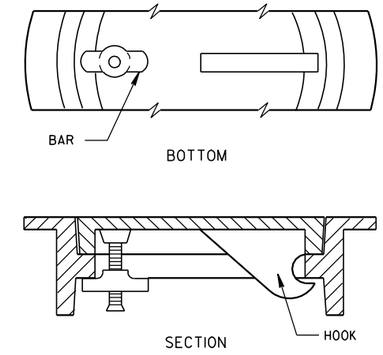
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.

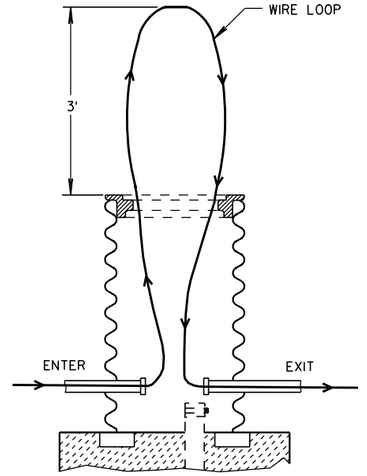


CORRUGATED PIPE EXTENDER

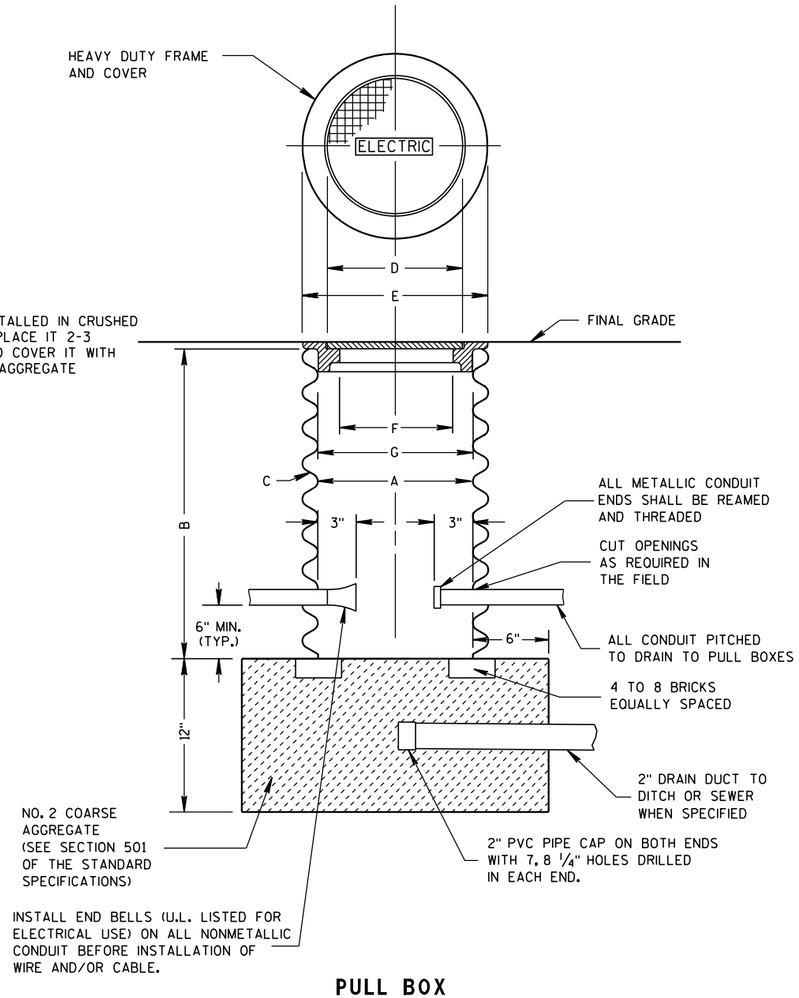


ALTERNATE COVER (LOCKING)

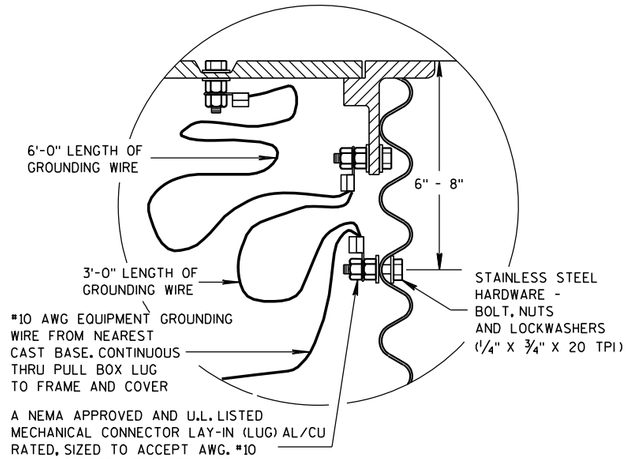
TIGHTENING BAR TYPE



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



PULL BOX

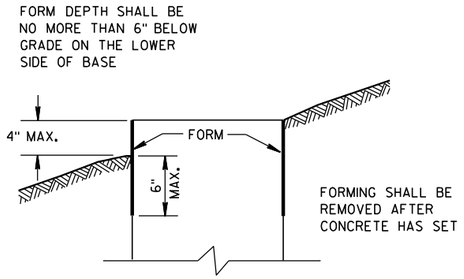


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/27/06 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 220 HWYS
FHWA



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

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 2 AND TYPE 5 BASES.

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

(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.

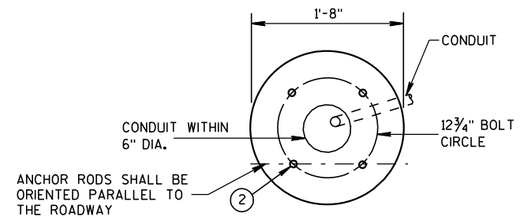
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

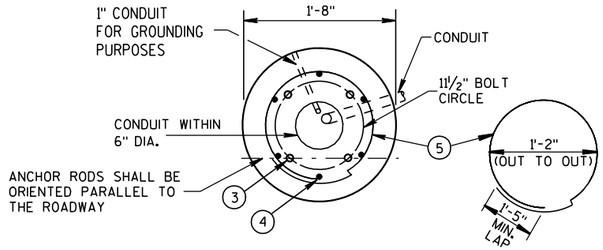
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

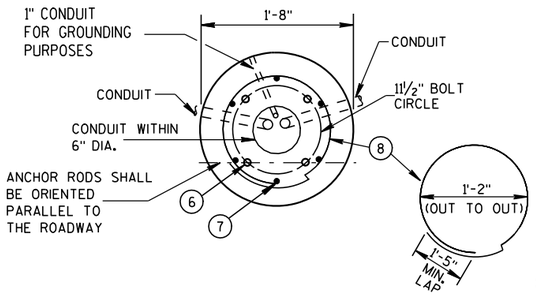
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

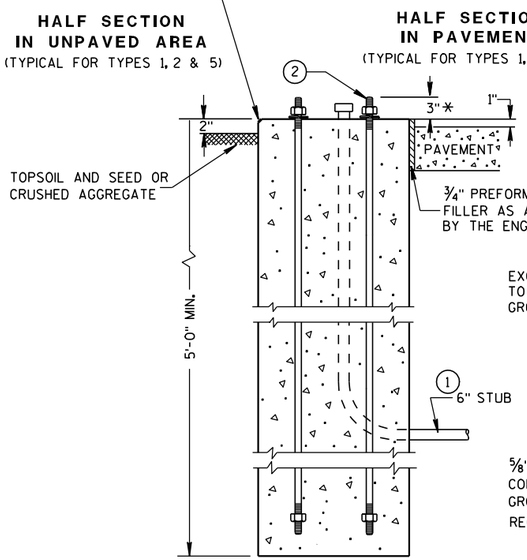
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.





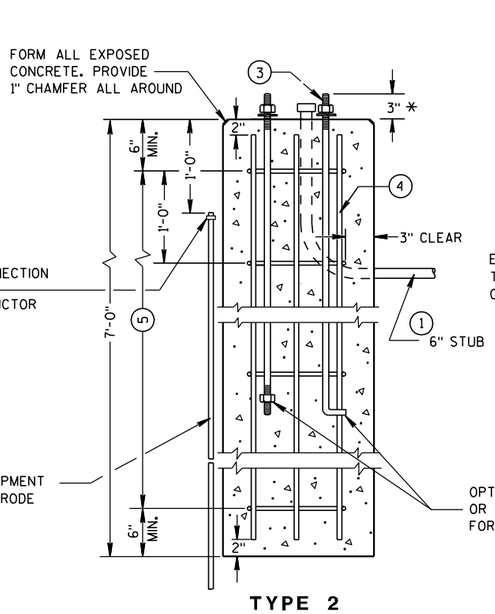


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)

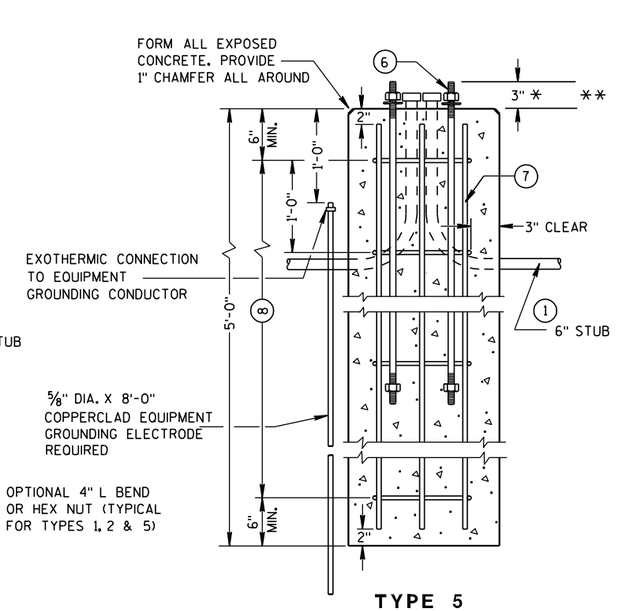


HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)

TYPE 1



TYPE 2



TYPE 5

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/3/10 — DATE

/S/ Joanna L. Rush — STATE ELECTRICAL ENGI 221 — HWYS

FHWA

6

S.D.D. 9 C 2-6

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, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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 AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

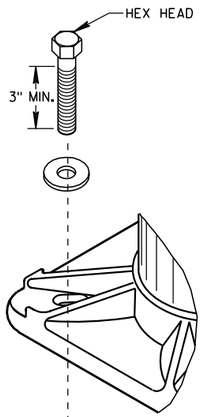
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

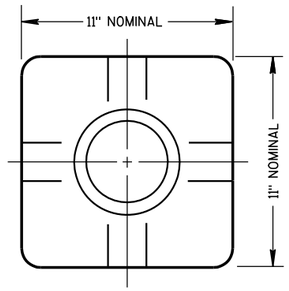
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

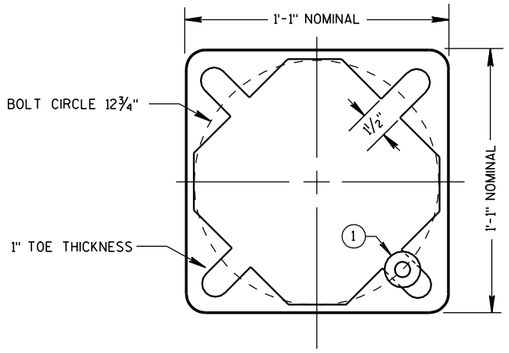
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

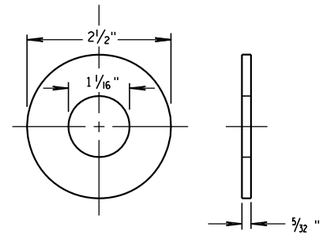




TOP VIEW
(PEDESTAL BASE)

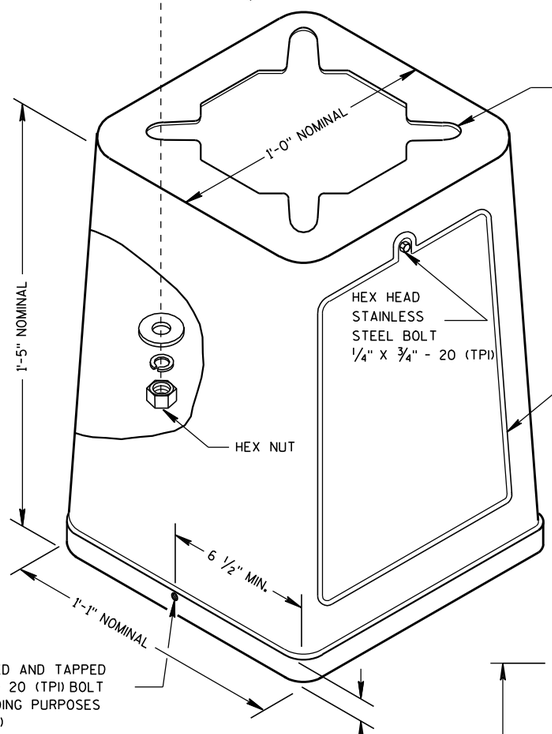


BOTTOM VIEW
(PEDESTAL BASE)

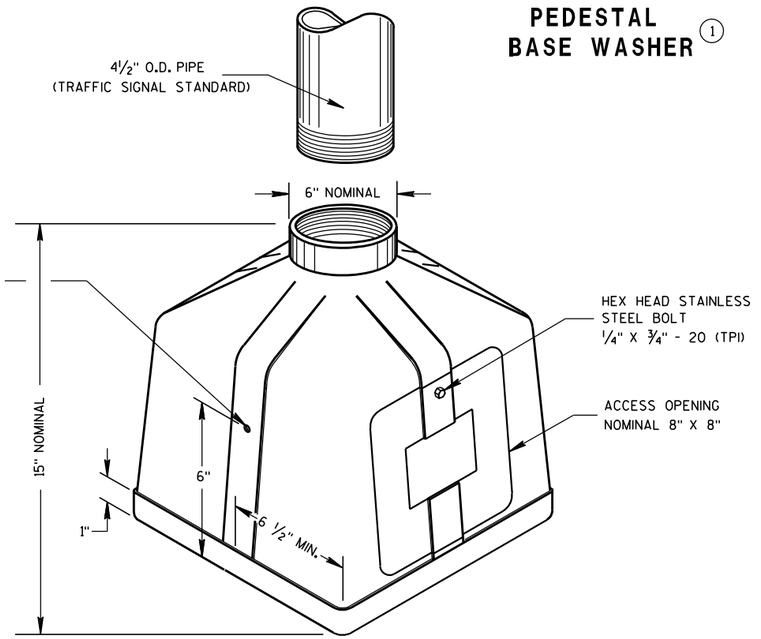


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

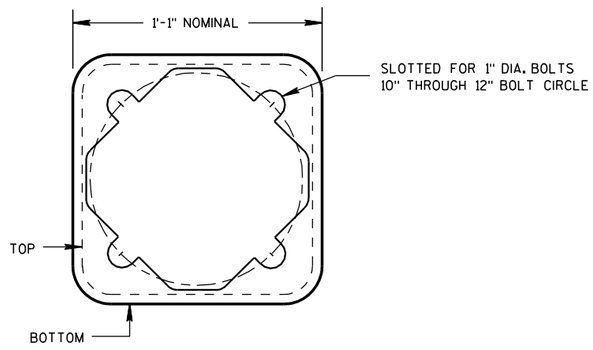


ISOMETRIC VIEW

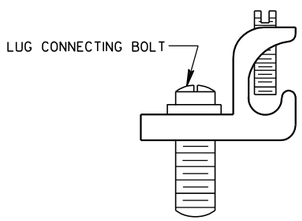


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

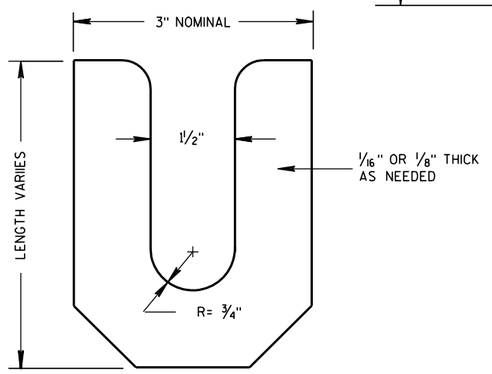


TYPICAL MECHANICAL CONNECTOR LUG

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
10/27/09 — DATE
/S/ Joanna L. [illegible] — STATE ELECTRICAL ENGI
222
HWYS
FHWA

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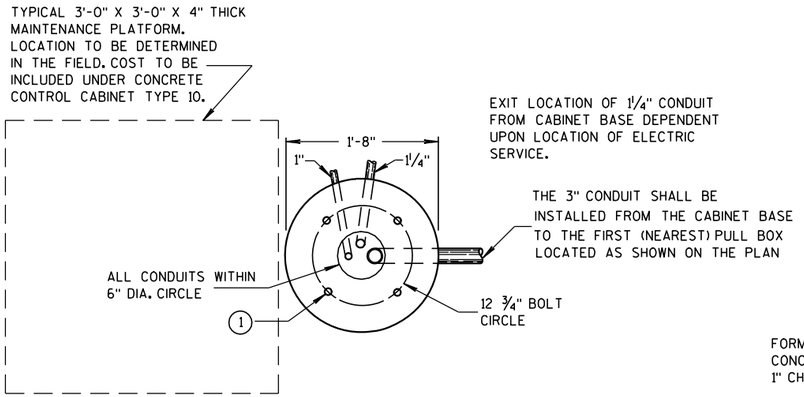
S.D.D. 9 C 3-3

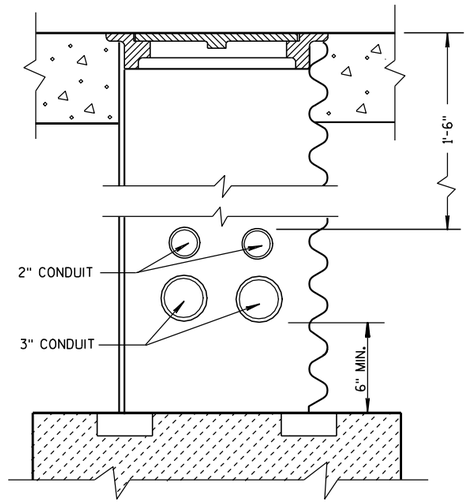
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S.D.D. 9 C 3-3

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

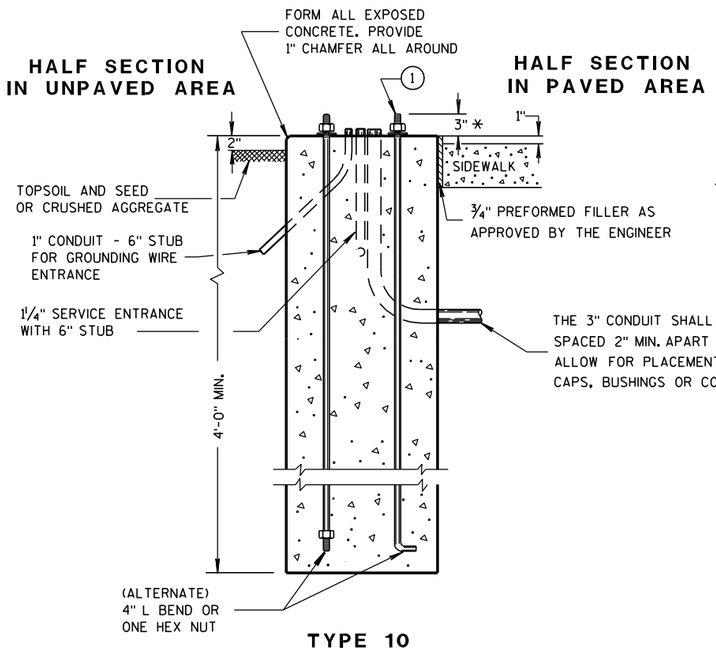
* INCLUDES MAINTENANCE PLATFORM.



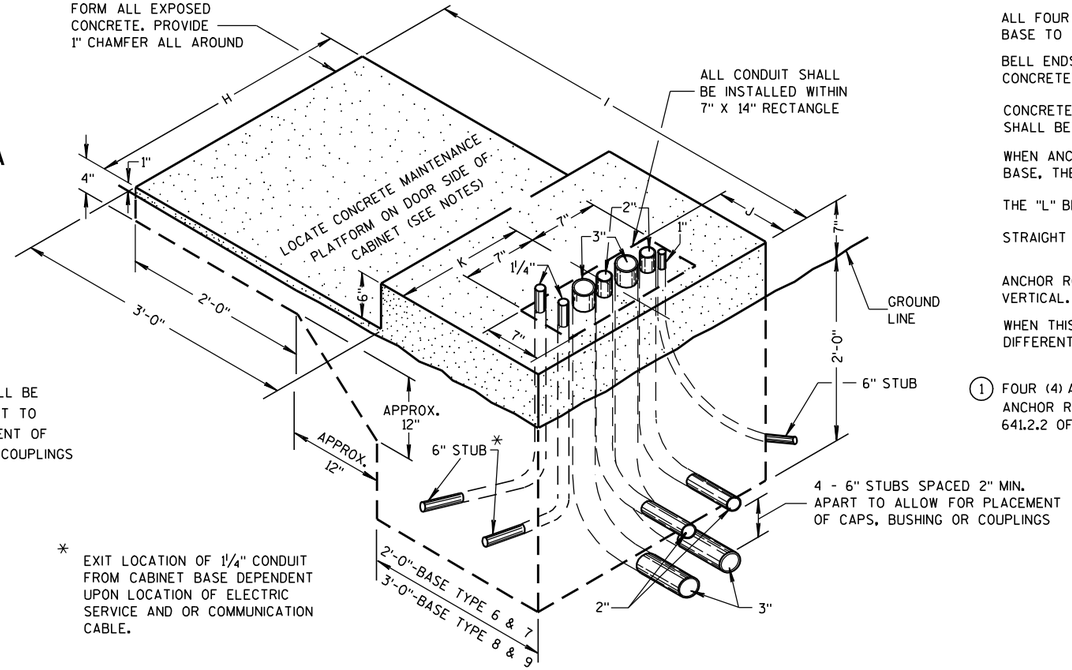


CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 10



TYPE 6,7,8 AND 9 (ISOMETRIC VIEW)

* EXIT LOCATION OF 1¼" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE AND OR COMMUNICATION CABLE.

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

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

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

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

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

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

WHEN THIS DRAWING IS USED FOR STREET LIGHTING CABINET BASES, CONDUIT MAY BE DIFFERENT AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6"
ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS.

CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 DATE
/S/ Joanna L. [illegible]
STATE ELECTRICAL ENGI
HWYS
FHWA

6

S.D.D. 9 C 5-7

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 AND 641.2.2 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.

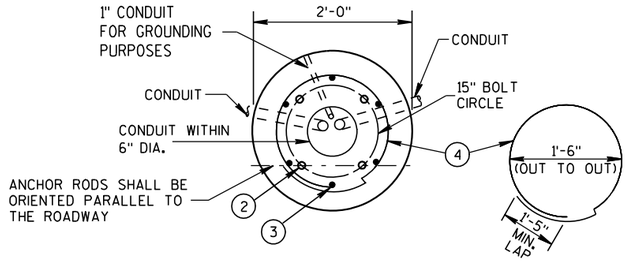
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

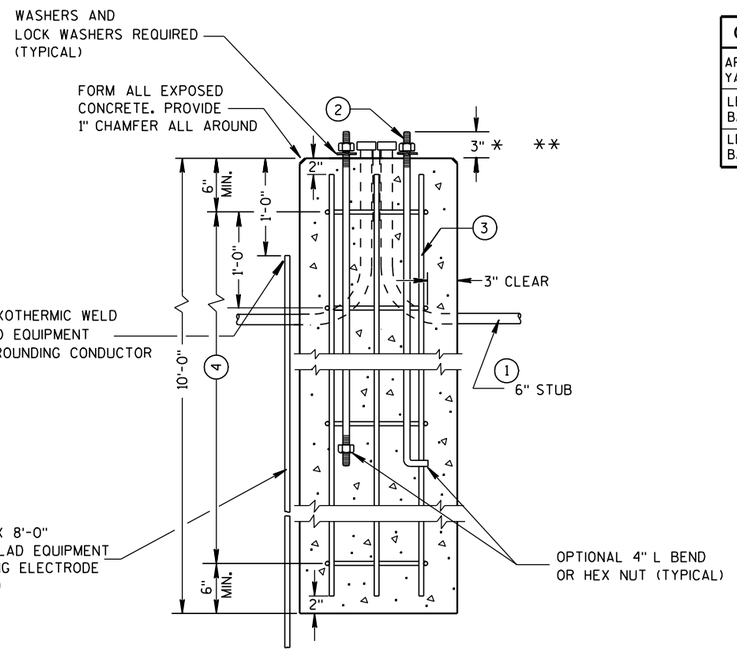
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN 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.



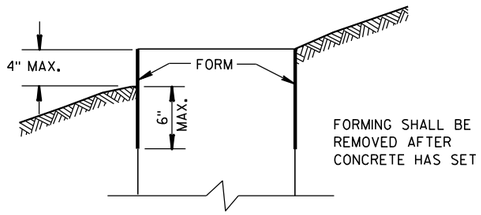


CONCRETE BASE, TYPE 8 (FOR 50' LIGHT POLES)

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

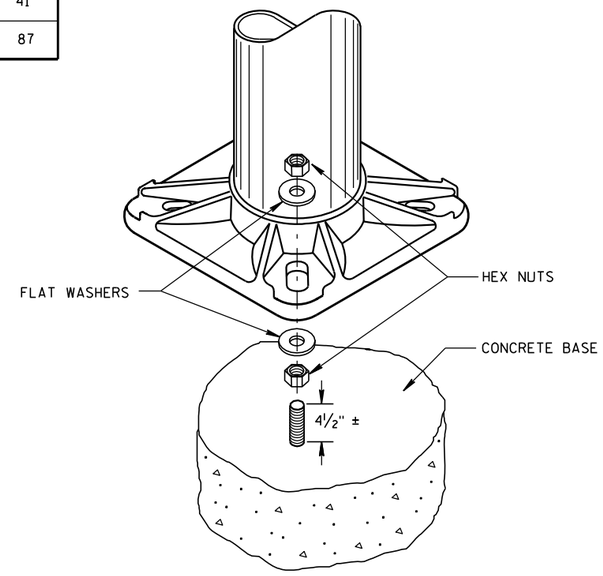
** FOR NONBREAKAWY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

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

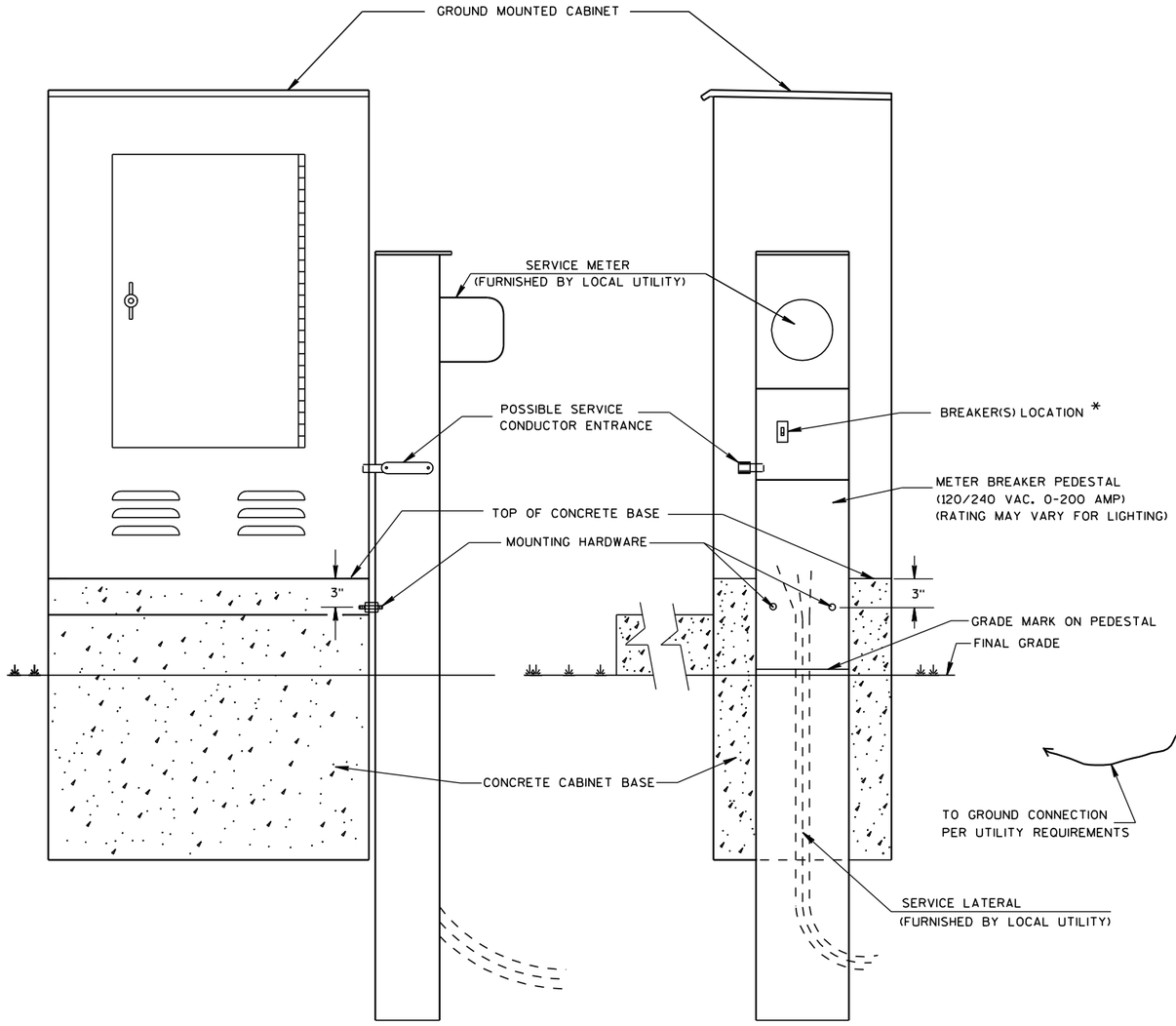


NON-BREAKAWAY INSTALLATION (LEVELING NUT)

CONCRETE BASE, TYPE 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 DATE
/S/ Joanna L. Bush
STATE ELECTRICAL ENGI 224 HWYS
FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

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

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

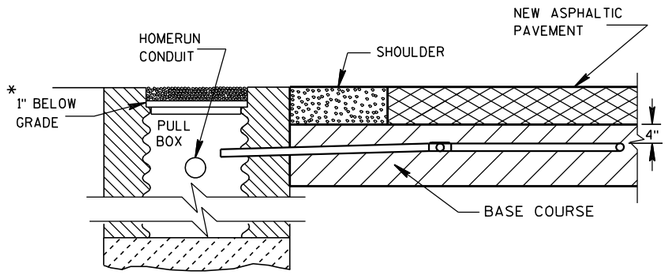
IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

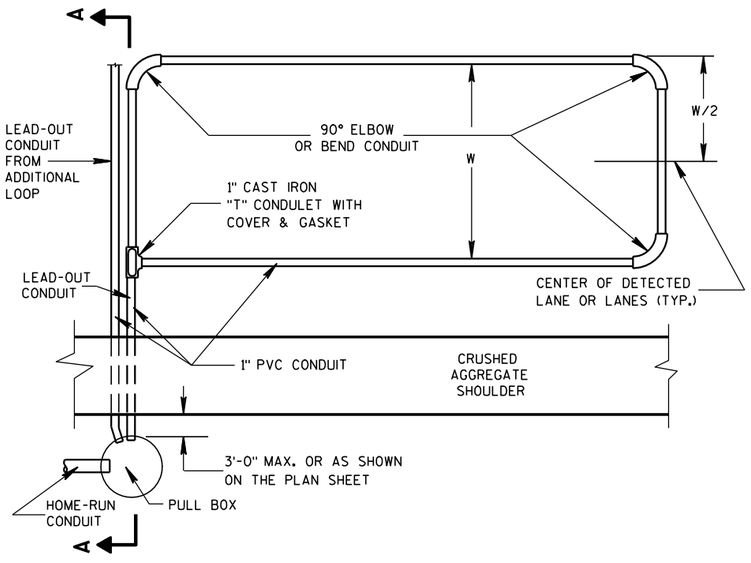
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10/27/09 DATE
/S/ Joanna L. Bush STATE ELECTRICAL ENGI
225
HWYS
FHWA



SECTION A-A
NO CURB & GUTTER

DETECTOR LOOP INSTALLATION DETAIL

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



TYPICAL PLAN OF LOOP DETECTOR

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

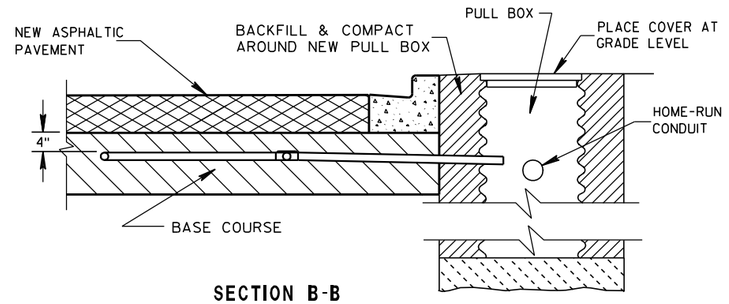
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

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

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

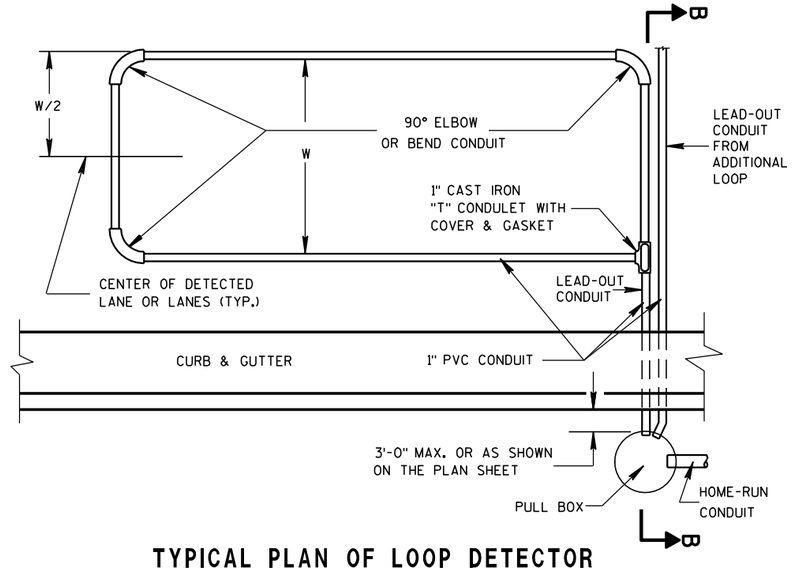
SHOULD TRAFFIC BE ALLOWED TO USE THE AREA OF ROADWAY WITH THE NEWLY INSTALLED LOOP BEFORE THE PLACEMENT OF THE NEXT LAYER OF ASPHALTIC PAVEMENT, THE SLOT/PAVEMENT OPENING SHALL BE SEALED WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT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

DRIVE A 1½" MAX. PK NAIL INTO THE NEW ASPHALTIC PAVEMENT AND DIRECTLY ABOVE THE CONDULET AFTER THE FINAL LAYER OF NEW ASPHALTIC PAVEMENT IS COMPLETELY INSTALLED, IF REQUIRED BY THE DISTRICT TRAFFIC SECTION.



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/7/06 DATE

/S/ Balu Ananthar[illegible]an
STATE ELECTRICAL ENGI

FHWA

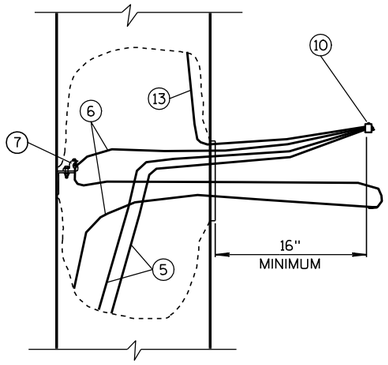
HWYS

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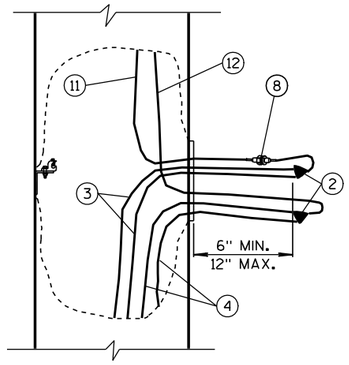
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S.D.D. 9 F 8-3

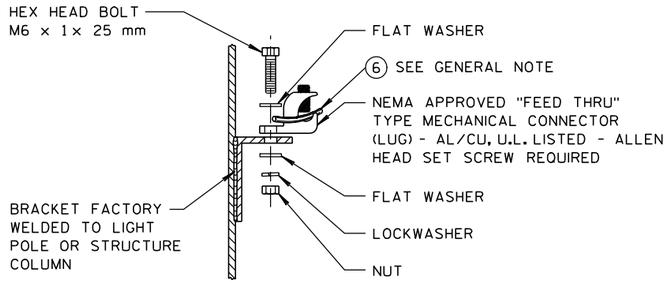


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



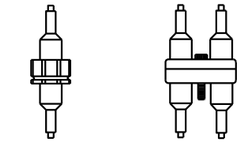
HANDHOLE GROUNDING LUG

(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.

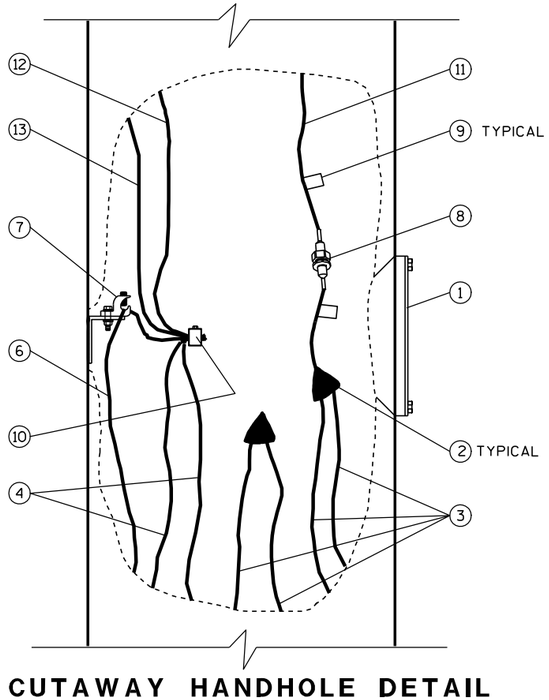
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

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.

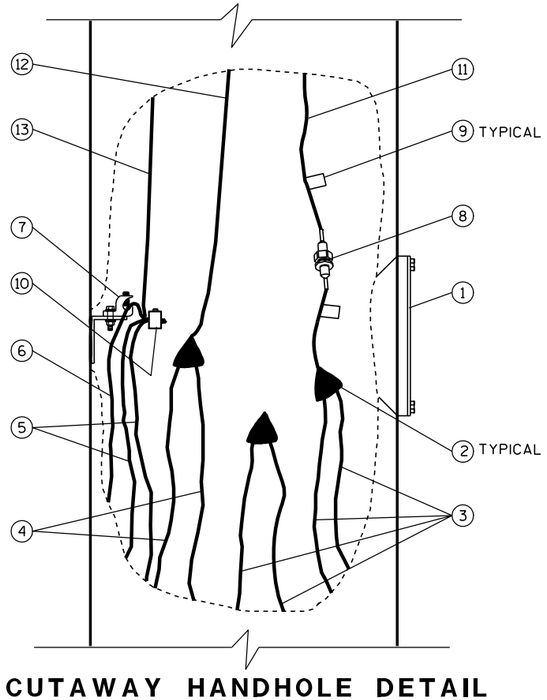
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



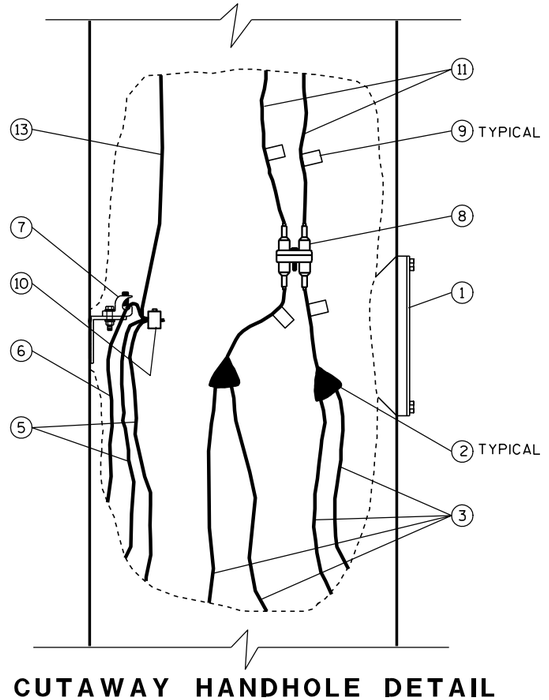
CUTAWAY HANDHOLE DETAIL

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

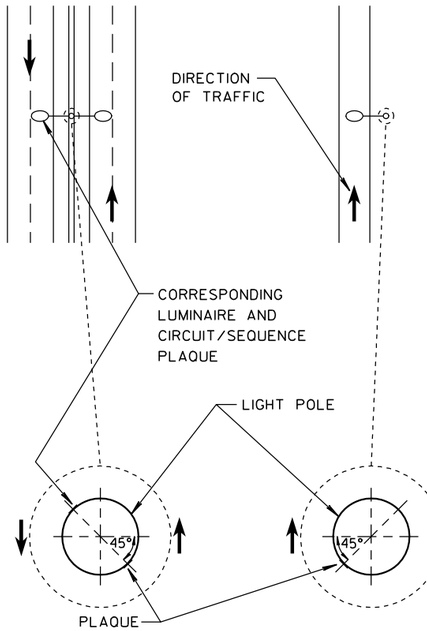
ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
227 HWYS
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S.D.D. 10 A 1-2



MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

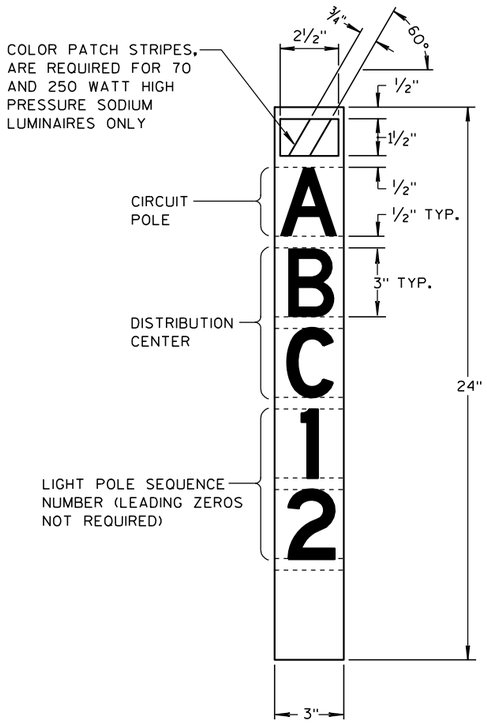
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS LUMINAIRES

1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE WITH WHITE STRIPE
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN
70 WATT - BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

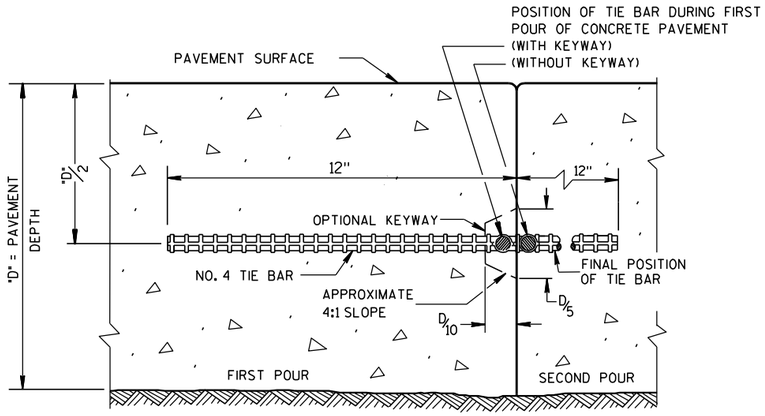
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10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI
228 — HWYS
FHWA

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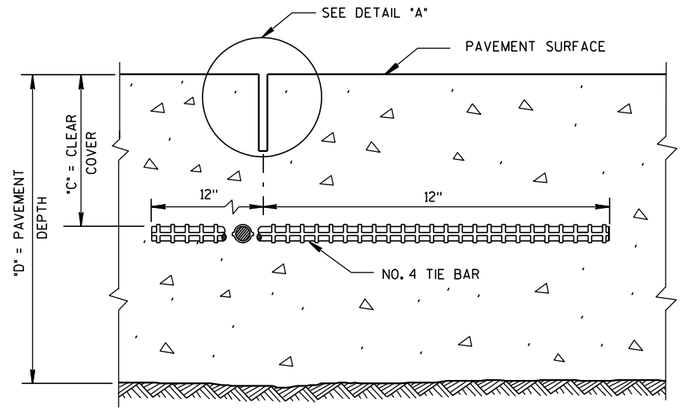
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CONSTRUCTION JOINT



SAWED JOINT

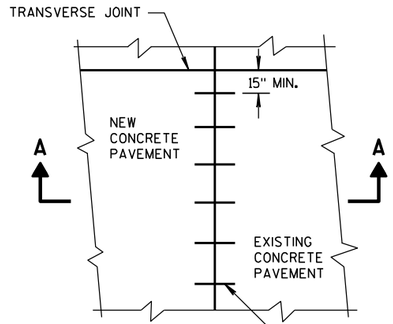
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

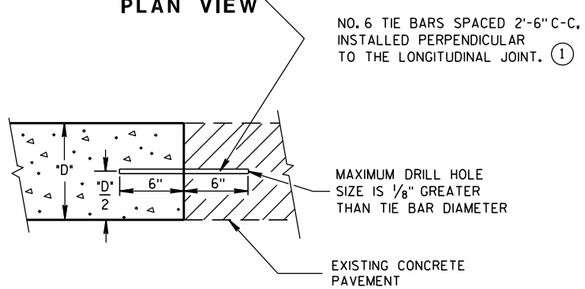
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

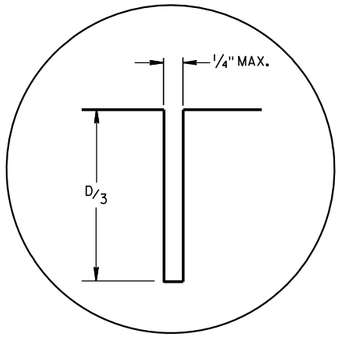
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

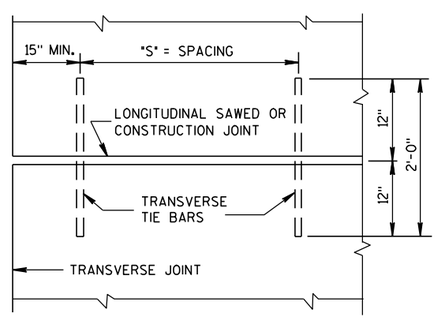


SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

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



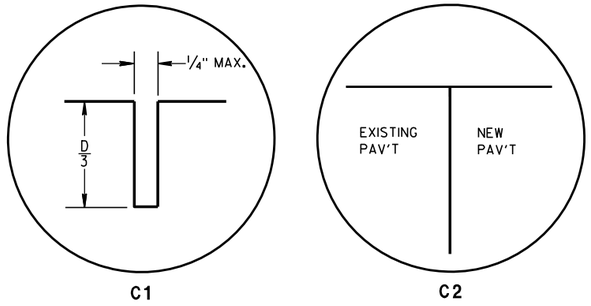
PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

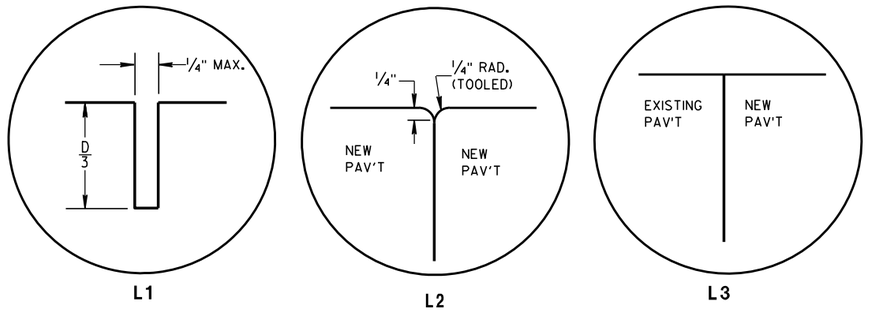
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DEPARTMENT OF TRANSPORTATION

APPROVED
10-5-2010 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER
FHWA

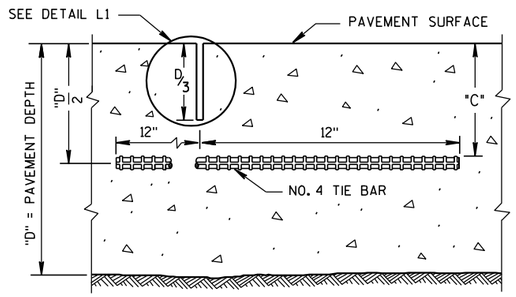
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TRANSVERSE JOINTS

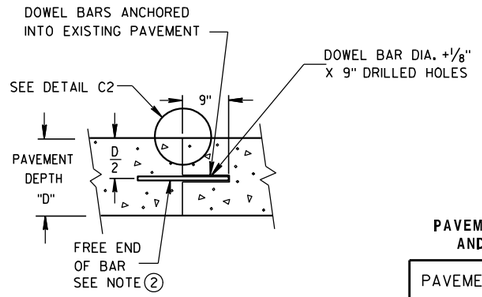


LONGITUDINAL JOINTS



SECTION C-C

SAWED JOINT



SECTION D-D

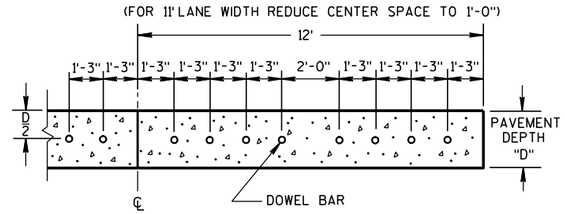
GENERAL NOTES

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

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

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION E-E

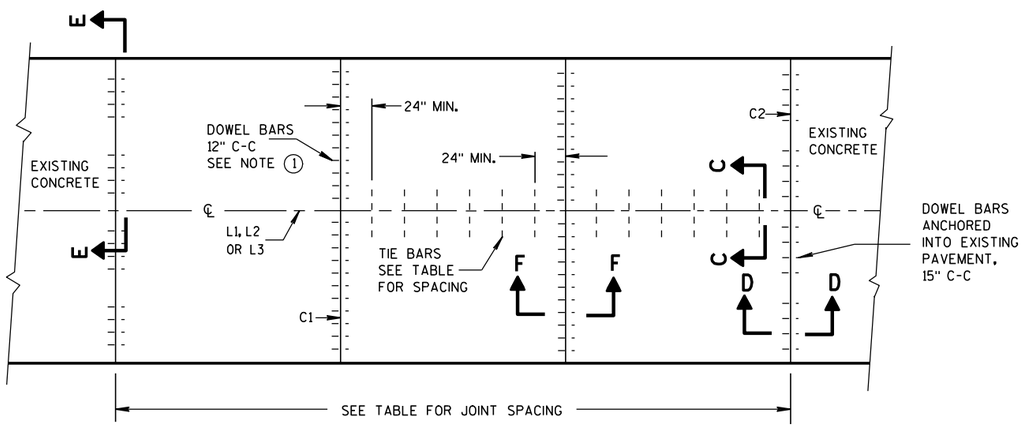
SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH "D"	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5½", 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'

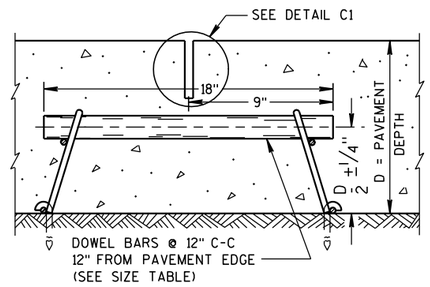
TIE BAR LOCATION TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING C-C	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 ½"	3"±½"	48"	42"
7, 7 ½"	3 ¼"±1"	45"	36"
8, 8 ½"	3 ¾"±1"	39"	30"
9, 9 ½"	4 ¼"±1"	33"	27"
10, 10 ½"	4 ¾"±1"	30"	24"
11, 11 ½"	5 ¼"±1"	27"	21"
12"	5 ¾"±1"	24"	21"



PLAN VIEW

CONCRETE BASE CONTRACTION JOINT LOCATIONS



SECTION F-F

CONTRACTION JOINT

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

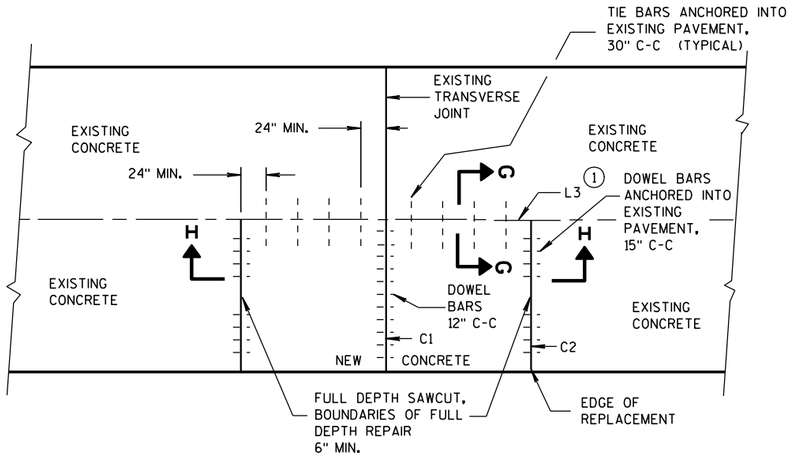
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S.D.D. 13 C 15-5a

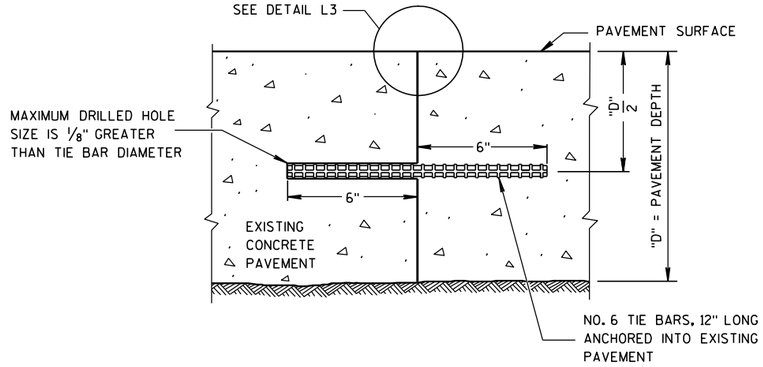
GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.



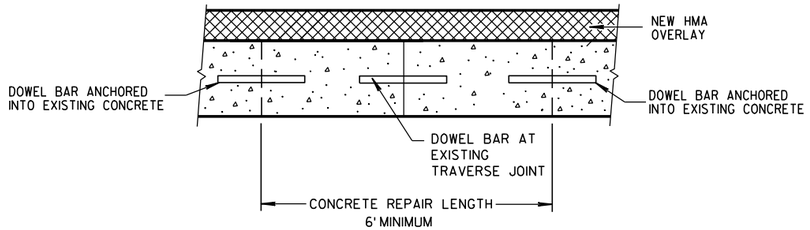
PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

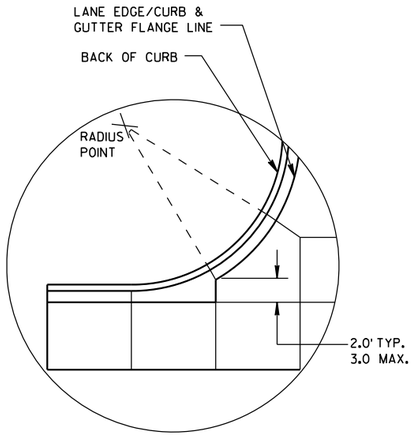
CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

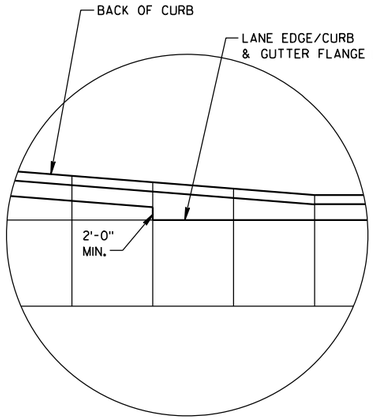
APPROVED
12-11-2009 DATE
/S/ Deb Bischoff PAVEMENT POLICY & D ENGINEER
FHWA

6

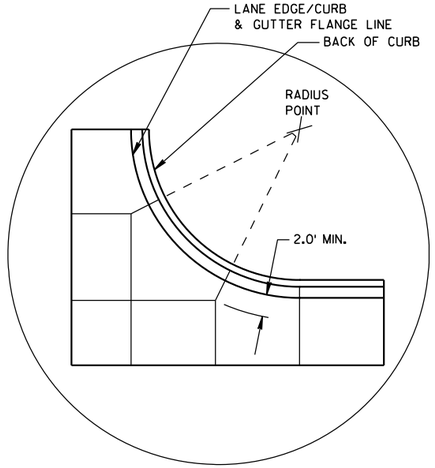
S.D.D. 13 C 15-5b



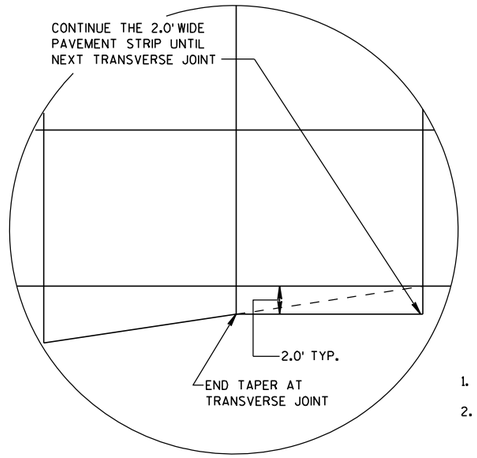
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

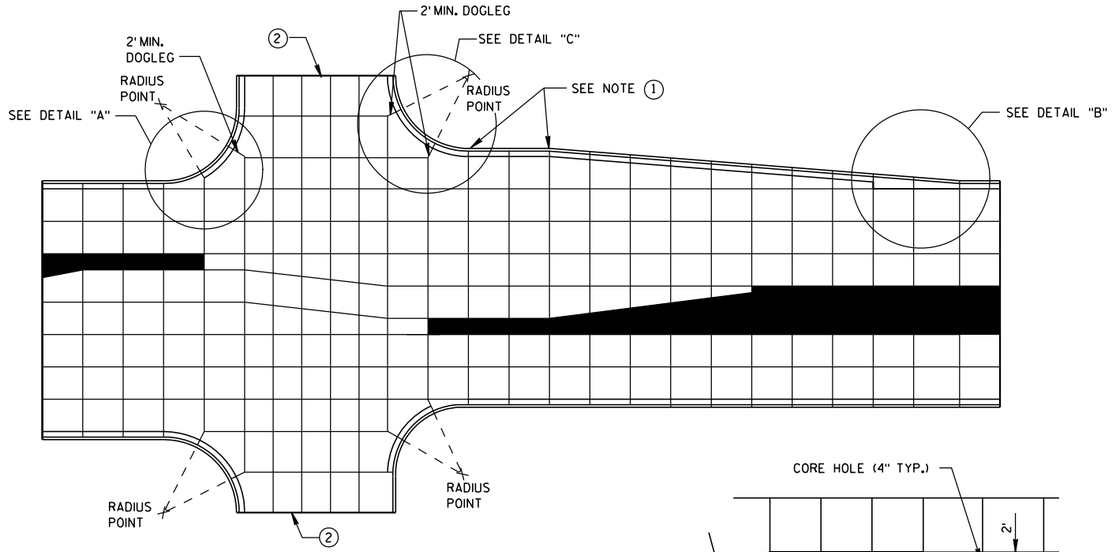
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

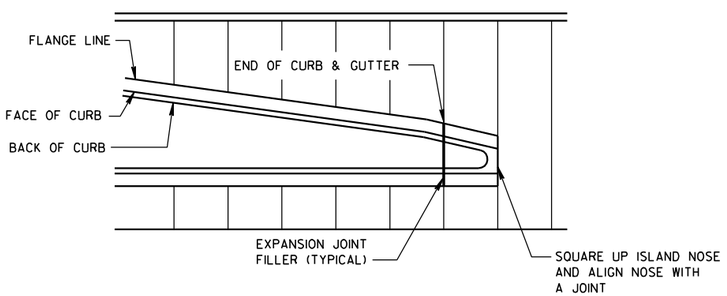
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



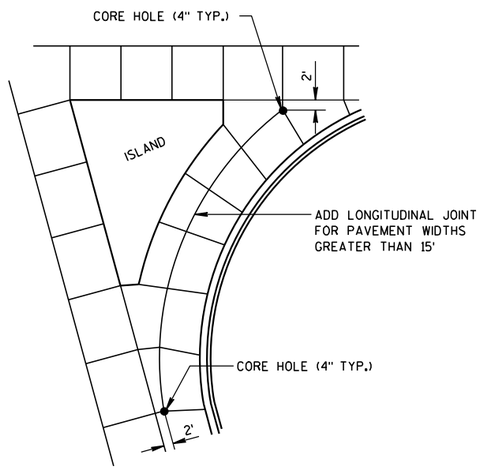
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

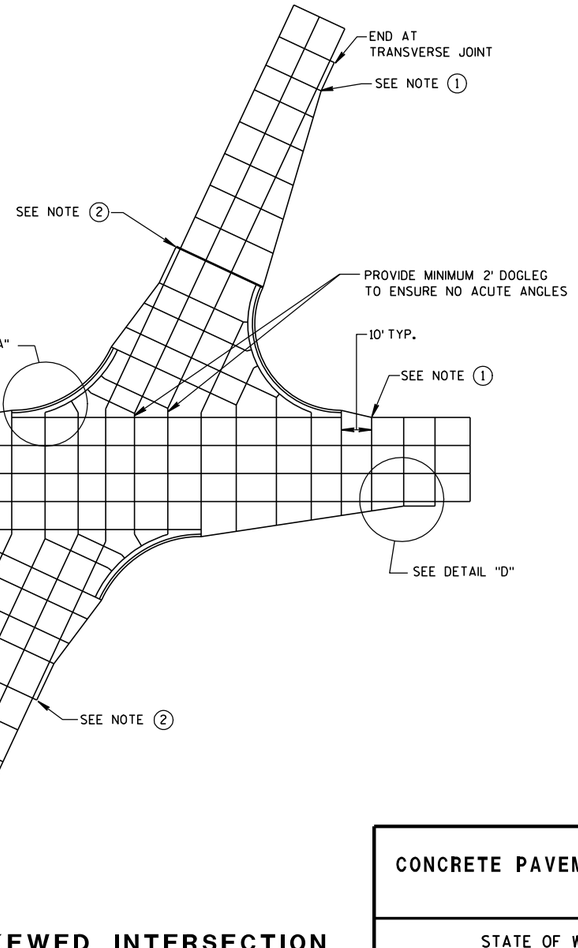
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



APPROACH TO MEDIAN



LARGE RIGHT TURN



SKEWED INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

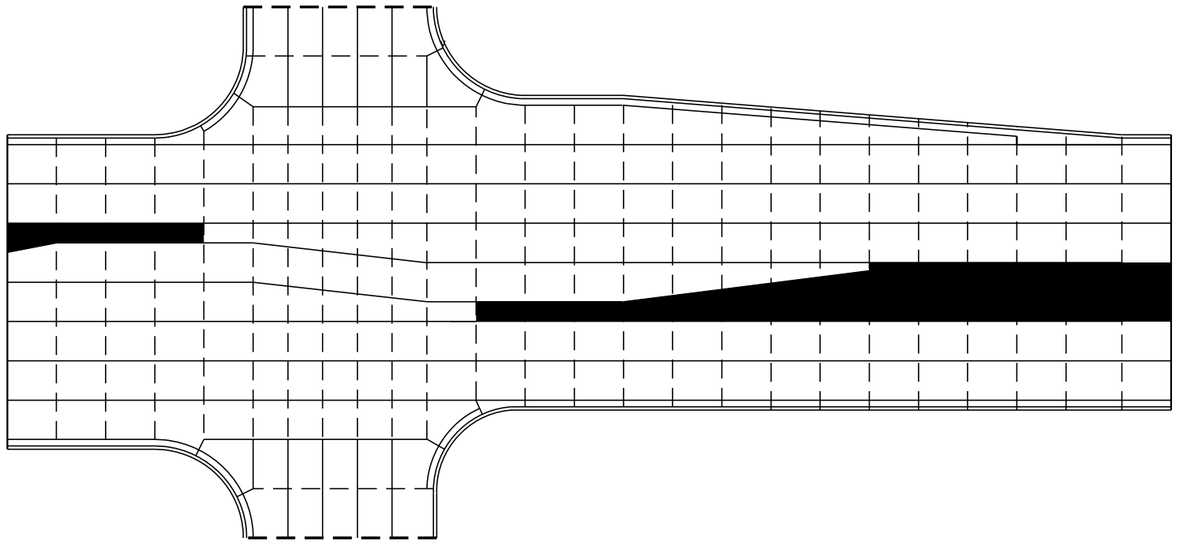
6
S.D.D. 13 C 18-1a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

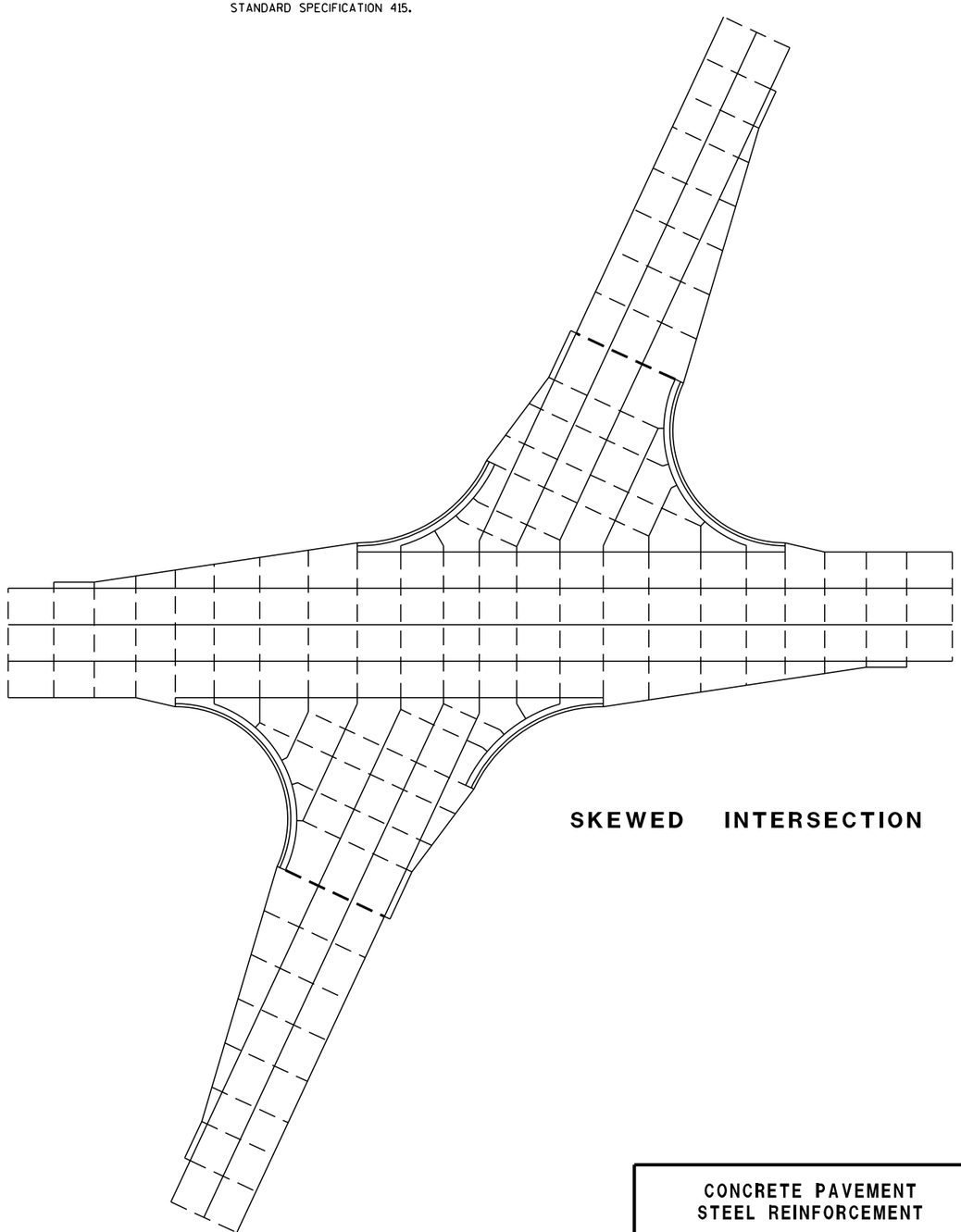
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

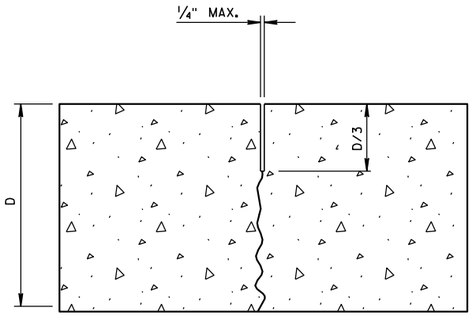
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S.D.D. 13 C 18-1b

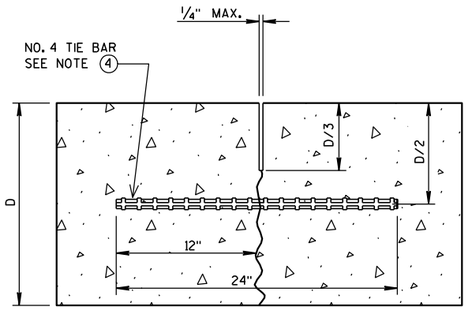
S.D.D. 13 C 18-1b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



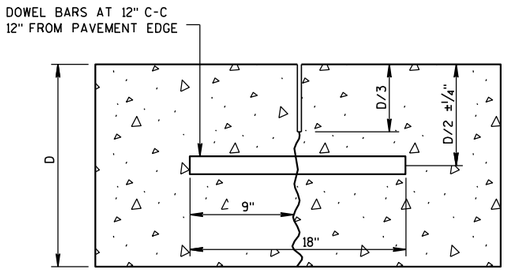
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

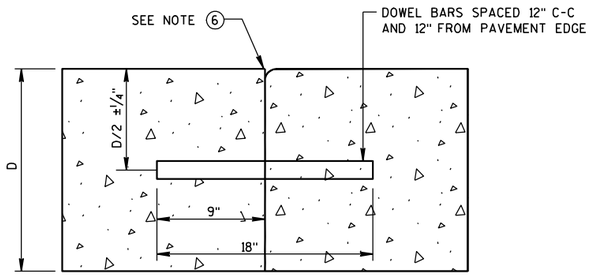
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



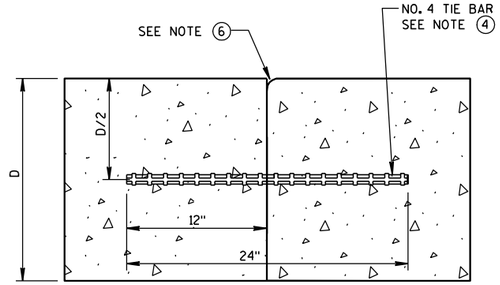
DOWELED-TRANSVERSE

CONTRACTION JOINTS

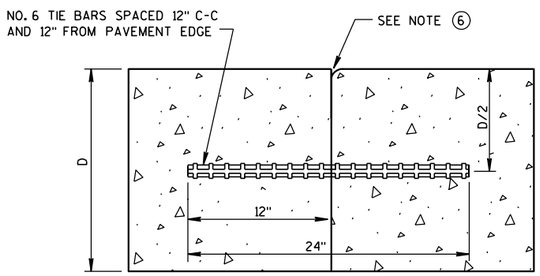
SEE NOTE (2)



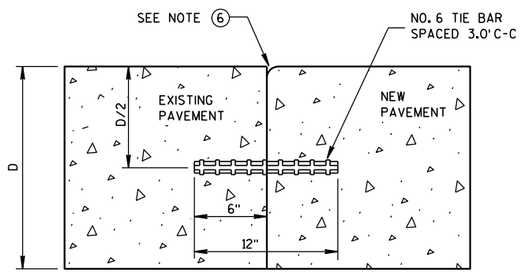
DOWELED TRANSVERSE



TIED LONGITUDINAL



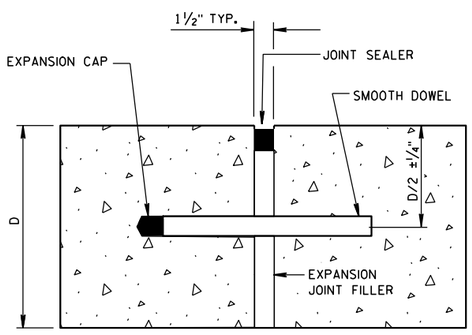
TIED TRANSVERSE
SEE NOTE (3)



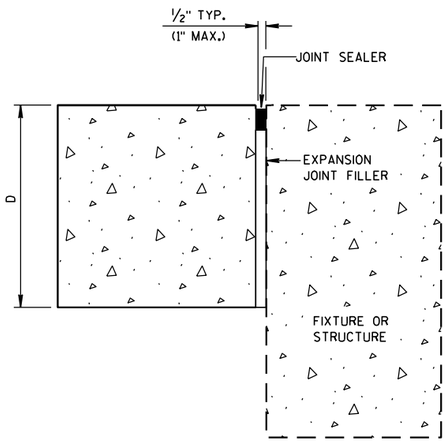
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE
SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

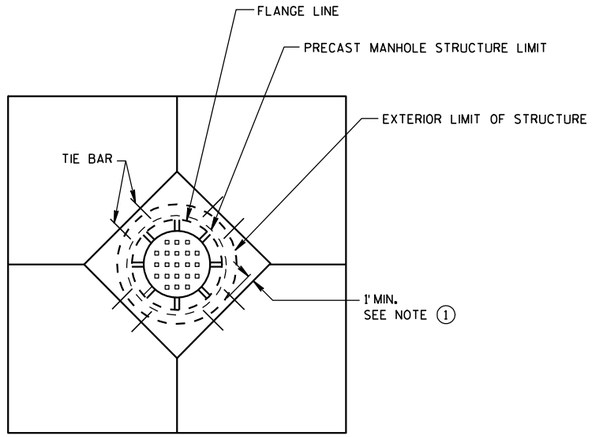
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

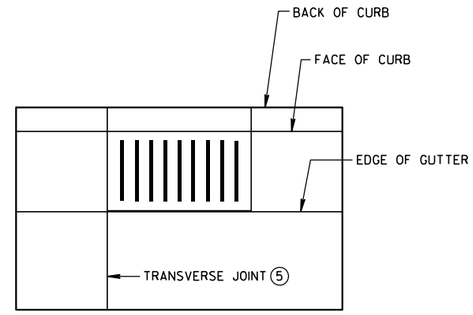
S.D.D. 13 C 18-1c

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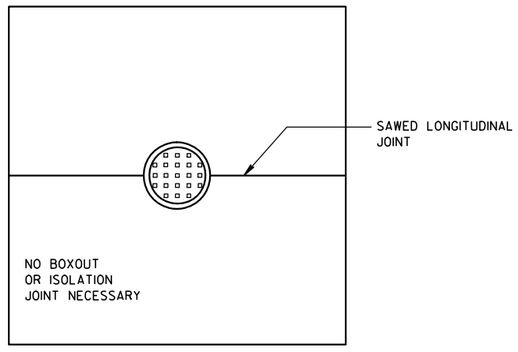
S.D.D. 13 C 18-1c



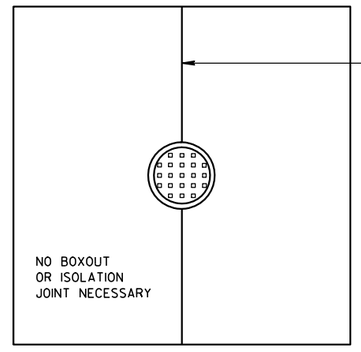
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



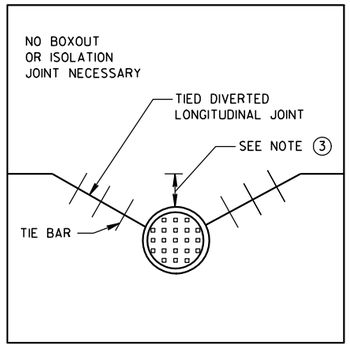
INLET WITH TRANSVERSE JOINT



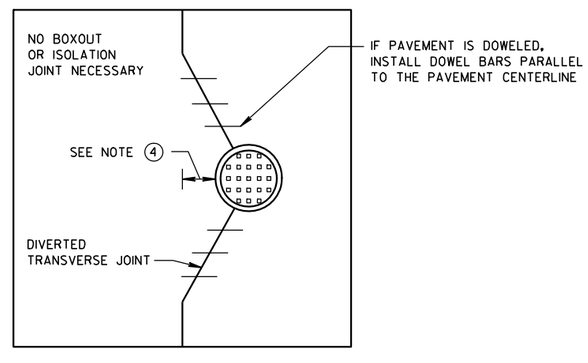
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

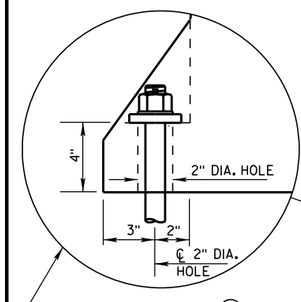
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF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

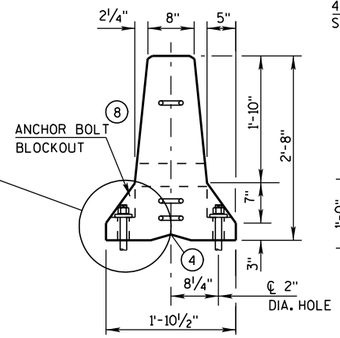
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

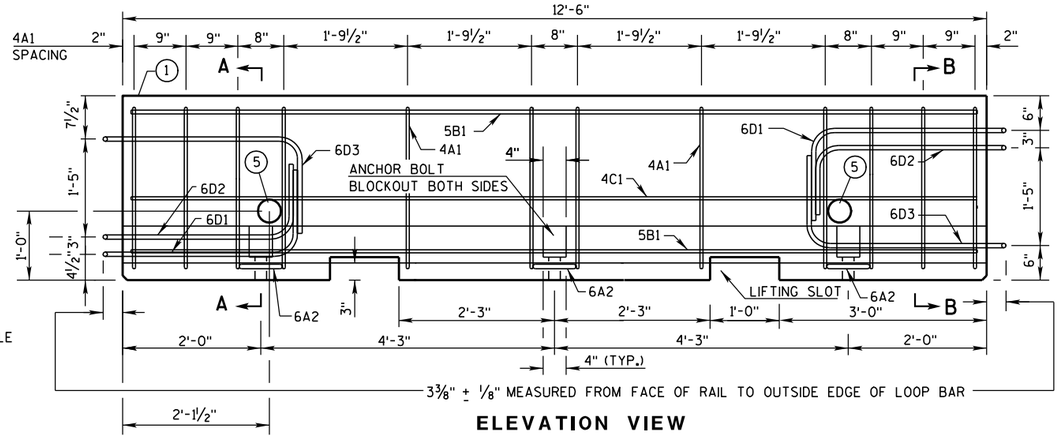
APPROVED
10-5-2010 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & D 235 ENGINEER
FHWA

6
S.D.D. 13 C 18-1d

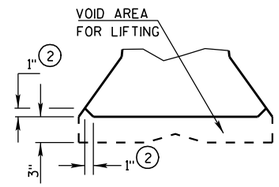




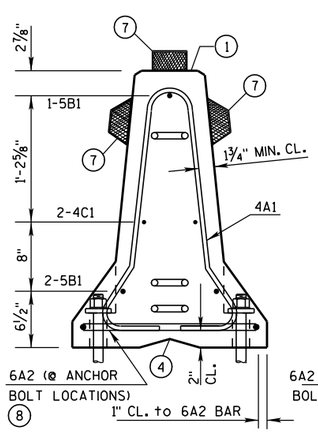
END VIEW



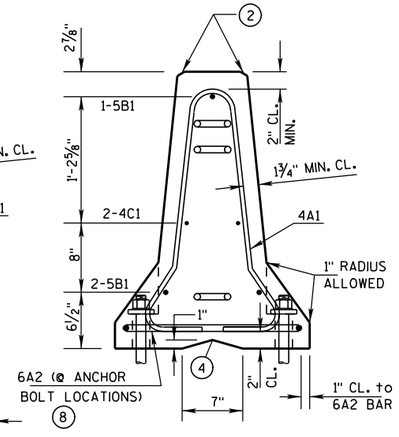
ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL



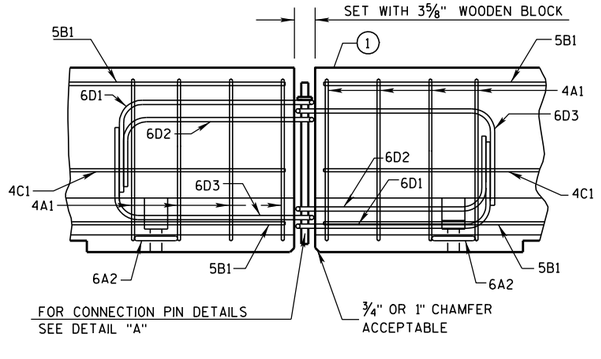
SECTION A-A
(STIRRUP PLACEMENT)



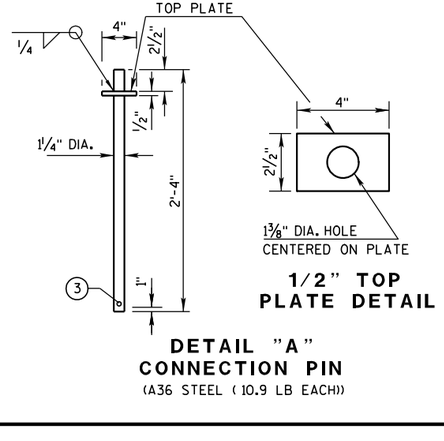
SECTION B-B
(STIRRUP PLACEMENT)

PLAN VIEW

DETAILS OF BARRIER SECTION

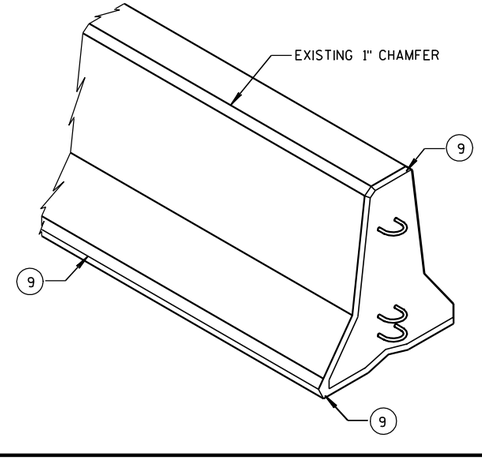


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(h).

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 EPOXY 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: WICBTP
- 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 ANCHORING CRITERIA.

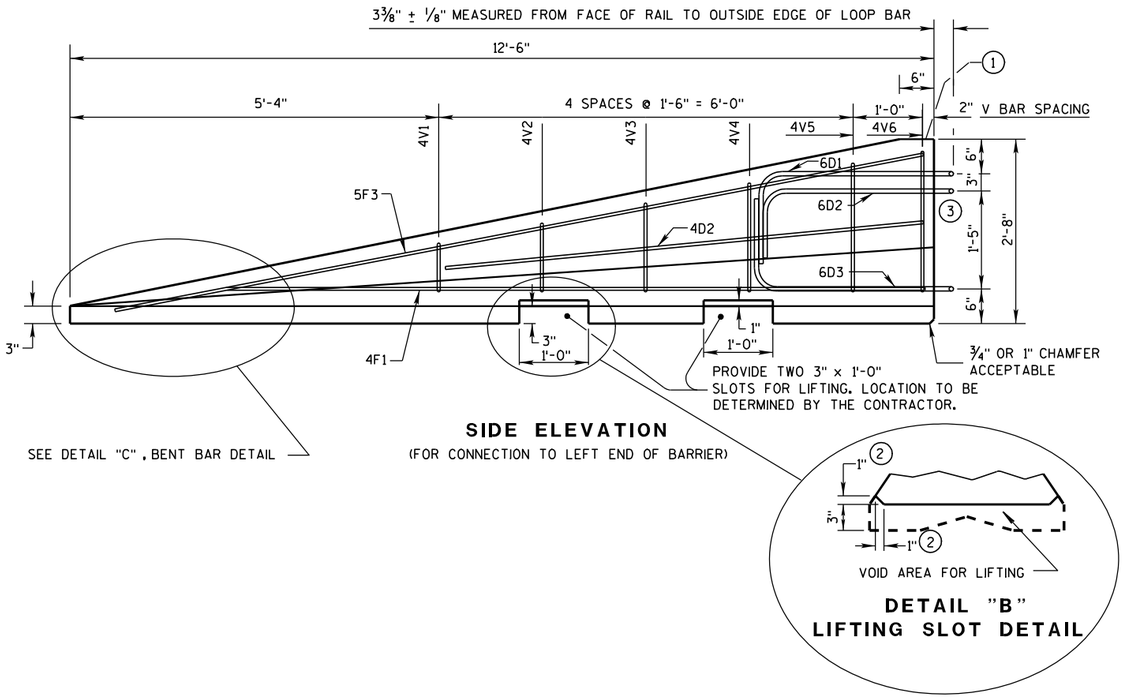
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

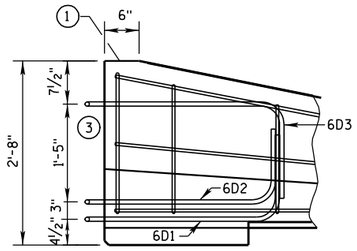
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL



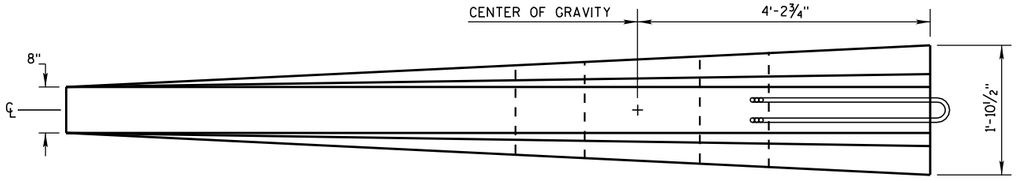
SIDE ELEVATION

LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END.

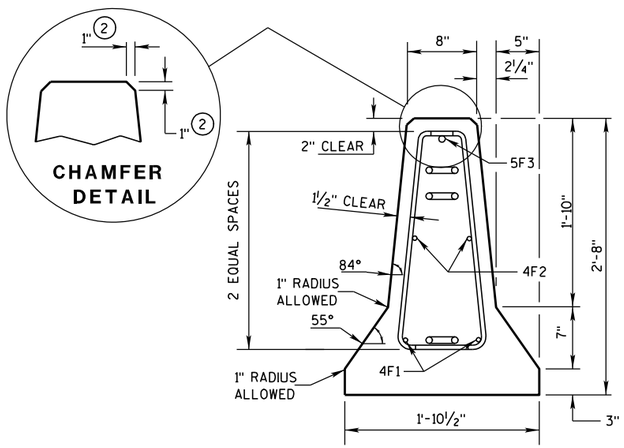
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

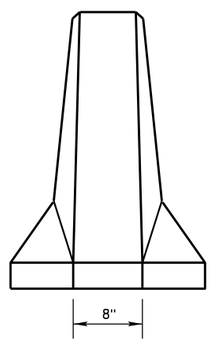
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



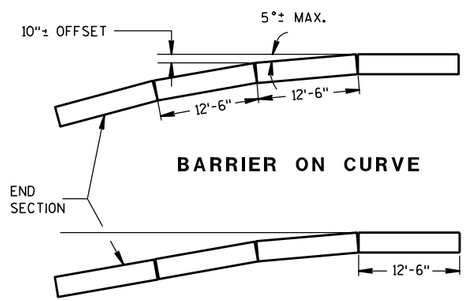
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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 TRANSPORTATION

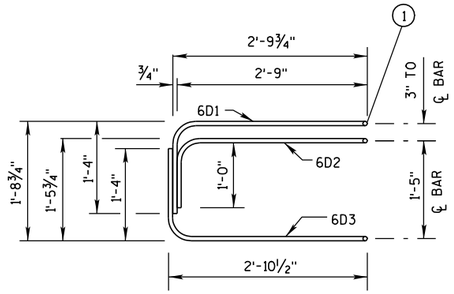
6

S.D.D. 14 B 7-13b

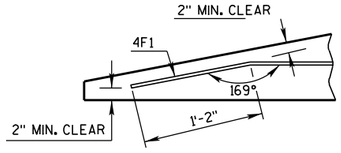
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

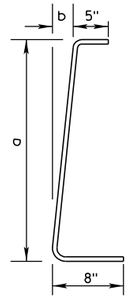
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

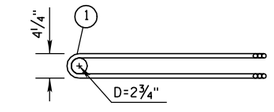
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

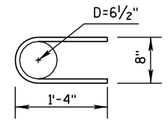
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

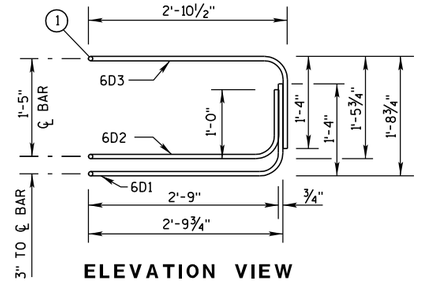
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



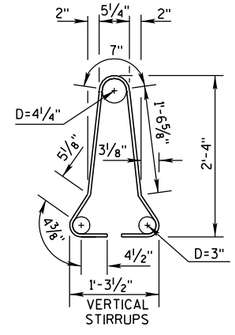
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



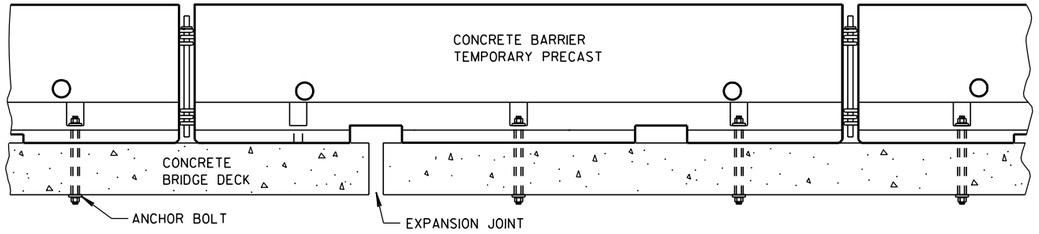
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

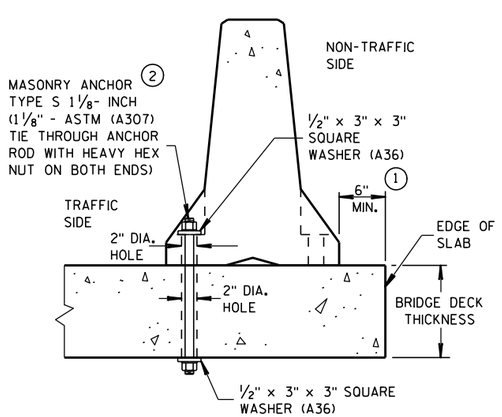
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13c



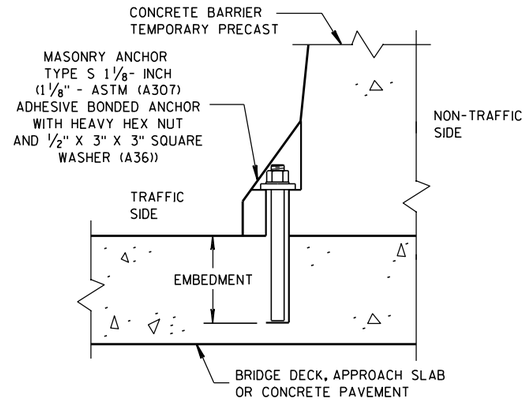
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

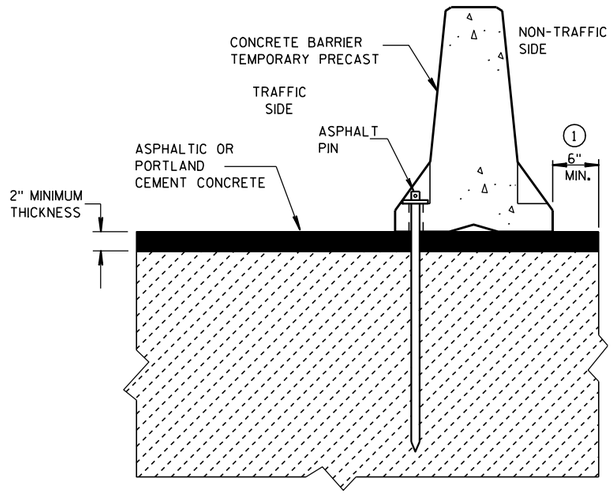
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

2. ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

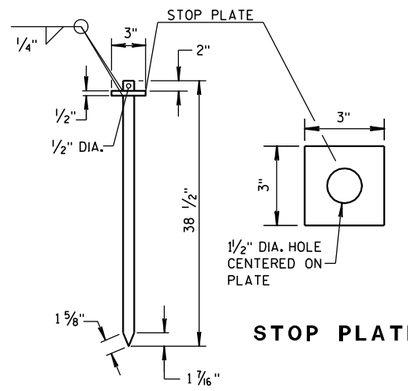
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

   UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

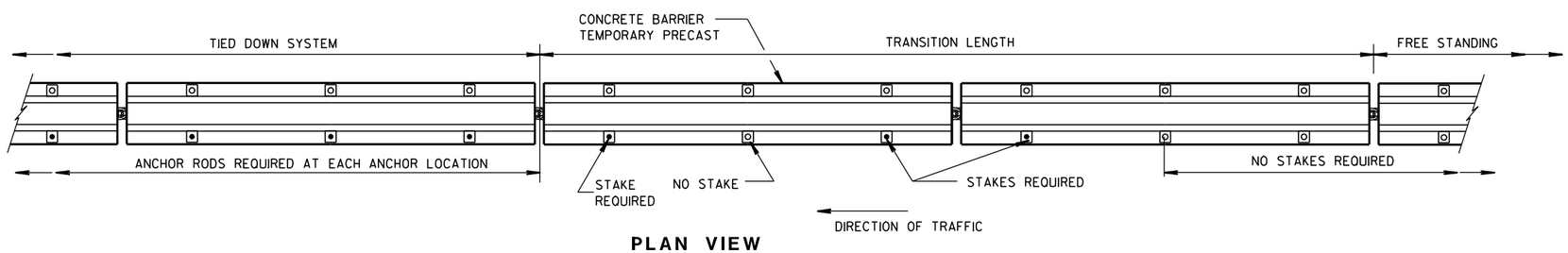
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



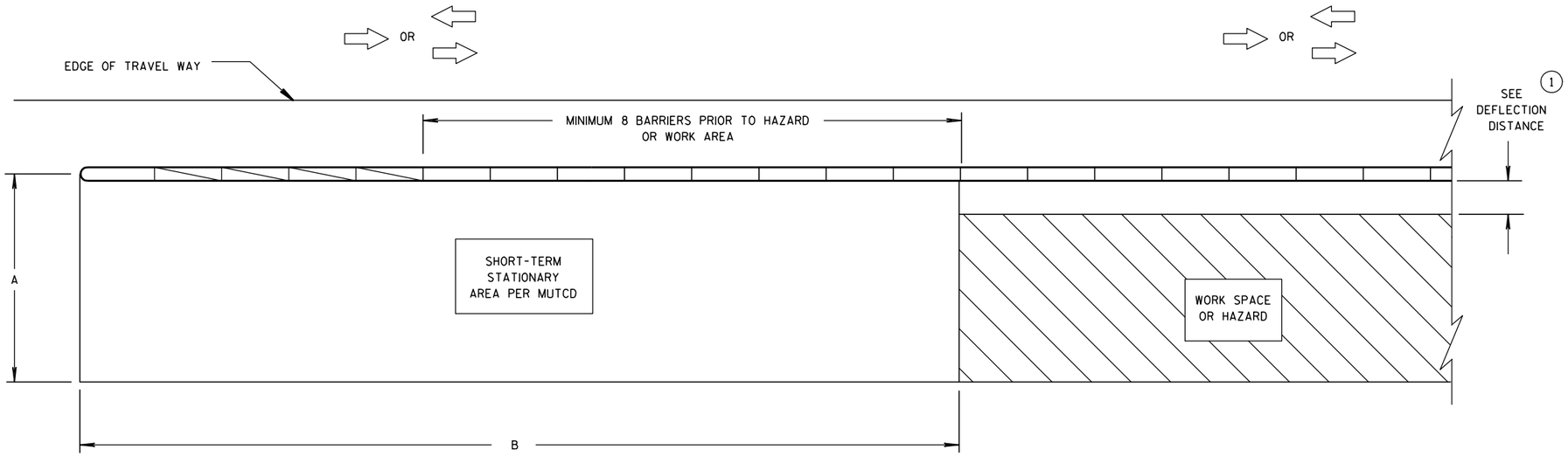
PLAN VIEW

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 TRANSPO...



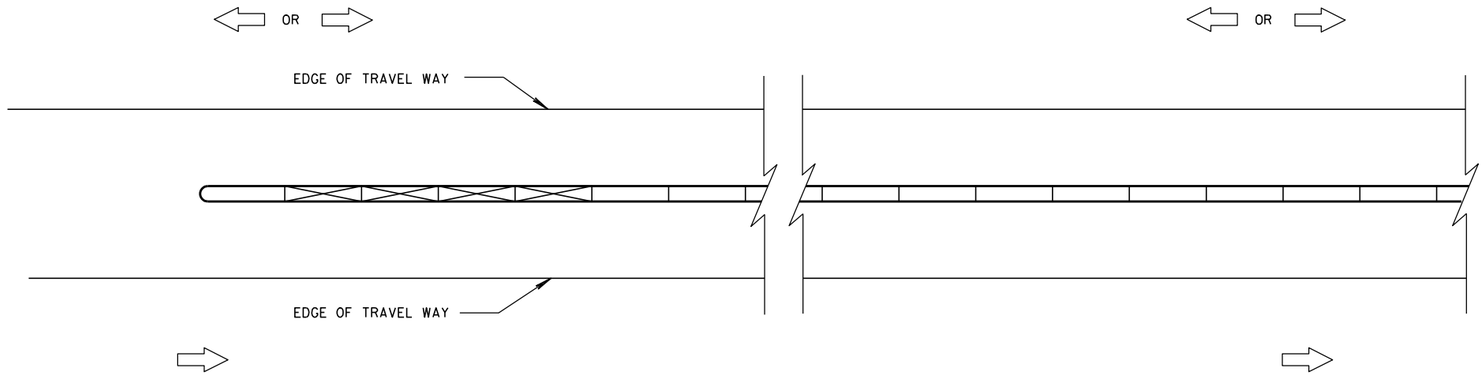
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

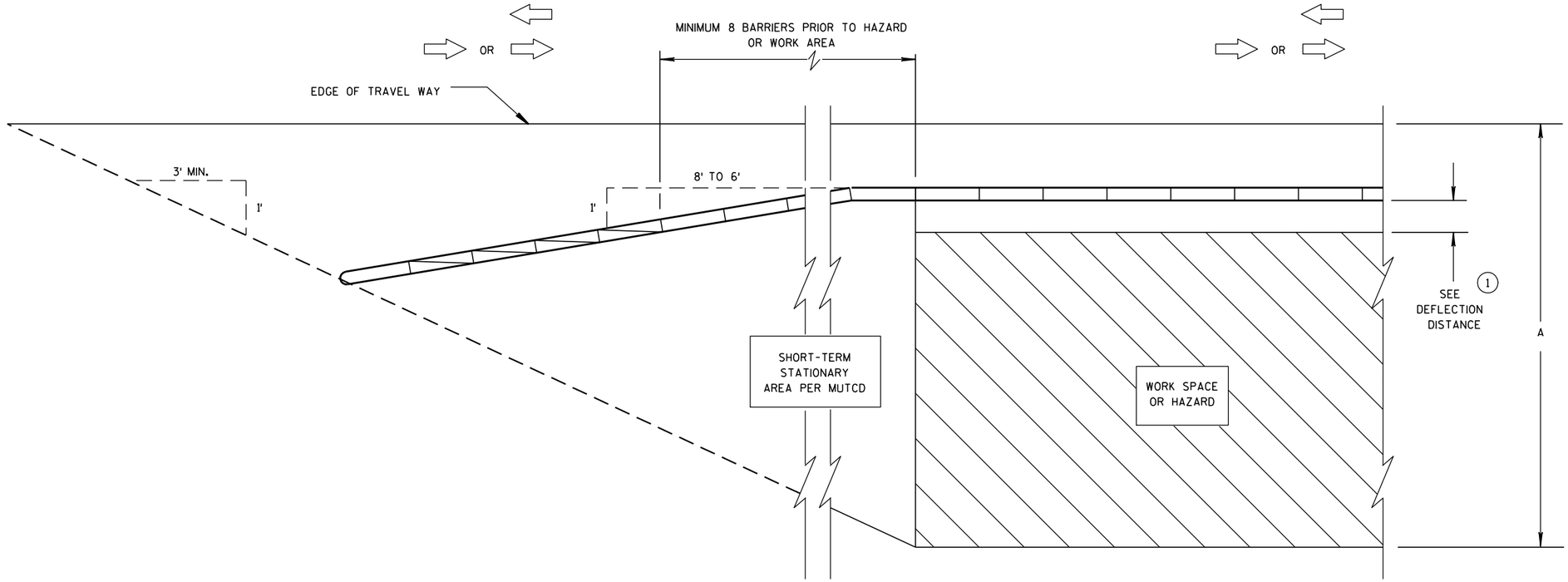
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

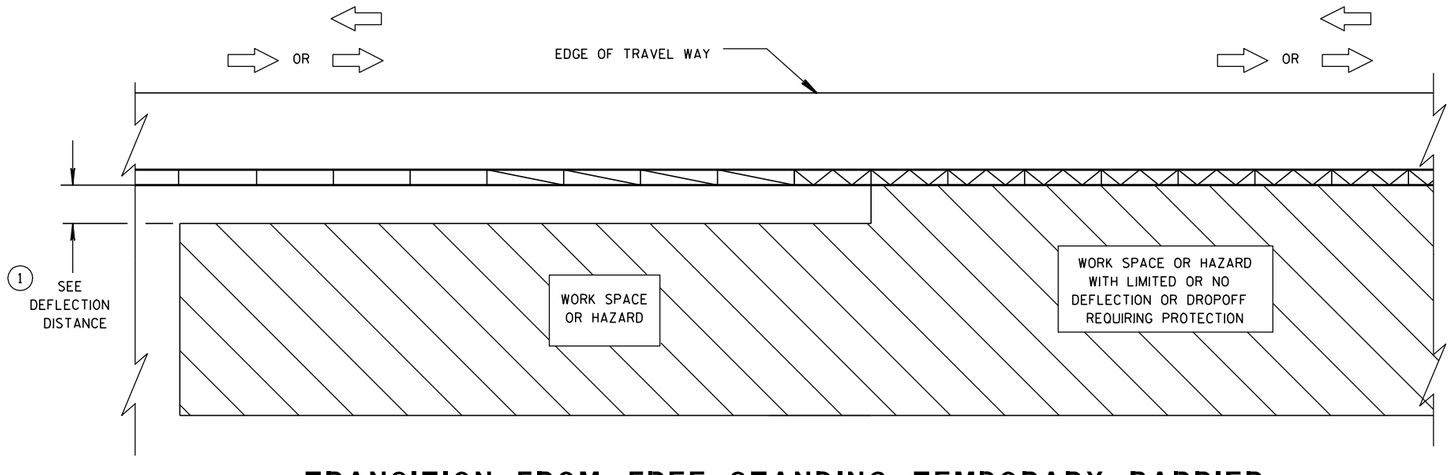
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 8-1a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

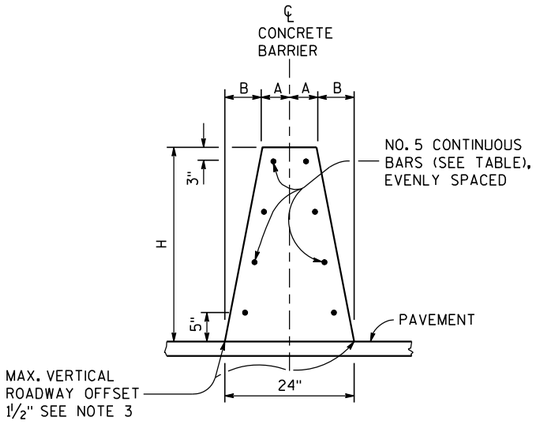
LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

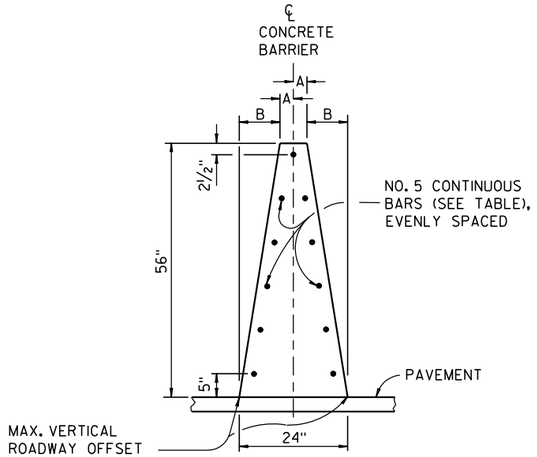
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

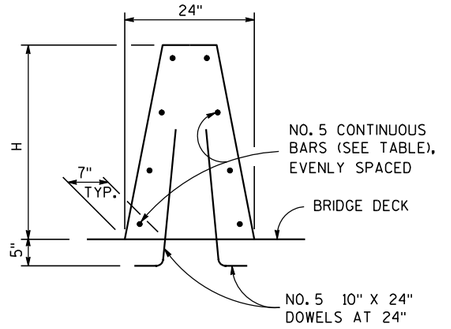
6
S.D.D. 14 B 8-1b



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)



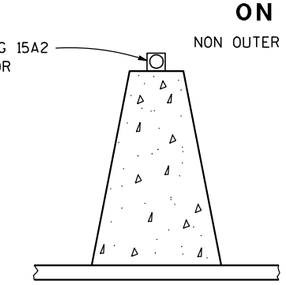
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

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, PAVEMENT 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.

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



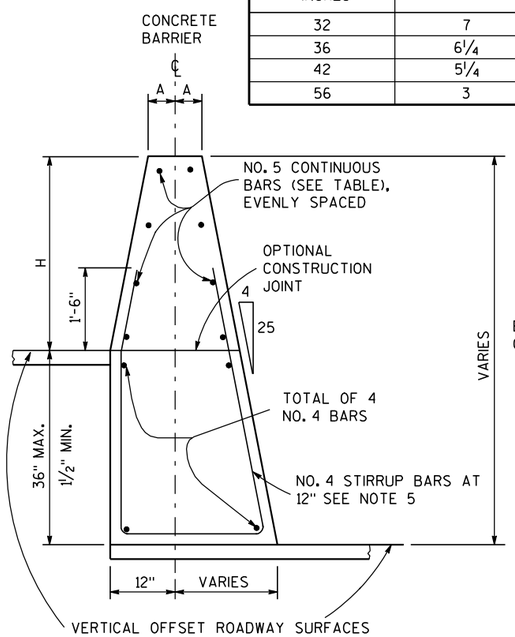
DELINEATION

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

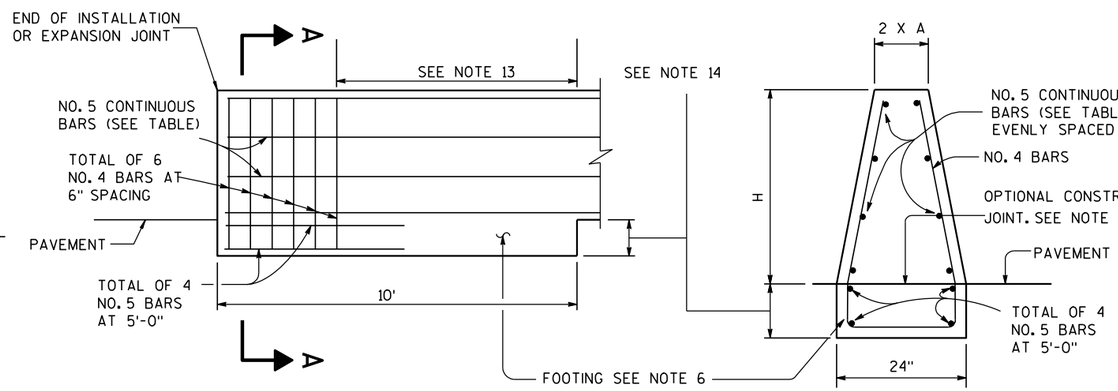
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	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

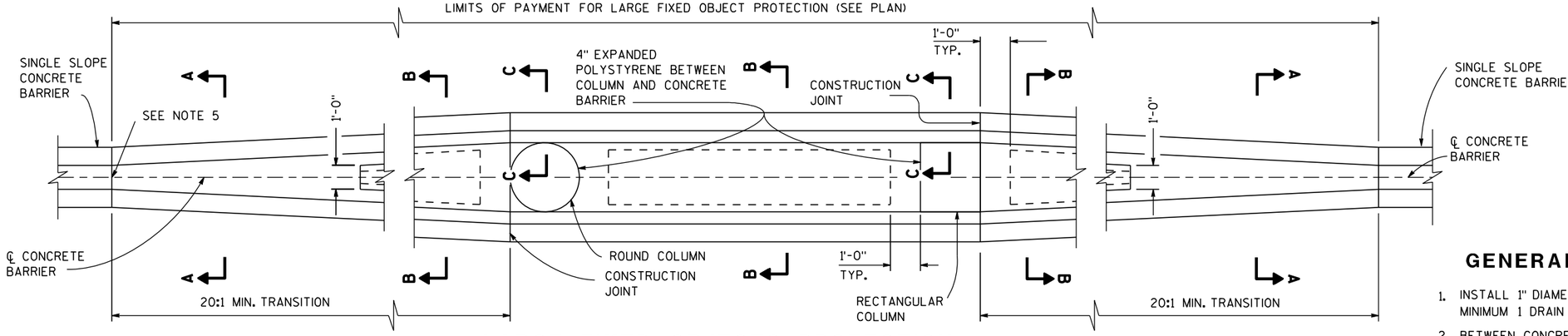
AT CONSTRUCTION JOINT

SECTION A-A

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

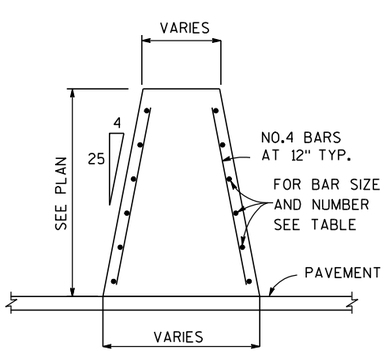
6
S.D.D. 14 B 32-1a



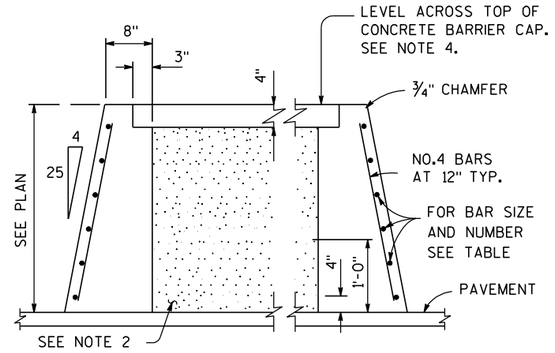
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

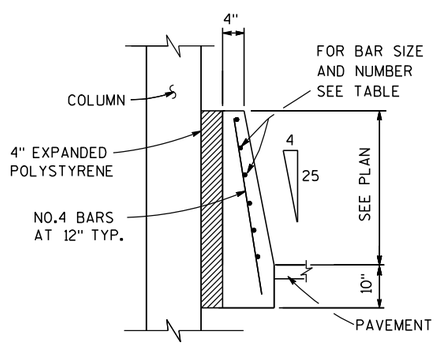
1. INSTALL 1" DIAMETER DRAIN PIPE EVERY 20' OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH GRANULAR BACKFILL GRADE 2
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET 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.



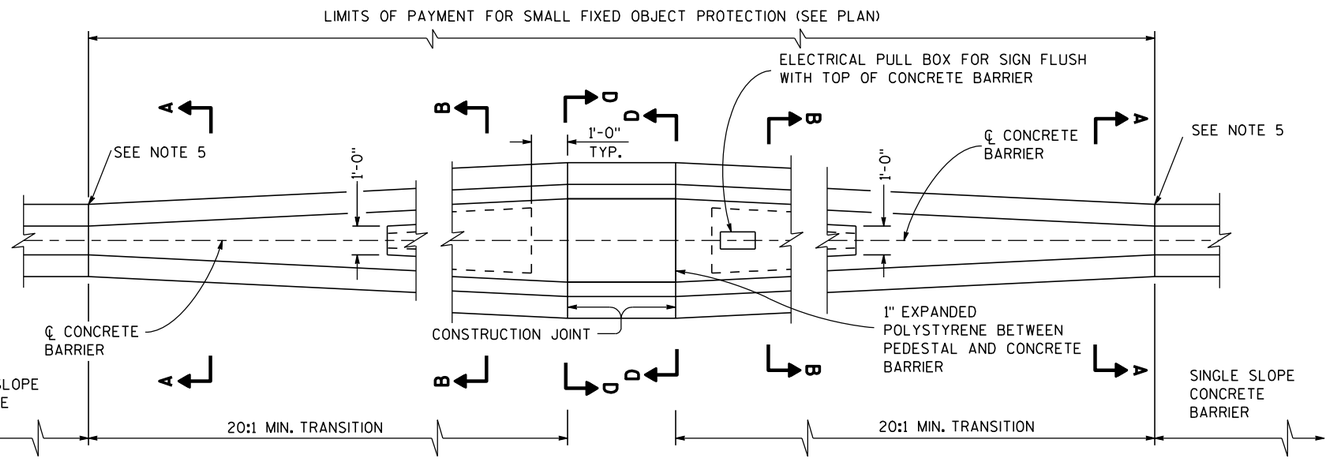
SECTION A-A



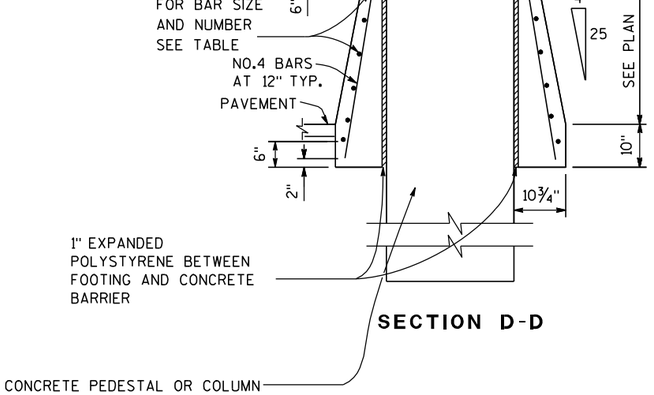
SECTION B-B



SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



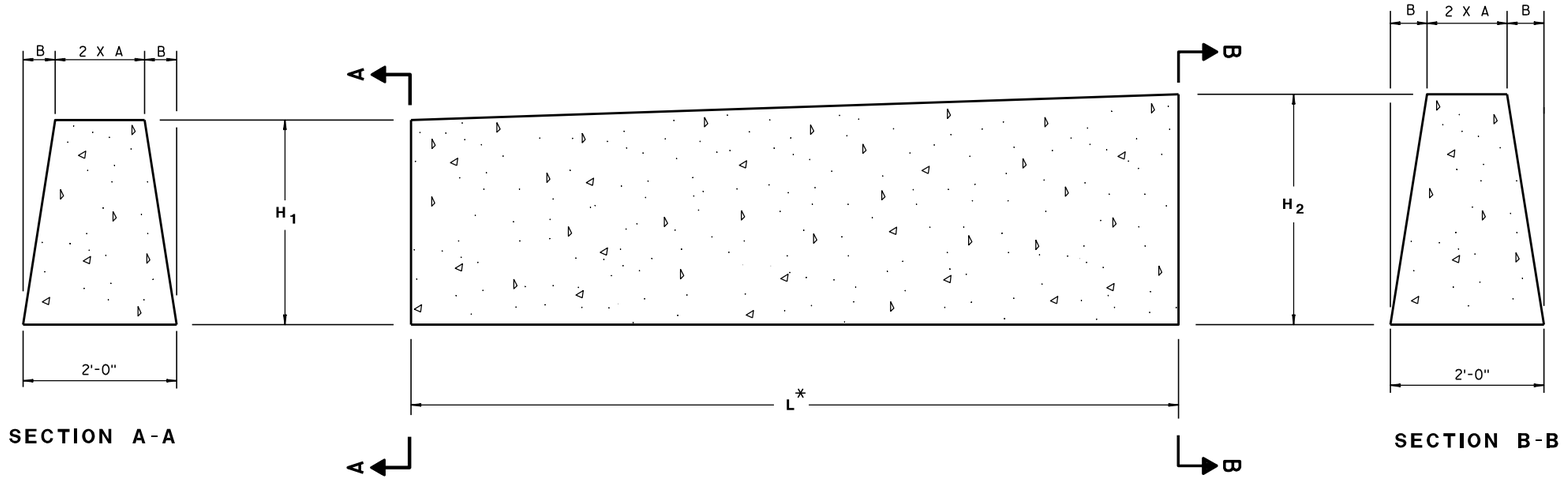
SECTION D-D

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 TRANSPORTATION

6
S.D.D. 14 B 32-1b



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

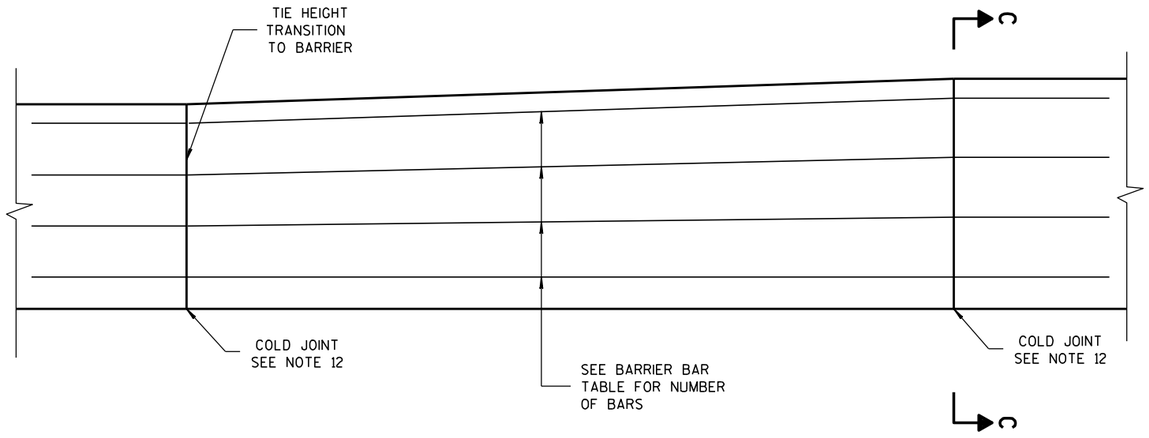
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

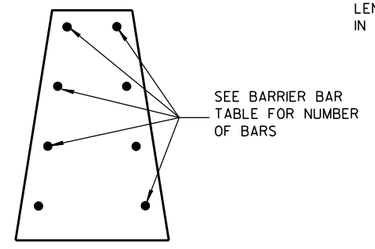
BARRIER BARS

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

6-3-2010 DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

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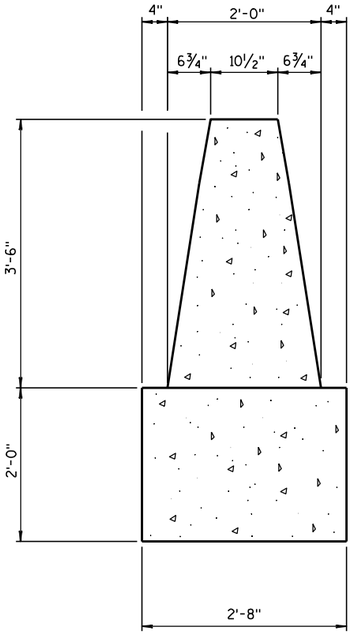
FHWA

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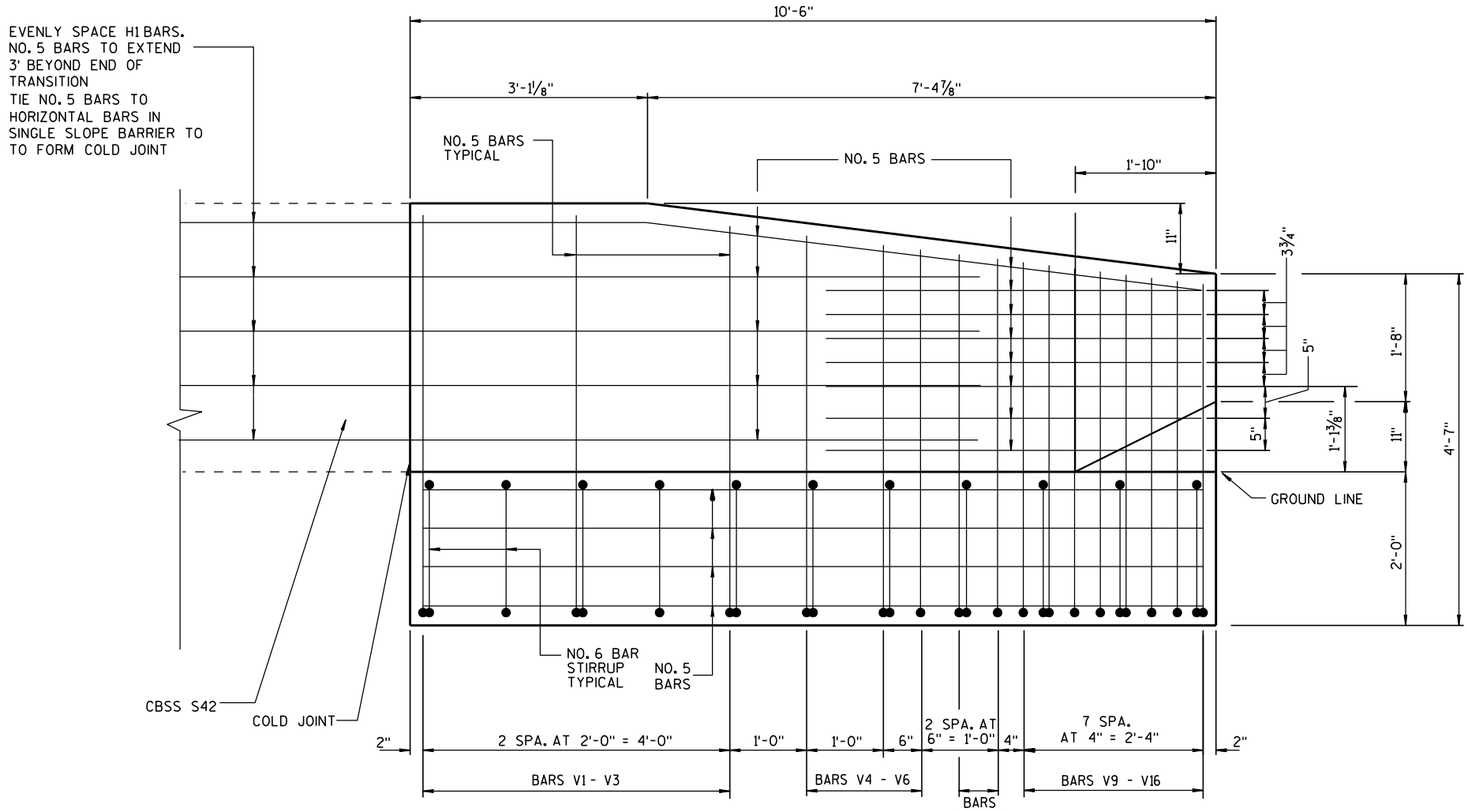
S.D.D. 14 B 32-1d

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S.D.D. 14 B 32-1d

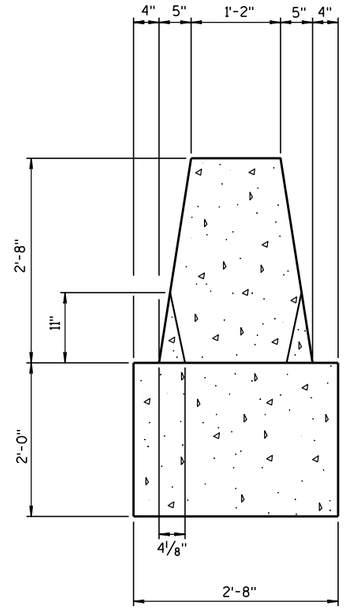


SECTION A-A

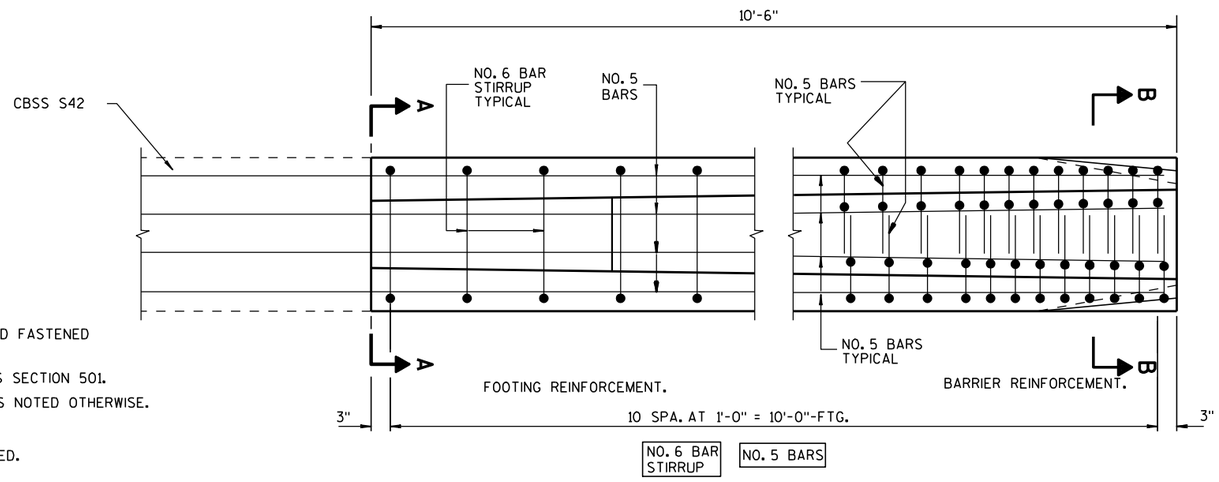


SEE SECTIONS ① THRU ⑯

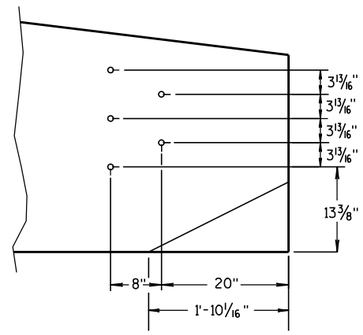
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

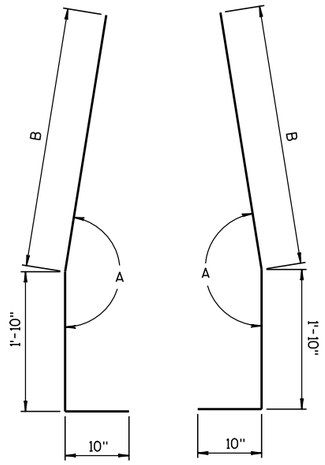
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

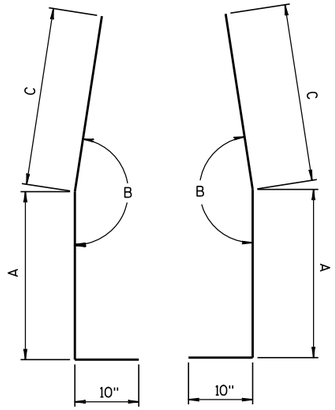
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

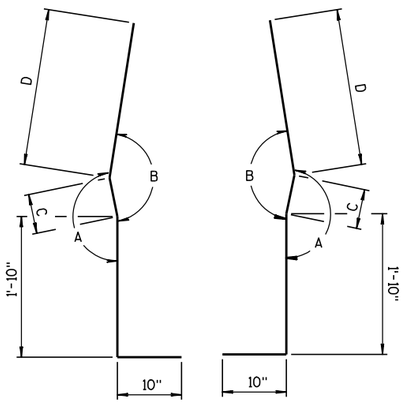
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



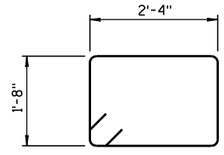
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

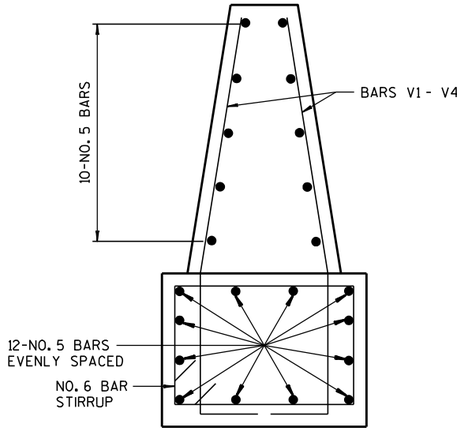
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



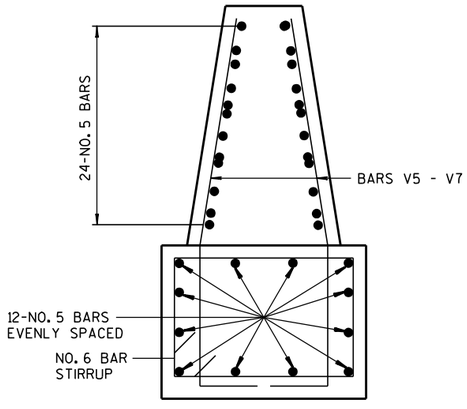
BAR BENDING DETAIL
FOR BARS V14 - V16



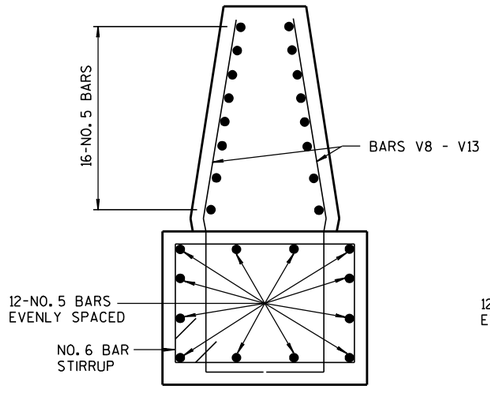
STIRRUP BAR
BENDING DETAIL



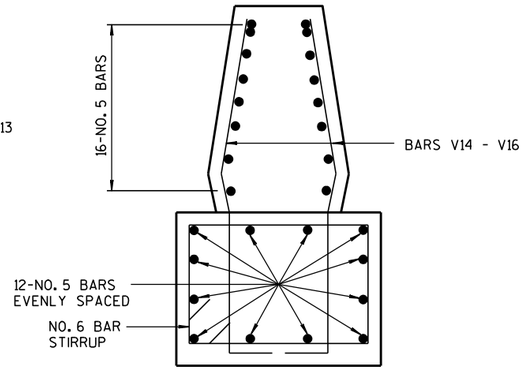
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



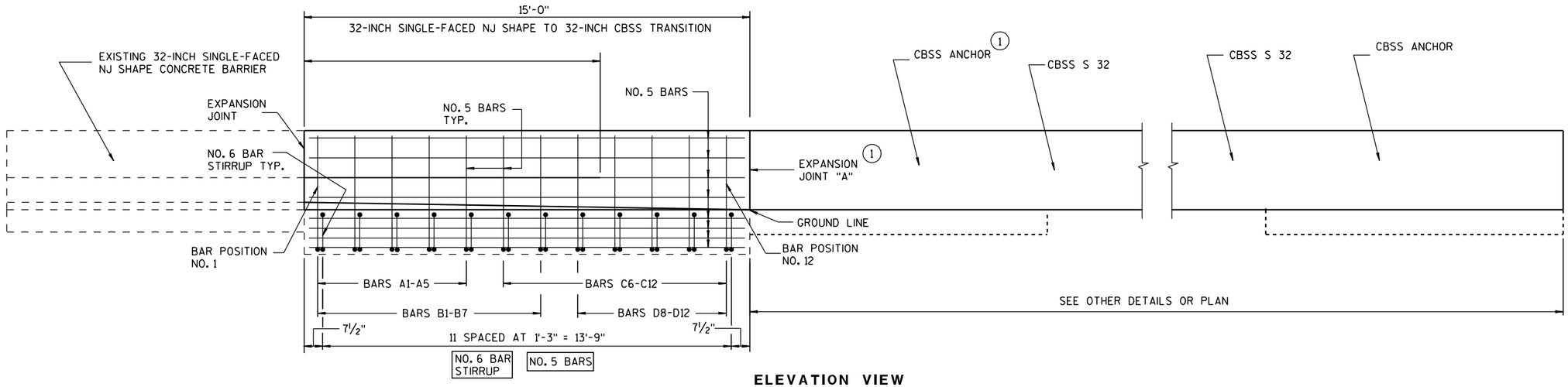
BAR DETAIL
SECTIONS V14 - V16

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

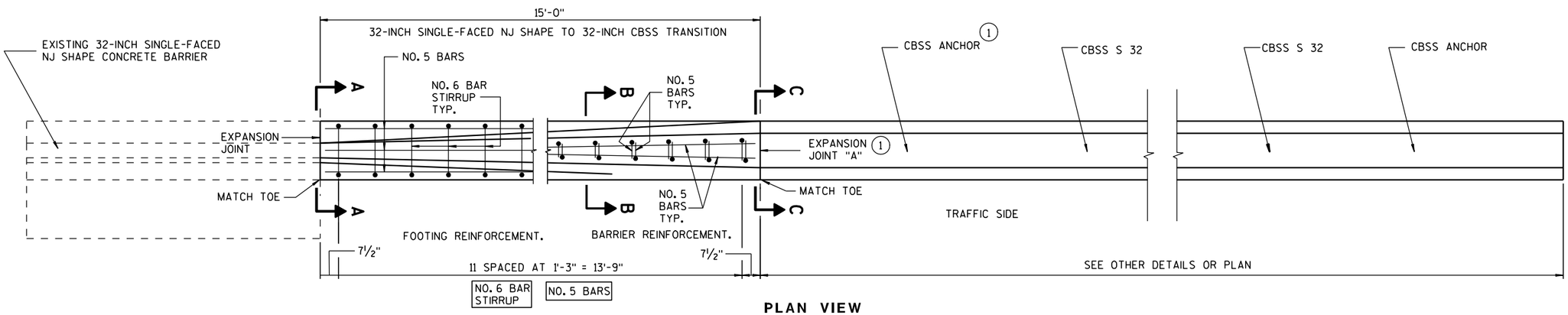
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-3-2010 DATE
/S/ Jerry H. Z--- ROADWAY STANDARDS ENGINEER
FHWA

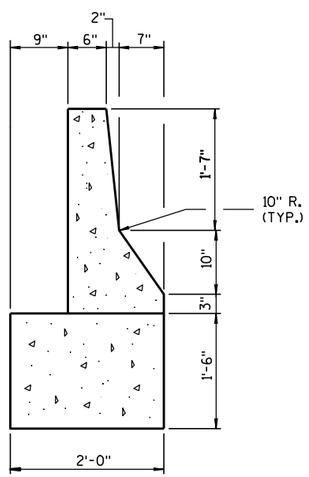
6
S.D.D. 14 B 33-1h



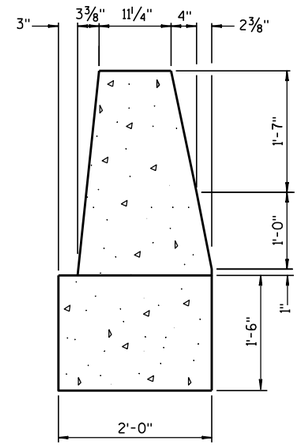
ELEVATION VIEW



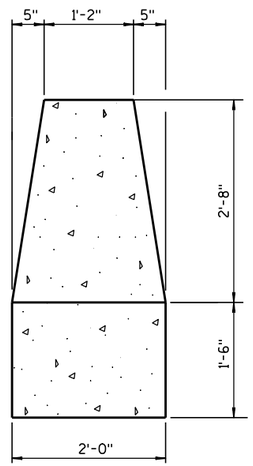
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD -JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

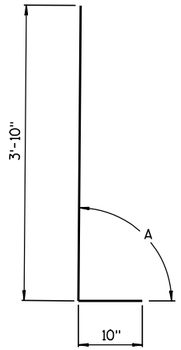
32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 35-1a

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

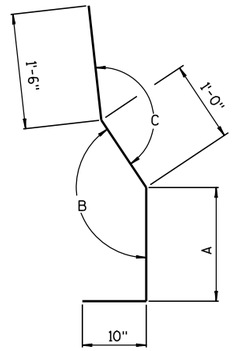
BAR	A
A1	90°
A2	89°-15'
A3	88°-50'
A4	88°-15'
A5	87°-50'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 7

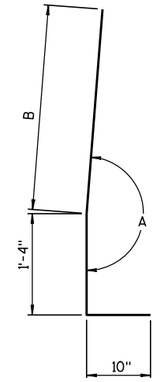
BAR	A	B	C
B1	1'-6"	146°-20'	152°-40'
B2	1'-6"	149°-25'	156°-35'
B3	1'-6"	152°-35'	160°-30'
B4	1'-5½"	155°-20'	163°-55'
B5	1'-5½"	158°-30'	167°-50'
B6	1'-5"	161°-45'	171°-50'
B7	1'-5"	164°-20'	175°-10'



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

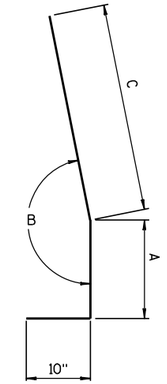
BAR	A	B
C6	176°	2'-6"
C7	175°-05'	2'-6"
C8	174°-25'	2'-6"
C9	173°-45'	2'-6¼"
C10	172°-50'	2'-6¼"
C11	172°-10'	2'-6½"
C12	171°-30'	2'-6½"



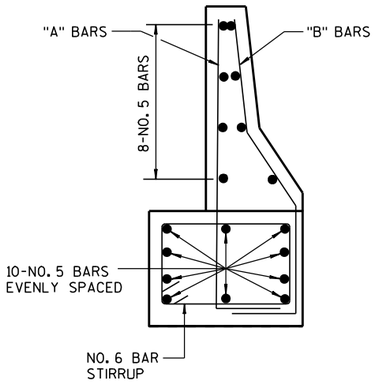
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 8 - NO. 12

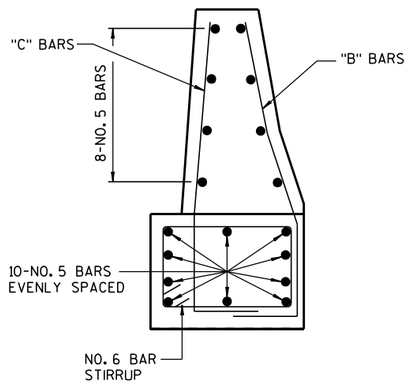
BAR	A	B	C
D8	1'-5"	168°-05'	2'-6"
D9	1'-5"	168°-50'	2'-6"
D10	1'-5"	169°-25'	2'-6"
D11	1'-4"	170°-10'	2'-6½"
D12	1'-4"	170°-50'	2'-6½"



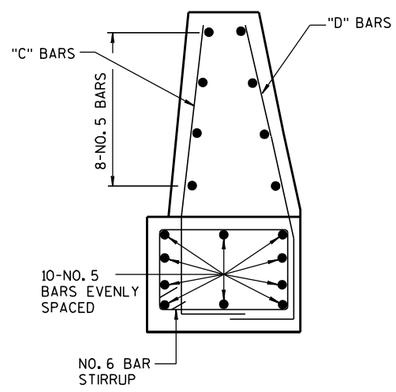
"D" BAR
BENDING DETAIL



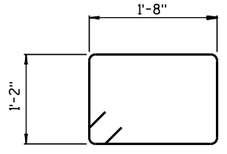
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6 - NO. 8



BAR DETAIL
BAR POSITIONS NO. 9 - NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

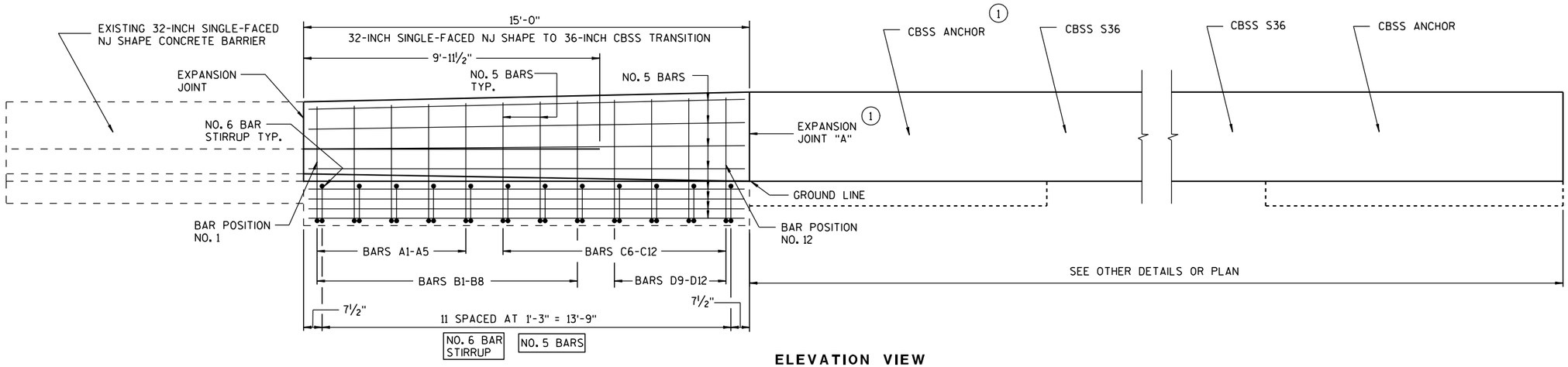
FHWA

6

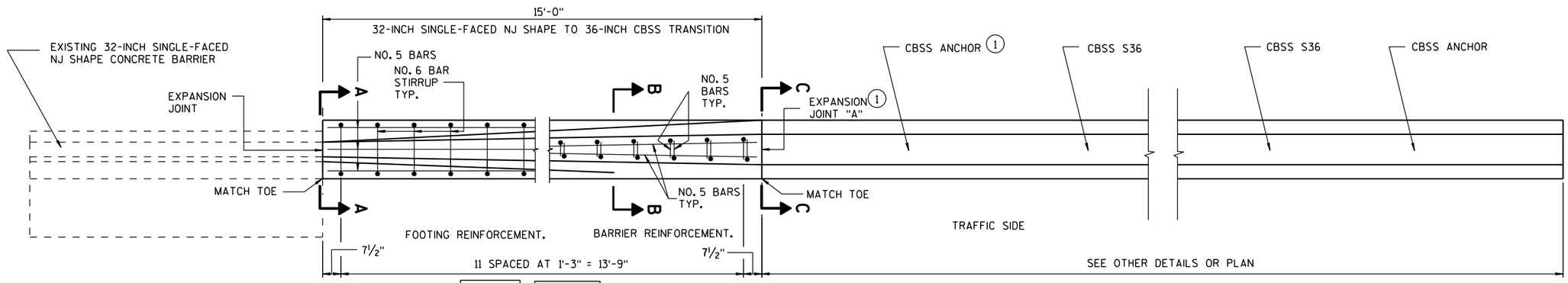
S.D.D. 14 B 35-1b

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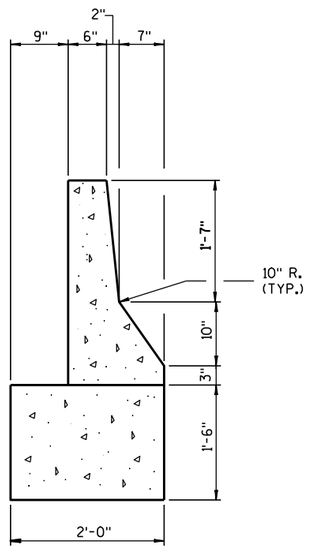
S.D.D. 14 B 35-1b



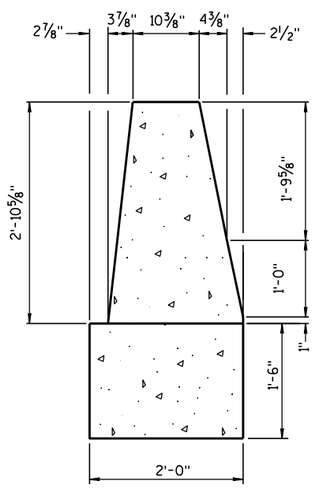
ELEVATION VIEW



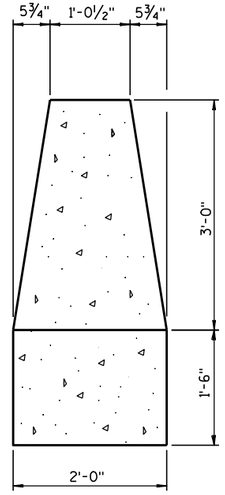
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

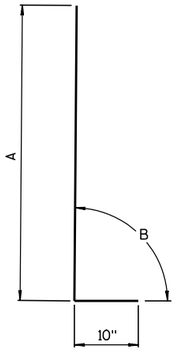
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

S.D.D. 14 B 35-1c

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

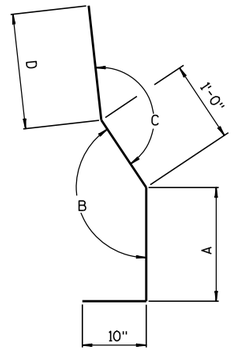
BAR	A	B
A1	3'-10"	89°-35'
A2	3'-10"	88°-40'
A3	3'-11"	87°-50'
A4	3'-11"	87°-10'
A5	3'-11½"	86°-15'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 8

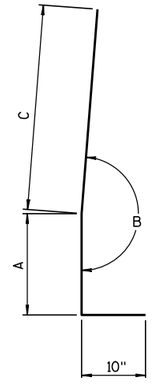
BAR	A	B	C	D
B1	1'-6"	146°-20'	152°-40'	1'-6"
B2	1'-6"	149°-25'	156°-45'	1'-6"
B3	1'-6"	152°-40'	160°-55'	1'-6½"
B4	1'-6"	155°-40'	164°-30'	1'-7"
B5	1'-5½"	158°-30'	167°-55'	1-'7"
B6	1'-5"	161°-45'	172°	1'-7½
B7	1'-5"	164°-25'	175°-05'	1'-8"
B8	1'-5"	167°-30'	179°	1'-8"



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

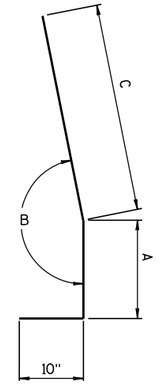
BAR	A	B	C
C6	1'-4"	175°-35'	2'-8"
C7	1'-4"	174°-45'	2'-8"
C8	1'-4"	174°	2'-8½"
C9	1'-4"	173°-15'	2'-9"
C10	1'-4"	172°-45'	2'-9½"
C11	1'-3½"	172°	2'-9½"
C12	1'-3½"	171°-15'	2'-10"



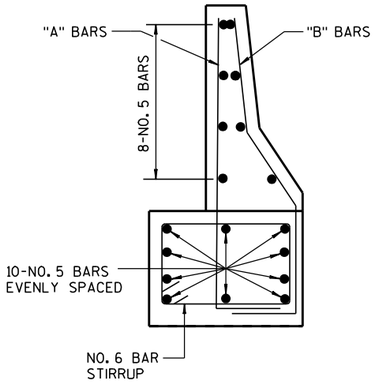
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 9 - NO. 12

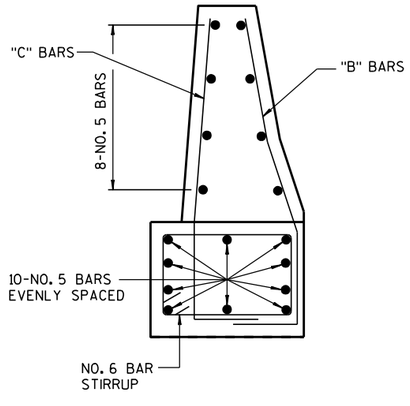
BAR	A	B	C
D9	1'-5"	168°-45'	2'-8½"
D10	1'-4½"	169°-30'	2'-9"
D11	1'-4"	170°-15'	2'-9½"
D12	1'-4"	170°-40'	2'-10"



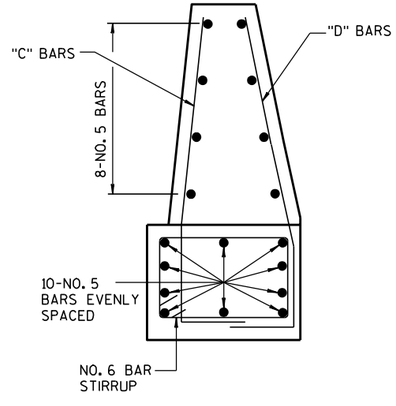
"D" BAR
BENDING DETAIL



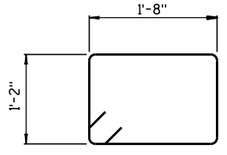
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6 - NO. 8



BAR DETAIL
BAR POSITIONS NO. 9 - NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH SINGLE-FACED NJ SHAPE
CONCRETE BARRIER TO 36-INCH SINGLE
SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

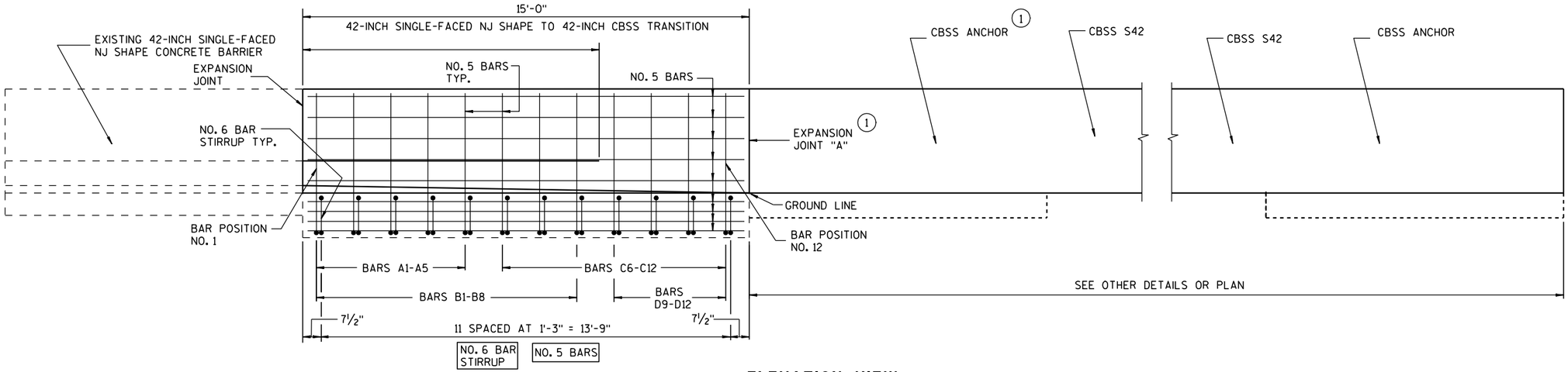
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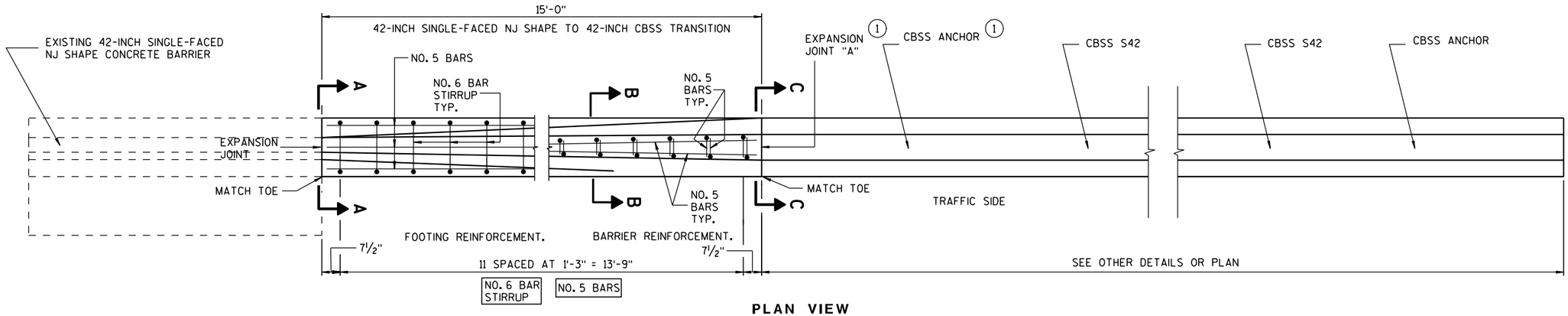
S.D.D. 14 B 35-1d

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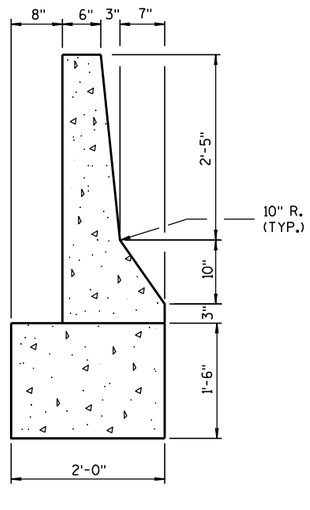
S.D.D. 14 B 35-1d



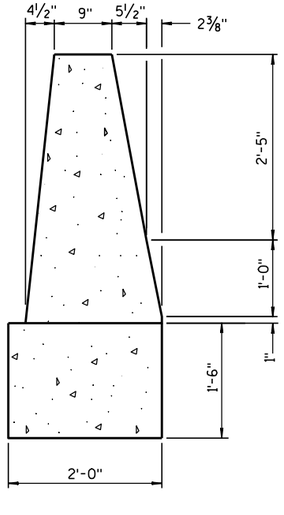
ELEVATION VIEW



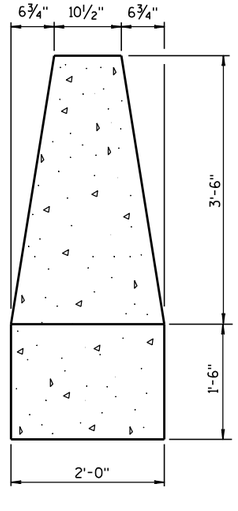
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

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42-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

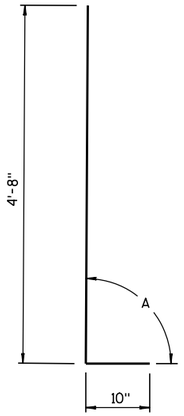
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 35-1e

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

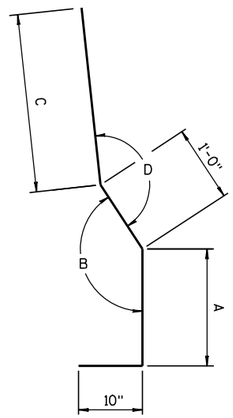
BAR	A
A1	89°-40'
A2	89°-05'
A3	88°-30'
A4	88°-05'
A5	87°-35'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 8

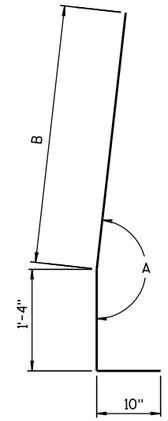
BAR	A	B	C	D
B1	1'-6"	146°-50'	2'-3 7/8"	152°-55'
B2	1'-6"	150°-30'	2'-3 1/2"	157°-20'
B3	1'-6"	152°-40'	2'-3 1/2"	160°
B4	1'-6"	155°-20'	2'-3 1/2"	163°-10'
B5	1'-5 1/2"	158°-30'	2'-3 1/2"	167°-05'
B6	1'-5 1/4"	161°-10'	2'-4"	170°-30'
B7	1'-5"	164°-55'	2'-4"	174°-45'
B8	1'-5"	167°-30'	2'-3 1/2"	176°-50'



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

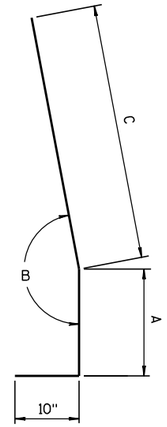
BAR	A	B
C6	175°-45'	3'-4 1/4"
C7	174°-55'	3'-4 1/4"
C8	175°-05'	3'-4 1/4"
C9	173°-35'	3'-4 1/4"
C10	172°-40'	3'-4 1/2"
C11	171°-50'	3'-4 1/2"
C12	171°-15'	3'-4 1/2"



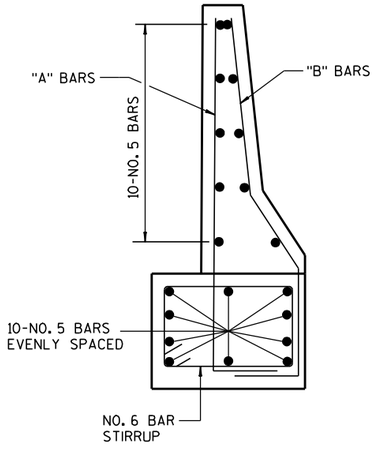
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 9 - NO. 12

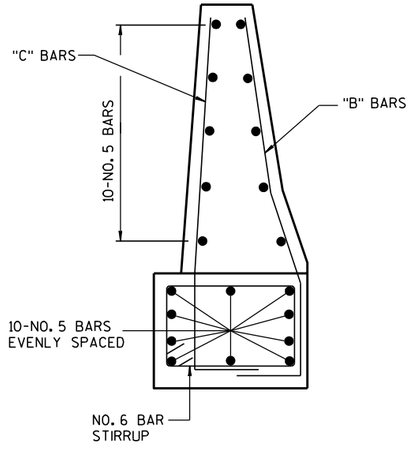
BAR	A	B	C
D9	1'-4 1/2"	169°-20'	3'-4"
D10	1'-4 1/2"	169°-55'	3'-4"
D11	1'-4 1/2"	170°-15'	3'-4 1/4"
D12	1'-4"	170°-30'	3'-4 1/2"



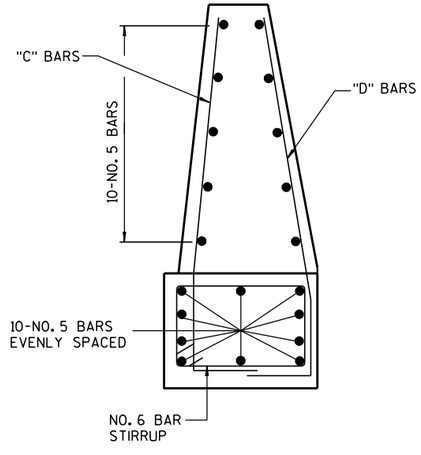
"D" BAR
BENDING DETAIL



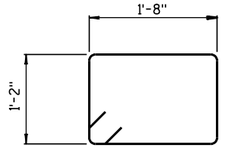
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6 - NO. 8



BAR DETAIL
BAR POSITIONS NO. 9 - NO. 12



STIRRUP BAR
BENDING DETAIL

42-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

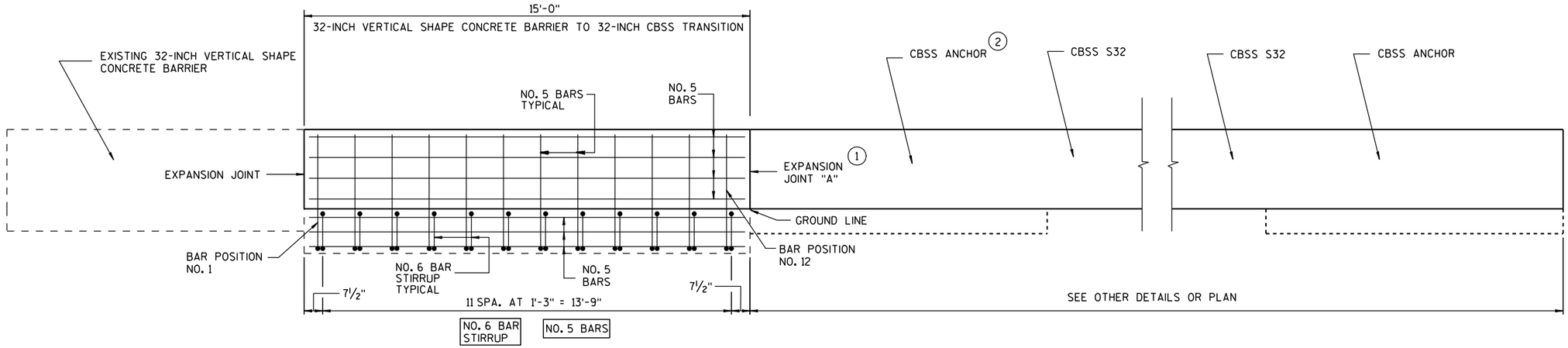
6-3-2010
DATE

/S/ Jerry H. Zoss
ROADWAY STANDARDS DEVELOPMENT ENGINEER

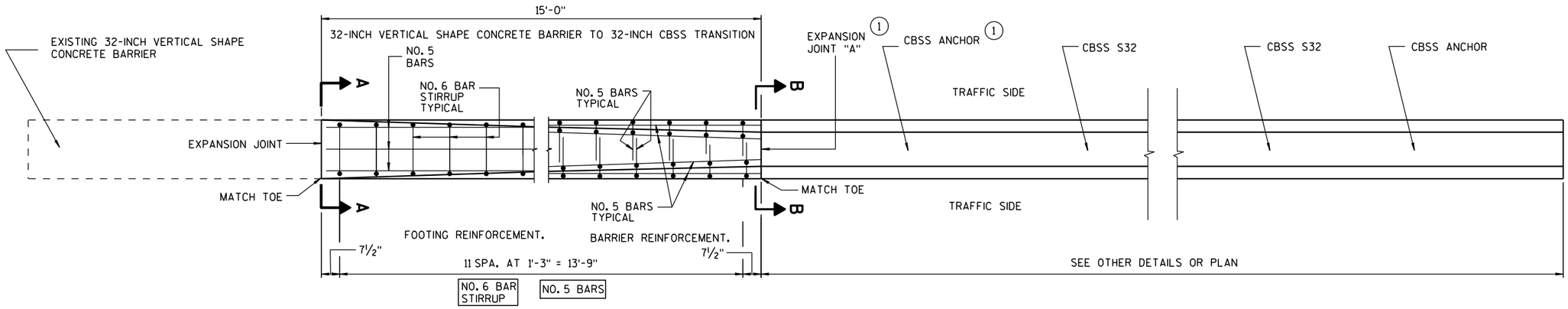
FHWA

S.D.D. 14 B 35-1f

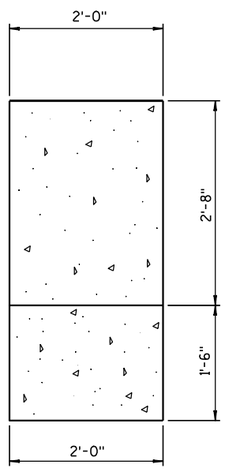
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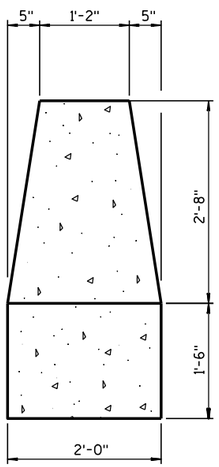
ELEVATION VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

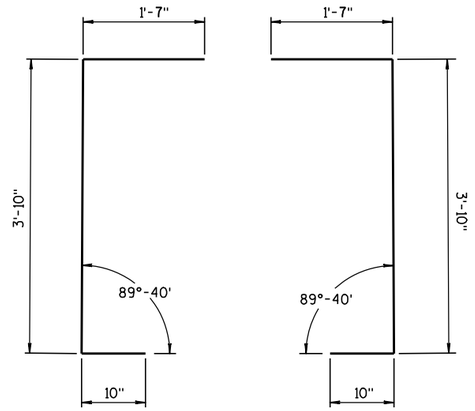
2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

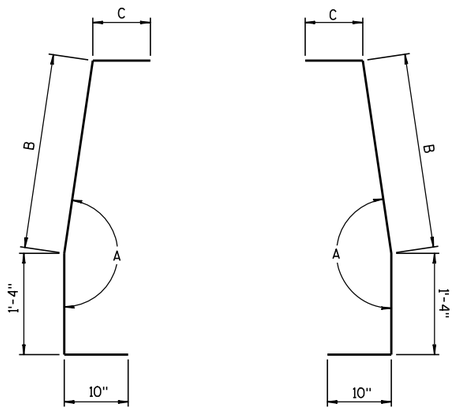
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S.D.D. 14 B 40-1a



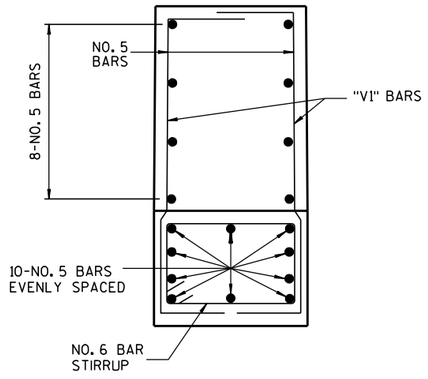
BAR NO. V1
BENDING DETAIL

BAR CHART
BAR POSITIONS V2 - V12

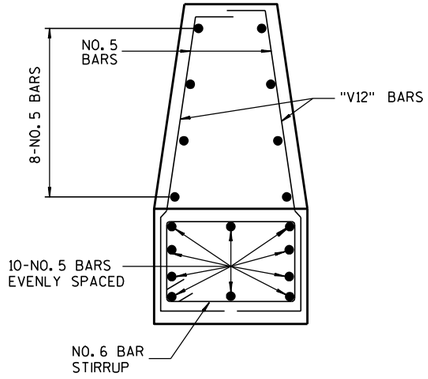
BAR	A	B	C
V2	178°-50'	2'-6"	1'-7"
V3	178°-15'	2'-6"	1'-7"
V4	177°-20'	2'-6"	1'-4"
V5	176°-40'	2'-6"	1'-4"
V6	176°	2'-6"	1'-2"
V7	175°-05'	2'-6"	1'-0"
V8	174°-25'	2'-6"	1'-0"
V9	173°-30'	2'-6"	11"
V10	172°-50'	2'-6"	11"
V11	172°-15'	2'-6½"	10"
V12	171°-35'	2'-6½"	9"



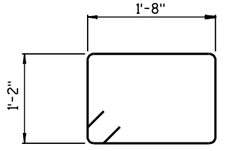
BAR NO. V2 - NO. V12
BENDING DETAIL



BAR DETAIL
BAR POSITION NO. 1



BAR DETAIL
BAR POSITION NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

254

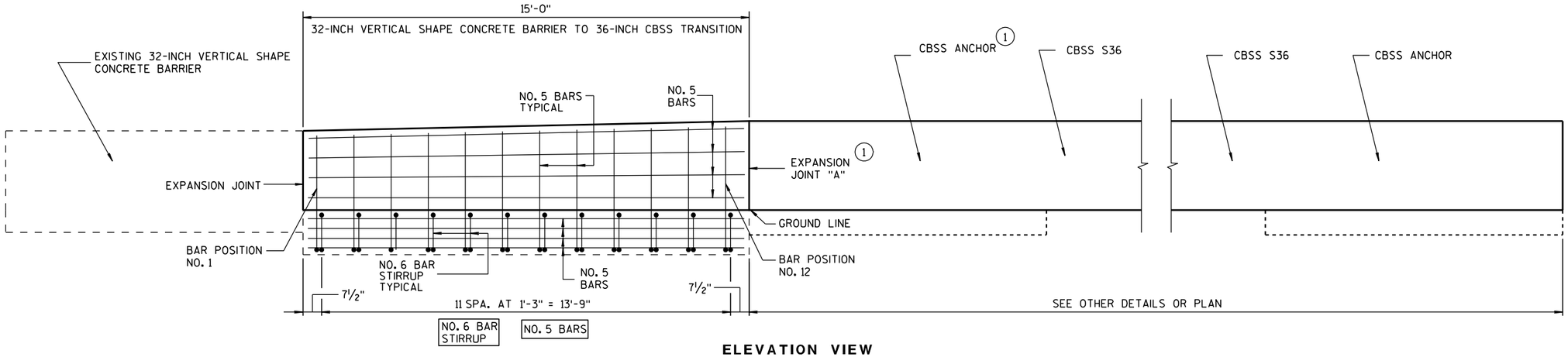
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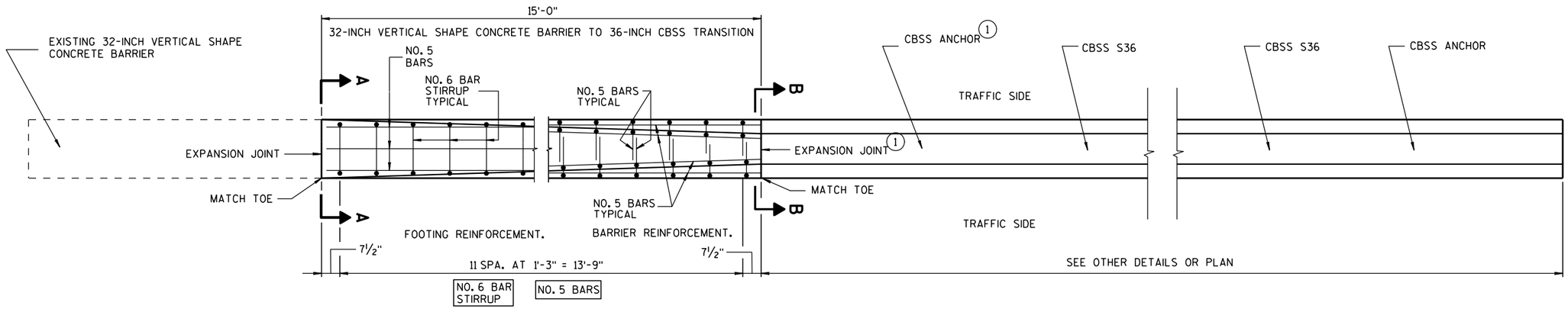
S.D.D. 14 B 40-1b

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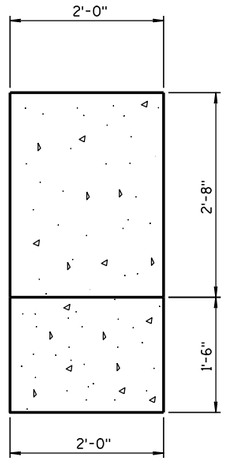
S.D.D. 14 B 40-1b



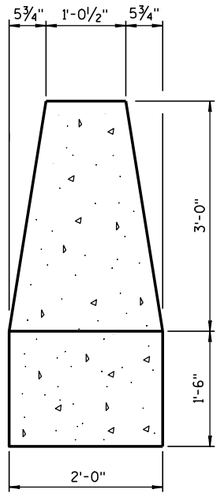
ELEVATION VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

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32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 36-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

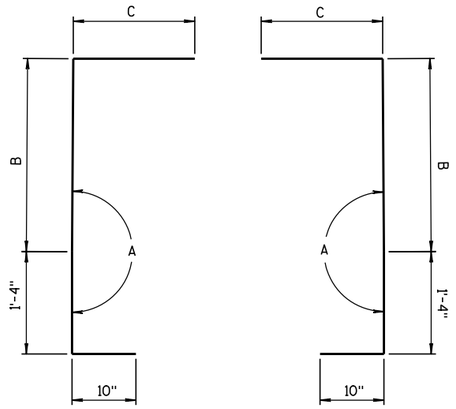
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

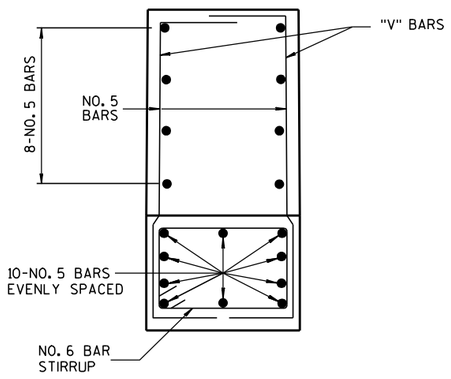
S.D.D. 14 B 40-1c

BAR CHART
BAR POSITIONS V1 - V12

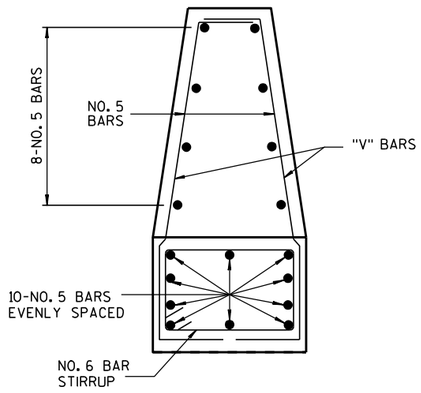
BAR	A	B	C
V1	179°-35'	2'-6 1/4"	1'-7"
V2	179°-10'	2'-6 1/2"	1'-7"
V3	178°-05'	2'-6 3/4"	1'-5"
V4	177°	2'-7 1/4"	1'-4"
V5	176°-35'	2'-7 3/4"	1'-4"
V6	175°-35'	2'-8"	1'-2"
V7	174°-45'	2'-8 1/2"	1'-1"
V8	174°-05'	2'-8 3/4"	1'-0"
V9	173°-15'	2'-9 1/4"	11"
V10	172°-45'	2'-9 3/4"	11"
V11	172°	2'-10"	10"
V12	171°-15'	2'-10 1/2"	9"



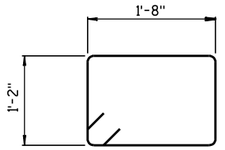
BAR BENDING DETAIL



BAR DETAIL
BAR POSITION NO. 1



BAR DETAIL
BAR POSITION NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 36-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

256

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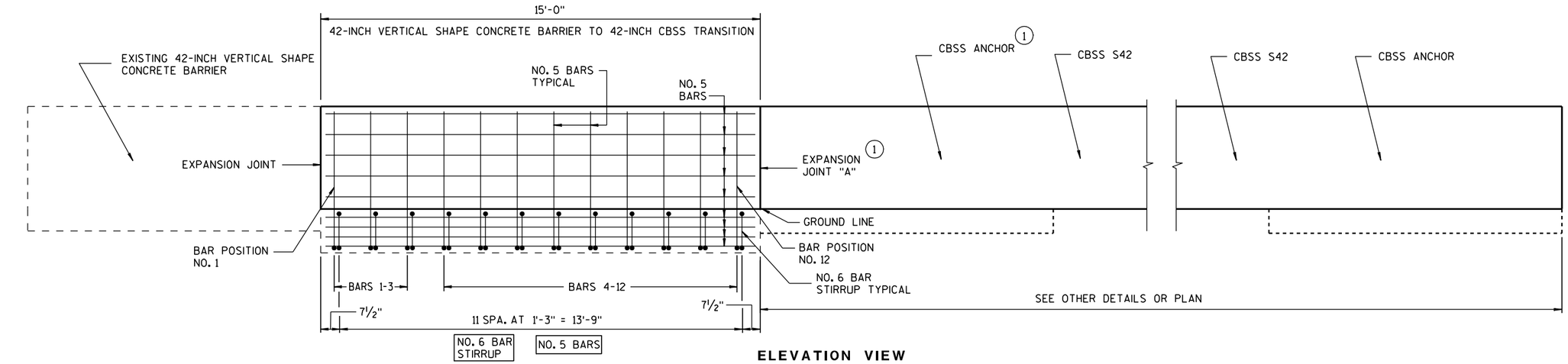
FHWA

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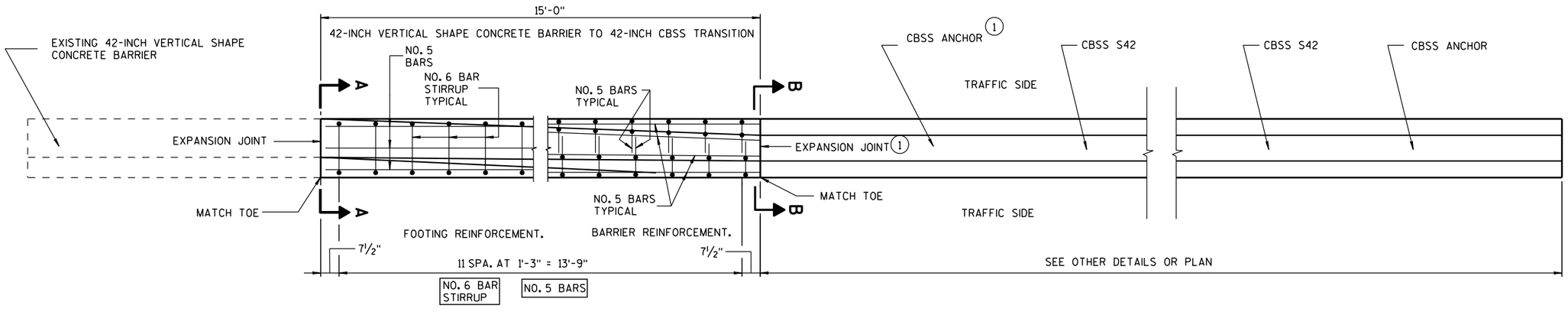
S.D.D. 14 B 40-1d

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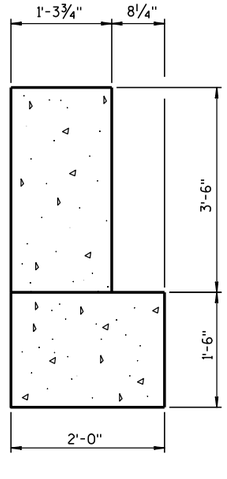
S.D.D. 14 B 40-1d



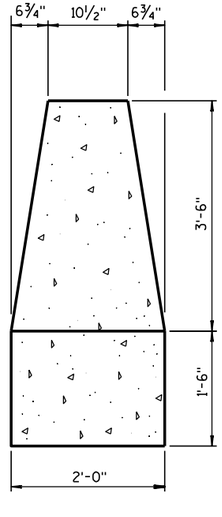
ELEVATION VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

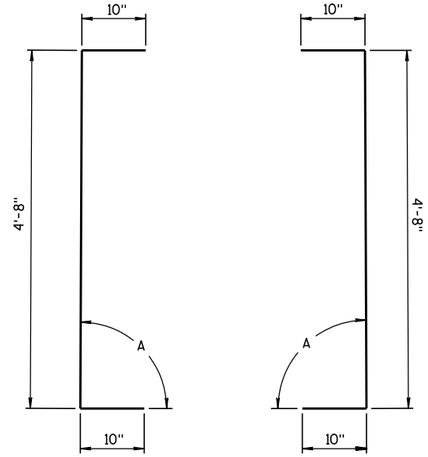
42-INCH VERTICAL SHAPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 40-1e

BAR CHART
BAR POSITIONS V1 - V3

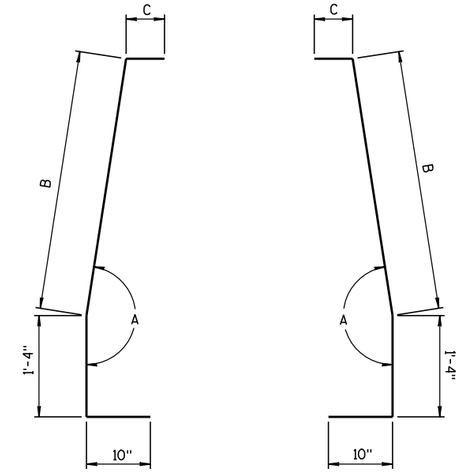
BAR	A
V1	89°-45'
V2	89°-10'
V3	88°-40'



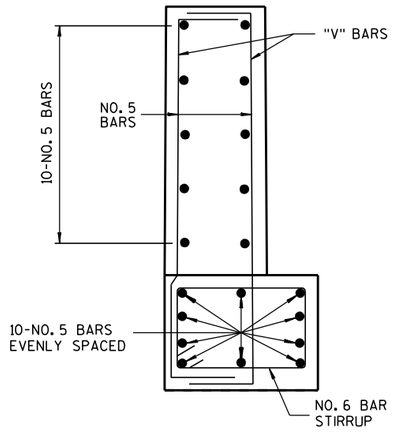
BARS BENDING DETAIL FOR V1 - V3

BAR CHART
BAR POSITIONS V4 - V12

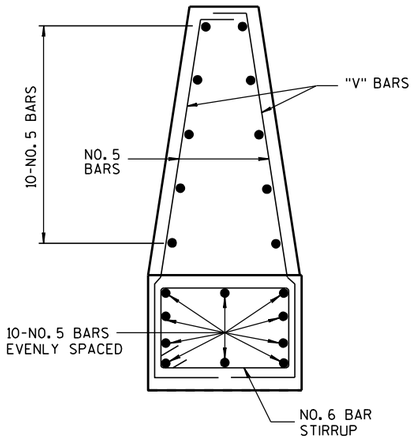
BAR	A	B	C
V4	177°-15'	3'-4"	10"
V5	176°-35'	3'-4"	10"
V6	175°-55'	3'-4½"	8"
V7	175°-05'	3'-4½"	8"
V8	174°-25'	3'-4½"	8"
V9	173°-35'	3'-4½"	8"
V10	172°-05'	3'-4½"	8"
V11	172°-40'	3'-4½"	6"
V12	172°-05'	3'-4½"	6"



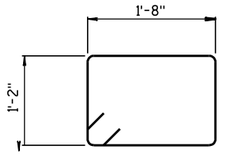
BARS BENDING DETAIL FOR V4 - V12



BAR DETAIL
BAR POSITION V1-V3



BAR DETAIL
BAR POSITION V4-V12



STIRRUP BAR
BENDING DETAIL

42-INCH VERTICAL SHAPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

258

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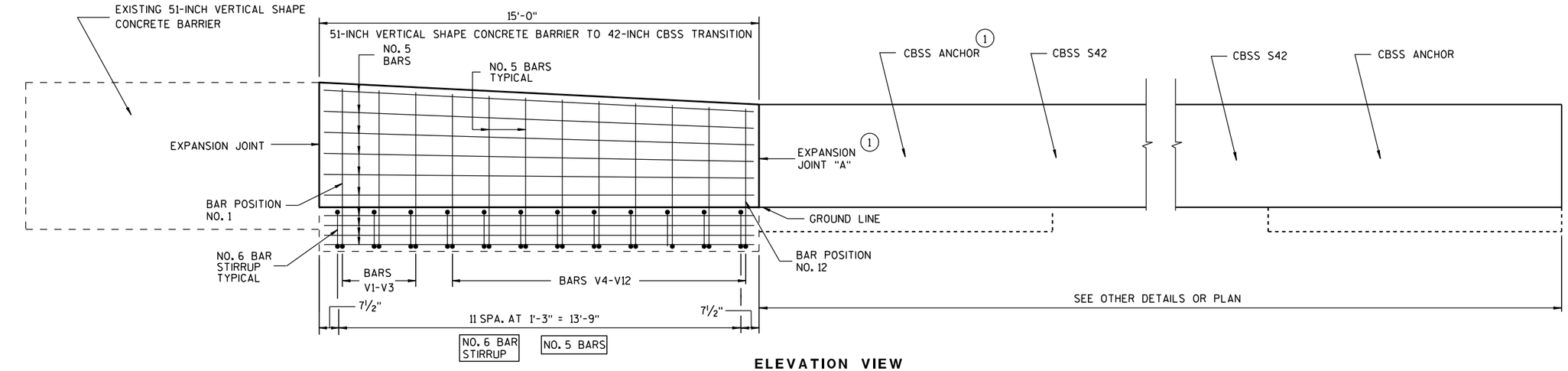
FHWA

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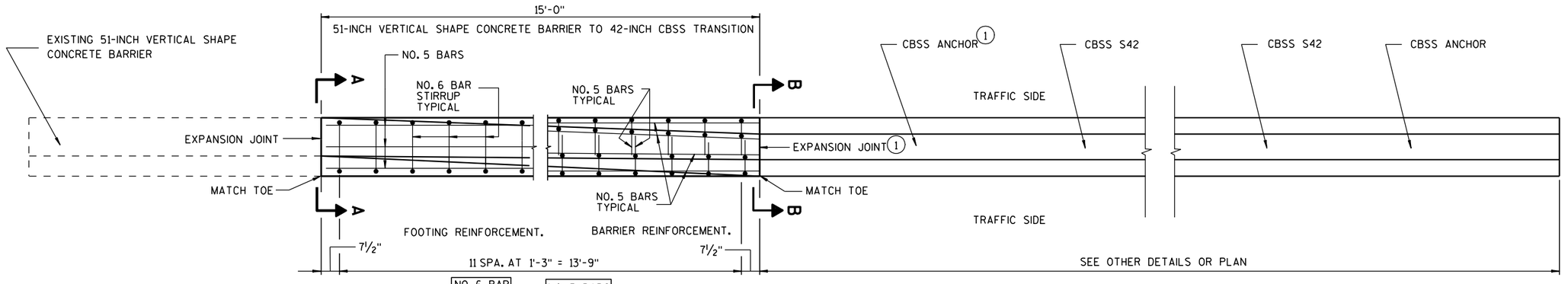
S.D.D. 14 B 40-1f

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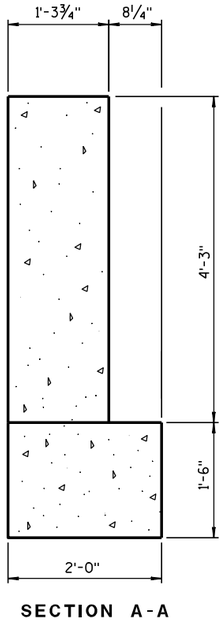
S.D.D. 14 B 40-1f



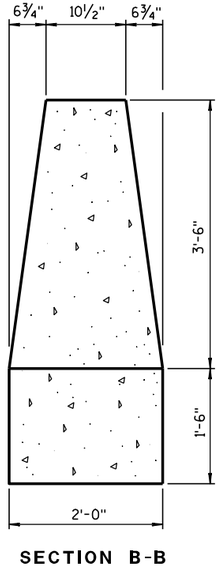
ELEVATION VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

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51-INCH VERTICAL SHAPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

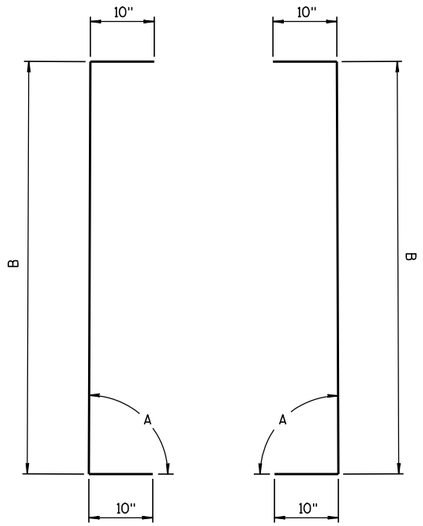
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 40-1g

BAR CHART
BAR POSITIONS V1 - V3

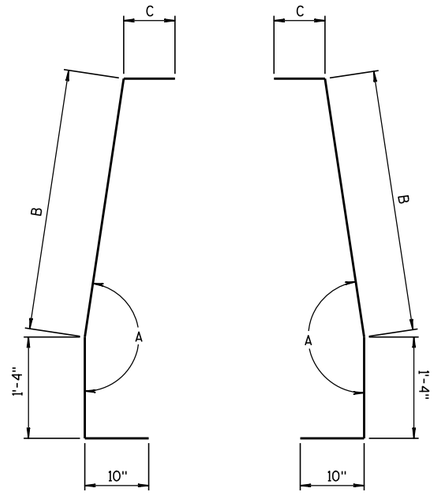
BAR	A	B
V1	89°-45'	5'-4½"
V2	89°-20'	5'-3½"
V3	88°-45'	5'-3"



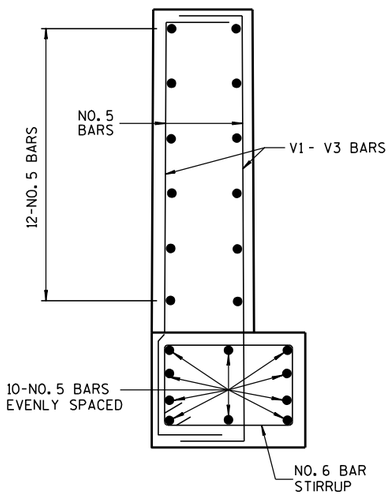
BARS BENDING DETAIL FOR V1 - V3

BAR CHART
BAR POSITIONS V4 - V12

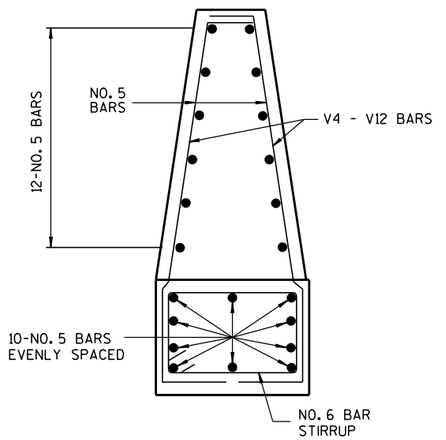
BAR	A	B	C
V4	171°-40'	3'-10⅜"	10"
V5	171°	3'-9¹¹⁄₁₆"	10"
V6	176°-20'	3'-9"	8"
V7	175°-30'	3'-8"	8"
V8	174°-40'	3'-7½"	8"
V9	173°-55'	3'-6½"	8"
V10	173°-10'	3'-6"	8"
V11	172°-15'	3'-5½"	8"
V12	171°-25'	3'-5"	8"



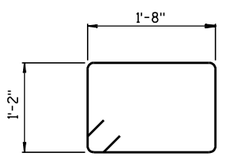
BARS BENDING DETAIL FOR V4 - V12



BAR DETAIL
BAR POSITION V1-V3



BAR DETAIL
BAR POSITION V4-V12



STIRRUP BAR
BENDING DETAIL

51-INCH VERTICAL SHAPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

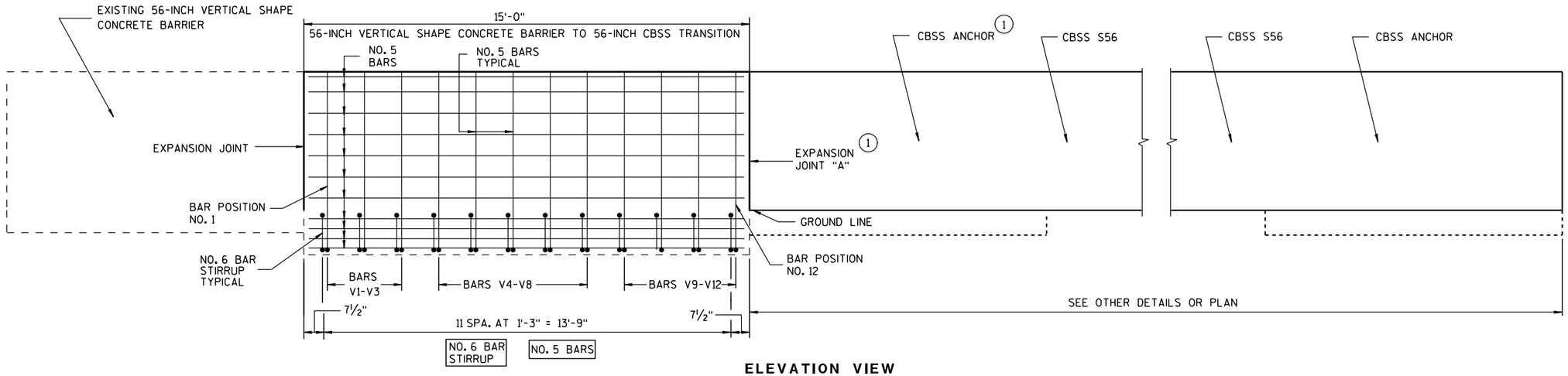
APPROVED

6-3-2010
DATE

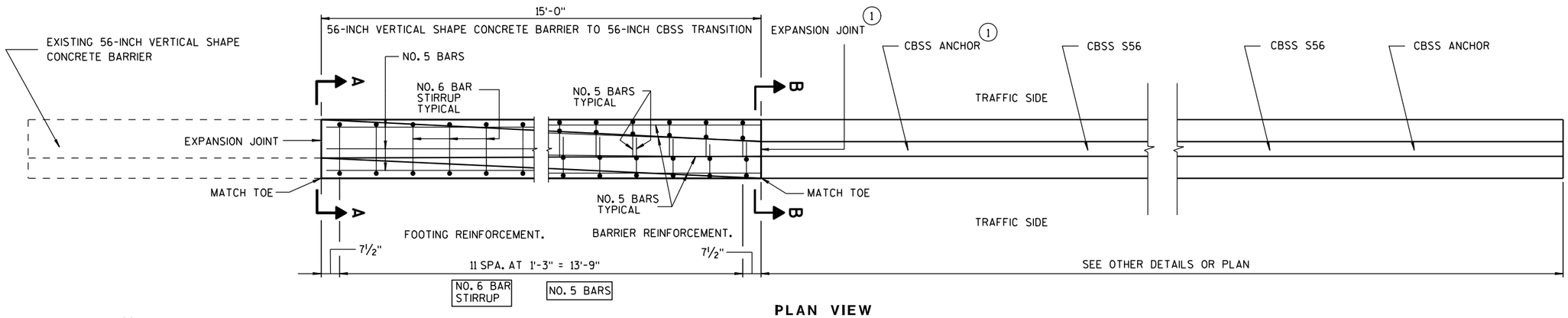
/S/ Jerry H. Z---
ROADWAY STANDARDS ENGINEER

FHWA

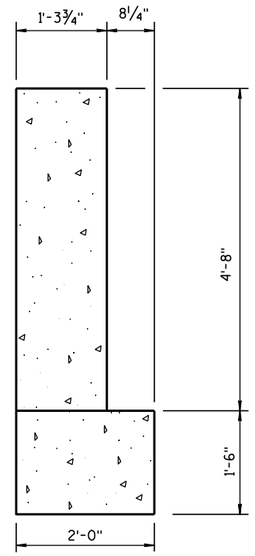
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S.D.D. 14 B 40-1h



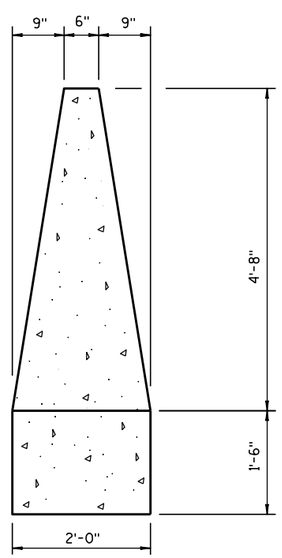
ELEVATION VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

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56-INCH VERTICAL SHAPE CONCRETE BARRIER TO 56-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

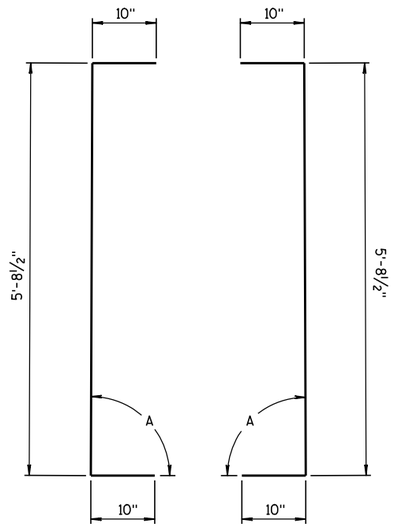
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 40-11

BAR CHART
BAR POSITIONS V1 - V3

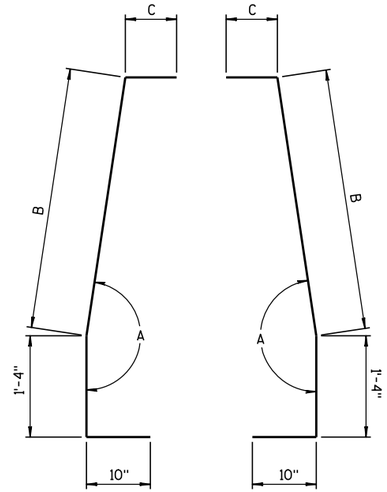
BAR	A
V1	89°-41'
V2	88°-55'
V3	88°-9'



BARS BENDING DETAIL FOR V1 - V3

BAR CHART
BAR POSITIONS V4 - V8

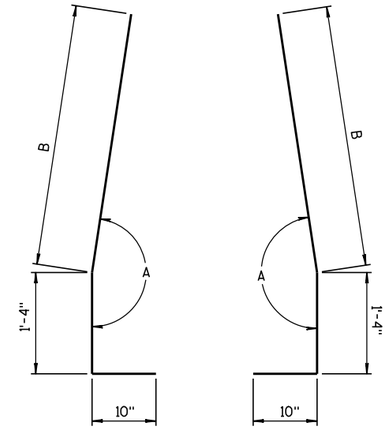
BAR	A	B	C
V4	177°-23'	4'-5¼"	8"
V5	176°-37'	4'-5¼"	8"
V6	175°-51'	4'-5⅜"	8"
V7	175°-5'	4'-5½"	6"
V8	174°-19'	4'-5½"	6"



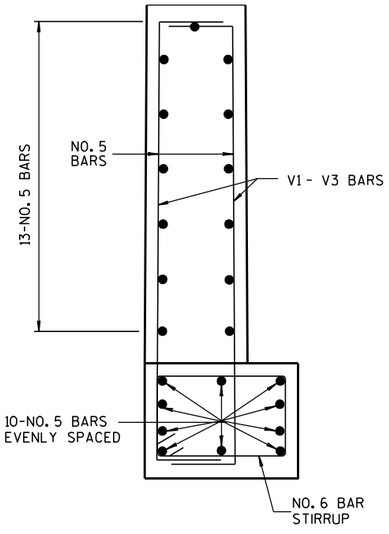
BARS BENDING DETAIL FOR V4 - V8

BAR CHART
BAR POSITIONS V9 - V12

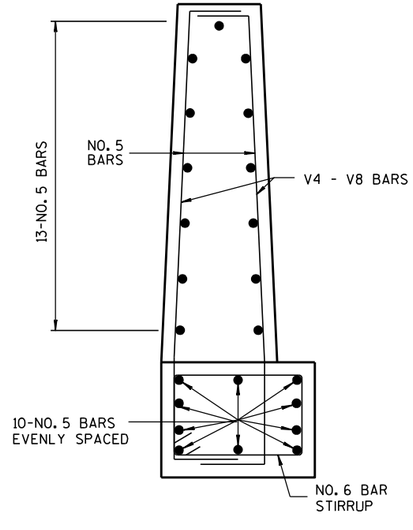
BAR	A	B
V9	173°-30'	4'-5½"
V10	172°-48'	4'-5⅝"
V11	172°-3'	4'-5¾"
V12	171°-18'	4'-5⅞"



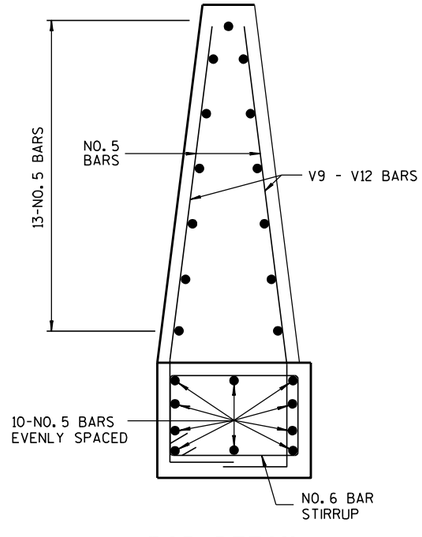
BARS BENDING DETAIL FOR V9 - V12



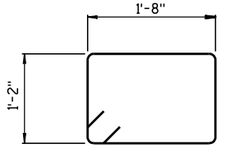
BAR DETAIL
BAR POSITION V1-V3



BAR DETAIL
BAR POSITION V4-V8



BAR DETAIL
BAR POSITION V9-V12



STIRRUP BAR
BENDING DETAIL

56-INCH VERTICAL SHAPE CONCRETE BARRIER TO 56-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010 DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 40-1j

GENERAL NOTES

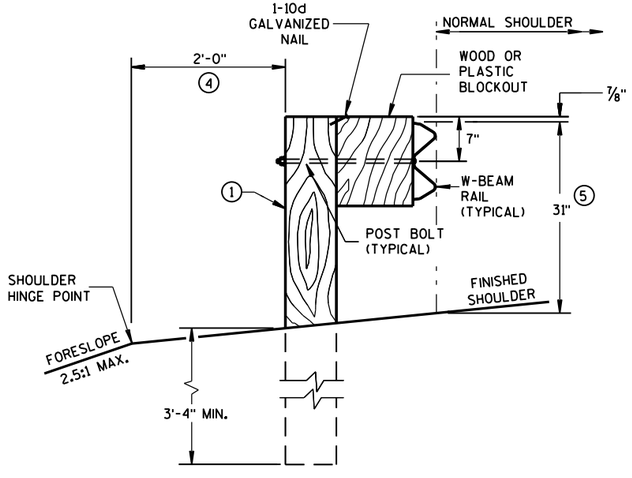
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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 2½INCHES 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.

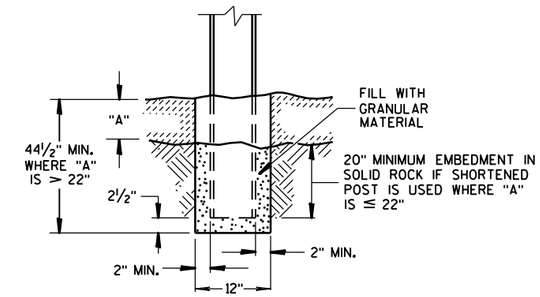
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

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".



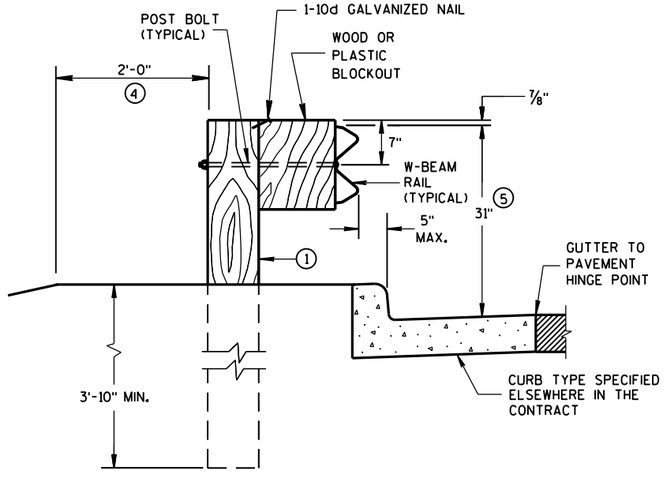
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



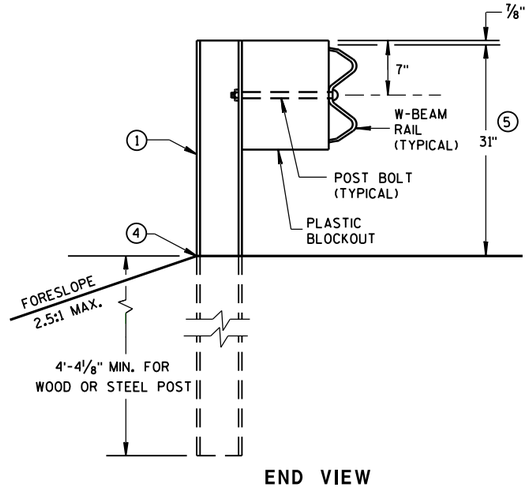
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



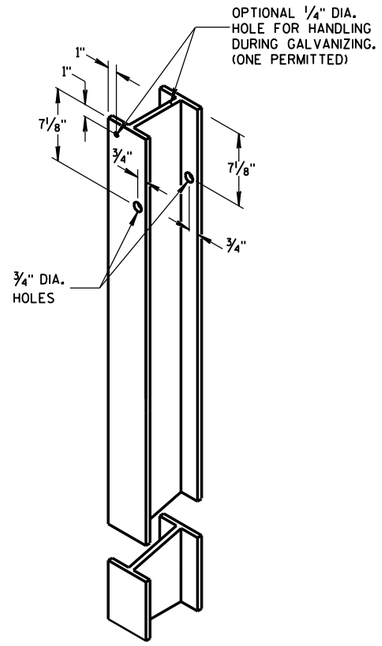
END VIEW

LOCATED ALONG A CURBED ROADWAY

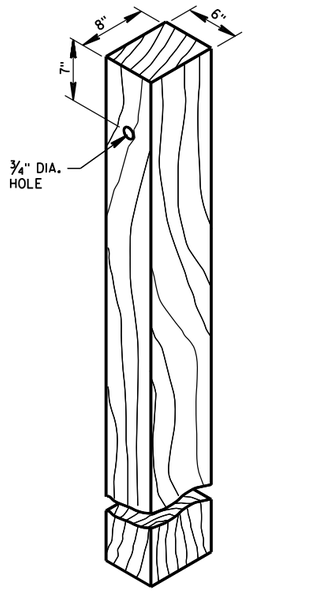


END VIEW

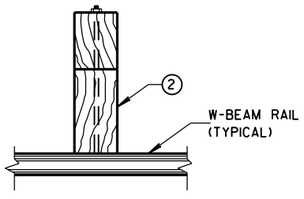
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



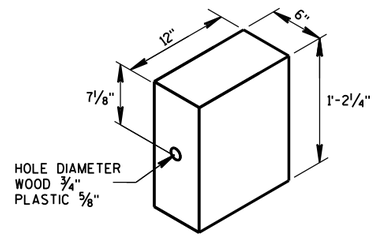
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



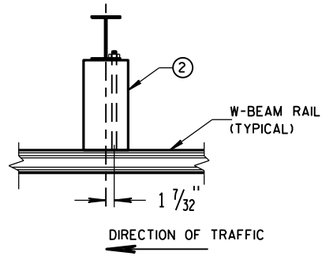
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

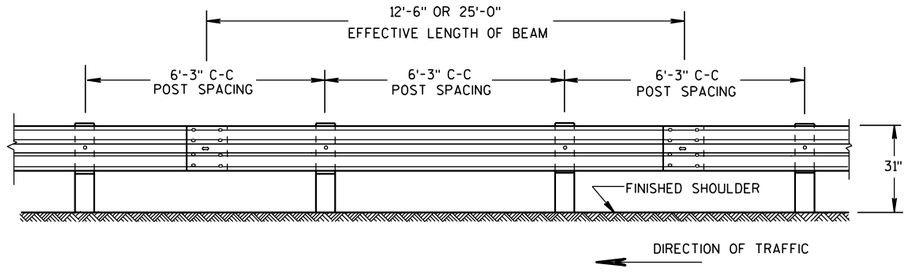


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

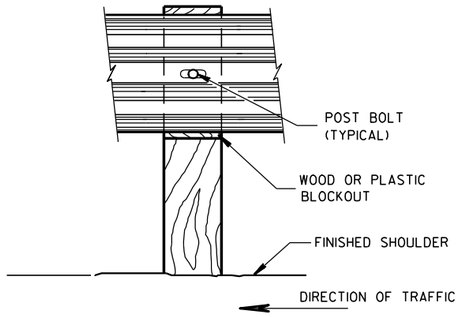
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



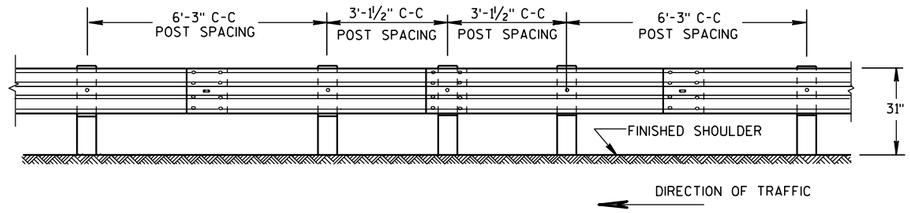
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

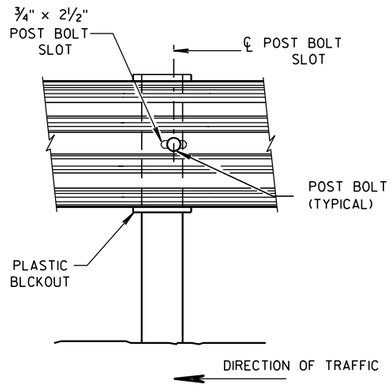
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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.

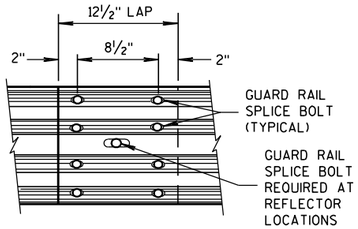


FRONT VIEW

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

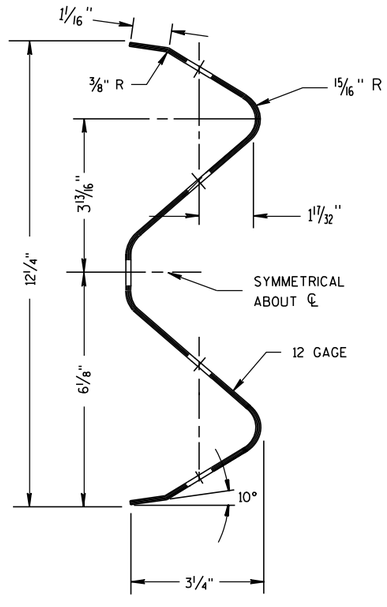


FRONT VIEW AT STEEL POST

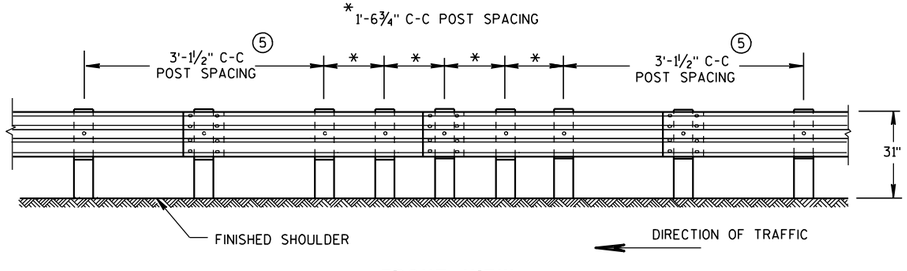


FRONT VIEW

MID-SPAN BEAM SPLICE

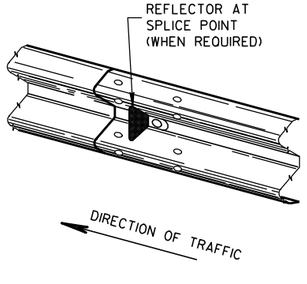


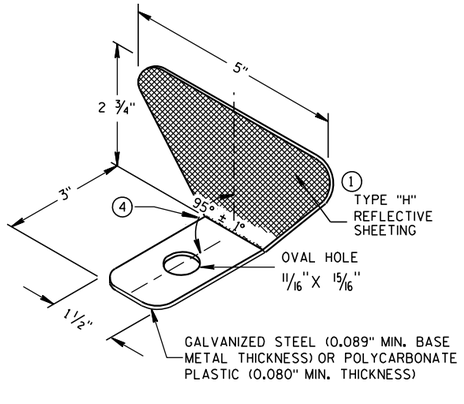
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

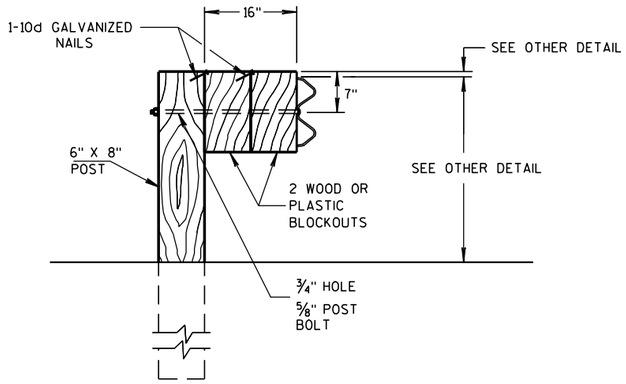
REFLECTOR SPACING ②

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

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

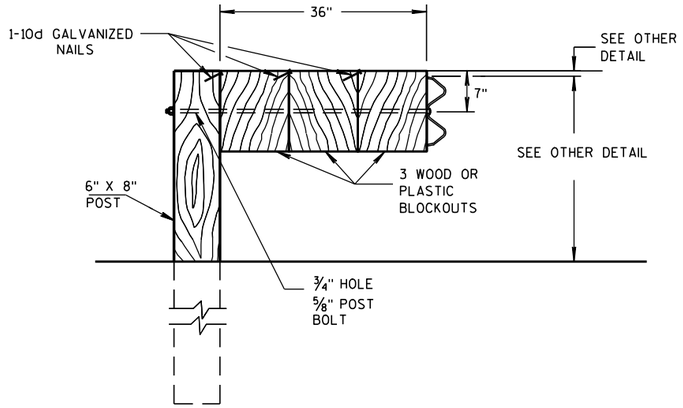
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 42-2b



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.

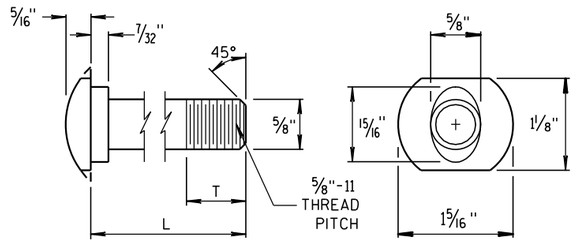


DETAIL FOR 36" BLOCKOUT DEPTH

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.

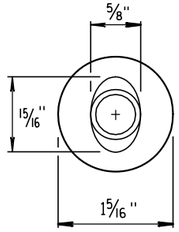
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

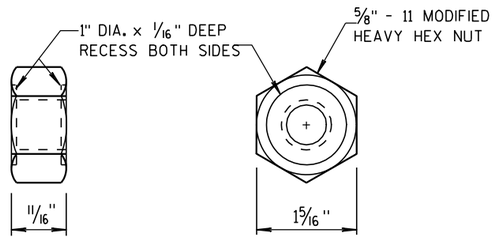


POST BOLT TABLE

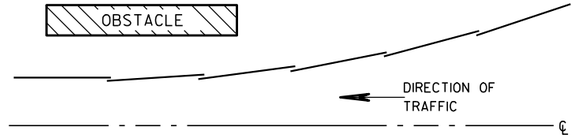
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

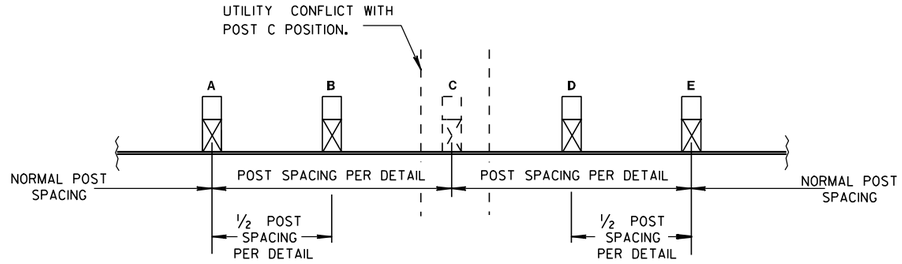


POST BOLT AND RECESS NUT

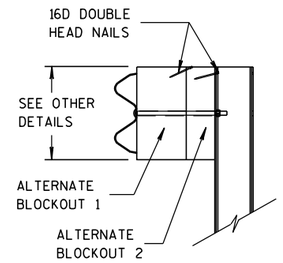


PLAN VIEW

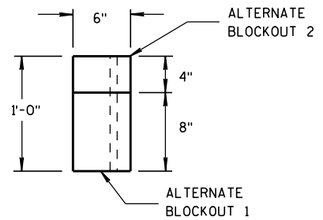
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

ENT

6

S.D.D. 14 B 42-2c

6

S.D.D. 14 B 42-2c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

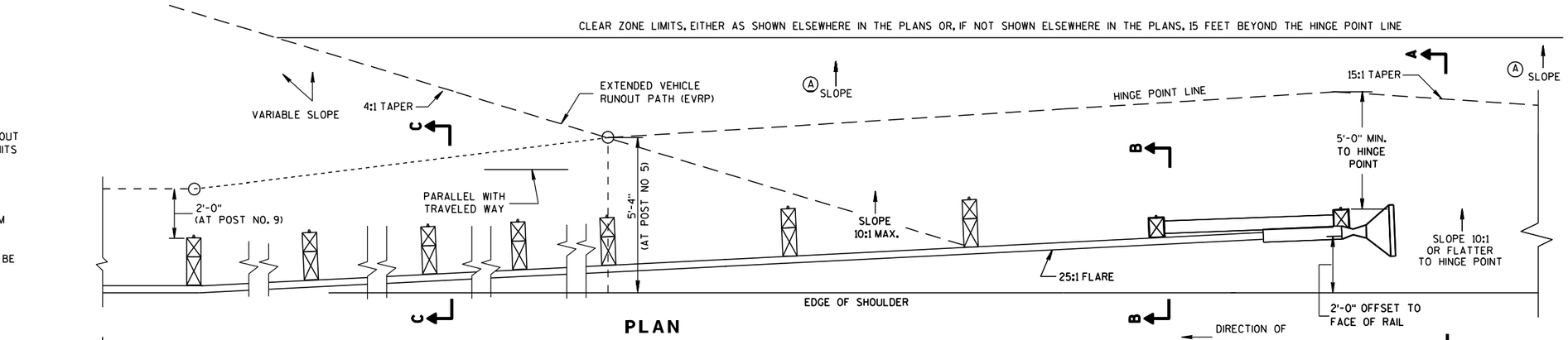
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

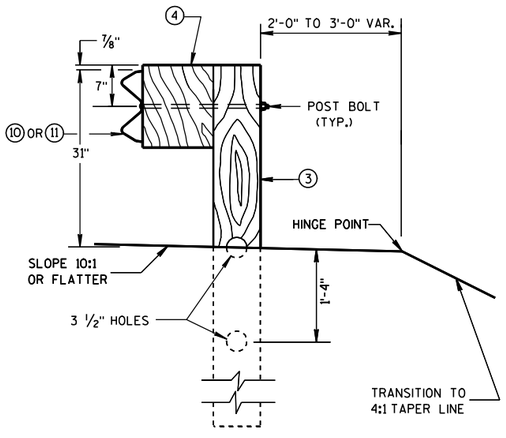
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

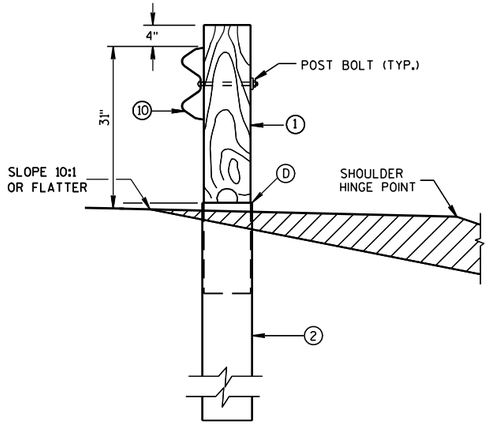
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

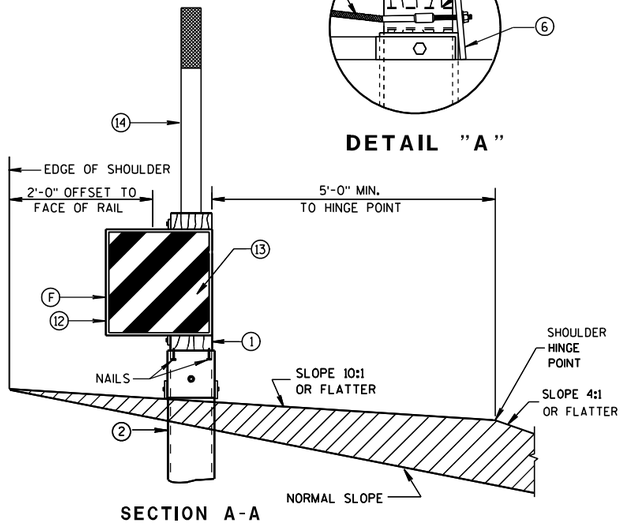




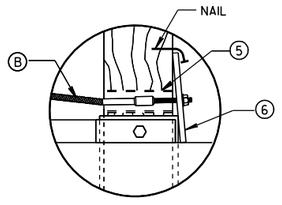
SECTION C-C
TYPICAL AT POST NOS. 3-9



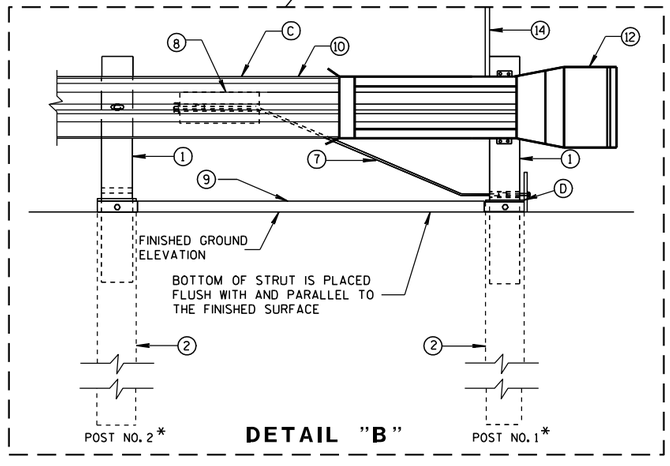
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



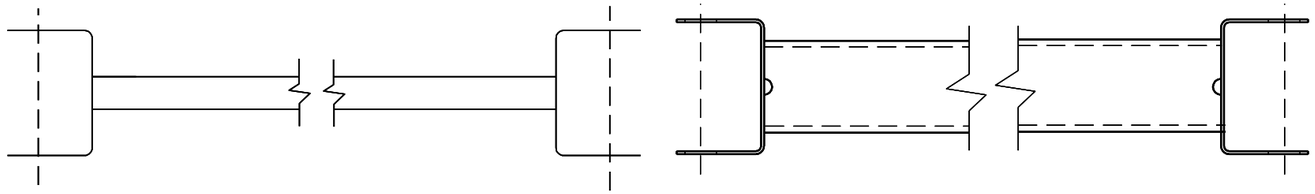
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 14 B 44-1a

6

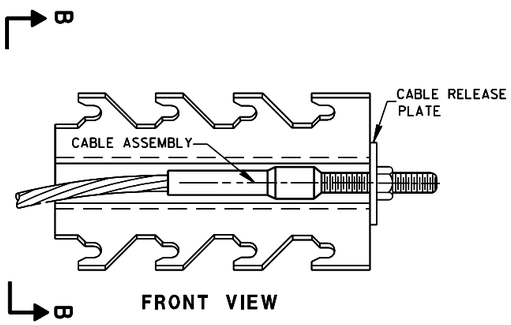


(9) (H)

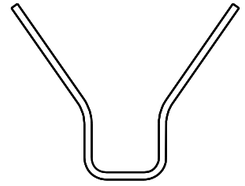
GENERIC GROUND STRUT

BILL OF MATERIALS

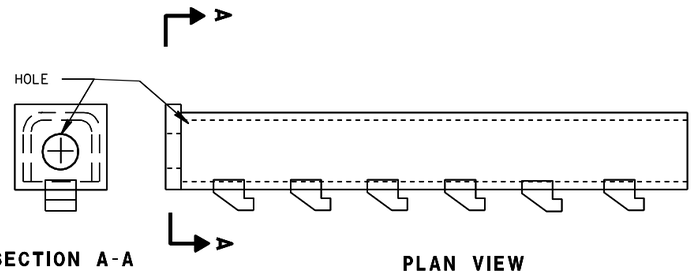
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR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



FRONT VIEW



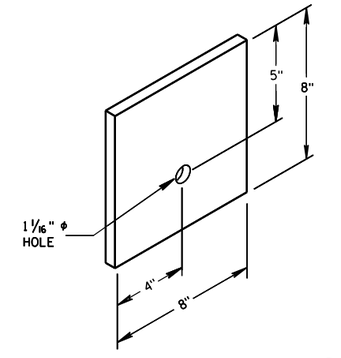
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



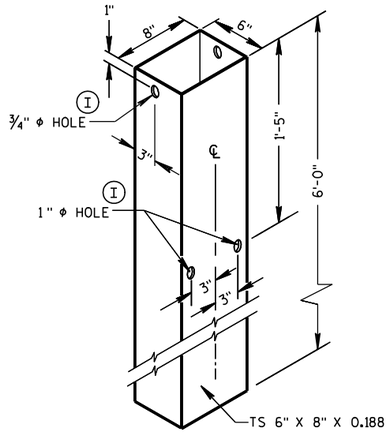
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

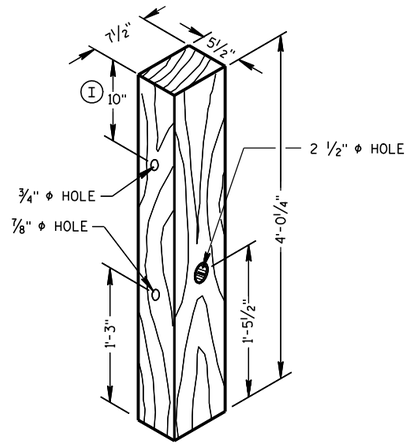
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

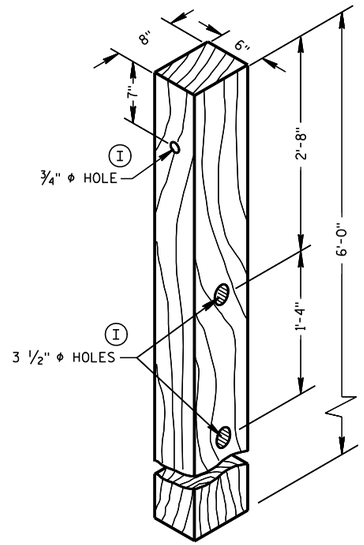


FOUNDATION TUBE (2)



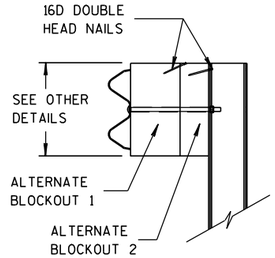
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

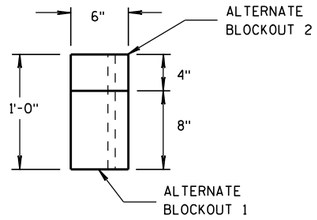


POSTS NUMBER 3-9

WOOD CRT POST (3)

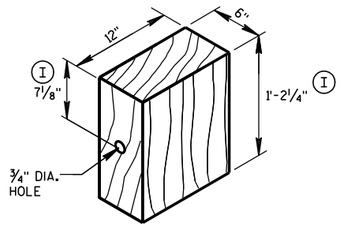


SIDE VIEW



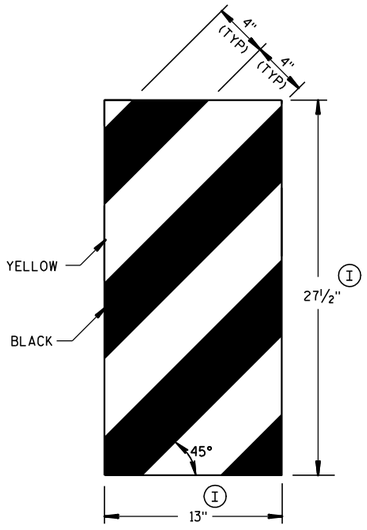
TOP VIEW

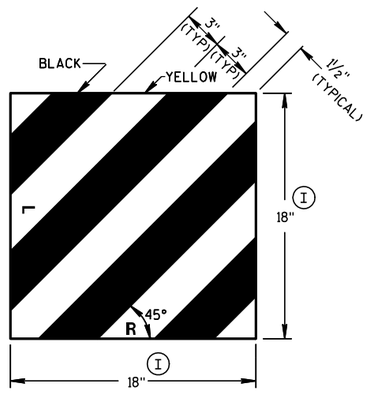
ALTERNATE WOOD BLOCKOUT DETAIL



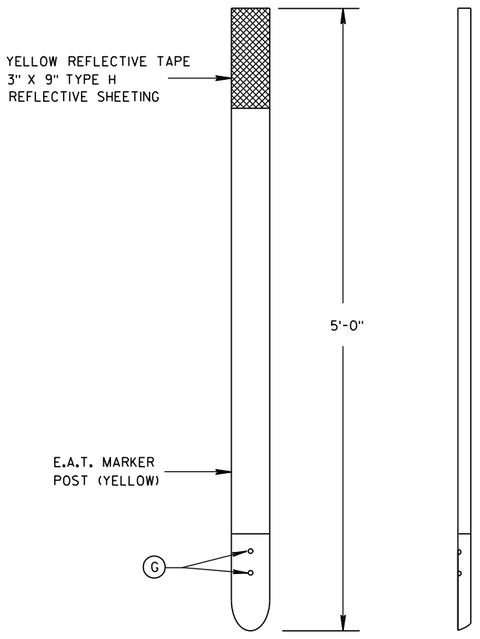
WOOD BLOCKOUT (4)

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





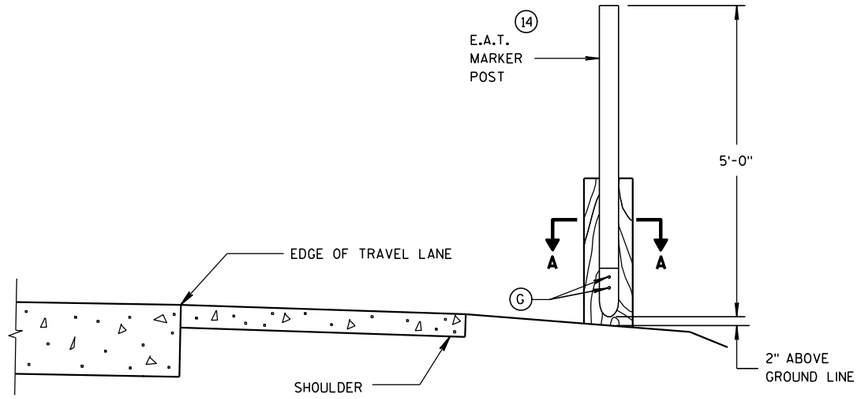
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

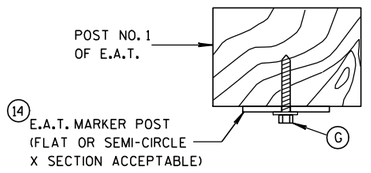
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

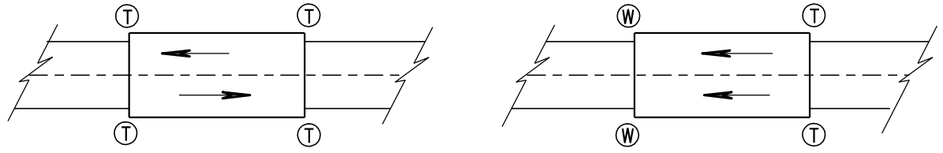
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-1c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

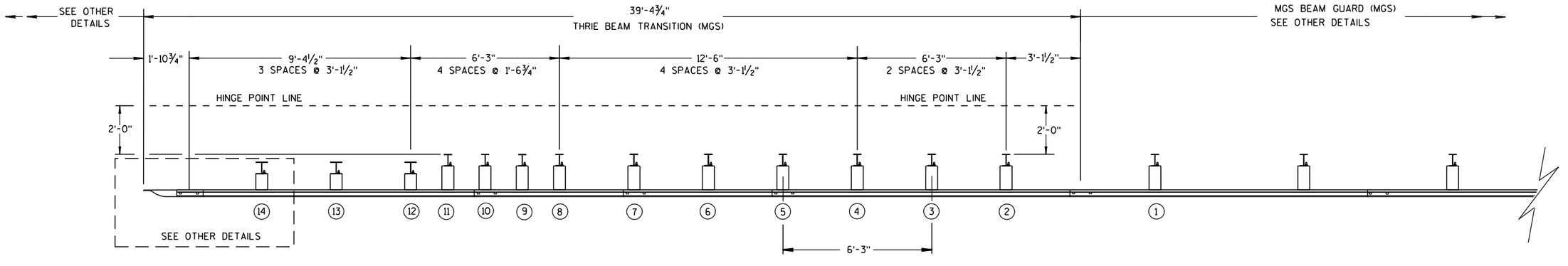
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

IF ROCK IS ENCOUNTERED DURING EXCAVATION, SEE STANDARD DETAIL DRAWING 14 B 42.

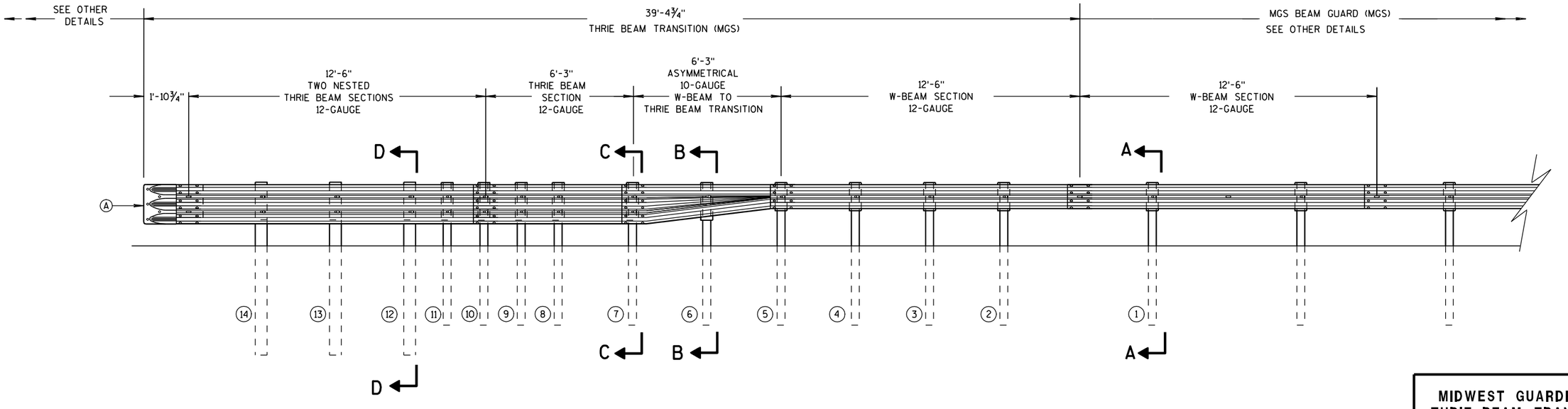
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

(A) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

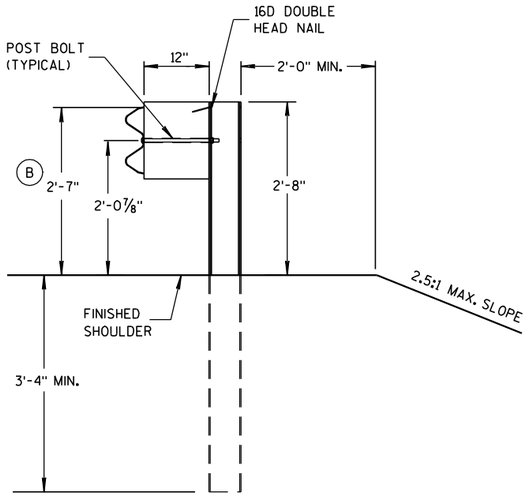
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 45-2a

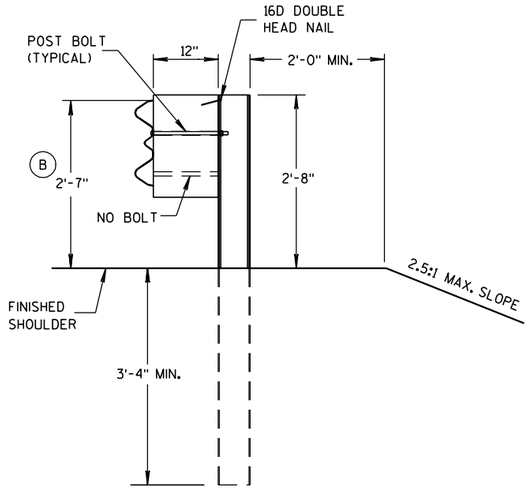
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



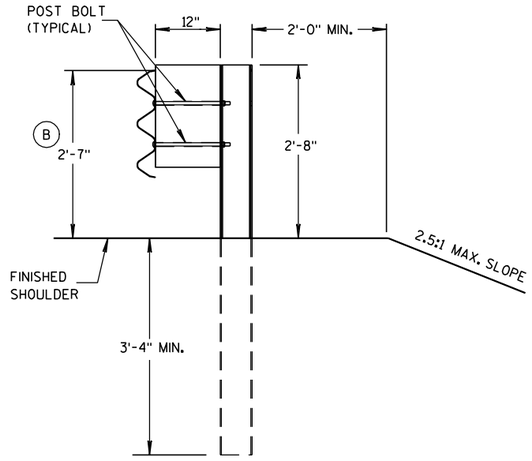
SECTION A-A

POSTS 1-5



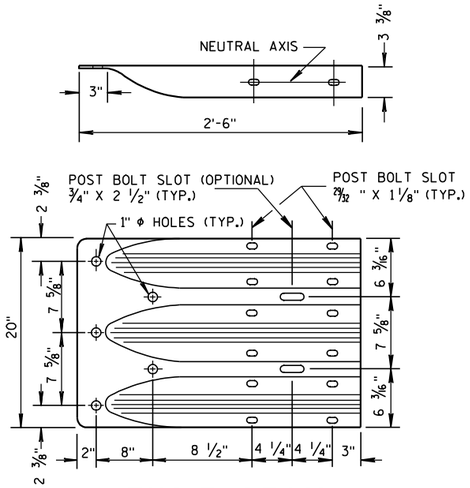
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

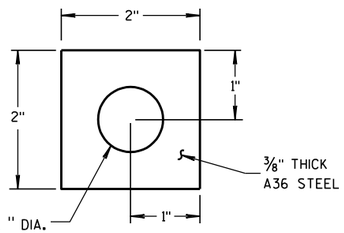
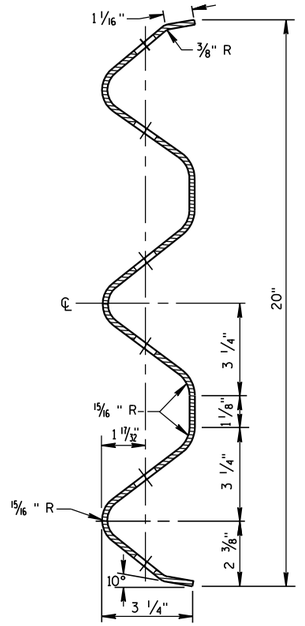
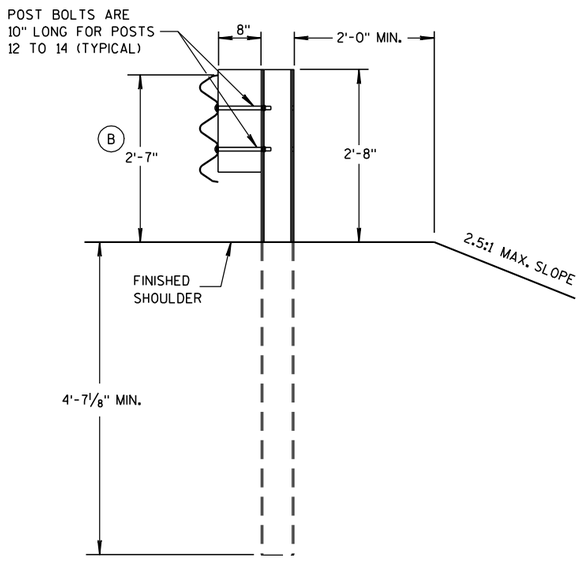


PLATE WASHER DETAIL

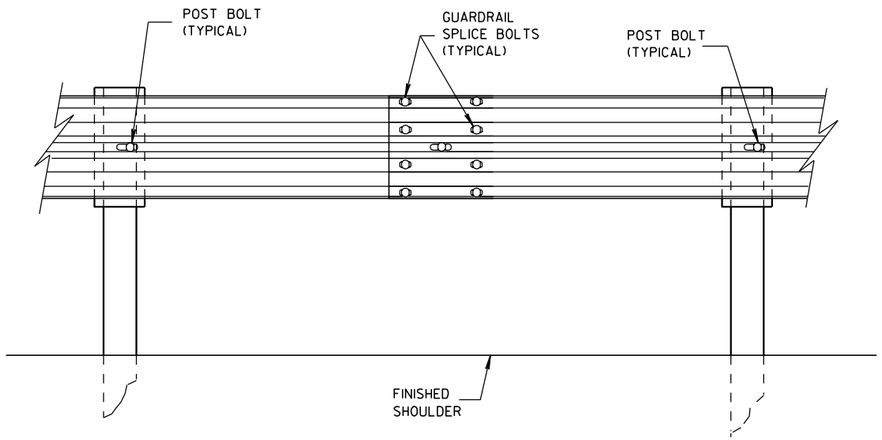


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-14



SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

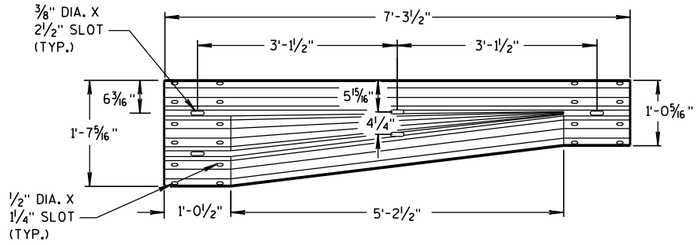
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

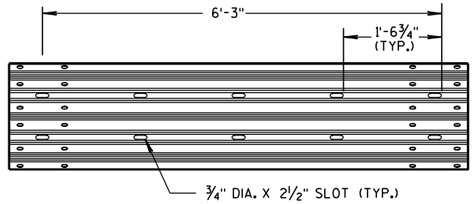
S.D.D. 14 B 45-2b

6

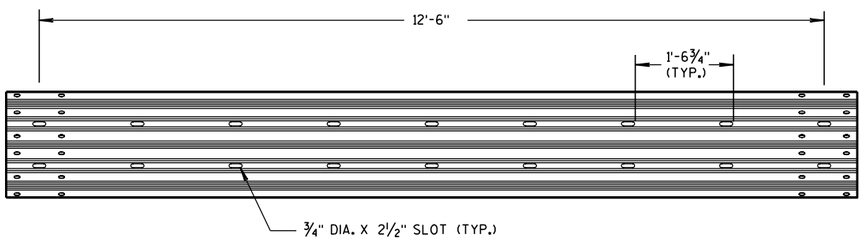
S.D.D. 14 B 45-2b



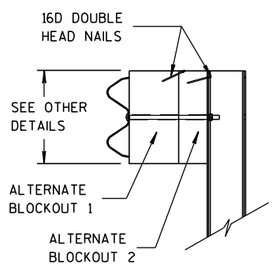
W-BEAM TO THRIE BEAM TRANSITION SECTION



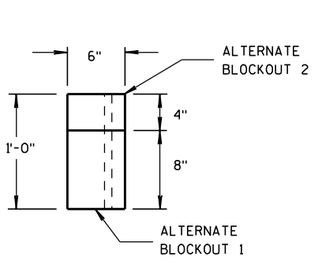
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

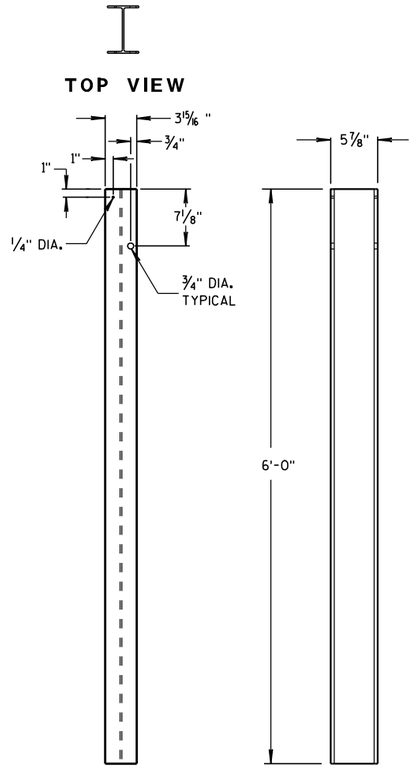


SIDE VIEW

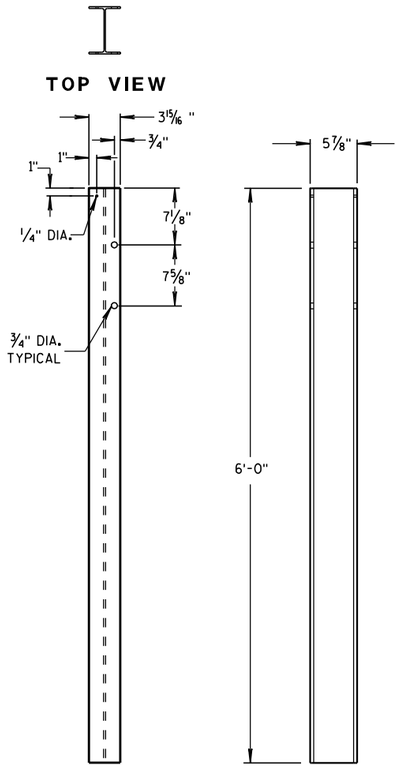


TOP VIEW

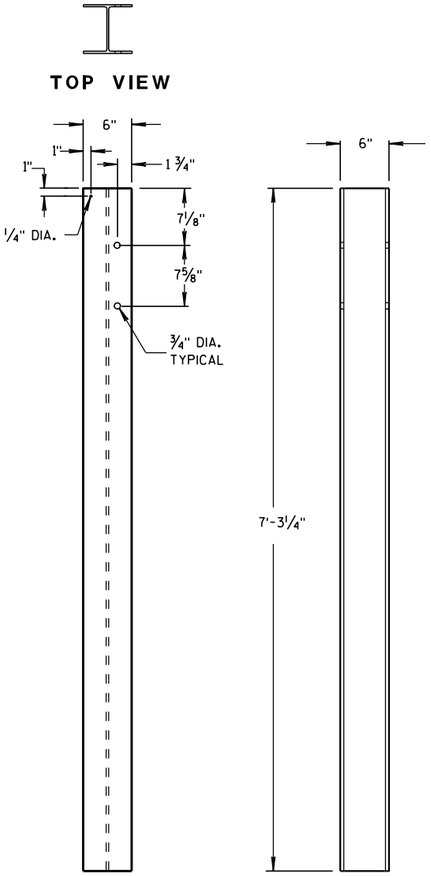
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

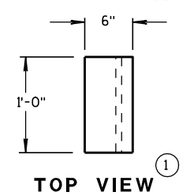


STEEL POSTS 6-11

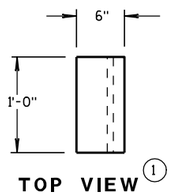


STEEL POSTS 12-14

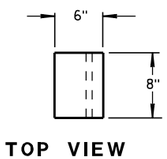
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



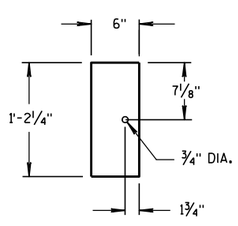
TOP VIEW (1)



TOP VIEW (1)

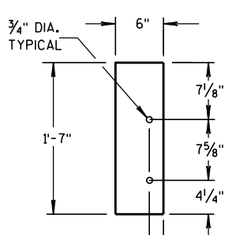


TOP VIEW



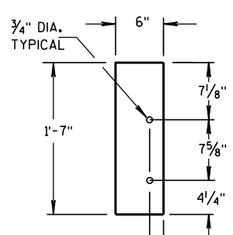
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

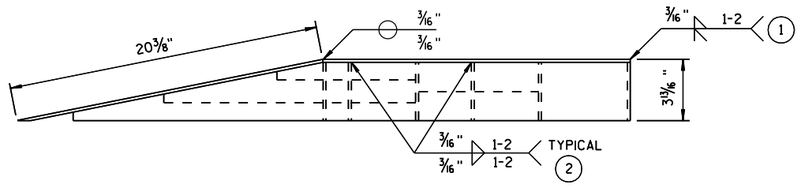
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

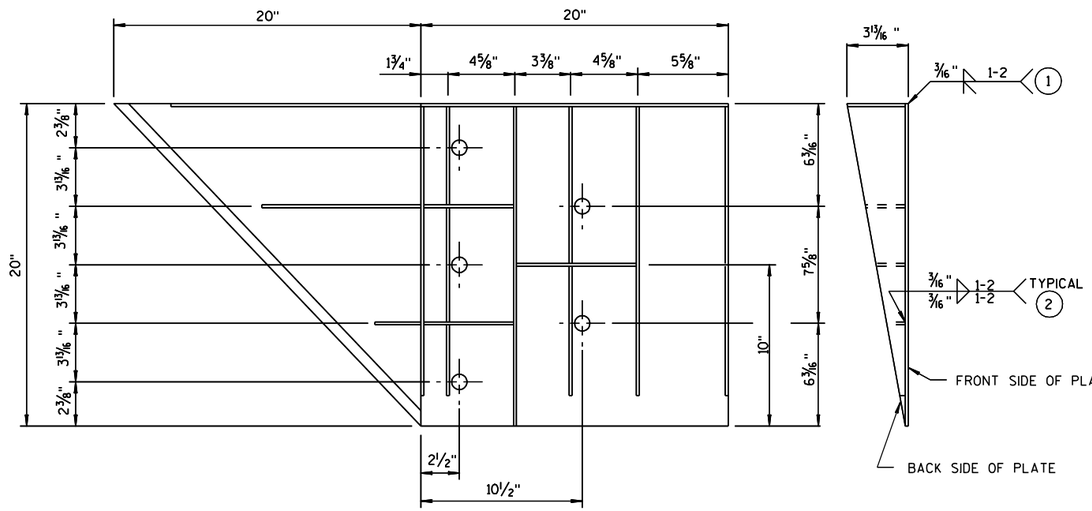
6

S.D.D. 14 B 45-2c

6

S.D.D. 14 B 45-2c





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

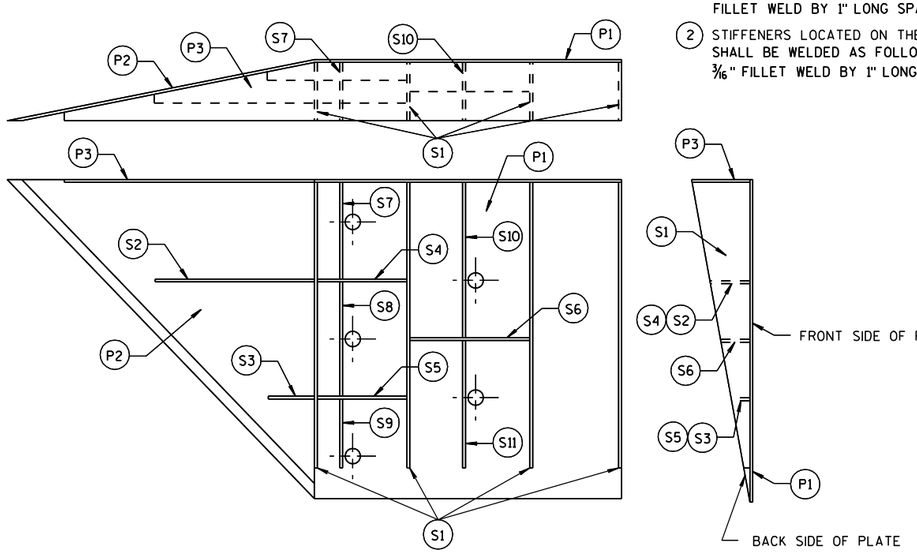


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

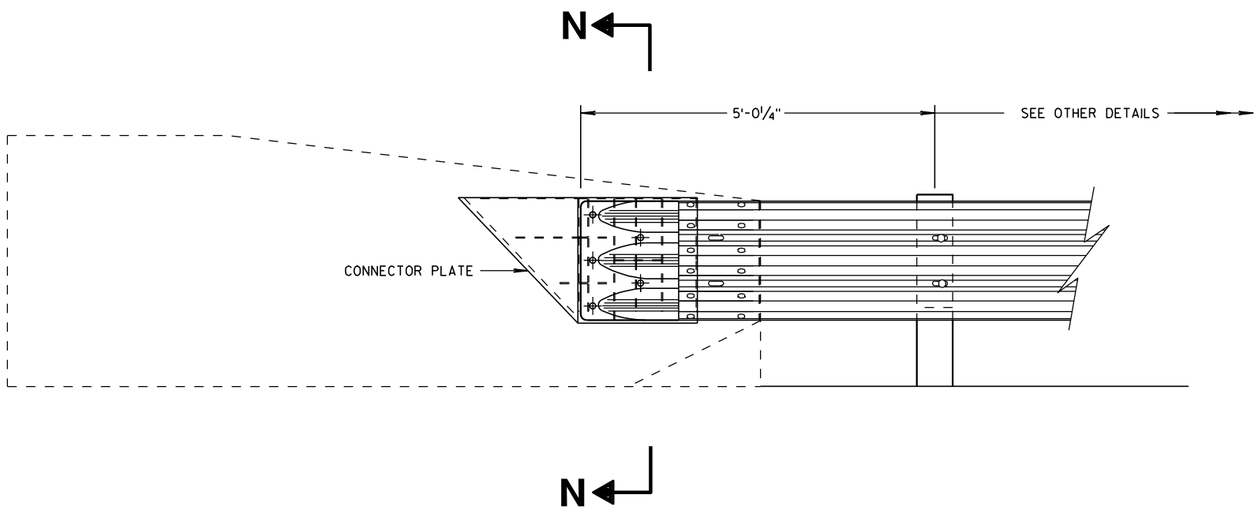
APPROVED
8/31/2012
DATE
/S/ Jerry H ----
ROADWAY STANDARDS ENGINEER
272
FHWA

6

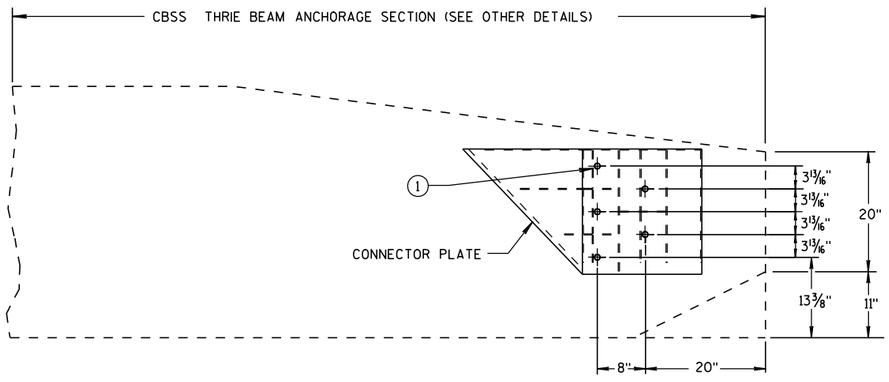
S.D.D. 14 B 45-3i

6

S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

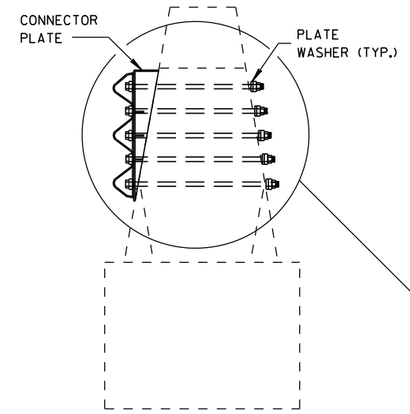


SINGLE SLOPE CONNECTION PLATE PLACEMENT

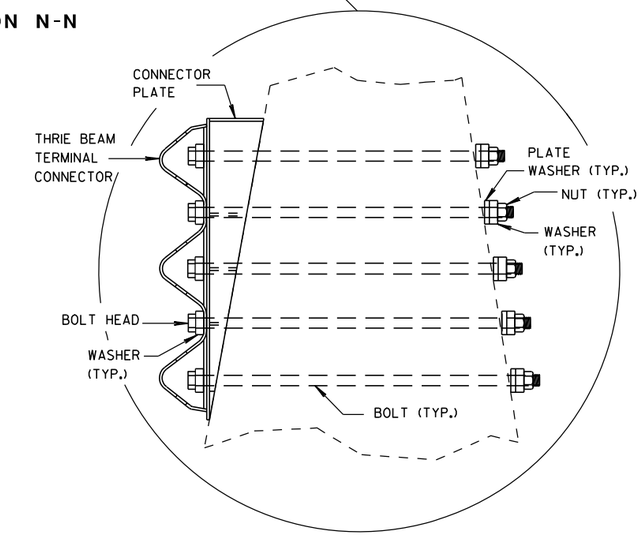
GENERAL NOTES

CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

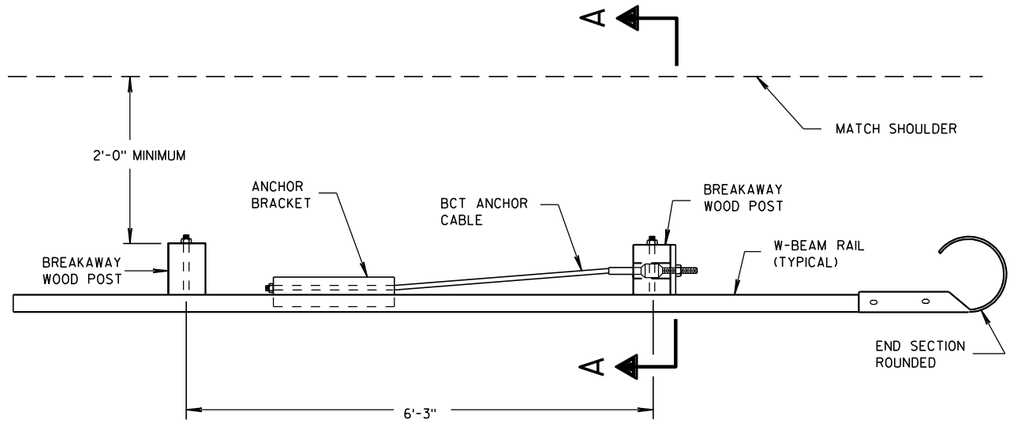
APPROVED
8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

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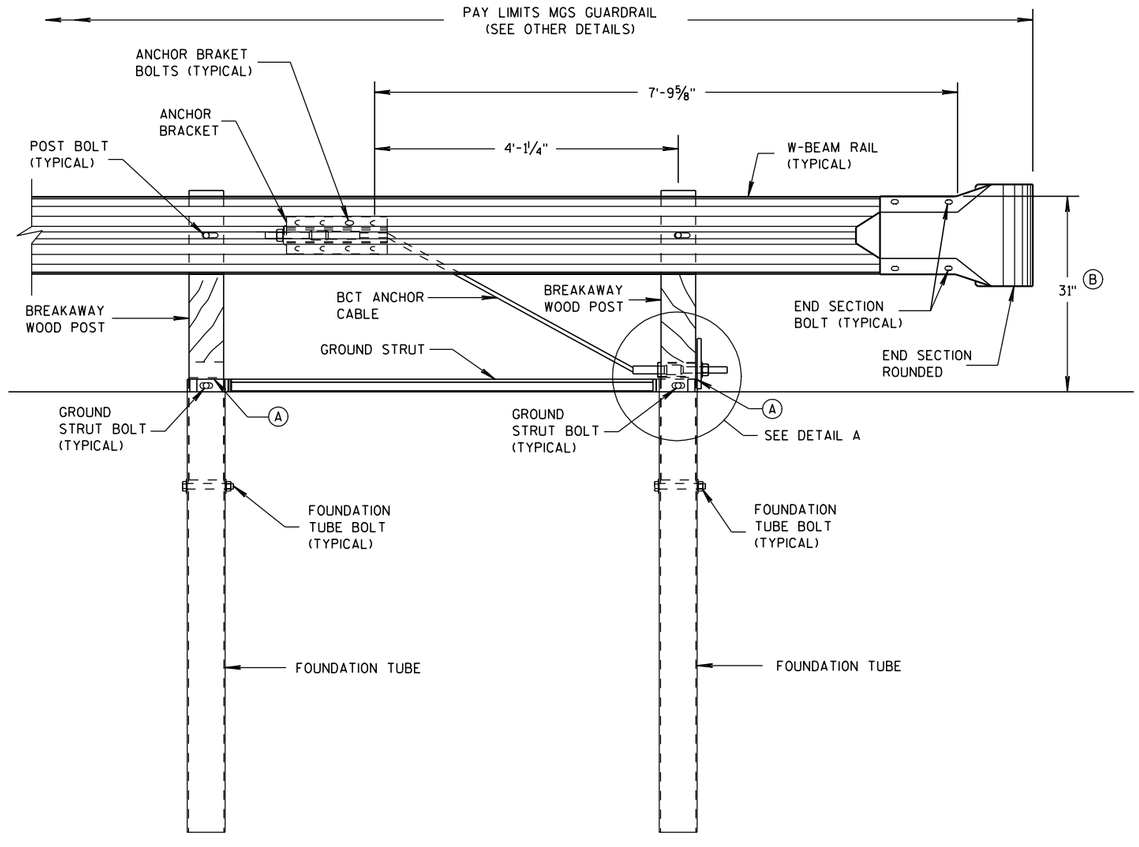
S.D.D. 14 B 45-3j

6

S.D.D. 14 B 45-3j

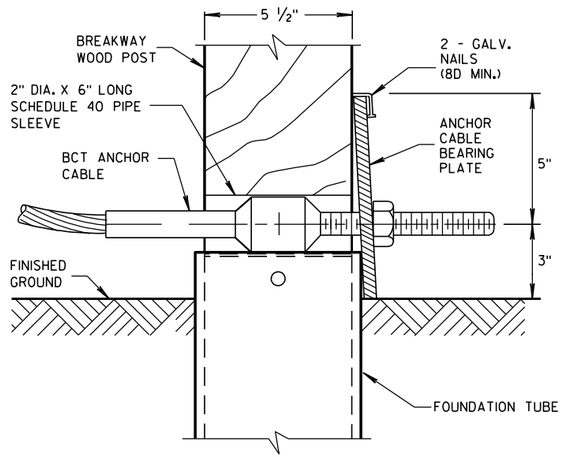


PLAN VIEW



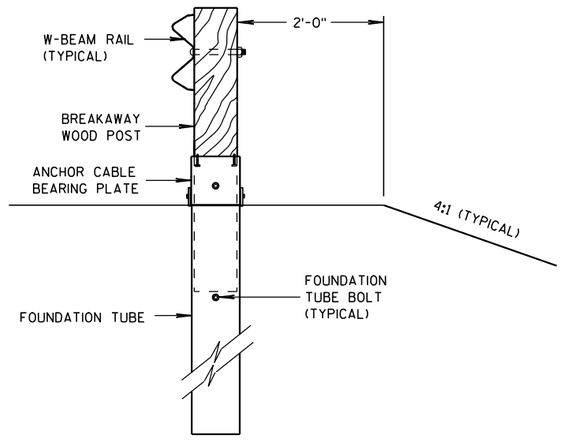
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

POST BOLTS ARE A ⅝" DIAMETER X 10" LONG GUARDRAIL BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER DH MODIFIED (RECESSED) HEAVY HEX NUT AND ⅝" DIAMETER FLAT WASHER.

FOUNDATION TUBE BOLTS ARE A ⅞" DIAMETER X 7½" LONG HEAVY HEX HEAD BOLT. A FOUNDATION TUBE BOLT REQUIRES A ⅞" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

GROUND STRUT BOLTS ARE A ⅝" DIAMETER X 10" LONG HEAVY HEX HEAD BOLT. A GROUND STRUT BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

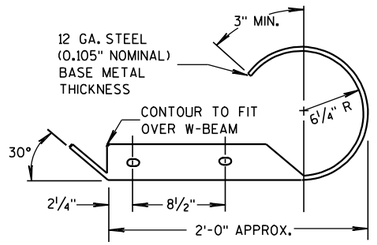
ANCHOR BRAKET BOLTS ARE A ⅝" DIAMETER X 1½" LONG HEAVY HEX HEAD BOLT. AN ANCHOR BRAKET BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A FLAT WASHER.

END SECTION BOLTS ARE A ⅝" DIAMETER X 1½" HEAVY HEX HEAD BOLT. AN END SECTION BOLT REQUIRES ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

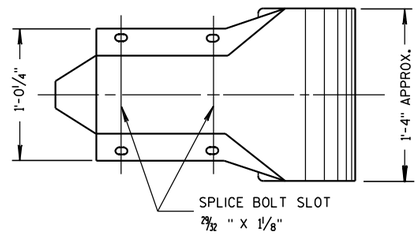
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(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".



PLAN VIEW



FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

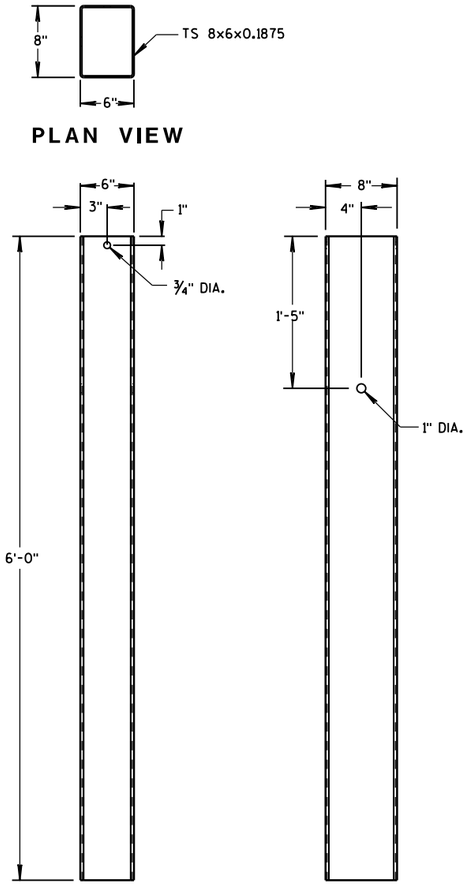
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 47-1a

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S.D.D. 14 B 47-1a

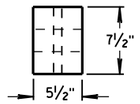


PLAN VIEW

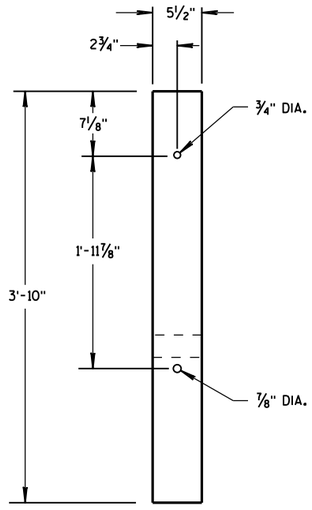
FRONT VIEW

SIDE VIEW

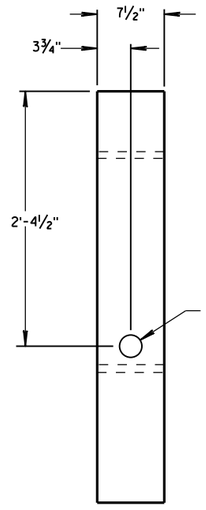
FOUNDATION TUBE



PLAN VIEW



FRONT VIEW

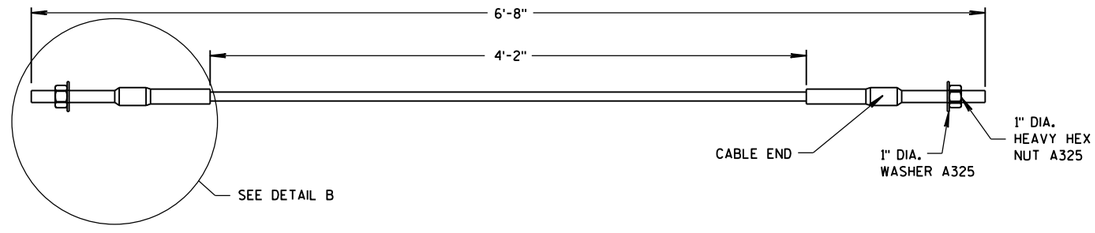


SIDE VIEW

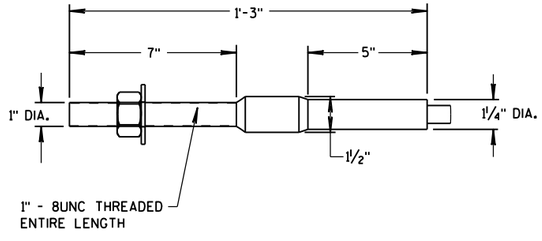
BREAKAWAY WOOD POST

GENERAL NOTES

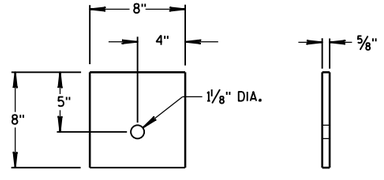
BCT ANCHOR CABLE IS A ⅜" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. THE END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. THE TREADED STUD SHOULD CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

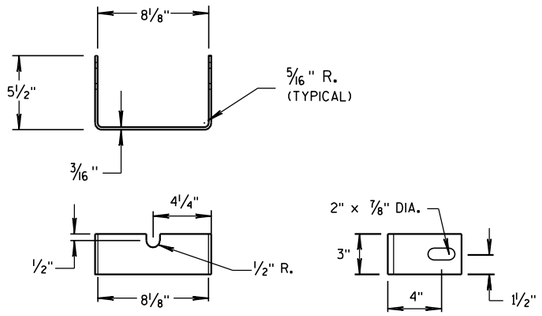
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

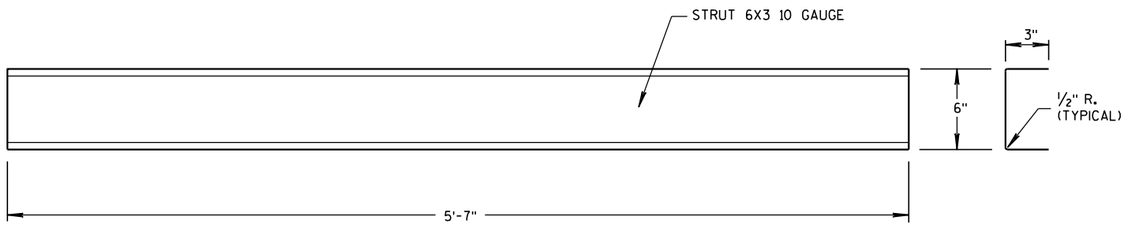
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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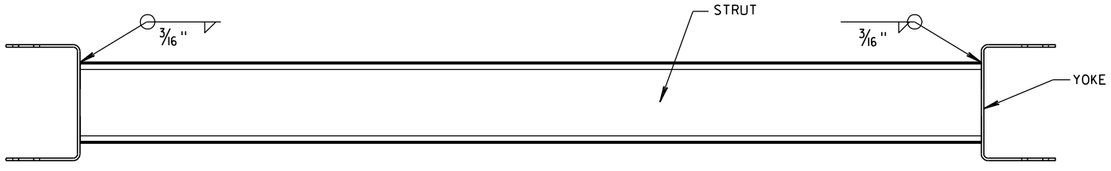
S.D.D. 14 B 47-1b



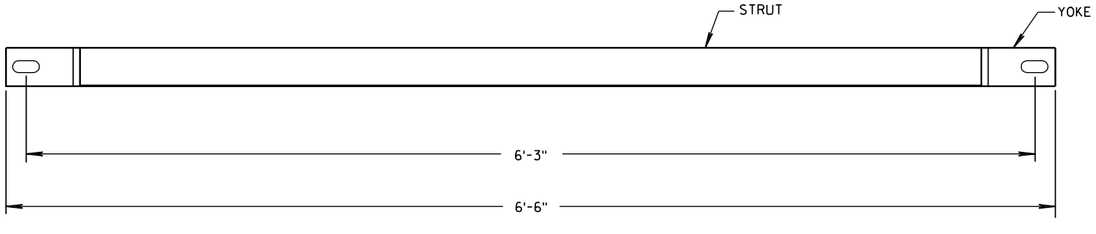
YOKE DETAIL



STRUT DETAIL

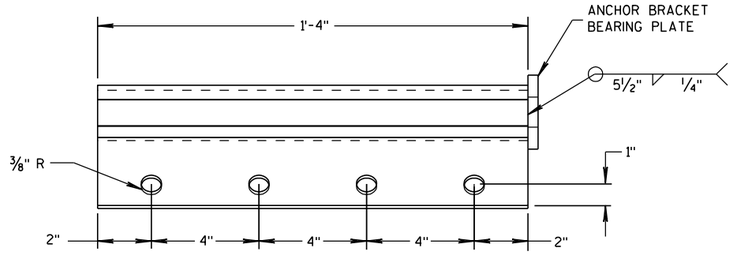


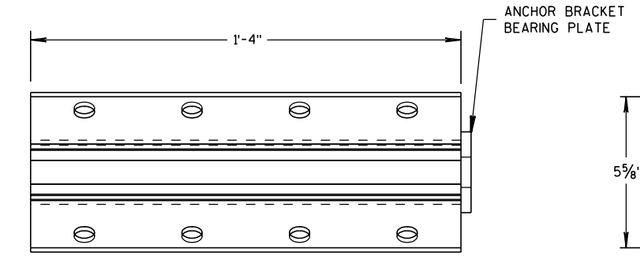
PLAN VIEW

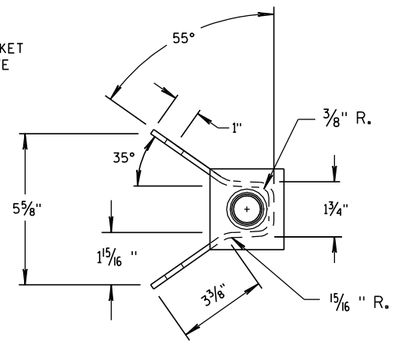


FRONT VIEW

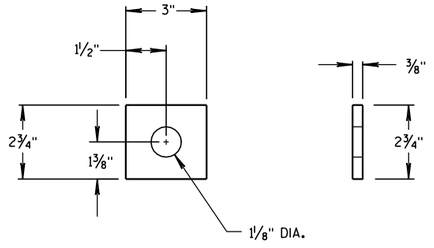
GROUND STRUT DETAIL







ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/2011
DATE

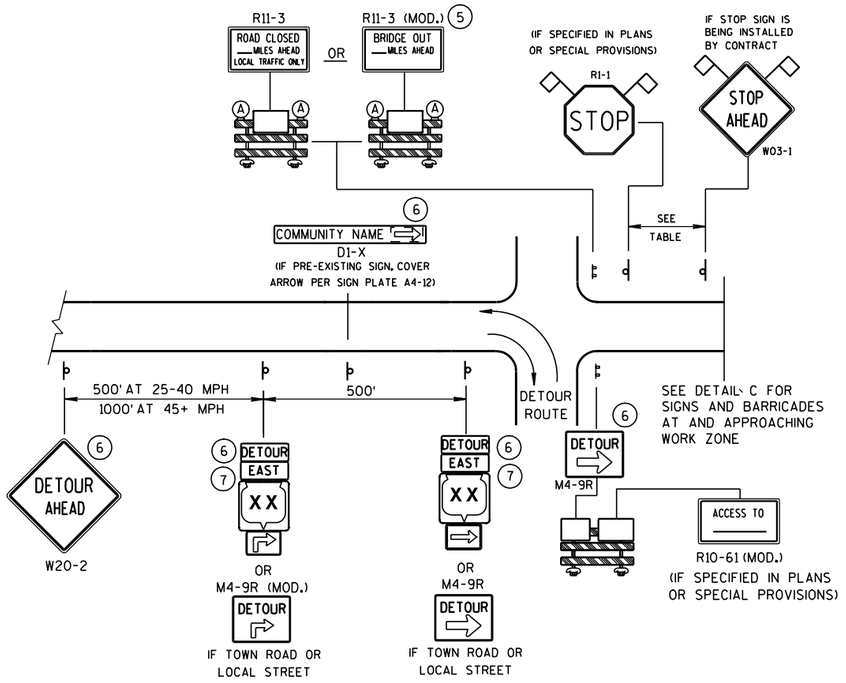
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

[illegible]

FHWA

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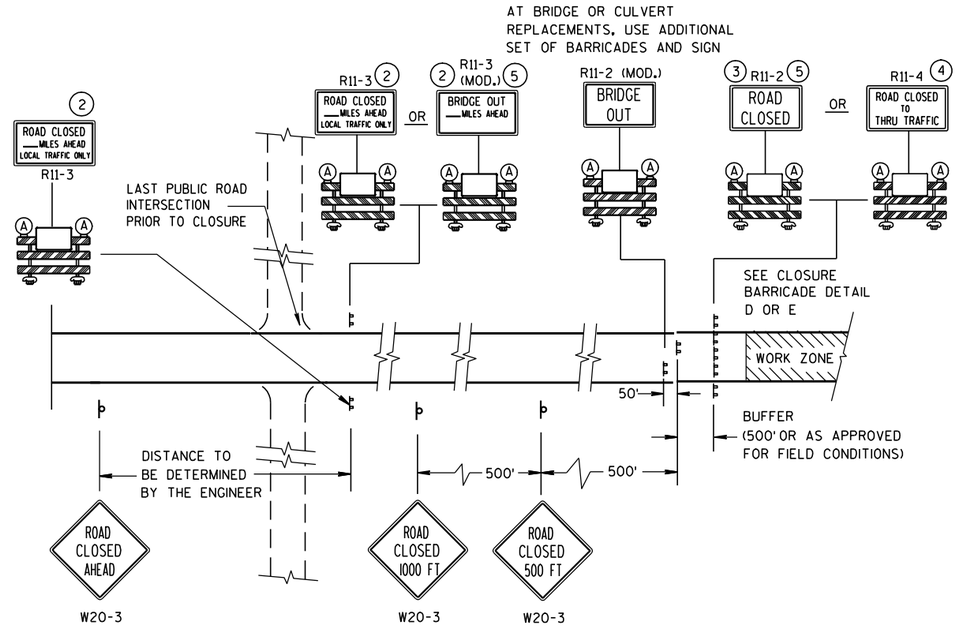
S.D.D. 14 B 47-1c



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

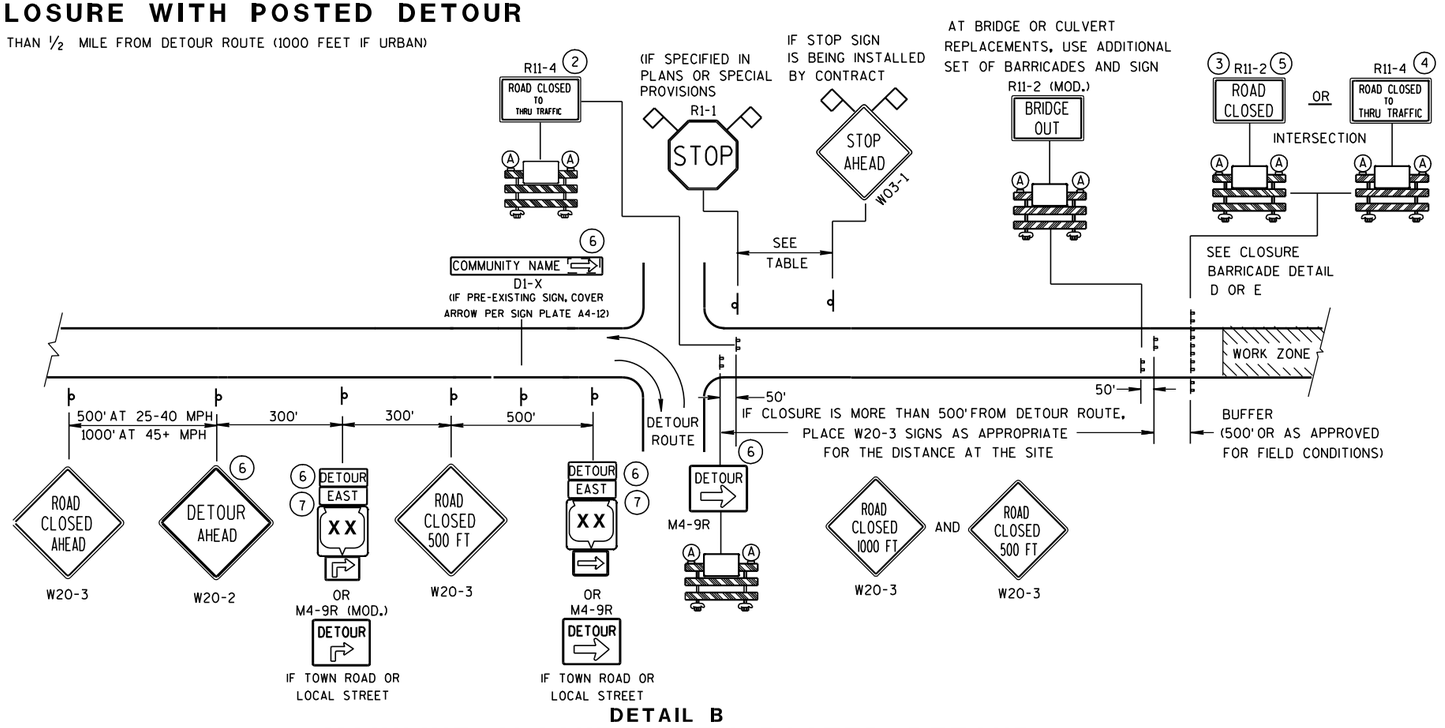


DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

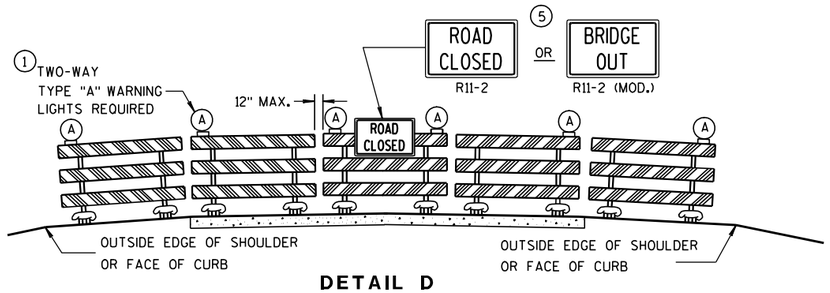
- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1; M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

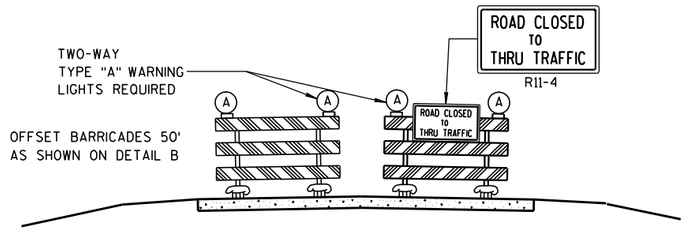
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/16/03
DATE

/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

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

GENERAL NOTES

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

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

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

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

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

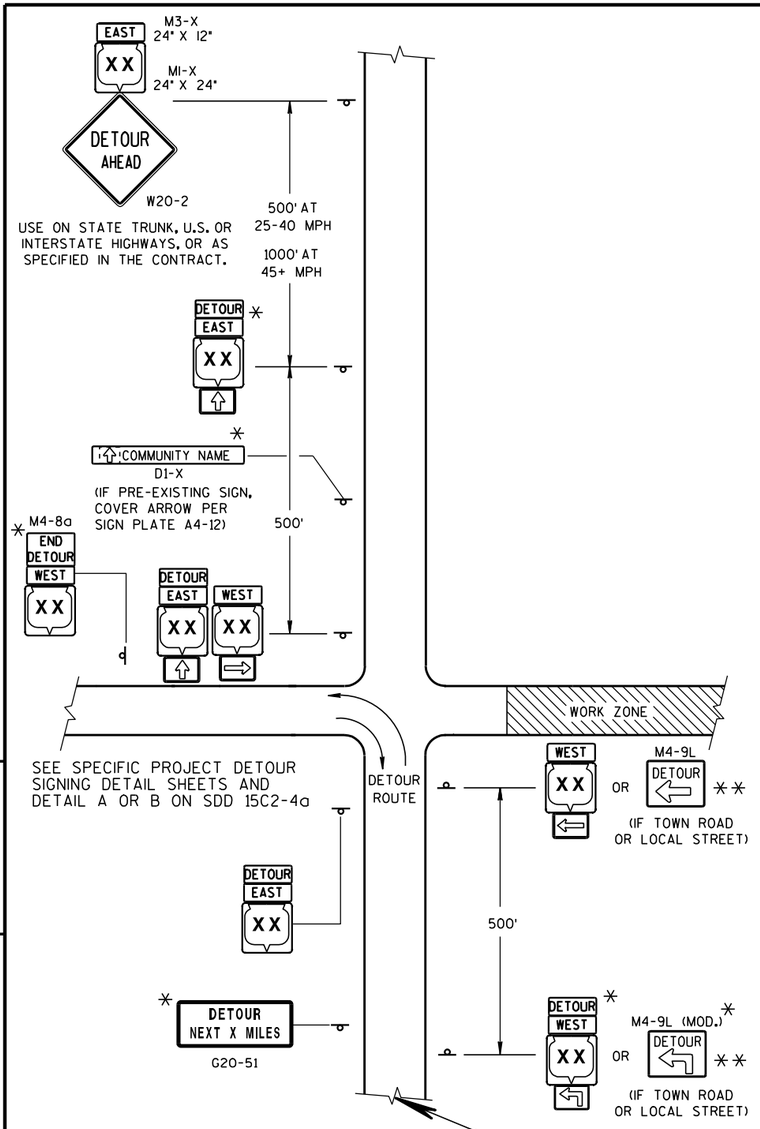
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

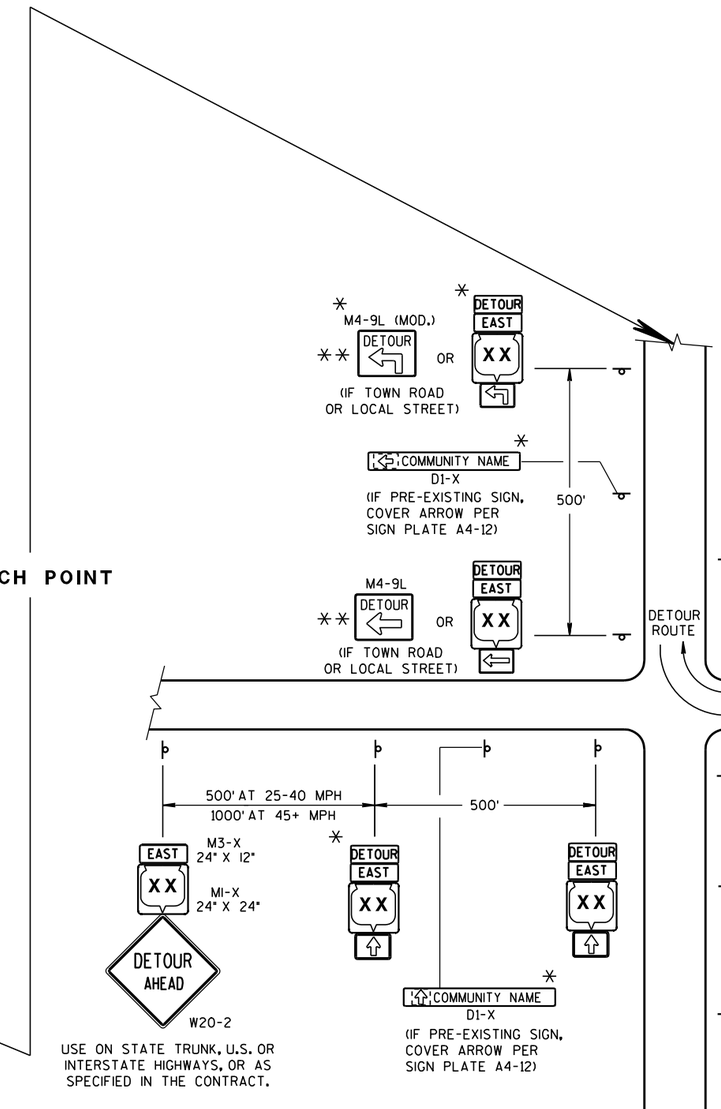
SIGN SIZES SHALL BE AS FOLLOWS:

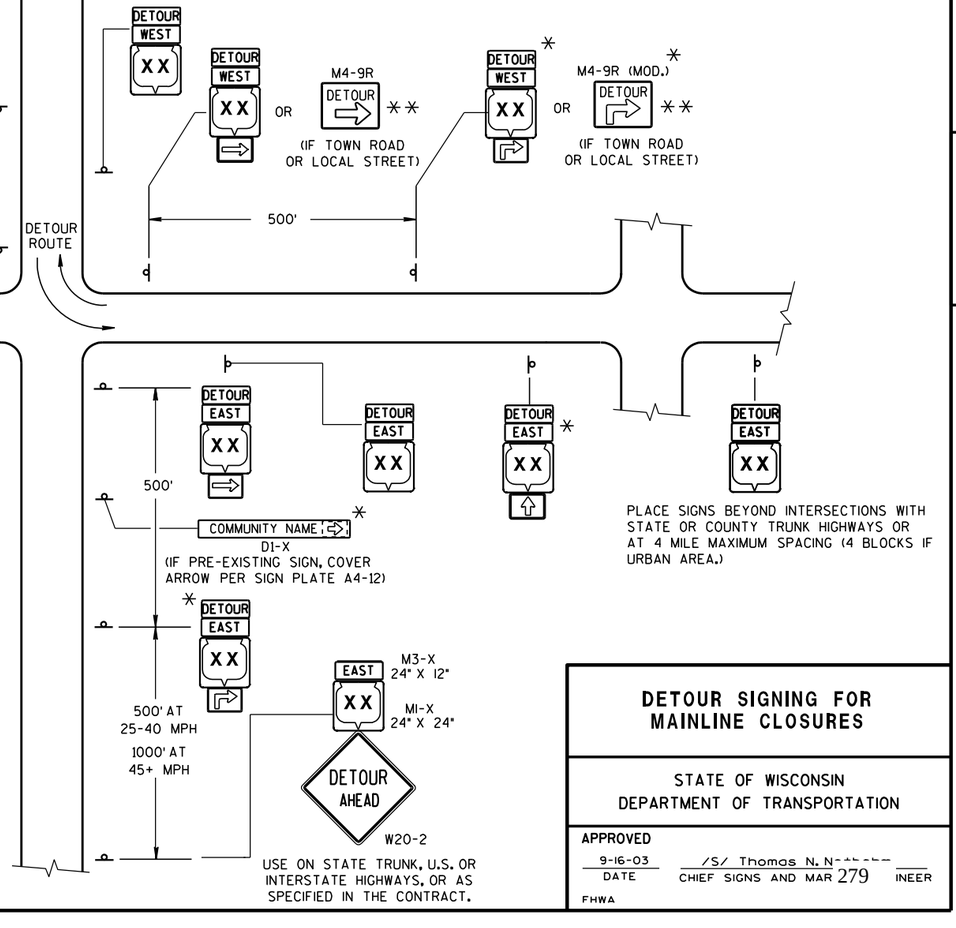
M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
M4-9 SHALL BE 30" X 24".
M4-8a SHALL BE 24" X 18".
G20-51 SHALL BE 60" X 24".
W20-2 SHALL BE 48" X 48".
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

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

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







LEGEND

- POST MOUNTED SIGN
- WORK ZONE
- M4-8 / M3-X
- M1-4, M1-5A, M1-6
- M05-1, M06-1, M06-1

DETAIL F

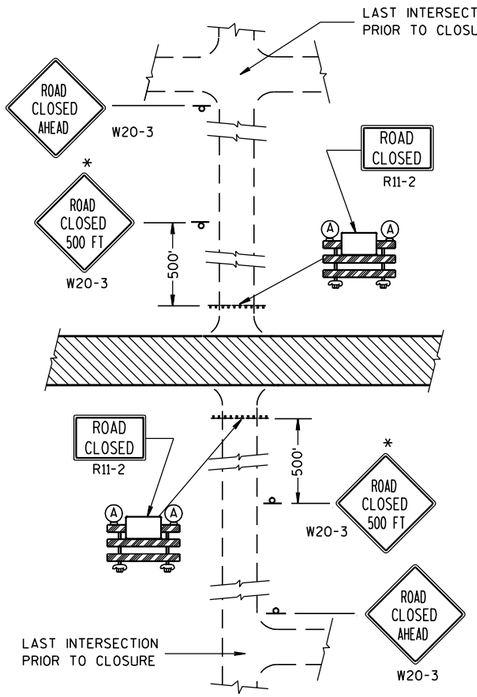
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

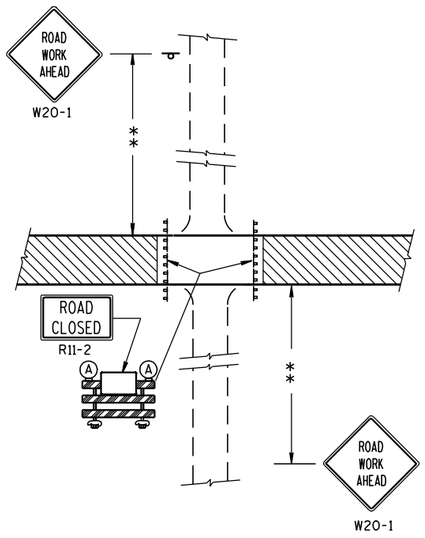
APPROVED
9-16-03 DATE
/S/ Thomas N. [illegible] CHIEF SIGNS AND MAR INEER
FHWA

6
S.D.D. 15 C 2-4c



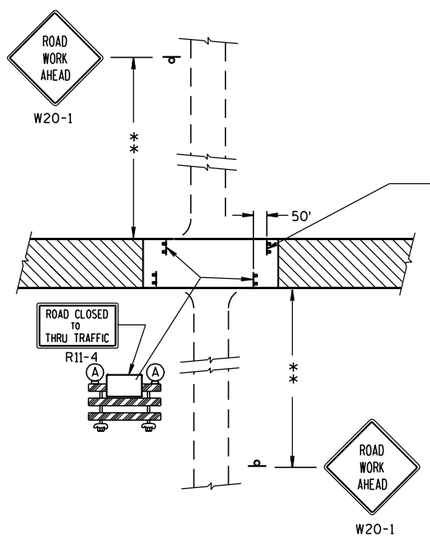
DETAIL 1

(NO ACCESS TO PROJECT)



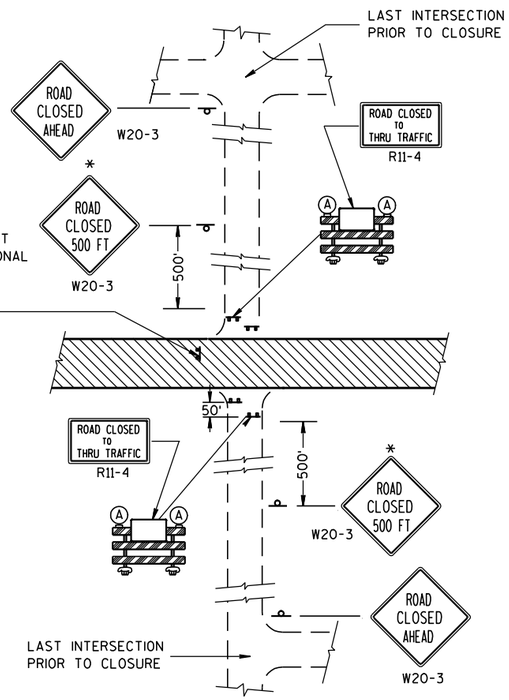
DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).



DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

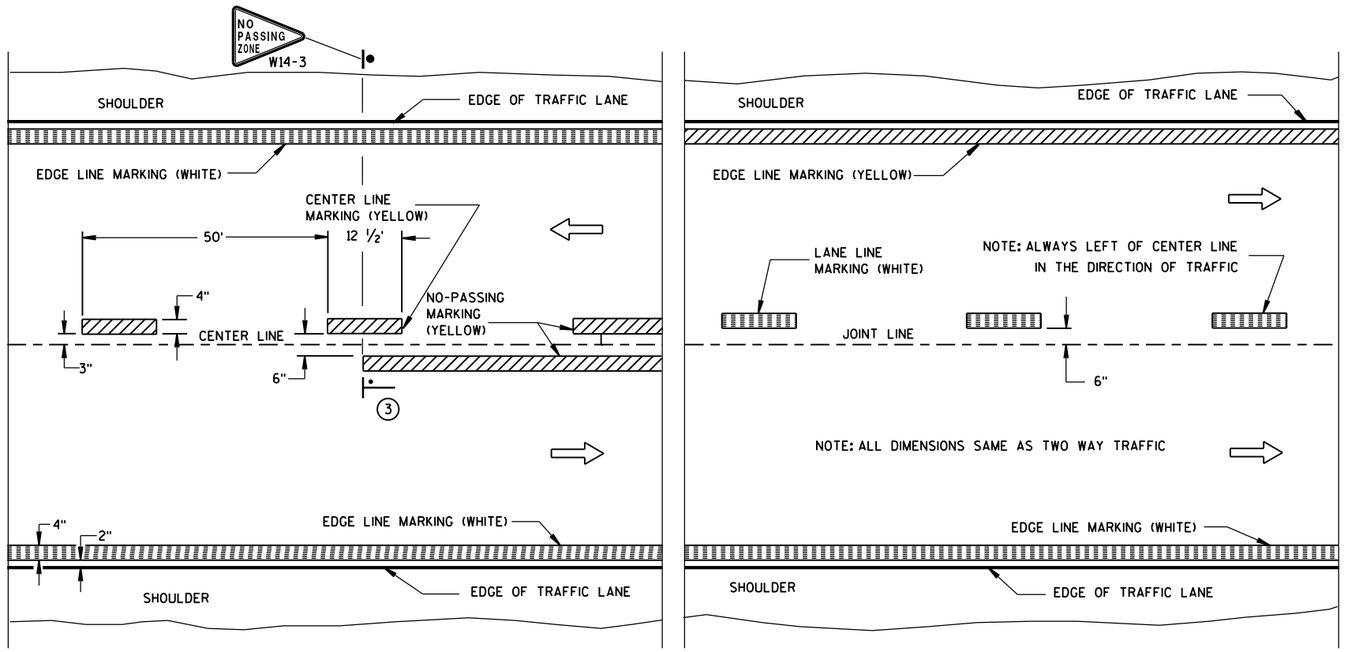
9-16-03 DATE

/S/ Thomas N. N[illegible] CHIEF SIGNS AND MAR[illegible] INEER

FHWA

6

S.D.D. 15 C 3-1



TWO WAY TRAFFIC

ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

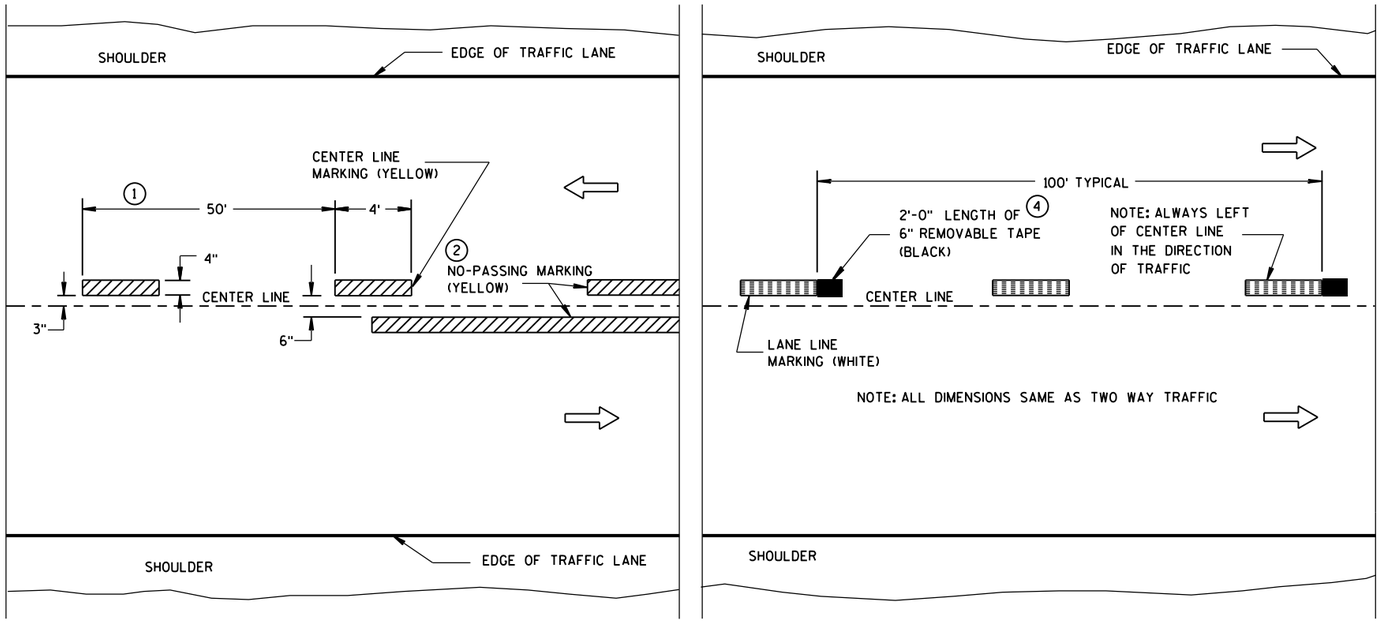
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

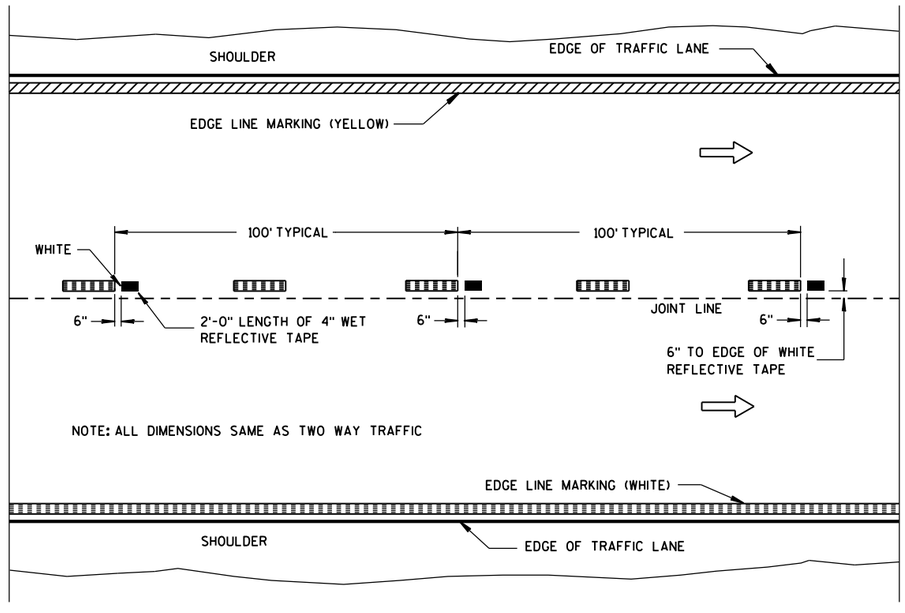


TWO WAY TRAFFIC

ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

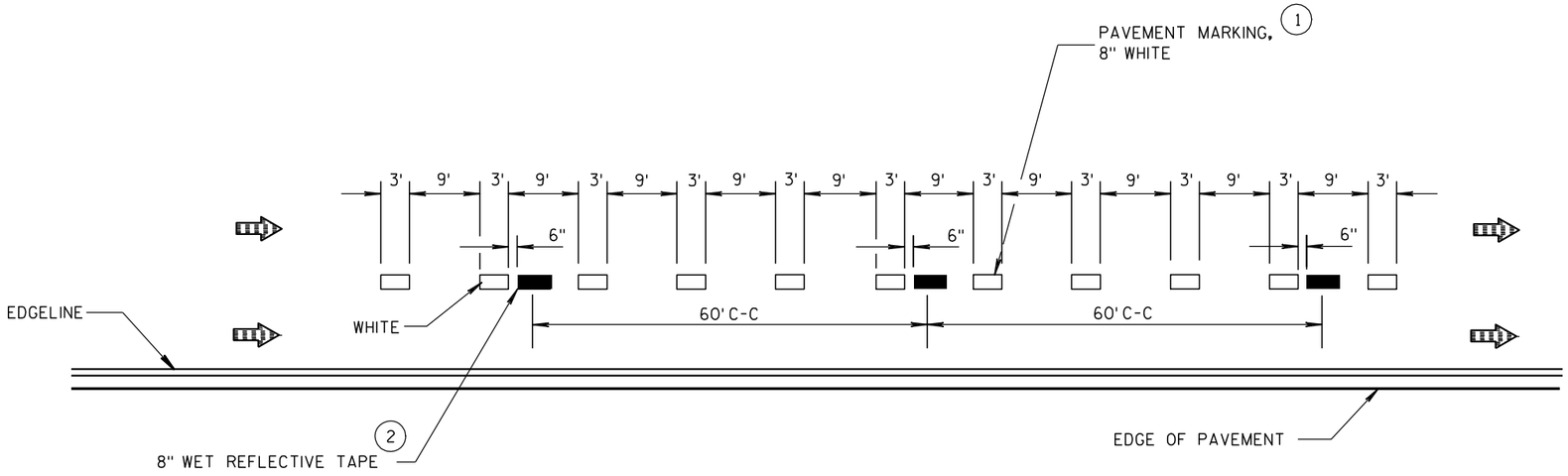
APPROVED
10-1-2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 C 8-15a

6

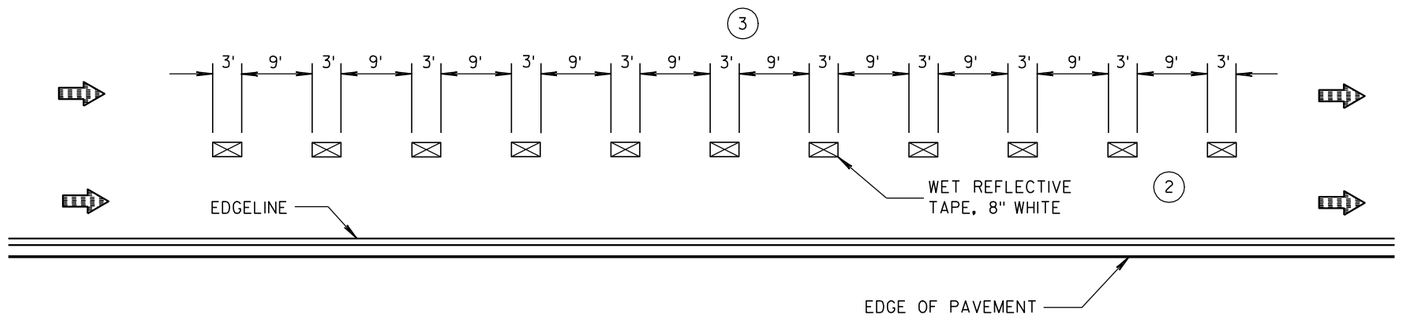
S.D.D. 15 C 8-15a



SPRAYED OR NON WET REFLECTIVE DROP LANE LINE SUPPLEMENTED BY WET REFLECTIVE TAPE SEGMENT

GENERAL NOTES

1. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE. RETRACE EXISTING 4" MARKING WITH 8" MARKING.
2. REPLACE SAME 4" WET REFLECTIVE TAPE WHERE EXISTING 4" TAPE IS IN PLACE.
3. 3' LINE 9' GAP, EXCEPT REPLACE THE EXISTING LINE - GAP PATTERN AND WIDTH OF TAPE WHERE EXISTING TAPE IS IN PLACE.



DROP LANE DETAIL FOR NEW WET REFLECTIVE TAPE INSTALLATIONS

LEGEND

- 2.0' LENGTH OF WET REFLECTIVE TAPE
- 3.0' LENGTH OF WET REFLECTIVE TAPE
- DROP LANE MARKING SPRAYED OR NON WET REFLECTIVE TAPE
- DIRECTION OF TRAFFIC

PAVEMENT MARKINGS FOR DROP LANES FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

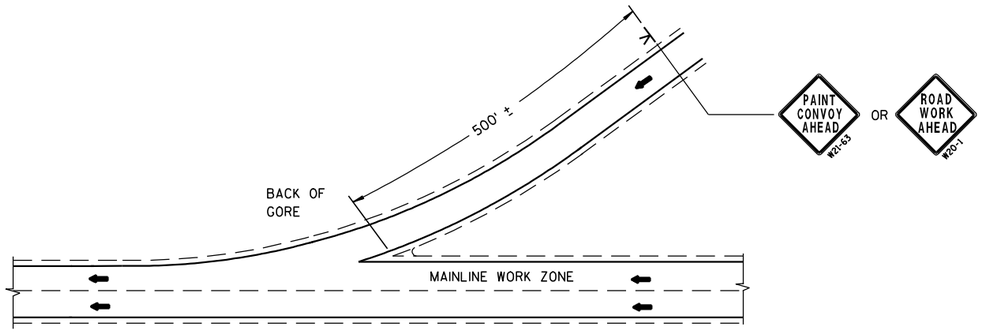
APPROVED

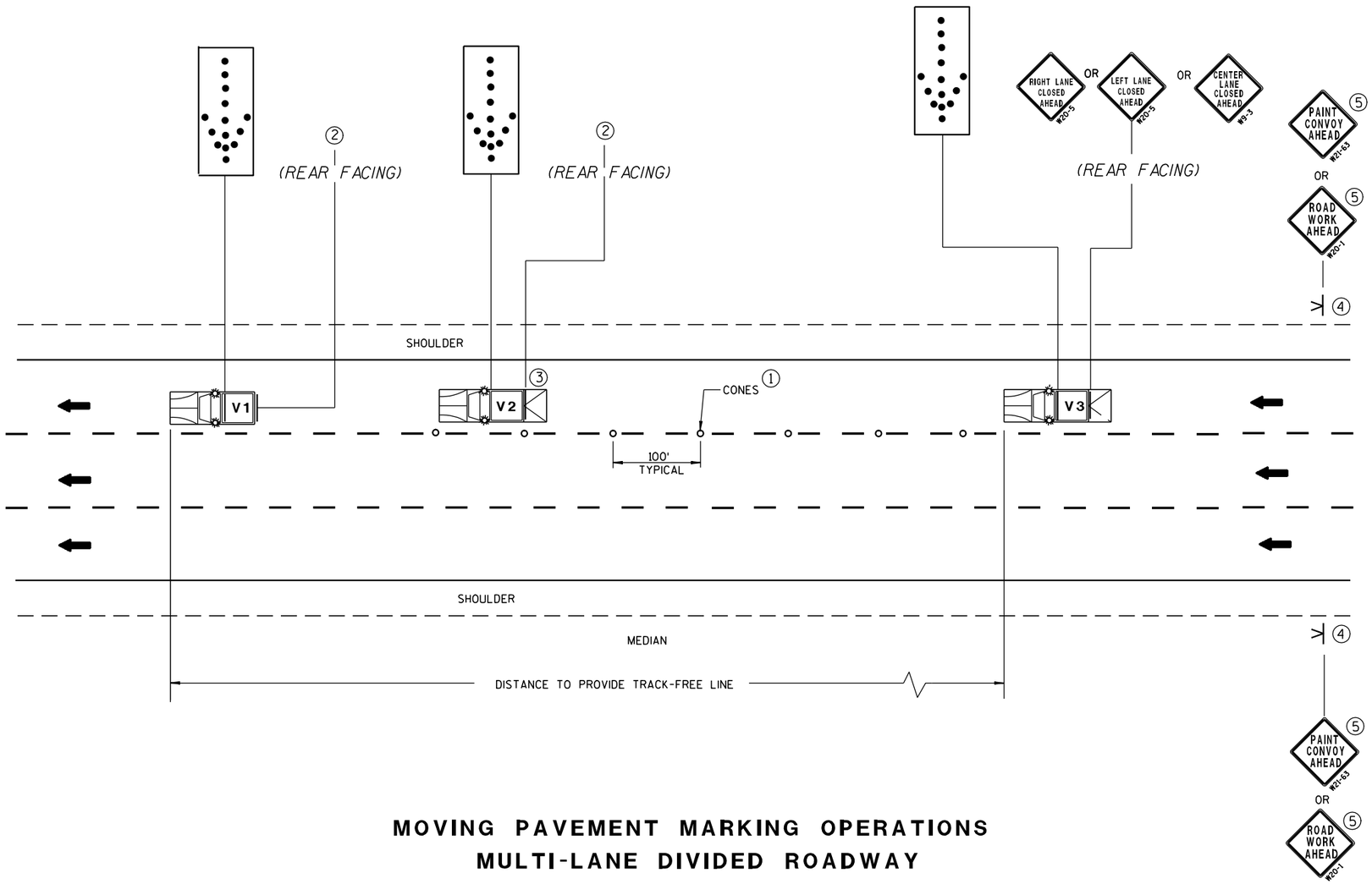
5/13/10 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER

FHWA

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S.D.D. 15 C 10-10





MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

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

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

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

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

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

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

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

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

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

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

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON PORTABLE SUPPORT
	DIRECTION OF TRAVEL
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/6/2011 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

283 SIGN

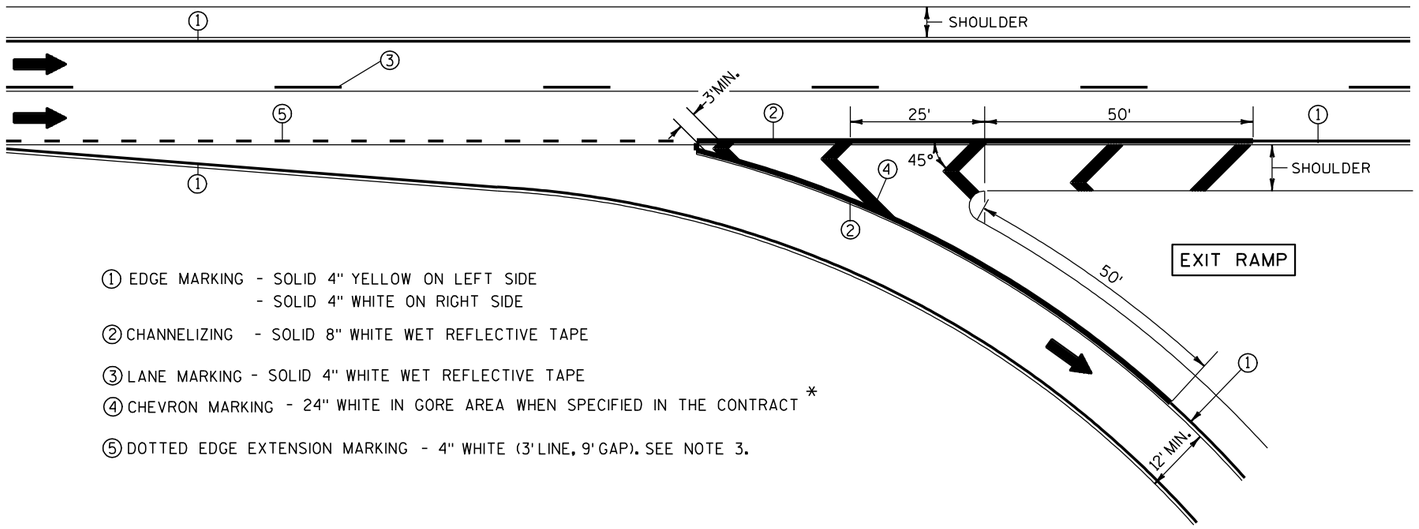
FHWA

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S.D.D. 15 C 19-1c

6

S.D.D. 15 C 19-1c



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

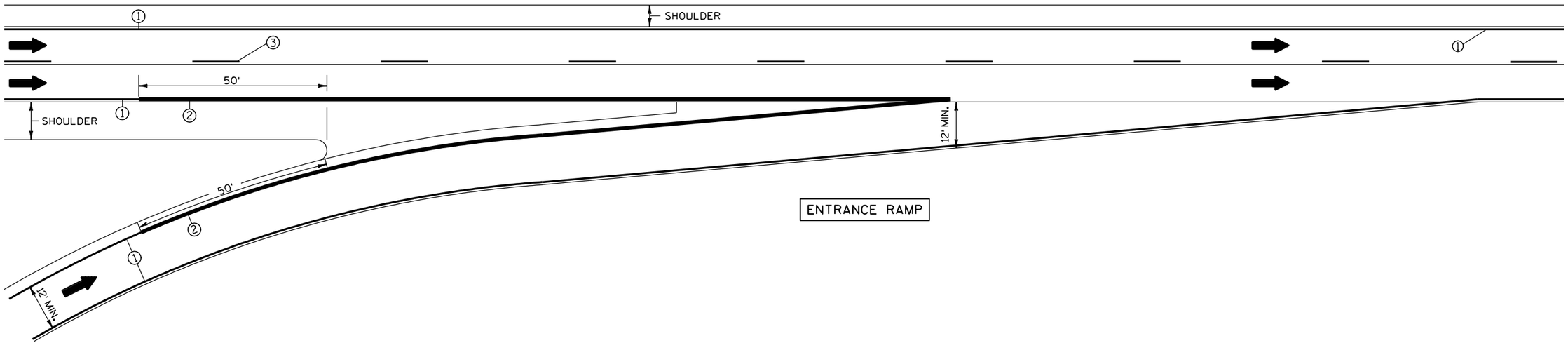
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

6

S.D.D. 15 C 31-1a

S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

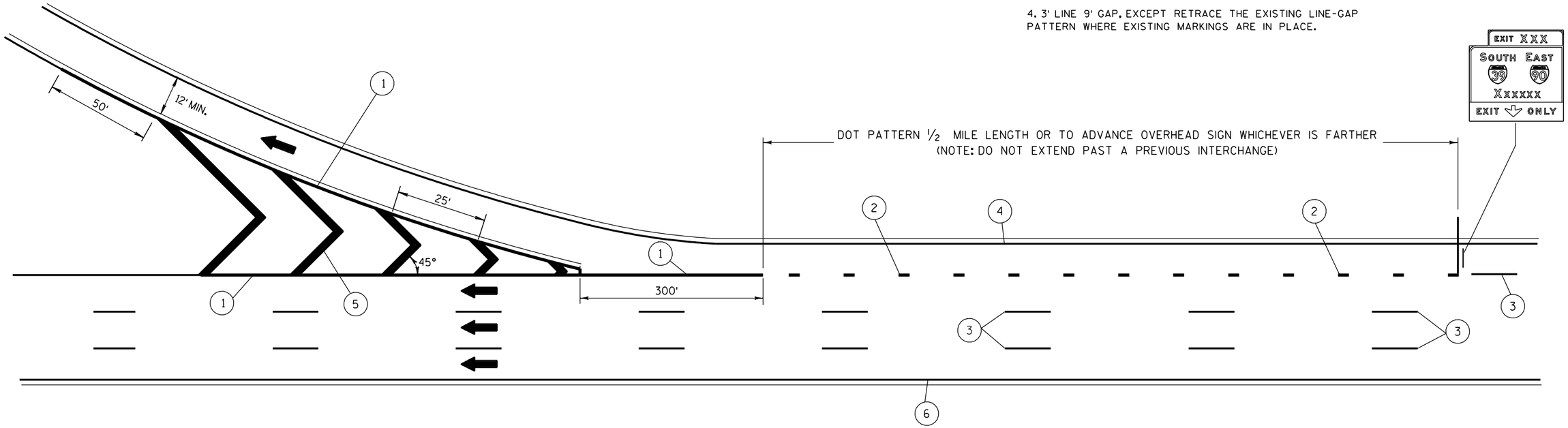
NOTES:

1. SEE STANDARD DETAIL DRAWING 15 C 10 FOR SPRAYED OR NON WET REFLECTIVE LINE SEGMENTS.

2. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

3. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

4. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.



1. CHANNELIZING - SOLID 8" WHITE WET RELECTIVE TAPE
2. 3' LINE, 9' GAP SOLID 8" WHITE WET REFLECTIVE TAPE. SEE NOTE 4.
3. SOLID 4" WHITE WET REFLECTIVE TAPE
4. 4" WHITE EDGELINE
5. CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT
6. 4" YELLOW EDGELINE

LANE DROP
PAVEMENT MARKING

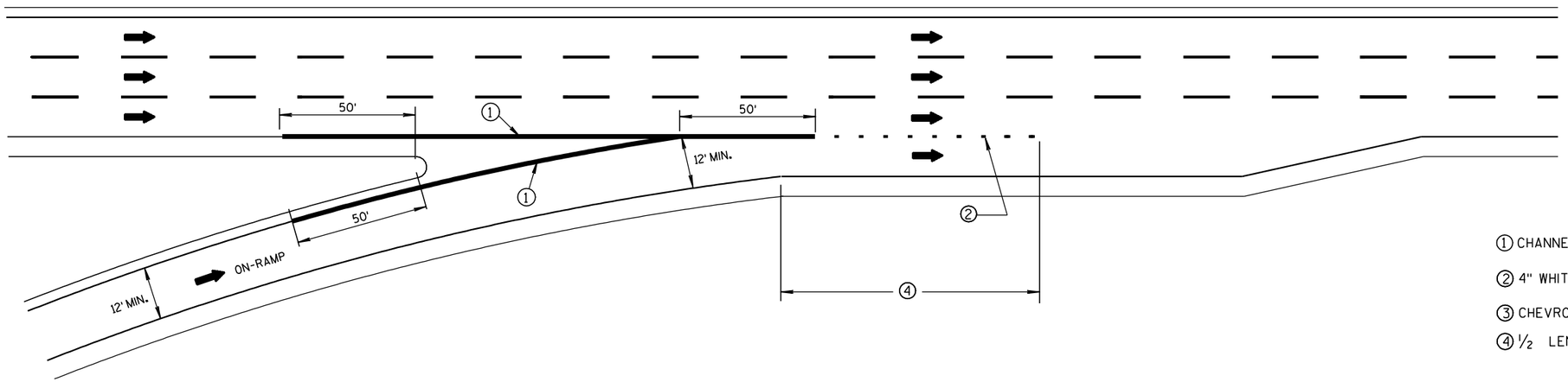
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 31-1b
S.D.D. 15 C 31-1b

NOTES:

1. AHEAD ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
3. RETRACE EXISTING DIAGONAL MARKINGS.



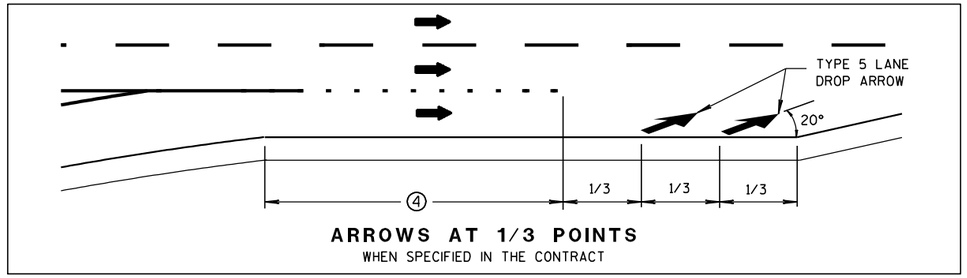
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

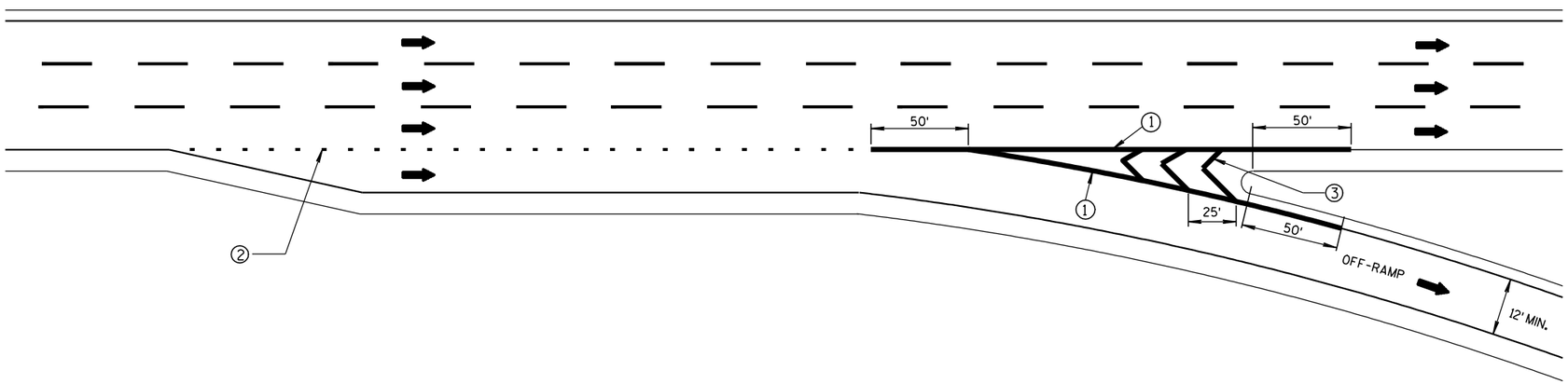
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

④ ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP



ARROWS AT 1/3 POINTS
WHEN SPECIFIED IN THE CONTRACT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/23/2011 DATE

/S/ Thomas N. Nothem
STATE TRAFFIC ENGINE 286 SIGN

FHWA

6
S.D.D. 15 C 31-1d

SYMBOLS

IC/C	TYPE III BARRICADE (8' EQUIVALENT) WITH/WITHOUT SIGN
•	DRUM
⊢	POST MOUNTED SIGN
(A)	WARNING LIGHT, TYPE A (FLASHING)
⇨	DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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

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

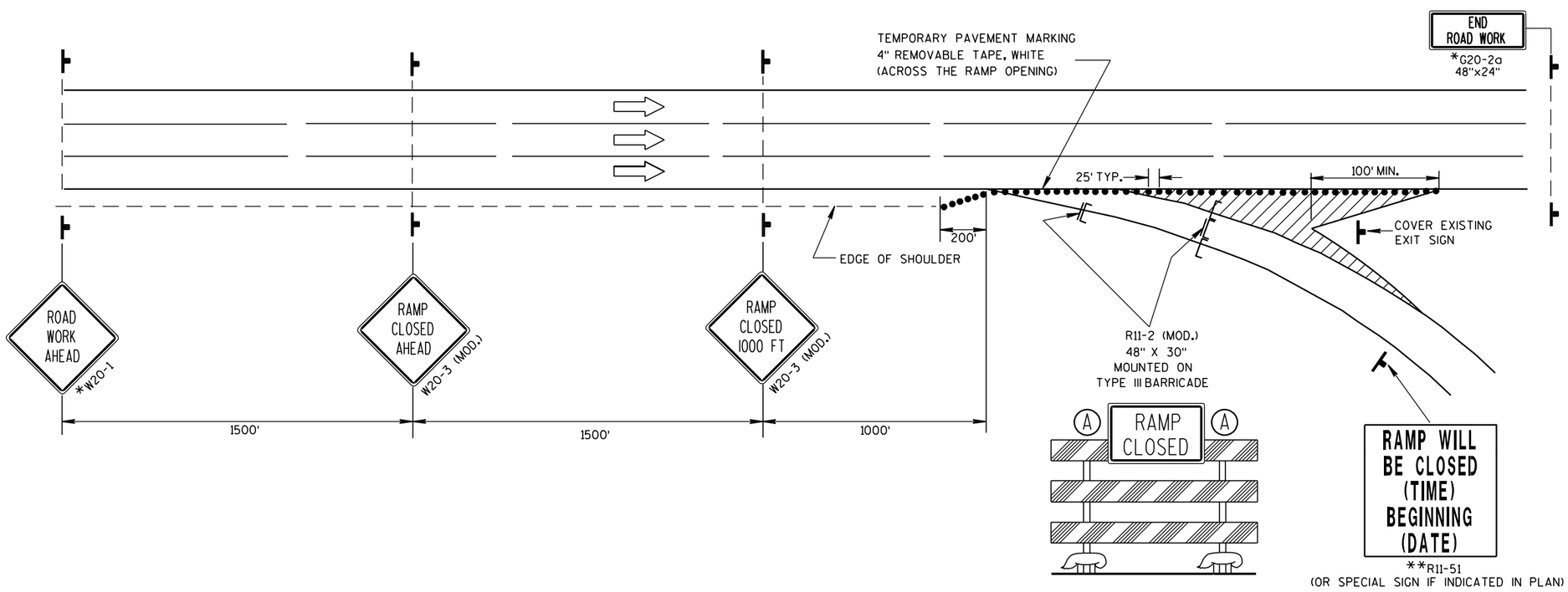
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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

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

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



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

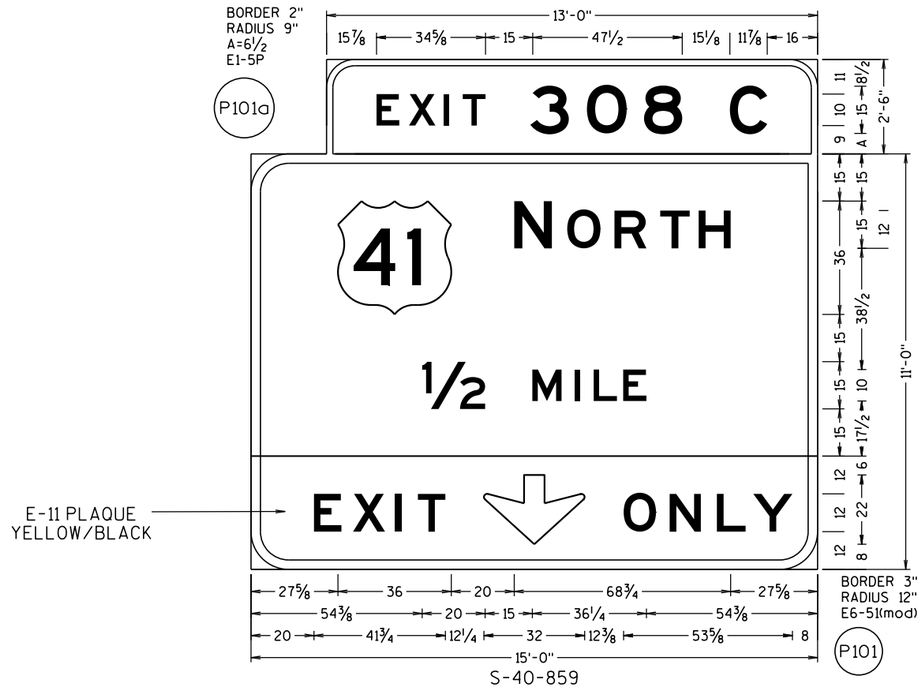
5/23/2000
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKINGS ENGINEER

FHWA

6

S.D.D. 15 D 16-1



S-40-859

GENERAL NOTES:

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

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

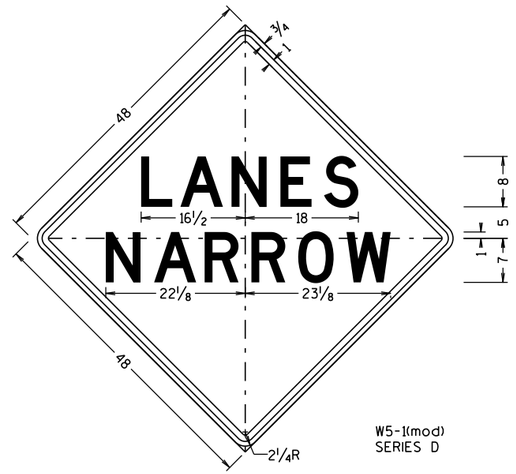
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.



TYPE II
YELLOW-BACKGROUND
BLACK-COPY

7

7

SHEET 1 OF 1

PROJECT NO: 1060-45-70	HWY: I-94 @ 28TH STREET	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I SIGNS	SCALE: 0 ½" 1"	SHEET 288	E

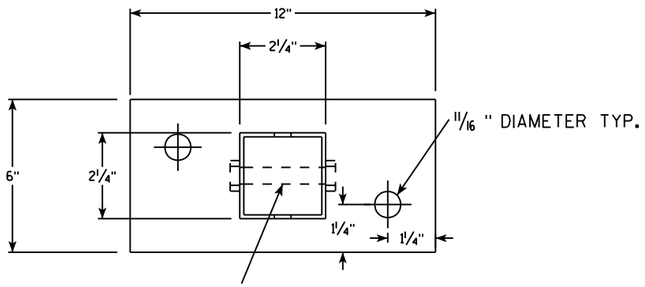
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WISDOT/CADDS SHEET 47

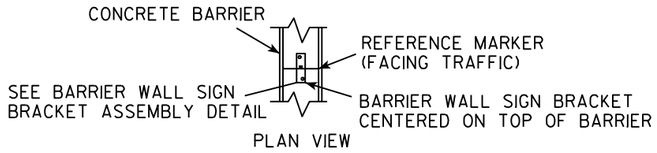
TYPICAL BARRIER WALL SIGN PLACEMENT DETAILS

TYPICAL REFERENCE MARKER MOUNTING DETAILS

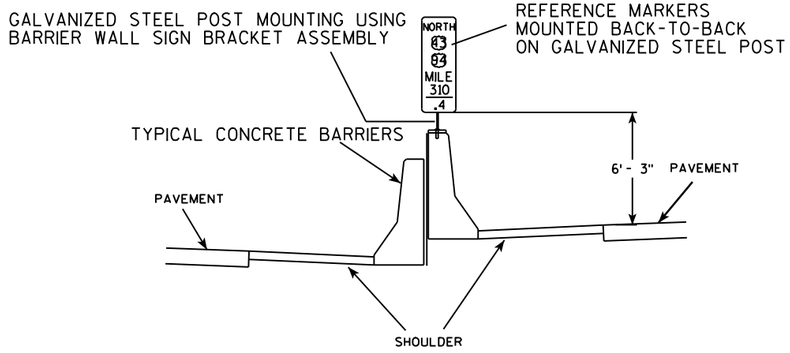
BARRIER WALL SIGN BRACKET ASSEMBLY
NOT TO SCALE



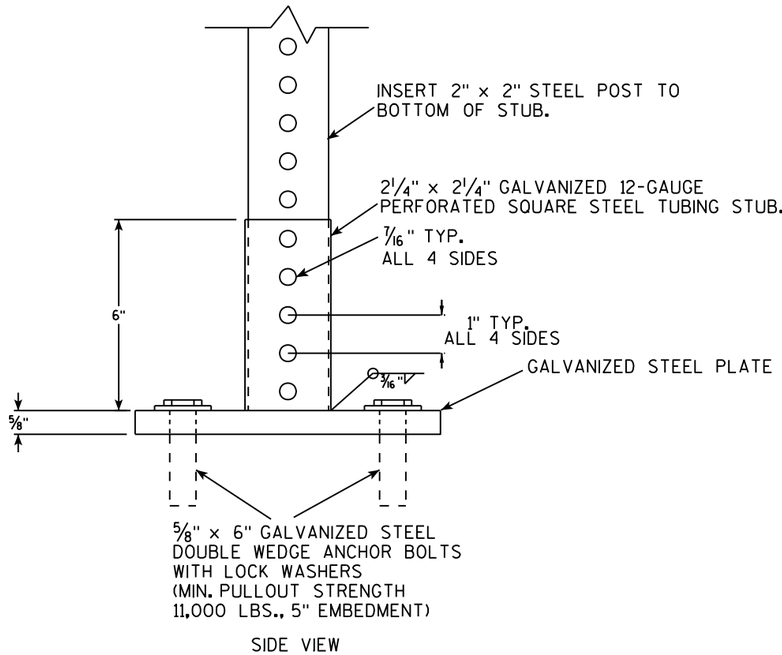
PLAN VIEW



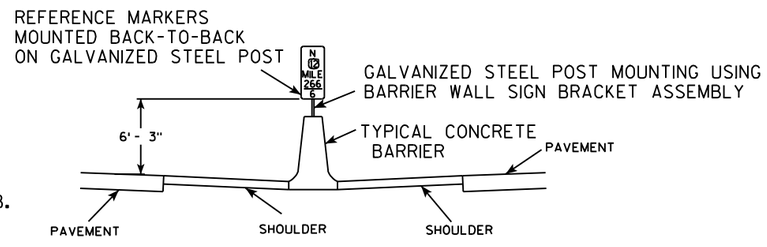
MEDIAN BARRIER MOUNTING DETAIL



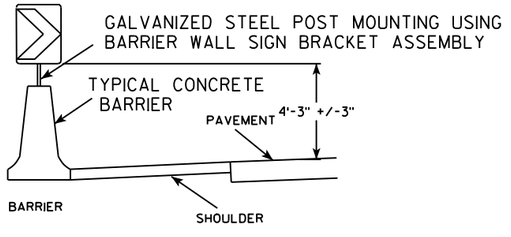
TYPICAL ENHANCED REFERENCE
MARKER PLACEMENT ON DOUBLE MEDIAN BARRIER



SIDE VIEW



TYPICAL ENHANCED REFERENCE
MARKER PLACEMENT ON SINGLE MEDIAN BARRIER



TYPICAL CHEVRON MARKER PLACEMENT

NOTES

1) ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION
2) SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS.

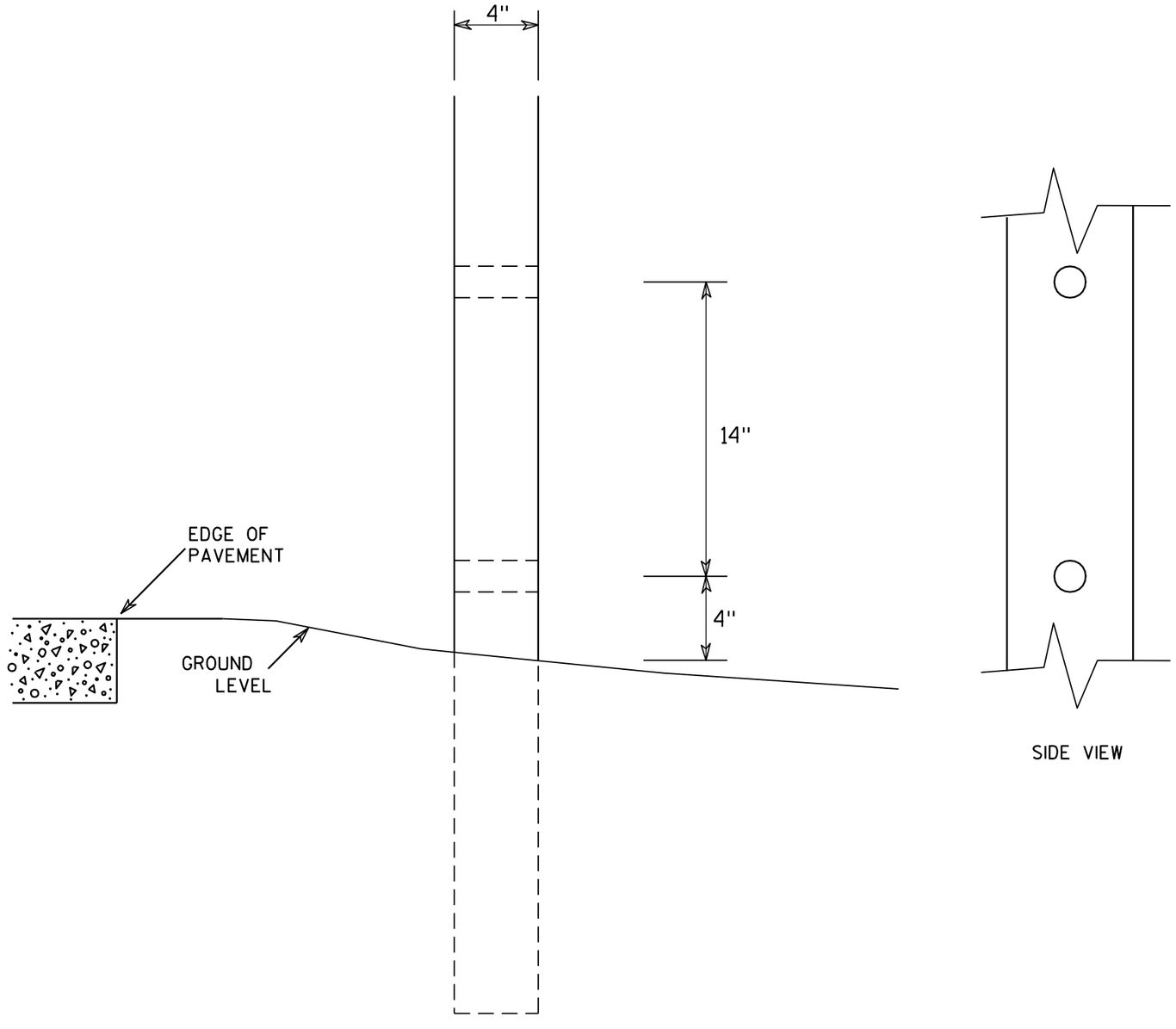
SIGN MOUNTING ON BARRIER WALL

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/15/2012 PLATE NO. A4-10.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 289	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.

7

7

4 X 6 WOOD POST MODIFICATIONS

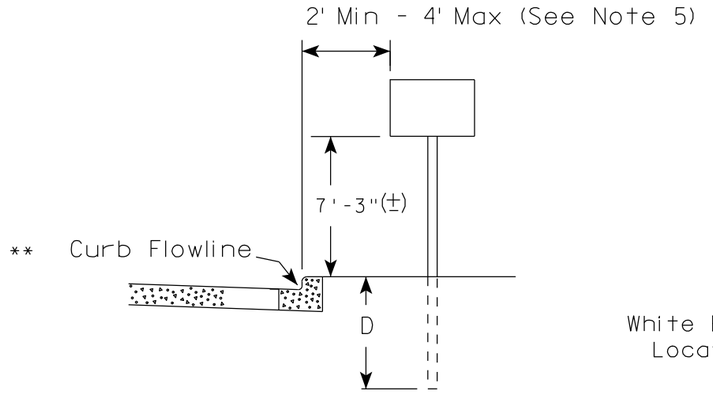
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

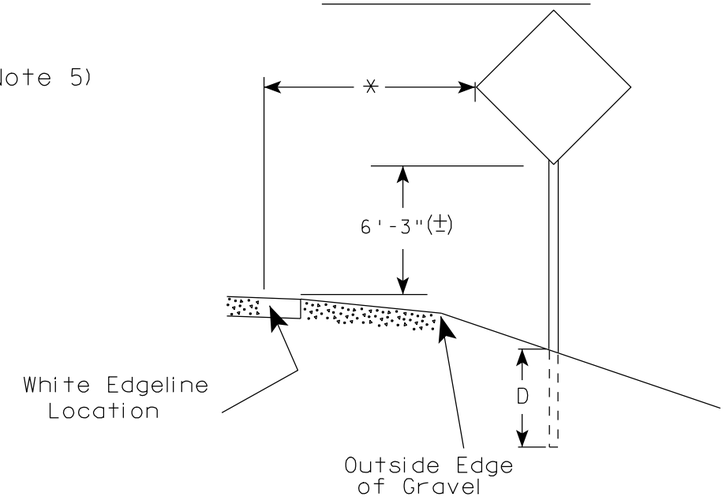
DATE 3/27/97 PLATE NO. A4-11.2

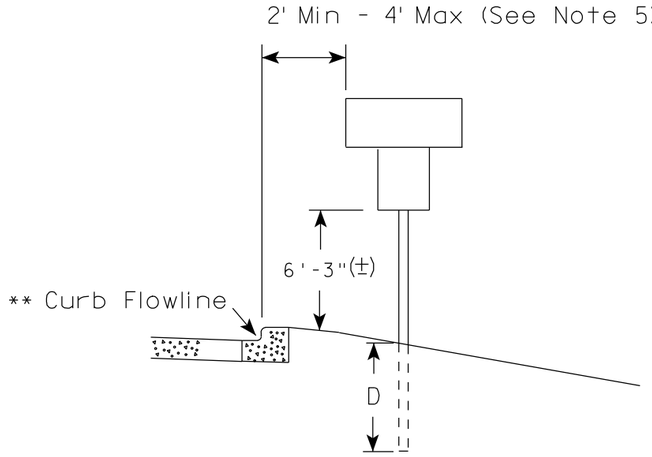
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 290	E

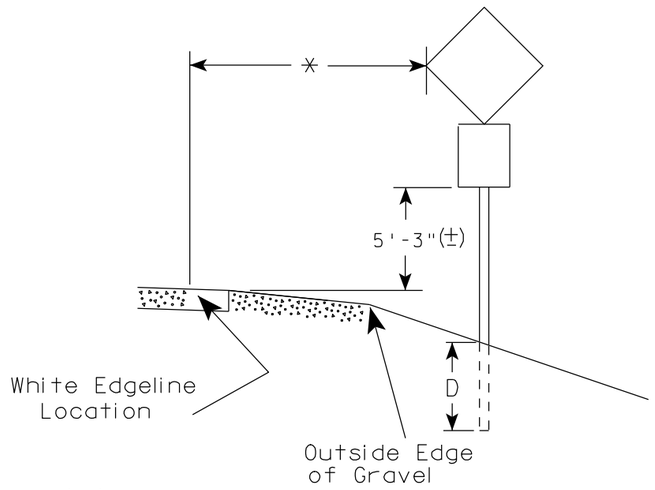
URBAN AREA



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.

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

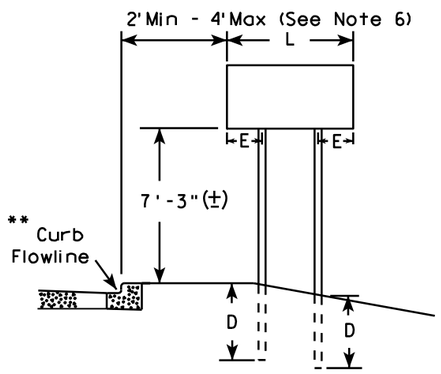
DATE 9/21/2011 PLATE NO. A4-3.16

7

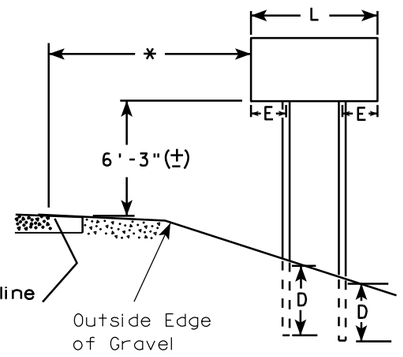
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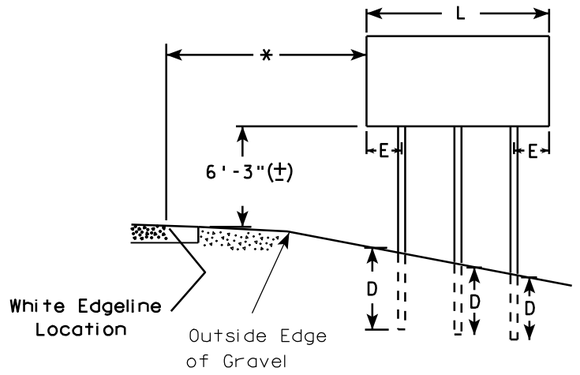
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 291 | E

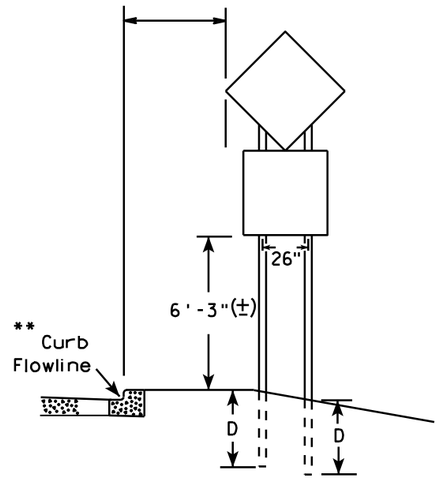
URBAN AREA



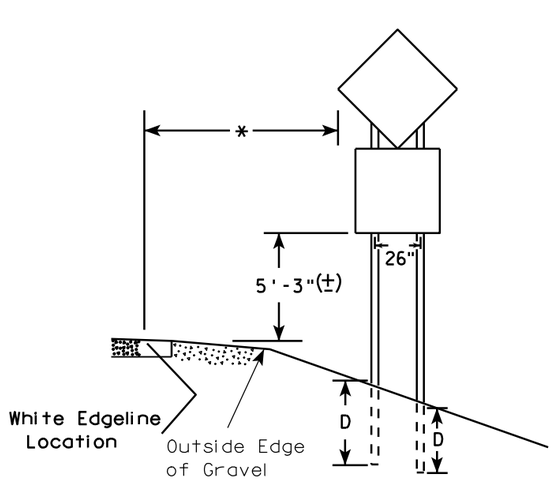
RURAL AREA (See Note 3)







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 120"	L/5

***

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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. For multiple post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

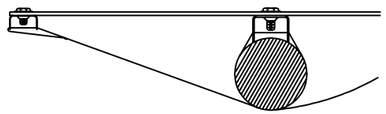
DATE 9/21/2011 PLATE NO. A4-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 292	E

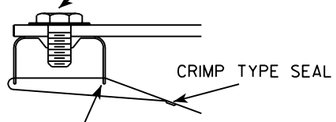
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FILE NAME : C:\Users\PROJECTS\tr_stdplate\A44.DGN PLOT DATE : 21-SEP-2011 13:36 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 109.249131:1.000000
WISDOT/CADDS SHEET 42

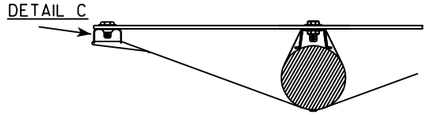
BRACE BANDING

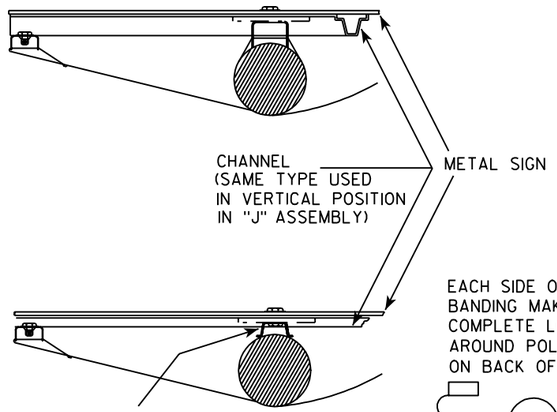


DETAIL C
CADMIUM PLATED STEEL BOLT
THROUGH BLACK BORDER

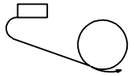


DETAIL C



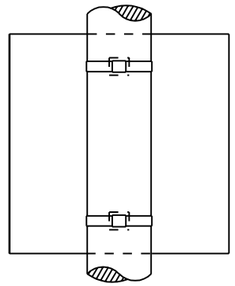


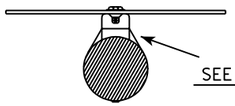
EACH SIDE OF BRACE
BANDING MAKES ONE
COMPLETE LOOP
AROUND POLE-SEAL
ON BACK OF POLE



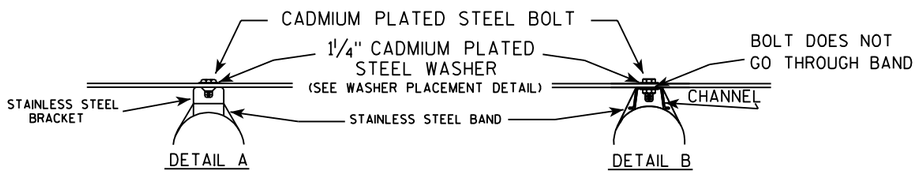
BRACKET BANDING

SINGLE SIGN





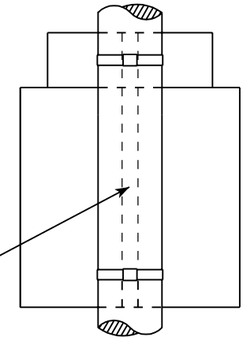
SEE DETAIL A



DETAIL A

DETAIL B

"J" ASSEMBLY

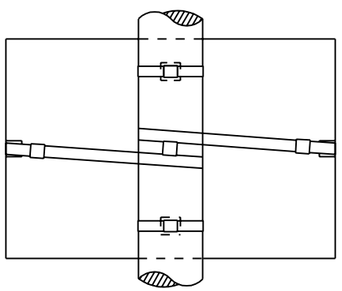


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

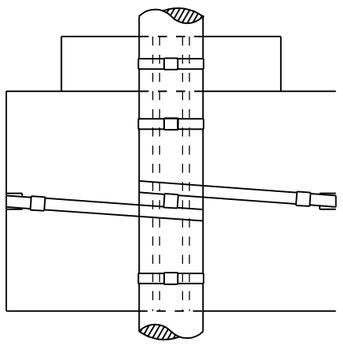
GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

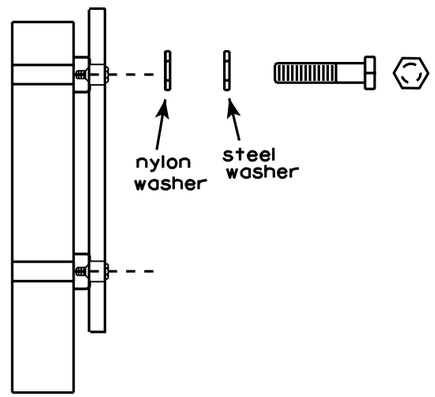


BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY BUT NOT SO TIGHT AS TO APPRECIABLY CURVE FACE OF SIGN.



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

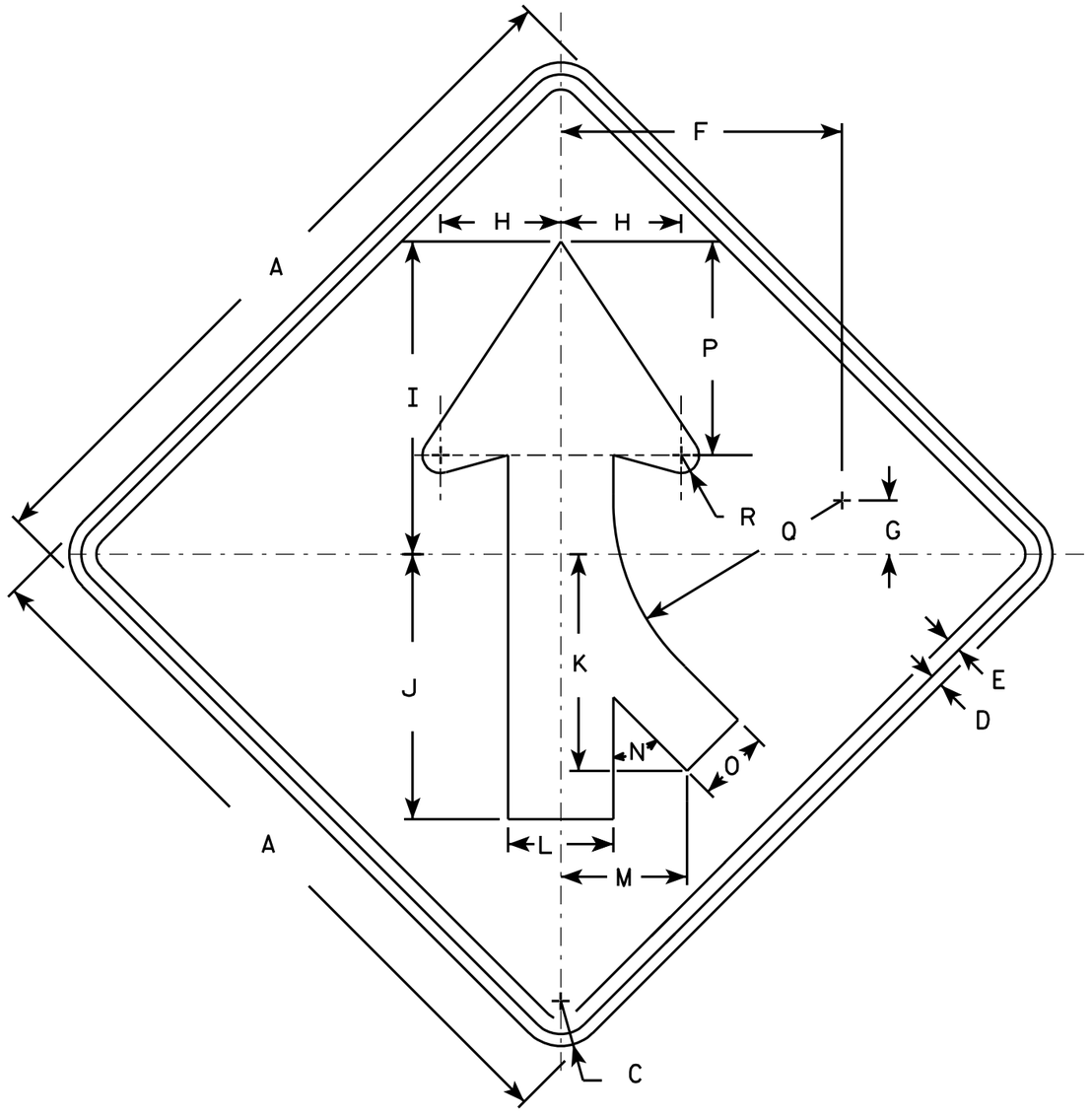
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 293	E



W4-1 R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

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

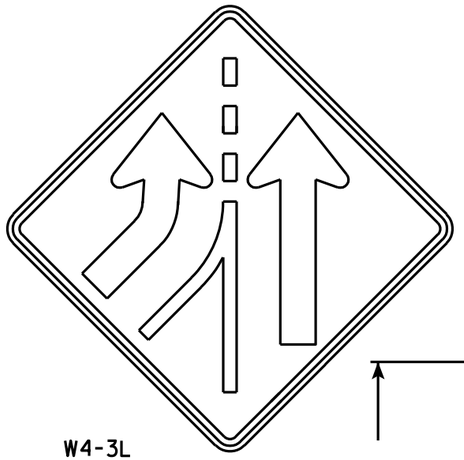
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

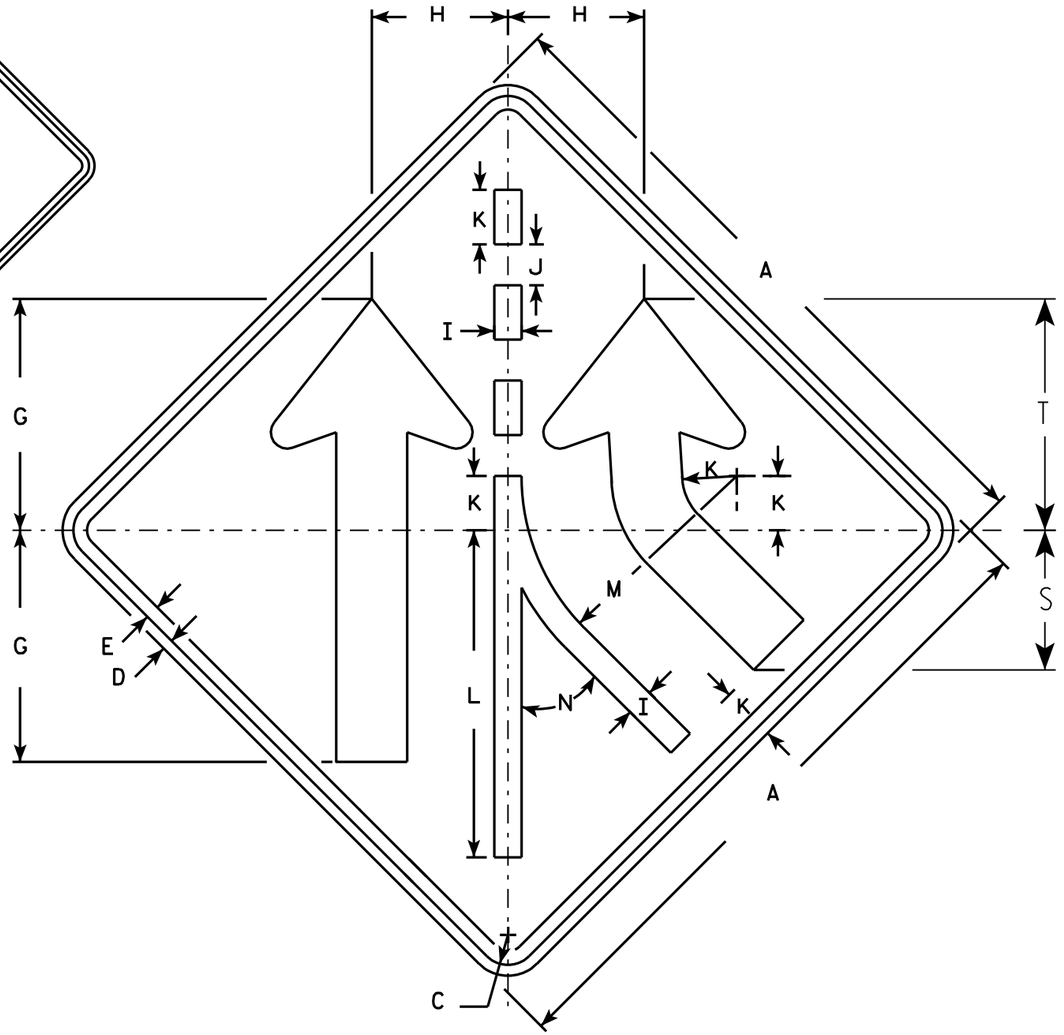
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/21/11 PLATE NO. W4-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 294 | E



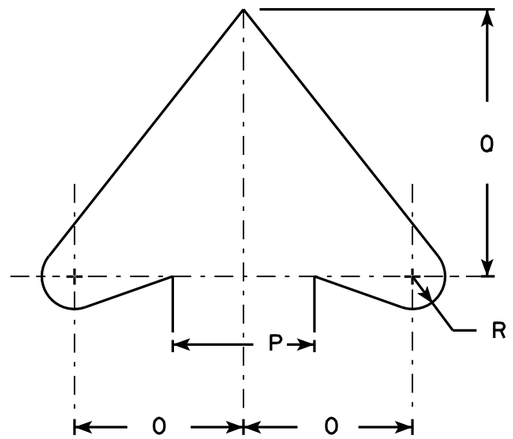
W4-3L



W4-3R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. 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. W4-3 L is the same as W4-3 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		10 5/8	6 1/4	1 1/4	1 7/8	2 1/2	15	9 7/8	45°	3 7/8	3 1/4	6 1/8	3/4	6 3/8	10 5/8							6.25
2S	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
2M	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
3																											
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
W4-3

WISCONSIN DEPT OF TRANSPORTATION

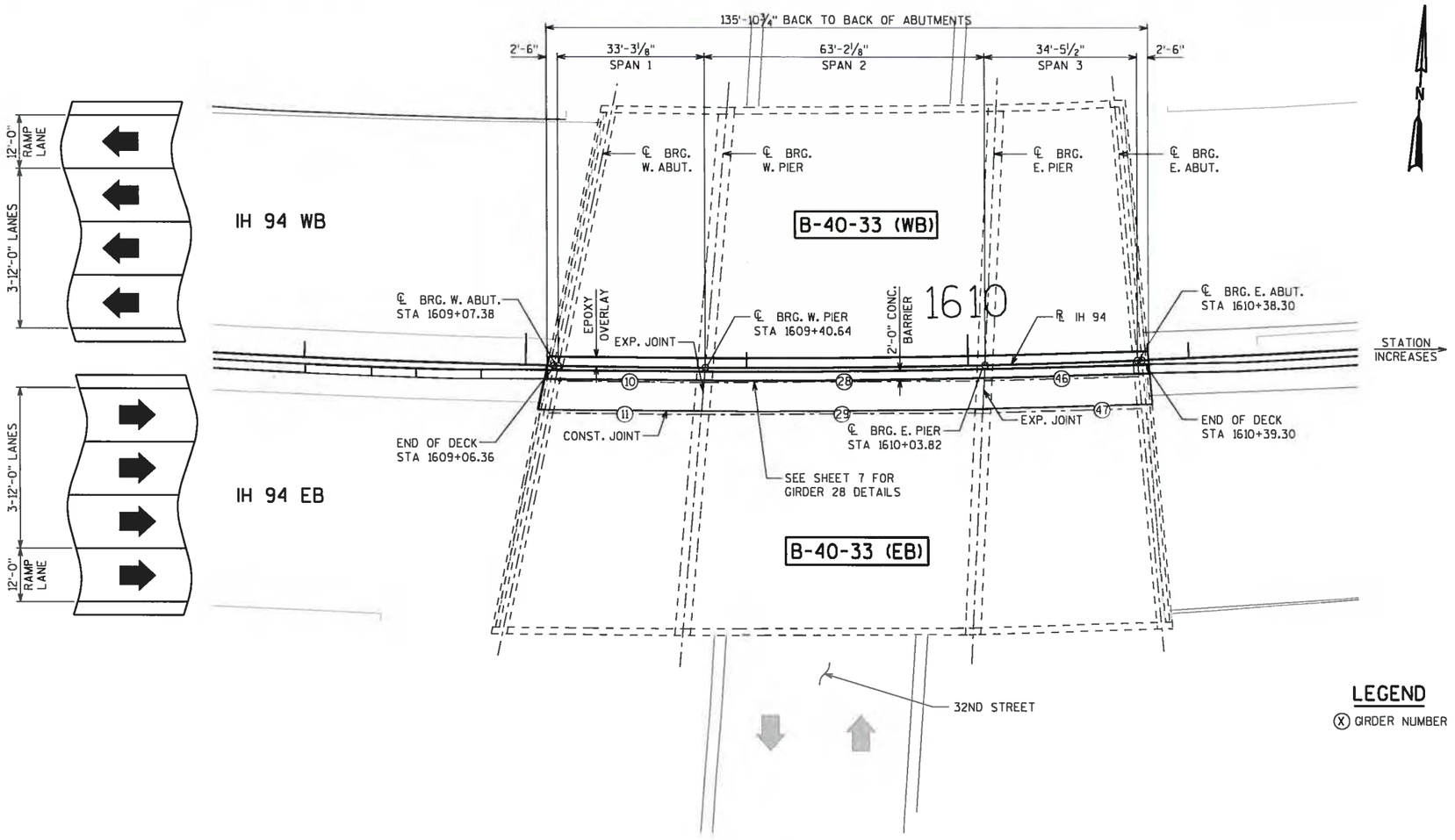
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W4-3.7

PROJECT NO:

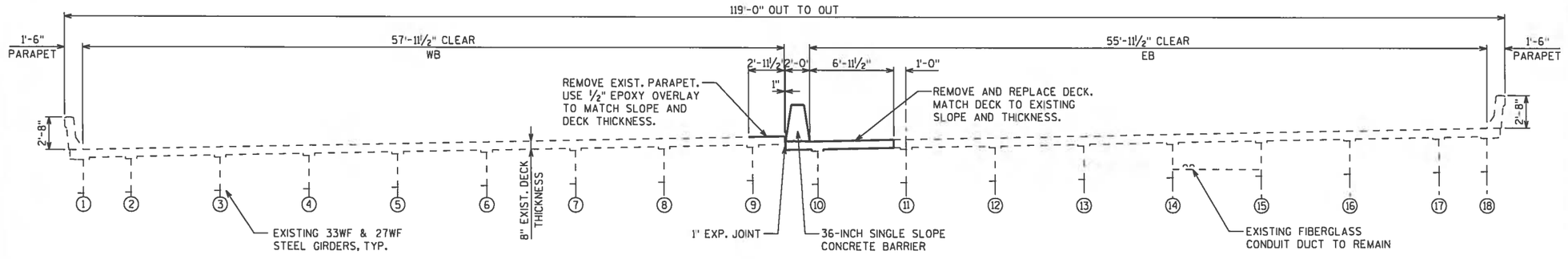
SHEET NO: 295 E

STATE PROJECT NUMBER
1060-45-70



PLAN

(3 SPAN STEEL DECK GIRDER BRIDGE)



TYPICAL SECTION B-40-33

(LOOKING EAST)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.36 (GIRDER 28, EB)
OPERATING RATING FACTOR: RF = 2.37 (GIRDER 28, EB)
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES (NEW WORK):

CONCRETE MASONRY, DECK ..... f'c = 4,000 psi

HIGH STRENGTH BAR STEEL REINFORCEMENT GRADE 60 ..... fy = 60,000 psi

STRUCTURAL STEEL (ASTM A50) ..... fy = 50,000 psi

ULTIMATE DESIGN STRESSES (EXISTING WORK):

EXISTING STRUCTURAL STEEL (ASTM A36) ..... fy = 36,000 psi

FOUNDATION DATA

ABUTMENTS ARE SUPPORTED ON TREATED TIMBER PILES WITH STEEL PILE SHOES.

PIERS ARE SUPPORTED ON SPREAD FOOTINGS.

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. CONSTRUCTION STAGING, NOTES & QUANTITIES
3. SUPERSTRUCTURE REINFORCEMENT
4. SUPERSTRUCTURE DETAILS
5. EXPANSION DEVICE - 1
6. EXPANSION DEVICE - 2
7. COVER PLATE EXTENSION GIRDER 28

LEGEND

Ⓧ GIRDER NUMBER

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
11/19/2012

NO.	DATE	REVISION	BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/27/12
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-33

IH-94 OVER 32ND STREET

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC.	LOAD
AASHTO LRFD	HL-93

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AJA	MHZ	AJA	MHZ

GENERAL PLAN AND ELEVATION

SHEET 1 OF 7

296

SCALE =

DATE:

STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 358-6668

8

8

STATE PROJECT NUMBER
1060-45-70

ELEVATION TABLE **

	SPAN 1											SPAN 2										SPAN 3										
	℄ W. ABUT.	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	℄ W. PIER	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	℄ E. PIER	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	℄ E. ABUT.
ELEVATION A	660.57	660.62	660.66	660.69	660.73	660.77	660.80	660.84	660.88	660.91	660.94	661.00	661.06	661.13	661.19	661.23	661.26	661.29	661.32	661.35	661.38	661.39	661.41	661.42	661.44	661.45	661.46	661.48	661.49	661.50	661.53
ELEVATION B	660.64	660.69	660.73	660.76	660.80	660.84	660.87	660.92	660.96	660.99	661.02	661.07	661.13	661.20	661.26	661.30	661.33	661.32	661.39	661.43	661.46	661.47	661.49	661.50	661.52	661.53	661.54	661.56	661.57	661.58	661.61

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

THE FIRST DIGIT OF A THREE DIGIT AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DETAILS, MATERIALS AND FABRICATION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE SPECIFICATIONS OF THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION, EDITION OF 2011.

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

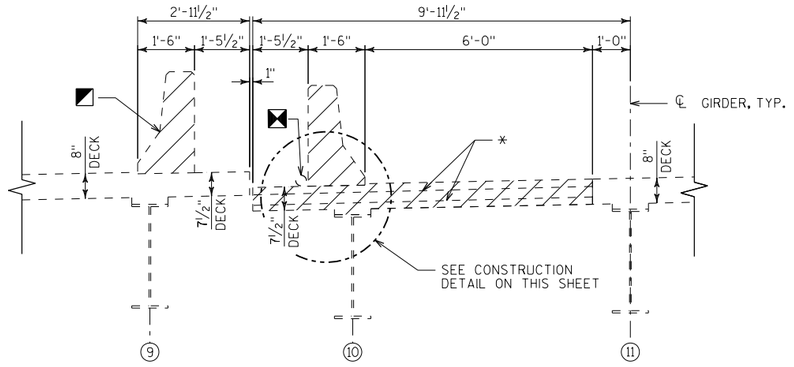
THE EXISTING STRUCTURE, B-40-33, IS A 3-SPAN STEEL DECK GIRDER BRIDGE WITH AN OVERALL WIDTH OF 119'-0" AND AN OVERALL LENGTH OF 134'-9". THE INTERIOR PARAPETS ARE TO BE REMOVED AND REPLACED BY CONCRETE BARRIER ON THE EASTBOUND SIDE OF THE BRIDGE. PORTION OF THE EASTBOUND DECK IS TO BE REMOVED AND REPLACED. ALL EXISTING TRANSVERSE REBAR (#5) SHALL BE PRESERVED DURING REMOVAL AND UTILIZED WITH THE NEW DECK CONSTRUCTION.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

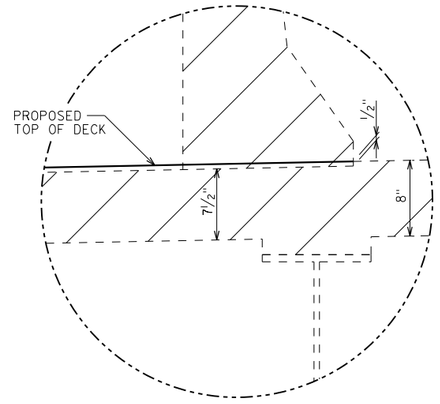
CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION AND CONSTRUCTION.

INFORMATION ON THESE DRAWINGS RELATED TO THE EXISTING BRIDGE IS BASED UPON AVAILABLE DRAWING FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION. NO GUARANTEE OR WARRANTY IS MADE THAT THE INFORMATION IS ALL INCLUSIVE OR TOTALLY ACCURATE. THEREFORE, THE CONTRACTOR SHALL MAKE ITS OWN DETERMINATION OF THE ACTUAL CONDITIONS TO BE ENCOUNTERED.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN.



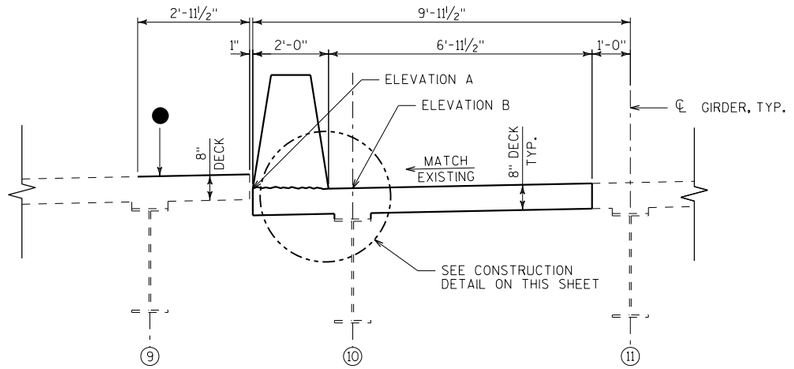
DEMOLITION LIMITS
(LOOKING EAST)



CONSTRUCTION DETAIL
(EASTBOUND SHOWN)
(WESTBOUND SIMILAR)

TOTAL ESITMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	SUPER	TOTAL
203.0200	REMOVING OLD STRUCTURE STA 1609 +80	LS	1	1
203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-40-0033	LS	1	1
502.0100	CONCRETE MASONRY BRIDGES	CY	53	53
502.3100	EXPANSION DEVICE BRIDGE B-40-0033	LS	1	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	200	200
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	8820	8820
509.1500	CONCRETE SURFACE REPAIR	SF	20	20
517.0900.S	PREPARATION AND COATING OF TOP FLANGE B-40-0033	LS	1	1
SPV.0180.07	EPOXY OVERLAY	SY	45	45



PROPOSED CONSTRUCTION
(LOOKING EAST)

LEGEND

- REMOVE EXISTING PARAPET TO TOP OF DECK.
- USE A MINIMUM ½" EPOXY OVERLAY TO MATCH DECK THICKNESS AND CROSS SLOPE.
- EXISTING LIGHTING CONDUIT TO BE RELOCATED.
- * EXISTING TRANSVERSE TOP & BOTTOM REBARS SHALL BE PRESERVED AND UTILIZED IN NEW CONSTRUCTION.
- ** TOP OF SLAB ELEVATION INTERPOLATED FROM SURVEY DATA. VERIFY IN FIELD.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-33

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

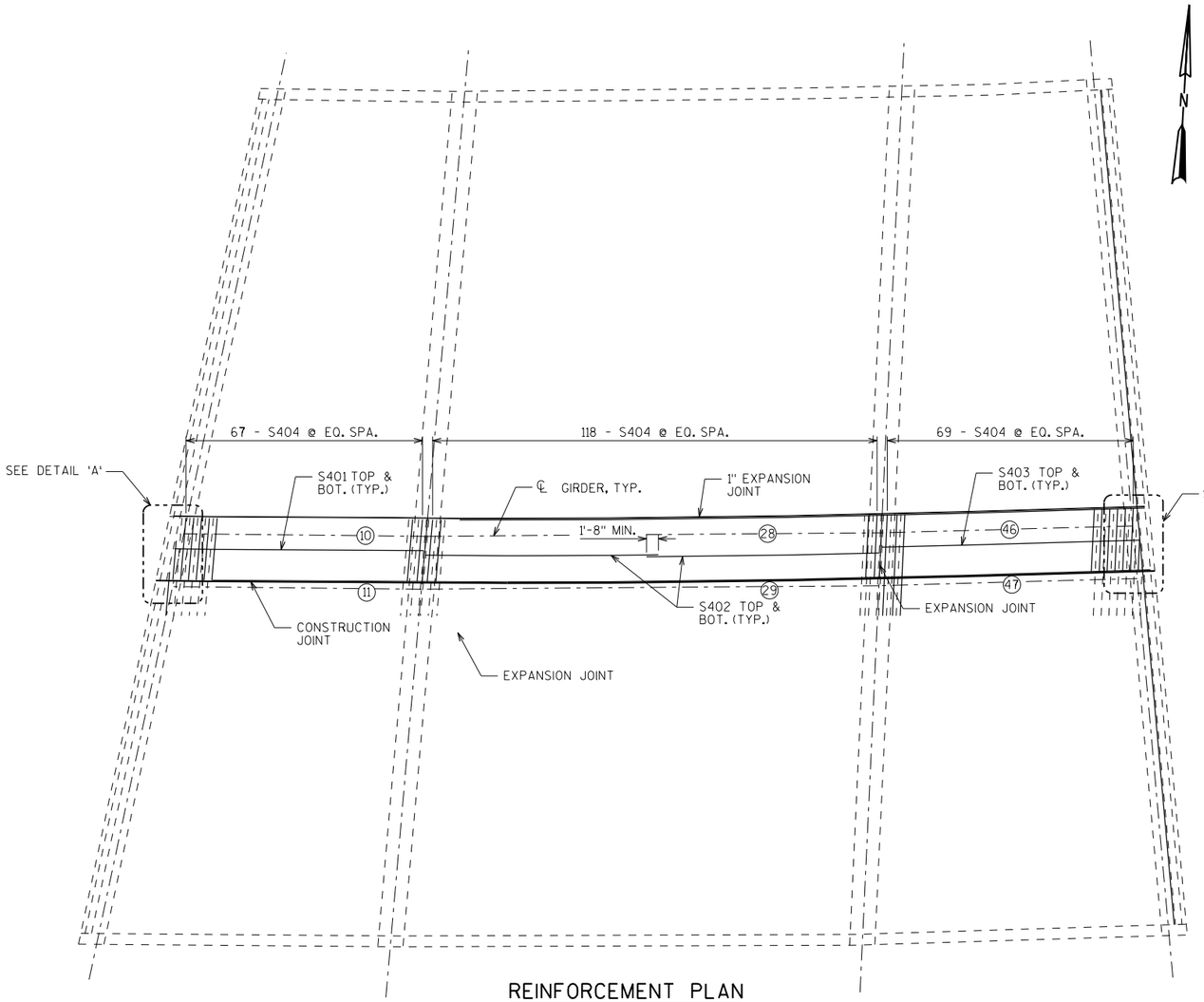
CONSTRUCTION STAGING, NOTES & QUANTITIES

SHEET 2 OF 7

297

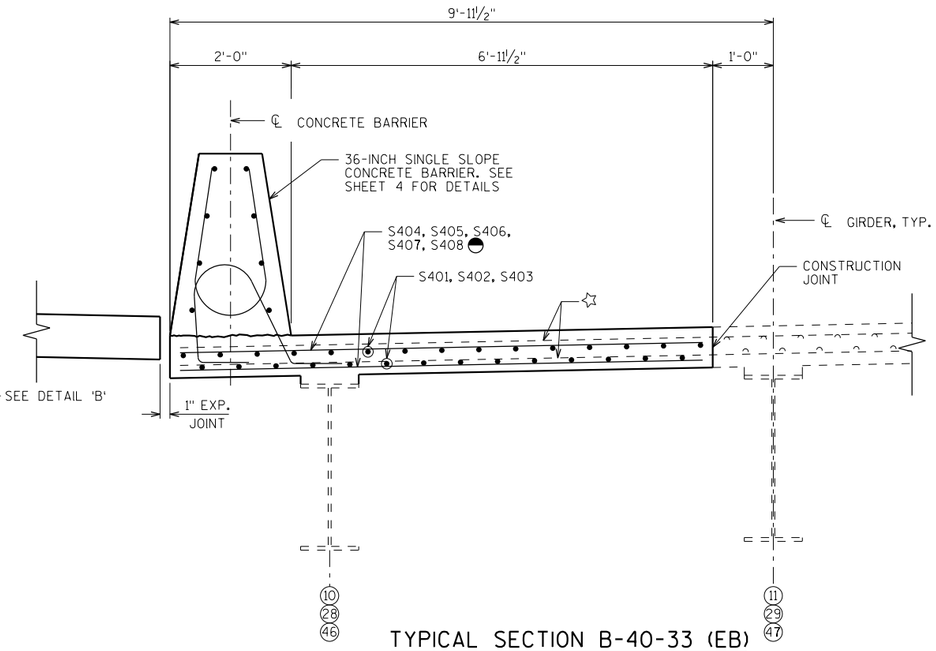
FILE=
SCALE =

STATE PROJECT NUMBER
1060-45-70

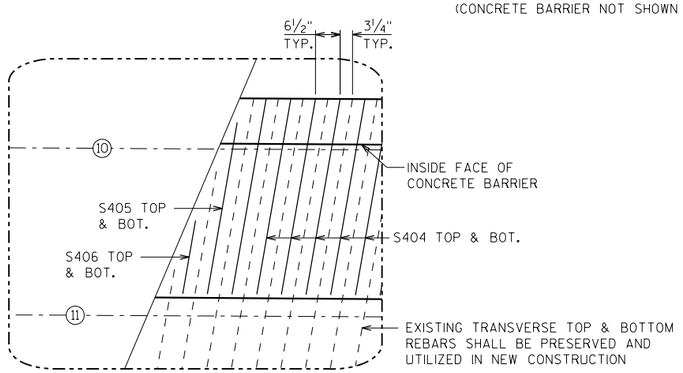


REINFORCEMENT PLAN

(CONCRETE BARRIER NOT SHOWN FOR CLARITY)

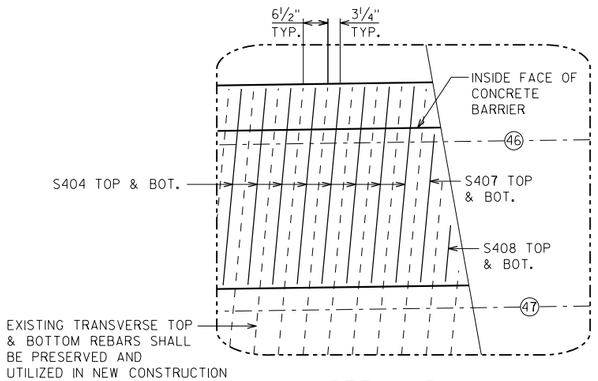


TYPICAL SECTION B-40-33 (EB)



DETAIL 'A'

LONGITUDINAL REINFORCEMENT NOT SHOWN FOR CLARITY



DETAIL 'B'

LONGITUDINAL REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES

◓ SPACE NO. 4 BARS BETWEEN EXISTING NO. 5 BARS.

☆ EXISTING TRANSVERSE TOP & BOTTOM REBARS SHALL BE PRESERVED AND UTILIZED IN NEW CONSTRUCTION

Ⓧ GIRDER NUMBER

SEE SHEET 7 FOR GIRDER 28 DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-33

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

SUPERSTRUCTURE REINFORCEMENT

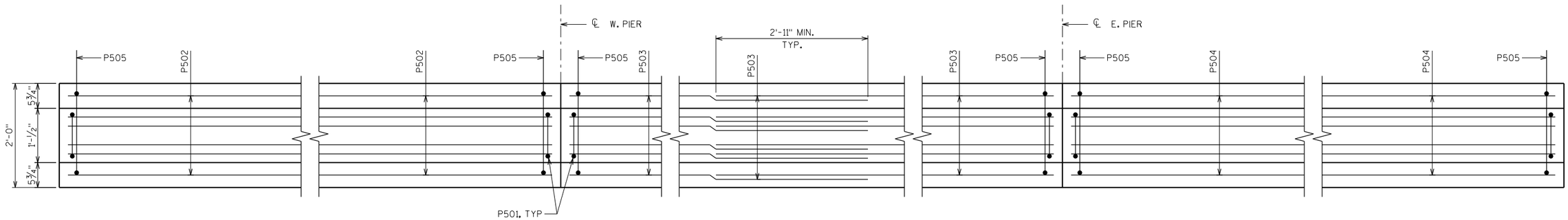
SHEET 3 OF 7
298

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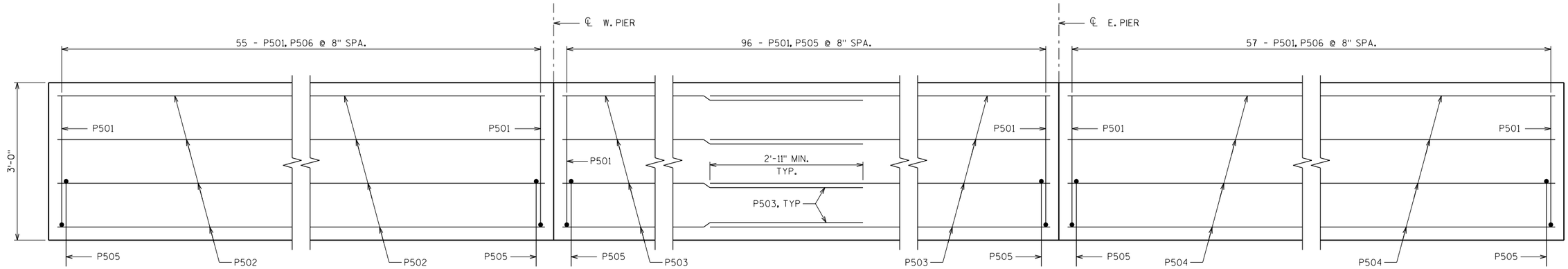
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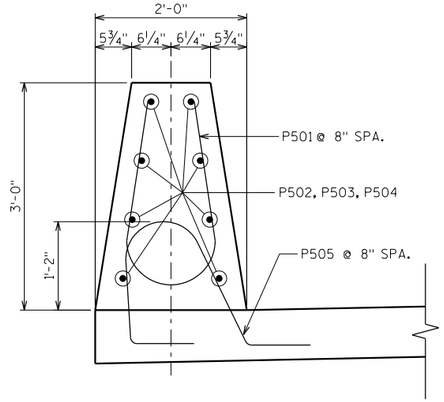
STATE PROJECT NUMBER
1060-45-70



CONCRETE BARRIER PLAN



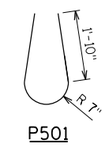
CONCRETE BARRIER ELEVATION



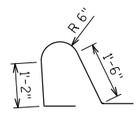
SECTION THRU BARRIER

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	29	35'-2"	-	-	LONG. DECK SPAN 1
S402	X	58	32'-5"	-	-	LONG. DECK SPAN 2
S403	X	29	35'-10"	-	-	LONG. DECK SPAN 3
S404	X	508	8'-7"	-	-	TRANS. DECK
S405	X	2	7'-8"	-	-	TRANS. DECK W. ABUT.
S406	X	2	3'-3"	-	-	TRANS. DECK W. ABUT.
S407	X	2	6'-6"	-	-	TRANS. DECK W. ABUT.
S408	X	2	2'-6"	-	-	TRANS. DECK E. ABUT.
S409	X	4	6'-5"	-	-	HORIZ. EXPANSION JOINTS
P501	X	208	4'-10"	X	-	VERT. PARAPET
P502	X	8	35'-5"	-	-	LONG. PARAPET SPAN 1
P503	X	16	32'-11"	-	-	LONG. PARAPET SPAN 2
P504	X	8	36'-8"	-	-	LONG. PARAPET SPAN 3
P505	X	208	4'-9"	X	-	VERT. PARAPET



P501



P505

BENDING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-33

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

SUPERSTRUCTURE DETAILS

SHEET 4 OF 7
299

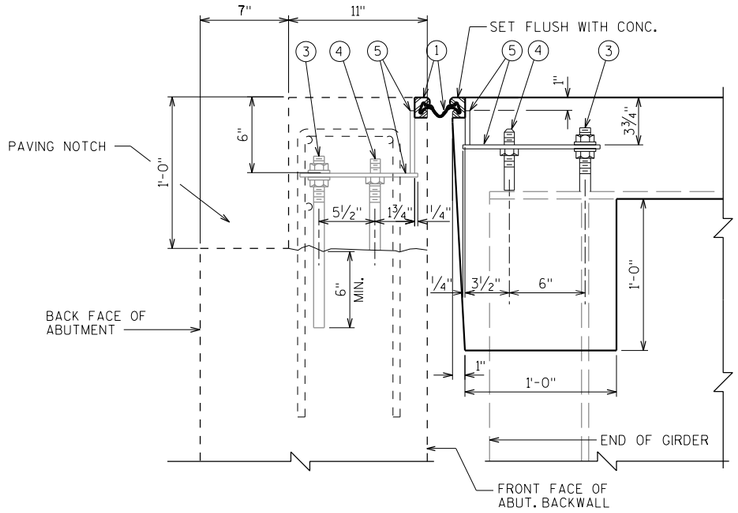
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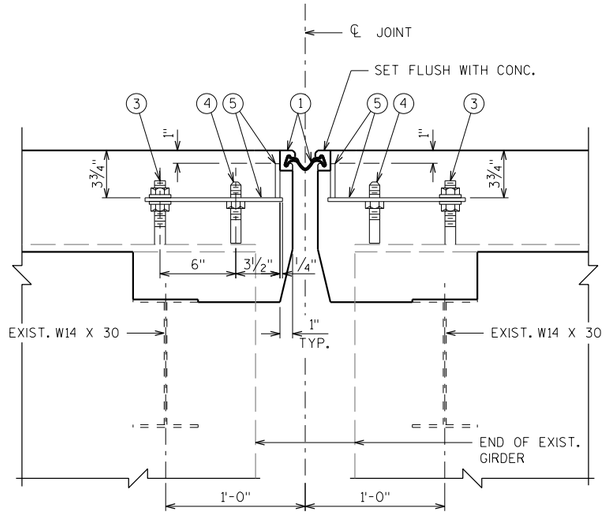
STATE PROJECT NUMBER

1060-45-70



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



TYPICAL SECTION THRU PIER JOINT

NORMAL TO ℄ SUBSTRUCTURE

LEGEND

⚠ (1) NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1¾".

(2) STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PL. TO NO. 1 AT 1'-6" CTRS. BETWEEN GIRDERS.

(3) ¾"Φ THREADED ROD WITH 2 NUTS AND WASHERS. FOR STEEL GIRDERS WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½"Φ HOLE FOR NO. 3 & 1"Φ HOLE FOR NO. 4.

SEE SHEET 6

(6) GALVANIZED PLATE ⅜" X 14¼" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

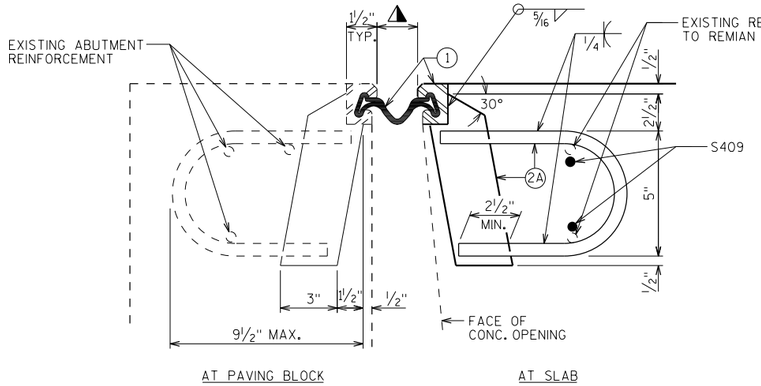
(7) ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.

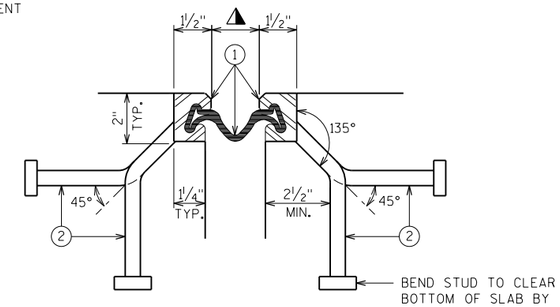
(10) NOT USED

(11) 1" X 5" SLOTTED CSK. HOLE FOR NO. 7. SLOT PARALLEDL TO DIRECTION OF MOVEMENT.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



SECTION THRU JOINT

NOTES

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERICAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

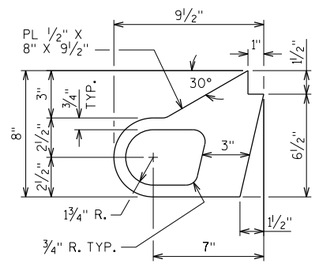
ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION ASSEMBLES, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID "EXPANSION DEVICE B-40-33".

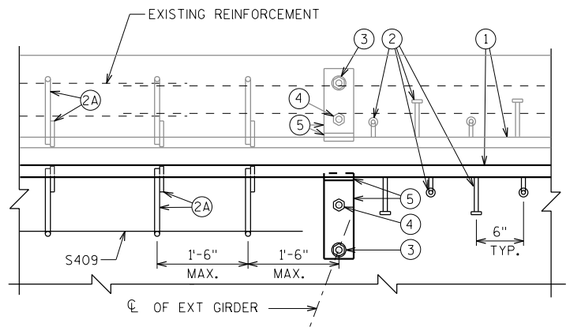
JOINT LENGTH AND GIRDER SPACING SHALL BE FIELD VERIFIED PRIOR TO FABRICATION.

REMOVAL OF EXISITING JOINT AND CONCRETE FOR JOINT REPLACEMENT IS INCIDENTAL TO BID ITEM "REMOVING OLD STRUCTURE STA. 1609+80".

SEE SHEET 6 FOR EXPANSION JOINT CONNECTION DETAIL.



ALTERNATE STRIP SEAL ANCHOR



PART PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-33

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2012	AJA	MHZ

EXPANSION DEVICE - 1

SHEET 5 OF 7

300

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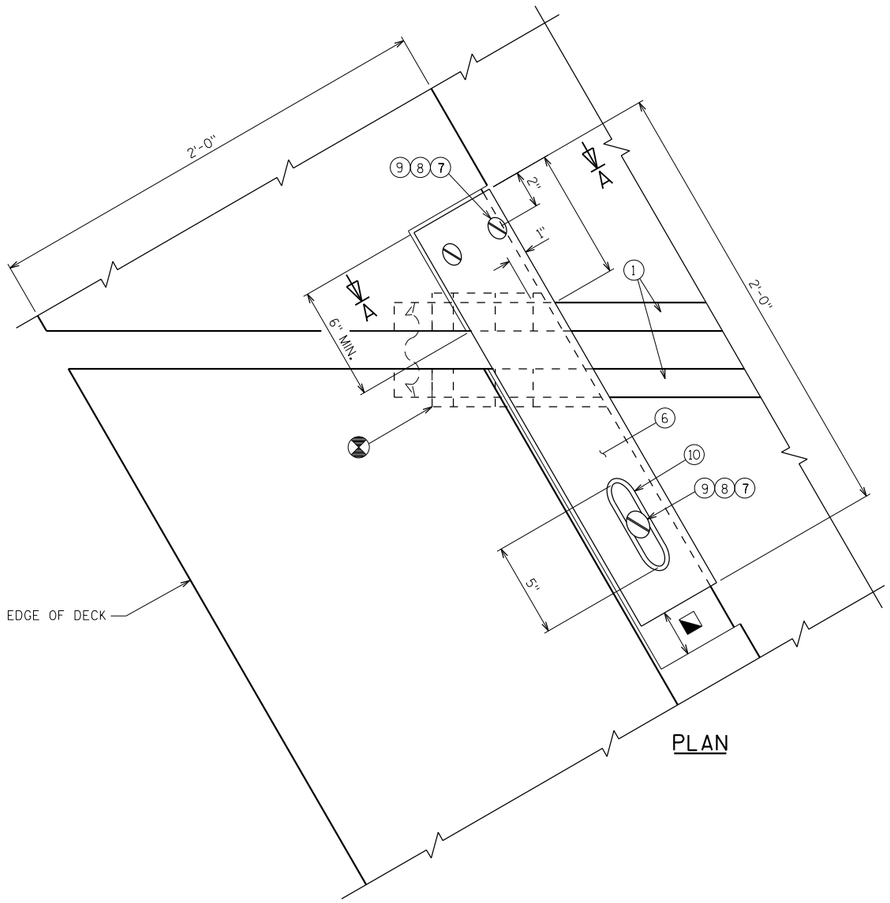
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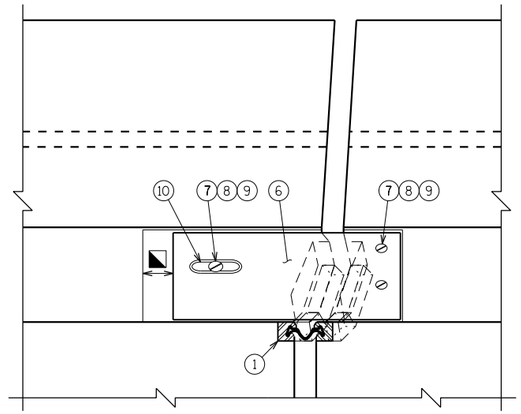
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STATE PROJECT NUMBER

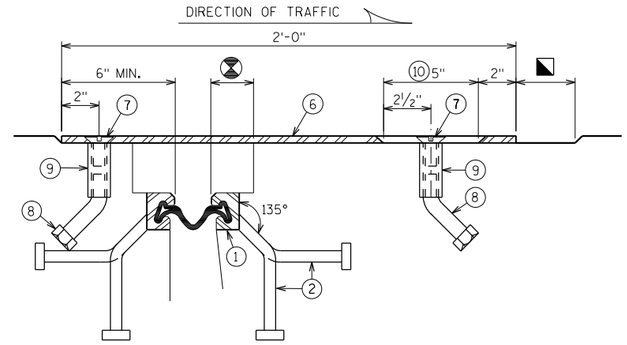
1060-45-70



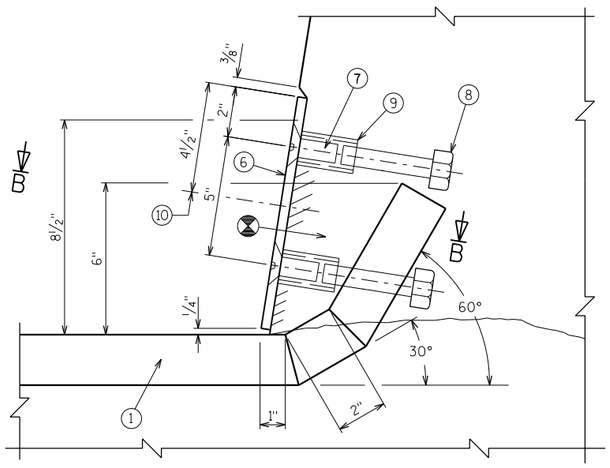
PLAN



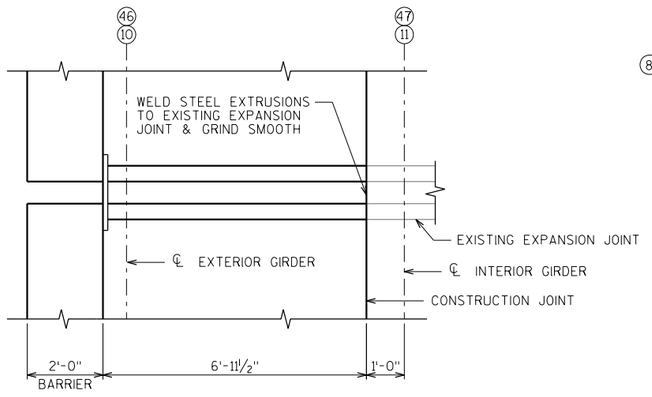
VIEW OF PARAPET PLATE
FROM ROADWAY



SECTION B-B



SECTION A-A



EXPANSION JOINT
CONNECTION DETAIL

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W.S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

NOTES

- BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- JOINT OPENING DIM. ALONG SKEW PLUS ½".
- (X) GIRDER NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-33

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

EXPANSION DEVICE -2

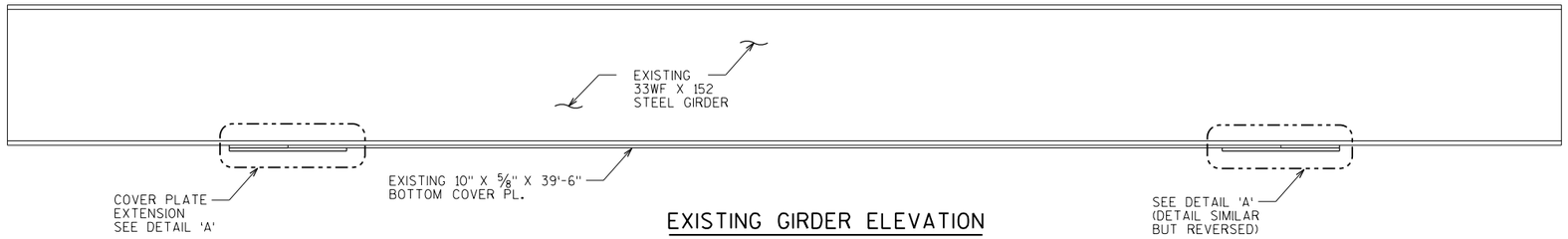
SHEET 6 OF 7
301

FILE=
SCALE =

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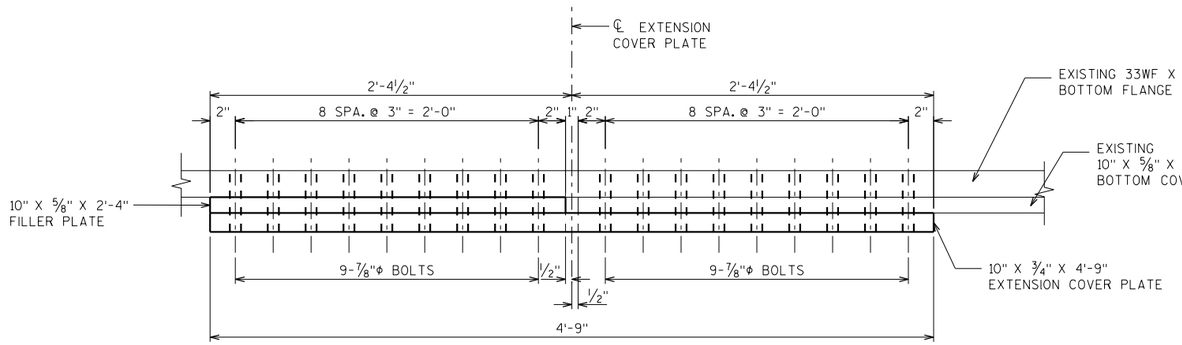
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STATE PROJECT NUMBER
1060-45-70

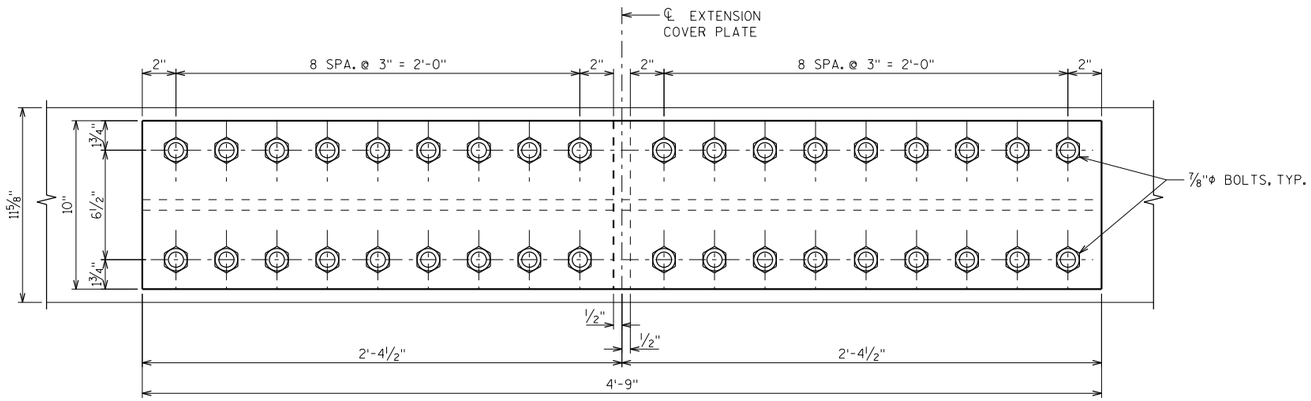


EXISTING GIRDER ELEVATION

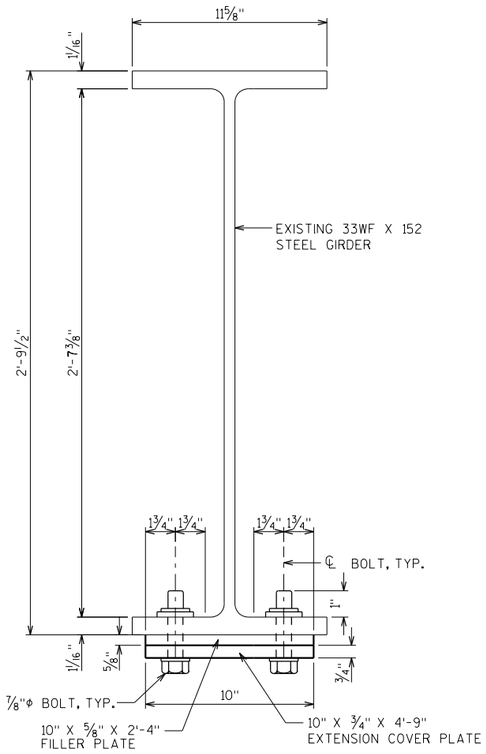
(GIRDER 28)



DETAIL 'A'



PLAN



SECTION THRU GIRDER

NOTES

ONLY EASTBOUND, CENTER SPAN, MEDIAN GIRDER NUMBER 28 SHALL RECEIVE COVER PLATE EXTENSION TREATMENT.

ALL BOLTED CONNECTIONS SHALL BE MADE WITH 7/8"ϕ HIGH STRENGTH BOLTS (ASTM A325)

COVER PLATE EXTENSION TREATMENT SHALL BE INCIDENTAL TO BID ITEM 517.0900.S "PREPARATION AND COATING TOP FLANGE B-40-0033".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-33

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

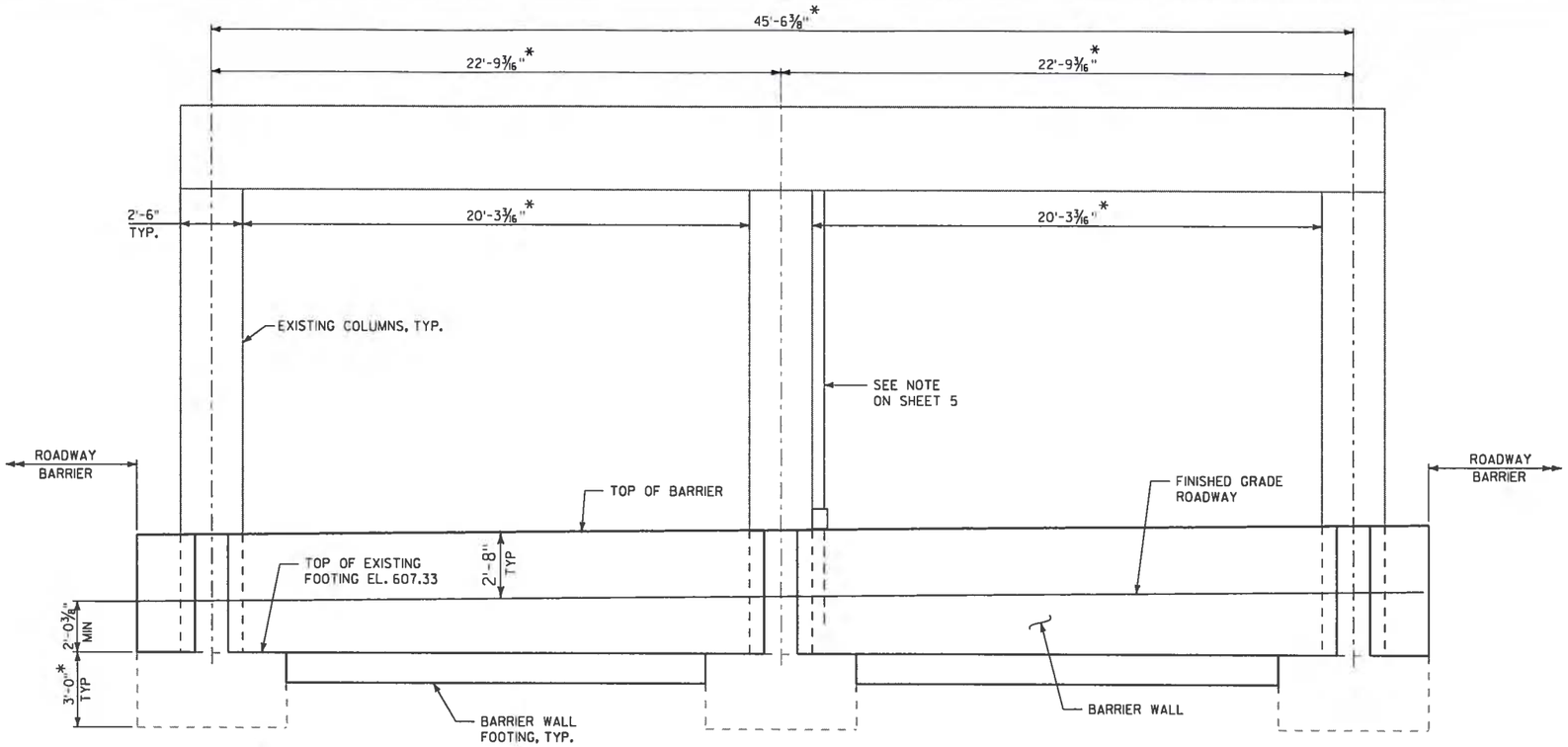
COVER PLATE EXTENSION GIRDER 28

SHEET 7 OF 7
302

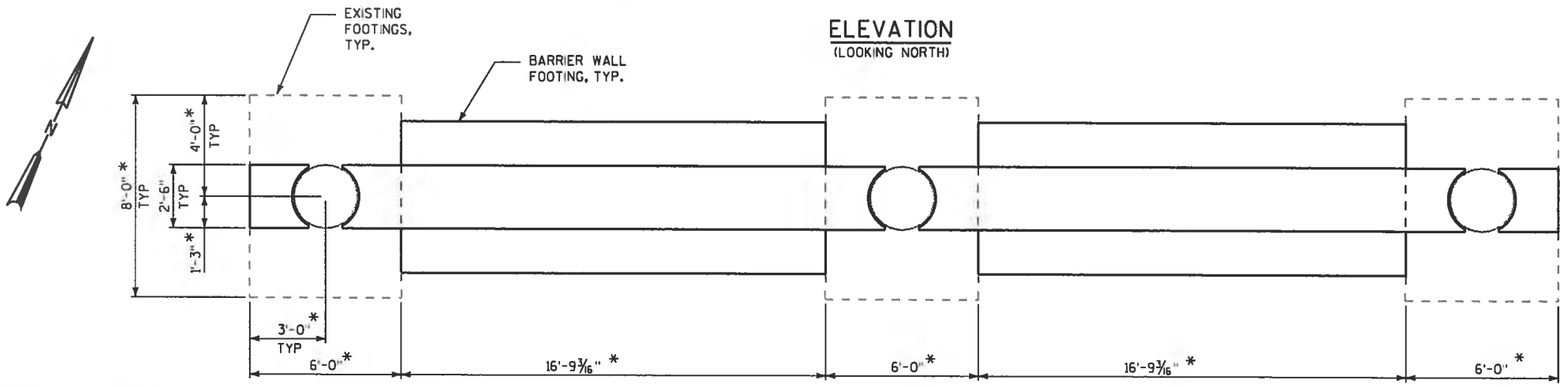
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STATE PROJECT NUMBER

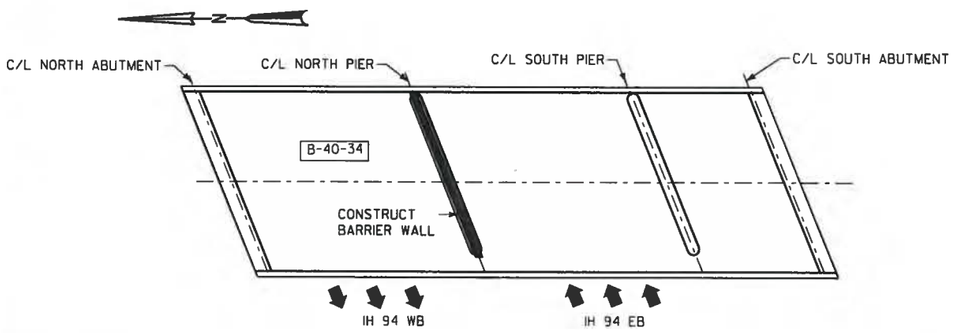
1060-45-70



ELEVATION
(LOOKING NORTH)



PLAN
(NORTH PIER, LOOKING NORTH)



KEY PLAN
EXISTING BRIDGES

* EXISTING PIER DIMENSIONS AND ELEVATIONS ARE PER RECORD PLANS DATED JULY 29, 2005

DESIGN DATA

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY
WALLS & FOOTINGS ..... f'c = 4000 PSI
BAR STEEL REINFORCEMENT,
HIGH STRENGTH, GRADE 60 ...fy = 60,000 PSI

FOUNDATION DATA

MINIMUM SOIL BEARING CAPACITY
CAST-IN-PLACE BARRIER/FILLER WALL = 3000 PSF

LIST OF DRAWINGS

1. PIER BARRIER PLAN & ELEVATION
2. PIER BARRIER WALL DETAILS
3. QUANTITIES & GENERAL NOTES

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER

10/9/2012

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 358-6668

NO.	DATE	REVISION	BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/15/12
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-34

25TH STREET OVER IH-94

COUNTY MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~ MILWAUKEE
DESIGN SPEC. AASHTO LRFD	LOAD HL-93
DESIGNED BY AJA / DESIGN CK'D. MHZ	DRAWN BY AJA / PLANS CK'D. MHZ

PIER BARREIR PLAN & ELEVATION

SHEET 1 OF 3
303

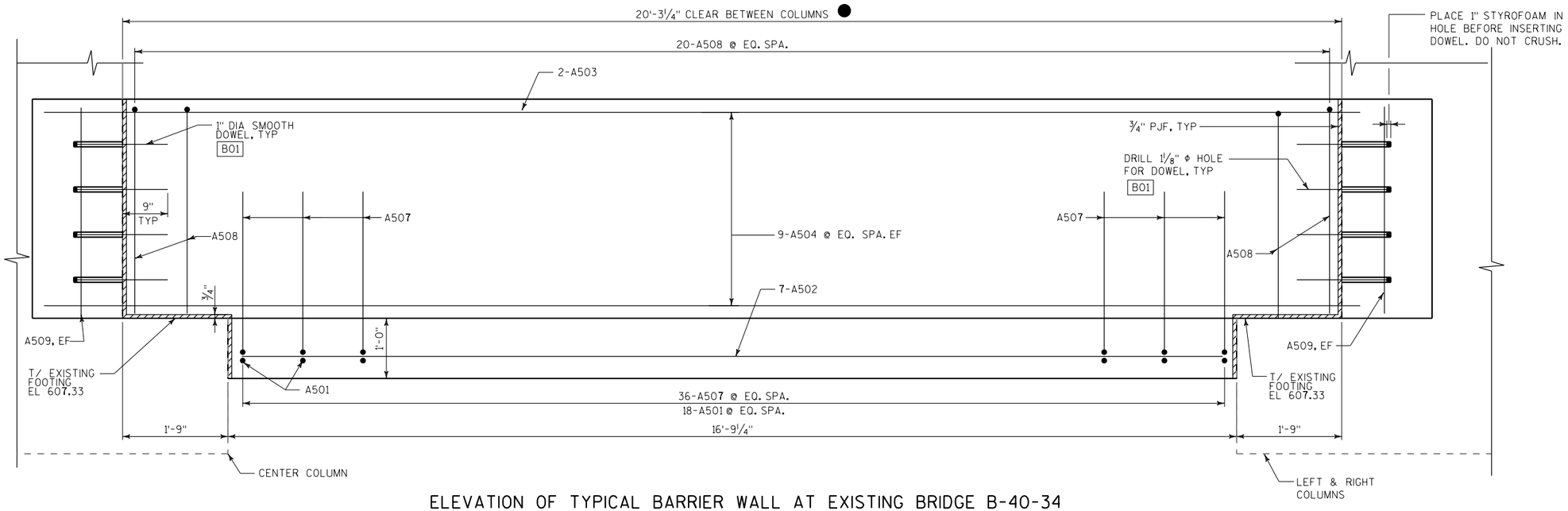
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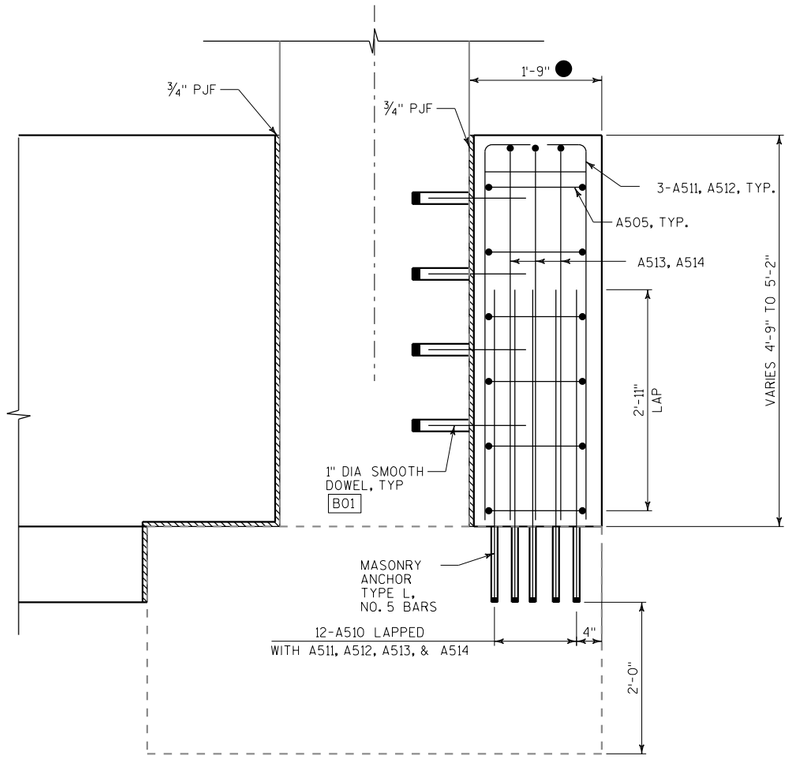
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STATE PROJECT NUMBER
1060-45-70

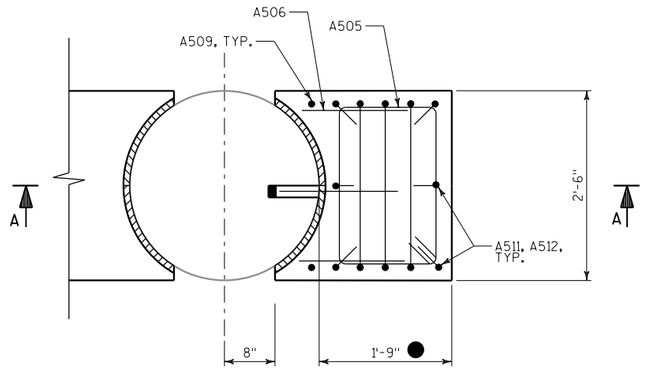


ELEVATION OF TYPICAL BARRIER WALL AT EXISTING BRIDGE B-40-34

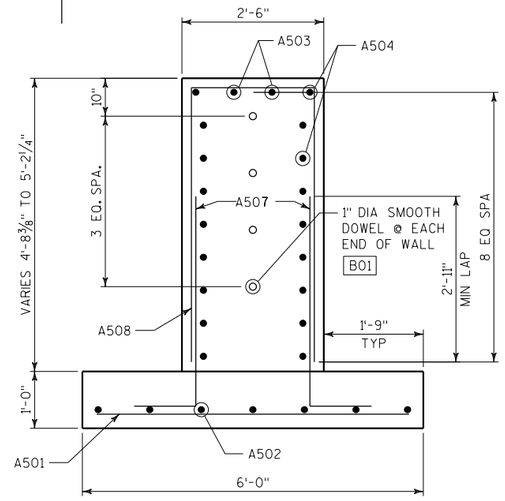
● VERIFY DIMENSIONS IN FIELD



SECTION A-A



PLAN OF BARRIER WALL AT END OF PIER



SECTION OF BARRIER WALL

NOTES

B01 LIGHTLY COAT DOWELS WITH A DEBONDING SUBSTANCE OVER ENTIRE DOWEL LENGTH

PJF PERFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-34

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MR

PIER BARRIER WALL DETAILS

SHEET 2 OF 3
304

FILE=
SCALE =

8

8

STATE PROJECT NUMBER
1060-45-70

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID - ITEM	UNIT	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGE B-40-34	LS	1
416.0620	DRILLED DOWEL BAR	EACH	24
502.0100	CONCRETE MASONRY BRIDGES	CY	30
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2550
	NON BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NGVD DATUM.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

FIELD VERIFY EXISTING DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION OF ANY COMPONENT.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT PIERS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW BARRIER WALL SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE I, II, OR III OR M213.

THESE PLANS ARE FOR EXISTING BRIDGED B-40-34. THIS WORK CONSISTS OF CONSTRUCTING BARRIER WALL INFILL BETWEEN THE COLUMNS AT THE NORTH PIER.

EXISTING STRUCTURE B-40-34 IS A THREE -SPAN CONTINUOUS STEEL GIRDER BRIDGE THAT CARRIES 25TH STREET OVER IH 94.

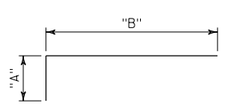
RELOCATE EXISTING ELECTRIC METAL CONDUIT AND BOX.

BILL OF BARS

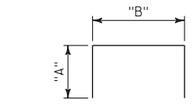
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	-	36	5'-8"			FOOTING - HORIZ
A502	-	14	16'-3"			FOOTING - HORIZ
A503	-	4	19'-10"			BARRIER WALL - HORIZ
A504	-	36	20'-7"			BARRIER WALL - HORIZ
A505	-	12	7'-9"	X		BARRIER WALL - HORIZ
A506	-	24	2'-0"			END BARRIER WALL - HORIZ
A507	-	72	4'-7"	X		BARRIER WALL - VERT
A508	-	40	11'-0"	X		BARRIER WALL - VERT
A509	-	12	4'-7"			BARRIER WALL - VERT
A510	-	24	4'-2"		◑	OUTSIDE COLUMN FOOTING DOWELS
A511	-	6	5'-1"	X		WEST END BARRIER WALL - VERT
A512	-	6	5'-7"	X		EAST END BARRIER WALL - VERT
A513	-	3	10'-7"	X		WEST END BARRIER WALL - VERT
A514	-	3	11'-7"	X		EAST END BARRIER WALL - VERT

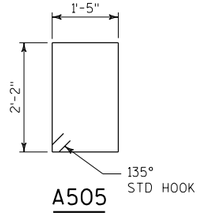
◑ MASONRY ANCHOR TYPE L, NO. 5 BARS



MARK	"A"	"B"
A507	10"	3'-10"
A511	10"	4'-4"
A512	10"	4'-10"



MARK	"A"	"B"
A508	4'-3" TO 4'-9"	2'-2"
A513	4'-4"	2'-2"
A514	4'-10"	2'-2"



A505

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-34

CONST. SPEC. 2012 | DRAWN BY AJA | PLANS CK'D. MR

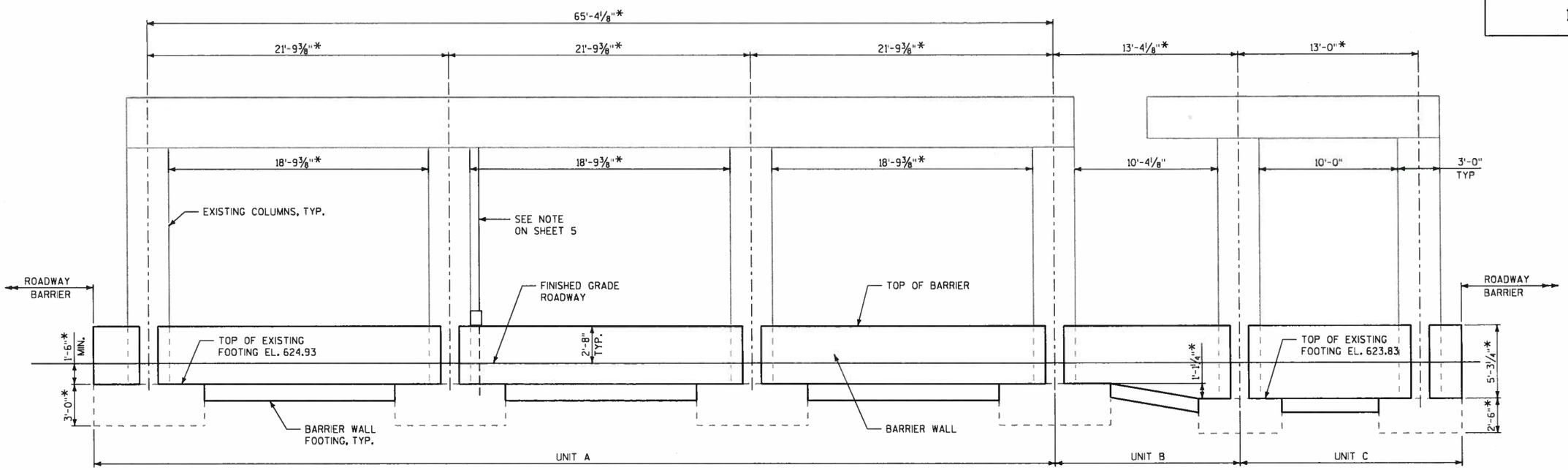
QUANTITIES & GENERAL NOTES

SHEET 3 OF 3

305

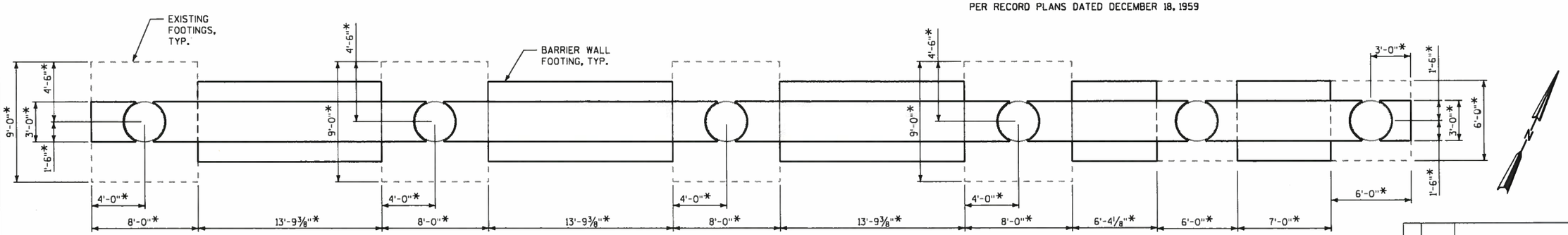
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STATE PROJECT NUMBER
1060-45-70

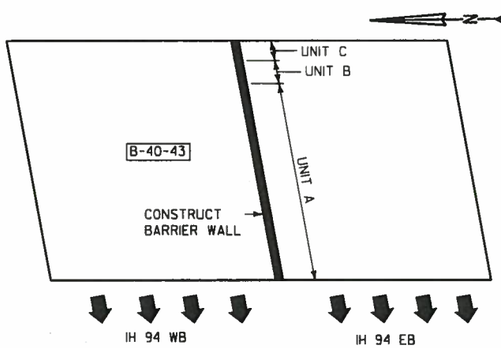


ELEVATION
(LOOKING NORTH)

* EXISTING PIER DIMENSIONS AND ELEVATIONS PER RECORD PLANS DATED DECEMBER 18, 1959



PLAN



KEY PLAN
EXISTING BRIDGES

DESIGN DATA

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY
WALLS & FOOTINGS ..... f'c = 4000 PSI
BAR STEEL REINFORCEMENT,
HIGH STRENGTH, GRADE 60 ...fy = 60,000 PSI

FOUNDATION DATA

MINIMUM SOIL BEARING CAPACITY
CAST-IN-PLACE BARRIER/FILLER WALL = 3000 PSF

LIST OF DRAWINGS

1. PIER BARRIER PLAN & ELEVATION
2. PIER BARRIER WALL DETAILS - UNIT A
3. PIER BARRIER WALL DETAILS - UNIT B
4. PIER BARRIER WALL DETAILS - UNIT C
5. QUANTITIES & GENERAL NOTES

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
Mohammed H. Zagloul 10/9/2012

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 351-6668

NO.	DATE	REVISION	BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR — 11/15/12
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-43

27TH STREET OVER IH 94

COUNTY	TOWN/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.	LOAD
AASHTO LRFD	HL-93

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AJA	MHZ	AJA	MHZ

PIER BARRIER PLAN & ELEVATION

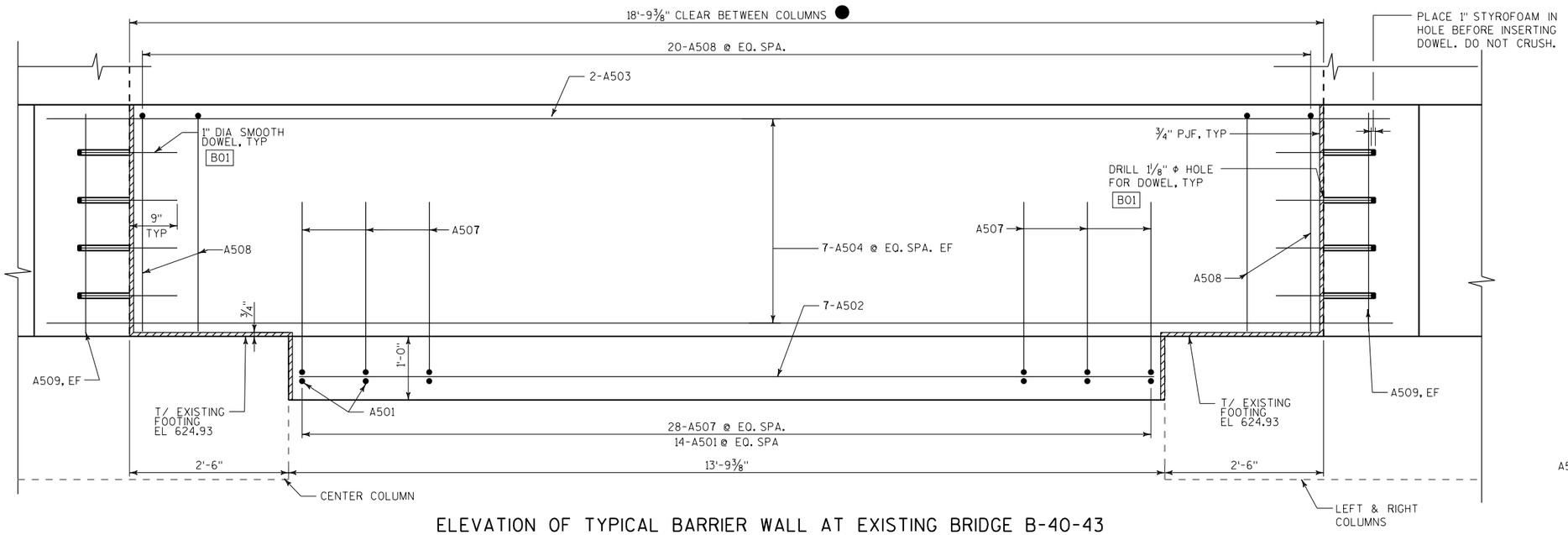
SHEET 1 OF 5
306

SCALE =

I.D.

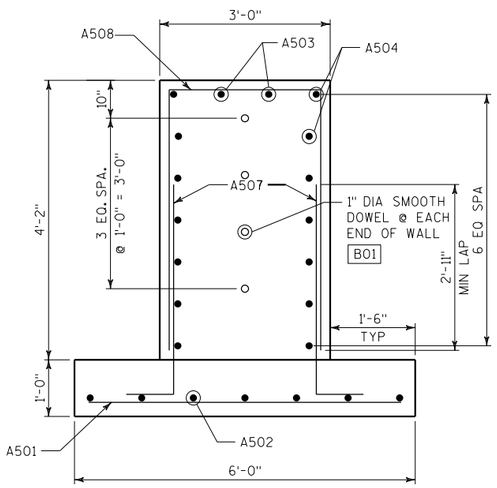
DATE:

STATE PROJECT NUMBER
1060-45-70

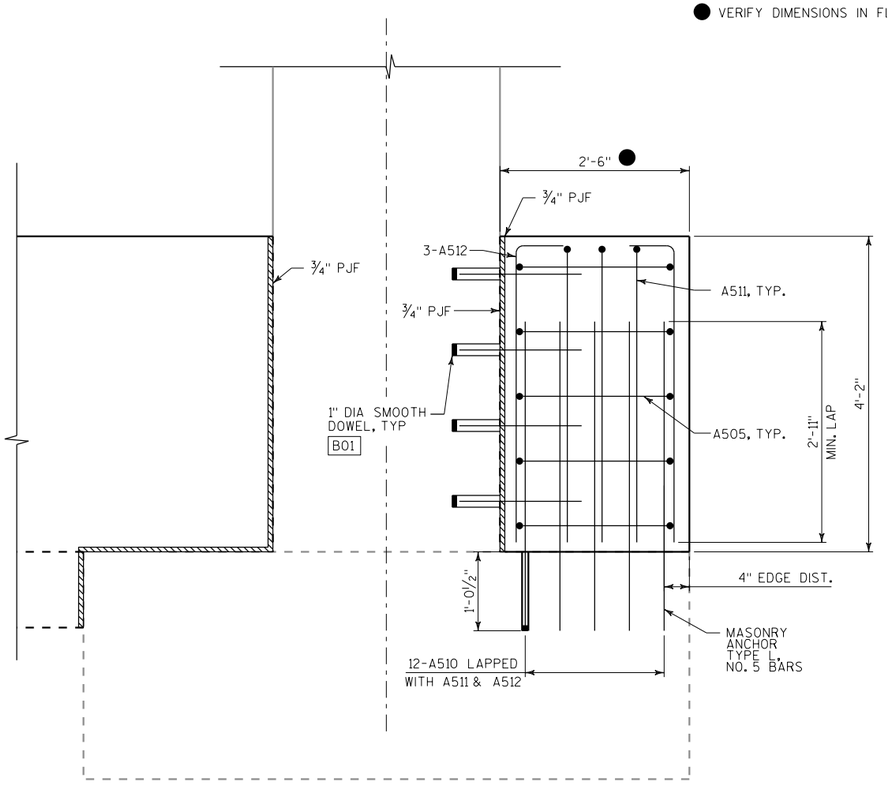


ELEVATION OF TYPICAL BARRIER WALL AT EXISTING BRIDGE B-40-43

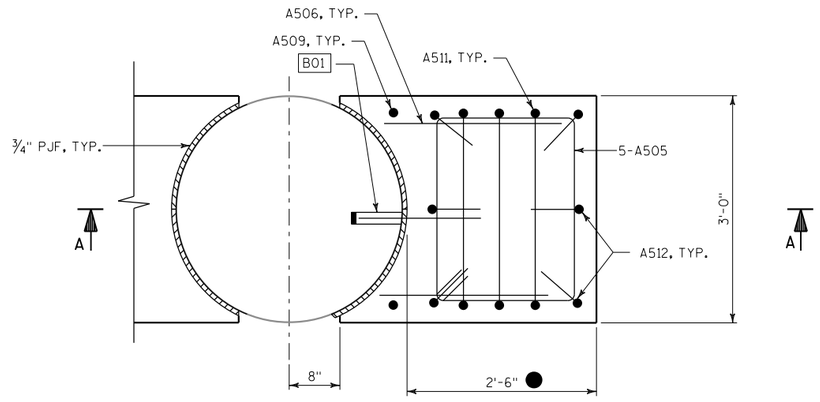
● VERIFY DIMENSIONS IN FIELD



SECTION OF BARRIER WALL



SECTION A-A



PLAN OF BARRIER WALL AT END OF PIER

NOTES

B01 LIGHTLY COAT DOWELS WITH A DEBONDING SUBSTANCE OVER ENTIRE DOWEL LENGTH. MINIMUM 4 DOWELS USED AT EACH COLUMN FACE.

PJF PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-43

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

PIER BARRIER WALL DETAILS - UNIT A

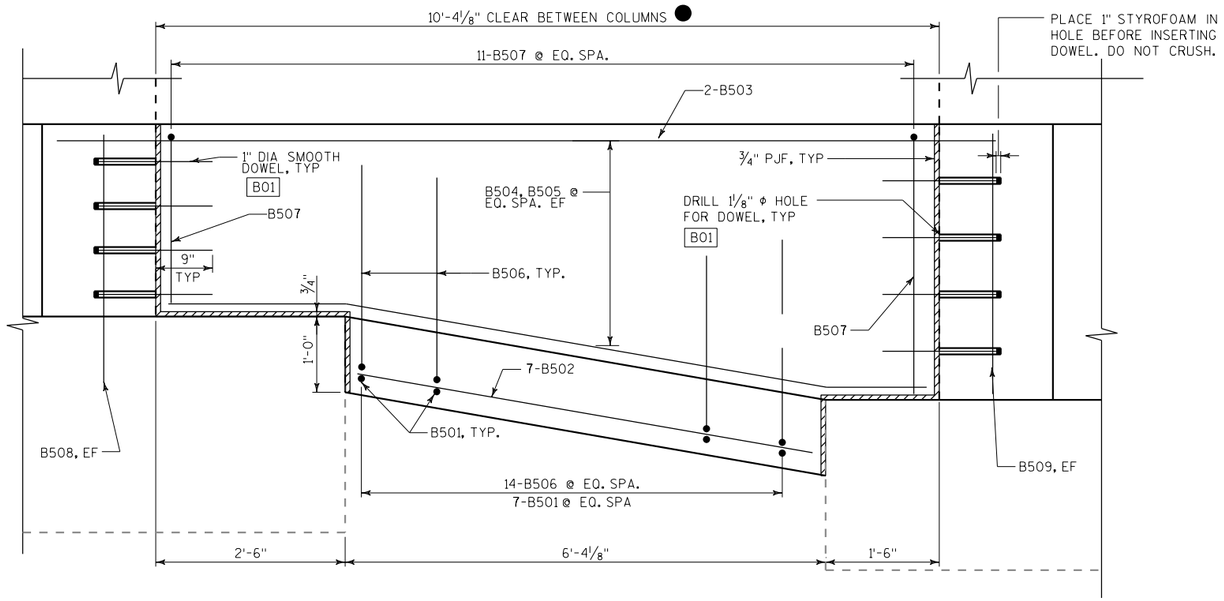
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307

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SCALE =

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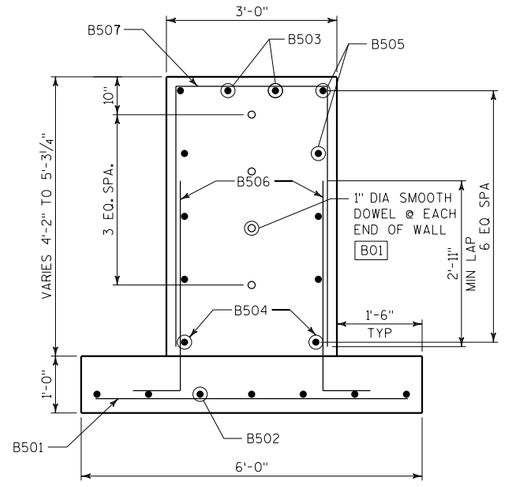
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STATE PROJECT NUMBER
1060-45-70



ELEVATION OF TYPICAL BARRIER WALL AT EXISTING BRIDGE B-40-43

● VERIFY DIMENSIONS IN FIELD



SECTION OF BARRIER WALL

NOTES

B01 LIGHTLY COAT DOWELS WITH A DEBONDING SUBSTANCE OVER ENTIRE DOWEL LENGTH. MINIMUM 4 DOWELS USED AT EACH COLUMN FACE.

PJF PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-43

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

PIER BARRIER WALL DETAILS - UNIT B

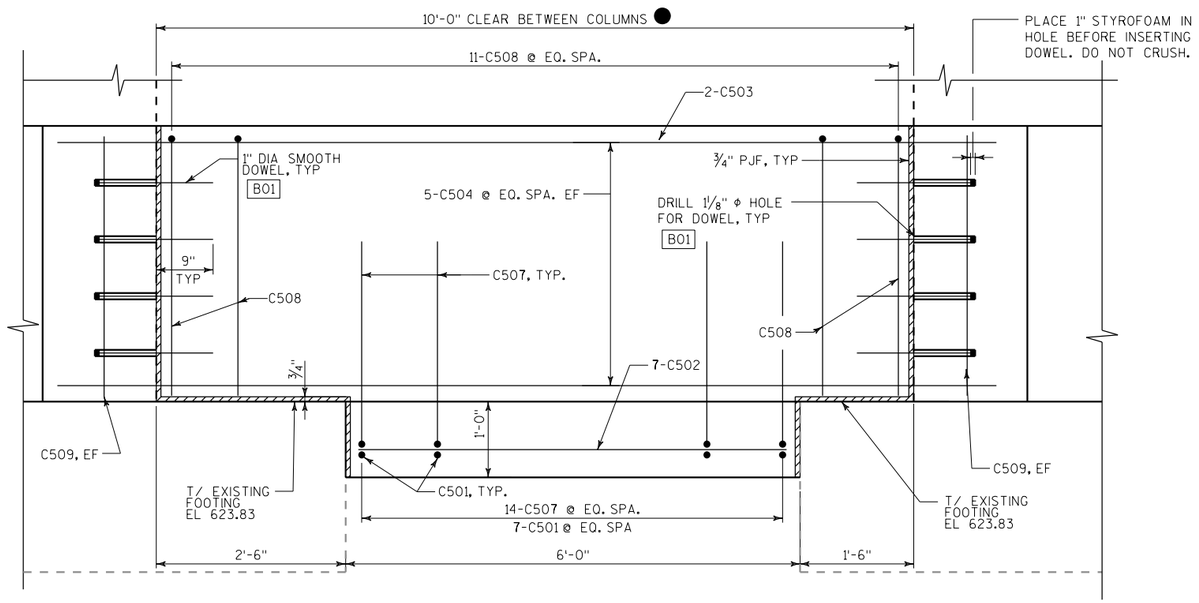
SHEET 3 OF 5
308

FILE=
SCALE =

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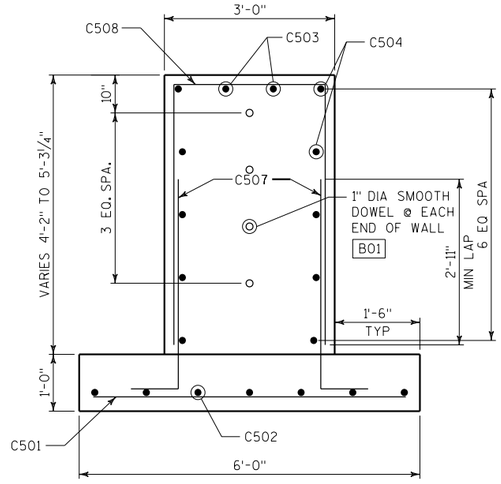
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STATE PROJECT NUMBER
1060-45-70

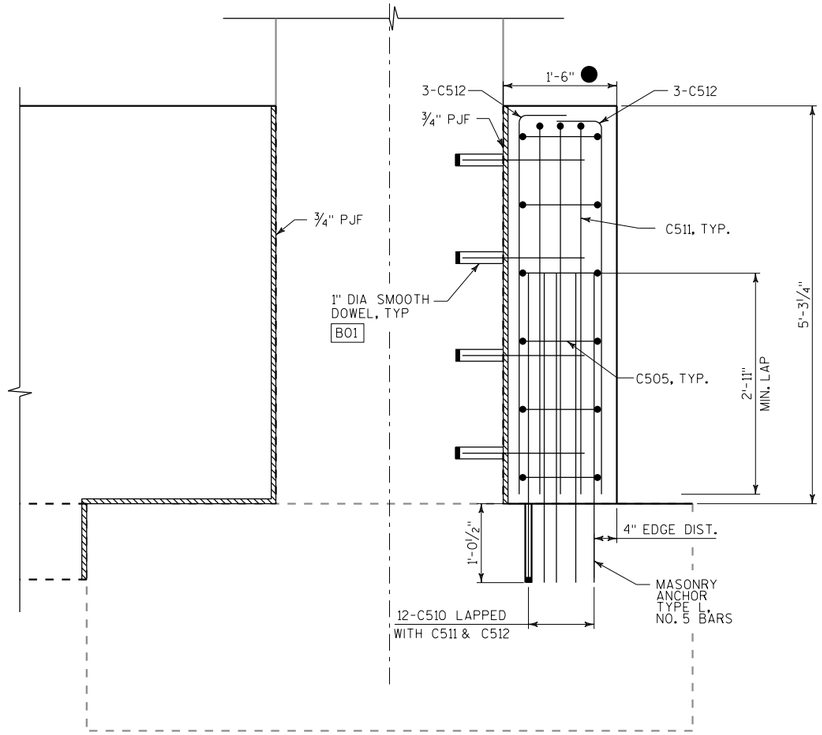


ELEVATION OF TYPICAL BARRIER WALL AT EXISTING BRIDGE B-40-43

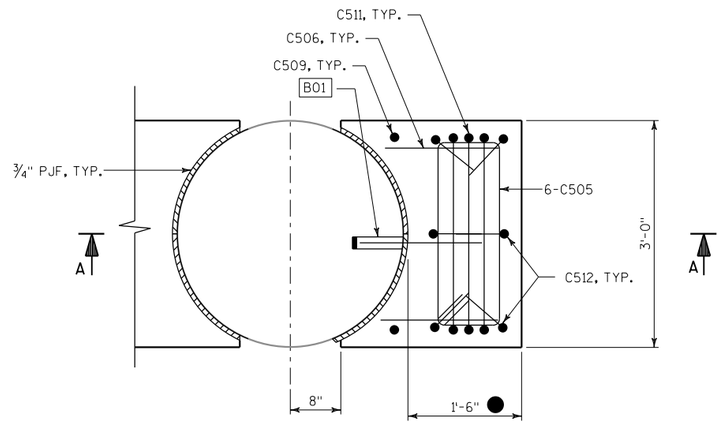
● VERIFY DIMENSIONS IN FIELD



SECTION OF BARRIER WALL



SECTION A-A



PLAN OF BARRIER WALL AT END OF PIER

NOTES

B01 LIGHTLY COAT DOWELS WITH A DEBONDING SUBSTANCE OVER ENTIRE DOWEL LENGTH. MINIMUM 4 DOWELS USED AT EACH COLUMN FACE.

PJF PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-43

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

PIER BARRIER WALL DETAILS - UNIT C

SHEET 4 OF 5
309

FILE=
SCALE =

8

8

STATE PROJECT NUMBER
1060-45-70

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID - ITEM	UNIT	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGE B-40-43	LS	1
416.0620	DRILLED DOWEL BAR	EACH	48
502.0100	CONCRETE MASONRY BRIDGES	CY	51.49
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4040
	NON BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NGVD DATUM.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

FIELD VERIFY EXISTING DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION OF ANY COMPONENT.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT PIERS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW BARRIER WALL SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE I, II, OR III OR M213.

THESE PLANS ARE FOR EXISTING BRIDGED B-40-43. THIS WORK CONSISTS OF CONSTRUCTING BARRIER WALL INFILL BETWEEN THE COLUMNS AT PIER.

EXISTING STRUCTURE B-40-43 IS A TWO-SPAN STEEL PLATE GIRDER BRIDGE THAT CARRIES N. 27TH ST. OVER IH 94.

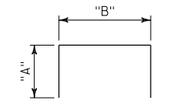
RELOCATE EXISTING ELECTRIC METAL CONDUIT AND BOX.

BILL OF BARS - UNIT A

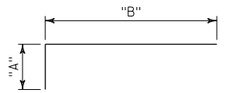
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	-	42	5'-8"			FOOTING - HORIZ
A502	-	21	13'-4"			FOOTING - HORIZ
A503	-	6	18'-5"			BARRIER WALL - HORIZ
A504	-	42	19'-5"			BARRIER WALL - HORIZ
A505	-	10	10'-7"	X		BARRIER WALL - HORIZ
A506	-	20	3'-0"			END BARRIER WALL - HORIZ
A507	-	84	4'-6"	X		BARRIER WALL - VERT
A508	-	60	9'-11"	X		BARRIER WALL - VERT
A509	-	16	3'-9"			BARRIER WALL - VERT
A510	-	20	4'-2"		◑	OUTSIDE COLUMN FOOTING DOWELS
A511	-	6	9'-11"	X		END BARRIER WALL - VERT
A512	-	12	4'-6"	X		END BARRIER WALL - VERT

◑ MASONRY ANCHOR TYPE L, NO. 5 BARS

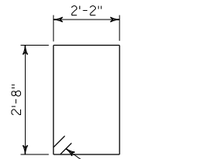
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE



MARK	"A"	"B"
A508	3'-9"	2'-8"
A511	3'-9"	2'-8"



MARK	"A"	"B"
A507	10"	3'-10"
A512	10"	3'-9"



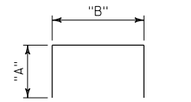
A505

BILL OF BARS - UNIT C

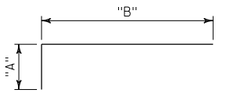
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C501	-	7	5'-8"			FOOTING - HORIZ
C502	-	7	5'-8"			FOOTING - HORIZ
C503	-	2	9'-8"			BARRIER WALL - HORIZ
C504	-	10	10'-5"			BARRIER WALL - HORIZ
C505	-	6	7'-7"	X		BARRIER WALL - HORIZ
C506	-	12	1'-6"			END BARRIER WALL - HORIZ
C507	-	14	4'-7"	X		BARRIER WALL - VERT
C508	-	11	12'-3"	X		BARRIER WALL - VERT
C509	-	6	4'-11"			BARRIER WALL - VERT
C510	-	12	4'-2"		◑	OUTSIDE COLUMN FOOTING DOWELS
C511	-	3	12'-3"	X		END BARRIER WALL - VERT
C512	-	6	5'-8"	X		END BARRIER WALL - VERT

◑ MASONRY ANCHOR TYPE L, NO. 5 BARS

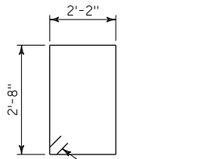
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE



MARK	"A"	"B"
C508	3'-9"	2'-8"
C511	4'-11"	2'-8"



MARK	"A"	"B"
C507	10"	3'-10"
C512	10"	4'-11"



C505

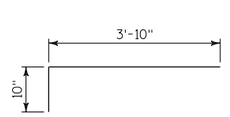
BILL OF BARS - UNIT B

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	-	7	5'-8"	-	-	FOOTING - HORIZ
B502	-	7	6'-1"	-	-	FOOTING - HORIZ
B503	-	2	10'-0"	-	-	BARRIER WALL - HORIZ
B504	-	2	11'-1"	X	-	BARRIER WALL - HORIZ
B505	-	8	11'-4"	-	-	BARRIER WALL - VERT
B506	-	14	4'-8"	X	-	BARRIER WALL - VERT
B507	-	11	11'-2"	X	X	BARRIER WALL - VERT
B508	-	2	3'-10"	-	-	BARRIER WALL - VERT
B509	-	2	4'-11"	-	-	BARRIER WALL - VERT

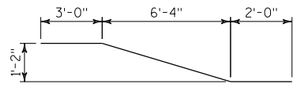
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR SERIES TABLE

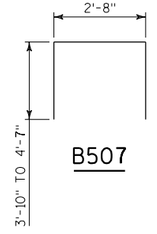
MARK	No. REQUIRED	LENGTH
B507	1 SERIES OF 11	10'-1" TO 12'-3"



B506



B504



B507

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-43

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

QUANTITIES & GENERAL NOTES

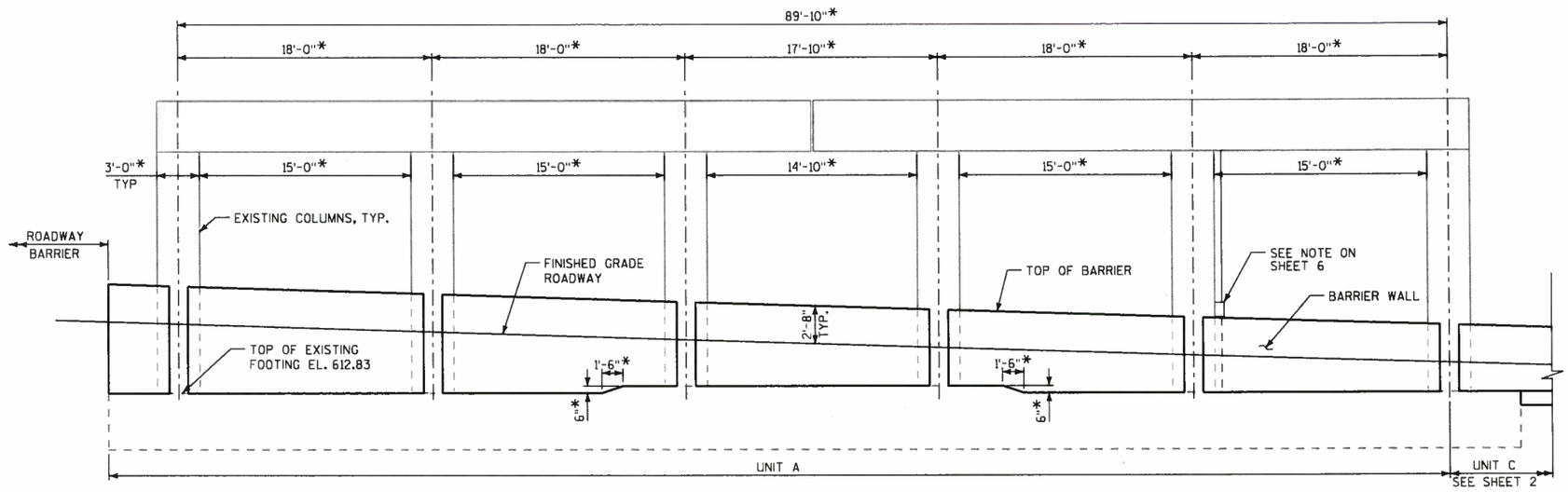
SHEET 5 OF 5
310

FILE=
SCALE =

8

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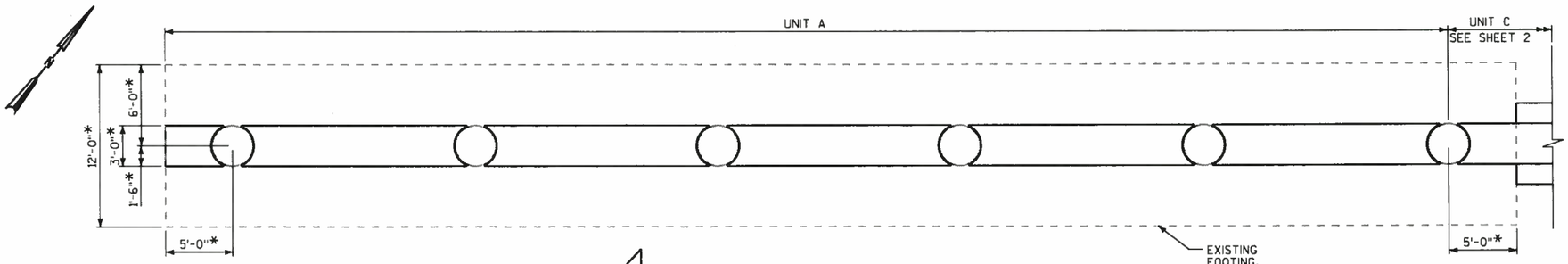
STATE PROJECT NUMBER
1060-45-70



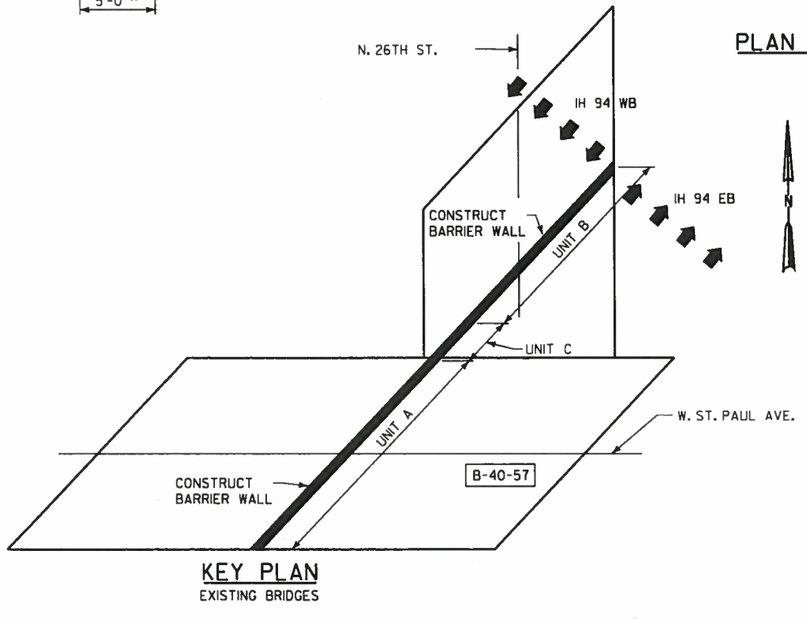
ELEVATION - UNIT A

(LOOKING NORTH)

* EXISTING PIER DIMENSIONS AND ELEVATIONS PER RECORD PLANS DATED JULY 29, 2005



PLAN - UNIT A



KEY PLAN

EXISTING BRIDGES

DESIGN DATA

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY
WALLS & FOOTINGS ..... f'c = 4000 PSI
BAR STEEL REINFORCEMENT,
HIGH STRENGTH, GRADE 60 ...fy = 60,000 PSI

FOUNDATION DATA

MINIMUM SOIL BEARING CAPACITY
CAST-IN-PLACE BARRIER/FILLER WALL = 3000 PSF

LIST OF DRAWINGS

1. PIER BARRIER PLAN & ELEVATION
2. PIER BARRIER PLAN & ELEVATION-2
3. PIER BARRIER WALL DETAILS - UNIT A
4. PIER BARRIER WALL DETAILS - UNIT B
5. PIER BARRIER WALL DETAILS - UNIT C
6. QUANTITIES & GENERAL NOTES

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER

Mohammed H. Zagloul 10/9/2012

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 358-6668

NO.	DATE	REVISION	BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/15/12
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-57

ST. PAUL AVE. - N 26TH ST. OVER IH 94

COUNTY		~~TOWN~~/CITY/~~VILLAGE~~	
MILWAUKEE		MILWAUKEE	
DESIGN SPEC. AASHTO LRFD			LOAD HL-93
DESIGNED BY AJA	DESIGN CK'D. MHZ	DRAWN BY AJA	PLANS CK'D. MHZ

PIER BARREIR PLAN & ELEVATION

SHEET 1 OF 6
311

LD

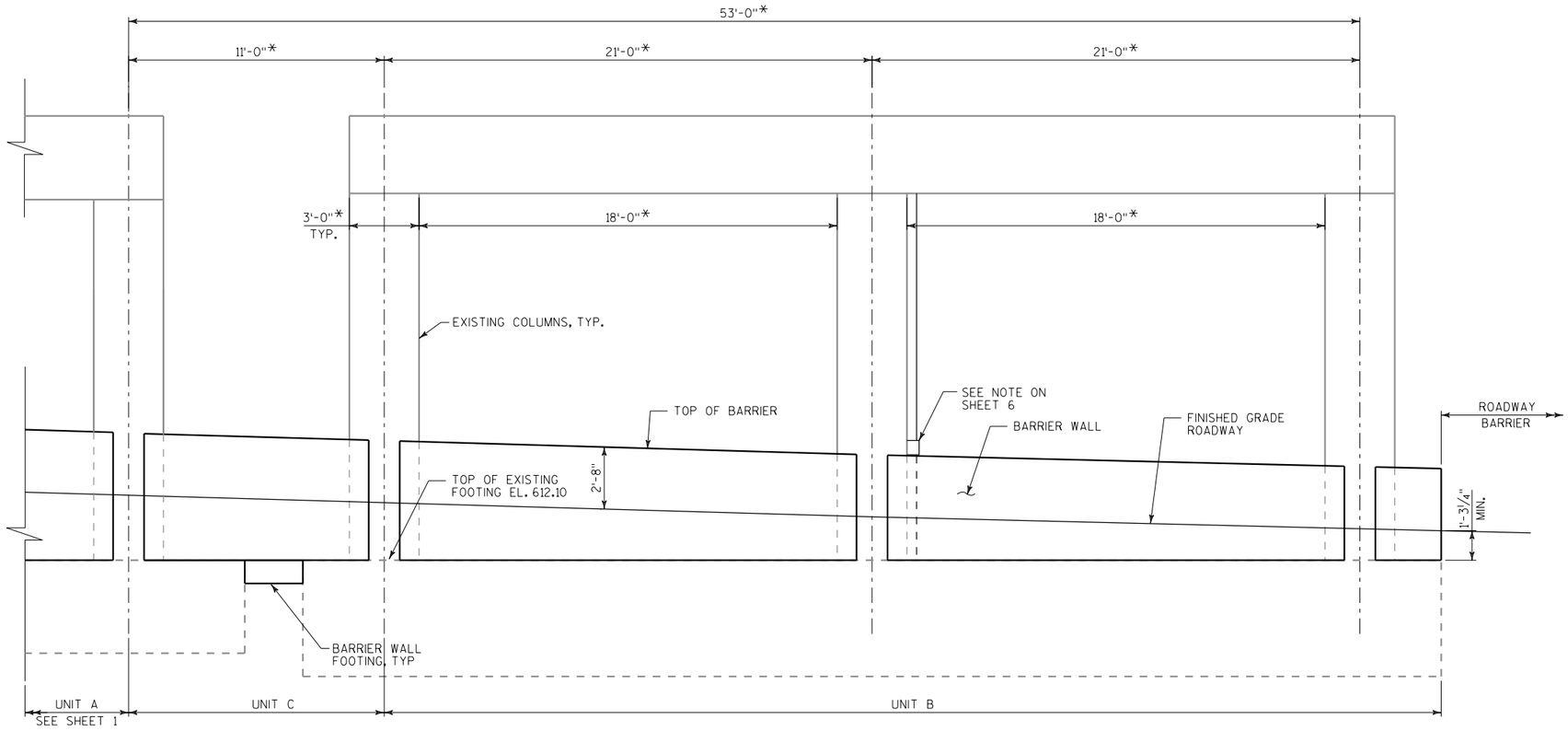
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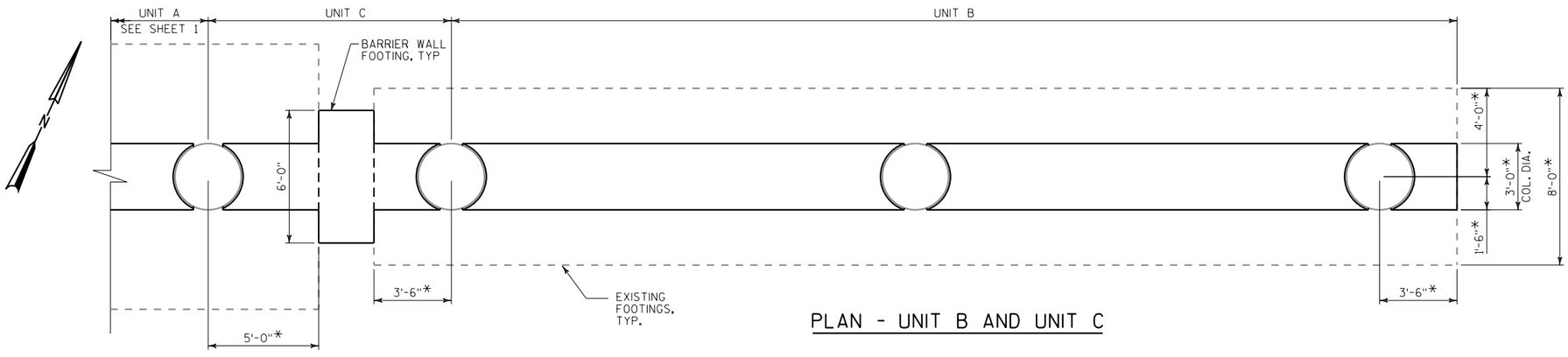
STATE PROJECT NUMBER
1060-45-70



ELEVATION - UNIT B AND UNIT C

(LOOKING NORTH)

* EXISTING PIER DIMENSIONS AND ELEVATIONS PER RECORD PLANS DATED JULY 29, 2005



PLAN - UNIT B AND UNIT C

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-57

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

PIER BARREIR PLAN & ELEVATION - 2

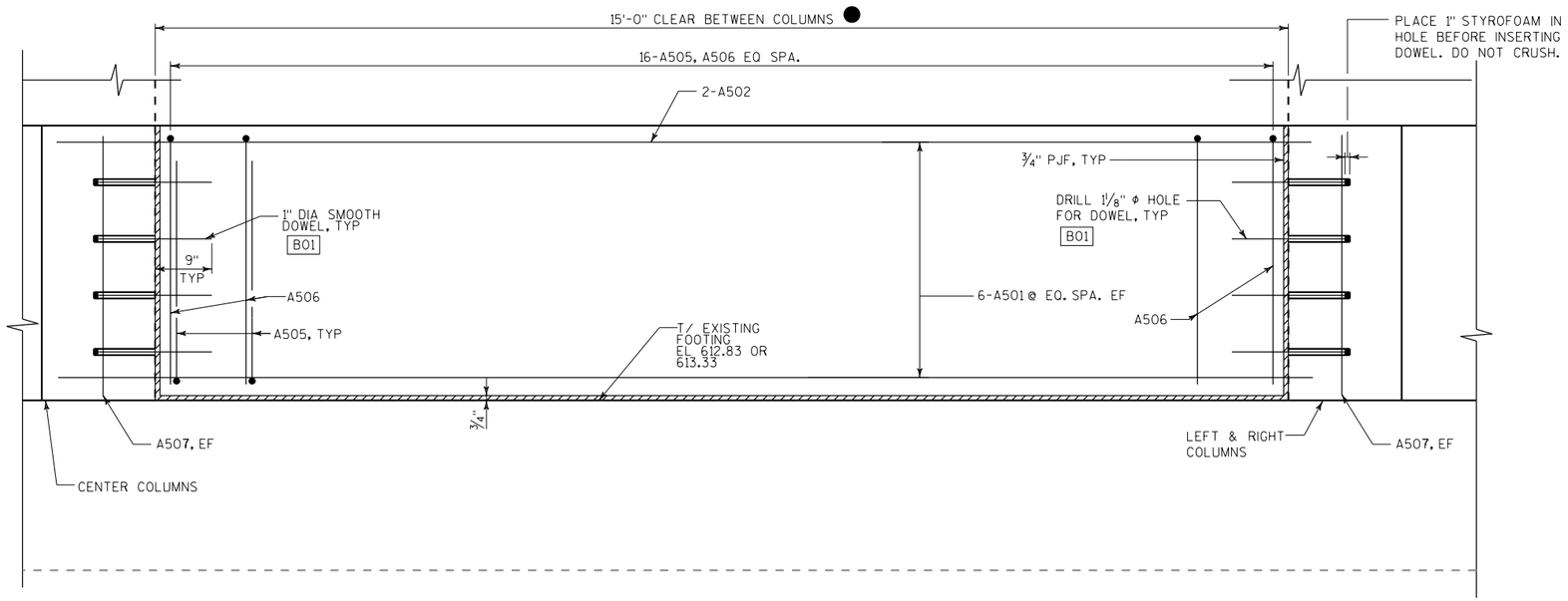
SHEET 2 OF 6

312

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SCALE =

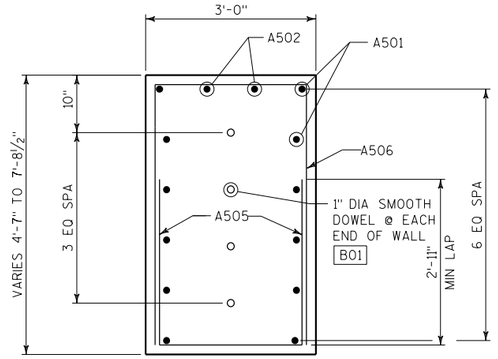
STATE PROJECT NUMBER

1060-45-70

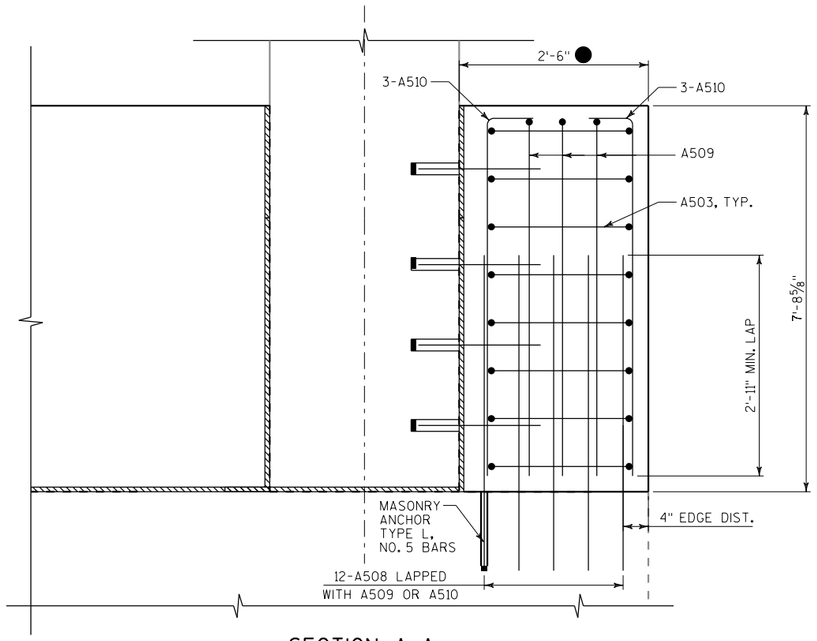


ELEVATION OF TYPICAL BARRIER WALL AT EXISTING BRIDGE B-40-57

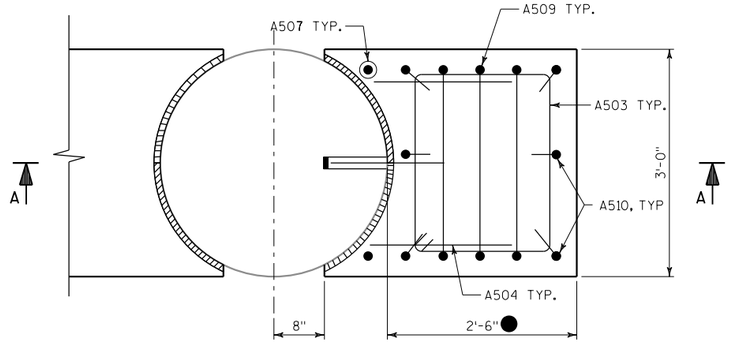
● VERIFY DIMENSIONS IN FIELD



SECTION OF BARRIER WALL



SECTION A-A



PLAN OF BARRIER WALL AT END OF PIER

NOTES

B01 LIGHTLY COAT DOWELS WITH A DEBONDING SUBSTANCE OVER ENTIRE DOWEL LENGTH

PJF PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-57

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

PIER BARRIER WALL DETAILS - UNIT A

SHEET 3 OF 6

313

8

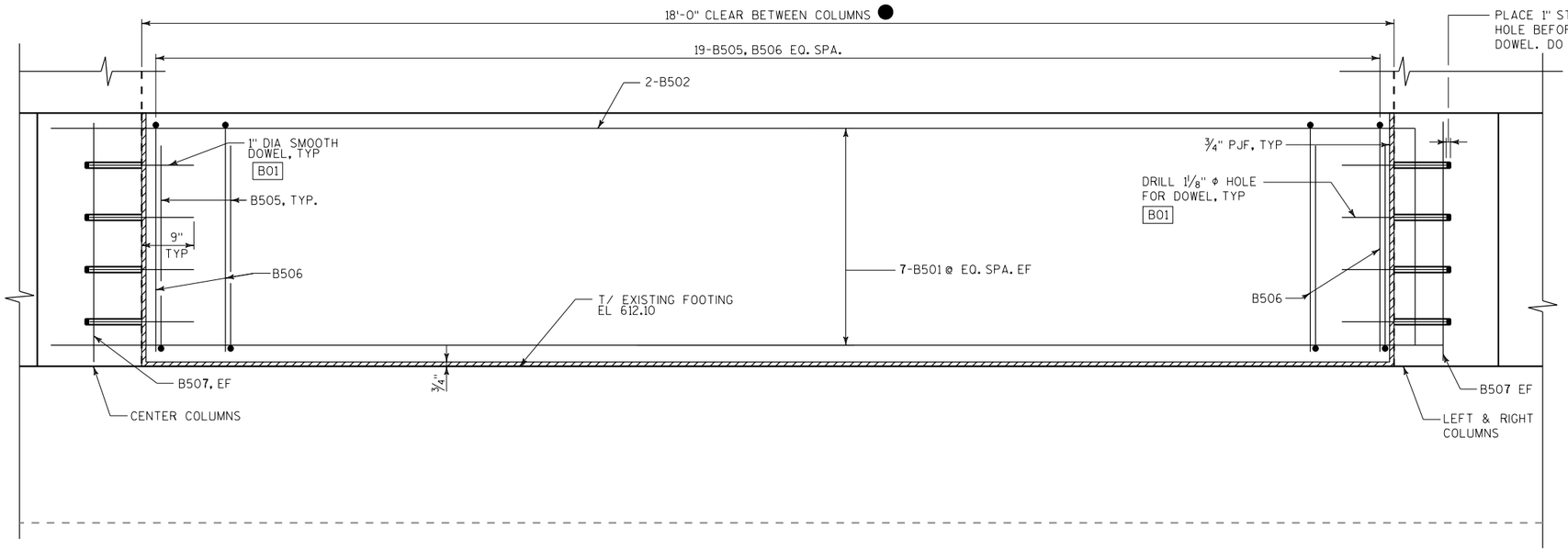
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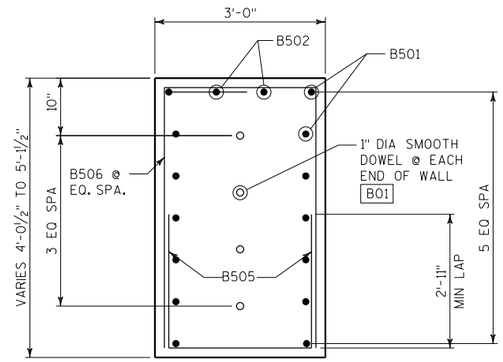
STATE PROJECT NUMBER

1060-45-70

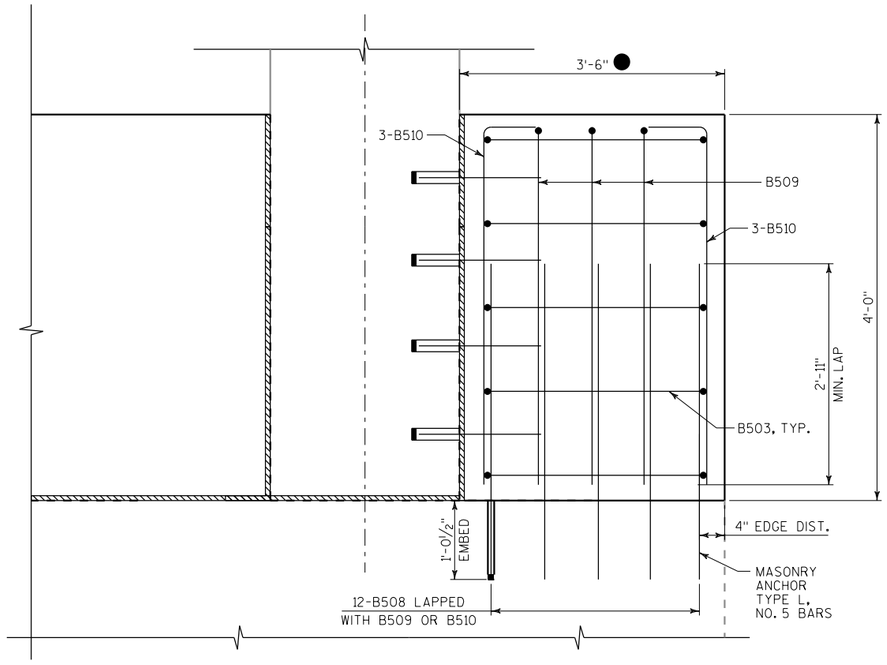


ELEVATION OF TYPICAL BARRIER WALL AT EXISTING BRIDGE B-40-57

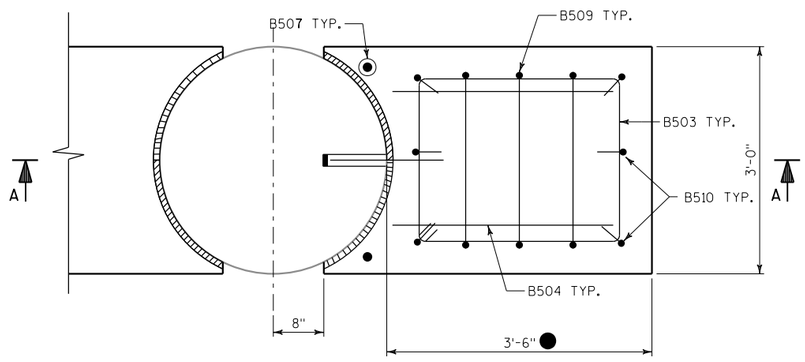
● VERIFY DIMENSIONS IN FIELD



SECTION OF BARRIER WALL



SECTION A-A



PLAN OF BARRIER WALL AT END OF PIER

NOTES

B01 LIGHTLY COAT DOWELS WITH A DEBONDING SUBSTANCE OVER ENTIRE DOWEL LENGTH. MINIMUM 4 DOWLES USED @ EACH COLUMN FACE

PJF PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-57

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2012	AJA	MHZ

PIER BARRIER WALL DETAILS - UNIT B

SHEET 4 OF 6

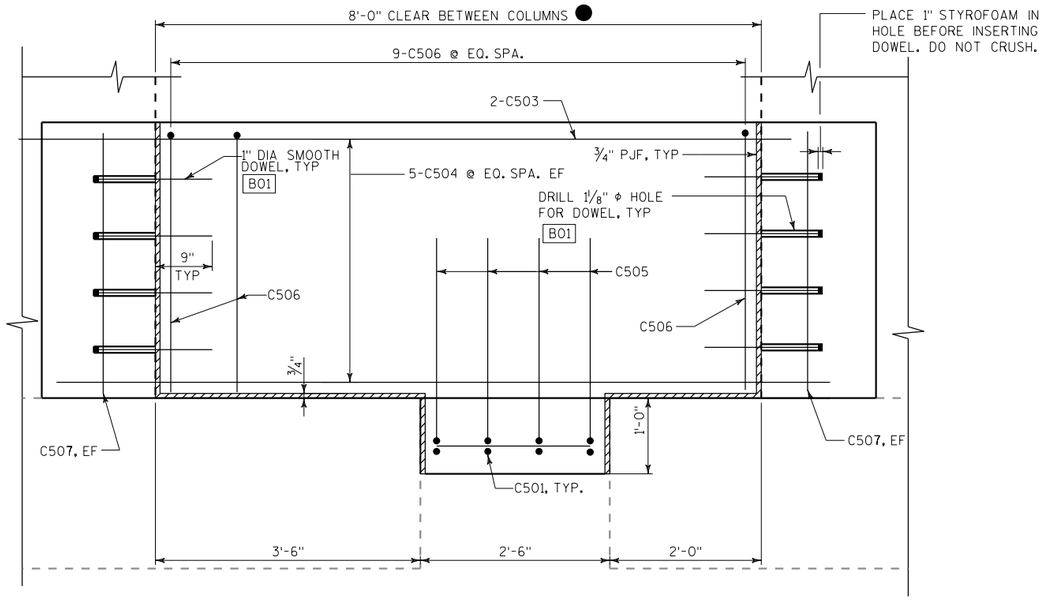
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SCALE =

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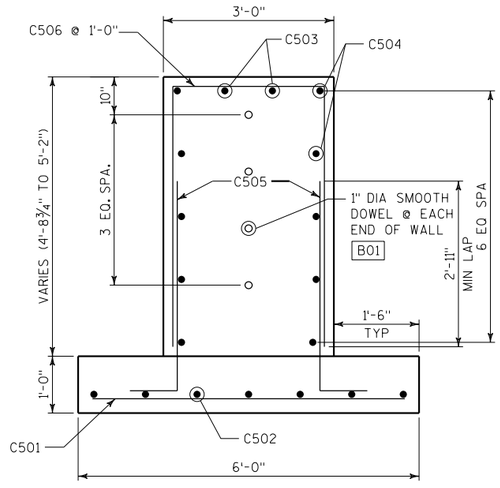
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STATE PROJECT NUMBER
1060-45-70



ELEVATION OF TYPICAL BARRIER WALL AT EXISTING BRIDGE B-40-57

● VERIFY DIMENSIONS IN FIELD



SECTION OF BARRIER WALL BETWEEN FOOTINGS

NOTES

B01 LIGHTLY COAT DOWELS WITH A DEBONDING SUBSTANCE OVER ENTIRE DOWEL LENGTH. MINIMUM 4 DOWELS USED AT EACH COLUMN FACE.

PJF PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-57

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

PIER BARRIER WALL DETAILS - UNIT C

SHEET 5 OF 6

315

FILE=
SCALE =

STATE PROJECT NUMBER
1060-45-70

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID - ITEM	UNIT	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGE B-40-57	LS	1
416.0620	DRILLED DOWEL BAR	EACH	72
502.0100	CONCRETE MASONRY BRIDGES	CY	81
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	5370
	NON BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NGVD DATUM.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

FIELD VERIFY EXISTING DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION OF ANY COMPONENT.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT PIERS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW BARRIER WALL SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE I, II, OR III OR M213.

THESE PLANS ARE FOR EXISTING BRIDGE B-40-57. THIS WORK CONSISTS OF CONSTRUCTING BARRIER WALL INFILL BETWEEN THE COLUMNS AT PIERS BELOW W. ST. PAUL AVE. AND N. 26TH ST.

EXISTING STRUCTURE B-40-57 IS A 2-SPAN CONTINUOUS STEEL GIRDER BRIDGE THAT CARRIES W. ST. PAUL AVE OVER IH 94.

RELOCATE EXISTING ELECTRIC METAL CONDUIT AND BOX.

BILL OF BARS - UNIT A

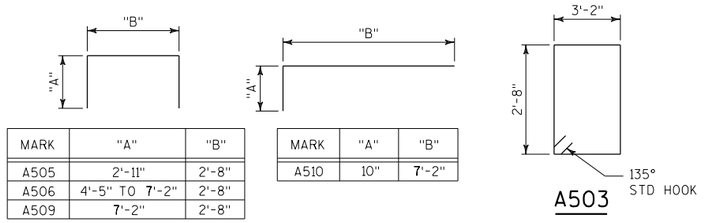
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	-	60	15'-6"	-	-	BARRIER WALL - HORIZ
A502	-	10	14'-6"	-	-	BARRIER WALL - HORIZ
A503	-	8	12'-2"	X	-	END BARRIER WALL - HORIZ
A504	-	16	3'-0"	-	-	END BARRIER WALL - HORIZ
A505	-	80	8'-3"	X	-	BARRIER WALL - VERT
A506	-	80	14'-0"	X	X	BARRIER WALL - VERT
A507	-	24	5'-9"	-	X	BARRIER WALL - VERT
A508	-	24	4'-2"	-	◑	OUTSIDE COLUMN FOOTING DOWELS
A509	-	3	16'-9"	X	-	WEST END BARRIER WALL - VERT
A510	-	6	7'-11"	X	-	WEST END BARRIER WALL - VERT

◑ MASONRY ANCHOR TYPE L, NO. 5 BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR SERIES TABLE

MARK	No. REQUIRED	LENGTH
A506	1 SERIES OF 80	11'-3" TO 16'-9"
A507	2 SERIES OF 12	4'-3" TO 7'-3"



MARK	"A"	"B"
A505	2'-11"	2'-8"
A506	4'-5" TO 7'-2"	2'-8"
A509	7'-2"	2'-8"

MARK	"A"	"B"
A510	10"	7'-2"

A503

BILL OF BARS - UNIT B

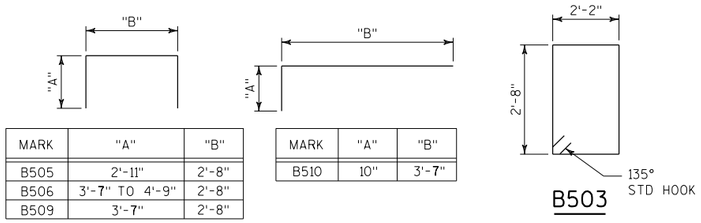
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	-	28	18'-4"	-	-	BARRIER WALL - HORIZ
B502	-	4	17'-6"	-	-	BARRIER WALL - HORIZ
B503	-	5	10'-3"	X	-	END BARRIER WALL - HORIZ
B504	-	10	4'-0"	-	-	END BARRIER WALL - HORIZ
B505	-	38	8'-3"	X	-	BARRIER WALL - VERT
B506	-	38	10'-9"	X	X	BARRIER WALL - VERT
B507	-	10	4'-2"	-	X	BARRIER WALL - VERT
B508	-	12	4'-2"	-	◑	OUTSIDE COLUMN FOOTING DOWELS
B509	-	3	9'-7"	X	-	EAST END BARRIER WALL - VERT
B510	-	6	4'-4"	X	-	EAST END BARRIER WALL - VERT

◑ MASONRY ANCHOR TYPE L, NO. 5 BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR SERIES TABLE

MARK	No. REQUIRED	LENGTH
B506	1 SERIES OF 38	9'-7" TO 11'-11"
B507	2 SERIES OF 6	3'-7" TO 4'-9"



MARK	"A"	"B"
B505	2'-11"	2'-8"
B506	3'-7" TO 4'-9"	2'-8"
B509	3'-7"	2'-8"

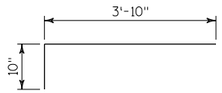
MARK	"A"	"B"
B510	10"	3'-7"

B503

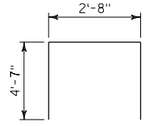
BILL OF BARS - UNIT C

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C501	-	4	5'-8"	-	-	FOOTING - HORIZ
C502	-	7	2'-0"	-	-	FOOTING - HORIZ
C503	-	2	7'-8"	-	-	BARRIER WALL - HORIZ
C504	-	10	8'-0"	-	-	BARRIER WALL - HORIZ
C505	-	8	4'-7"	X	-	BARRIER WALL - VERT
C506	-	9	11'-7"	X	-	BARRIER WALL - VERT
C507	-	4	4'-6"	-	-	BARRIER WALL - VERT

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE



C505



C506

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-57

CONST. SPEC. 2012	DRAWN BY AJA	PLANS CK'D. MHZ

QUANTITIES & GENERAL NOTES

SHEET 6 OF 6

316

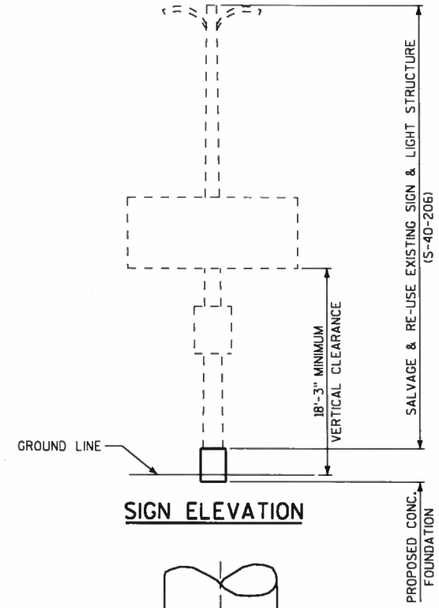
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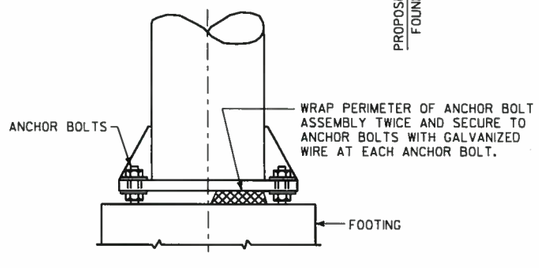
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STATE PROJECT NUMBER

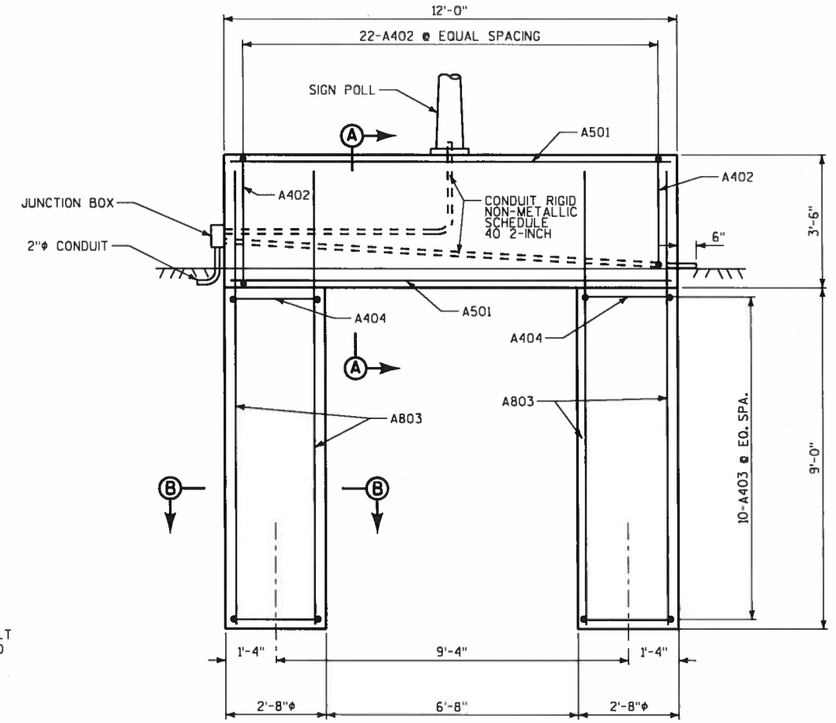
1060-45-70



SIGN ELEVATION



RODENT SCREEN



ELEVATION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE CONSIDERED INCIDENTAL TO SIGN BRIDGES.

CATWALKS ARE NOT REQUIRED.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

SIGN BRIDGE STRUCTURES SHALL BE GROUNDED PER SDD "SIGN BRIDGE STRUCTURE GROUNDING" AND THE DETAILS ON SHEET 5.

VERIFY TOP OF FOOTING ELEVATION AND EXISTING GROUND ELEVATION TO MEET MINIMUM VERTICAL CLEARANCE.

CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH AND JUNCTION BOX SHALL BE INCIDENTAL TO BID ITEM 636.0100 "SIGN SUPPORTS CONCRETE MASONRY".

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-40-206	135 SF	7.5 FT

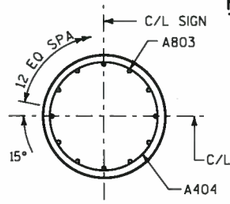
DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS
WIND VELOCITY - 90 MPH (3-SECOND WIND GUST) TO SIGN AREA & EXPOSED MEMBERS

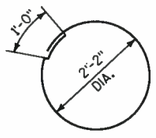
WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½WIND	133

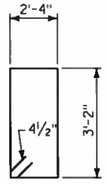
NOTE: WIND LOAD SHALL NOT BE LESS THAN 25 PSF.



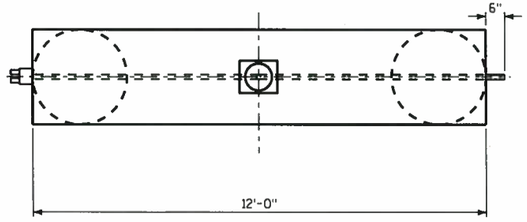
SECTION B-B



A404

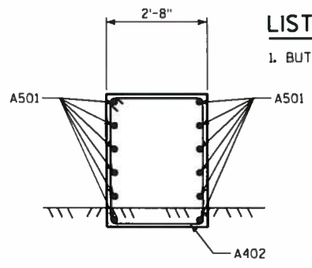


A402
(STIRRUP)



PLAN VIEW

STRUCTURE S-40-206
IH 94 WB



SECTION A-A

LIST OF DRAWINGS

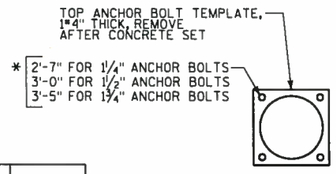
1. BUTTERFLY SIGN FOOTING

BILL OF BARS

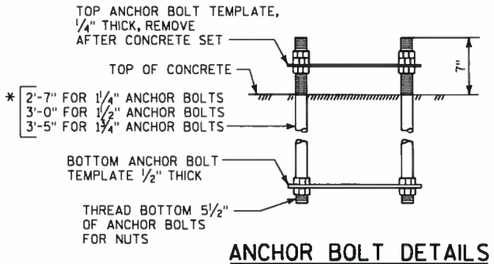
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
A501		12	11'-6"				CAP-LONGITUDINAL
A402		22	11'-6"	X			CAP-VERTICAL
A803		24	11'-6"				SHAFT-VERTICAL
A404		20	7'-10"	X			SHAFT-TRANSVERSE

TOTAL ESTIMATE OF QUANTITIES

BID NUMBER	BID ITEM	UNIT	TOTALS
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	8
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	1155

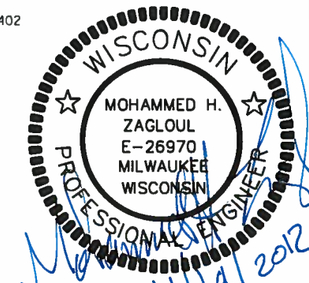


ANCHOR BOLT PLAN



ANCHOR BOLT DETAILS

*BOLT SIZES TO MATCH EXISTING POLE BASE PLATE BOLT HOLES MINUS 1/16"



STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7223

NO.	DATE	REVISION	BY

Plans Prepared for WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 11/30/12
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-40-206

IH 94 EB

COUNTY	CITY
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO STD. SPEC. FOR STR. SUPPORTS
LOAD 90 MPH 3 SEC. SP.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AJA	MHZ	WAW	MHZ

BUTTERFLY SIGN FOOTING

SHEET 1 OF 1

317

SCALE =

DATE:

8

8

STATE PROJECT NUMBER

1060-45-70

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE CONSIDERED INCIDENTAL TO SIGN BRIDGES.

CATWALKS ARE NOT REQUIRED.

CENTER SIGNS VERTICALLY ON TRUSS.

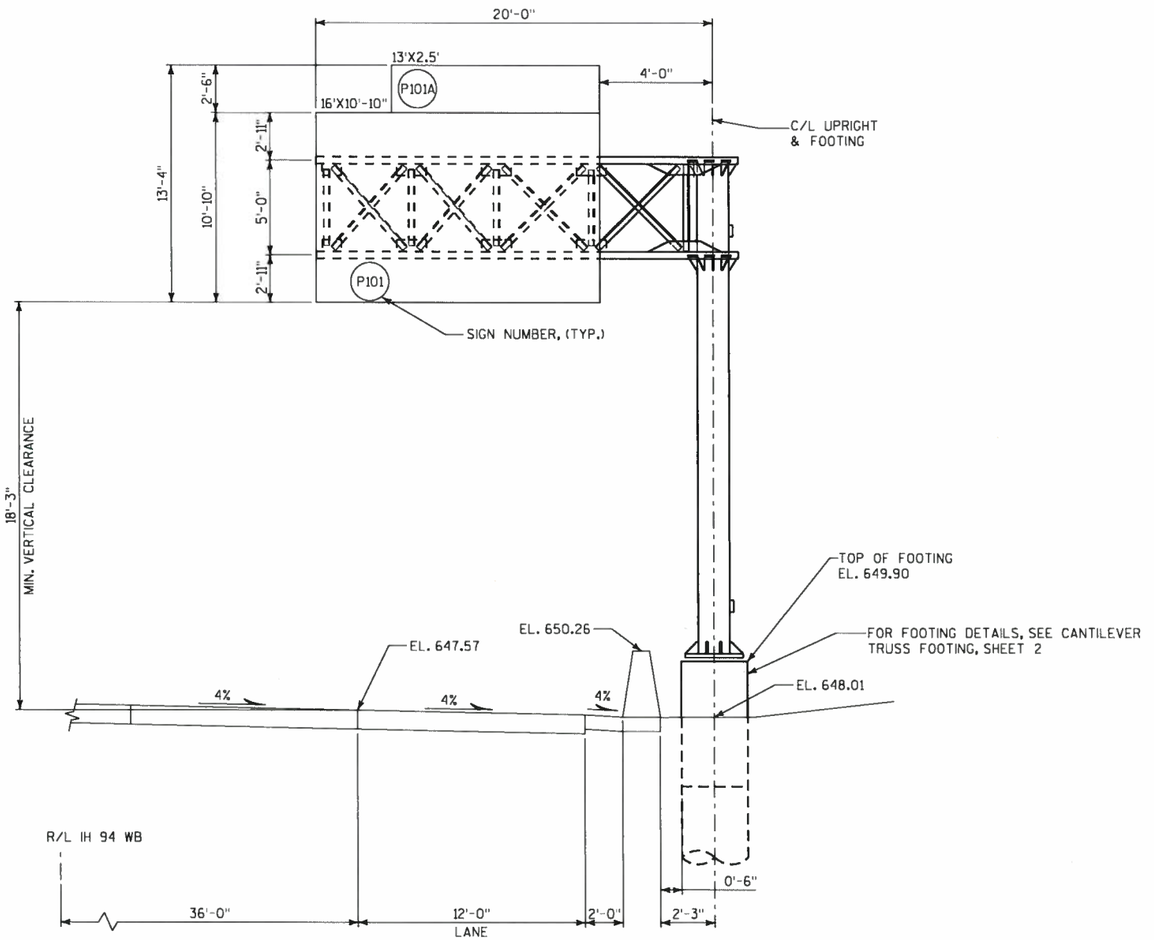
ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

WELD TESTS AS PER AWS D1.1.

SIGN BRIDGE STRUCTURES SHALL BE GROUNDED PER SDD "SIGN BRIDGE STRUCTURE GROUNDING" AND THE DETAILS ON SHEET 5.



ELEVATION

STRUCTURE S-40-859
IH 94 WB, EXIT TO STH 41 NB
(LOOKING WEST AT FRONT FACE OF SIGNS)
STA 1594+00

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-40-859	206 SF	13 FT

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS
WIND VELOCITY - 90 MPH (3-SECOND WIND GUST) TO SIGN AREA & EXPOSED MEMBERS

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½WIND	133

NOTE: WIND LOAD SHALL NOT BE LESS THAN 25 PSF.

LIST OF DRAWINGS

1. SIGN BRIDGE LAYOUT
2. CANTILEVER TRUSS FOOTING
3. GALVANIZED STEEL CANTILEVER SIGN TRUSS
4. GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS
5. HANDHOLE DETAILS

TOTAL ESTIMATE OF QUANTITIES

	BID NUMBER	BID ITEM	UNIT	TOTALS
	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	8
	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	1443
*	641.1200	SIGN BRIDGE CANTILEVERED (STRUCTURE S-40-859)	LS	1

* - THIS LUMP SUM PAY ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN, AND ANCHOR ASSEMBLIES.

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
11/13/2012

STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7223

NO.	DATE	REVISION	BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

Plans Prepared for WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher NK 11/30/12
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-40-859

IH 94 WB EXIT TO USH 41

COUNTY	CITY
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO STD. SPEC. FOR STR. SUPPORTS — LOAD 90 MPH 3 SEC. SP.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MHZ	MHZ	WAW	KGW

SIGN BRIDGE LAYOUT

SHEET 1 OF 5
318

I.D.

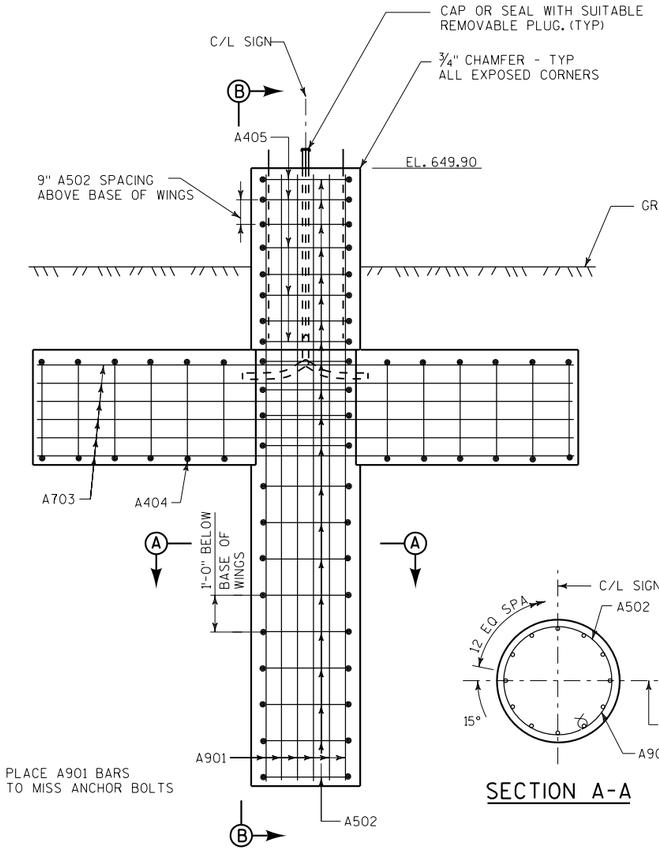
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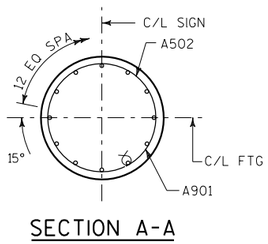
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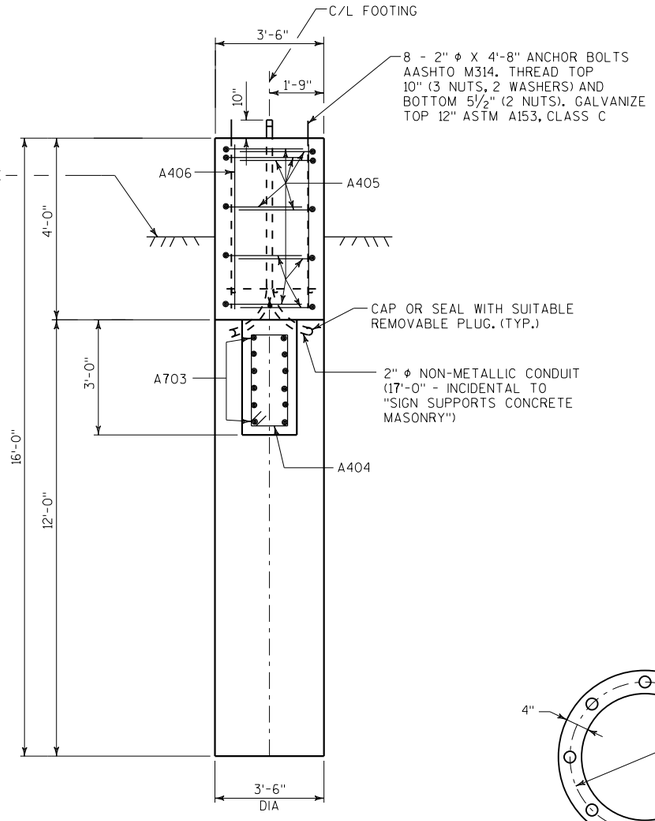
STATE PROJECT NUMBER
1060-45-70



ELEVATION



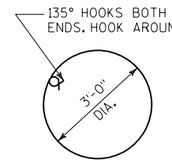
SECTION A-A



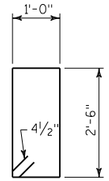
SECTION B-B

BILL OF BARS

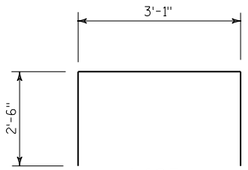
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A901		12	15'-6"				FOOTING - COLUMN
A502		19	10'-5"	X			FOOTING - COLUMN/TIE
A703		12	15'-0"				FOOTING - WINGS HORIZ
A404		12	7'-6"	X			FOOTING - WINGS VERT
A405		10	7'-11"	X			FOOTING - TOP HORIZ
A406		4	3'-6"				FOOTING - TOP - CORNERS



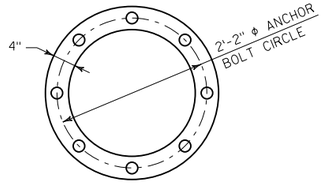
A502



A404
(STIRRUP)



A405



TOP VIEW OF TOP & BOTTOM TEMPLATES

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

ALLOWABLE DESIGN STRESSES

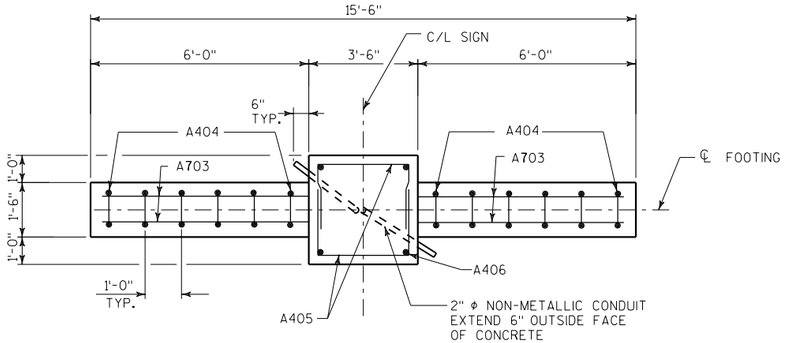
CONCRETE MASONRY ——— f'c=3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 PSI
ANCHOR BOLTS A.A.S.H.T.O. M314 GRADE 55 ——— fy=55,000 PSI

FOUNDATION DATA

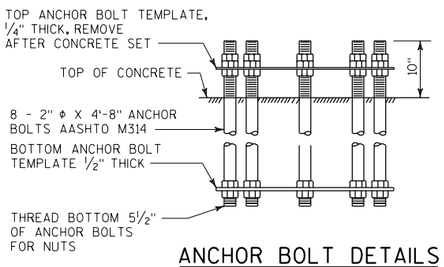
ALLOWABLE SOIL BEARING PRESSURE = 3,000 PSF

ESTIMATED QUANTITIES (1 FTG)

SIGN SUPPORTS CONCRETE MASONRY ——— 8 CY
SIGN SUPPORTS STEEL REINFORCEMENT HS ——— 1443 LB



PLAN



ANCHOR BOLT DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-40-859

CONST. SPEC.	2013	DRAWN BY	WAW	PLANS CK'D.	MHZ

CANTILEVER TRUSS FOOTING

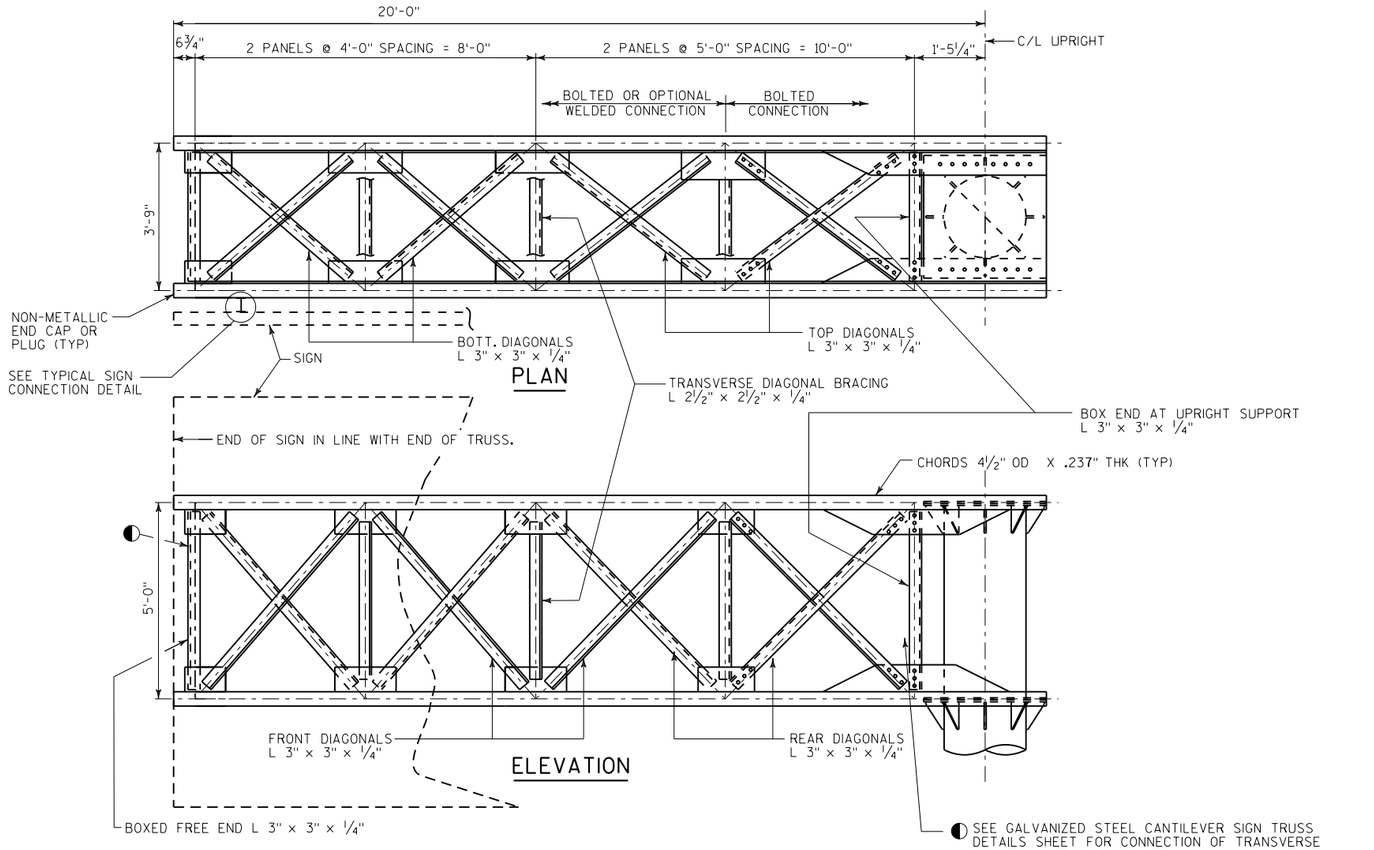
SHEET 2 OF 5
319

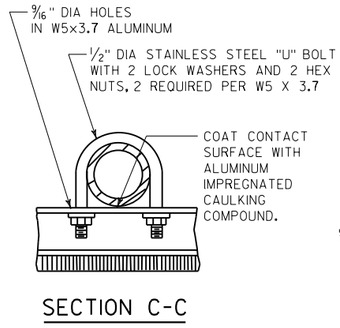
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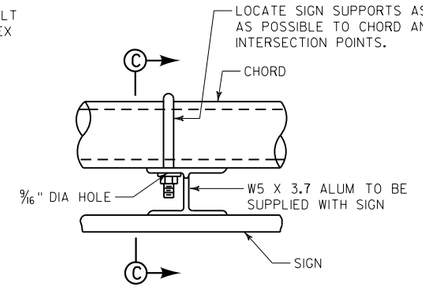
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STATE PROJECT NUMBER
1060-45-70







TYPICAL SIGN CONNECTION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

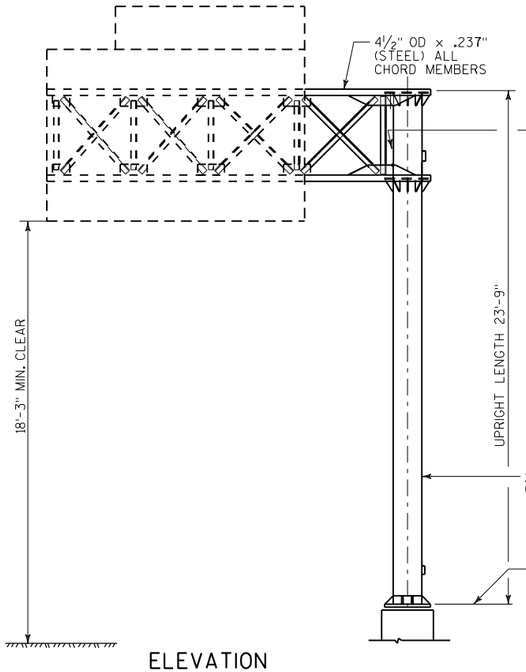
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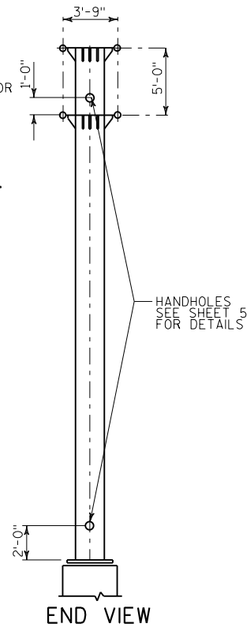
WIND VELOCITY = 90 MPH (3-SECOND GUST SPEED)

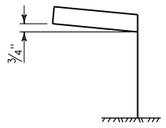
PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT AT THE END OF TRUSS SHOWN IN THE "CAMBER DIAGRAM". DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF THE LEVELING NUTS.

ALLOWABLE DESIGN STRESSES

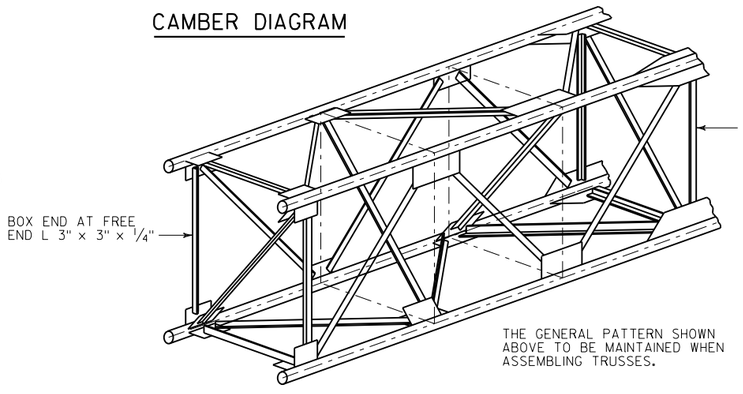
CHORDS & COLUMN (INCLD. HANDHOLE)	API-5L-X42	fy=42,000 PSI
STRUCTURAL ANGLES	ASTM A709 GRADE 36	fy=36,000 PSI
PLATES & BARS	ASTM A709 GRADE 36	fy=36,000 PSI
ANCHOR BOLTS	AASHTO M314	fy=55,000 PSI
HIGH STRENGTH BOLTS	ASTM A325	fy=92,000 PSI
STRUCTURAL MEMBERS GALVANIZED		ASTM A123
HARDWARE GALVANIZED		ASTM A153 CLASS C







CAMBER DIAGRAM



TYPICAL TRUSS SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-40-859

CONST. SPEC. 2013	DRAWN BY WAW	PLANS CK'D. MHZ

GALVANIZED STEEL CANTILEVER SIGN TRUSS

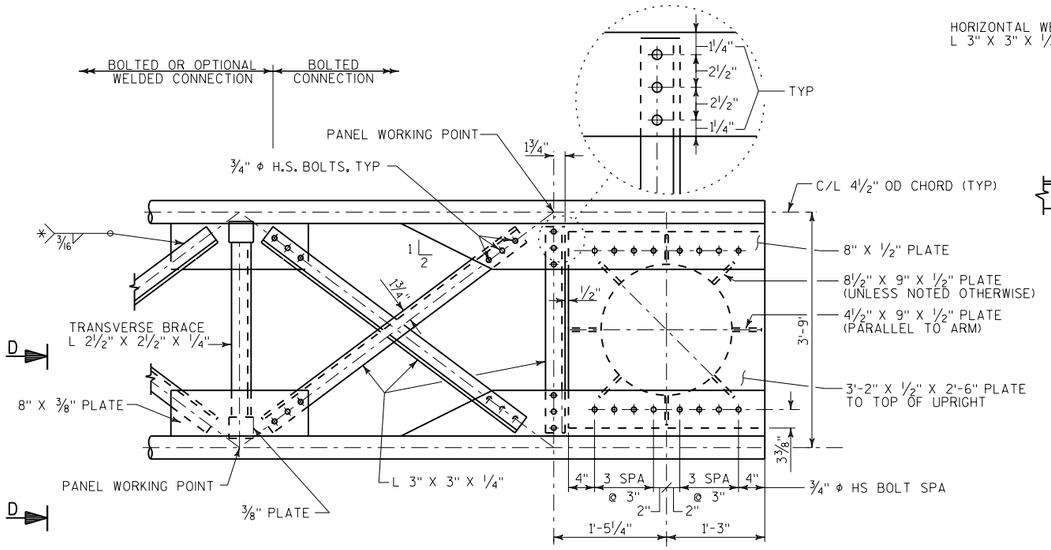
SHEET 3 OF 5
320

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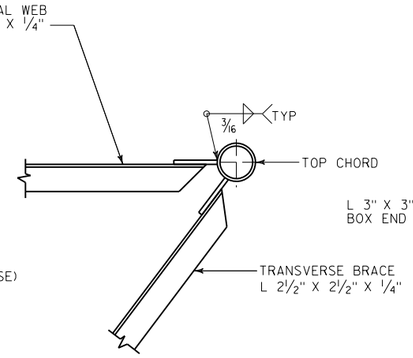
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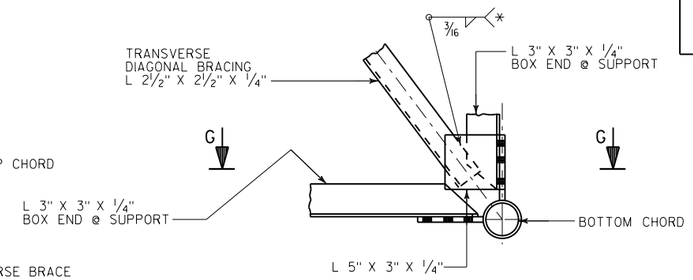
STATE PROJECT NUMBER
1060-45-70



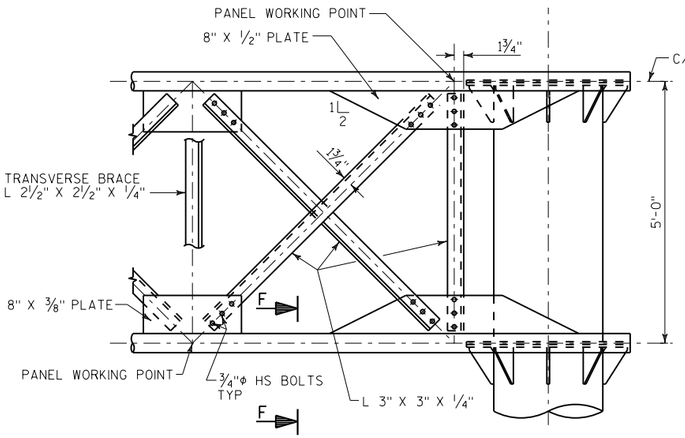
PLAN TRUSS TO UPRIGHT



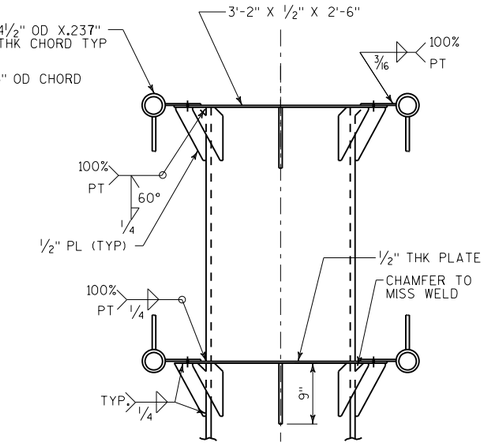
SECTION D-D



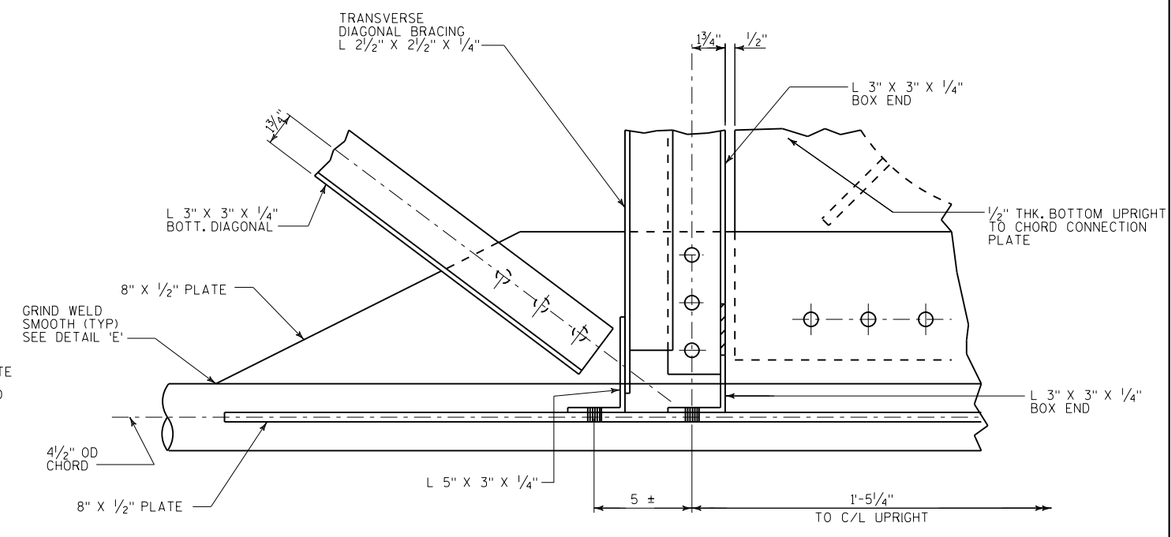
SECTION F-F



ELEVATION TRUSS TO UPRIGHT

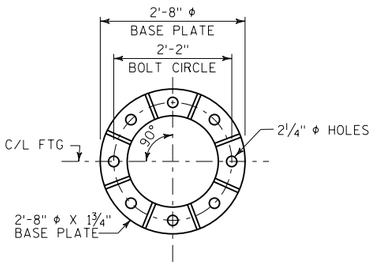


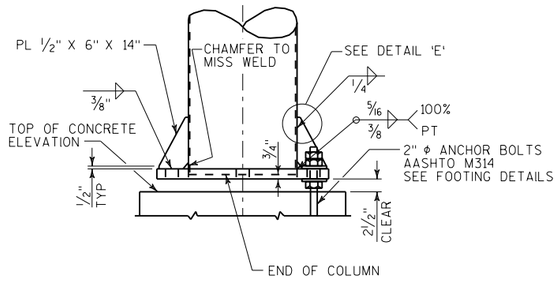
END VIEW TRUSS TO UPRIGHT



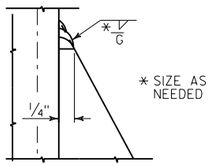
SECTION G-G

(LOOKING DOWN @ BOTTOM HORIZ PLANE @ FRONT CHORD)

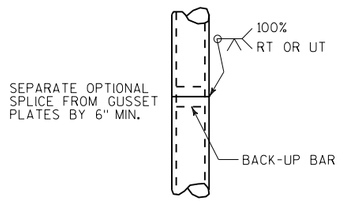




BASE PLATE DETAILS



DETAIL 'E'



OPTIONAL COLUMN OR CHORD SPLICE DETAIL

LEGEND

* ANGLE	WELD LENGTH (MIN.)
L 2 1/2" X 2 1/2" X 1/4"	7"
L 3" X 3" X 1/4"	8"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-40-859

CONST. SPEC. 2013	DRAWN BY WAW	PLANS CK'D. MHZ

GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

SHEET 4 OF 5
321

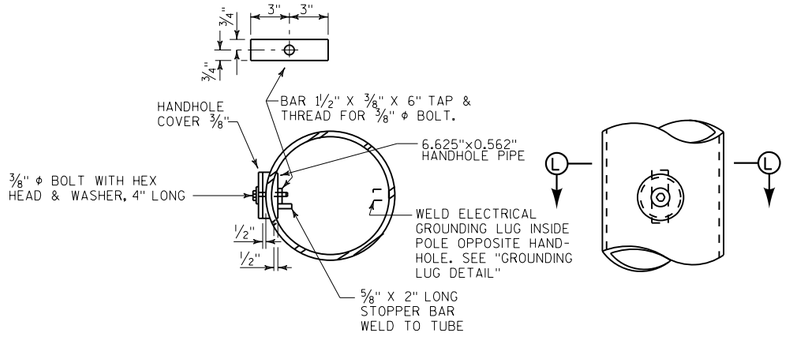
FILE=
SCALE =

8

8

STATE PROJECT NUMBER

1060-45-70

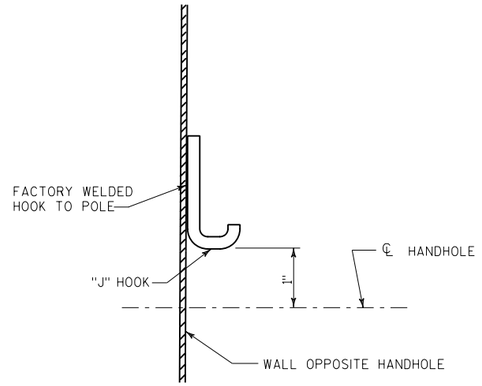


SECTION 'L'

HANDHOLE DETAILS

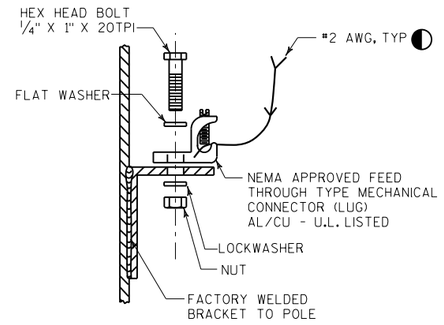
HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN COLUMN AS DETAILED ON SHEET 3.



TYPICAL "J" HOOK LOCATION

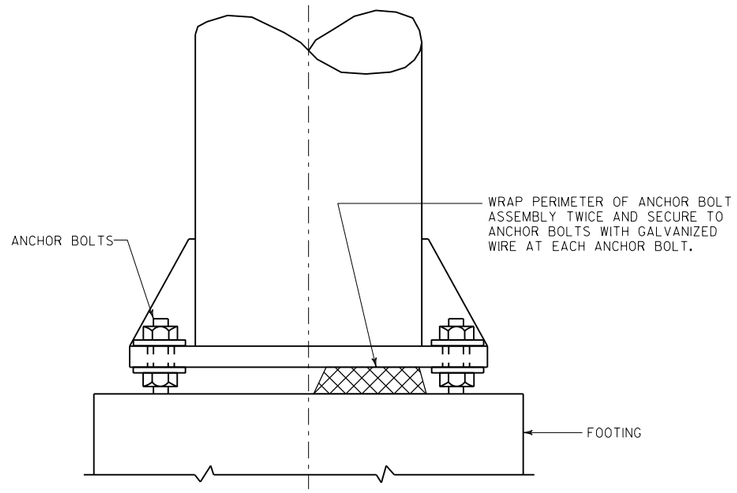
THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS.
THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

◐ SEE SDD "SIGN BRIDGE STRUCTURE GROUNDING" FOR GROUNDING DETAILS. GROUNDING ELECTRODES AND #2 AWG ARE INCIDENTAL TO PAY ITEM "SIGN SUPPORTS CONCRETE MASONRY"



RODENT SCREEN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-40-859

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2013	WAW	MHZ

HANDHOLE DETAILS

SHEET 5 OF 5

322

FILE=
SCALE =

94 WB AT 35TH STREET ON RAMP

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1					Note 2
1585+64		31	0	0	0	0	0	0	0	0
1586+00	36	32	0	0	42	0	0	42	0	42
1586+50	50	33	0	1	59	0	1	101	1	100
1587+00	50	33	0	1	60	0	1	161	2	159
1587+50	50	33	0	1	61	0	1	222	4	218
1588+00	50	33	0	2	61	0	2	283	7	277
1588+50	50	33	0	0	62	0	2	345	9	336
1589+00	50	32	0	1	61	0	1	405	11	395
1589+50	50	32	0	0	59	0	1	465	12	452
1590+00	50	36	0	0	62	0	0	527	13	514
1590+50	50	8	0	0	40	0	0	567	13	555
1591+00	50	15	0	0	22	0	0	589	13	576
1591+50	50	31	0	1	43	0	1	632	14	618
1592+00	50	38	0	0	64	0	1	696	16	680
1592+50	50	38	0	0	70	0	0	766	16	750
1592+75	25	31	0	0	31	0	0	797	16	782
					797	641	13			

NOTES:
1) Not shown in cross-sections.
2) Cut - (Fill * Fill Factor)

FILE NAME: S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\Quantities\090101_EW.ppt
ORIGINATOR: SHANNON M. CONNOLLY
ORIG. DATE: OCTOBER 30, 2012
PLOTTED DATE: 11/26/2012 11:17 AM

94 WB AT ENFORCEMENT PAD

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
						Note 1				Note 2
1593+95		11	0	5	0	0	0	0	0	0
1594+00	5	12	0	6	2	0	1	2	1	1
1594+50	50	17	0	17	27	0	21	29	28	1
1595+00	50	39	0	23	52	0	36	82	73	8
1595+50	50	58	0	25	90	0	44	172	128	43
1596+00	50	109	0	40	155	0	60	327	203	124
1596+50	50	143	0	50	234	0	83	560	307	254
1597+00	50	71	0	24	198	0	69	758	393	365
1597+50	50	36	0	15	99	0	36	857	438	418
1598+00	50	10	0	6	42	0	19	899	463	436
1598+50	50	11	0	5	20	0	10	919	475	443
1599+00	50	11	0	7	20	1	11	939	489	448
1599+36	36	15	0	10	17	2	12	956	504	449
					956	0	403			

NOTES:
1) Not shown in cross-sections.
2) Cut - (Fill * Fill Factor)

94 WB AT 28TH STREET ON RAMP

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1					Note 2
1616+69		13	0	0	0	0	0	0	0	0
1617+00	31	16	0	0	17	0	0	17	0	17
1617+50	50	16	0	0	29	0	0	46	0	46
1618+00	50	24	0	0	37	0	0	83	0	83
1618+50	50	33	0	0	53	0	0	135	0	135
1619+00	50	47	0	0	74	0	0	209	0	209
1619+50	50	58	0	0	97	0	0	307	0	307
1620+00	50	66	0	0	115	0	0	421	0	421
1620+50	50	55	0	0	112	0	0	533	0	533
1621+00	50	40	0	0	88	0	0	621	0	621
					621	389	0			

NOTES:
1) Not shown in cross-sections.
2) Cut - (Fill * Fill Factor)

94 WB AT 25TH STREET

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1					Note 2
1638+50		35	0	0	0	0	0	0	0	0
1639+00	50	26	0	0	56	0	0	56	0	56
1639+50	50	22	0	0	44	0	0	100	0	100
1640+00	50	21	0	0	39	0	0	138	0	138
1640+50	50	20	0	0	38	0	0	176	0	176
1641+00	50	20	0	0	38	0	0	214	0	214
1641+50	50	20	0	0	38	0	0	252	0	252
1642+00	50	20	0	0	37	0	0	289	0	289
1642+50	50	20	0	0	37	0	0	325	0	325
1643+00	50	17	0	0	34	0	0	359	0	359
1643+50	50	18	0	0	33	0	0	392	0	392
1644+00	50	19	0	0	35	0	0	427	0	427
1644+50	50	25	0	0	41	0	0	468	0	468
1645+00	50	31	0	0	52	0	0	520	0	520
1645+50	50	38	0	0	63	0	0	583	0	583
					583	583	0			

NOTES:
1) Not shown in cross-sections.
2) Cut - (Fill * Fill Factor)

35TH STREET ON RAMP

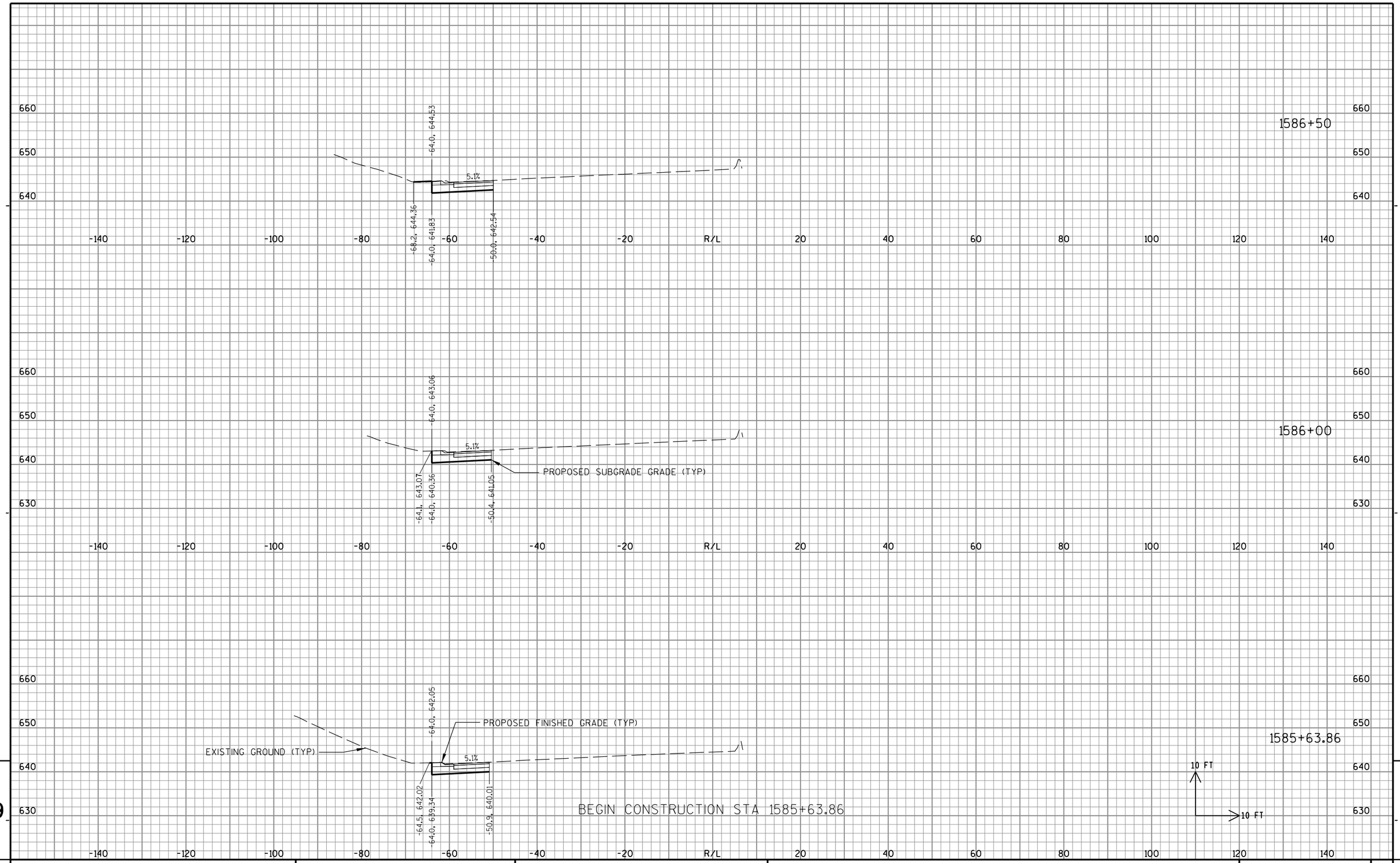
Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1					Note 2
90+21		56	0	0	0	0	0	0	0	0
90+50	29	65	0	0	65	0	0	65	0	65
91+00	50	77	0	0	132	0	0	197	0	196
91+50	50	69	0	1	136	0	1	332	1	331
92+00	50	53	0	2	114	0	2	446	4	442
92+50	50	49	0	2	94	0	3	540	8	532
93+00	50	33	0	1	76	0	3	616	11	605
93+50	50	40	0	0	68	0	1	684	13	671
94+00	50	48	0	0	82	0	0	766	13	752
94+28	28	50	0	0	51	0	0	816	13	803
					816	776	11			

NOTES:
1) Not shown in cross-sections.
2) Cut - (Fill * Fill Factor)

28TH STREET ON RAMP

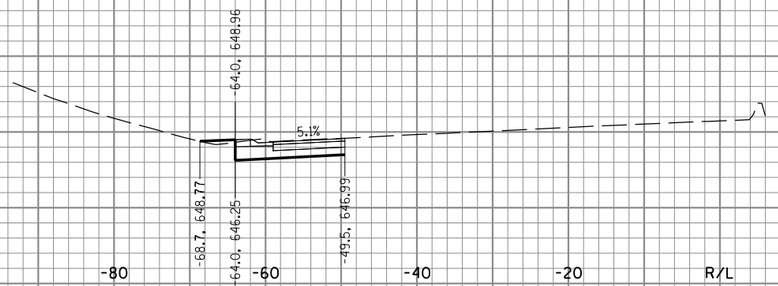
Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1					Note 2
19+00		7	0	0	0	0	0	0	0	0
19+50	50	7	0	0	13	0	1	13	1	12
20+00	50	7	0	0	13	0	0	26	2	24
20+50	50	7	0	0	13	0	0	39	2	37
21+00	50	8	0	0	14	0	1	53	3	50
21+50	50	8	0	0	14	0	0	67	3	64
					67	67	2			

NOTES:
1) Not shown in cross-sections.
2) Cut - (Fill * Fill Factor)

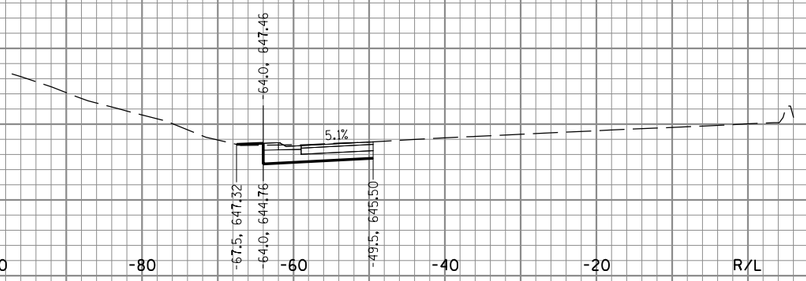


STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 35TH ST ON RAMP	SHEET NO: 329	E

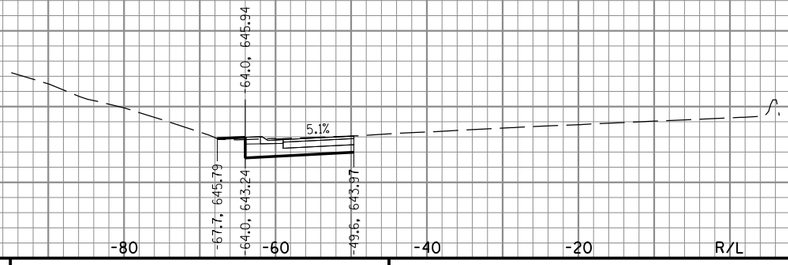
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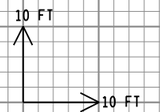
1588+00



1587+50



1587+00

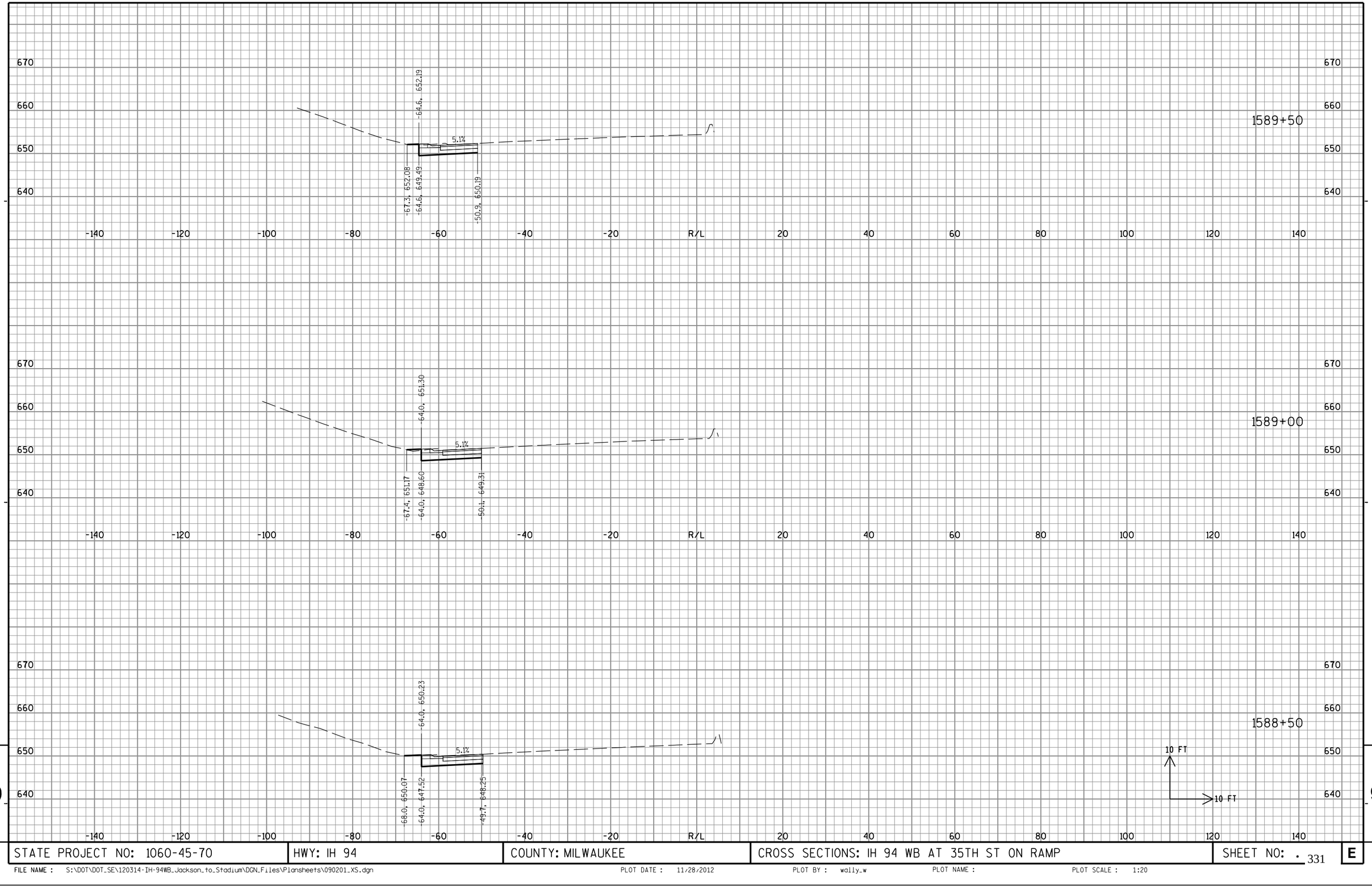


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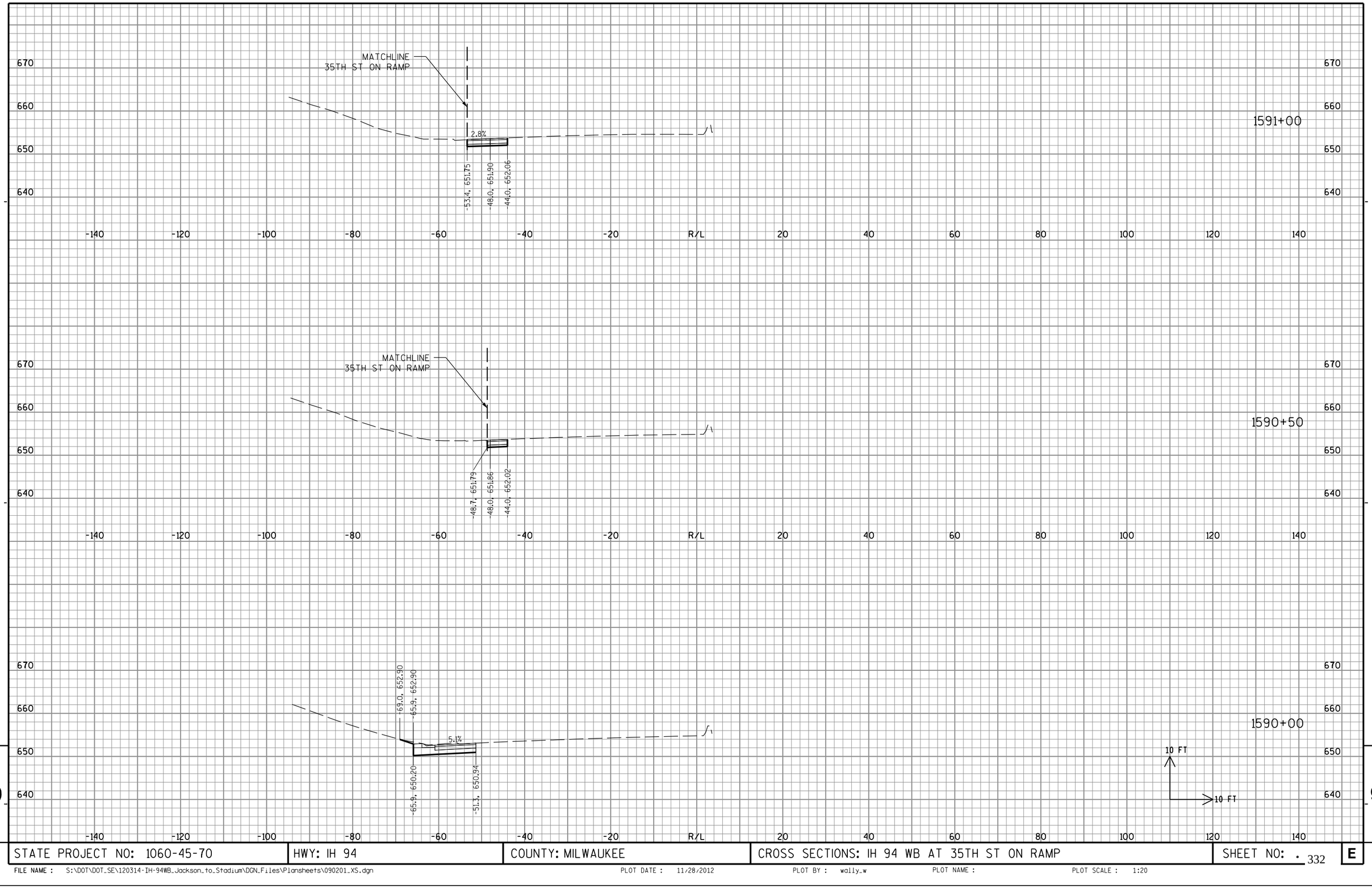
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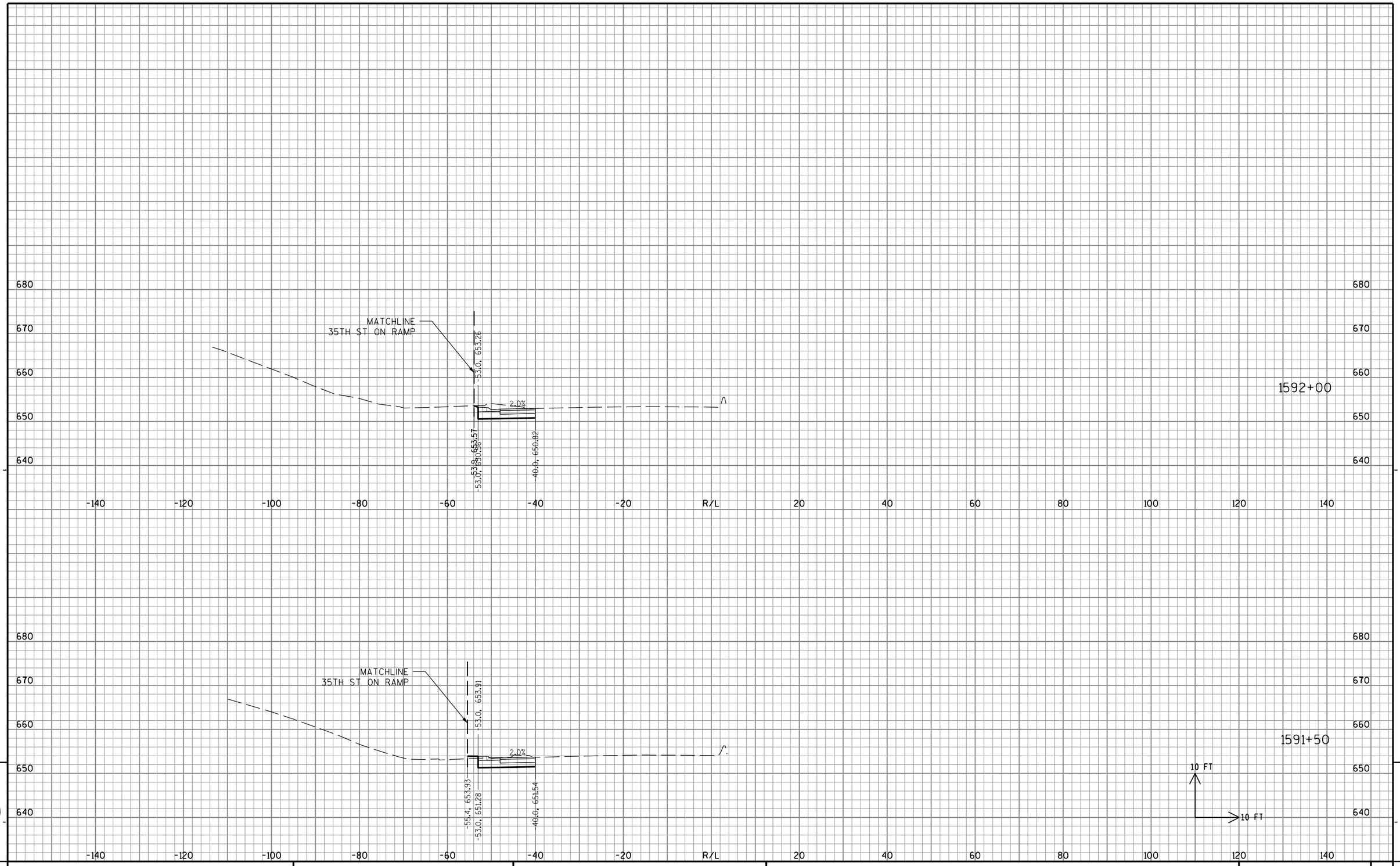
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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 35TH ST ON RAMP	SHEET NO: . 332 E

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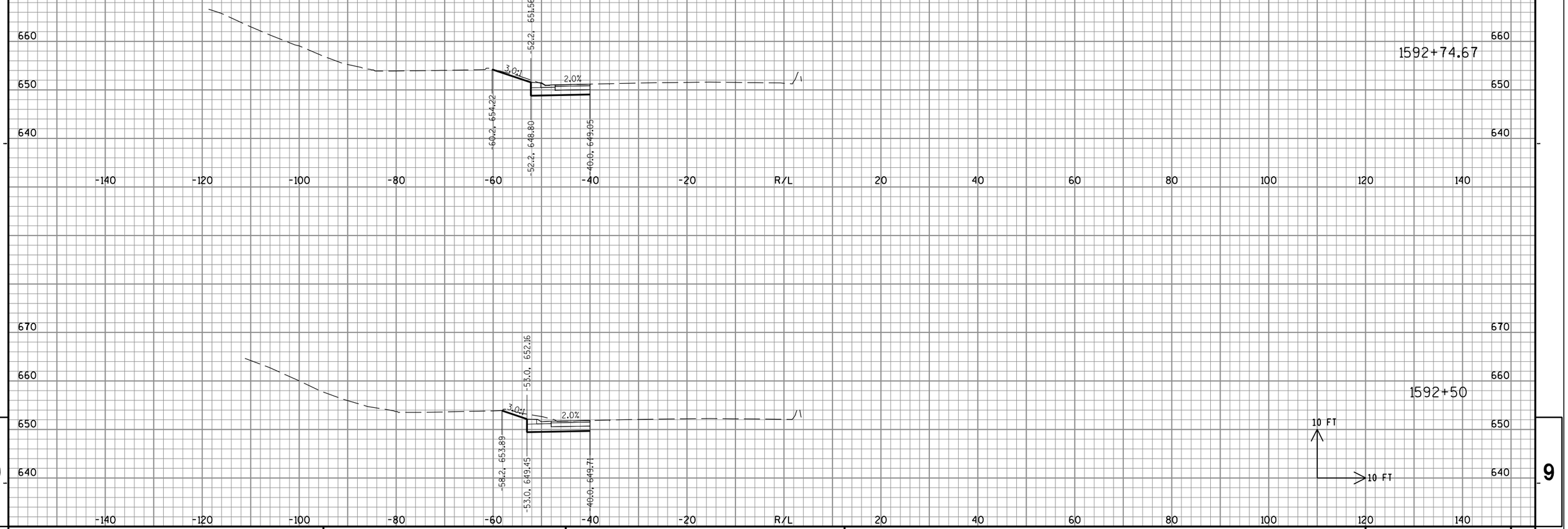
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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 35TH ST ON RAMP	SHEET NO: . 333	E

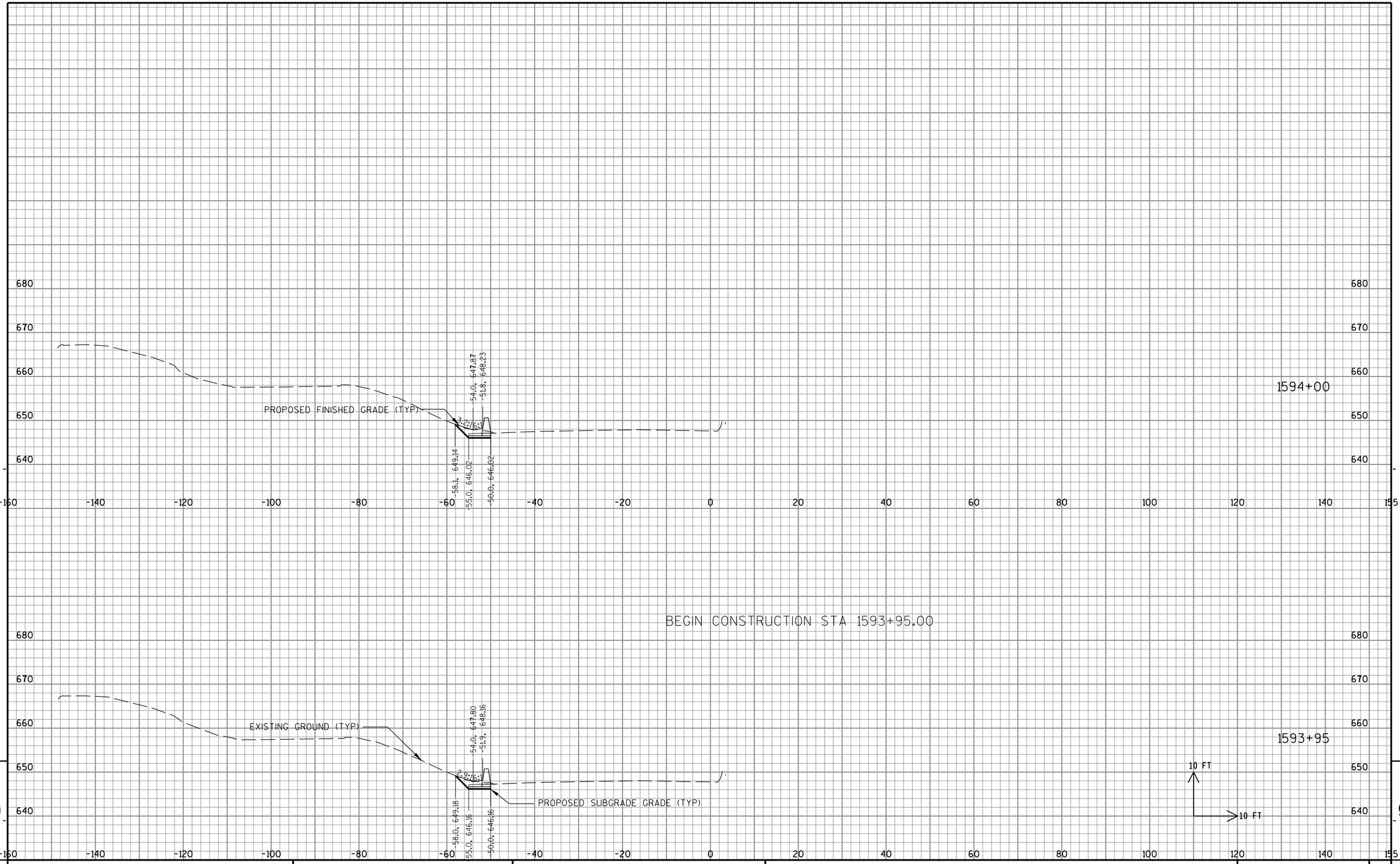
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END CONSTRUCTION STA 1592+74.67



STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 35TH ST ON RAMP	SHEET NO: . 334	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090201_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

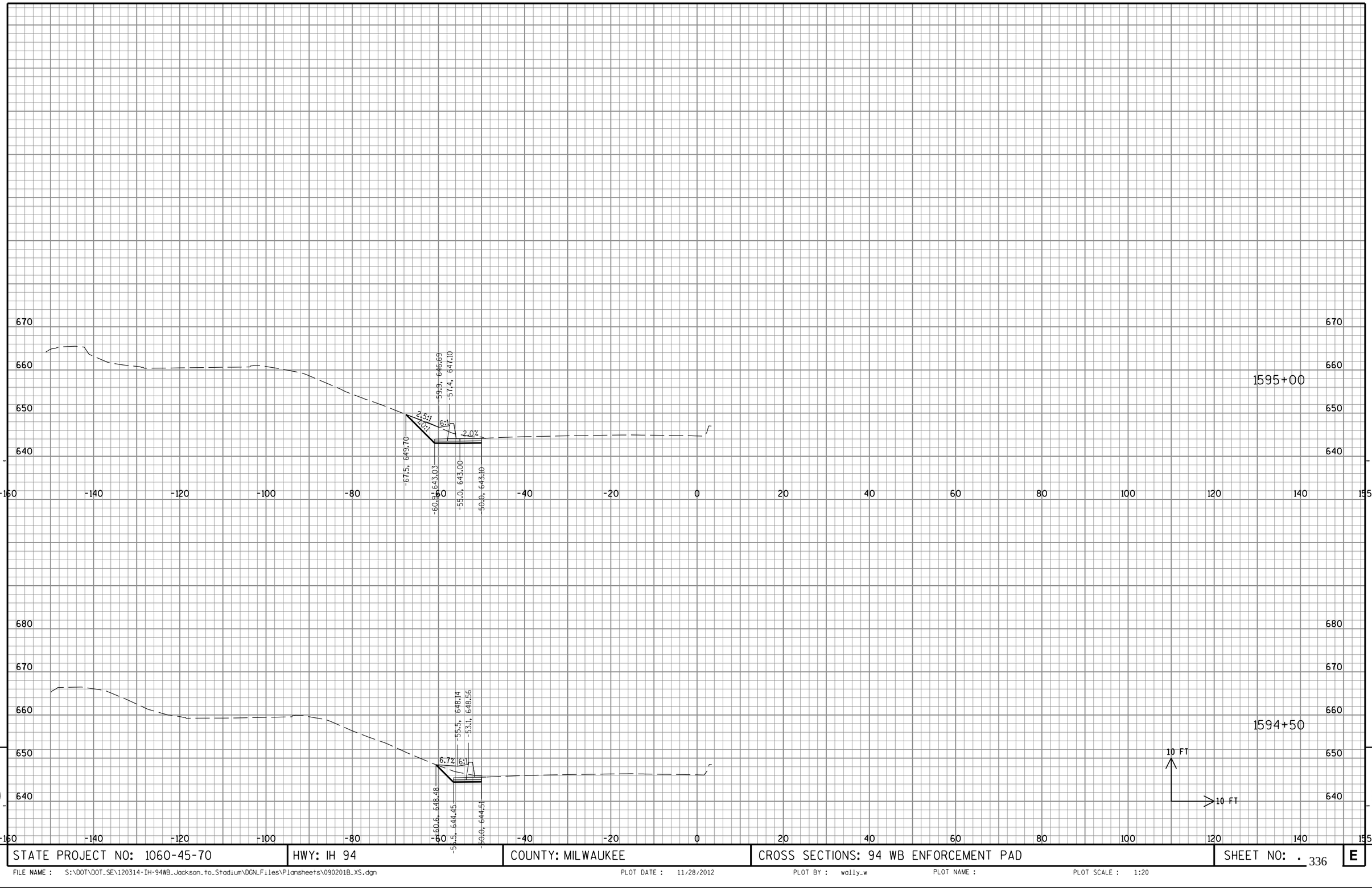


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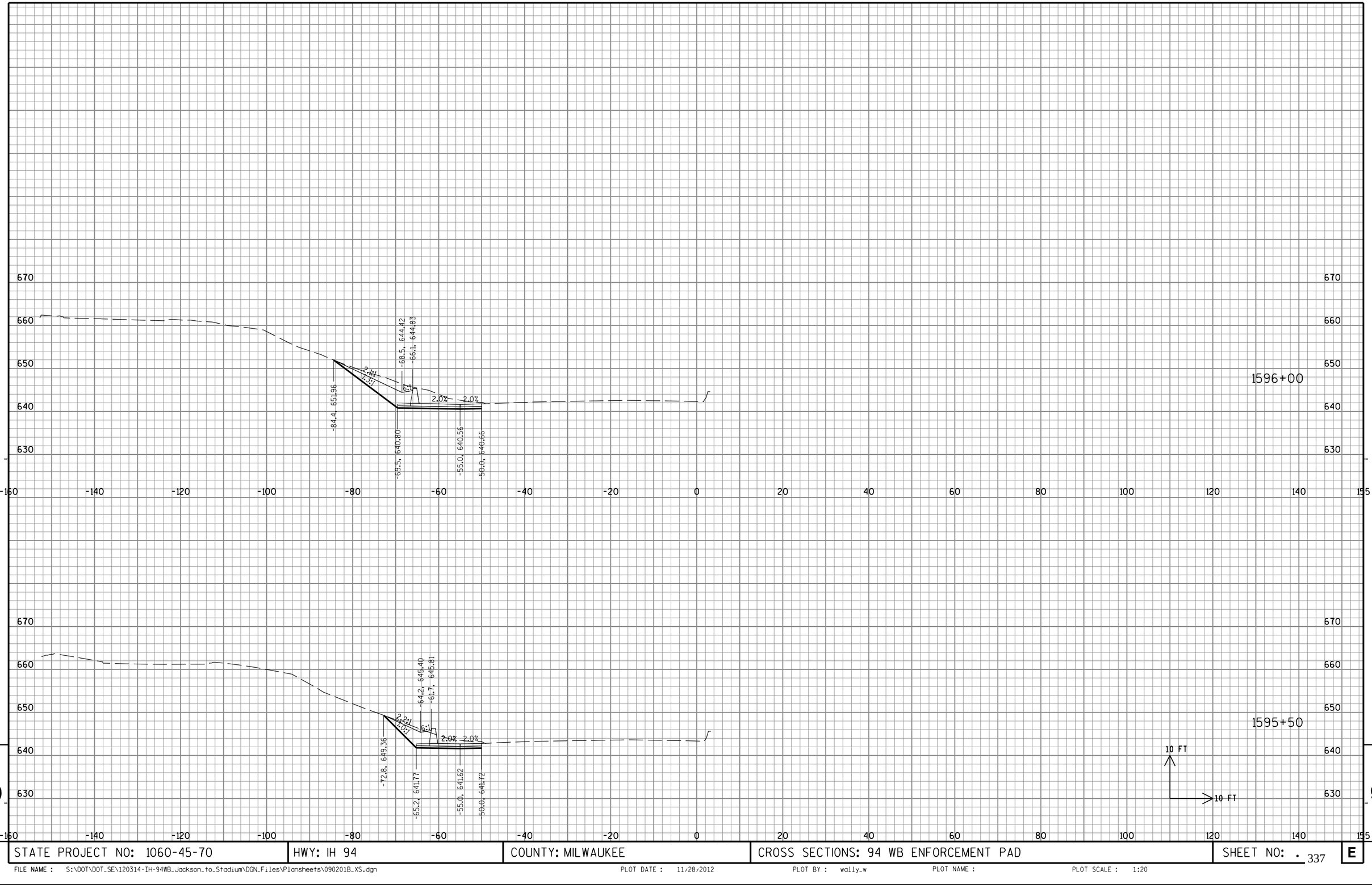
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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 94 WB ENFORCEMENT PAD	SHEET NO: . 336 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090201B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

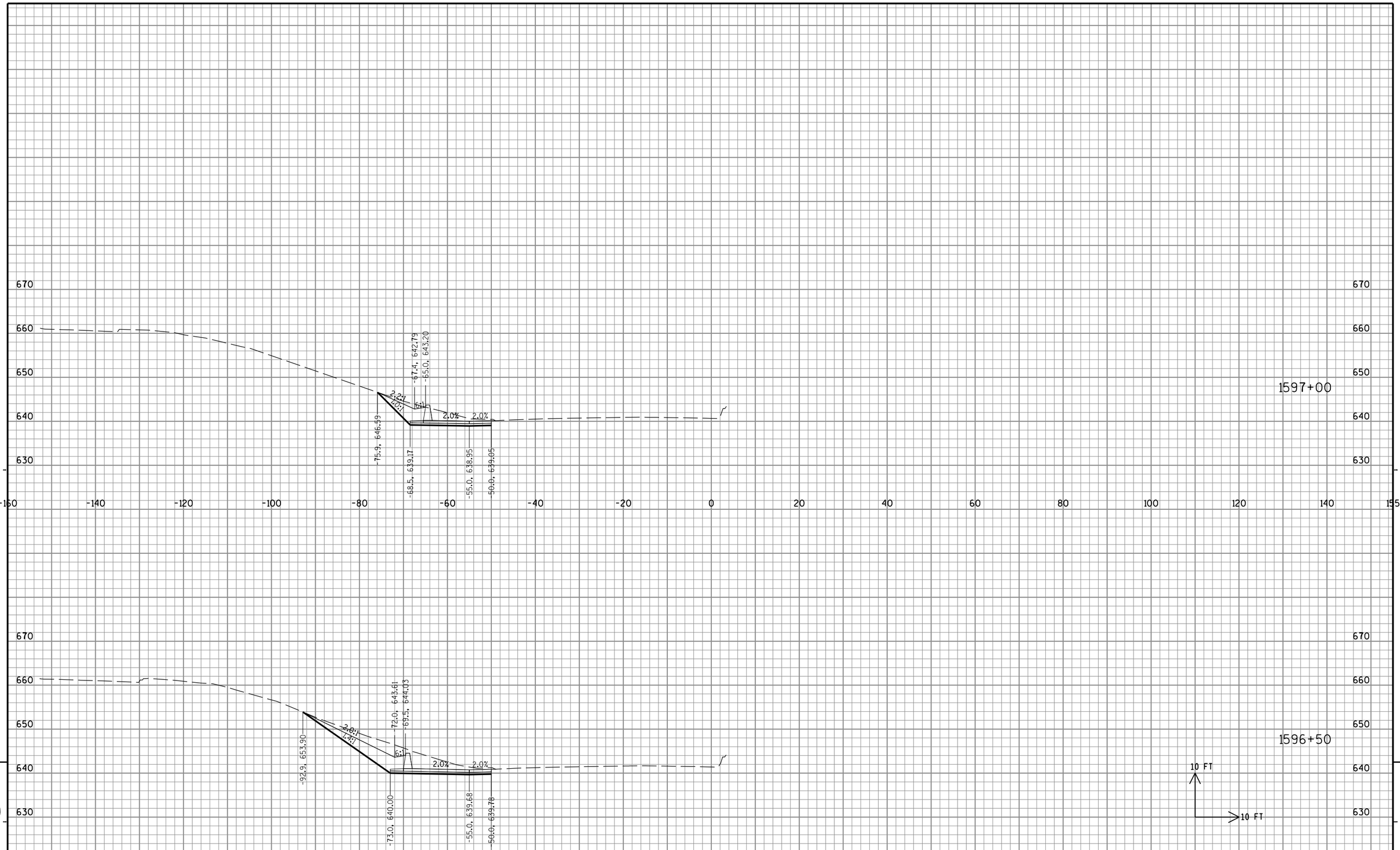


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 94 WB ENFORCEMENT PAD	SHEET NO: . 337	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090201B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

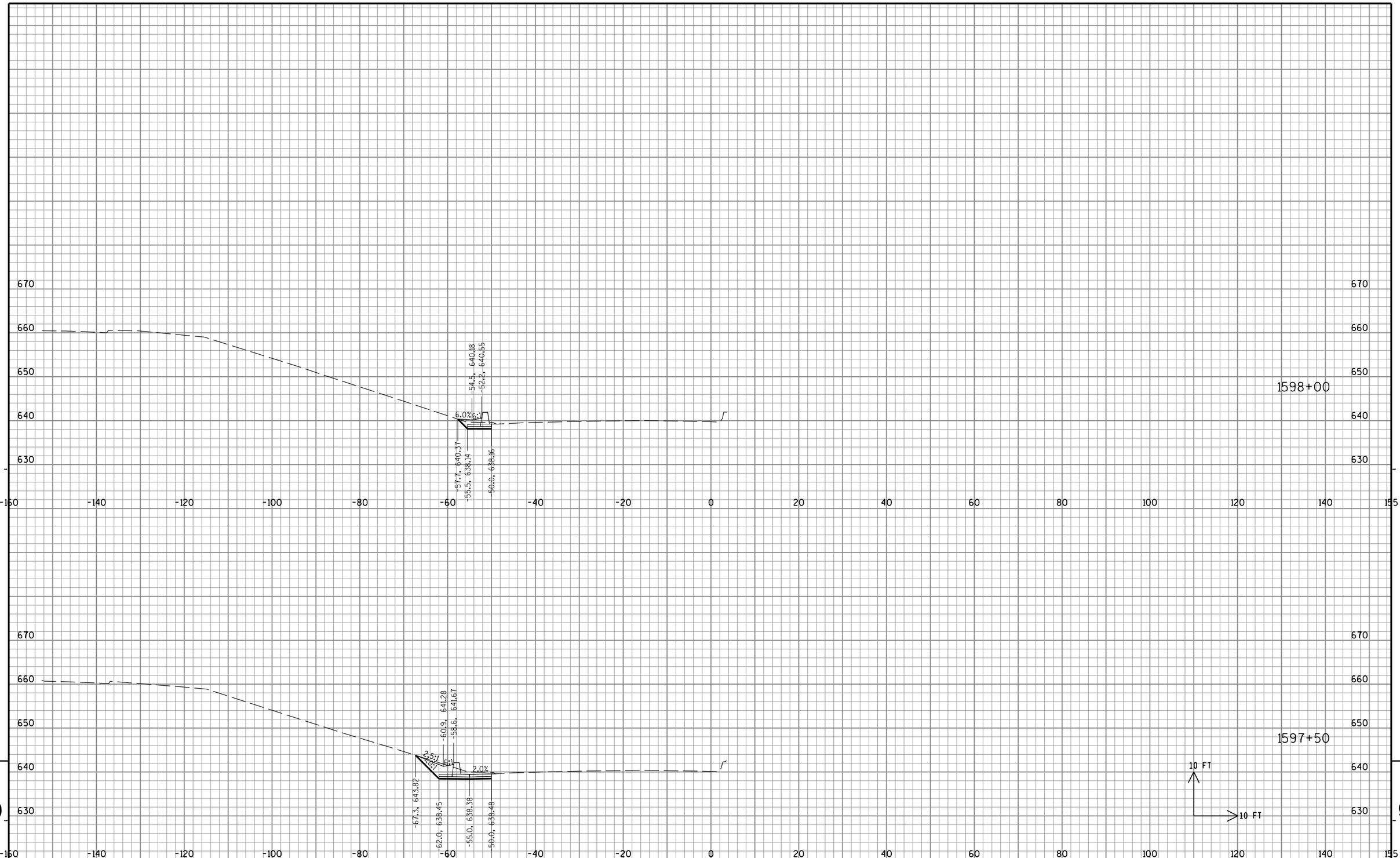


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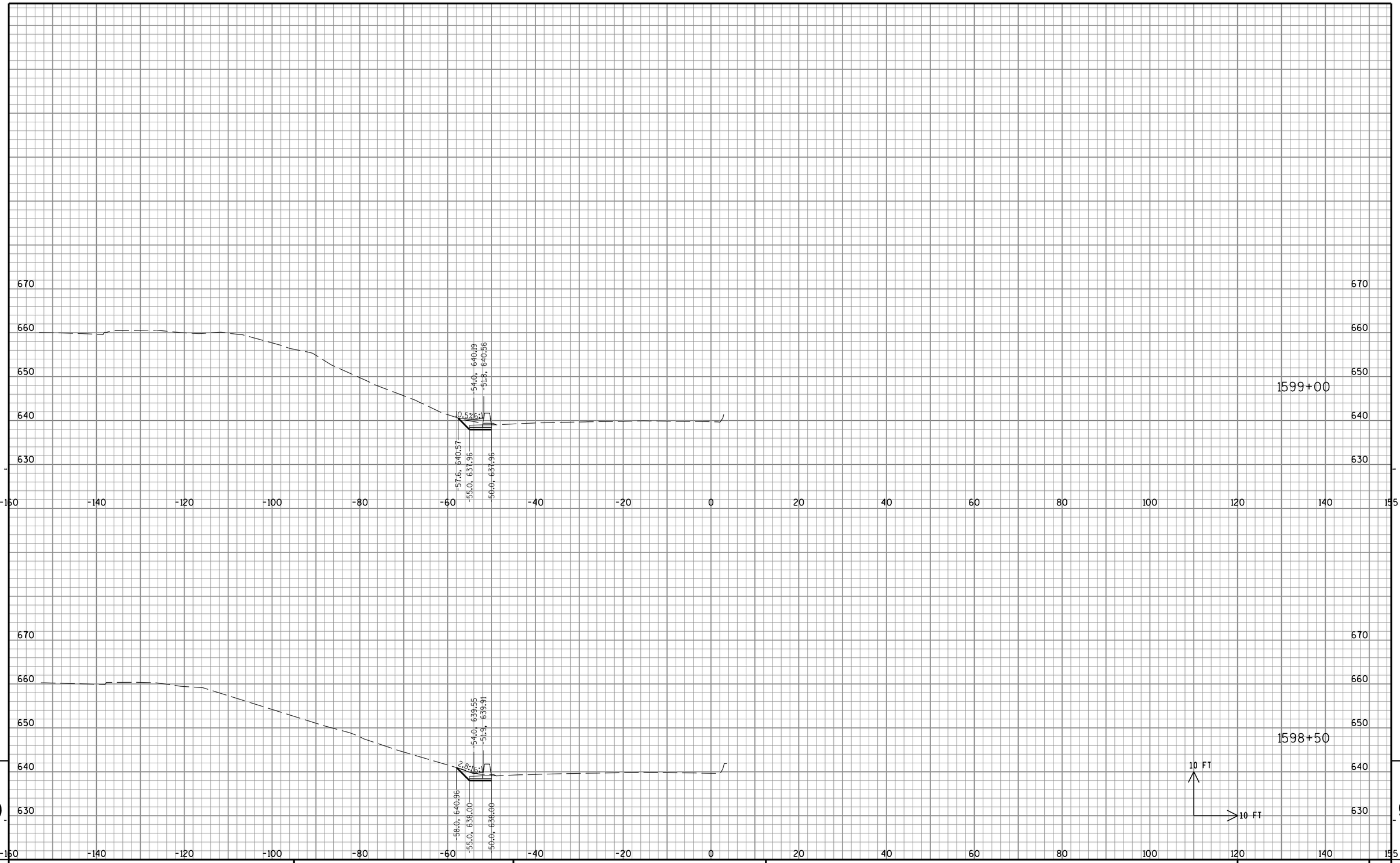
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 94 WB ENFORCEMENT PAD	SHEET NO: . 338	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090201B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 94 WB ENFORCEMENT PAD	SHEET NO: . 339 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090201B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 94 WB ENFORCEMENT PAD	SHEET NO: . 340	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090201B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

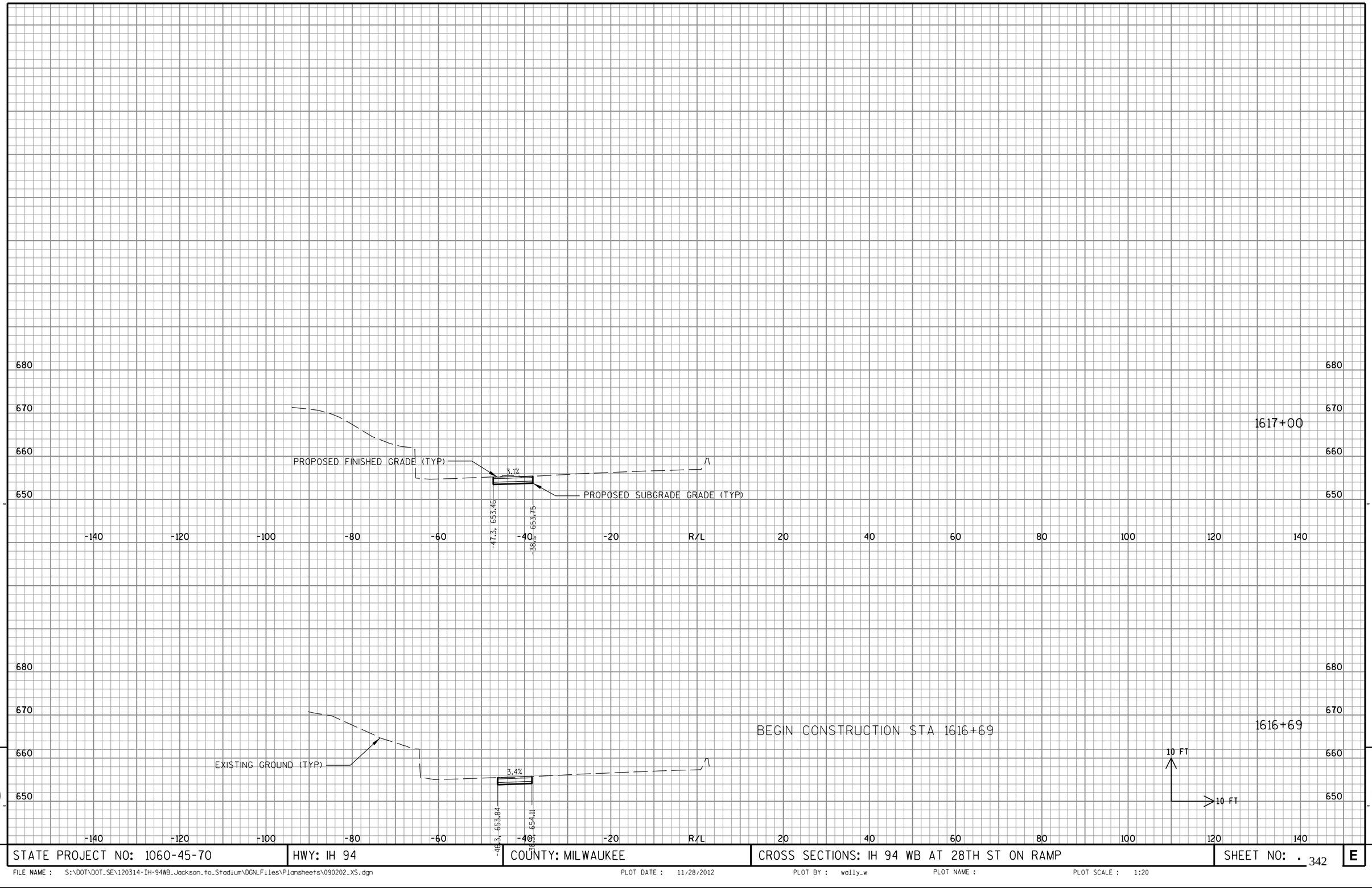
END CONSTRUCTION STA 1599+35.54



9 9

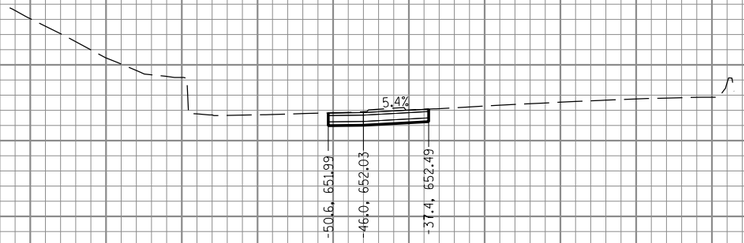
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 94 WB ENFORCEMENT PAD	SHEET NO: . 341	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090201B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

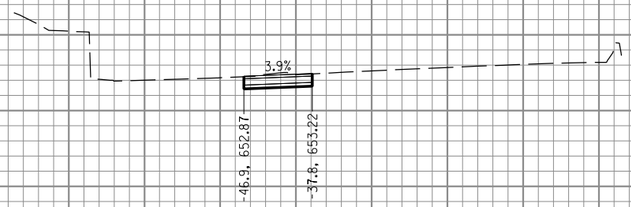


STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 28TH ST ON RAMP	SHEET NO: . 342	E

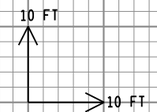
FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



1618+00



1617+50



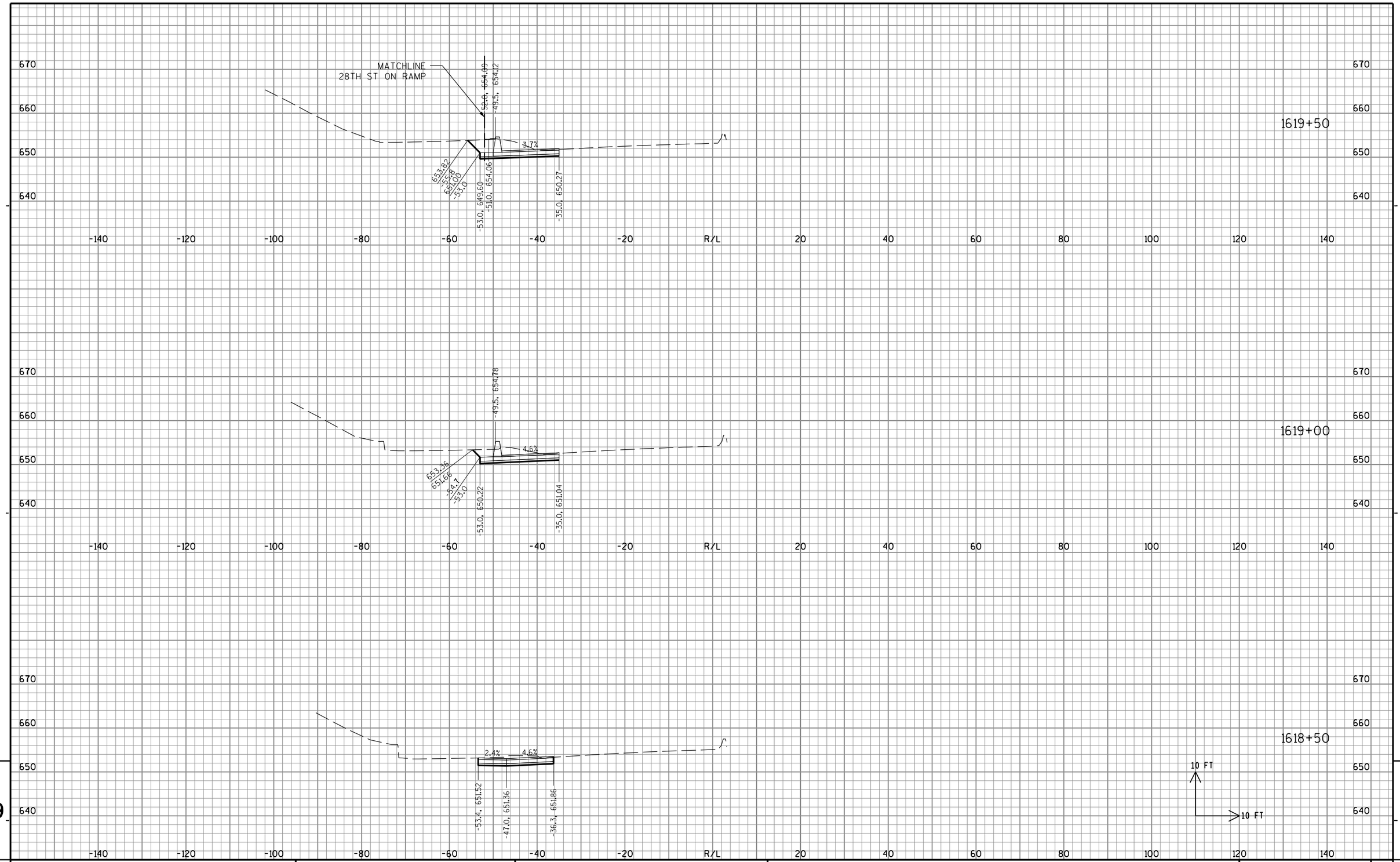
680 670 660 650 640

-140 -120 -100 -80 -60 -40 -20 R/L 20 40 60 80 100 120 140

9

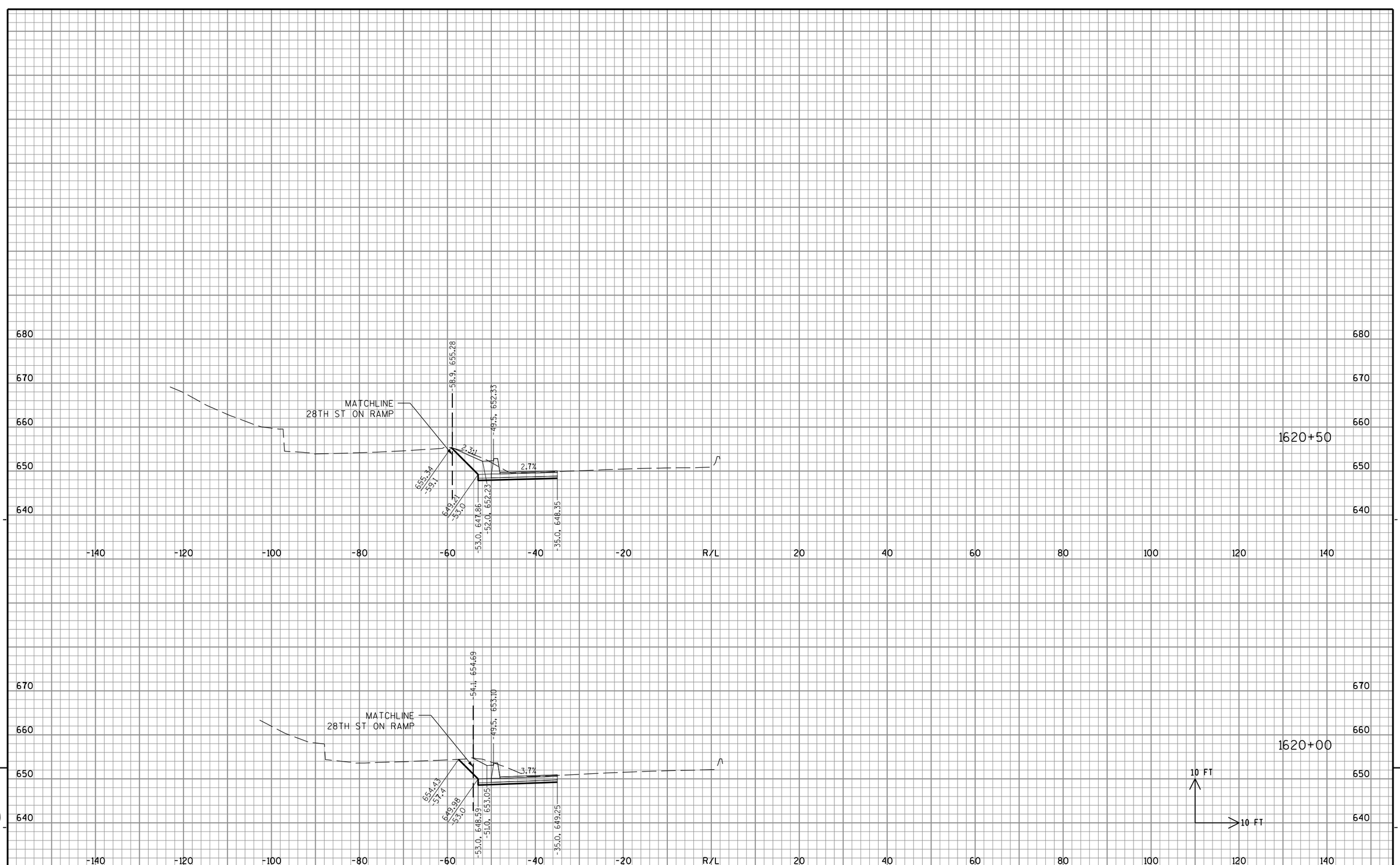
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 28TH ST ON RAMP	SHEET NO: . 343	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 28TH ST ON RAMP	SHEET NO: . 344 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 28TH ST ON RAMP	SHEET NO: . 345	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

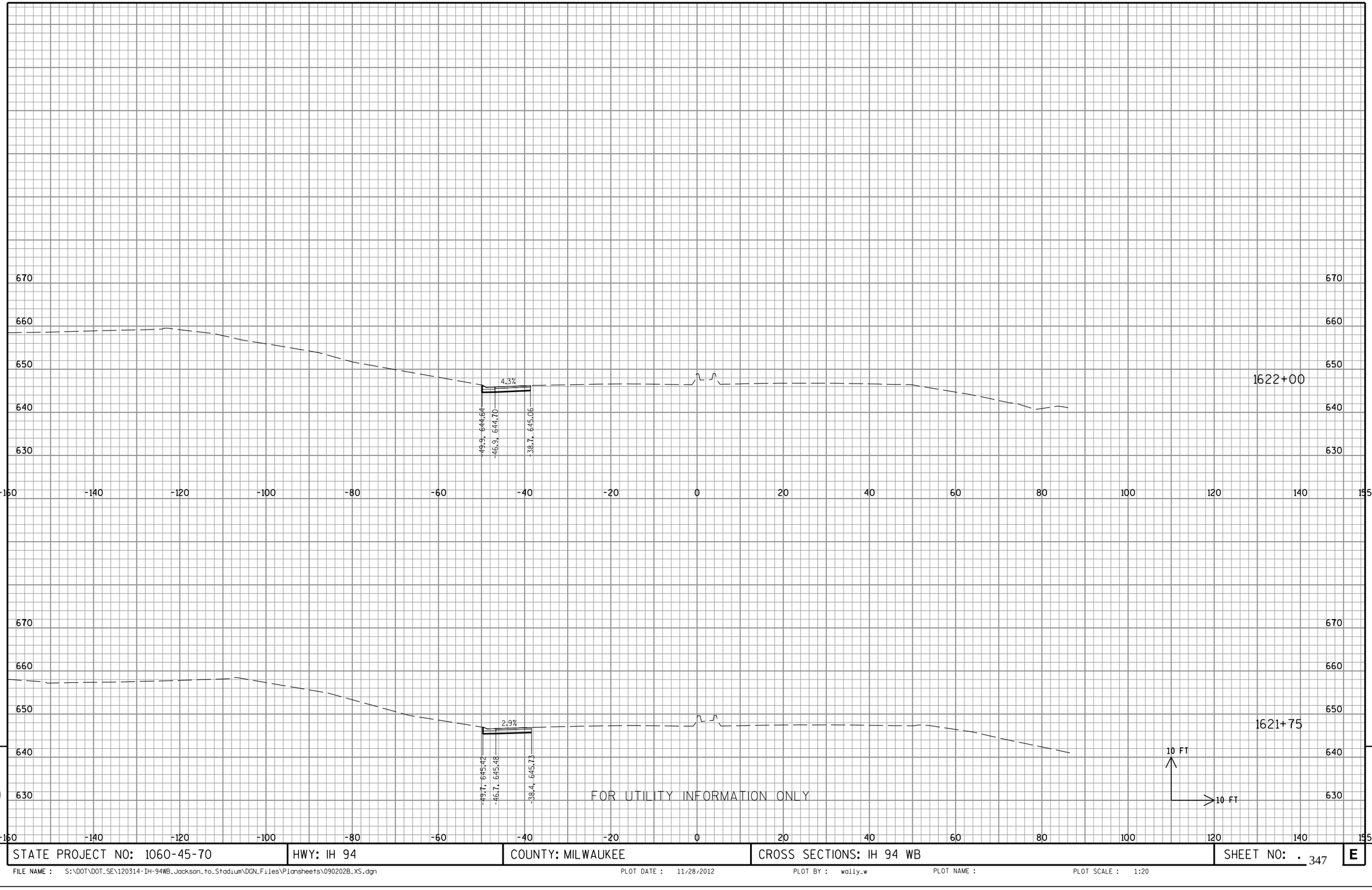


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 28TH ST ON RAMP	SHEET NO: . 346	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

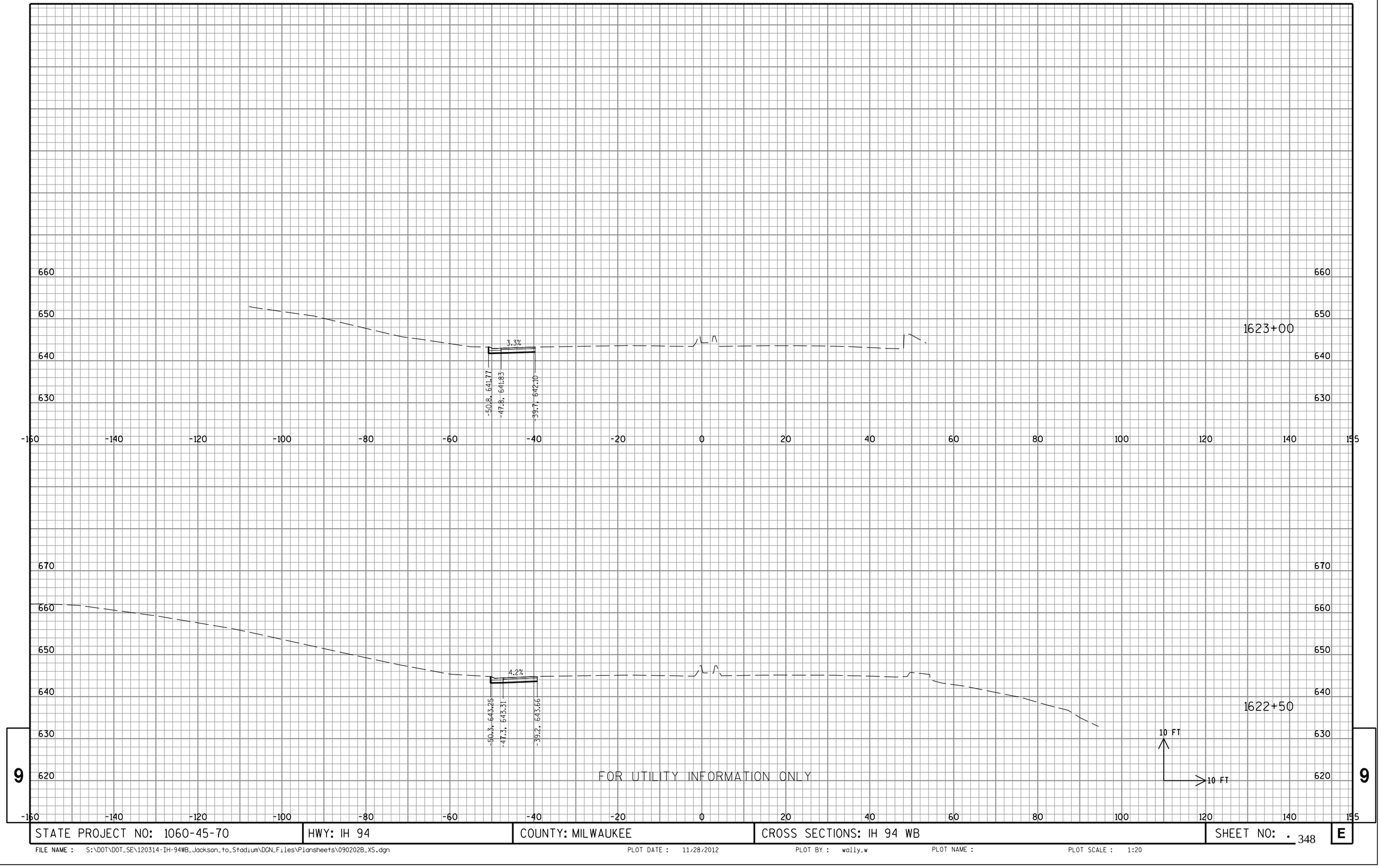


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 347	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

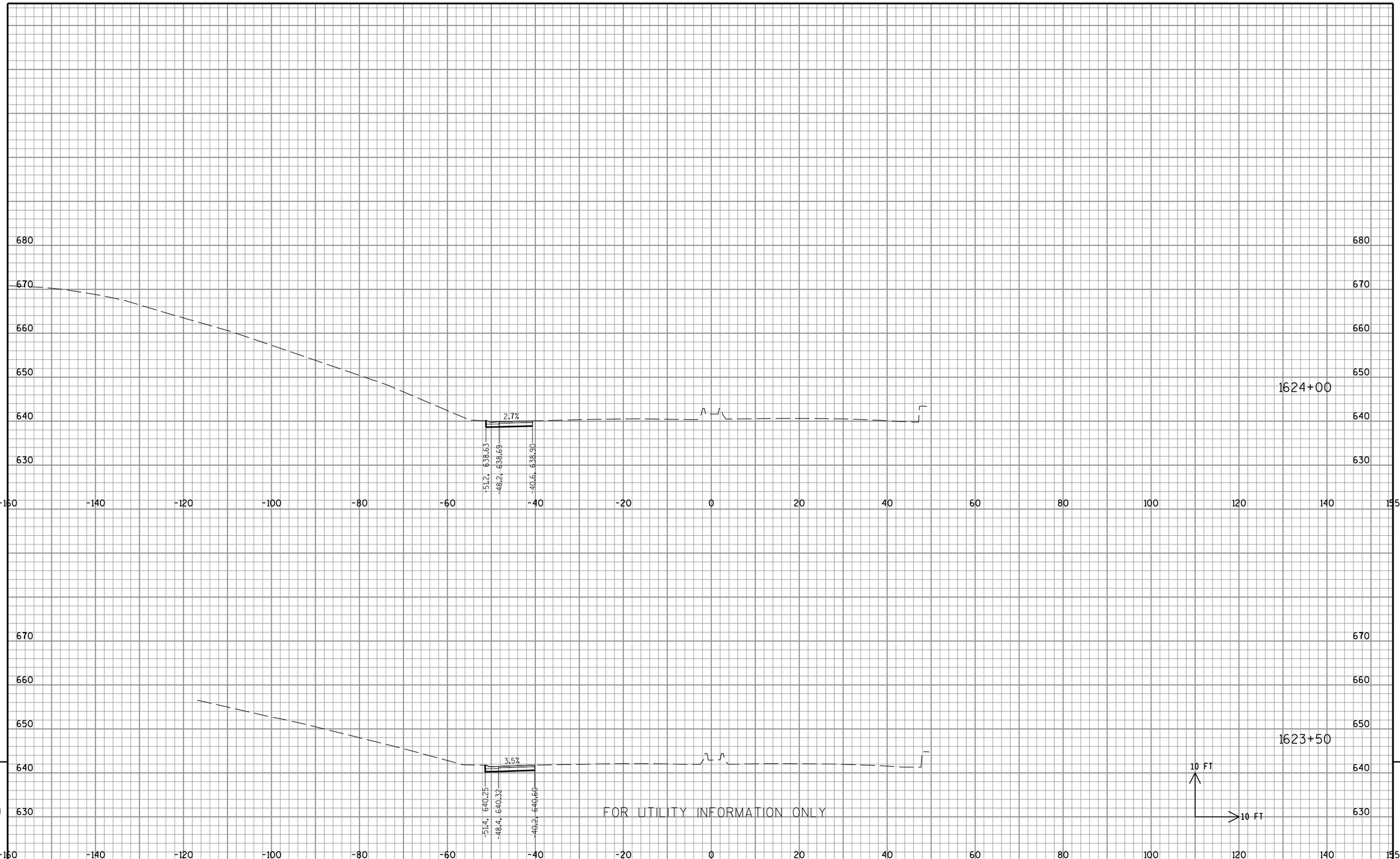


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 348	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

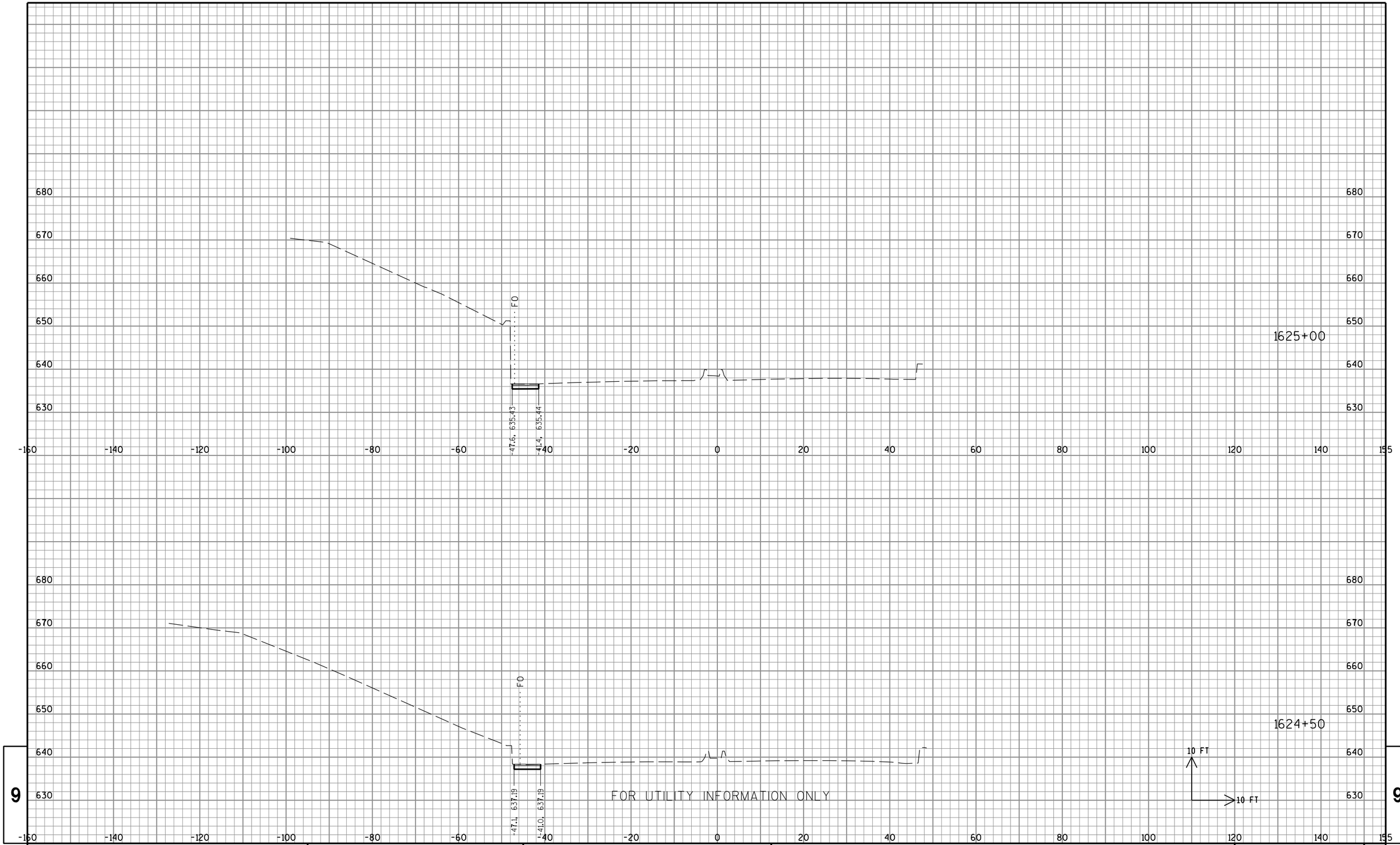


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 349	E

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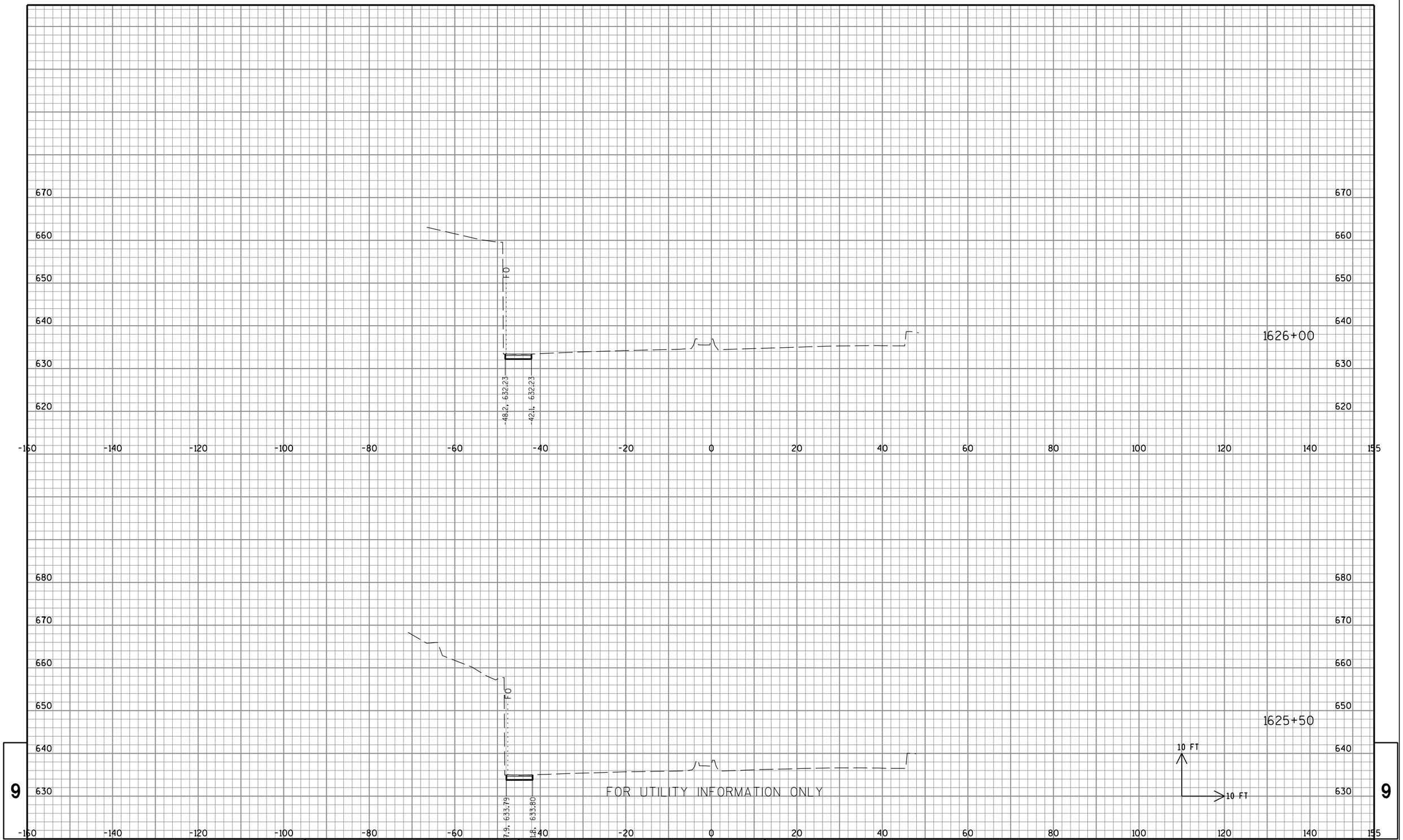


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 350	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

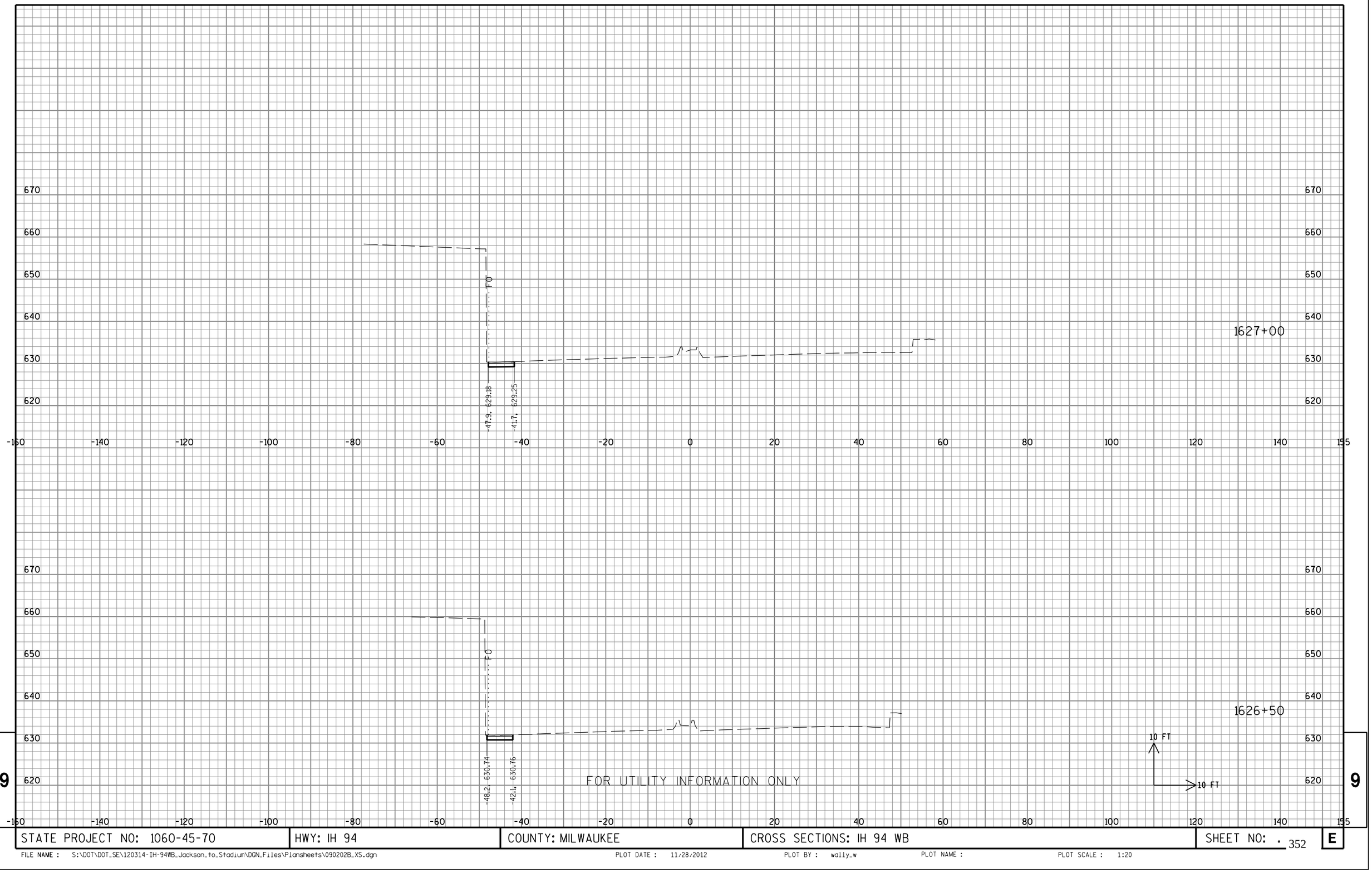


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 351	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 352	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

660
650
640
630
620
610
600

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

FO

1.8%

48.0, 623.63

39.9, 623.48

1629+00

660
650
640
630
620
610
600

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

FO

1.1%

47.9, 624.93

39.8, 624.84

1628+50

10 FT

10 FT

FOR UTILITY INFORMATION ONLY

9

9

STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 353	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

660
650
640
630
620
610

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

FO

0.9%

-48.5, 621.17

-40.4, 621.10

1630+00

660
650
640
630
620
610
600

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

FO

1.0%

-48.4, 622.43

-40.3, 622.35

1629+50

10 FT

10 FT

FOR UTILITY INFORMATION ONLY

9

9

STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 354	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

660
650
640
630
620
610

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

FO

2.5%

-48.4, 618.31

-40.5, 618.12

1631+00

660
650
640
630
620
610

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

FO

1.8%

-48.4, 619.75

-40.3, 619.60

1630+50

10 FT

10 FT

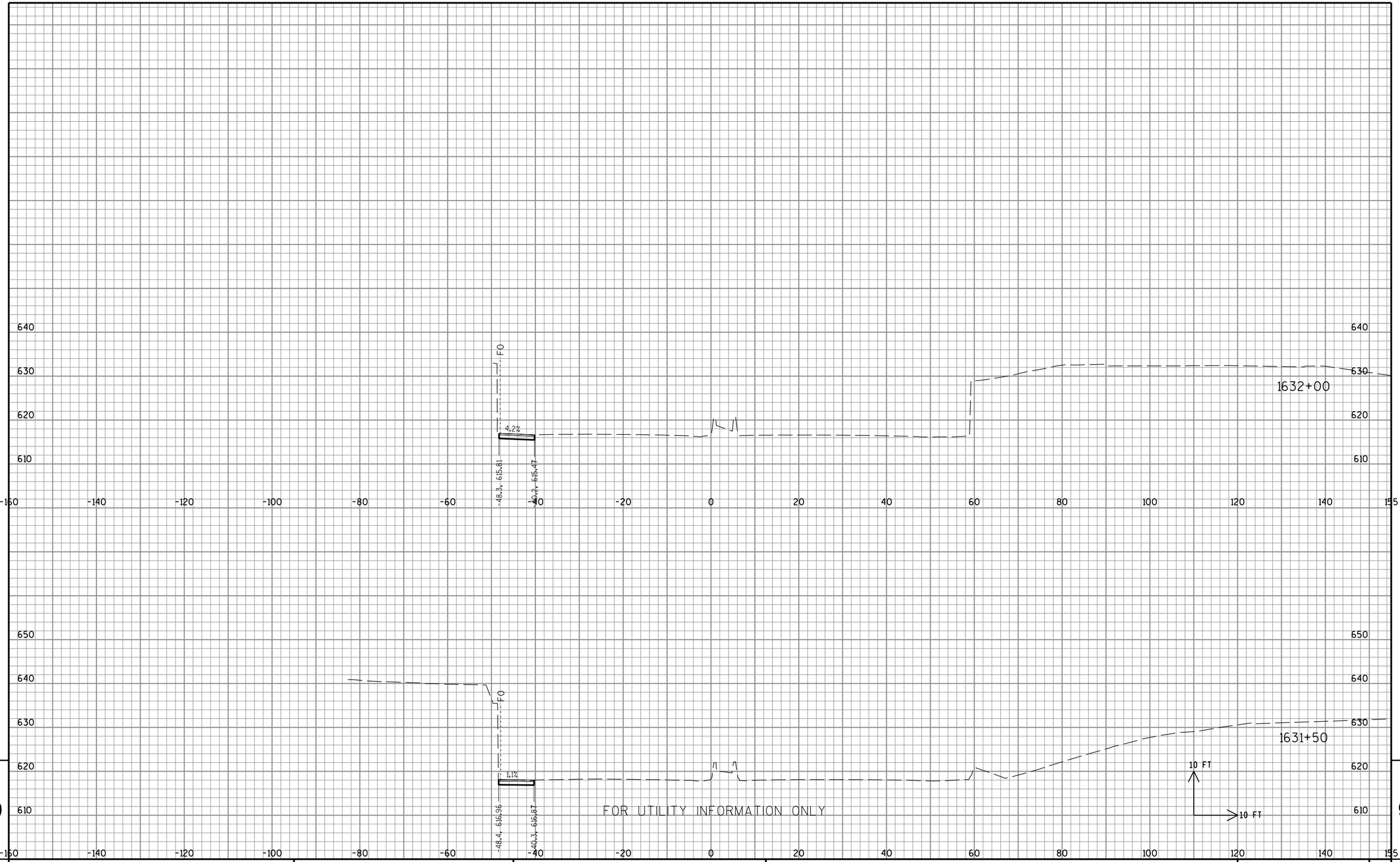
FOR UTILITY INFORMATION ONLY

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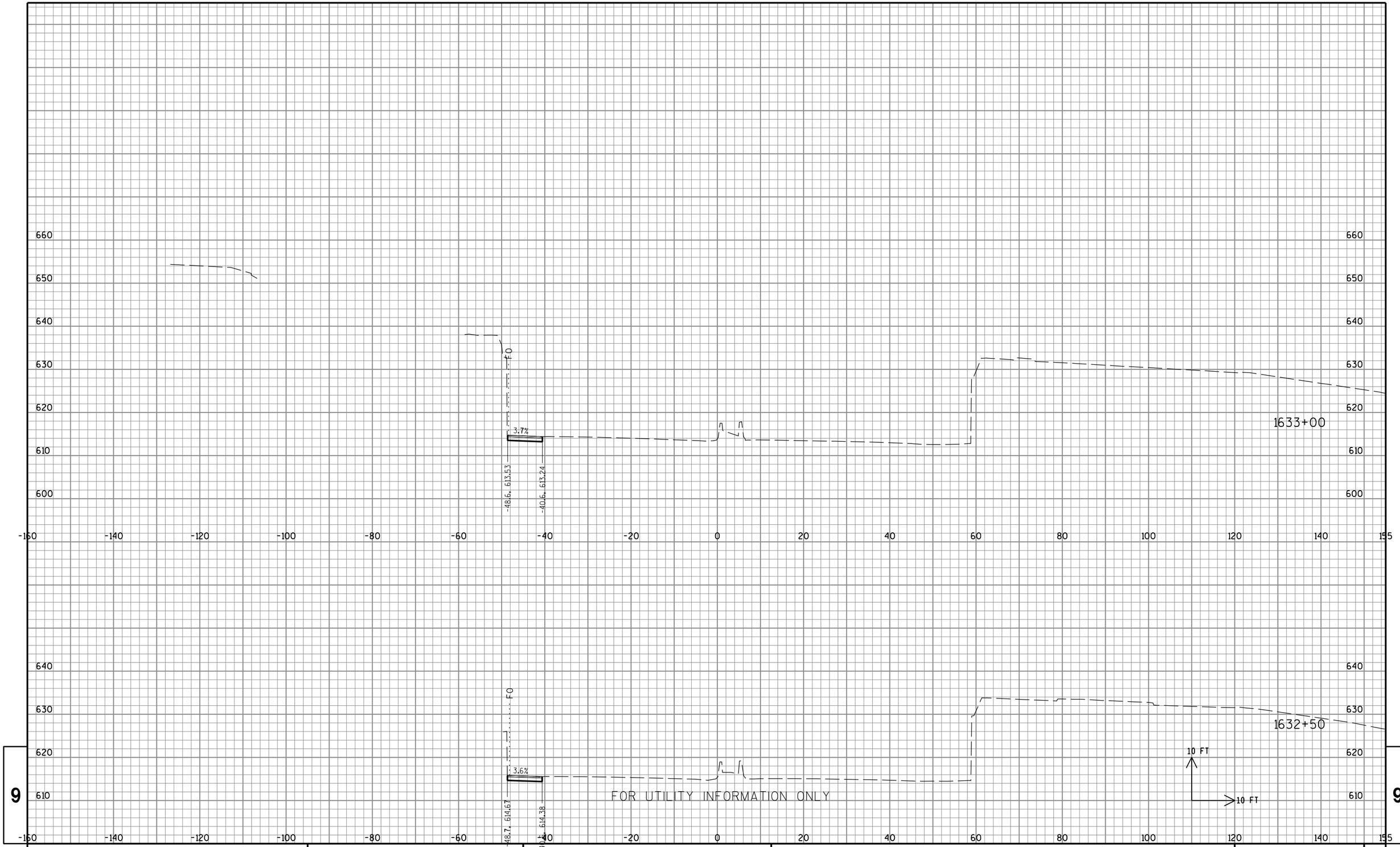
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 355	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 356	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

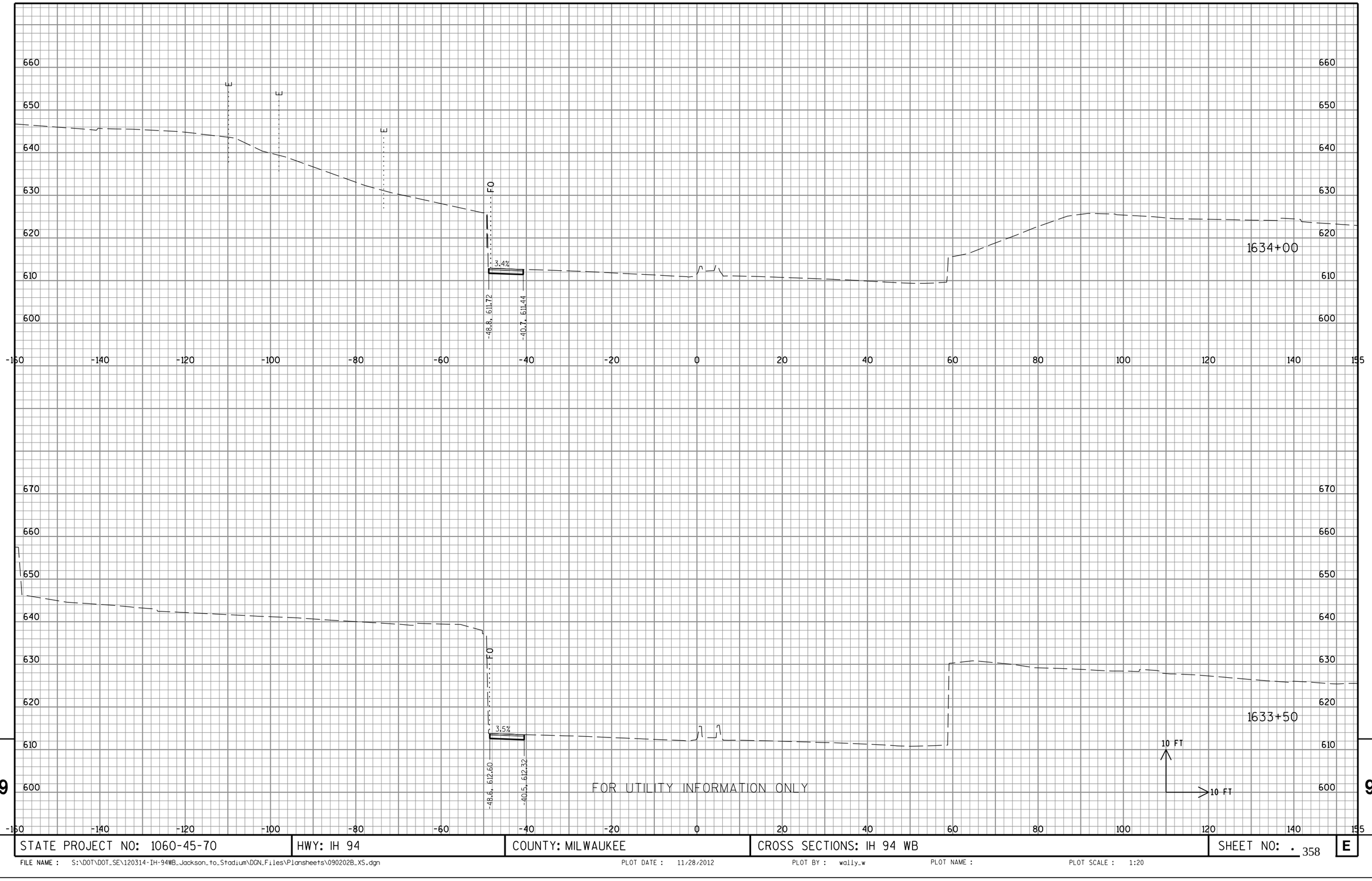


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 357	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 358	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

660
650
640
630
620
610
600

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

1635+00

5.0%

-48.3, 610.51

-40.2, 616.11

660
650
640
630
620
610
600

E

E

E

FO

1634+50

5.3%

-48.4, 611.14

-40.4, 610.71

FOR UTILITY INFORMATION ONLY

10 FT

10 FT

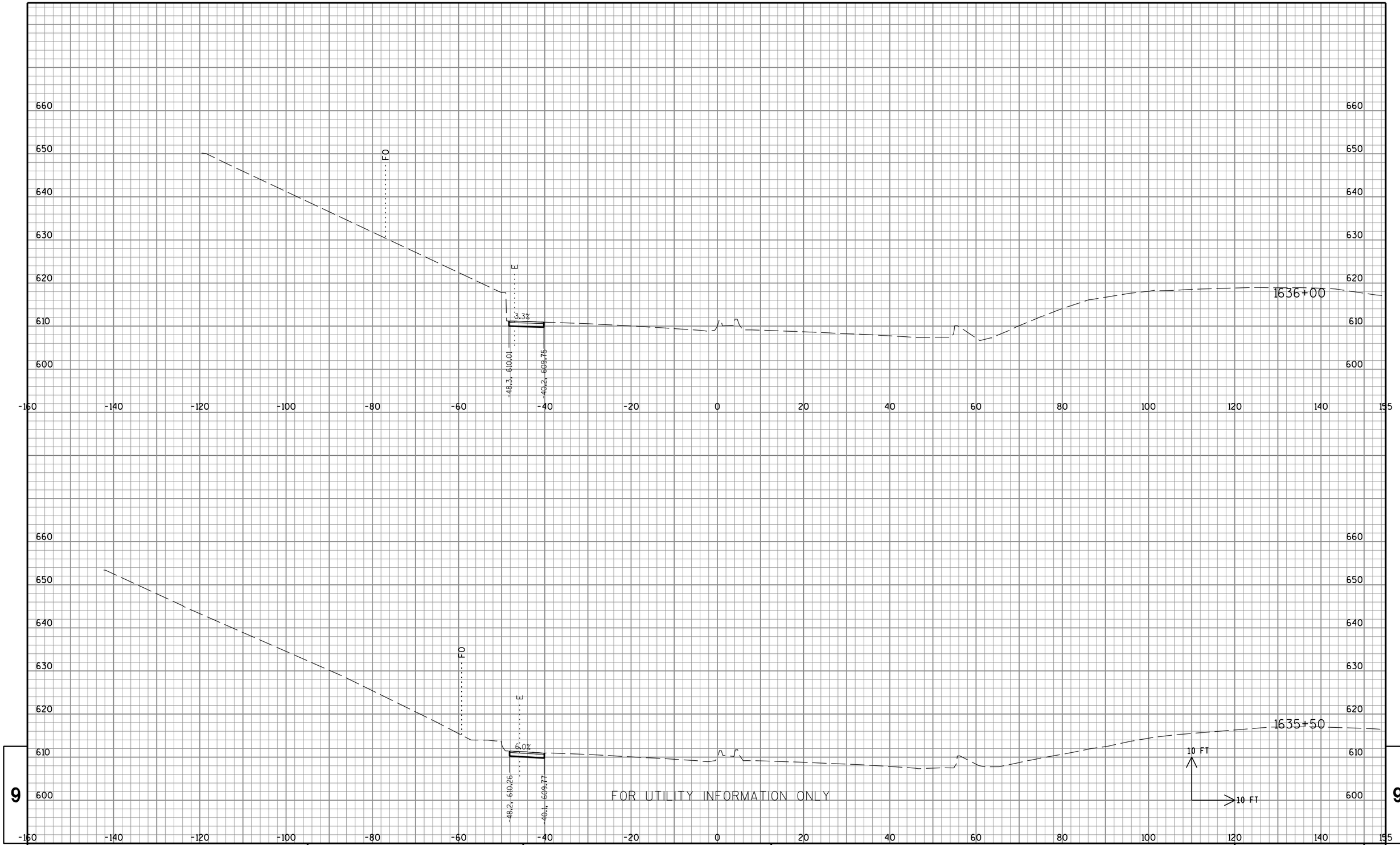
-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

9

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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 359	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

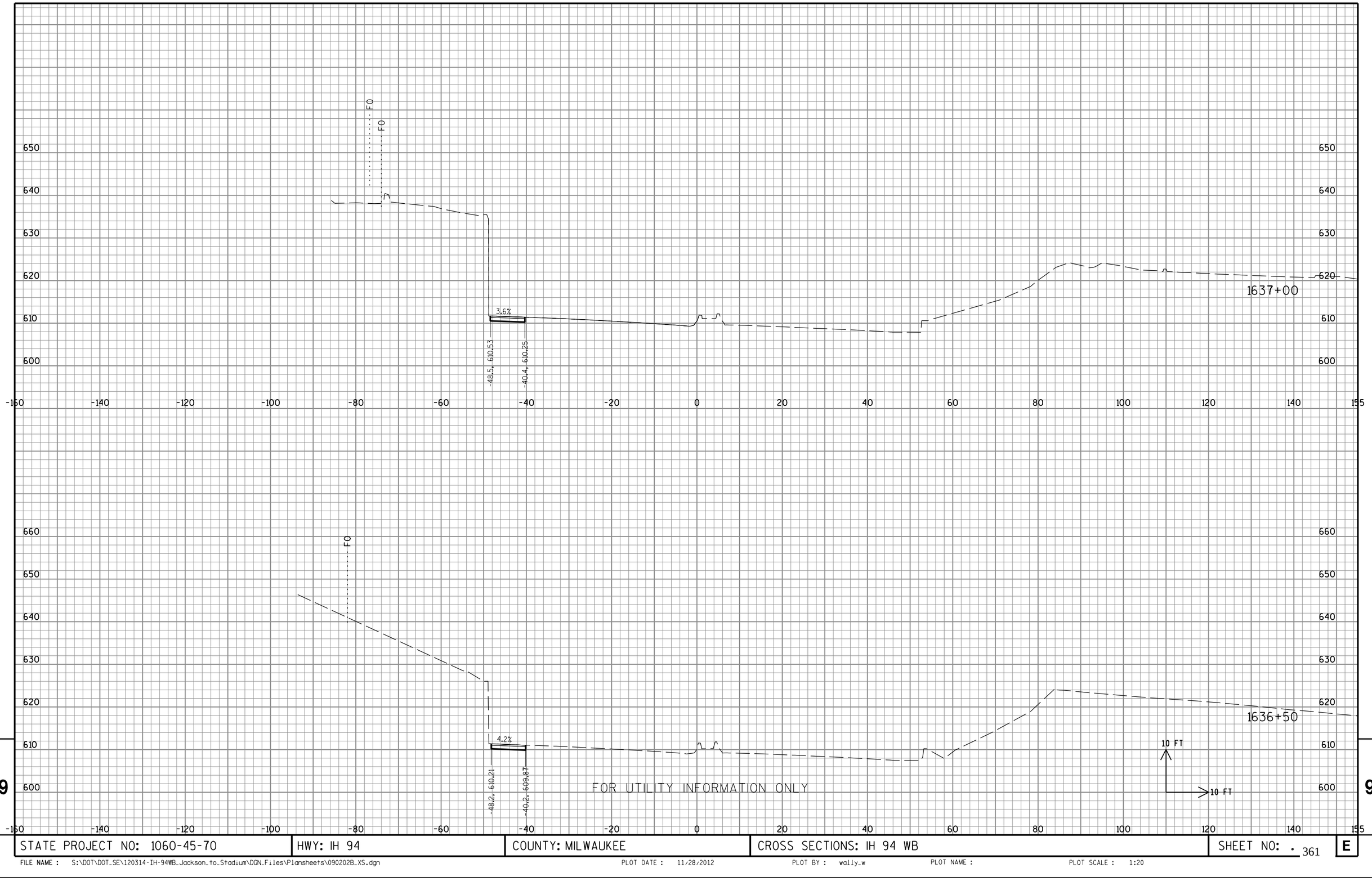


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 360	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

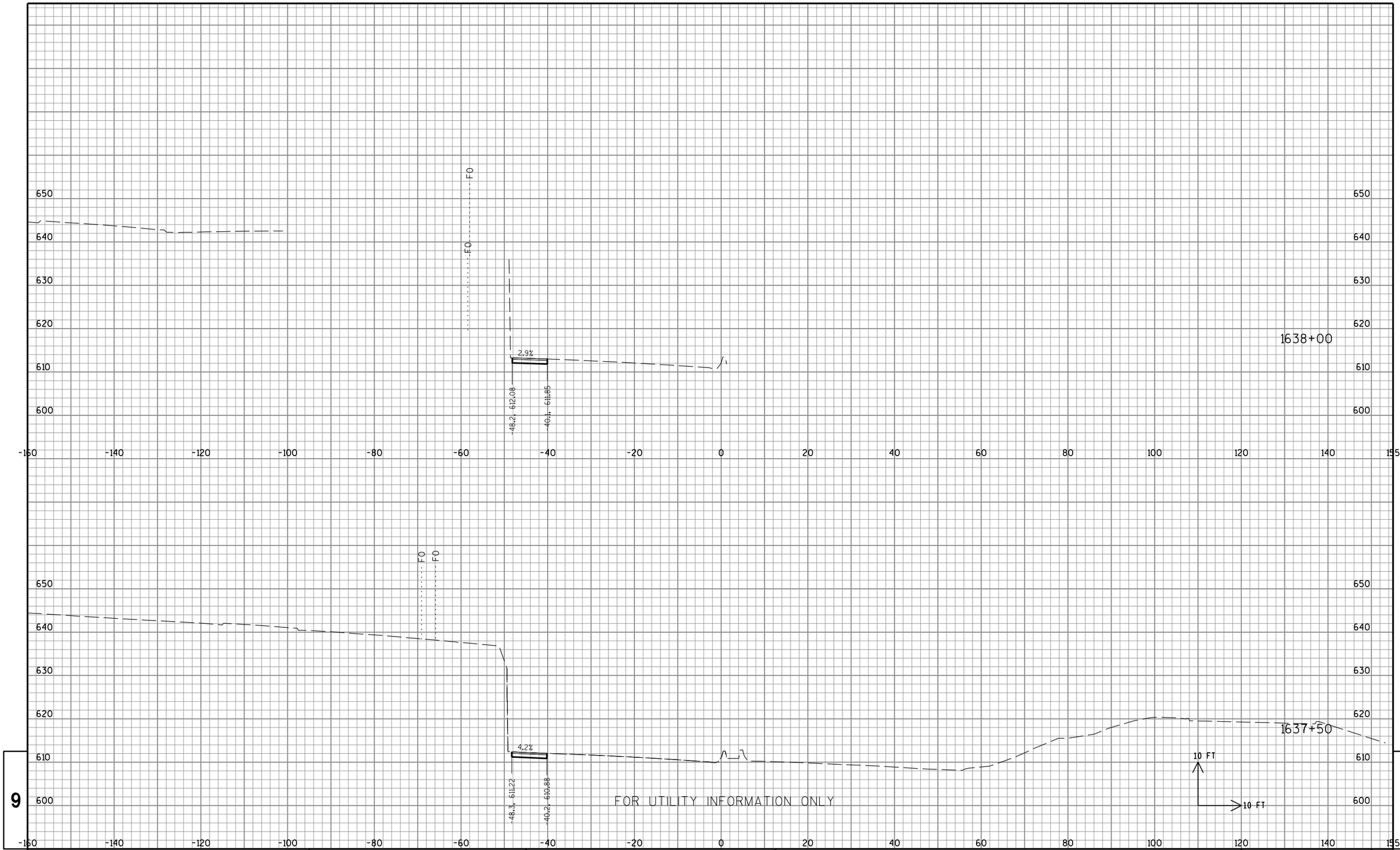


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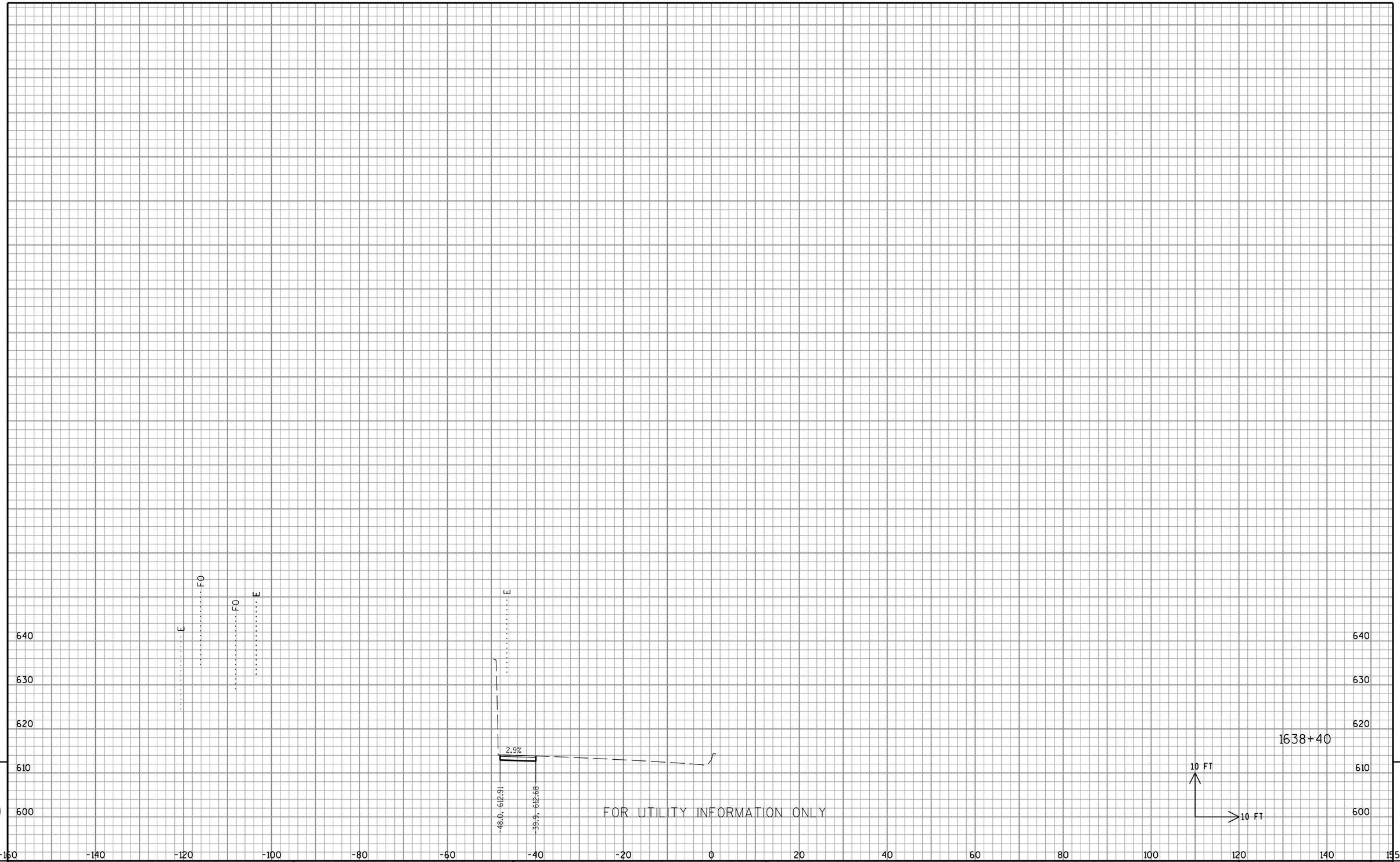
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 361	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 362 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

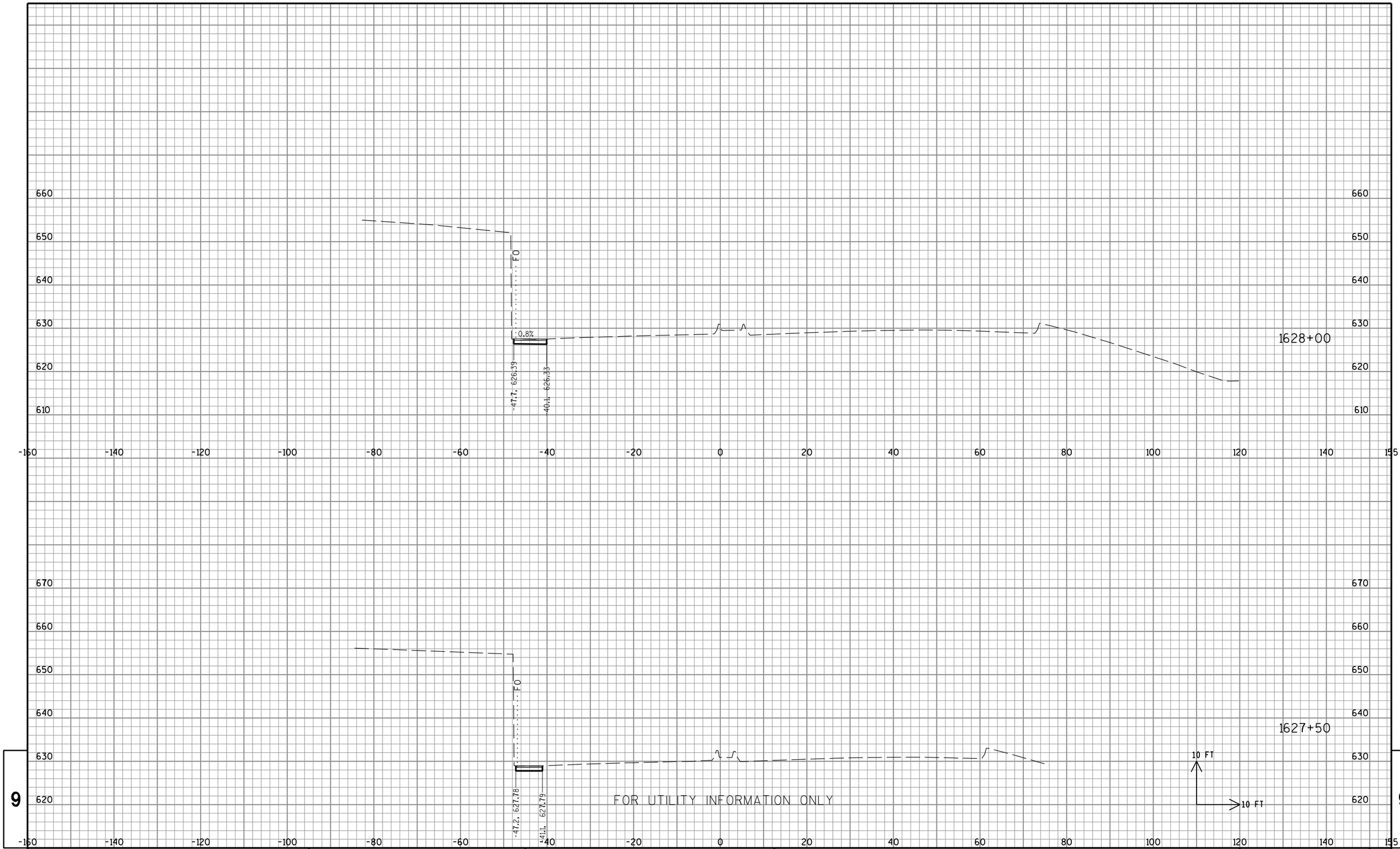


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 363	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

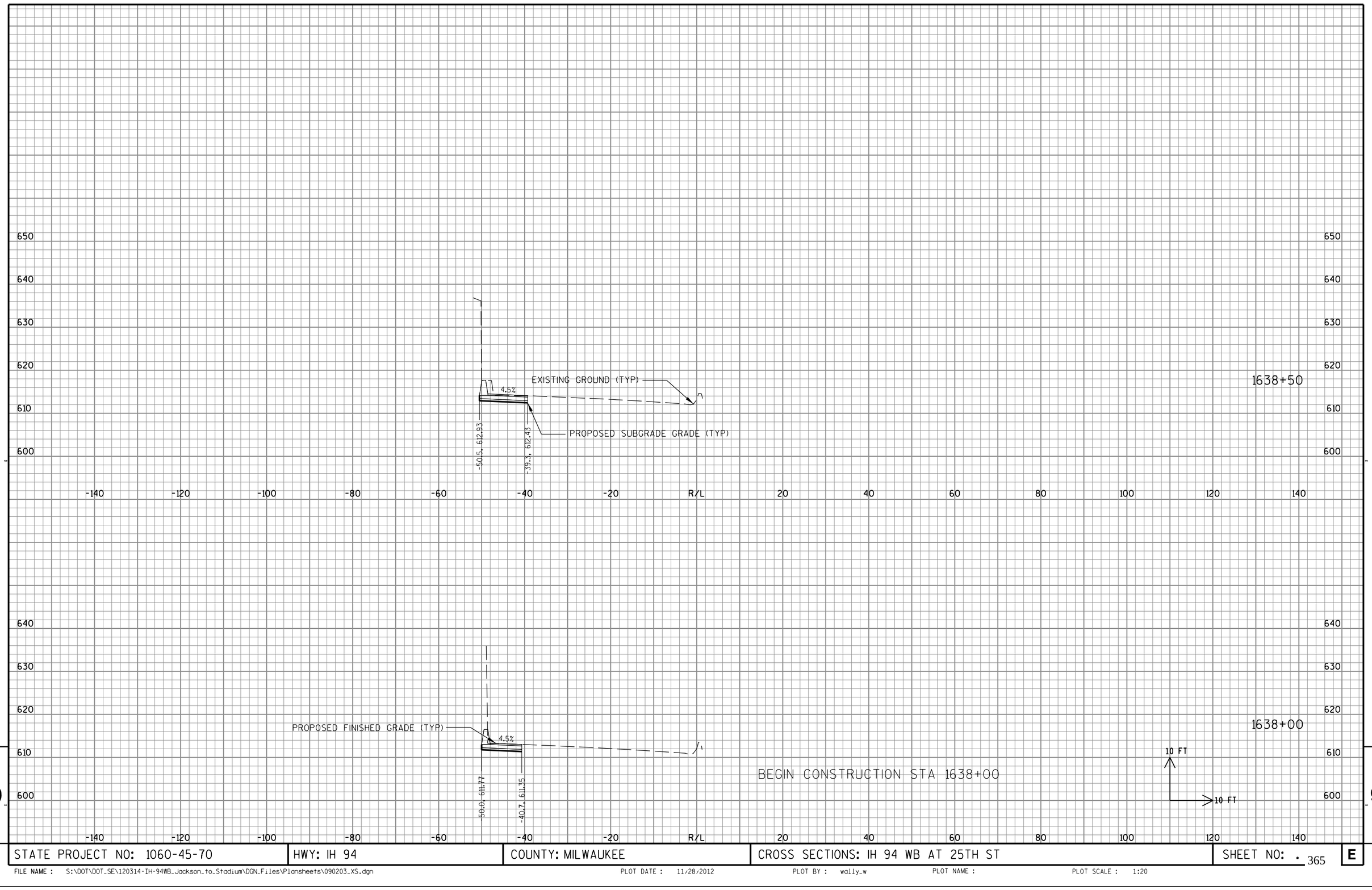


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET NO: . 364	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090202B_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 25TH ST	SHEET NO: . 365	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090203_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

650
640
630
620
610
600

-140 -120 -100 -80 -60 -40 -20 R/L 20 40 60 80 100 120 140

1639+50

4.5%

-50.5, 615.76

-39.1, 615.25

1639+00

4.5%

-50.5, 614.25

-39.2, 613.75

10 FT

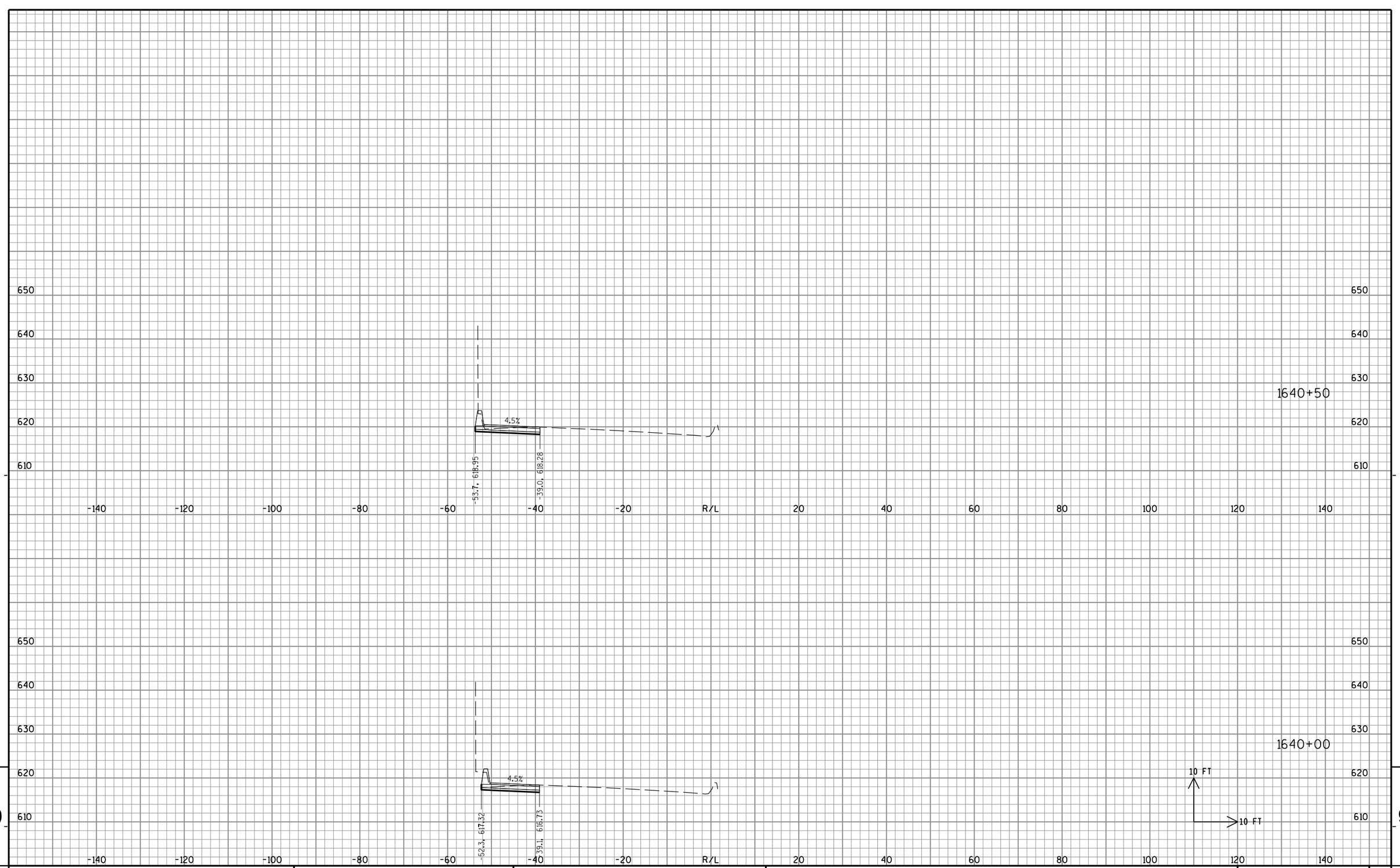
10 FT

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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 25TH ST	SHEET NO: . 366	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090203_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



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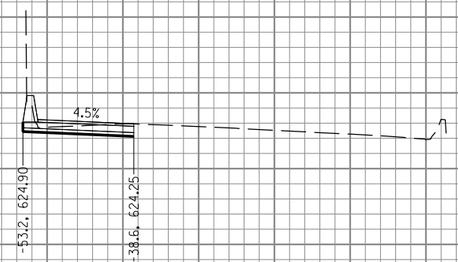
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 25TH ST	SHEET NO: . 367	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090203_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 25TH ST	SHEET NO: . 368	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090203_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



1642+50



1642+00

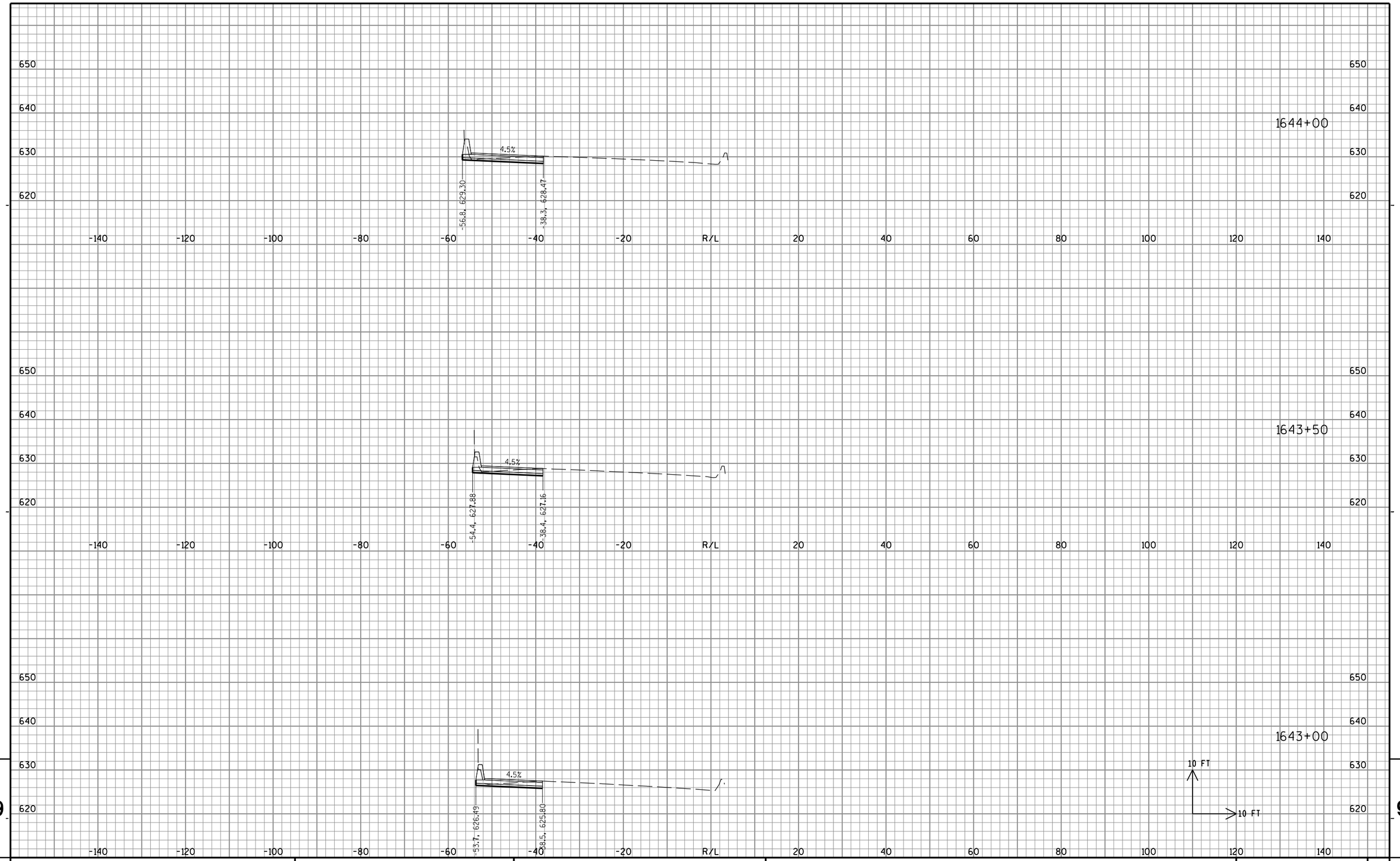


650 640 630 620 610 -140 -120 -100 -80 -60 -40 -20 R/L 20 40 60 80 100 120 140

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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 25TH ST	SHEET NO: . 369	E

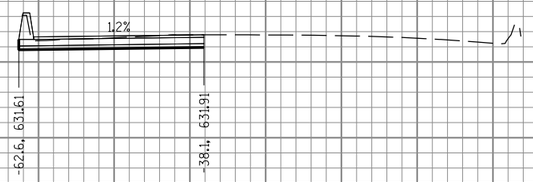
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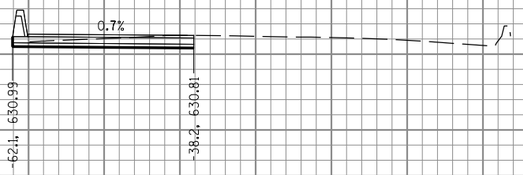
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 25TH ST	SHEET NO: . 370	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090203_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

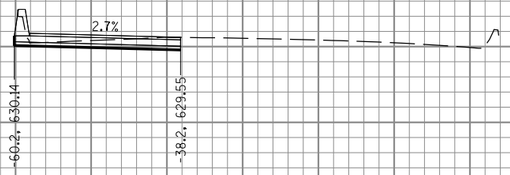
END CONSTRUCTION STA 1645+50



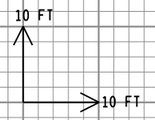
1645+50



1645+00



1644+50

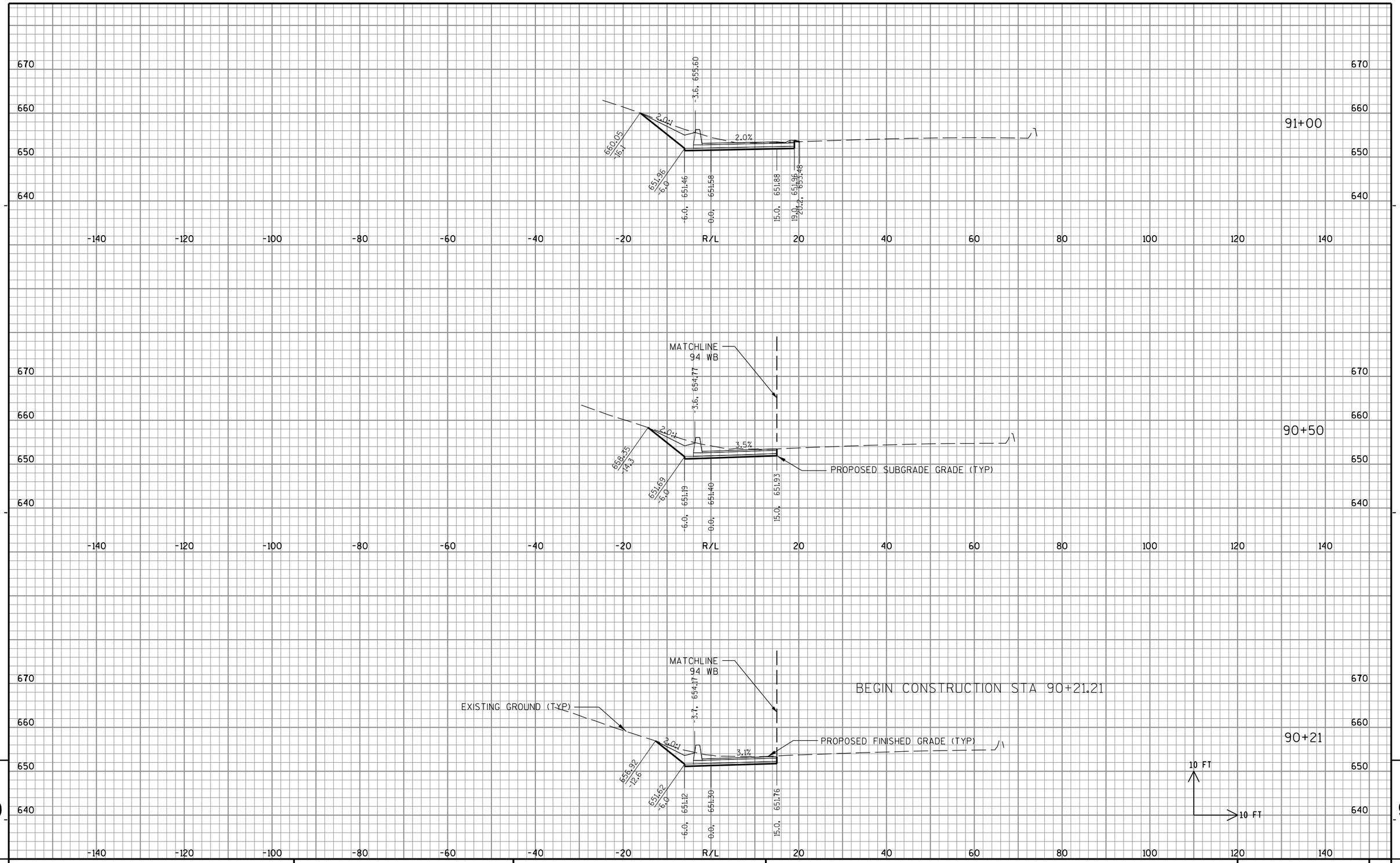


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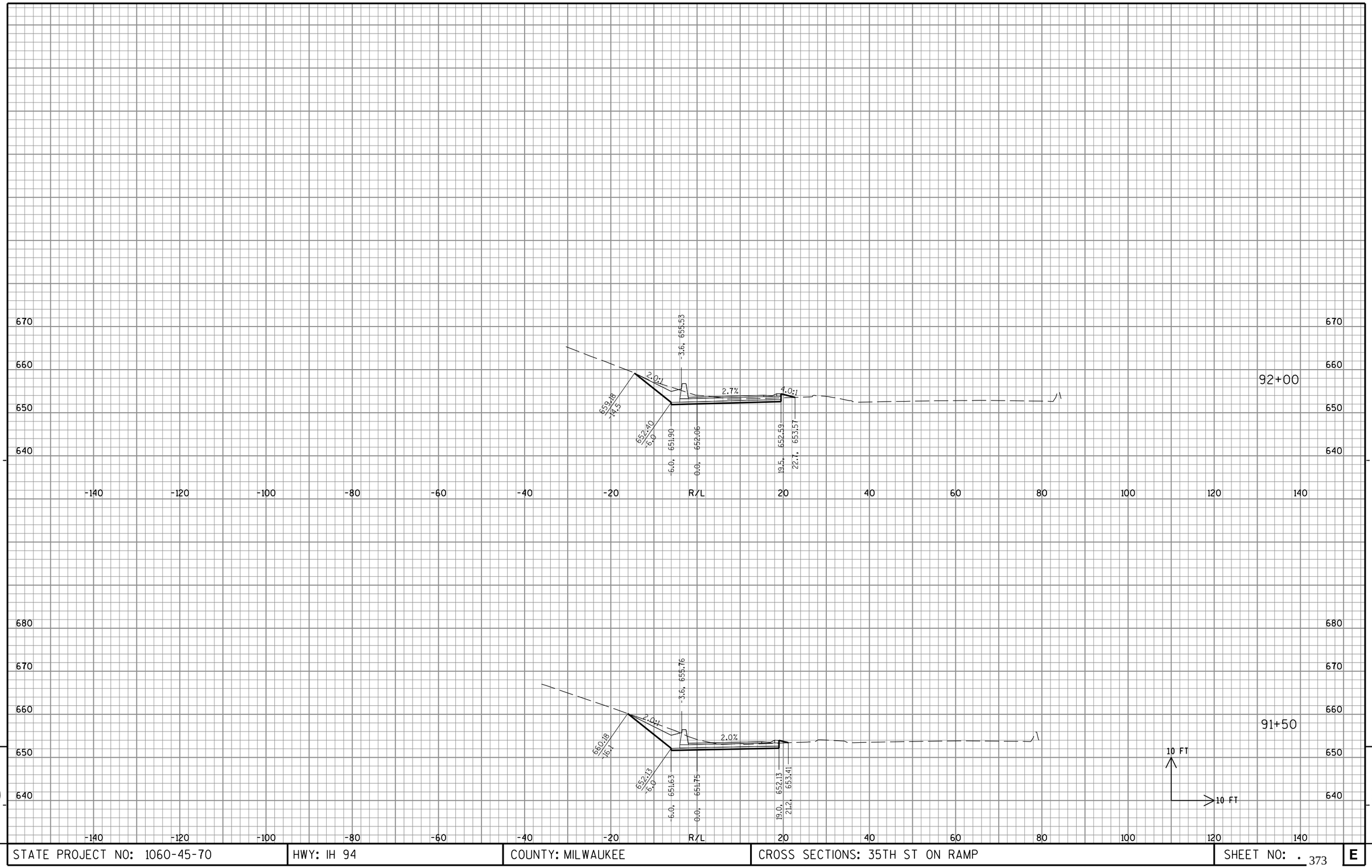
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB AT 25TH ST	SHEET NO: . 371	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090203_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 35TH ST ON RAMP	SHEET NO: . 372 E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090204_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

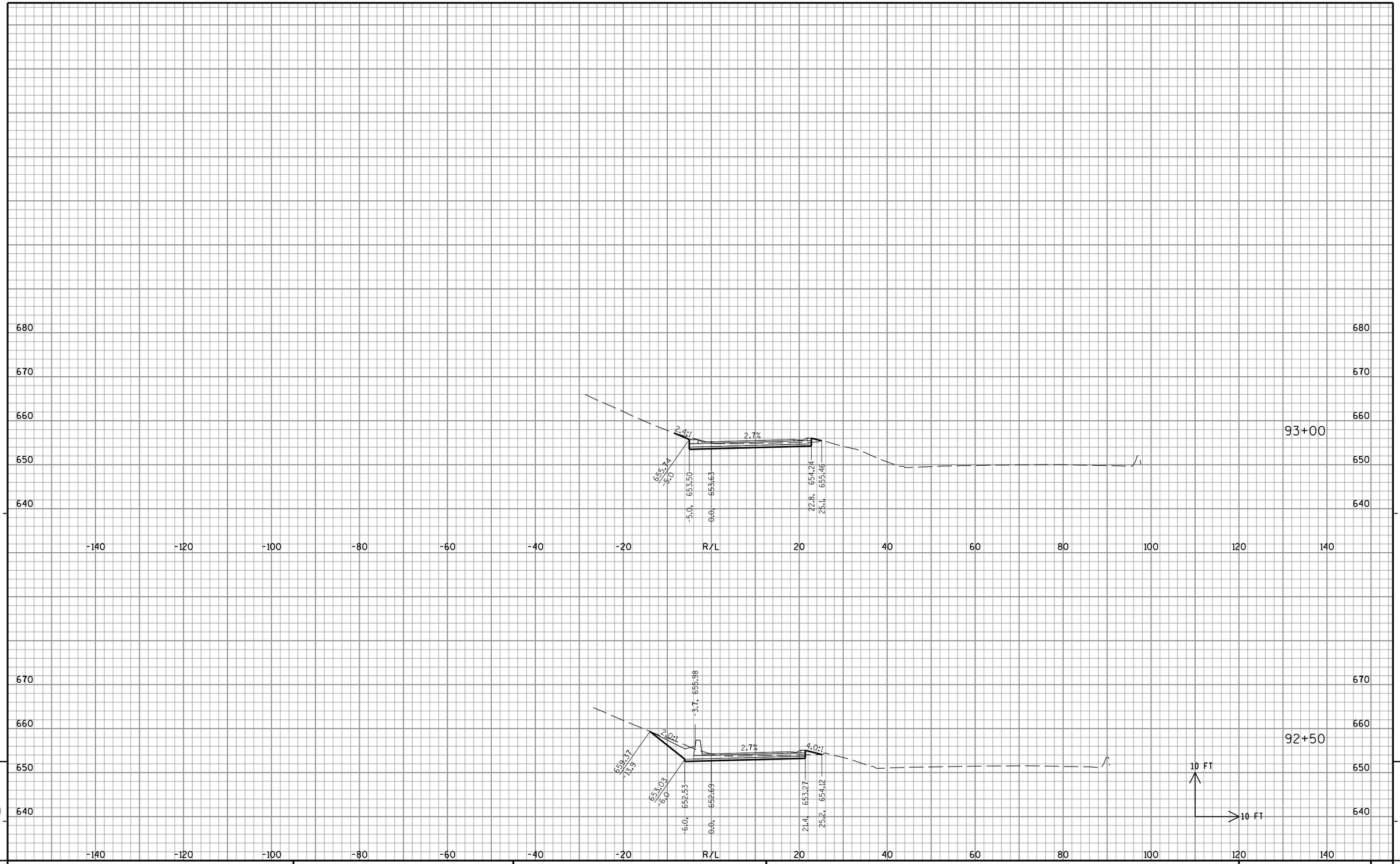


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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 35TH ST ON RAMP	SHEET NO: . 373	E

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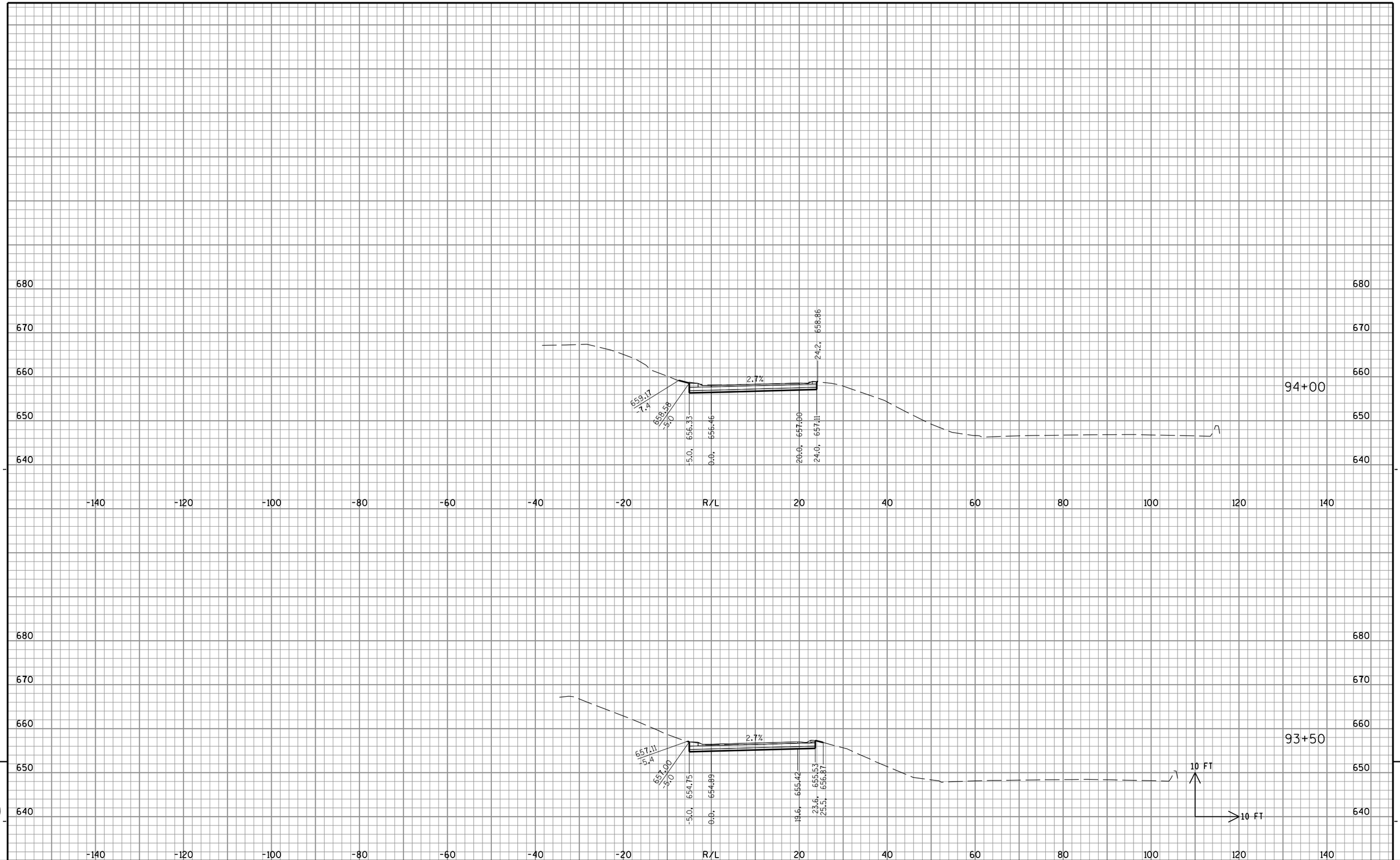


STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 35TH ST ON RAMP	SHEET NO: . 374	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090204_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

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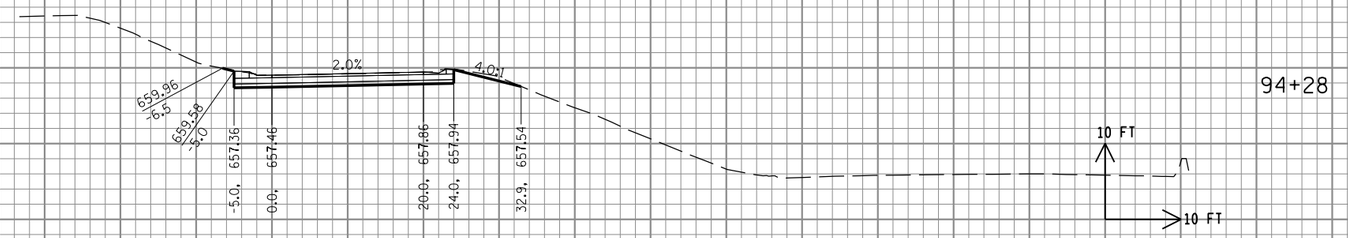
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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 35TH ST ON RAMP	SHEET NO: . 375	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090204_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

END CONSTRUCTION STA 94+28.01



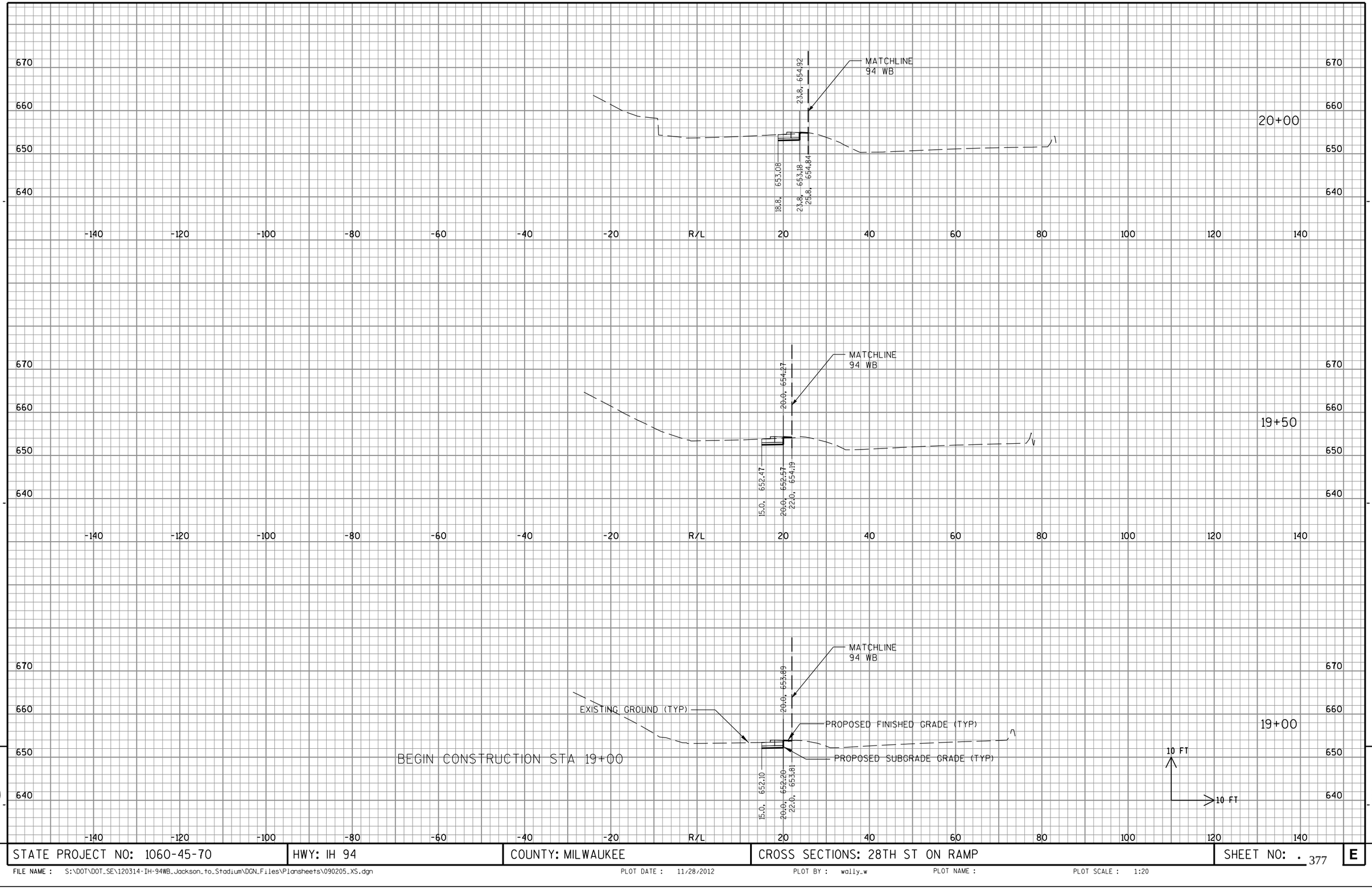
680 670 660 650 640

-140 -120 -100 -80 -60 -40 -20 R/L 20 40 60 80 100 120 140

9 9

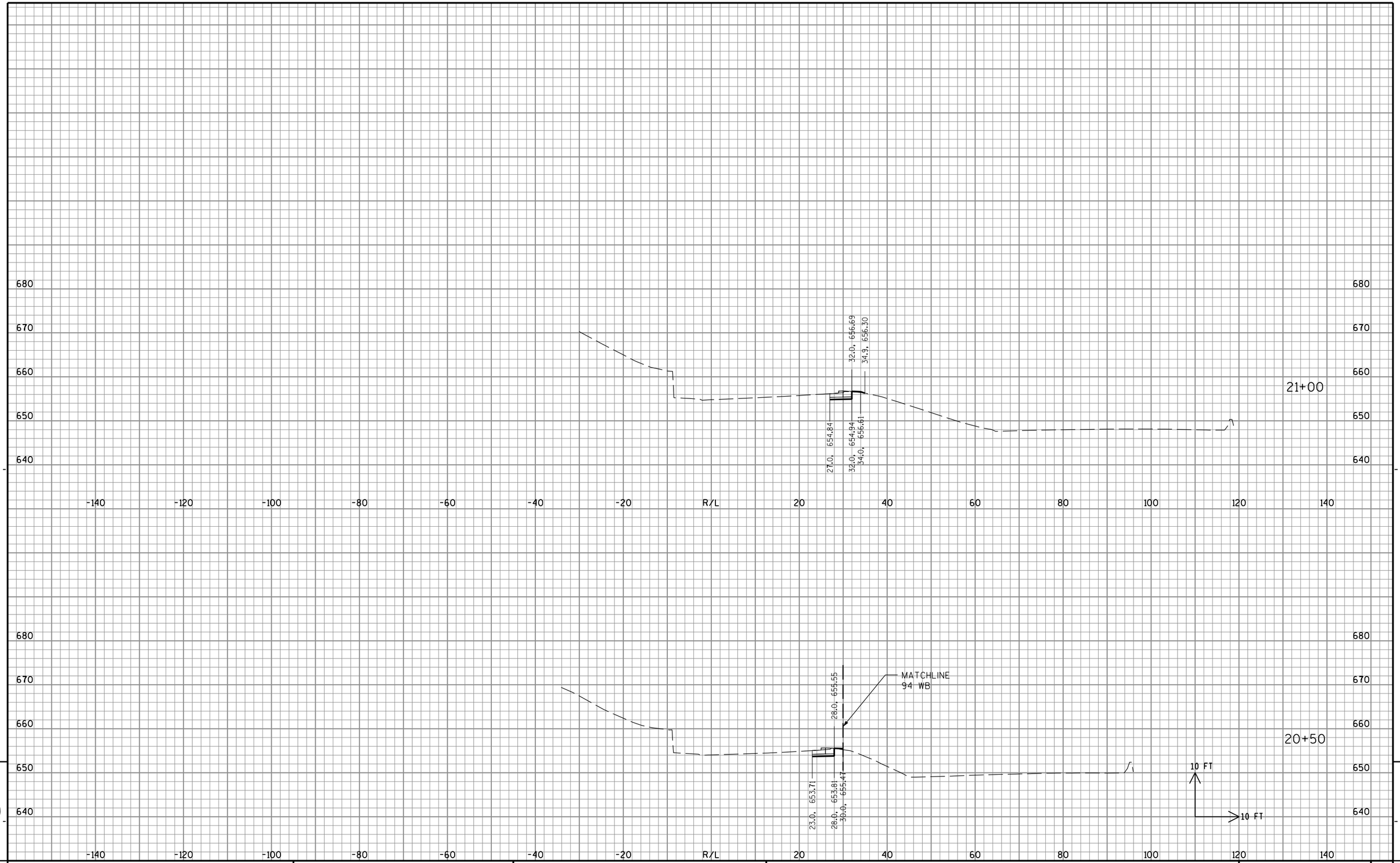
STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 35TH ST ON RAMP	SHEET NO: . 376	E

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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 28TH ST ON RAMP	SHEET NO: . 377	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090205_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



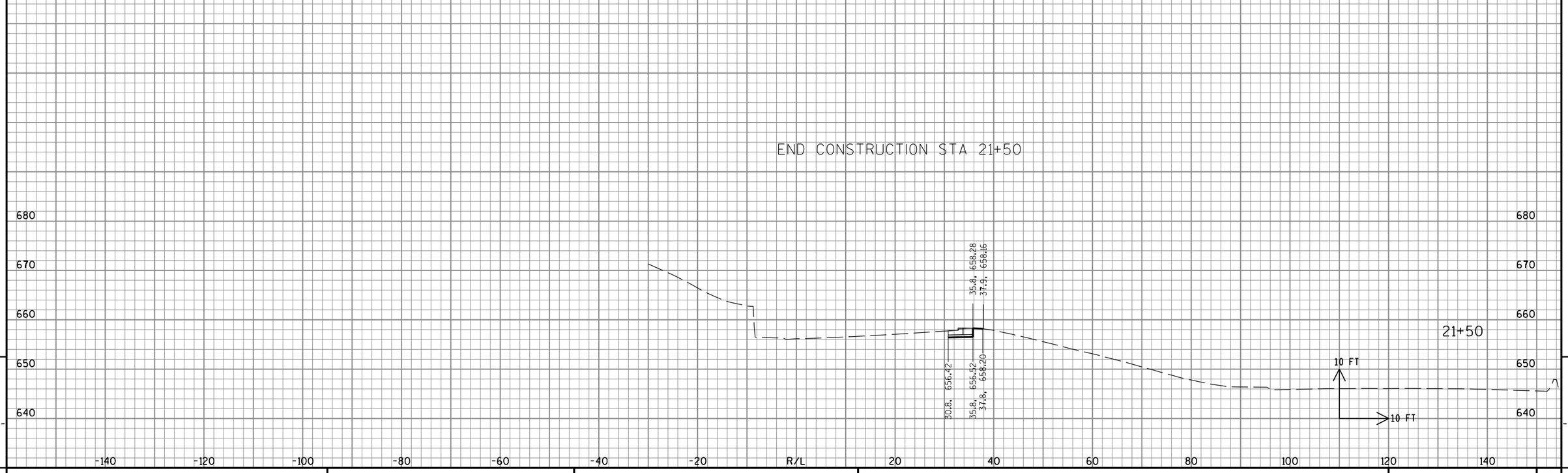
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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 28TH ST ON RAMP	SHEET NO: . 378	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090205_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

END CONSTRUCTION STA 21+50



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STATE PROJECT NO: 1060-45-70	HWY: IH 94	COUNTY: MILWAUKEE	CROSS SECTIONS: 28TH ST ON RAMP	SHEET NO: . 379	E

FILE NAME : S:\DOT\DOT_SE\120314-IH-94WB_Jackson_to_Stadium\DGN_Files\Plansheets\090205_XS.dgn PLOT DATE : 11/28/2012 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

Wisconsin Department of Transportation

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