

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 = 102

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

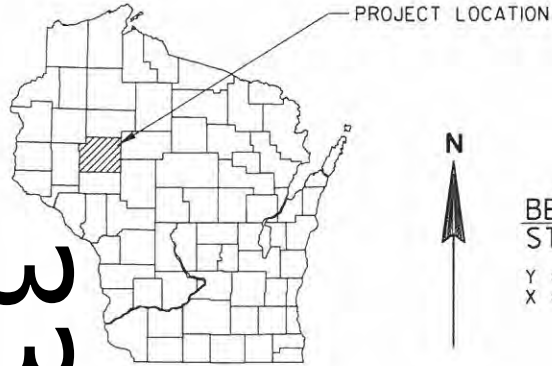
CHIPPEWA FALLS-CADOTT ROAD

LAKE WISSOTA BRIDGE B-09-0280

CTH X

CHIPPEWA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8919-03-72		



BEGIN PROJECT 8919-03-72
STA 141+67.61
Y = 125402.8446
X = 190760.4505

STATE PROJECT NUMBER
8919-03-72

END PROJECT 8919-03-72
STA 162+50.00
Y = 125888.5749
X = 192772.5801

DESIGN DESIGNATION

A.A.D.T. 2015	=	8300
A.A.D.T. 2035	=	10400
D.H.V.	=	13.6%
D.D.	=	59/41
T.	=	3.8%
DESIGN SPEED	=	45 MPH
ESALS	=	1,817,700

CONVENTIONAL SYMBOLS

COUNTY LINE	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED EASEMENT	
EARTHWORK BALANCE POINT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SURVEY LINE	
SLOPE INTERCEPT	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
MARSH AREA	
WOODED OR SHRUB AREA	

COMBUSTIBLE FLUIDS	
UNDERGROUND UTILITIES	
GAS	
ELECTRIC	
TELEPHONE OR TELEGRAPH	
TV/CABLE	
SERVICE PEDESTAL	
POWER POLE	
TELEPHONE POLE	
RAILROAD	
SANITARY SEWER	
STORM SEWER	
WATER	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
CULVERT (Profile View)	



STRUCTURE B-09-0280
STA 150+00

LAYOUT
SCALE 0 0.5 MI
TOTAL NET LENGTH OF CENTERLINE = 0.394

Coordinates on this plan are referenced to the Wisconsin County
Coordinate System (WCCS), Chippewa County.

ACCEPTED FOR
COUNTY of CHIPPEWA
DATE: 10/15/2014
Signature: [Signature]

ORIGINAL PLANS PREPARED BY:
SEH
Professional Engineer
Tara L. Krista
10-16-14

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY: Surveyor SEH
Designer: SEH
Management Consultant: Knight E/A
C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 10/15/14
Signature: Ryan B. McKane
(Management Consultant Signature)

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	HYD	HYDRANT
AC	ACRE	ID	INSIDE DIAMETER
AGG	AGGREGATE	INV	INVERT
AECPRC	APRON ENDWALL FOR CULVERT PIPE	IP	IRON PIPE ON PIN
	REINFORCED CONCRETE	LHF	LEFT-HAND FORWARD
ASPH	ASPHALTIC	L	LENGTH OF CURVE
AVG	AVERAGE	LF	LINEAR FOOT
ADT	AVERAGE DAILY TRAFFIC	LC	LONG CHORD OF CURVE
BF	BACK FACE	LS	LUMP SUM
BM	BENCH MARK	MH	MANHOLE
BR	BRIDGE	MOR	MID POINT OF RADIUS
CE	COMMERCIAL ENTRANCE	NC	NORMAL CROWN
CL OR C/L OR ☿	CENTER LINE	NO	NUMBER
Δ	CENTRAL ANGLE OR DELTA	OBLIT	OBLITERATE
CONC	CONCRETE	PAVT	PAVEMENT
CPRC	CULVERT PIPE REINFORCED CONCRETE	PE	PRIVATE ENTRANCE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE	PVRC	POINT OF VERTICAL REVERSE CURVE
	HORIZONTAL ELLIPTICAL	QOR	QUARTER POINT OF RADIUS
CR	CREEK	R	RADIUS
CY	CUBIC YARD	REQ'D	REQUIRED
C & G	CURB AND GUTTER	RES	RESIDENCE OR RESIDENTIAL
D	DEGREE OF CURVE	RHF	RIGHT-HAND FORWARD
DHV	DESIGN HOUR VOLUME	R/W	RIGHT-OF-WAY
DISCH	DISCHARGE	R	RIVER
DG	DITCH GRADE	RDWY	ROADWAY
DWY	DRIVEWAY	R/L OR ☿	REFERENCE LINE
X	EAST GRID COORDINATE	SALV	SALVAGED
EAT	STEEL PLATE BEAM GUARD	SAN	SANITARY SEWER
	ENERGY ABSORBING TERMINAL	SF	SQUARE FEET
EOR	END POINT OF RADIUS	SY	SQUARE YARD
EL	ELEVATION	SDD	STANDARD DETAIL DRAWINGS
ENT	ENTRANCE	STA	STATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	SS	STORM SEWER
EXC	EXCAVATION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION RATE
EXIST	EXISTING	TC	TOP OF CURB
FC	FACE OF CURB	T OR TN	TOWN
FF	FACE TO FACE	T	TRUCKS (PERCENT OF)
FERT	FERTILIZE	TYP	TYPICAL
FE	FIELD ENTRANCE	VAR	VARIABLE
FL	FLOW LINE	VC	VERTICAL CURVE
FO	FIBER OPTIC	Y	NORTH GRID COORDINATE
CWT	HUNDREDWEIGHT	YD	YARD

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE APPROXIMATE USGS DATUM.

WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH TOPSOILED, FERTILIZED, SEEDED AND MULCHED.

THE LOCATION OF ALL DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

ALL SIDE ROAD EARTHWORK QUANTITIES ARE INCLUDED IN MAINLINE EARTHWORK QUANTITIES.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

CONSTRUCTION PERMITS FOR SIDEWALK AND/OR DRIVEWAY CONSTRUCTION HAVE BEEN OBTAINED AND SUCH RIGHTS WILL BE EXTENDED TO THE CONTRACTOR.

ALL STORM SEWER INVERTS, ELEVATIONS, PIPE LENGTHS, AND GRADES ARE COMPUTED CENTER-TO-CENTER OF STRUCTURES.

SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO BRIDGE REMOVAL.

WISDOT MONUMENTS WILL BE SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

BEARINGS SHOWN ON THE PLAN ARE REFERENCED TO THE EXISTING ROADWAY CENTERLINE AND ARE ASSUMED.

UTILITY CONTACTS

CHARTER COMMUNICATIONS
1201 MCCANN DRIVE
ALTOONA, WI 54720
TELEPHONE: 715.831.8940 EXT. 619
ATTENTION: SHANE YODER
EMAIL: SHANE.YODER@CHARTERCOM.COM

AT&T WISCONSIN
304 SOUTH DEWEY
EAU CLAIRE, WI 54701
TELEPHONE: 715.839.5565
ATTENTION: RICK PODOLAK
EMAIL: RP4514@ATT.COM

XCEL ENERGY - GAS
PO BOX 8
1414 WEST HAMILTON AVENUE
EAU CLAIRE, WI 54702-0008
TELEPHONE: 715.737.2584
ATTENTION: SCOTT SEAHOLM

XCEL ENERGY - DISTRIBUTION
PO BOX 8
1414 WEST HAMILTON AVENUE
EAU CLAIRE, WI 54702-0008
TELEPHONE: 715.737.4303
ATTENTION: DAN KLEIN
EMAIL: DANIEL.J.KLEIN@XCELENERGY.COM



Dial  or (800)242-8511

www.DiggersHotline.com

** NOT A MEMBER OF DIGGERS HOTLINE

DESIGN CONTACTS

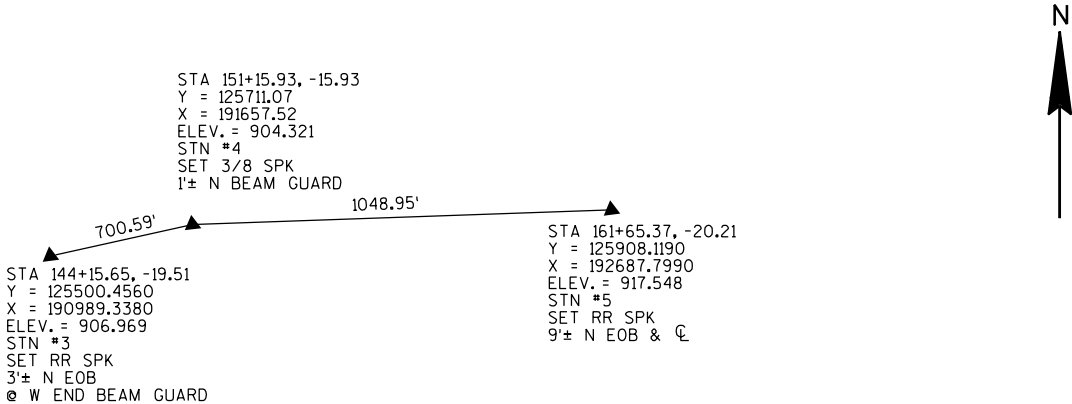
SEH
10 NORTH BRIDGE STREET
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.720.6266
ATTENTION: GREG WEYANDT
EMAIL: GWEYANDT@SEHINC.COM

WDNR CONTACT

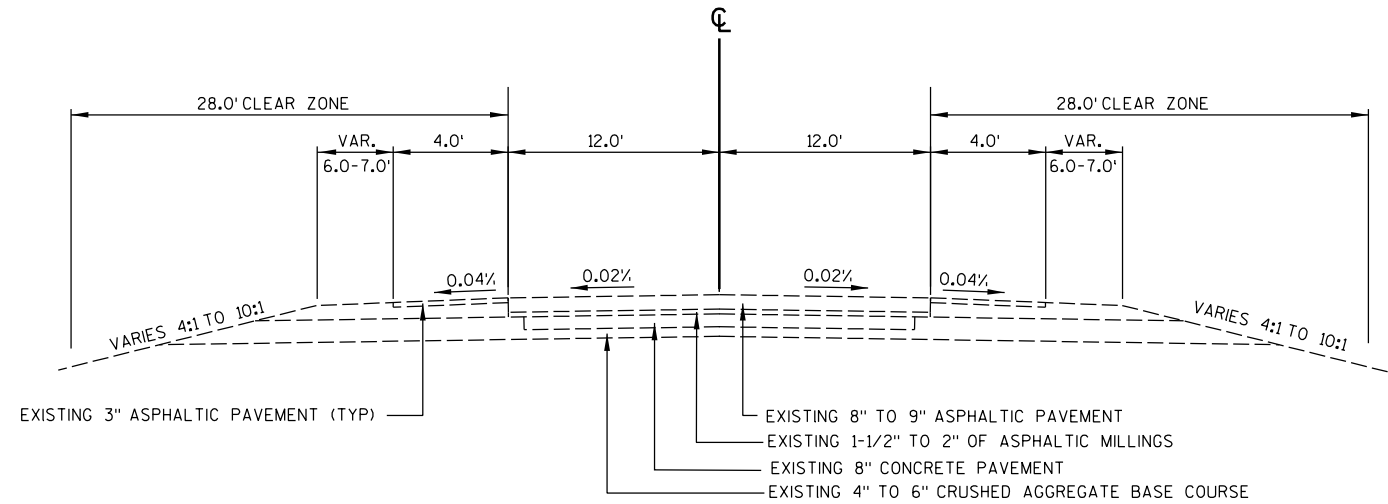
WI DEPT OF NATURAL RESOURCES
WEST CENTRAL REGION HQ
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE WI, 54702
TELEPHONE: 715.839.1609
ATTENTION: CHRIS WILLGER
EMAIL: CHRISTOPHERJ.WILLGER@WISCONSIN.GOV

WISDOT RAILROAD COORDINATOR

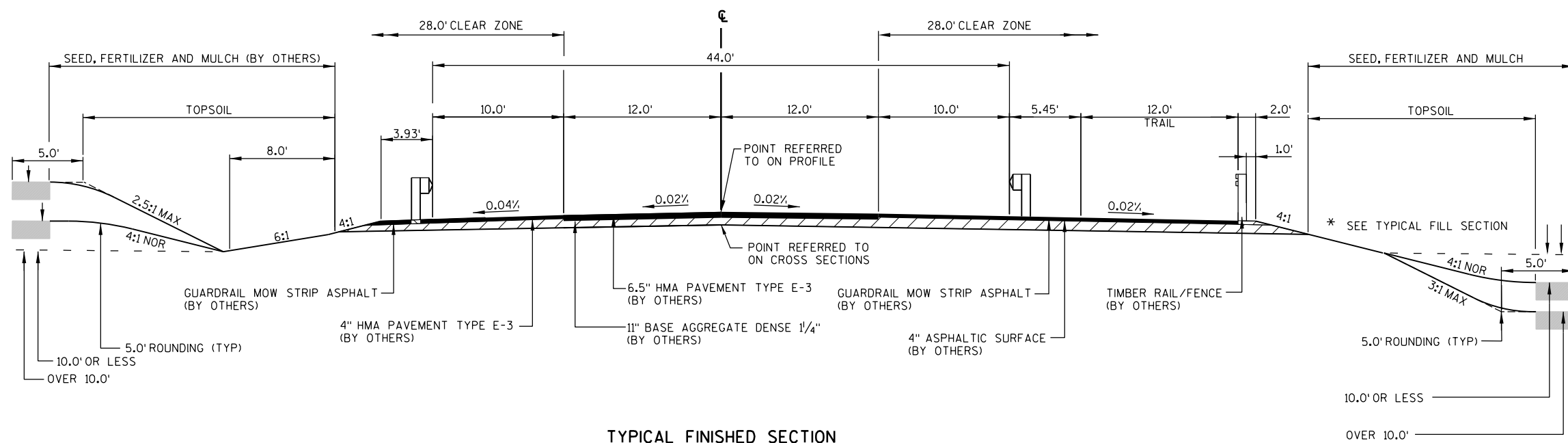
WI DEPT OF TRANSPORTATION
NORTHWEST REGION
1701 N 4TH STREET
SUPERIOR WI, 54880
TELEPHONE: 715.392.7960
ATTENTION: ANNA DAVEY
EMAIL: ANNA.DAVEY@DOT.WI.GOV



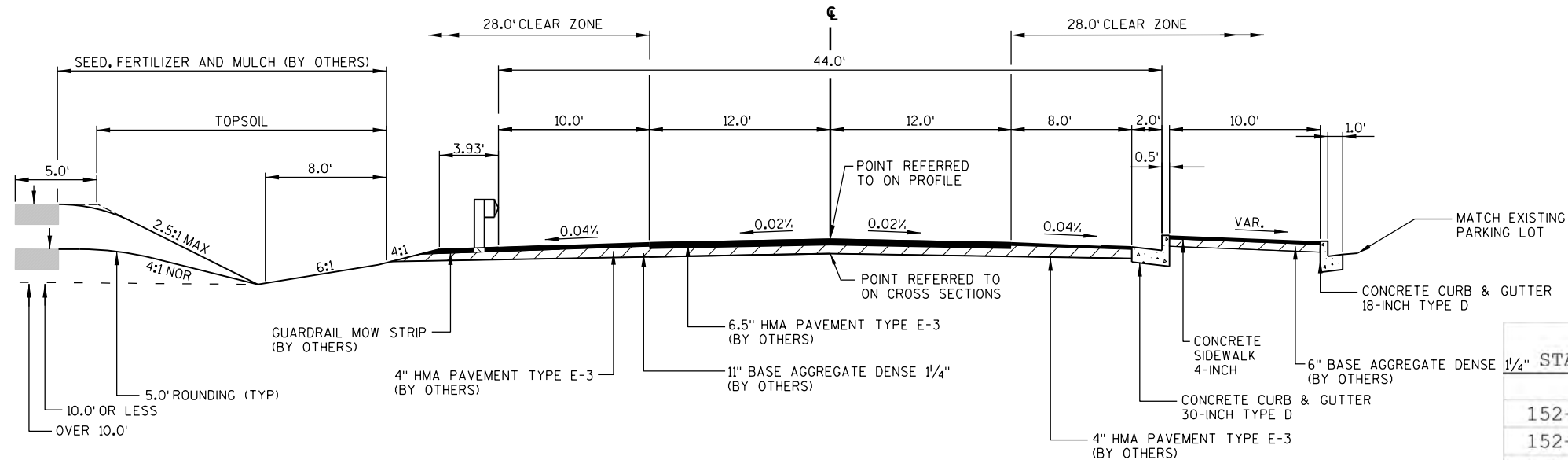
ALIGNMENT TIES

**EXISTING TYPICAL SECTION**

STA 141+67.61 TO STA 149+06.47
STA 150+93.73 TO STA 162+50.00

**TYPICAL FINISHED SECTION**

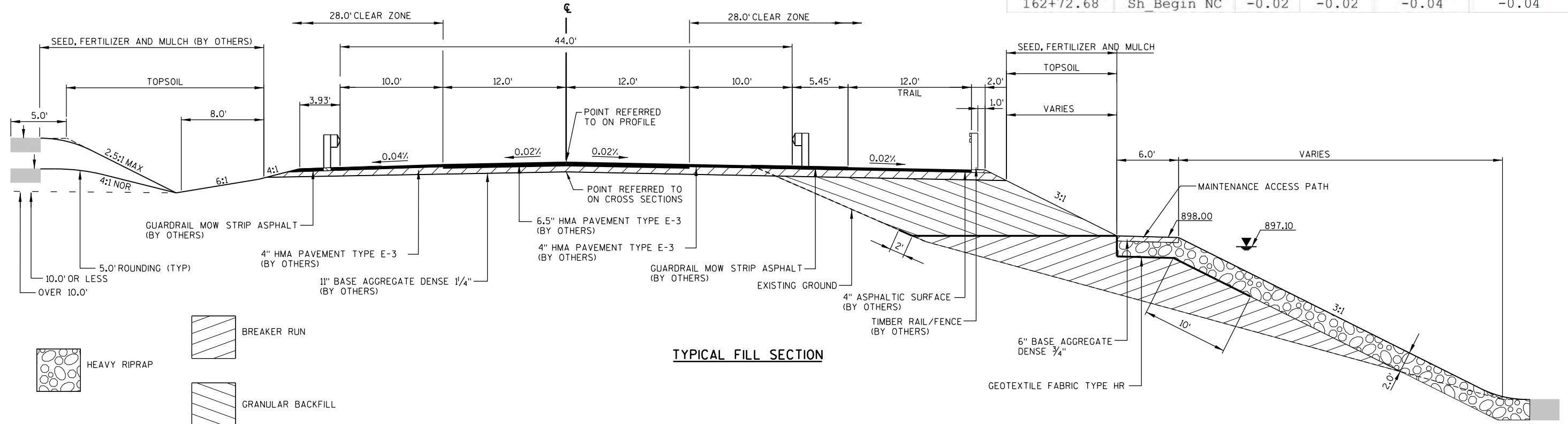
STA 141+67.61 TO STA 148+83.75
STA 151+16.25 TO STA 157+86.74



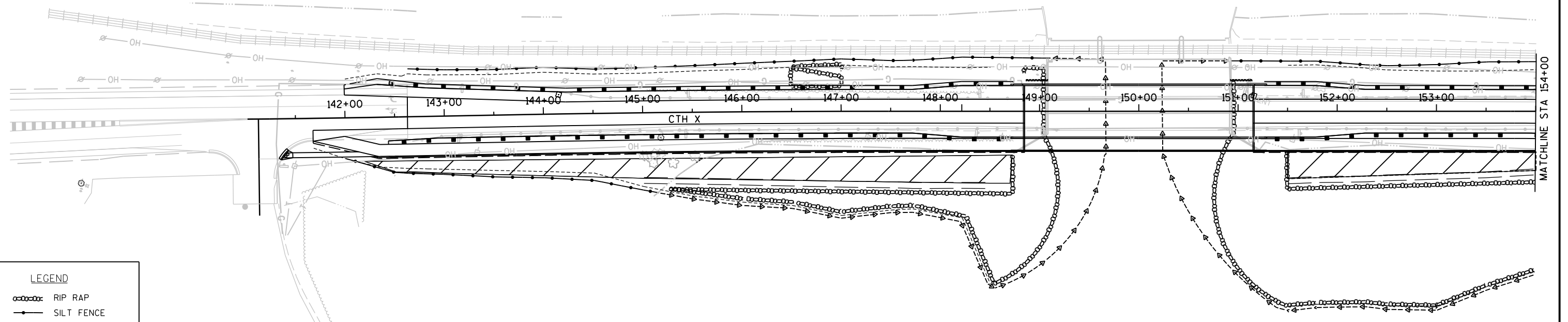
TYPICAL FINISHED SECTION
STA 157+86.74 TO STA 162+50.00

SUPERELEVATION TABLE

STATION	TYPE	LEFT	RIGHT	SHOULDER LEFT	SHOULDER RIGHT
152+02.22	Sh_End NC	-0.02	-0.02	-0.04	-0.04
152+53.13	End NC	-0.02	-0.02	-0.02	-0.04
153+04.04	Zero Super	0	-0.02	0	-0.04
153+54.95	Rev. Crown	0.02	-0.02	0.02	-0.04
154+05.86	Sh. Trans.	0.04	-0.04	0.04	-0.04
154+16.04	Begin FS	0.044	-0.044	0.044	-0.044
160+58.86	End FS	0.044	-0.044	0.044	-0.044
160+69.05	Sh. Trans.	0.04	-0.04	0.04	-0.04
161+19.95	Rev. Crown	0.02	-0.02	0.02	-0.04
161+70.86	Zero Super	0	-0.02	0	-0.04
162+21.77	Begin NC	-0.02	-0.02	-0.02	-0.04
162+72.68	Sh_Begin NC	-0.02	-0.02	-0.04	-0.04

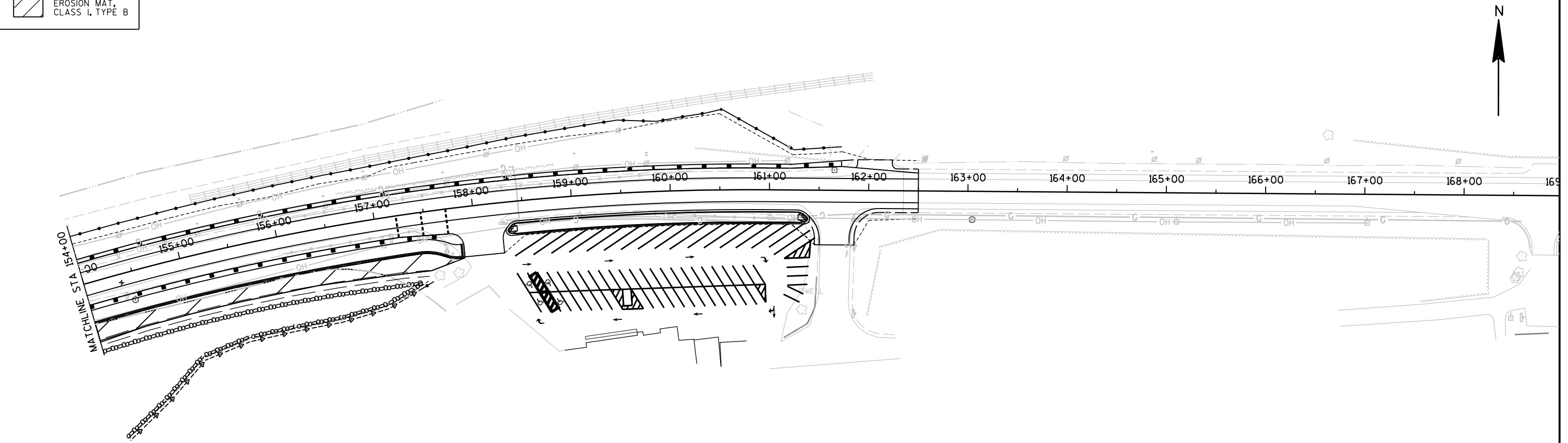


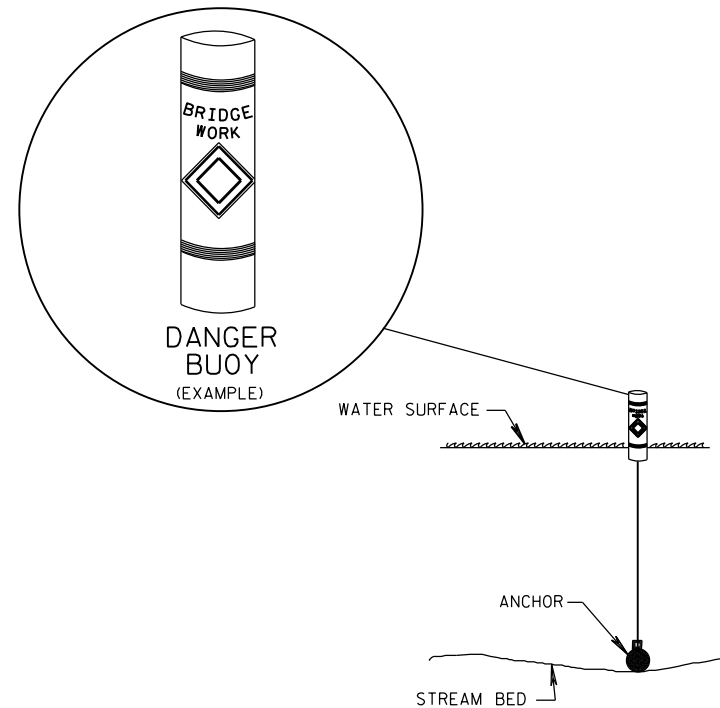
TYPICAL FILL SECTION



LEGEND

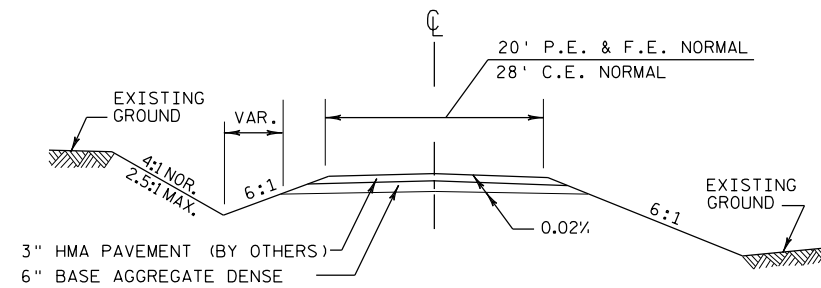
- RIP RAP
- SILT FENCE
- - ->- - SILT SCREEN
- [Hatched Box] EROSION MAT, CLASS I, TYPE B



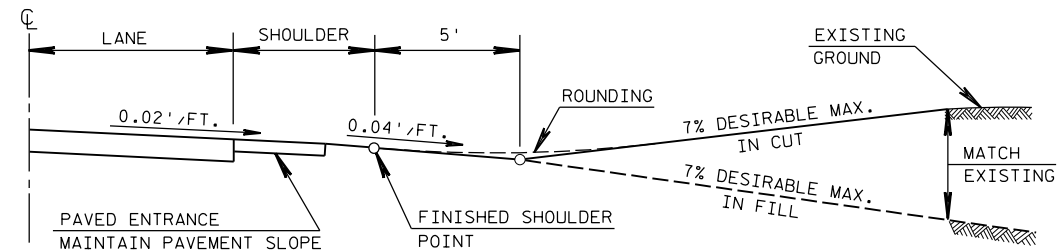


DANGER BUOY PLACEMENT DETAIL

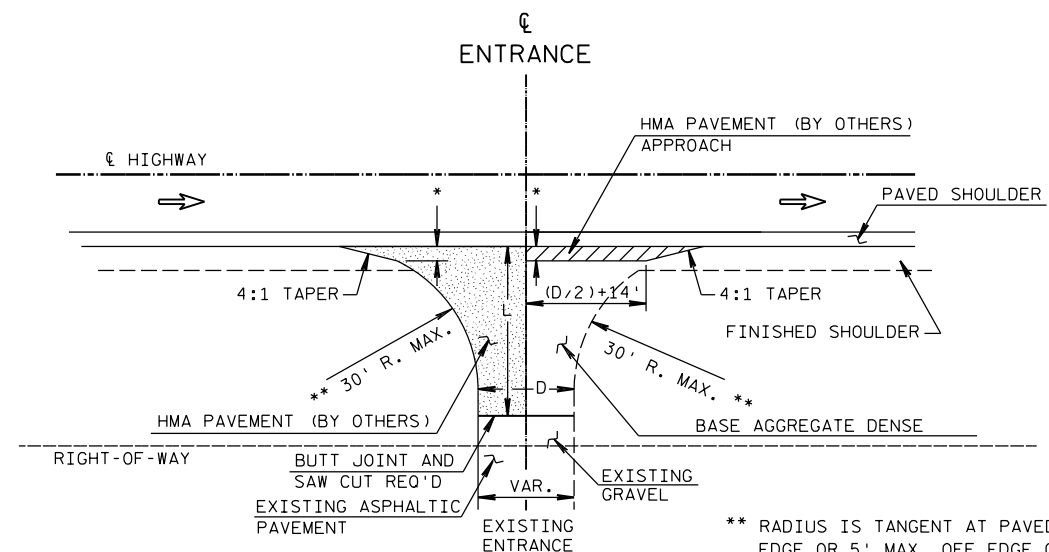
USE AS DIRECTED BY COAST GUARD OR DNR PERMIT
BOUY MESSAGE MAY VARY (DANGER, NAVIGATIONAL, BOATS PROHIBITED)



TYPICAL CROSS SECTION



PROFILE VIEW



L=VARIABLE, EXACT LENGTH TO BE DETERMINED
IN THE FIELD BY THE ENGINEER.
BLEND BACK ON THE ENTRANCE FAR
ENOUGH TO GET A SMOOTH PROFILE.

D=DRIVEWAY WIDTH
D=20'TYP. (PE'S & FE'S) (16'MIN.-24'MAX.)
D=28'TYP. (CE'S & FARM ENT.) (24'MIN.-35'MAX.)

** RADIUS IS TANGENT AT PAVED SHOULDER
EDGE OR 5' MAX. OFF EDGE OF MAIN LINE
PAVEMENT WHICH EVER IS LESS.
* 3' MAX. OR TO FINISHED SHOULDER
WHICH EVER IS LESS.

PLAN VIEW

RURAL DRIVEWAY INTERSECTION DETAIL (PE'S, FE'S & CE'S) (FOR NEW CONSTRUCTION)

STAGE 1

UTILIZE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

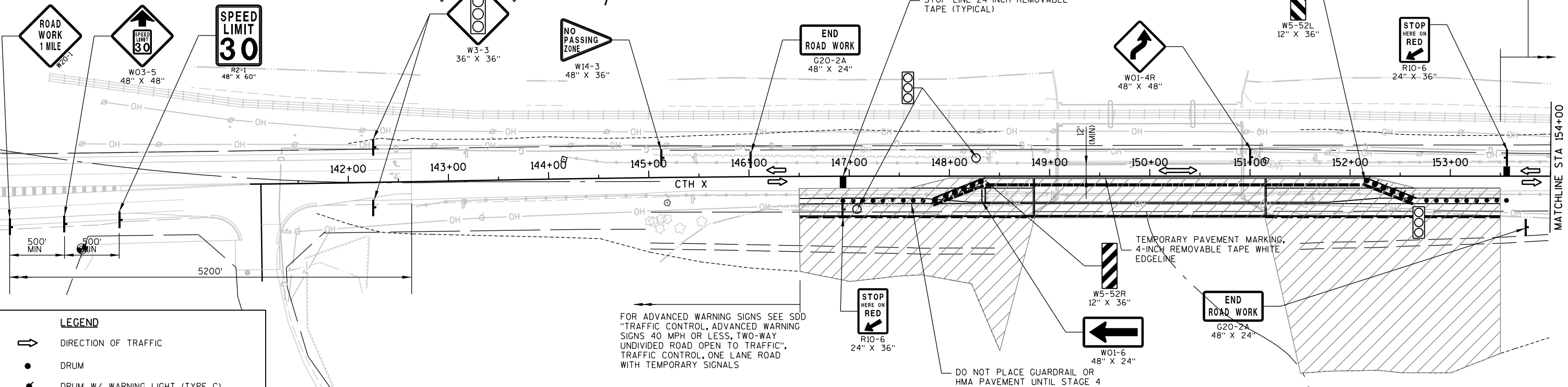
TRAFFIC WILL BE REDUCED TO A SINGLE LANE USING THE WEST BOUND LANE AND NORTH SIDE OF EXISTING STRUCTURE.

SOUTH SIDE OF STRUCTURE AND APPROACH FILLS WILL BE CONSTRUCTED.

REMOVING PAVEMENT MARKING REQ'D STA 147+00 TO STA 153+50 (DOUBLE YELLOW CENTERLINE)

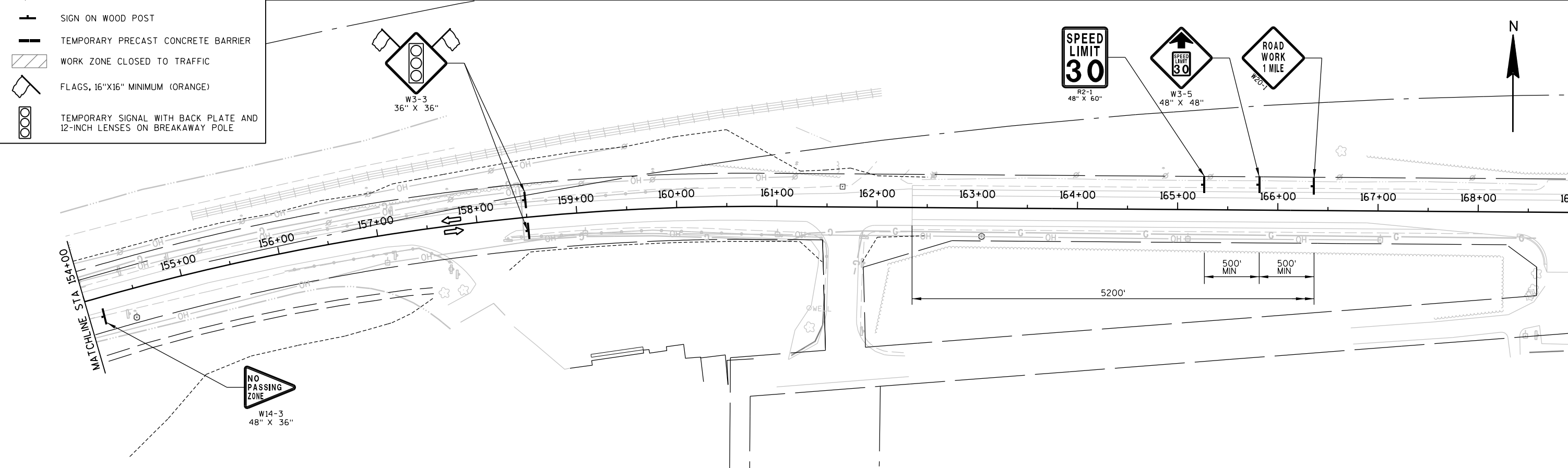
TEMPORARY PAVEMENT MARKING REMOVABLE TAPE REQ'D STA 147+75 TO STA 152+75 (WHITE EDGELINE)

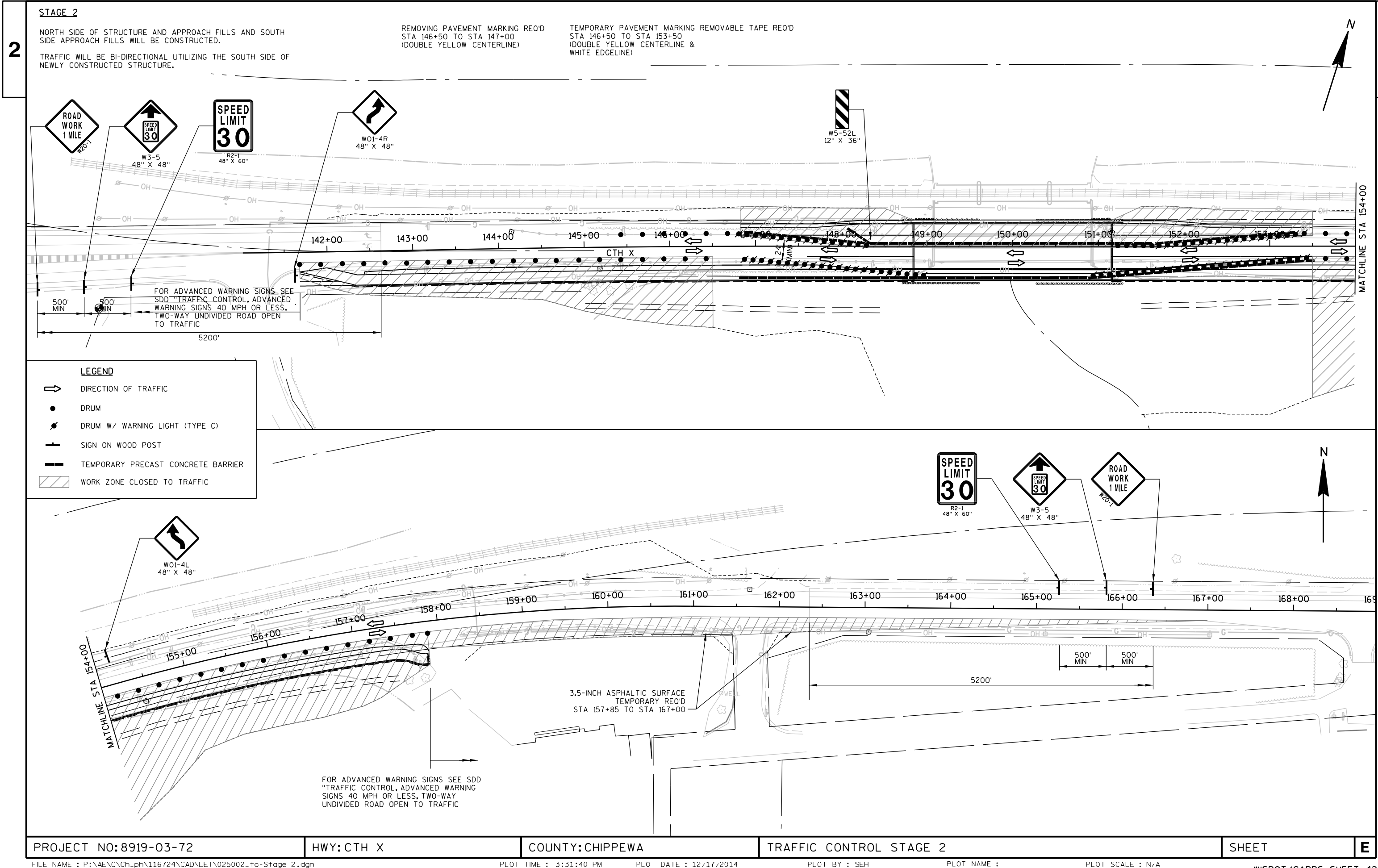
FOR ADVANCED WARNING SIGNS SEE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 40 MPH OR LESS, TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC", TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS



LEGEND

- DIRECTION OF TRAFFIC
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- SIGN ON WOOD POST
- TEMPORARY PRECAST CONCRETE BARRIER
- WORK ZONE CLOSED TO TRAFFIC
- FLAGS, 16"x16" MINIMUM (ORANGE)
- TEMPORARY SIGNAL WITH BACK PLATE AND 12-INCH LENSES ON BREAKAWAY POLE





STAGE 2

NORTH SIDE OF STRUCTURE AND APPROACH FILLS AND SOUTH SIDE APPROACH FILLS WILL BE CONSTRUCTED.

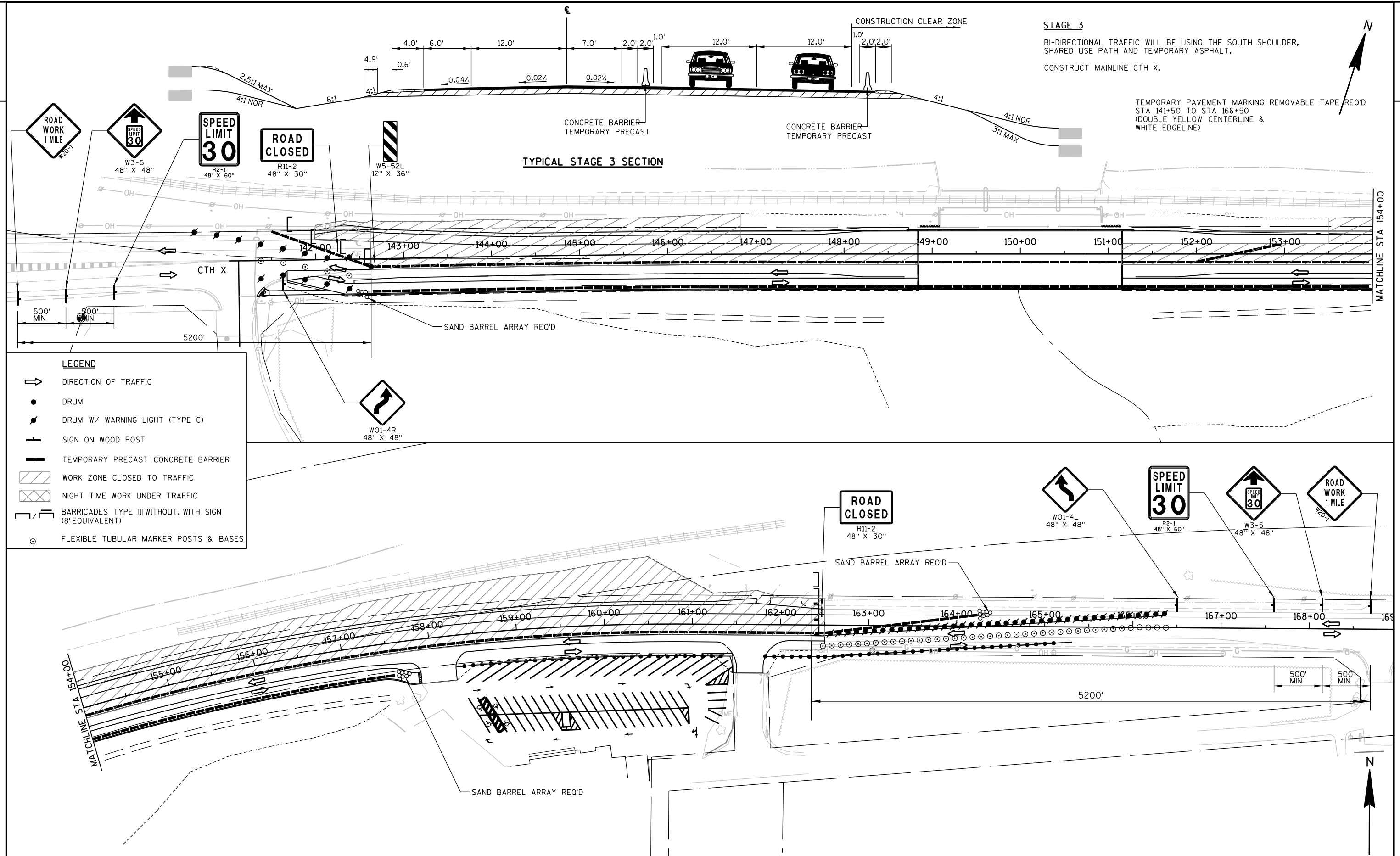
TRAFFIC WILL BE BI-DIRECTIONAL UTILIZING THE SOUTH SIDE OF NEWLY CONSTRUCTED STRUCTURE.

REMOVING PAVEMENT MARKING REQ'D
STA 146+50 TO STA 147+00
(DOUBLE YELLOW CENTERLINE)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE REQ'D
STA 146+50 TO STA 153+50
(DOUBLE YELLOW CENTERLINE &
WHITE EDGLINE)

LEGEND

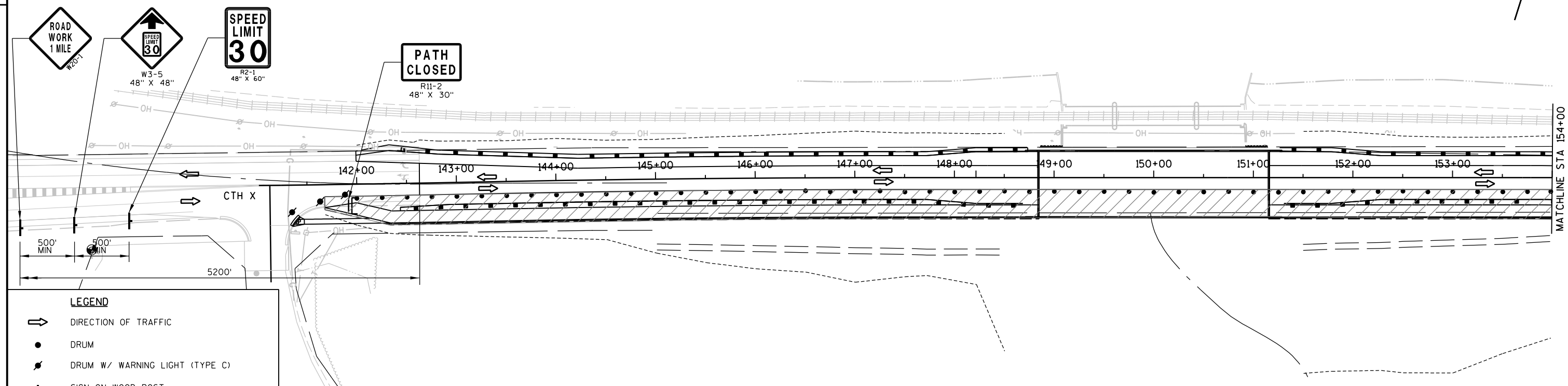
- DIRECTION OF TRAFFIC
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- SIGN ON WOOD POST
- TEMPORARY PRECAST CONCRETE BARRIER
- WORK ZONE CLOSED TO TRAFFIC



INSTALLATION OF GUARDRAIL, CURB & GUTTER AND
ANY FINISHING ITEMS.

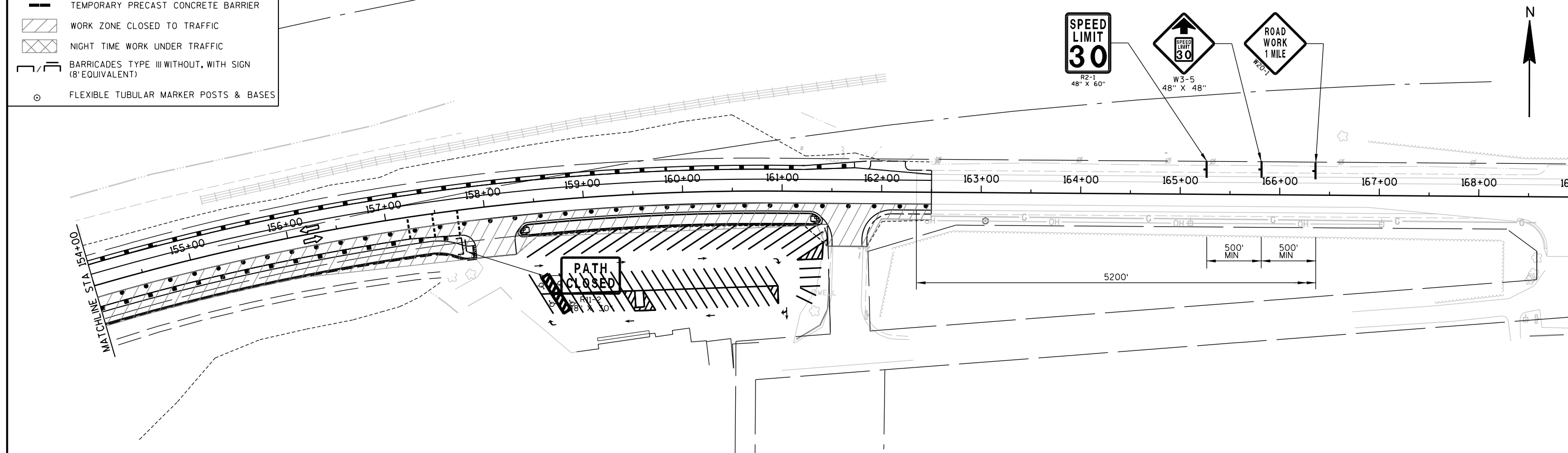
2

2



LEGEND

- | | |
|---|--|
|  | DIRECTION OF TRAFFIC |
|  | DRUM |
|  | DRUM W/ WARNING LIGHT (TYPE C) |
|  | SIGN ON WOOD POST |
|  | TEMPORARY PRECAST CONCRETE BARRIER |
|  | WORK ZONE CLOSED TO TRAFFIC |
|  | NIGHT TIME WORK UNDER TRAFFIC |
|  | BARRICADES TYPE III WITHOUT, WITH SIGN (8' EQUIVALENT) |
|  | FLEXIBLE TUBULAR MARKER POSTS & BASES |



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WISDOT/CADDS SHEET 42

NOTES:

DETOUR UTILIZED DURING PILE DRIVING OPERATIONS ONLY.

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

DURING HOURS OF DARKNESS ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE A.

ALL SIGNS ARE TYPE 2 UNLESS OTHERWISE NOTED.

ALL SIGNS OR PAVEMENT MARKING, TEMPORARY OR EXISTING, MAY CONFLICT WITH THE CONSTRUCTION TRAFFIC PATTERN SHALL BE REMOVED OR COVERED.

ALL SIGNS SHALL BE FURNISHED BY THE CONTRACTOR.

ALL TRAFFIC CONTROL DEVICES SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMTCD) AND STANDARD DETAIL DRAWINGS.

UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.

ALL SIDEROAD INTERSECTIONS WITHIN THE PROJECT LIMITS SHALL BE CLOSED AND SIGNED IN ACCORDANCE WITH DETAIL 4 OF THE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES".

TYPICAL SIGN SPACING, SIGN CODES, SIGN SIZES AND ADDITIONAL GENERAL NOTES SHALL BE IN ACCORDANCE WITH SDD'S "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" AND "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES".

A 200' SPACING BETWEEN SIGN LOCATIONS SHALL BE MAINTAINED WHEREVER CONDITIONS ALLOW.

N

BEGIN PROJECT
8919-03-72

END PROJECT
8919-03-72

LEGEND

DETOUR ROUTE



BARRICADES TYPE III (SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES")



BARRICADES TYPE III WITH SIGN



SIGN ON WOOD POST



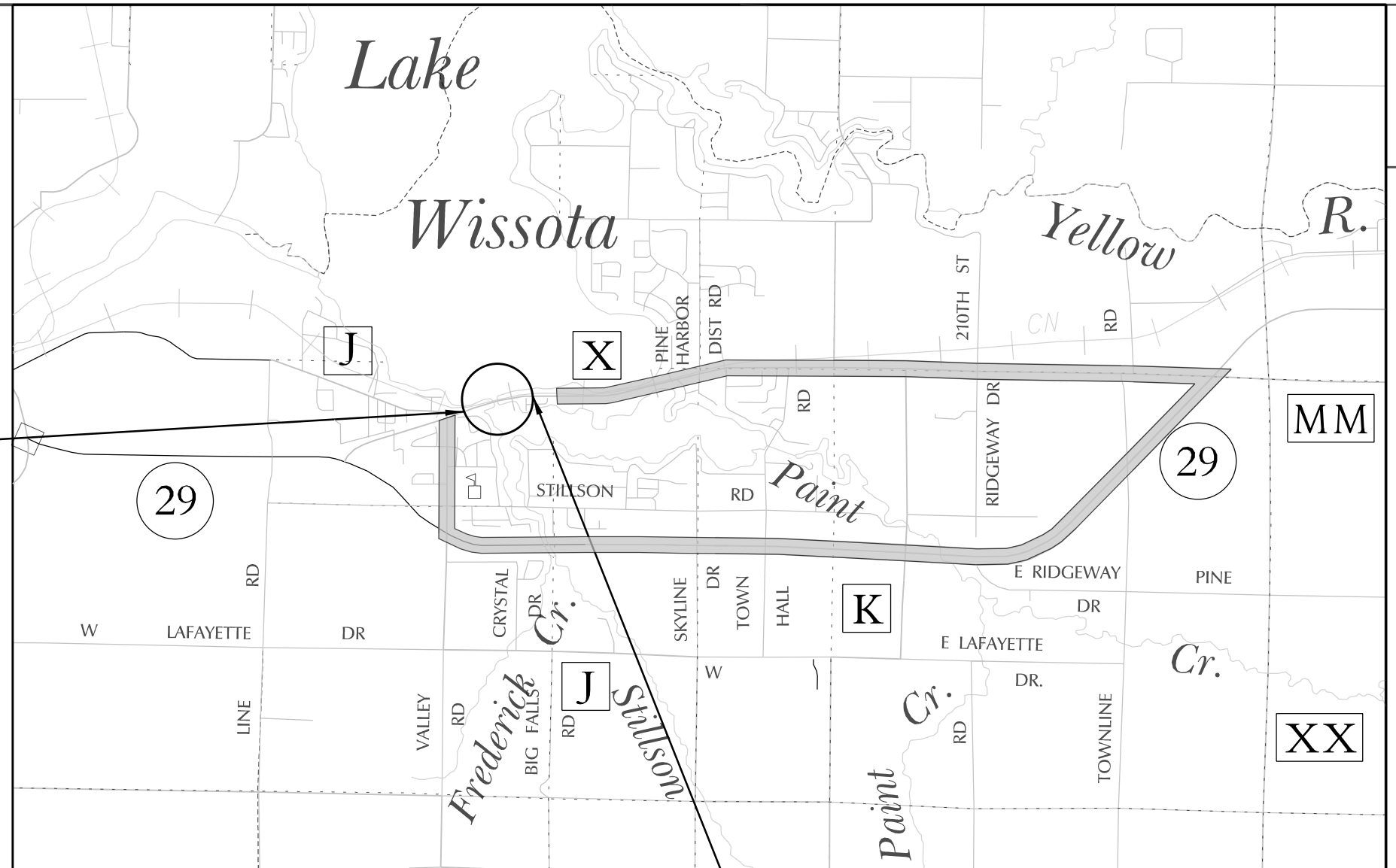
SIGN ON EXISTING POST



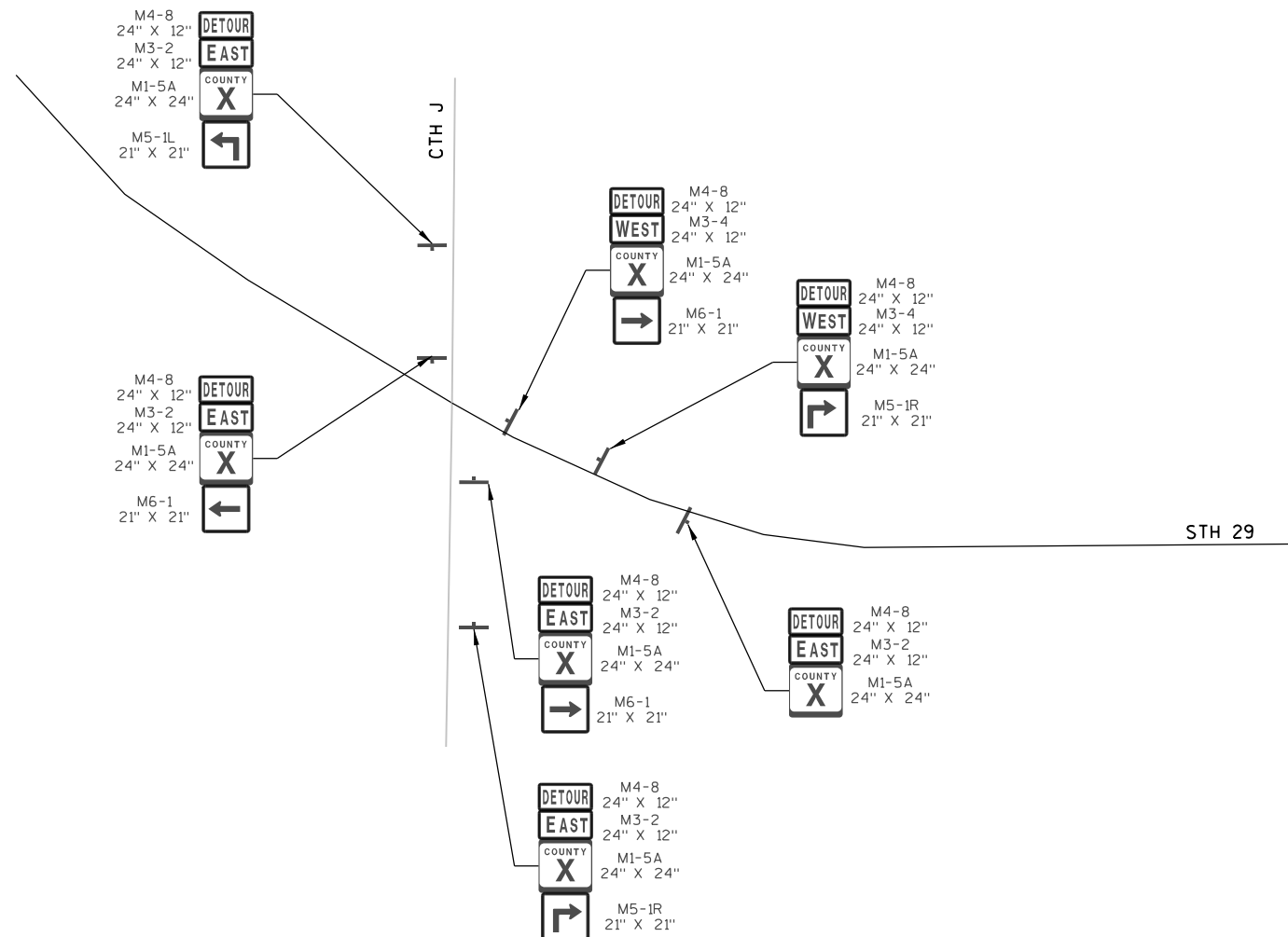
DIRECTION OF TRAFFIC



EXISTING SIGNS SHALL BE COVERED





**LEGEND**

-  DETOUR ROUTE
-  BARRICADES TYPE III (SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES")
-  BARRICADES TYPE III WITH SIGN
-  SIGN ON WOOD POST
-  SIGN ON EXISTING POST
-  DIRECTION OF TRAFFIC
-  EXISTING SIGNS SHALL BE COVERED

PROJECT NO: 8919-03-72

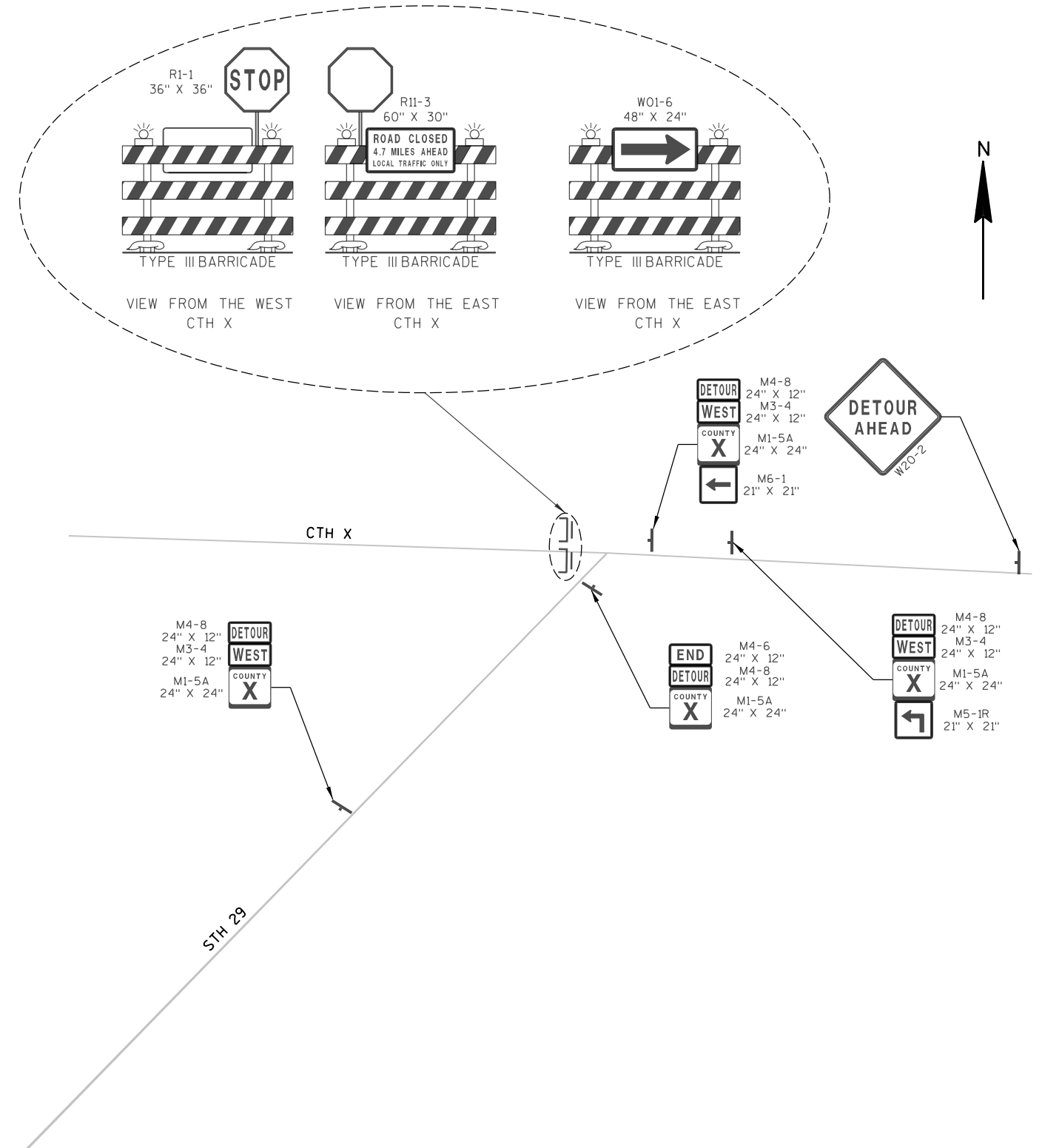
HWY: CTH X

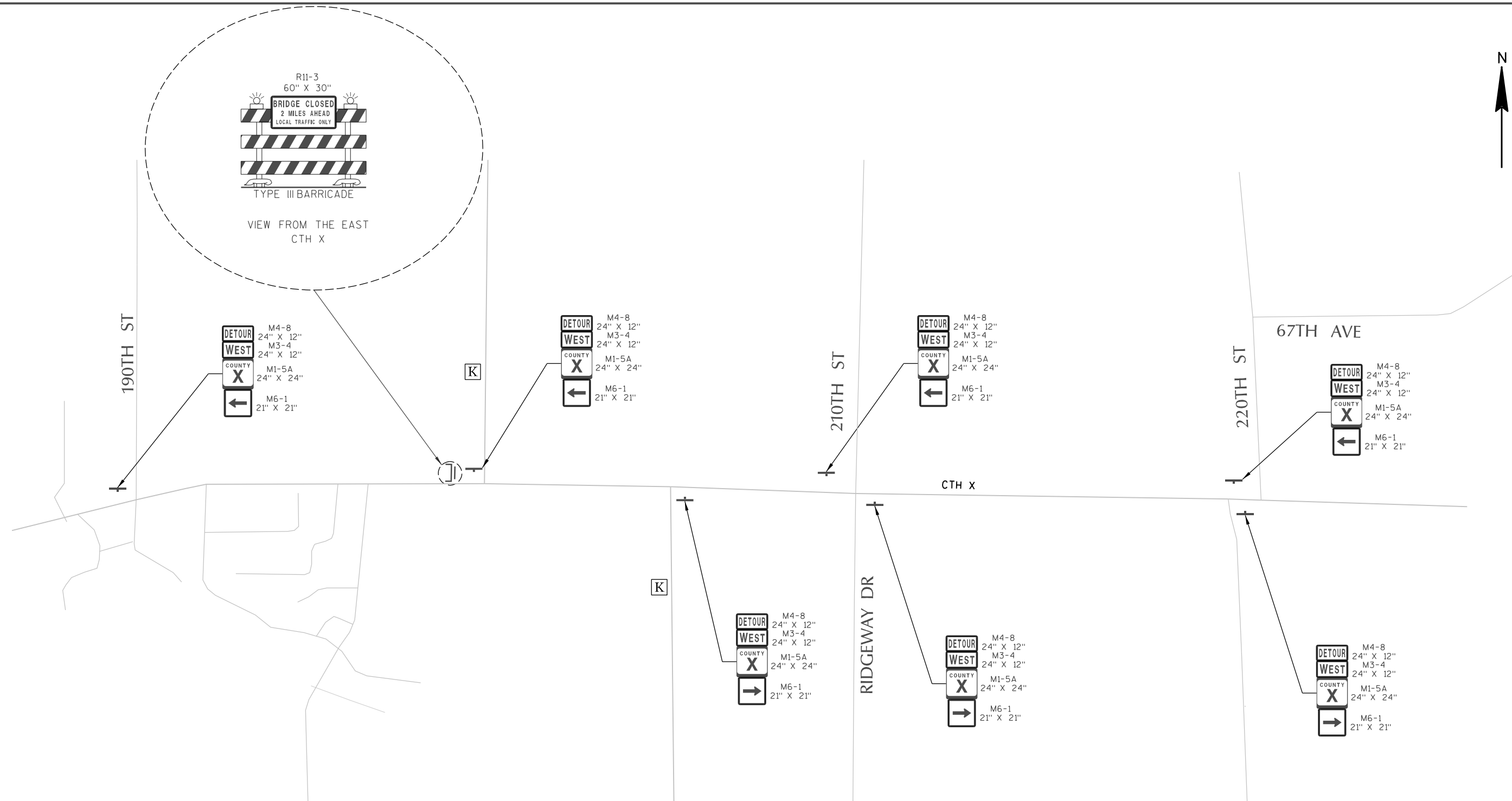
COUNTY: CHIPPEWA

TRAFFIC CONTROL & DETOUR SIGNING (DURING PILE DRIVING ONLY)

SHEET

E



**LEGEND**

-  DETOUR ROUTE
-  BARRICADES TYPE III (SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES")
-  BARRICADES TYPE III WITH SIGN
-  SIGN ON WOOD POST
-  SIGN ON EXISTING POST
-  DIRECTION OF TRAFFIC
-  EXISTING SIGNS SHALL BE COVERED

PROJECT NO: 8919-03-72

HWY: CTH X

COUNTY: CHIPPEWA

TRAFFIC CONTROL & DETOUR SIGNING (DURING PILE DRIVING ONLY)

SHEET

E

DATE 17MAR15			E S T I M A T E O F Q U A N T I T I E S		
LINE			8919-03-72		
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0105	Clearing	STA	10.000	10.000
0020	201.0205	Grubbing	STA	10.000	10.000
0030	203.0225.S	Debris Containment (structure) 01. B-9-280	LS	1.000	1.000
0040	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 150+00	LS	1.000	1.000
0050	204.0100	Removing Pavement	SY	4,935.000	4,935.000
0060	204.0150	Removing Curb & Gutter	LF	12.000	12.000
0070	205.0100	Excavation Common **P**	CY	3,025.000	3,025.000
0080	206.1000	Excavation for Structures Bridges (structure) 01. B-9-280	LS	1.000	1.000
0090	209.0100	Backfill Granular	CY	11,655.000	11,655.000
0100	210.0100	Backfill Structure	CY	546.000	546.000
0110	213.0100	Finishing Roadway (project) 01. 8919-03-72	EACH	1.000	1.000
0120	305.0110	Base Aggregate Dense 3/4-Inch	TON	270.000	270.000
0130	311.0110	Breaker Run	TON	42,075.000	42,075.000
0140	455.0605	Tack Coat	GAL	95.000	95.000
0150	465.0125	Asphaltic Surface Temporary	TON	315.000	315.000
0160	502.0100	Concrete Masonry Bridges	CY	961.000	961.000
0170	502.3200	Protective Surface Treatment	SY	2,134.000	2,134.000
0180	502.6110	Masonry Anchors Type S 3/4-Inch	EACH	700.000	700.000
0190	503.0146	Prestressed Girder Type I 45W-Inch	LF	1,844.000	1,844.000
0200	505.0405	Bar Steel Reinforcement HS Bridges	LB	9,120.000	9,120.000
0210	505.0605	Bar Steel Reinforcement HS Coated Bridges	LB	177,660.000	177,660.000
0220	505.0905	Bar Couplers No. 5	EACH	705.000	705.000
0230	505.0906	Bar Couplers No. 6	EACH	22.000	22.000
0240	505.0907	Bar Couplers No. 7	EACH	12.000	12.000
0250	505.0909	Bar Couplers No. 9	EACH	26.000	26.000
0260	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	48.000	48.000
0270	506.4000	Steel Diaphragms (structure) 01. B-9-280	EACH	28.000	28.000
0280	511.1200	Temporary Shoring (structure) 01. B-9-280	SF	400.000	400.000
0290	512.0500	Piling Steel Sheet Permanent Delivered	SF	1,250.000	1,250.000
0300	512.0600	Piling Steel Sheet Permanent Driven	SF	1,250.000	1,250.000
0310	513.7020	Railing Steel Type C4 (structure) 01. B-9-280	LS	1.000	1.000
0320	516.0500	Rubberized Membrane Waterproofing	SY	32.000	32.000
0330	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,920.000	1,920.000
0340	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	250.000	250.000
0350	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	365.000	365.000
0360	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	12.000	12.000
0370	602.0405	Concrete Sidewalk 4-Inch	SF	3,238.000	3,238.000
0380	602.0415	Concrete Sidewalk 6-Inch	SF	203.000	203.000
0390	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	48.000	48.000
0400	603.8000	Concrete Barrier Temporary Precast Delivered	LF	4,884.000	4,884.000
0410	603.8125	Concrete Barrier Temporary Precast Installed	LF	6,359.000	6,359.000
0420	606.0300	Riprap Heavy	CY	5,005.000	5,005.000
0430	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	80.000	80.000
0440	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	158.000	158.000

DATE 17MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE				8919-03-72	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0450	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	4.000	4.000
0460	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0470	614.0700	Sand Barrels Arrays	EACH	2.000	2.000
0480	619.1000	Mobilization	EACH	1.000	1.000
0490	625.0100	Topsoil	SY	5,860.000	5,860.000
0500	627.0200	Mulching	SY	6,705.000	6,705.000
0510	628.1504	Silt Fence	LF	1,300.000	1,300.000
0520	628.1520	Silt Fence Maintenance	LF	1,300.000	1,300.000
0530	628.1550	Silt Screen	LF	1,690.000	1,690.000
0540	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0550	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0560	628.2004	Erosion Mat Class I Type B	SY	2,785.000	2,785.000
0570	629.0205	Fertilizer Type A	CWT	4.200	4.200
0580	630.0120	Seeding Mixture No. 20	LB	180.000	180.000
0590	630.0200	Seeding Temporary	LB	180.000	180.000
0600	642.5001	Field Office Type B	EACH	1.000	1.000
0610	643.0100	Traffic Control (project) 01. 8919-03-72	EACH	1.000	1.000
0620	643.0300	Traffic Control Drums	DAY	16,552.000	16,552.000
0630	643.0420	Traffic Control Barricades Type III	DAY	869.000	869.000
0640	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	45.000	45.000
0650	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	45.000	45.000
0660	643.0705	Traffic Control Warning Lights Type A	DAY	1,738.000	1,738.000
0670	643.0715	Traffic Control Warning Lights Type C	DAY	8,492.000	8,492.000
0680	643.0900	Traffic Control Signs	DAY	4,264.000	4,264.000
0690	643.2000	Traffic Control Detour (project) 01. 8919-03-72	EACH	1.000	1.000
0700	643.3000	Traffic Control Detour Signs	DAY	2,424.000	2,424.000
0710	645.0120	Geotextile Fabric Type HR	SY	6,460.000	6,460.000
0720	646.0600	Removing Pavement Markings	LF	1,400.000	1,400.000
0730	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	13,300.000	13,300.000
0740	649.1400	Temporary Pavement Marking Stop Line Removable Tape 24-Inch	LF	24.000	24.000
0750	650.4500	Construction Staking Subgrade	LF	1,850.000	1,850.000
0760	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	615.000	615.000
0770	650.6500	Construction Staking Structure Layout (structure) 01. B-9-280	LS	1.000	1.000
0780	650.9910	Construction Staking Supplemental Control (project) 01. 8919-03-72	LS	1.000	1.000
0790	650.9920	Construction Staking Slope Stakes	LF	1,850.000	1,850.000
0800	661.0100	Temporary Traffic Signals for Bridges (structure) 01. B-09-0280	LS	1.000	1.000
0810	690.0150	Sawing Asphalt	LF	170.000	170.000
0820	690.0250	Sawing Concrete	LF	266.000	266.000
0830	715.0502	Incentive Strength Concrete Structures	DOL	5,766.000	5,766.000
0840	SPV.0060	Special 01. Pile Driving Analyzer	EACH	6.000	6.000
0850	SPV.0090	Special 01. Piling Cip Concrete Delivered And Driven 30 X 0.625 Inch	LF	1,020.000	1,020.000
0860	SPV.0090	Special 02. Concrete Curb and Gutter Cure And Seal Treatment	LF	627.000	627.000

DATE 17MAR15			E S T I M A T E O F Q U A N T I T I E S		
LINE			8919-03-72		
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0870	SPV.0105	Special 01. Settlement Monitoring	LS	1.000	1.000
0880	SPV.0105	Special 02. Vibration Monitoring	LS	1.000	1.000

3

CLEARING & GRUBBING

STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
CTH X			
145+00 - 149+00	LT & RT	4	4
156+00 - 162+00	LT & RT	6	6
ITEM TOTALS		10	10

FINISHING ROADWAY (8919-03-72)

STATION - STATION	213.0100 EACH
CTH X	
141+67.61 - 162+50.00	1
ITEM TOTAL	1

CONCRETE CURB & GUTTER

STATION - STATION	LOCATION	601.0407 18-INCH TYPE D LF	601.0411 30-INCH TYPE D LF	601.0553 4-INCH SLOPED 36-INCH TYPE D LF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0415 CONCRETE SIDEWALK 6-INCH SF	SPV.0090.02 CURE AND SEAL TREATMENT LF
CTH X								
141+35	RT			12	8			12
141+35 - 142+33	RT					383	57	
157+85	RT				24		36	
158+31.70 - 161+40.16	RT	250	365			2855		615
158+36	RT				8		55	
161+35	RT				8		55	
ITEM TOTALS		250	365	12	48	3238	203	627

REMOVALS

STATION - STATION	LOCATION	PAVEMENT 204.0100 SY	CURB & GUTTER 204.0150 SY
CTH X			
141+35	RT		12
141+67.61 - 148+83.75	LT & RT	1910	
151+16.25 - 162+50	LT & RT	3025	
ITEM TOTALS		4935	12

BASE COURSE DENSE

STATION - STATION	LOCATION	305.0110 3/4-INCH TON	*311.011 BREAKER RUN TON
CTH X			
145+00 - 148+50	RT	100	7416
151+50 - 157+50	RT	170	34659
ITEM TOTALS		270	42075

*BREAKER RUN UNIT WEIGHT 1.8 TONS/CY.

RIPRAP ITEMS

STATION - STATION	LOCATION	606.0300* RIPRAP HEAVY CY	645.0120* GEOTEXTILE FABRIC TYPE HR SY
CTH X			
141+67.61 - 148+83.75	LT & RT	955	2500
151+16.25 - 162+50	LT & RT	3770	3400
ITEM TOTALS		4725	5900

* ITEM LOCATED ELSEWHERE IN PLANS

EXCAVATION

STATION - STATION	LOCATION	**205.0100 COMMON CY	AIR FILL CY	EXPAND. FILL CY	209.0100 BACKFILL GRANULAR CY
CTH X					
141+67.61 - 148+83.75	LT & RT	740	6035	7845	7105
151+16.25 - 162+50	LT & RT	2285	5258	6835	4550
ITEM TOTALS		3025	11293	14680	11655

NOTES:
1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN COMMON EXCAVATION.
2) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION VOLUME.
3) FILL WILL BE BACKFILLED WITH CUT OR BORROW.
4) POSITIVE BORROW INDICATES A SHORTAGE OF MATERIAL.
5) EXPANSION FACTOR = 1.3
**PAY PLAN QUANTITY

ASPHALTIC PAVEMENT ITEMS

STATION - STATION	LOCATION	455.0605 TACK COAT GAL	465.0125 ASPHALTIC SURFACE TEMPORARY TON	REMARKS
CTH X				
157+87 - 167+00	RT	95	315	STAGE 2
ITEM TOTALS		95	315	

MOBILIZATION

STATION - STATION	619.1000 EACH
CTH X	
CATEGORY 0010	
141+67.61 - 162+50.00	0.25
CATEGORY 0020	
141+67.61 - 162+50.00	0.75
ITEM TOTAL	1

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE.

3

TOPSOIL, MULCHING AND SEEDING						
STATION - STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0205 FERTILIZER TYPE A CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 TEMPORARY SEEDING LB
CTH X						
141+67.61 - 148+83.75	LT & RT	2560	2920	1.8	80	80
151+16.25 - 162+50	LT & RT	3300	3785	2.4	100	100
ITEM TOTALS		5860	6705	4.2	180	180

MOBILIZATIONS EROSION CONTROL		
STATION - STATION	628.1905 EROSION CONTROL EACH	628.1910 EMERGENCY EROSION CONTROL EACH
CTH X		
141+67.61 - 162+50.00	3	3
ITEM TOTALS	3	3

CONSTRUCTION STAKING						
STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5500 CURB GUTTER AND CURB & GUTTER LF	650.6500* STRUCTURE LAYOUT (B-09-280) LS	650.9910 SUPPLEMENTAL CONTROL (8919-03-72) LS	650.9920 SLOPE STAKES LF
CTH X						
141+67.61 - 148+83.75	LT & RT	716				716
148+83.75 - 151+16.25				1	1	
151+16.25 - 162+50	LT & RT	1134				1134
158+31.70 - 161+40.16	RT		615			
ITEM TOTALS		1850	615	1	1	1850
*CATEGORY 0020						

3

TRAFFIC CONTROL																		
STATION - STATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0700 SAND BARREL ARRAYS EACH	643.0100 (8919-03-72) EACH	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0500 FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAY	643.0900 SIGNS DAYS	643.3000 DETOUR SIGNS DAYS	643.2000 DETOUR (8919-03-72) EACH	646.0600 REMOVING PAVEMENT MARKING LF	649.0400 TEMPORARY PAVEMENT MARKING 4-INCH REMOVABLE TAPE LF	649.1400 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH LF	661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES LS	REMARKS
CTH X				1													1	
148+83.75 - 151+16.25	505	505			1830	61			122	732	2013			1300	500	24		STAGE 1
148+83.75 - 151+16.25	875	1380			8778					5742	1188			100	2800			STAGE 2
148+83.75 - 151+16.25	3504	4474	2		4329	296	45	45	592	1961	740				10000			STAGE 3
148+83.75 - 151+16.25					1615	152			304	57	323							STAGE 4
148+83.75 - 151+16.25						360			720			2424	1					DURING PILE DRIVING OPERATIONS ONLY
ITEM TOTALS	4884	6359	2	1	16552	869	45	45	1738	8492	4264	2424	1	1400	13300	24	1	

EROSION CONTROL ITEMS					
STATION - STATION	LOCATION	623.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1550 SILT SCREEN LF	628.2004 EROSION MAT CLASS I TYPE B SY
CTH X					
141+67.61 - 148+83.75	LT & RT	970	970	720	1510
151+16.25 - 162+50	LT & RT	330	330	970	1275
ITEM TOTALS		1300	1300	1690	2785

FIELD OFFICE TYPE B	
STATION - STATION	642.5001 EACH
CTH X	
141+67.61 - 162+50.00	1
ITEM TOTAL	1

SAWING			
STATION - STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
CTH X			
141+35	RT		18
141+67.61	LT & RT	46	
162+50	LT & RT	24	
DRIVEWAYS			
158+06	RT	70	
SIDE ROADS			
57TH AVE	RT	30	
ITEM TOTAL		170	18

MONITORING				
STATION - STATION		SPV.0105.01 SETTLEMENT MONITORING LS	SPV.0105.02 VIBRATION MONITORING LS	
CTH X				
141+67.61 - 162+50.00		1	1	
ITEM TOTALS		1	1	
ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE.				

PROJECT NO: 8919-03-72	HWY: CTH X	COUNTY: CHIPPEWA	MISCELLANEOUS QUANTITIES	SHEET	E
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SCHEDULE OF LANDS & INTERESTS REQUIRED

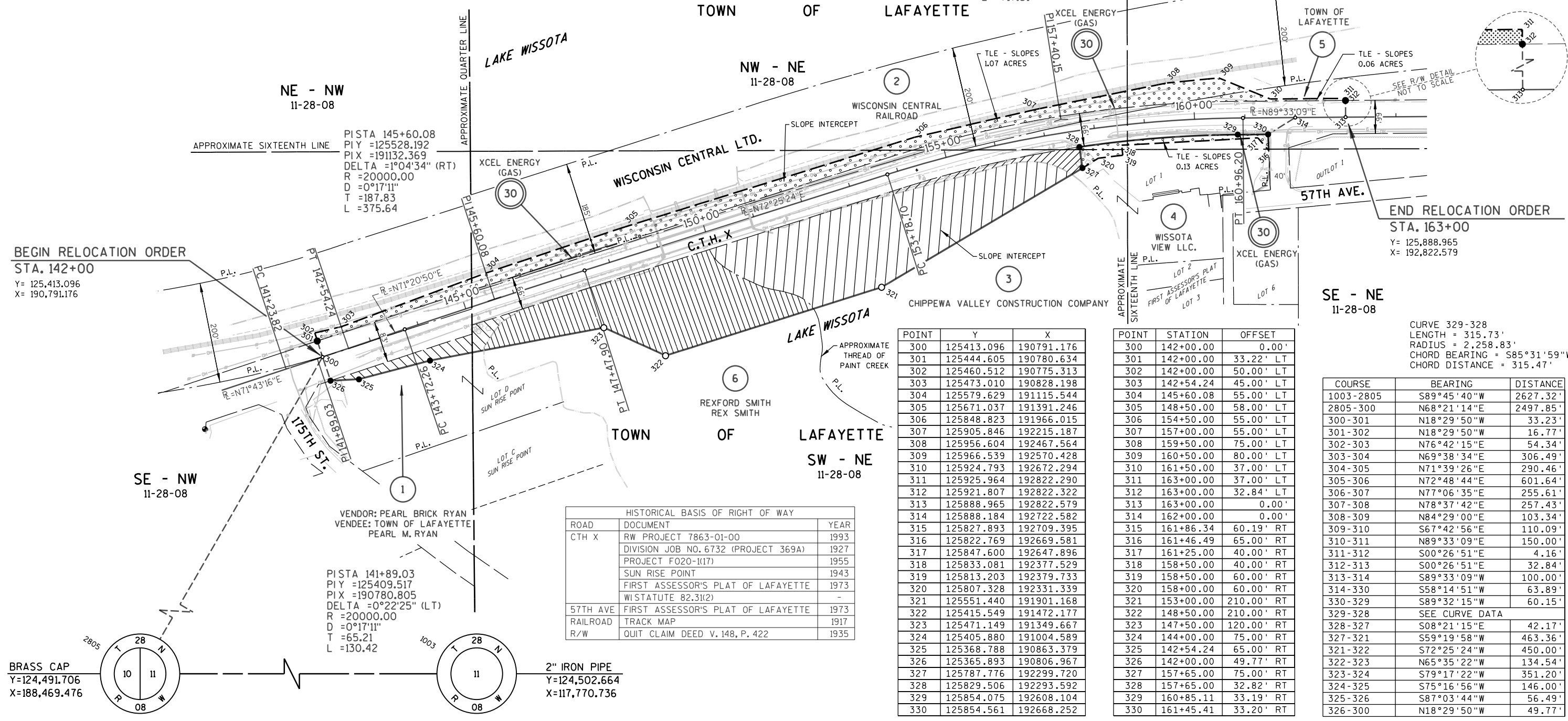
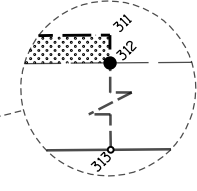
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R&W ACRES REQUIRED			TLE ACRES
			NEW	EXISTING	TOTAL	
1	PEARL M. RYAN & VENDOR: PEARL BRICK RYAN VENDEE: TOWN OF LAFAYETTE	FEE	0.20	---	0.20	---
2	WISCONSIN CENTRAL RAILWAY COMPANY / WISCONSIN CENTRAL LTD.	TLE	---	---	---	1.07
3	CHIPPEWA VALLEY CONSTRUCTION COMPANY	FEE	1.99	---	1.99	---
4	WISSOTA VIEW LLC.	FEE/TLE	0.14	---	0.14	0.13
5	TOWN OF LAFAYETTE	TLE	---	---	---	0.06
6	REXFORD SMITH REX SMITH	FEE	1.51	---	1.51	---
10	AT&T	RELEASE OF RIGHTS				
20	XCEL ENERGY (ELECTRIC)	RELEASE OF RIGHTS				
30	XCEL ENERGY (GAS)	RELEASE OF RIGHTS				

FLOWAGE RIGHTS TABLE	
PARCEL AFFECTED	DOCUMENT LOCATION
1	V. 108, P. 136 V. III, P. 533
2	V. III, P. 533 V. 108, P. 136 V. 148, P. 422
3	V. III, P. 533
4	V. III, P. 533
5	DOC. # 727756
6	V. III, P. 533

UTILITY EASEMENT TABLE		
UTILITY	DOCUMENT LOCATION	PARCELS AFFECTED
10 AT&T	V. 114, P. 249 BLANKET EASEMENT	2 & 5
20 XCEL ENERGY (ELECTRIC)	V. 116, P. 305 BLANKET EASEMENT	1, 2, 3, 4, & 6
30 XCEL ENERGY (GAS)	NO RECORDED EASEMENT	2 & 4

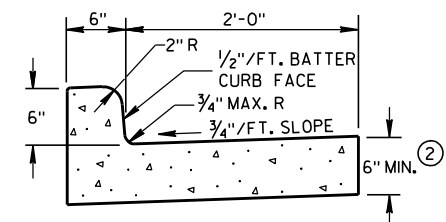
GN



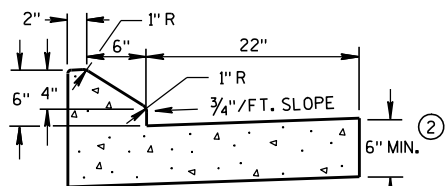
REVISION DATE 10-13-2014	DATE	SCALE, FEET 0 100 200	HWY: CTH X	STATE R/W PROJECT NUMBER 8919-03-02	PLAT SHEET NO: 4.02
	GRID FACTOR N/A		COUNTY: CHIPPEWA	CONSTRUCTION PROJECT NUMBER 8919-03-72	PS&E SHEET

Standard Detail Drawing List

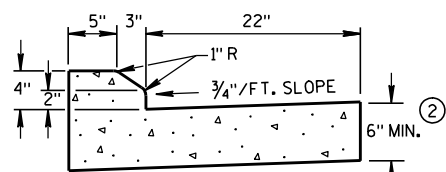
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E12-01	SILT SCREEN
09G02-03A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	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
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14C01-02	TIMBER RAIL GUARD FENCE, CURB AND GUARD POST AND MARKER POST
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D33-03	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS



TYPES A & D ①

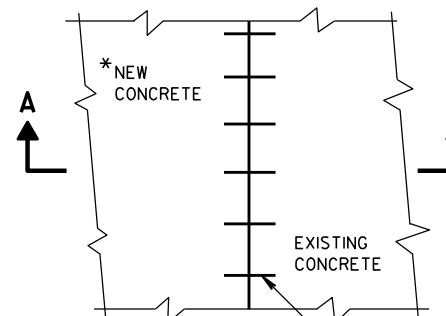


6" SLOPED CURB TYPES G & J ①



4" SLOPED CURB TYPES G & J ①

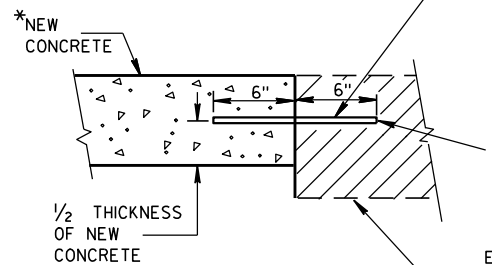
CONCRETE CURB & GUTTER 30"



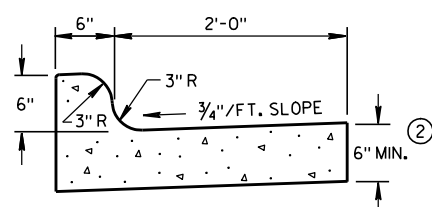
PLAN VIEW

* NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

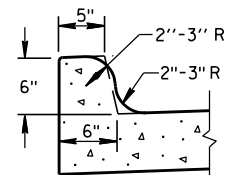
NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.



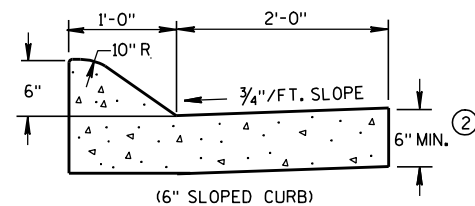
SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT



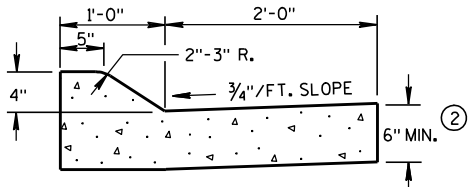
TYPES K & L ①



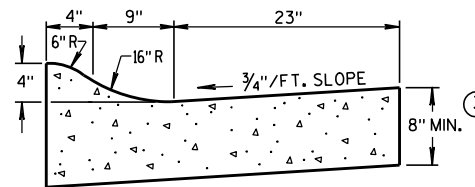
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



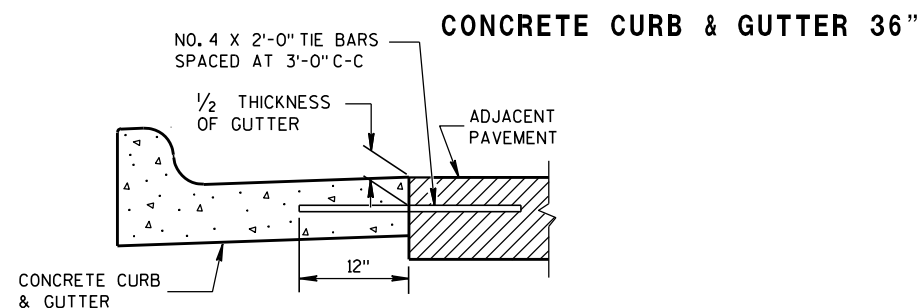
(6" SLOPED CURB)



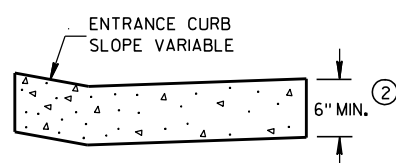
TYPES A & D ①



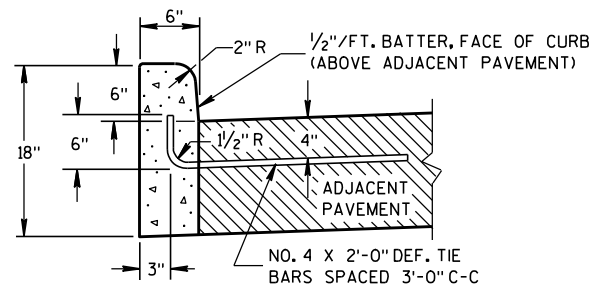
4" SLOPED CURB TYPES R & T ① ④



TYPICAL TIE BAR LOCATION ①

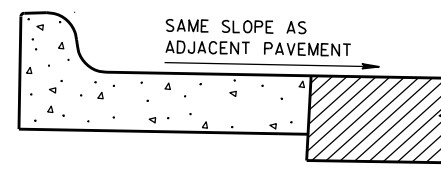


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

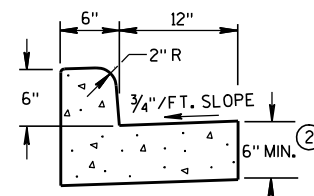


TYPES A & D ①

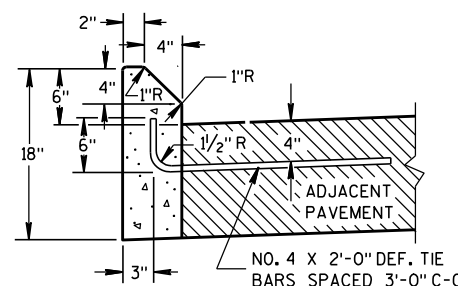
CONCRETE CURB



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

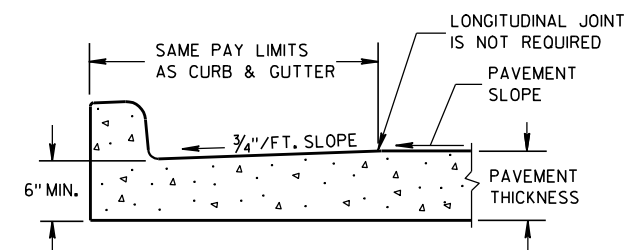
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

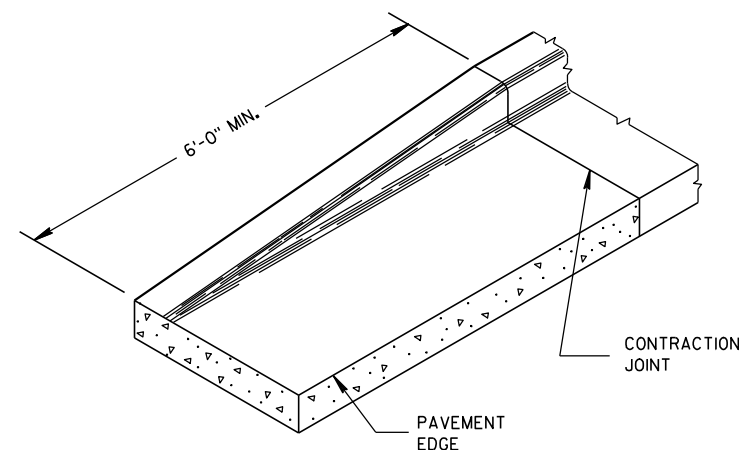
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

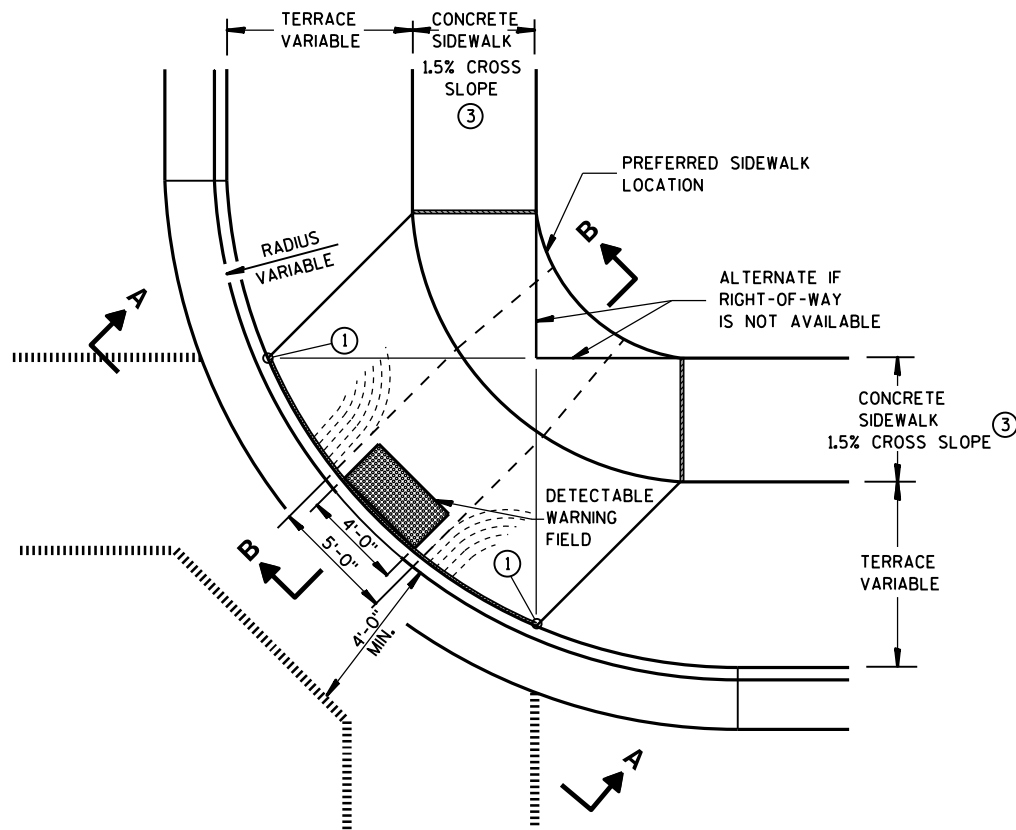
APPROVED

9/4/08

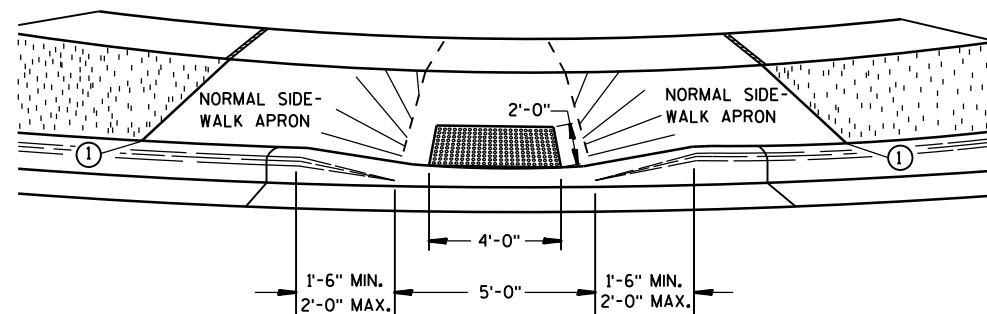
DATE

FHWA

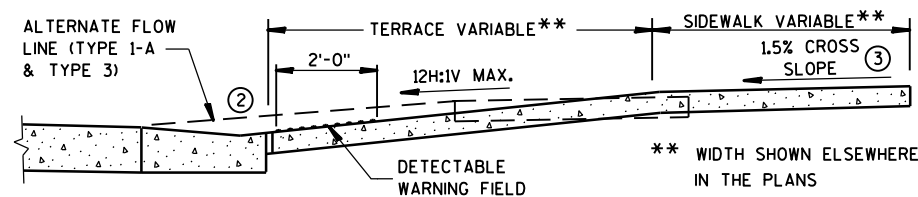
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



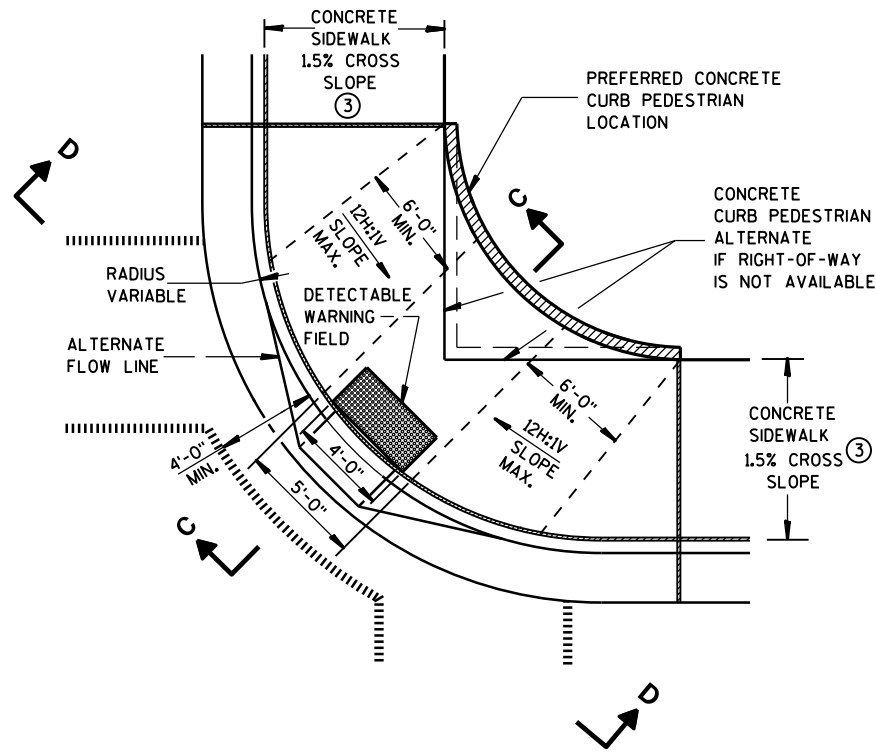
**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)



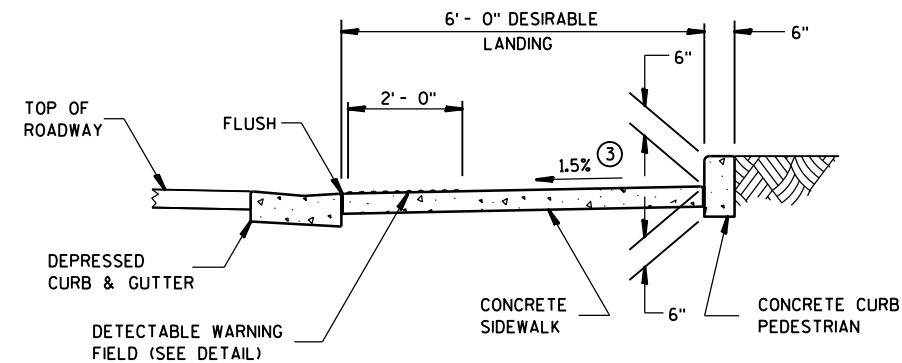
VIEW A-A



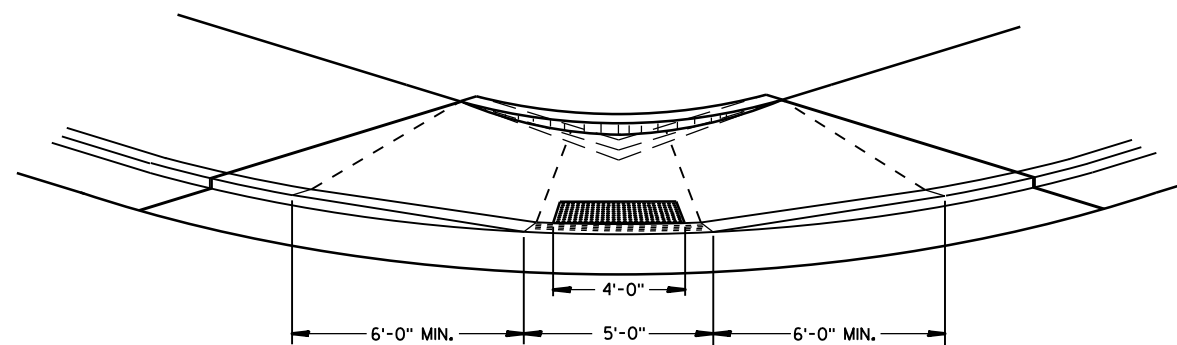
SECTION B-B



**PLAN VIEW
TYPE 1-A RAMP**
(NO TERRACE)



SECTION C-C



VIEW D-D

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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

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

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

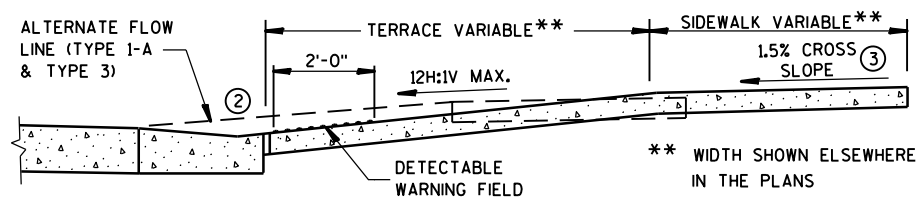
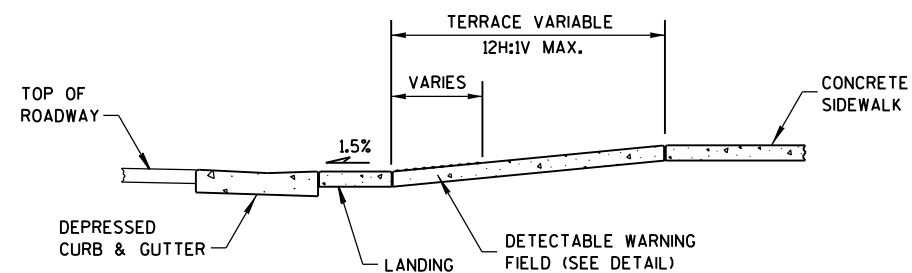
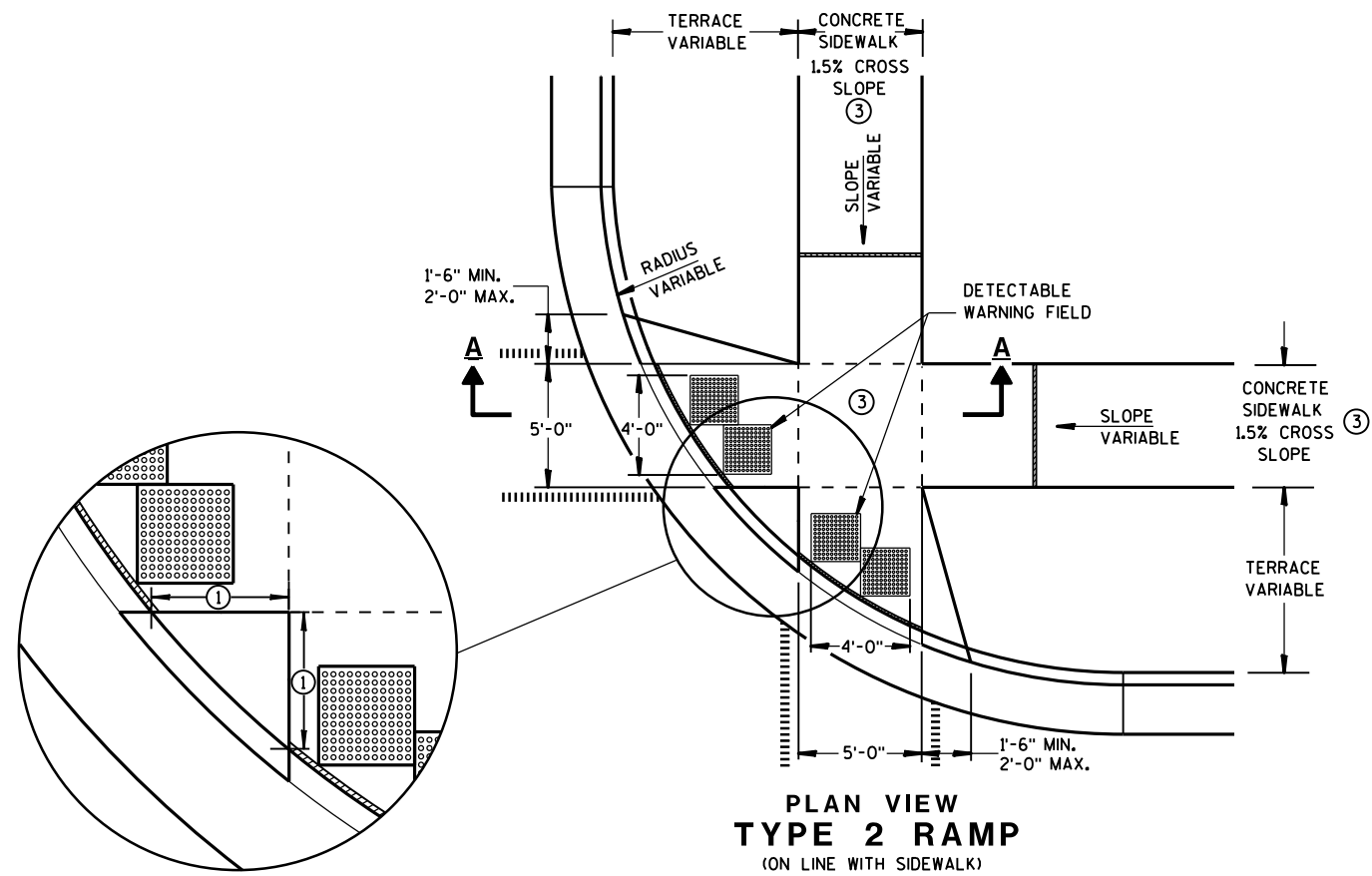
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

**CURB RAMPS
TYPES 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

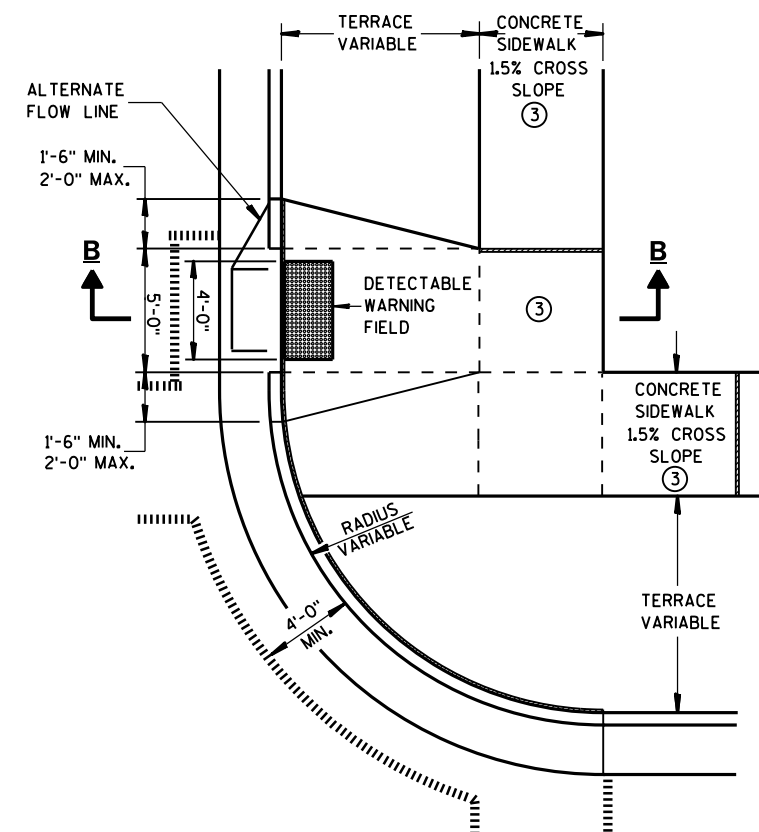
USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

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

- ① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



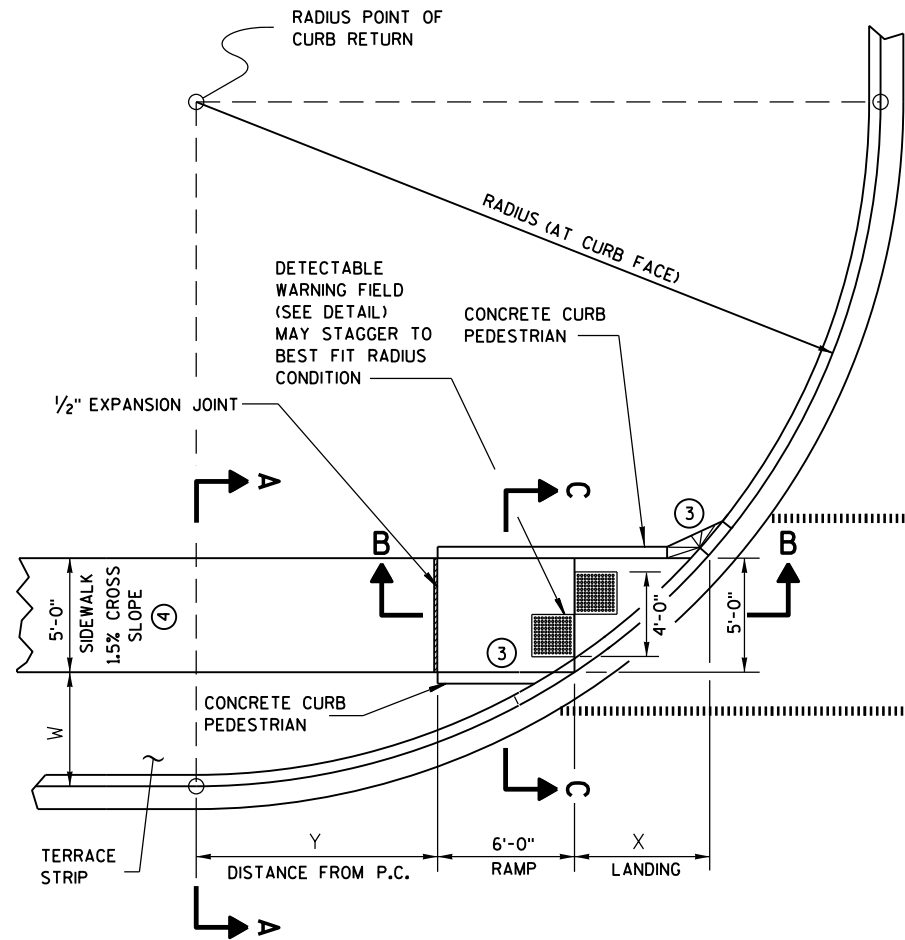
**CURB RAMPS
TYPES 2 AND 3**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

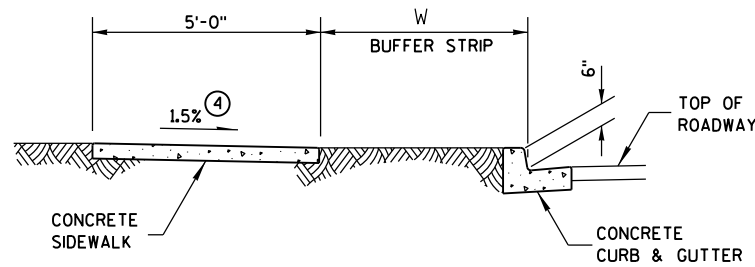


CURB RAMP TYPE 4A

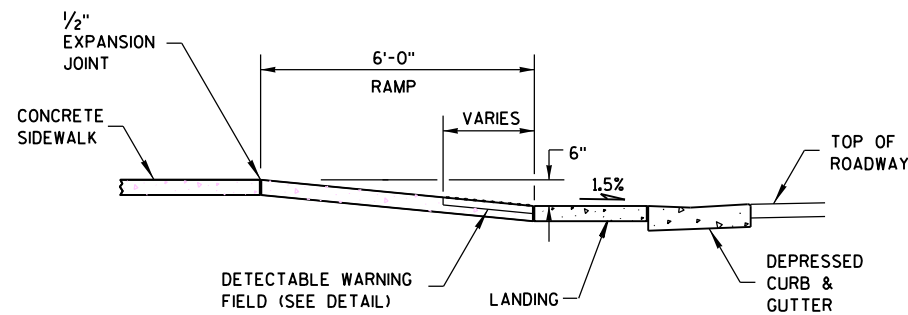




**CURB RAMP TYPE 4B
PLAN VIEW**



SECTION A-A FOR TYPE 4B

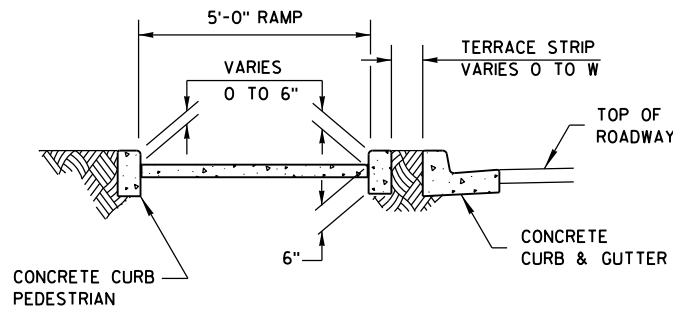


SECTION B-B FOR TYPE 4B

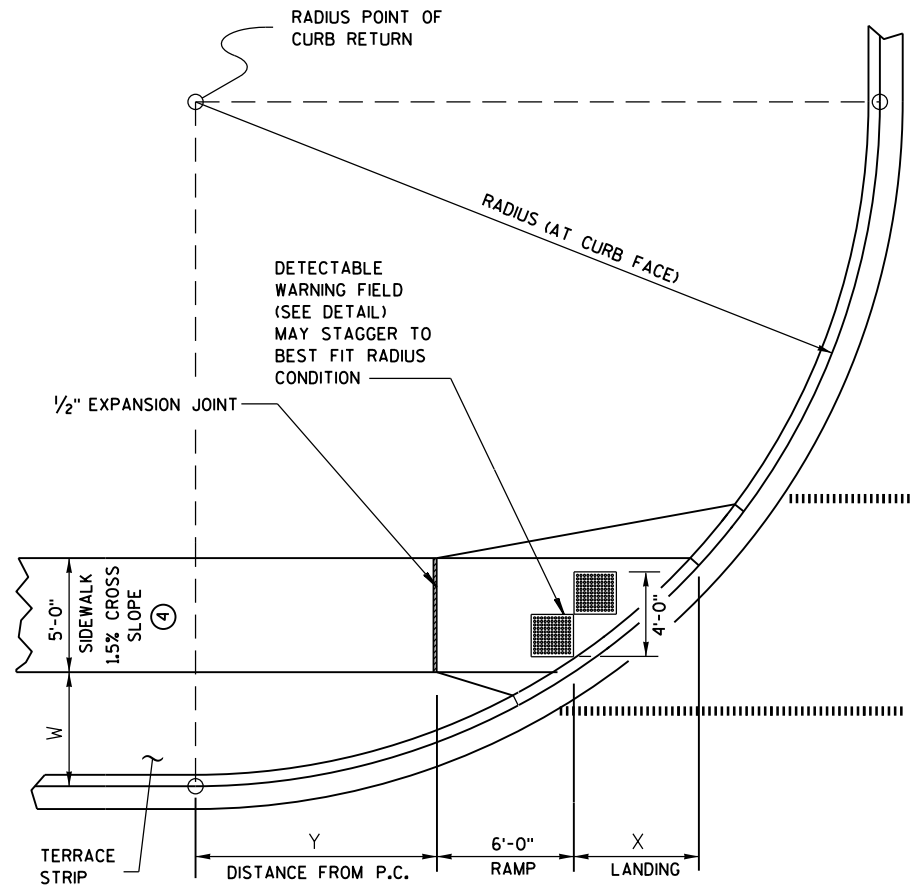
- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - - - CONTRACTION JOINT FIELD LOCATED
 - ||||| PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3/4"	11'-3/4"	9'-1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B



**CURB RAMP TYPE 4B1
PLAN VIEW**

GENERAL NOTES

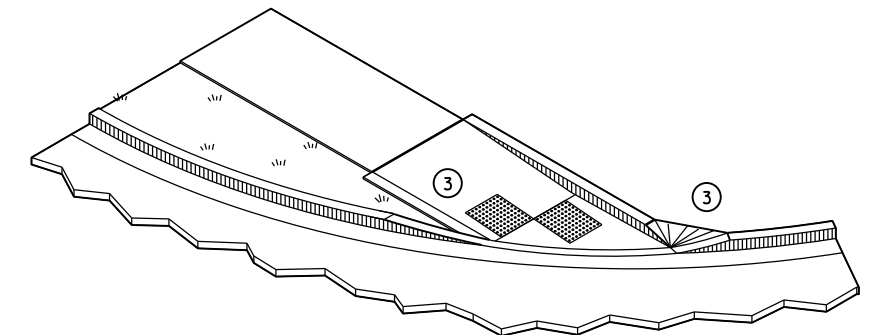
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

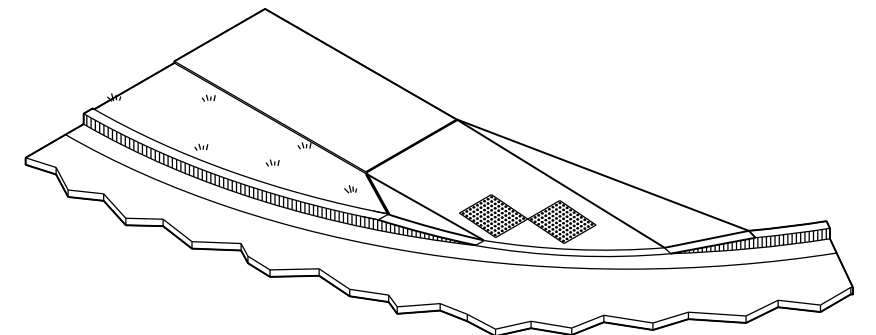
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



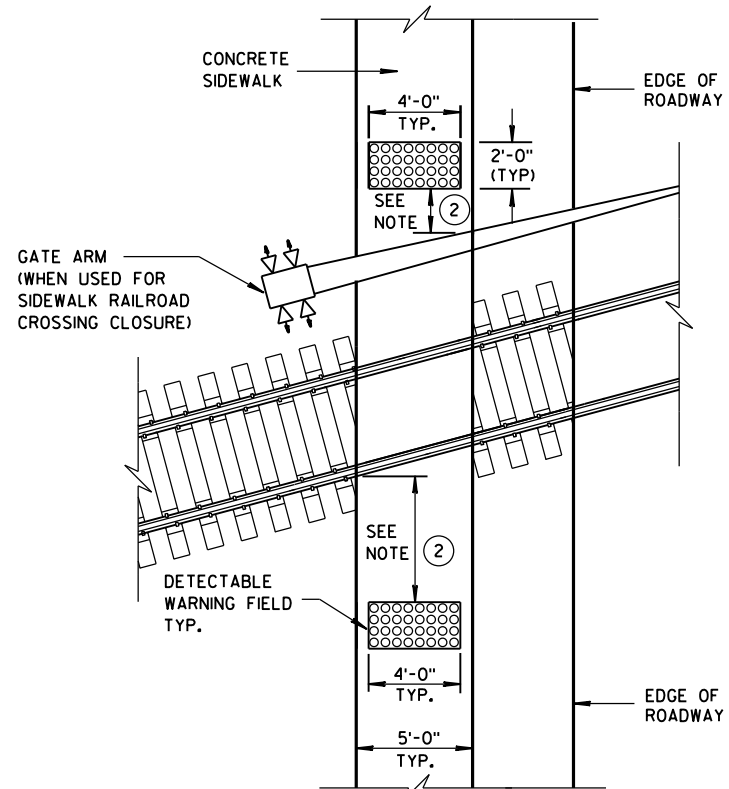
ISOMETRIC VIEW FOR TYPE 4B



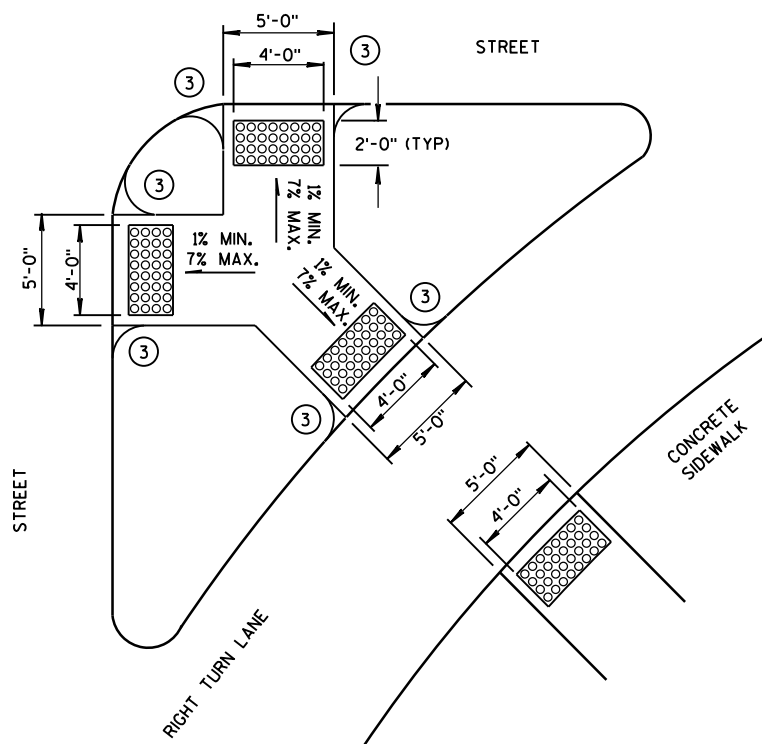
ISOMETRIC VIEW FOR TYPE 4B1

**CURB RAMPS
TYPE 4B AND 4B1**

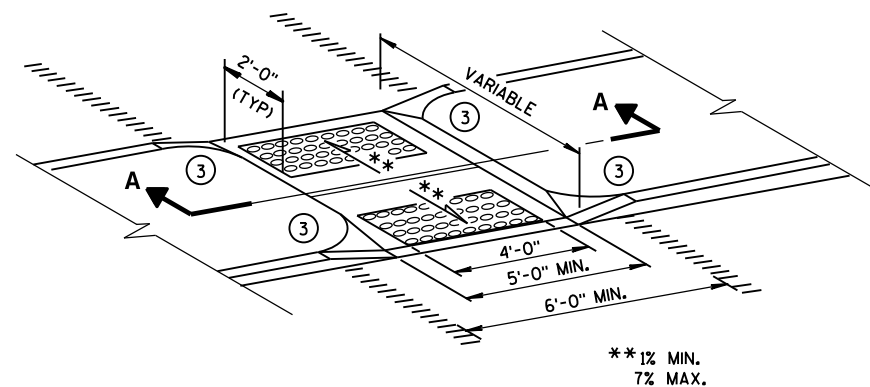
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



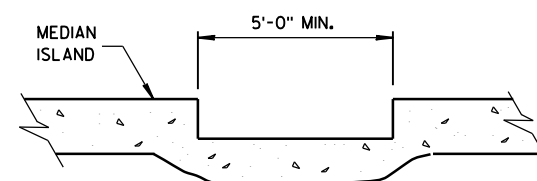
TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING



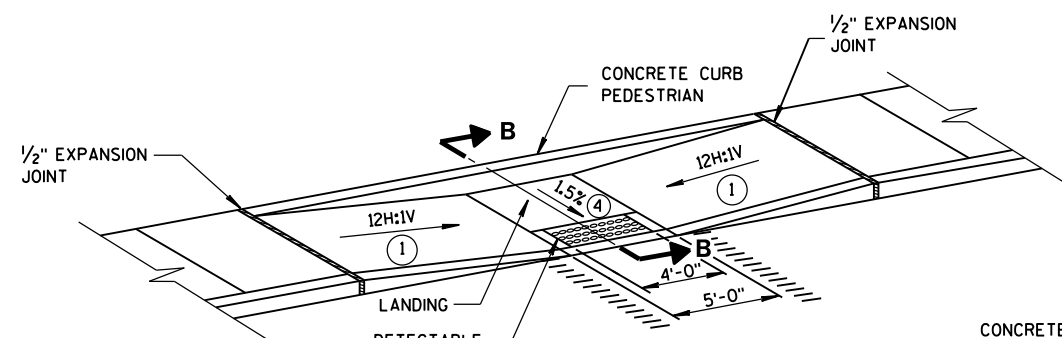
TYPE 6
DETECTABLE WARNING AT ISLANDS



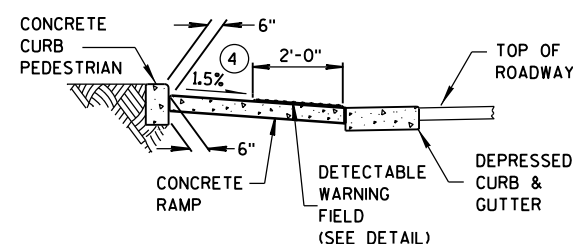
MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



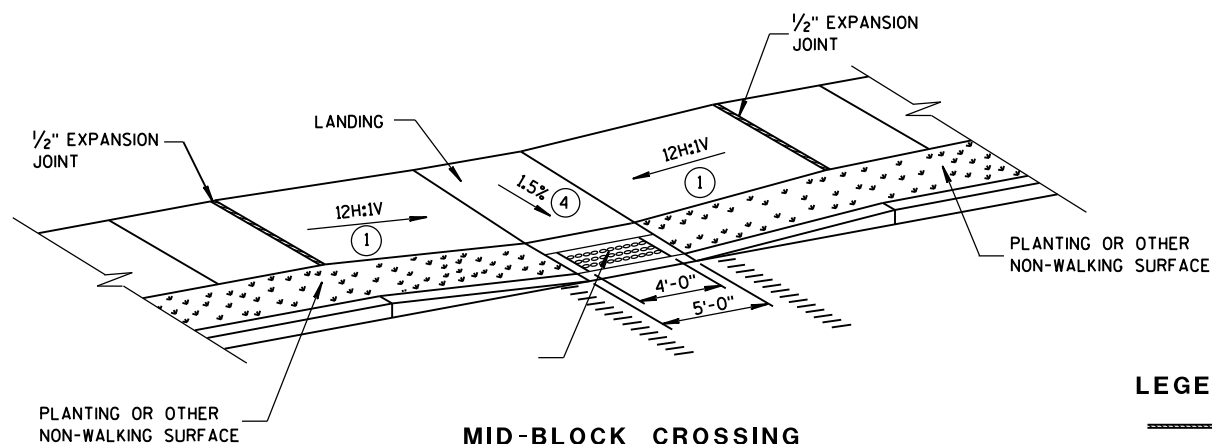
SECTION A-A



MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



MID-BLOCK CROSSING
TYPE 7B

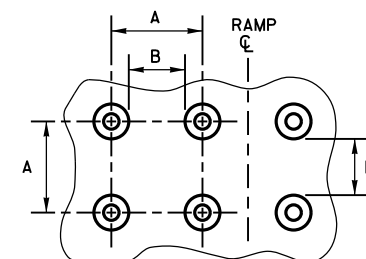
NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

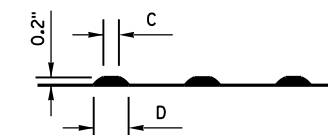
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

- ① SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ② THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET $\pm$ 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.
- ④ $\pm$ 0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



PLAN VIEW



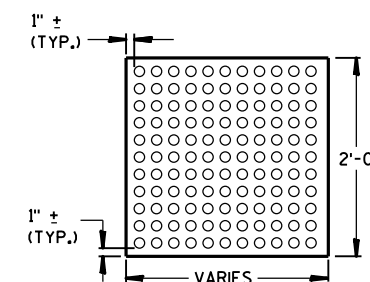
ELEVATION VIEW

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

LEGEND

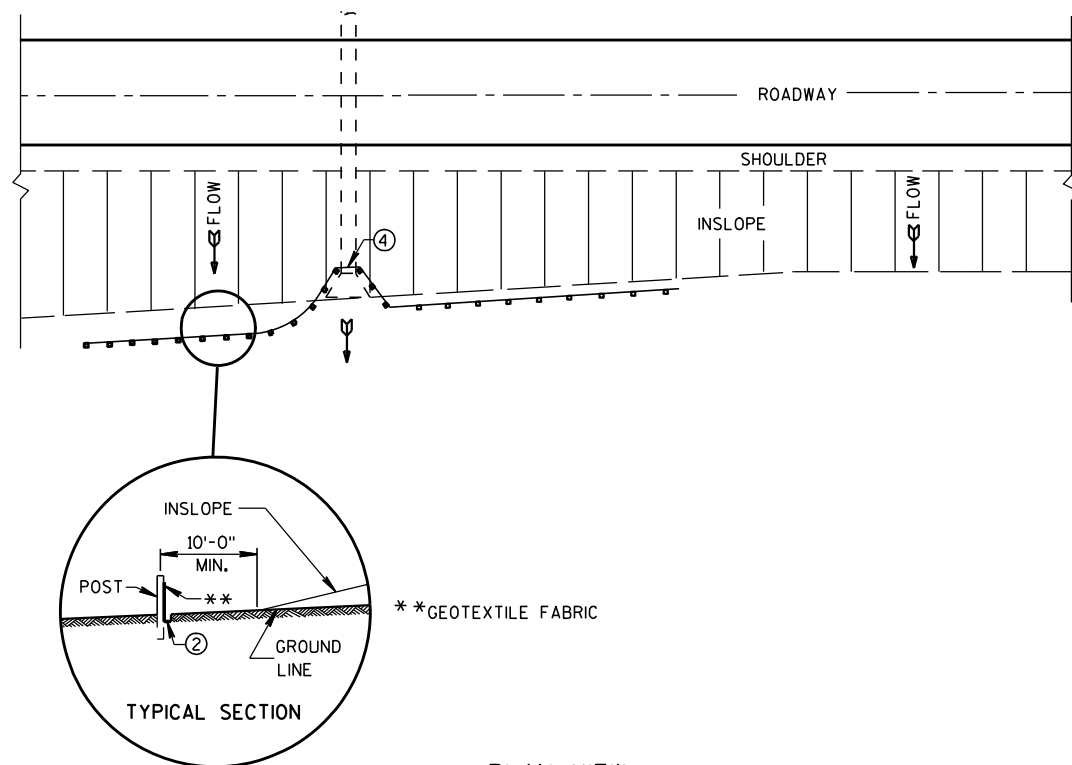
- 1/2" EXPANSION JOINT-SIDEWALK
- - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

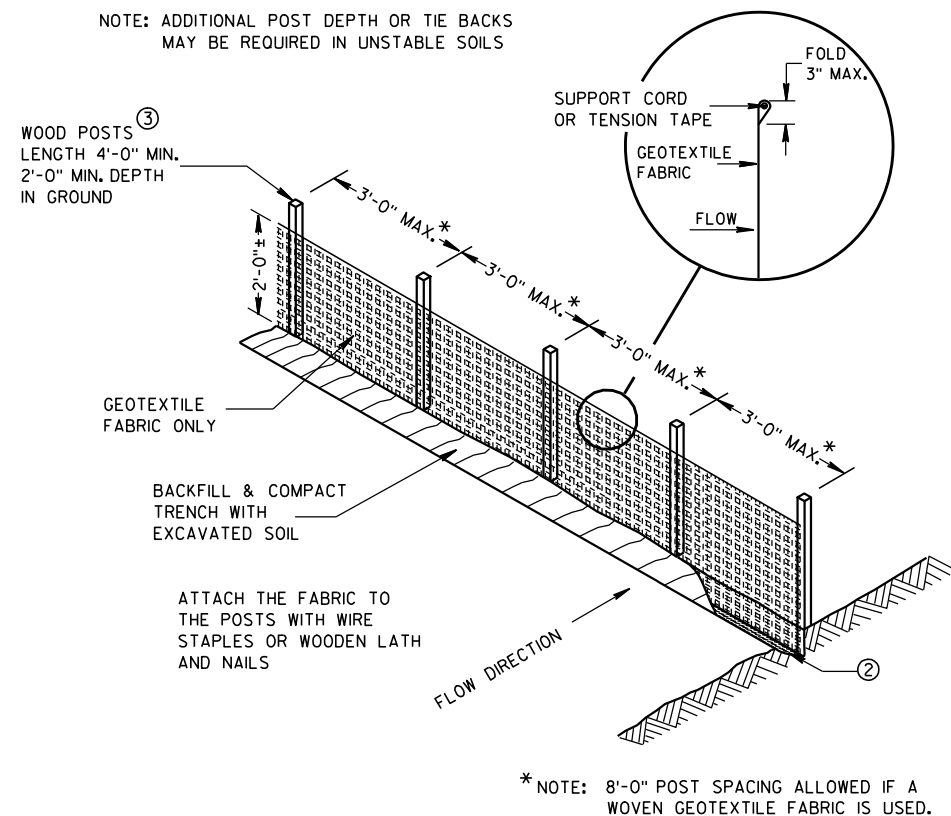
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-6-2013
DATE
FHWA

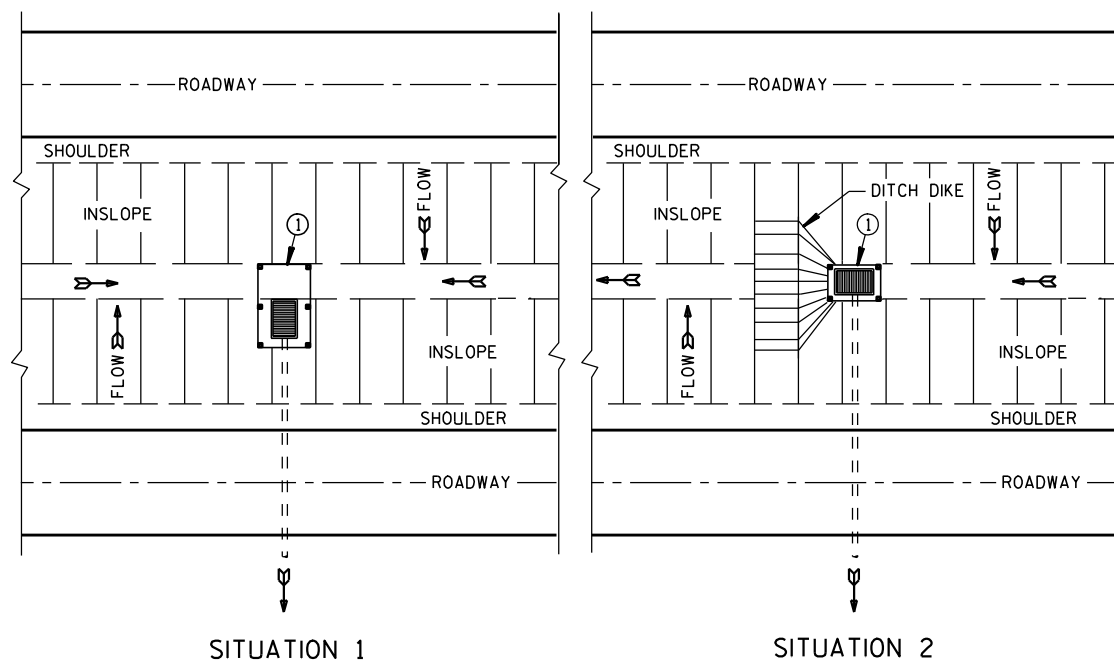
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



TYPICAL APPLICATION OF SILT FENCE

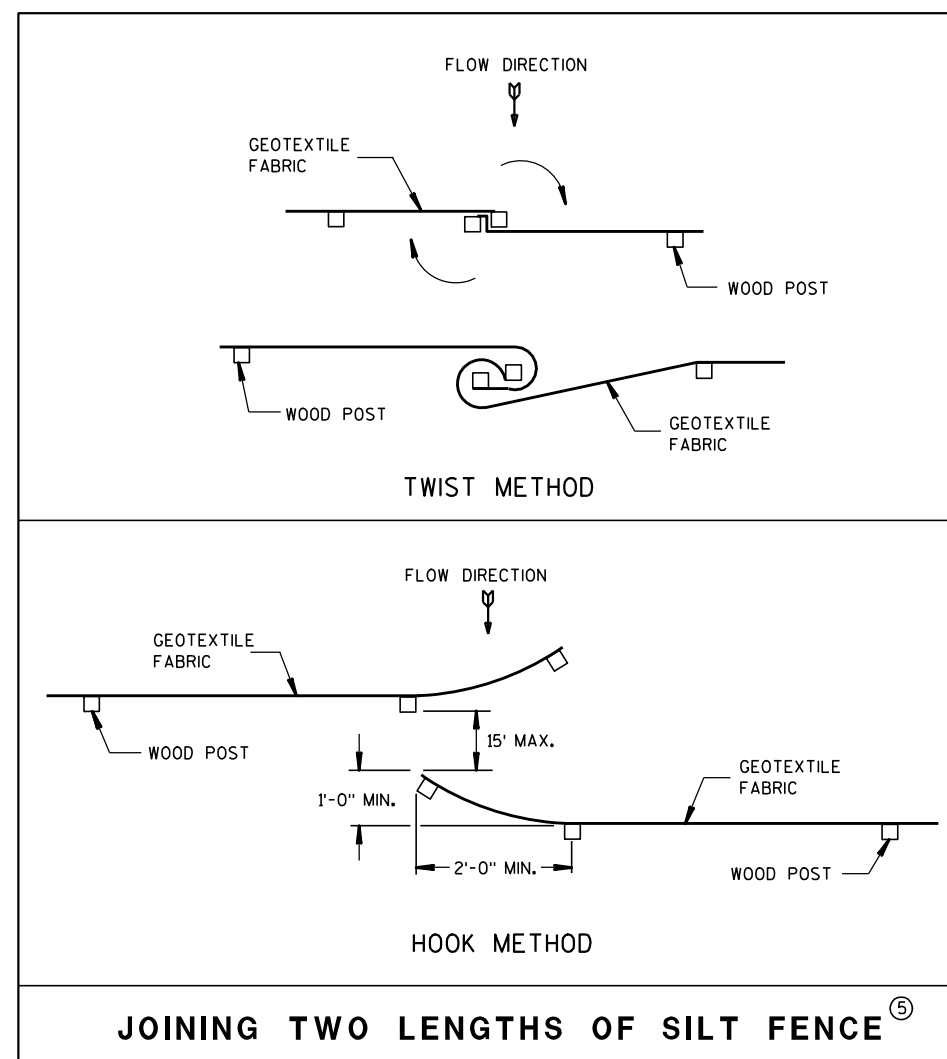


SILT FENCE



PLAN VIEW

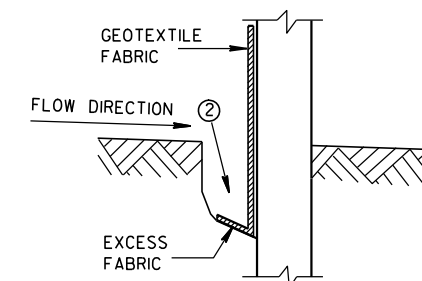
SILT FENCE AT MEDIAN SURFACE DRAINS



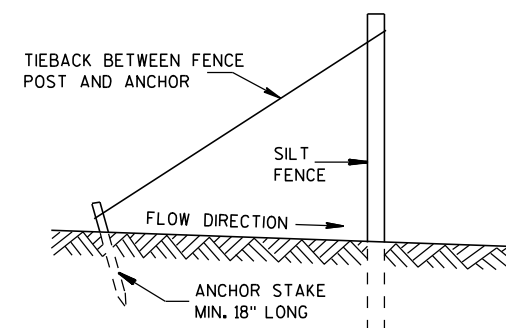
GENERAL NOTES

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 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

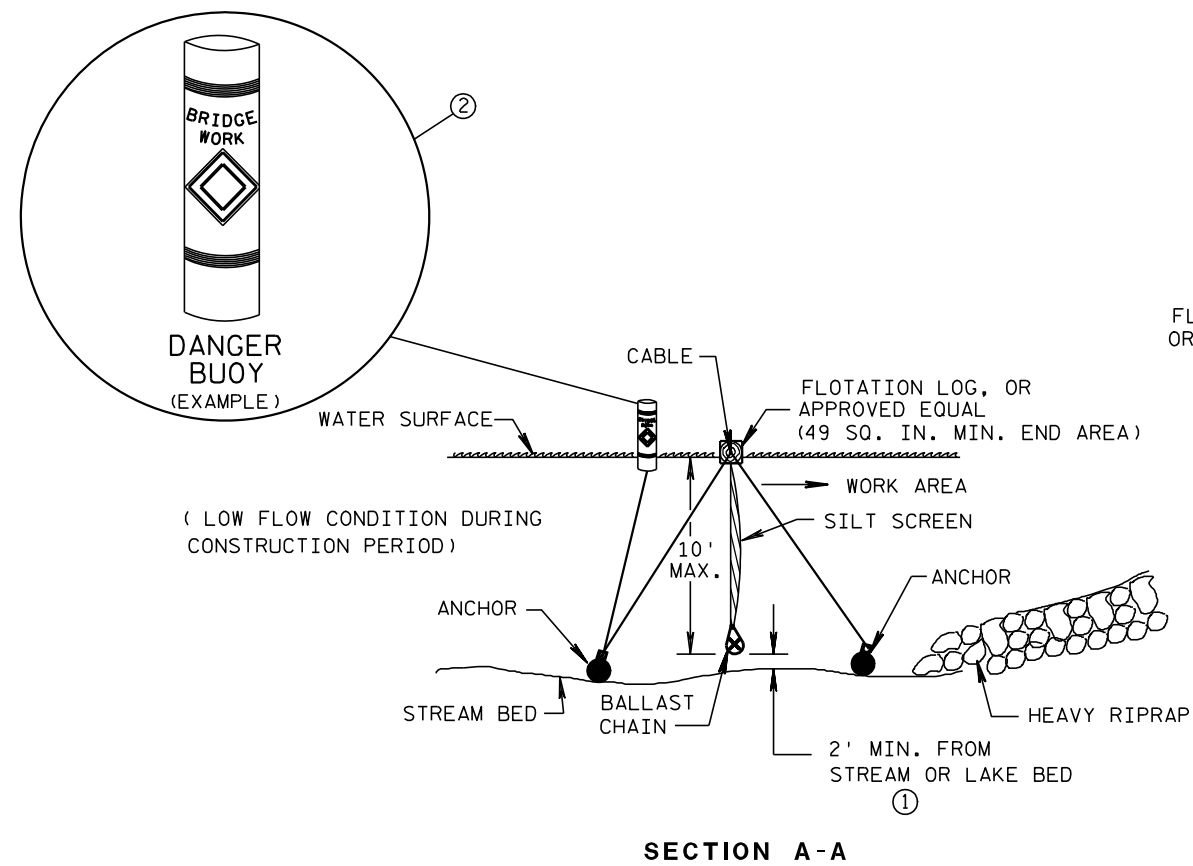
APPROVED

4-29-05

DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

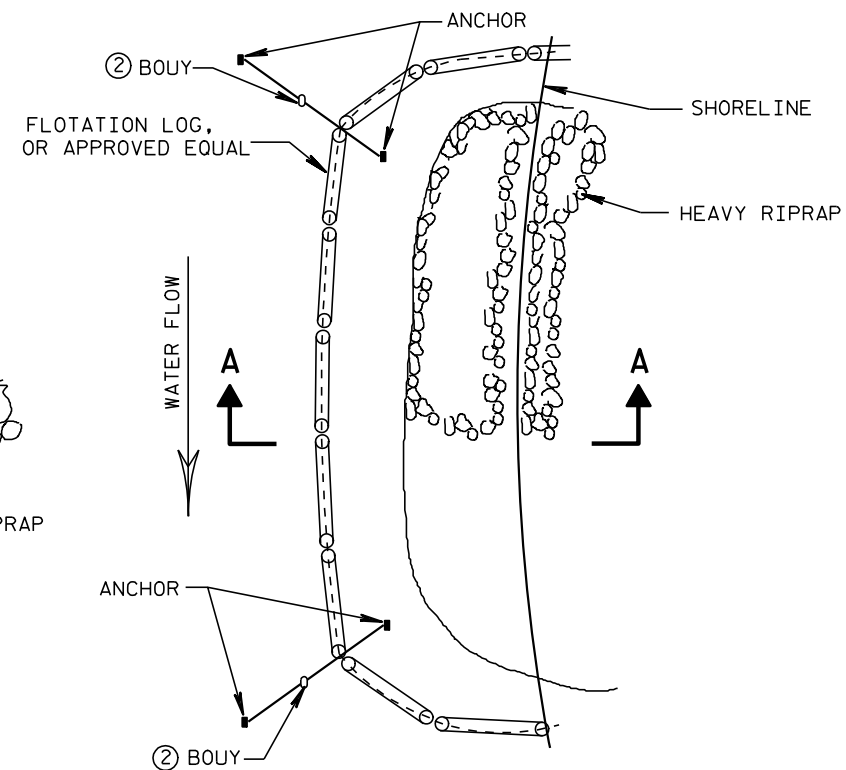


SILT SCREEN PLACEMENT DETAIL

GENERAL NOTES

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

- ① 2' MINIMUM SHALL BE MAINTAINED DURING CONSTRUCTION PERIOD.
- ② USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



SILT SCREEN

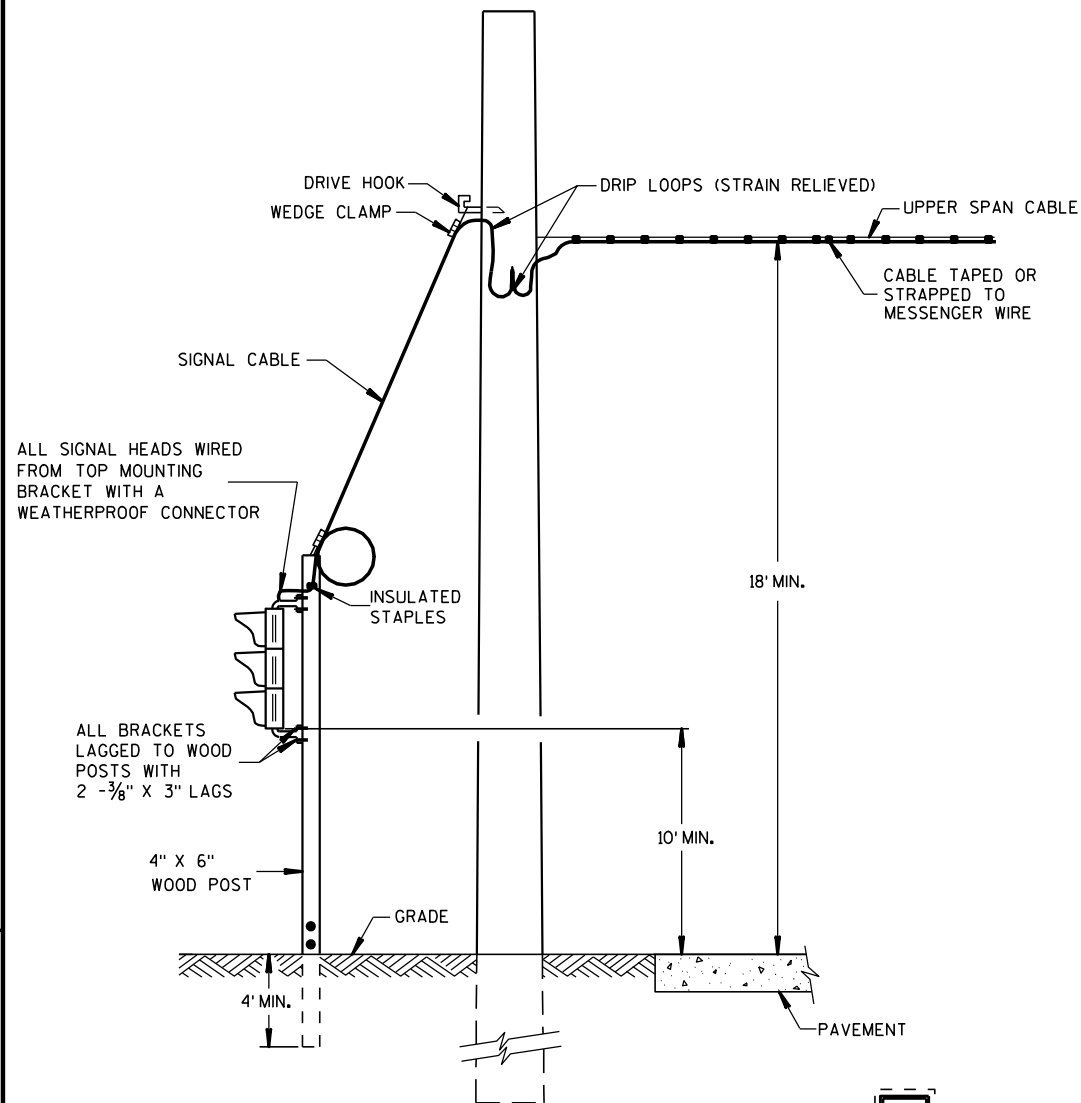
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

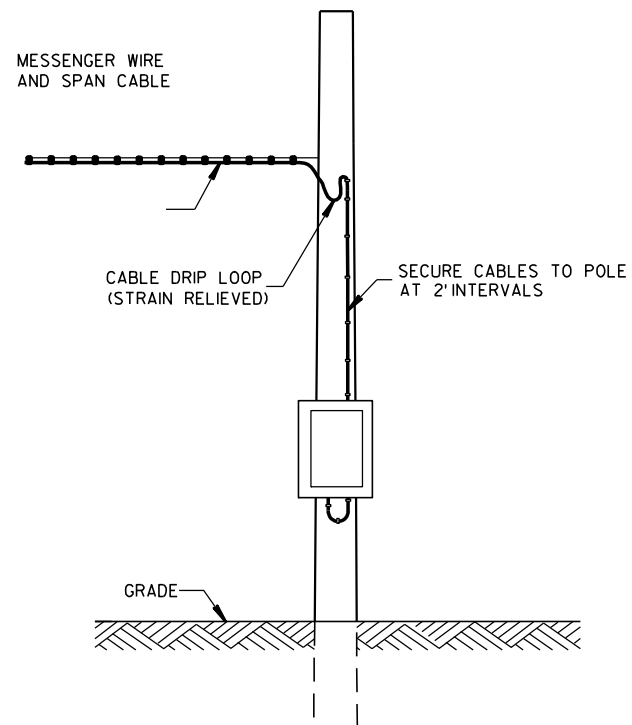


**TYPICAL DROP
TO TRAFFIC SIGNAL FACE**

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE**
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/ CURBS	2 FT

**NOTE: OFFSET MEASURED FROM OUTER EDGE OF
OUTSIDE THRU LANE.

MINIMUM POLE LENGTHS	CLASS	MINIMUM BURIAL DEPTHS
25 FEET	V	5 FEET
30 FEET	V	6 FEET
35 FEET	IV	7 FEET
40 FEET	IV	8 FEET
45 FEET	IV	9 FEET



**POLE MOUNT
CABINET INSTALLATION**

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAYBE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

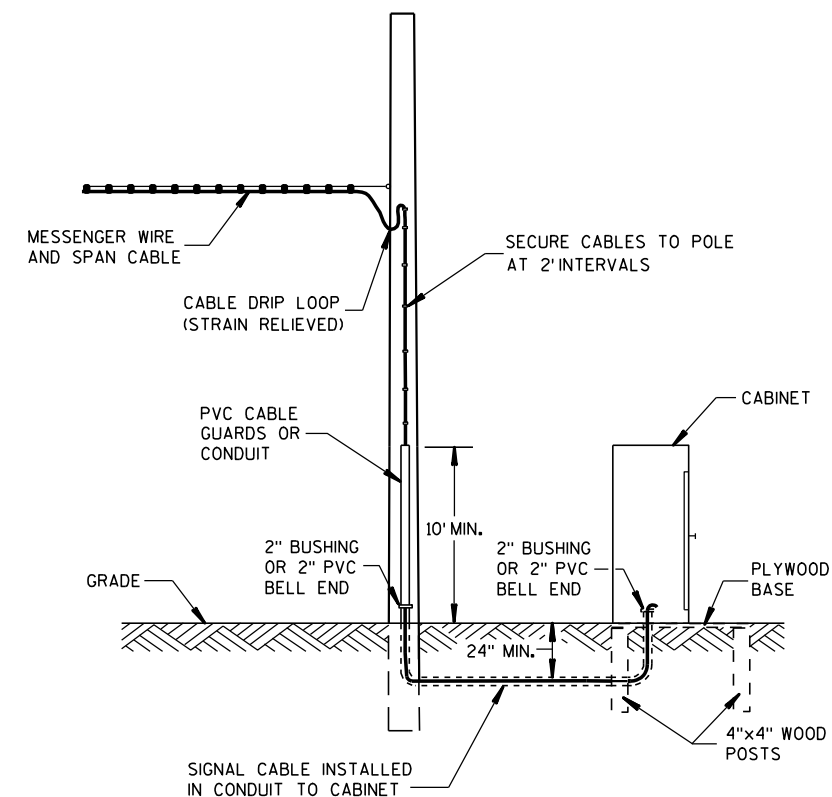
WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAMGUARD, ETC.).

WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

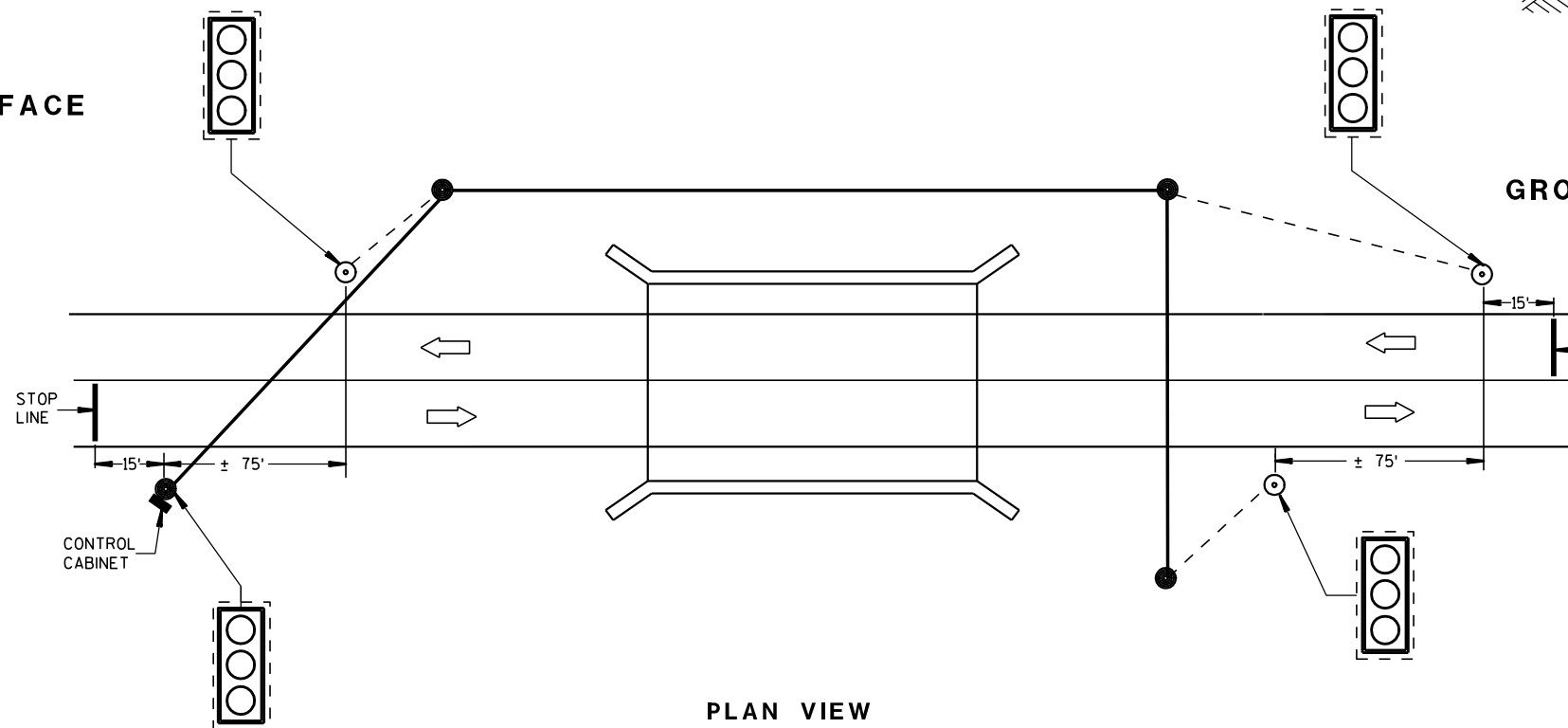
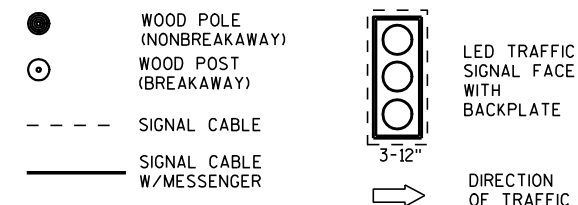
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.



GROUND MOUNT CABINET INSTALLATION

LEGEND



**PLAN VIEW
TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION**

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

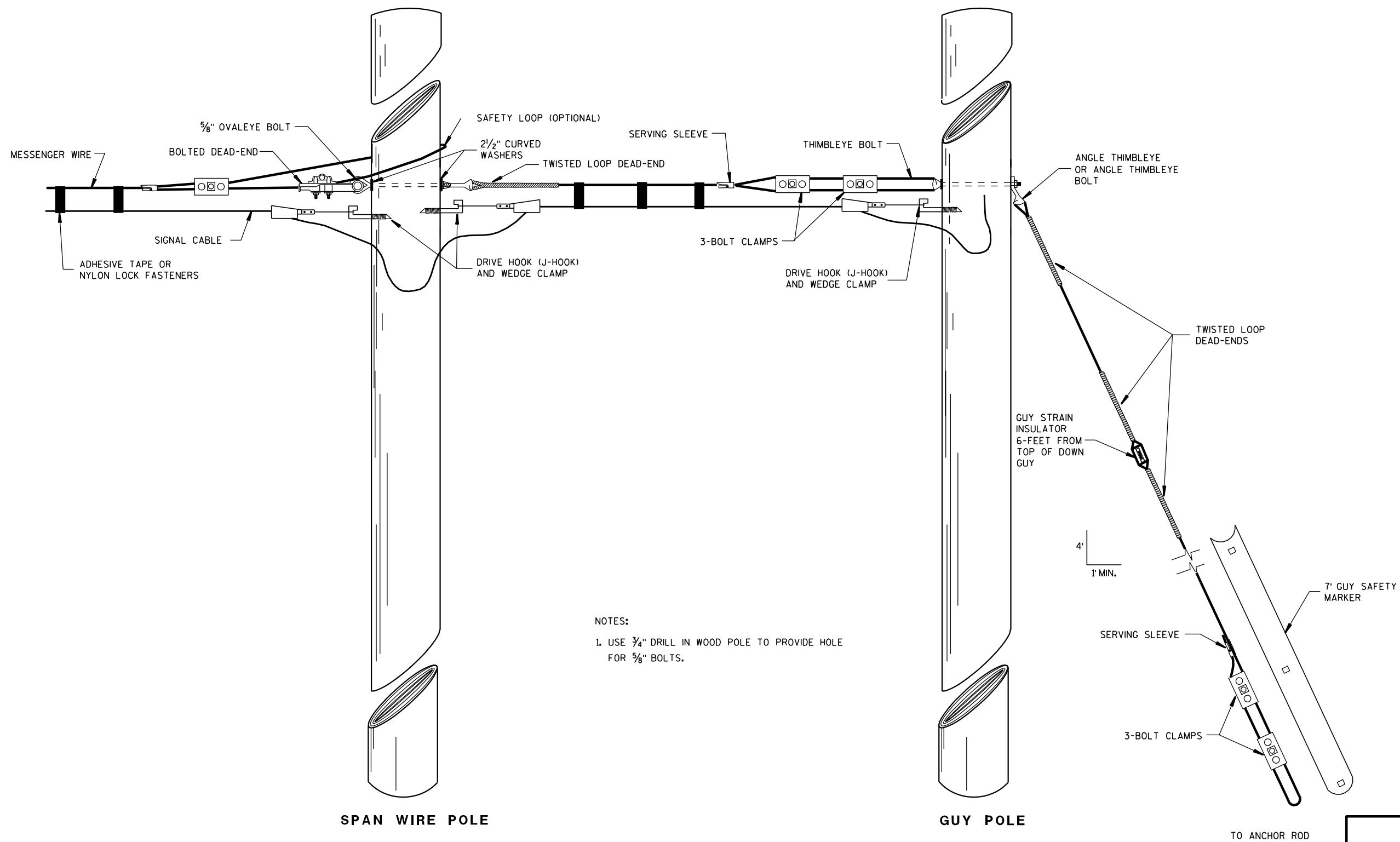
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011
DATE

/S/ Thomas J. Goring
STATE ELECTRICAL ENGINEER FOR HWYS

FHWA



NOTES:
1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE HOLE FOR 5/8" BOLTS.

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

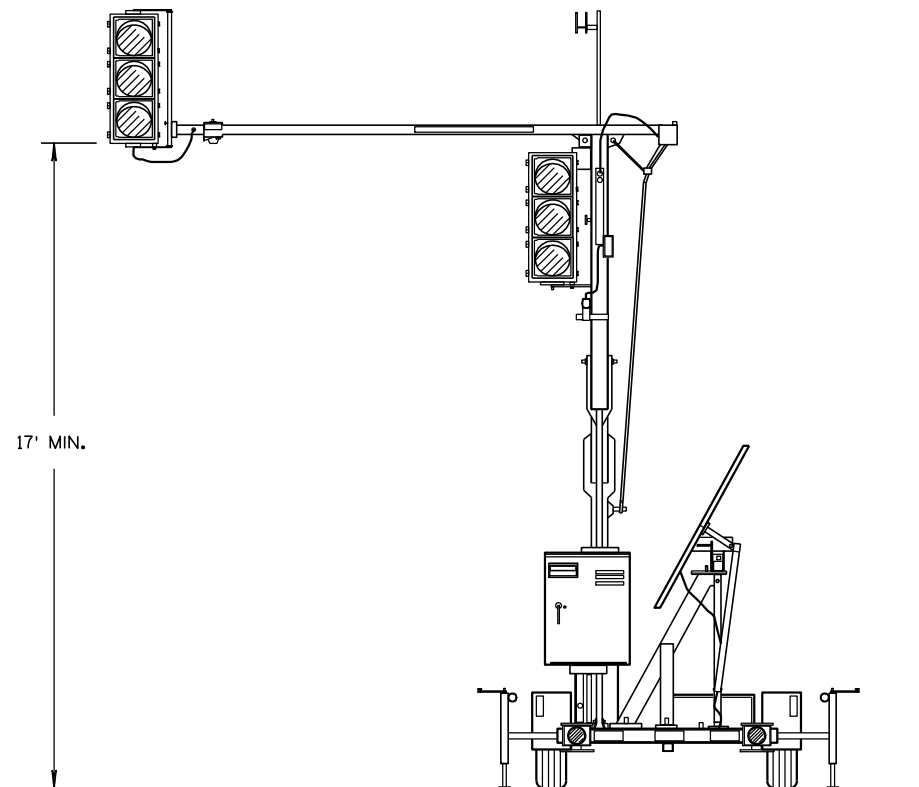
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011
DATE

FHWA

/S/ Thomas J. Goring
STATE ELECTRICAL ENGINEER FOR HWYS

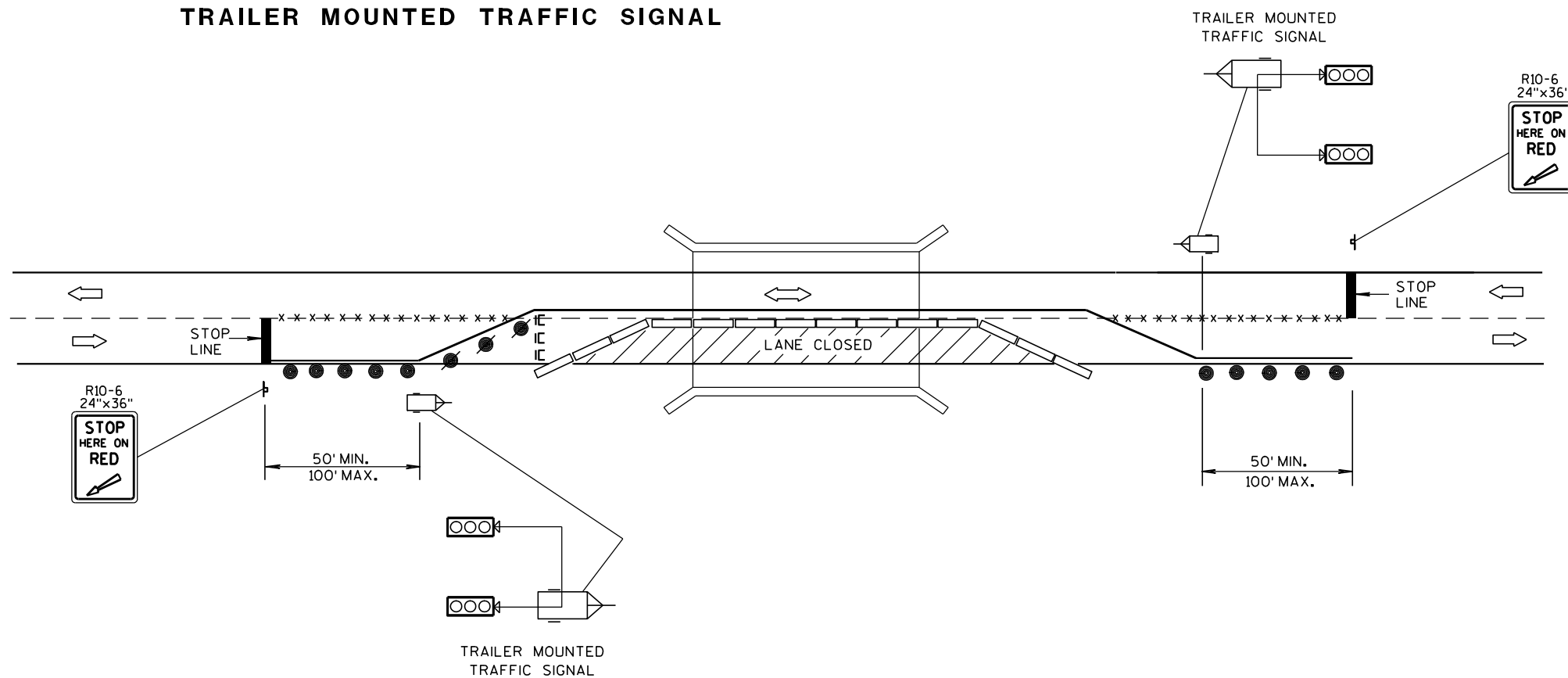


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- ⌋ POST MOUNTED SIGN
- *-x-* REMOVING PAVEMENT MARKING
- ⌋ TYPE III BARRICADE WITH SIGN
- /● DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- ▬ TEMPORARY PRECAST CONCRETE BARRIER
- ⌋ TRAILER MOUNTED TRAFFIC SIGNAL
- ➡ DIRECTION OF TRAFFIC FLOW

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

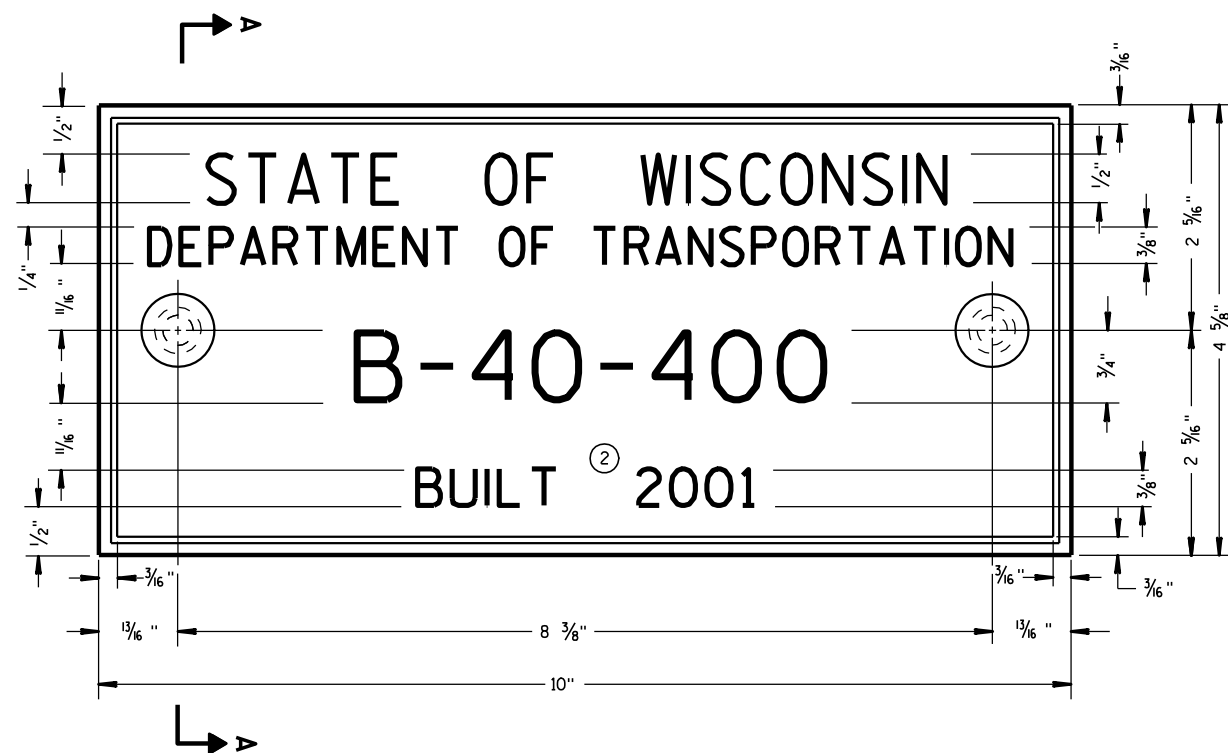
APPROVED

3/2/2011

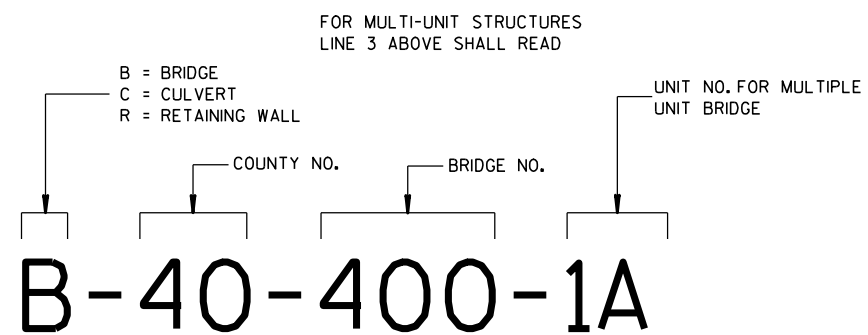
DATE

FHWA

/S/ Thomas J. Goring
STATE ELECTRICAL ENGINEER FOR HWYS



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



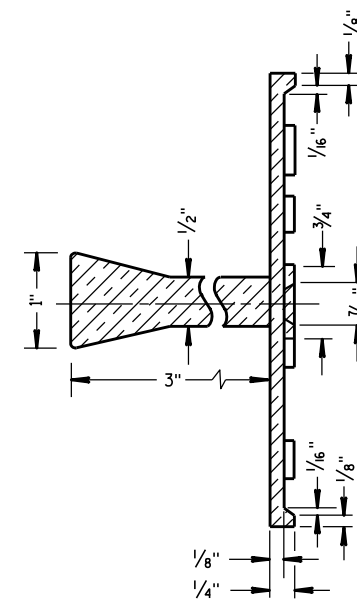
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

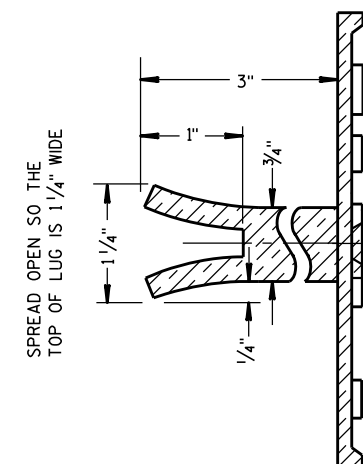
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

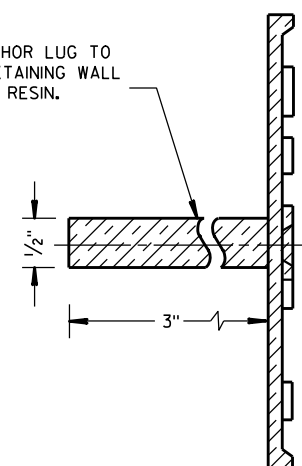


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

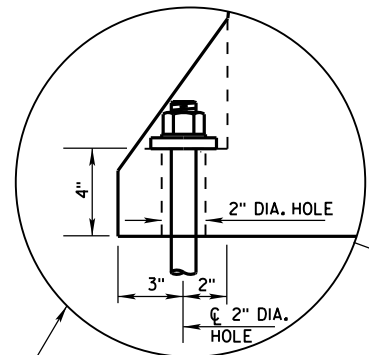
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

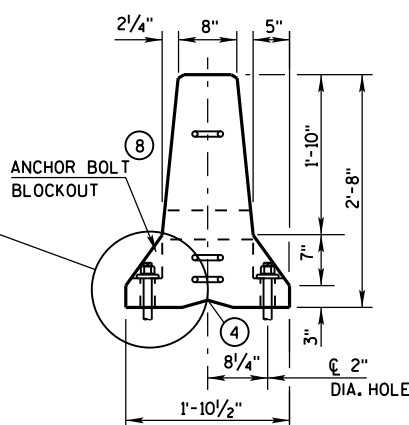
3/26/10
DATE

FHWA

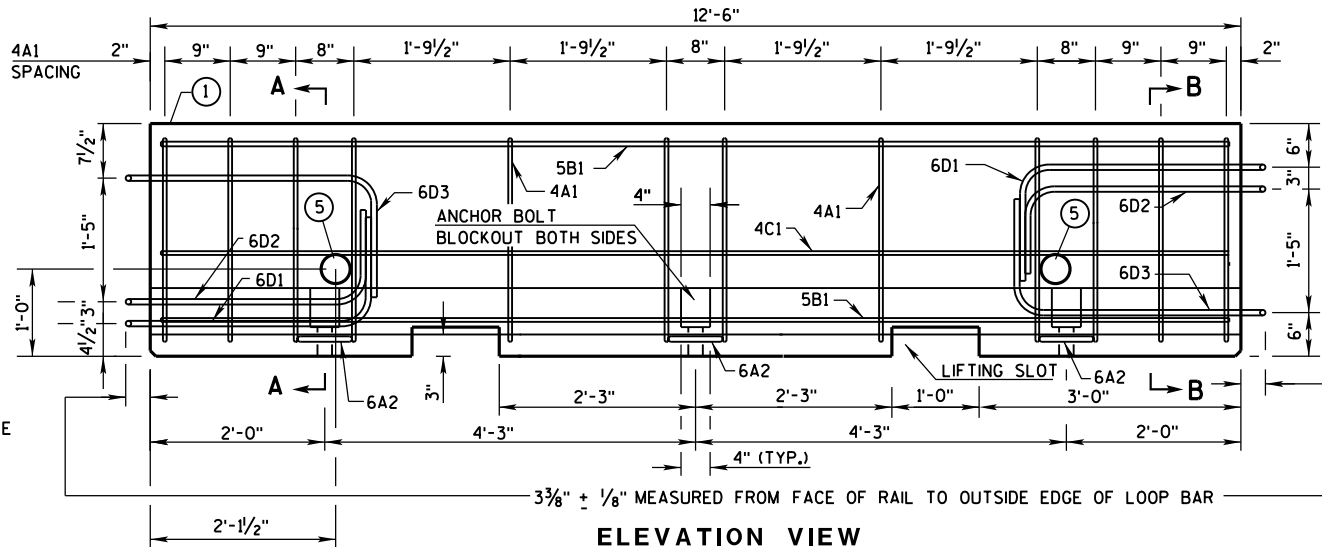
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



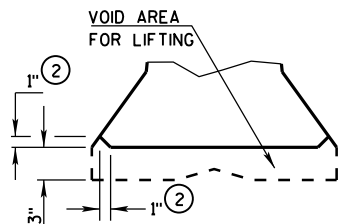
ANCHOR ON TRAFFIC SIDE
ONLY WHEN REQUIRED
(SEE SHEET D FOR ADDITIONAL
ANCHOR DETAIL)



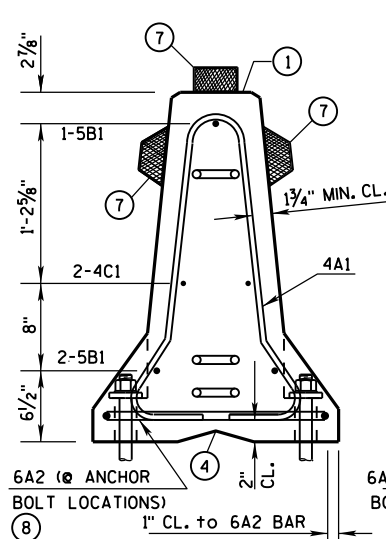
END VIEW



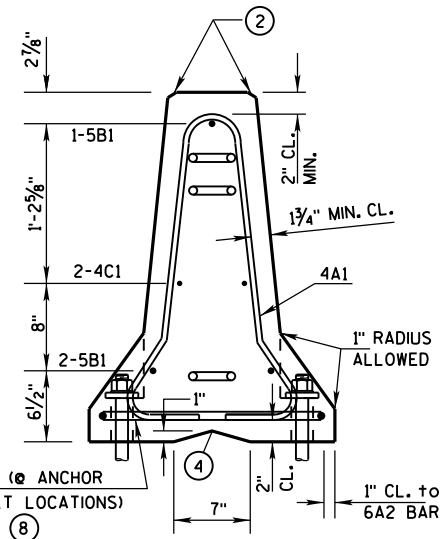
ELEVATION VIEW



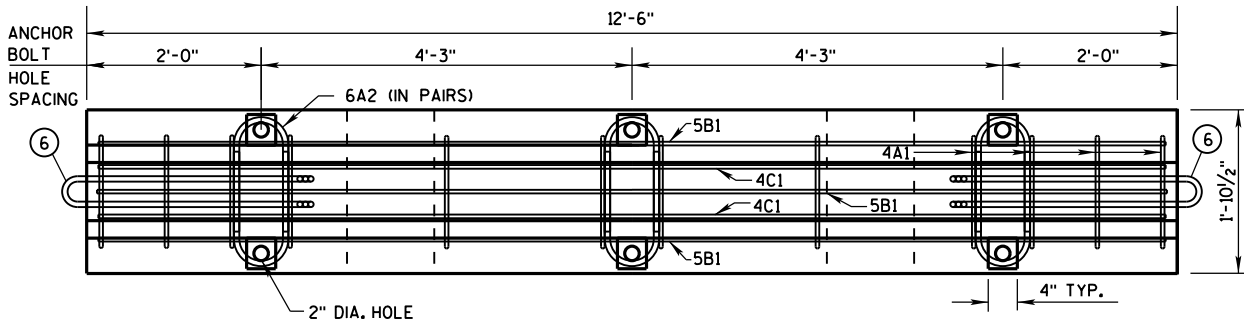
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

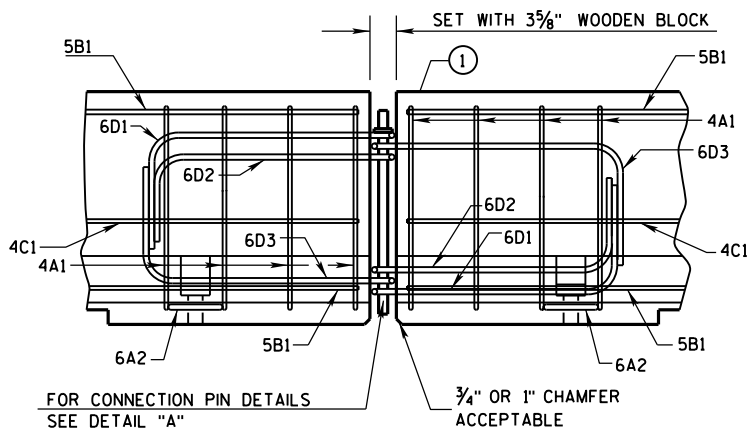


SECTION B-B
(STIRRUP PLACEMENT)

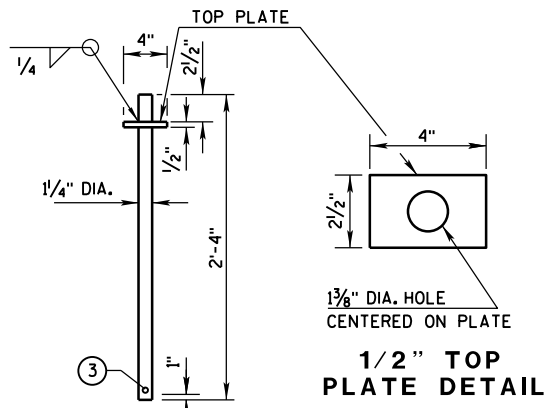


PLAN VIEW

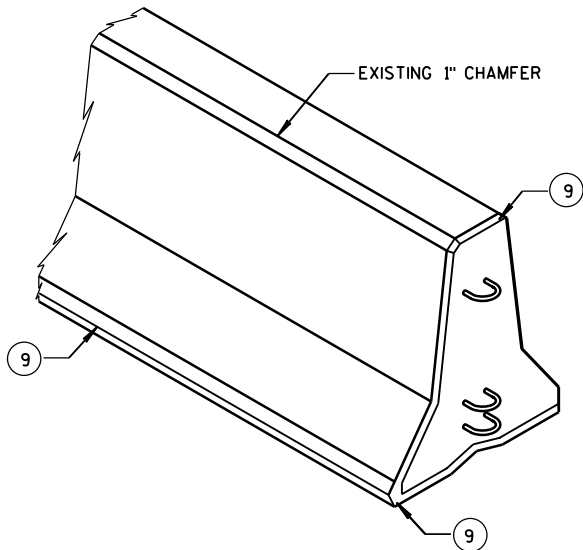
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(g) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 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 3/4" 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 3-1/2" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

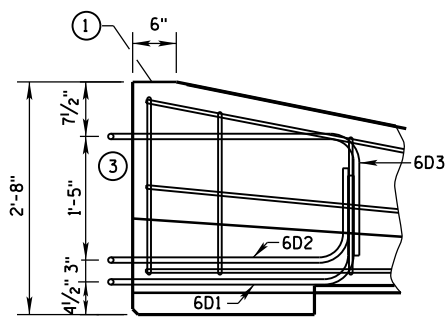
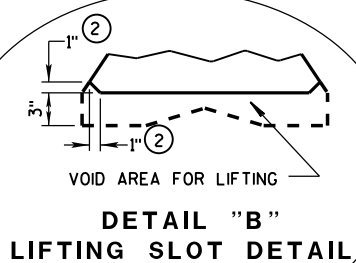
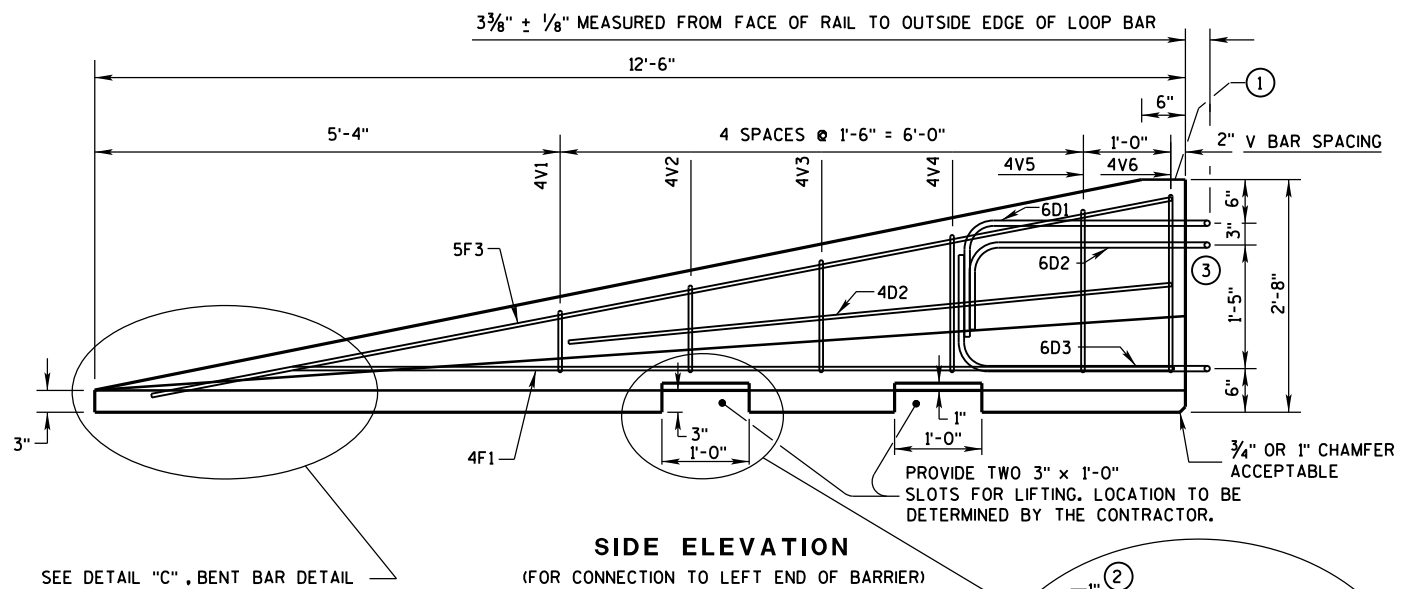
PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

- MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - TYPE: WICBTP
 - MANUFACTURER
 - DATE MANUFACTURED (MONTH AND YEAR)
- 1" CHAMFER TO PREVENT SPALLING.
- A 3/8" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- "V" NOTCH IS OPTIONAL.
- THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURER'S 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.
- SEE SHEET D FOR ANCHORING CRITERIA.
- 1" CHAMFER OPTIONAL.

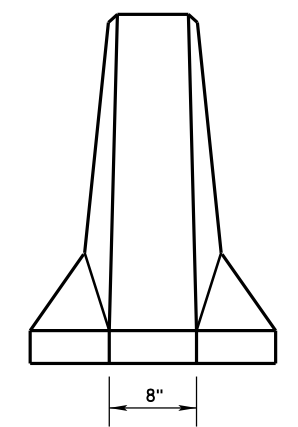
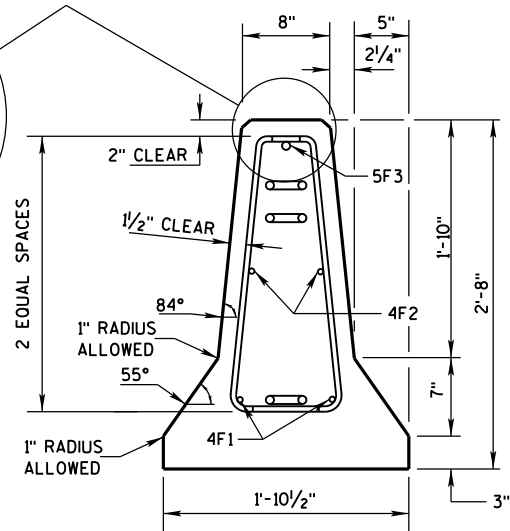
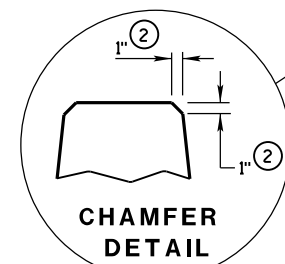
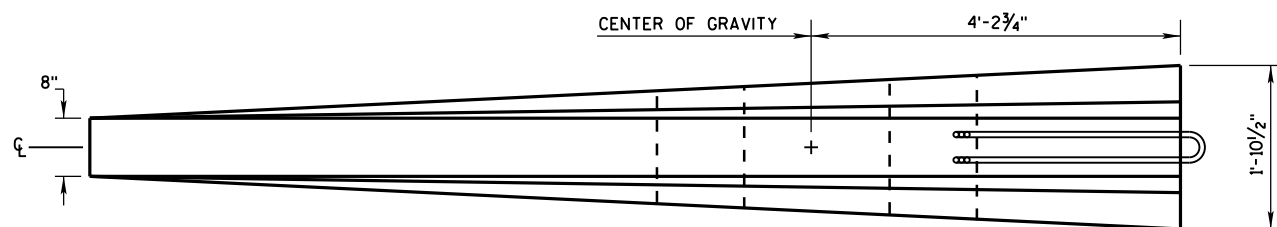
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

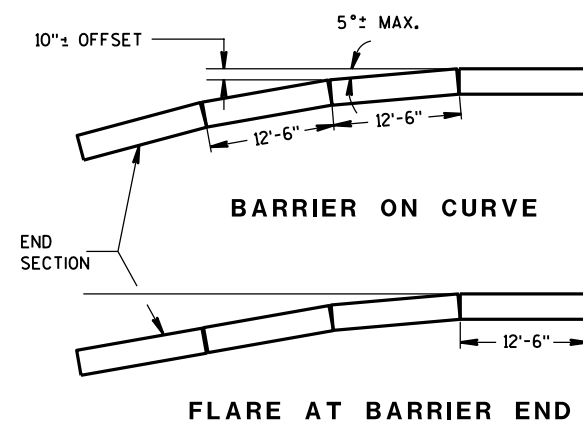


GENERAL NOTES

- 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.



DETAILS OF BARRIER TAPER SECTION



POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

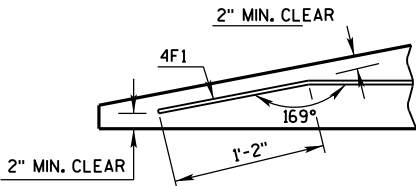
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

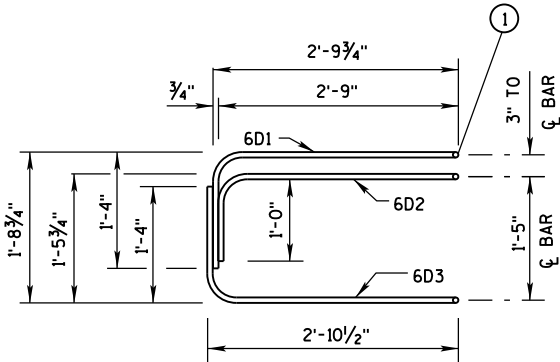
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

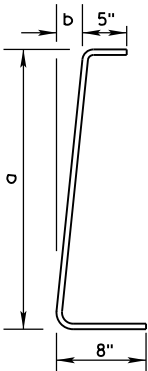
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

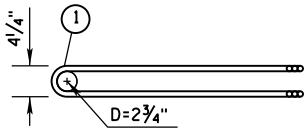
BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

TAPER BARRIER SECTION

BARRIER SECTION
BILL OF MATERIALS

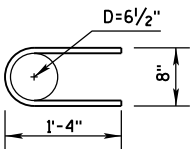
(PER 12'-6" BARRIER SECTION)

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"

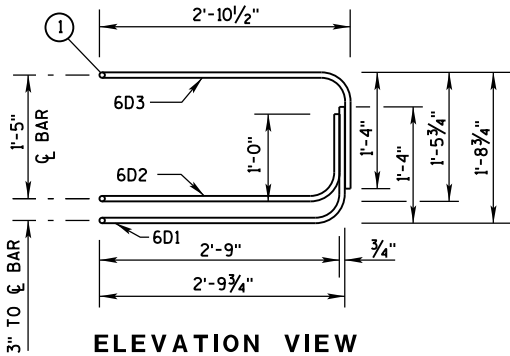


PLAN VIEW
LOOP BAR ASSEMBLY

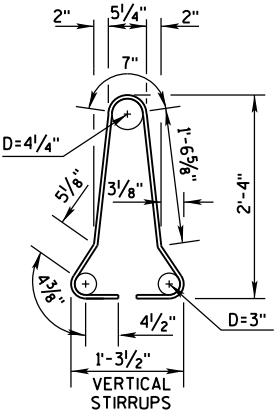
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW

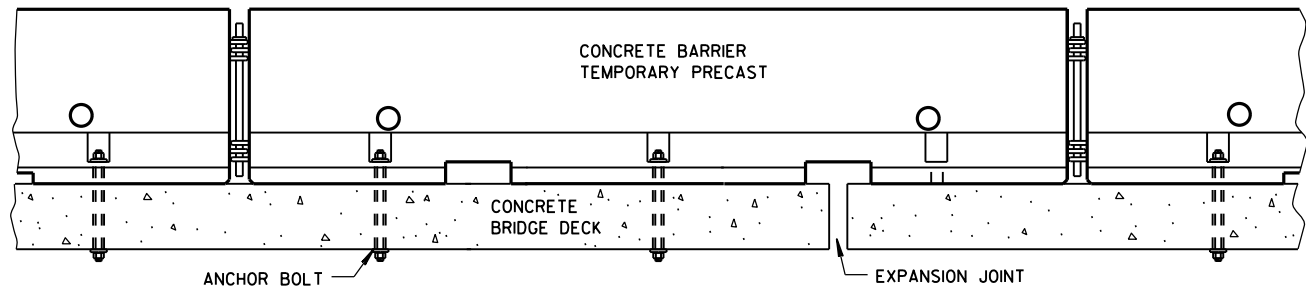
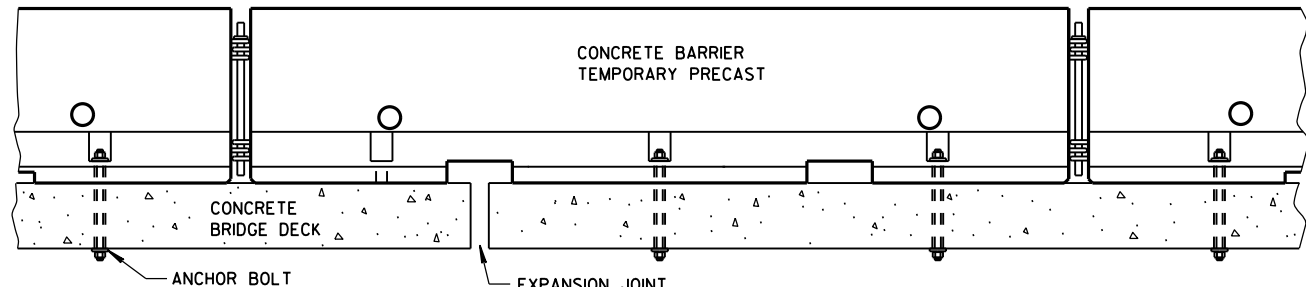


4A1

BARRIER SECTION

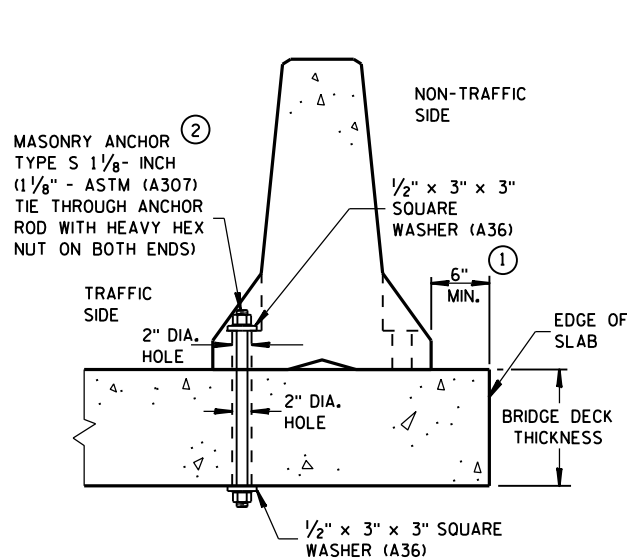
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



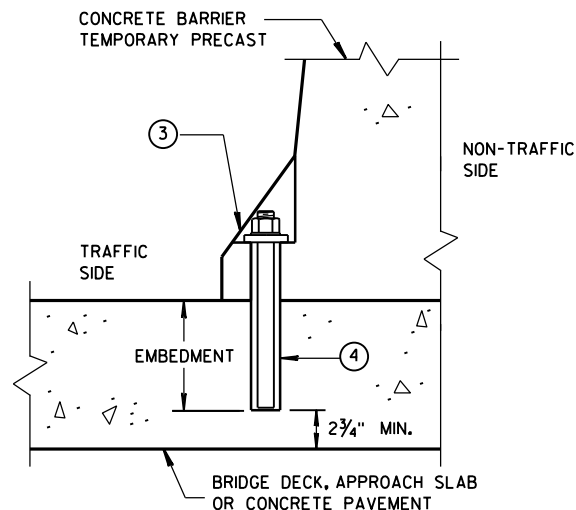
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)



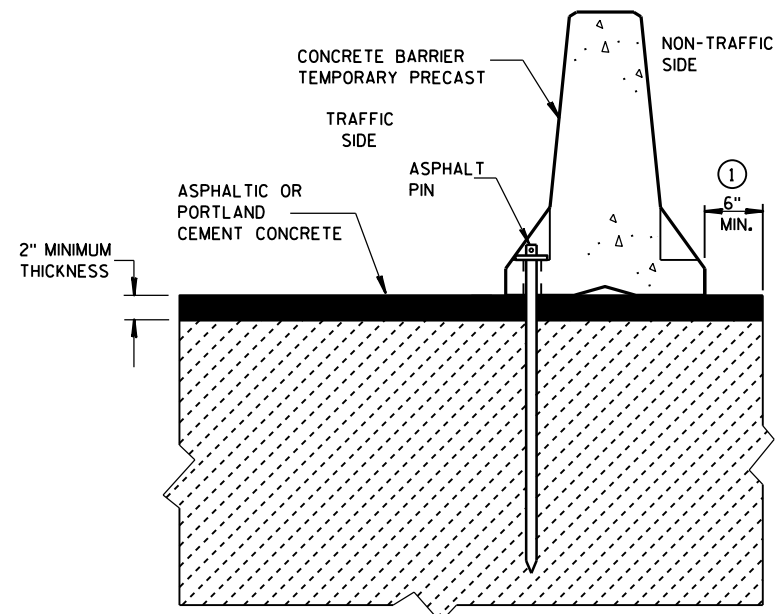
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



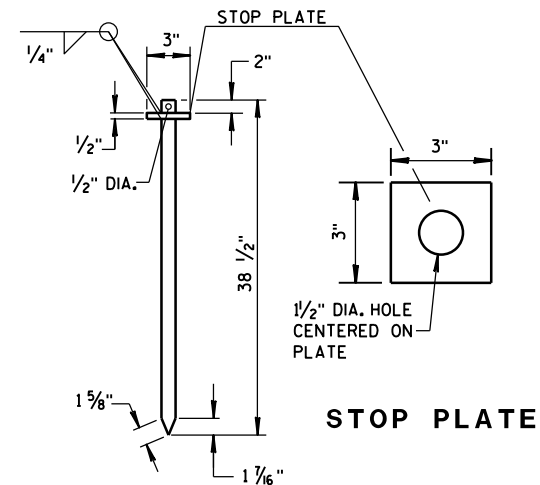
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

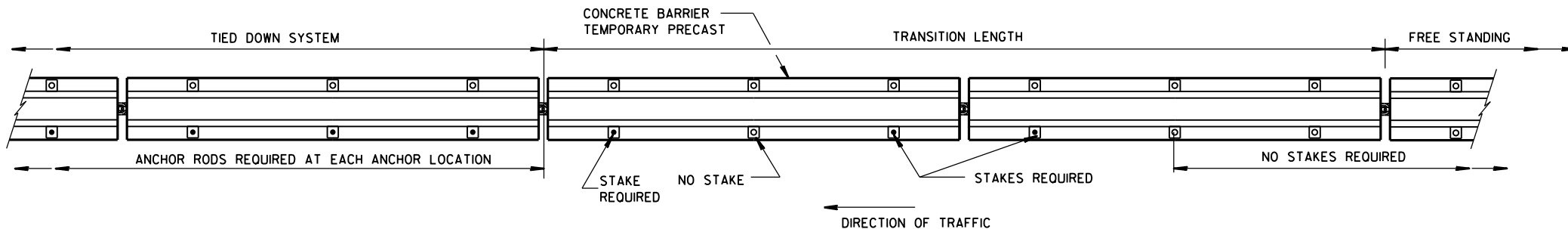


STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



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.)

GENERAL NOTES

- 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

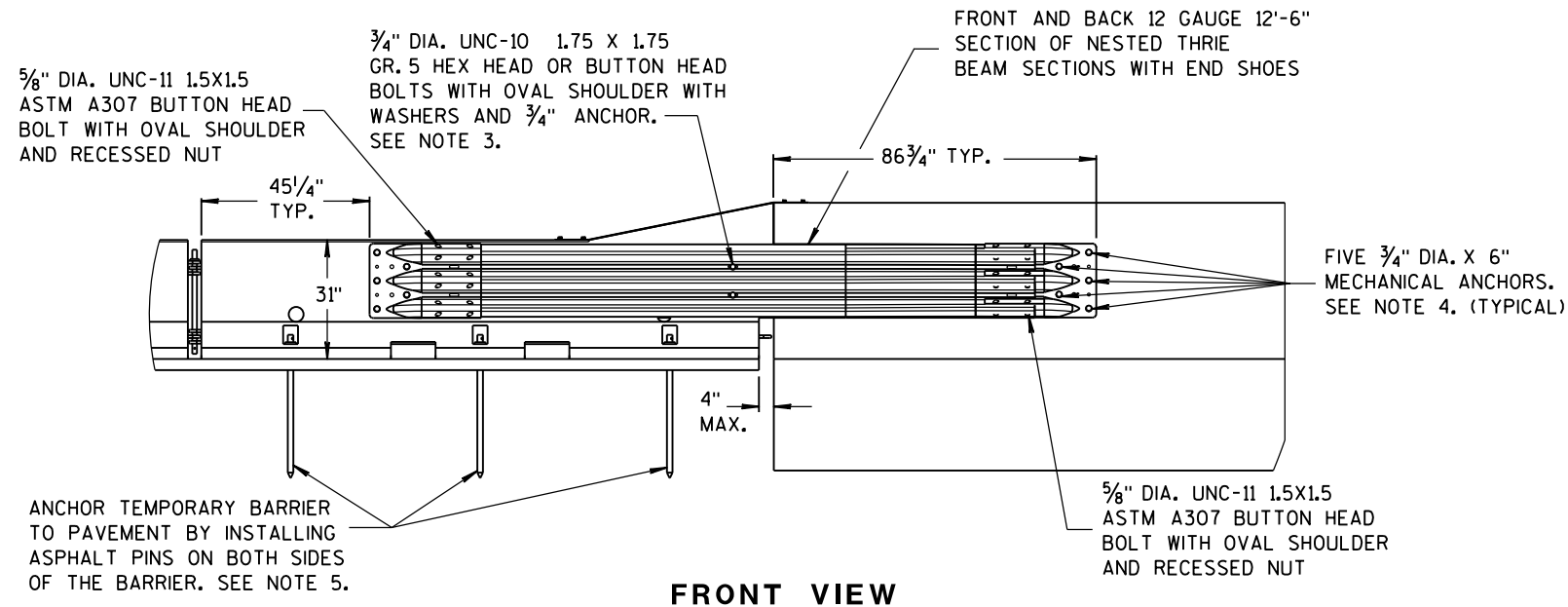
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.
- ANCHORING IS INCIDENTAL TO CONCRETE BARRIER 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 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

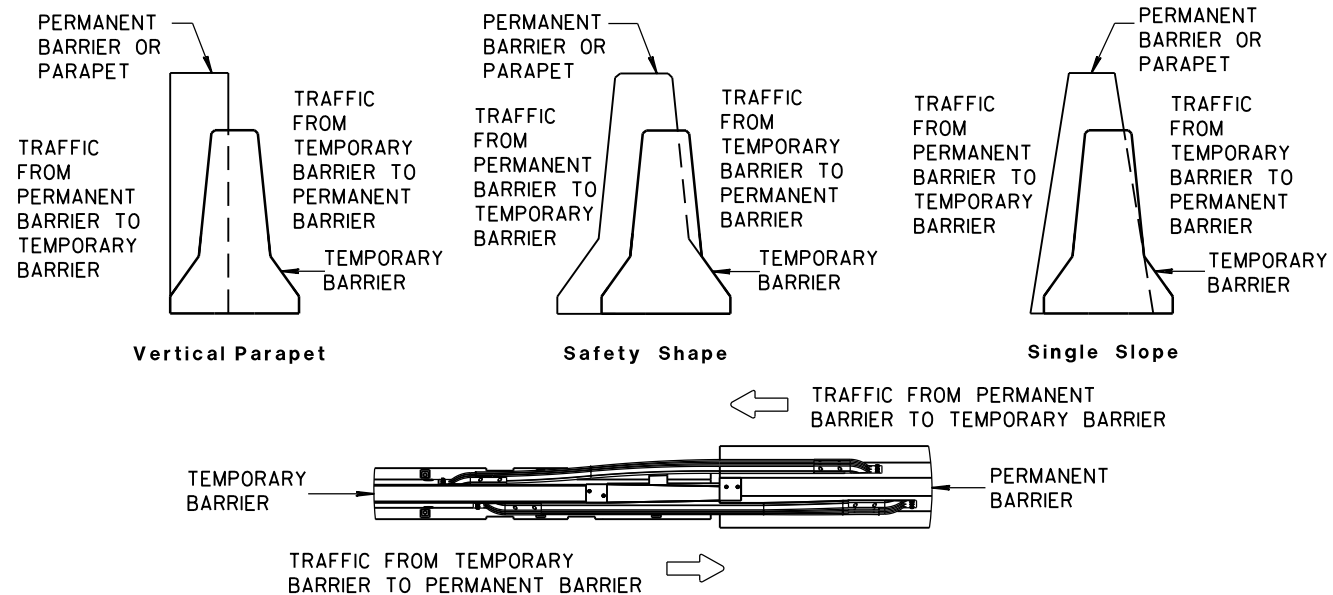
UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.
- 1/8" DIAMETER A307 THREADED ROD, 1/2" x 3" x 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.
- ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5/4" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



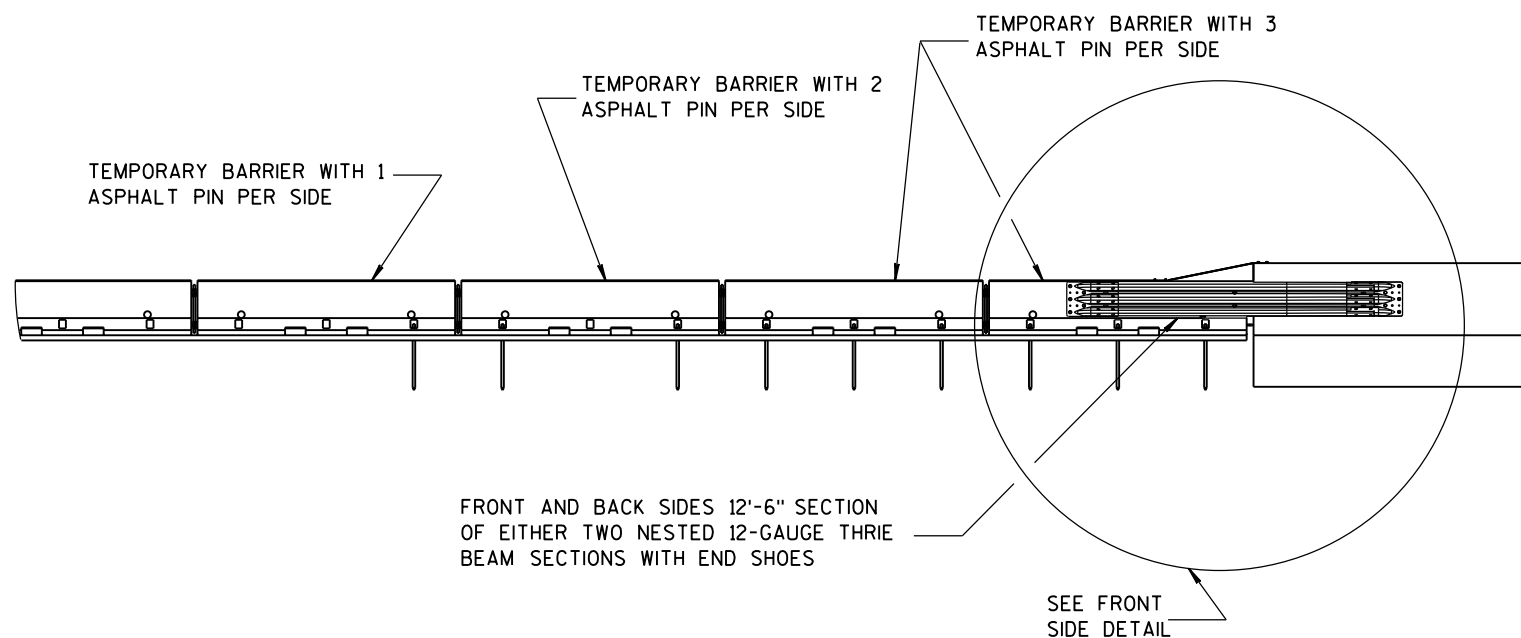
FRONT VIEW



TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

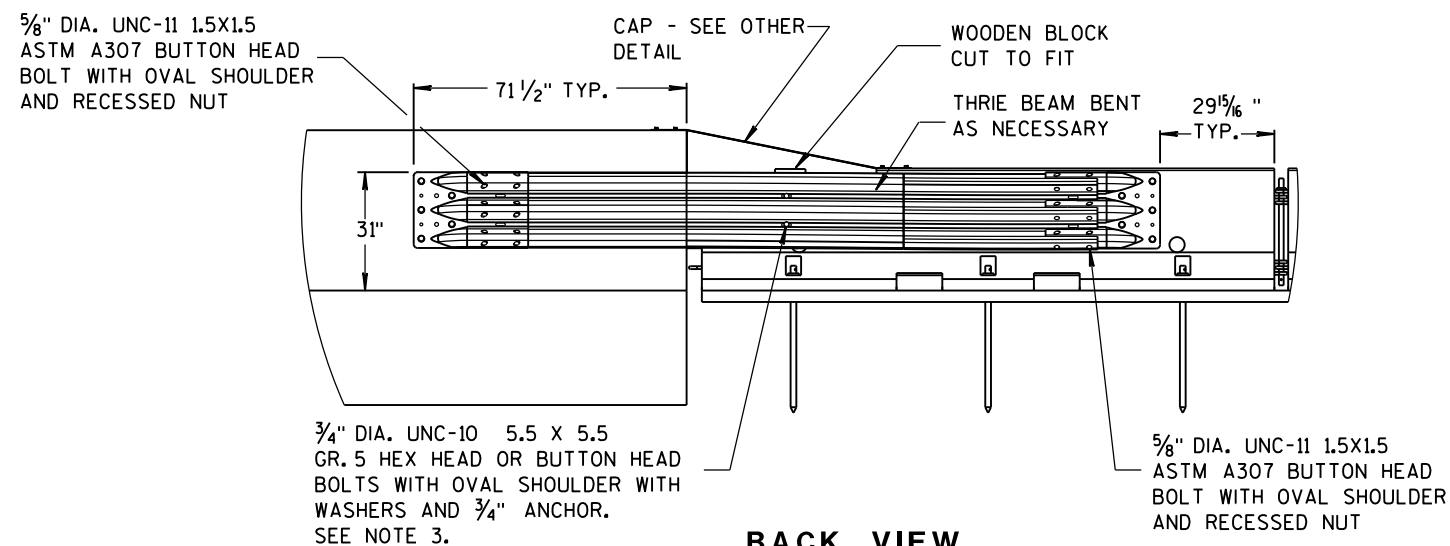
NOTES

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

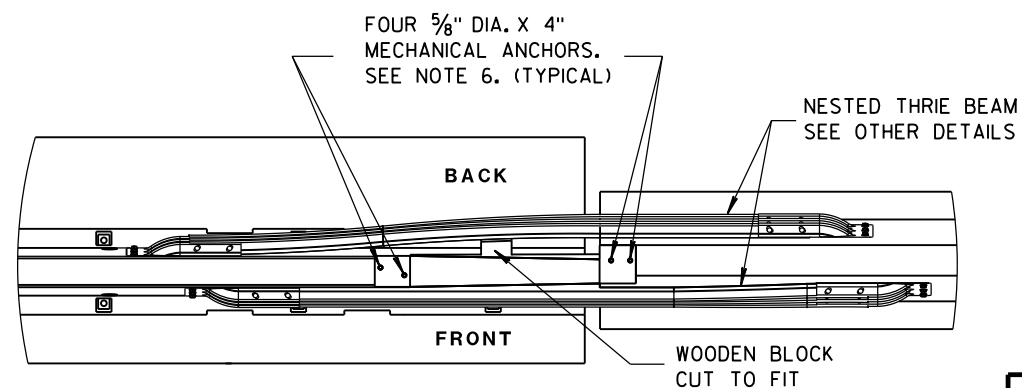


FRONT VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



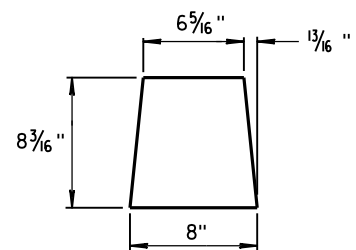
BACK VIEW



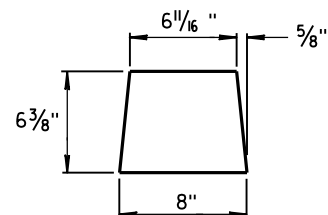
PLAN VIEW

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

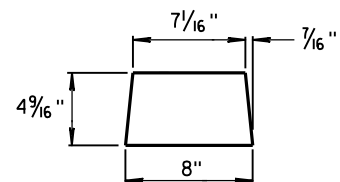
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



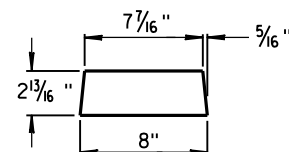
GUSSET 1



GUSSET 2

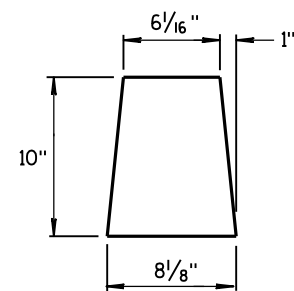


GUSSET 3

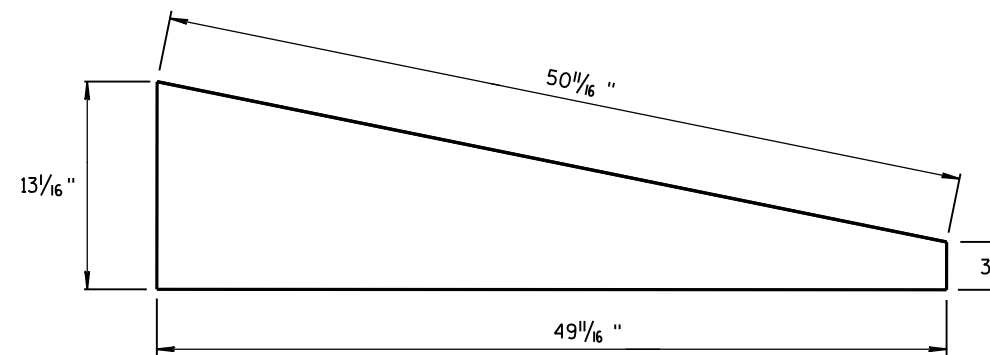


GUSSET 4

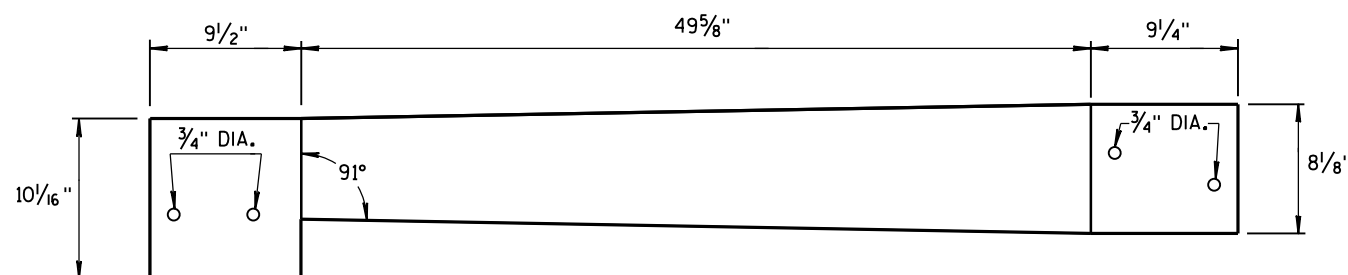
GUSSETS



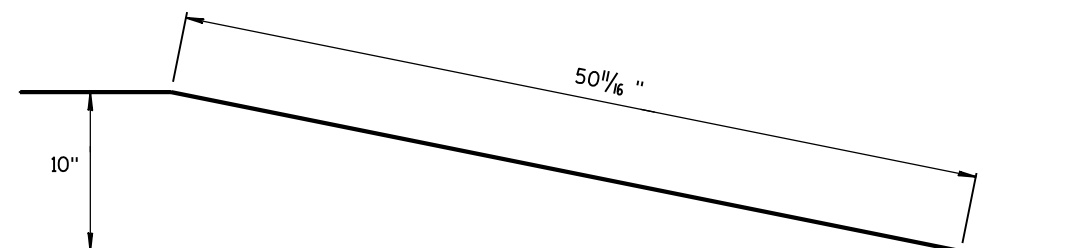
END PLATE



SIDE PLATE

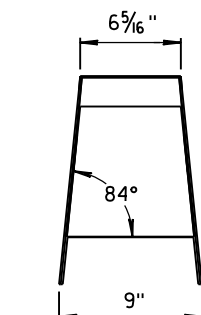
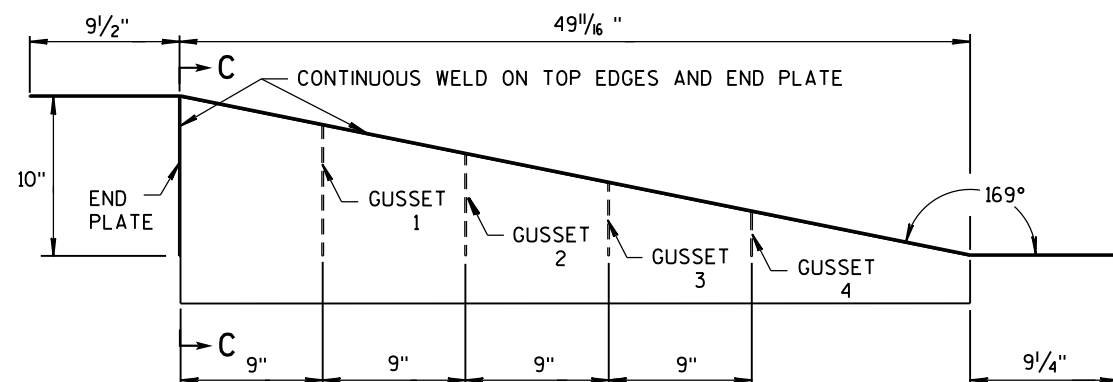
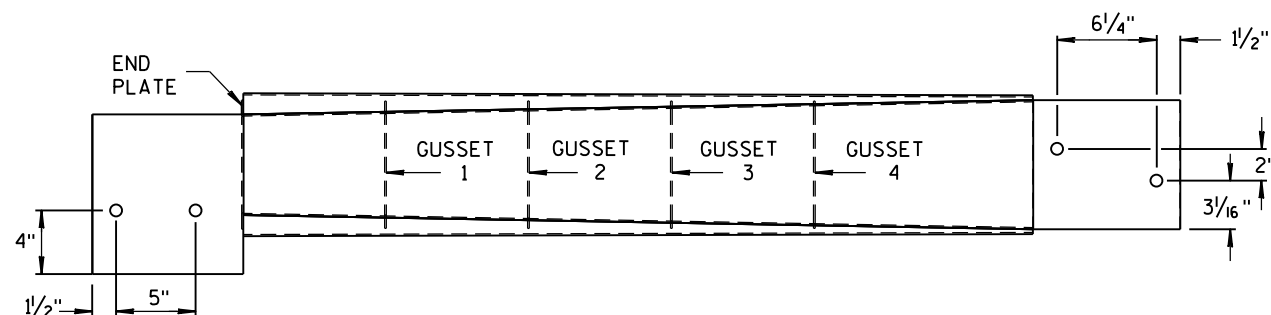


TOP PLATE



**SIDE, TOP AND END PLATES FOR CAP
FROM TEMPORARY CONCRETE BARRIER
TO 42" PERMANENT CONCRETE BARRIER**

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.



SECTION C-C

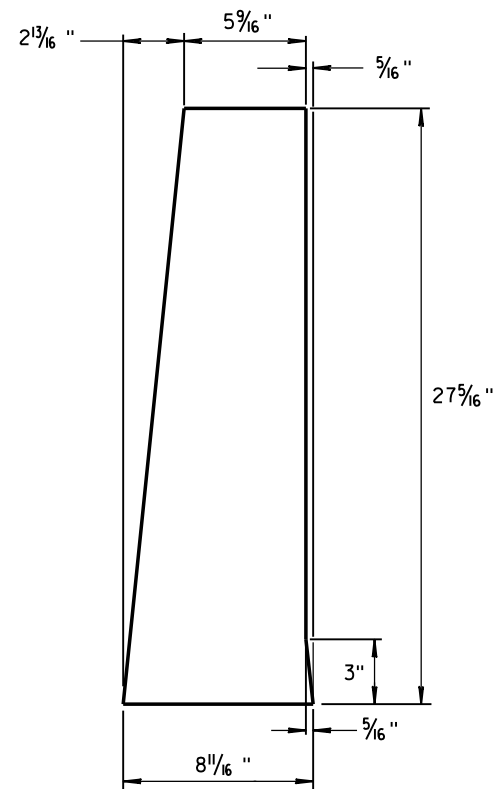
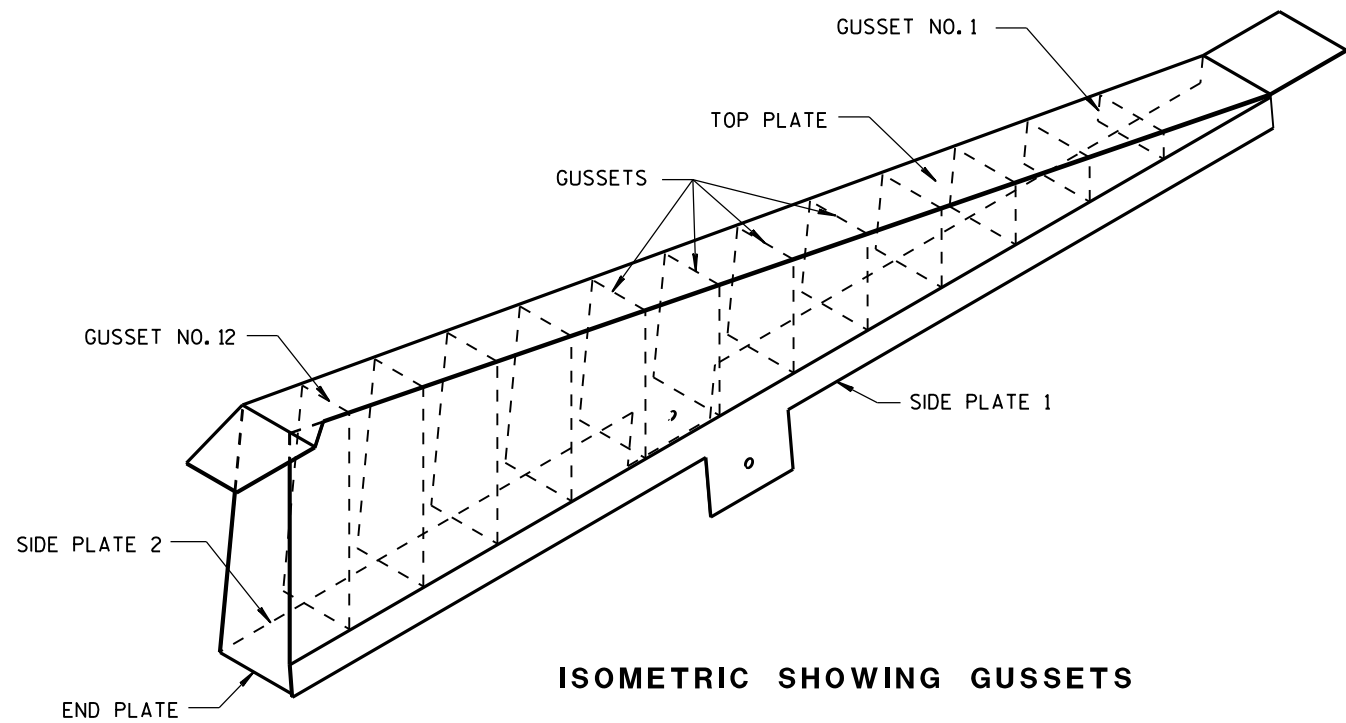
NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

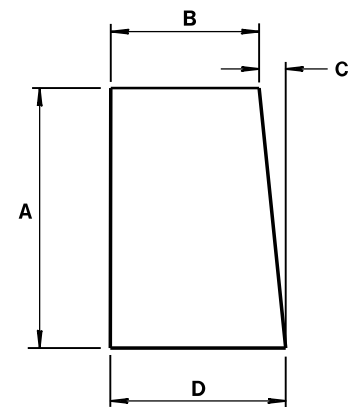
**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



END PLATE
1/8" STEEL PLATE

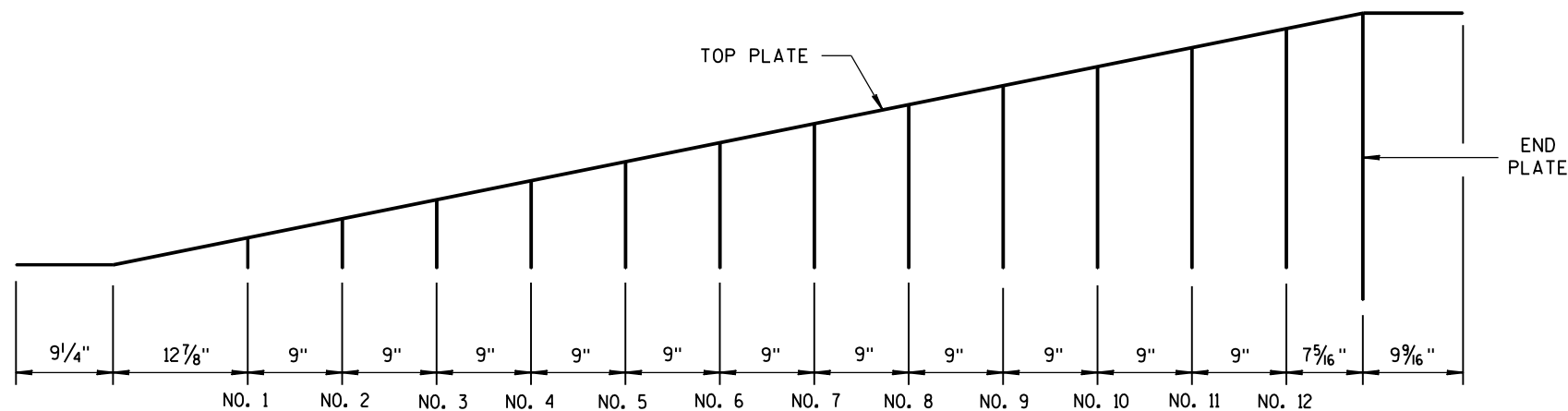


GUSSETS 1 - 12
ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 1/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	1 1/16 "	8 1/16 "
4	8 5/16"	7 3/16"	7/8"	8 1/16"
5	10 1/8"	7"	1 1/16 "	8 1/16"
6	11 5/16 "	6 13/16 "	1 1/4"	8 1/16"
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16"
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16"
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16"
10	19 3/16"	6 1/16"	1 15/16 "	8 1/16"
11	21"	5 7/8"	2 3/16 "	8 1/16"
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16"

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

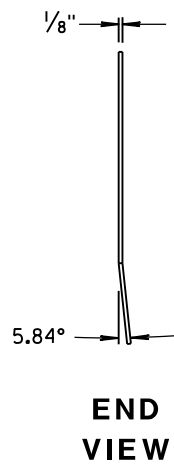
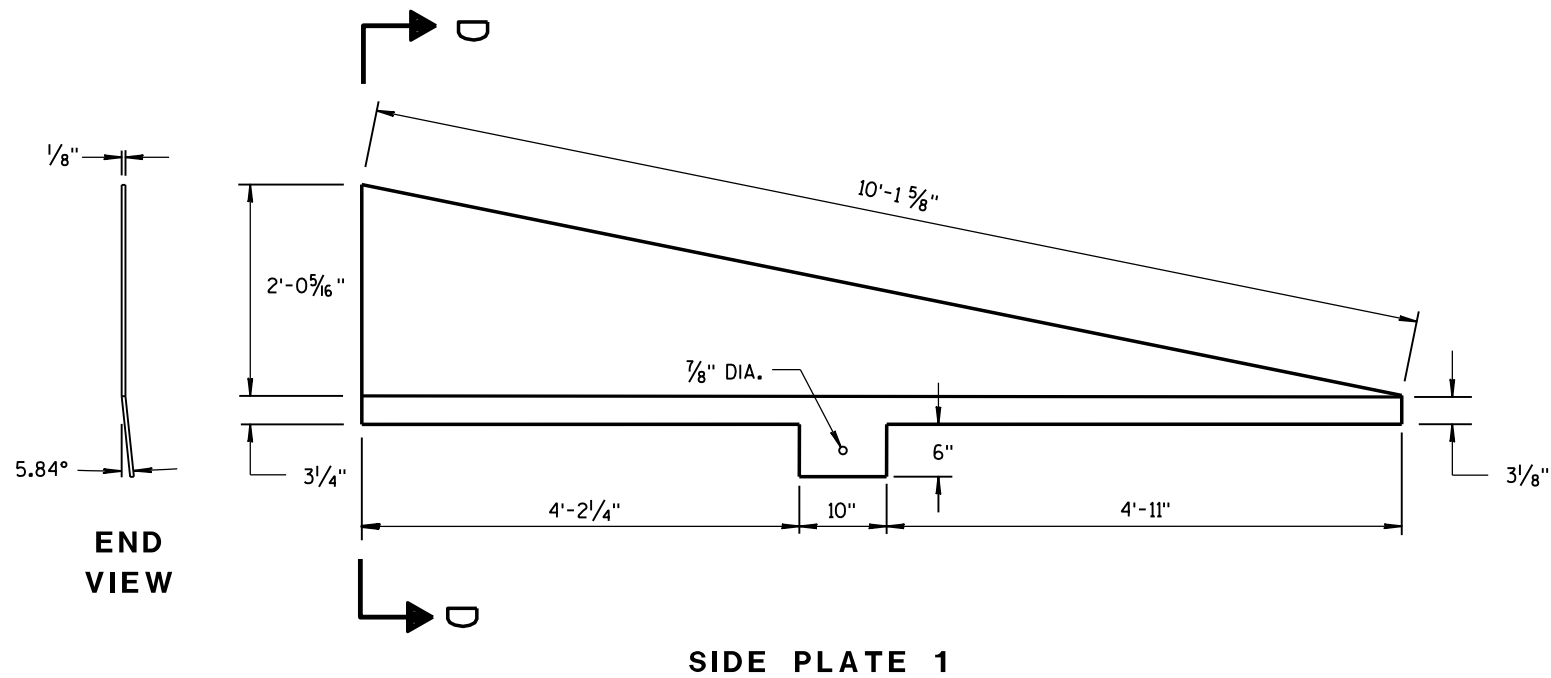
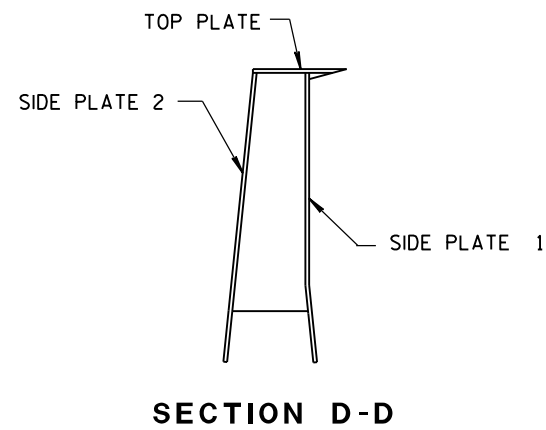
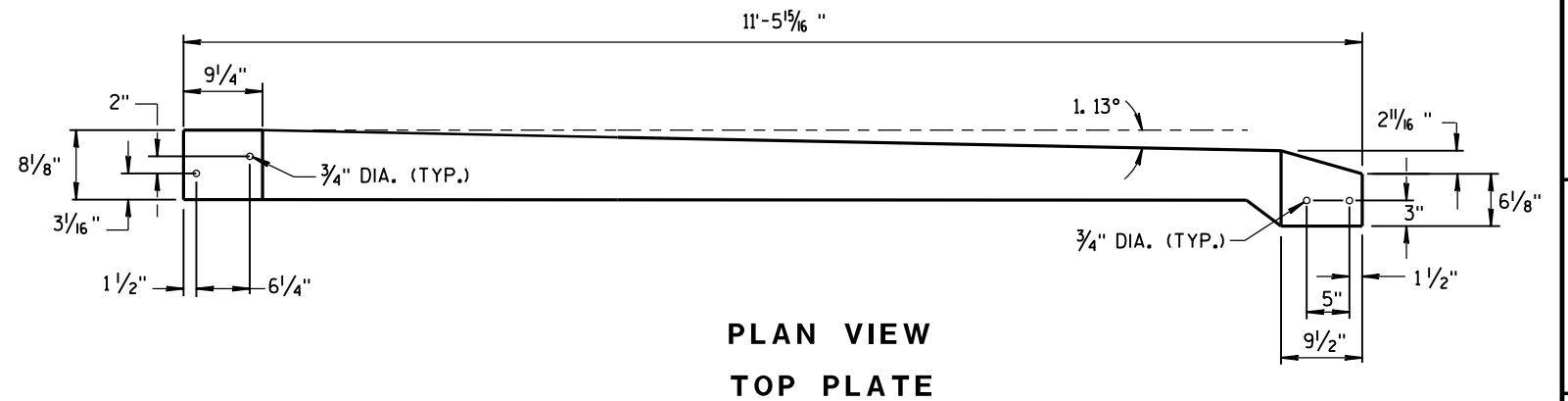
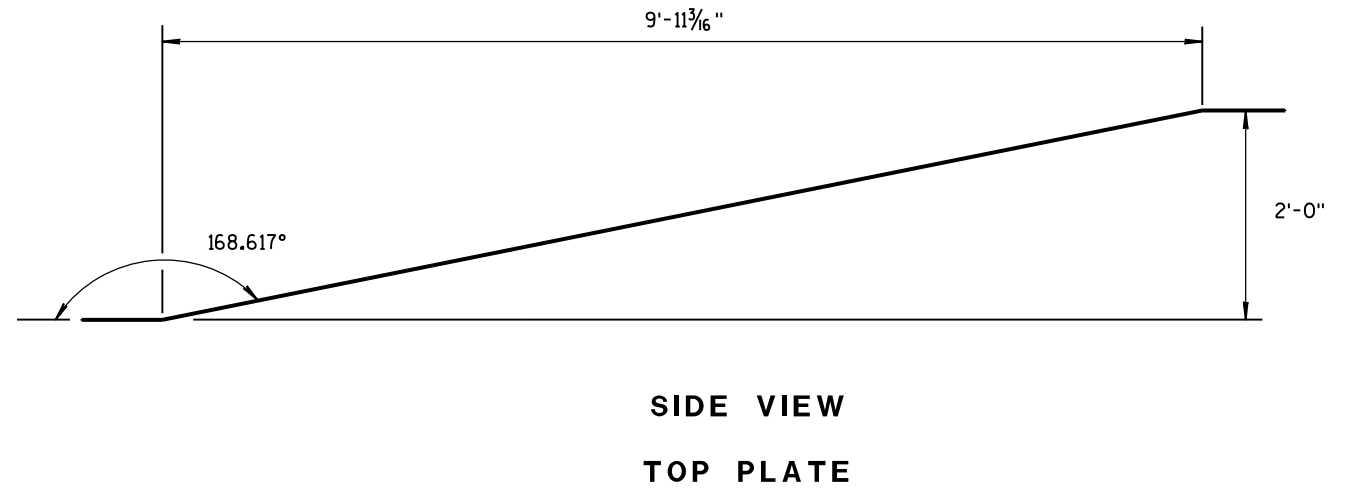
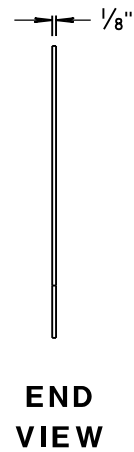
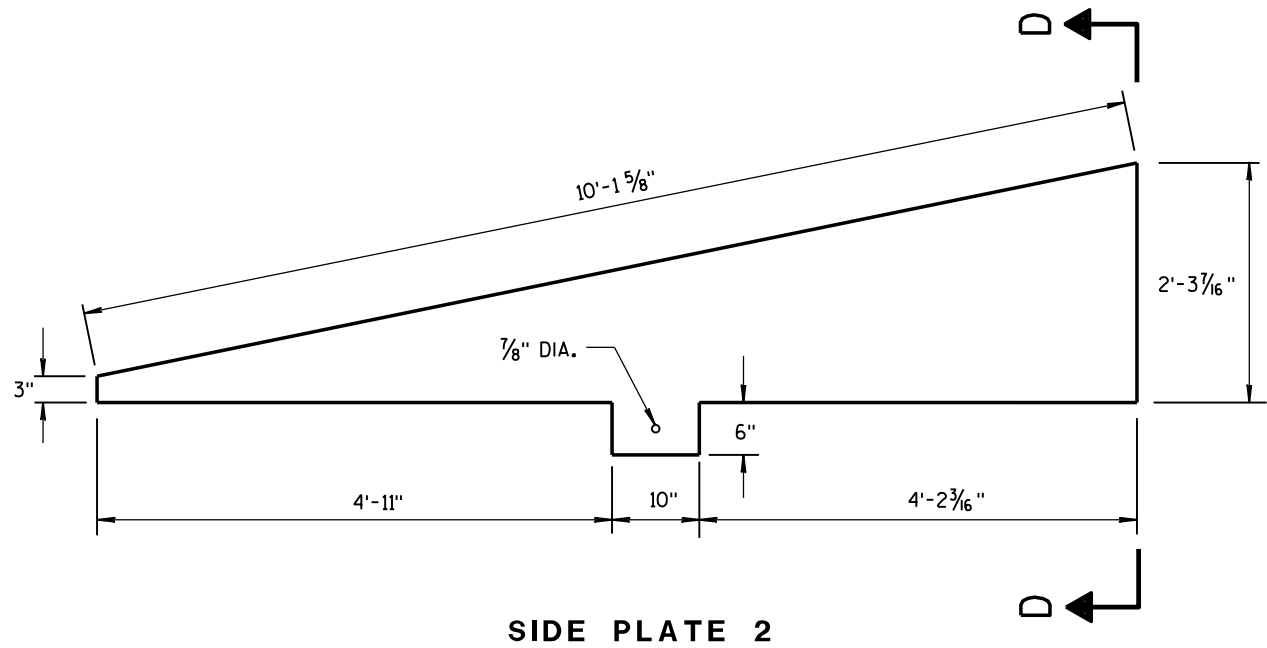
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

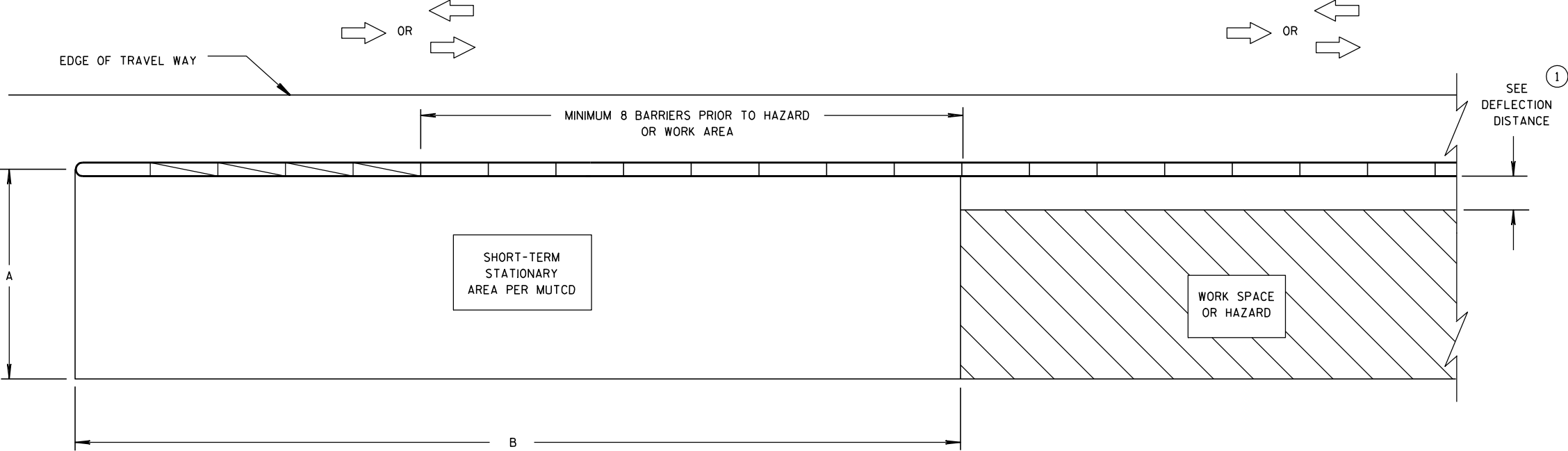
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

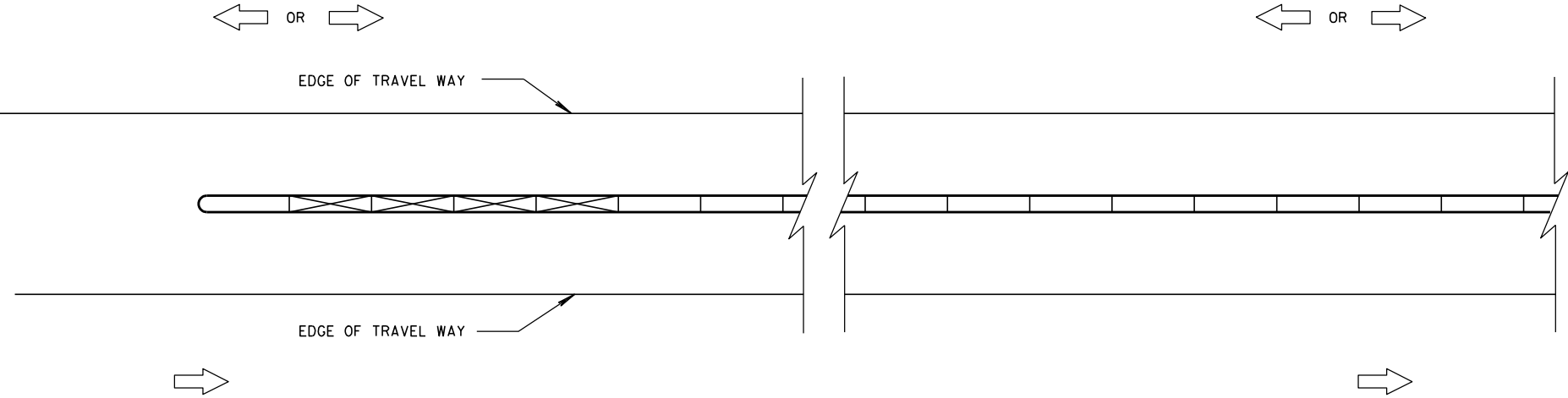


CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2014 DATE	/S/ Jerry H. Zogg ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA	



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON BOTH SIDES OF 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.

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

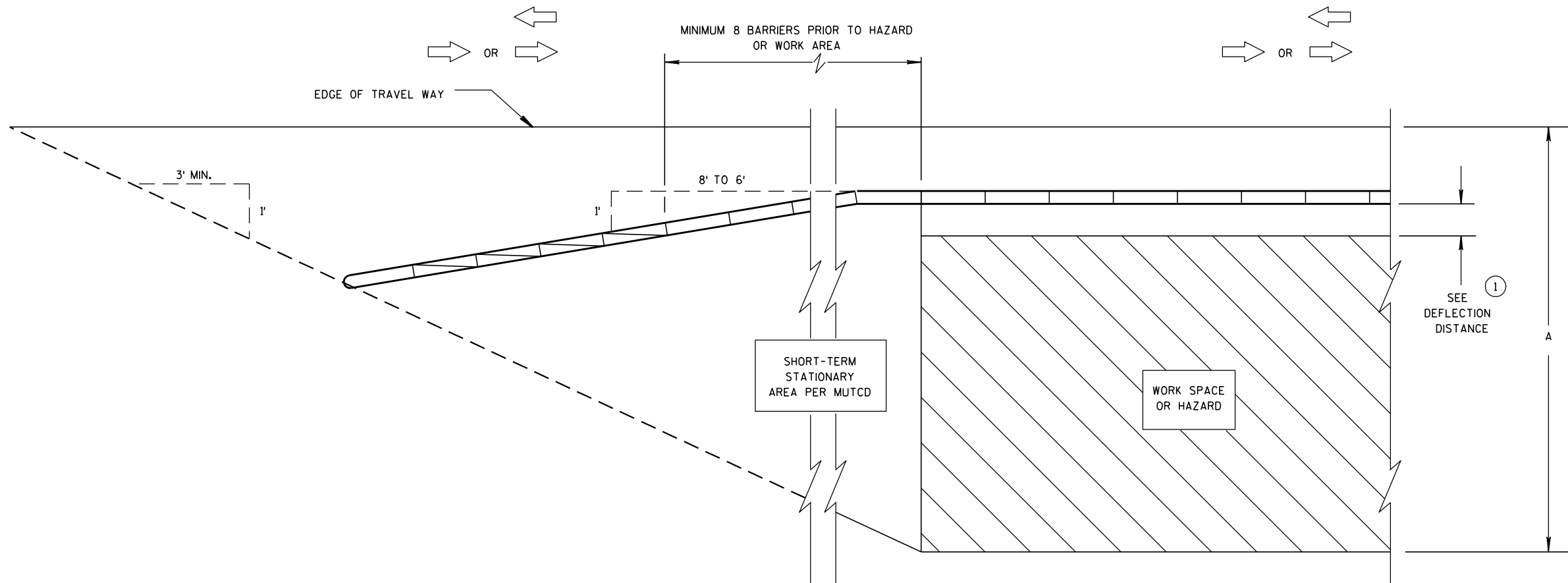
POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

LEGEND

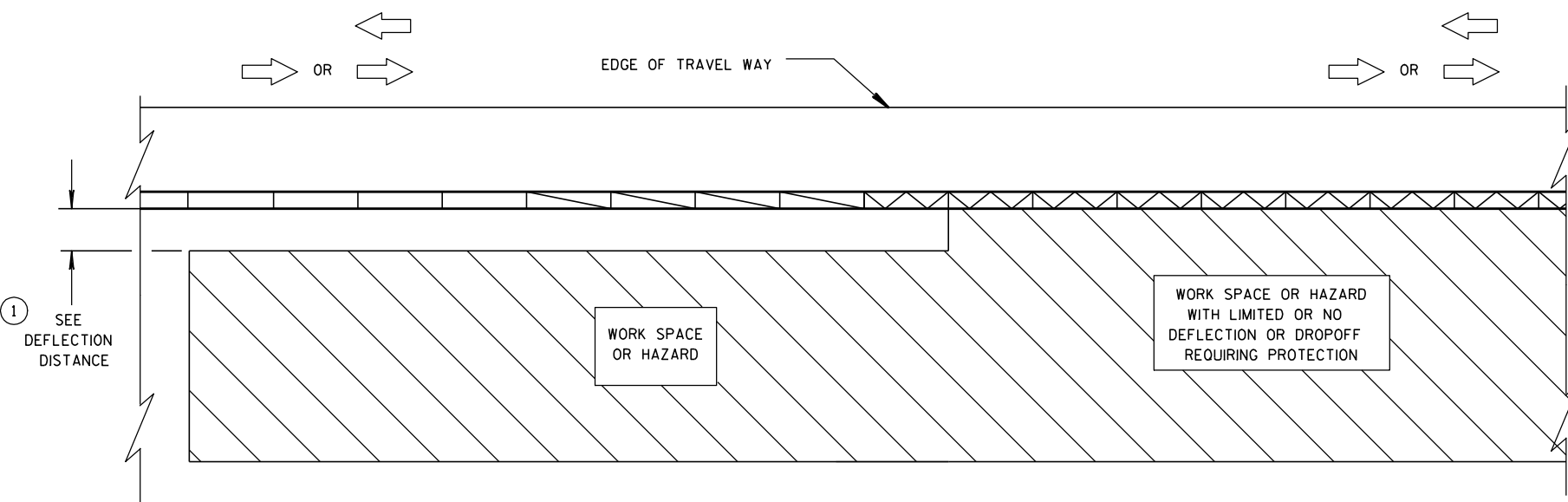
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**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**

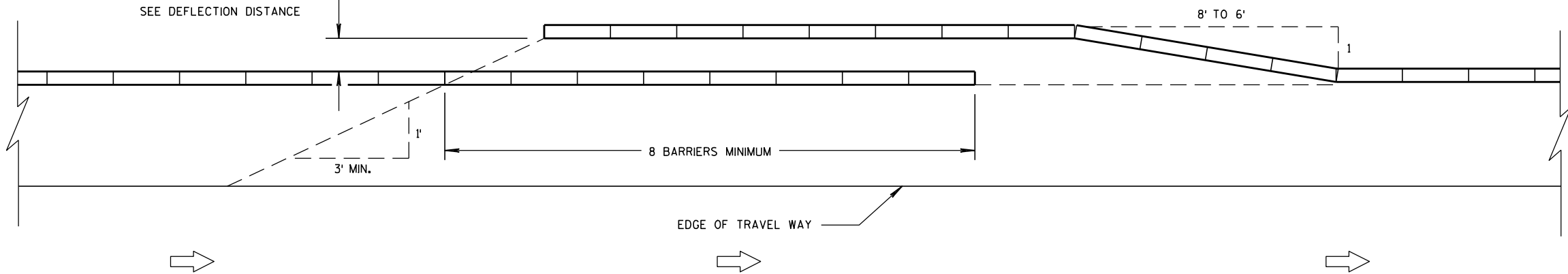
LEGEND

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**

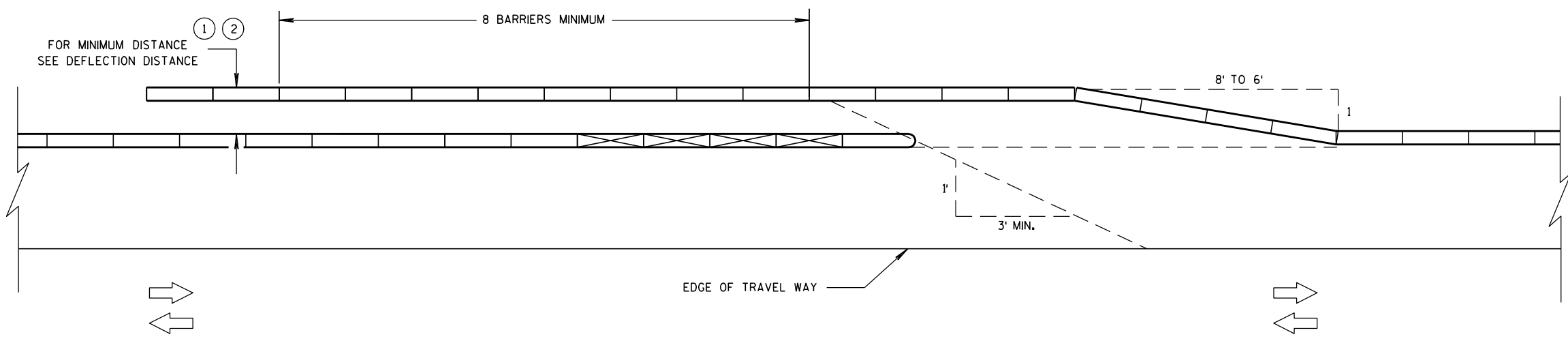
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

FOR MINIMUM DISTANCE
SEE DEFLECTION DISTANCE

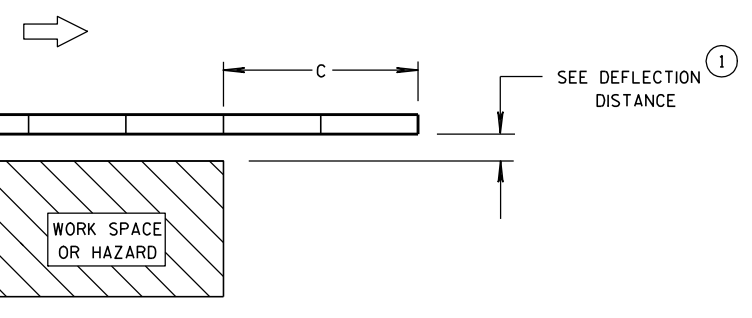


TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC

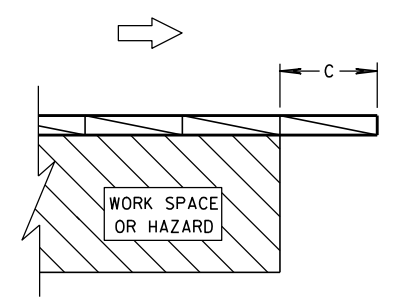
FOR MINIMUM DISTANCE
SEE DEFLECTION DISTANCE



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



**ENDING TEMPORARY BARRIER
DOWNSTREAM - UNANCHORED**



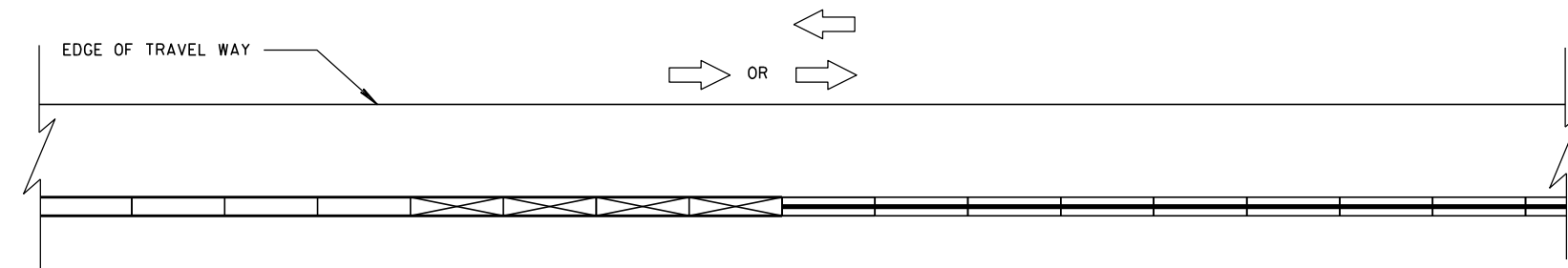
**ENDING TEMPORARY BARRIER
DOWNSTREAM - ANCHORED**

LEGEND

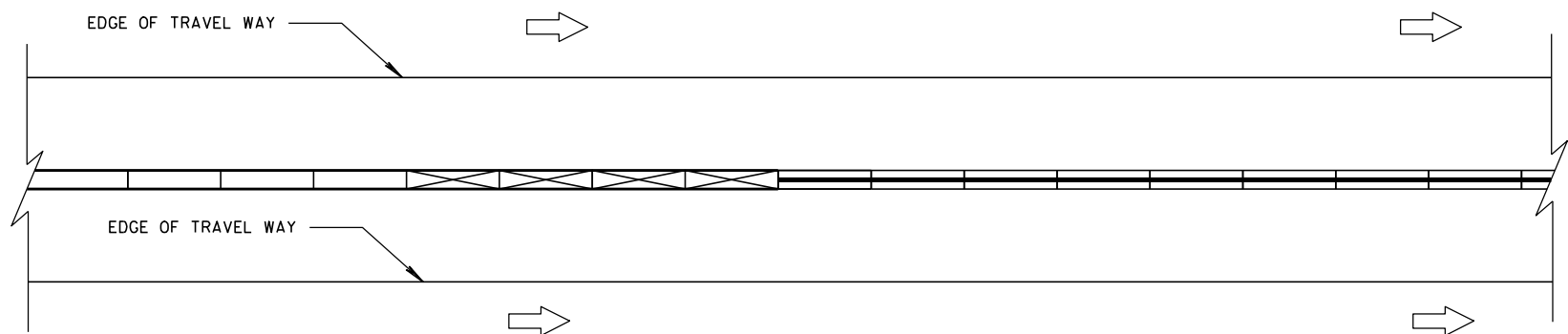
- DIRECTION OF TRAVEL →
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



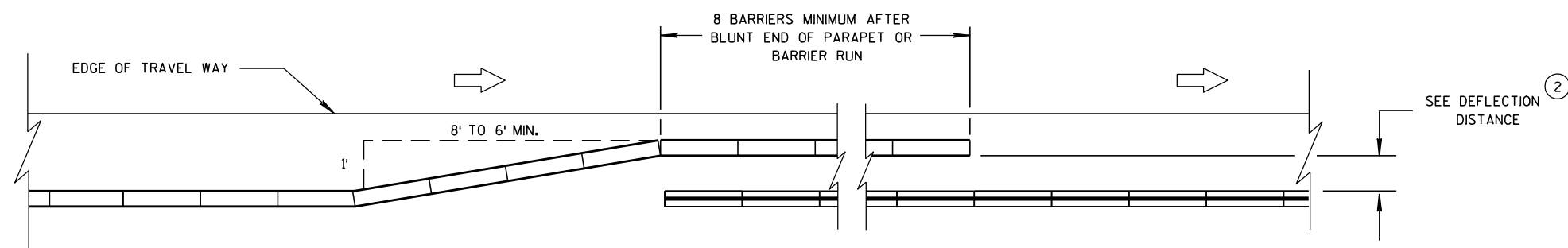
**CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE**



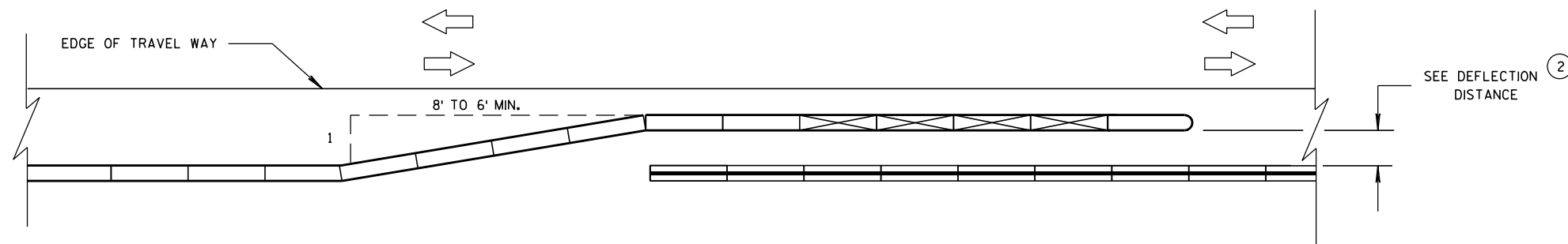
**CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES**

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	



**OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC**

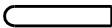
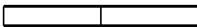


**OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC**

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

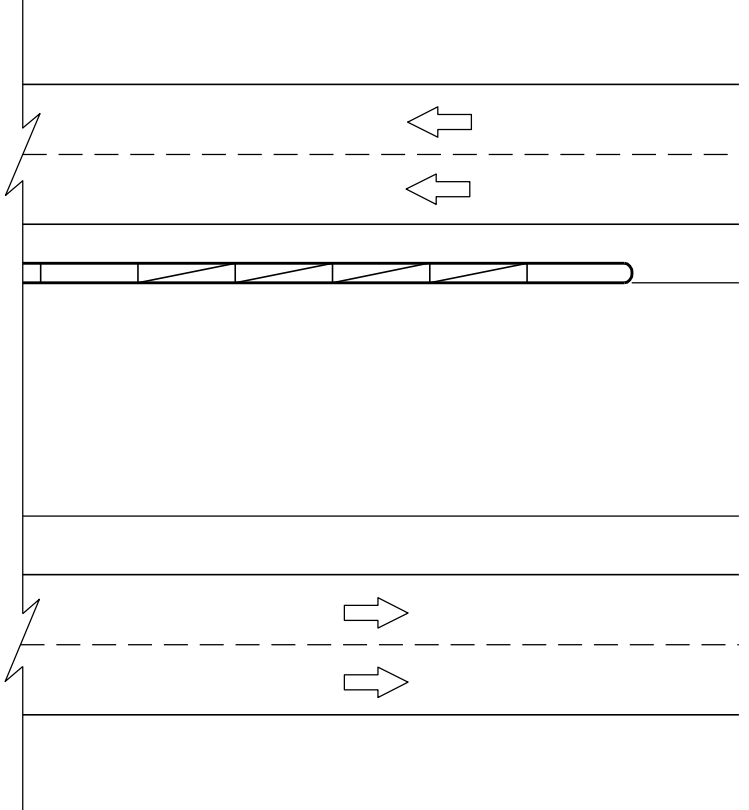
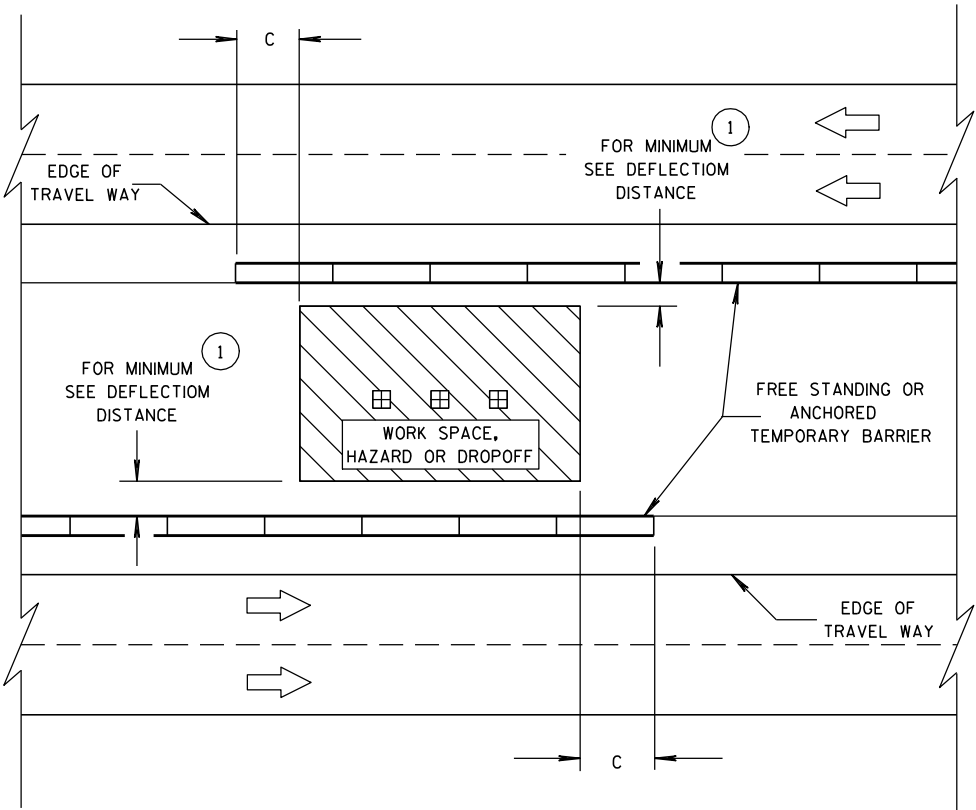
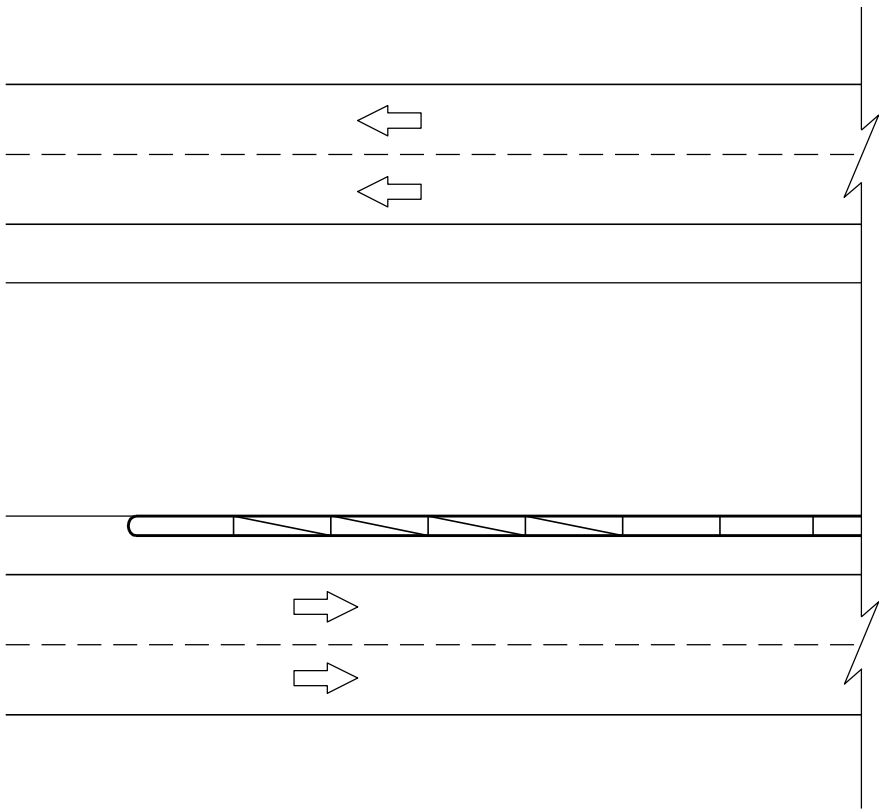
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

DIMENSION C TABLE

2

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100

6



6

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

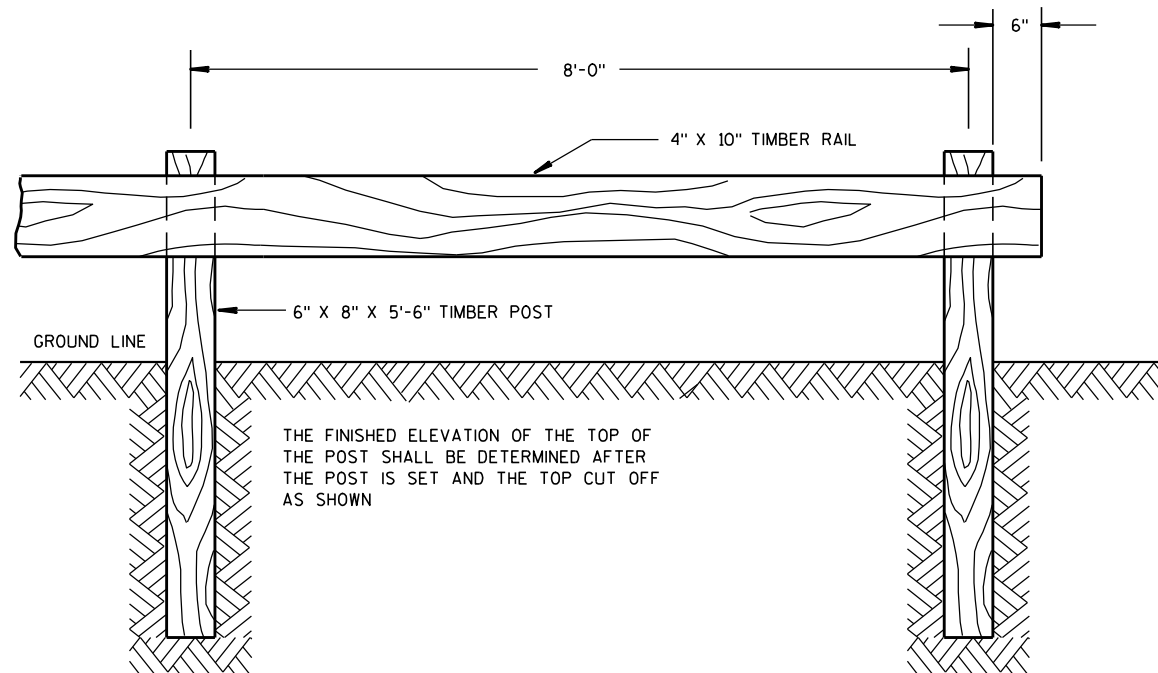
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
FHWA

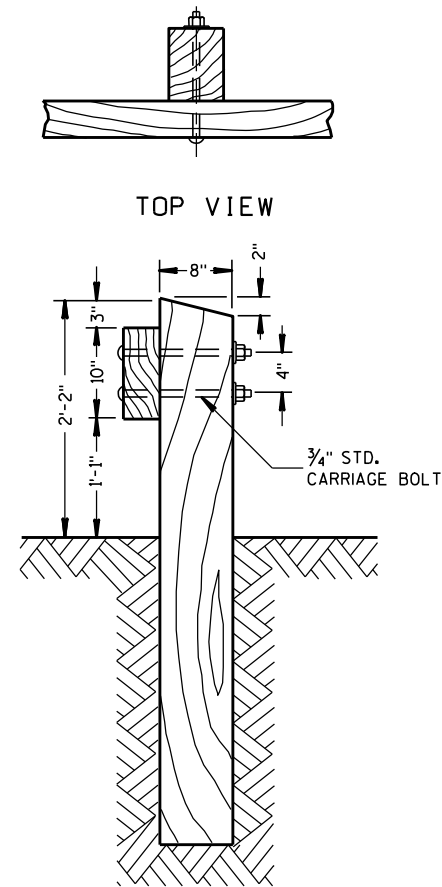
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

S.D.D. 14 B 8-1e

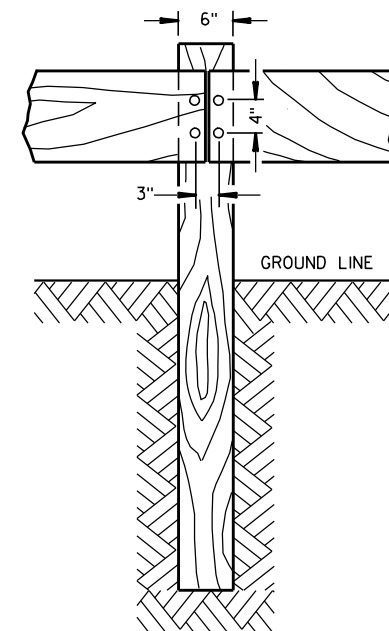
S.D.D. 14 B 8-1e



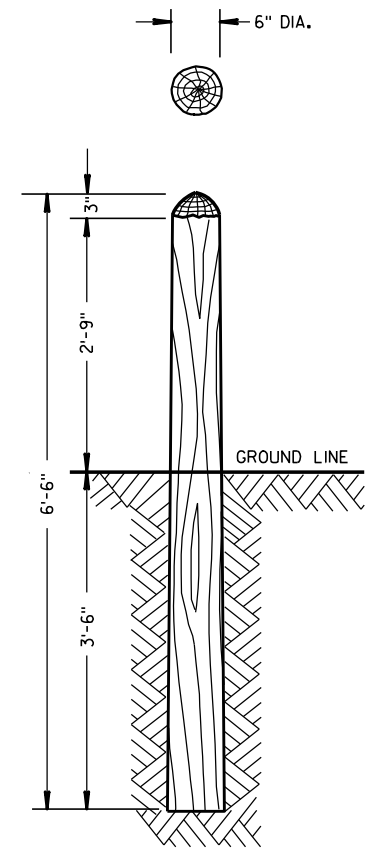
FRONT VIEW



SIDE VIEW

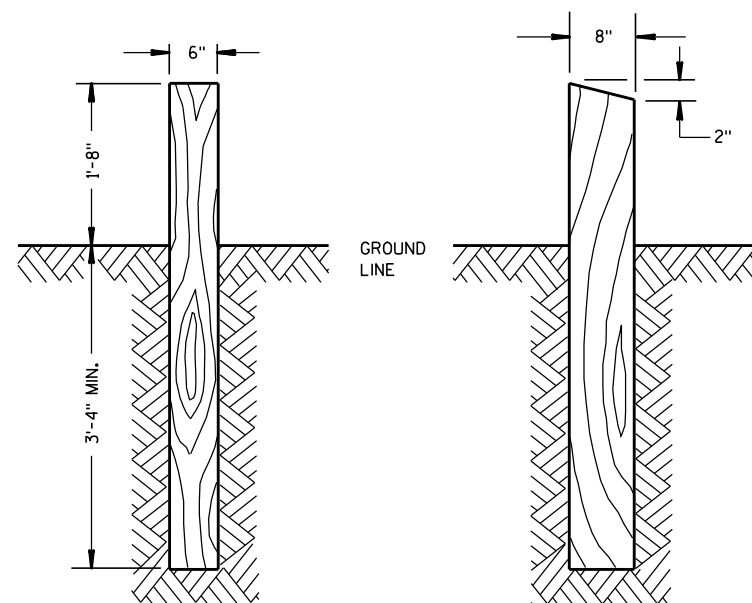


SPLICE POST



RUSTIC MARKER POST

TIMBER RAIL GUARD FENCE (PARKING LOT PROTECTION)

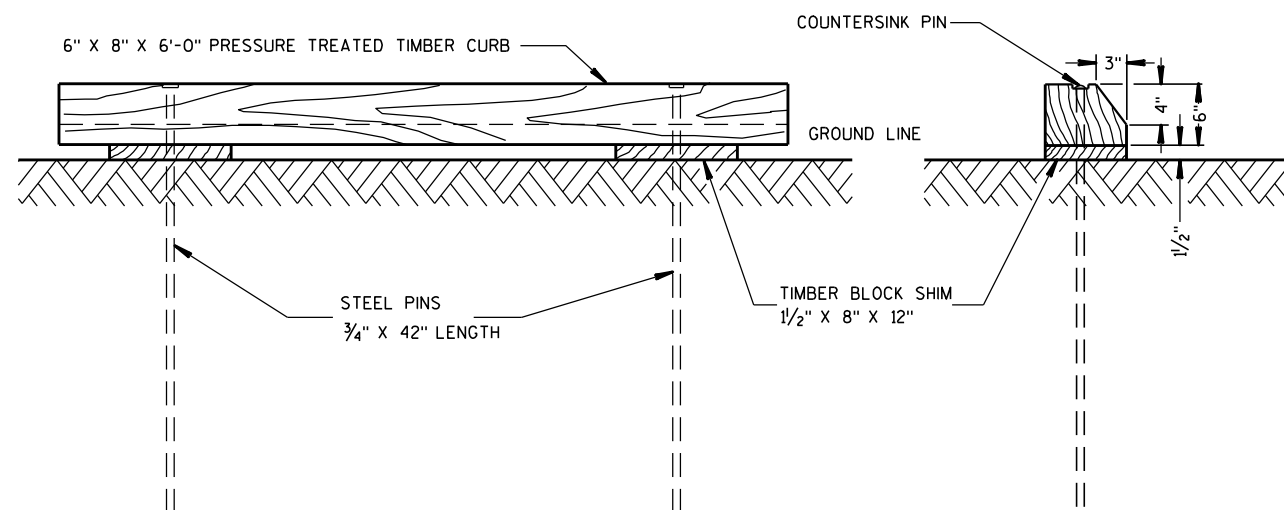


FRONT VIEW

SIDE VIEW

TIMBER GUARD POST

(REQUIREMENTS SHALL BE THE SAME AS POSTS FOR TIMBER RAIL GUARD FENCE)



FRONT VIEW

END VIEW

TREATED TIMBER CURB

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS. ALL POST AND RAIL DIMENSIONS ARE NOMINAL DIMENSIONS.

TIMBER POSTS, RAILS AND MARKER POSTS

THE GALVANIZING OR CADMIUM PLATING OF HARDWARE WILL NOT BE REQUIRED.

POSTS WHEN UNTREATED SHALL BE PAINTED WITH TWO COATS OF BROWN WOOD STAIN CONFORMING TO THE REQUIREMENTS OF THE APPLICABLE STANDARD SPECIFICATIONS. TOPS OF POSTS, IF TREATED, SHALL BE PAINTED WITH TWO COATS OF CREOSOTE AFTER ERECTION. IF UNTREATED POST ARE USED, PAINT TOPS WITH TWO COATS OF PRESERVATIVE WOOD STAIN AFTER ERECTION.

TIMBER RAIL GUARD FENCE, CURB AND GUARD POST AND MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

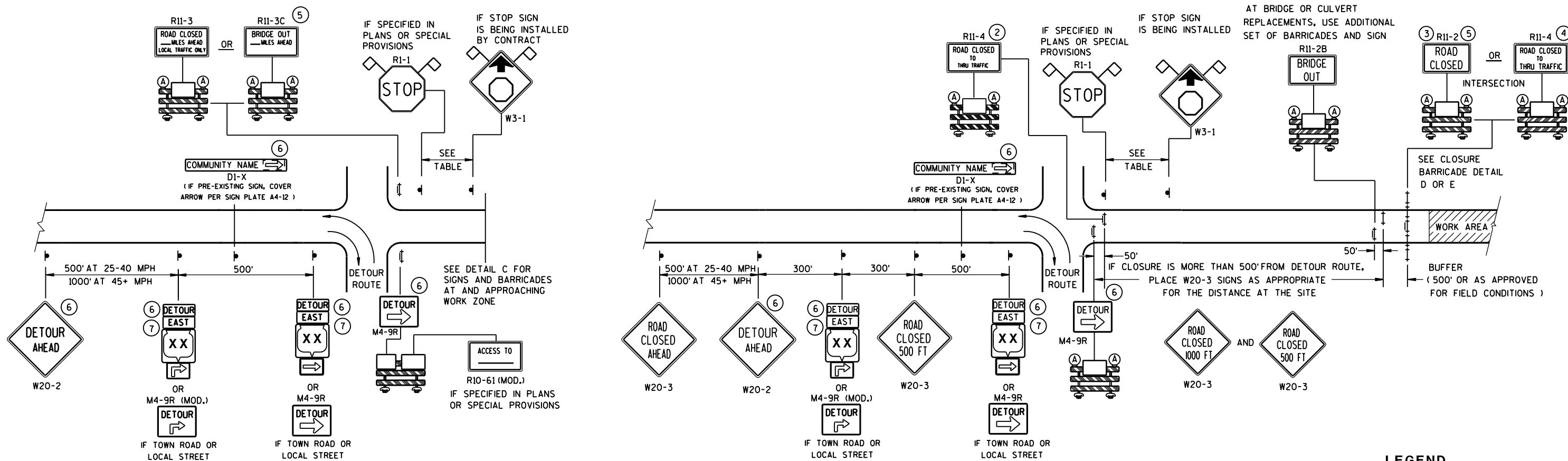
APPROVED

4/23/1974

DATE

FHWA

/S/ H. Fiedler
STATE HIGHWAY ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

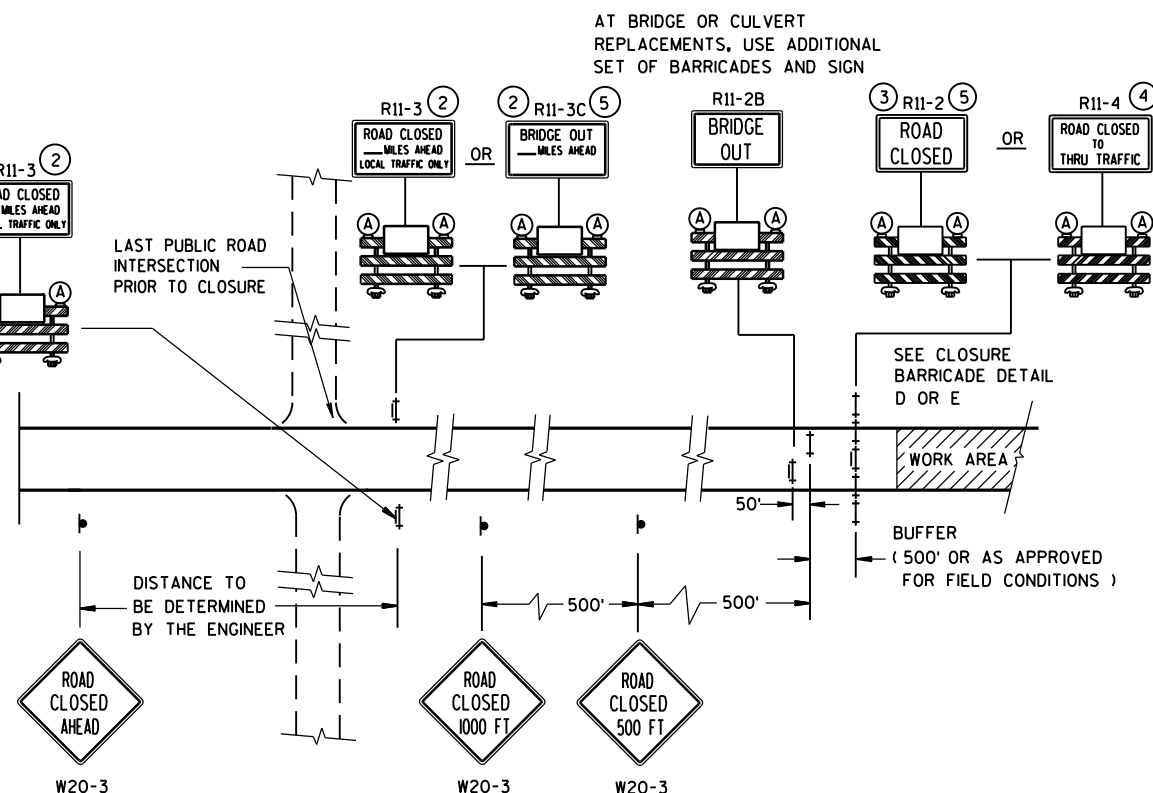
WORK AREA

DETOUR EAST
M4-8
M3-X
M1-4
M1-5A
M1-6

M05-1
M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750



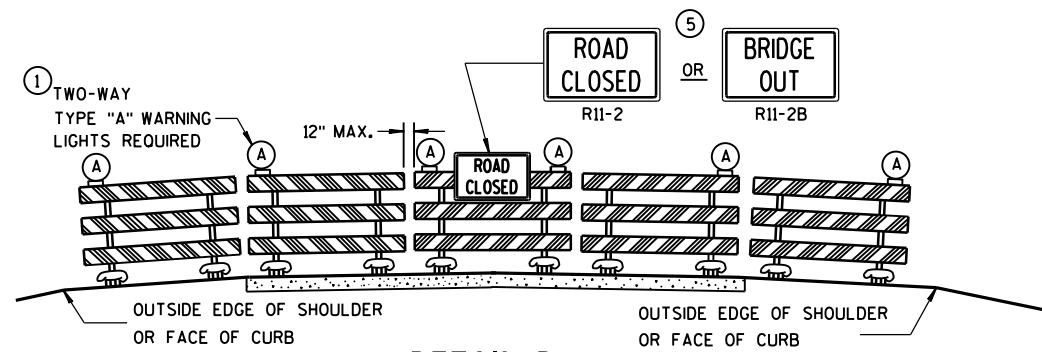
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

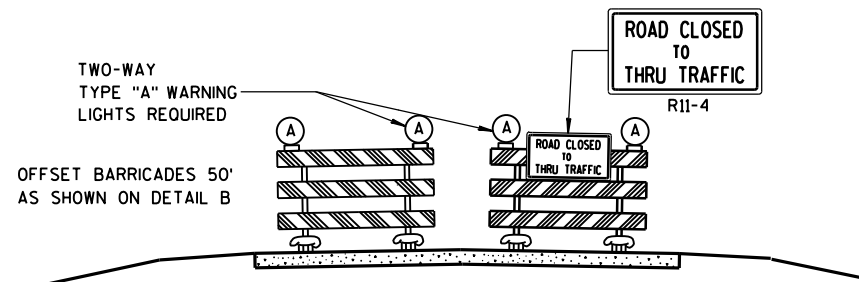
**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE /S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

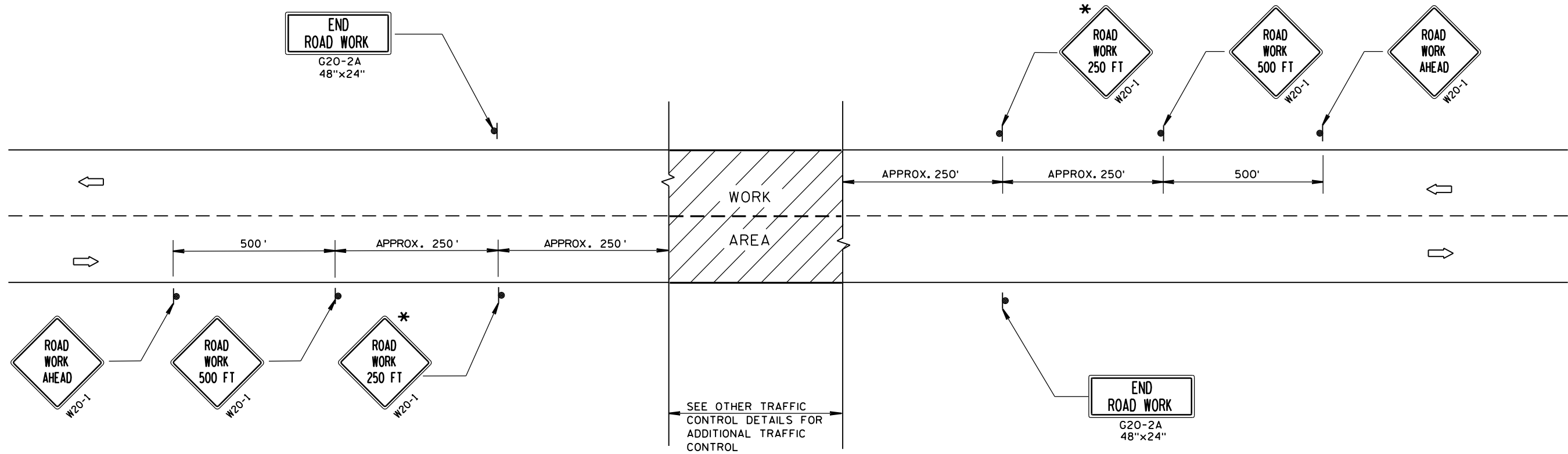
R1-1 SHALL BE 36" X 36".

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

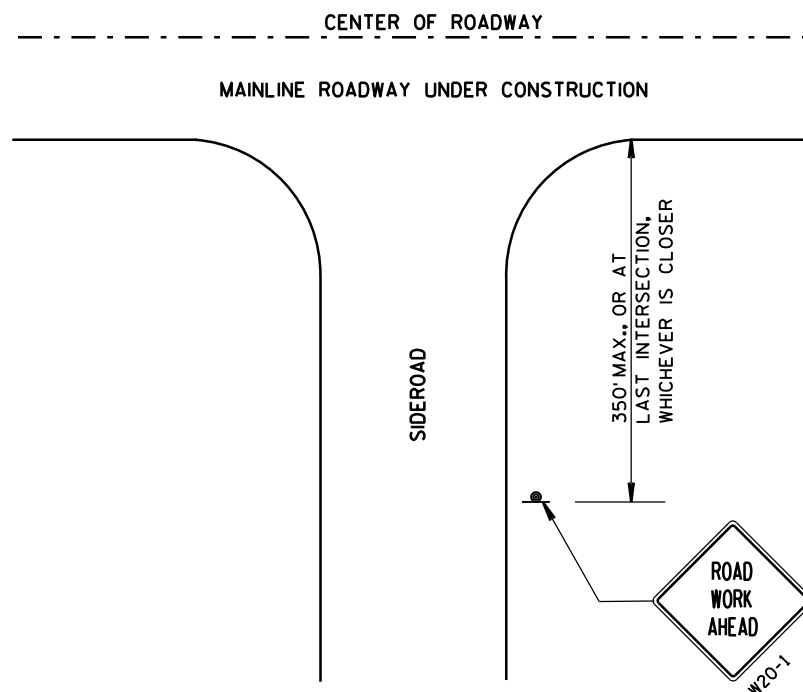
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

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



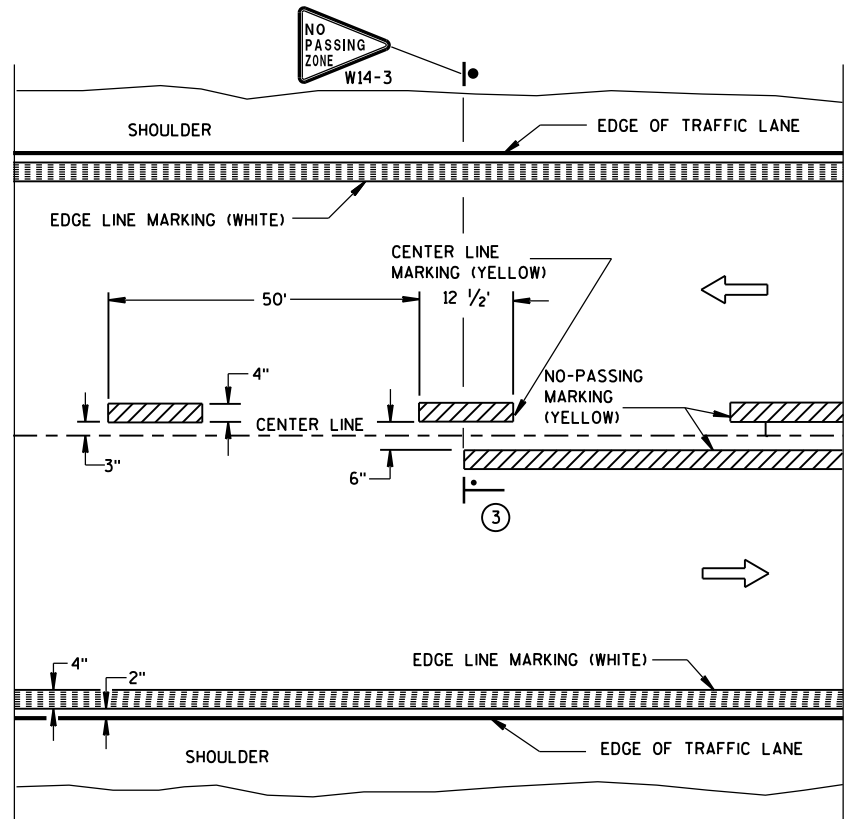
LEGEND

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

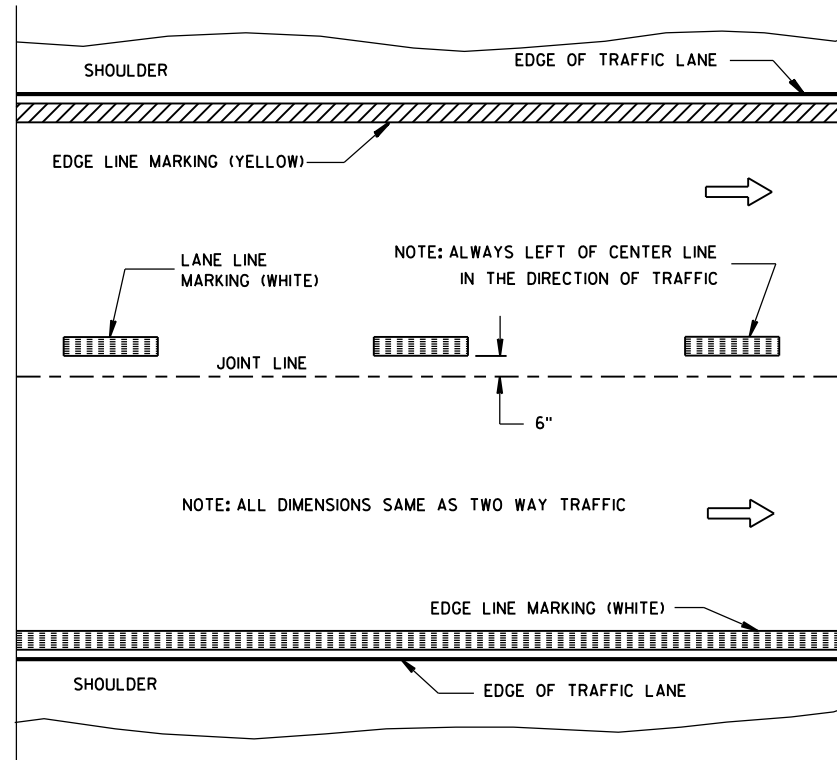
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

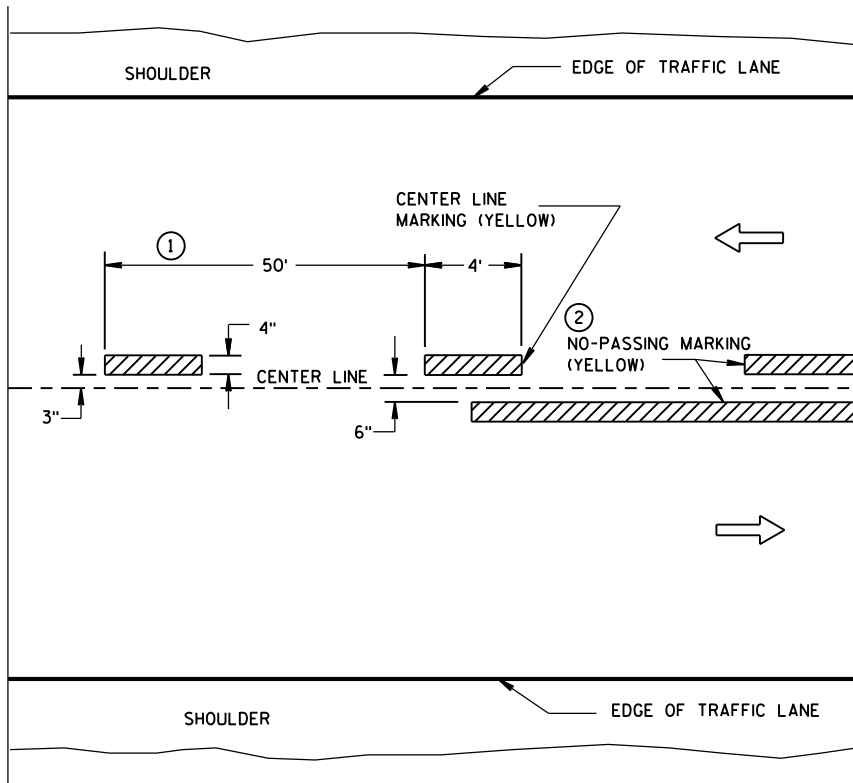


TWO WAY TRAFFIC

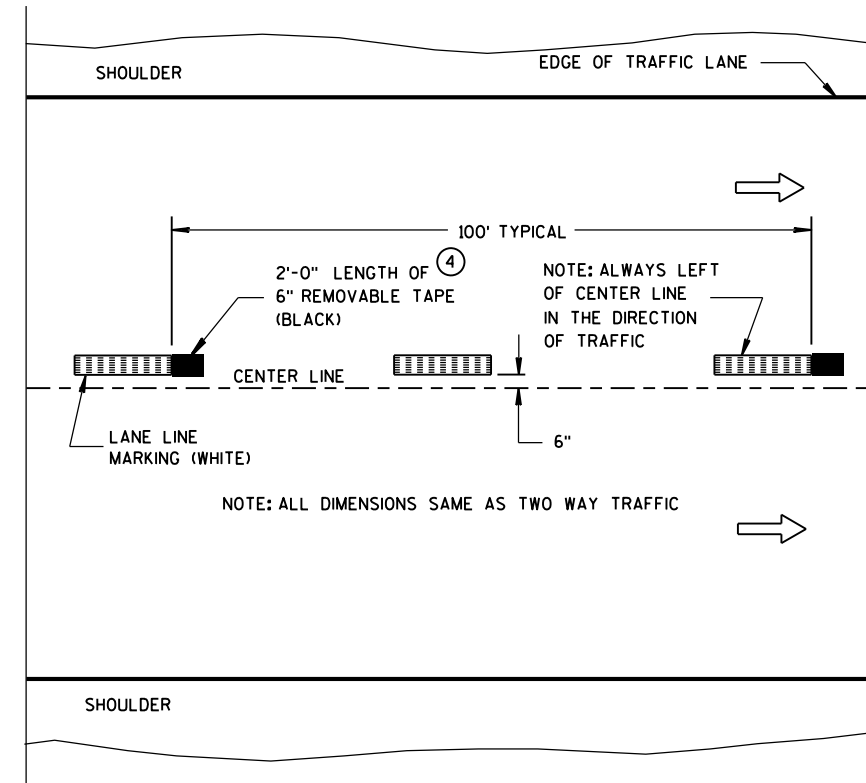


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

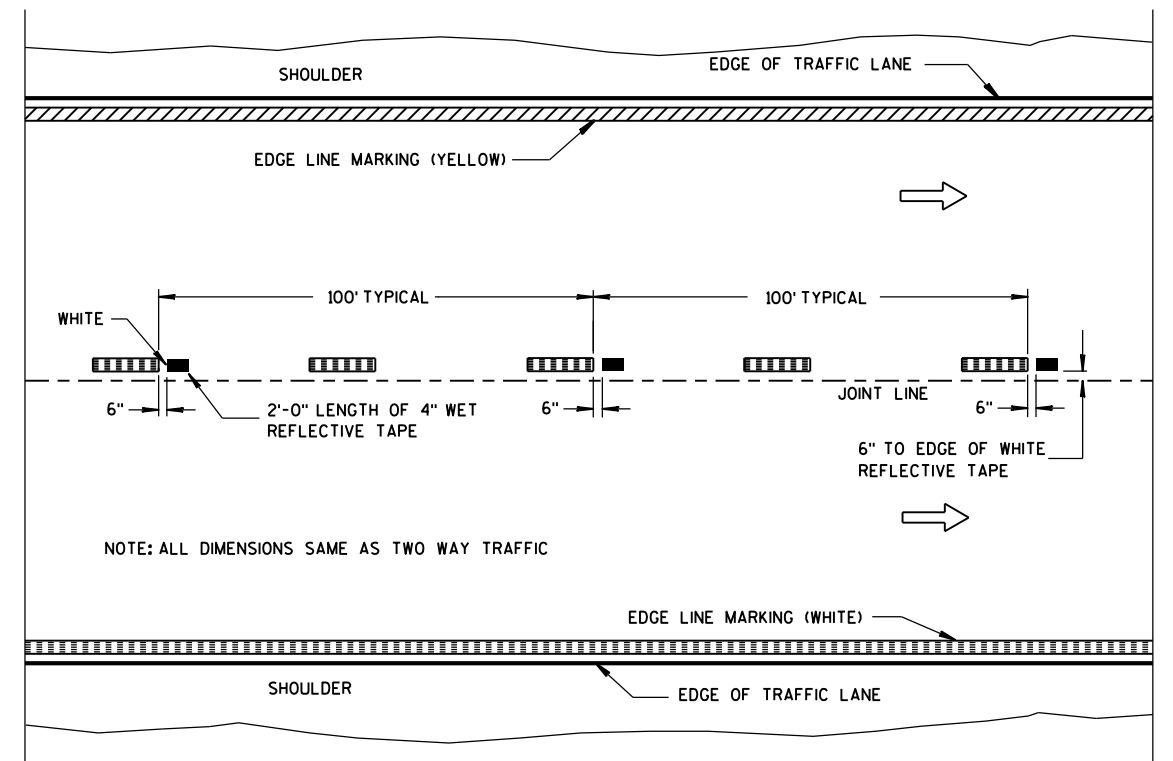
GENERAL NOTES

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

- 1 HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- 2 NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- 3 NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- 4 CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



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

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

LEGEND

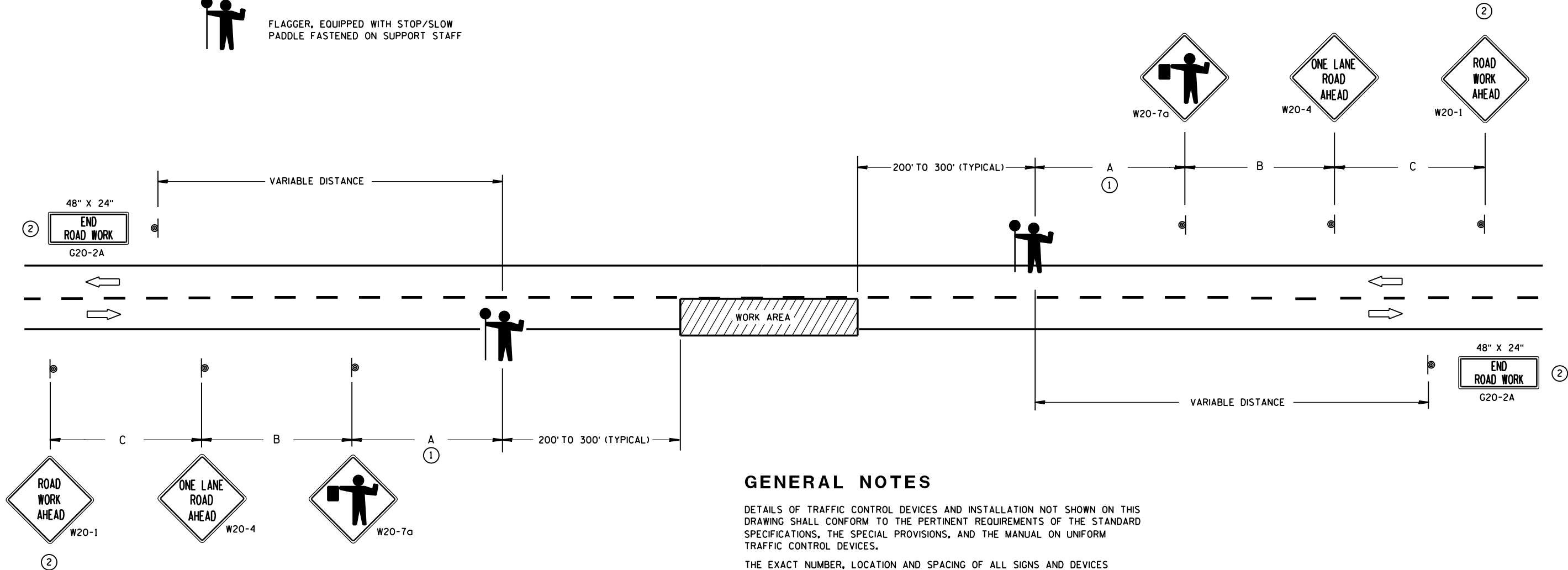
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

LEGEND

- SIGN ON PERMANENT SUPPORT
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH ATTACHED SIGN
- CONCRETE BARRIER TEMPORARY PRECAST
- FLAGS, 16" x 16" MIN., (ORANGE)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ASPHALTIC PAVEMENT WIDENING
- DIRECTION OF TRAFFIC
- 4" X 6" WOOD POST
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE



INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET.)

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

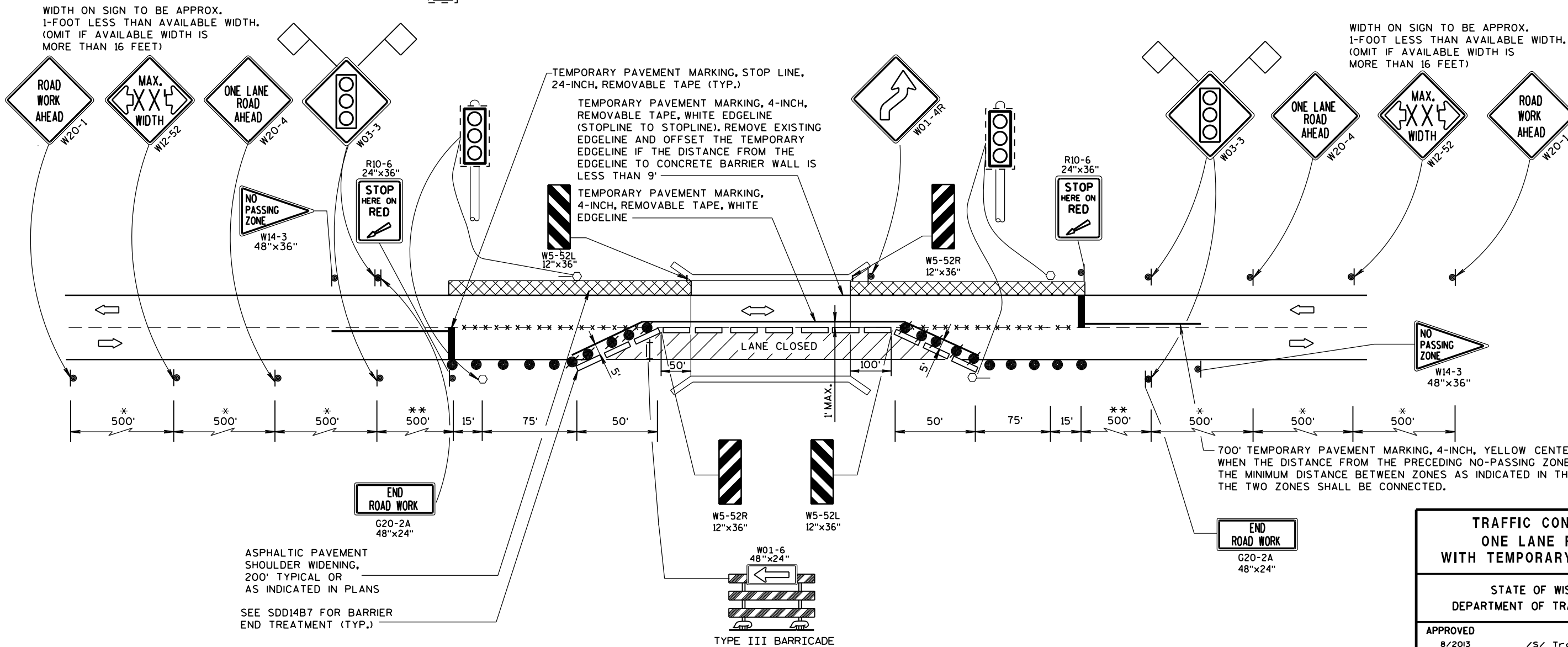
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE, AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

* 500-FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350-FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200-FOOT TYPICAL SPACING.

** USE 300' SPACING IF PRE-CONSTRUCTION REGULATORY SPEED LIMIT IS 35 MPH OR LESS.

6

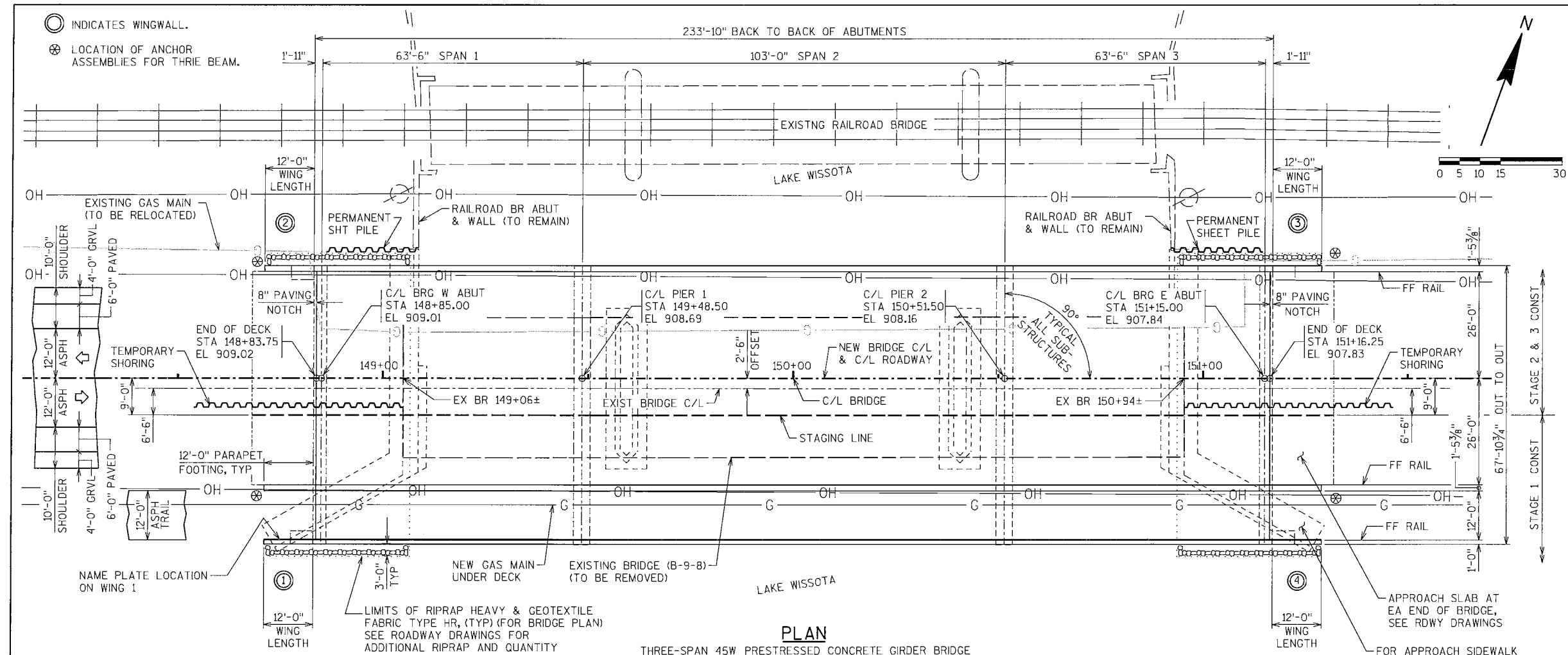


6

TRAFFIC CONTROL,
ONE LANE ROAD
WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.11
OPERATING RATING FACTOR: RF = 1.44
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 210 KIPS
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF
INVENTORY AND OPERATING RATINGS DO NOT INCLUDE FUTURE WEARING SURFACE.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY - SLAB $f'c = 4,000$ psi
- ALL OTHER (GRADE A) $f'c = 3,500$ psi
HIGH STRENGTH BAR STEEL REINFORCEMENT
AASHTO GRADE 60 $f_y = 60,000$ psi
PRESTRESSED CONCRETE GIRDER
(45") CONCRETE $f'c = 8,000$ psi
STRANDS, 0.6 DIA ULTIMATE
TENSILE STRENGTH $F_y = 270,000$ psi

FOUNDATION DATA

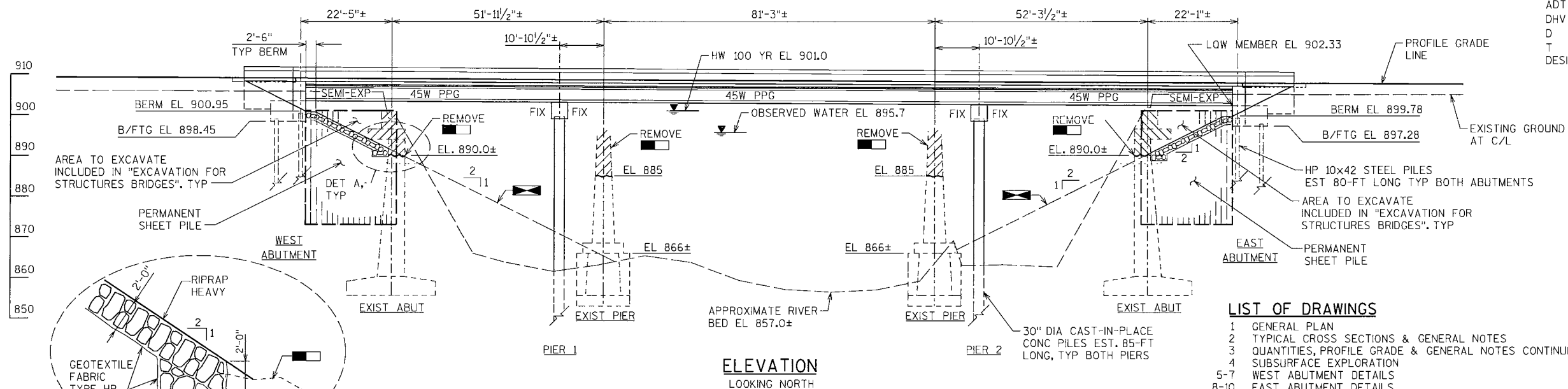
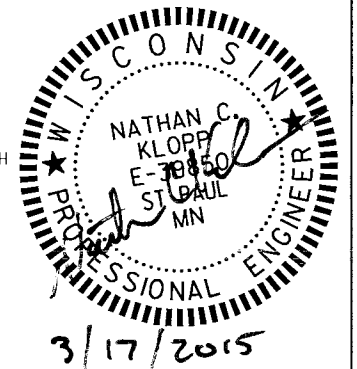
ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 80-FEET LONG AT EACH ABUTMENT.

PIERS TO BE SUPPORTED ON 30-INCH DIAMETER X 0.625-INCH WALL DRIVEN OPEN END PILES WITH A REQUIRED DRIVING RESISTANCE OF 380 TONS PER PILE AS DETERMINED BY PILE DRIVING ANALYZER. THE FACTORED AXIAL RESISTANCE OF THE PIER PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65. SEE SPECIAL PROVISIONS FOR PILE DRIVING ANALYZER. ESTIMATED 85-FEET LONG AT EACH PIER.

*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA

ADT (2014) = 8300
ADT (2034) = 10400
DHV = 13.6 %
D = 59/41
T = 3.8 %
DESIGN SPEED = 45 MPH



LIST OF DRAWINGS

- 1 GENERAL PLAN
- 2 TYPICAL CROSS SECTIONS & GENERAL NOTES
- 3 QUANTITIES, PROFILE GRADE & GENERAL NOTES CONTINUED
- 4 SUBSURFACE EXPLORATION
- 5-7 WEST ABUTMENT DETAILS
- 8-10 EAST ABUTMENT DETAILS
- 11-13 PIER 1 & PIER 2 DETAILS
- 14-17 SUPERSTRUCTURE DETAILS
- 18-19 45" PRESTRESSED GIRDER DETAILS
- 20 STEEL DIAPHRAGM
- 21-22 VERTICAL FACE PARAPET/COMBINATION RAIL TYPE C4
- 23 SINGLE SLOPED FACE PARAPET 32SS
- 24 PARAPET FOOTING FOR SINGLE SLOPED PARAPET 42SS
- 25 SINGLE SLOPED PARAPET 42SS
- 26-28 BRIDGE STAGING CONCEPT

HYDRAULIC DATA

100 YEAR FREQUENCY
 Q_{100} 3200 CFS
 Q_{100} THRU BRIDGE 3200 CFS
HIGH WATER EL 901.0 FT
WATERWAY AREA 5715 SQ FT
DRAINAGE AREA 65.9 SQ MI

SCOUR CODE = 5

WATER ELEVATION IS CONTROLLED BY THE HYDRO DAM. NORMAL DAY-DAY OPERATING ELEVATION IS 897.1

SEH CONTACT: GREG WEYANDT, PE, 715.720.6266

WISDOT BRIDGE OFFICE CONTACT: BILL DREHER, PE, 608.266.8489

BENCHMARK

NO	STATION	DESCRIPTION	ELEV
		ALUM DISC NE CORNER WINGWALL BRIDGE STAMPED X-39/1934	904.73

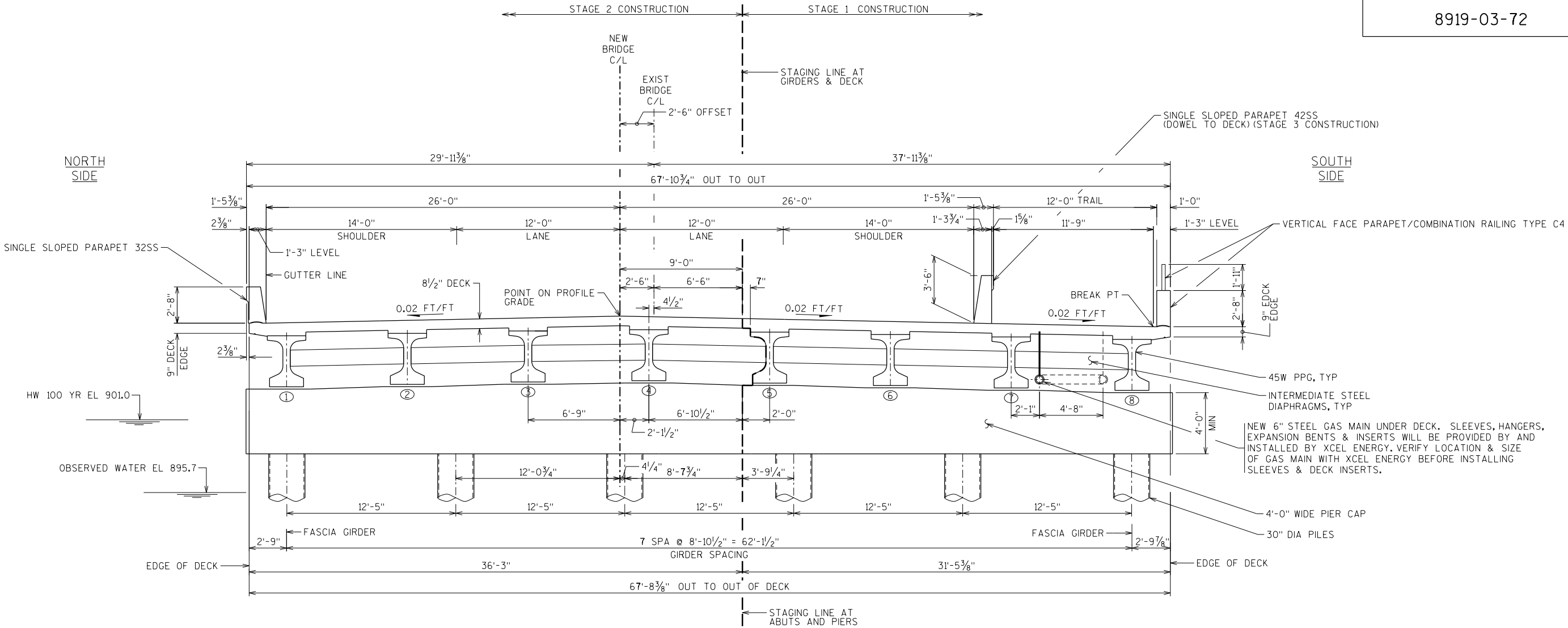
NO.	DATE	REVISION	BY
 SHORT ELLIOTT HENDRICKSON INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED 		3/18/15	DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-9-280			
CTH X OVER LAKE WISSOTA/PAINT CREEK			
COUNTY	CHIPPEWA	TOWN/CITY/VILLAGE	LAFAYETTE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	NCK	DESIGN CKD.	JAJ
DRAWN BY	DLF	PLANS CKD.	NCK
GENERAL PLAN			SHEET 1 OF 28

PLOT TIME: 9:33:47 AM

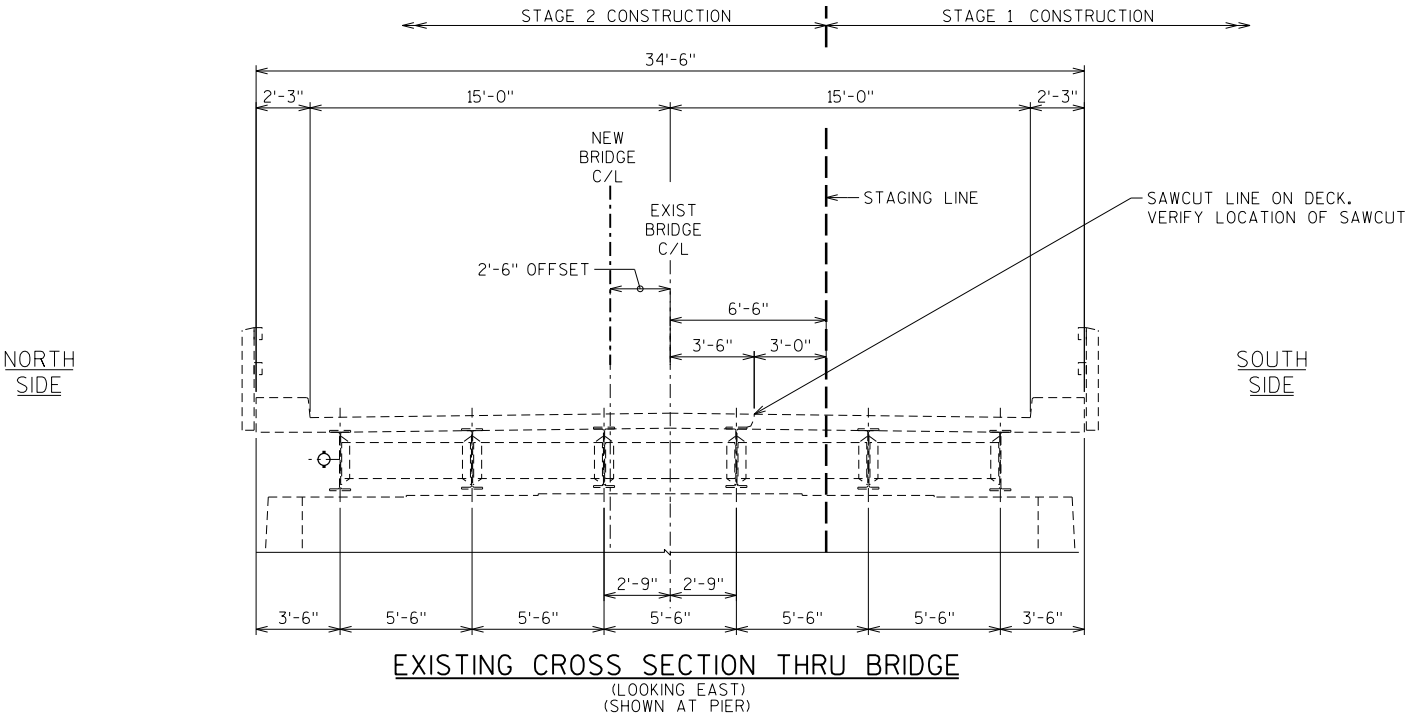
PLOT DATE: 11/25/2014

FILE NAME : S:\AE\Chipm\16724\5-findi-dsgn\51-drawings\20-Struct\br\idgn\09280g2.dgn

8



CROSS SECTION THRU BRIDGE
(LOOKING EAST)
(SHOWN AT PIER)



EXISTING CROSS SECTION THRU BRIDGE
(LOOKING EAST)
(SHOWN AT PIER)

GENERAL NOTES

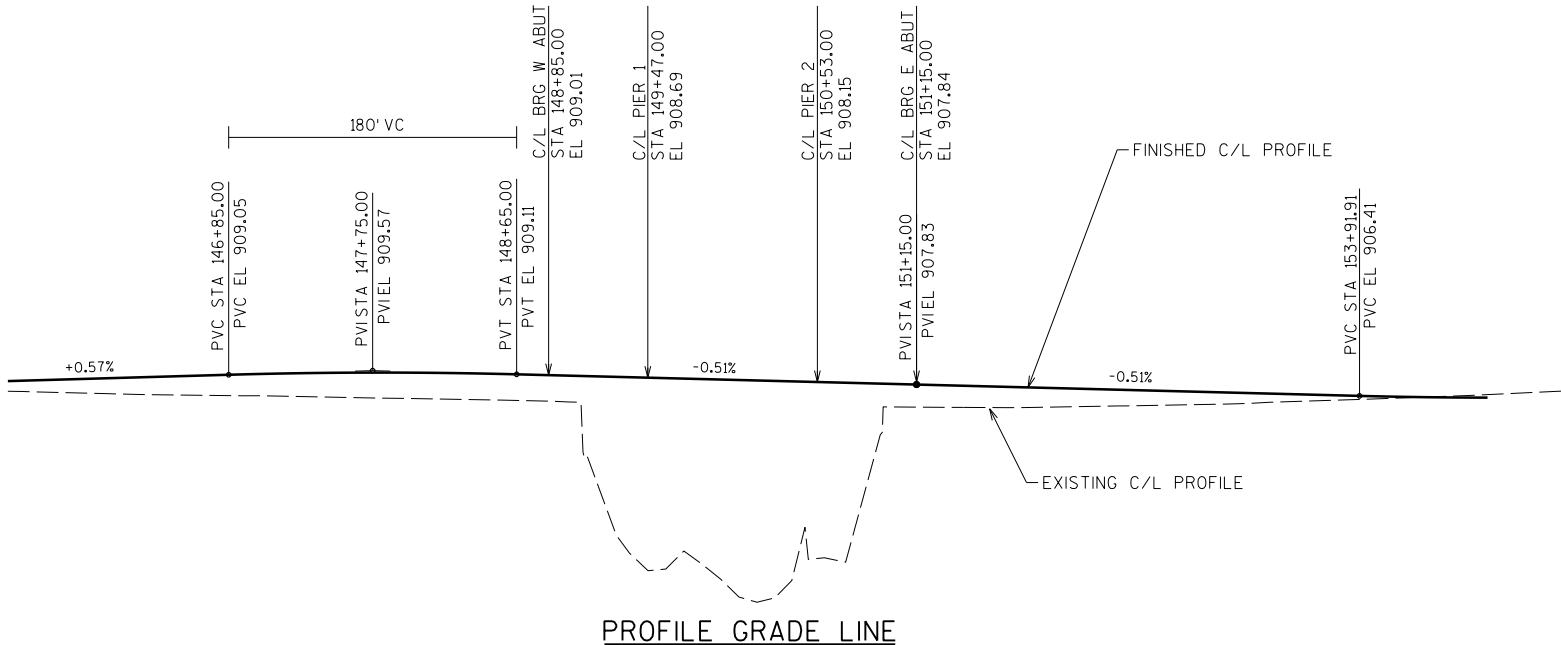
- DRAWINGS SHALL NOT BE SCALED.
- ALL CONCRETE REMOVAL SHALL BE REFINED BY A 1" DEEP SAWCUT UNLESS OTHERWISE NOTED.
- DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON EXISTING ORIGINAL STRUCTURE PLANS, SURVEY AND INSPECTION REPORTS. CONTRACTOR TO VERIFY BEFORE ACCEPTANCE. EXISTING BRIDGE PLANS AVAILABLE AT WISDOT.
- STATIONING MAY VARY BASED ON EXACT LOCATION OF BRIDGE TO PROPOSED ALIGNMENT. CONTRACTOR TO VERIFY.
- STA 10+00 REMOVE EXISTING STRUCTURE (B-9-8) A THREE-SPAN CONCRETE DECK AND STEEL BEAM BRIDGE 185.5-FT LONG x 30' CLEAR WIDTH.
- SEE SHEETS 26 THRU 28 OF THIS PLAN SET AND THE ROADWAY DRAWING SET FOR LANE STAGING AND TRAFFIC.
- SEE ROADWAY PLANS FOR EXISTING UTILITY LOCATIONS.
- SEE SHEET 3 FOR GENERAL NOTES CONTINUED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
TYPICAL CROSS SECTIONS AND GENERAL NOTES			SHEET 2 OF 28

8

TOTAL ESTIMATED QUANTITIES - B-9-280

			WEST ABUT		EAST ABUT		PIER 1		PIER 2		SUPERSTRUCTURE		TOTALS			
BID ITEM NUMBER	BID ITEMS	UNIT	STG 1	STG 2	STG 1	STG 2	STG 1	STG 2	STG 1	STG 2	STG 1	STG 2	STG 1	STG 2	STG 3	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 150+00	LS	-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	1
203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) B-9-280	LS	-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) B-9-280	LS	-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	1
210.0100	BACKFILL STRUCTURE	CY	127	146	127	146	-	-	-	-	-	-	254	292	-	546
502.0100	CONCRETE MASONRY BRIDGES	CY	26	30	26	30	43	48	43	48	291	336	429	492	40	961
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	-	-	-	-	-	-	892	1012	892	1012	230	2134
502.6110	MASONRY ANCHORS TYPE S 3/4-INCH	EACH	-	-	-	-	-	-	-	-	-	-	-	-	700	700
503.0146	PRESTRESSED GIRDER TYPE 145W-INCH	LF	-	-	-	-	-	-	-	-	922	922	922	922	-	1844
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1,939	2,621	1,939	2,621	-	-	-	-	-	-	3880	5240	-	9120
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	623	626	623	626	7,434	8,225	7,434	8,225	59360	75960	75470	93660	8530	177,660
505.0905	BAR COUPLERS NO. 5	EACH	-	-	-	-	4	-	4	-	697	-	705	-	-	705
505.0906	BAR COUPLERS NO. 6	EACH	11	-	11	-	-	-	-	-	-	-	22	-	-	22
505.0907	BAR COUPLERS NO. 7	EACH	6	-	6	-	-	-	-	-	-	-	12	-	-	12
505.0909	BAR COUPLERS NO. 9	EACH	-	-	-	-	13	-	13	-	-	-	26	-	-	26
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	-	-	-	-	-	-	-	24	24	24	24	-	48
506.4000	STEEL DIAPHRAGMS (STRUCTURE) B-9-280	EACH	-	-	-	-	-	-	-	-	12	16	12	16	-	28
511.1200	TEMPORARY SHORING (STRUCTURE) B-9-280	SF	200	-	200	-	-	-	-	-	-	-	400	-	-	400
512.0500	PILING STEEL SHEET PERMANENT DELIVERED	SF	-	625	-	625	-	-	-	-	-	-	-	1250	-	1250
512.0600	PILING STEEL SHEET PERMANENT DRIVEN	SF	-	625	-	625	-	-	-	-	-	-	-	1250	-	1250
513.7020	RAILING STEEL TYPE C4 (STRUCTURE) B-9-280	LS	-	-	-	-	-	-	-	-	1	-	1	-	-	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	7	9	7	9	-	-	-	-	-	-	14	18	-	32
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	480	480	480	480	-	-	-	-	-	-	960	960	-	1920
SPV.0060.01	PILE DRIVING ANALYZER	EACH	-	-	-	-	2	1	2	1	-	-	4	2	-	6
SPV.0090.01	PILING CIP CONCRETE DELIVERED AND DRIVEN 30 X 0.625-INCH	LF	-	-	-	-	255	255	255	255	-	-	510	510	-	1020
606.0300	RIPRAP HEAVY	CY	65	75	65	75	-	-	-	-	-	-	130	150	-	280
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	20	20	20	20	-	-	-	-	-	-	40	40	-	80
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	37	42	37	42	-	-	-	-	-	-	74	84	-	158
612.0806	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	EACH	1	1	1	1	-	-	-	-	-	-	2	2	-	4
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	-	-	-	-	-	-	2	2	2	2	-	4
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	130	150	130	150	-	-	-	-	-	-	260	300	-	560
690.0250	SAWING CONCRETE	LF	31	-	31	-	-	-	-	-	186	-	248	-	-	248
	NON-BID ITEMS															
	FILLER	SIZE	-	-	-	-	-	-	-	-	-	-	-	-	-	1/2" & 3/4"
	NAME PLATE	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	BENCH MARK	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	1



STATE PROJECT NUMBER

8919-03-72

GENERAL NOTES CONTINUED

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

ELASTORMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENTS DETAILS.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

AT THE BACKFACE OF THE ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL UNLESS OTHERWISE NOTED.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION :M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION :M213.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER SHEET.

COAT WITH "PROTECTIVE SURFACE TREATMENT" PER THE STANDARD SPECIFICATIONS AND THE SUPERSTRUCTURE DETAILS SHEET.

QUANTITES NOTES:

- ① TEMPORARY SHORING IS BASED ON THE SQUARE FOOT OF EXPOSED PILE SURFACE BETWEEN THE UPPER & LOWER GRADES.
- ② SUPERSTRUCTURE CONCRETE QUANTITY INCLUDES PARAPETS ON WINGWALLS AND PARAPET ON BRIDGE.
PIER CONCRETE QUANTITY INCLUDES CONCRETE FOR THE 30" DIA PILES.
- ③ SUPERSTRUCTURE REINFORCEMENT QUANTITY INCLUDES PARAPETS ON WINGWALLS AND PARAPET ON BRIDGE.
PIER REINFORCEMENT QUANTITY INCLUDES BAR STEEL FOR THE 30" DIA PILES.
- ④ FURNISH AND APPLY A PROTECTIVE SURFACE FINISH TREATMENT TO THE ENTIRE TOP OF THE BRIDGE DECK, AND INSIDE FACES AND TOP OF THE CONCRETE PARAPETS.
- ⑤ TOTAL INCLUDES STAGE 3 QUANTITIES AS LISTED. STAGE 3 IS THE PLACEMENT OF THE PARAPET FOOTINGS AND SINGLE SLOPED PARAPET 42SS ON THE BRIDGE.
- ⑥ TOP OF SHEET PILE ELEVATION TO MATCH TOP OF EXISTING WALL AT ONE END AND NEW ABUTMENT BERM AT THE OTHER.
PERMANENT SHEET PILE MINIMUM PROPERTIES:
LENGTH = 25'-0"
MOMENT OF INERTIA (I) = 184 IN⁴/FT
SECTION MODULUS (S) = 30 IN³/FT
WEB THICKNESS = 0.350 INCHES
STEEL YIELD POINT F_y = 50 KSI
- ⑦ PILE TO BE PAINTED IN ACCORDANCE WITH STANDARD SPECIFICATION.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
		DRAWN BY DLF	PLANS CK'D. NCK
QUANTITIES, PROFILE GRADE AND GENERAL NOTES CONTINUED			SHEET 3 OF 28

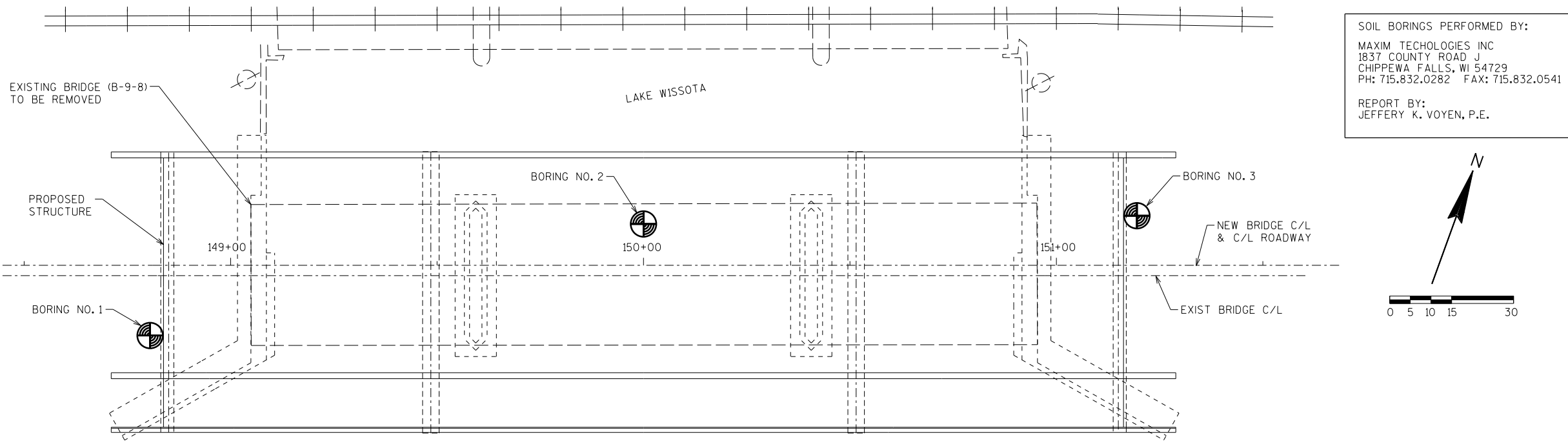
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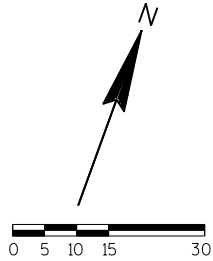
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8



SOIL BORINGS PERFORMED BY:
MAXIM TECHNOLOGIES INC
1837 COUNTY ROAD J
CHIPPEWA FALLS, WI 54729
PH: 715.832.0282 FAX: 715.832.0541

REPORT BY:
JEFFERY K. VOYEN, P.E.



STATE PROJECT NUMBER

8919-03-72

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
95/6=95 BLOWS FOR 6"
PENETRATION
PROBING TAKEN WITH
A 350# WT.
FALLING 18" ON A 2"
O.D. POINT.
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

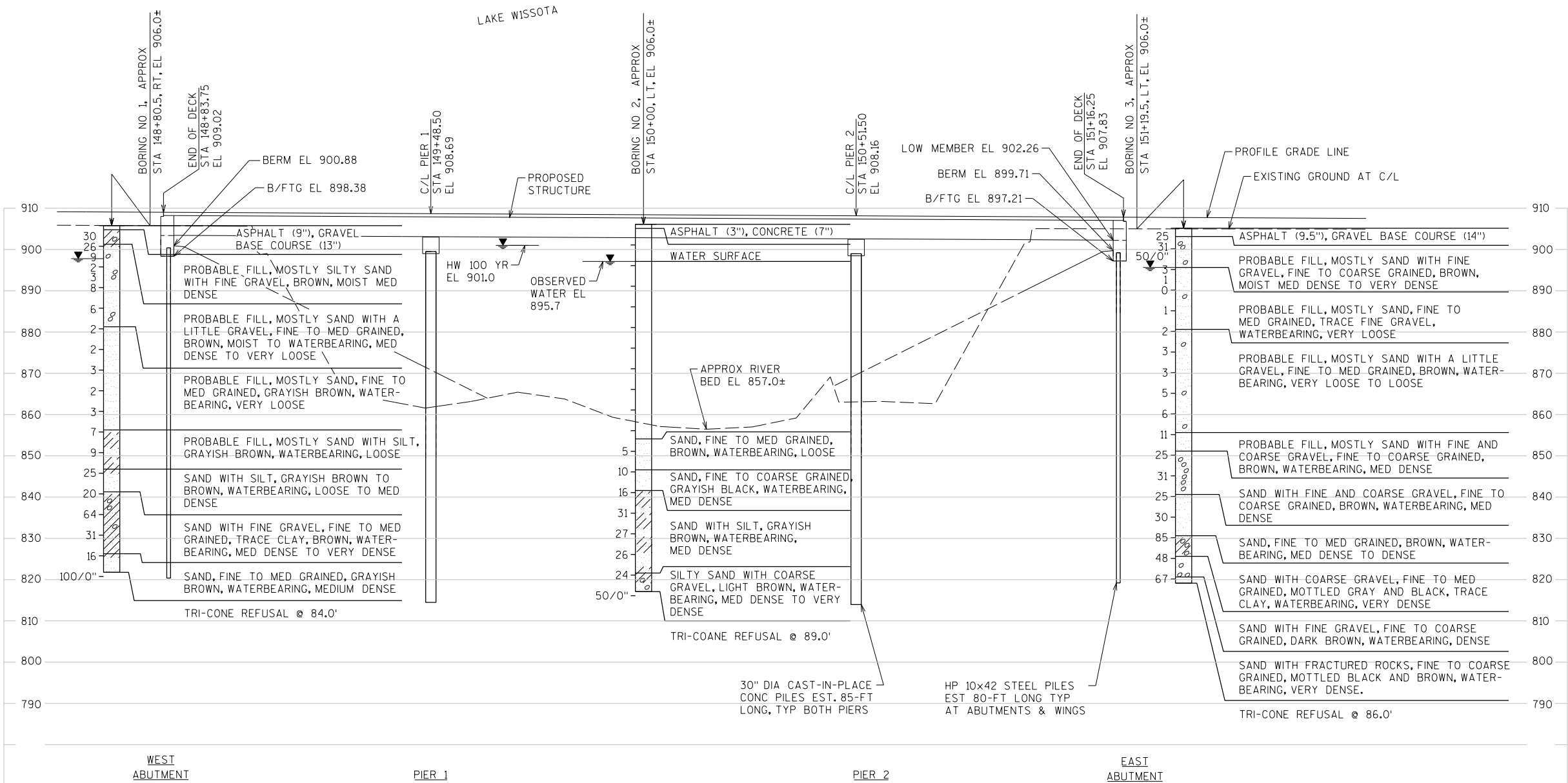
ELEV. BORING NO.
STA.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

8



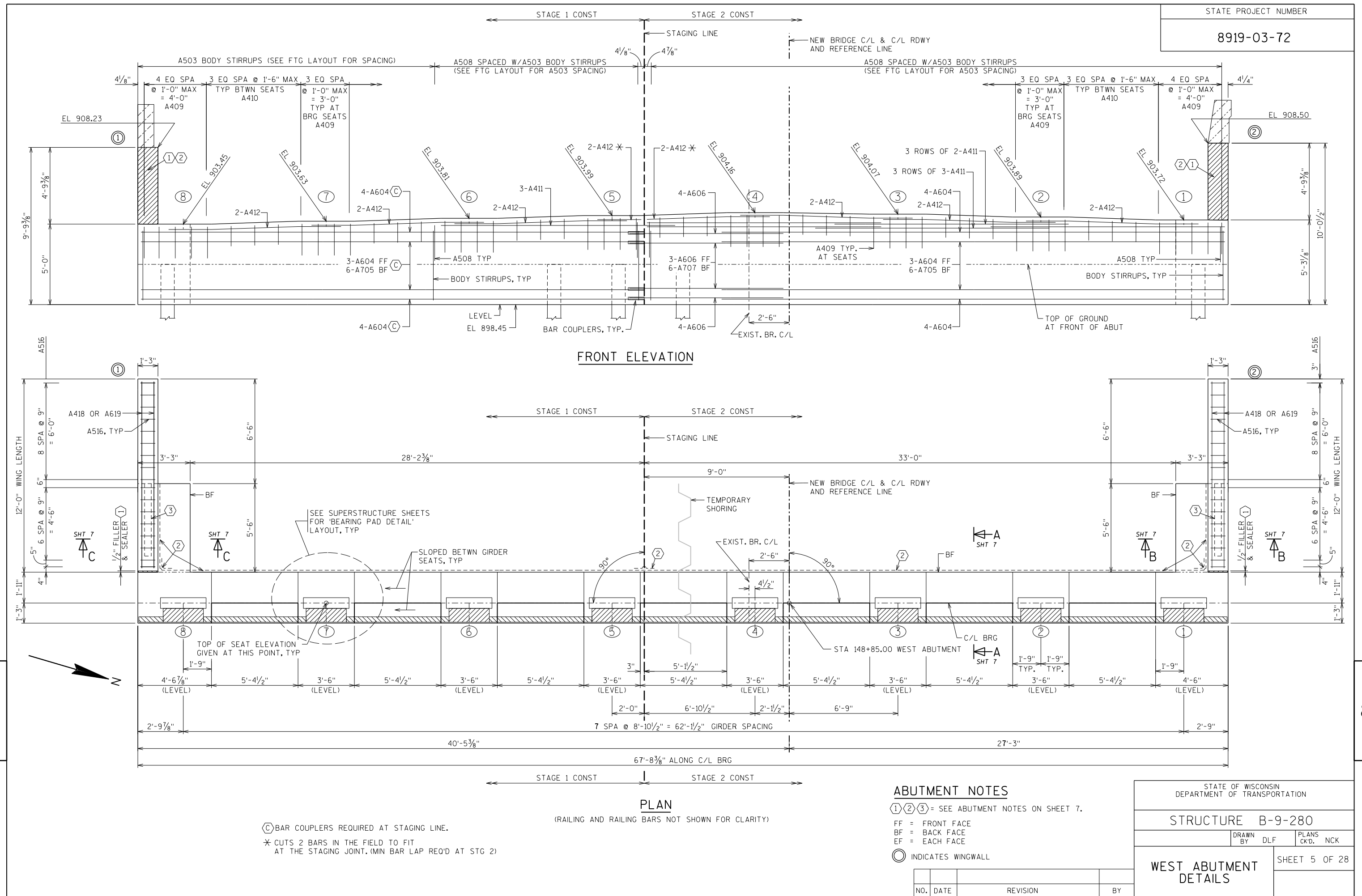
WEST
ABUTMENT

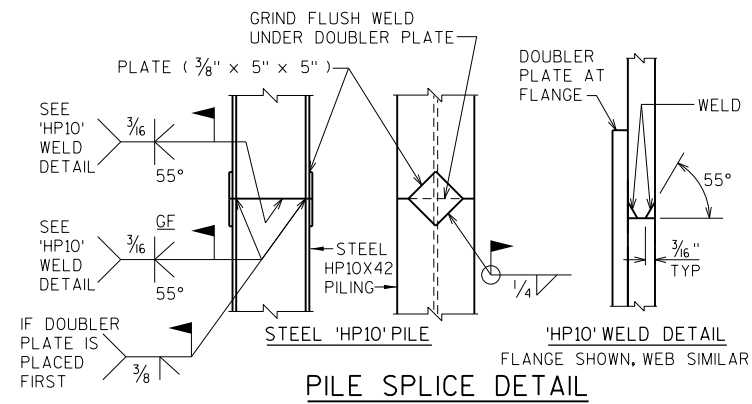
PIER 1

PIER 2

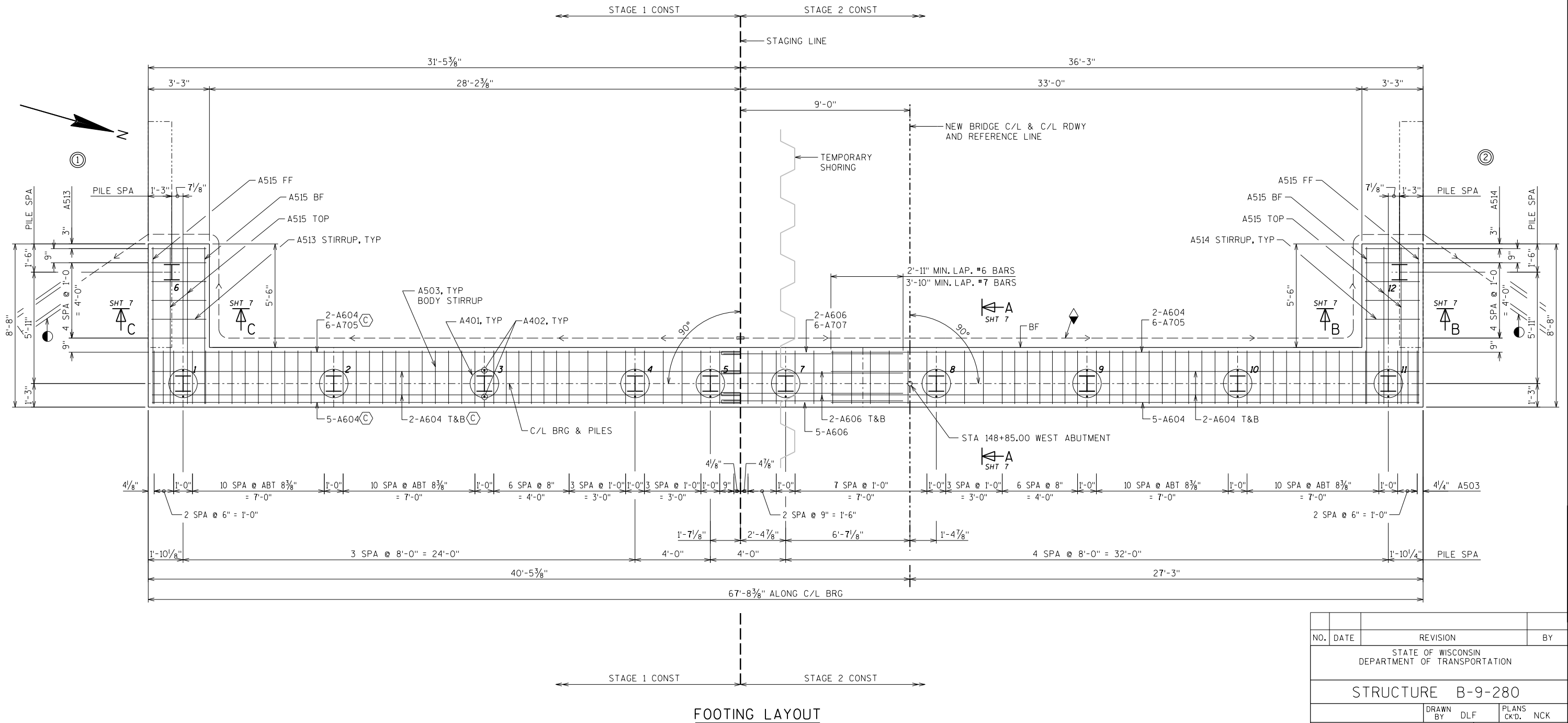
EAST
ABUTMENT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
SUBSURFACE EXPLORATION			SHEET 4 OF 28





* CUTS 2 BARS IN THE FIELD TO FIT
AT THE STAGING JOINT. (MIN BAR LAP REQ'D AT STG 2)



NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-9-280					
			DRAWN BY	DLF	PLANS CK'D. NCK
WEST ABUTMENT DETAILS				SHEET 6 OF 28	

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

BAR MARK	COAT	NO. REQ'D.	LENGTH (F T-IN)	BAR SERIES	BENT	LOCATION
A401		5	28 - 0		X	BODY AT PILES
A402		10	2 - 3			BODY AT PILES
A503		41	14 - 9		X	BODY STIRRUPS
A604		11	31 - 1			BODY HORIZ
A705		6	31 - 1			BODY HORIZ BF

not used					
not used					
A508		16	7 - 1	X	BODY TOP TIE
A409		17	6 - 8	X	BODY TOP TIE
A410		9	4 - 1	X	BODY TOP TIE
A411		3	14 - 6		BODY TOP HORIZ
A412		8	10 - 8	X	BODY TOP HORIZ
A513	X	6	15 - 7	X	WING BODY STIRRUPS

BAR MARK	COAT	NO. REQ'D.	LENGTH (F T-IN)	BAR SERIES	BENT	LOCATION
A401		5	28 - 0		X	BODY AT PILES
A402		10	2 - 3			BODY AT PILES
A503		46	14 - 9		X	BODY STIRRUPS
A604		11	31 - 1			BODY HORIZ
A705		6	31 - 1			BODY HORIZ BF
A606		11	9 - 0			BODY HORIZ
A707		6	9 - 0			BODY HORIZ BF
A508		46	7 - 1		X	BODY TOP TIE
A409		17	6 - 8		X	BODY TOP TIE
A410		12	4 - 1		X	BODY TOP TIE
A411		15	14 - 6			BODY TOP HORIZ
A412		8	10 - 8		X	BODY TOP HORIZ

not used						
A514	X	6	16 - 1		X	WING BODY STIRRUPS
A515	X	15	8 - 4			WING BODY HORIZ
A516	X	17	14 - 2		X	WING WALL VERT
A417	X	6	7 - 11			WING WALL HORIZ
A418	X	10	11 - 7			WING WALL HORIZ
A619	X	2	11 - 7			WING WALL HORIZ TOP

② CUT BARS IN THE FIELD TO FIT.

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL
PILING WITH A REQUIRED DRIVING RESISTANCE OF 180
TONS PER PILE AS DETERMINED BY THE MODIFIED
GATES DYNAMIC EQUATION, ESTIMATED 80-FT LONG
AT EACH ABUT. FOR PILE SPLICE DETAIL SEE SHT 6.

① and ②

①

②

- ① SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE). FILLER INCLUDED IN WING LENGTH.
- ② 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ & VERT JOINTS ON BACK-FACE. VERTICAL WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.
- ③ KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" x 6". 3/4" V-GROOVE ON FRONT FACE OF WINGWALL.

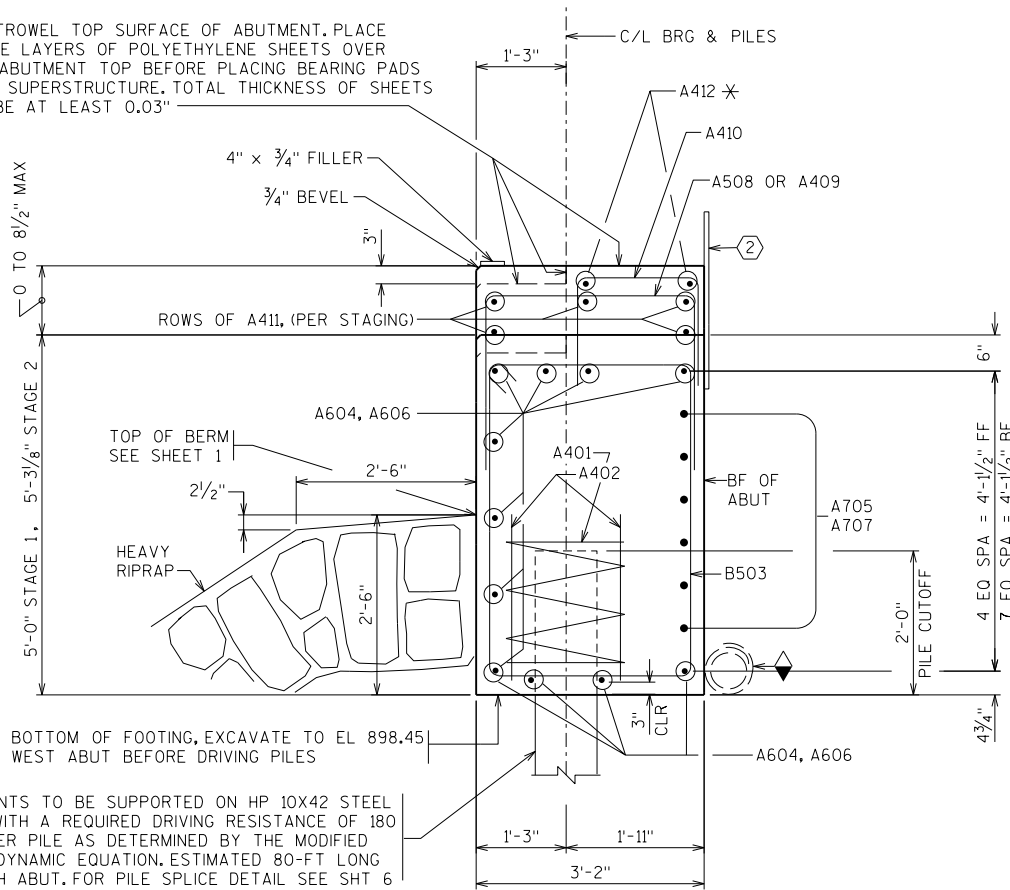
* CUT 2 BARS IN THE FIELD TO FIT AT THE STAGING JOINT. (MIN BAR LAP REQ'D AT STG 2).

FOR CONCRETE APRON ENDWALL FOR UNDERDRAIN, SEE SHEET 6.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE
T&B = TOP AND BOTTOM

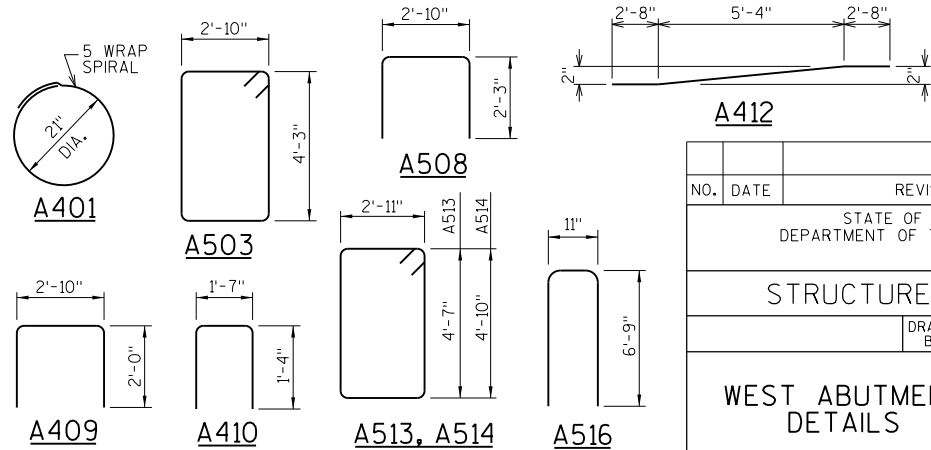
○ INDICATES WINGWALL

STEEL TROWEL TOP SURFACE OF ABUTMENT.PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"



SECTION A-A
TYPICAL SECTION THRU BODY

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL
PILING WITH A REQUIRED DRIVING RESISTANCE OF 180
TONS PER PILE AS DETERMINED BY THE MODIFIED
GATES DYNAMIC EQUATION, ESTIMATED 80-FT LONG
AT EACH ABUT. FOR PILE SPLICE DETAIL SEE SHT 6



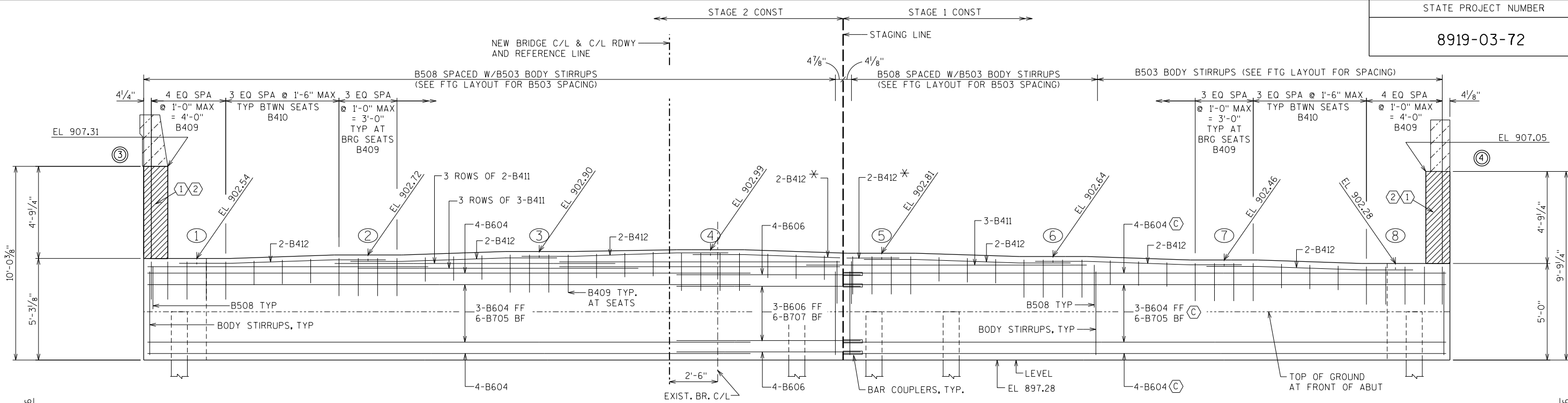
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-9-280					
		DRAWN BY	DLF	PLANS CK'D.	NCK
WEST ABUTMENT DETAILS				SHEET 7 OF 28	

PLOT TIME: 9:33:50 AM

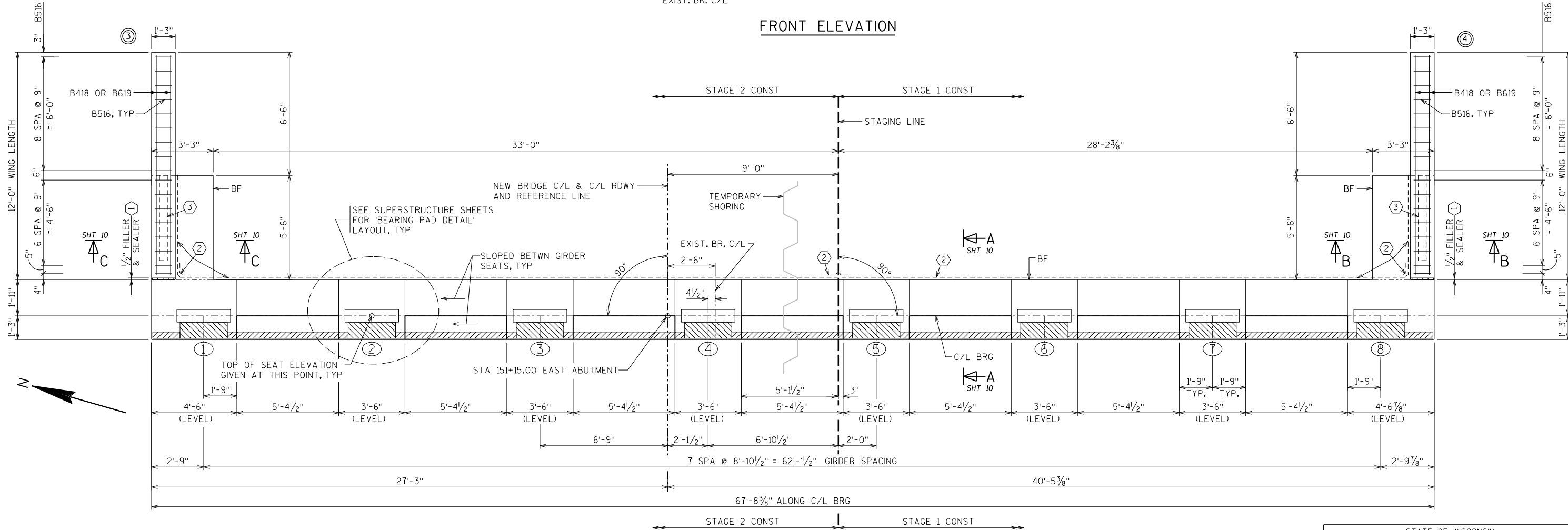
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8



FRONT ELEVATION



PLAN

(RAILING AND RAILING BARS NOT SHOWN FOR CLARITY)

(C) BAR COUPLERS REQUIRED AT STAGING LINE.

* CUTS 2 BARS IN THE FIELD TO FIT AT THE STAGING JOINT. (MIN BAR LAP REQ'D AT STG 2)

ABUTMENT NOTES

①②③ = SEE ABUTMENT NOTES ON SHEET 10.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

(C) INDICATES WINGWALL

NO.	DATE	REVISION	BY

STATE PROJECT NUMBER

8919-03-72

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-280

DRAWN BY DLF PLANS CK'D. NCK

EAST ABUTMENT
DETAILS

SHEET 8 OF 28

8

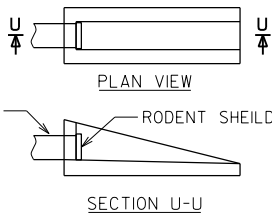
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STATE PROJECT NUMBER

8919-03-72

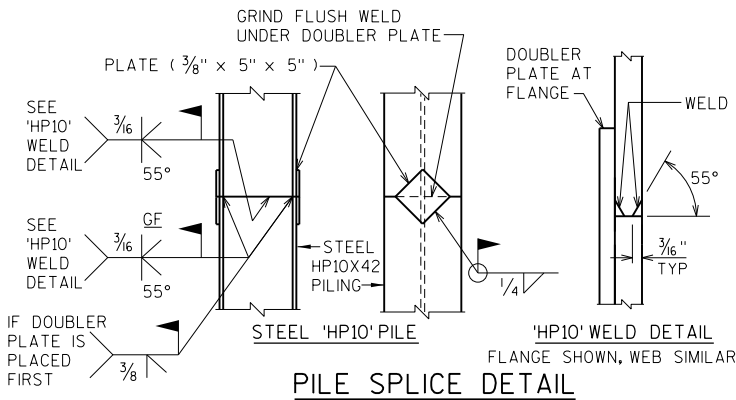


NOTE:
SEE S.D.D.8F6: REINFORCED
CONCRETE APRON ENDWALL
FOR PIPE UNDERDRAIN.

CONCRETE APRON ENDWALL FOR UNDERDRAIN

ATTACH RODENT SHIELD PER SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN. COST OF CONCRETE APRON ENDWALL AND RODENT SHIELD SHALL BE PAID FOR UNDER BID ITEM "APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH"

PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN BEHIND ABUTMENT BODY AND WINGS. PIPE UNDERDRAIN UNPERFORATED TO BE PLACED OUTSIDE WINGS.

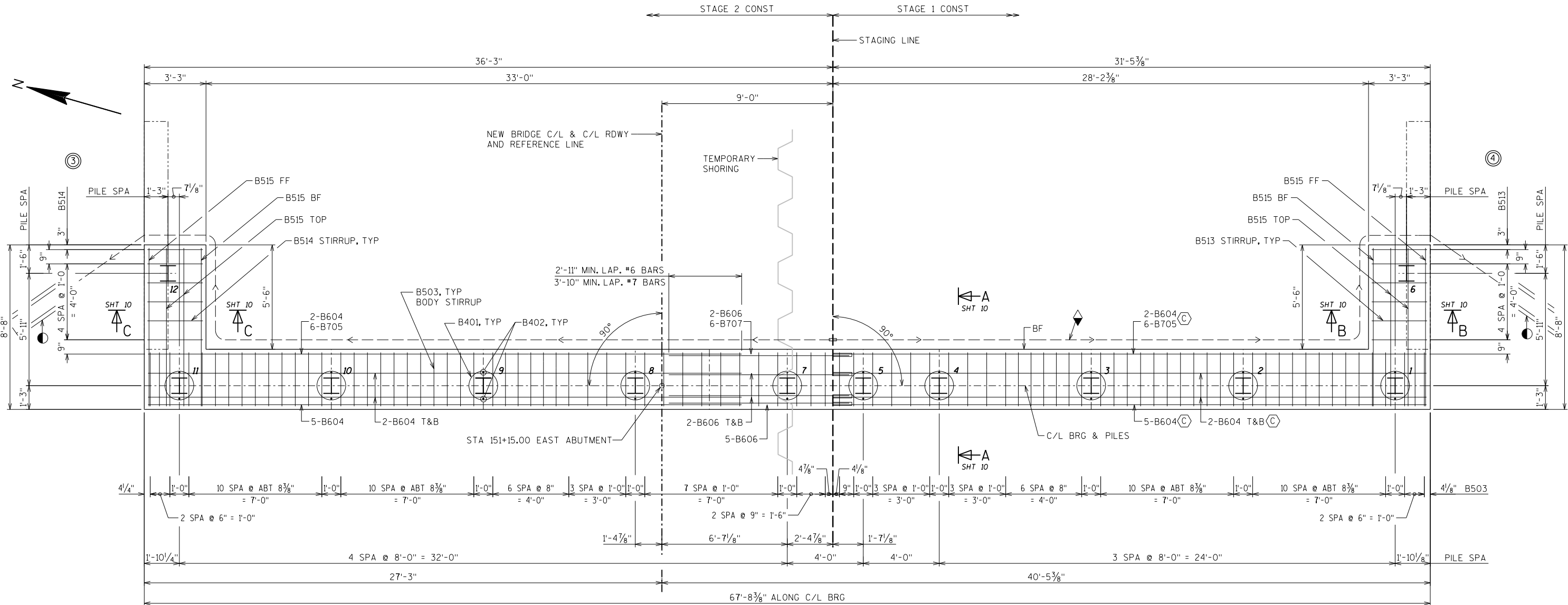


INDICATES WINGWALL

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

BAR COUPLERS REQUIRED AT STAGING LINE.

* CUTS 2 BARS IN THE FIELD TO FIT AT THE STAGING JOINT. (MIN BAR LAP REQ'D AT STG 2)



FOOTING LAYOUT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY DLF		PLANS CK'D. NCK	
EAST ABUTMENT DETAILS			SHEET 9 OF 28

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

BAR MARK	COMT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
B401		5	28 - 0		X	BODY AT PILES
B402		10	2 - 3			BODY AT PILES
B503		41	14 - 9		X	BODY STIRRUPS
B604		11	31 - 1			BODY HORIZ
B705		6	31 - 1			BODY HORIZ BF
not used						
not used						
B508		16	7 - 1		X	BODY TOP TIE
B409		17	6 - 8		X	BODY TOP TIE
B410		9	4 - 1		X	BODY TOP TIE
B411		3	14 - 6			BODY TOP HORIZ
B412		8	10 - 8		X	BODY TOP HORIZ
B513	X	6	15 - 7		X	WING BODY STIRRUPS
not used						
B515	X	15	8 - 4			WING BODY HORIZ
B516	X	17	14 - 2		X	WING WALL VERT
B417	X	6	7 - 11			WING WALL HORIZ
B418	X	10	11 - 7			WING WALL HORIZ
B619	X	2	11 - 7			WING WALL HORIZ TOP

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
B401		5	28 - 0		X	BODY AT PILES
B402		10	2 - 3			BODY AT PILES
B503		46	14 - 9		X	BODY STIRRUPS
B604		11	31 - 1			BODY HORIZ
B705		6	31 - 1			BODY HORIZ BF
B606		11	9 - 0			BODY HORIZ
B707		6	9 - 0			BODY HORIZ BF
B508		46	7 - 1		X	BODY TOP TIE
B409		17	6 - 8		X	BODY TOP TIE
B410		12	4 - 1		X	BODY TOP TIE
B411		15	14 - 6			BODY TOP HORIZ
B412		8	10 - 8		X	BODY TOP HORIZ
not used						
B514	X	6	16 - 1		X	WING BODY STIRRUPS
B515	X	15	8 - 4			WING BODY HORIZ
B516	X	17	14 - 2		X	WING WALL VERT
B417	X	6	7 - 11			WING WALL HORIZ
B418	X	10	11 - 7			WING WALL HORIZ
B619	X	2	11 - 7			WING WALL HORIZ TOP

PARAPET 32SS- (SEE RAILING DETAILS)

RAIL BAR - (SEE RAILING DETAILS)

WING ELEV AT THIS P

B619

B418, TYP IN WING WALL EXCEPT AS NOTED

B516

2" CL

3

3" EQ SPA @ 1'-6" MAX

7' EQ SPA @ 8" MAX

3"

3"

2'-0" MIN

FF

B515, TYP IN WING FTG

1'-0" PILE CUTOFF

1'-3"

3" CLR

BF

6' EQ SPA @ 4'-8" = 4'-8"

B514

SECTION C-C

③

SECTION B-B

STEEL TROWEL TOP SURFACE OF ABUTMENT.PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"

① SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE). FILLER INCLUDED IN WING LENGTH.

② 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ & VERT JOINTS ON BACKFACE. VERTICAL WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

③ KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6". 3/4" V-GROOVE ON FRONT FACE OF WINGWALL.

* CUT 2 BARS IN THE FIELD TO FIT AT THE STAGING JOINT. (MIN BAR LAP REQ'D AT STG 2).

◆ FOR CONCRETE APRON ENDWALL FOR UNDERDRAIN, SEE SHEET 9.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE
T&B = TOP AND BOTTOM

⊙ INDICATES WINGWALL

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"

0 TO 8 1/2" MAX

5'-0" STAGE 1, 5'-3 7/8" STAGE 2

TOP OF BERM SEE SHEET 1

HEAVY RIPRAP

2'-6"

2'-0" PILE CUTOFF

BOTTOM OF FOOTING, EXCAVATE TO EL 897.28 EAST ABUT BEFORE DRIVING PILES

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 80-FT LONG AT EACH ABUT. FOR PILE SPLICE DETAIL SEE SHT 9

SECTION A-A
TYPICAL SECTION THRU BODY

5 W SPIR

2" DIA.

B401

Diagram of a rectangular sign with dimensions 2'-10" by 4'-3". The sign is labeled B503.

B508

Technical drawing of the East Abutment Details for Bridge B412. The drawing includes a plan view of the abutment structure and a cross-section view. The plan view shows a structure with a total width of 11 feet, divided into three sections: two side sections of 2 feet 8 inches each and a central section of 5 feet 4 inches. The structure is 2 feet high. The cross-section view shows a U-shaped structure with a width of 11 feet and a height of 6 feet 9 inches. The structure is labeled B412.

NO.	DATE	REVISION
STATE OF V DEPARTMENT OF T		
STRUCTURE		
		DRAW B'
EAST ABUTMENT DETAILS		

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
		DRAWN BY	DLF
		PLANS CK'D.	NCK
EAST ABUTMENT DETAILS		SHEET 10 OF 28	

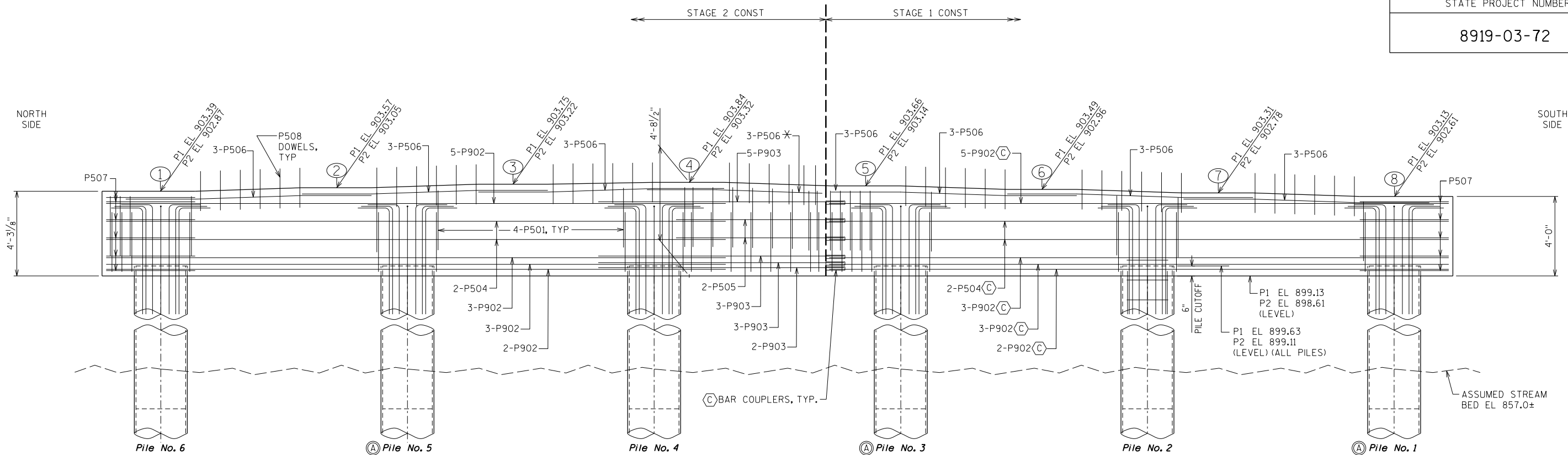
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PLOT DATE: 11/25/2014

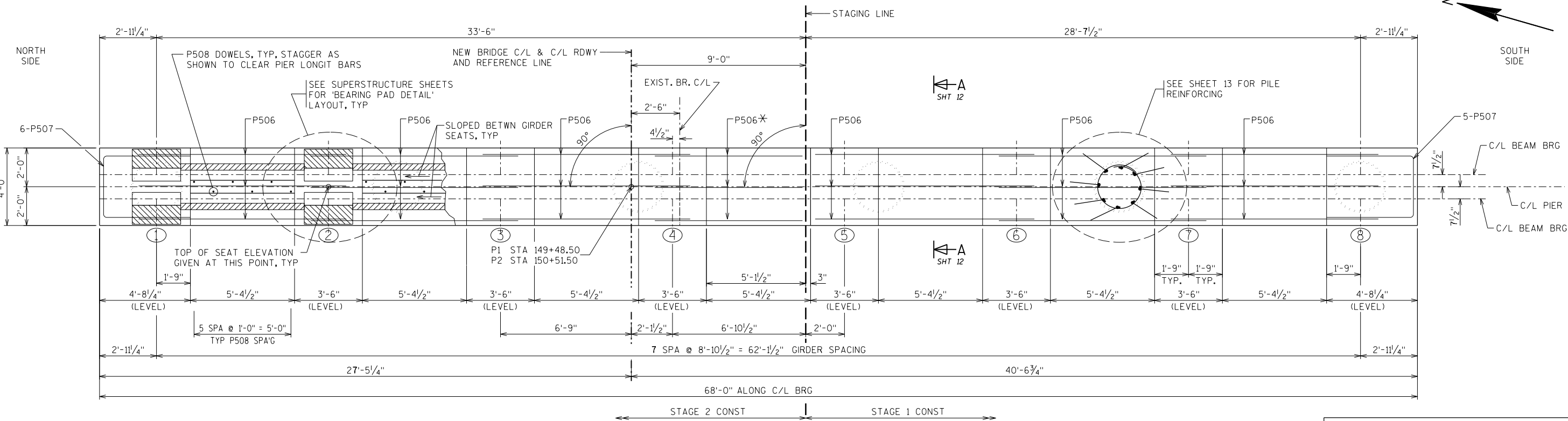
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8

8



ELEVATION
SHOWING REINFORCEMENT



PLAN TOP

NOTE: PIER 1 AND PIER 2 ARE IDENTICAL UNLESS SHOWN OR NOTED OTHERWISE.

- Ⓐ TEST THIS PILE WITH THE PILE DRIVING ANALYZER.
- Ⓒ BAR COUPLERS REQUIRED AT STAGING LINE.
- * CUT BAR IN THE FIELD TO FIT.
- T = TOP
- B = BOTTOM

NO.	DATE	REVISION	BY

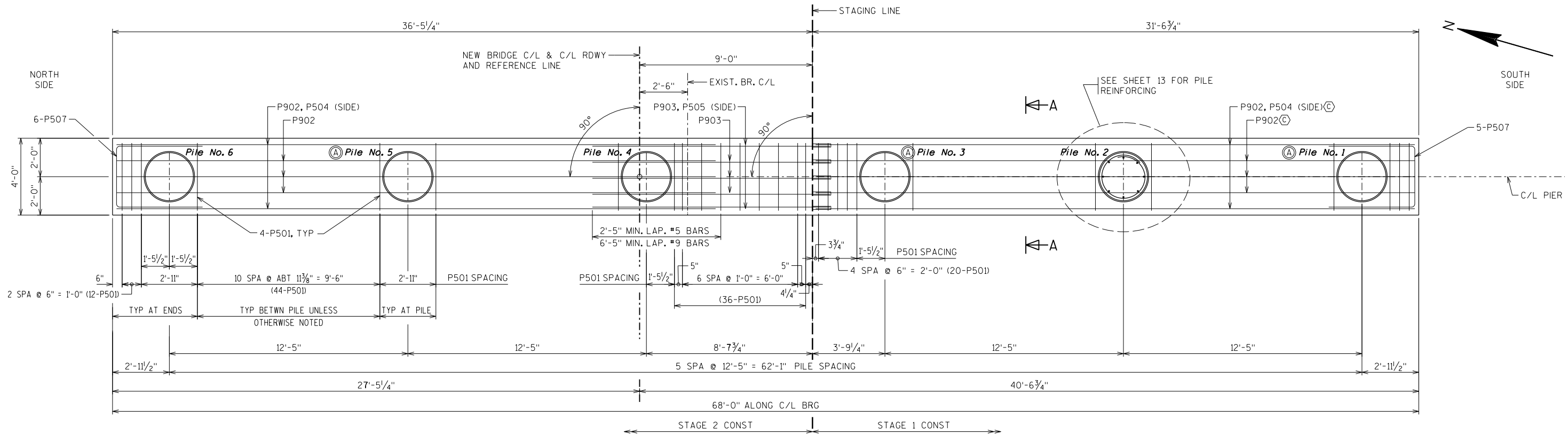
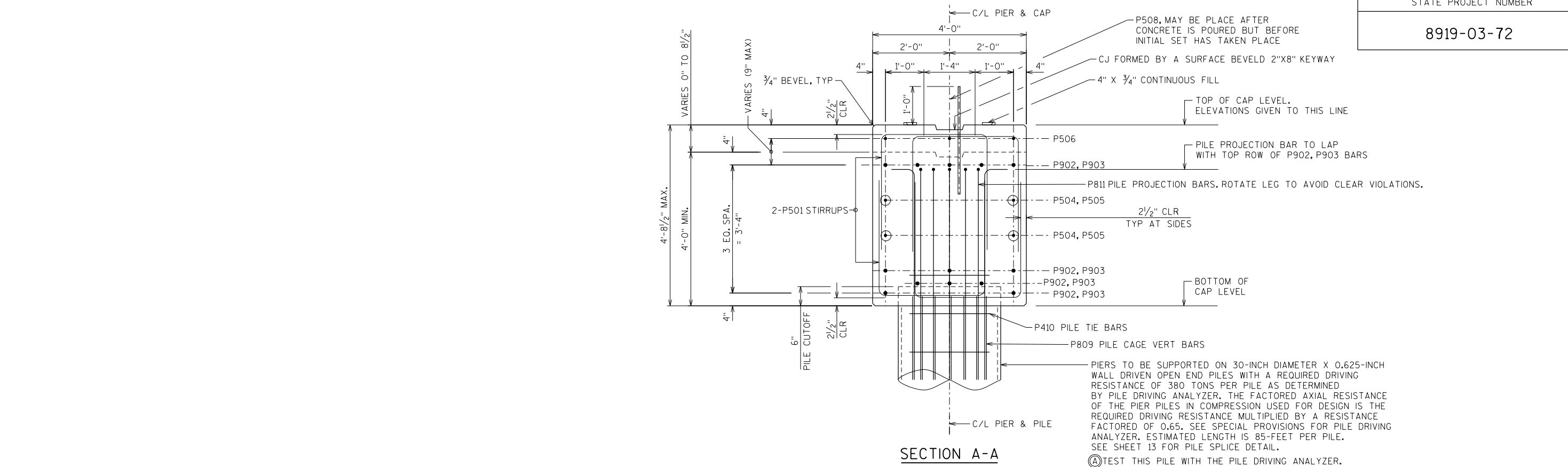
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
PIER 1 & 2 DETAILS			SHEET 11 OF 28

PLOT TIME: 9:33:52 AM

PLOT DATE: 11/25/2014

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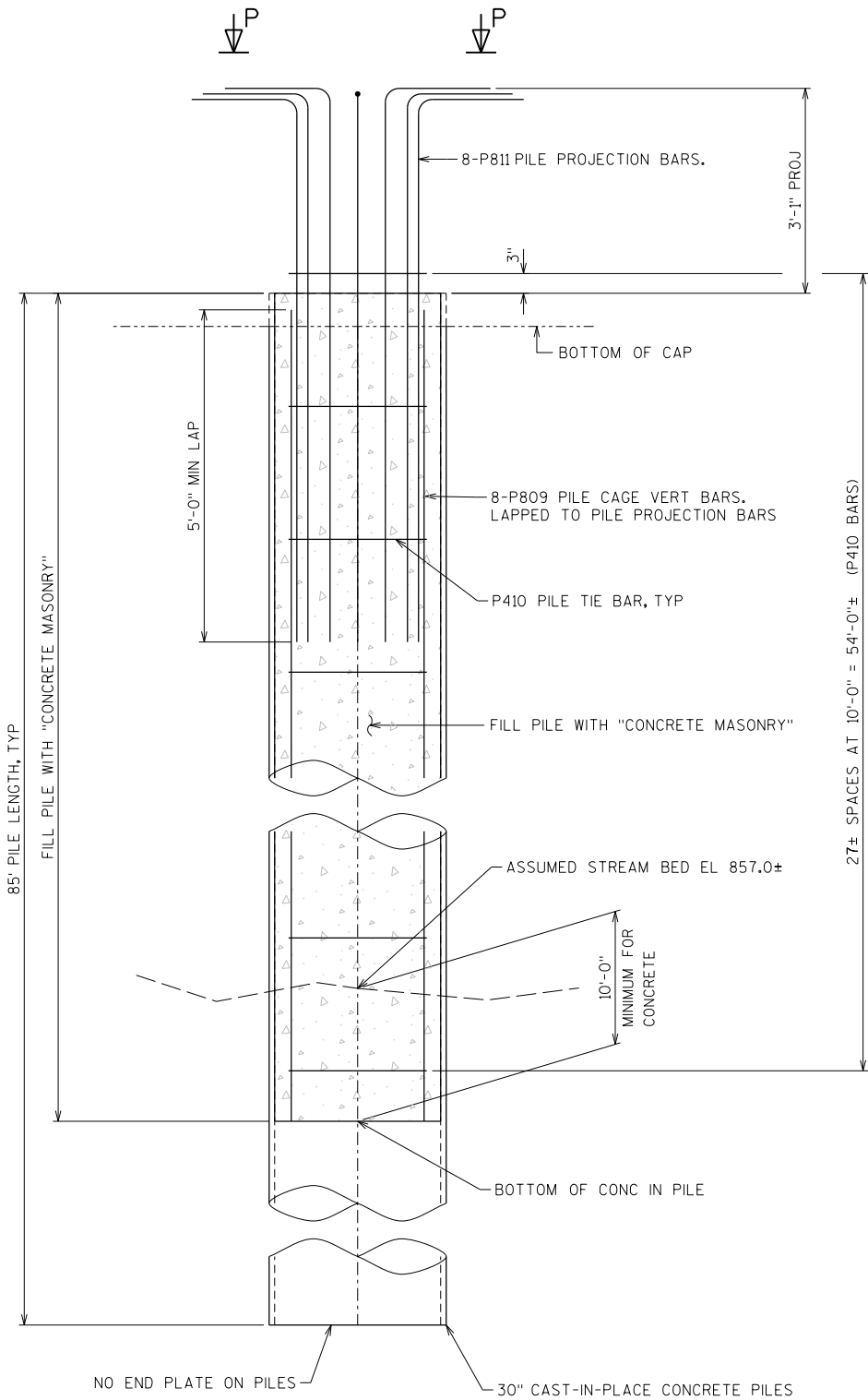


PLAN

(C) BAR COUPLERS REQUIRED AT STAGING LINE.
T&B = TOP AND BOTTOM

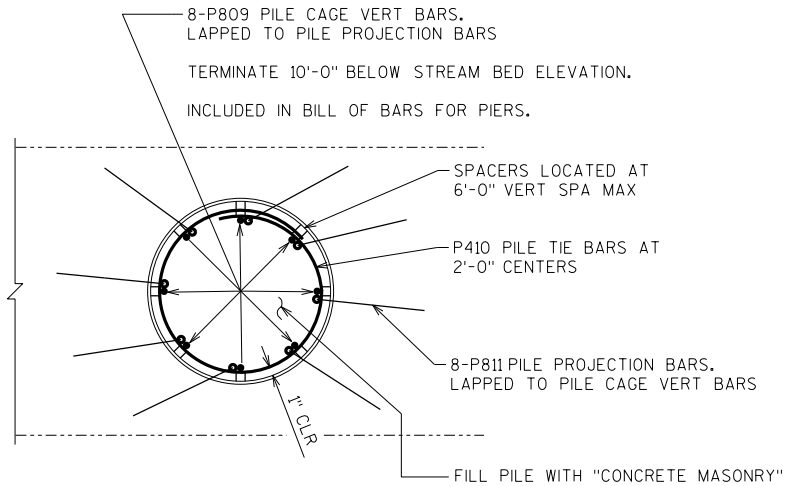
NO.	DATE	REVISION	BY

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
PIER 1 & 2 DETAILS			SHEET 12 OF 28



CAST-IN-PLACE PILE

SECTION P-P
TYP THRU CONCRETE
CAST-IN-PLACE PILE



NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

STATE PROJECT NUMBER

8919-03-72

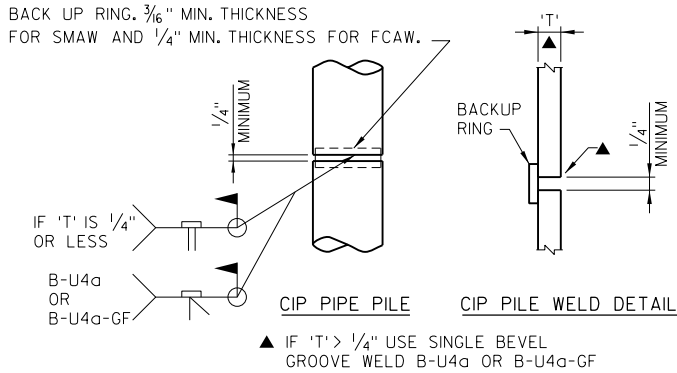
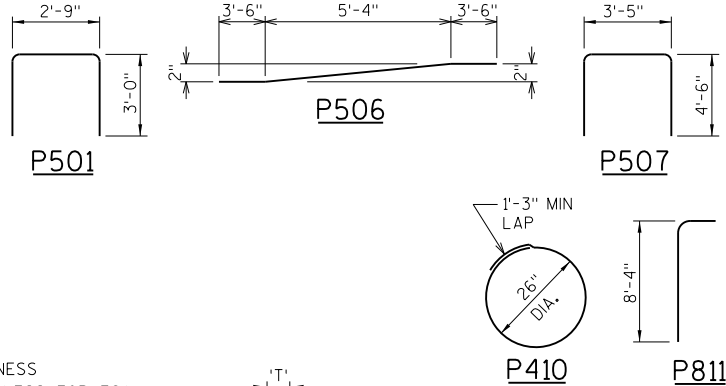
BILL OF BARS PIER 1

STAGE 1						
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
P501	X	120	8 - 9		X	CAP STIRRUP
P902	X	13	31 - 2			CAP HORIZ
not used						
P504	X	4	31 - 2			CAP HORIZ SIDES
not used						
P506	X	9	12 - 4		X	CAP TOP HORIZ
P507	X	5	12 - 5		X	CAP ENDS
P508	X	18	2 - 0			DOWEL
P809	X	24	55 - 0			PILE CAGE VERT
P410	X	84	8 - 1		X	PILE TIE
P811	X	24	9 - 11		X	PILE PROJECTION
STAGE 2						
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
P501	X	136	8 - 9		X	CAP STIRRUP
P902	X	13	31 - 2			CAP HORIZ
P903	X	13	12 - 4			CAP HORIZ
P504	X	4	31 - 2			CAP HORIZ SIDES
P505	X	4	8 - 6			CAP HORIZ SIDES
P506	X	12	12 - 4		X	CAP TOP HORIZ
P507	X	6	12 - 5		X	CAP ENDS
P508	X	24	2 - 0			DOWEL
P809	X	24	55 - 0			PILE CAGE VERT
P410	X	84	8 - 1		X	PILE TIE
P811	X	24	9 - 11		X	PILE PROJECTION

- ① BAR COUPLERS REQUIRED AT STAGING LINE. COUPLES PER SPEC.
② CUT BARS IN THE FIELD TO FIT.

BILL OF BARS PIER 2

STAGE 1						
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
P501	X	120	8 - 9	X		CAP STIRRUP
P902	X	13	31 - 2			CAP HORIZ
not used						
P504	X	4	31 - 2			CAP HORIZ SIDES
not used						
P506	X	9	12 - 4	X		CAP TOP HORIZ
P507	X	5	12 - 5	X		CAP ENDS
P508	X	18	2 - 0			DOWEL
P809	X	24	55 - 0			PILE CAGE VERT
P410	X	84	8 - 1	X		PILE TIE
P811	X	24	9 - 11	X		PILE PROJECTION
STAGE 2						
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
P501	X	136	8 - 9		X	CAP STIRRUP
P902	X	13	31 - 2			CAP HORIZ
P903	X	13	12 - 4			CAP HORIZ
P504	X	4	31 - 2			CAP HORIZ SIDES
P505	X	4	8 - 6			CAP HORIZ SIDES
P506	X	12	12 - 4		X	CAP TOP HORIZ
P507	X	6	12 - 5		X	CAP ENDS
P508	X	24	2 - 0			DOWEL
P809	X	24	55 - 0			PILE CAGE VERT
P410	X	84	8 - 1		X	PILE TIE
P811	X	24	9 - 11		X	PILE PROJECTION



PILE SPLICE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-280

DRAWN BY DLF PLANS CK'D. NCK

PIER 1 & 2
DETAILS

SHEET 13 OF 28

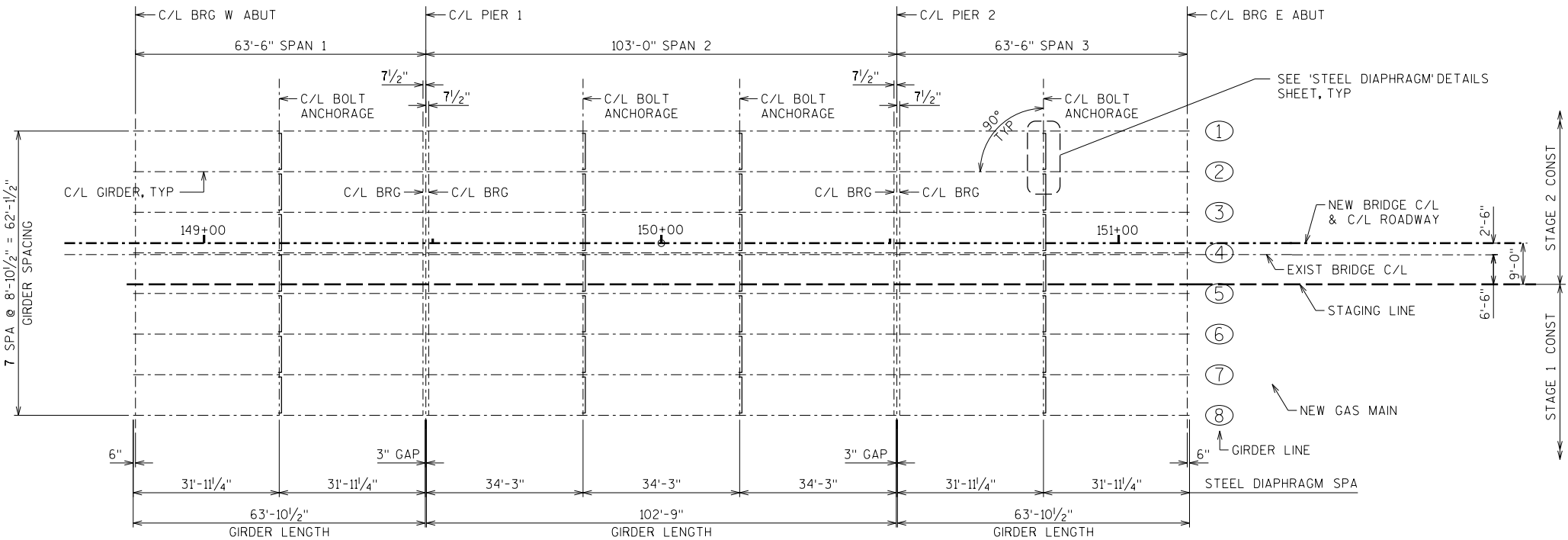
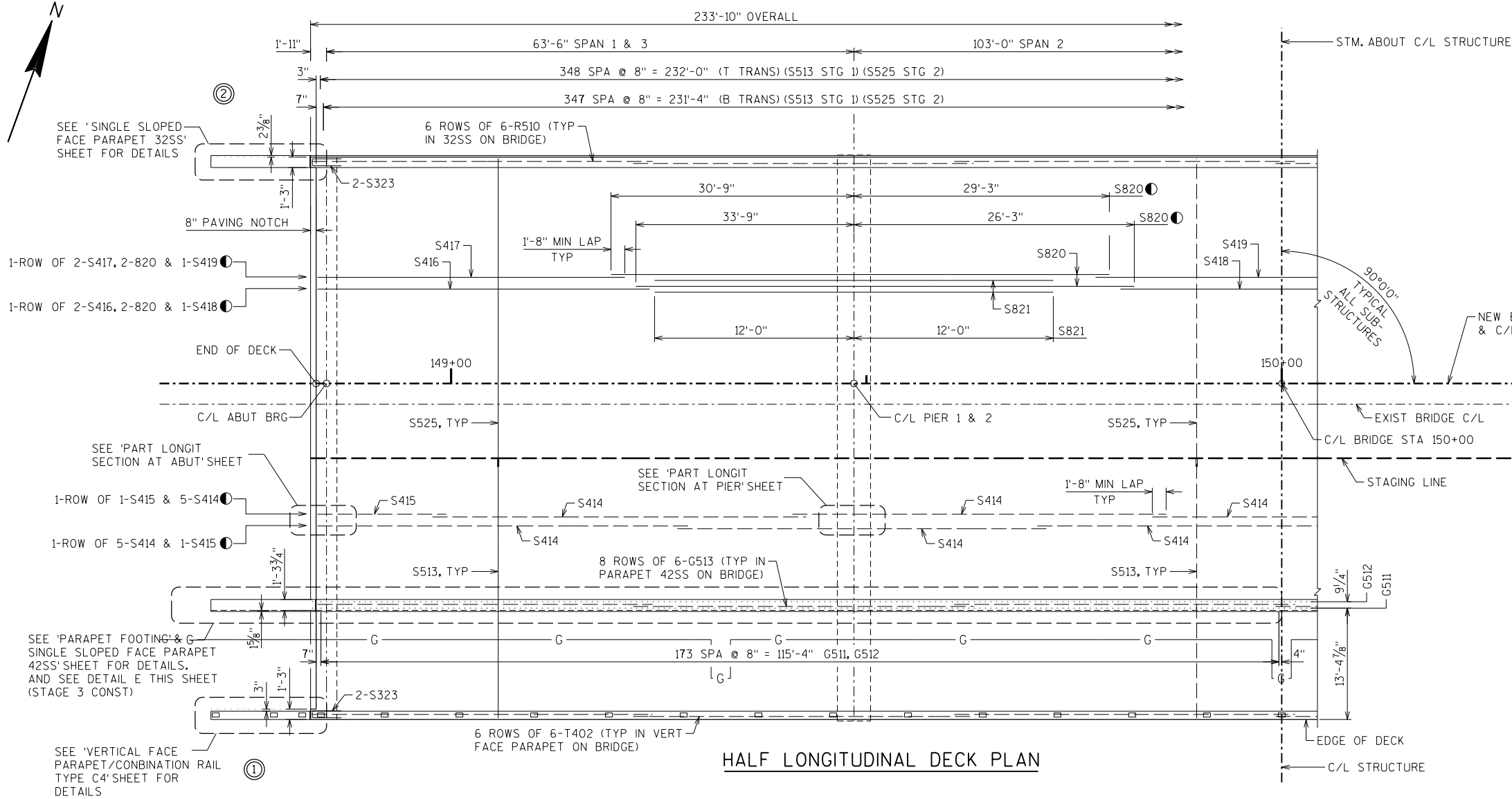
NO.	DATE	REVISION	BY

PLOT TIME: 9:33:53 AM

PLOT DATE: 11/25/2014

FILE NAME : S:\AE\VC\Chipm\16724\5-final-dsgn\51-drawings\20-Struct\br\bridge\B09280ssl.dgn

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STATE PROJECT NUMBER

8919-03-72

SUPERSTRUCTURE NOTES & SYMBOLS:

BOTTOM TRANSVERSE BAR STEEL SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF SLAB TO SUPPORT THE END OF THE BOTTOM TRANSVERSE BAR STEEL.

TOP LONGITUDINAL BAR STEEL SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.

FOR PRESTRESSED GIRDER DETAILS SEE SHEET 18 & 19.

FOR STEEL INTERMEDIATE DIAPHRAGM DETAILS SEE SHEET 20.

● ALTERNATE ROWS SO LAPS STAGGER AS SHOWN AND AS SPACED IN TRANSVERSE SECTION.

— INDICATES TOP BAR STEEL REINFORCEMENT
- - - INDICATES BOT BAR STEEL REINFORCEMENT

○ INDICATES WINGWALL:
WING 1 SHOWN, WING 4 SIMILAR
WING 2 SHOWN, WING 3 SIMILAR.

UN = UNLESS SHOWN OR NOTED OTHERWISE

FF = FRONT FACE

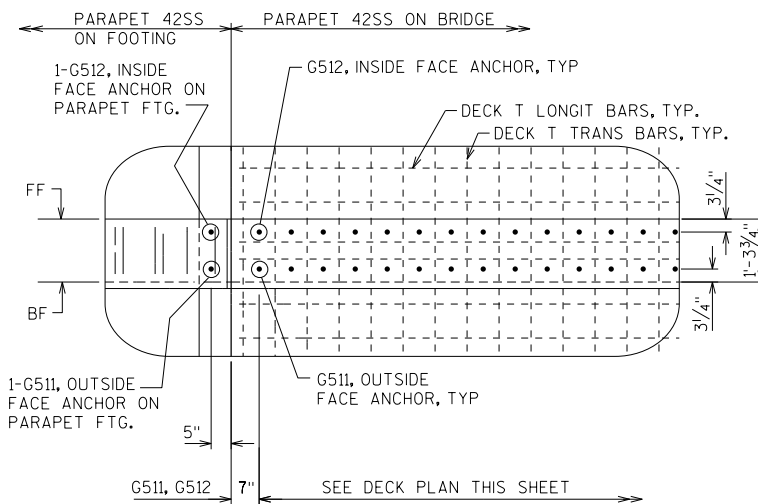
BF = BACK FACE

EF = EACH FACE

T = TOP

B = BOTTOM

○ = GIRDER LINE 1 THRU 8



DETAIL E STAGE 3 CONST

		8	
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY DLF		PLANS CK'D. NCK	
SUPERSTRUCTURE DETAILS			SHEET 14 OF 28

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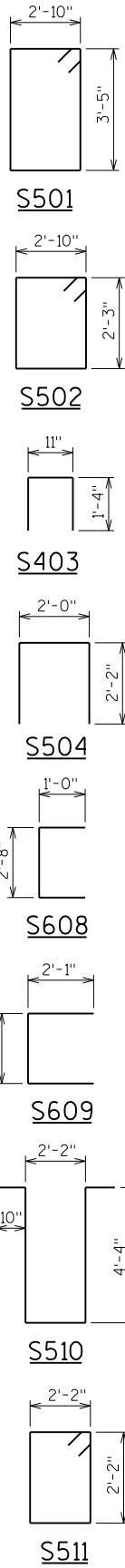
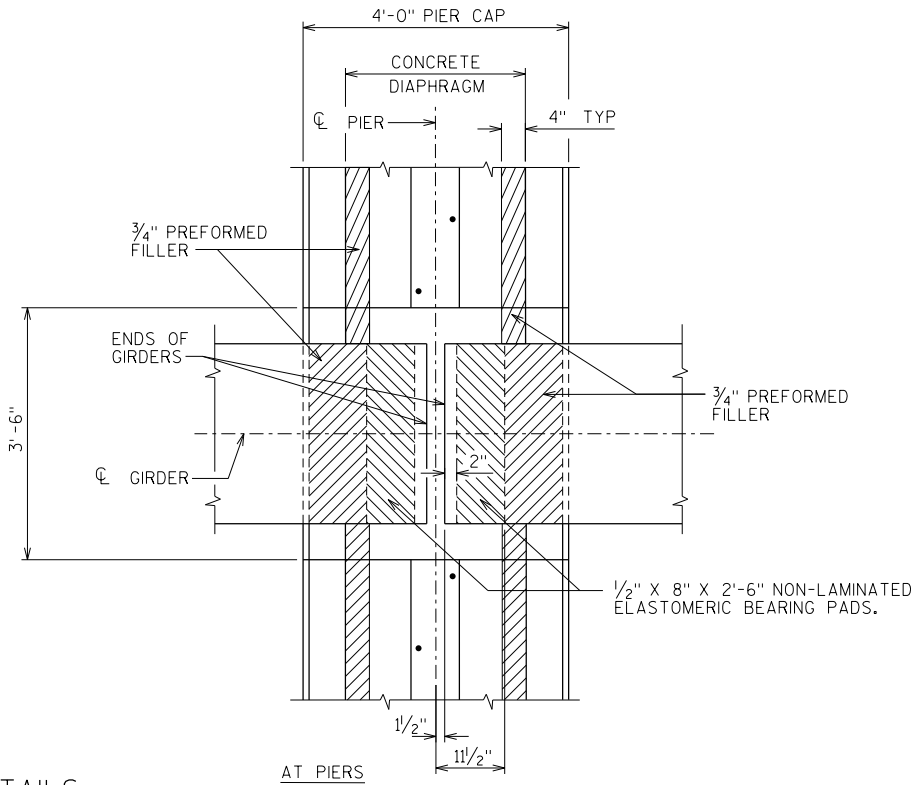
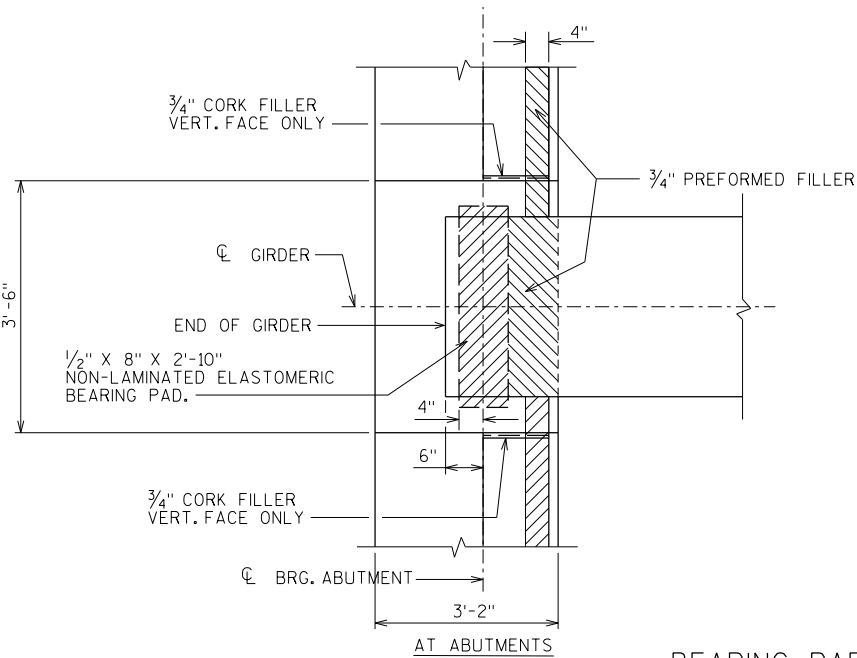
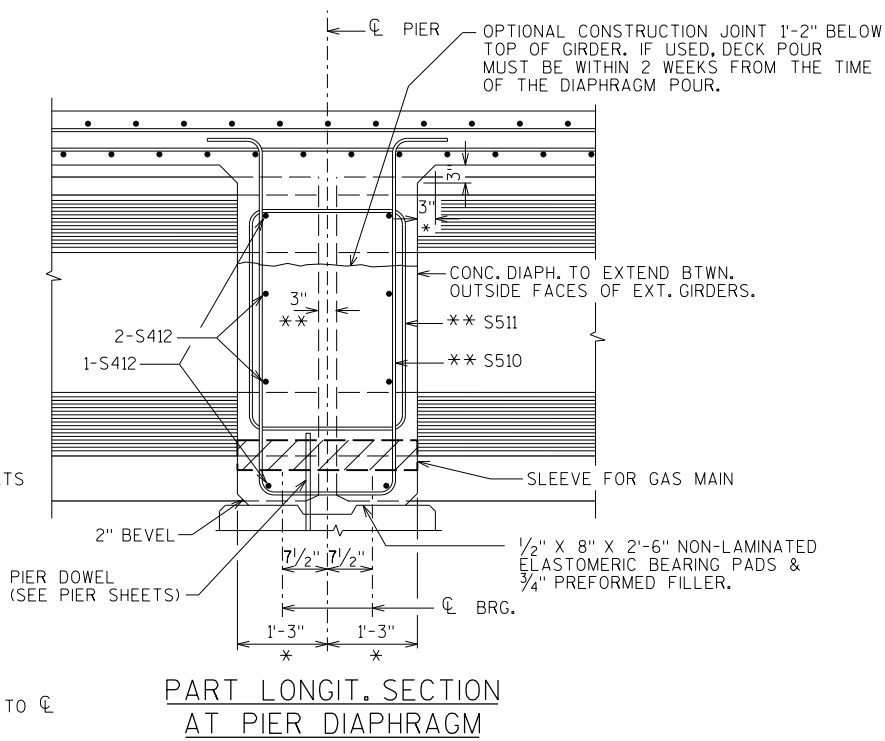
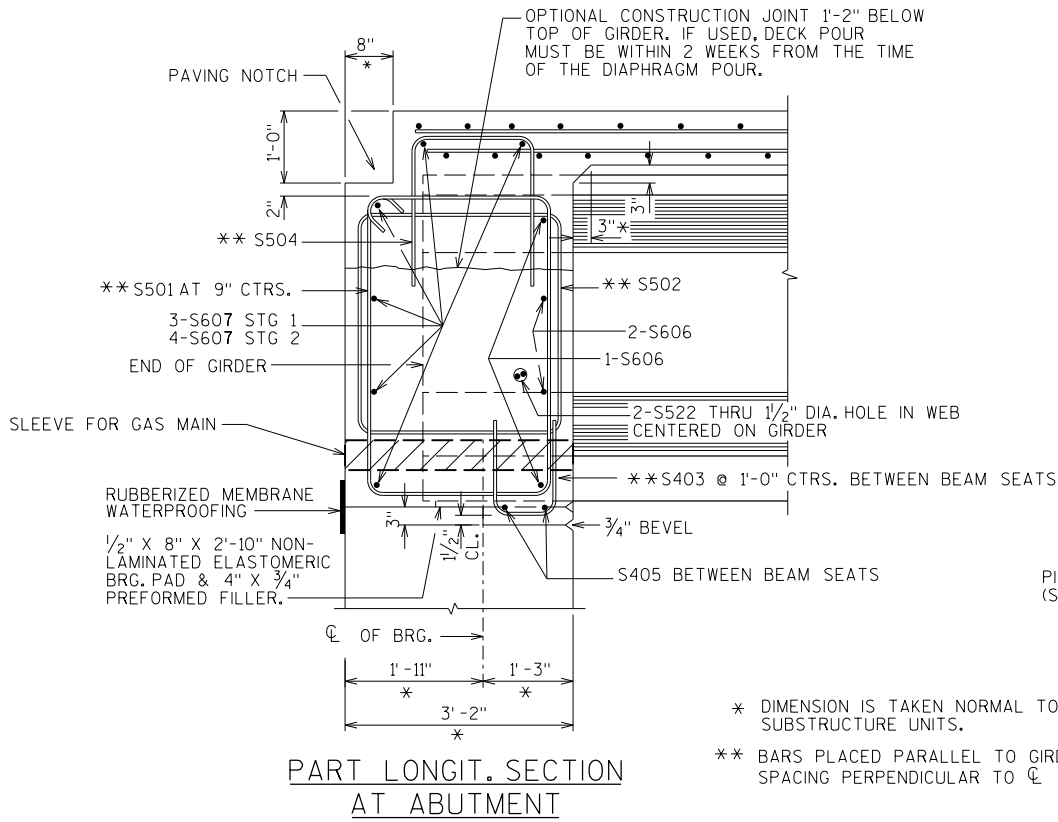


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PLOT DATE: 11/25/2014

FILE NAME : S:\AE\VC\Chipm\16724\5-final-dsgn\51-drawings\20-Struct\br\idg\B09280ss4.dgn

1 2 3 4 7 8 16



STATE PROJECT NUMBER					
8919-03-72					
NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.					
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.					
BILL OF BARS STAGE 1 SUPERSTRUCTURE					
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT LOCATION
S501	X	52	13 - 1		X ABUT DIAPH STIRRUP
S502	X	14	10 - 9		X ABUT DIAPH STIRRUP
S403	X	36	3 - 5		X ABUT DIAPH KEY
S504	X	52	6 - 1		X ABUT DIAPH TIE
S405	X	12	4 - 11		ABUT DIAPH KEY HORIZ
S606	X	36	5 - 8		ABUT DIAPH HORIZ
S607	X	36	11 - 9		ABUT DIAPH HORIZ
S608	X	4	4 - 4		X ABUT DIAPH HORIZ
S609	X	4	6 - 6		X ABUT DIAPH HORIZ
S510	X	36	12 - 0		X PIER DIAPH STIRRUP
S511	X	12	9 - 3		X PIER DIAPH STIRRUP
S412	X	72	5 - 8		PIER DIAPH HORIZ
S513	X	697	31 - 0		SLAB TRANS T & B
S414	X	225	45 - 0		SLAB LONGIT B
S415	X	45	15 - 6		SLAB LONGIT B
S416	X	46	32 - 6		SLAB LONGIT T
S417	X	44	35 - 6		SLAB LONGIT T
S418	X	23	53 - 10		SLAB LONGIT T
S419	X	22	47 - 10		SLAB LONGIT T
S820	X	90	60 - 0		SLAB LONGIT T
S821	X	82	24 - 0		SLAB LONGIT T
S522	X	16	6 - 0		THRU GIRDERS
S323	X	4	7 - 11		X SLAB CORNERS
S424	X	4	4 - 4		ABUT DIAPH END

BILL OF BARS STAGE 2 SUPERSTRUCTURE					
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT LOCATION
S501	X	68	13 - 1		X ABUT DIAPH STIRRUP
S502	X	18	10 - 9		X ABUT DIAPH STIRRUP
S403	X	48	3 - 5		X ABUT DIAPH KEY
S504	X	68	6 - 1		X ABUT DIAPH TIE
S405	X	16	4 - 11		ABUT DIAPH KEY HORIZ
S606	X	48	5 - 8		ABUT DIAPH HORIZ
S607	X	48	11 - 9		ABUT DIAPH HORIZ
S608	X	4	4 - 4		X ABUT DIAPH HORIZ
S609	X	4	6 - 6		X ABUT DIAPH HORIZ
S510	X	48	12 - 0		X PIER DIAPH STIRRUP
S511	X	16	9 - 3		X PIER DIAPH STIRRUP
S412	X	96	5 - 8		PIER DIAPH HORIZ
not used					
S414	X	260	45 - 0		SLAB LONGIT B
S415	X	52	15 - 6		SLAB LONGIT B
S416	X	52	32 - 6		SLAB LONGIT T
S417	X	52	35 - 6		SLAB LONGIT T
S418	X	26	53 - 10		SLAB LONGIT T
S419	X	26	47 - 10		SLAB LONGIT T
S820	X	104	60 - 0		SLAB LONGIT T
S821	X	98	24 - 0		SLAB LONGIT T
S522	X	16	6 - 0		THRU GIRDERS
S323	X	4	7 - 11		X SLAB CORNERS
S424	X	4	4 - 4		ABUT DIAPH END
S525	X	697	36 - 0		SLAB TRANS T & B
S526	X	697	6 - 0		SLAB TRANS T & B

① BAR COUPLERS REQUIRED AT STAGING LINE. COUPLES PER SPEC.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
SUPERSTRUCTURE DETAILS			SHEET 16 OF 28

PLOT TIME: 9:33:54 AM

PLOT DATE: 11/25/2014

FILE NAME : S:\AE\Chipm\16724\5-final-dsgn\51-drawings\20-Struct\bridge\B09280.es3.dgn

FINAL TOP OF DECK ELEVATIONS											
SPAN 1											
	WEST ABUT	.1	.2	.3	.4	.5	.6	.7	.8	.9	PIER 1
NORTH EDGE OF DECK (GUTTER LINE)	908.49	908.46	908.42	908.39	908.36	908.33	908.29	908.26	908.23	908.20	
GIRDER LINE 1	908.52	908.49	908.45	908.42	908.39	908.36	908.32	908.29	908.26	908.23	
GIRDER LINE 2	908.70	908.66	908.63	908.60	908.57	908.53	908.50	908.47	908.44	908.41	
GIRDER LINE 3	908.87	908.84	908.81	908.78	908.74	908.71	908.68	908.65	908.61	908.58	
C/L	909.01	908.98	908.94	908.91	908.88	908.85	908.81	908.78	908.75	908.72	
GIRDER LINE 4	908.97	908.93	908.90	908.87	908.84	908.80	908.77	908.74	908.71	908.68	
GIRDER LINE 5	908.79	908.76	908.72	908.69	908.66	908.63	908.59	908.56	908.53	908.50	
GIRDER LINE 6	908.61	908.58	908.55	908.51	908.48	908.45	908.42	908.38	908.35	908.32	
GIRDER LINE 7	908.43	908.40	908.37	908.34	908.30	908.27	908.24	908.21	908.17	908.14	
GIRDER LINE 8	908.26	908.22	908.19	908.16	908.13	908.09	908.06	908.03	908.00	907.97	
SOUTH EDGE OF DECK (BREAK POINT)	908.23	908.19	908.16	908.13	908.10	908.06	908.03	908.00	907.97	907.93	

FINAL TOP OF DECK ELEVATIONS											
SPAN 2											
	PIER 1	.1	.2	.3	.4	.5	.6	.7	.8	.9	PIER 2
NORTH EDGE OF DECK (GUTTER LINE)	908.17	908.11	908.06	908.01	907.96	907.90	907.85	907.80	907.74	907.69	907.64
GIRDER LINE 1	908.20	908.14	908.09	908.04	907.99	907.93	907.88	907.83	907.77	907.72	907.67
GIRDER LINE 2	908.37	908.32	908.27	908.22	908.16	908.11	908.06	908.00	907.95	907.90	907.85
GIRDER LINE 3	908.55	908.50	908.45	908.39	908.34	908.29	908.23	908.18	908.13	908.08	908.02
C/L	908.69	908.63	908.58	908.53	908.48	908.42	908.37	908.32	908.26	908.21	908.16
GIRDER LINE 4	908.64	908.59	908.54	908.49	908.43	908.38	908.33	908.27	908.22	908.17	908.12
GIRDER LINE 5	908.47	908.41	908.36	908.31	908.26	908.20	908.15	908.10	908.04	907.99	907.94
GIRDER LINE 6	908.29	908.24	908.18	908.13	908.08	908.03	907.97	907.92	907.87	907.81	907.76
GIRDER LINE 7	908.11	908.06	908.01	907.95	907.90	907.85	907.79	907.74	907.69	907.64	907.58
GIRDER LINE 8	907.93	907.88	907.83	907.78	907.72	907.67	907.62	907.56	907.51	907.46	907.41
SOUTH EDGE OF DECK (BREAK POINT)	907.90	907.85	907.80	907.74	907.69	907.64	907.59	907.53	907.48	907.43	907.38

FINAL TOP OF DECK ELEVATIONS											
SPAN 3											
	PIER 2	.1	.2	.3	.4	.5	.6	.7	.8	.9	EAST ABUT
NORTH EDGE OF DECK (GUTTER LINE)		907.61	907.58	907.54	907.51	907.48	907.45	907.41	907.38	907.35	907.32
GIRDER LINE 1		907.64	907.61	907.57	907.54	907.51	907.48	907.44	907.41	907.38	907.35
GIRDER LINE 2		907.81	907.78	907.75	907.72	907.69	907.65	907.62	907.59	907.56	907.52
GIRDER LINE 3		907.99	907.96	907.93	907.90	907.86	907.83	907.80	907.77	907.73	907.70
C/L		908.13	908.10	908.06	908.03	908.00	907.97	907.93	907.90	907.87	907.84
GIRDER LINE 4		908.08	908.05	908.02	907.99	907.96	907.92	907.89	907.86	907.83	907.79
GIRDER LINE 5		907.91	907.88	907.84	907.81	907.78	907.75	907.71	907.68	907.65	907.62
GIRDER LINE 6		907.73	907.70	907.67	907.63	907.60	907.57	907.54	907.50	907.47	907.44
GIRDER LINE 7		907.55	907.52	907.49	907.46	907.42	907.39	907.36	907.33	907.29	907.26
GIRDER LINE 8		907.37	907.34	907.31	907.28	907.25	907.21	907.18	907.15	907.12	907.08
SOUTH EDGE OF DECK (BREAK POINT)		907.34	907.31	907.28	907.25	907.21	907.18	907.15	907.12	907.08	907.05

NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION				
STRUCTURE B-9-280				
		DRAWN BY	DLF	PLANS CK'D. NCK
SUPERSTRUCTURE DETAILS			SHEET 17 OF 28	

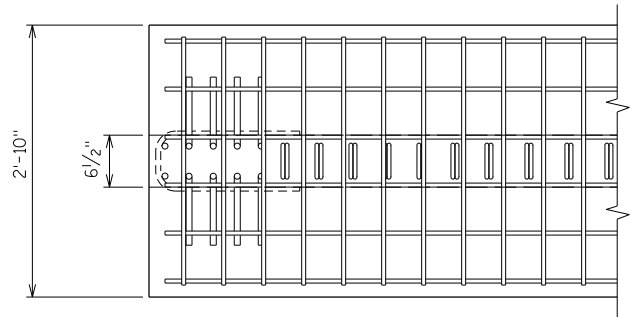
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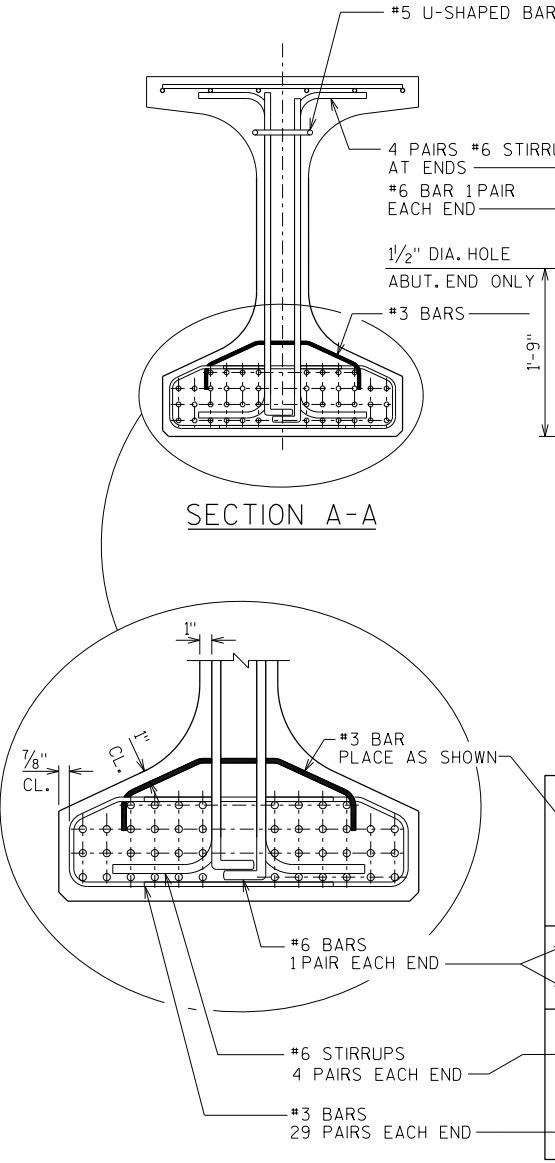
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18

9
5
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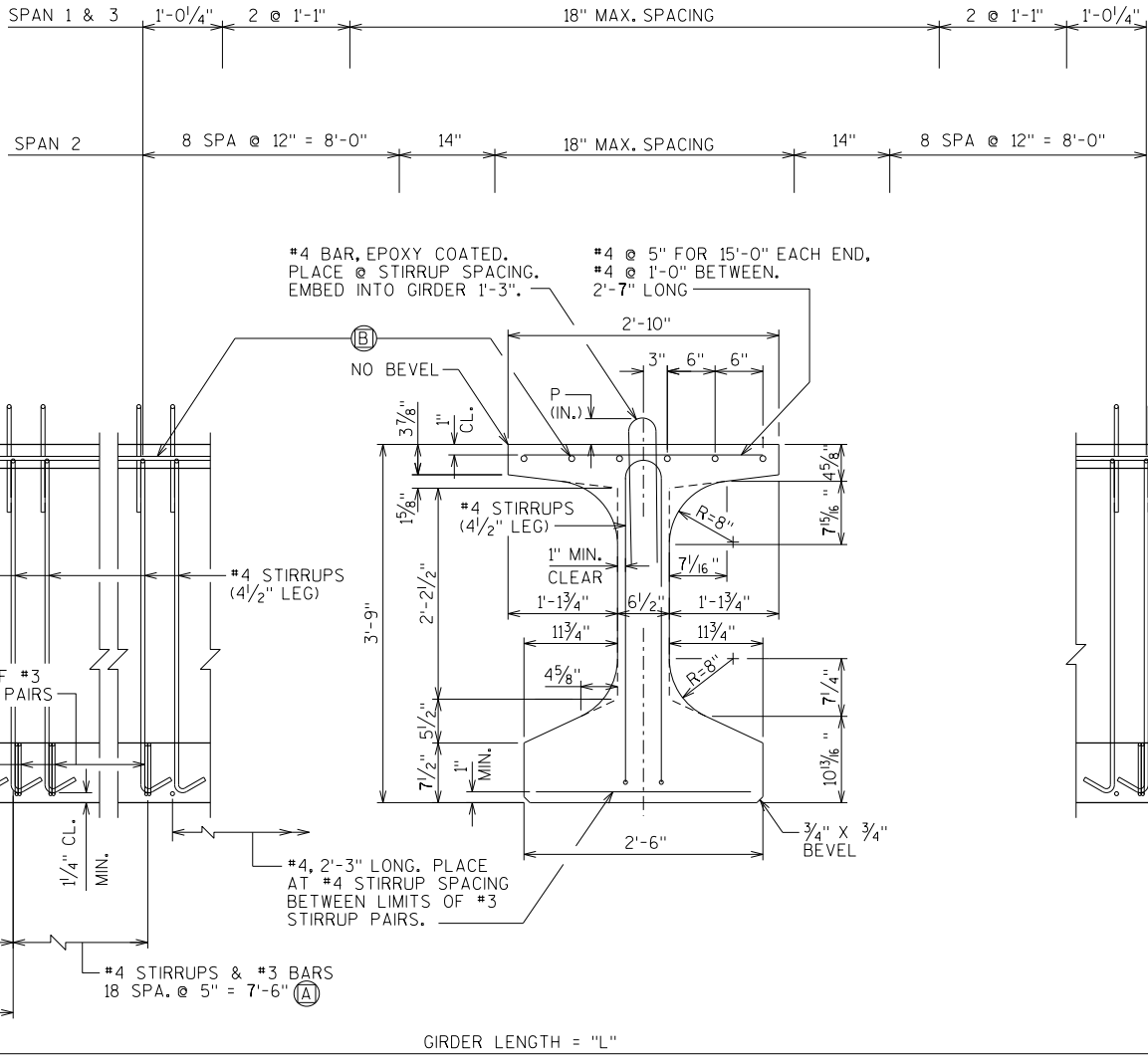


TOP FLANGE



SECTION A-A

BOTTOM FLANGE



SIDE VIEW & TYPICAL SECTION IN SPAN

- (A) DETAIL TYP. AT EACH END
(B) 6 #_ BARS, FULL LENGTH, MIN. LAP = 2'-7".

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA																								
SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)										CONC. STRGTH. f'c (p.s.i.)	"P" 1ST OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN					UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	TOTAL NO. OF STRANDS						f'ci (P.S.I.) *	(IN.)				TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
																			"A"	"B" MIN.	"B" MAX.	"C"		
1 & 3	1-8	63'-10" 1/2"	1/8	1/4	1/4	3/8	3/8	3/8	1/4	1/4	1/8	8000	7	7	7	0.6	-	-	-	-	-	18	4500	
2	1-8	102'-9"	3/4	1 3/8	1 7/8	2 1/8	2 1/4	2 1/8	1 7/8	1 3/8	3/4	8000	7	6	7	0.6	40	6800	39	13.5	16.5	5	-	

STATE PROJECT NUMBER

8919-03-72

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

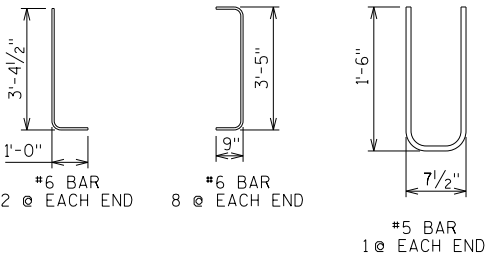
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



8
18

9
5
1 2

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
45W" PRESTRESSED GIRDER DETAILS			SHEET 18 OF 28

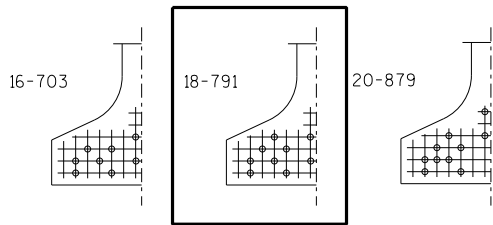
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PLOT DATE: 11/25/2014

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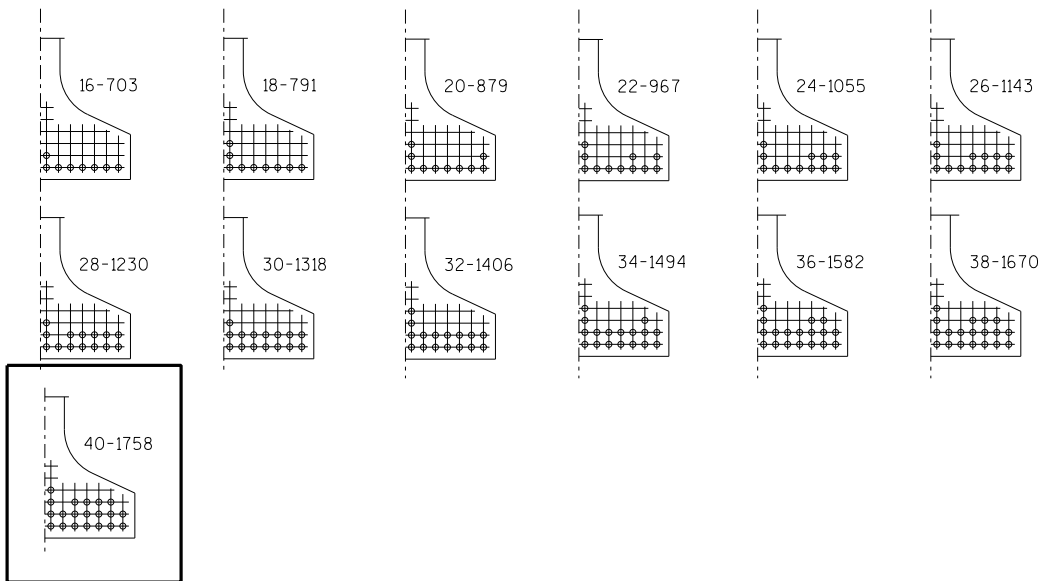
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1 2 5 9



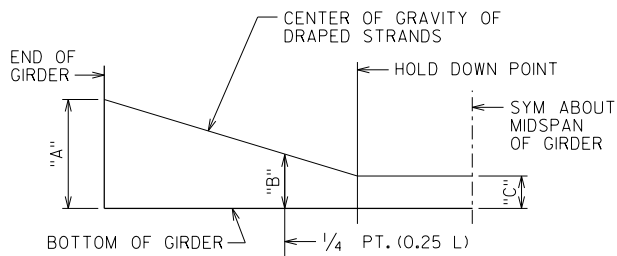
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS

0.6"φ STRANDS



ARRANGEMENT AT $\frac{1}{4}$ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"φ STRANDS



DRAPED STRAND PROFILE

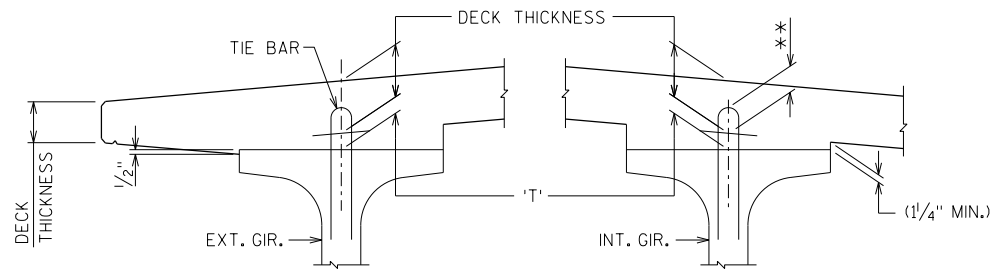
*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1 & 3	1 $\frac{1}{8}$
2	4 $\frac{3}{8}$

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T',
USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

STATE PROJECT NUMBER

8919-03-72



DECK HAUNCH DETAIL

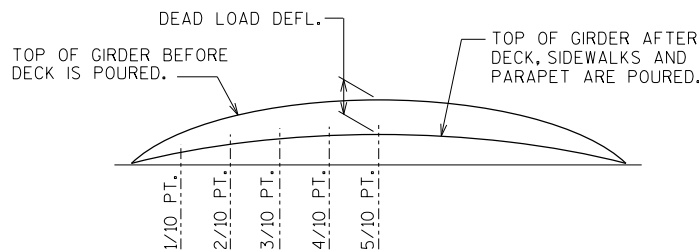
IF 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, ** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT $\frac{1}{4}$ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3 $\frac{5}{8}$ " WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

NOTE:
3.63" AT ABUTMENTS
3.63" AT PIERS



DEAD LOAD DEFLECTION DIAGRAM

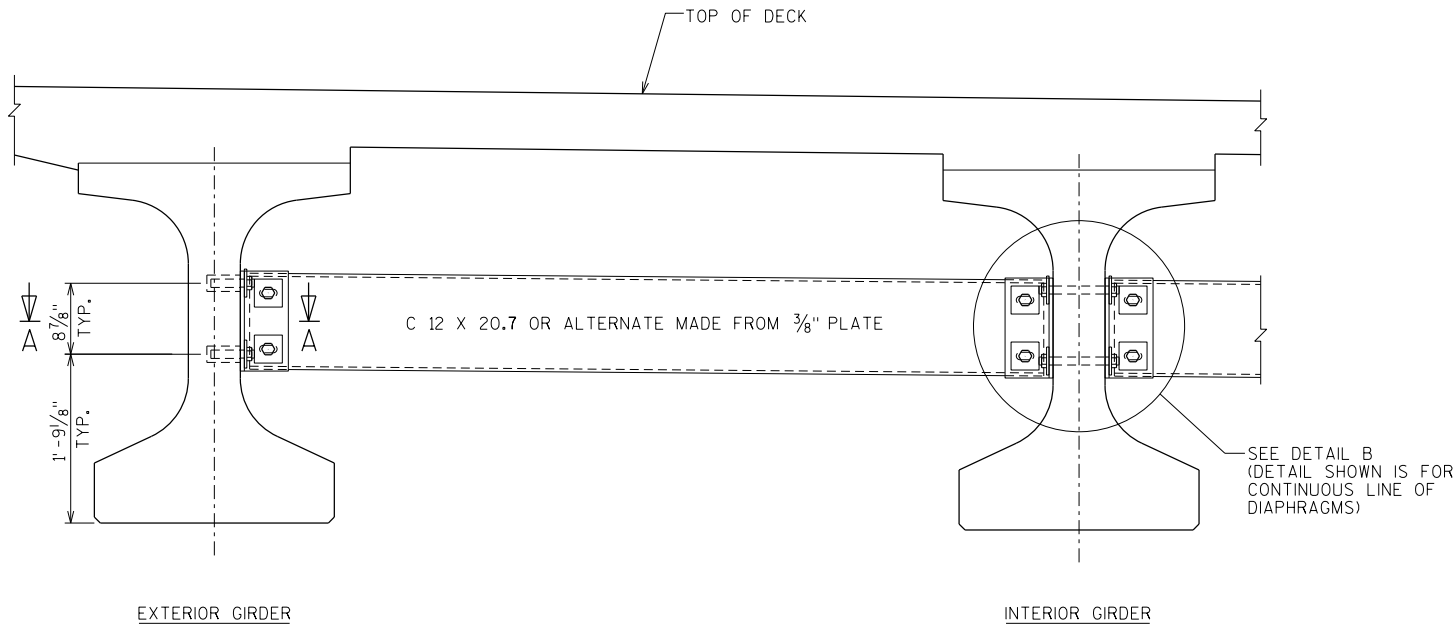
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
45W" PRESTRESSED GIRDER DETAILS		SHEET 19 OF 28	

PLOT TIME: 9:33:55 AM

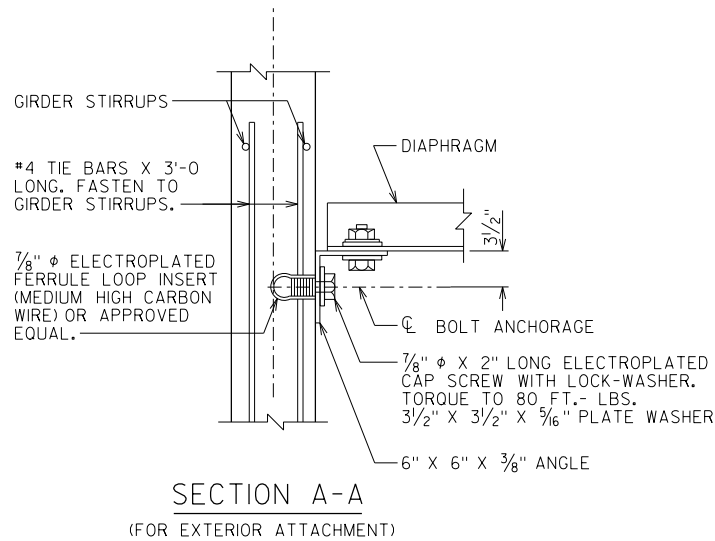
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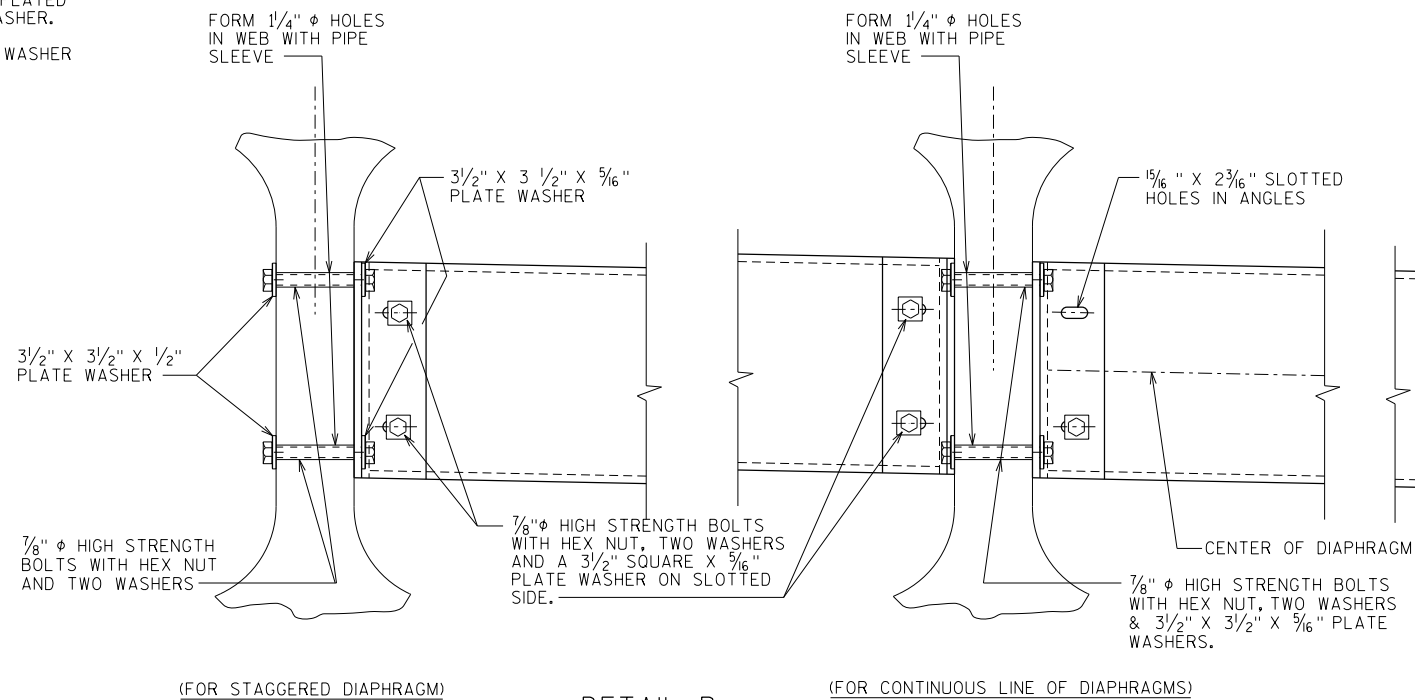
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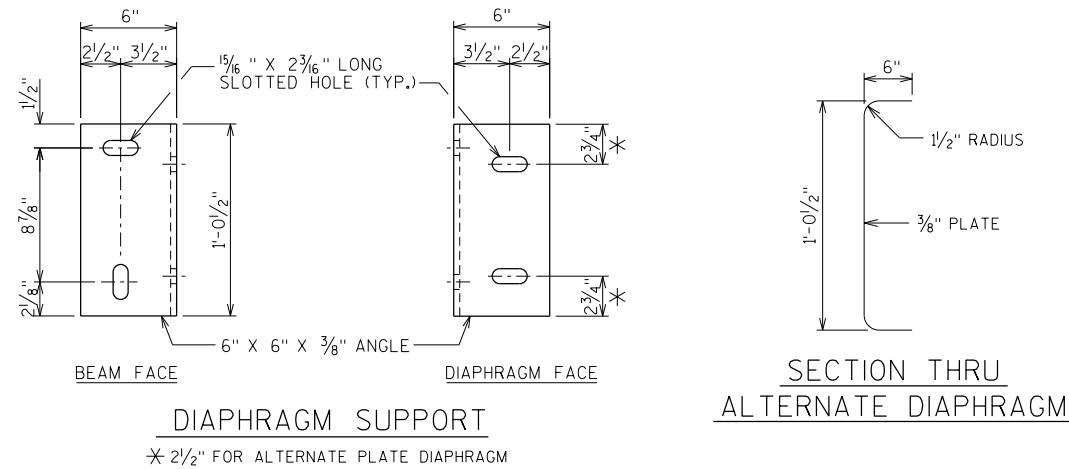
PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A
(FOR EXTERIOR ATTACHMENT)



DETAIL B



DIAPHRAGM SUPPORT

SECTION THRU
ALTERNATE DIAPHRAGM

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS (STRUCTURE) B-9-280", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S10F OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY DLF		PLANS CK'D. NCK	
STEEL DIAPHRAGM			SHEET 20 OF 28

8

PLOT TIME: 9:33:56 AM

PLOT DATE: 11/25/2014

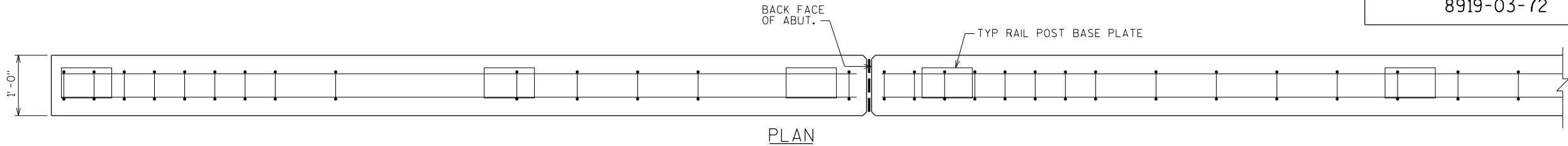
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1 2 3 4 8 11 12

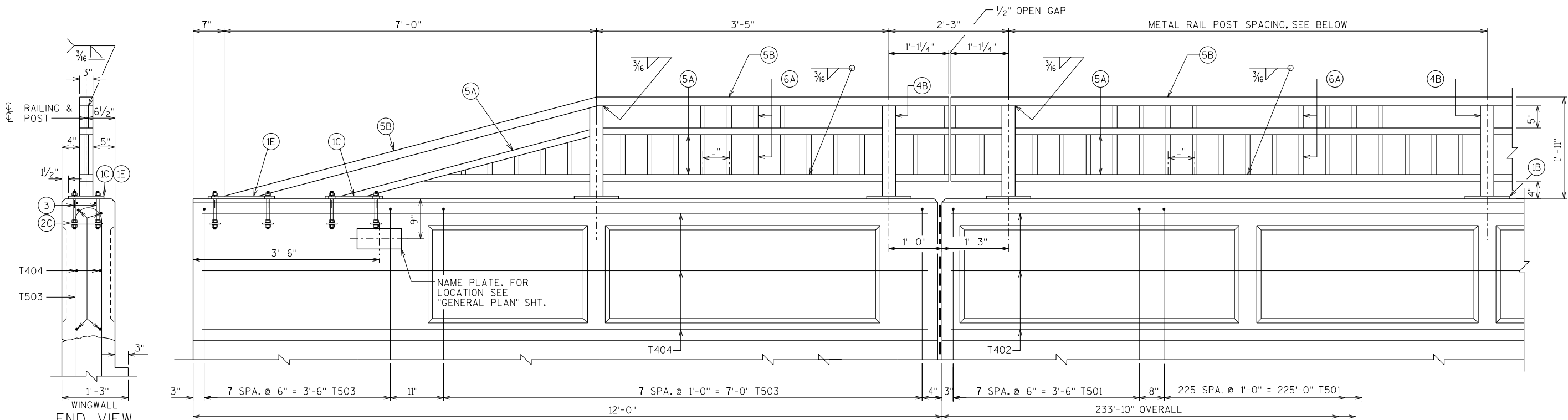
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STATE PROJECT NUMBER

8919-03-72

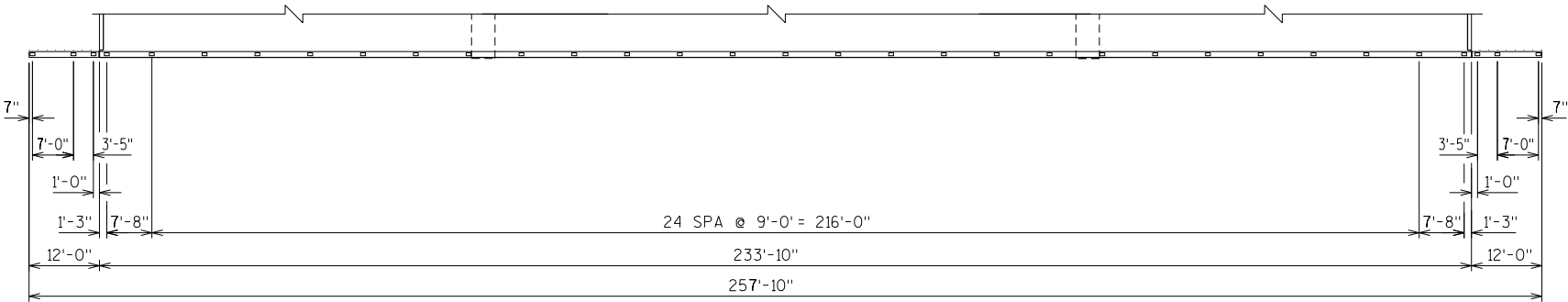


PLAN

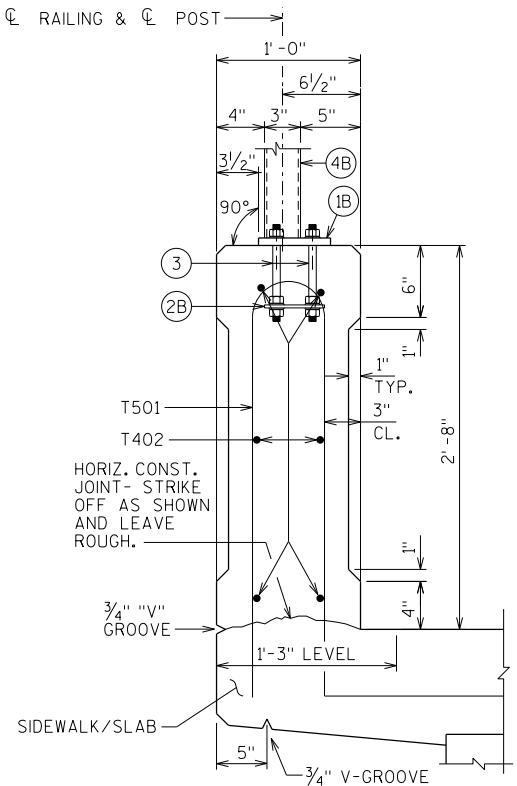


ELEVATION OF PARAPET

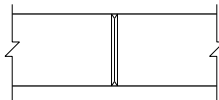
NOTES: NO DEFLECTION JOINTS IN THE PARAPETS ARE REQUIRED.
SEE FDM STD 30.07 FOR ADDITIONAL INFORMATION.



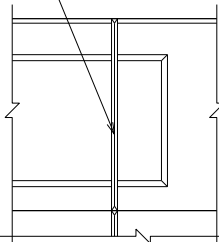
METAL RAIL POST LAYOUT



SECTION THRU PARAPET ON BRIDGE



OPTIONAL CONSTRUCTION JOINTS
IN THE PARAPETS MAY BE USED.
RUN BAR REINF. THRU THE JOINT.
LAP LONGIT. BARS A MIN. OF 1'-9\"/>

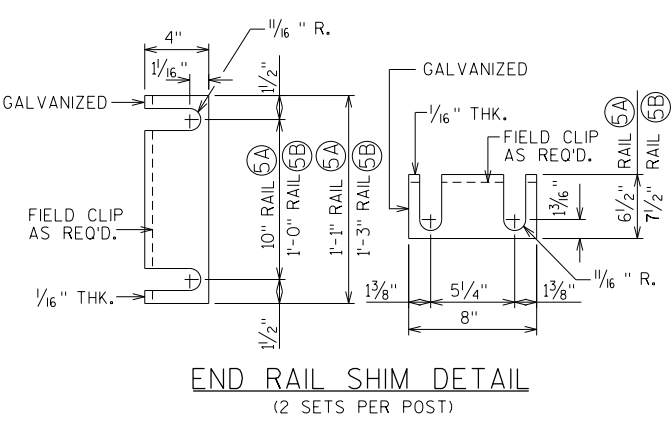
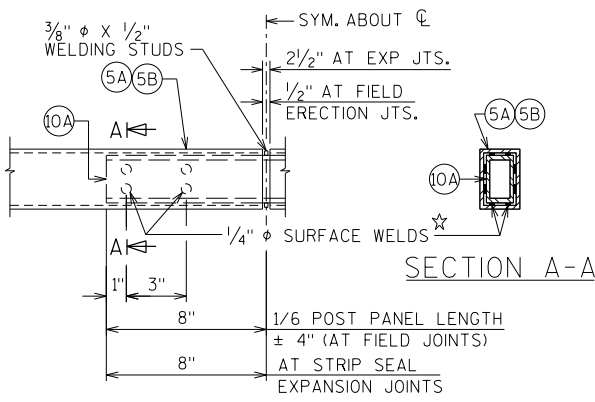
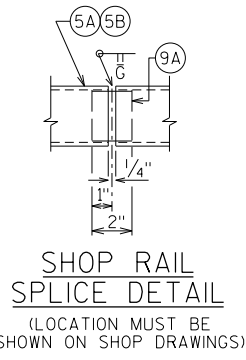
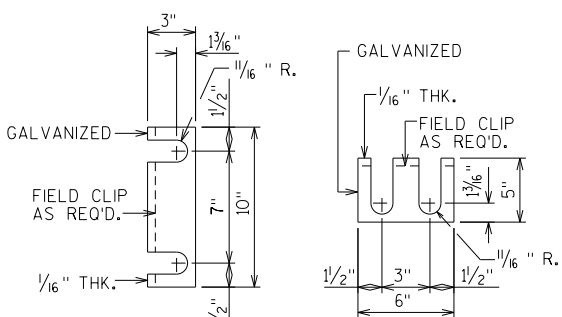
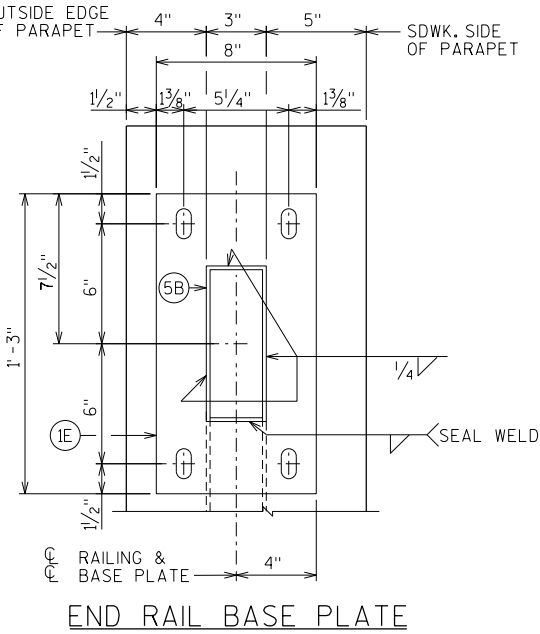
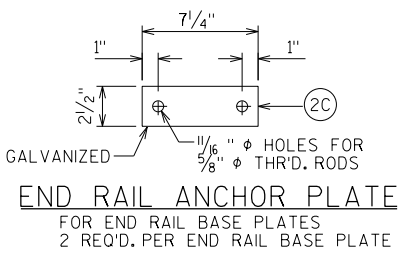
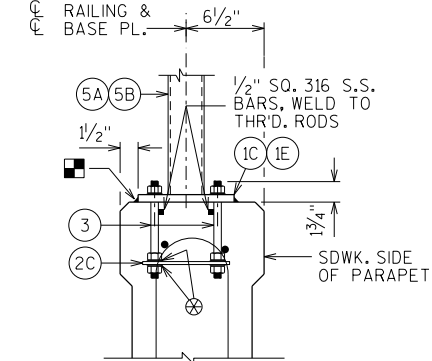
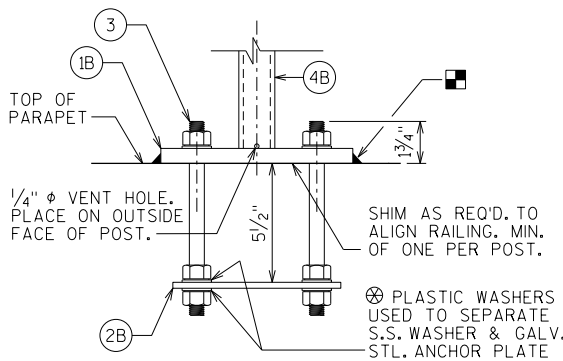
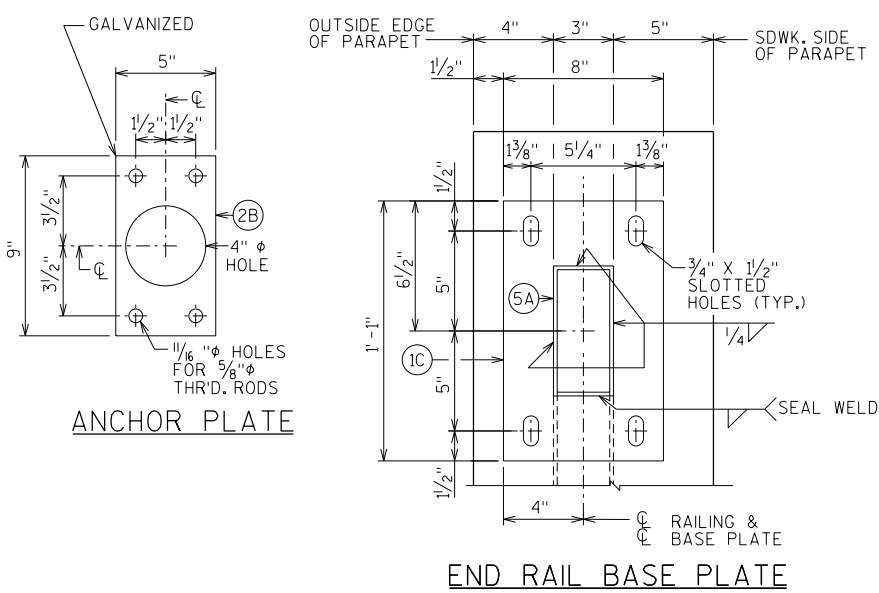
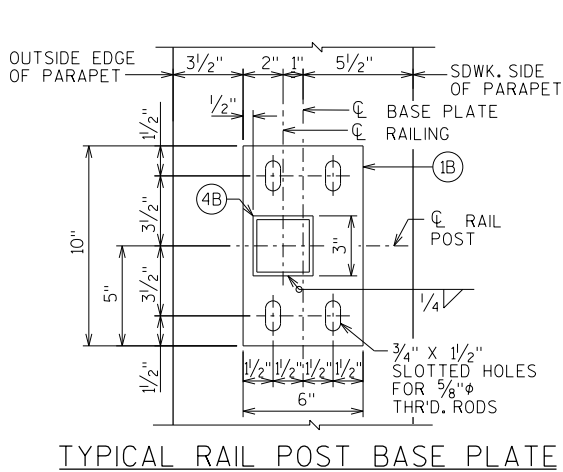


OPTIONAL CONST JOINTS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
VERTICAL FACE PARAPET/COMBINATION RAIL TYPE "C4"		SHEET 21 OF 28	

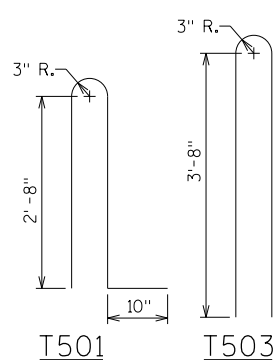
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BILL OF BARS FOR STAGE 1 CONSTRUCTION ON ABUTMENTS AND SUPERSTRUCTURE

BAR MARK	C04T	WEST ABUT.	EAST ABUT.	SUPER.	LENGTH	BENT	LOCATION
T501	X	-	-	242	6'-10"	X	PARAPET VERT.
T402	X	-	-	36	40'-6"		PARAPET HORIZ.
T503	X	16	16	-	8'-2"	X	PARAPET VERT. @ WINGS
T404	X	6	6	-	11'-7"		PARAPET HORIZ. @ WINGS



LEGEND

- 1B PLATE 5/8" X 6" X 10" WITH 3/4" X 1/2" SLOTTED HOLES
- 1C PLATE 5/8" X 8" X 1'-1" WITH 3/4" X 1/2" SLOTTED HOLES.
- 1E PLATE 5/8" X 8" X 1'-3" WITH 3/4" X 1/2" SLOTTED HOLES
- 2B 1/4" X 5" X 9" ANCHOR PLATE WITH 1/16" φ HOLES FOR THR'D. RODS NO. 3.
- 2C 1/4" X 2 1/2" X 7 1/4" ANCHOR PLATE WITH 1/16" φ HOLES FOR THR'D. RODS NO. 3.
- 3 5/8" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE: 4 EQUIVALENT STAINLESS STEEL CONCRETE MASONRY ANCHORS TYPE S 5/8"-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS.)
- 4B STRUCTURAL TUBING 3" X 3" X 3/16". PLACE VERTICAL. WELD TO NO.1 & 5.
- 5A STRUCTURAL TUBING 3" X 1 1/2" X 3/16" RAILS. WELD TO NO.1 & NO.4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- 5B STRUCTURAL TUBING 3" X 2" X 3/16" RAILS. WELD TO NO.1 & NO.4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- 6A BAR 1" X 1" PICKETS. WELD TO NO.5. PLACE VERTICAL.
- 6C BAR 1" X 1 1/2" PICKETS. WELD TO NO.11. PLACE VERTICAL
- 9A RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".
- 10A RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)
- 11A BAR 2 1/2" X 1" X 1'-1".
- 11B BAR 2 1/2" X 1 1/2" X 1'-1".
- 12 1/2" DIA. STAINLESS STEEL BOLT WITH NUT AND LOCKWASHER.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C4 (STRUCTURE) B-9-280", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES, NO.1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO.3 & 12) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO.6 BLAST CLEANING PER SSPC SPECIFICATIONS, PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE "BRIDGE SPECIAL PROVISIONS". THE RAILING SHALL BE PAINTED FEDERAL SPEC 595 C COLOR NO.17038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

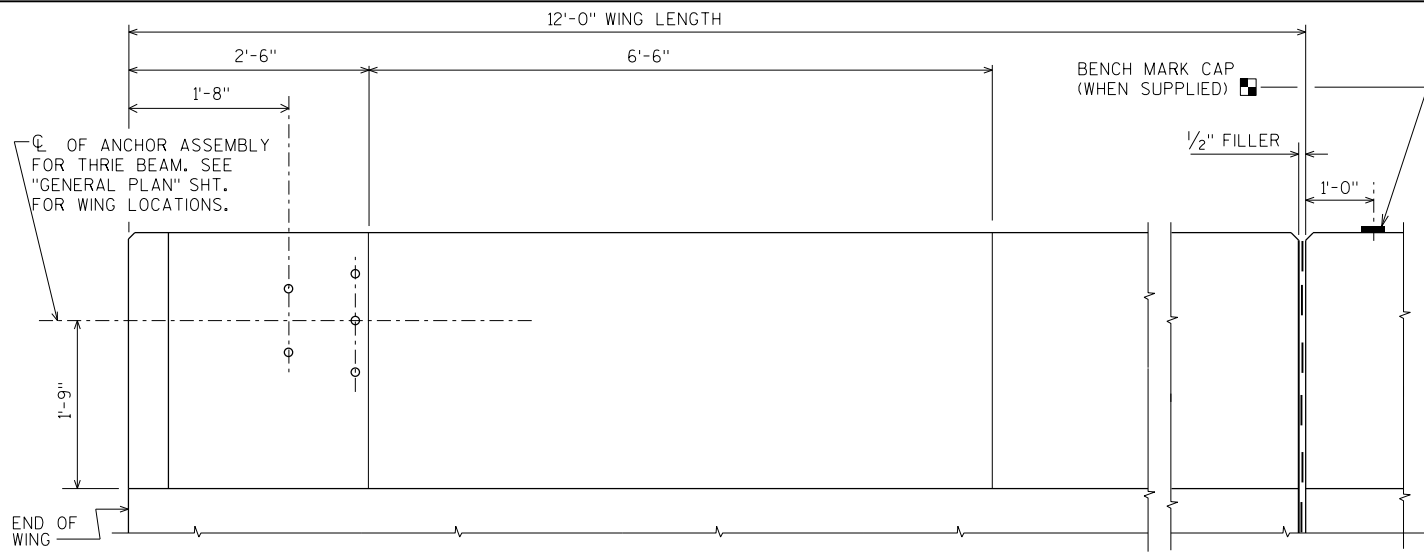
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
VERTICAL FACE PARAPET/COMBINATION RAIL TYPE "C4"		SHEET 22 OF 28	

PLOT TIME: 9:33:57 AM

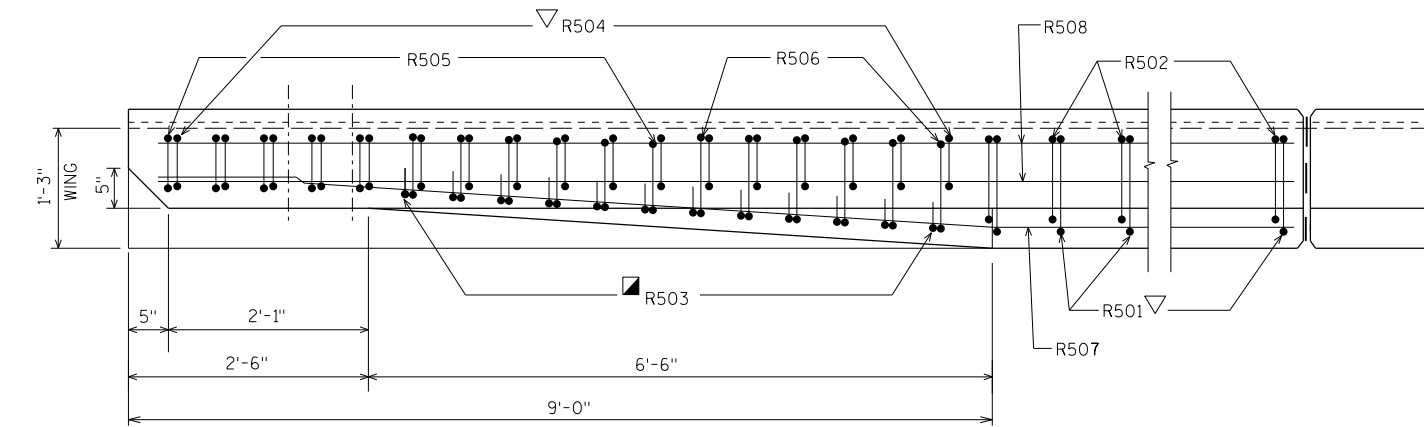
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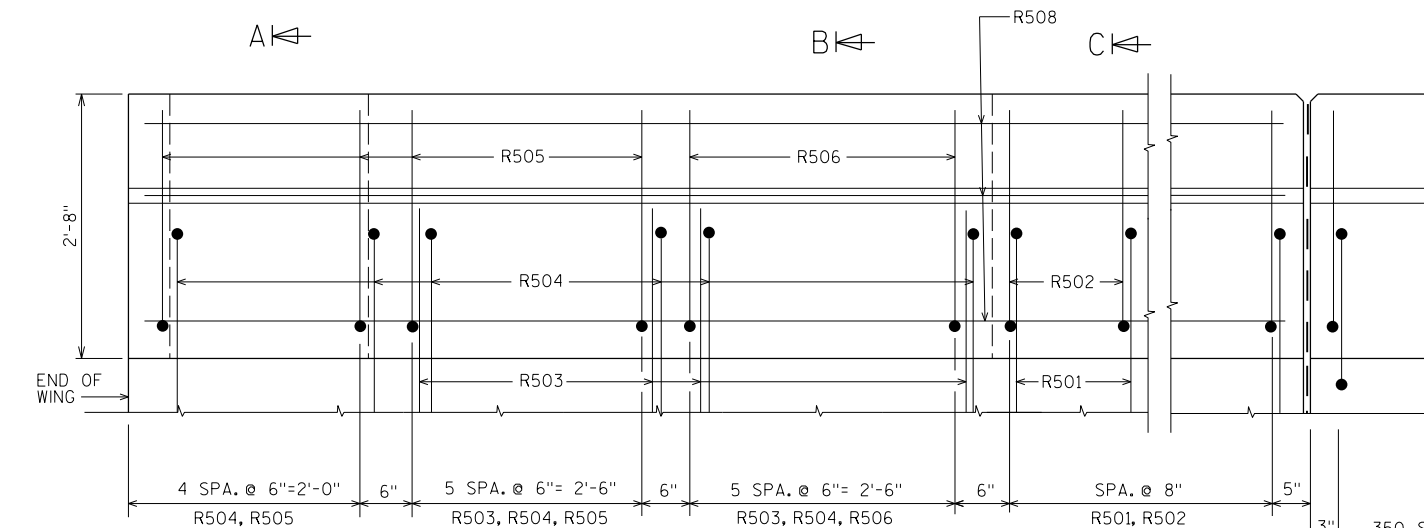
8



INSIDE ELEVATION

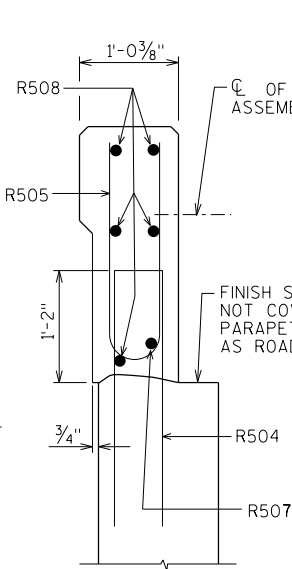


PLAN

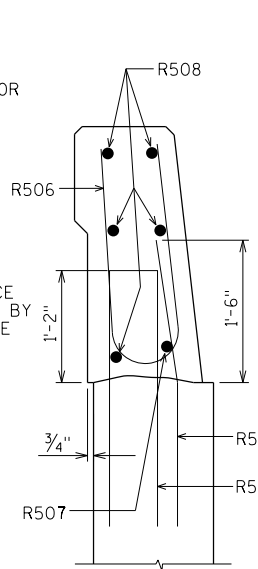


OUTSIDE ELEVATION

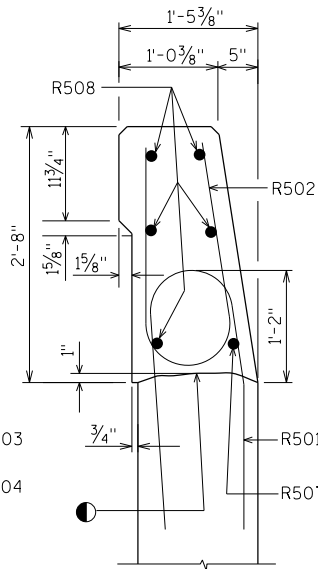
AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



SECTION A



SECTION B

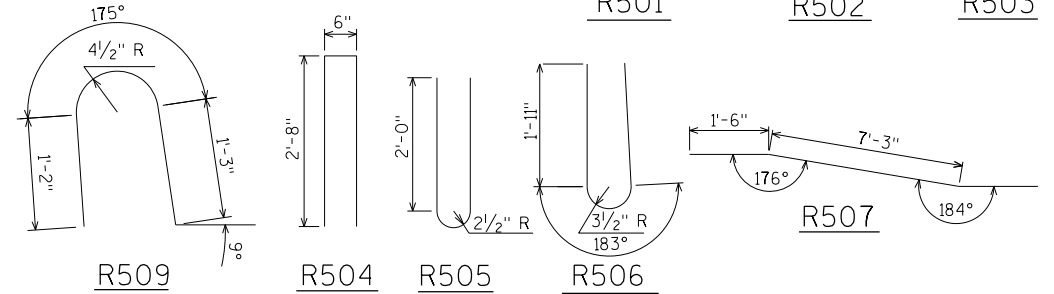
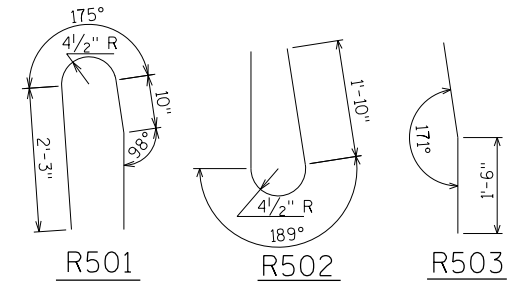


SECTION C

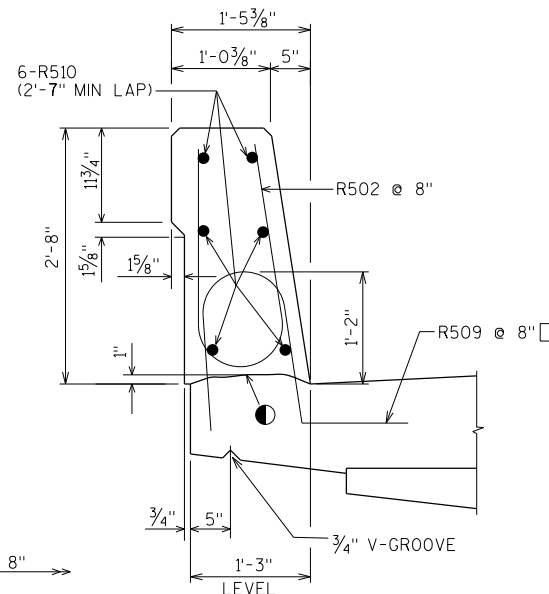
BILL OF BARS

FOR STAGE 2 CONSTRUCTION ON ABUTMENTS AND SUPERSTRUCTURE

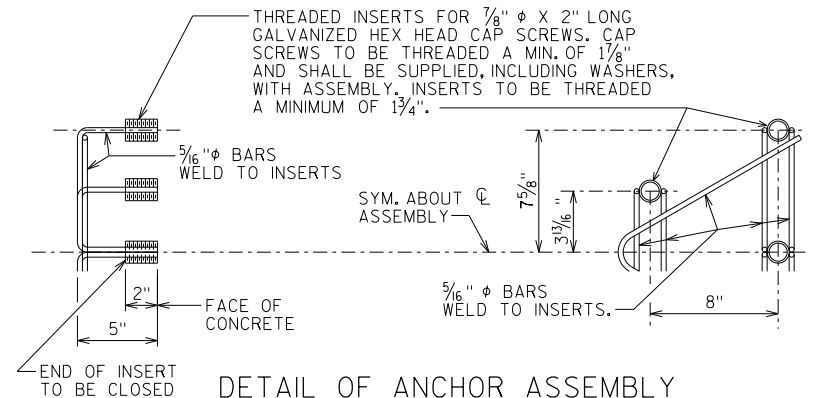
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	SUPER.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	6	6	-	5-10	X		PARAPET VERT.
R502	X	6	6	351	5-0	X		PARAPET VERT.
R503	X	12	12	-	3-0	X		PARAPET VERT.
R504	X	17	17	-	5-7	X		PARAPET VERT.
R505	X	11	11	-	4-9	X		PARAPET VERT.
R506	X	6	6	-	4-10	X		PARAPET VERT.
R507	X	1	1	-	11'-7"	X		PARAPET HORIZ.
R508	X	5	5	-	11'-7"			PARAPET HORIZ.
R509	X	-	-	351	4-5	X		PARAPET VERT.
R510	X	-	-	36	41-2			PARAPET HORIZ.



OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

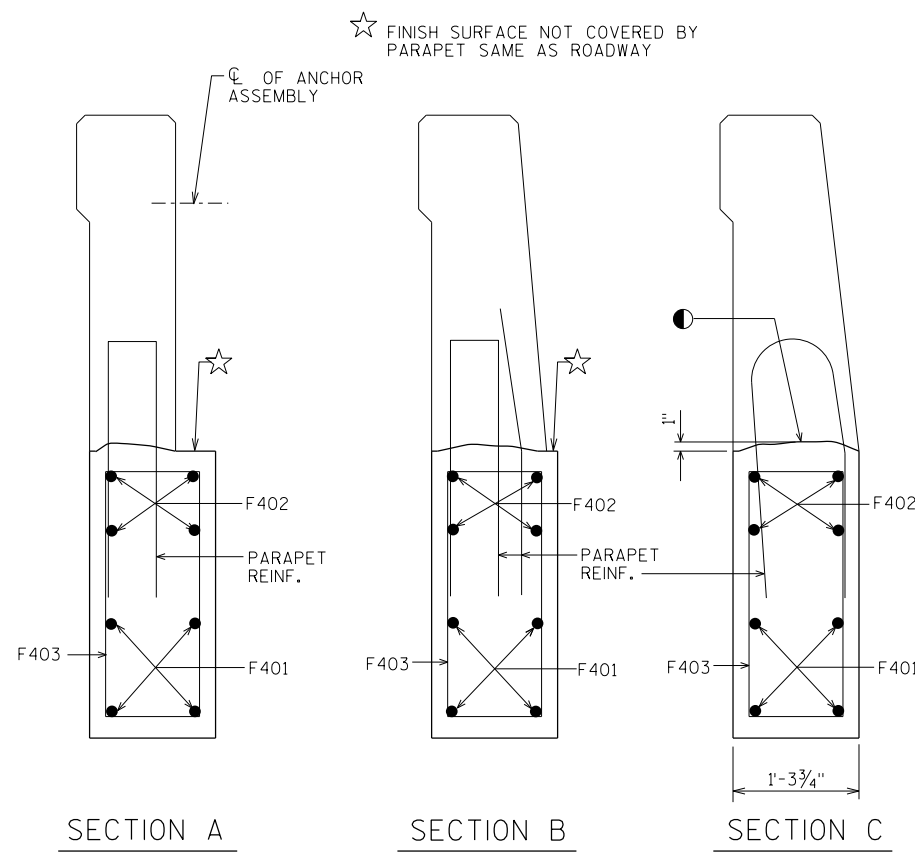
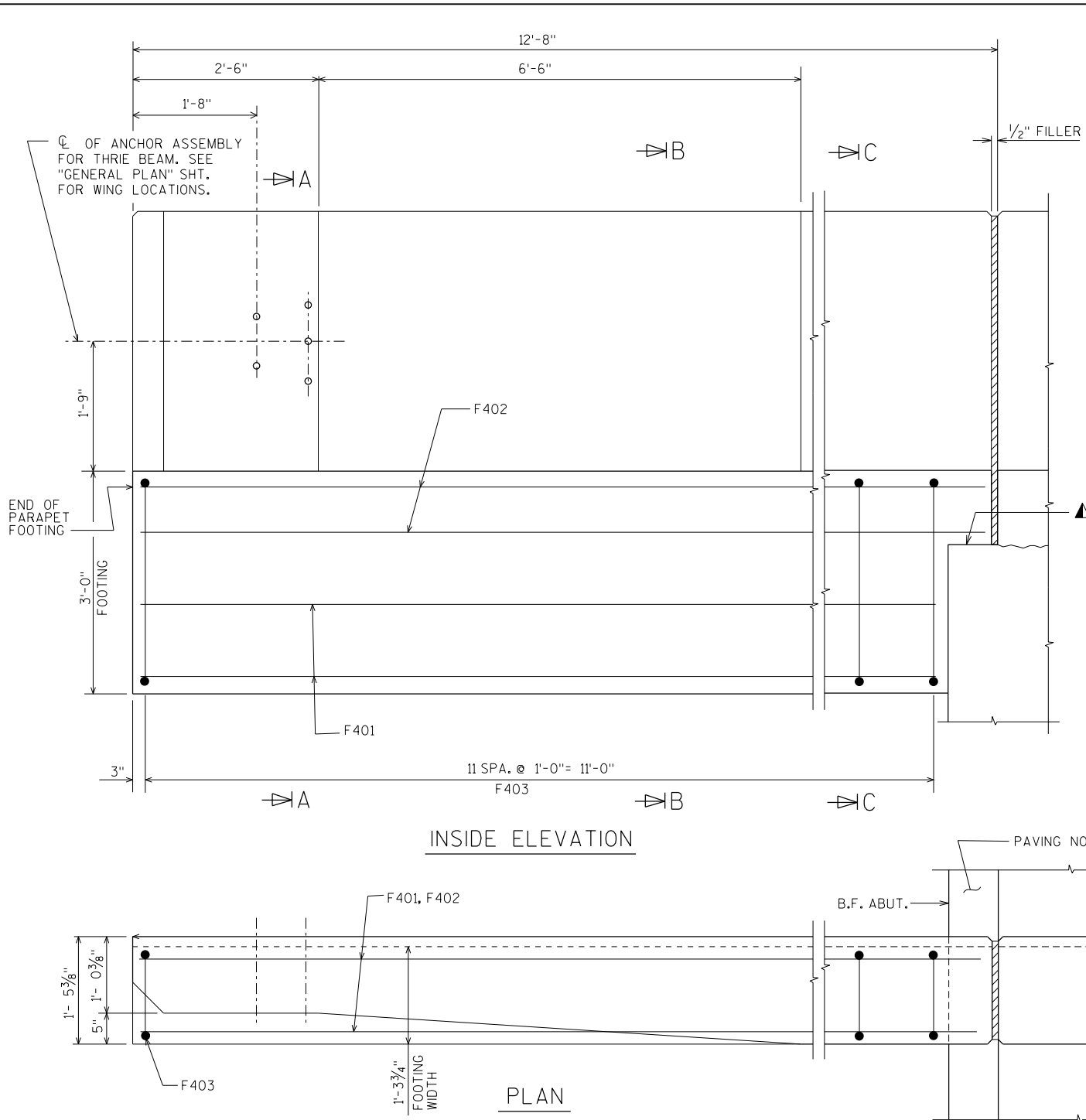
- PLACE WITH DECK REINFORCEMENT
- CONST. JOINT - STRIKE OFF AS SHOWN.
- R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 OR S503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
SINGLE SLOPED PARAPET 32SS			SHEET 23 OF 28

FILE NAME : S:\AE\Chipm\16724\5-finish-dsgn\51-drawings\20-Struct\bridge\B092805SFooting.dgn

PLOT DATE: 11/25/2014

PLOT TIME: 9:33:57 AM



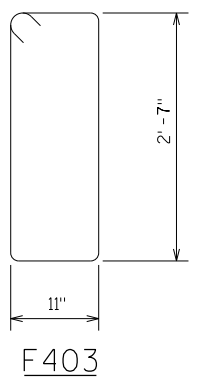
STATE PROJECT NUMBER

8919-03-72

BILL OF BARS

FOR PARAPET FOOTINGS

BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
F401	X	4	4	11-7			PARAPET FOOTING
F402	X	4	4	12-3			PARAPET FOOTING
F403	X	12	12	7-6	X		PARAPET FOOTING



▲ STEEL TROWEL HORIZ. SURFACE OF ABUTMENT PAVING NOTCH. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS BETWEEN PARAPET FOOTING AND HORIZ. SURFACE OF PAVING NOTCH. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

● CONST. JOINT - STRIKE OFF AS SHOWN.

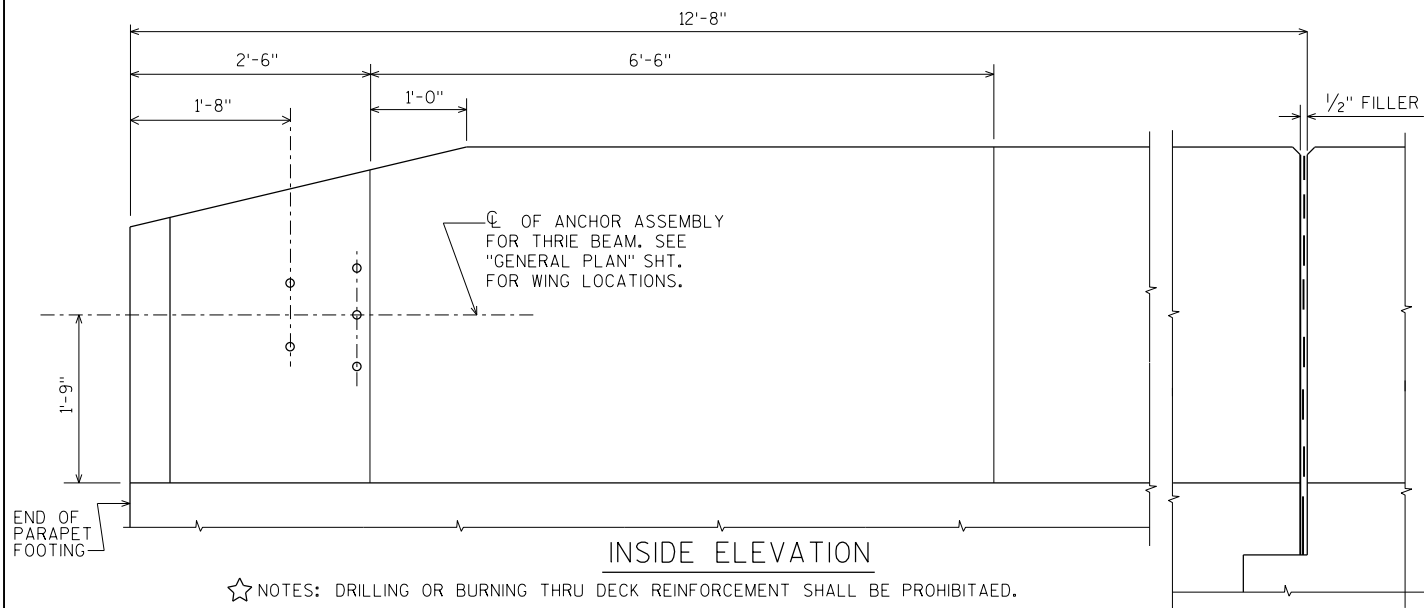
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
PARAPET FOOTING FOR SINGLE SLOPED PARAPET 42SS			SHEET 24 OF 28

PLOT TIME: 9:33:58 AM

PLOT DATE: 11/25/2014

FILE NAME : S:\AE\VC\Chp\116724\5-final-dsgn\51-drawings\20-Struct\br\idgn\092805S42WIN.dgn
1 2 3 4 6

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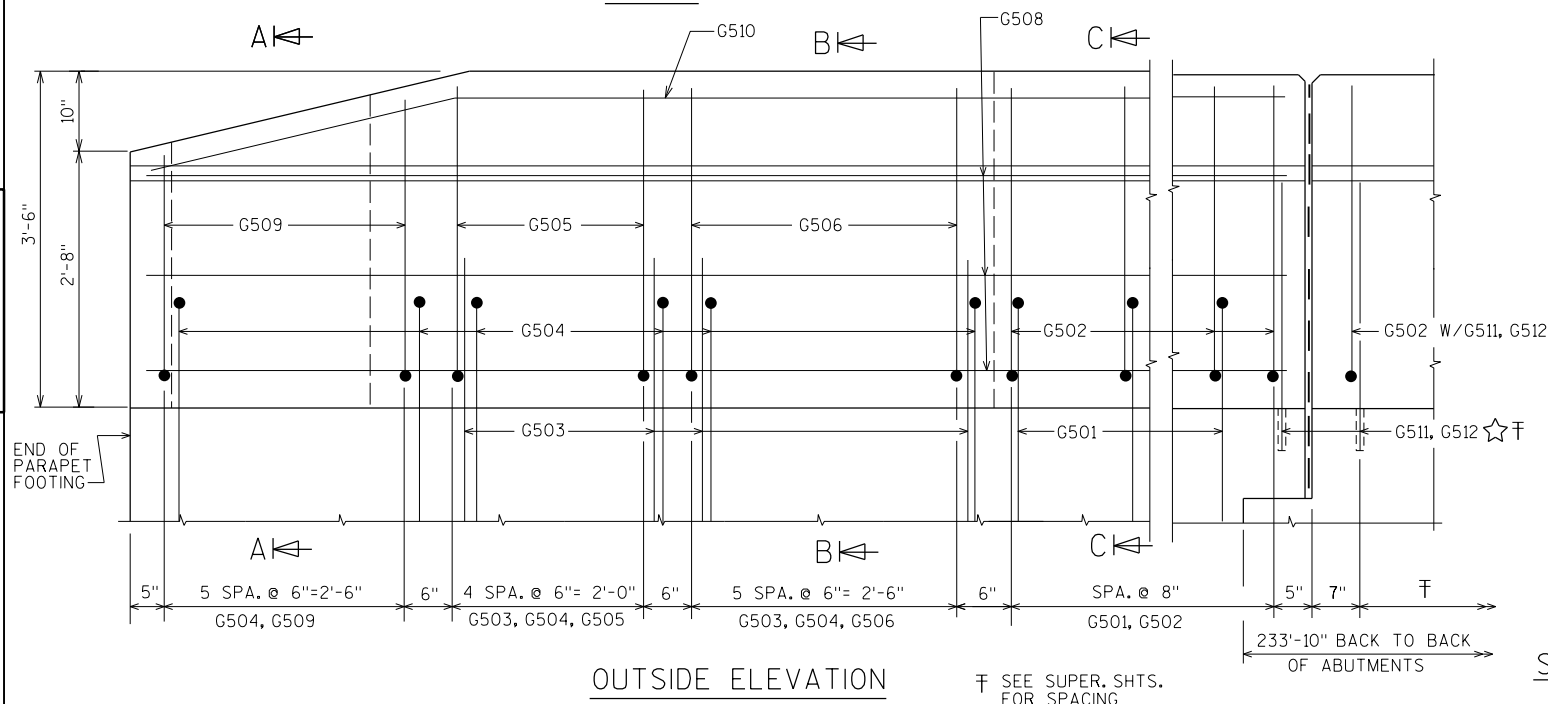
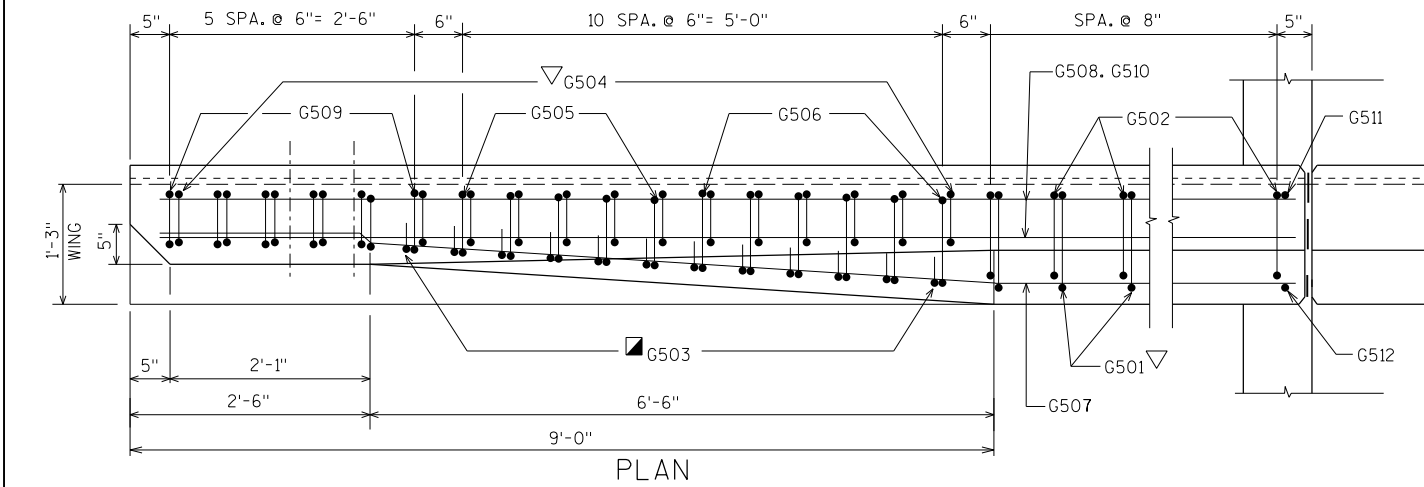


★ NOTES: DRILLING OR BURNING THRU DECK REINFORCEMENT SHALL BE PROHIBITED.

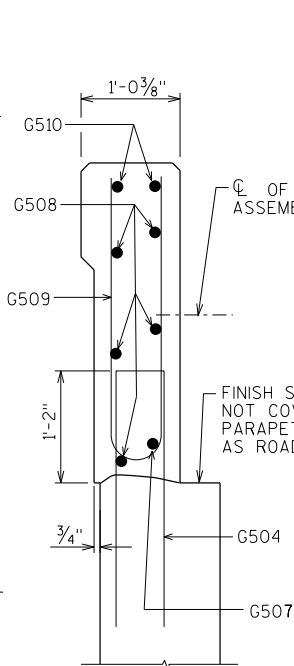
PARTIALLY DRILLED HOLES ABANDONED IN THE DECK SHALL BE FILLED WITH NON-SHRINK COMMERCIAL GROUT PER THE APPROVED PRODUCTS LIST.

G511 AND G512 DOWELS SHALL BE BID ITEM "MASONRY ANCHORS TYPE S 3/4-INCH". INCLUDES THE DRILLING AND GROUTING OF THE ANCHOR. WEIGHT OF BARS ARE INCLUDED IN THE BAR TABLE.

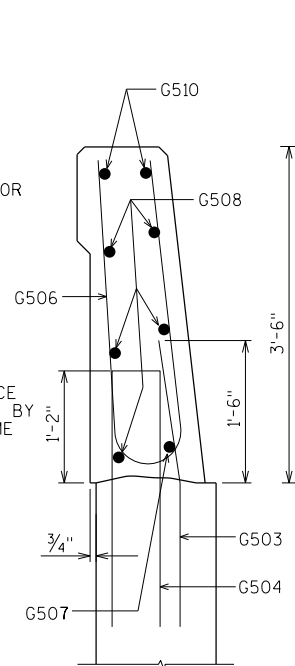
MASONRY ANCHORS TYPE S HAVING A MIN PULLOUT CAPACITY OF 18.6 KIPS. EMBED 5/4" IN CONCRETE, EPOXY COATED.



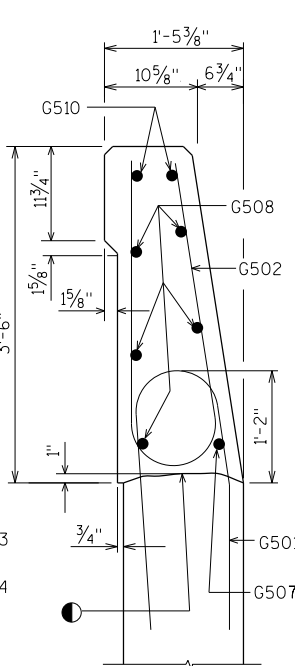
↑ SEE SUPER. SHTS. FOR SPACING



SECTION A

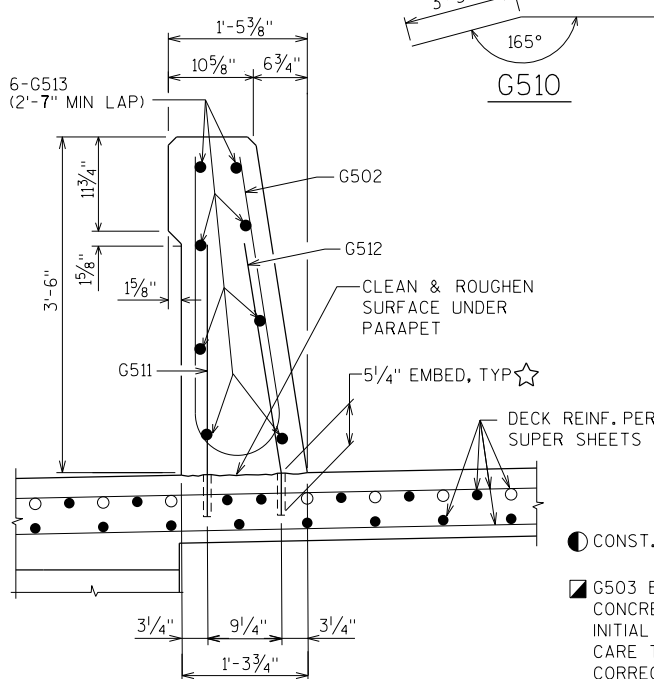


SECTION B



SECTION C

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



SECTION THRU PARAPET ON BRIDGE

● CONST. JOINT - STRIKE OFF AS SHOWN.

■ G503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE G503 OR S503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ G501 AND G504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

BILL OF BARS

FOR STAGE 3 CONSTRUCTION ON ABUTMENTS AND SUPERSTRUCTURE

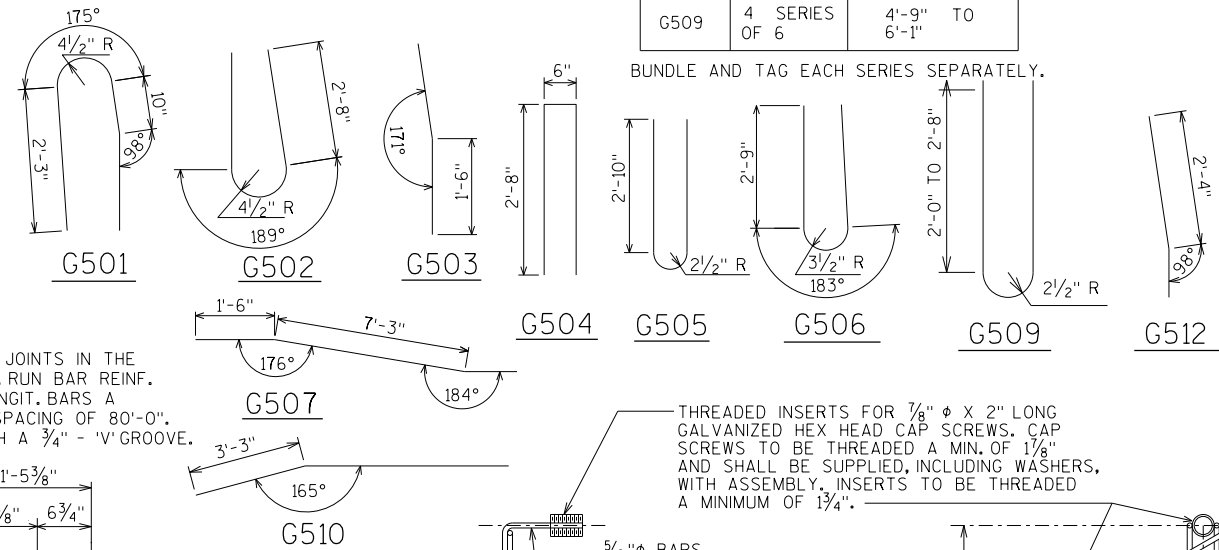
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	SUPER.	LENGTH	BENT	BAR SERIES	LOCATION
G501	X	5	5	-	5-10	X		PARAPET VERT.
G502	X	6	6	348	6-8	X		PARAPET VERT.
G503	X	11	11	-	3-0	X		PARAPET VERT.
G504	X	17	17	-	5-7	X		PARAPET VERT.
G505	X	5	5	-	6-5	X		PARAPET VERT.
G506	X	6	6	-	6-6	X		PARAPET VERT.
G507	X	1	1	-	11-7	X		PARAPET HORIZ.
G508	X	5	5	-	11-7			PARAPET HORIZ.
G509	X	6	6	-	5-5	X	▲	PARAPET VERT.
G510	X	2	2	-	11-7	X		PARAPET HORIZ.
G511	☆	X	1	1	348	2-10		PARAPET ANCHOR
G512	☆	X	1	1	348	2-10	X	PARAPET ANCHOR
G513	X	-	-	48	41-2			PARAPET HORIZ.

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

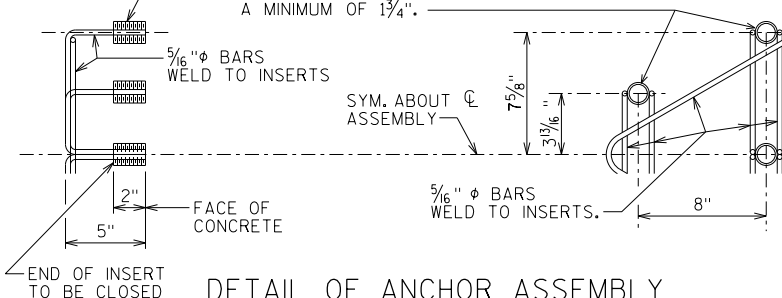
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
G509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



THREADED INSERTS FOR 7/8" ϕ X 2" LONG GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF 1/6" AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF 1/4".



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

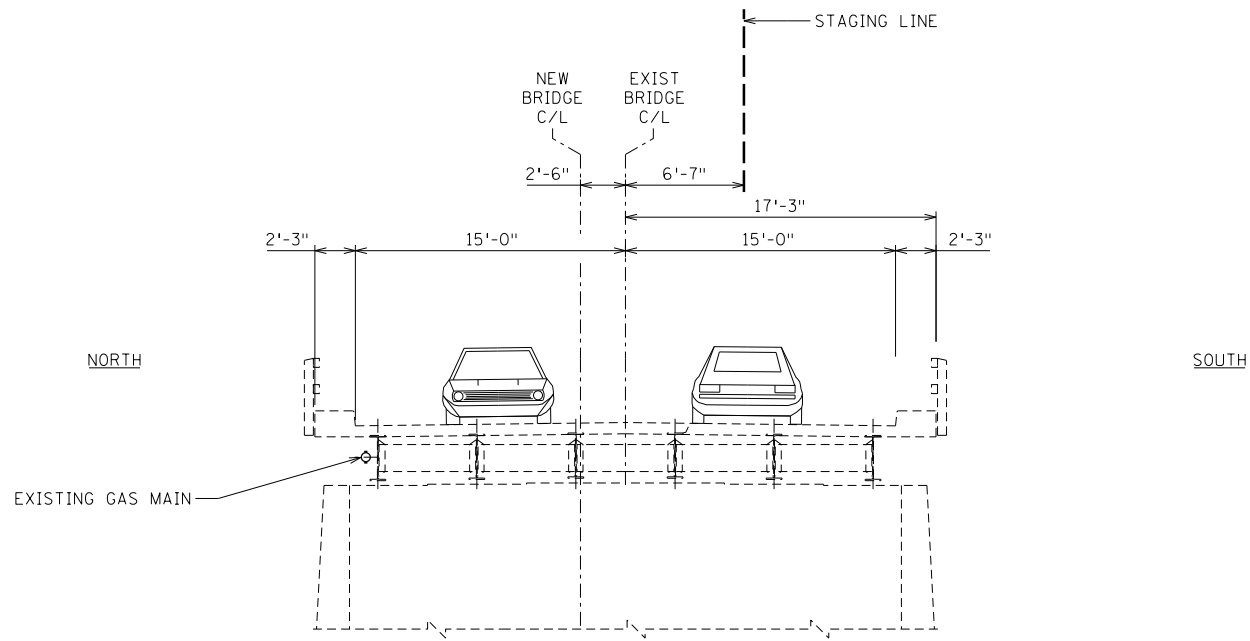
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY DLF		PLANS CK'D. NCK	
SINGLE SLOPED PARAPET 42SS			SHEET 25 OF 28

PLOT TIME: 9:33:58 AM

PLOT DATE: 11/25/2014

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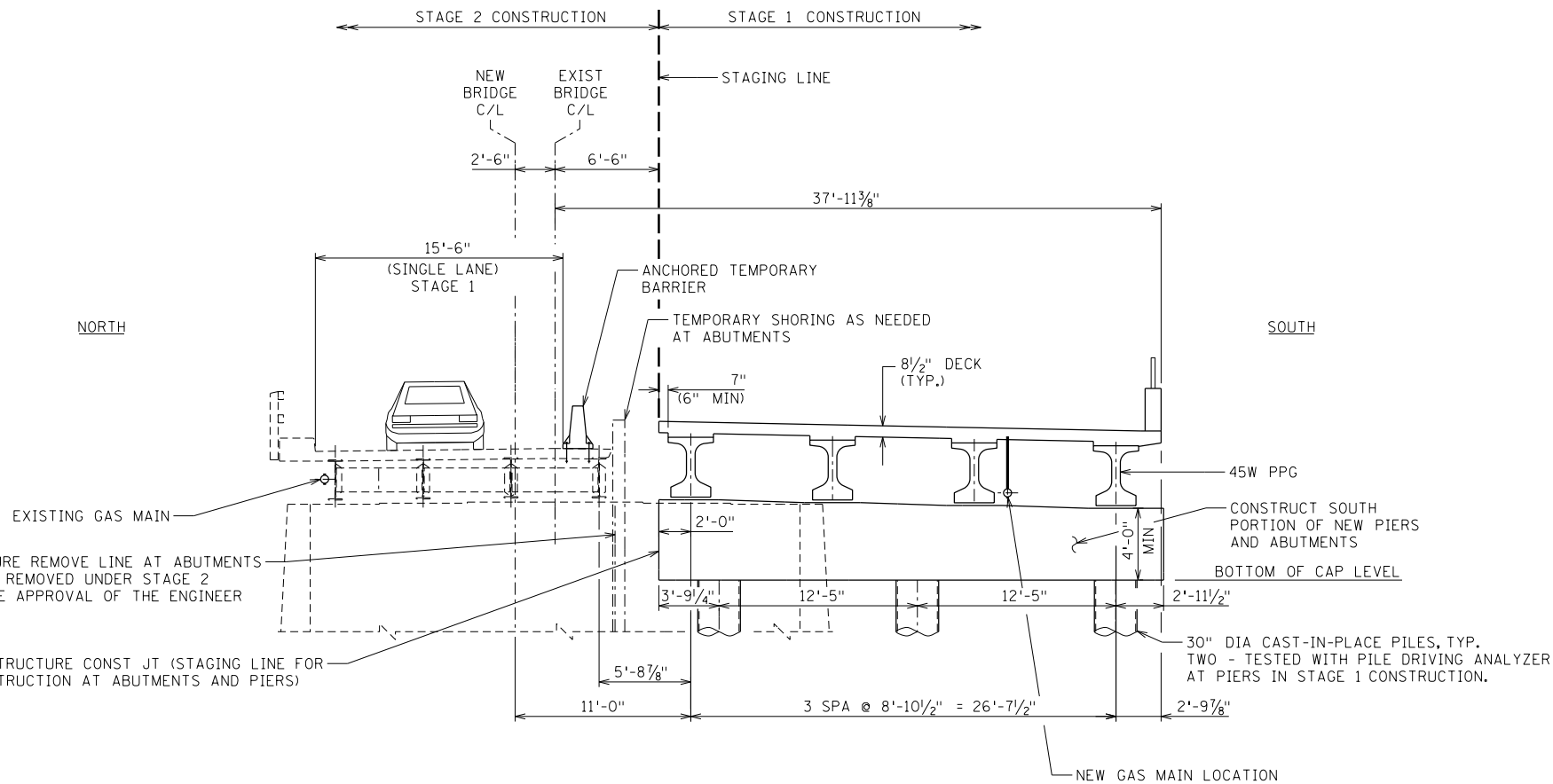
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EXISTING BRIDGE TYPICAL SECTION

NOTES:

NEW BRIDGE CENTERLINE 2'-6" NORTH OF EXISTING BRIDGE CENTERLINE.



STAGE 1 CONSTRUCTION TYPICAL SECTION

NOTES:

SHIFT TRAFFIC AS SHOWN.

REMOVE PORTION OF EXISTING CONCRETE DECK, BEAMS & ABUTMENTS.
NOTE: EXISTING PIERS MAY REMAIN.

CONSTRUCT SOUTH PORTION OF BRIDGE.

NOTE:

SUPPLYING AND INSTALLING THE ANCHORED TEMPORARY BARRIER
INCLUDED IN ROADWAY DRAWING.

REFER TO ROADWAY DRAWINGS FOR ADDITIONAL STAGING REQUIREMENTS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
		DRAWN BY DLF	PLANS CK'D. NCK
BRIDGE STAGING CONCEPT			SHEET 26 OF 28

NO.		DATE	REVISION		BY
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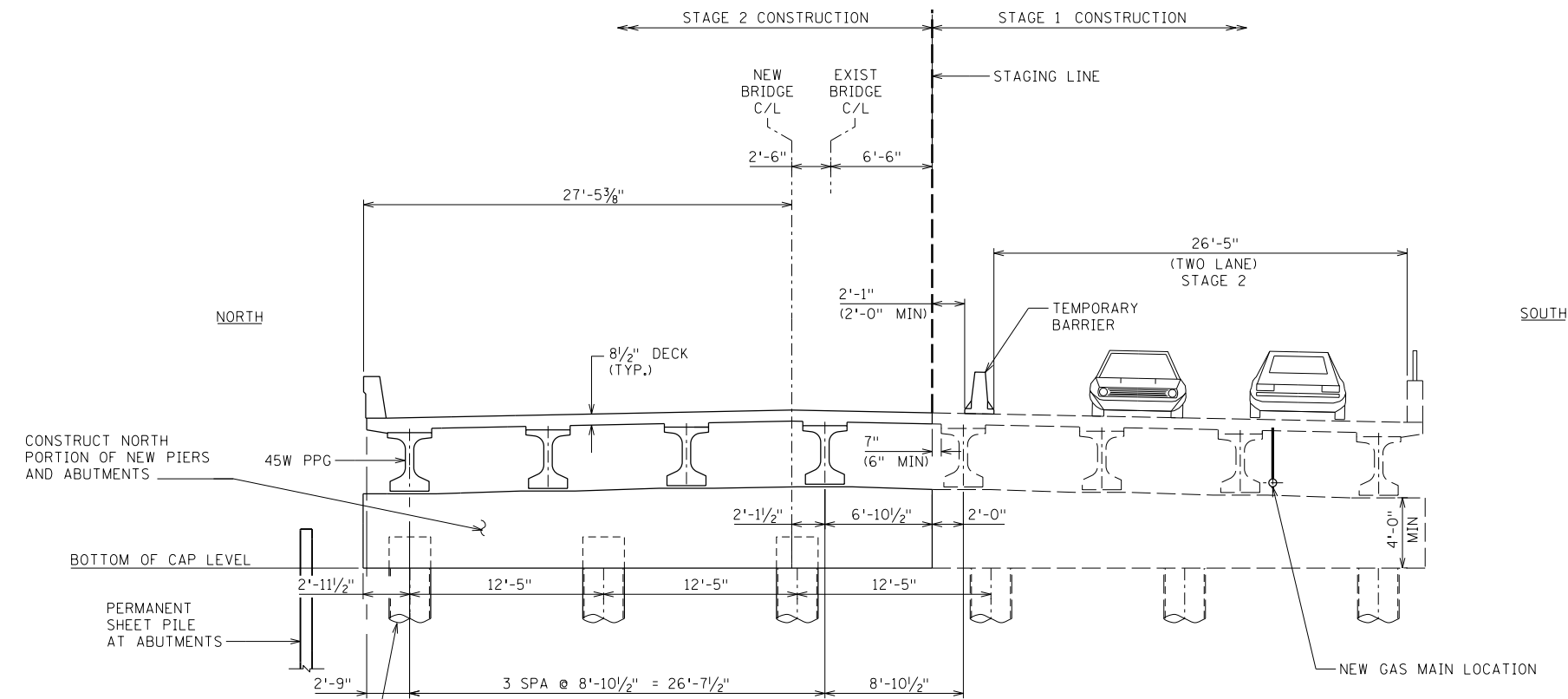
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PLOT TIME: 9:33:59 AM

PLOT DATE: 11/25/2014

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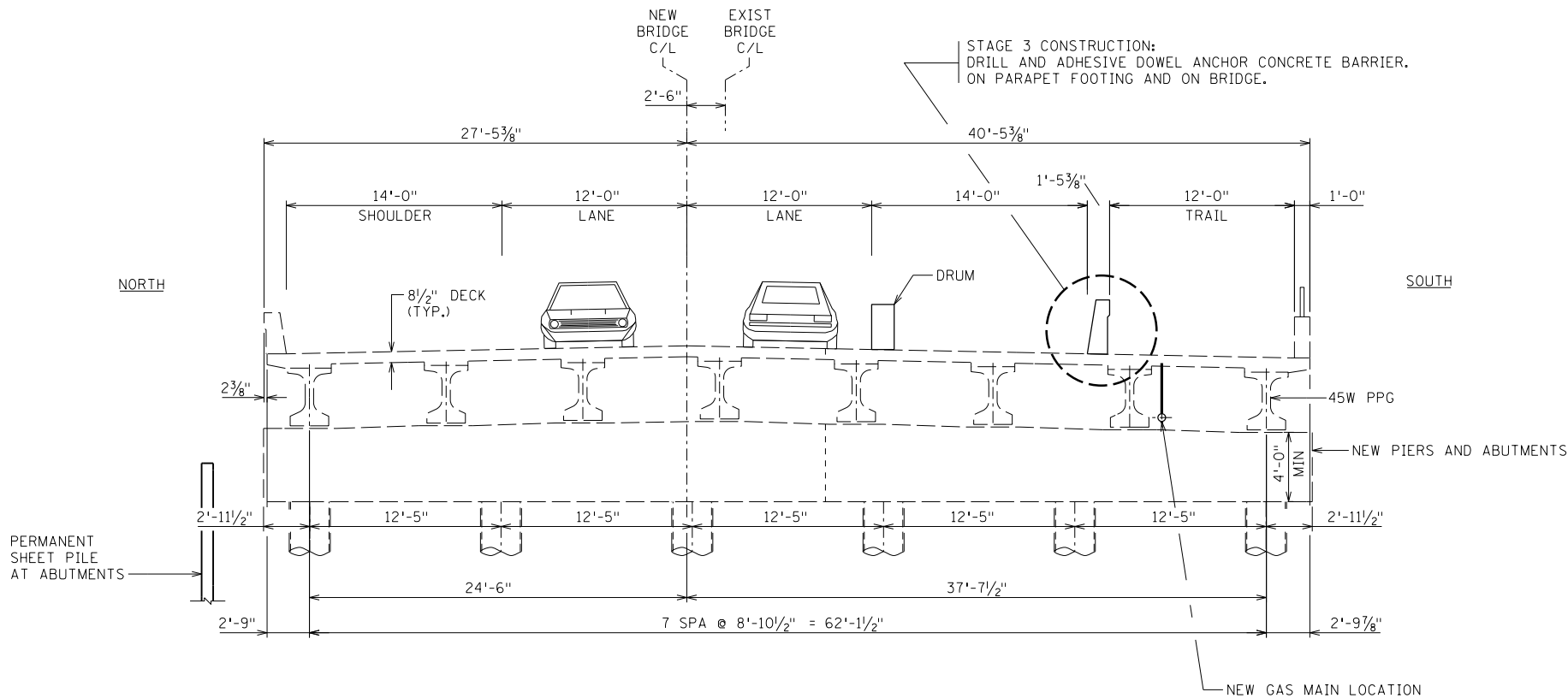


STAGE 2 CONSTRUCTION TYPICAL SECTION

30" DIA CAST-IN-PLACE PILES, TYP.
ONE - TESTED WITH PILE DRIVING ANALYZER
AT PIERS IN STAGE 2 CONSTRUCTION.

NOTES:

- SHIFT TRAFFIC AS SHOWN.
- REMOVE EXISTING DECK, BEAMS, ABUTMENTS & PIERS ABOVE EL 866 ± .
- COMPLETE CONSTRUCTION OF NEW BRIDGE.
- NOTE:
- REFER TO ROADWAY DRAWINGS FOR ADDITIONAL STAGING REQUIREMENTS.
- SUPPLYING AND INSTALLING TEMPORARY BARRIER INCLUDED IN ROADWAY DRAWINGS.



STAGE 3 CONSTRUCTION TYPICAL SECTION

NOTES:

- SHIFT TRAFFIC AS SHOWN
- DRILL AND ADHESIVE DOWEL ANCHOR NEW CONCRETE BARRIER.
- NOTE:
- SUPPLYING AND PLACING PORTABLE DRUM BARRIER INCLUDED IN ROADWAY DRAWINGS.
- REFER TO ROADWAY DRAWINGS FOR ADDITIONAL STAGING REQUIREMENTS.

STATE PROJECT NUMBER
8919-03-72

NO.	DATE	REVISION	BY

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
BRIDGE STAGING CONCEPT			SHEET 27 OF 28

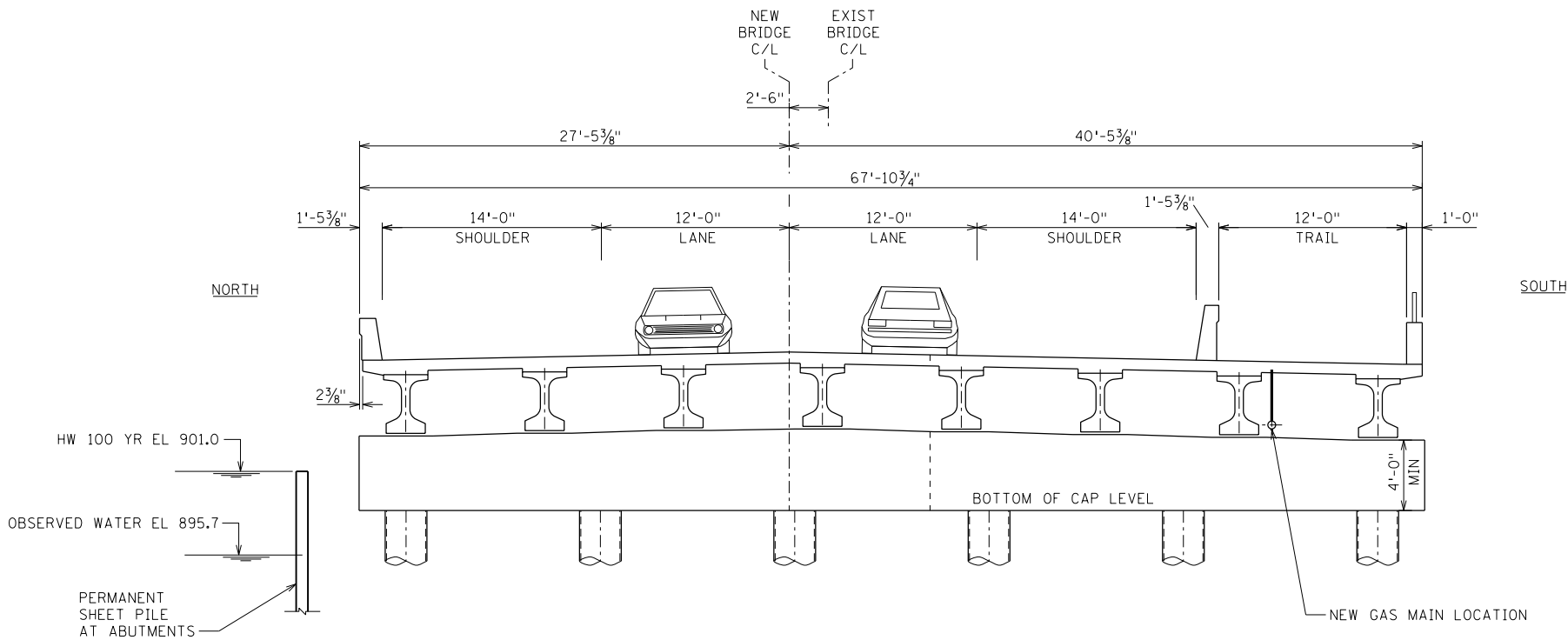
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PLOT DATE: 11/25/2014

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8



COMPLETED BRIDGE TYPICAL SECTION

STATE PROJECT NUMBER
8919-03-72

NOTES:
OPEN BRIDGE TO TRAFFIC.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-9-280			
DRAWN BY		DLF	PLANS CK'D. NCK
BRIDGE STAGING CONCEPT			SHEET 28 OF 28

NO.	DATE	REVISION	BY
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8

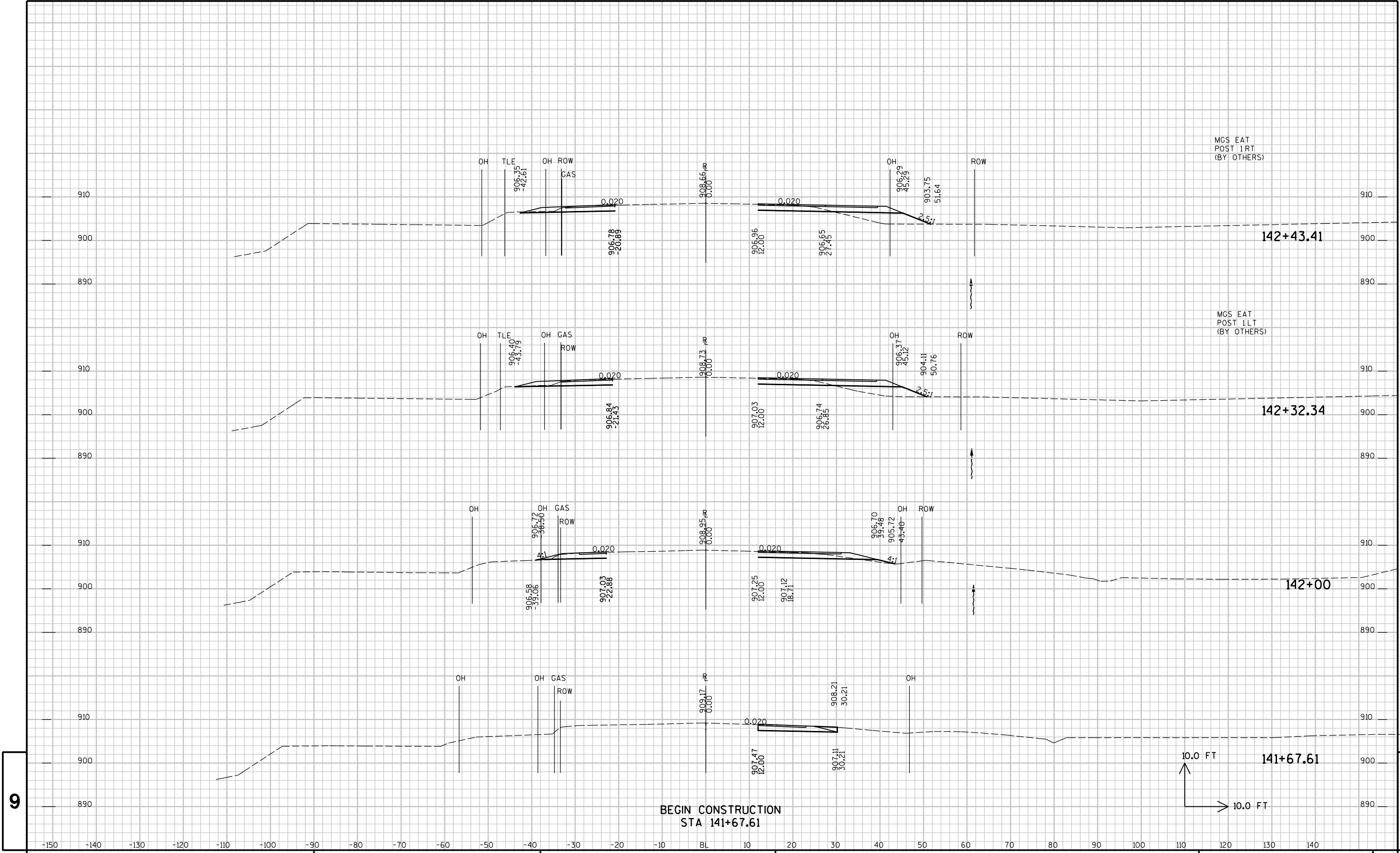
CTH X, CHIPPEWA COUNTY
SELECT BORROW

STATION	END AREA		VOLUME		CUM VOLUME		MASS HAUL
	CUT	FILL	CUT	FILL (CY)	CUT (CY)	FILL (CY)	(CY) Note 4
	(SF)	(SF)	(CY)	Note 1 Note 2, 3	Note 1 Note 2, 3	Note 2, 3	
141+68	23	0	0	0	0	0	0
142+00	37	6.7	36	5	36	5	31
142+32	33	27.3	42	26	78	32	46
142+43	33	32.7	14	16	91	48	44
142+57	35	34.3	18	22	109	70	39
142+63	81.4	33.9	12	9	121	79	42
142+68	82	33.4	16	9	137	88	49
142+82	82.1	32.1	42	22	180	110	70
142+93	83	32.3	34	17	213	127	86
143+00	83.9	32.8	21	10	234	138	96
143+50	84.1	37	156	84	390	222	168
144+00	70.4	72.8	143	132	533	354	179
144+50	44.1	137.8	106	254	639	607	31
145+00	23.8	214.12	63	424	702	1031	-329
145+50	7.4	260.71	29	572	731	1603	-872
146+00	0	316.28	7	695	737	2297	-1560
146+50	0	368.87	0	825	737	3122	-2384
147+00	0	431.73	0	964	737	4085	-3348
147+50	0	461.73	0	1075	737	5161	-4424
147+72	0	482.09	0	496	737	5657	-4920
148+22	0	473.75	0	1147	737	6804	-6067
148+50	0	470.04	0	643	737	7447	-6710
148+85	0	0	0	396	737	7844	-7106
STRUCTURE B-09-0280							
151+15	0	0	0	0	0	0	0
151+50	3.4	330.5	2	278	2	278	-276
151+78	3	304.84	3	433	6	711	-708
152+28	2.6	265.97	5	685	11	1396	-1386
152+50	1.6	239.22	2	266	12	1662	-1650
153+00	1.1	203.05	3	532	15	2194	-2180
153+50	15.5	187.59	15	470	30	2665	-2634
154+00	39	144.05	50	399	81	3064	-2983
154+50	62.9	101.4	94	295	175	3359	-3184
155+00	85	82.2	137	221	312	3580	-3268
155+50	100.6	71.5	172	185	484	3765	-3281
156+00	108.4	80.08	194	182	677	3948	-3270
156+50	101	114.19	194	234	871	4182	-3310
157+00	87.5	135.16	175	300	1046	4482	-3436
157+22	78.9	156.77	68	154	1113	4636	-3522
157+47	63.3	127.23	66	172	1180	4808	-3628
157+72	64.6	87.1	60	130	1239	4938	-3699
158+00	54.4	106	61	129	1300	5067	-3766
158+50	51.2	121.5	98	274	1398	5341	-3942
159+00	51	139.2	95	314	1493	5654	-4162
159+50	50	119	94	311	1586	5965	-4379
160+00	56	133.8	98	304	1685	6270	-4585
160+50	60.1	140.8	108	331	1792	6600	-4808
161+00	64.2	16.8	115	190	1907	6790	-4883
161+23	63	7.6	54	13	1961	6803	-4842
161+48	61.1	9.2	57	10	2018	6813	-4795
161+73	69.8	8.9	61	11	2079	6824	-4745
162+00	71.8	1	71	6	2150	6831	-4680
162+50	73.4	0.4	134	2	2285	6832	-4548

CTH X, CHIPPEWA COUNTY
BREAKER RUN - NOT EXPANDED

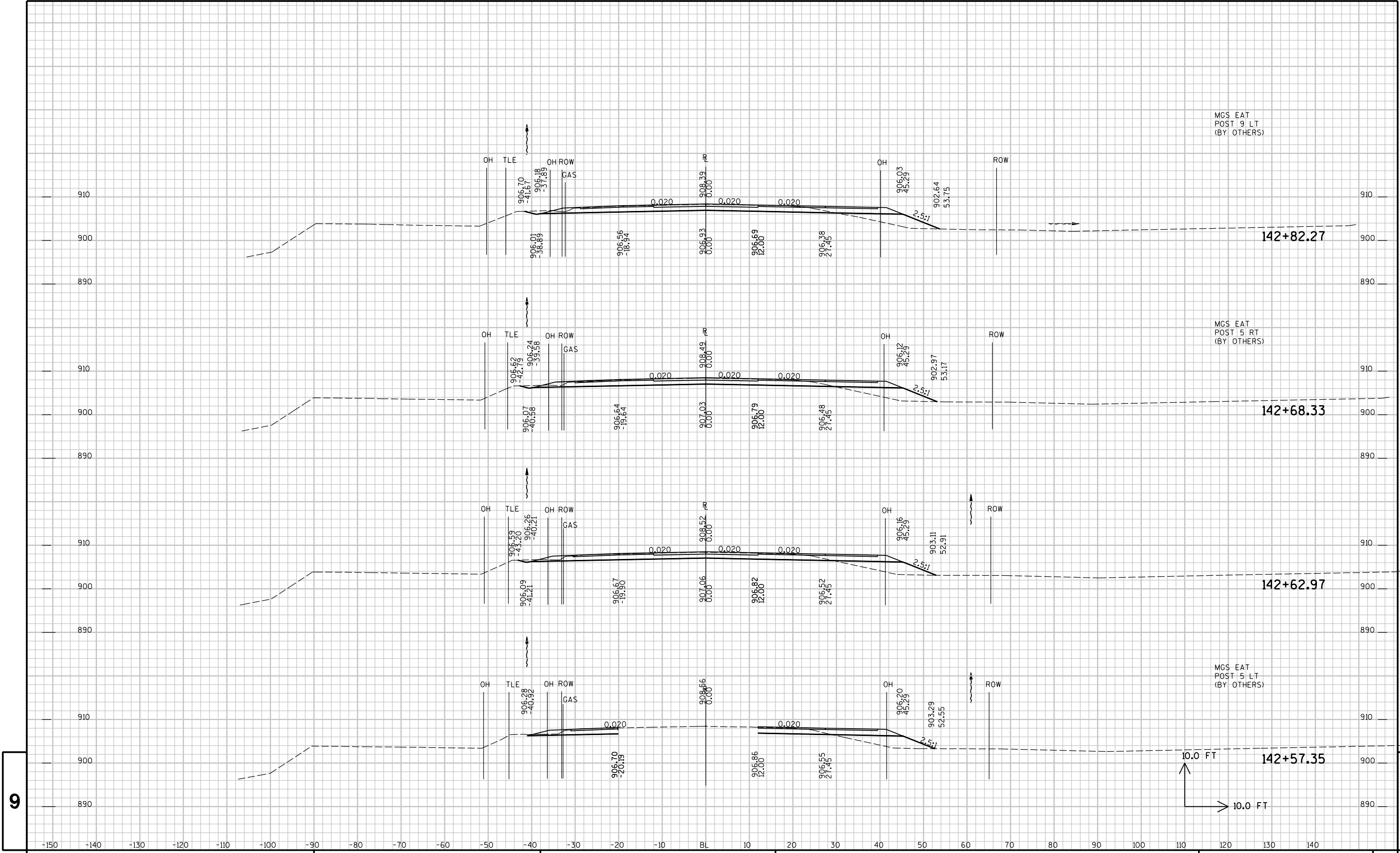
STATION	END AREA		VOLUME		CUM VOLUME		MASS HAUL
	CUT	FILL	CUT	FILL (CY)	CUT (CY)	FILL (CY)	(CY) Note 4
	(SF)	(SF)	(CY)	Note 1 Note 2, 3	Note 1 Note 2, 3	Note 2, 3	
144+50	0	0	0	0	0	0	0
145+00	0	14.58	0	14	0	14	-14
145+50	0	105.99	0	112	0	125	-125
146+00	0	228.92	0	310	0	435	-435
146+50	0	276.53	0	468	0	903	-903
147+00	0	471.17	0	692	0	1596	-1596
147+50	0	357.75	0	768	0	2363	-2363
147+72	0	312.61	0	271	0	2634	-2634
148+22	0	314.35	0	579	0	3213	-3213
148+50	0	632.76	0	497	0	3710	-3710
148+85	0	0	0	410	0	4120	-4120
STRUCTURE B-09-0280							
151+15	0	0	0	0	0	0	0
151+50	0	1860	0	1206	0	1206	-1206
151+78	0	1756.3	0	1896	0	3101	-3101
152+28	0	1591.2	0	3090	0	6191	-6191
152+50	0	1634.4	0	1305	0	7496	-7496
153+00	0	1529.5	0	2929	0	10426	-10426
153+50	0	1285.5	0	2606	0	13032	-13032
154+00	0	915.45	0	2038	0	15070	-15070
154+50	0	500	0	1311	0	16381	-16381
155+00	0	282.1	0	724	0	17105	-17105
155+50	0	274.9	0	516	0	17620	-17620
156+00	0	310.22	0	542	0	18162	-18162
156+50	0	277.01	0	544	0	18706	-18706
157+00	0	165.54	0	410	0	19116	-19116
157+22	0	78.43	0	99	0	19215	-19215
157+47	0	5.874	0	39	0	19254	-19254

- NOTES:
1) Salvaged/Unusable Pavement Material is included in Cut.
2) Does not include Unusable Pavement Excavation volume.
3) Will be backfilled with Cut or Borrow.
4) Plus quantity indicates an excess of material. Minus indicates a shortage of material.



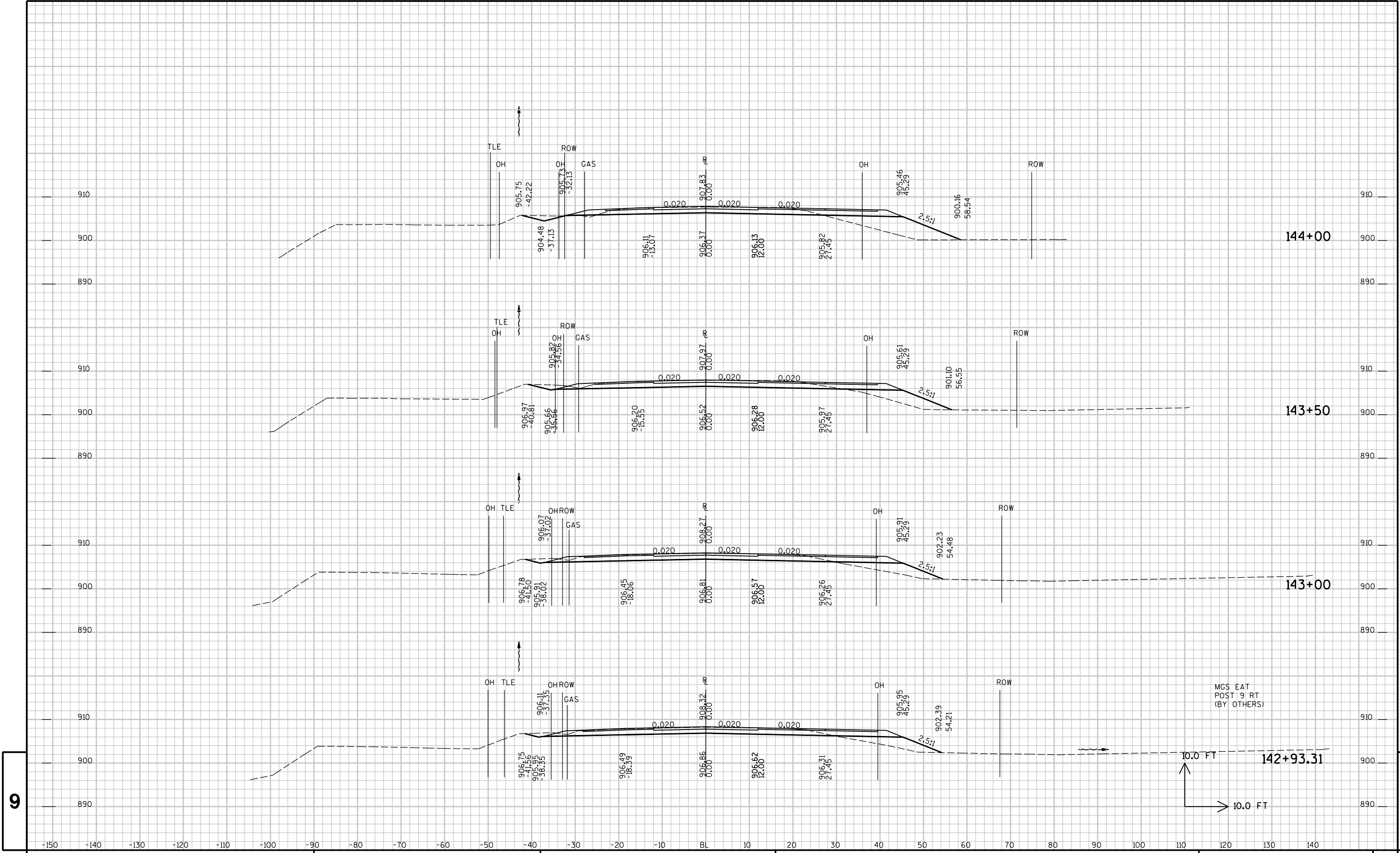
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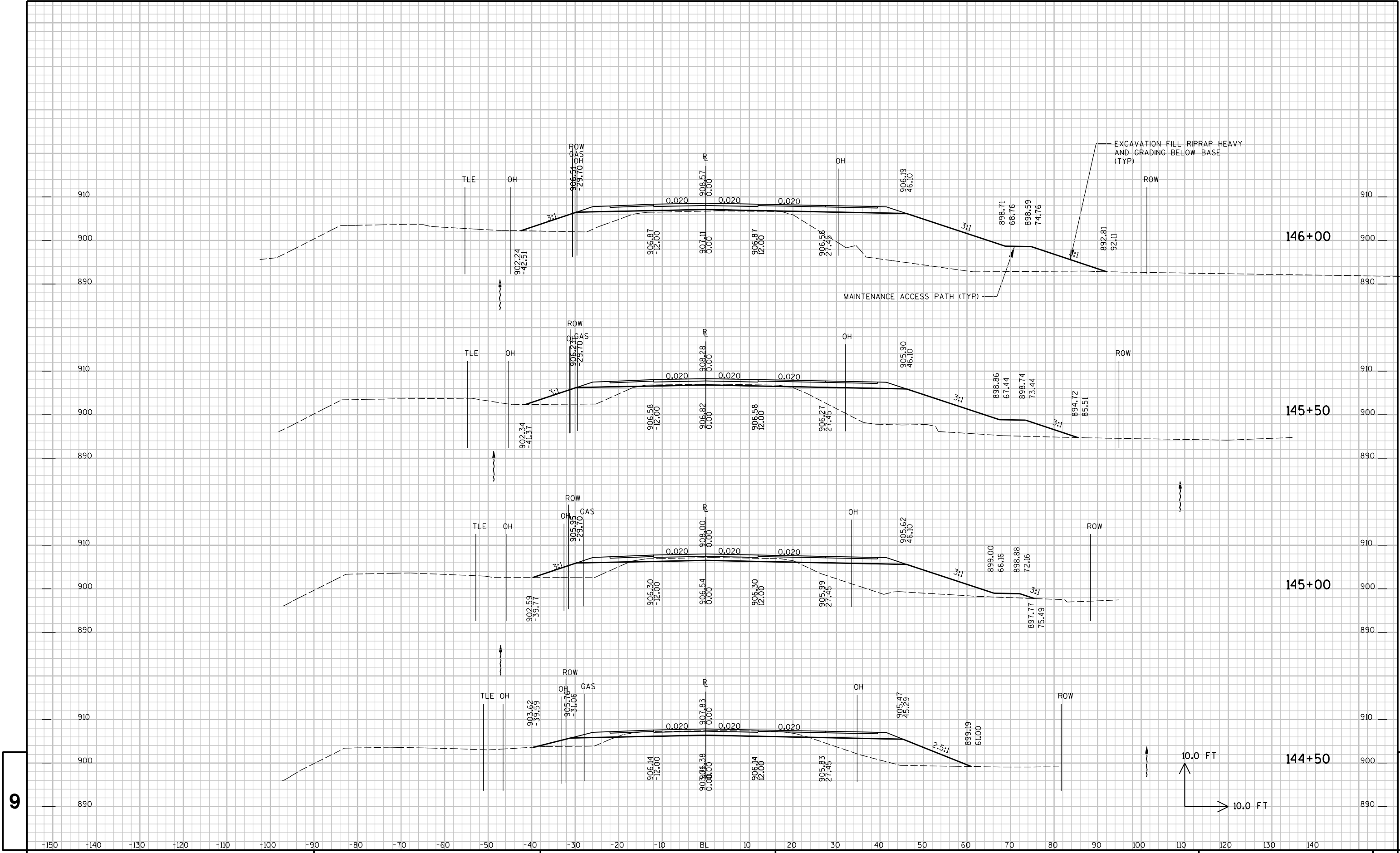
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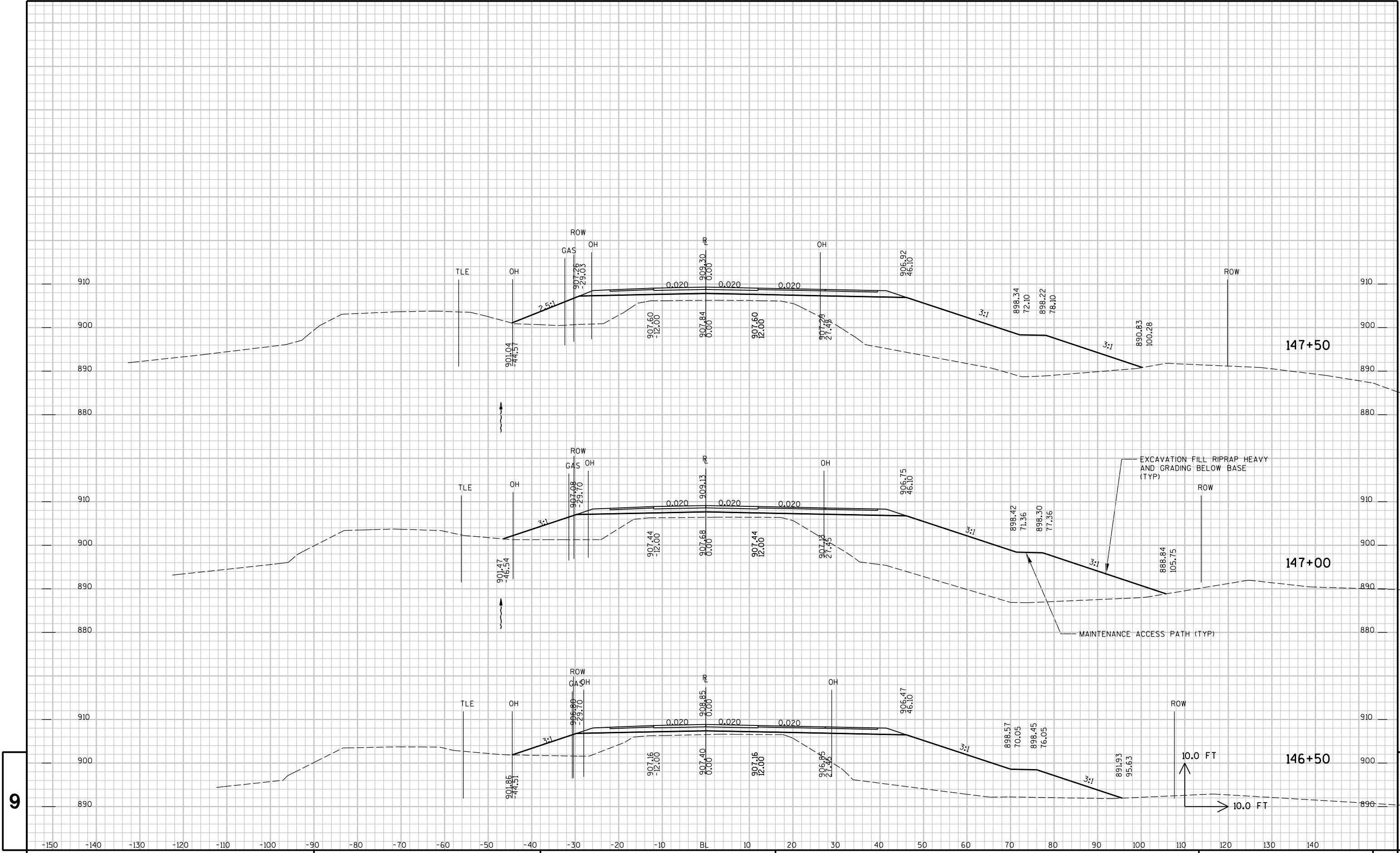


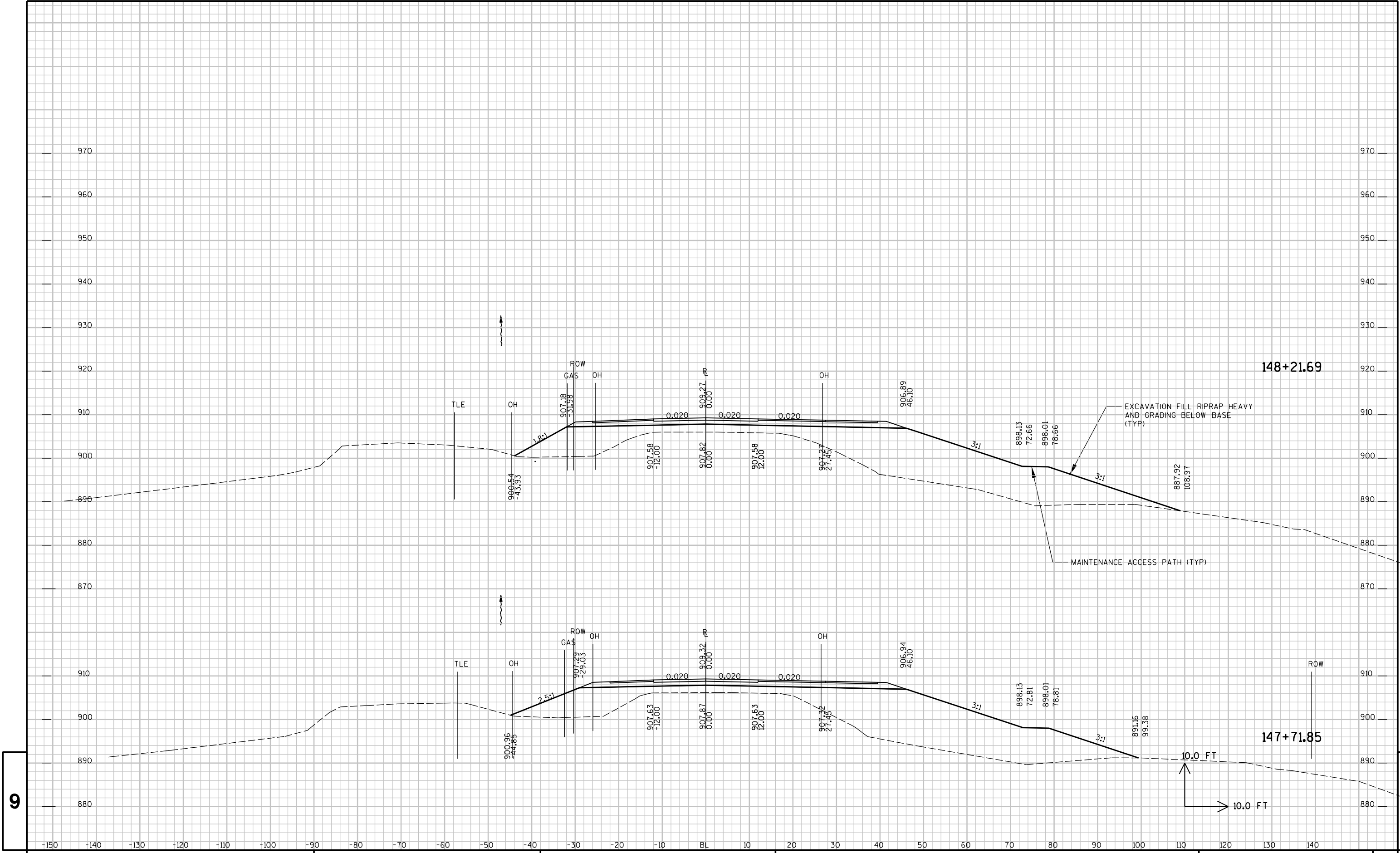
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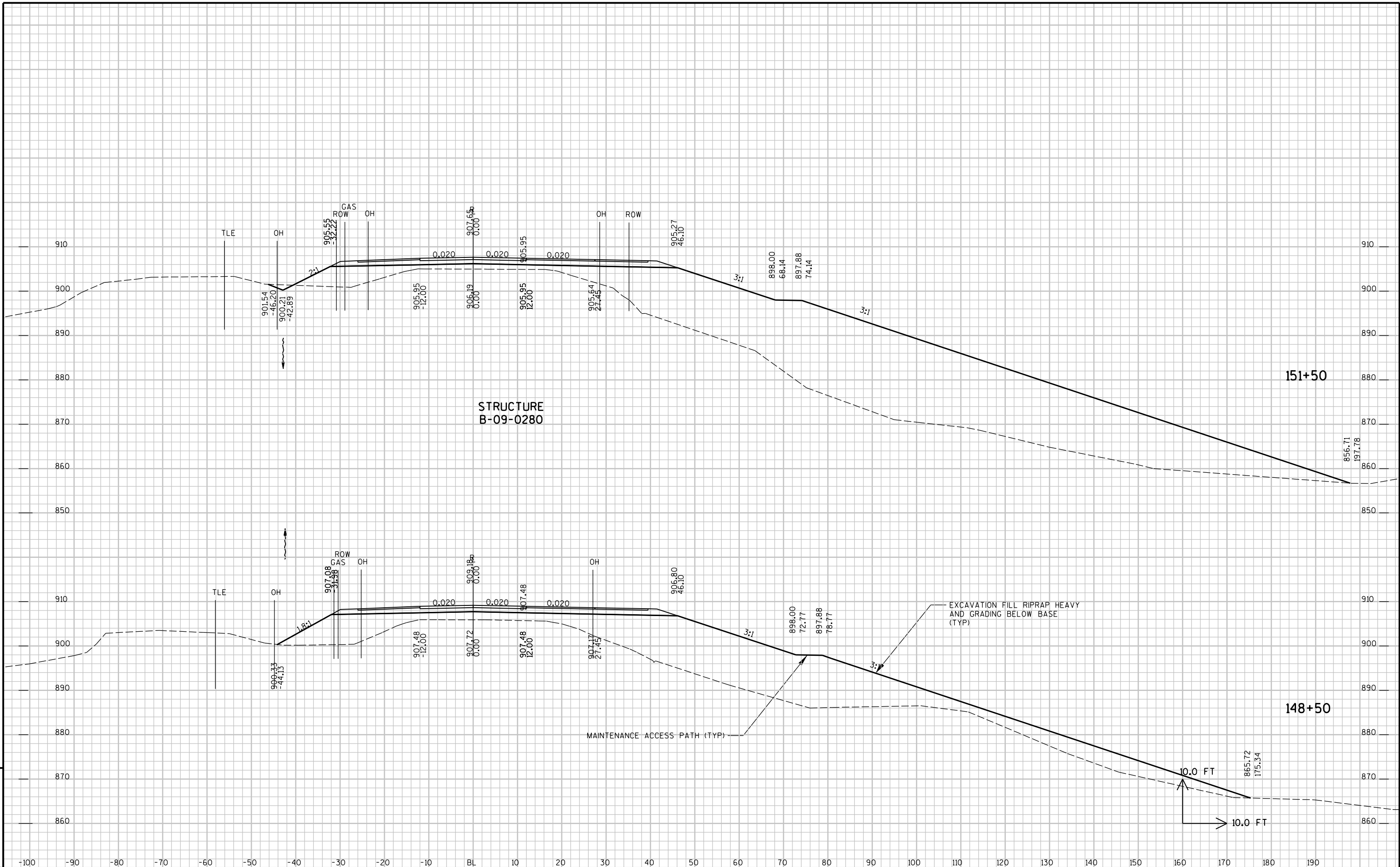






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PROJECT NO: 8919-03-72

HWY : CTH X

COUNTY : CHIPPEWA

CROSS SECTIONS -

SHEET NO:

E

FILE NAME : P:\AEV\Chipp\116724\CAD\LET\XBCTHX00.DGN

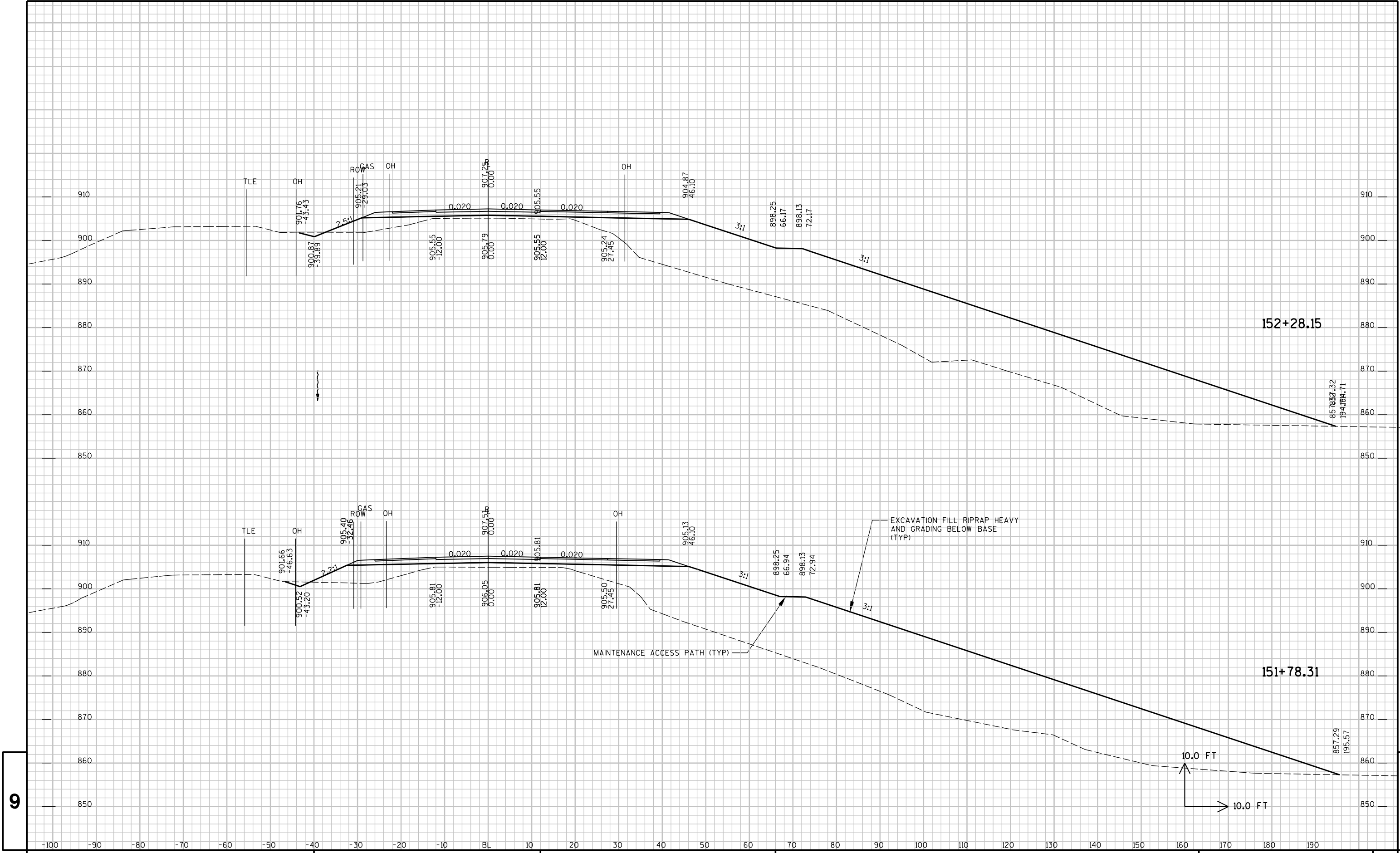
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PLOT DATE : 10/28/2014

PLOT BY : SEH

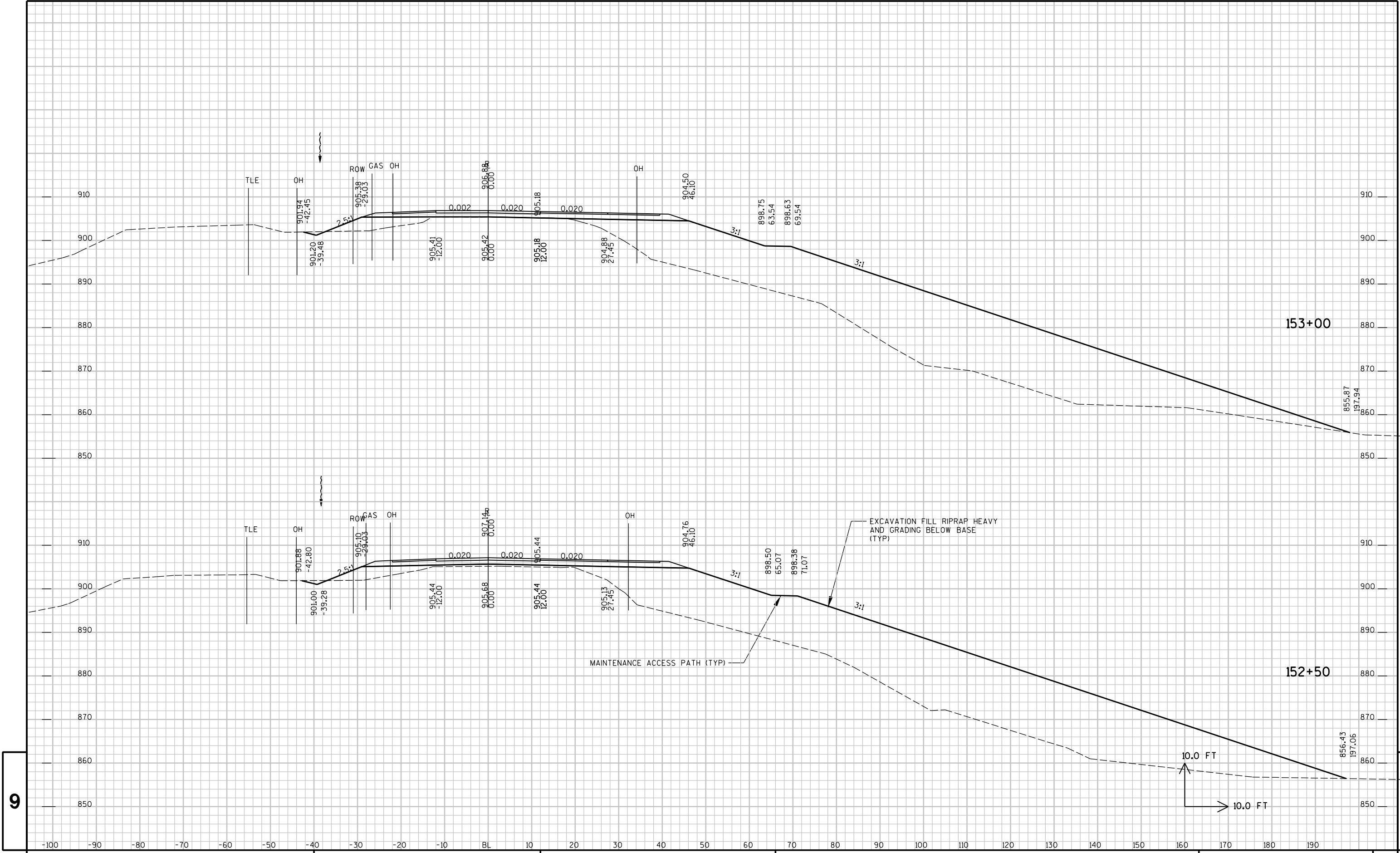
PLOT NAME :

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PROJECT NO: 8919-03-72	HWY : CTH X	COUNTY : CHIPPEWA	CROSS SECTIONS -	SHEET NO:	E
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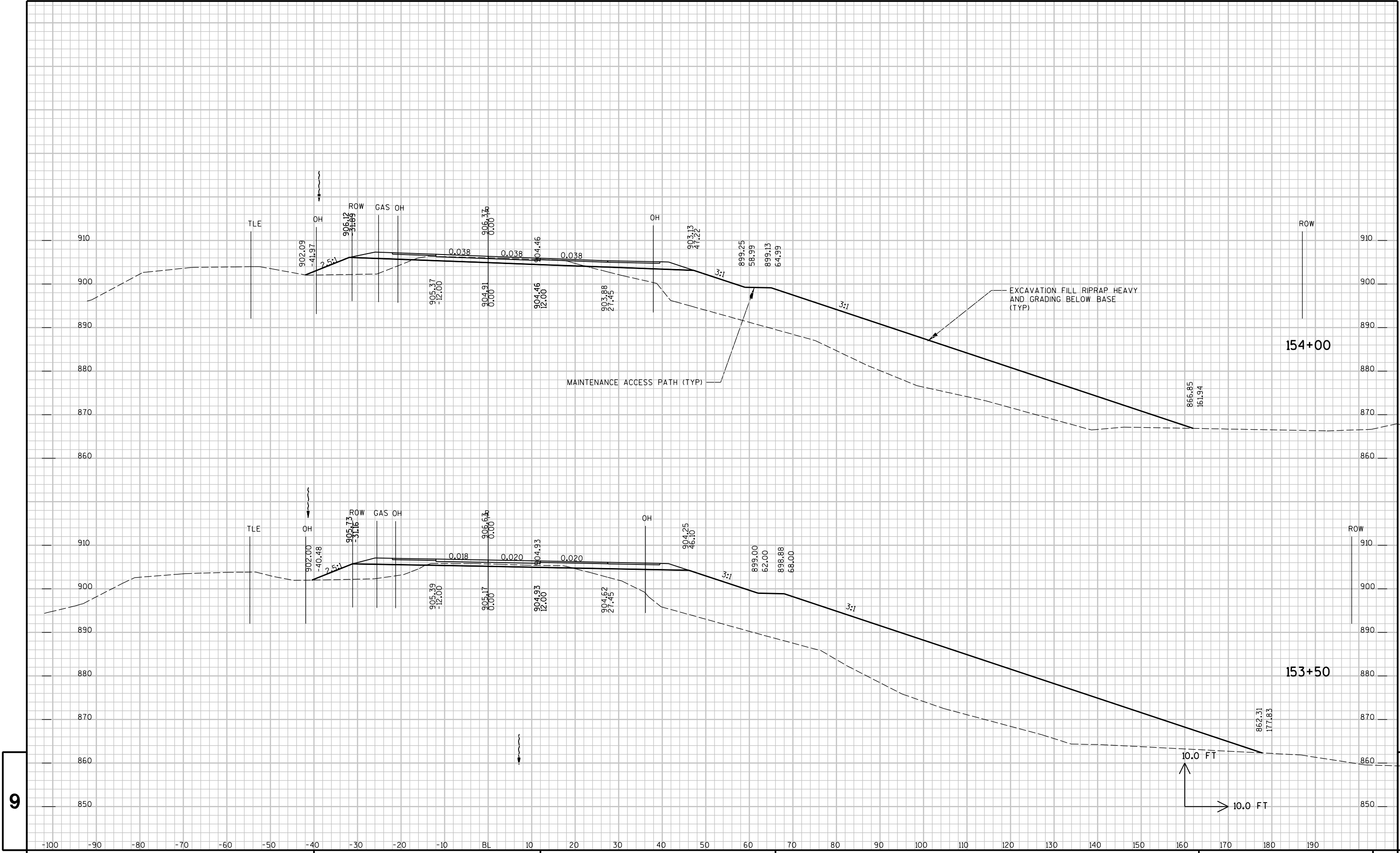
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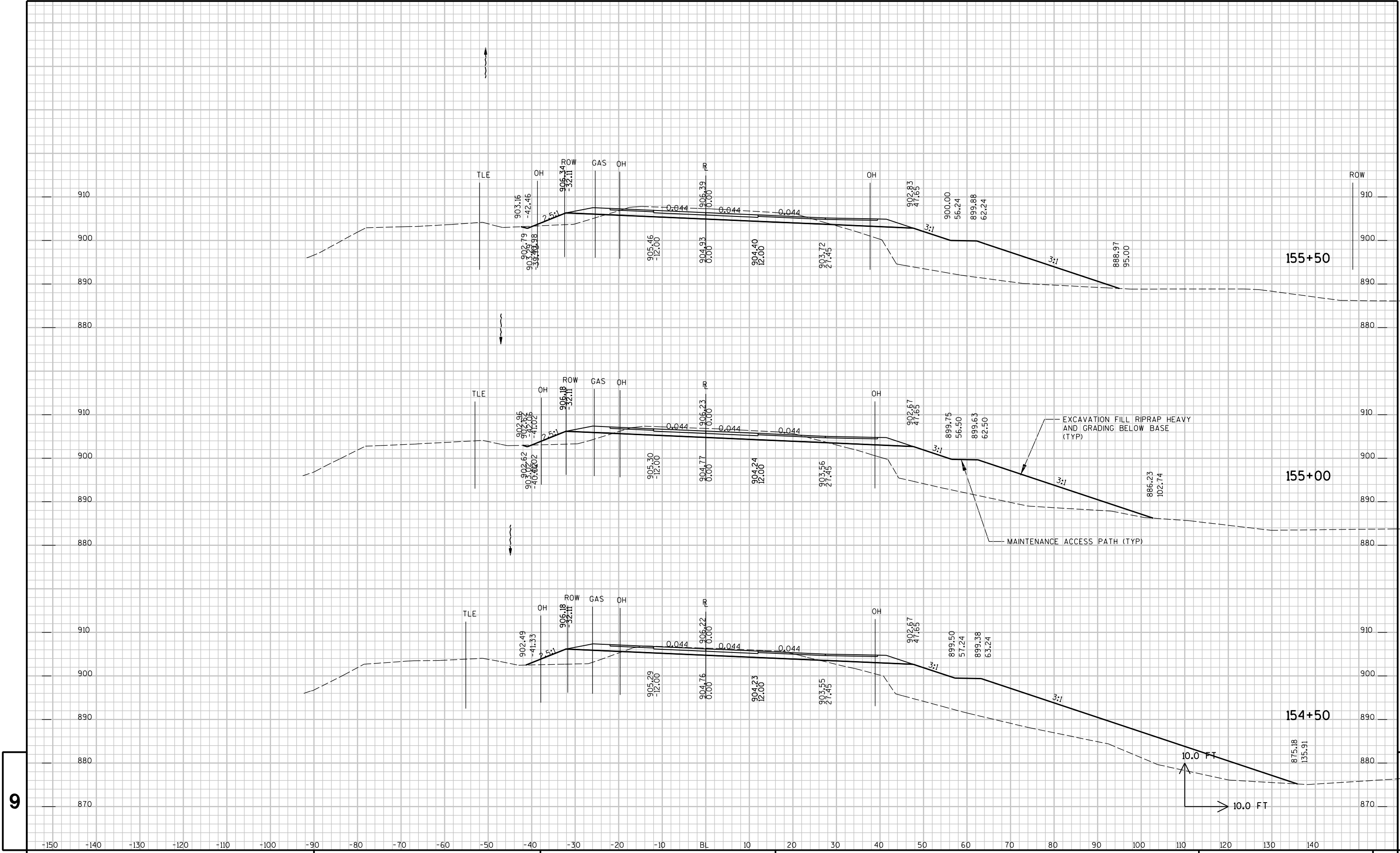
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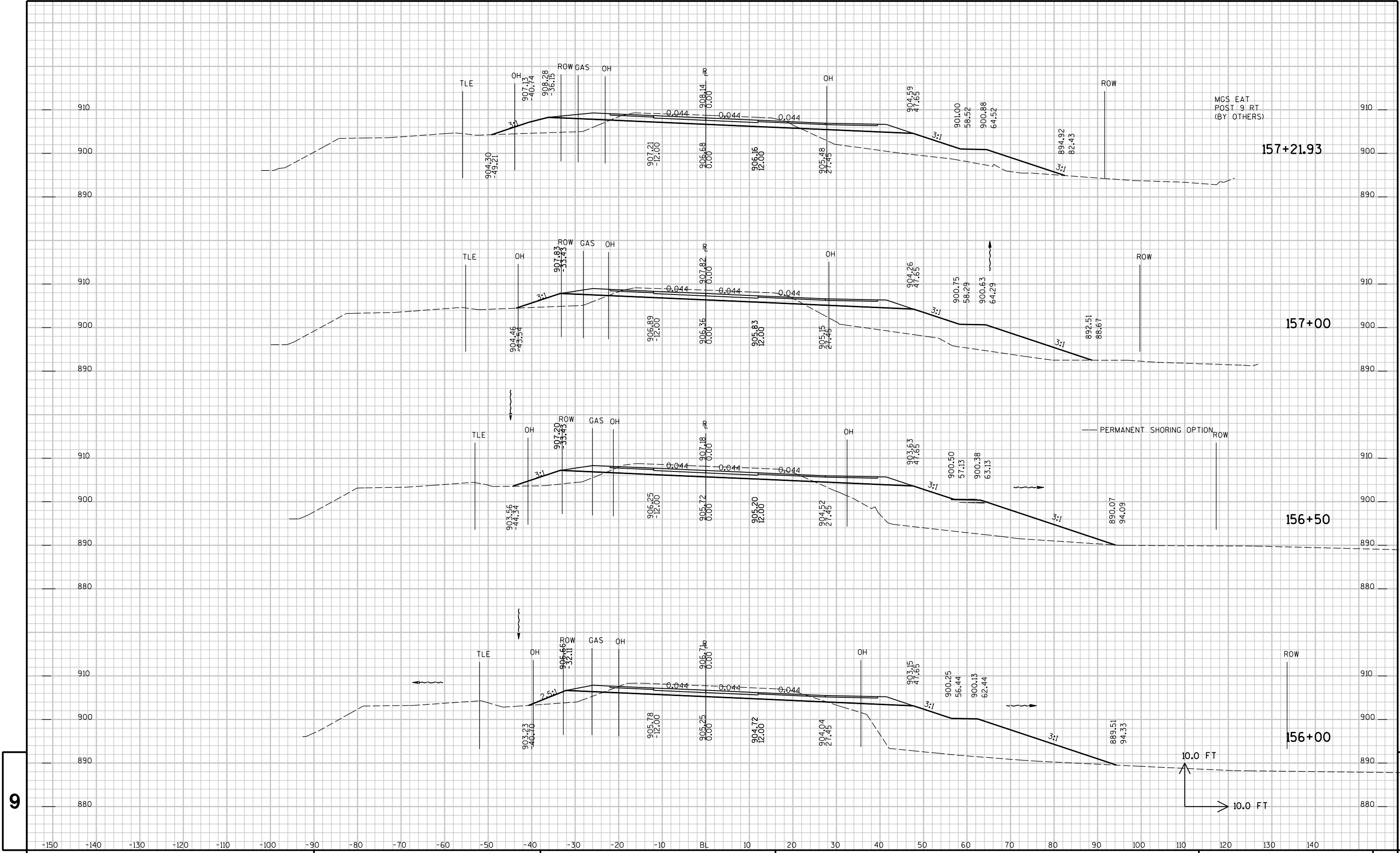


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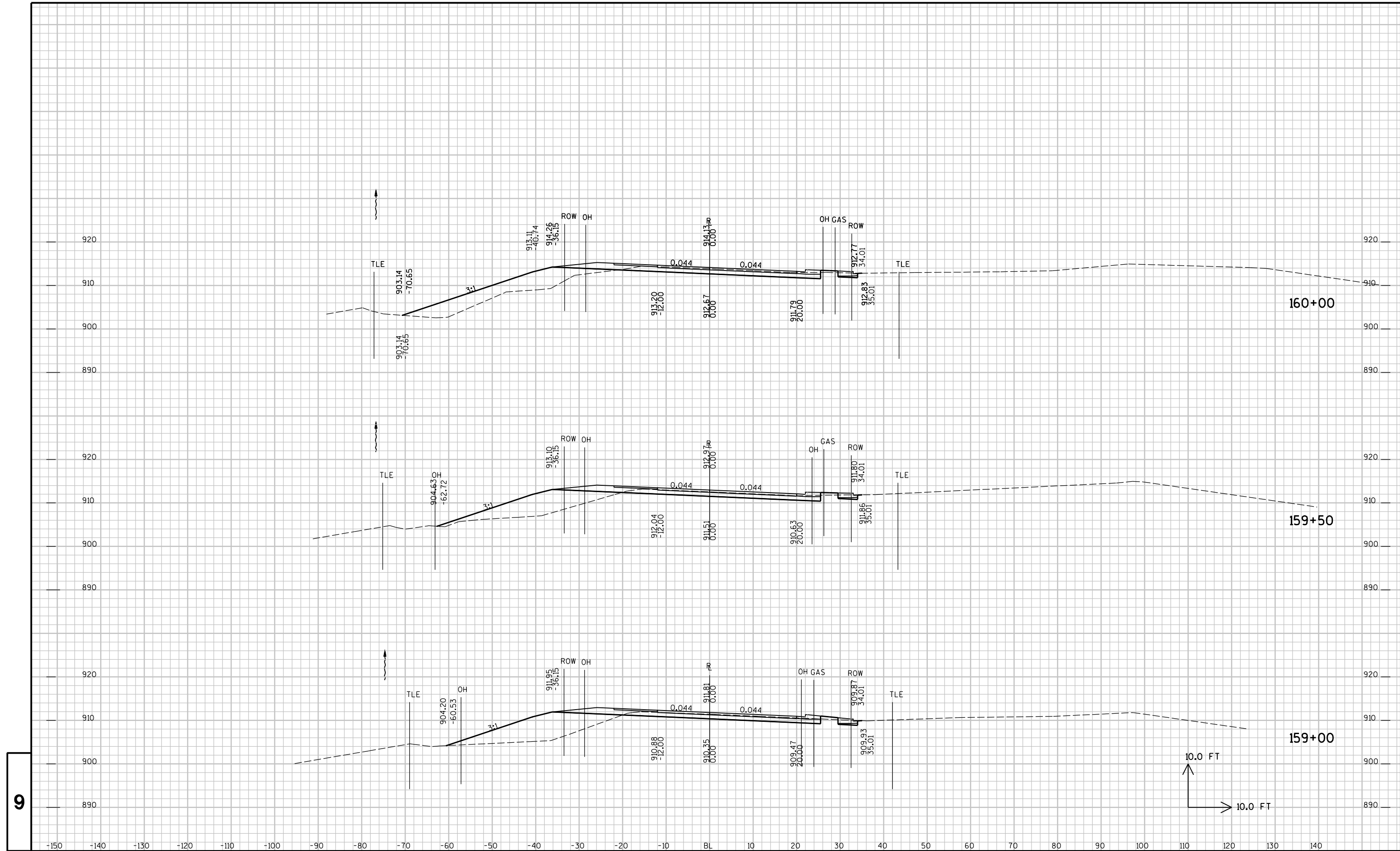
PROJECT NO: 8919-03-72	HWY : CTH X	COUNTY : CHIPPEWA	CROSS SECTIONS -	SHEET NO:	E
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FILE NAME : P:\AEV\Chip\116724\CAD\LET\XBCTHX00.DGN PLOT TIME : 10:53:39 AM PLOT DATE : 10/28/2014 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A



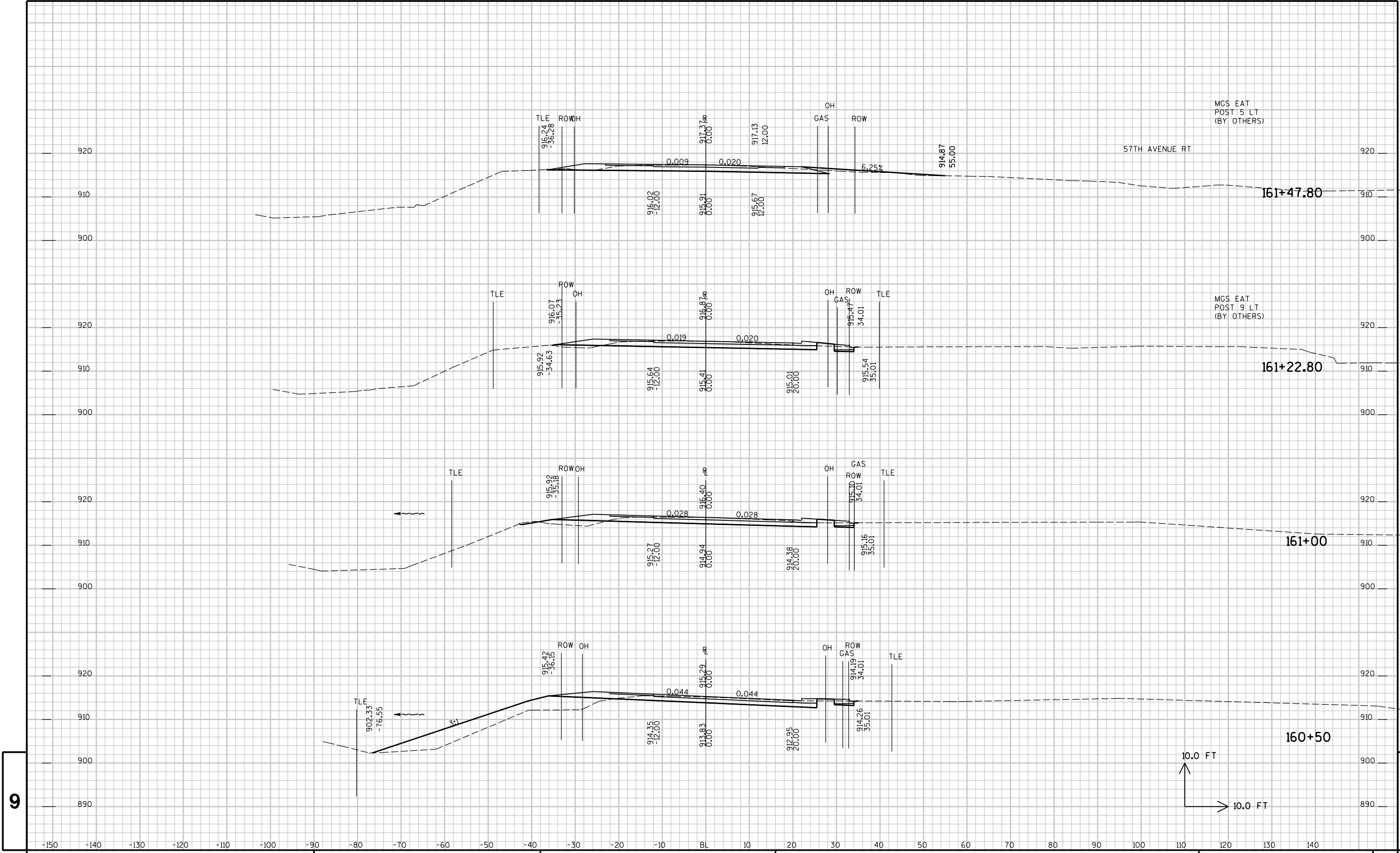
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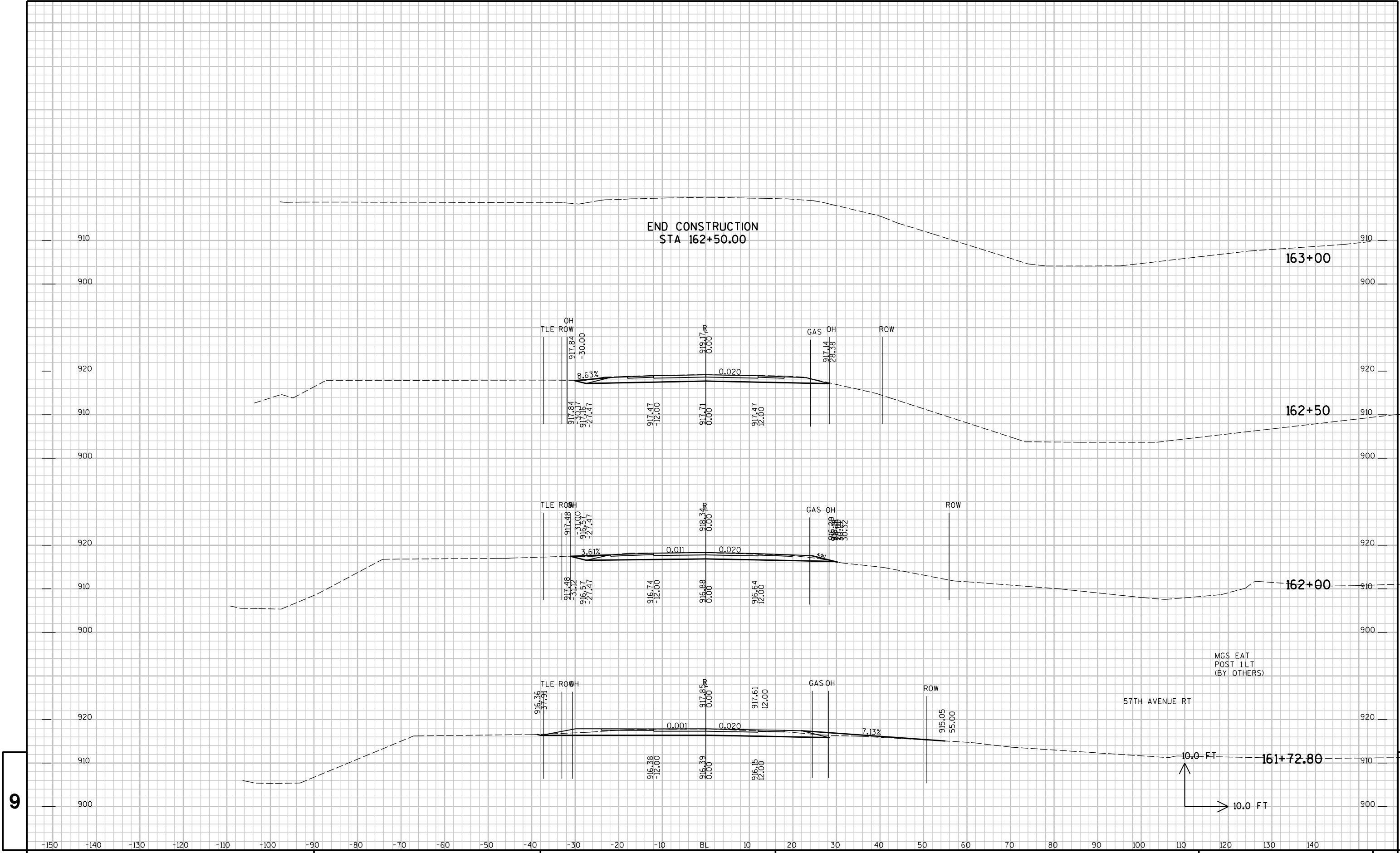
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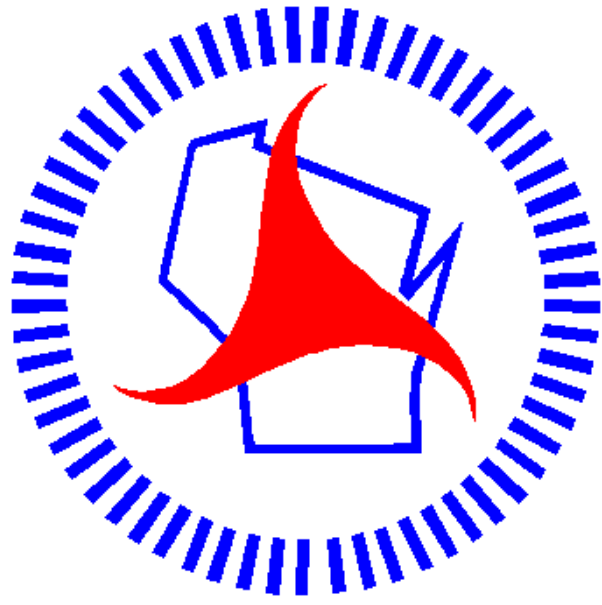
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Wisconsin Department of Transportation

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through innovation and exceptional service.

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