

SWL
PROJECT ID: 3997-00-70
COUNTY: DODGE

AUGUST 2017

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details (Includes Erosion Control)
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 = 104

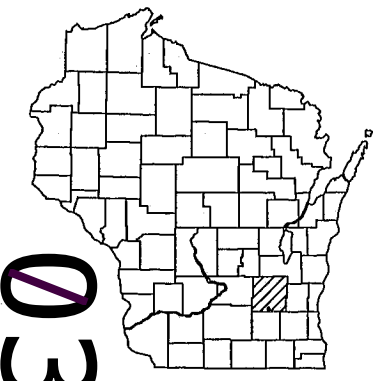
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CITY OF WATERTOWN, NORTH 2ND STREET
(ROCK RIVER BRIDGE B-14-0209)
LOCAL STREET
DODGE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3997-00-70	WISC 2017400	1

STATE PROJECT NUMBER
3997-00-70



DESIGN DESIGNATION

A.A.D.T. 2017	=	2,400
A.A.D.T. 2037	=	2,600
D.H.V.	=	377
D.D.	=	59.41
T.	=	3.3%
DESIGN SPEED	=	30MPH
ESALS	=	189,800

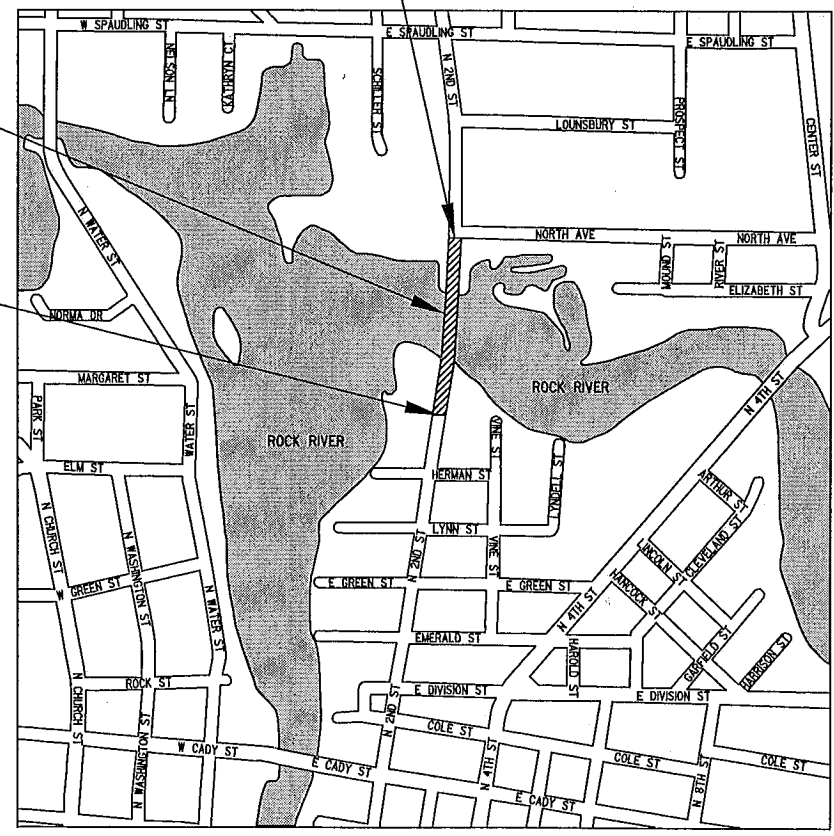
CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS	////	GRADE LINE	—
PROPERTY LINE	----	ORIGINAL GROUND	- - -
LOT LINE	----	MARSH OR ROCK PROFILE (To be noted as such)	- - -
LIMITED HIGHWAY EASEMENT	----	SPECIAL DITCH	----
EXISTING RIGHT OF WAY	----	GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE	----	CULVERT (Profile View)	□
SLOPE INTERCEPT	----	UTILITIES	
REFERENCE LINE	----	ELECTRIC	— E —
EXISTING CULVERT	----	FIBER OPTIC	— FO —
PROPOSED CULVERT (Box or Pipe)	----	GAS	— G —
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	— SAN —
MARSH AREA	----	STORM SEWER	— SS —
WOODED OR SHRUB AREA	----	TELEPHONE	— T —
		WATER	— W —
		UTILITY PEDESTAL	⊕
		POWER POLE	⊕
		TELEPHONE POLE	⊕

STRUCTURE B-14-209

BEGIN PROJECT 3997-00-70
STA. 7+00.00
Y = 630,300.00
X = 878,273.11

END PROJECT 3997-00-70
STA. 15+00.00



LAYOUT
SCALE 0 1000FT.

TOTAL NET LENGTH OF CENTERLINE 0.125MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DODGE COUNTY, NAD83 (1988), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ACCEPTED FOR
CITY of Watertown
4-10-17 Fred Smith
(Date) Fred Smith, Acting Mayor

ORIGINAL PLANS PREPARED BY
MSA
PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL • REMEDIATION
DEVELOPMENT • ENVIRONMENTAL
2901 International Lane, Suite 300 Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN
JAMIE L. KURTEN-CHMIELEWSKI
E-42403
MADISON
WI
PROFESSIONAL ENGINEER
DATE: 4-6-17 Jaime Kurten-Chmielewski
(Professional Engineer)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor MSA PROFESSIONAL SERVICES, INC.
Designer MSA PROFESSIONAL SERVICES, INC.
Management Consultant KL ENGINEERING

APPROVED FOR THE DEPARTMENT
DATE: 4/28/17
Management Consultant Signature
E

GENERAL NOTES

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. PAVEMENT SLOPES, BORDER SLOPES, ETC., MAY VARY WITHIN THE STATION LIMITS OF EACH SECTION.

CROSS SLOPES AS SHOWN ON THE TYPICAL SECTION WILL VARY AT THE INTERSECTIONS. SEE DETAIL SHEETS AND CROSS SECTIONS FOR SLOPES AND GRADES.

ALL LENGTHS ARE IN FEET EXCEPT AS SHOWN.

OFFSETS FOR INLETS ARE GIVEN TO THE CENTER OF STRUCTURE. STORM SEWER PIPE LENGTHS ARE TO CENTER OF STRUCTURES.

EARTHWORK WASTE MATERIAL SHOWN ON THE EARTHWORK SUMMARY SHALL BE HAULED FROM THE PROJECT, EXCEPT AS DIRECTED BY ENGINEER.

THE EXACT LOCATION AND WIDTH OF DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. DRIVEWAYS SHALL BE REPLACED IN KIND.

RADIUS DIMENSIONS FOR THE CURB AND GUTTER ARE TO THE FACE OF CURB.

ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEED, FERTILIZER, AND E-MAT AS SHOWN IN THE EROSION CONTROL DETAILS. DISTURBED AREAS BEHIND THE BACK OF NEW SIDEWALK SHALL BE TOPSOILED, SEEDED, FERTILIZED AND MULCHED. PAYMENT FOR RESTORATION WILL ONLY BE FOR AREAS SHOWN ON THE PLANS WITHIN THE SLOPE INTERCEPTS.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE OF CONSTRUCTION OPERATIONS AND MAINTAINED AS DETERMINED BY ENGINEER.

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

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

THE LIMITS OF PAVEMENT REMOVAL ON SIDE STREETS IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.

THE REMOVAL OF CONCRETE DRIVEWAYS AND CONCRETE STEPS SHALL BE MEASURED AND PAID AS REMOVING CONCRETE SIDEWALK.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS, BUT IS MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATION OF EBS WILL BE DETERMINED BY THE ENGINEER. AN UNDISTRIBUTED QUANTITY OF SELECT CRUSHED MATERIAL IS INCLUDED FOR EBS BACKFILL.

PIPE ELEVATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

GRADES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

THE EROSION CONTROL FEATURES ARE SHOWN ON THE PLAN AND ARE AT SUGGESTED LOCATIONS. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.

MATCH EXISTING SIDEWALK GRADES AT PRIVATE SIDEWALKS AND DRIVEWAYS UNLESS OTHERWISE NOTED.

PRIOR TO ORDERING DRAINAGE PIPES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS AND RESOLVE ALL CONFLICT VERIFICATIONS BY ALL OF ULO'S WITH THE ENGINEER.

DRIVEWAYS WILL BE REPLACED WITH CONCRETE UP TO THE SIDEWALK. REPLACE IN KIND BEHIND SIDEWALK. ALL RESIDENTIAL CONCRETE DRIVEWAYS AND SIDEWALKS ACROSS DRIVEWAYS SHALL BE 6" THICK AND SHALL BE PAID FOR AS CONCRETE DRIVEWAY 6-INCH. ALL COMMERCIAL DRIVEWAYS AND SIDEWALKS ACROSS DRIVEWAYS SHALL BE 8" THICK AND SHALL BE PAID FOR AS CONCRETE DRIVEWAY 8-INCH.

CONCRETE PIPE SHALL HAVE JOINT TIES INSTALLED ON THE LAST TWO PIPE JOINTS AND THE ENDWALL JOINT AT THE DISCHARGE END.

ELEVATIONS SHOWN ON THE STORM SEWER SHEETS ARE AT THE FLANGE OF THE CASTING. A MINIMUM 6" OF ADJUSTMENT RINGS REQUIRED UNLESS OTHERWISE NOTED.

EXPANSION JOINTS ARE TO CONSTRUCTED AT ALL RADIUS POINTS IN CURB AND GUTTER OR AT LOCATIONS SHOWN IN THE PLANS. SIDEWALK REPLACEMENT SHOULD BE TO THE NEAREST JOINT. LIMITS ARE APPROXIMATE AND ARE TO VERIFIED IN THE FIELD BY THE ENGINEER.

PROOF ROLLING OF SUBBASE IS REQUIRED BEFORE PLACEMENT OF BASE COURSE AND IS INCIDENTAL TO COMMON EXCAVATION. PROOF ROLLING SHALL BE WITNESSED BY THE ENGINEER.

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 0.70 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.59 ACRES

UTILITIES

**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

STORM SEWER:
CITY OF WATERTOWN
ATTN: RICK SCHULTZ
811 SOUTH FIRST STREET
WATERTOWN, WI 53094
PHONE: (920) 262-4080
E-MAIL: ricks@cityofwatertown.org

SANITARY SEWER & WATERMAIN:
CITY OF WATERTOWN
ATTN: KEVIN FREBER
800 HOFFMAN DRIVE
WATERTOWN, WI 53094
PHONE: (920) 262-4075
E-MAIL: kevin.freber@ci.watertown.wi.us

TELEPHONE:
AT&T WISCONSIN
ATTN: ALPER KOLCU
2005 PEWAUKEE ROAD, FL 1
WAUKESHA, WI 53188
PHONE: (262) 970-8494
E-MAIL: ak308x@att.com

CABLE TELEVISION:
CHARTER COMMUNICATIONS
ATTN: RONALD FRASE
N3760 CTH DJ
JUNEAU, WI 53039
PHONE: (920) 349-3156 EXT. 103
E-MAIL: ronald.frase@charter.com

GAS AND ELECTRIC:
WE ENERGIES-ELECTRIC
ATTN: TODD STACH
S13 W33800 HWY 18
DELAFIELD, WI 53018
PHONE: (262) 968-5709
E-MAIL: todd.stach@we-energies.com

GAS AND ELECTRIC:
WE ENERGIES-GAS
ATTN: JOE DABLE
500 S 116 STREET
WEST ALLIS, WI 53214
PHONE: (414) 944-5543
E-MAIL: joe.dable@we-energies.com

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: ERIC HEGGELUND
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 275-3301
EMAIL: eric.heggelund@wisconsin.gov

DESIGN CONTACTS

MSA PROFESSIONAL SERVICES
ATTN: JAIME KURTEN
2901 INTERNATIONAL LANE, SUITE 300
MADISON, WI 53704-3133
PHONE: (608) 242-7779
E-MAIL: jkurten@msa-ps.com

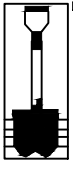
CITY OF WATERTOWN
ATTN: RICK SCHULTZ
811 SOUTH FIRST STREET
WATERTOWN, WI 53094
PHONE: (920) 262-4080
E-MAIL: ricks@cityofwatertown.org

STANDARD ABBREVIATIONS

AC	ACRES
AH	AHEAD
ALUM.	ALUMINUM
A.P.	ACCESS POINT
AVE	AVENUE
BK	BACK
BLK	BLOCK
BM	BENCHMARK
CABC	CRUSHED AGGREGATE BASE COURSE
CL or C	CENTERLINE
Δ	CENTRAL ANGLE or DELTA
CP	CONTROL POINT
CSM	CERTIFIED SURVEY MAP
D	DEGREE OF CURVE
E	EAST
EB	EASTBOUND
ET AL	AND OTHERS
EW	ENDWALL
EXIST	EXISTING
FT	FOOT
FT2	SQUARE FEET
GN	GRID NORTH
HYD	HYDRANT
IN	INCH
INL	INLET
IP	IRON PIPE
L	LENGTH
L	LENGTH OF CURVE
LF	LINEAL FEET
LC	LONG CHORD
LCB	LONG CHORD BEARING
LT	LEFT
MH	MANHOLE
MI	MILE
MON	MONUMENT
N	NORTH
NB	NORTHBOUND
NO	NUMBER
PB	PULLBOX
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT
PT	POINT OF TANGENCY
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
POB	POINT OF BEGINNING
R	RADIUS
R	RANGE
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RL or R/L	REFERENCE LINE
RP	RADIUS POINT
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
SAN	SANITARY SEWER
S	SOUTH
SB	SOUTHBOUND
SQ	SQUARE
STD	STANDARD
SEC	SECTION
ST	STREET
STA	STATION
STM	STORM SEWER
STR	STRUCTURE
T	TANGENT
TAN	TANGENT
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T or TN	TOWN
TYP.	TYPICAL
WM	WATERMAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE

**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

DIGGERS

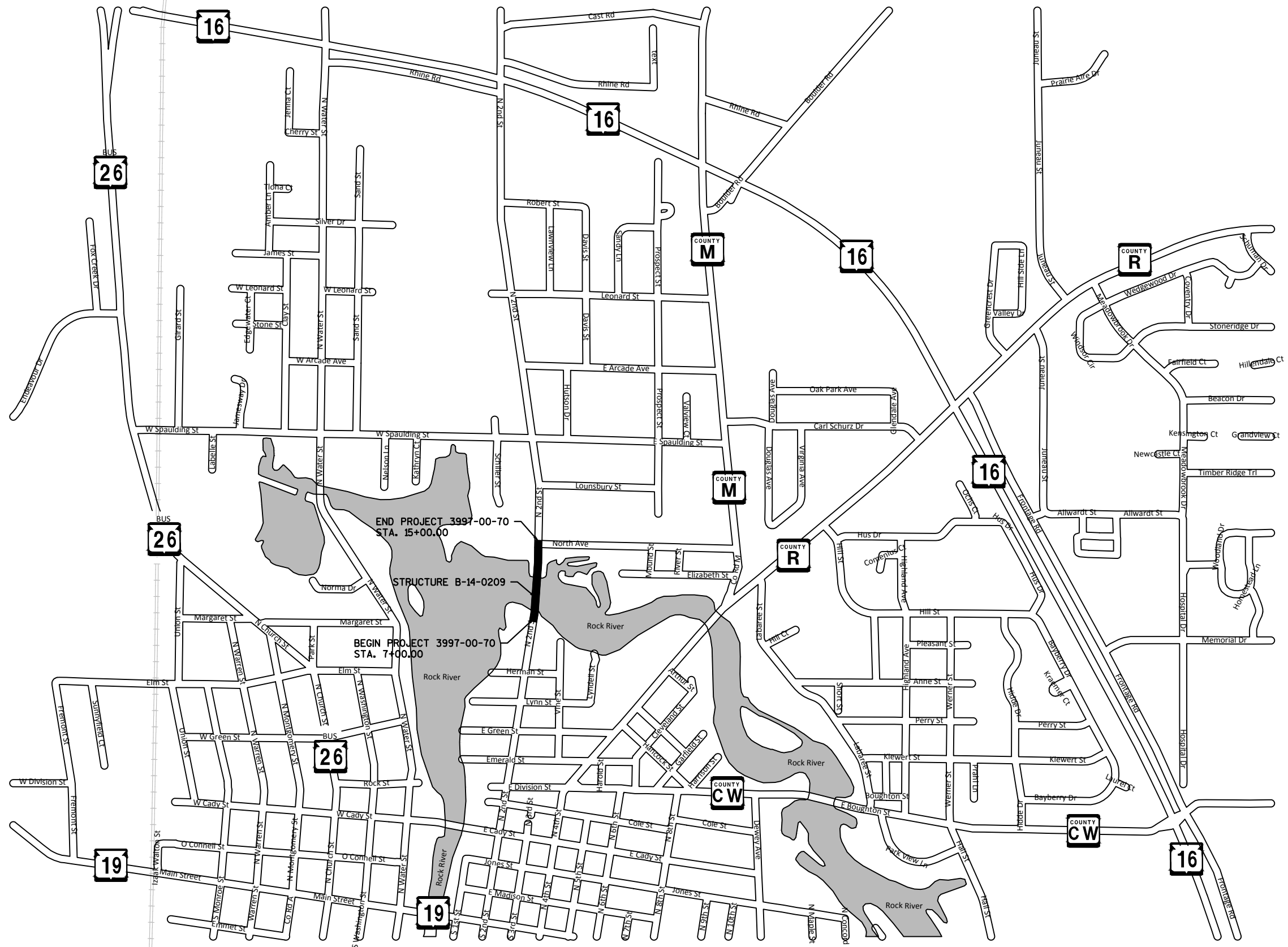


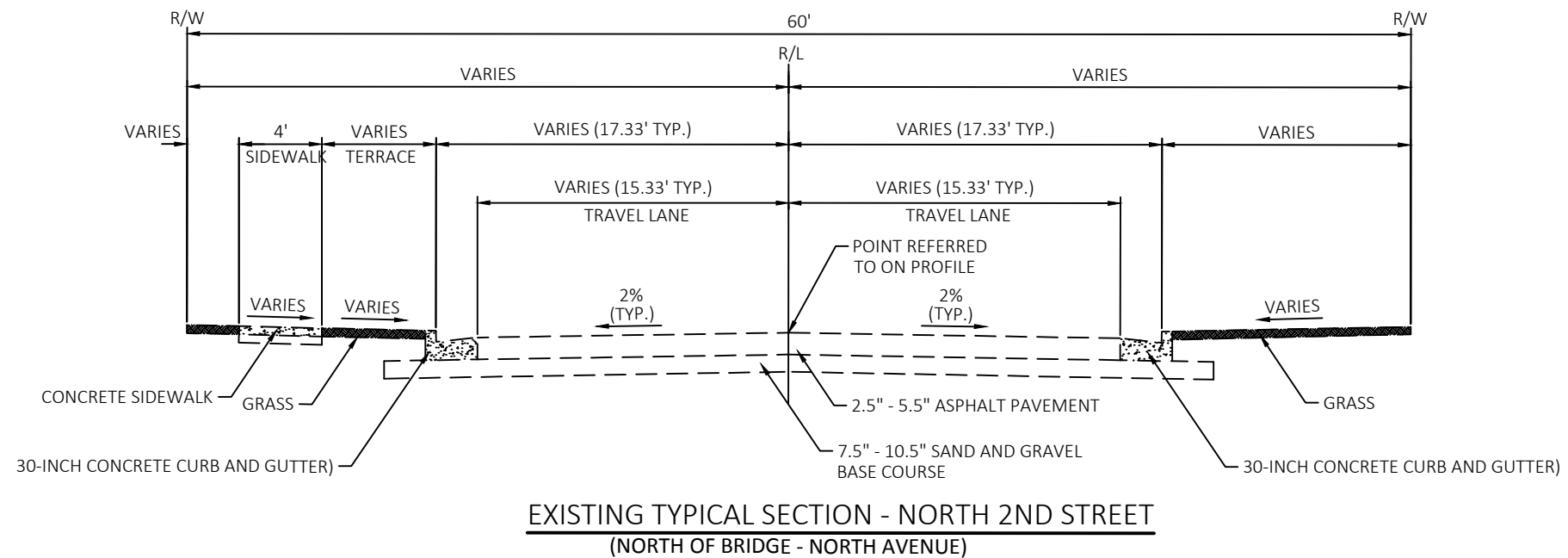
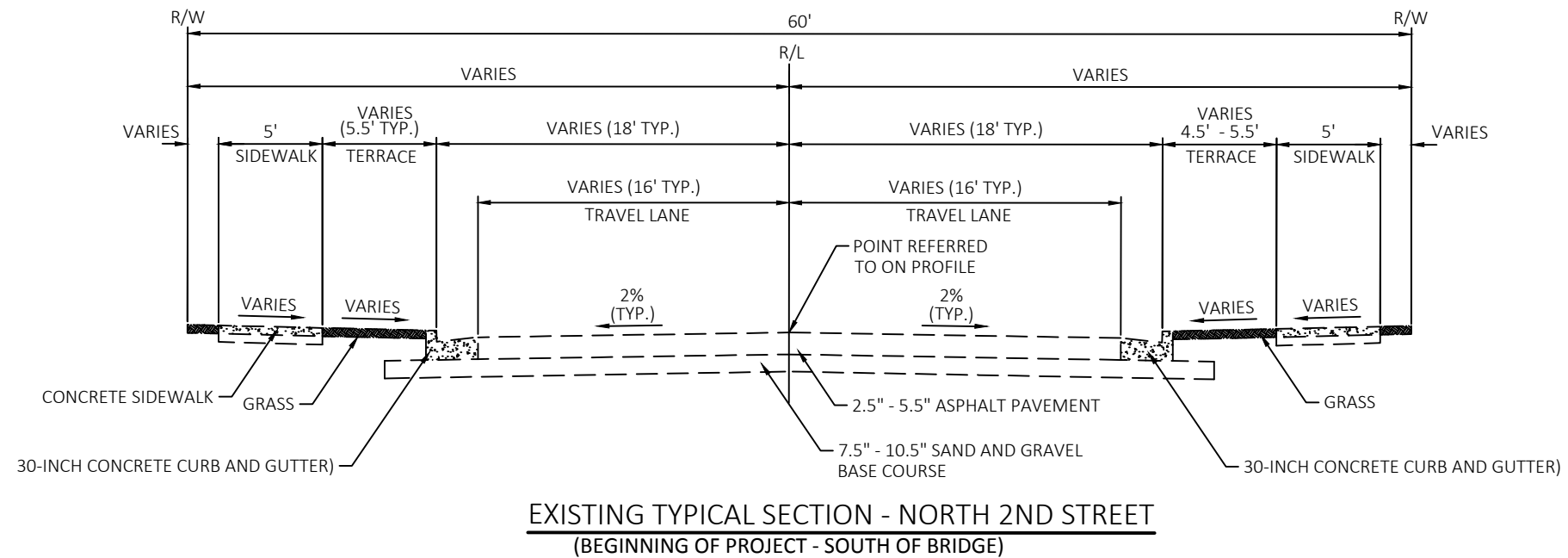
HOTLINE

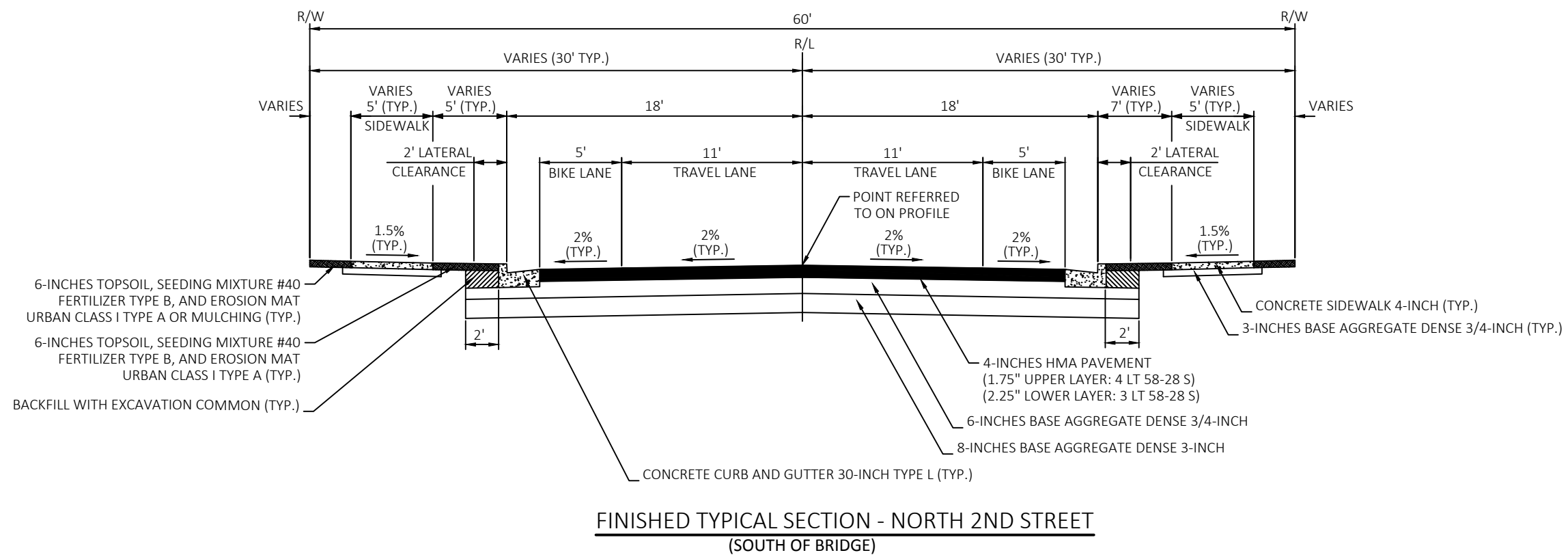
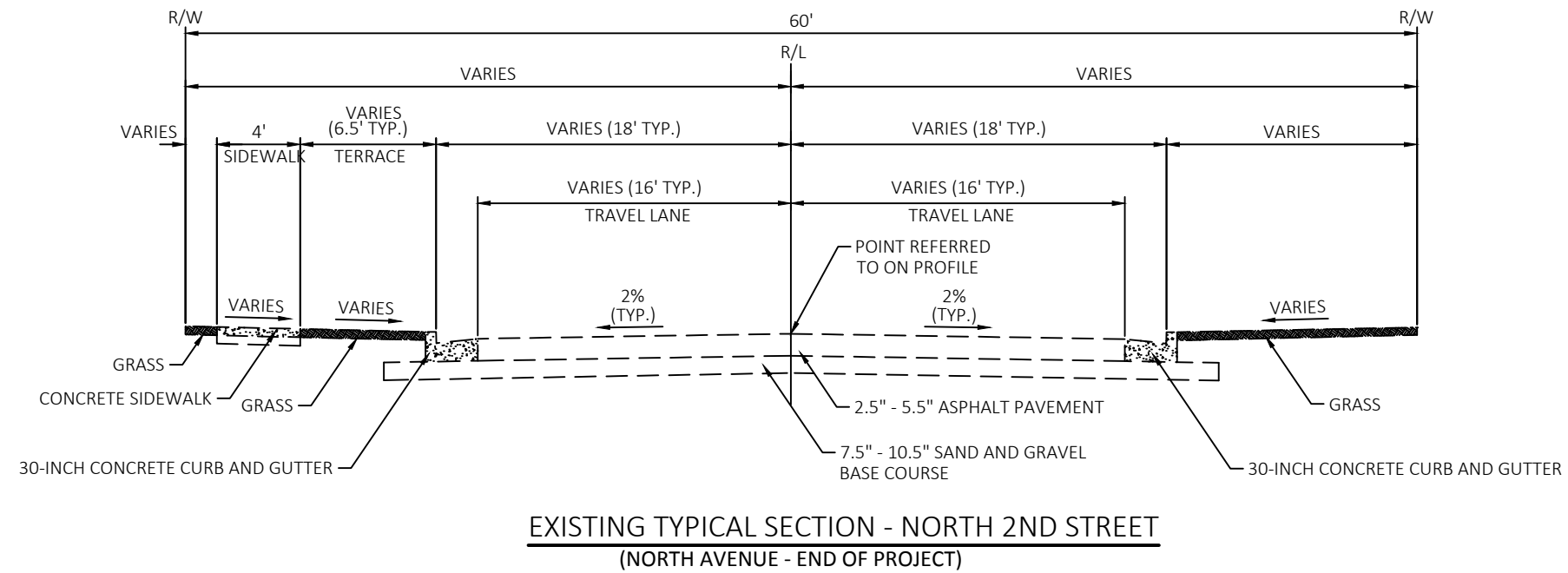
Dial  or (800) 242-8511

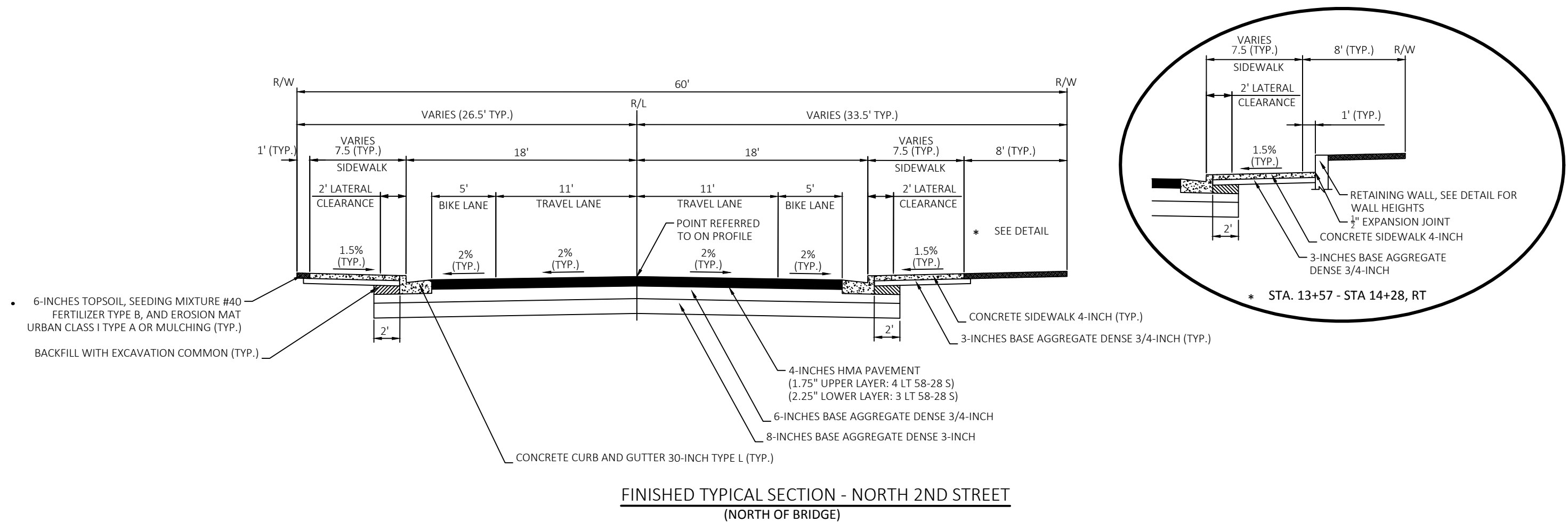
www.DiggersHotline.com

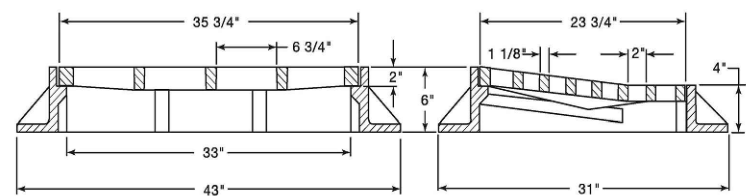
WISCONSIN PUBLIC SERVICE EMERGENCY CONTACT NUMBERS:
ELECTRIC 24-HOUR EMERGENCY SERVICE: 1-800-862-6222
GAS 24-HOUR EMERGENCY SERVICE: 1-800-862-6222





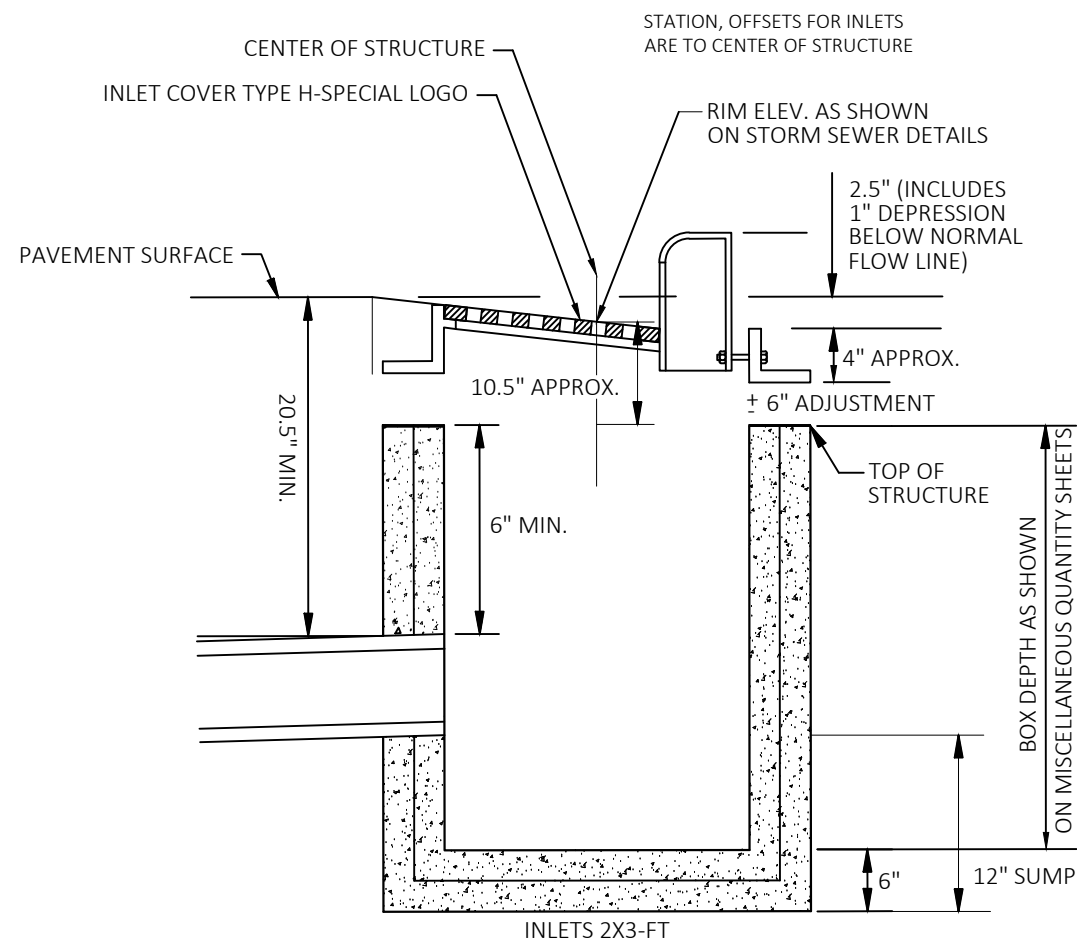






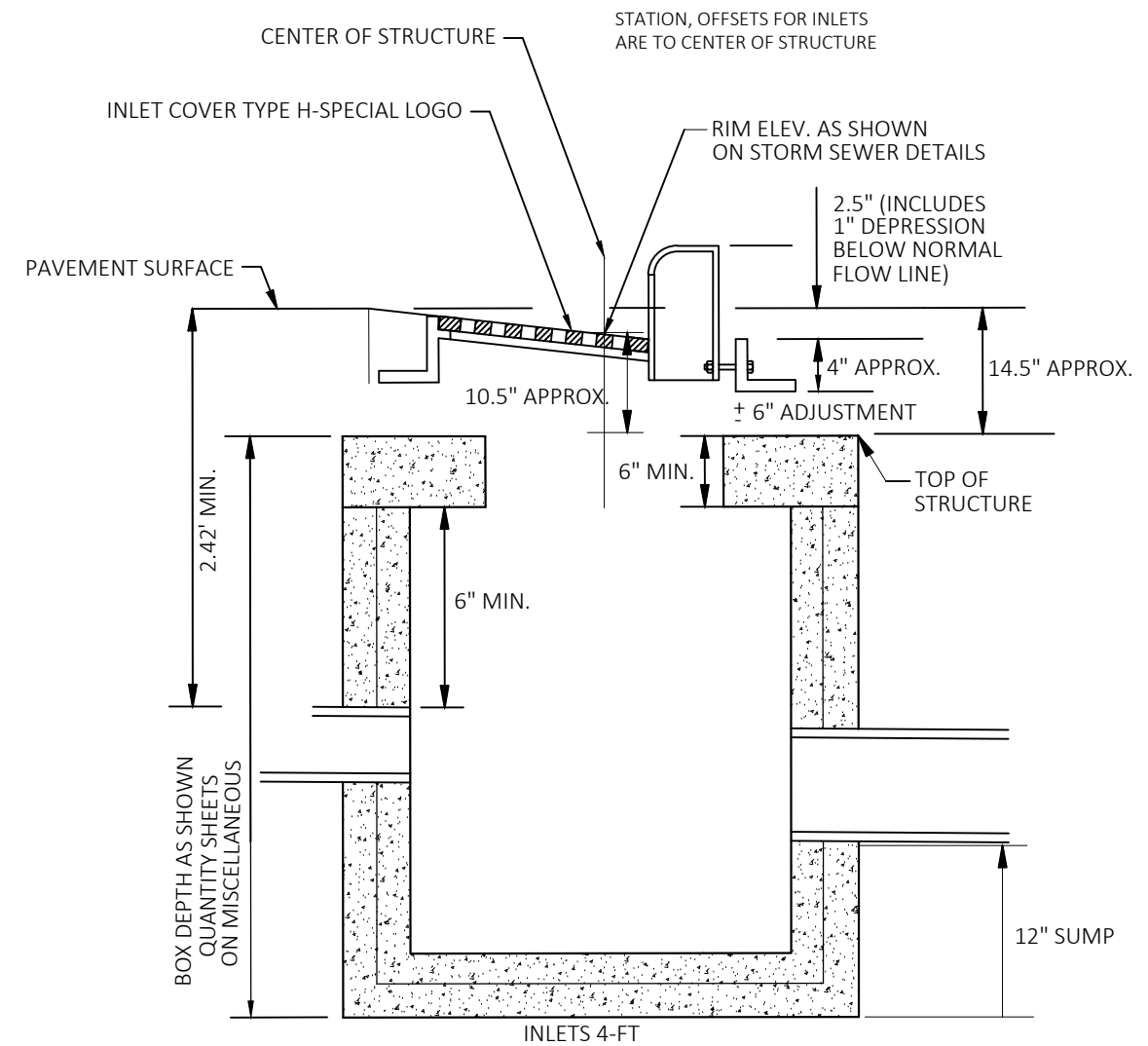
INLET COVER TYPE DRIVEWAY SPECIAL DETAIL

SCALE: NONE



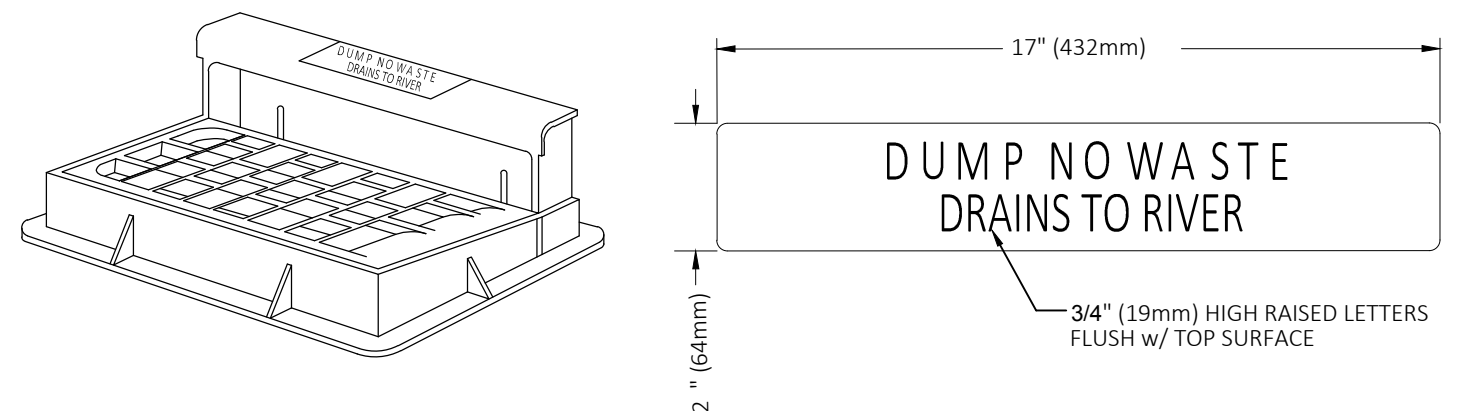
DETAIL FOR COMPUTING INLET ELEVATIONS

SCALE: NONE

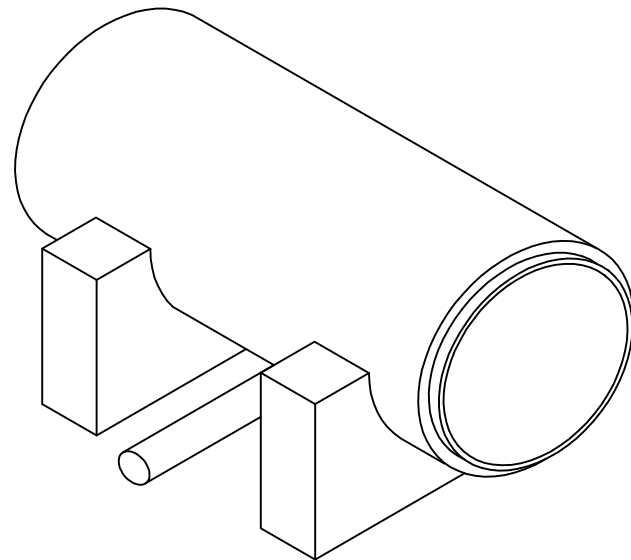


DETAIL FOR COMPUTING ROUND INLET ELEVATIONS

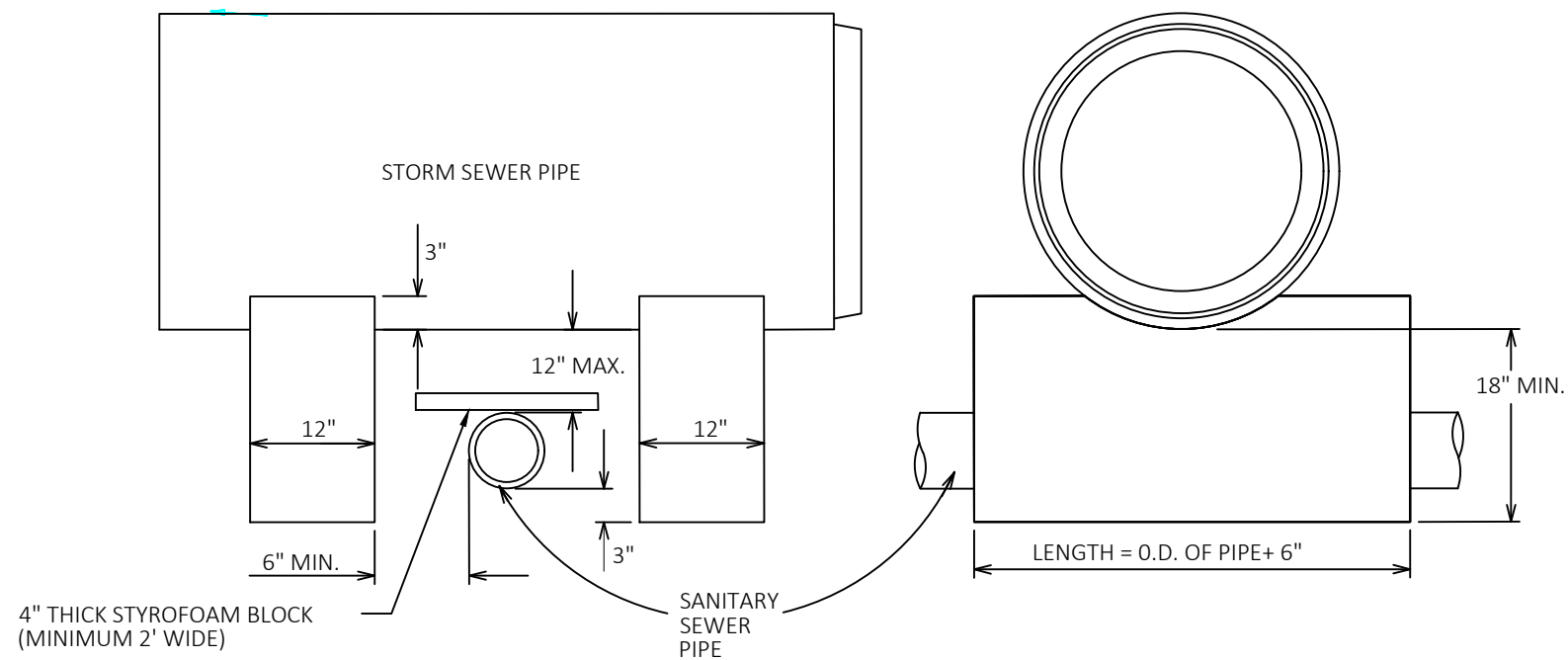
SCALE: NONE



INLET COVER TYPE H-SPECIAL LOGO DETAIL

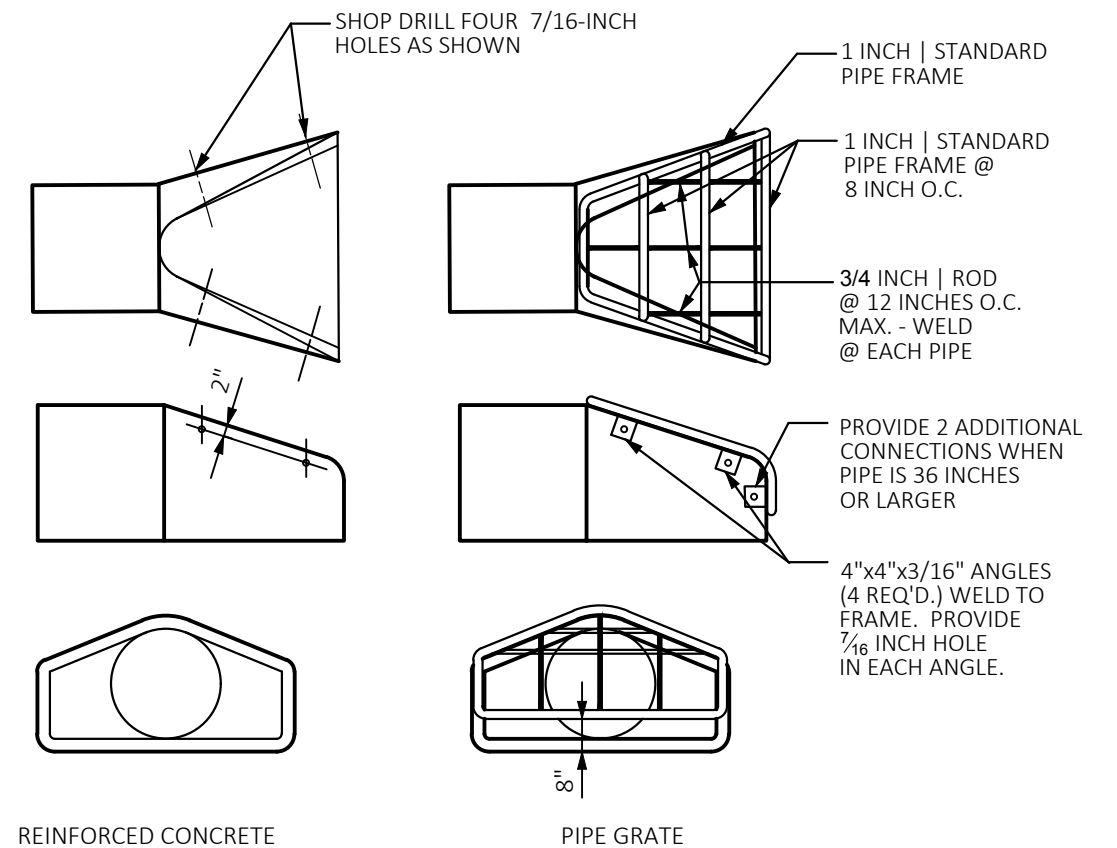


NOTES:
1. FIELD POURED, CONCRETE PIPE SUPPORTS SHALL BE INSTALLED FOR STORM SEWERS WHEN CLEARANCE BETWEEN BOTTOM OF PIPE & TOP OF SANITARY SEWER PIPE IS 12" OR LESS.



CONCRETE SUPPORT DETAIL
SCALE: NONE

STA. 12+85, LT



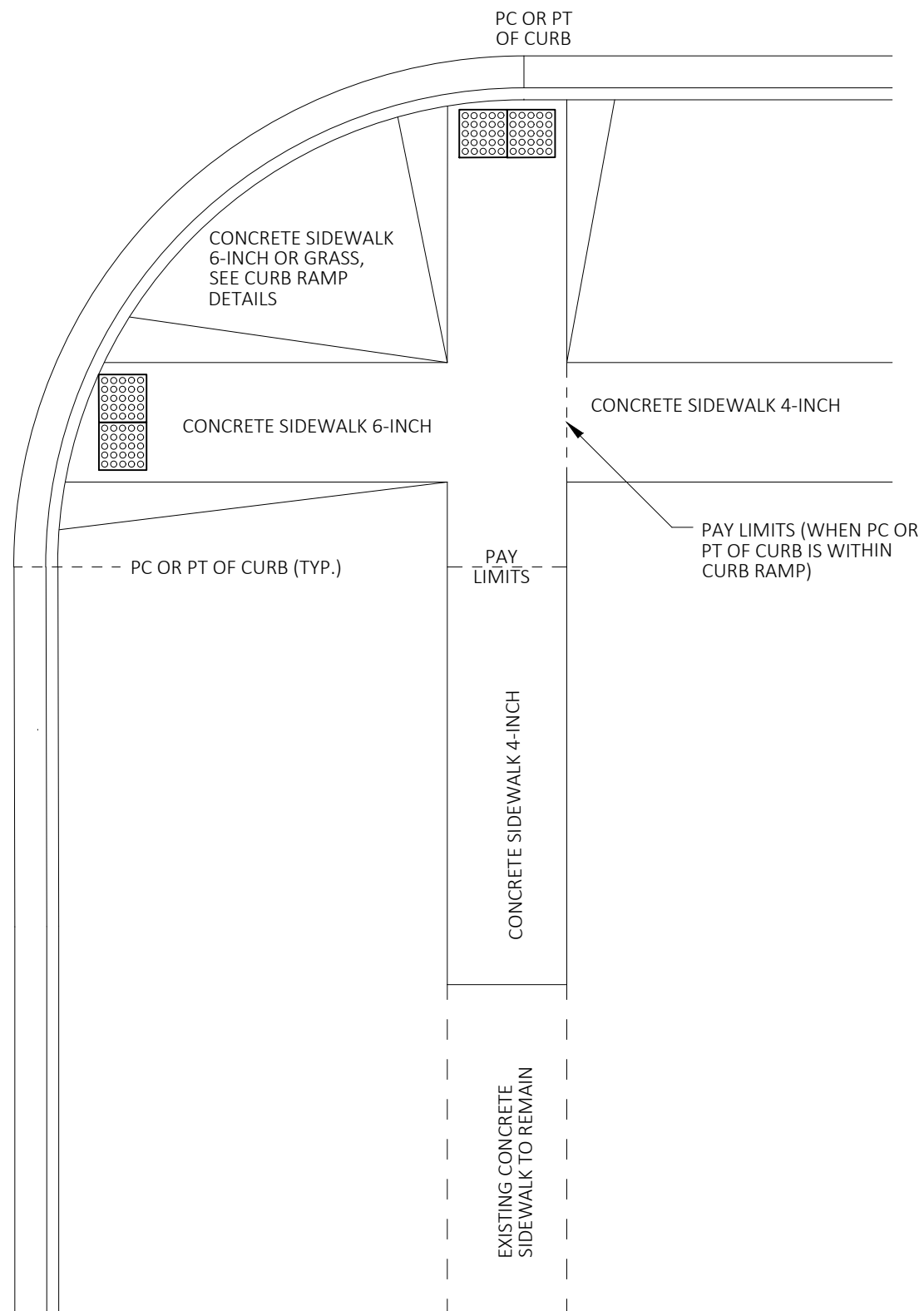
REINFORCED CONCRETE
APRON ENDWALL

PIPE GRATE

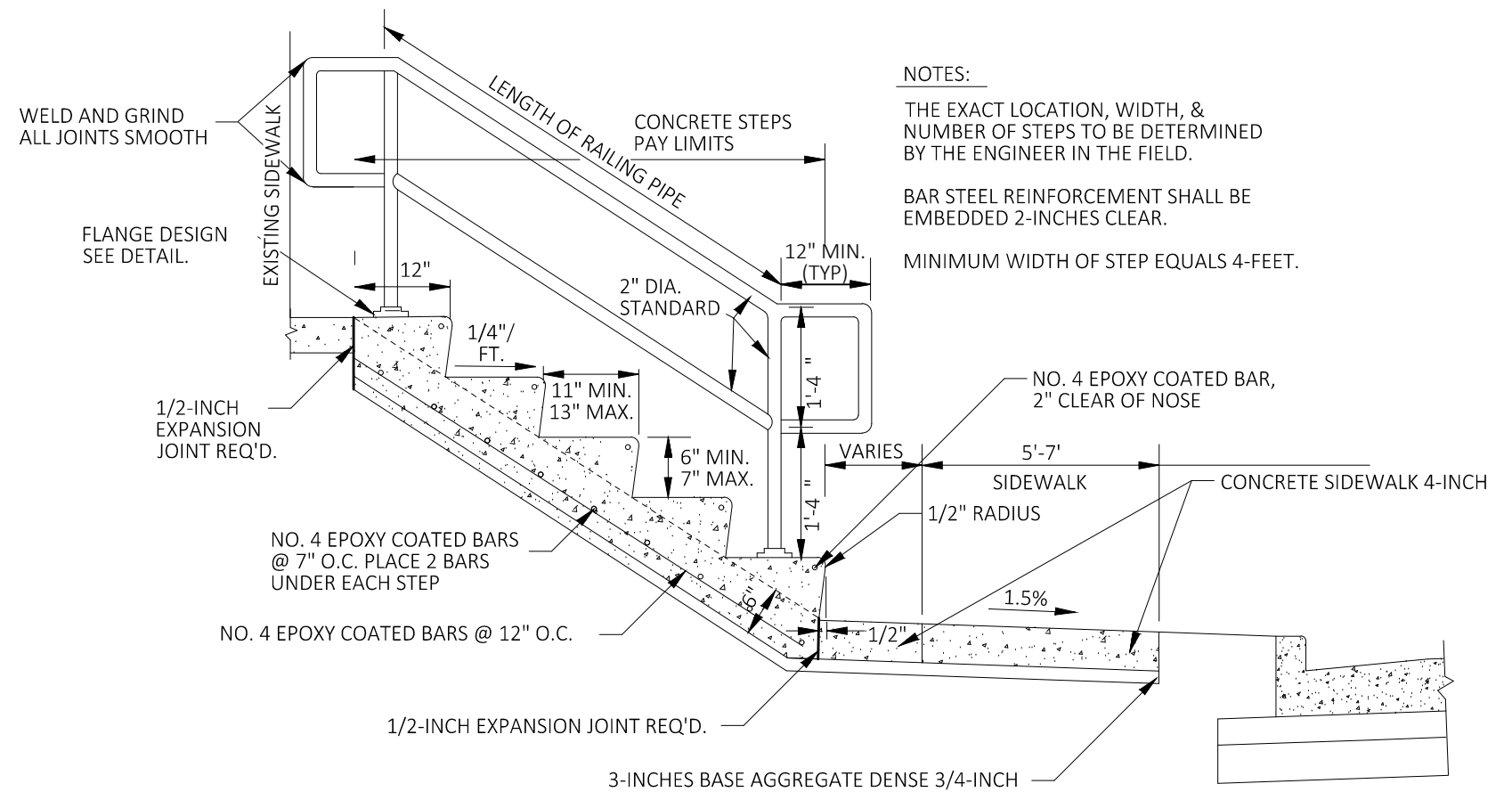
GENERAL NOTES:

1. THE CONTRACTOR SHALL BOLT THE PIPE GRATE TO THE ENDWALL WITH FOUR 3/8- INCH x 6 INCH STAINLESS STEEL ZINC COATED MACHINE BOLTS WITH NUTS ON INSIDE WALL.
2. PAINTING SPECIFICATIONS
THE PIPE GRATE SHALL RECEIVE THE FOLLOWING PREPARATION AND PAINTING.
PREPARATION:
BARE SURFACES BY THOROUGH SCRAPING, WIRE BRUSHING AND CLEANING.
APPLY A THREE COAT SYSTEM AS RECOMMENDED BY THE MANUFACTURER. PIPE GRATES SHALL BE POWDER COATED BLACK (RAL 9017).
ALLOW 24-48 HOURS DRYING TIME BETWEEN COATS.

PIPE GRATE DETAIL
SCALE: NONE

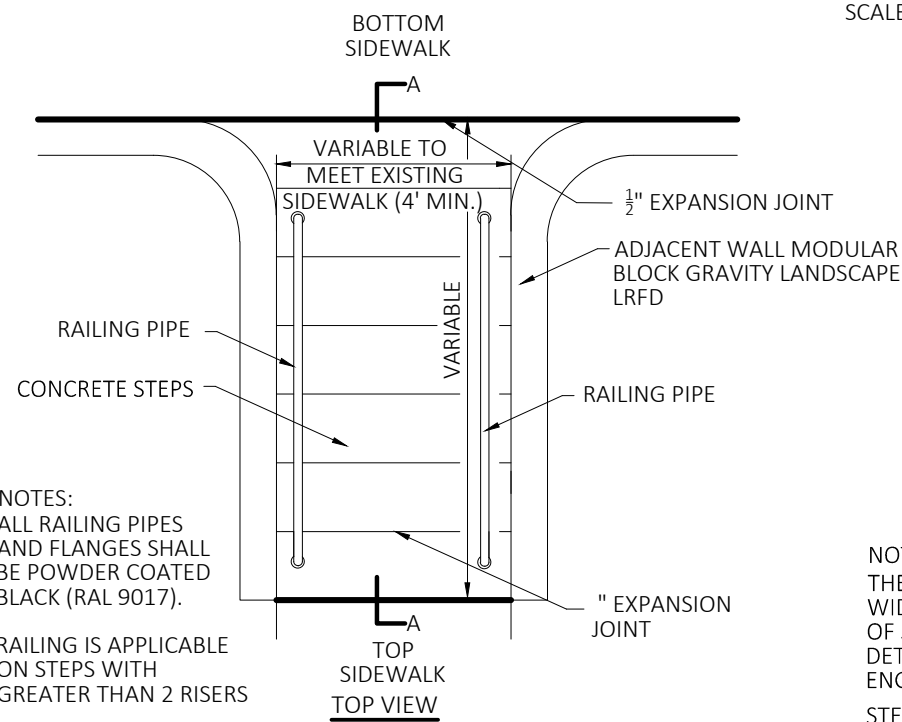


CONCRETE SIDEWALK 6-INCH PAY LIMITS DETAIL
SCALE: NONE



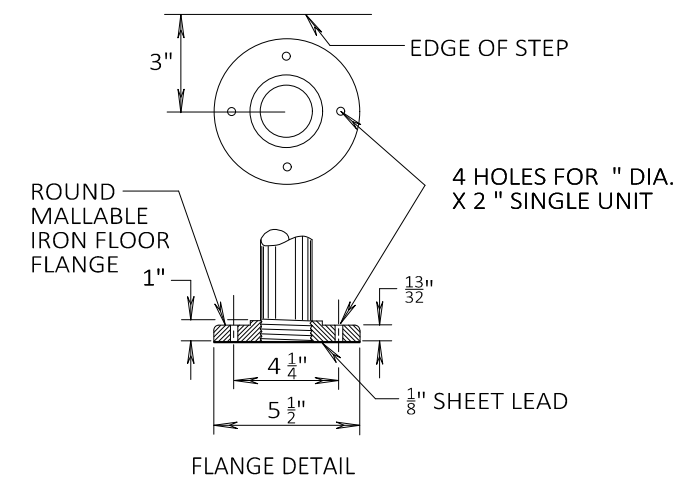
STA. 7+26, LT - 1 STEP
STA. 13+55, RT - 2 STEPS
STA. 14+05, RT - 5 STEPS

CONCRETE STEPS DETAIL
SCALE: NONE



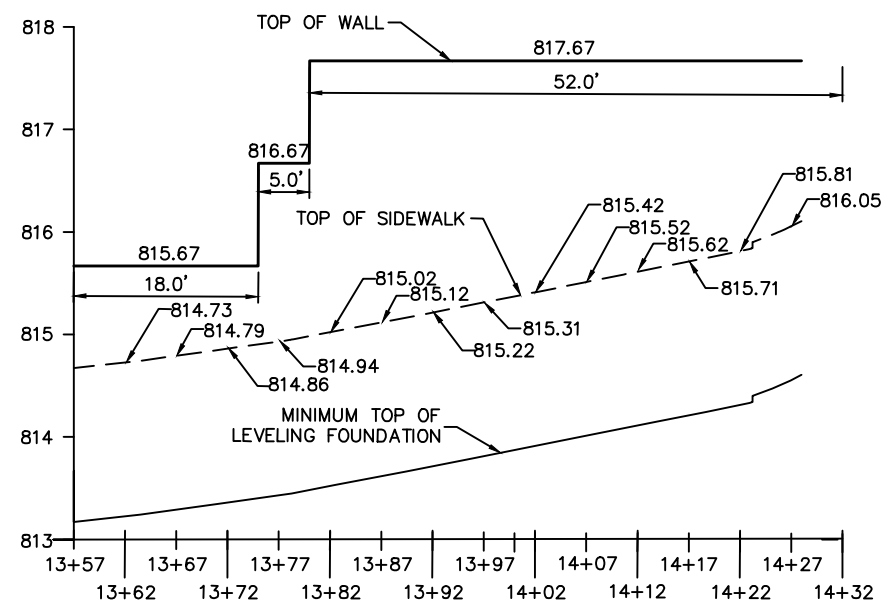
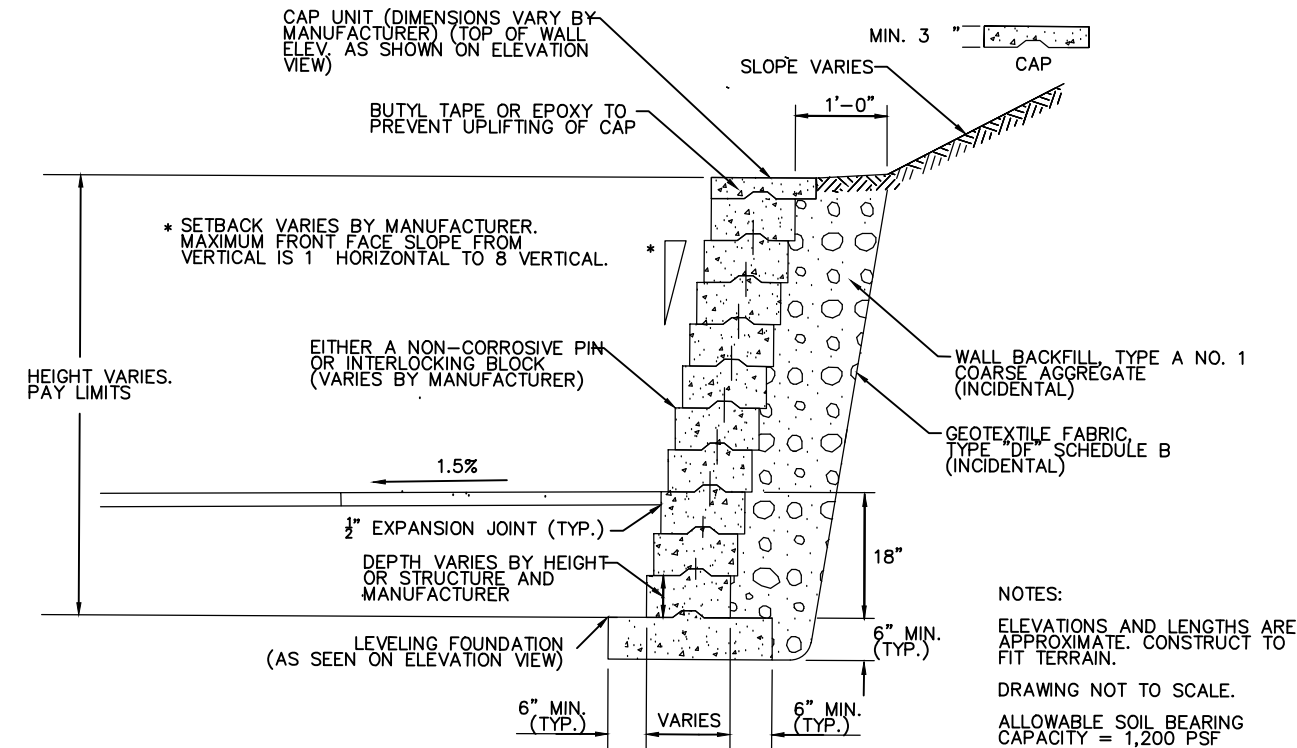
NOTES:
ALL RAILING PIPES
AND FLANGES SHALL
BE POWDER COATED
BLACK (RAL 9017).

RAILING IS APPLICABLE
ON STEPS WITH
GREATER THAN 2 RISERS

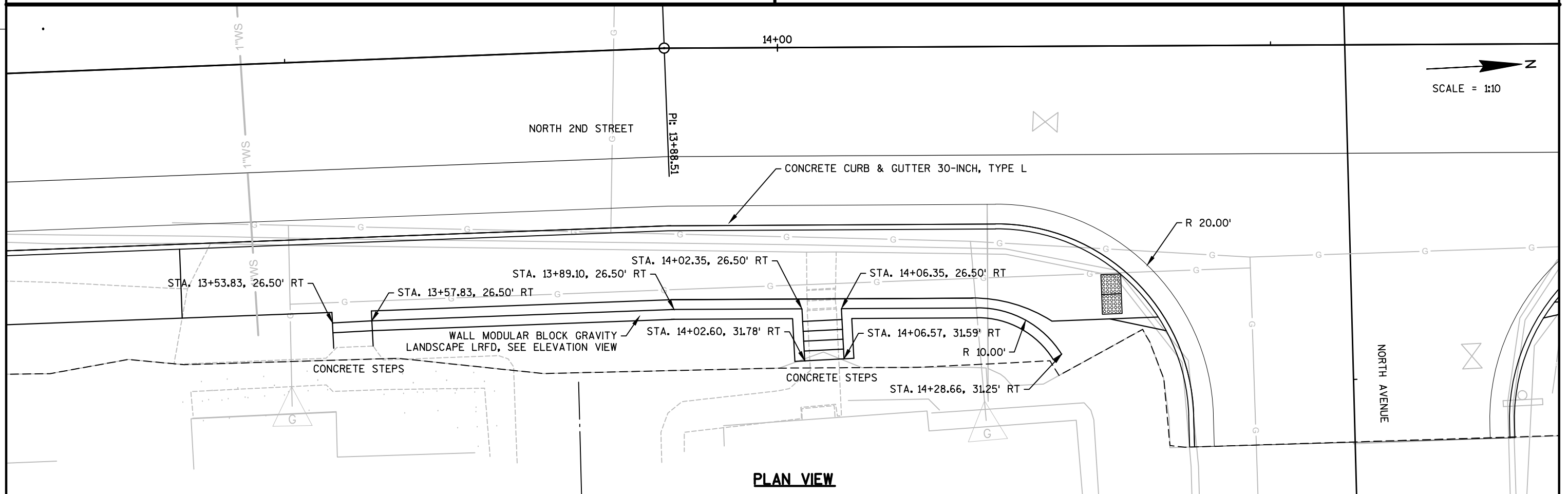


NOTES:
THE EXACT LOCATION,
WIDTHS, & NUMBER
OF STEPS TO BE
DETERMINED BY THE
ENGINEER IN THE FIELD.
STEEL REINFORCEMENT
NOT REQUIRED ON STEPS
WITH 2 RISERS OR LESS.

BAR STEEL REINFORCEMENT
SHALL BE EMBEDDED 2 INCHES
CLEAR.
RAILING AND FLANGE MAY BE
INSTALLED AFTER STEP CONSTRUCTION
OR PER MANUFACTURER'S SPECIFICATIONS.
MINIMUM WIDTH OF STEP EQUALS 4 FEET.

**ELEVATION VIEW****SECTION VIEW**

NOTES:
ELEVATIONS AND LENGTHS ARE APPROXIMATE. CONSTRUCT TO FIT TERRAIN.
DRAWING NOT TO SCALE.
ALLOWABLE SOIL BEARING CAPACITY = 1,200 PSF

**PLAN VIEW**

STUEBE REVOCABLE TRUST
1022 N SECOND ST

GREGORY J SCHWARTZ
1026 N SECOND ST

JEROME P DAVID
1030 N SECOND ST

1/2" EXPANSION JOINT
ALONG BUILDING EDGE

SAWCUT REQ'D
ALONG BUILDING AND STEPS

*MATCH EXISTING DRIVEWAY
LOCATION AND ELEVATIONS

8+10.36, 72.37' LT

1/2" EXPANSION JOINT

8+04.88, 47.49' LT

8+00.00, 28.00' LT

1/2" EXPANSION JOINT

CONCRETE DRIVEWAY
8-INCH

CONCRETE DRIVEWAY
8-INCH

CONCRETE DRIVEWAY
8-INCH

8+28.10, 28.07' LT

CONCRETE DRIVEWAY
8-INCH

CONCRETE DRIVEWAY
8-INCH

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

1/2" EXPANSION JOINT

N. 2ND STREET

7+00

8+00

9+00

PLAN VIEW

CONCRETE DRIVEWAY
STA. 8+05 LT
SCALE 1"=20'

PROJECT NO: 3997-00-70

HWY: N. 2ND STREET

COUNTY: DODGE

CONSTRUCTION DETAILS

SHEET

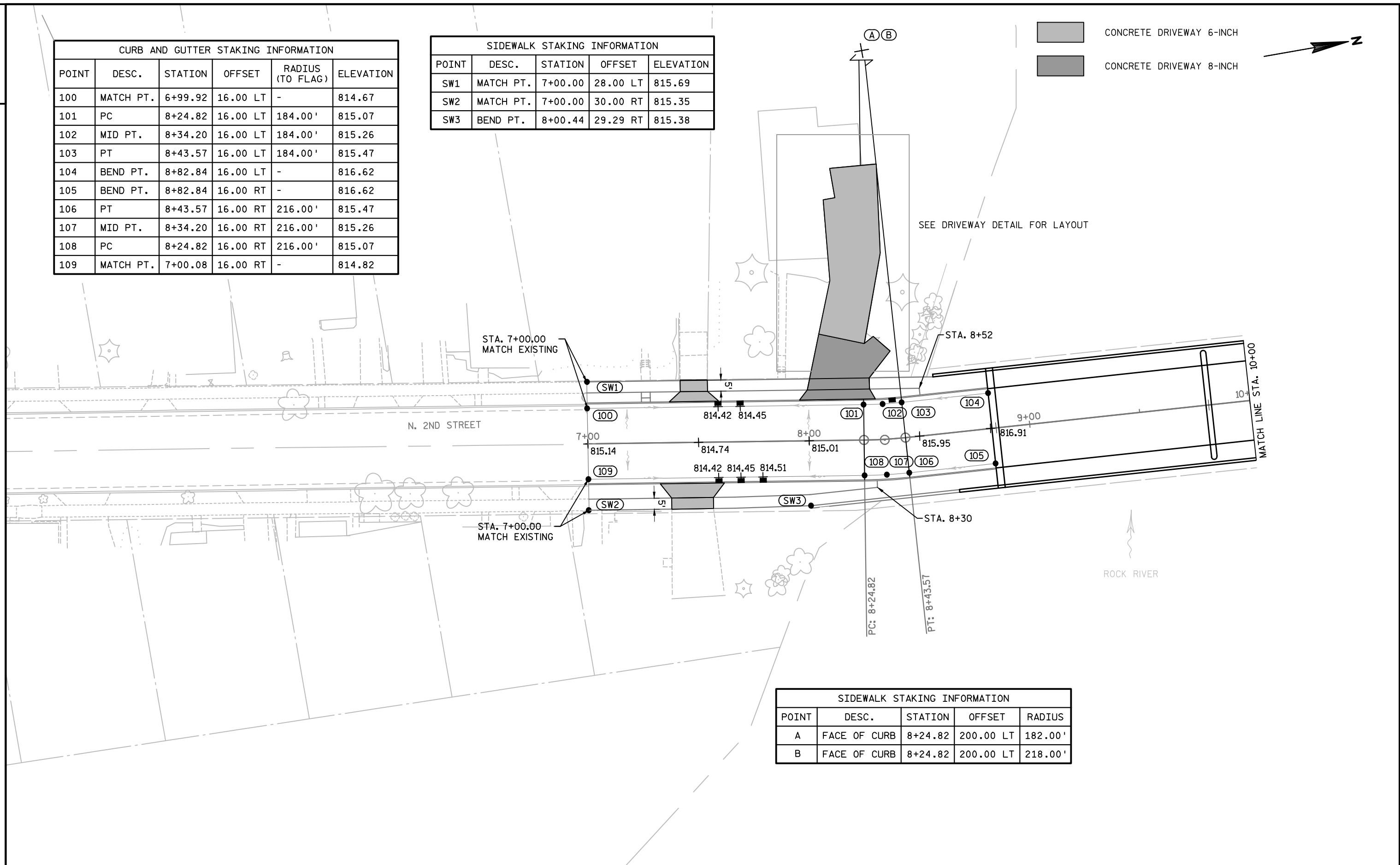
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CURB AND GUTTER STAKING INFORMATION					
POINT	DESC.	STATION	OFFSET	RADIUS (TO FLAG)	ELEVATION
100	MATCH PT.	6+99.92	16.00 LT	-	814.67
101	PC	8+24.82	16.00 LT	184.00'	815.07
102	MID PT.	8+34.20	16.00 LT	184.00'	815.26
103	PT	8+43.57	16.00 LT	184.00'	815.47
104	BEND PT.	8+82.84	16.00 LT	-	816.62
105	BEND PT.	8+82.84	16.00 RT	-	816.62
106	PT	8+43.57	16.00 RT	216.00'	815.47
107	MID PT.	8+34.20	16.00 RT	216.00'	815.26
108	PC	8+24.82	16.00 RT	216.00'	815.07
109	MATCH PT.	7+00.08	16.00 RT	-	814.82

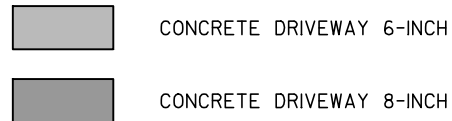
SIDEWALK STAKING INFORMATION				
POINT	DESC.	STATION	OFFSET	ELEVATION
SW1	MATCH PT.	7+00.00	28.00 LT	815.69
SW2	MATCH PT.	7+00.00	30.00 RT	815.35
SW3	BEND PT.	8+00.44	29.29 RT	815.38

CONCRETE DRIVEWAY 6-INCH

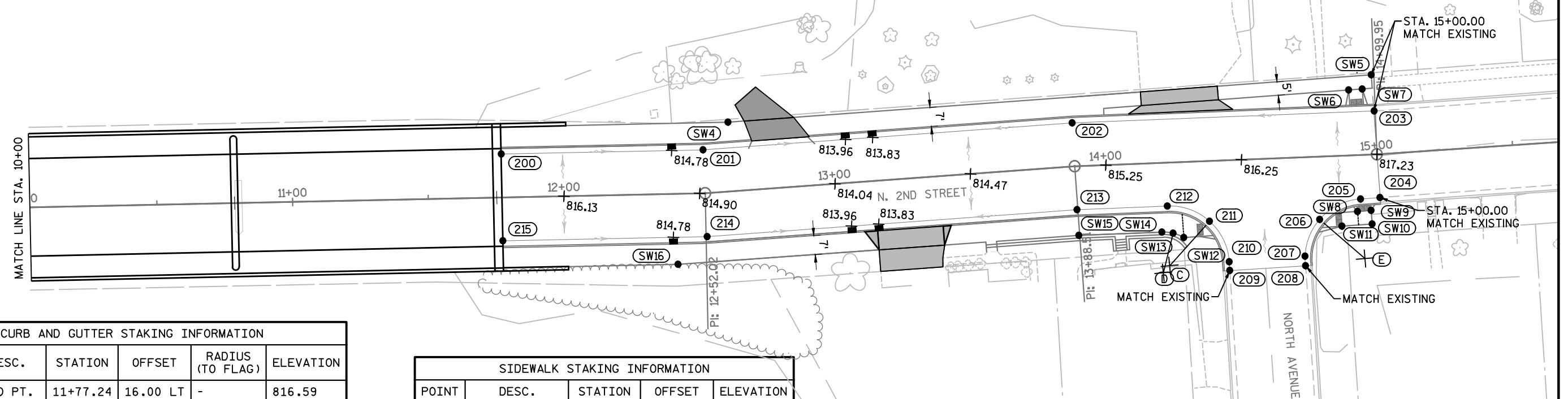
CONCRETE DRIVEWAY 8-INCH



SIDEWALK STAKING INFORMATION				
POINT	DESC.	STATION	OFFSET	RADIUS
A	FACE OF CURB	8+24.82	200.00 LT	182.00'
B	FACE OF CURB	8+24.82	200.00 LT	218.00'



SIDEWALK STAKING INFORMATION				
POINT	DESC.	STATION	OFFSET	RADIUS
C	FACE OF CURB	14+94.03	38.20 RT	20.0'
D	BACK OF SIDEWALK	14+19.58	40.50 RT	15.0'
E	FACE OF CURB	14+22.02	38.00 RT	20.0'

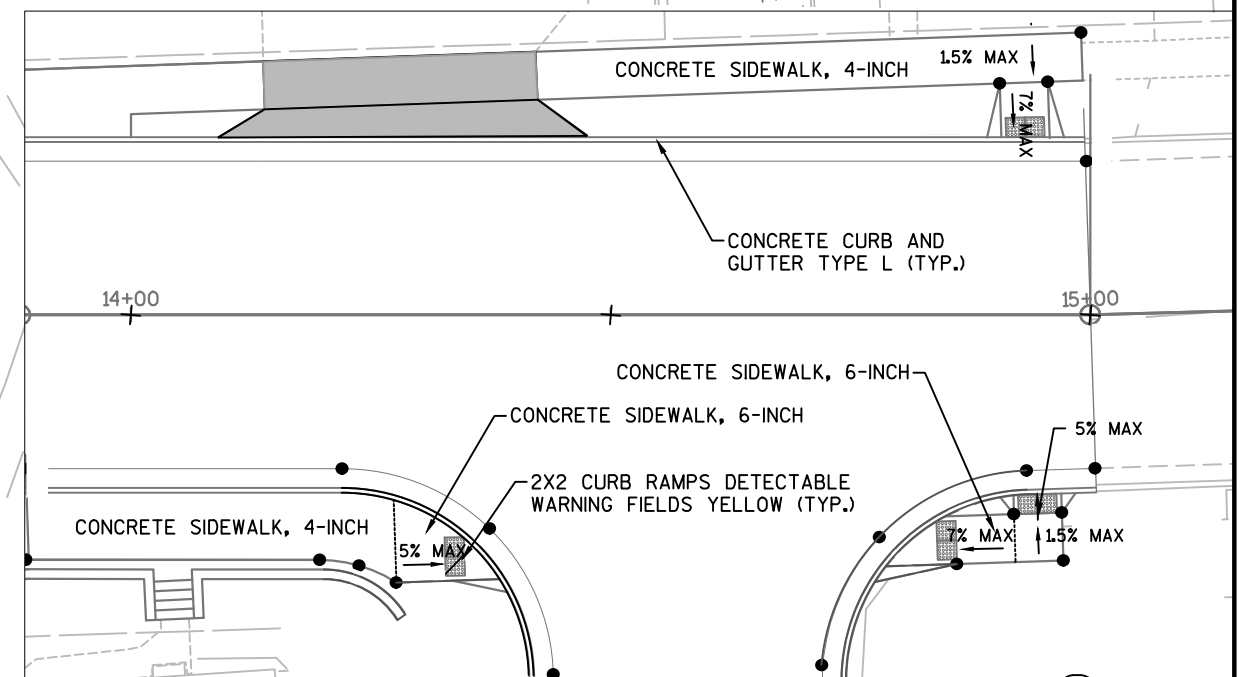


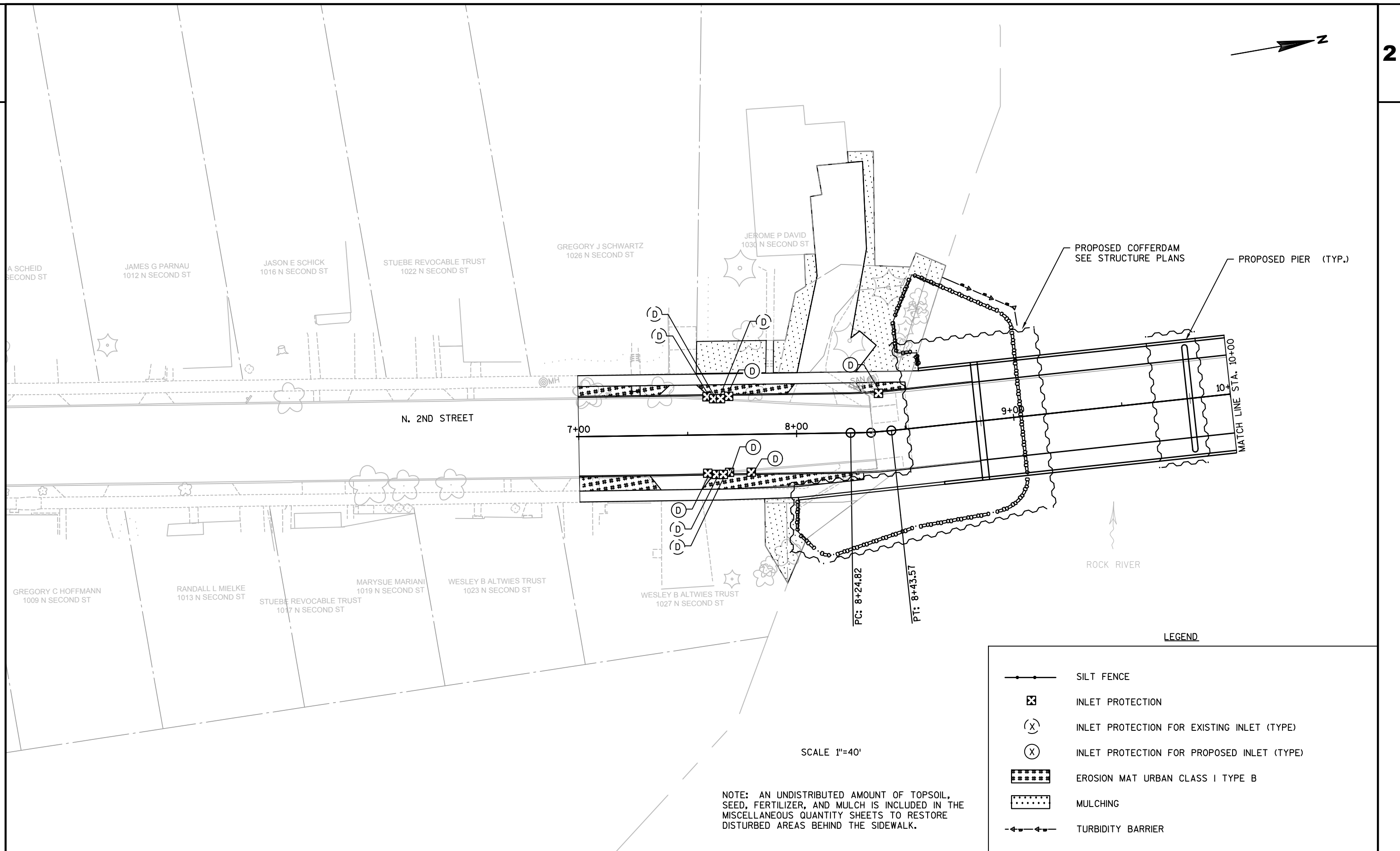
CURB AND GUTTER STAKING INFORMATION

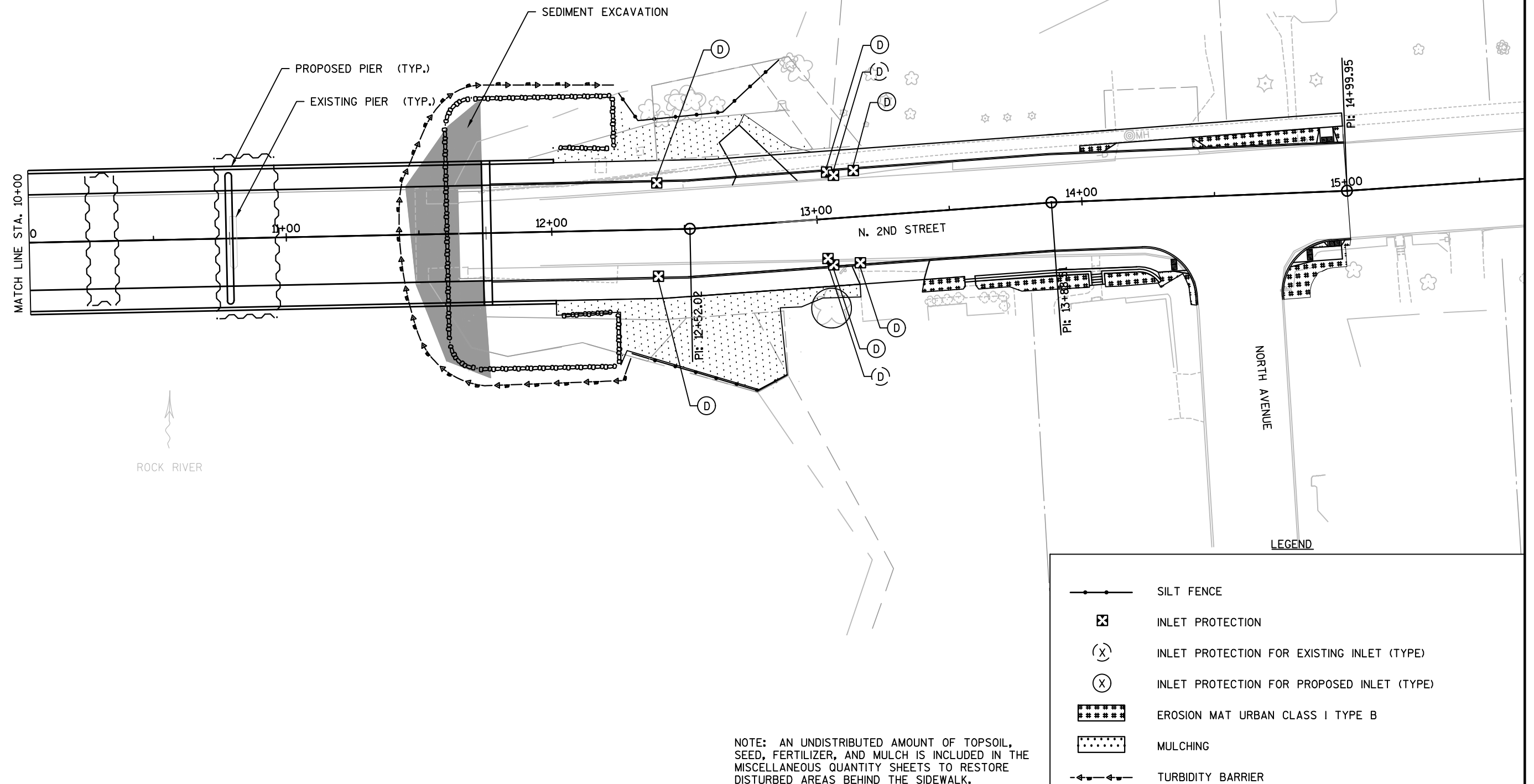
POINT	DESC.	STATION	OFFSET	RADIUS (TO FLAG)	ELEVATION
200	BEND PT.	11+77.24	16.00 LT	-	816.59
201	BEND PT.	12+51.60	16.00 LT	-	814.55
202	BEND PT.	0+00.00	0.00	-	814.70
203	MATCH PT.	14+99.55	16.00 LT	-	816.93
204	MATCH PT.	15+00.00	16.00 RT	22.0'	816.93
205	PT	14+93.31	16.21 RT	22.0'	816.76
206	MID PT.	14+77.97	23.16 RT	22.0'	816.30
207	PC	14+71.98	36.46 RT	-	815.90
208	MATCH PT.	14+72.08	40.00 RT	-	815.81
209	MATCH PT.	14+44.09	40.65 RT	-	816.13
210	PT	14+44.01	37.44 RT	22.0'	816.07
211	MID PT.	14+37.38	22.25 RT	22.0'	815.75
212	PC	14+22.02	16.00 RT	22.0'	815.41
213	BEND PT.	13+88.78	16.00 RT	-	814.72
214	BEND PT.	0+00.00	0.00	-	814.56
215	BEND PT.	11+77.17	16.00 RT	-	816.60

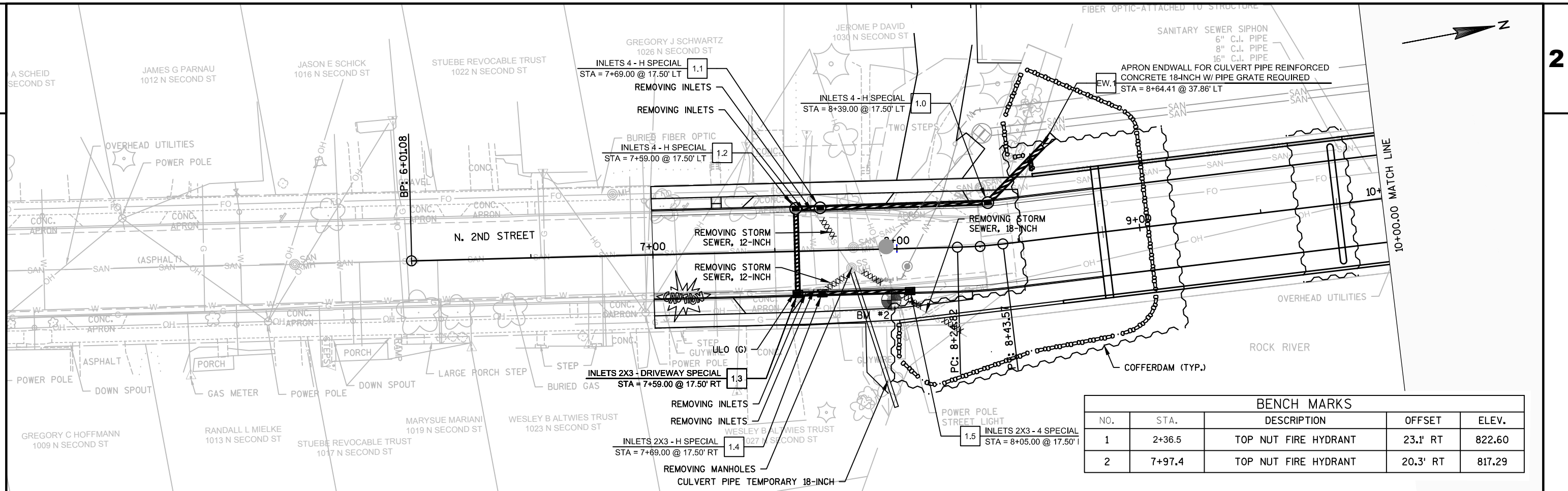
SIDEWALK STAKING INFORMATION

POINT	DESC.	STATION	OFFSET	ELEVATION
SW4	BEND PT.	12+62.31	25.50 LT	814.61
SW5	MATCH PT.	14+99.00	29.41 LT	817.49
SW6	TOP OF RAMP	14+90.51	24.11 LT	816.96
SW7	TOP OF RAMP	14+95.51	24.29 LT	817.07
SW8		14+92.00	20.75 RT	816.75
SW9	END CONCRETE	14+97.00	20.59 RT	816.85
SW10	END CONCRETE	14+97.16	25.59 RT	816.93
SW11	END CONCRETE	14+86.06	25.95 RT	816.55
SW12	END CONCRETE	14+27.67	27.86 RT	816.14
SW13	MID PT.	14+23.79	26.10 RT	815.98
SW14	PC	14+19.70	25.50 RT	815.81
SW15	BEND PT.	13+89.08	25.49 RT	815.20
SW16	BEND PT.	12+41.52	26.00 RT	815.23

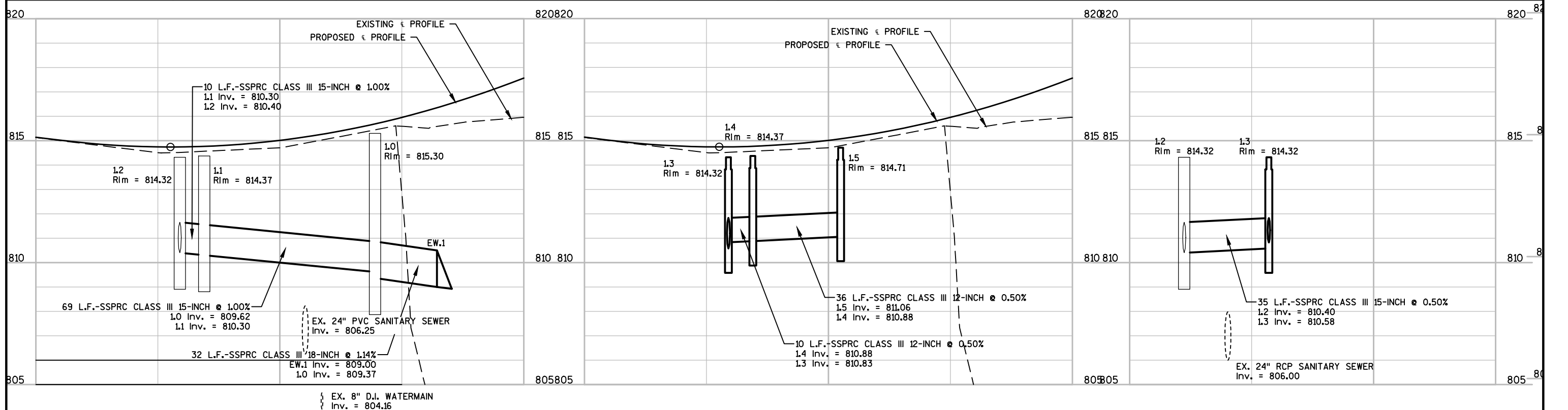


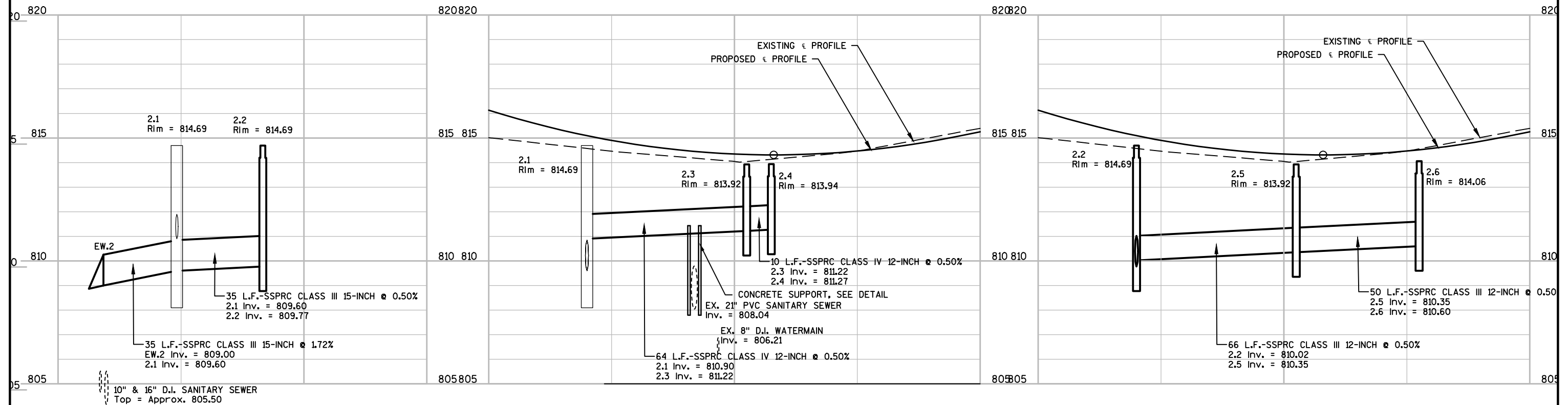
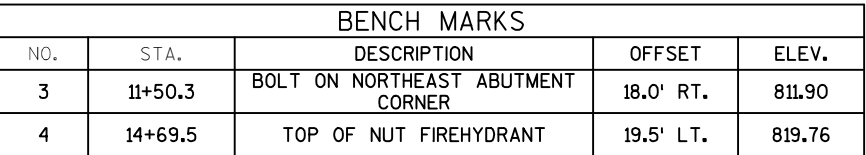


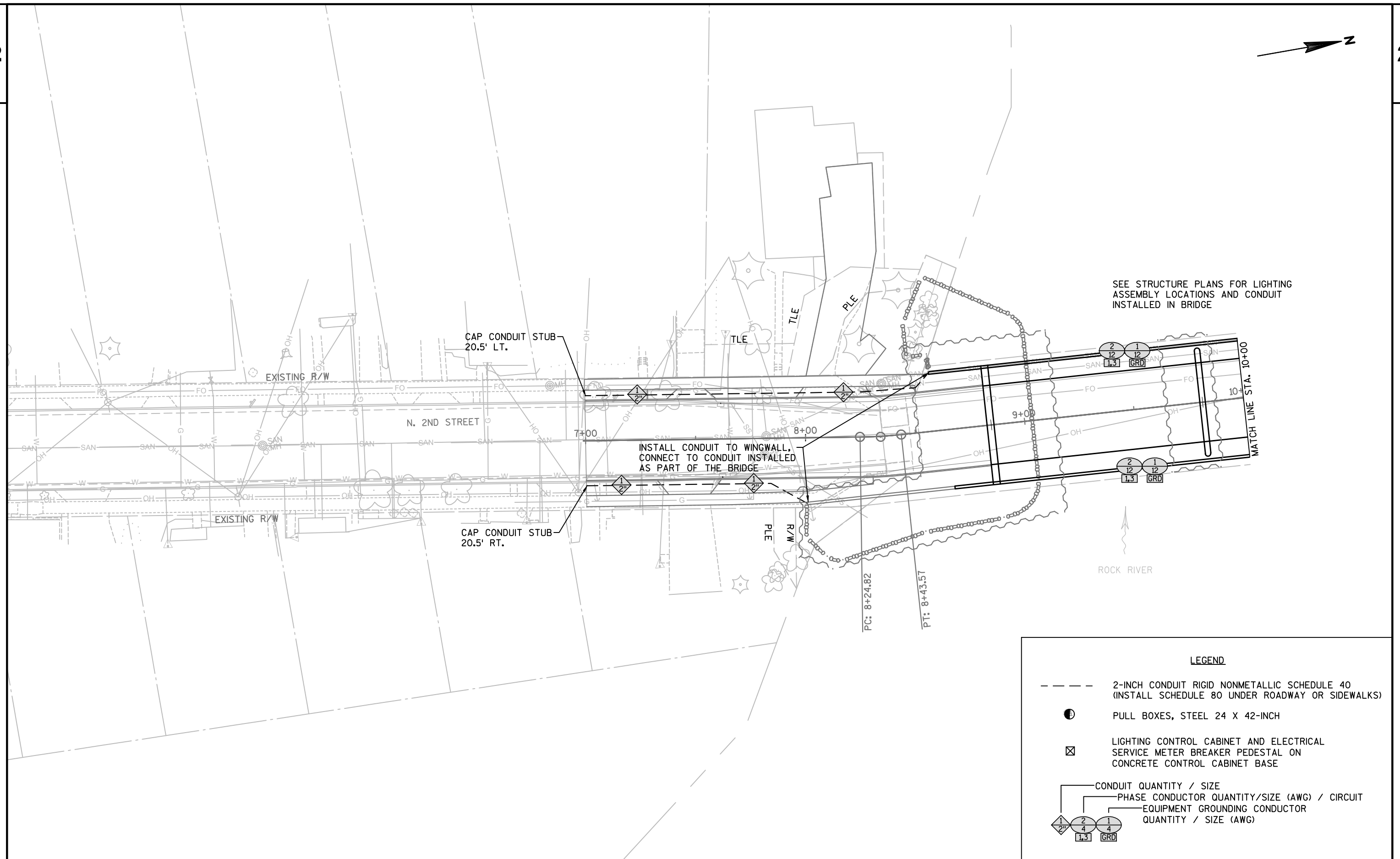


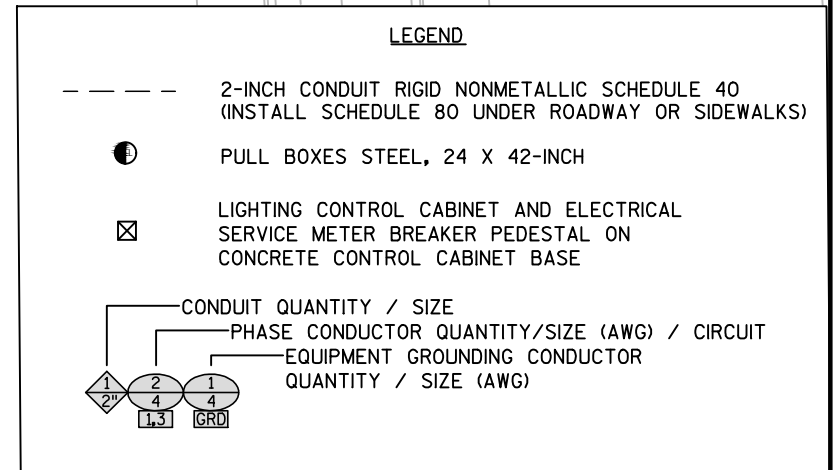


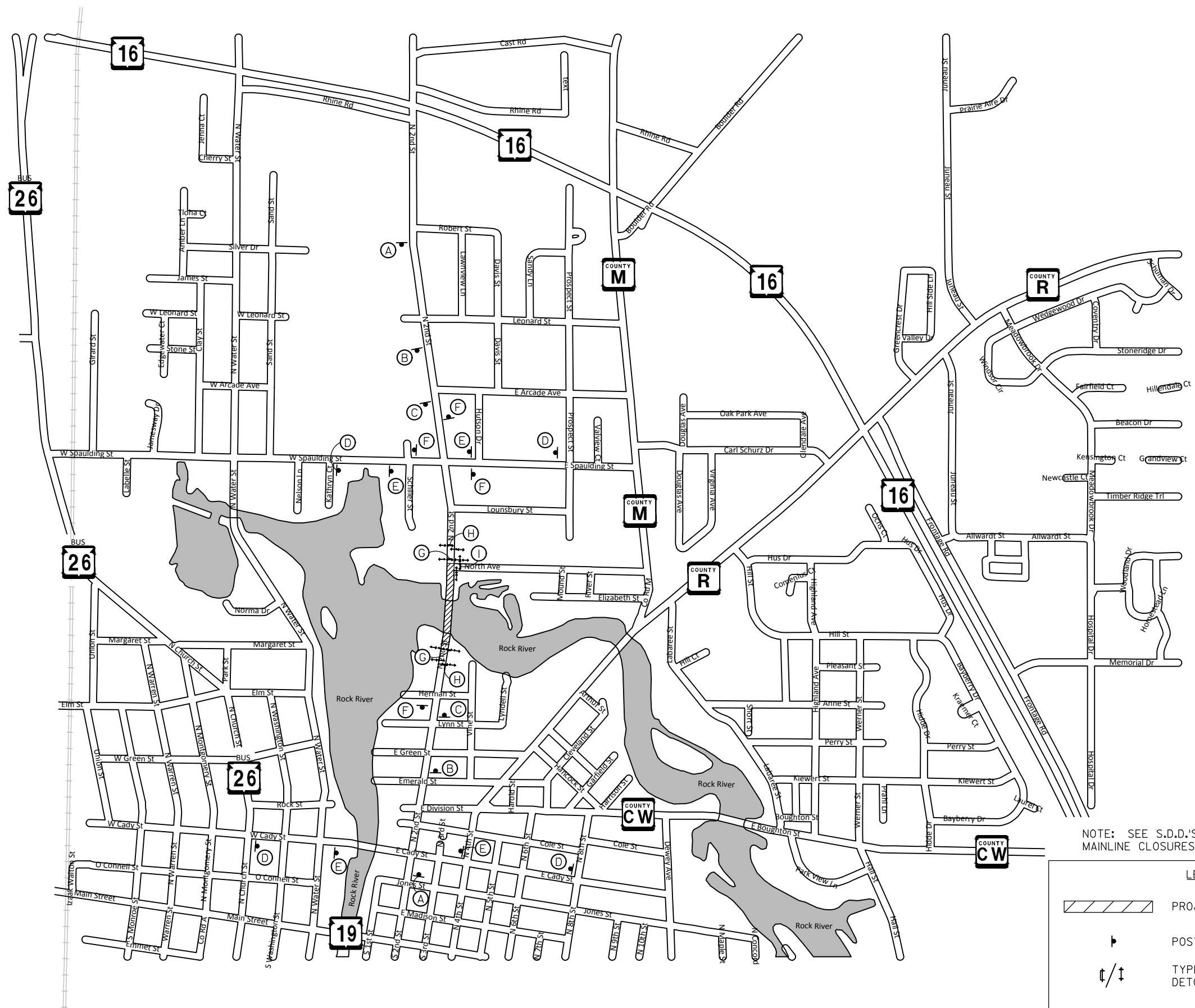
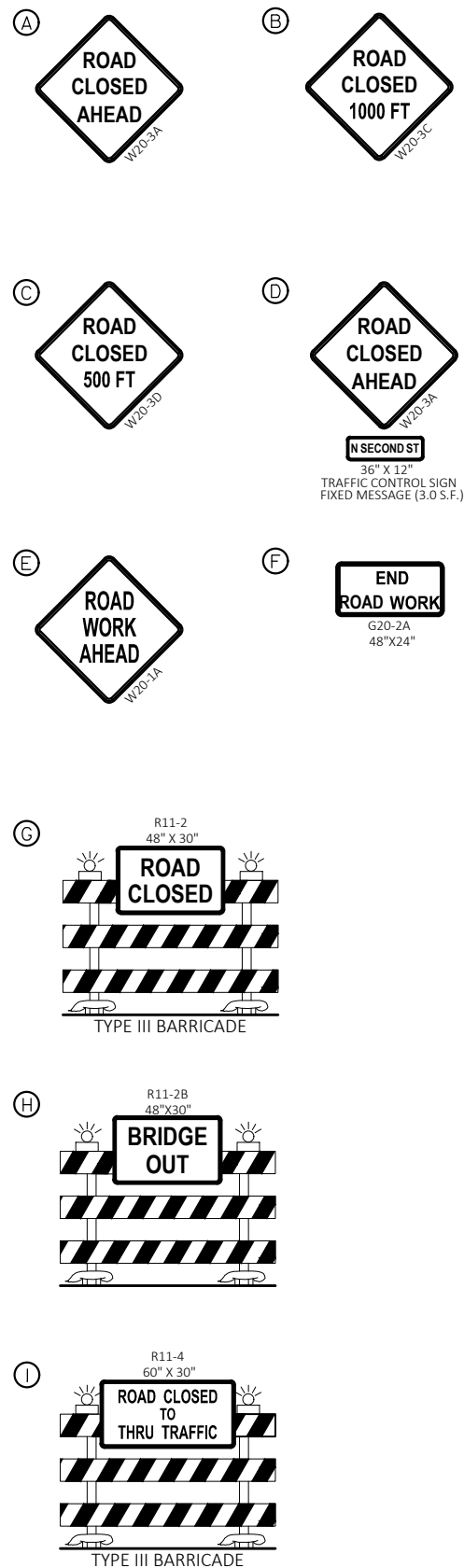
BENCH MARKS				
NO.	STA.	DESCRIPTION	OFFSET	ELEV.
1	2+36.5	TOP NUT FIRE HYDRANT	23.1' RT	822.60
2	7+97.4	TOP NUT FIRE HYDRANT	20.3' RT	817.29











SCALE: NONE

NOTE: SEE S.D.D.'S "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

LEGEND

- PROJECT LOCATION
- POST MOUNTED DETOUR ROUTE SIGN
- TYPE III BARRICADE WITH/WITHOUT DETOUR ROUTE SIGN

PROJECT NO:3997-00-70

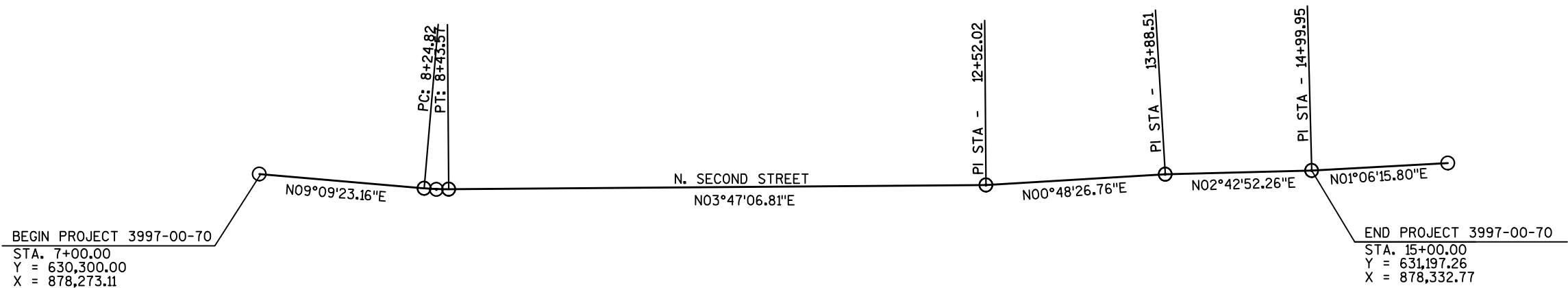
HWY:N. 2ND STREET

COUNTY:DODGE

TRAFFIC CONTROL OVERVIEW

SHEET

E



N. SECOND STREET CURVE & P.I. DATA			
P.I. = STA. 8+34.20	P.I. = STA. 12+52.02	P.I. = STA. 13+88.51	P.I. = STA. 14+99.95
Y = 630,432.50	Y = 630,849.42	Y = 630,984.90	Y = 631,097.21
X = 878,294.47	X = 878,322.06	X = 878,323.98	X = 878,329.26
Δ = 5°22'16"	Δ = 2°58'41"	Δ = 1°54'25"	Δ = 1°36'36"
T. = 9.38'			
L. = 18.75'			
R. = 200.00'			
P.C. = STA. 8+24.82			
Y = 630,423.24			
X = 878,292.98			
P.C. = STA. 8+43.57			
Y = 630,441.86			
X = 878,295.09			

Estimate Of Quantities

3997-00-70					
Line	Item	Item Description	Unit	Total	Qty
0010	201.0105	Clearing	STA	3.000	3.000
0020	201.0205	Grubbing	STA	3.000	3.000
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. Station 10+00	LS	1.000	1.000
0040	204.0150	Removing Curb & Gutter	LF	921.000	921.000
0050	204.0155	Removing Concrete Sidewalk	SY	482.000	482.000
0060	204.0210	Removing Manholes	EACH	1.000	1.000
0070	204.0220	Removing Inlets	EACH	6.000	6.000
0080	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	112.000	112.000
0090	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	55.000	55.000
0100	205.0100	Excavation Common **p**	CY	1,341.000	1,341.000
0110	206.1000	Excavation for Structures Bridges (structure) 01. B-14-209	LS	1.000	1.000
0120	206.5000	Cofferdams (structure) 01. B-14-209	LS	1.000	1.000
0130	210.1500	Backfill Structure Type A	TON	730.000	730.000
0140	213.0100	Finishing Roadway (project) 01. 3997-00-70	EACH	1.000	1.000
0150	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,045.000	1,045.000
0160	305.0130	Base Aggregate Dense 3-Inch	TON	1,066.000	1,066.000
0170	311.0110	Breaker Run	TON	350.000	350.000
0180	312.0110	Select Crushed Material	TON	5.000	5.000
0190	416.0160	Concrete Driveway 6-Inch	SY	281.000	281.000
0200	416.0180	Concrete Driveway 8-Inch	SY	124.000	124.000
0210	416.0610	Drilled Tie Bars	EACH	39.000	39.000
0220	455.0605	Tack Coat	GAL	95.000	95.000
0230	460.2000	Incentive Density HMA Pavement	DOL	270.000	270.000
0240	460.5223	HMA Pavement 3 LT 58-28 S	TON	234.000	234.000
0250	460.5224	HMA Pavement 4 LT 58-28 S	TON	182.000	182.000
0260	502.0100	Concrete Masonry Bridges	CY	996.000	996.000
0270	502.3200	Protective Surface Treatment	SY	1,735.000	1,735.000
0280	502.3210	Pigmented Surface Sealer	SY	775.000	775.000
0290	503.0137	Prestressed Girder Type I 36W-Inch	LF	2,328.000	2,328.000
0300	505.0400	Bar Steel Reinforcement HS Structures	LB	20,120.000	20,120.000
0310	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	138,120.000	138,120.000
0320	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	48.000	48.000
0330	506.4000	Steel Diaphragms (structure) 01. B-14-209	EACH	42.000	42.000
0340	513.2050.S	Railing Pipe	LF	10.000	10.000
0350	516.0500	Rubberized Membrane Waterproofing	SY	38.000	38.000
0360	520.2018	Culvert Pipe Temporary 18-Inch	LF	60.000	60.000
0370	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	1.000	1.000

Estimate Of Quantities

3997-00-70

Line	Item	Item Description	Unit	Total	Qty
0380	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0390	550.0500	Pile Points	EACH	70.000	70.000
0400	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	1,820.000	1,820.000
0410	550.2108	Piling CIP Concrete 10 3/4 X 0.50-Inch	LF	420.000	420.000
0420	601.0419	Concrete Curb & Gutter 30-Inch Type L	LF	1,006.000	1,006.000
0430	602.0405	Concrete Sidewalk 4-Inch	SF	4,931.000	4,931.000
0440	602.0415	Concrete Sidewalk 6-Inch	SF	251.000	251.000
0450	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	40.000	40.000
0460	602.1500	Concrete Steps	SF	85.000	85.000
0470	606.0200	Riprap Medium	CY	90.000	90.000
0480	606.0300	Riprap Heavy	CY	645.000	645.000
0490	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	162.000	162.000
0500	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	184.000	184.000
0510	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	32.000	32.000
0520	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	74.000	74.000
0530	611.3004	Inlets 4-FT Diameter	EACH	4.000	4.000
0540	611.3230	Inlets 2x3-FT	EACH	8.000	8.000
0550	611.8110	Adjusting Manhole Covers	EACH	3.000	3.000
0560	611.9800.S	Pipe Grates	EACH	2.000	2.000
0570	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	320.000	320.000
0580	616.0700.S	Fence Safety	LF	100.000	100.000
0590	619.1000	Mobilization	EACH	1.000	1.000
0600	624.0100	Water	MGAL	29.000	29.000
0610	625.0100	Topsoil **p**	SY	904.000	904.000
0620	627.0200	Mulching **p**	SY	693.000	693.000
0630	628.1104	Erosion Bales	EACH	50.000	50.000
0640	628.1504	Silt Fence	LF	261.000	261.000
0650	628.1520	Silt Fence Maintenance	LF	522.000	522.000
0660	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0670	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0680	628.2006	Erosion Mat Urban Class I Type A	SY	50.000	50.000
0690	628.2008	Erosion Mat Urban Class I Type B	SY	211.000	211.000
0700	628.6005	Turbidity Barriers	SY	273.000	273.000
0710	628.7020	Inlet Protection Type D	EACH	18.000	18.000
0720	628.7560	Tracking Pads	EACH	3.000	3.000
0730	629.0210	Fertilizer Type B **p**	CWT	0.570	0.570

Estimate Of Quantities

3997-00-70					
Line	Item	Item Description	Unit	Total	Qty
0740	630.0140	Seeding Mixture No. 40 **p**	LB	16.000	16.000
0750	631.1100	Sod Erosion Control	SY	50.000	50.000
0760	642.5001	Field Office Type B	EACH	1.000	1.000
0770	643.0100	Traffic Control (project) 01. 3997-00-70	EACH	1.000	1.000
0780	643.0420	Traffic Control Barricades Type III	DAY	5,660.000	5,660.000
0790	643.0705	Traffic Control Warning Lights Type A	DAY	11,320.000	11,320.000
0800	643.0900	Traffic Control Signs	DAY	6,509.000	6,509.000
0810	643.1000	Traffic Control Signs Fixed Message	SF	12.000	12.000
0820	645.0111	Geotextile Type DF Schedule A	SY	160.000	160.000
0830	645.0120	Geotextile Type HR	SY	1,310.000	1,310.000
0840	646.0106	Pavement Marking Epoxy 4-Inch	LF	3,099.000	3,099.000
0850	647.0556	Pavement Marking Stop Line Epoxy 12-Inch	LF	16.000	16.000
0860	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	142.000	142.000
0870	650.4000	Construction Staking Storm Sewer	EACH	14.000	14.000
0880	650.4500	Construction Staking Subgrade	LF	430.000	430.000
0890	650.5000	Construction Staking Base	LF	430.000	430.000
0900	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,006.000	1,006.000
0910	650.6500	Construction Staking Structure Layout (structure) 01. B-14-209	LS	1.000	1.000
0920	650.8500	Construction Staking Electrical Installations (project) 01. Project 3997-00-70	LS	1.000	1.000
0930	650.9910	Construction Staking Supplemental Control (project) 01. Project 3997-00-70	LS	1.000	1.000
0940	650.9920	Construction Staking Slope Stakes	LF	430.000	430.000
0950	652.0125	Conduit Rigid Metallic 2-Inch	LF	43.000	43.000
0960	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,800.000	1,800.000
0970	652.0325	Conduit Rigid Nonmetallic Schedule 80 2-Inch	LF	715.000	715.000
0980	653.0140	Pull Boxes Steel 24x42-Inch	EACH	2.000	2.000
0990	653.0222	Junction Boxes 18x12x6-Inch	EACH	8.000	8.000
1000	654.0205	Concrete Control Cabinet Bases Type 7	EACH	1.000	1.000
1010	655.0610	Electrical Wire Lighting 12 AWG	LF	4,779.000	4,779.000
1020	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. Sta. 12+50	LS	1.000	1.000
1030	657.6005.S	Anchor Assemblies Light Poles on Structures	EACH	8.000	8.000
1040	659.2124	Lighting Control Cabinets 120/240 24-Inch	EACH	1.000	1.000
1050	690.0150	Sawing Asphalt	LF	92.000	92.000
1060	690.0250	Sawing Concrete	LF	226.000	226.000
1070	715.0502	Incentive Strength Concrete Structures	DOL	5,976.000	5,976.000
1080	999.1500.S	Crack and Damage Survey 01. Project 3997-00-70	LS	1.000	1.000
1090	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	700.000	700.000
1100	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	475.000	475.000

Estimate Of Quantities

3997-00-70					
Line	Item	Item Description	Unit	Total	Qty
1110	SPV.0060	Special 01. Utility Line Opening (ULO)	EACH	2.000	2.000
1120	SPV.0060	Special 02. Underwater Pier Inspection B-14-209	EACH	2.000	2.000
1130	SPV.0060	Special 03. Decorative Logo	EACH	8.000	8.000
1140	SPV.0060	Special 04. Logo Concrete Staining	EACH	8.000	8.000
1150	SPV.0060	Special 05. Decorative Light Unit	EACH	8.000	8.000
1160	SPV.0060	Special 06. Concrete Pipe Support	EACH	2.000	2.000
1170	SPV.0060	Special 07. Inlet Cover Type H Special Logo	EACH	11.000	11.000
1180	SPV.0060	Special 08. Inlet Cover Type Driveway Special	EACH	1.000	1.000
1190	SPV.0090	Special 01. Remove and Salvage Railing Structure P-14-0713	LF	800.000	800.000
1200	SPV.0090	Special 02. Parapet Concrete Type 'TX'	LF	746.000	746.000
1210	SPV.0090	Special 03. Construction Staking Driveway	LF	10.000	10.000
1220	SPV.0105	Special 01. Construction Access	LS	1.000	1.000
1230	SPV.0165	Special 01. Anti-Graffiti Coating	SF	1,680.000	1,680.000
1240	SPV.0165	Special 02. Wall Modular Block Gravity Landscape LRFD	SF	240.000	240.000
1250	SPV.0195	Special 01. Base Aggregate Open-Graded, Special	TON	40.000	40.000

CLEARING & GRUBBING					
CATEGORY	STATION	TO STATION	LOCATION	(201.0105)	(201.0205)
				CLEARING STA	GRUBBING STA
0010	7+00	9+00	LT & RT	2	2
	12+00	13+00	LT & RT	1	1
PROJECT TOTALS				3	3

REMOVING STORM SEWER STRUCTURES				
CATEGORY	STATION	LOCATION	(204.0210)	(204.0220)
			REMOVING MANHOLES EACH	REMOVING INLETS EACH
0010	7+61	17' LT	-	1
	7+62	16' RT	-	1
	7+64	17 LT	-	1
	7+67	15' RT	-	1
	7+81	7' RT	1	-
	13+04	16' RT	-	1
	13+06	12.7' LT	-	1
PROJECT TOTALS			1	6

REMOVING STORM SEWER					
CATEGORY	STATION	TO STATION	LOCATION	(204.0245.01)	
				12-INCH LF	18-INCH LF
0010	7+66	7+81	LT & RT	28	-
	7+67	7+81	RT	16	-
	7+81	8+27	RT	-	55
	12+87	13+04	RT	34	-
	12+90	13+05	LT	34	-
PROJECT TOTAL				112	55

HMA PAVEMENT											
					*	*					
					(305.0110)	(305.0130)	(311.0110)	(455.0605)	(460.5223)	(460.5224)	(690.0150)
					BASE AGGREGATE	BASE AGGREGATE	BREAKER	TACK	3 LT 58-28 S	4 LT 58-28 S	SAWING
					DENSE 3/4-INCH	DENSE 3-INCH	RUN	COAT			ASPHALT
CATEGORY	STATION	TO STATION	LOCATION	INTERSECTION	TON	TON	TON	GAL	TON	TON	LF
0010	7+00	8+83	LT & RT	-	277	370	-	32	80	62	32
	11+77	14+21	LT & RT	-	369	492	-	43	107	83	-
	14+21	15+00	LT & RT	NORTH AVENUE	153	204	-	19	47	37	60
	UNDISTRIBUTED				-	-	350	-	-	-	-
PROJECT TOTALS					799	1066	350	95	234	182	92

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CRACK AND DAMAGE SURVEY		
CATEGORY	DESCRIPTION	(999.1500.S)
		LS
0010	PROJECT 3997-00-70	1
PROJECT TOTAL		1

EARTHWORK PROJECT I.D. 3997-00-70 - N SECOND STREET - BRIDGE RECONSTRUCTION

Division	From/To Station	Location	Common Excavation (1) (item # 205.0100)		Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste
			Cut (2)	EBS Excavation (3)				Factor 1.25		
Project ID 5695-00-72										
1	7+00 - 8+82	N Second Street - South Approach	339	0	0	339	462	577	-239	-239
2	11+78 - 15+00	N Second Street - North Approach	762	0	0	762	86	108	654	654
Private Driveway - 8+11 LT			40	0	0	40	0	0	40	40
UNDISTRIBUTED EBS			0	200						
Grand Total			1141	200	0	1141	548	685	456	456
			1341							

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 3) EBS Excavation to be backfilled with Breaker Run material.
- 4) Salvaged/Unusable Pavement Material
- 5) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 6) Expanded Fill. Factor = 1.25
- 7) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

DRIVEWAYS															
			*			*						*			
			(204.0155)			(305.0110)		(416.0160)			(416.0180)			(690.0250)	(SPV.0090.03)
			REMOVING CONCRETE SIDEWALK			BASE AGGREGATE		CONCRETE DRIVEWAY 6-INCH			CONCRETE DRIVEWAY 8-INCH			SAWING	CONSTRUCTION
			(APRON)	(SIDEWALK)	(DRIVEWAY)	DENSE 3/4-INCH		(APRON)	(SIDEWALK)	(BEHIND SIDEWALK)	(APRON)	(SIDEWALK)	(BEHIND SIDEWALK)	CONCRETE	STAKING DRIVEWAY EACH
CATEGORY	STATION	LOCATION	SY	SY	SY	TON		SY	SY	SY	SY	SY	SY	LF	
0010	7+46	RT	17	11	-	9		17	11	-	-	-	-	-	-
	7+46	LT	9	7	-	5		8	7	-	-	-	-	-	-
	8+05	LT	-	-	-	-		-	-	-	15	15	-	-	-
	13+33	RT	12	-	-	6		19	-	-	-	-	-	24	-
	14+21	LT	-	-	-	9		13	16	-	-	-	-	38	-
SUBTOTALS				56		30		90			31			62	0
0030	8+05	LT	-	-	172	94		-	-	191	-	-	59	119	10
	12+75	LT	-	-	-	11		-	-	-	-	-	34	-	-
SUBTOTALS				172		105		191			93			119	10
PROJECT TOTALS				228		135		282			124			181	10

CONCRETE CURB & GUTTER							
				*			
				(204.0150)	(601.0419)	(650.5500)	(690.0250)
				REMOVING CURB & GUTTER	CONCRETE CURB & GUTTER 30-INCH TYPE L	CONSTRUCTION STAKING CURB & GUTTER	SAWING CONCRETE
CATEGORY	STATION	TO STATION	LOCATION	LF	LF	LF	LF
0010	7+00	8+41	RT	137	136	136	2.5
	7+00	8+41	LT	134	135	135	2.5
	8+41	8+83	RT	-	48	48	-
	8+41	8+83	LT	-	46	46	-
	11+65	14+41	RT	286	279	279	3
	14+70	15+00	RT	30	41	41	5
	11+77	15+00	LT	334	321	321	3
PROJECT TOTALS				921	1,006	1,006	15

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

DRILL TIE BARS			
			(416.0610)
CATEGORY	STA	LOCATION	EACH
0010	7+87	LT	5
	8+05	LT	24
	13+55	RT	5
	14+05	RT	5
PROJECT TOTALS			39

WALL MODULAR BLOCK GRAVITY LANDSCAPE LRFD			
			(SPV.0165.02)
CATEGORY	STATION	TO STATION	SF
0010	13+61	14+32	240
PROJECT TOTALS			240

RAILING PIPE		
		(513.2050.S)
CATEGORY	STA	LF
0010	14+03	10
PROJECT TOTALS		10

CONCRETE SIDEWALK								
				*	*			
				(204.0155)	(305.0110)	(602.0405)	(602.0415)	*
				REMOVING CONCRETE SIDEWALK	BASE AGGREGATE DENSE 3/4-INCH	CONCRETE SIDEWALK 4-INCH	CONCRETE SIDEWALK 6-INCH	SAWING CONCRETE
CATEGORY	STATION	TO STATION	LOCATION	SY	TON	SF	SF	LF
0010	7+00	7+37	RT	22	4	191	-	5
	7+00	7+42	LT	28	5	211	-	5
	7+54	7+98	LT	18	5	235	-	-
	7+58	8+83	RT	34	17	802	-	-
	8+28	8+83	LT	6	7	340	-	-
	11+77	12+78	LT	92	15	713	-	-
	11+77	13+14	RT	27	21	994	-	-
	12+92	14+15	LT	-	19	871	-	-
	13+38	14+27	RT	4	12	574	-	5
	14+27	14+40	RT	-	2	-	109	-
	14+44	15+00	LT	25	-	-	-	5
	14+88	14+97	LT	-	1	-	37	-
	14+74	14+97	RT	-	2	-	105	-
UNDISTRIBUTED				-	-	-	-	10
PROJECT TOTALS				254	111	4,931	251	30

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

TRAFFIC CONTROL

CATEGORY	DESCRIPTION	DURATION DAYS	(643.0420) TRAFFIC CONTROL		(643.0705) TRAFFIC CONTROL		(643.0900) TRAFFIC CONTROL		(643.1000) TRAFFIC CONTROL	
			BARRICADES	BARRICADES	WARNING LIGHTS	WARNING LIGHTS	SIGNS	SIGNS	SIGNS FIXED	SIGNS FIXED
			TYPE III	TYPE III	TYPE A	TYPE A	NO. DEVICES	DAY	MESSAGE	MESSAGE
			NO. DEVICES	DAY	NO. DEVICES	DAY			NO. DEVICES	SF
0010	N. SECOND ST.	283	16	4,528	16	9,056	12	3,396	-	-
	NORTH AVE	283	4	1,132	4	2,264	1	283	-	-
	SPAULDING ST.	283	-	-	-	-	6	1,698	2	6
	CADY ST.	283	-	-	-	-	4	1,132	2	6
	PROJECT TOTALS		20	5,660	20	11,320	23	6,509	4	12.0

PAVEMENT MARKINGS

CATEGORY	STATION	TO STATION	(646.0106) PAVEMENT MARKING EPOXY 4-INCH		(647.0766) CROSSWALK EPOXY 6-INCH	(647.0556) STOP LINE EPOXY 12-INCH
			(YELLOW)	(WHITE)	(WHITE)	(WHITE)
			LF	LF	LF	LF
0010	7+00	14+21	1,444	1,448	-	-
	14+21	15+00	138	69	142	16
SUBTOTALS			1,582	1,517	-	-
PROJECT TOTALS			3,099	142	16	

STORM SEWER PIPE REINFORCED CONCRETE

CATEGORY	FROM STRUCTURE ID	TO STRUCTURE ID	(608.0312) CLASS III 12-INCH	(608.0315) CLASS III 15-INCH	(608.0318) CLASS III 18-INCH	(608.0412) CLASS IV 12-INCH
			LF	LF	LF	LF
0010	1.0	EW.1	-	-	32	-
	1.0	1.1	-	69	-	-
	1.1	1.2	-	10	-	-
	1.2	1.3	-	35	-	-
	1.3	1.4	10	-	-	-
	1.4	1.5	36	-	-	-
	2.1	EW.2	-	35	-	-
	2.1	2.2	-	35	-	-
	2.1	2.3	-	-	-	64
	2.3	2.4	-	-	-	10
	2.2	2.5	66	-	-	-
	2.5	2.6	50	-	-	-
PROJECT TOTALS			162	184	32	74

CULVERT PIPE TEMPORARY

CATEGORY	STATION	LOCATION	(520.2018) 18-INCH
			LF
0010	7+81	7' RT	60
PROJECT TOTALS			60

STORM SEWER STRUCTURES

CATEGORY	STRUCTURE I.D.	STATION	LOCATION	(522.1015) APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	(522.1018) APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	(611.9800.S) PIPE GRATES	(611.3230) INLETS 2x3-FT	(611.3004) INLETS 4-FT	(650.4000) CONSTRUCTION STAKING STORM SEWER	(SPV.0060.07) INLET COVERS TYPE H SPECIAL LOGO	(SPV.0060.08) INLET COVER TYPE DRIVEWAY SPECIAL	TOP OF STRUCTURE ELEVATION	BOX DEPTH FEET	FLANGE OR RIM ELEVATION	INVERT ELEVATION
				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH				
0010	1.0	8+39.00	17.50' LT	-	-	-	-	1	1	1	-	814.38	5.76	815.30	809.62
	1.1	7+69.00	17.50' LT	-	-	-	-	1	1	1	-	813.45	4.15	814.37	810.30
	1.2	7+59.00	17.50' LT	-	-	-	-	1	1	1	-	813.40	4.00	814.32	810.40
	1.3	7+59.00	17.50' RT	-	-	-	1	-	1	-	1	813.40	3.57	814.32	810.83
	1.4	7+69.00	17.50' RT	-	-	-	1	-	1	1	-	813.45	3.57	814.37	810.88
	1.5	8+05.00	17.50' RT	-	-	-	1	-	1	1	-	813.79	3.73	814.71	811.06
	EW.1	8+64.41	37.86' LT	-	1	1	-	-	1	-	-	810.50	-	-	809.00
	2.1	14+40.00	17.50' LT	-	-	-	-	1	1	1	-	813.77	5.17	814.69	809.60
	2.2	12.40.00	17.50' RT	-	-	-	1	-	1	1	-	813.77	5.00	814.69	809.77
	2.3	13+05.00	17.50' LT	-	-	-	1	-	1	1	-	813.00	2.78	813.92	811.22
	2.4	13+15.00	17.50' LT	-	-	-	1	-	1	1	-	813.02	2.75	813.94	811.27
	2.5	13+05.00	17.50' RT	-	-	-	1	-	1	1	-	813.00	3.65	813.92	810.35
	2.6	13+55.00	17.50' RT	-	-	-	1	-	1	1	-	813.14	3.54	814.06	810.60
	EW.2	12+21.32	46.65' LT	1	-	1	-	-	1	-	-	810.25	-	-	809.00
	PROJECT TOTALS			1	1	2	8	4	14	11	1				

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

FINISHING ITEMS														
				(625.0100)	(627.0200)	(628.1504)	(628.1520)	(628.1104)	(628.2006)	(628.2008)	(628.6005)	(629.0210)	(630.0140)	(631.110)
				TOPSOIL	MULCHING	SILT FENCE	SILT FENCE	EROSION	EROSION MAT URBAN	EROSION MAT URBAN	TURBIDITY	FERTILIZER	SEEDING MIXTURE	SOD EROSION
CATEGORY	STATION	TO STATION	LOCATION	SY	SY	LF	LF	BALES	CLASS I TYPE A	CLASS I TYPE B	SY	CWT	NO. 40	CONTROL
0010	7+00	7+41	RT	25	-	-	-	-	-	25	-	0.02	0	-
	7+00	7+41	LT	19	-	-	-	-	-	19	-	0.01	0	-
	7+56	8+00	LT	123	103	-	-	-	-	19	-	0.08	2	-
	7+56	8+30	RT	43	-	-	-	-	-	43	-	0.03	1	-
	7+86	8+00	RT	50	50	-	-	-	-	-	-	0.03	1	-
	8+30	8+66	LT	211	202	-	-	-	-	9	-	0.13	4	-
	8+66	9+07	LT	0	-	-	-	-	-	-	42	0.00	0	-
	11+42	12+23	RT/LT	0	-	-	-	-	-	-	231	0.00	0	-
	11+89	13+18	LT	111	111	-	-	-	-	-	-	0.07	2	-
	12+00	13+18	RT	227	227	-	-	-	-	-	-	0.14	4	-
	12+23	12+89	LT	-	-	75	150	-	-	-	-	0.00	0	-
	12+23	12+89	RT	-	-	86	172	-	-	-	-	0.00	0	-
	13+34	14+37	RT	44	-	-	-	-	-	44	-	0.03	1	-
	14+44	15+00	LT	28	-	-	-	-	-	28	-	0.02	1	-
	14+72	15+00	RT	23	-	-	-	-	-	23	-	0.01	0	-
UNDISTRIBUTED				-	-	100	200	50	50	-	-	-	-	50
PROJECT TOTALS				904	693	261	522	50	50	211	273	0.57	16	50

WATER

		(624.0100)
CATEGORY	DESCRIPTION	MGAL
0010	DUST CONTROL	8
	COMPACTION	20
PROJECT TOTALS		29

FENCE SAFETY

		(616.0700.S)
CATEGORY	LOCATION	LF
0010	STA 7+77 LT	50
	STA 13+05 RT	50
PROJECT TOTAL		100

TRACKING PADS

		(628.7560)
CATEGORY	TO STATION	EACH
0010	7+00	1
	NORTH AVENUE	1
	15+00	1
PROJECT TOTAL		3

CONCRETE PIPE SUPPORT

			(SPV.0060.06)
CATEGORY	STATION	LOCATION	EACH
0010	12+85	17.50' LT	1
	13+55	17.50' RT	1
PROJECT TOTAL			2

MOBILIZATIONS EROSION CONTROL

		(628.1905)	(628.1910)
		MOBILIZATION	EMERGENCY
		EROSION CONTROL	EROSION CONTROL
CATEGORY	DESCRIPTION	EACH	EACH
0010	PROJECT 3997-00-70	4	4
PROJECT TOTALS		4	4

CONSTRUCTION STAKING

			(650.9910.01)	(650.4500)	(650.5000)	(650.9920)
			SUPPLEMENTAL	SUBGRADE	BASE	SLOPE
			CONTROL (PROJECT)			STAKES
CATEGORY	STATION	TO STATION	LS	LF	LF	LF
0010	7+00	8+50	-	150	150	150
	12+20	15+00	-	280	280	280
PROJECT 3997-00-70			1	-	-	-
PROJECT TOTALS			1	430	430	430

SOUTH ABUTMENT FILL

		SELECT CRUSHED	BASE AGGREGATE OPEN-
		MATERIAL	GRADED, SPECIAL
		(312.0110)	(SPV.0195.01)
CATEGORY	LOCATION	TON	TON
0010	SOUTH ABUTMENT	5	40
PROJECT TOTAL		5	40

INLET PROTECTION

			(628.7020)	
			TYPE D	
CATEGORY	STATION	LOCATION	EACH	NOTES
0010	7+59	RT	1	EXISTING
	7+59	LT	1	PROPOSED
	7+61	LT	1	EXISTING
	7+63	RT	1	EXISTING
	7+65	LT	1	EXISTING
	7+66	RT	1	EXISTING
	7+69	RT	1	PROPOSED
	7+69	LT	1	PROPOSED
	7+79	RT	1	PROPOSED
	8+39	LT	1	PROPOSED
	12+40	LT	1	PROPOSED
	12+40	RT	1	PROPOSED
	13+03	RT	1	EXISTING
	13+05	LT	1	PROPOSED
	13+05	RT	1	PROPOSED
	13+07	LT	1	EXISTING
	13+15	LT	1	PROPOSED
	13+15	RT	1	PROPOSED
PROJECT TOTALS			18	

UTILITY LINE OPENING (ULO)

			(SPV.0060.01)	
			EACH	UTILITY
CATEGORY	STATION	LOCATION		
0010	7+59	RT	1	GAS
	UNDISTRIBUTED		1	
PROJECT TOTAL			2	

CONDUIT RIGID NONMETALLIC				
CATEGORY	FROM	TO	(652.0225) SCHEDULE 40 2-INCH	(652.0325) SCHEDULE 80 2-INCH
			LF	LF
0010	STUB (STA. 7+00, 20.5' RT)	WING 1	105	-
	STUB (STA. 7+00, 20.5' LT)	WING 2	-	160
	WING 3	PB-1	100	-
	PB-1	STUB (STA 15+00, 20.5' LT)	-	250
	PB-1	CB-1	5	-
	WING 4	PB-2	100	-
	PB-1	PB-2	-	60
	PB-2	STUB (STA 15+00, 20.5' RT)	-	245
	PROJECT TOTALS		310	715

ELECTRICAL WIRE LIGHTING			
CATEGORY	FROM	TO	(655.0610) 12 AWG
			LF
0010	STUB (STA. 7+00, 20.5' RT)	WING 1	-
	STUB (STA. 7+00, 20.5' LT)	WING 2	-
	SOUTH ABUT (STA 8+85, RT)	PIER 1 (9+81, RT)	291
	SOUTH ABUT (STA 8+85, LT)	PIER 1 (9+81, LT)	291
	PIER 1 (9+81, RT)	PIER 2 (10+79, RT)	282
	PIER 1 (9+81, LT)	PIER 2 (10+79, LT)	282
	PIER 2 (10+79, RT)	NORTH ABUT (11+65, RT)	291
	PIER 2 (10+79, LT)	NORTH ABUT (11+65, LT)	291
	NORTH ABUT (11+65, LT)	WING 3	78
	NORTH ABUT (11+65, RT)	WING 4	78
	WING 3	PB-1	369
	PB-1	STUB (STA 15+00, 20.5' LT)	786
	WING 4	PB-2	348
	PB-1	PB-2	297
	PB-2	STUB (STA 15+00, 20.5' RT)	783
	PROJECT TOTALS		4,467

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

DECORATIVE LIGHTING UNIT					
CATEGORY	DESCRIPTION	STATION	LOCATION	EACH	(SPV.0060.05) (655.0610) 12 AWG
					LF
0010	SOUTH ABUT	8+85	RT	-	39
	SOUTH ABUT	8+85	LT	-	39
	PIER 1	9+81	RT	-	39
	PIER 1	9+81	LT	-	39
	PIER 2	10+79	RT	-	39
	PIER 2	10+79	LT	-	39
	NORTH ABUT	11+65	RT	-	39
	NORTH ABUT	11+65	LT	-	39
0030	SOUTH ABUT	8+85	RT	1	-
	SOUTH ABUT	8+85	LT	1	-
	PIER 1	9+81	RT	1	-
	PIER 1	9+81	LT	1	-
	PIER 2	10+79	RT	1	-
	PIER 2	10+79	LT	1	-
	NORTH ABUT	11+65	RT	1	-
	NORTH ABUT	11+65	LT	1	-
PROJECT TOTAL				8	312

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

PULL BOXES STEEL 24x42-INCH				
CATEGORY	PULL BOX NUMBER	STATION	LOCATION	(653.0140) EACH
0010	PB-1	12+45	28.0' LT	1
	PB-2	12+50	30.0' RT	1
PROJECT TOTAL				2

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS		
CATEGORY	PROJECT	(650.8500.01) LS
0010	3997-00-70	1
PROJECT TOTAL		1

STREET LIGHTING CONTROL CABINET						
CATEGORY	CABINET NUMBER	STATION	LOCATION	(654.0205) CONCRETE CONTROL CABINET BASES TYPE 7 EACH	(656.0200) ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) LS	(659.2124) LIGHTING CONTROL CABINETS 120/240 24-INCH EACH
0010	CB-1	12+50	28.0' LT	1	1	1
PROJECT TOTALS				1	1	1

ADJUSTING SANITARY SEWER MANHOLE COVERS			
CATEGORY	STATION	LOCATION	(611.8110) ADJUSTING MANHOLE COVERS EACH
0030	7+96.00	0.99' LT	1
	12+96.00	0.71' RT	1
	14+26.00	2.03' RT	1
PROJECT TOTALS			3

CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	•
QUARTER LINE	---	SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	o
SIXTEENTH LINE	---	GEODETIC SURVEY MONUMENT		FOUND IRON PIN (1-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE	---	SIXTEENTH CORNER MONUMENT		FOUND IRON REBAR (3/4-INCH UNLESS NOTED)	IR
NEW R/W LINE	---	SIGN		OFF-PREMISE SIGN	
EXISTING R/W OR HE LINE	---	COMPENSABLE		NON-COMPENSABLE	
PROPERTY LINE	---	ELECTRIC POLE		TELEPHONE POLE	
LOT, TIE & OTHER MINOR LINES	---	PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		ACCESS RESTRICTED BY ACQUISITION	
SLOPE INTERCEPT	---	NO ACCESS (BY STATUTORY AUTHORITY)		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	
CORPORATE LIMITS		NO ACCESS (NEW HIGHWAY)		PARCEL NUMBER (25)	UTILITY NUMBER (40)
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	---	PARALLEL OFFSETS			
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---				
TEMPORARY LIMITED EASEMENT AREA	---				
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---				
TRANSMISSION STRUCTURES	---				
BUILDING TO BE REMOVED	---				
BRIDGE	---				

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT	RDE
CENTERLINE	C/L	EASEMENT	
CERTIFIED SURVEY MAP	CSM	RIGHT	RT
CONCRETE	CONC	RIGHT OF WAY	R/W
COUNTY	CO	SECTION	SEC
COUNTY TRUNK HIGHWAY	CTH	SEPTIC VENT	SEPV
DISTANCE	DIST	SQUARE FEET	SF
CORNER	COR	STATE TRUNK HIGHWAY	STH
DOCUMENT NUMBER	DOC	STATION	STA
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED EASEMENT	TLE
GAS VALVE	GV	TRANSPORTATION PROJECT	TPP
GRID NORTH	GN	PLAT	
HIGHWAY EASEMENT	HE	UNITED STATES HIGHWAY	USH
IDENTIFICATION	ID	VOLUME	V
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

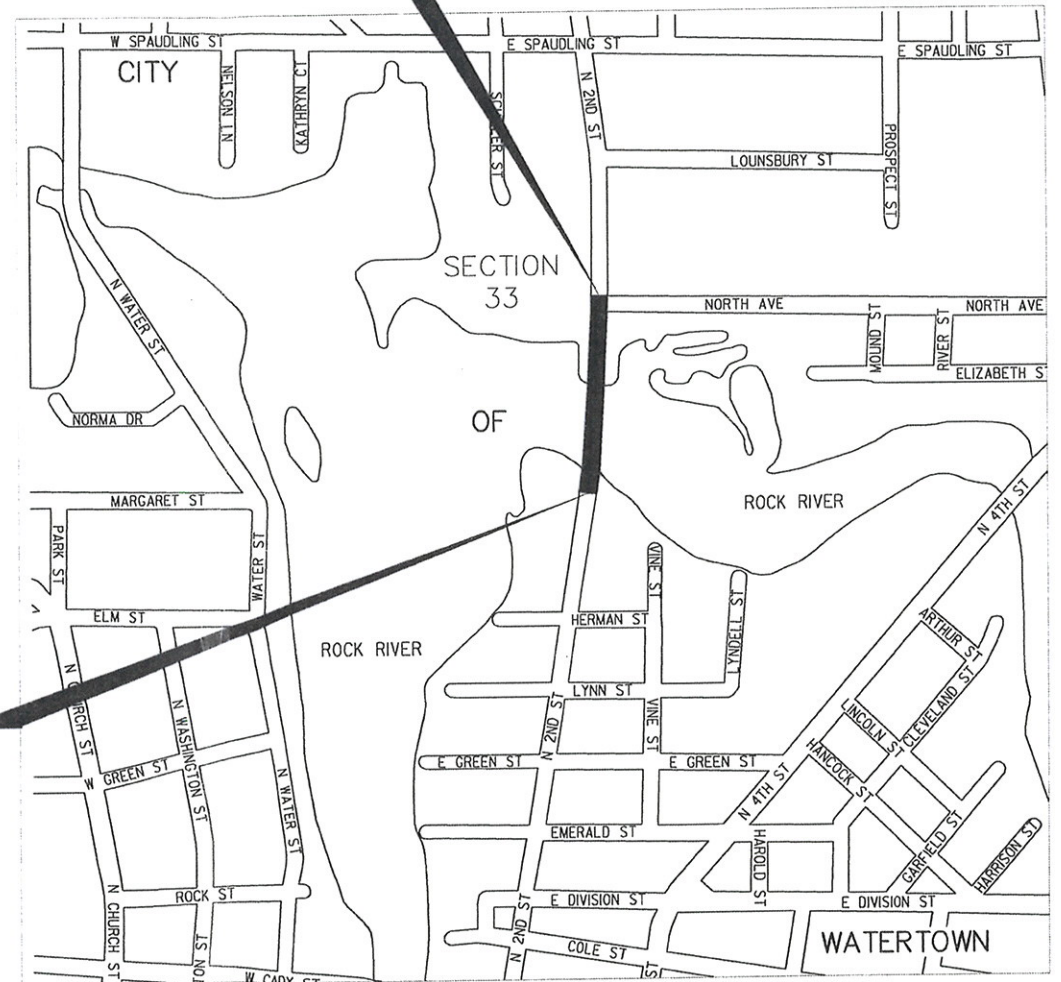
BEGIN RELOCATION

ORDER STA.7+50.00
Y = 630,349.368
X = 878,281.072
APPROXIMATELY 2011 FEET WEST AND 1608 FEET NORTH OF THE SOUTHEAST CORNER OF SECTION 33, T-9-N, R-15-E, CITY OF WATERTOWN, DODGE COUNTY, WI.

CONVENTIONAL UTILITY SYMBOLS

WATER	---
GAS	---
TELEPHONE	---
OVERHEAD	---
TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---

END RELOCATION
ORDER STA.14+87.97
Y = 631,085.243
X = 878,328.689
APPROXIMATELY 1963 FEET WEST AND 2344 FEET NORTH OF THE SOUTHEAST CORNER OF SECTION 33, T-9-N, R-15-E, CITY OF WATERTOWN, DODGE COUNTY, WI.



TOTAL NET LENGTH OF CENTERLINE = 0.140 MI.

RECEIVED
IN THE OFFICE OF
JAN 17 2017
DODGE COUNTY CLERK

R/W PROJECT NUMBER 3997-00-00	SHEET NUMBER 4.01	TOTAL SHEETS 2
FEDERAL PROJECT NUMBER		
PLAT OF RIGHT-OF-WAY REQUIRED FOR CITY OF WATERTOWN, NORTH 2ND STREET (ROCK RIVER BRIDGE B-14-0209)		
LOCAL STREET	DODGE COUNTY	
CONSTRUCTION PROJECT NUMBER 3997-00-70		

ACCEPTED FOR
CITY of WATERTOWN

1-16-2012 John Dail
(Date) (Signature)

ORIGINAL PLAT PREPARED BY
MSA
PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL • REMEDIATION
DEVELOPMENT • ENVIRONMENTAL
2901 International Lane, Suite 300 Madison, WI 53704-3133
608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN
BRADLEY L. TISDALE
S-2824
WAUNAKEE WI
LAND SURVEYOR

12/15/2016
(Date) (Professional Land Surveyor)

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), DODGE COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT OF WAY MONUMENTS ARE 3/4"X24" REBAR AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

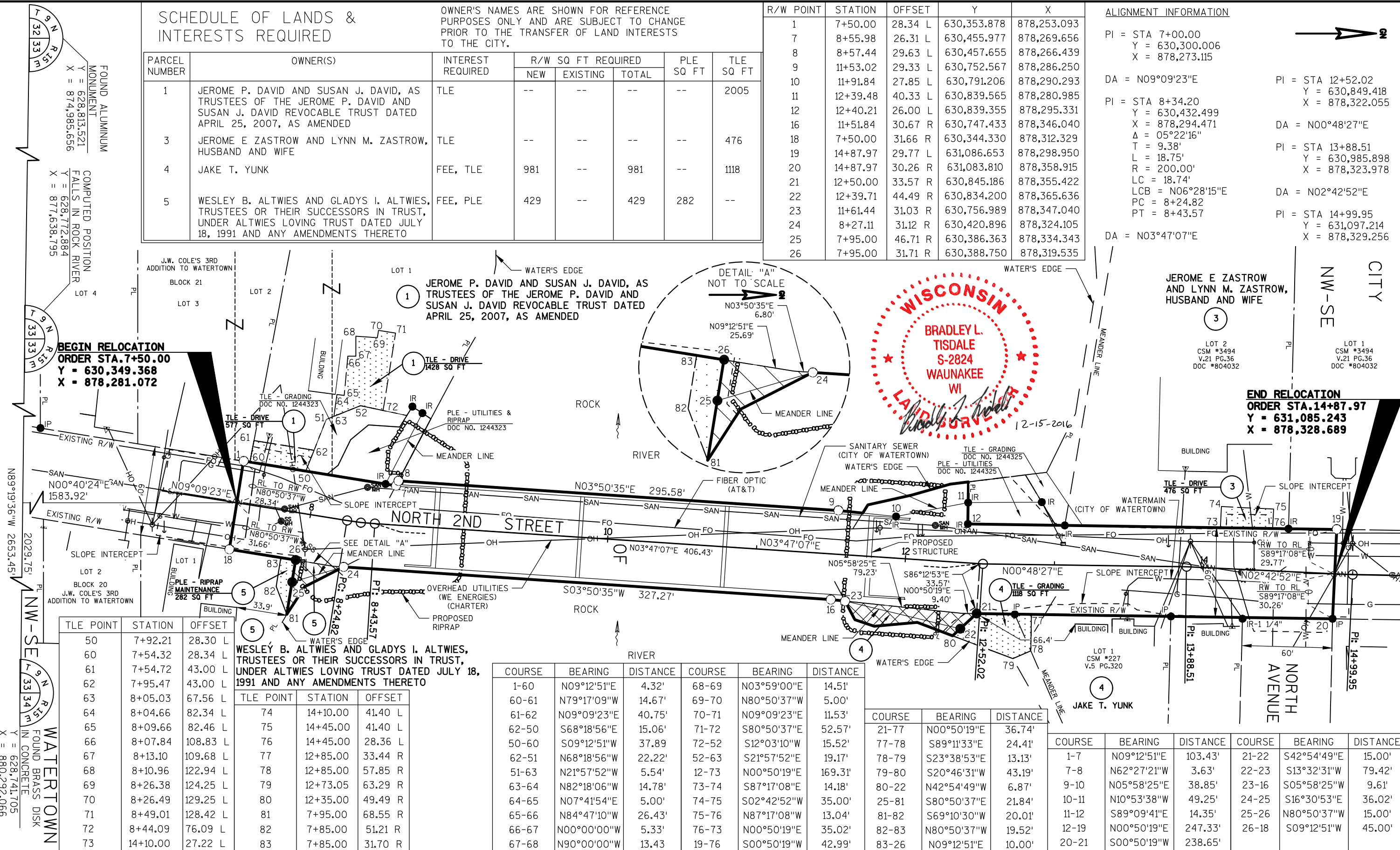
EXISTING RIGHT-OF-WAY IS BASED ON J.W. COLE'S 3RD ADDITION TO WATERTOWN, CSM #3494, AND CSM #227.

REVISION DATE	DATE 12/15/2016
	GRID FACTOR NA

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W SQ FT REQUIRED			PLE SQ FT	TLE SQ FT
			NEW	EXISTING	TOTAL		
1	JEROME P. DAVID AND SUSAN J. DAVID, AS TRUSTEES OF THE JEROME P. DAVID AND SUSAN J. DAVID REVOCABLE TRUST DATED APRIL 25, 2007, AS AMENDED	TLE	--	--	--	--	2005
3	JEROME E ZASTROW AND LYNN M. ZASTROW, HUSBAND AND WIFE	TLE	--	--	--	--	476
4	JAKE T. YUNK	FEE, TLE	981	--	981	--	1118
5	WESLEY B. ALTWIES AND GLADYS I. ALTWIES, TRUSTEES OR THEIR SUCCESSORS IN TRUST, UNDER ALTWIES LOVING TRUST DATED JULY 18, 1991 AND ANY AMENDMENTS THERETO	FEE, PLE	429	--	429	282	--

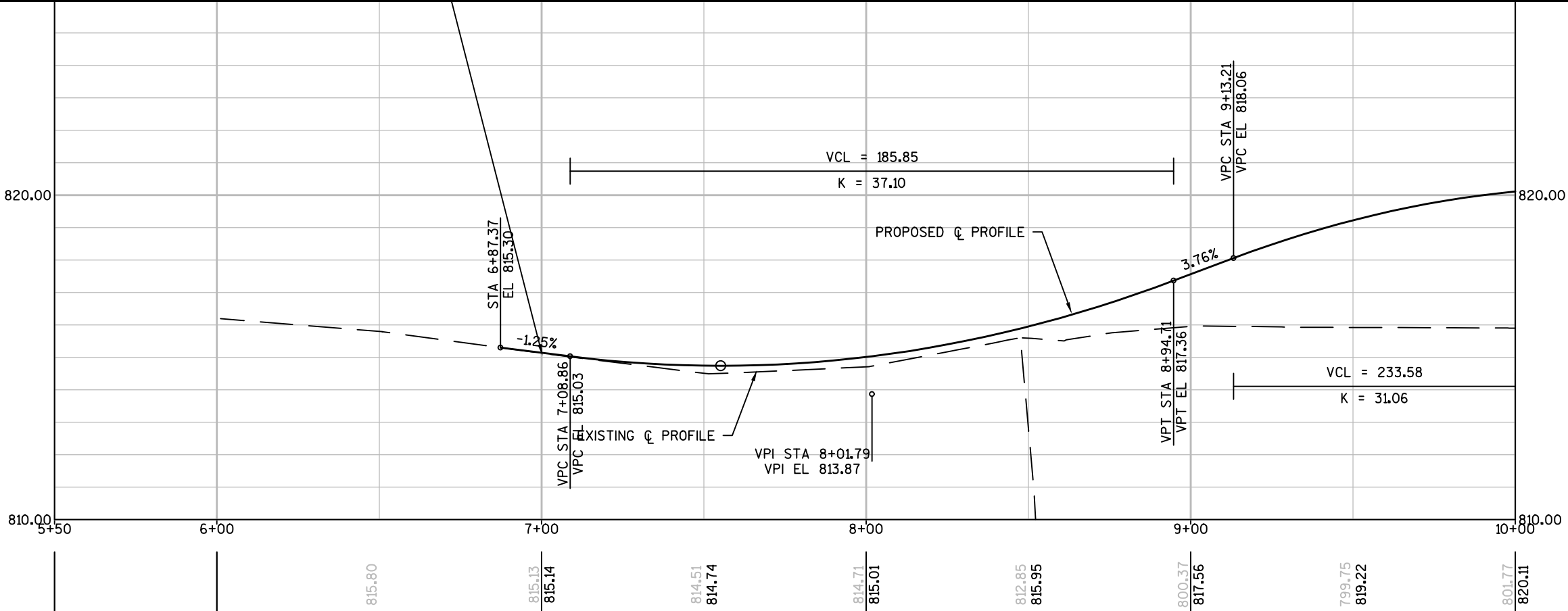
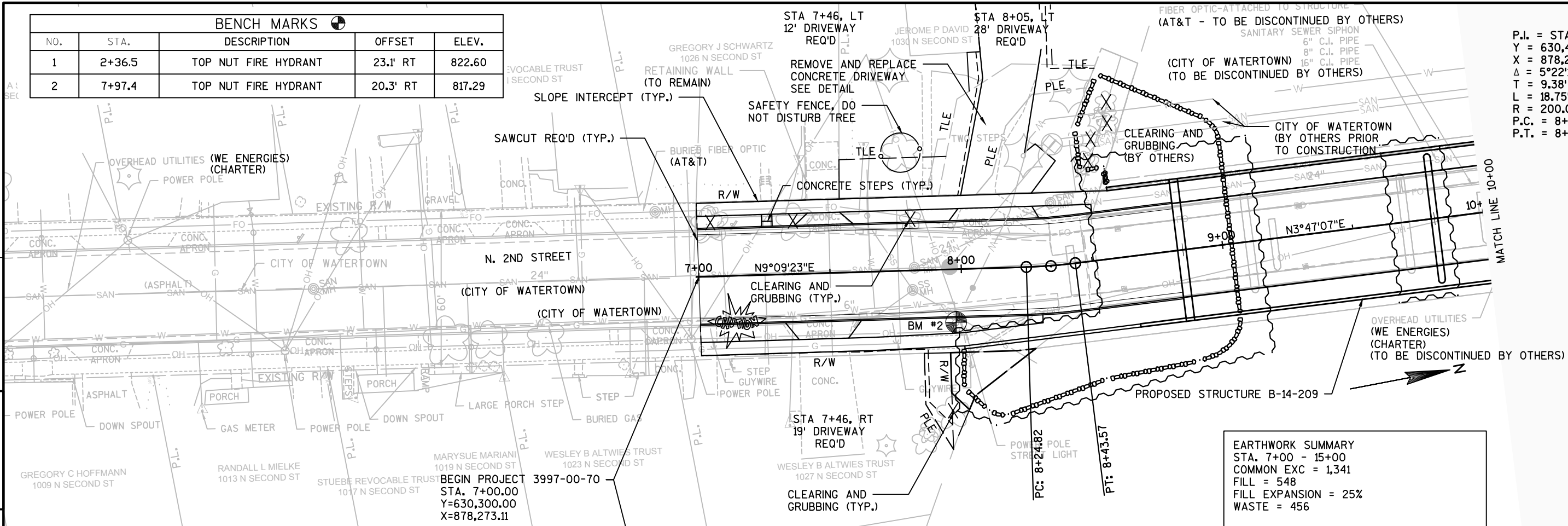
R/W POINT	STATION	OFFSET	Y	X
1	7+50.00	28.34 L	630,353.878	878,253.093
7	8+55.98	26.31 L	630,455.977	878,269.656
8	8+57.44	29.63 L	630,457.655	878,266.439
9	11+53.02	29.33 L	630,752.567	878,286.250
10	11+91.84	27.85 L	630,791.206	878,290.293
11	12+39.48	40.33 L	630,839.565	878,280.985
12	12+40.21	26.00 L	630,839.355	878,295.331
16	11+51.84	30.67 R	630,747.433	878,346.040
18	7+50.00	31.66 R	630,344.330	878,312.329
19	14+87.97	29.77 L	631,086.653	878,298.950
20	14+87.97	30.26 R	631,083.810	878,358.915
21	12+50.00	33.57 R	630,845.186	878,355.422
22	12+39.71	44.49 R	630,834.200	878,365.636
23	11+61.44	31.03 R	630,756.989	878,347.040
24	8+27.11	31.12 R	630,420.896	878,324.105
25	7+95.00	46.71 R	630,386.363	878,334.343
26	7+95.00	31.71 R	630,388.750	878,319.535

DA = N03°47'07"E

$$X = 878,329.256$$


REVISION	DATE	DATE 12/15/2016	SCALE, FEET	HWY: SECOND STREET	STATE R/W PROJECT NUMBER 3997-00-00	PLAT SHEET 4.02
-----	-----	GRID FACTOR -----	0 30 60	COUNTY: DODGE	CONSTRUCTION PROJECT NUMBER 3997-00-70	PS&E SHEET -----

BENCH MARKS				
NO.	STA.	DESCRIPTION	OFFSET	ELEV.
1	2+36.5	TOP NUT FIRE HYDRANT	23.1' RT	822.60
2	7+97.4	TOP NUT FIRE HYDRANT	20.3' RT	817.29



PROJECT NO:3997-00-70

HWY:N. 2ND STREET

COUNTY:DODGE

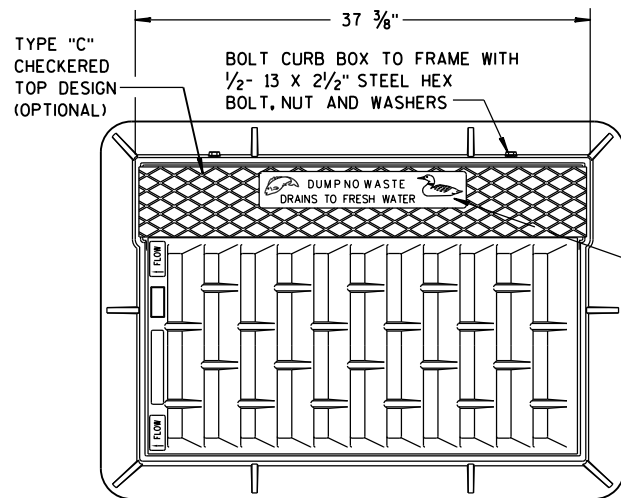
PLAN AND PROFILE: N. 2ND STREET

SHEET

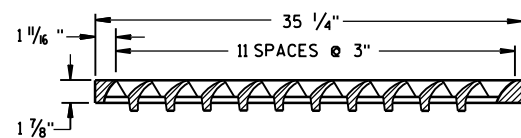
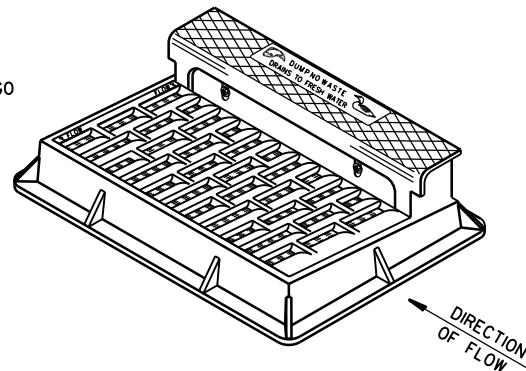
E

Standard Detail Drawing List

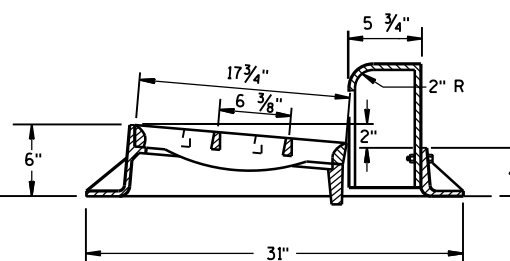
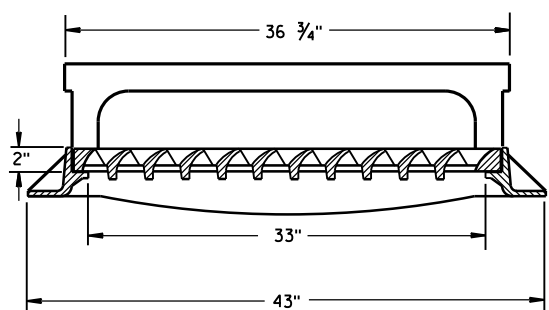
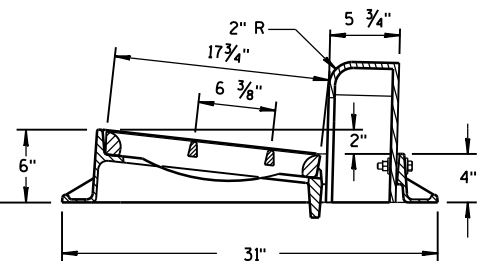
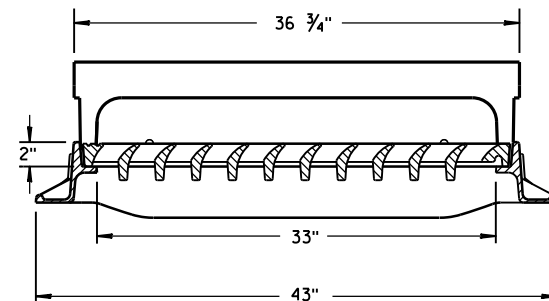
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D18-01	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
09C05-10	CONCRETE CONTROL CABINET BASES
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D04-02	LIGHTING CONTROL CABINET 120/240 VOLT
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C29-05A	BICYCLE LANE MARKING
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING



NOTE:
GRATE IS REVERSIBLE.

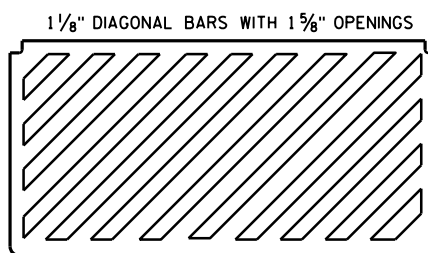


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

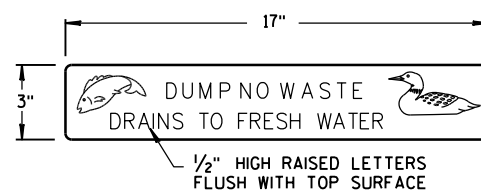


TYPE "H"

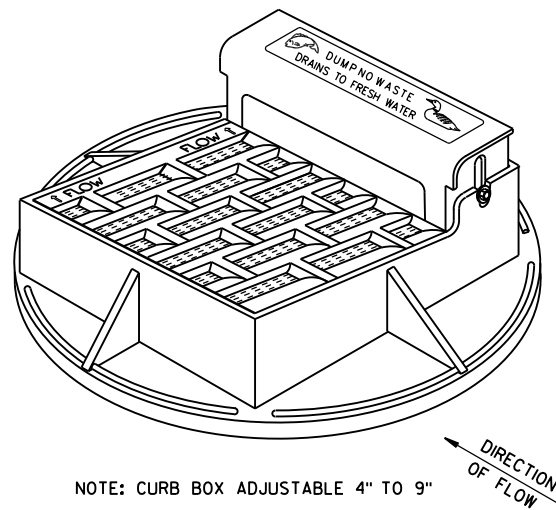
NOTE: EITHER CASTING IS ACCEPTABLE



SPECIAL GRATE FOR
TYPE "H" COVER
(MEASURES 35 1/4" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

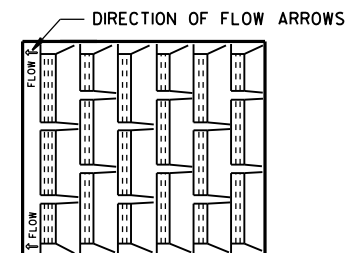


LOGO DETAIL

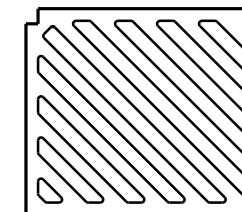


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

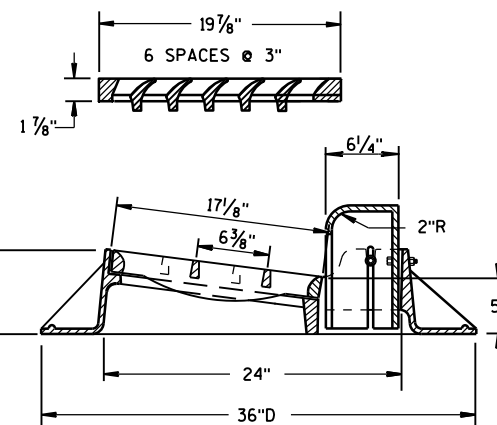
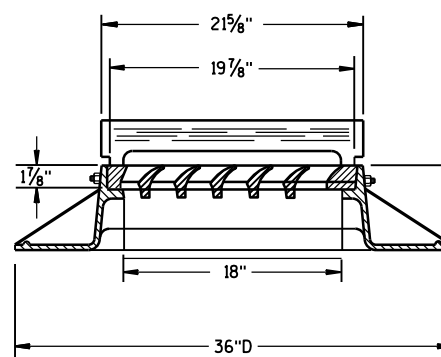
NOTE:
GRATE IS REVERSIBLE.



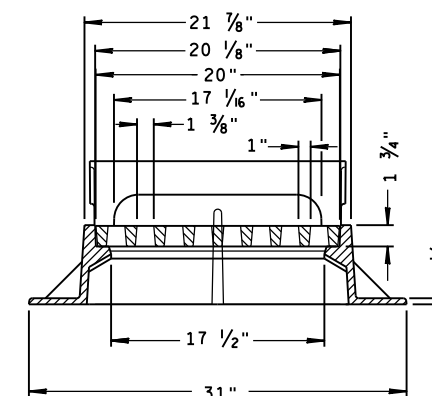
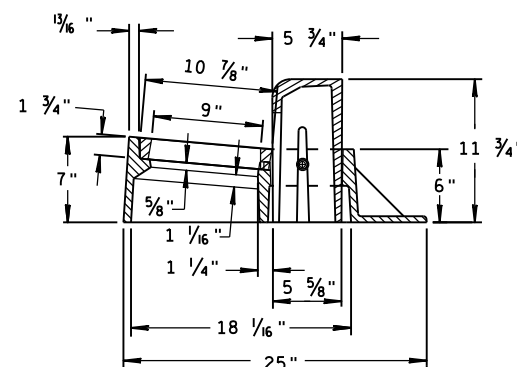
1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



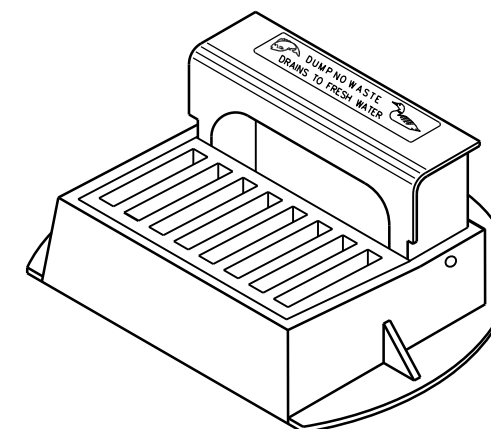
SPECIAL GRATE FOR
TYPE "A" COVER
(MEASURES 19 3/4" X 17" X 1 1/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



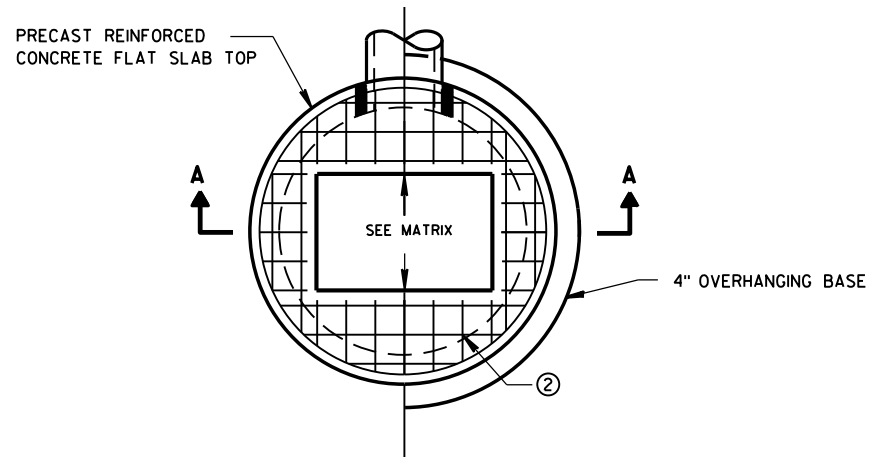
TYPE "Z"



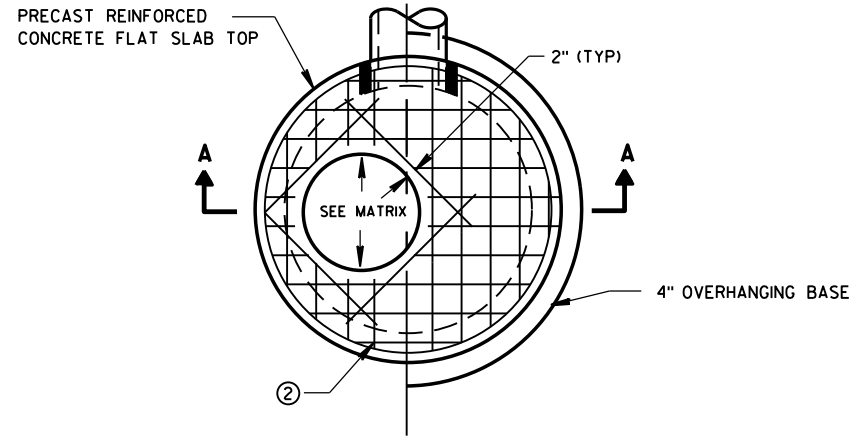
INLET COVERS
TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

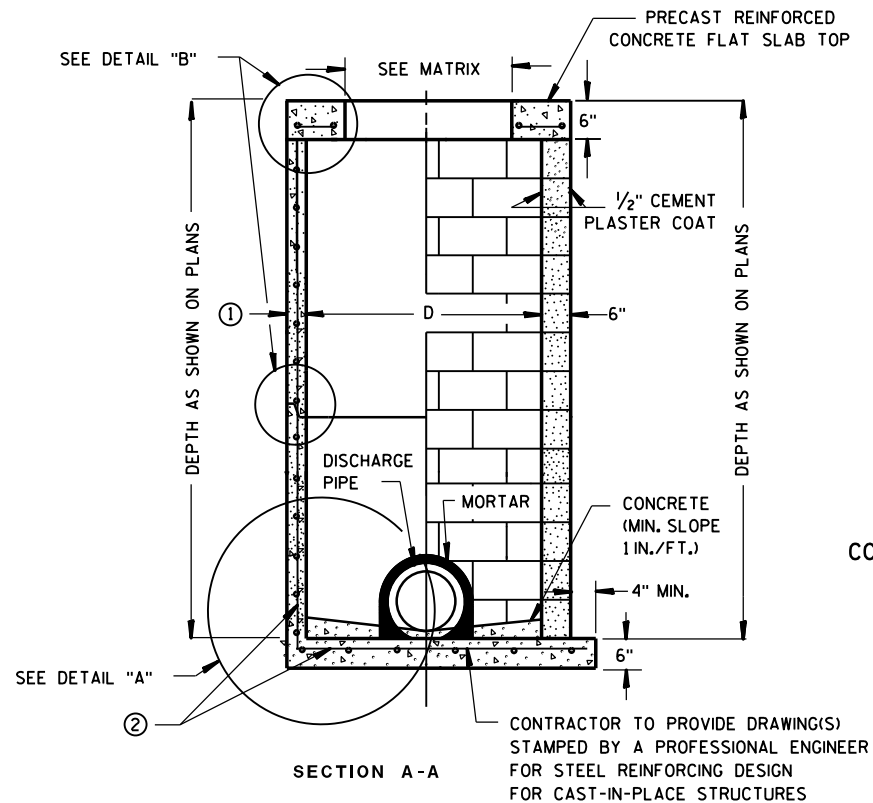
APPROVED
11-27-13
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



PLAN VIEW RECTANGULAR OPENING

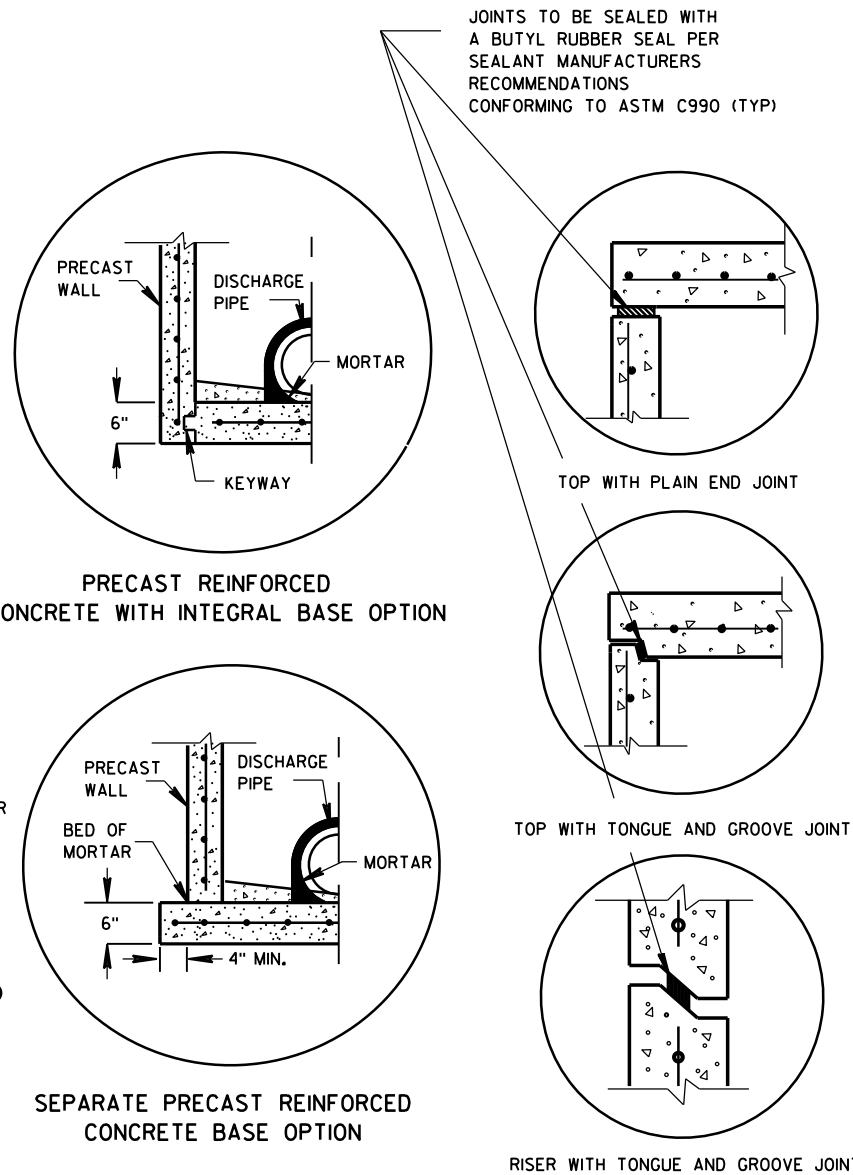


PLAN VIEW CIRCULAR OPENING



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

CIRCULAR INLETS W/ FLAT TOP



DETAIL "A"

DETAIL "B"

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

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

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

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

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

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

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

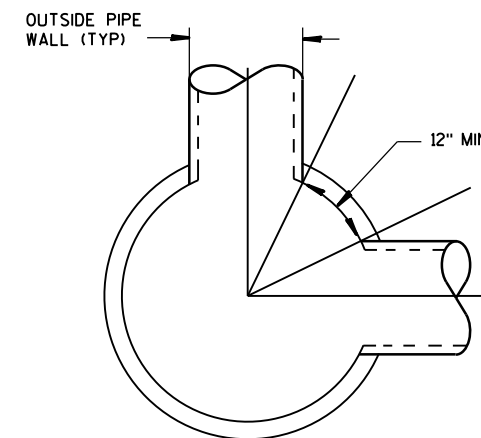
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

- ① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

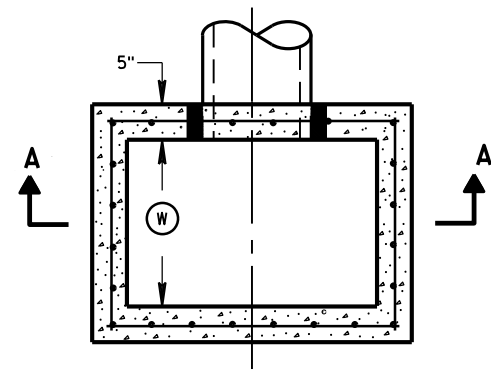
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

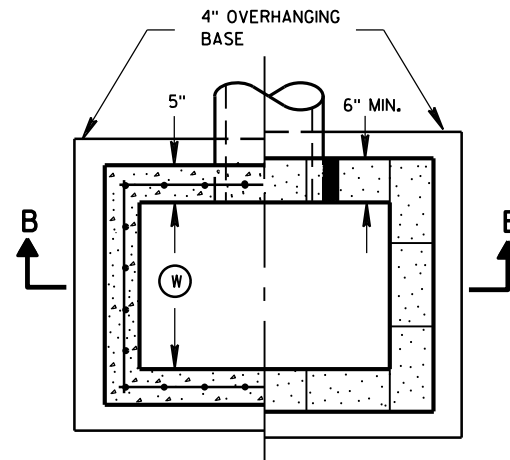
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

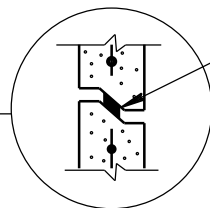
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



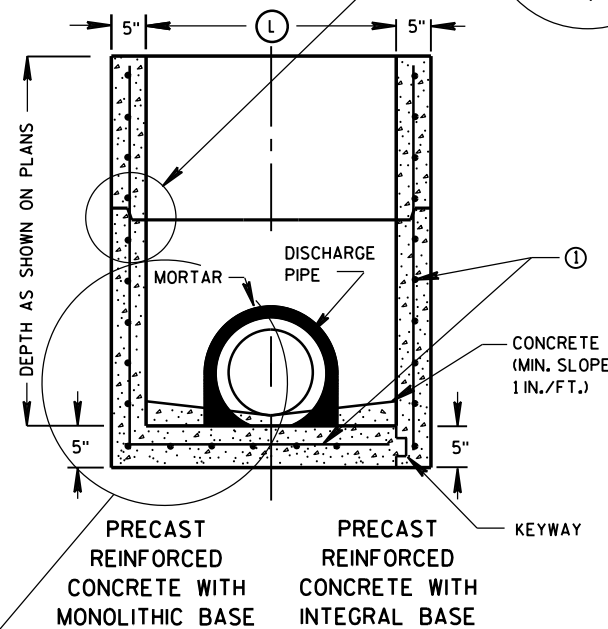
PLAN VIEW



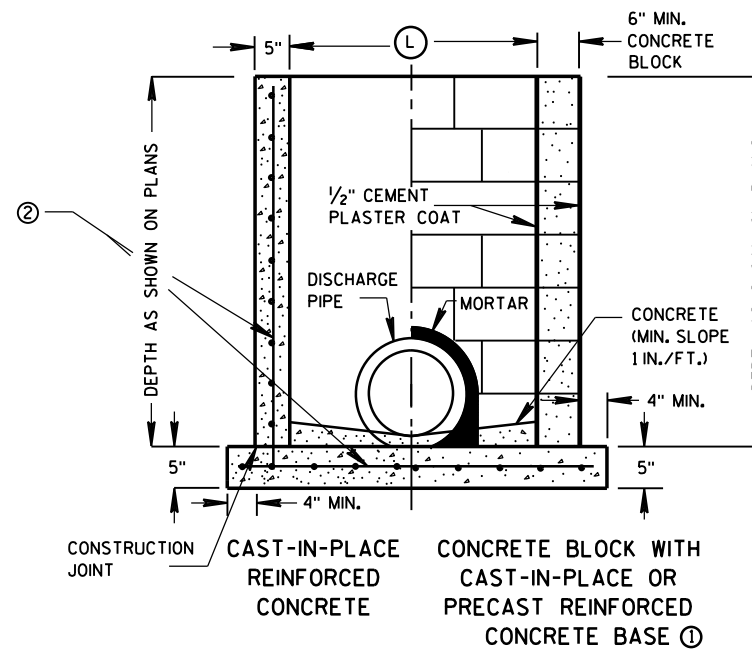
PLAN VIEW



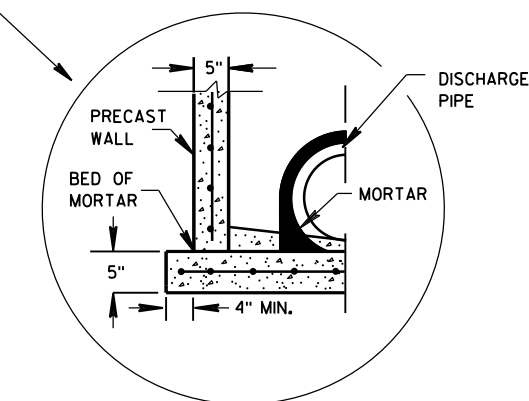
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

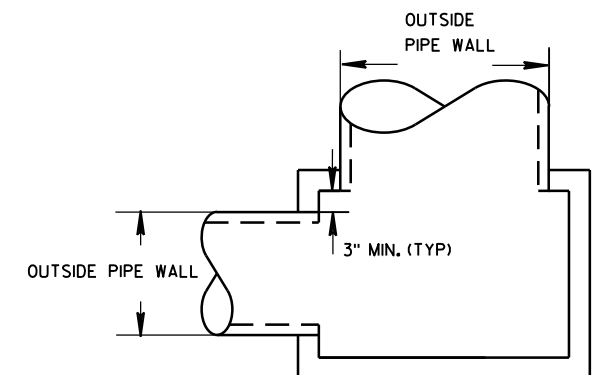
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH ① (FT)	LENGTH ② (FT)								
2X2-FT	2	2	X	X			X		X	
2X2.5-FT	2	2.5			X		X	X	X	X
2X3-FT	2	3				X				
2.5X3-FT	2.5	3			X					

PIPE MATRIX

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



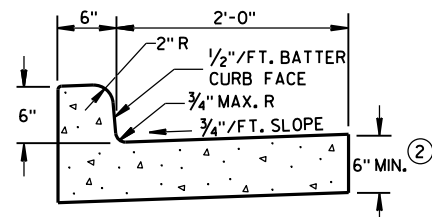
DETAIL "A"

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

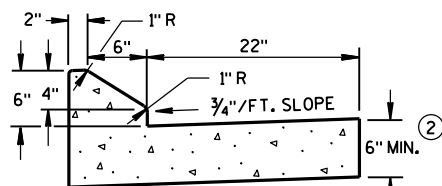
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

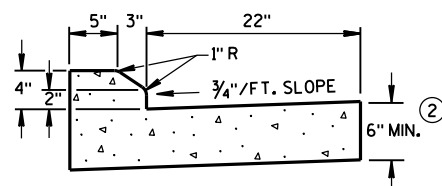
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR



TYPES A & D ①

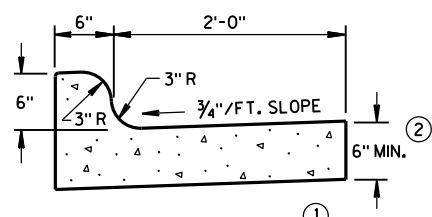


6" SLOPED CURB TYPES G & J ①



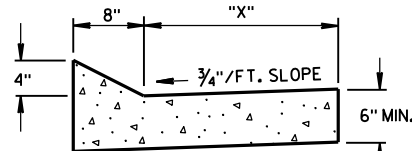
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



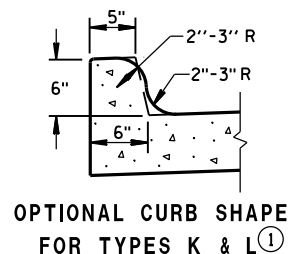
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

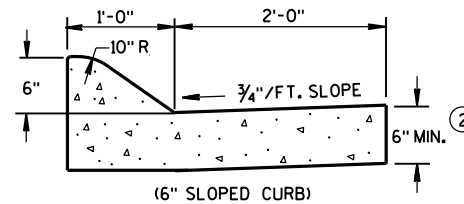


TYPES TBT & TBTt ①
CONCRETE CURB & GUTTER

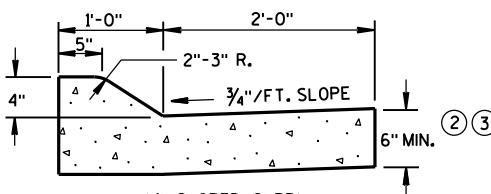
TBT & TBTt	"X"
30"	22"
36"	28"



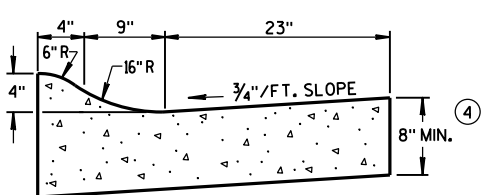
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)



(4" SLOPED CURB)
TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ⑤
CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

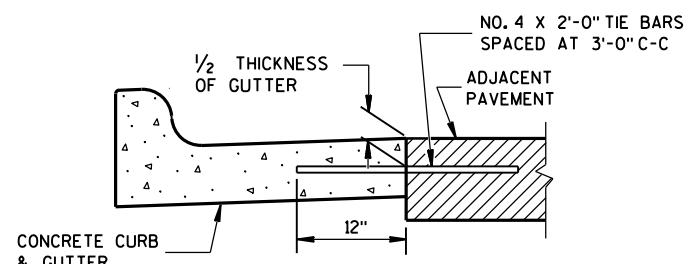
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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.

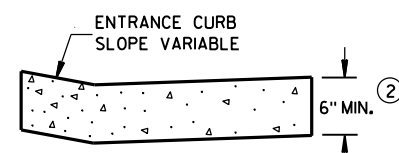
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

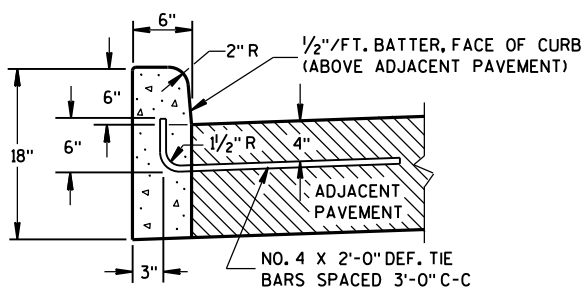
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTt.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH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



TYPICAL TIE BAR LOCATION ①

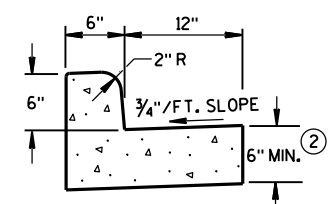


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

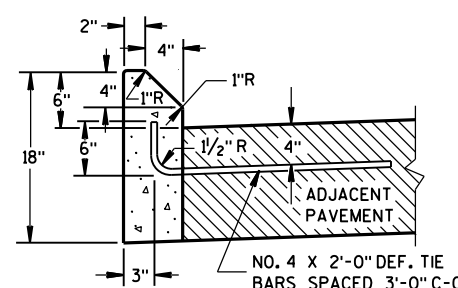


TYPES A & D ①

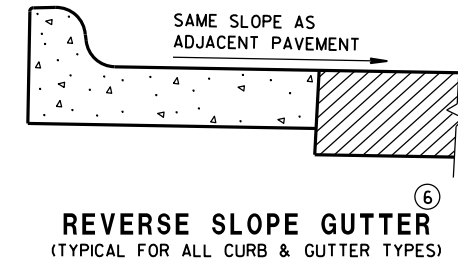
CONCRETE CURB



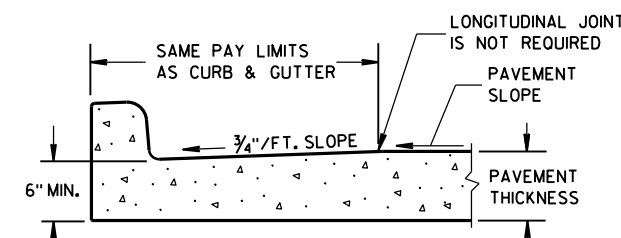
TYPES A & D
CONCRETE CURB & GUTTER 18"



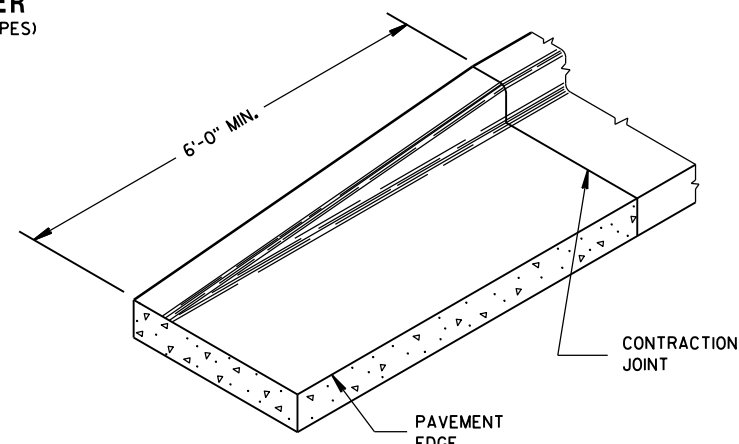
TYPES G & J ①



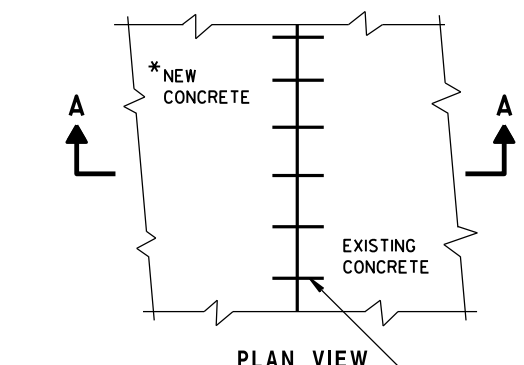
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)



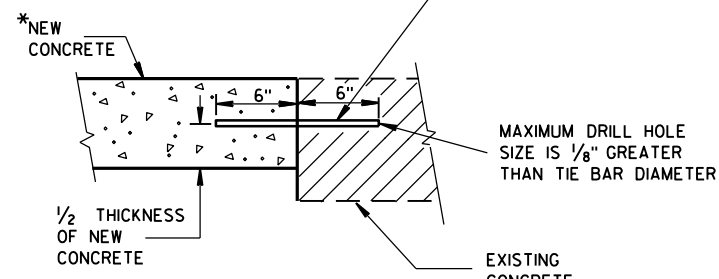
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER



PLAN VIEW



TIE BARS DRILLED
INTO EXISTING PAVEMENT

* 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.

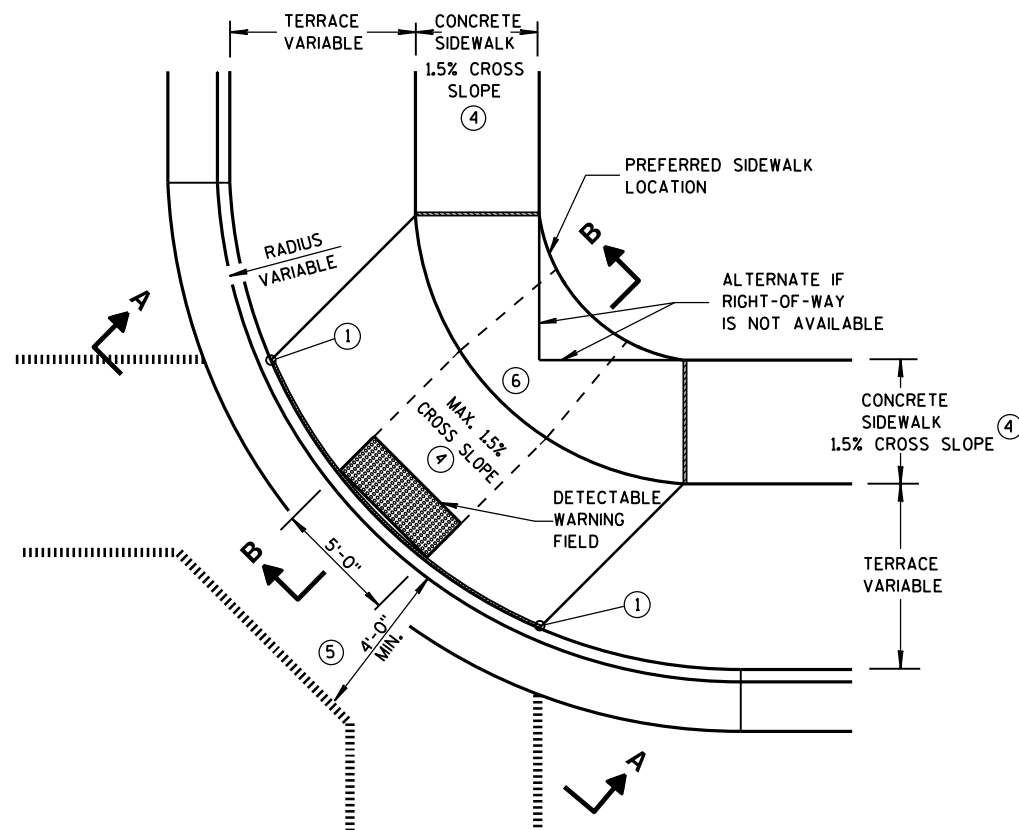
MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

EXISTING CONCRETE

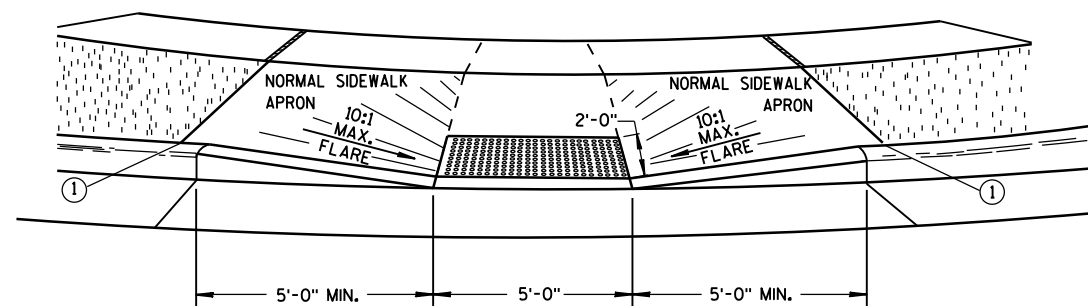
CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

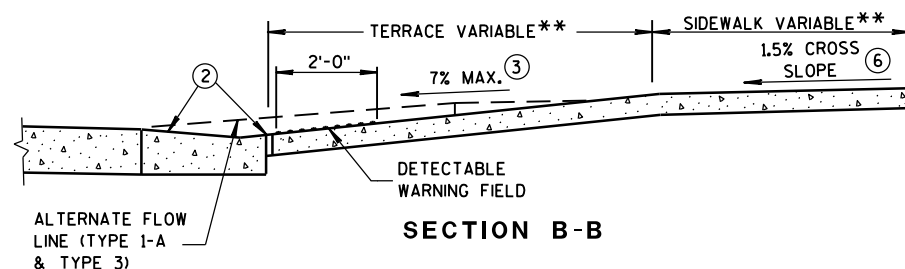


PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)

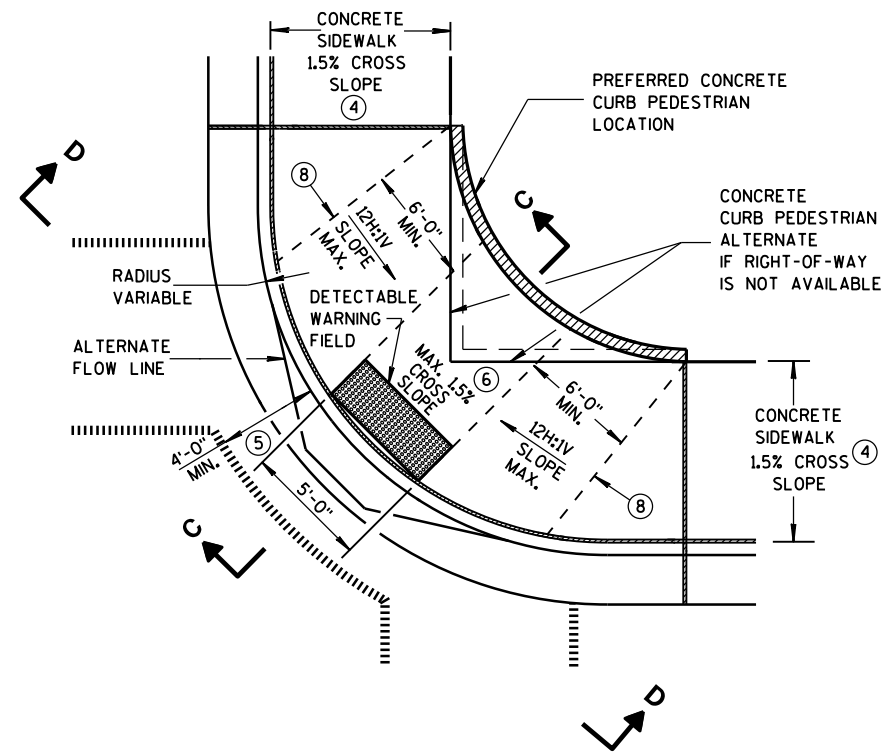


VIEW A-A

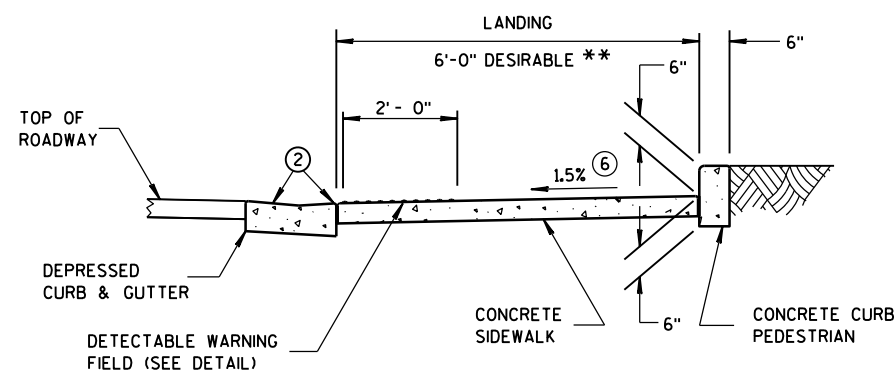
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



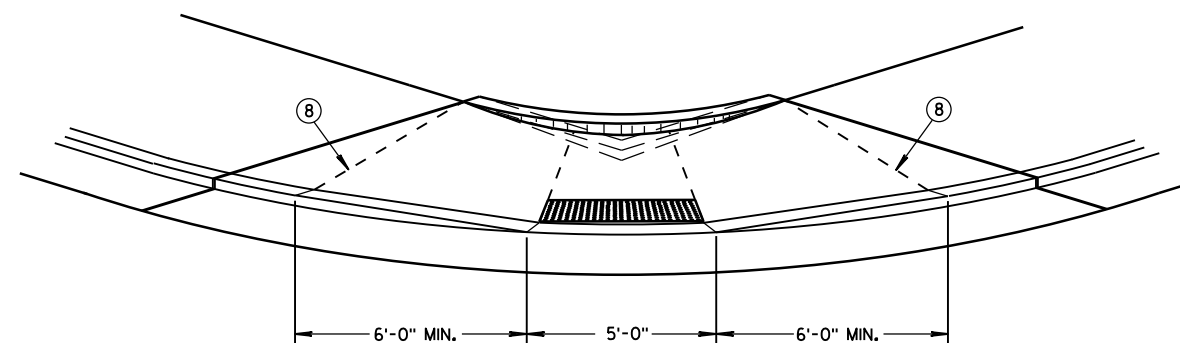
SECTION B-B



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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

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

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

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

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

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

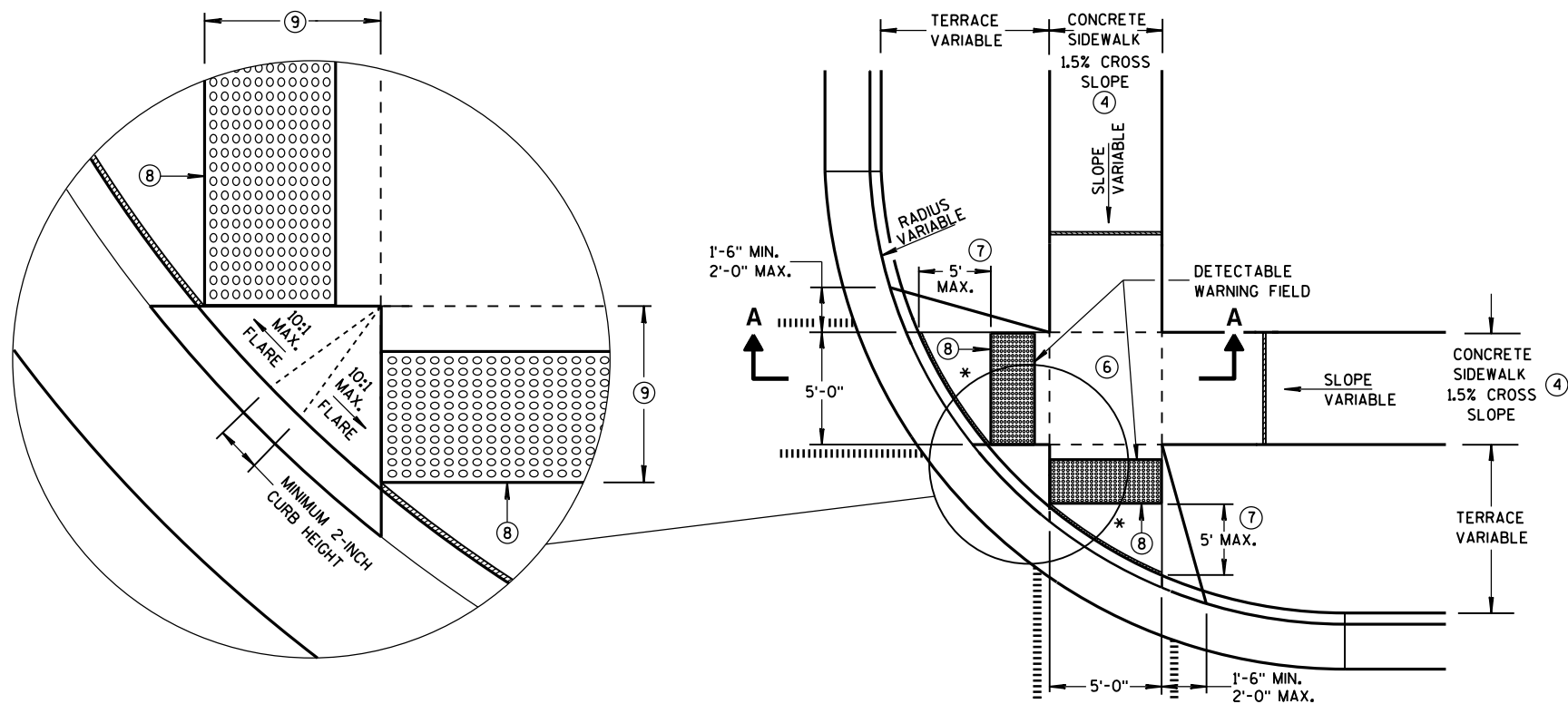
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

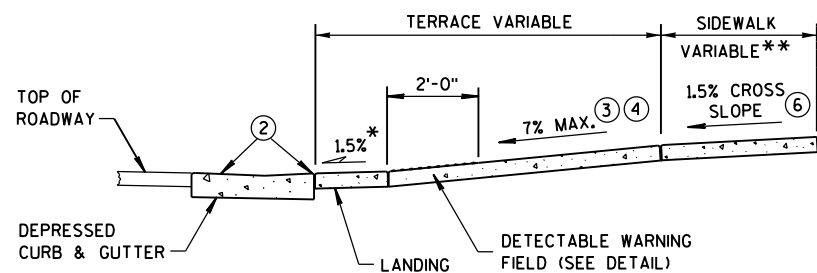
-  1/2" EXPANSION JOINT-SIDEWALK
 CONTRACTION JOINT FIELD LOCATED
 PAVEMENT MARKING CROSSWALK (WHITE)
 ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

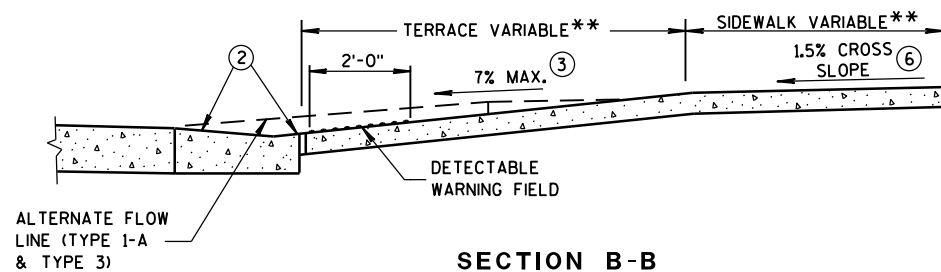
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK



** WIDTH SHOWN ELSEWHERE
IN THE PLANS



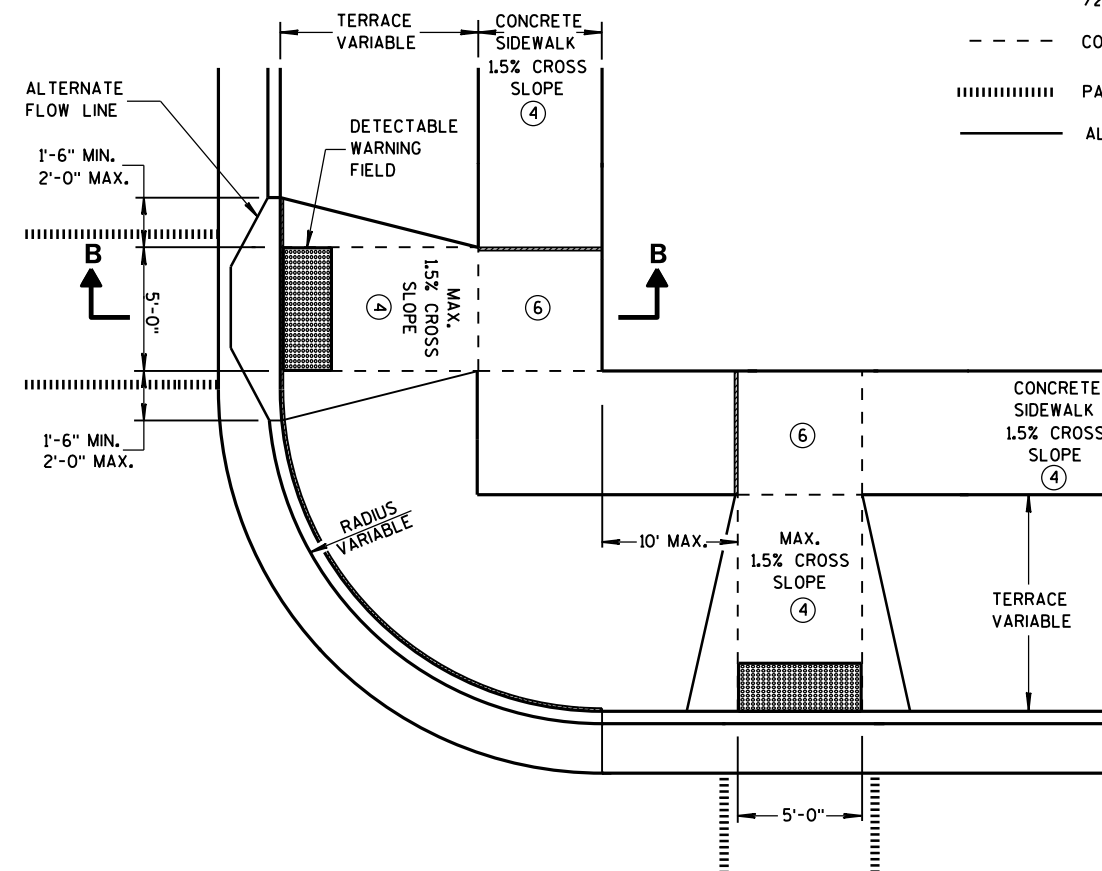
GENERAL NOTES

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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

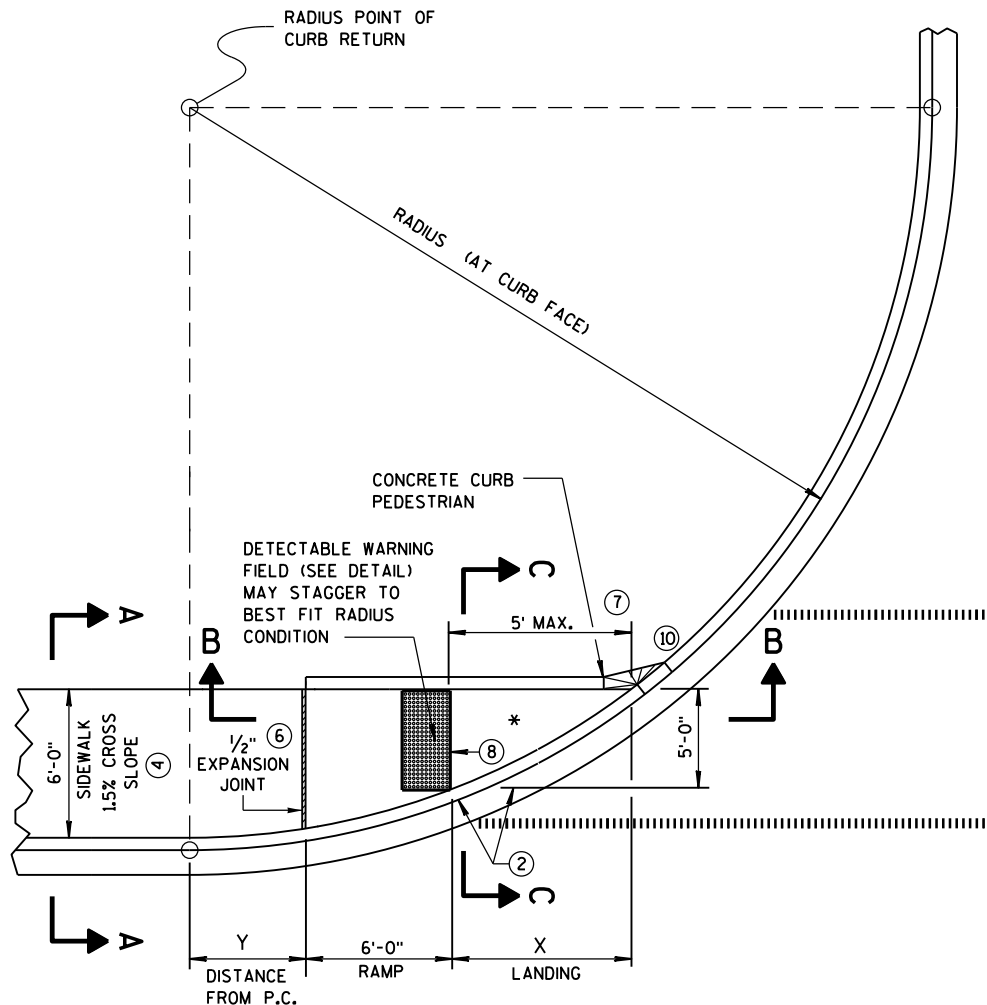
LEGEND

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

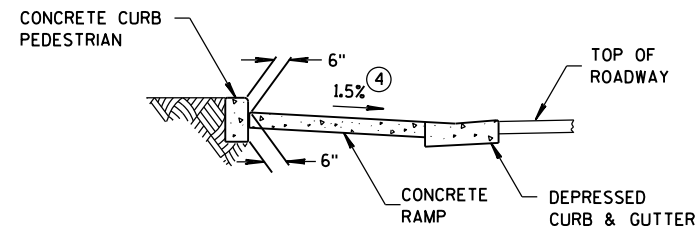


CURB RAMPS
TYPES 2 AND 3

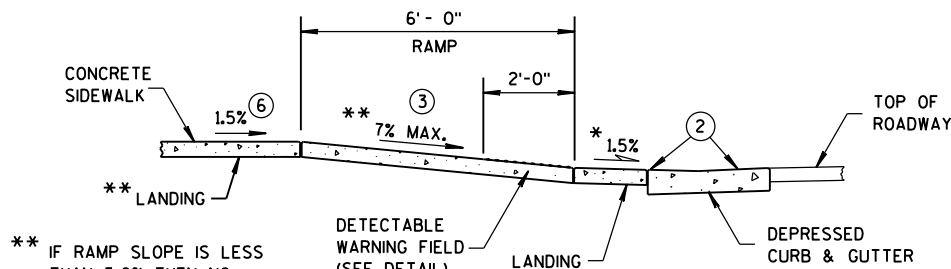
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A



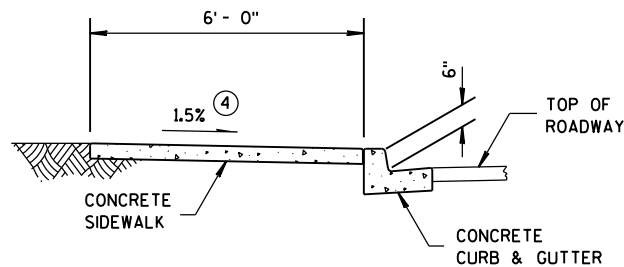
SECTION B-B FOR TYPE 4A

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

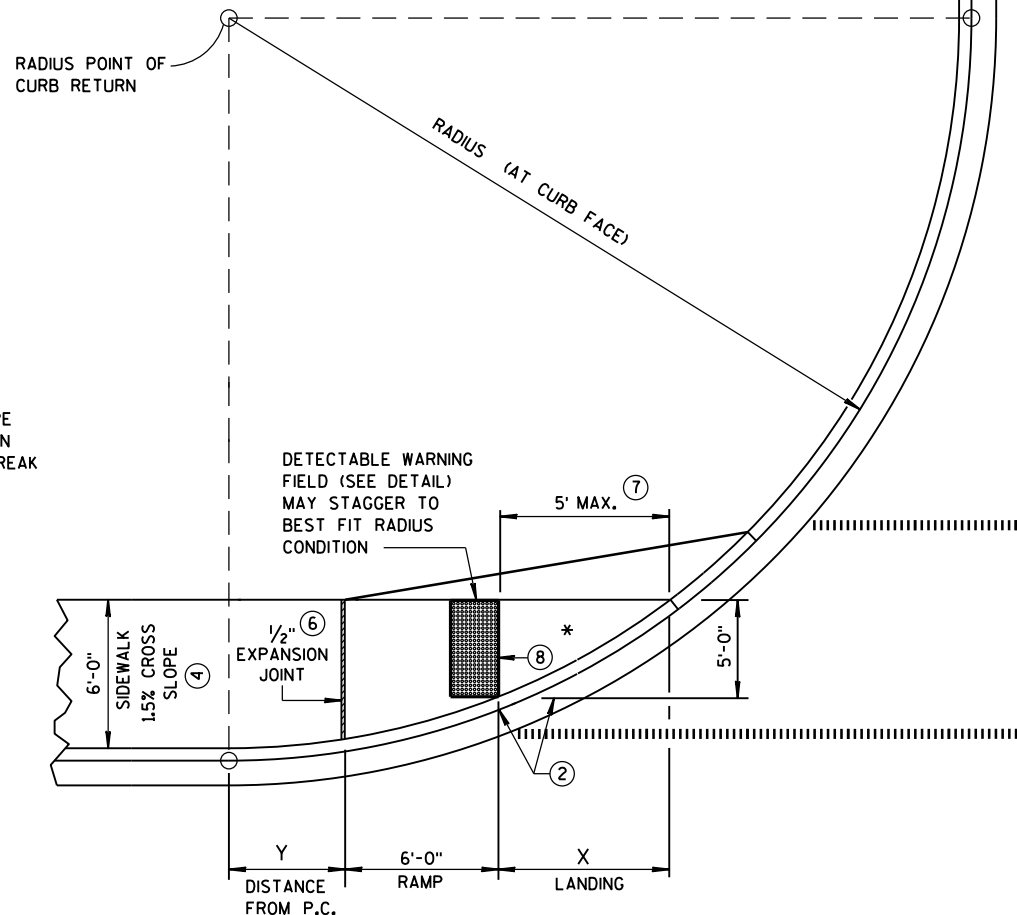
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2 3/4"	1'-7 1/2"
40 FEET	12'-1 1/4"	2'-10"
50 FEET	13'-8 3/4"	3'-10 3/4"
60 FEET	15'-2"	4'-10 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



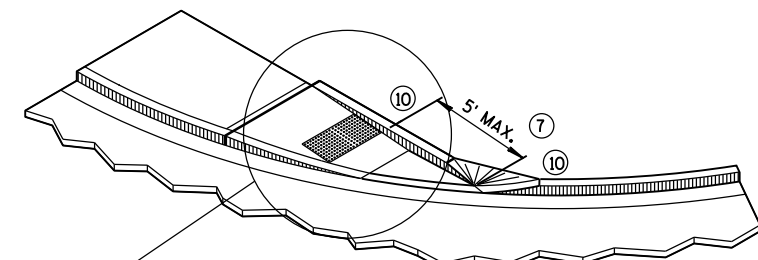
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

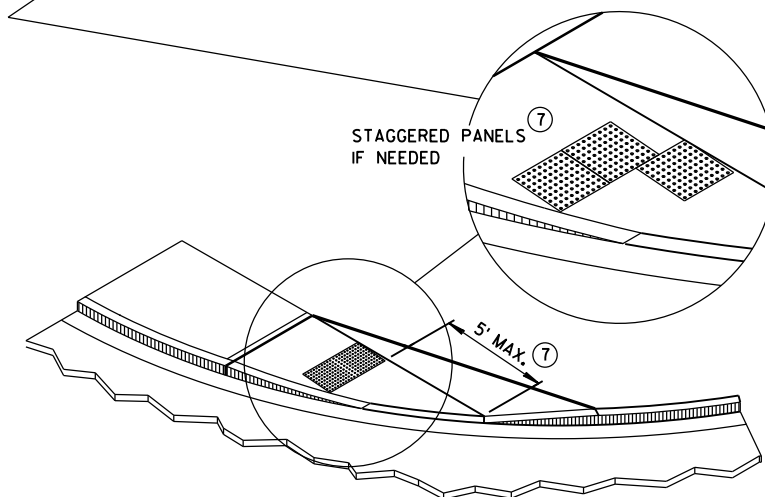
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



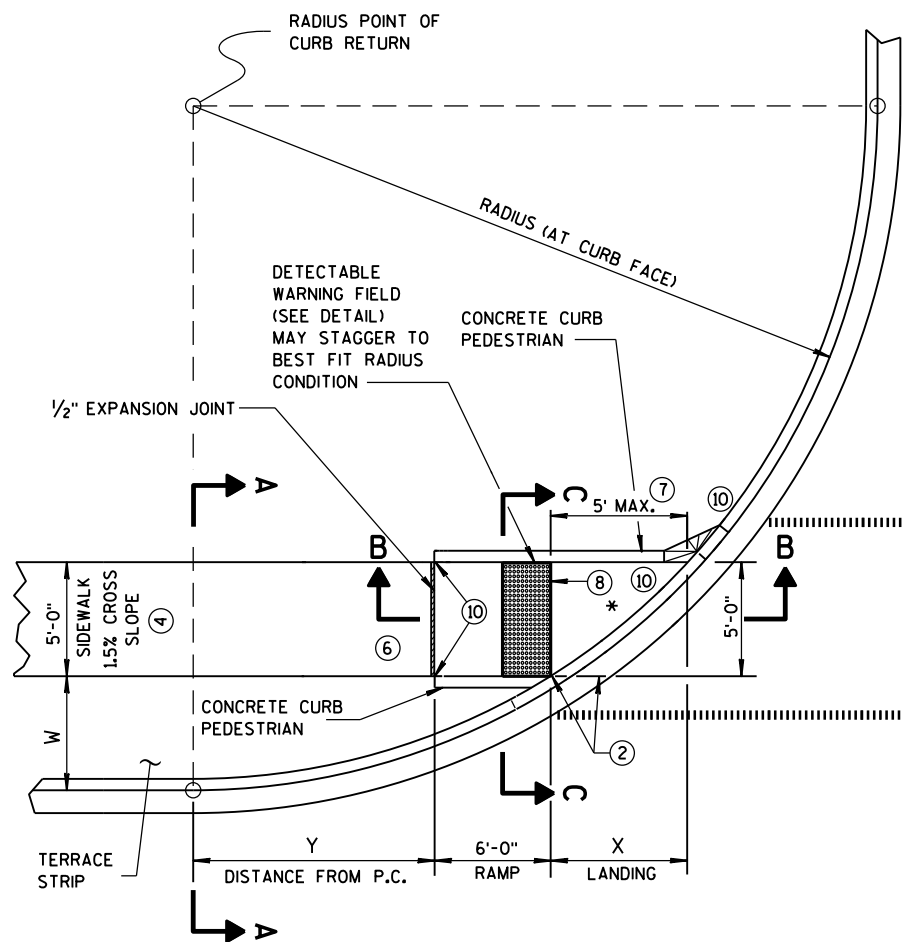
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

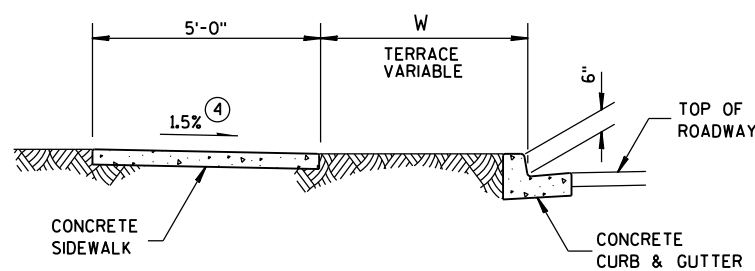
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

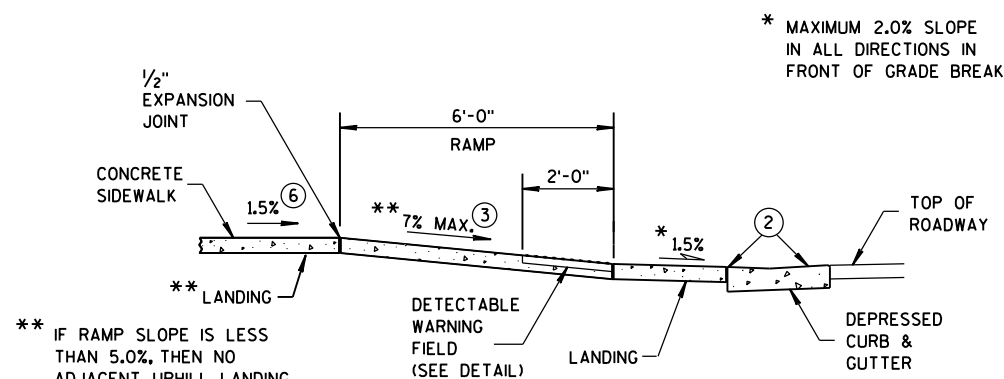
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB RAMP TYPE 4B
PLAN VIEW**

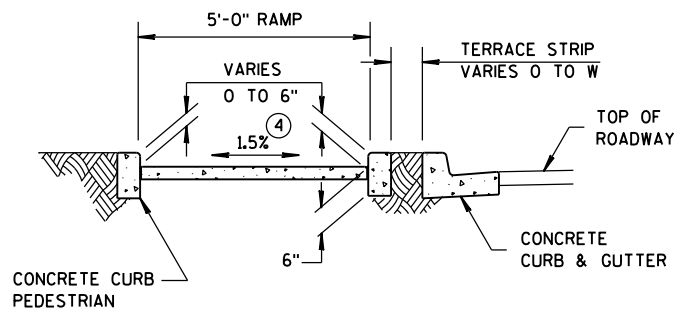


SECTION A-A FOR TYPE 4B

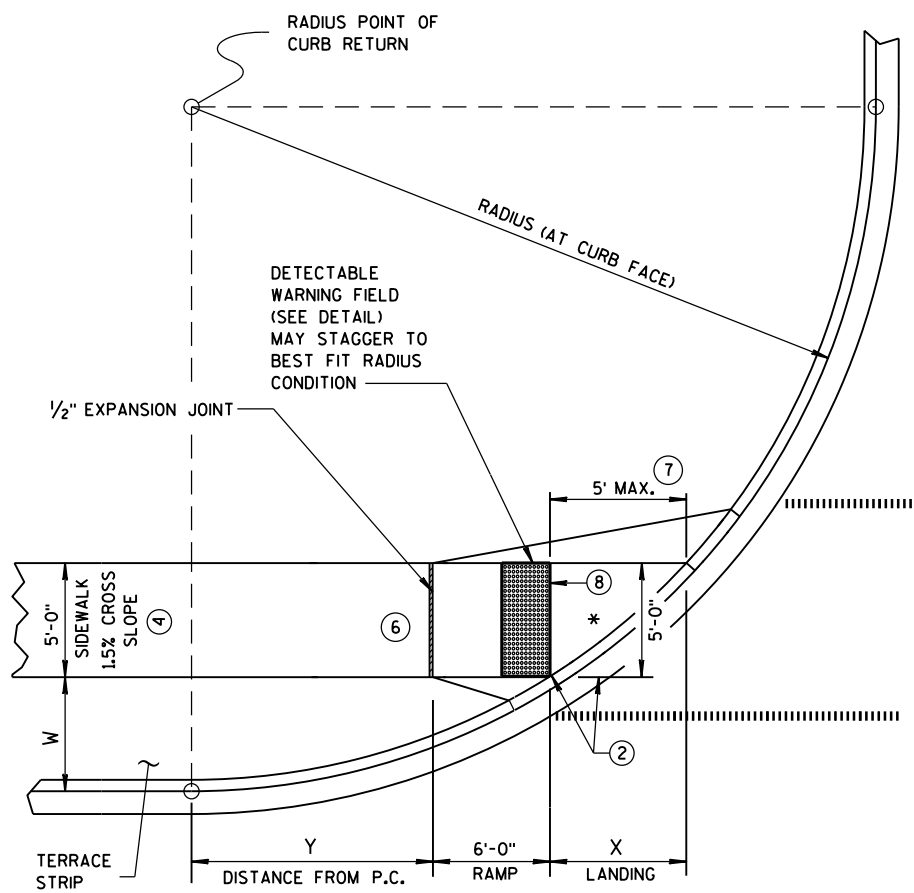


SECTION B-B FOR TYPE 4B

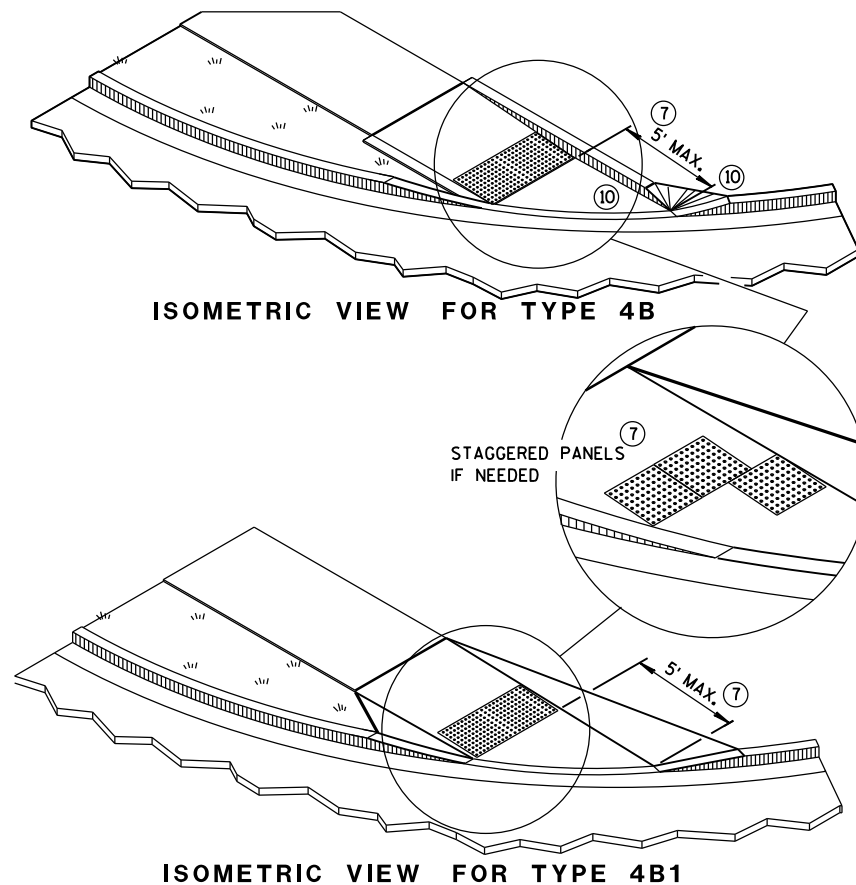
- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B



**CURB RAMP TYPE 4B1
PLAN VIEW**



ISOMETRIC VIEW FOR TYPE 4B

ISOMETRIC VIEW FOR TYPE 4B1

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

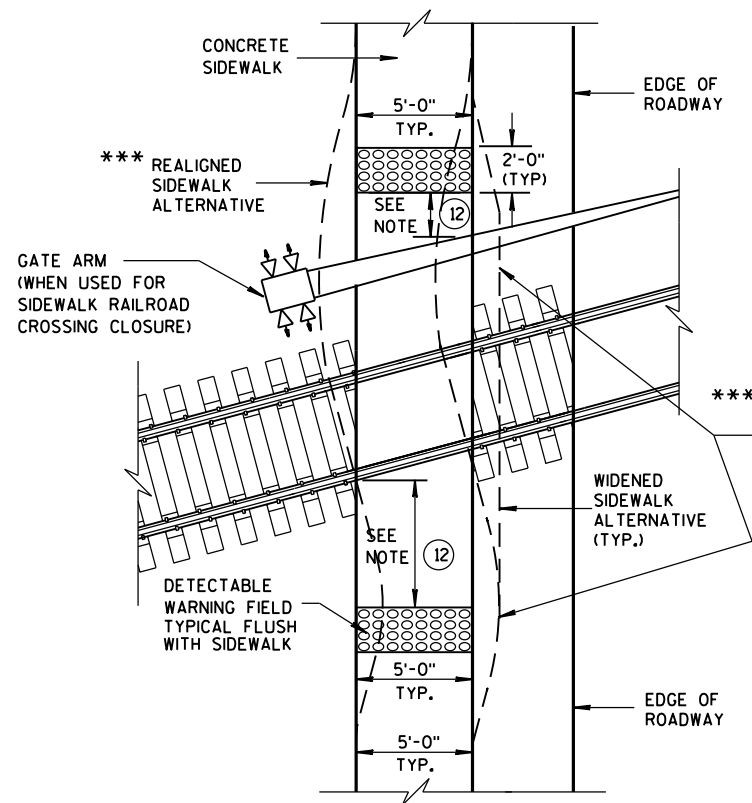
**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

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'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 3/4"	6'-5 1/2"	3'-8 3/4"	7'-6 3/4"	3'-3"	8'-6 1/4"
30 FEET	7'-9 1/4"	5'-10 1/2"	6'-9 1/2"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"
40 FEET	9'-4"	7'-10"	8'-2 3/4"	10'-3"	7'-4 3/4"	12'-3 3/4"	6'-8 1/2"	14'-1 1/4"	6'-1 3/4"	15'-8 1/2"
50 FEET	10'-8"	9'-6 1/2"	9'-5 1/2"	12'-3 1/4"	8'-6 1/2"	14'-7 1/2"	7'-9 3/4"	16'-8 1/4"	7'-2 1/2"	18'-6 1/4"
60 FEET	11'-10 1/4"	11'-0 3/4"	10'-6 1/2"	14'-1 1/4"	9'-6 1/2"	16'-8 1/2"	8'-9 1/4"	18'-11 3/4"	8'-1 1/2"	21'-0 1/2"

GENERAL NOTES

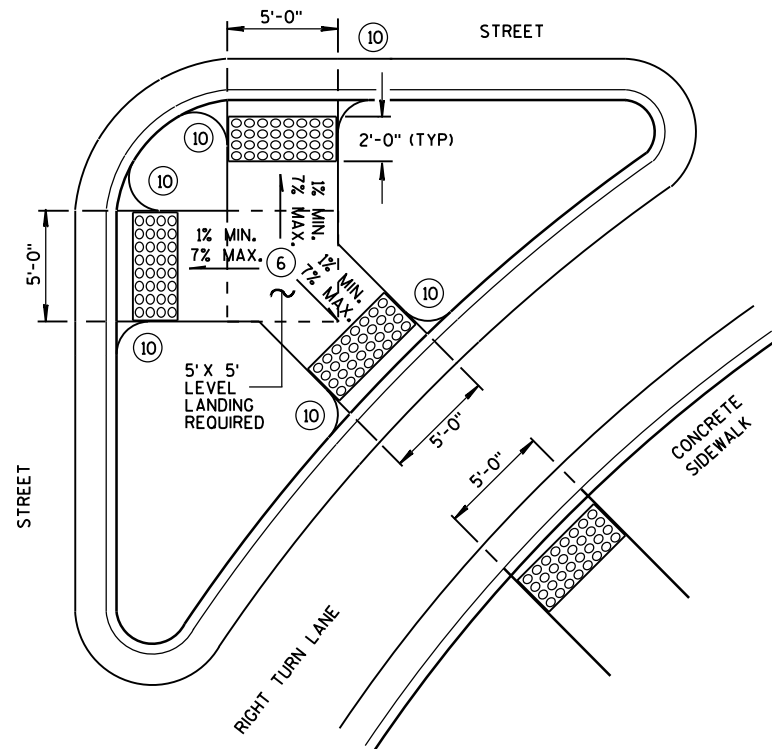
INTERMEDIATE RADII CAN BE INTERPOLATED

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

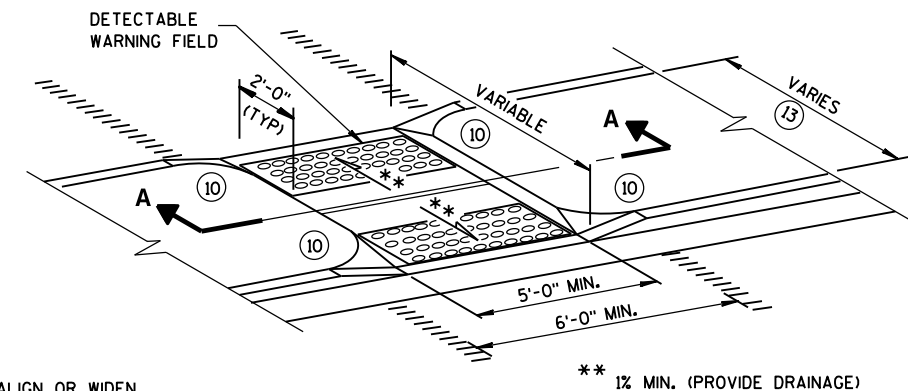


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

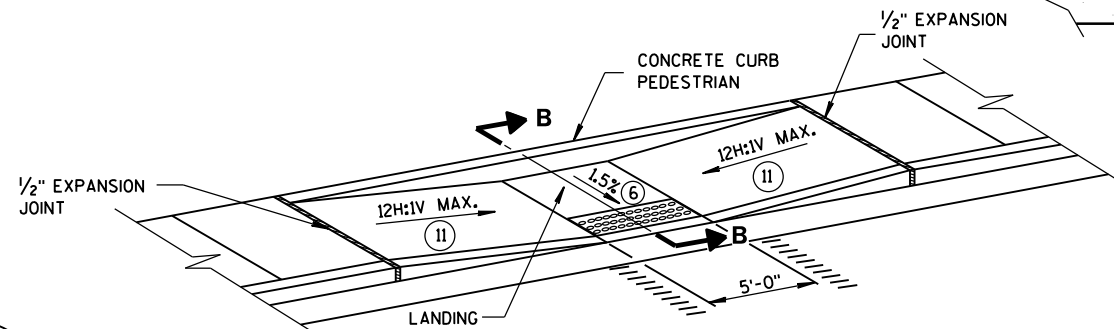
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



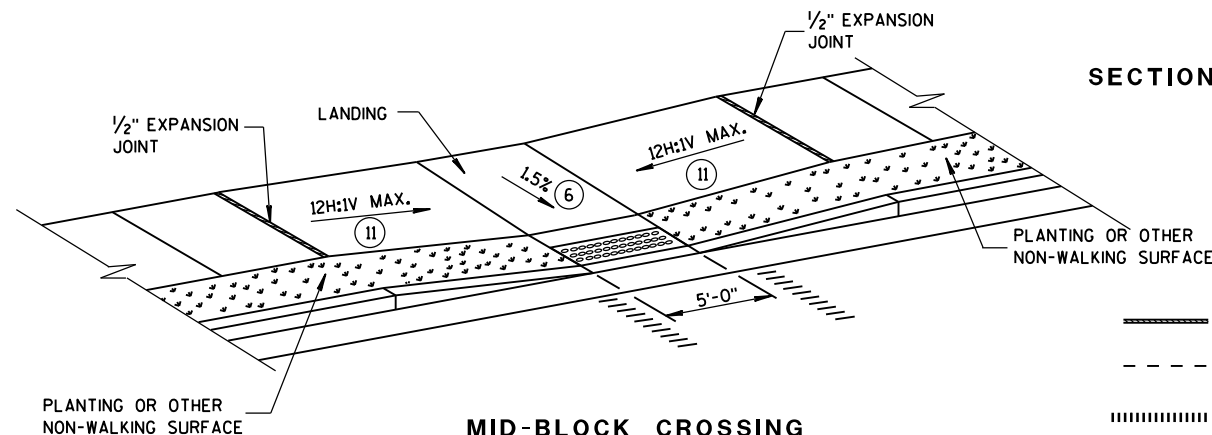
TYPE 6
DETECTABLE WARNING AT ISLANDS



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A

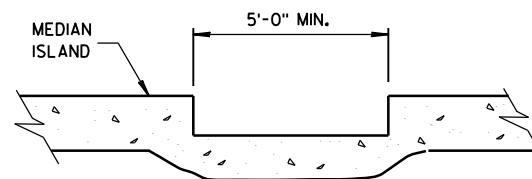


MID-BLOCK CROSSING
TYPE 7B

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

GENERAL NOTES

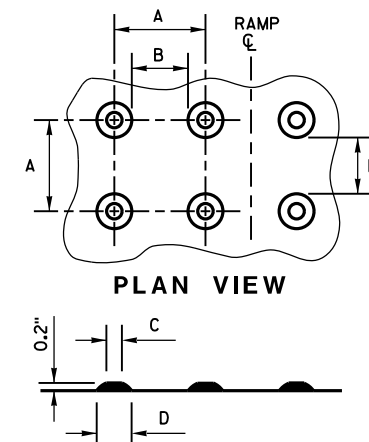
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



SECTION A-A

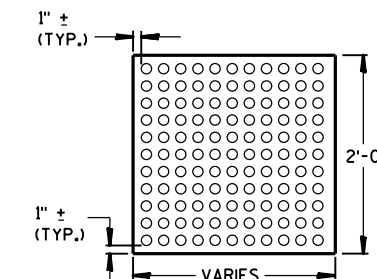
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



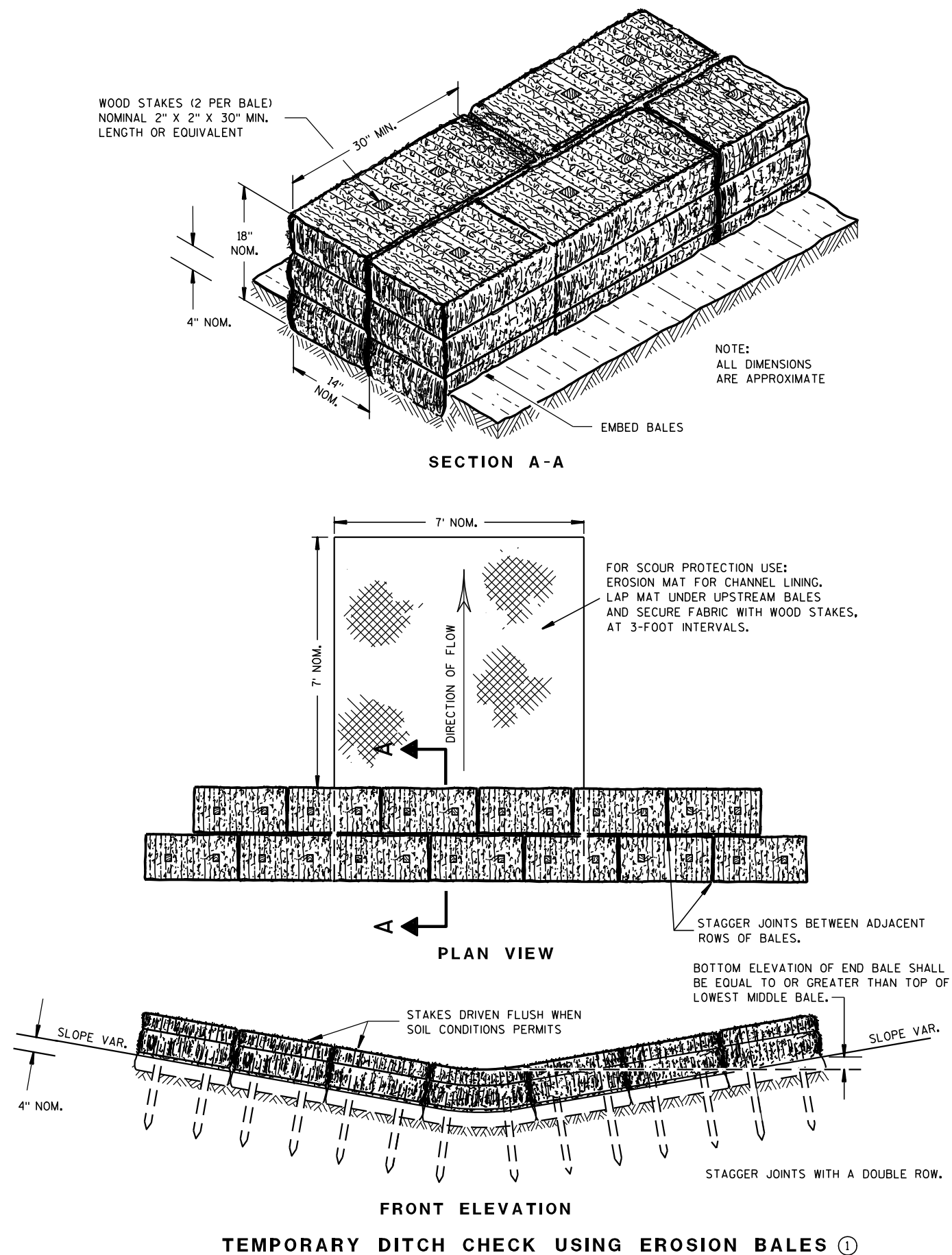
PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

- 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

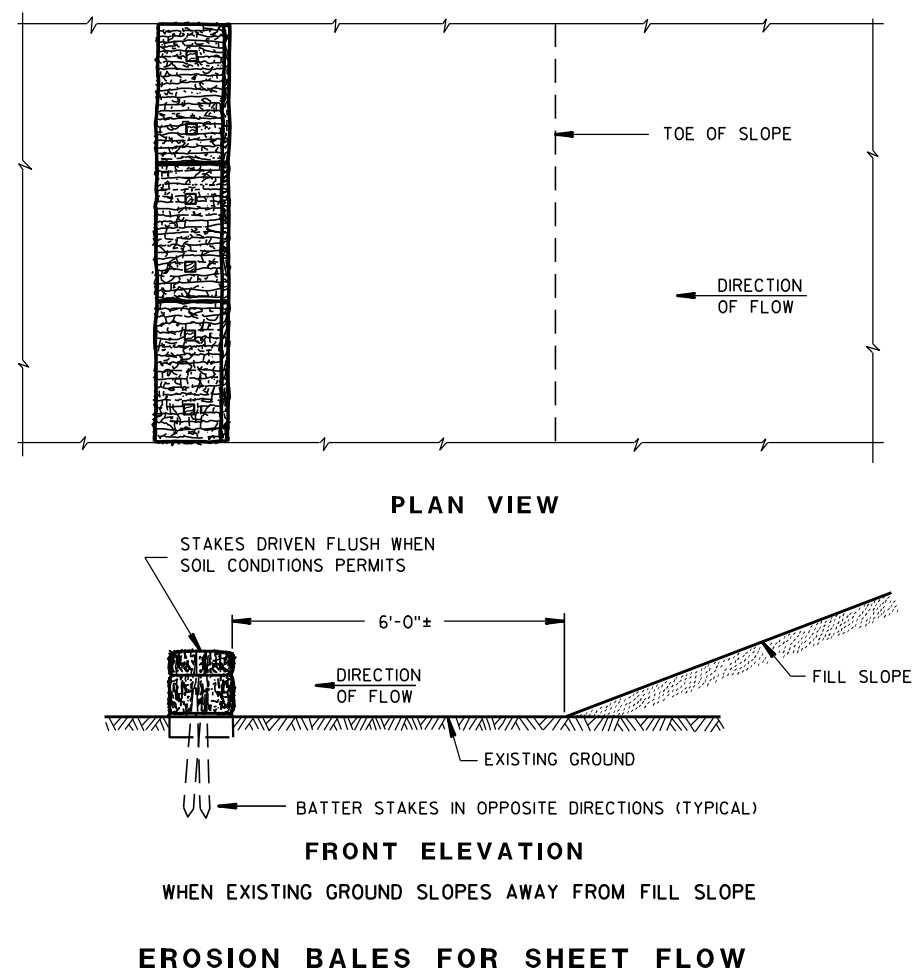
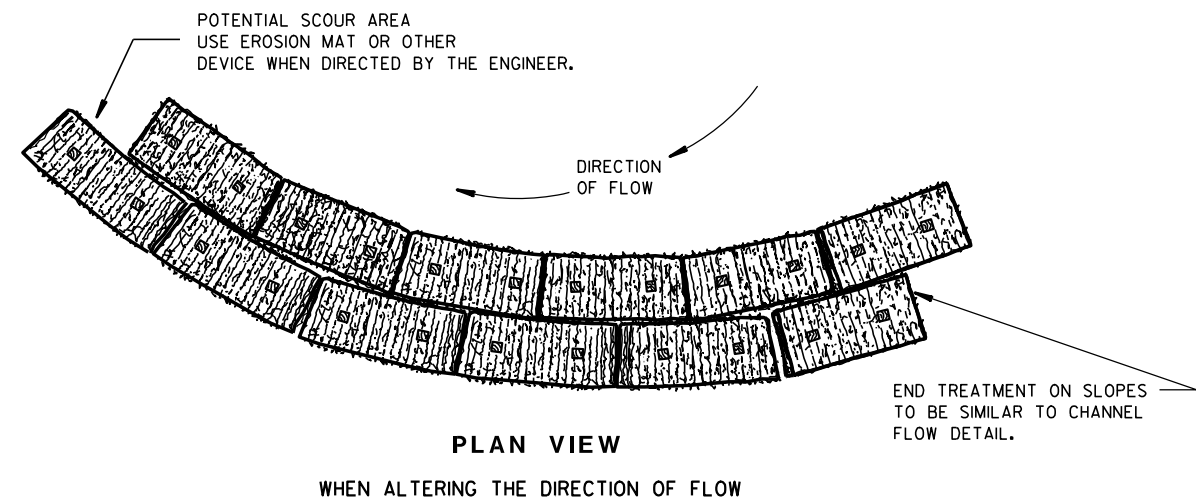
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



GENERAL NOTES

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

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

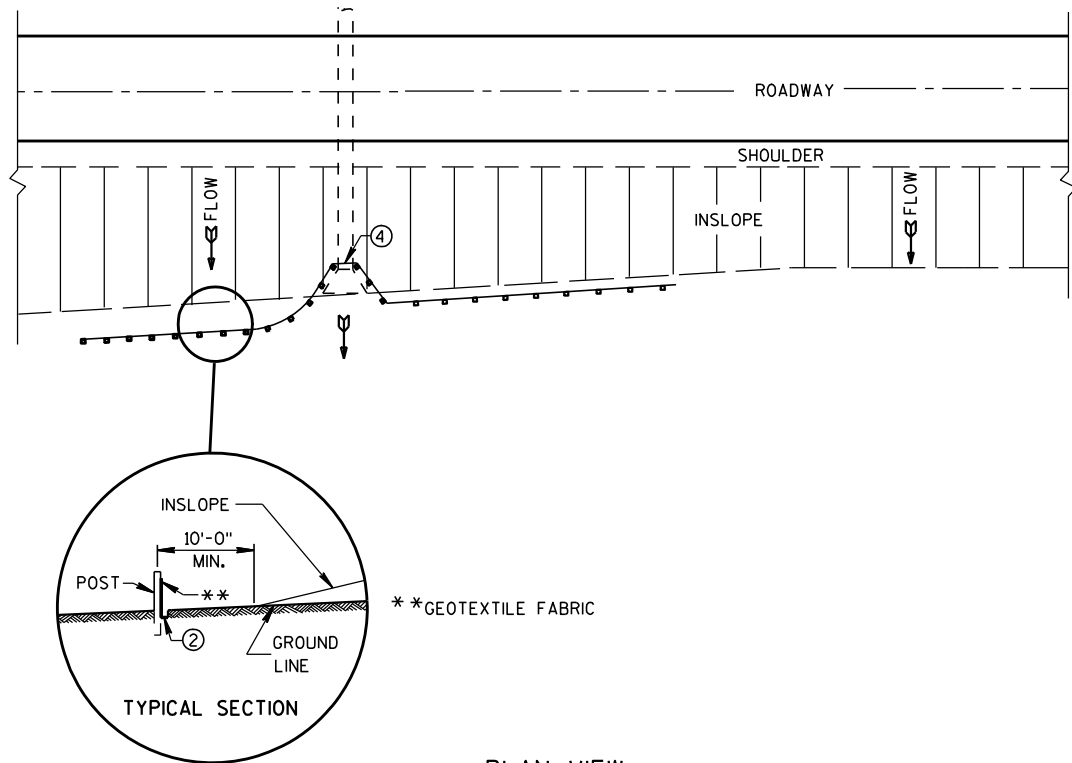
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

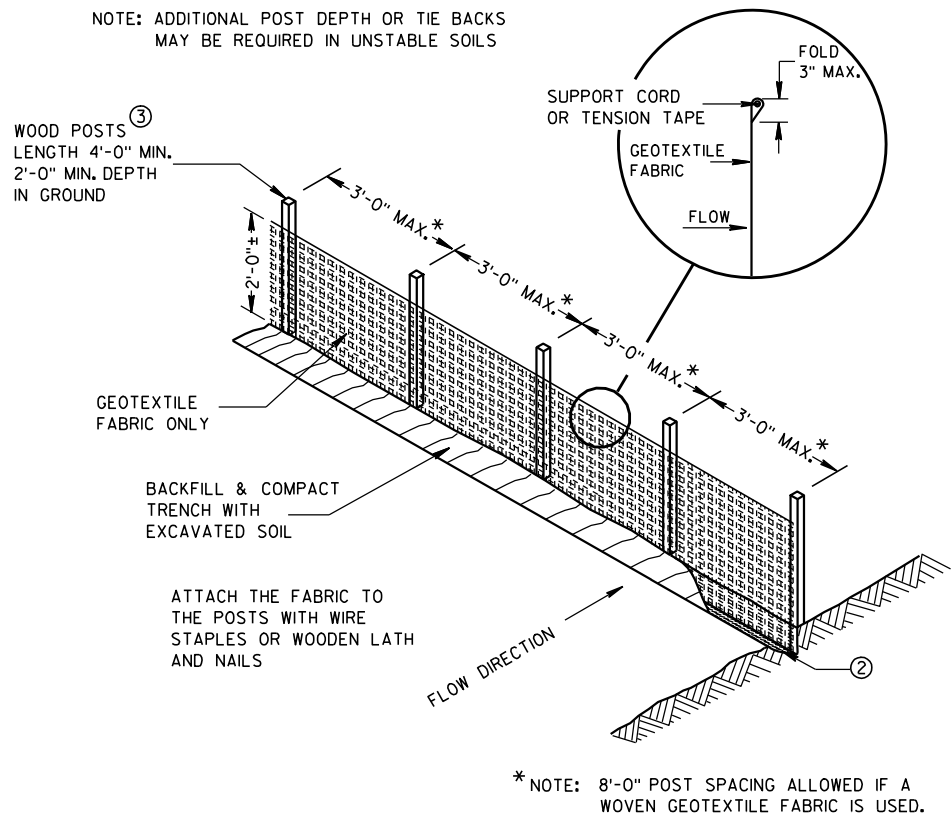
APPROVED

6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

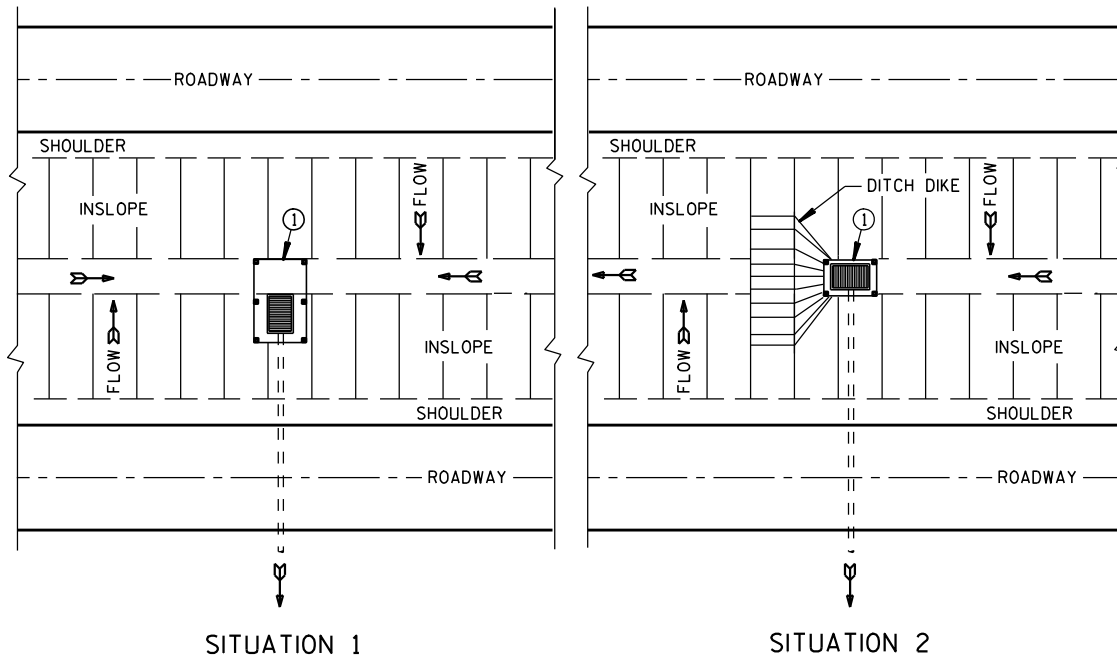
FHWA



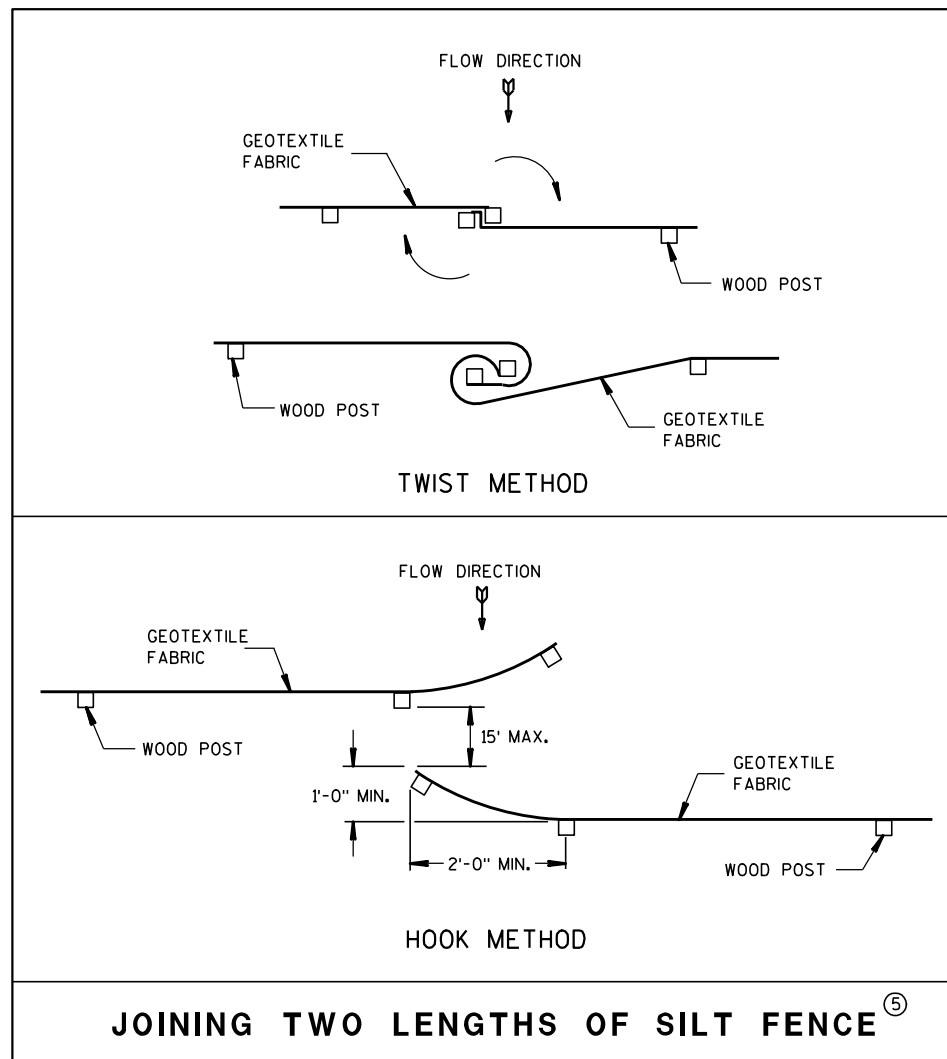
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

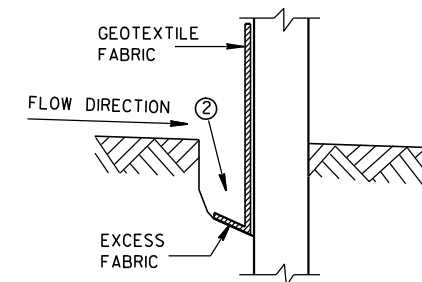


JOINING TWO LENGTHS OF SILT FENCE (5)

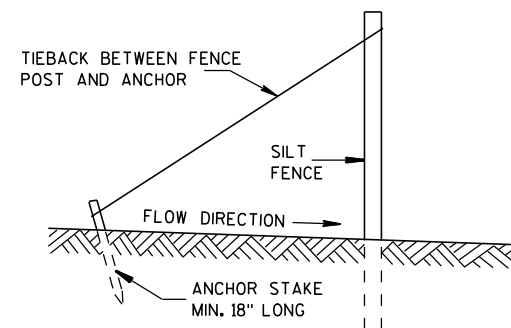
GENERAL NOTES

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.

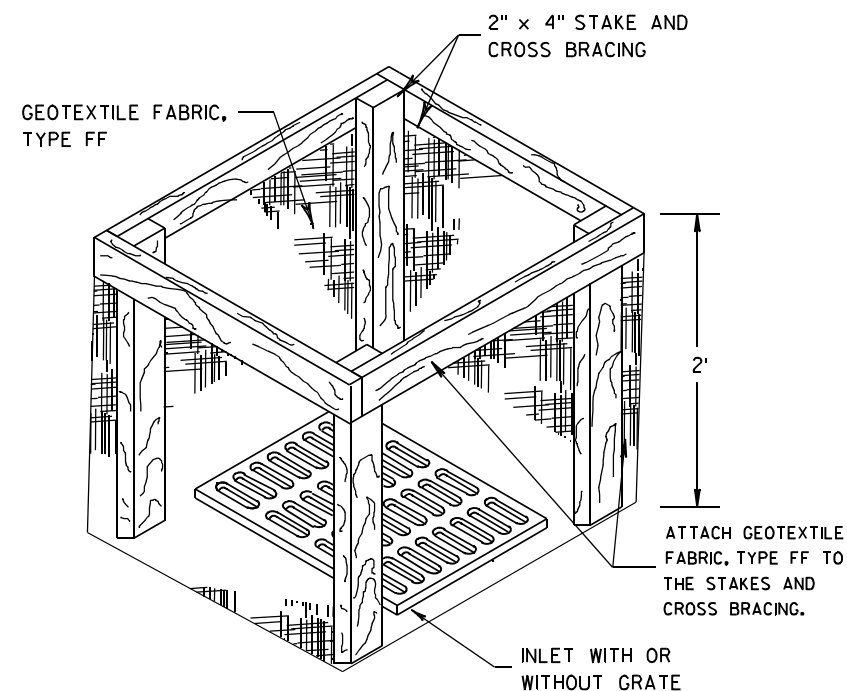
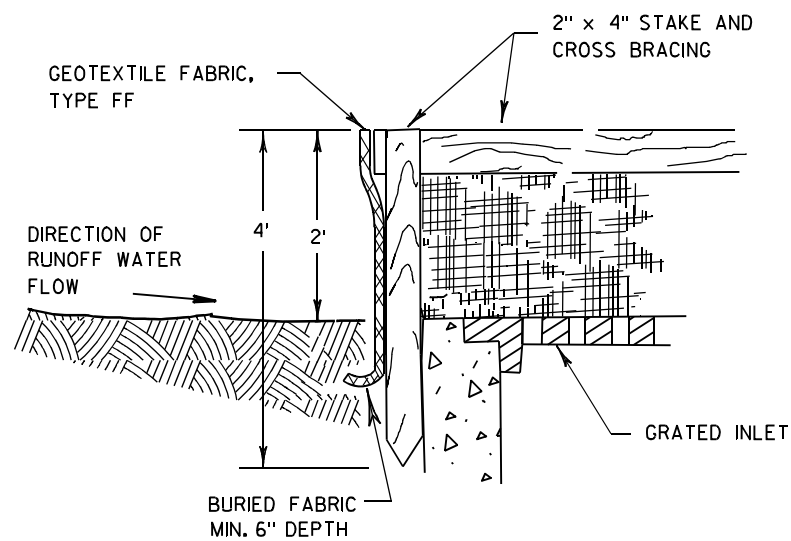


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



INLET PROTECTION, TYPE A

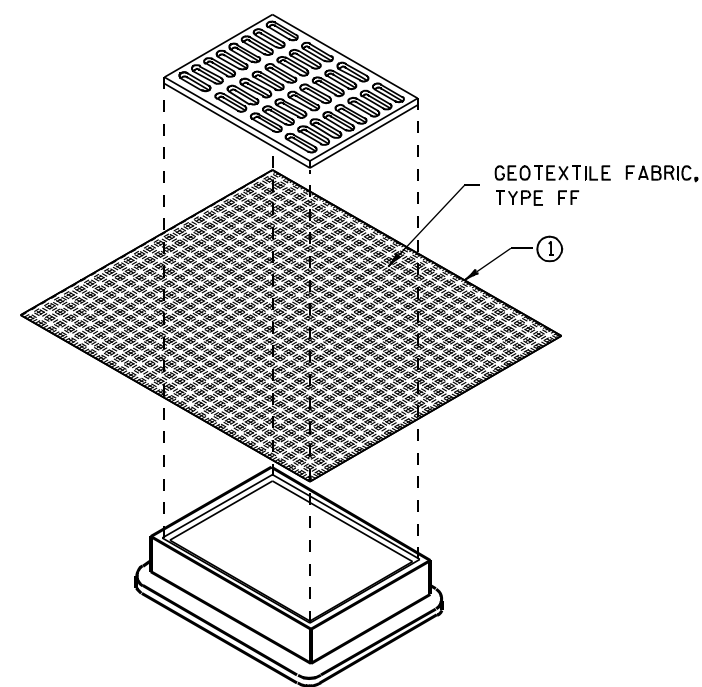
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

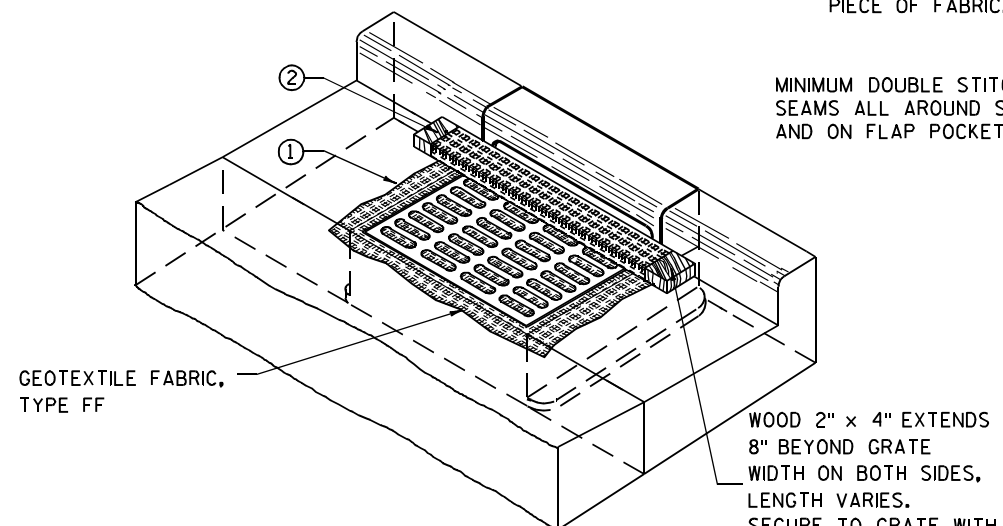
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

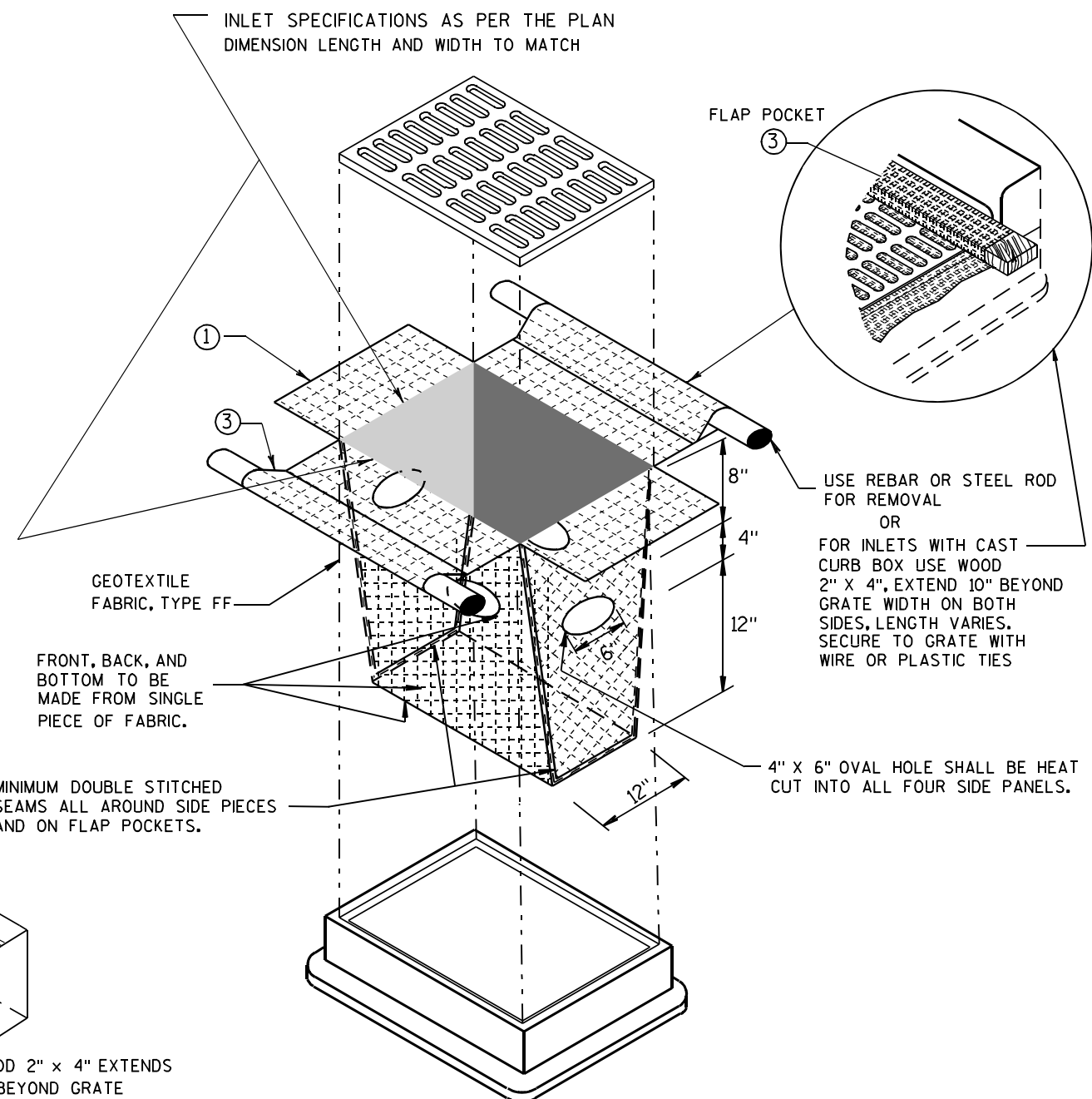
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



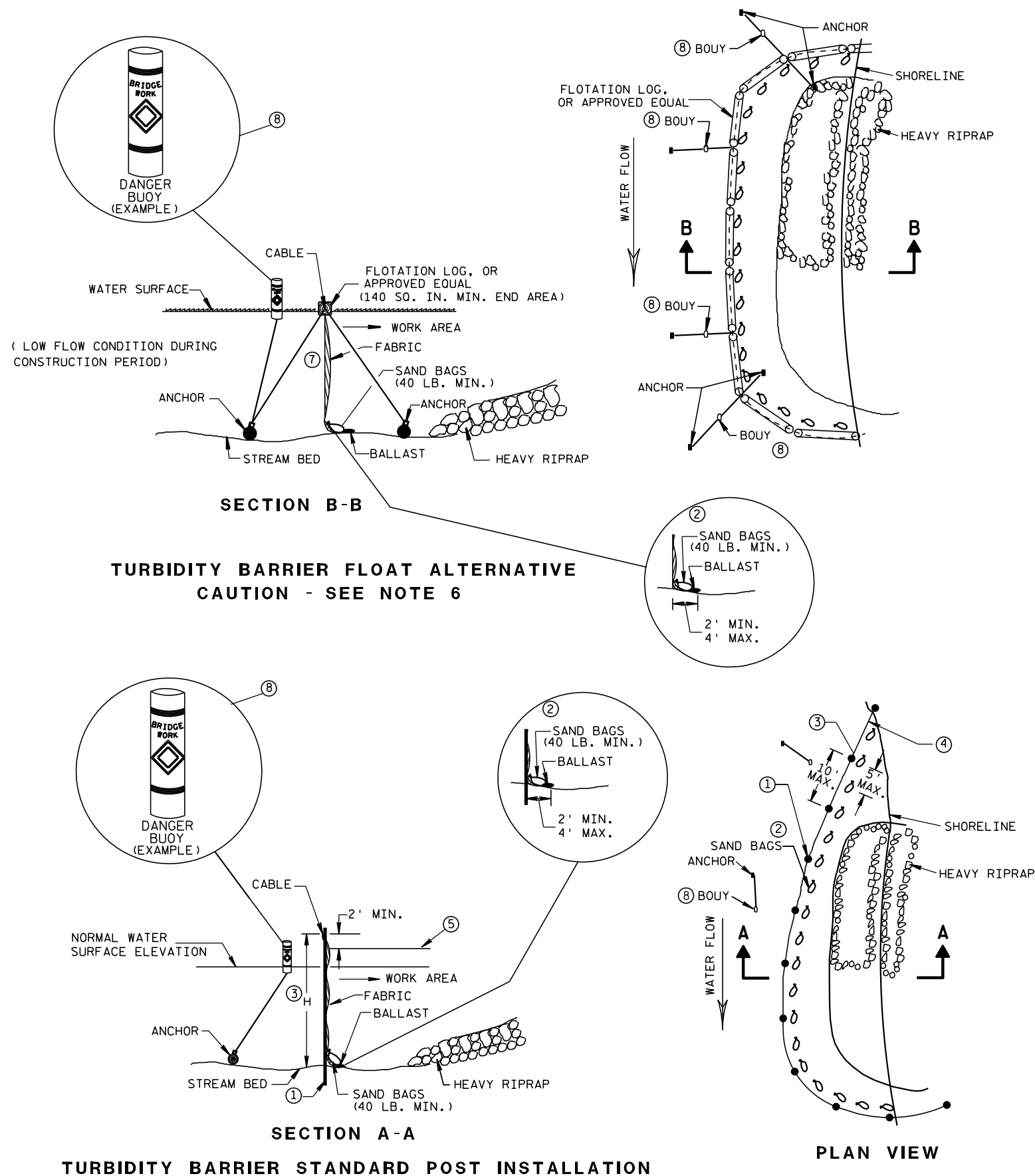
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

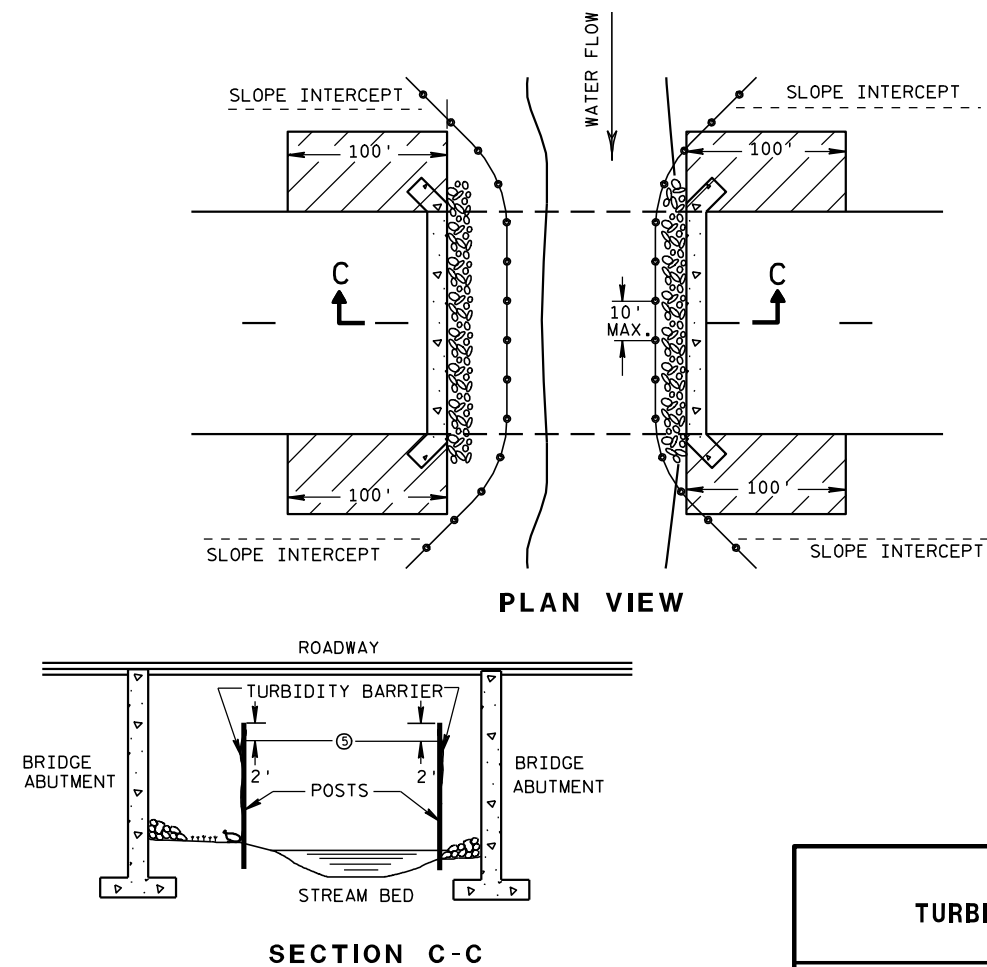


GENERAL NOTES

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.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

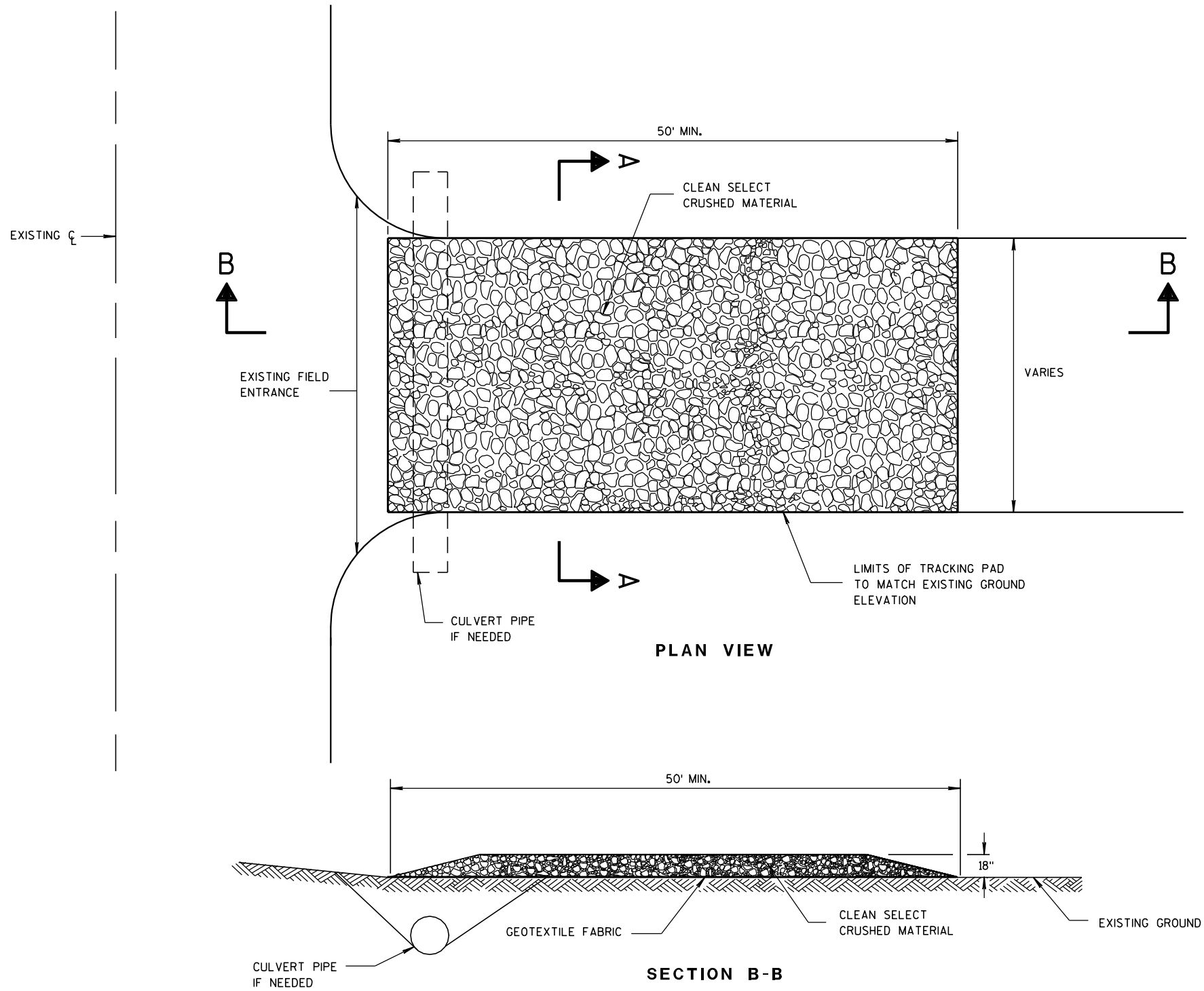
APPROVED

6/04/02

DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



TRACKING PAD

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

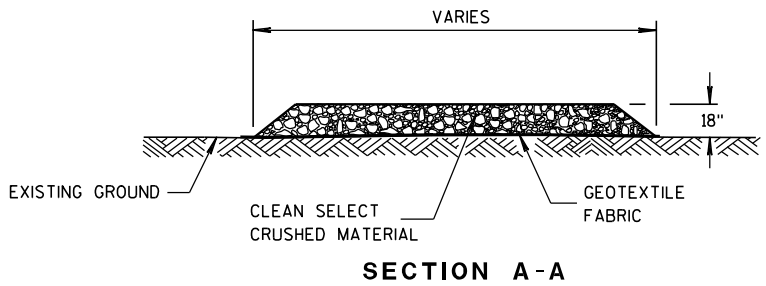
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



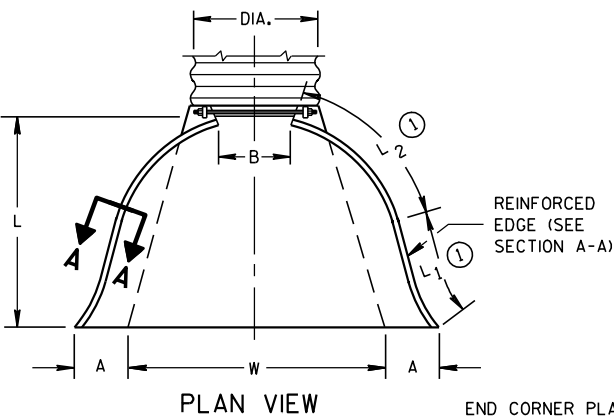
TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1		1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1		1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1		1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1		1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1		1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1		1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1		2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1		2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1		3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1		3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1		3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1		3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1		3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1		3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1		3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1		3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1		3 Pc.

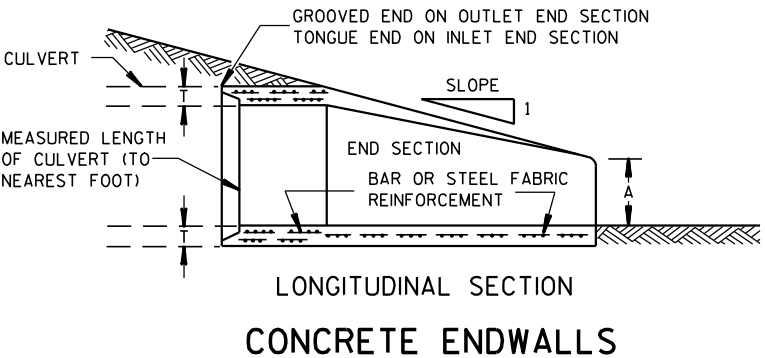
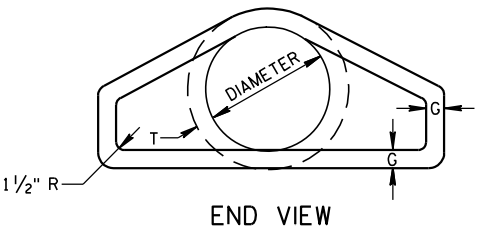
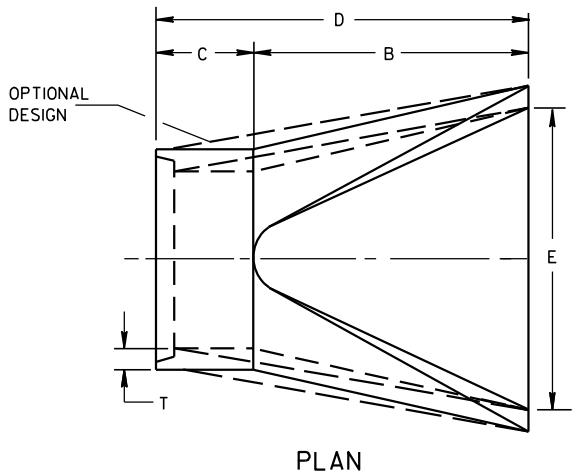
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



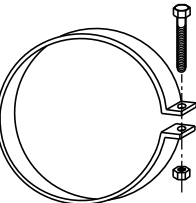
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1				
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1				
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1				
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1				
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1				
48	5	24	72	26	98	84	5	3 to 1				
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 2/5 to 1				
60	6	30-35	60	39	99	96	5	2 to 1				
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1				
72	7	24-36	78	21	99	108	6	2 to 1				
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1				
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1				
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1				

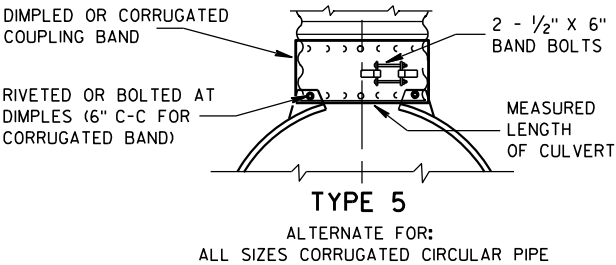
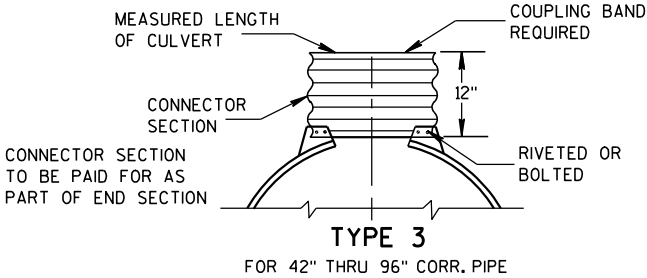
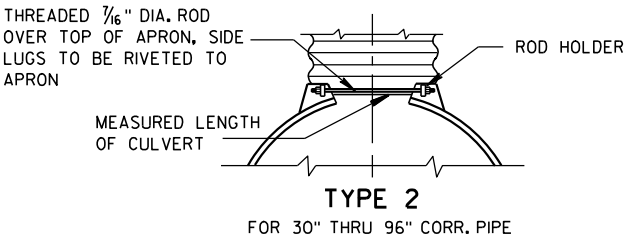
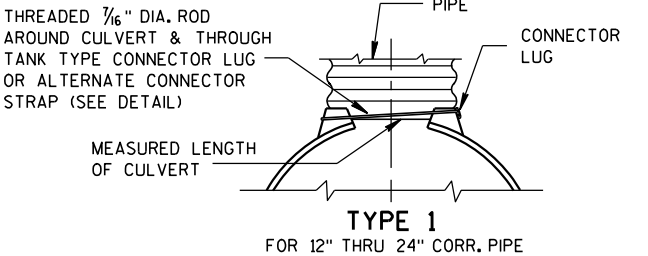
* MINIMUM
** MAXIMUM



1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



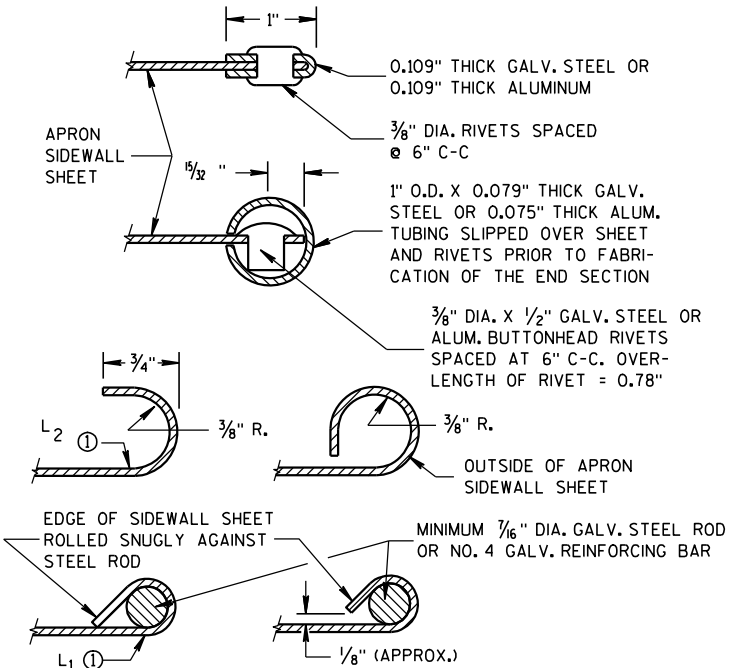
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

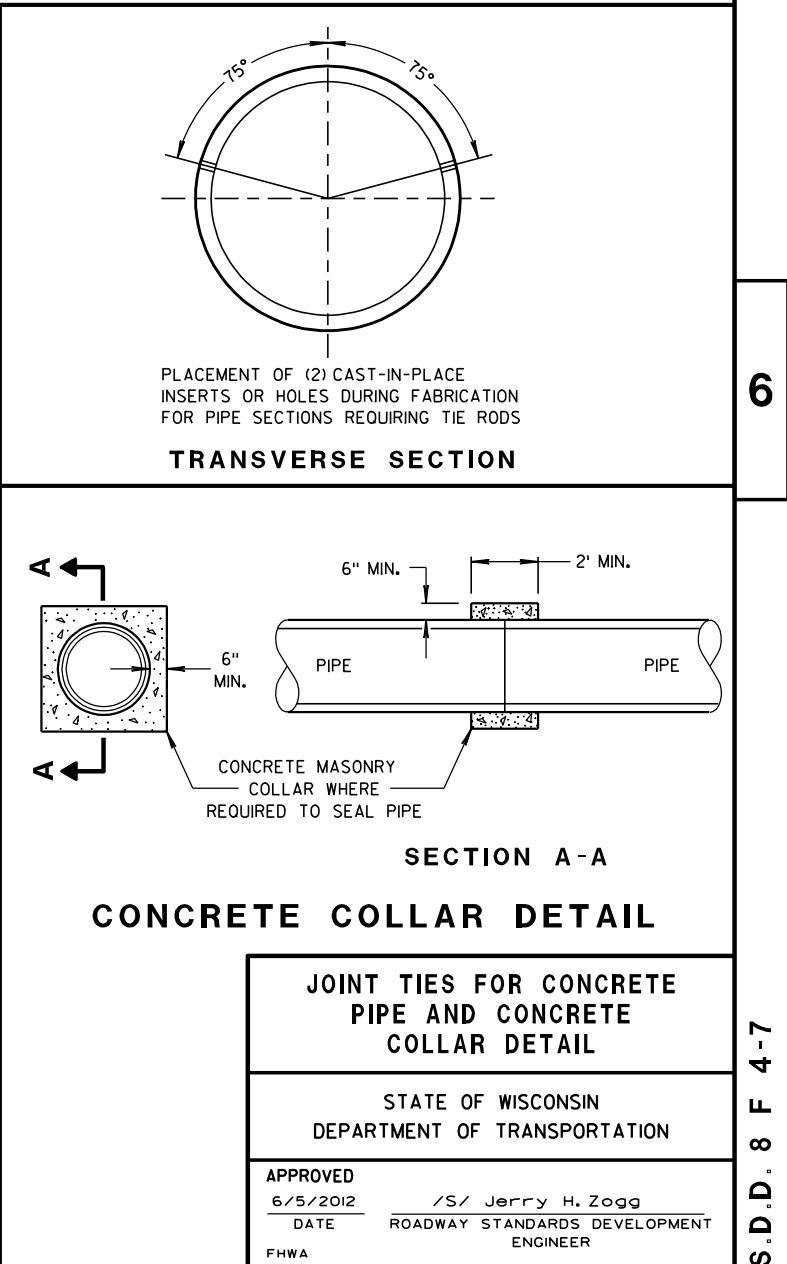
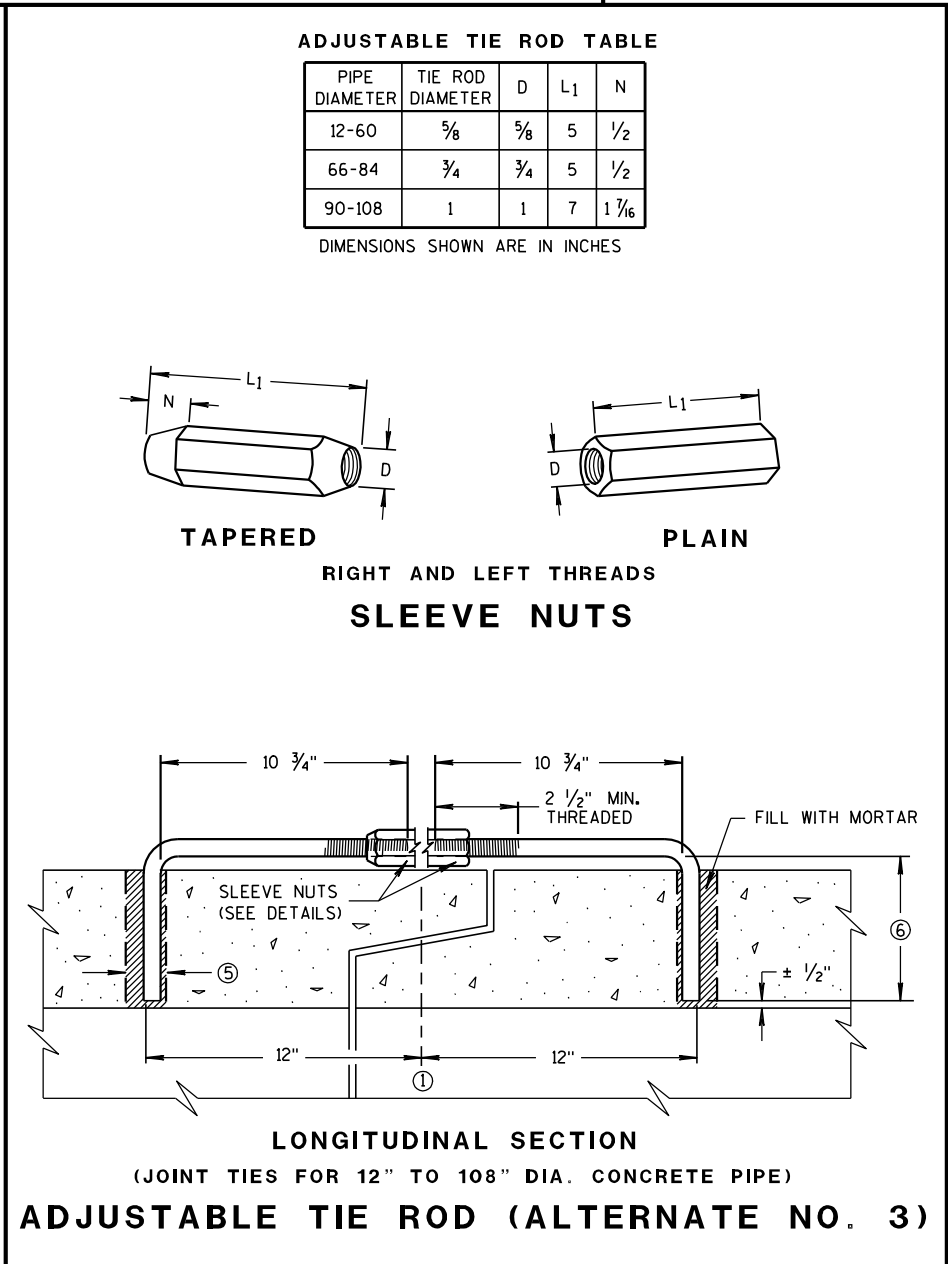
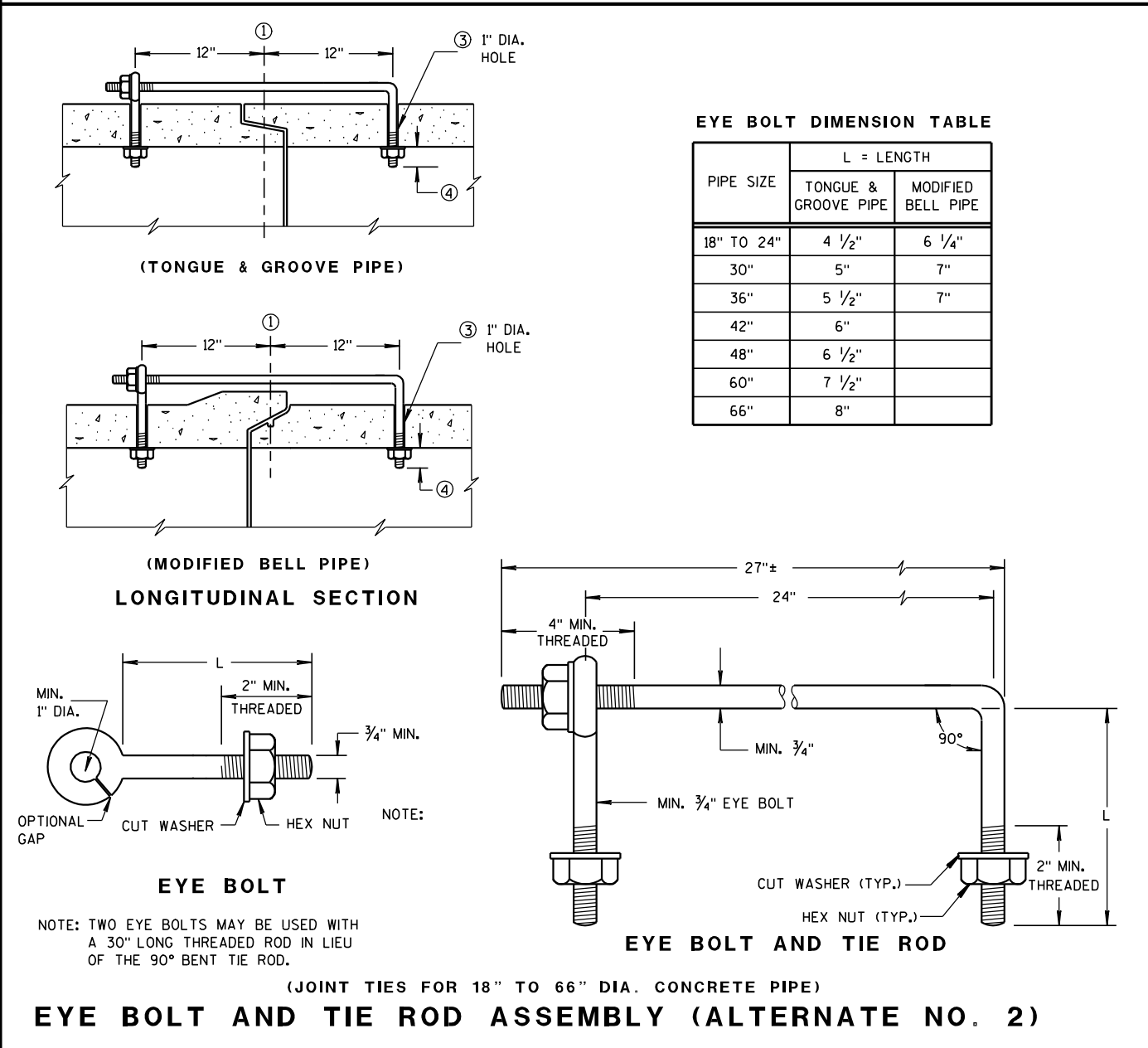
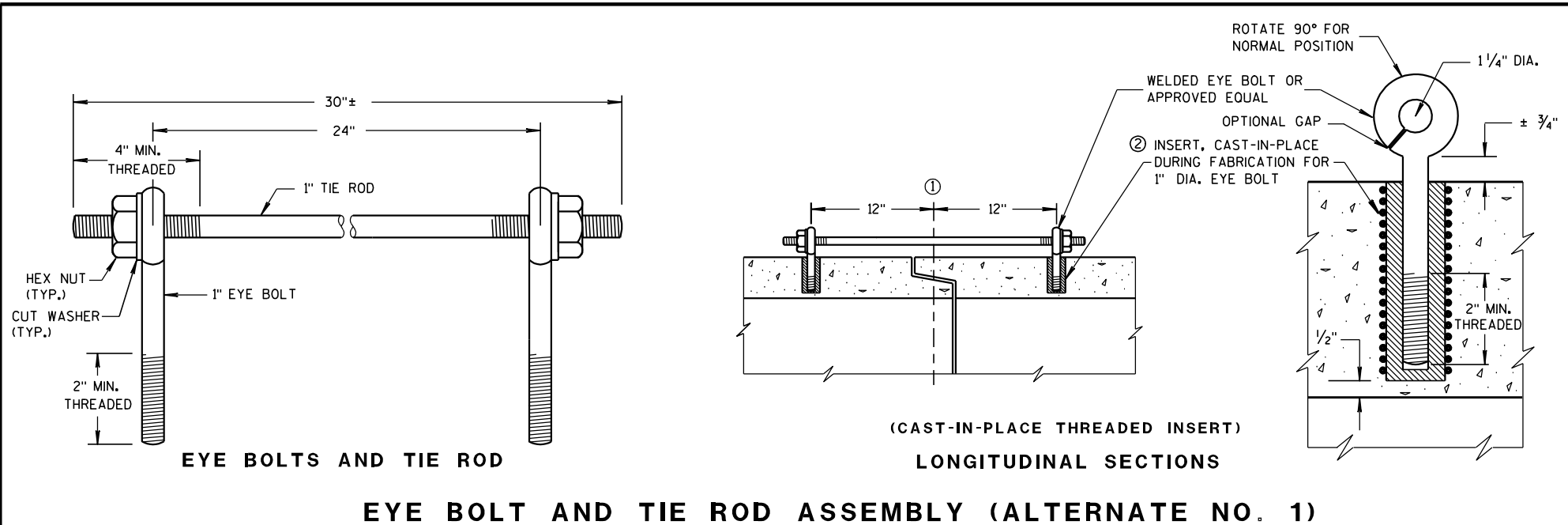
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

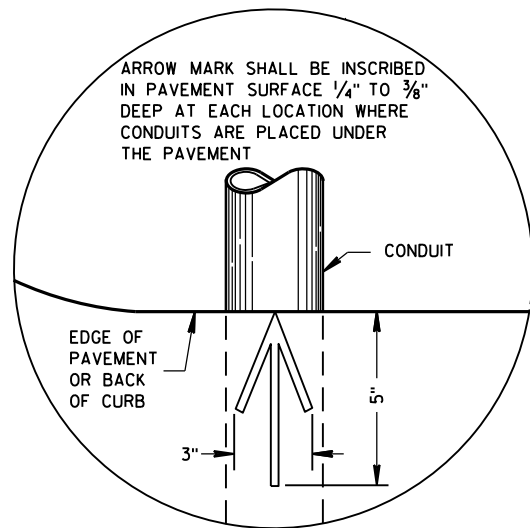
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

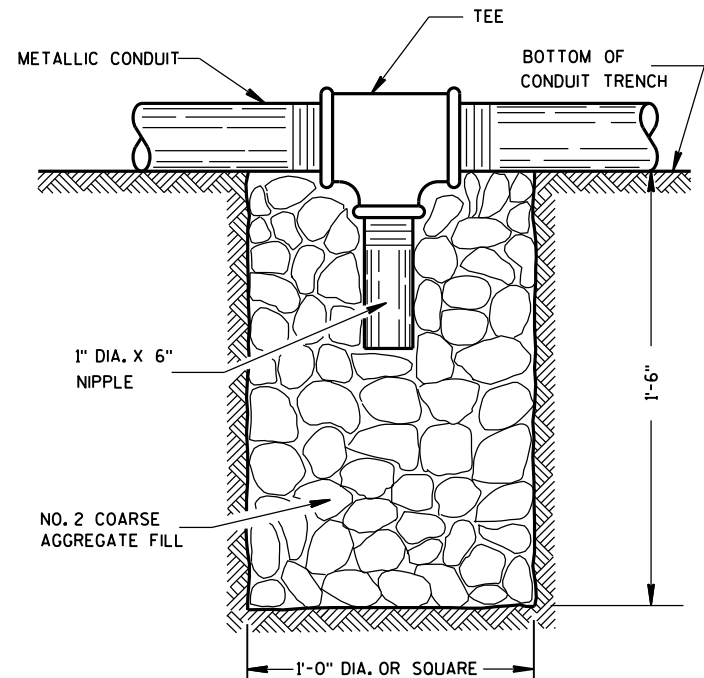
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



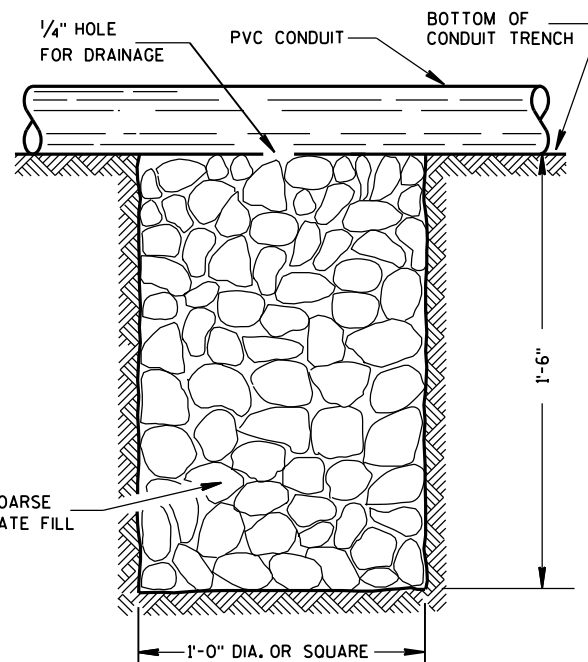


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

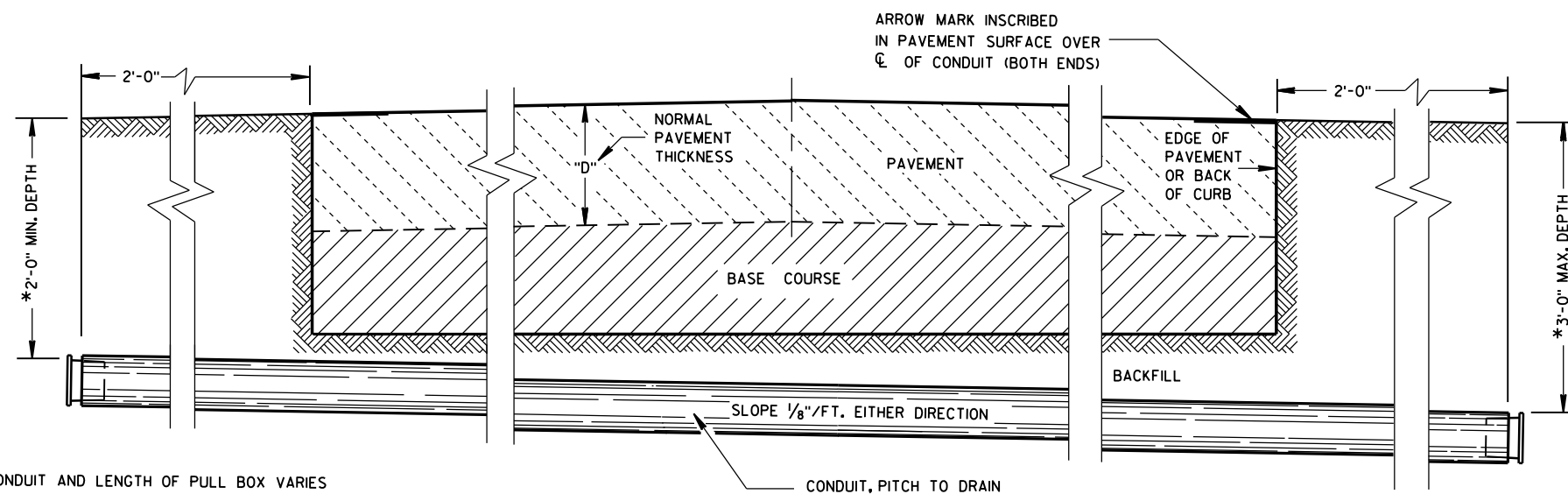
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

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

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

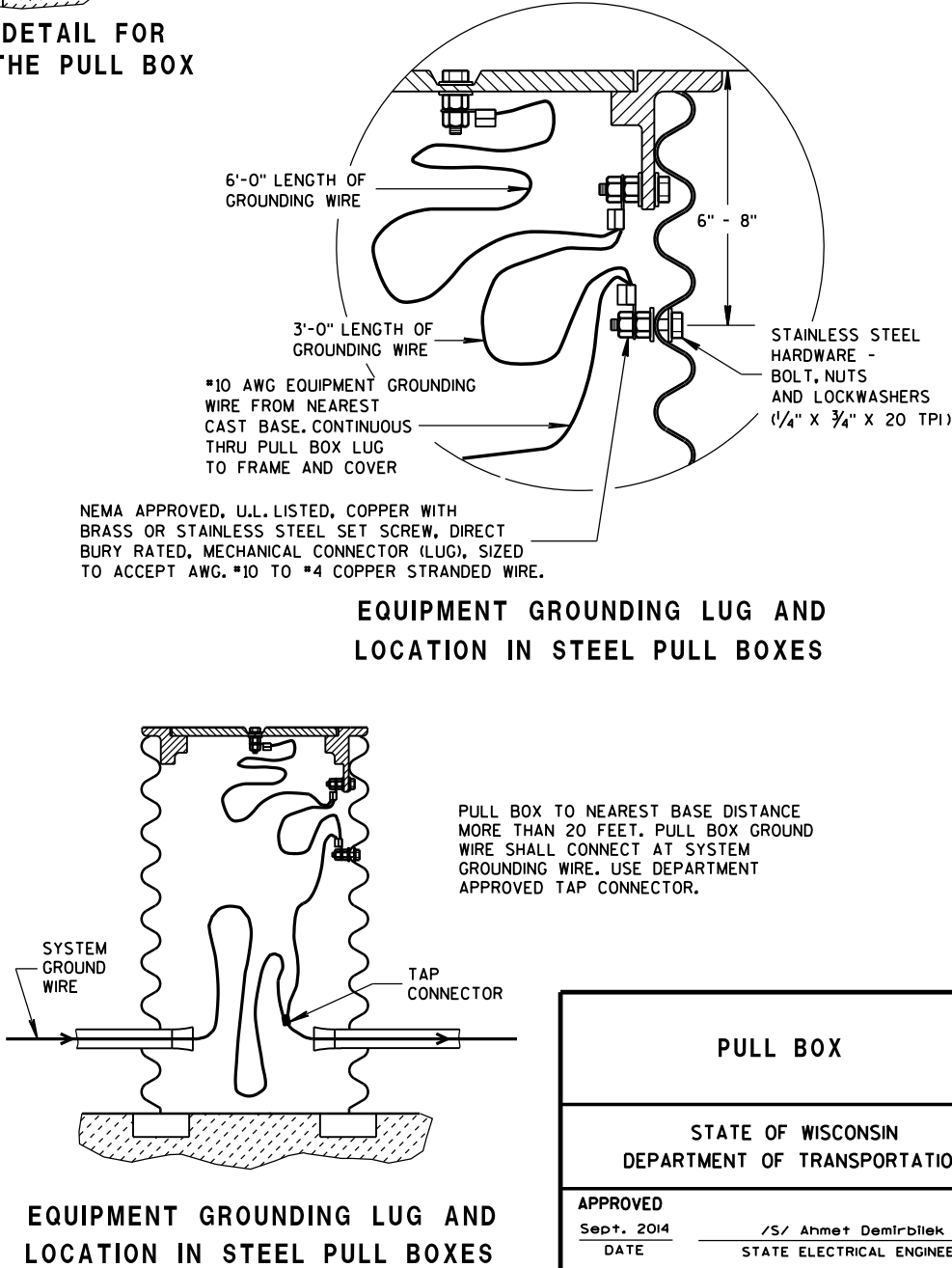
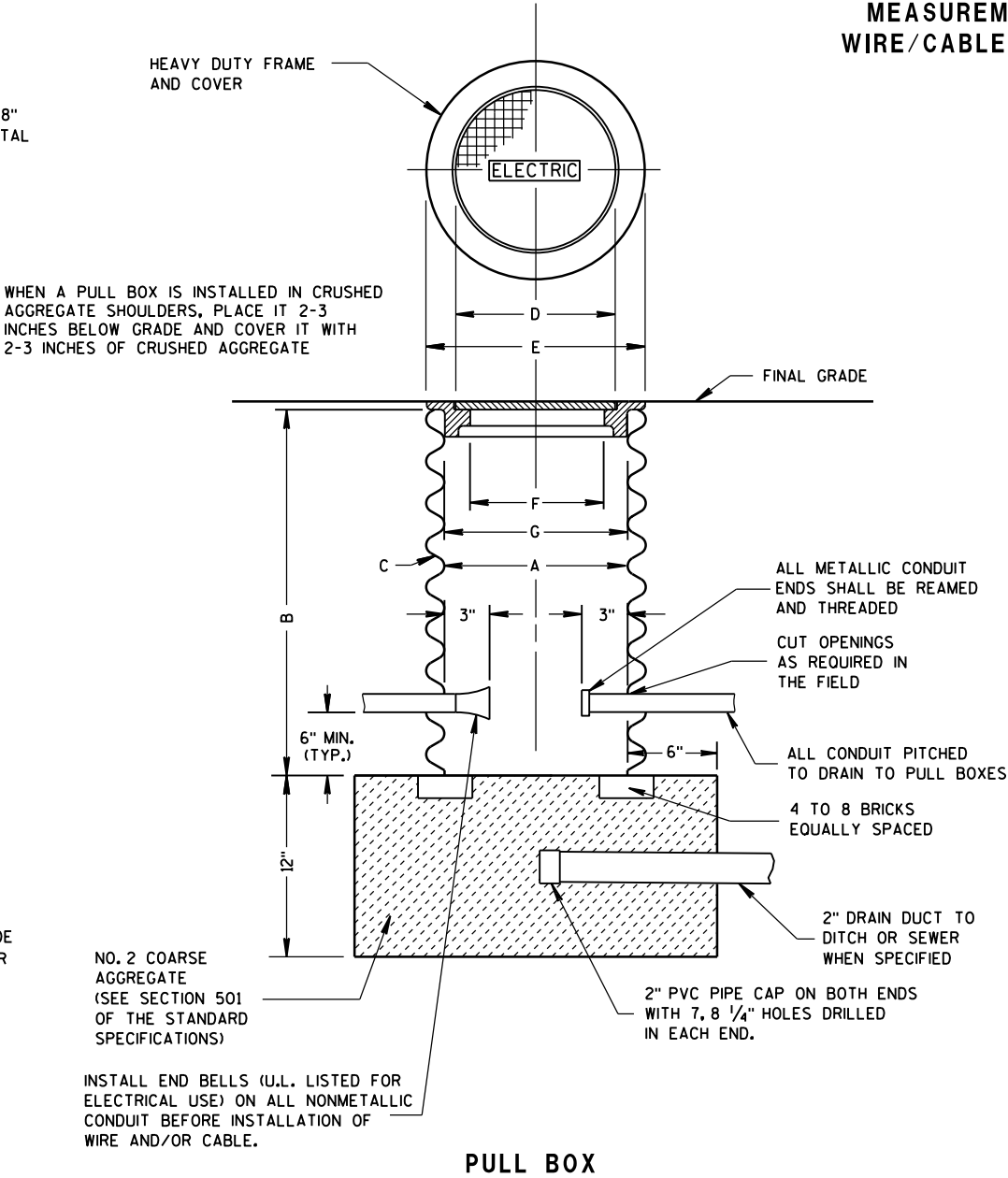
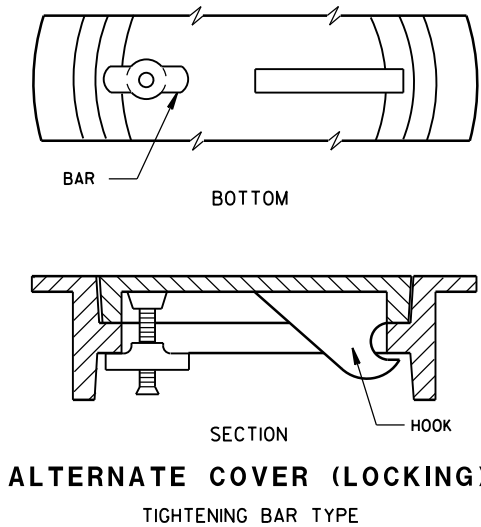
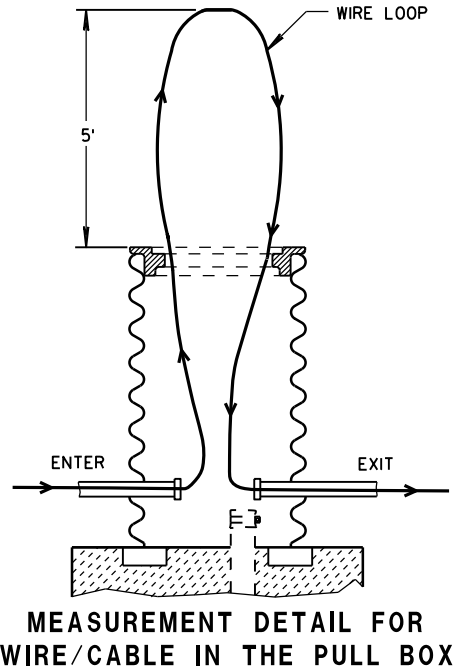
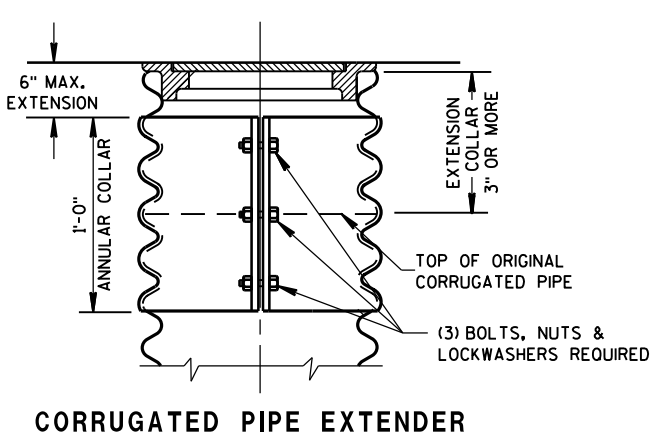
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

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

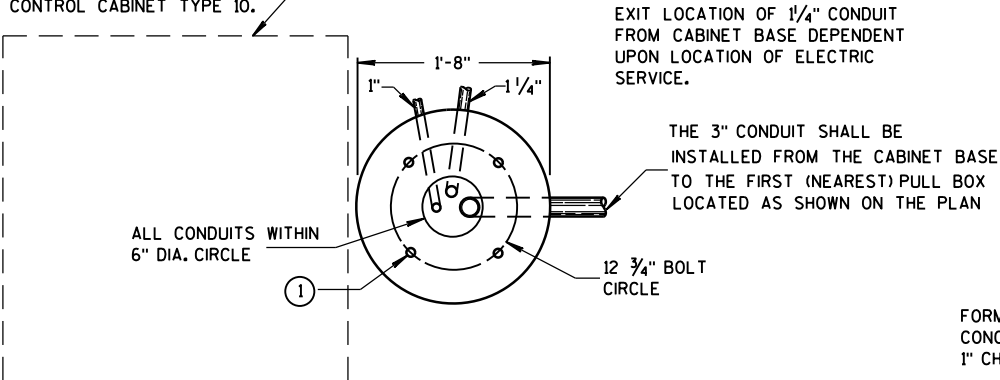


PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

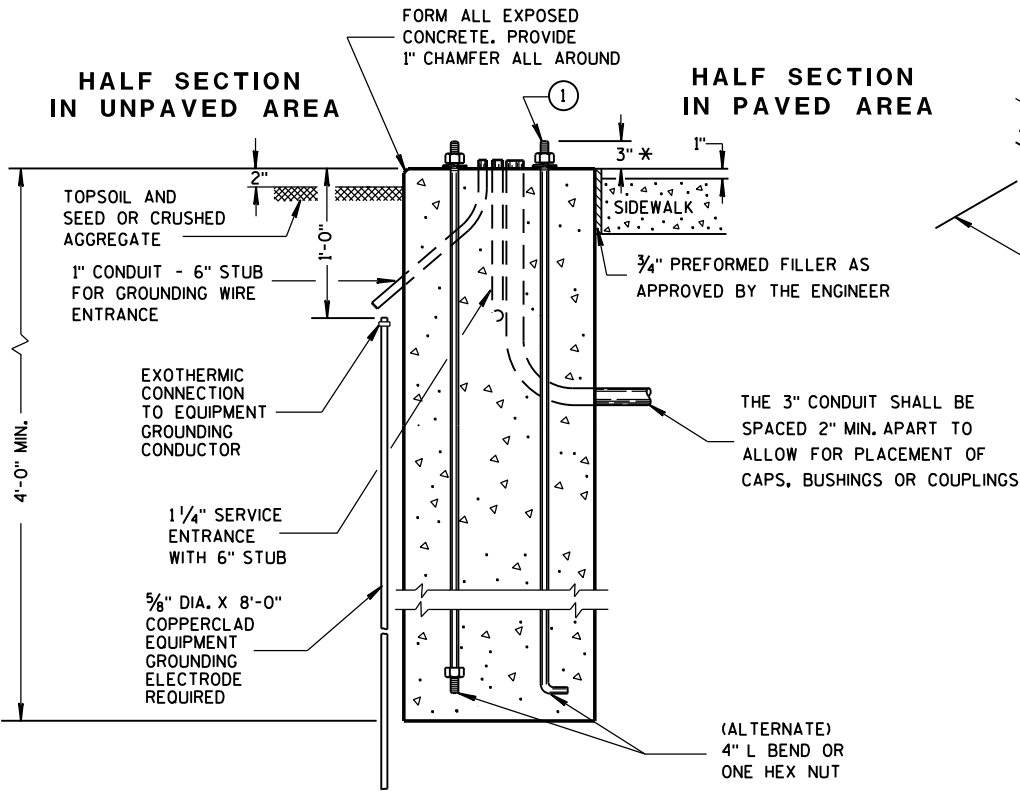
CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

* INCLUDES MAINTENANCE PLATFORM.

TYPICAL 3'-0" X 3'-0" X 4" THICK
MAINTENANCE PLATFORM.
LOCATION TO BE DETERMINED
IN THE FIELD. COST TO BE
INCLUDED UNDER CONCRETE
CONTROL CABINET TYPE 10.



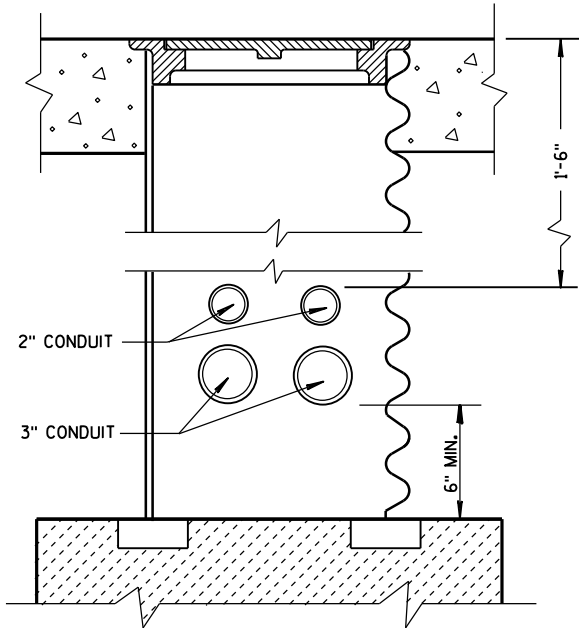
HALF SECTION IN UNPAVED AREA



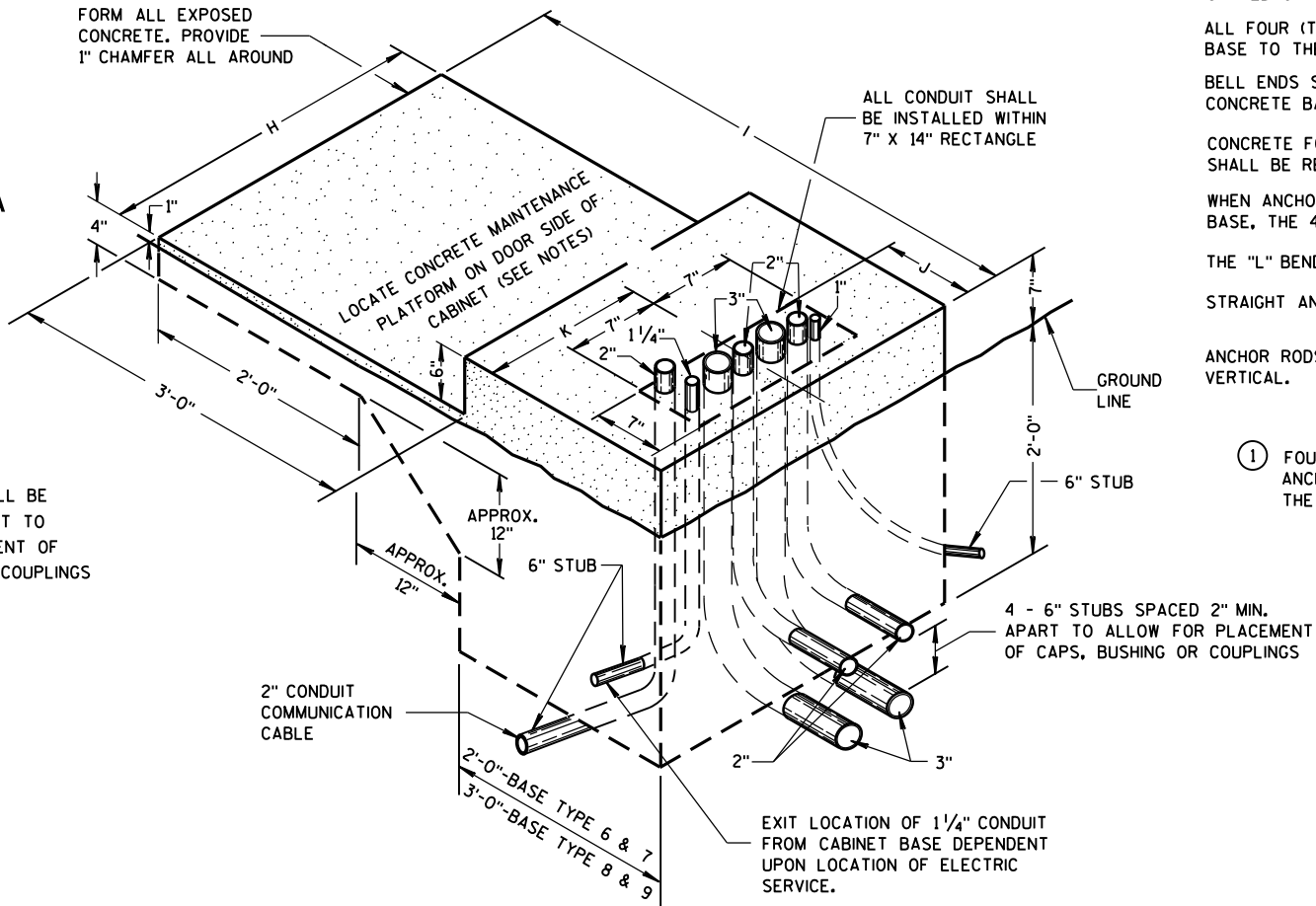
TYPE 10

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

CONCRETE CONTROL CABINET BASES



CONDUIT LOCATIONS IN 24" X 36" PULL BOX (LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

GENERAL NOTES

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

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

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

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST) PULL BOX LOCATED AS SHOWN ON THE PLANS.

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

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

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

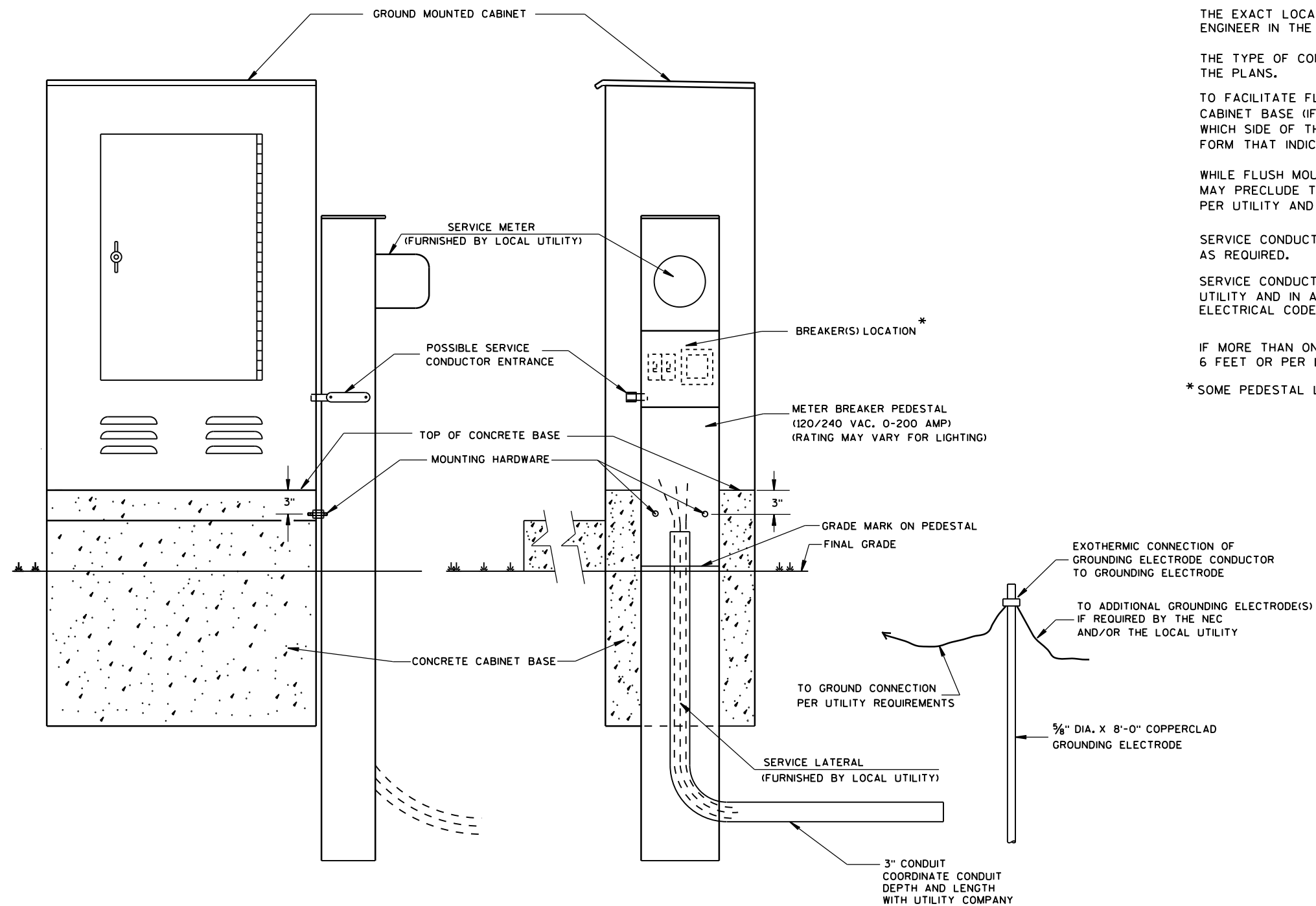
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

① FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2016 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

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

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

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

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA

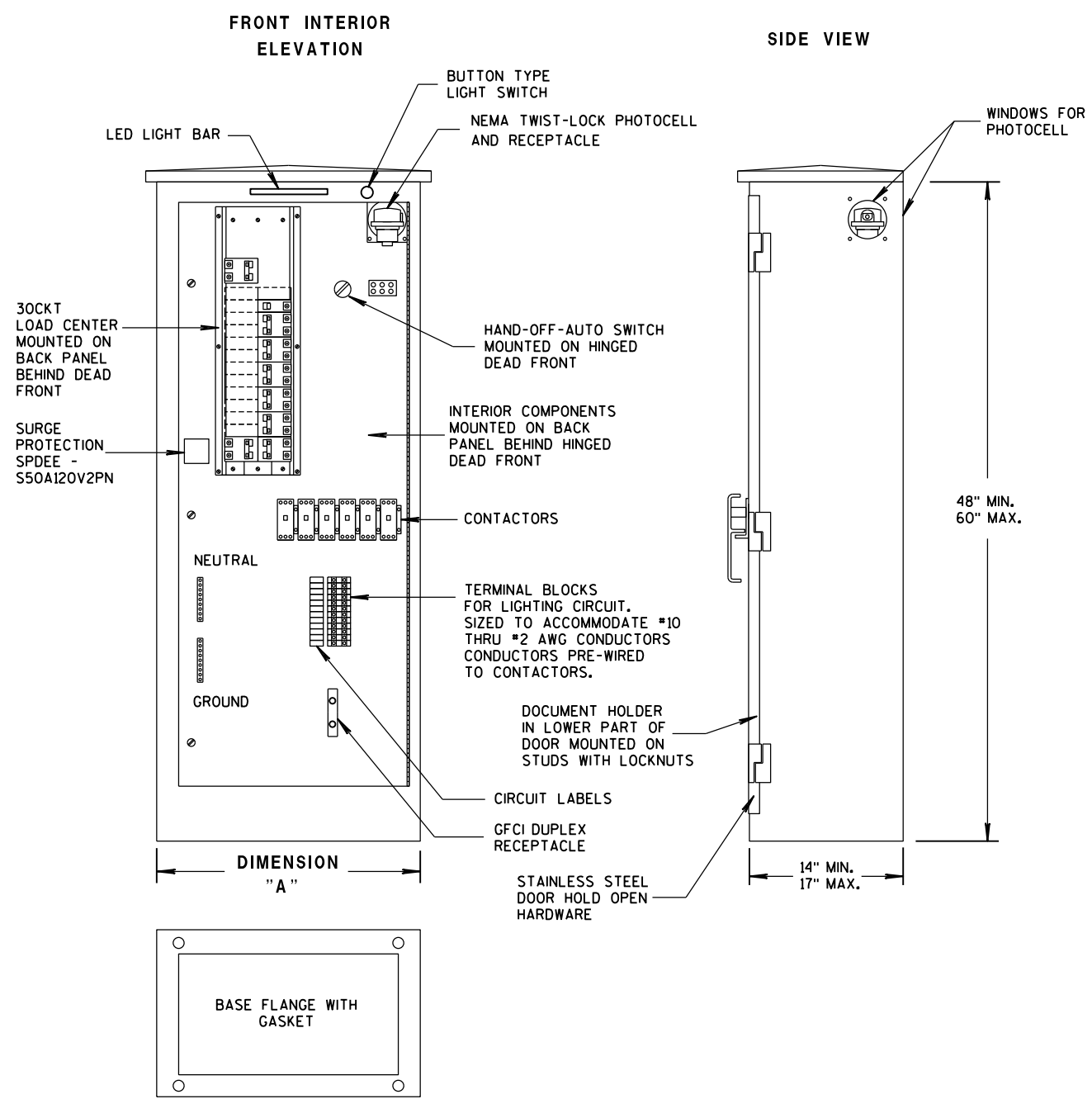
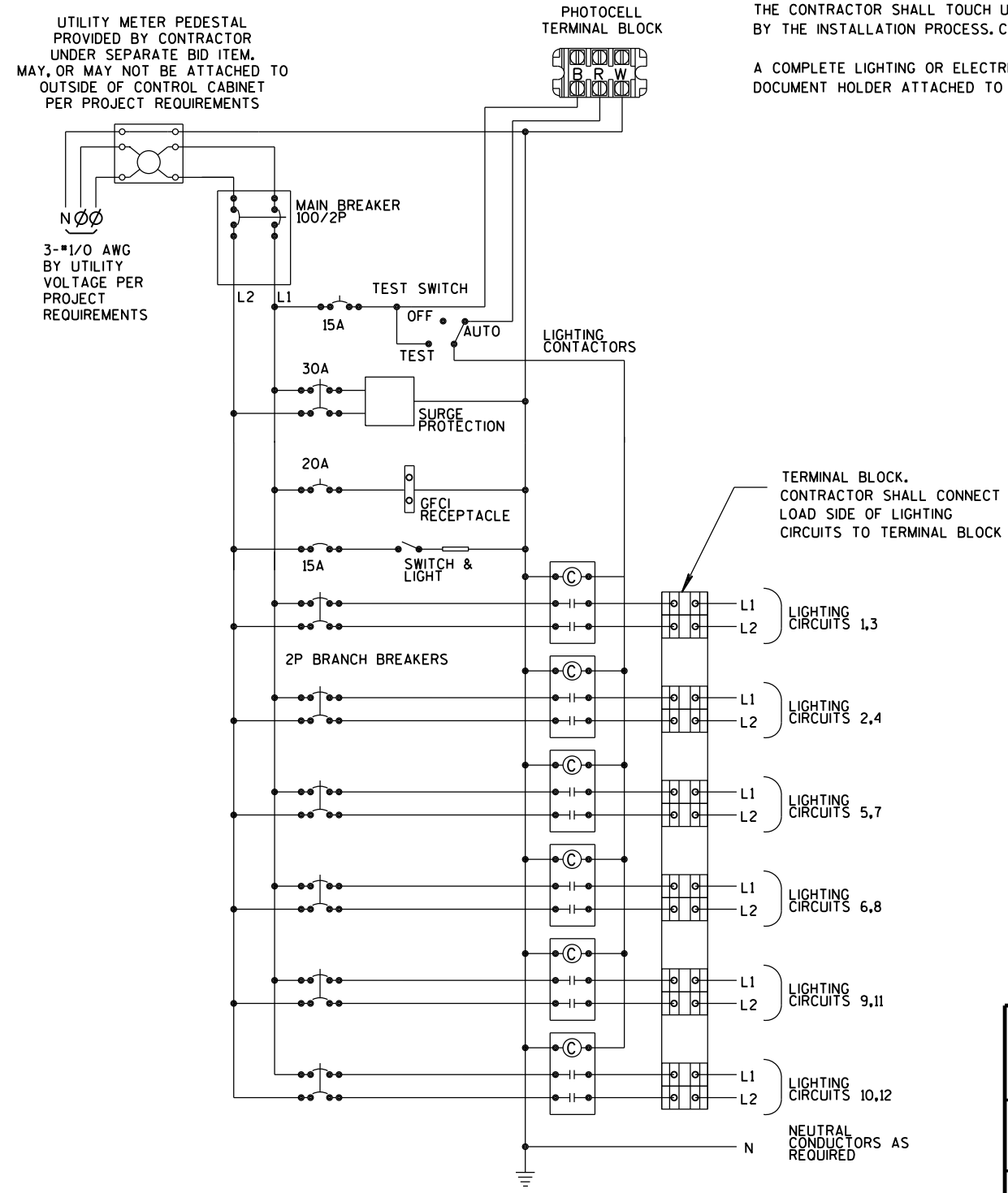


TABLE OF DIMENSIONS (INCHES)		
CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

LIGHTING CONTROL CABINET

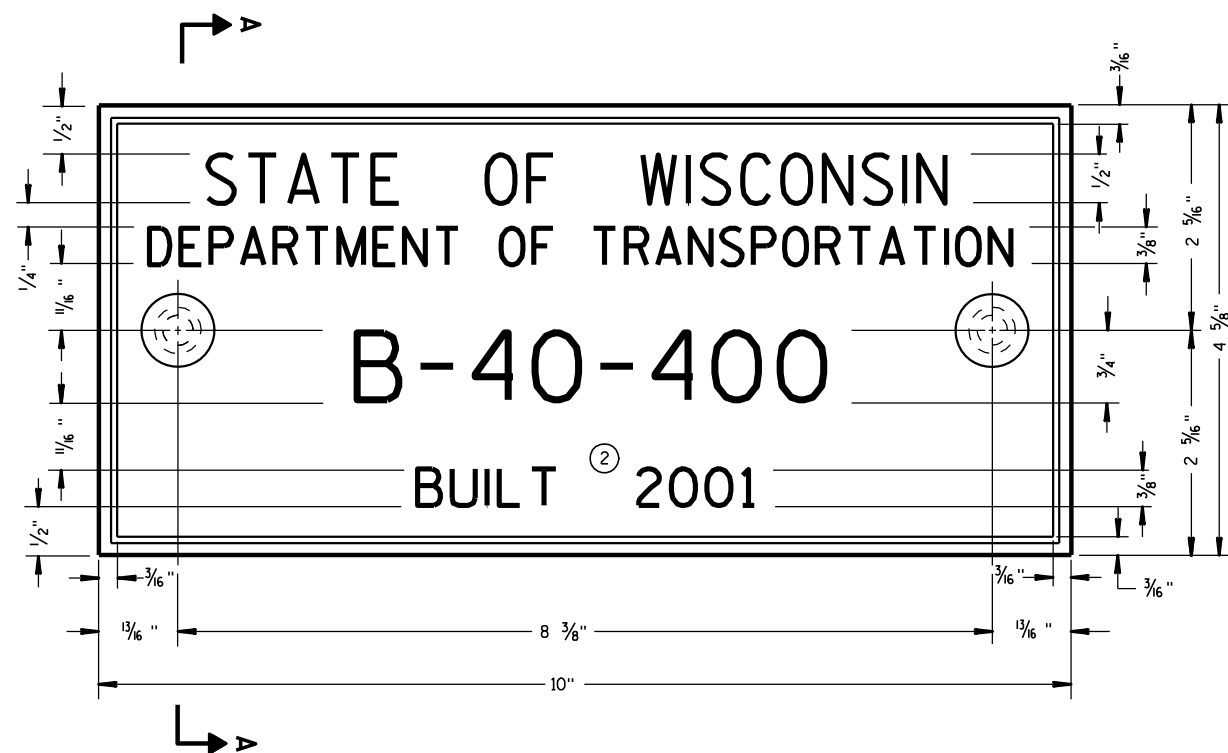


CONTROL CABINET SCHEMATIC

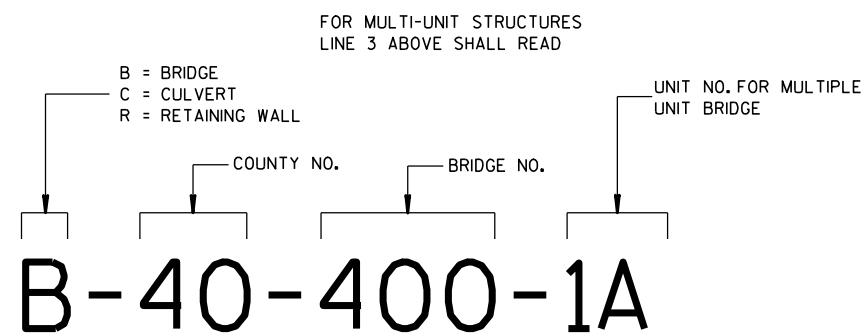
GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
- ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.
- ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.
- ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.
- THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.
- A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

LIGHTING CONTROL CABINET 120/240 VOLT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FWHA	/S/ Thomas Gorring STATE LIGHTING ENGINEER FOR HWYS.



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



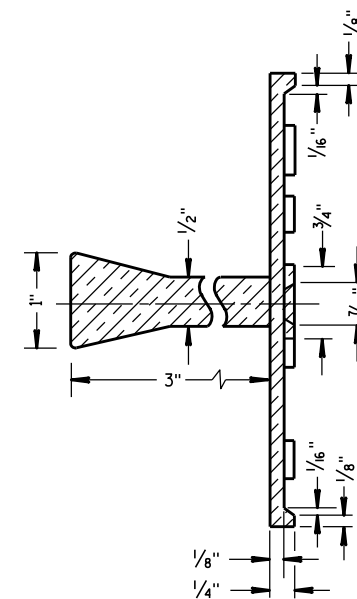
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

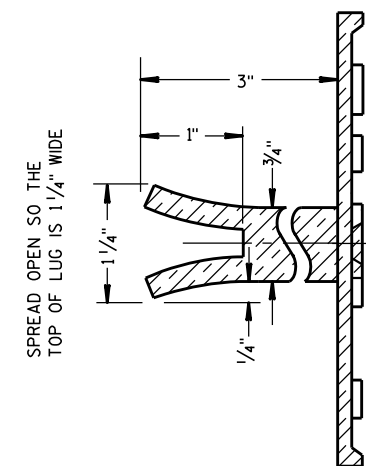
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

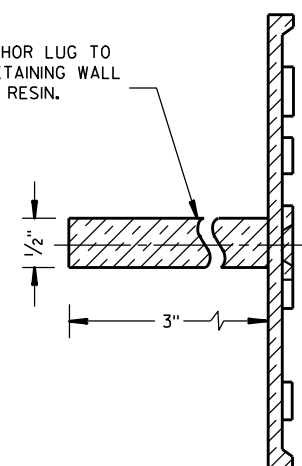


SECTION A-A



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

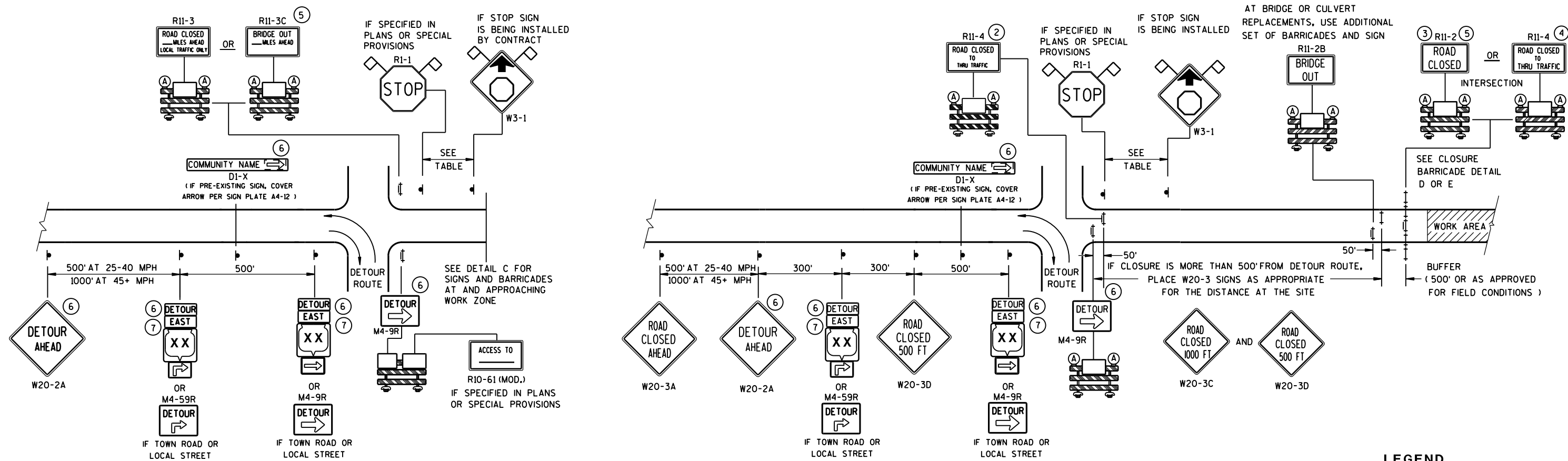
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10
DATE

FHWA

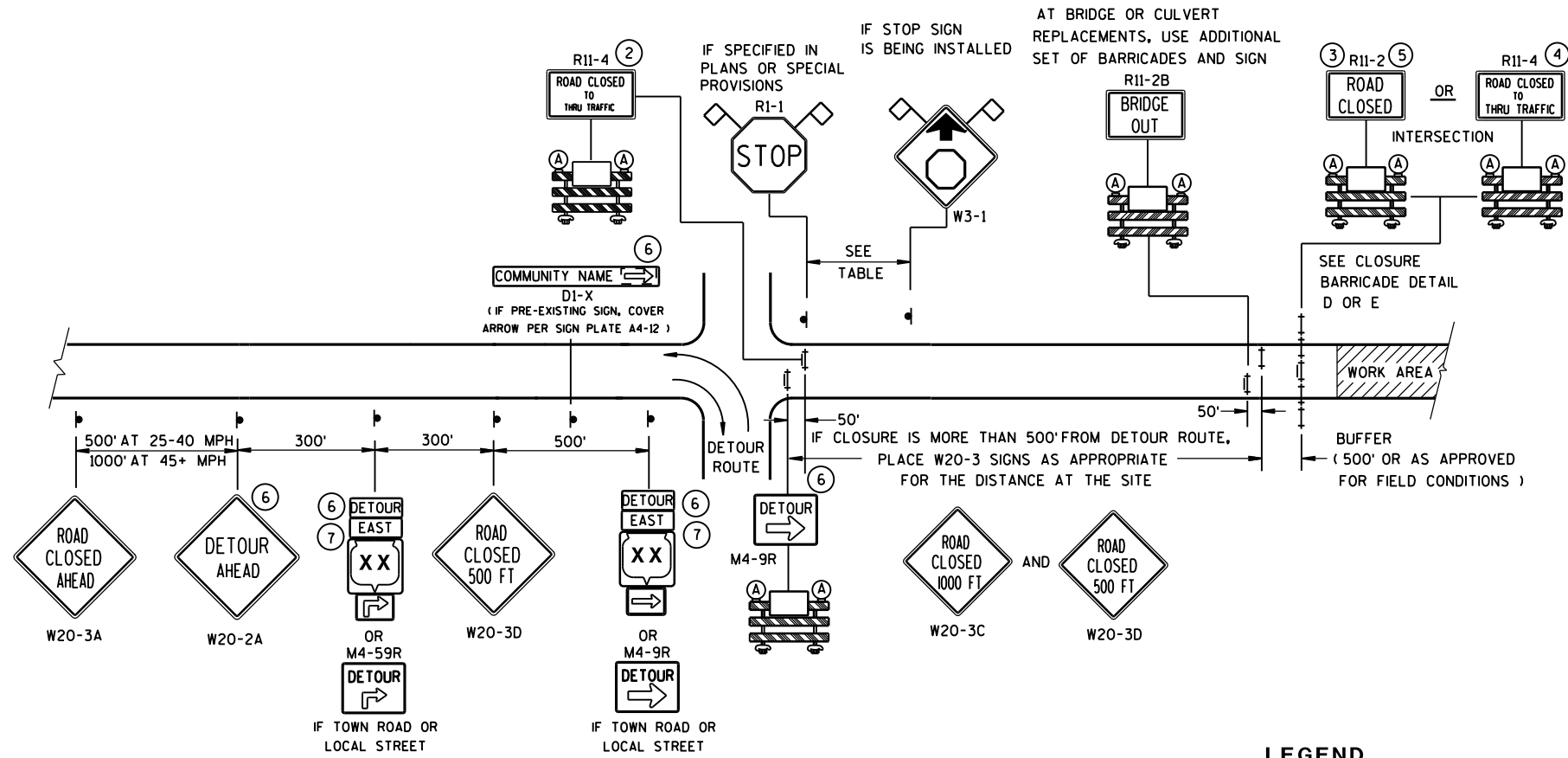
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

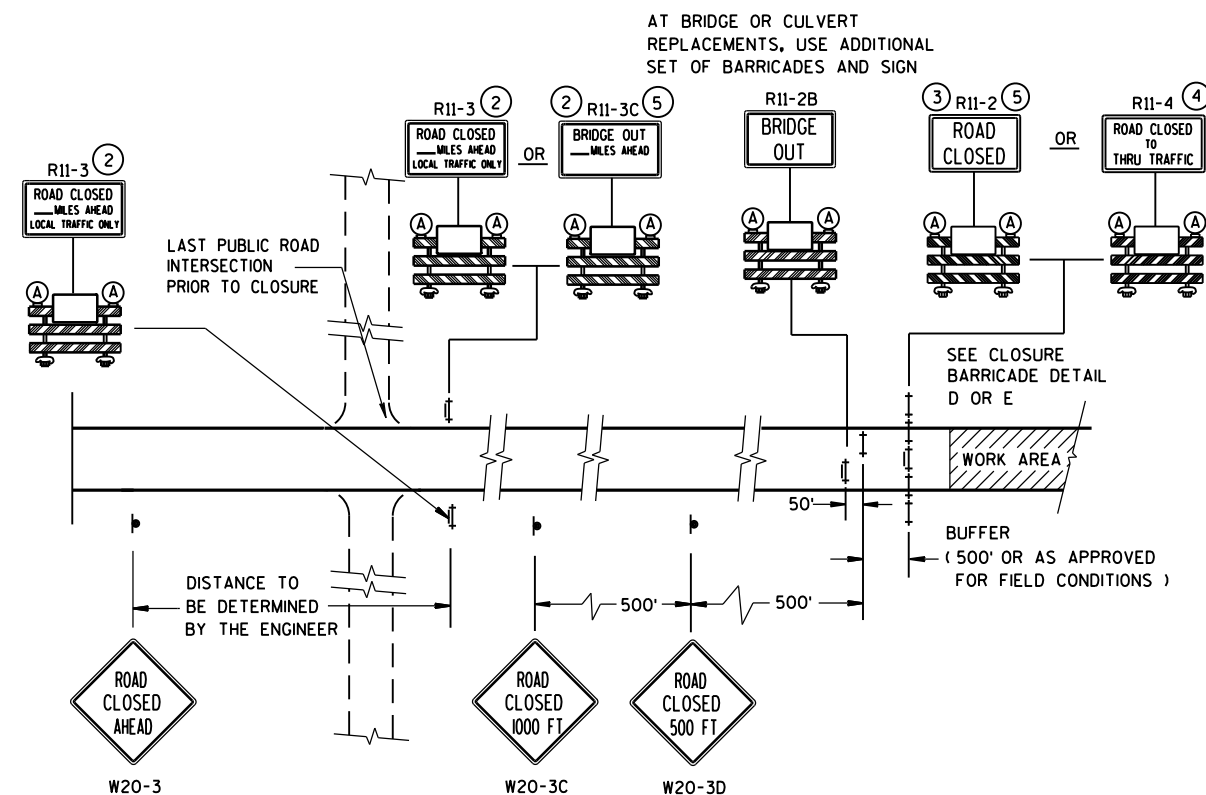
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

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

 WORK AREA

 M4-8
 M3-X
 MI-4
OR
 MI-5A
OR
 MI-6

 OR 
M05-1 M06-1

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

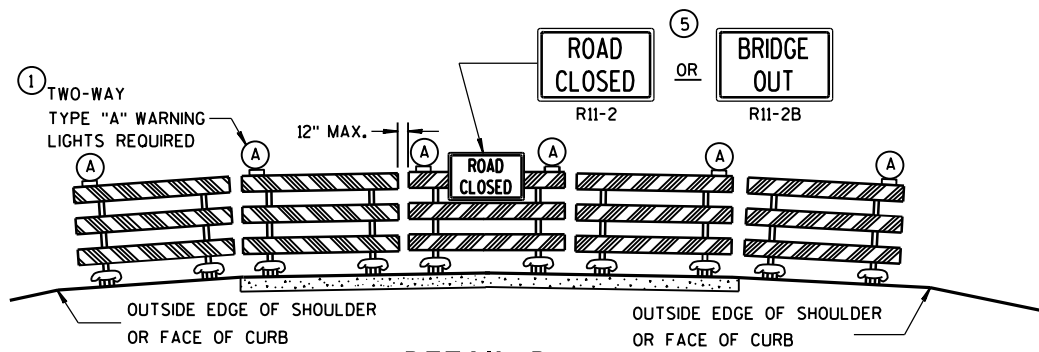
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

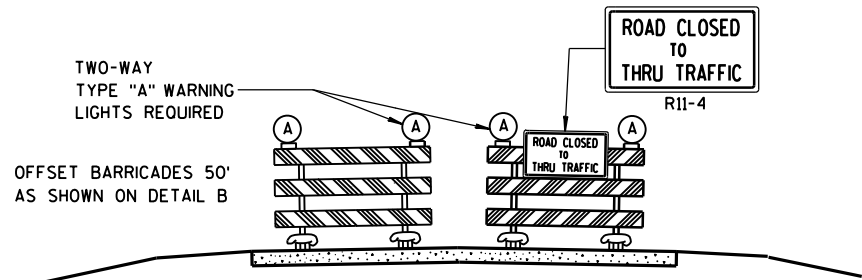
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE TRAFFIC
FHWA	SAFETY ENGINEER



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:

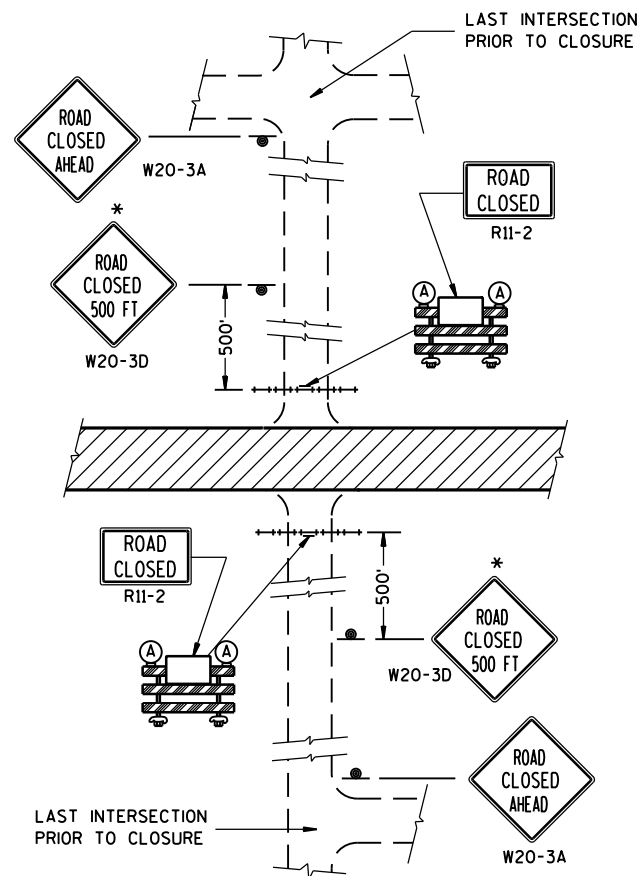
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" 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.

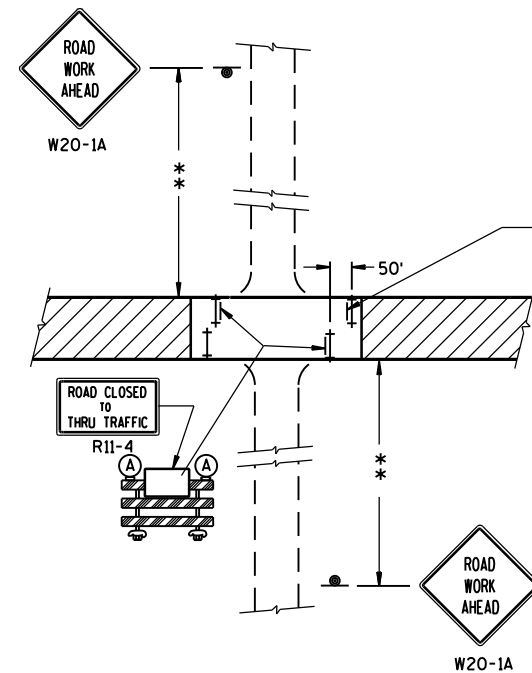
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

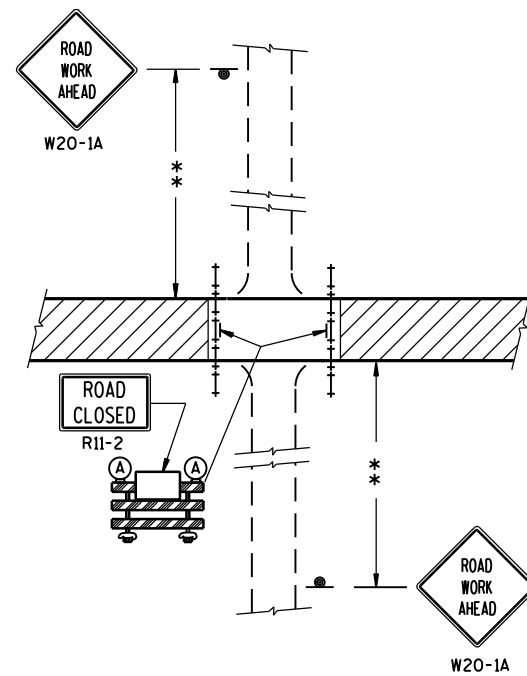
Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



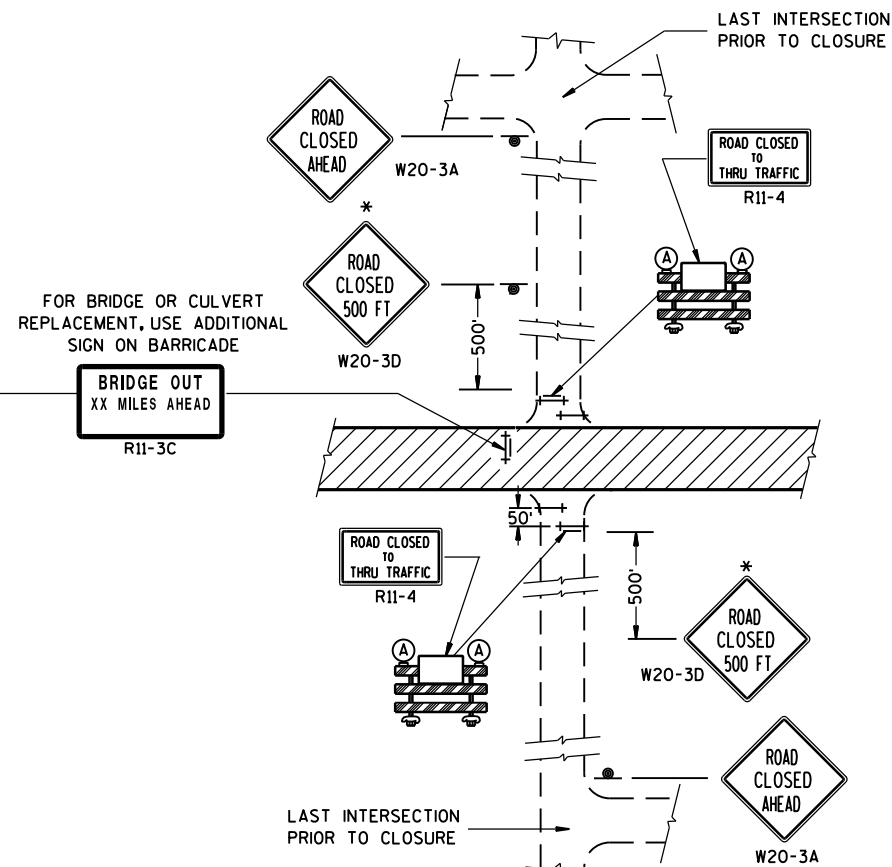
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

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

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ TYPE III BARRICADE
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015

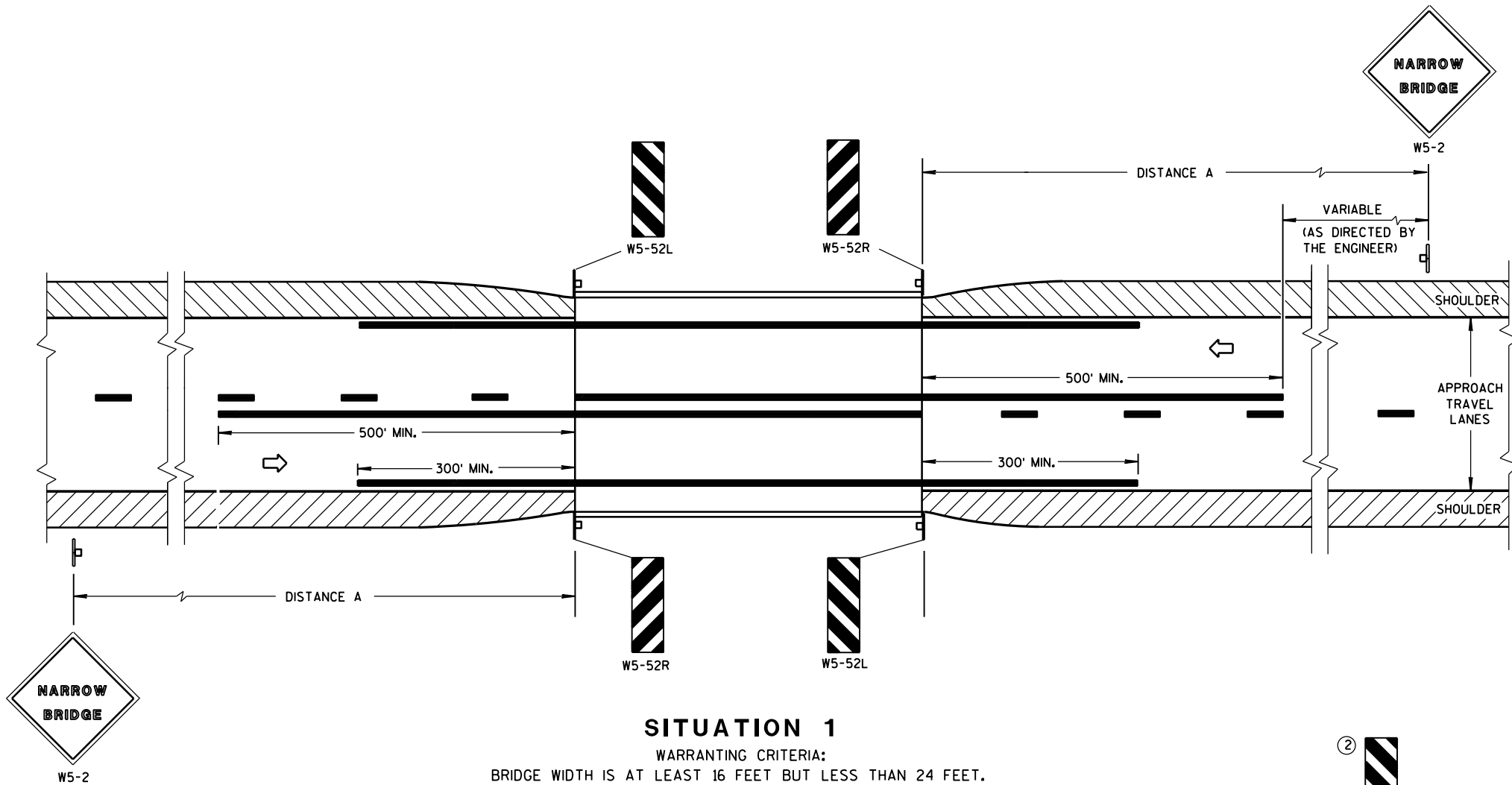
DATE

FHWA

/S/ Peter Amakobe Atepe

STATEWIDE WORK ZONE TRAFFIC

SAFETY ENGINEER



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

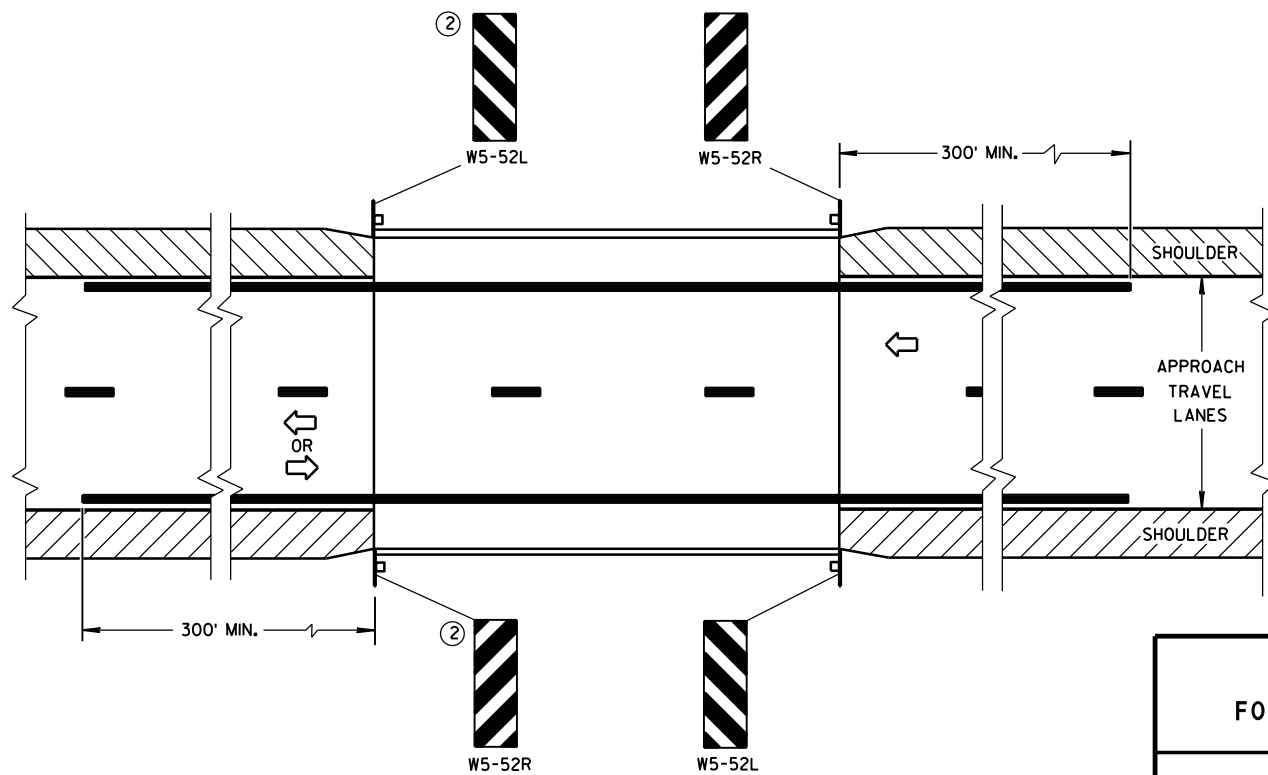
DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

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.

- ① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.
- ② OMIT ON ONE-WAY TRAVELLED WAYS.
- ③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.



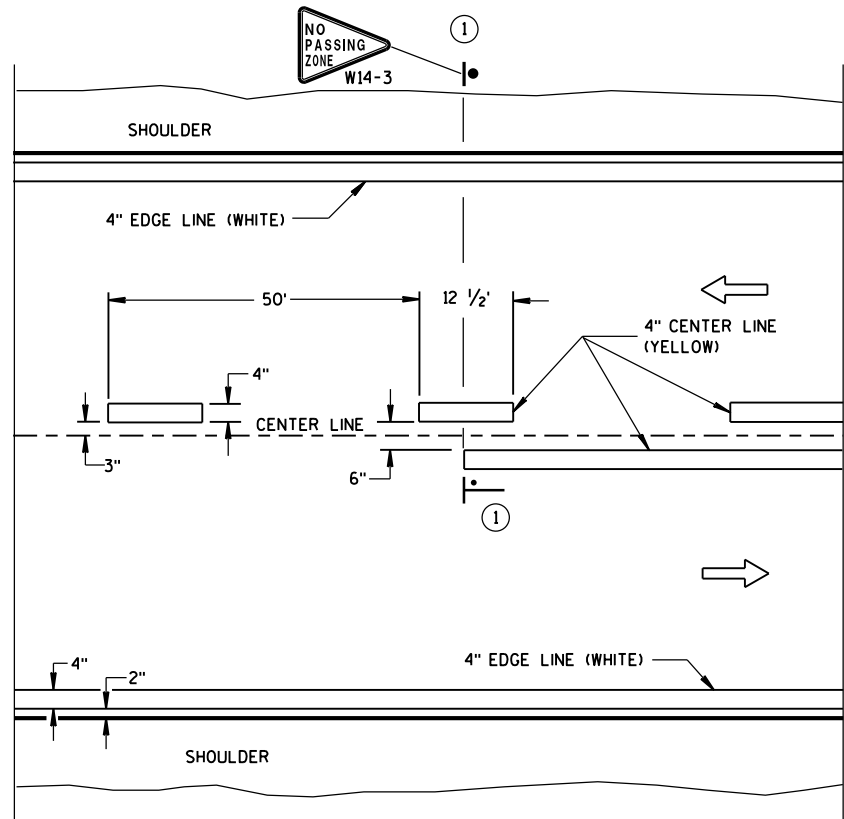
SITUATION 2

WARRANTING CRITERIA:
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

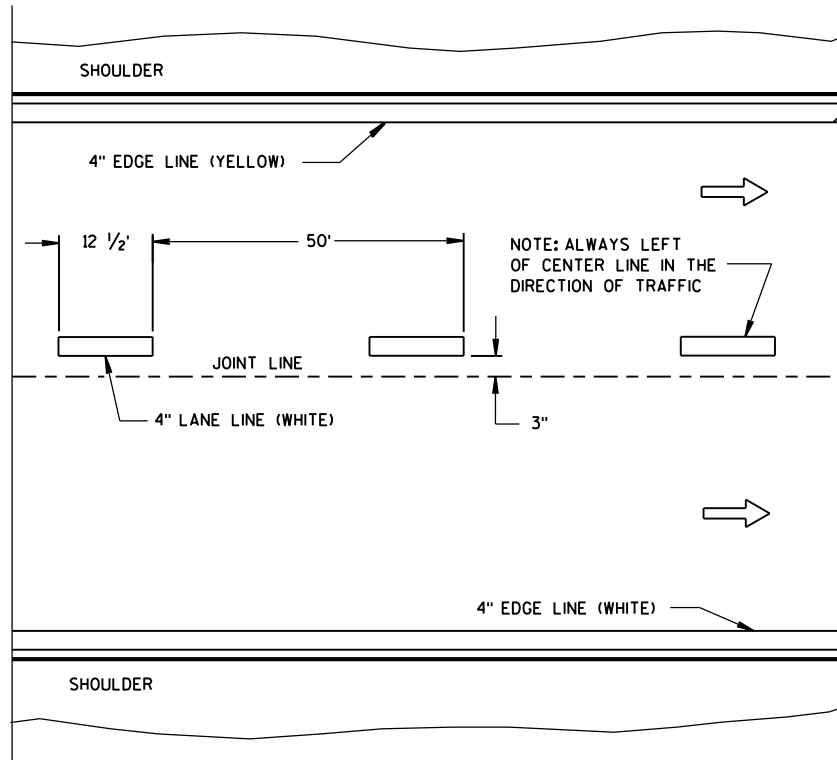
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

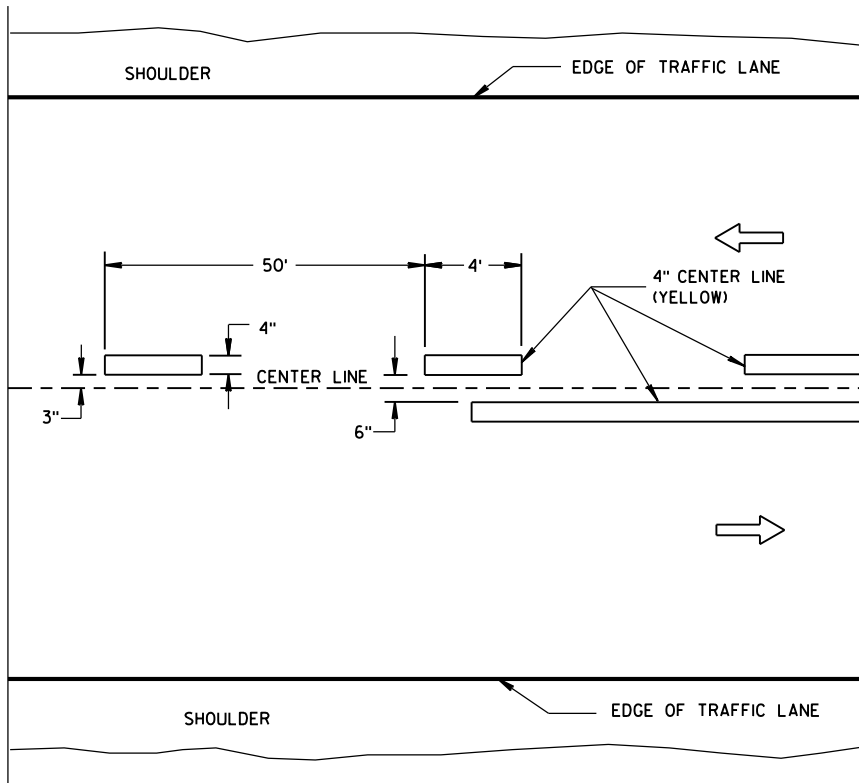


TWO WAY TRAFFIC

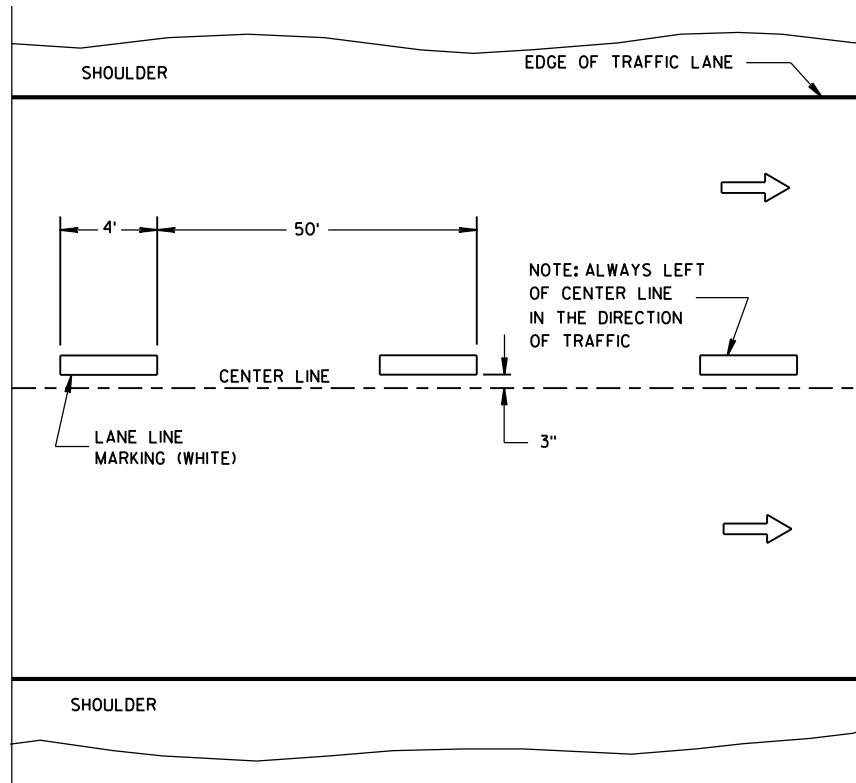


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

- ① NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

GENERAL NOTES

- ① DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- ② MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
- ③ DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
- ④ IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
- ⑤ BIKE ACCOMODATION FOR CONCRETE PAVEMENT IS 5 FEET WIDE. BIKE ACCOMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4 FEET. USE 5 FEET AT ≥ 45 MPH.
- ⑥ OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FEET WIDE TURN LANE).
- ⑦ REFER TO CONTRACT PLANS FOR LANE WIDTH.

➔ DIRECTION OF TRAVEL

DESIGNATED BICYCLE LANE NO PARKING

4 LANE DIVIDED WITHOUT ISLAND

4 LANE DIVIDED WITH ISLAND

BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS (4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

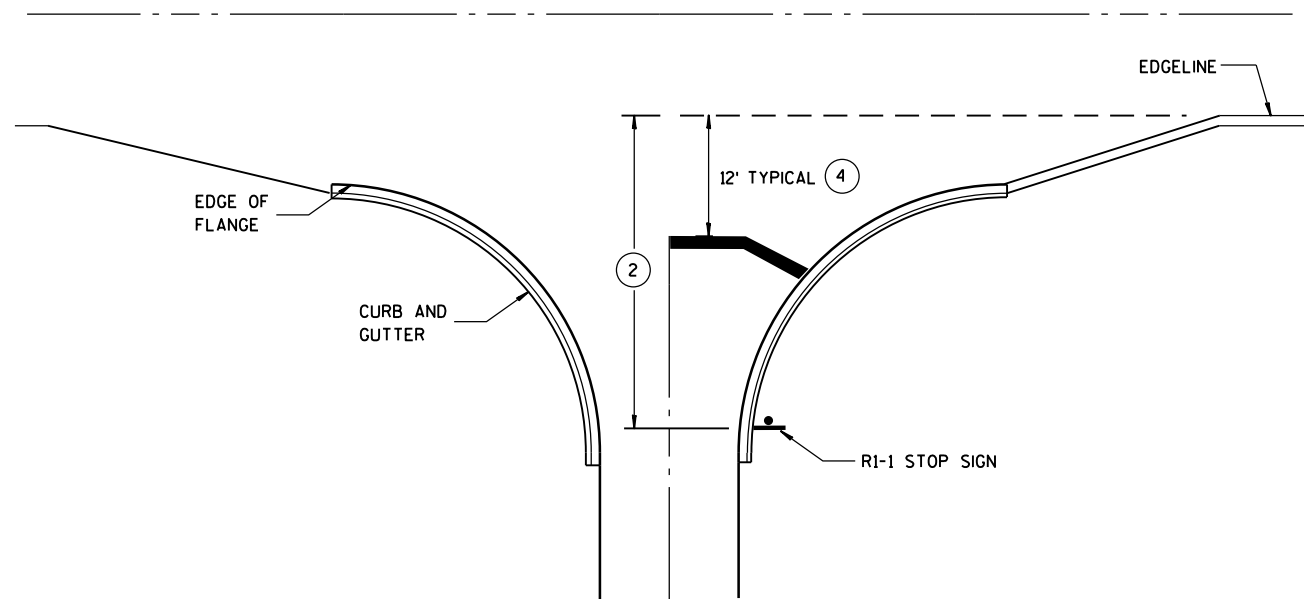
APPROVED

12-2016

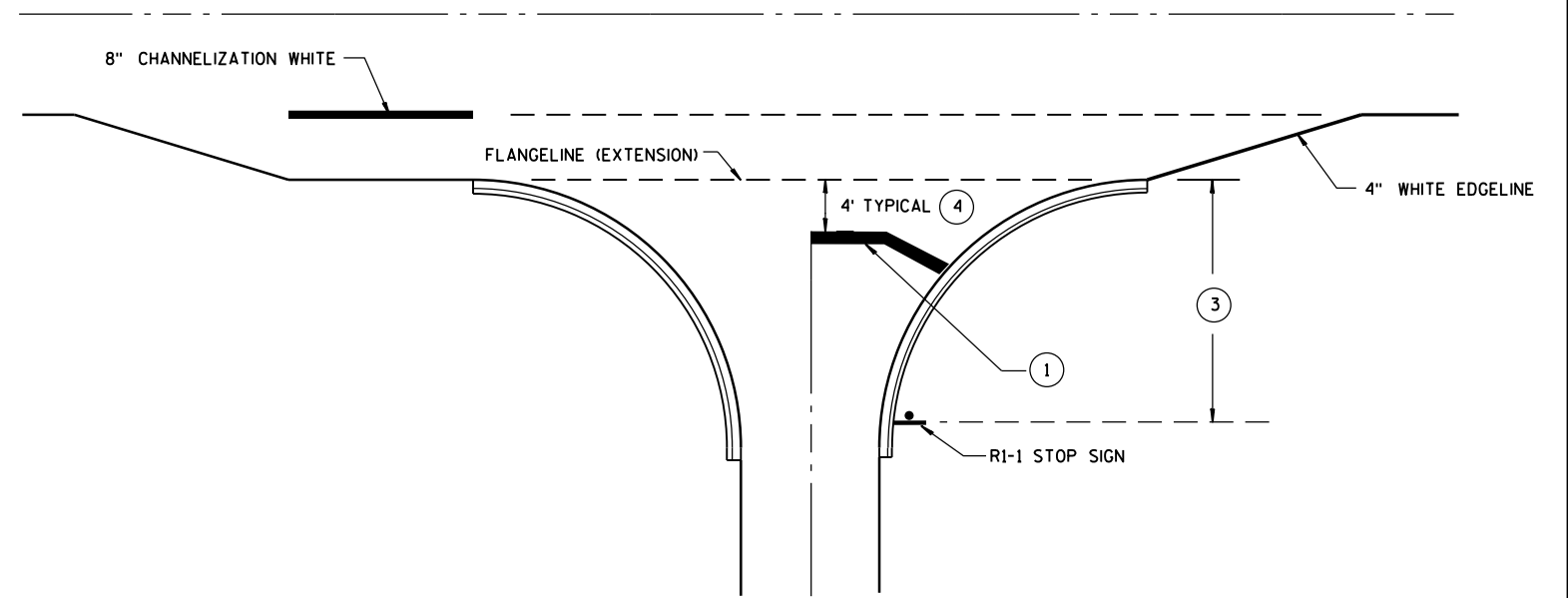
DATE

FHWA

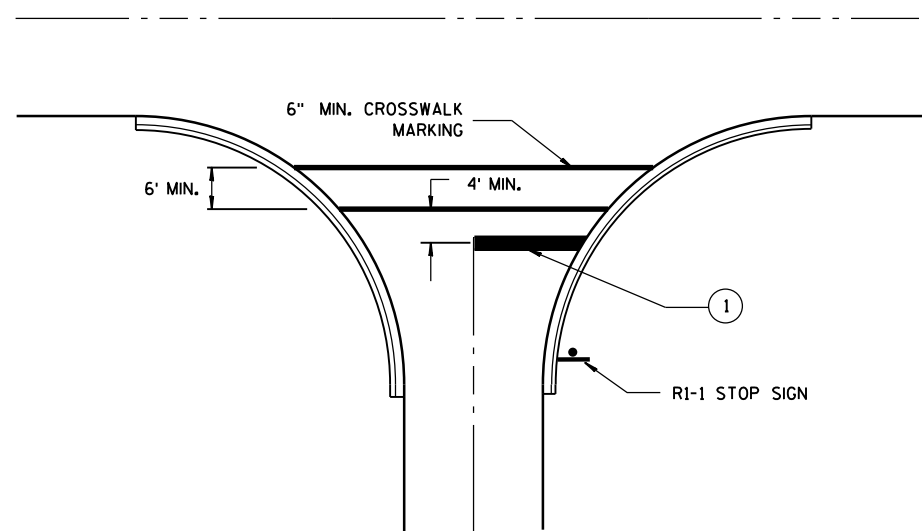
/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER



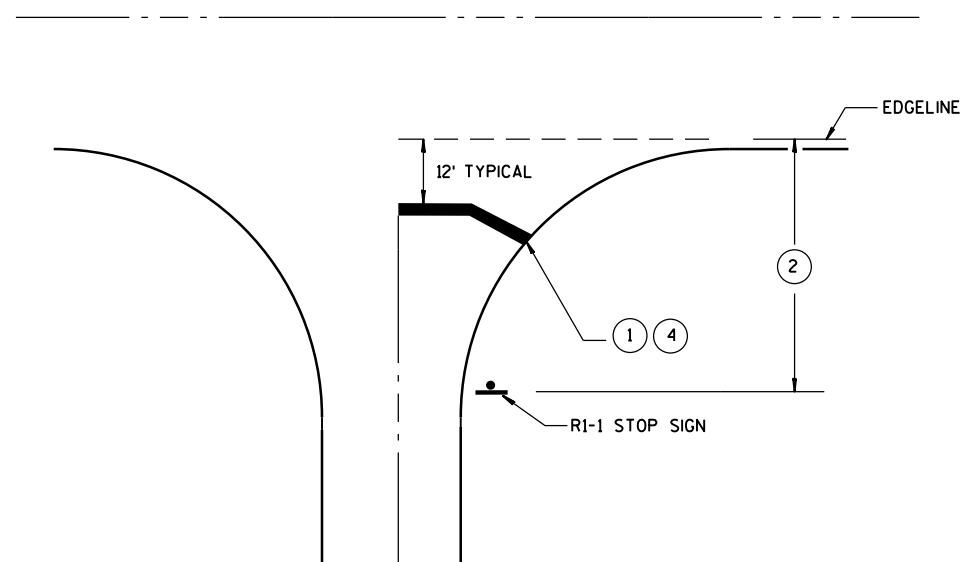
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER**

GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

**STOP LINE AND CROSSWALK
PAVEMENT MARKING**

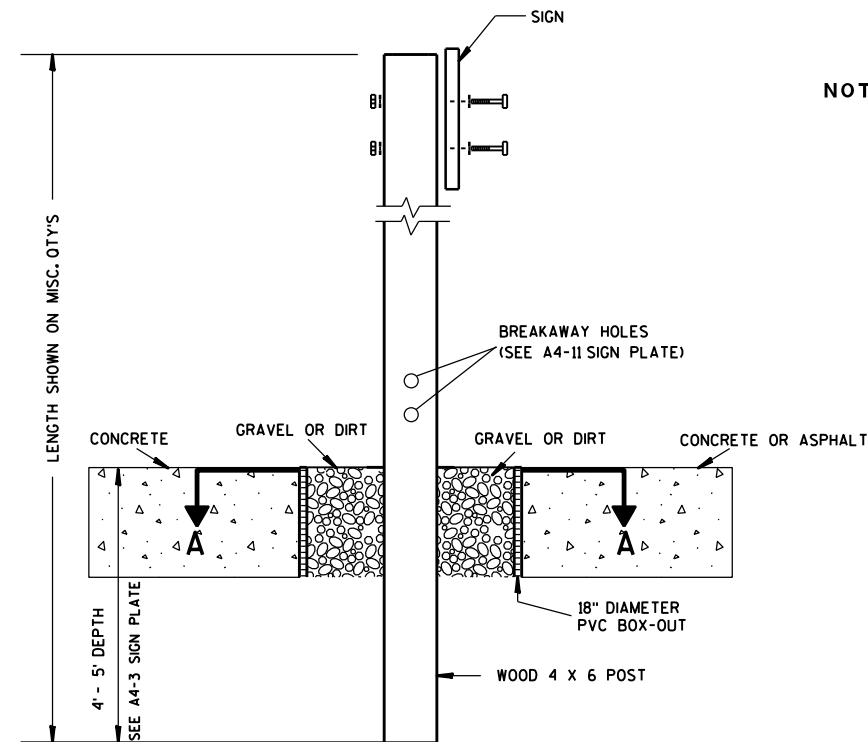
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

FHWA

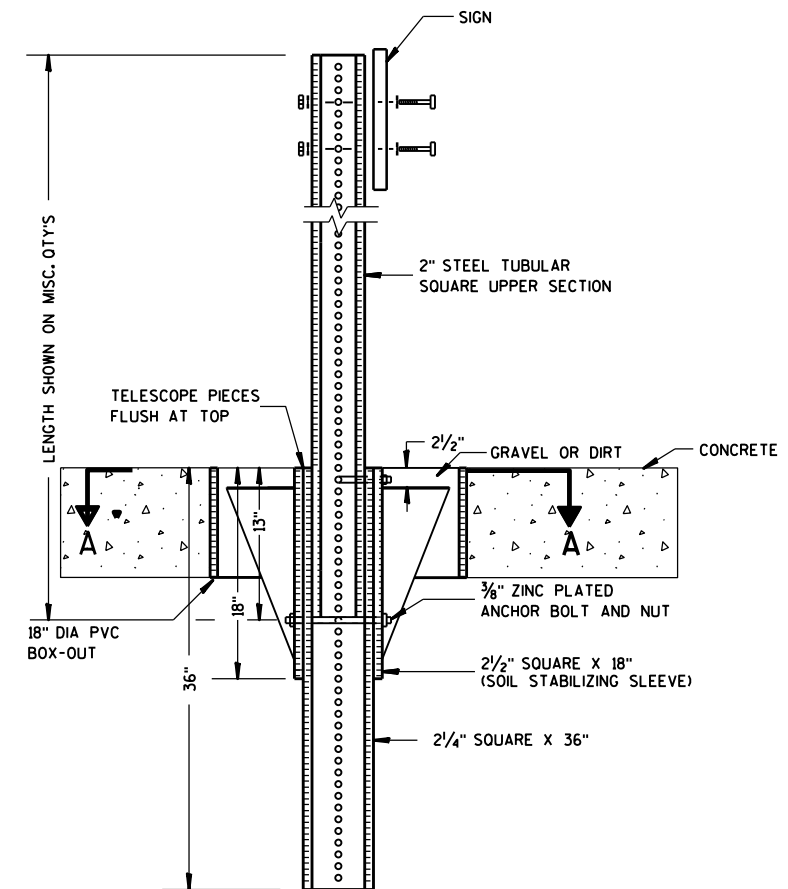
/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER



ELEVATION VIEW

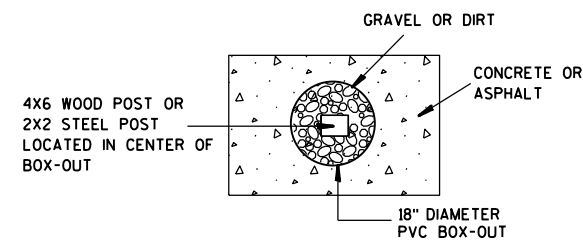
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

HWY:

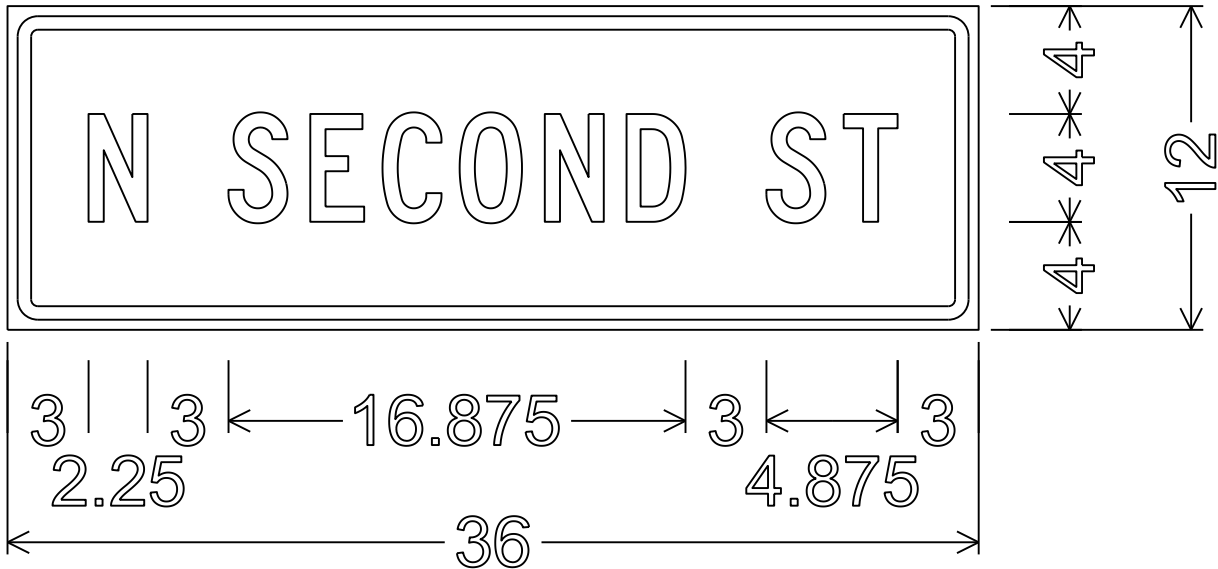
COUNTY:

SHEET NO:

E

NOTES

- 1. All Signs Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - C



1.125" Radius, 0.500" Border, 0.375" Indent

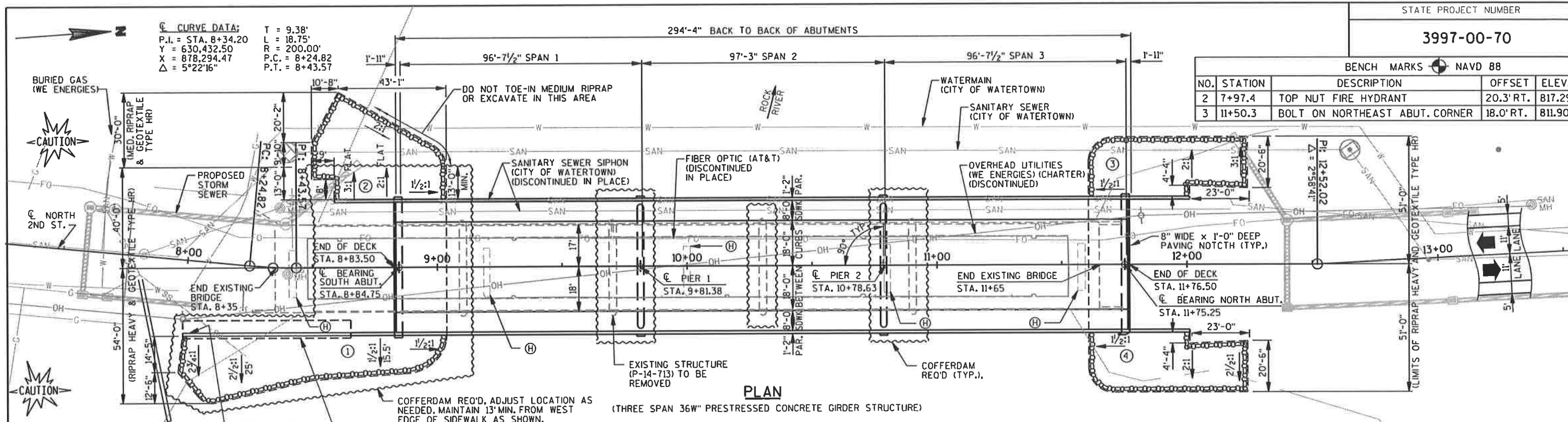
7

7

3997-00-70

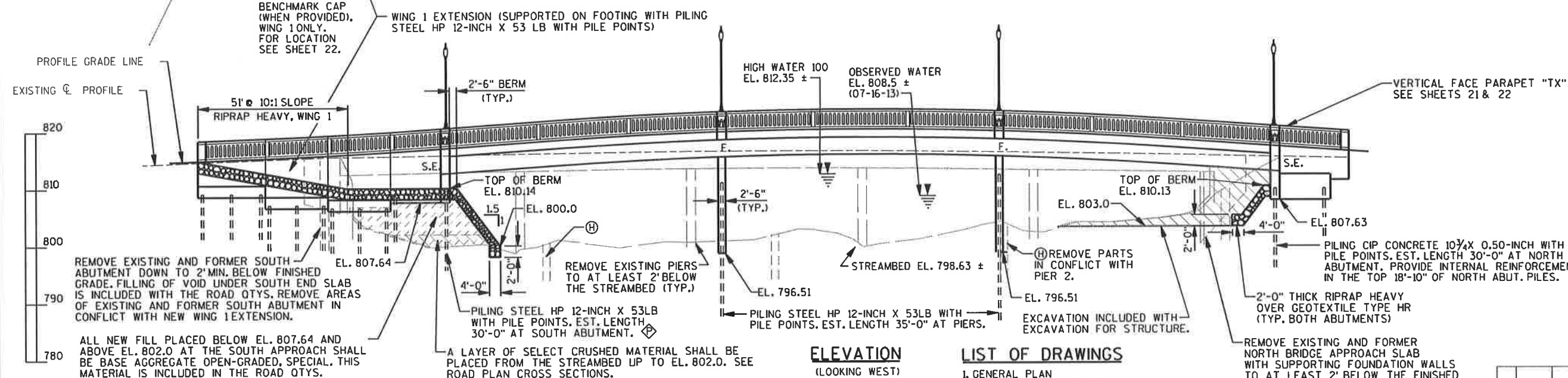
BENCH MARKS NAVD 88

NO.	STATION	DESCRIPTION	OFFSET	ELEV.
2	7+97.4	TOP NUT FIRE HYDRANT	20.3' RT.	817.29
3	11+50.3	BOLT ON NORTHEAST ABUT. CORNER	18.0' RT.	811.90



PLAN

(THREE SPAN 36\" PRESTRESSED CONCRETE GIRDER STRUCTURE)

ELEVATION
(LOOKING WEST)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR : 1.07
OPERATIONAL RATING FACTOR : 1.39
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SUPERSTRUCTURE & WING EXTENSION $f'_c = 4,000$ P.S.I.
SUBSTRUCTURE $f'_c = 3,500$ P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.
36W-INCH PRESTRESSED GIRDERS
CONCRETE MASONRY $f'_c = 8,000$ P.S.I.
STRANDS - 0.60\" WITH AN ULTIMATE TENSILE STRENGTH OF $f_y = 270,000$ P.S.I.

TRAFFIC DATA:

A.A.D.T. (2017) = 2400
A.A.D.T. (2037) = 2600
R.D.S. = 30 MPH

FOUNDATION DATA:

SOUTH ABUTMENT, WING 1 EXTENSION, AND PIERS TO BE SUPPORTED ON PILING STEEL HP 12-INCH X 53 LB WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. NORTH ABUTMENT TO BE SUPPORTED ON PILING CIP CONCRETE 10\" X 0.50-INCH WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 30'-0\" AT THE ABUTMENTS AND WING 1 EXTENSION, AND 35'-0\" AT THE PIERS.

* 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.

HYDRAULIC DATA:

100 YEAR FREQUENCY
DRAINAGE AREA 945 SQ. MI.
0 100 VELOCITY 6,300 C.F.S.
2.23 F.P.S.
WATERWAY AREA 2,829 SQ. FT.
HIGH WATER 100 ELEVATION 812.35
ROADWAY OVERFLOW DESIGN FREQUENCY N/A
SCOUR CRITICAL CODE 5
0 2 HIGH WATER ELEVATION (2,080 C.F.S.) 810.22
0 REGULATORY 6,470 C.F.S.
HIGH WATER REGULATORY 813.46

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTIONS & DETAILS
3. QUANTITIES, PROFILE & NOTES
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT & WING 1 DETAILS
7. SOUTH ABUTMENT & WING 2 DETAILS
8. WING 1 EXTENSION
9. WING 1 EXTENSION SECTIONS & DETAILS
10. NORTH ABUTMENT
11. NORTH ABUTMENT DETAILS
12. PIER 1
13. PIER 1 DETAILS
14. PIER 2
15. PIER 2 DETAILS
16. 36W\" PRESTRESSED GIRDER DETAILS
17. STEEL DIAPHRAGM & BEARING PAD DETAILS
18. SUPERSTRUCTURE
19. SUPERSTRUCTURE SECTIONS
20. SUPERSTRUCTURE SECTIONS & DETAILS
21. VERTICAL FACE PARAPET \"TX\"
22. VERTICAL FACE PARAPET \"TX\" DETAILS
23. ELECTRICAL CONDUIT PLAN & DETAILS
24. PILE SPLICE & AESTHETIC DETAILS

○ - INDICATES WING NUMBER

⊙ - REMNANT FOUNDATION OF FORMER BRIDGE AS SHOWN ON EXISTING BRIDGE PLAN. (TYP.)

⊕ - PILING MAY BE DRIVEN PRIOR TO PLACEMENT OF BASE AGGREGATE OR SELECT CRUSHED MATERIAL.

CONSULTANT DESIGN CONTACT:
LEAH RHODES
(608) 355-8945

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489



6/27/2017

NO.	DATE	REVISION	BY

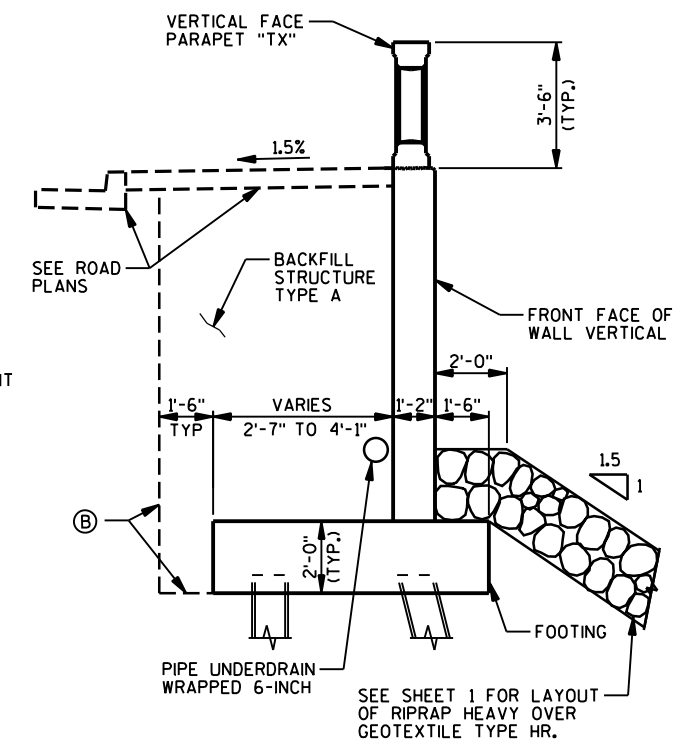
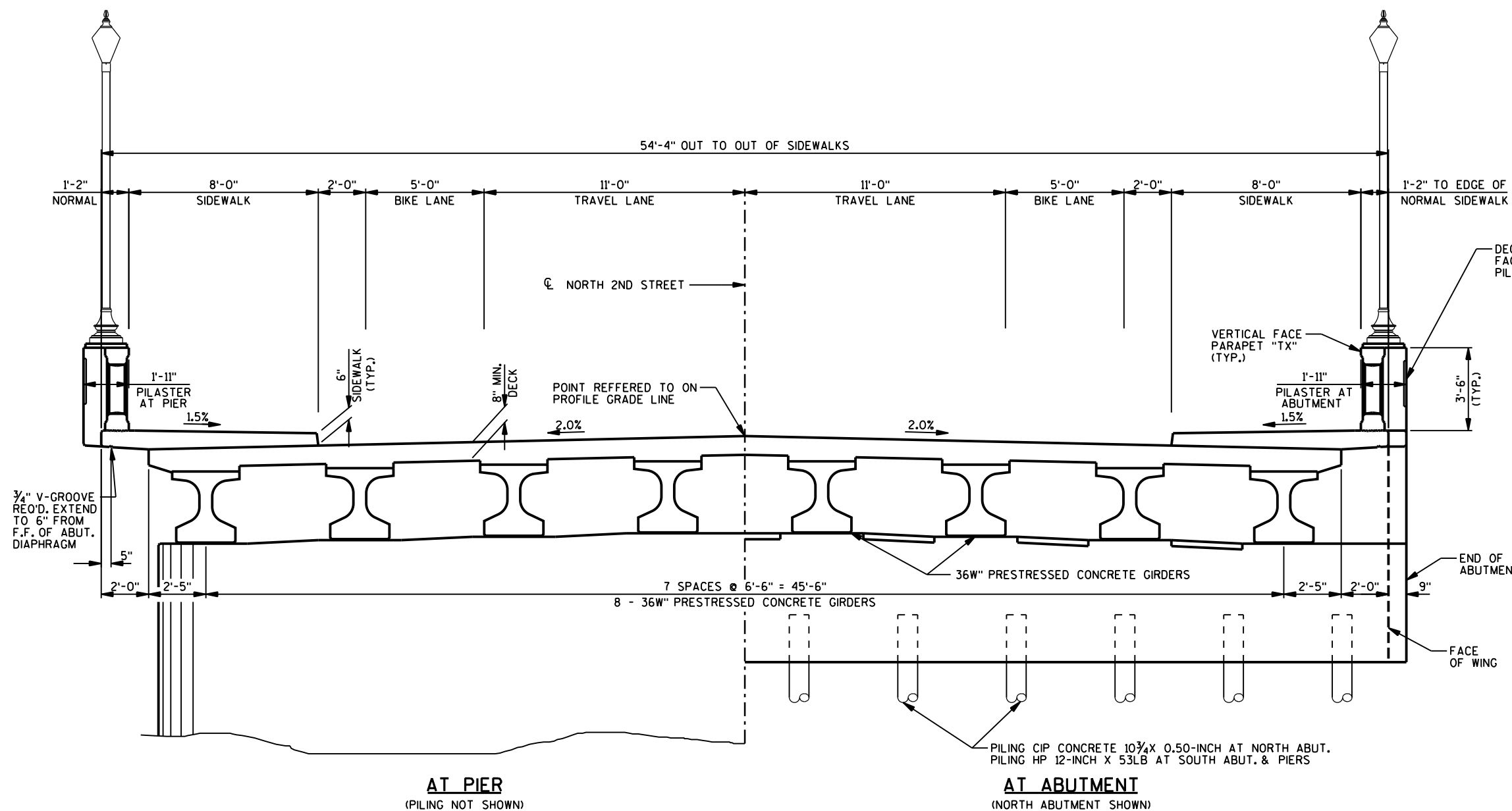
MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2770

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED *William C. Dieker* **06/27/17**
CHIEF STRUCTURES DESIGN ENGINEER DATE

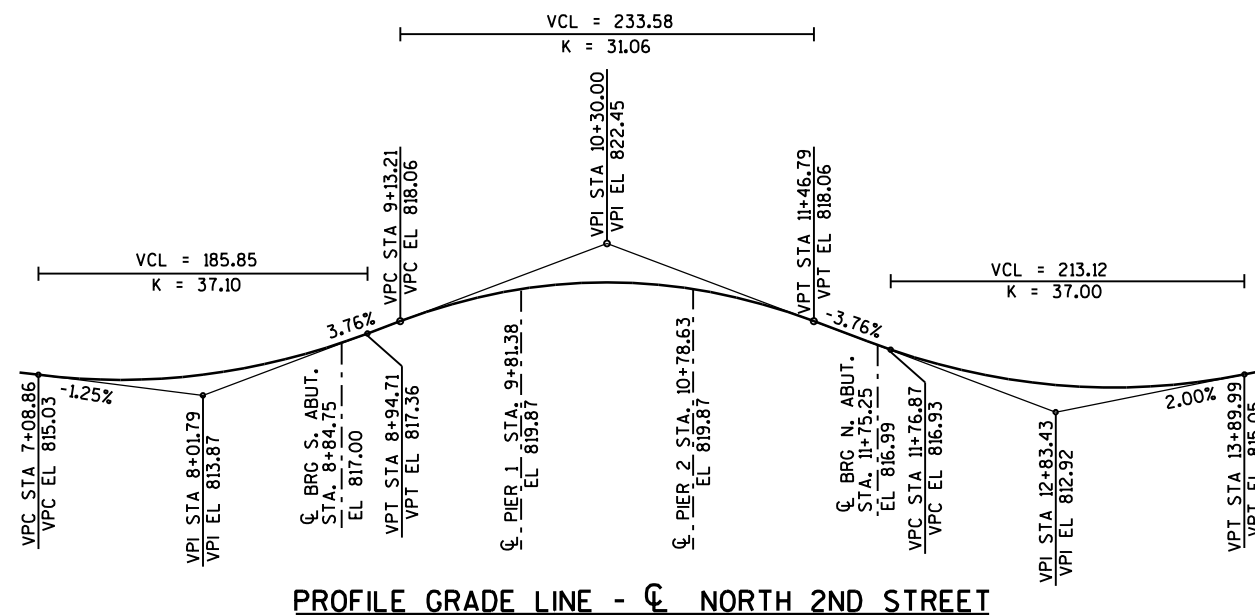
STRUCTURE B-14-209
NORTH 2ND STREET OVER ROCK RIVER
COUNTY DODGE TOWN/CITY/VILLAGE WATERTOWN

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
DESIGNED BY LJR DESIGN CKD. JRS DRAWN BY RLR PLANS CKD. LJR

GENERAL PLAN SHEET 1 OF 24



② - "BACKFILL STRUCTURE TYPE A" PAY LIMITS. BACKFILLING OF EXCAVATED AREAS BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. BACKFILLING OF AREAS REQUIRING FILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED IN THE ROAD QUANTITIES FOR BASE AGGREGATE OPEN-GRADED OR BORROW.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY		RLR	PLANS CK'D. LJR
CROSS SECTIONS & DETAILS		SHEET 2 OF 24	

STATE PROJECT NUMBER

GENERAL NOTES

THE FIRST DIGIT OF A THREE DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS AND PIERS.

THE SOUTH ABUTMENT AND RIPRAP HEAVY ARE TO BE PLACED ON BASE AGGREGATE OPEN-GRADED FILL OVER SELECT CRUSHED MATERIAL AS PART OF THE ROADWAY EARTHWORK QUANTITIES.

COFFERDAMS ARE REQUIRED FOR THE CONSTRUCTION OF THE SOUTH ABUTMENT, SOUTH ABUTMENT WING WALLS, PIER 1, AND PIER 2, AND FOR EXISTING PIER REMOVALS. PLACE ALL FILL MATERIAL AND RIPRAP BELOW THE OBSERVED WATER ELEVATION AT THE SOUTH ABUTMENT PRIOR TO REMOVING THE COFFERDAM. PLACE GEOTEXTILE TYPE HR ALONG THE INSIDE FACE OF THE COFFERDAM AS SHOWN IN THE RIPRAP DETAIL BELOW.

THIS STRUCTURE WILL REPLACE EXISTING BRIDGE P-14-713, A 330 FOOT LONG STRUCTURE INCLUDING FIVE STEEL DECK GIRDER SPANS AND 15 FOOT VAULTED SLAB SPANS AT EACH END. THE SLAB SPANS ARE FOUNDED ON CONCRETE FOUNDATION WALLS OVER PARTIALLY REMOVED ABUTMENTS OF THE PREVIOUS STRUCTURE. THE BRIDGE IS SET ON CONCRETE ABUTMENTS AND CONCRETE PIERS FOUNDED ON SPREAD FOOTINGS. REMOVAL OF VAULTED END SLAB SPANS AND REMNANT FOUNDATIONS OF FORMER BRIDGE IS INCLUDED IN THE BID ITEM FOR "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00".

THE EXISTING BRIDGE PLANS ARE AVAILABLE ON THE WISDOT HSI SITE.

AT THE BACKFACE OF THE NORTH ABUTMENT, ALL EXCAVATED VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A. AT THE BACKFACE OF THE SOUTH ABUTMENT, BACKFILL STRUCTURE TYPE A SHALL BE PLACED, AT A MINIMUM, TO THE LIMITS SHOWN ON THE STRUCTURE BACKFILL DETAIL BELOW.

② - "BACKFILL STRUCTURE TYPE A" PAY LIMITS. BACKFILLING OF EXCAVATED AREAS BEYOND BACKFILL PAY LIMITS AT THE NORTH ABUTMENT SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. BACKFILLING OF AREAS REQUIRING FILL BEYOND BACKFILL PAY LIMITS AT THE SOUTH ABUTMENT SHALL BE INCLUDED IN THE ROAD QUANTITIES FOR BASE AGGREGATE OPEN-GRADED OR BORROW.

EXCAVATION BELOW THE NORTH ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE TYPE DF SCHEDULE A SHALL BE SET AT THE BOTTOM OF BACKFILL STRUCTURE LIMITS AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88 BENCHMARKS.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF DECK AND TO THE INSIDE FACE AND TOP OF SIDEWALKS.

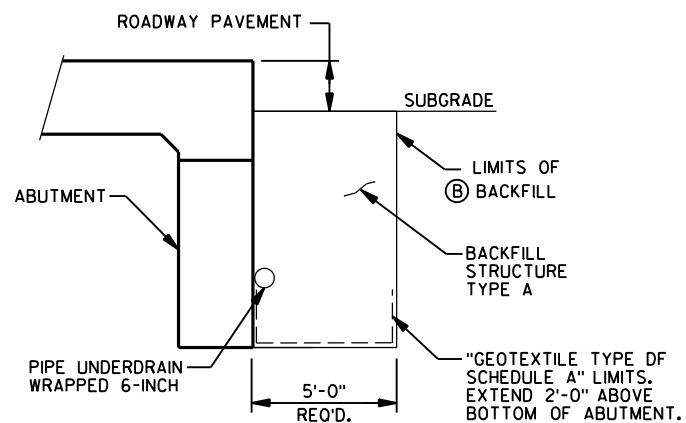
PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE PARAPETS, INCLUDING THE PARAPET ON THE WINGS AND WING 1 EXTENSION, PILASTERS FOR LIGHT STANDARDS, AND TO THE EDGE AND OUTSIDE 1'-0" OF THE UNDERSIDE OF THE SIDEWALK OVERHANGS. DO NOT PLACE PIGMENTED SURFACE SEALER ON AREAS RECEIVING LOGO CONCRETE STAINING.

THE AREA OF PARAPET USED TO DETERMINE THE QUANTITY OF PIGMENTED SURFACE SEALER SHALL BE THE LENGTH TIMES THE SUM OF THE INSIDE HEIGHT, TOP WIDTH, AND OUTSIDE HEIGHT FOR EACH PARAPET.

ANTI-GRAFFITI COATING SHALL BE APPLIED TO THE EXPOSED ABUTMENT FRONT FACES AND ALL EXPOSED SURFACES OF THE ABUTMENT SIDES AND WINGS, INCLUDING THE WING EXTENSION, BETWEEN 1 FOOT BELOW THE FINISHED GROUND LINE AND THE BOTTOM OF THE PARAPET. ANTI-GRAFFITI COATING SHALL BE APPLIED TO THE EXTERIOR FACE AND UNDERSIDE OF THE EXTERIOR GIRDERS WITHIN 15 FEET OF THE FRONT FACE OF EACH ABUTMENT.

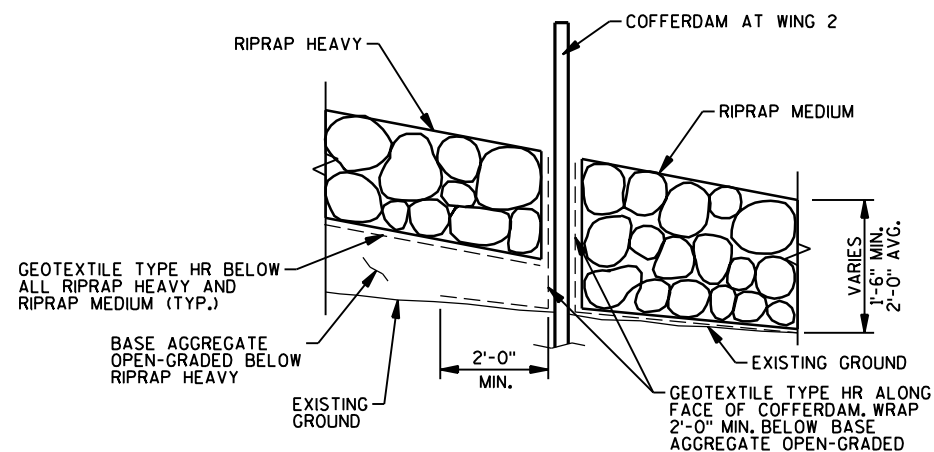
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS. MEDIUM RIPRAP SHALL BE PLACED OUTSIDE THE COFFERDAM IN THE SOUTHWEST QUADRANT AS SHOWN ON SHEET 1.

THE HAUNCH CONCRETE QUANTITIY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE SUPERSTRUCTURE SHEET.



SOUTH ABUTMENT

(ABUTMENT BODY SHOWN, WING BACKFILL PAY LIMITS SIMILAR)



RIPRAP DETAIL
(LOOKING SOUTH)

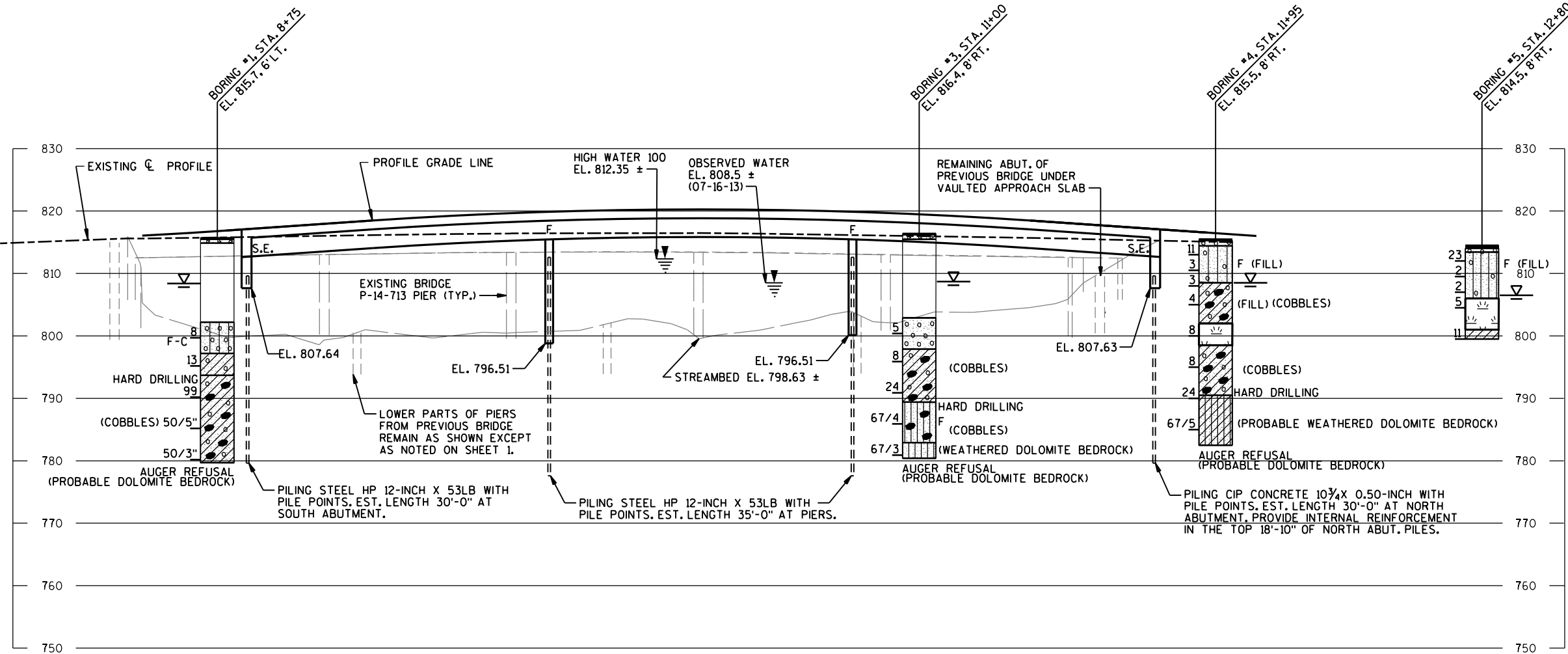
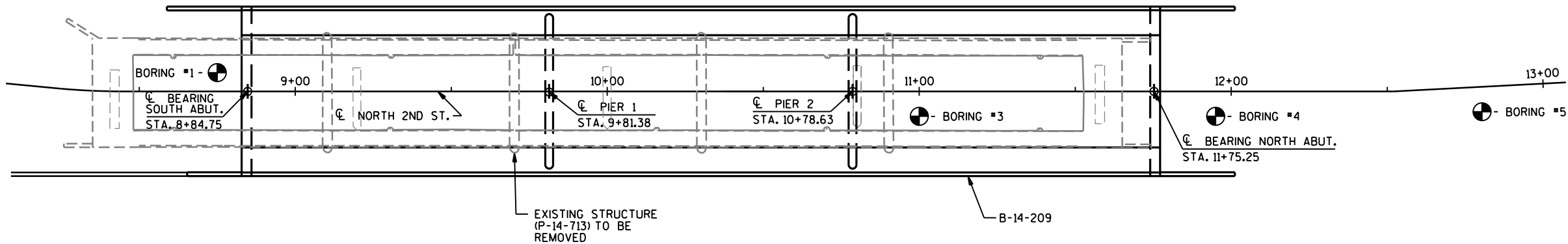
NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE		B-14-209			
		DRAWN BY	RLR	PLANS CK'D.	LJR
QUANTITIES, PROFILE & NOTES				SHEET 3 OF 24	



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	6-09-2015	630,473.6	878,291.2
3	6-09-2015	630,697.2	878,320.0
4	6-10-2015	630,792.0	878,326.3
5	6-10-2015	630,877.3	878,330.4

BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.
ALL COORDINATES REFERENCED TO WCCS NAD 83(1988) DODGE COUNTY
NOTE: BORING #2 WAS NOT COMPLETED.

ROCK
RIVER



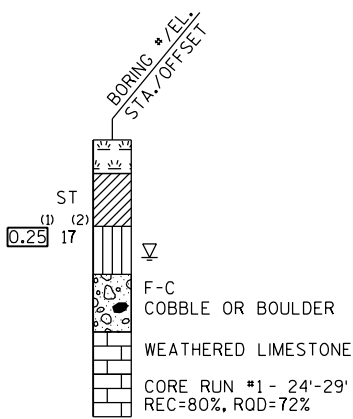
STATE PROJECT NUMBER

3997-00-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
▽ END OF DRILLING
▽ AFTER DRILLING

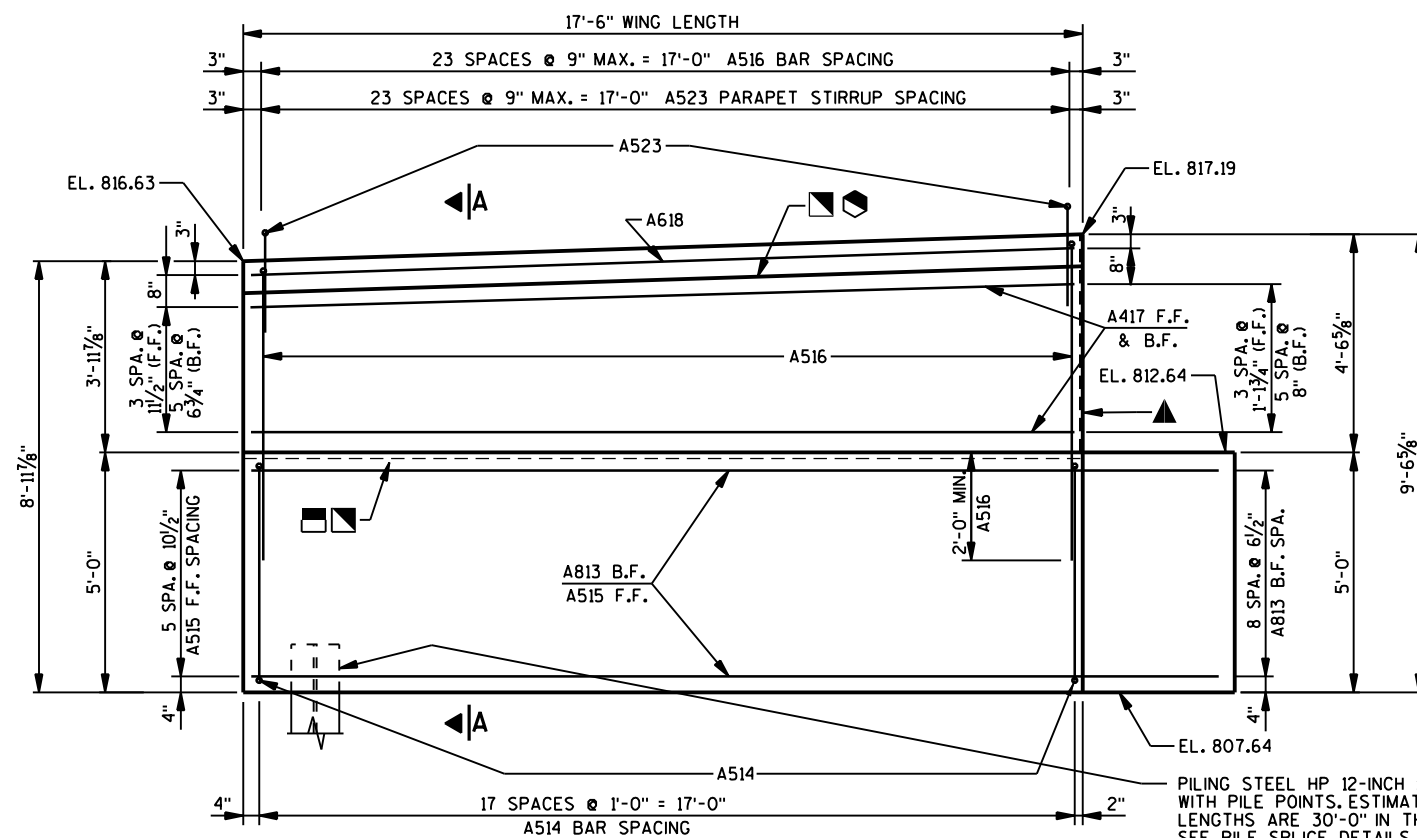
ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

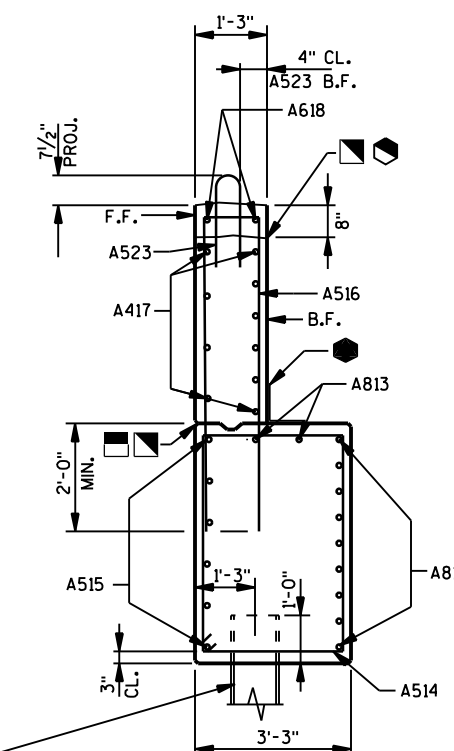
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY		RLR	PLANS CK'D. DHW
SUBSURFACE EXPLORATION		SHEET 4 OF 24	



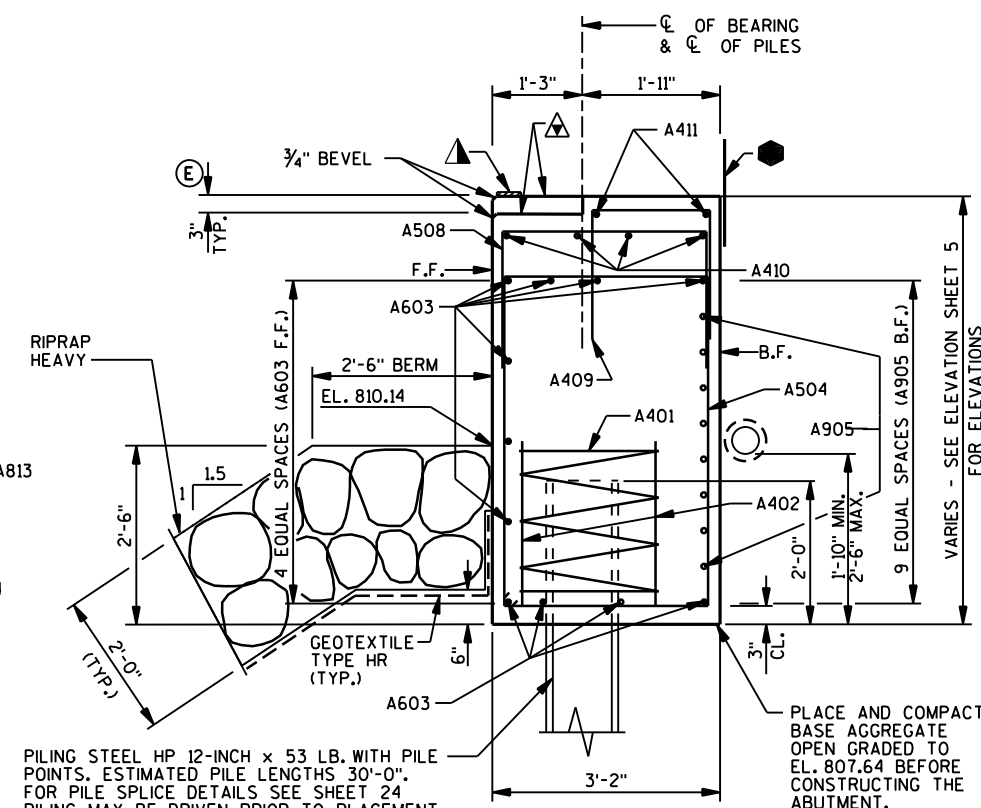
ELEVATION WING 1

SEE SHEET 23 FOR CONDUIT
IN WING WALLS.

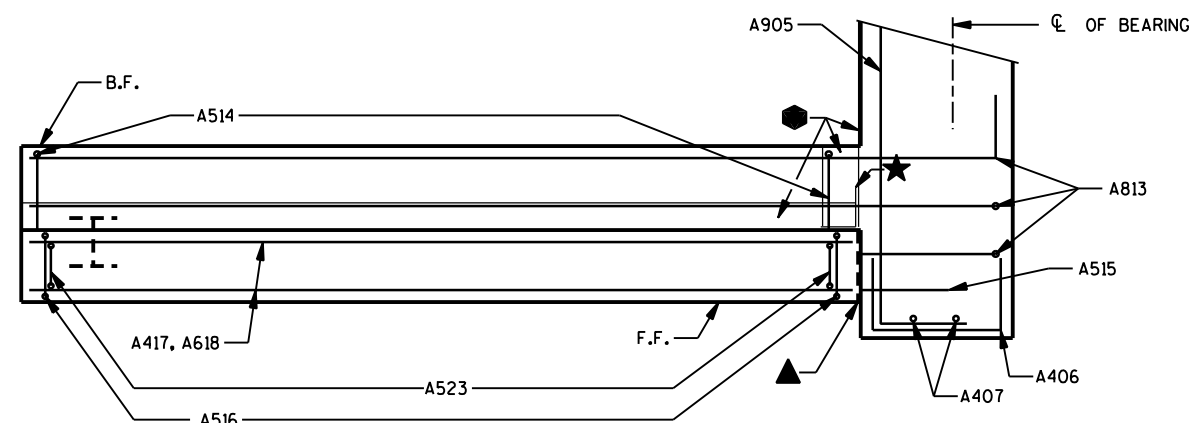
PIILING STEEL HP 12-INCH x 53 LB.
WITH PILE POINTS. ESTIMATED PILE
LENGTHS ARE 30'-0" IN THE WINGS.
SEE PILE SPLICE DETAILS, SHEET 24.
PIILING MAY BE DRIVEN PRIOR TO
PLACEMENT OF BASE AGGREGATE
OPEN-GRADED OR SELECT CRUSHED
MATERIAL.

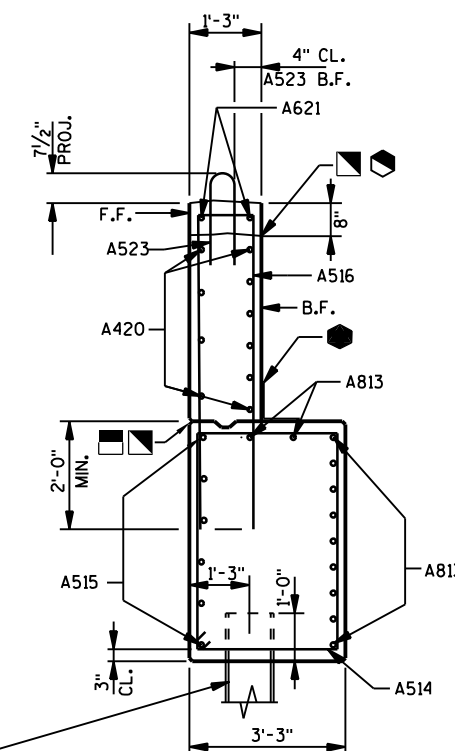
SECTION A-A
THRU WING 1

PIILING STEEL HP 12-INCH x 53 LB. WITH PILE
POINTS. ESTIMATED PILE LENGTHS 30'-0".
FOR PILE SPLICE DETAILS SEE SHEET 24.
PIILING MAY BE DRIVEN PRIOR TO PLACEMENT
OF BASE AGGREGATE OPEN-GRADED OR SELECT
CRUSHED MATERIAL.

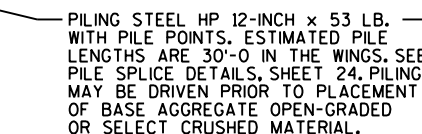


TYPICAL SECTION THRU ABUTMENT

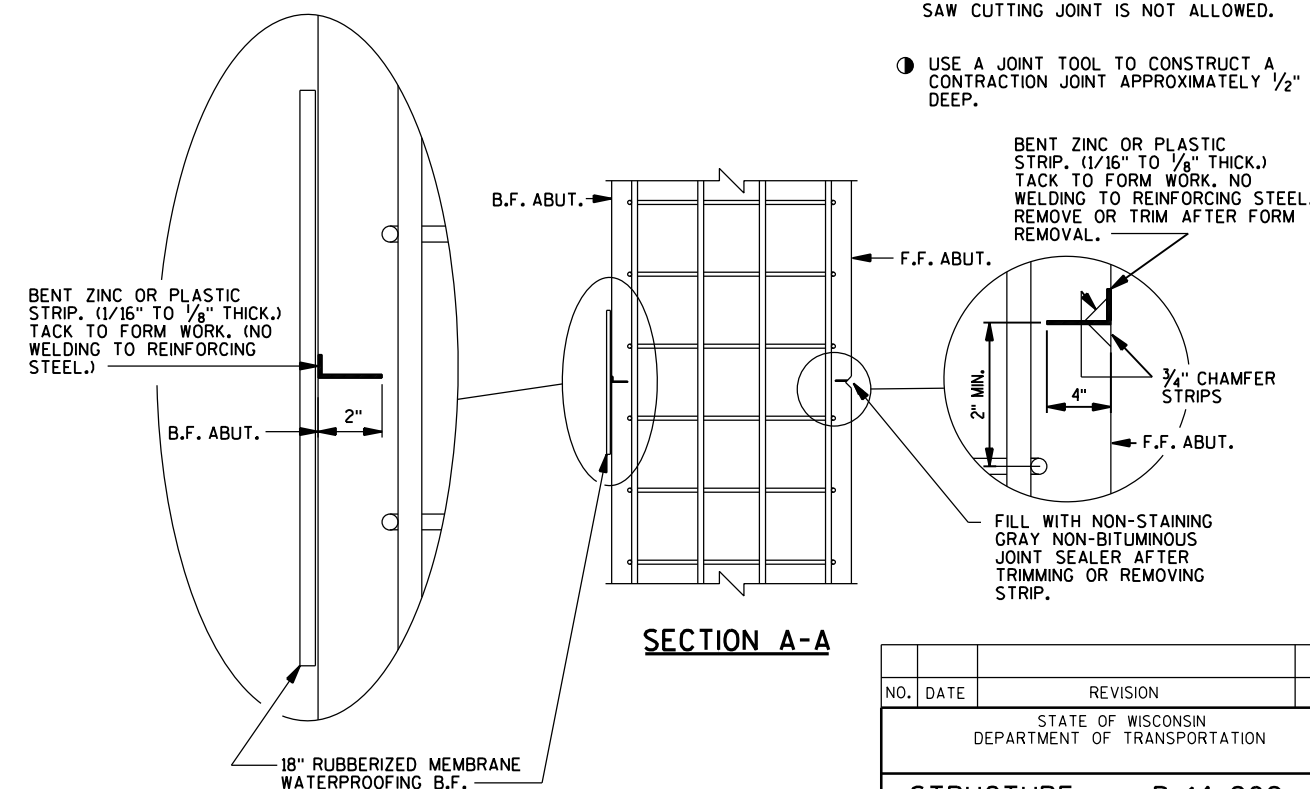




ELEVATION WING 2



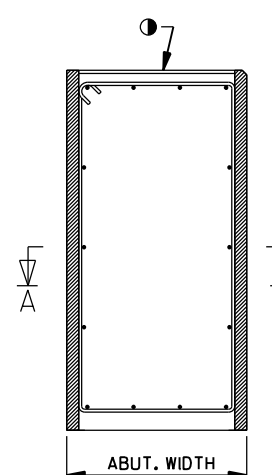
PLAN WING 2



SECTION A-A

SECTION R-R

SECTION R-R



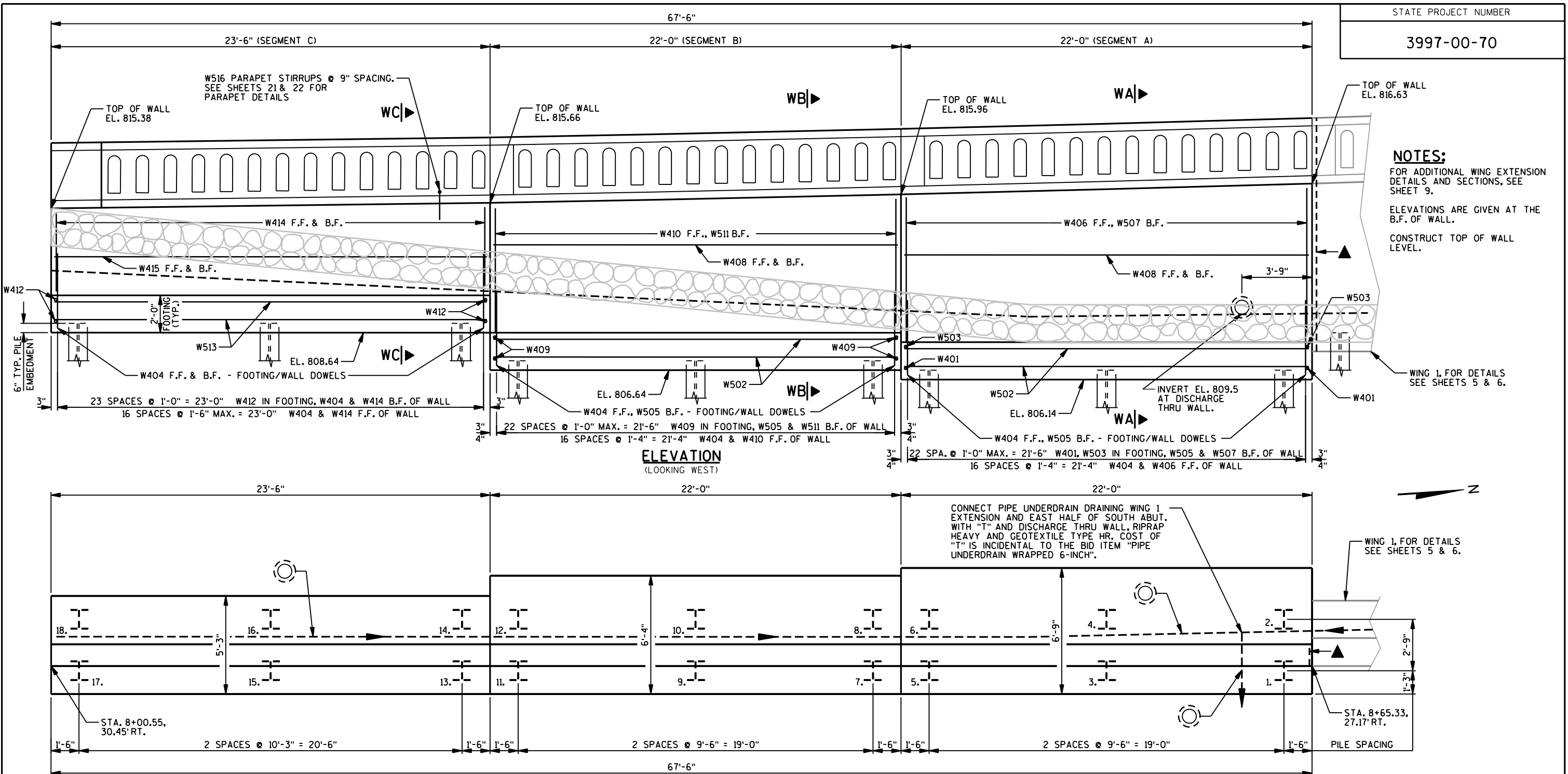
SECTION THRU
ABUTMENT BODY

ALTERNATE CONSTRUCTION
JOINT AT ABUTMENT

BENT ZINC OR PLASTIC STRIP. (1/16" TO 1/8" THICK.) TACK TO FORM WORK. NO WELDING TO REINFORCING STEEL. REMOVE OR TRIM AFTER FORM REMOVAL. 

PICTURE B-14-209

FILE= 69005_07.DGN
DATE= 4/25/2017



STATE PROJECT NUMBER
3997-00-70

NOTES:
FOR ADDITIONAL WING EXTENSION
DETAILS AND SECTIONS, SEE
SHEET 9.

ELEVATIONS ARE GIVEN AT THE
B.F. OF WALL.

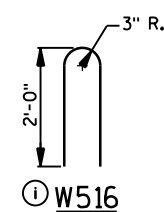
CONSTRUCT TOP OF WALL
LEVEL.

ELEVATION
(LOOKING WEST)

PLAN

NOTES:
EPOXY COAT ALL WALL
EXTENSION BARSTEEL.

DIMENSIONS IN BENDING DETAILS
ARE OUT TO OUT OF BAR.

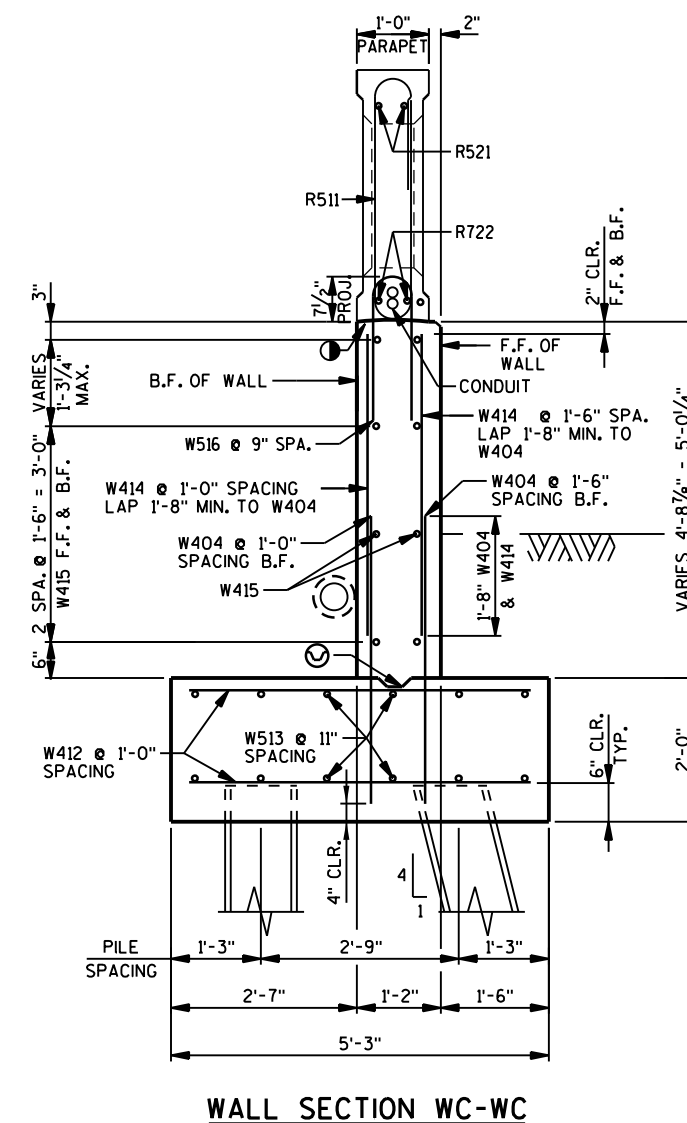
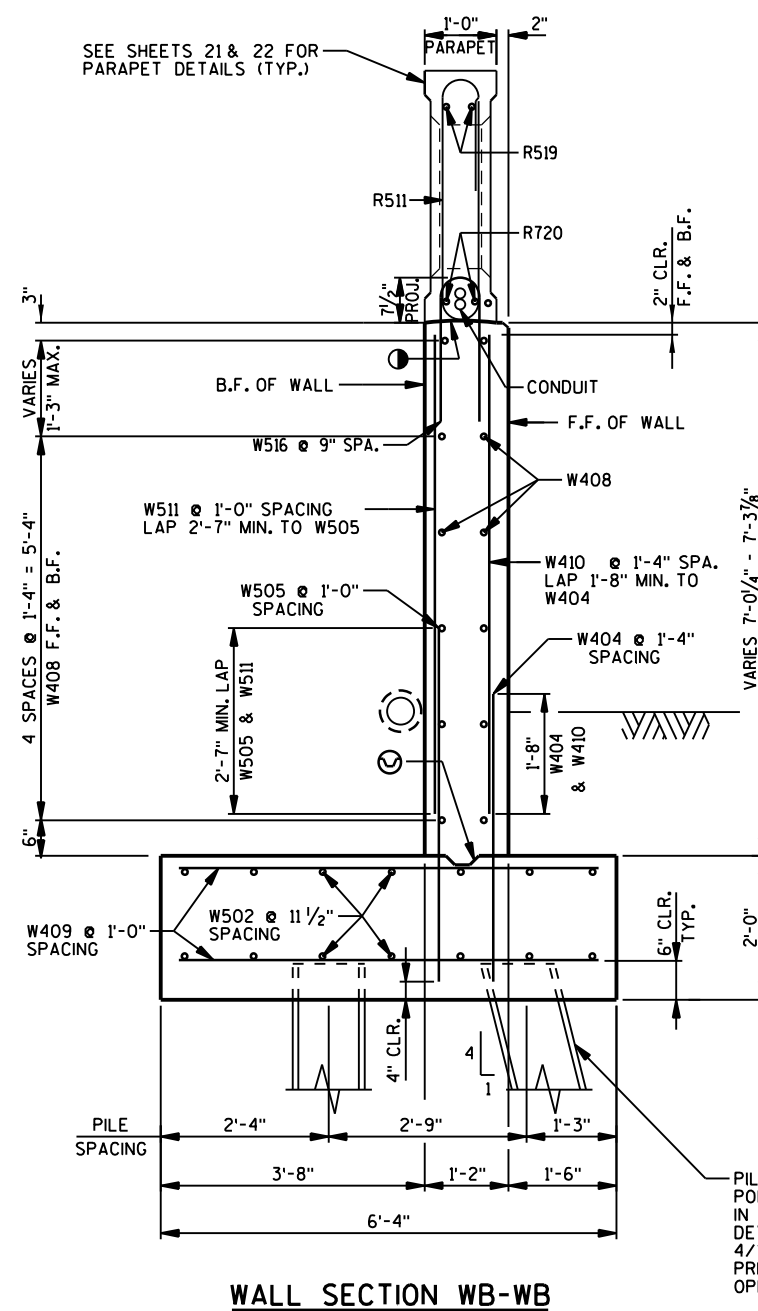
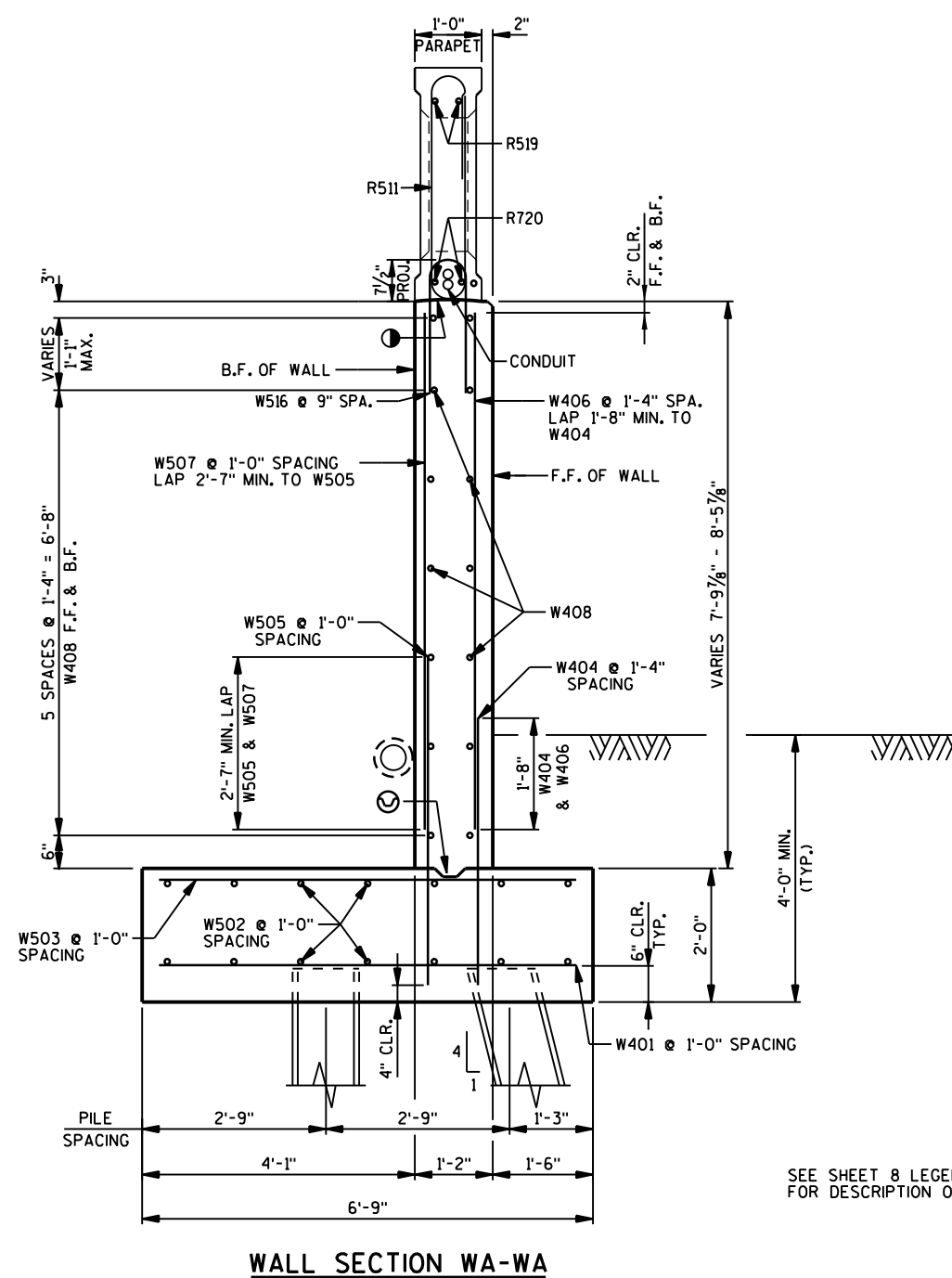
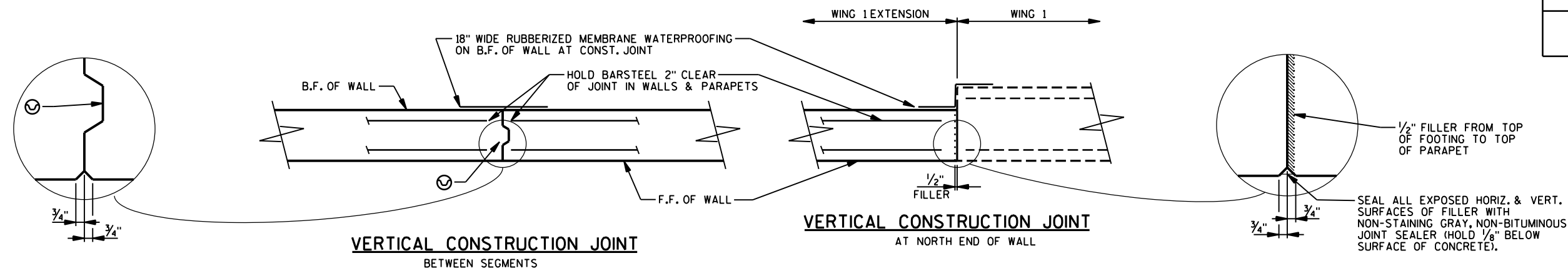


BILL OF BARS (COATED) 3070 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
W401	23	6'-3"		WALL - SEGMENT A - FOOTING BOTTOM - TRANS.
W502	28	21'-8"		WALL - SEGMENT A & SEGMENT B - FOOTING - LONGIT.
W503	23	6'-3"		WALL - SEGMENT A - FOOTING TOP - TRANS.
W404	75	4'-1"		WALL - DOWELS - VERT.
W505	46	5'-0"		WALL - SEGMENT A & SEGMENT B - DOWELS - B.F. - VERT.
W406	17	7'-7"		WALL - SEGMENT A - F.F. - VERT.
W507	23	7'-7"		WALL - SEGMENT A - B.F. - VERT.
W408	26	21'-8"		WALL - SEGMENT A & SEGMENT B - LONGIT.
W409	46	5'-10"		WALL - SEGMENT B - FOOTING TOP & BOTTOM - TRANS.
W410	17	6'-8"		WALL - SEGMENT B - F.F. - VERT.
W511	23	6'-8"		WALL - SEGMENT B - B.F. - VERT.
W412	48	4'-9"		WALL - SEGMENT C - FOOTING TOP & BOTTOM - TRANS.
W513	12	23'-2"		WALL - SEGMENT C - FOOTING - LONGIT.
W414	41	4'-5"		WALL - SEGMENT C - F.F. & B.F. - VERT.
W415	8	23'-2"		WALL - SEGMENT C - LONGIT.
W516	91	4'-4"	X	WALL - PARAPET STIRRUP - VERT.

- LEGEND:**
- PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. DISCHARGE THRU RIPRAP HEAVY AND GEOTEXTILE TYPE HR AND CONCEAL END OF PIPE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE DETAIL SHEET 7.
 - FOR INFORMATION ONLY, NOT INCLUDED IN BAR STEEL REINFORCEMENT WEIGHT, THESE BARS ARE INCLUDED IN THE BID ITEM FOR PARAPET CONCRETE TYPE 'TX'.
 - 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER, (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY		RLR	PLANS CK'D. LJR
WING 1 EXTENSION		SHEET 8 OF 24	

**LEGEND:**

- ⊙ - KEYWAY FORMED BY BEVELED 2"x6".
- - CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH

PIILING STEEL HP 12-INCH x 53 LB. WITH PILE POINTS. ESTIMATED PILE LENGTHS ARE 30'-0" IN THE WING EXTENSION. SEE PILE SPLICE DETAILS, SHEET 24. BATTER FRONT FACE PILES 4/1 AS SHOWN. (TYP.) PILING MAY BE DRIVEN PRIOR TO PLACEMENT OF BASE AGGREGATE OPEN-GRADED OR SELECT CRUSHED MATERIAL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY		RLR	PLANS CK'D. LJR
WING 1 EXTENSION SECTIONS & DETAILS			SHEET 9 OF 24

NOTESFOR WING AND ADDITIONAL ABUTMENT DETAILS
SEE SHEET 11.

ELEVATIONS ARE GIVEN AT THE CL OF BEARING.

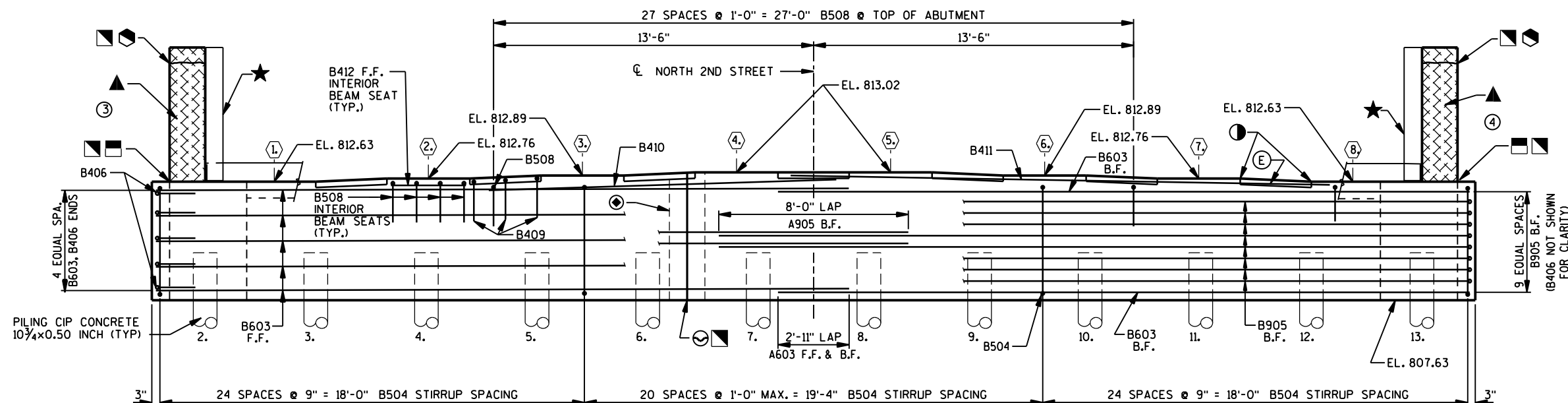
CONSTRUCT BEARING SEAT WITH $1\frac{3}{8}$ " RISE FROM
B.F. TO F.F.**LEGEND**

F.F.—FRONT FACE

B.F.—BACK FACE

CL.—CLEAR

- INDICATES WING NUMBER
 - INDICATES GIRDER NUMBER
 - ⊙ KEYED CONST. JOINT ON ABUT. BODY
FORMED BY BEVELED 2 x 8. PLACE
18" WIDE RMW ON B.F. AT JOINT.
 - ⓔ SEMI-EXPANSION STEP, CONSTRUCT
3" DEEPER THAN ABUTMENT BACKWALL.
 - ▲ STEEL TROWEL TOP SURFACE OF ABUTMENT.
PLACE MULTIPLE LAYERS OF POLYETHYLENE
SHEETS OVER ENTIRE ABUTMENT TOP BEFORE
PLACING BEARING PADS AND SUPERSTRUCTURE.
TOTAL THICKNESS OF SHEETS SHALL BE
AT LEAST 0.03 INCHES.
 - ▲ $\frac{1}{2}$ " FILLER EXTEND AS SHOWN. SEAL ALL
EXPOSED HORIZONTAL & VERTICAL SURFACES
OF FILLER WITH NON-STAINING GRAY,
NON-BITUMINOUS JOINT SEALER. (1" DEEP
& HOLD $\frac{1}{8}$ " BELOW SURFACE OF CONCRETE).
 - ▲ 4"x $\frac{3}{4}$ " FILLER, EXTEND FULL LENGTH OF
ABUTMENT.
 - $\frac{3}{4}$ " CORK FILLER (SIDE VERTICAL FACES
ONLY).
 - ⊙ VERTICAL 18" WIDE RUBBERIZED MEMBRANE
WATERPROOFING. EXTEND FROM BOTTOM OF
ABUTMENT TO BEARING SEAT.
 - ★ VERTICAL 18" WIDE RUBBERIZED MEMBRANE
WATERPROOFING. EXTEND FROM BRIDGE
SEAT TO TOP OF WINGS.
 - HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE
WATERPROOFING. EXTEND ACROSS B.F. ABUT.
BETWEEN WINGS & ALONG B.F. WING AT
OR
 - $\frac{3}{4}$ " "V" GROOVE ON FRONT FACE OF
CONSTRUCTION JOINT.
 - ⊙ PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND
THRU RIPRAP HEAVY AND GEOTEXTILE TYPE
HR. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE.
PROVIDE RODENT PROTECTION AT ENDS OF
PIPE. SEE DETAIL ON SHEET 7.
 - OPTIONAL KEYED CONSTRUCTION JOINT ON
WING FORMED BY BEVELED 2x6.
 - OPTIONAL CONSTRUCTION JOINT AT TOP OF
WING, STRIKE OFF & LEAVE ROUGH.
- AT LEAST ONE OPTIONAL CONSTRUCTION
JOINT SHALL BE USED. PLACE ● AT
JOINT ON B.F. OF WING. POUR CONCRETE
ABOVE THIS JOINT AFTER DECK IS IN PLACE.

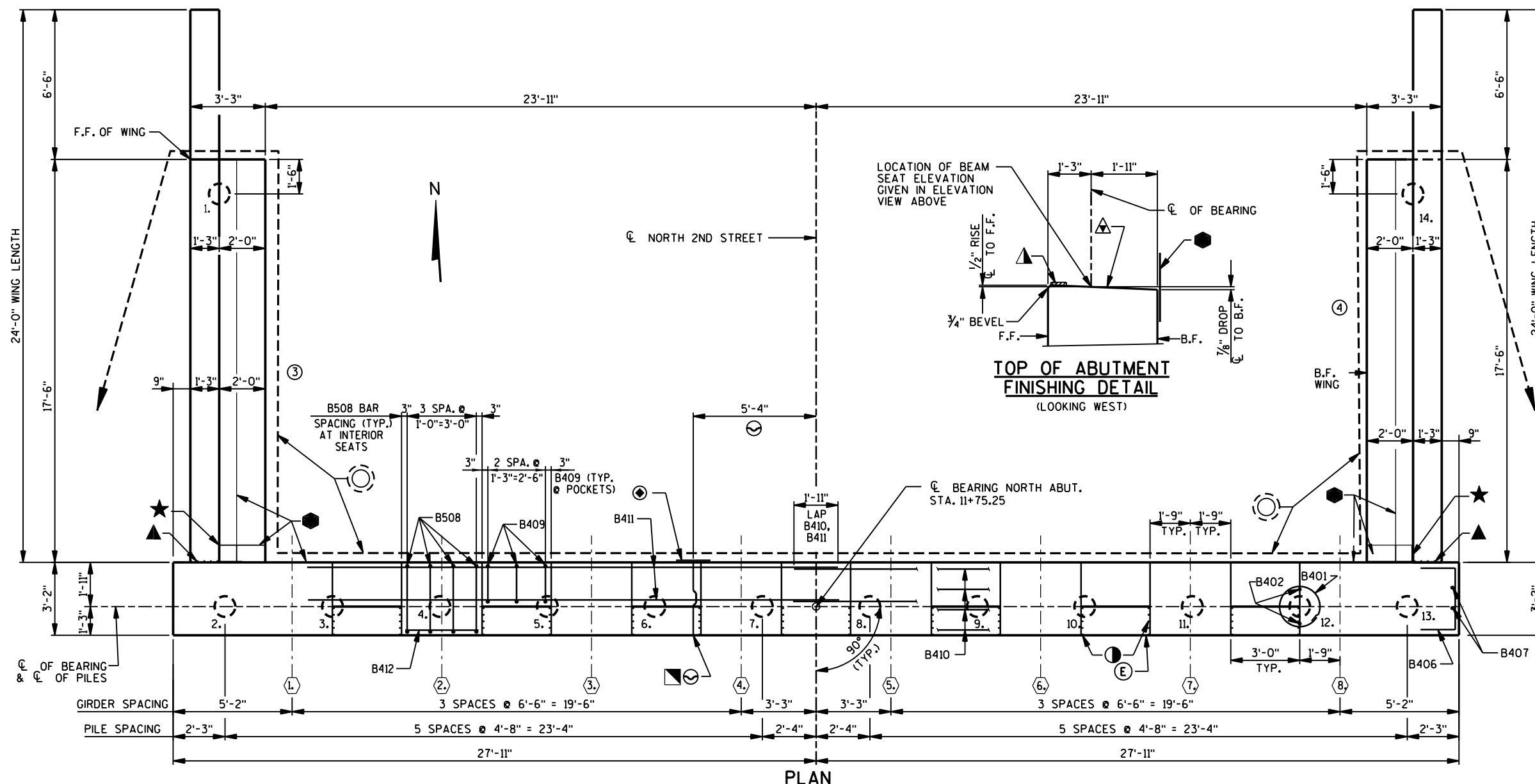


FRONT FACE BAR STEEL REINF.

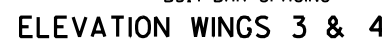
ELEVATION

(NORTH ABUTMENT LOOKING NORTH)

BACK FACE BAR STEEL REINF.

**PLAN**

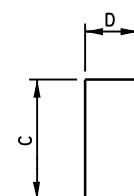
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY		RLR	PLANS CK'D. LJR
NORTH ABUTMENT		SHEET 10 OF 24	



① FOR INFORMATION ONLY. NOT INCLUDED IN BAR STEEL REINFORCEMENT WEIGHT. THESE BARS ARE INCLUDED IN THE BID ITEM FOR PARAPET CONCRETE TYPE 'TX'.



MARK	A	B
B504	4'-4"	2'-10"
B514	4'-7"	2'-11"

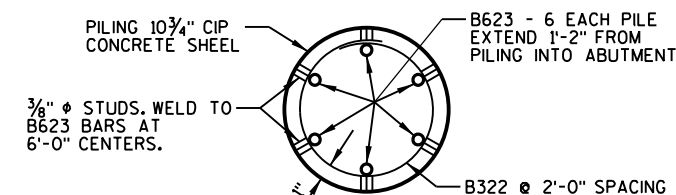
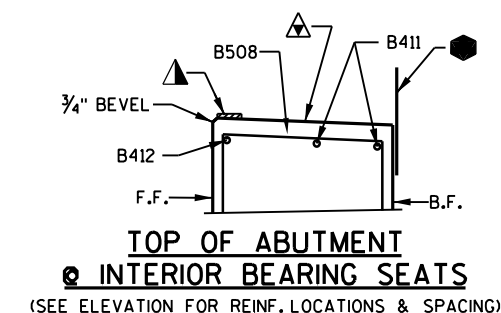
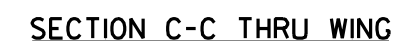


MARK	C	D
B406	1'-6"	2'-9"
B508	1'-6"	2'-10"
B409	1'-6"	1'-7"
B516	6'-5"	11"
B520	4'-8"	11"

BILL OF BARS

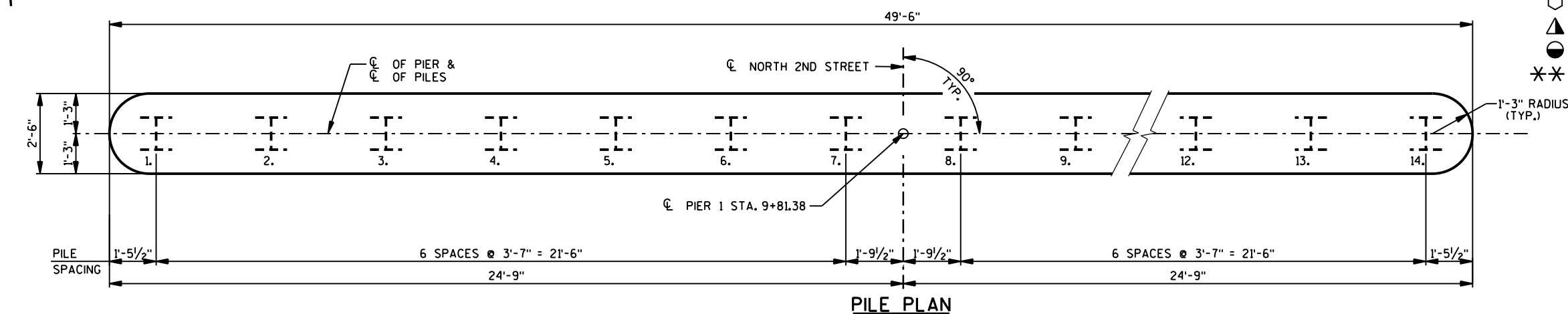
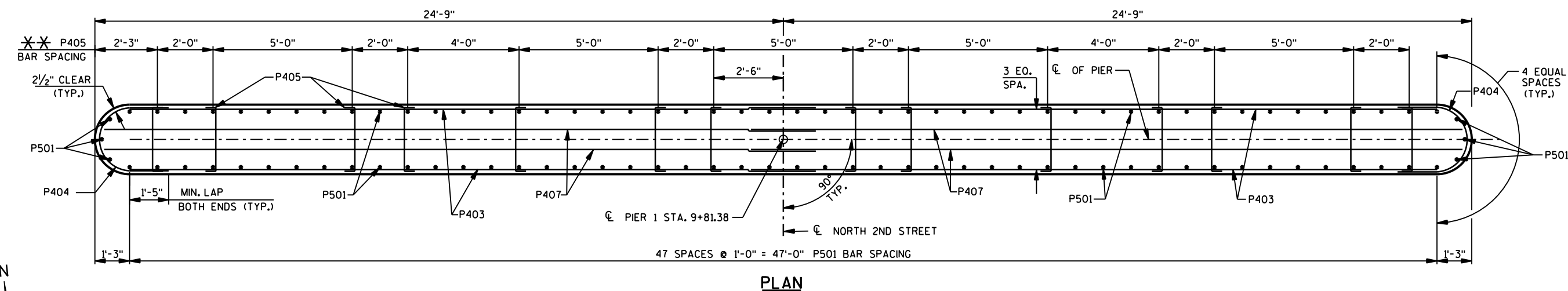
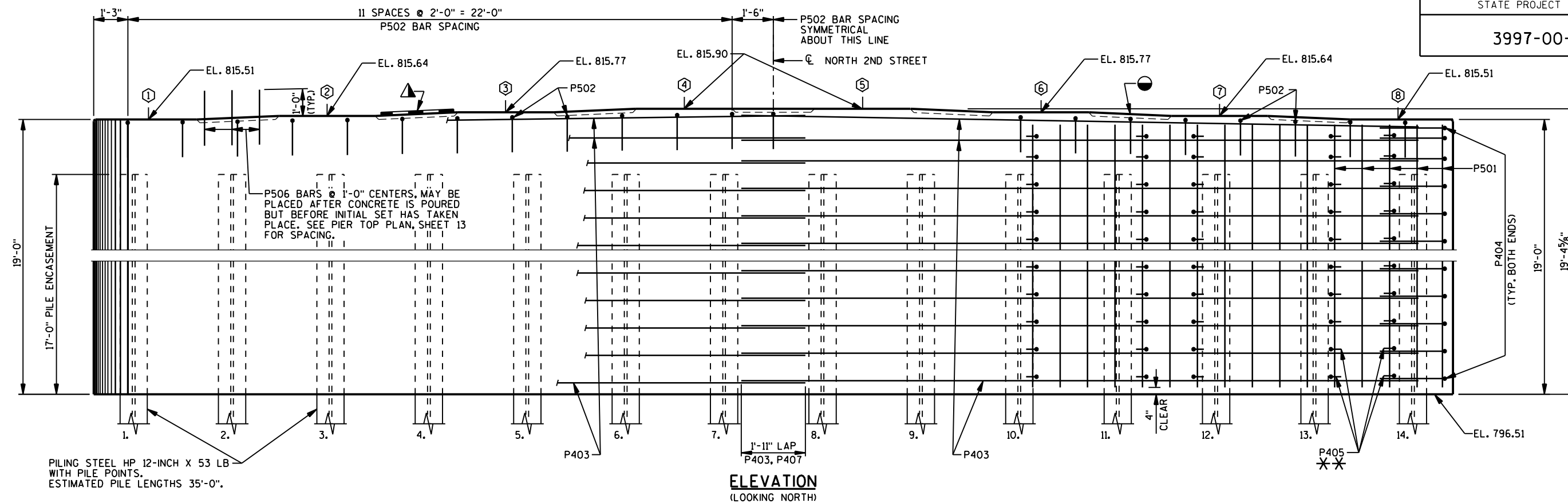
MARK	NUMBER REQUIRED		LENGTH	BENT	LOCATION
	COATED	UNCOATED			
B401	-	12	28'-0"	X	AT BODY PILES - 1 PER PILE 5 SPIRAL WRAPS
B402	-	24	2'-4"		AT BODY PILES - 2 PER PILE - VERT.
B603	-	22	29'-3"		BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	69	15'-0"	X	BODY - STIRRUPS - VERT.
B905	-	16	33'-1"	X	BODY - B.F. - HORIZ.
B406	-	10	5'-7"	X	BODY - ENDS - HORIZ.
B407	-	4	4'-7"		BODY - ENDS - VERT.
B508	-	52	5'-7"	X	BODY - TIE - TOP & INT. BEAM SEATS - VERT.
B409	-	21	4'-5"	X	BODY - TIE - TOP & SEMI-EXP. POCKET - VERT.
B410	-	8	14'-8"		BODY - TOP - HORIZ.
B411	-	4	23'-0"		BODY - TOP & SEMI-EXP. BACKWALL - HORIZ.
B412	-	6	3'-2"		BODY - F.F. - TOP & INT. BEAM SEAT - HORIZ.
B813	22	-	21'-5"	X	WINGS 3 & 4 - BASE - B.F. - HORIZ.
B514	36	-	15'-8"	X	WINGS 3 & 4 - BASE - STIRRUP - VERT.
B515	12	-	19'-2"		WINGS 3 & 4 - BASE - F.F. - HORIZ.
B516	48	-	13'-6"	X	WINGS 3 & 4 - TOP - STIRRUP - VERT.
B417	20	-	23'-7"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B618	4	-	23'-7"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B419	6	-	7'-9"		WINGS 3 & 4 - TIP - F.F. & B.F. - HORIZ.
B520	18	-	10'-0"	X	WINGS 3 & 4 - TIP - STIRRUP - VERT.
B521	64	-	4'-4"	X	WINGS 3 & 4 - TOP - PARAPET STIRRUP - VERT
B322	-	140	2'-6"	X	CONCRETE CIP PILING - 10 EACH PILE - TIES
B623	-	84	20'-0"		CONCRETE CIP PILING - 6 EACH PILE - VERT

COATED 3440 LBS.
UNCOATED 7330 LBS.



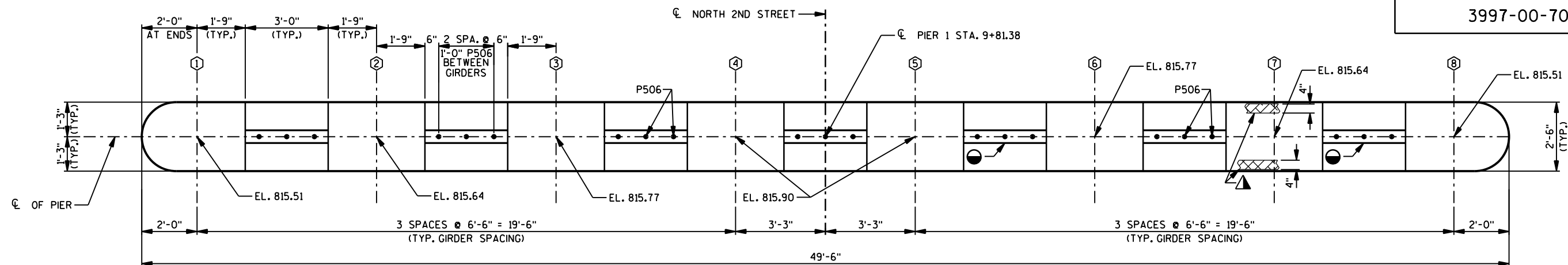
SECTION THRU REINFORCED
CONCRETE CAST-IN-PLACE PILING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
		DRAWN BY	PLANS CK'D.
		RLR	LJR
NORTH ABUTMENT DETAILS		SHEET 11 OF	

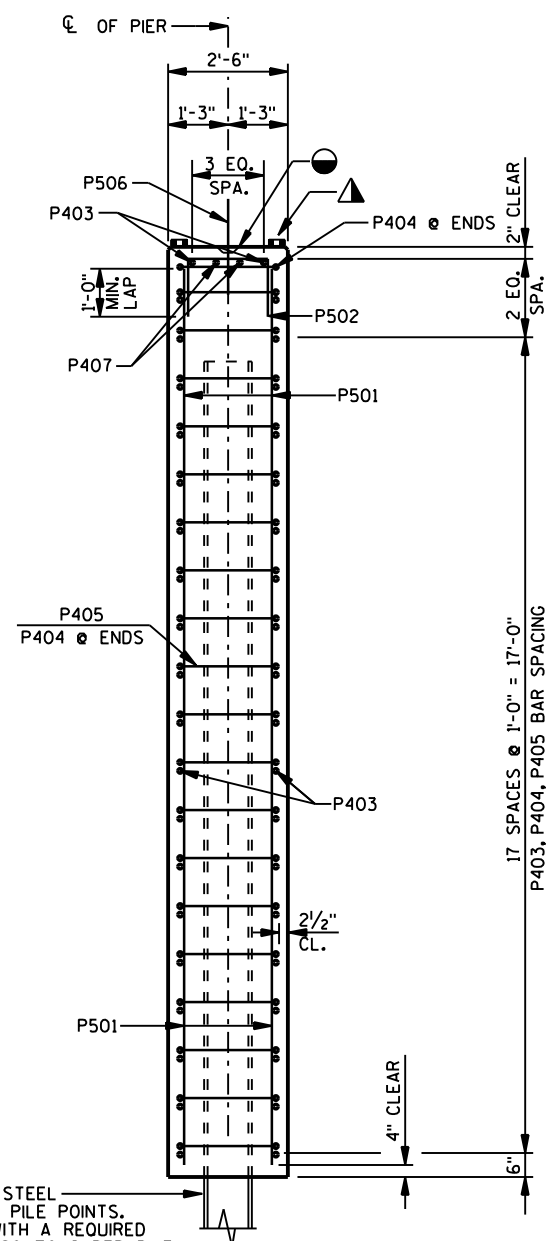
**LEGEND**

- - INDICATES GIRDER NUMBER.
- ▲ - 4"x 3/4" PREFORMED FILLER BETWEEN GIRDERS.
- - KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ✱✱ - ADJACENT TO EACH PILE, ONE SIDE ONLY.

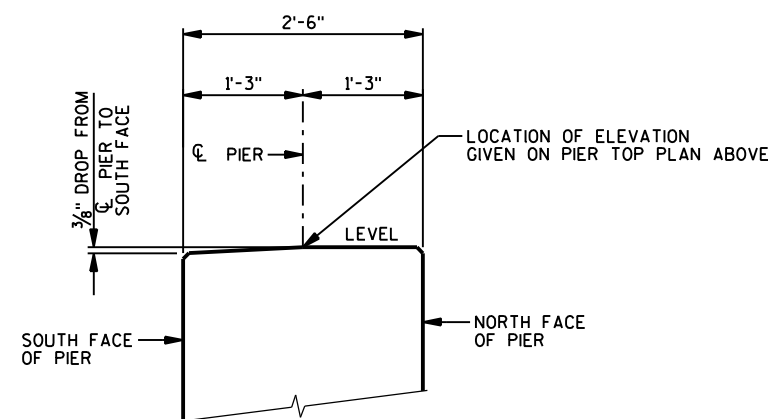
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-209			
DRAWN BY RLR		PLANS CK'D. LJR	
PIER 1			SHEET 12 OF 24



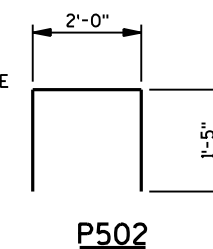
PIER TOP PLAN

TYPICAL SECTION
THRU PIER

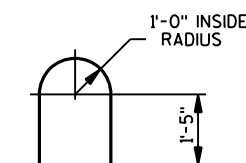
SUPPORT PIER ON PILING STEEL
HP 12-INCH X 53 LB WITH PILE POINTS.
ESTIMATED 35'-0" LONG WITH A REQUIRED
DRIVING RESISTANCE OF 220 TONS PER PILE
PER MODIFIED GATES FORMULA.
SEE SHEET 2 FOR PILE SPLICE DETAILS.



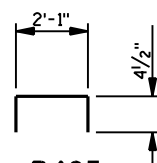
PIER TOP DETAIL



P502



P404



P405

COATED 45 LBS. UNCOATED 4100 LBS.

BILL OF BARS

MARK	NO. REQ'D	LENGTH	BENT	LOCATION
P501	102	18'-6"		PIER - VERT.
P502	25	4'-7"	X	PIER - STIRRUPS - TOP - VERT.
P403	80	24'-6"		PIER - TOP & SIDES - HORIZ.
P404	40	6'-1"	X	PIER - AT ENDS - HORIZ.
P405	266	2'-8"	X	PIER - TIES - HORIZ.
P506	21	2'-0"		PIER - DOWELS @ TOP - VERT.
P407	4	25'-7"		PIER - TOP - HORIZ.

C

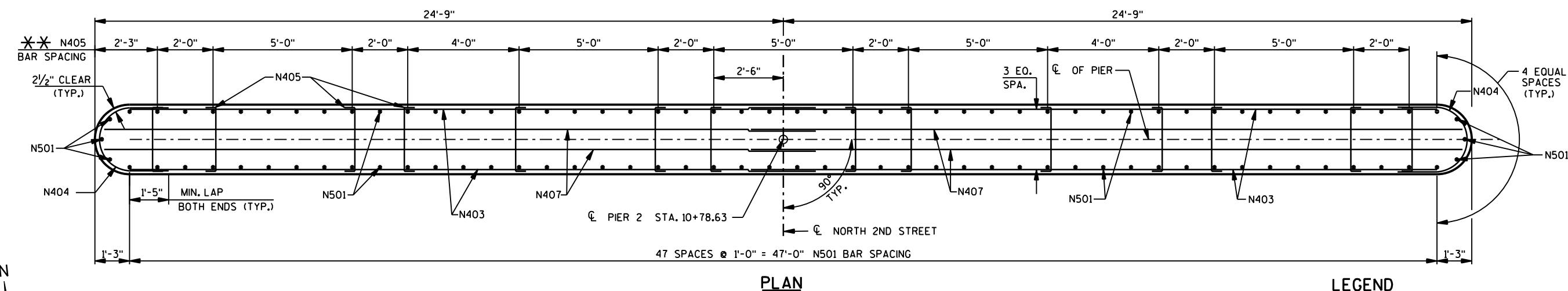
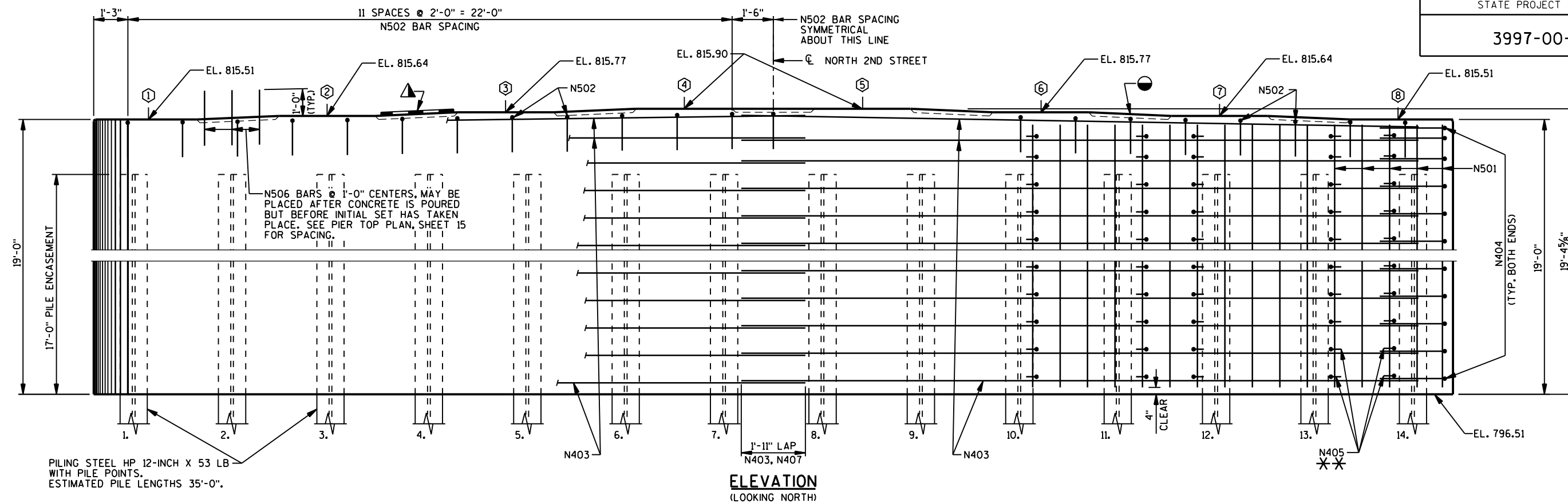
C - THESE BARS SHALL BE EPOXY COATED.

DIMENSIONS IN BENDING DETAILS ARE OUT
TO OUT OF BAR EXCEPT AS NOTED.

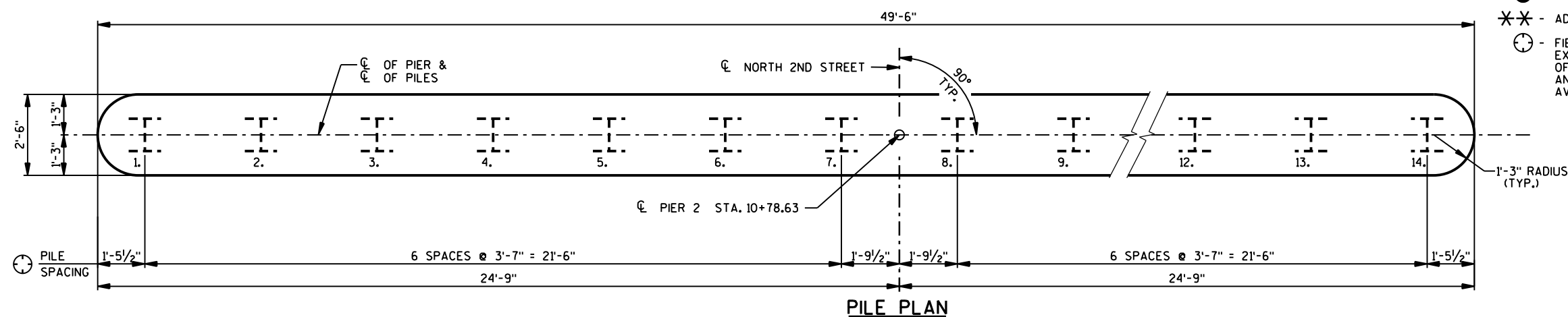
LEGEND

- - INDICATES GIRDER NUMBER.
- ▲ - 4"x 3/4" PREFORMED FILLER BETWEEN GIRDERS.
- - KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ** - ADJACENT TO EACH PILE, ONE SIDE ONLY.

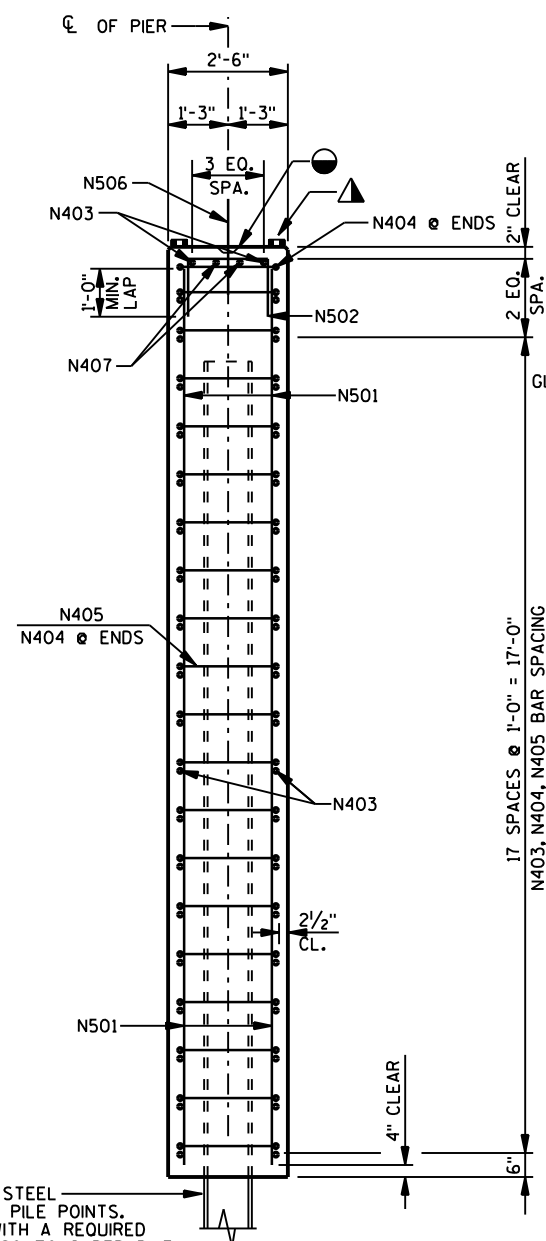
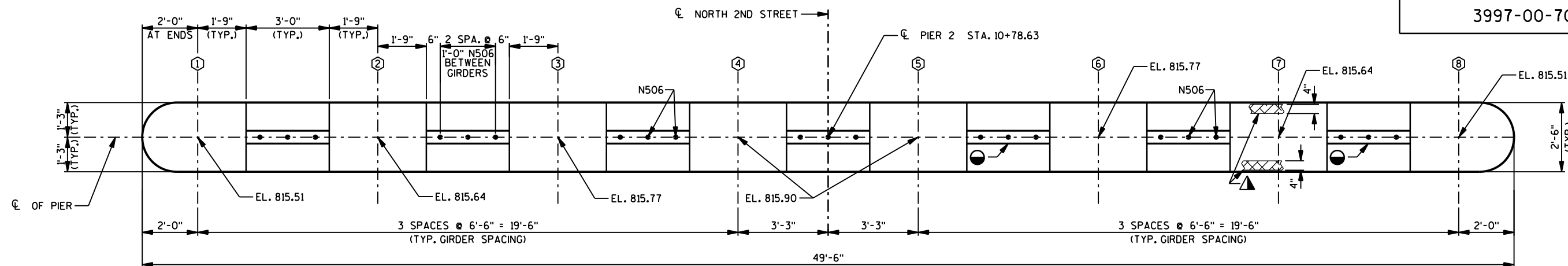
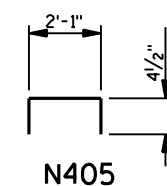
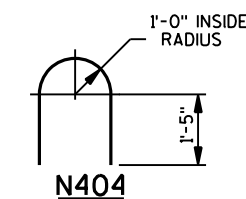
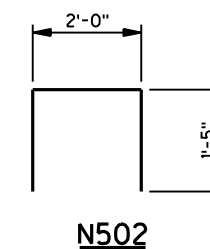
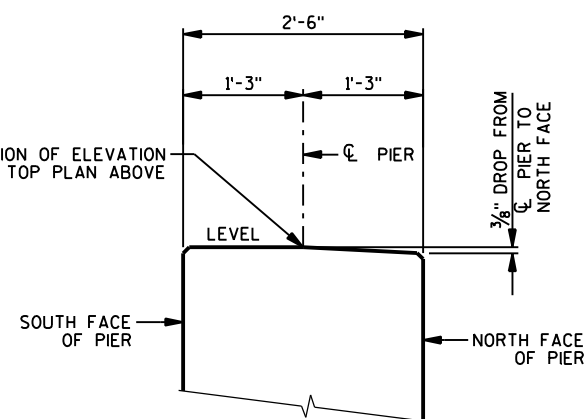
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-209			
DRAWN BY RLR		PLANS CK'D. LJR	
PIER 1 DETAILS			SHEET 13 OF 24

**LEGEND**

- ◻ - INDICATES GIRDER NUMBER.
- ▲ - 4"x 3/4" PREFORMED FILLER BETWEEN GIRDERS.
- - KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ✱✱ - ADJACENT TO EACH PILE, ONE SIDE ONLY.
- ⊙ - FIELD VERIFY LOCATION OF ANY REMNANT FOUNDATION OR EXISTING PILING BEFORE DRIVING NEW PILES. ADJUST LOCATION OF NEW PILES UP TO 6'-6" MAX. AND 3'-0" MIN. SPACING AND/OR REMOVE ANY REMNANT FOUNDATIONS OR PILING TO AVOID CONFLICTS.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-209			
DRAWN BY RLR		PLANS CK'D. LJR	
PIER 2			SHEET 14 OF 24

LOCATION OF ELEVATION
GIVEN ON PIER TOP PLAN ABOVE

COATED 45 LBS. UNCOATED 4100 LBS.

MARK	NO. REQ'D	LENGTH	BENT	LOCATION
N501	102	18'-6"		PIER - VERT.
N502	25	4'-7"	X	PIER - STIRRUPS - TOP - VERT.
N403	80	24'-6"		PIER - TOP & SIDES - HORIZ.
N404	40	6'-1"	X	PIER - AT ENDS - HORIZ.
N405	266	2'-8"	X	PIER - TIES - HORIZ.
N506	21	2'-0"		PIER - DOWELS @ TOP - VERT.
N407	4	25'-7"		PIER - TOP - HORIZ.

C - THESE BARS SHALL BE EPOXY COATED.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR EXCEPT AS NOTED.

LEGEND

- - INDICATES GIRDER NUMBER.
- ▲ - 4"x 3/4" PREFORMED FILLER BETWEEN GIRDERS.
- - KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ✱✱ - ADJACENT TO EACH PILE, ONE SIDE ONLY.

SUPPORT PIER ON PILING STEEL
HP 12-INCH X 53 LB WITH PILE POINTS.
ESTIMATED 35'-0" LONG WITH A REQUIRED
DRIVING RESISTANCE OF 220 TONS PER PILE
PER MODIFIED GATES FORMULA.
SEE SHEET 24 FOR PILE SPLICE DETAILS.

TYPICAL SECTION THRU PIER

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-209			
DRAWN BY RLR		PLANS CK'D. LJR	
PIER 2 DETAILS		SHEET 15 OF 24	

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.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECTION 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

PRESTRESSING STRANDS SHALL BE 0.6" ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

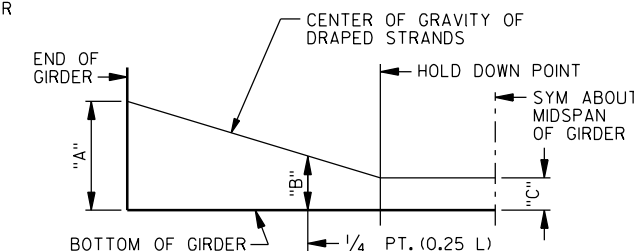
STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE SHEET 17.

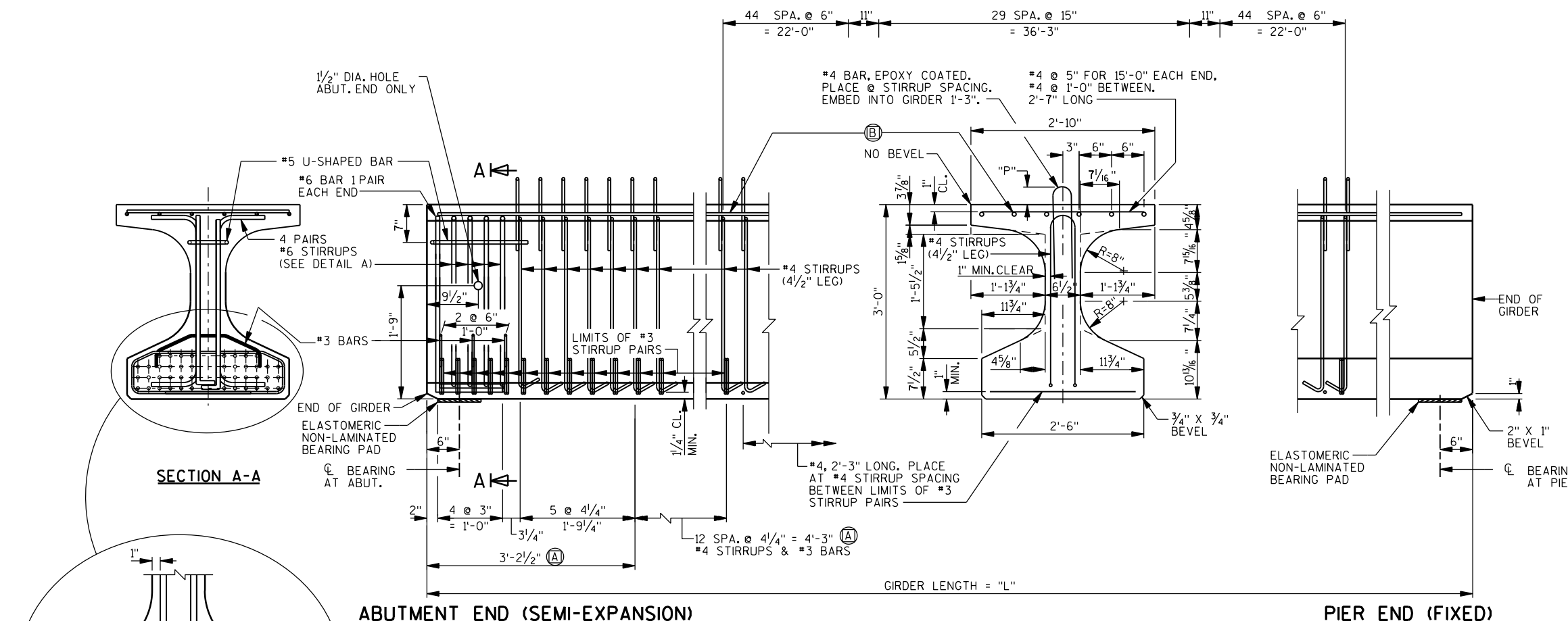
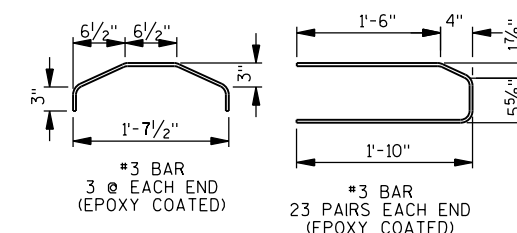
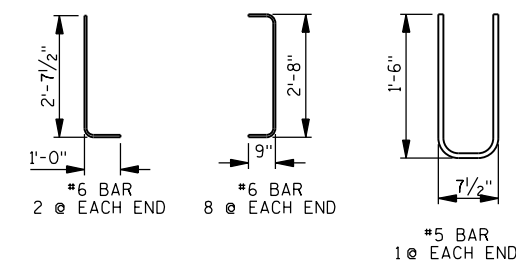
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

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.



DRAPED STRAND PROFILE



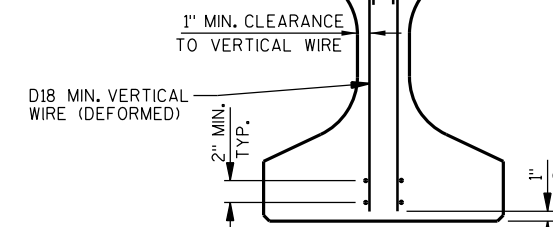
SIDE VIEW & TYP. SECTION

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

NO. 4 BAR, EPOXY COATED. PLACE AT STIRRUP SPACING REQUIRED FOR NON WWF STIRRUPS. EMBED INTO GIRDER 1'-3".

AREA OF HORIZ. WIRE SHALL BE $\geq$ 40% OF VERT. WIRE AREA (ASTM A497)
HORIZ. WIRES SHALL BE LOCATED IN TOP AND BOTTOM FLANGES AND NOT IN THE WEB.



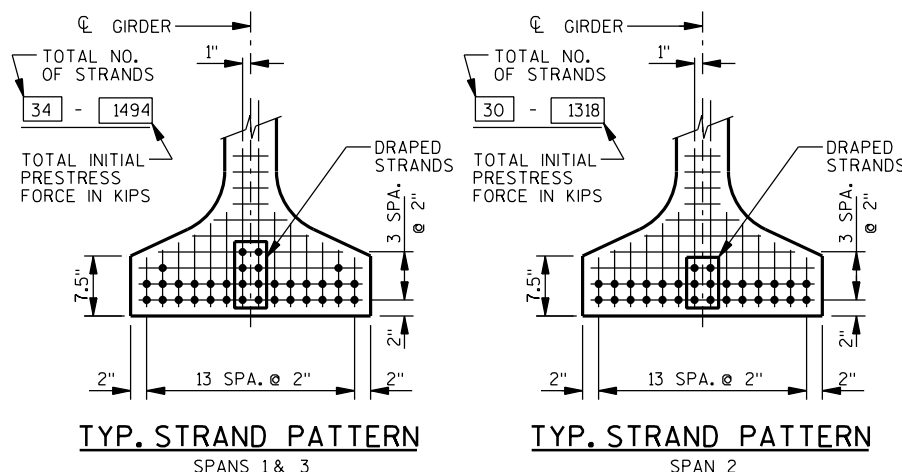
SECTION THRU GIRDER

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS ASTM A497 ($F_y = 70$ Ksi)

* 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 1/5 OF GIRDER	"P" 2ND 1/5 OF GIRDER	"P" 3RD 1/5 OF GIRDER	"P" 4TH 1/5 OF GIRDER	"P" 4TH 1/5 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED 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.)			
																					"A"	"B" MIN.	"B" MAX.	"C"
1 & 3	1-8	97'-0"	0.8	1.6	2.1	2.5	2.6	2.5	2.1	1.5	0.8	8000	7.75"	7.75"	7.75"	7.75"	7.75"	0.6	34	6800	31	11.5	14.5	5
2	1-8	97'-0"	0.8	1.5	2.0	2.4	2.5	2.4	2.0	1.5	0.8	8000	7.75"	9.00"	9.00"	9.00"	7.75"	0.6	30	6800	32	11	14	4



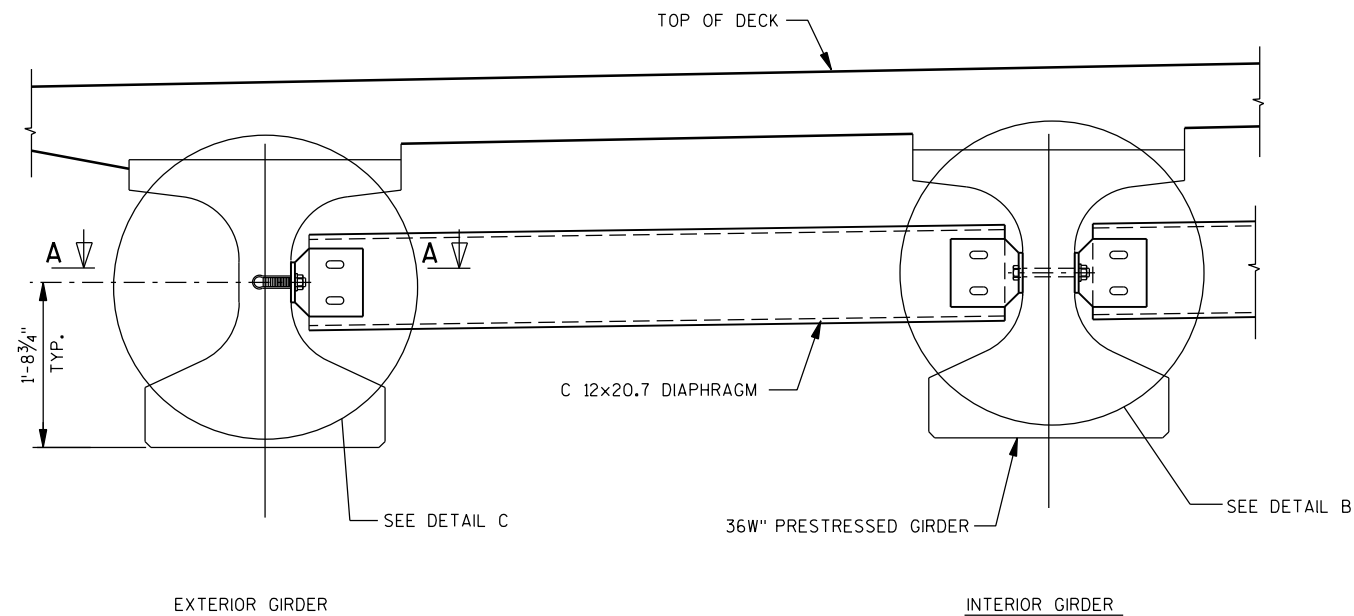
TYP. STRAND PATTERN

SPANS 1 & 3

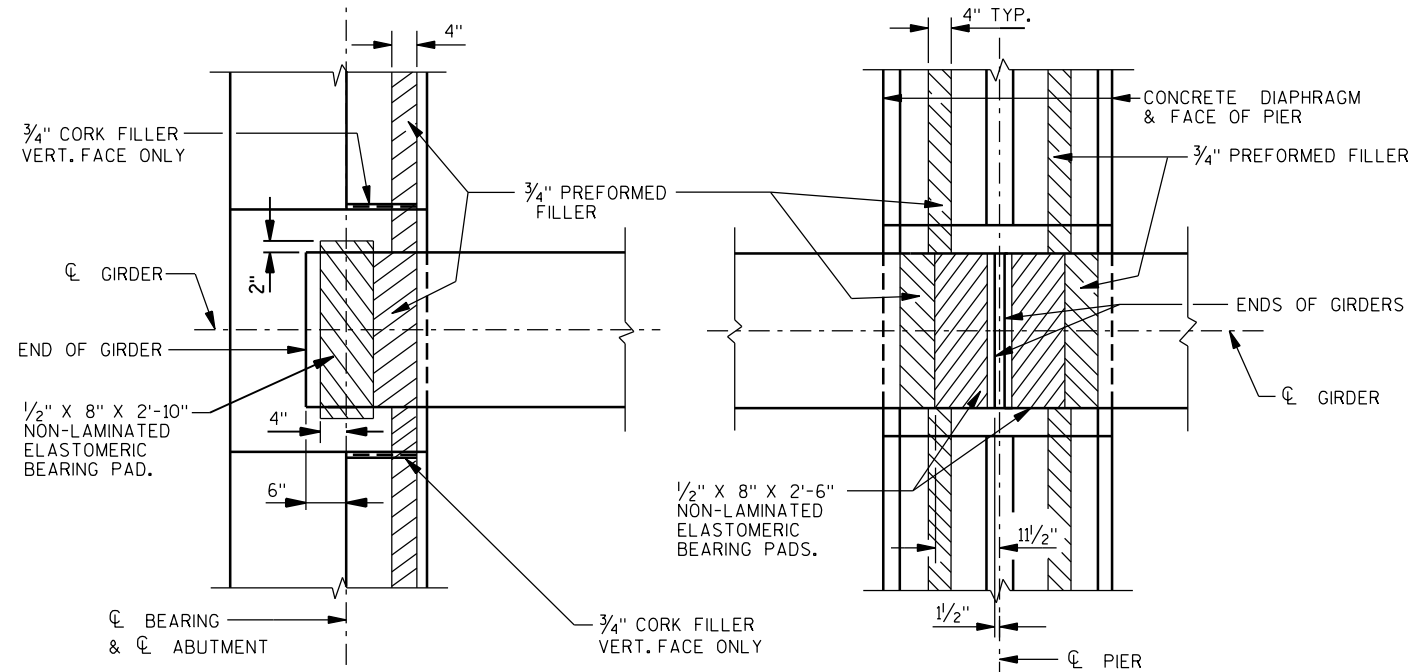
TYP. STRAND PATTERN

SPAN 2

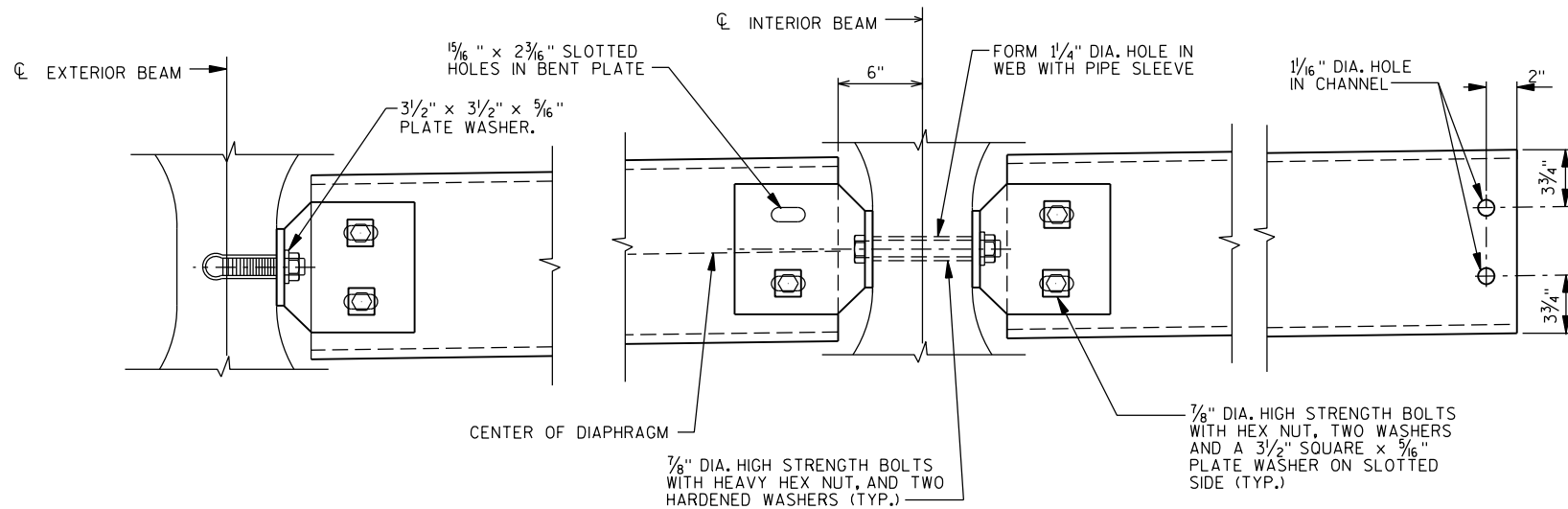
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY		RLR	PLANS CK'D. LJR
36W" PRESTRESSED GIRDER DETAILS		SHEET 16 OF 24	



PART TRANSVERSE SECTION AT DIAPHRAGM

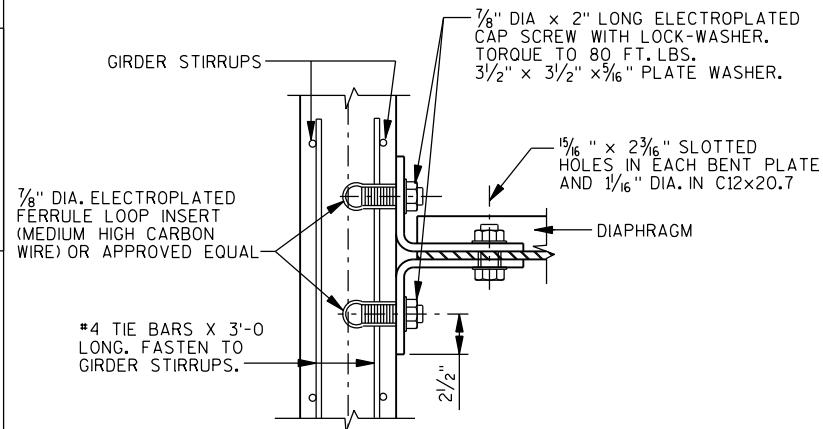
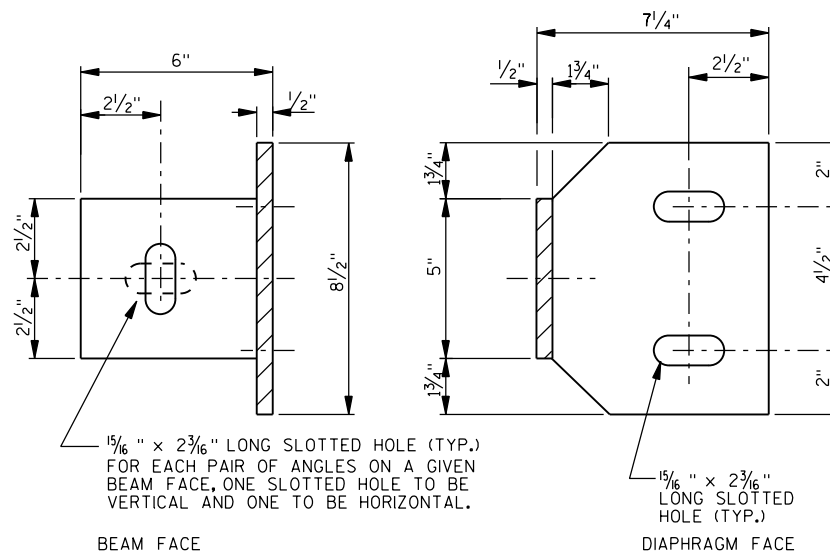


BEARING PAD DETAIL



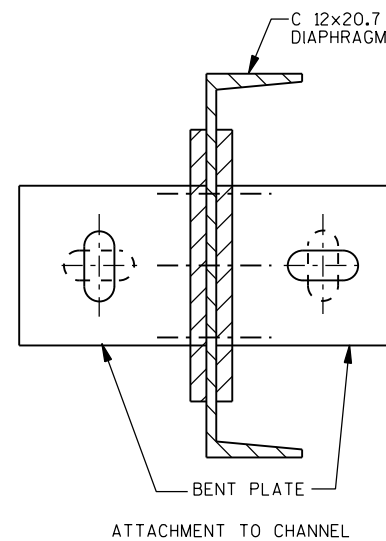
DETAIL C

DETAIL B

SECTION A-A
(FOR EXTERIOR ATTACHMENT)

BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-14-209", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

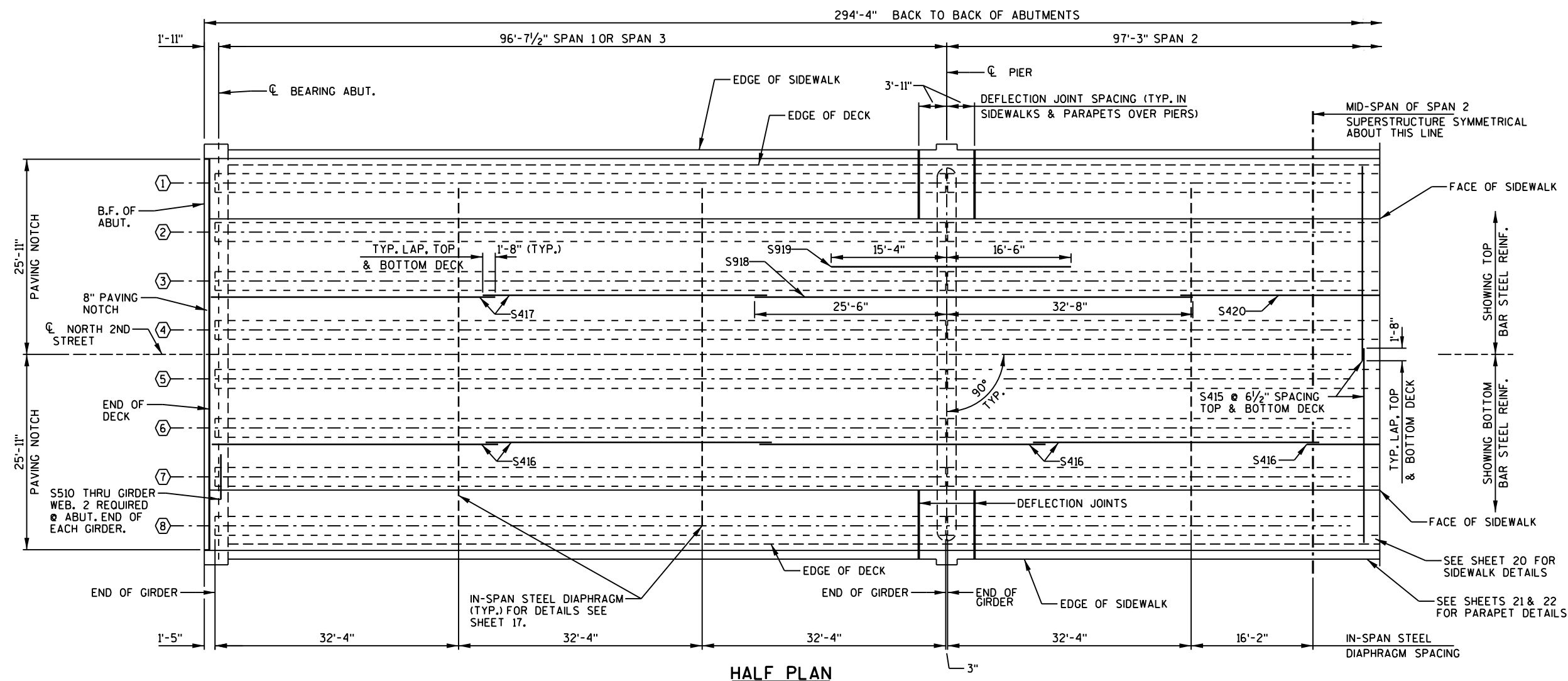
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

FOR STEEL DIAPHRAGM SPACING SEE SHEET 18.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY		RLR	PLANS CK'D. LJR
STEEL DIAPHRAGM & BEARING PAD DETAILS		SHEET 17 OF 24	



GENERAL NOTES

○ - INDICATES GIRDER NUMBER

SEE SHEET 19 FOR TRANSVERSE AND LONGITUDINAL BAR SPACING.

TOP OF DECK ELEVATIONS

LOCATION	SPAN POINT	EAST EDGE OF DECK	C/L GIRDER 8	C/L GIRDER 7	C/L GIRDER 6	C/L GIRDER 5	C/L NORTH 2ND STREET	C/L GIRDER 4	C/L GIRDER 3	C/L GIRDER 2	C/L GIRDER 1	WEST EDGE OF DECK
S. ABUT.	1	816.50	816.55	816.68	816.81	816.94	817.00	816.94	816.81	816.68	816.55	816.50
	1.1	816.85	816.90	817.03	817.16	817.29	817.35	817.29	817.16	817.03	816.90	816.85
	1.2	817.21	817.26	817.39	817.52	817.65	817.72	817.65	817.52	817.39	817.26	817.21
	1.3	817.58	817.62	817.75	817.88	818.01	818.08	818.01	817.88	817.75	817.62	817.58
	1.4	817.92	817.97	818.10	818.23	818.36	818.43	818.36	818.23	818.10	817.97	817.92
	1.5	818.24	818.29	818.42	818.55	818.68	818.74	818.68	818.55	818.42	818.29	818.24
	1.6	818.52	818.57	818.70	818.83	818.96	819.03	818.96	818.83	818.70	818.57	818.52
	1.7	818.78	818.83	818.96	819.09	819.22	819.28	819.22	819.09	818.96	818.83	818.78
	1.8	819.01	819.06	819.19	819.32	819.45	819.51	819.45	819.32	819.19	819.06	819.01
PIER 1	1.9	819.20	819.25	819.38	819.51	819.64	819.71	819.64	819.51	819.38	819.25	819.20
	2	819.37	819.42	819.55	819.68	819.81	819.87	819.81	819.68	819.55	819.42	819.37
	2.1	819.51	819.56	819.69	819.82	819.95	820.01	819.95	819.82	819.69	819.56	819.51
	2.2	819.61	819.66	819.79	819.92	820.05	820.12	820.05	819.92	819.79	819.66	819.61
	2.3	819.69	819.74	819.87	820.00	820.13	820.19	820.13	820.00	819.87	819.74	819.69
	2.4	819.74	819.78	819.91	820.04	820.17	820.24	820.17	820.04	819.91	819.78	819.74
	2.5	819.75	819.80	819.93	820.06	820.19	820.25	820.19	820.06	819.93	819.80	819.75
	2.6	819.74	819.78	819.91	820.04	820.17	820.24	820.17	820.04	819.91	819.78	819.74
	2.7	819.69	819.74	819.87	820.00	820.13	820.19	820.13	820.00	819.87	819.74	819.69
PIER 2	2.8	819.61	819.66	819.79	819.92	820.05	820.12	820.05	819.92	819.79	819.66	819.61
	2.9	819.51	819.56	819.69	819.82	819.95	820.01	819.95	819.82	819.69	819.56	819.51
	3	819.37	819.42	819.55	819.68	819.81	819.87	819.81	819.68	819.55	819.42	819.37
	3.1	819.20	819.25	819.38	819.51	819.64	819.71	819.64	819.51	819.38	819.25	819.20
	3.2	819.01	819.06	819.19	819.32	819.45	819.51	819.45	819.32	819.19	819.06	819.01
	3.3	818.78	818.83	818.96	819.09	819.22	819.28	819.22	819.09	818.96	818.83	818.78
	3.4	818.52	818.57	818.70	818.83	818.96	819.03	818.96	818.83	818.70	818.57	818.52
	3.5	818.24	818.29	818.42	818.55	818.68	818.74	818.68	818.55	818.42	818.29	818.24
	3.6	817.92	817.97	818.10	818.23	818.36	818.43	818.36	818.23	818.10	817.97	817.92
N. ABUT.	3.7	817.58	817.62	817.75	817.88	818.01	818.08	818.01	817.88	817.75	817.62	817.58
	3.8	817.21	817.26	817.39	817.52	817.65	817.72	817.65	817.52	817.39	817.26	817.21
	3.9	816.85	816.90	817.03	817.16	817.29	817.35	817.29	817.16	817.03	816.90	816.85
	4	816.49	816.53	816.66	816.79	816.92	816.99	816.92	816.79	816.66	816.53	816.49

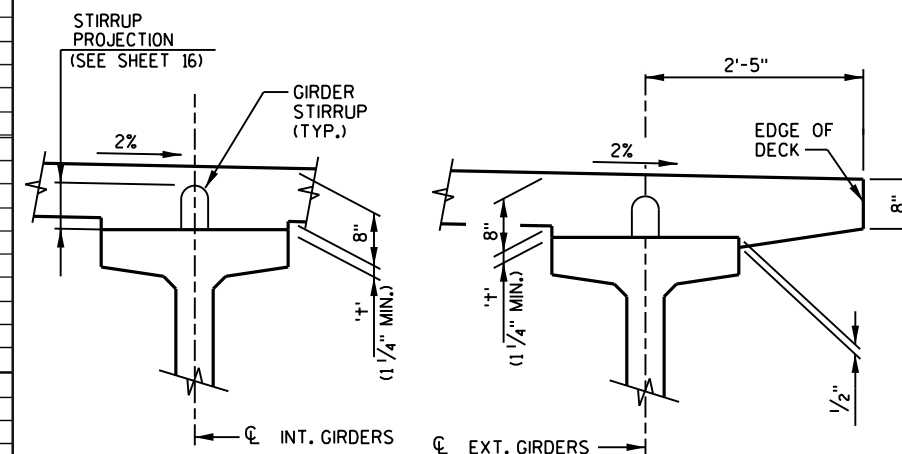
TO DETERMINE '+', ELEV. OF TOP OF GIRDERS AT CL OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. TO DETERMINE THE TOP OF DECK ELEVATION FOR POINT REFERRED USE TABLE ON THIS SHEET AND ADJUST FOR CROSS SLOPE OVER GIRDER. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
 - TOP OF GIRDER ELEVATION
 + DEADLOAD DEFLECTION (SEE SHEET 16)
 - DECK THICKNESS

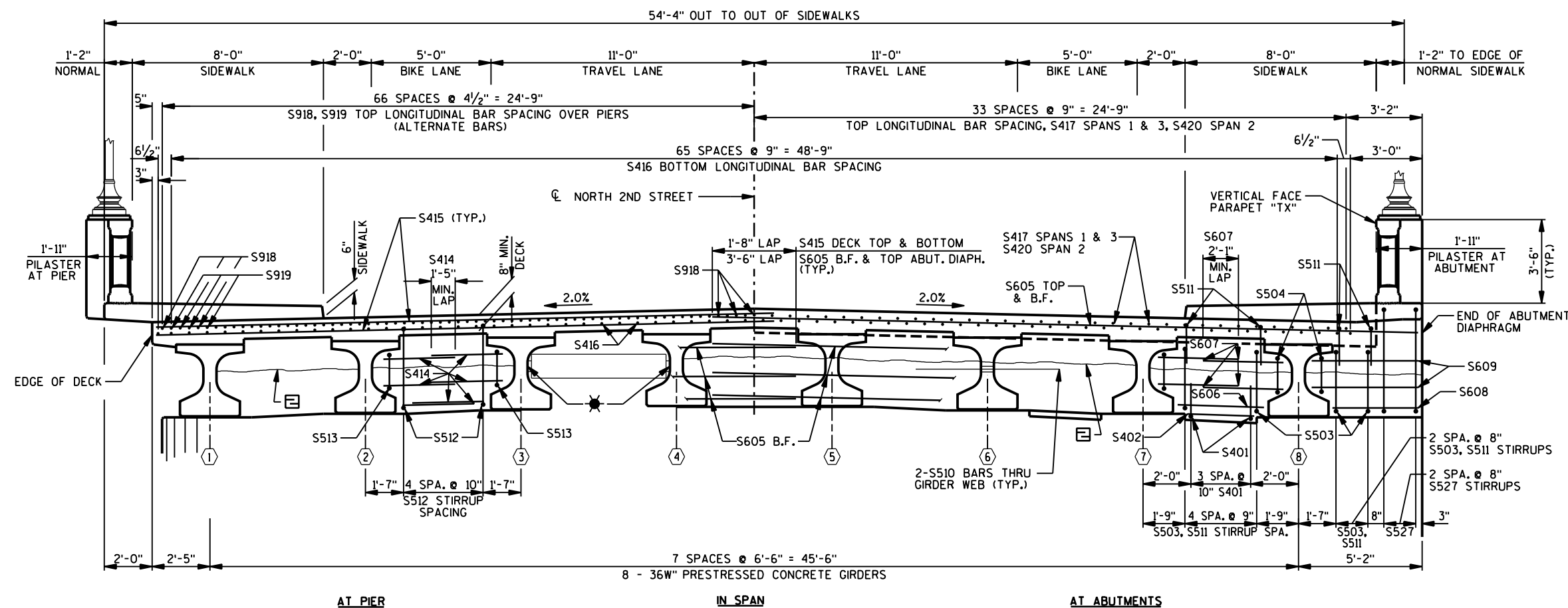
 = HAUNCH HEIGHT '+'

IF 1 1/4" MINIMUM HAUNCH HEIGHT '+' 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. MAX. HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3".

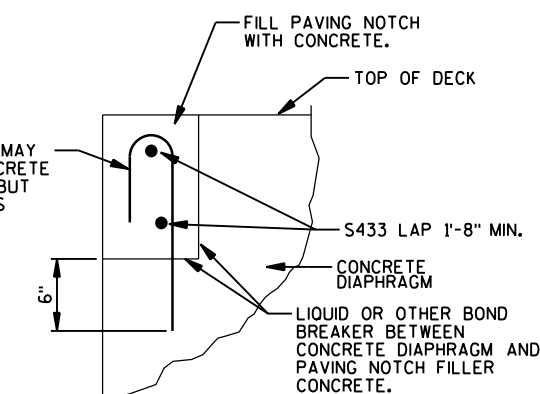
NOTE: AN AVERAGE HAUNCH ("+") OF 3 3/4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES."



DECK HAUNCH DETAIL



S432 @ 2'-0" CENTERS, MAY BE PLACED AFTER CONCRETE DIAPHRAGM IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

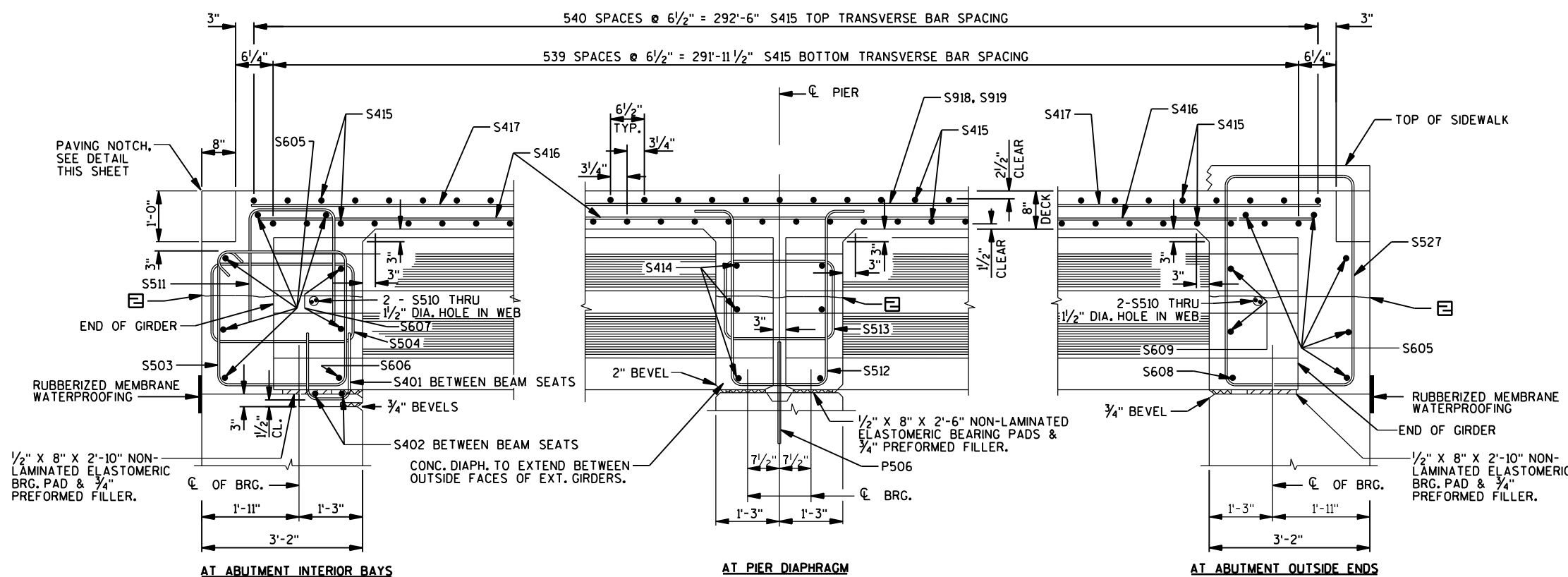


PAVING NOTCH DETAIL

LEGEND

- - INDICATES GIRDER NUMBER
- - OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDERS. IF USED DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
- ★ - FOR DETAILS OF STEEL DIAPHRAGMS AND DIAPHRAGM INSERTS, SEE SHEET 17. FOR LAYOUT AND SPACING OF STEEL DIAPHRAGMS, SEE HALF PLAN, SHEET 18.

F.F. - FRONT FACE B.F. - BACK FACE



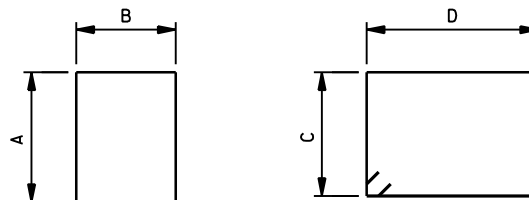
PART LONGITUDINAL SECTION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-209			
DRAWN BY RLR		PLANS CK'D. LJR	
SUPERSTRUCTURE SECTIONS			SHEET 19 OF 24

BILL OF BARS (COATED) 128,250 LBS.

MARK	NUMBER REQ'D.	LENGTH	BENT	DESCRIPTION
S401	56	3'-9"	X	DIAPH. @ ABUT. - SEMI-EXP. NOTCH - STIRRUP - VERT.
S402	28	2'-9"		DIAPH. @ ABUT. - SEMI-EXP. NOTCH - HORIZ.
S503	82	11'-4"	X	DIAPH. @ ABUT. - STIRRUP - VERT.
S504	32	9'-0"	X	DIAPH. @ ABUT. - STIRRUP - VERT.
S605	20	29'-6"		DIAPH. @ ABUT. - B.F. & TOP - HORIZ.
S606	14	3'-8"		DIAPH. @ ABUT. - F.F. - INTERIOR BAYS - HORIZ.
S607	56	3'-5"		DIAPH. @ ABUT. - F.F. - INTERIOR BAYS - HORIZ.
S608	4	3'-7"		DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S609	8	4'-5"		DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S510	32	6'-0"		DIAPH. @ ABUT. - 2 THRU GIRDER WEB - HORIZ.
S511	82	5'-5"	X	DIAPH. @ ABUT. - TOP STIRRUP - VERT.
S512	70	9'-4"	X	DIAPH. @ PIER - STIRRUP - VERT.
S513	28	7'-8"	X	DIAPH. @ PIER - STIRRUP - VERT.
S414	168	3'-1"		DIAPH. @ PIER - HORIZ.
S415	2162	25'-10"		DECK - TOP & BOTTOM - TRANS.
S416	544	38'-1"		DECK - BOTTOM - LONGIT.
S417	268	37'-10"		DECK - TOP @ ABUTS. & SPANS 1 & 3 - LONGIT.
S918	134	58'-2"		DECK - TOP - OVER PIER - LONGIT.
S919	132	31'-10"		DECK - TOP - OVER PIER - LONGIT.
S420	67	35'-3"		DECK - SPAN 2 - LONGIT.
S421	2344	2'-6"	X	SIDEWALK INTO SLAB - VERT.
S422	392	2'-10"		SIDEWALK - BOTTOM - TRANS.
S523	1172	9'-4"	X	SIDEWALK - TOP - TRANS.
S424	192	32'-7"		SIDEWALK - SPANS 1 & 3 - LONGIT.
S425	64	7'-6"		SIDEWALK - OVER PIERS - LONGIT.
S426	96	30'-10"		SIDEWALK - SPAN 2 - LONGIT.
S527	12	14'-10"	X	SIDEWALK & ABUT. DIAPH END STIRRUP - VERT.
S428	8	6'-6"	X	SIDEWALK & ABUT. DIAPH END - VERT.
S429	20	7'-6"	X	SIDEWALK & ABUT. DIAPH END - HORIZ.
S430	40	5'-8"	X	SIDEWALK - EDGE - ABUT. & PIER - TRANS.
S431	8	7'-8"	X	SIDEWALK - EDGE @ PIER - TRANS.
S432	52	1'-10"	X	PAVING NOTCH FILLER - VERT.
S433	8	26'-7"		PAVING NOTCH FILLER - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR REINFORCEMENT.



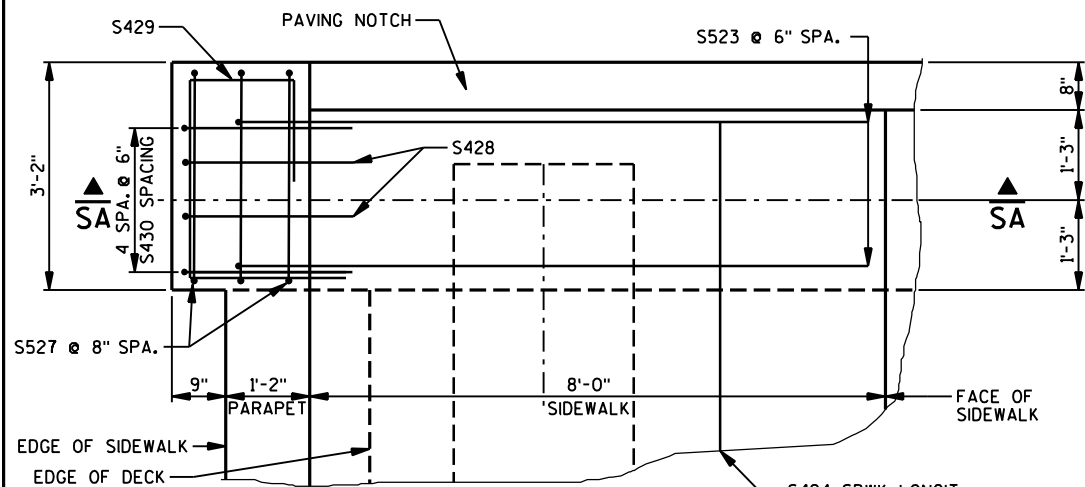
MARK	A	B
S401	1'-6"	11"
S511	1'-10"	2'-0"
S421	1'-0"	8"
S430	2'-9"	4"
S431	2'-6"	2'-10"

MARK	C	D
S503	2'-6"	2'-10"
S504	1'-4"	2'-10"
S513	1'-4"	2'-2"
S527	4'-3"	2'-10"

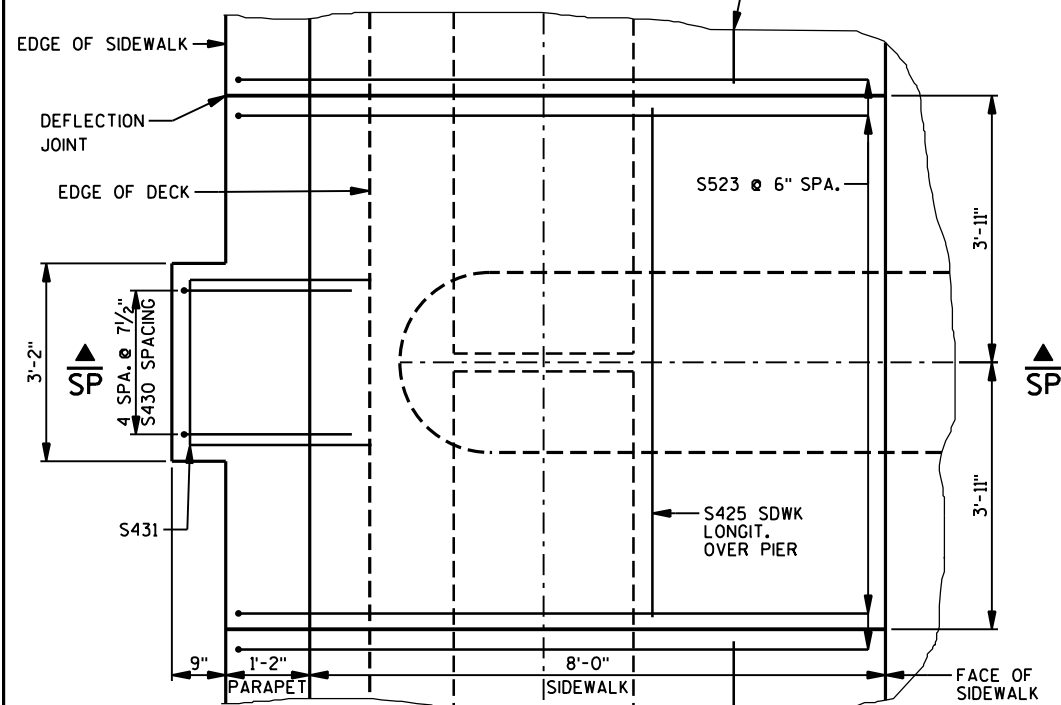
NOTE:

SEE SHEETS 21 & 22
FOR SPACING AND DETAILS
OF R501, R502 & R503
PARAPET/SIDEWALK STIRRUPS.

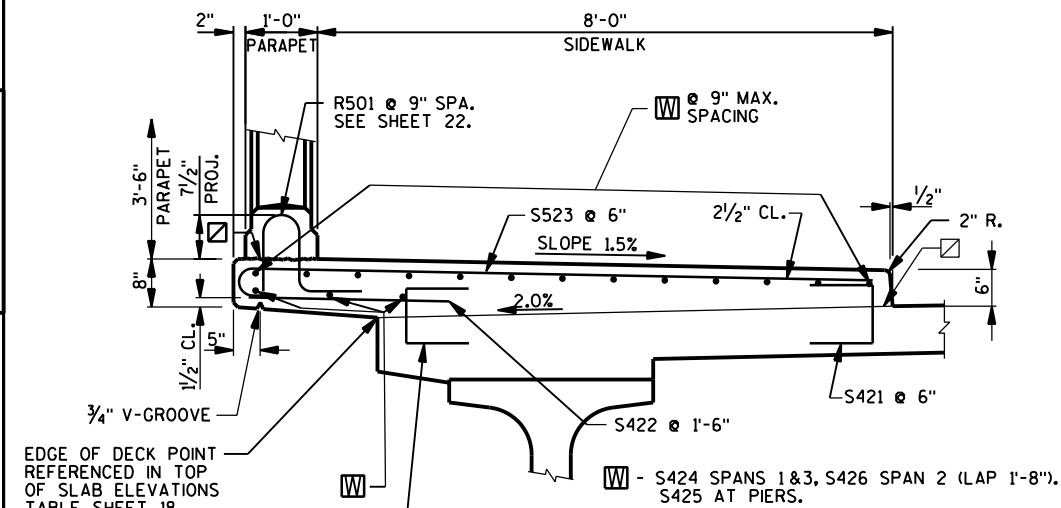
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY		RLR	PLANS CK'D. LJR
SUPERSTRUCTURE SECTIONS & DETAILS		SHEET 20 OF 24	



SIDEWALK PLAN AT ABUTMENT

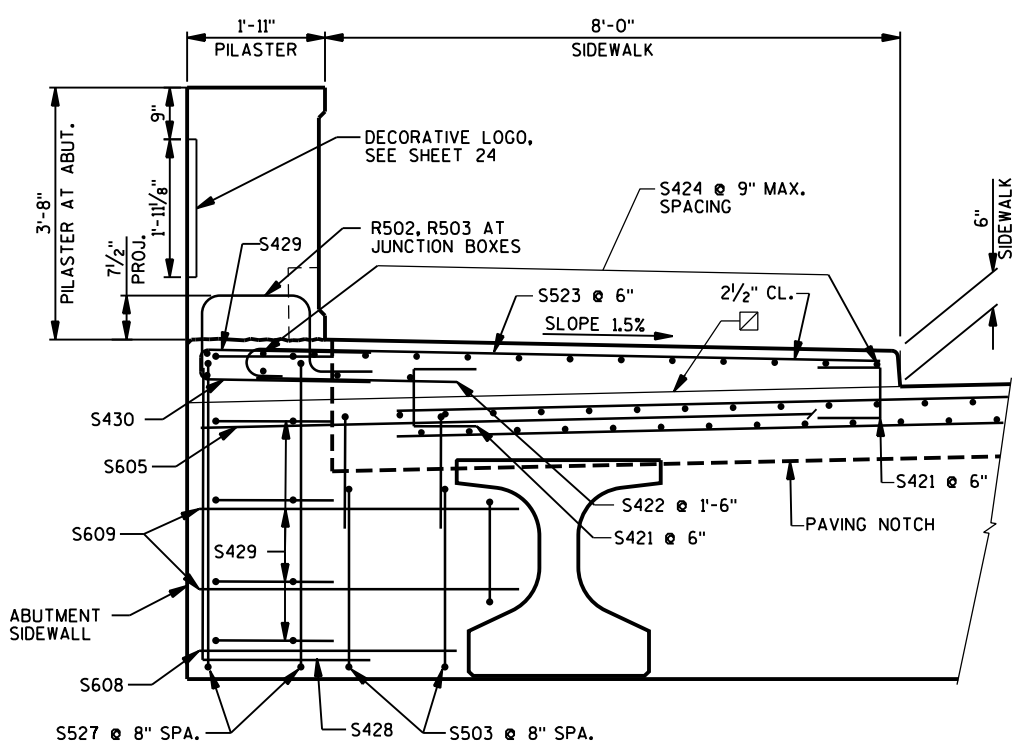


SIDEWALK PLAN AT PIER

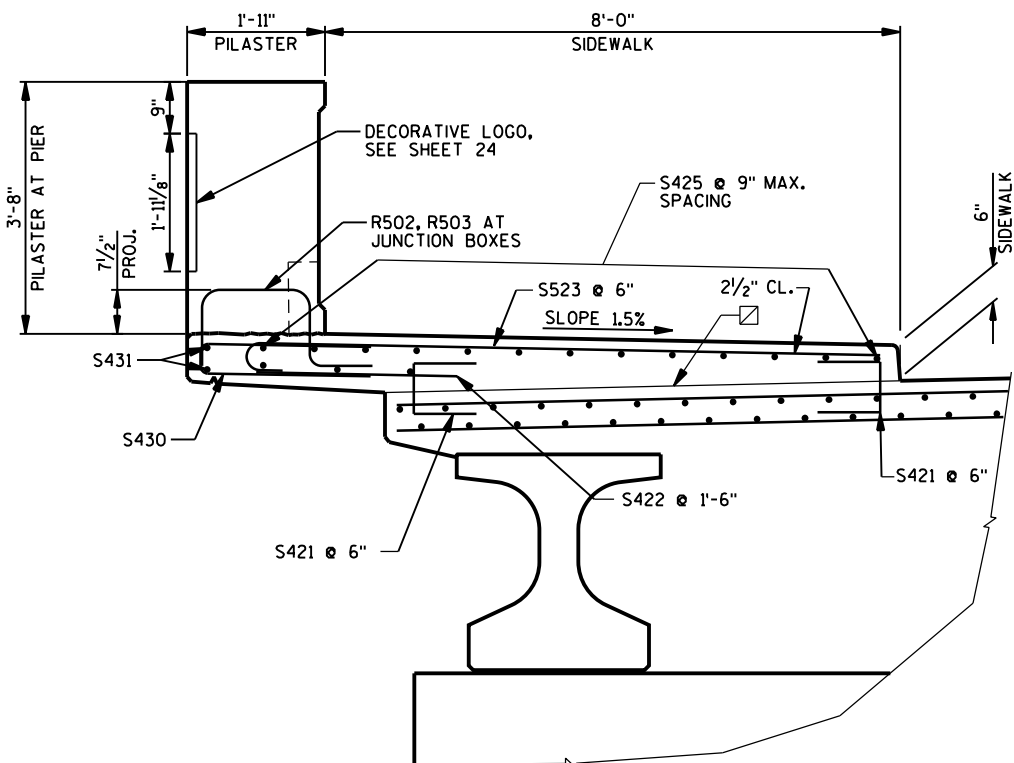


TYPICAL SECTION THRU SIDEWALK

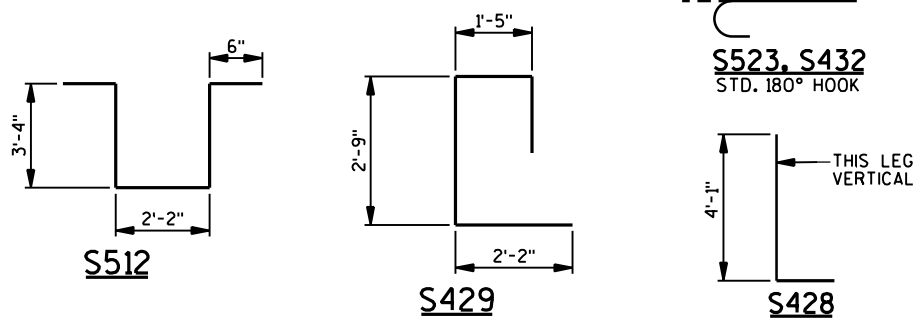
☐ - CONSTRUCTION JOINT
STRIKE OFF AS SHOWN
AND LEAVE ROUGH.

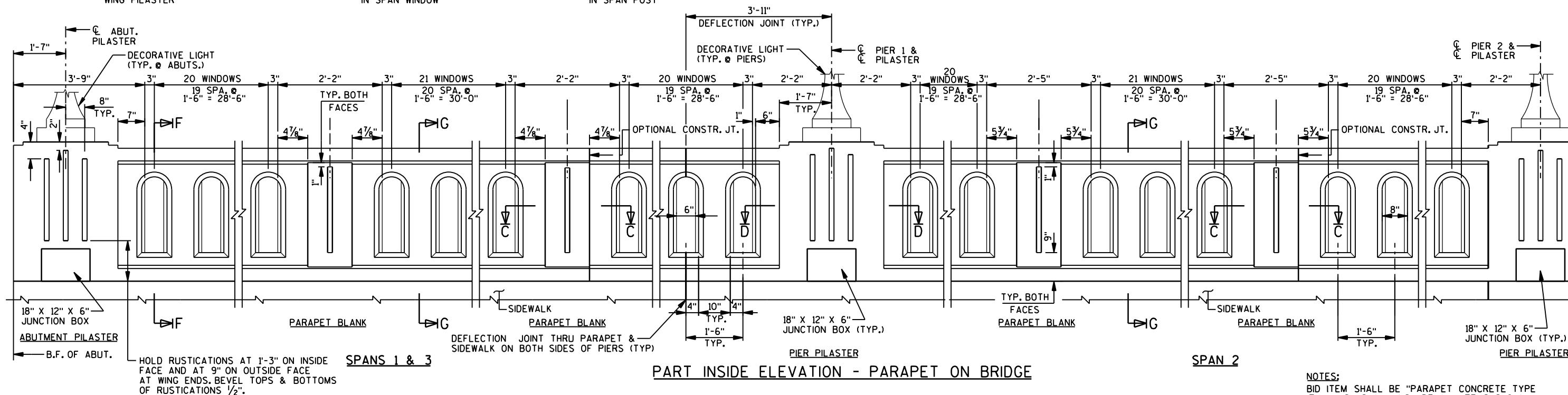
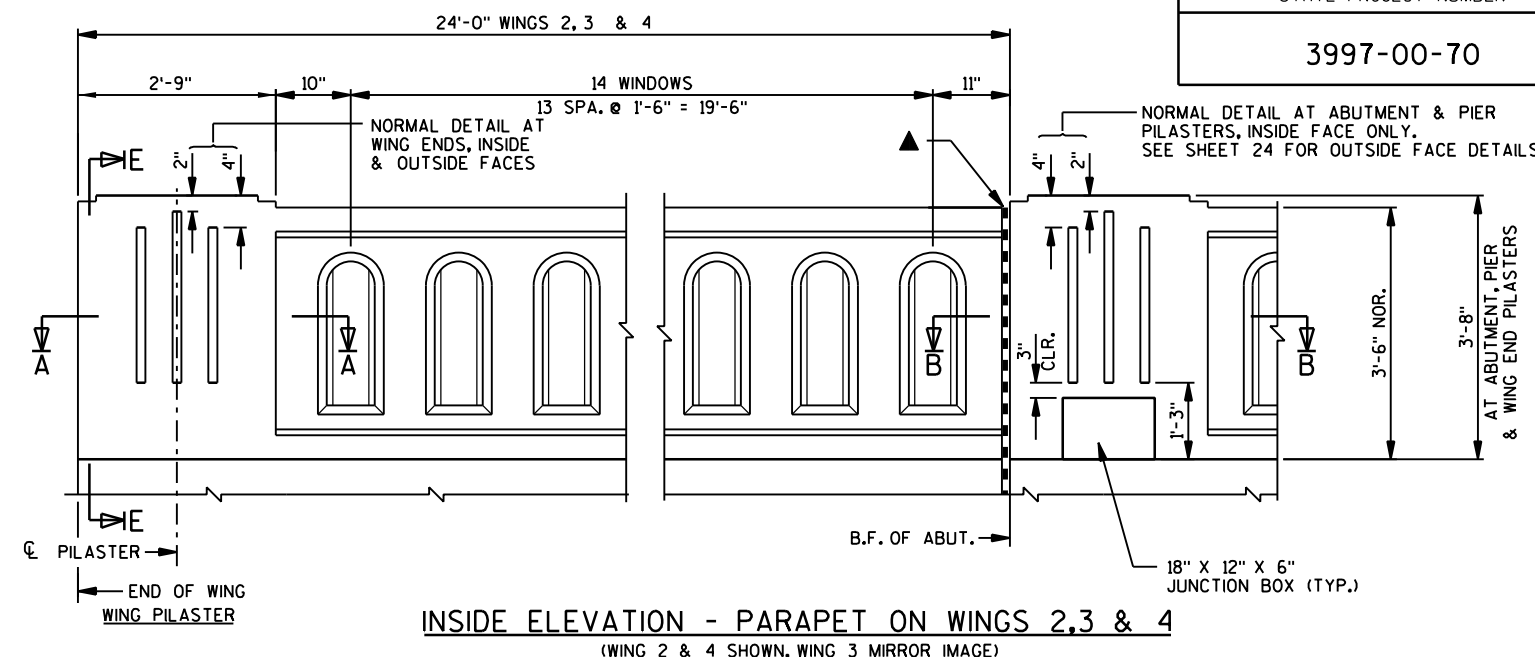


SECTION SA-SA THRU SIDEWALK AT ABUTMENTS



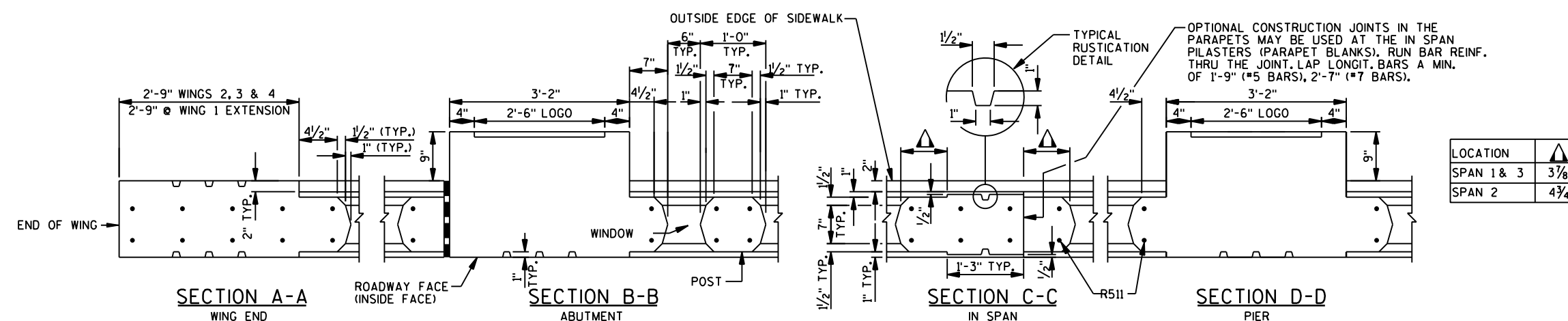
SECTION SP-SP THRU SIDEWALK AT PIERS





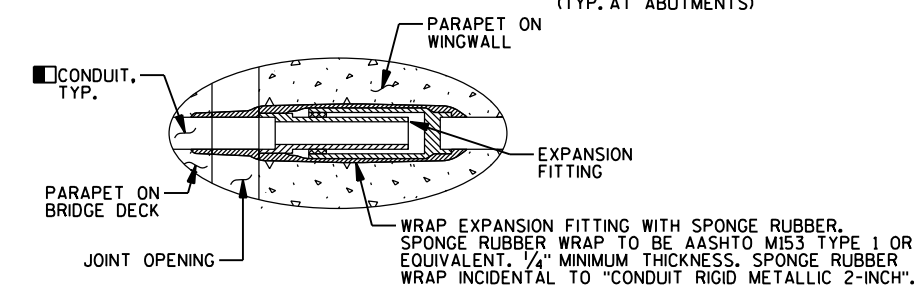
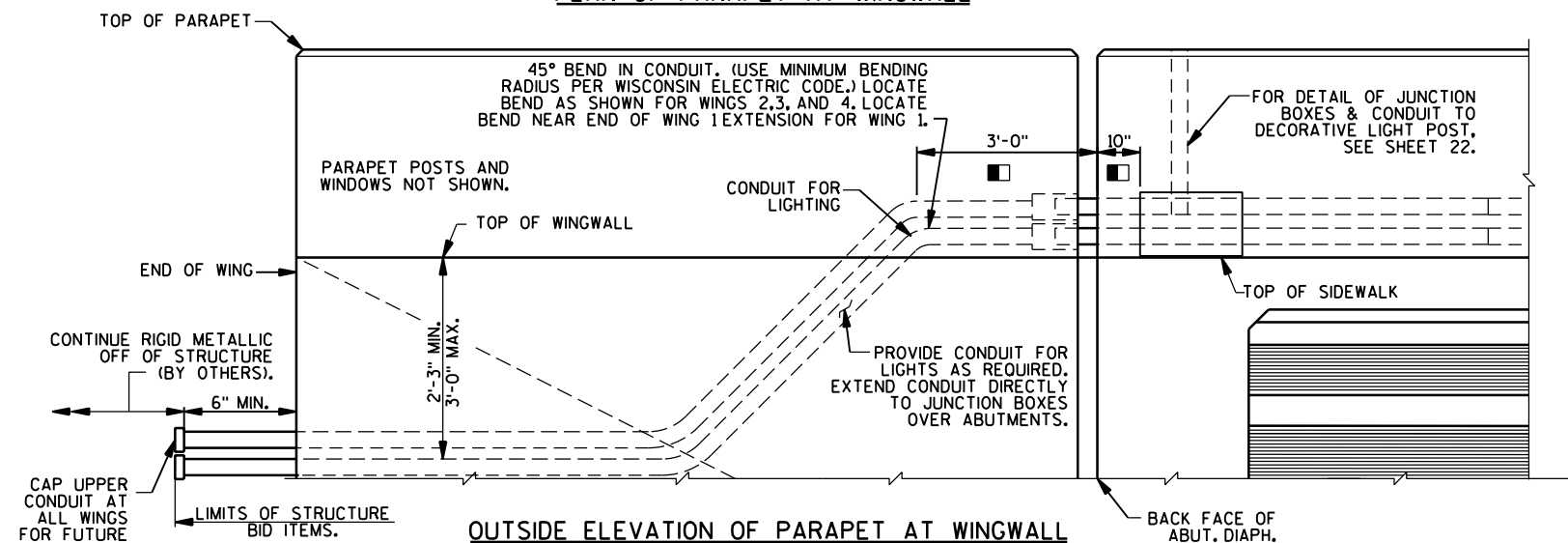
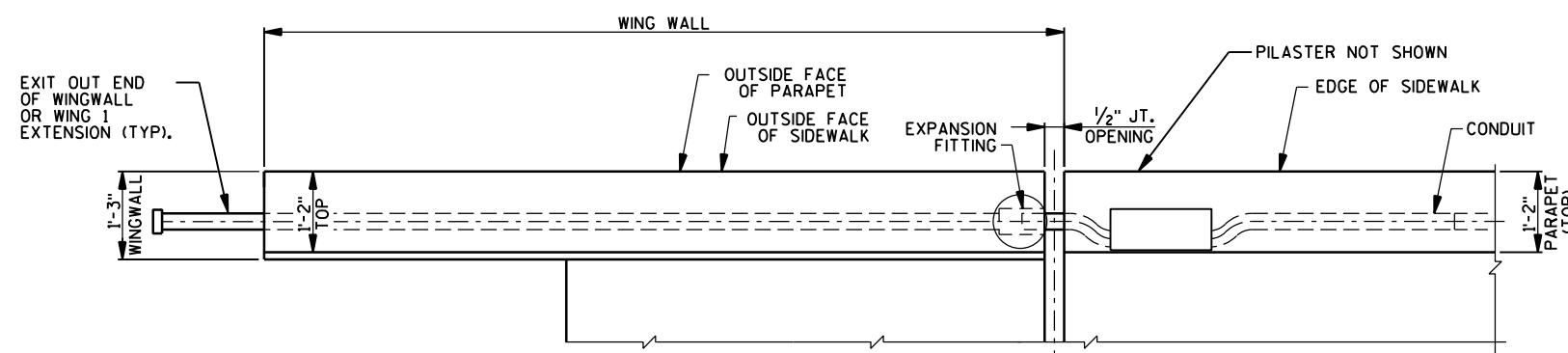
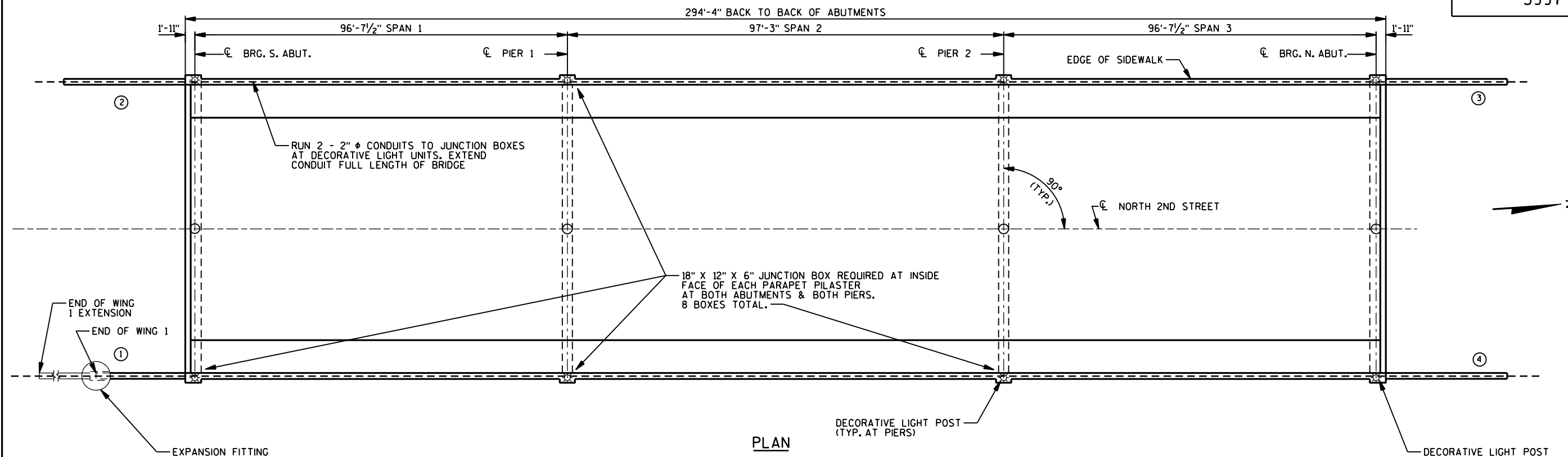
NOTES:
 BID ITEM SHALL BE "PARAPET CONCRETE TYPE
 'TX', WHICH SHALL INCLUDE ALL ITEMS SHOWN.

- ① - CONTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ▲ - 1/2" FILLER AT B.F. OF ABUT. EXTEND TO TOP OF PARAPET. SEAL ALL EXPOSED SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER (1" DEEP & HOLD 1/4" BELOW SURFACE OF CONCRETE).



LOCATION	
SPAN 1 & 3	3 7/8
SPAN 2	4 3/4

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
		DRAWN BY RLR	PLANS CK'D. LJR
VERTICAL FACE PARAPET "TX"		SHEET 21 OF 24	

**NOTES:**

BID ITEMS SHALL BE:
 "CONDUIT RIGID METALLIC 2-INCH"
 "JUNCTION BOXES 18X12X6-INCH", EACH
 "CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
 "ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURE"

EXPANSION FITTINGS AND ADAPTER FITTINGS TO BE INCLUDED IN THE BID ITEM "CONDUIT RIGID METALLIC 2-INCH".

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

APPROVED MANUFACTURERS - JUNCTION BOXES: SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING
 O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

JUNCTION BOX REQUIREMENTS

- PLACE A 18" X 12" X 6" JUNCTION BOX AT EACH LIGHT STANDARD (CENTERED ON LIGHT CL) AT SIDEWALK FACE OF EACH PARAPET PILASTER AT CL ABUTMENTS AND CL OF PIERS.

CONDUIT REQUIREMENTS

- USE (1) - 2" Ø CONDUIT TO PROVIDE ELECTRICAL SERVICE TO LIGHTS MOUNTED ON TOP OF THE PARAPET.
- USE (1) - 2" Ø CONDUIT FOR FUTURE UTILITIES

EXPANSION FITTING REQUIREMENTS

- USE AN APPROVED EXPANSION FITTING AT EACH SEMI-EXPANSION JOINT.
- INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

POSITION CONDUITS VERTICALLY TO ENSURE DRAINAGE OF CONDENSATE.

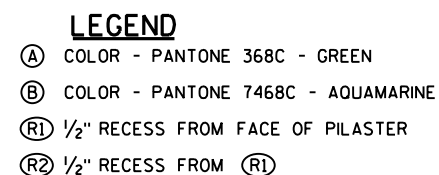
BRIDGE CONTRACTOR TO PROVIDE A PULL WIRE IN ALL CONDUIT FOR FUTURE CABLE INSTALLATION BY OTHERS AS PROVIDED IN THE STANDARD SPECIFICATIONS OR SPECIAL PROVISIONS.

LEGEND:

○ INDICATES WING NUMBER.

■ USE 2" Ø RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT EXTENDING 3'-0" INTO THE WING SIDE OF THE OPENING AND EXTENDING DIRECTLY INTO THE JUNCTION BOX ON THE SPAN SIDE OF THE OPENING. AT THE END OF WING 1, EXTEND 3'-0" INTO WING 1 AND 3'-0" INTO WING 1 EXTENSION.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-209			
DRAWN BY RLR		PLANS CK'D. LJR	
ELECTRICAL CONDUIT PLAN & DETAILS			SHEET 23 OF 24



PILE SPLICE DETAILS

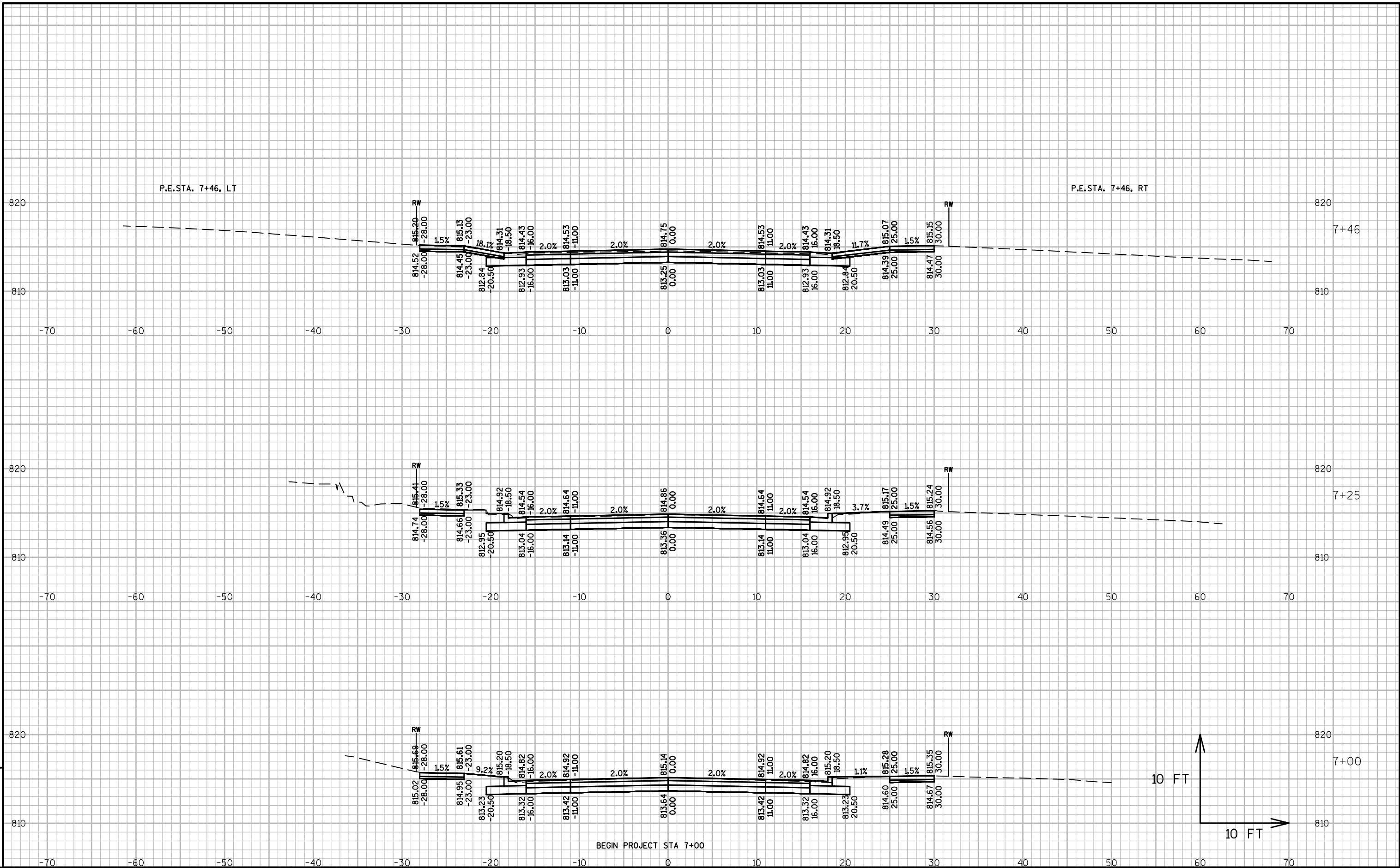
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-14-209	
DRAWN BY LJR		PLANS CK'D. JAS	
PILE SPICE & AESTHETIC DETAILS		SHEET 24 OF 24	

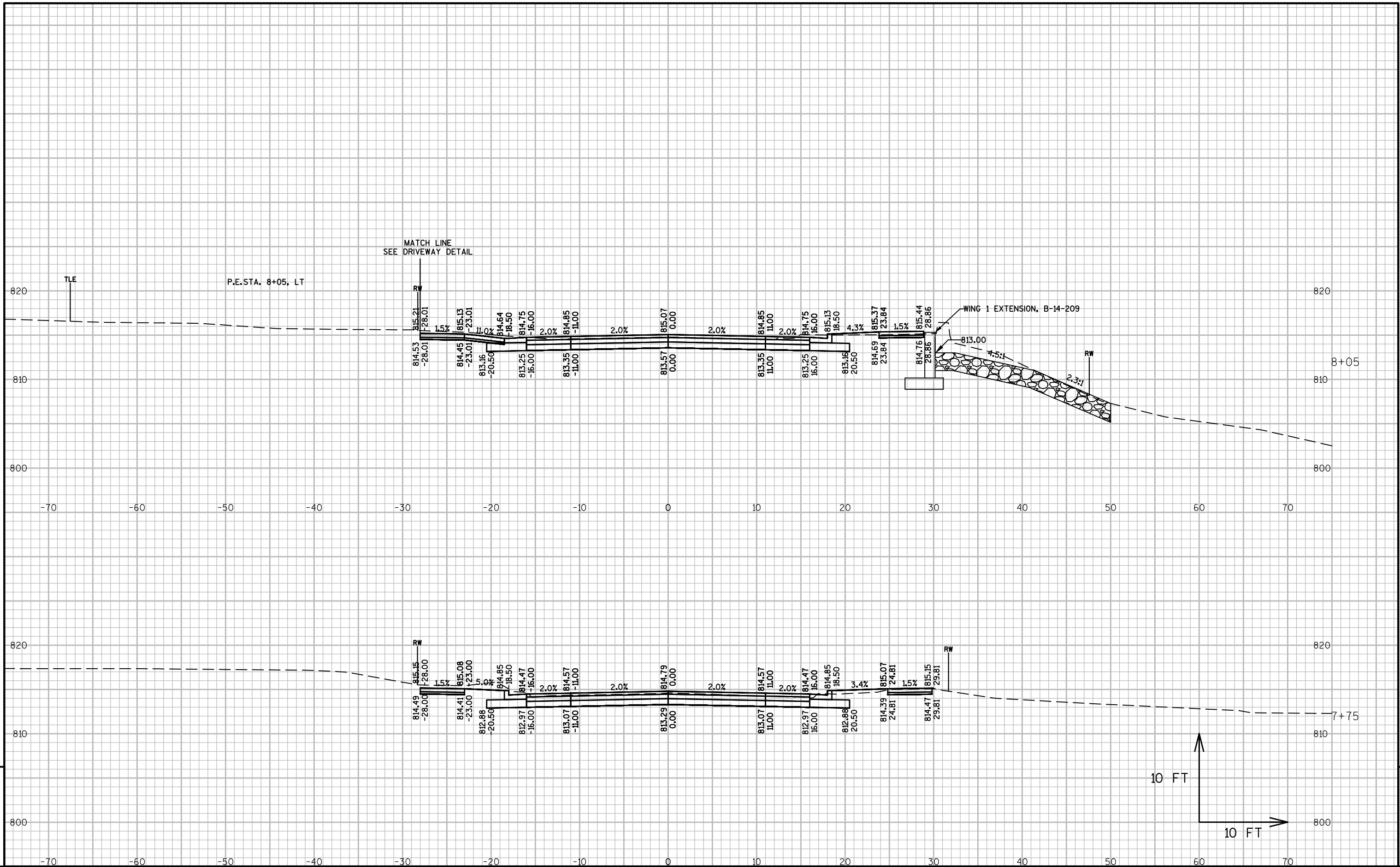
EARTHWORK PROJECT I.D. 3997-00-70 - N SECOND STREET - BRIDGE RECONSTRUCTION

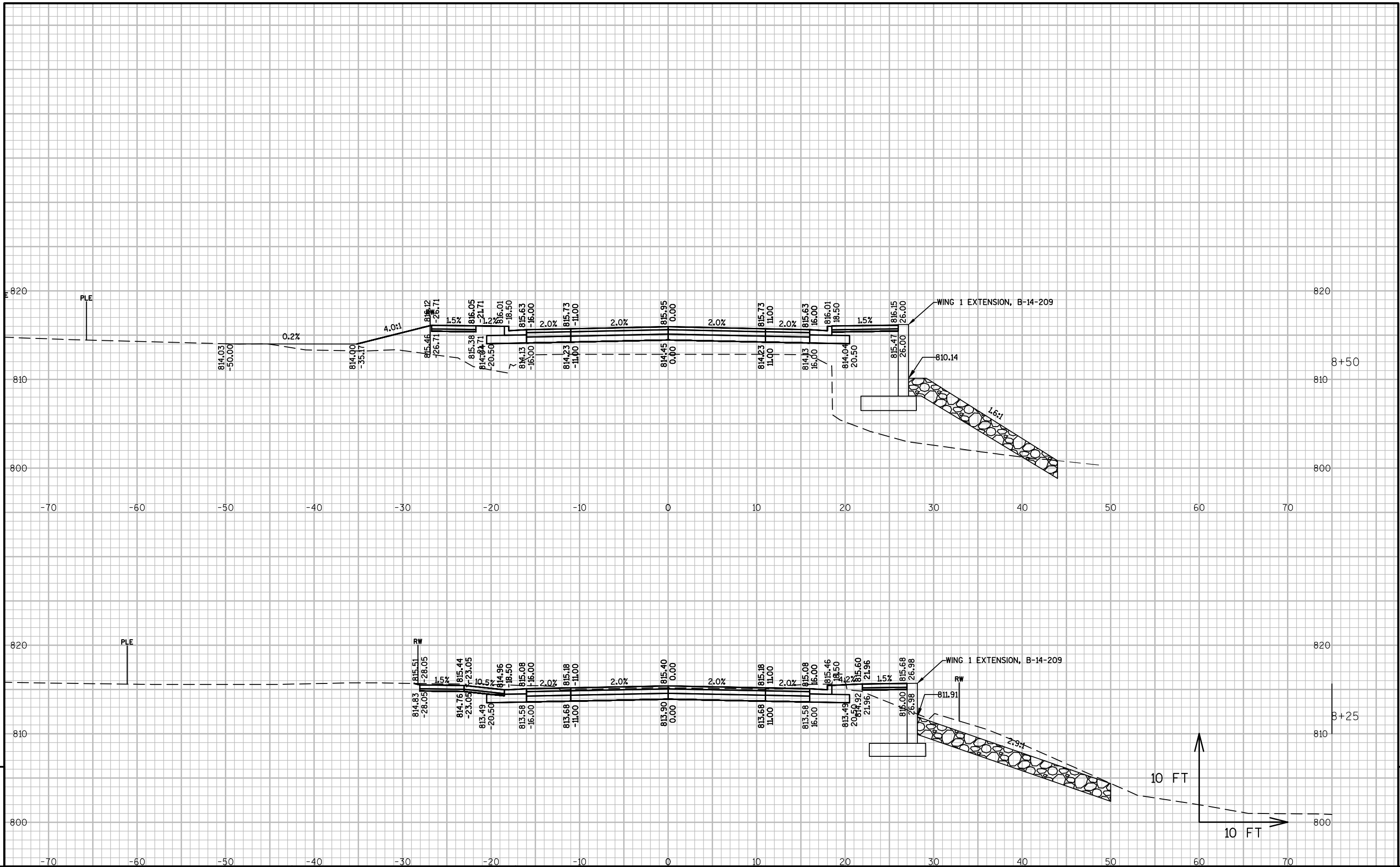
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
7+00		67	0	0	0	0	0	0	0	0
7+25.	25.00	68	0	0	63	0	0	63	0	62
7+46.	21.00	66	0	0	52	0	0	115	0	114
7+75.	29.00	65	0	1	70	0	1	185	1	184
8+05.	30.00	63	0	1	71	0	1	256	3	253
8+25.	20.00	71	0	7	50	0	3	306	7	299
8+50.	25.00	0	0	182	33	0	88	339	116	222
8+75.	25.00	0	0	392	0	0	266	339	448	-110
8+82.	7.00	0	0	404	0	0	103	339	577	-239
B-14-0209										
					339	0	462			

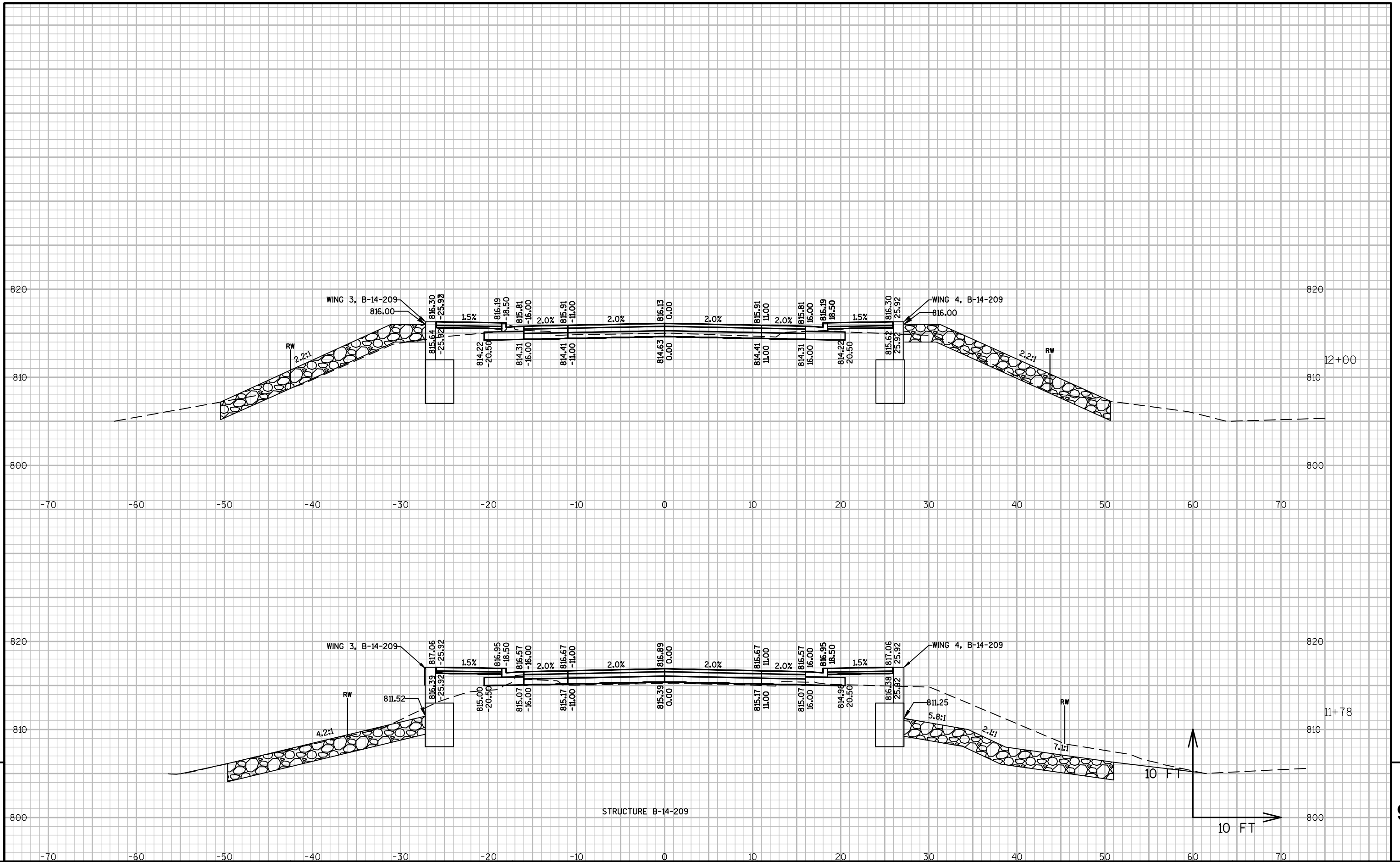
EARTHWORK PROJECT I.D. 3997-00-70 - N SECOND STREET - BRIDGE RECONSTRUCTION

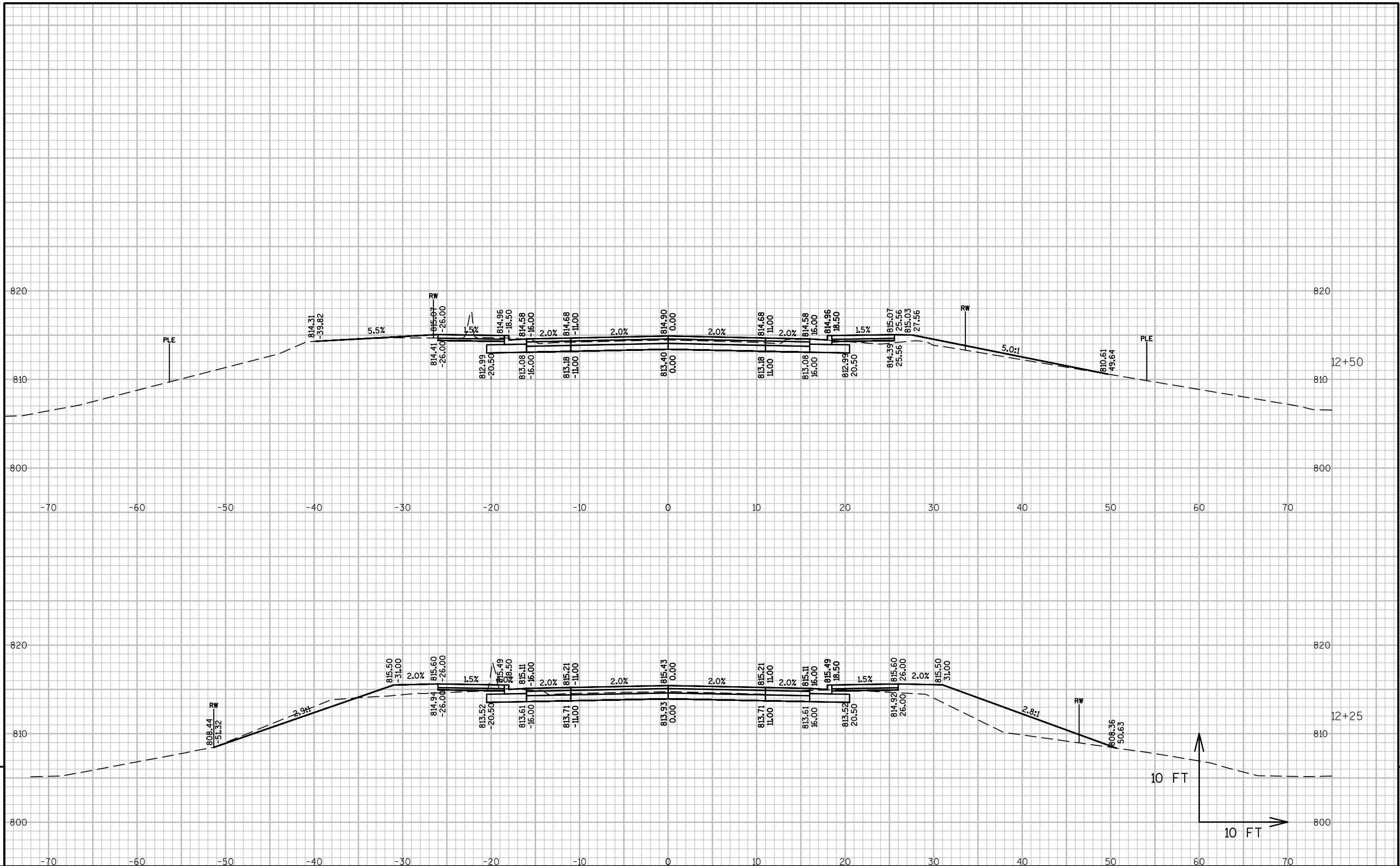
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	Expanded Rock 1.10	
B-14-0209											
11+78.		5	0	25	0	0	0	0	0	0	0
12+00	22.00	24	0	7	12	0	13	12	17	0	-5
12+25	25	49	0	51	33	0	27	45	50	0	-5
12+50	25.00	51	0	12	46	0	29	91	86	0	5
12+75	25	67	0	12	55	0	11	146	100	0	46
13+00	25.00	55	0	0	57	0	6	203	107	0	95
13+33	33.00	71	0	0	77	0	0	280	108	0	172
13+50	17	81	0	0	48	0	0	328	108	0	220
13+75	25.00	87	0	0	78	0	0	405	108	0	298
14+00	25.00	85	0	0	80	0	0	485	108	0	378
14+21	21	85	0	0	66	0	0	552	108	0	444
14+50	29.00	61	0	0	79	0	0	630	108	0	523
14+95	45.00	81	0	0	118	0	0	749	108	0	641
15+00	5	63	0	1	13	0	0	762	108	0	654
					762	0	86				

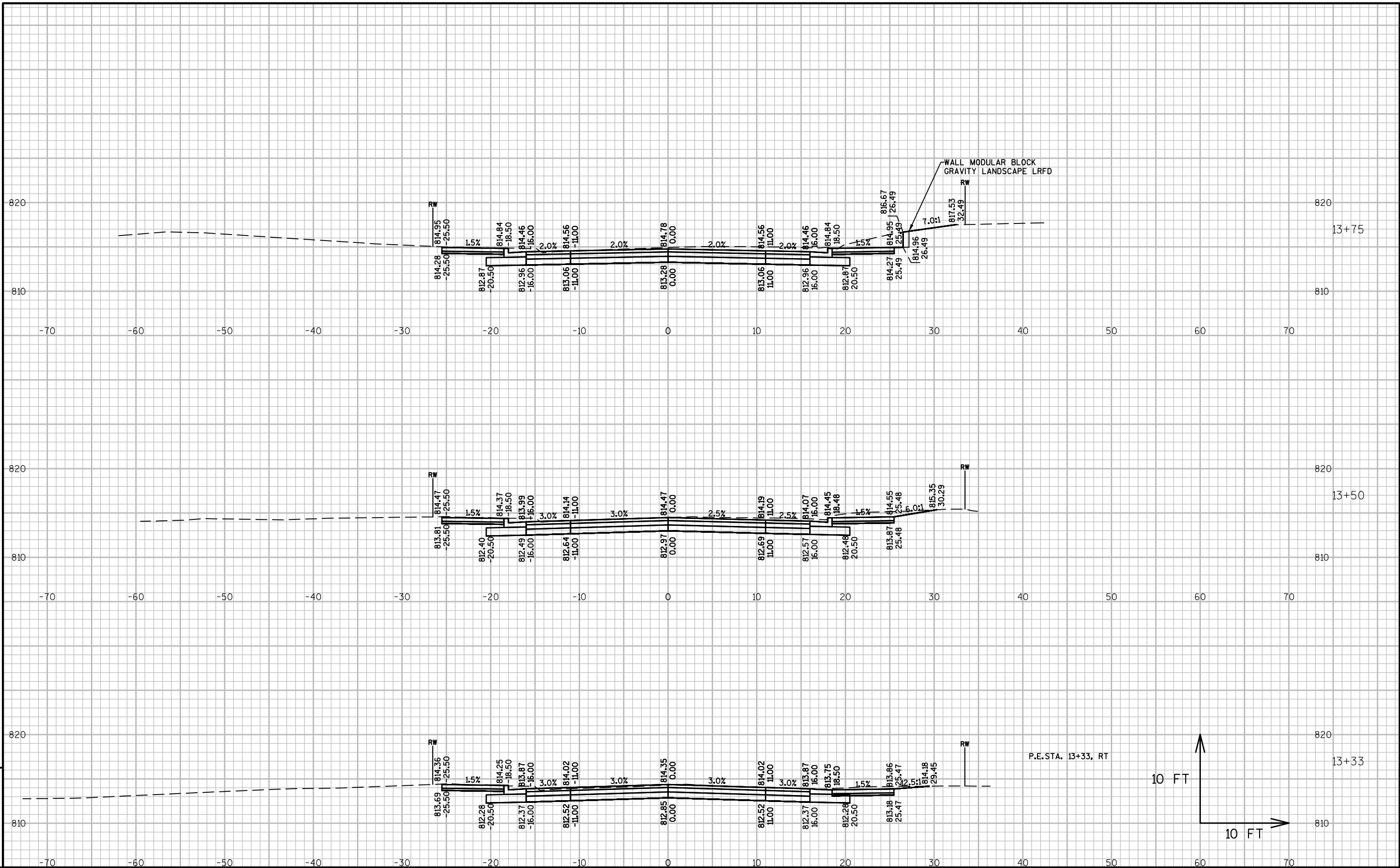


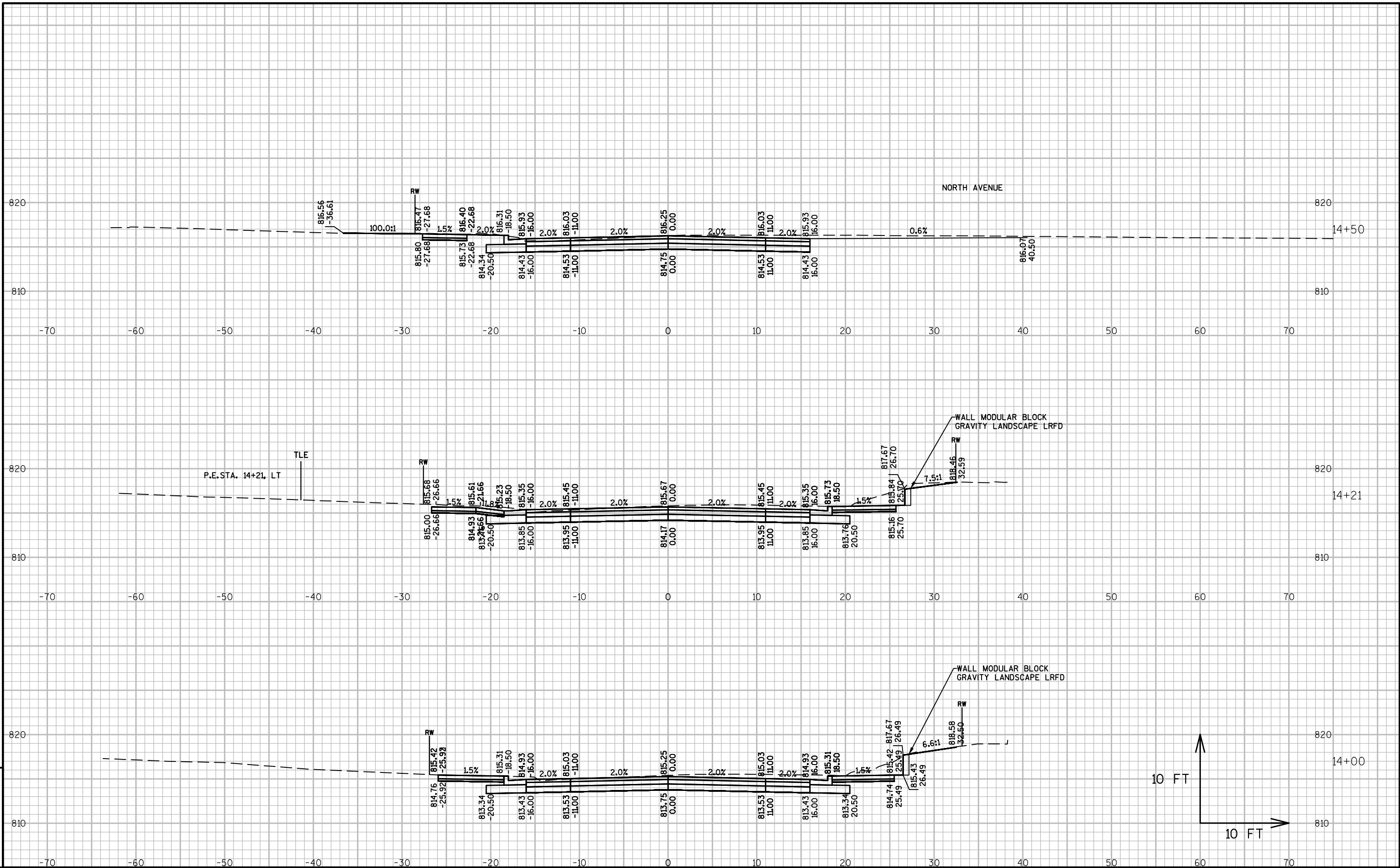


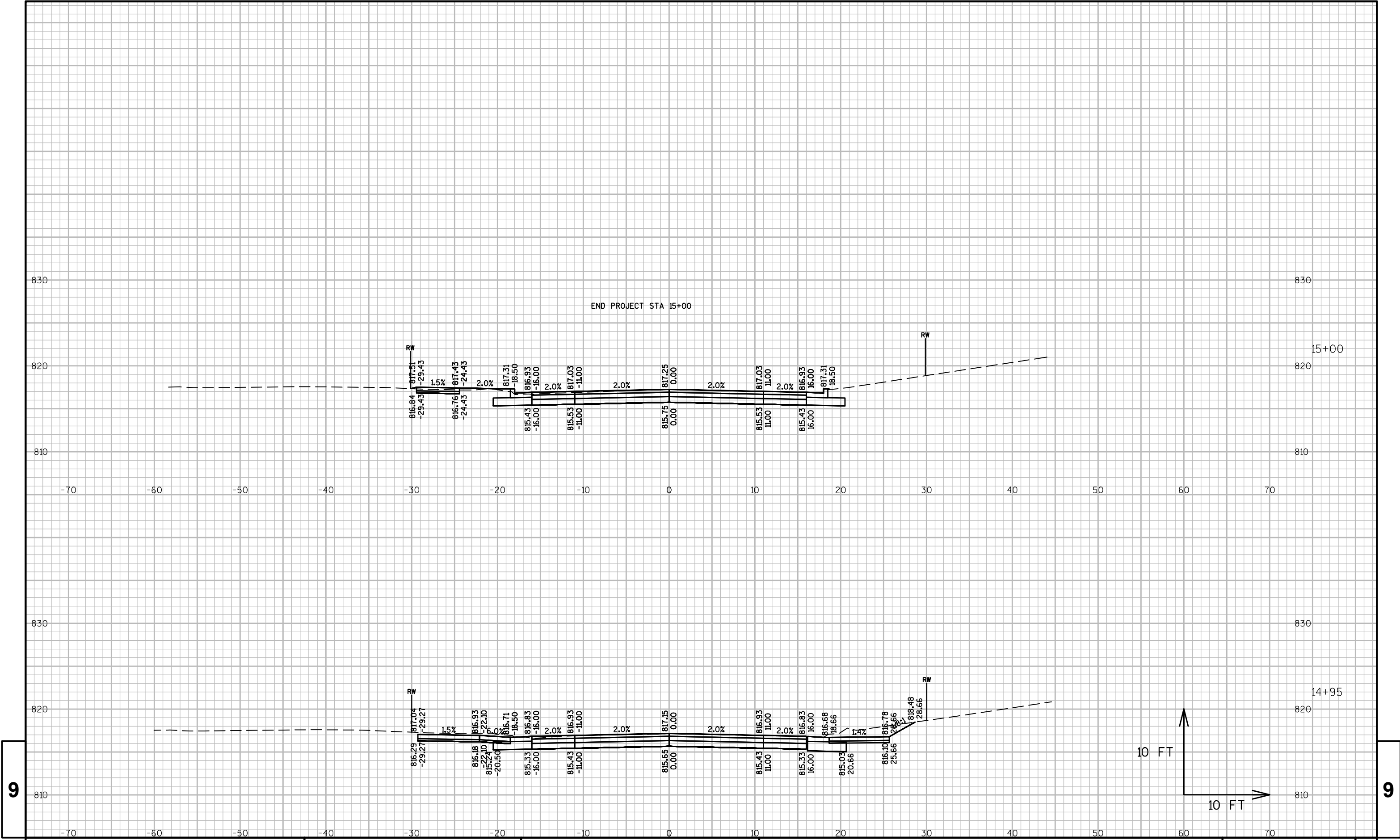




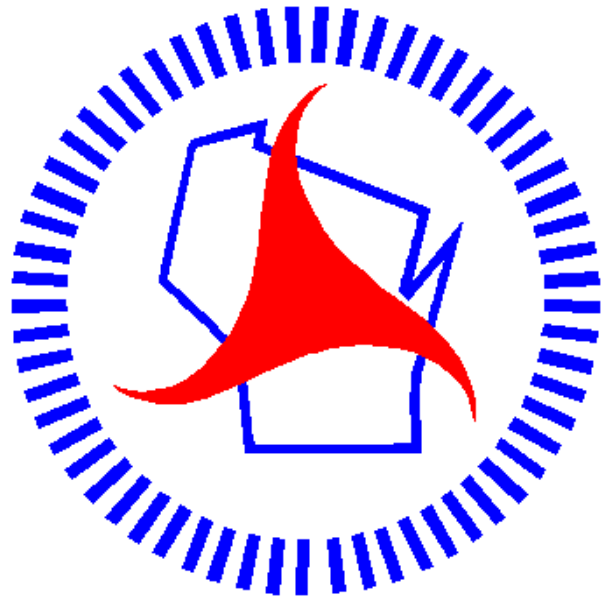








Notes



Wisconsin Department of Transportation

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