GRE

MAY 2019

PROJECT ID: 6435-03-71

WITH: N/A

COUNTY: WINNEBAGO

ORDER OF SHEETS

TOTAL SHEETS = 42

29

DESIGN DESIGNATION

A.A.D.T.	(2019)	=	170 VPD
A.A.D.T.	(2039)	=	200 VPD
D.H.V.		=	53
D.D.		=	60/40
T.		=	5.5%
DESIGN SPEED		=	45 MPH
ESALS		=	21,900 (HMA)

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T NEKIMI, NEKIMI AVE

WEYHURST CREEK BRIDGE

LOCAL STREET
WINNEBAGO COUNTY

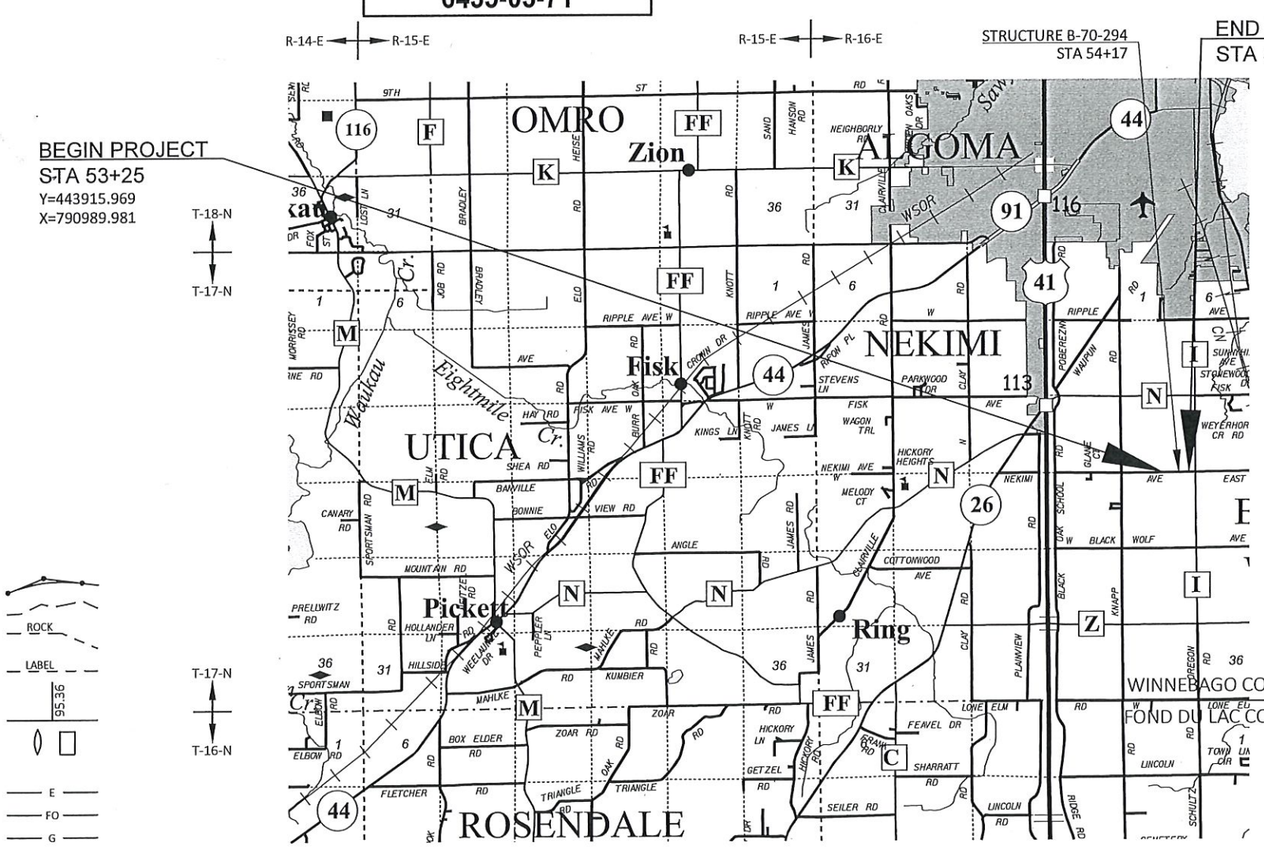
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6435-03-71	WISC 2019298	1

STATE PROJECT NUMBER
6435-03-71

BEGIN PROJECT
STA 53+25
Y=443915.969
X=790989.981

STRUCTURE B-70-294
STA 54+17

END PROJECT
STA 55+10



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.035 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, WINNEBAGO COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (2012) (NAVD 88-2012).

ACCEPTED FOR

TOWN OF NEKIMI

Date 1-11-19 Glen Barthels
(Glen Barthels, Town Chair)

ORIGINAL PLANS PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
85 South Pioneer Road, Suite 500 • Fond du Lac, WI 54935
(920) 924-5720 • fax (920) 924-5725

WISCONSIN
ANDREW L. KLEMP
E-33645
FOND DU LAC, WI
PROFESSIONAL ENGINEER

DATE: 01-11-19

ANDREW L. KLEMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GREMMER & ASSOCIATES, INC.
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	BRIAN EDWARDS

APPROVED FOR THE DEPARTMENT

DATE: 1/16/2019 Tim Verhagen
(Signature)

E

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-010101-TI.DWG

PLOT DATE : 11/30/2018 7:42 AM

PLOT BY : AARON SARAUER

PLOT NAME :

GENERAL NOTES

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

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

A VERTICAL SAW CUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS, SIDEWALKS AND PAVEMENTS AT THE REMOVAL LIMITS, AND WHERE NEW ASPHALTIC SURFACE ABUTS EXISTING PAVEMENT TO CREATE A SMOOTH CONTINUOUS VERTICAL FACE. SAWCUT SLURRY SHALL BE ACTIVELY MANAGED TO PREVENT RELEASE OF SLURRY INTO WATERWAY AND WETLANDS.

SAWCUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD.

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

TOPSOIL, FERTILIZER, SEED AND MULCH OR EROSION MAT AS SHOWN IN PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE PLACED ON ALL DISTURBED AREAS, EXCLUSIVE OF THE AREA OCCUPIED BY THE NEW PAVEMENTS, SIDEWALKS, ENTRANCES, AND RELATED STRUCTURES.

SECTIONS AS SHOWN ON THE CROSS-SECTIONS INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED.

EROSION CONTROL ITEMS SHOWN ARE APPROXIMATE, THE EXACT LOCATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THAT THE MEASURE IS NO LONGER NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EROSION CONTROL MEASURE AS DIRECTED BY THE ENGINEER.

INSTALL SAFETY EDGE ON ASPHALT PAVEMENTS WITH A PAVED SHOULDER OF 3 FEET OR LESS.

ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 110 LBS/SY-INCH

PLACE 4.0" ASPHALTIC SURFACE IN TWO LAYERS OF THE FOLLOWING THICKNESS:

UPPER LAYER THICKNESS = 1.75"	NOMINAL GRADATION SIZE = 12.5 MM
LOWER LAYER THICKNESS = 2.25"	NOMINAL GRADATION SIZE = 19.0 MM

ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALT
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
E	EXTERNAL DISTANCE FROM MIDPOINT OF CIRCULAR CURVE FROM ANGLE INTERSECTION
EB	EASTBOUND
ELEV	ELEVATION
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
HP	HIGH POINT
HT	HEIGHT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LP	LOW POINT
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NOM	NOMINAL
NORM	NORMAL
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SEG	SEGMENT
SF	SQUARE FOOT
SS	STORM SEWER
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED
VC	VERTICAL CURVE
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPRC	POINT OF VERTICAL REVERSE CURVE
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND

ORDER OF SECTION 2 SHEETS

UTILITIES

GAS

WISCONSIN PUBLIC SERVICE CORPORATION
3300 N MAIN STREET
OSHKOSH, WI 54901
ATTN: STEVE BONECK
PHONE: (920) 236-5918
EMAIL: SJBONECK@WISCONSINPUBLICSERVICE.COM

COMMUNICATIONS

AT&T
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
ATTN: CHUCK BARTELT
PHONE: (920) 929-1013
MOBILE: (920) 410-5104
EMAIL: CB1461@ATT.COM

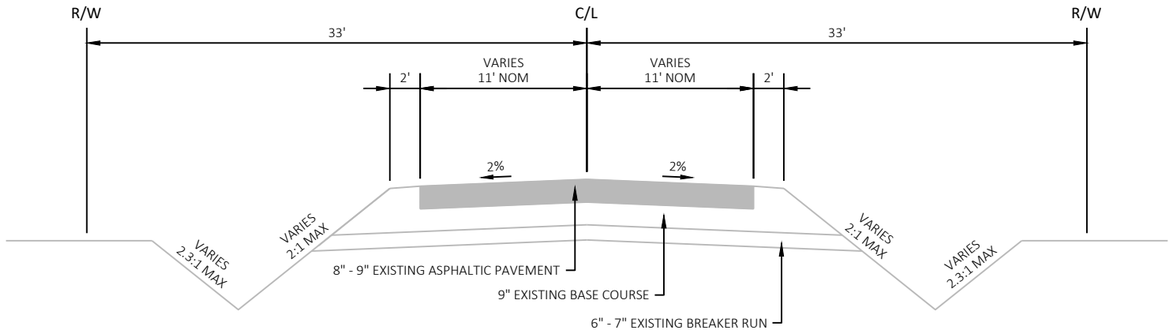
* DENOTES NON-MEMBER OF DIGGERS HOTLINE

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

DNR AREA LIAISON

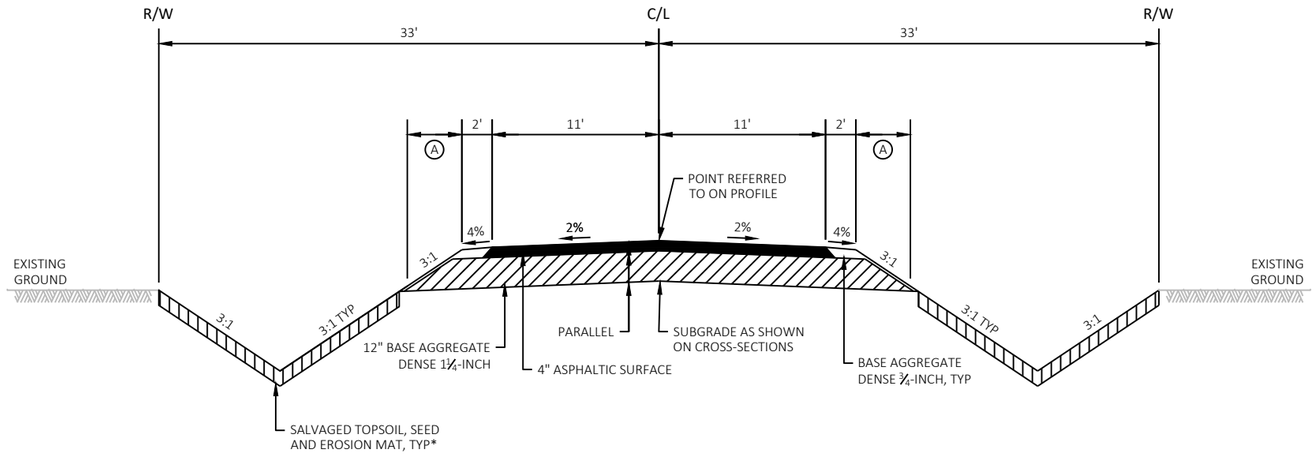
WISCONSIN DEPT. OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
ATTN: JAY SCHIEFELBEIN
PHONE: (920) 360-3784
EMAIL: jeremiah.schiefelbein@wisconsin.gov

2



TYPICAL EXISTING SECTION

NEKIMI AVENUE
STA 53+25 - STA 53+97.66
STA 54+34.30 - STA 55+10



TYPICAL FINISHED SECTION

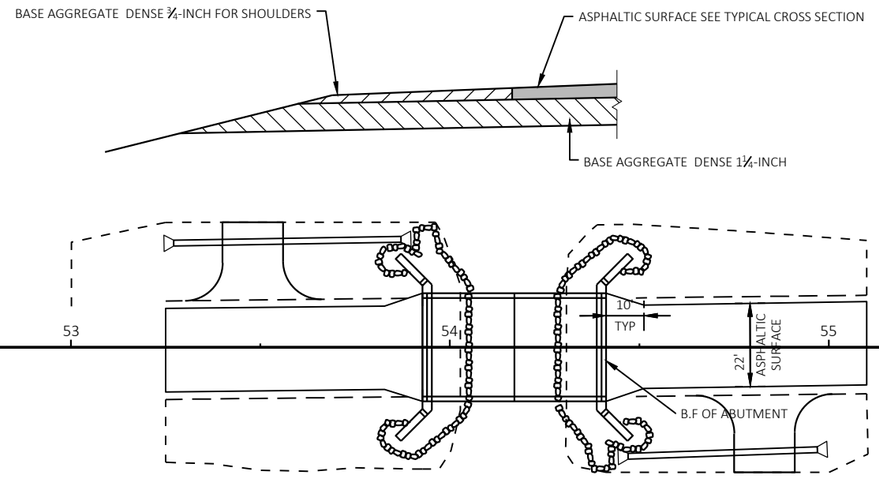
NEKIMI AVENUE
STA 53+25 - STA 53+92.75
STA 54+41.25 - STA 55+10

NOTES:

(A) SEEDING

* SEE MISCELLANEOUS QUANTITIES AND EROSION CONTROL PLANS FOR LOCATIONS AND TYPES.

PROJECT NO: 6435-03-71	HWY: NEKIMI AVENUE	COUNTY: WINNEBAGO	TYPICAL SECTIONS: NEKIMI AVENUE	SHEET 3	E



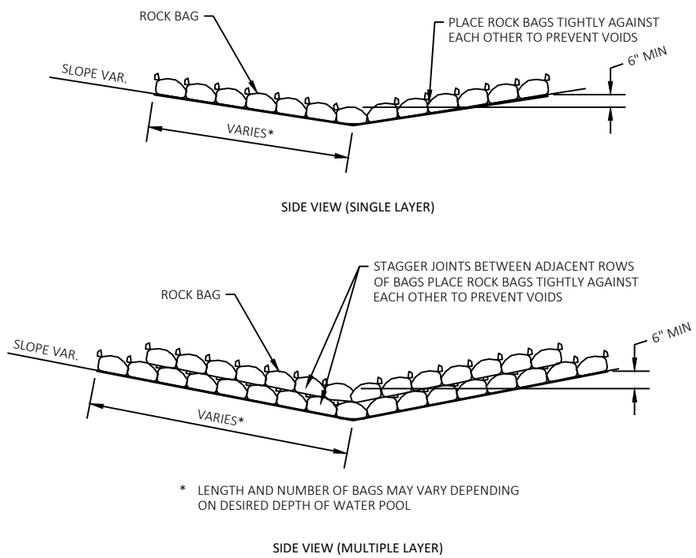
DETAIL FOR ASPHALTIC TAPER AT STRUCTURE

	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			.25 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

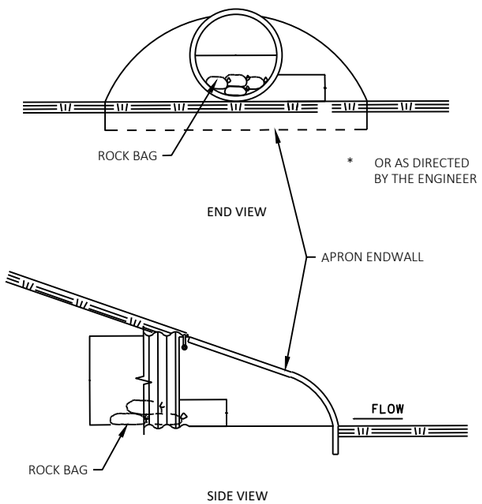
TOTAL PROJECT AREA = 0.318 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.246 ACRES

RUNOFF COEFFICIENT TABLE



ROCK BAGS USED FOR DITCH CHECKS



CULVERT PIPE CHECKS DETAIL

ROCK BAGS DETAIL

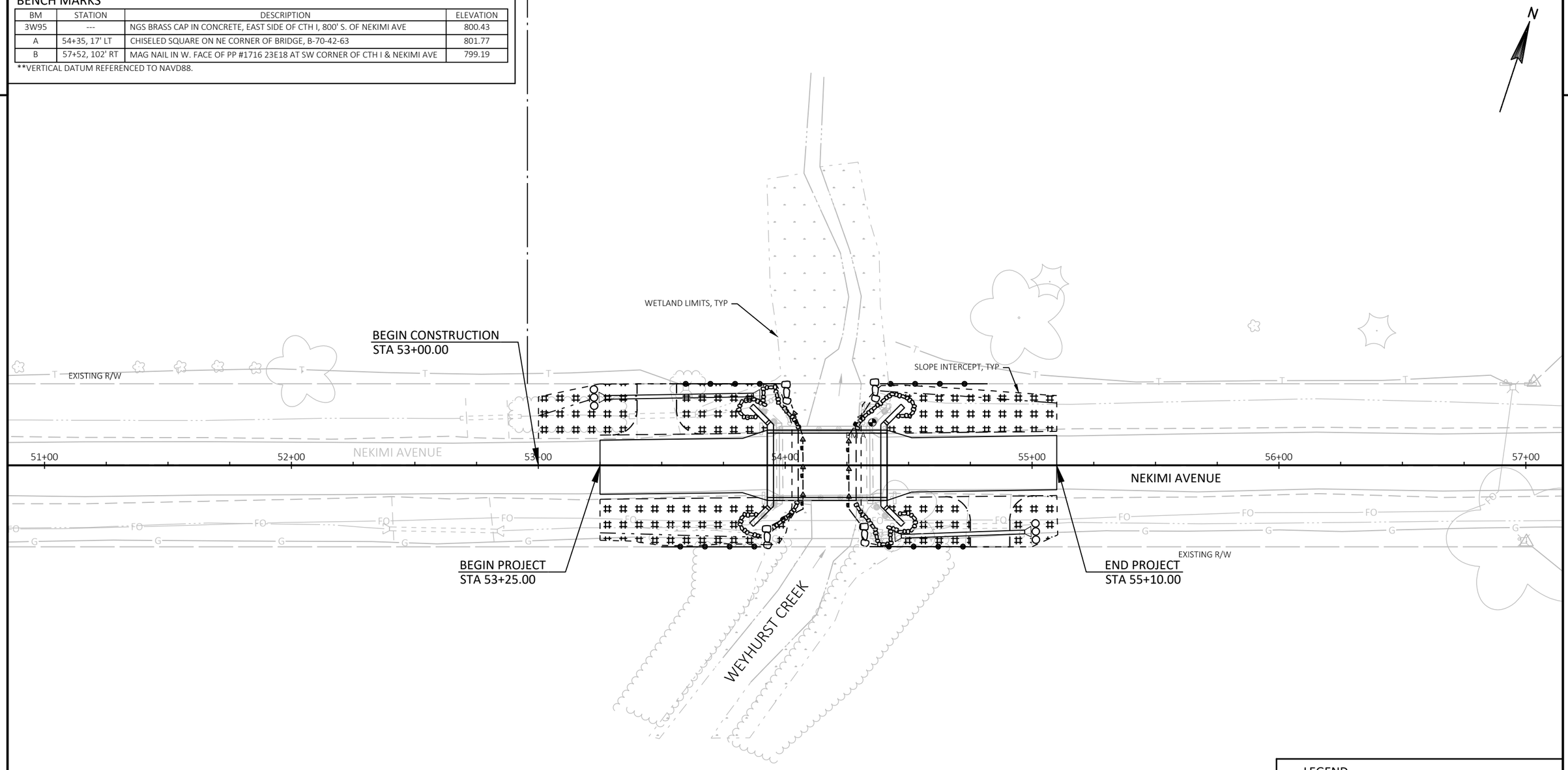
PROJECT NO: 6435-03-71	HWY: NEKIMI AVENUE	COUNTY: WINNEBAGO	CONSTRUCTION DETAILS	SHEET 4	E

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-021001-CD.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 1/30/2019 12:19 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

BENCH MARKS

BM	STATION	DESCRIPTION	ELEVATION
3W95	---	NGS BRASS CAP IN CONCRETE, EAST SIDE OF CTH I, 800' S. OF NEKIMI AVE	800.43
A	54+35, 17' LT	CHISELED SQUARE ON NE CORNER OF BRIDGE, B-70-42-63	801.77
B	57+52, 102' RT	MAG NAIL IN W. FACE OF PP #1716 23E18 AT SW CORNER OF CTH I & NEKIMI AVE	799.19

**VERTICAL DATUM REFERENCED TO NAVD88.



LEGEND

- SLOPE INTERCEPT
- SILT FENCE
- TURBIDITY BARRIER
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP HEAVY
- CULVERT PIPE CHECKS
- ROCK BAGS FOR DITCH CHECKS
- SURFACE WATER FLOW PROPOSED
- SURFACE WATER FLOW EXISTING

FINISHING ITEMS FOR SALVAGED TOPSOIL, SEED, AND EROSION MAT ARE SHOWN ON TYPICAL SECTIONS AND MISCELLANEOUS QUANTITIES.

PROJECT NO: 6435-03-71	HWY: NEKIMI AVENUE	COUNTY: WINNEBAGO	EROSION CONTROL PLAN: NEKIMI AVENUE	SHEET 5	E

6435-03-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0008	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. Sta 54+16	LS	1.000	1.000
0010	205.0100	Excavation Common	CY	188.000	188.000
0012	206.1000	Excavation for Structures Bridges (structure) 01. B-70-294	LS	1.000	1.000
0014	210.1500	Backfill Structure Type A	TON	320.000	320.000
0016	213.0100	Finishing Roadway (project) 01. 6435-03-71	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	65.000	65.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	340.000	340.000
0022	455.0605	Tack Coat	GAL	18.000	18.000
0024	465.0105	Asphaltic Surface	TON	80.000	80.000
0026	502.0100	Concrete Masonry Bridges	CY	164.000	164.000
0028	502.3200	Protective Surface Treatment	SY	183.000	183.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	4,239.000	4,239.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	25,060.000	25,060.000
0034	513.4061	Railing Tubular Type M	LF	102.000	102.000
0036	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0038	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000	4.000
0040	520.4118	Culvert Pipe Class IV 18-Inch	LF	110.000	110.000
0042	550.0020	Pre-Boring Rock or Consolidated Materials	LF	49.000	49.000
0044	550.0500	Pile Points	EACH	14.000	14.000
0046	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	490.000	490.000
0048	606.0300	Riprap Heavy	CY	99.000	99.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	123.000	123.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	624.0100	Water	MGAL	6.000	6.000
0056	625.0500	Salvaged Topsoil	SY	540.000	540.000
0058	628.1504	Silt Fence	LF	210.000	210.000
0060	628.1520	Silt Fence Maintenance	LF	210.000	210.000
0062	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0064	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0066	628.2008	Erosion Mat Urban Class I Type B	SY	540.000	540.000
0068	628.6005	Turbidity Barriers	SY	125.000	125.000
0070	628.7555	Culvert Pipe Checks	EACH	5.000	5.000
0072	628.7560	Tracking Pads	EACH	2.000	2.000
0074	628.7570	Rock Bags	EACH	75.000	75.000
0076	630.0130	Seeding Mixture No. 30	LB	12.000	12.000

6435-03-71

Line	Item	Item Description	Unit	Total	Qty
0078	630.0200	Seeding Temporary	LB	9.000	9.000
0080	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0082	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0084	638.2602	Removing Signs Type II	EACH	4.000	4.000
0086	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0088	642.5001	Field Office Type B	EACH	1.000	1.000
0090	643.0420	Traffic Control Barricades Type III	DAY	924.000	924.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	1,584.000	1,584.000
0094	643.0900	Traffic Control Signs	DAY	792.000	792.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0111	Geotextile Type DF Schedule A	SY	92.000	92.000
0100	645.0120	Geotextile Type HR	SY	149.000	149.000
0102	650.4500	Construction Staking Subgrade	LF	137.000	137.000
0104	650.5000	Construction Staking Base	LF	137.000	137.000
0106	650.6500	Construction Staking Structure Layout (structure) 01. B-70-294	LS	1.000	1.000
0108	650.9910	Construction Staking Supplemental Control (project) 01. 6435-03-71	LS	1.000	1.000
0110	650.9920	Construction Staking Slope Stakes	LF	162.000	162.000
0112	690.0150	Sawing Asphalt	LF	44.000	44.000
0114	715.0502	Incentive Strength Concrete Structures	DOL	984.000	984.000
0116	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0118	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	150.000	150.000

3

CLEARING AND GRUBBING ITEMS

STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
CATEGORY CODE 0010			
53+00 - 55+00	LT & RT	2	2
	TOTALS	**2**	**2**

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	COMMENTS
CATEGORY CODE 0010			
53+37 - 53+64	LT	1	REMOVE 27 LF OF CMP 24-INCH
54+69 - 54+93	RT	1	REMOVE 25 LF OF CMP 24-INCH
	TOTAL	**2**	

BASE AGGREGATE DENSE AND WATER ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
CATEGORY CODE 0010				
53+25 - 53+92.75	LT & RT	32	169	3
54+41.25 - 55+10	LT & RT	33	171	3
	TOTALS	**65**	**340**	**6**

BASE AGGREGATE DENSE 3/4-INCH WEIGHT CALCULATIONS BASED ON 2.1 TONS/CY.
BASE AGGREGATE DENSE 1 1/4-INCH WEIGHT CALCULATIONS BASED ON 2.0 TONS/CY.

3

EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	EXCAVATION COMMON (1) ITEM #205.0100 CUT (2)	EBS EXCAVATION	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5) FACTOR 1.10	MASS ORDINATE +/- (6)	WASTE	COMMENT:
DIVISION 1											
	53+00 - 55+10	NEKIMI	188	0	80	109	99	109	0	0	
	DIVISION 1 SUBTOTAL		188	0	80	109	99	109	0	0	
	GRAND TOTAL		188	0	80	109	99	109	0	0	
TOTAL EXCAVATION COMMON			**188**								

NOTES:
1 - COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3 - SALVAGED/UNUSABLE PAVEMENT MATERIAL = LENGH * TYPICAL WIDTH * TYPICAL DEPTH (8")
4 - AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
5 - EXPANDED FILL FACTOR = 1.10. EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
6 - 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.

ASPHALTIC ITEMS

STATION - STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
CATEGORY CODE 0010			
53+25 - 53+92.75	LT & RT	9	40
54+41.25 - 55+10	LT & RT	9	40
	TOTALS	**18**	**80**

TACK COAT CALCULATIONS BASED ON 0.050 GAL/SY.
ASPHALTIC SURFACE WEIGHT CALCULATIONS BASED ON 110 LB/SY/IN.

CULVERT PIPE ITEMS

STATION	LOCATION	STEEL PIPE THICKNESS INCHES	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	520.4118 CULVERT PIPE CLASS IV 18-INCH LF
CATEGORY CODE 0010				
53+27 - 53+87	LT	0.064	2	60
54+47 - 54+97	RT	0.064	2	50
		TOTALS	**4**	**110**

RESTORATION ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	630.0130 SEED MIX NO. 30 LB	630.0200 SEEDING TEMPORARY LB
CATEGORY CODE 0010					
53+00 - 53+93	LT & RT	243	243	5	4
54+41 - 55+10	LT & RT	186	186	4	3
UNDISTRIBUTED		111	111	3	2
	TOTALS	**540**	**540**	**12**	**9**

NOTES: TEMPORARY SEED TO BE PLACED IN CONJUNCTION WITH PERMANENT SEED AT A RATE OF 1.5 LBS/ 1000 SF.

ALL ITEMS ARE CATEGORY CODE 0010 UNLESS OTHERWISE NOTED

3

EROSION CONTROL ITEMS

STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.6005 TURBIDITY BARRIERS SY	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH
CATEGORY CODE 0010									
PROJECT 6435-03-71		--	--	5	3	--	--	2	--
53+25	LT	--	--	--	--	--	2	--	--
53+50 - 54+07	LT & RT	83	83	--	--	51	--	--	30
54+26 - 54+82	LT & RT	85	85	--	--	47	--	--	30
55+00	RT	--	--	--	--	--	2	--	--
UNDISTRIBUTED		42	42	--	--	27	1	--	15
	TOTALS	**210**	**210**	**5**	**3**	**125**	**5**	**2**	**75**

SIGNING ITEMS

SIGN NUMBER	EXISTING STATION	EXISTING LOCATION	PROPOSED STATION	PROPOSED LOCATION	ROADWAY	SIGN CODE	SIZE	634.0612 POSTS WOOD 4X6X12 EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
CATEGORY CODE 0010											
101	53+91	LT	53+93	LT	NEKIMI AVENUE	W5-52L	12X36	1	3	1	1
102	53+92	RT	53+93	RT	NEKIMI AVENUE	W5-52R	12X36	1	3	1	1
103	54+40	LT	54+41	LT	NEKIMI AVENUE	W5-52L	12X36	1	3	1	1
104	54+43	RT	54+41	RT	NEKIMI AVENUE	W5-52R	12X36	1	3	1	1
						TOTALS		**4**	**12**	**4**	**4**

3

TRAFFIC CONTROL ITEMS

	NUMBER OF DAYS IN SERVICE	643.0420 TRAFFIC CONTROL BARRICADES TYPE III *NO. REQ'D*	643.0420 TRAFFIC CONTROL BARRICADES TYPE III TOTAL DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A *NO. REQ'D*	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A TOTAL DAY	643.0900 TRAFFIC CONTROL SIGNS *NO. REQ'D*	643.0900 TRAFFIC CONTROL SIGNS TOTAL DAY
CATEGORY CODE 0010							
NEKIMI AVE/ OLD KNAPP RD	66	*2*	132	*4*	264	*3*	198
WEST PROJECT LIMITS	66	*5*	330	*8*	528	*4*	264
EAST PROJECT LIMITS	66	*5*	330	*8*	528	*2*	132
NEKIMI AVE/ CTH I	66	*2*	132	*4*	264	*3*	198
	TOTALS		**924**		**1,584**		**792**

CONSTRUCTION STAKING ITEMS

STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500 STRUCTURE LAYOUT LS	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
CATEGORY CODE 0010						
PROJECT 6435-03-71		--	--	--	1	--
53+00 - 53+25	LT	--	--	--	--	25
53+25 - 53+93	LT & RT	68	68	--	--	68
54+41 - 55+10	LT & RT	69	69	--	--	69
CATEGORY CODE 0010 SUBTOTALS		137	137	--	1	162
CATEGORY CODE 0020						
B-70-294		--	--	1	--	--
CATEGORY CODE 0020 SUBTOTALS		--	--	1	--	--
TOTALS		**137**	**137**	**1**	**1**	**162**

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 LF
CATEGORY CODE 0010		
53+25	LT & RT	22
55+10	LT & RT	22
TOTAL		**44**

ALL ITEMS ARE CATEGORY CODE 0010 UNLESS OTHERWISE NOTED

N

SCOTT A MARKEL
JODY K MARKEL

53+27.11; 27.5 LT; EL=795.40
53+87.10; 28.5 LT; EL=794.60
60 LF OF CP CLASS IV 18-INCH REQ'D
2 - AEW REQ'D

WETLAND LIMITS

+48
16' FE
(B.A.D. 3/4-INCH)

SLOPE INTERCEPT, TYP

AT&T

NEKIMI AVENUE

51 52 53 54 55 56 57

REMOVE CULVERT

S89° 49' 55.61"E

BEGIN CONSTRUCTION
STA 53+00.00

BEGIN PROJECT
STA 53+25.00
Y=443915.969
X=790989.981
MATCH EXISTING
SAWCUT REQUIRED

WETLAND LIMITS

CAUTION

WEYHURST CREEK

WETLAND LIMITS

REMOVE CULVERT

+83
16' FE
(B.A.D. 3/4-INCH)

CAUTION

WETLAND LIMITS

CECILIA M RUEDINGER

54+97.00; 27.0 RT; EL=795.25
54+47.03; 28.7 RT; EL=794.60
50 LF OF CP CLASS IV 18-INCH REQ'D
2 - AEW REQ'D

WETLAND LIMITS

JOHN W MCBRAIR
CAROL R MCBRAIR

AT&T

EXISTING R/W

AT&T

WPS

EXISTING R/W

END PROJECT
STA 55+10.00
Y=443915.427
X=791174.980
MATCH EXISTING
SAWCUT REQUIRED

BENCH MARKS

BM	STATION	DESCRIPTION	ELEVATION
3W95	---	NGS BRASS CAP IN CONCRETE, EAST SIDE OF CTH I, 800' S. OF NEKIMI AVE	800.43
A	54+35, 17' LT	CHISELED SQUARE ON NE CORNER OF BRIDGE, B-70-42-63	801.77
B	57+52, 102' RT	MAG NAIL IN W. FACE OF PP #1716 23E18 AT SW CORNER OF CTH I & NEKIMI AVE	799.19

**VERTICAL DATUM REFERENCED TO NAVD88.

804 802 800 798 796 794 792 790

STA 53+25.00
EL 800.83

VPC STA 53+60.00
VPC EL 801.10

HIGH POINT STA 54+13.03
HIGH POINT EL 801.30

VPI STA 54+25.00
VPI EL 801.60

R/L FINISHED PROFILE

VPT STA 54+90.00
VPT EL 800.87

STA 55+10.00
EL 800.65

0.77%

-1.12%

HIGH WATER (Q100)
ELEV= 799.71

R/L EXISTING PROFILE

VCL = 130.00

K = 68.76

HIGH WATER (Q2)
ELEV= 797.01

STATION 54+17.00
STRUCTURE B-70-294, REQ'D
SINGLE SPAN FLAT CONCRETE SLAB
48.5' OVERALL LENGTH
26.0' CLEAR ROADWAY WIDTH
0° SKEW

STATION 54+16
REMOVE STRUCTURE B-70-0042
SINGLE SPAN CONCRETE DECK GIRDER
39' APPROX OVERALL LENGTH
26' CLEAR ROADWAY WIDTH

OBSERVED ICE
12/11/17
ELEV= 793.09'

STREAMBED
EL 791.01'

EXISTING PROFILE ELEVATION AT R/L

FINISHED PROFILE ELEVATION AT R/L

800.91 800.64 800.40 800.19 800.13 800.35 800.53 800.68 800.83 800.83 801.02 801.02 801.17 801.20 801.24 801.29 801.24 801.29 801.16 801.20 801.01 801.02 800.75 800.76 800.49 800.23 800.05 800.04 800.06 800.09 800.19

51 52 53 54 55 56 57

5 5

PROJECT NO: 6435-03-71	HWY: NEKIMI AVE	COUNTY: WINNEBAGO	PLAN AND PROFILE: NEKIMI AVE	SHEET 10	E

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-050101-PP.DWG
LAYOUT NAME - Sheet-01

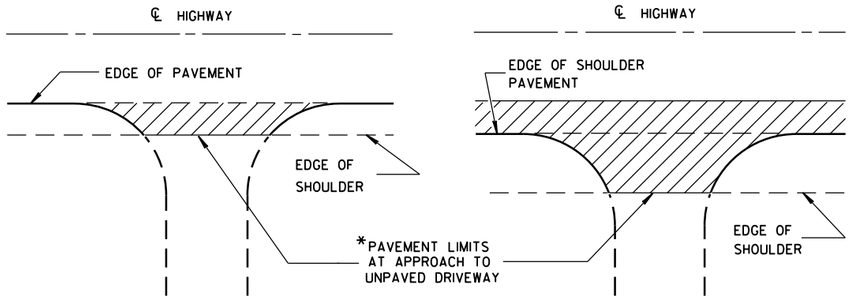
PLOT DATE : 1/30/2019 12:19 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:40 FT

Standard Detail Drawing List

08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
14B29-01	SAFETY EDGE
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

6

6

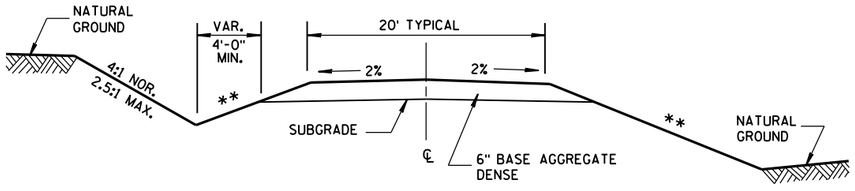


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)

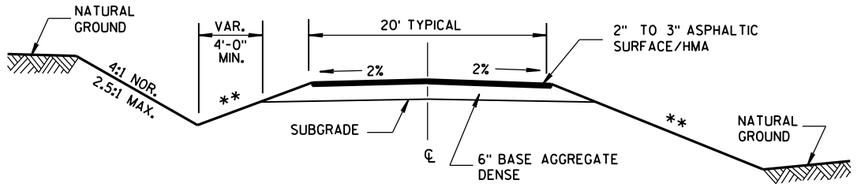


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

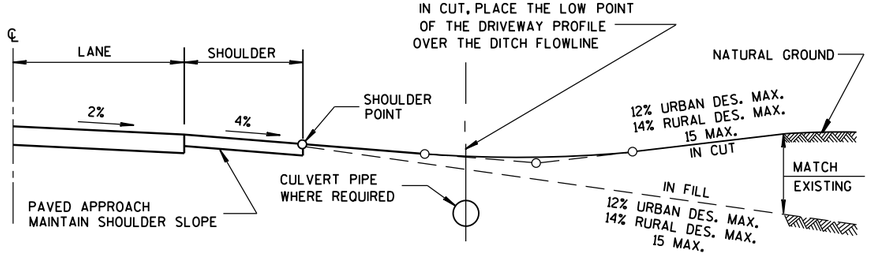
** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥35 TO <60	6:1
≥60	10:1



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE



TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

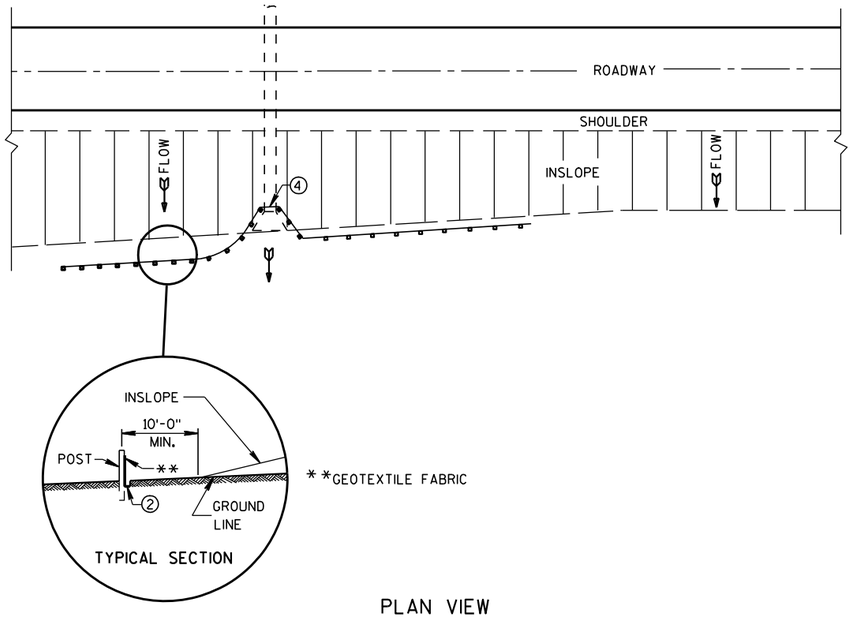
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA

6

S.D.D. 8 D 21-1

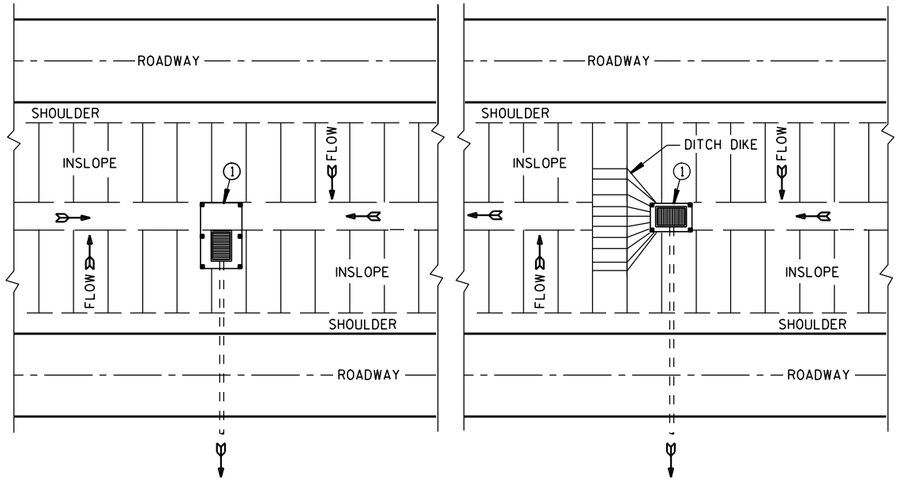
6

S.D.D. 8 D 21-1



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

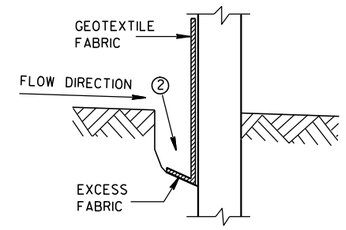
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

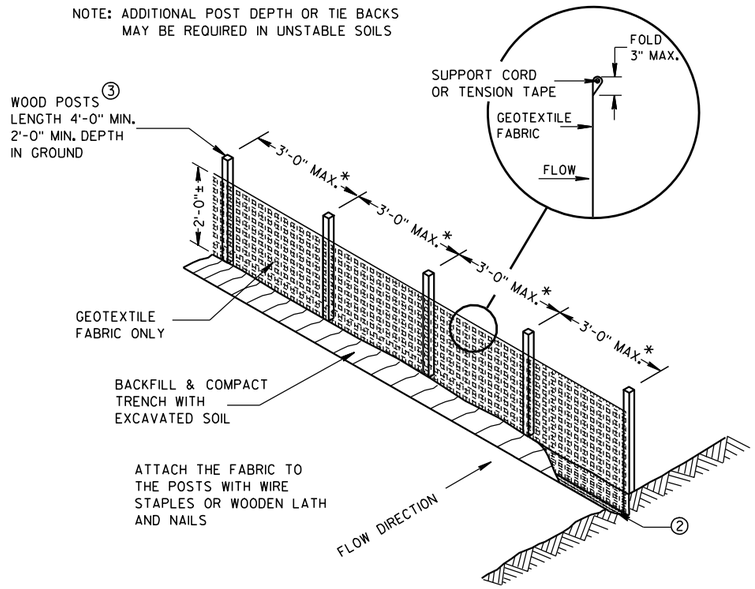
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

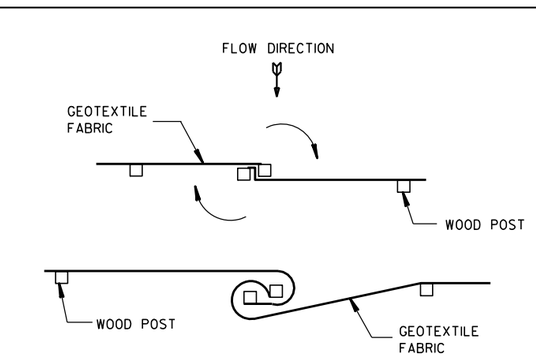
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



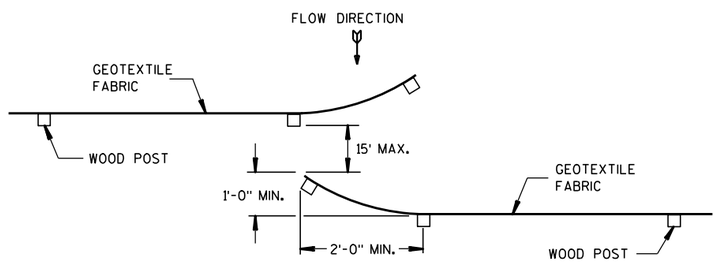
TRENCH DETAIL



SILT FENCE

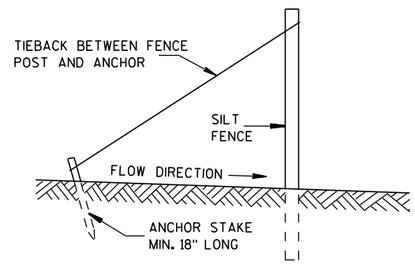


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

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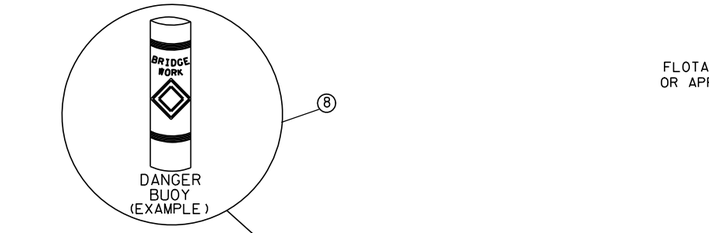
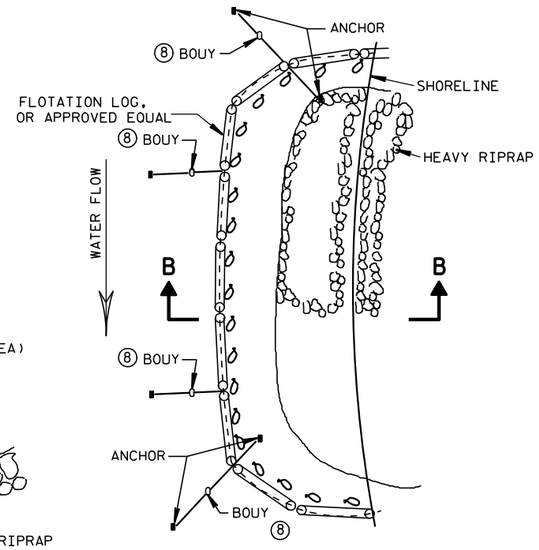
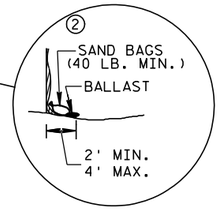
S.D.D. 8 E 9-6

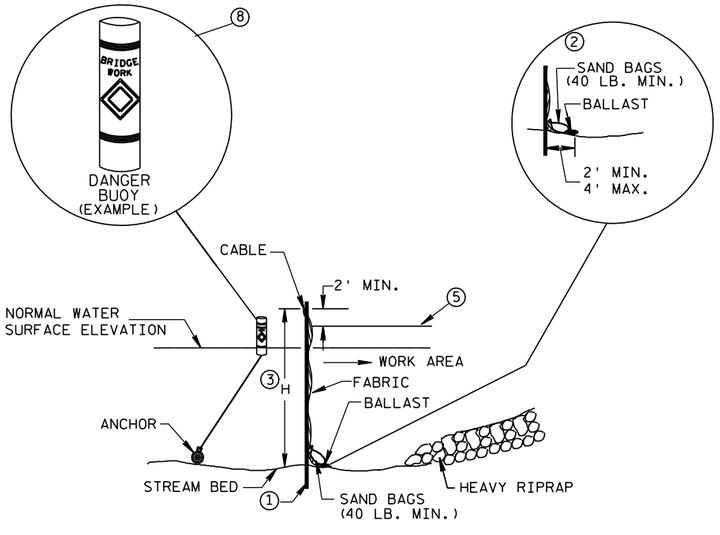


SECTION B-B

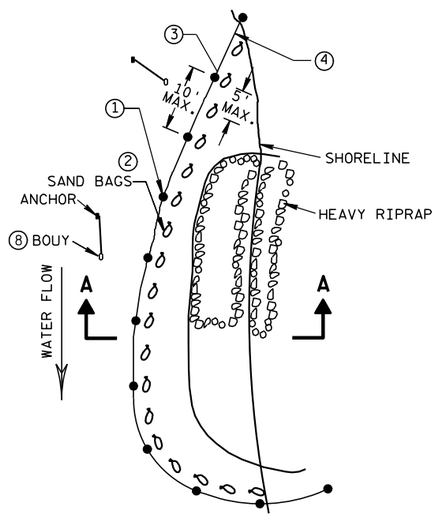




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

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.

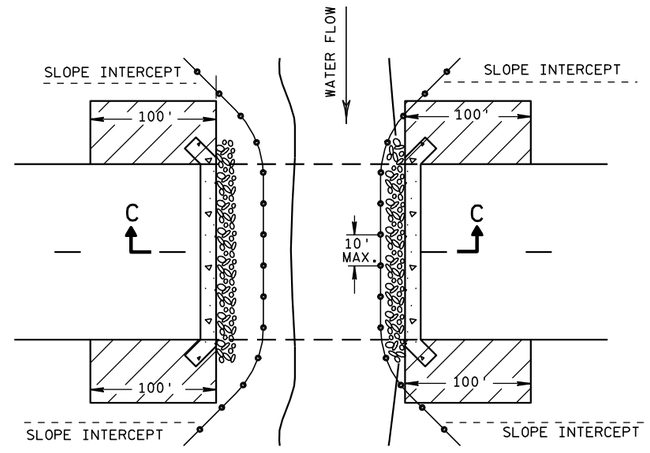
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

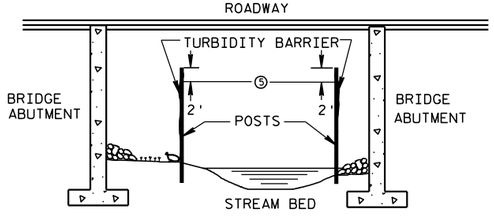
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

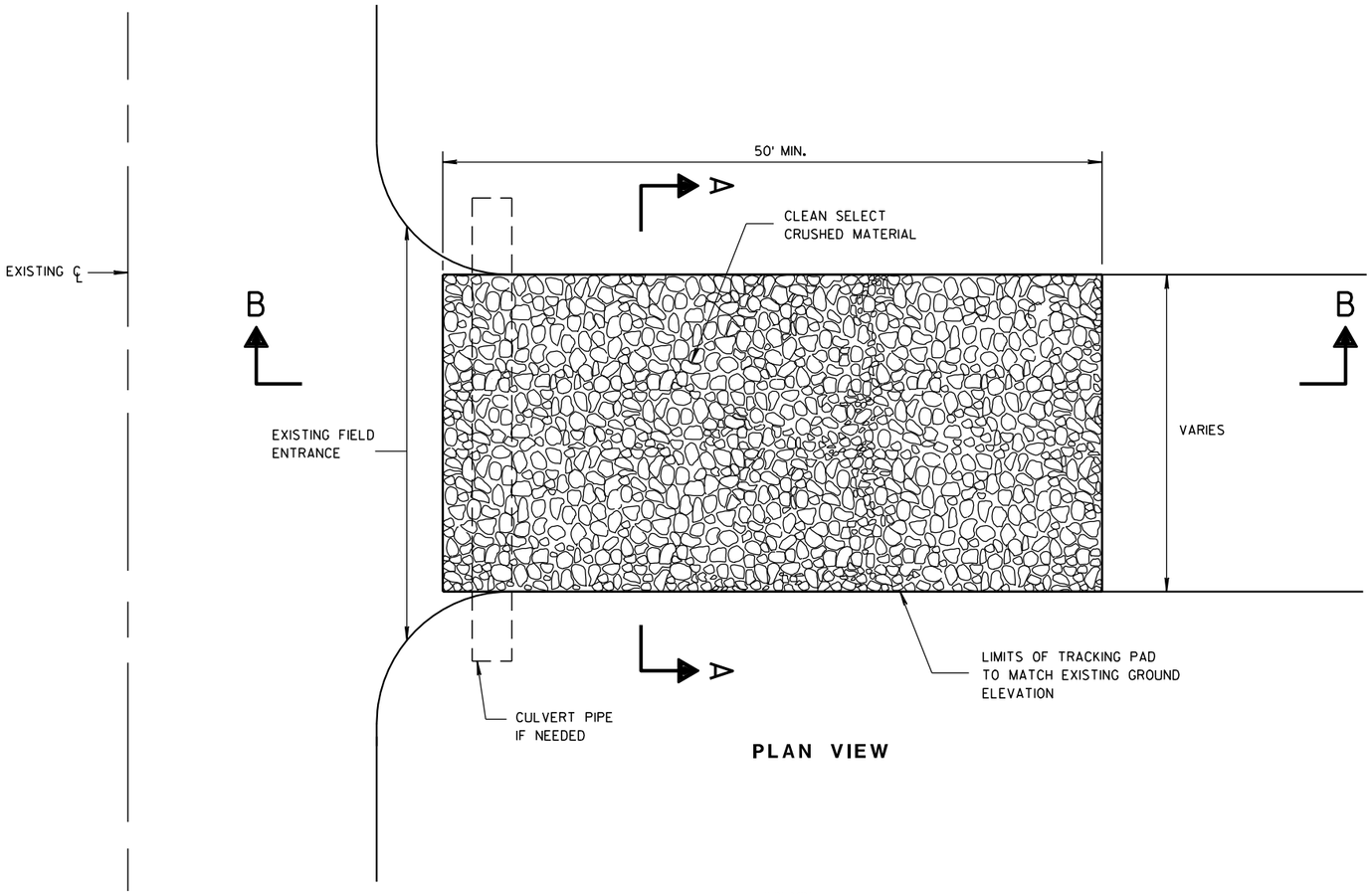
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

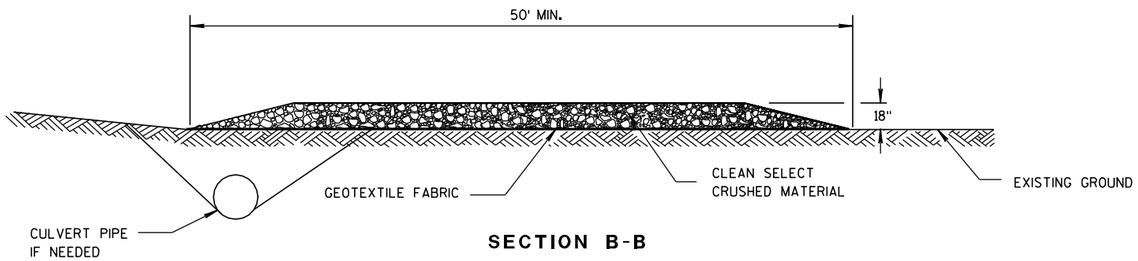
S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2



PLAN VIEW



SECTION B-B

GENERAL NOTES

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

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

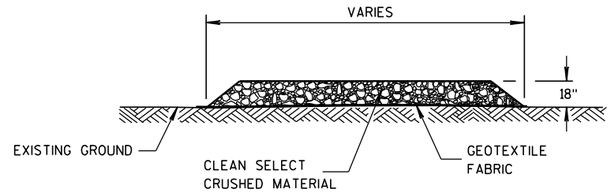
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

ENT

6

S.D.D. 8 E 14-1

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

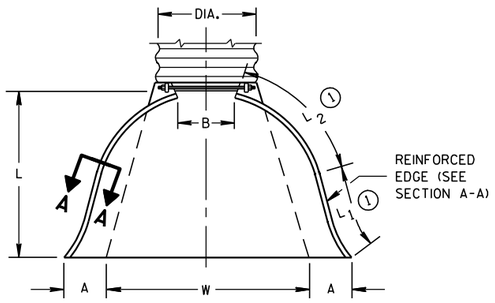
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

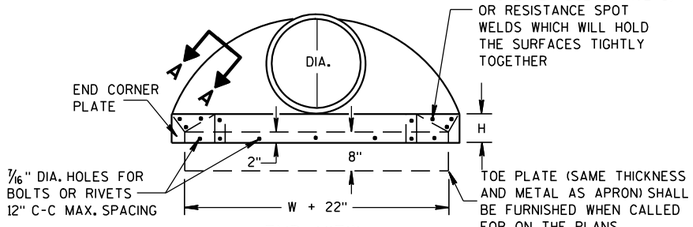
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	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

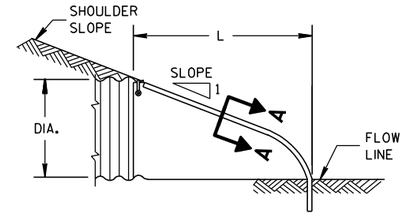
*MINIMUM
**MAXIMUM



PLAN VIEW

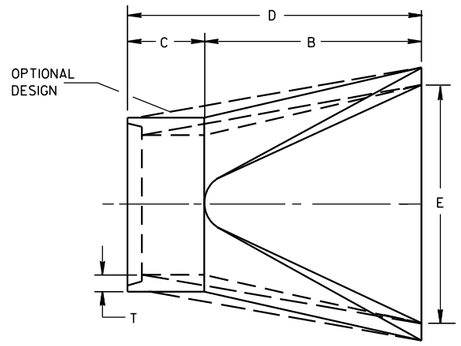


END VIEW

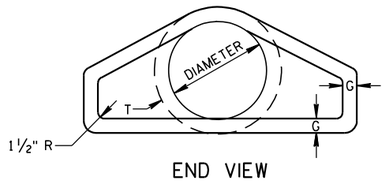


SIDE ELEVATION

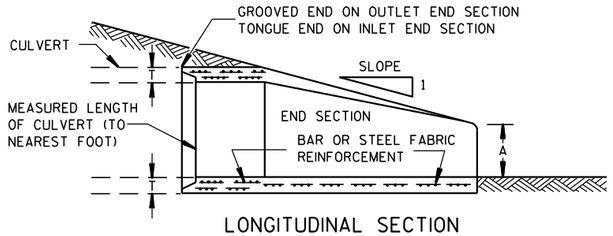
METAL ENDWALLS



PLAN

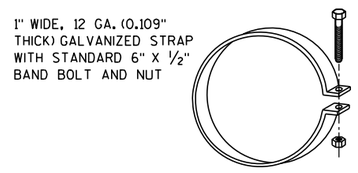


END VIEW



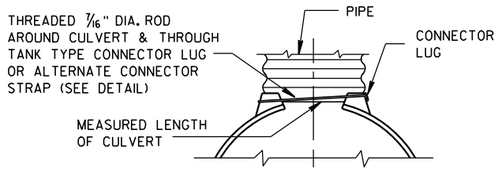
LONGITUDINAL SECTION

CONCRETE ENDWALLS

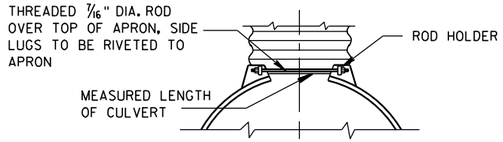


ALTERNATE FOR TYPE 1 CONNECTION

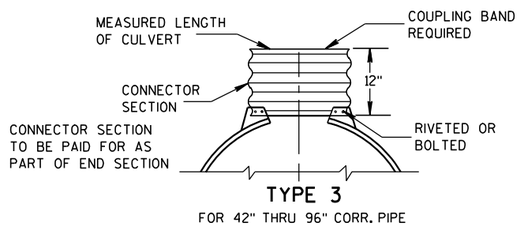
END SECTION CONNECTOR STRAP



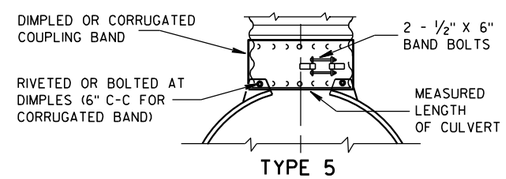
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

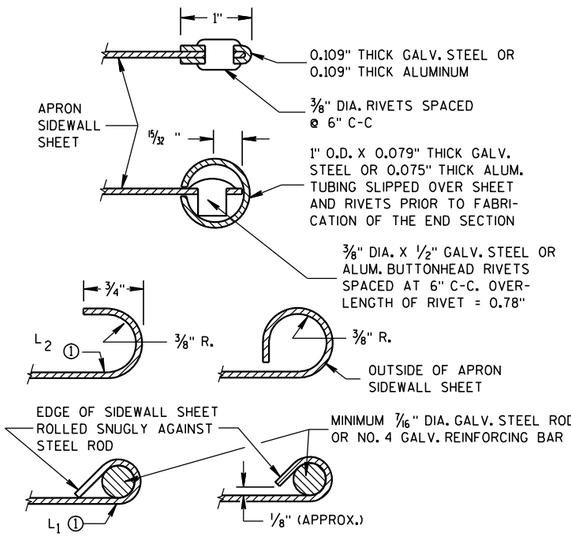
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

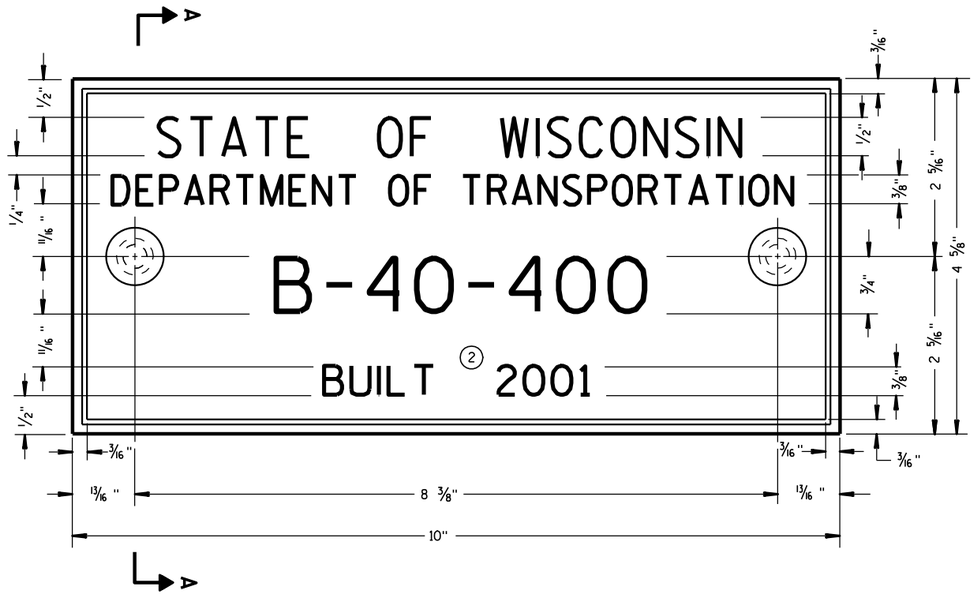
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

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

6
S.D.D. 8 F 1-11



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

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

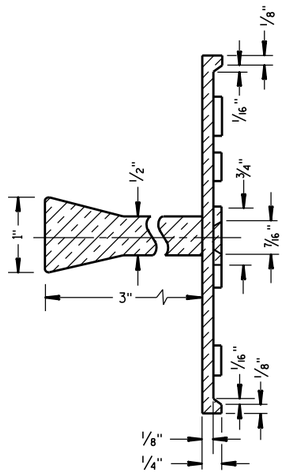
GENERAL NOTES

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.

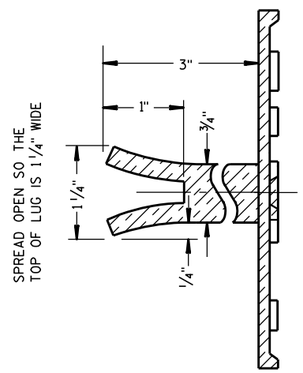
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

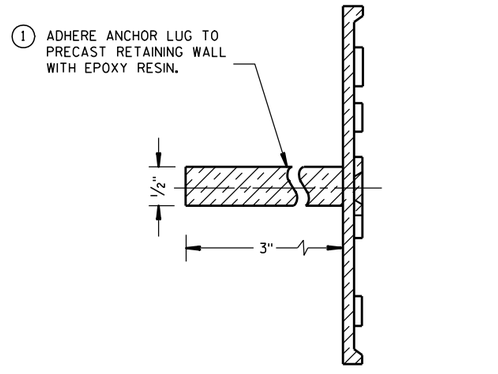
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE — /S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

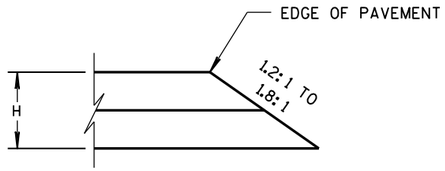
FHWA

6

S.D.D. 12 A 3-10

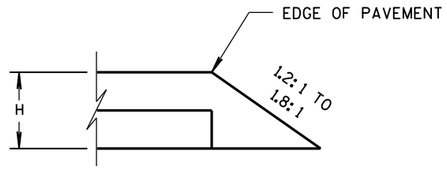
6

S.D.D. 12 A 3-10



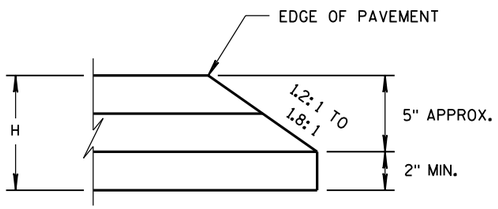
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



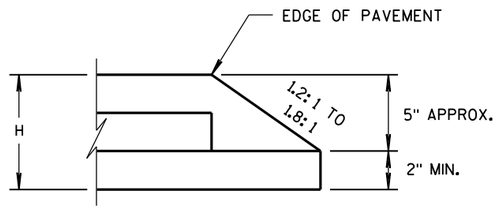
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

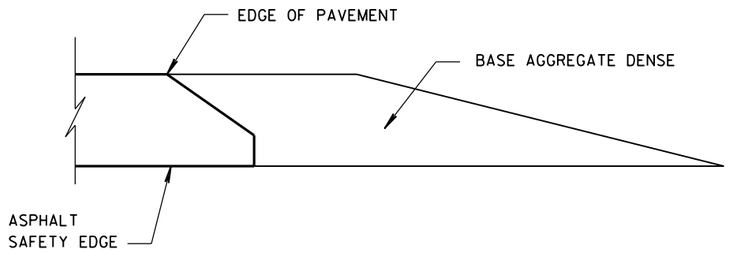
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

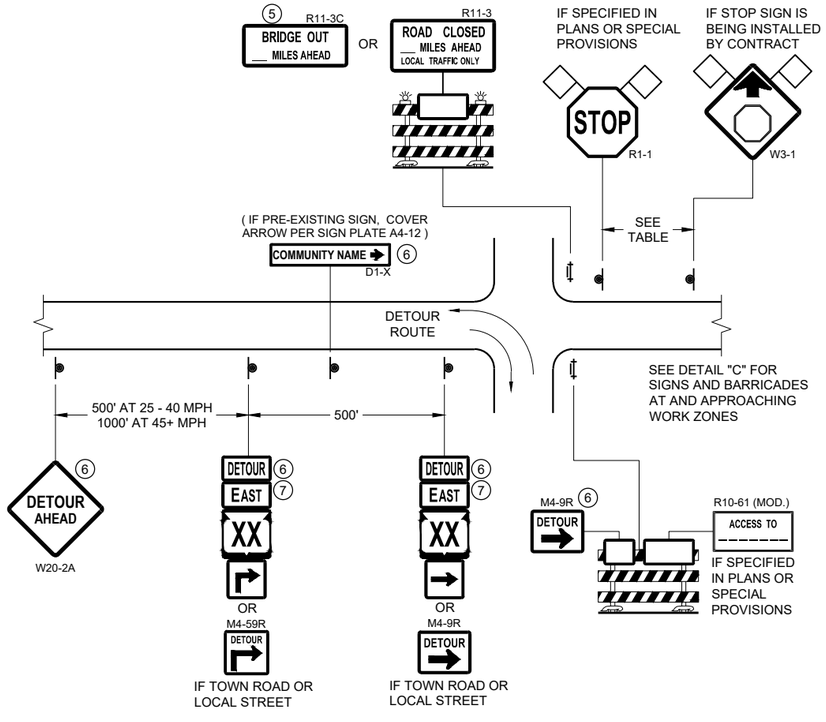
11/30/2012
DATE

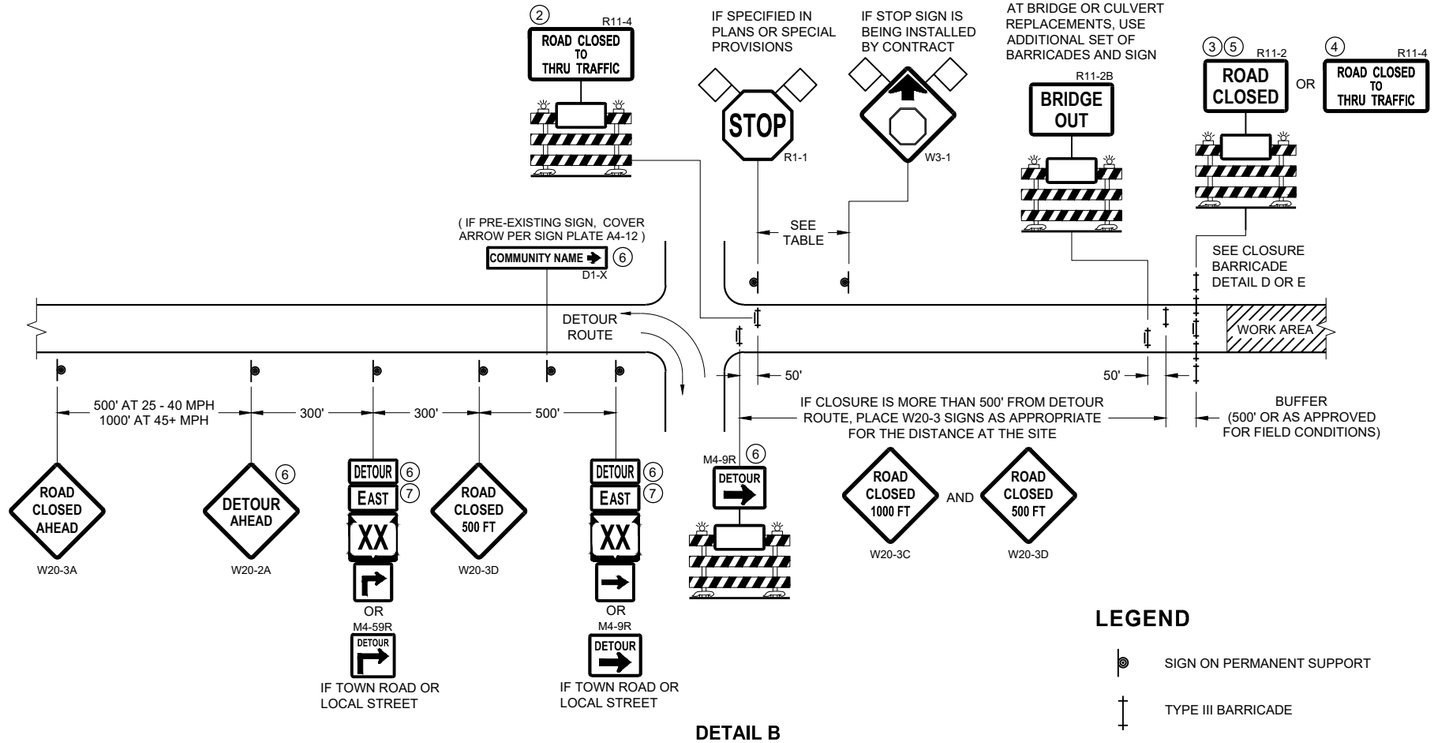
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1



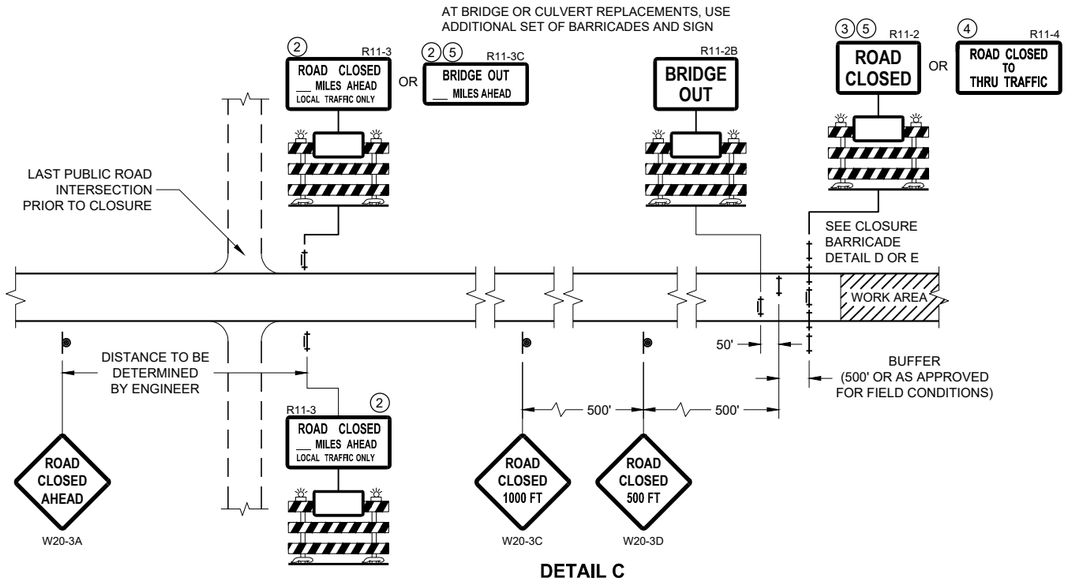


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

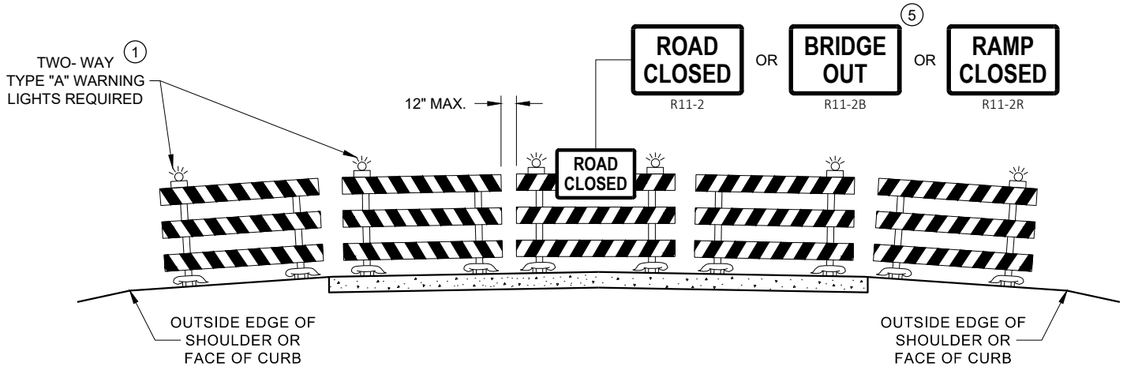
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

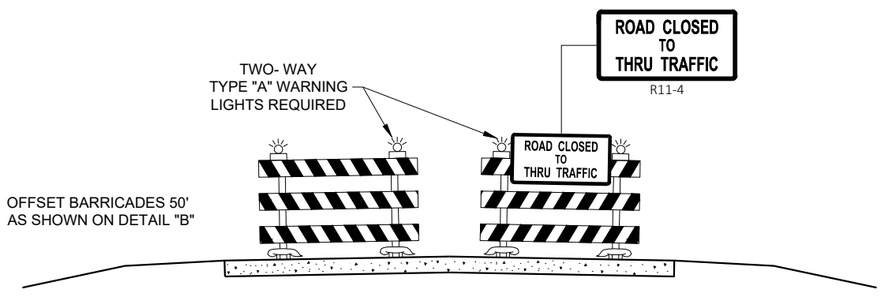
6

SDD 15C02 - 07a

SDD 15C02 - 07a



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 PORTABLBLE 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 THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL 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 SHALL, 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" (36" 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)
- MO5 - 1 AND MO6 - 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 AN 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 ROAD 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 CARDIANAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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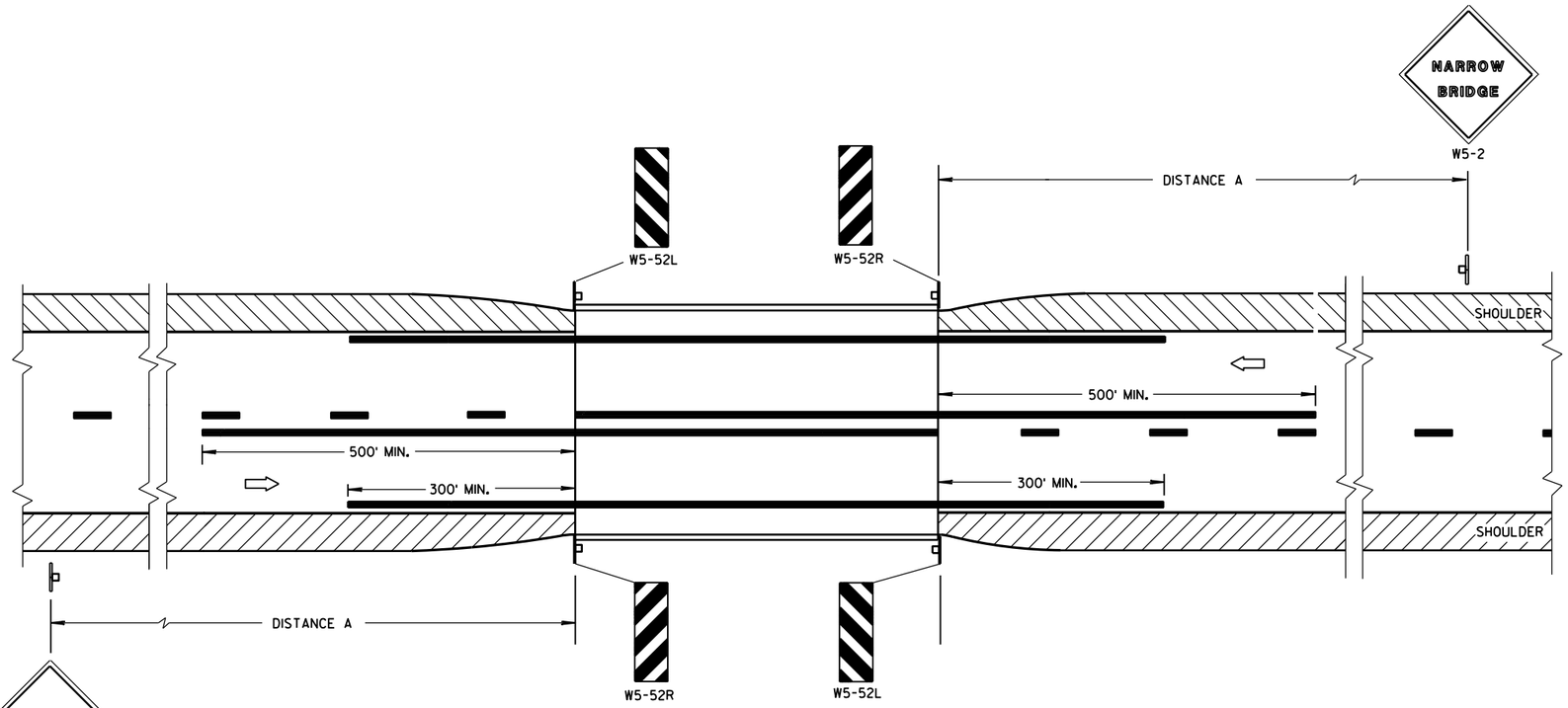
SDD 15C02 - 07b

6

SDD 15C02 - 07b



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

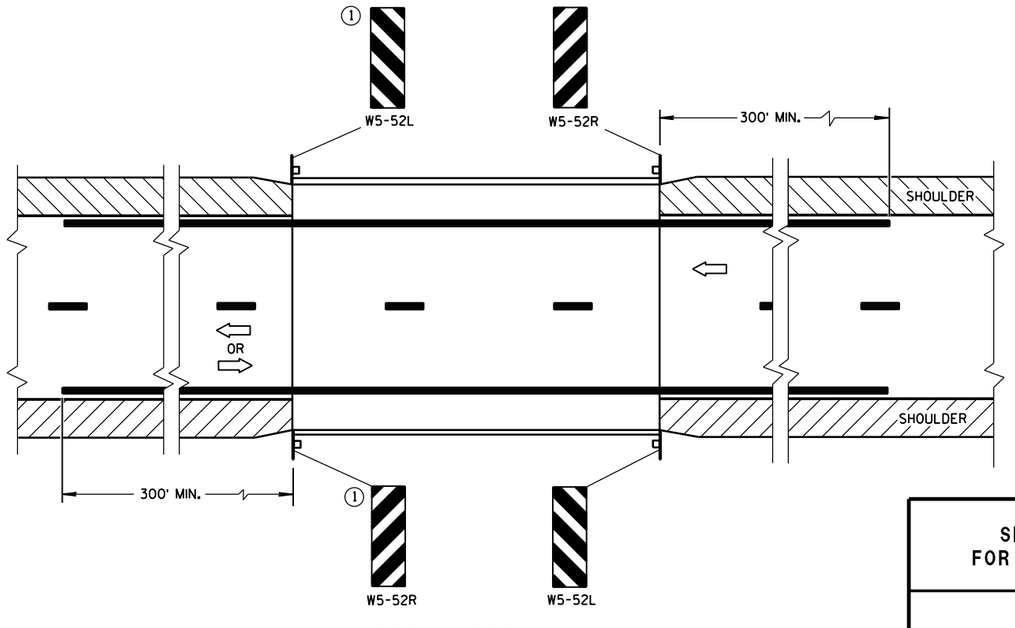
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

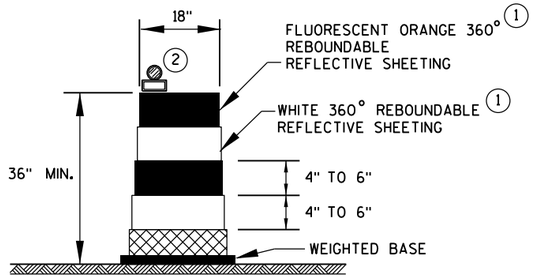
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

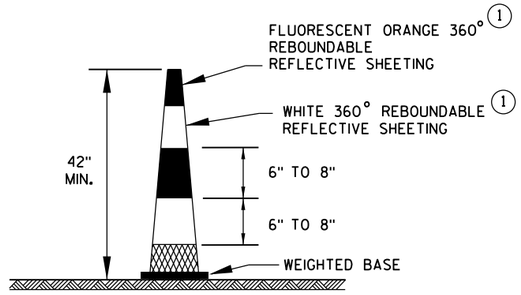
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

6

S.D.D. 15 C 6-9



DRUM

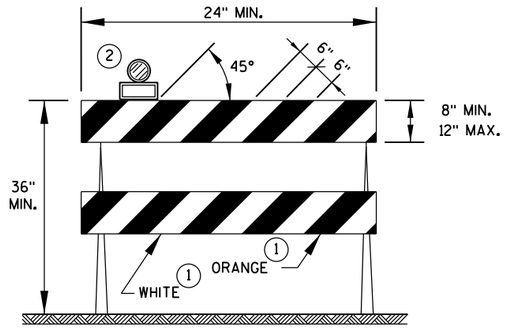


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

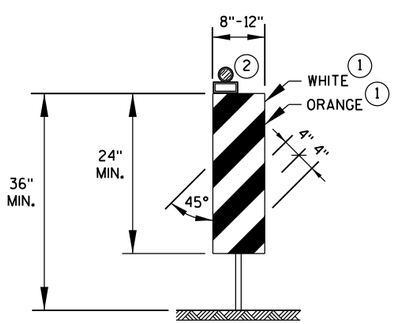
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



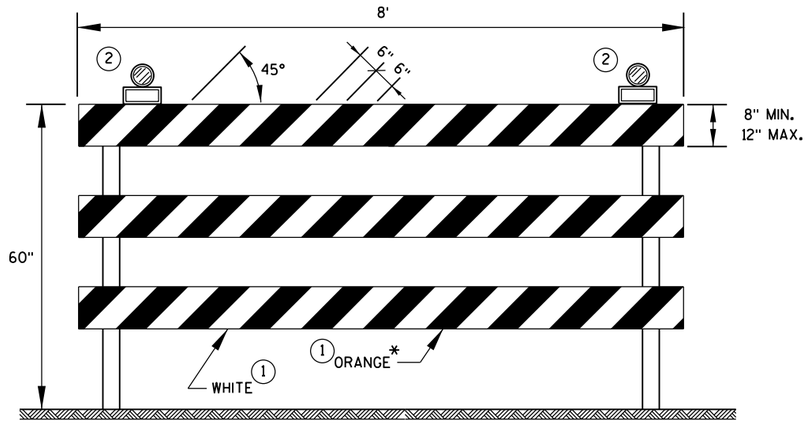
TYPE 2 BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE 3 BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017 — DATE

/S/ Andrew Heidtke — WORK ZONE ENG

FHWA

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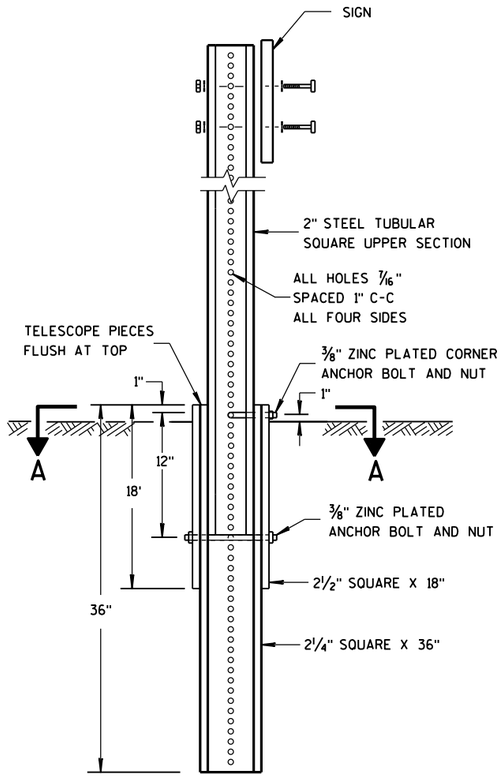
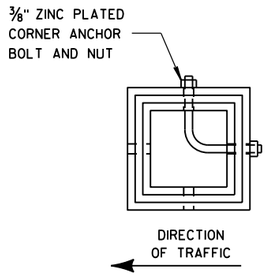
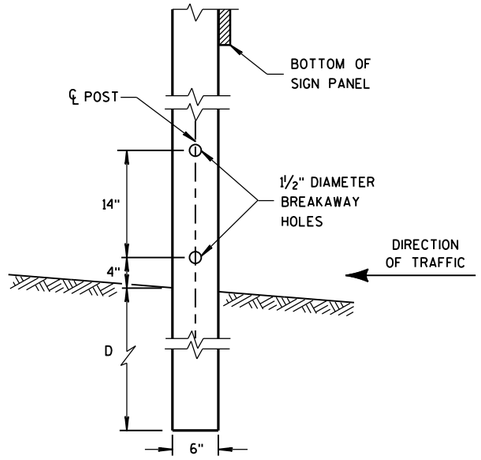
S.D.D. 15 C 11-7b



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



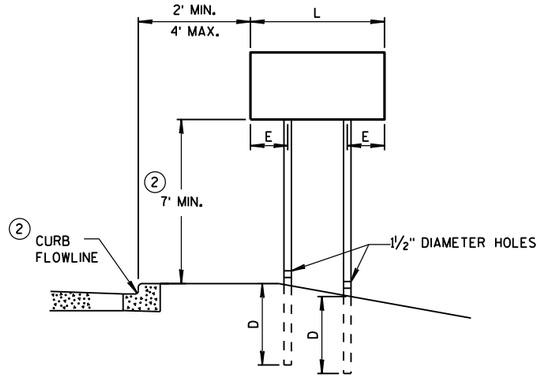
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

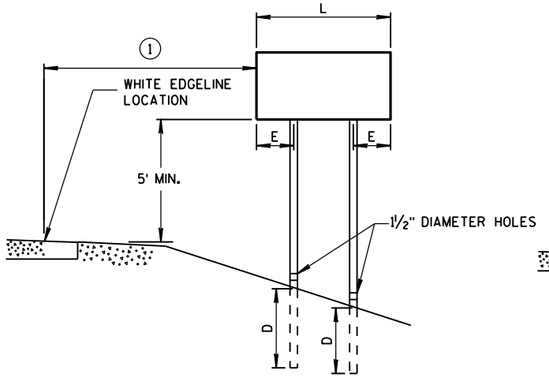
1. 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

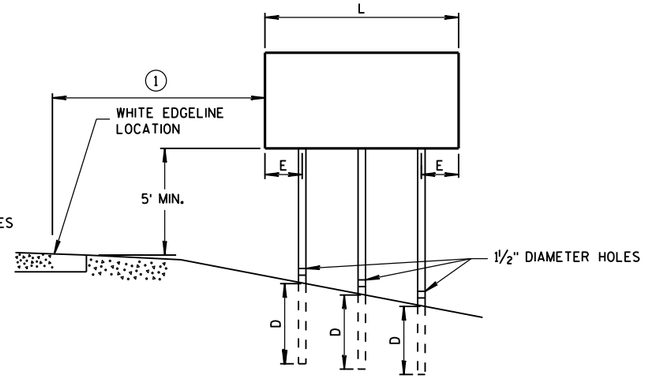
2. THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

3. FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

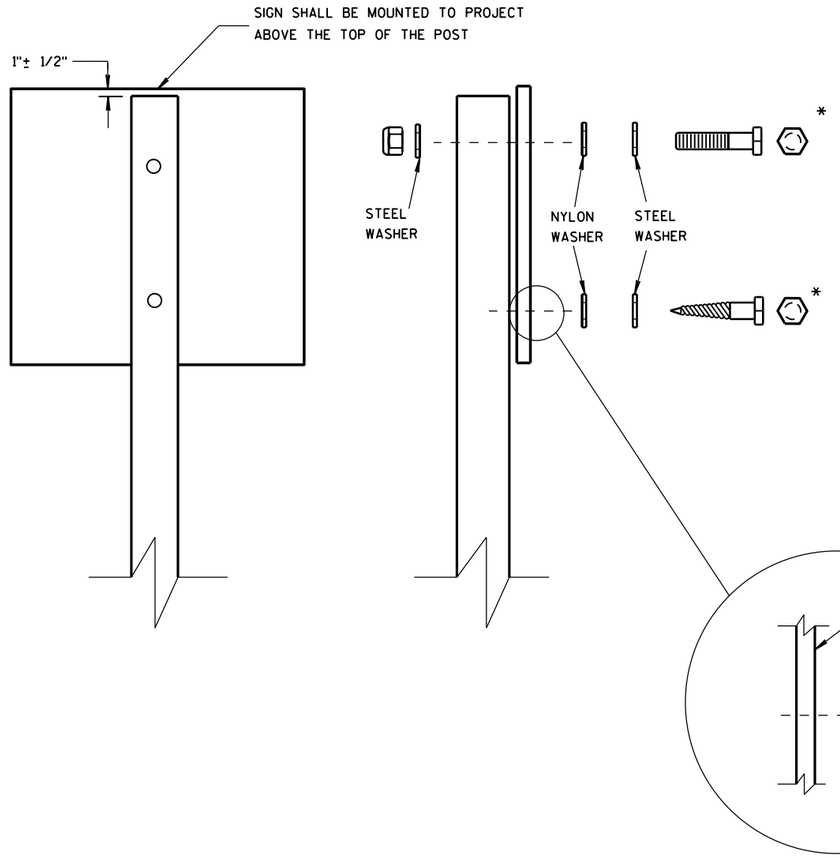
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-2a

6

S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

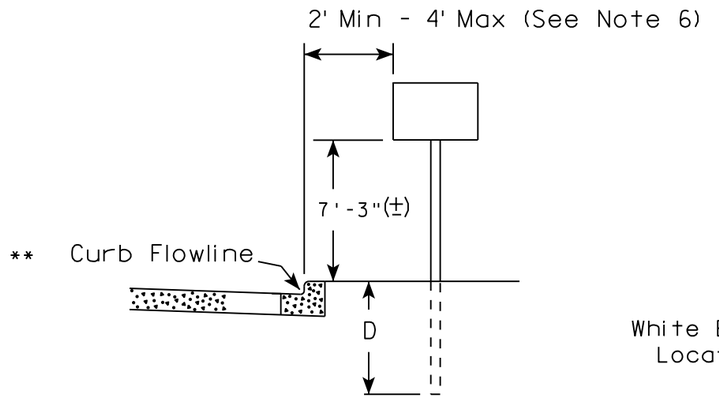
APPROVED

June 2017
DATE

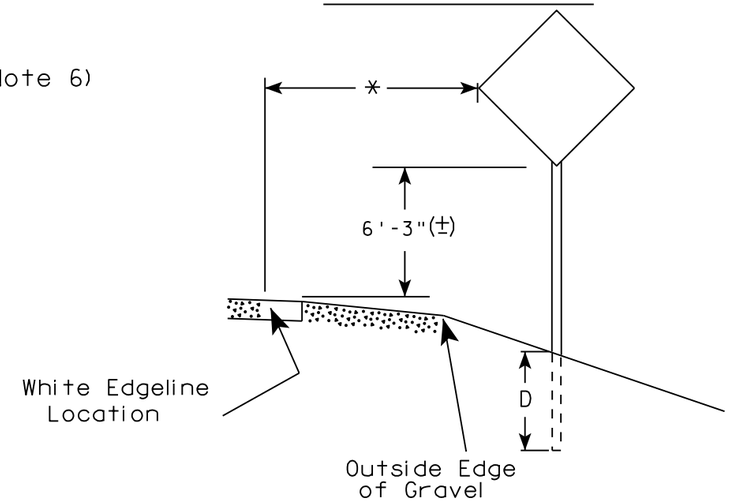
/S/ Andrew Heldtke
WORK ZONE ENG

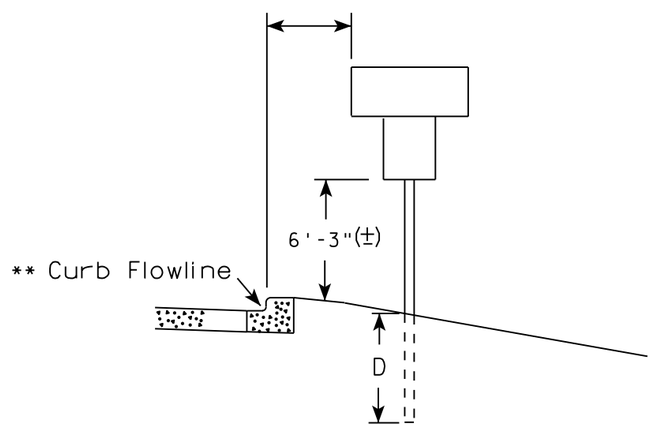
FHWA

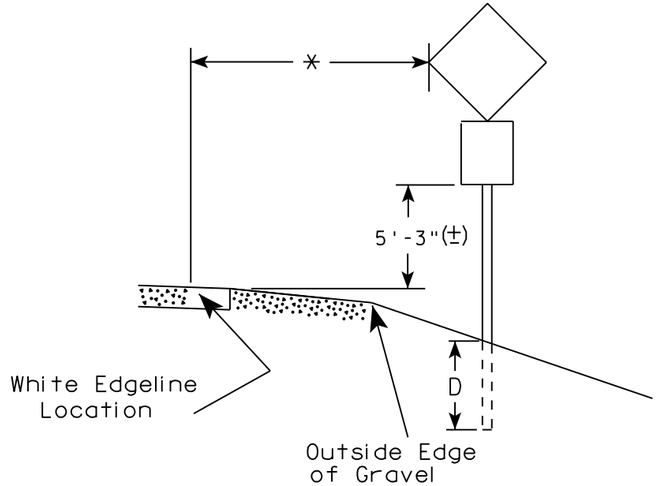
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

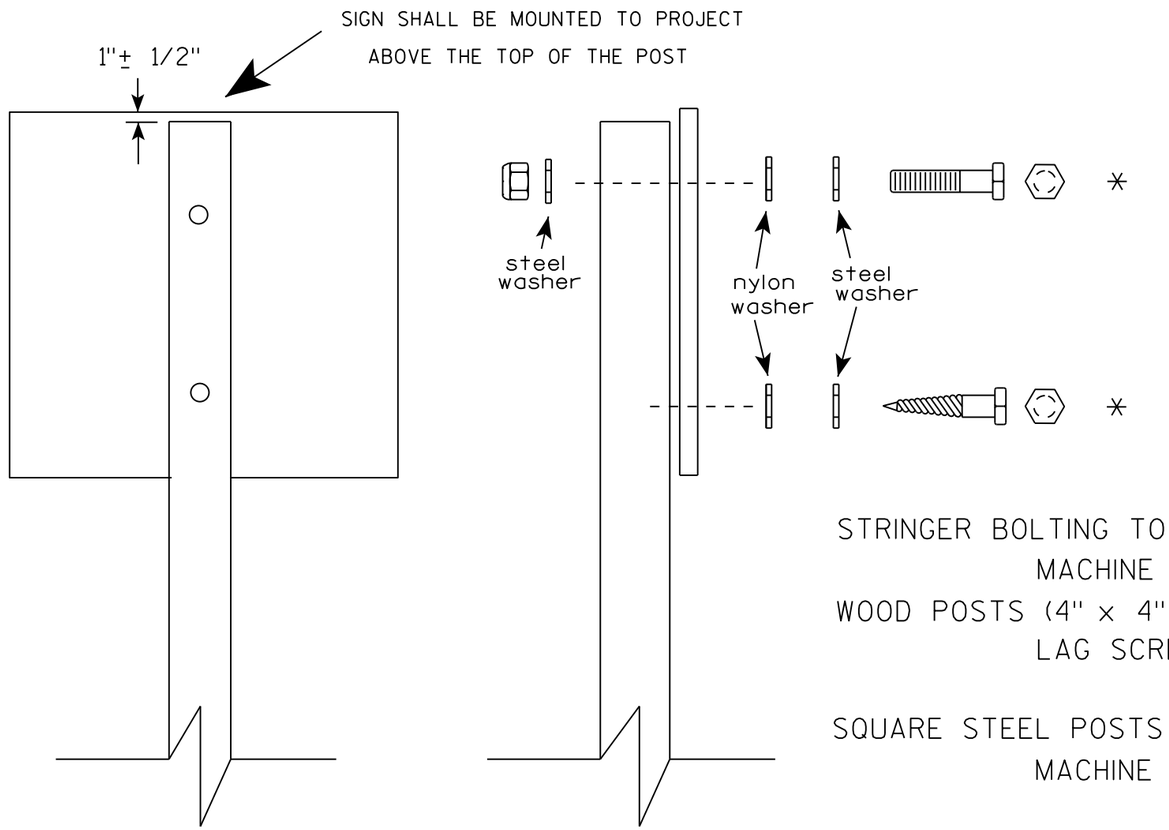
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)

3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)

3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

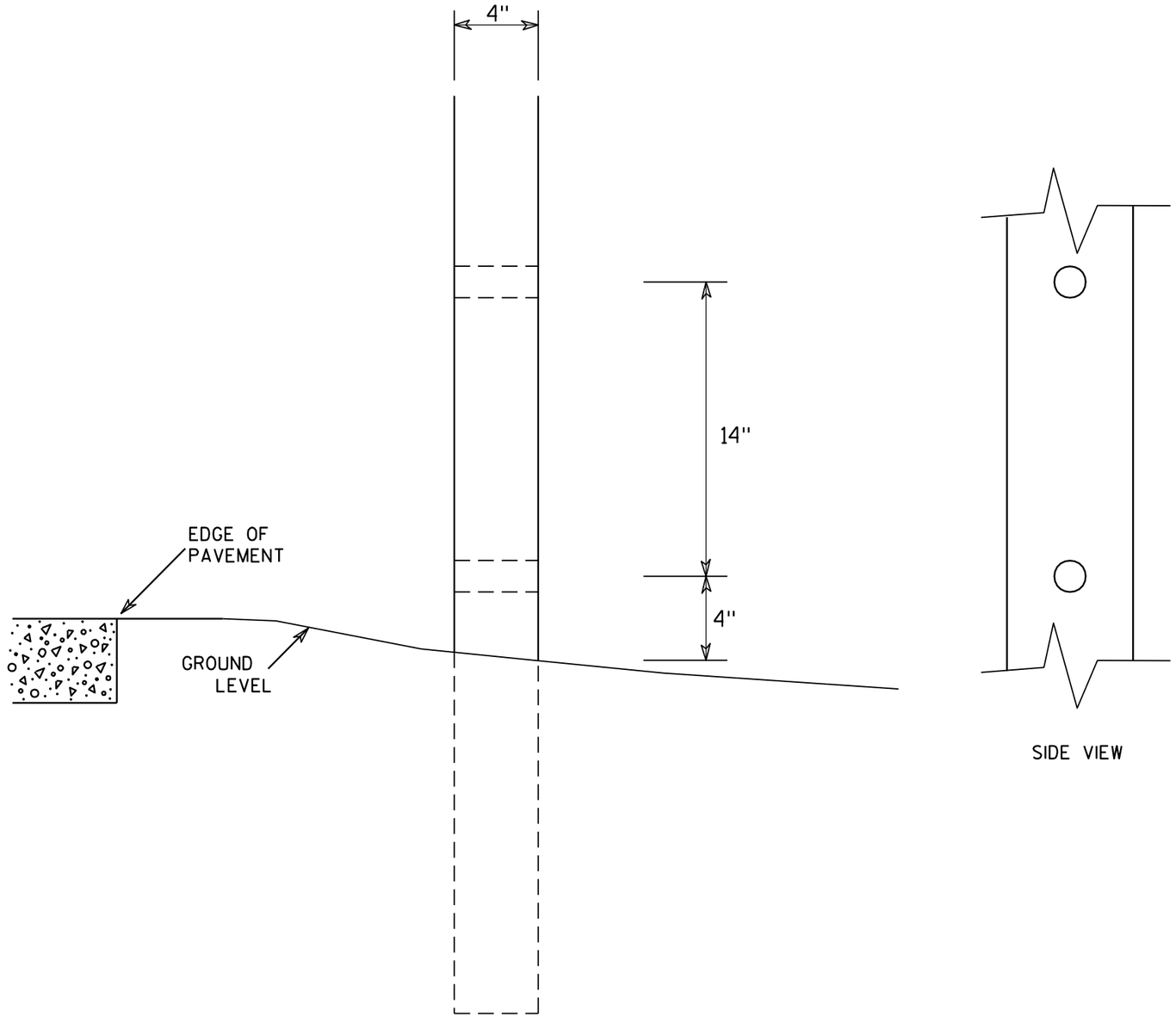
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

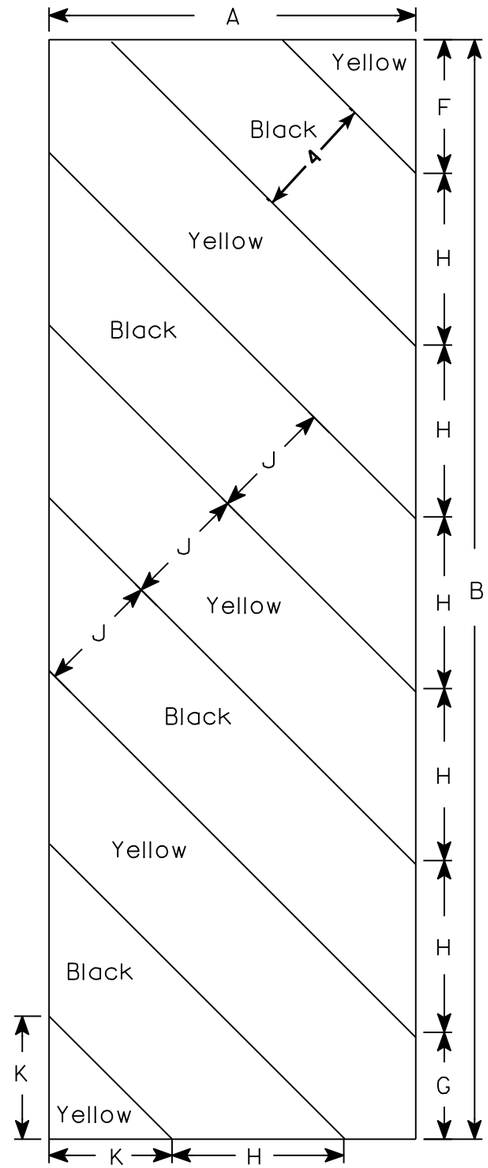
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

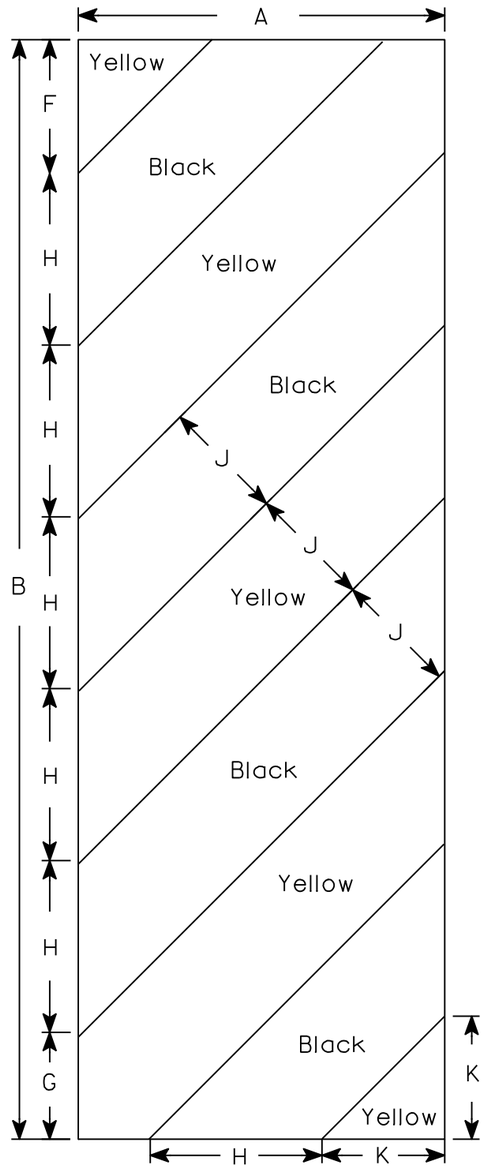
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 27	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

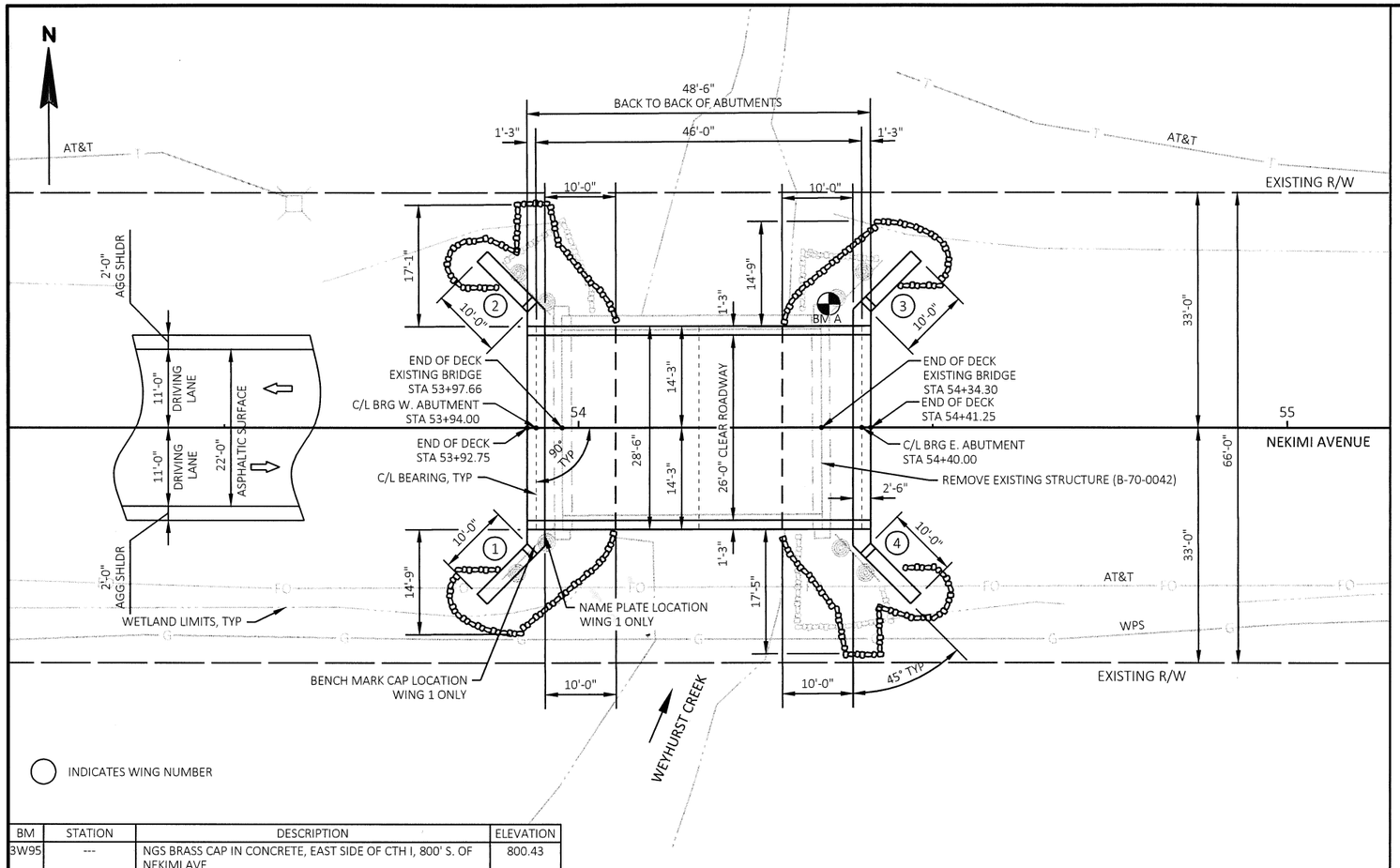
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

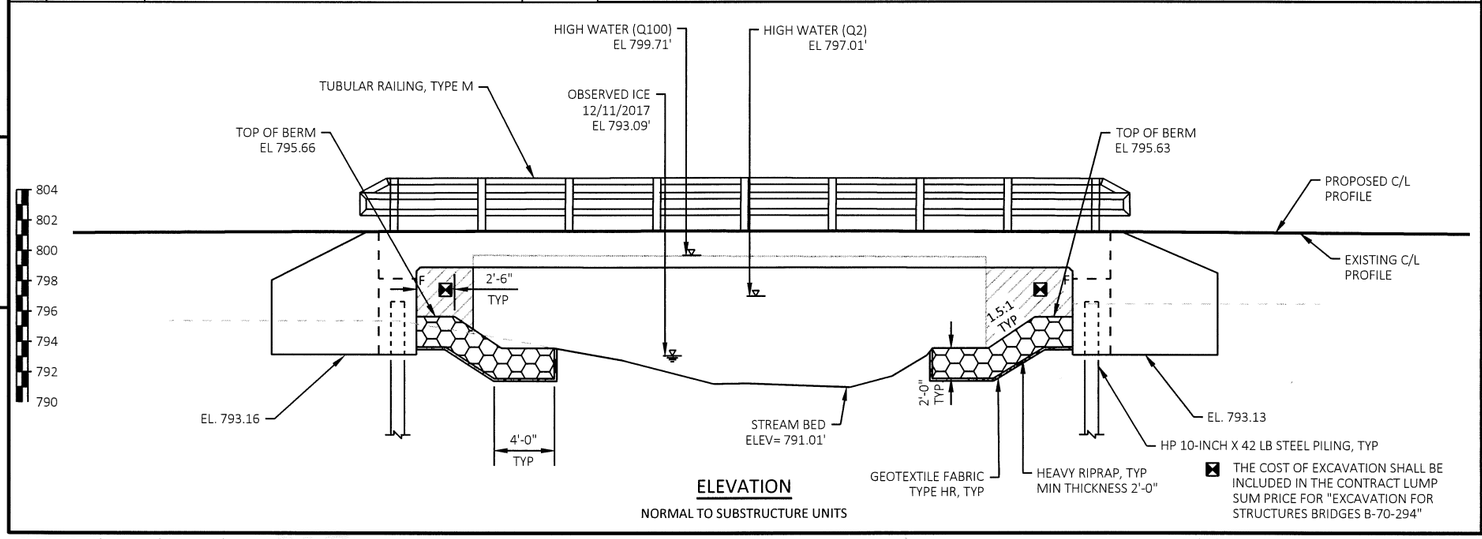
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 28	E



BM	STATION	DESCRIPTION	ELEVATION
3W95	---	NGS BRASS CAP IN CONCRETE, EAST SIDE OF CTH I, 800' S. OF NEKIMI AVE	800.43
A	54+35, 17' LT	CHISELED SQUARE ON NE CORNER OF BRIDGE, B-70-42-63	801.77
B	57+52, 102' RT	MAG NAIL IN W. FACE OF PP #1716 23E18 AT SW CORNER OF CTH I & NEKIMI AVE	799.19

PLAN

SINGLE SPAN FLAT CONCRETE SLAB



ELEVATION

NORMAL TO SUBSTRUCTURE UNITS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN INCHES (IN) EXCEPT AS NOTED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET (FT).

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO NAVD88.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

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

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION: M153, TYPE I,II OR III; OR M213.

THE EXISTING GROUND LINE AT THE ABUTMENTS SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURE.

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

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

THIS STRUCTURE WILL REPLACE A SINGLE SPAN CONCRETE DECK GIRDER (B-70-0042).

ALL REINFORCING BARS ARE ENGLISH AND THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFY THE BAR SIZE.

DESIGN DATA

DESIGN LOAD	HL-93
INVENTORY RATING FACTOR	RF=1.27
OPERATING RATING FACTOR	RF=1.65
MAX STD PERMIT VEHICLE (WIS SPV)	250 KIPS

STRUCTURE WILL BE DESIGNED FOR A FUTURE WEARING SURFACE OF 20 LBS PER SQ FT

MATERIAL PROPERTIES

CONCRETE:	SLAB	f'c = 4,000 psi
	ALL OTHER	f'c = 3,500 psi
REINFORCING STEEL GRADE 60		fy = 60,000 psi

* 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.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS* PER PILE. AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED PILE LENGTH FOR WEST ABUTMENT IS 35 FT. ESTIMATED PILE LENGTH FOR EAST ABUTMENT IS 35 FT. PRE-BORING FOR WEST ABUTMENT IS ESTIMATED AT 7 FT PER PILE. PILING REQUIRES THE USE OF PILE POINTS.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q100	=	1,420 cfs
VELOCITY-THRU BRIDGE	=	6.2 fps
HIGH WATER (Q100)	=	799.71 ft
WATERWAY AREA-THRU BRIDGE	=	228 ft²
DRAINAGE AREA	=	7.6 mi²
OVERTOPPING FREQUENCY	=	N/A
SCOUR CRITICAL CODE	=	5

2 YEAR FREQUENCY

Q2	=	360 cfs
VELOCITY-THRU BRIDGE	=	2.5 fps
HIGH WATER (Q2)	=	797.01 ft

TRAFFIC DATA

(NEKIMI AVENUE)

ADT	(2019)	170 vpd
ADT	(2039)	200 vpd
RDS		45 MPH

STATE PROJECT NUMBER

6435-03-71

WISCONSIN
RYAN T. ARNDT
E-41765
FOND DU LAC, WI
12-27-18
PROFESSIONAL ENGINEER

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT:
BILL DREHER 608-266-8489

CONSULTANT CONTACT:
THOMAS LANSER 920-924-5720

NO.	DATE	REVISION	BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — CHIEF STRUCTURES DESIGN ENGINEER — 02/05/19 DATE

STRUCTURE B-70-294

NEKIMI AVENUE OVER WEYHURST CREEK

COUNTY	TOWN/~~CITY~~/VILLAGE
WINNEBAGO	NEKIMI

DESIGN SPEC
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
RTA	ALK	MJK	ALK

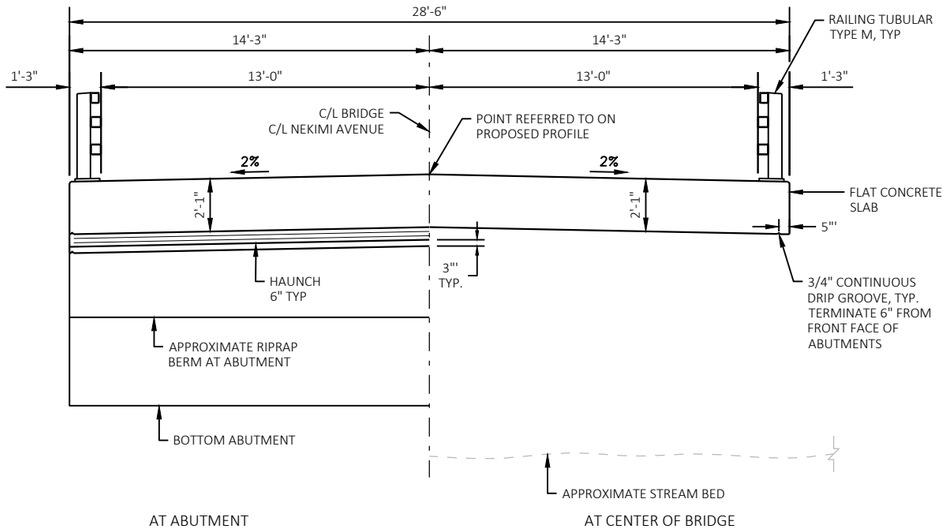
GENERAL PLAN

SHEET 1 OF 8

29

STATE PROJECT NUMBER

6435-03-71

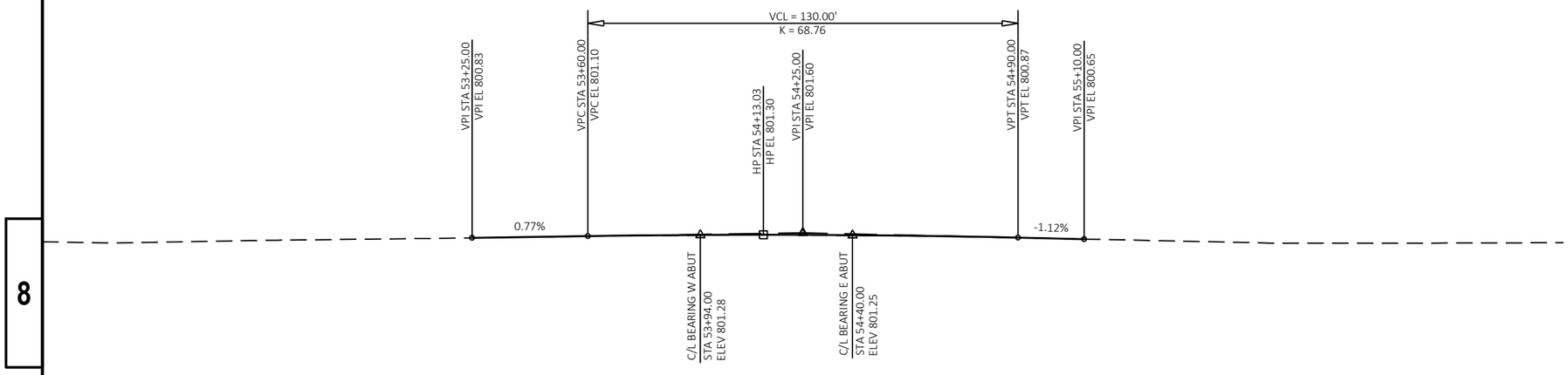


CROSS-SECTION THROUGH STRUCTURE

LOOKING EAST

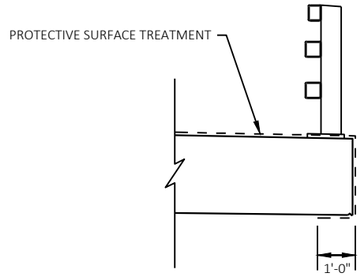
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	W ABUT	E ABUT	SUPER	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 54+16	LS	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-70-294	LS	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	160	160	---	320
502.0100	CONCRETE MASONRY BRIDGES	CY	27	26	111	164
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	183	183
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2120	2119	---	4,239
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1488	1488	22084	25,060
513.4061	RAILING TUBULAR TYPE M	LF	---	---	102	102
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	---	12
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	49	---	---	49
550.0500	PILE POINTS	EACH	7	7	---	14
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	245	245	---	490
606.0300	RIPRAP HEAVY	CY	49	50	---	99
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	63	60	---	123
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	46	46	---	92
645.0120	GEOTEXTILE TYPE HR	SY	73	76	---	149
	NON-BID ITEMS					
-----	JOINT FILLER	SIZE				1/2" & 3/4"



FINISHED REFERENCE LINE PROFILE

NEKIMI AVENUE



PROTECTIVE SURFACE TREATMENT DETAIL

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-70-294

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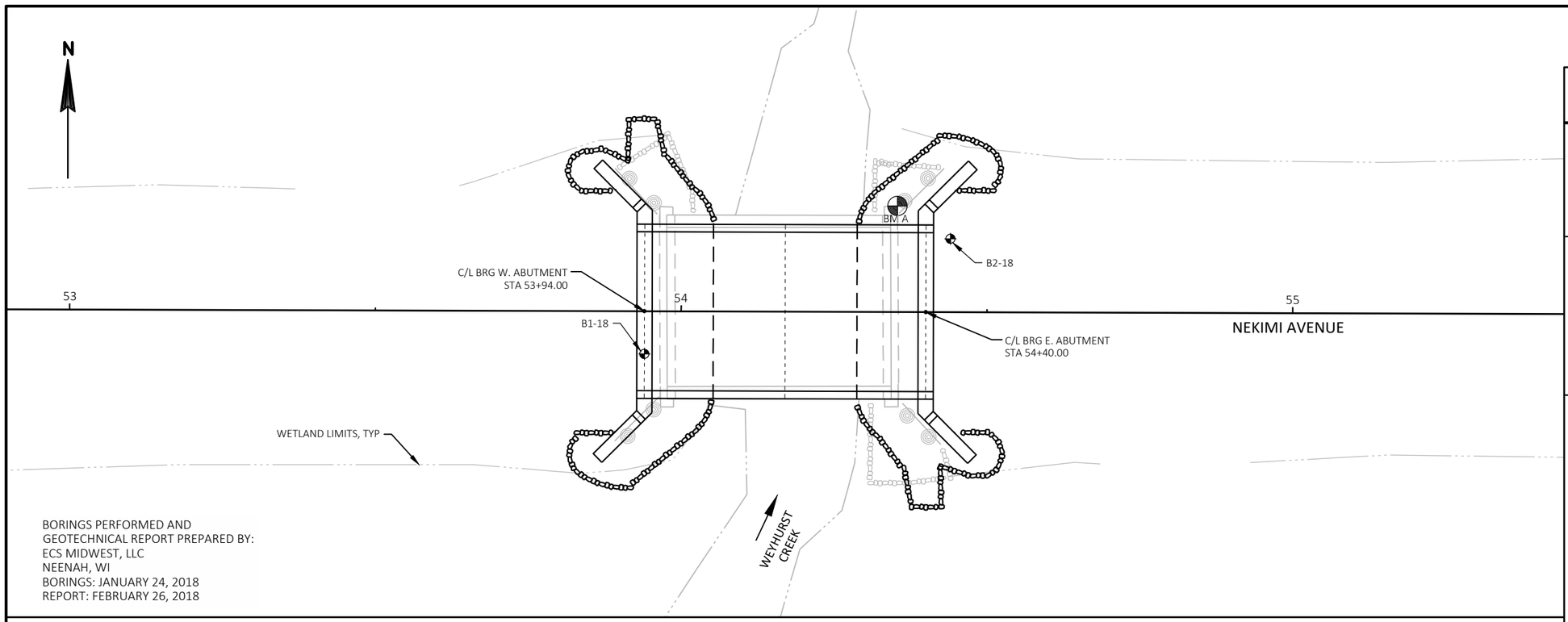
QUANTITIES AND CROSS SECTIONS

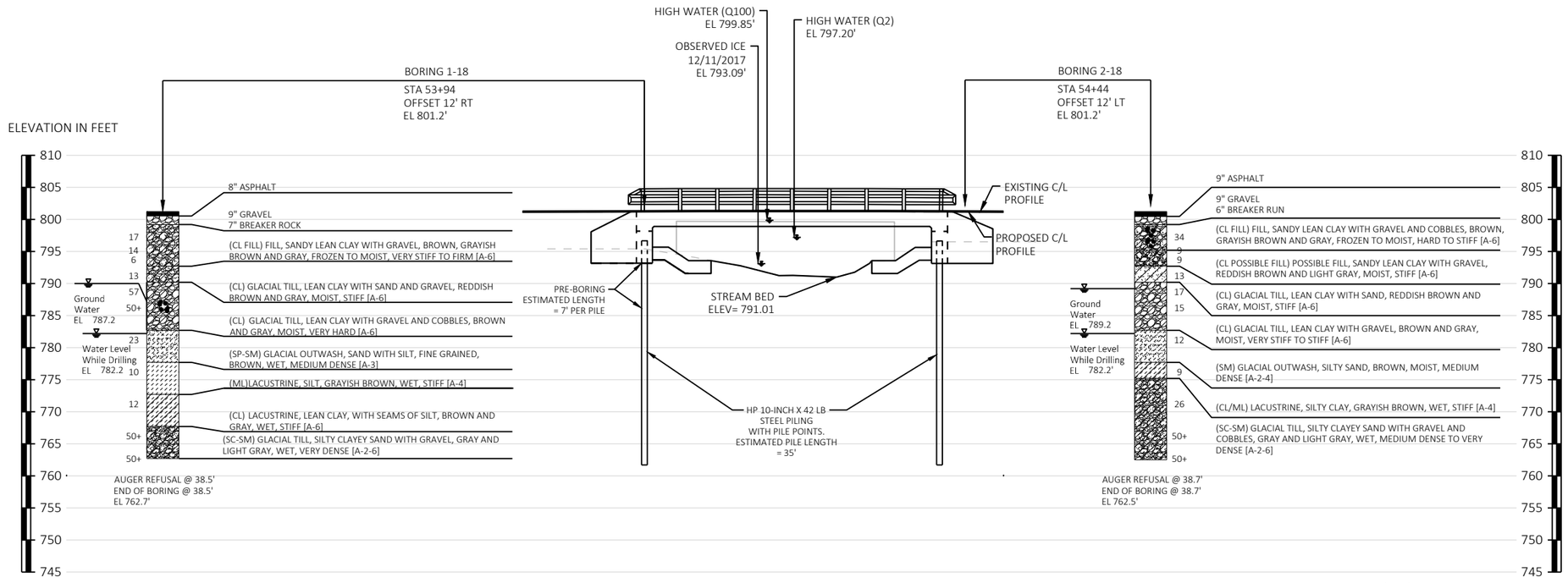
SHEET 2

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-080102-BR.DWG
LAYOUT NAME - SHEET-02

PLOT DATE : 12/27/2018 9:48 AM PLOT BY : AARON SARAUER PLOT NAME :



BORINGS PERFORMED AND
GEOTECHNICAL REPORT PREPARED BY:
ECS MIDWEST, LLC
NEENAH, WI
BORINGS: JANUARY 24, 2018
REPORT: FEBRUARY 26, 2018



NOTES: COBBLES ENCOUNTERED FROM 11' TO 18½'

NOTES: COBBLES ENCOUNTERED FROM 2' TO 6'
COBBLES ENCOUNTERED FROM 26' TO 38.7'

STATE PROJECT NUMBER

6435-03-71

ABBREVIATIONS

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

MATERIAL SYMBOLS

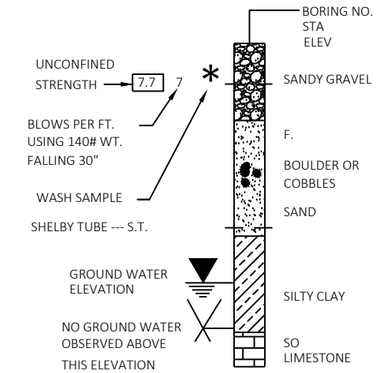
TOPSOIL, SAND, GRAVEL, SILT, PEAT, CLAY, SANDSTONE, LIMESTONE, IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

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DEPARTMENT OF TRANSPORTATION

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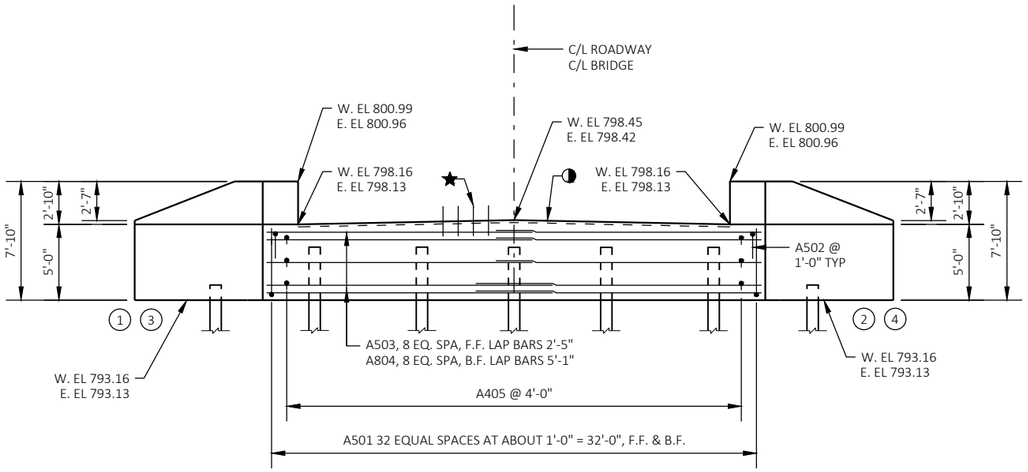
SUBSURFACE EXPLORATION

SHEET 3

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-080103-BR.DWG
LAYOUT NAME - SHEET-03
PLOT DATE : 12/27/2018 9:48 AM PLOT BY : AARON SARAUER PLOT NAME :

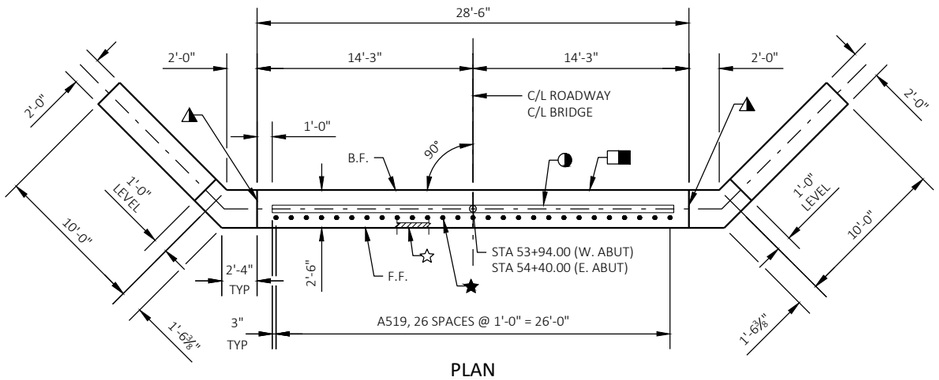
STATE PROJECT NUMBER

6435-03-71

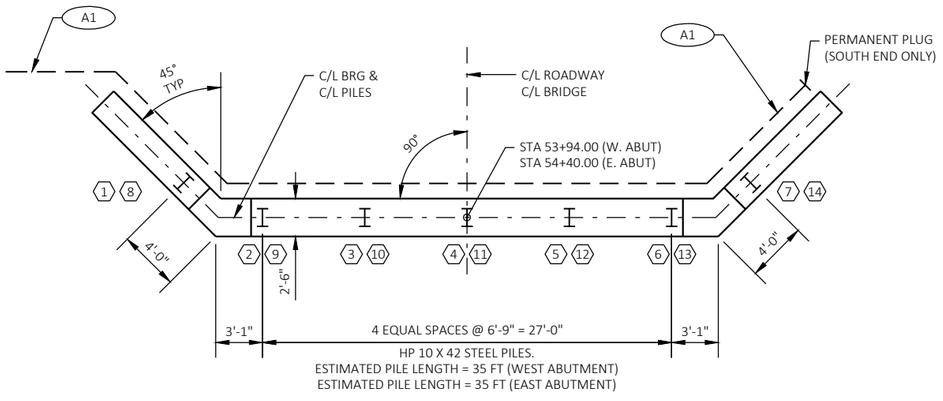


ELEVATION

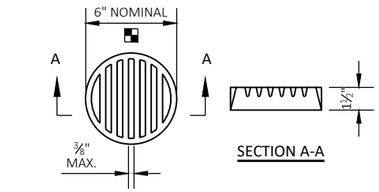
(LOOKING WEST FOR WEST ABUTMENT)
(LOOKING EAST FOR EAST ABUTMENT)



PLAN



PILE PLAN



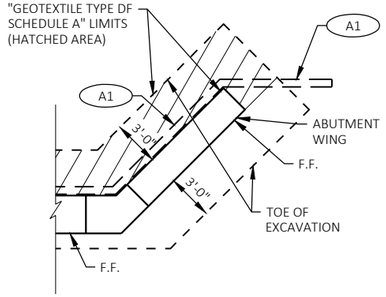
SECTION A-A

DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

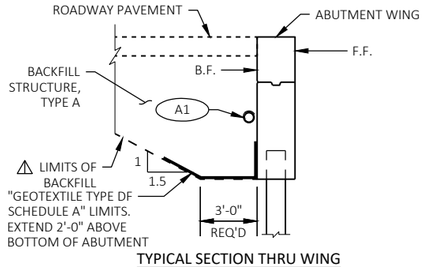
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED".

THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

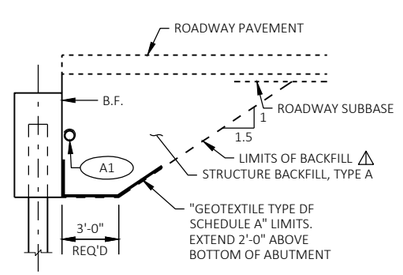
RODENT SHIELD DETAIL



ABUTMENT PLAN WITH WING



TYPICAL SECTION THRU WING



TYPICAL SECTION THRU ABUTMENT

NOTES:

THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES SHALL BE THE EXISTING GROUND LINE.

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

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

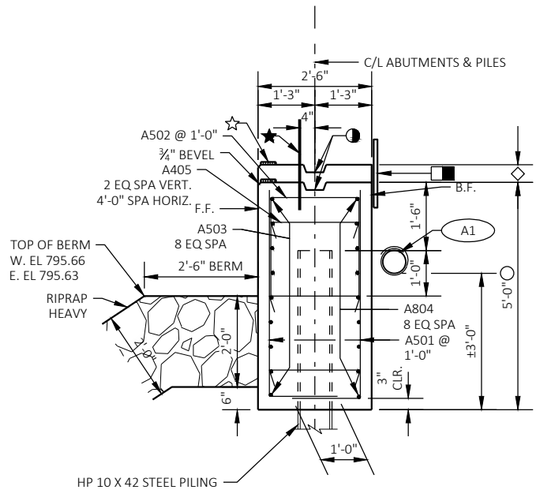
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

STRUCTURE BACKFILL LIMITS DETAIL

(TYPICAL AT BOTH ABUTMENTS)

LEGEND

(1)	INDICATES WING NUMBER
⬡1	INDICATES PILE NUMBER
F.F.	FRONT FACE
B.F.	BACK FACE
◨	RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND CONTINUOUS BETWEEN CORNERS AND FROM SEAT TO TOP OF WINGS, TO BE PLACED FLUSH WITH SURFACE OF CONCRETE.
◭	½" PREFORMED FILLER TO EXTEND FROM TOP OF ABUTMENT BODY TO TOP OF WINGS, SEAL ALL EXPOSED SURFACES OF FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONC.).
◑	CONSTRUCTION JOINT KEYWAY FORMED WITH A SURFACED BEVELED 2"X6".
★	A519 BARS COATED AT 1'-0" (2'-0" LONG). THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.
☆	4" X ¾" CORK FILLER.
○	DIMENSION IS FROM BOTTOM OF ABUTMENT TO LOW BEAM SEAT OR LOW SIDE OF SLAB TYPE SUPERSTRUCTURE.
◇	VARIES 0" - 3 ½" ADJUST HEIGHT OF A502 AND TOP A503, A804 BARS TO MATCH ABUTMENT SLOPE.



TYPE A5 WITH FIXED SEAT

(A1) PIPE UNDERDRAIN WRAPPED, 6 INCH, SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. PERMANENT PLUG ON UPSTREAM END TO BE INCLUDED IN BID PRICE FOR "PIPE UNDERDRAIN WRAPPED 6-INCH". ATTACH RODENT SHIELD AT OUTLET END AS DETAILED ON THIS SHEET. RODENT SHIELD TO BE INCLUDED IN BID PRICE FOR "PIPE UNDERDRAIN WRAPPED 6-INCH".

NO.	DATE	REVISION	BY

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ABUTMENTS

SHEET 4

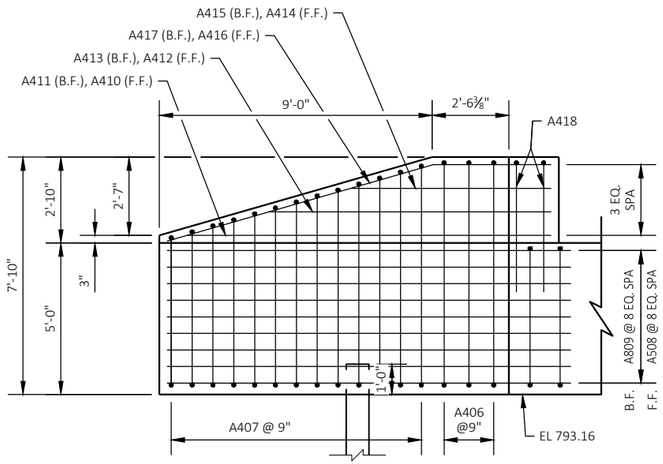
8

8

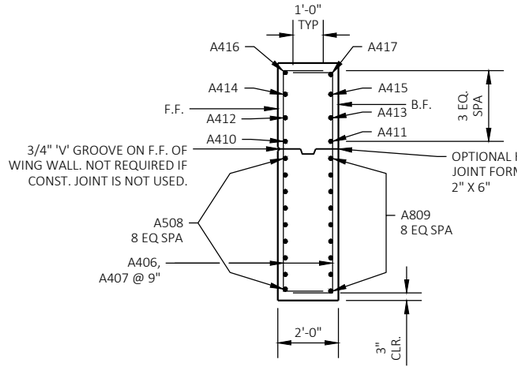
FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-080104-BR.DWG
LAYOUT NAME - SHEET-04
PLOT DATE : 12/27/2018 9:48 AM PLOT BY : AARON SARAUER PLOT NAME :

STATE PROJECT NUMBER

6435-03-71

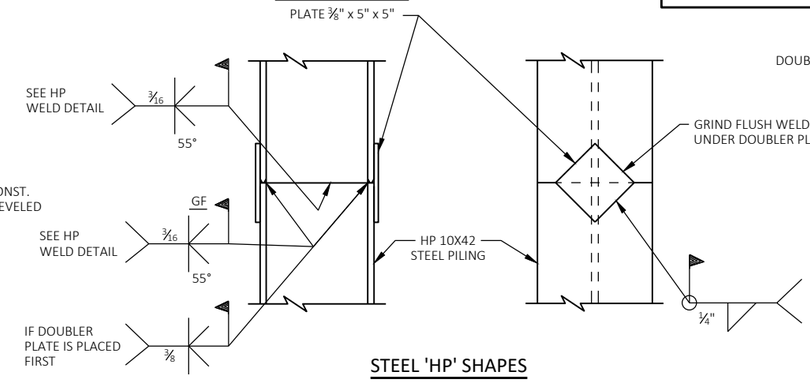


WINGS 1 & 2 ELEVATION

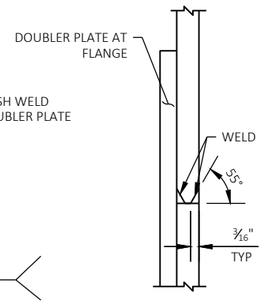


WINGS 1 & 2 SECTION

DOUBLER PLATES

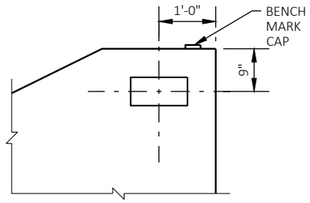


STEEL 'HP' SHAPES



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR



NAME PLATE DETAIL

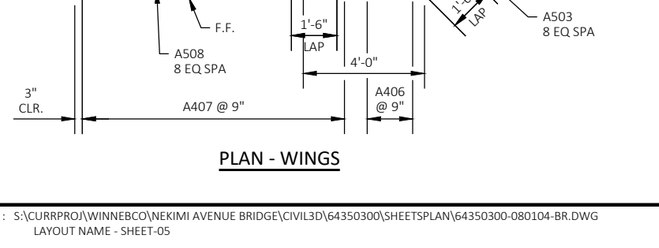
(WING 1 ONLY)

△

BILL OF BARS - ABUTMENTS

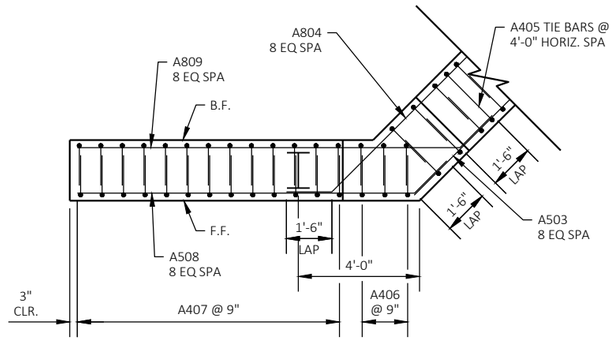
BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
A501		132	6'-0"	X		BODY - VERTICAL - STIRRUPS
A502		66	7'-1"	X		BODY - VERTICAL - STIRRUPS - TOP
A503		36	17'-8"			BODY - HORIZONTAL - F.F.
A804		36	22'-8"	X		BODY - HORIZONTAL - B.F.
A405		48	2'-7"	X		BODY - TIES
A406	X	24	9'-9"	X		WINGS - VERTICAL AT BODY
A407	X	104	8'-5"	X	X	WINGS - VERTICAL - STIRRUPS
A508	X	36	12'-7"	X		LOWER WINGS - HORIZONTAL - F.F.
A809	X	36	14'-4"	X		LOWER WINGS - HORIZONTAL - B.F.
A410	X	4	13'-2"	X		UPPER WINGS - HORIZONTAL - F.F.
A411	X	4	11'-4"	X		UPPER WINGS - HORIZONTAL - B.F.
A412	X	4	10'-2"	X		UPPER WINGS - HORIZONTAL - F.F.
A413	X	4	8'-3"	X		UPPER WINGS - HORIZONTAL - B.F.
A414	X	4	7'-4"	X		UPPER WINGS - HORIZONTAL - F.F.
A415	X	4	5'-5"	X		UPPER WINGS - HORIZONTAL - B.F.
☒ A416	X	4	13'-6"	X		UPPER WINGS - HORIZONTAL - TOP - F.F.
☒ A417	X	4	11'-8"	X		UPPER WINGS - HORIZONTAL - TOP - B.F.
A418	X	8	10'-6"	X		UPPER WINGS - VERTICAL - OVER ABUT BODY
A519	X	54	2'-0"			BODY - DOWELS

☒ AN ADDITIONAL FIELD BEND WILL BE REQUIRED TO FIT THESE BARS IN THE WINGS, OVER THE ABUTMENT BODY

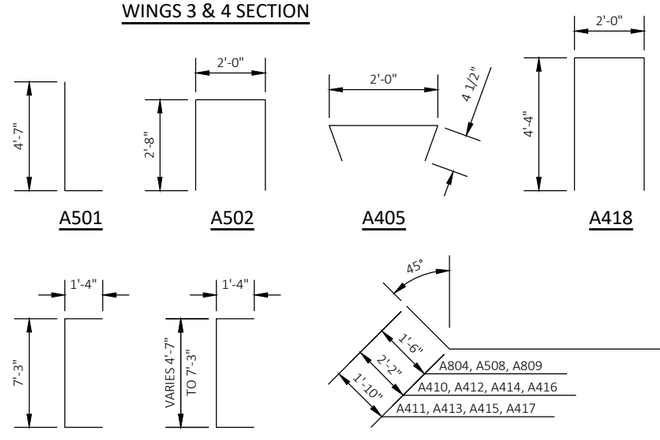


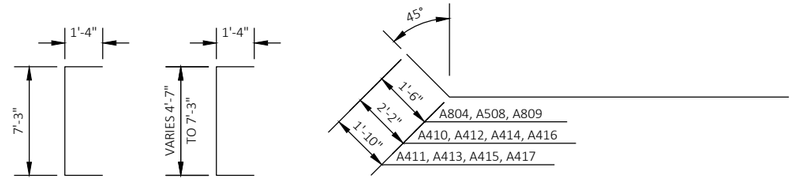
WINGS 3 & 4 ELEVATION

WINGS 3 & 4 SECTION



PLAN - WINGS





BAR SERIES -		
BAR MARK	NO. REQUIRED	LENGTH
A407	8 SERIES OF 13	7'-1" TO 9'-9"

NOTES:

1. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
2. BAR DIMENSIONS ARE OUT TO OUT OF BAR.
3. FILL/EXCAVATE TO BOTTOM OF FOOTING ELEVATION BEFORE DRIVING PILING.

LEGEND

F.F. FRONT FACE

B.F. BACK FACE

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-70-294

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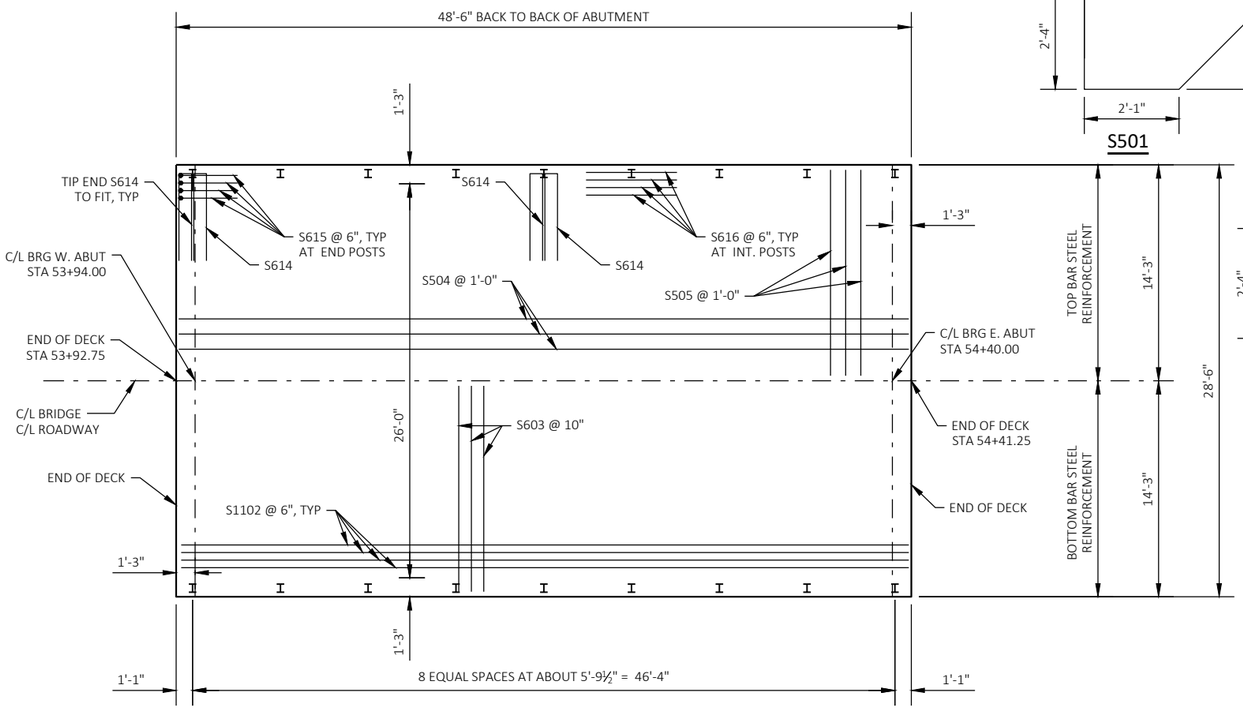
ABUTMENT DETAILS

SHEET 5

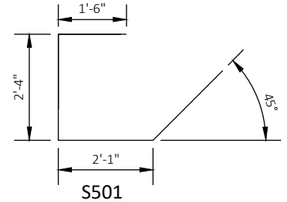
FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-080104-BR.DWG
LAYOUT NAME - SHEET-05
PLOT DATE : 12/27/2018 9:48 AM PLOT BY : AARON SARAUER PLOT NAME :

STATE PROJECT NUMBER

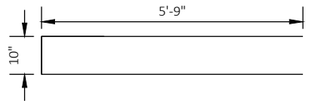
6435-03-71



PLAN



S501



S614

S615

GENERAL NOTES:

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE C/L OF THE SUBSTRUCTURE UNITS.

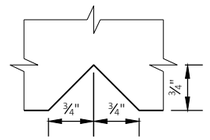
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

BILL OF BARS - SUPERSTRUCTURE

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	58	7'-9"	X		AT END OF DECK
S1102	X	57	48'-2"			DECK - BOTTOM - LONGITUDINAL
S603	X	67	28'-2"			DECK - BOTTOM - TRANSVERSE
S504	X	29	48'-2"			DECK - TOP - LONGITUDINAL
S505	X	49	28'-2"			DECK - TOP - TRANSVERSE
S614	X	36	12'-0"	X		DECK - AT RAIL POSTS - TRANSVERSE - 2 PER POST
S615	X	16	6'-0"	X		DECK - AT END RAIL POSTS - LONGITUDINAL
S616	X	56	6'-0"			DECK - AT INTERMEDIATE RAIL POSTS - LONGITUDINAL

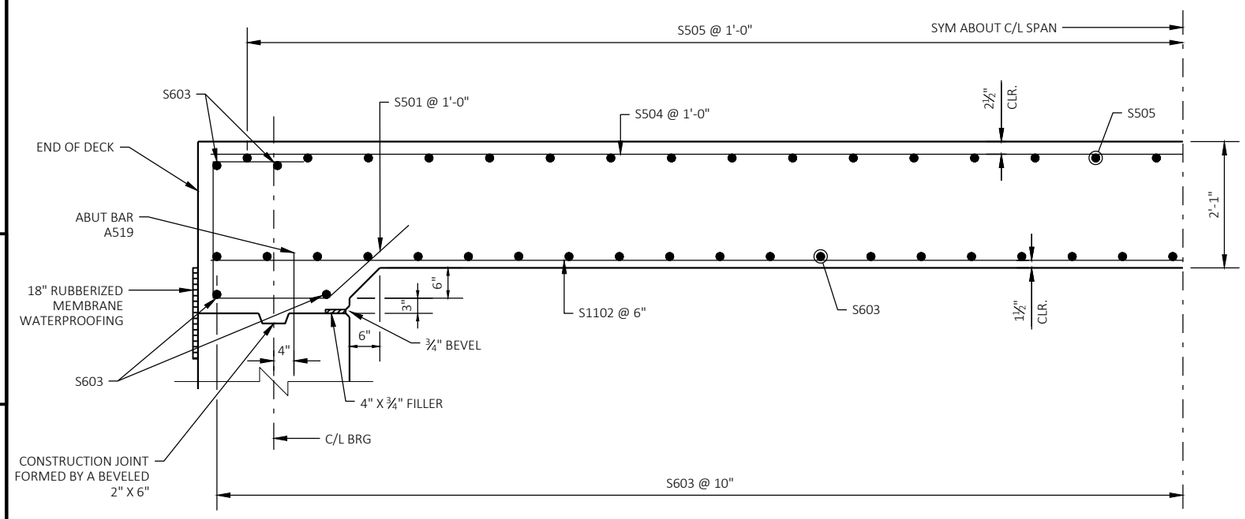
NOTES:

1. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
2. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

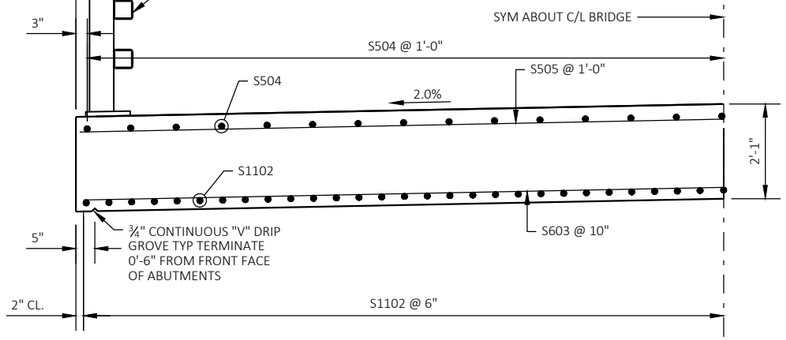


DRIP GROOVE DETAIL

3/4" V-GROOVE TERMINATE 0'-6" FROM FRONT FACE OF ABUTMENTS



LONGITUDINAL SECTION



CROSS SECTION THROUGH ROADWAY

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STATE OF WISCONSIN
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B-70-294

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SUPERSTRUCTURE

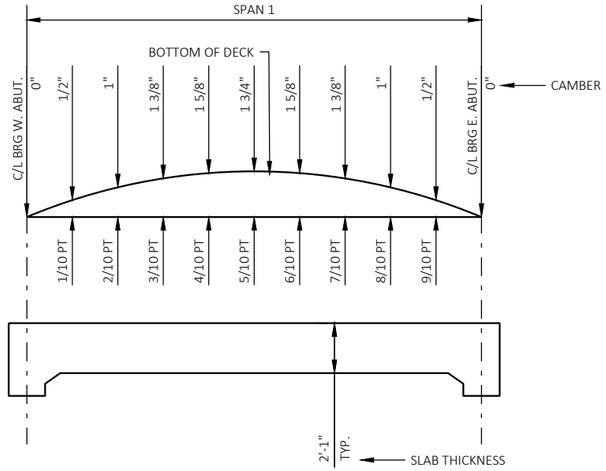
SHEET 6

8

8

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-080104-BR.DWG
LAYOUT NAME - SHEET-06
PLOT DATE : 12/27/2018 9:48 AM
PLOT BY : AARON SARAUER
PLOT NAME :

STATE PROJECT NUMBER
6435-03-71



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS, SIDEWALKS AND MEDIANS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION.

SURVEY TOP OF SLAB ELEVATIONS

	C/L BRG. W. ABUTMENT	5/10	C/L BRG. E. ABUTMENT
N. EDGE OF DECK			
CROWN OR R/L			
S. EDGE OF DECK			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF DECK AND CROWN OR C/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF DECK ELEVATIONS AT FINAL GRADE

	C/L BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L BRG. E. ABUT.
STATION	53+94.0	53+98.6	54+03.2	54+07.8	54+12.4	54+17.0	54+21.6	54+26.2	54+30.8	54+35.4	54+40
N. EDGE OF DECK	801.00	801.01	801.02	801.02	801.02	801.02	801.02	801.01	800.99	800.97	800.96
CROWN OR R/L	801.28	801.29	801.30	801.30	801.30	801.30	801.30	801.29	801.28	801.27	801.25
S. EDGE OF DECK	801.00	801.01	801.02	801.02	801.02	801.02	801.02	801.01	800.99	800.97	800.96

NOTES:

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

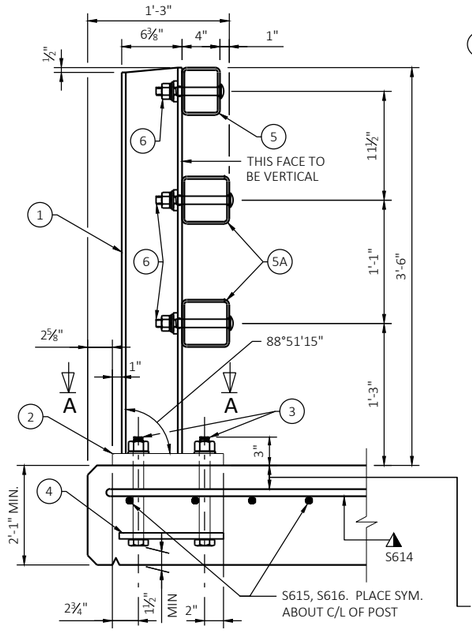
B-70-294

DRAWN BY MJK | PLANS CK'D ALK

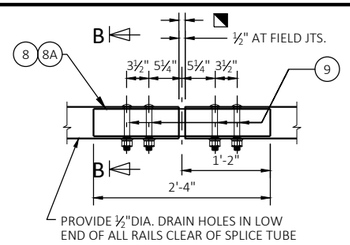
SUPERSTRUCTURE DETAILS

SHEET 7

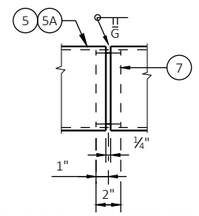
FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-080104-BR.DWG
LAYOUT NAME - SHEET-07
PLOT DATE : 12/27/2018 9:48 AM PLOT BY : AARON SARAUER PLOT NAME :



SECTION THRU RAILING ON DECK

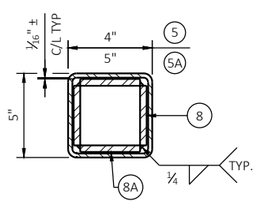


FIELD ERECTION JOINT DETAIL

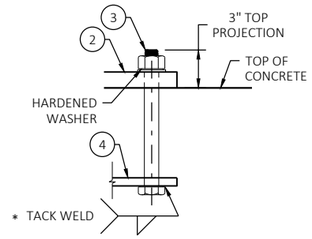


SHOP RAIL SPLICE DETAIL

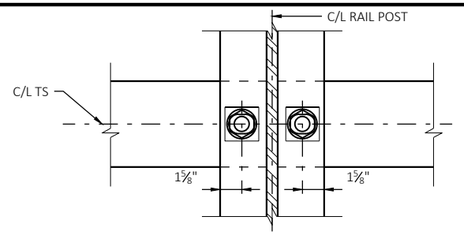
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



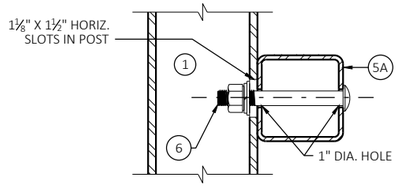
SECTION B-B



ANCHOR BOLTS



SECTION THRU POST WEB



SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

LEGEND

(1) W6 X 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1¼" X 11¾" X 1'-8" WITH 1⁵⁄₁₆" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

(3) ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)

(4) ⅝" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 X 4 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 X 5 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

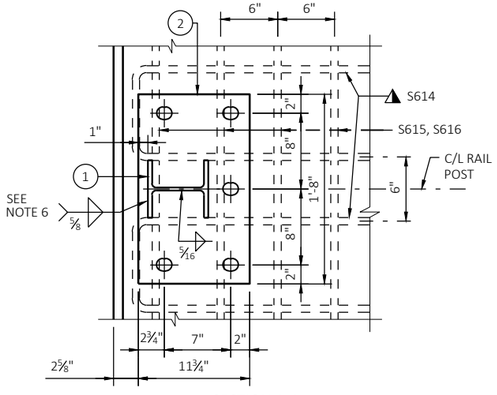
(6) ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ³⁄₁₆" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

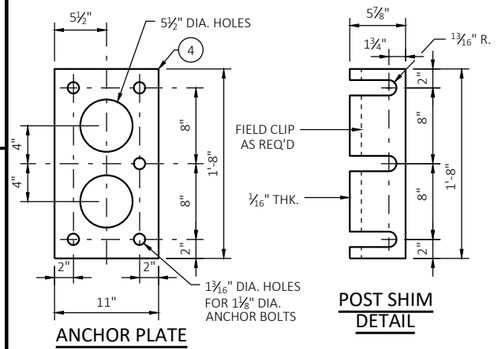
(8) ⅜" X 3⅜" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(8A) ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

(9) ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE ¹⁵⁄₁₆" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND ¹⁵⁄₁₆" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 8A.



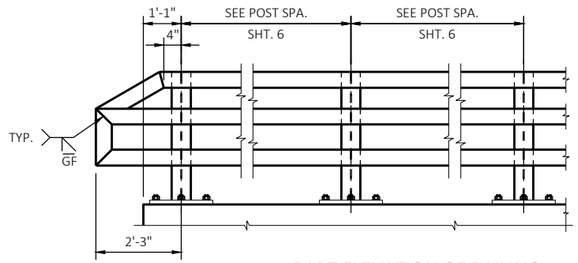
SECTION A-A



ANCHOR PLATE

AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



PART ELEVATION OF RAILING

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.

◭ TIE TO TOP MAT OF STEEL.

* FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

◥ RDWY. OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & ½" OPENING FOR A1 ABUTMENT.

STATE PROJECT NUMBER

6435-03-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-70-294

DRAWN BY MJK | PLANS CK'D ALK

TUBULAR STEEL RAILING TYPE 'M'

SHEET 8

8

8

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-080104-BR.DWG
LAYOUT NAME - SHEET-08
PLOT DATE : 12/27/2018 9:48 AM PLOT BY : AARON SARAUER PLOT NAME :

NEKIMI AVENUE

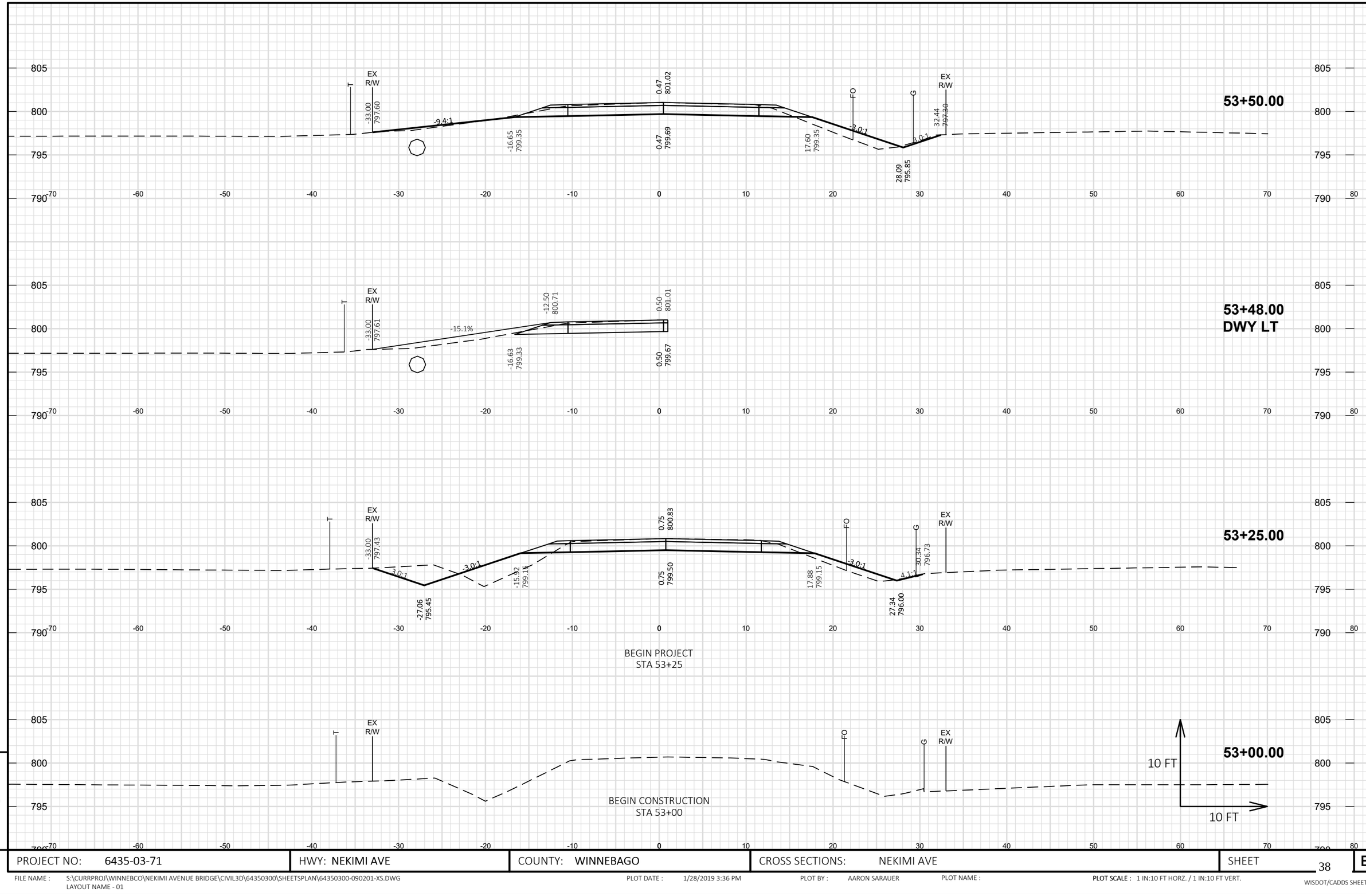
STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 2	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXPANDED FILL 1.10	MASS ORDINATE NOTE 3
53+00	5300.0	0.0	0.0	0.0	0	0	0	0	0
53+25	5325.0	25.0	45.6	23.7	21	11	21	12	9
53+48	5348.0	23.0	18.9	2.9	27	11	49	25	24
53+50	5350.0	2.0	36.2	11.7	2	1	51	25	26
53+85.68	5385.7	35.7	37.0	39.6	48	34	99	62	37
53+92.75	5392.8	7.1	2.6	0.0	5	5	104	68	36
54+41.25	5441.3	48.5	2.6	0.0	5	0	109	68	41
54+48.32	5448.3	7.1	37.9	42.5	5	6	114	74	40
54+50	5450.0	1.7	37.9	41.7	2	3	116	77	39
54+83	5483.0	33.0	22.3	0.1	37	26	153	105	48
55+00	5500.0	17.0	41.2	5.4	20	2	173	107	66
55+10	5510.0	10.0	39.5	3.1	15	2	188	109	79
COLUMN TOTALS					**188**	**99**			

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Fill	Does not include Unusable Pavement Excavation volume
3 - Mass Ordinate	[(CUT) - ((FILL) * FILL FACTOR)]

9

9

PROJECT NO: 6435-03-71 | HWY: NEKIMI AVE | COUNTY: WINNEBAGO | COMPUTER EARTHWORK DATA | SHEET 37 | E



9

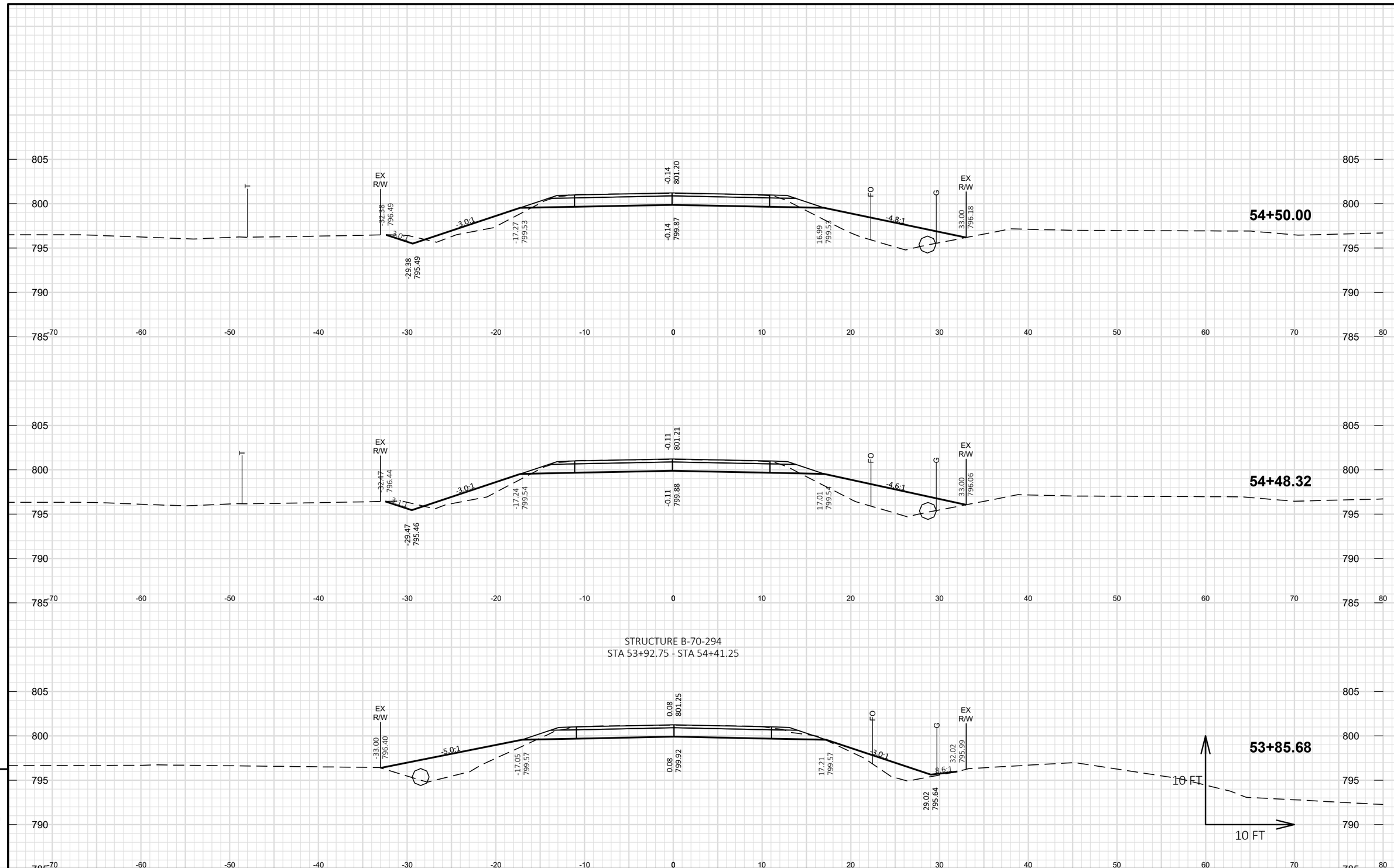
9

PROJECT NO: 6435-03-71	HWY: NEKIMI AVE	COUNTY: WINNEBAGO	CROSS SECTIONS: NEKIMI AVE	SHEET 38	E

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-090201-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 1/28/2019 3:36 PM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

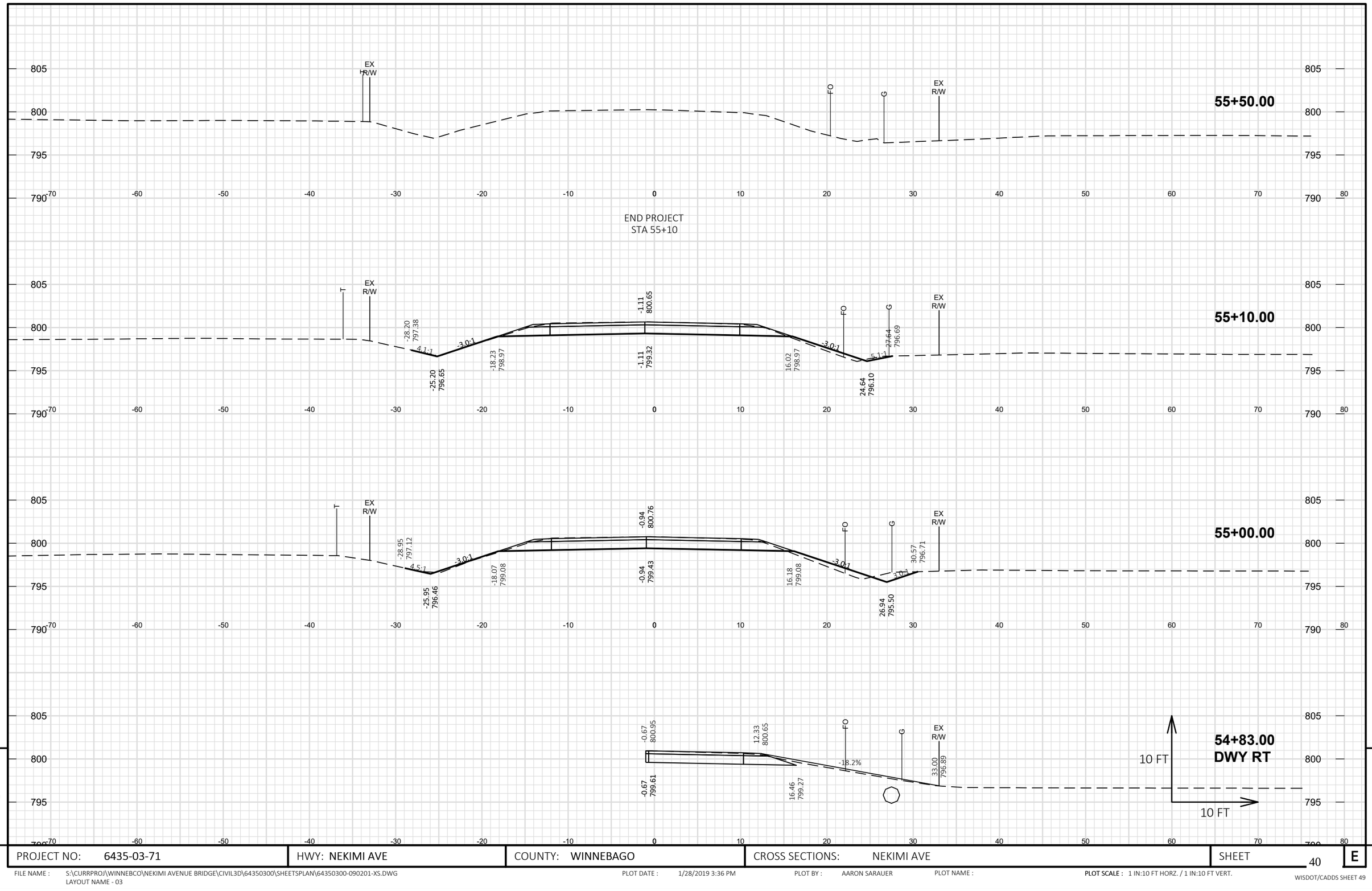


PROJECT NO: 6435-03-71	HWY: NEKIMI AVE	COUNTY: WINNEBAGO	CROSS SECTIONS: NEKIMI AVE	SHEET 39 E

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-090201-XS.DWG
LAYOUT NAME - 02

PLOT DATE : 1/28/2019 3:36 PM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 6435-03-71	HWY: NEKIMI AVE	COUNTY: WINNEBAGO	CROSS SECTIONS: NEKIMI AVE	SHEET 40	E

FILE NAME : S:\CURRPROJ\WINNEBCO\NEKIMI AVENUE BRIDGE\CIVIL3D\64350300\SHEETSPLAN\64350300-090201-XS.DWG
LAYOUT NAME - 03

PLOT DATE : 1/28/2019 3:36 PM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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through innovation and exceptional service.

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