LAX

SEPTEMBER 2020

PROJECT ID: 1660-03-62
WITH: 5580-00-82

COUNTY: CRAWFORD

ORDER OF SHEETS

TOTAL SHEETS = 78

01

N

DESIGN DESIGNATION 1660-03-38

A.A.D.T.	2018	=	9620
A.A.D.T.	2028	=	9620
D.H.V.		=	N/A
D.D.		=	N/A
T.		=	15%
DESIGN SPEED		=	55 MPH
ESALS		=	2,900,000

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY REHABILITATION-MAINTENANCE PROJECT

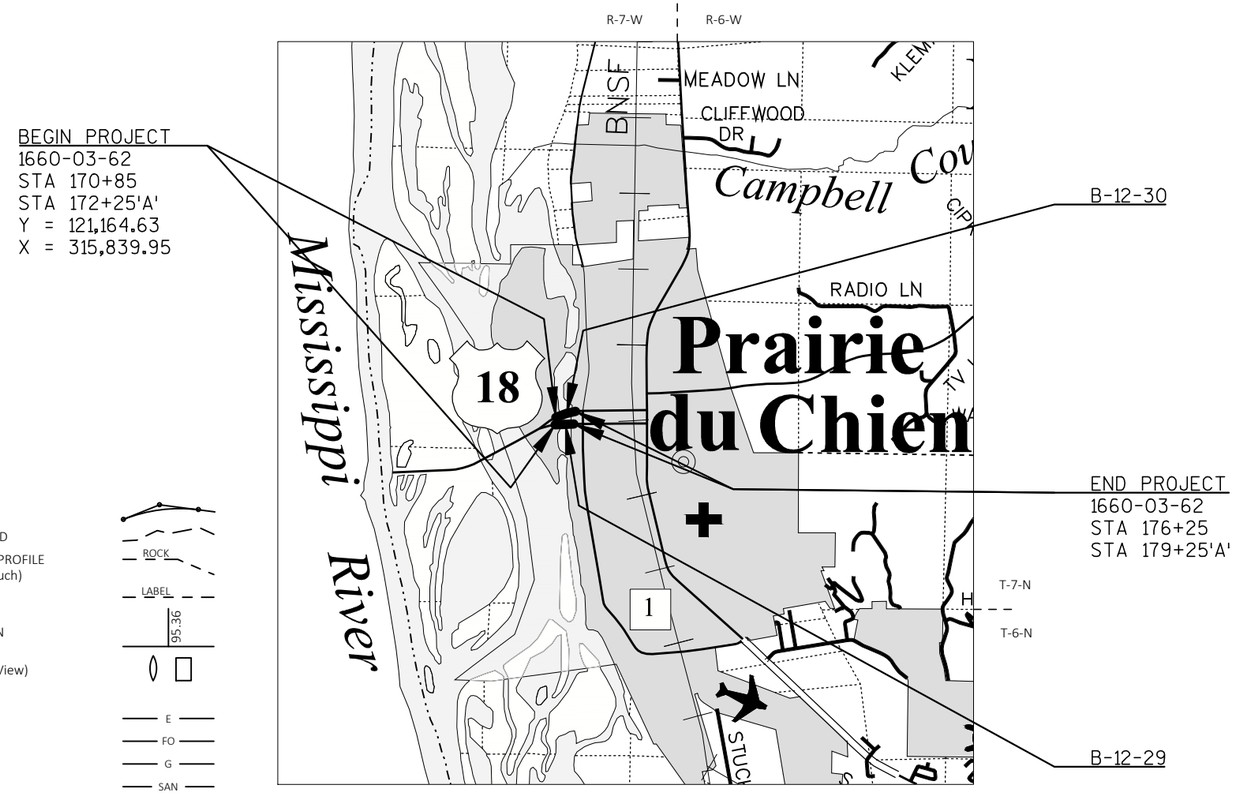
MARQUETTE - PRAIRIE DU CHIEN

MISSISSIPPI RVR STRUC B-12-29 & 30

USH 18
CRAWFORD COUNTY

STATE PROJECT NUMBER
1660-03-62

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1660-03-62	WISC 2020410	1



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI (1660-03-62)

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, CRAWFORD 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.

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

PREPARED BY

Surveyor	WISDOT - SW REGION
Designer	SHANE PETERSON
Project Manager	TIMOTHY MAEDKE
Regional Examiner	SW REGION
Regional Supervisor	REINY YAHNKE

APPROVED FOR THE DEPARTMENT

DATE: 5/1/2020 (Signature)

E

FILE NAME : N:\PDS\C3D\16600337\SHEETSPLAN\B-12-29 & 30\010101-TI.DWG
LAYOUT NAME - 010101-ti

PLOT DATE : 3/3/2020 8:16 AM PLOT BY : PETERSON, SHANE J 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.
- THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
- THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH THE EXISTING UTILITY FACILITIES.
- PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED, AND COMPACTED WITH BASE AGGREGATE DENSE 3/4-INCH. THE EXISTING POSTS SHALL BE REINFORCED AS NEEDED.
- CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND MULCHED OR SODDED AS DIRECTED BY THE ENGINEER.

DESIGN CONTACTS

TIMOTHY MAEDKE
PROJECT MANAGER
PROJECT DEVELOPMENT
WISDOT SW REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 789-6317

SHANE PETERSON
PROJECT DESIGNER
PROJECT DEVELOPMENT
WISDOT SW REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 386-1898

DNR LIAISON

KAREN KALVELAGE
ENVIRONMENTAL ANALYSIS & REVIEW SPECIALIST
WISCONSIN DEPT. OF NATURAL RESOURCES
WEST CENTRAL REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-785-9115

UTILITY CONTACTS

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WISDOT RWIS PROGRAM - COMMUNICATION TOWER
RM 501
P.O. BOX 7986
MADISON, WI 53707-7986
(608) 266-5004

MICHAEL BROLIN
ALLIANT ENERGY - ELECTRICITY
4902 NORTH BILTMORE LN
MADISON, WI 53713
(608) 458-4871
michaelbrolin@alliantenergy.com

CRAIG EGGERT
MEDIACOM WISCONSIN LLC - COMMUNICATION LINE
207 W PEARLE ST
P.O. BOX 226
DECORAH, IA 52101-0226
(563) 419-5160
ceggert@mediacomcc.com

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

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
BTWN	BETWEEN
CTR.	CENTER
C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
C.E.	COMMERCIAL ENTRANCE
CONST.	CONSTRUCTION
CO.	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CABC	CRUSHED AGGREGATE BASE COURSE
CY	CUBIC YARD
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
D.H.V.	DESIGN HOURLY VOLUME
D.D.	DIRECTIONAL DISTRIBUTION
EA	EACH
E	EAST
EB	EASTBOUND
ELEC.	ELECTRIC(AL), ELEC. CABLE
EL., ELEV.	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC.	EXCAVATION
EXIST	EXISTING
FERT.	FERTILIZER
F/L, F.L.	FLOW LINE
GALV.	GALVANIZE
H.S.	HIGH STRENGTH
CWT	HUNDRED WEIGHT
INL	INLET
INTER.	INTERSECTION
JT.	JOINT
LT	LEFT
L.	LENGTH OF CURVE
L.F.	LINEAR FOOT(FEET)
LS	LUMP SUM
M.P.	MARKER POST
MGAL	1000 GALLONS
N.C.	NORMAL CROWN
N	NORTH
NB	NORTHBOUND
NOR	NORMAL
NO.	NUMBER
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
P.L.	PROPERTY LINE
R	RADIUS OR RANGE
R/L	REFERENCE LINE
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT OF WAY
RD.	ROAD
SHLD.	SHOULDER(S)
SHR.	SHRINKAGE
S	SOUTH
SB	SOUTHBOUND
S.F.	SQUARE FOOT (FEET)
SDD	STANDARD DETAIL DRAWING(S)
STH	STATE TRUNK HIGHWAY
STA.	STATION
S.E.	SUPERELEVATION
S/L	SURVEY LINE
T.	PERCENT TRUCKS
TEL.	TELEPHONE
TEMP.	TEMPORARY
TYP	TYPICAL
U.G.	UNDERGROUND (CABLE)
VAR	VARIABLE
Wt.	WEIGHT
W	WEST
WB	WESTBOUND

ORDER OF SECTION 2 SHEETS

STA 172+87'A' - 177+29'A'
B-12-30 CONCRETE OVERLAY
(1.5-INCH)

BEGIN PROJECT
1660-03-62
STA 170+85
STA 172+25'A'

END PROJECT
1660-03-62
STA 176+25
STA 178+25'A'

STA 171+81 - 176+05
B-12-29 CONCRETE OVERLAY
(1.5-INCH)

STA 159+65
WISCONSIN & SOUTHERN RAILROAD

SAINT FERIOLE ISLAND

EAST CHANNEL MISSISSIPPI RIVER

WEST CHANNEL MISSISSIPPI RIVER

Marquette, IA

Prairie du Chien, WI

McGregor Lake

W. MILLER ST.
W. PINE ST.
W. CEDAR ST.
W. MCLEAD ST.
W. PERRY ST.
E. PERRY ST.
WASHINGTON ST.
COURT ST.
PARK ST.
E. PARK ST.
HAYDEN ST.
W. BLACKHAWK AVE.
E. WISCONSIN ST.
E. IOWA ST.
E. CASS ST.
E. WEBSTER ST.
W. DUNN ST.
E. DUNN ST.
E. PINE ST.
E. CEDAR ST.
E. MCLEAD ST.
W. WELLS ST.
E. WELLS ST.
E. BROADWAY ST.
E. BRUNSON ST.
E. FOWLER ST.
E. PARRISH ST.
CAMPION BLVD.
E. CAMPION BLVD.
2ND ST.

N. MAIN ST. | N. PRAIRIE ST. | N. BEAUMONT RD. | N. WACOUTA AVE. | N. MICHIGAN ST. | N. ILLINOIS ST.
S. MAIN ST. | S. PRAIRIE ST. | S. BEAUMONT RD. | S. WACOUTA AVE. | S. MICHIGAN ST. | S. ILLINOIS ST. | S. FREMONT ST.
N. OHIO ST.
DE SAINT FERIOLE
MARAIS
LUMBER ST.
S. 1ST ST. | S. 3RD ST. | S. 5TH ST. | S. 6TH ST. | S. 7TH ST. | S. 9TH ST. | S. 10TH ST. | S. 11TH ST. | S. 12TH ST. | S. 13TH ST. | S. 14TH ST. | S. 15TH ST. | S. 16TH ST. | S. 17TH ST. | S. 18TH ST.

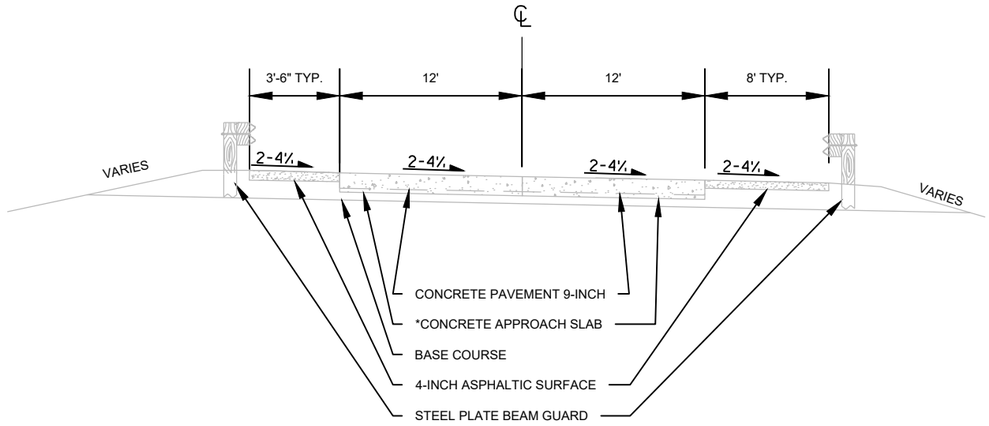
35 | 27 | 18 | 60 | COUNTY K

N

PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : N:\PDS\C3D\16600337\SHEETSPLAN\B-12-29 & 30\020201-PO.DWG
LAYOUT NAME - 020201-po
PLOT DATE : 3/3/2020 8:16 AM
PLOT BY : PETERSON, SHANE J
PLOT NAME :
PLOT SCALE : 1 IN:500 FT
WISDOT/CADDS SHEET 42

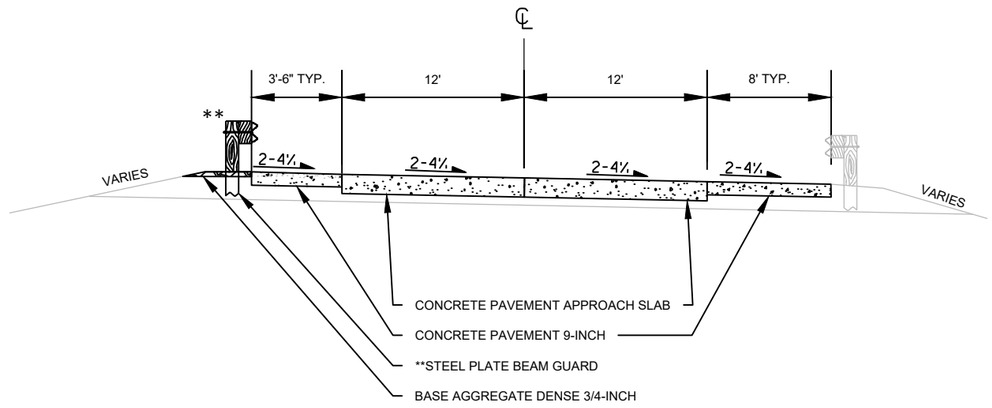
2



EXISTING TYPICAL SECTION - USH 18

WEST OF B-12-29
(LOOKING EAST)

STA 170+85 - 171+66
*STA 171+66 - 171+81

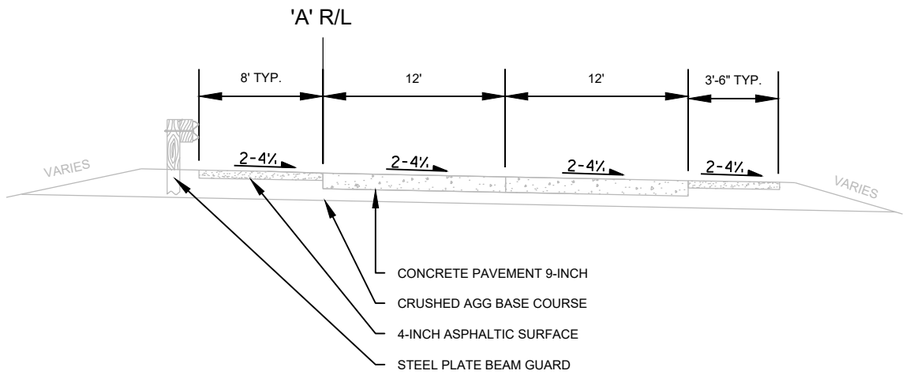


PROPOSED TYPICAL SECTION - USH 18

WEST OF B-12-29
(LOOKING EAST)

**STA 170+85 - 171+48
STA 171+66 - 171+81

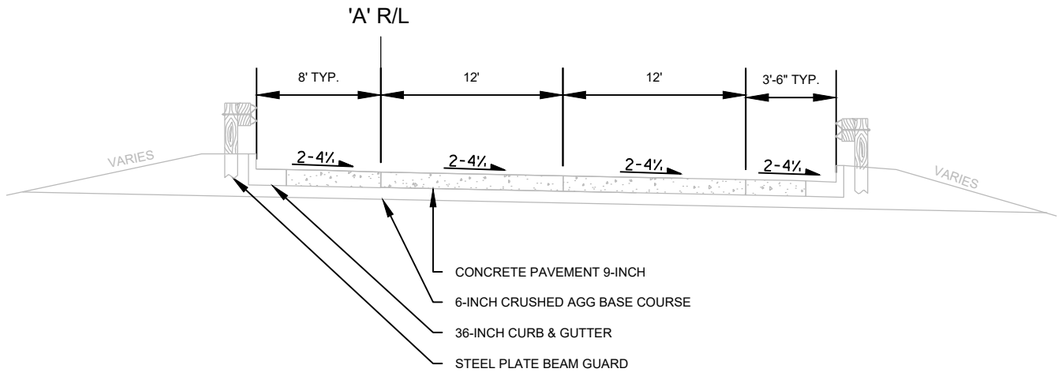
PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	TYPICAL SECTIONS	SHEET 4	E



EXISTING TYPICAL SECTION - USH 18

WEST OF B-12-30
(LOOKING EAST)

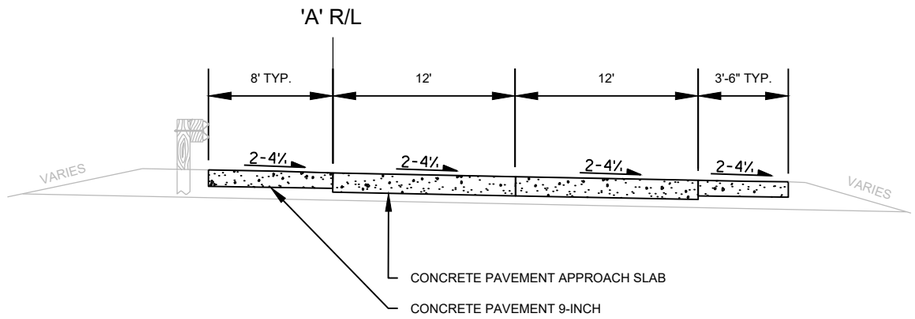
STA 172+70'A' - 172+90'A'



EXISTING TYPICAL SECTION - USH 18

EAST OF B-12-30
(LOOKING EAST)

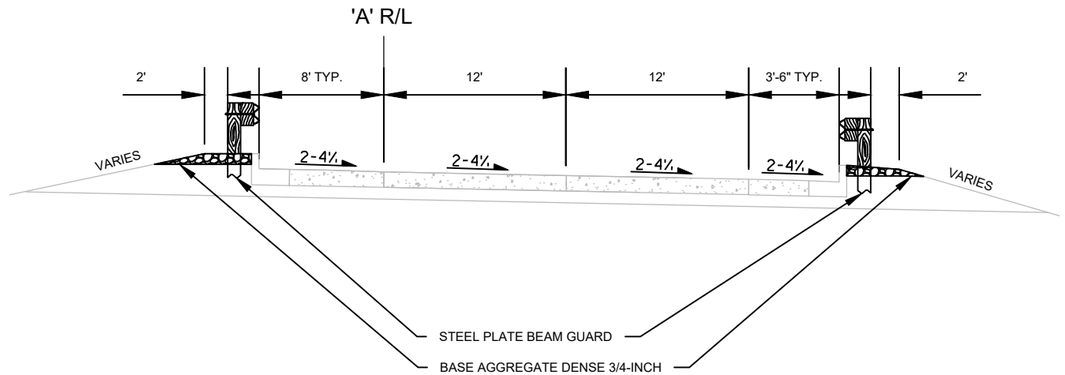
STA 177+57'A' - 178+25'A'



PROPOSED TYPICAL SECTION - USH 18

WEST OF B-12-30
(LOOKING EAST)

STA 172+70'A' - 172+90'A'

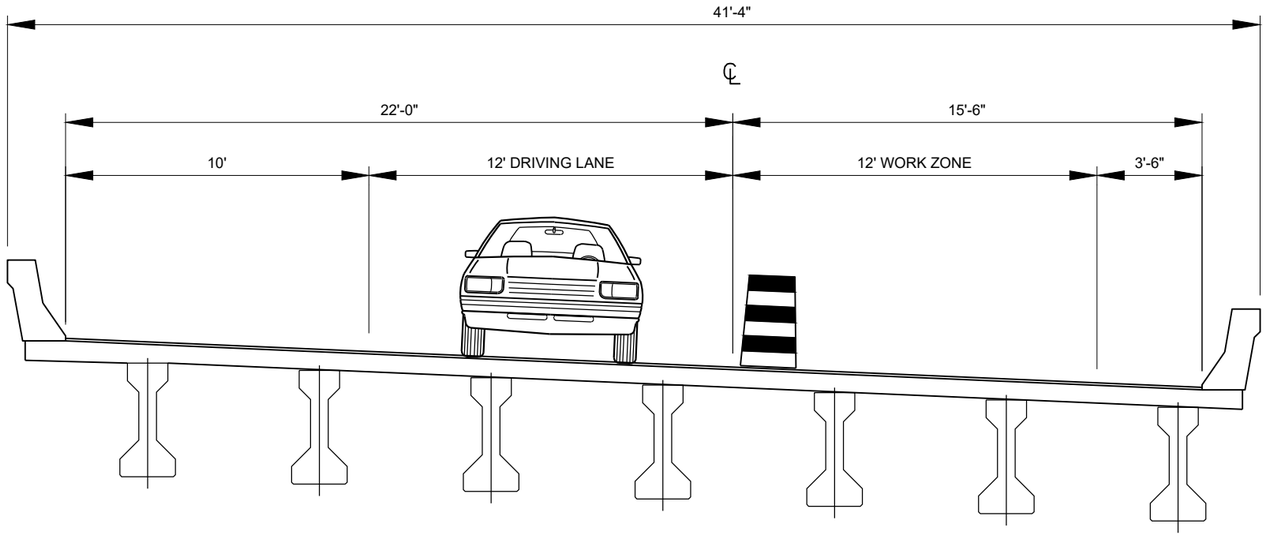


PROPOSED TYPICAL SECTION - USH 18

EAST OF B-12-30
(LOOKING EAST)

STA 177+57'A' - 178+25'A'

2

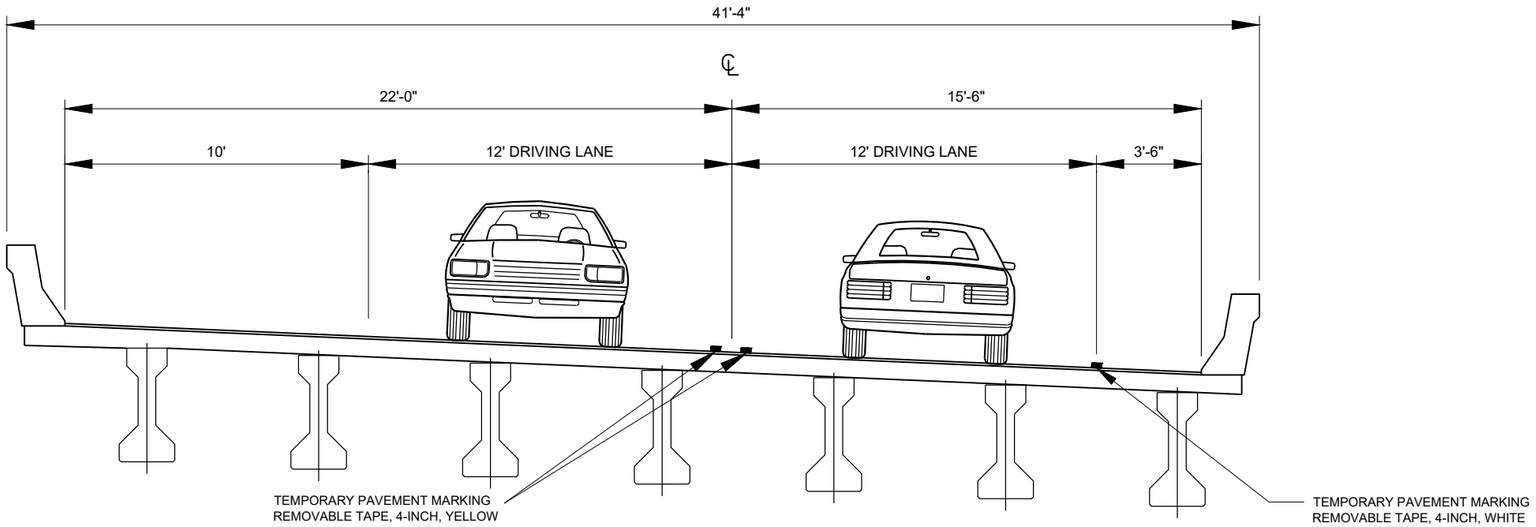


TYPICAL TRAFFIC CONTROL - STAGE 1: B-12-30 TEMPORARY CRASH CUSHION INSTALLATION

LOOKING EAST, STRUCTURE B-12-30

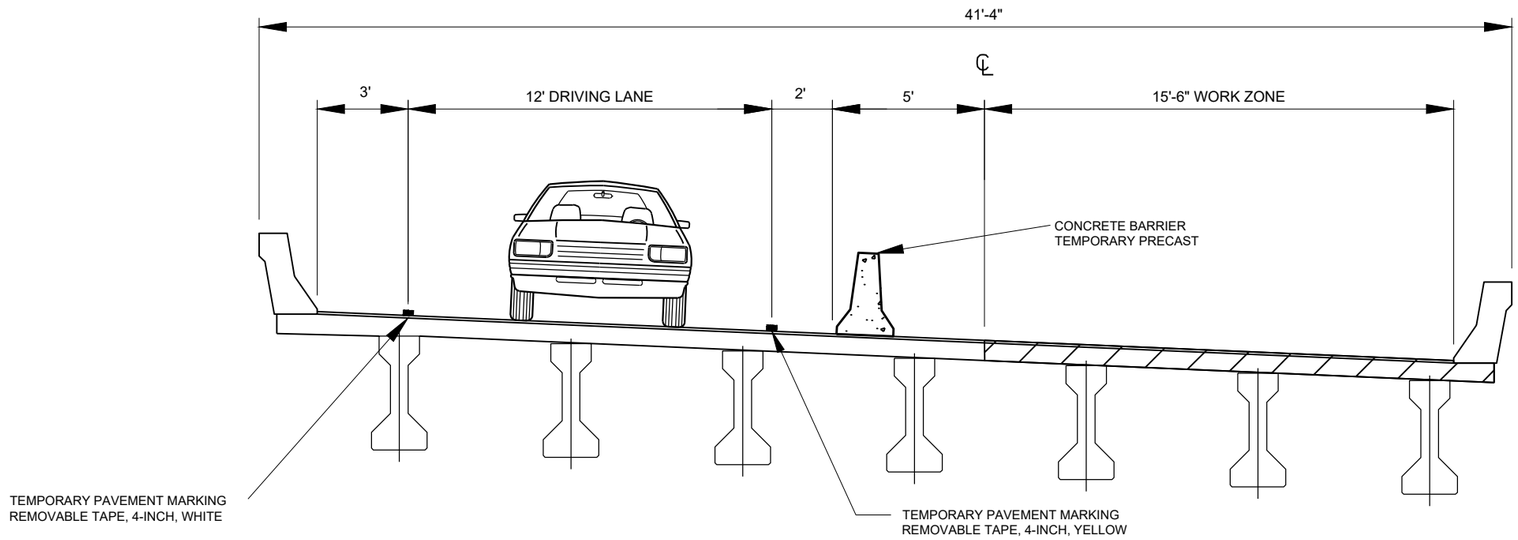
CONSTRUCTION STAGING DESCRIPTIONS

STAGE 1: TEMPORARY CRASH CUSHION INSTALLATION
STAGE 2: B-12-30 DETOUR FOR B-12-29 REPAIRS
STAGE 3: REPAIR WORK TO SOUTHERN PORTION OF B-12-30
STAGE 4: REPAIR WORK TO NORTHERN PORTION OF B-12-30



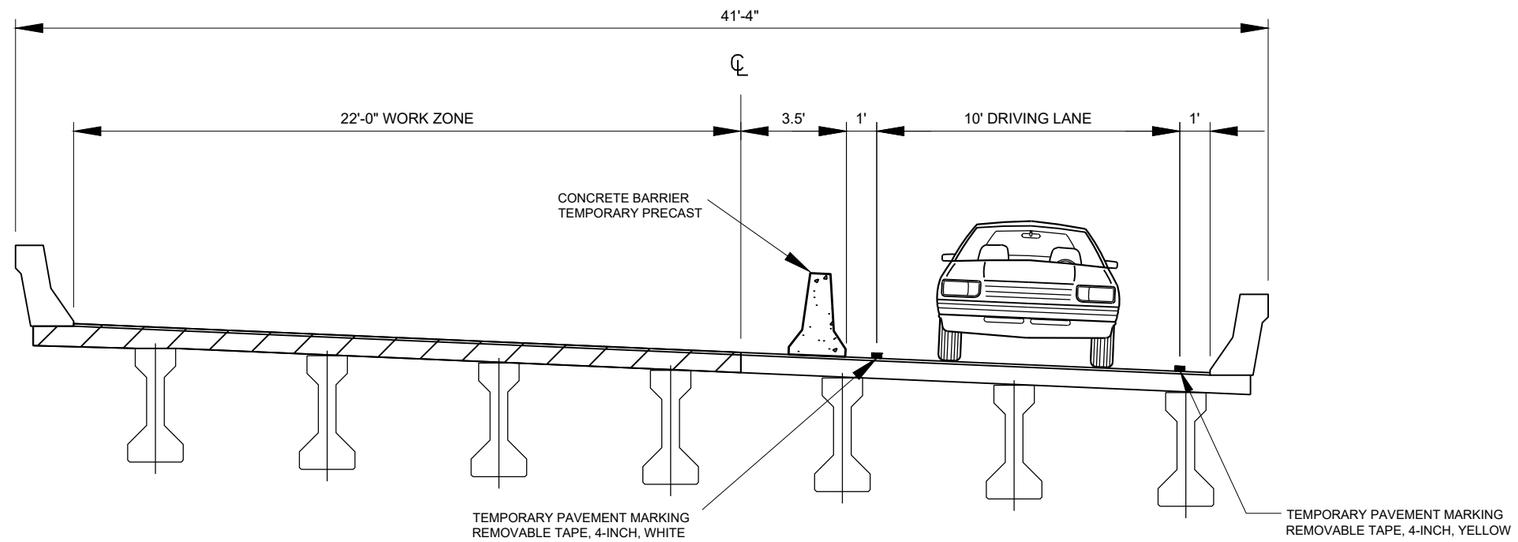
TYPICAL TRAFFIC CONTROL - STAGE 2: B-12-30 DETOUR

LOOKING EAST, STRUCTURE B-12-30



TYPICAL TRAFFIC CONTROL - STAGE 3: B-12-30 SOUTHERN WORK ZONE

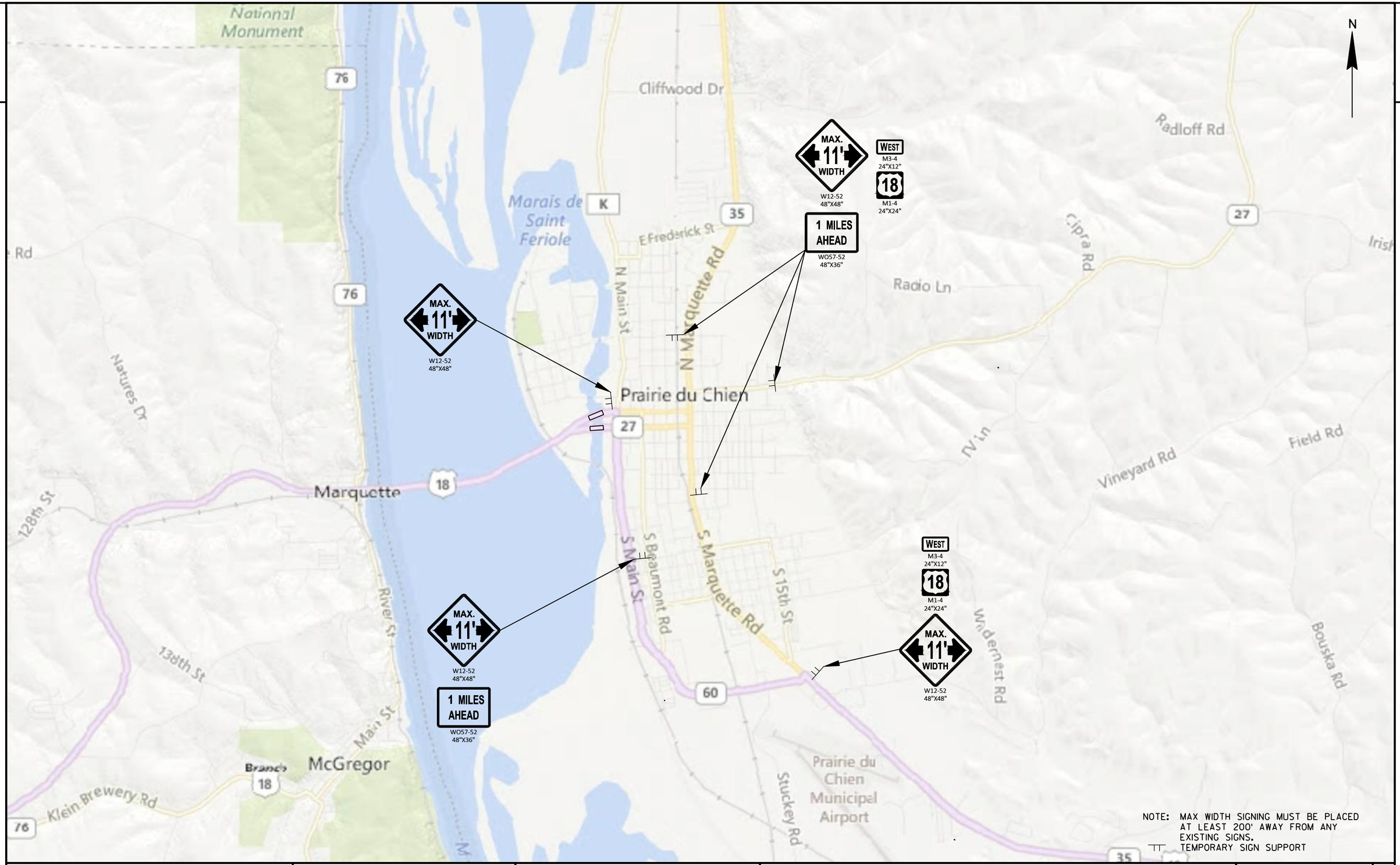
LOOKING EAST, STRUCTURE B-12-30



TYPICAL TRAFFIC CONTROL - STAGE 4: B-12-30 NORTHERN WORK ZONE

LOOKING EAST, STRUCTURE B-12-30

PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	TYPICAL SECTIONS - TRAFFIC CONTROL STAGING	SHEET 7	E



PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	ADVANCED WARNING SIGNING - 11 FT WIDTH RESTRICTION (STAGE 4 - WESTBOUND)	SHEET 8	E

FILE NAME : N:\PDS\C3D\16600337\SHEETSPLAN\B-12-29 & 30\023301-AW.DWG
LAYOUT NAME - 023301-aw

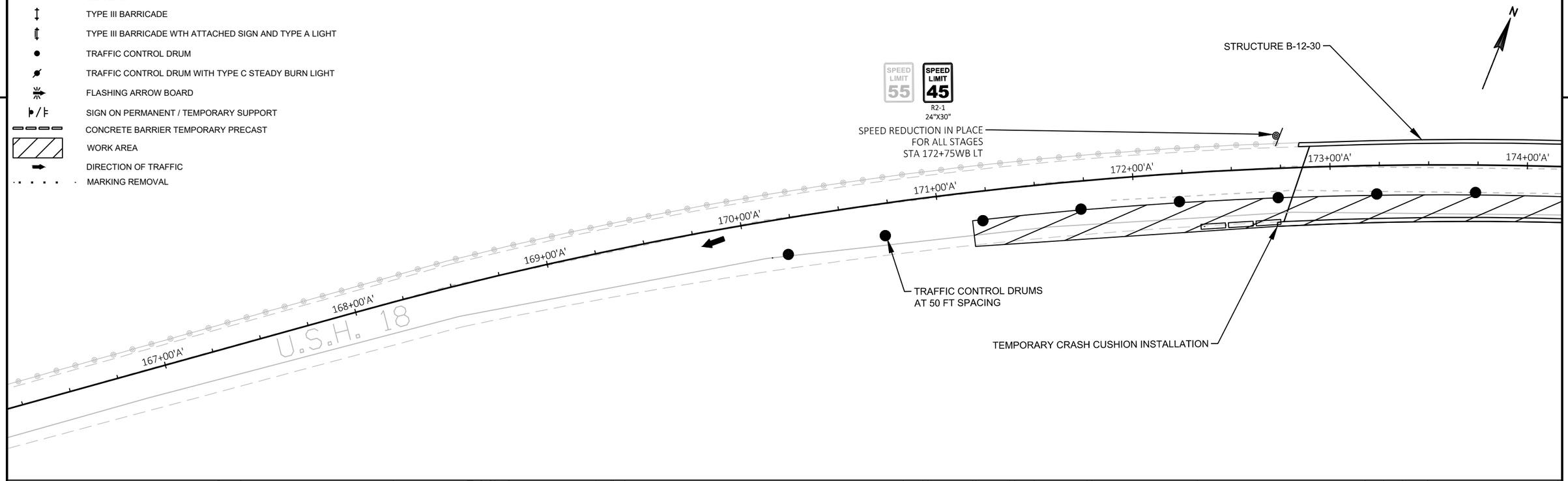
PLOT DATE : 4/22/2020 11:55 AM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : 1 IN:0.5 MI

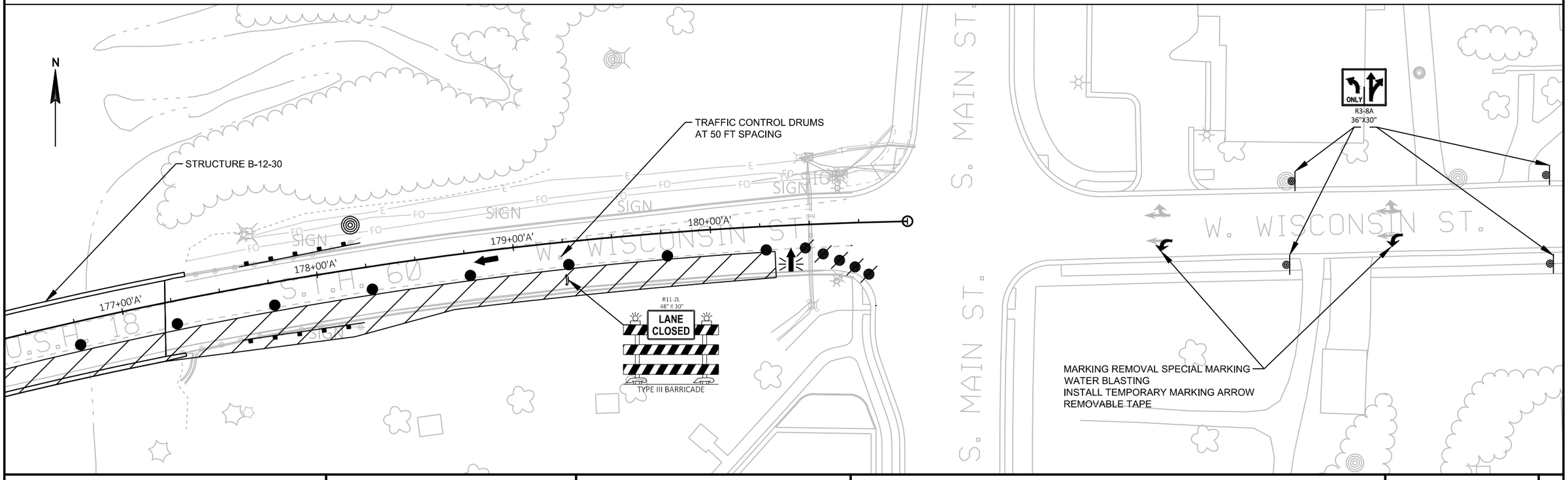
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN AND TYPE A LIGHT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT / TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MARKING REMOVAL





PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	TRAFFIC CONTROL: STAGE 1	SHEET 9	E

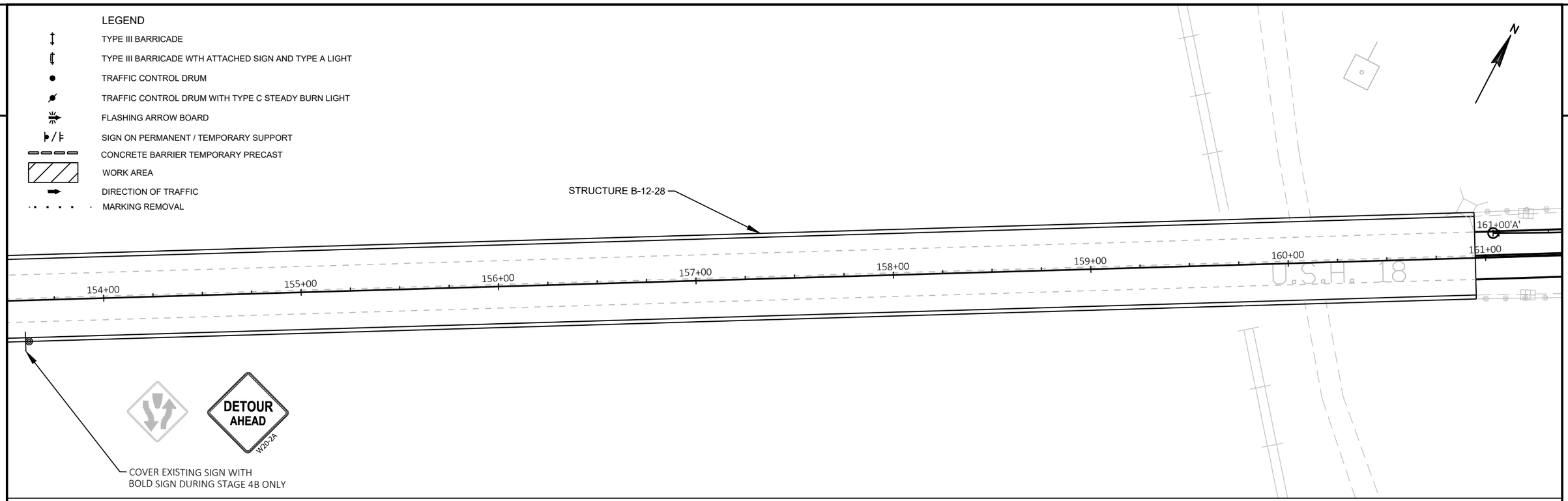
FILE NAME : N:\PDS\C3D\16600337\SHEETSPLAN\B-12-29 & 30\026301-S1.DWG
LAYOUT NAME - 026301-s1

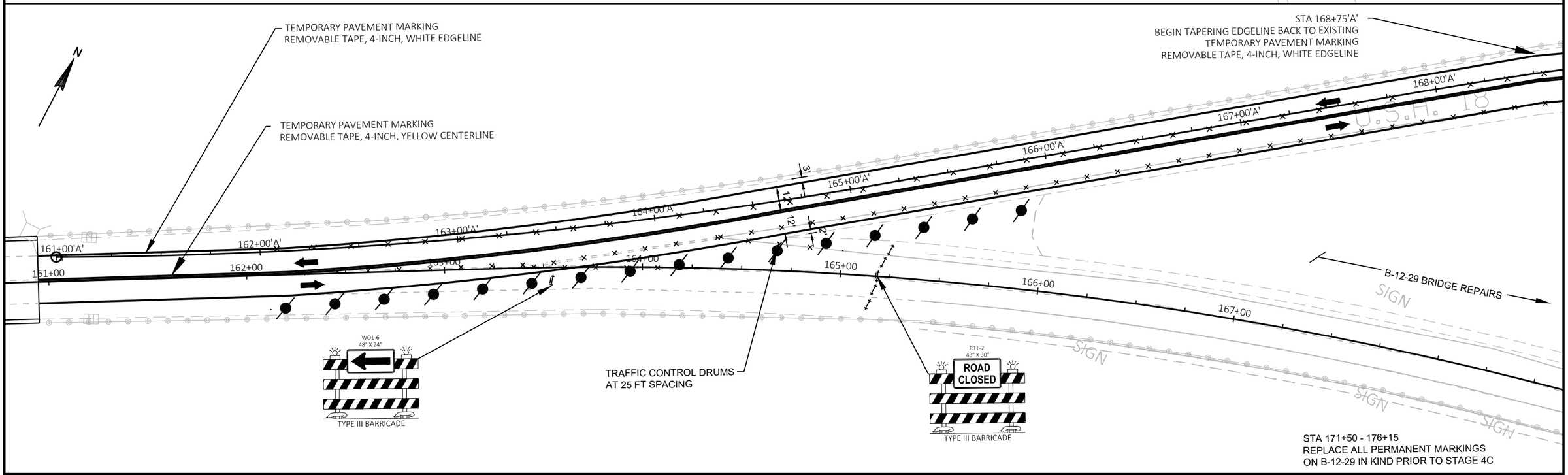
PLOT DATE : 3/3/2020 8:16 AM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN AND TYPE A LIGHT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT / TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MARKING REMOVAL





PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	TRAFFIC CONTROL: STAGE 2	SHEET 10	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN AND TYPE A LIGHT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT / TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MARKING REMOVAL

N

STRUCTURE B-12-30

STRUCTURE B-

SPEED LIMIT 55

SPEED LIMIT 45

R2-1
24"X30"

SPEED REDUCTION IN PLACE
FOR ALL STAGES
STA 172+75WB LT

STA 171+75'A'
END TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, 4-INCH, WHITE EDGELINE
MATCH INTO EXISTING EDGELINE

169+00'A'
170+00'A'
171+00'A'
172+00'A'
173+00'A'
174+00'A'
175+00'A'
176+00'A'

STA 172+75 'A', 40' RT
TEMPORARY CRASH CUSHION
REMOVE PRIOR TO STAGE 4C

STA 171+75'A'
TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, 4-INCH, WHITE EDGELINE
MATCH EXISTING EDGELINE LOCATION

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, DOUBLE YELLOW, 4-INCH

STRUCTURE B-12-30

176+00'A'
177+00'A'
178+00'A'
179+00'A'
180+00'A'

U.S.H. 18
S.T.H. 60
W. WISCONSIN ST.
S. MAIN ST.

SIGN
FO
E

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, WHITE, 4-INCH
MATCH EXISTING EDGELINE LOCATION

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, TYPE 7 ARROWS

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, STOP BAR, 18-INCH

TEMPORARY MARKING ARROWS
TO REMAIN FOR STAGE 3

PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	TRAFFIC CONTROL: STAGE 2	SHEET 11	E

2

DETOUR
M4-8
NORTH EAST EAST
27 18 60
J2-3
72"X57"

INSTALL DIRECTIONAL ASSEMBLY

COVER EXISTING SIGNS

W06-3

COVER EXISTING SIGNS
WITH BOLD SIGNS

DETOUR
M4-8
NORTH EAST EAST
27 18 60
J2-3
72"X57"

INSTALL DIRECTIONAL ASSEMBLY

ONE WAY

STOP

TRAFFIC FROM LEFT
DOES NOT STOP

ONE WAY
R6-2L

COVER BOLD
SIGNS

STOP
R1-1
36"X36"

INSTALL SIGN ON SAME POST
AS DO NOT ENTER SIGN

ONLY
R3-8A
36"X30"

W03-1

N

DO NOT
ENTER

COVER EXISTING SIGN
WITH BOLD SIGN

W06-3

SPEED LIMIT 55
SPEED LIMIT 45
R2-1
24"X30"

45MPH SPEED ZONE
ALL STAGES

B-12-30

175+00'A'

180+00'A'

W. WISCONSIN ST.

R3-6T
42"X48"

STOP
R1-1
36"X36"

170+00'A'

90'

170+00

175+00

179+90

W. IOWA ST.

B-12-29
CONCRETE OVERLAY
WORK ZONE

165+00'A'

165+00

INSTALL

W03-1

COVER BOLD
SIGNS

ONE WAY

ONE
WAY

STOP

TRAFFIC FROM RIGHT
DOES NOT STOP

R6-2R

B-12-28

160+00

W. CASS ST.

MOVE AND COVER EXISTING SIGN
WITH BOLD SIGN TO ACCOMMODATE
BI-DIRECTIONAL TRAFFIC DURING STAGE 4B ONLY

W06-3

NO
PASSING
ZONE

TO REMAIN ATTACHED
TO SAME POST

R11-2
48" X 30"
ROAD
CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

TYPE III BARRICADE

PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	TRAFFIC CONTROL: STAGE 2 DETOUR SIGNING	SHEET 12	E

FILE NAME : N:\PDS\C3D\16600337\SHEETSPLAN\B-12-29 & 30\026304-S2.DWG
LAYOUT NAME - 026304-s2

PLOT DATE : 3/3/2020 8:17 AM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, WHITE, 4-INCH
MATCH INTO EXISTING MARKINGS

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, WHITE, 4-INCH

SPEED LIMIT 55

SPEED LIMIT 45
R2-1
24"X30"

SPEED REDUCTION IN PLACE
FOR ALL STAGES
STA 172+75WB LT

166+00'A'
167+00'A'
168+00'A'
169+00'A'
170+00'A'
171+00'A'
172+00'A'
173+00'A'

12'

55'

TYPICAL 15'-6" WORK ZONE
B-12-30

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, YELLOW, 4-INCH

TRAFFIC CONTROL DRUMS
AT 50 FT SPACING

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, YELLOW, 4-INCH
MATCH INTO EXISTING MARKINGS

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN AND TYPE A LIGHT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT / TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MARKING REMOVAL

SIGN

S. MAIN ST.

W. WISCONSIN ST.

N

TRAFFIC CONTROL DRUMS
AT 50 FT SPACING

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, WHITE, 4-INCH

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, YELLOW, 4-INCH

177+00'A'
178+00'A'
179+00'A'
180+00'A'

80' TAPER

100'

R11-2L
48"X 30"
LANE CLOSED
TYPE III BARRICADE

TYPICAL 15'-6" WORK ZONE
B-12-30

ONLY
R3-8A
36"X30"

TEMPORARY MARKING ARROWS
TO REMAIN FOR STAGE 4C
REPLACE PERMANENT MARKINGS
PRIOR TO STAGE 4D

PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	TRAFFIC CONTROL: STAGE 3	SHEET 13	E

FILE NAME : N:\PDS\C3D\16600337\SHEETSPLAN\B-12-29 & 30\026305-S3.DWG
LAYOUT NAME - 026305-s3
PLOT DATE : 3/3/2020 8:17 AM
PLOT BY : PETERSON, SHANE J
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN AND TYPE A LIGHT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT / TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MARKING REMOVAL

SPEED LIMIT 55 / SPEED LIMIT 45
R2-1
24"X30"

TRAFFIC CONTROL DRUMS
AT 50 FT SPACING

SPEED REDUCTION IN PLACE
FOR ALL STAGES
STA 172+75WB LT

TEMPORARY PRECAST CONCRETE BARRIER

TYPICAL 22' WORK ZONE
B-12-30

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, WHITE, 4-INCH
MATCH PERMANENT MARKING LOCATION

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, YELLOW, 4-INCH
MATCH PERMAMENT MARKING LOCATION

168+00'A' 169+00'A' 170+00'A' 171+00'A' 172+00'A' 173+00'A' 174+00'A' 175+00'A'

12' 10' 55'

U.S.H. 18

SIGN

N

2

N

TYPICAL 22' WORK ZONE
B-12-30

100' 80' TAPER

177+00'A' 178+00'A' 179+00'A' 180+00'A'

TRAFFIC CONTROL DRUMS
AT 50 FT SPACING

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, YELLOW, 4-INCH

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE, WHITE, 4-INCH

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

W. WISCONSIN ST.

S. MAIN ST.

R3-8
36"X30"
ONLY

MARKING REMOVAL SPECIAL MARKING
WATER BLASTING
INSTALL TEMPORARY MARKING ARROW
REMOVABLE TAPE

PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	TRAFFIC CONTROL: STAGE 4	SHEET 14	E

FILE NAME : N:\PDS\C3D\16600337\SHEETSPLAN\B-12-29 & 30\026306-S4.DWG
LAYOUT NAME - 026306-s4

PLOT DATE : 3/3/2020 8:17 AM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

1660-03-62

Line	Item	Item Description	Unit	Total	Qty
0002	203.0210.S	Abatement of Asbestos Containing Material (structure) 01. B-12-29	LS	1.000	1.000
0004	203.0210.S	Abatement of Asbestos Containing Material (structure) 02. B-12-30	LS	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	90.000	90.000
0010	204.0110	Removing Asphaltic Surface	SY	58.000	58.000
0016	204.0165	Removing Guardrail	LF	187.500	187.500
0026	213.0100	Finishing Roadway (project) 01. 1660-03-62	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	21.000	21.000
0034	415.0090	Concrete Pavement 9-Inch	SY	58.000	58.000
0036	415.0410	Concrete Pavement Approach Slab	SY	90.000	90.000
0048	502.3101	Expansion Device	LF	78.000	78.000
0050	502.3200	Protective Surface Treatment	SY	3,612.000	3,612.000
0052	502.3210	Pigmented Surface Sealer	SY	772.000	772.000
0054	502.4110	Adhesive Anchors 1 1/4-inch	EACH	26.000	26.000
0058	502.4205	Adhesive Anchors No. 5 Bar	EACH	78.000	78.000
0060	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	3,280.000	3,280.000
0062	505.0905	Bar Couplers No. 5	EACH	8.000	8.000
0064	506.6000	Bearing Assemblies Expansion (structure) 01. B-12-29	EACH	6.000	6.000
0066	506.6000	Bearing Assemblies Expansion (structure) 02. B-12-30	EACH	7.000	7.000
0068	506.7050.S	Removing Bearings (structure) 01. B-12-29	EACH	6.000	6.000
0070	506.7050.S	Removing Bearings (structure) 02. B-12-30	EACH	7.000	7.000
0072	509.0301	Preparation Decks Type 1	SY	1,072.000	1,072.000
0074	509.0302	Preparation Decks Type 2	SY	673.000	673.000
0078	509.0505.S	Cleaning Decks to Reapply Concrete Masonry Overlay	SY	3,563.000	3,563.000
0080	509.1000	Joint Repair	SY	59.000	59.000
0082	509.1500	Concrete Surface Repair	SF	124.000	124.000
0084	509.2000	Full-Depth Deck Repair	SY	10.000	10.000
0086	509.2500	Concrete Masonry Overlay Decks	CY	322.000	322.000
0088	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 01. B-12-29	SY	1,738.000	1,738.000
0090	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 02. B-12-30	SY	1,825.000	1,825.000
0092	509.9020.S	Epoxy Crack Sealing	LF	40.000	40.000
0094	509.9050.S	Cleaning Parapets	LF	1,808.000	1,808.000
0100	603.8000	Concrete Barrier Temporary Precast Delivered	LF	675.000	675.000
0102	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,350.000	1,350.000
0108	614.0305	Steel Plate Beam Guard Class A	LF	37.500	37.500
0110	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	3.000	3.000
0112	614.0905	Crash Cushions Temporary	EACH	1.000	1.000
0120	618.0100	Maintenance And Repair of Haul Roads (project) 01.	EACH	1.000	1.000

1660-03-62

Line	Item	Item Description	Unit	Total	Qty
		1660-03-62			
0124	619.1000	Mobilization	EACH	0.667	0.667
0148	638.2102	Moving Signs Type II	EACH	2.000	2.000
0150	642.5201	Field Office Type C	EACH	1.000	1.000
0152	643.0300	Traffic Control Drums	DAY	1,390.000	1,390.000
0154	643.0420	Traffic Control Barricades Type III	DAY	182.000	182.000
0156	643.0705	Traffic Control Warning Lights Type A	DAY	364.000	364.000
0158	643.0715	Traffic Control Warning Lights Type C	DAY	646.000	646.000
0160	643.0800	Traffic Control Arrow Boards	DAY	42.000	42.000
0162	643.0900	Traffic Control Signs	DAY	3,538.000	3,538.000
0164	643.0920	Traffic Control Covering Signs Type II	EACH	14.000	14.000
0166	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0168	643.5000	Traffic Control	EACH	0.667	0.667
0174	646.1020	Marking Line Epoxy 4-Inch	LF	7,115.000	7,115.000
0176	646.5020	Marking Arrow Epoxy	EACH	6.000	6.000
0178	646.9000	Marking Removal Line 4-Inch	LF	4,350.000	4,350.000
0182	646.9310	Marking Removal Special Marking Water Blasting	EACH	4.000	4.000
0184	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	12,230.000	12,230.000
0186	649.0550	Temporary Marking Arrow Removable Tape	EACH	6.000	6.000
0188	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	45.000	45.000
0202	690.0150	Sawing Asphalt	LF	32.000	32.000
0204	690.0250	Sawing Concrete	LF	48.000	48.000
0206	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0212	SPV.0060	Special 01. Downspout Repair	EACH	5.000	5.000
0214	SPV.0060	Special 02. Embedded Galvanic Anodes	EACH	8.000	8.000
0220	SPV.0180	Special 01. Abutment Seat Cleaning and Sealing	SY	21.000	21.000

3

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
0010	171+66	-	171+81	MAINLINE	40			40		24	B-12-29 APPROACH SLAB
0010	171+66	-	171+81	LT/RT		22	22		16		B-12-29 APPROACH SLAB SHOULDERS
0010	172+70'A'	-	172+90'A'	MAINLINE	50			50		24	B-12-30 APPROACH SLAB
0010	172+70'A'	-	172+90'A'	LT/RT		36	36		16		B-12-30 APPROACH SLAB SHOULDERS
				TOTAL 0010	90	58	58	90	32	48	

GUARDRAIL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	REMARKS
0010	170+85	-	171+48	LT	62.5	7	12.5	1	B-12-29 NW QUADRANT
0010	177+57'A'	-	178+20'A'	RT	62.5	7	12.5	1	B-12-30 NE QUADRANT
0010	177+62'A'	-	178+25'A'	LT	62.5	7	12.5	1	B-12-30 SE QUADRANT
				TOTAL 0010	187.5	21	37.5	3	

CRASH CUSHIONS TEMPORARY

CATEGORY	STATION	LOCATION	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
0010	172+75'A'	RT	1	2	OM-3R (W05-58R)	TL-2	BIDIRECTIONAL	L	B-12-30 SW PARAPET	INSTALL FOR STAGE 2
		TOTAL 0010	1							

CONCRETE BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	REMARKS
0010	172+25'A'	-	178+55'A'	CL	675	675	B-12-30 STAGE 3
0010	172+25'A'	-	178+55'A'	CL		675	B-12-30 STAGE 4
				TOTAL 0010	675	1,350	

MOVING SIGNS

CATEGORY	STATION	TO	STATION	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
0010	165+10	-	166+00	MEDIAN	2	STAGE 2 DETOUR
				TOTAL 0010	2	

TRAFFIC CONTROL COVERING SIGNS

CATEGORY	STAGE	SIGN DESCRIPTION	SIGN CODE	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH
0010	ALL STAGES	SPEED LIMIT 55 MPH	R2-1	1
0010	STAGE 2	DIVIDED HIGHWAY AHEAD	W6-1	1
0010		KEEP RIGHT	R4-7	1
0010		DO NOT ENTER	R5-1	1
0010		DIVIDED HIGHWAY ENDS	W6-2	2
0010		LANE REDUCTION TRANSITION	W4-2-L	2
0010		ONE WAY RIGHT ARROW	R6-1R	1
0010		TRAFFIC FROM LEFT DOES NO STOP	W4-4-AL	1
0010		ONE WAY LEFT ARROW	R6-2L	1
0010		ONE WAY LEFT ARROW	R6-1L	1
0010		TRAFFIC FROM RIGHT DOES NOT STOP	W4-4-AR	1
0010		ONE WAY RIGHT ARROW	R6-2R	1
			TOTAL 0010	14

NOTE: COVERING SIGNS INVOLVES 1 CYCLE OR AS DIRECTED BY THE ENGINEER

3

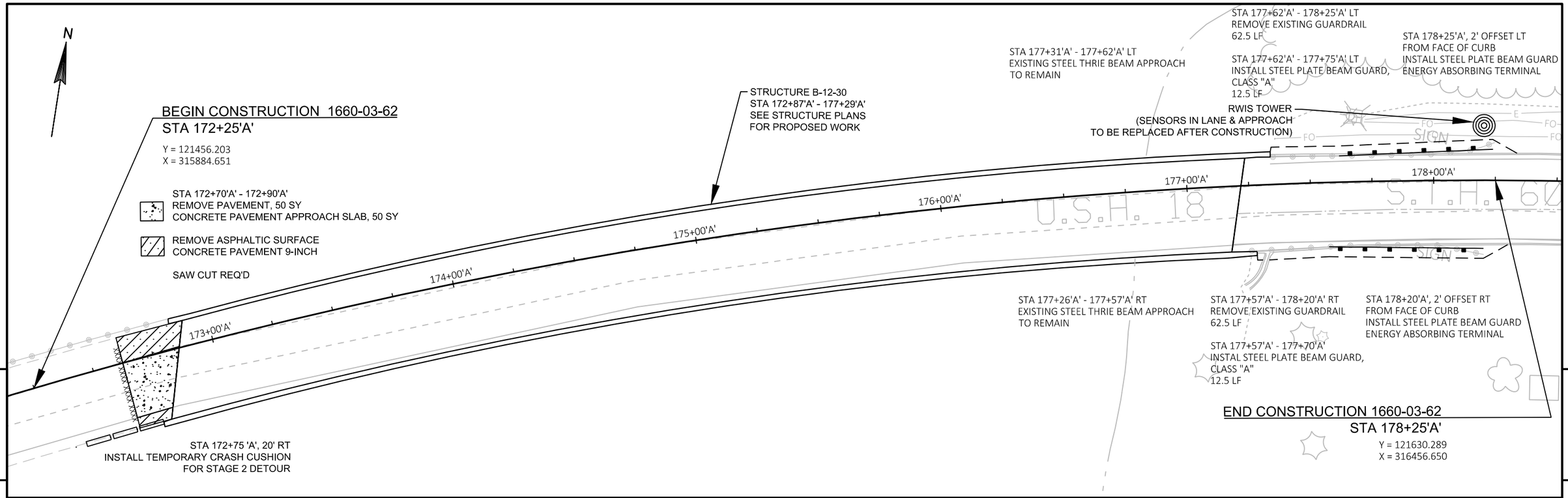
TRAFFIC CONTROL SUMMARY

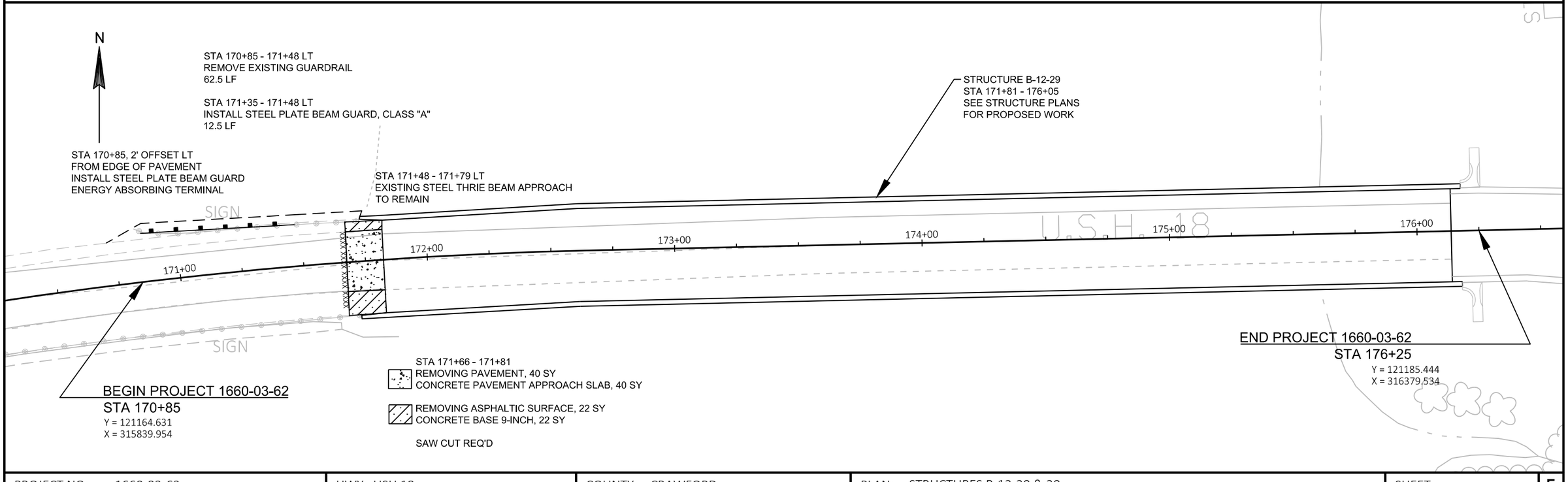
CATEGORY	STAGE	SIGN DESCRIPTION	SIGN CODE	CALENDAR DAYS	NO. OF DRUMS	643.0300 TRAFFIC CONTROL DRUMS DAY	NO. OF BARRICADES	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	NO. OF TYPE A LIGHTS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	NO. OF TYPE C LIGHTS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	NO. OF SIGNS	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.5000 TRAFFIC CONTROL EACH
0010	PRECONSTRUCTION	PCMS		7	10	70	-	-	-	-	10	70	-	-	-	14	0.67
0010	ALL STAGES	SPEED LIMIT 45 MPH	R2-1	70	-	-	-	-	-	-	-	-	-	1	70	-	-
0010		ROAD WORK AHEAD	W20-1A	70	-	-	-	-	-	-	-	-	-	3	210	-	-
0010		ROAD WORK 1000 FT	W20-1C	70	-	-	-	-	-	-	-	-	-	3	210	-	-
0010		ROAD WORK 500 FT	W20-1D	70	-	-	-	-	-	-	-	-	-	3	210	-	-
0010		END ROAD WORK	G20-2A	70	-	-	-	-	-	-	-	-	-	4	280	-	-
0010		WEST	M3-4	70	-	-	-	-	-	-	-	-	-	4	280	-	-
0010		USH 18	M1-4	70	-	-	-	-	-	-	-	-	-	4	280	-	-
0010		1 MILES AHEAD	WO57-52	70	-	-	-	-	-	-	-	-	-	4	280	-	-
0010		NO PASSING ZONE	W14-3	70	-	-	-	-	-	-	-	-	-	1	70	-	-
0010	STAGE 1	LEFT ONLY/AHEAD-RIGHT	R3-8A	6	50	300	1	6	2	12	10	60	6	4	24	-	-
0010	STAGE 2	DETOUR AHEAD	W20-2A	28	-	-	-	-	-	-	-	-	-	1	28	-	-
0010		ROAD CLOSED	R11-2	28	-	-	4	112	8	224	-	-	-	2	56	-	-
0010		ARROW LEFT	WO1-6	28	12	336	1	28	2	56	12	336	-	1	28	-	-
0010		TWO-WAY TRAFFIC	WO6-3	28	-	-	-	-	-	-	-	-	-	4	112	-	-
0010		STOP AHEAD DETOUR	WO3-1	28	-	-	-	-	-	-	-	-	-	4	112	-	-
0010		NORTH-EAST-EAST 27 - 18 - 60 RTA - RTA - RTA	J2-3	28	-	-	-	-	-	-	-	-	-	10	280	-	-
0010		LEFT/RIGHT TURN DETOUR	R3-6T	28	-	-	-	-	-	-	-	-	-	1	28	-	-
0010		NORTH-EAST-EAST 27 - 18 - 60 RA - RA - RA	J2-3	28	-	-	-	-	-	-	-	-	-	10	280	-	-
0010		STOP	R1-1	28	-	-	-	-	-	-	-	-	-	3	84	-	-
		LEFT ONLY/AHEAD-RIGHT	R3-8A	28	-	-	-	-	-	-	-	-	-	4	112	-	-
0010	STAGE 3	LANE CLOSED	R11-2L	18	22	396	1	18	2	36	5	90	18	1	18	-	-
0010		LEFT ONLY/AHEAD-RIGHT	R3-8A	18	-	-	-	-	-	-	-	-	-	4	72	-	-
0010	STAGE 4	LANE CLOSED	R11-2L	18	16	288	1	18	2	36	5	90	18	1	18	-	-
0010		LEFT, AHEAD/RIGHT ONLY	R3-8	18	-	-	-	-	-	-	-	-	-	4	72	-	-
0010		MAX WIDTH 11'	W12-52	18	-	-	-	-	-	-	-	-	-	6	108		
0010		1 MILE AHEAD	W057-52	18	-	-	-	-	-	-	-	-	-	4	72		
0010		WEST	M3-4	18	-	-	-	-	-	-	-	-	-	4	72		
0010		USH 18	M1-4	18	-	-	-	-	-	-	-	-	-	4	72		
			TOTAL 0010			1,390		182		364		646	42		3,538	14	0.67

3

PAVEMENT MARKING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9310 MARKING REMOVAL SPECIAL MARKING WATER BLASTING EACH	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	649.0550 TEMPORARY MARKING ARROW REMOVABLE TAPE EACH	649.0850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF	REMARKS
0010				ML	-	-	-	2	-	2	-	STAGE 1 - WB TYPE 2 (LT)
0010	162+00'A'	-	171+75'A'	LT	-	-	975	-	-	-	-	STAGE 2 - WHITE EDGELINE
0010	162+00'A'	-	171+75'A'	LT	-	-	-	-	975	-	-	STAGE 2 - WHITE EDGELINE
0010	162+25	-	164+85	CL	-	-	590	-	-	-	-	STAGE 2 - DOUBLE YELLOW CL/GORE
0010	164+40	-	164+85	LT	-	-	50	-	-	-	-	STAGE 2 - YELLOW EDGELINE
0010	164+30'A'	-	180+55'A'	RT	-	-	1,615	-	-	-	-	STAGE 2 - YELLOW EDGELINE
0010	179+25'A'	-	180+40'A'	RT	-	-	-	-	-	2	-	STAGE 2 - TYPE 7
0010	172+00'A'	-	180+60'A'	CL	-	-	225	-	-	-	45	STAGE 2 - WHITE LANE LINES & STOP BARS
0010	162+00'A'	-	180+60'A'	CL	-	-	-	-	3,720	-	-	STAGE 2 - DOUBLE YELLOW
0010	162+00'A'	-	180+55'A'	RT	-	-	-	-	1,855	-	-	STAGE 2 - WHITE EDGELINE
0010	171+50	-	176+15	RT	465	-	-	-	-	-	-	STAGE 2 - B-12-29 WHITE EDGELINE
0010	171+50	-	176+15	CL	125	-	-	-	-	-	-	STAGE 2 - B-12-29 WHITE LANE LINES
0010	171+50	-	176+15	LT	465	-	-	-	-	-	-	STAGE 2 - B-12-29 YELLOW EDGELINE
0010			175+85	LT/RT	-	2	-	-	-	-	-	STAGE 2 - B-12-29 TYPE 3 (LT) & TYPE 1 (RT)
0010	171+75'A'	-	180+70'A'	LT	-	-	895	-	-	-	-	STAGE 3 - WHITE EDGELINE
0010	166+50'A'	-	180+70'A'	LT	-	-	-	-	1,420	-	-	STAGE 3 - WHITE EDGELINE
0010	166+50'A'	-	180+70'A'	RT	-	-	-	-	1,420	-	-	STAGE 3 - YELLOW EDGELINE
0010	166+50'A'	-	180+70'A'	LT	-	-	-	-	1,420	-	-	STAGE 4 - WHITE EDGELINE
0010	166+50'A'	-	180+70'A'	RT	-	-	-	-	1,420	-	-	STAGE 4 - YELLOW EDGELINE
0010				ML	-	-	-	2	-	2	-	STAGE 4 - WB TYPE 2 (RT)
0010	161+00	-	180+70'A'	LT	1,970	-	-	-	-	-	-	FINAL - WHITE EDGELINE
0010	161+00	-	164+00	RT	300	-	-	-	-	-	-	FINAL - WHITE EDGELINE
0010	161+00	-	164+85	CL	1,680	-	-	-	-	-	-	FINAL - DOUBLE YELLOW
0010	163+40	-	164+40	CL	200	-	-	-	-	-	-	FINAL - DOUBLE YELLOW (WB)
0010	164+40	-	164+85	LT	45	-	-	-	-	-	-	FINAL - YELLOW EDGELINE
0010	164+25'A'	-	180+55'A'	RT	1,640	-	-	-	-	-	-	FINAL - YELLOW EDGELINE
0010	172+00'A'	-	180+60'A'	CL	225	-	-	-	-	-	-	FINAL - WHITE LANE LINES
0010				ML	-	4	-	-	-	-	-	FINAL - WB TYPE 3
				TOTAL 0010	7,115	6	4,350	4	12,230	6	45	





PROJECT NO: 1660-03-62	HWY: USH 18	COUNTY: CRAWFORD	PLAN: STRUCTURES B-12-29 & 30	SHEET 20	E

Standard Detail Drawing List

13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-06B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-06C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

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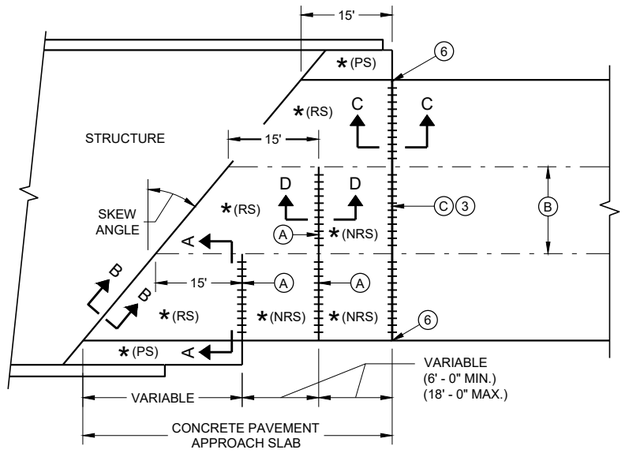


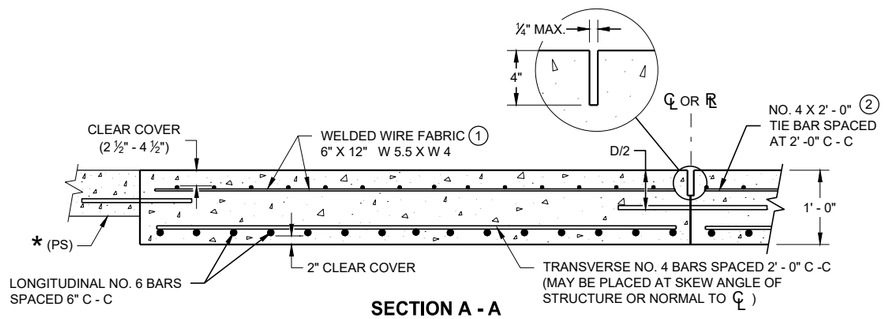
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

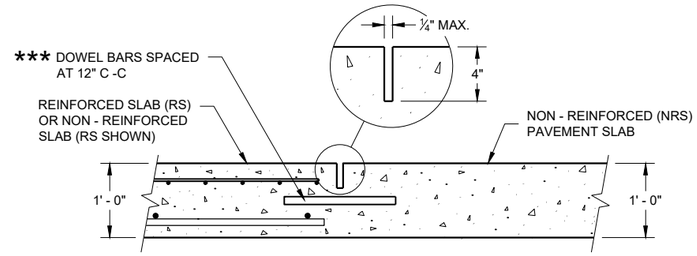
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

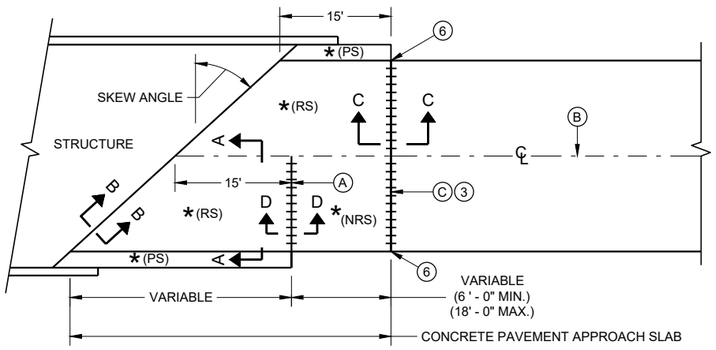
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

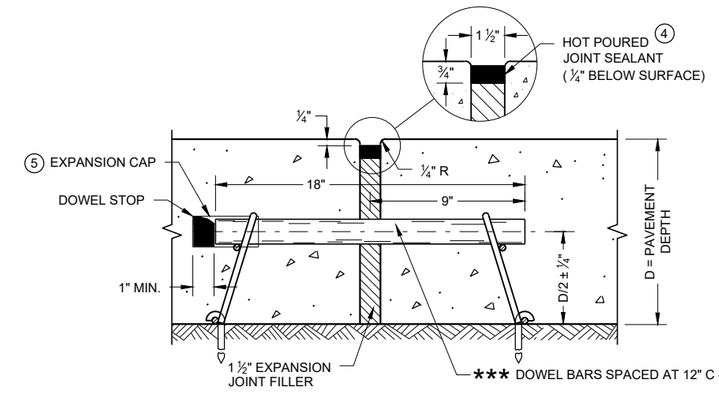


SECTION D - D
CONTRACTION JOINT



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT

SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISO

FHWA

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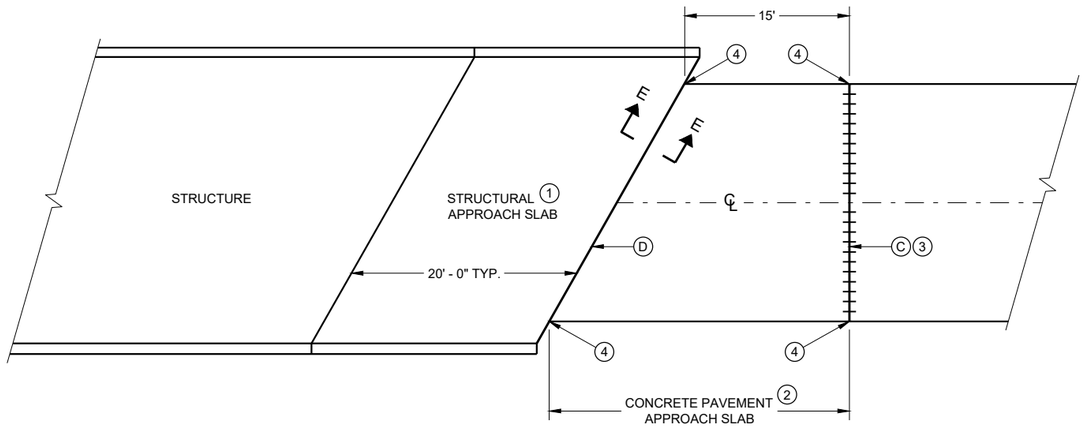
SDD 13B02 - 09a

SDD 13B02 - 09a



BRIDGE APPROACHES

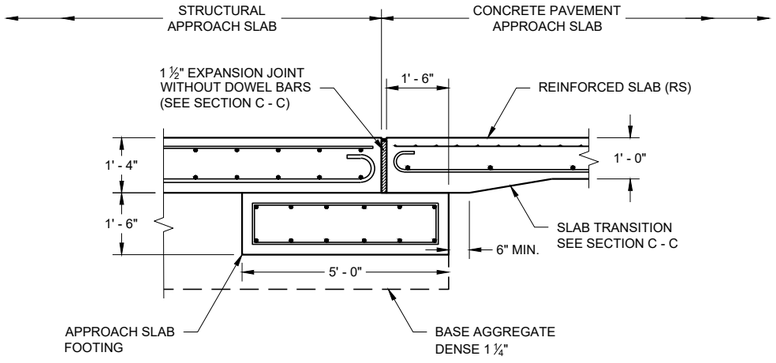
GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

1. SEE BRIDGE PLAN.
2. CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS
3. DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
4. EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

C. 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞.

D. 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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SDD 13B02 - 09b

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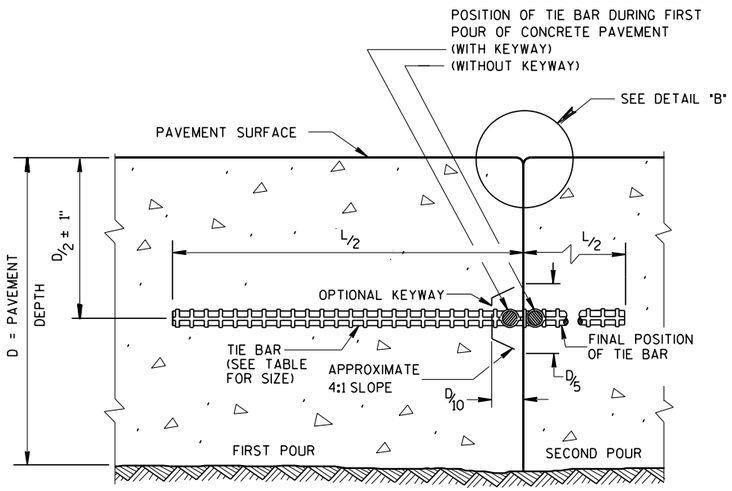
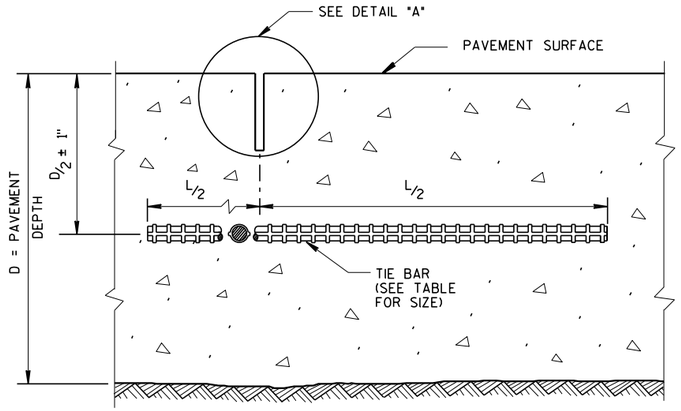
SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

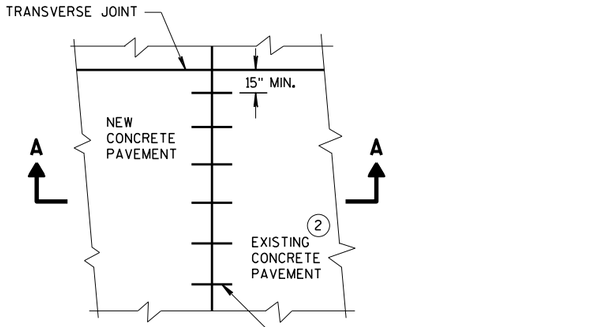
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

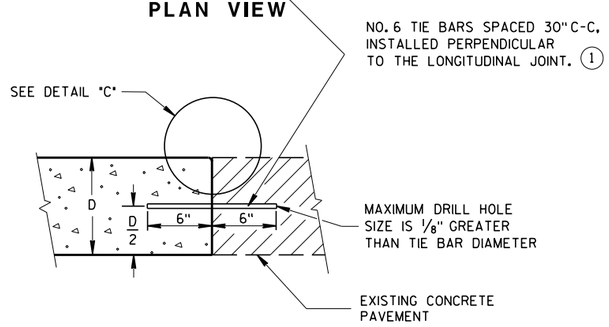
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

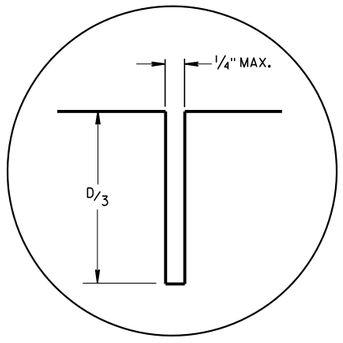


PLAN VIEW

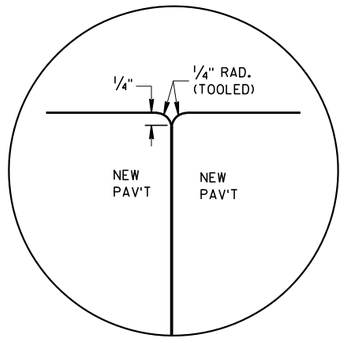


SECTION A-A

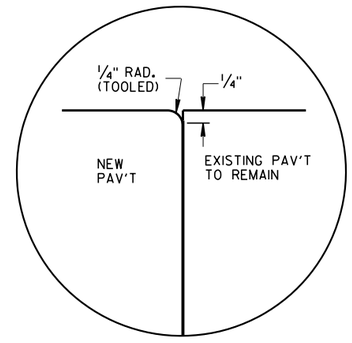
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



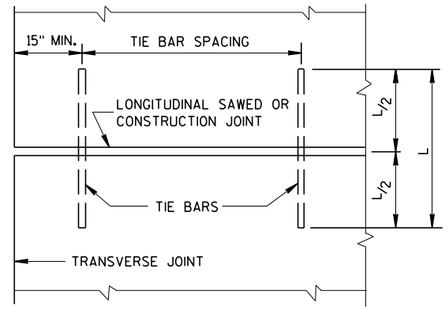
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

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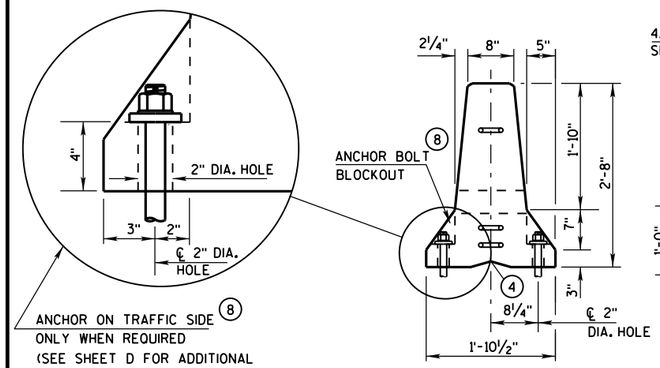
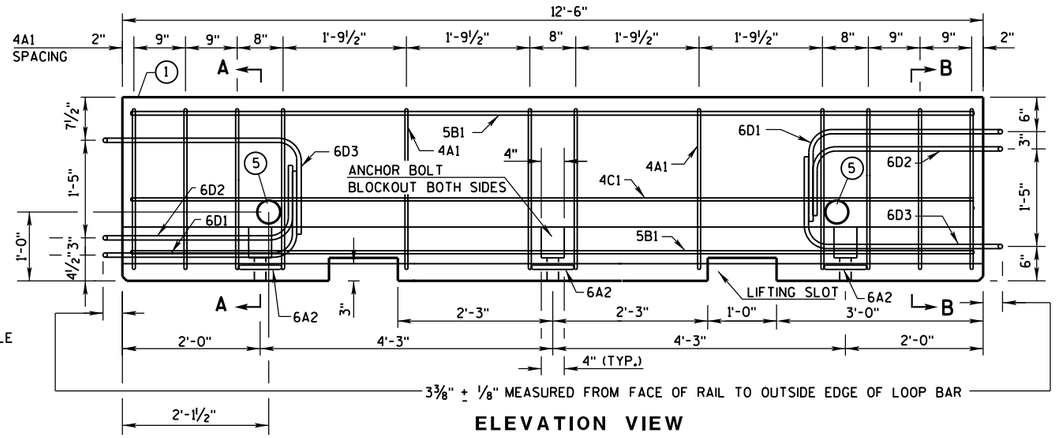
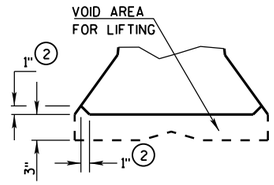
S.D.D. 13 C 1-19



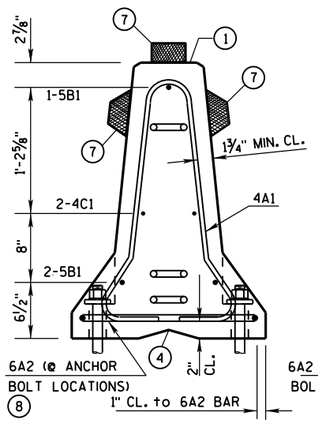
END VIEW



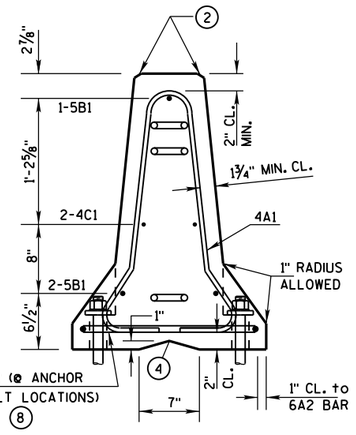
ELEVATION VIEW



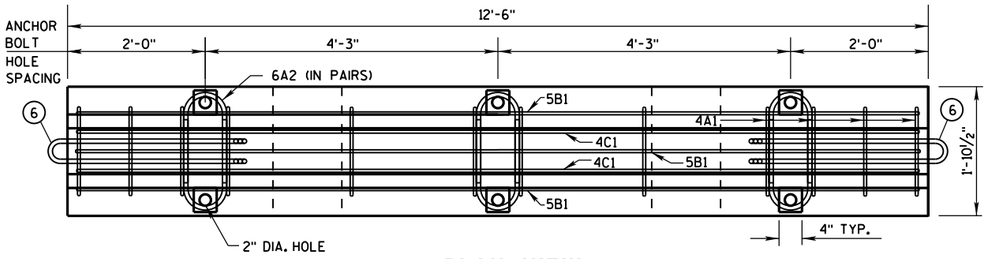
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

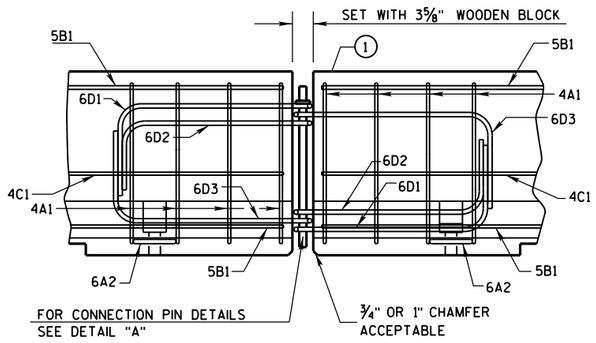


SECTION B-B
(STIRRUP PLACEMENT)

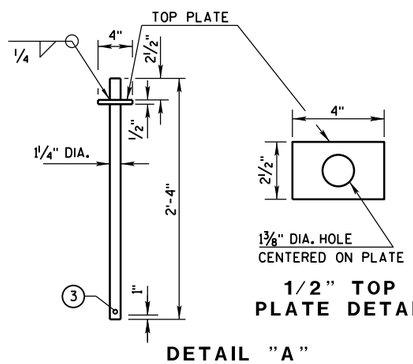


PLAN VIEW

DETAILS OF BARRIER SECTION

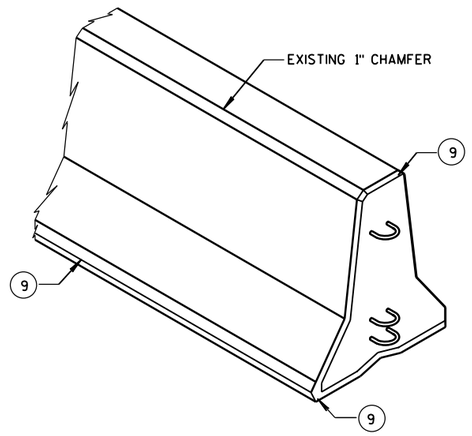


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

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

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

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

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

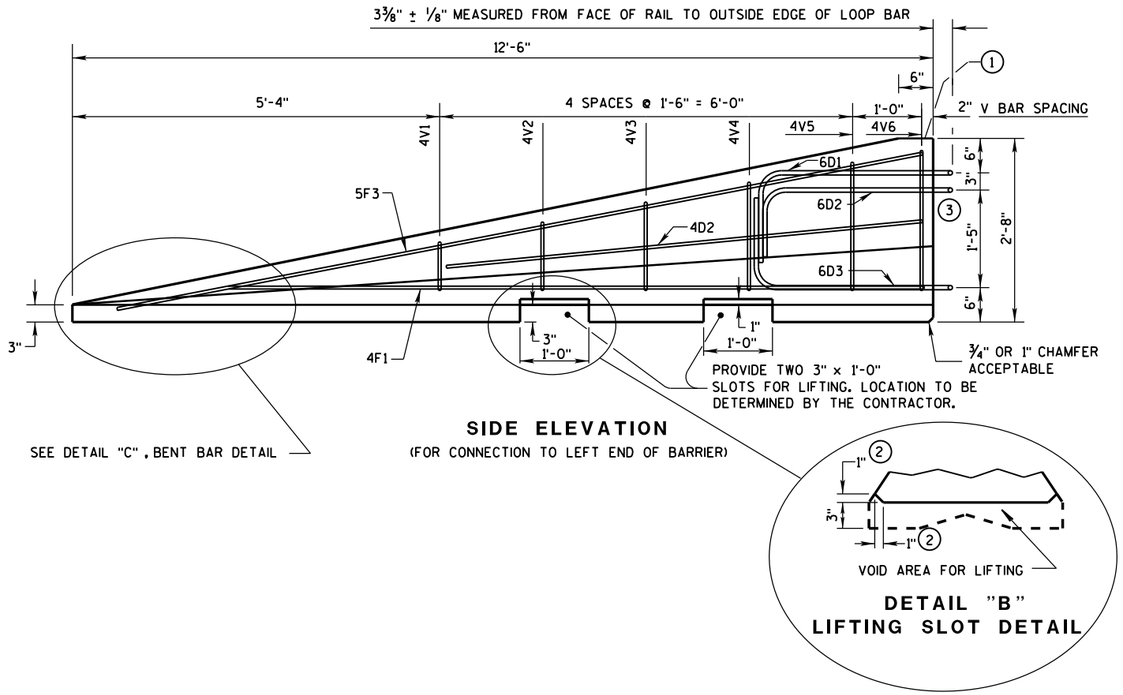
(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

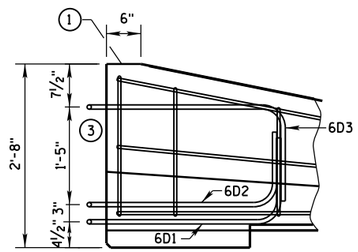
(9) 1" CHAMFER OPTIONAL.

f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

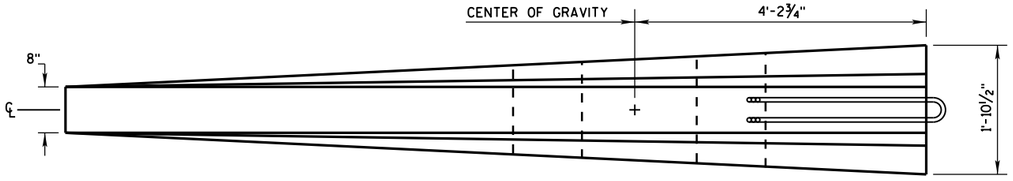
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 25

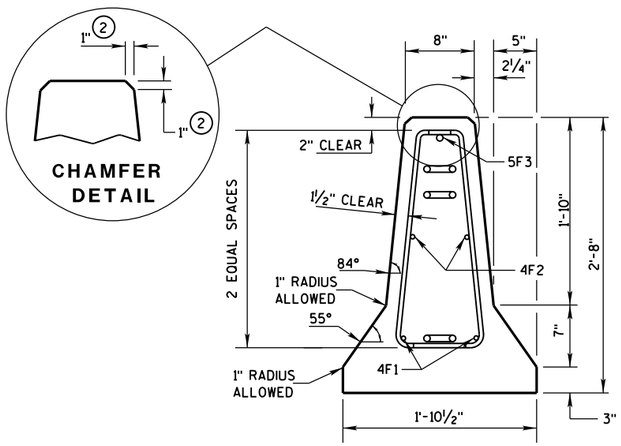


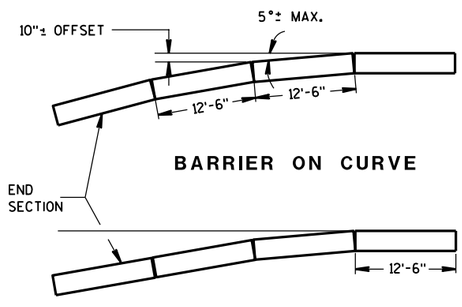


GENERAL NOTES

1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.







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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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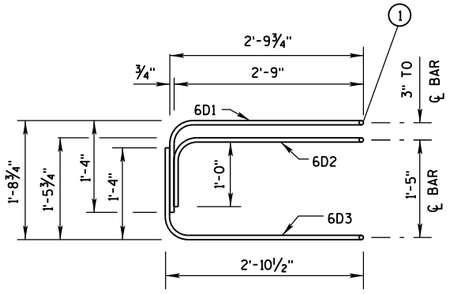
S.D.D. 14 B 7-15b

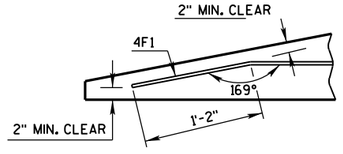
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

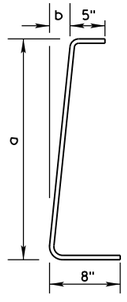
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

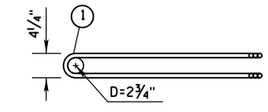
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

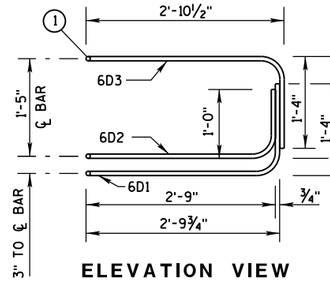
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

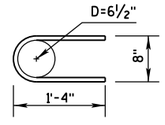
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



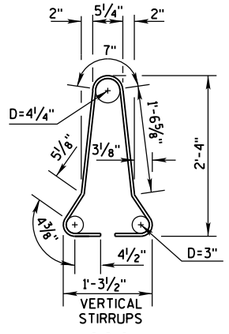
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

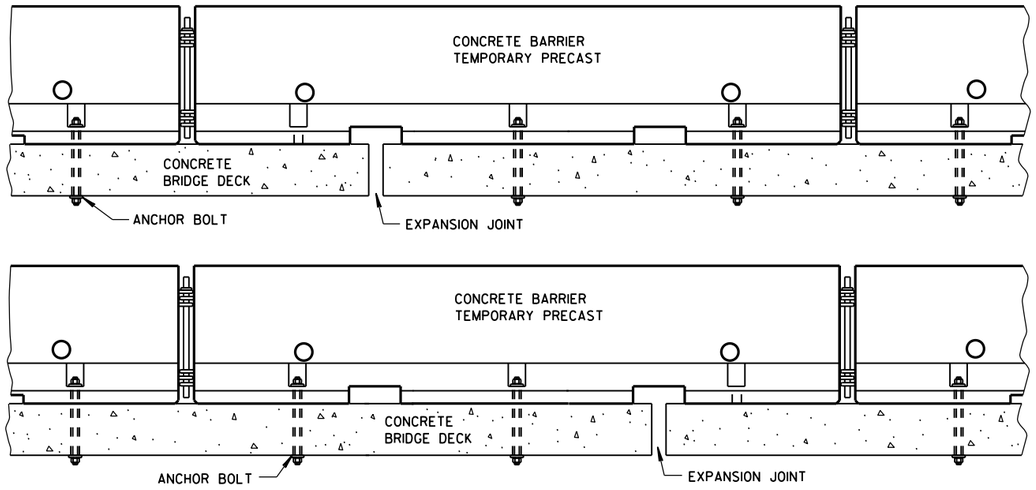
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

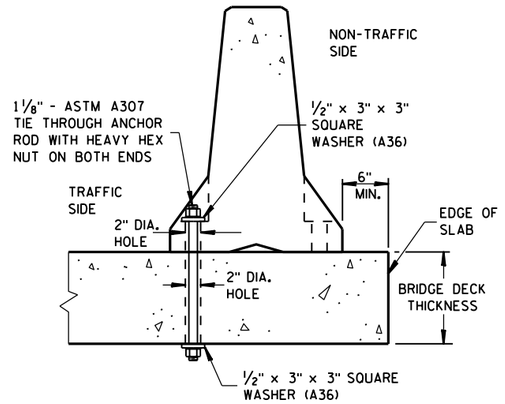
6

S.D.D. 14 B 7-15c



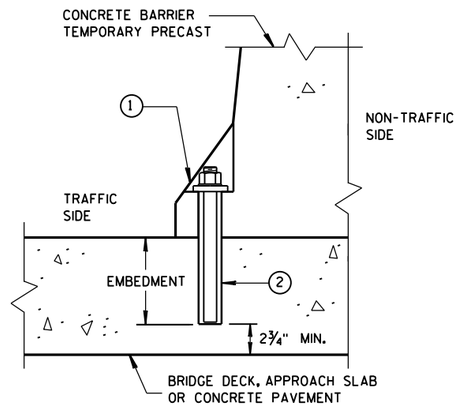
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



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

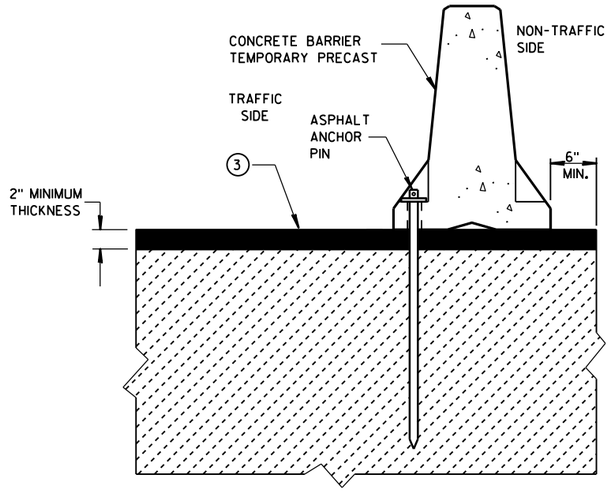
(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

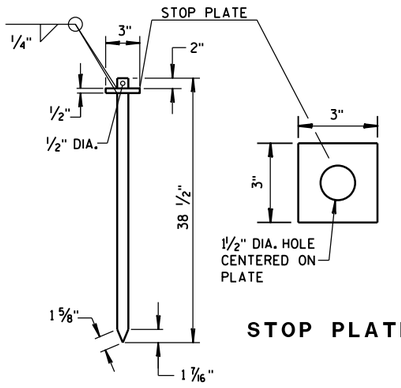
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

1. 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.
2. ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.
3. ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



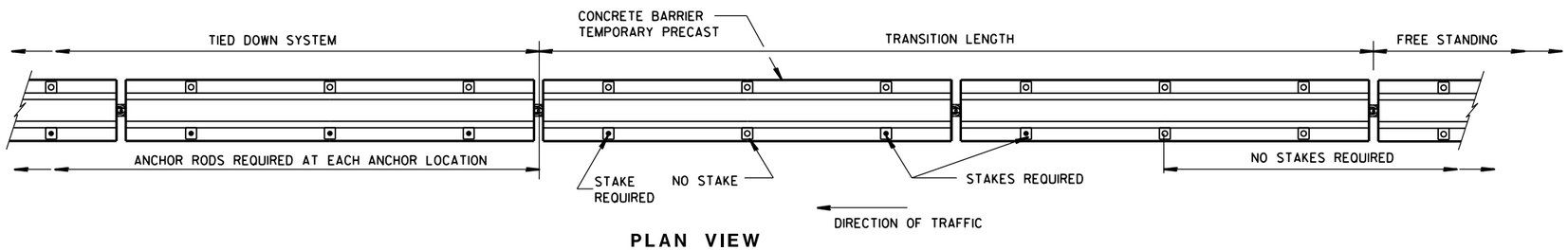
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

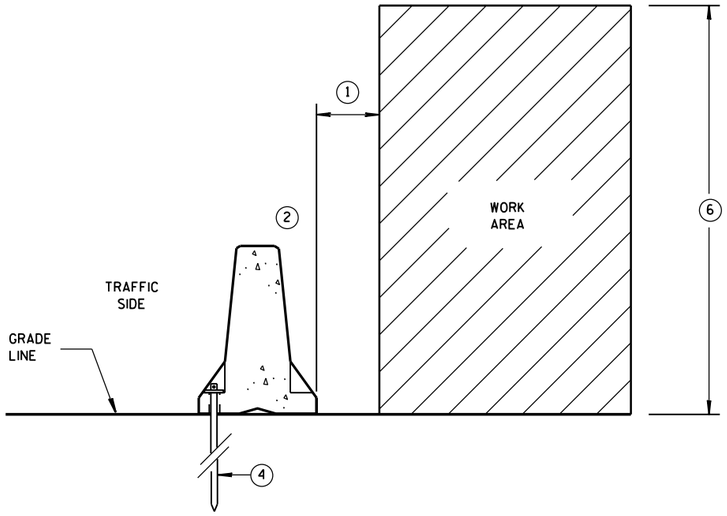
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

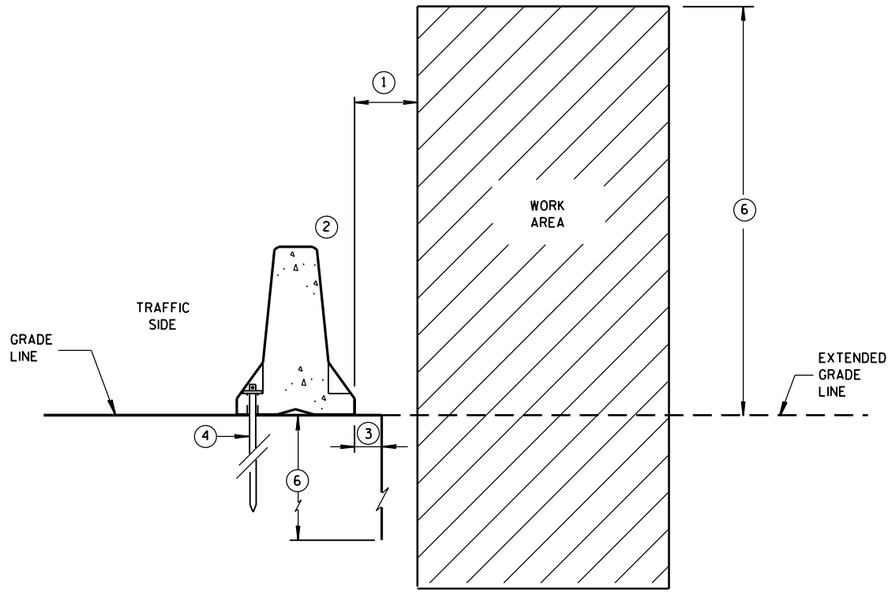
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

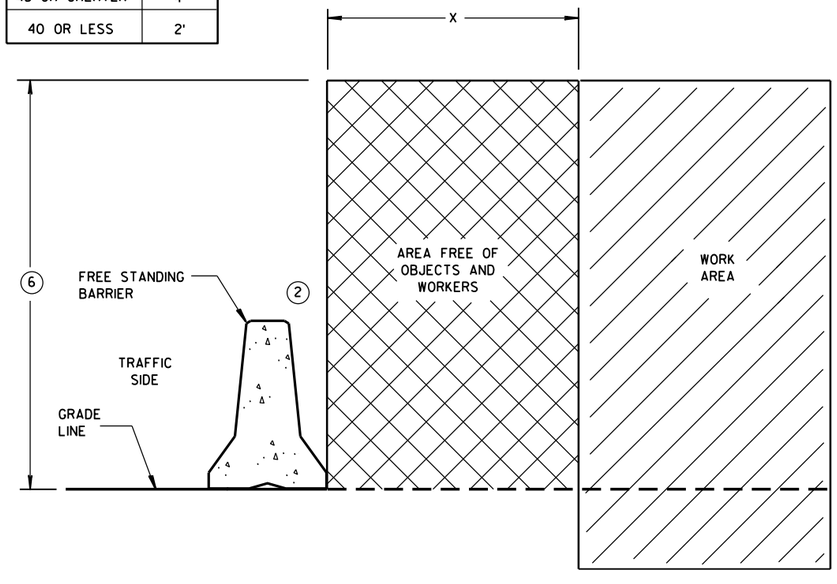


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

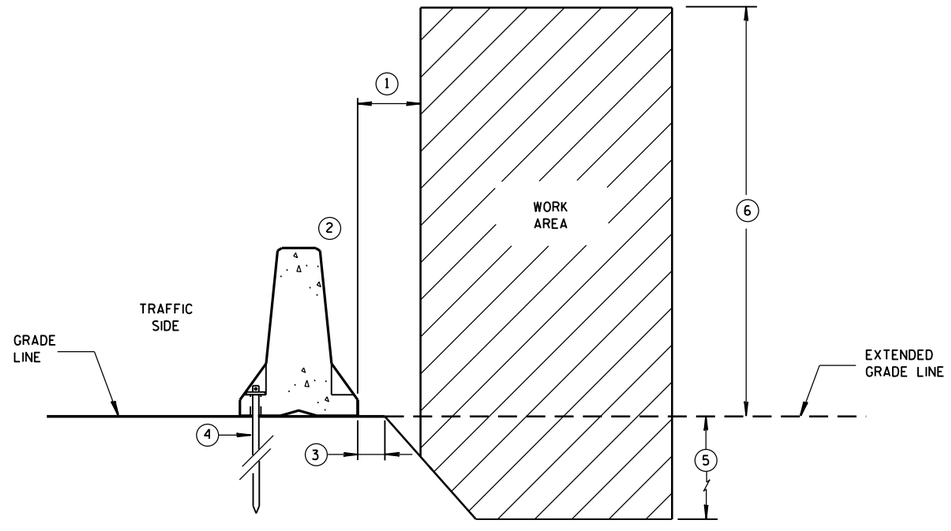
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



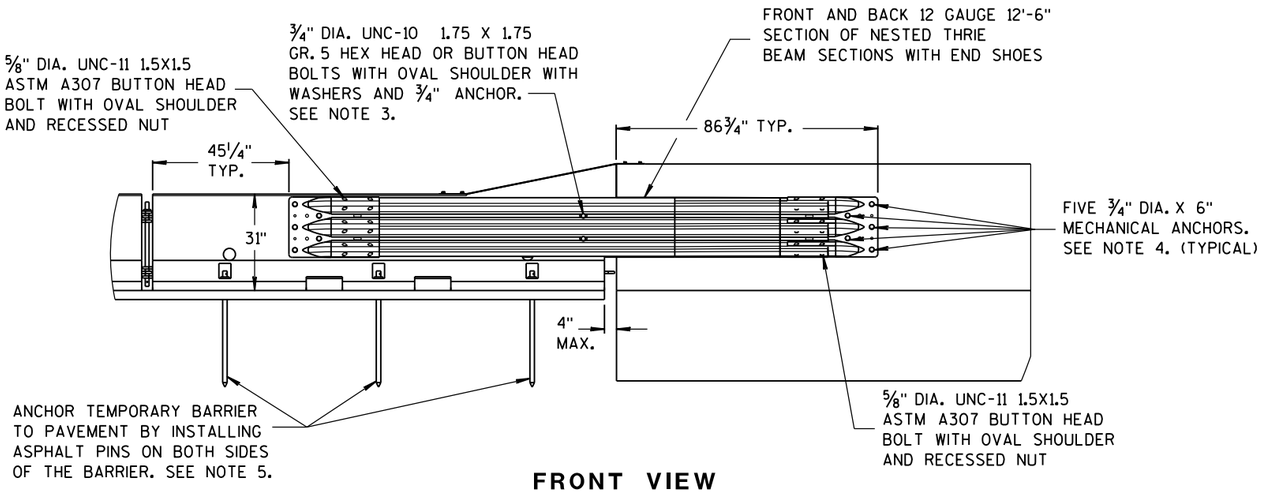
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

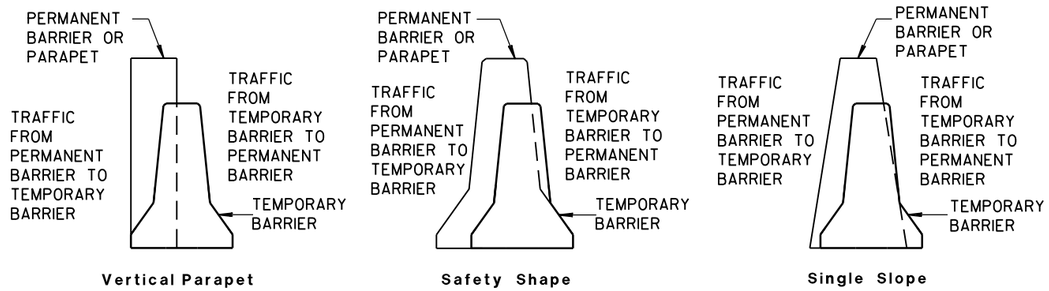
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

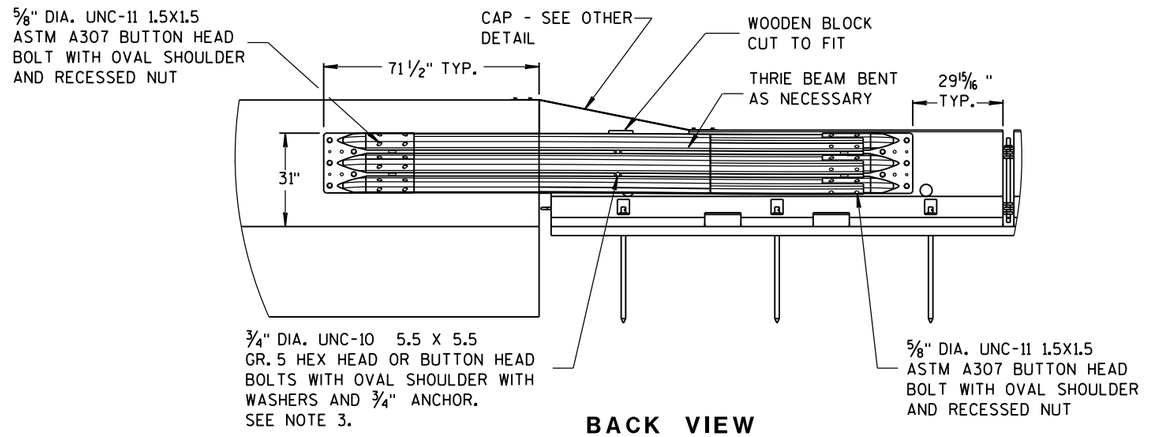


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

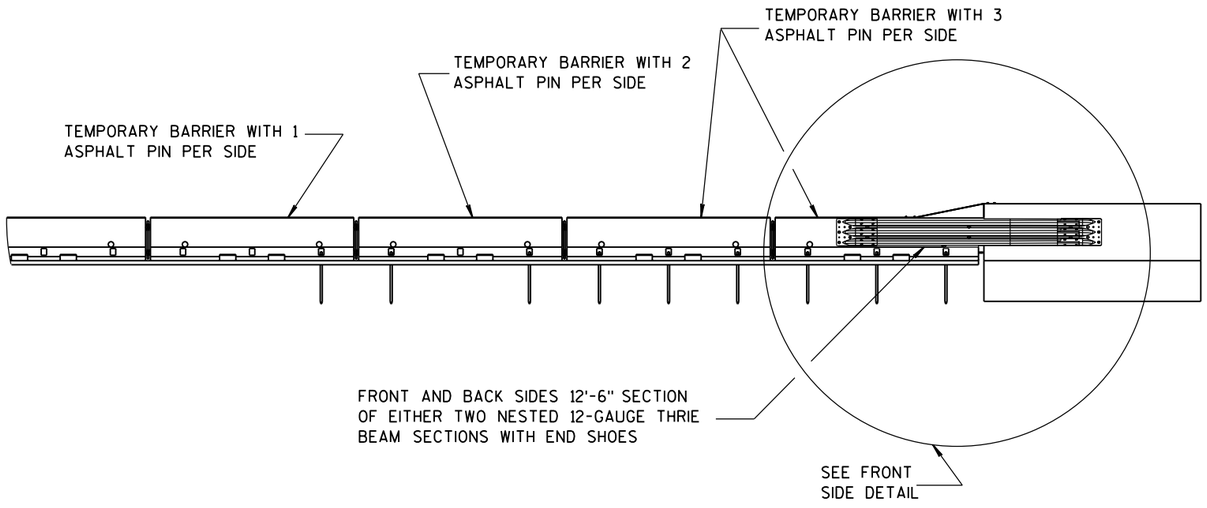
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

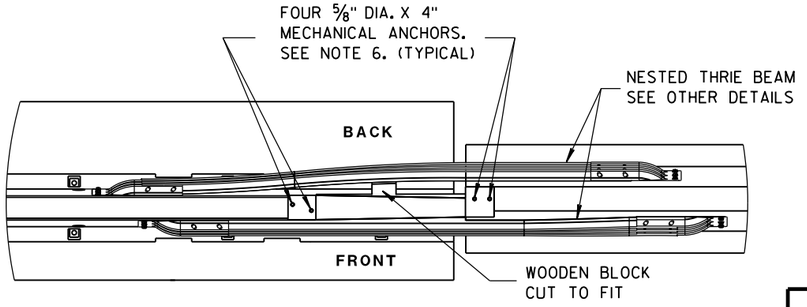
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD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



BACK VIEW



FRONT VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 7-15f

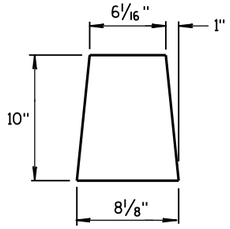
GUSSET 1

GUSSET 2

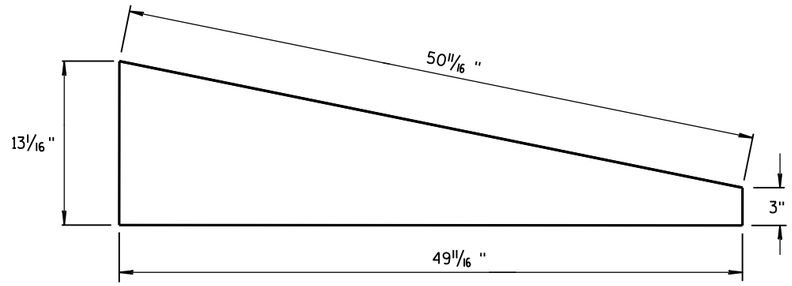
GUSSET 3

GUSSET 4

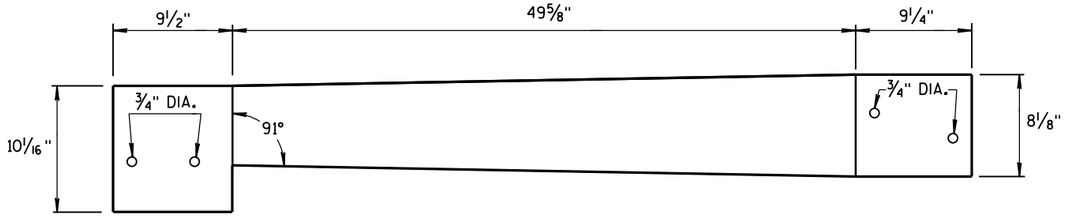
GUSSETS

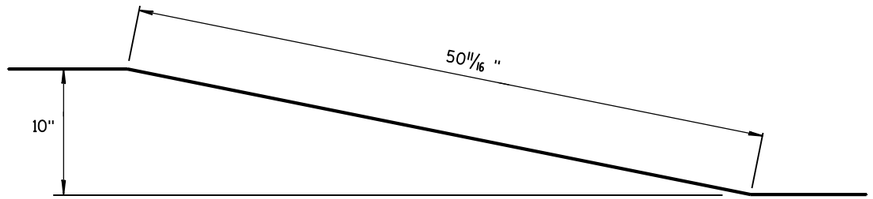


END PLATE

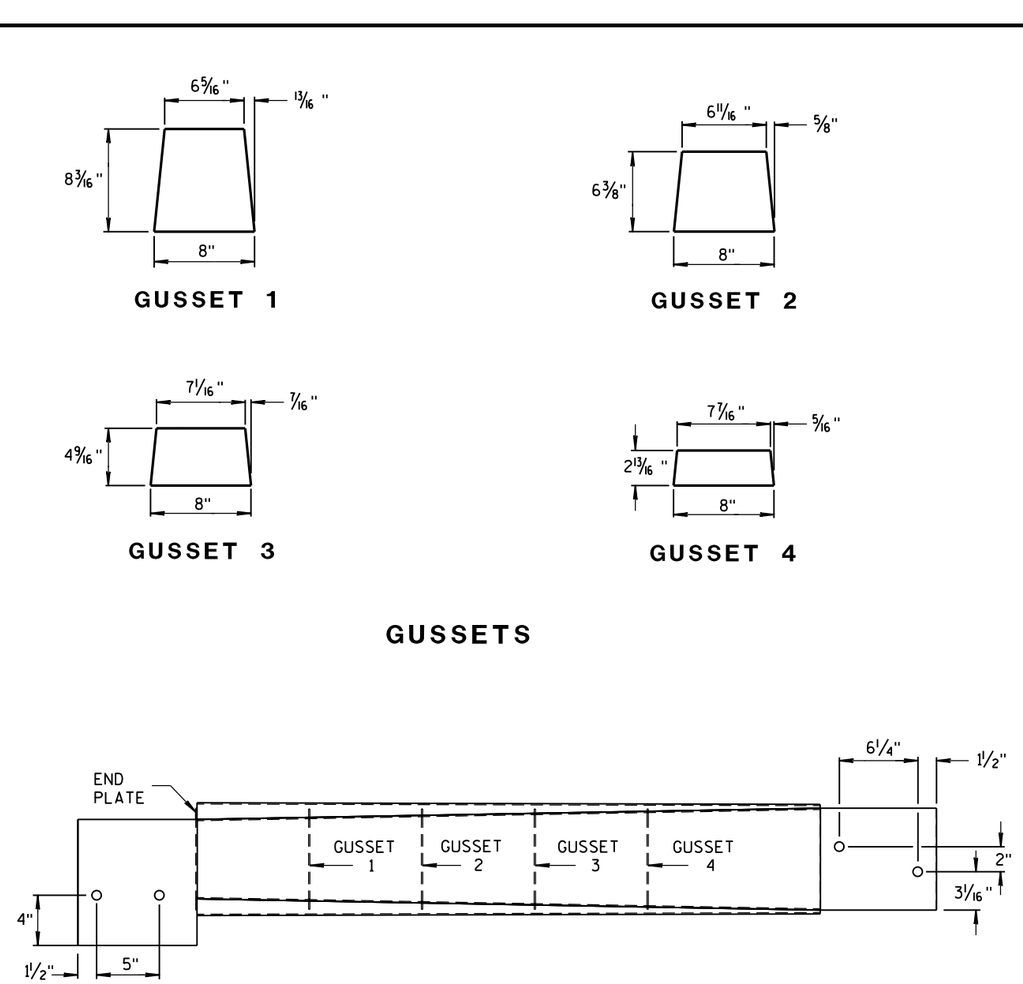


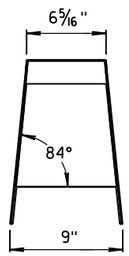
SIDE PLATE





TOP PLATE





SECTION C-C

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

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

NOTES

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

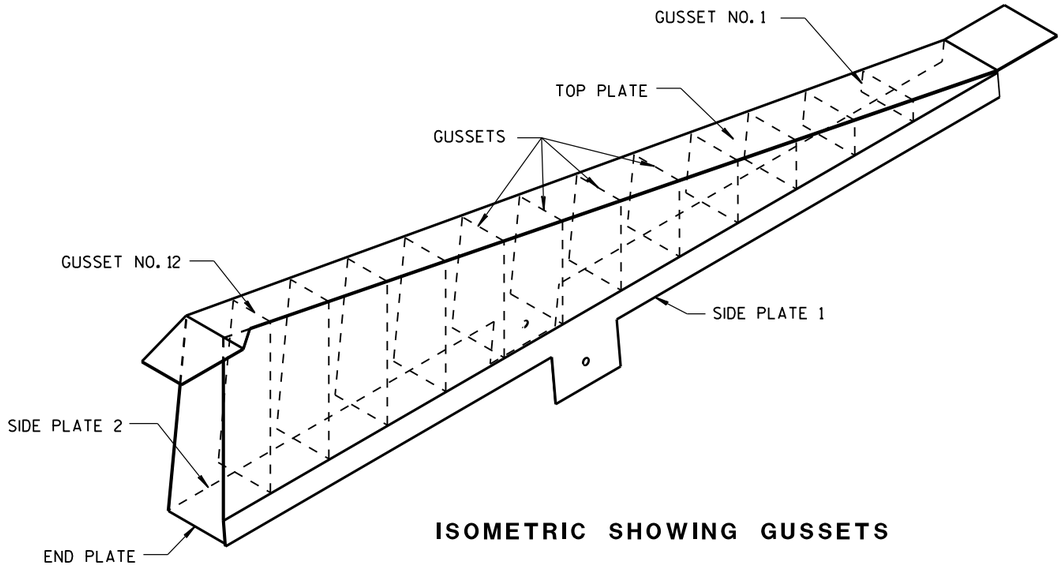
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

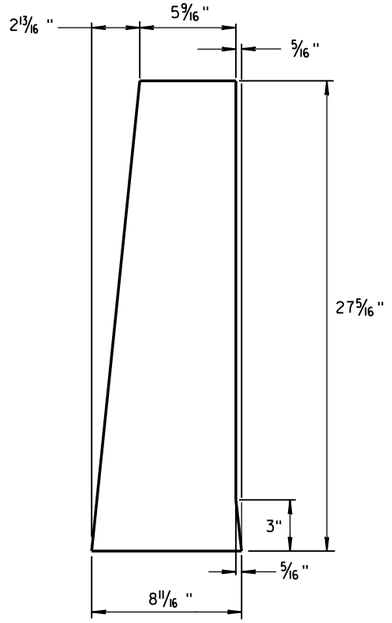
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15g

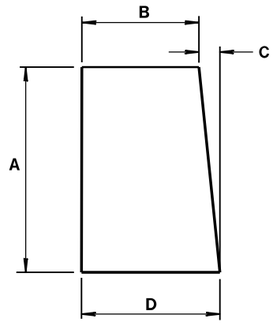


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



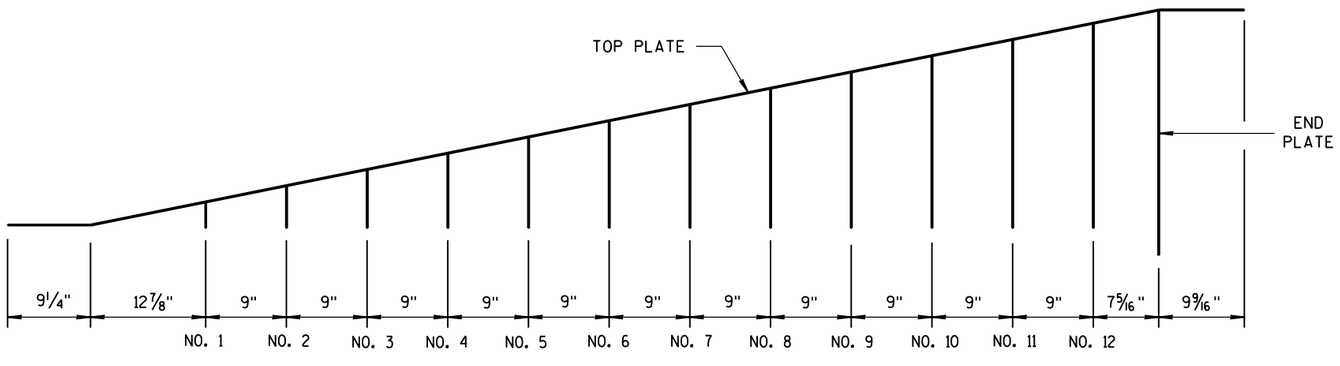
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

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

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

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



GUSSET LOCATION

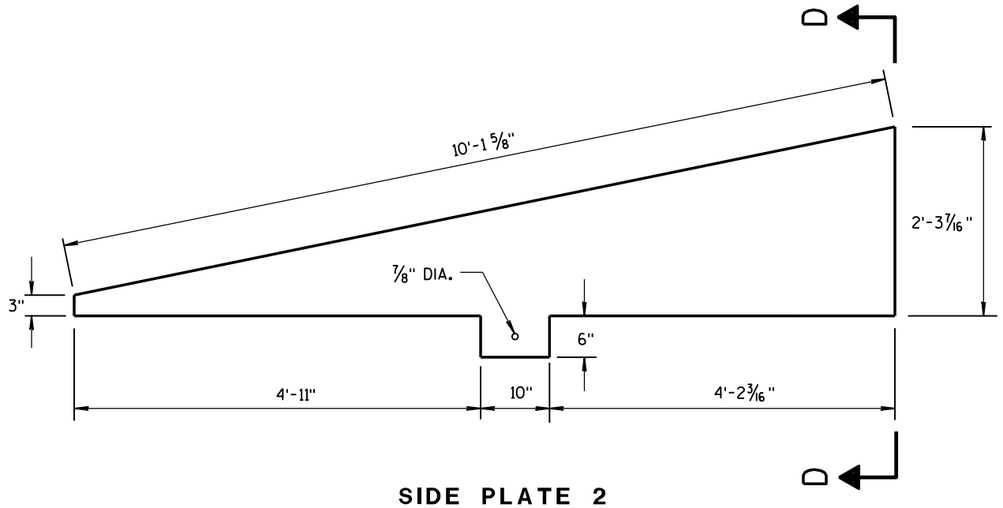
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

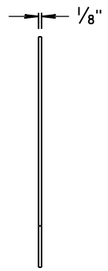
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

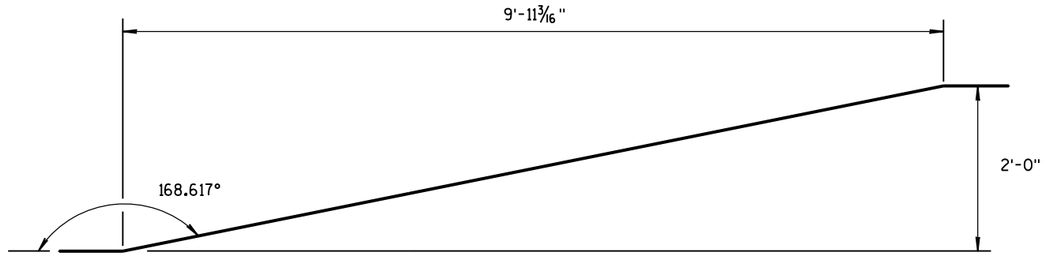
S.D.D. 14 B 7-15h



SIDE PLATE 2

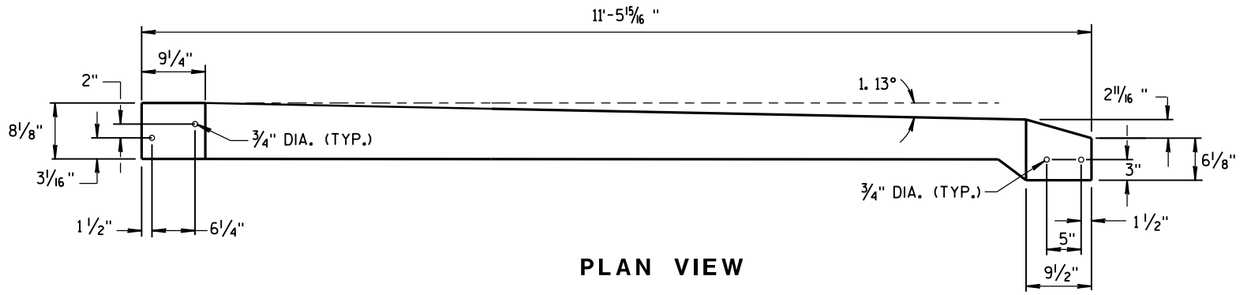


END VIEW



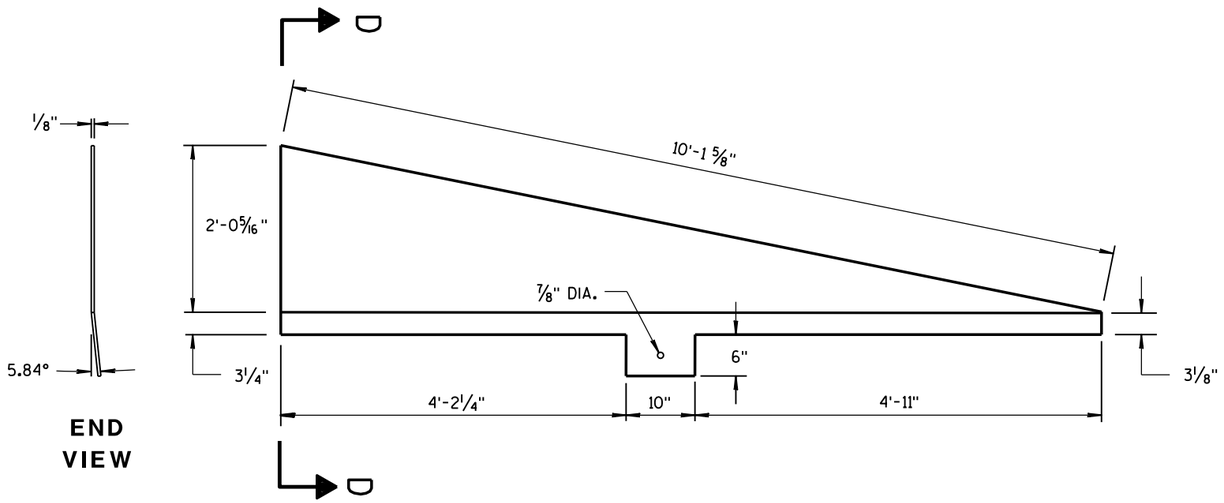
SIDE VIEW

TOP PLATE



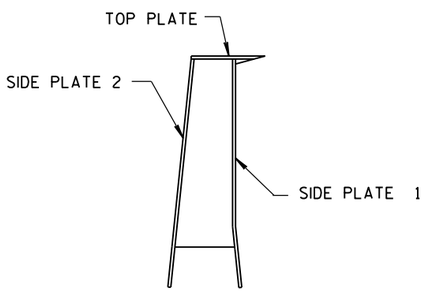
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
FHWA

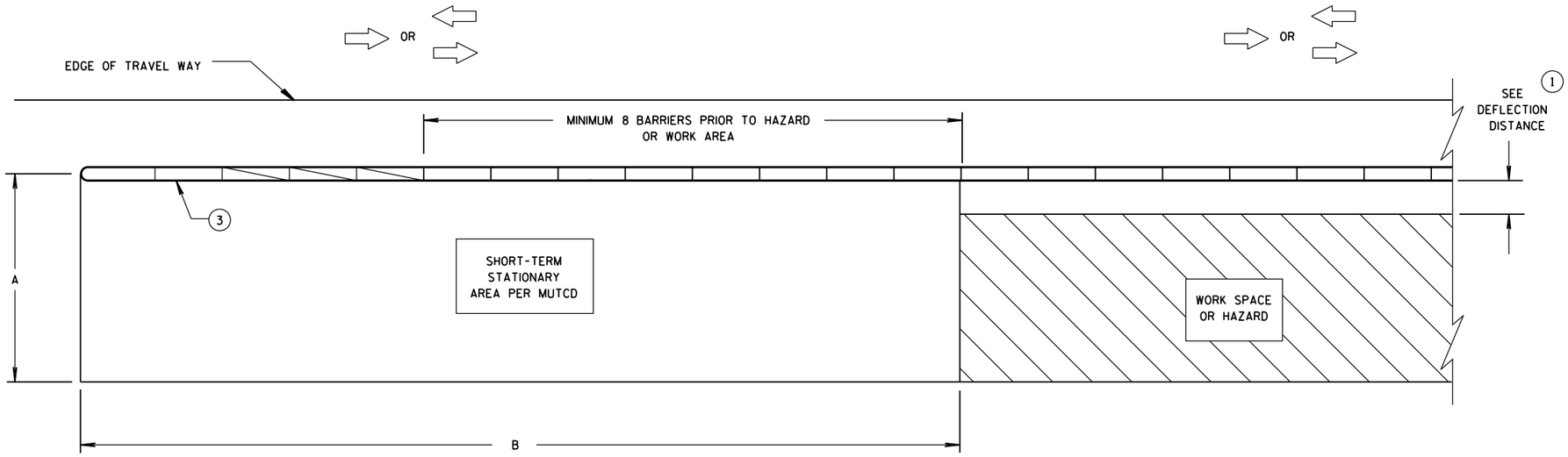
ENT

6

S.D.D. 14 B 7-15i

6

S.D.D. 14 B 7-15i



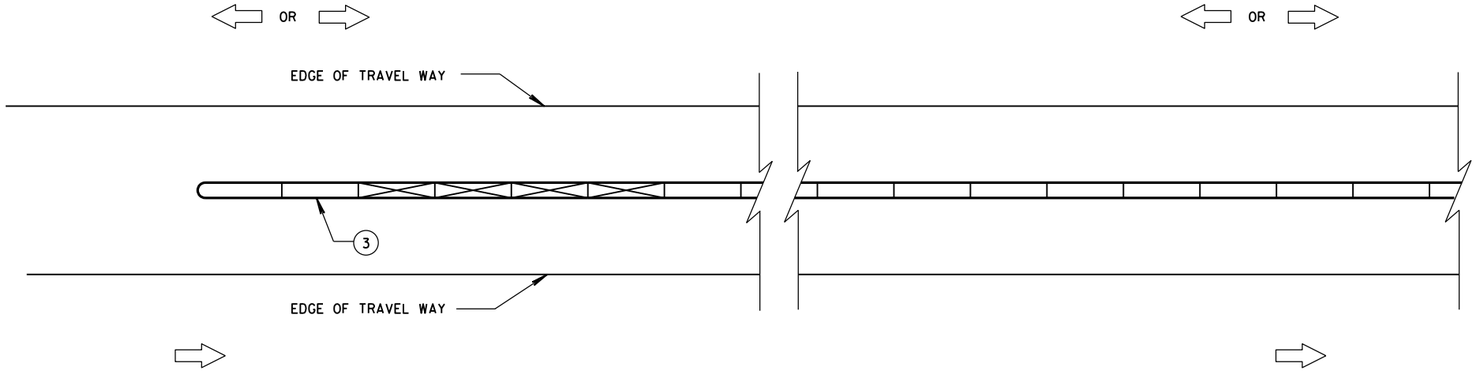
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

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



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

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

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

STATE OF WISCONSIN
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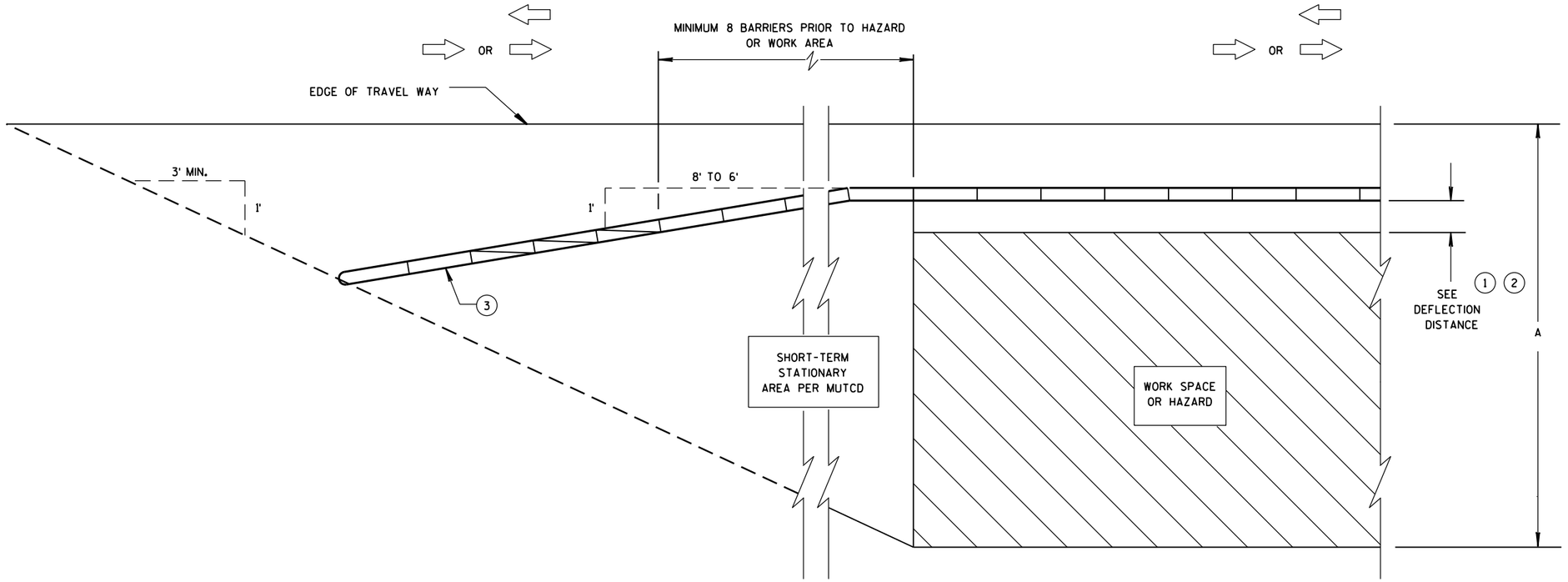
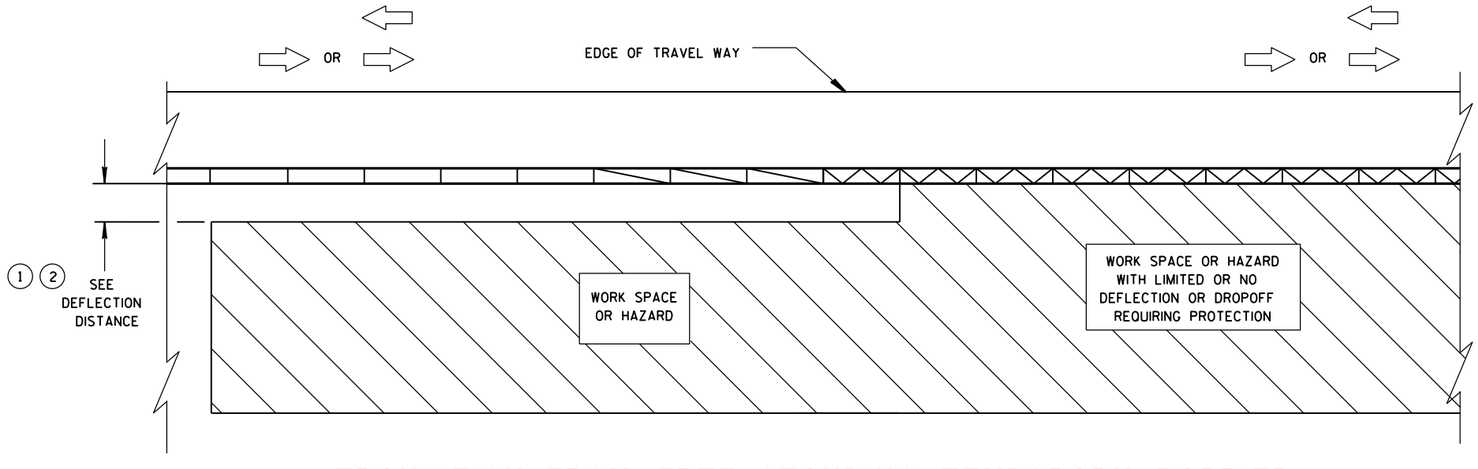
S.D.D. 14 B 8-2a
S.D.D. 14 B 8-2a



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2b

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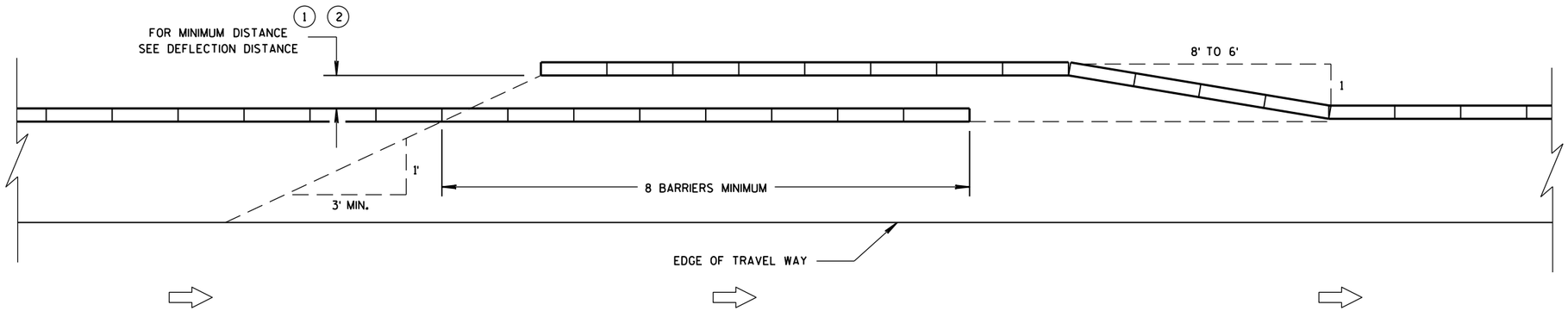
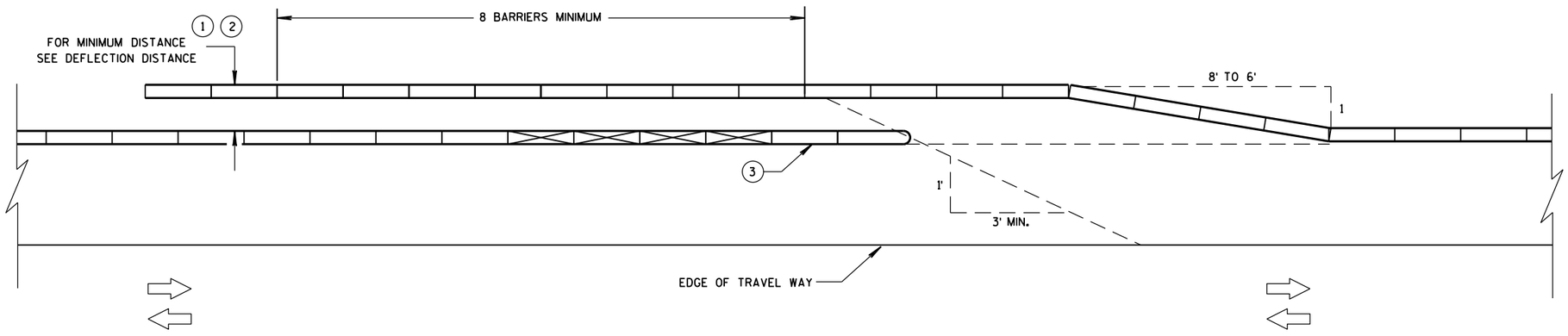
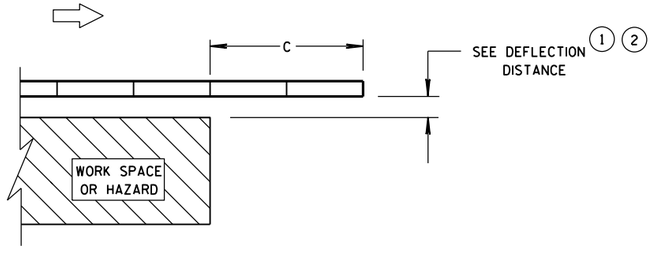
S.D.D. 14 B 8-2b



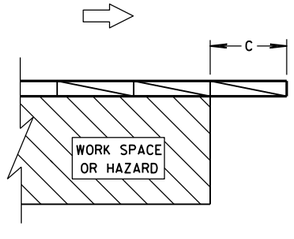
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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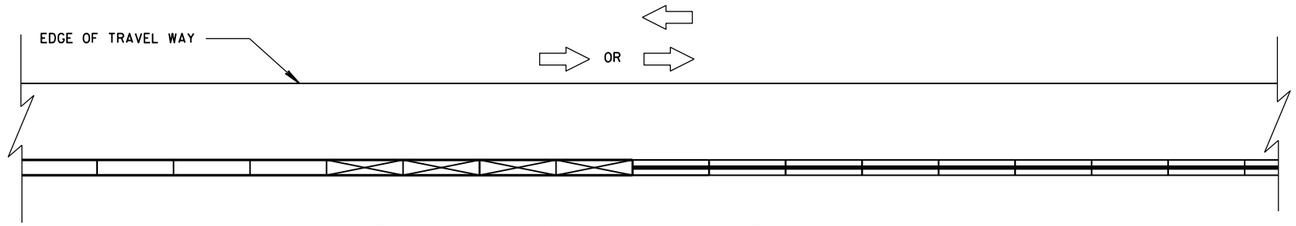
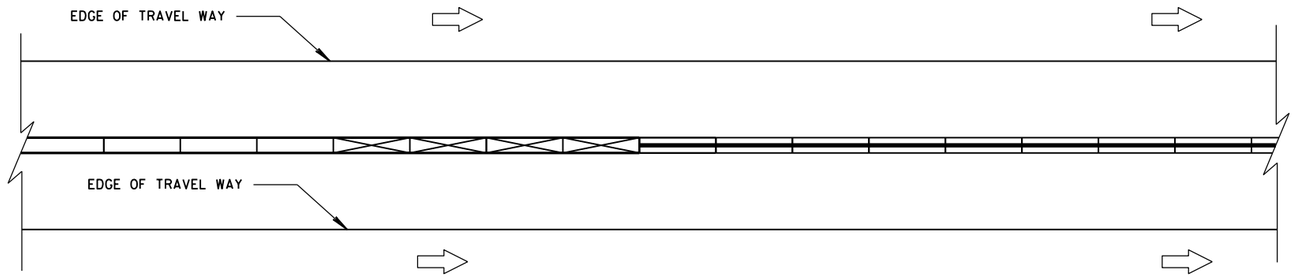
S.D.D. 14 B 8-2c



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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

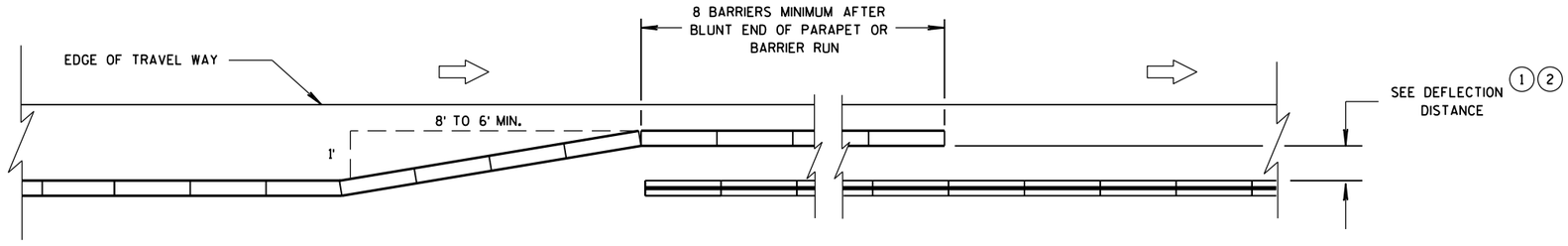
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

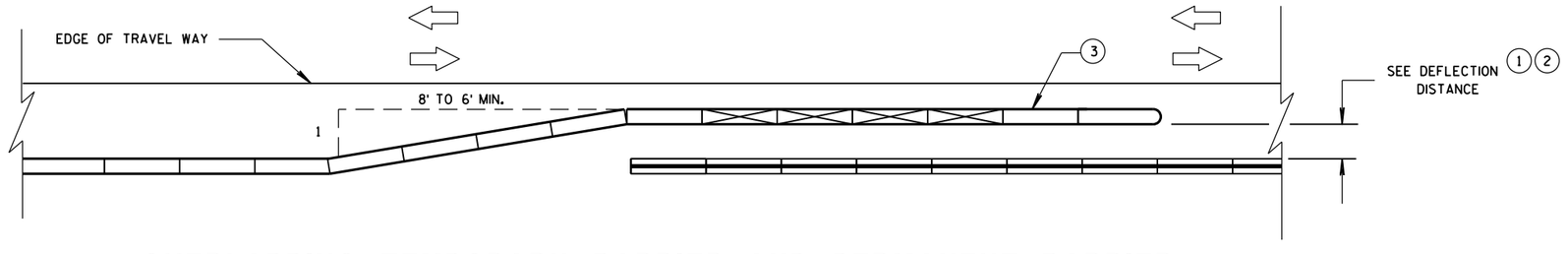
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

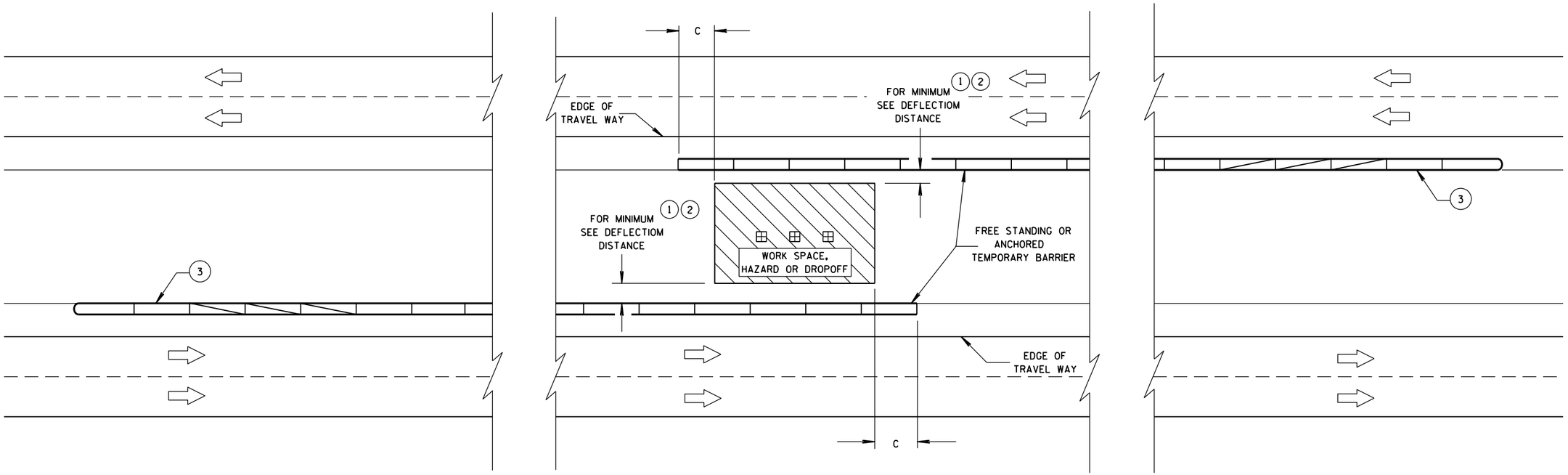
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

6

S.D.D. 14 B 8-2e

GENERAL NOTES

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

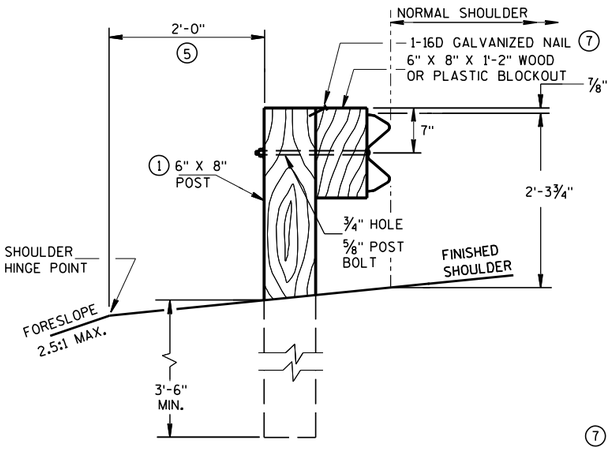
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

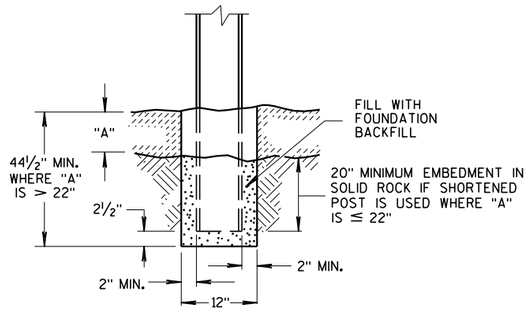
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

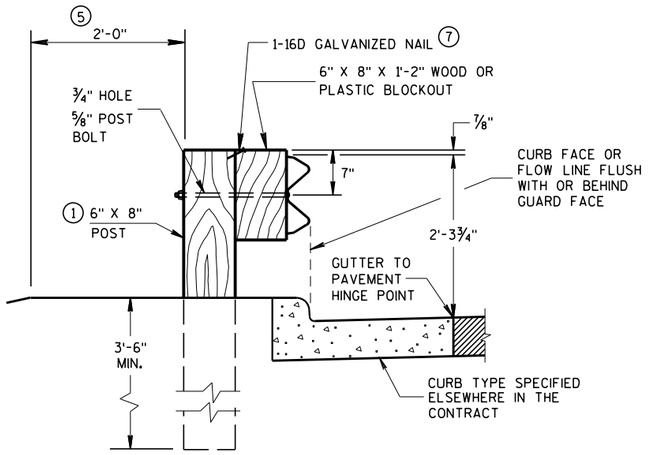
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



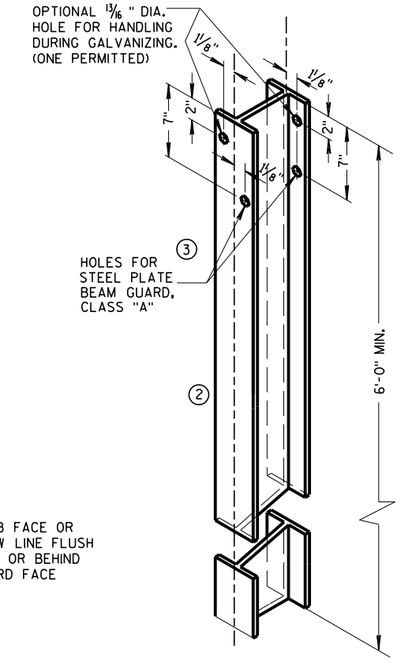
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥

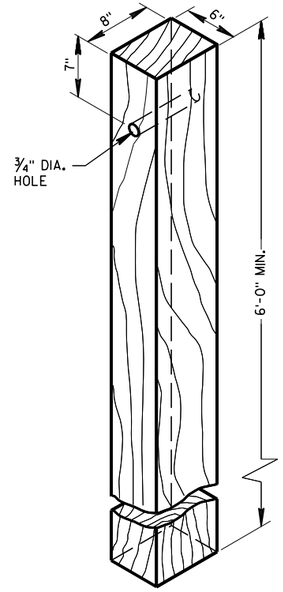


END VIEW
LOCATED ALONG A CURBED ROADWAY

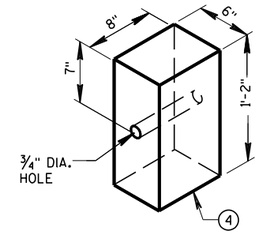


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①

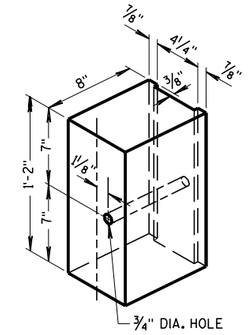
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



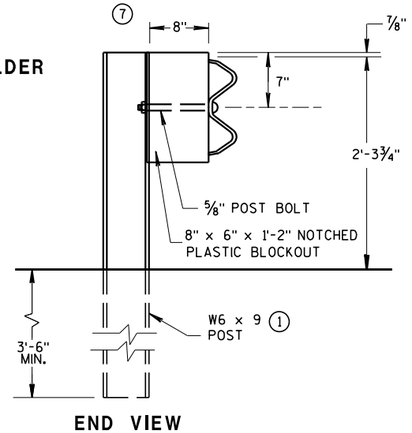
WOOD POST
(6"X8") NOMINAL



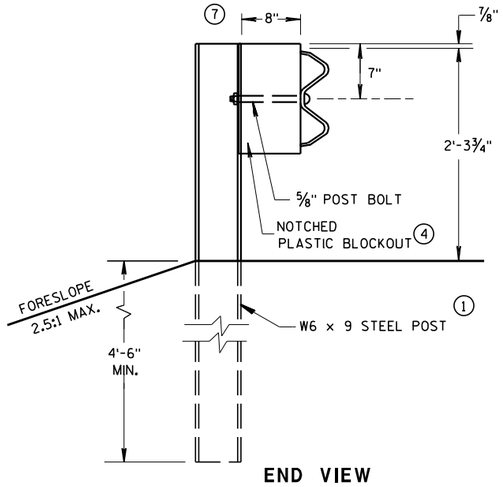
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



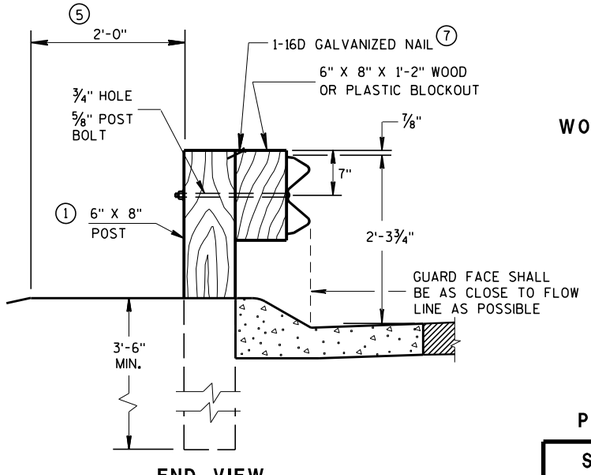
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS ①



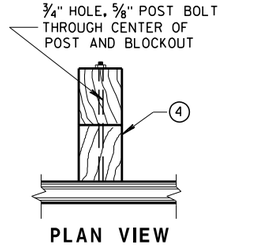
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



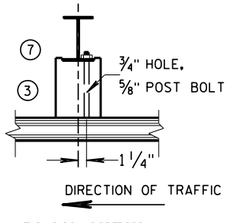
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD, CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 15-11a

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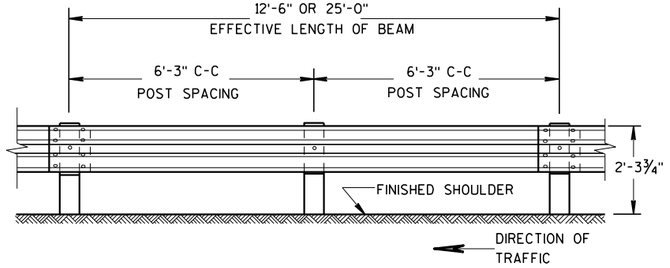
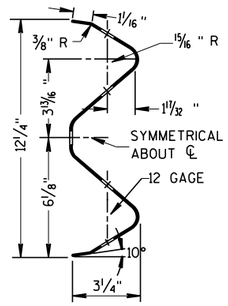
S.D.D. 14 B 15-11a

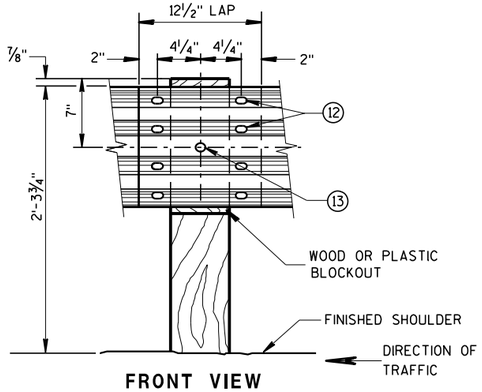


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

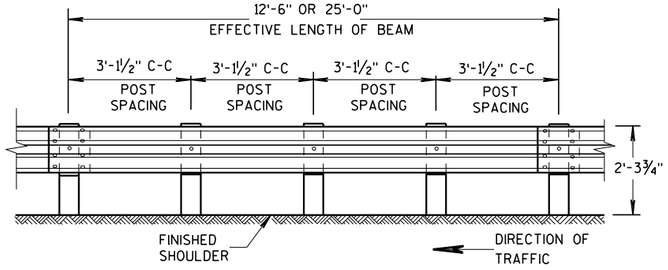
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

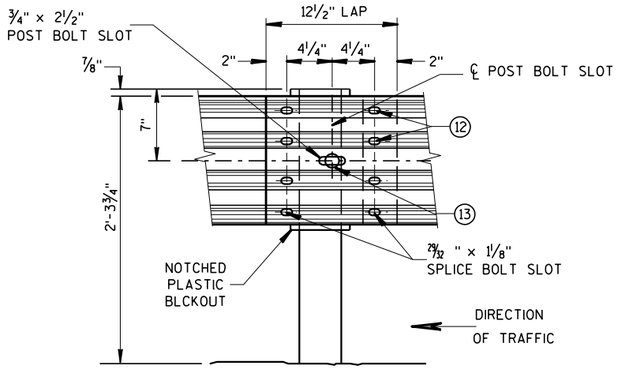
(12) 8 -5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

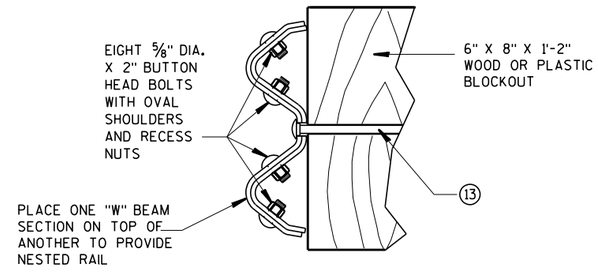
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

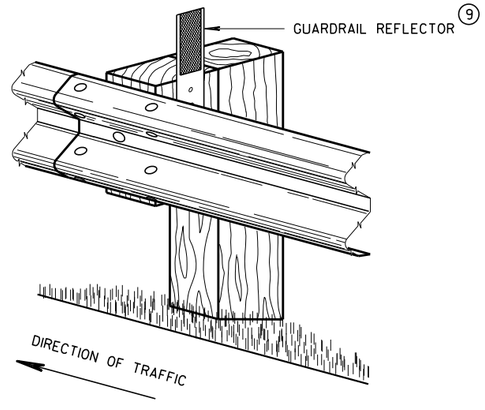
TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



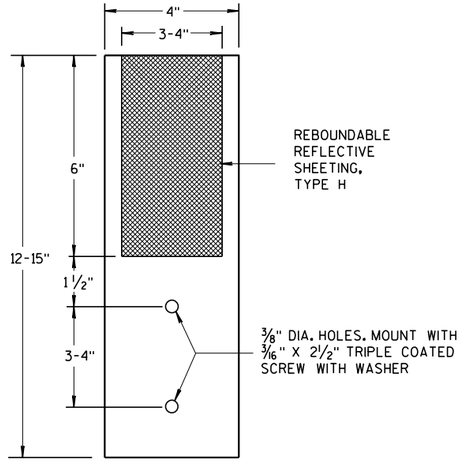
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCO 40
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 15-11b

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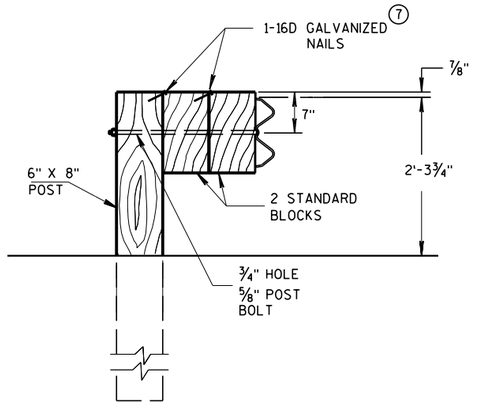
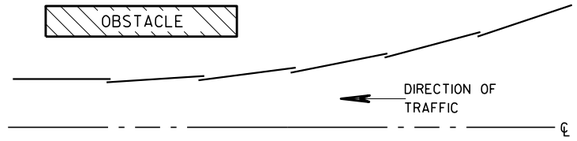
S.D.D. 14 B 15-11b

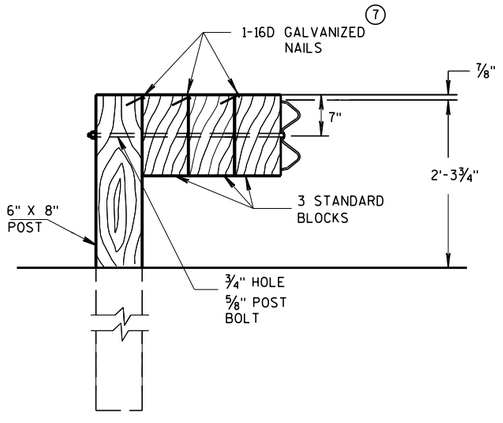


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

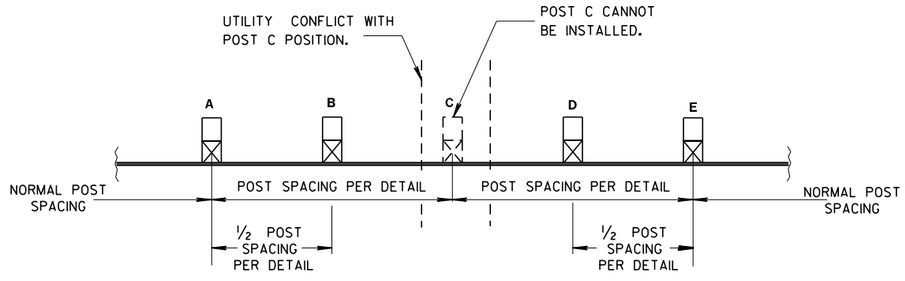


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

6
S.D.D. 14 B 15-11c

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

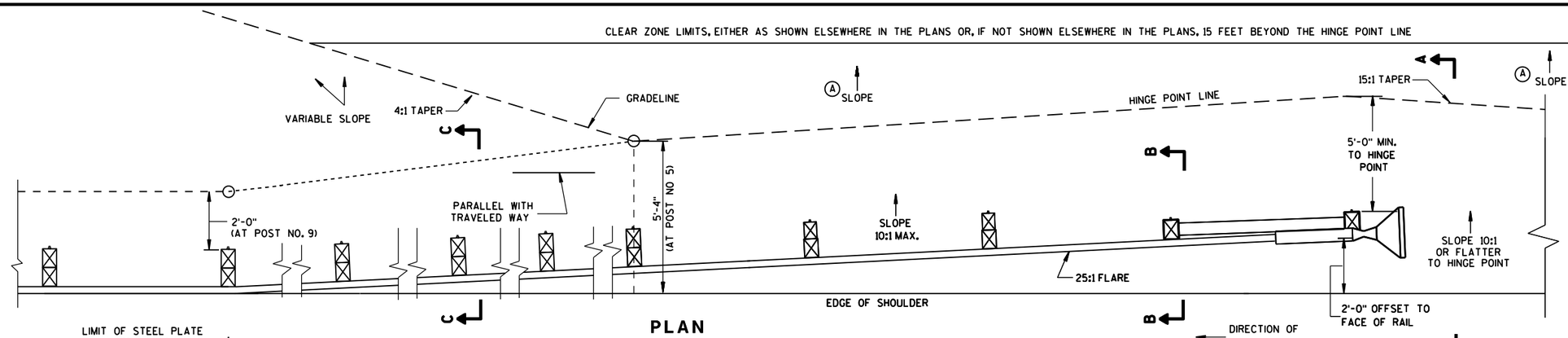
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

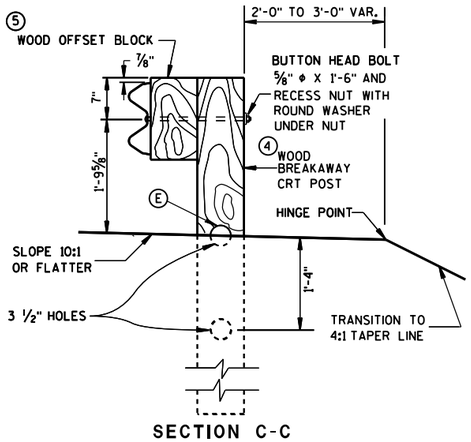
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

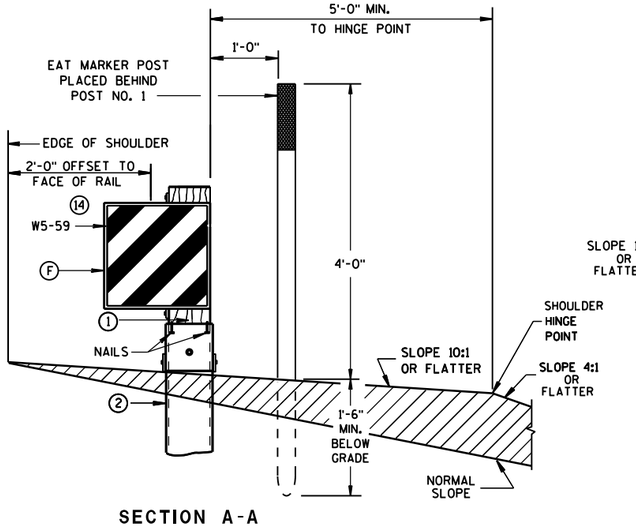
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

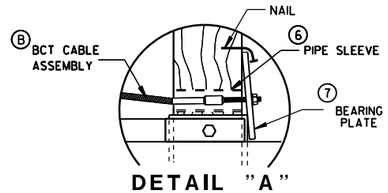
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

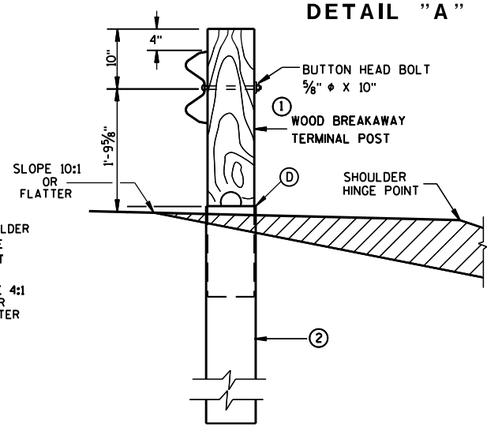
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

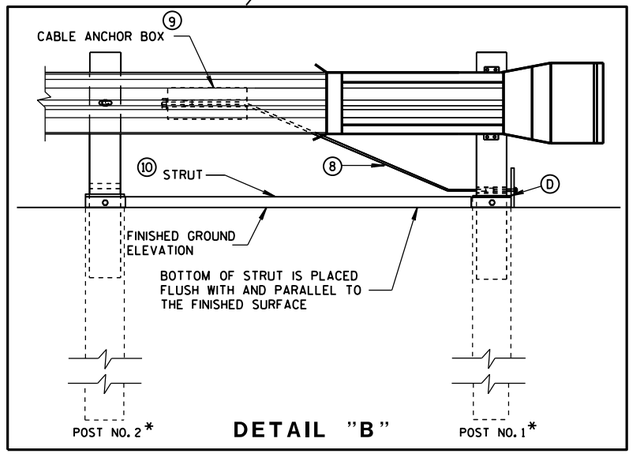










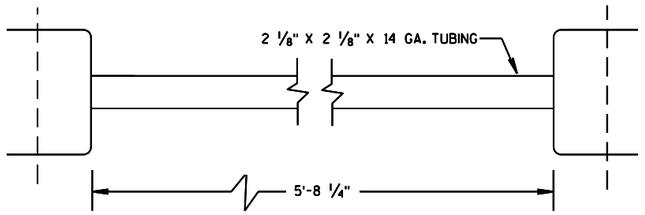


STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

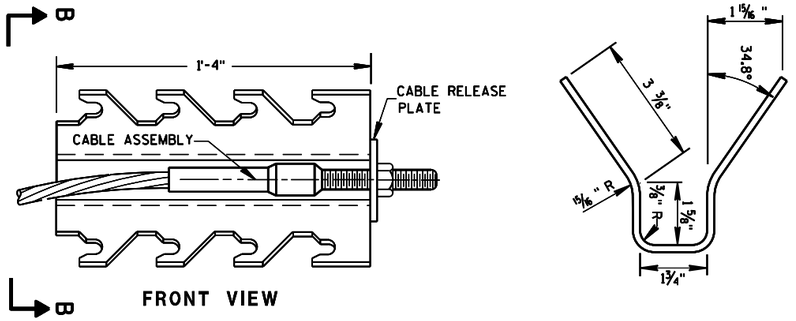
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

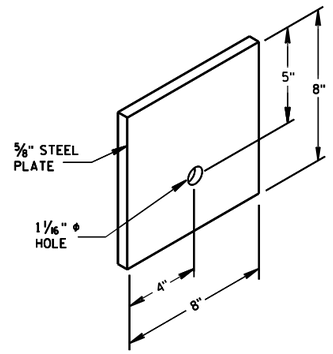
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL



⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

6

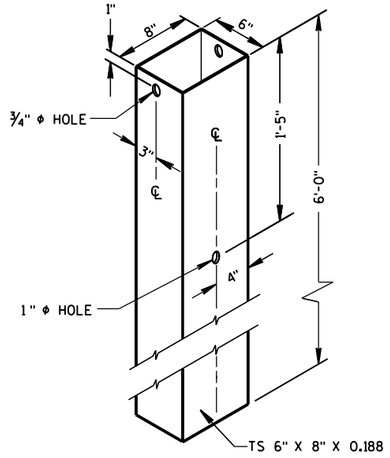
6

S.D.D. 14 B 24-9b

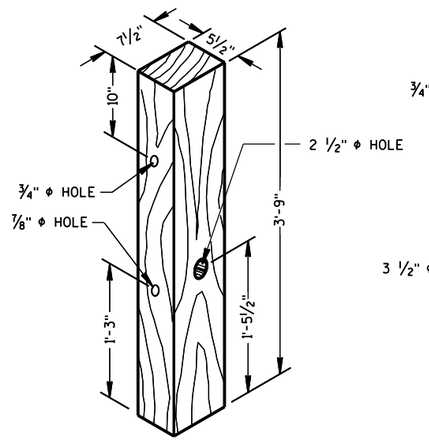
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

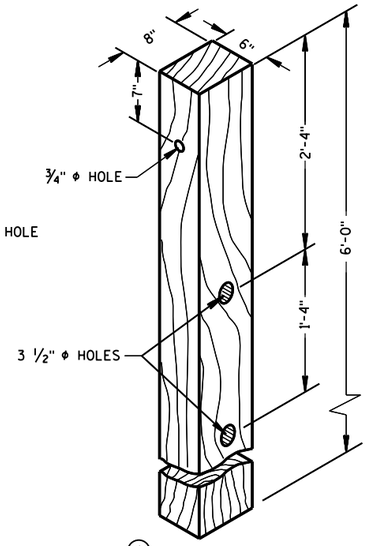
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-2



① TERMINAL POST

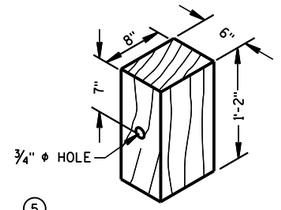


④ CRT POST
(POSTS NO'S 5-8

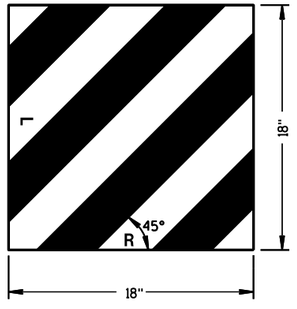
WOOD BREAKAWAY POSTS

GENERAL NOTES

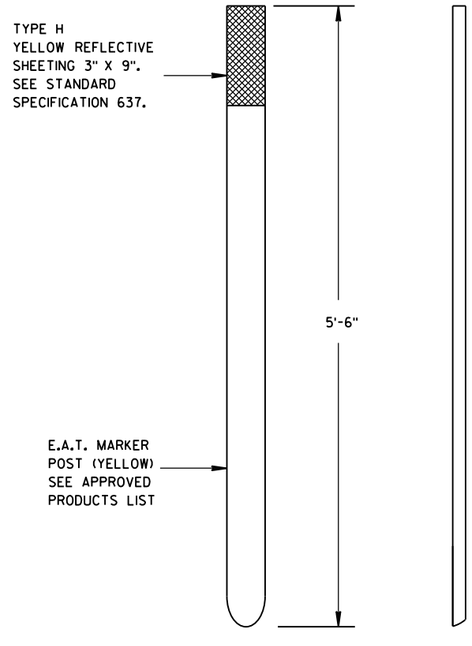
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

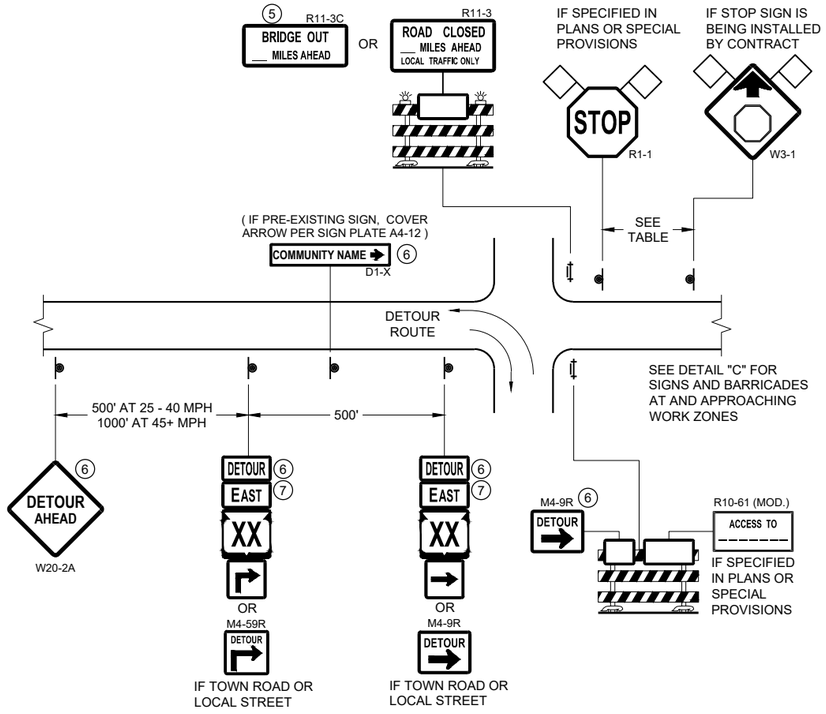
/S/ Rodney Taylor
ROADWAY STANDARDS 44 ENT
UNIT SUPERV...

6

S.D.D. 14 B 24-9c

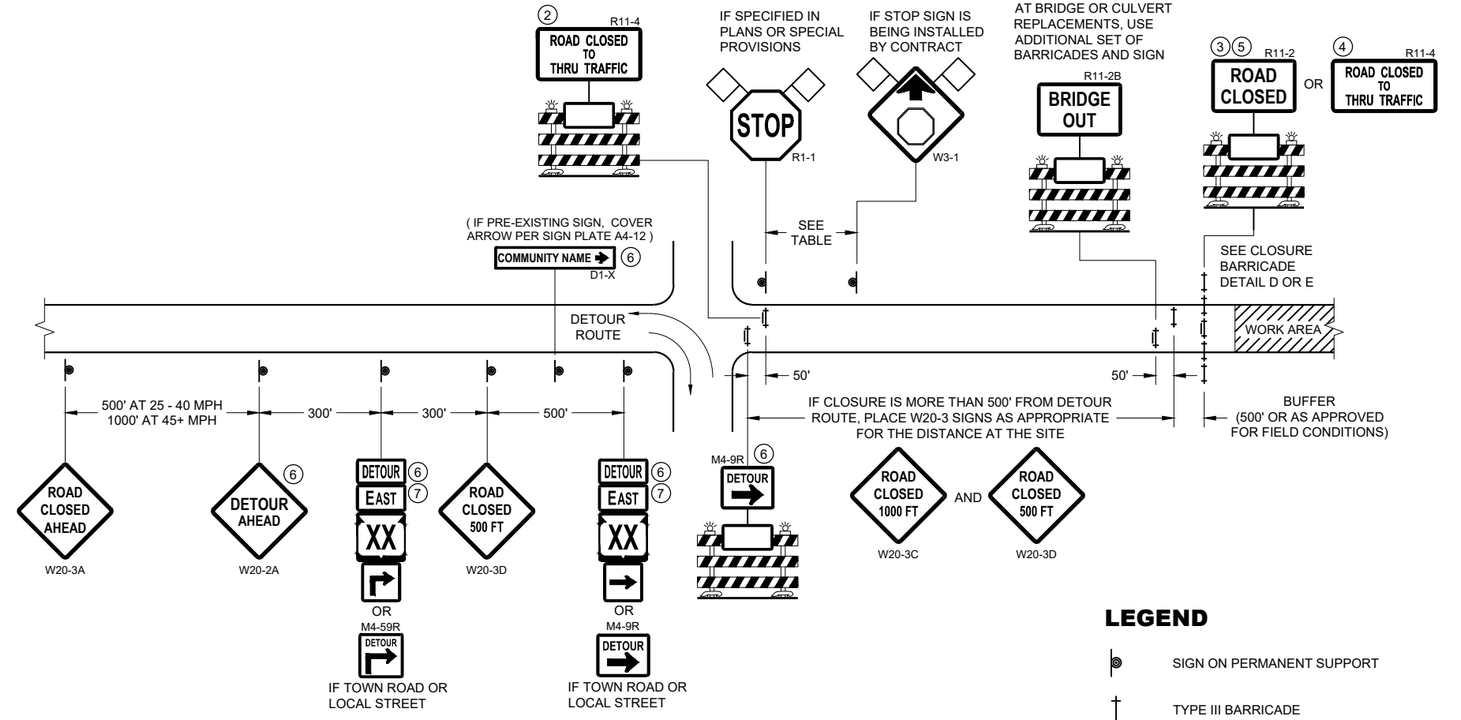
6

S.D.D. 14 B 24-9c



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

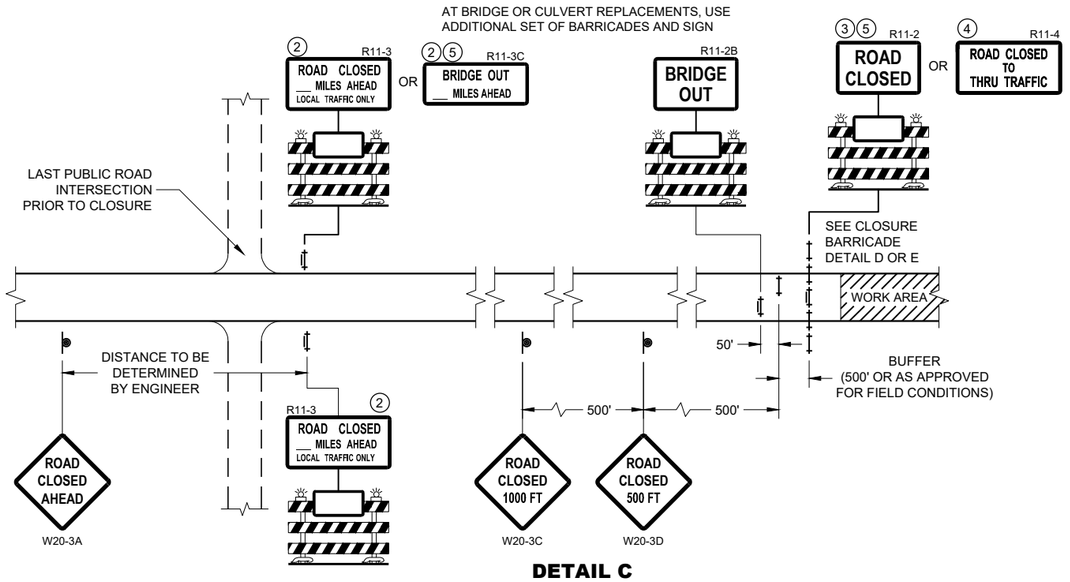


DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

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



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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

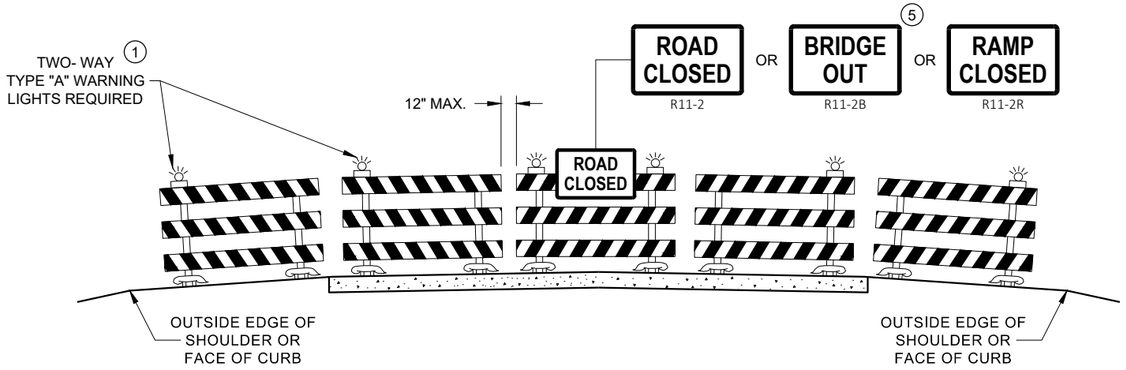
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

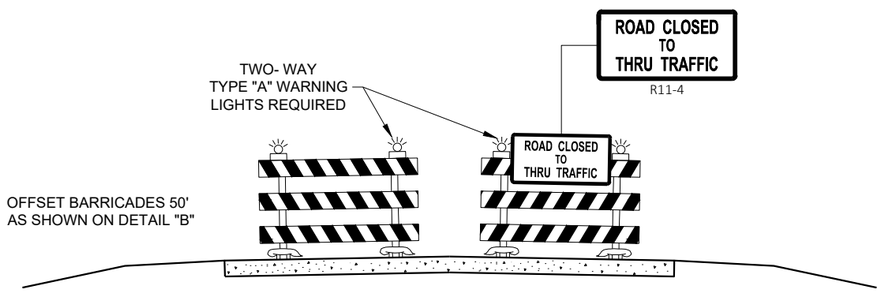
6

SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON 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 18" 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 CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 08b

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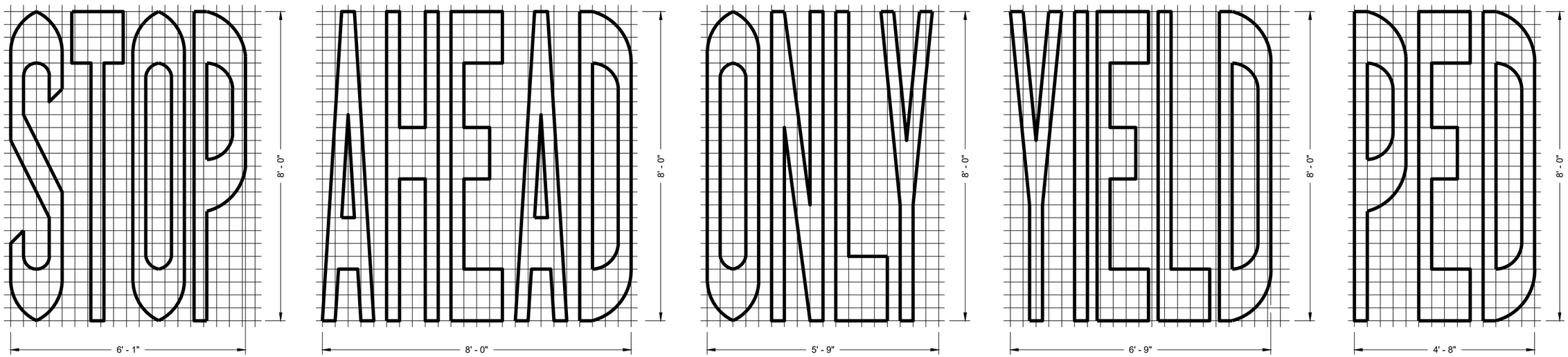
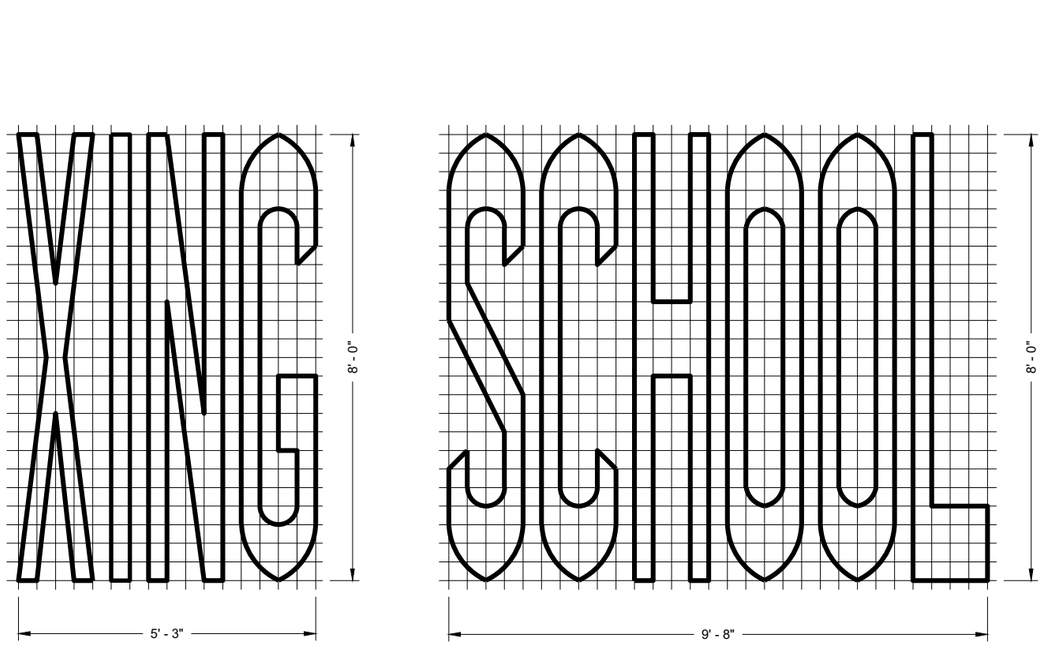
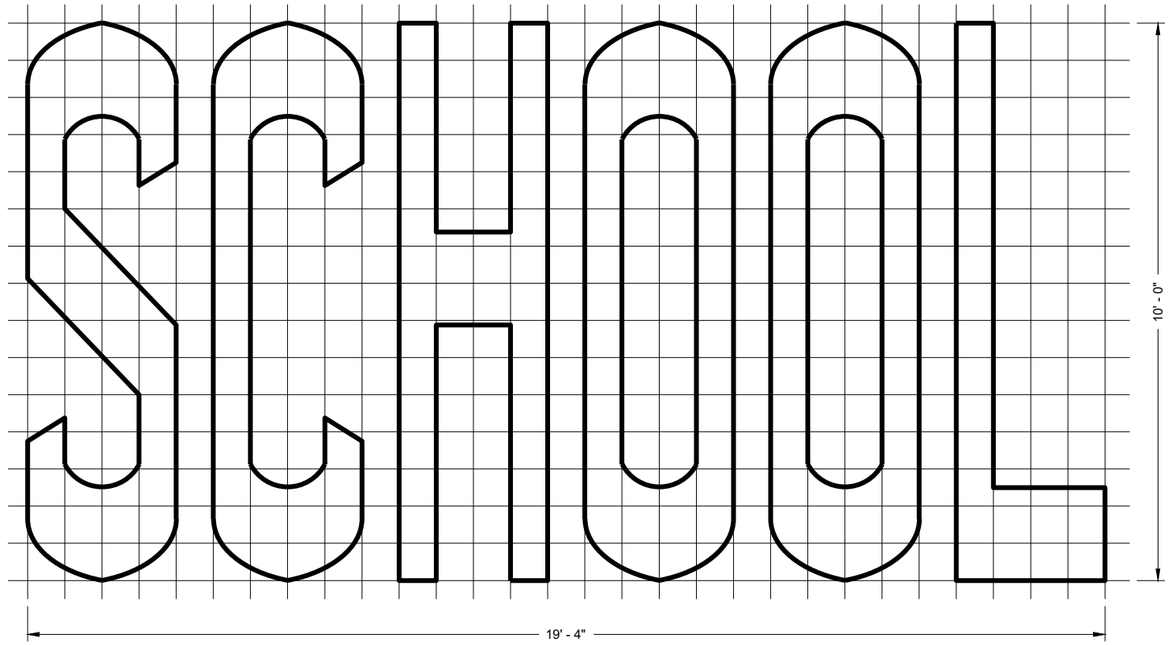
SDD 15C02 - 08b





SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

6

SDD 15C07 - 15b

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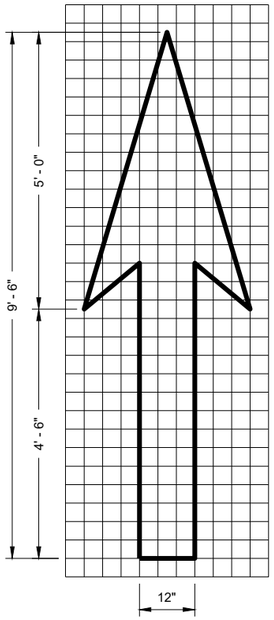
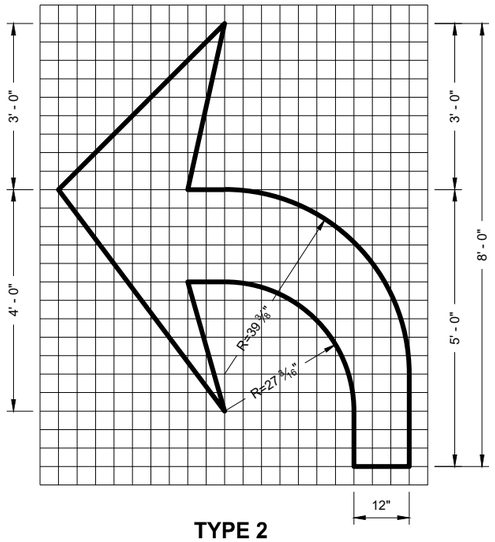
SDD 15C07 - 15b

GENERAL NOTES

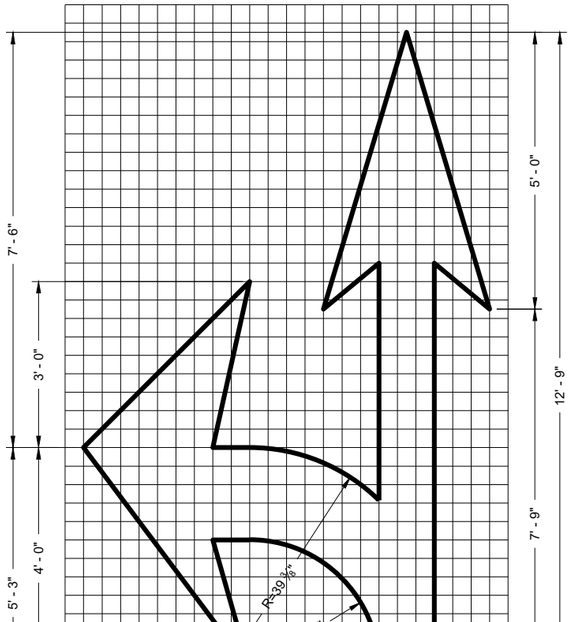
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



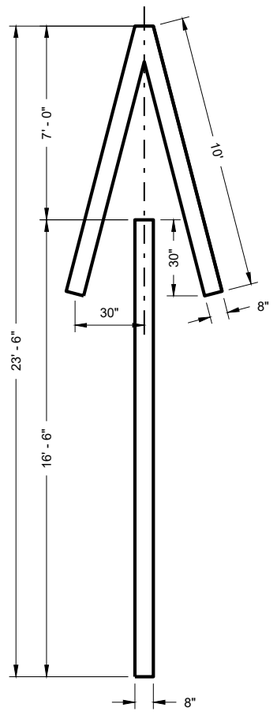
TYPE 1



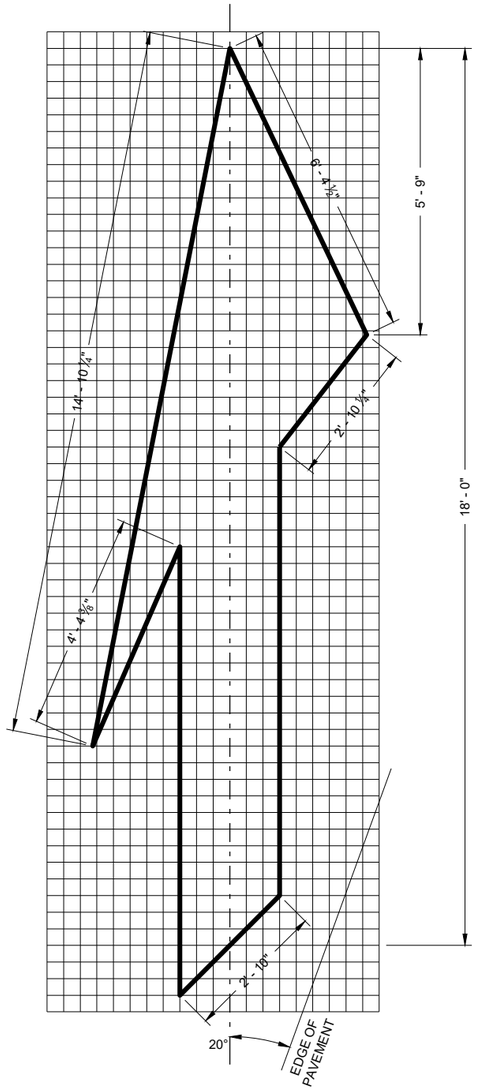
TYPE 2



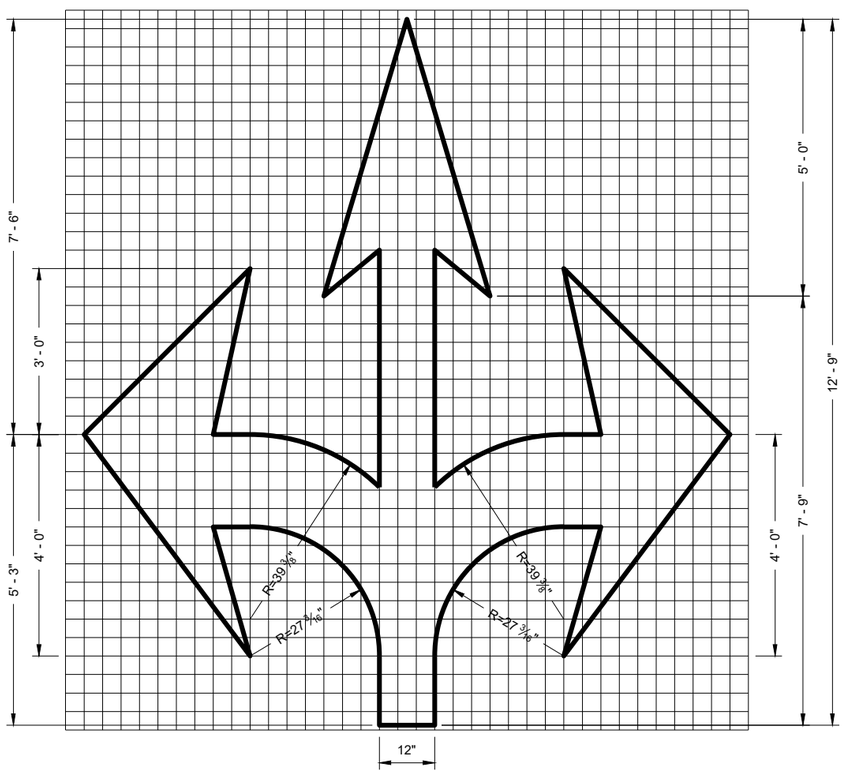
TYPE 3



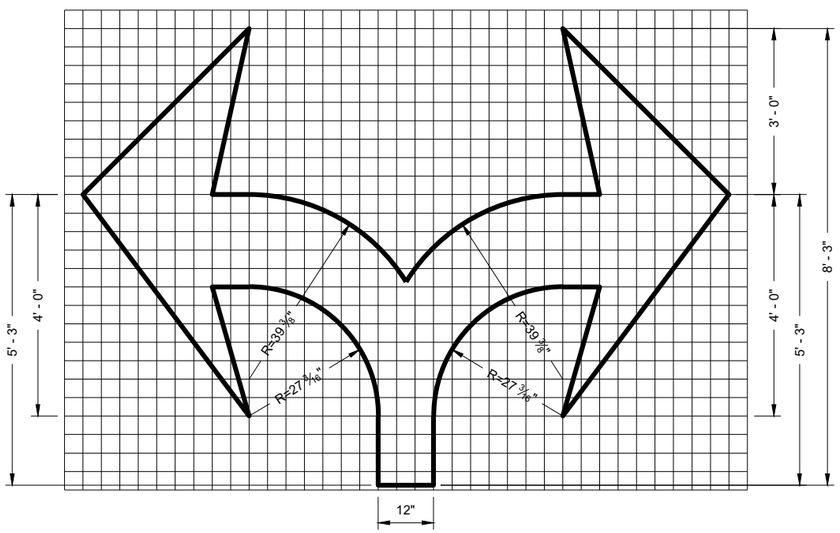
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

6

SDD 15C07 - 15c

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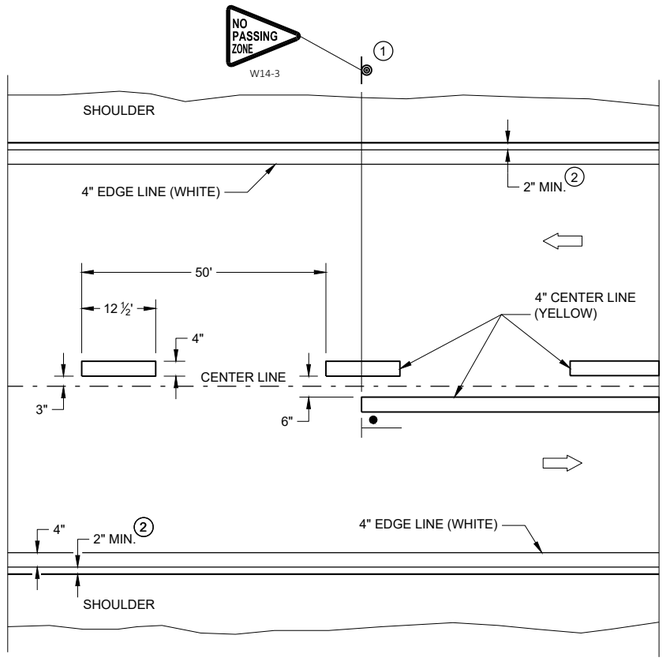
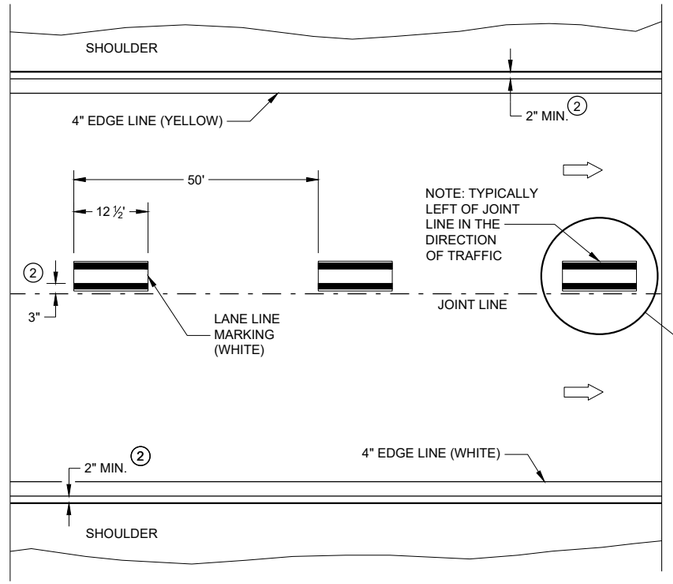
SDD 15C07 - 15c

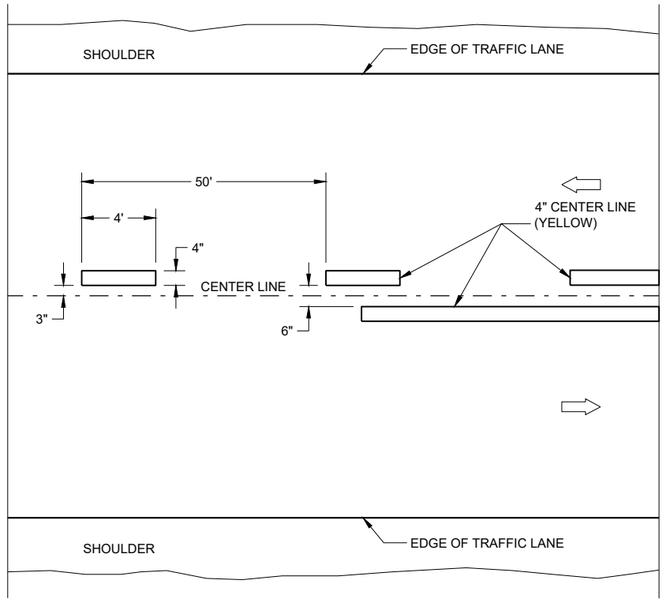


TWO WAY TRAFFIC

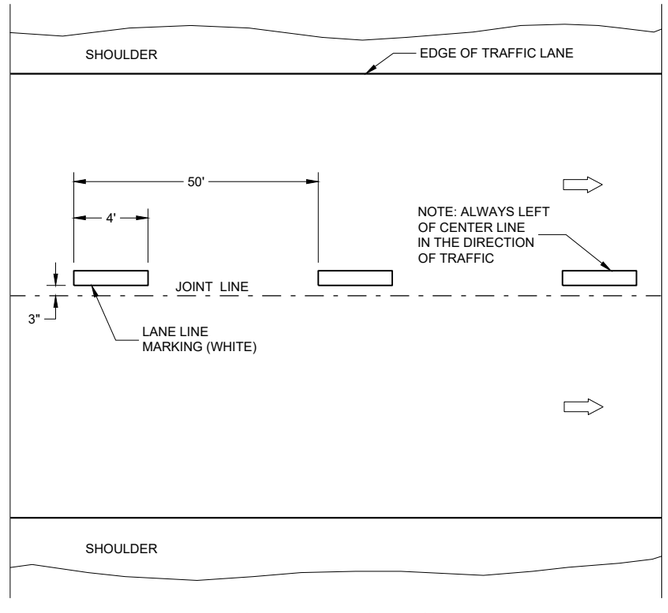


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

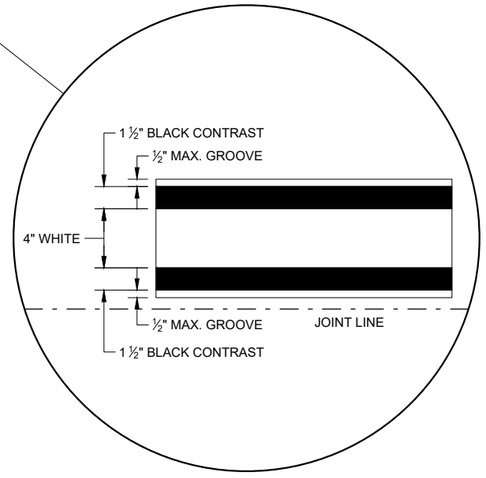
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Matthew Rauch — STATEWIDE SIGNING AND M ENGINEER
FHWA

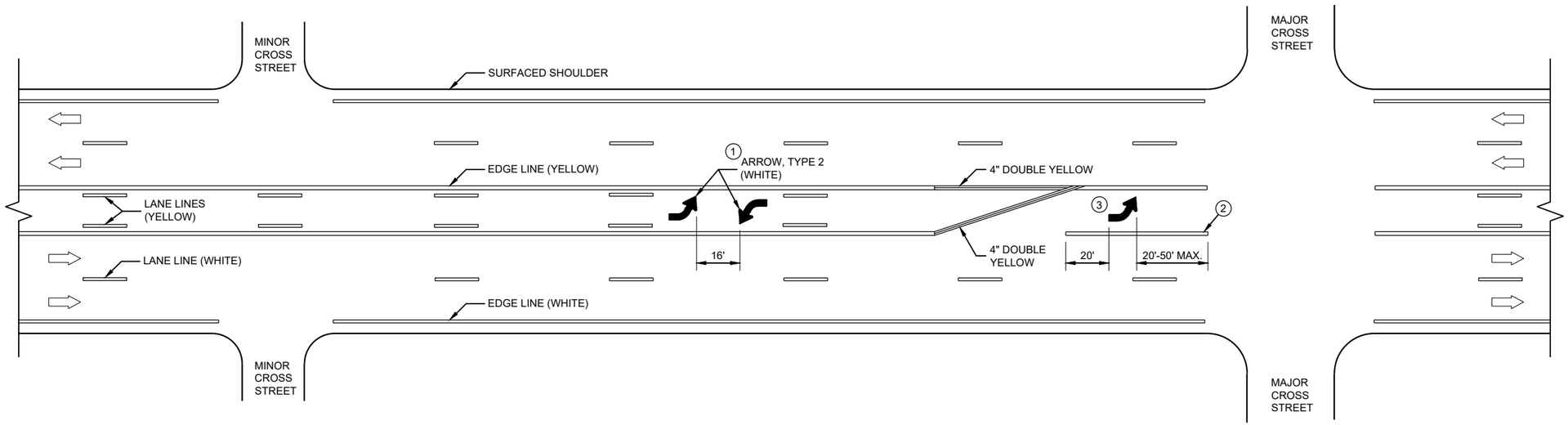
SDD 15C08 - 20a

SDD 15C08 - 20a

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

6

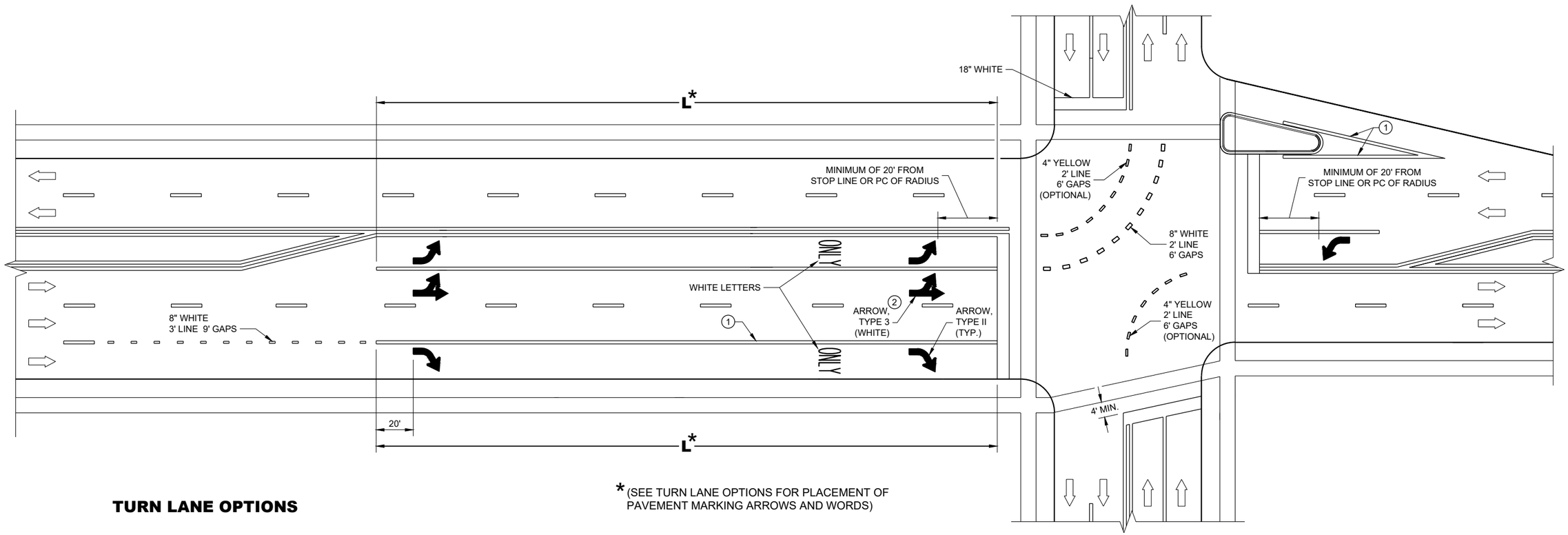
SDD 15C08 - 20b

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

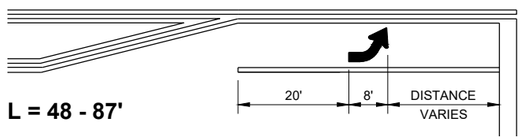
SDD 15C08 - 20b



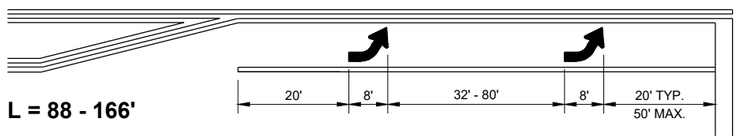
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

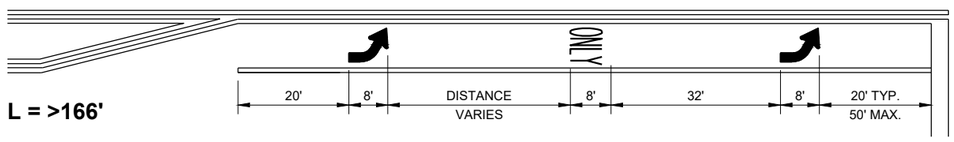
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

1. 8" WHITE
2. QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

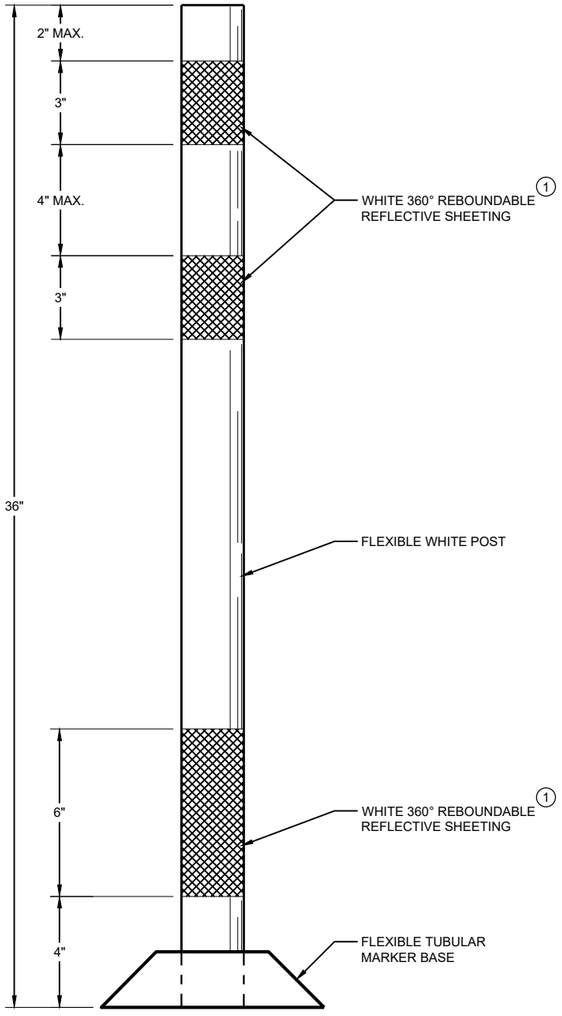
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

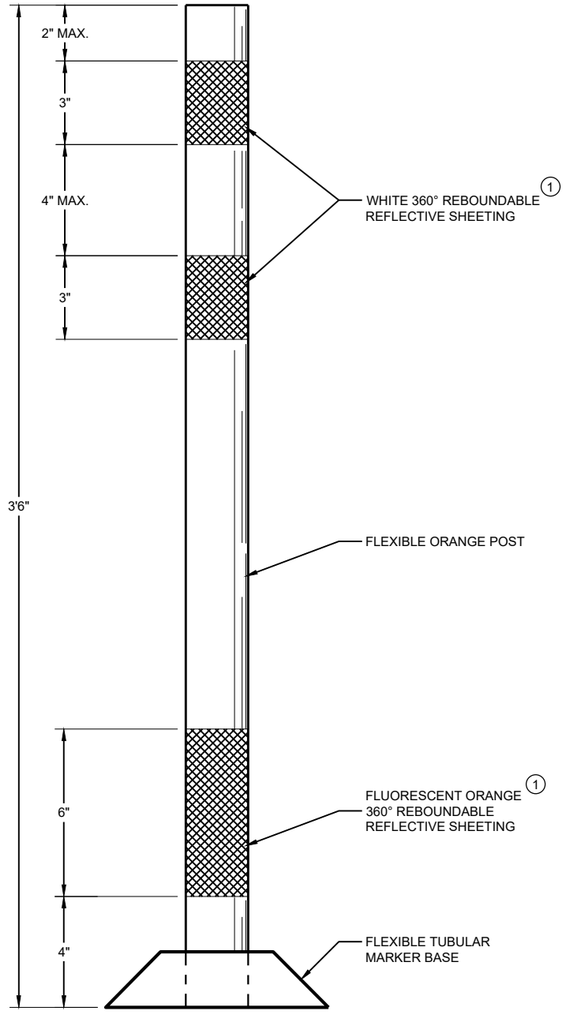
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C08 - 20c



FLEXIBLE TUBULAR MARKER POST PERMANENT CROSSOVER



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

SDD 15C11 - 07a

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

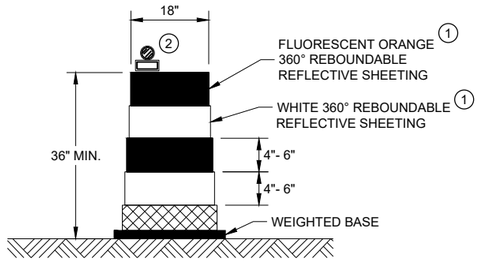
FHWA

6

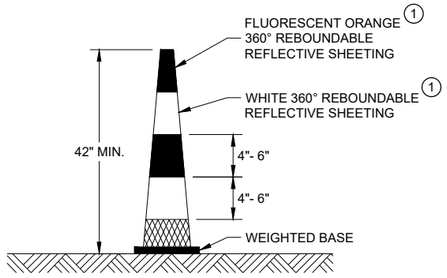
SDD 15C11 - 07a

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.

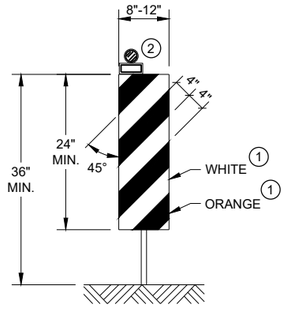


DRUM



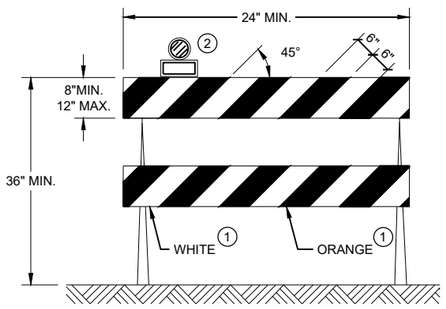
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



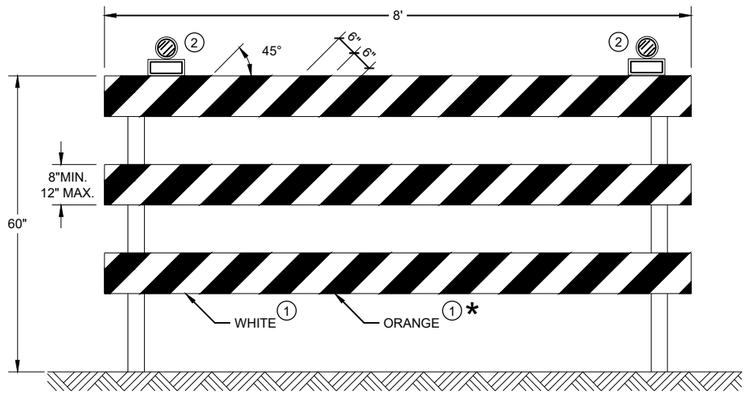
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III 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 ENGINEE

FHWA

6

SDD 15C11 - 07b

6

SDD 15C11 - 07b

LEGEND

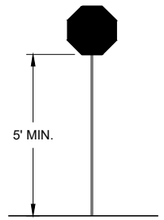
SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



STOP/SLOW PADDLE ON SUPPORT STAFF

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.

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

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

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

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

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

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

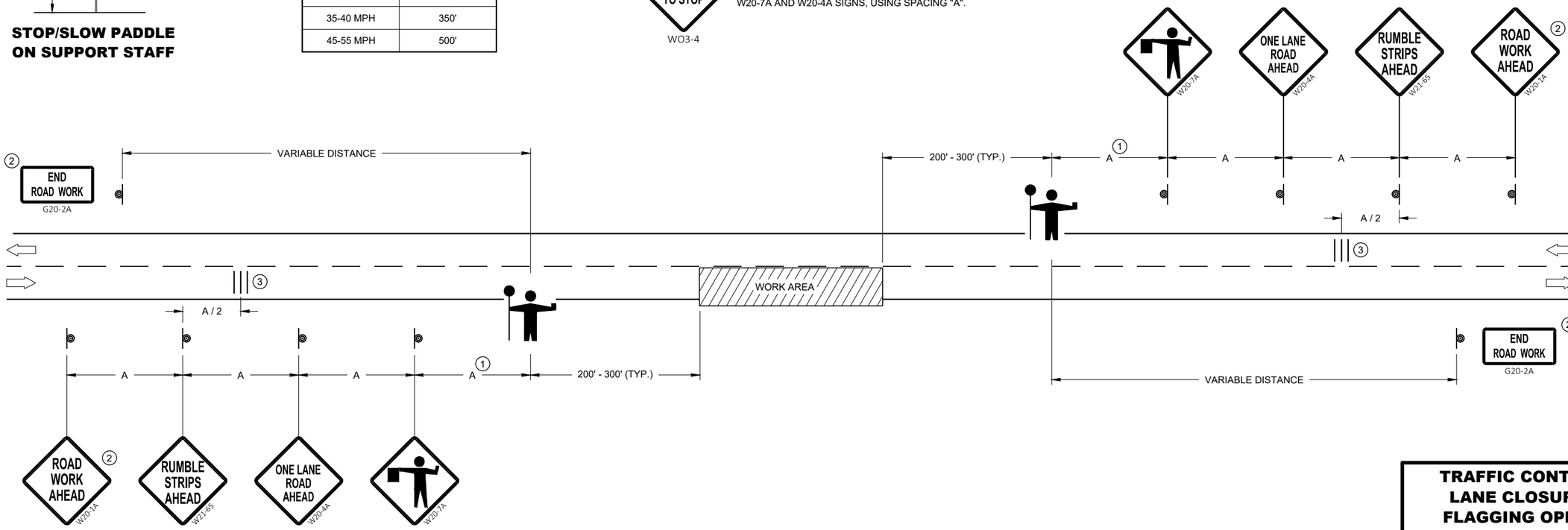
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C12 - 07

SDD 15C12 - 07

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

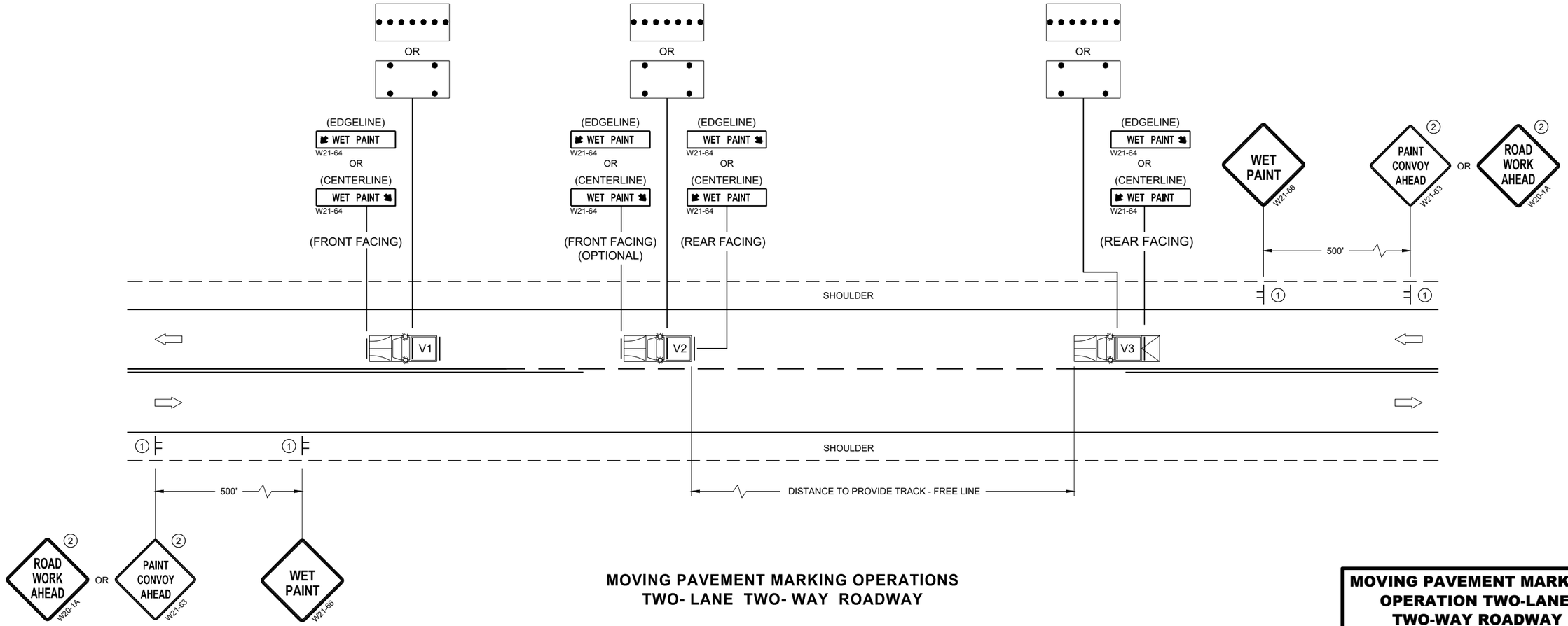
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 18" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C19 - 06a

SDD 15C19 - 06a

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (MERGE)

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

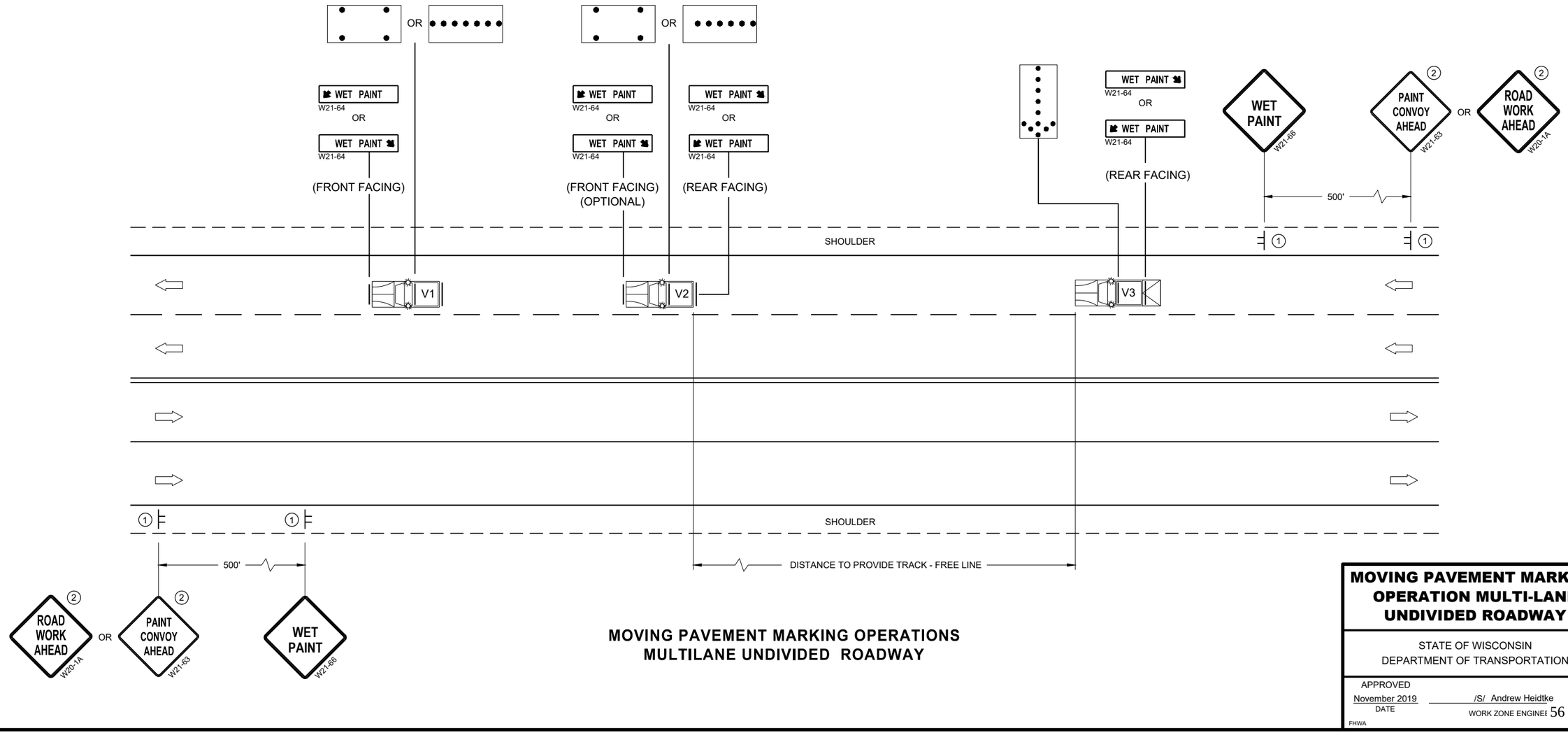
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 18" FOR WET PAVEMENT MARKINGS.

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE UNDIVIDED ROADWAY

MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

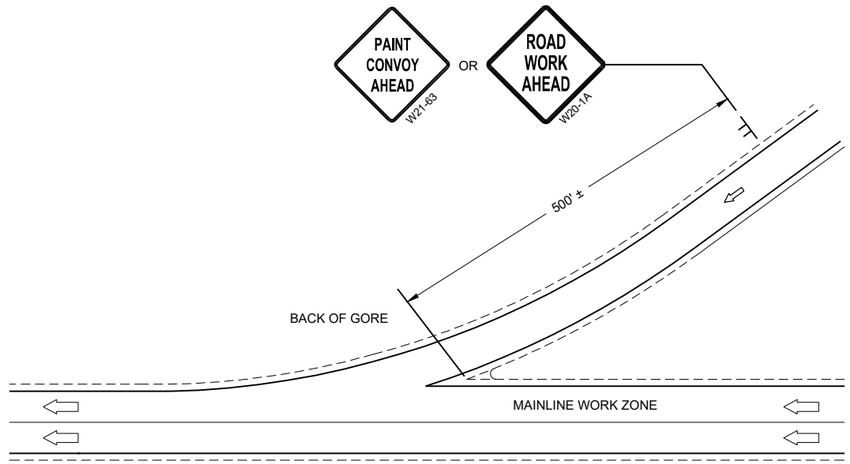
APPROVED
November 2019 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD 15C19 - 06b

LEGEND

- V1 MARKING VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

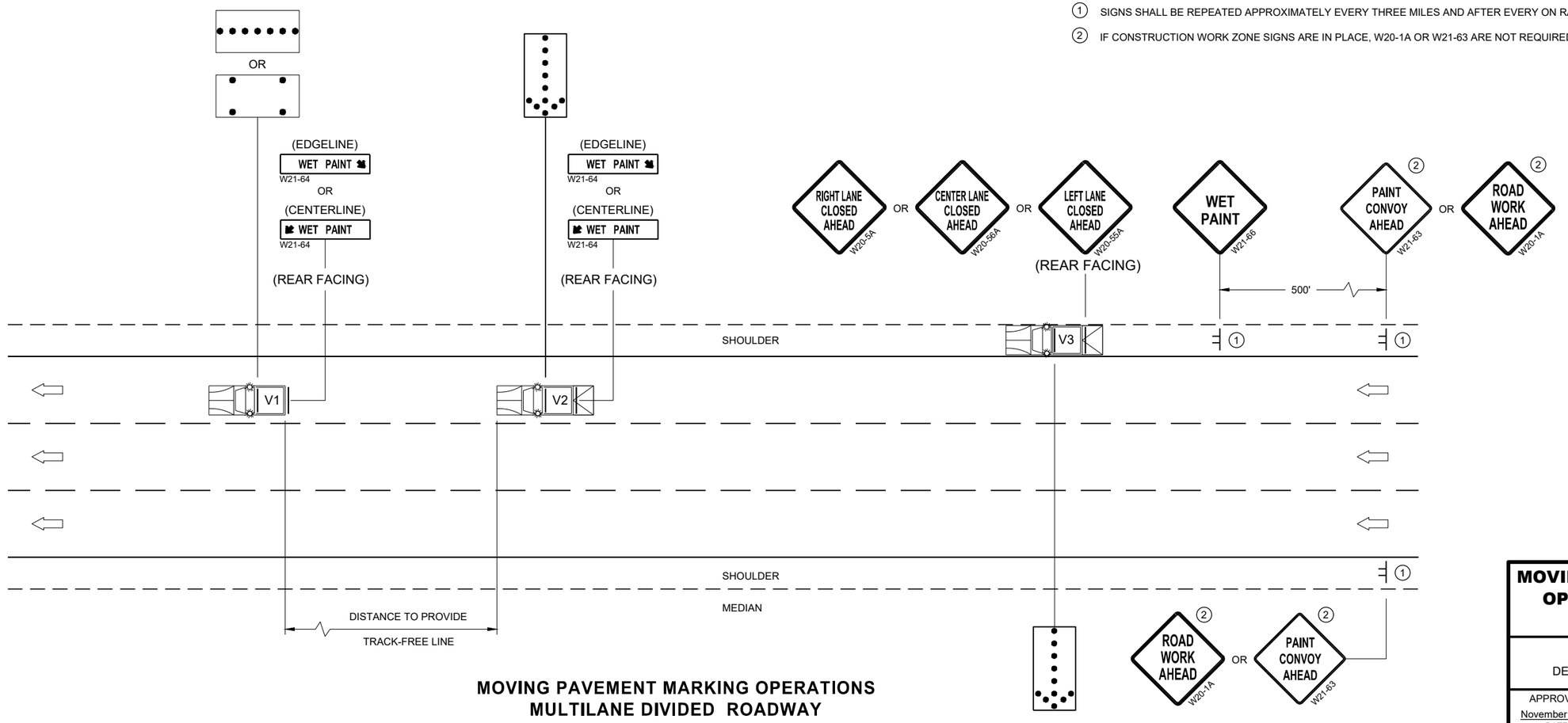
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM HEIGHT OF 18" FOR WET PAVEMENT MARKINGS

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

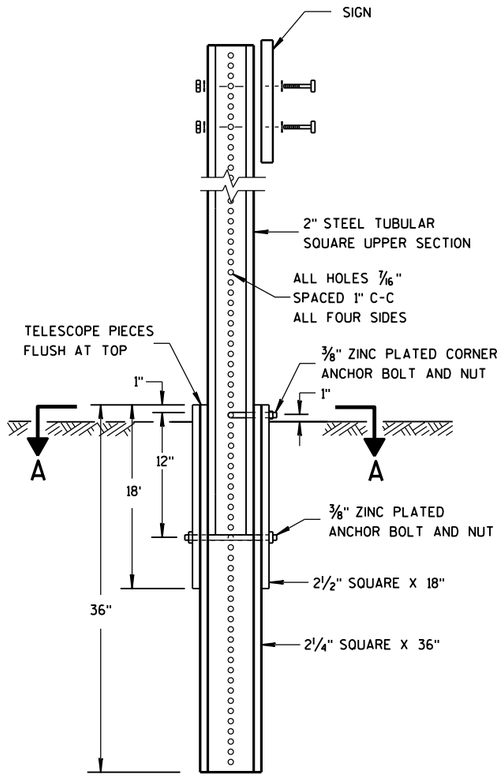
FHWA

6

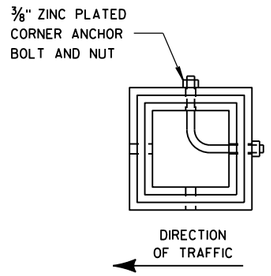
SDD 15C19 - 06c

6

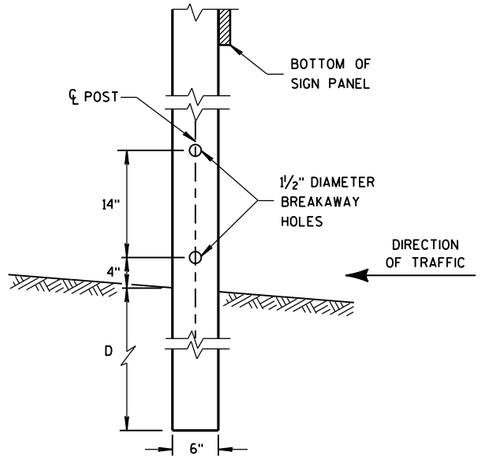
SDD 15C19 - 06c



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



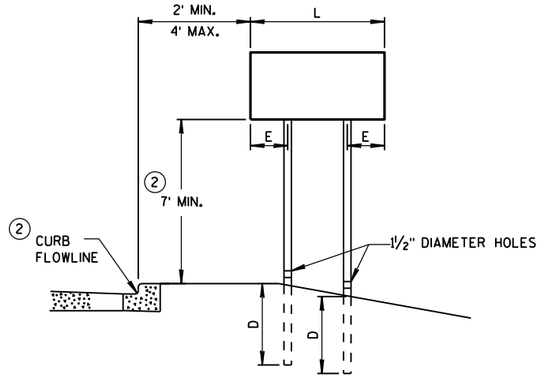
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

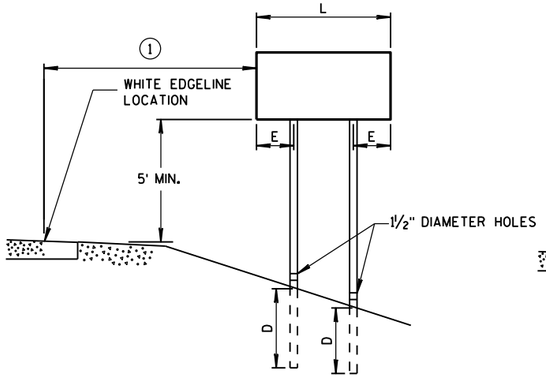
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

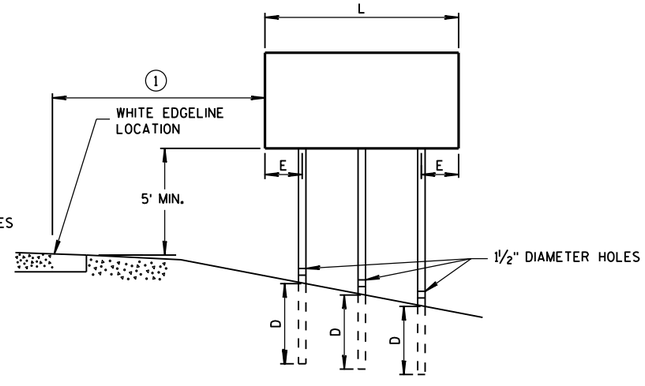
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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

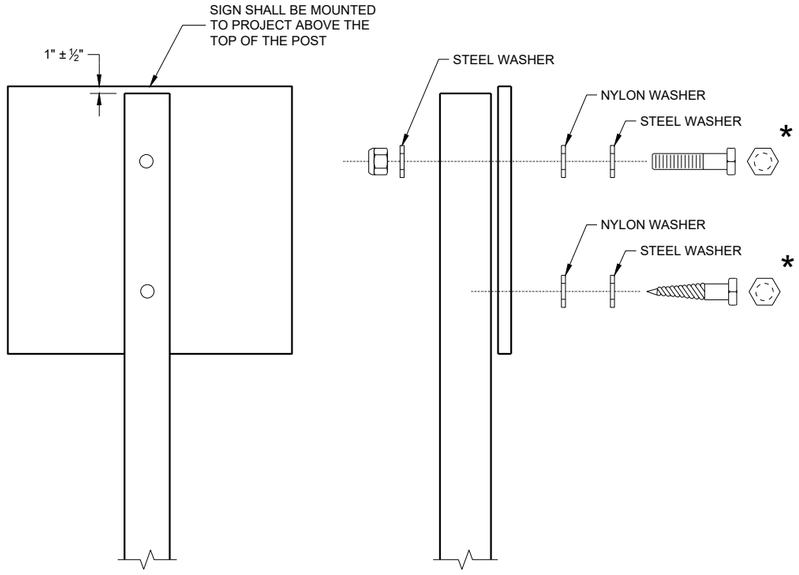
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



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 POST (4" x 6")
- LAG SCREWS - ⅜" x 3"
- MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
- MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
- 1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
- 1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

SDD 15D38 - 02b

SDD 15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

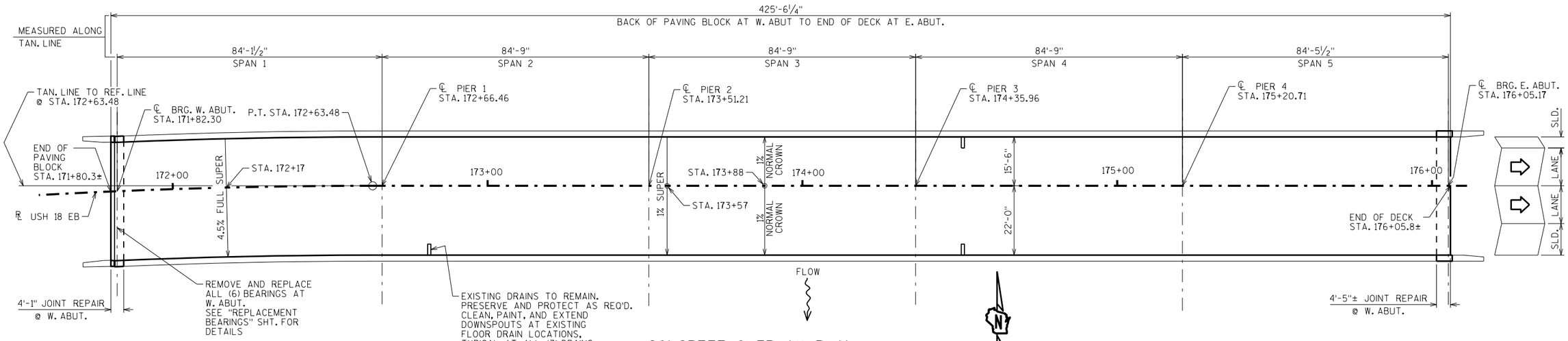
APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

STATE PROJECT NUMBER

1660-03-62



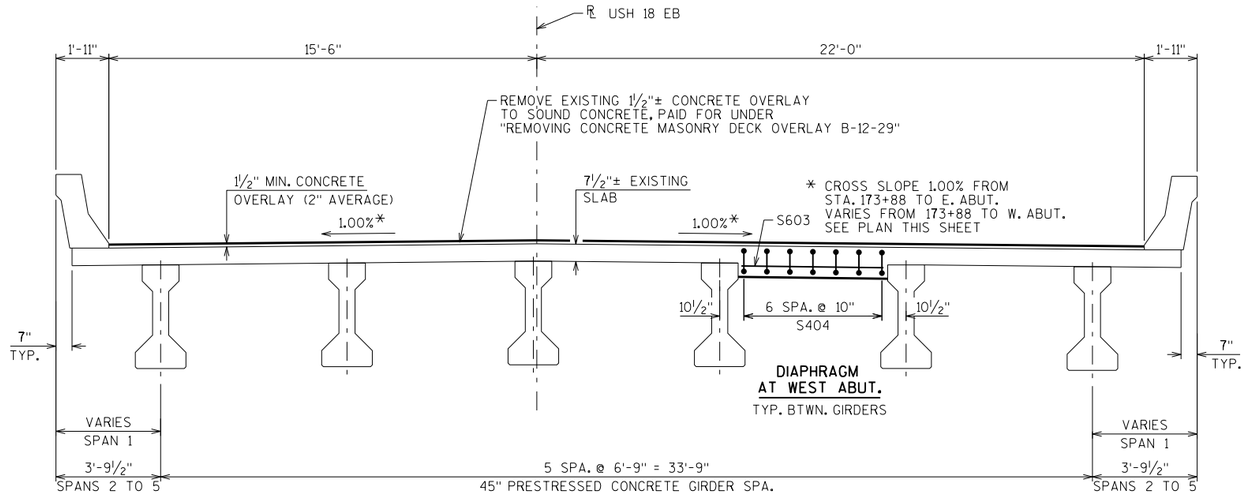
CONCRETE OVERLAY PLAN

(5 SPAN - 45" PRESTRESSED CONCRETE GIRDER BRIDGE)

CURVE DATA

USH 18 EB

P.I. = 167+92.32
△ = 27° 42' 52"
D = 3° 0' 0"
T = 471.16
L = 923.87'
R = 1909.86'
S.E. = 4.5 %



TYPICAL CROSS SECTION THRU BRIDGE

(LOOKING EAST)

DESIGN DATA

LIVE LOAD:

DESIGN RATING: HS-20
INVENTORY RATING: HS-22
OPERATIONAL RATING: HS- 37
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY ——— f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT:
GRADE 60 ——— fy = 60,000 P.S.I.

TRAFFIC VOLUME

USH 18 EB

ADT = 4,600 (2016)
R.D.S. = 50 M.P.H.

STRUCTURE DESIGN CONTACTS:

CHRISTOPHER DOLL (608) 266-3229
LAURA SHADEWALD (608) 267-9592

LIST OF DRAWINGS

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED _____ LLS 6/10/20
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-12-29

USH 18/STH 60 EB OVER MARAIS DE SAINT FERIOLE

COUNTY: CRAWFORD | CITY: PRAIRIE DU CHIEN

DESIGN SPEC.
N/A REHABILITATION

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
CAD	MJL	CAD	MJL

GENERAL PLAN

SHEET 1 OF 9

60

I.D. 1660-03-38C DATE: JAN. 2020

SCALE = 16.00

8

8

STATE PROJECT NUMBER

1660-03-62

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-12-29	LS	———	———	———	1
502.3101	EXPANSION DEVICE B-12-29	LF	———	39	———	39
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,774	———	———	1,774
502.3210	PIGMENTED SURFACE SEALER	SY	379	———	———	379
502.4110	ADHESIVE ANCHORS 1 1/4-INCH	EACH	———	12	———	12
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	———	38	———	38
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,960	———	———	1,960
506.6000	BEARING ASSEMBLIES EXPANSION B-12-29	EACH	———	6	———	6
506.7050.S	REMOVING BEARINGS B-12-29	EACH	———	6	———	6
509.0301	PREPARATION DECKS TYPE 1	SY	298	———	———	298
509.0302	PREPARATION DECKS TYPE 2	SY	191	———	———	191
509.0505.S	CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY	SY	1,738	———	———	1,738
509.1000	JOINT REPAIR	SY	———	19	20	39
509.1500	CONCRETE SURFACE REPAIR	SF	19	40	———	59
509.2000	FULL-DEPTH DECK REPAIR	SY	2	———	———	2
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	141	———	———	141
509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-12-29	SY	1,738	———	———	1,738
509.9020.S	EPOXY CRACK SEALING	LF	———	10	10	20
509.9050.S	CLEANING PARAPETS	LF	890	———	———	890
SPV.0060	DOWNSPOUT REPAIR	EACH	3	———	———	3
SPV.0060	EMBEDDED GALVANIC ANODES	EACH	8	———	———	8
SPV.0180	ABUTMENT SEAT CLEANING AND SEALING	SY	———	10	———	10
	NON-BID ITEMS					
	FILLER	SIZE	———	———	———	1/2"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK/OVERLAY.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

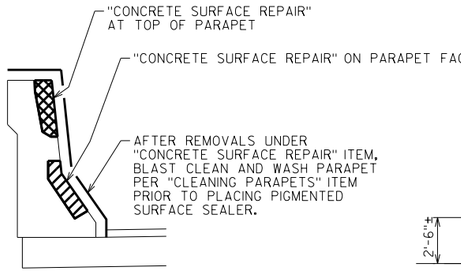
ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL EXCEED THE AVERAGE OVERLAY SHOWN ON THE PLANS BY MORE THAN 1/2".

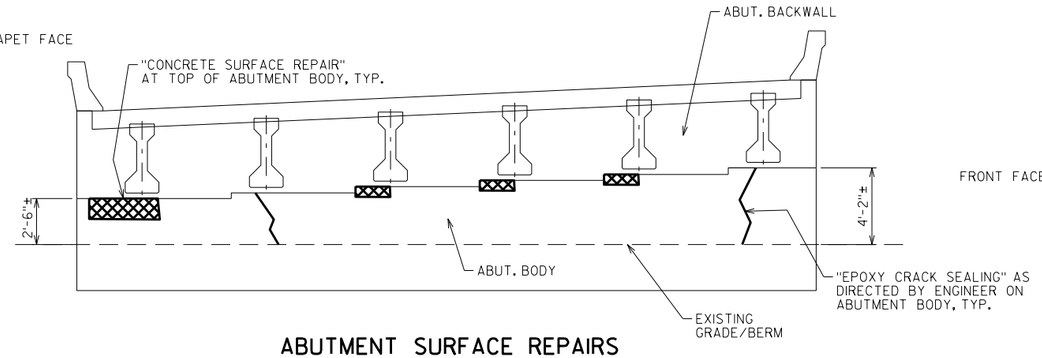
THE EXISTING OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY B-12-29".

AFTER REMOVING EXISTING OVERLAY AND PRIOR TO PLACING NEW OVERLAY, CLEAN THE DECK SURFACE UNDER BID ITEM "CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY".

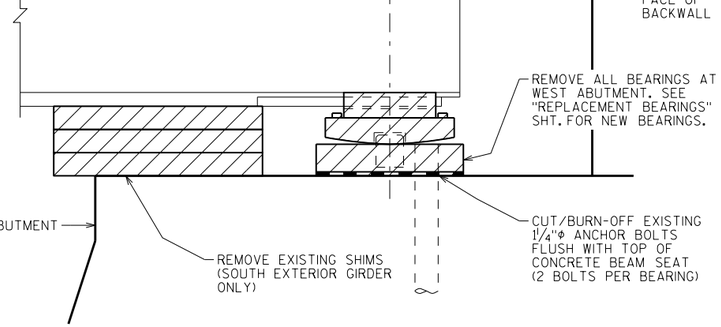
PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".



PARAPET REPAIR DETAILS



ABUTMENT SURFACE REPAIRS



BEARING REMOVAL DETAIL AT WEST ABUTMENT

SURFACE REPAIR NOTES

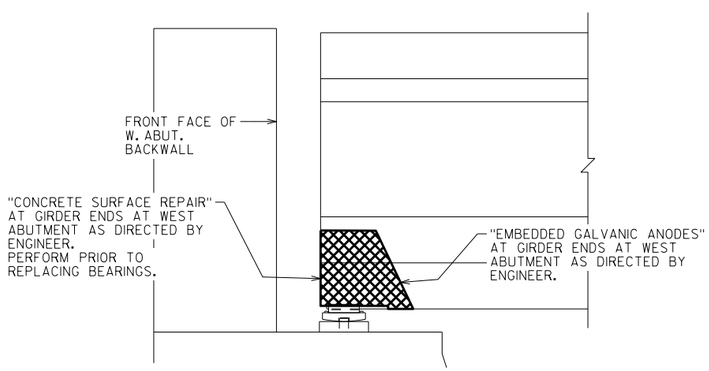
SURFACE REPAIR DETAILS DEPICT THE GENERAL TYPES AND LOCATIONS OF REPAIRS, AND MAY NOT BE ALL INCLUSIVE. QUANTITIES SHOWN ARE APPROXIMATE. ADDITIONAL REPAIRS MAY BE REQUIRED DURING CONSTRUCTION AND SHOULD BE PERFORMED AS DIRECTED BY THE FIELD ENGINEER.

ALL SURFACE REPAIR AREAS SHALL BE DEFINED BY 1/2" MIN. SAWCUT.

CONTRACTOR SHALL EMPLOY METHODS TO PREVENT REMOVED CONCRETE MATERIAL FROM ENTERING THE WATERWAY.

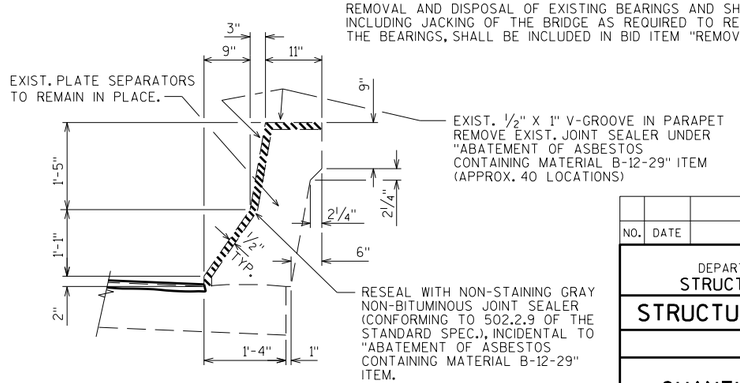
SEE SPECIAL PROVISION "EMBEDDED GALVANIC ANODES" FOR DESCRIPTION, MATERIALS, CONSTRUCTION, MEASUREMENT, AND PAYMENT INFORMATION FOR ANODES ITEM. EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORRODED MATERIAL PRIOR TO INSTALLATION OF GALVANIC ANODES. AFTER PLACEMENT, GALVANIC ANODES SHOULD MAINTAIN A MINIMUM COVER OF 1".

AFTER CONCRETE SURFACE REPAIRS, BLAST CLEAN AND WASH WEST ABUTMENT SEAT AND SEAL SURFACE WITH BRIDGE SEAT PROTECTION. PAID FOR UNDER "ABUTMENT SEAT CLEANING AND SEALING". SEE SPECIAL PROVISIONS FOR REQUIREMENTS.



GIRDER END REPAIRS

NOTE:
REMOVAL AND DISPOSAL OF EXISTING BEARINGS AND SHIMS AS SHOWN, INCLUDING JACKING OF THE BRIDGE AS REQUIRED TO REMOVE AND REPLACE THE BEARINGS, SHALL BE INCLUDED IN BID ITEM "REMOVING BEARINGS B-12-29".



ASBESTOS ABATEMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-29

DRAWN BY | CAD | PLANS CK'D. MJL

QUANTITIES & NOTES

SHEET 2

61

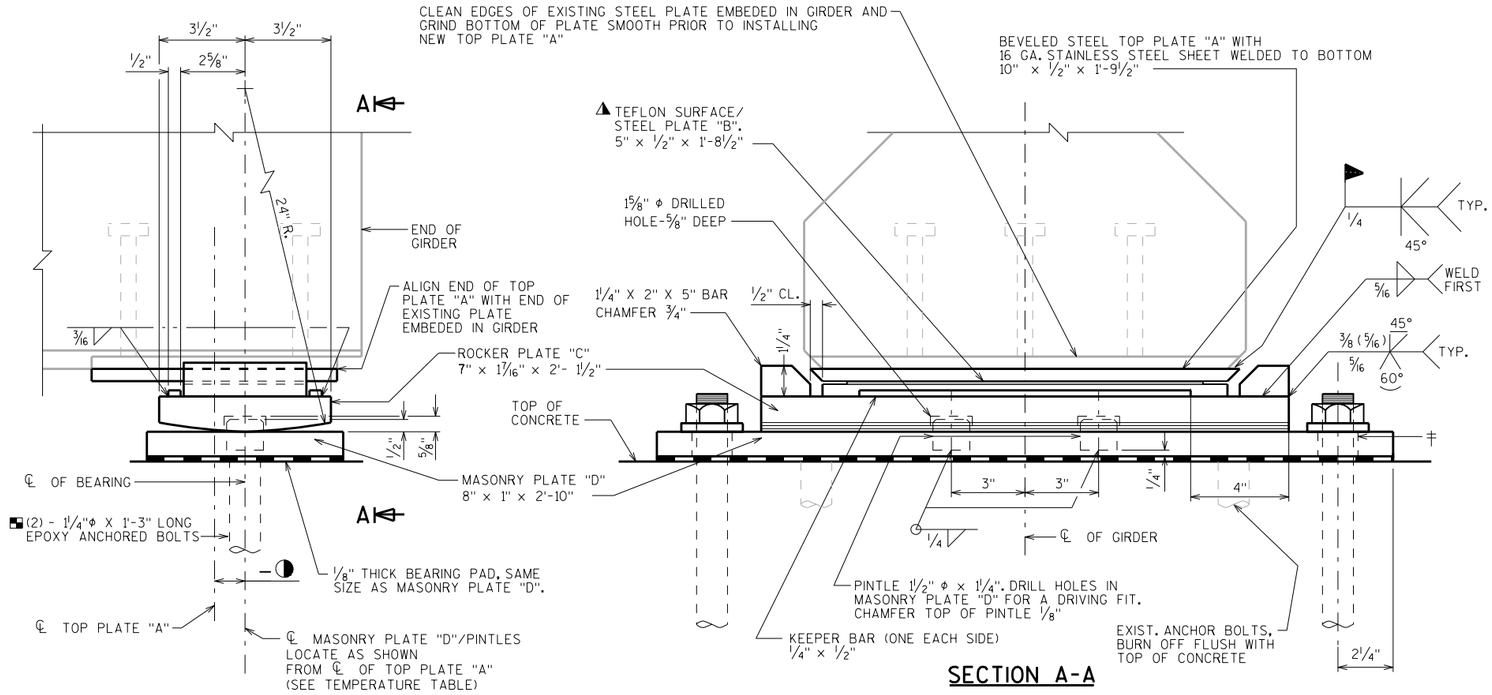
SCALE = 1.00

8

8

STATE PROJECT NUMBER

1660-03-62



SECTION A-A

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

ALL MATERIAL IN BEARINGS, BUT EXCLUDING STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, ANCHOR BOLTS, NUTS AND WASHERS, SHALL CONFORM TO ASTM A709 GRADE 50W.

STAINLESS STEEL SHEET SHALL CONFORM TO ASTM A240, TYPE 304.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

◪ ANCHOR BOLTS SHALL BE FULLY THREADED. PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2¼", ABOVE TOP OF CONCRETE. ANCHOR BOLTS SHALL BE PAID FOR AS "ADHESIVE ANCHORS 1 1/4-INCH" AND BE EPOXY ANCHORED. CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

MASONRY PLATE "D", ROCKER PLATE "C", ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS "C". TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT TEFLON OR STAINLESS STEEL SURFACES.

ALL MATERIAL IN BEARING ASSEMBLIES, INCLUDING BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-12-29", EACH.

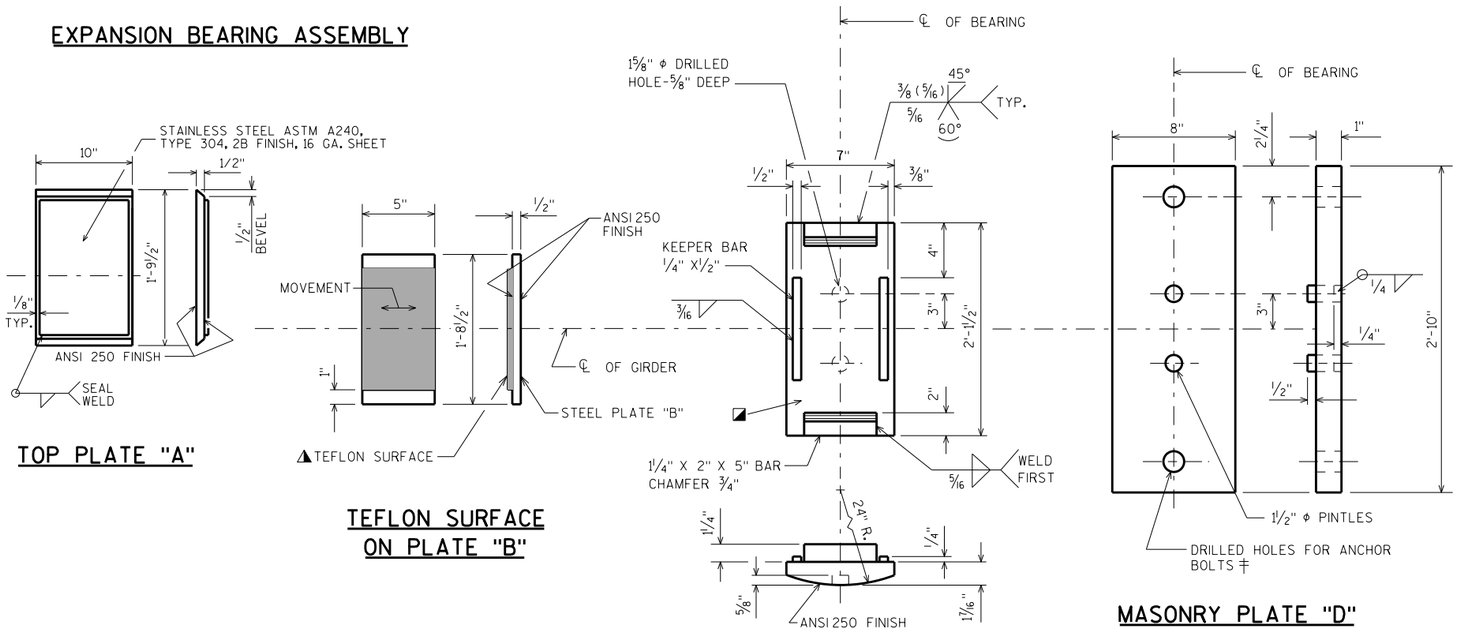
‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "D" SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT.

▲ TEFLON SURFACE, USE UNFILLED WITH MINIMUM 1/16" THICKNESS. PLACE WITH SCRIVE MARKS IN DIRECTION OF MOVEMENT. BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING THE REQUIREMENTS FOUND IN THE STANDARD SPECIFICATION.

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.

EXPANSION BEARING ASSEMBLY



TOP PLATE "A"

TEFLON SURFACE ON PLATE "B"

ROCKER PLATE "C"

MASONRY PLATE "D"

EXPANSION BEARING

TEMPURATURE	W. ABUT. ◑, IN.
10°	-1 1/16"
20°	-¾"
30°	-⅝"
40°	-⅛"
50°	⅛"
60°	7/16"
70°	¾"
80°	1 1/16"
90°	1⅜"

TEMPERATURE TABLE

AT THE WEST ABUTMENT, NEGITIVE VALUE INDICATES PINTLES ARE LOCATED WEST OF THE ℄ OF TOP PLATE "A" AND POSITIVE VALUE INDICATES PINTLES ARE LOCATED EAST OF THE ℄ OF TOP PLATE "A".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-29

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REPLACEMENT BEARINGS

SHEET 3

62

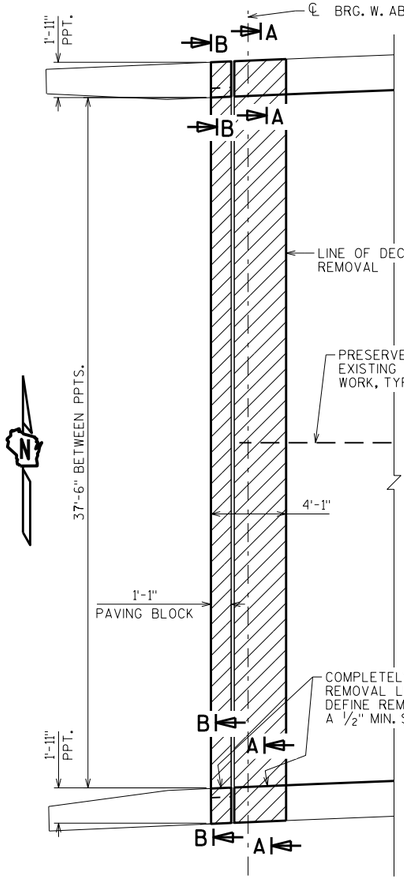
SCALE = 1.00

8

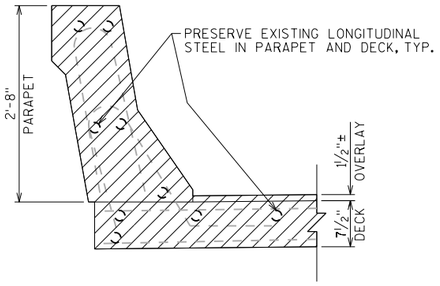
8

STATE PROJECT NUMBER

1660-03-62

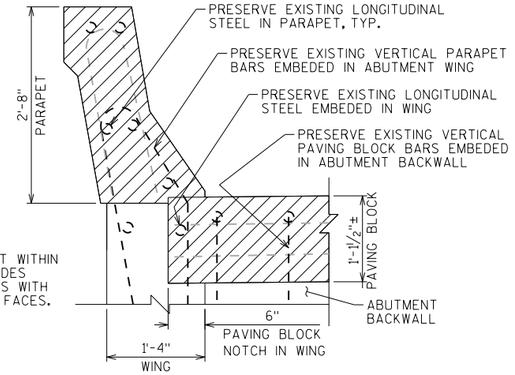


REMOVAL PLAN



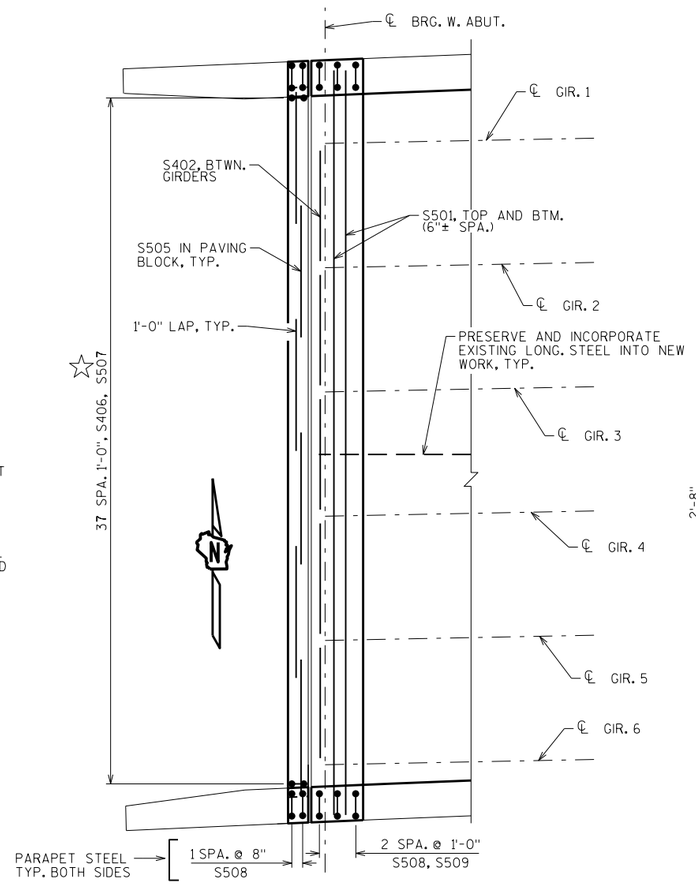
SECTION A-A

(SHOWING REMOVAL AT DECK SIDE OF JOINT)

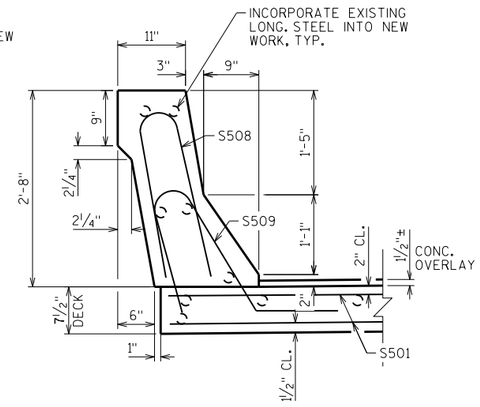


SECTION B-B

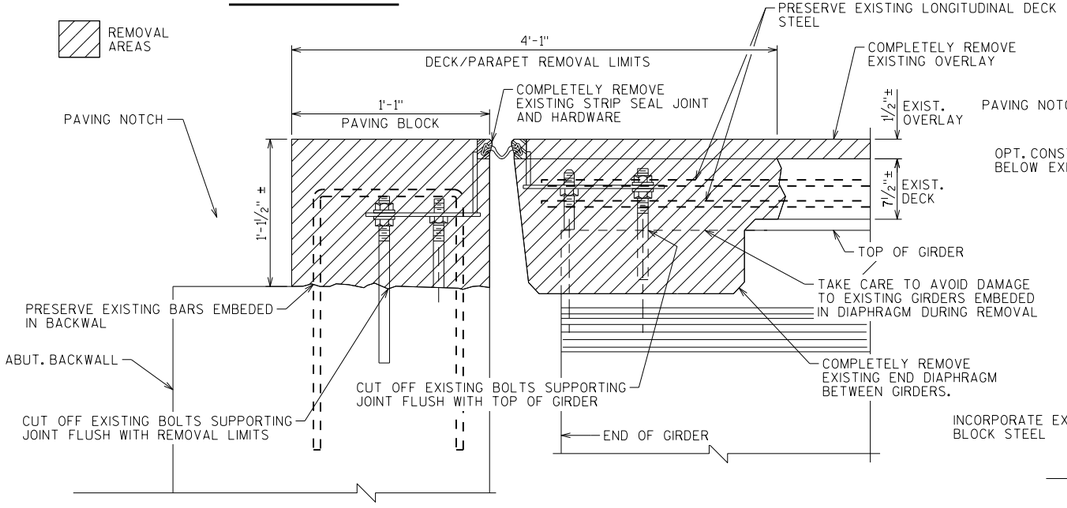
(SHOWING REMOVAL AT PAVING BLOCK SIDE OF JOINT)



JOINT REPAIR PLAN

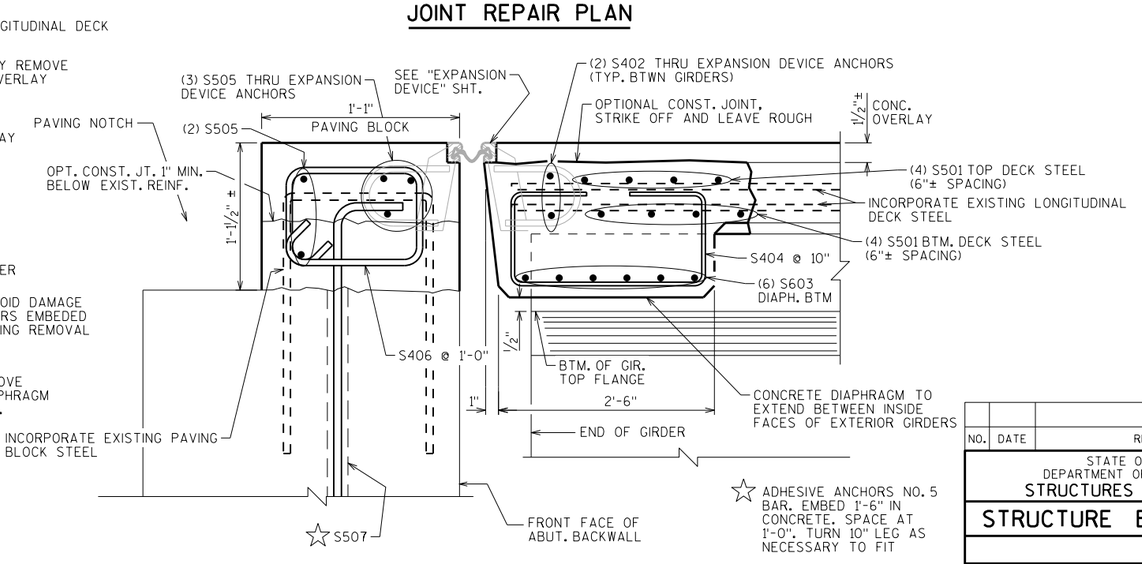


PARAPET SECTION



JOINT REMOVAL SECTION

NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT REPAIR AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-29

DRAWN BY CAD | PLANS CK'D. MJL

JOINT REPAIR DETAILS - W. ABUT.

SHEET 4

63

SCALE = 4.00

8

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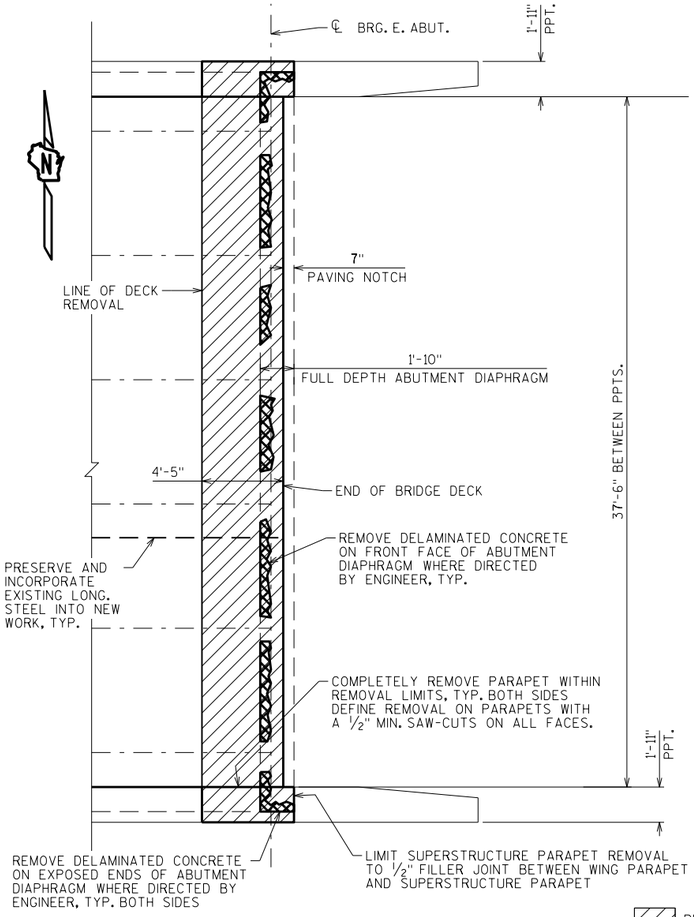
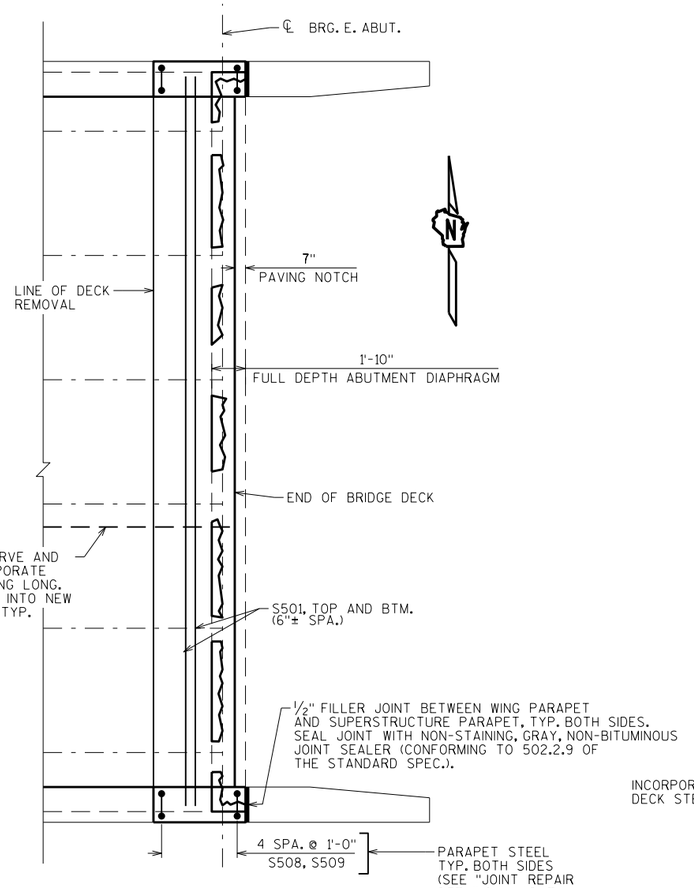
STATE PROJECT NUMBER

1660-03-62



REMOVAL PLAN

REMOVAL AREAS

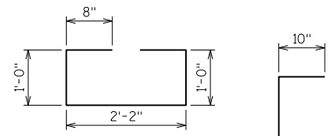


JOINT REPAIR PLAN

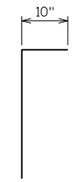
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

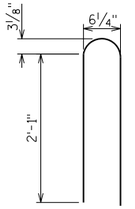
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	23	39'-9"			DECK TRANS. @ JOINT REPAIRS
S402	X	10	5'-9"			W. ABUT. DECK TRANS, THRU EXP. DEVICE ANCHORS
S603	X	30	5'-1"			W. ABUT. DIAPH. BTM.
S404	X	35	5'-2"	X		W. ABUT. DIAPH. STIRRUPS
S505	X	30	7'-2"			W. ABUT. PAVING BLOCK
S406	X	38	3'-6"	X		W. ABUT. PAVING BLOCK STIRRUPS
S507	X	38	2'-11"	X		W. ABUT. PAVING BLOCK MASONRY ANCHOR
S508	X	20	5'-0"	X		PARAPET VERT.
S509	X	16	4'-9"	X		DECK TO PARAPET VERT. DOWEL



S404



S507



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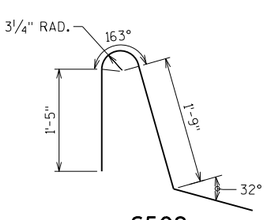

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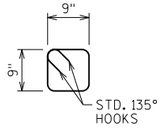

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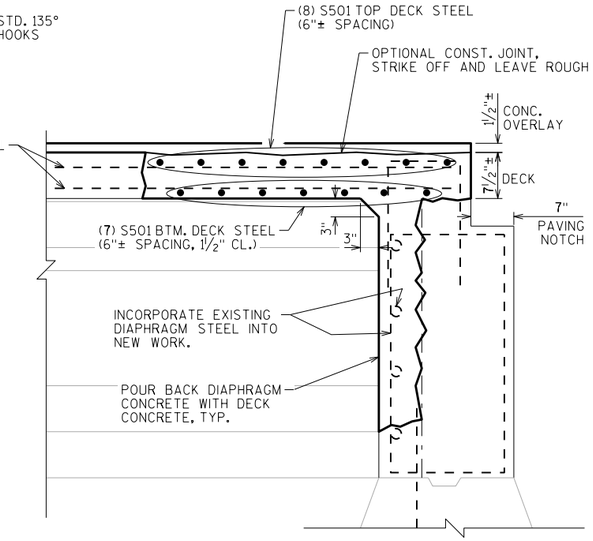
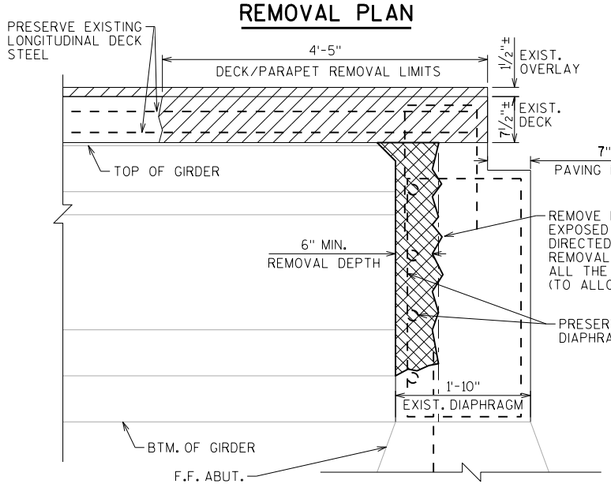
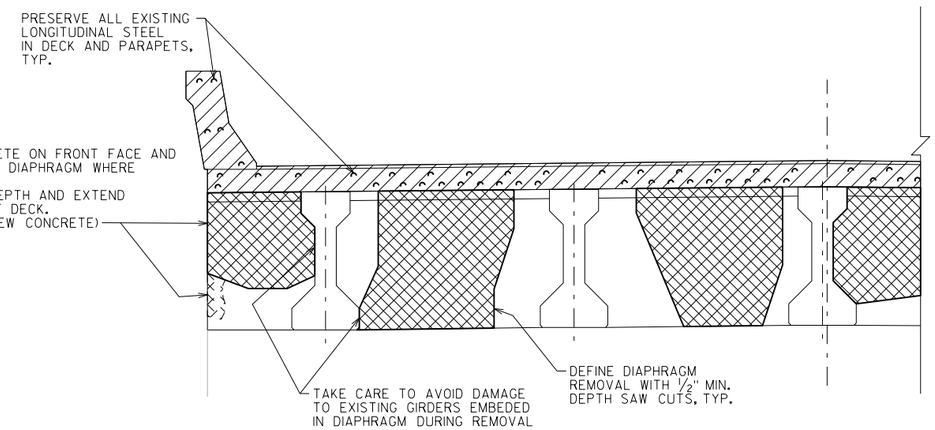


JOINT REPAIR SECTION



JOINT REMOVAL SECTION

NORMAL TO ℄ SUBSTRUCTURE



PARTIAL TRANS. SECTION AT JOINT REMOVAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-29

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JOINT REPAIR DETAILS - E. ABUT.

SHEET 5

64

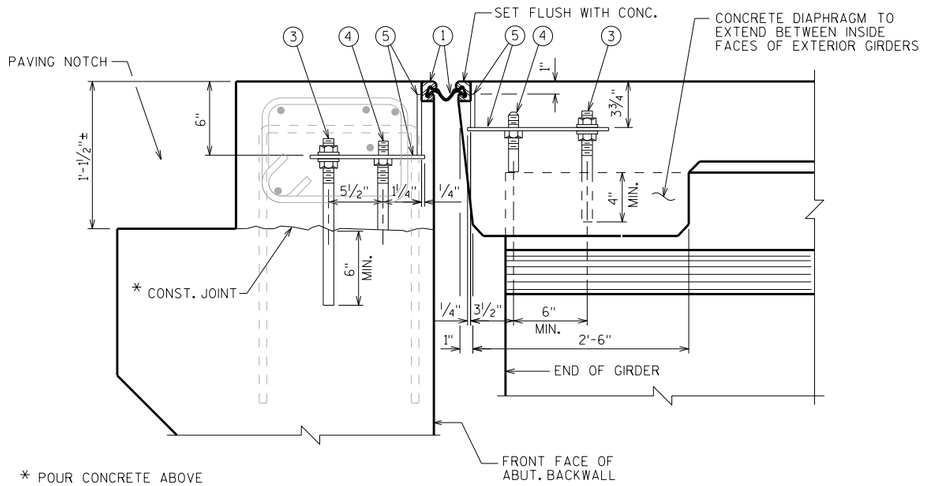
8

8

SCALE = 4.00

STATE PROJECT NUMBER

1660-03-62



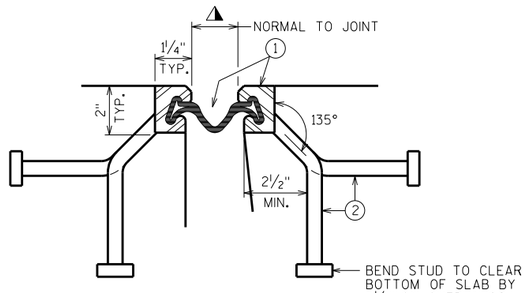
* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

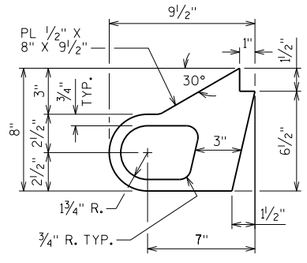
LEGEND

1. NEOPRENE STRIP SEAL (4- INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 AND 1" Φ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 1'-5" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

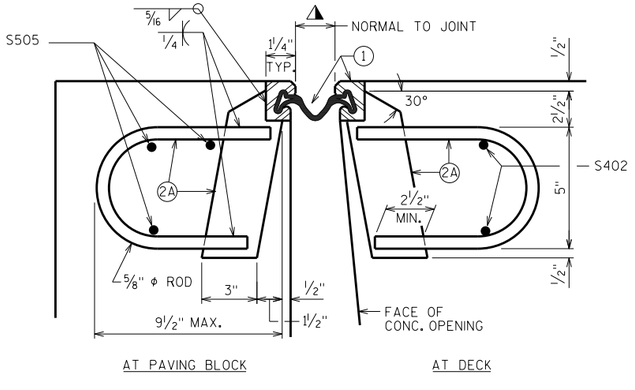


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS

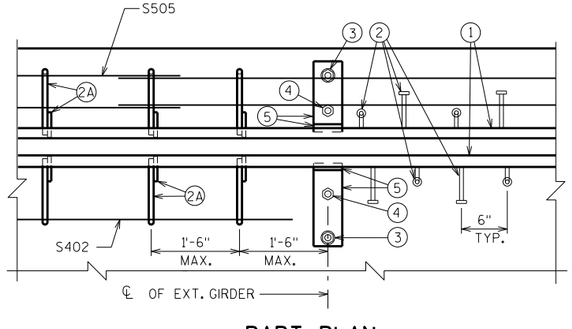


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-12-29".

⚠ TEMPERATURE TABLE

SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	¾"
75°	1 1/16"
65°	1⅜"
55°	1 11/16"
45°	2"
35°	2 5/16"
25°	2⅝"
15°	2 15/16"
5°	3¼"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-29

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EXPANSION DEVICE

SHEET 6

65

JTSS_SLPFAC
1-14

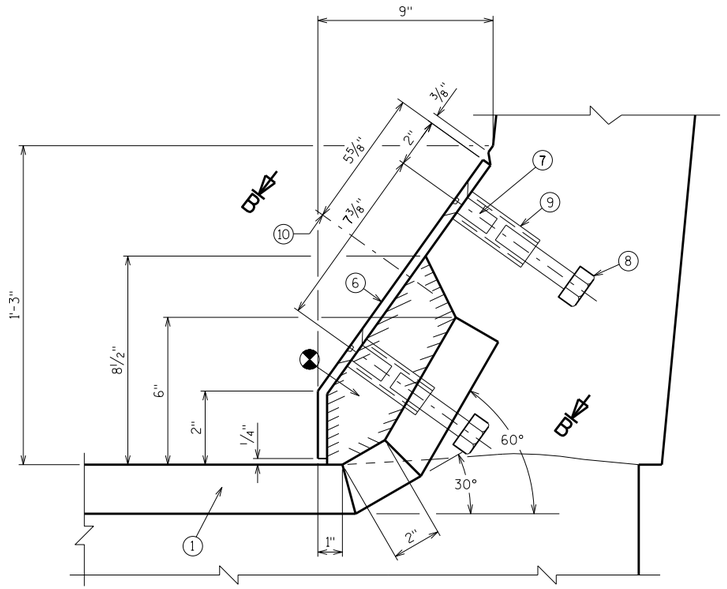
8

8

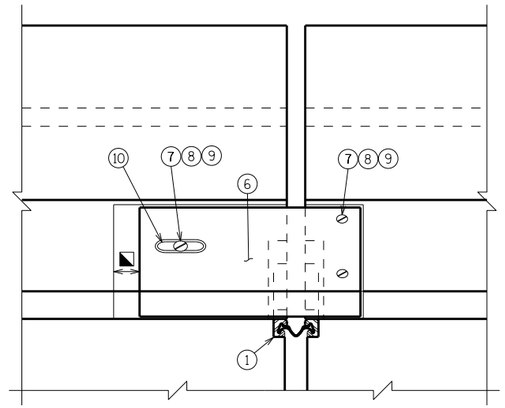
SCALE =

STATE PROJECT NUMBER

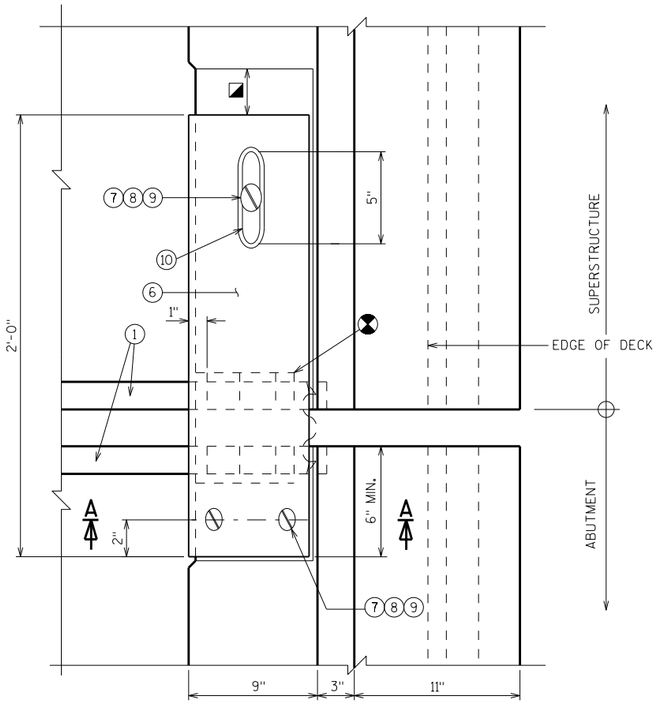
1660-03-62



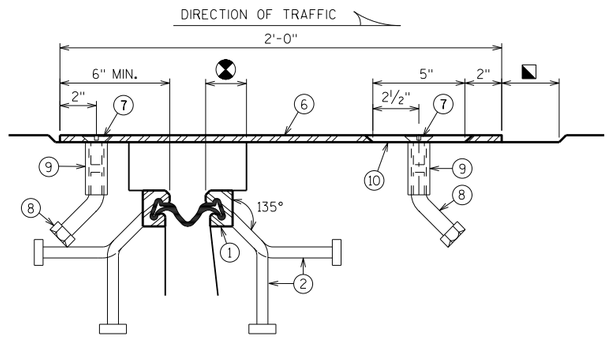
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-29

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COVER PLATE DETAILS

SHEET 7

66

JTSS_SLPFAC
1-14

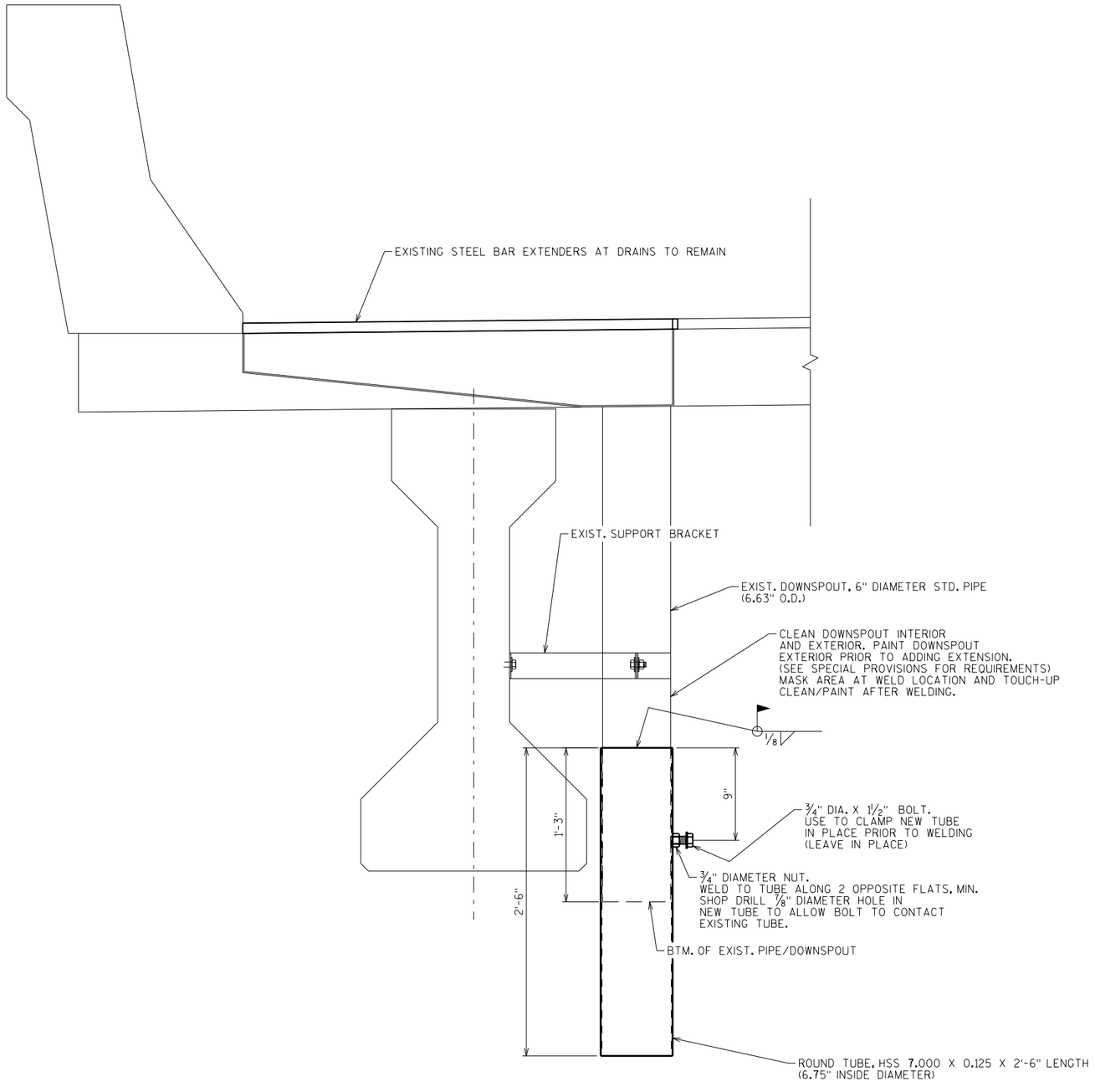
SCALE =

8

8

STATE PROJECT NUMBER

1660-03-62



DOWNSPOUT EXTENSION DETAIL

(TYPICAL AT ALL (3) FLOOR DRAIN LOCATIONS)

NOTES

BID ITEM SHALL BE "DOWNSPOUT REPAIR", WHICH INCLUDES ALL ITEMS SHOWN.

ROUND HSS TUBE MATERIAL SHALL CONFORM TO ASTM A500-GRADE B.

NEW STEEL TUBES SHALL BE SHOP PAINTED. BLAST CLEAN TO SSPC SP-6 AND USE A WELDABLE PRIMER. DO NOT APPLY FINISH COATS TO SURFACES TO BE FIELD WELDED.

THE COLOR OF THE FINISH TOP COAT SHALL BE "GRAY", FEDERAL COLOR NO. 26293

BOLTS AND NUTS SHALL CONFORM TO ASTM F3125, GRADE A325.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-29

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DOWNSPOUT DETAILS

SHEET 8

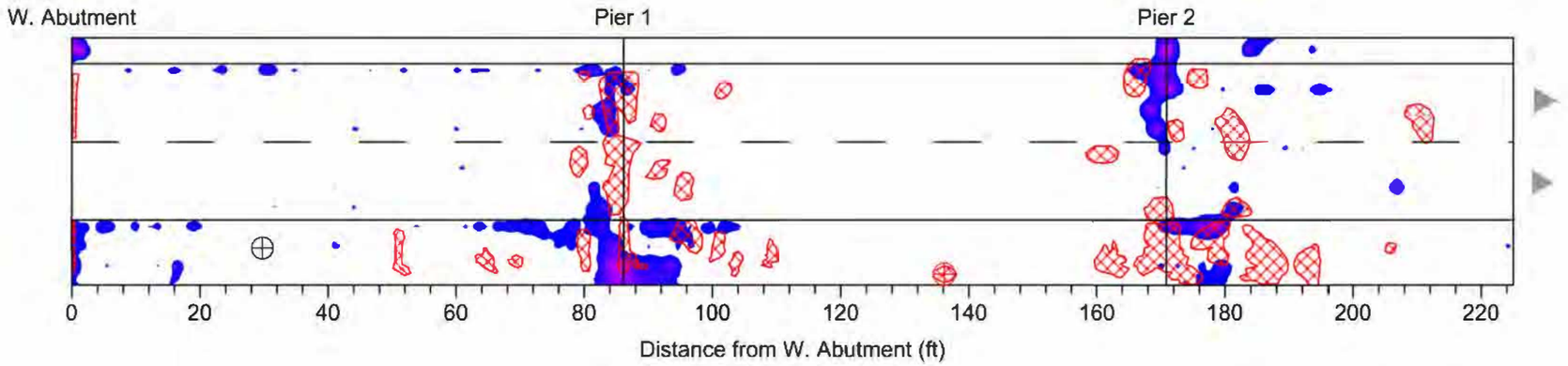
67

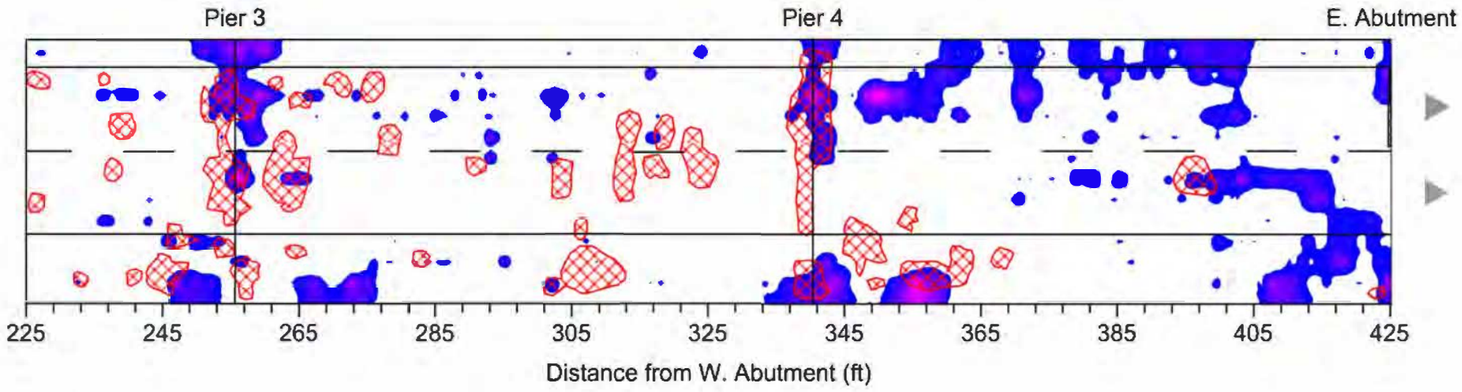
SCALE = 0.50

8

8

STATE PROJECT NUMBER
1660-03-62





Conditions Legend		Orientation	Quantity Summary			General Information
Rebar-level deterioration detected by GPR	Delamination detected by IR	N	Estimate Deck Prep Items	sq. ft.	%	Bridge ID: B-12-029 USH 18 EB-STH 60 EB over Marais De St
Increasing severity -->	Patching		Type 1	878	5.4	Analyzed by: SB/RG Reviewed by: AC
⊕ IE (delam)	Full Depth	▶ Direction of traffic	Type 2	1563	9.7	Completed: 09/22/17
⊕ IE (no delam)			Full-Depth	0	0.0	**Sheet 1 of 1**

INFRASENSE

NOTES

DECK SURVEY IS SHOWN FOR INFORMATION PURPOSES ONLY AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL PATCHING/PREPARATION MAY BE REQUIRED AND SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.

GPR= GROUND PENETRATING RADAR
IR = INFRARED (THERMOGRAPHY)
IE = IMPACT ECHO

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-29

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DECK CONDITION SURVEY

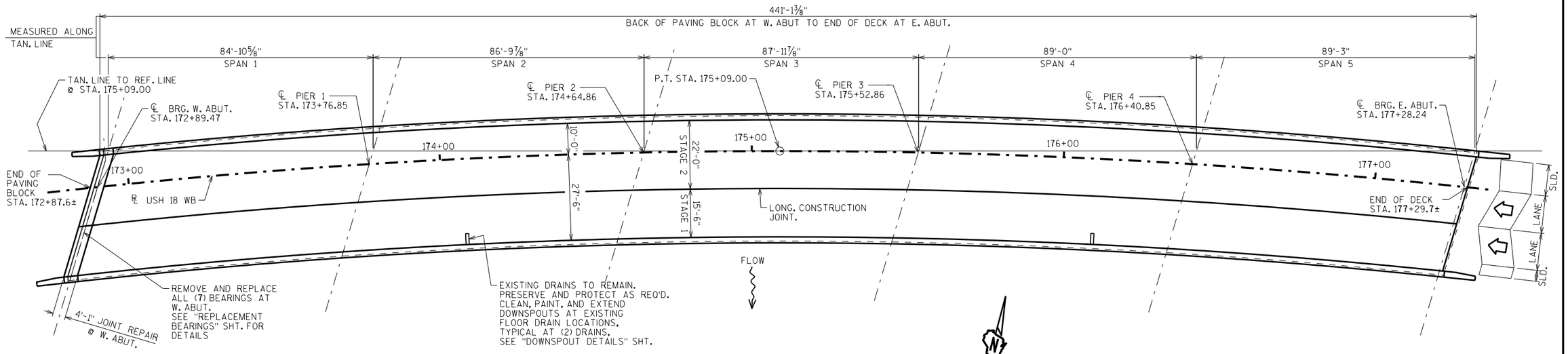
SHEET 9

68

SCALE = 1.00

STATE PROJECT NUMBER

1660-03-62



CONCRETE OVERLAY PLAN

(5 SPAN - 45" PRESTRESSED CONCRETE GIRDER BRIDGE)

CURVE DATA

USH 18 WB

P.I. = 174+63.28
△ = 36° 11' 25"
D = 2° 45' 0"
T = 680.79
L = 1316.00'
R = 2083.48'
S.E. = 4.3 %

DESIGN DATA

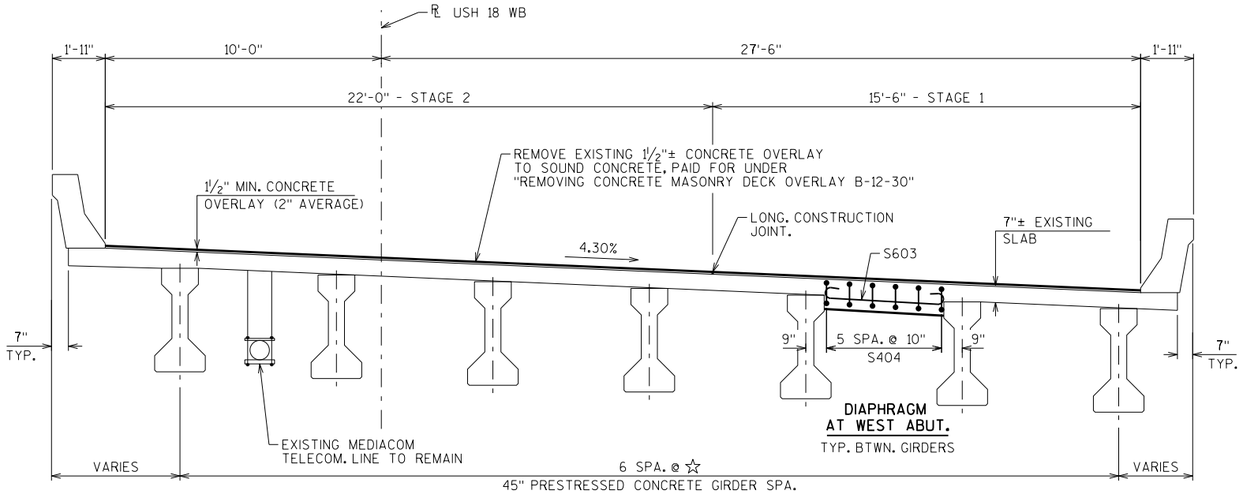
LIVE LOAD:

DESIGN RATING: HS-20
INVENTORY RATING: HS-20
OPERATIONAL RATING: HS- 31
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY ——— f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 ——— fy = 60,000 P.S.I.



TYPICAL CROSS SECTION THRU BRIDGE

(LOOKING EAST)

	☆
SPAN 1	5'-8"
SPAN 2	5'-9"
SPAN 3	5'-10"
SPAN 4	5'-10¾"
SPAN 5	5'-11½"

TRAFFIC VOLUME

USH 18 WB

ADT = 5000 (2016)
R.D.S. = 50 M.P.H.

LIST OF DRAWINGS

STRUCTURE DESIGN CONTACTS:

CHRISTOPHER DOLL (608) 266-3229
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED LLS 6/10/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-12-30

USH 18/STH 60 WB OVER MARAIS DE SAINT FERIOLE

COUNTY	CITY
CRAWFORD	PRAIRIE DU CHIEN

DESIGN SPEC. N/A REHABILITATION

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
CAD	MJL	CAD	MJL

GENERAL PLAN

SHEET 1 OF 8

69

I.D. 1660-03-38D DATE: JAN. 2020

SCALE = 16.00

8

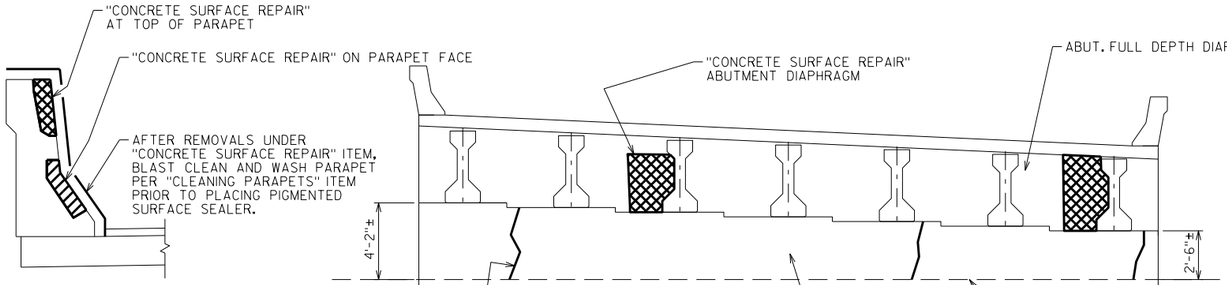
8

STATE PROJECT NUMBER

1660-03-62

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-12-30	LS	———	———	———	1
502.3101	EXPANSION DEVICE B-12-30	LF	———	39	———	39
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,838	———	———	1,838
502.3210	PIGMENTED SURFACE SEALER	SY	393	———	———	393
502.4110	ADHESIVE ANCHORS 1 1/4-INCH	EACH	———	14	———	14
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	———	40	———	40
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	———	1,320	———	1,320
505.0905	BAR COUPLERS NO. 5	EACH	———	8	———	8
506.6000	BEARING ASSEMBLIES EXPANSION B-12-30	EACH	———	7	———	7
506.7050.S	REMOVING BEARINGS B-12-30	EACH	———	7	———	7
509.0301	PREPARATION DECKS TYPE 1	SY	774	———	———	774
509.0302	PREPARATION DECKS TYPE 2	SY	482	———	———	482
509.0505.S	CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY	SY	1,825	———	———	1,825
509.1000	JOINT REPAIR	SY	———	20	———	20
509.1500	CONCRETE SURFACE REPAIR	SF	60	———	5	65
509.2000	FULL-DEPTH DECK REPAIR	SY	8	———	———	8
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	181	———	———	181
509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-12-30	SY	1,825	———	———	1,825
509.9020.S	EPOXY CRACK SEALING	LF	———	10	10	20
509.9050.S	CLEANING PARAPETS	LF	918	———	———	918
SPV.0060	DOWNSPOUT REPAIR	EACH	2	———	———	2
SPV.0180	ABUTMENT SEAT CLEANING AND SEALING	SY	———	11	———	11



PARAPET REPAIR DETAILS

EAST ABUTMENT SURFACE REPAIRS

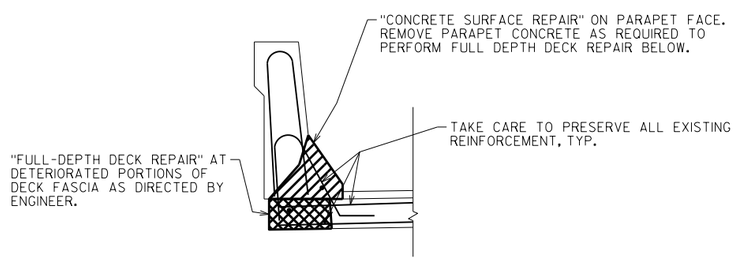
SURFACE REPAIR NOTES

SURFACE REPAIR DETAILS DEPICT THE GENERAL TYPES AND LOCATIONS OF REPAIRS, AND MAY NOT BE ALL INCLUSIVE. QUANTITIES SHOWN ARE APPROXIMATE. ADDITIONAL REPAIRS MAY BE REQUIRED DURING CONSTRUCTION AND SHOULD BE PERFORMED AS DIRECTED BY THE FIELD ENGINEER.

ALL SURFACE REPAIR AREAS SHALL BE DEFINED BY ½" MIN. SAWCUT.

CONTRACTOR SHALL EMPLOY METHODS TO PREVENT REMOVED CONCRETE MATERIAL FROM ENTERING THE WATERWAY.

AFTER CONCRETE SURFACE REPAIRS, BLAST CLEAN AND WASH WEST ABUTMENT SEAT AND SEAL SURFACE WITH BRIDGE SEAT PROTECTION. PAID FOR UNDER "ABUTMENT SEAT CLEANING AND SEALING". SEE SPECIAL PROVISIONS FOR REQUIREMENTS.



PARAPET SURFACE REPAIR WITH FULL DEPTH DECK REPAIR

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK/OVERLAY.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

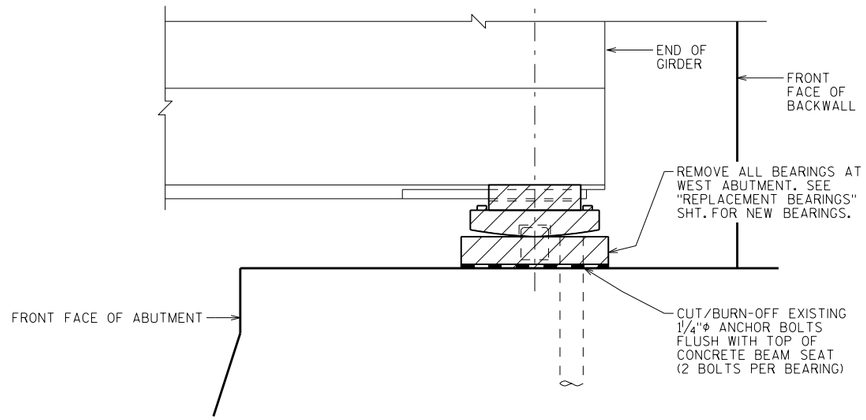
ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL EXCEED THE AVERAGE OVERLAY SHOWN ON THE PLANS BY MORE THAN ½".

THE EXISTING OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY B-12-30".

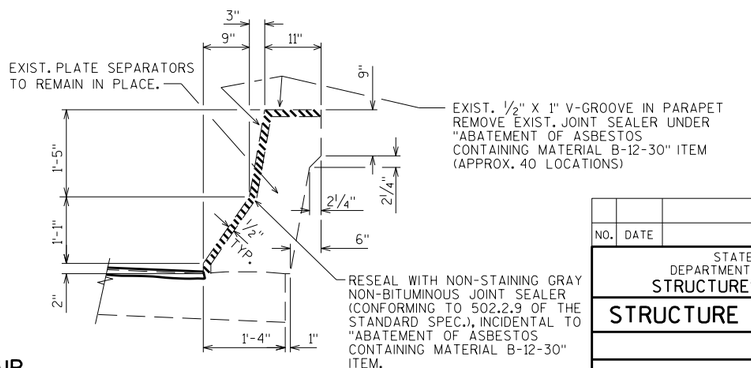
AFTER REMOVING EXISTING OVERLAY AND PRIOR TO PLACING NEW OVERLAY, CLEAN THE DECK SURFACE UNDER BID ITEM "CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".



BEARING REMOVAL DETAIL AT WEST ABUTMENT

NOTE:
REMOVAL AND DISPOSAL OF EXISTING BEARINGS AS SHOWN, INCLUDING JACKING OF THE BRIDGE AS REQUIRED TO REMOVE AND REPLACE THE BEARINGS, SHALL BE INCLUDED IN BID ITEM "REMOVING BEARINGS B-12-30".



ASBESTOS ABATEMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-30

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QUANTITIES & NOTES

SHEET 2

70

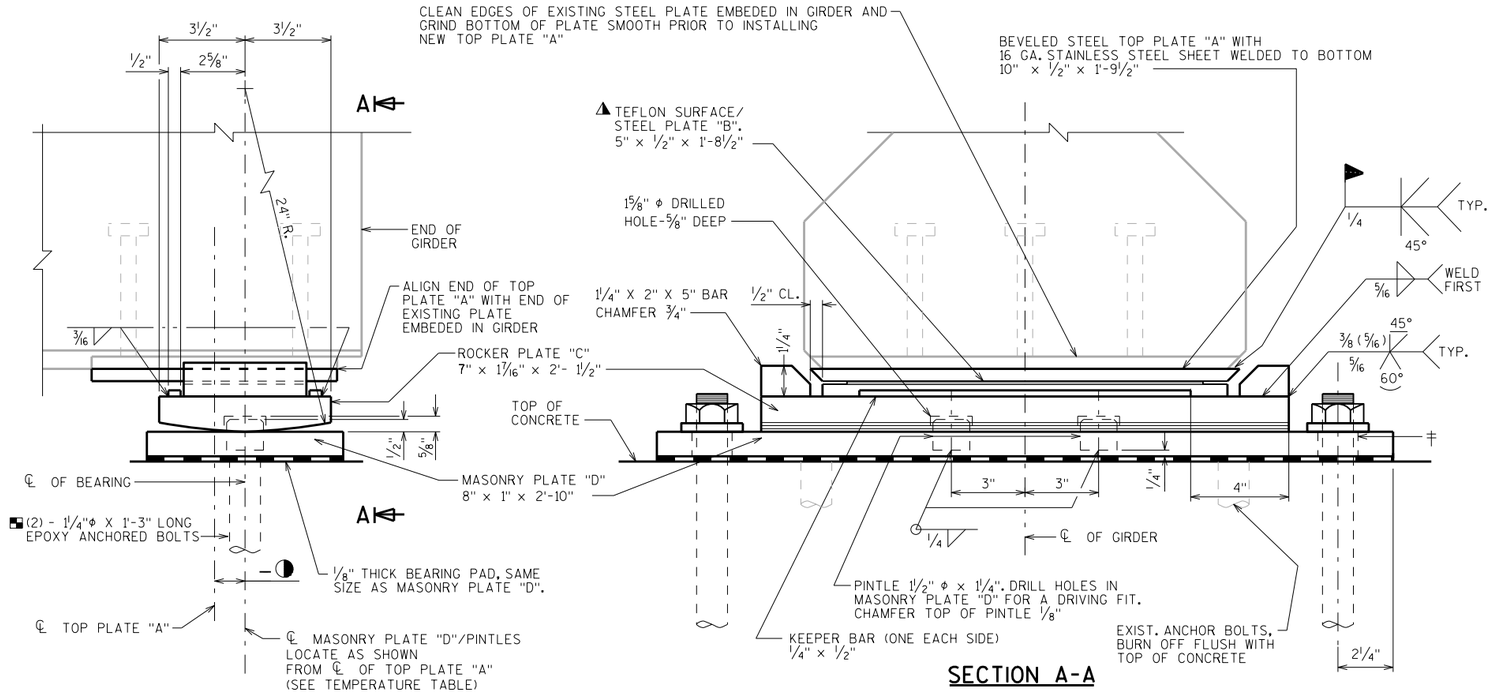
SCALE = 1.00

8

8

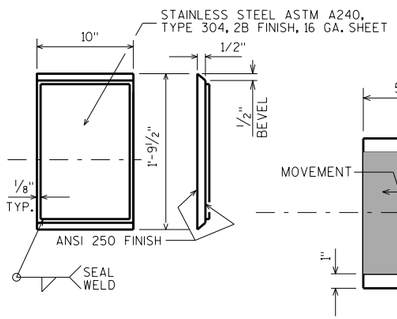
STATE PROJECT NUMBER

1660-03-62

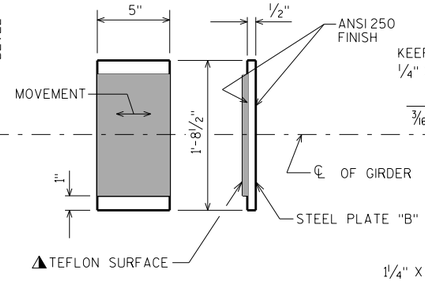


SECTION A-A

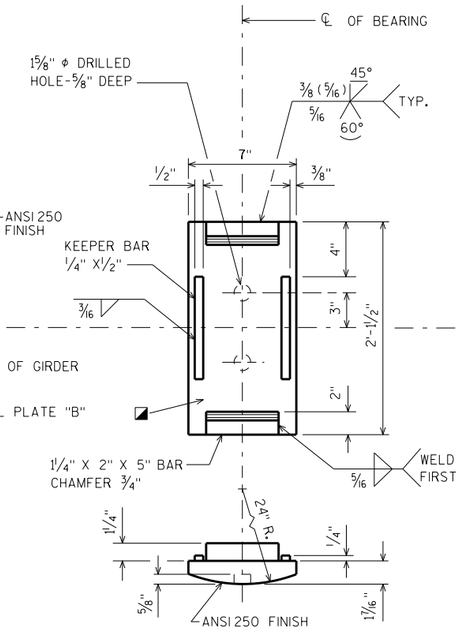
EXPANSION BEARING ASSEMBLY



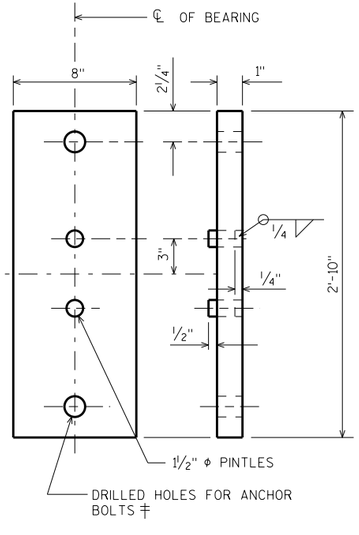
TOP PLATE "A"



TEFLON SURFACE ON PLATE "B"



ROCKER PLATE "C"



MASONRY PLATE "D"

EXPANSION BEARING

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

ALL MATERIAL IN BEARINGS, BUT EXCLUDING STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, ANCHOR BOLTS, NUTS AND WASHERS, SHALL CONFORM TO ASTM A709 GRADE 50W.

STAINLESS STEEL SHEET SHALL CONFORM TO ASTM A240, TYPE 304.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

◪ ANCHOR BOLTS SHALL BE FULLY THREADED. PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE. ANCHOR BOLTS SHALL BE PAID FOR AS "ADHESIVE ANCHORS 1 1/4-INCH" AND BE EPOXY ANCHORED. CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

MASONRY PLATE "D", ROCKER PLATE "C", ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS "C". TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT TEFLON OR STAINLESS STEEL SURFACES.

ALL MATERIAL IN BEARING ASSEMBLIES, INCLUDING BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-12-30", EACH.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "D" SHALL HAVE A DIAMETER 3/8" LARGER THAN ANCHOR BOLT.

◭ TEFLON SURFACE, USE UNFILLED WITH MINIMUM 1/16" THICKNESS. PLACE WITH SCRIVE MARKS IN DIRECTION OF MOVEMENT. BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING THE REQUIREMENTS FOUND IN THE STANDARD SPECIFICATION.

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.

TEMPURATURE	W. ABUT. ◑, IN.
10°	-1 1/16"
20°	-3/4"
30°	-7/16"
40°	-1/8"
50°	1/8"
60°	7/16"
70°	3/4"
80°	1 1/16"
90°	1 3/8"

TEMPERATURE TABLE

AT THE WEST ABUTMENT, NEGITIVE VALUE INDICATES PINTLES ARE LOCATED WEST OF THE ℄ OF TOP PLATE "A" AND POSITIVE VALUE INDICATES PINTLES ARE LOCATED EAST OF THE ℄ OF TOP PLATE "A".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-30

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REPLACEMENT BEARINGS

SHEET 3

71

SCALE = 1.00

8

8

STATE PROJECT NUMBER

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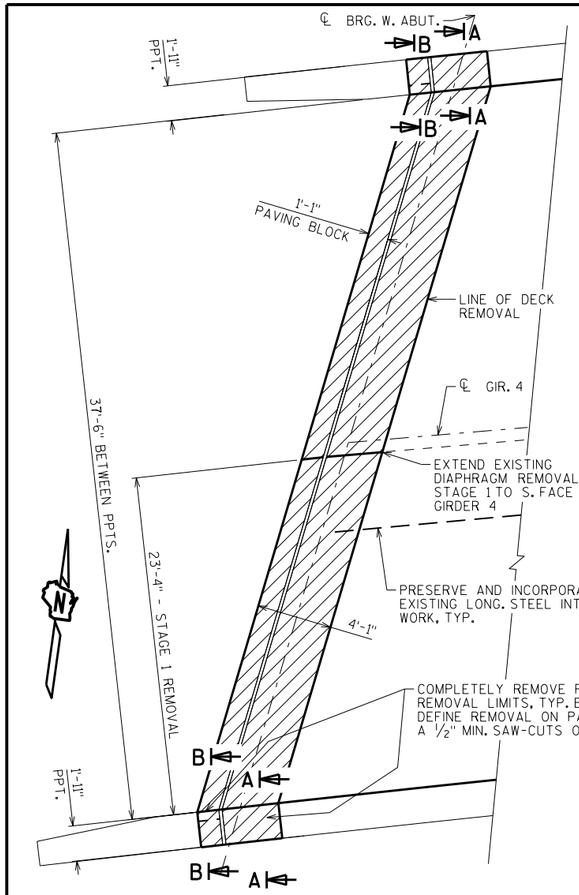
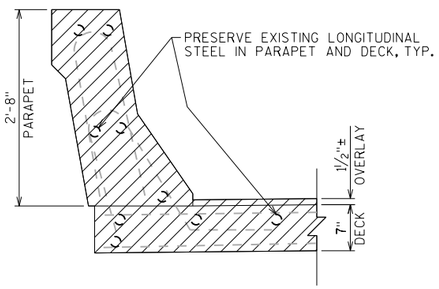
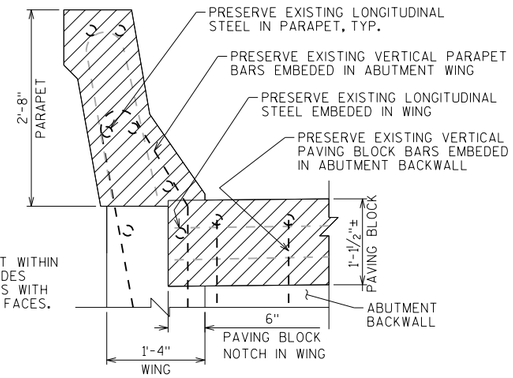


REMOVAL PLAN



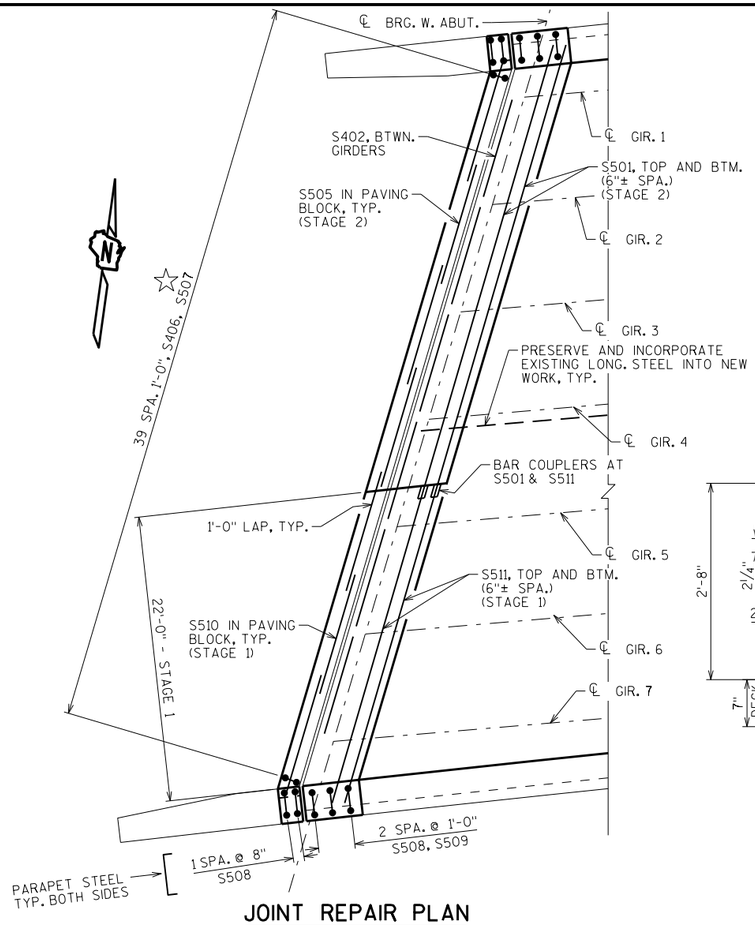
SECTION A-A

(SHOWING REMOVAL AT DECK SIDE OF JOINT)

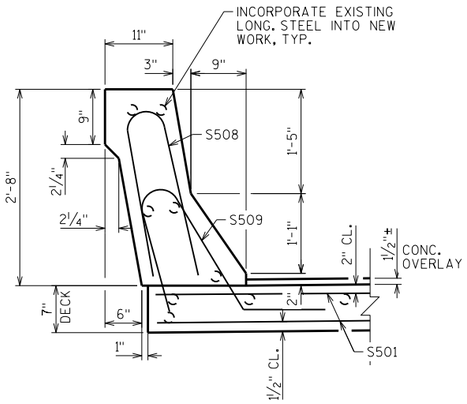


SECTION B-B

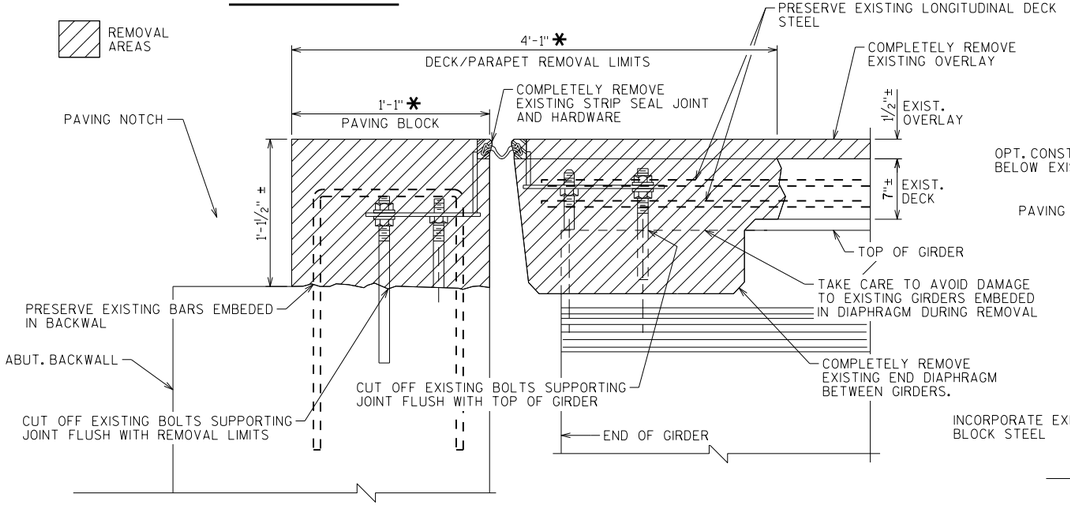
(SHOWING REMOVAL AT PAVING BLOCK SIDE OF JOINT)



JOINT REPAIR PLAN

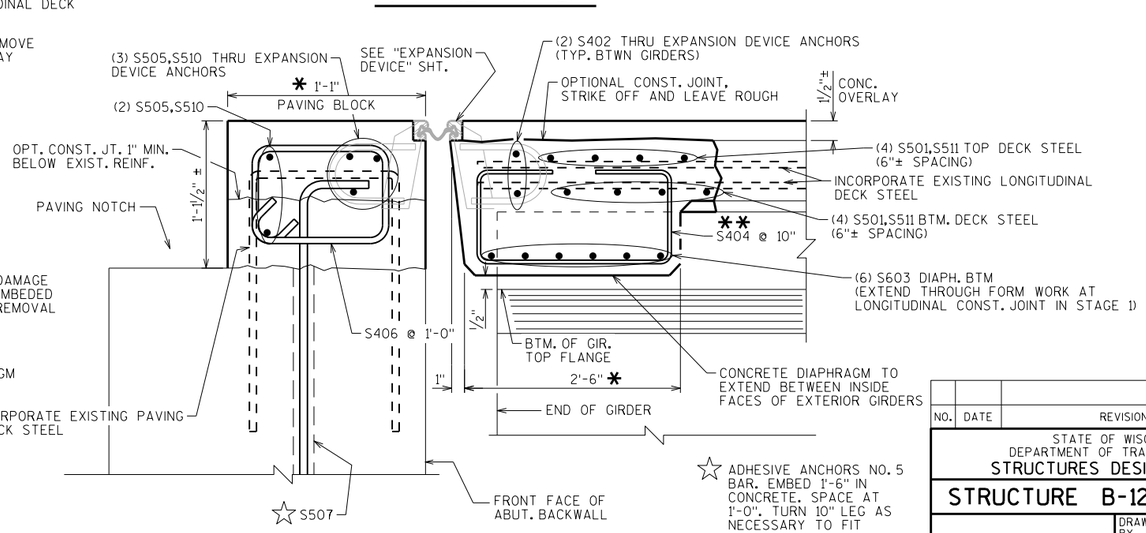


PARAPET SECTION



JOINT REMOVAL SECTION

NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT REPAIR AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNIT.

** BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ GIRDERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-30

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JOINT REPAIR DETAILS - W. ABUT.

SHEET 4

72

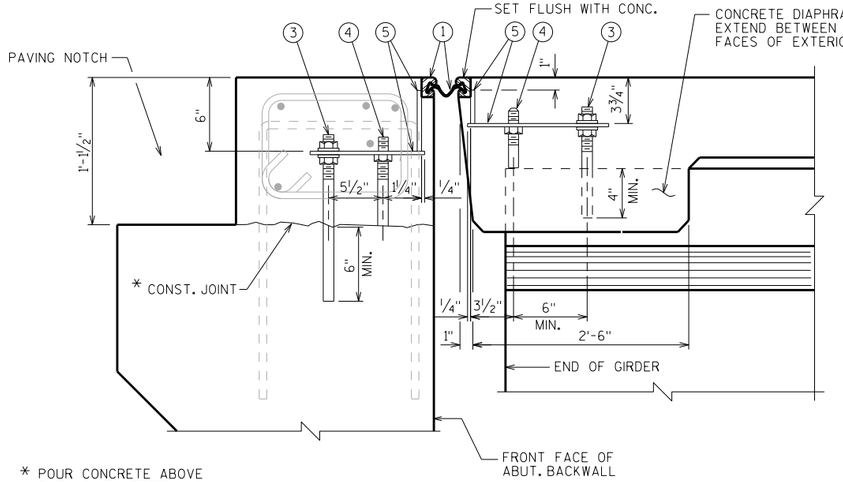
SCALE = 4.00

8

8

STATE PROJECT NUMBER

1660-03-62



* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

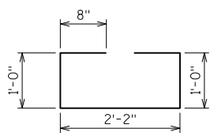
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

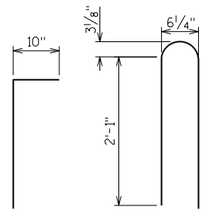
	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
(S01)	S501	X	8	24'-11"			DECK TRANS. @ JOINT REPAIR-STAGE 2
	S402	X	12	5'-6"			DECK TRANS, THRU EXP. DEVICE ANCHORS
	S603	X	30	5'-7"	X		W. ABUT. DIAPH. BTM.
	S404	X	36	5'-2"	X		W. ABUT. DIAPH. STIRRUPS
	S505	X	20	6'-9"			W. ABUT. PAVING BLOCK-STAGE 2
	S406	X	40	3'-6"	X		W. ABUT. PAVING BLOCK STIRRUPS
	S507	X	40	2'-11"	X		W. ABUT. PAVING BLOCK MASONRY ANCHOR
	S508	X	10	5'-0"	X		PARAPET VERT.
	S509	X	6	4'-9"	X		DECK TO PARAPET VERT. DOWEL
	S510	X	15	6'-9"			W. ABUT. PAVING BLOCK-STAGE 1
(S01)	S511	X	8	17'-11"			DECK TRANS. @ JOINT REPAIR-STAGE 1

BAR COUPLERS NO. 5 BARS REQ'D

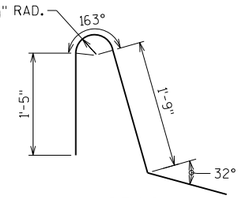
(S01) BAR COUPLERS USED. BAR LENGTH COMPUTED TO CL OF LONGIT. JOINT & SHALL BE MODIFIED IF REQ'D. TO THE BAR COUPLER MANUFACTURER RECOMMENDATIONS. PAY BASED ON BARS AS DETAILED.



S404

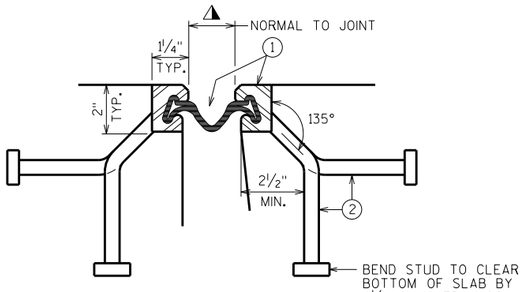


S507



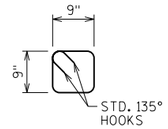
S509

S508

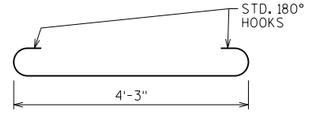


SECTION THRU JOINT

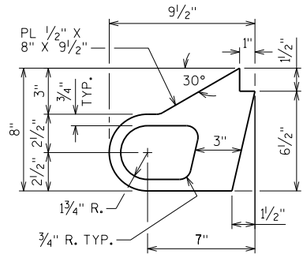
EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



S406



S603

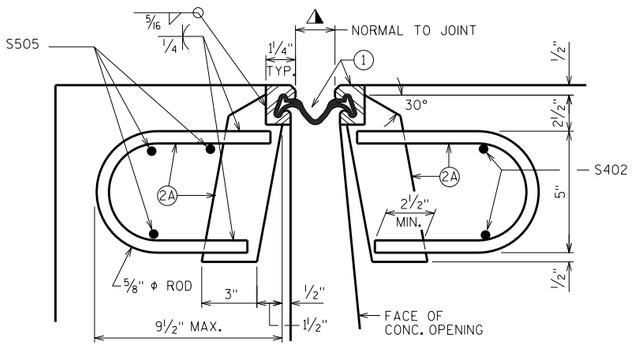


ALTERNATE STRIP SEAL ANCHOR

⚠ TEMPERATURE TABLE

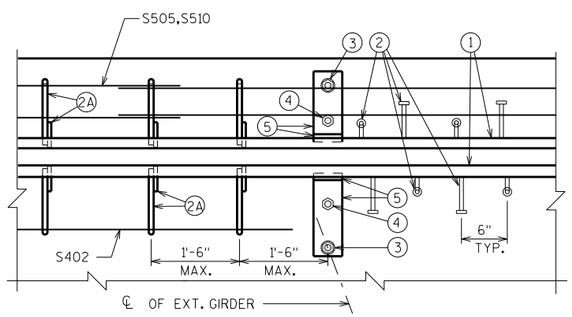
SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	¾"
75°	1 1/16"
65°	1⅜"
55°	1 11/16"
45°	2"
35°	2 5/16"
25°	2⅝"
15°	2 15/16"
5°	3¼"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-12-30".

LEGEND

1. NEOPRENE STRIP SEAL (4- INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝"ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 1'-2" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾"ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾"ϕ X 2¼" GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-30

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EXPANSION DEVICE

SHEET 5

73

JTSS_SLPFAC
1-14

SCALE =

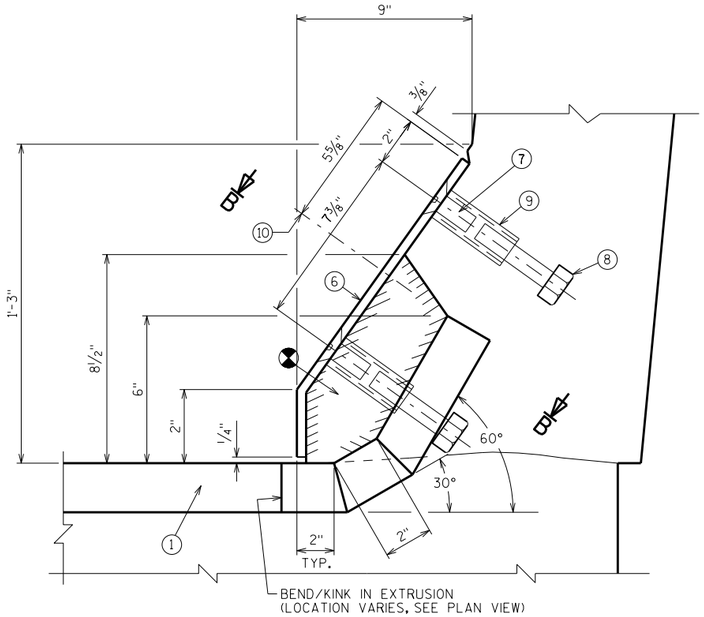
18

8

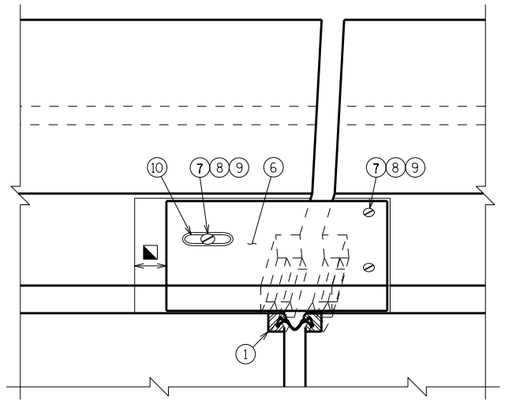
8

STATE PROJECT NUMBER

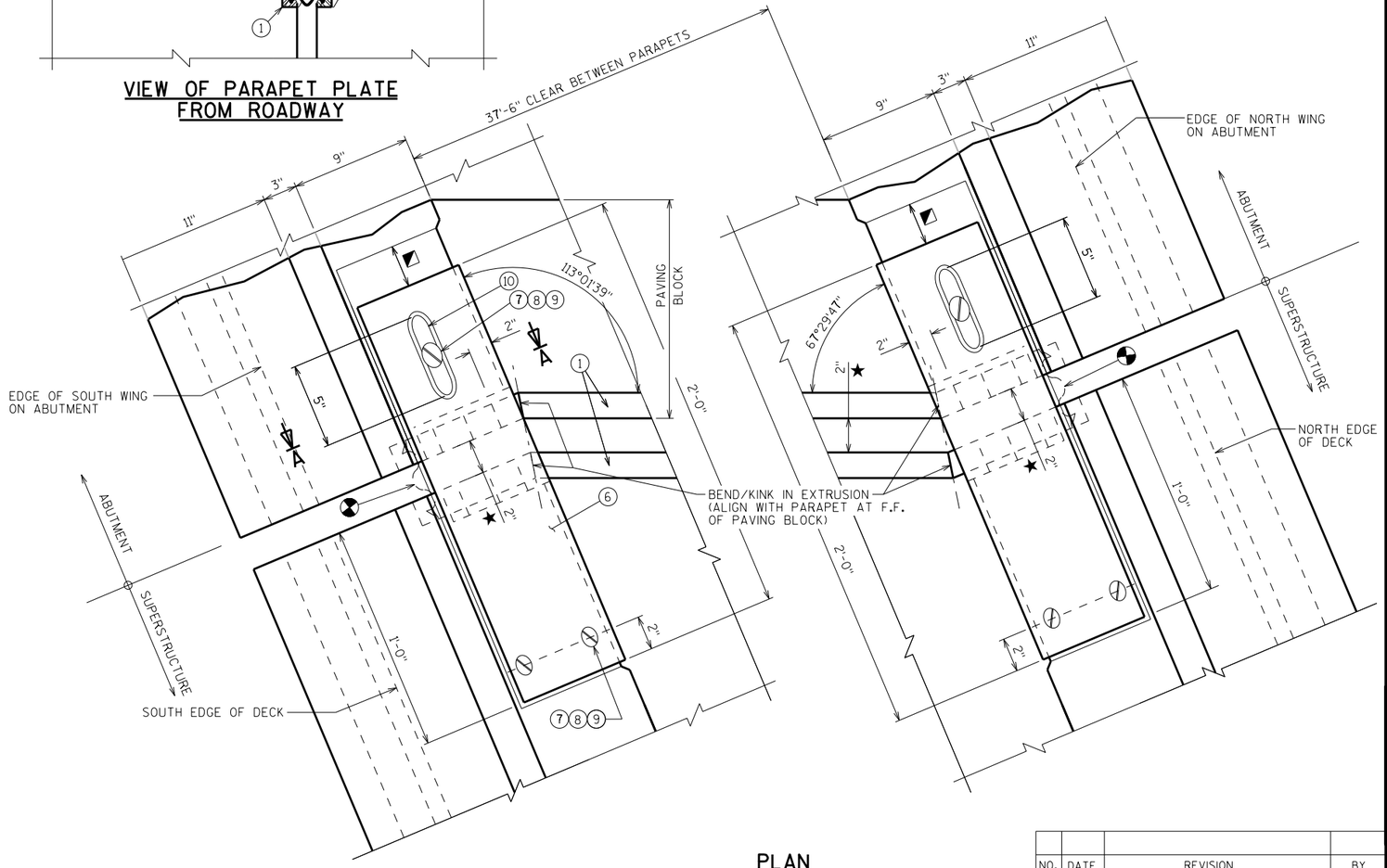
1660-03-62



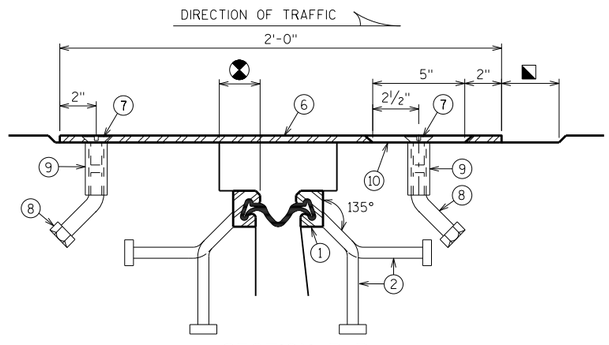
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

★ ASSUMED JOINT OPENING WIDTH FOR FABRICATION. SEE TEMPERTURE TABLE ON "EXPANSION DEVICE" SHT. FOR JOINT OPENING WIDTH AT TIME OF INSTALLATION.

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-12-30

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COVER PLATE DETAILS

SHEET 6

74

JTSS_SLPFAC
1-14

18

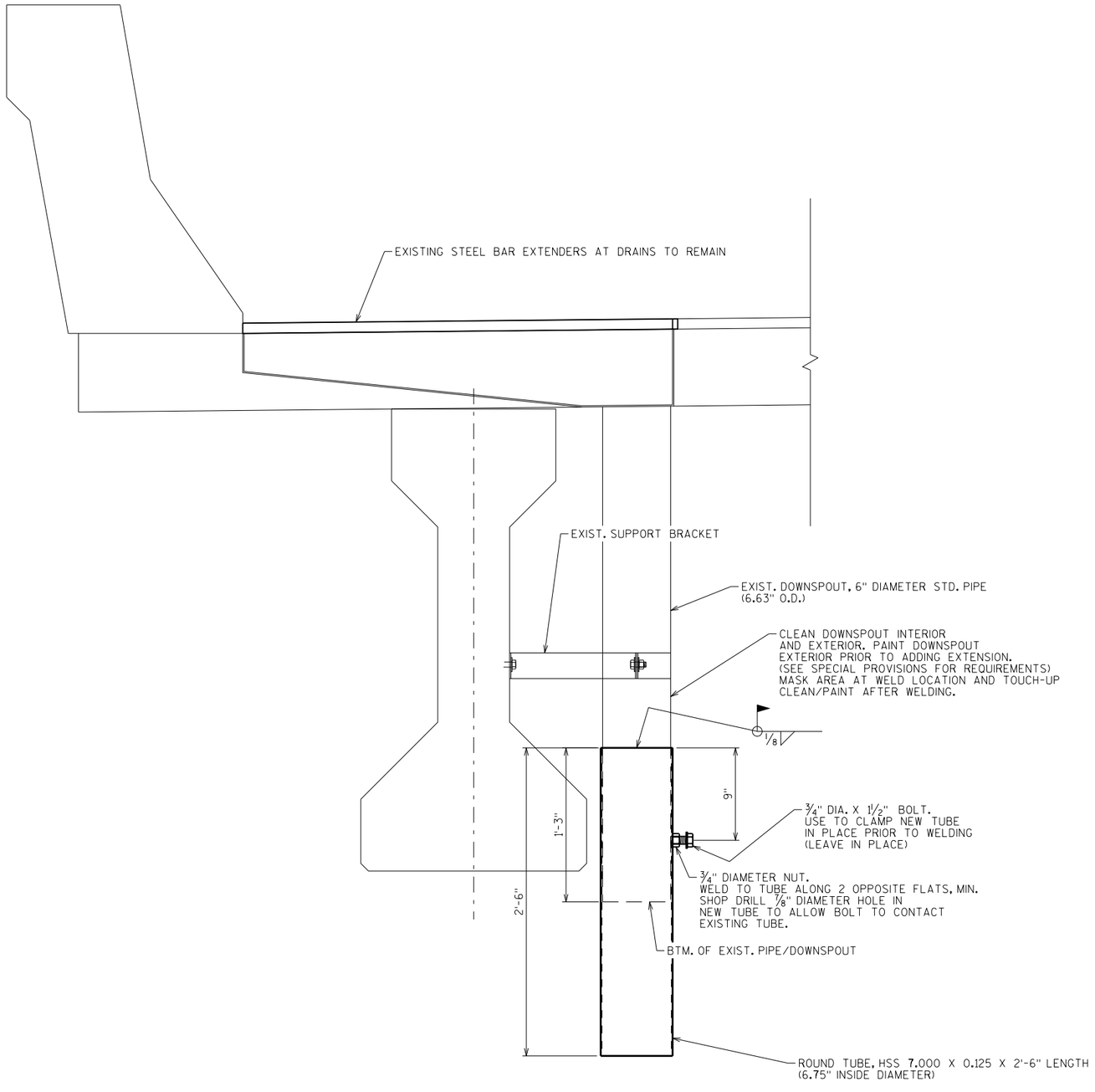
8

8

SCALE =

STATE PROJECT NUMBER

1660-03-62



DOWNSPOUT EXTENSION DETAIL

(TYPICAL AT (2) FLOOR DRAIN LOCATIONS)

NOTES

BID ITEM SHALL BE "DOWNSPOUT REPAIR", WHICH INCLUDES ALL ITEMS SHOWN.

ROUND HSS TUBE MATERIAL SHALL CONFORM TO ASTM A500-GRADE B.

NEW STEEL TUBES SHALL BE SHOP PAINTED. BLAST CLEAN TO SSPC SP-6 AND USE A WELDABLE PRIMER. DO NOT APPLY FINISH COATS TO SURFACES TO BE FIELD WELDED.

THE COLOR OF THE FINISH TOP COAT SHALL BE "GRAY", FEDERAL COLOR NO. 26293

BOLTS AND NUTS SHALL CONFORM TO ASTM F3125, GRADE A325.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-30

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DOWNSPOUT DETAILS

SHEET 7

75

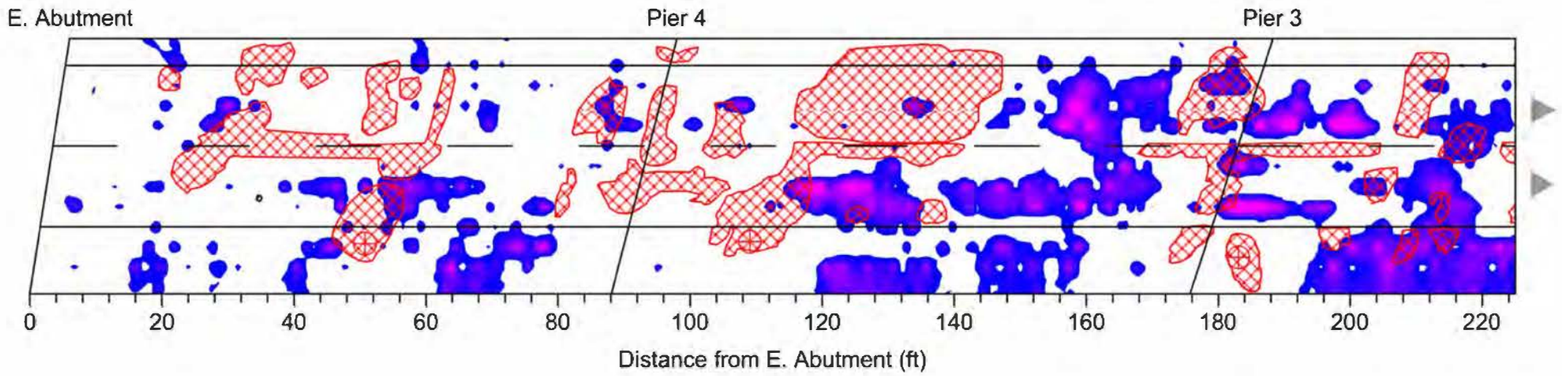
SCALE = 0.50

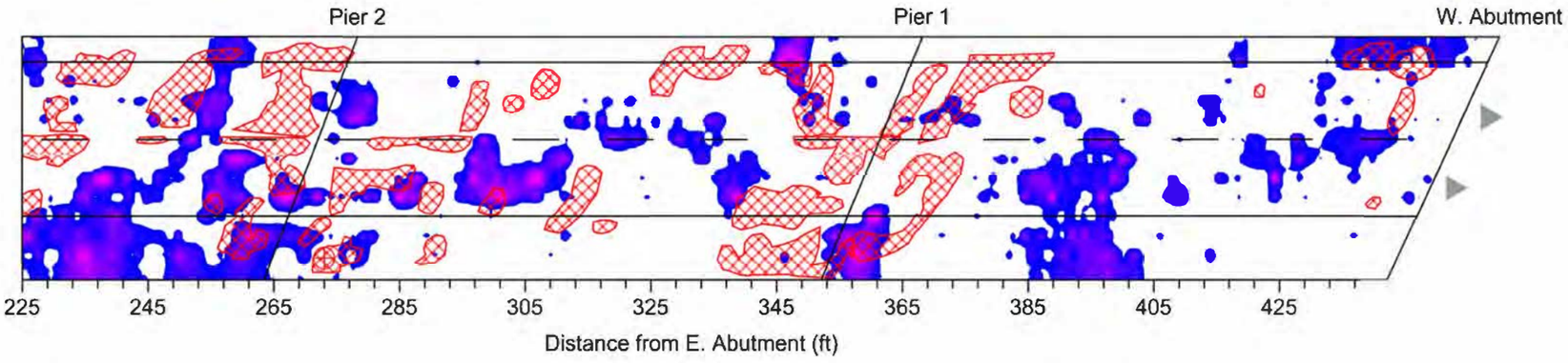
8

8

STATE PROJECT NUMBER

1660-03-62





Conditions Legend		Orientation	Quantity Summary			General Information
Rebar-level deterioration detected by GPR	Delamination detected by IR		Estimate Deck Prep Items	sq. ft.	%	Bridge ID: B-12-030 USH 18 WB-STH 60 WB over Marais De St
Increasing severity -->	Patching		Type 1	2389	14.1	Analyzed by: SB/RG Reviewed by: AC Completed: 09/22/17
IE (delam)	Full Depth	Direction of traffic	Type 2	3943	23.3	
IE (no delam)			Full-Depth	0	0.0	**Sheet 1 of 1**

INFRASENSE

NOTES

DECK SURVEY IS SHOWN FOR INFORMATION PURPOSES ONLY AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL PATCHING/PREPARATION MAY BE REQUIRED AND SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.

GPR= GROUND PENETRATING RADAR
IR = INFRARED (THERMOGRAPHY)
IE = IMPACT ECHO

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-30

DRAWN BY CAD | PLANS CK'D. MJL

DECK CONDITION SURVEY

SHEET 8

76

SCALE = 1.00

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

LAX

SEPTEMBER 2020

PROJECT ID: 5580-00-82

WITH: 1660-03-62

COUNTY: GRANT

ORDER OF SHEETS

TOTAL SHEETS = 72

01

N

DESIGN DESIGNATION 5580-00-02

A.A.D.T. (2016)	=	1,900
A.A.D.T. (2033)	=	2,860
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	11.6%
DESIGN SPEED	=	60 MPH
ESALS	=	1,000,000

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

BLOOMINGTON - PRAIRIE DU CHIEN

BLAKE FORK CREEK STRUCTURE B-22-59

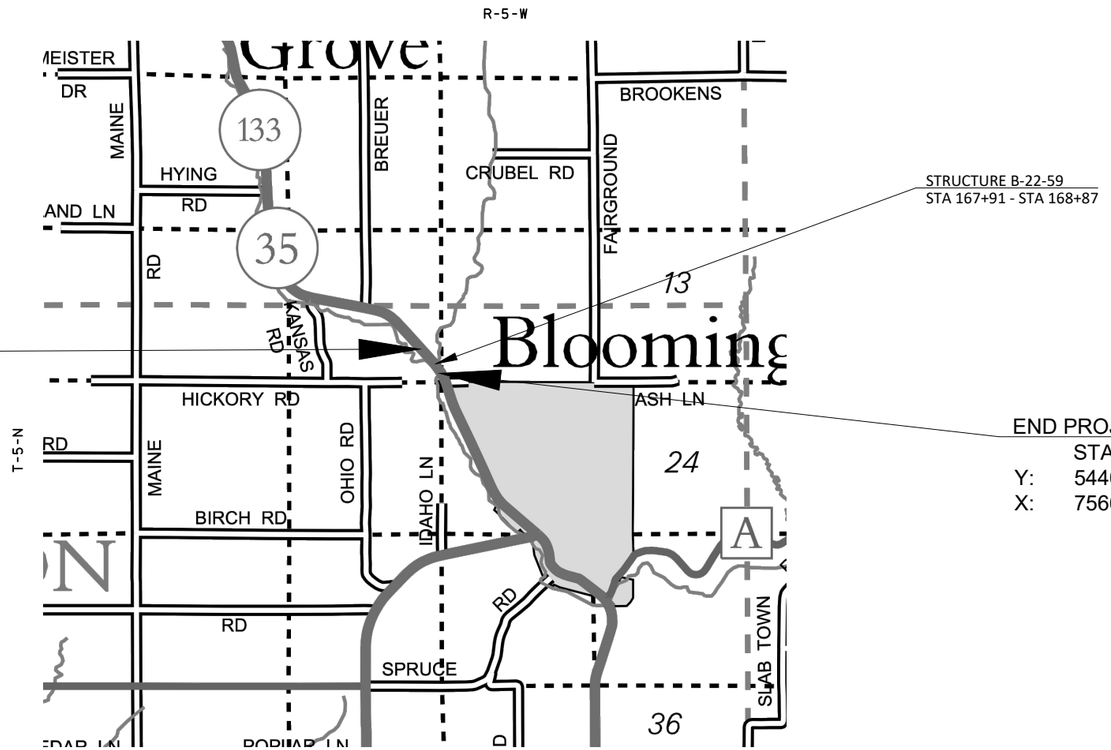
STH 35

GRANT COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5580-00-82	———	—

STATE PROJECT NUMBER

5580-00-82



BEGIN PROJECT
STA 165+26
Y: 543577.005
X: 756986.078

END PROJECT
STA 171+52
Y: 544079.865
X: 756616.720

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), GRANT COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WisDOT
Designer	KATHLEEN KLUDY, P.E.
Project Manager	TIMOTHY MAEDKE, P.E.
Regional Examiner	SW REGION
Regional Supervisor	REINY YANKE, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 5/1/2020 (Signature)

E

FILE NAME :C:±WISDOT±DESIGN±C3D±55800002±SHEETS PLAN±010101_TI.DWG

PLOT DATE : 4/18/2020 5:53 PM PLOT BY : PETERSON, SHANE J PLOT NAME :

GENERAL NOTES

- WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE THICKNESS SHOWN ON THE PLAN IS APPROXIMATE. THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.
- THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT ANY UTILITIES NOT ON PLAN.
- REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A MILLED BUTT JOINT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.
- SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND SHALL BE PLACED WITH CAUTION TO AVOID CONFLICT WITH UTILITIES.
- PRIOR TO THE PLACEMENT OF MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.

CONTACTS

WISDOT

WISCONSIN DEPARTMENT OF TRANSPORTATION
SOUTHWEST REGION - LA CROSSE OFFICE
3550 MORMON COULEE RD
LA CROSSE, WI 54601
ATTN: TIMOTHY MAEDKE, P.E. (PROJECT MANAGER)
PHONE: (608) 789-6317
EMAIL: timothy.maedke@dot.wi.gov

WISCONSIN DEPARTMENT OF TRANSPORTATION
SOUTHWEST REGION - LA CROSSE OFFICE
3550 MORMON COULEE RD
LA CROSSE, WI 54601
ATTN: KATHLEEN KLUDY, P.E. (PROJECT DESIGNER)
PHONE: (608) 785-9948
EMAIL: kathleen.kludy@dot.wi.gov

DNR LIAISON

DNR SOUTH CENTRAL REGION HQ
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
ATTN: ANDY BARTA (GRANT COUNTY)
PHONE: (608) 275-3308
EMAIL: andrew.barta@wisconsin.gov

UTILITY CONTACTS

COMMUNICATION LINE

TDS TELECOM - COMMUNICATION LINE
ATTN: KEN KLAAS
140 N MONROE ST
P.O. BOX 467
LANCASTER, WI 53813
PHONE: (608) 723-2181
EMAIL: kenneth.klaas@tdstelecom

ELECTRIC

ATC MANAGEMENT, INC - ELECTRICITY
ATTN: MIKE OLSEN
801 O'KEEFE RD
DE PERE, WI 54115-6113
PHONE: (920) 338-6582
EMAIL: molsen@atcllc.com

GAS/PETROLEUM

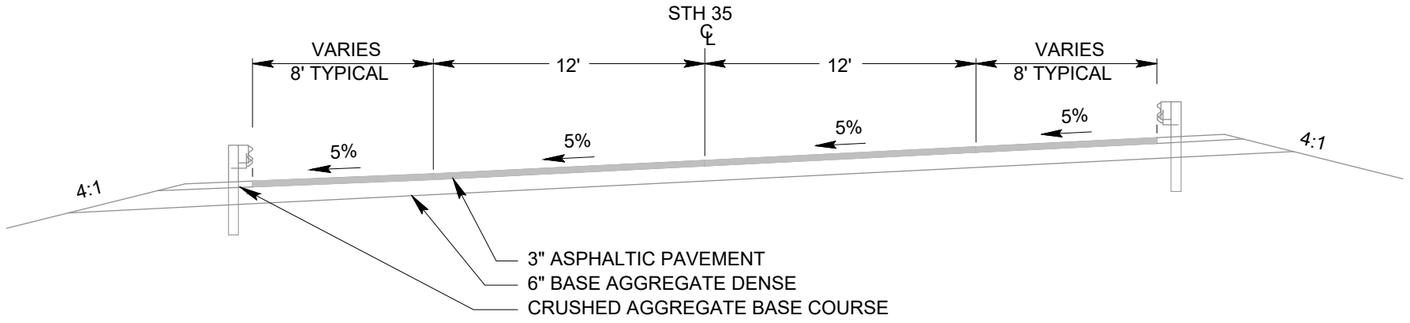
WE ENERGIES - GAS/PETROLEUM
ATN: NICOLE SMULLEN
333 WEST EVERETT ST, ROOM A299
MILWAUKEE, WI 53203
PHONE: (414) 221-5617
EMAIL: nicole.smullen@we-energies.com

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

STANDARD ABBREVIATIONS

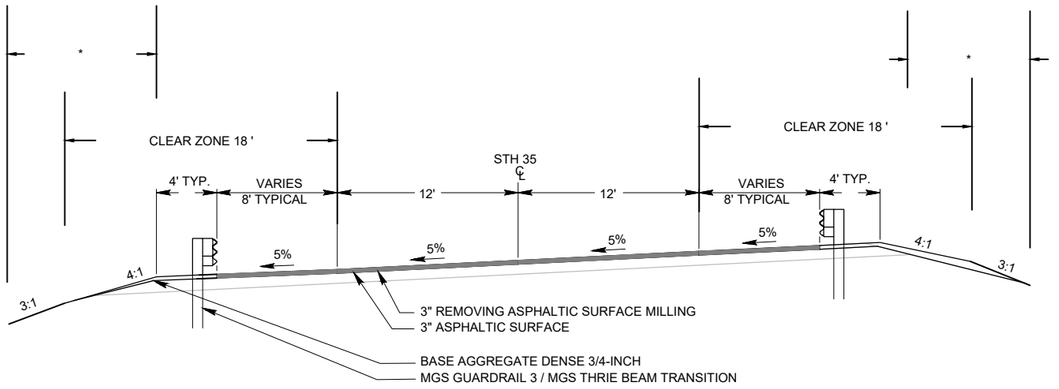
AC	ACRE
AGG	AGGREGATE
<	ANGLE
AE, AEW	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
B.F.	BACK FACE
BM	BENCHMARK
BTWN	BETWEEN
CTR.	CENTER
C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
C.E.	COMMERCIAL ENTRANCE
CONST.	CONSTRUCTION
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CO.	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR.	CREEK
CABC	CRUSHED AGGREGATE BASE COURSE
CY	CUBIC YARD
CP	CONTROL POINT OR CULVERT PIPE
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
D.H.V.	DESIGN HOURLY VOLUME
DIA.	DIAMETER
D.D.	DIRECTIONAL DISTRIBUTION
DISCH.	DISCHARGE
DMS	DYNAMIC MESSAGE SIGN
EA	EACH
E	EAST
EB	EASTBOUND
ELEC.	ELECTRIC(AL), ELEC. CABLE
EL., ELEV.	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC.	EXCAVATION
EXIST	EXISTING
F.F.	FACE TO FACE
FERT.	FERTILIZER
F.E.	FIELD ENTRANCE
F/L, F.L.	FLOW LINE
GALV.	GALVANIZE
H.S.	HIGH STRENGTH
CWT	HUNDRED WEIGHT
INL	INLET
INTER.	INTERSECTION
IH	INTERSTATE HIGHWAY
JT.	JOINT
LT	LEFT
L.H.F.	LEFT HAND FORWARD
L.	LENGTH OF CURVE
L.F.	LINEAR FOOT(FEET)
LC.	LONG CHORD
LS	LUMP SUM
M.P.	MARKER POST
MGAL	1000 GALLONS
N.C.	NORMAL CROWN
N	NORTH
NB	NORTHBOUND
NOR	NORMAL
NO.	NUMBER
PAV'T	PAVEMENT
P.L.E.	PERMANENT LIMITED EASEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
P.E.	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
P.L.	PROPERTY LINE
R	RADIUS OR RANGE
R/L	REFERENCE LINE
R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
REQ'D	REQUIRED
RT	RIGHT
R.H.F.	RIGHT HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHLD.	SHOULDER(S)
SHR.	SHRINKAGE
S	SOUTH
SB	SOUTHBOUND
S.F.	SQUARE FOOT (FEET)
SDD	STANDARD DETAIL DRAWING(S)
STH	STATE TRUNK HIGHWAY
STA.	STATION
S.E.	SUPERELEVATION
S/L	SURVEY LINE
SYM	SYMMETRICAL
T.	PERCENT TRUCKS
TEL.	TELEPHONE
TEMP.	TEMPORARY
T.L.E.	TEMPORARY LIMITED EASEMENT
T.O.C.	TOP OF CURB
TYP	TYPICAL
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND (CABLE)
VAR	VARIABLE
V.C.	VERTICAL CURVE
V.P.C.	VERTICAL POINT OF CURVATURE
V.P.I.	VERTICAL POINT OF INTERSECTION
V.P.T.	VERTICAL POINT OF TANGENCY
Wt.	WEIGHT
W	WEST
WB	WESTBOUND

ORDER OF SECTION 2 SHEETS



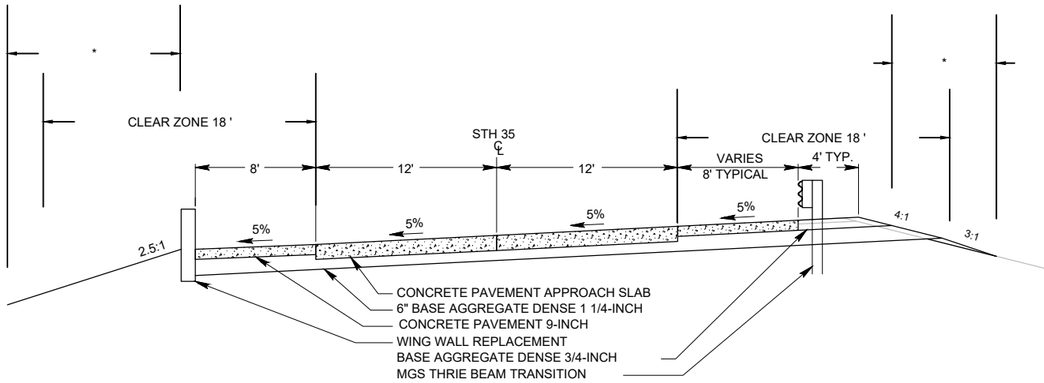
EXISTING SUPERELEVATED TYPICAL SECTION

B-22-0059 APPROACHES



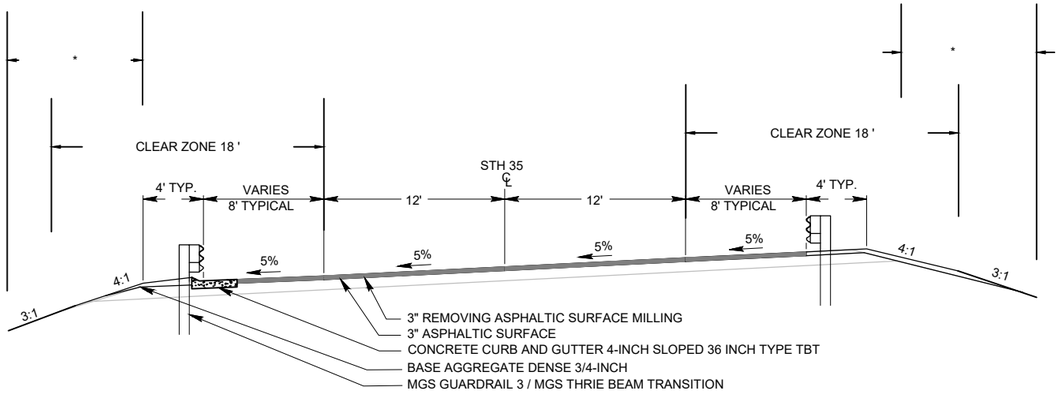
PROPOSED SUPERELEVATED TYPICAL SECTION

STATION 165+77 TO STATION 167+09
STATION 169+18 TO STATION 171+02



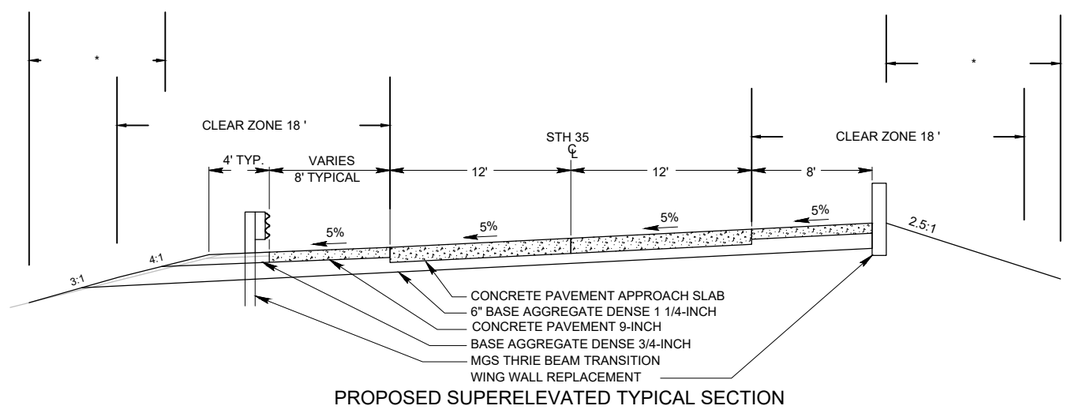
PROPOSED SUPERELEVATED TYPICAL SECTION

STATION 167+64 TO STATION 167+85



PROPOSED SUPERELEVATED TYPICAL SECTION

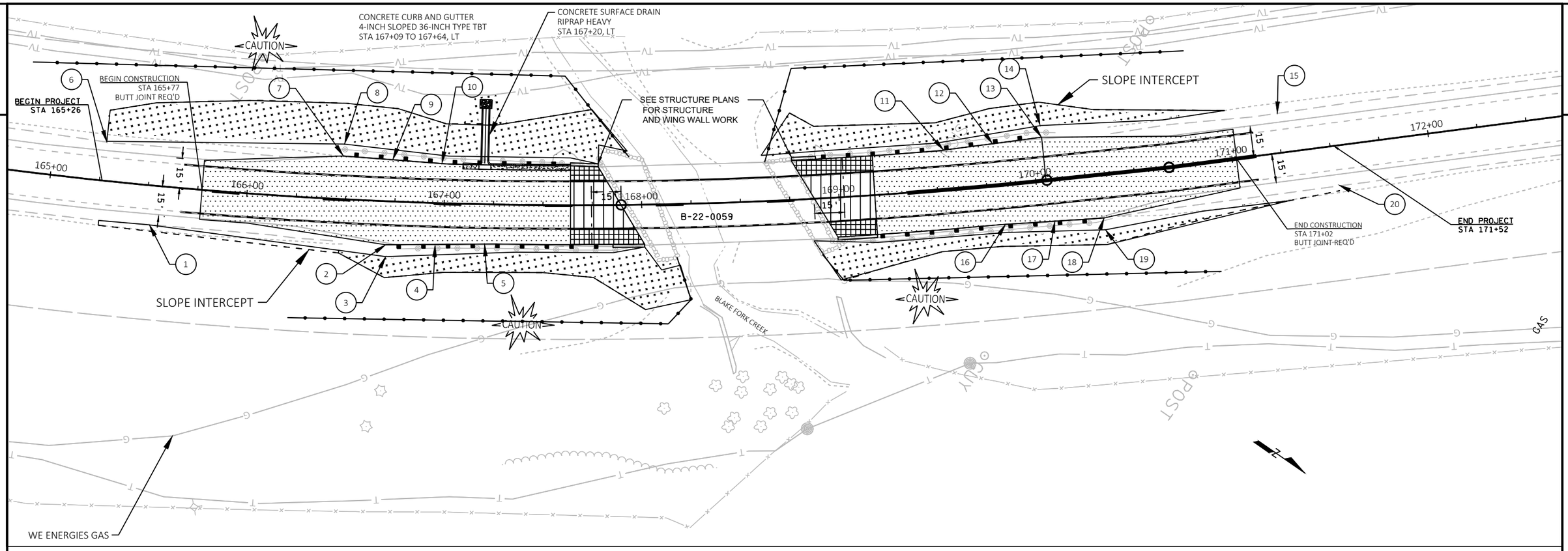
STATION 167+09 TO STATION 167+64



PROPOSED SUPERELEVATED TYPICAL SECTION

STATION 168+89 TO STATION 169+18

* LIMITS OF SALVAGED TOPSOIL & FINISHING ITEMS (AS DIRECTED BY ENGINEER)



2

LEGEND

- SILT FENCE (AS DIRECTED BY THE ENGINEER)
- LIMITS OF BORROW, SALVAGED TOPSOIL, MULCH, AND SEEDING (AS DIRECTED BY THE ENGINEER)
- EXCAVATION COMMON AND REPLACE WITH BASE AGGREGATE DENSE 1 ¼ INCH AND CONCRETE PAVEMENT APPROACH SLAB
- EXCAVATION COMMON AND REPLACE WITH CONCRETE PAVEMENT 9-INCH
- REMOVE AND REPLACE WITH BASE AGGREGATE DENSE 1 ¼ INCH, CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT, AND CONCRETE SURFACE DRAIN WITH FLUME. REFER TO SDD FOR CONCRETE SURFACE DRAIN DETAILS.
- REMOVE ASPHALTIC SURFACE MILLING AND REPLACE WITH ASPHALTIC SURFACE
- RIPRAP HEAVY
- CAUTION — POTENTIAL UTILITY CONFLICT. INSTALL SILT FENCE WITH CAUTION.

1. STA. 165+51, 15' RT; BEGIN 10:1 SLOPE TO HINGE POINT
2. STA. 166+71, 22' RT (POST 1)
3. STA. 166+71, 28' RT; HINGE POINT
4. STA. 166+96 (POST 5)
5. STA. 167+21 (POST 9)
6. STA. 165+26, 15' LT; BEGIN 10:1 SLOPE TO HINGE POINT
7. STA. 166+47, 22' LT (POST 1)
8. STA. 166+47, 28' LT; HINGE POINT
9. STA. 166+72 (POST 5)
10. STA. 166+97 (POST 9)
11. STA. 169+54 (POST 9)
12. STA. 169+79 (POST 5)
13. STA. 170+04, 22' LT (POST 1)
14. STA. 170+04, 28' LT; HINGE POINT
15. STA. 171+25, 18' LT; BEGIN 10:1 SLOPE TO HINGE POINT
16. STA. 169+82 (POST 9)
17. STA. 170+07 (POST 5)
18. STA. 170+32, 22' RT (POST 1)
19. STA. 170+32, 28' RT; HINGE POINT
20. STA. 171+52, 20' RT; BEGIN 10:1 SLOPE TO HINGE POINT

PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	CONSTRUCTION DETAIL	SHEET 4	E

FILE NAME : C:\WISDOT\DESIGN\C3D\55800002\SHEETS PLAN\021001_CD.DWG
LAYOUT NAME - 021001_cd
PLOT DATE : 6/16/2020 3:37 PM
PLOT BY : PETERSON, SHANE J
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

NOTES:

- TO BE USED IN CONJUNCTION WITH SDD 15C-4.
- THE LOCATION OF PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE APPROVED BY THE ENGINEER.
- PCMS SHALL BE OPERATIONAL FOR A MINIMUM OF ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- PCMS MESSAGE MAY REQUIRE ADJUSTMENT TO ACCOMMODATE CONSTRUCTION SCHEDULE. MESSAGES MUST BE APPROVED BY THE ENGINEER.

2

2

Millville

MILLVILLE

WYALUSING

WYALUSING

PATCH GROVE

MOUNT HOPE

Mount Hope

Werley

MOUNT IDA

Mt. Ida

FENNIMORE

Fennimore

Pre

Wyalusing

Patch Grove

ROAD WORK 2 MILES W20-1

ROAD WORK 1 MILE W20-1

ROAD WORK B-22-0059

NORTH LANCASTER

Stitzer

LIBERTY

Bloomington

LITTLE GRANT

Bagley

BLOOMINGTON

ROAD WORK 1 MILE W20-1

ROAD WORK 2 MILES W20-1

STATE OF IOWA

Lancaster

ELLENBORO

Glen Haven

GLEN HAVEN

N. Andover

BEETOWN

SOUTH LANCASTER

Beetown

Hurricane

Ellenboro

BNSF

LEGEND

MB PORTABLE CHANGEABLE MESSAGE SIGN

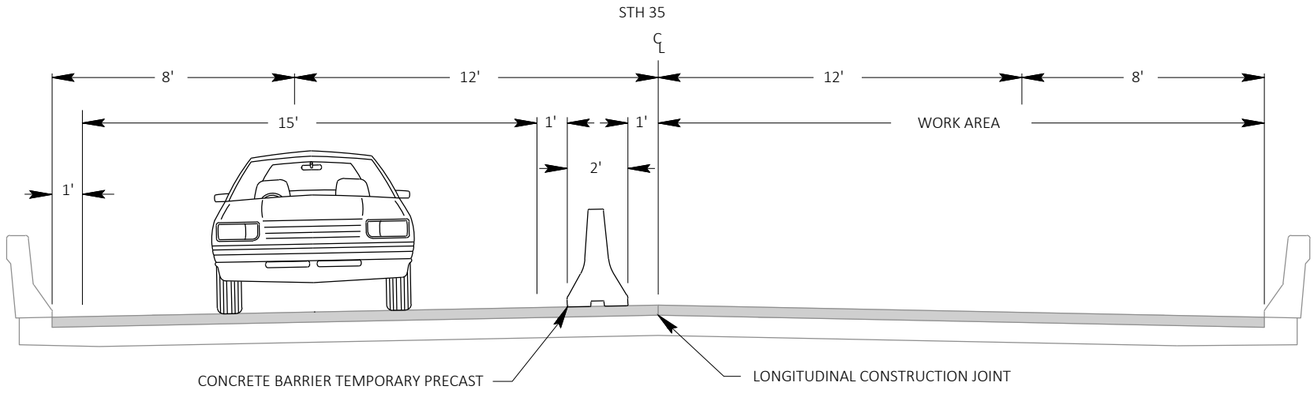
PCMS MESSAGE

ROAD WORK STARTS XX/XX/XXXX

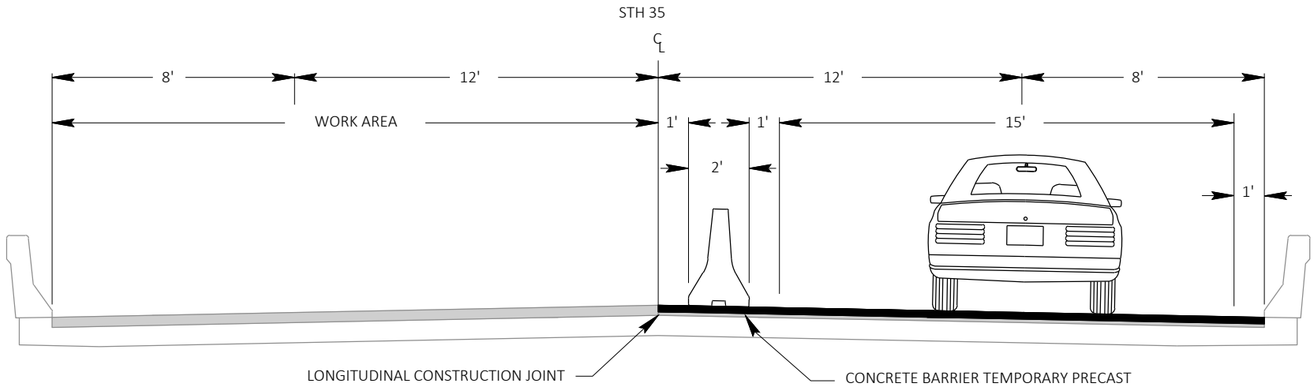
PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	ADVANCED WARNING - TRAFFIC CONTROL	SHEET 5	E

FILE NAME : C:\WISDOT\DESIGN\C3D\55800002\SHEETS PLAN\023301-AW.DWG
LAYOUT NAME - 023301_aw
PLOT DATE : 4/18/2020 7:42 PM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : 1 IN:2 MI
WISDOT/CADDS SHEET 42

2



STH 35 STAGE 1



STH 35 STAGE 2

PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	TRAFFIC CONTROL STAGING	SHEET 6	E

FILE NAME : C:\WISDOT\DESIGN\C3D\55800002\SHEETS PLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1
PLOT DATE : 4/18/2020 8:11 PM
PLOT BY : PETERSON, SHANE J
PLOT NAME :
PLOT SCALE : 1 IN:5 FT
WISDOT/CADDS SHEET 42

2

2

CATTLE FENCE POST

CP 902 A 1000MM BERTSEN FENO MONUMENT WITH 2" ALUMINUM CAP AND A 60" CARSONITETHIN LINE WITNESS POST

R/W POST

135.2'

57.6'

63.5'

163+00

164+00

165+00

33.8'

CP 901 A 1000MM BERTSEN FENO MONUMENT WITH 2" ALUMINUM CAP AND A 60" CARSONITETHIN LINE WITNESS POST.

Y/NORTHING COORDINATE: 544176.071
X/EASTING COORDINATE: 756492.146

FEN

205.4'

R/W POST

117.2'

27.76'

173+00

172+00

12" CULVERT

151.7'

40" OAK TREE

GAS

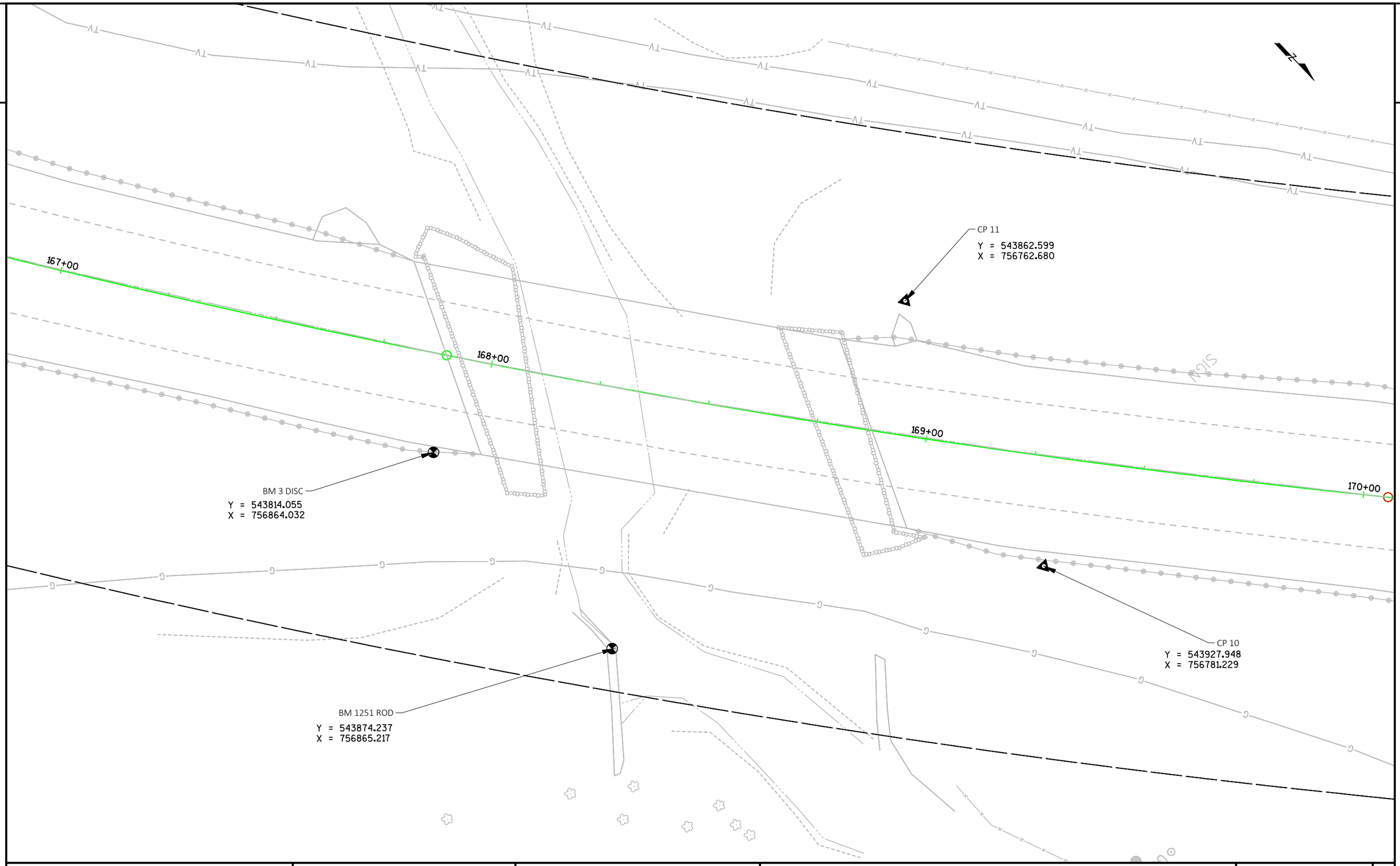
PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	CONTROL POINTS	SHEET 7	E

FILE NAME : C:\WISDOT\DESIGN\C3D\55800002\SHEETS PLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad

PLOT DATE : 4/18/2020 9:16 PM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2



PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	CONTROL POINTS	SHEET 8	E

5580-00-82

Line	Item	Item Description	Unit	Total	Qty
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. Station 168+39	LS	1.000	1.000
0012	204.0115	Removing Asphaltic Surface Butt Joints	SY	28.000	28.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	1,555.000	1,555.000
0016	204.0165	Removing Guardrail	LF	533.000	533.000
0018	205.0100	Excavation Common	CY	117.000	117.000
0020	206.1000	Excavation for Structures Bridges (structure) 01. B-22-59	LS	1.000	1.000
0022	208.0100	Borrow	CY	670.000	670.000
0024	210.1100	Backfill Structure Type A	CY	369.000	369.000
0028	213.0100	Finishing Roadway (project) 01. 5580-00-82	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	56.000	56.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	80.000	80.000
0034	415.0090	Concrete Pavement 9-Inch	SY	100.000	100.000
0036	415.0410	Concrete Pavement Approach Slab	SY	150.000	150.000
0038	416.1010	Concrete Surface Drains	CY	4.000	4.000
0040	455.0605	Tack Coat	GAL	110.000	110.000
0042	465.0105	Asphaltic Surface	TON	268.000	268.000
0044	502.0100	Concrete Masonry Bridges	CY	63.000	63.000
0046	502.0717.S	Crack Sealing Epoxy	LF	25.000	25.000
0052	502.3200	Protective Surface Treatment	SY	437.000	437.000
0054	502.3210	Pigmented Surface Sealer	SY	104.000	104.000
0058	502.4204	Adhesive Anchors No. 4 Bar	EACH	226.000	226.000
0060	502.4205	Adhesive Anchors No. 5 Bar	EACH	156.000	156.000
0062	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	6,610.000	6,610.000
0074	509.0301	Preparation Decks Type 1	SY	20.000	20.000
0076	509.0302	Preparation Decks Type 2	SY	10.000	10.000
0078	509.0500	Cleaning Decks	SY	437.000	437.000
0084	509.1500	Concrete Surface Repair	SF	2.000	2.000
0086	509.2000	Full-Depth Deck Repair	SY	1.000	1.000
0088	509.2500	Concrete Masonry Overlay Decks	CY	25.000	25.000
0098	511.1200	Temporary Shoring (structure) 01. B-22-59	SF	1,513.000	1,513.000
0100	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	55.000	55.000
0102	603.8000	Concrete Barrier Temporary Precast Delivered	LF	430.000	430.000
0104	603.8125	Concrete Barrier Temporary Precast Installed	LF	860.000	860.000
0106	606.0300	Riprap Heavy	CY	47.000	47.000
0108	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0116	614.2300	MGS Guardrail 3	LF	100.000	100.000
0118	614.2500	MGS Thrie Beam Transition	LF	158.000	158.000

5580-00-82

Line	Item	Item Description	Unit	Total	Qty
0120	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0124	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5580-00-82	EACH	1.000	1.000
0126	619.1000	Mobilization	EACH	0.333	0.333
0128	624.0100	Water	MGAL	5.000	5.000
0130	625.0500	Salvaged Topsoil	SY	1,408.000	1,408.000
0132	627.0200	Mulching	SY	1,408.000	1,408.000
0134	628.1504	Silt Fence	LF	1,130.000	1,130.000
0136	628.1520	Silt Fence Maintenance	LF	1,130.000	1,130.000
0138	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0140	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0142	629.0210	Fertilizer Type B	CWT	0.900	0.900
0144	630.0120	Seeding Mixture No. 20	LB	39.000	39.000
0146	630.0200	Seeding Temporary	LB	39.000	39.000
0148	630.0500	Seed Water	MGAL	5.000	5.000
0154	643.0300	Traffic Control Drums	DAY	364.000	364.000
0156	643.0420	Traffic Control Barricades Type III	DAY	28.000	28.000
0160	643.0715	Traffic Control Warning Lights Type C	DAY	84.000	84.000
0164	643.0900	Traffic Control Signs	DAY	672.000	672.000
0168	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0170	643.5000	Traffic Control	EACH	0.333	0.333
0172	645.0111	Geotextile Type DF Schedule A	SY	54.000	54.000
0174	645.0120	Geotextile Type HR	SY	90.000	90.000
0176	646.1020	Marking Line Epoxy 4-Inch	LF	1,462.000	1,462.000
0182	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	1,365.000	1,365.000
0186	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	3,818.000	3,818.000
0190	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	24.000	24.000
0192	650.4500	Construction Staking Subgrade	LF	79.000	79.000
0194	650.5000	Construction Staking Base	LF	79.000	79.000
0196	650.7000	Construction Staking Concrete Pavement	LF	79.000	79.000
0198	650.9910	Construction Staking Supplemental Control (project) 01. 5580-00-82	LS	1.000	1.000
0200	650.9920	Construction Staking Slope Stakes	LF	533.000	533.000
0202	661.0100	Temporary Traffic Signals for Bridges (structure) 01. B-22-59	LS	1.000	1.000
0208	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0210	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000
0212	SPV.0035	Special 01. Cement Slurry Mixture	CY	2.000	2.000
0218	SPV.0090	Special 01. Pipe Underdrain Wrapped 6-Inch Special	LF	122.000	122.000
0220	SPV.0165	Special 01. Geocomposite Drain Board	SF	731.000	731.000

3

REMOVING ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
0010	165+77	-	165+81	14		30' x 4' BUTT JOINT
0010	165+81	-	167+64		778	
0010	169+18	-	170+98		777	
0010	170+98	-	171+02	14		30' x 4' BUTT JOINT
			TOTAL 0010	28	1,555	

EXCAVATION COMMON

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY	REMARKS
0010	167+64	-	167+89	ML	34	APPROACH SLAB
0010	167+60	-	167+72	LT/RT	19	CONCRETE SHOULDER 9-INCH
0010	167+60	-	169+15	ML	41	APPROACH SLAB
0010	167+60	-	169+49	LT/RT	23	CONCRETE SHOULDER 9-INCH
				TOTAL 0010	117	

BORROW

CATEGORY	STATION	TO	STATION	LOCATION	208.0100 BORROW CY
0010	165+26	-	167+90	LT	260
0010	166+49	-	168+20	RT	120
0010	168+67	-	171+00	LT	200
0010	168+95	-	171+00	RT	90
				TOTAL 0010	670

CONCRETE PAVEMENT APPROACH SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF
0010	167+64	-	167+97	ML	40		68	37	37	37
0010	168+88	-	169+18	ML	40		82	42	42	42
0010	167+64	-	167+78	LT		14				
0010	167+64	-	168+01	RT		31				
0010	168+76	-	169+18	LT		35				
0010	168+98	-	169+18	RT		20				
				TOTAL 0010	80	100	150	79	79	79

MGS GUARDRAIL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	166+45	-	167+78	LT	132	14	25	39.4	1	132
0010	166+77	-	168+02	RT	126	14	25	39.4	1	126
0010	168+77	-	170+12	LT	135	14	25	39.4	1	135
0010	167+99	-	170+37	RT	140	14	25	39.4	1	140
				TOTAL 0010	533	56	100	158	4	533

ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
0010	165+77	-	167+64	ML	55	134
0010	169+18	-	171+02	ML	55	134
				TOTAL 0010	110	268

CONCRETE SURFACE DRAIN

CATEGORY	STATION	LOCATION	416.1010 CONCRETE SURFACE DRAINS CY	* 606.0300 RIPRAP HEAVY CY	* 645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY
0010	167+20	LT	4	3	6
		TOTAL 0010	4	3	6

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT

CATEGORY	STATION	TO	STATION	LOCATION	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF
0010	167+09	-	167+64	LT	55
				TOTAL 0010	55

WATER

CATEGORY	LOCATION	624.0100 WATER MGAL	REMARKS
0010	SHOULDERS	5	COMPACTION
	TOTAL 0010	5	

3

3

TRAFFIC CONTROL SUMMARY

CATEGORY	STATION TO	STATION	NO. DRUMS	643.0300 TRAFFIC CONTROL DRUMS DAY	NO. BARRICADES TYPE III	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	NO. WARNING LIGHTS TYPE C	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	REMARKS
0010	164+50 -	172+75	13	364	1	28	3	84	STAGE 1&2
	TOTAL 0010			364		28		84	

CONCRETE BARRIER TEMPORARY PRECAST

CATEGORY	STATION TO	STATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
0010	166+50 -	170+75	430	860
	TOTAL 0010		430	860

TRAFFIC CONTROL SIGNS PCMS

CATEGORY	STAGE	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY
0010	PRECONSTRUCTION	14
	TOTAL 0010	14

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

CATEGORY	STATION	LOCATION	649.0850 LF	REMARKS
0010	165+90	RT	12	STAGE 1&2
0010	171+90	LT	12	STAGE 1&2
	TOTAL 0010		24	

TEMORARY MARKING LINE REMOVABLE TAPE 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	649.0150 LF	REMARKS
0010	158+90 -	165+90	RT	700	STAGE 1 YELLOW CL
0010	158+90 -	178+90	LT	606	STAGE 1 WHITE EDGELINE
0010	158+90 -	178+90	LT	600	STAGE 1 WHITE EDGELINE
0010	171+90 -	178+90	LT	700	STAGE 1 YELLOW CL
0010	158+90 -	178+90	RT	606	STAGE 2 WHITE EDGELINE
0010	158+90 -	178+90	RT	606	STAGE 2 WHITE EDGELINE
		TOTAL 0010		3,818	

MARKING LINE EPOXY 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	REMARKS
0010	165+67 -	169+34	CL	88	YELLOW CL DASH
0010	165+67 -	171+12	LT	542	WHITE EDGELINE
0010	169+34 -	171+12	CL	290	YELLOW CL DOUBLE
0010	165+67 -	171+12	RT	542	WHITE EDGELINE
		TOTAL 0010		1,462	

MARKING REMOVAL

CATEGORY	STATION TO	STATION	LOCATION	646.9010 MARKING REMOVAL LINE WATER BLASTING 4-INCH LF	REMARKS
0010	165+90 -	166+75	CL	85	STAGE 1
0010	165+90 -	171+90	LT	600	STAGE 1
0010	170+75 -	171+90	CL	115	STAGE 1
0010	166+25 -	171+90	RT	565	STAGE 2
		TOTAL 0010		1,365	

TRAFFIC CONTROL SIGNS

CATEGORY	LOCATION	LT/RT	NO. SIGN	643.0900 DAY	SIGN NO.	SIGN	SIZE	STAGE
0010	B-22-59	RT	1	14	W20-1A	ROAD WORK AHEAD		STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	W20-4A	ONE LANE ROAD AHEAD		STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	W14-3	NO PASSING ZONE	48"X36"	STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	W03-3	SIGNAL AHEAD		STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	W03-3	SIGNAL AHEAD		STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	G20-2A	END ROAD WORK	48"X24"	STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	R10-6	STOP HERE ON RED	24"X36"	STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	W05-52L		12"X36"	STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	W01-6	ARROW TO THE LEFT	48"X24"	STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	W05-52R		12"X36"	STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	W05-52R		12"X36"	STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	W01-4R			STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	W05-52L		12"X36"	STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	R10-6	STOP HERE ON RED	24"X36"	STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	G20-2A	END ROAD WORK	48"X24"	STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	W03-3	SIGNAL AHEAD		STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	W03-3	SIGNAL AHEAD		STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	W14-3	NO PASSING ZONE	48"X36"	STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	W20-4A	ONE LANE ROAD AHEAD		STAGE 1 RT LN CLOSED
0010	B-22-59	LT	1	14	W20-1A	ROAD WORK AHEAD		STAGE 1 RT LN CLOSED
0010	B-22-59	RT	1	14	W20-1A	ROAD WORK AHEAD		STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	W20-4A	ONE LANE ROAD AHEAD		STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	W14-3	NO PASSING ZONE	48"X36"	STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	W03-3	SIGNAL AHEAD		STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	W03-3	SIGNAL AHEAD		STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	G20-2A	END ROAD WORK	48"X24"	STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	R10-6	STOP HERE ON RED	24"X36"	STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	W05-52L		12"X36"	STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	W01-6	ARROW TO THE LEFT	48"X24"	STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	W05-52R		12"X36"	STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	W05-52R		12"X36"	STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	W01-4R			STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	W05-52L		12"X36"	STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	R10-6	STOP HERE ON RED	24"X36"	STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	G20-2A	END ROAD WORK	48"X24"	STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	W03-3	SIGNAL AHEAD		STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	W03-3	SIGNAL AHEAD		STAGE 2 LT LN CLOSED
0010	B-22-59	RT	1	14	W14-3	NO PASSING ZONE	48"X36"	STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	W20-4A	ONE LANE ROAD AHEAD		STAGE 2 LT LN CLOSED
0010	B-22-59	LT	1	14	W20-1A	ROAD WORK AHEAD		STAGE 2 LT LN CLOSED
0010	STH 35	RT	1	28	WO57-52	2 MILES AHEAD	36"x24"	STAGES 1&2
0010	STH 35	RT	1	28	WO57-52	1 MILE AHEAD	36"x24"	STAGES 1&2
0010	STH 35	LT	1	28	WO57-52	1 MILE AHEAD	36"x24"	STAGES 1&2
0010	STH 35	LT	1	28	WO57-52	2 MILES AHEAD	36"x24"	STAGES 1&2
			TOTAL 0010	672				

EROSION CONTROL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	REMARKS
0010									1	2					
0010	165+26	-	167+89	LT	560	560	325	325			0.35	15	15	1	
0010	166+49	-	168+20	RT	270	270	235	235			0.17	7	7	1	
0010	168+67	-	171+00	LT	250	250	250	250			0.16	7	7	1	
0010	168+95	-	171+00	RT	200	200	220	220			0.13	5	5	1	
0010					128	128	100	100			0.09	5	5	1	UNDISTRIBUTED
				TOTAL 0010	1,408	1,408	1,130	1,130	1	2	0.90	39	39	5	

SEE SDD 8D2 FOR FURTHER DETAILS ON CONCRETE SURFACE DRAIN

PROPOSED SLOPE INTERCEPT

R/W

PC: 164+11.58

BEGIN CONSTRUCTION
STA 165+77

165+00

166+00

167+00

168+00

169+00

170+00

171+00

172+00

BEGIN PROJECT
STA 165+26

MARKING LINE EPOXY 4-INCH WHITE EDGELINE

MARKING LINE EPOXY 4-INCH YELLOW CENTERLINE

PROPOSED SLOPE INTERCEPT

B-22-0059

BLAKE FORK CREEK

PROPOSED SLOPE INTERCEPT

PT: 170+05.58

PC: 170+67.73

PI: 170+67.73

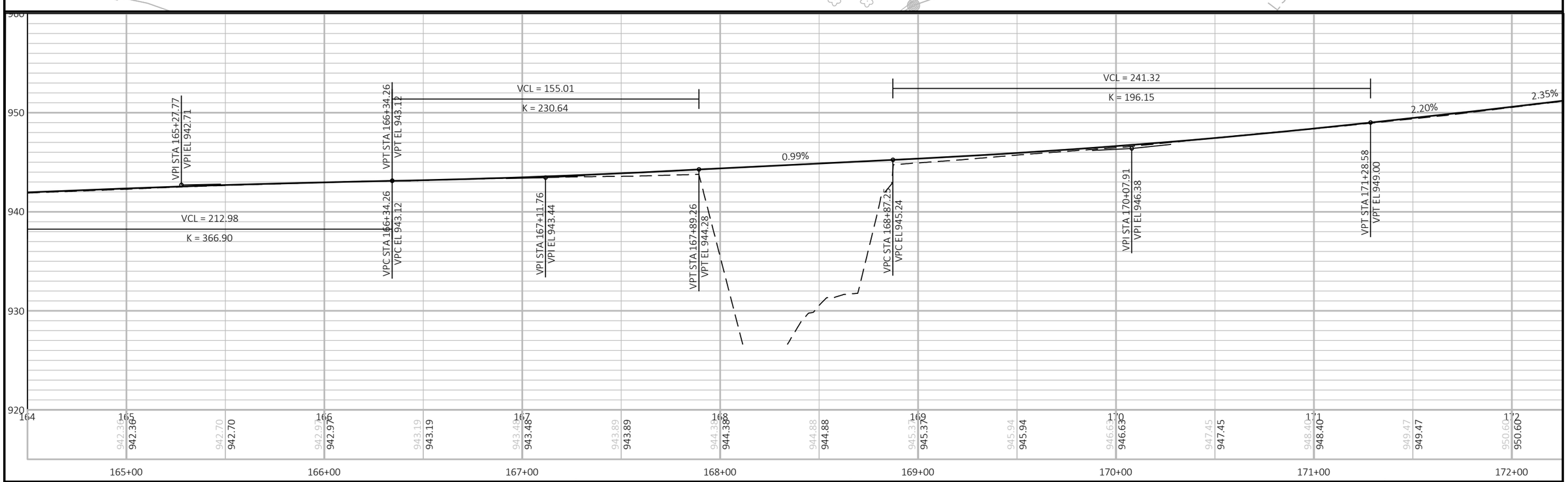
END CONSTRUCTION
STA 171+02

R/W

END PROJECT
STA 171+52

5

5



PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	PLAN AND PROFILE: STH 35	SHEET 14	E

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LAYOUT NAME - 050101_pp

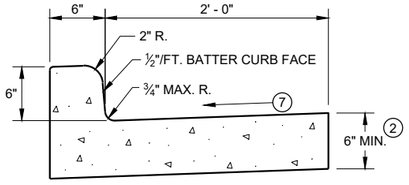
PLOT DATE : 4/22/2020 12:58 PM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

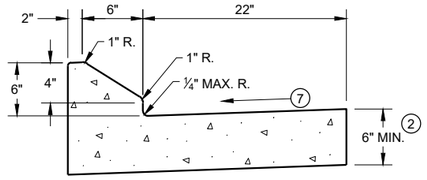
Standard Detail Drawing List

08D01-21A	CONCRETE CURB & GUTTER
08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E09-06	SILT FENCE
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15D33-06	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

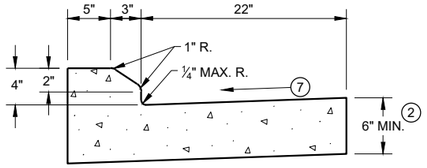
6



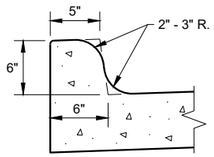
TYPES A (1) & D



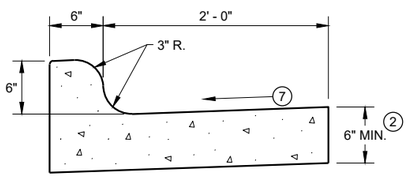
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

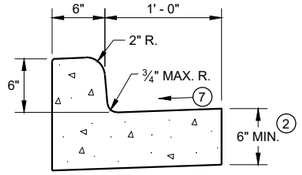


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



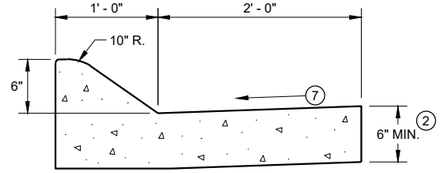
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

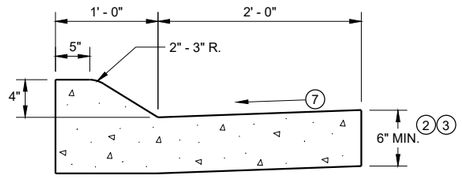


TYPES A (1) & D

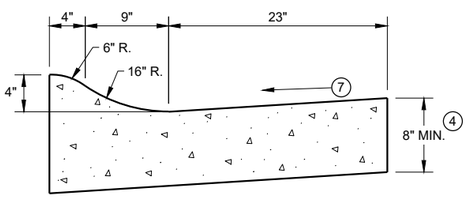
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A (1) & D



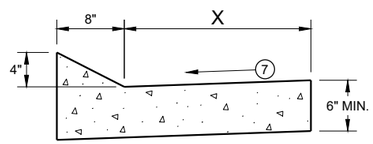
4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB AND GUTTER 36"

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

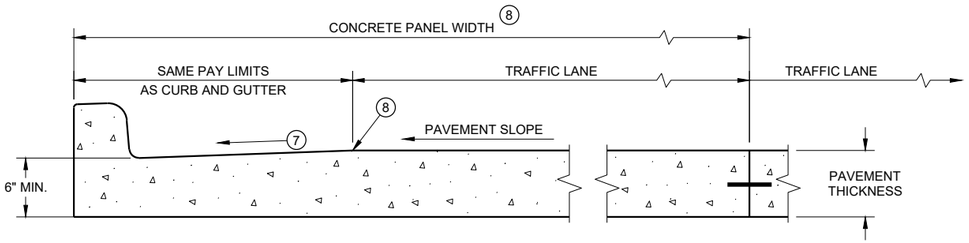


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

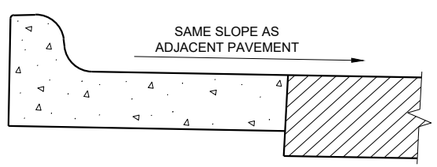
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 21a

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.

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

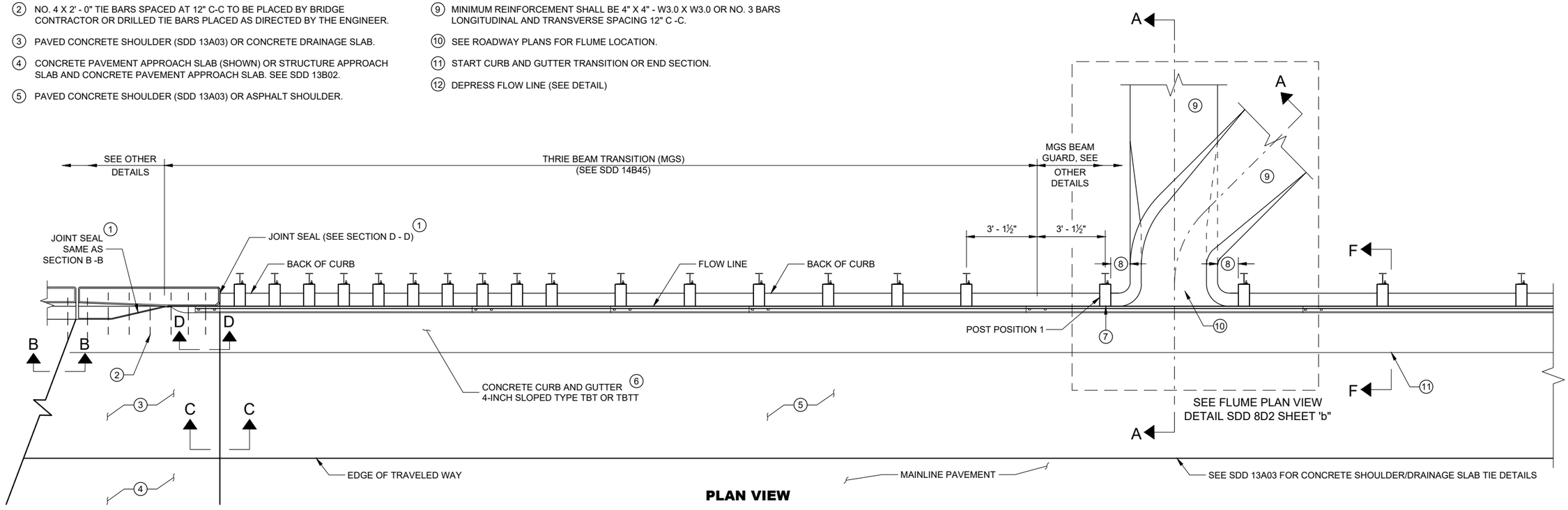
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

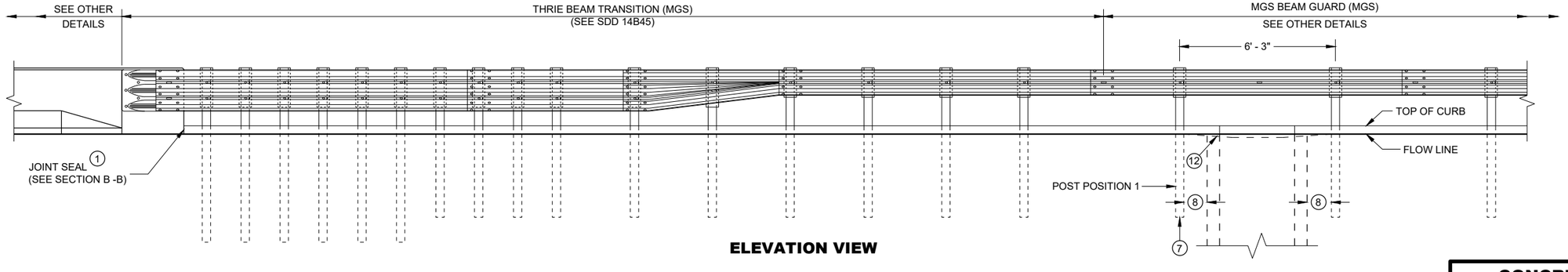
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



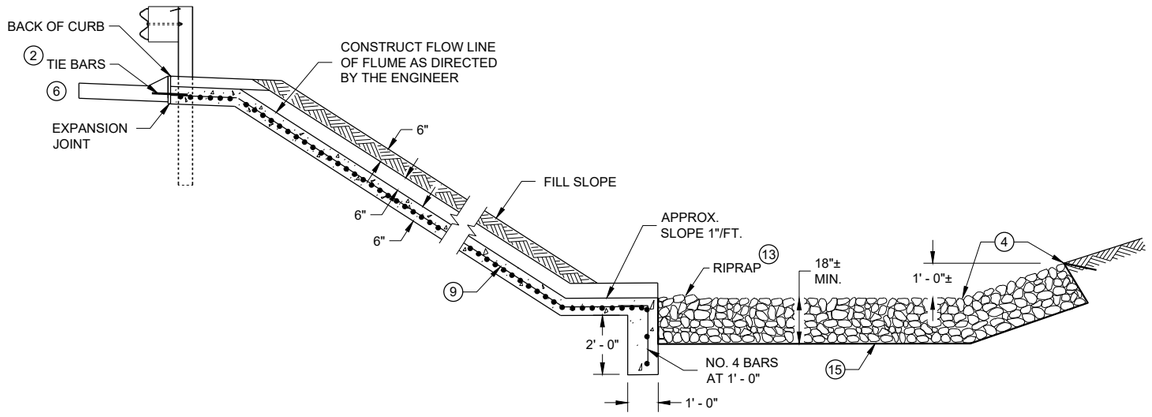
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

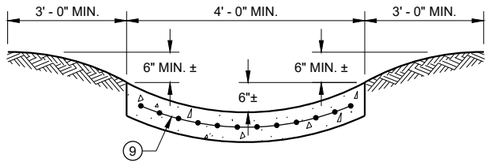
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 07a

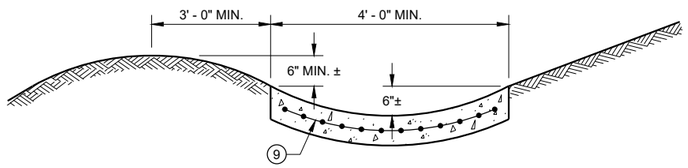
SDD 08D02 - 07a



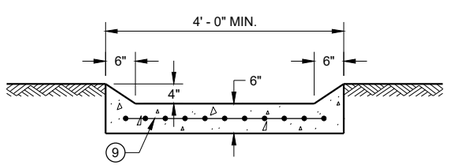
SECTION A - A



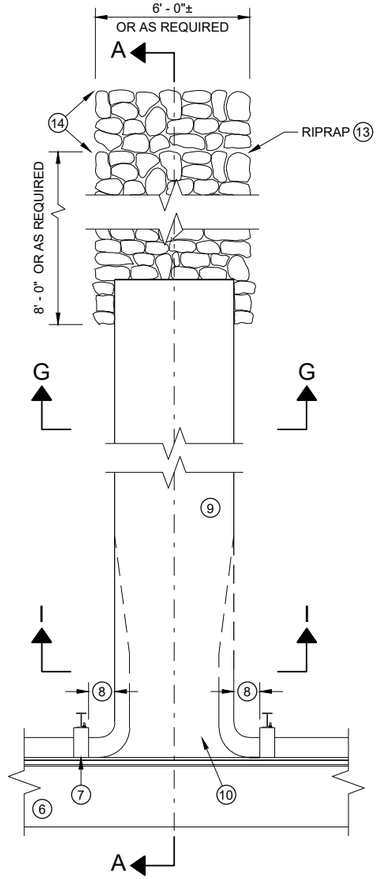
SECTION G - G



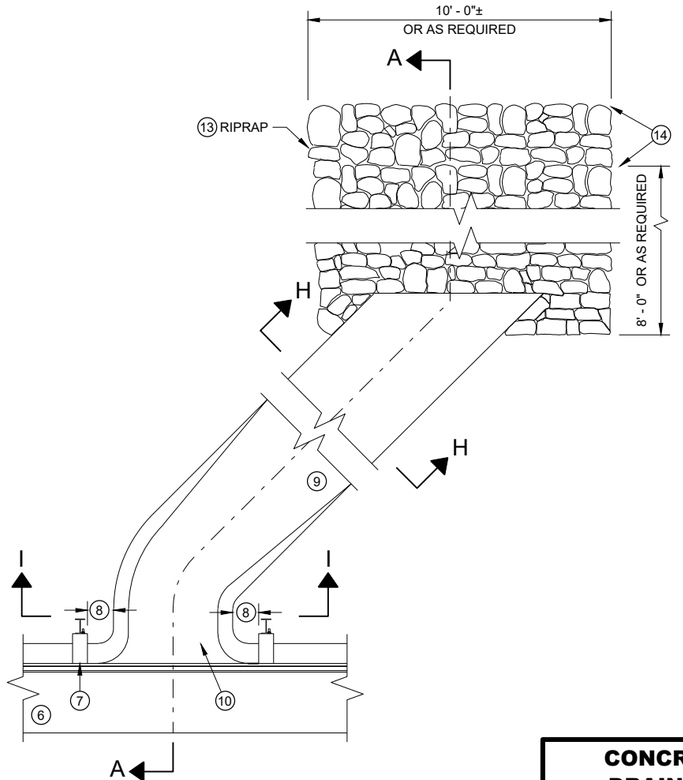
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

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.

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

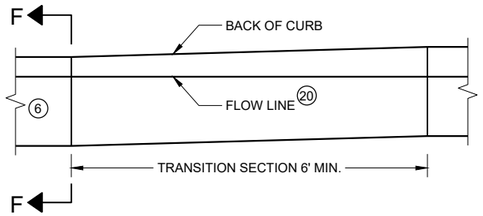
1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE FABRIC TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

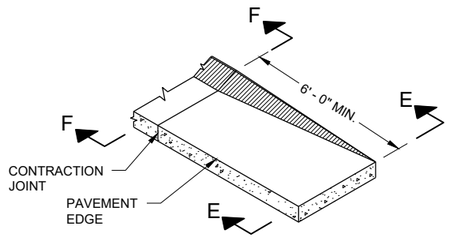
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

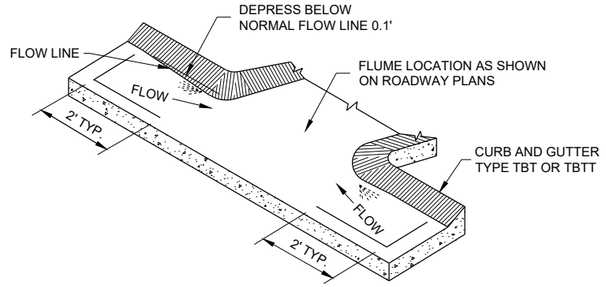
SDD 08D02 - 07b



CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION AT FLUMES CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

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.

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(15) GEOTEXTILE FABRIC TYPE HR.

(16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

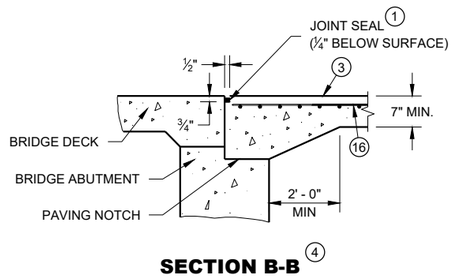
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

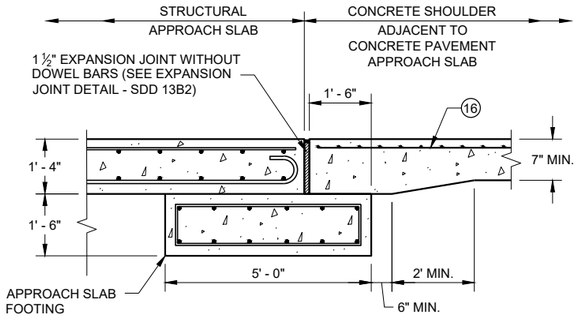
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

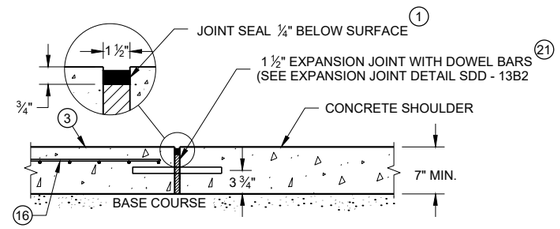
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



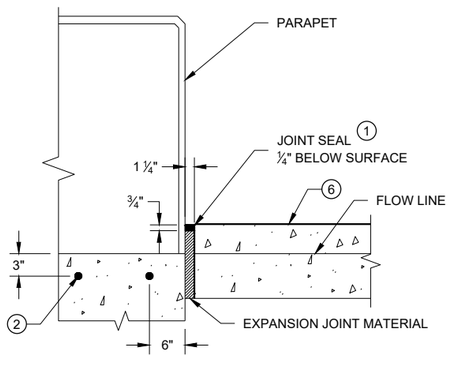
SECTION B-B (4)



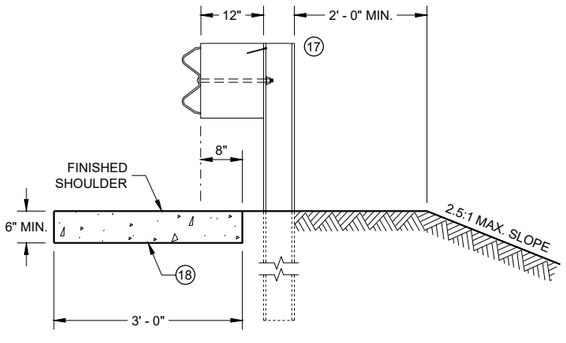
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



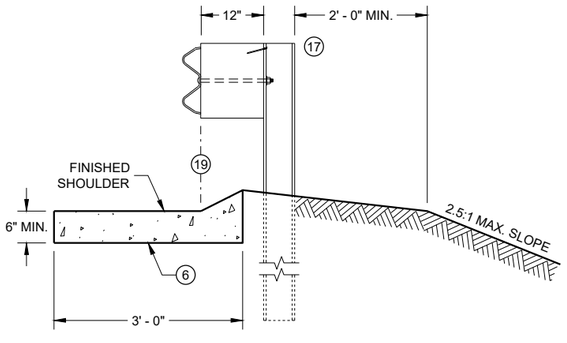
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

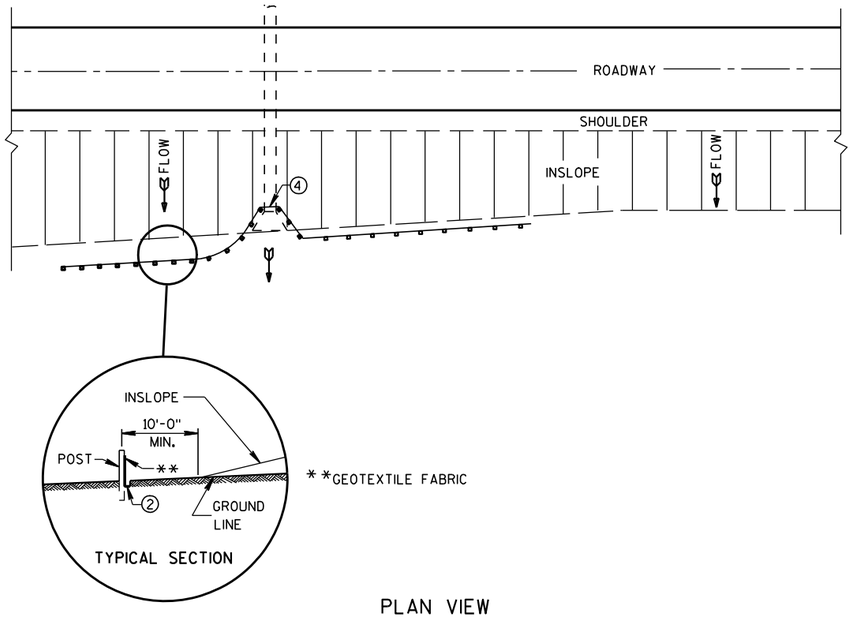
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

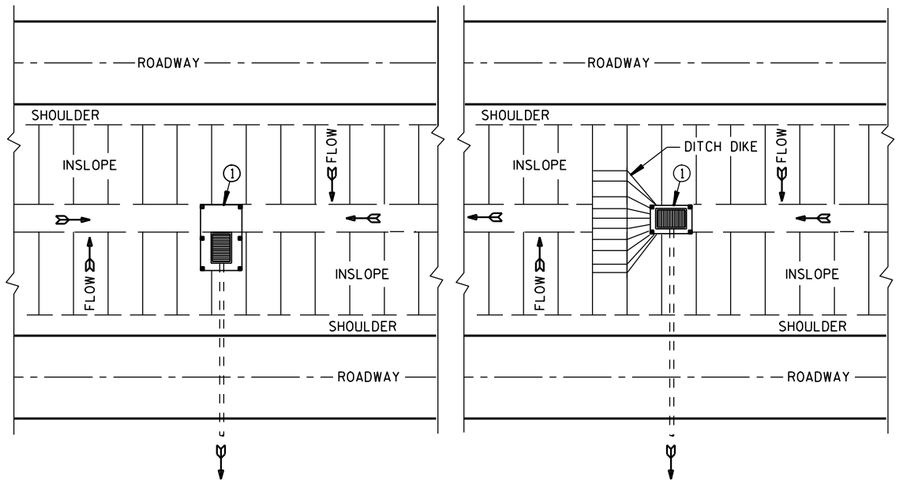
SDD 08D02 - 07c

SDD 08D02 - 07c



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



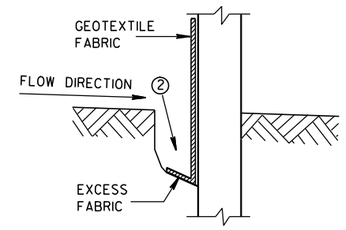
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

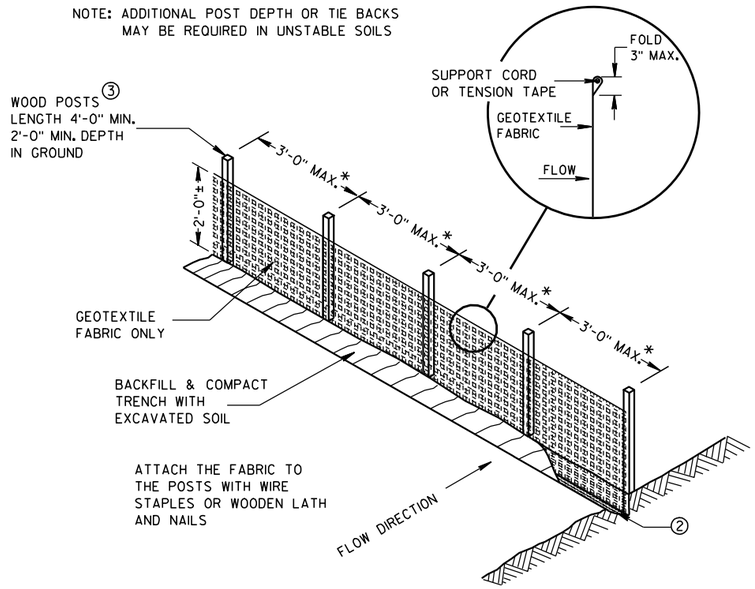
GENERAL NOTES

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

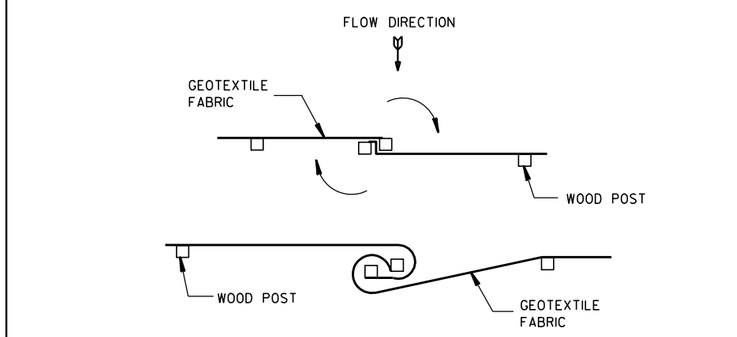
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



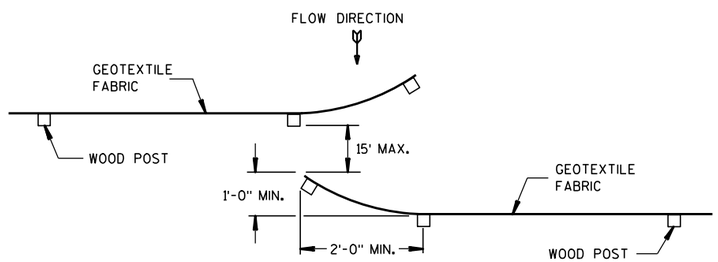
TRENCH DETAIL



SILT FENCE

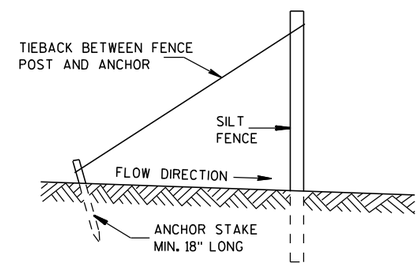


TWIST METHOD



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

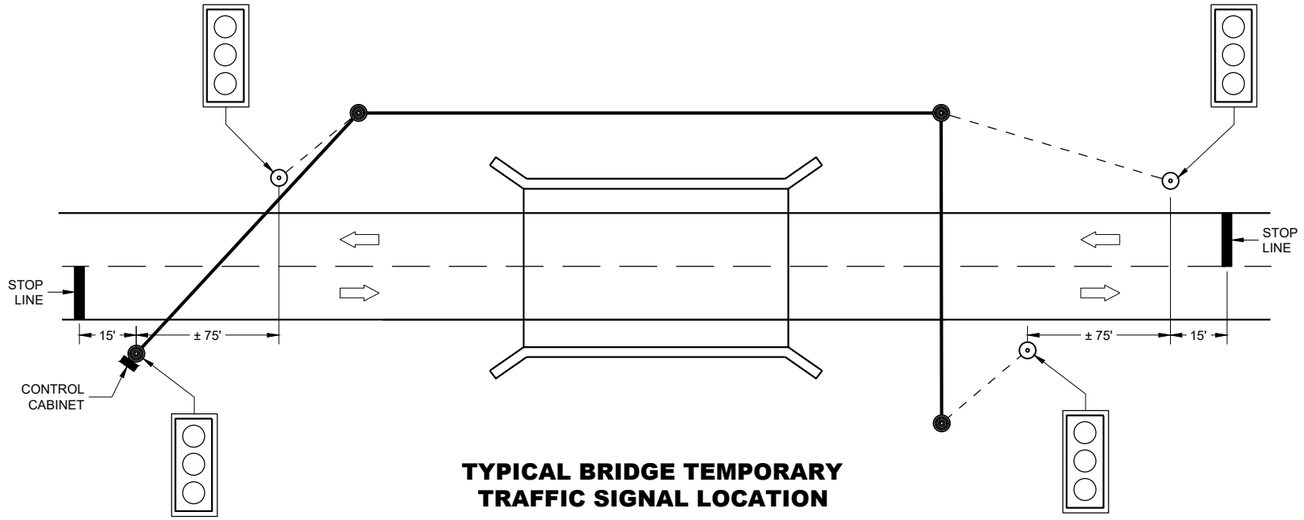
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

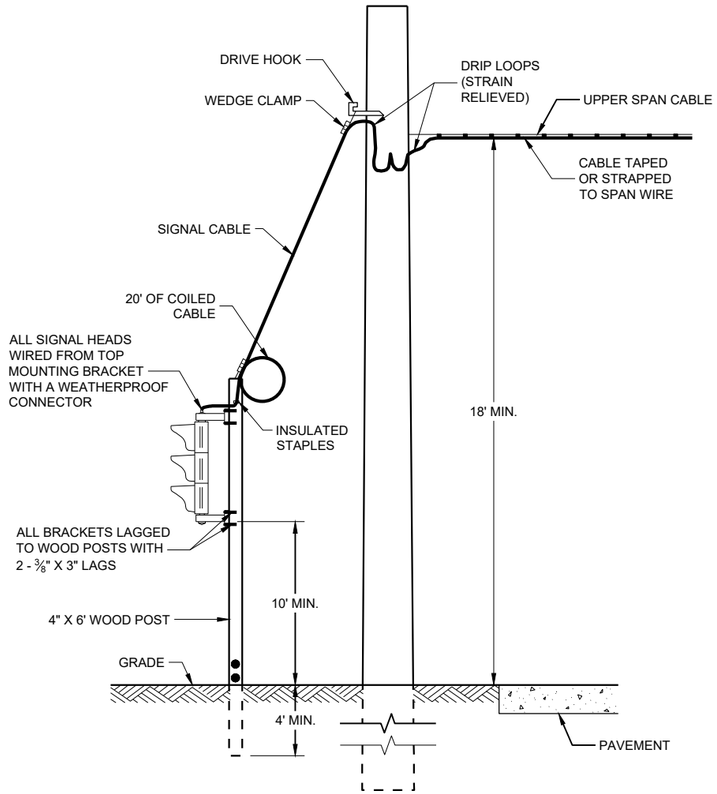
S.D.D. 8 E 9-6

6

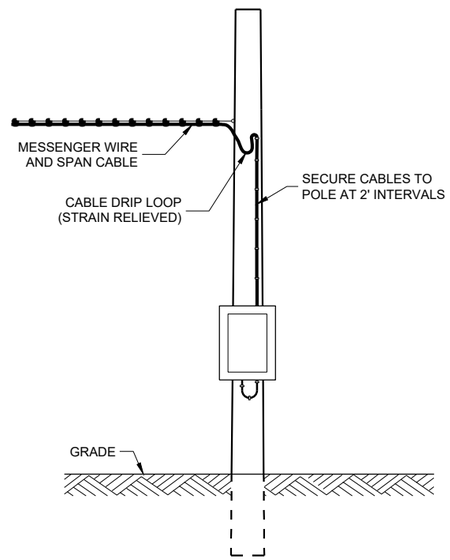
S.D.D. 8 E 9-6



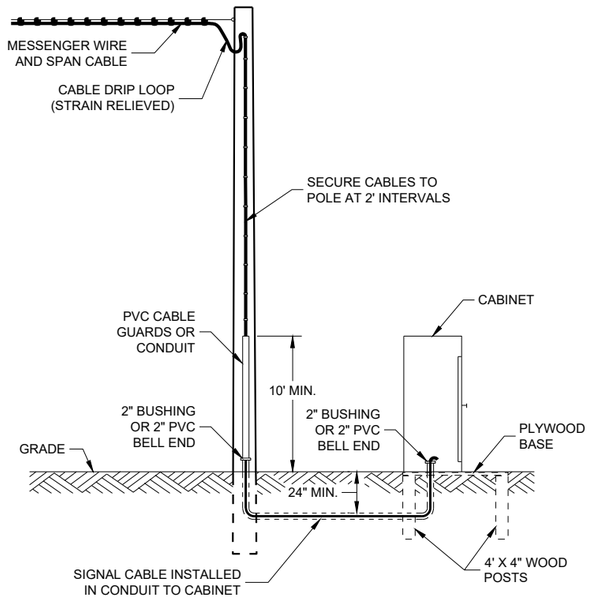
TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREADAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE (3-12")

GENERAL NOTES

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

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

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

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

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

VERTICAL CLEARANCE ETC. PER NEC.

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

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.

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

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

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

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — ROADWAY STANDARDS DEVE ENGINEER

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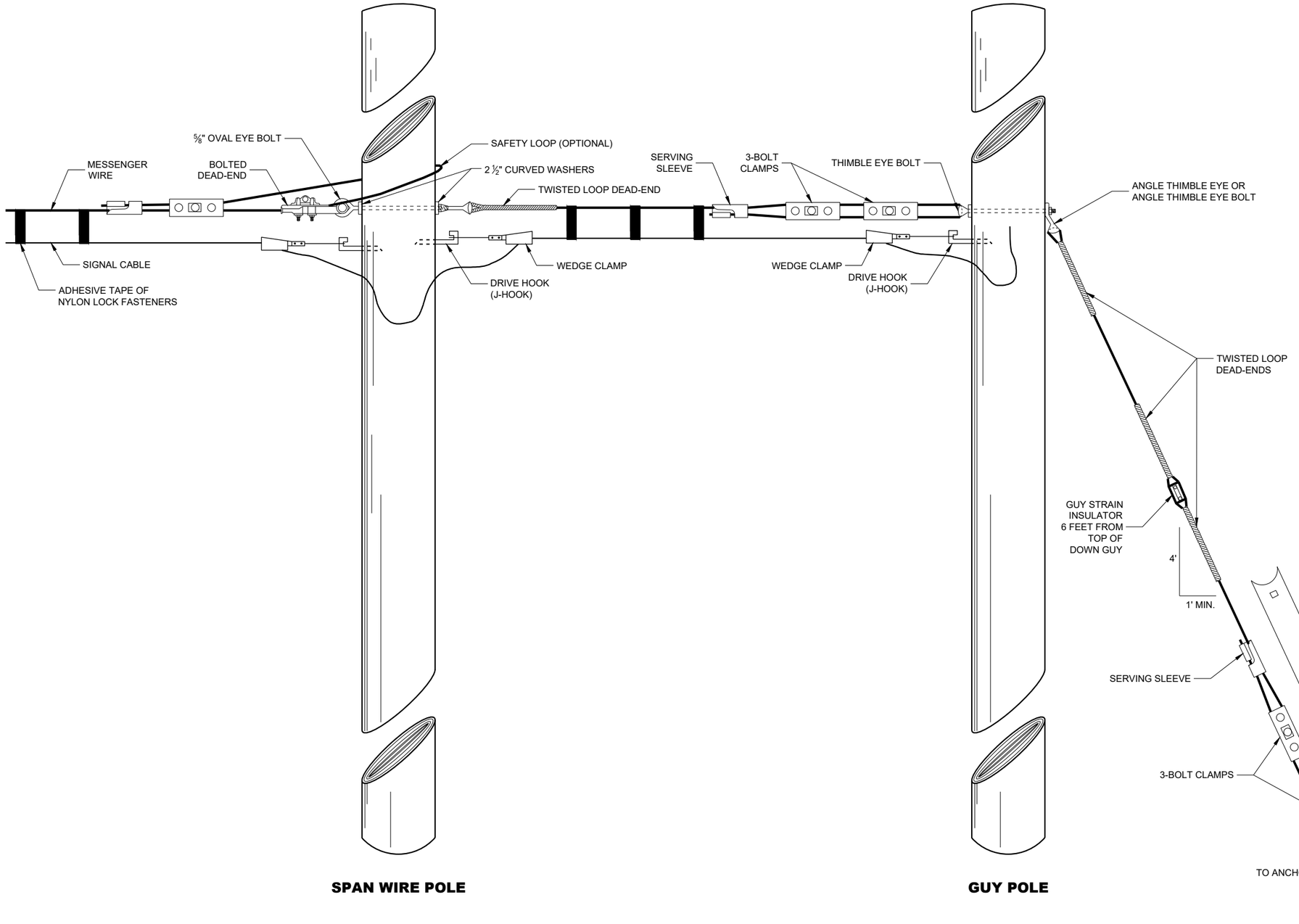
GENERAL NOTES

USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — ROADWAY STANDARDS DEVE ENGINEER

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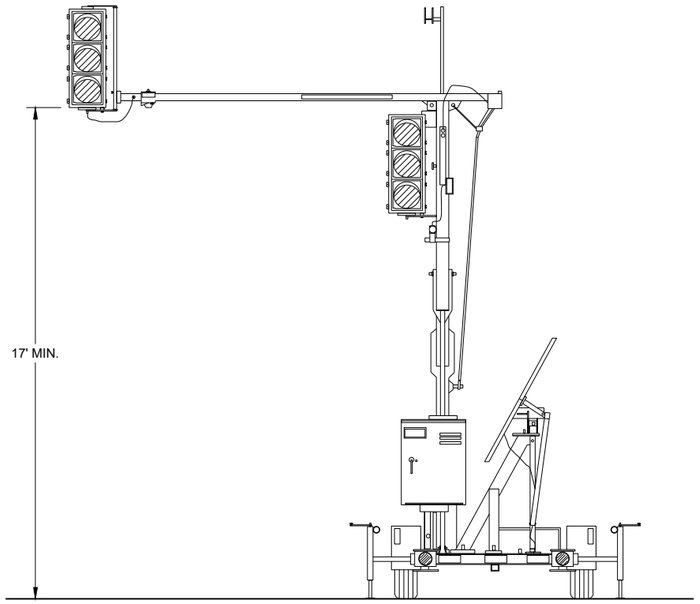
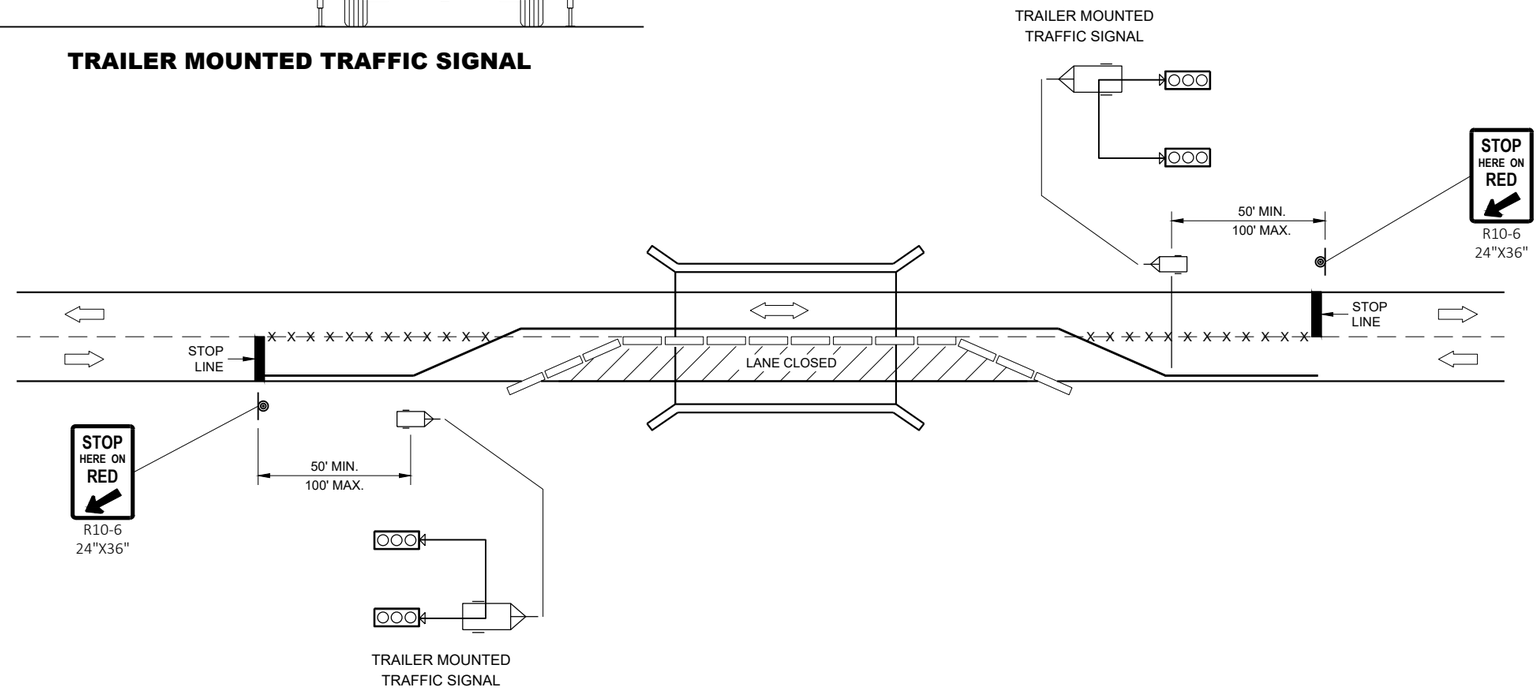


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

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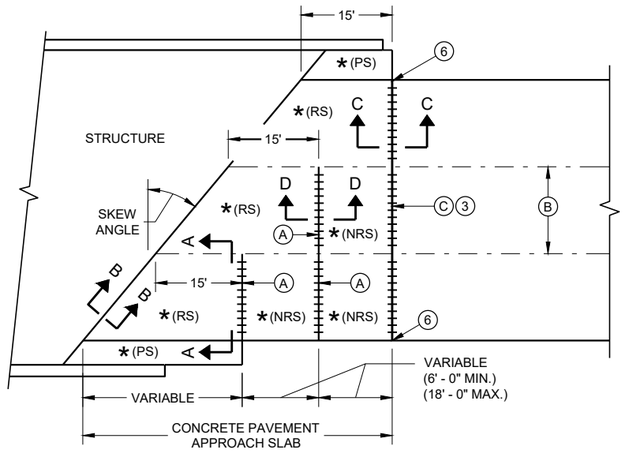
SDD09G02 - 05c

SDD09G02 - 05c



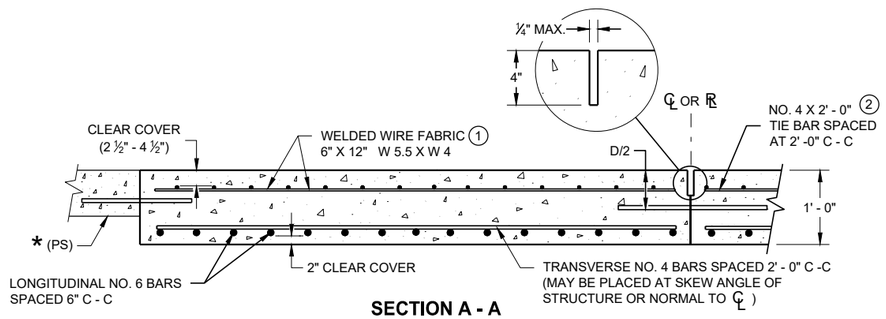
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

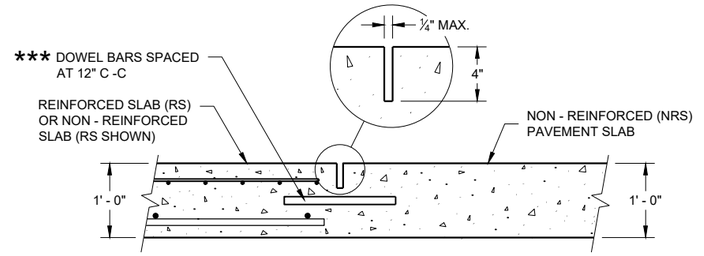
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

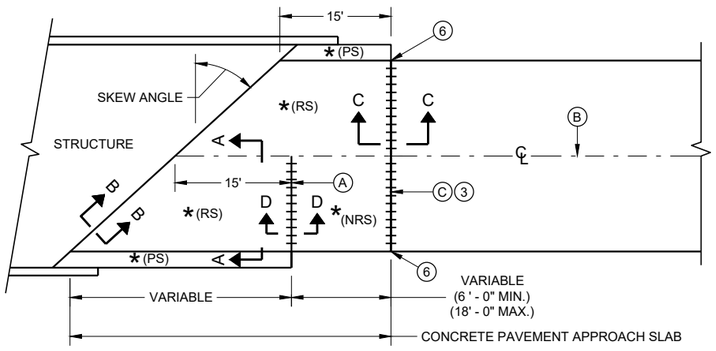
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

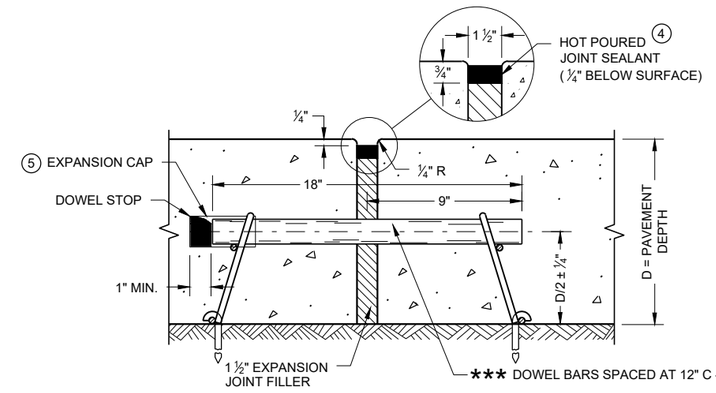


SECTION D - D
CONTRACTION JOINT

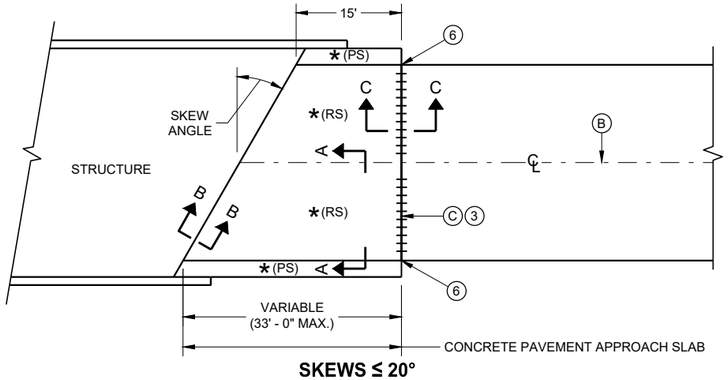


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

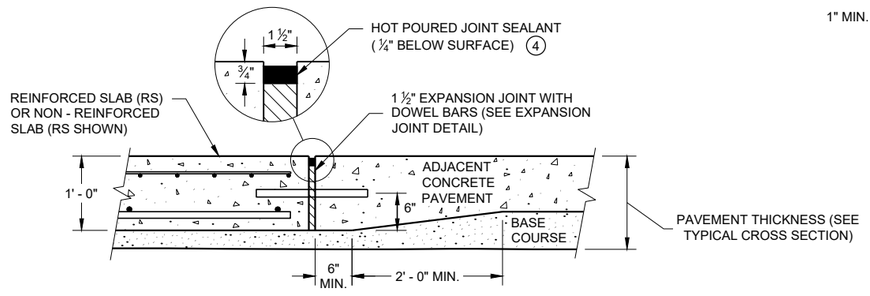


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISO

FHWA

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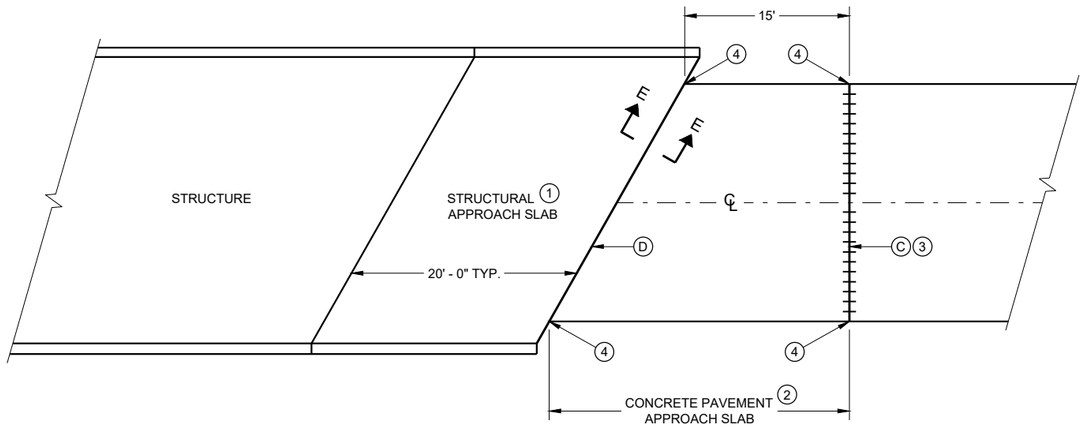


BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

(1) SEE BRIDGE PLAN.

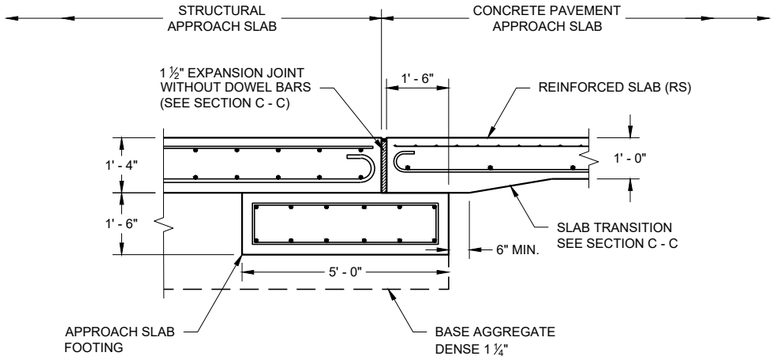
(2) CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞.

(D) 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Peter Kemp P.E.
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SDD 13B02 - 09b

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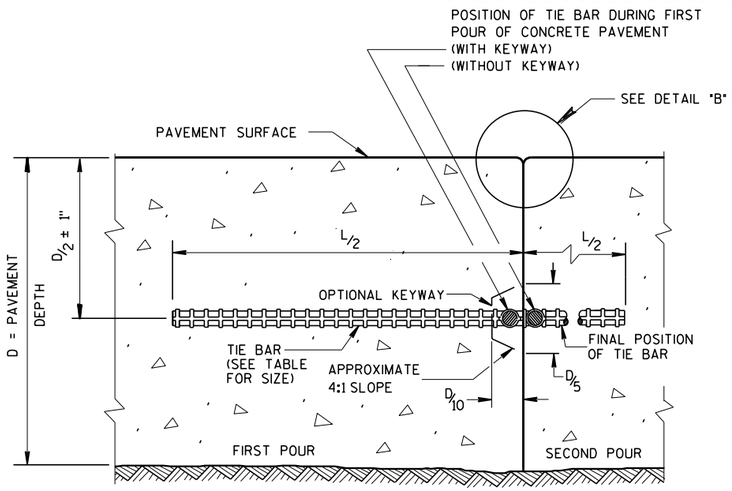
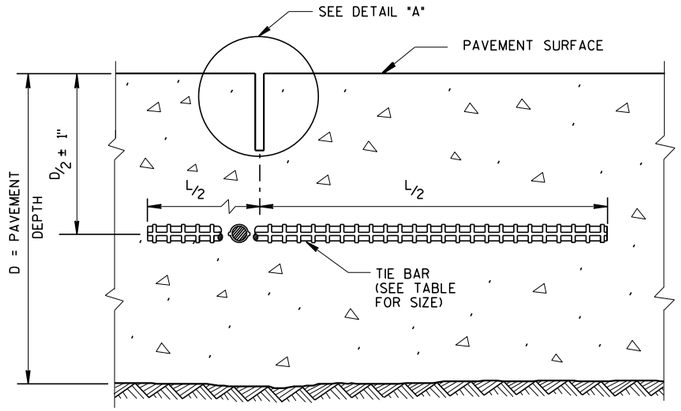
SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

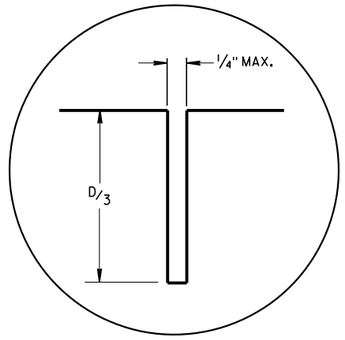
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

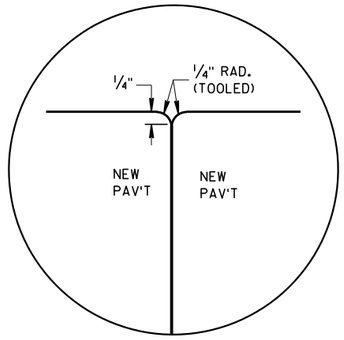
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

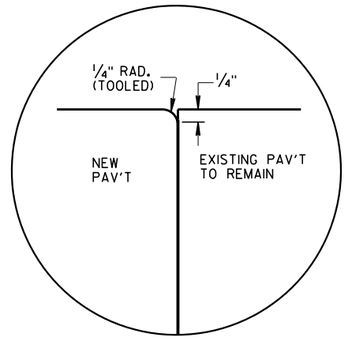
(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



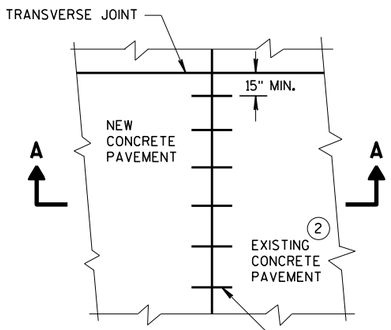
DETAIL "A"



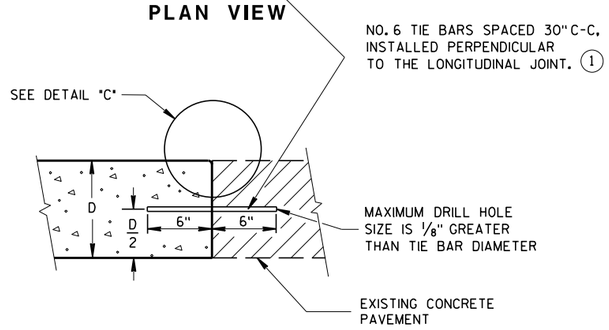
DETAIL "B"



DETAIL "C"



PLAN VIEW



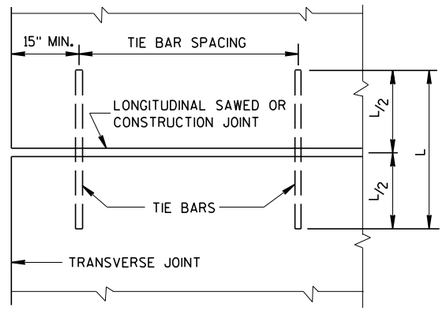
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp — PAVEMENT SUPE
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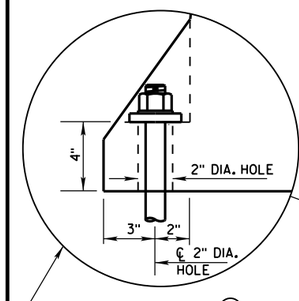
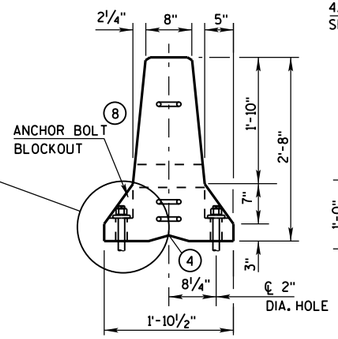
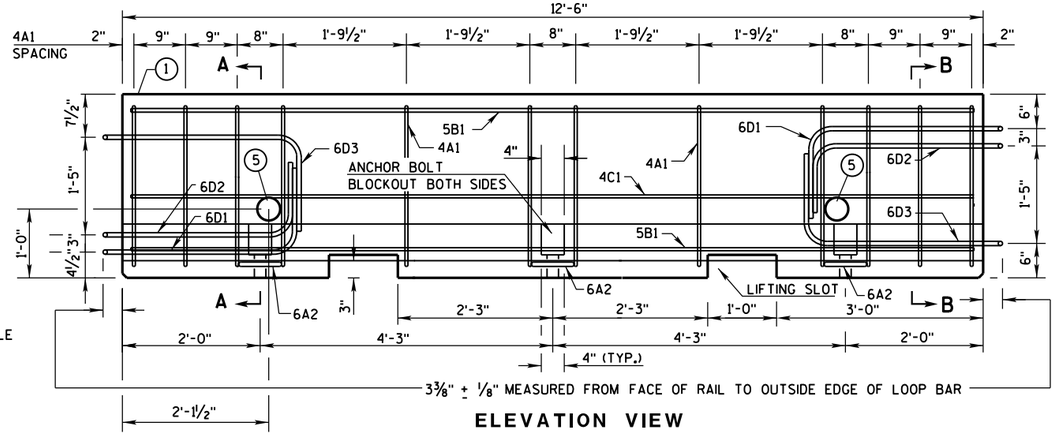


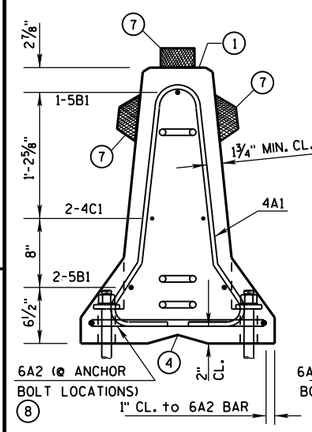
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



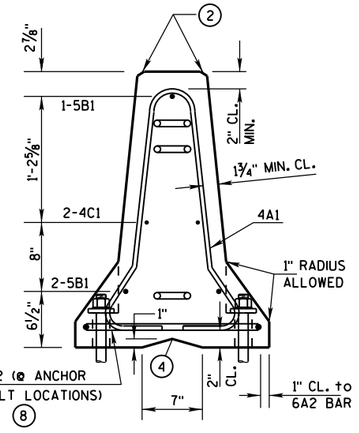
END VIEW



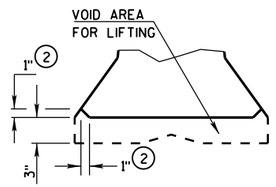
ELEVATION VIEW



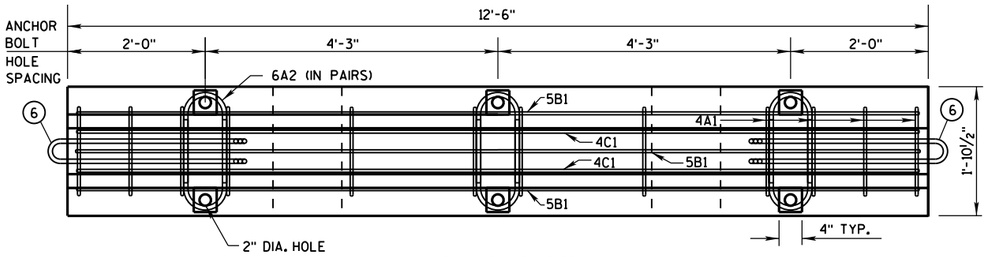
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

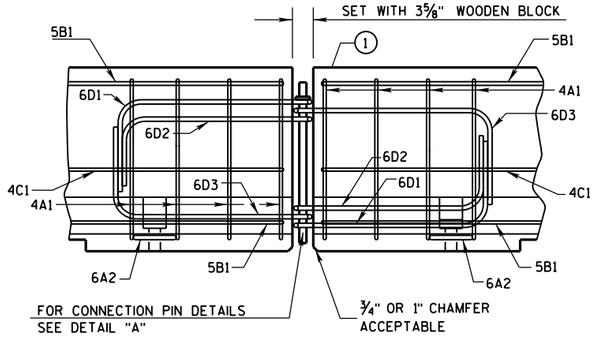


DETAIL "B"
LIFTING SLOT DETAIL

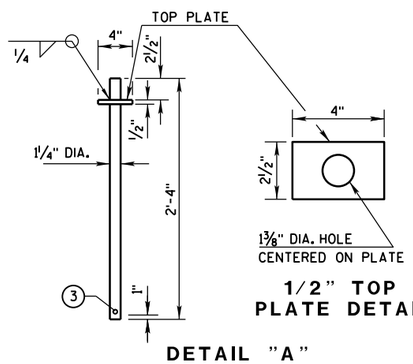


PLAN VIEW

DETAILS OF BARRIER SECTION

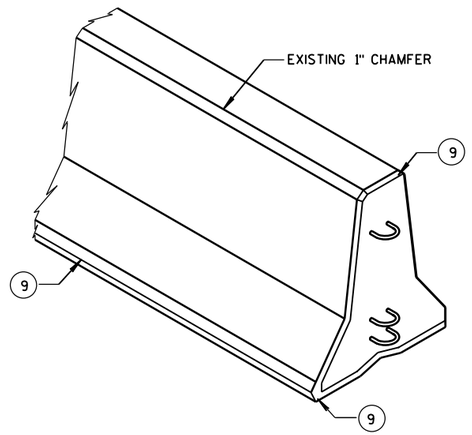


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

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

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

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

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

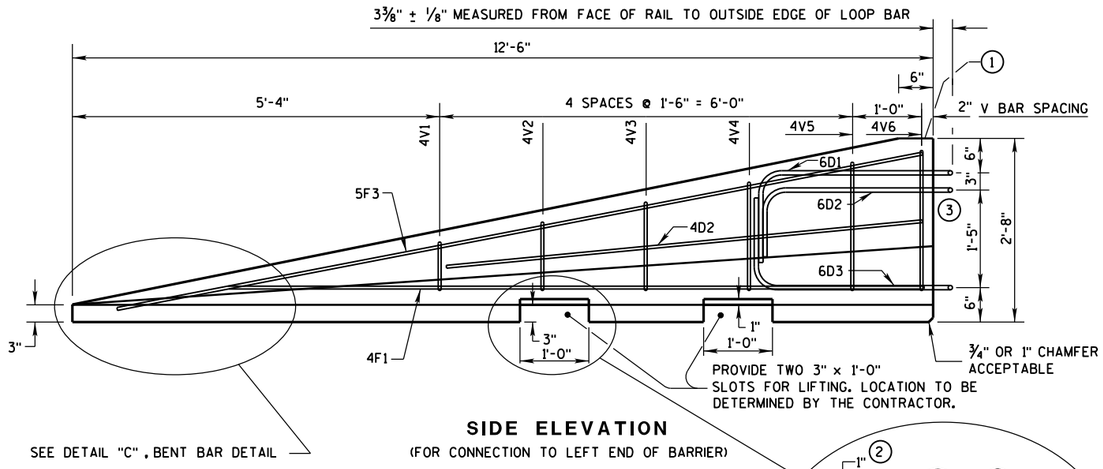
f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

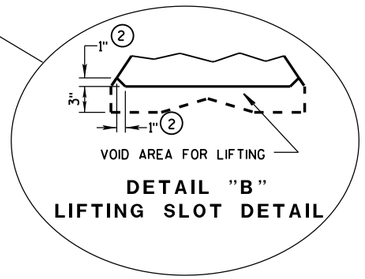
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

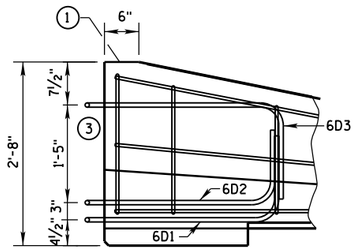
S.D.D. 14 B 7-15a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



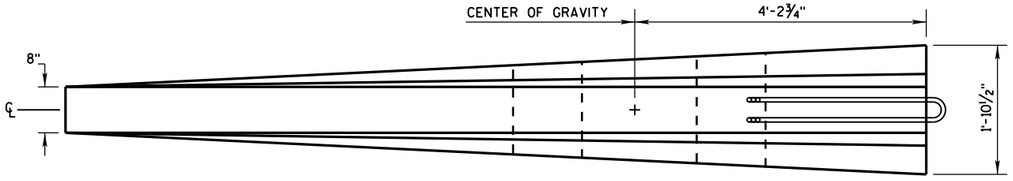
DETAIL "B"
LIFTING SLOT DETAIL



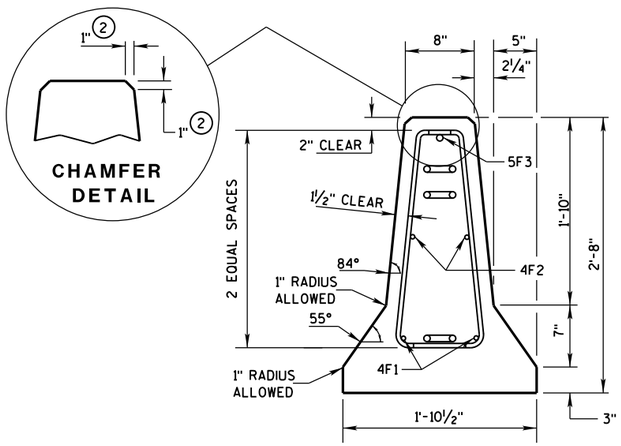
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

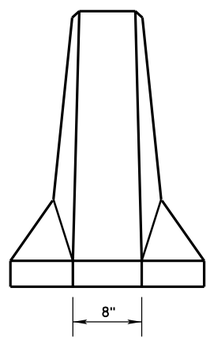
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



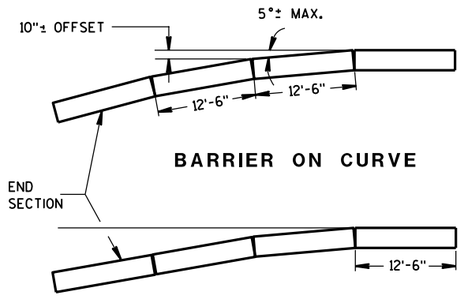
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

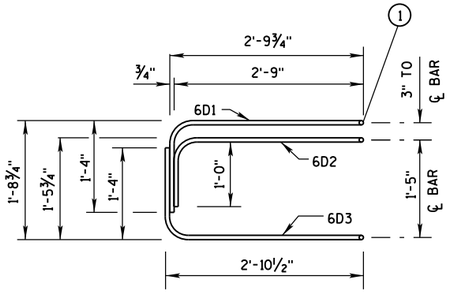
6

S.D.D. 14 B 7-15b

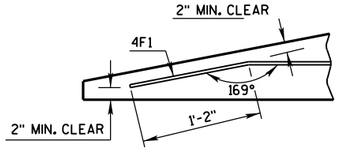
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

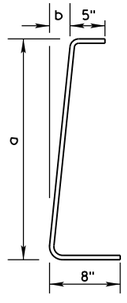
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

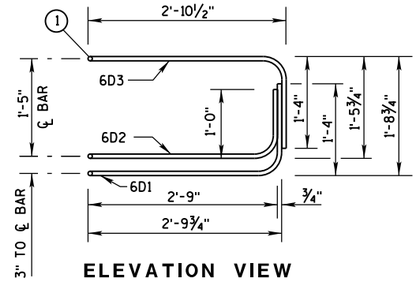
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

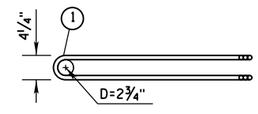
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

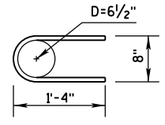
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



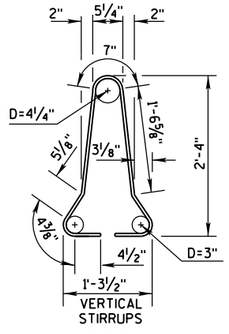
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

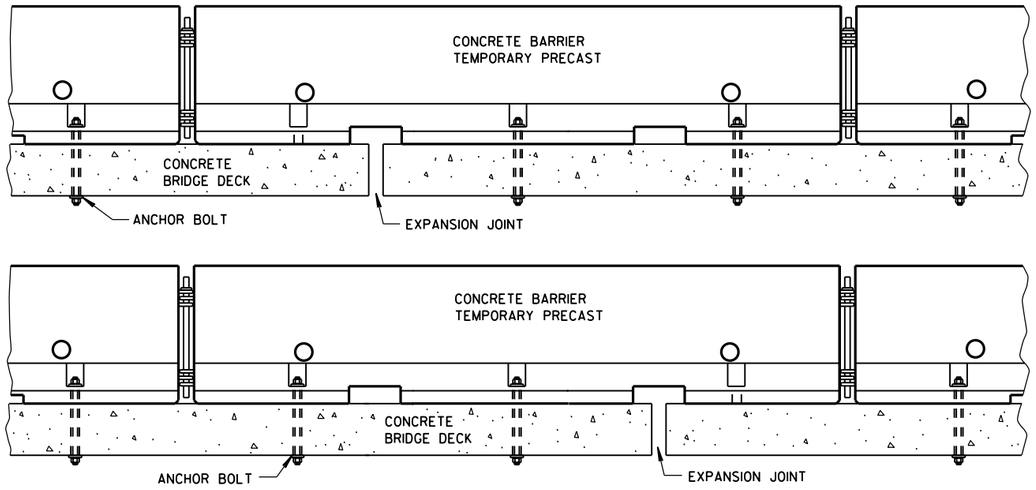
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

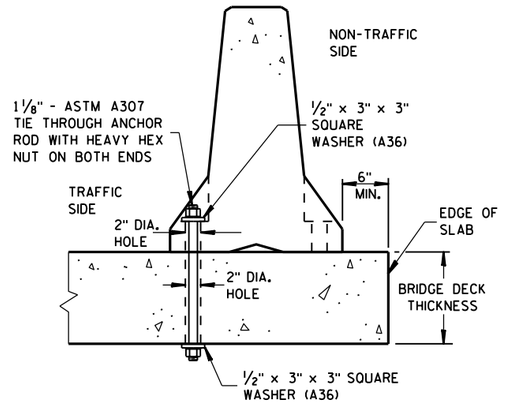
6

S.D.D. 14 B 7-15c



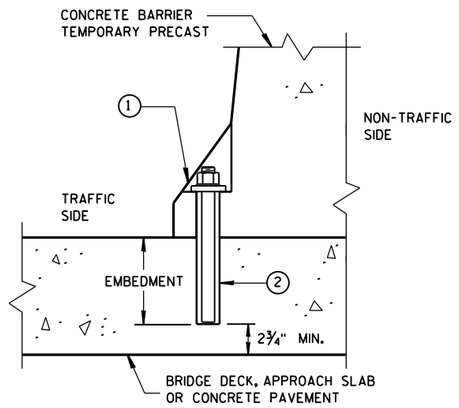
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



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

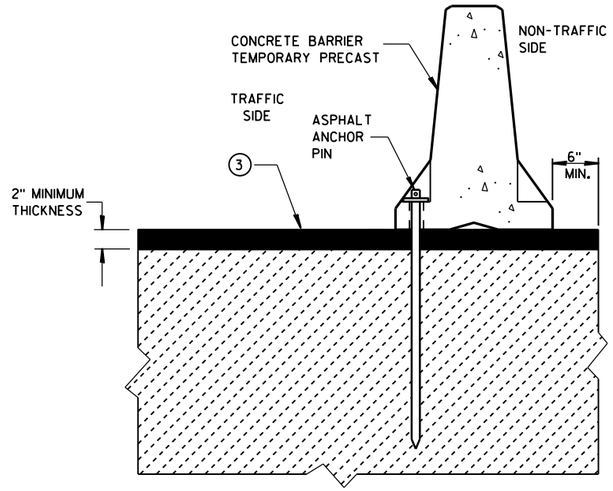
(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

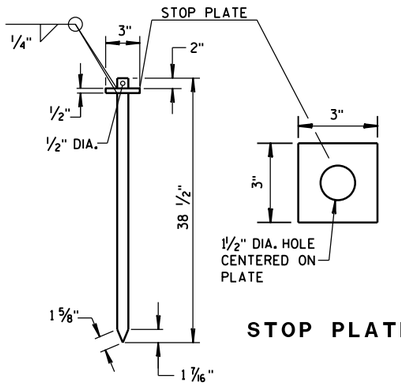
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

1. 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.
2. ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.
3. ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



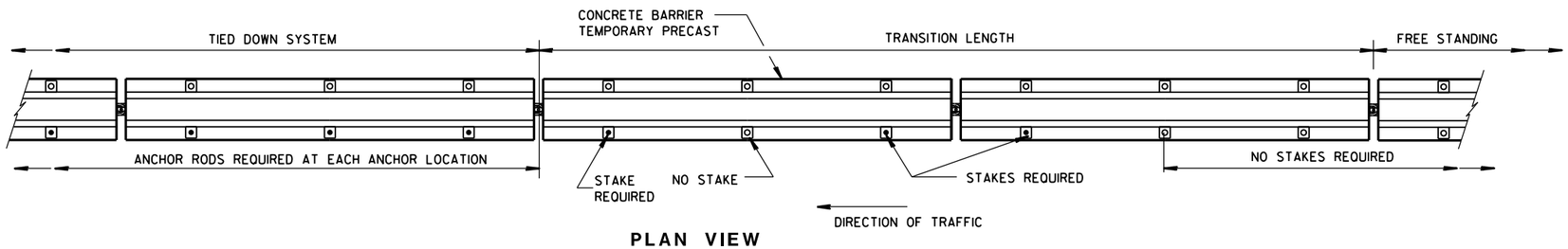
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

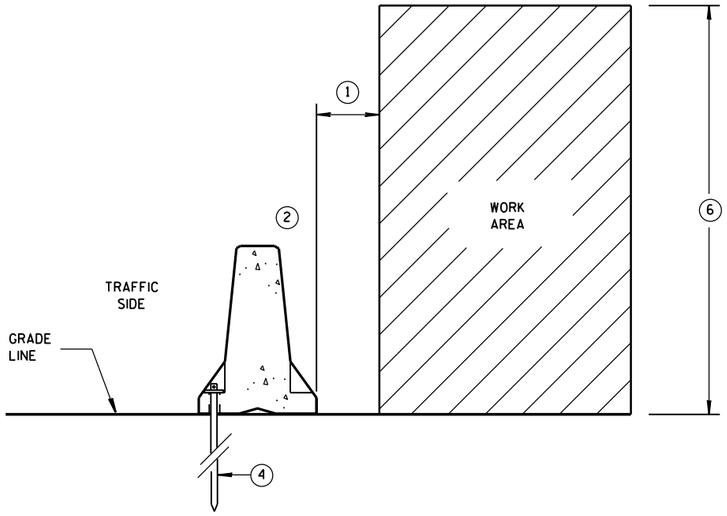
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

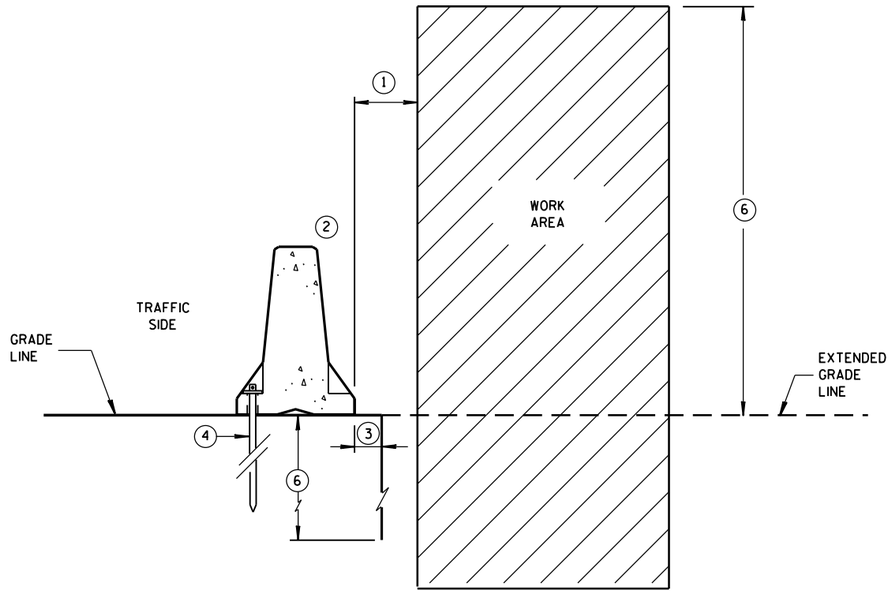
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

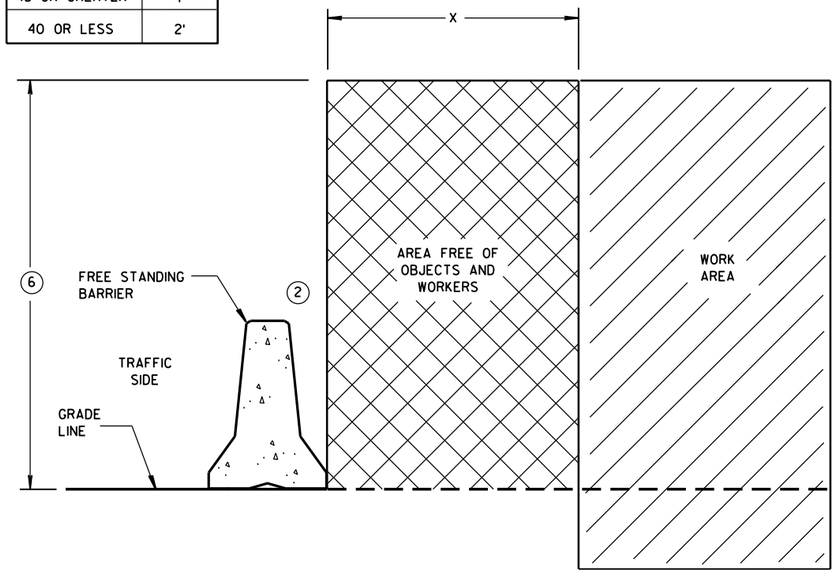


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

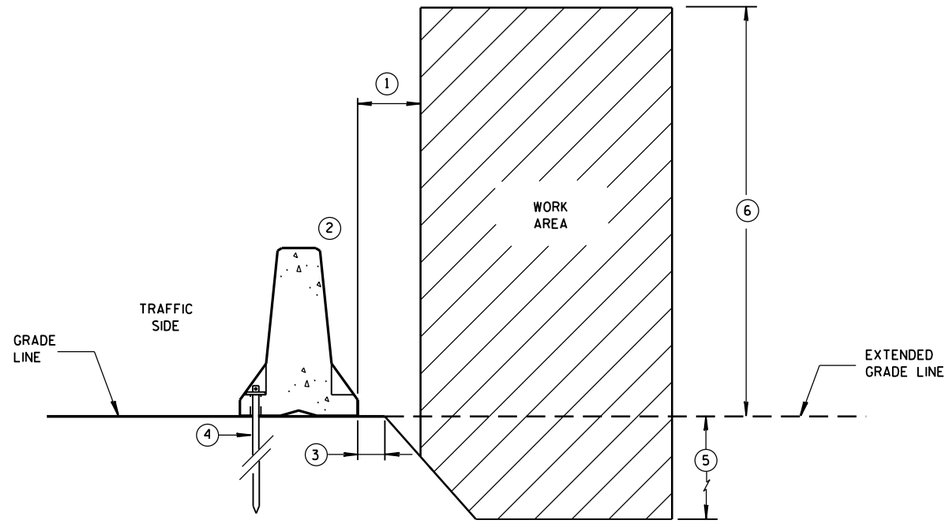
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



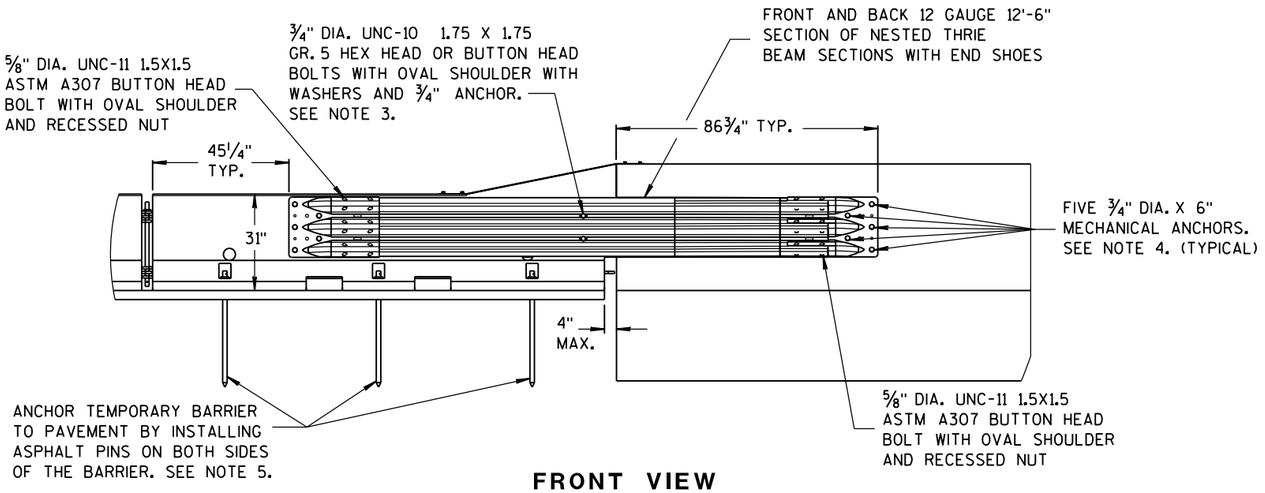
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

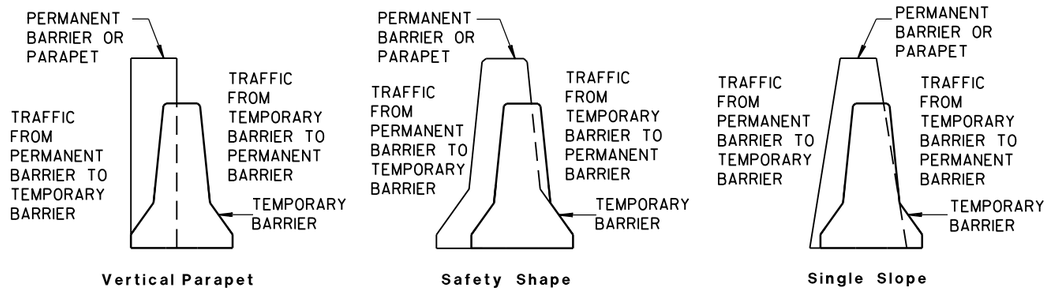
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

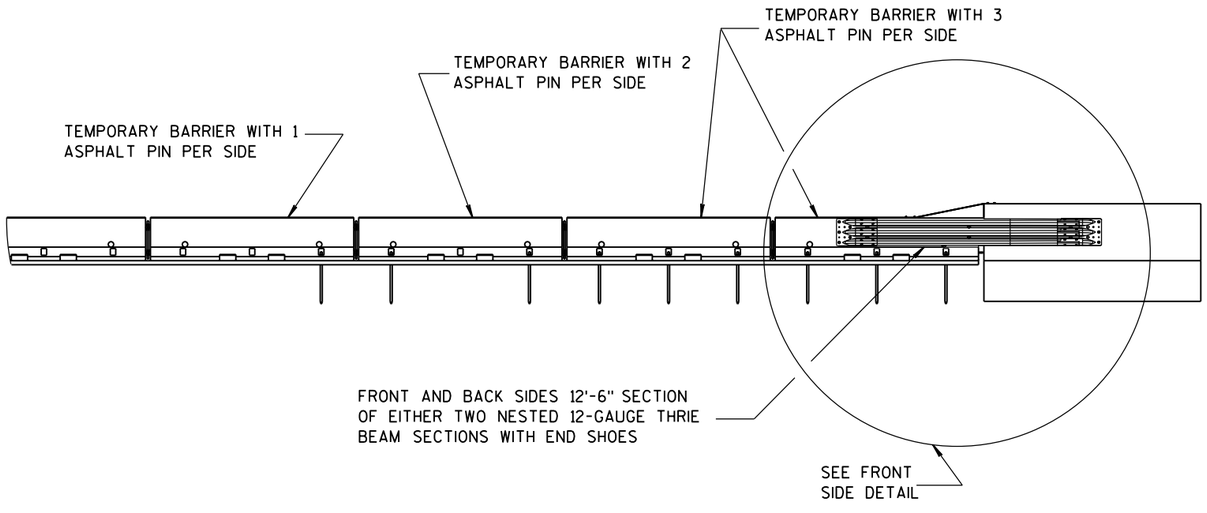


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

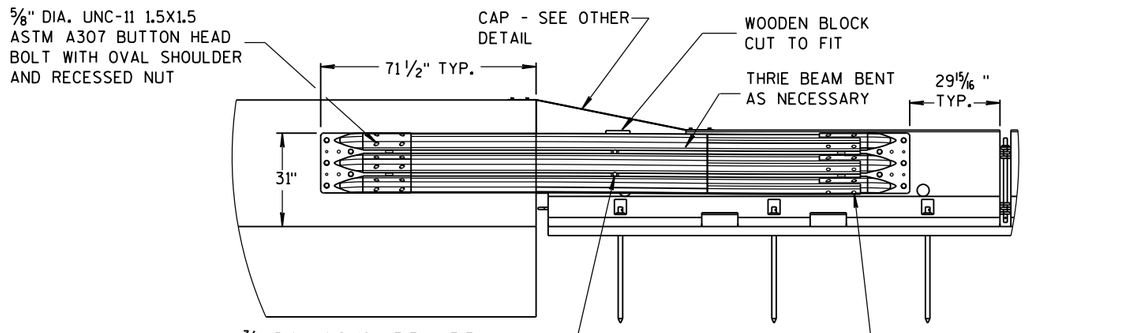
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

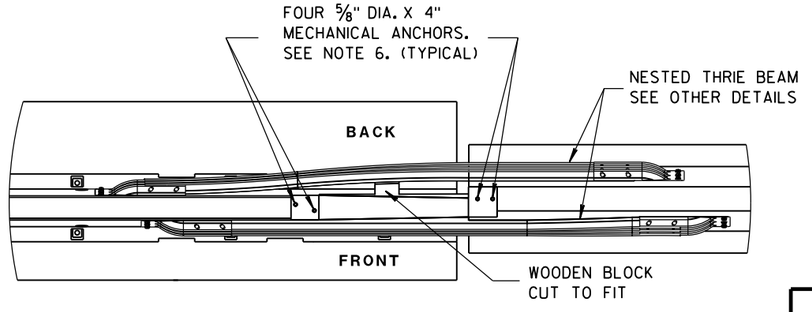
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD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



FRONT VIEW



BACK VIEW



PLAN VIEW

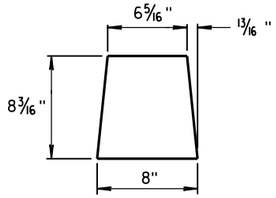
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

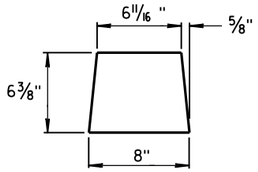
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

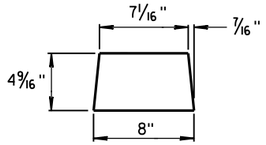
S.D.D. 14 B 7-15f



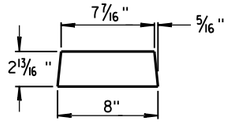
GUSSET 1



GUSSET 2

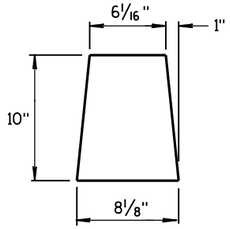


GUSSET 3

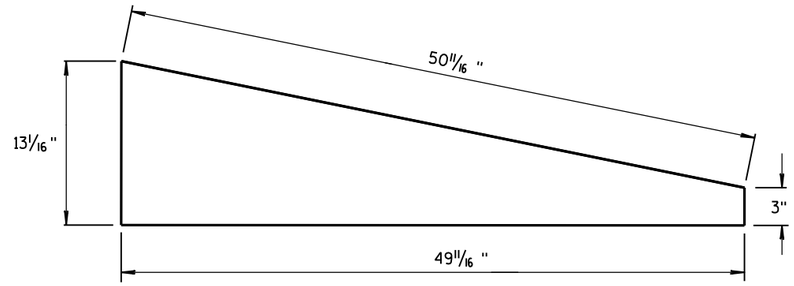


GUSSET 4

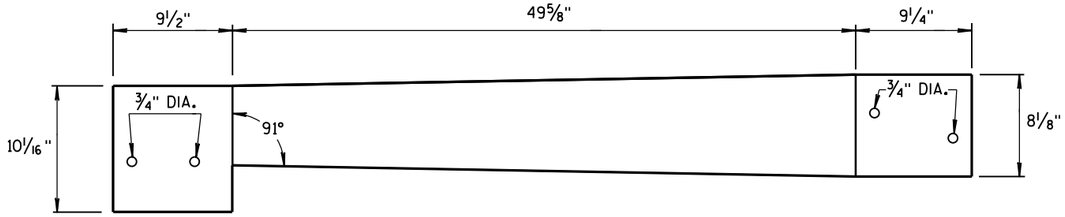
GUSSETS

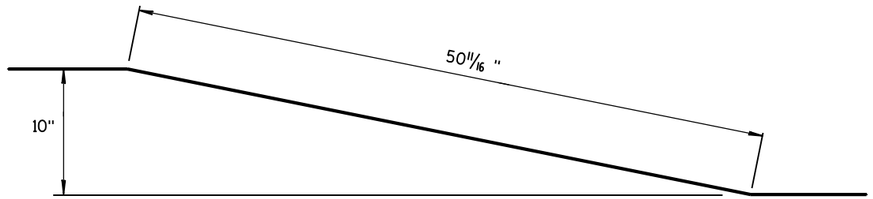


END PLATE

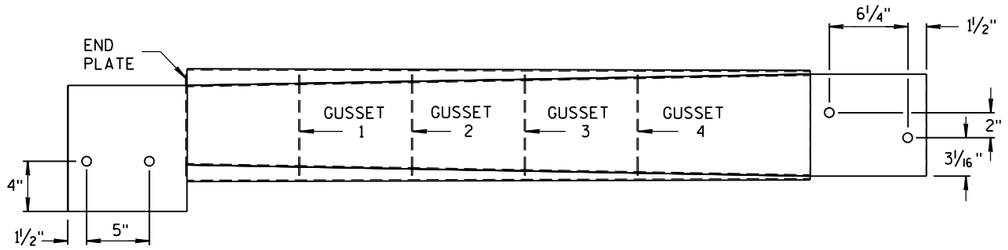


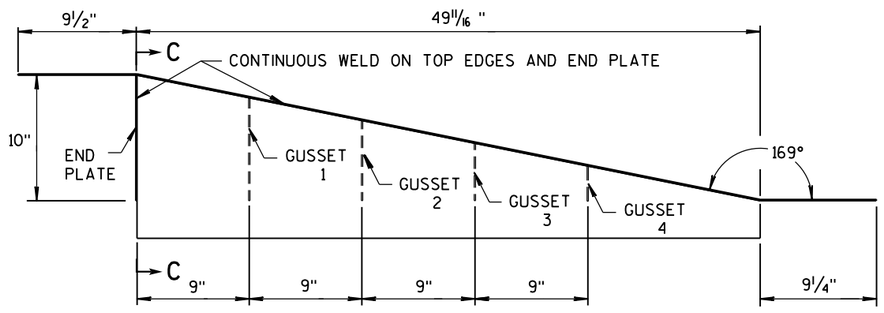
SIDE PLATE

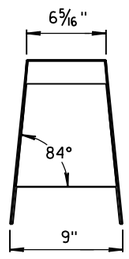




TOP PLATE







SECTION C-C

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

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

NOTES

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

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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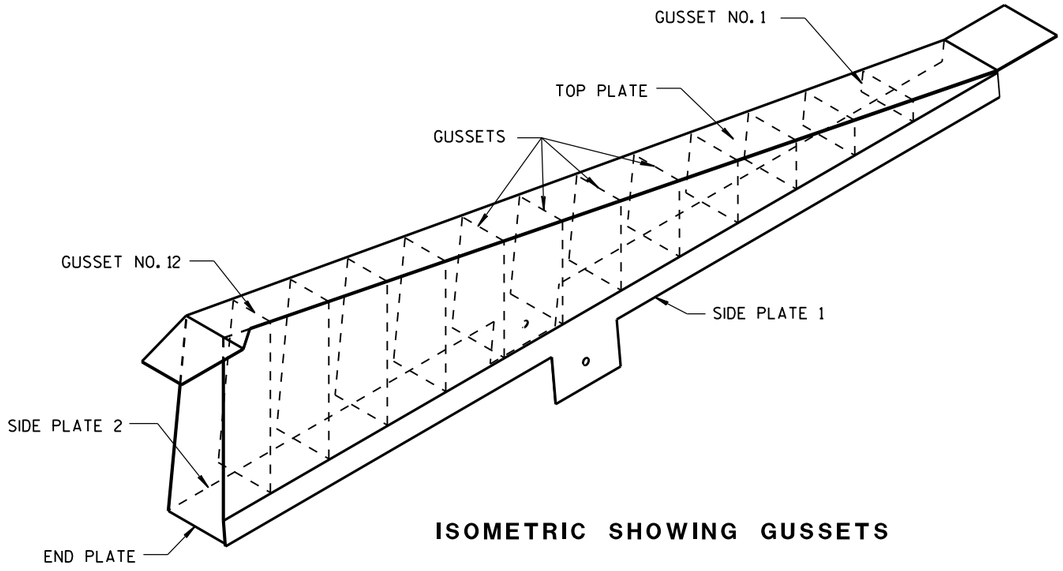
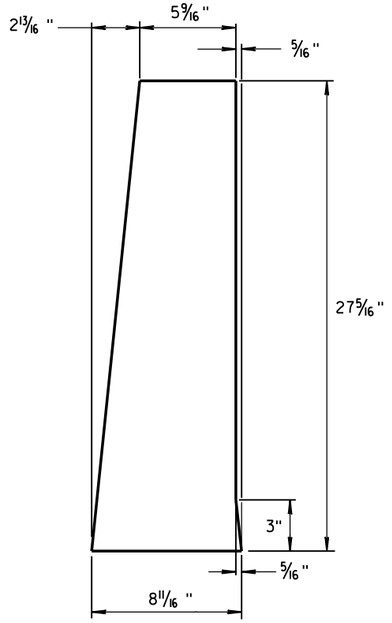
S.D.D. 14 B 7-15g

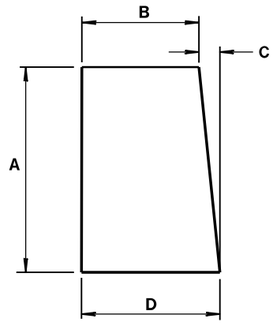


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



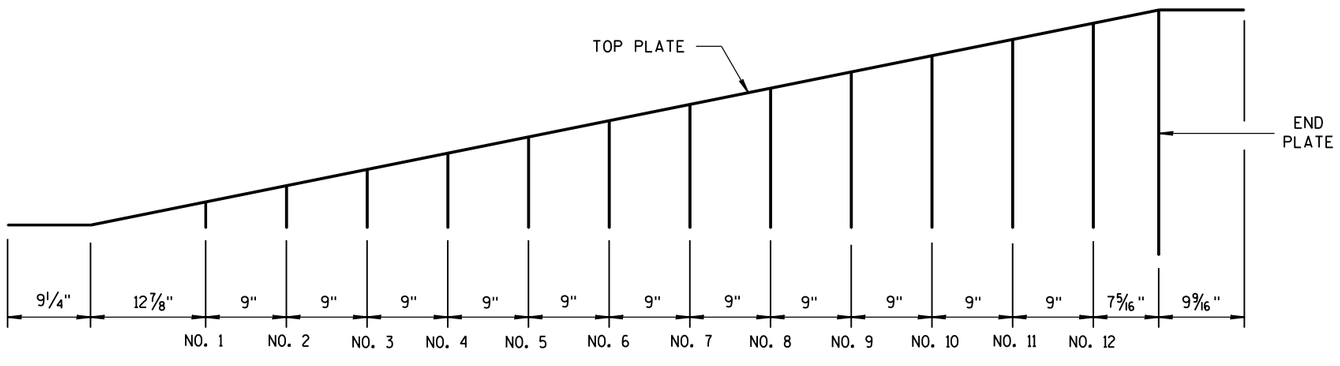
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

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

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

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



GUSSET LOCATION

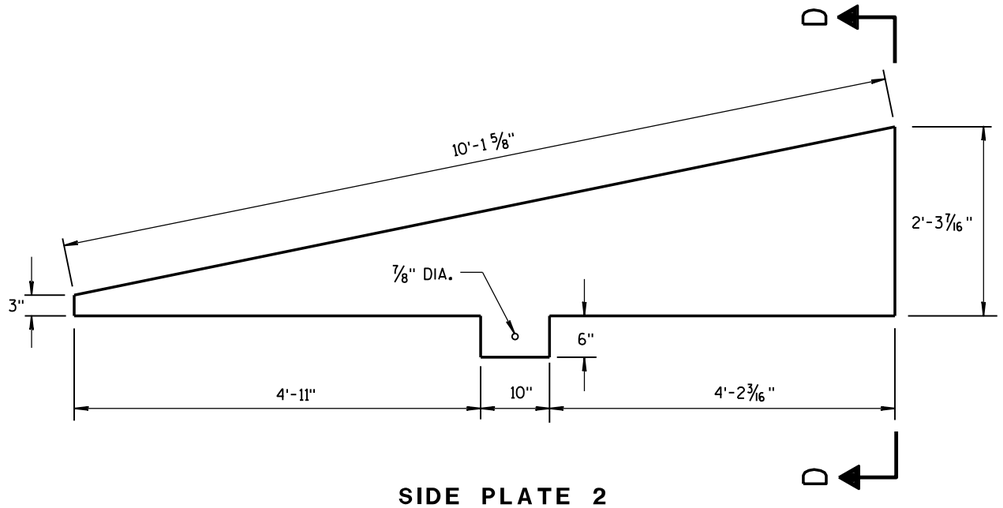
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

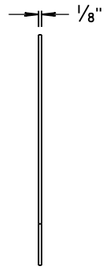
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

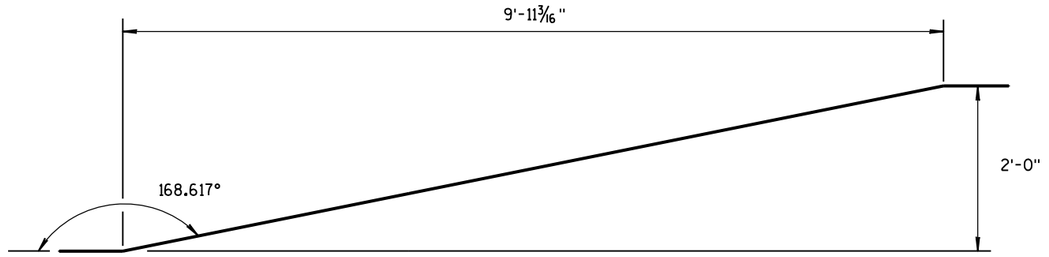
S.D.D. 14 B 7-15h



SIDE PLATE 2

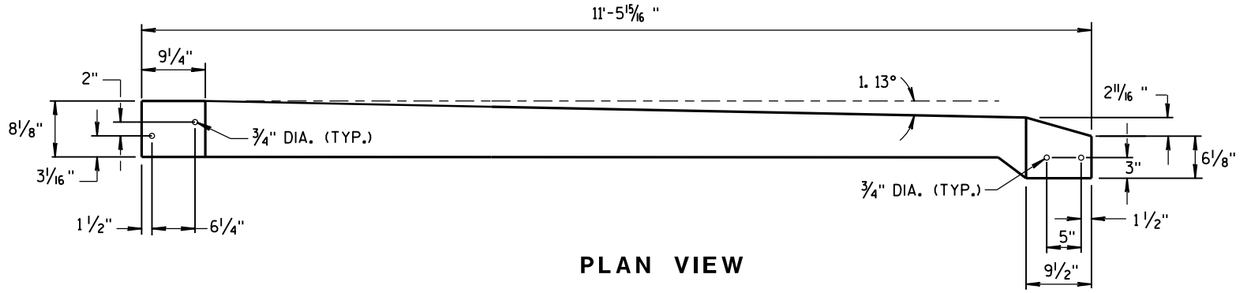


END VIEW



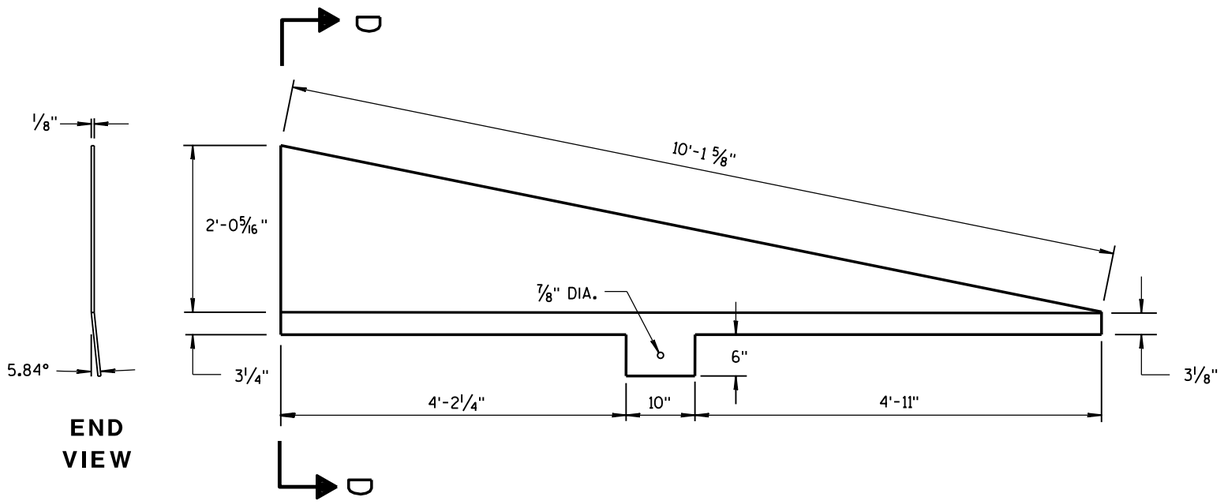
SIDE VIEW

TOP PLATE



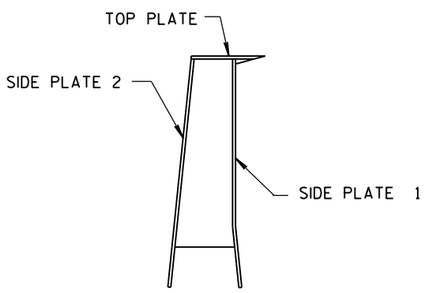
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

35

6

S.D.D. 14 B 7-15i

6

S.D.D. 14 B 7-15i

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

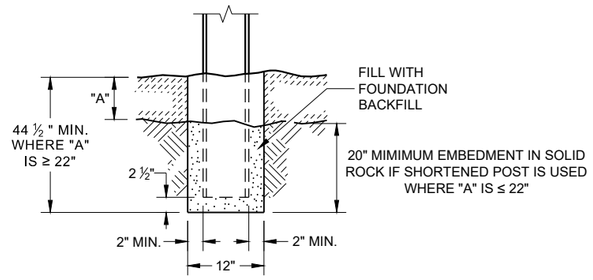
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

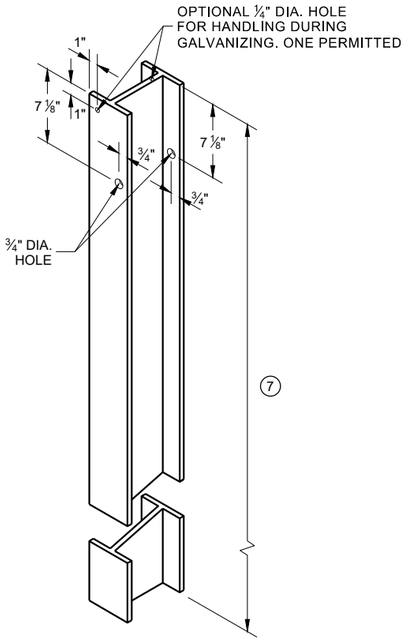
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

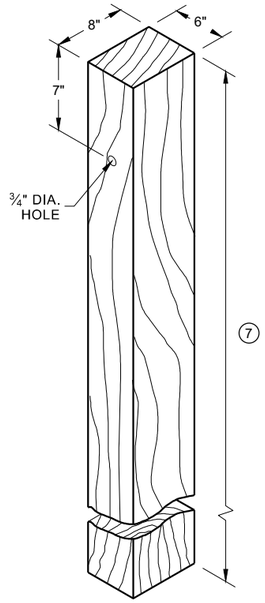
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



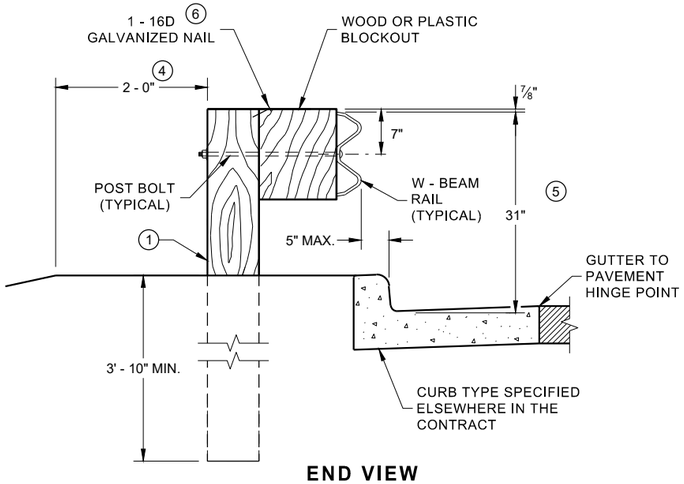
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



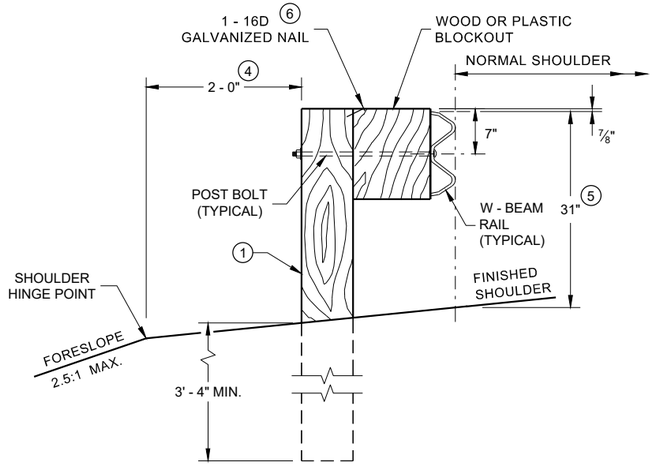
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



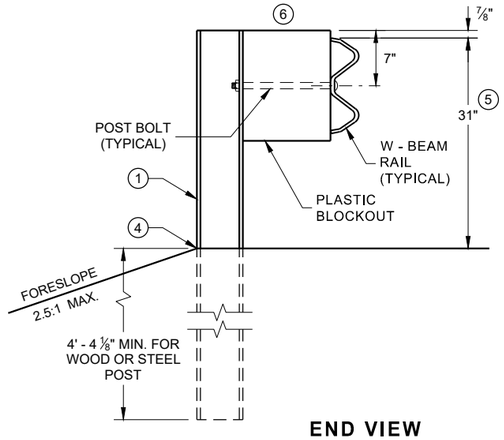
WOOD POST (6" X 8") NOMINAL (1)



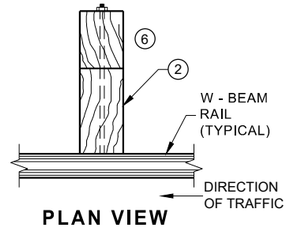
END VIEW
LOCATED ALONG A CURBED ROADWAY



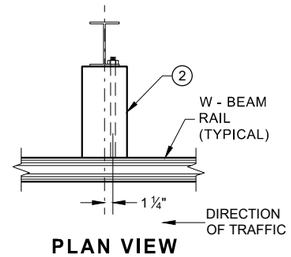
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



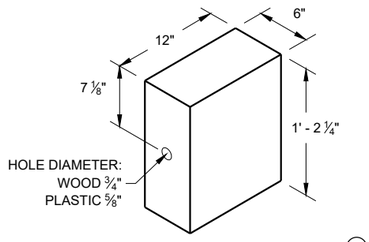
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



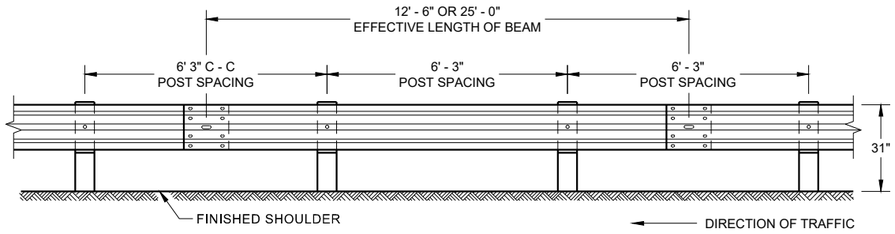
PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



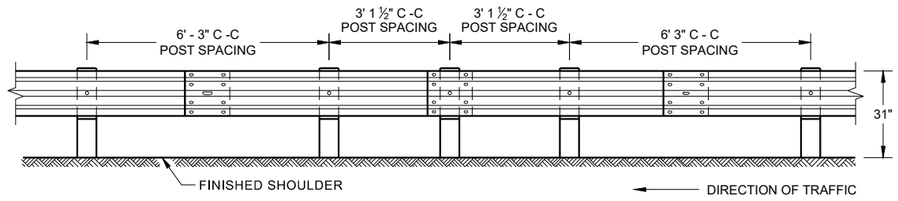
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

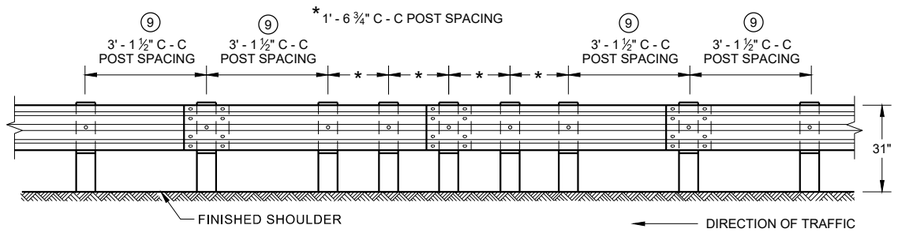
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



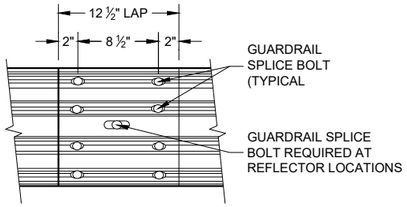
FRONT VIEW
POST SPACING STANDARD INSTALLATION



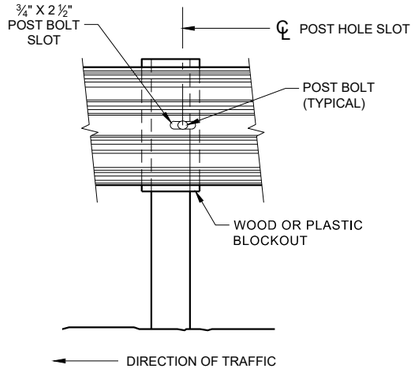
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



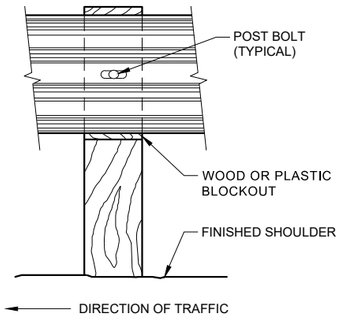
FRONT VIEW
QUARTER POST SPACING (QS)



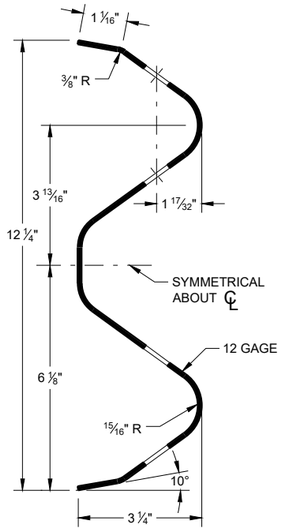
FRONT VIEW
MID-SPAN BEAM SPLICE



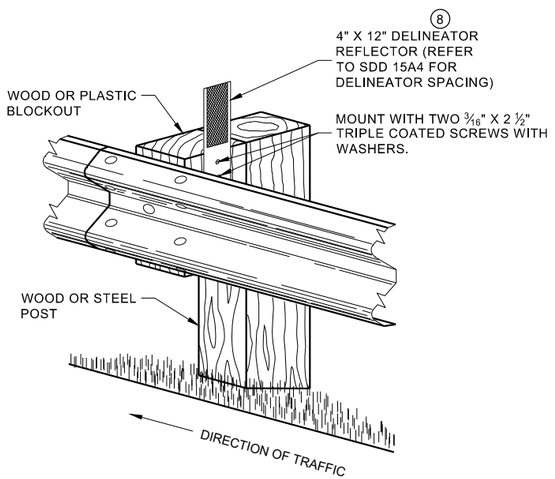
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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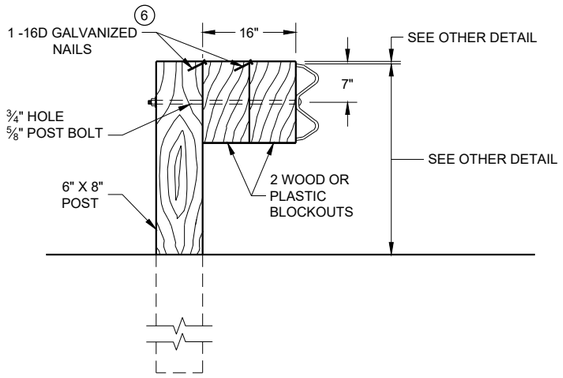
SDD 14B42 - 06b

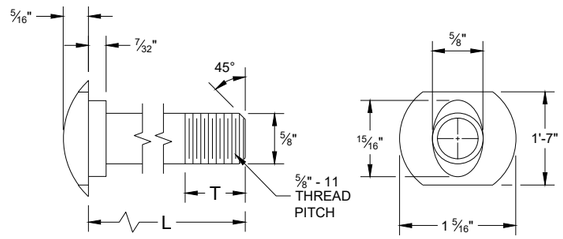


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

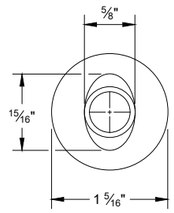
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

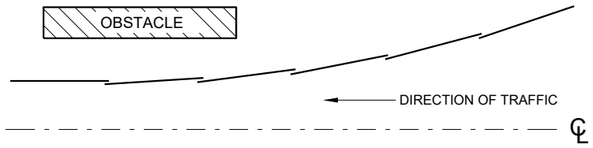


POST BOLT TABLE

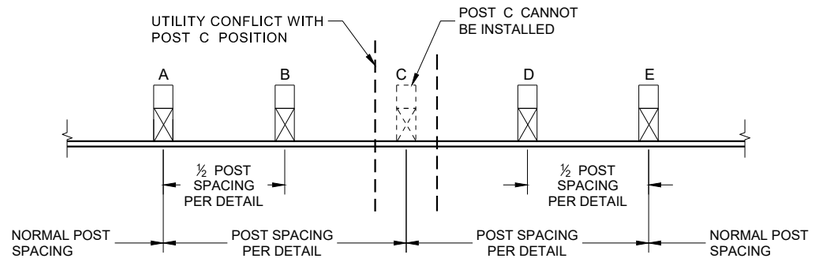
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



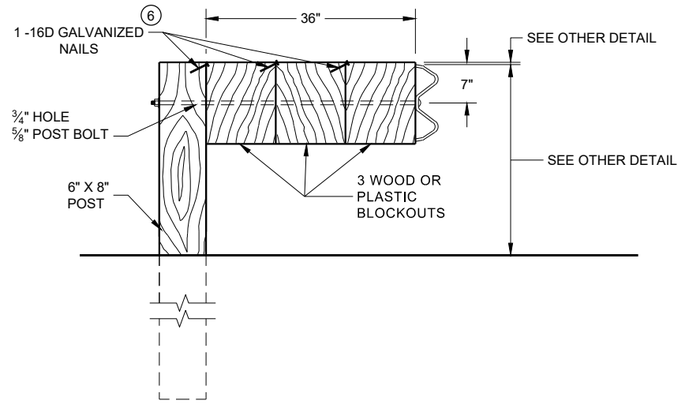
ALTERNATE BOLT HEAD



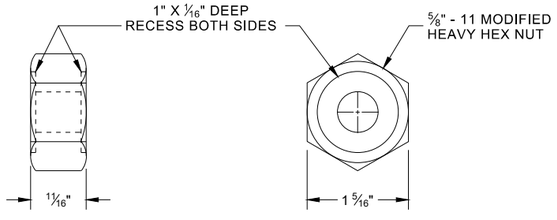
PLAN VIEW
BEAM LAPPING DETAIL



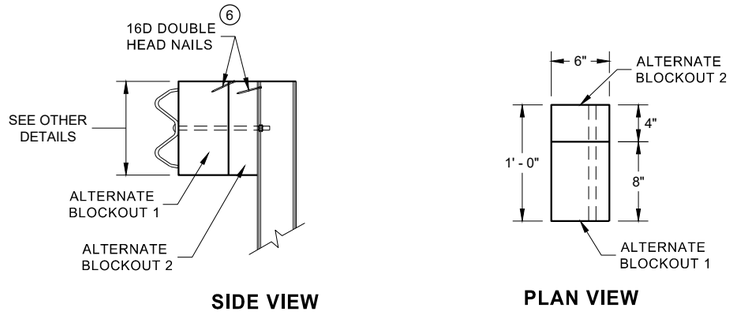
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

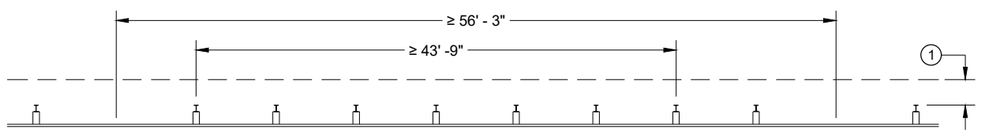
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

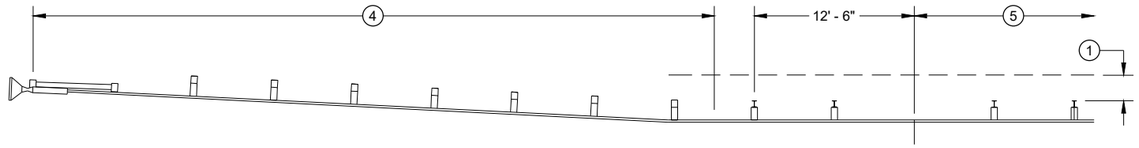
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

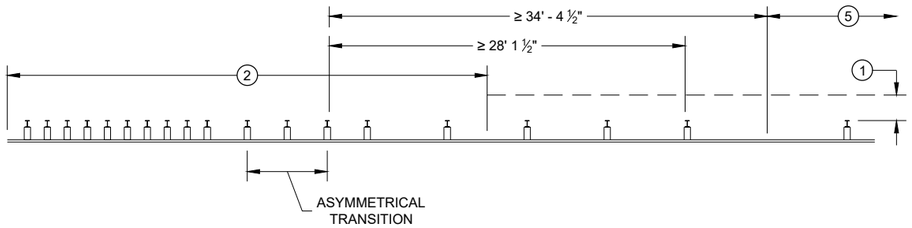
SDD 14B42 - 06c



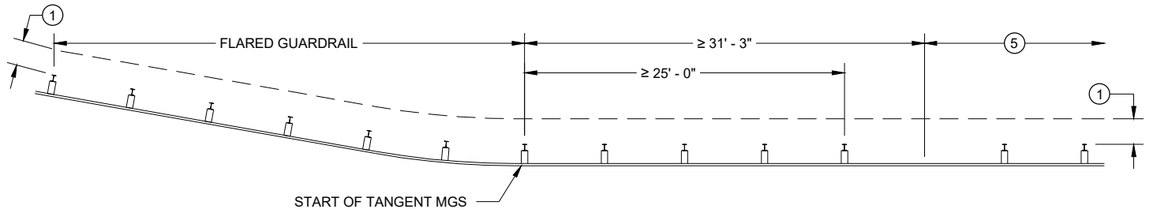
MISSING POST IN NORMAL BEAM GUARD RUN



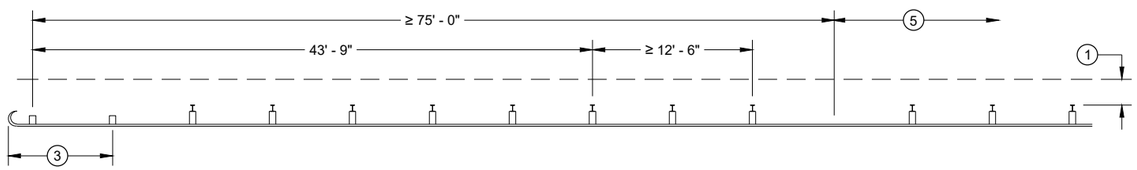
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



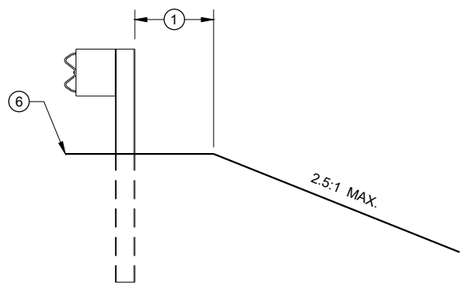
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

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SDD 14B42 - 06d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

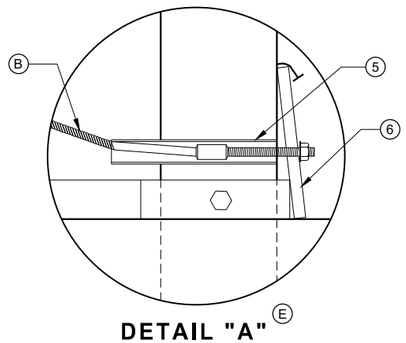
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

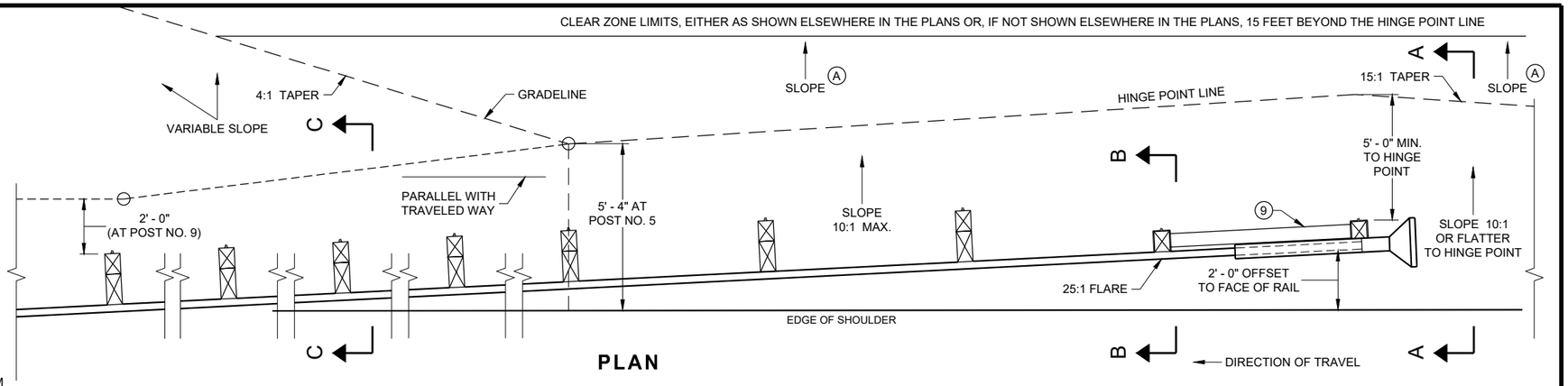
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

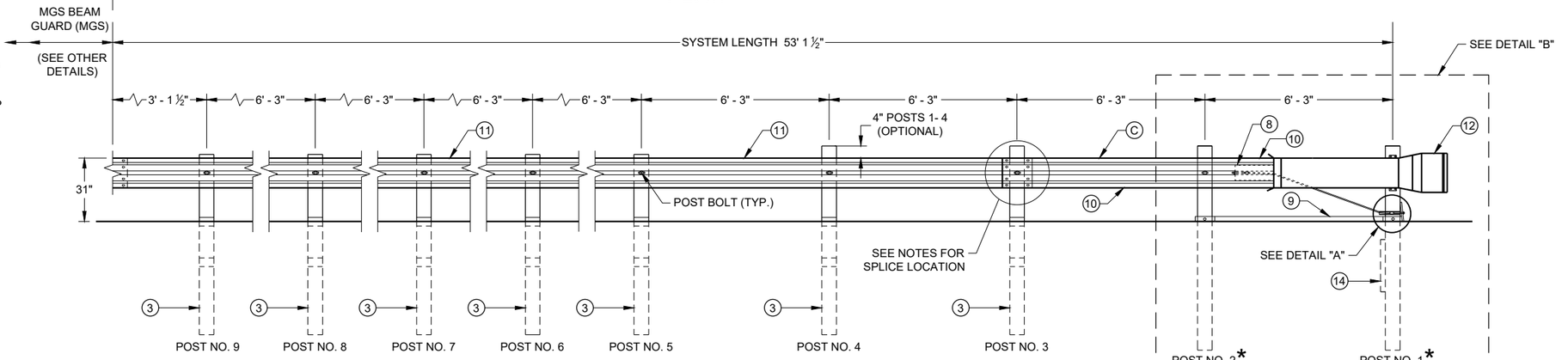
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



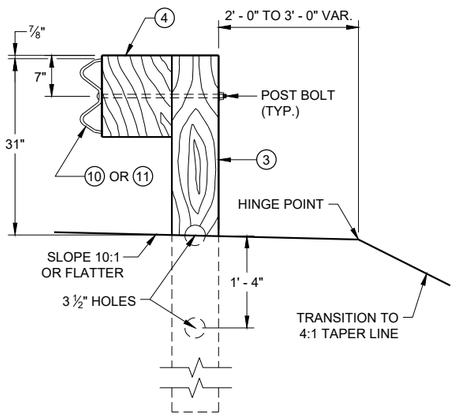
DETAIL "A" (E)



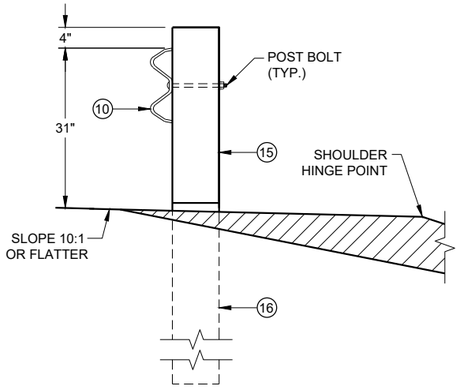
PLAN



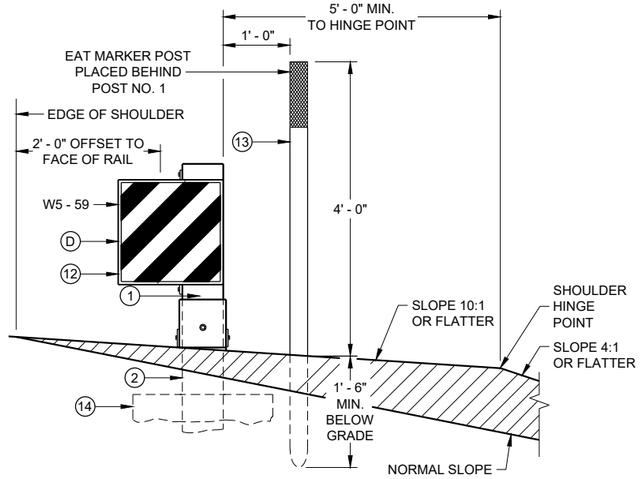
ELEVATION



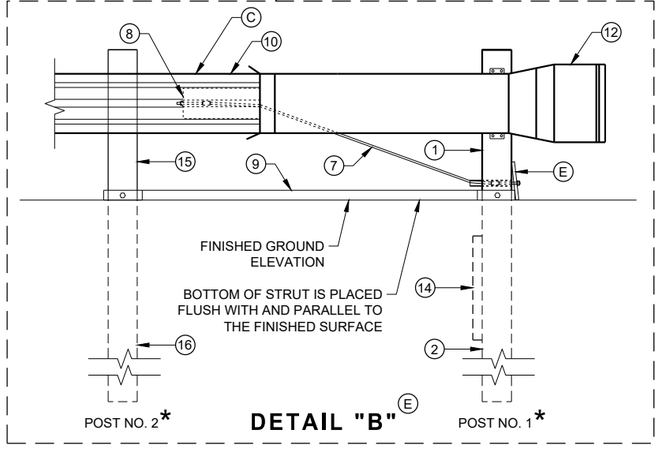
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

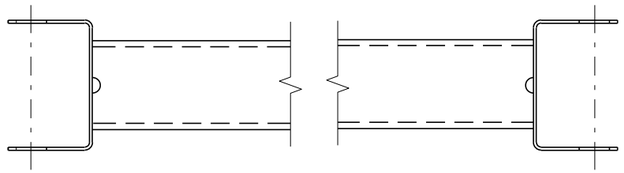
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

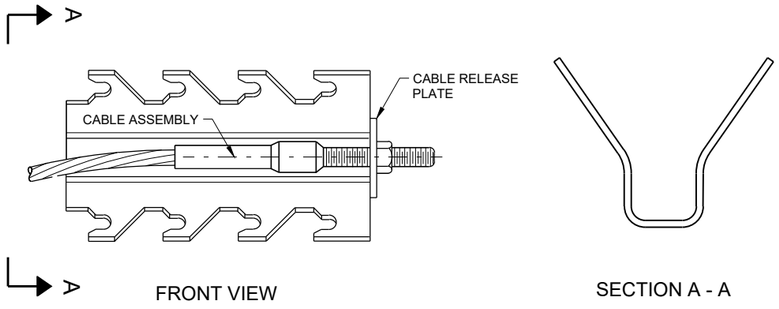
SDD 14B44 - 04a

BILL OF MATERIALS

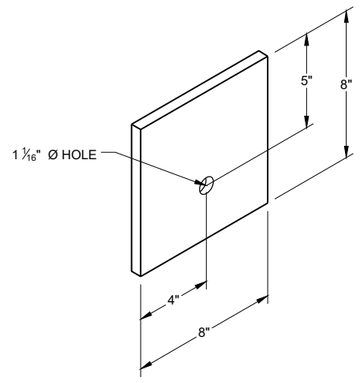
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC GROUND STRUT ⑨ Ⓔ



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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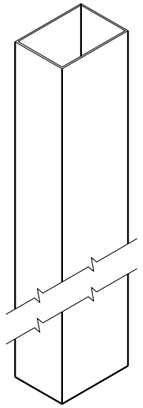
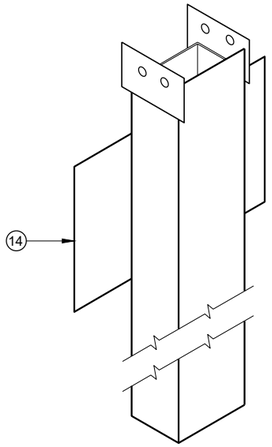
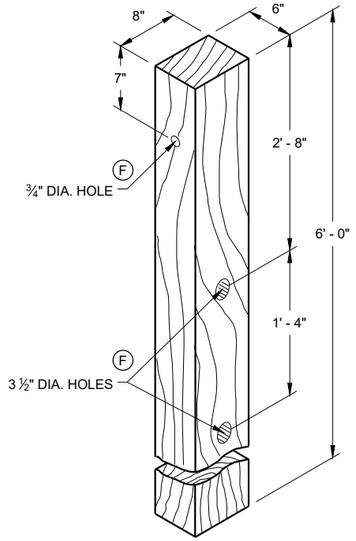
SDD 14B44 - 04b



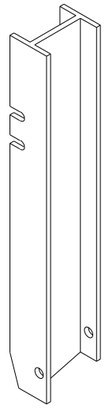
UPPER POST NO. 1 (1) (E)



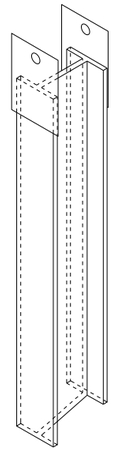
LOWER POST NO. 1 (2) (E)



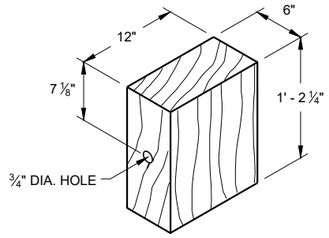
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



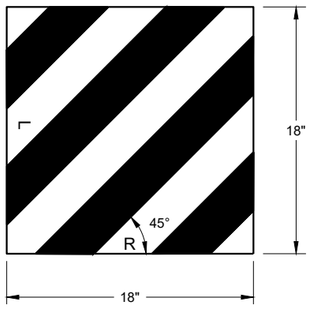
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

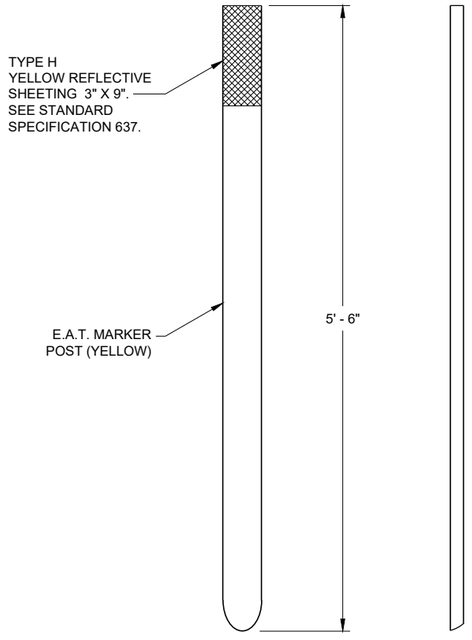


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



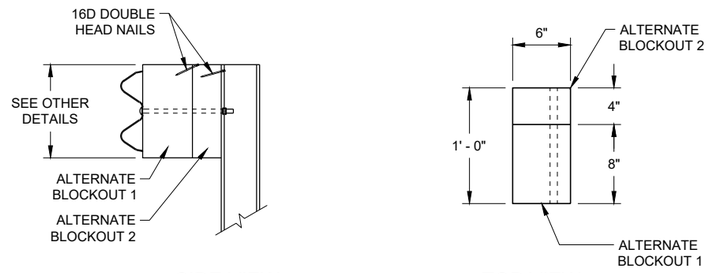
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

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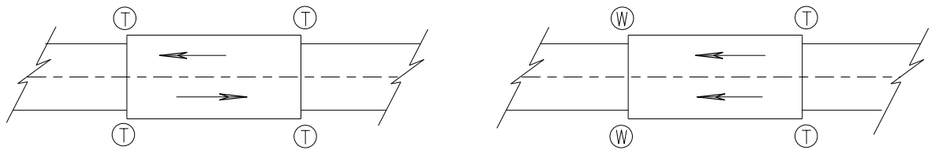
SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

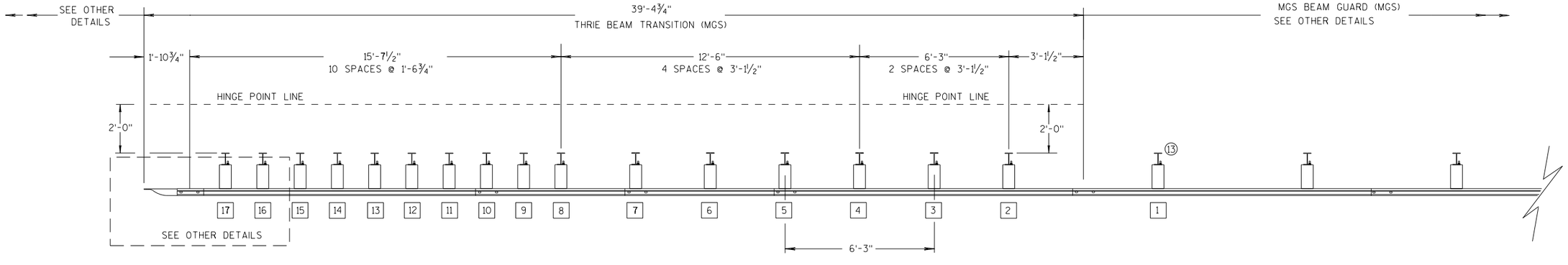
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

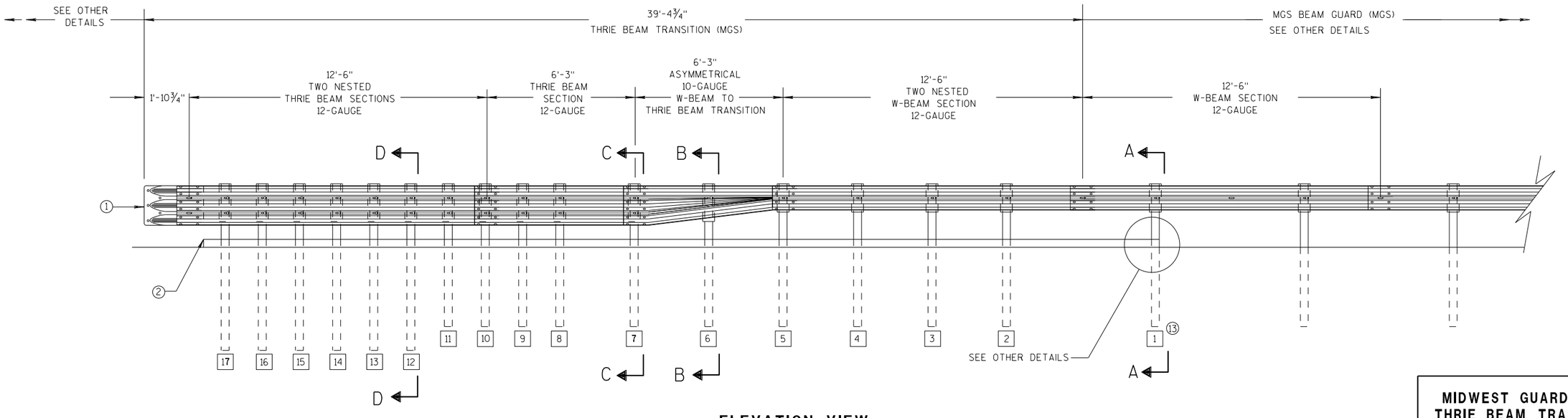
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5a

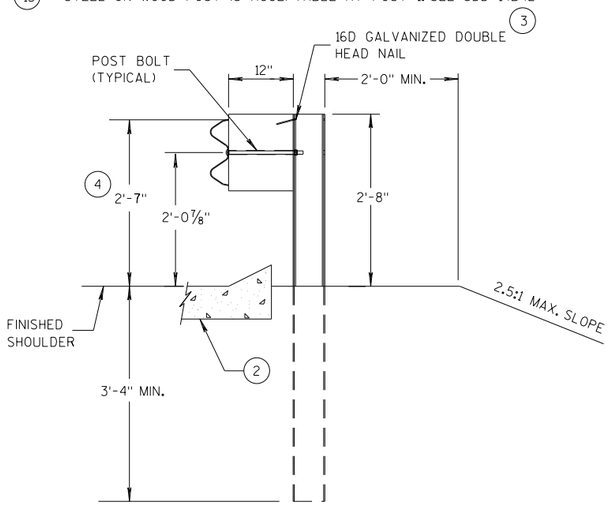
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

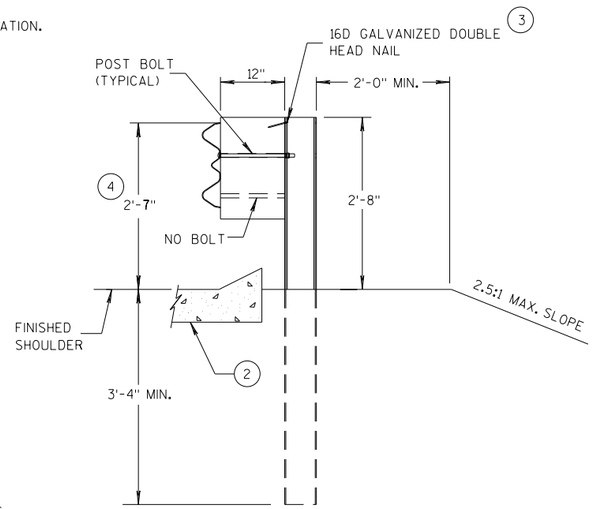
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



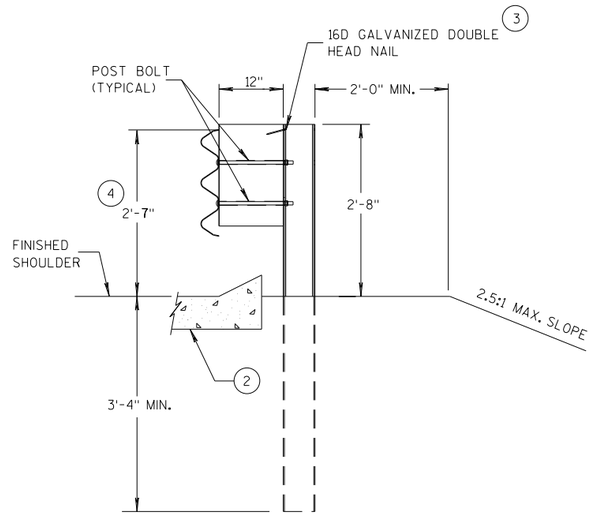
SECTION A-A (13)

POSTS 1-5



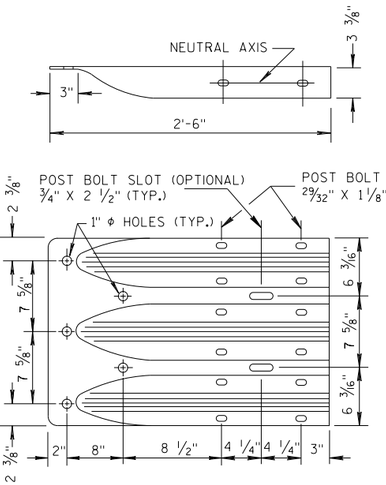
SECTION B-B

POST 6

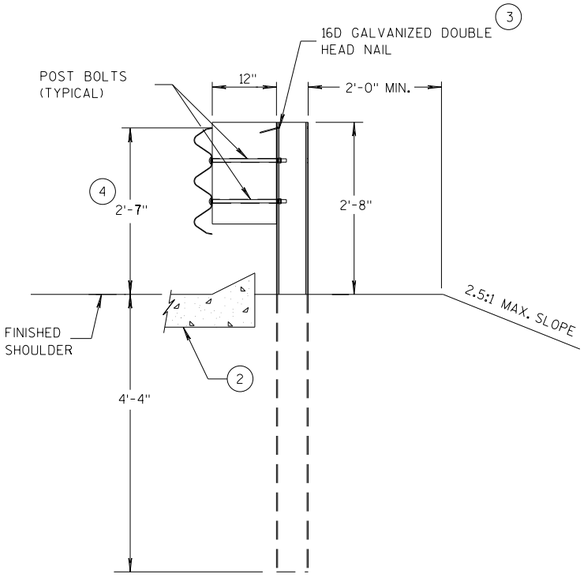


SECTION C-C

POSTS 7-11

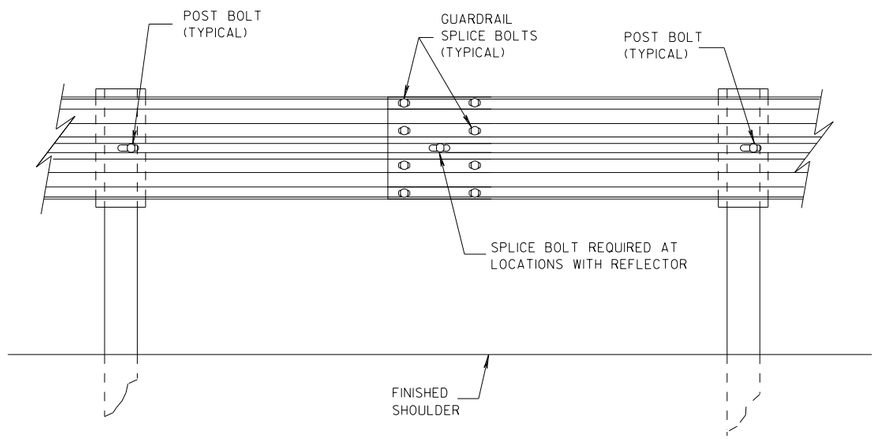


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

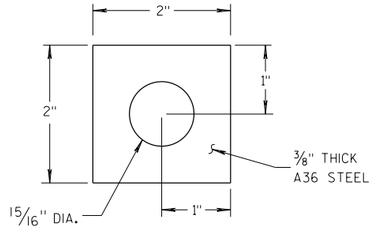
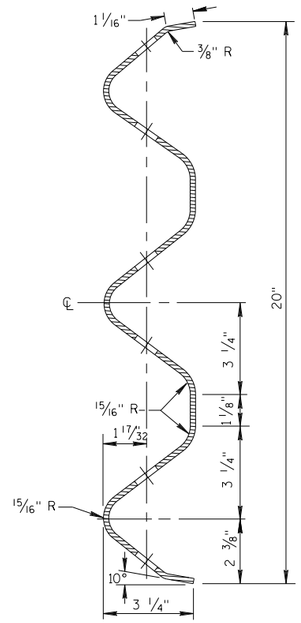


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

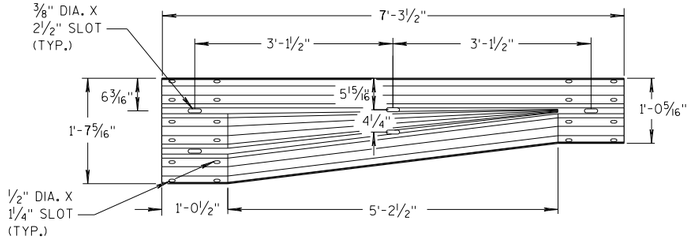
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 44

6

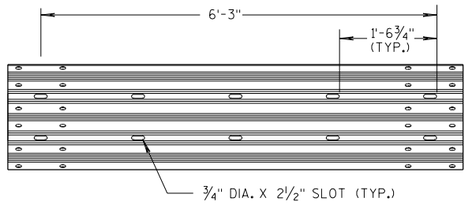
S.D.D. 14 B 45-5b

6

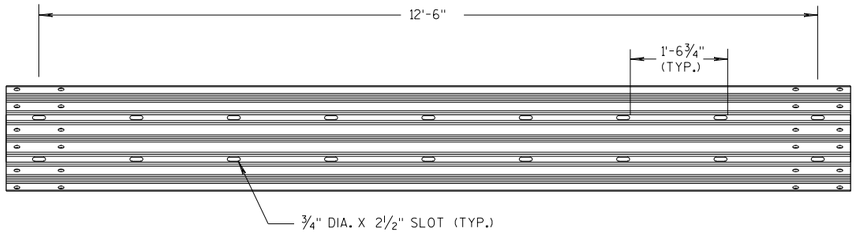
S.D.D. 14 B 45-5b



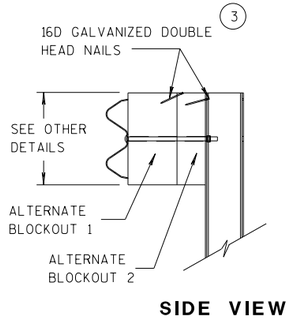
W-BEAM TO THRIE BEAM TRANSITION SECTION



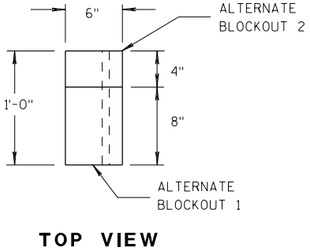
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

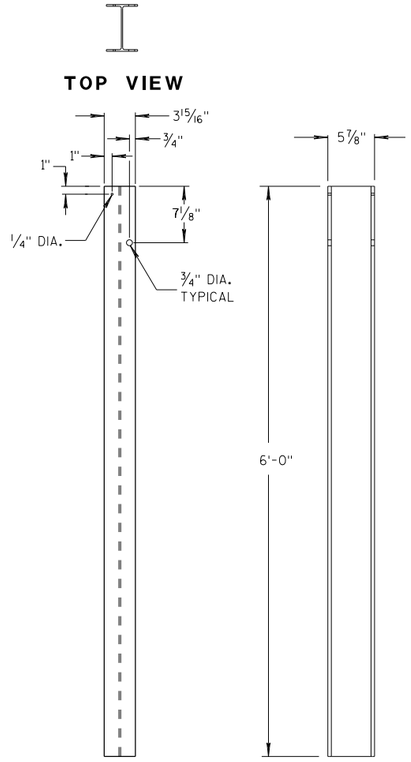


SIDE VIEW



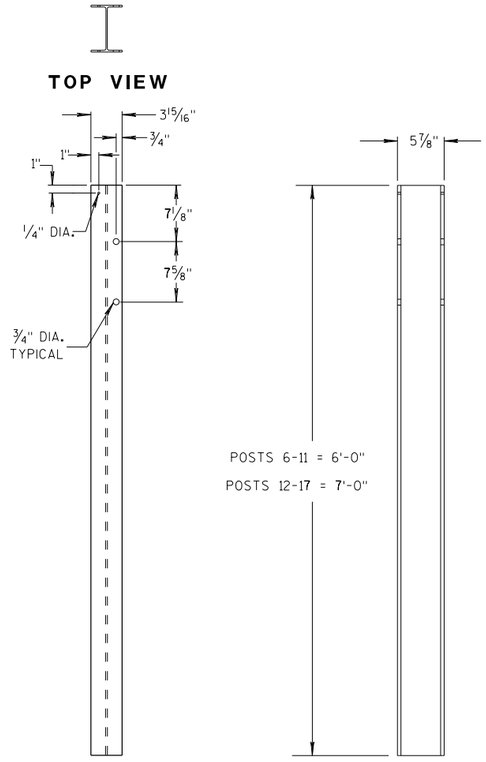
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



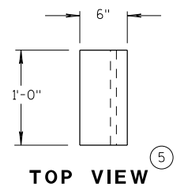
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

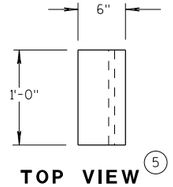


FRONT VIEW SIDE VIEW

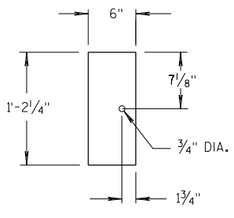
STEEL POSTS 6-17



TOP VIEW (5)

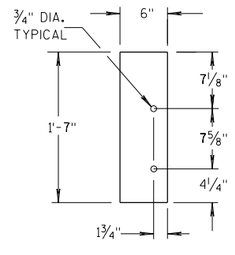


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 45

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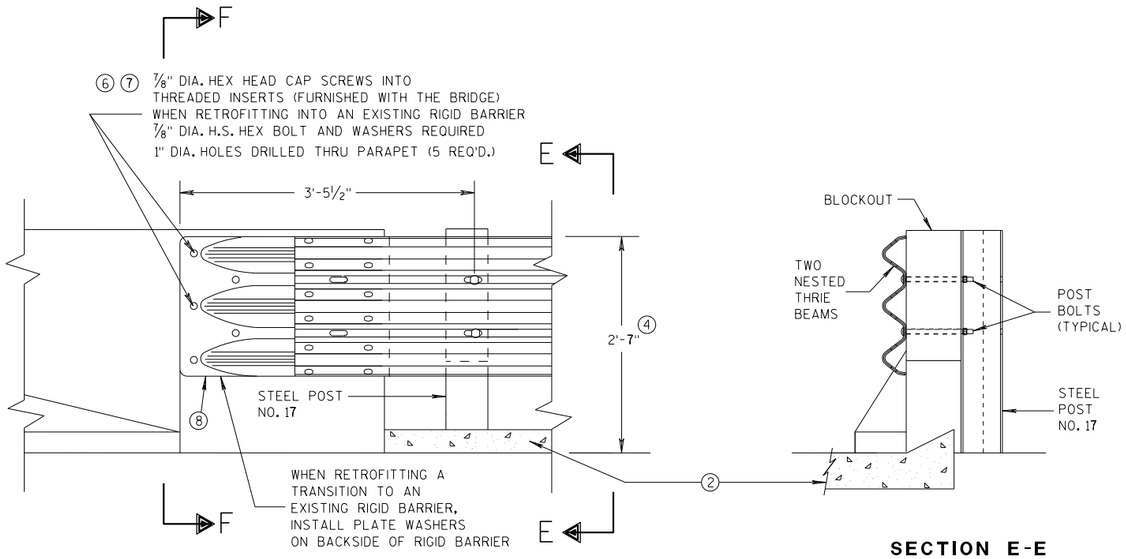


FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

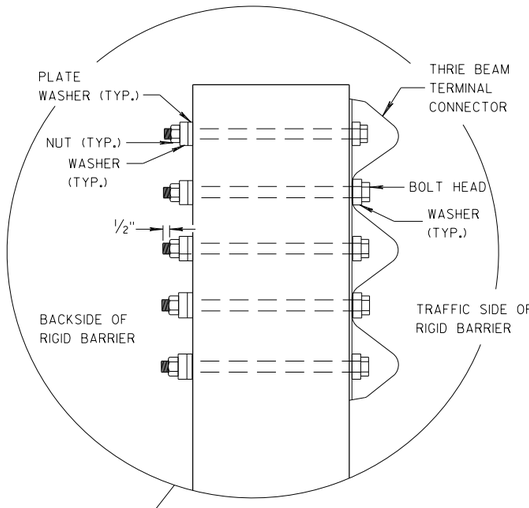
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

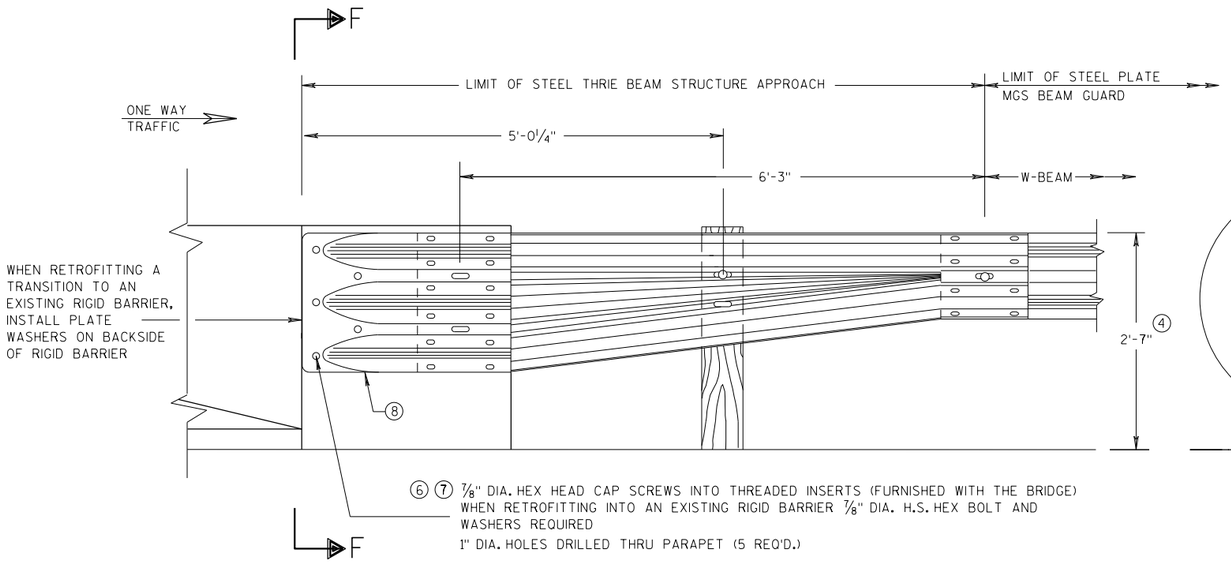
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

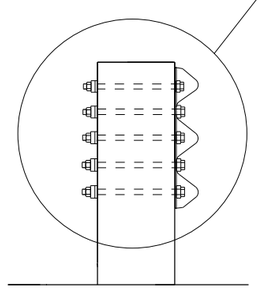
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

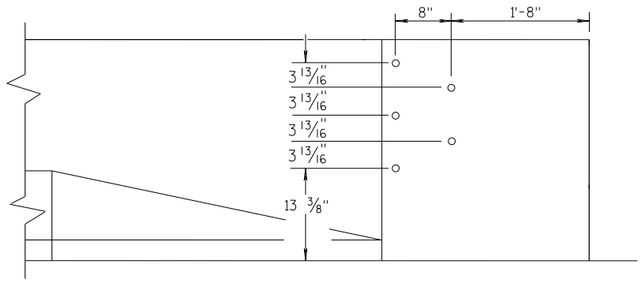




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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07/2018 DATE
/S/ Rodney Taylor
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FHWA

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GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

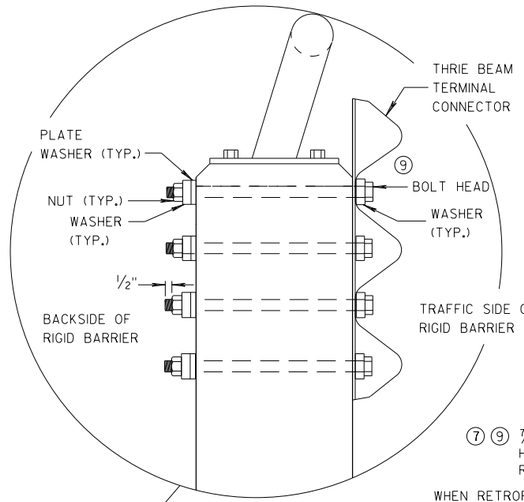
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

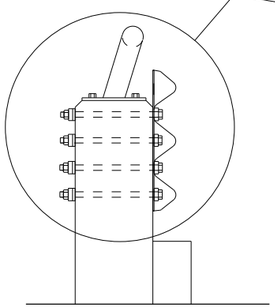
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

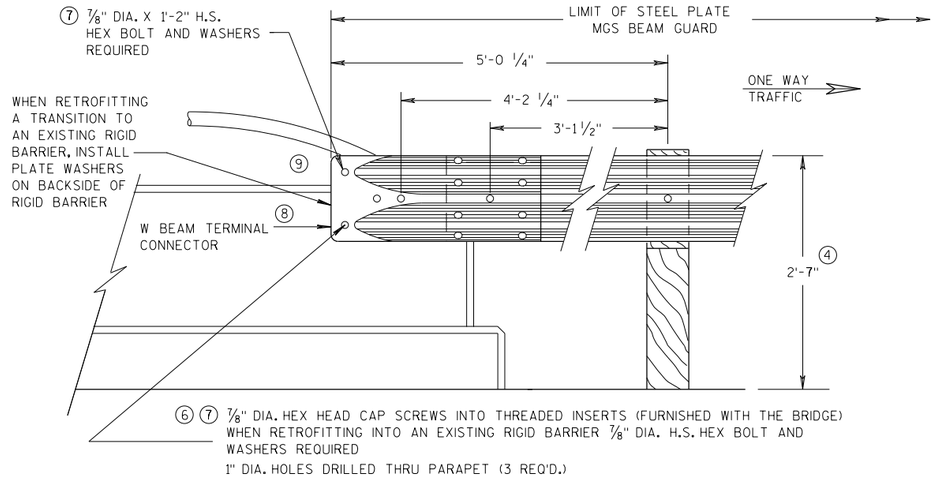
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





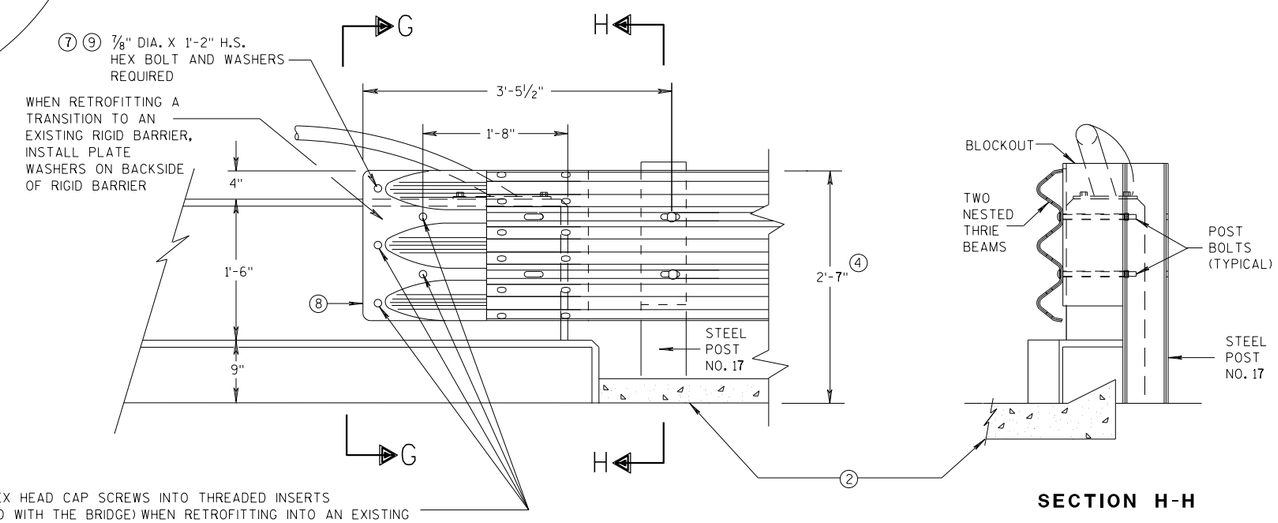
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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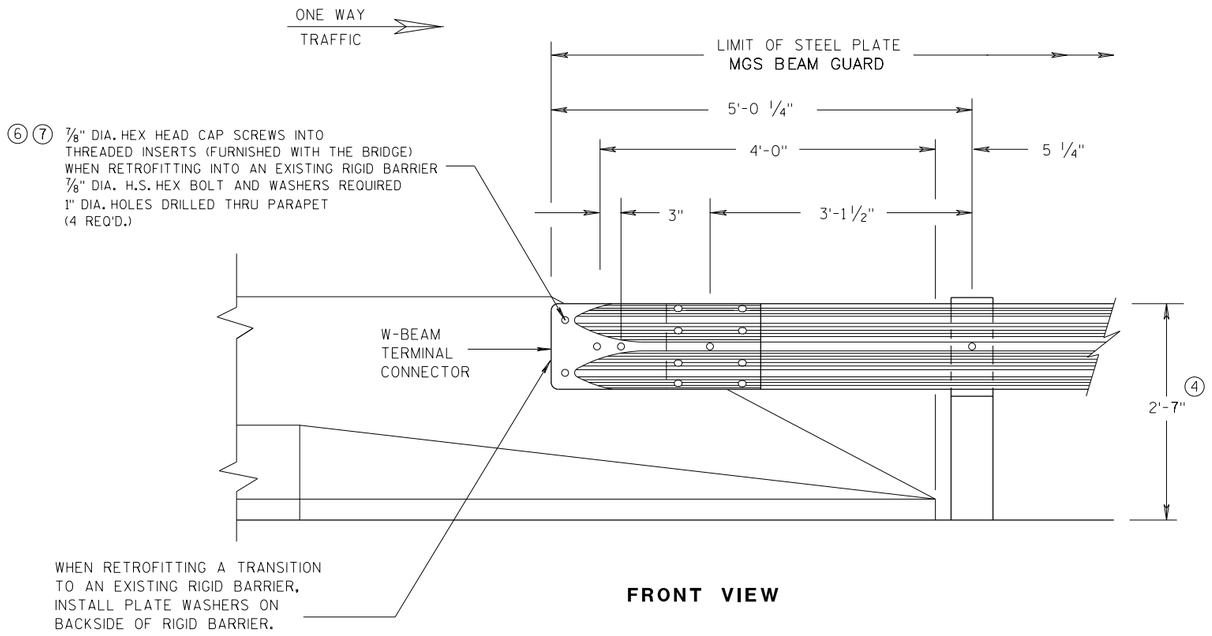


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

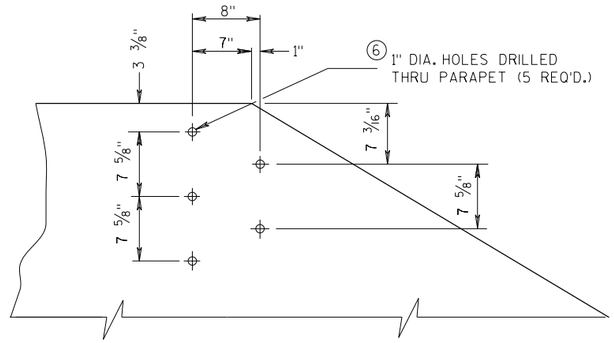
GENERAL NOTES

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

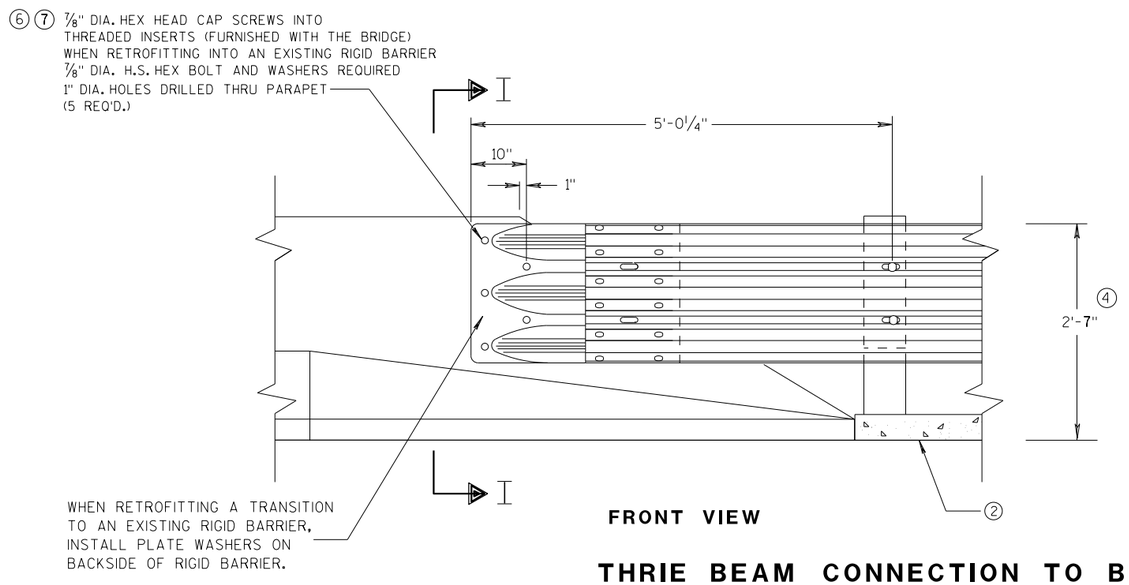
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

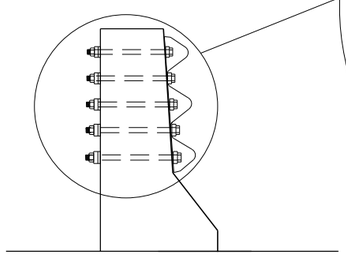
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



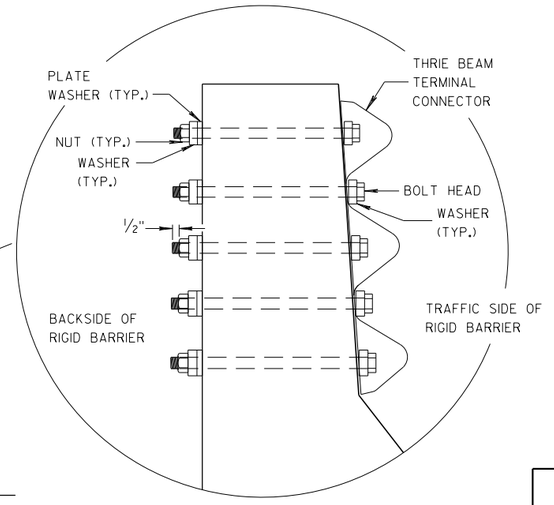
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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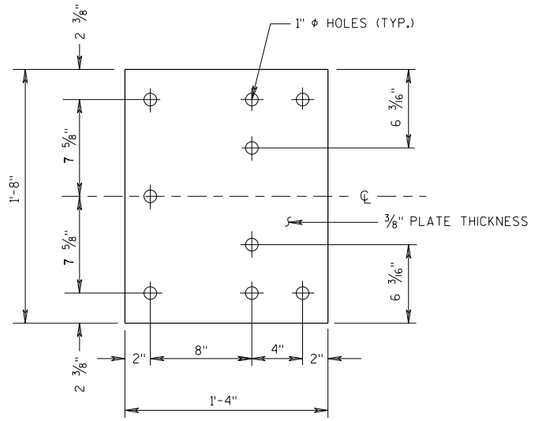
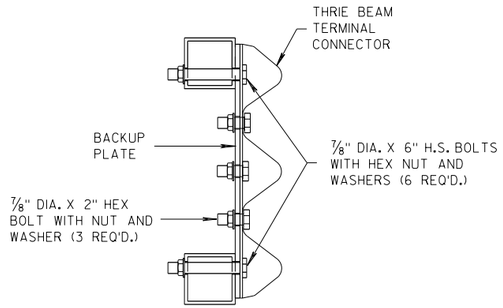
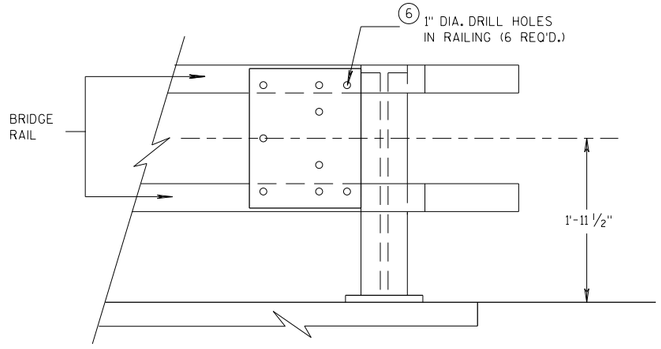


BACK-UP PLATE DETAIL



SECTION J-J

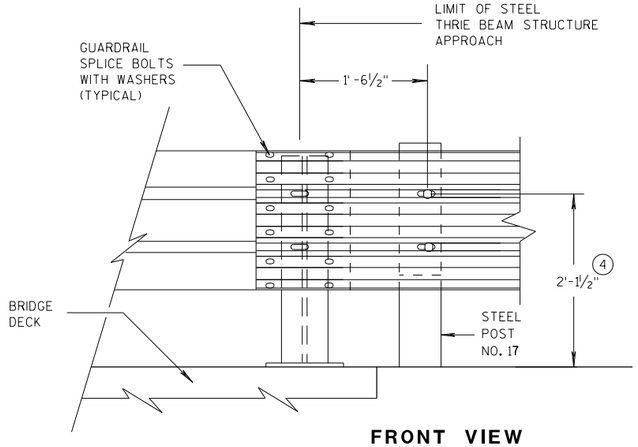


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

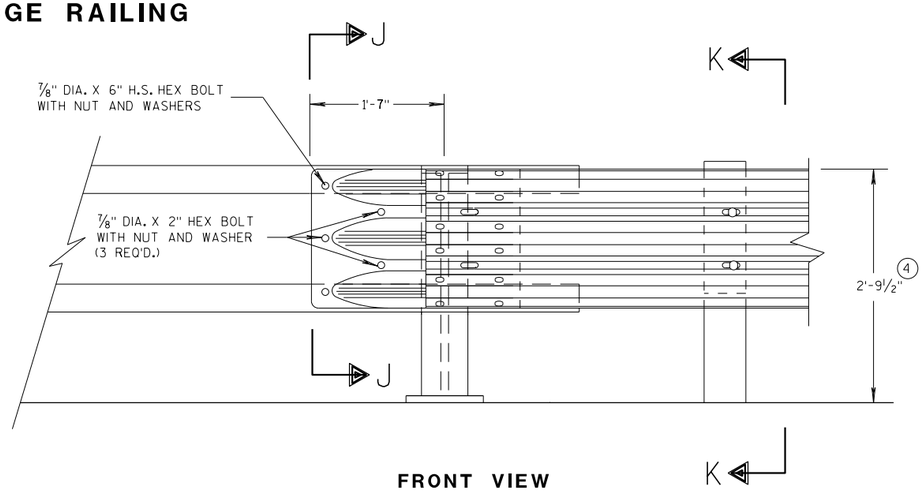
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

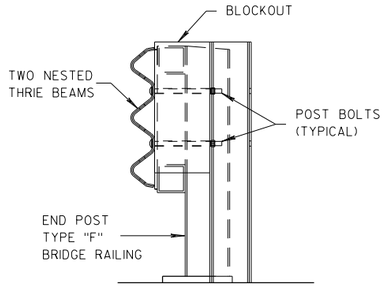


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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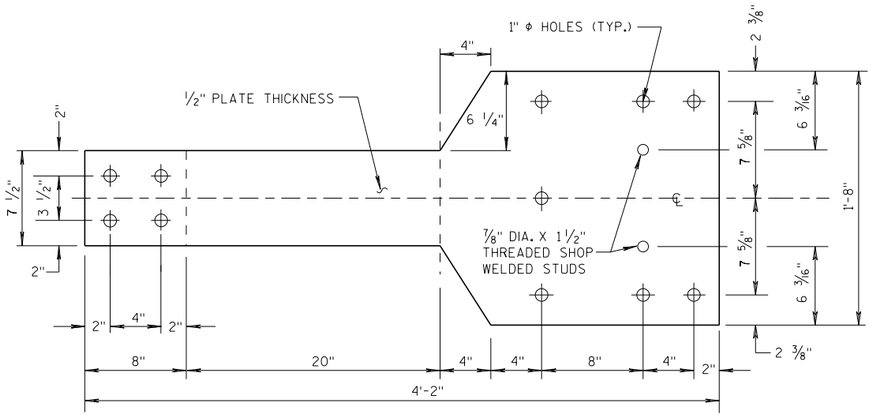
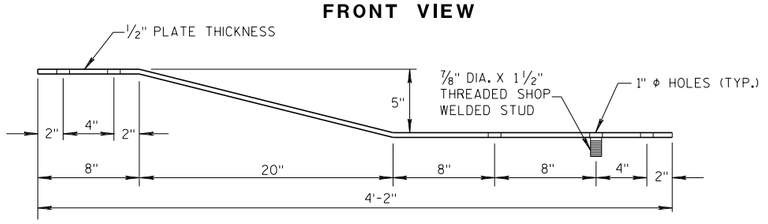
GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

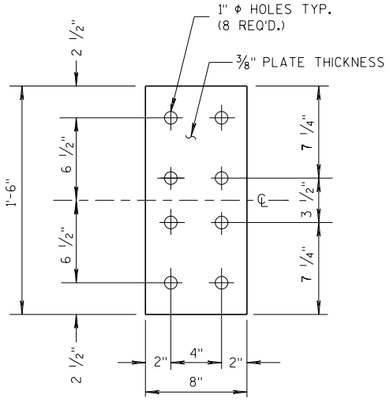


FRONT VIEW



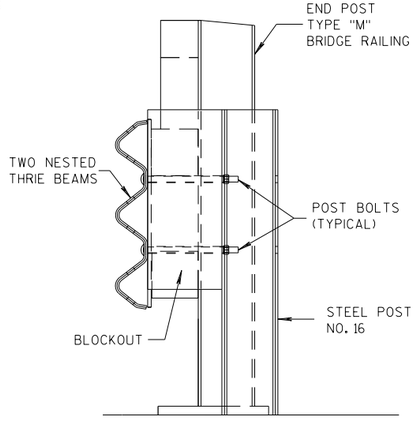
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

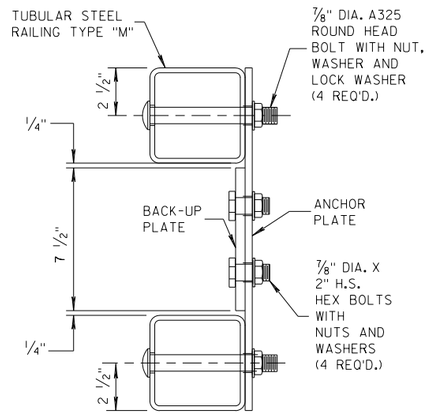


FRONT VIEW

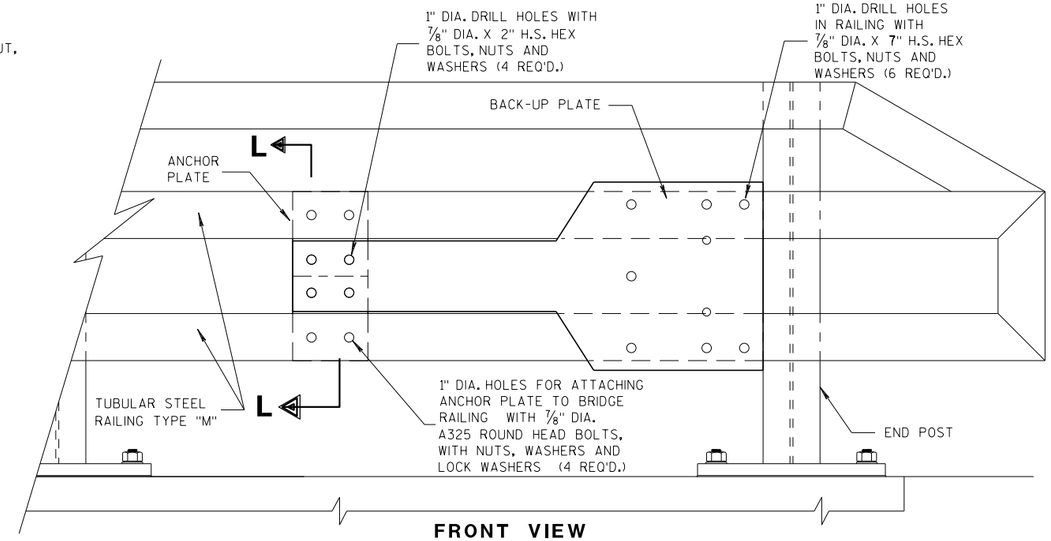
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

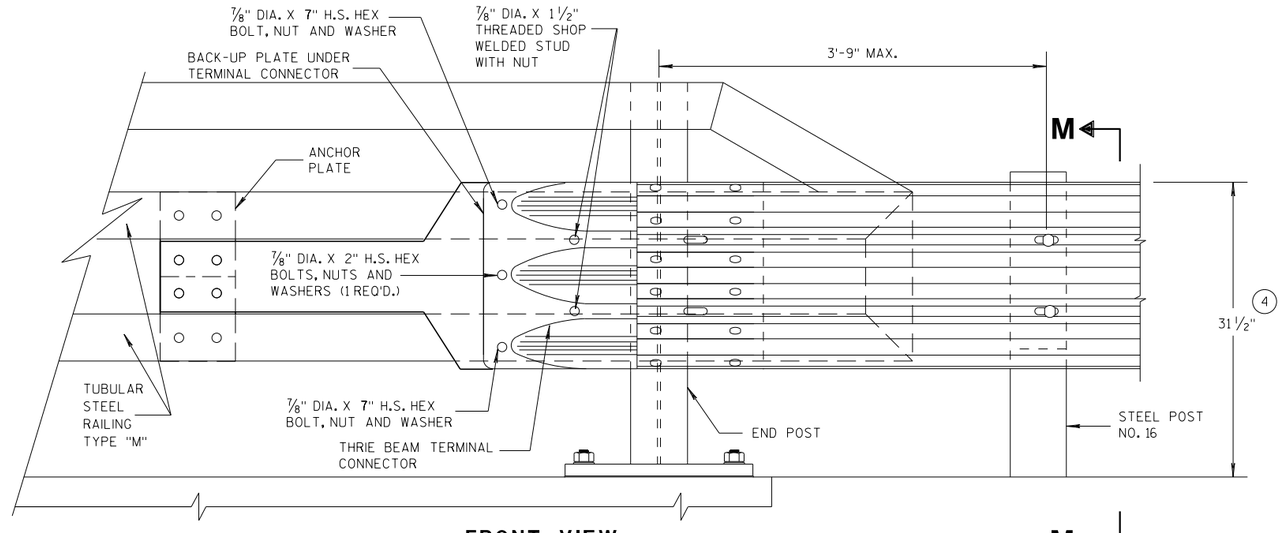


SECTION L-L

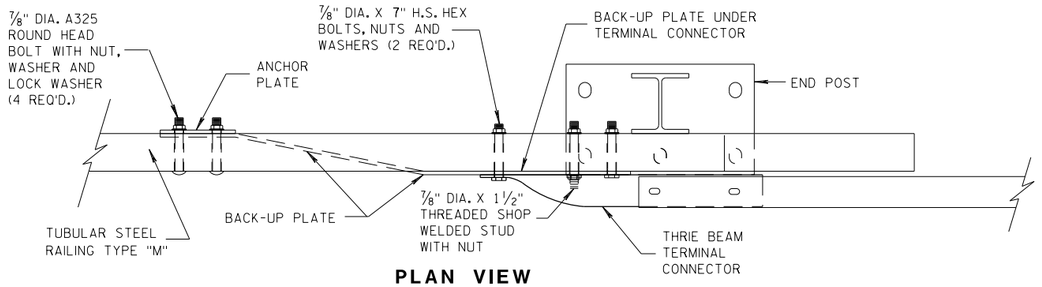


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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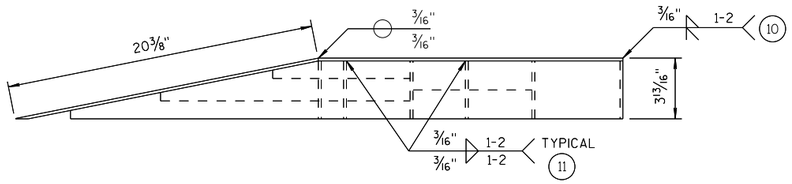

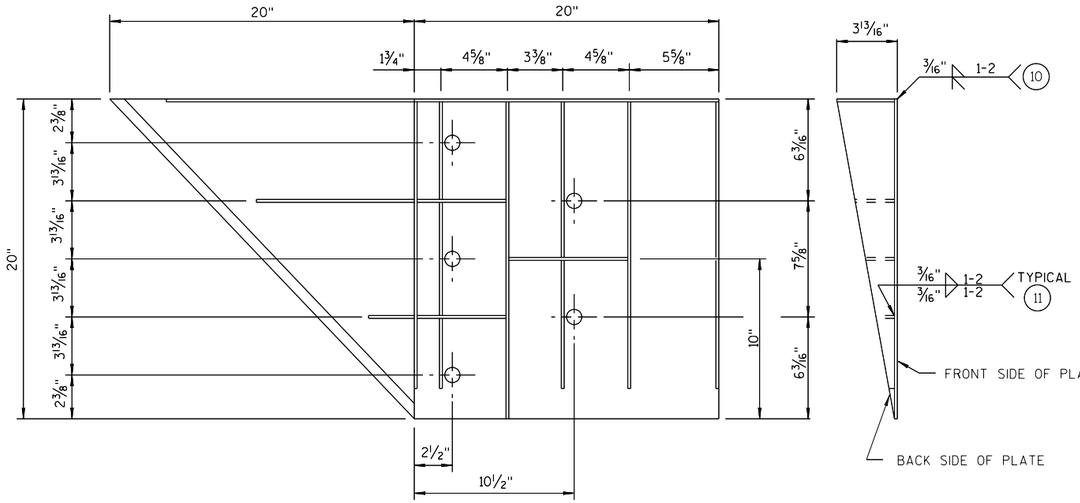

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

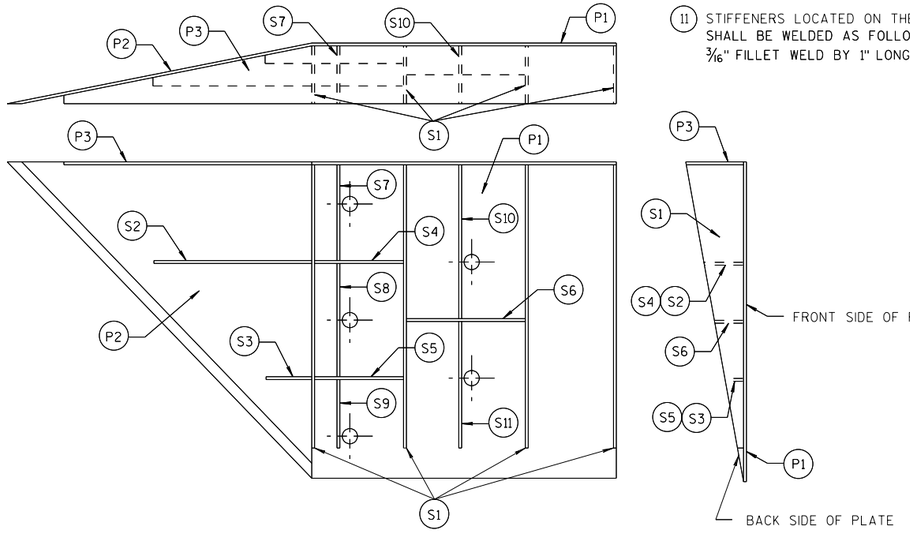

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
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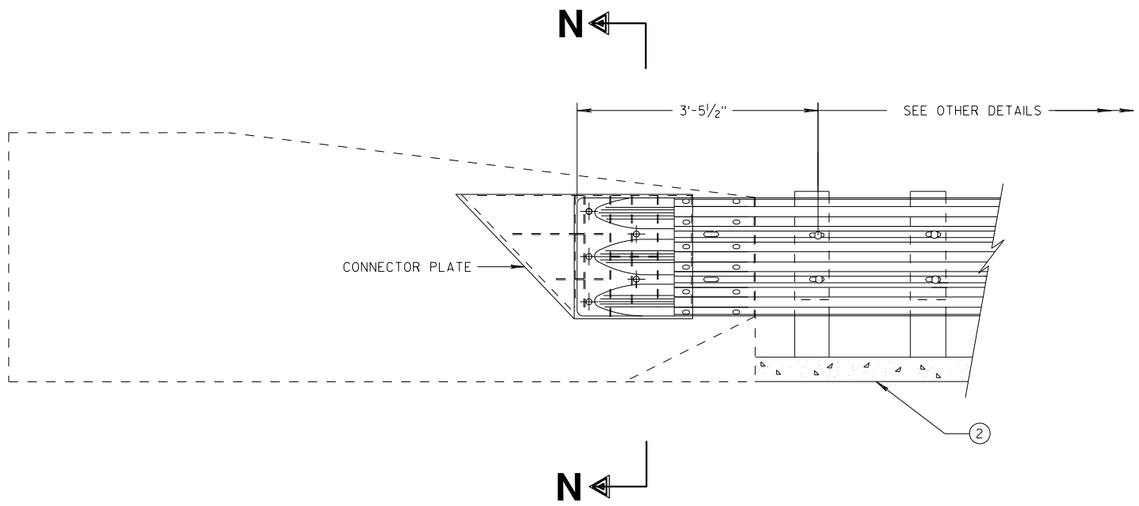
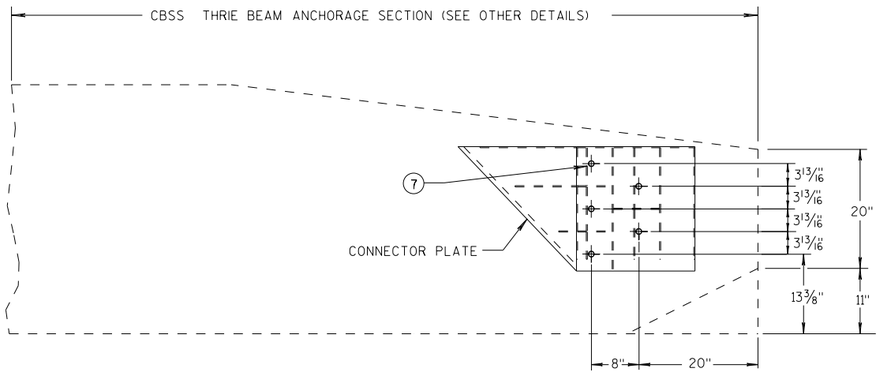


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



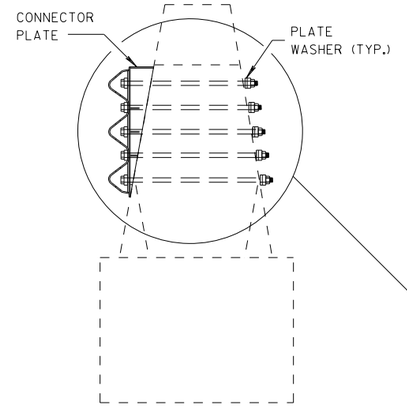
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

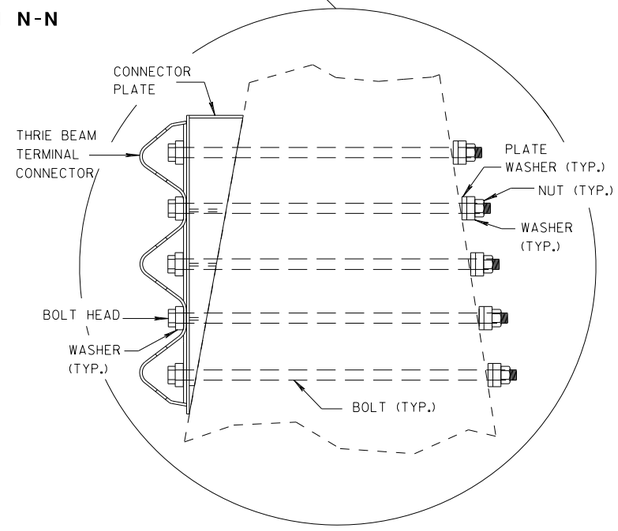
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DI
UNIT SUPERVIS

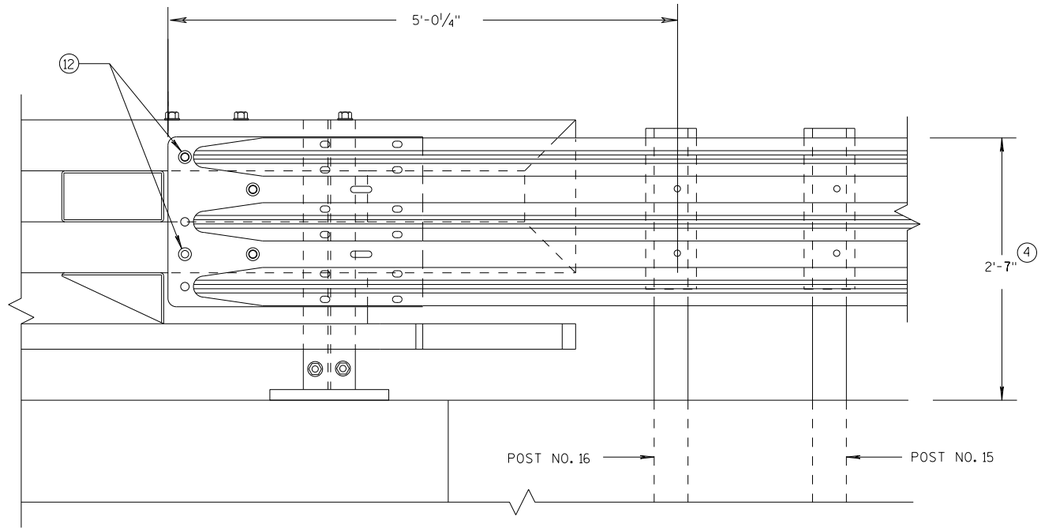
FHWA

6

S.D.D. 14 B 45-5j

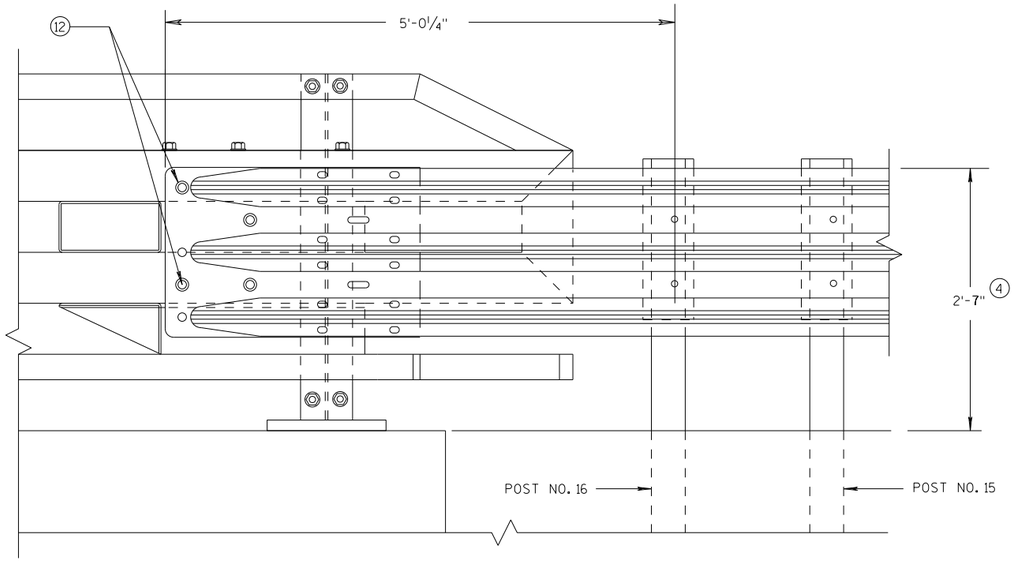
6

S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

FHWA

NT

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S.D.D. 14 B 45-5k

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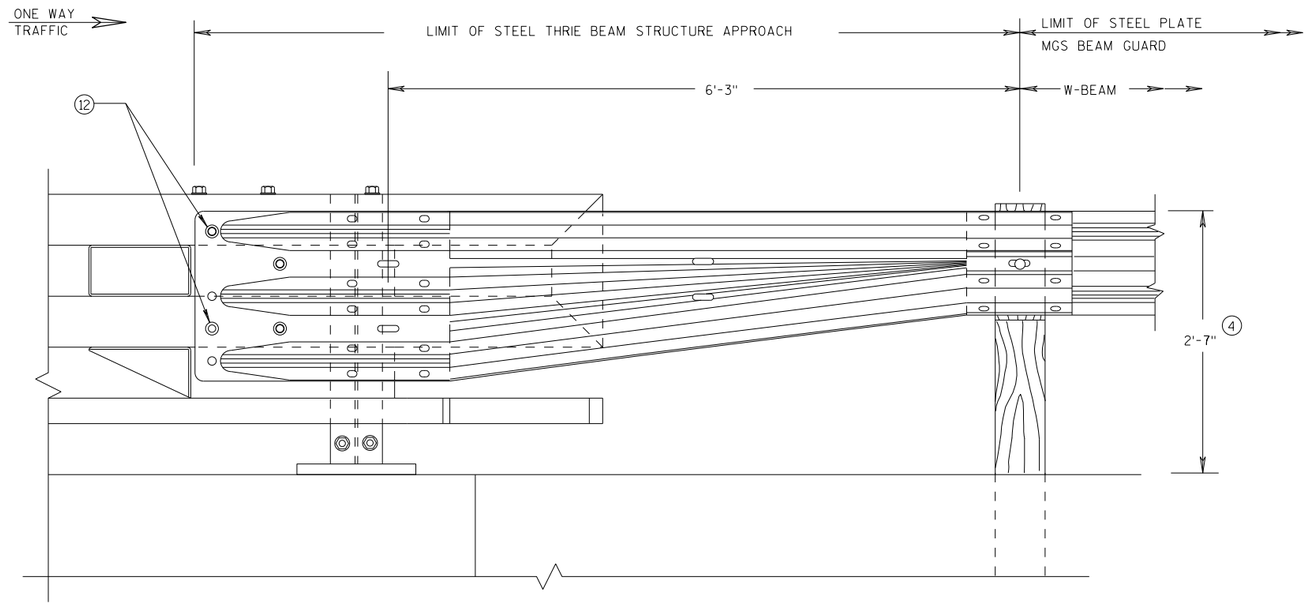
S.D.D. 14 B 45-5k



FRONT VIEW

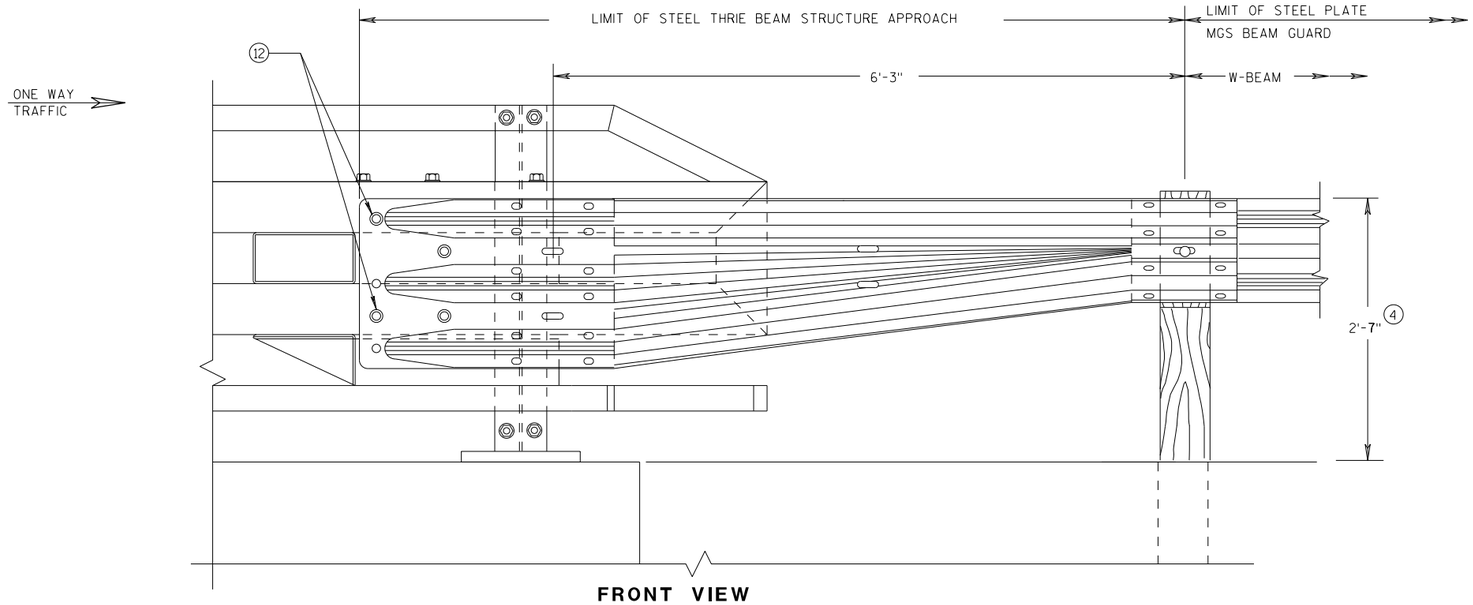
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

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6

S.D.D. 14 B 45-5L

6

S.D.D. 14 B 45-5L

GENERAL NOTES

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

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

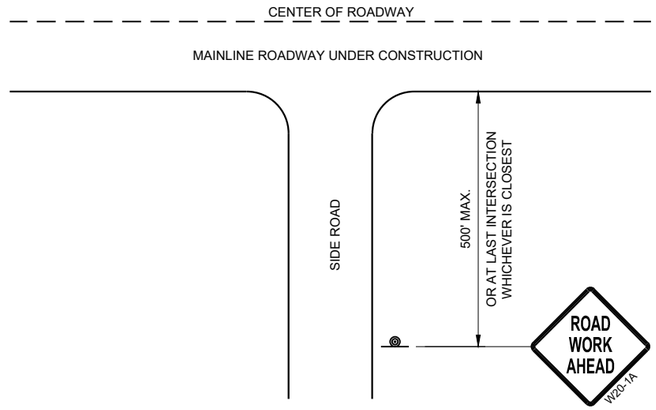
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



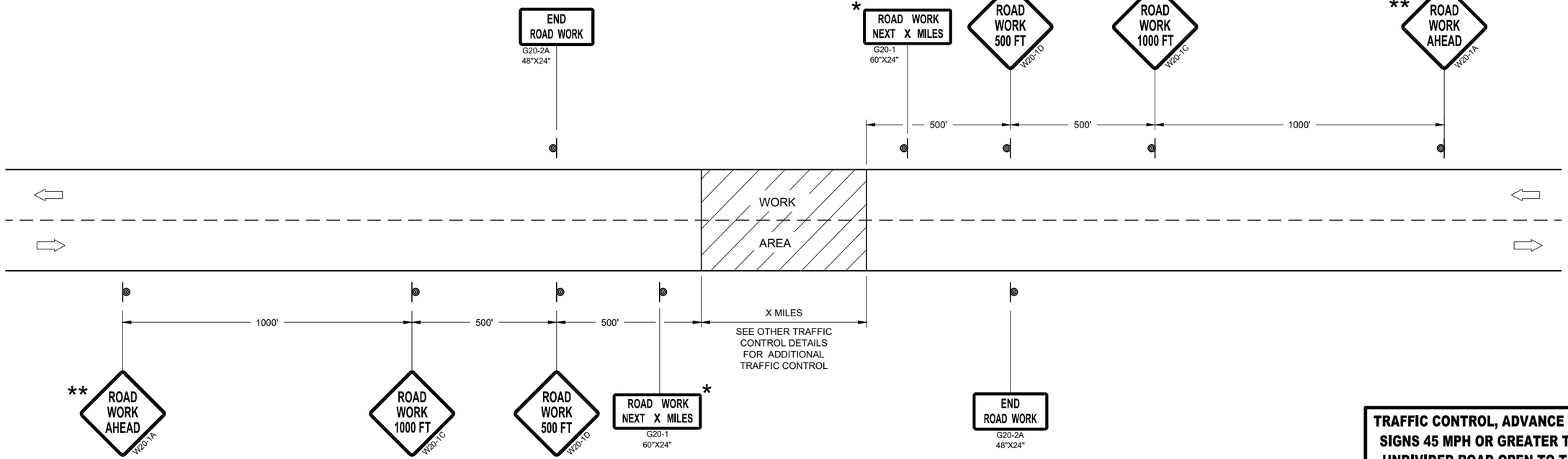
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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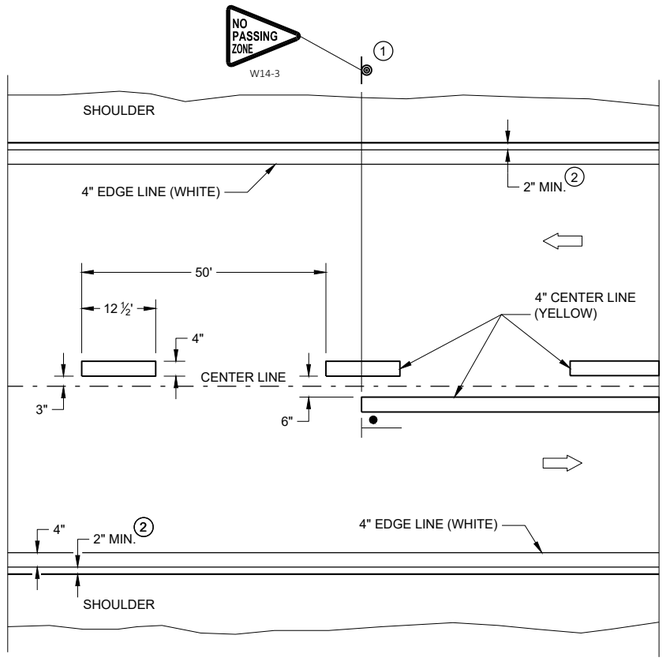
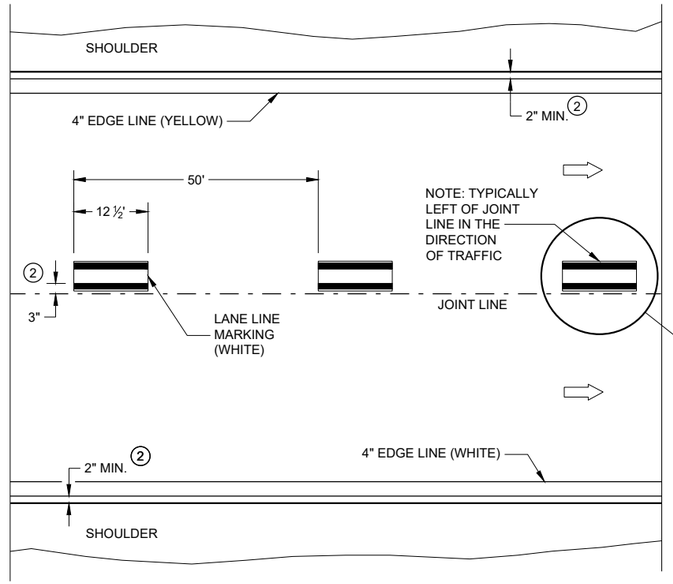
SDD 15C04 - 05

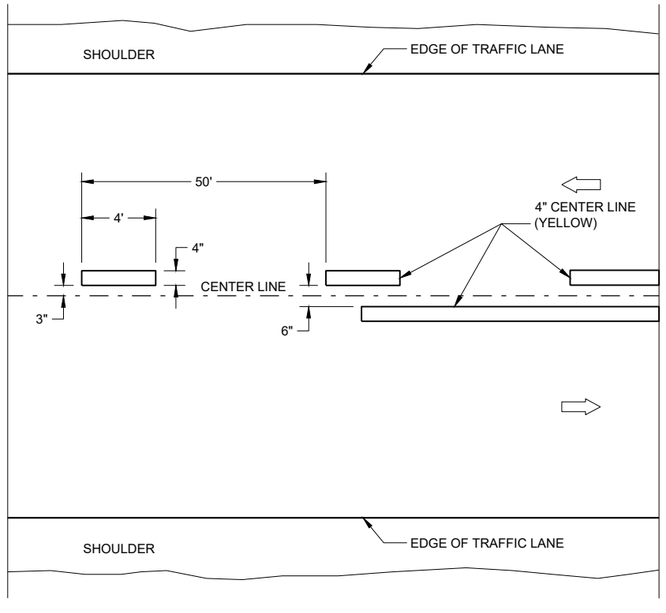


TWO WAY TRAFFIC

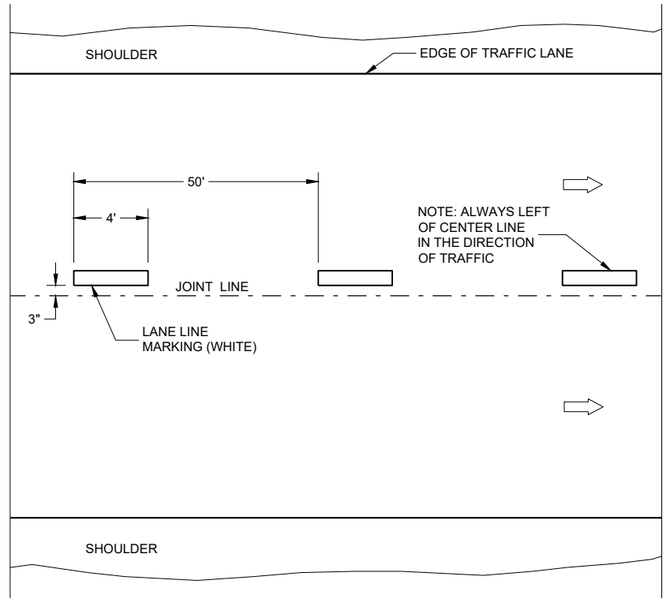


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

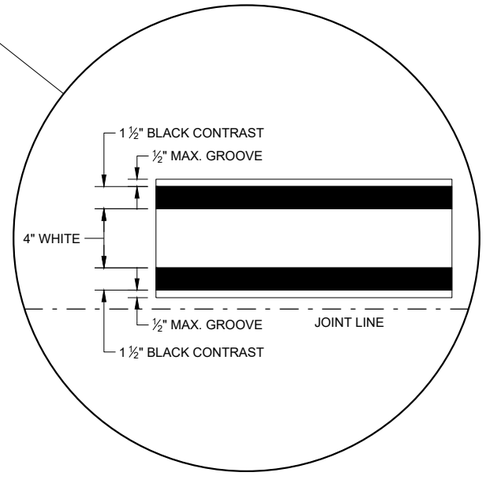
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND M ENGINEER

FHWA

SDD 15C08 - 20a

SDD 15C08 - 20a

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TRAFFIC CONTROL DRUM

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

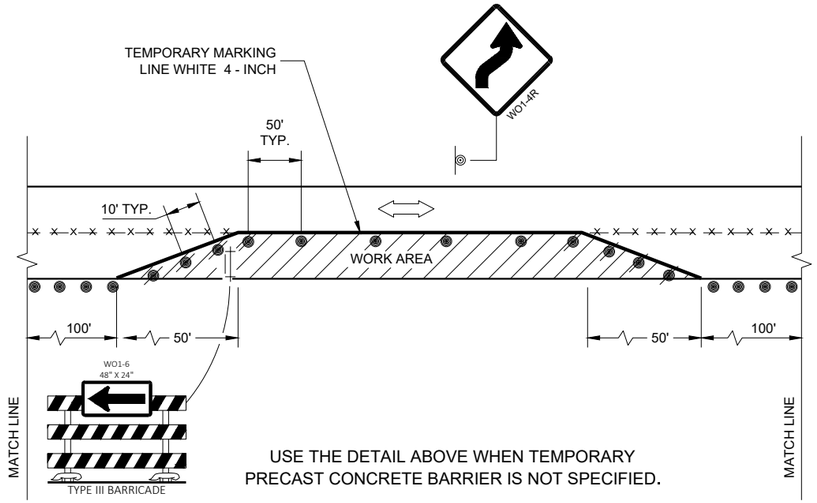
REMOVING PAVEMENT MARKING

DIRECTION OF TRAFFIC

ASPHALTIC PAVEMENT WIDENING

CONCRETE BARRIER TEMPORARY PRECAST

TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

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

(1) 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.

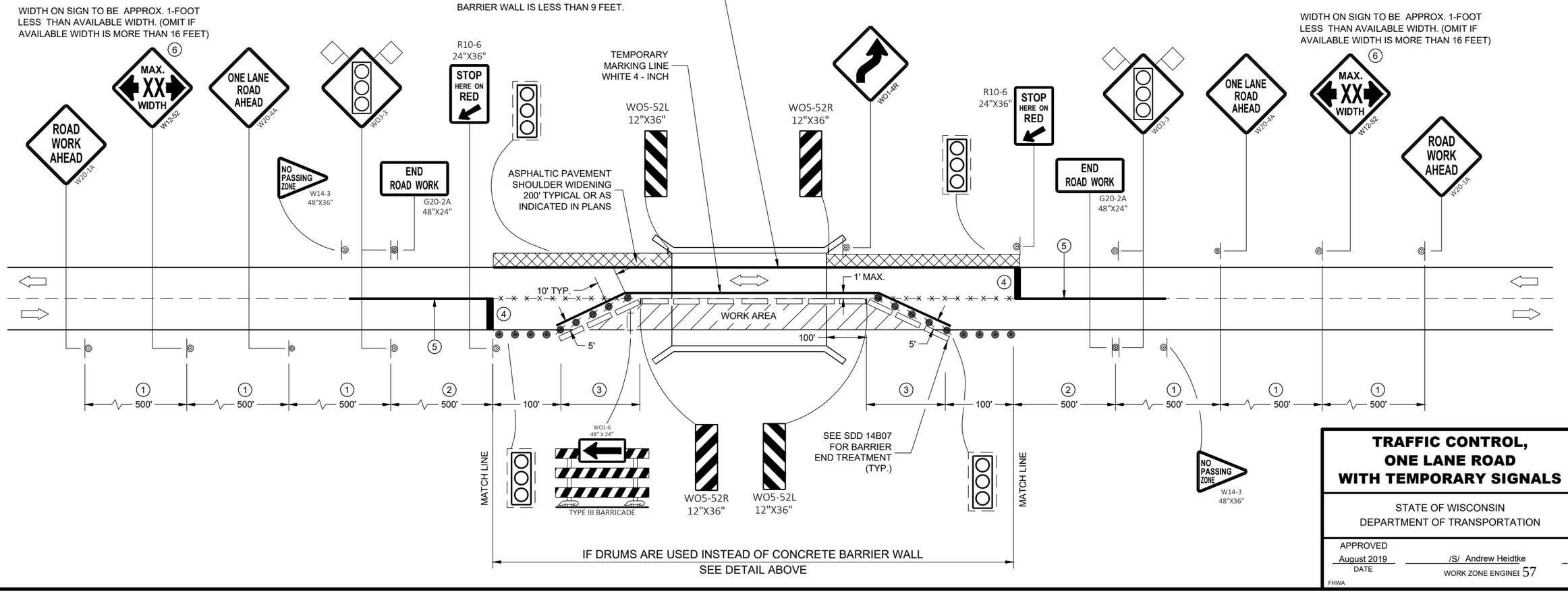
(2) USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.

(3) DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.

(4) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18 - INCH.

(5) 700 FOOT TEMPORARY MARKING LINE, DOUBLE YELLOW 4 - INCH . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

(6) SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TEMPORARY MARKING LINE WHITE 4 - INCH (STOPLINE TO STOPLINE). REMOVE EXISTING EDGELINE AND OFFSET THE TEMPORARY EDGELINE IF THE DISTANCE FROM THE EDGELINE TO CONCRETE BARRIER WALL IS LESS THAN 9 FEET.

TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

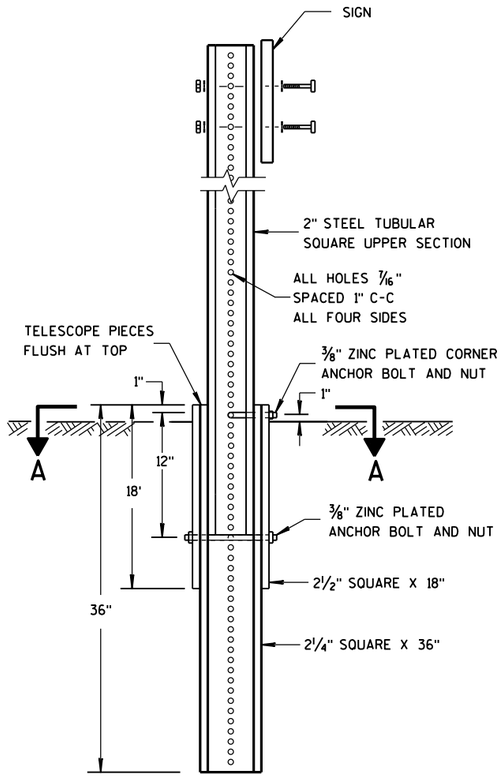
APPROVED
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

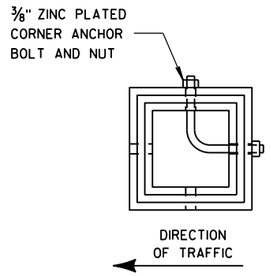
FHWA

SDD 15D33 - 06

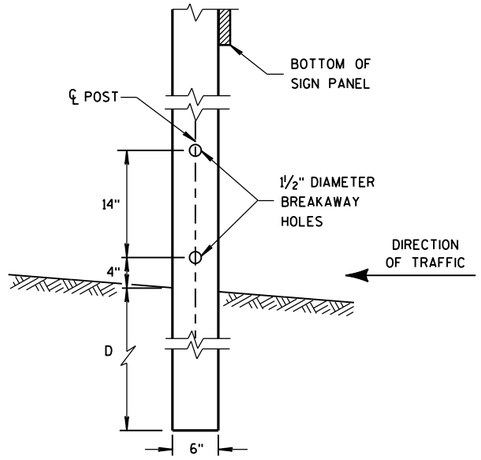
SDD 15D33 - 06



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



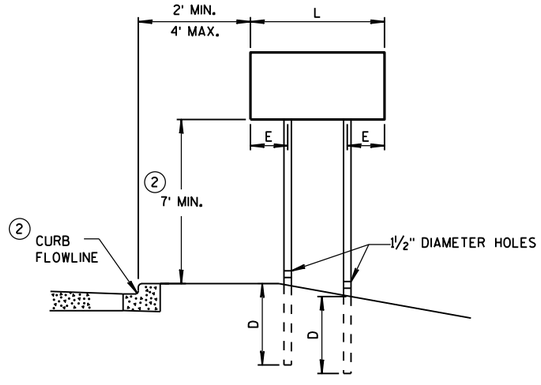
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

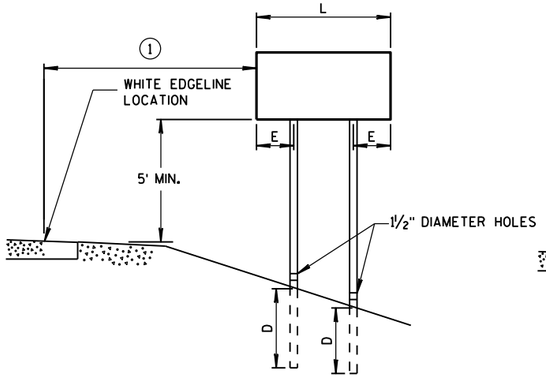
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

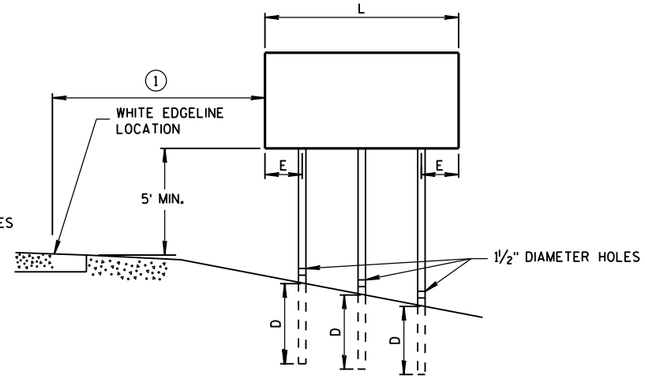
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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 TRANSPOR

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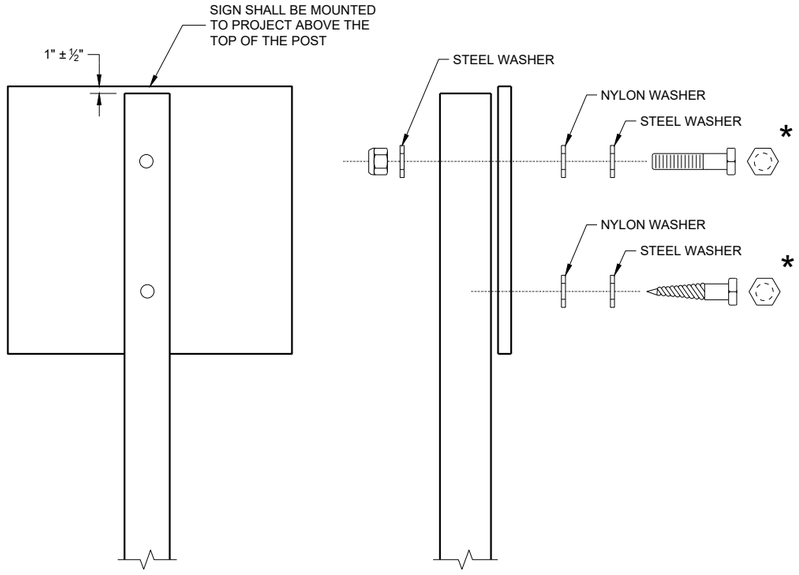
S.D.D. 15 D 38-2a



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 POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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SDD 15D38 - 02b

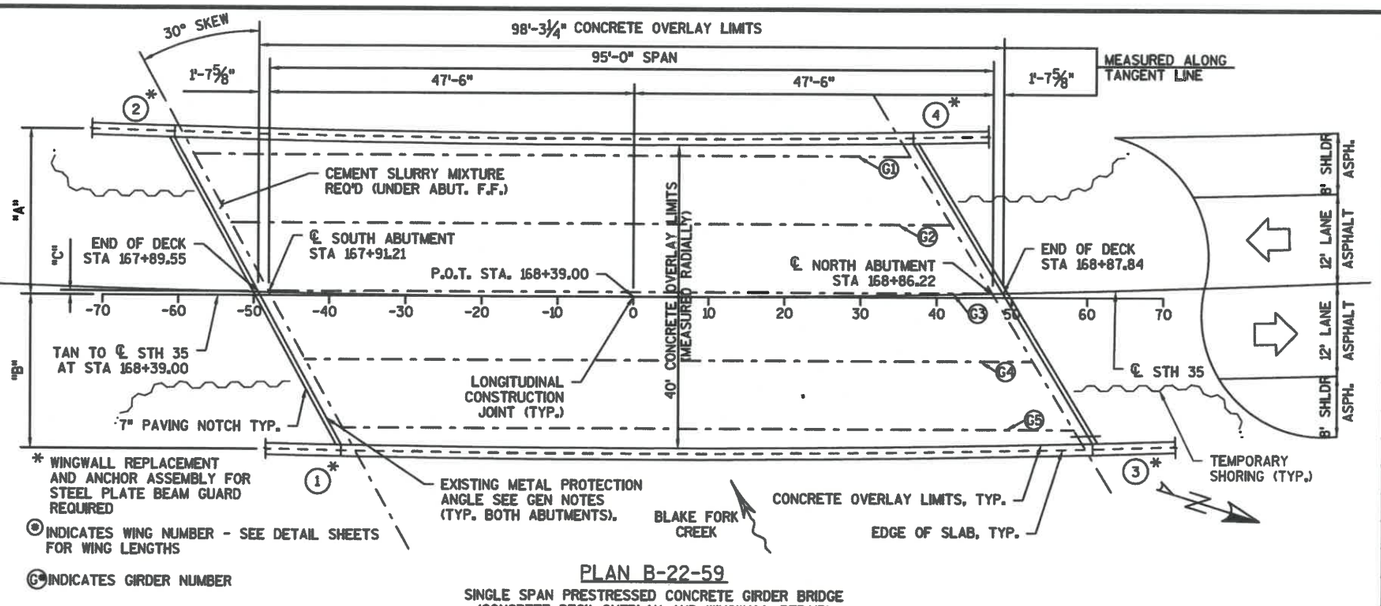
SDD15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

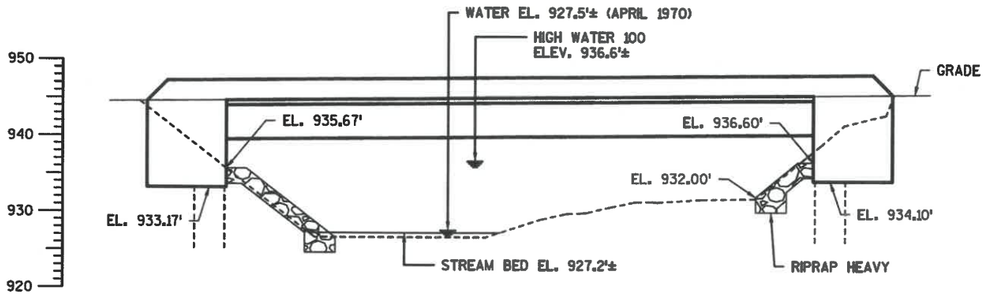
APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



PLAN B-22-59

SINGLE SPAN PRESTRESSED CONCRETE GIRDER BRIDGE
(CONCRETE DECK OVERLAY AND WINGWALL REPAIR)



ELEVATION

NORMAL TO BLAKE FORK CREEK

ELEVATIONS TAKEN FROM AS-BUILT PLANS AND ARE FOR VERTICAL REFERENCE ONLY

STATE PROJECT NUMBER

5580-00-82

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM DESCRIPTION	UNIT	TOTAL
203.0600.S.03	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 168+39	LS	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-22-59)	LS	1
210.1100	BACKFILL STRUCTURE TYPE A	CY	369
502.0100	CONCRETE MASONRY BRIDGES	CY	63
502.0717.S	CRACK SEALING EPOXY	LF	25
502.3200	PROTECTIVE SURFACE TREATMENT	SY	437
502.3210	PIGMENTED SURFACE SEALER	SY	104
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	226
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	156
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LBS	6,610
509.0301	PREPARATION DECKS TYPE 1	SY	20
509.0302	PREPARATION DECKS TYPE 2	SY	10
509.0500	CLEANING DECKS	SY	437
509.1500	CONCRETE SURFACE REPAIR	SF	2
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	25
511.1200	TEMPORARY SHORING (B-22-59)	SF	1,513
606.0300	RIPRAP HEAVY	CY	44
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	48
645.0120	GEOTEXTILE TYPE HR	SY	90
SPV.0035.02	CEMENT SLURRY MIXTURE	CY	2
SPV.0090.03	PIPE UNDERDRAIN WRAPPED 6-INCH, SPECIAL	LF	122
SPV.0165.01	GEOCOMPOSITE DRAIN BOARD	SF	731

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20
INVENTORY RATING: HS-25
OPERATING RATING: HS-51
WISCONSIN STANDARD PERMIT VEHICLE LOAD (Wis-SPV)= 250 KIPS

MATERIAL PROPERTIES
CONCRETE MASONRY - OVERLAY F'C = 4000 PSI
- ALL OTHER F'C = 3500 PSI

HIGH-STRENGTH BAR REINFORCEMENT
AASHTO GRADE 60 FY = 60000 PSI

HORIZONTAL CURVE DATA

PI STA = 167+10.27
Y = 543743.854
X = 756908.568
DELTA = 14°53'40"
D = 2°30'27"
T = 298.69'
L = 594.00'
R = 2285.00'
PC STA = 164+11.58
PT STA = 170+05.58
SE= 5%
RO= 191°

LIST OF DRAWINGS
1. GENERAL PLAN
2. CROSS SECTION, NOTES & DETAILS
3. DETAILS & REBAR TABLE
4. SOUTHEAST WING DETAIL (WING 1)
5. SOUTHWEST WING DETAIL (WING 2)
6. NORTHEAST WING DETAIL (WING 3)
7. NORTHWEST WING DETAIL (WING 4)
8. SLOPED FACE PARAPET 'B'

TRAFFIC DATA
ADT: 2,860 (2033)
RDS: 60 MPH

TANGENT OFFSET TABLE			
DIMENSION	A	B	C
-70	22'-2"	20'-0¼"	1'-0⅞"
-60	21'-10½"	20'-3⅝"	0'-9⅜"
-50	21'-7⅝"	20'-6⅝"	0'-6½"
-40	21'-5⅛"	20'-8¾"	0'-4⅛"
-30	21'-3⅜"	20'-10⅝"	0'-2⅜"
-20	21'-2"	20'-11⅞"	0'-1"
-10	21'-1¼"	21'-0¾"	0'-0¼"
0	21'-1"	21'-1"	0'-0"
10	21'-1¼"	21'-0¾"	0'-0¼"
20	21'-2"	20'-11⅞"	0'-1"
30	21'-3⅜"	20'-10⅝"	0'-2⅜"
40	21'-5⅛"	20'-8¾"	0'-4⅛"
50	21'-7⅝"	20'-6⅝"	0'-6½"
60	21'-10½"	20'-3⅝"	0'-9⅜"
70	22'-2"	20'-0¼"	1'-0⅞"

WISCONSIN
RYAN B. McKANE
E-37669
HOLDEN, WISCONSIN
PROFESSIONAL ENGINEER
11/12/2018

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

DESIGN CONSULTANT
CHAD SCHROEDER, PE
(608) 519-1455

NO.	DATE	REVISION	BY

KNIGHT
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831 Critter Court
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Phone: (608) 519-1455

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 11/13/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-22-59

STH 35 OVER BLAKE FORK CREEK

COUNTY	TOWN
GRANT	BLOOMINGTON

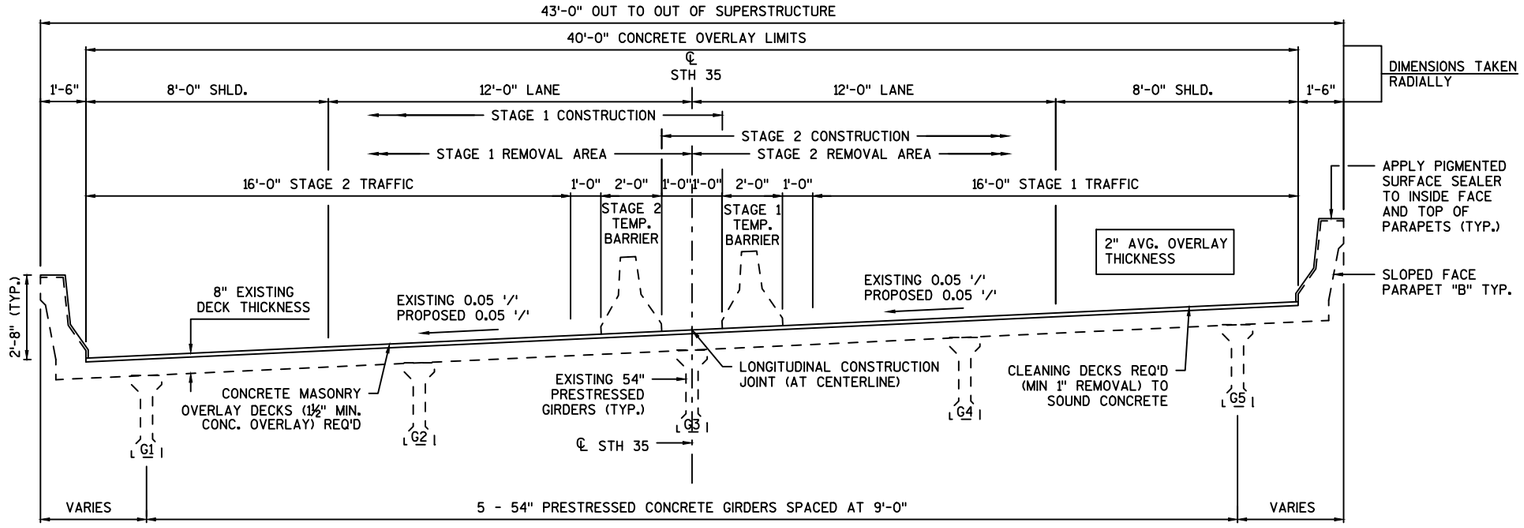
DESIGN SPEC.
REHABILITATION, N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TB	CAS	JEK	CAS

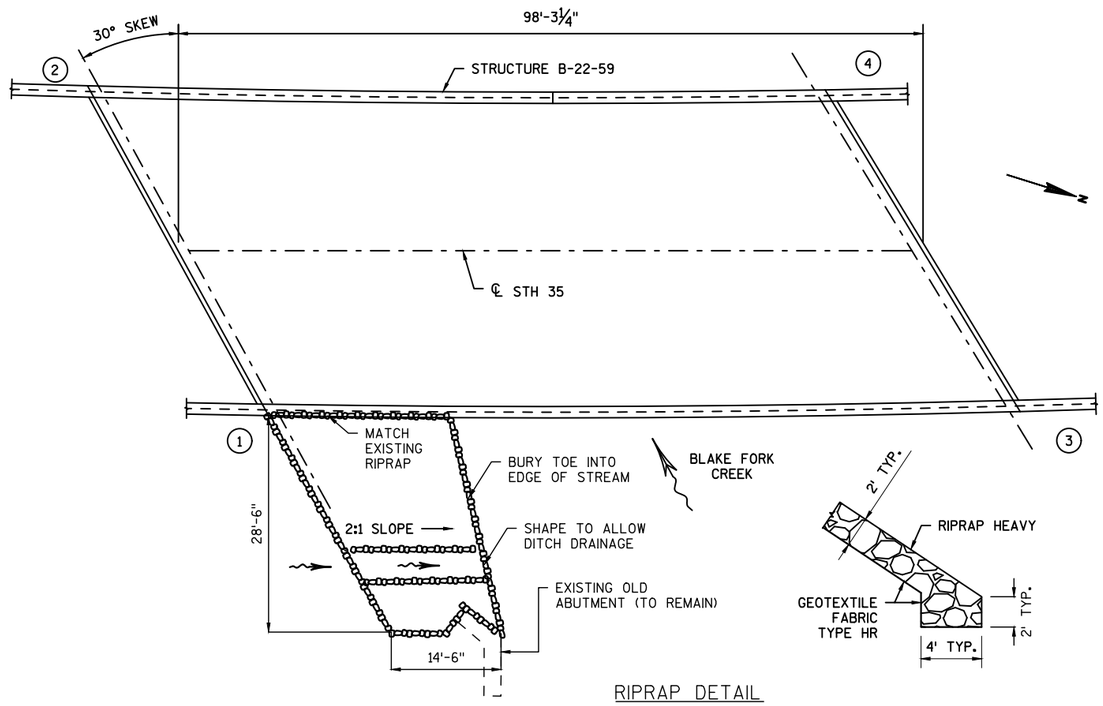
GENERAL PLAN

SHEET 1 OF 8

FILE NAME : W:\7390_01\CAD\7390.01\SHEETSPLAN\080101_BR.DWG
PLOT DATE : 11/12/2018 10:49 AM
PLOT BY : OLSON, COLIN
PLOT SCALE : **********



CROSS SECTION THRU ROADWAY
LOOKING NORTH



RIPRAP DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED OFF OF ORIGINAL STRUCTURE PLANS, INSPECTION REPORTS & FIELD SURVEY.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1 1/2" PLACED ABOVE THE DECK SURFACE AFTER CLEANING THE DECK. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN 1/2", CONTACT THE STRUCTURES DESIGN SECTION.

A MINIMUM OF 1" OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER BID ITEM "CLEANING DECKS".

PREPARATION DECKS AND FULL DEPTH REPAIR SHALL BE DETERMINED BY FIELD ENGINEER AND TO BE FILLED WITH CONCRETE MASONRY OVERLAY DECKS.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT.

POST CLEANING DECKS, CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER, PAID FOR AS CRACK SEALING EPOXY.

FILL VOIDS UNDER SOUTH ABUTMENT WITH "CEMENT SLURRY MIXTURE".

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

WHERE ADHESIVE ANCHORS ARE SPECIFIED:
FOR ALL #5 BARS, EMBED 12"
FOR ALL #4 BARS, EMBED 10"

USE 2" COVER ON ALL BARS UNLESS NOTED OTHERWISE.

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

PRIOR TO OVERLAY, REMOVE EXISTING METAL PROTECTION ANGLE FROM BOTH DECK ENDS. REMOVAL IS CONSIDERED INCIDENTAL TO ITEM "CLEANING DECKS". FILL REMOVED VOIDS WITH CONCRETE MASONRY OVERLAY DECKS.

WHEN PLACING FRESH CONCRETE NEXT TO EXISTING, SANDBLAST EXISTING CONCRETE TO REMOVE SURFACE DEBRIS AND/OR PROTECTIVE COATINGS PRIOR TO PLACEMENT. WORK WILL BE CONSIDERED INCIDENTAL TO ITEM "CONCRETE MASONRY BRIDGES".

LEGEND
F.F. FRONT FACE
B.F. BACK FACE

NO.	DATE	REVISION	BY

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER
5580-00-82

STRUCTURE B-22-59

DRAWN BY JEK | PLANS CK'D. CAS

CROSS SECTION, NOTES & DETAILS

SHEET 2 OF 8

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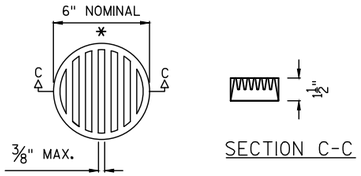
PLOT BY : OLSON, COLIN

STATE PROJECT NUMBER
5580-00-82

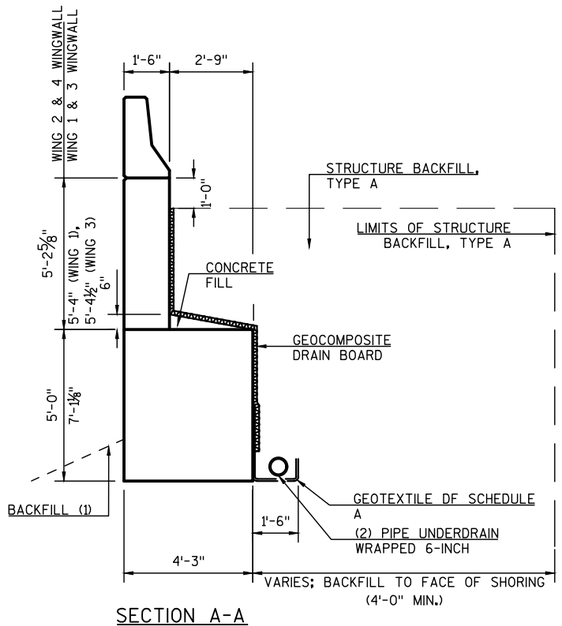


SECTION C-C

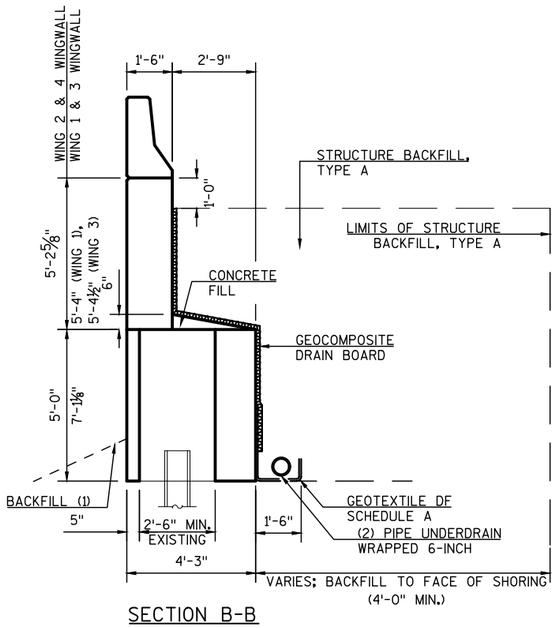
RODENT SHIELD DETAIL

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

THE RODENT SHIELD SHALL BE A 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.



SECTION A-A



SECTION B-B

(1) WHEN COMPLETE, BACKFILL WITH EXCAVATED MATERIAL FROM B.F. OF WINGS. RESTORE WITH TOPSOIL, SEEDING TEMP & #20, FERTILIZER TYPE A, AND EROSION MAT URBAN CLASS 1 TYPE B. INCIDENTAL TO ITEM 'EXCAVATION FOR STRUCTURES BRIDGES (B-22-59)'.

(2) DAYLIGHT END OF UNDERDRAIN 15-FEET PERPENDICULAR TO WING END. COUPLERS BETWEEN UNDERDRAIN TYPES AND RODENT SHIELD INCIDENTAL TO UNDERDRAIN ITEMS.

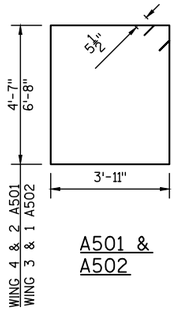
WALL DRAIN AND UNDERDRAIN DETAIL

SEE WING DETAILS FOR LOCATIONS OF SHOWN SECTIONS

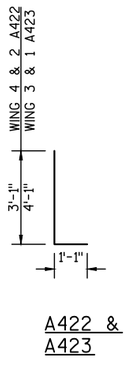
BILL OF BARS - WINGS

BAR MARK	NUMBER REQUIRED	LENGTH	BENT	COAT	LOCATION
A501	14	17'-11"	X	X	WING 2 & 4, VERTICAL
A502	14	22'-1"	X	X	WING 1 & 3, VERTICAL
A503	6	13'-8"		X	WING 2 F.F. HORIZONTAL
A504	8	15'-8"		X	WING 1 F.F. HORIZONTAL
A505	6	11'-8"		X	WING 4 F.F. HORIZONTAL
A506	8	19'-8"		X	WING 3 F.F. HORIZONTAL
A707	8	15'-3"		X	WING 2 B.F. HORIZONTAL
A708	8	14'-0"		X	WING 1 B.F. HORIZONTAL
A609	7	10'-1"		X	WING 4 B.F. HORIZONTAL
A910	8	21'-1"		X	WING 3 B.F. HORIZONTAL
A711	12	6'-2"		X	WING 2 & 1 HORIZONTAL
A612	6	6'-2"		X	WING 4, HORIZONTAL
A913	6	6'-2"		X	WING 3, HORIZONTAL
A514	12	13'-8"		X	WING 2, HORIZONTAL
A515	12	15'-8"		X	WING 1, HORIZONTAL
A516	12	11'-8"		X	WING 4, HORIZONTAL
A517	12	19'-8"		X	WING 3, HORIZONTAL
A518	54	7'-0"		X	WING 2 & 4, VERTICAL
A519	67	7'-2"		X	WING 1 & 3, VERTICAL
A520	18	6'-0"		X	WING 2 & 4 B.F. VERTICAL
A521	31	6'-2"		X	WING 1 & 3 B.F. VERTICAL
A422	34	4'-2"	X	X	WING 2 & 4 F.F. VERTICAL
A423	62	5'-2"	X	X	WING 1 & 3 F.F. VERTICAL
A424	36	5'-1"	X	X	WING 2 & 4 B.F. VERTICAL
A425	62	6'-1"	X	X	WING 1 & 3 B.F. VERTICAL
A526	40	3'-6"		X	ALL WINGS, HORIZONTAL

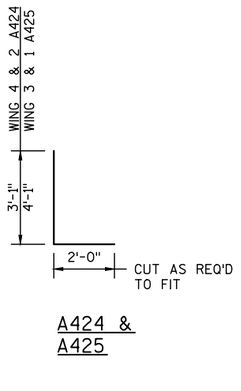
COATED BARS = 5330 LBS



A501 & A502



A422 & A423



A424 & A425

NO.	DATE	REVISION	BY

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831 Critter Court
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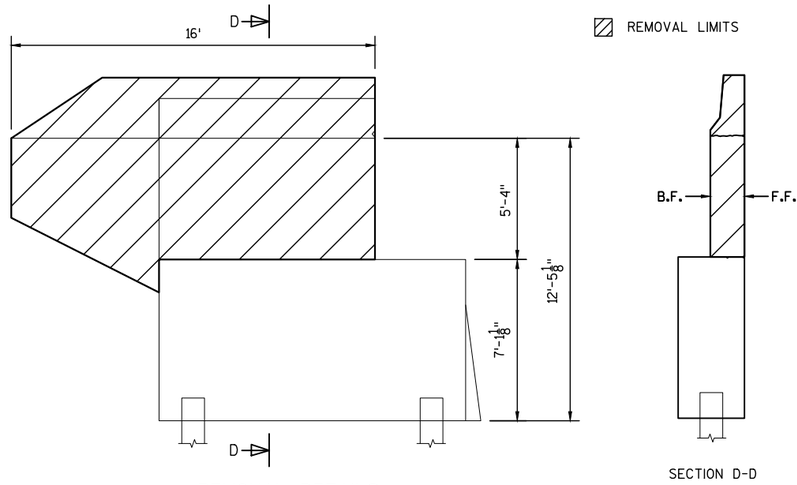
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE **B-22-59**

DRAWN BY JEK | PLANS CK'D. CAS

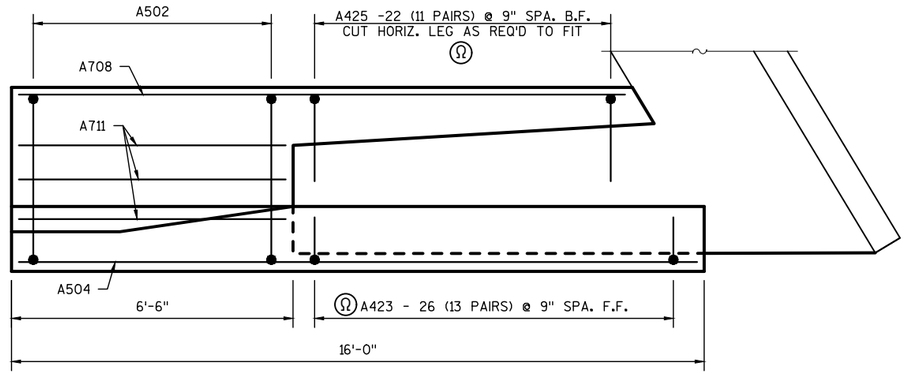
DETAILS & REBAR TABLE

SHEET 3 OF 8



REMOVAL DETAILS

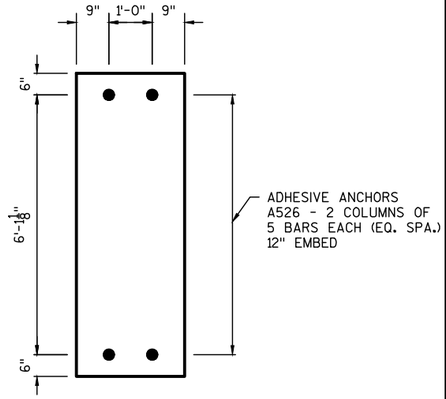
SECTION D-D



SOUTHEAST WINGWALL PLAN

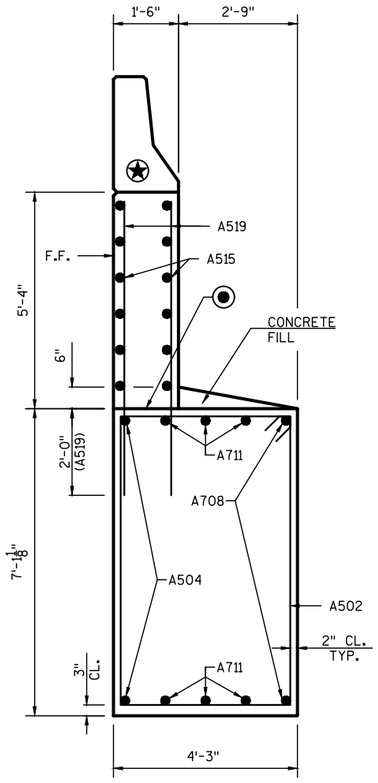
NOTES:

1. APPROXIMATE DISTANCE PER AS-BUILT. STAGGER A425 BARS TO AVOID PILE AS NEEDED.
2. ADHESIVE ANCHORS REQ'D, EMBED 12".
3. ADHESIVE ANCHORS REQ'D. EMBED 10".
4. ½" FILLER TO EXTEND FROM BRIDGE SEAT TO WHERE SHOWN
5. OPTIONAL CONST. JOINT FORMED BY SURFACED BEVELED 2" X 6" KEYWAY ('V'-GROOVE NOT REQ'D IF JOINT IS NOT USED).
6. SEE PARAPET DETAIL FOR BAR STEEL PLACEMENT INTO WING.

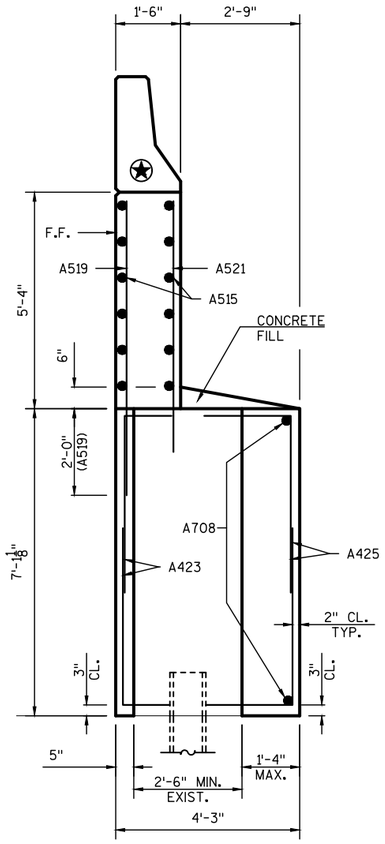


SECTION C-C

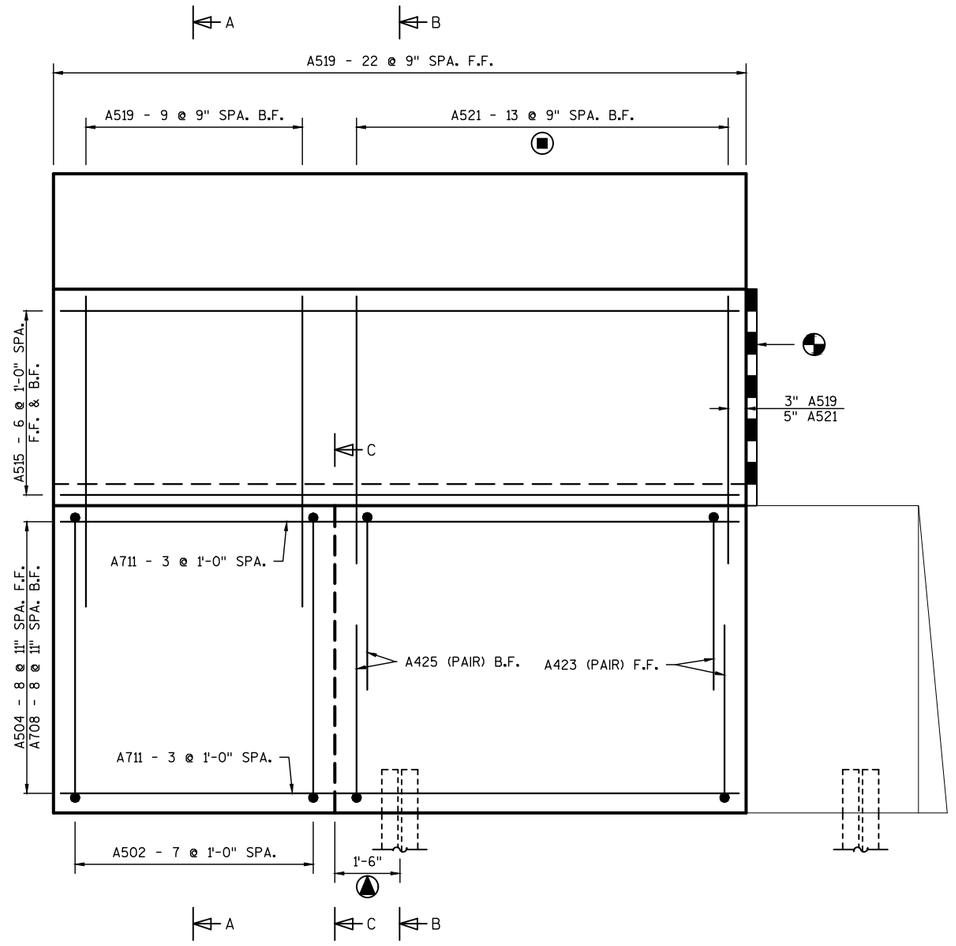
ANCHOR AND BAR PLACEMENT INTO REMAINING WING END.



SECTION A-A



SECTION B-B



SOUTHEAST WINGWALL ELEVATION

NO.	DATE	REVISION	BY

KNIGHT
Engineers & Architects
831 Critter Court
Suite 400
Onalaska, WI 54650
Phone: (608) 519-1455

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE **B-22-59**

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SOUTHEAST WING DETAIL (WING 1)

SHEET 4 OF 8

STATE PROJECT NUMBER

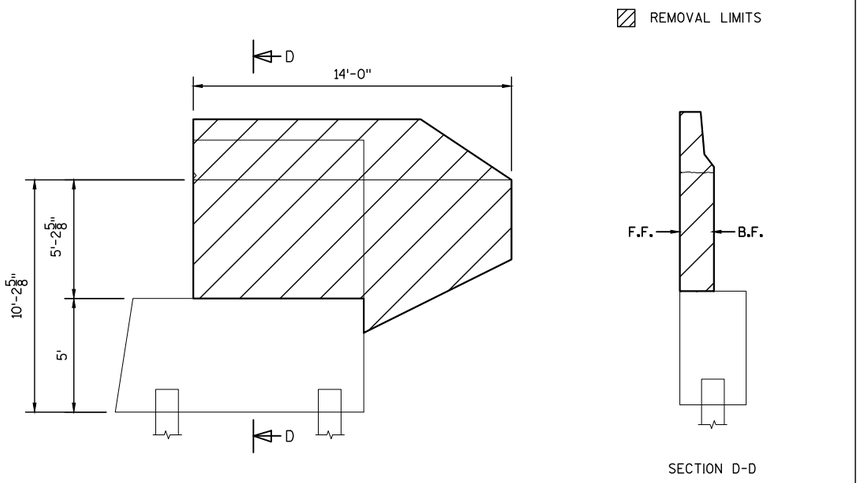
5580-00-82

8

8

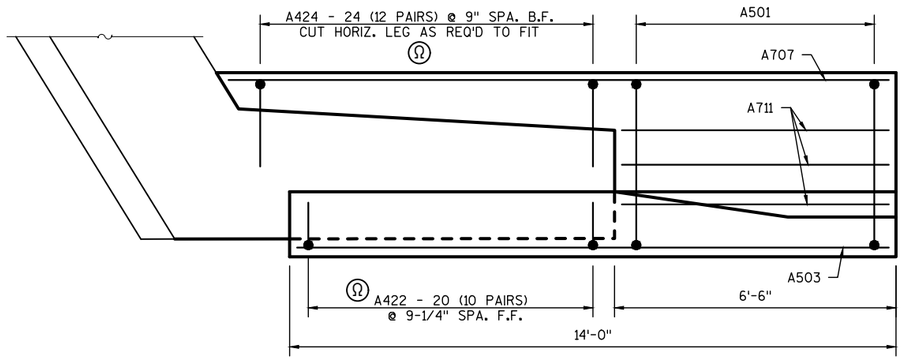
STATE PROJECT NUMBER

5580-00-82



REMOVAL DETAILS

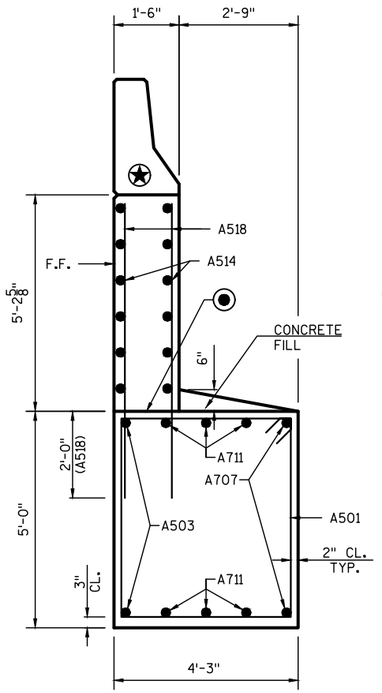
SECTION D-D



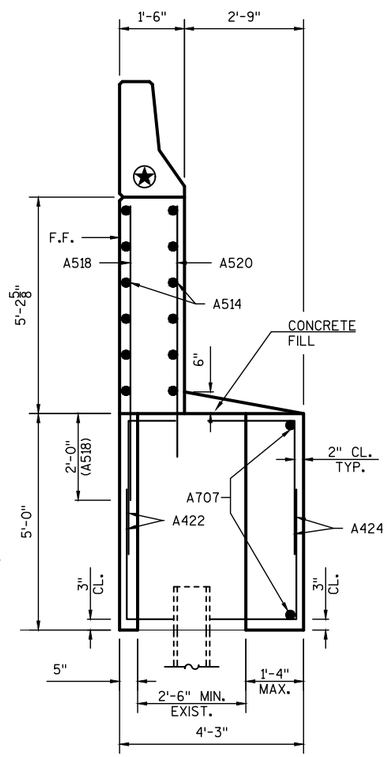
SOUTHWEST WINGWALL PLAN

NOTES:

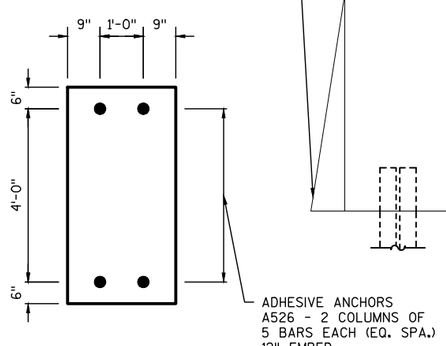
1. APPROXIMATE DISTANCE PER AS-BUILT. STAGGER A424 BARS TO AVOID PILE AS NEEDED.
2. ADHESIVE ANCHORS REQ'D, EMBED 12".
3. ADHESIVE ANCHORS REQ'D. EMBED 10".
4. ½" FILLER TO EXTEND FROM BRIDGE SEAT TO WHERE SHOWN
5. OPTIONAL CONST. JOINT FORMED BY SURFACED BEVELED 2" X 6" KEYWAY ('V'-GROOVE NOT REQ'D IF JOINT IS NOT USED).
6. SEE PARAPET DETAIL FOR BAR STEEL PLACEMENT INTO WING.



SECTION A-A

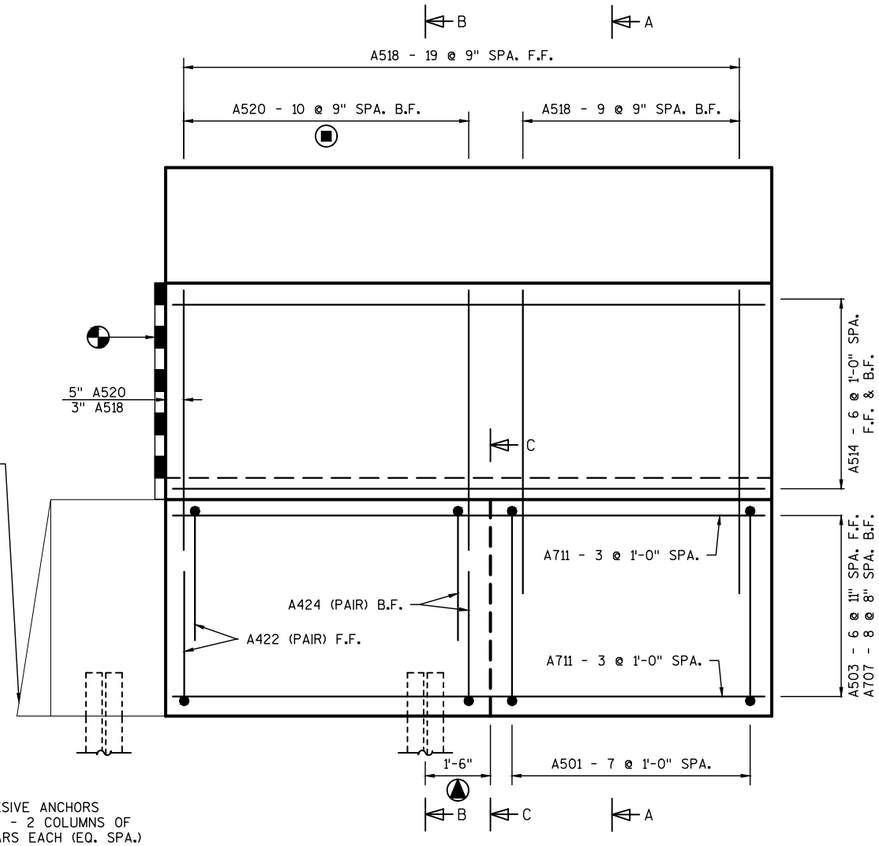


SECTION B-B



SECTION C-C

ANCHOR AND BAR PLACEMENT INTO REMAINING WING END.



SOUTHWEST WINGWALL ELEVATION

NO.	DATE	REVISION	BY

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE **B-22-59**

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SOUTHWEST WING DETAIL (WING 2)

SHEET 5 OF 8

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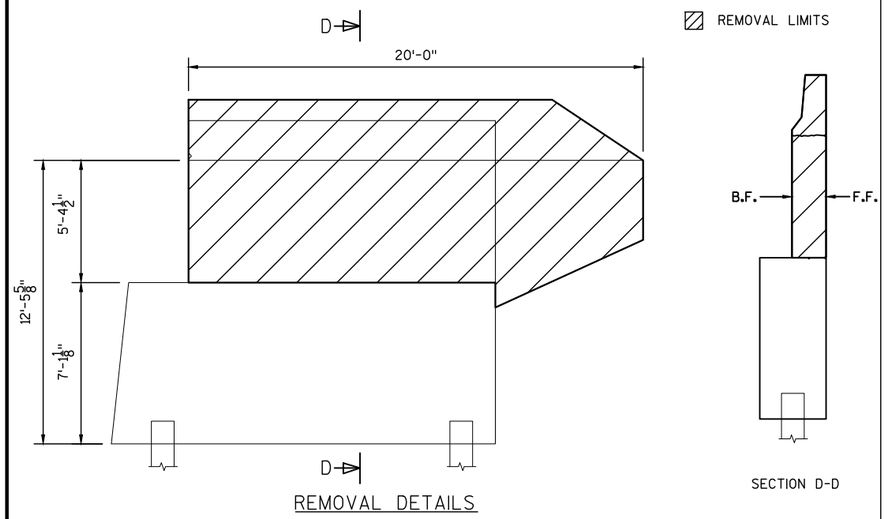
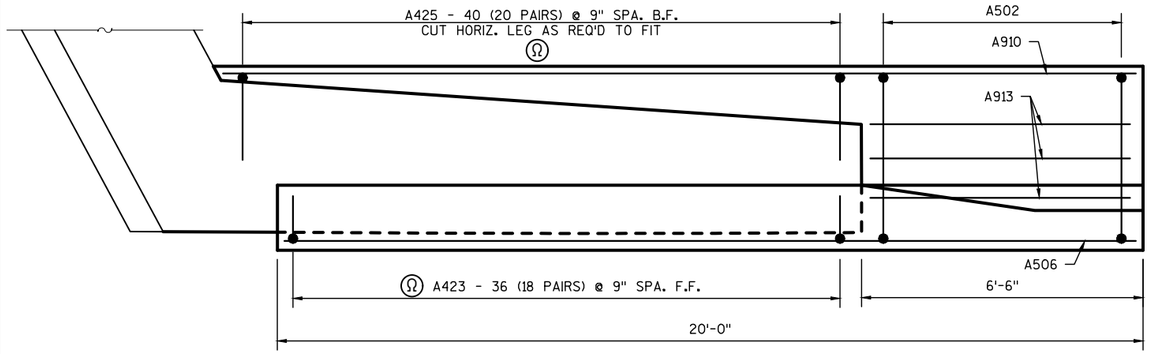


REMOVAL DETAILS

SECTION D-D



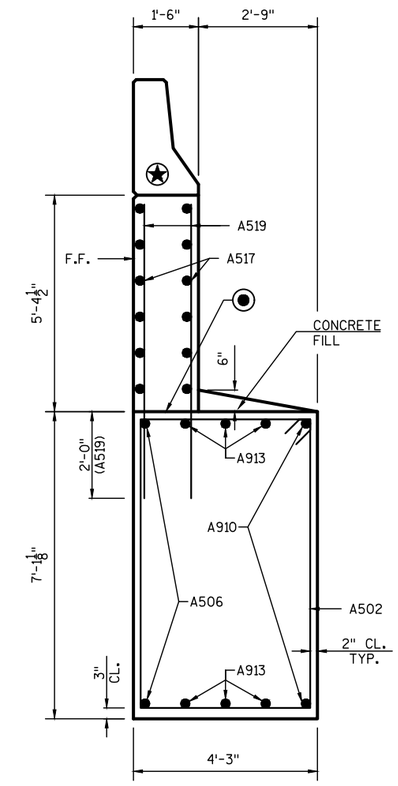
NORTHEAST WINGWALL PLAN

STATE PROJECT NUMBER

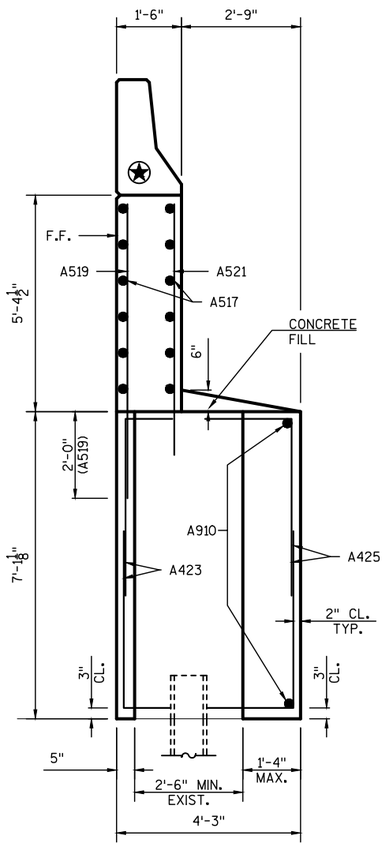
5580-00-82

NOTES:

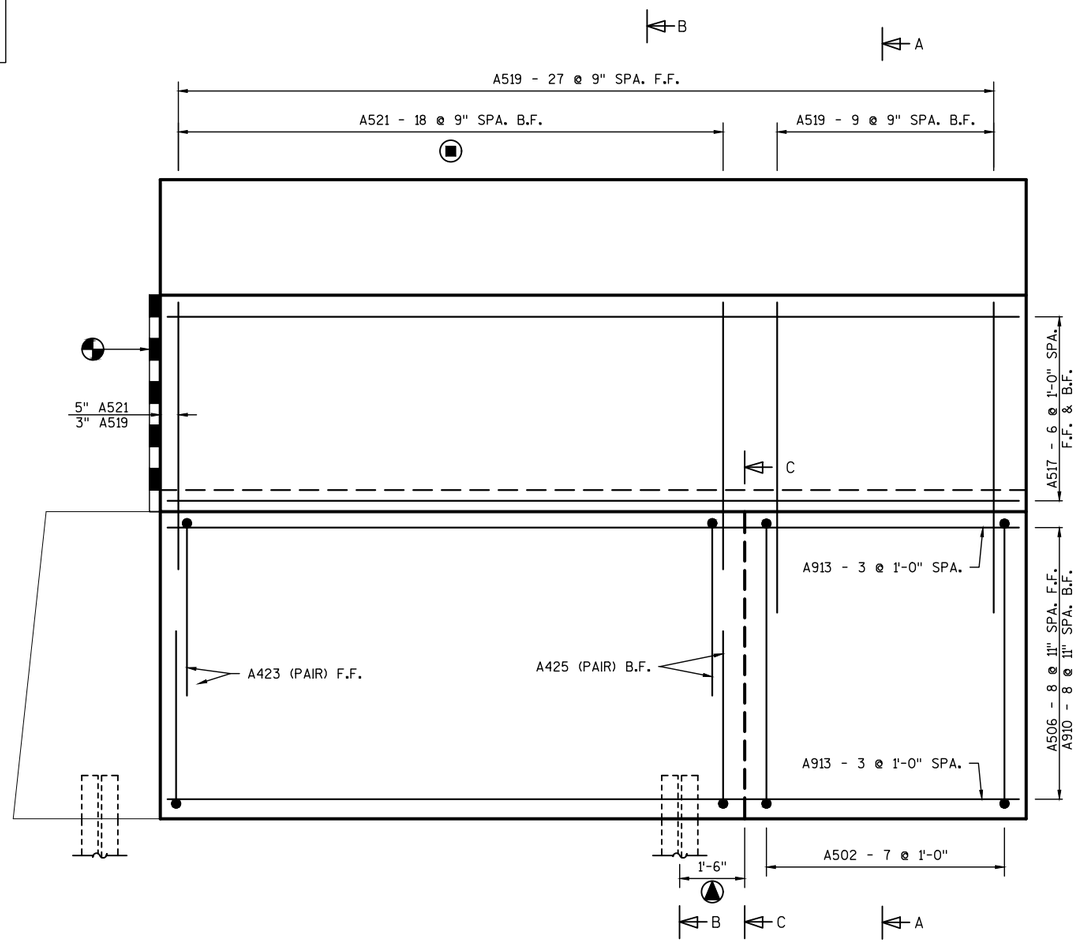
1. APPROXIMATE DISTANCE PER AS-BUILT. STAGGER A425 BARS TO AVOID PILE AS NEEDED.
2. ADHESIVE ANCHORS REQ'D, EMBED 12".
3. ADHESIVE ANCHORS REQ'D. EMBED 10".
4. ½" FILLER TO EXTEND FROM BRIDGE SEAT TO WHERE SHOWN
5. OPTIONAL CONST. JOINT FORMED BY SURFACED BEVELED 2" X 6" KEYWAY ('V'-GROOVE NOT REQ'D IF JOINT IS NOT USED).
6. SEE PARAPET DETAIL FOR BAR STEEL PLACEMENT INTO WING.



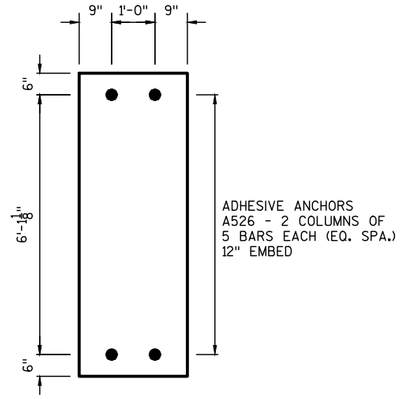
SECTION A-A



SECTION B-B



NORTHEAST WINGWALL ELEVATION



SECTION C-C

ANCHOR AND BAR PLACEMENT INTO REMAINING WING END.

NO.	DATE	REVISION	BY

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE **B-22-59**

DRAWN BY JEK | PLANS CK'D. CAS

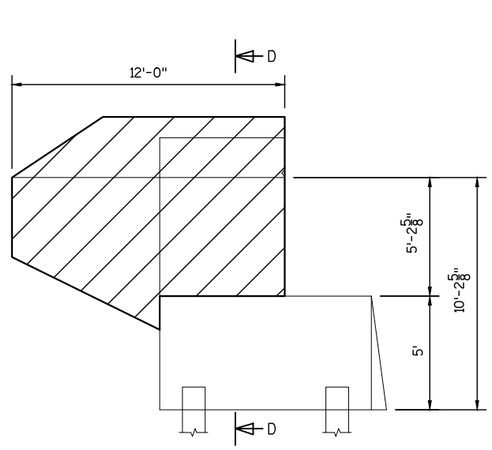
NORTHEAST WING DETAIL (WING 3)

SHEET 6 OF 8

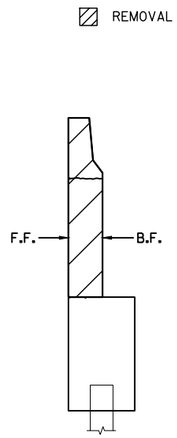
FILE NAME : W:\7390_01\CAD\7390.01\SHEETSPLAN\080101_BR.DWG PLOT DATE : 7/12/2018 7:48 AM PLOT BY : OLSON, COLIN

STATE PROJECT NUMBER

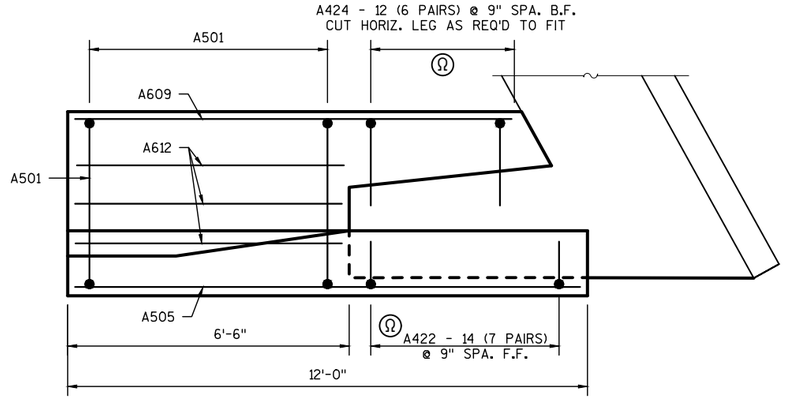
5580-00-82



REMOVAL DETAILS



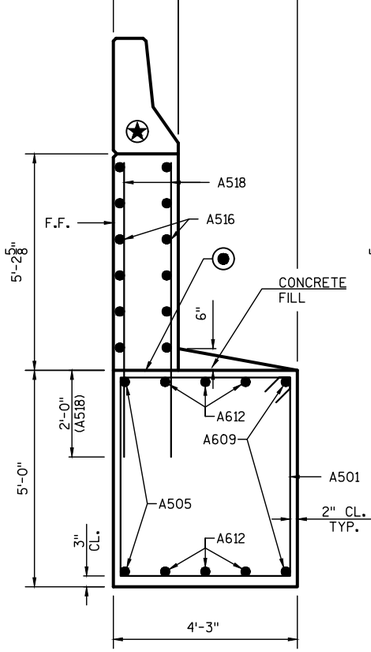
SECTION D-D



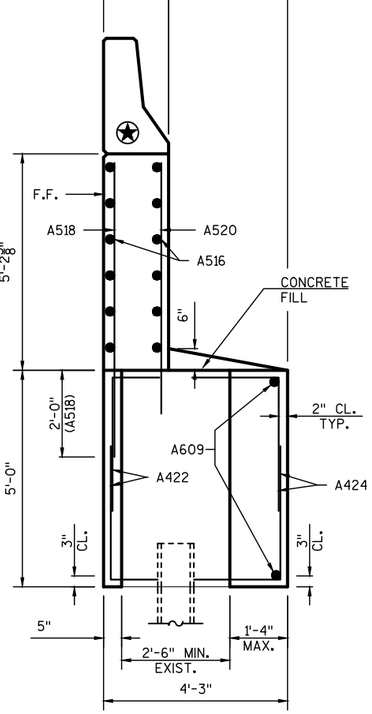
NORTHWEST WINGWALL PLAN

NOTES:

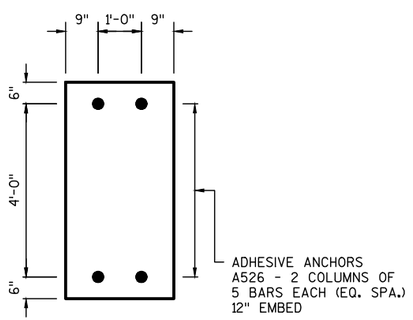
1. APPROXIMATE DISTANCE PER AS-BUILT. STAGGER A424 BARS TO AVOID PILE AS NEEDED.
2. ADHESIVE ANCHORS REQ'D, EMBED 12".
3. ADHESIVE ANCHORS REQ'D. EMBED 10".
4. ½" FILLER TO EXTEND FROM BRIDGE SEAT TO WHERE SHOWN
5. OPTIONAL CONST. JOINT FORMED BY SURFACED BEVELED 2" X 6" KEYWAY ('V'-GROOVE NOT REQ'D IF JOINT IS NOT USED).
6. SEE PARAPET DETAIL FOR BAR STEEL PLACEMENT INTO WING.



SECTION A-A

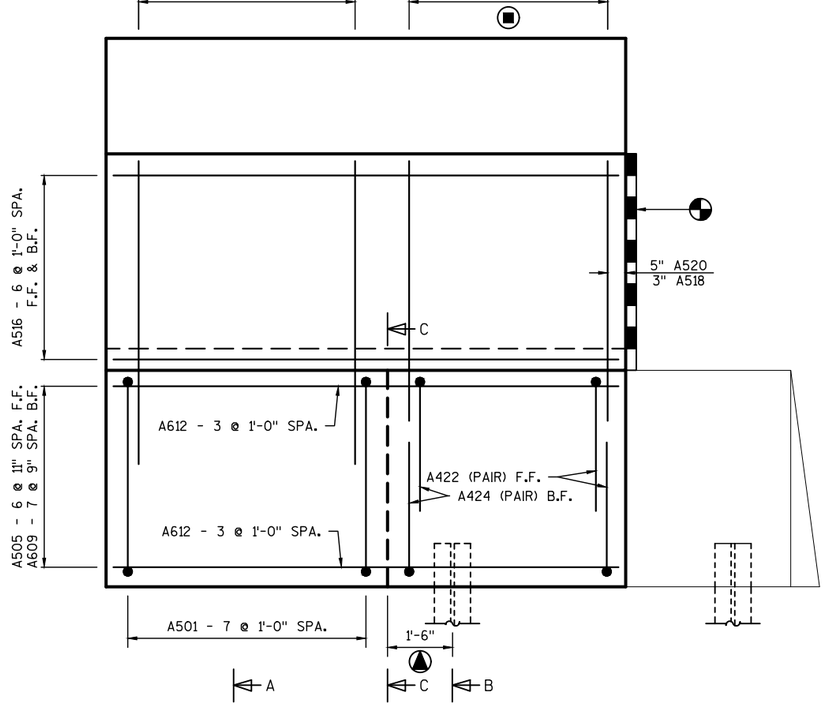


SECTION B-B



SECTION C-C

ANCHOR AND BAR PLACEMENT INTO REMAINING WING END.



NORTHWEST WINGWALL ELEVATION

NO.	DATE	REVISION	BY

KNIGHT
Engineers & Architects
831 Critter Court
Suite 400
Onalaska, WI 54650
Phone: (608) 519-1455

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE **B-22-59**

DRAWN BY JEK | PLANS CK'D. CAS

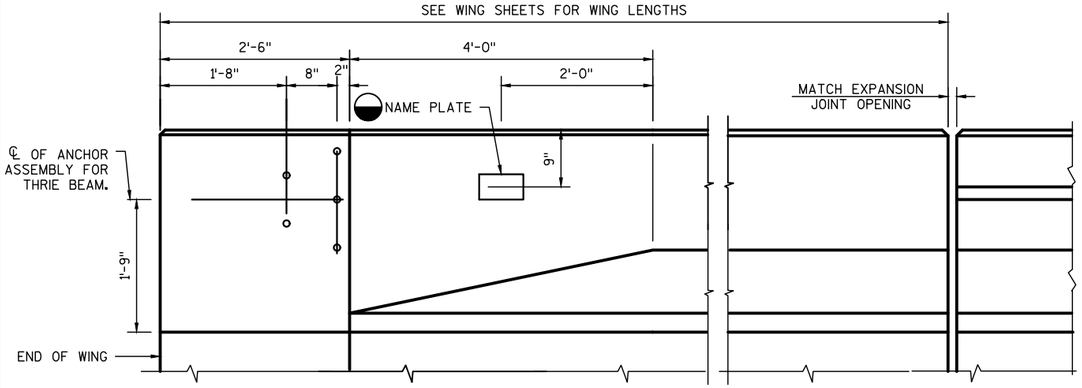
NORTHWEST WING DETAIL (WING 4)

SHEET 7 OF 8

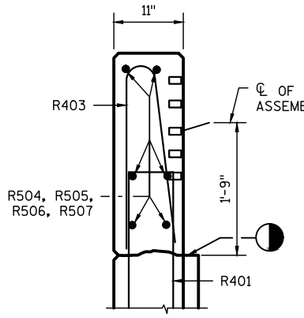
FILE NAME : W:\7390_01\CAD\7390.01\SHEETSPLAN\080101_BR.DWG PLOT DATE : 7/12/2018 7:48 AM PLOT BY : OLSON, COLIN

STATE PROJECT NUMBER

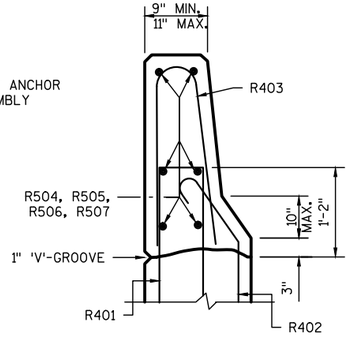
5580-00-82



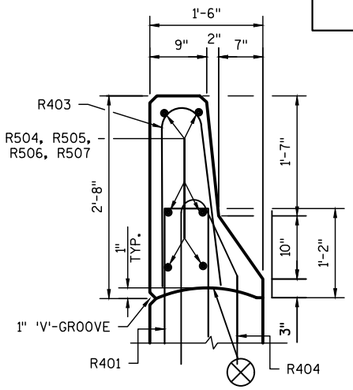
INSIDE ELEVATION



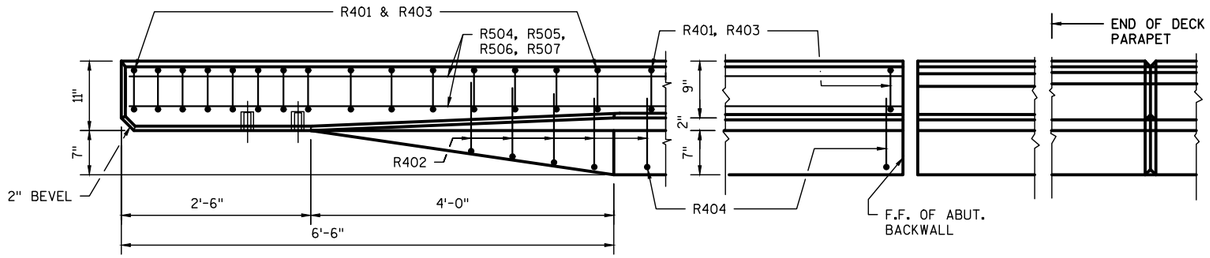
SECTION A



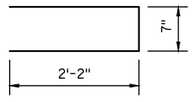
SECTION B



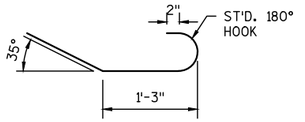
SECTION C



PLAN



R401



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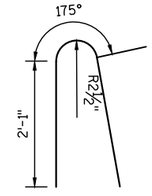
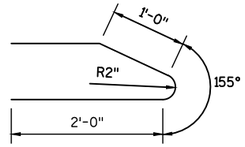


R403



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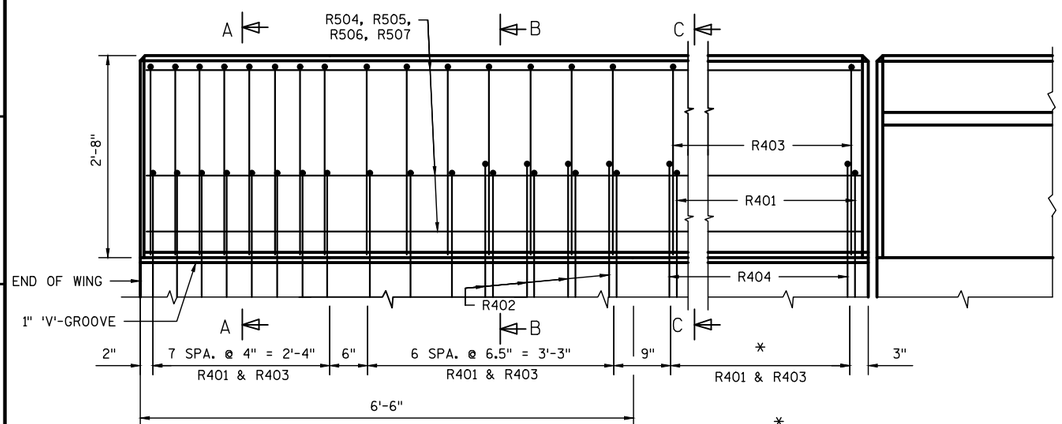


OUTSIDE ELEVATION

* WING 1 - 11 SPA @ 9" MAX
WING 2 - 9 SPA @ 9" MAX
WING 3 - 17 SPA @ 9" MAX
WING 4 - 6 SPA @ 9" MAX

NOTES:

⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

◒ SALVAGE EXISTING NAME PLATE AND RE-EMBED FLUSH INTO SE WING AS SHOWN, INCIDENTAL TO ITEM 'CONCRETE MASONRY BRIDGES'.

◑ FINISH SURFACE NOT COVERED BY PARAPET SAME AS ROADWAY

BILL OF BARS - PARAPETS

BAR MARK	NUMBER REQUIRED	LENGTH	BENT	COAT	LOCATION
R401	112	4'-11"	X	X	PARAPET, ALL WINGS, VERTICAL
R402	16	3'-1"	X	X	PARAPET, ALL WINGS, VERTICAL
R403	112	4'-9"	X	X	PARAPET, ALL WINGS, VERTICAL
R404	47	4'-7"	X	X	PARAPET, ALL WINGS, VERTICAL
R504	6	15'-8"		X	PARAPET, WING 1, HORIZONTAL
R505	6	13'-8"		X	PARAPET, WING 2, HORIZONTAL
R506	6	19'-8"		X	PARAPET, WING 3, HORIZONTAL
R507	6	11'-8"		X	PARAPET, WING 4, HORIZONTAL

COATED BARS = 1280 LBS

NO.	DATE	REVISION	BY

KNIGHT
831 Critter Court
Suite 400
Onalaska, WI 54650
Engineers & Architects Phone: (608) 519-1455

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE **B-22-59**

DRAWN BY JEK | PLANS CK'D. CAS

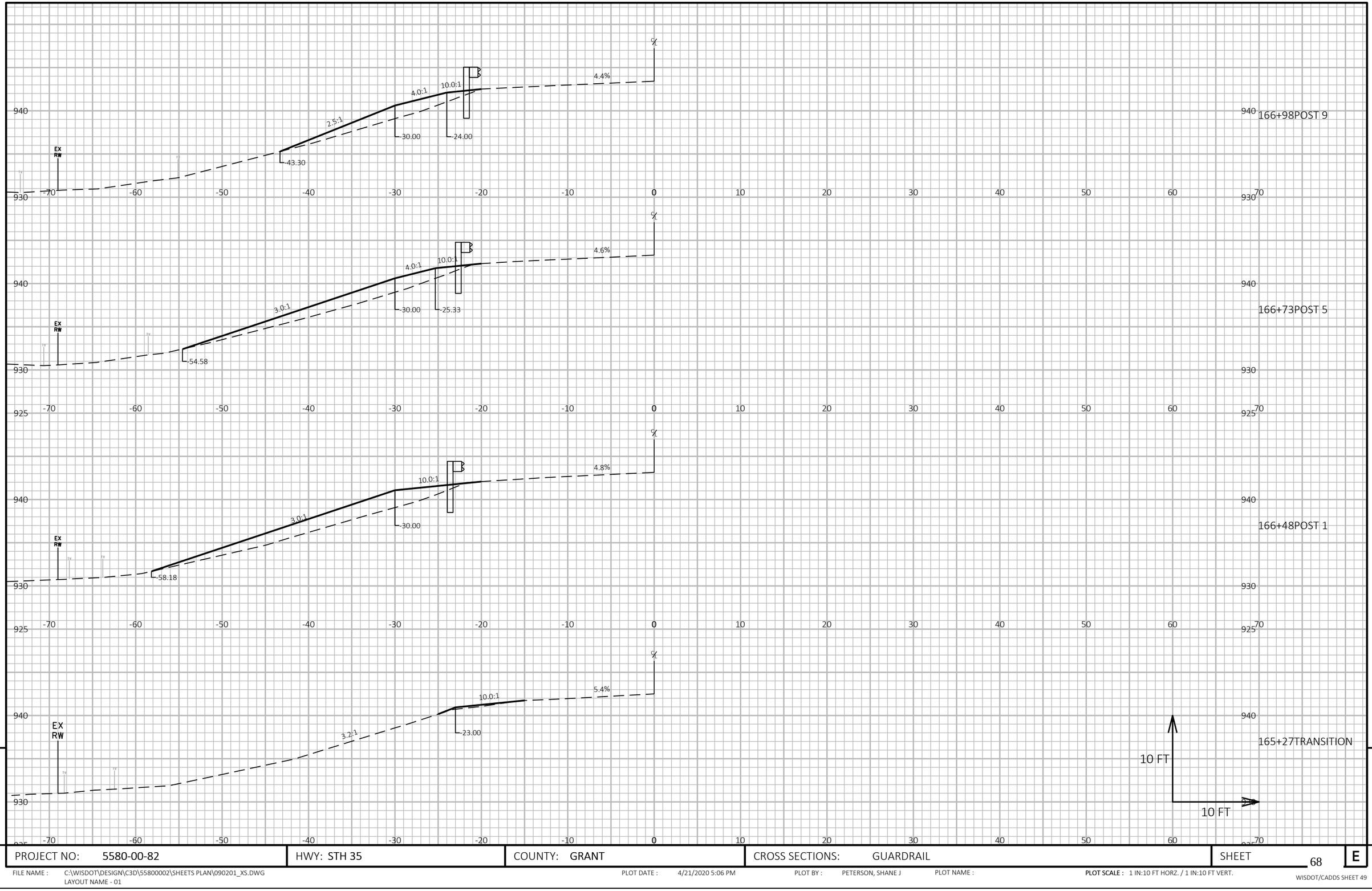
SLOPED FACE PARAPET 'B'

SHEET 8 OF 8

8

8

FILE NAME : W:\7390_01\CAD\7390.01\SHEETSPLAN\080101_BR.DWG PLOT DATE : 7/12/2018 7:48 AM PLOT BY : OLSON, COLIN



9

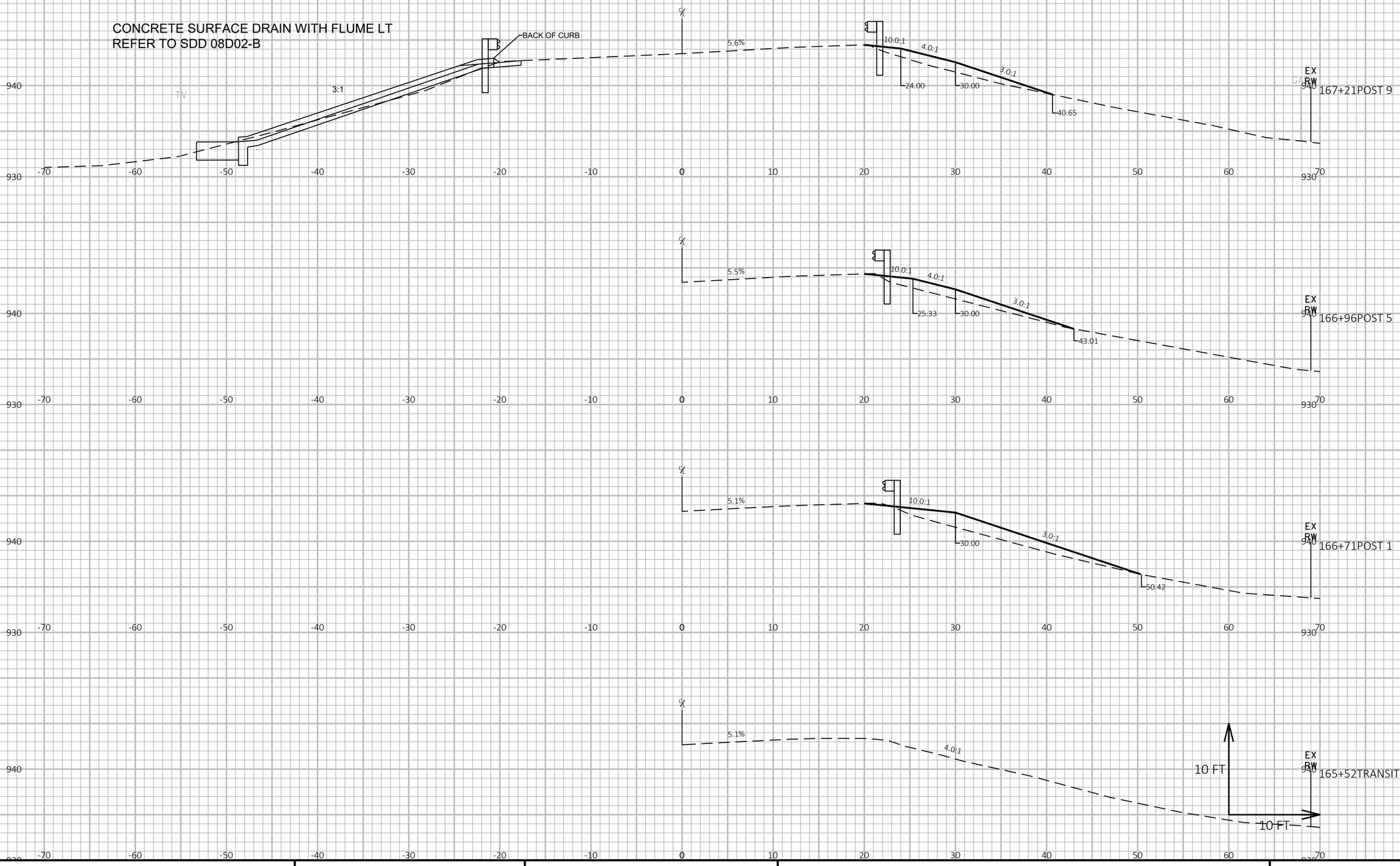
9

PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	CROSS SECTIONS: GUARDRAIL	SHEET 68	E

FILE NAME : C:\WISDOT\DESIGN\C3D\55800002\SHEETS PLAN\090201_XS.DWG
LAYOUT NAME - 01

PLOT DATE : 4/21/2020 5:06 PM PLOT BY : PETERSON, SHANE J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

CONCRETE SURFACE DRAIN WITH FLUME LT
REFER TO SDD 08D02-B



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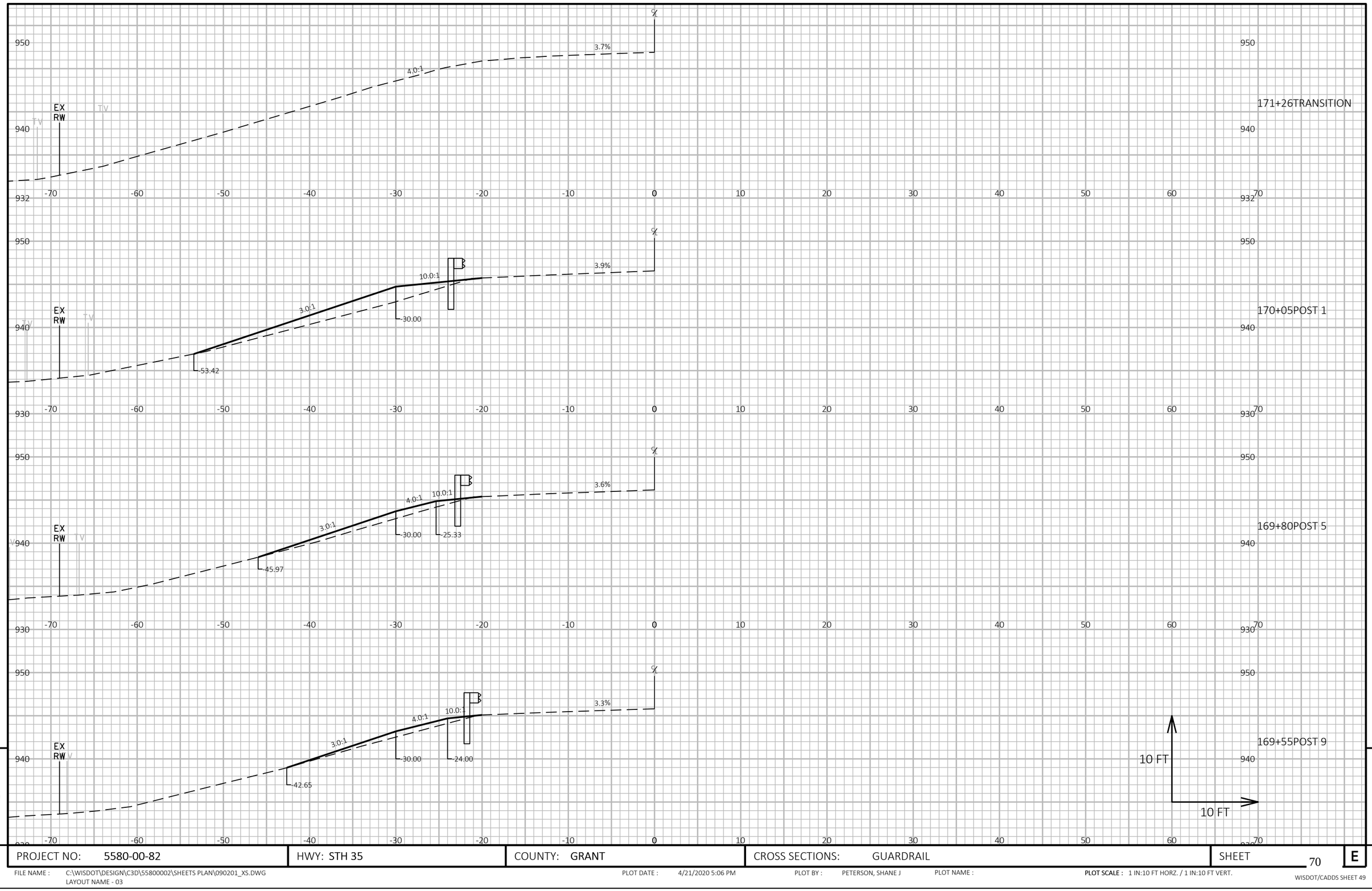
9

PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	CROSS SECTIONS: GUARDRAIL	SHEET 69	E

FILE NAME : C:\WISDOT\DESIGN\C3D\55800002\SHEETS PLAN\090201_XS.DWG
LAYOUT NAME - 02

PLOT DATE : 4/21/2020 5:06 PM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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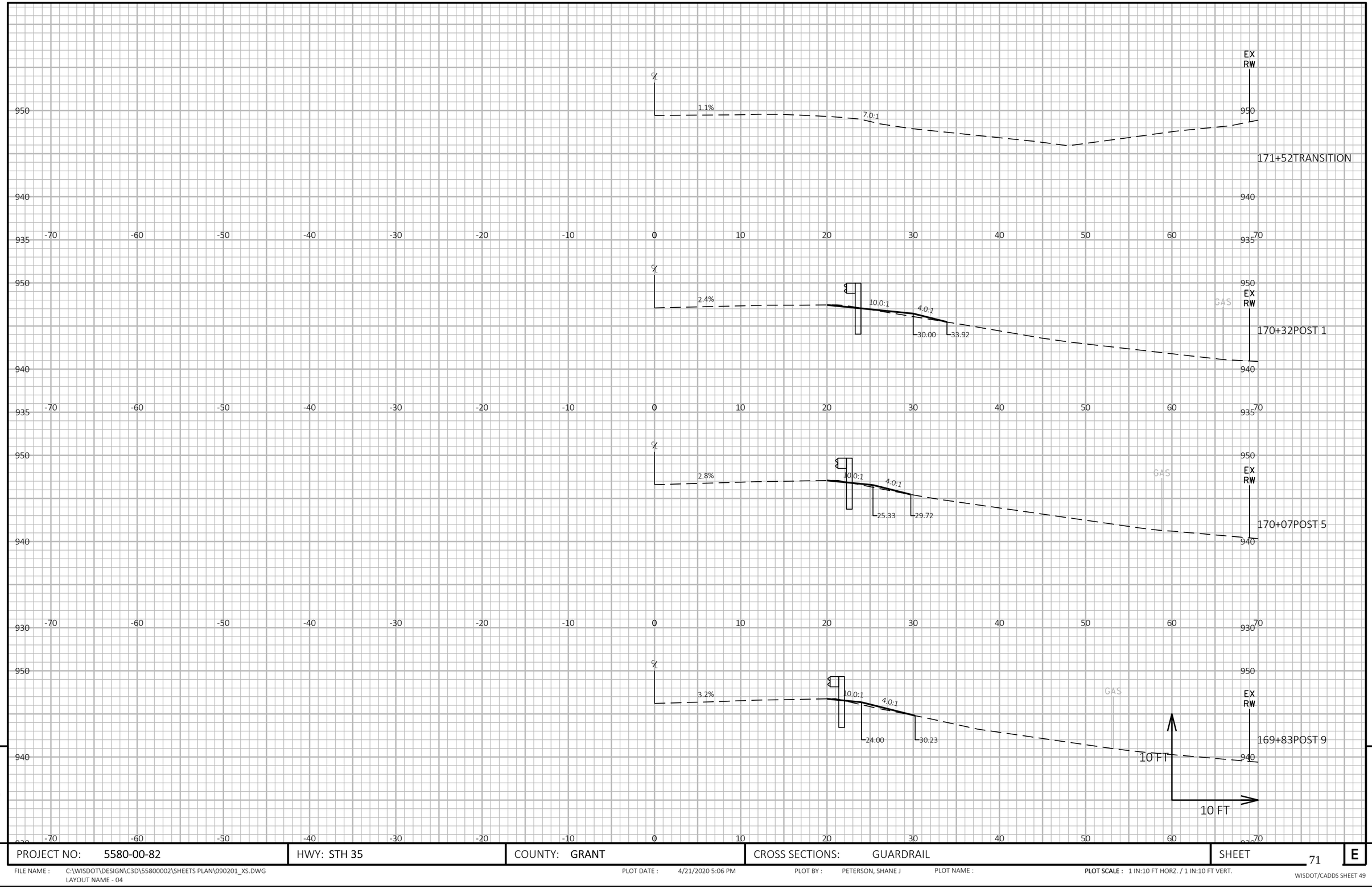
9

PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	CROSS SECTIONS: GUARDRAIL	SHEET 70	E

FILE NAME : C:\WISDOT\DESIGN\C3D\55800002\SHEETS PLAN\090201_XS.DWG
LAYOUT NAME - 03

PLOT DATE : 4/21/2020 5:06 PM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 5580-00-82	HWY: STH 35	COUNTY: GRANT	CROSS SECTIONS: GUARDRAIL	SHEET 71	E

FILE NAME : C:\WISDOT\DESIGN\C3D\55800002\SHEETS PLAN\090201_XS.DWG
LAYOUT NAME - 04

PLOT DATE : 4/21/2020 5:06 PM PLOT BY : PETERSON, SHANE J PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Wisconsin Department of Transportation

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