SUP

NOVEMBER 2021

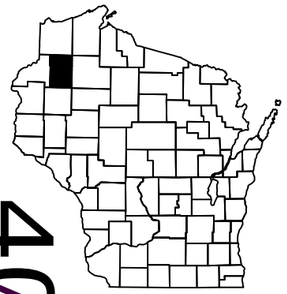
PROJECT ID: 8130-00-72

WITH: 8130-01-70

COUNTY: WASHBURN

ORDER OF SHEETS

TOTAL SHEETS = 206



40

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8130-00-72	WISC 2022031	1
8130-01-70	WISC 2022032	1

SPOONER - STONE LAKE
CRYSTAL BROOK BRIDGE B-65-0060

STH 70

WASHBURN

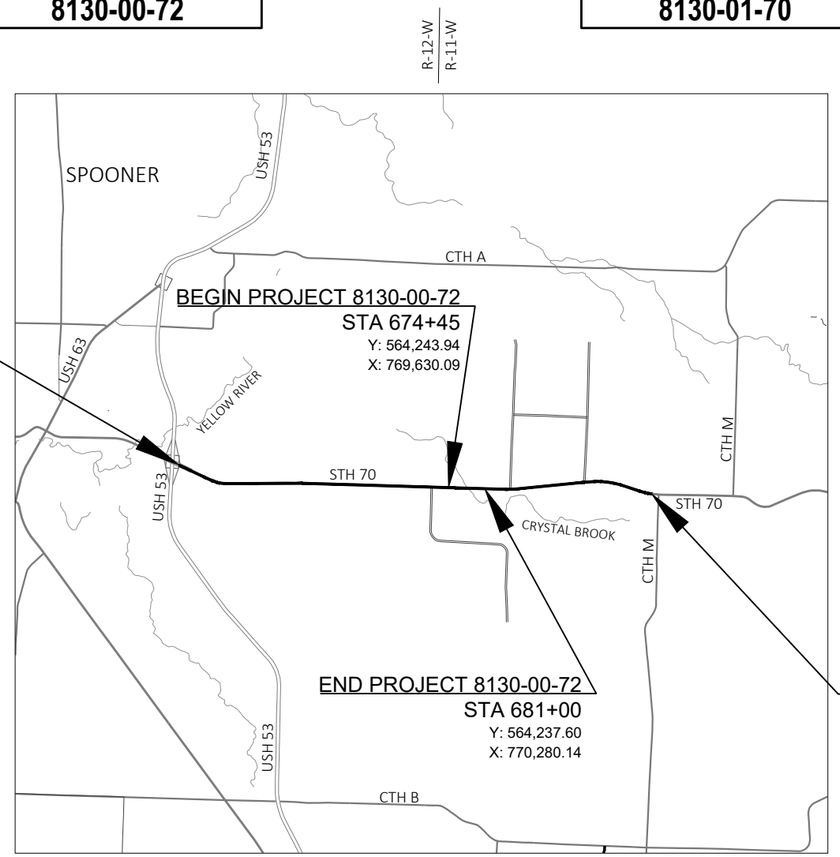
STATE PROJECT NUMBER
8130-00-72

SPOONER - STONE LAKE
USH 53 TO SOUTH JUNCTION CTH M

STH 70

WASHBURN

STATE PROJECT NUMBER
8130-01-70



DESIGN DESIGNATION 8130-00-02, 8130-01-01

A.A.D.T.	2019	=	1,350
A.A.D.T.	2040	=	1,470
D.H.V.		=	
D.D.		=	61/39
T.		=	
DESIGN SPEED		=	55 MPH
ESALS		=	

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

LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 6.324

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WASHBURN 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	CBS SQUARED
Designer	CAITLIN BUKOVITZ
Project Manager	MATTHEW DICKENSON
Regional Examiner	TOU YANG
Regional Supervisor	JEFFREY OLSON

APPROVED FOR THE DEPARTMENT

DATE: 7/22/21 Matthew J Dickenson (Signature)

E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\010101_TI.DWG PLOT DATE : 6/16/2021 8:19 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME :

GENERAL NOTES

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

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

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT FOR AREAS WITHIN FINISHED SHOULDER POINT, SHALL BE FERTILIZED, SEEDED, AND MULCHED.

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

SHRINKAGE OF EARTHWORK IS VARIABLE. THE AVERAGE FACTOR USED IS 18%.

RIPRAP HEAVY AT CRYSTAL BROOK SHALL BE PLACED PRIOR TO REMOVAL OF CULVERT PIPE TO REDUCE SOIL DISCHARGE. ADDITIONS AND/OR MOVEMENT OF RIPRAP WILL BE REQUIRED FOR FINAL SLOPE PROTECTION.

NO EQUIPMENT OR MATERIALS SHALL BE STORED IN WETLAND AREAS.

PRIOR TO THE PLACEMENT OF GUARDRAIL, THE BASE AGGREGATE SHOULDERS SHALL BE CONSTRUCTED, SHAPED AND COMPACTED UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

ACCESS TO ALL RESIDENCES SHALL BE MAINTAINED DURING CONSTRUCTION.

THE LOCATION OF DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

PAVEMENT QUANTITIES ARE BASED ON 112 LBS/SY COMPACTED 1" THICK.

CURVE DATA IS BASED ON THE ARC DEFINITION.

BARRON ELECTRIC COOPERATIVE - ELECTRICITY

ATTN: SCOTT DEVOE
P.O. BOX 261
SPOONER, WI 54801
PHONE: (715) 637-6131 (OFFICE)
PHONE: (715) 418-1182 (MOBILE)
EMAIL: sdevoe@barronelectric.com

CENTURY LINK - COMMUNICATION LINE

ATTN: RUSSELL VANCE
135 N 21 ST ST.
SUPERIOR, WI 54880
PHONE: (715) 919-8003
EMAIL: russell.vance@lumen.com

DAIRYLAND POWER COOPERATIVE - ELECTRICITY

ATTN: ROB MALY
3200 EAST AVE S
P.O. BOX 817
LA CROSSE, WI 54602
PHONE: (608) 787-1427 (OFFICE)
PHONE: (608) 518-2633 (MOBILE)
EMAIL: rob.maly@DairylandPower.com

CHARTER COMMUNICATIONS - COMMUNICATION LINE

ATTN: JAMEY OLDEEN
2304 S. MAIN ST.
RICE LAKE, WI 54868
PHONE: (715) 719-0561 (OFFICE)
PHONE: (715) 651-7488 (MOBILE)
EMAIL: jamey.oldeen@charter.com

WE ENERGIES

ATTN: STEVEN CHAVERS
104 W SOUTH ST.
RICE LAKE, WI 54868
PHONE: (715) 234-9605 (OFFICE)
PHONE: (715) 213-4327 (MOBILE)
EMAIL: steven.chavers@we.energies.com

24-HOUR EMERGENCY CONTACT: 1-800-261-5325

WISCONSIN DNR-LIASON

ATTN: SHAWN HASELEU
810 W. MAPLE ST.
SPOONER, WI 54801
PHONE: (715) 635-4228
EMAIL: shawn.haseleu@wisconsin.gov

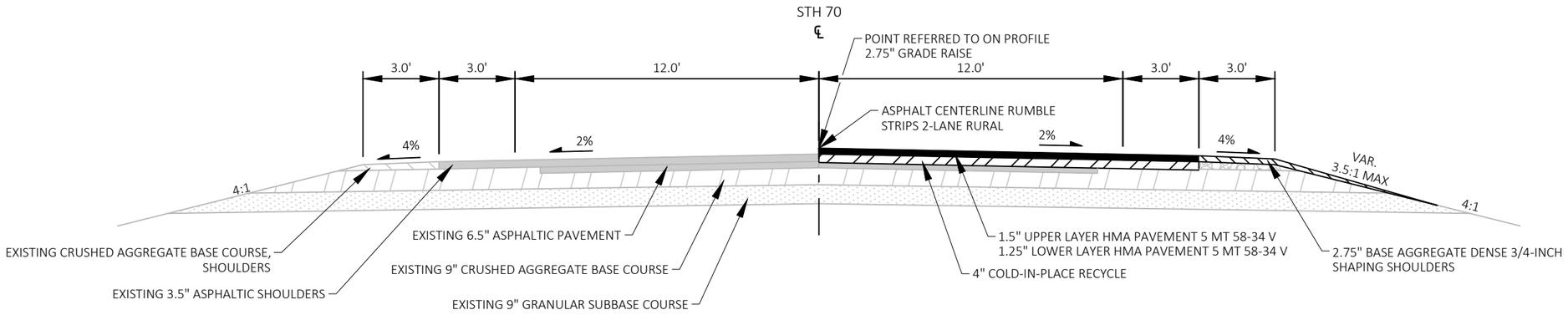
WISDOT NW REGION

ATTN: MATTHEW DICKENSON - PROJECT MANAGER
1701 N. 4TH ST
SUPERIOR, WI 54880
PHONE: (718) 395-3022
EMAIL: matthew.dickenson@dot.wi.gov

ATTN: CAITLIN BUKOVITZ - DESIGN PROJECT LEADER
1701 N. 4TH ST
SUPERIOR, WI 54880
PHONE: (715) 392-7975
EMAIL: caitlin.bukovitz@dot.wi.gov

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

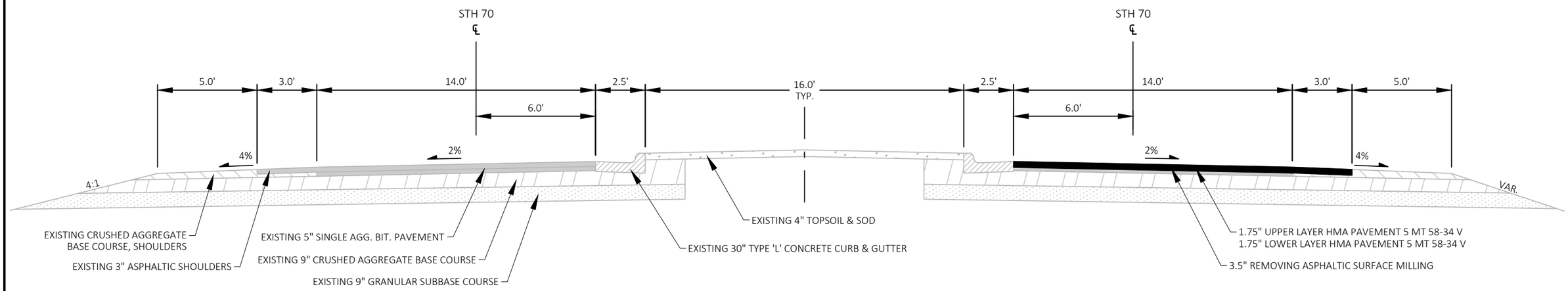
2



TYPICAL EXISTING HALF SECTION

TYPICAL PROPOSED HALF SECTION

STA 486+02.19 - 674+45
STA 681+00 - 809+15



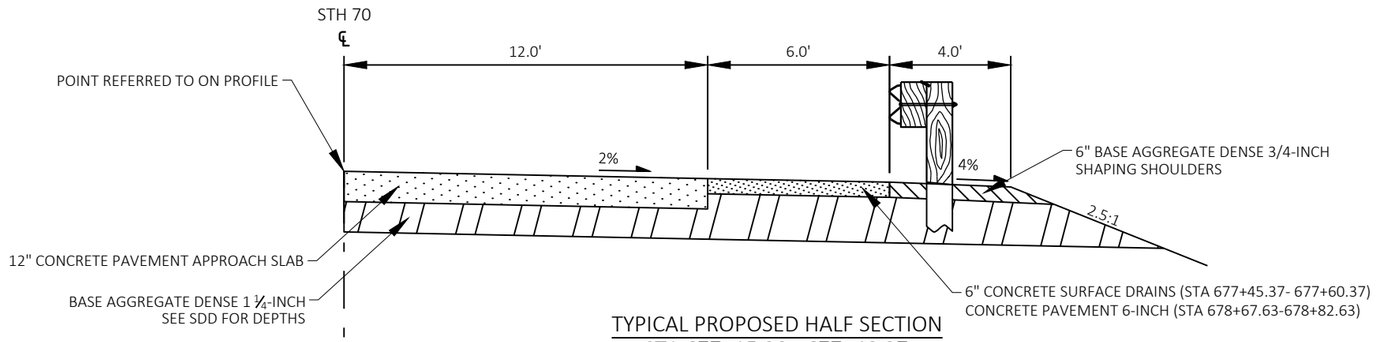
TYPICAL EXISTING HALF SECTION

TYPICAL PROPOSED HALF SECTION

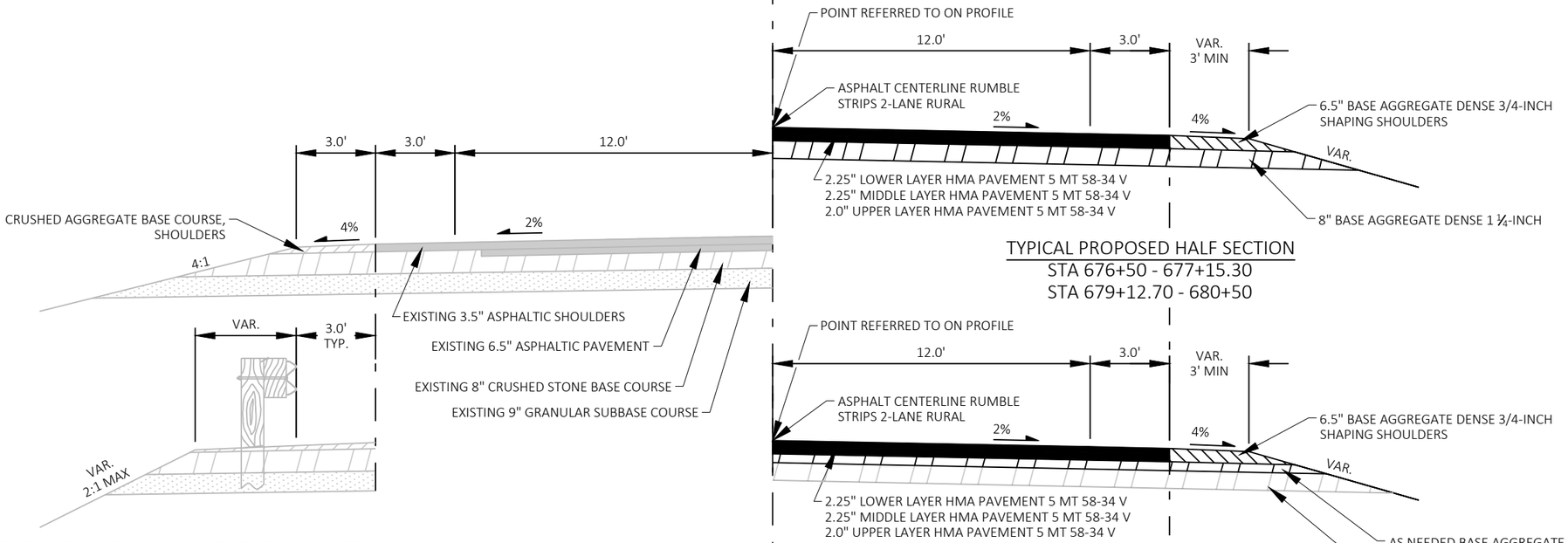
STA 475+23 - 486+02.19

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN: TYPICAL SECTIONS	SHEET 3	E

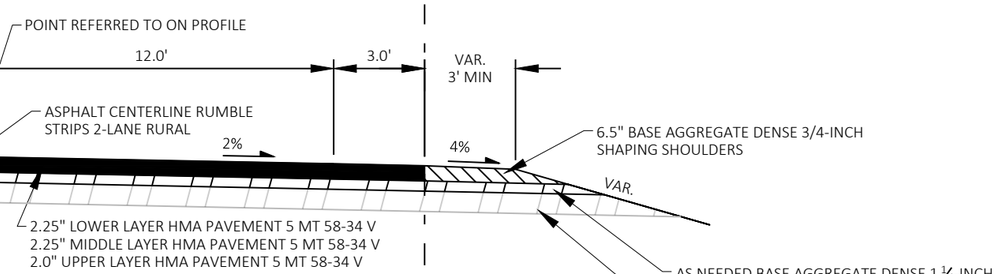
FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - TS_01
PLOT DATE : 6/15/2021 2:58 PM
PLOT BY : BUKOVITZ, CAITLIN LE
PLOT NAME :
PLOT SCALE : 1 IN:5 FT
WISDOT/CADDS SHEET 42



TYPICAL PROPOSED HALF SECTION
STA 677+15.30 - 677+40.37
STA 678+87.63 - 679+12.70



TYPICAL PROPOSED HALF SECTION
STA 676+50 - 677+15.30
STA 679+12.70 - 680+50

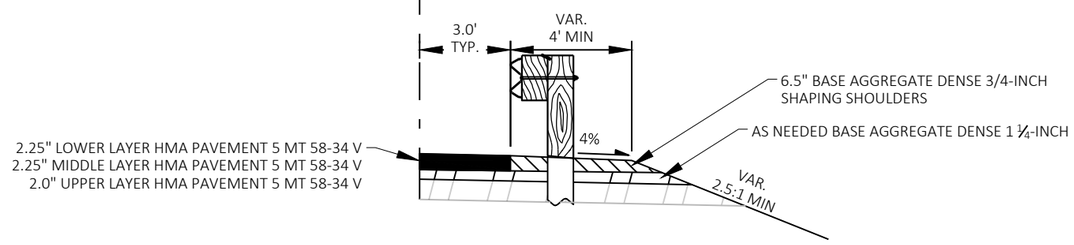


TYPICAL PROPOSED HALF SECTION
STA 674+45 - 676+50
STA 680+50 - 681+00

LEFT BEAMGUARD
STA 675+77 - 678+87

RIGHT BEAMGUARD
STA 677+32 - 679+99

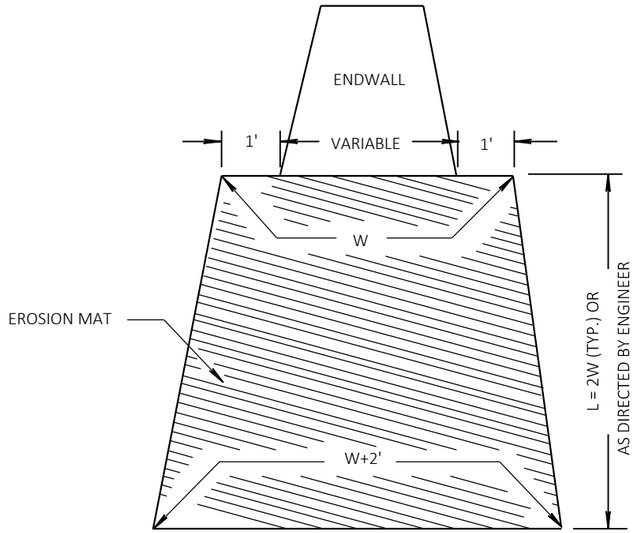
TYPICAL EXISTING HALF SECTION
STA 674+45 - 677+45.37
STA 678+82.63 - 681+00



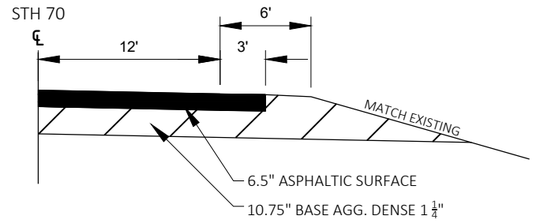
LEFT BEAMGUARD
STA 675+40 - 677+22
STA 678+69 - 679+90

RIGHT BEAMGUARD
STA 676+00 - 677+60
STA 679+05 - 680+90

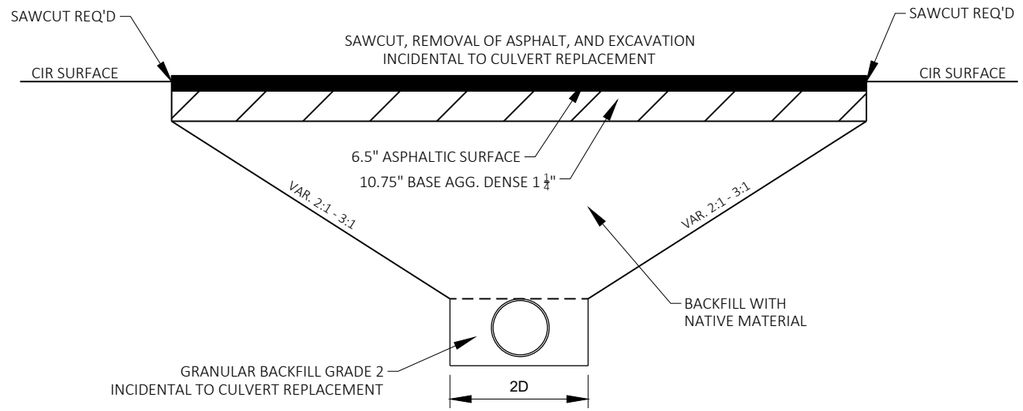
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN: TYPICAL SECTIONS	SHEET 4	E



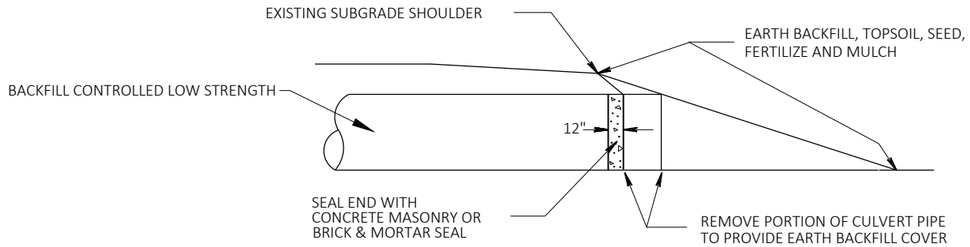
EROSION MAT TREATMENT AT CULVERTS



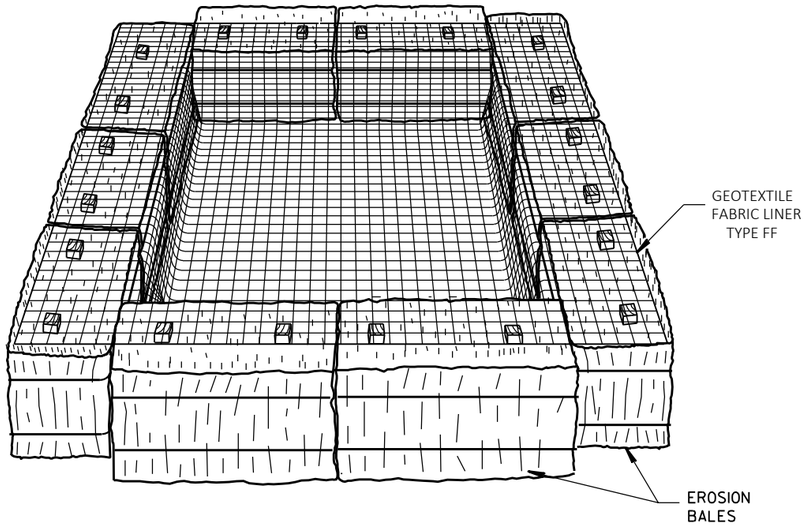
CROSS DRAIN INSTALLATION DETAIL



CROSS DRAIN INSTALLATION DETAIL



ABANDONING CULVERT PIPE DETAIL



TEMPORARY SETTLING BASIN

(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

$\frac{800 \text{ C.F.}}{1.5 \text{ FT.}}$ = 533 S.F.

USE A 20 FT. X 27 FT. BASIN

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = _____ ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = _____ACRES

2

LEGEND

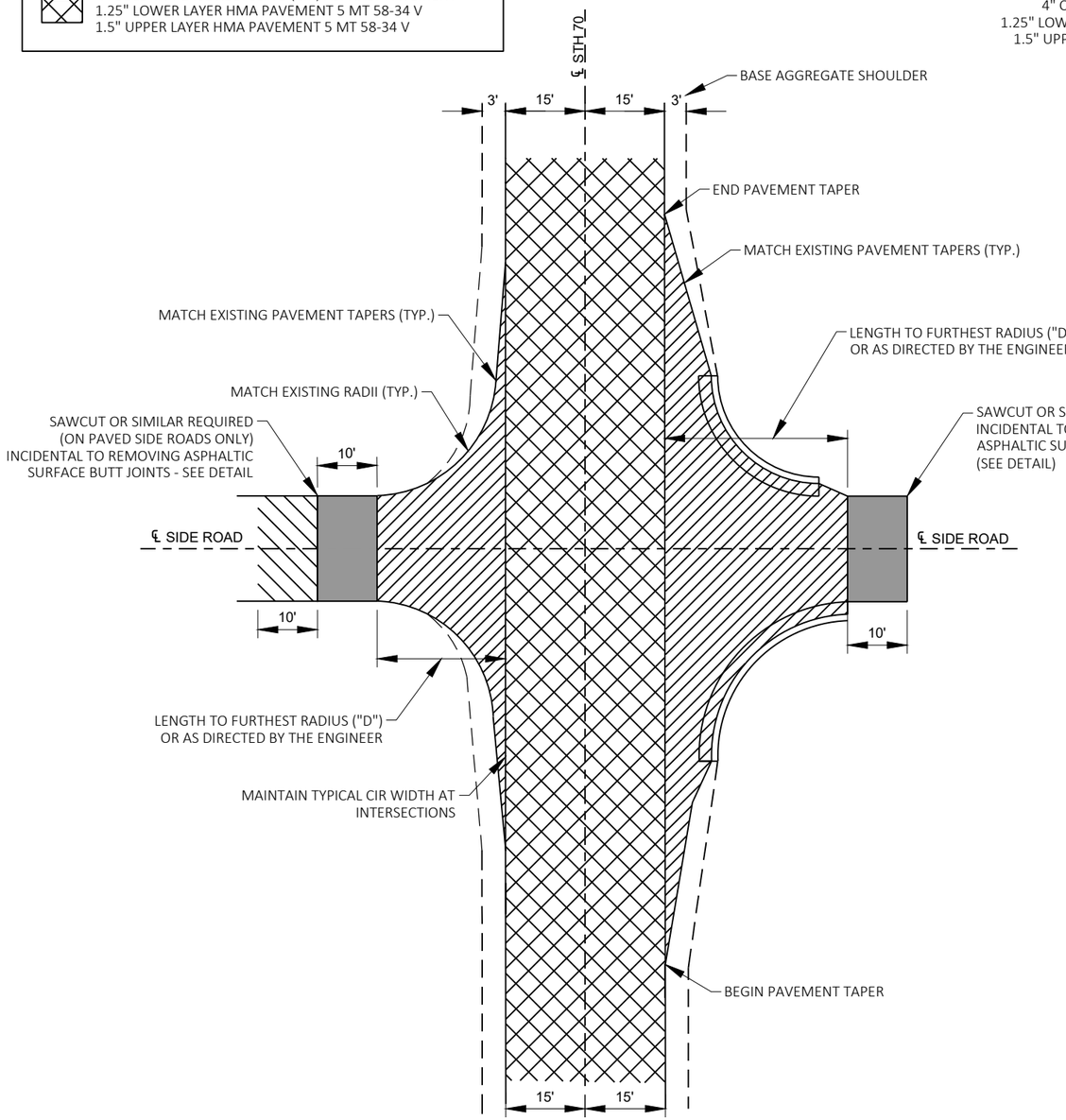
- 1.25" WEDGING LOWER LAYER HMA PAVEMENT 5 MT 58-34 V
  1.5" UPPER LAYER HMA PAVEMENT 5 MT 58-34 V
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- 4" COLD-IN-PLACE RECYCLING (CIR) ASPHALT PAVEMENT
  1.25" LOWER LAYER HMA PAVEMENT 5 MT 58-34 V
  1.5" UPPER LAYER HMA PAVEMENT 5 MT 58-34 V

NOTES:

DRAWING NOT TO SCALE.

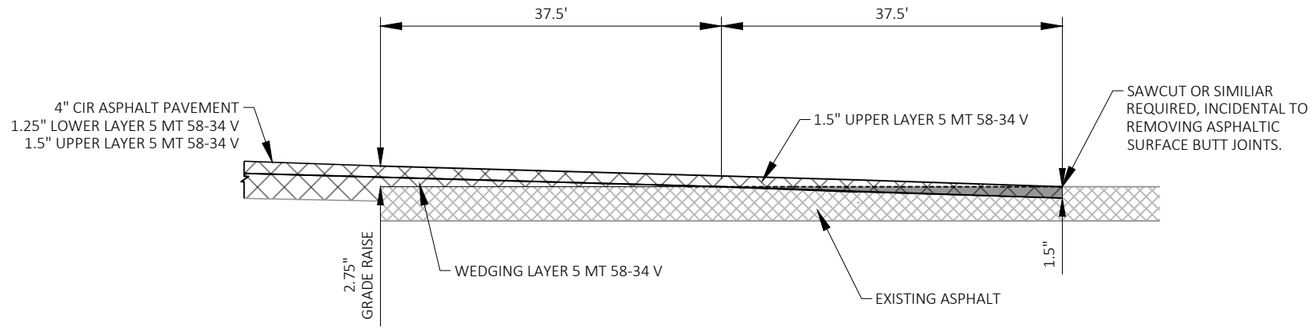
DO NOT PLACE LONGITUDINAL PAVING JOINTS IN THE WHEEL PATHS OF DRIVE LANES

MAINTAIN TYPICAL CIR WIDTH THROUGH INTERSECTIONS WITH SIDE ROADS.

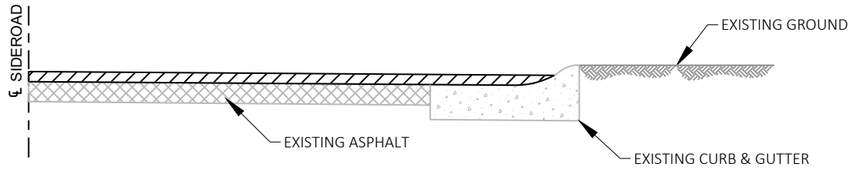


SIDE ROAD WITHOUT CURB & GUTTER

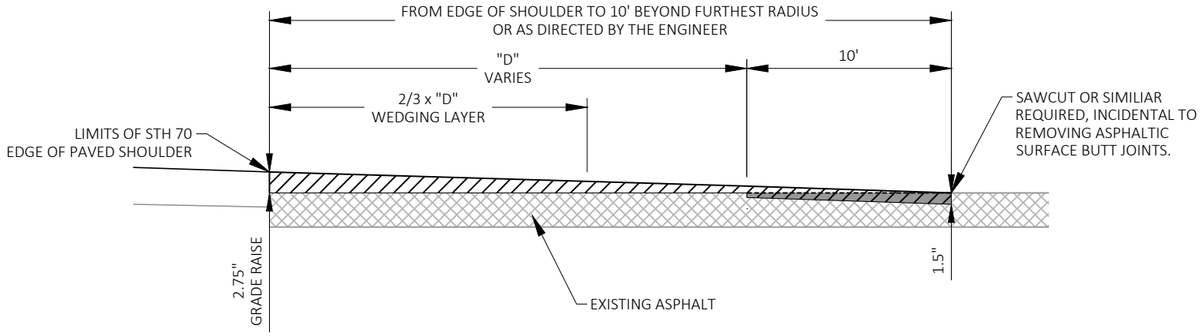
SIDE ROAD WITH CURB & GUTTER



DETAIL OF MAINLINE BUTT JOINT

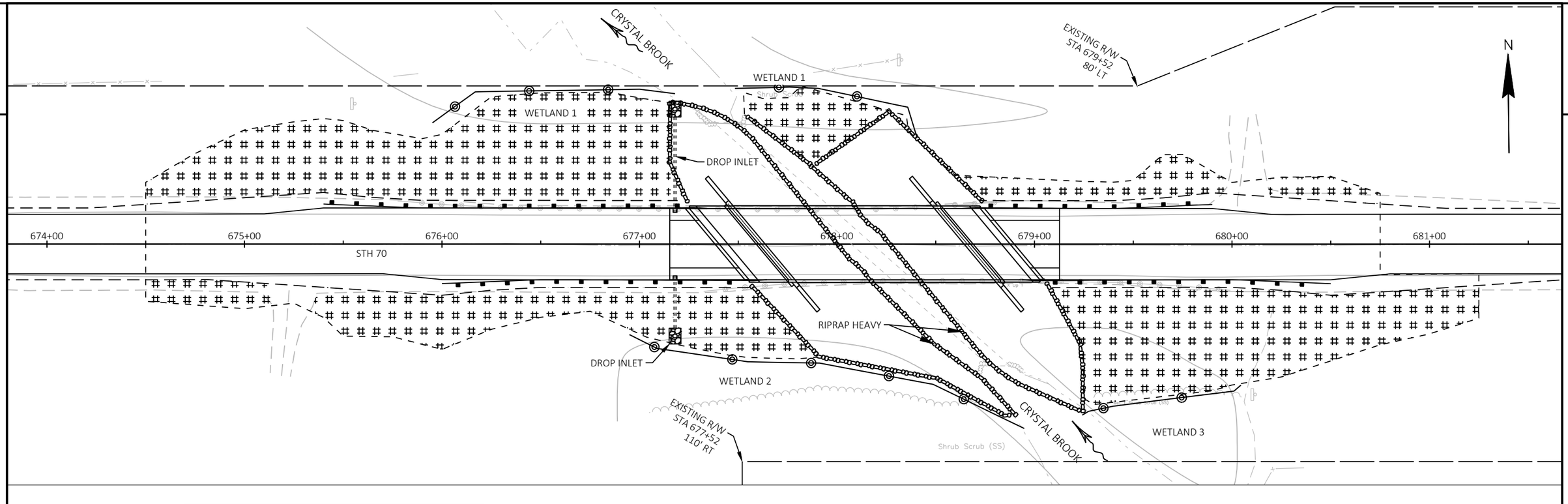


DETAIL OF BUTT JOINT ACROSS SIDEROAD WITH CURB & GUTTER



DETAIL OF BUTT JOINT ALONG CENTERLINE OF SIDE ROAD

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CONSTRUCTION DETAILS	SHEET 7	E



LEGEND

- SILT FENCE
- PROPOSED SLOPE INTERCEPT
- EROSION MAT URBAN CLASS I TYPE B

CONSTRUCTION NOTES:

1. RIPRAP HEAVY SHALL BE PLACED PRIOR TO REMOVAL OF CULVERT PIPE TO REDUCE SOIL DISCHARGE. ADDITIONS AND/OR MOVEMENT OF RIPRAP WILL BE REQUIRED FOR FINAL SLOPE PROTECTION.
2. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED EXCEPT WITHIN SHOULDER POINTS.

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	EROSION CONTROL - CRYSTAL BROOK	SHEET 8	E

2

N

USH 53

CTH M

BEGIN PROJECT 8130-01-70
STA 475+23

END PROJECT 8130-01-70
STA 809+15

STH 70

STH 70

PROJECT 8130-00-72
STA 674+45 - 681+00

L4

L3

DETOUR ROUTE

CTH M

USH 53

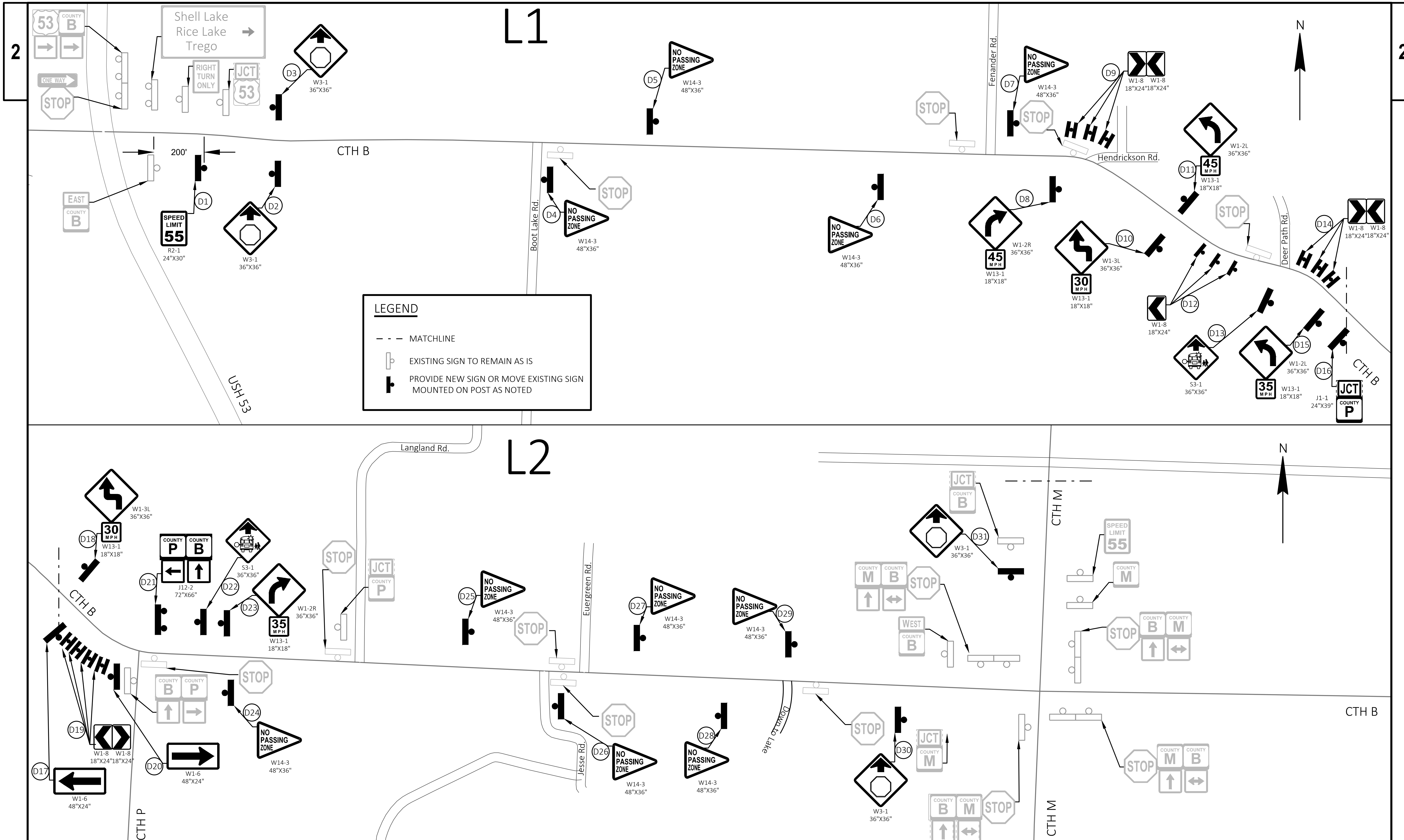
L1

DETOUR ROUTE
CTH B

L2

CTH P

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR SIGNING & MARKING	SHEET 9	E


2
2
L1
L2
N
CTH B
CTH P
CTH M
USH 53
Boot Lake Rd.
Fenander Rd.
Hendrickson Rd.
Deer Path Rd.
Langland Rd.
Euergreen Rd.
Jesse Rd.
Down to Lake
Shell Lake
Rice Lake
Trego
200'
LEGEND
MATCHLINE
EXISTING SIGN TO REMAIN AS IS
PROVIDE NEW SIGN OR MOVE EXISTING SIGN
MOUNTED ON POST AS NOTED
D1 R2-1 24"X30"
D2 W3-1 36"X36"
D3 W3-1 36"X36"
D4 W14-3 48"X36"
D5 W14-3 48"X36"
D6 W14-3 48"X36"
D7 W14-3 48"X36"
D8 W1-2R 36"X36" W13-1 18"X18"
D9 W1-8 18"X24" W1-8 18"X24"
D10 W1-3L 36"X36" W13-1 18"X18"
D11 W1-2L 36"X36" W13-1 18"X18"
D12 W1-8 18"X24"
D13 S3-1 36"X36"
D14 W1-8 18"X24" W1-8 18"X24"
D15 W1-2L 36"X36" W13-1 18"X18"
D16 J1-1 24"X39"
D17 W1-6 48"X24"
D18 W1-3L 36"X36" W13-1 18"X18"
D19 W1-8 18"X24" W1-8 18"X24"
D20 W1-6 48"X24"
D21 J12-2 72"X66"
D22 S3-1 36"X36"
D23 W1-2R 36"X36" W13-1 18"X18"
D24 W14-3 48"X36"
D25 W14-3 48"X36"
D26 W14-3 48"X36"
D27 W14-3 48"X36"
D28 W14-3 48"X36"
D29 W14-3 48"X36"
D30
D31 W3-1 36"X36"
SPEED LIMIT 55
NO PASSING ZONE
STOP
JCT
ONE WAY
RIGHT TURN ONLY
EAST
WEST

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR SIGNING & MARKING	SHEET 10	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\023201_PS.DWG PLOT DATE : 6/14/2021 5:54 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:1000 FT
LAYOUT NAME - PS-1 WISDOT/CADDS SHEET 42

2

L3

N

Baker Rd.

CTH M

STOP

D32 NO PASSING ZONE
W14-3
48"X36"

STOP

Baker Rd.

D33 NO PASSING ZONE
W14-3
48"X36"

STOP

Harmond Lake Rd.

D34 NO PASSING ZONE
W14-3
48"X36"

ATV ROUTE

D36 ATV CROSSING
W11-50
36"X36"

D35 ATV CROSSING
W11-50
36"X36"

STAY ON PAVEMENT

ATV ROUTE

ATV ROUTE

STOP

Leesome Lake Rd.

CTH M

2

L4

N

CTH M

D38 NO PASSING ZONE
W14-3
48"X36"

D40 NO PASSING ZONE
W14-3
48"X36"

D43 SPEED LIMIT 55
R2-1
24"X30"

M1-5A
36"X36"
COUNTY M
D44

D37 NO PASSING ZONE
W14-3
48"X36"

D39 NO PASSING ZONE
W14-3
48"X36"

JCT 70
D41
J1-1
24"X39"

D42
W3-1
36"X36"

STOP

D45 70
J12-1
36"X66"

D46
W1-7
48"X24"

STH 70

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR SIGNING & MARKING	SHEET 11	E

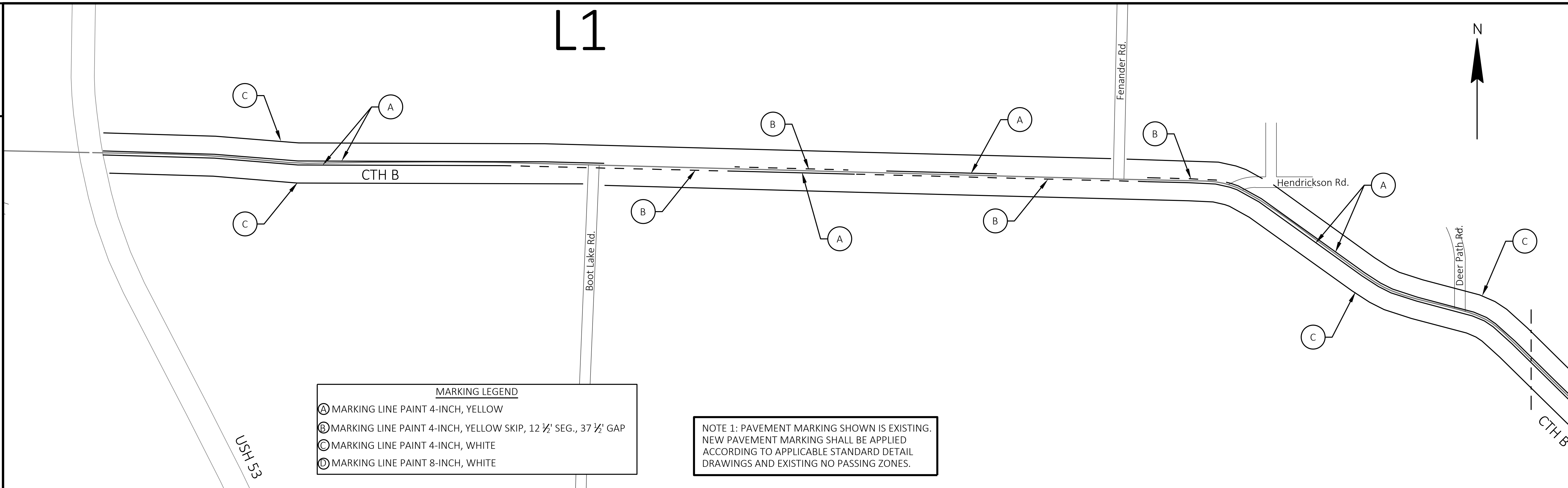
FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - PS-2

PLOT DATE : 6/14/2021 5:54 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

2

L1

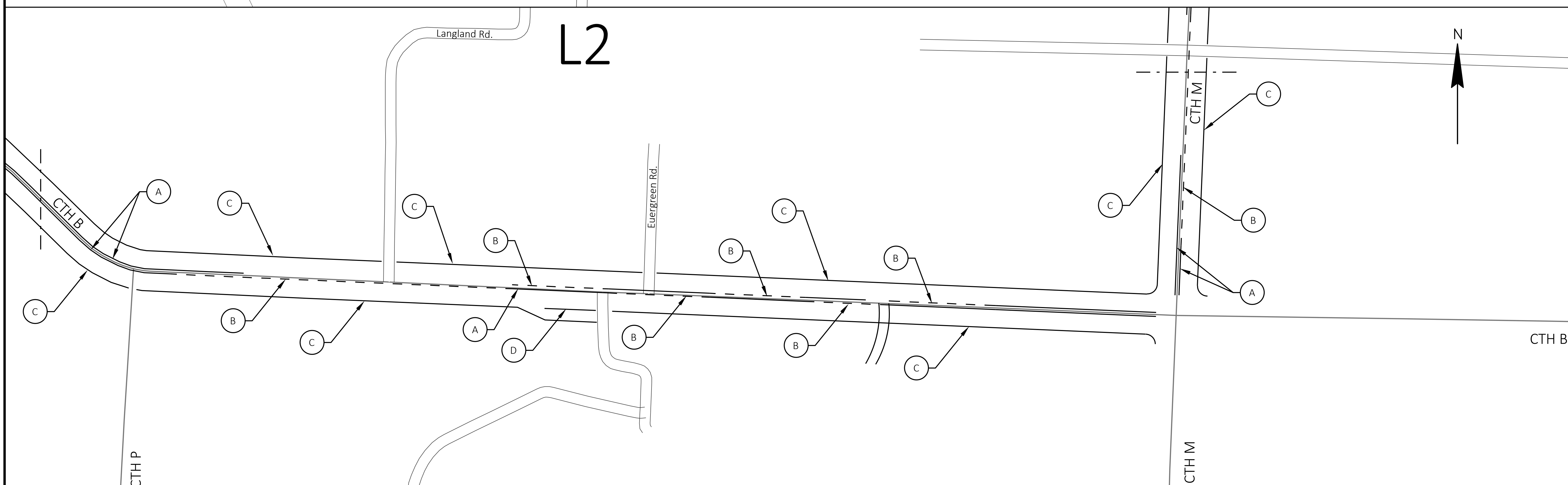


MARKING LEGEND

- (A) MARKING LINE PAINT 4-INCH, YELLOW
- (B) MARKING LINE PAINT 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP
- (C) MARKING LINE PAINT 4-INCH, WHITE
- (D) MARKING LINE PAINT 8-INCH, WHITE

NOTE 1: PAVEMENT MARKING SHOWN IS EXISTING. NEW PAVEMENT MARKING SHALL BE APPLIED ACCORDING TO APPLICABLE STANDARD DETAIL DRAWINGS AND EXISTING NO PASSING ZONES.

L2

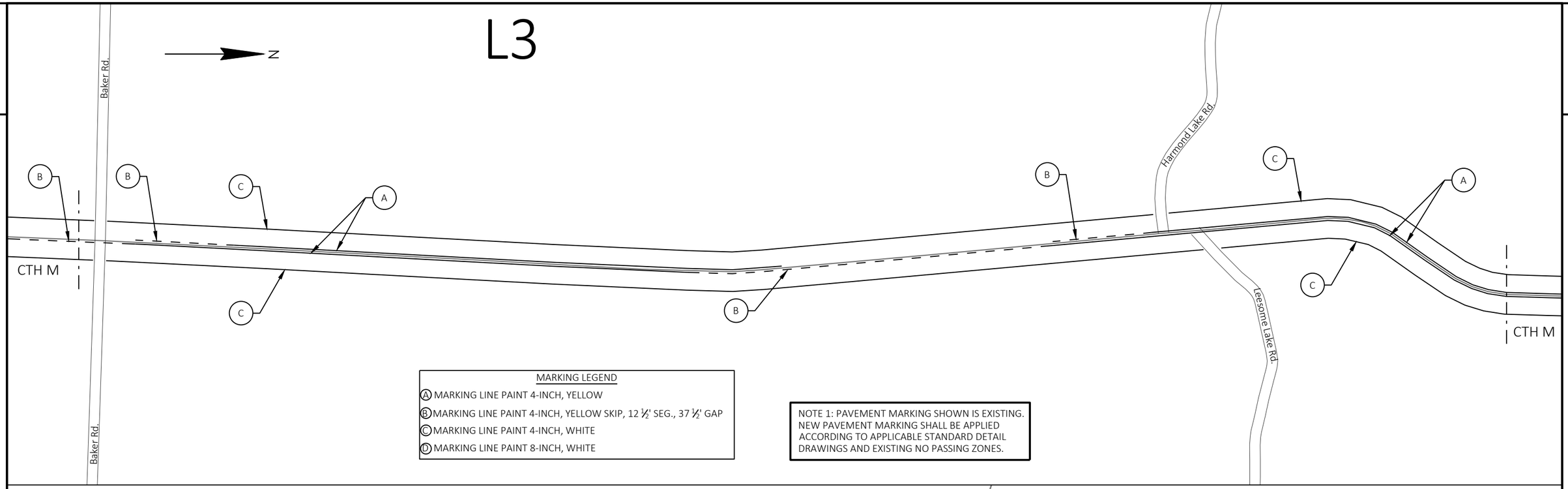


PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR SIGNING & MARKING	SHEET 12	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - PM-1
PLOT DATE : 6/14/2021 4:44 PM
PLOT BY : BUKOVITZ, CAITLIN LE
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 42

2

L3

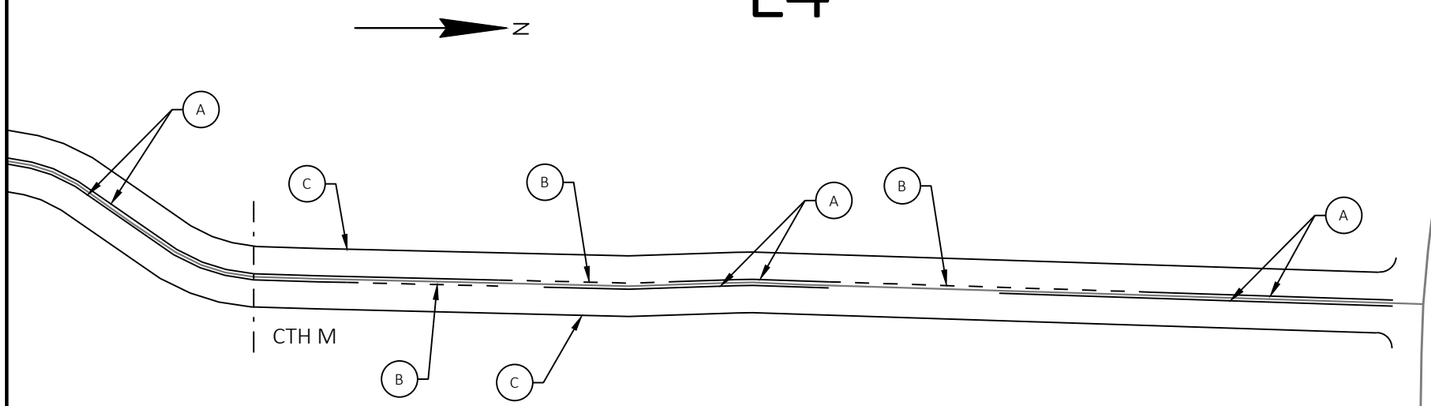


MARKING LEGEND

- (A) MARKING LINE PAINT 4-INCH, YELLOW
- (B) MARKING LINE PAINT 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP
- (C) MARKING LINE PAINT 4-INCH, WHITE
- (D) MARKING LINE PAINT 8-INCH, WHITE

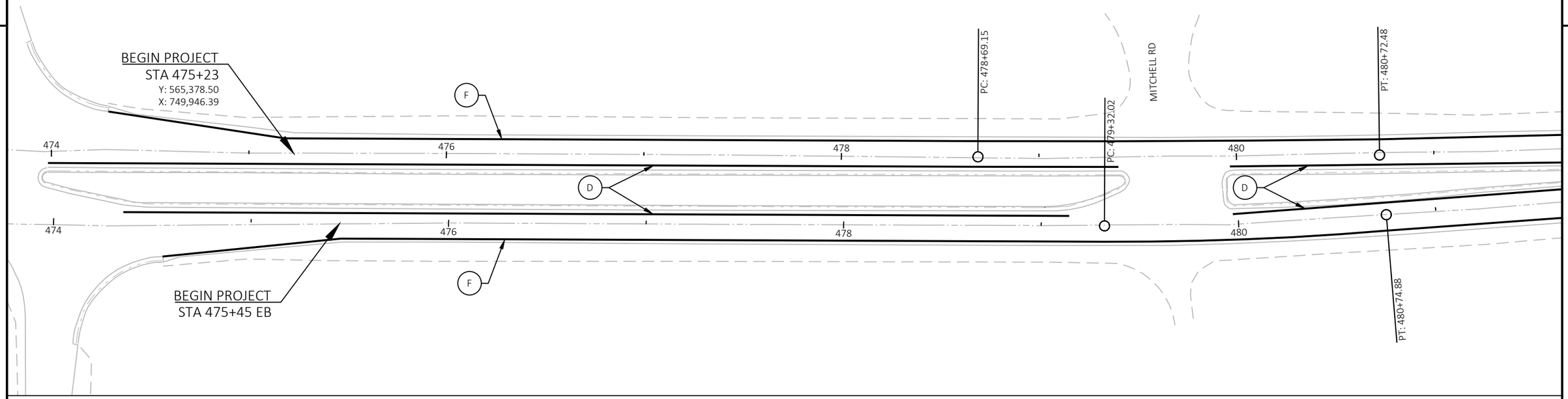
NOTE 1: PAVEMENT MARKING SHOWN IS EXISTING. NEW PAVEMENT MARKING SHALL BE APPLIED ACCORDING TO APPLICABLE STANDARD DETAIL DRAWINGS AND EXISTING NO PASSING ZONES.

L4



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR SIGNING & MARKING	SHEET 13	E

2

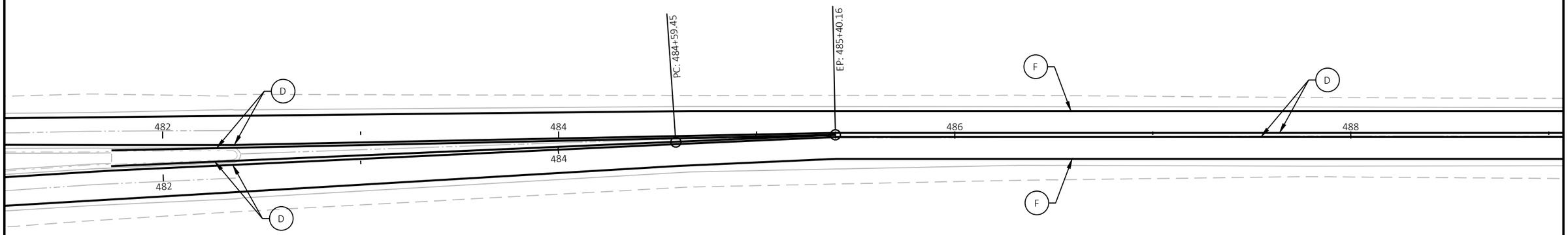


Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

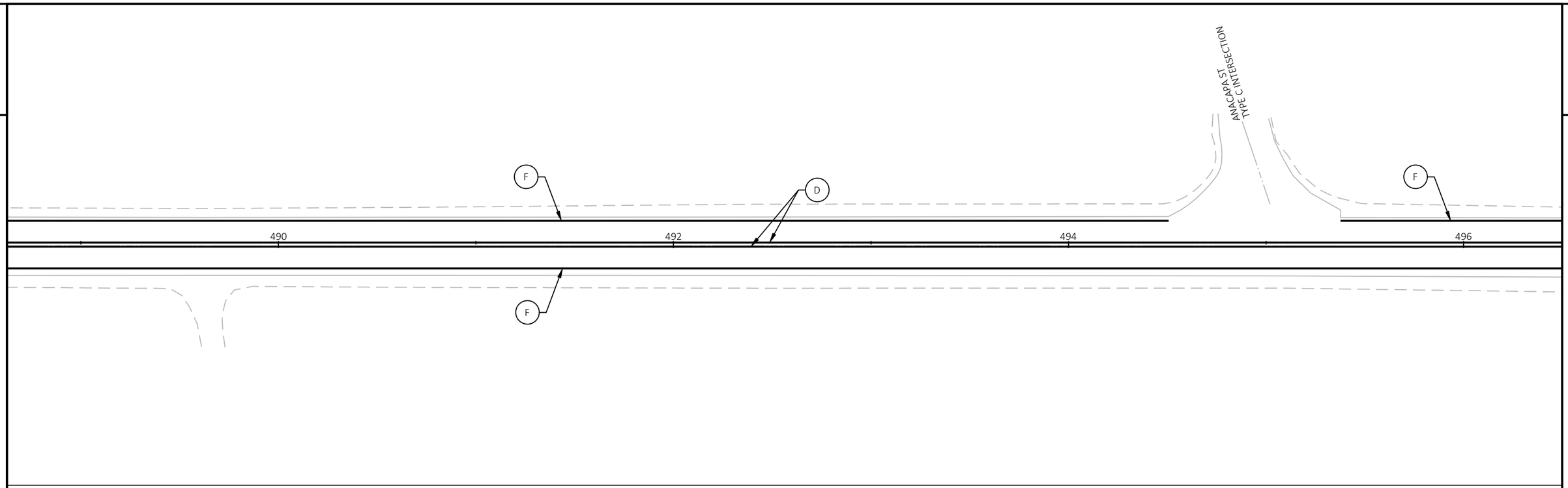
MARKING LEGEND

- (D) MARKING LINE EPOXY 4-INCH, YELLOW
- (E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP
- (F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 14	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

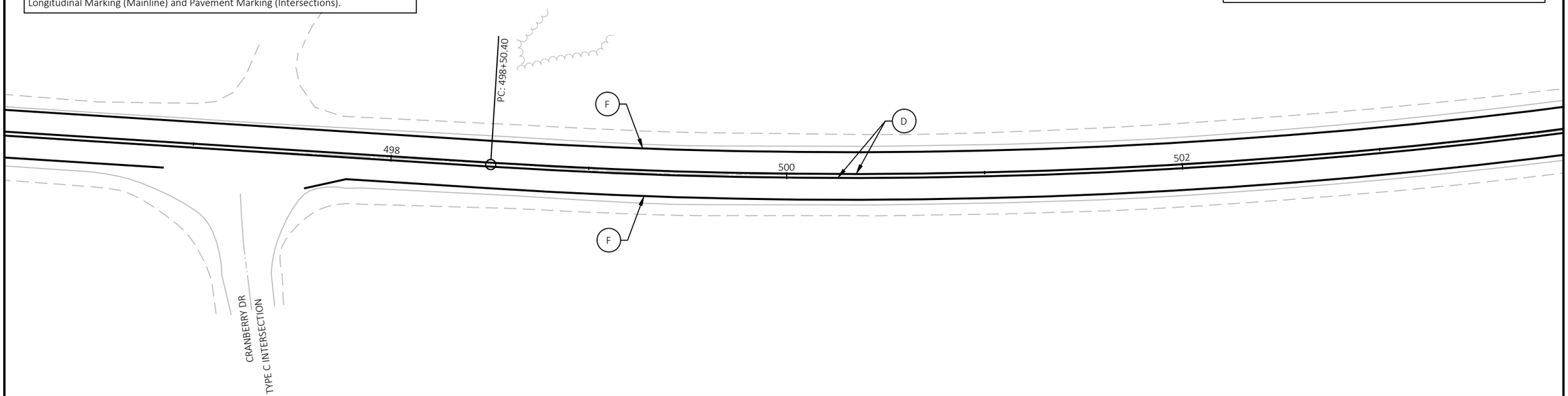
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

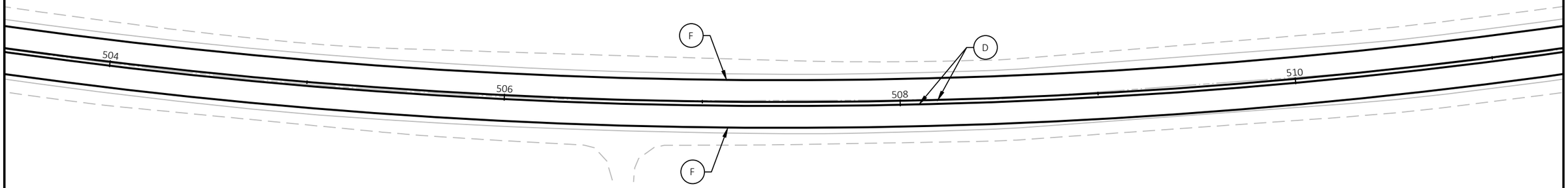
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 15	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

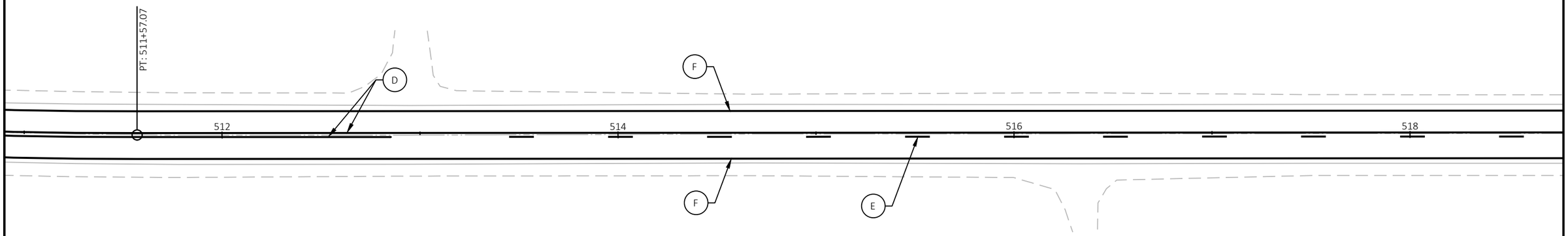
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

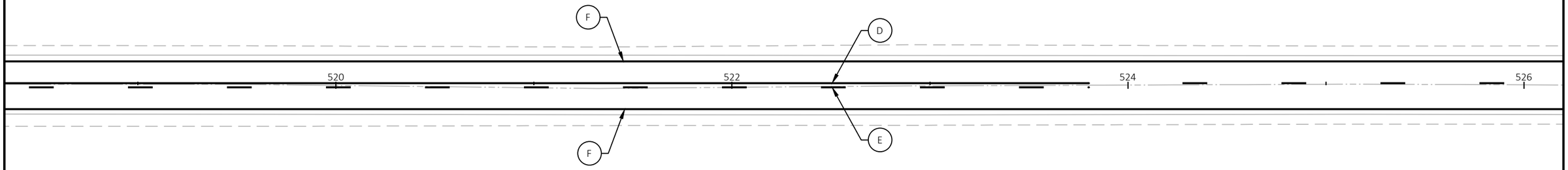
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 16	E

2



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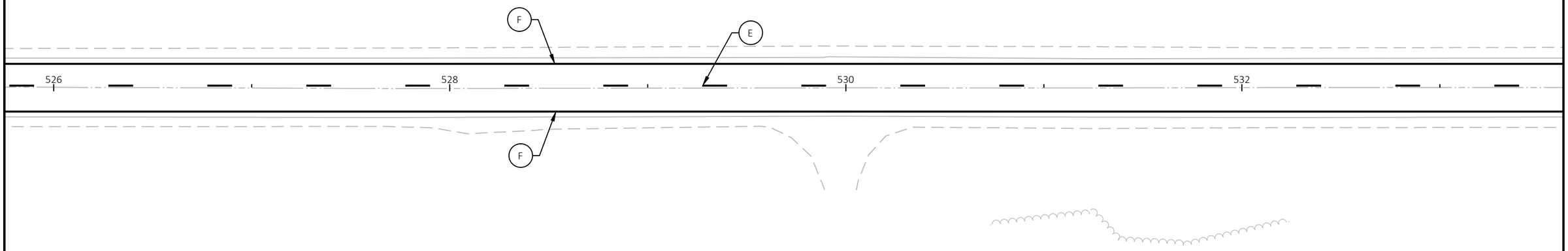
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

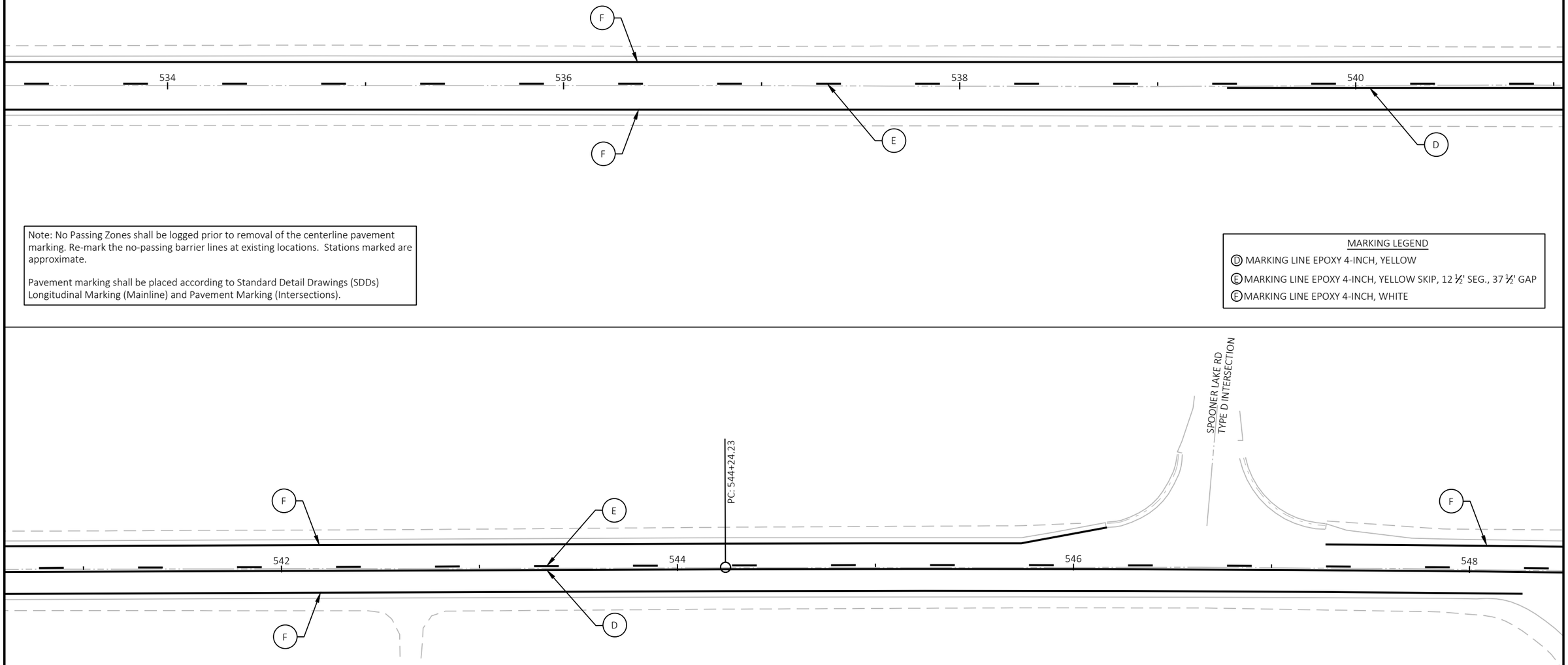
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 17	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

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MARKING LEGEND

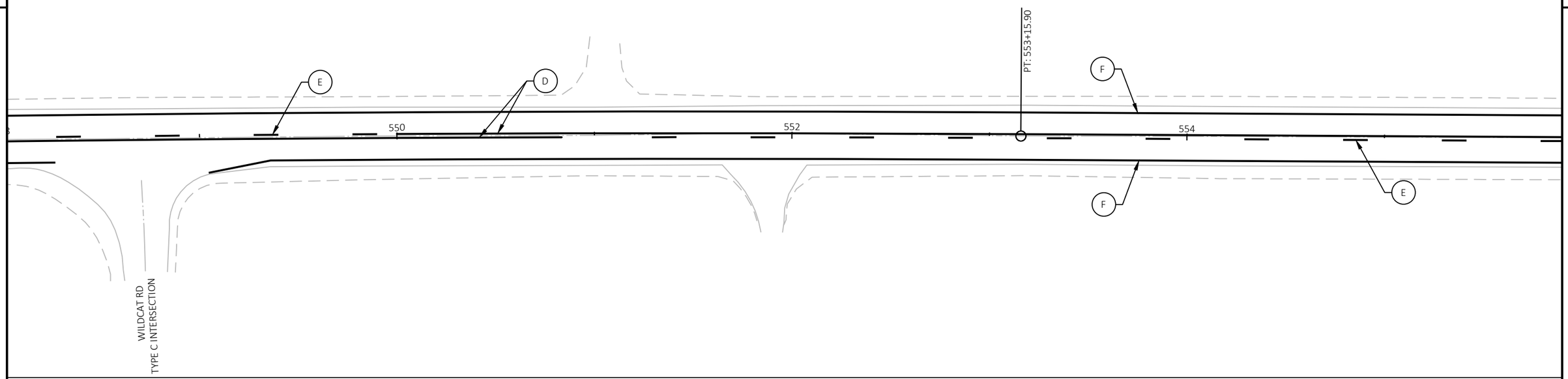
Ⓓ MARKING LINE EPOXY 4-INCH, YELLOW

Ⓔ MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

Ⓕ MARKING LINE EPOXY 4-INCH, WHITE

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 18	E

2



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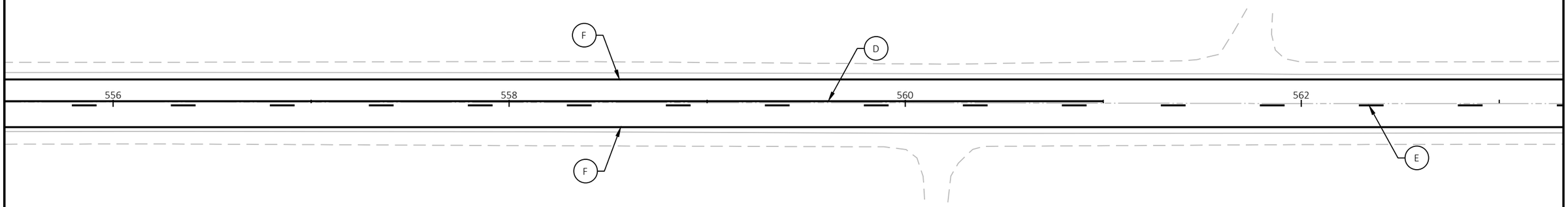
MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

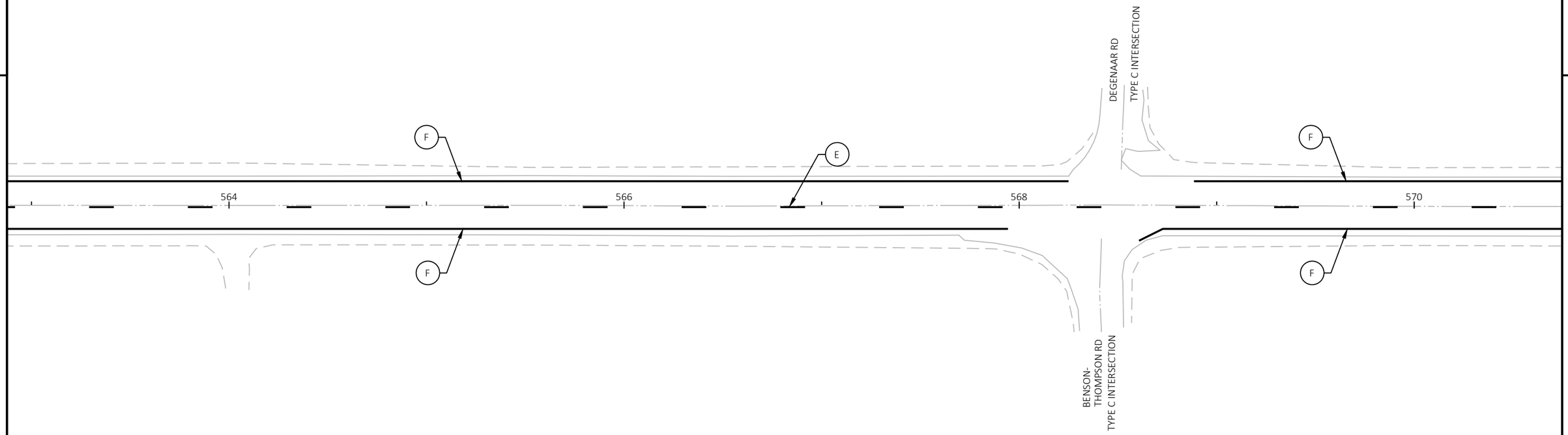
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 19	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

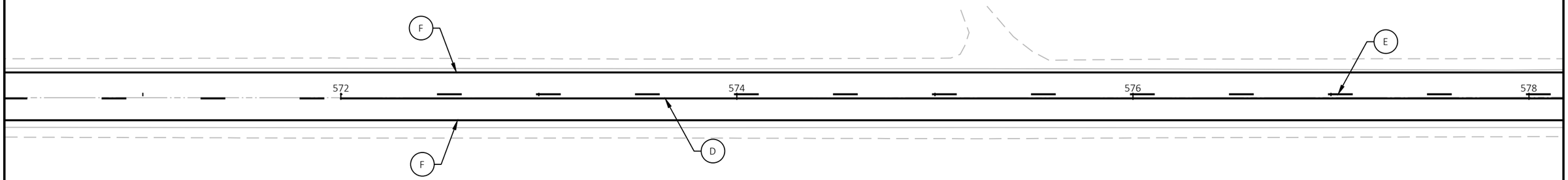
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

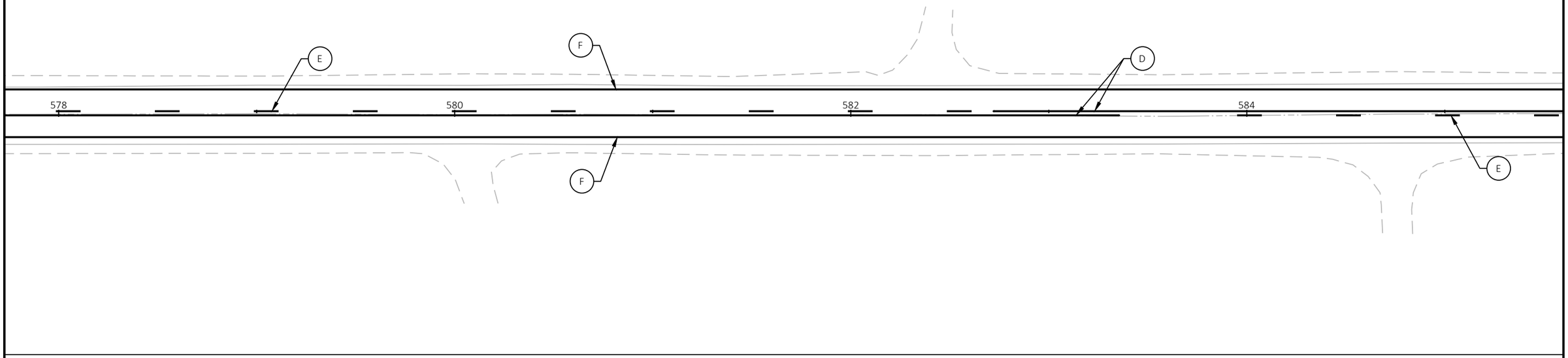
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 20	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

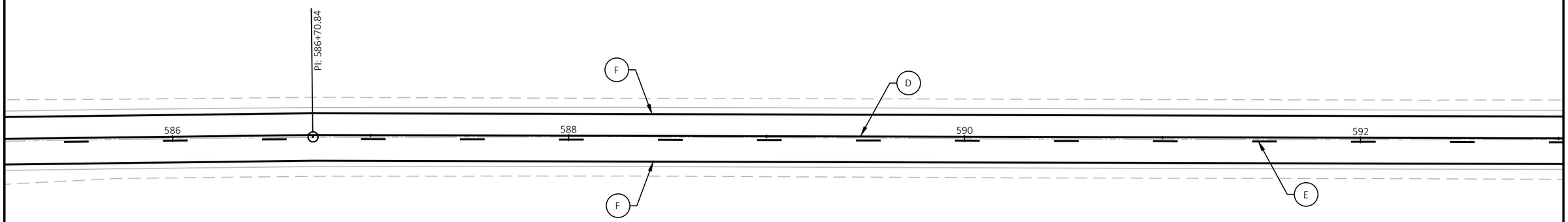
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

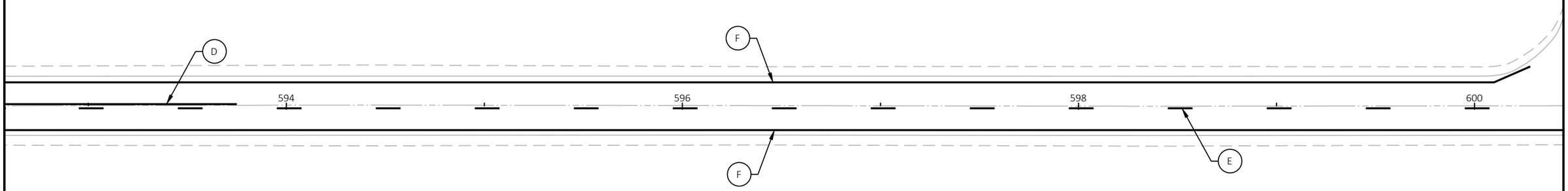
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 21	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

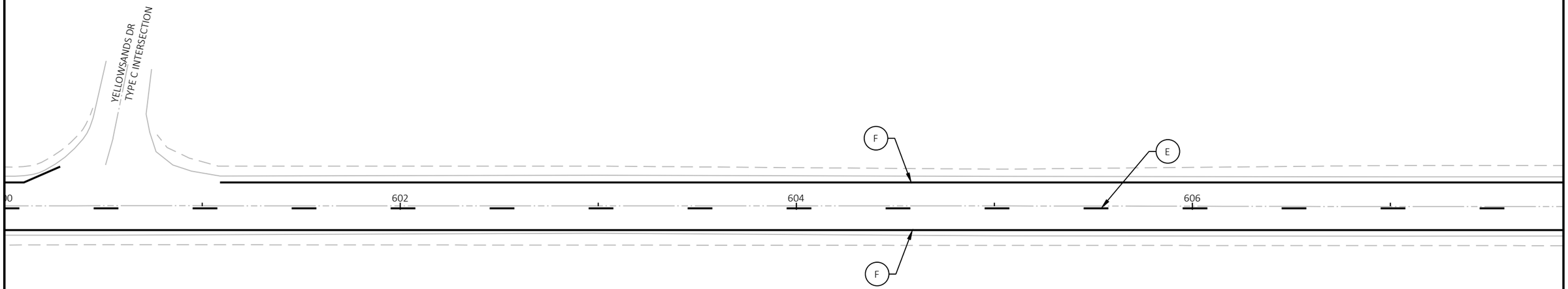
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

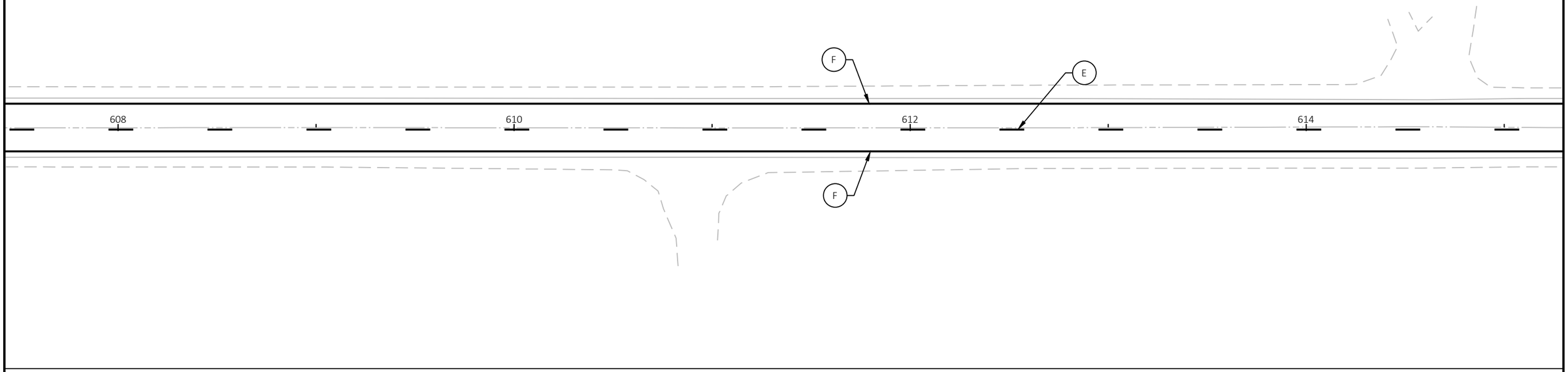
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 22	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

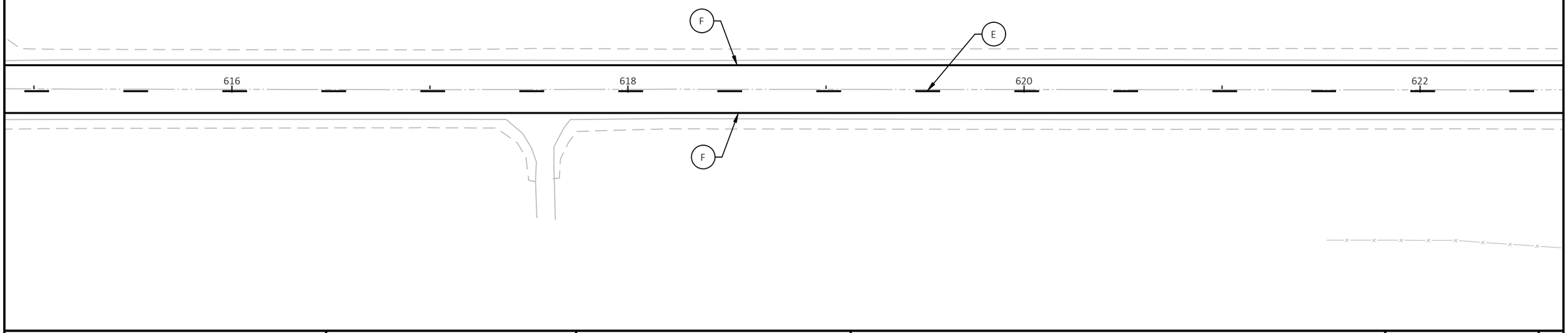
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

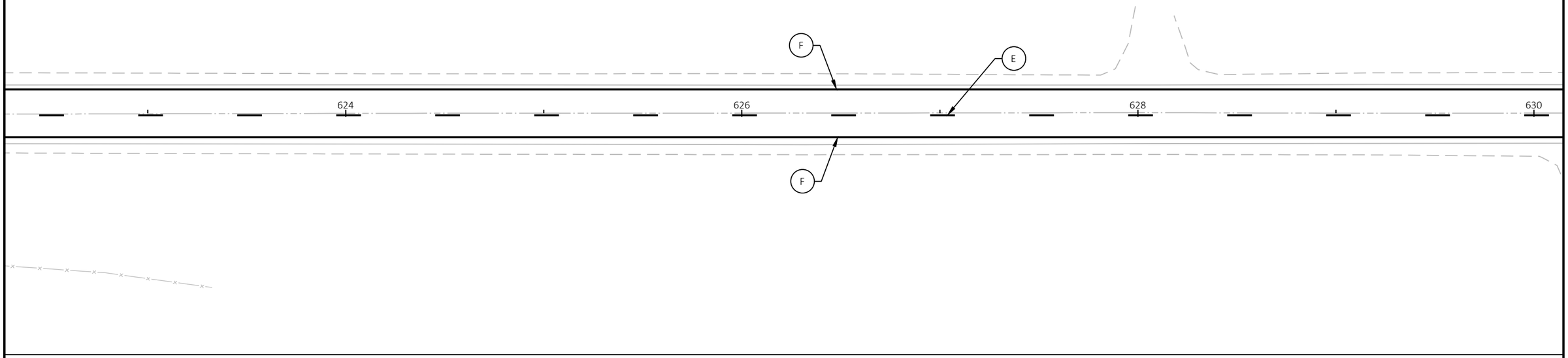
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 23	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

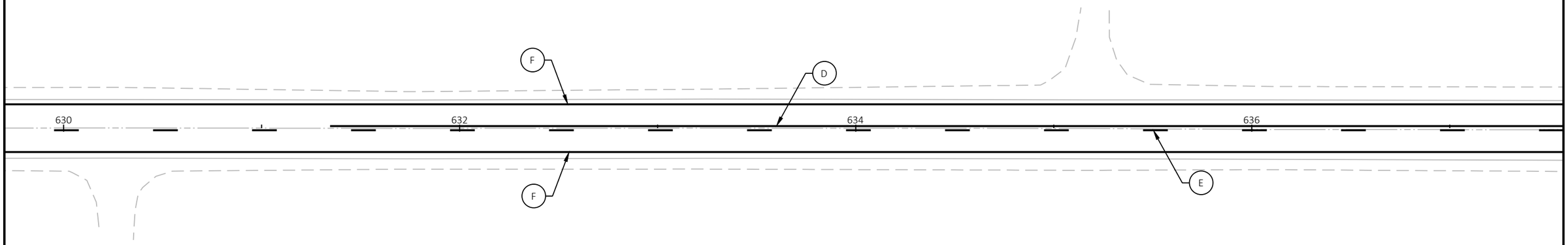
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

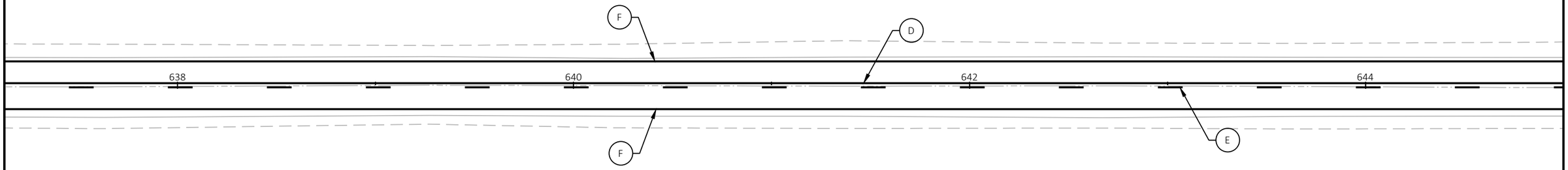
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 24	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

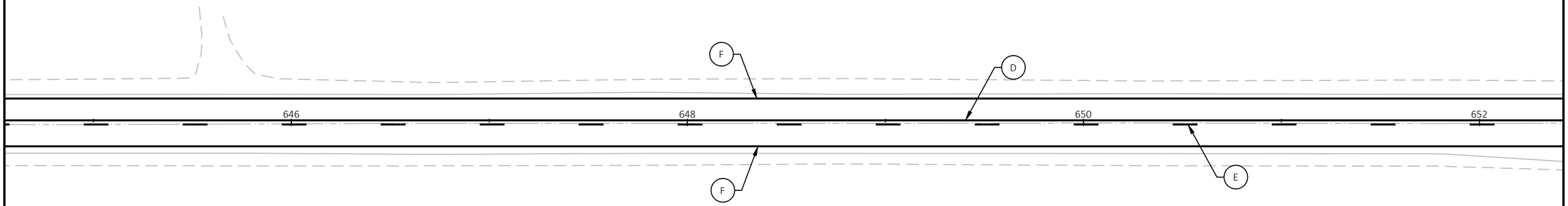
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

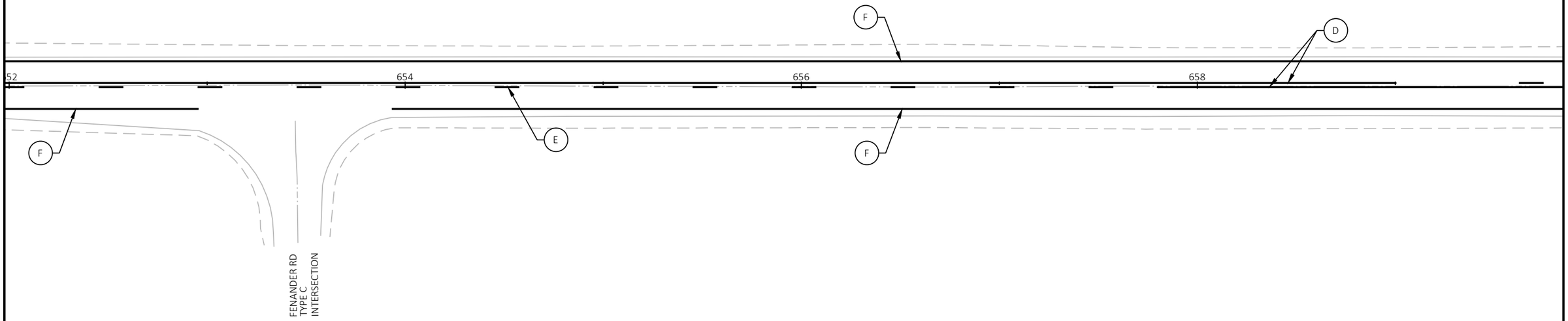
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 25	E

2



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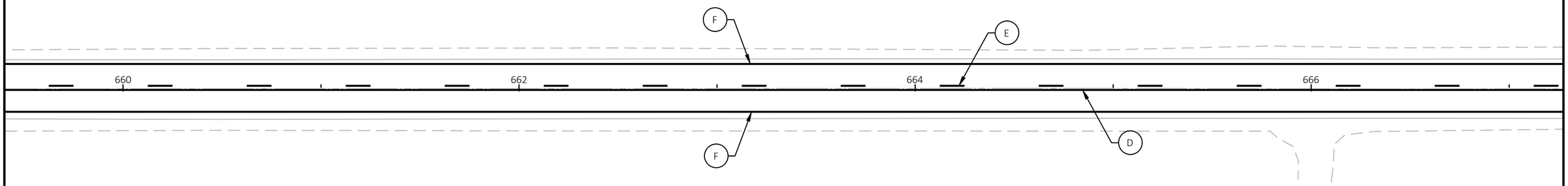
MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

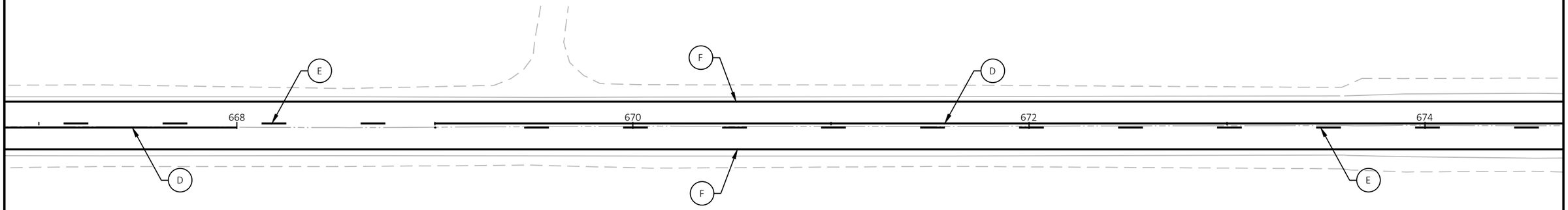
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 26	E

2



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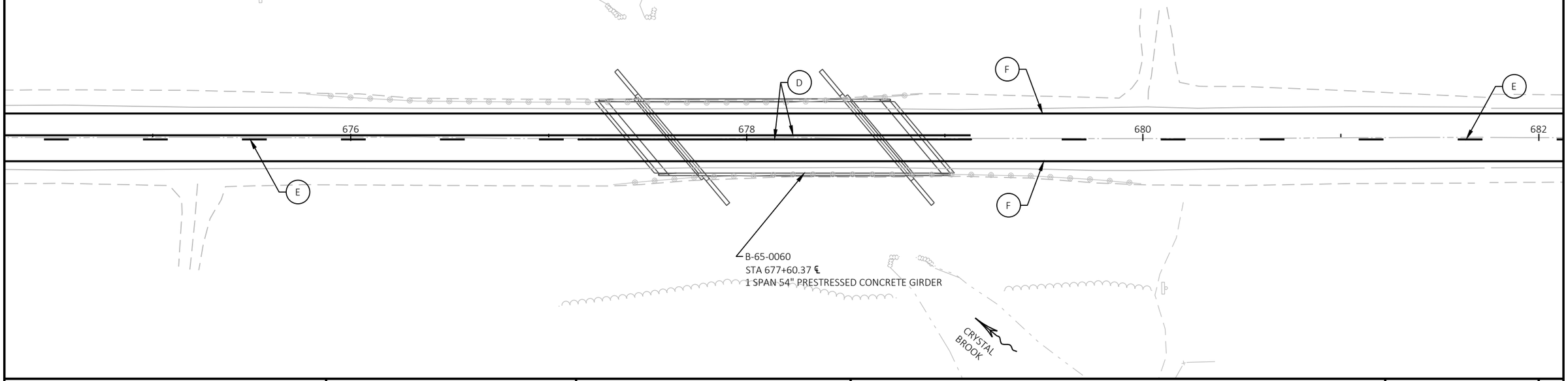
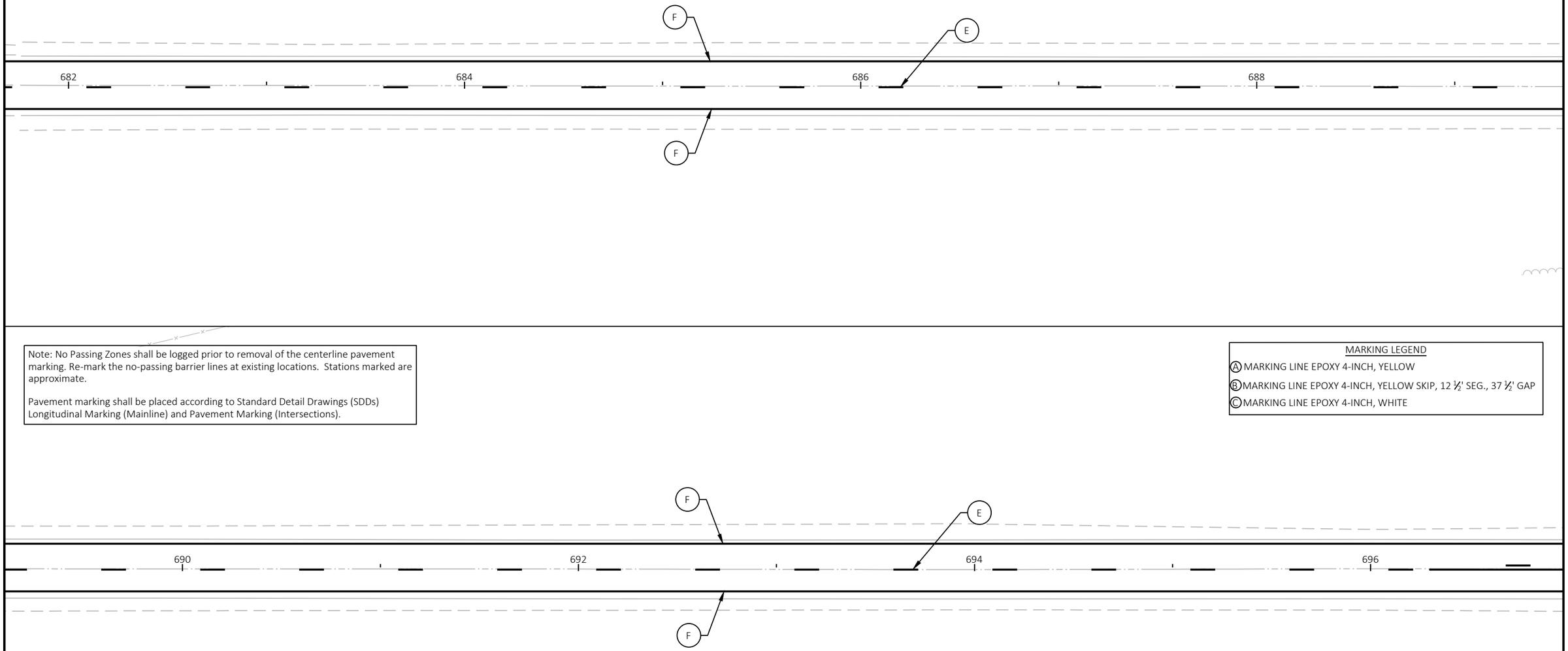
MARKING LEGEND

- (D) MARKING LINE EPOXY 4-INCH, YELLOW
- (E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP
- (F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 27	E

2



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MARKING LEGEND

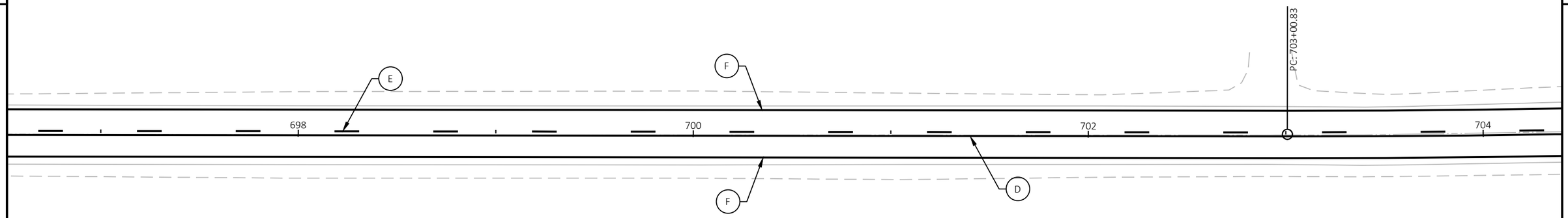
Ⓐ MARKING LINE EPOXY 4-INCH, YELLOW

Ⓑ MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

Ⓒ MARKING LINE EPOXY 4-INCH, WHITE

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 28	E

2



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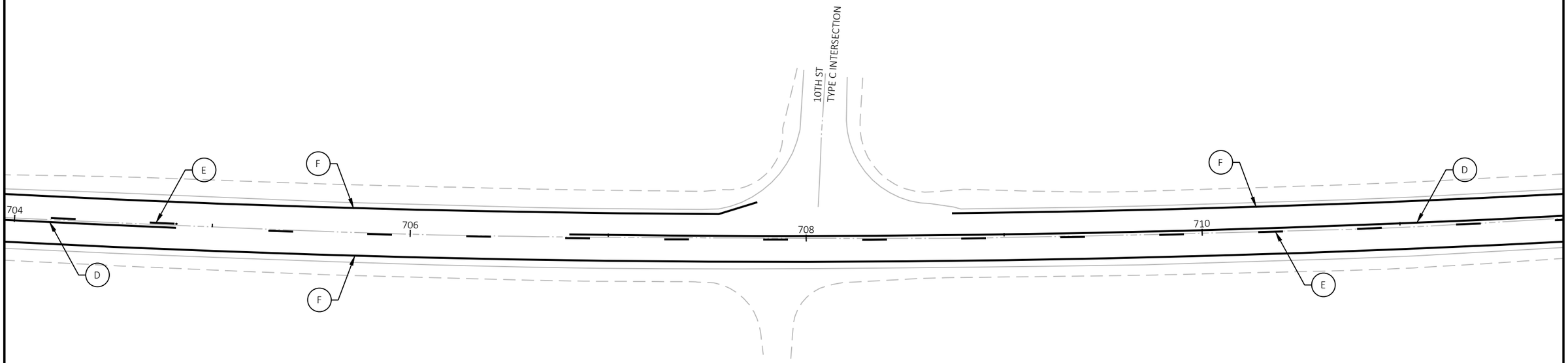
MARKING LEGEND

Ⓓ MARKING LINE EPOXY 4-INCH, YELLOW

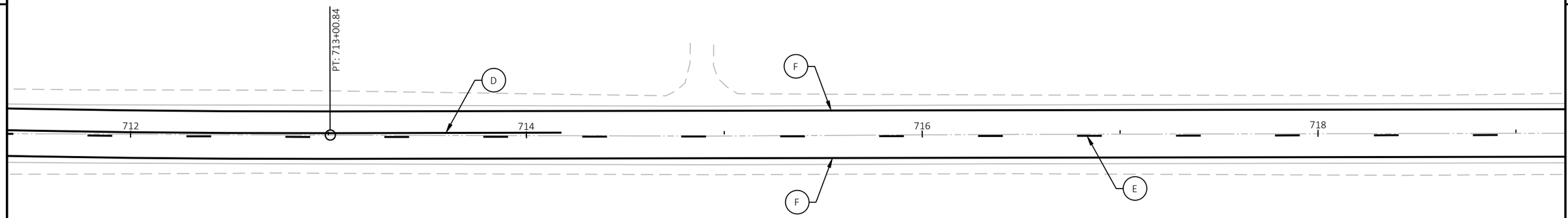
Ⓔ MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

Ⓕ MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 29	E

2



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MARKING LEGEND

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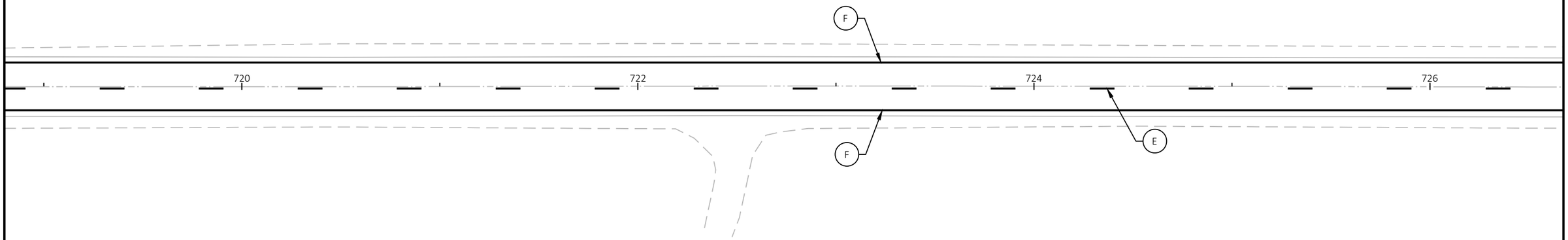
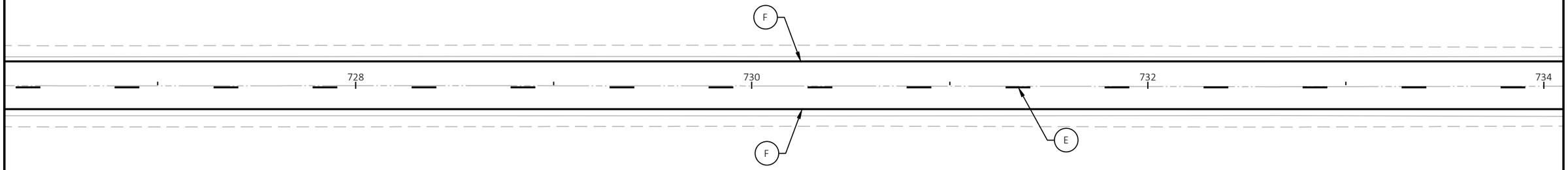
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 30	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

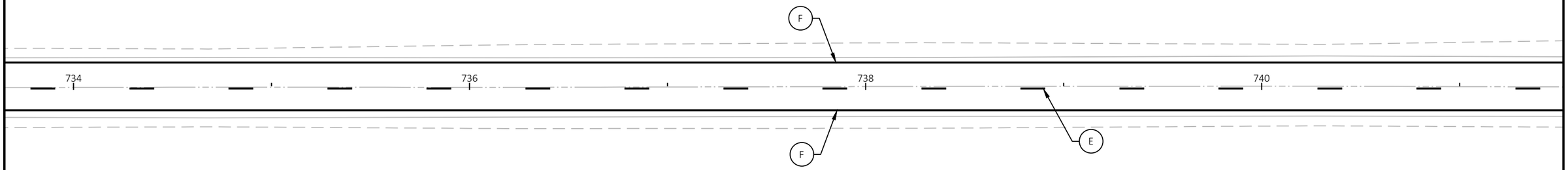
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

Ⓓ MARKING LINE EPOXY 4-INCH, YELLOW

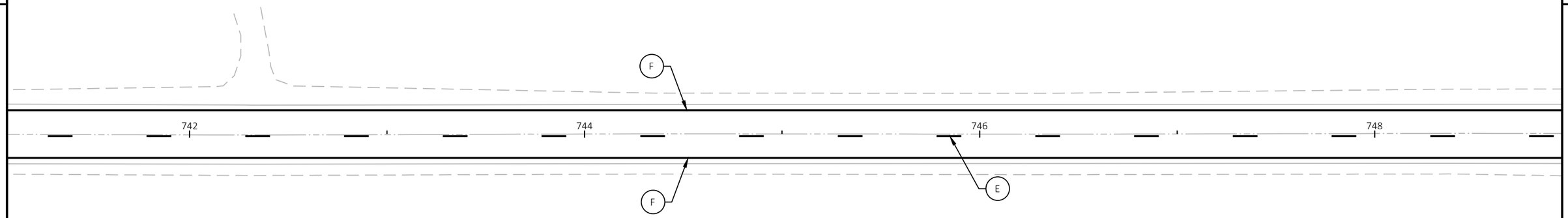
Ⓔ MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

Ⓕ MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 31	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

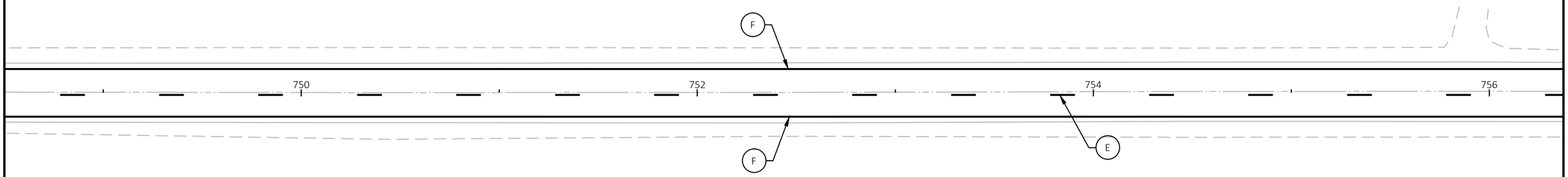
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

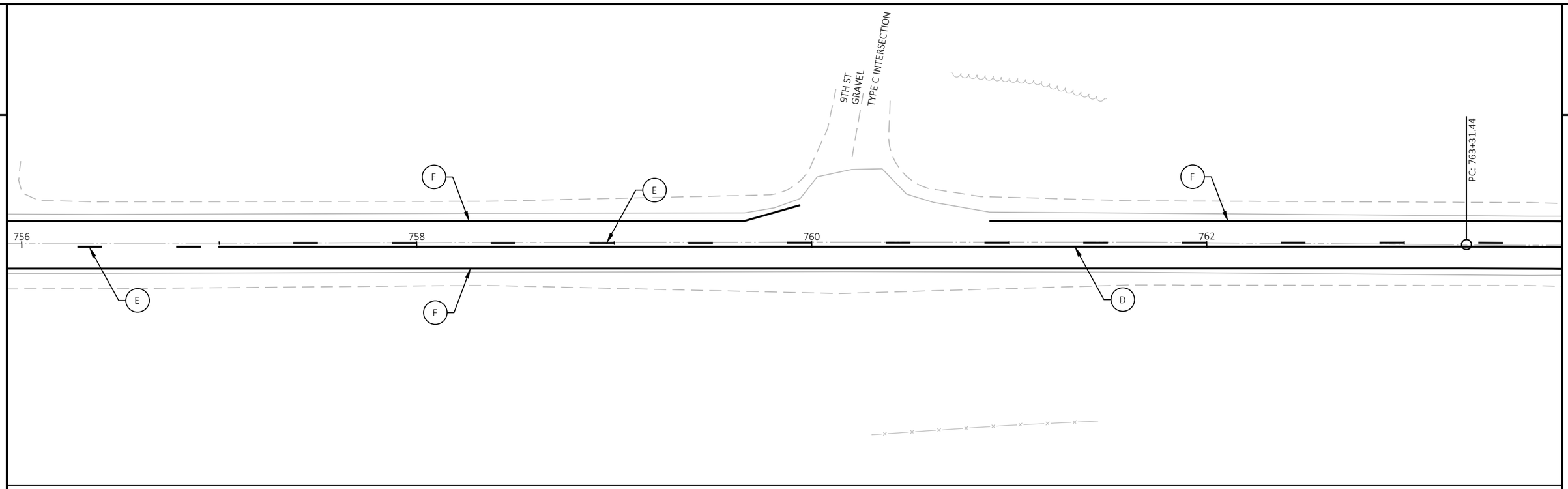
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 32	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

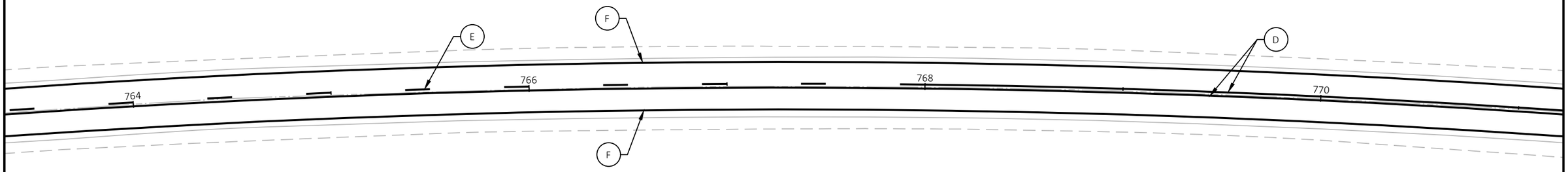
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

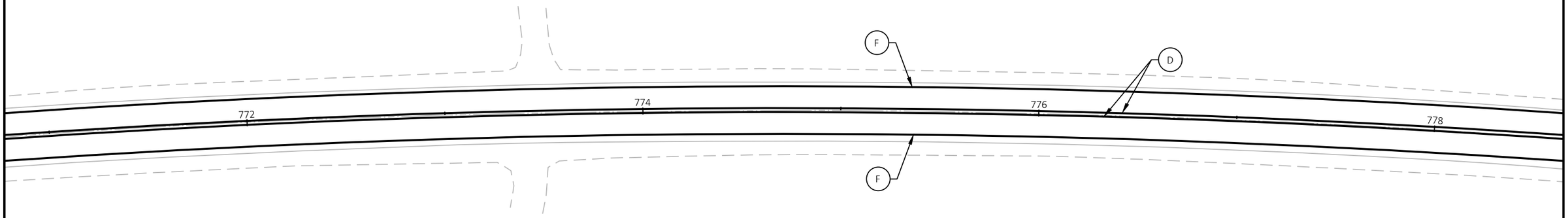
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 33	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

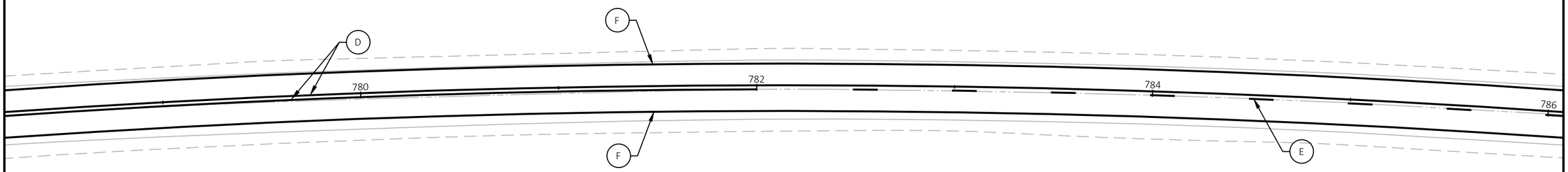
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

Ⓓ MARKING LINE EPOXY 4-INCH, YELLOW

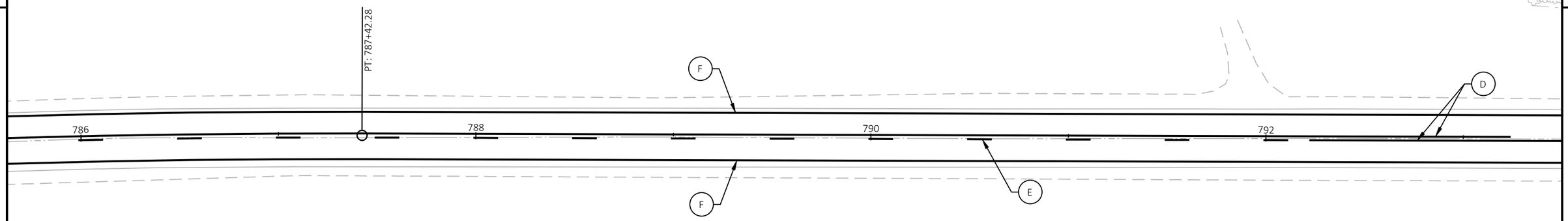
Ⓔ MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

Ⓕ MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 34	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

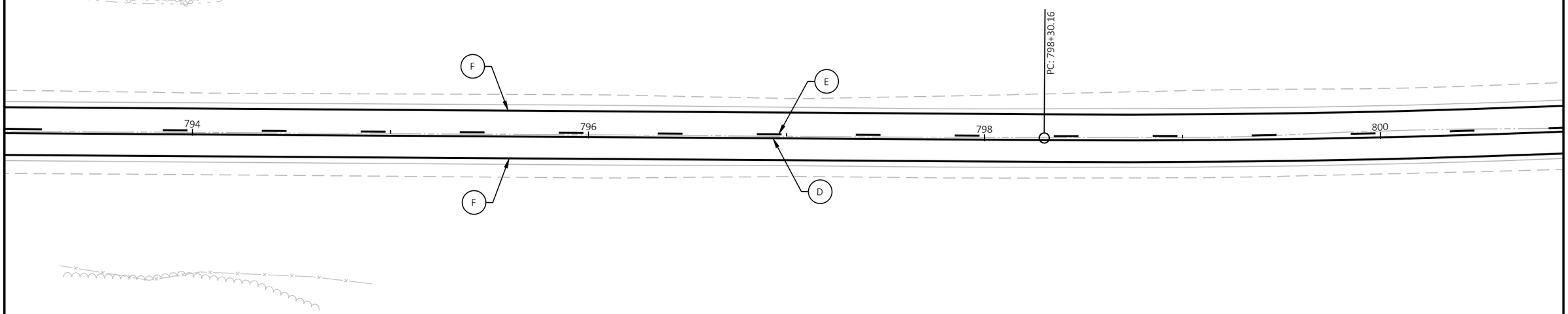
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

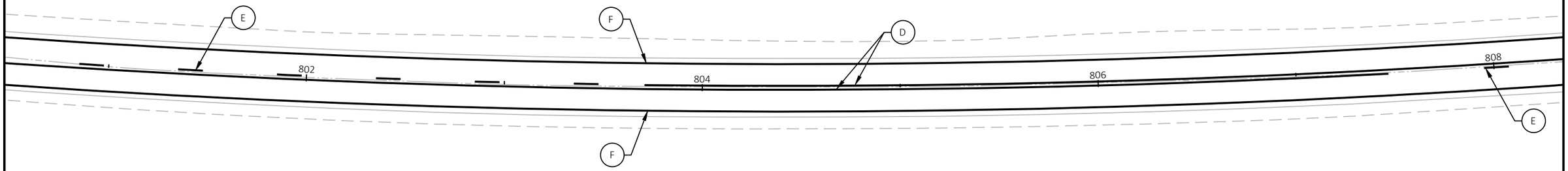
(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 35	E

2



Note: No Passing Zones shall be logged prior to removal of the centerline pavement marking. Re-mark the no-passing barrier lines at existing locations. Stations marked are approximate.

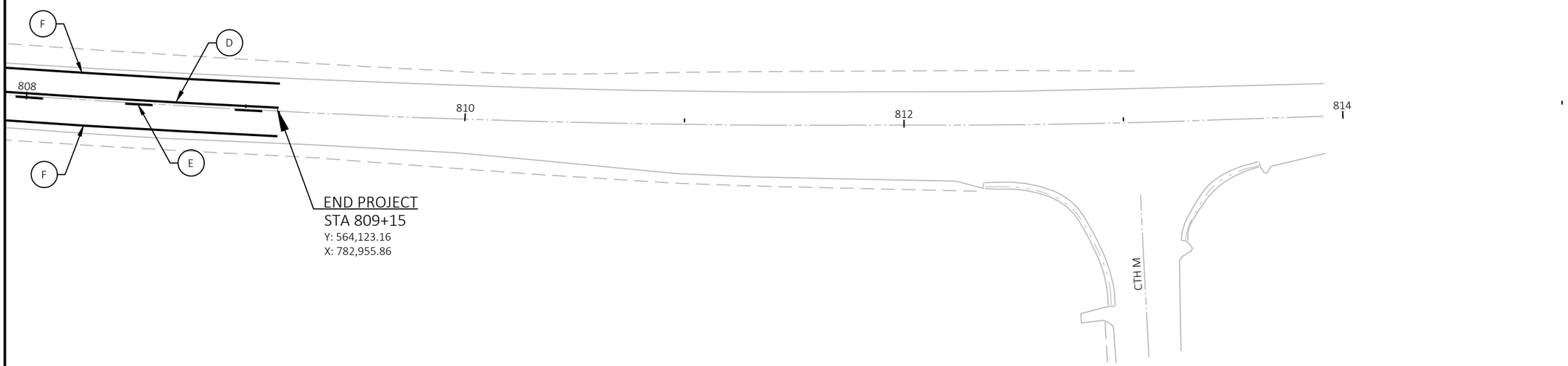
Pavement marking shall be placed according to Standard Detail Drawings (SDDs) Longitudinal Marking (Mainline) and Pavement Marking (Intersections).

MARKING LEGEND

(D) MARKING LINE EPOXY 4-INCH, YELLOW

(E) MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 ½' SEG., 37 ½' GAP

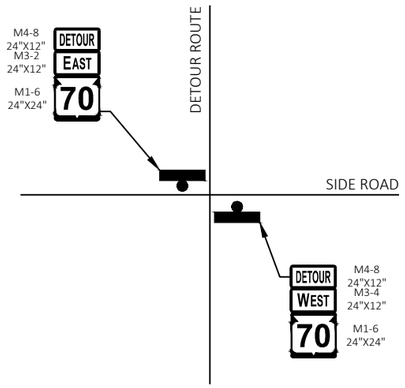
(F) MARKING LINE EPOXY 4-INCH, WHITE



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	MARKING PLAN	SHEET 36	E

REASSURANCES TO BE PLACED AT THE FOLLOWING INTERSECTIONS:

- USH 53 & WILDCAT ROAD
- CTH B & CTH P
- CTHM & HARMON LAKE ROAD



ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE

CTH A
USH 63
CTH H
BEGIN PROJECT 8130-01-70
STA 475+23
CRYSTAL BROOK CULVERT
STA 674+45 - STA 681+00
END PROJECT 8130-01-70
STA 809+15
USH 53
L1-B
L1-A
L2
L3
L4
STH 70
STH 70
USH 53
DETOUR ROUTE
CTH M
DETOUR ROUTE
L6
CTH B
DETOUR ROUTE
CTH B
L5
Shell Lake
USH 53
CTH P

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR ROUTE	SHEET 37	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - 81300002_CarOV
PLOT DATE : 6/17/2021 4:23 PM
PLOT BY : BUKOVITZ, CAITLIN LE
PLOT NAME :
PLOT SCALE : 1 IN:1 MI
WISDOT/CADDS SHEET 42

2

N

L1-A

USH 53

M3-2 36"X18"
M1-6 36"X36"
EAST 70
DETOUR AHEAD W20-2A
D1

M4-8 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO6-1 30"X30"
DETOUR EAST 70
D2

M4-8 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO6-1 30"X30"
DETOUR EAST 70
D3a

FIXED MESSAGE SIGN 54"X132"
STONE LAKE TRAFFIC FOLLOW DETOUR

70 Spooner Stone Lake
D3b

COVER EXISTING SIGN

STH 70

R11-3C 60"X24"
BRIDGE OUT 4.0 MILES AHEAD
TYPE III BARRICADE

M4-9R 30"X24"
DETOUR
TYPE III BARRICADE
D4

DETOUR AHEAD W20-2A
D5

M4-8 24"X12"
DETOUR
NORTH EAST SOUTH
53 70 53
MO5-1R 21"X21"
D6

COVER EXISTING SIGN

Stone Lake Superior
Rice Lake
D7

M4-8 24"X12"
DETOUR
NORTH EAST SOUTH
53 70 53
MO6-1 21"X21"
D8

D9

M4-8 24"X12"
DETOUR
SOUTH WEST
53 70
EAST 70
M3-2 24"X12"
M1-6 24"X24"
MO5-1L 21"X21"

USH 53

M4-8A 24"X18"
END DETOUR
DETOUR EAST
M4-8 24"X12"
M3-2 24"X12"
SOUTH WEST
53 70
70
M1-6 24"X24"
MO5-1L 21"X21"
D18

D17
COVER EXISTING SIGN

Stone Lake Minong Superior

R11-3C 60"X24"
BRIDGE OUT 4.0 MILES AHEAD
TYPE III BARRICADE
TYPE III BARRICADE
D16

M4-8 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO6-1 21"X21"
DETOUR EAST 70
D15

M4-8 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO5-1L 21"X21"
DETOUR EAST 70
D14

STH 70

M4-8 36"X18"
DETOUR EAST 70
M3-2 36"X18"
M1-6 36"X36"
D10

M4-8 36"X18"
M3-4 36"X18"
M1-6 24"X24"
MO6-2 30"X30"
DETOUR WEST 70
D13b

70 Spooner Stone Lake
COVER EXISTING SIGN

D11

DETOUR NEXT 15 MILES
G20-51 60"X24"

D12

EAST 70
M3-2 36"X18"
M1-6 36"X36"
D13a

DETOUR AHEAD W20-2A

M4-8 36"X18"
TO SOUTH
DETOUR WEST
63 70
M3-4 36"X18"
M1-6 36"X36"
MO5-2R 30"X30"

USH 53

L1-B

N

2

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR - L1-A AND L1-B	SHEET 38	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - DT_L1

PLOT DATE : 6/17/2021 4:23 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:500 FT

WISDOT/CADDS SHEET 42

2

2

N

R11-3B
60" X 30"
BRIDGE OUT
0.4 MILES AHEAD
LOCAL TRAFFIC ONLY
TYPE III BARRICADE

R11-3B
60" X 30"
BRIDGE OUT
0.4 MILES AHEAD
LOCAL TRAFFIC ONLY
TYPE III BARRICADE

D22

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE

TYPE III BARRICADE

TYPE III BARRICADE

TYPE III BARRICADE

TYPE III BARRICADE

D25

D24

TYPE III BARRICADE

MAINTAIN ACCESS TO PE

STH 70

D19

ROAD CLOSED AHEAD
W20-3A

D20

ROAD CLOSED 1000 FT
W20-3C

D21

ROAD CLOSED 500 FT
W20-3D

D23

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE

CRYSTAL BROOK

FENANDER ROAD

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR - L2	SHEET 39	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - DT_L2

PLOT DATE : 6/17/2021 4:23 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:500 FT

WISDOT/CADDS SHEET 42

2

N

10TH STREET

STH 70

CRYSTAL BROOK

R11-2B
48" X 30"
BRIDGE OUT

TYPE III BARRICADE
TYPE III BARRICADE
TYPE III BARRICADE
TYPE III BARRICADE
TYPE III BARRICADE

D26

ROAD CLOSED 500 FT
W20-3D
D27

ROAD CLOSED 1000 FT
W20-3C
D28

R11-3C
60"X24"
BRIDGE OUT
0.5 MILES AHEAD
TYPE III BARRICADE
D30

ROAD CLOSED AHEAD
W20-3A
D31

D29
TYPE III BARRICADE

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR - L3	SHEET 40	E

2

2

N

STH 70

CTH M

R11-3C
60"X24"
BRIDGE OUT
2.0 MILES AHEAD
TYPE III BARRICADE

D42

M4-9L
30"X24"
DETOUR

D43

D41

DETOUR
WEST
70
M4-8
24"X12"
M3-4
24"X12"
M1-6
24"X24"
MO6-1
21"X21"

D40

COUNTY
M
DETOUR
WEST
70
M4-8
24"X12"
M3-4
24"X12"
M1-6
24"X24"
MO5-1L
21"X21"

JCT
COUNTY
M

D39

DETOUR
AHEAD
W20-2A

JCT
COUNTY
M

D32

M4-8
24"X12"
DETOUR
WEST
70
M3-4
24"X12"
M1-6
24"X24"
MO5-1R
21"X21"

D33

COUNTY
M
DETOUR
WEST
70
M4-8
24"X12"
M3-4
24"X12"
M1-6
24"X24"
MO6-1
21"X21"

D37

DETOUR
EAST
70
M4-8
24"X12"
M3-2
24"X12"
M1-6
24"X24"
MO6-1
21"X21"

D38

END
DETOUR
EAST
70
M4-8A
24"X18"
M3-2
24"X12"
M1-6
24"X24"

D34

M4-8
24"X12"
DETOUR
WEST
70
M3-4
24"X12"
M1-6
24"X24"

D35

DETOUR
NEXT 15 MILES
G20-51
60"X24"

D36

DETOUR
EAST
70
M4-8
24"X12"
M3-2
24"X12"
M1-6
24"X24"
MO5-1R
21"X21"

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR - L4	SHEET 41	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - DT_L4

PLOT DATE : 6/17/2021 4:24 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

N

CTH B

CTH M

JCT COUNTY B

D44

M4-8 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO5-1R 21"X21"

D45

M4-8 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

D46

M4-8 24"X12"
M3-4 24"X12"
M1-6 24"X24"

D55

M4-8 24"X12"
M3-2 24"X12"
M1-6 24"X24"

D54

M4-8 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

D53

M4-8 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

JCT COUNTY M

D52

M3-4 24"X12"
M1-6 24"X24"
W20-2A

JCT COUNTY M

D47

M4-8 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO5-1L 21"X21"

D48

M4-8 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

D51

M4-8 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

D50

M4-8 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO5-1L 21"X21"

JCT COUNTY B

D49

M3-4 24"X12"
M1-6 24"X24"
W20-2A

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR - L5	SHEET 42	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - DT_L5

PLOT DATE : 6/17/2021 4:24 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

USH 53

CTH B

STH 253

Long Lake

Long Lake
Trego

D56

D57

D58

D59

D60

D61

D62

D63

D64

D65

D66

D67

D68

D69

D70

M4-8
36"X18"
M3-2
36"X18"
M1-6
36"X36"
MO4-20L
36"X36"
DETOUR
EAST
70
USE LEFT LANE
EAST
WEST
COUNTY B

M4-8
36"X18"
M4-5
24"X12"
M3-2
36"X18"
M1-6
36"X36
MO5-52
30"X30"
DETOUR
TO
EAST
70
TO EAST B
WEST B

M4-8
36"X18"
M3-2
36"X18"
M1-6
36"X36"
MO5-1L
30"X30"
DETOUR
EAST
70
EAST
COUNTY B
SOUTH WEST
53
COUNTY B

M4-8
24"X12"
M3-2
24"X12"
M1-6
24"X24"
MO5-1R
21"X21"
DETOUR
EAST
70

M4-8
24"X12"
M3-2
24"X12"
M1-6
24"X24"
MO6-1
21"X21"
DETOUR
EAST
70
53 COUNTY B

M4-8
36"X18"
M3-2
36"X18"
M1-6
36"X36"
MO5-52
30"X30"
DETOUR
EAST
70
NORTH EAST
53
COUNTY B

M4-8
36"X18"
M3-4
36"X18"
M1-6
36"X36"
DETOUR
WEST
70

M4-8
24"X12"
M3-4
24"X12"
M1-6
24"X24"
DETOUR
WEST
70
53 COUNTY B

M4-8
24"X12"
M3-4
24"X12"
M1-6
24"X24"
MO5-1R
21"X21"
DETOUR
WEST
70

M4-8
36"X18"
M3-2
36"X18"
M1-6
36"X36"
MO6-1
30"X30"
DETOUR
EAST
70
NORTH EAST
53
COUNTY B

M4-8
36"X18"
M3-2
36"X18"
M1-6
36"X36"
MO6-1
21"X21"
MO4-20R
30"X30"
DETOUR
EAST
70
USE RIGHT LANE
B EAST
USE FAR RIGHT LANE
53 NORTH

M4-8
36"X18"
M3-2
36"X18"
M1-6
36"X36"
MO5-1R
30"X30"
DETOUR
EAST
70
WEST EAST
COUNTY B
COUNTY B
USE LEFT LANE

M3-2
36"X18"
M1-6
36"X36"
EAST
70
JCT
COUNTY B
DETOUR AHEAD
W20-2A

JCT
COUNTY B

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	DETOUR - L6	SHEET 43	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - DT_L6

PLOT DATE : 6/17/2021 4:24 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:500 FT

Estimate Of Quantities

Line	Item	Item Description	Unit	Total	8130-00-72 Qty	8130-01-70 Qty
0002	201.0105	Clearing	STA	4.000		4.000
0004	203.0100	Removing Small Pipe Culverts	EACH	3.000		3.000
0006	203.0200	Removing Old Structure (station) 01. 678+12	LS	1.000	1.000	
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	625.000		625.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	2,816.000		2,816.000
0012	204.0165	Removing Guardrail	LF	580.000		580.000
0014	204.0270	Abandoning Culvert Pipes	EACH	3.000		3.000
0016	205.0100	Excavation Common	CY	8,780.000	8,780.000	
0018	206.1000	Excavation for Structures Bridges (structure) 01. B-65-0060	LS	1.000	1.000	
0020	209.0200.S	Backfill Controlled Low Strength	CY	34.000		34.000
0022	210.1500	Backfill Structure Type A	TON	772.000	772.000	
0024	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 8130-01-70	LS	1.000		1.000
0026	211.0700.S	Prepare Foundation for CIR Base Layer (project) 01. 8310-01-70	EACH	1.000		1.000
0028	211.0800.S	Base Repair for CIR Layer	CY	1,000.000		1,000.000
0030	213.0100	Finishing Roadway (project) 01. 8130-01-70	EACH	1.000		1.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,100.000		4,100.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,137.000	318.000	819.000
0036	305.0500	Shaping Shoulders	STA	336.000		336.000
0038	327.1000.S	CIR Asphaltic Base Layer	SY	118,190.000		118,190.000
0040	415.0060	Concrete Pavement 6-Inch	SY	34.000	34.000	
0042	415.0410	Concrete Pavement Approach Slab	SY	134.000	134.000	
0044	416.0610	Drilled Tie Bars	EACH	10.000	10.000	
0046	416.1010	Concrete Surface Drains	CY	4.000	4.000	
0048	455.0605	Tack Coat	GAL	13,648.000		13,648.000
0050	455.0770.S	Asphalt Stabilizing Agent	TON	497.000		497.000
0052	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000		1.000
0054	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000		2.000
0056	460.2000	Incentive Density HMA Pavement	DOL	530.000		530.000
0058	460.2005	Incentive Density PWL HMA Pavement	DOL	13,150.000		13,150.000
0060	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	25,990.000		25,990.000
0062	460.2010	Incentive Air Voids HMA Pavement	DOL	17,940.000		17,940.000
0064	460.6645	HMA Pavement 5 MT 58-34 V	TON	17,936.000		17,936.000
0066	460.9000.S	Material Transfer Vehicle	EACH	1.000		1.000
0068	465.0105	Asphaltic Surface	TON	300.000		300.000
0070	465.0110	Asphaltic Surface Patching	TON	100.000		100.000
0072	465.0115	Asphaltic Surface Detours	TON	100.000		100.000
0074	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	11.000		11.000
0076	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	28,870.000		28,870.000
0078	502.0100	Concrete Masonry Bridges	CY	516.000	516.000	
0080	502.3200	Protective Surface Treatment	SY	617.000	617.000	
0082	502.3210	Pigmented Surface Sealer	SY	146.000	146.000	
0084	503.0155	Prestressed Girder Type I 54W-Inch	LF	420.000	420.000	
0086	505.0400	Bar Steel Reinforcement HS Structures	LB	8,460.000	8,460.000	
0088	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	58,050.000	58,050.000	
0090	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	1,330.000	1,330.000	
0092	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000	
0094	506.4000	Steel Diaphragms (structure) 01. B-65-0060	EACH	6.000	6.000	
0096	516.0500	Rubberized Membrane Waterproofing	SY	34.000	34.000	
0098	520.8700	Cleaning Culvert Pipes	EACH	3.000		3.000

					8130-00-72	8130-01-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0100	520.9700.S	Culvert Pipe Liners (size) 01. 24-Inch	LF	366.000		366.000
0102	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	3.000		3.000
0104	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000	
0106	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	182.000		182.000
0108	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	94.000		94.000
0110	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000		4.000
0112	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000		2.000
0114	530.0112	Culvert Pipe Corrugated Polyethylene 12-Inch	LF	75.000	75.000	
0116	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	2,850.000	2,850.000	
0118	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	56.000	56.000	
0120	606.0200	Riprap Medium	CY	3.000	3.000	
0122	606.0300	Riprap Heavy	CY	1,006.000	1,006.000	
0124	611.0654	Inlet Covers Type V	EACH	2.000	2.000	
0126	611.3220	Inlets 2x2-FT	EACH	2.000	2.000	
0128	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	220.000	220.000	
0130	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000	
0132	614.2300	MGS Guardrail 3	LF	263.000		263.000
0134	614.2500	MGS Thrie Beam Transition	LF	158.000		158.000
0136	614.2610	MGS Guardrail Terminal EAT	EACH	4.000		4.000
0138	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8130-01-70	EACH	1.000		1.000
0140	619.1000	Mobilization	EACH	1.000	0.200	0.800
0142	624.0100	Water	MGAL	55.000	10.000	45.000
0144	625.0500	Salvaged Topsoil	SY	4,375.000	3,535.000	840.000
0146	627.0200	Mulching	SY	840.000		840.000
0148	628.1504	Silt Fence	LF	530.000	530.000	
0150	628.1520	Silt Fence Maintenance	LF	530.000	530.000	
0152	628.1905	Mobilizations Erosion Control	EACH	4.000	2.000	2.000
0154	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	2.000	1.000
0156	628.2008	Erosion Mat Urban Class I Type B	SY	4,375.000	3,535.000	840.000
0158	629.0210	Fertilizer Type B	CWT	2.900	2.300	0.600
0160	630.0120	Seeding Mixture No. 20	LB	121.000	97.000	24.000
0162	630.0500	Seed Water	MGAL	15.000	12.000	3.000
0164	633.5200	Markers Culvert End	EACH	31.000		31.000
0166	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	53.000		53.000
0168	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	2.000		2.000
0170	637.2210	Signs Type II Reflective H	SF	81.500		81.500
0172	637.2230	Signs Type II Reflective F	SF	336.020		336.020
0174	638.2602	Removing Signs Type II	EACH	44.000		44.000
0176	638.3000	Removing Small Sign Supports	EACH	31.000		31.000
0178	642.5001	Field Office Type B	EACH	1.000		1.000
0180	643.0300	Traffic Control Drums	DAY	250.000		250.000
0182	643.0420	Traffic Control Barricades Type III	DAY	1,980.000		1,980.000
0184	643.0705	Traffic Control Warning Lights Type A	DAY	3,960.000		3,960.000
0186	643.0900	Traffic Control Signs	DAY	28,730.000		28,730.000
0188	643.0920	Traffic Control Covering Signs Type II	EACH	4.000		4.000
0190	643.1000	Traffic Control Signs Fixed Message	SF	14.000		14.000
0192	643.5000	Traffic Control	EACH	1.000		1.000
0194	645.0111	Geotextile Type DF Schedule A	SY	115.000	115.000	
0196	645.0120	Geotextile Type HR	SY	1,489.000	1,489.000	

					8130-00-72	8130-01-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0198	646.1005	Marking Line Paint 4-Inch	LF	179,300.000		179,300.000
0200	646.1020	Marking Line Epoxy 4-Inch	LF	34,270.000		34,270.000
0202	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	65,960.000		65,960.000
0204	646.3005	Marking Line Paint 8-Inch	LF	100.000		100.000
0206	649.0105	Temporary Marking Line Paint 4-Inch	LF	66,784.000		66,784.000
0208	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	34,270.000		34,270.000
0210	650.4500	Construction Staking Subgrade	LF	549.000	549.000	
0212	650.5000	Construction Staking Base	LF	549.000	549.000	
0214	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	56.000	56.000	
0216	650.6000	Construction Staking Pipe Culverts	EACH	3.000		3.000
0218	650.6500	Construction Staking Structure Layout (structure) 01. B-65-0060	LS	1.000	1.000	
0220	650.8000	Construction Staking Resurfacing Reference	LF	34,100.000		34,100.000
0222	650.9910	Construction Staking Supplemental Control (project) 01. 8130-00-72	LS	1.000	1.000	
0224	650.9910	Construction Staking Supplemental Control (project) 02. 8130-01-70	LS	1.000		1.000
0226	650.9920	Construction Staking Slope Stakes	LF	1,098.000	1,098.000	
0228	690.0150	Sawing Asphalt	LF	60.000	60.000	
0230	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000	
0232	715.0502	Incentive Strength Concrete Structures	DOL	3,096.000	3,096.000	
0234	740.0440	Incentive IRI Ride	DOL	25,290.000		25,290.000
0236	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,000.000		1,000.000
0238	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,000.000		1,000.000
0240	SPV.0090	Special 01. Ditch Cleaning	LF	200.000		200.000

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CLEARING

STATION	TO	STATION	LOCATION	201.0105 STA
PROJECT 8130-01-70				
475+23	-	809+15	PROJECT	4
			TOTAL 0010	4

EARTHWORK SUMMARY

STATION	TO	STATION	TYPE	205.0100 EXCAVATION COMMON CY	AVAILABLE MATERIAL CY	FILL: TOTAL EXPANDED FILL (18%) CY	WASTE: UNUSABLE PAVEMENT MATERIAL CY	MASS HAUL CY
PROJECT 8130-00-72								
674+50	-	681+25	Cross Sections (Pvmt & Slopes)	8,780	8,400	1,210	378	-7,190
			PROJECT TOTALS	8,780	8,400	1,210	378	-7,190
			TOTAL 0010	8,780				

NO ADDITIONAL PAYMENT WILL BE MADE FOR CUT USED AS FILL

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION	TO	STATION	LOCATION	204.0115 SY	REMARKS
PROJECT 8130-01-70					
475+23	-	475+33	WB BEGIN	19	
475+45	-	475+55	EB BEGIN	19	
808+75	-	809+15	END PROJECT	133	
		494+95	SR LT	44	ANACAPA ST
		497+30	SR RT	48	CRANBERRY DR
		546+70	SR LT	54	SPOONER LAKE RD
		548+71	SR RT	41	WILDCAT RD
		551+89	PE RT	39	PRIVATE ENTRANCE
		568+40	SR RT	34	BENSON-THOMPSON RD
		568+53	SR LT	29	DEGENAAR RD
		600+55	SR LT	38	YELLOWSANDS DR
		617+58	PE RT	26	PRIVATE ENTRANCE
		653+45	SR RT	54	FENANDER RD
		708+06	SR LT	45	10TH ST
			TOTAL 0010	625	

REMOVING ASPHALTIC SURFACE MILLING

STATION	TO	STATION	LOCATION	204.0120 SY
PROJECT 8130-01-70				
475+23	-	482+40	WB & INT	1,486
475+45	-	482+40	EB	1,330
			TOTAL 0010	2,816

REMOVING GUARDRAIL

STATION	TO	STATION	LOCATION	204.0165 LF
PROJECT 8130-01-70				
675+50	-	679+00	LT	310
676+50	-	680+50	RT	270
			TOTAL 0010	580

ABANDON CULVERT

STATION	LOCATION	204.0270 ABANDONING CULVERT PIPES CY	209.0200.S BACKFILL CONTROLLED LOW STRENGTH EACH
PROJECT 8130-01-70			
739+82	CROSS PIPE	1	12
753+82	CROSS PIPE	1	10
774+83	CROSS PIPE	1	12
	TOTAL 0010	3	34

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PROJECT WIDE

STATION	TO	STATION	LOCATION	211.0100.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 8130-01-70) LS	211.0700.S.01 PREPARE FOUNDATION FOR CIR BASE LAYER (PROJECT) (01. 8130-01-70) EACH	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 8130-01-70) EACH	618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (01. 8130-01-70) EACH	642.5001 FIELD OFFICE TYPE B EACH
PROJECT 8130-01-70								
475+23	-	809+15	PROJECT	1	1	1	1	1
			TOTAL 0010	1	1	1	1	1

APPROACHES

STATION	TO	STATION	LOCATION	415.0060 CONCRETE PAVEMENT 6-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	416.1010 CONCRETE SURFACE DRAINS CY
PROJECT 8130-00-72						
677+15	-	677+40	ML		67	4
678+88	-	679+13	ML	34	67	
			TOTAL 0010	34	134	4

DROP INLET

STATION	TO	STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH LF	601.0590 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF	606.0200 RIPRAP MEDIUM CY	611.0654 INLET COVER TYPE V EACH	611.3220 INLETS 2x2-FT EACH	⚠ 645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY
PROJECT 8130-00-72											
677+12	-	677+25	LT	5			13				
677+12	-	677+55	RT	5			43				
677+18	-	677+18	LT		1	50			1	1	
677+18	-	677+18	RT		1	25		3	1	1	9
			TOTAL 0010	10	2	75	56	3	2	2	9

⚠ See Structure Plans for additional quantity.

BASE AGGREGATE DENSE 3/4-INCH

STATION	TO	STATION	LOCATION	305.0110 TON
PROJECT 8130-01-70				
481+75	-	494+95	STH 70	157
494+95	-	497+30	STH 70	28
497+30	-	546+70	STH 70	587
546+70	-	548+71	STH 70	24
548+71	-	551+89	STH 70	38
551+89	-	568+40	STH 70	196
568+40	-	600+55	STH 70	382
600+55	-	617+58	STH 70	202
617+58	-	653+45	STH 70	426
653+45	-	674+50	STH 70	250
674+50	-	677+20	STH 70 LT	50
674+80	-	677+55	STH 70 RT	51
678+70	-	681+00	STH 70 LT	43
679+10	-	681+25	STH 70 RT	40
681+00	-	708+06	STH 70	322
708+06	-	760+20	STH 70	620
760+20	-	809+15	STH 70	582
			34 Entrances @ 3 Tons	102
			TOTAL 0010	4,100

SHAPING SHOULDERS

STATION	TO	STATION	LOCATION	305.0500 STA
PROJECT 8130-01-70				
475+23	-	809+15	LT & RT	336
			TOTAL 0010	336

BASE AGGREGATE DENSE 1 1/4-INCH

STATION	TO	STATION	LOCATION	⚠ 305.0120 TON
PROJECT 8130-01-70				
		498+08	CROSS PIPE	80
		531+43	CROSS PIPE	80
676+50	-	677+45	ML	198
677+45	-	677+60	ML	27
678+68	-	678+83	ML	27
678+83	-	680+50	ML	347
		760+65	CROSS PIPE	60
			TOTAL 0010	819

⚠ See Structure Plans for additional quantity.

CIR

STATION	TO	STATION	LOCATION	211.0800.S BASE REPAIR FOR CIR PAVEMENT CY	327.1000.S CIR ASPHALTIC BASE LAYER SY	455.0770.S ASPHALT STABILIZING AGENT TON
PROJECT 8130-01-70						
482+40	-	677+15	ML	500	75,470	317
681+00	-	809+15	ML	500	42,720	180
			TOTAL 0010	1,000	118,190	497

HMA

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.6645 HMA PAVEMENT 5 MT 58-34 V TON
PROJECT 8130-01-70					
475+23	-	482+00	STH 70 WB	186	281
475+45	-	482+00	STH 70 EB	180	272
479+15	-	479+95	INTERSECTION	18	28
482+00	-	482+40	STH 70 TAPER	22	34
482+40	-	485+40	STH 70 TAPER	154	198
485+40	-	674+45	STH 70	7,562	9,705
674+45	-	677+15	STH 70	121	368
679+13	-	681+00	STH 70	85	257
681+00	-	809+15	STH 70	5,126	6,579
		494+95	ANACAPA ST	20	25
		497+30	CRANBERRY DR	19	24
		546+70	SPOONER LAKE RD	28	35
		548+71	WILDCAT RD	19	a
		568+40	BENSON-THOMPSON RD	16	21
		568+53	DEGENAAR RD	13	17
		600+55	YELLOWSANDS DR	16	21
		653+45	FENANDER RD	26	33
		708+06	10TH ST	21	27
		760+20	9TH ST	17	11
			TOTAL 0010	13,648	17,936

PWL

STATION	TO	STATION	LOCATION	460.0105.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	460.0110.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH
PROJECT 8130-01-70					
475+23	-	809+15	PROJECT	1	2
			TOTAL 0010	1	2

SPECIAL (01. MATERIAL TRANSFER VEHICLE)

STATION	TO	STATION	LOCATION	460.9000.S MATERIAL TRANSFER VEHICLE EACH
PROJECT 8130-01-70				
475+23	-	809+15	PROJECT	1

ADDITIONAL ASPHALT

STATION		STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0115 ASPHALTIC SURFACE DETOURS TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES REMARKS
PROJECT 8130-01-70							
475+23	-	809+15	UNDISTRIBUTED	300	100		
475+23	-	809+15	PIPE REPLACEMENT AREAS				
		551+89	PE RT				6
		617+58	PE RT				4
			DETOUR			100	
			TOTAL 0010	300	100	100	11

ASPHALT CENTERLINE RUMBLE STRIPS 2-LANE RURAL

STATION	TO	STATION	LOCATION	465.0475 LF	REMARKS
PROJECT 8130-01-70					
482+40	-	492+95	ML CL	1,060	END OF CURB & GUTTER TO ANACAPA ST
499+30	-	544+70	ML CL	4,540	CRANBERRY DR TO SPOONER LAKE RD
550+71	-	566+40	ML CL	1,570	WILDCAT RD TO BENSON-THOMPSON RD
570+53	-	598+55	ML CL	2,810	DEGENAAR RD TO YELLOWSANDS DR
602+55	-	608+92	ML CL	640	YELLOWSANDS DR TO WIND RD (CE)
612+92	-	651+45	ML CL	3,860	WIND RD (CE) TO FENANDER RD
655+45	-	677+15	ML CL	2,170	FENANDER RD TO CRYSTAL BROOK
679+13	-	706+06	ML CL	2,700	CRYSTAL BROOK TO 10TH ST
710+06	-	758+20	ML CL	4,820	10TH ST TO 9TH ST
762+20	-	809+15	ML CL	4,700	9TH ST TO END OF PROJECT
			TOTAL 0010	28,870	

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HMA ACCEPTANCE TABLE

Location	Station	Mixture Use	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
							Mixture Acceptance	Density Acceptance
12' Driving Lanes	475+23 - 482+40	Lower Layer	Milled Surface	460.6645 5 MT 58-34 V	190	1.75"	Incentive Air Voids HMA Pavement (460.2010)	Incentive Density HMA Pavement (460.2000)
12' Driving Lanes	475+23 - 482+40	Upper Layer	1.75" 5 MT 58-34 V	460.6645 5 MT 58-34 V	190	1.75"	Incentive Air Voids HMA Pavement (460.2010)	Incentive Density HMA Pavement (460.2000)
5' Shoulders + Mitchell Rd Median	475+23 - 482+40	Lower Layer	Milled Surface	460.6645 5 MT 58-34 V	117	1.75"	Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive
5' Shoulders + Mitchell Rd Median	475+23 - 482+40	Upper Layer	1.75" 5 MT 58-34 V	460.6645 5 MT 58-34 V	118	1.75"	Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive
12' Driving Lanes + 3' Shoulders	482+40 - 674+45, 681+00 - 809+15	Asphalt Stabilizing Agent		327.1000.S, 455.0770.S	499	4"	CIR Asphaltic Base Layer (327.1000.S)	
12' Driving Lanes	482+40 - 674+45, 681+00 - 809+15	Lower Layer	Cold-In-Place Recycle	460.6645 5 MT 58-34 V	5978	1.25"	Incentive Air Voids HMA Pavement (460.2010)	Incentive Density PWL HMA Pavement (460.2005)
12' Driving Lanes	482+40 - 674+45, 681+00 - 809+15	Upper Layer	1.25" 5 MT 58-34 V	460.6645 5 MT 58-34 V	7173	1.5"	Incentive Air Voids HMA Pavement (460.2010)	Incentive Density PWL HMA Pavement (460.2005)
3' Shoulders	482+40 - 674+45, 681+00 - 809+15	Lower Layer	Cold-In-Place Recycle	460.6645 5 MT 58-34 V	1514	1.25"	Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive
3' Shoulders	482+40 - 674+45, 681+00 - 809+15	Upper Layer	1.25" 5 MT 58-34 V	460.6645 5 MT 58-34 V	1817	1.5"	Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive
12' Driving Lanes	674+45 - 677+15, 679+13 - 681+00	Lower Layer	Base Aggregate	460.6645 5 MT 58-34 V	154	2.25"	Incentive Air Voids HMA Pavement (460.2010)	Incentive Density HMA Pavement (460.2000)
12' Driving Lanes	674+45 - 677+15, 679+13 - 681+00	Middle Layer	2.25" 5 MT 58-34 V	460.6645 5 MT 58-34 V	154	2.25"	Incentive Air Voids HMA Pavement (460.2010)	Incentive Density HMA Pavement (460.2000)
12' Driving Lanes	674+45 - 677+15, 679+13 - 681+00	Upper Layer	4.5" 5 MT 58-34 V	460.6645 5 MT 58-34 V	137	2"	Incentive Air Voids HMA Pavement (460.2010)	Incentive Density HMA Pavement (460.2000)
3' Shoulders	674+45 - 677+15, 679+13 - 681+00	Lower Layer	Base Aggregate	460.6645 5 MT 58-34 V	62	2.25"	Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive
3' Shoulders	674+45 - 677+15, 679+13 - 681+00	Middle Layer	2.25" 5 MT 58-34 V	460.6645 5 MT 58-34 V	63	2.25"	Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive
3' Shoulders	674+45 - 677+15, 679+13 - 681+00	Upper Layer	4.5" 5 MT 58-34 V	460.6645 5 MT 58-34 V	55	2"	Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive
Sideroads	Varies	Lower Layer Upper layer	Existing Asphalt	460.6645 5 MT 58-34 V	238	1.25" Wedging Layer 1.5" Upper Layer	Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive

3

CULVERT LINING

STATION	LOCATION	520.9700.S.01 CULVERT PIPE LINERS (SIZE) (01. 24-INCH) LF	520.9750.S CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH
PROJECT 8130-01-70			
622+53	CROSS PIPE	96	1
690+38	CROSS PIPE	144	1
794+00	CROSS PIPE	126	1
	TOTAL 0010	366	3

ADDITIONAL RIPRAP

STATION	TO	STATION	LOCATION	⚠ 606.0300 RIPRAP HEAVY CY	⚠ 645.0120 GEOTEXTILE TYPE HR SY
PROJECT 8130-00-72					
677+16	-	678+95	WEST ABUT	80	89
677+55	-	679+25	EAST ABUT	111	123
			TOTAL 0010	191	212

⚠ See Structure Plans for additional quantity.

WATER

STATION	TO	STATION	LOCATION	624.0100 MGAL
PROJECT 8130-00-72				
674+50		681+00	PROJECT	10
		PROJECT 8130-00-72	TOTAL 0010	10
PROJECT 8130-01-70				
475+23	-	809+15	PROJECT	45
		PROJECT 8130-01-70	TOTAL 0010	45
		-		
			TOTAL 0010	55

CULVERT REPLACEMENTS

STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH
PROJECT 8130-01-70							
498+35	CROSS PIPE	1	96		2		1
531+39	CROSS PIPE	1		94		2	1
760+52	CROSS PIPE	1	86		2		1
	TOTAL 0010	3	182	94	4	2	3

MISCELLANEOUS CULVERT

STATION	LOCATION	520.8700 CLEANING CULVERT PIPES EACH	633.5200 MARKERS CULVERT END EACH	SPV.0090.01 SPECIAL (01. DITCH CLEANING) LF
PROJECT 8130-01-70				
478+30	EB	1	1	200
490+00	CROSS PIPE	1	2	
498+08	CROSS PIPE		2	
525+58	CROSS PIPE		2	
531+43	CROSS PIPE		2	
557+91	CROSS PIPE		2	
572+03	CROSS PIPE		2	
592+49	CROSS PIPE		2	
622+59	CROSS PIPE		2	
690+22	CROSS PIPE		2	
725+23	CROSS PIPE		2	
760+65	CROSS PIPE		2	
781+83	CROSS PIPE	1	2	
789+21	CROSS PIPE		2	
794+46	CROSS PIPE		2	
802+48	CROSS PIPE		2	
	TOTAL 0010	3	31	200

3

GUARDRAIL

STATION	TO	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
PROJECT 8130-01-70						
675+40	-	677+22	LT	100	39	1
676+00	-	677+60	RT	75	39	1
678+69	-	679+90	LT	32	39	1
679+05	-	680+50	RT	56	39	1
			TOTAL 0010	263	158	4

EROSION CONTROL

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
PROJECT 8130-00-72					
674+50	-	677+30	LT	130	130
675+35	-	677+85	RT	210	210
678+10	-	680+00	LT	100	100
679+00	-	681+25	RT	90	90
			TOTAL 0010	530	530

GARDENING

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL
PROJECT 8130-00-72									
674+50	-	677+30	LT	1,240		1,240	0.79	34	4
675+35	-	677+85	RT	796		796	0.51	22	3
678+10	-	680+00	LT	472		472	0.30	13	2
679+00	-	681+25	RT	1,027		1,027	0.65	28	3
PROJECT 8130-00-72			TOTAL 0010	3,535	0	3,535	2.3	97	12
PROJECT 8130-01-70									
497+81	-	498+35	LT & RT	280	280	280	0.18	8	1
531+16	-	531+70	LT & RT	330	330	330	0.21	9	1
760+45	-	760+85	LT & RT	230	230	230	0.14	7	1
PROJECT 8130-01-70			TOTAL 0010	840	840	840	0.6	24	3
			TOTAL 0010	4,375	840	4,375	3	121	15

EC MOBILIZATION

STATION	TO	STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 8130-00-72					
674+50	-	681+00	PROJECT	2	2
PROJECT 8130-00-72			TOTAL 0010	2	2
PROJECT 8130-01-70					
475+23	-	809+15	PROJECT	2	1
PROJECT 8130-01-70			TOTAL 0010	2	1
			TOTAL 0010	4	3

TRAFFIC CONTROL SIGNS

643.0900

LAYOUT		SIGN CODE	DESCRIPTION	DAY	REMARKS
PROJECT 8130-01-70					
L1	D1	M3-2	EAST	180	NORTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
		M1-6	STH 70	180	
		W20-2A	DETOUR AHEAD	180	
L1	D2	M4-8	DETOUR	180	NORTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO6-1	UP ARROW	180	
L1	D3a	M4-8	DETOUR	180	NORTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO6-1	UP ARROW	180	
L1	D5	W20-2A	DETOUR AHEAD	90	WEST OF USH 53 SB RAMP / STH 70 INTERSECTION
L1	D6	M4-8	DETOUR	90	WEST OF USH 53 SB RAMP / STH 70 INTERSECTION
		MO5-1R	RIGHT TURN ARROW	90	
L1	D8	M4-8	DETOUR	90	WEST OF USH 53 SB RAMP / STH 70 INTERSECTION
		MO6-1	RIGHT ARROW	90	
L1	D9	M4-8	DETOUR	90	EAST OF USH 53 SB RAMP / STH 70 INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO5-1L	LEFT TURN ARROW	90	
L1	D10	M4-8	DETOUR	180	SOUTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
L1	D11	G20-51	DETOUR NEXT 15 MILES	180	SOUTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
		M1-6	STH 70	180	
L1	D12	M4-8	DETOUR	180	SOUTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
		M3-4	WEST	180	
		M1-6	STH 70	180	
		MO5-2R	RIGHT BENT ARROW	180	
L1	D13a	M3-2	EAST	180	SOUTH OF USH 53 / STH 70 INTERSECTION, NB SIDE
		M1-6	STH 70	180	
		W20-2A	DETOUR AHEAD	180	
L1	D14	M4-8	DETOUR	90	SOUTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO5-1L	LEFT TURN ARROW	90	
L1	D15	M4-8	DETOUR	90	SOUTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO6-1	LEFT ARROW	90	
L1	D18	M4-8A	END DETOUR	90	EAST OF USH 53 NB RAMP / STH 70 INTERSECTION
		M4-8	DETOUR	90	
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO5-1L	LEFT TURN ARROW	90	
L2	D19	W20-3A	ROAD CLOSED AHEAD	90	WEST OF STH 70 / FENANDER RD INTERSECTION
L2	D20	W20-3C	ROAD CLOSED 1000 FT	90	EAST OF STH 70 / FENANDER RD INTERSECTION
L2	D21	W20-3D	ROAD CLOSED 500 FT	90	EAST OF STH 70 / FENANDER RD INTERSECTION
			SECTION TOTAL	6,210	

TRAFFIC CONTROL SIGNS

643.0900

LAYOUT		SIGN CODE	DESCRIPTION	DAY	REMARKS
PROJECT 8130-01-70					
L3	D27	W20-3D	ROAD CLOSED 500 FT	90	WEST OF STH 70 / 10TH ST INTERSECTION
L3	D28	W20-3C	ROAD CLOSED 1000 FT	90	WEST OF STH 70 / 10TH ST INTERSECTION
L3	D31	W20-3A	ROAD CLOSED AHEAD	90	EAST OF STH 70 / 10TH ST INTERSECTION
L4	D32	M4-8	DETOUR	90	WEST OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO5-1R	RIGHT TURN ARROW	90	
L4	D33	M4-8	DETOUR	90	WEST OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO6-1	RIGHT ARROW	90	
L4	D34	M4-8	DETOUR	90	SOUTH OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
L4	D35	G20-51	DETOUR NEXT 15 MILES	90	SOUTH OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
L4	D36	M4-8	DETOUR	90	SOUTH OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M3-2	EAST	90	SOUTH OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M1-6	STH 70	90	
		MO5-1R	RIGHT TURN ARROW	90	
L4	D37	M4-8	DETOUR	90	SOUTH OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO6-1	RIGHT ARROW	90	
L4	D38	M4-8A	END DETOUR	90	EAST OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
L4	D39	W20-2A	DETOUR AHEAD	90	EAST OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
L4	D40	M4-8	DETOUR	90	EAST OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		M5-1L	LEFT TURN ARROW	90	
L4	D41	M4-8	DETOUR	90	EAST OF STH 70 / SOUTH JUNCTION CTH M INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO6-1	LEFT ARROW	90	
L5	D44	M4-8	DETOUR	90	NORTH OF CTH M / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO5-1R	RIGHT TURN ARROW	90	
L5	D45	M4-8	DETOUR	90	NORTH OF CTH M / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO6-1	RIGHT ARROW	90	
L5	D46	M4-8	DETOUR	90	WEST OF CTH M / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
L5	D47	M4-8	DETOUR	90	WEST OF CTH M / CTH B INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO5-1L	LEFT TURN ARROW	90	
			SECTION TOTAL	4,500	

TRAFFIC CONTROL SIGNS

643.0900

LAYOUT		SIGN CODE	DESCRIPTION	DAY	REMARKS
PROJECT 8130-01-70					
L5	D48	M4-8	DETOUR	90	WEST OF CTH M / CTH B INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO6-1	LEFT ARROW	90	
L5	D49	M3-4	WEST	90	SOUTH OF CTH M / CTH B INTERSECTION
		M1-6	STH 70	90	
		W20-2A	DETOUR AHEAD	90	
L5	D50	M4-8	DETOUR	90	SOUTH OF CTH M / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO5-1L	LEFT TURN ARROW	90	
L5	D51	M4-8	DETOUR	90	SOUTH OF CTH M / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO6-1	LEFT ARROW	90	
L5	D52	M3-4	WEST	90	EAST OF CTH M / CTH B INTERSECTION
		M1-6	STH 70	90	
		W20-2A	DETOUR AHEAD	90	
L5	D53	M4-8	DETOUR	90	EAST OF CTH M / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO6-1	UP ARROW	90	
L5	D54	M4-8	DETOUR	90	EAST OF CTH M / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO6-1	UP ARROW	90	
L5	D55	M4-8	DETOUR	90	NORTH OF CTH M / CTH B INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
L6	D56	M4-8	DETOUR	180	NORTH OF USH 53 / CTH B INTERSECTION SB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO4-20L	USE LEFT LANE	180	
L6	D57	M4-8	DETOUR	180	NORTH OF USH 53 / CTH B INTERSECTION SB SIDE
		M4-5	TO	180	
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO5-52	J-TURN SYMBOL	180	
L6	D58	M4-8	DETOUR	180	NORTH OF USH 53 / CTH B INTERSECTION SB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO5-1L	LEFT TURN ARROW	180	
L6	D59	M4-8	DETOUR	90	WEST OF USH 53 / CTH B INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO5-1R	RIGHT TURN ARROW	90	
			SECTION TOTAL	5,310	

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TRAFFIC CONTROL SIGNS

643.0900

LAYOUT		SIGN CODE	DESCRIPTION	DAY	REMARKS
PROJECT 8130-01-70					
L6	D60	M4-8	DETOUR	90	WEST OF USH 53 / CTH B INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO6-1	RIGHT ARROW	90	
L6	D61	M4-8	DETOUR	180	SOUTH OF USH 53 / CTH B INTERSECTION SB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO5-52	J-TURN SYMBOL	180	
L6	D62	M4-8	DETOUR	180	SOUTH OF USH 53 / CTH B INTERSECTION SB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO5-52	J-TURN SYMBOL	180	
L6	D63	M3-2	EAST	180	SOUTH OF USH 53 / CTH B INTERSECTION NB SIDE
		M1-6	STH 70	180	
		W20-2A	DETOUR AHEAD	180	
L6	D64	M4-8	DETOUR	180	SOUTH OF USH 53 / CTH B INTERSECTION NB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO5-1L	RIGHT TURN ARROW	180	
L6	D65	M4-8	DETOUR	90	SOUTH OF USH 53 / CTH B INTERSECTION NB SIDE
		M3-2	EAST	90	
		M1-6	STH 70	90	
		MO6-1	LEFT ARROW	90	
		MO4-2OR	USE RIGHT LANE	90	
L6	D66	M4-8	DETOUR	180	SOUTH OF USH 53 / CTH B INTERSECTION NB SIDE
		M3-2	EAST	180	
		M1-6	STH 70	180	
		MO6-1	RIGHT ARROW	180	
L6	D67	M4-8	DETOUR	90	EAST OF USH 53 / CTH B INTERSECTION
		M3-2	EAST	90	
		M1-6	STH 70	90	
L6	D68	M4-8	DETOUR	90	EAST OF USH 53 / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO5-1R	RIGHT TURN ARROW	90	
L6	D69	M4-8	DETOUR	90	EAST OF USH 53 / CTH B INTERSECTION
		M3-4	WEST	90	
		M1-6	STH 70	90	
		MO6-1	RIGHT ARROW	90	
L6	D70	M4-8	DETOUR	180	NORTH OF USH 53 / CTH B INTERSECTION
		M3-4	WEST	180	
		M1-6	STH 70	180	
REASSURANCES		M4-8	DETOUR	540	
		M3-2	EAST	540	
		M3-4	WEST	540	
		M1-6	STH 70	540	
			SUBTOTAL 0010	23,940	

3

TRAFFIC CONTROL SUMMARY

LAYOUT		SIGN CODE	DESCRIPTION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0920 (1) TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.5000 TRAFFIC CONTROL EACH	649.0105 (2) TEMPORARY MARKING LINE PAINT 4-INCH LF	REMARKS
PROJECT 8130-01-70												
475+23	809+15		PROJECT	250			650			1.00	66,784	
			ADVANCE WARNING SIGNS				1,200					
			SIDE ROAD WARNING SIGNS				1,440					
			FLAGGING OPERATION WARNING SIGNS				240					
L1	D3b	SPECIAL	STONE LAKE TRAFFIC FOLLOW DETOUR					1	14.00			NORTH OF USH 53 / STH 70 INTERSECTION, SB SIDE
L1	D4	R11-3C	BRIDGE OUT 4.0 MILES AHEAD		180	360	90					EAST OF USH 53 SB RAMP / STH 70 INTERSECTION
		M4-9R	DETOUR RIGHT ARROW				90					
L1	D7		COVER EXSITING SIGN					1				WEST OF USH 53 SB RAMP / STH 70 INTERSECTION
L1	D13b	M4-8	DETOUR				90	1				SOUTH OF USH 53 / STH 70 INTERSECTION, NB SIDE
		M3-4	WEST				90					
		M1-6	STH 70				90					
		MO6-2	TILT RIGHT ARROW				90					
L1	D16	R11-3C	BRIDGE OUT 4.0 MILES AHEAD		180	360	90					EAST OF USH 53 NB RAMP / STH 70 INTERSECTION
L1	D17		COVER EXSITING SIGN					1				WEST OF USH 53 NB RAMP / STH 70 INTERSECTION
L2	D22	R11-3B	BRIDGE OUT 0.4 MILES AHEAD		180	360	90					EAST OF STH 70 / FENANDER RD INTERSECTION
L2	D23	R11-2B	BRIDGE OUT		90	180	90					WEST OF CRYSTAL BROOK CULVERT
L2	D24				90	180						WEST OF CRYSTAL BROOK CULVERT
L2	D25	R11-2B	BRIDGE OUT		450	900	90					WEST OF CRYSTAL BROOK CULVERT
L3	D26	R11-2B	BRIDGE OUT		450	900	90					EAST OF CRYSTAL BROOK CULVERT
L3	D29				90	180						EAST OF CRYSTAL BROOK CULVERT
L3	D30	R11-3C	BRIDGE OUT 0.5 MILES AHEAD		90	180	90					EAST OF CRYSTAL BROOK CULVERT
L4	D42	R11-3C	BRIDGE OUT 2.0 MILES AHEAD		90	180	90					WEST OF CRYSTAL BROOK CULVERT
L4	D43	M4-9L	DETOUR LEFT ARROW		90	180	90					WEST OF CRYSTAL BROOK CULVERT
SUBTOTAL 0010 (SEE DETAILED TABLE UNDER "TRAFFIC CONTROL SIGNS")							23,940					
			TOTAL 0010	250	1,980	3,960	28,730	4	14	1	66,784	

(1) ONE CYCLE OF COVERING SIGNS REQUIRED

(2) QUANTITY ASSUMES ONE APPLICATION ON CIR SURFACE AND ONE APPLICATION ON HMA LOWER LAYER

DETOUR PERMANENT SIGNING

LAYOUT	SIGN #	SIGN CODE	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
PROJECT 8130-01-70									
L1	D1	R2-1	1		5.00				SPEED LIMIT 55
L1	D2	W3-1	1			9.00	1	1	STOP AHEAD
L1	D3	W3-1	1			9.00	1	1	STOP AHEAD
L1	D4	W14-3	1			5.56			NO PASSING ZONE
L1	D5	W14-3	1			5.56			NO PASSING ZONE
L1	D6	W14-3	1			5.56			NO PASSING ZONE
L1	D7	W14-3	1			5.56			NO PASSING ZONE
L1	D8	W1-2R	1			9.00	1	1	RIGHT CURVE
		W13-1				2.25	1		ADVISORY SPEED PLATE 45 MPH
L1	D9	W1-8	3			18.00	6	3	CHEVRON
L1	D10	W1-3L	1			9.00	1	1	LEFT REVERSE TURN
		W13-1				2.25	1		ADVISORY SPEED PLATE 45 MPH
L1	D11	W1-2L	1			9.00	1	1	LEFT CURVE
		W13-1				2.25	1		ADVISORY SPEED PLATE 30 MPH
L1	D12	W1-8	3			9.00	3	3	CHEVRON
L1	D13	S3-1	1			9.00	1	1	SCHOOL BUS STOP AHEAD
L1	D14	W1-8	3			18.00	3	3	CHEVRON
L1	D15	W1-2L	1			9.00	1	1	LEFT CURVE
		W13-1				2.25	1		ADVISORY SPEED PLATE 35 MPH
L1	D16	J1-1	1		6.50				JUNCTION CTH P
L2	D17	W1-6	1			8.00	1	1	NIGHT ARROW SINGLE (LEFT)
L2	D18	W1-3L	1			9.00	1	1	LEFT REVERSE TURN
		W13-1				2.25	1		ADVISORY SPEED PLATE 30 MPH
L2	D19	W1-8	4			24.00	8	4	CHEVRON
L2	D20	W1-6	1			8.00	1	1	NIGHT ARROW SINGLE (RIGHT)
L2	D21	J12-2		2	33.00		1	1	CTH P (LEFT ARROW) CTH B (AHEAD ARROW)
L2	D22	S3-1	1			9.00	1	1	SCHOOL BUS STOP AHEAD
L2	D23	W1-2R	1			9.00	1	1	RIGHT CURVE
		W13-1				2.25	1		ADVISORY SPEED PLATE 35 MPH
L2	D24	W14-3	1			5.56			NO PASSING ZONE
L2	D25	W14-3	1			5.56			NO PASSING ZONE
L2	D26	W14-3	1			5.56			NO PASSING ZONE
L2	D27	W14-3	1			5.56			NO PASSING ZONE
L2	D28	W14-3	1			5.56			NO PASSING ZONE
L2	D29	W14-3	1			5.56			NO PASSING ZONE
L2	D30	W3-1	1			9.00	1	1	STOP AHEAD
L2	D31	W3-1	1			9.00	1	1	STOP AHEAD
L3	D32	W14-3	1			5.56			NO PASSING ZONE
L3	D33	W14-3	1			5.56			NO PASSING ZONE
L3	D34	W14-3	1			5.56			NO PASSING ZONE
L3	D35	W11-50	1			9.00	1	1	ATV CROSSING
		SECTION TOTAL	43	2	45	288	42	29	

DETOUR PERMANENT SIGNING

LAYOUT	SIGN #	SIGN CODE	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
PROJECT 8130-01-70									
L3	D36	W11-50	1			9.00	1	1	ATV CROSSING
L4	D37	W14-3	1			5.56			NO PASSING ZONE
L4	D38	W14-3	1			5.56			NO PASSING ZONE
L4	D39	W14-3	1			5.56			NO PASSING ZONE
L4	D40	W14-3	1			5.56			NO PASSING ZONE
L4	D41	W14-3	1		6.50				JUNCTION STH 70
L4	D42	W3-1	1			9.00	1	1	STOP AHEAD
L4	D43	R2-1			5.00				SPEED LIMIT 55
L4	D44	M1-5A	1		9.00				CTH M
L4	D45	J12-1	1		16.50				STH 70 DIRECTIONAL ARROWS LEFT - RIGHT
L4	D46	W1-7	1			8.00			NIGHT ARROW DOUBLE
		TOTAL 0010	53	2	81.50	336.02	44	31	

MARKING

STATION	TO	STATION	LOCATION	646.1005 MARKING LINE PAINT 4-INCH LF	646.1020 MARKING LINE EPOXY 4-INCH LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH LF	646.3005 MARKING LINE PAINT 8-INCH LF	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH LF
PROJECT 8130-01-70								
			DETOUR EDGELINES	102,500				
			DETOUR CENTERLINES	76,800			100	
474+67	-	494+57	LT			1,990		
474+94	-	496+70	RT & CL		4,680	2,180		4,680
495+30	-	546+17	LT			5,090		
497+57	-	548+14	RT & CL		6,070	5,060		6,070
547+25	-	568+25	LT			2,100		
549+04	-	568+00	RT & CL		1,940	1,900		1,940
568+78	-	600+10	LT			3,140		
568+57	-	610+57	RT & CL		3,280	4,200		3,280
600+94	-	707+56	LT			10,670		
611+27	-	652+96	RT & CL		3,760	4,170		3,760
653+93	-	809+15	RT & CL		14,540	15,530		14,540
708+69	-	759+66	LT			5,100		
760+89	-	809+15	LT			4,830		
			TOTAL 0010	179,300	34,270	65,960	100	34,270

8130-01-70 STAKING

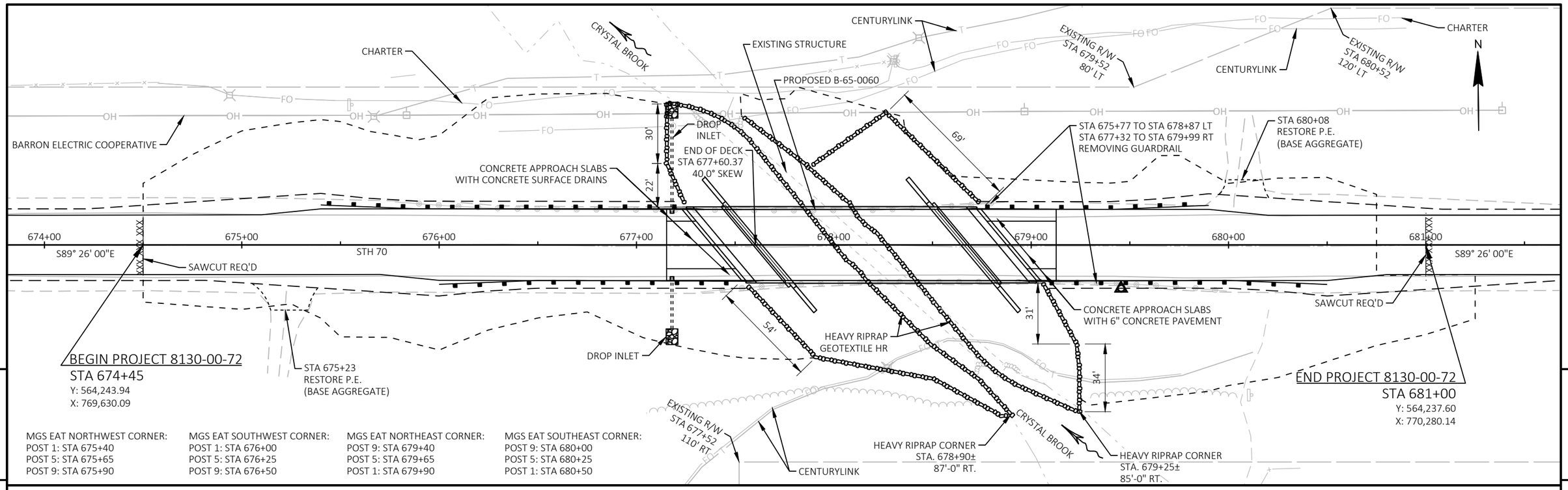
STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 8130-01-70) LS
PROJECT 8130-01-70					
475+23	-	809+15	WB	33,400	
475+45	-	482+40	EB	700	
475+23	-	809+15	ML		1
			TOTAL 0010	34,100	1

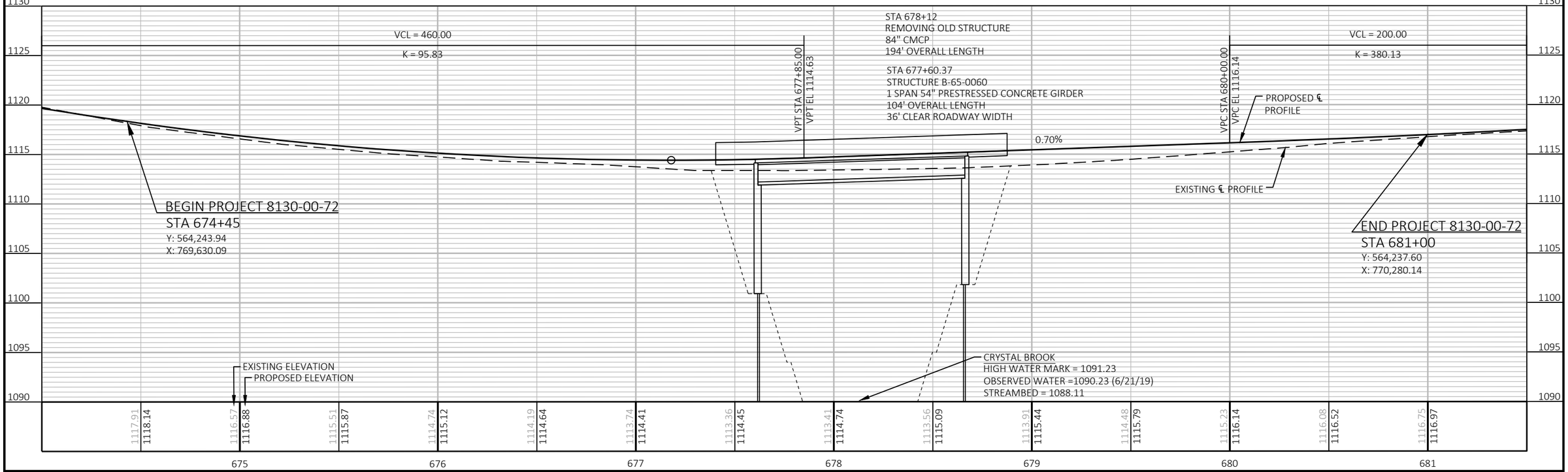
SAWING ASPHALT

STATION	TO	STATION	LOCATION	690.0150 LF
PROJECT 8130-00-72				
674+45	-	674+45	ML	30
681+00	-	681+00	ML	30
			TOTAL 0010	60

8130-00-72 STAKING

STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6500.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-65-0060) LS	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 8130-00-72) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
PROJECT 8130-00-72									
674+45	-	677+60	ML	316	316	56	1	1	632
678+68	-	681+00	ML	233	233				466
			TOTAL 0010	549	549	56	1	1	1,098





PROJECT NO: 8130-00-72	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 59	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - Crystal

PLOT DATE : 6/15/2021 2:47 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

BEGIN PROJECT
STA 475+23
Y: 565,378.50
X: 749,946.39

PI STA = 479+70.82
Y = 565188.778
X = 750352.033
DELTA = 1°01'00"
D = 0°30'00"
T = 101.67'
L = 203.33'
R = 11459.16'
PC STA = 478+69.15
PT STA = 480+72.48
S.E. = N.C. EXISTING
VERIFY AND MATCH

MITCHELL RD

PC: 478+69.15

PT: 480+72.48

474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00

STH 70

S64° 56' 00"E

S65° 57' 00"E

474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00

S64° 56' 00"E

STH 70

S69° 56' 00"E

BEGIN PROJECT
STA 475+45 EB

BOUNDARY OF REMOVING ASPHALTIC SURFACE MILLING

STA 478+30
INLET #25 W/ OUTLET PIPE
REMAIN AS IS

DITCH CLEANING

PC: 479+32.02

PI STA = 480+03.50
Y = 565142.946
X = 750368.113
DELTA = 5°00'00"
D = 3°30'00"
T = 71.47'
L = 142.86'
R = 1637.02'
PC STA = 479+32.02
PT STA = 480+74.88
S.E. = 0.052 '/FT EXISTING
VERIFY AND MATCH

PT: 480+74.88

5

5

EXISTING R/W
STA 481+93
77.89' LT

EXISTING R/W
STA 485+37
80' LT

REMOVING ASPHALTIC SURFACE MILLING ⟷ COLD-IN-PLACE RECYCLE PAVEMENT PARTIAL DEPTH

STA 482+40

EP: 485+40.16

482+00 483+00 484+00 485+00 486+00 487+00 488+00 489+00

S65° 57' 00"E

485+00

STH 70

S65° 57' 00"E

482+00 483+00 484+00

S69° 56' 00"E

STA 482+40

REMOVING ASPHALTIC SURFACE MILLING ⟷ COLD-IN-PLACE RECYCLE PAVEMENT PARTIAL DEPTH

PC: 484+59.45

PI STA = 484+99.81
Y = 564972.623
X = 750834.383
DELTA = 2°49'29"
D = 3°30'00"
T = 40.36'
L = 80.70'
R = 1637.02'
PC STA = 484+59.45
PT STA = 485+40.16
S.E. = 0.052 '/FT EXISTING
VERIFY AND MATCH

EXISTING R/W
STA 488+00
120' RT

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 60	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-1

PLOT DATE : 6/15/2021 2:47 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

EXISTING R/W
80' LT

ANACAPA ST
TYPE C INTERSECTION

N

REMOVING ASPHALTIC SURFACE BUTT JOINTS

489+00 | 490+00 | 491+00 | 492+00 | 493+00 | 494+00 | 495+00 | 496+00

S65° 57' 00"E — STH 70 — S65° 57' 00"E

STA 490+00
29"X18"X58' PIPE ARCH CMCP
REMAIN AS IS

STA 489+63
RESTORE P.E.
(BASE AGGREGATE)

BARRON ELECTRIC COOPERATIVE

EXISTING R/W
STA 489+00
85' RT

EXISTING R/W
STA 495+60
85' RT

5

5

STA 498+35
REMOVING SMALL PIPE CULVERTS
(24" CMCP EXISTING)
1-24" x 86' RCCP REQ'D
2 X APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH

EXISTING R/W
80' LT

CENTURYLINK

N

STA 497+38
RESTORE P.E.
(BASE AGGREGATE)

PC: 498+50.40

BARRON ELECTRIC COOPERATIVE

CHARTER

497+00 | 498+00 | 499+00 | 500+00 | 501+00 | 502+00 | 503+00

S65° 57' 00"E — STH 70

WE ENERGIES

REMOVING ASPHALTIC
SURFACE BUTT JOINTS

CAUTION

EXISTING R/W
STA 498+50
95' RT

CRANBERRY DR
TYPE C INTERSECTION

BARRON ELECTRIC COOPERATIVE

CENTURYLINK

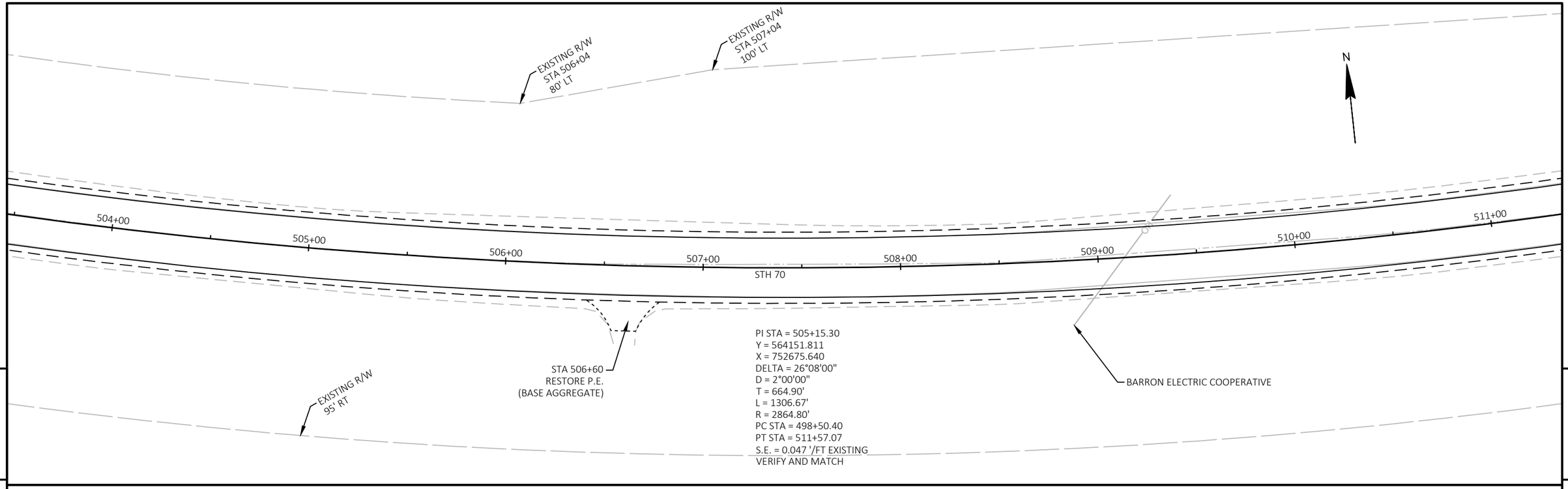
PI STA = 505+15.30
Y = 564151.811
X = 752675.640
DELTA = 26°08'00"
D = 2°00'00"
T = 664.90'
L = 1306.67'
R = 2864.80'
PC STA = 498+50.40
PT STA = 511+57.07
S.E. = 0.047 '/FT EXISTING
VERIFY AND MATCH

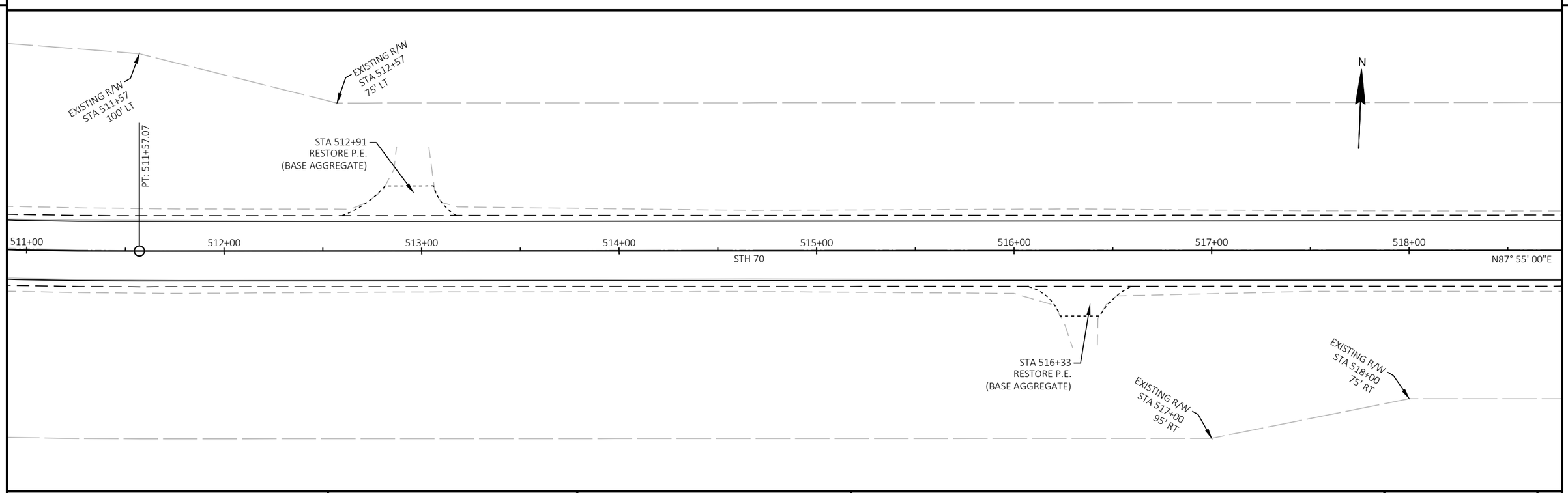
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 61	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-2

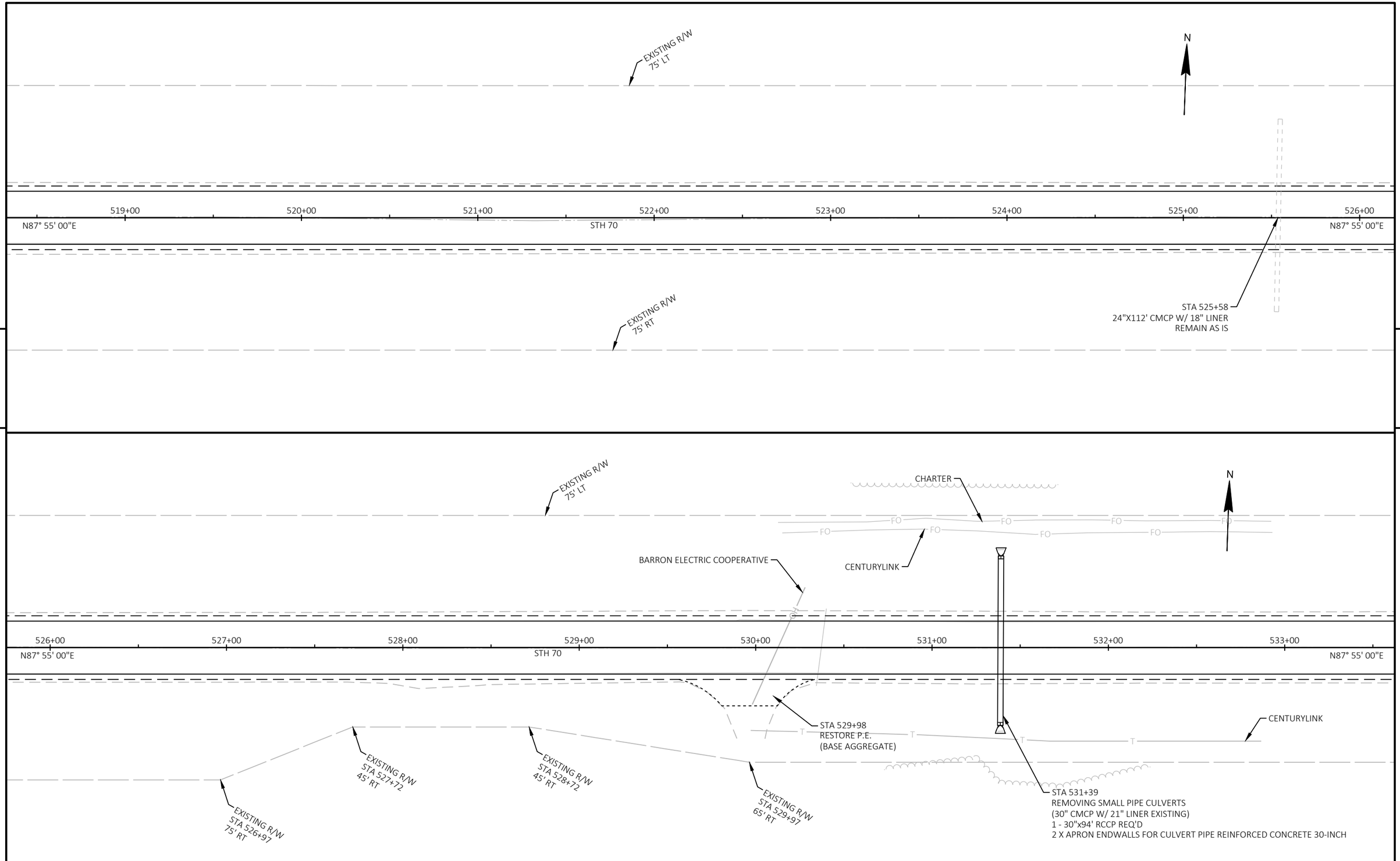
PLOT DATE : 6/15/2021 2:47 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 62	E



5 5

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 63	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-4

PLOT DATE : 6/15/2021 2:48 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

EXISTING R/W
75' LT

N

DAIRYLAND ELECTRIC

534+00 535+00 536+00 537+00 538+00 539+00 540+00 541+0

N87° 55' 00"E

STH 70

N87° 55' 00"E

EXISTING R/W
65' RT

5

5

EXISTING R/W
STA 545+04
75' LT

PI STA = 548+70.10
Y = 564310.962
X = 757050.677
DELTA = 1°47'00"
D = 0°12'00"
T = 445.87'
L = 891.66'
R = 28647.80'
PC STA = 544+24.23
PT STA = 553+15.90
S.E. = 0.015 '/FT EXISTING

SPOONER LAKE RD
TYPE 'D' INTERSECTION

OH

N

REMOVING ASPHALTIC
SURFACE BUTT JOINTS

PC: 544+24.23

541+00 542+00 543+00 544+00 545+00 546+00 547+00 548+00

N87° 55' 00"E

STH 70

STA 542+64
RESTORE P.E.
(BASE AGGREGATE)

EXISTING R/W
STA 544+24
65' RT

EXISTING R/W
STA 545+24
80' RT

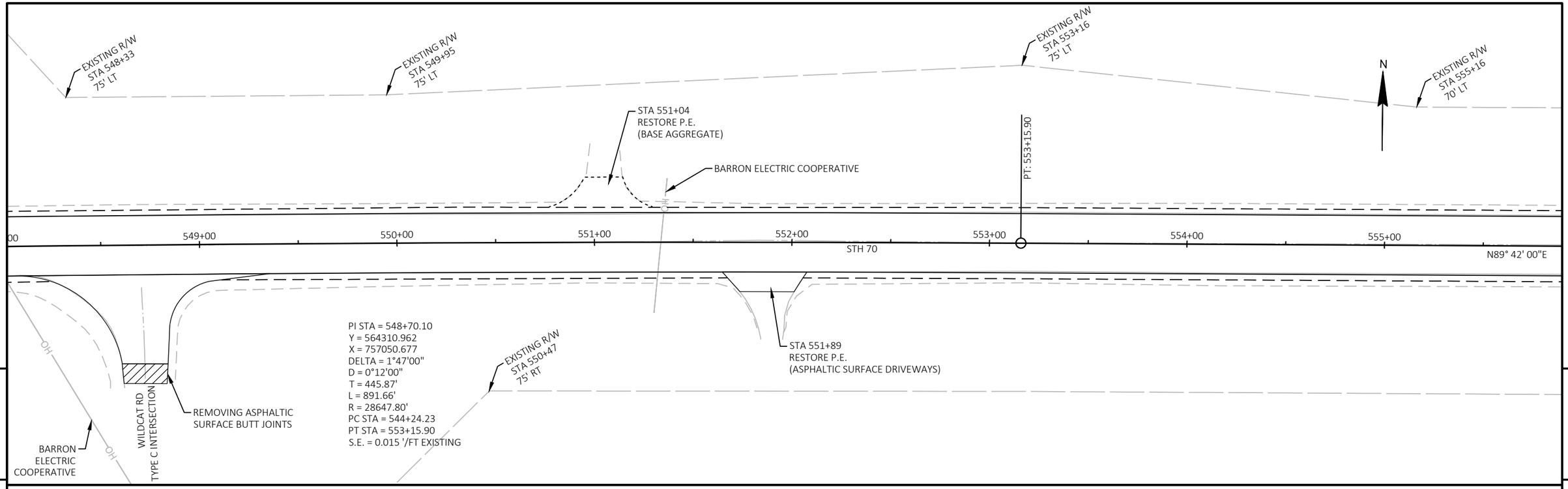
EXISTING R/W
STA 547+00
80' RT

BARRON ELECTRIC COOPERATIVE

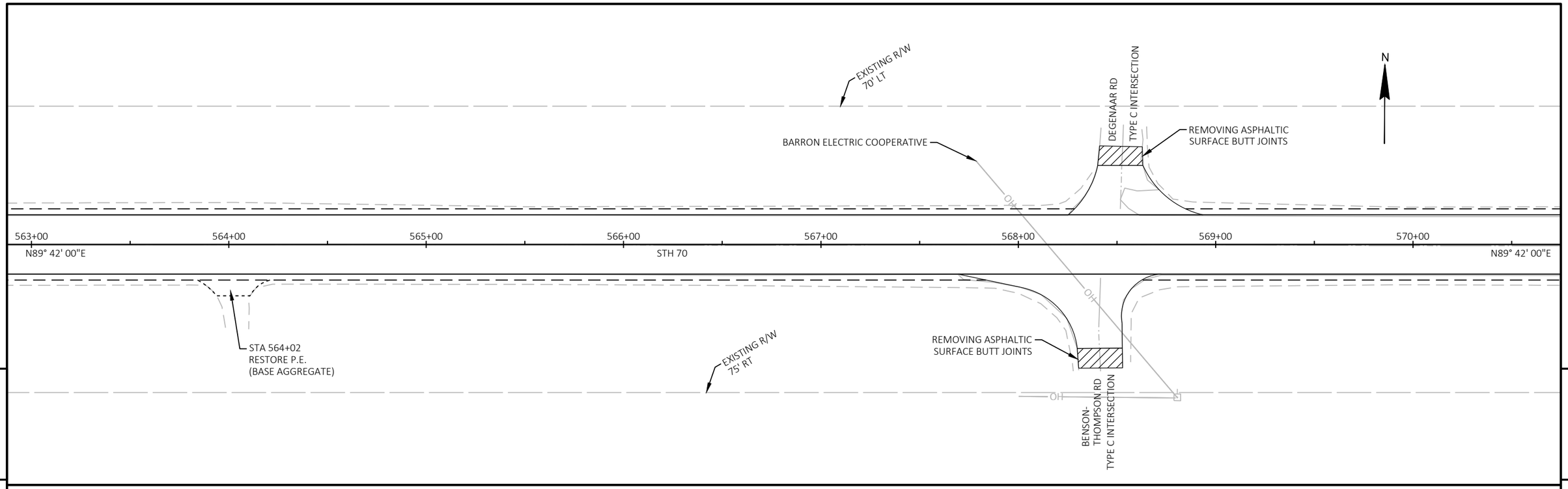
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 64	E

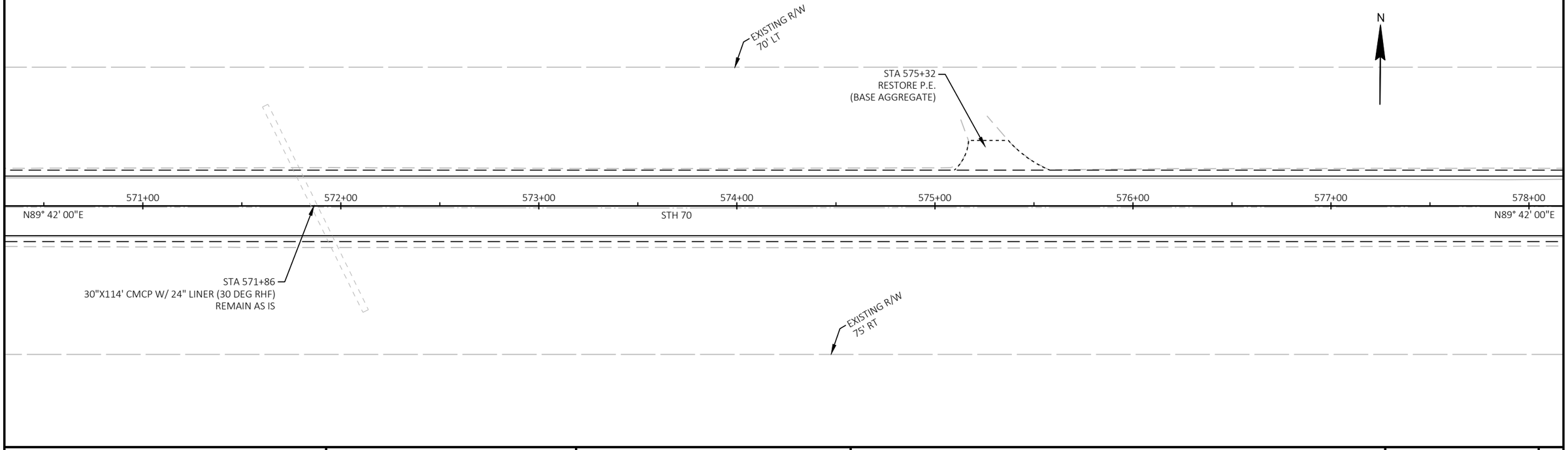
FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-5

PLOT DATE : 6/15/2021 2:48 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 65	E





PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 66	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-7

PLOT DATE : 6/15/2021 2:49 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

EXISTING R/W
STA 579+68
70' LT

EXISTING R/W
STA 580+68
75' LT

STA 582+42
RESTORE P.E.
(BASE AGGREGATE)

N

578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00

N89° 42' 00"E

STH 70

N89° 42' 00"E

EXISTING R/W
STA 579+68
75' RT

STA 580+07
RESTORE P.E.
(BASE AGGREGATE)

EXISTING R/W
STA 579+68
90' RT

BARRON ELECTRIC COOPERATIVE

STA 584+75
RESTORE P.E.
(BASE AGGREGATE)

5

5

EXISTING R/W
STA 586+71
75' LT

EXISTING R/W
STA 589+71
120' LT

N

PI: 586+70.84

586+00 587+00 588+00 589+00 590+00 591+00 592+00 593+

N89° 42' 00"E

STH 70

S89° 26' 00"E

STA 592+49
54"X170' CMCP (20 DEG RHF)
REMAIN AS IS

EXISTING R/W
STA 589+68
90' RT

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 67	E

EXISTING R/W
120' LT

N

593+00 | 594+00 | 595+00 | 596+00 | 597+00 | 598+00 | 599+00 | 600+00

S89° 26' 00"E — STH 70 — S89° 26' 00"E

5

EXISTING R/W
STA 596+68
75' RT

5

EXISTING R/W
STA 601+88
80' LT

EXISTING R/W
STA 603+68
80' LT

EXISTING R/W
STA 604+68
70' LT

N

YELLOWSANDS DR
TYPE C INTERSECTION

REMOVING ASPHALTIC
SURFACE BUTT JOINTS

+00 | 601+00 | 602+00 | 603+00 | 604+00 | 605+00 | 606+00 | 607+00

S89° 26' 00"E — STH 70 — S89° 26' 00"E

BARRON ELECTRIC COOPERATIVE

EXISTING R/W
75' RT

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 68	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-9

PLOT DATE : 6/15/2021 2:50 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

EXISTING R/W
70' LT

N

STA 614+59
RESTORE P.E.
(BASE AGGREGATE)

608+00 | 609+00 | 610+00 | 611+00 | 612+00 | 613+00 | 614+00 | 615+00

S89° 26' 00"E — STH 70 — S89° 26' 00"E

EXISTING R/W
75' RT

STA 610+93
RESTORE C.E.
(BASE AGGREGATE)

5

5

EXISTING R/W
70' LT

N

CENTURYLINK

CHARTER

T

T

T

FO

FO

615+00 | 616+00 | 617+00 | 618+00 | 619+00 | 620+00 | 621+00 | 622+00

S89° 26' 00"E — STH 70 — S89° 26' 00"E

STA 617+58
RESTORE P.E.
(ASPHALTIC SURFACE DRIVEWAYS)

EXISTING R/W
75' RT

STA 622+59
24"X102' CMCP
CLEANING CULVERT PIPES FOR LINER VERIFICATION
1 - 18"x102' CULVERT PIPE LINERS (18") REQ'D

FO

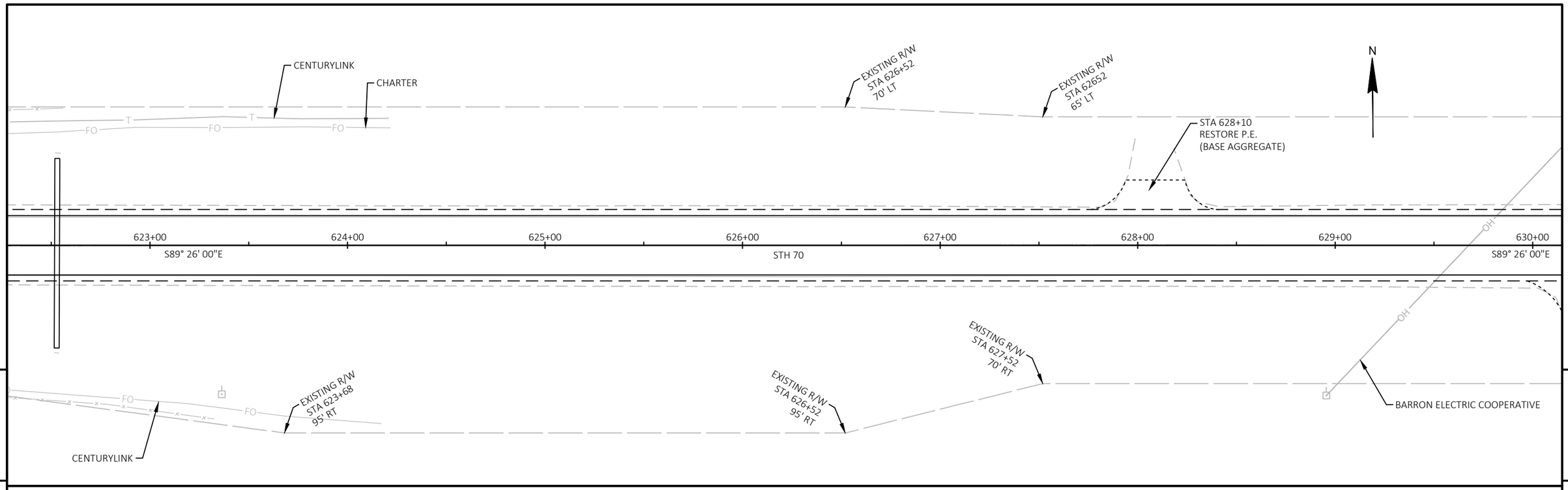
FO

FO

CENTURYLINK

EXISTING R/W
STA 622+18
75' RT

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 69	E



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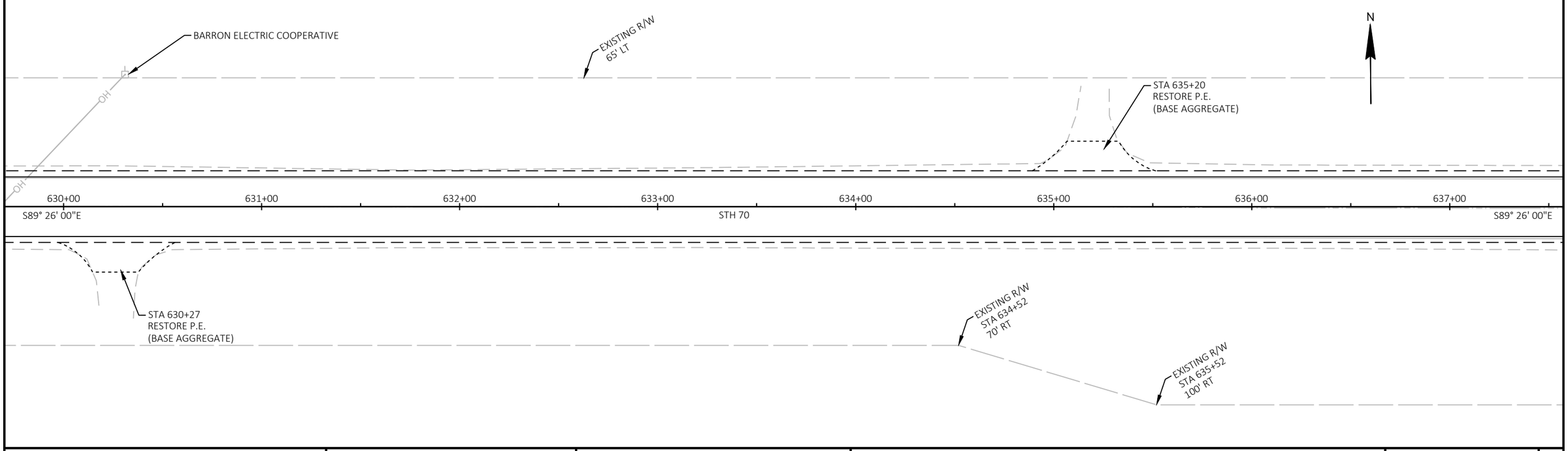
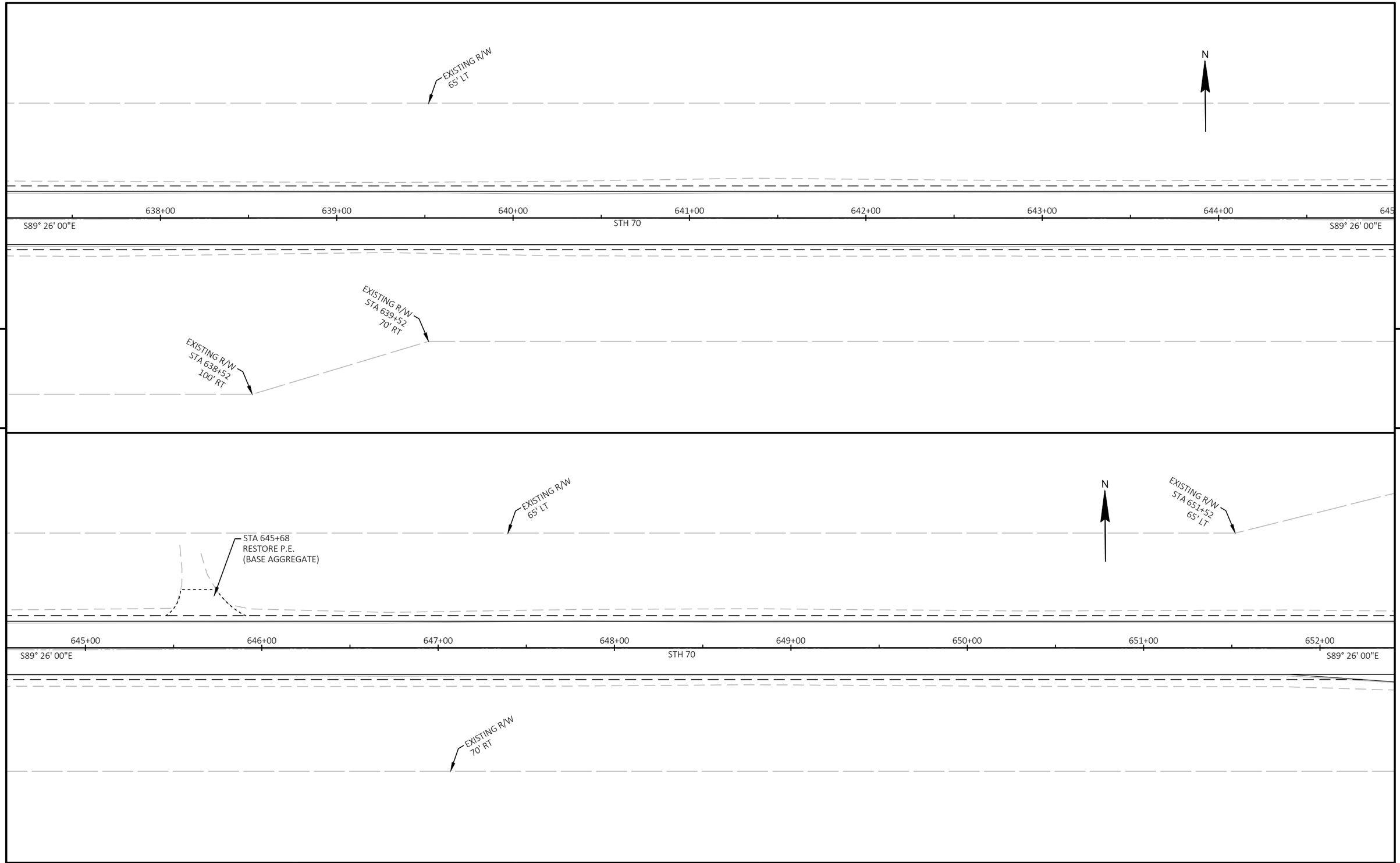


PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 70	E

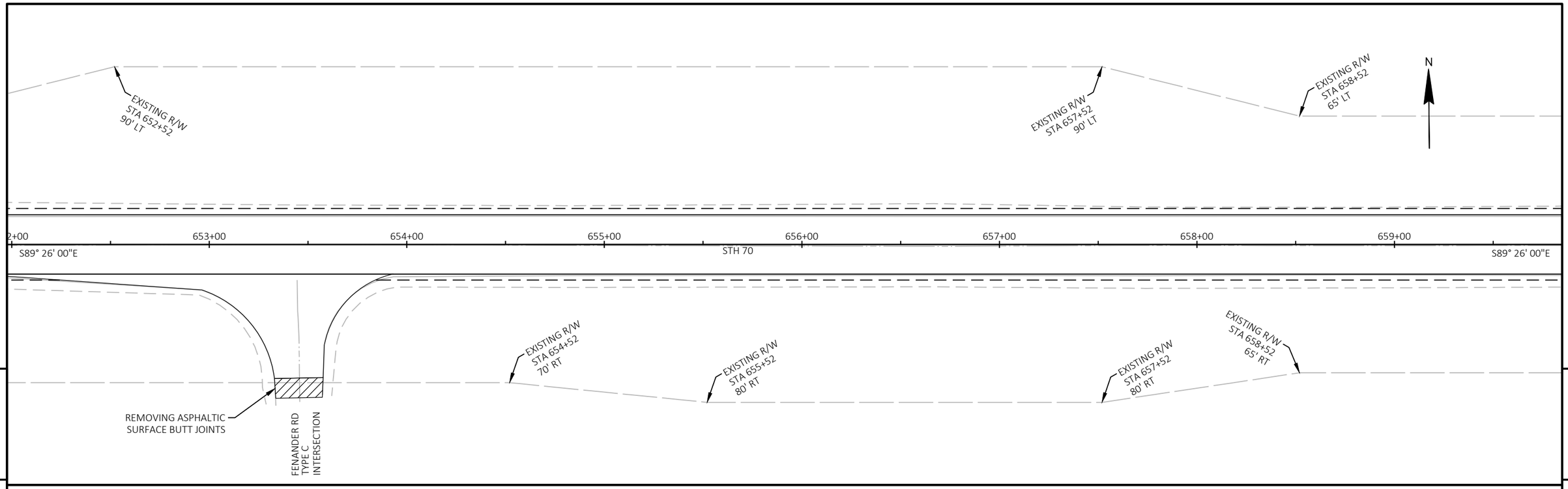
FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-11
PLOT DATE : 6/15/2021 2:51 PM
PLOT BY : BUKOVITZ, CAITLIN LE
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

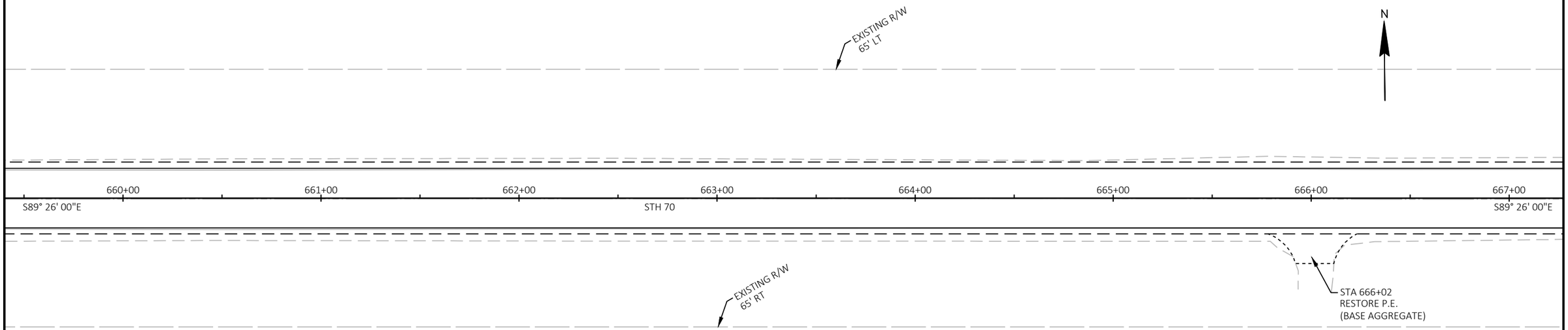


5

5

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 71	E



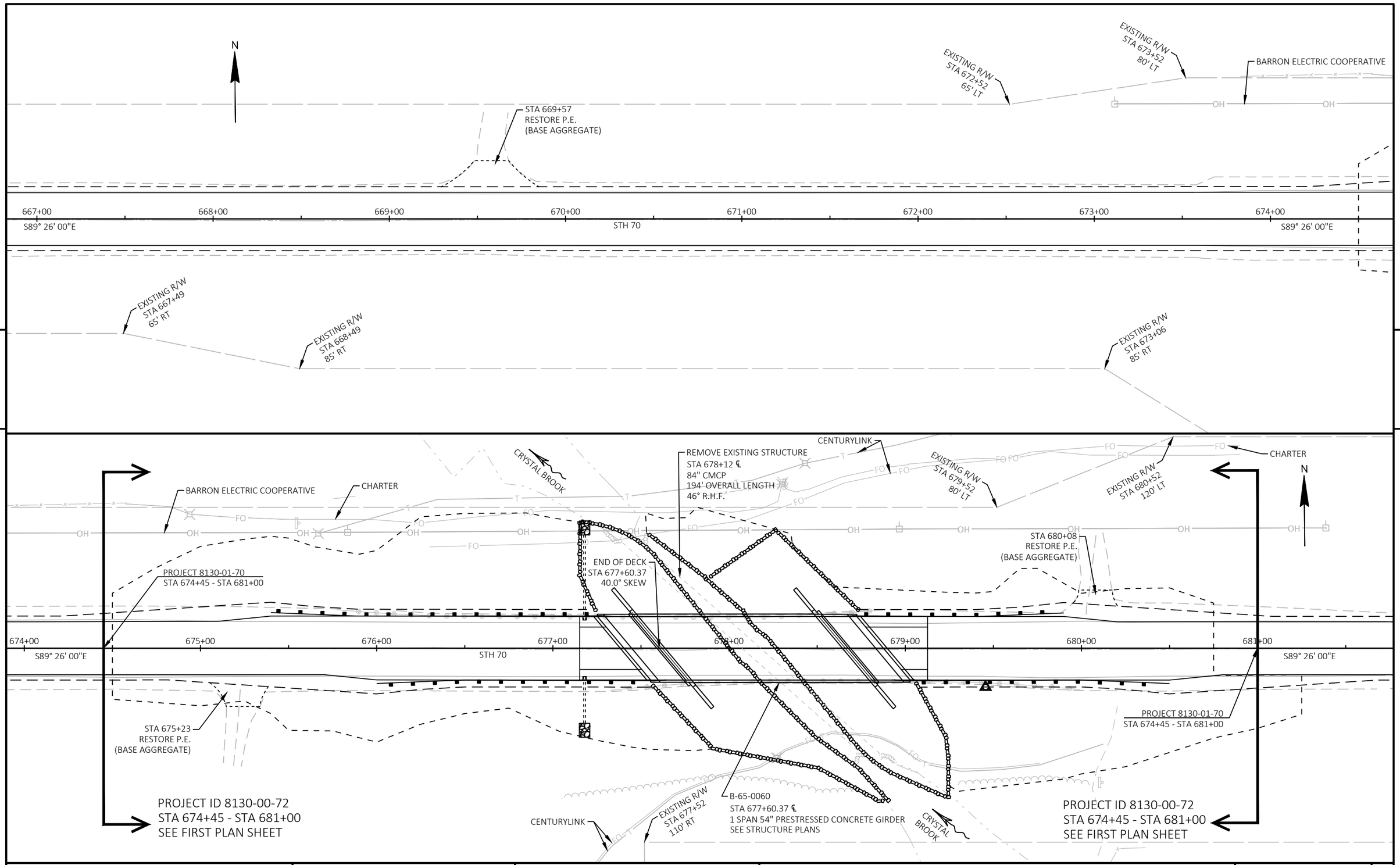


PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 72	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-13

PLOT DATE : 6/15/2021 2:51 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 73	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-14

PLOT DATE : 6/15/2021 2:52 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

EXISTING R/W
STA 683+94
120' LT

EXISTING R/W
STA 684+55
85' LT

EXISTING R/W
STA 688+42
85' LT

N

682+00 683+00 684+00 685+00 686+00 687+00 688+00 689+00

S89° 26' 00"E STH 70 S89° 26' 00"E

5

EXISTING R/W
STA 684+52
110' RT

EXISTING R/W
STA 685+52
90' RT

5

CHARTER

CENTURYLINK

BARRON ELECTRIC COOPERATIVE

FO FO FO FO FO FO FO FO

OH OH OH

EXISTING R/W
STA 694+17
85' LT

EXISTING R/W
STA 695+52
85' LT

N

EXISTING R/W
STA 696+52
75' LT

BARRON ELECTRIC COOPERATIVE

690+00 691+00 692+00 693+00 694+00 695+00 696+00 697

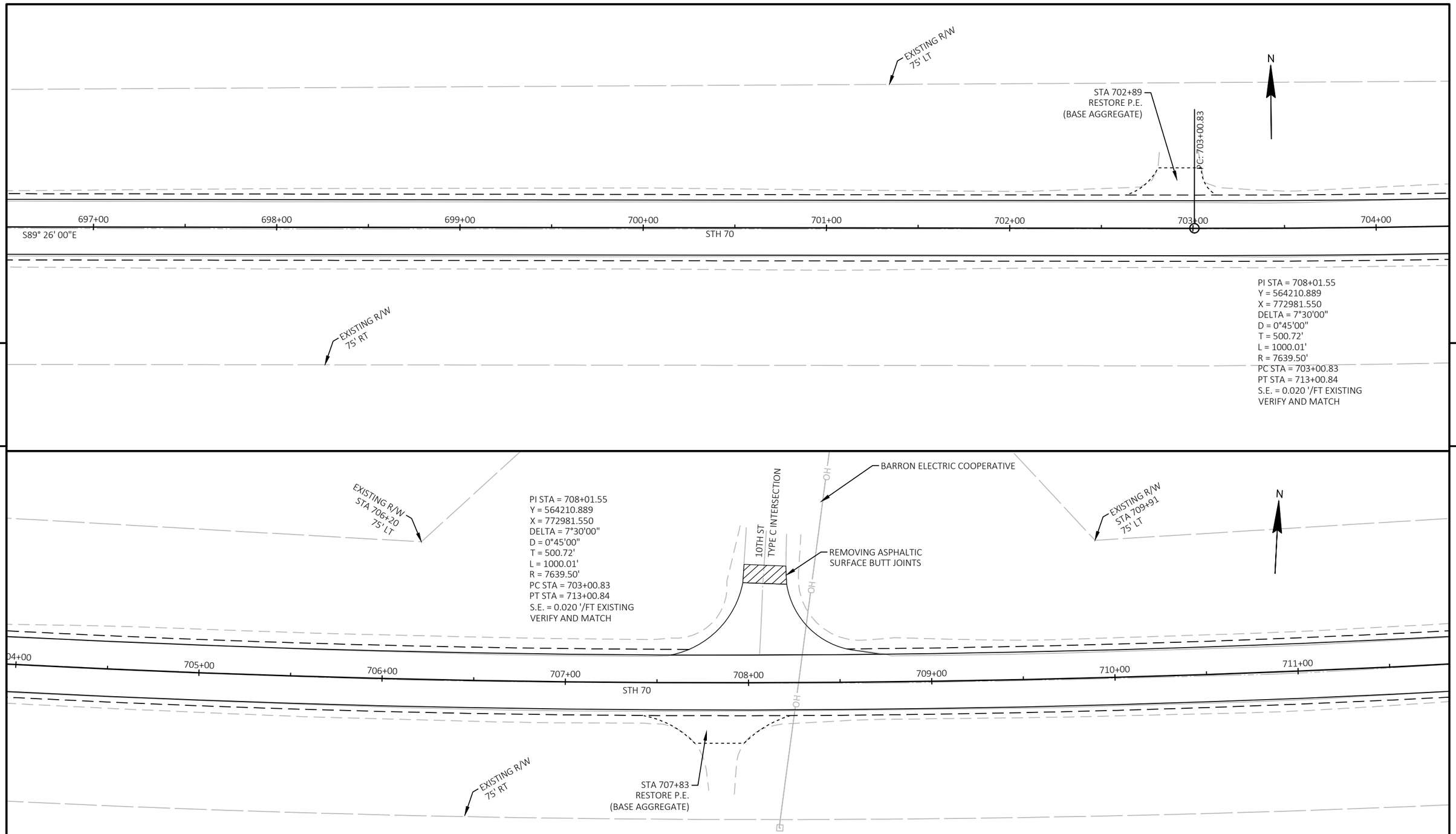
S89° 26' 00"E STH 70 S89° 26' 00"E

STA 690+22
24"X154' CMCP
CLEANING CULVERT PIPES FOR LINER VERIFICATION
1 - 18"x154' CULVERT PIPE LINER (18") REQ'D

EXISTING R/W
STA 692+52
90' RT

EXISTING R/W
STA 693+52
75' RT

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 74	E



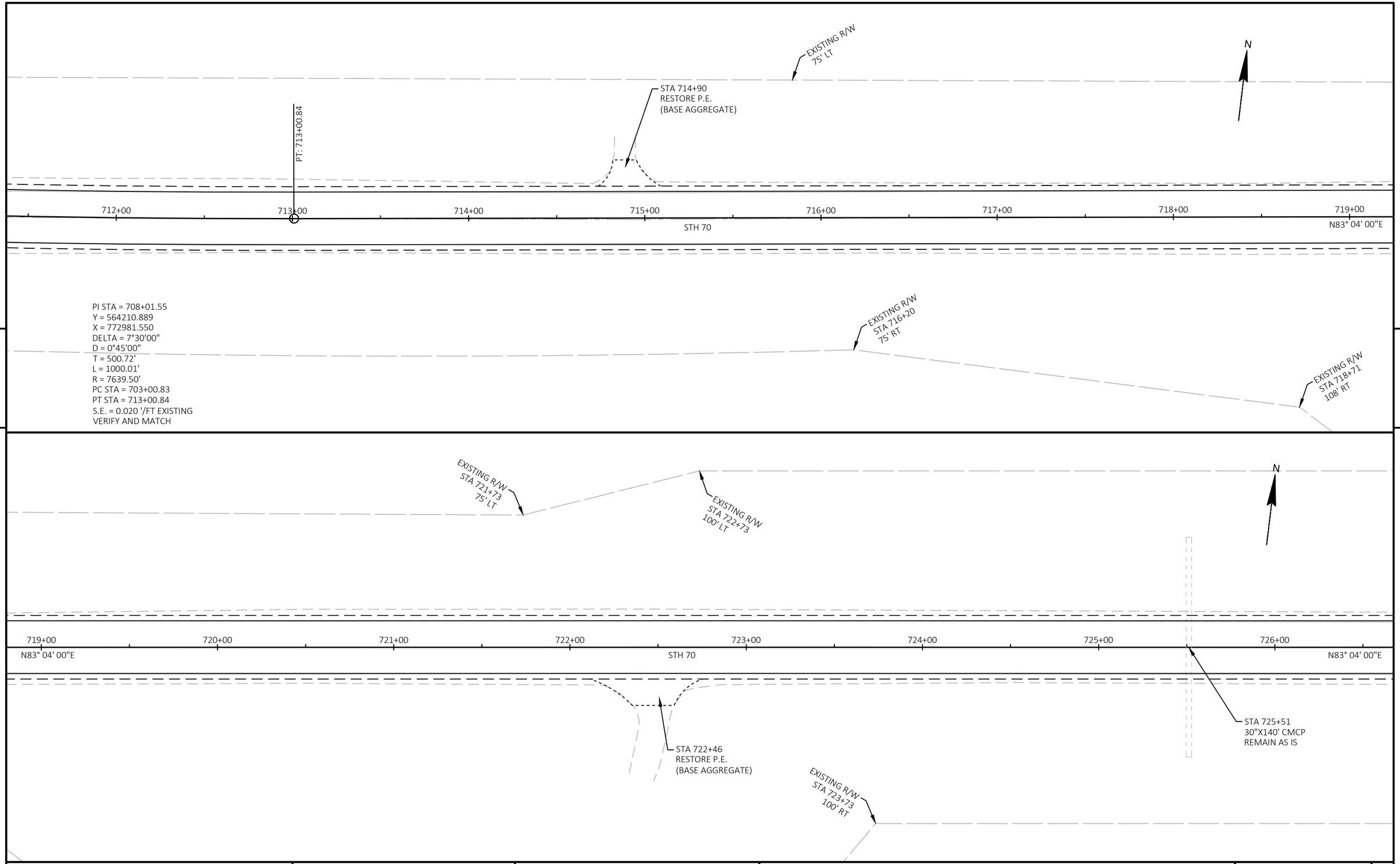
5

5

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 75	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-16

PLOT DATE : 6/15/2021 2:52 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT



5

5

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 76	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-17

PLOT DATE : 6/15/2021 2:53 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

EXISTING R/W
100' LT

N

727+00 728+00 729+00 730+00 731+00 732+00 733+00 734+00

N83° 04' 00"E STH 70 N83° 04' 00"E

EXISTING R/W
STA 732+73
100' RT

EXISTING R/W
STA 733+73
75' RT

5 5

EXISTING R/W
STA 734+73
100' LT

EXISTING R/W
STA 735+73
75' LT

N

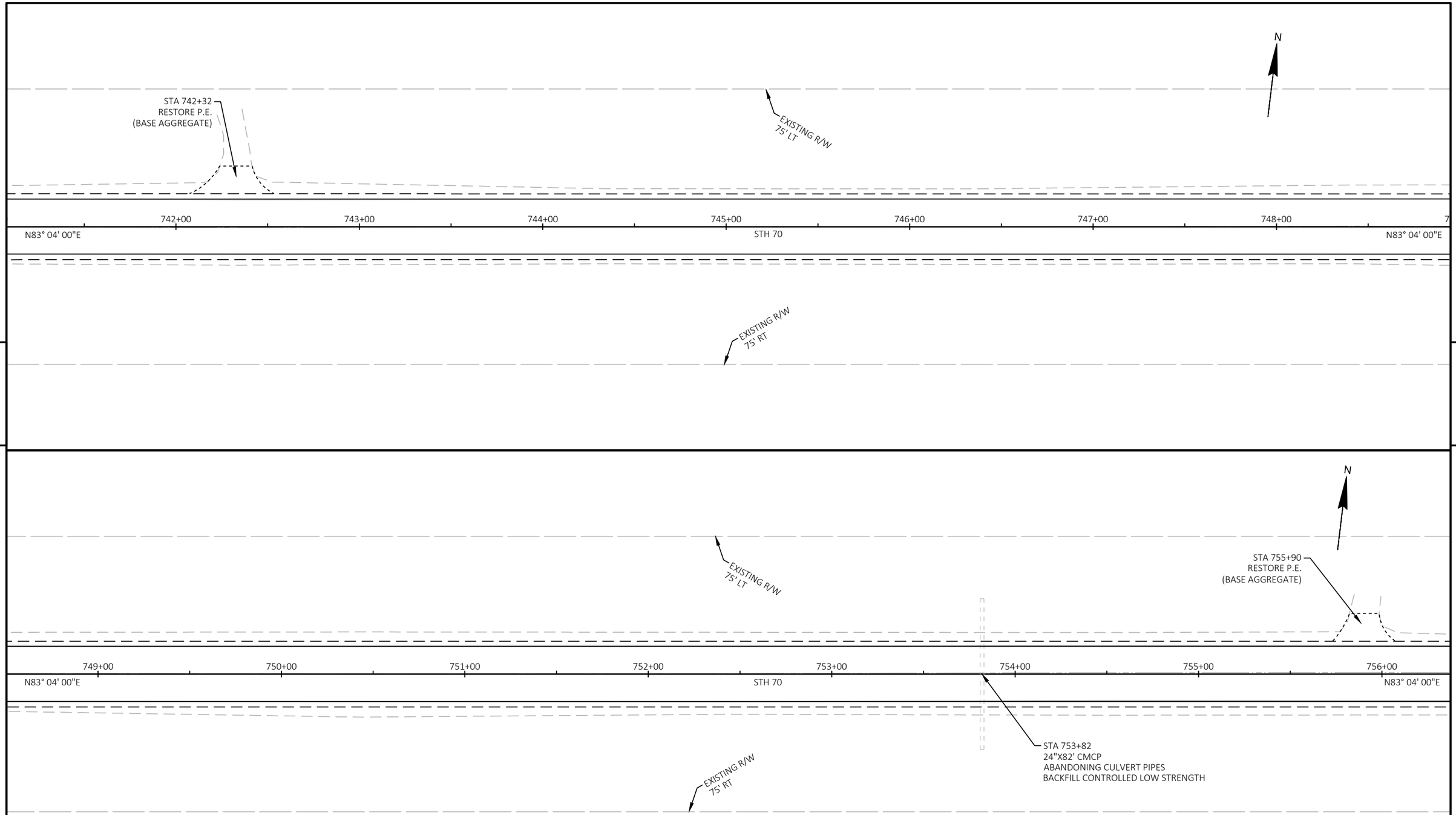
734+00 735+00 736+00 737+00 738+00 739+00 740+00 741+00

N83° 04' 00"E STH 70 N83° 04' 00"E

STA 740+22
24"X100' CMCP
ABANDONING CULVERT PIPES
BACKFILL CONTROLLED LOW STRENGTH

EXISTING R/W
75' RT

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 77	E



5

5

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 78	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-19

PLOT DATE : 6/15/2021 2:53 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

EXISTING R/W
STA 759+13
75' LT

CENTURYLINK AND CHARTER

T

FO

9TH ST
GRAVEL
TYPE C INTERSECTION

N

PC: 763+31.44

756+00 | 757+00 | 758+00 | 759+00 | 760+00 | 761+00 | 762+00 | 763+00

N83° 04' 00"E — STH 70 — N83° 04' 00"E

EXISTING R/W
STA 757+82
75' RT

STA 760+65
REMOVING SMALL PIPE CULVERTS
(24" CMCP EXISTING)
1 - 24"x90' RCCP REQ'D
2 X APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH

5

5

PI STA = 775+54.97
Y = 565026.297
X = 779687.005
DELTA = 24°06'30"
D = 1°00'00"
T = 1223.53'
L = 2410.84'
R = 5729.60'
PC STA = 763+31.44
PT STA = 787+42.28
S.E. = 0.022 '/FT EXISTING
VERIFY AND MATCH

EXISTING R/W
STA 766+83
75' LT

N

764+00 | 765+00 | 766+00 | 767+00 | 768+00 | 769+00 | 770+00 | 771+00

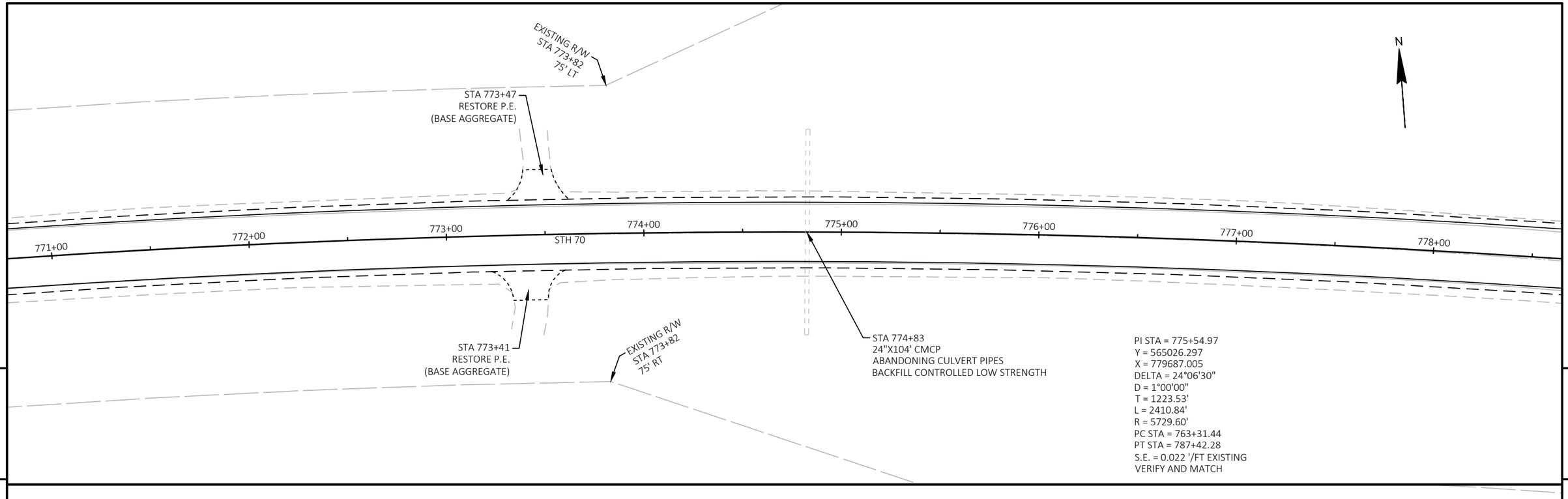
STH 70

EXISTING R/W
STA 766+83
75' RT

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 79	E

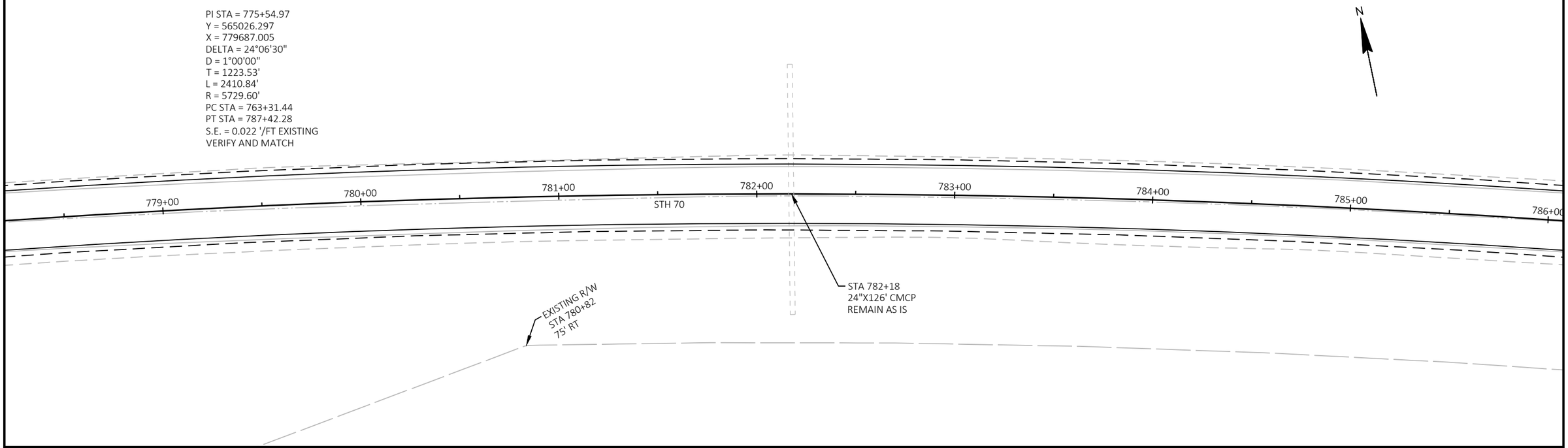
FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-20

PLOT DATE : 6/15/2021 2:54 PM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:50 FT



5

5



PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 80	E

PI STA = 775+54.97
Y = 565026.297
X = 779687.005
DELTA = 24°06'30"
D = 1°00'00"
T = 1223.53'
L = 2410.84'
R = 5729.60'
PC STA = 763+31.44
PT STA = 787+42.28
S.E. = 0.022 '/FT EXISTING
VERIFY AND MATCH

PT: 787+42.28

STA 791+91
RESTORE P.E.
(BASE AGGREGATE)

CENTURYLINK
AND CHARTER

FO

T

786+00 787+00 788+00 789+00 790+00 791+00 792+00 793+00

STH 70

S72° 49' 30"E

STA 789+12
24"X120' CMCP W/ 18" LINER
REMAIN AS IS

EXISTING R/W
STA 791+46
75' RT

5

5

CENTURYLINK AND CHARTER

FO

T

PI STA = 807+20.13
Y = 564080.959
X = 782745.621
DELTA = 17°39'30"
D = 1°00'00"
T = 889.98'
L = 1765.84'
R = 5729.60'
PC STA = 798+30.16
PT STA = 815+96.00
S.E. = 0.022 '/FT EXISTING
VERIFY AND MATCH

PC: 798+30.16

0 794+00 795+00 796+00 797+00 798+00 799+00 800+00

S72° 49' 30"E

STH 70

STA 794+01
24"X136' CMCP
CLEANING CULVERT PIPES FOR LINER VERIFICATION
1 - 18"x136' CULVERT PIPE LINERS (18") REQ'D

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 81	E

PI STA = 807+20.13
Y = 564080.959
X = 782745.621
DELTA = 17°39'30"
D = 1°00'00"
T = 889.98'
L = 1765.84'
R = 5729.60'
PC STA = 798+30.16
PT STA = 815+96.00
S.E. = 0.022 '/FT EXISTING
VERIFY AND MATCH

N

801+00 802+00 803+00 804+00 805+00 806+00 807+00 808+00

STH 70

STA 802+48
24"X92' CMCP (35 DEG LHF)
REMAIN AS IS

STA 800+63 - 802+08
24"X156' CMCP
REMAIN AS IS

EXISTING R/W
STA 803+33
108' RT

5

PI STA = 807+20.13
Y = 564080.959
X = 782745.621
DELTA = 17°39'30"
D = 1°00'00"
T = 889.98'
L = 1765.84'
R = 5729.60'
PC STA = 798+30.16
PT STA = 815+96.00
S.E. = 0.022 '/FT EXISTING
VERIFY AND MATCH

N

808+00 809+00 810+00 811+00 812+00 813+00 814+00 815+00

STH 70

END PROJECT
STA 809+15
Y: 564,123.16
X: 782,955.86

CTH M

5

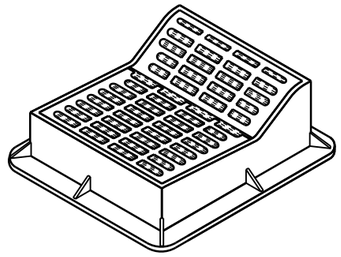
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	PLAN	SHEET 82	E

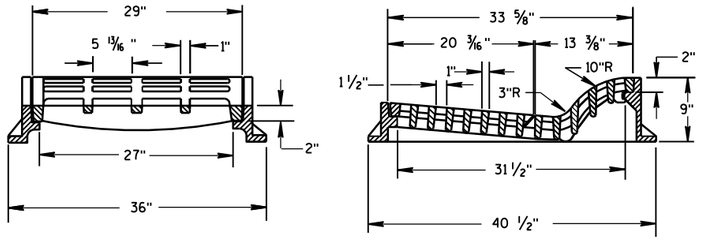
FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - PN-23
PLOT DATE : 6/15/2021 2:55 PM
PLOT BY : BUKOVITZ, CAITLIN LE
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D03-08A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-08B	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	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)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
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)
15C11-09B	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
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

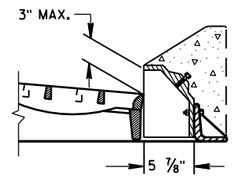
6





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

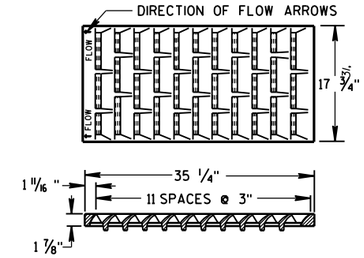
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

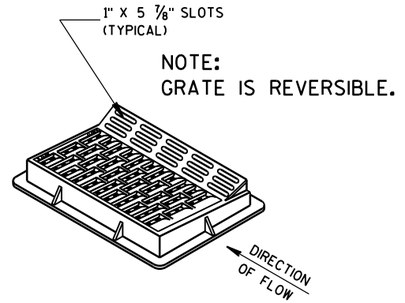
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

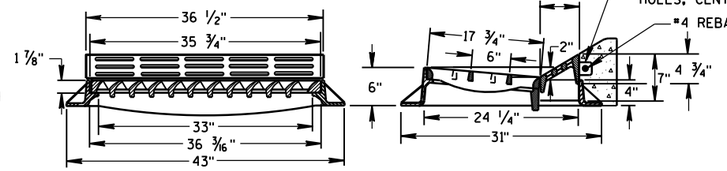
GENERAL NOTES

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

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



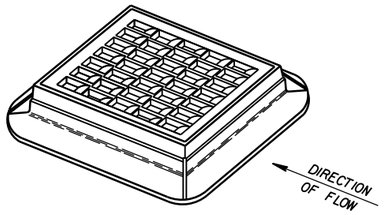


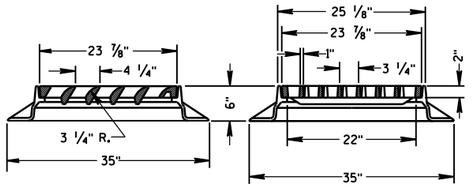


TYPE "HM"

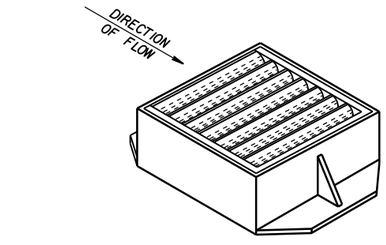
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

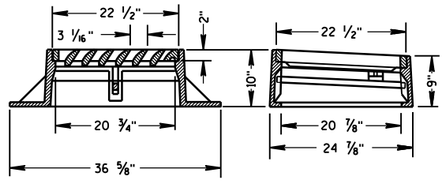
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



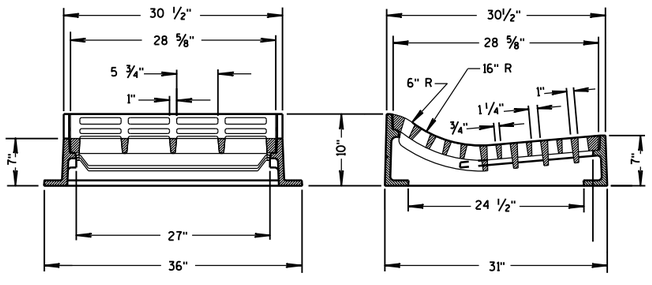


TYPE "S"



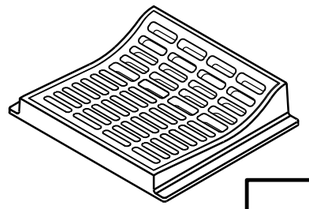


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

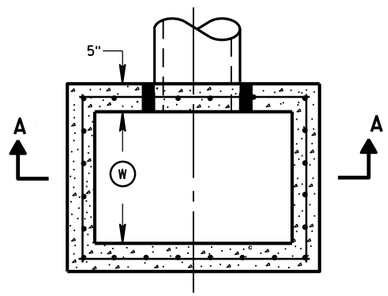
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

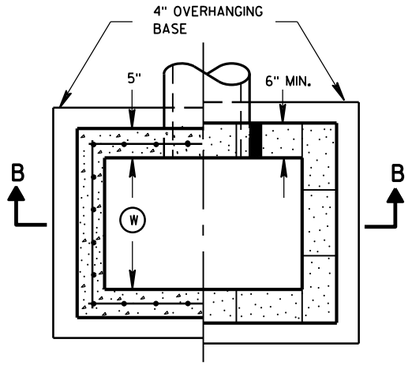
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

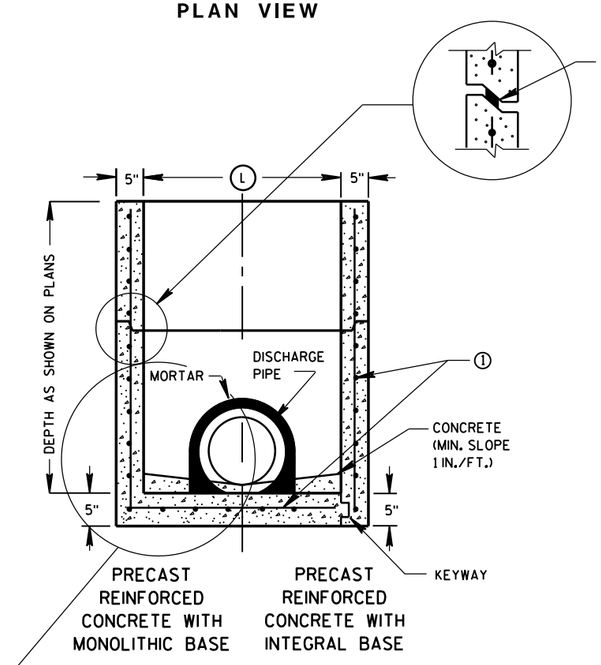
6
S.D.D. 8 A 5-19c



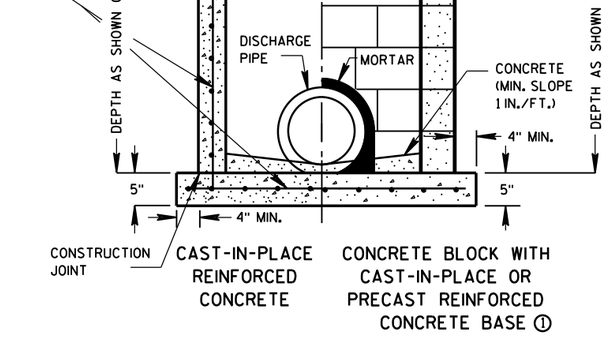
PLAN VIEW



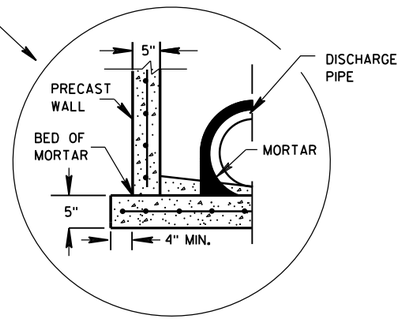
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

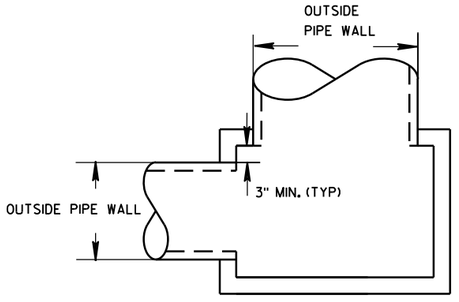
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



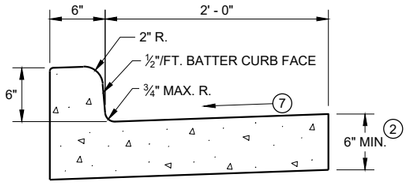
DETAIL "A"

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

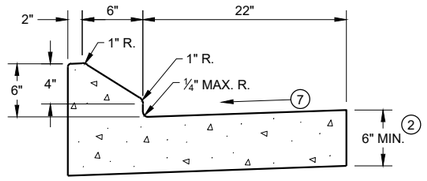
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
FHWA

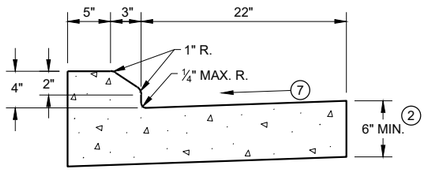
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



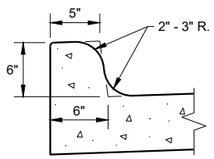
TYPES A[1] & D



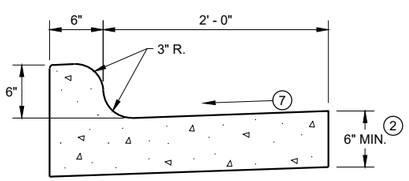
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

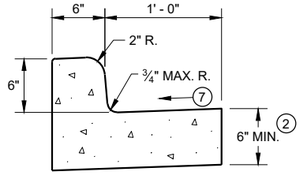


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



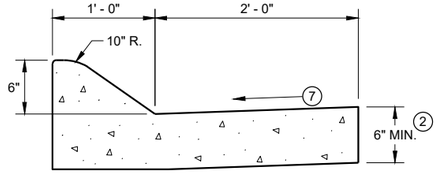
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"



TYPES A[1] & D

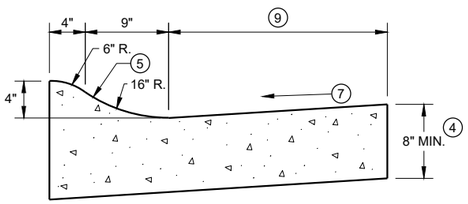
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D

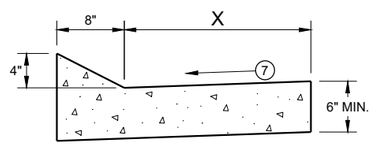
4" SLOPED CURB TYPES A[1] & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R[1] & T

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

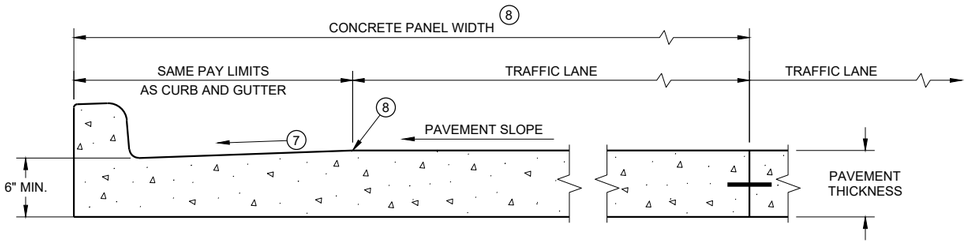


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

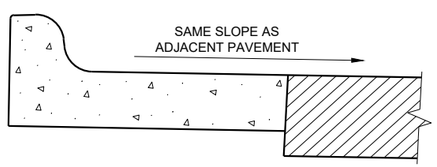
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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.

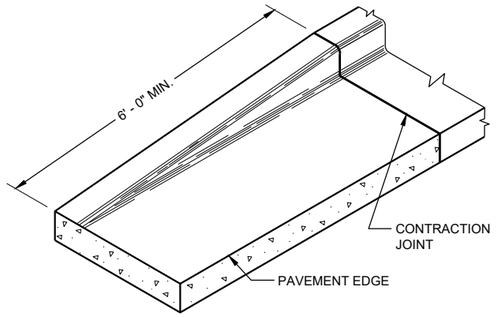
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

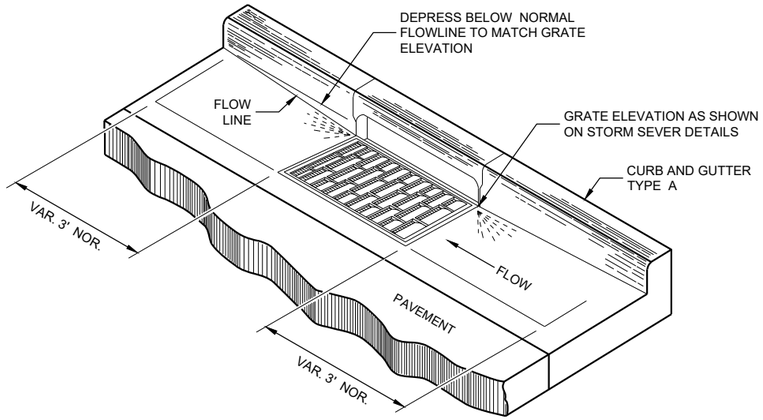
1. TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH 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. UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES 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.
9. CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
   CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

SDD 08D01 - 22a
6



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

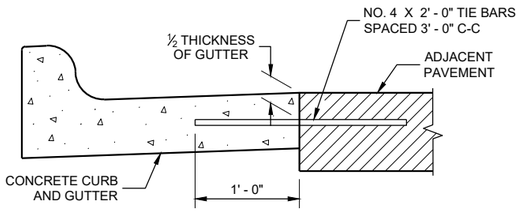
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

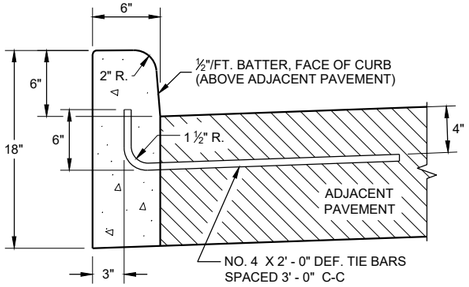
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(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.

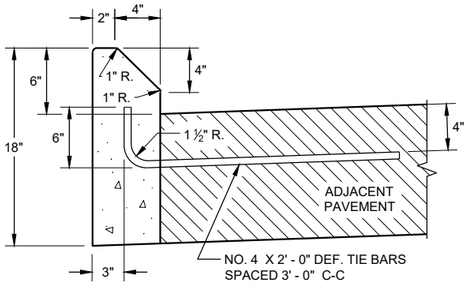
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

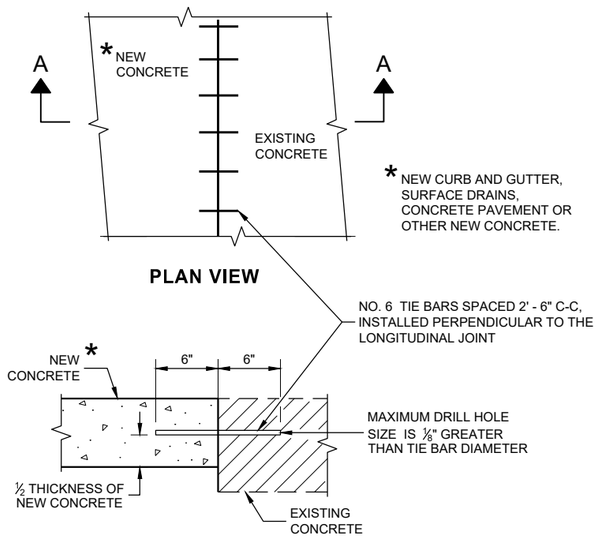


TYPES A (1) & D



TYPES G (1) & J

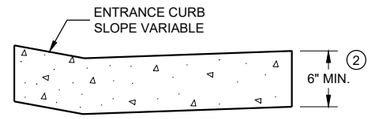
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

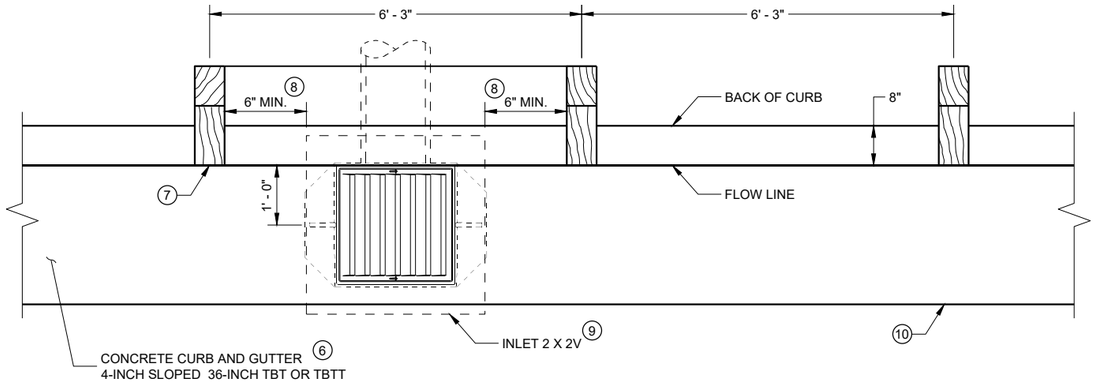
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

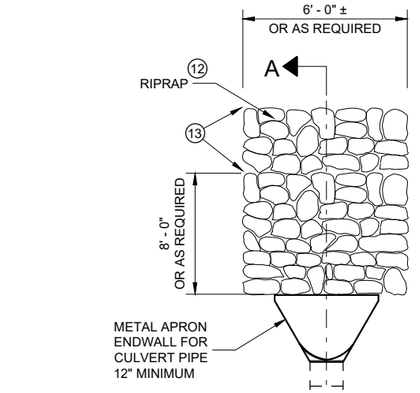
6

SDD08D01 - 22b



INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)



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 DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

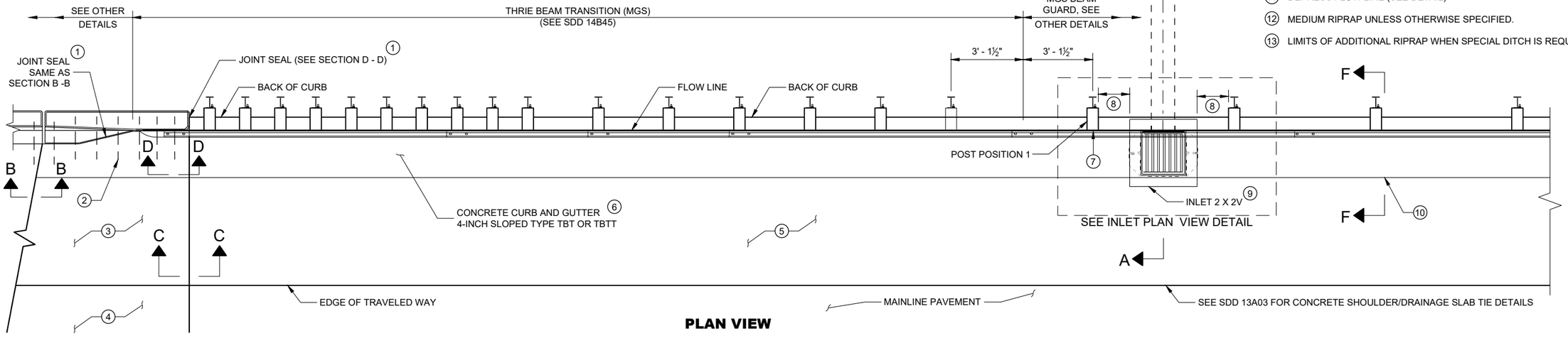
(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

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

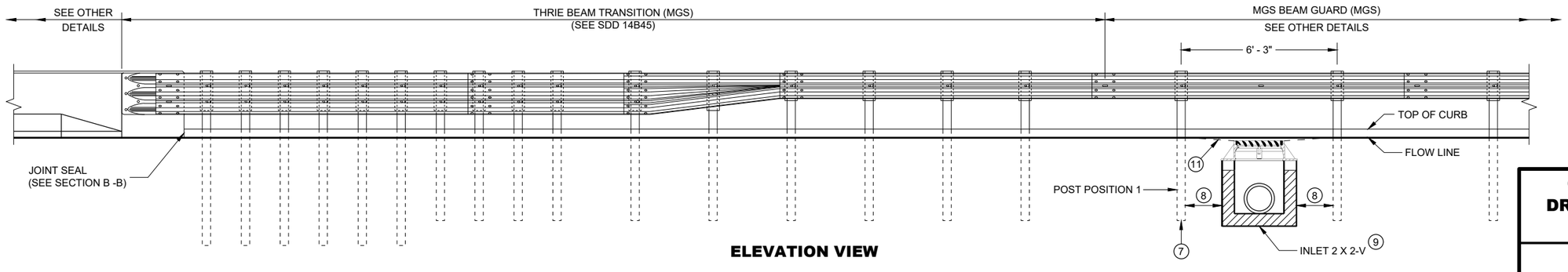
(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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



PLAN VIEW



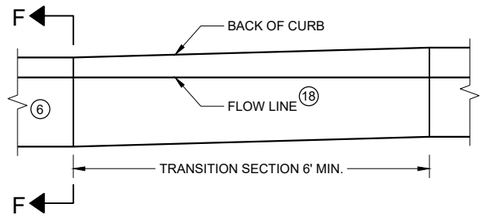
ELEVATION VIEW

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

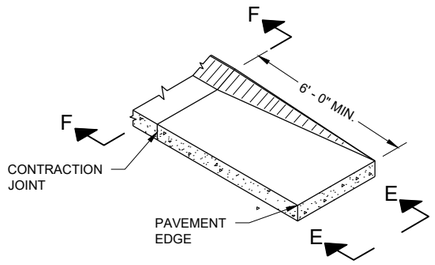
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D03 - 08a

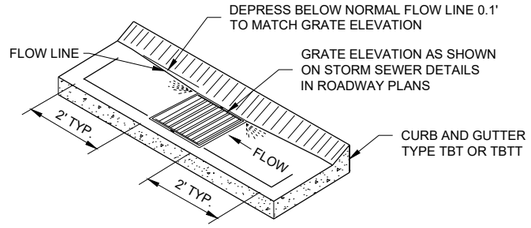
SDD 08D03 - 08a



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 INLETS 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 DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

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

(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(14) GEOTEXTILE FABRIC TYPE HR.

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

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

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

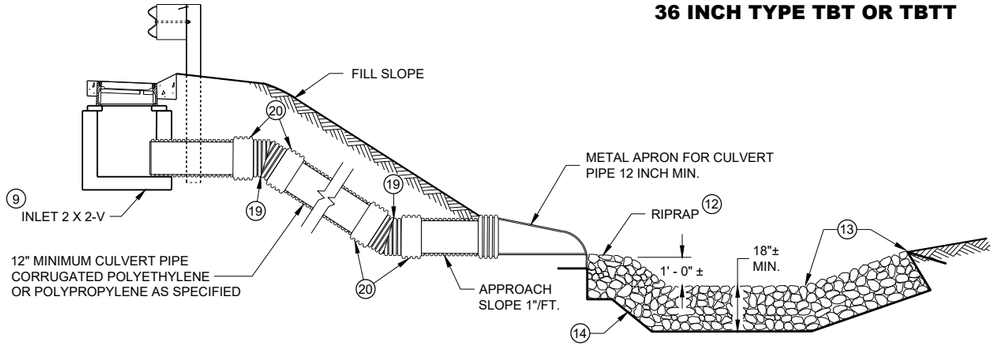
(18) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

(19) MANUFACTURER SUPPLIED BEND.

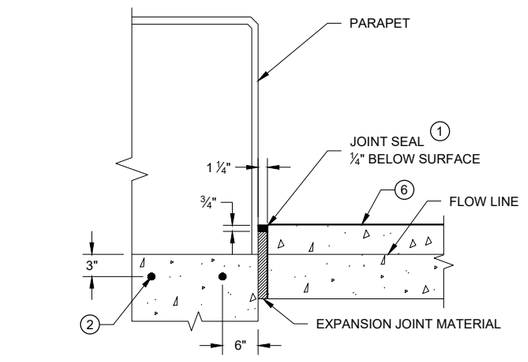
(20) MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.

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

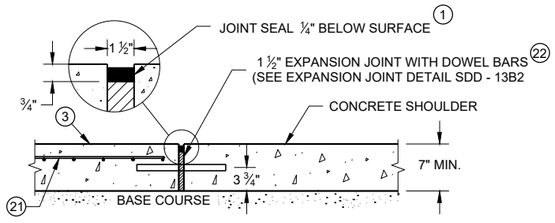
(22) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



SECTION A - A

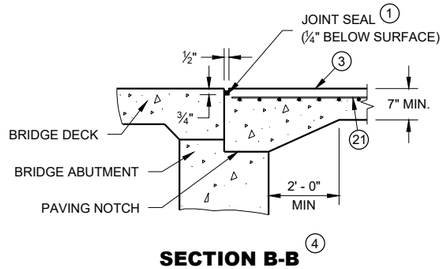


SECTION D - D

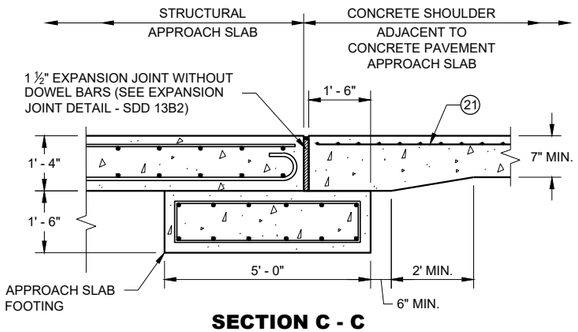


SECTION C - C

JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS

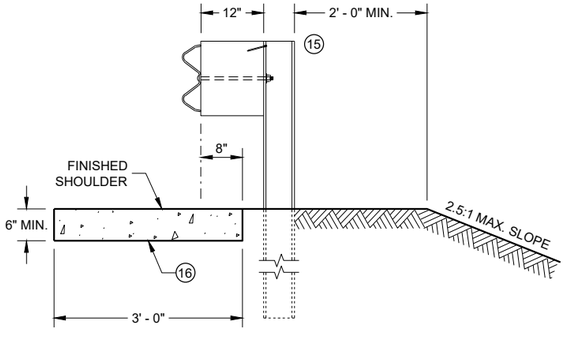


SECTION B-B (4)

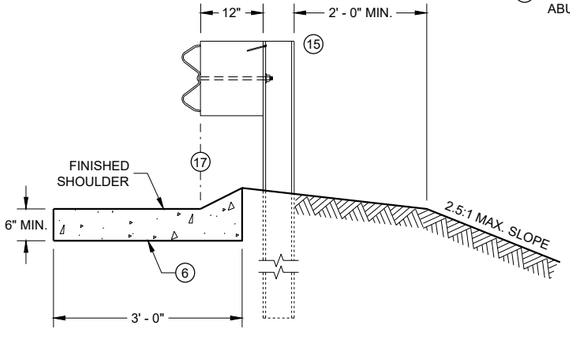


SECTION C - C

JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

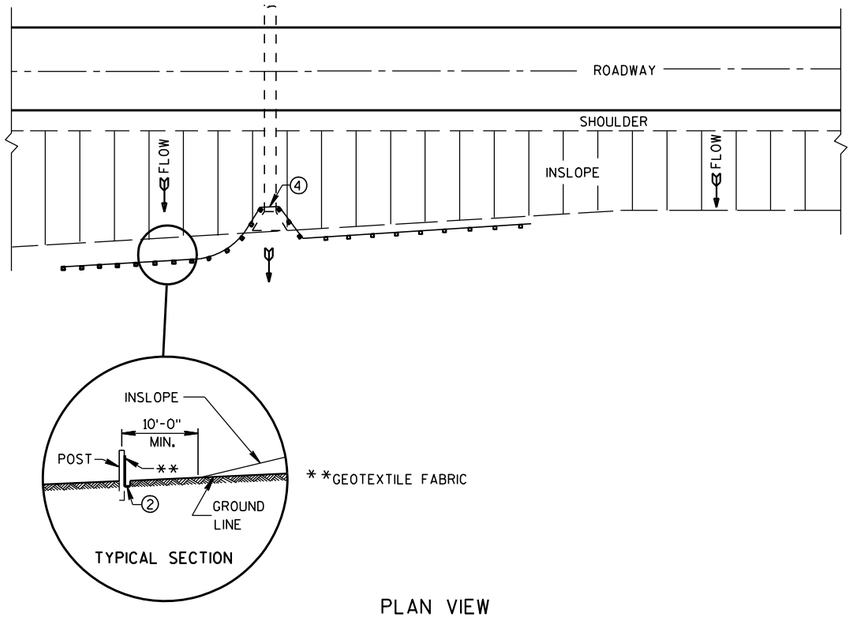
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

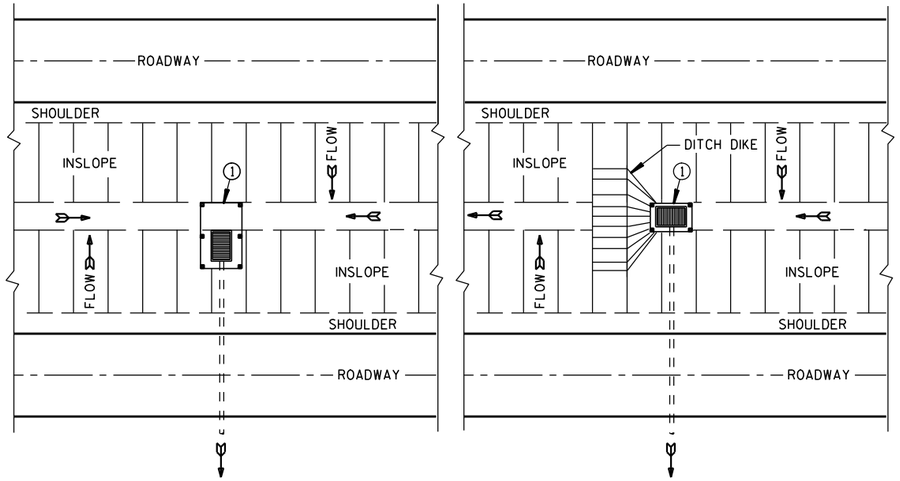
6

SDD 08D03 - 08b
SDD 08D03 - 08b



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



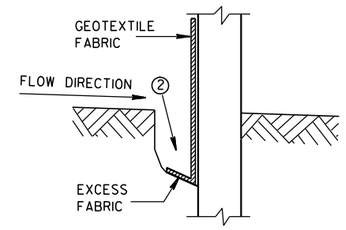
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

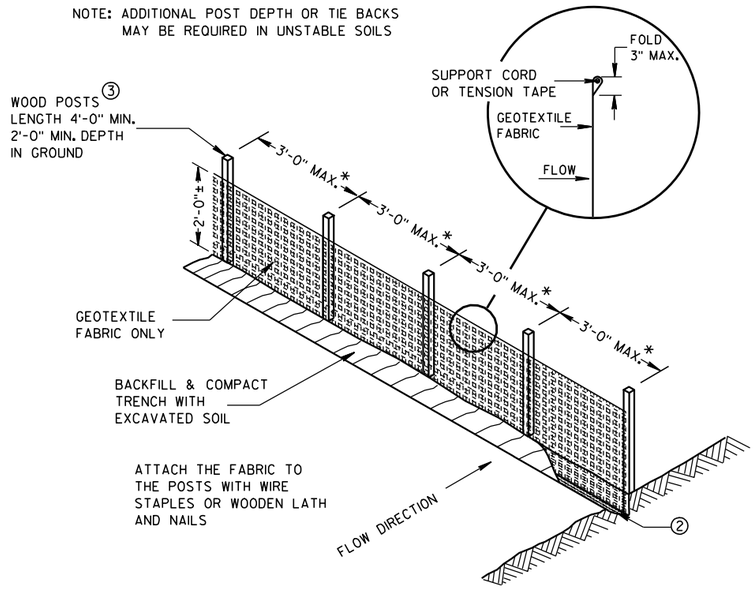
GENERAL NOTES

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

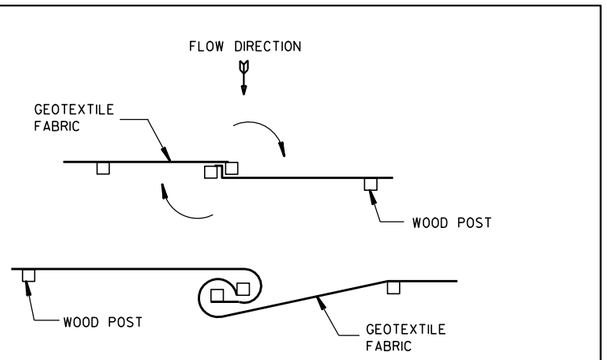
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



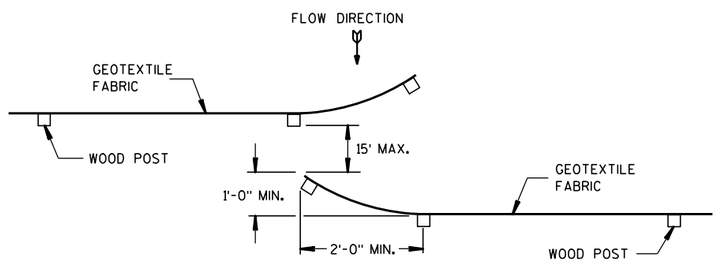
TRENCH DETAIL



SILT FENCE

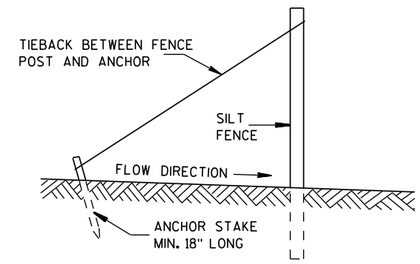


TWIST METHOD



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

METAL APRON ENDWALLS

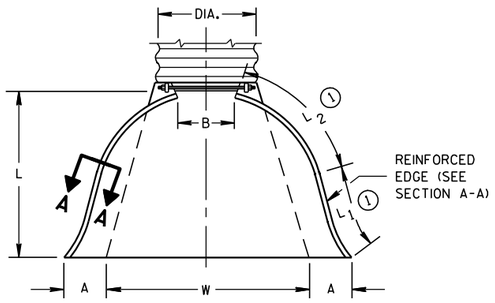
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

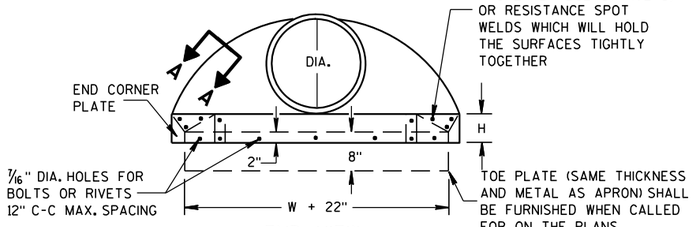
REINFORCED CONCRETE APRON ENDWALLS

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

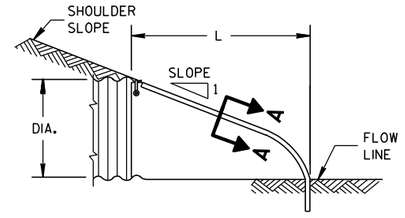
* MINIMUM
** MAXIMUM



PLAN VIEW

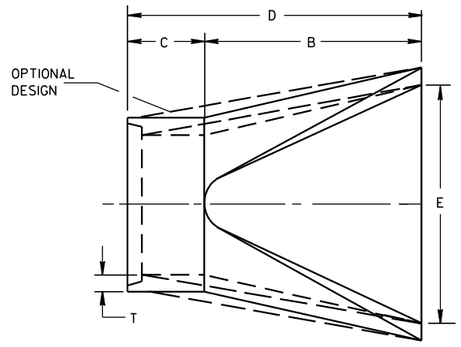


END VIEW

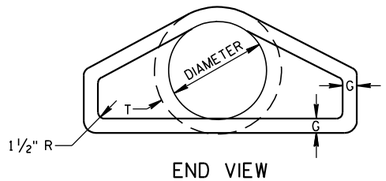


SIDE ELEVATION

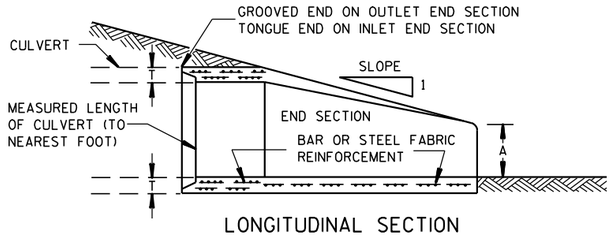
METAL ENDWALLS



PLAN

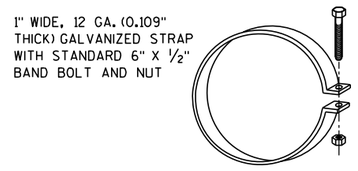


END VIEW



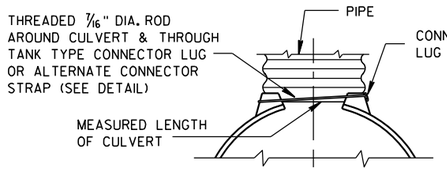
LONGITUDINAL SECTION

CONCRETE ENDWALLS

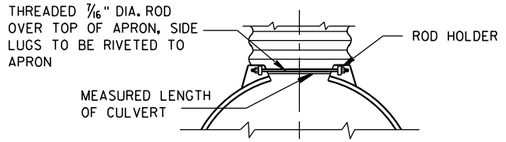


ALTERNATE FOR TYPE 1 CONNECTION

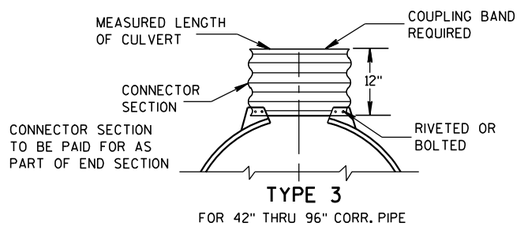
END SECTION CONNECTOR STRAP



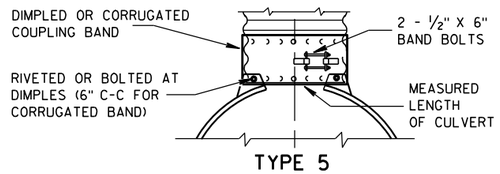
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

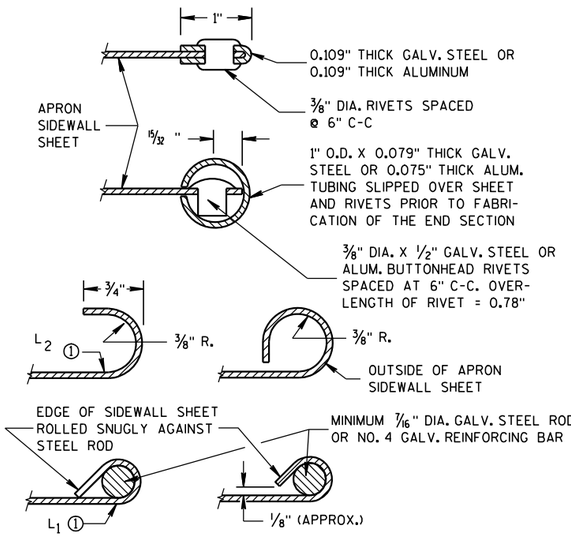
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

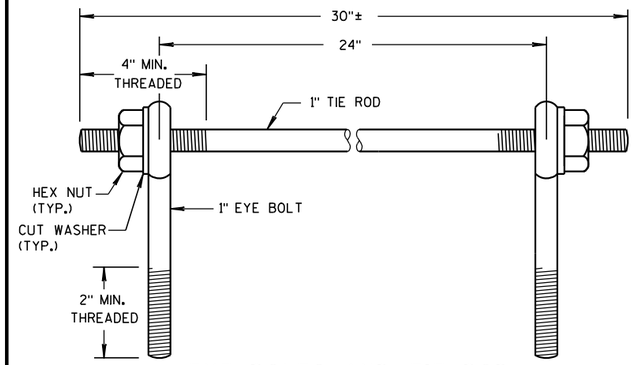
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

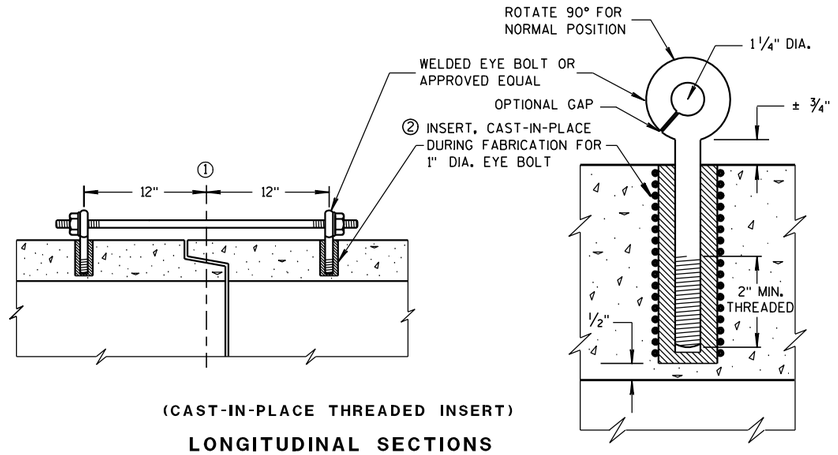
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

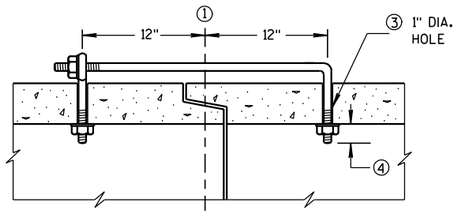
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

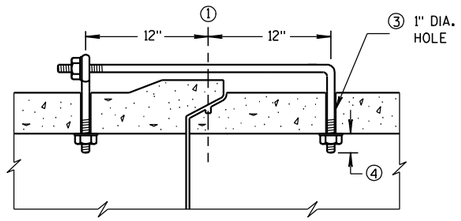
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

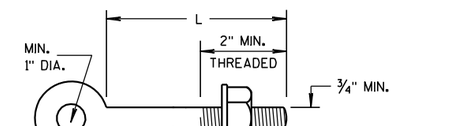


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

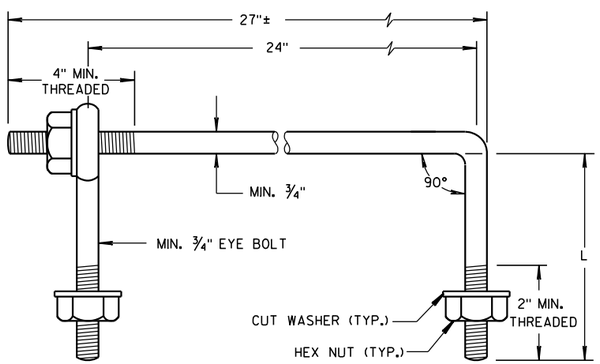
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

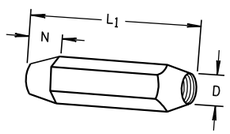
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

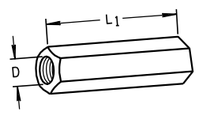
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



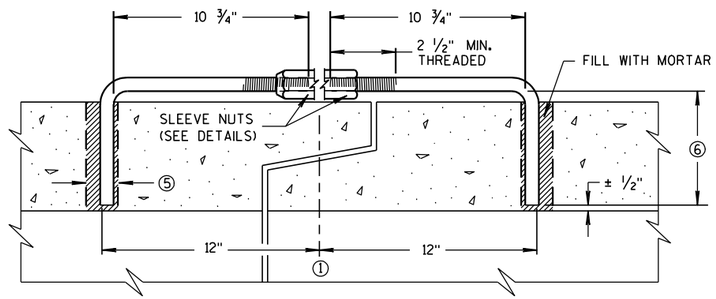
TAPERED



PLAIN

RIGHT AND LEFT THREADS

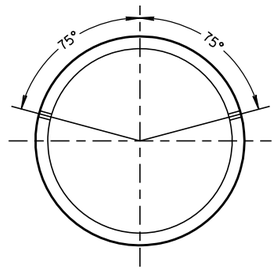
SLEEVE NUTS



LONGITUDINAL SECTION

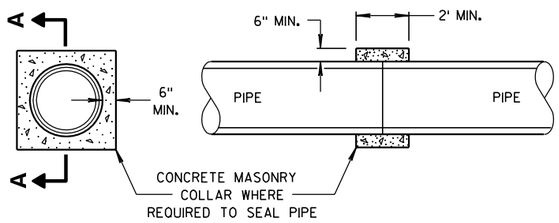
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
92
FHWA

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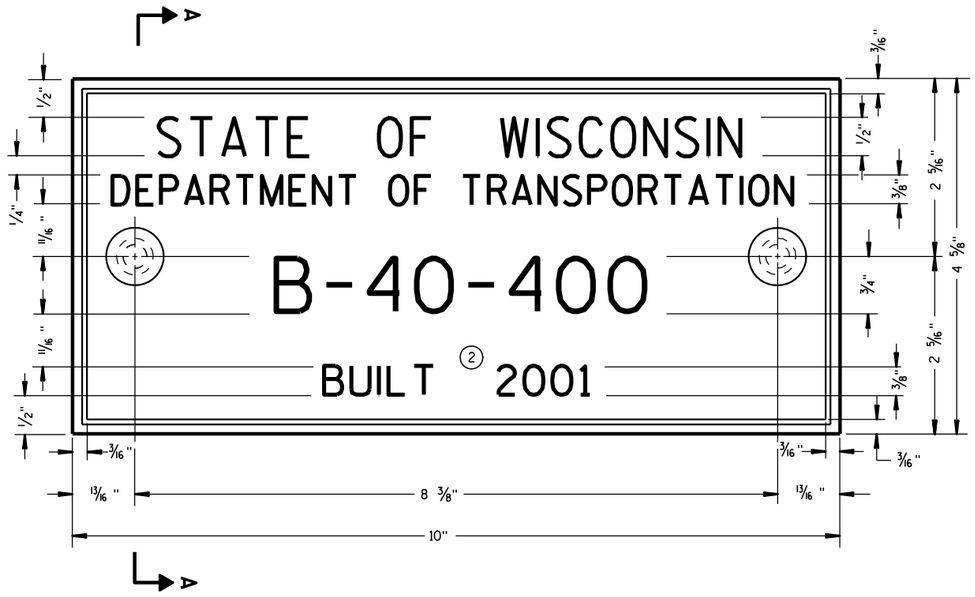
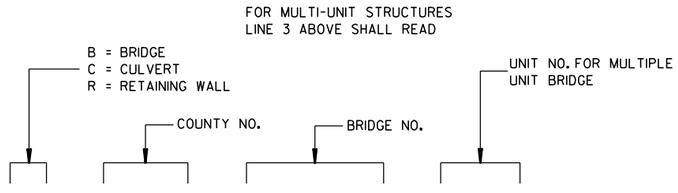
S.D.D. 8 F 4-7



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

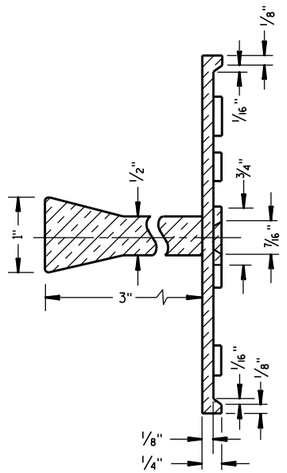
GENERAL NOTES

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

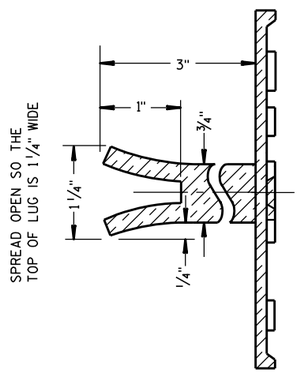
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

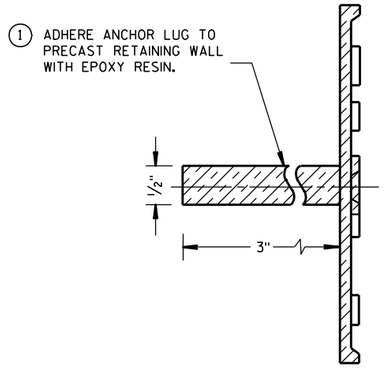
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

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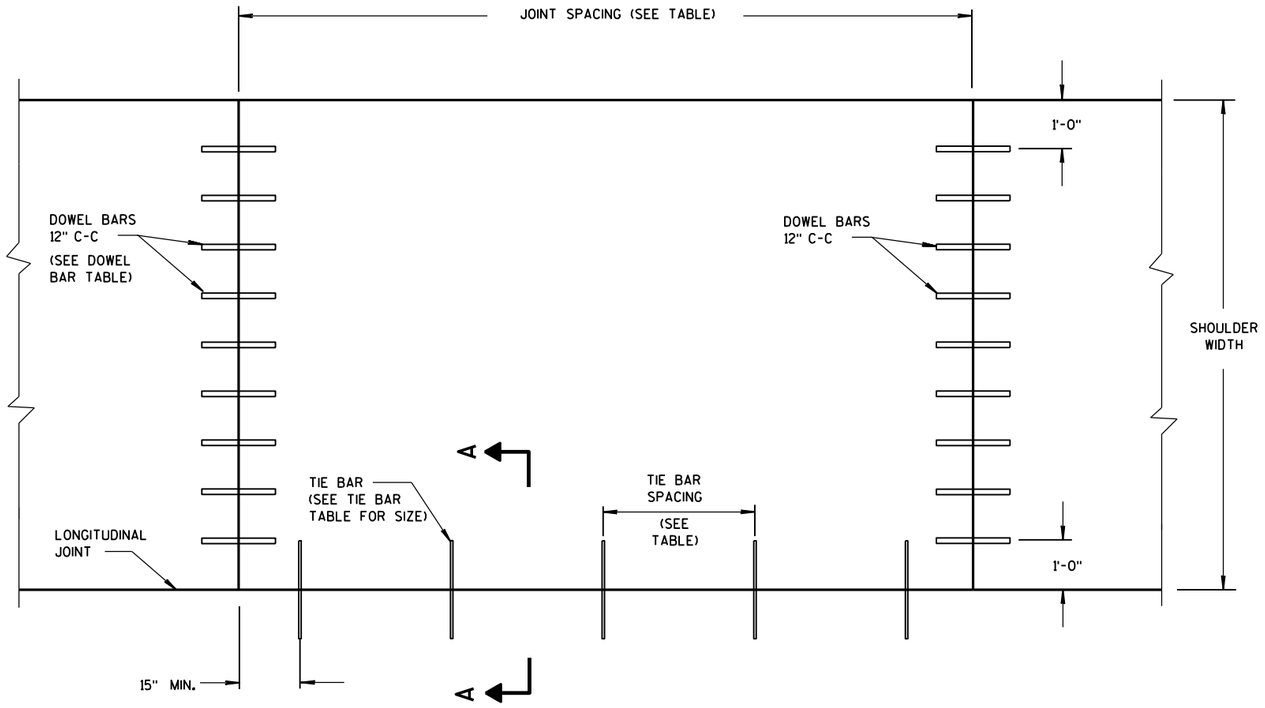
S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

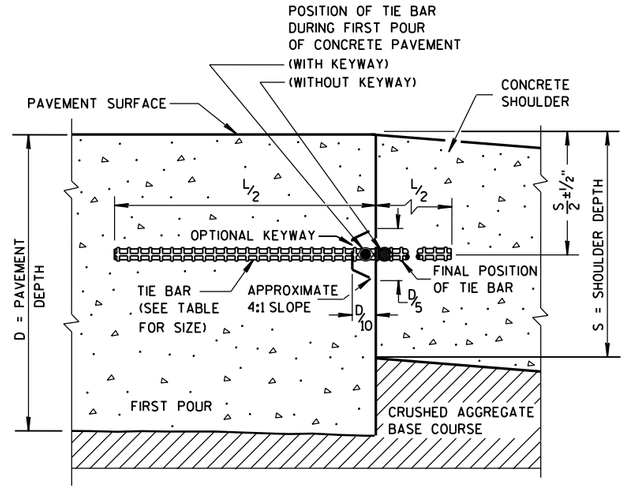
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	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.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEF
FHWA

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S.D.D. 13 A 3-6

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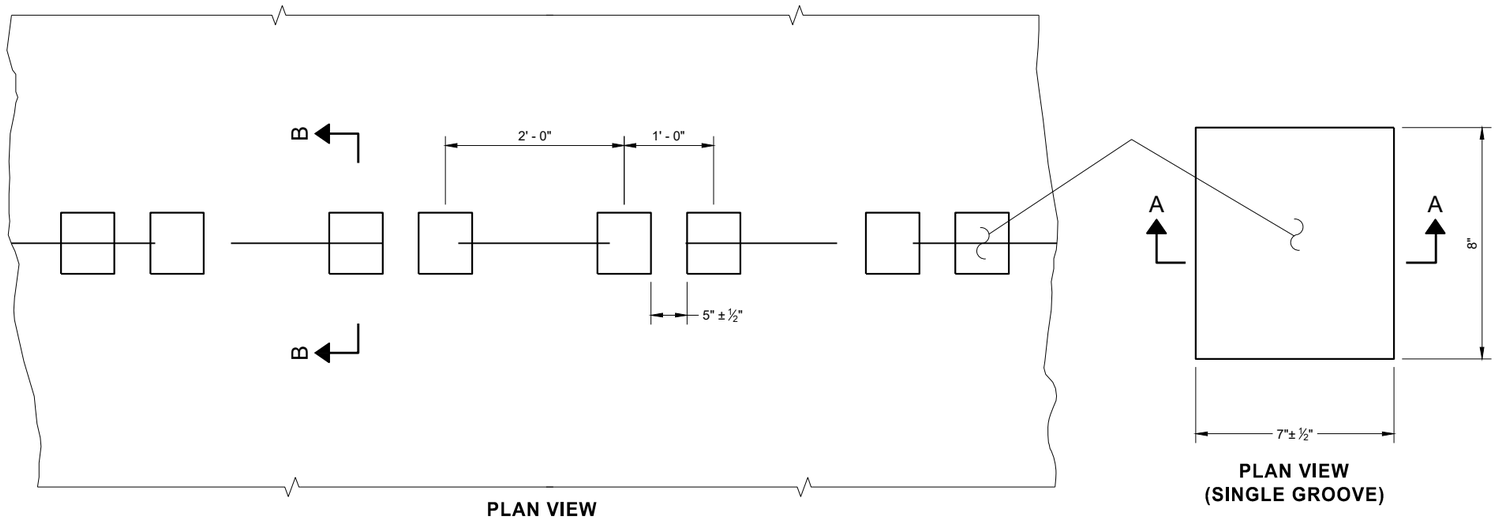
S.D.D. 13 A 3-6



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

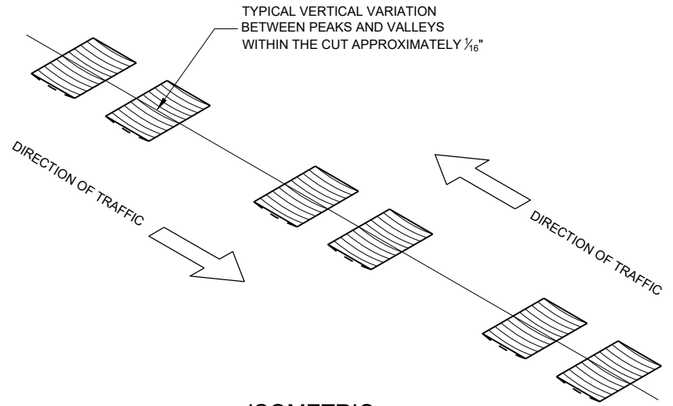
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



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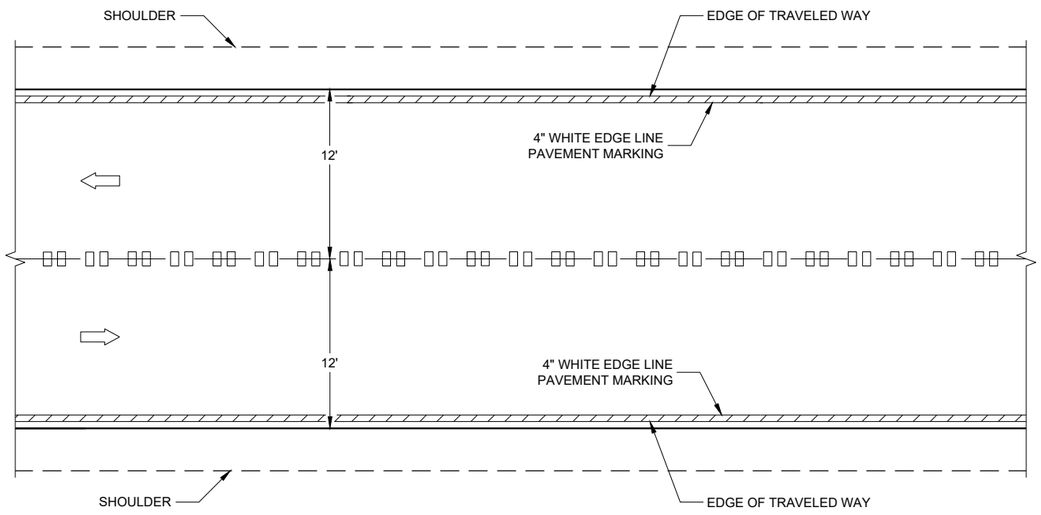
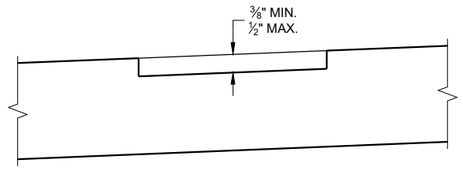
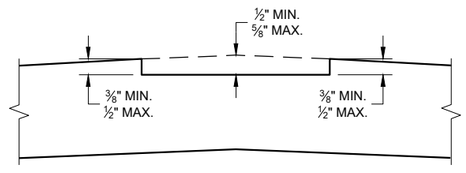


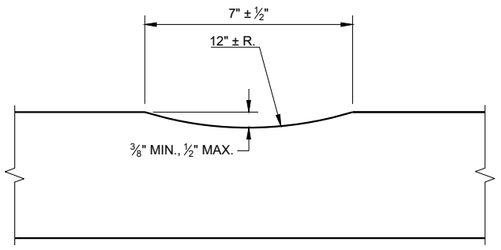
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



SECTION A - A

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13A11 - 03a

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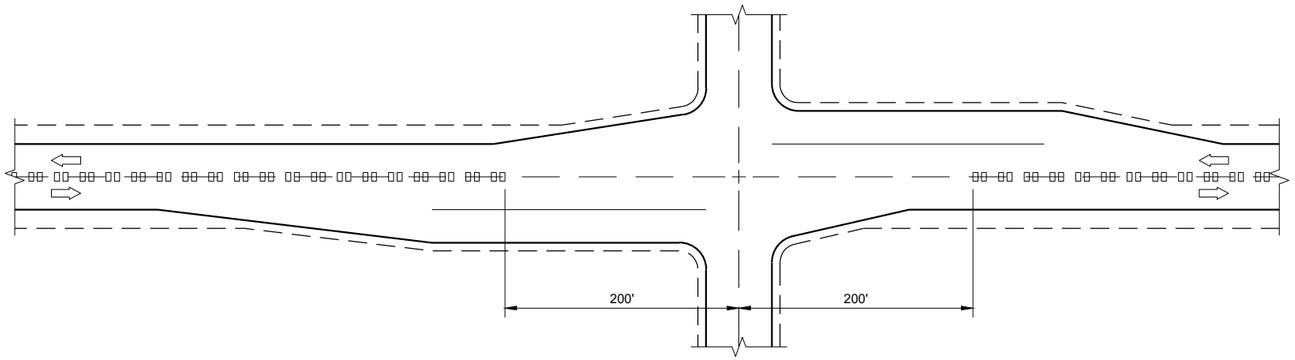
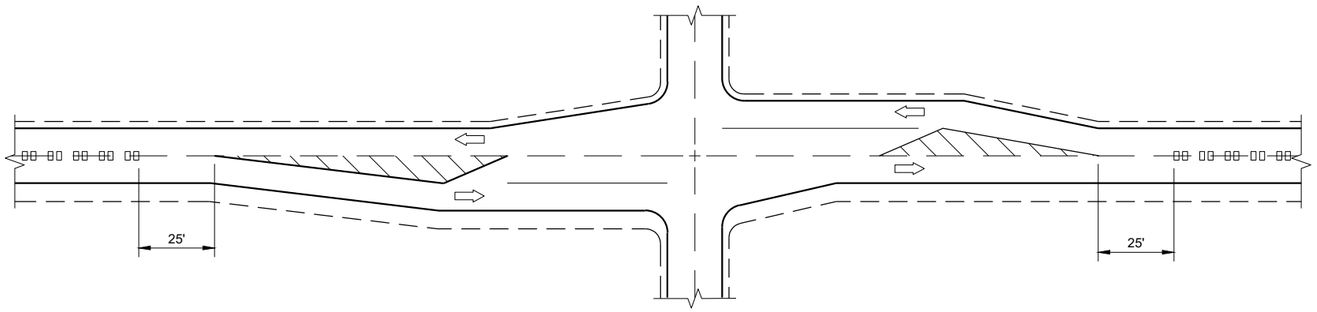
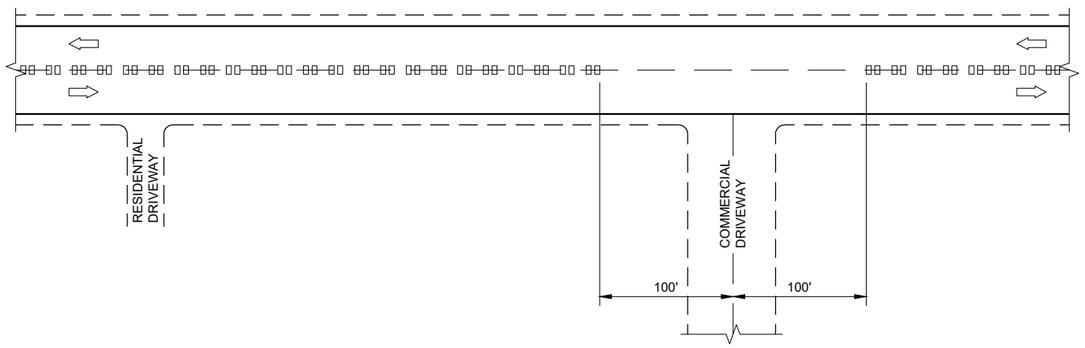
SDD 13A11 - 03a



CENTERLINE GROOVES AT INTERSECTIONS



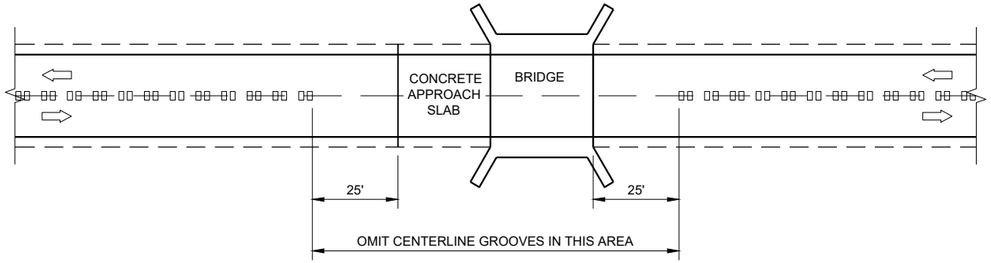
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



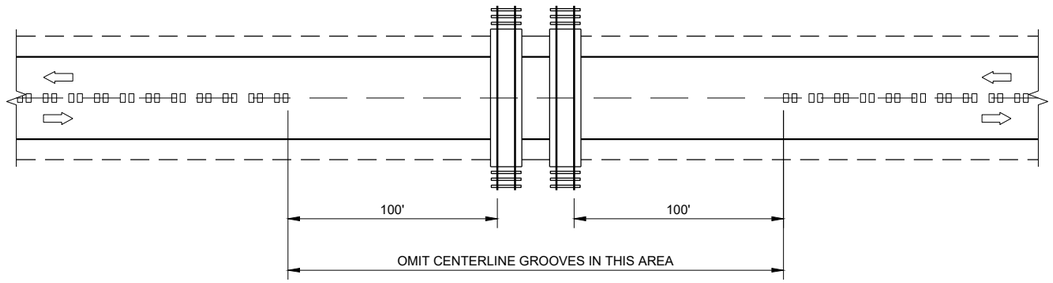
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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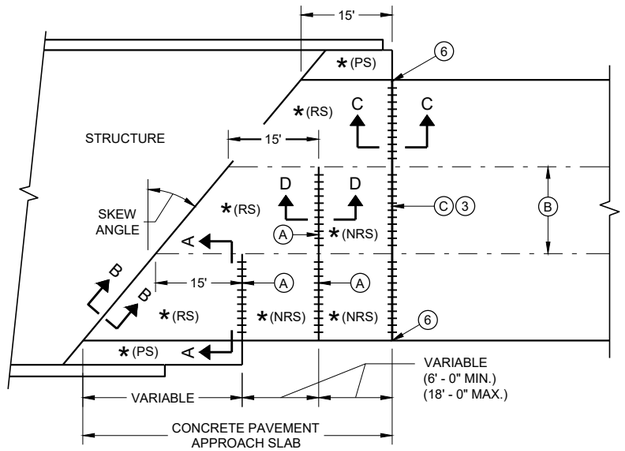
SDD 13A11 - 03b



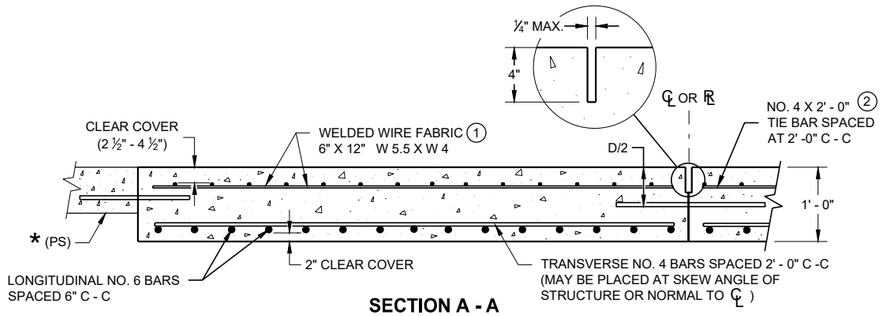
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

(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.

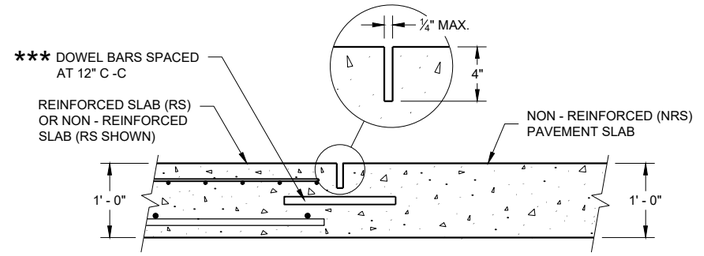
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

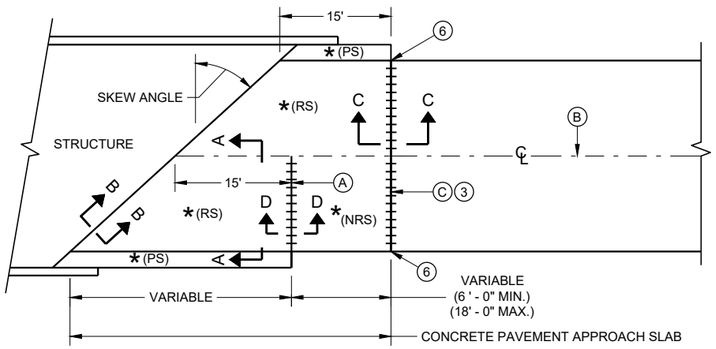
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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

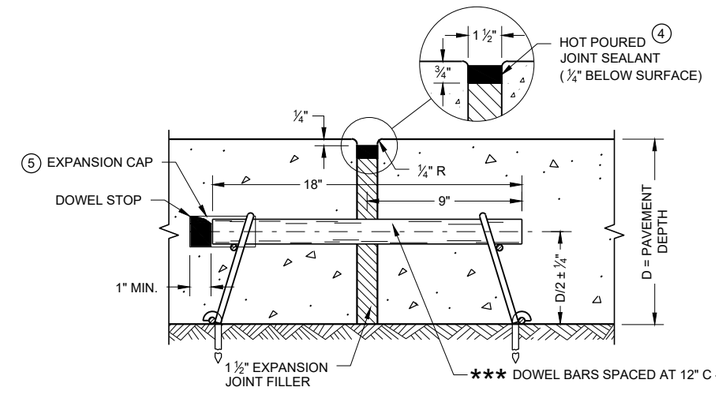


SECTION D - D
CONTRACTION JOINT

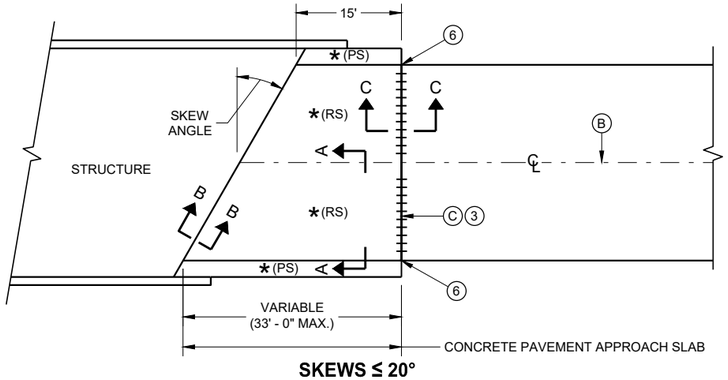


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

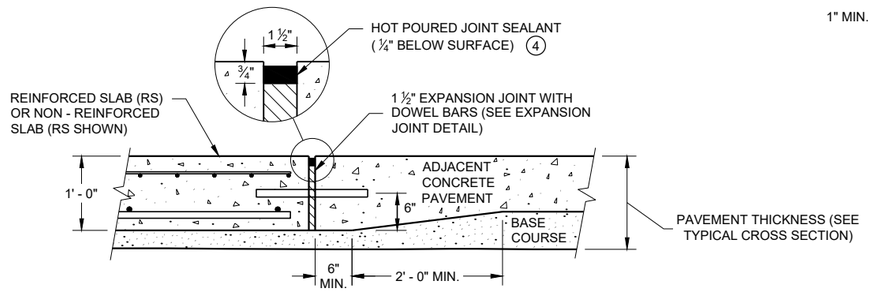
SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

APPROACH SLAB AND ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

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

FHWA

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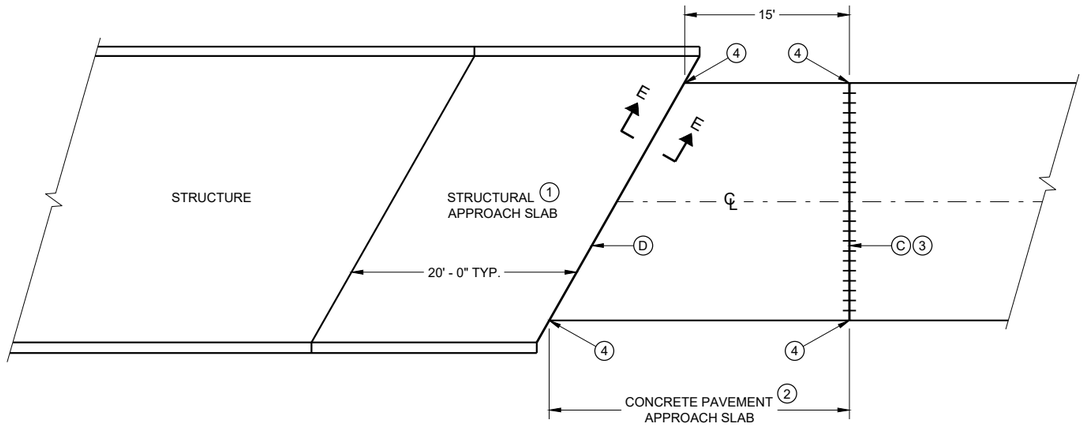
SDD 13B02 - 09a



BRIDGE APPROACHES

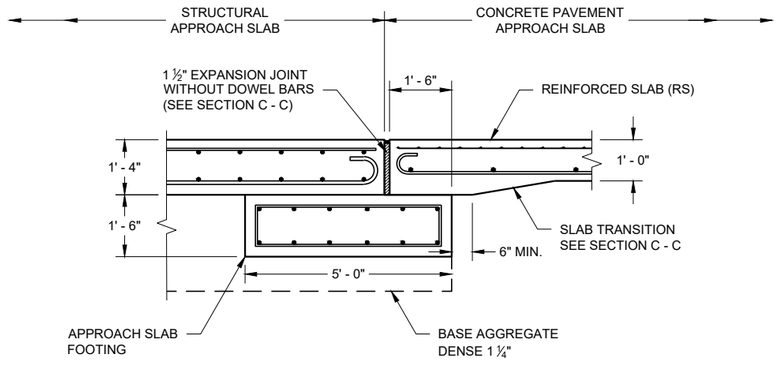
GENERAL NOTES

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

SDD 13B02 - 09b

(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.

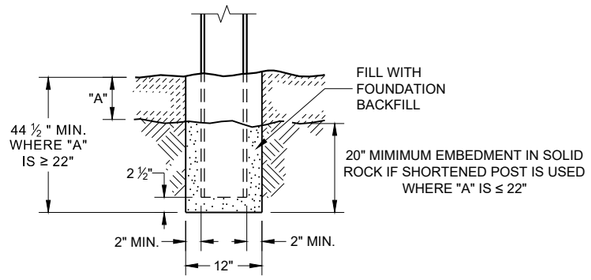
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

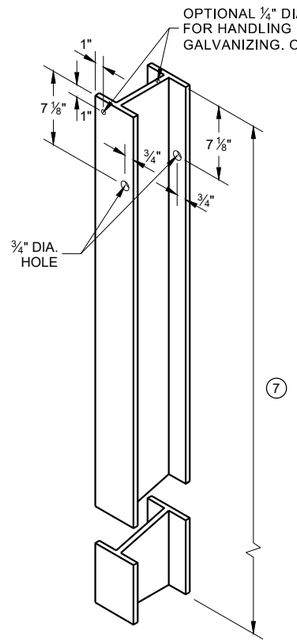
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

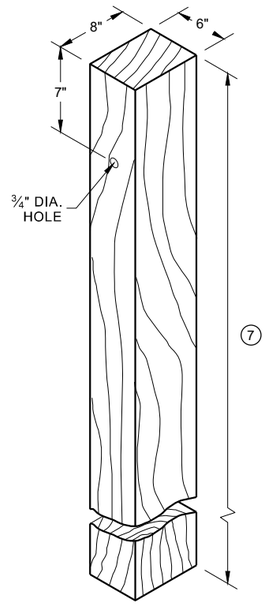
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



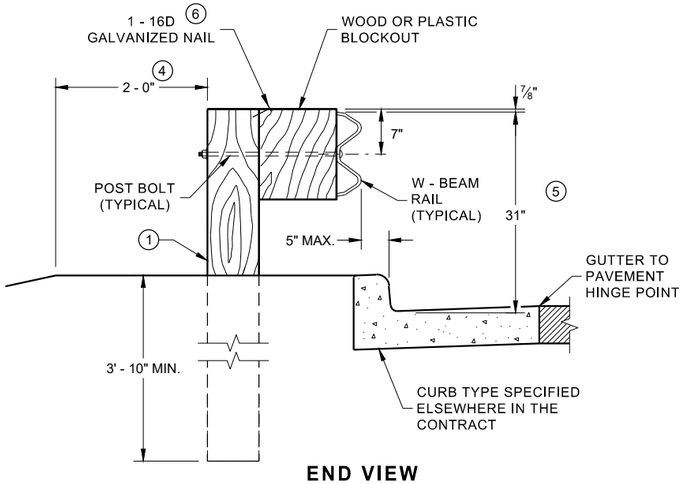
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



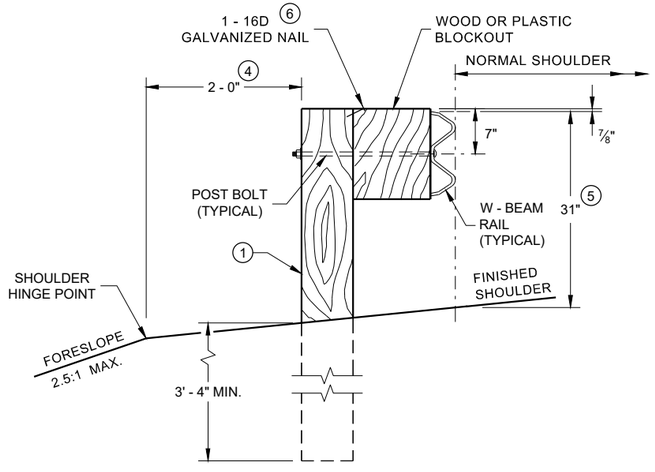
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



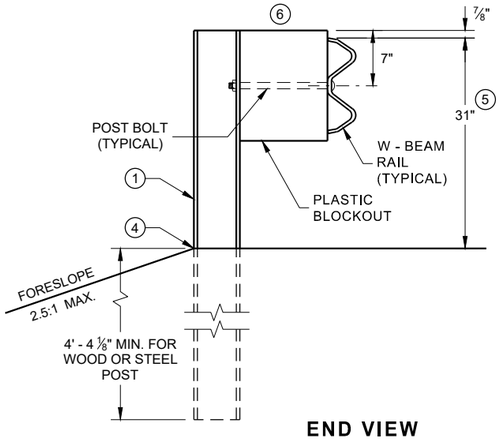
WOOD POST (6" X 8") NOMINAL (1)



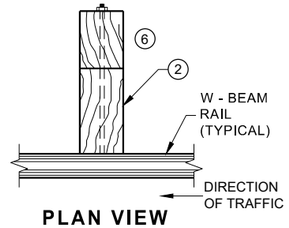
END VIEW
LOCATED ALONG A CURBED ROADWAY



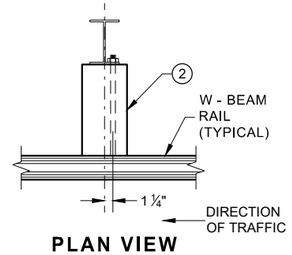
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



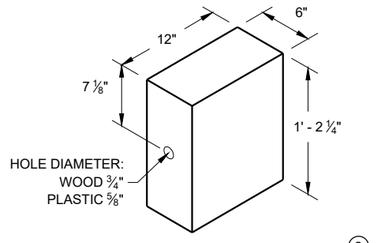
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



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

SDD 14B42 - 07a

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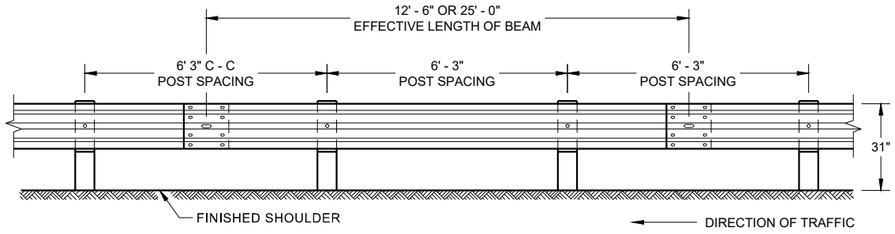
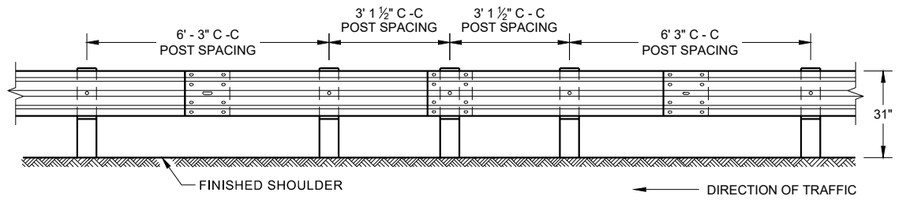
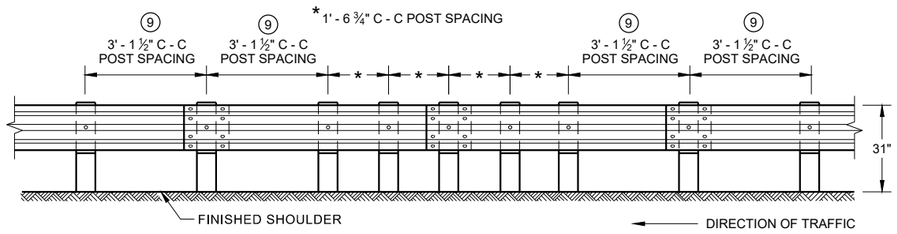


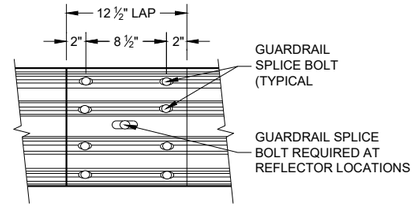
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

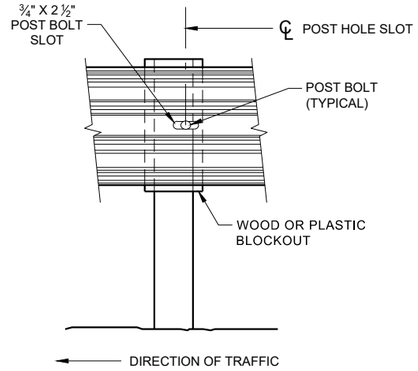
GENERAL NOTES

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

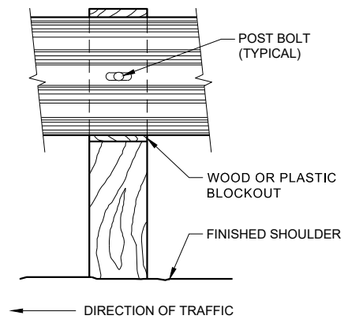
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

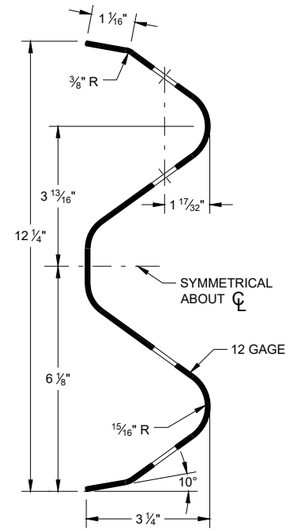
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



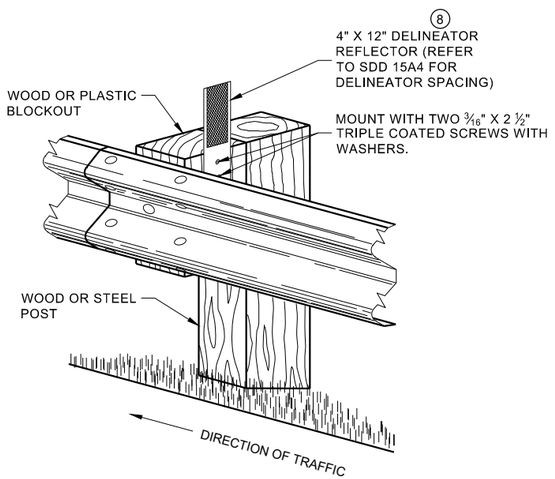
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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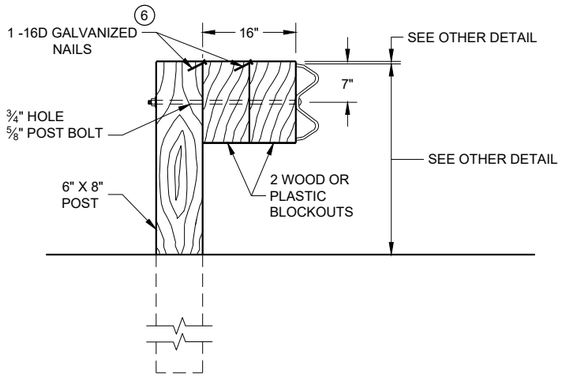
SDD 14B42 - 07b

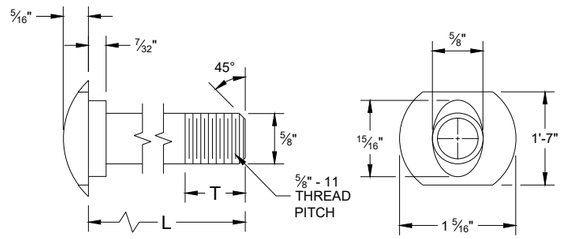


DETAIL FOR 16" BLOCKOUT DEPTH

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.

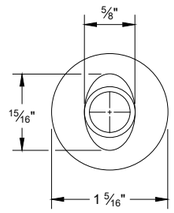
NOTE:

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.

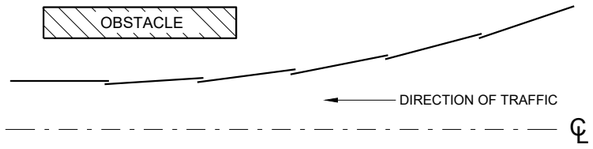


POST BOLT TABLE

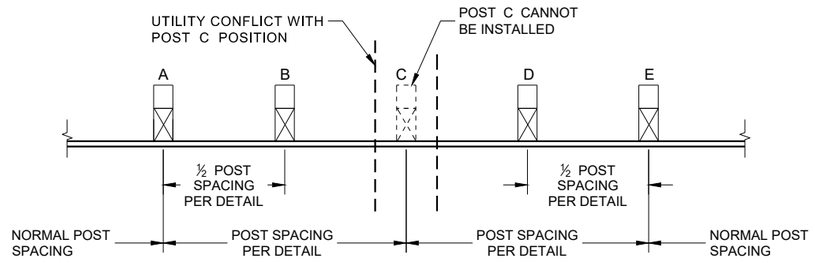
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



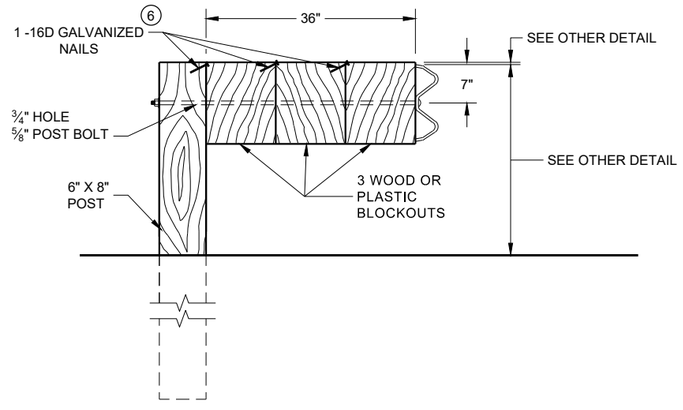
ALTERNATE BOLT HEAD



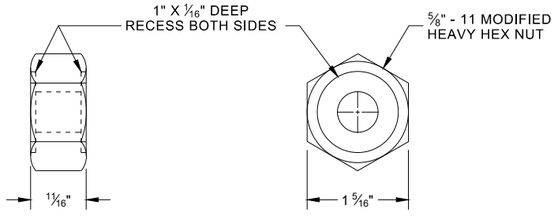
PLAN VIEW
BEAM LAPPING DETAIL



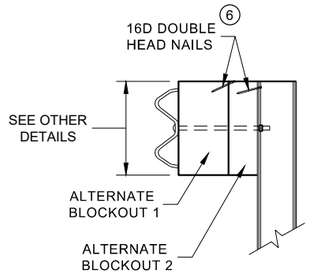
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



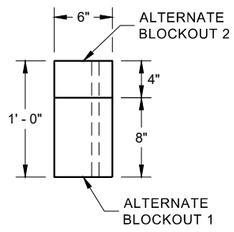
DETAIL FOR 36" BLOCKOUT DEPTH



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

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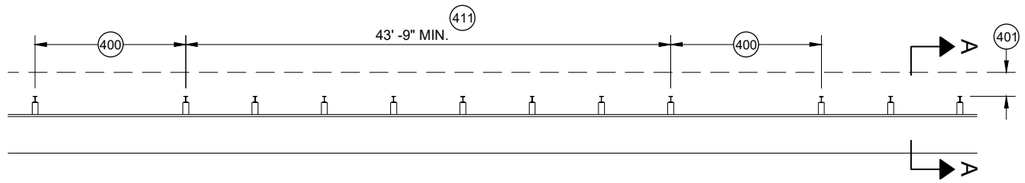
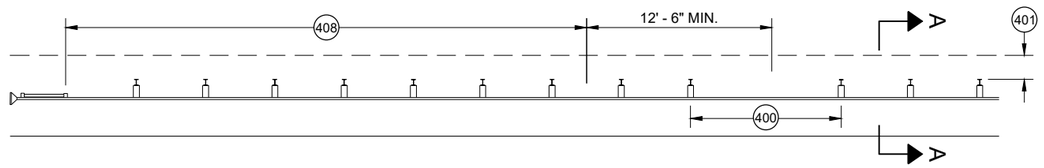
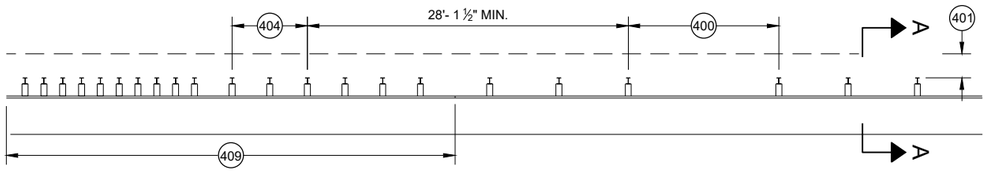


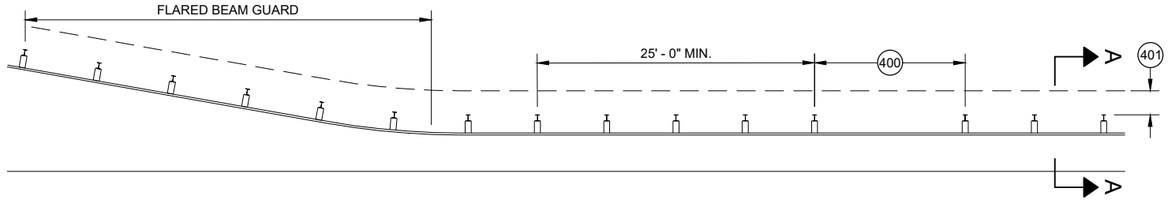
MISSING POST IN MGS GUARDRAIL



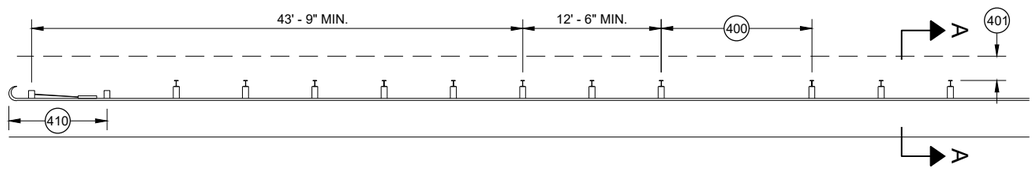
MISSING POST IN MGS GUARDRAIL NEAR EAT



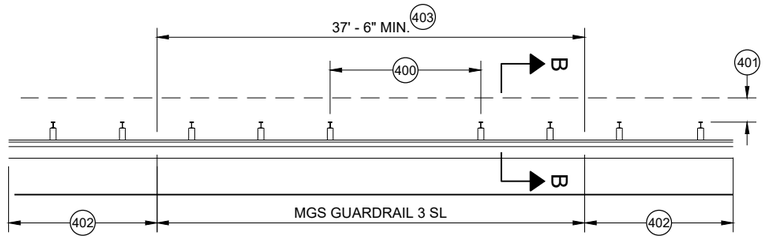
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

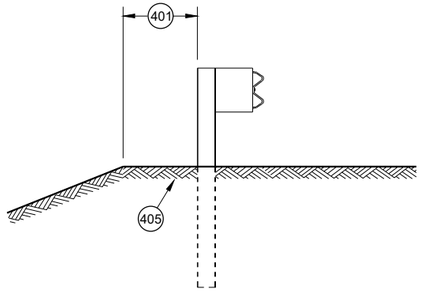


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

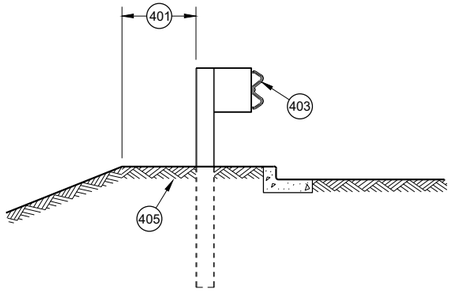


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

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SDD 14B42 - 07d

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.

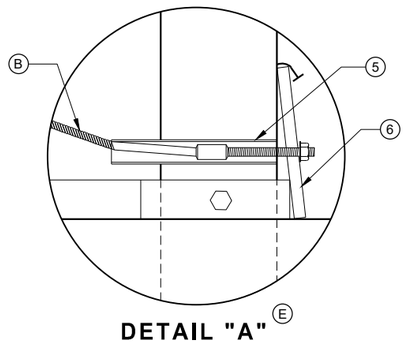
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

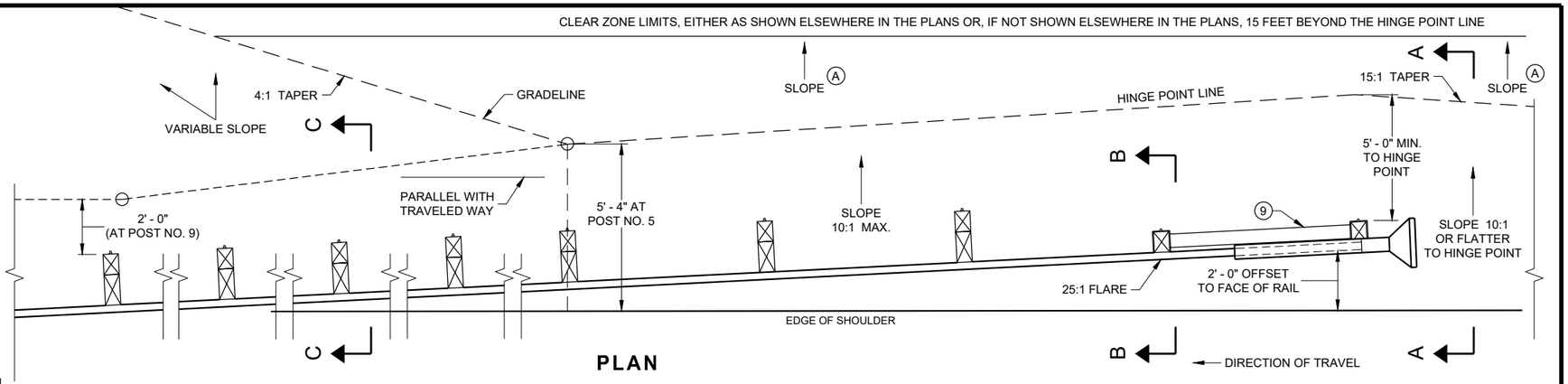
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

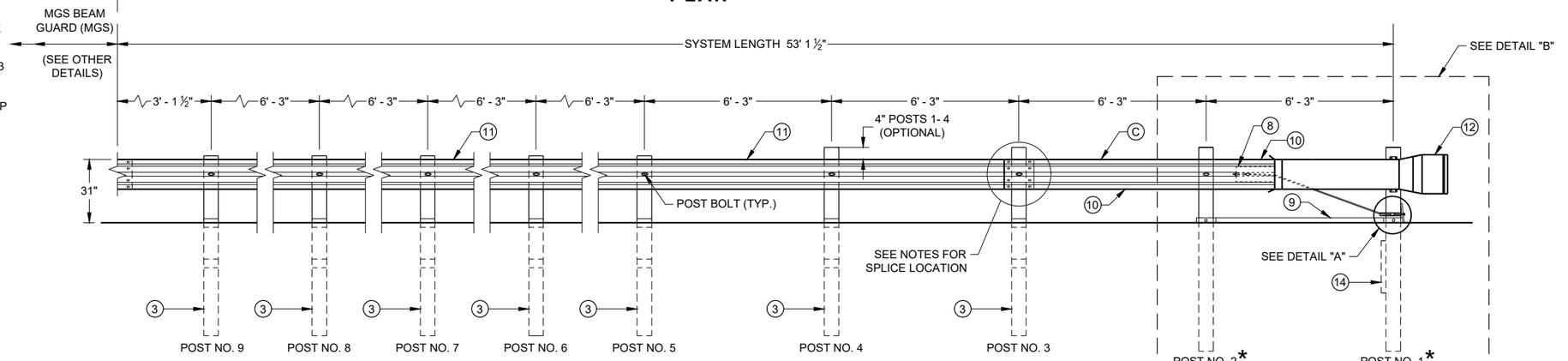
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



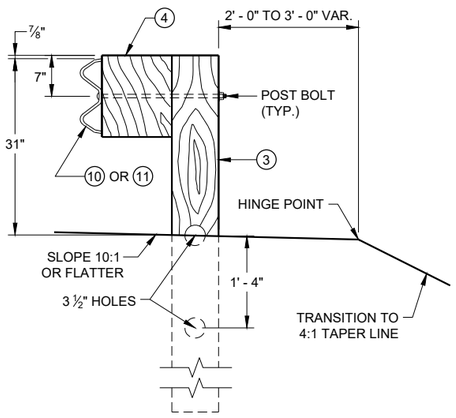
DETAIL "A" (E)



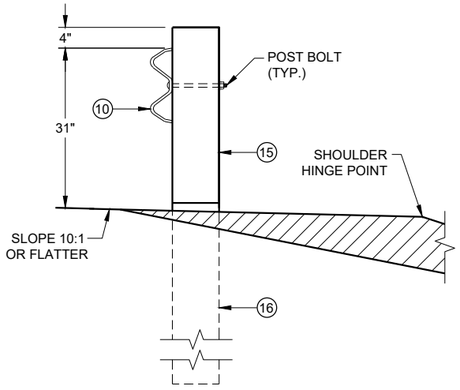
PLAN



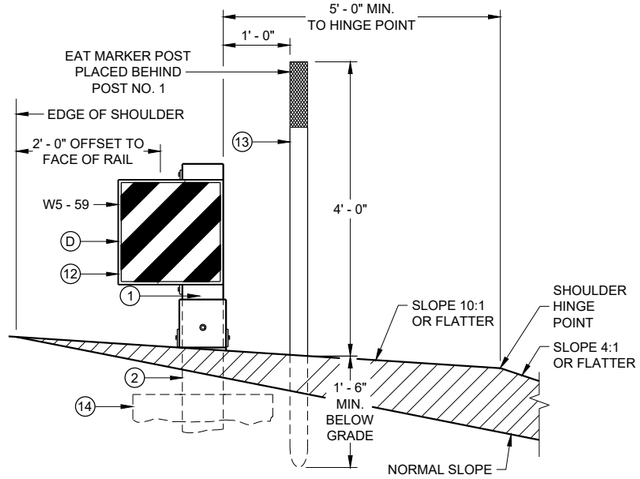
ELEVATION



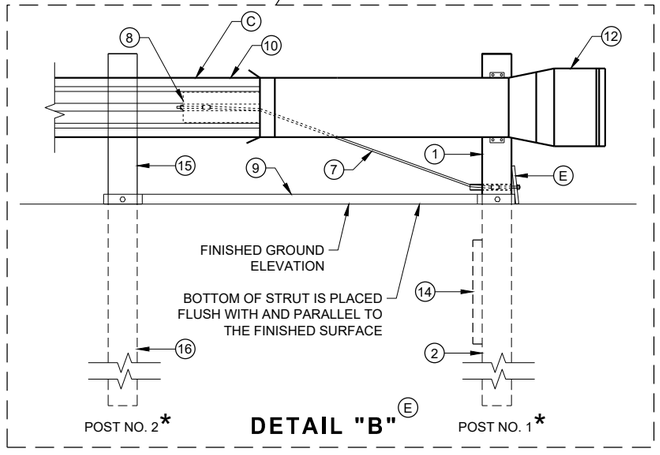
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



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

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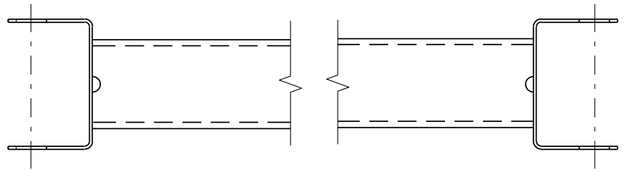
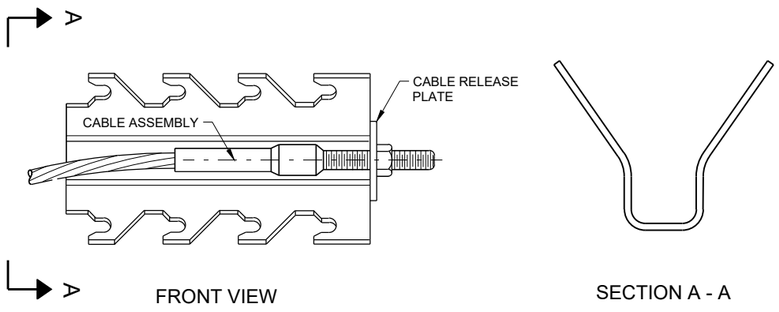


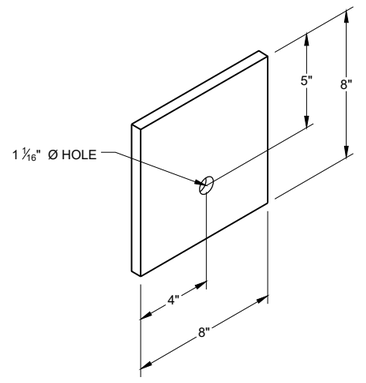
GENERIC GROUND STRUT ⑨ Ⓔ

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 ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

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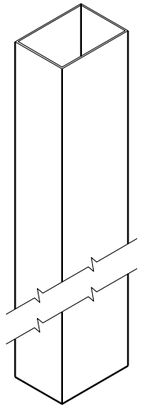
SDD 14B44 - 04b

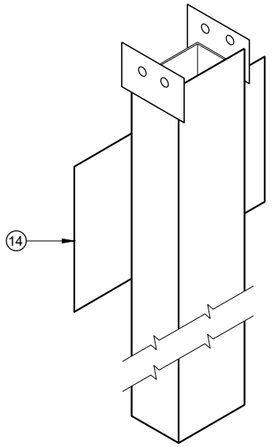
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

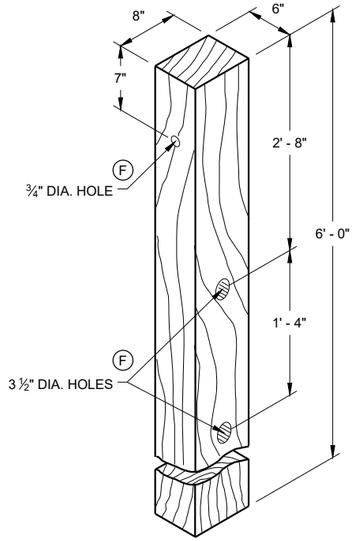
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



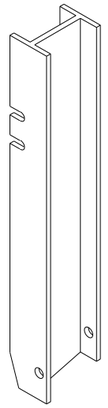
UPPER POST NO. 1 (1) (E)



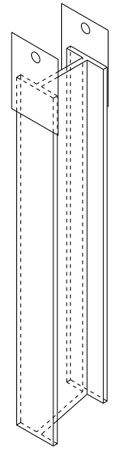
LOWER POST NO. 1 (2) (E)



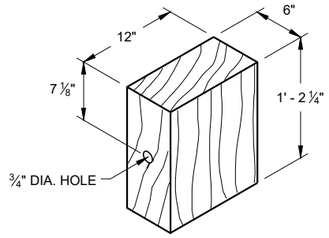
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



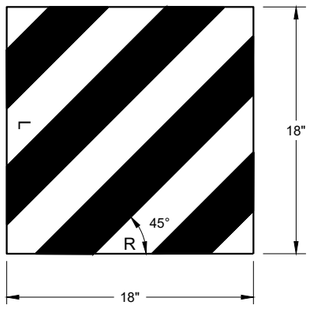
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

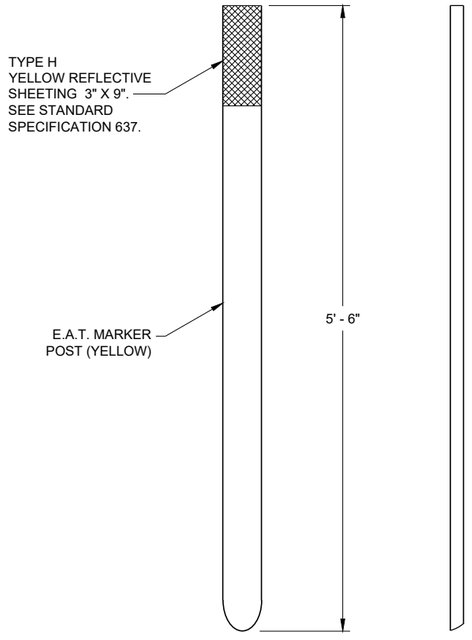


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



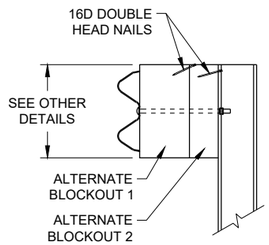
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

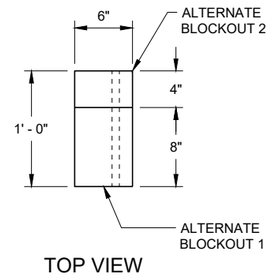


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

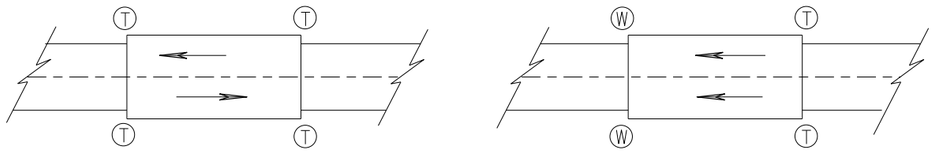
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

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.

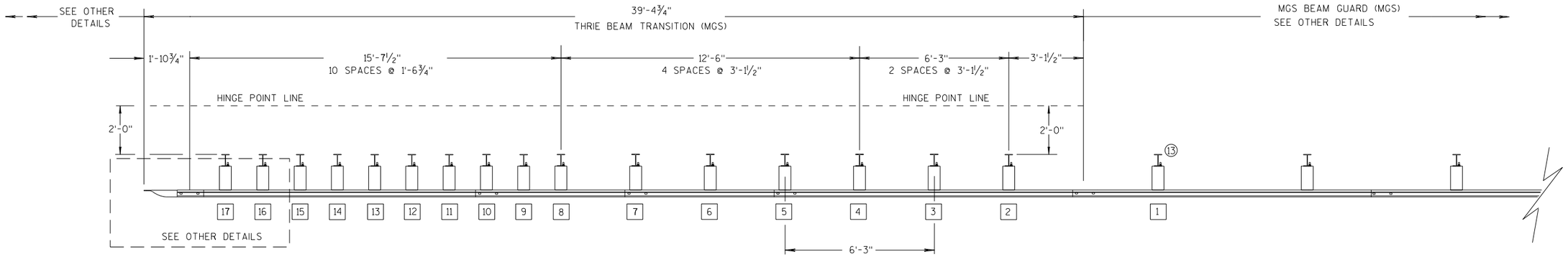
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

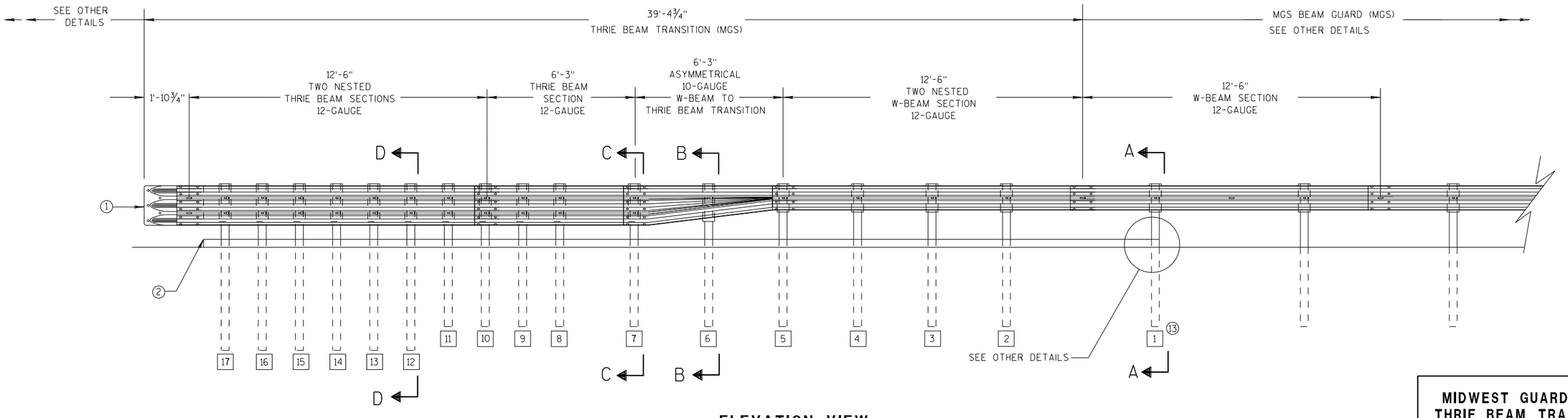
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

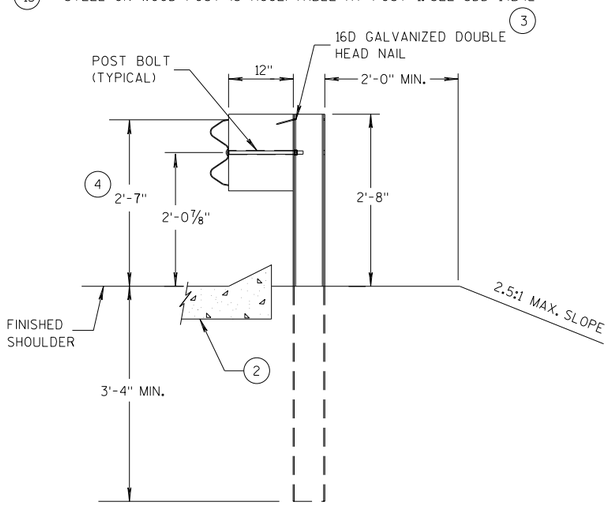
GENERAL NOTES

(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.

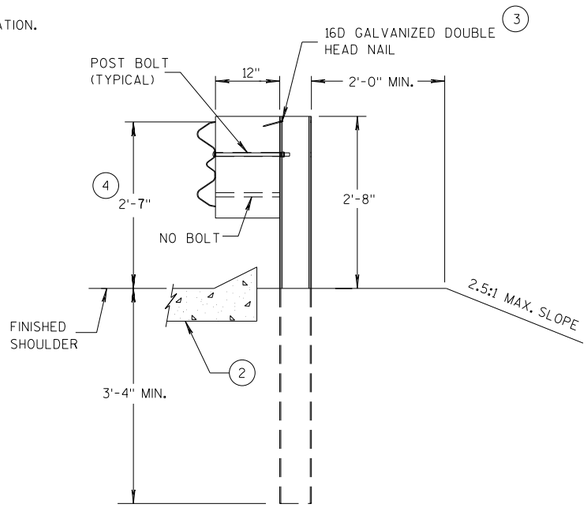
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



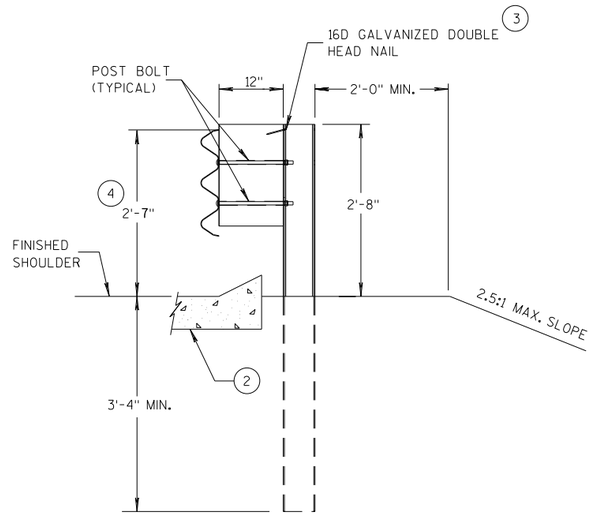
SECTION A-A (13)

POSTS 1-5



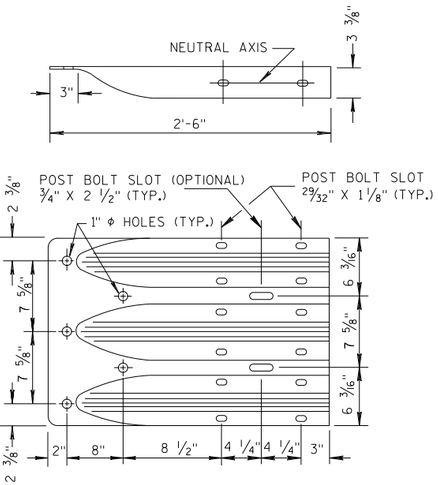
SECTION B-B

POST 6

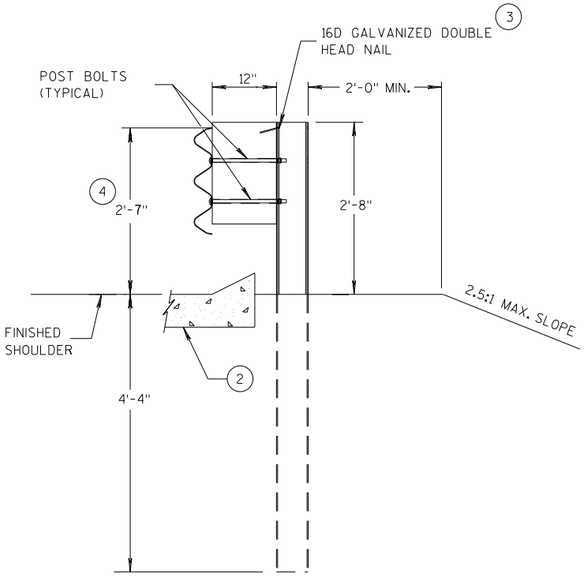


SECTION C-C

POSTS 7-11

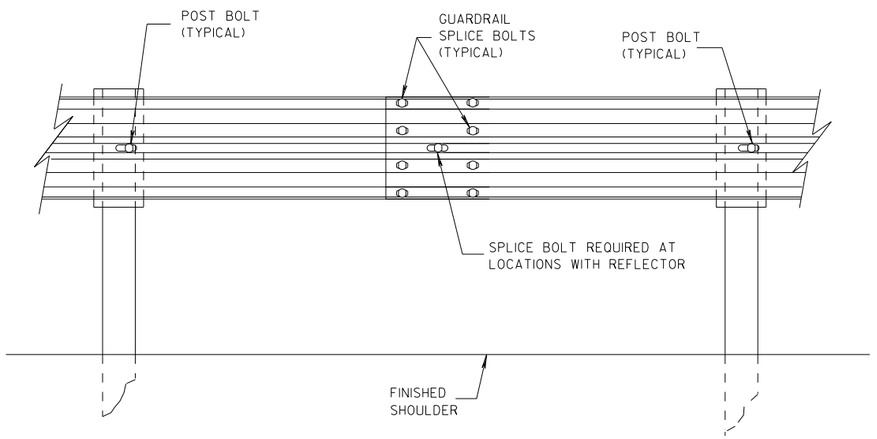


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

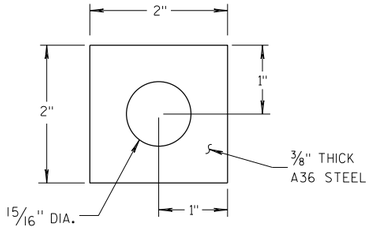
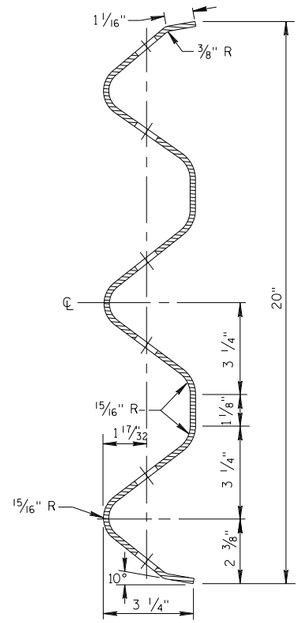


PLATE WASHER DETAIL



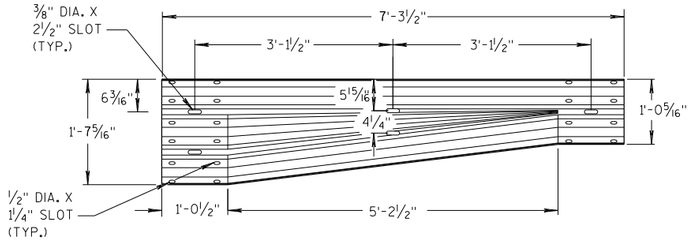
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

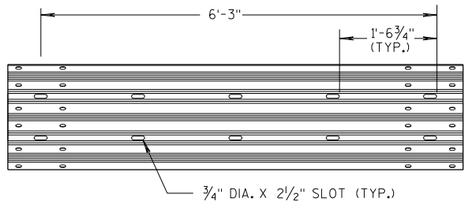
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

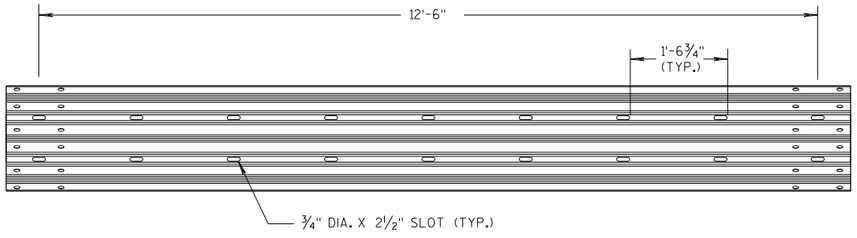
S.D.D. 14 B 45-5b



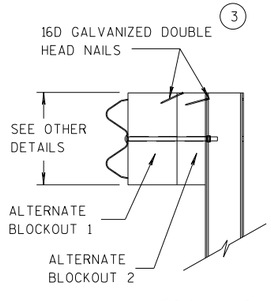
W-BEAM TO THRIE BEAM TRANSITION SECTION



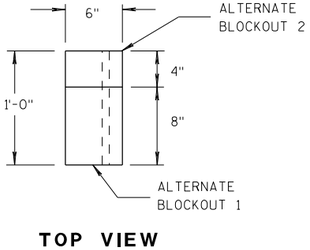
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

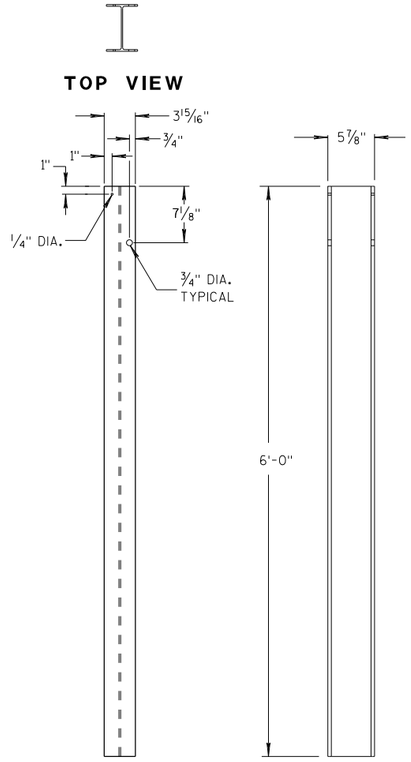


SIDE VIEW



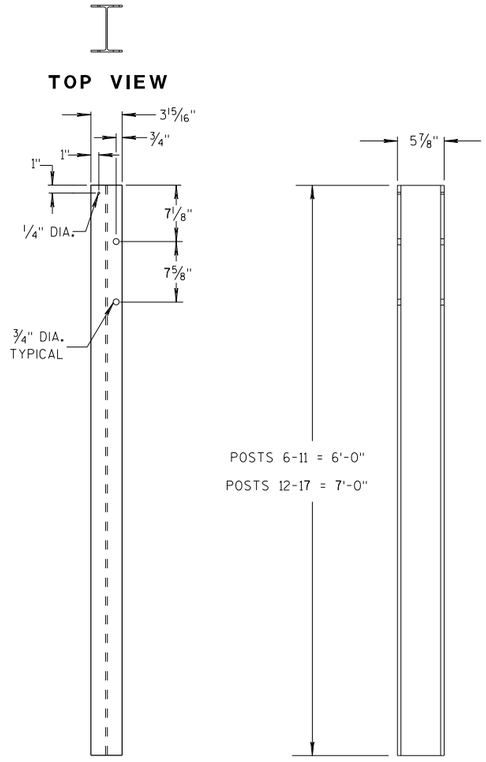
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



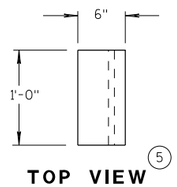
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

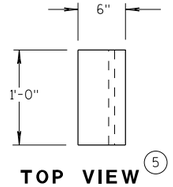


FRONT VIEW SIDE VIEW

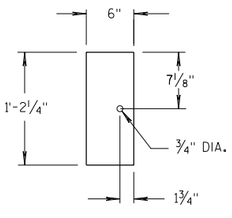
STEEL POSTS 6-17



TOP VIEW (5)

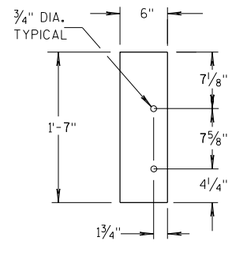


TOP VIEW (5)



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.

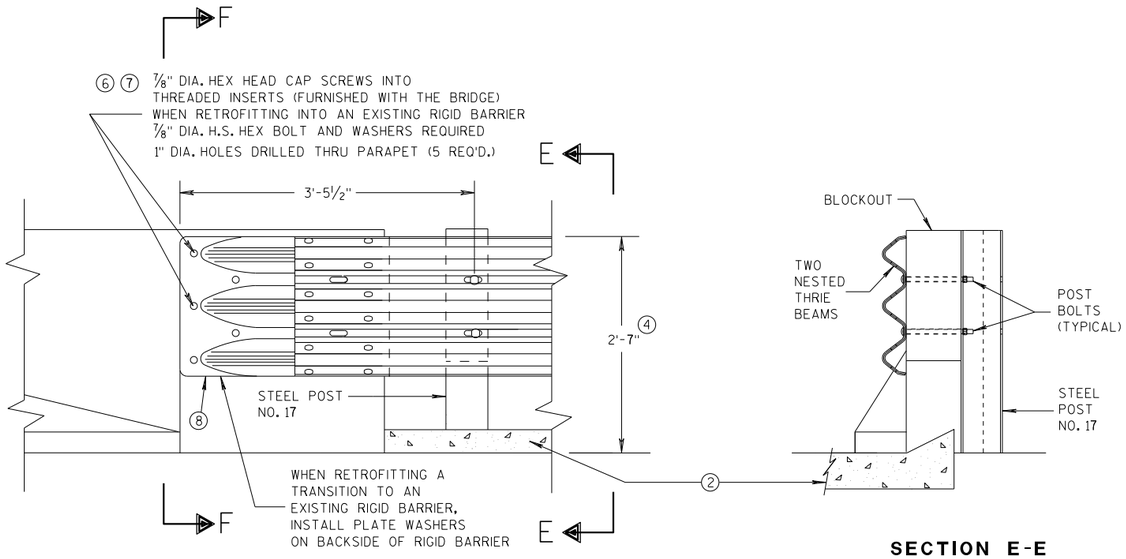
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



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.

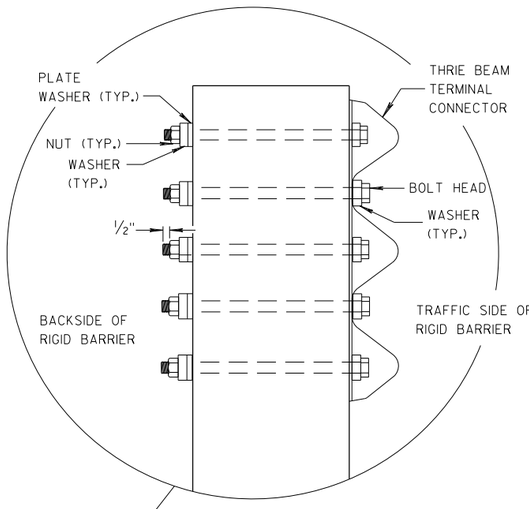
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

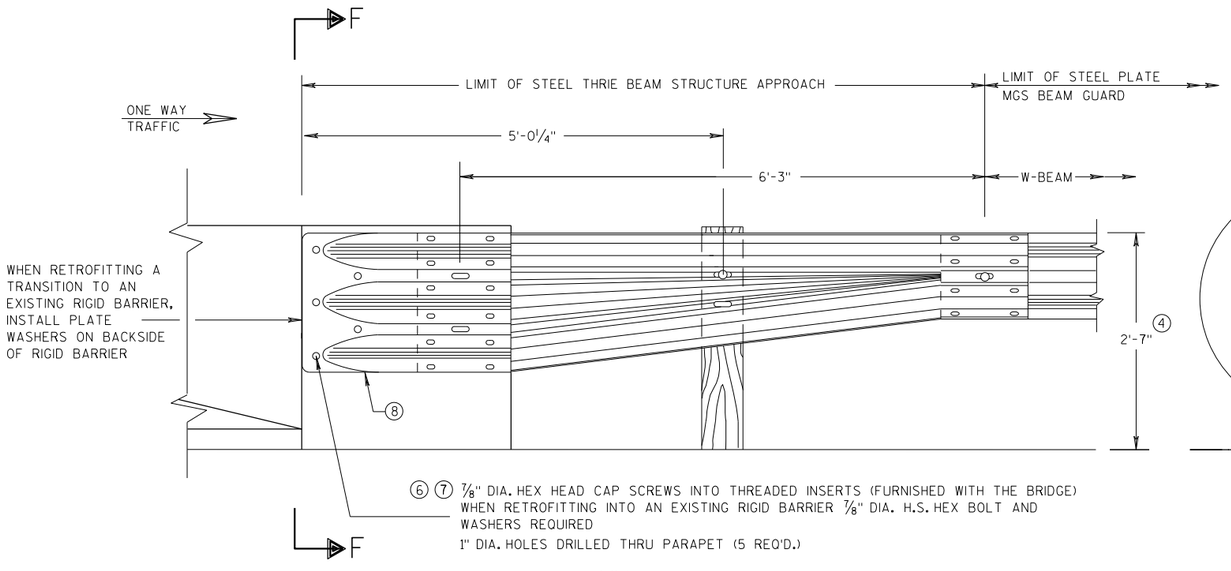
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

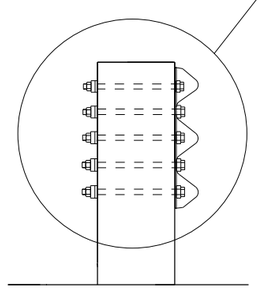
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" 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".

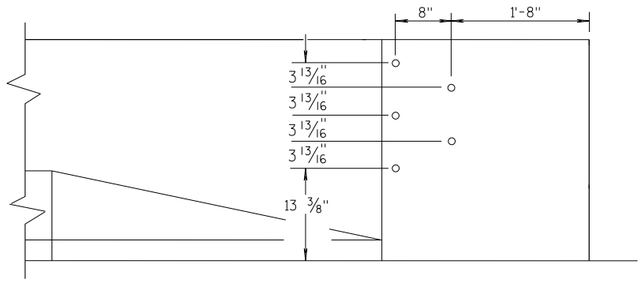




FRONT VIEW



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

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[illegible] UNIT SUPERVIS[illegible]
FHWA

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

6

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

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.

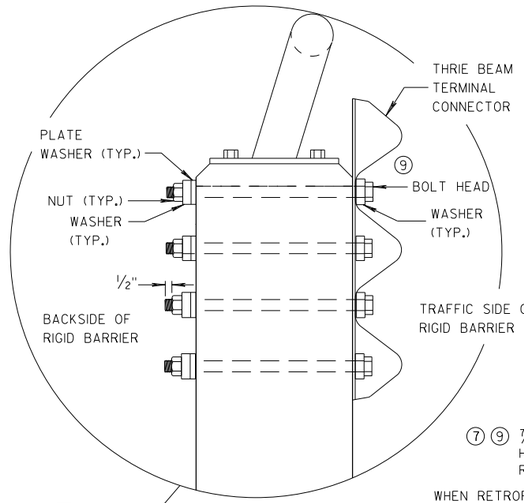
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

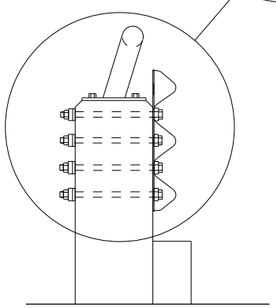
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

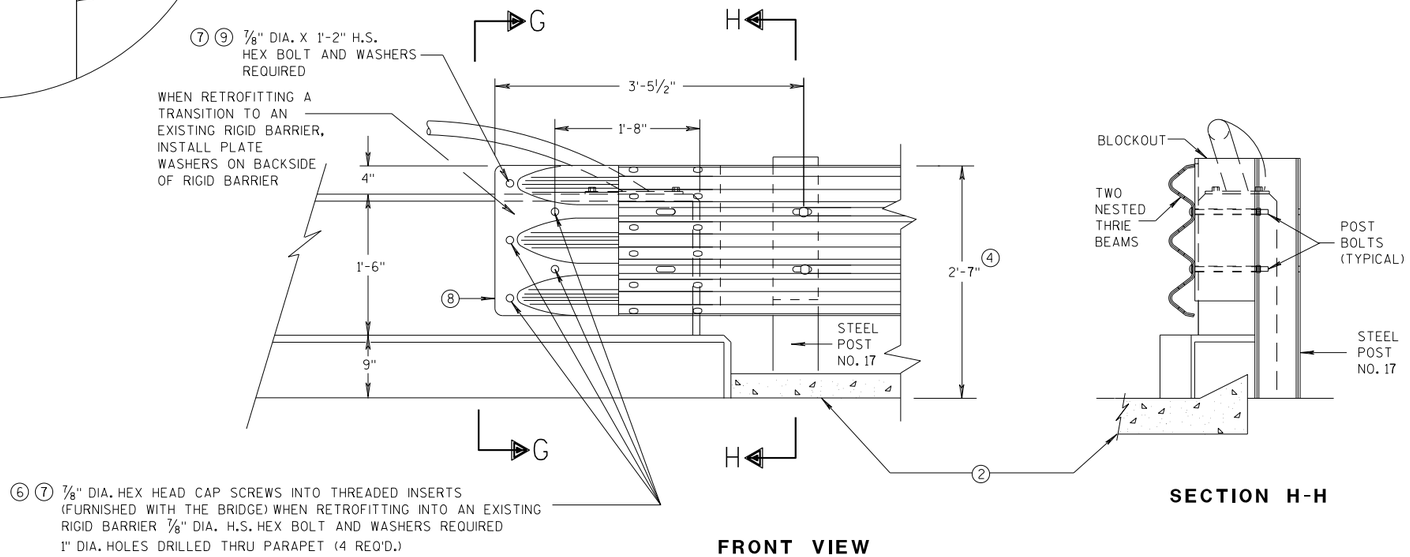
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(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.





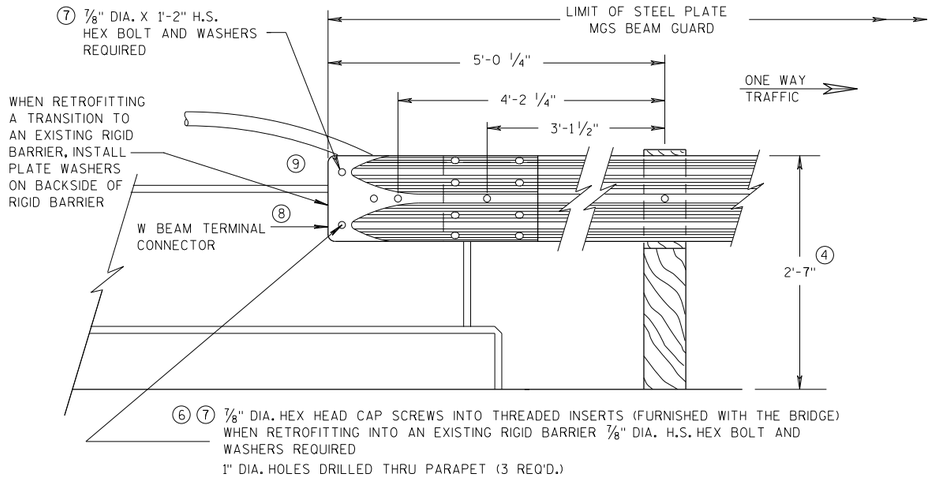
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(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
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS NT
FHWA

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

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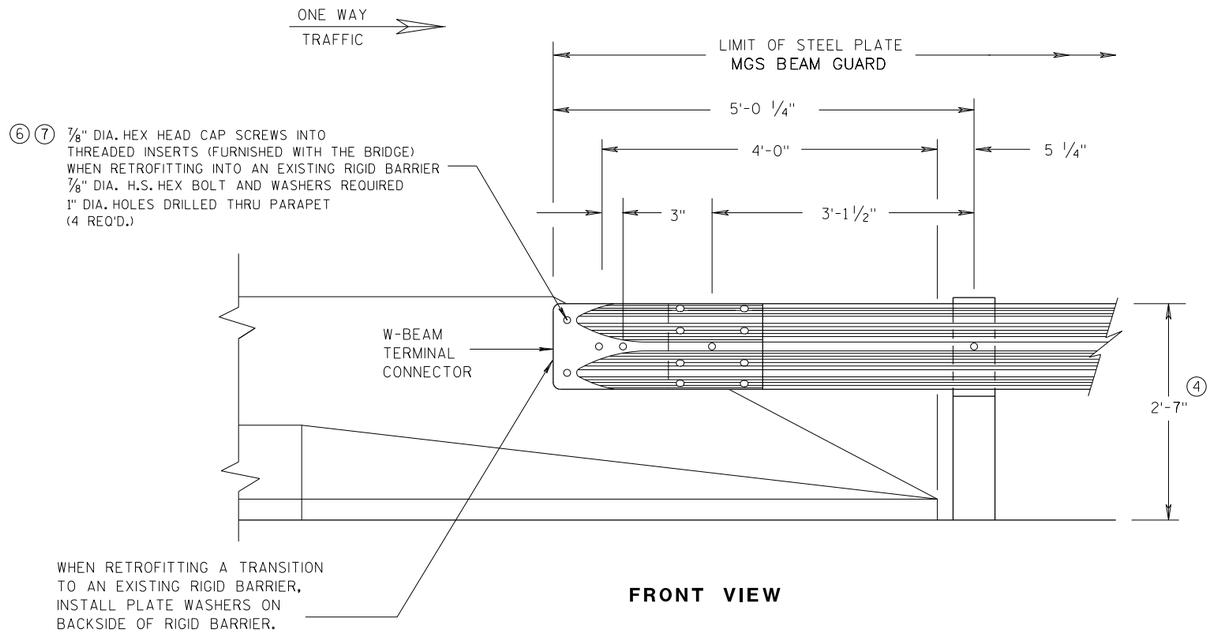
S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

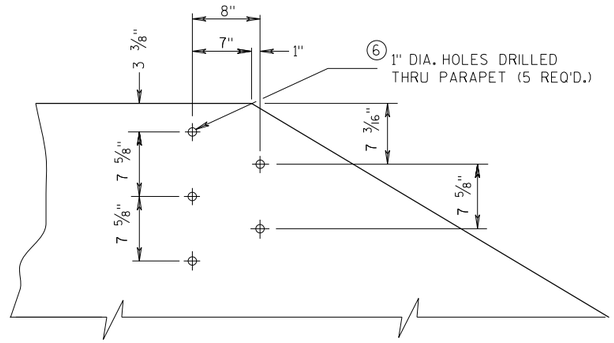
GENERAL NOTES

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

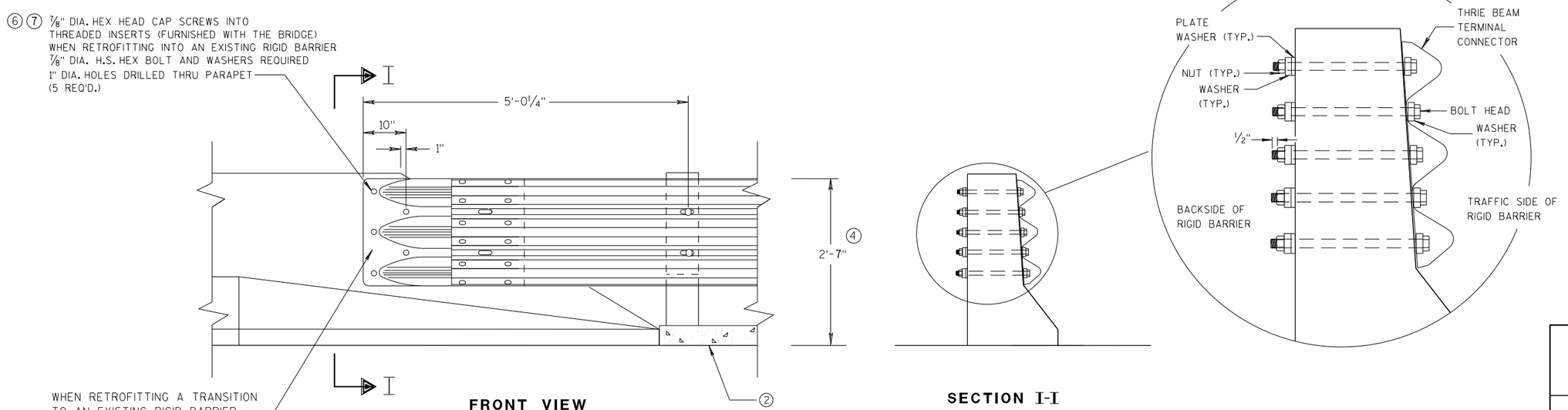
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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 5/32" 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

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
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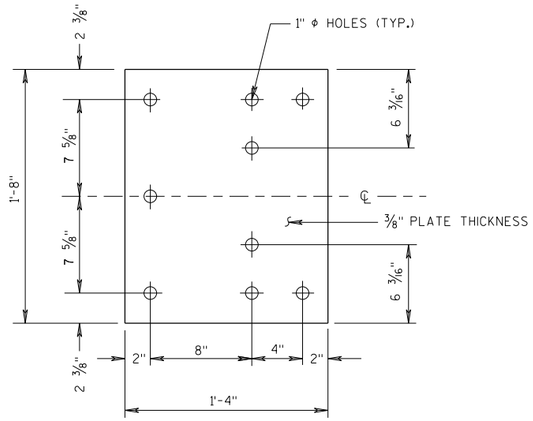
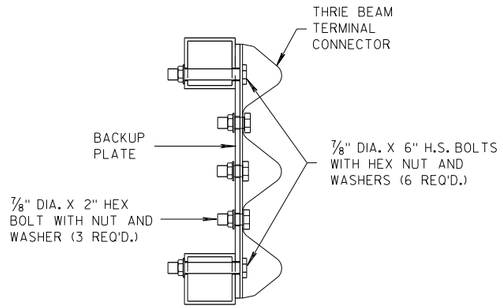
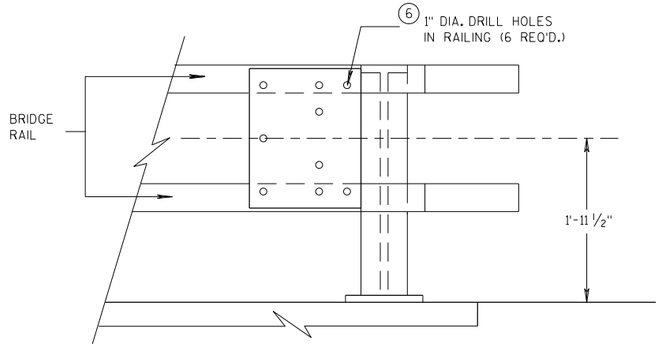


BACK-UP PLATE DETAIL



SECTION J-J

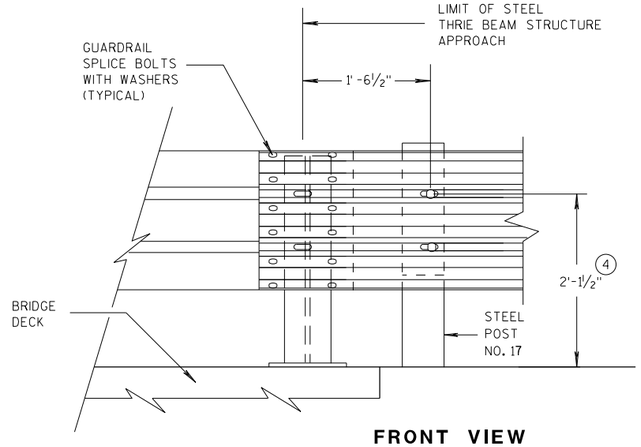


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

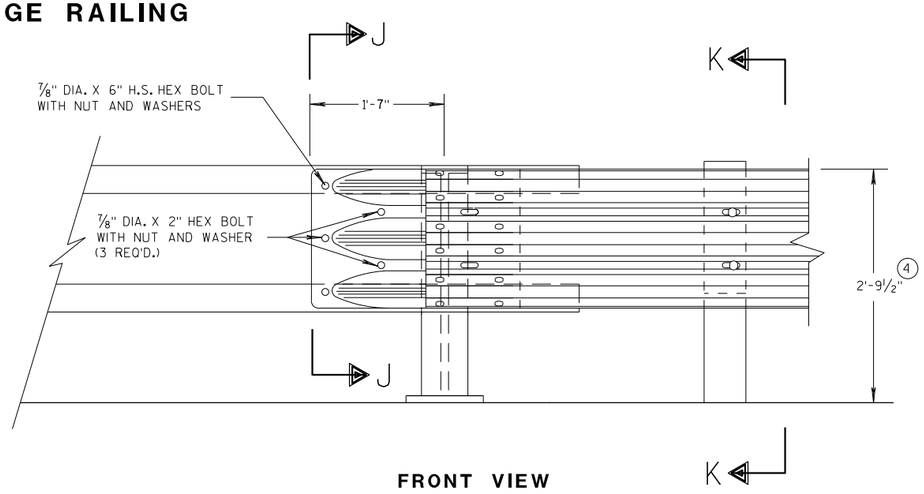
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

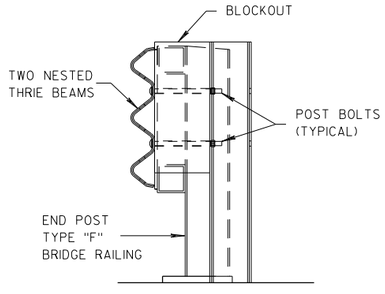


FRONT VIEW

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

APPROVED 07/2018 — DATE
FHWA

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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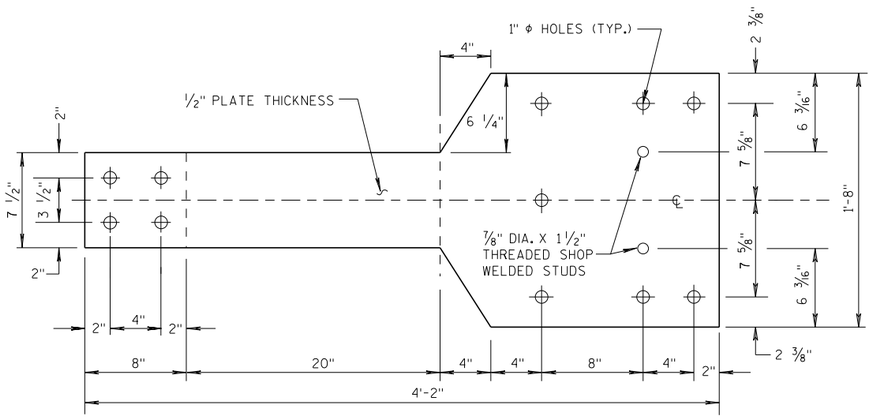
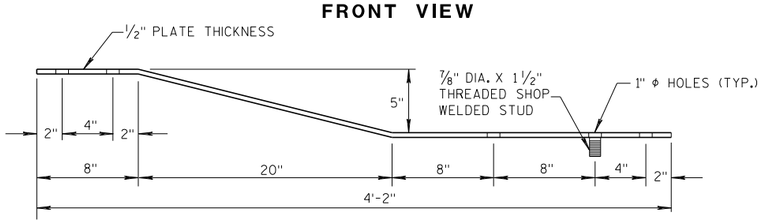
GENERAL NOTES

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

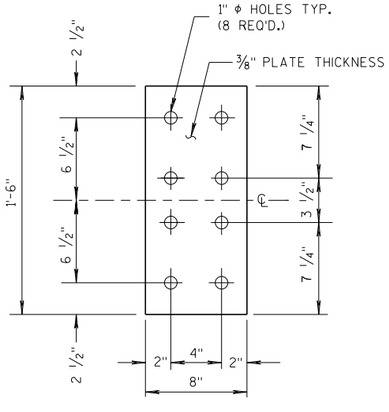


FRONT VIEW



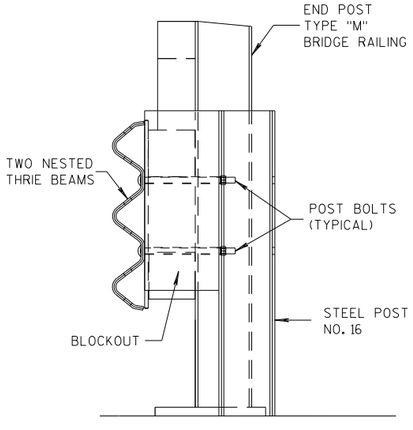
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

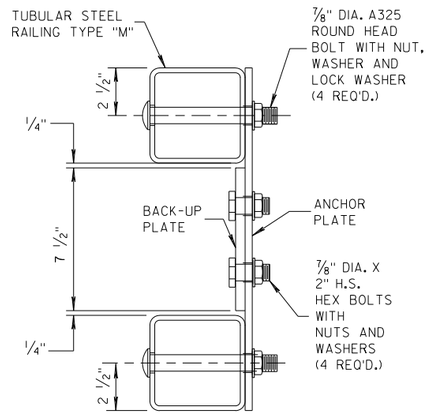


FRONT VIEW

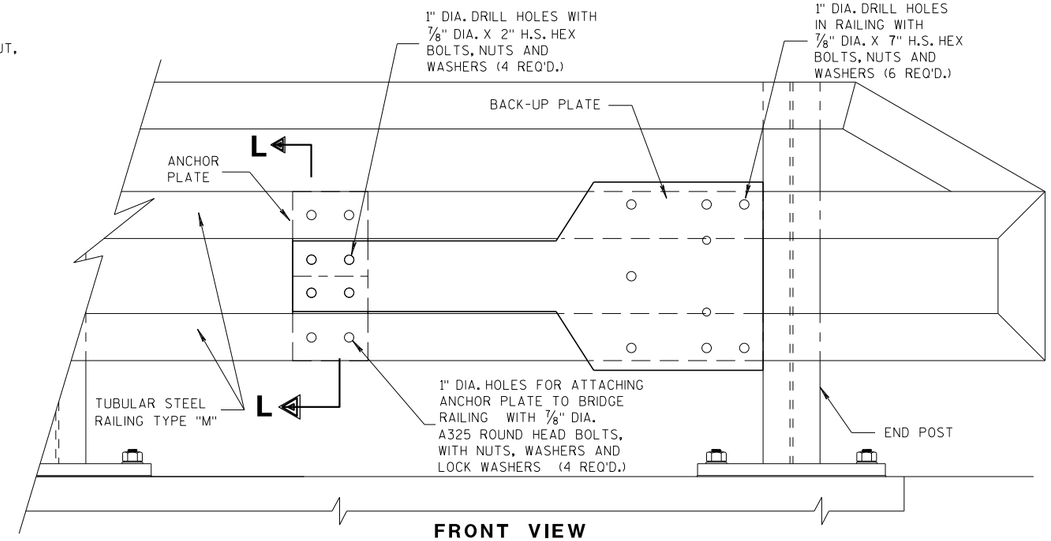
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

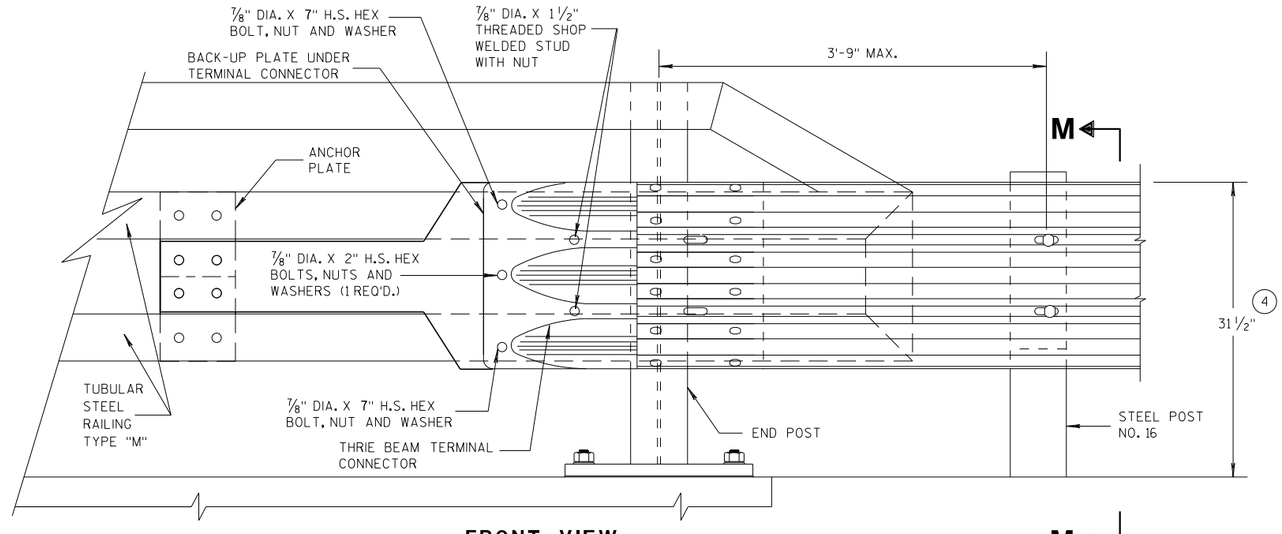


SECTION L-L

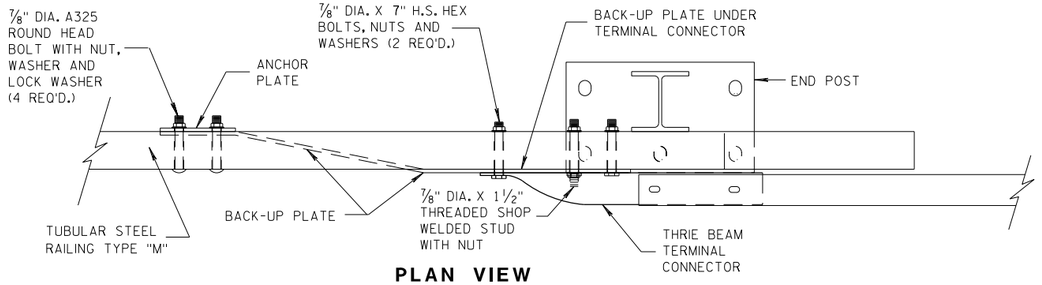


FRONT VIEW

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
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
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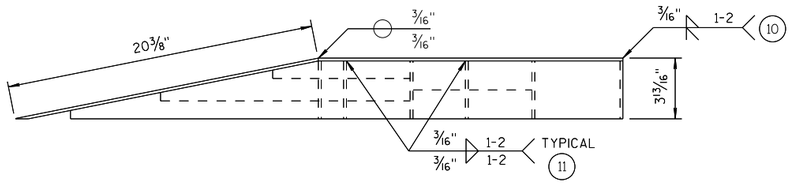

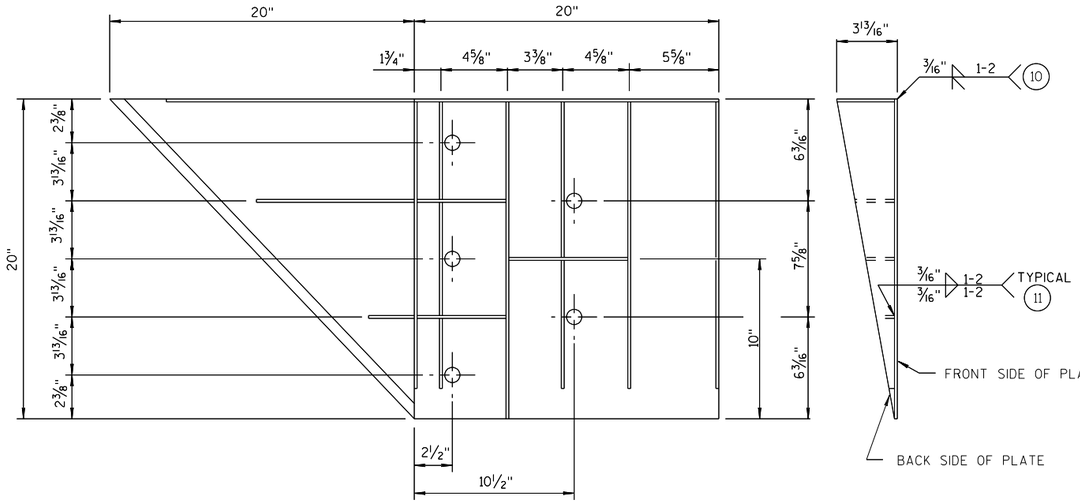

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

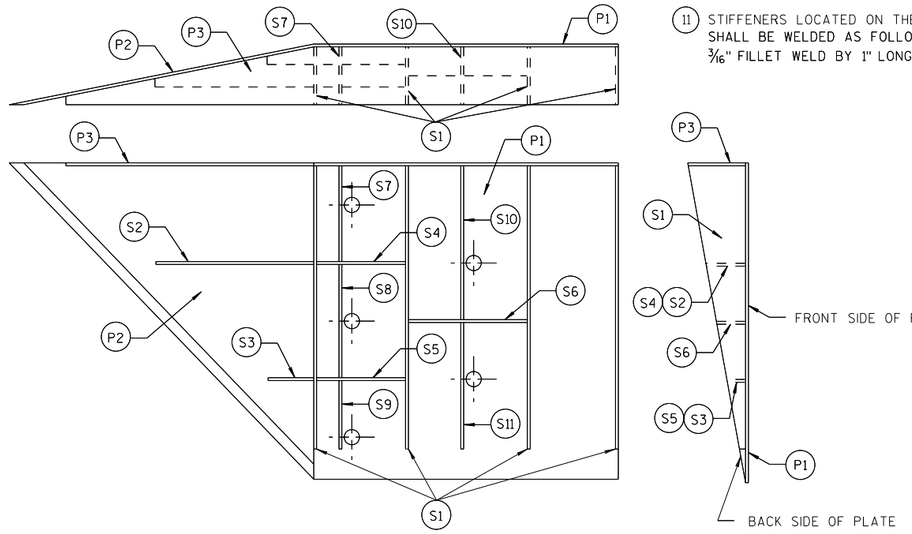

PLATE AND STIFFENER IDENTIFICATION

(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
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FHWA

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ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

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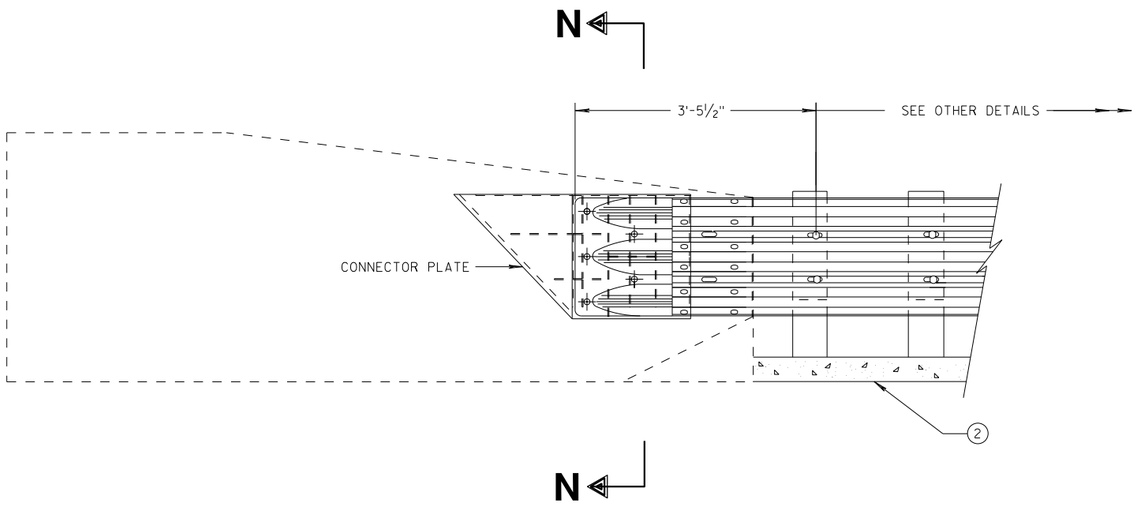
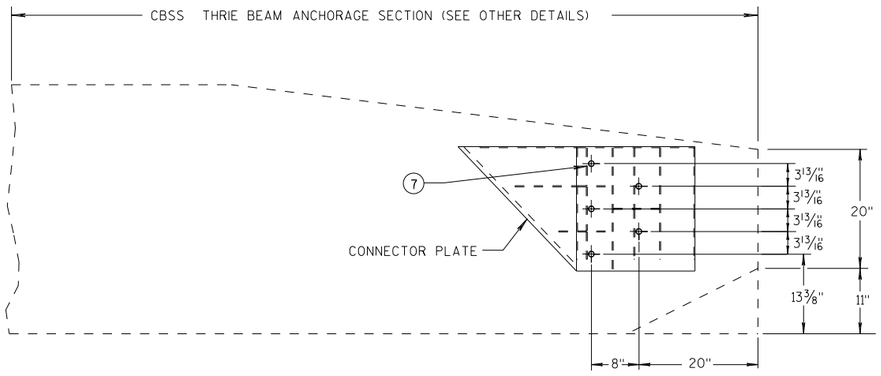


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



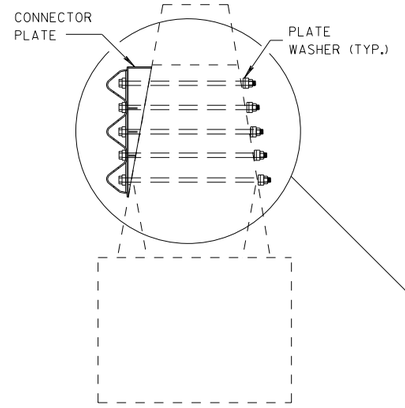
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

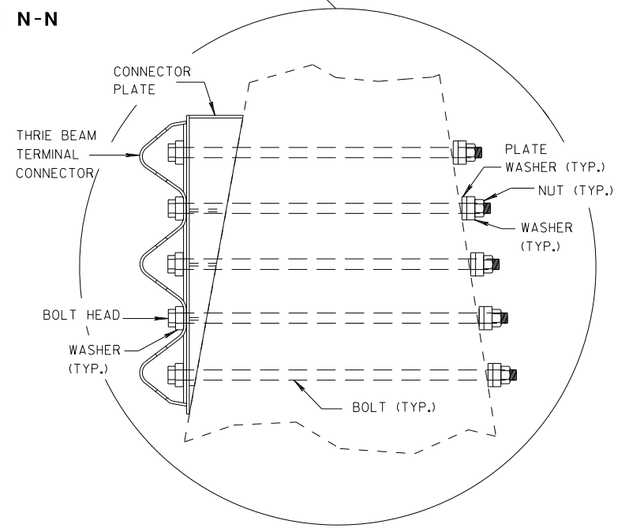
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/32" 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
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DI
UNIT SUPERVIS

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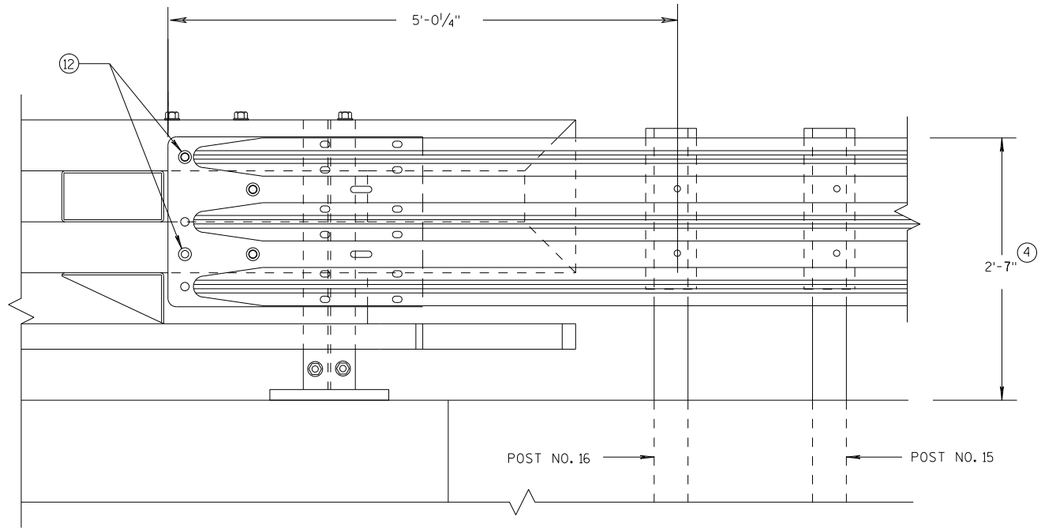
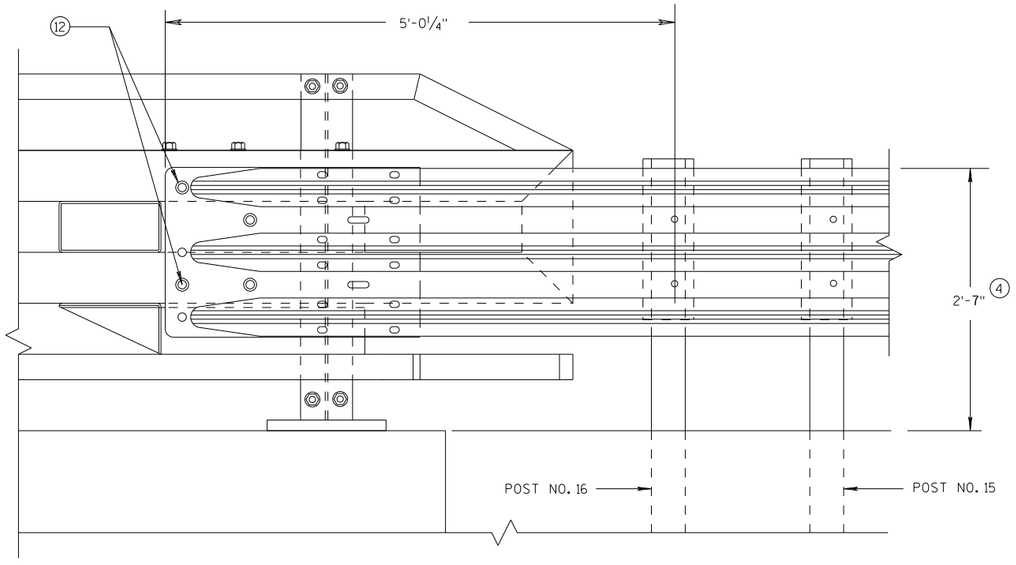


ELEVATION OF DETAIL AT NY3 END POST

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
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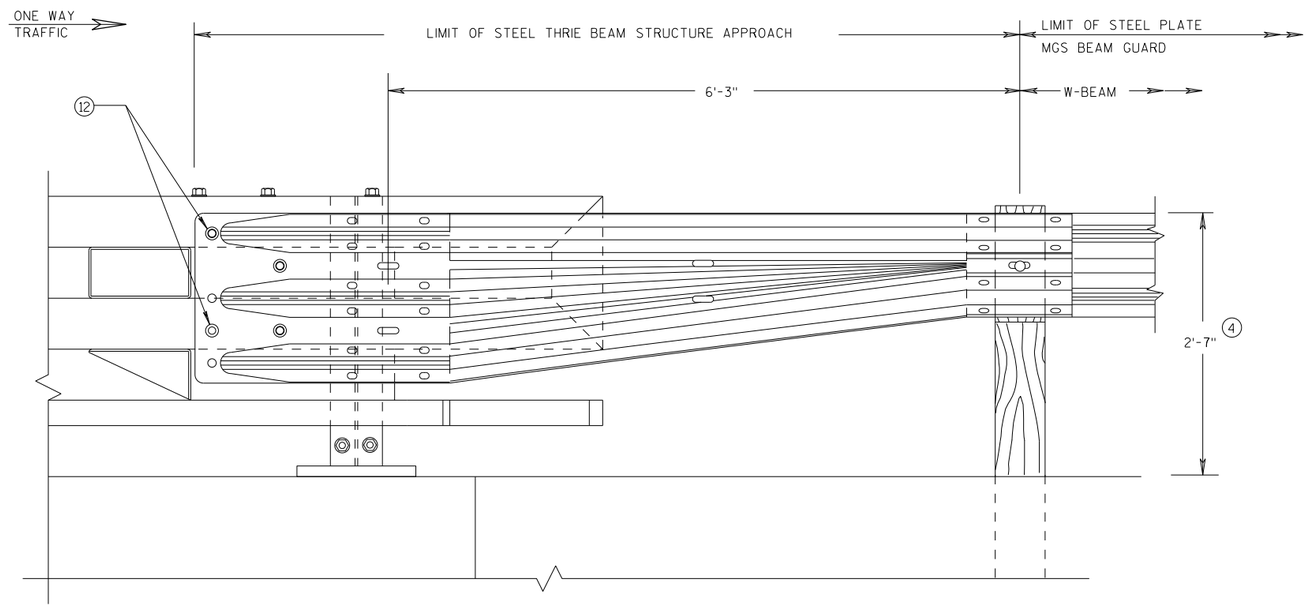


FRONT VIEW

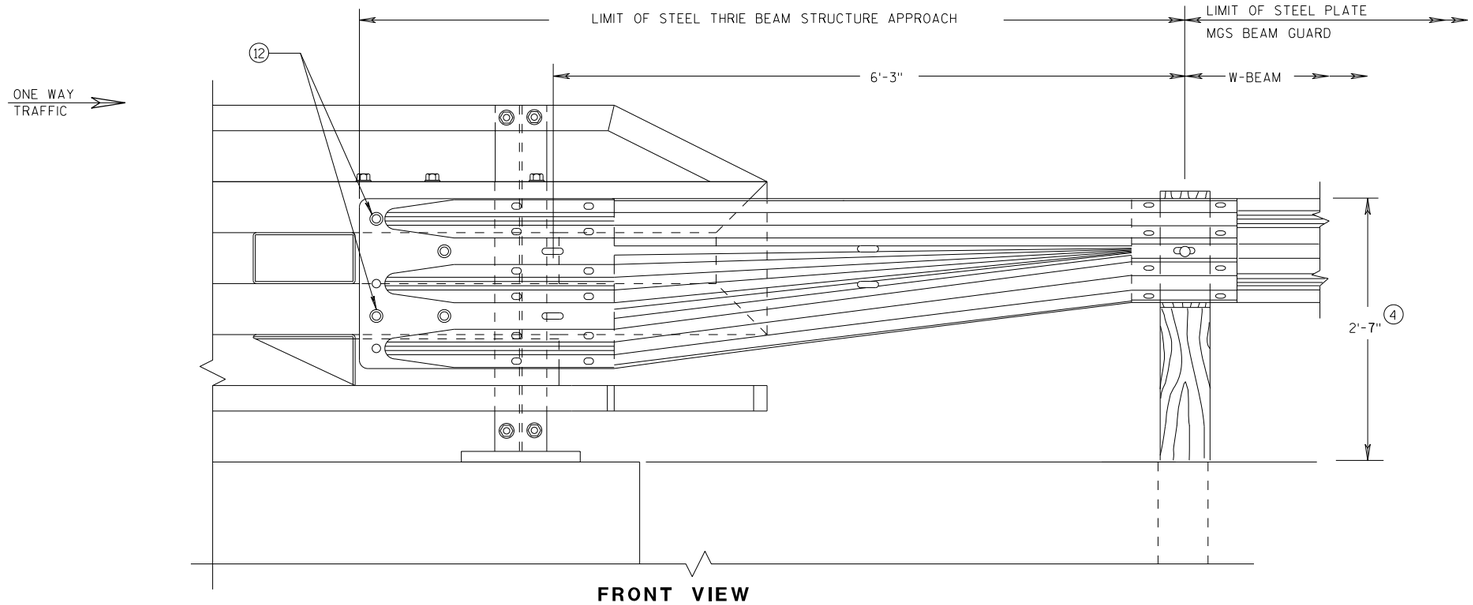
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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 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
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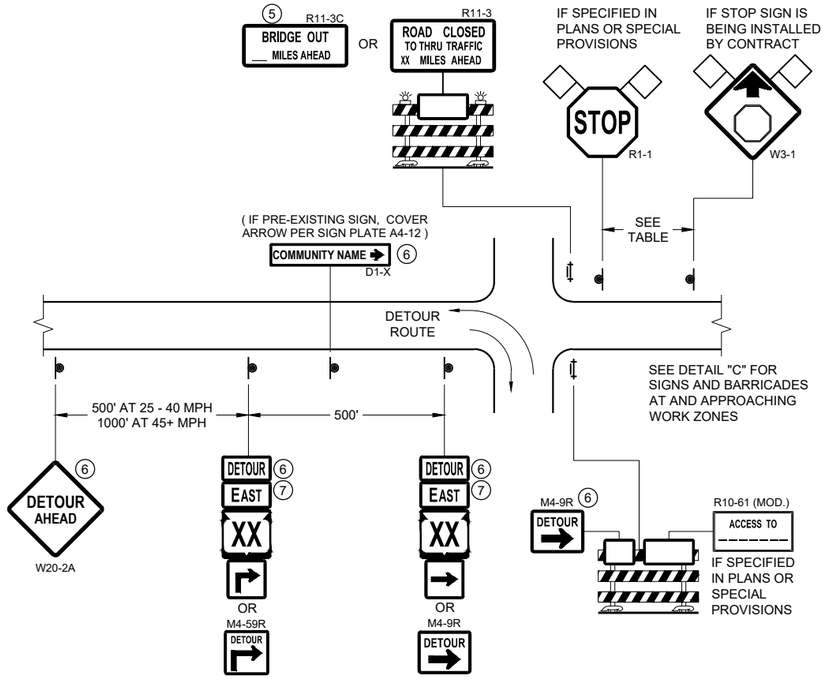
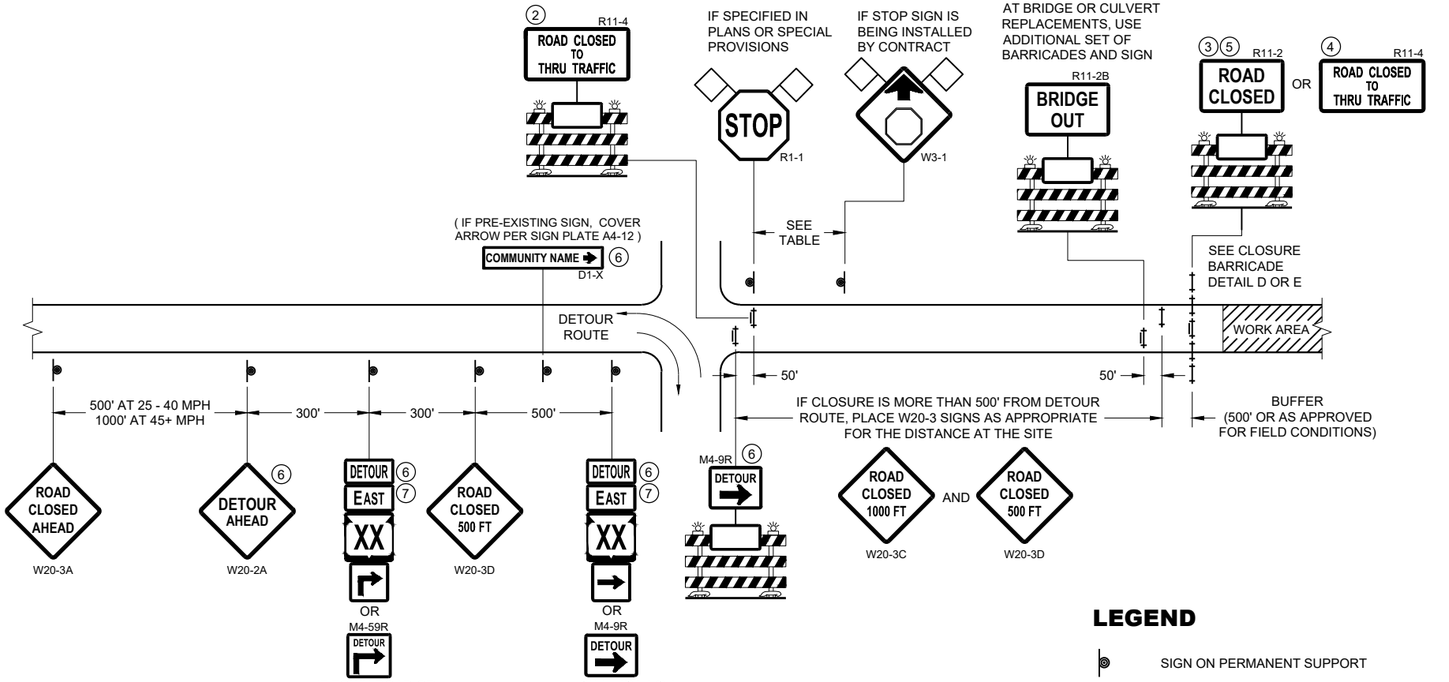




DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

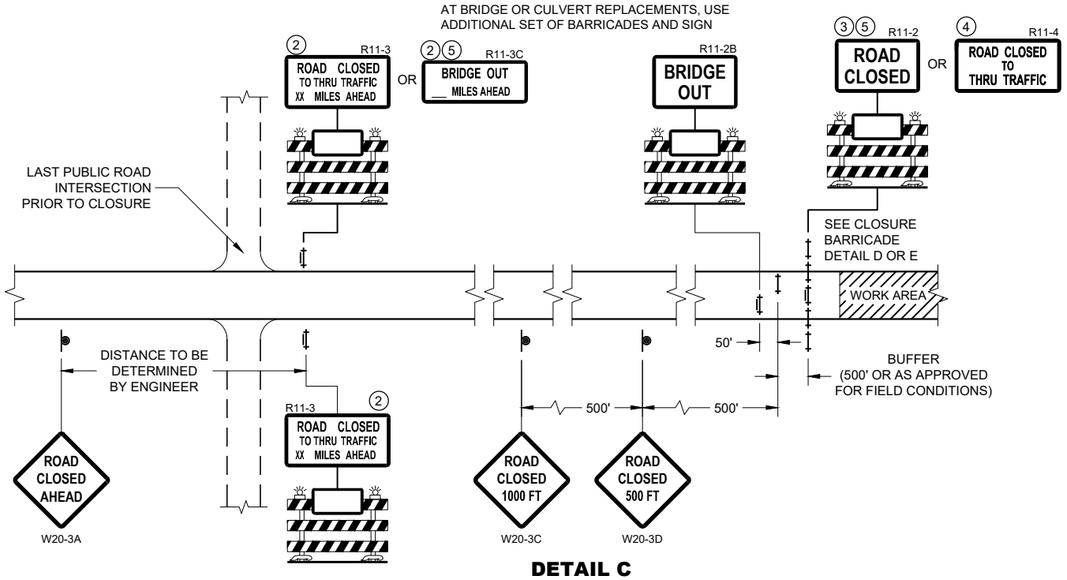
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

SDD 15C02 - 08a

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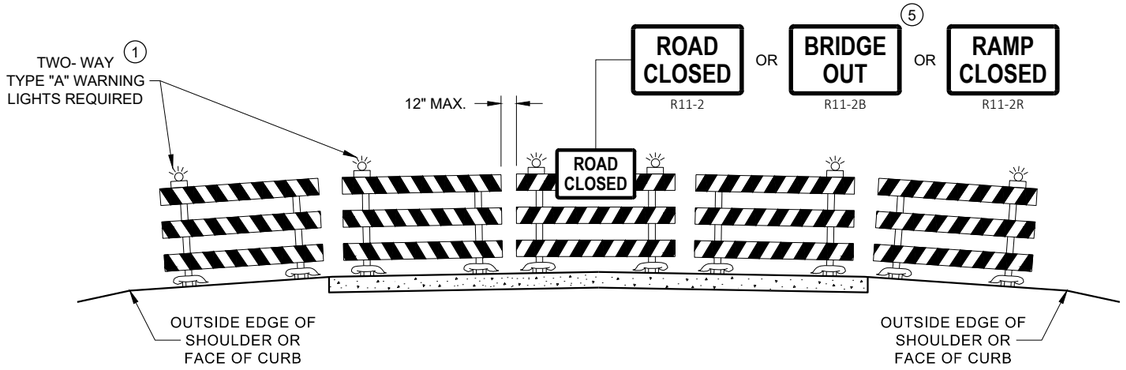
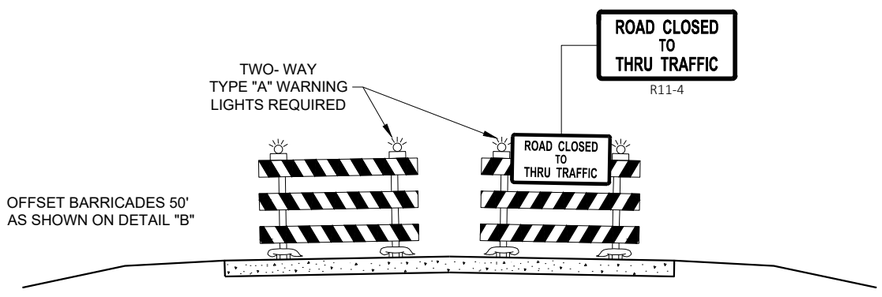
SDD 15C02 - 08a



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 ENGINEE
FHWA

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

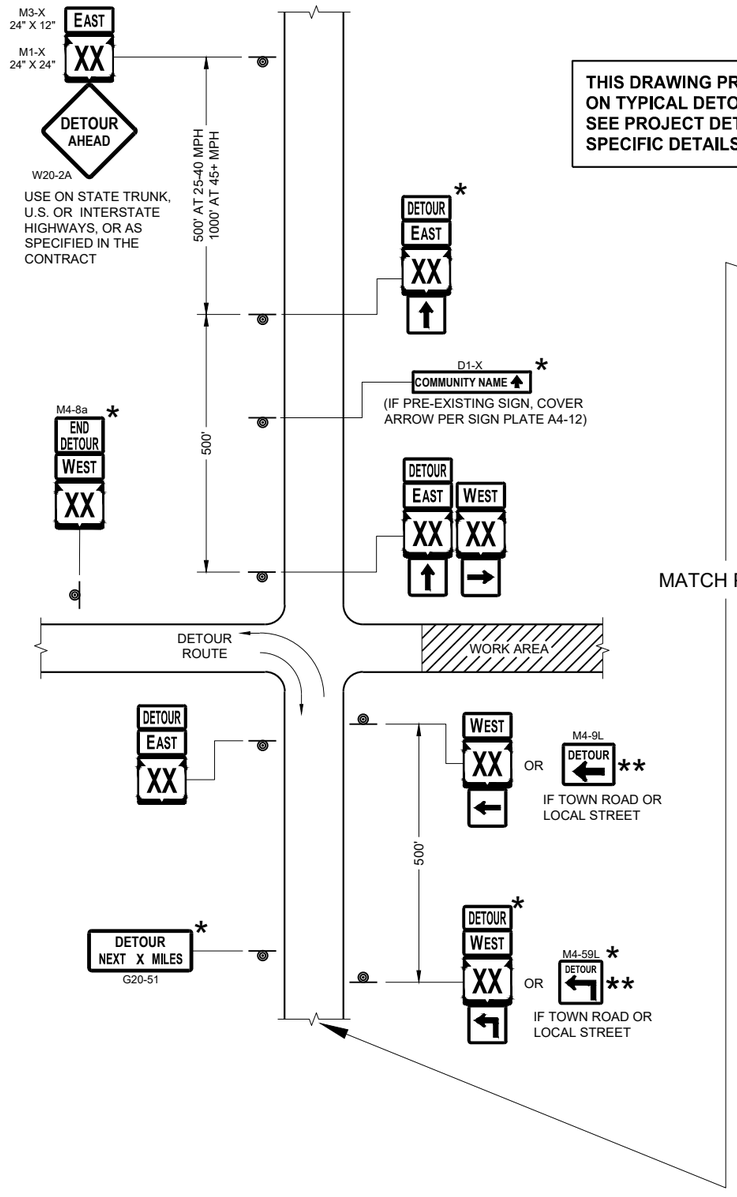
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

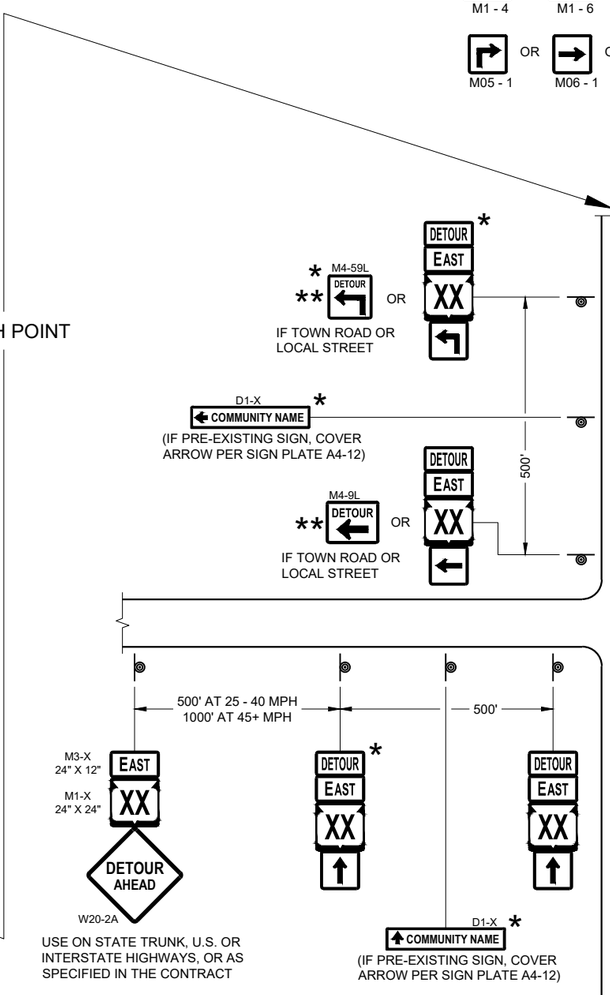
SIGN SIZES SHALL BE AS FOLLOWS:

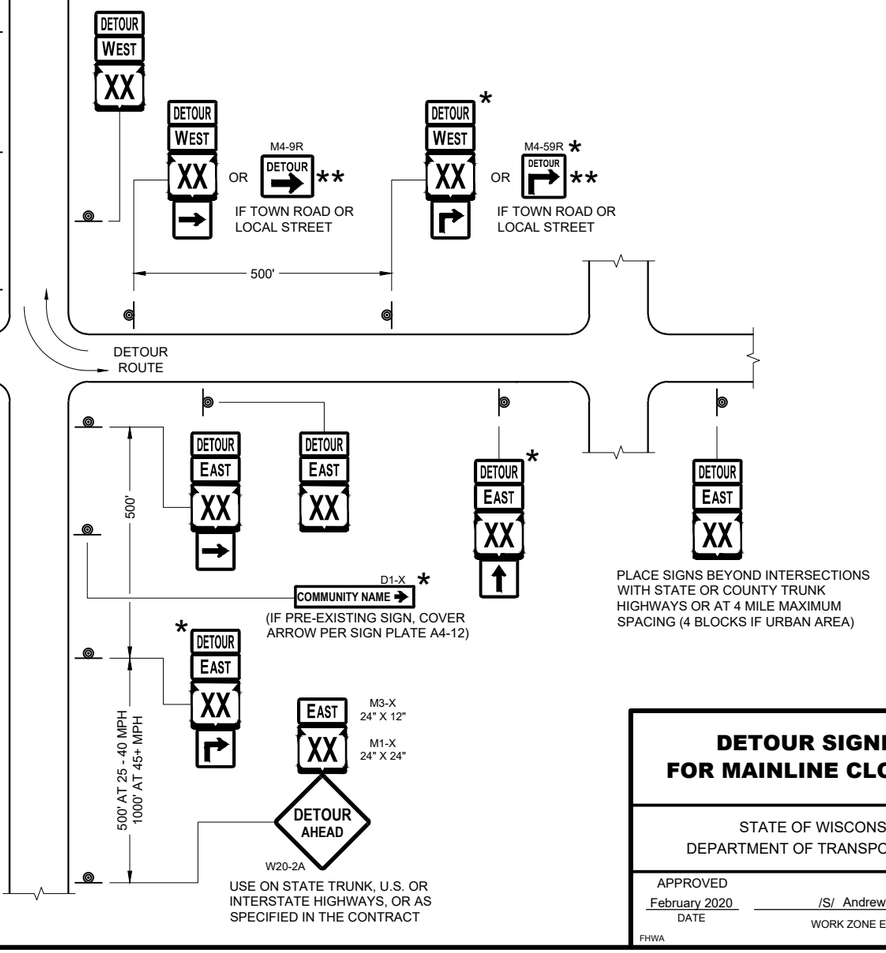
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.







SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 08c

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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.

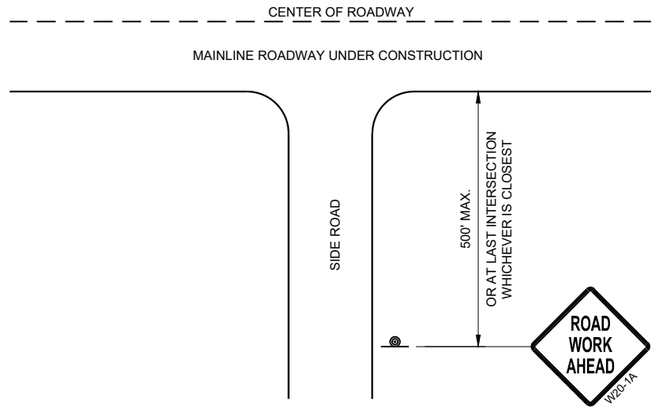
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



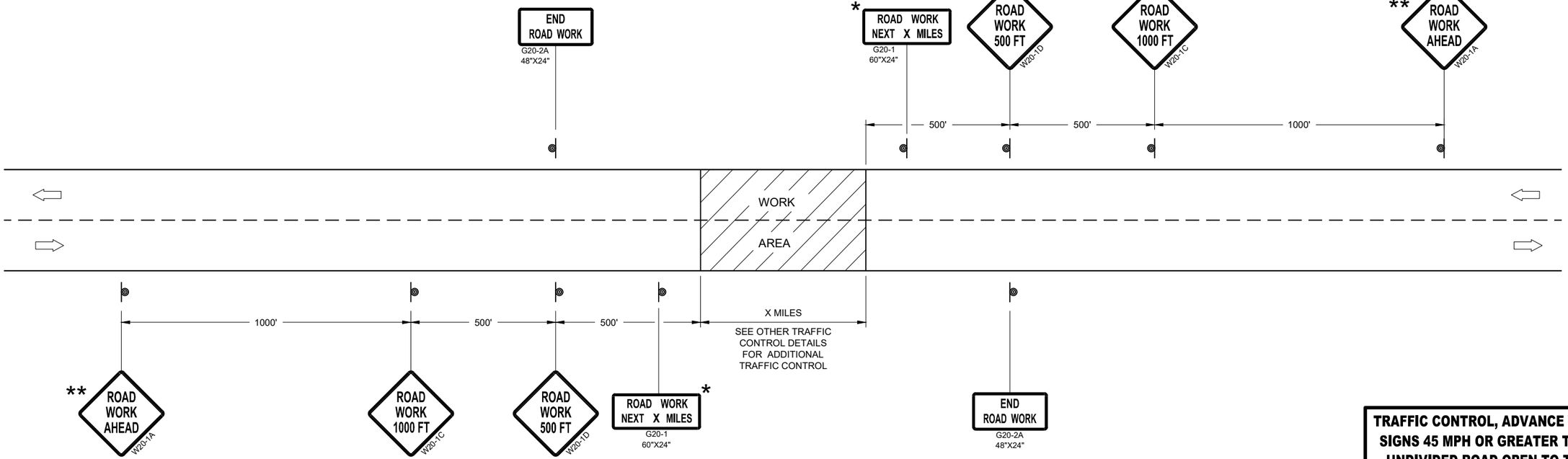
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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 TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C04 - 05

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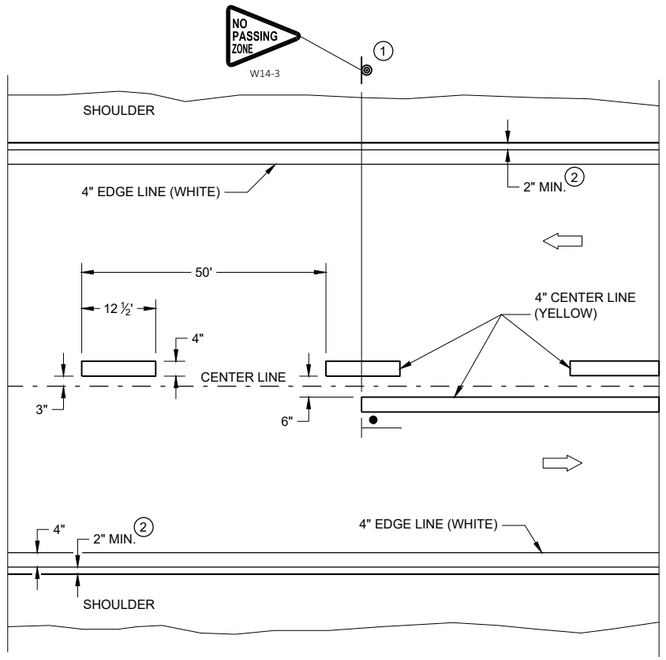
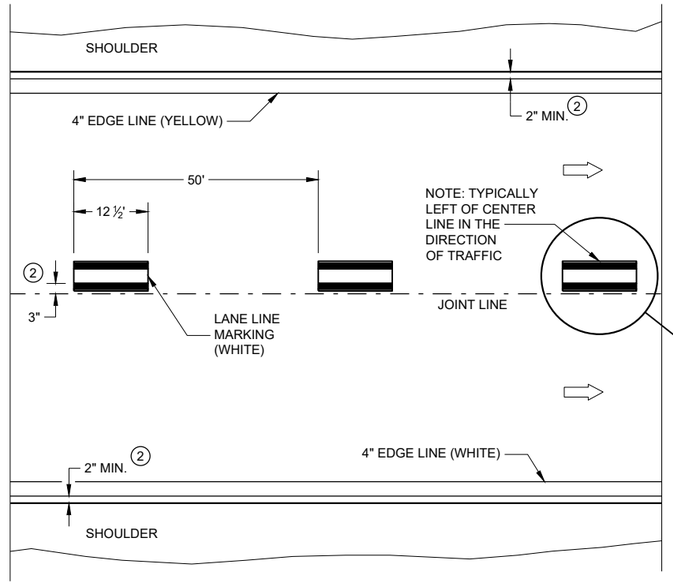
SDD 15C04 - 05

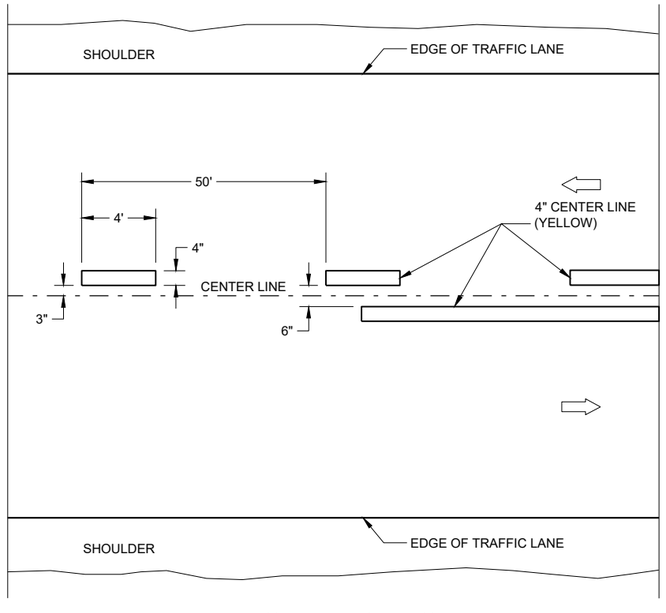


TWO WAY TRAFFIC

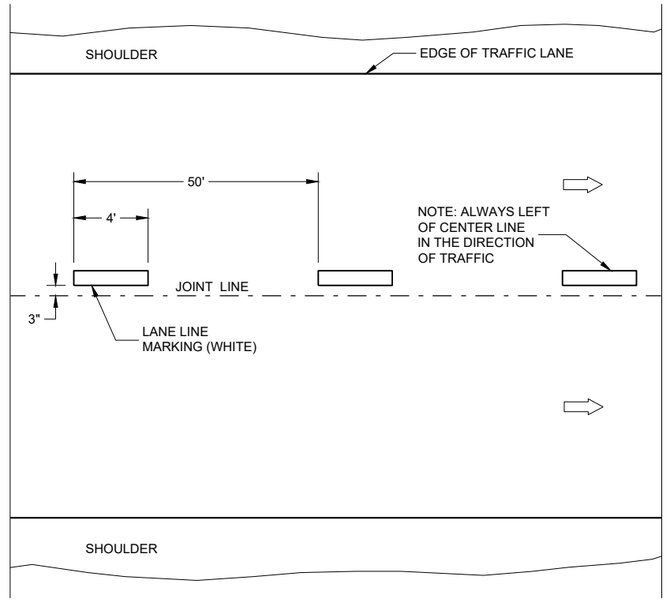


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

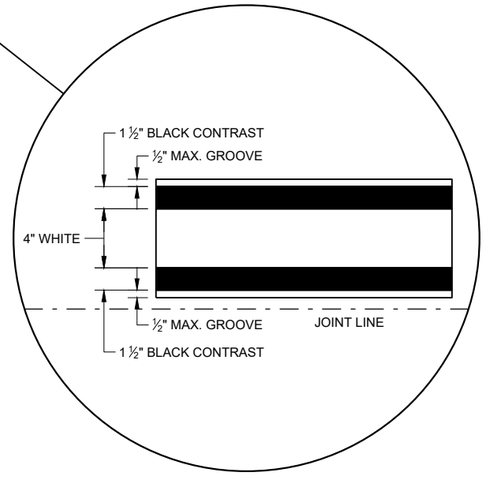
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

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

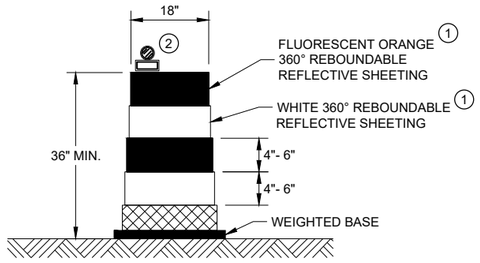
FHWA

SDD 15C08 - 20a

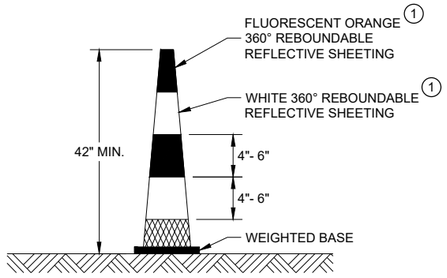
SDD 15C08 - 20a

GENERAL NOTES

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

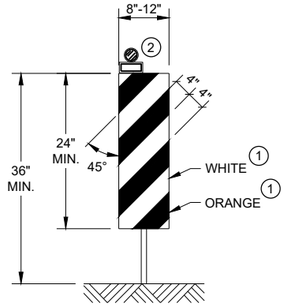


DRUM



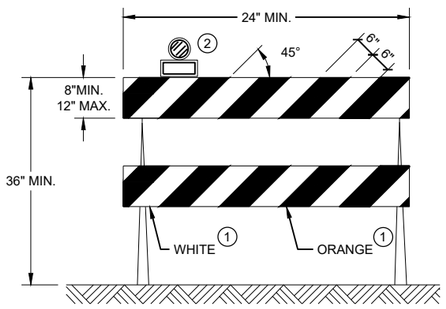
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



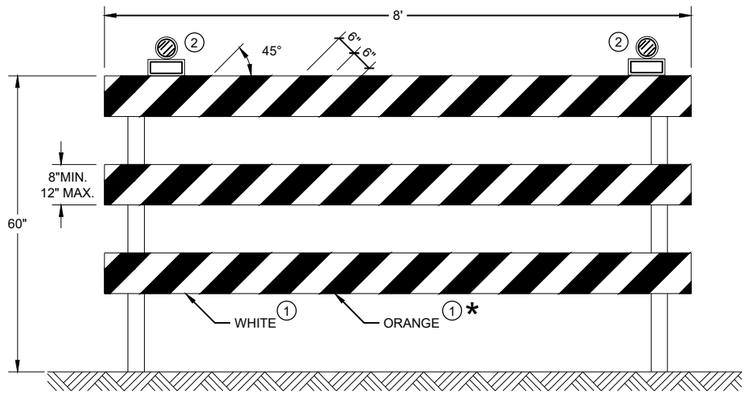
VERTICAL PANEL

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
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 09b

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SDD 15C11 - 09b

LEGEND

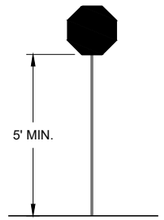
SIGN ON PORTABLE OR PERMANENT SUPPORT

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.

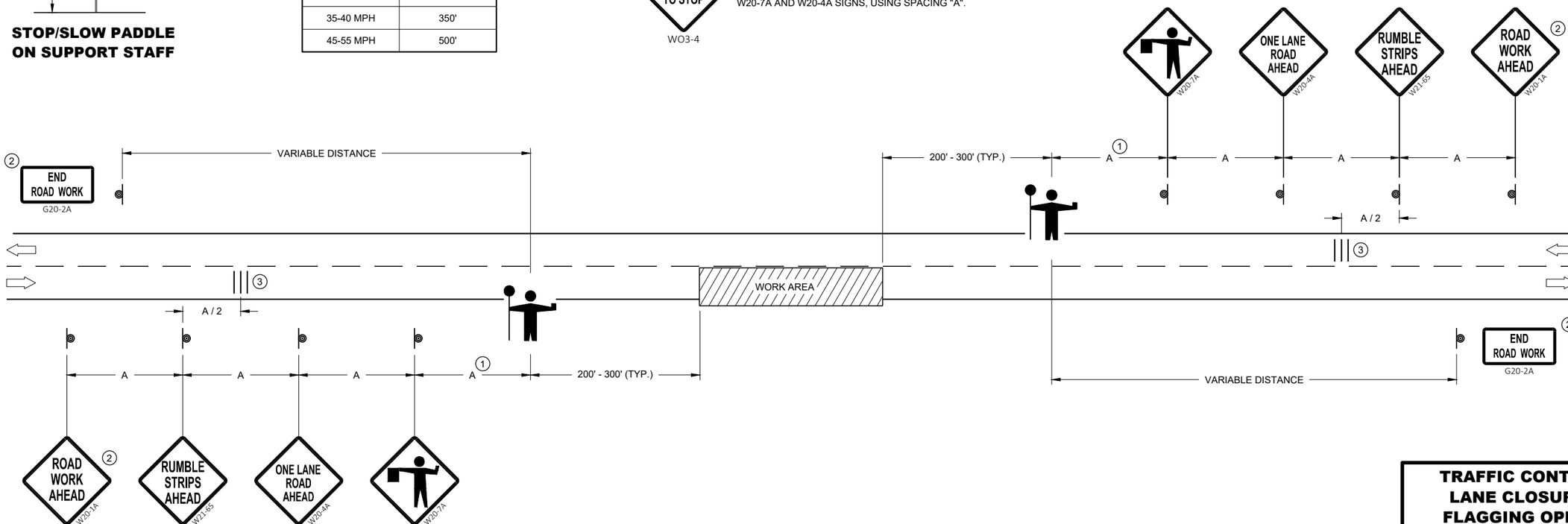
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

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 ENGINEE

FHWA

6

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.

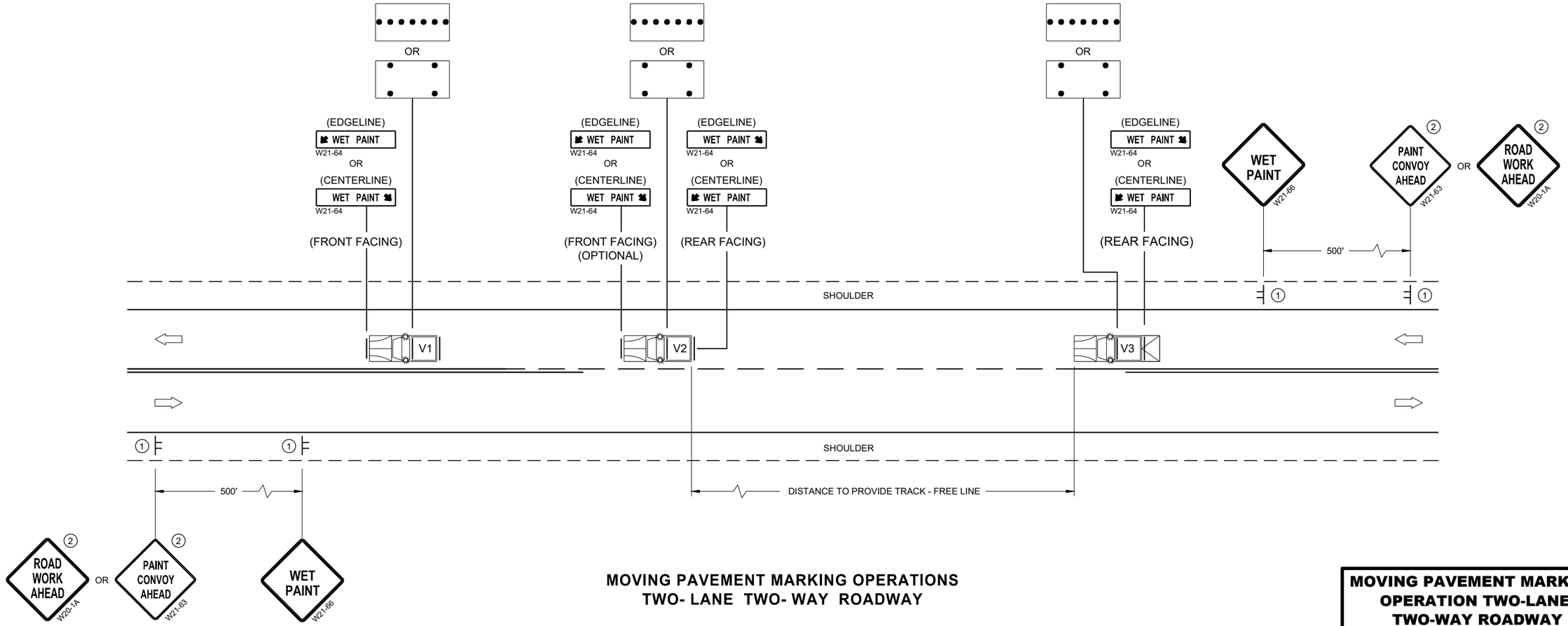
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

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

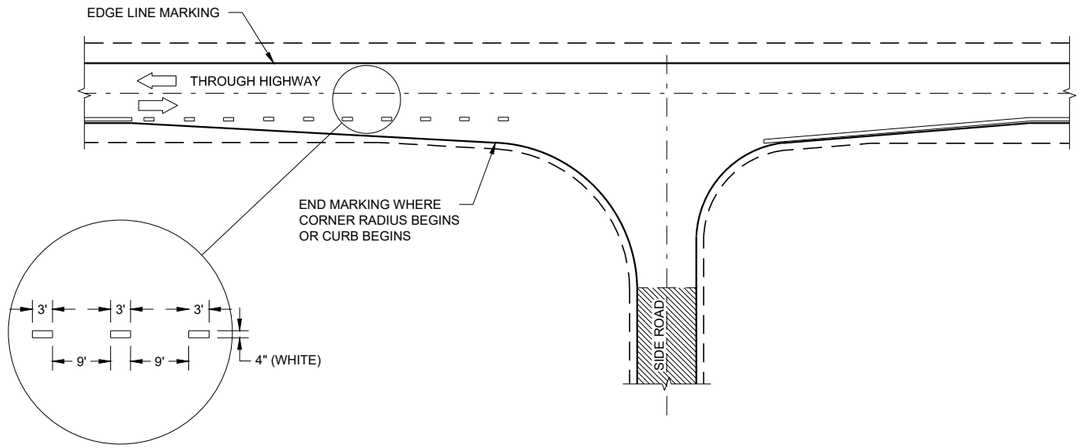
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

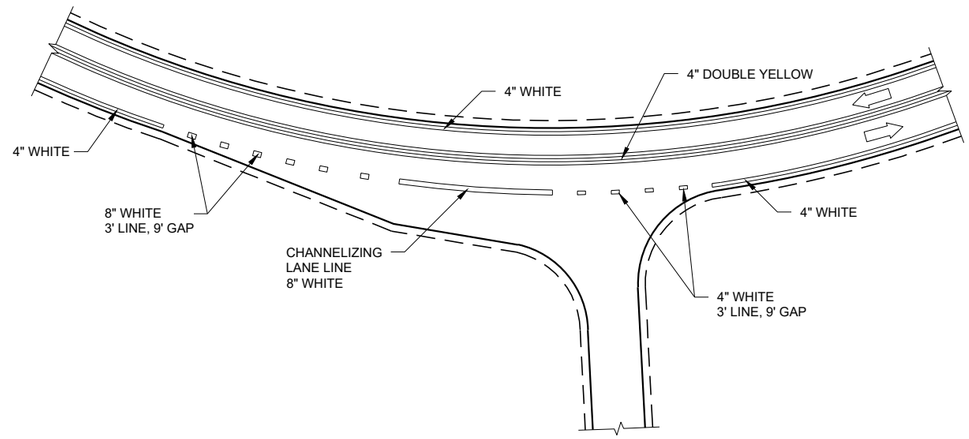
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

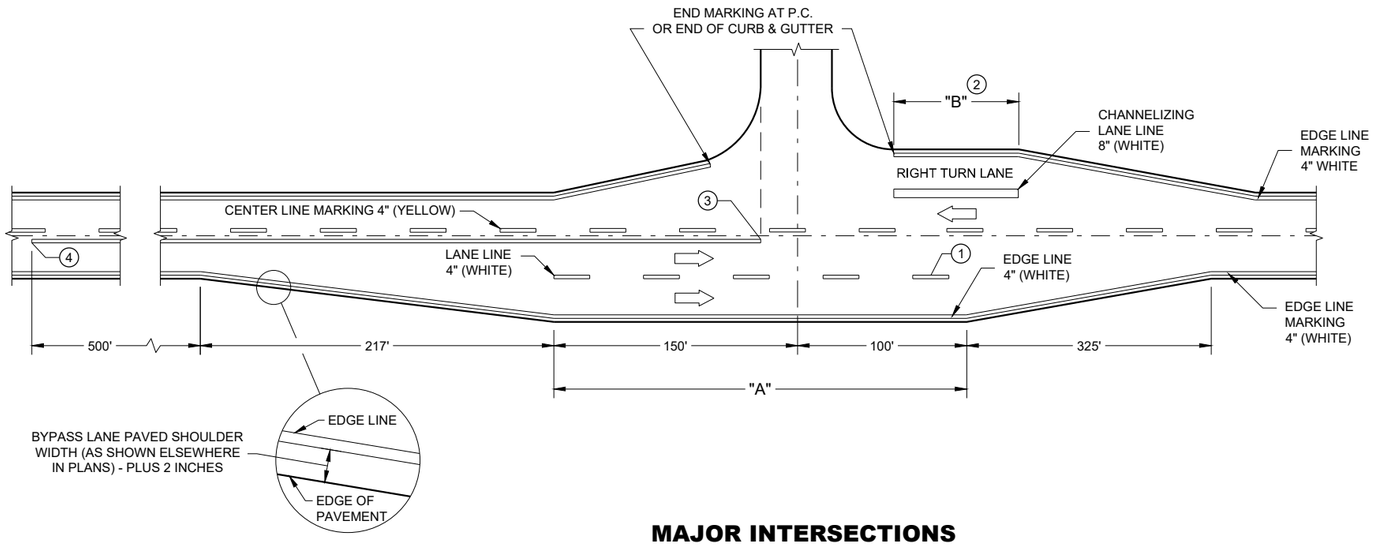
DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C35 - 04a

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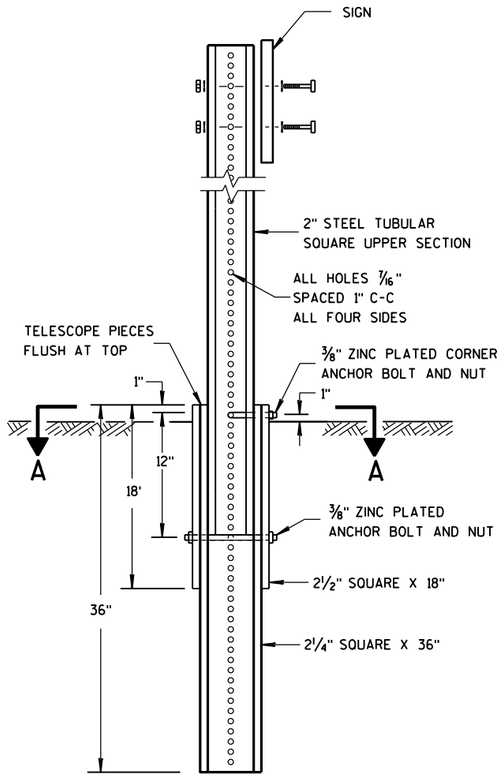
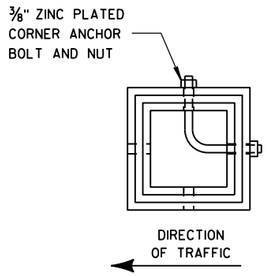
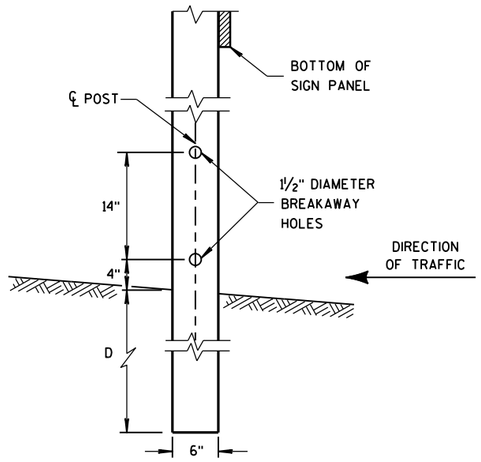
SDD 15C35 - 04a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



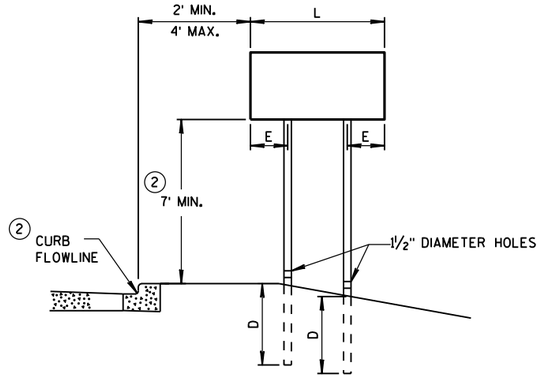
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

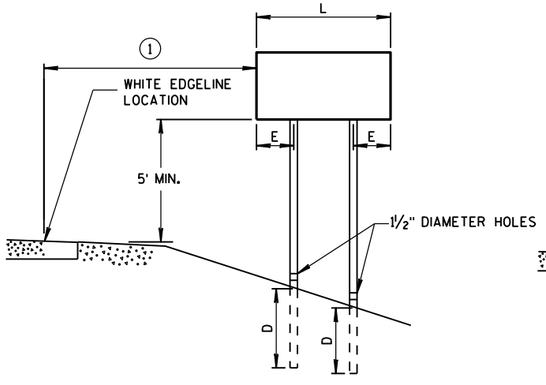
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

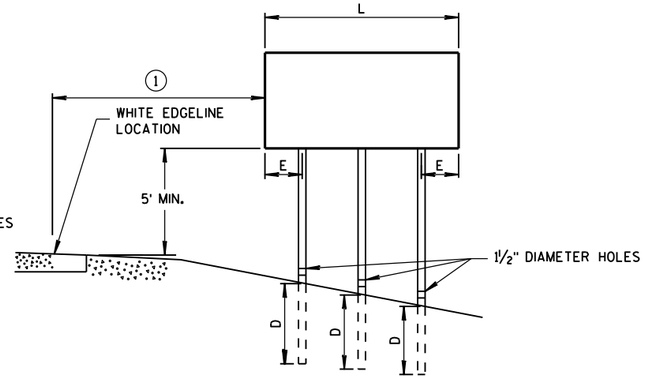
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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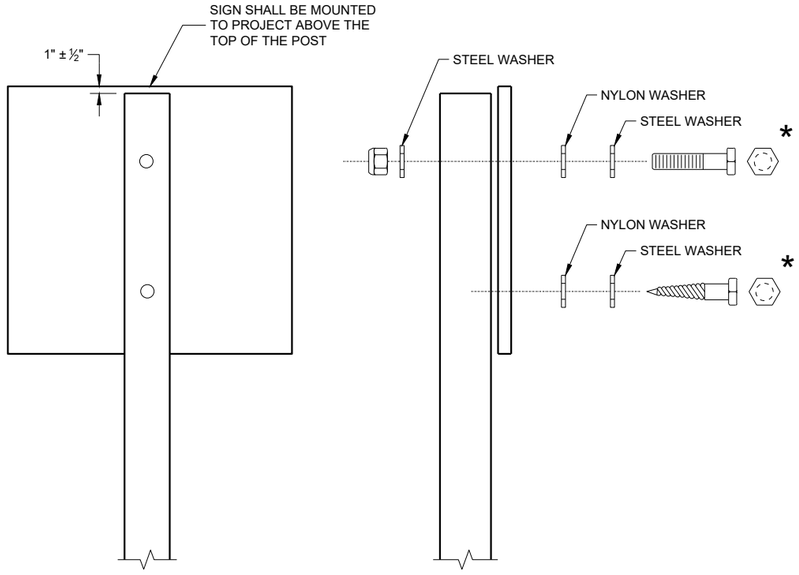
S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



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

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SDD 15D38 - 02b

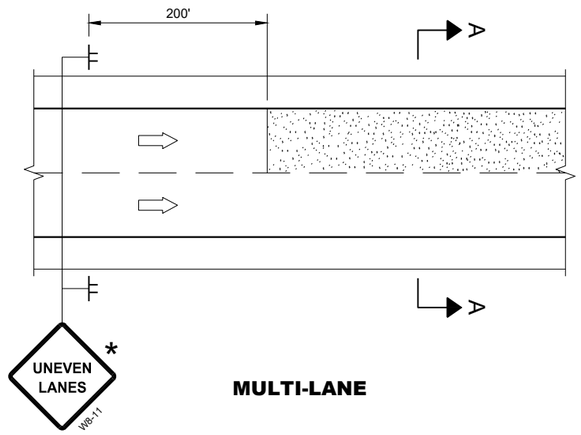
SDD15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

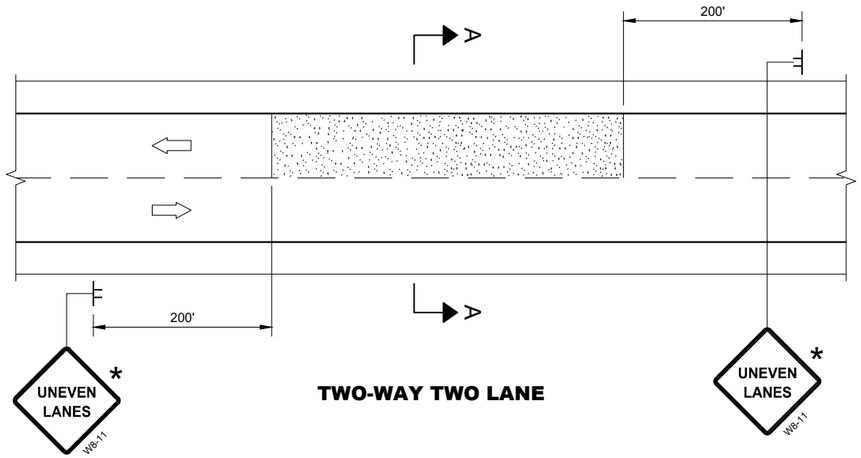
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

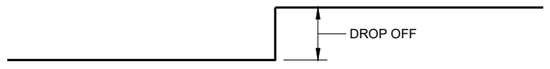
FHWA



MULTI-LANE

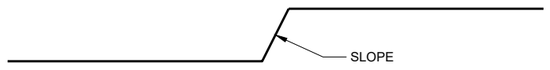


TWO-WAY TWO LANE

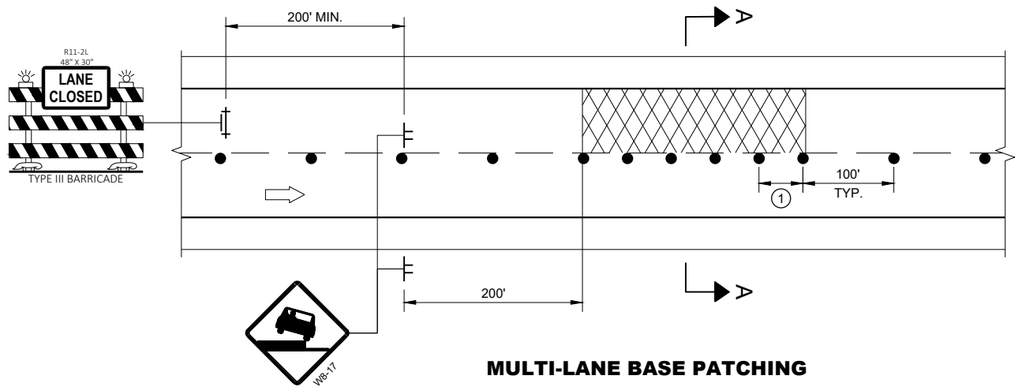


SECTION A - A

OR

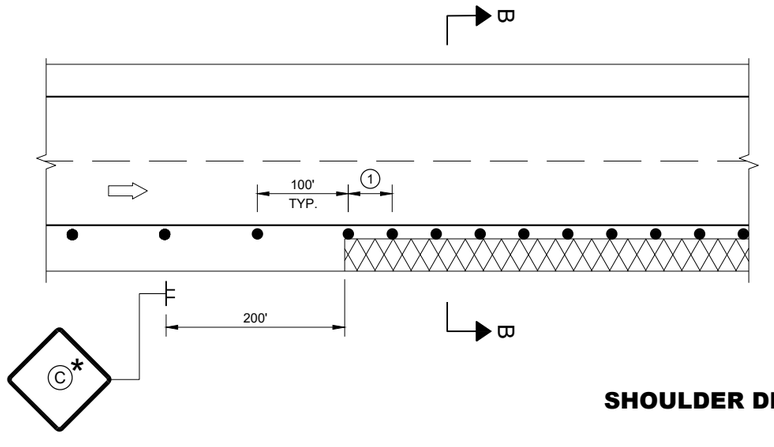


SECTION A - A

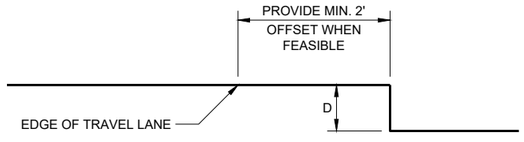


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE

FHWA

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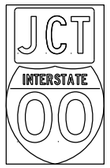
SDD 15D39 - 02

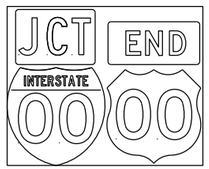
6

SDD 15D39 - 02

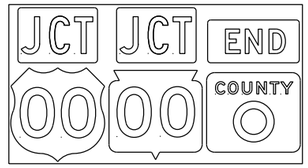
TYPICAL ASSEMBLIES



J1-1



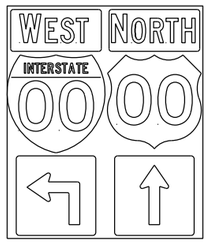
J1-2



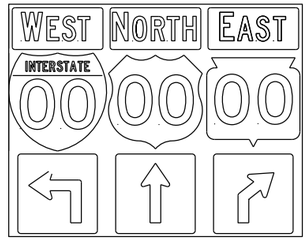
J1-3

JR1-1

J2-1

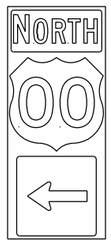


J2-2

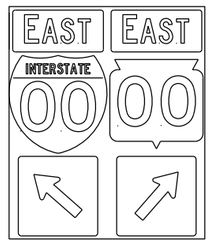


J2-3

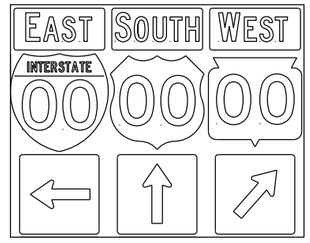
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



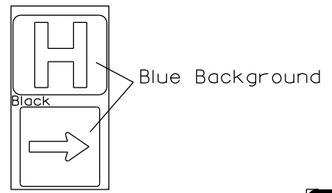
J3-1



J3-2

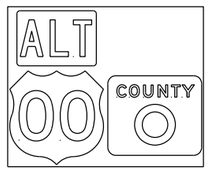


J3-3

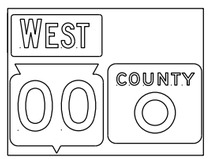


JH-1

J4-1

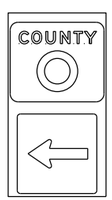


J4-2



J4-2

J12-1



J13-1

J32-1

J33-1

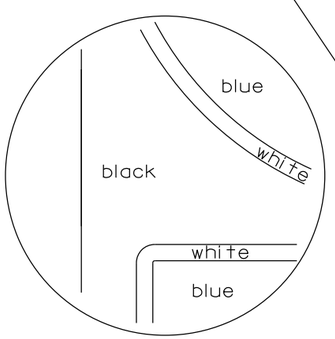
J22-1

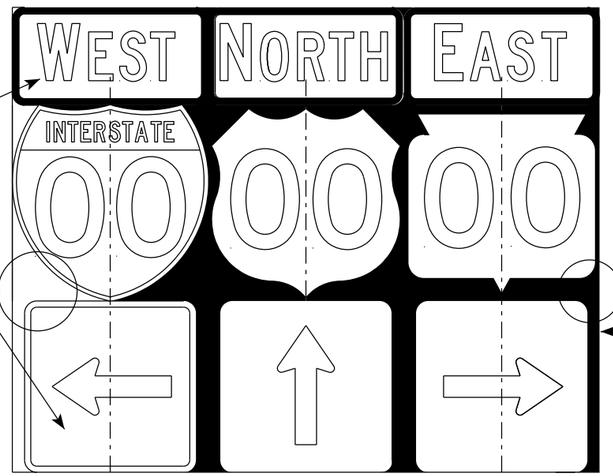
J23-1

JR13-1

JR23-1

JR99-1





NOTES

1. Signs are Type II - Type H Reflective
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

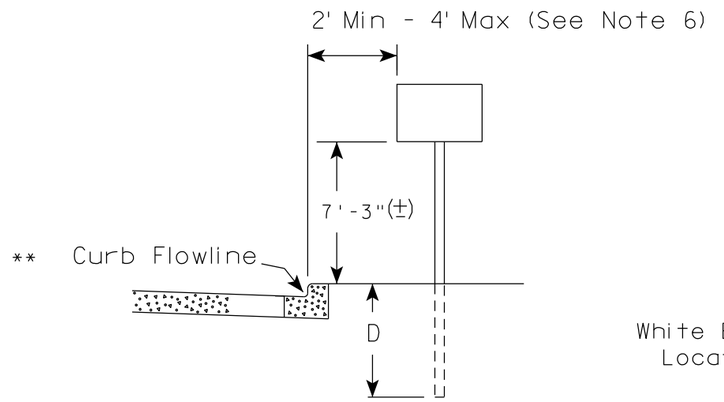
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/21 PLATE NO. A2-1S.9

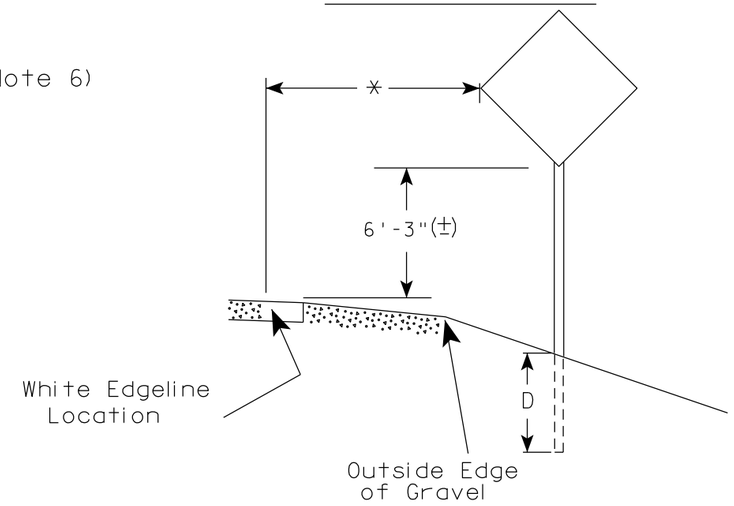
PROJECT NO:

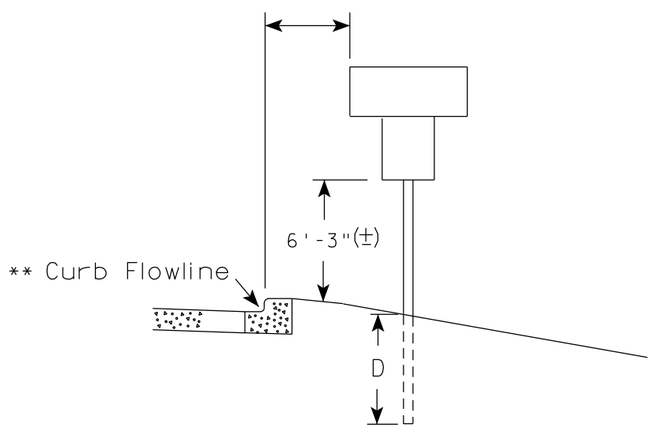
SHEET NO: 130 E

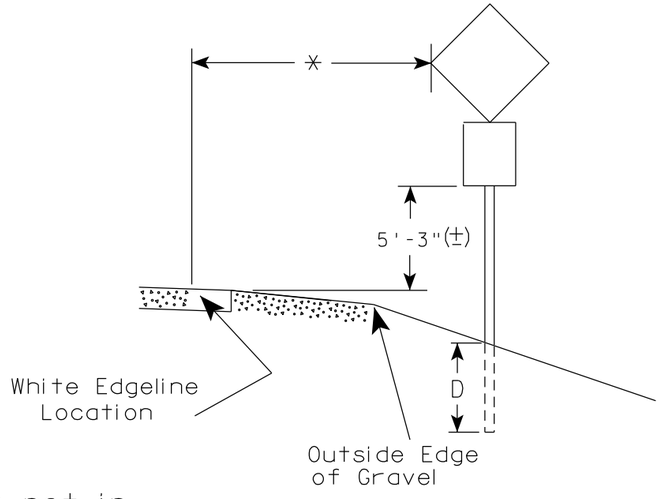
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

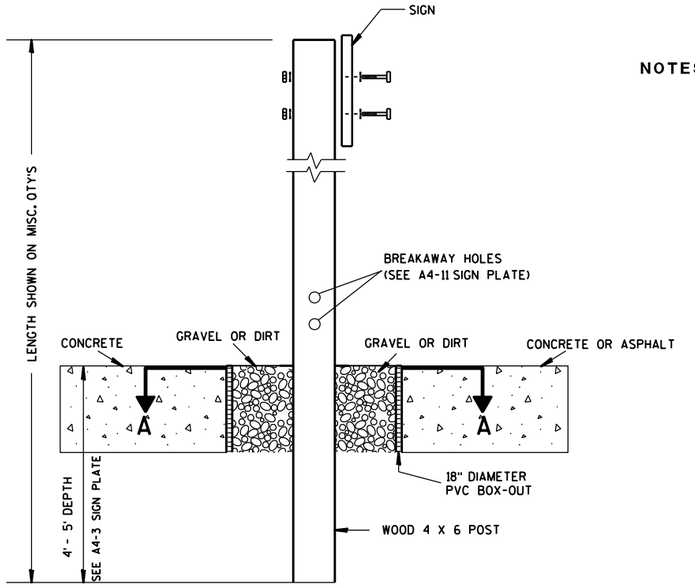
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

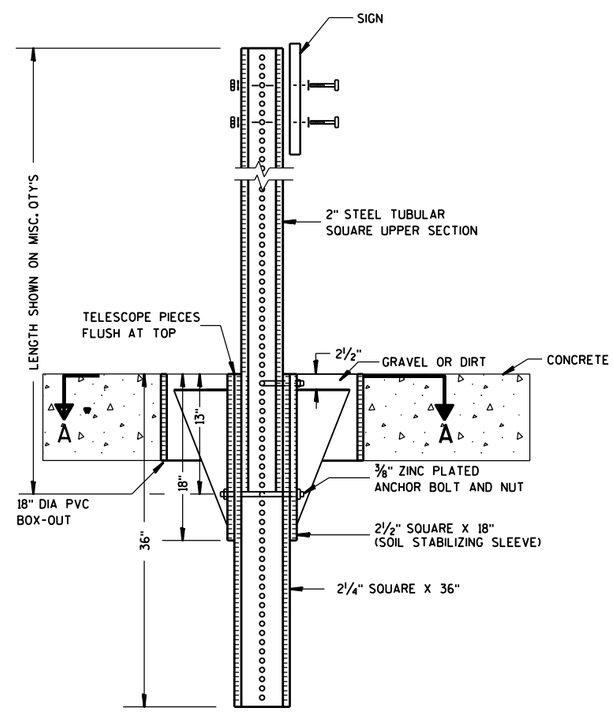
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 131	E



ELEVATION VIEW

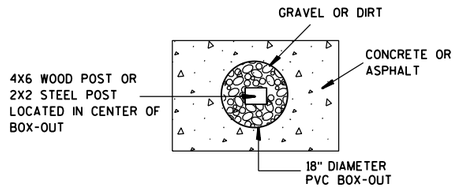
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

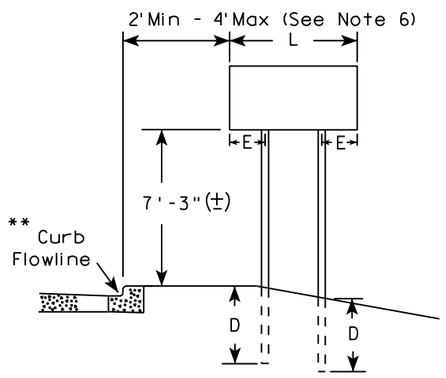
APPROVED Matthew R Rauch
for State Traffic Engineer

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

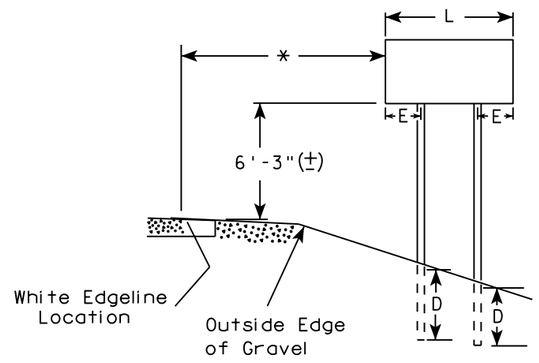
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

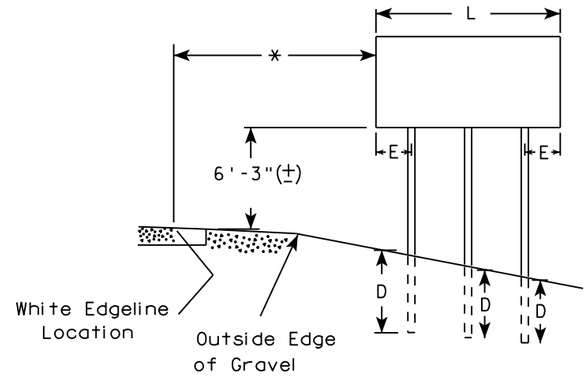
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

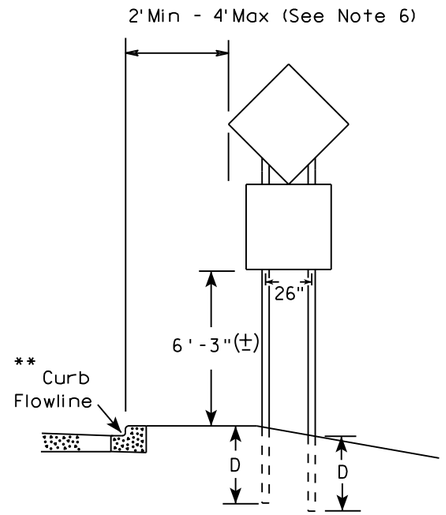
URBAN AREA



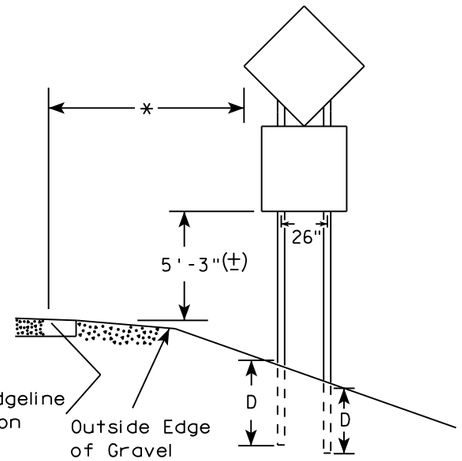
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

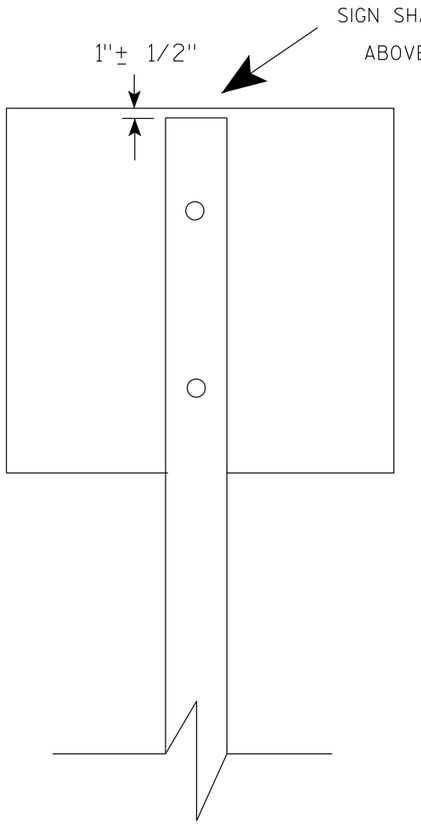
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

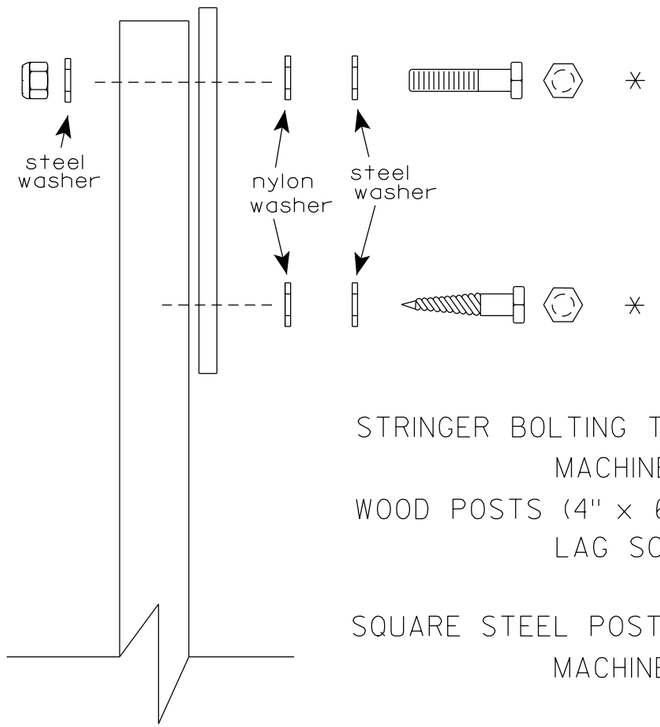
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 133	E





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

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

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

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

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

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

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

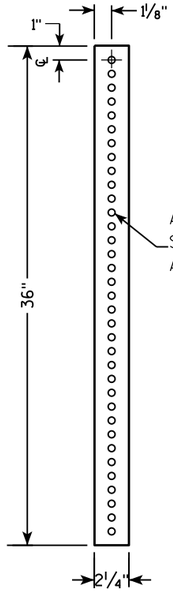
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

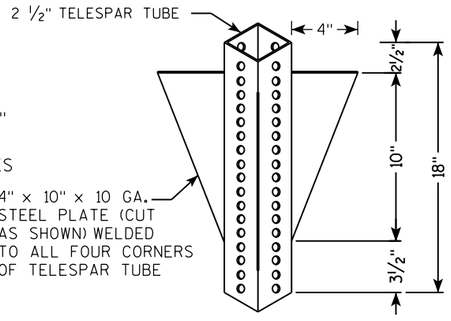
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

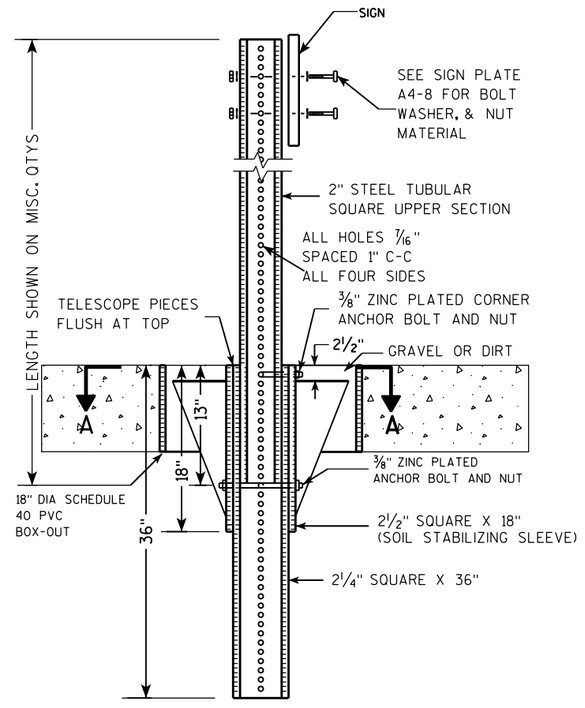
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



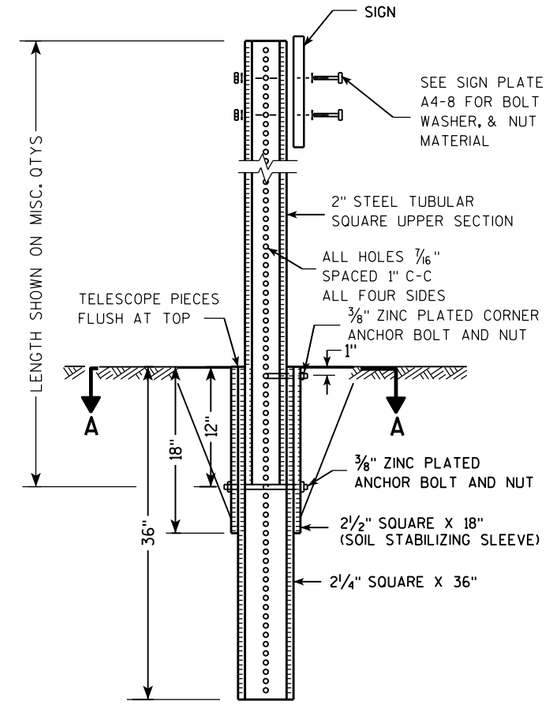
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

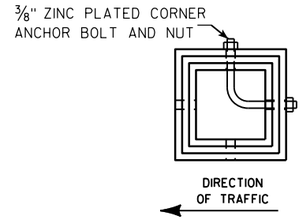


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required 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).

TUBULAR STEEL
SIGN POST
A4-9

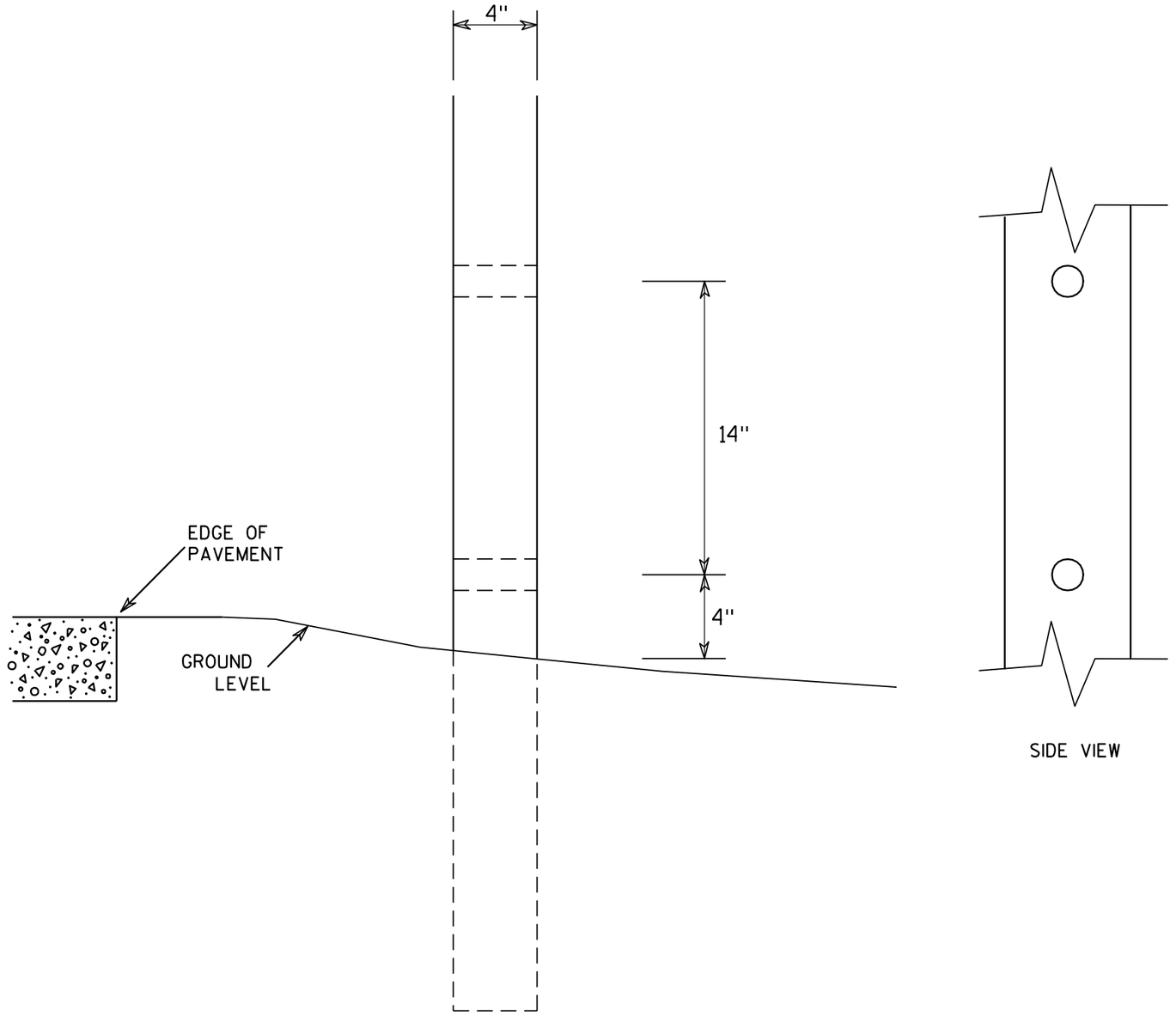
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

7

7

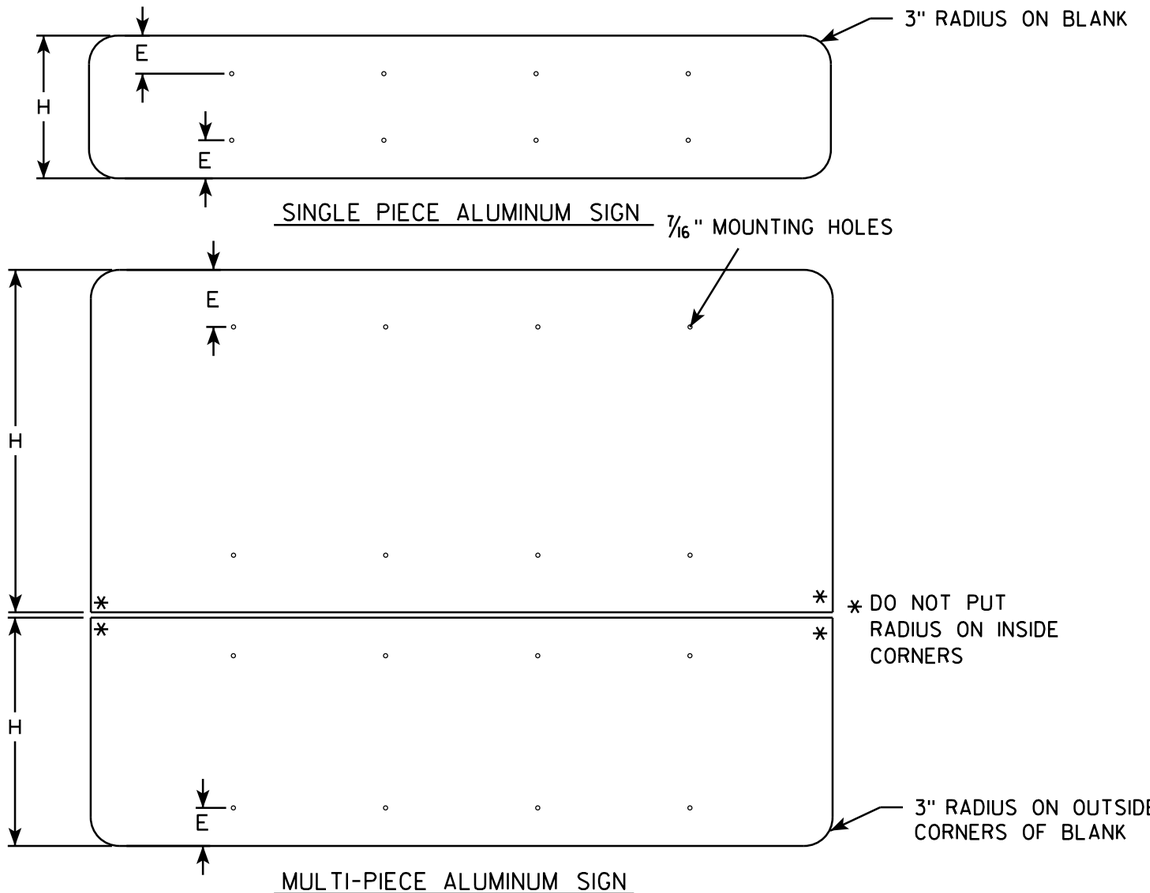
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

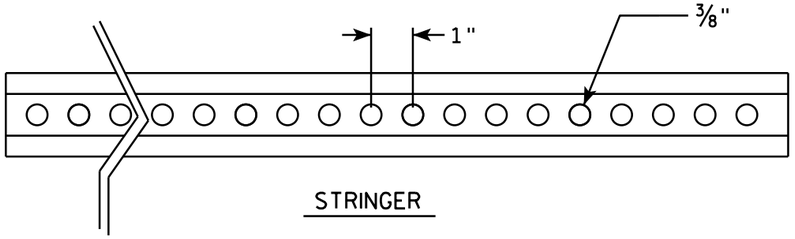
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 136	E



GENERAL NOTES

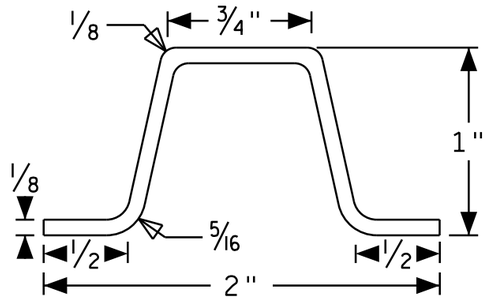
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

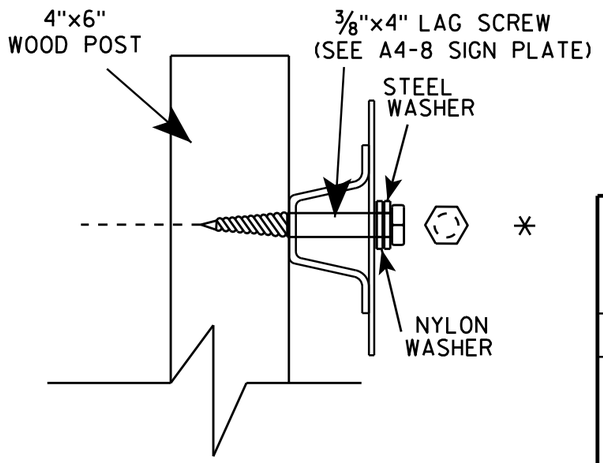


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

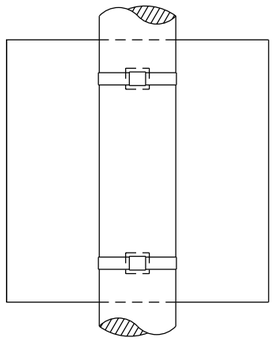
DATE 4/26/16 PLATE NO A4-18.1

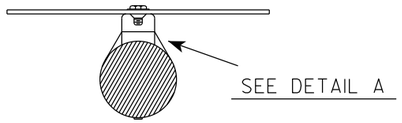
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

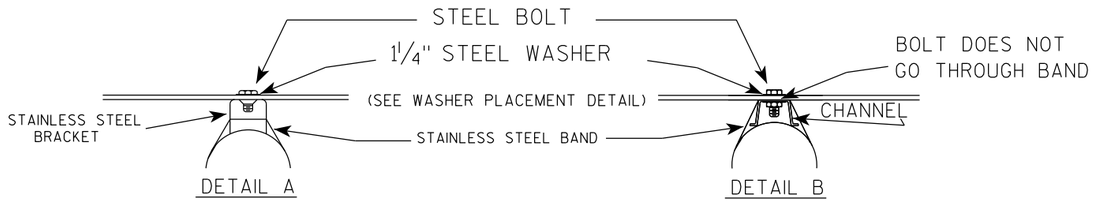
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

BANDING

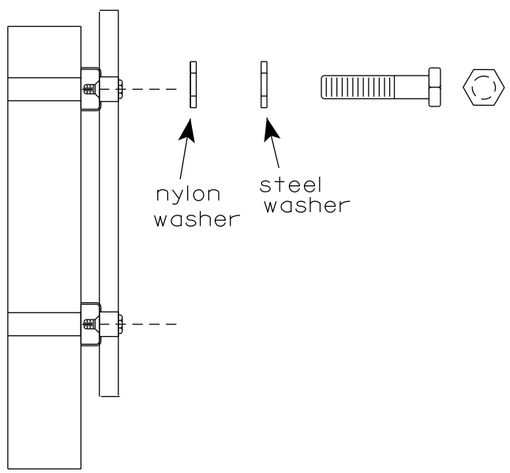
SINGLE SIGN







WASHER PLACEMENT

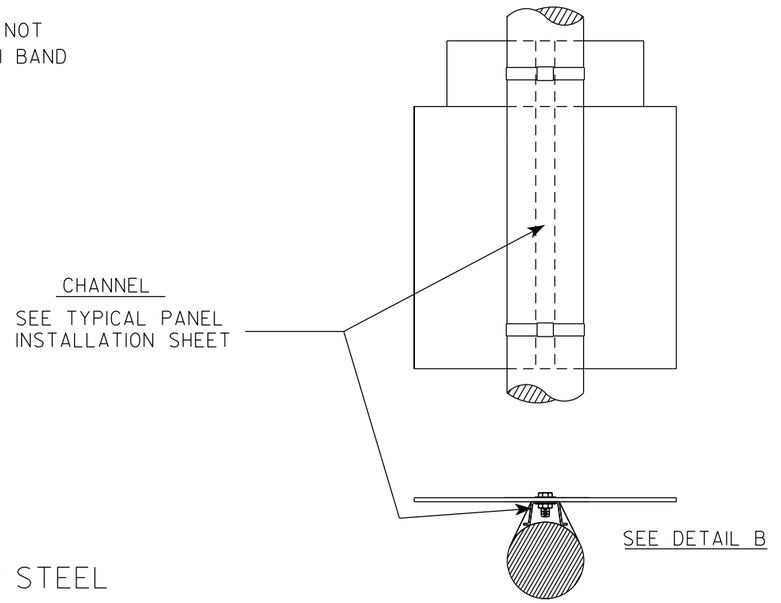


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

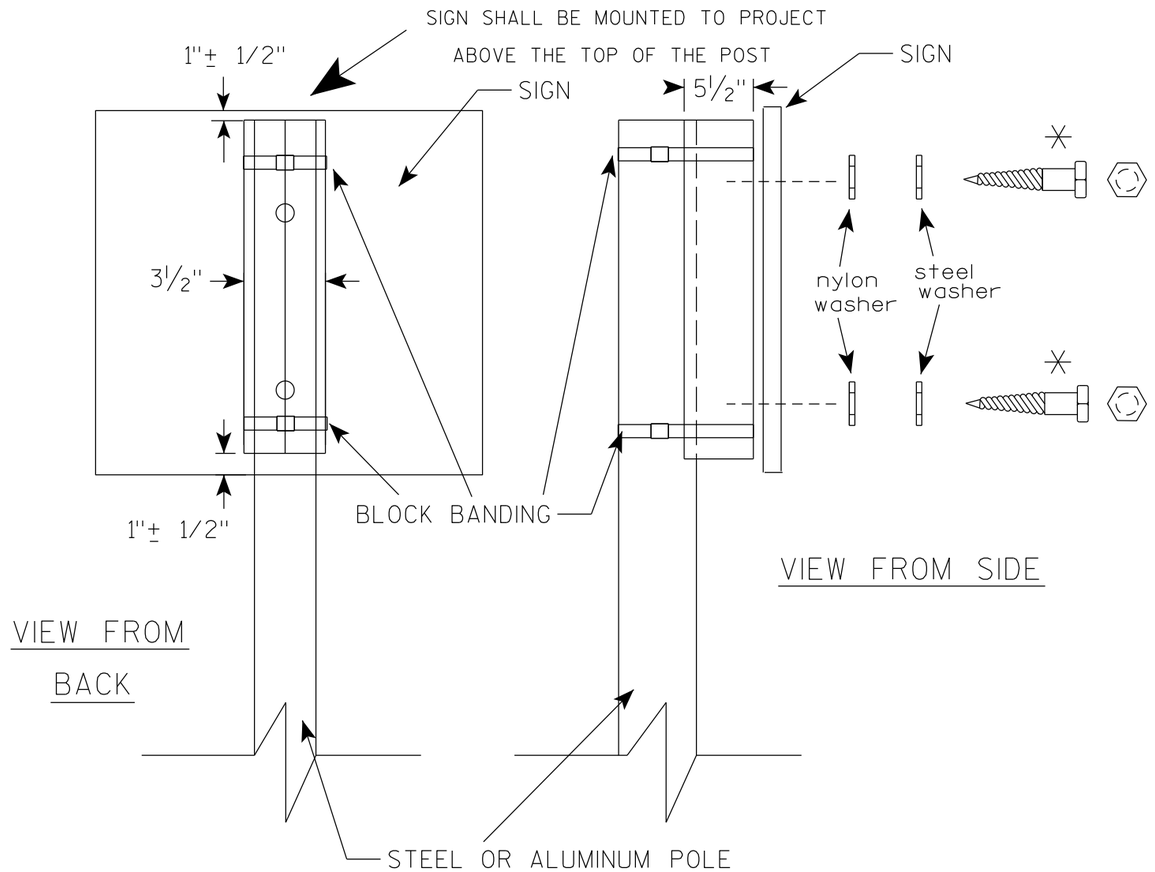
DATE 6/10/19 PLATE NO. A5-9.4

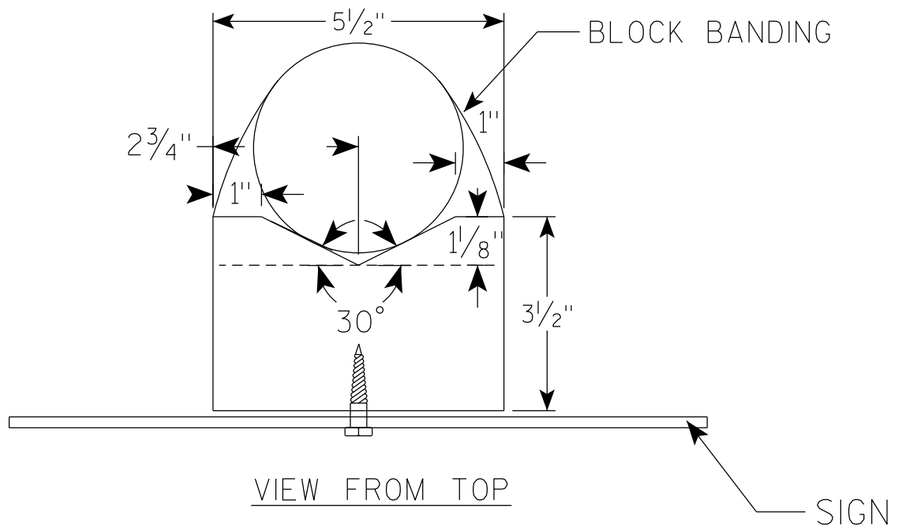
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 138	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

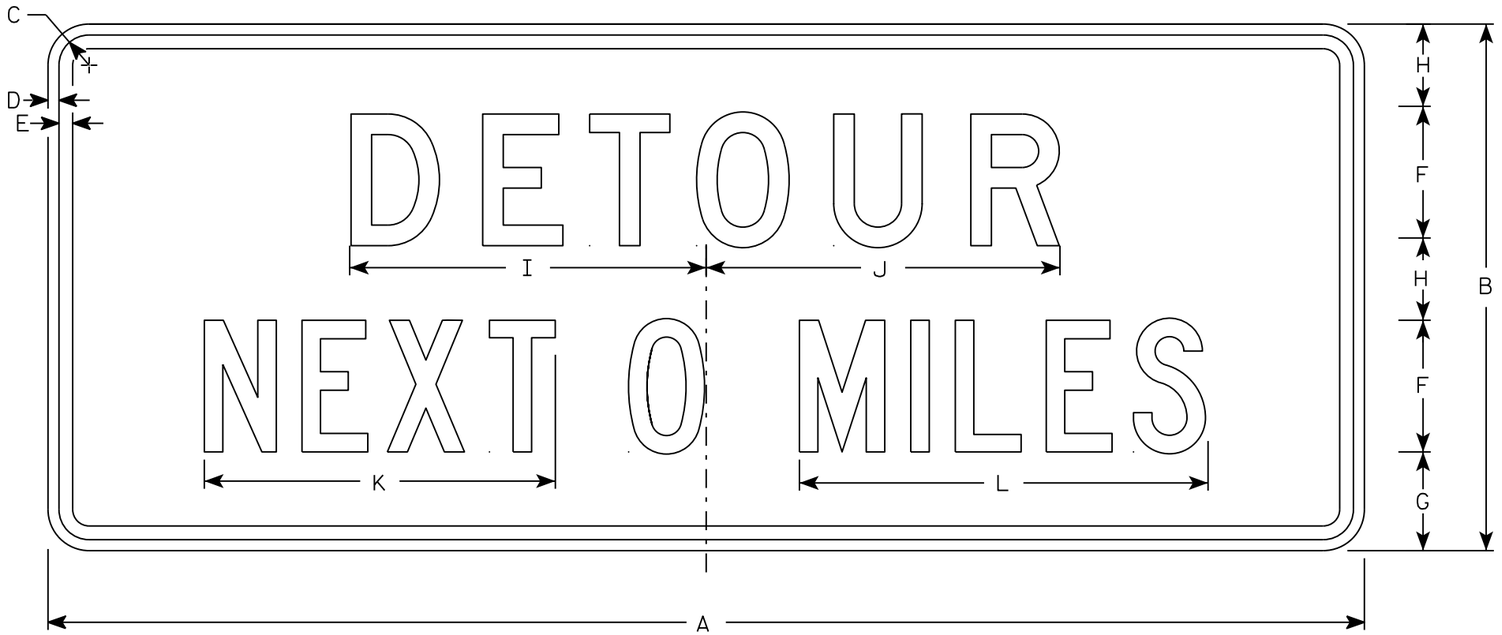
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:				SHEET NO: 139	E



G20-51

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - Line 1 is D and Line 2 is C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4	16 1/4	16 1/8	16	18 5/8															10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4	16 1/4	16 1/8	16	18 5/8															10
5																											

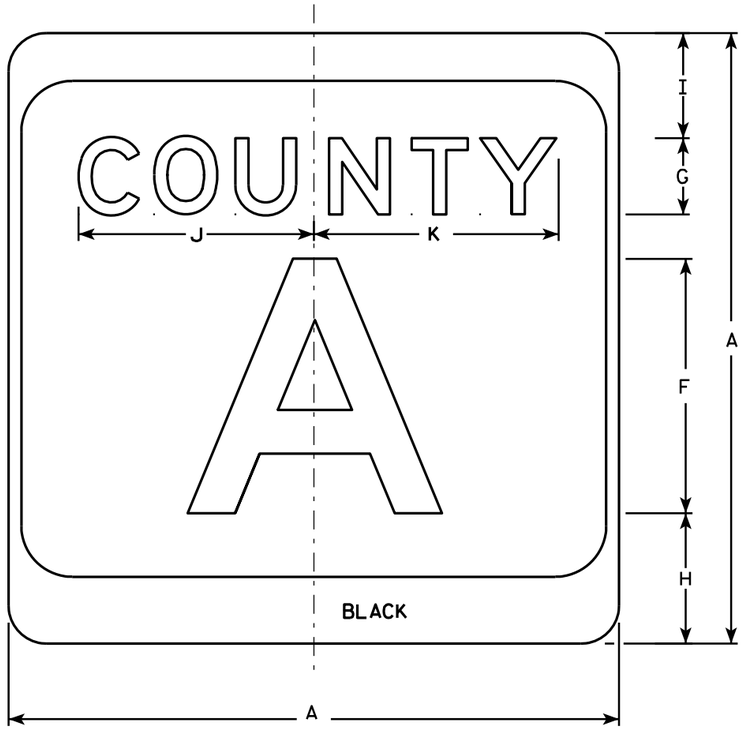
STANDARD SIGN
G20-51

WISCONSIN DEPT OF TRANSPORTATION

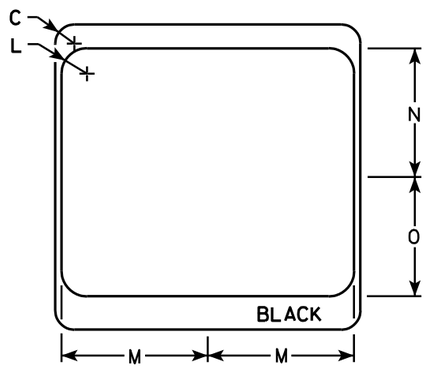
APPROVED Matthew R Rauch
for State Traffic Engineer

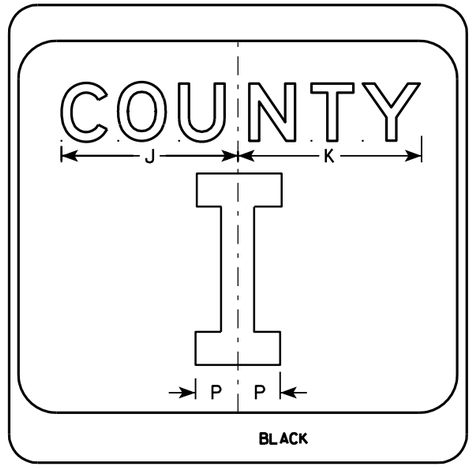
DATE 3/14/17 PLATE NO. G20-51.2

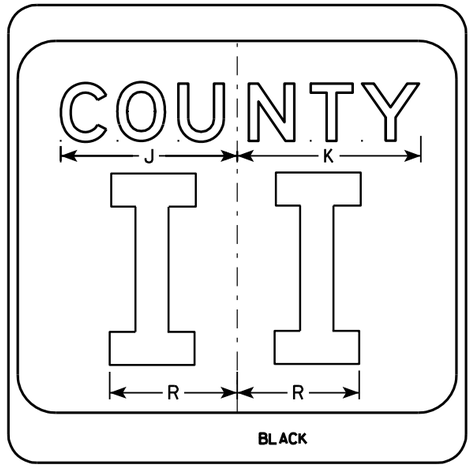
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 140	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

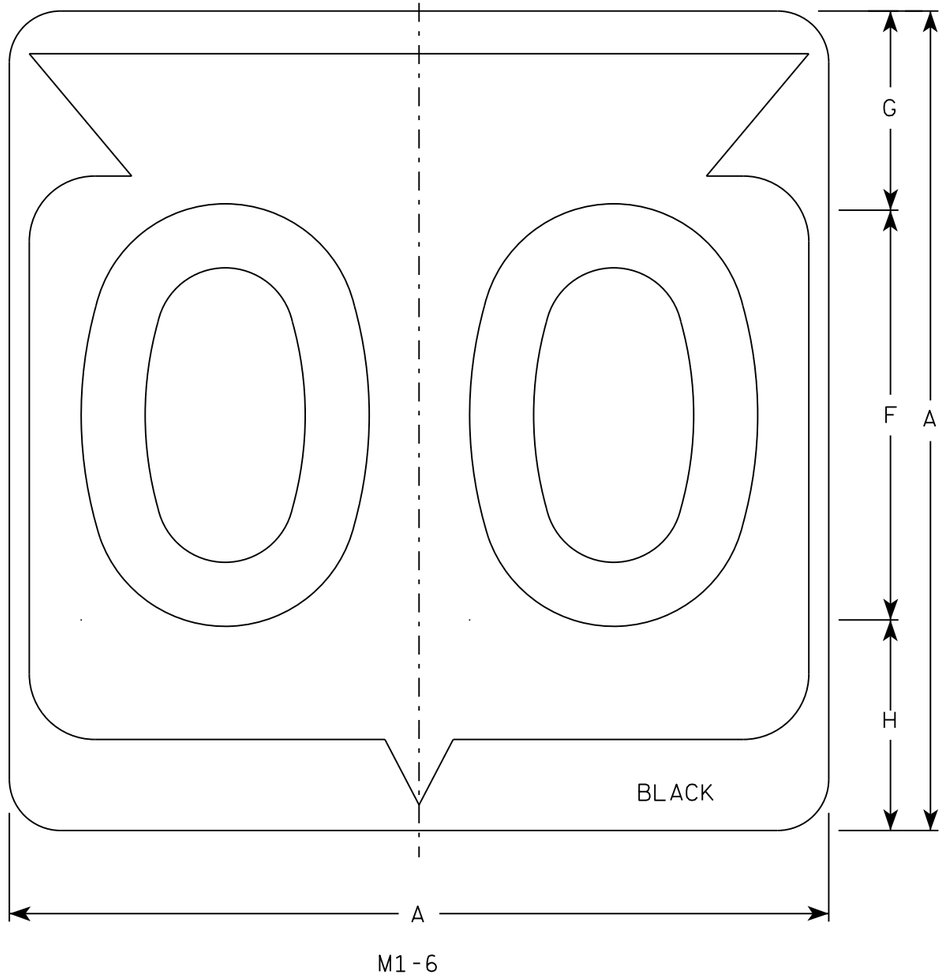
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

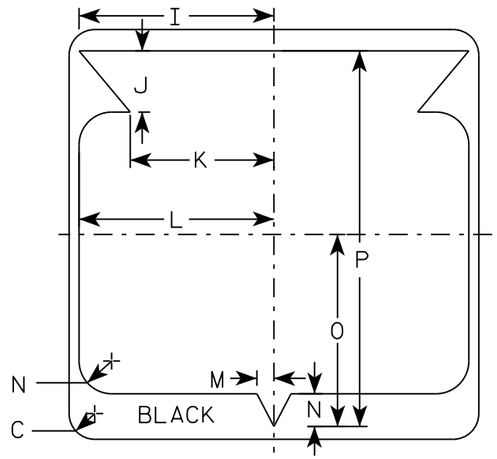
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 141	E



M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

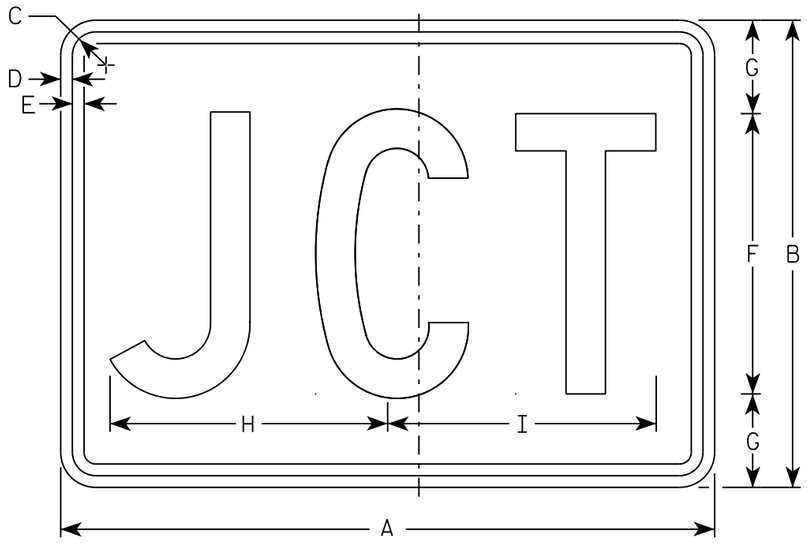
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

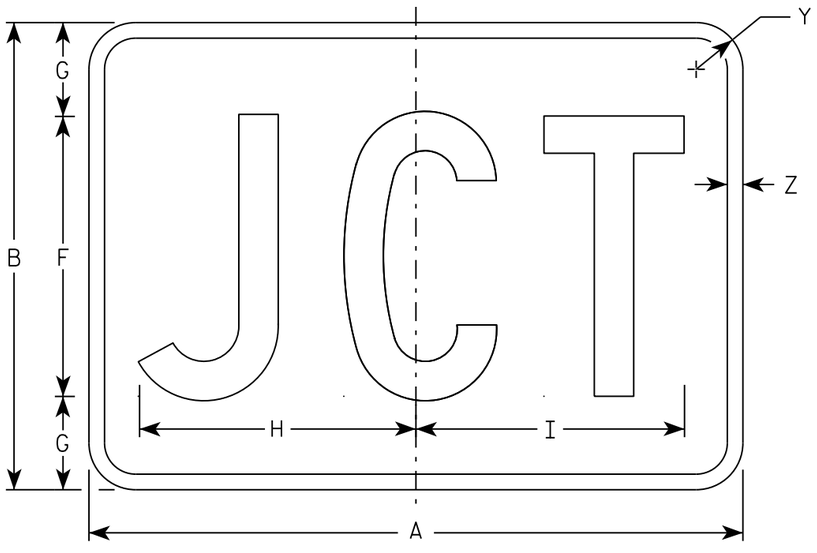
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 142 | E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

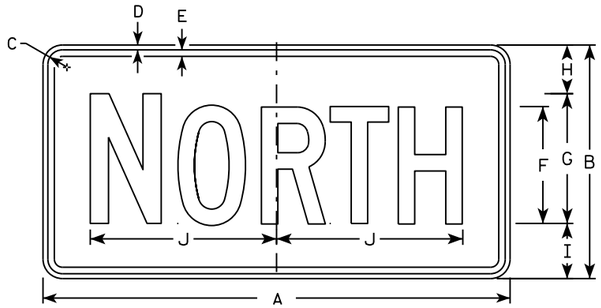
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

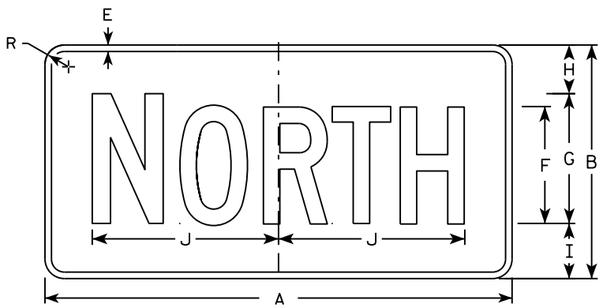
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 143 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



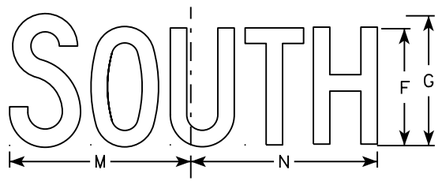
M3-1
MM3-1
MP3-1



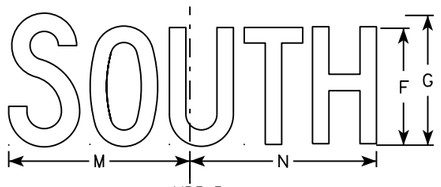
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

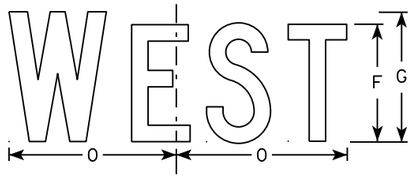
MB3-2
MK3-2
MN3-2



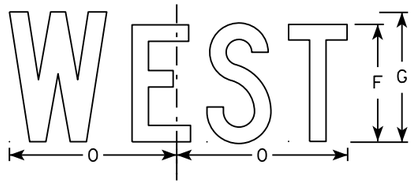
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

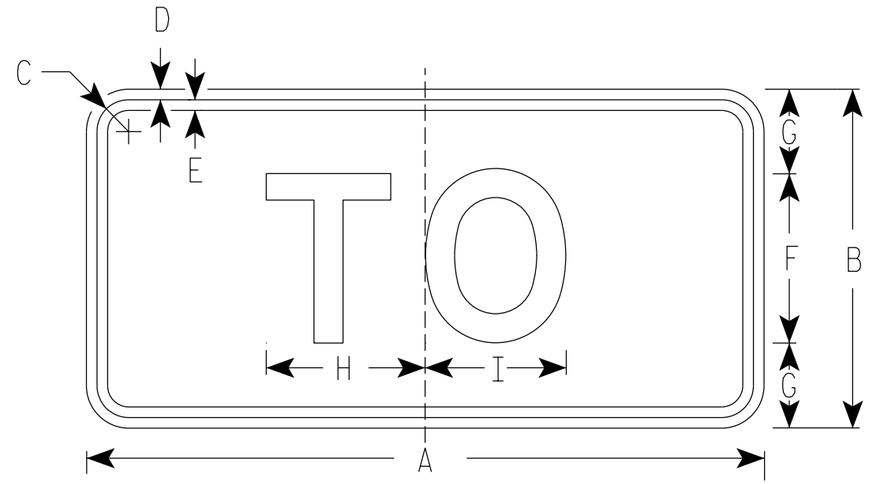
APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

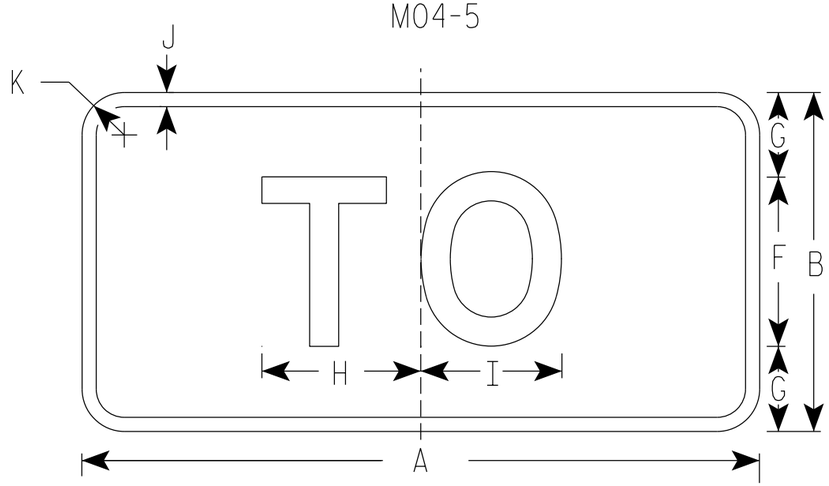
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000

7



M4-5
MM4-5
MP4-5
MO4-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

   MO4-5 Background - Orange Type F Reflective
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

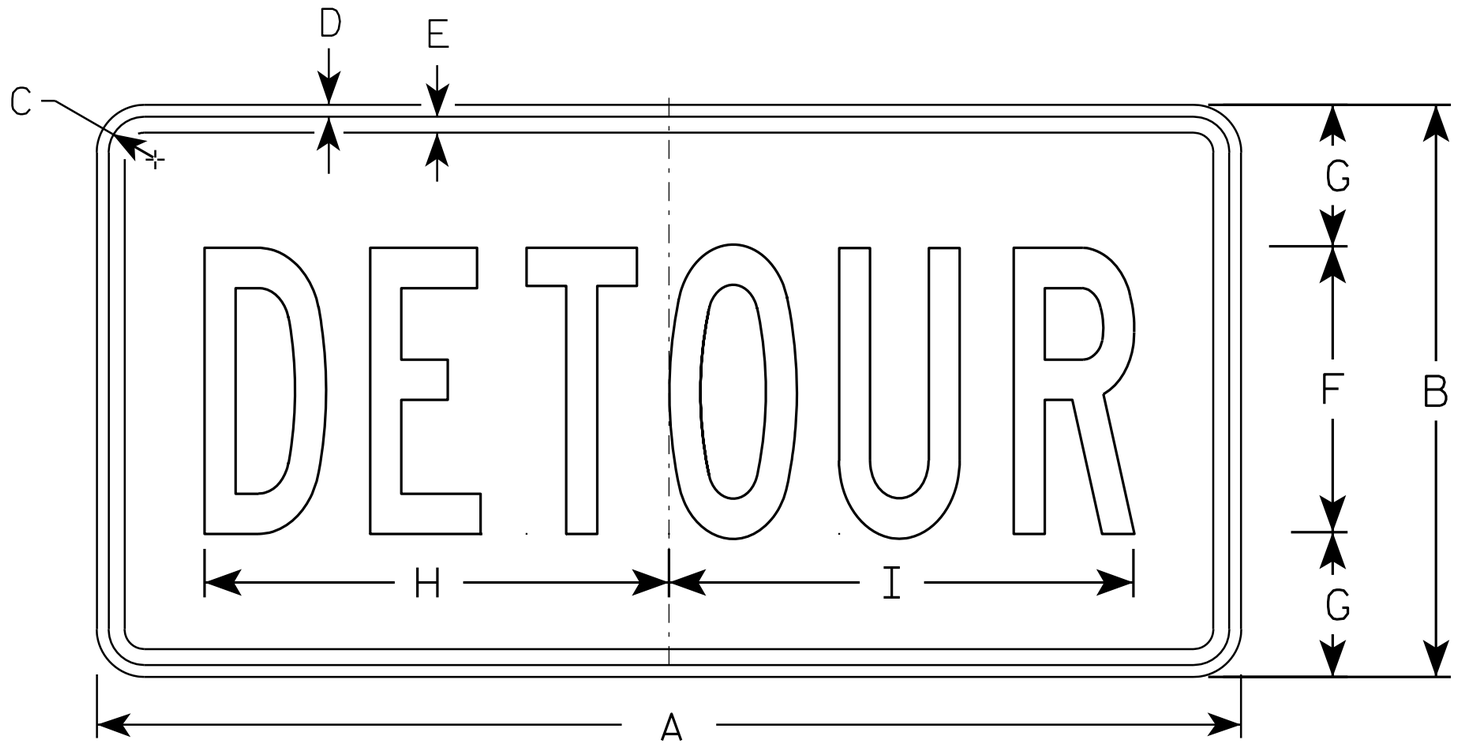
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/7/19 PLATE NO. M4-5.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 145 | E

7



M4-8

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

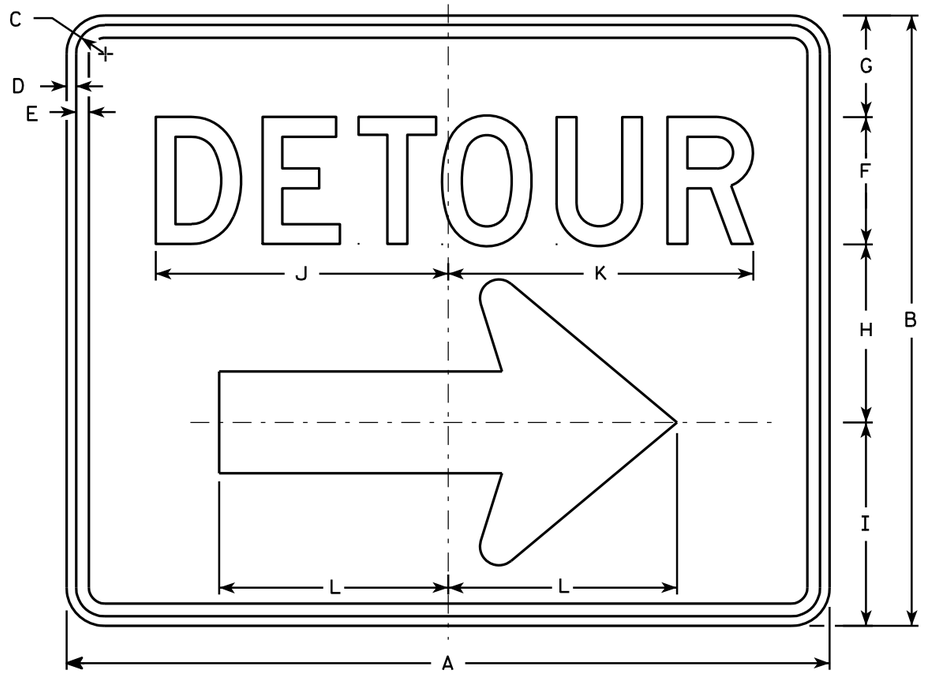
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

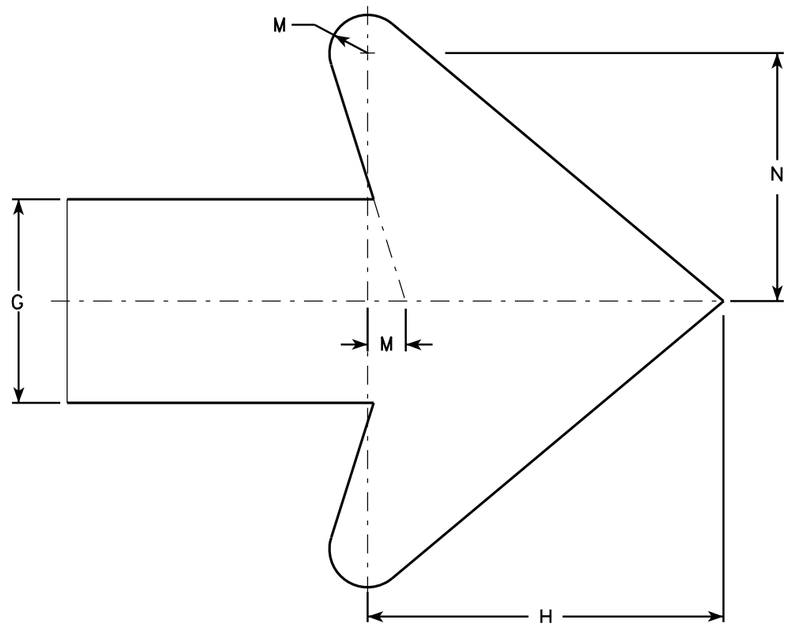
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 146	E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

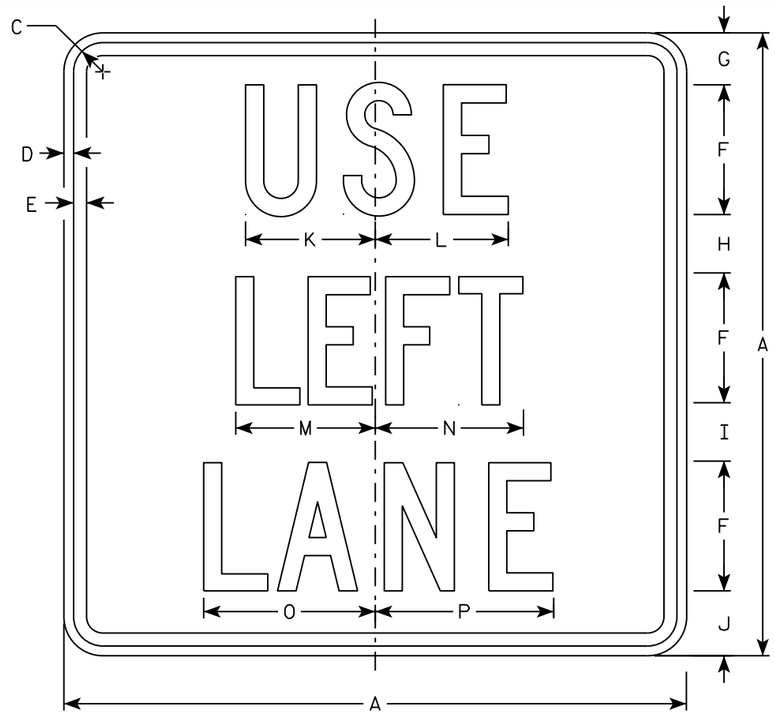
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

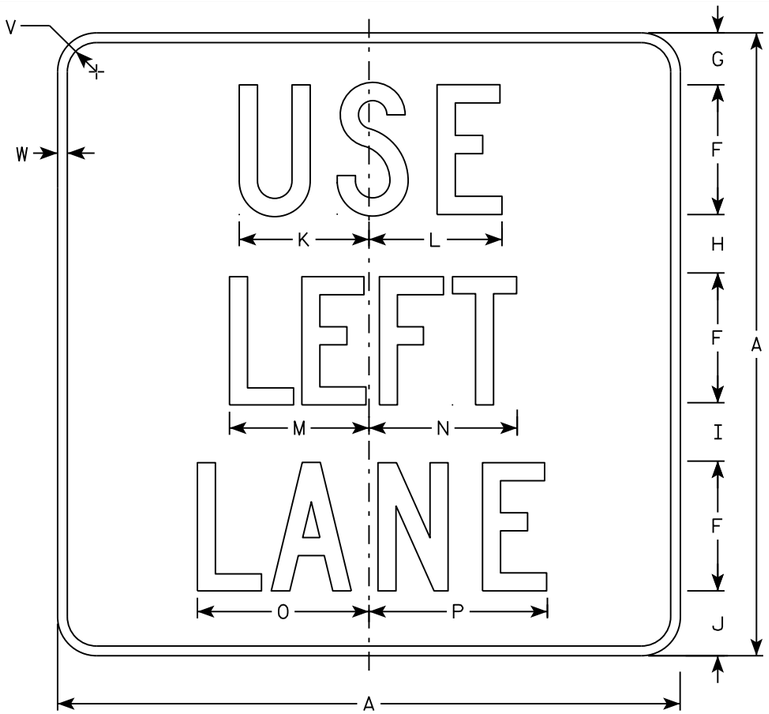
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 147	E



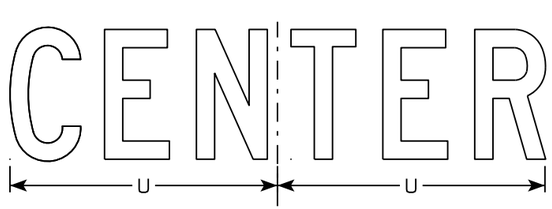
M4-20L



MB4-20L

M4-20L
MM4-20L
M04-20L
MP4-20L

MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C

M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   M04-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4																											
5																											

STANDARD SIGN
M4-20

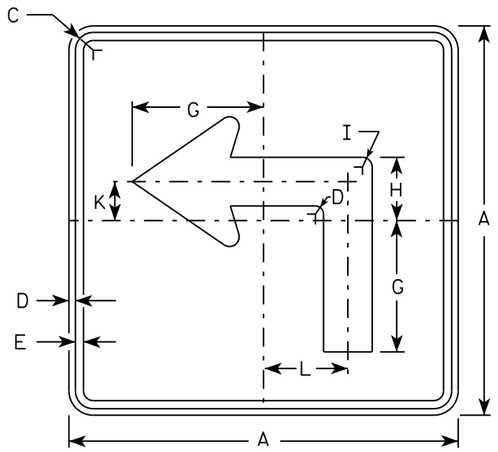
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

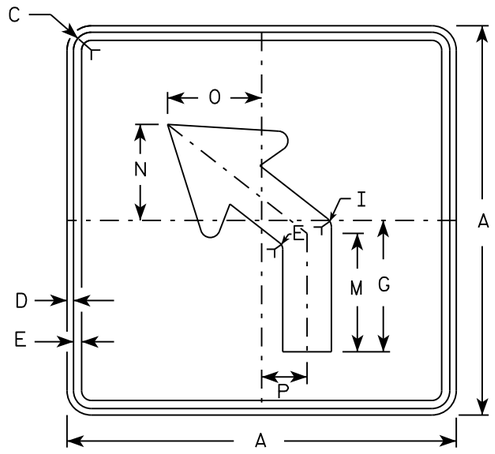
DATE 10/15/15 PLATE NO M4-20.5

148

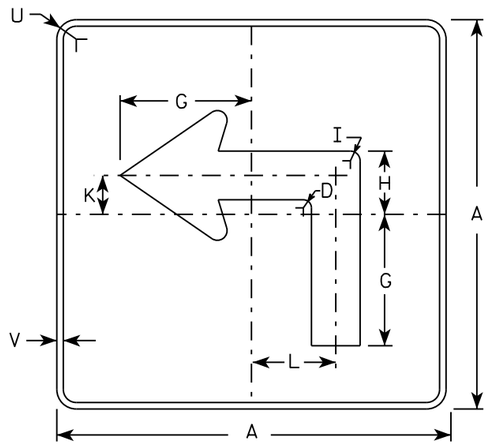
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



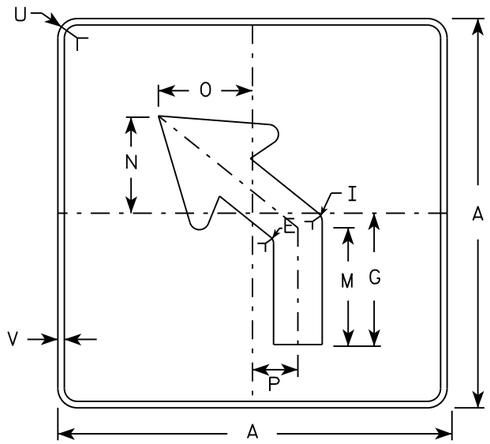
M5-1L
MM5-1L
MO5-1L
MP5-1L



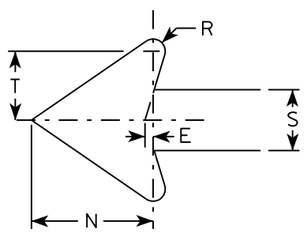
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

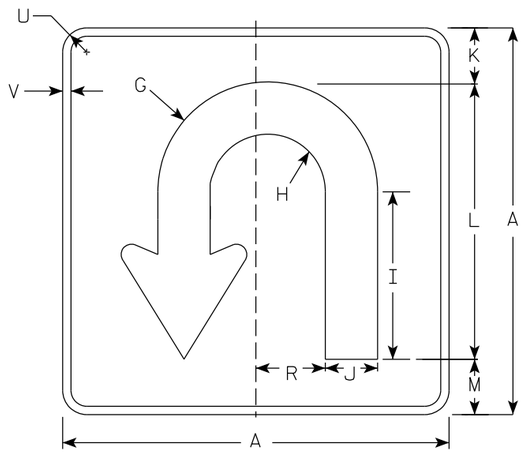
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

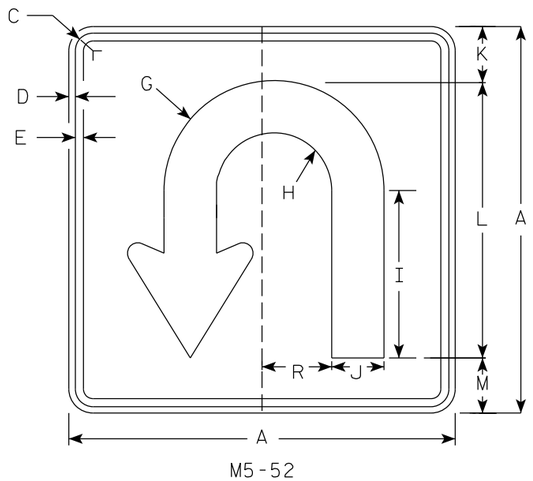
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



M5-52



M5-52

NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See note 4
3. M5-52 Background - White
   Message - Black

   MB5-52 Background - Blue
   Message - White

   MK5-52 Background - Green
   Message - White

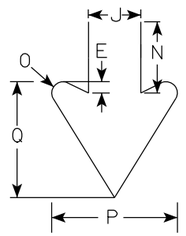
   MM5-52 Background - White
   Message - Green

   MN5-52 Background - Brown
   Message - White

   M05-52 Background - Orange - Type F Reflective
   Message - Black

   MP5-52 Background - White
   Message - Blue

   MR5-52 Background - Brown
   Message - Yellow



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		6	3 1/8	9 1/8	2 7/8	3	15	3	3 7/8	5/8	6 7/8	6 3/4	3 3/4			1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		8 1/2	4 1/2	13	4 1/8	4 3/8	21 3/8	4 1/4	5 1/2	7/8	9 3/4	8 1/8	5 1/4			2 1/2	5/8					6.25
4																											
5																											

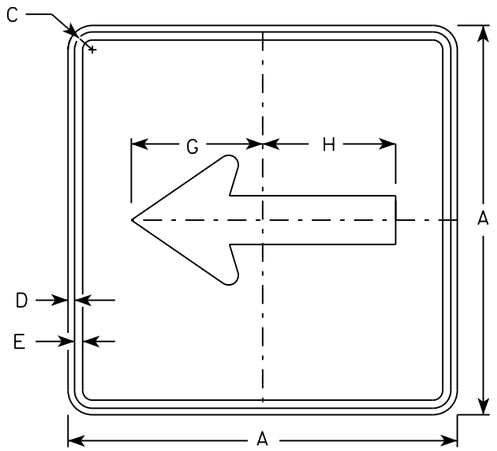
STANDARD SIGN
M5-52
SERIES

WISCONSIN DEPT OF TRANSPORTATION

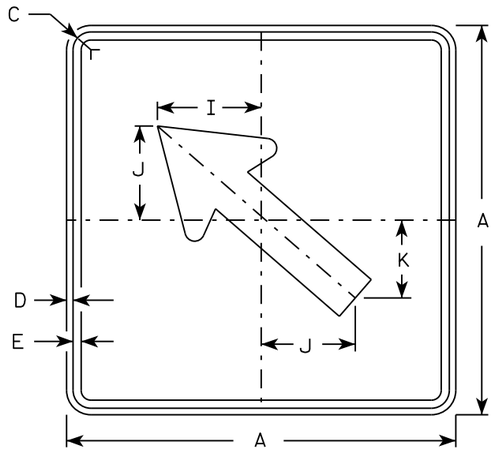
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. M5-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 150	E



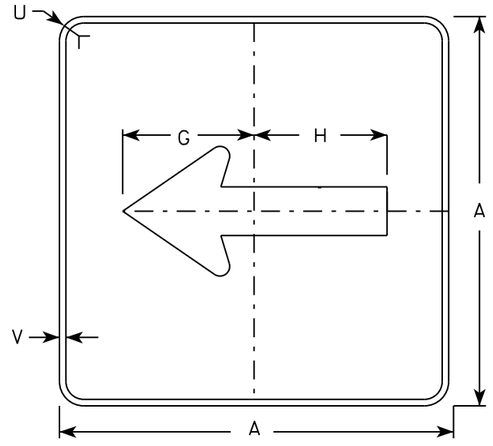
M6-1
MM6-1
MO6-1
MP6-1



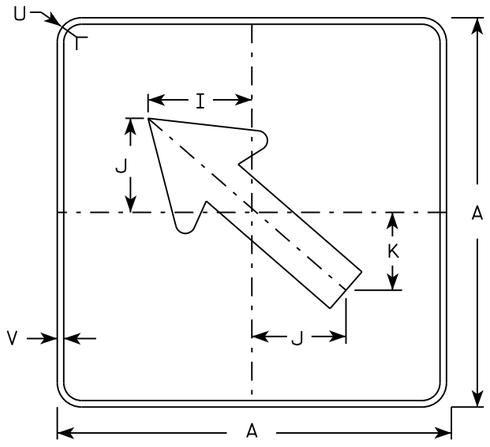
M6-2
MM6-2
MO6-2
MP6-2

NOTES

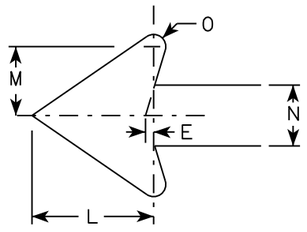
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

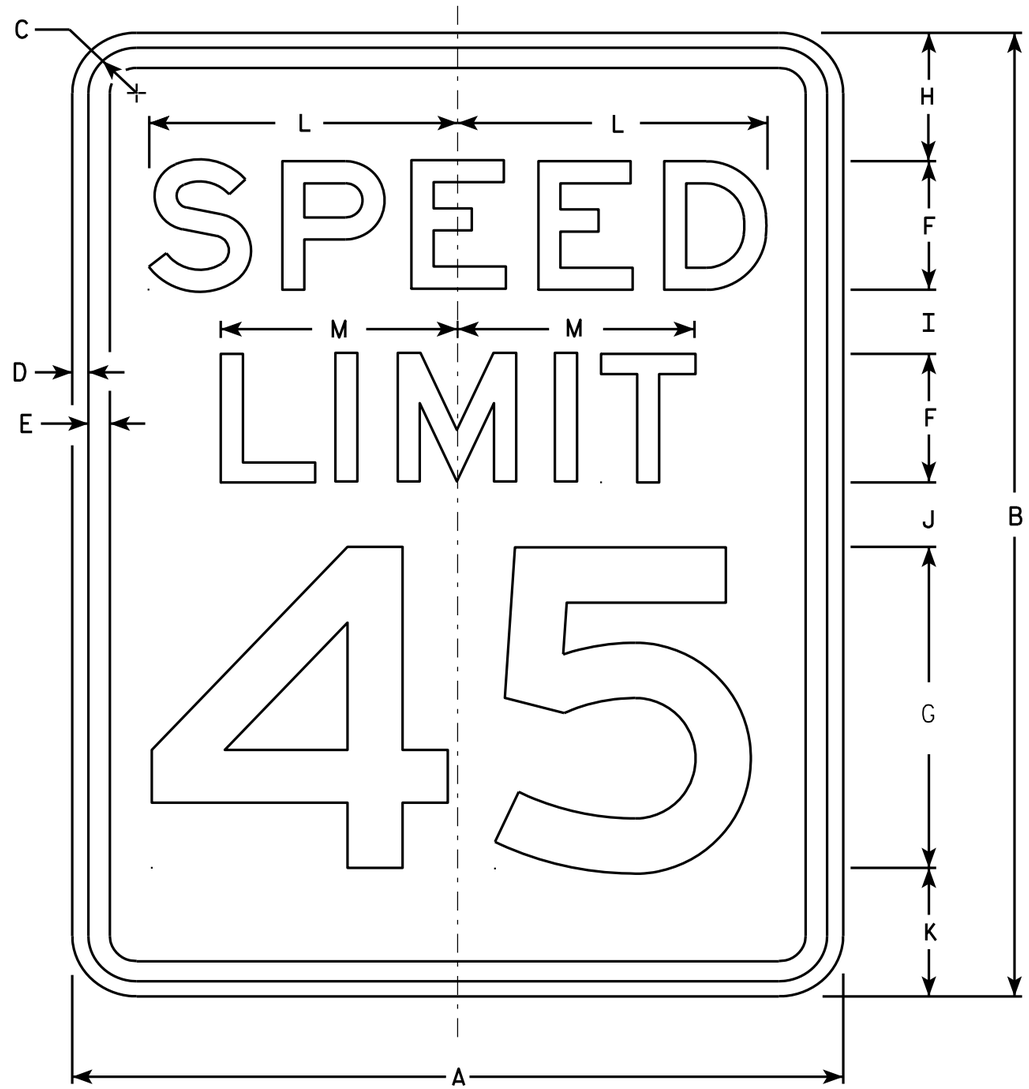
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 151 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

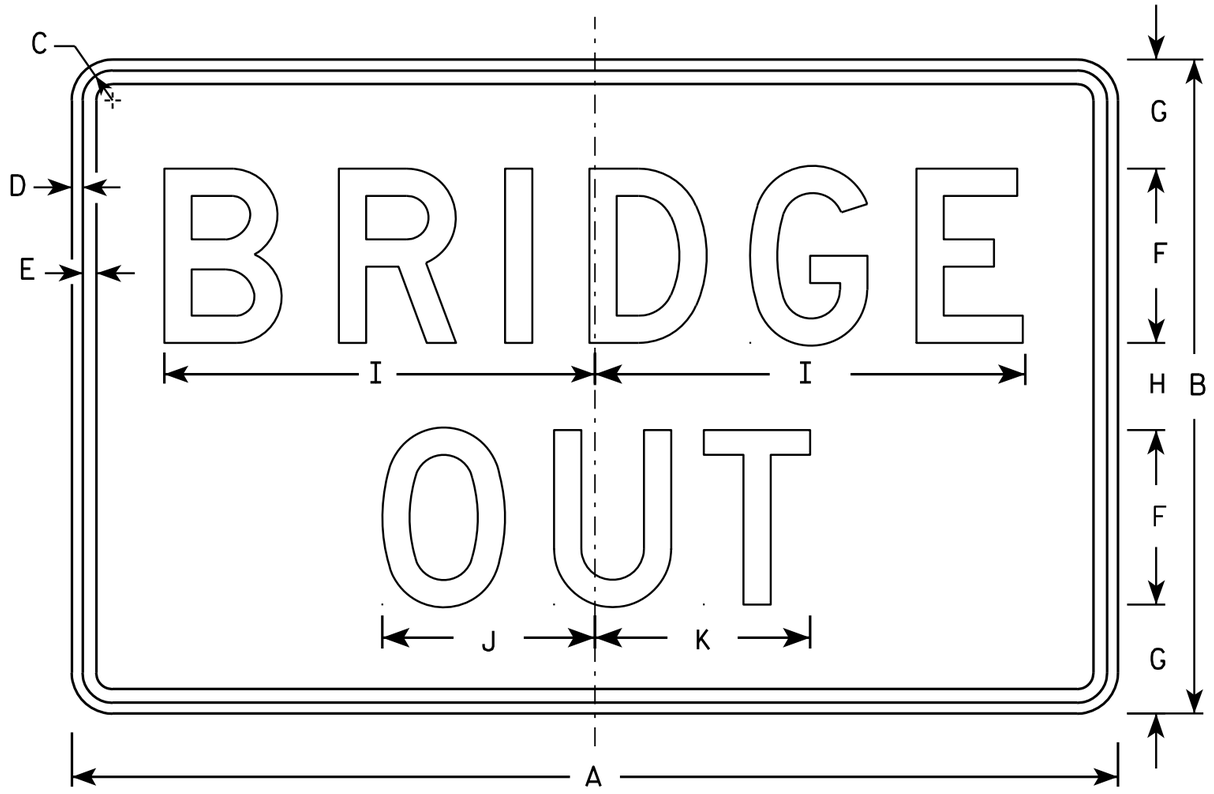
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 152 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R21.DGN PLOT DATE : 28-MAY-2010 08:32 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.717577:1.000000

WISDOT/CADDS SHEET 42



R11-2B

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

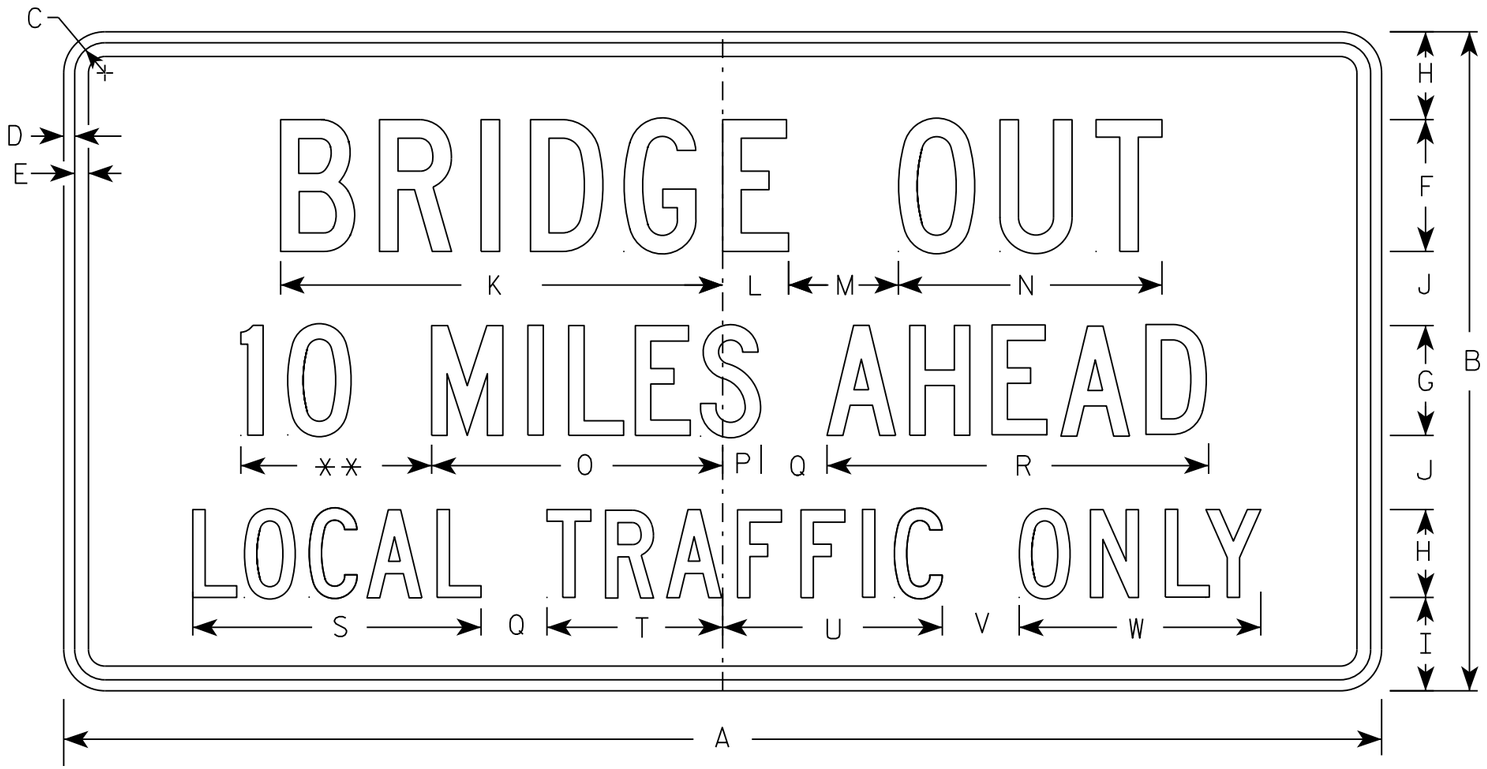
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

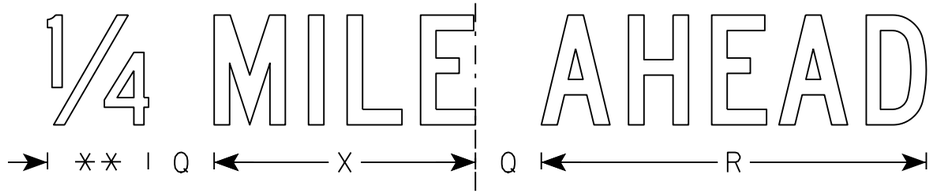
PROJECT NO:

SHEET NO: 153 E



R11-3B

** See Note 5



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3B

WISCONSIN DEPT OF TRANSPORTATION

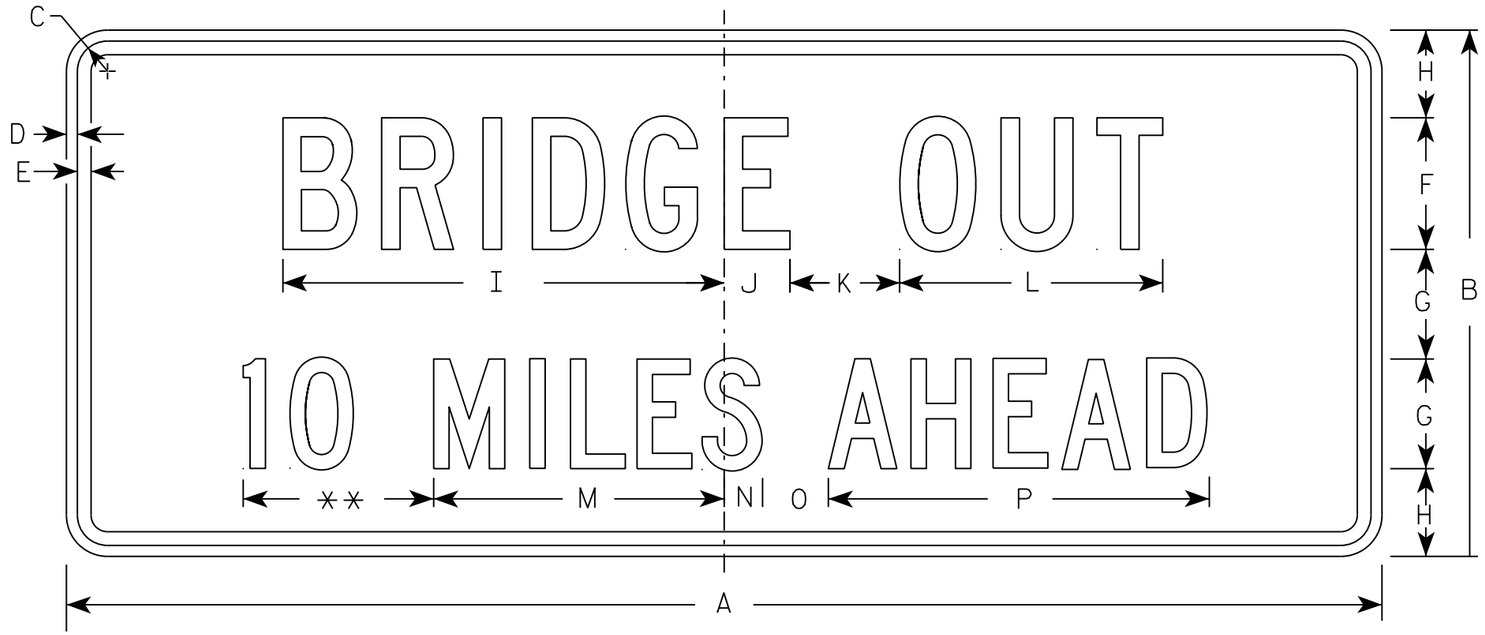
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. R11-3B.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 154	E

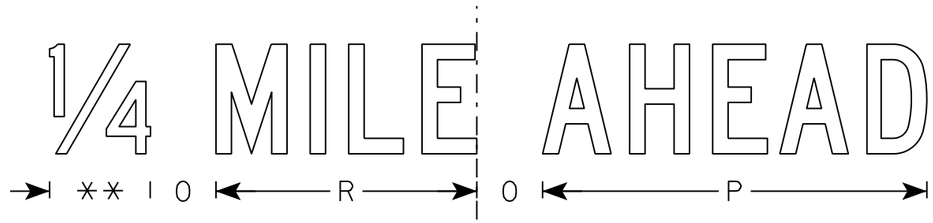
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3C

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

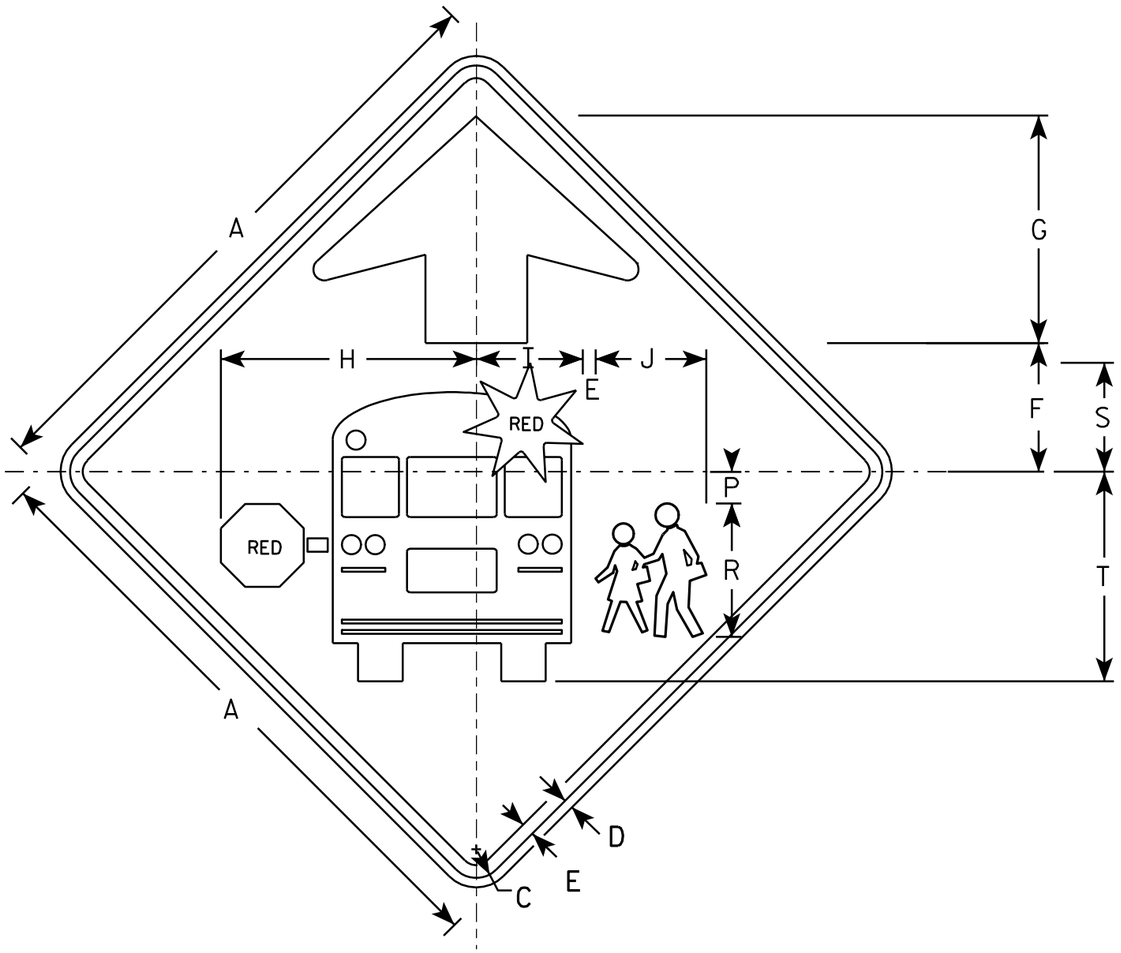
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO. R11-3C.3

PROJECT NO:

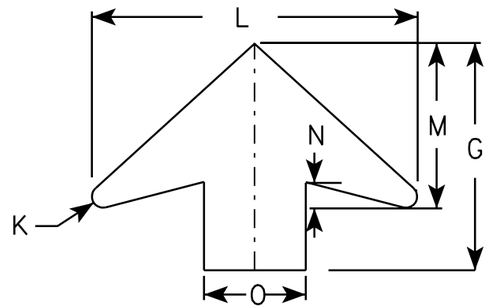
SHEET NO: 155 E



S3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW-GREEN
   Message - BLACK except as noted
   Circles except PEDS- RED BACKGROUND
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 7/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

STANDARD SIGN
S3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

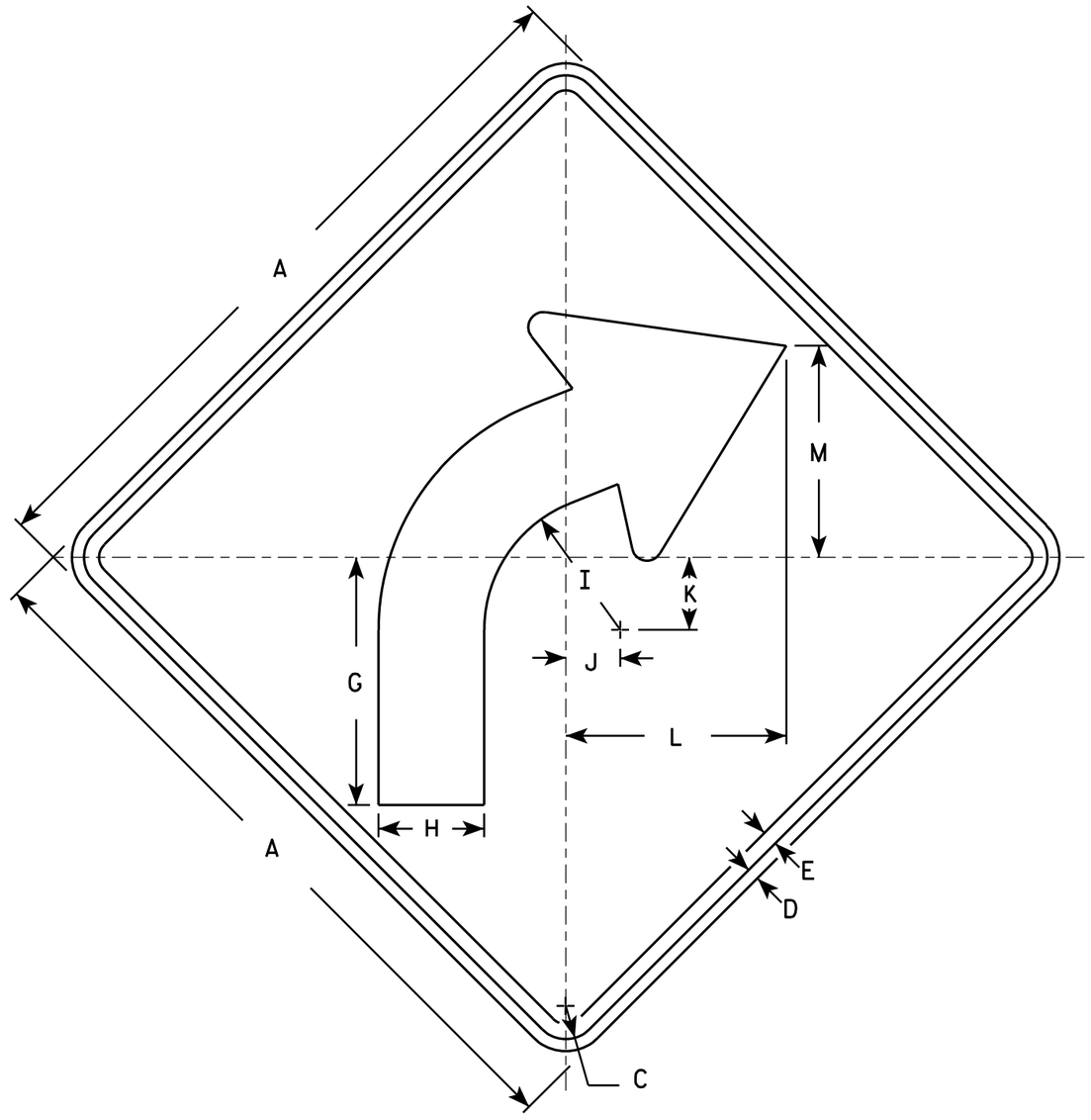
DATE 6/8/10 PLATE NO. S3-1.6

PROJECT NO:

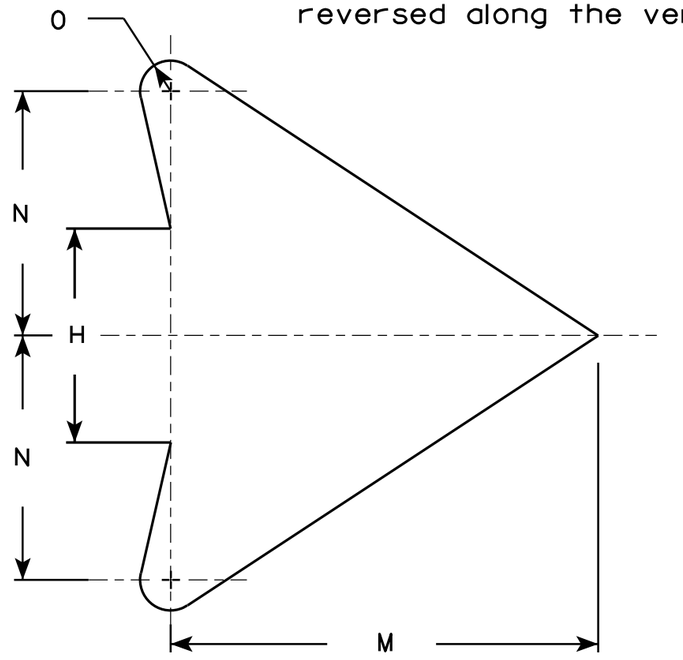
SHEET NO: 156 E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

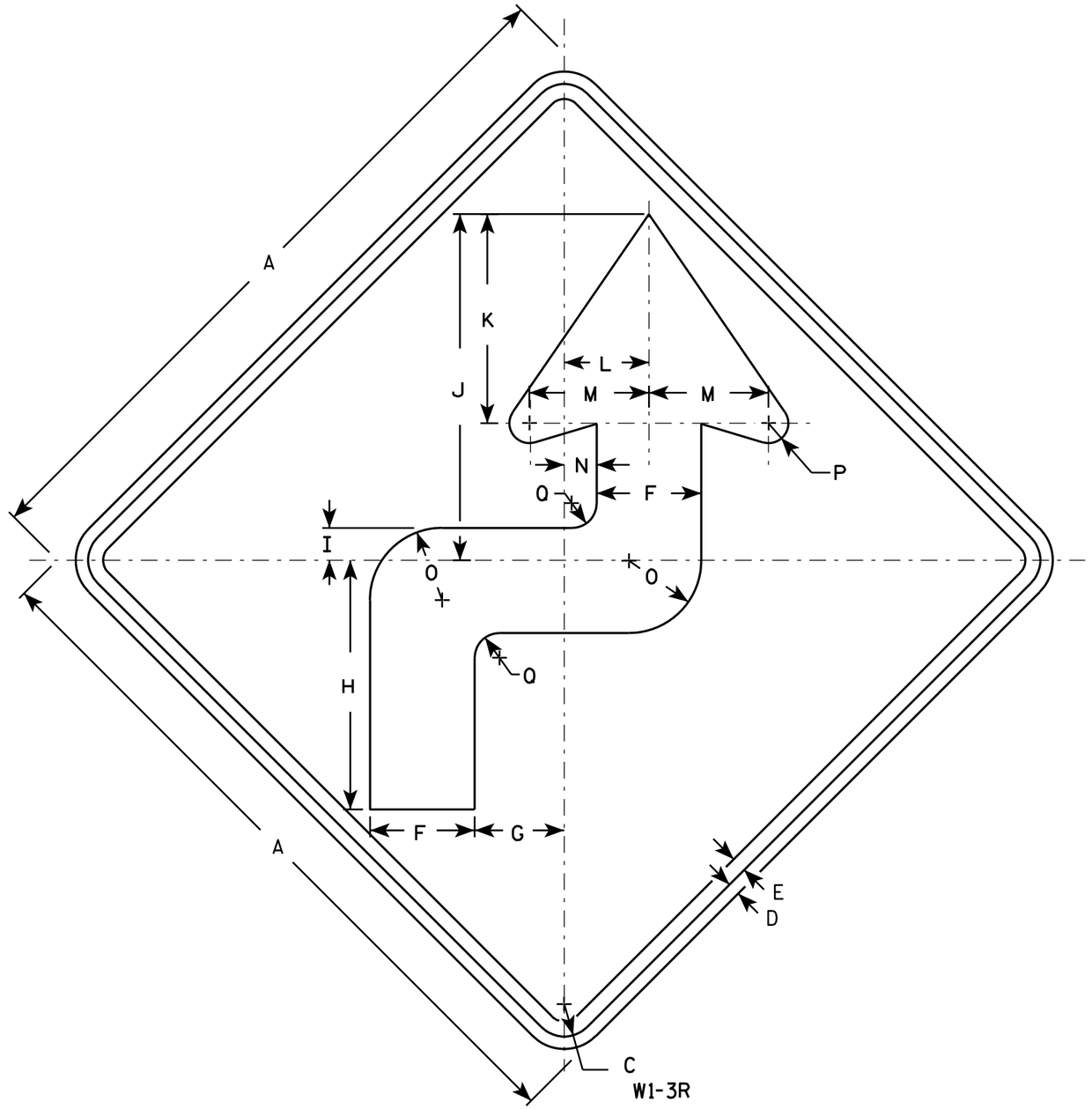
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 157	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-3L is the same as W1-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	3	8 3/8	1 1/8	11 5/8	7	2 3/4	4	1 1/8	2 1/2	5/8	7/8										4.0
2S	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2M	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
3	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
4	36		1 5/8	5/8	3/4	5 1/4	6	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

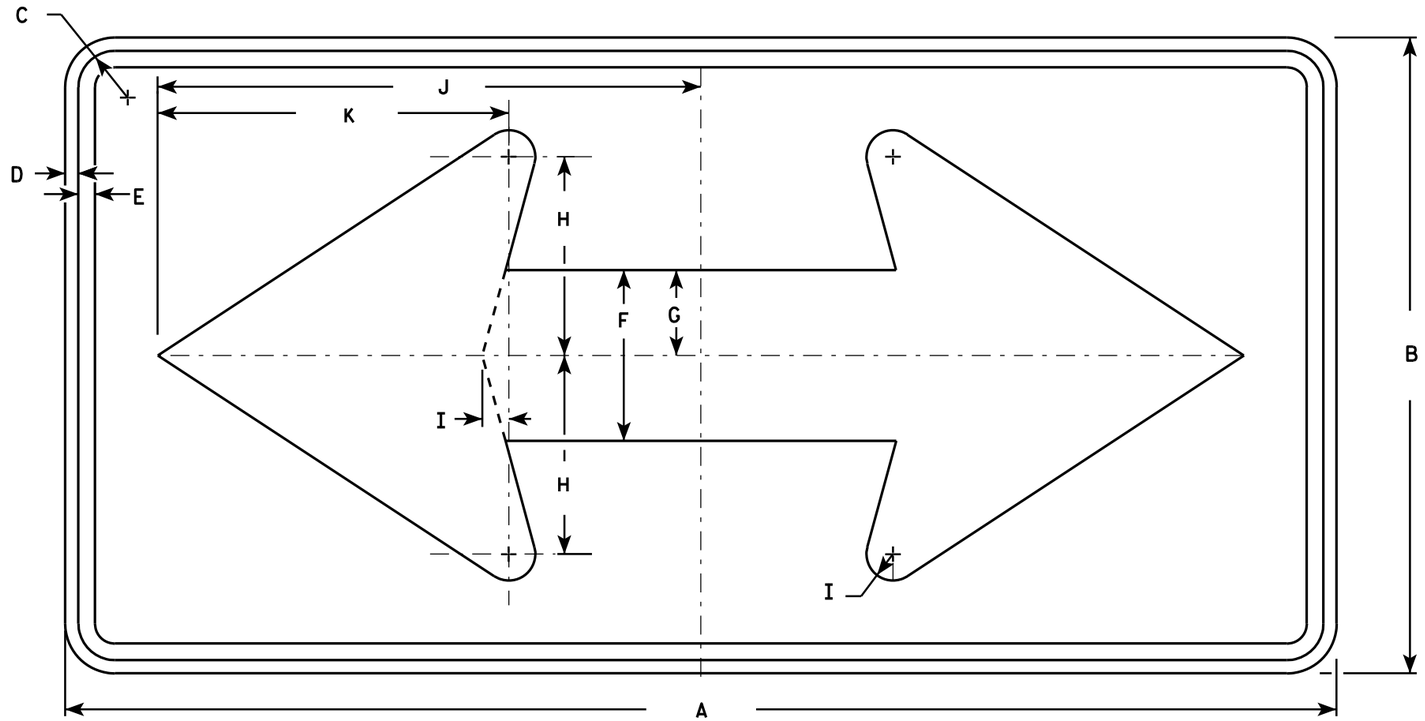
STANDARD SIGN
W1-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-3.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 158 | E



W1-7

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

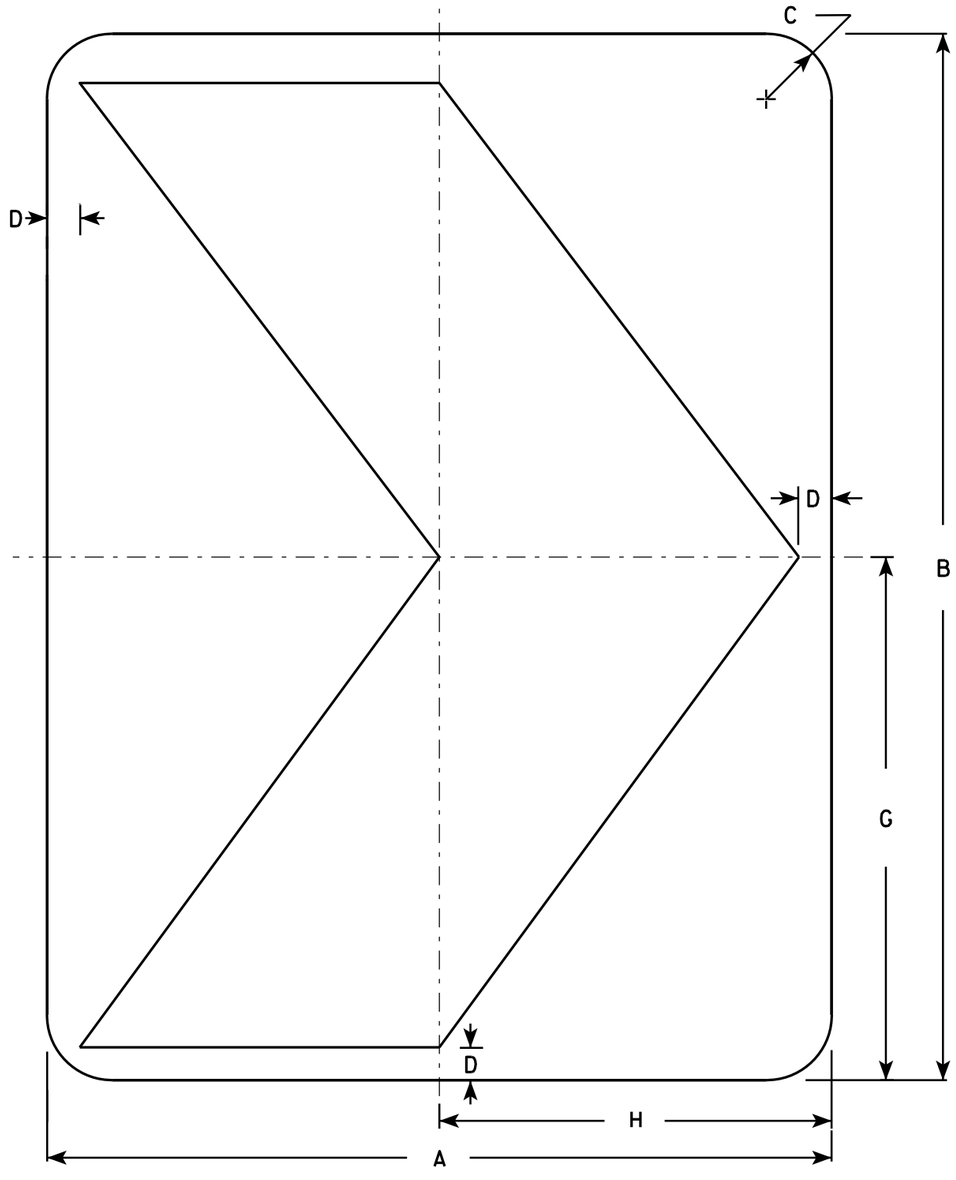
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 159 | E



NOTES

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

W1-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

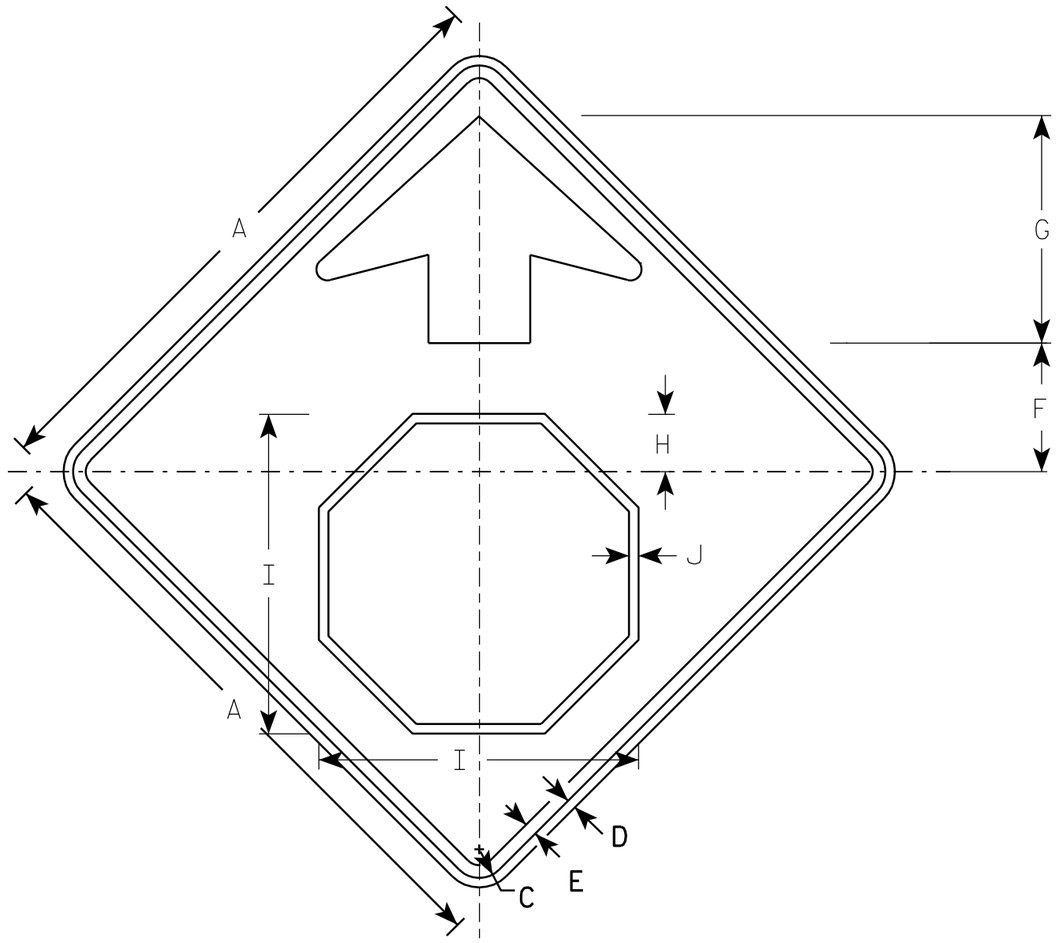
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

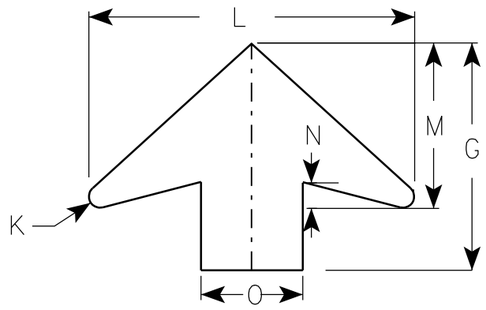
SHEET NO: 160 E



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

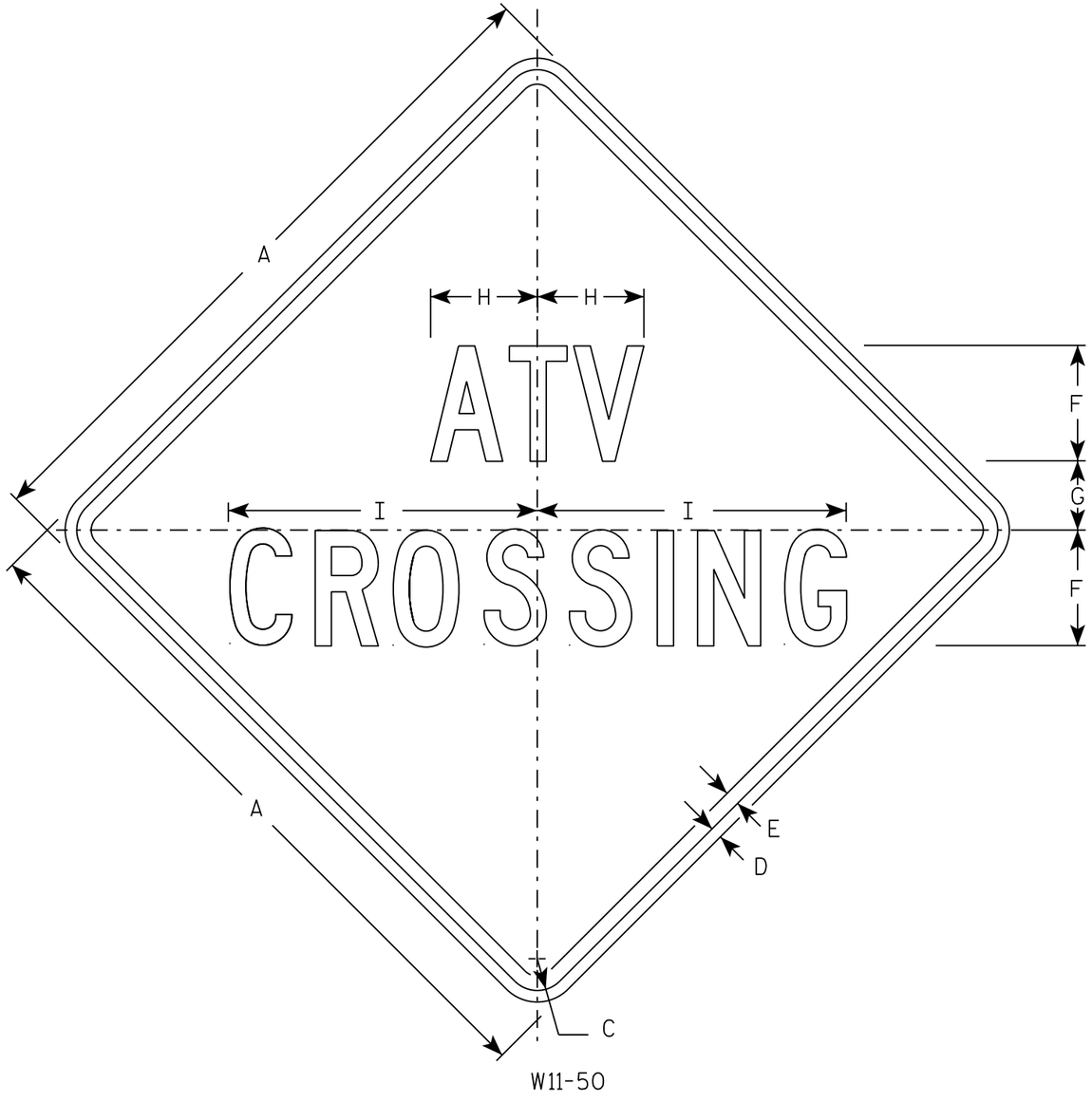
SHEET NO: 161 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W31.DGN PLOT DATE : 07-JUN-2010 12:59 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

7

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 3/8	3 3/4	10 3/4																		4.0
2S	30		1 3/8	1/2	5/8	5	3	4 5/8	13 3/8																		6.25
2M	36		1 5/8	5/8	3/4	6	3 1/2	5 5/8	16																		9.0
3	36		1 5/8	5/8	3/4	6	3 1/2	5 5/8	16																		9.0
4	48		2 1/4	3/4	1	8	5	7 3/8	21 1/4																		16.0
5																											

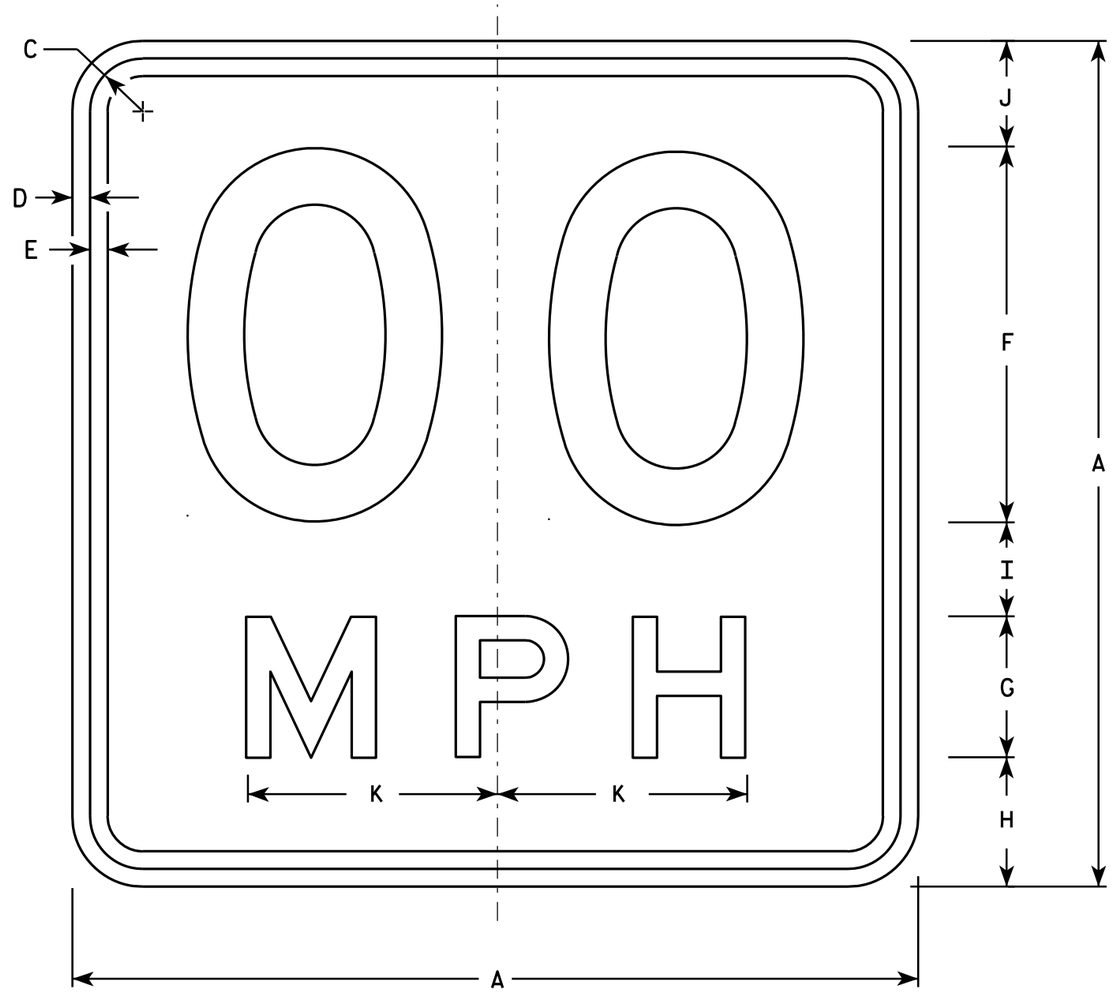
STANDARD SIGN
W11-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/1/16 PLATE NO. W11-50.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 162 | E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

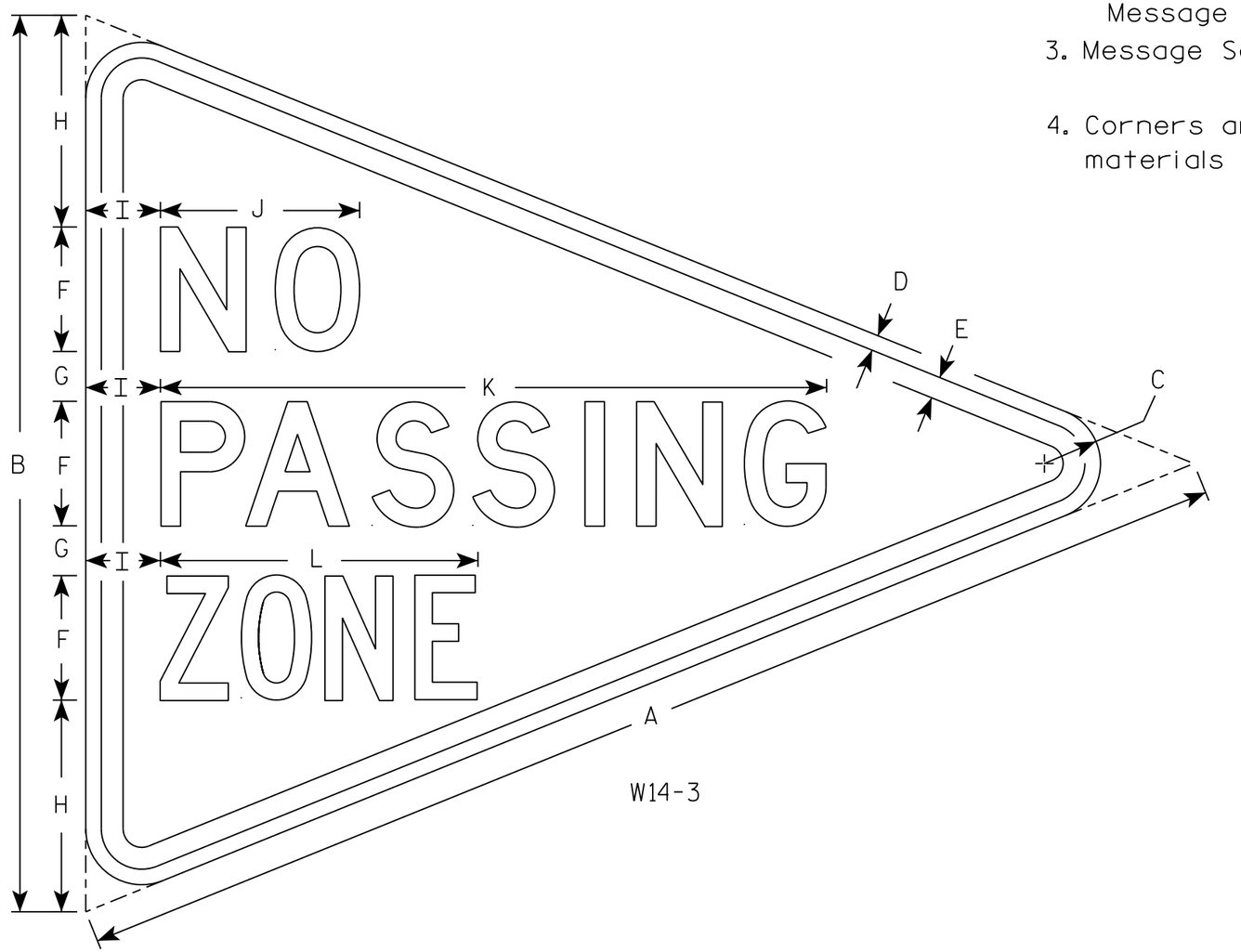
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 163	E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - Lines 1 and 2 are Series D.
   Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

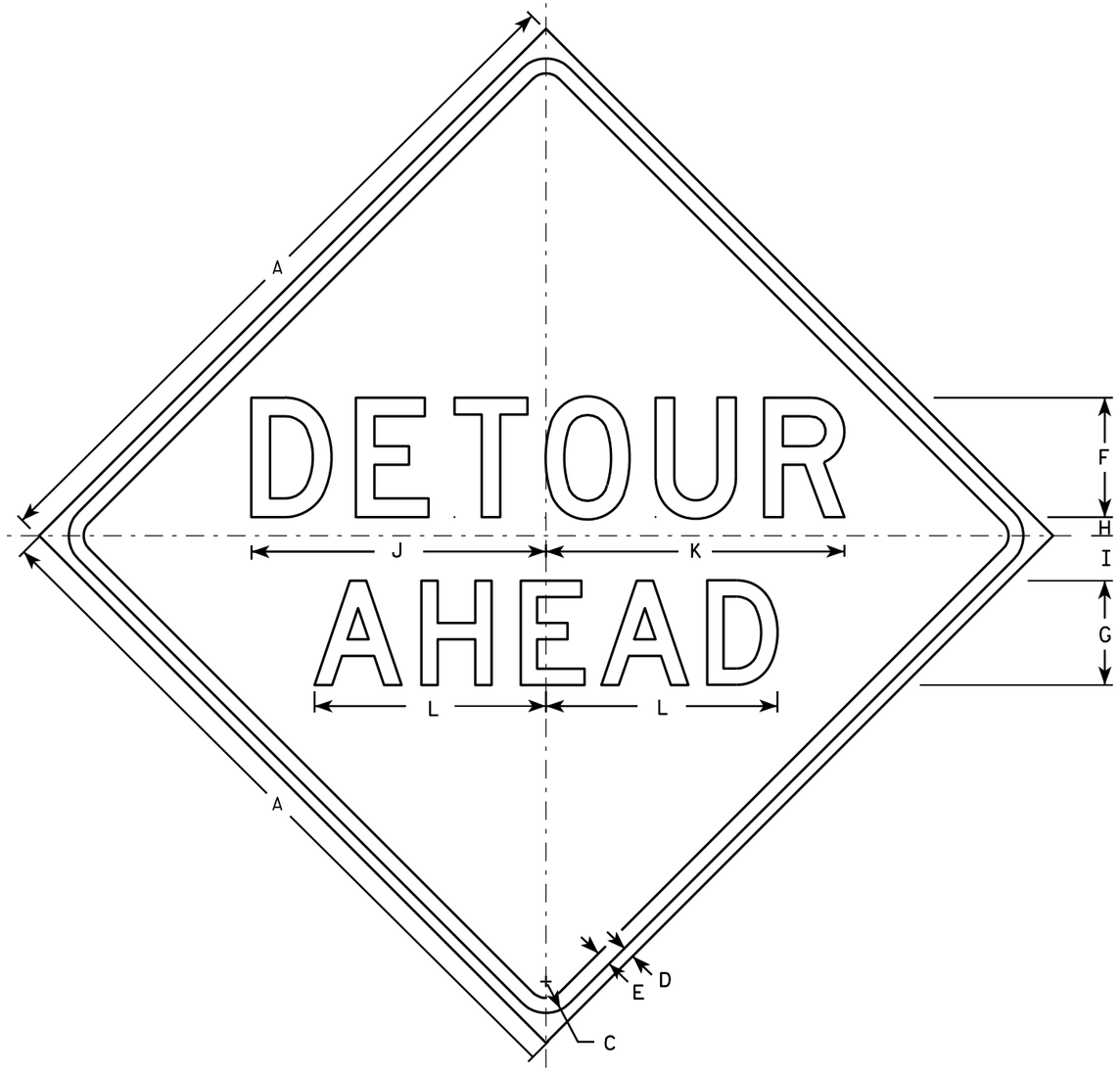
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 164 | E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W143.DGN PLOT DATE : 21-MAR-2017 08:48 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : 5.650195:1.000000

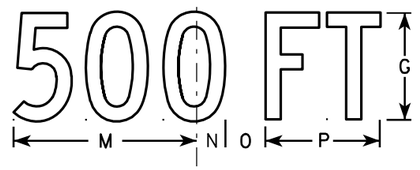
WISDOT/CADDS SHEET 42

7

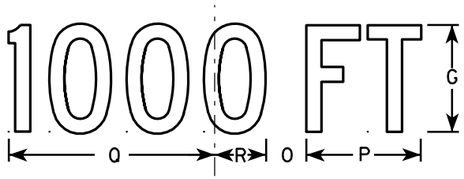
7



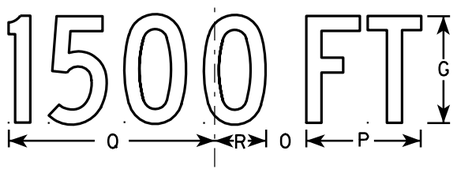
W20-2A



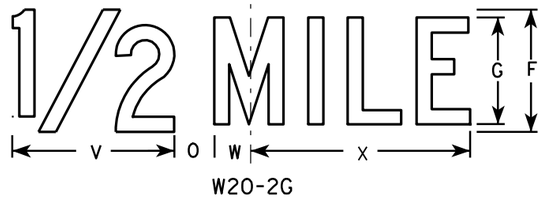
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

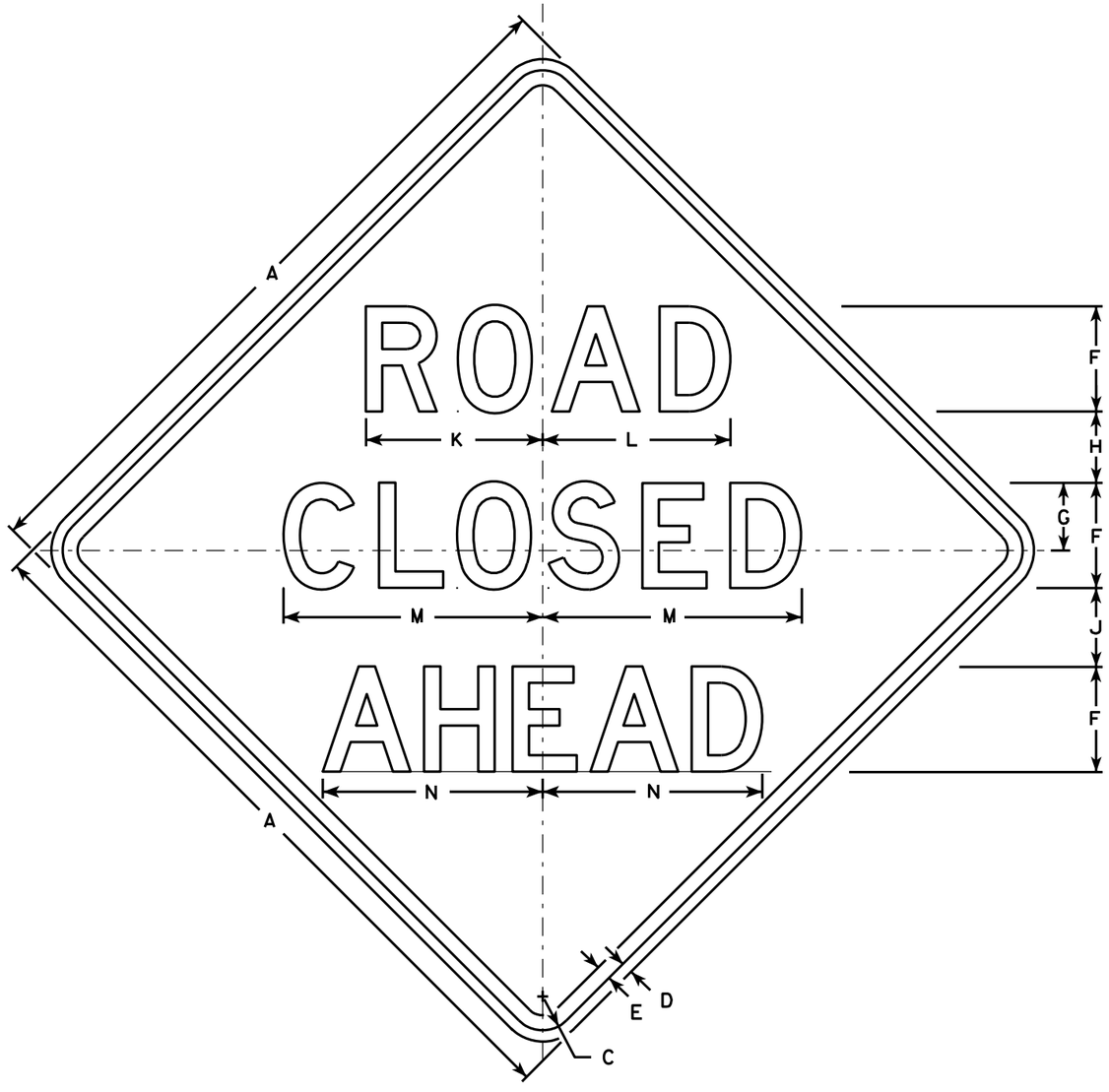
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

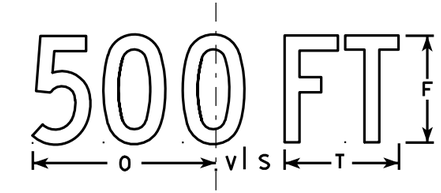
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

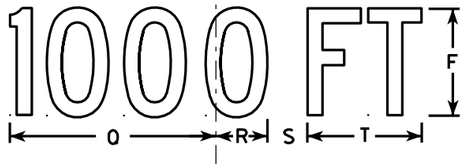
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 165	E



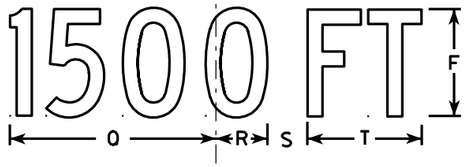
W20-3A



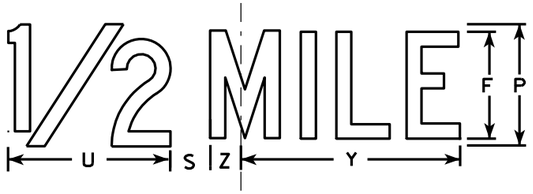
W20-3D



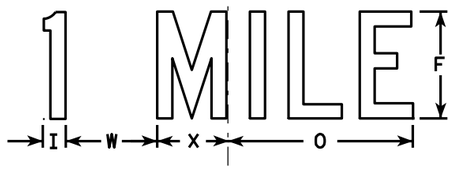
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

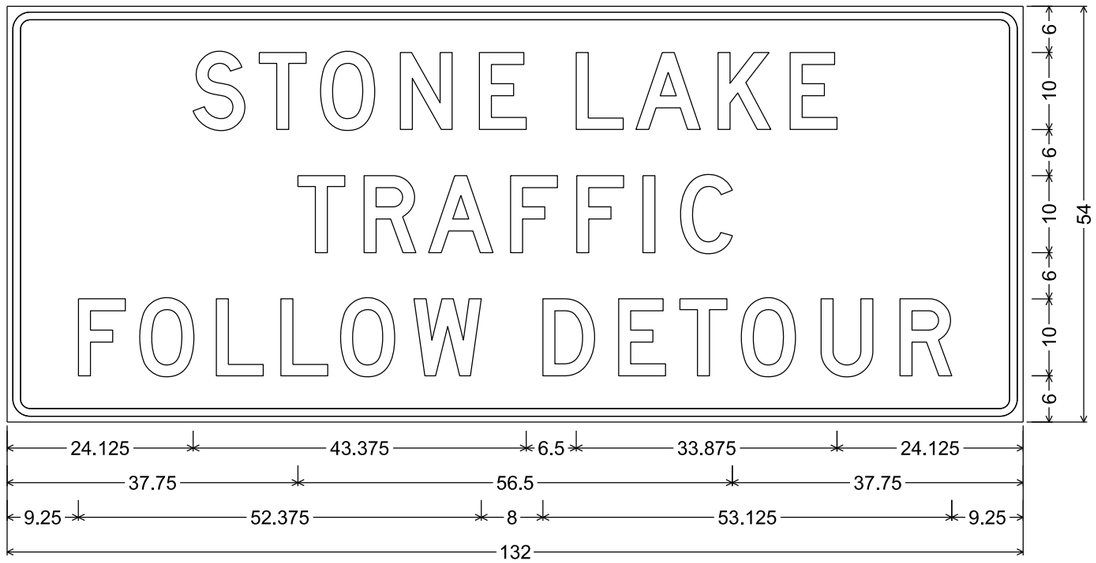
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 166 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

NOTES

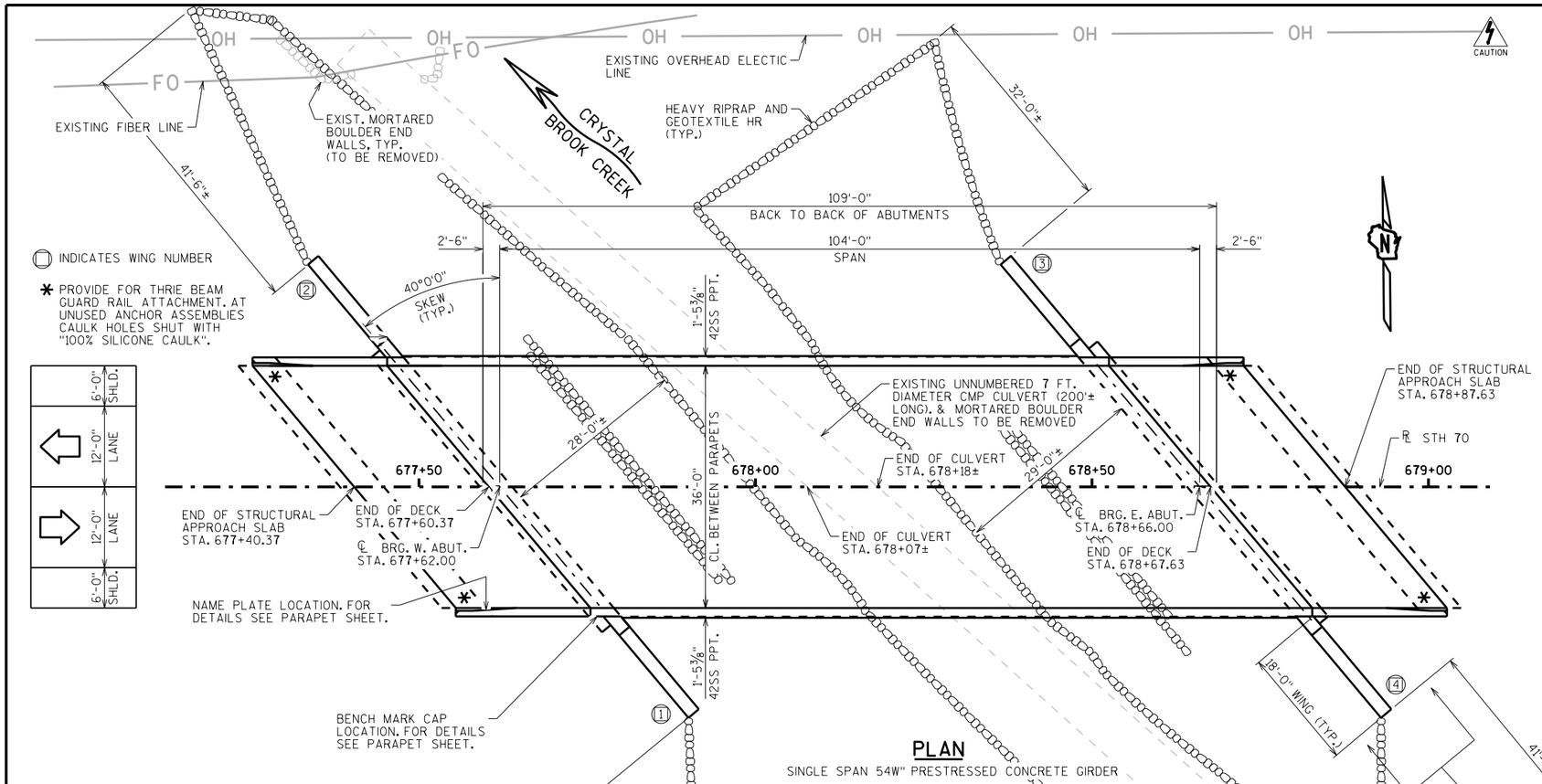
1. Fixed Message Type II sign - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



3.000" Radius, 1.000" Border, 0.750" Indent

STATE PROJECT NUMBER

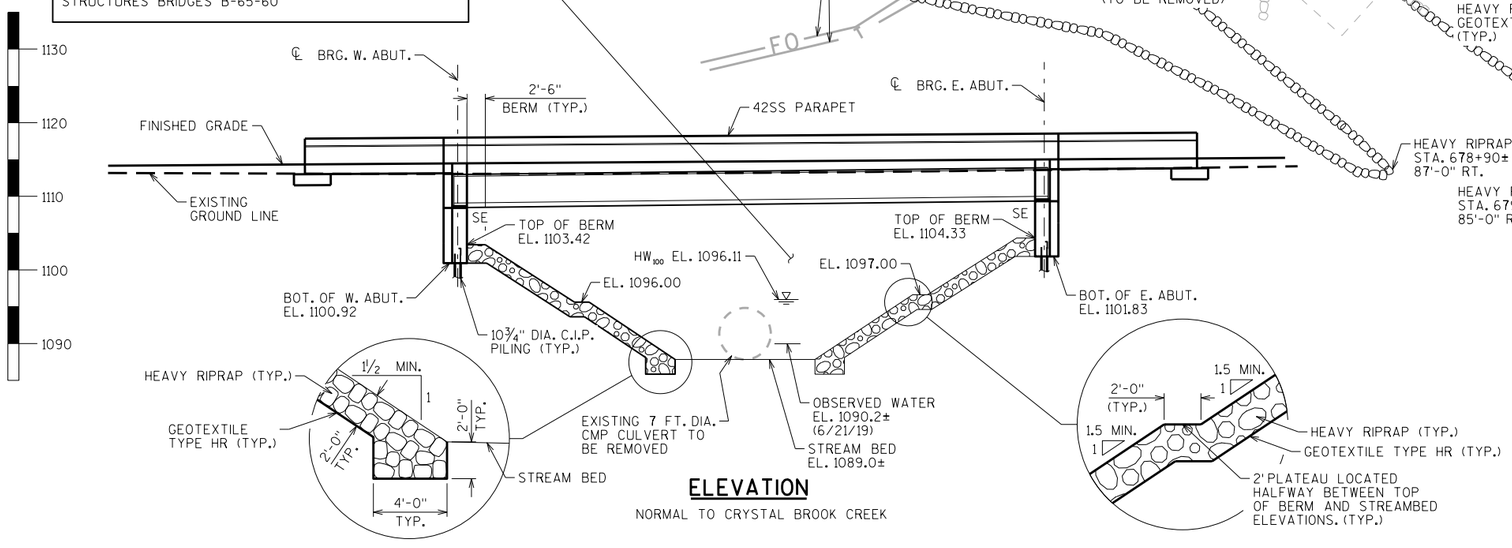
8130-00-72



PLAN

SINGLE SPAN 54W" PRESTRESSED CONCRETE GIRDER

ALL EXCAVATION BELOW BRIDGE AS REQUIRED TO REMOVE THE EXISTING STRUCTURE, PLACE RIPRAP, CREATE/GRADE THE CREEK CHANNEL OUTSIDE THE LIMITS OF THE SUPERSTRUCTURE IS INCLUDED IN THE ROADWAY PLANS. EXCAVATION REQUIRED FOR ABUTMENT & STRUCTURAL APPROACH SLAB CONSTRUCTION IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-65-60"



ELEVATION

NORMAL TO CRYSTAL BROOK CREEK

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.13
OPERATING RATING FACTOR: RF = 1.47
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

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

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

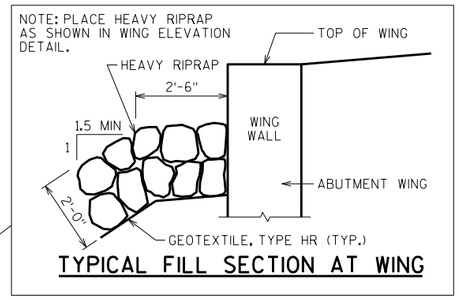
54W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10¾" DIA. X 0.365" WALL C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 145 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 95'-0" LONG.

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

NOTE: PLACE HEAVY RIPRAP AS SHOWN IN WING ELEVATION DETAIL.



TYPICAL FILL SECTION AT WING

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 950 C.F.S.
$VEL._{100}$ = 5.08 F.P.S.
$HW._{100}$ = EL. 1096.11
WATERWAY AREA = 187.01 SQ. FT.
DRAINAGE AREA = 16.32 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 225 C.F.S.
$VEL._2$ = 2.64 F.P.S.
$HW._2$ = EL. 1093.23

TRAFFIC VOLUME

STH 70

ADT = 1,350 (2019)
R.D.S. = 55 M.P.H.

STRUCTURE DESIGN CONTACTS:

ISATOU CEESAY (608) 266-9557
LAURA SHADEWALD (608) 267-9592

LIST OF DRAWINGS

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED 8/25/21
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-65-60

STH 70 OVER CRYSTAL BROOK CREEK

COUNTY	TOWN
WASHBURN	CRYSTAL/MADGE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
IFC	CAD	MJH	CAD

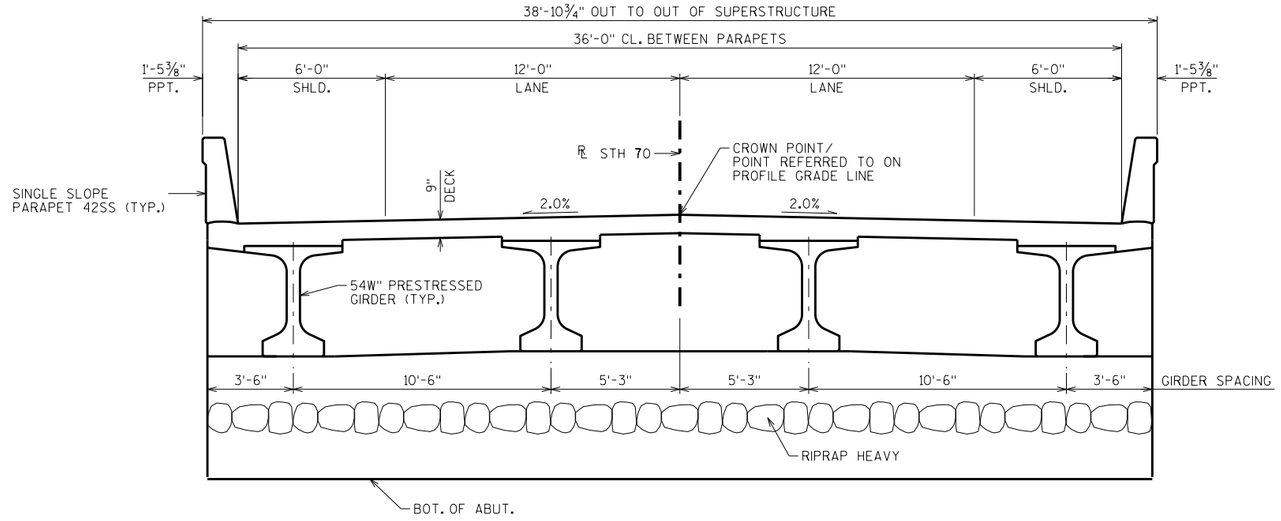
GENERAL PLAN

SHEET 1 OF 15

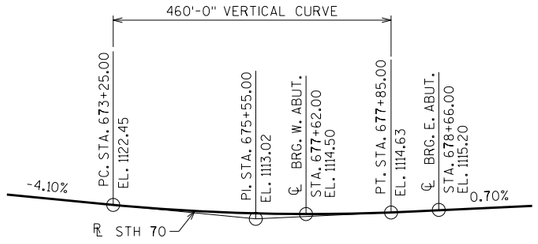
168

I.D. 8130-00-02A DATE: JAN 2021

SCALE = 10.00



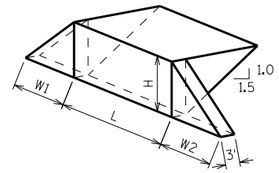
CROSS SECTION THRU ROADWAY LOOKING EAST



PROFILE GRADE LINE - STH 70

TOTAL ESTIMATED QUANTITIES

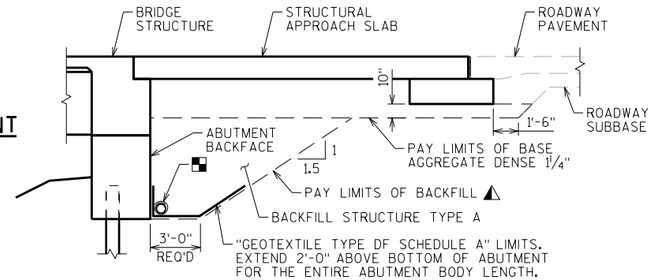
BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APP.	WEST ABUT.	EAST ABUT.	EAST APP.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS STA. 678+12	EACH	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-65-60	LS	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	393	379	———	772
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	159	———	———	159	318
502.0100	CONCRETE MASONRY BRIDGES	CY	255	57	83	81	57	533
502.3200	PROTECTIVE SURFACE TREATMENT	SY	455	81	———	———	81	617
502.3210	PIGMENTED SURFACE SEALER	SY	106	20	———	———	20	146
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	420	———	———	———	———	420
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	4,250	4,210	———	8,460
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	32,480	10,060	2,730	2,720	10,060	58,050
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,330	———	———	———	———	1,330
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	———	———	4	4	———	8
506.4000	STEEL DIAPHRAGMS B-65-60	EACH	6	———	———	———	———	6
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	———	17	17	———	34
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	———	———	1,425	1,425	———	2,850
606.0300	RIPRAP HEAVY	CY	———	———	420	395	———	815
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	110	110	———	220
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	———	———	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	———	———	53	53	———	106
645.0120	GEOTEXTILE TYPE HR	SY	———	———	661	616	———	1,277
	NON-BID ITEMS							
	FILLER	SIZE	———	———	———	———	———	½", ¾", 1½"



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ABUTMENT

L = OUT TO OUT OF ABUTMENT BODY (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
W1 = WING 1 LENGTH (FT)
W2 = WING 2 LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)

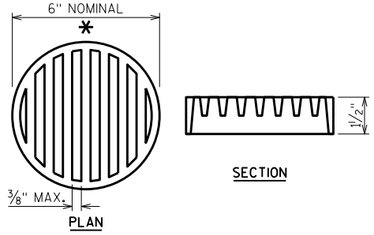
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3.0')(0.5)(W1+W2)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



TYPICAL SECTION THRU ABUTMENT

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

▪ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



RODENT SHIELD DETAIL

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

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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.

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.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-65-60" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1¼-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

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

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS. INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "54W PRESTRESSED GIRDER DETAILS 2" SHEET.

STATE PROJECT NUMBER
8130-00-72

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

CROSS SECTION & QUANTITIES

SHEET 2

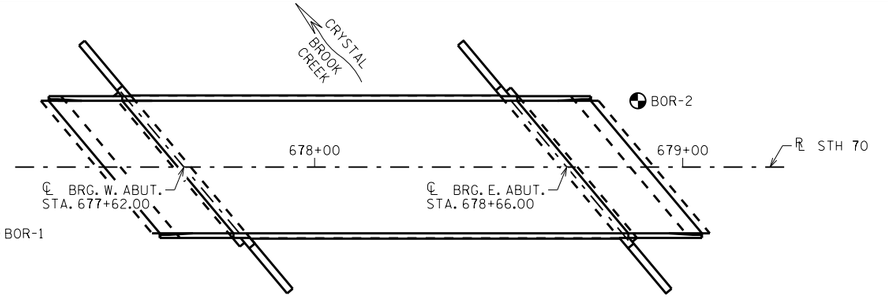
169

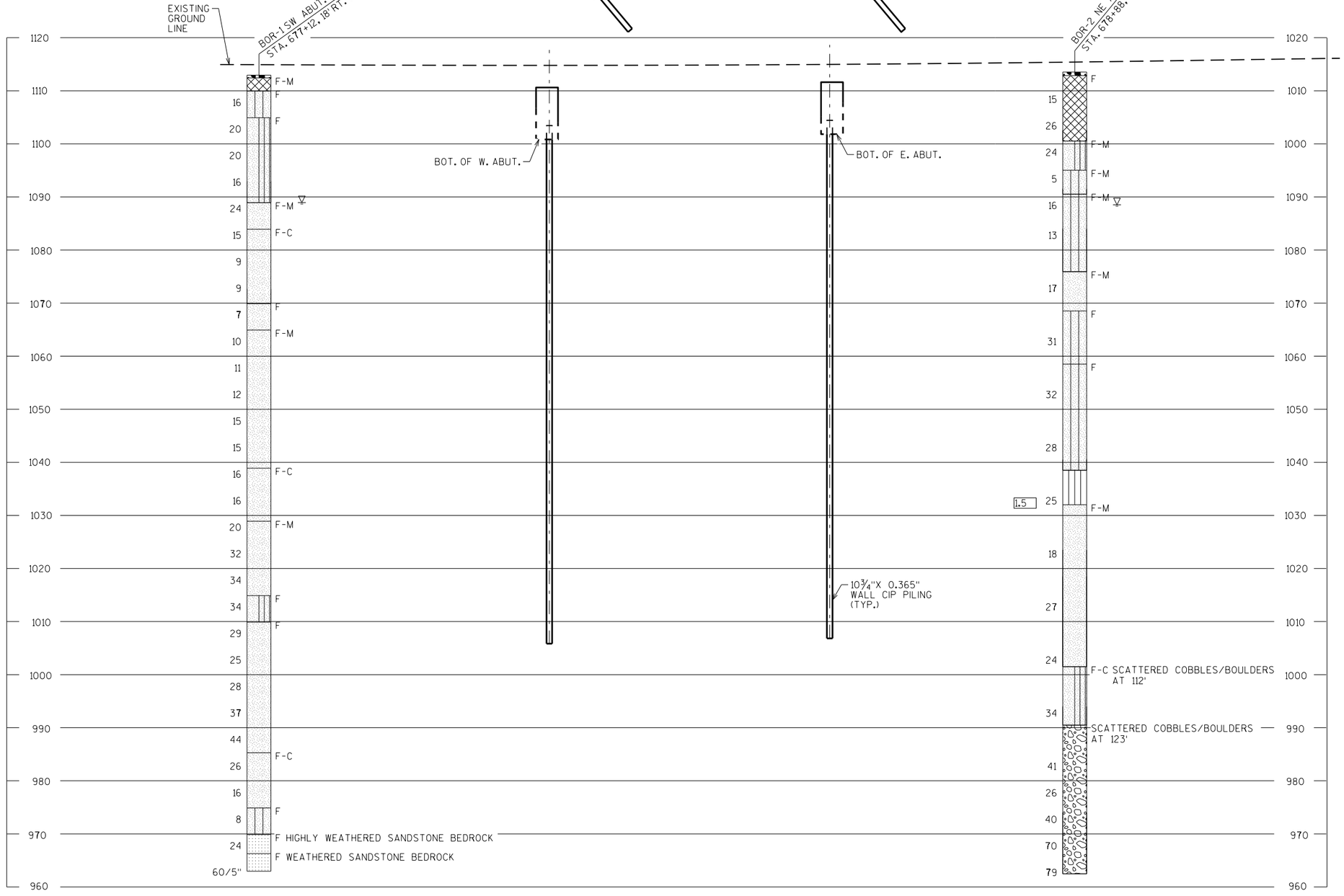
SCALE = 3.00

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	11/08/2020	564223	769892
2	11/05/2020	564258	770068
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WASHBURN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





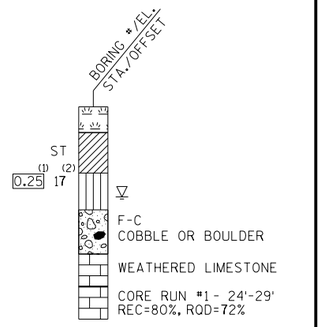
STATE PROJECT NUMBER

8130-00-72

MATERIAL SYMBOLS

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

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▼ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY TLP/MJH | PLANS CK'D. CAD

SUBSURFACE EXPLORATION

SHEET 3

170

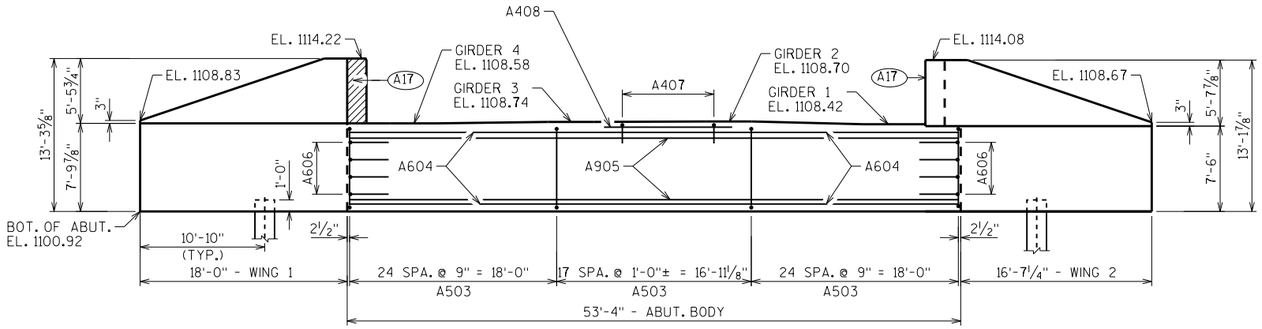
8

8

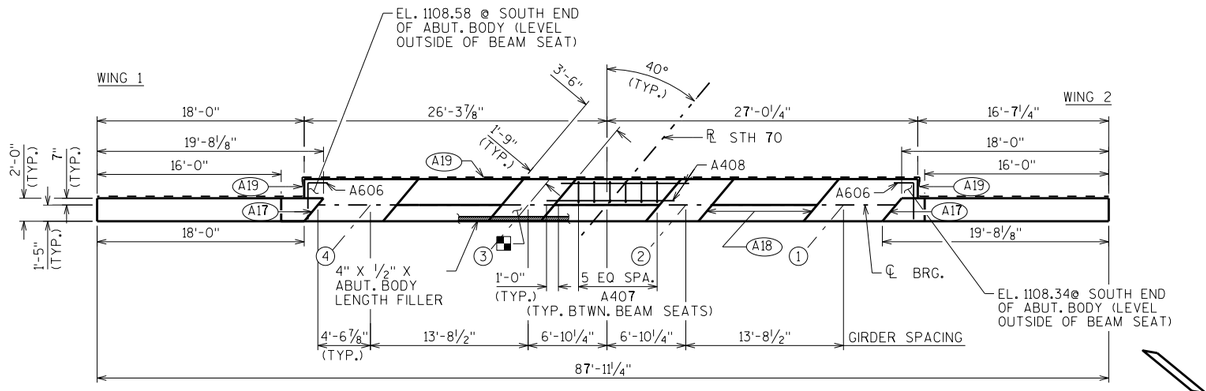
SCALE =

STATE PROJECT NUMBER

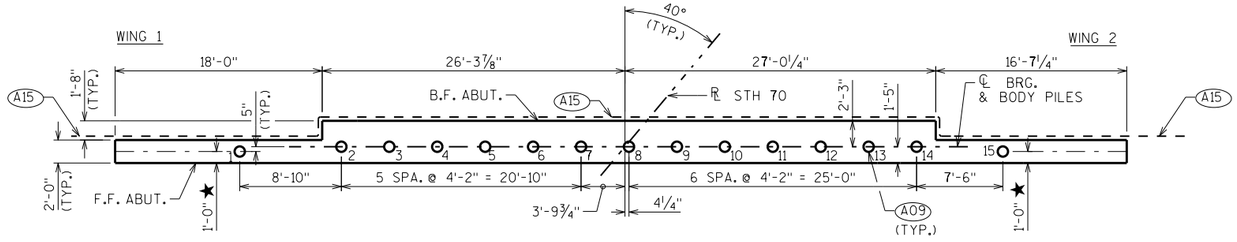
8130-00-72



ELEVATION LOOKING WEST

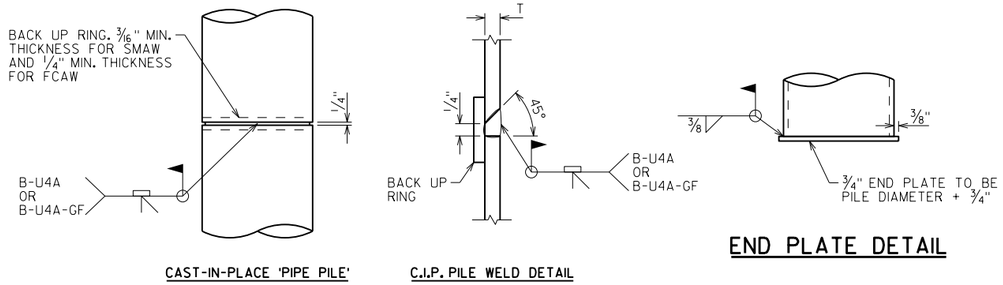


PLAN



★ TAKE CARE TO CNTR. WING PILES (NO.'S 1 & 15) IN 2'-0" WING WIDTH

PILE PLAN

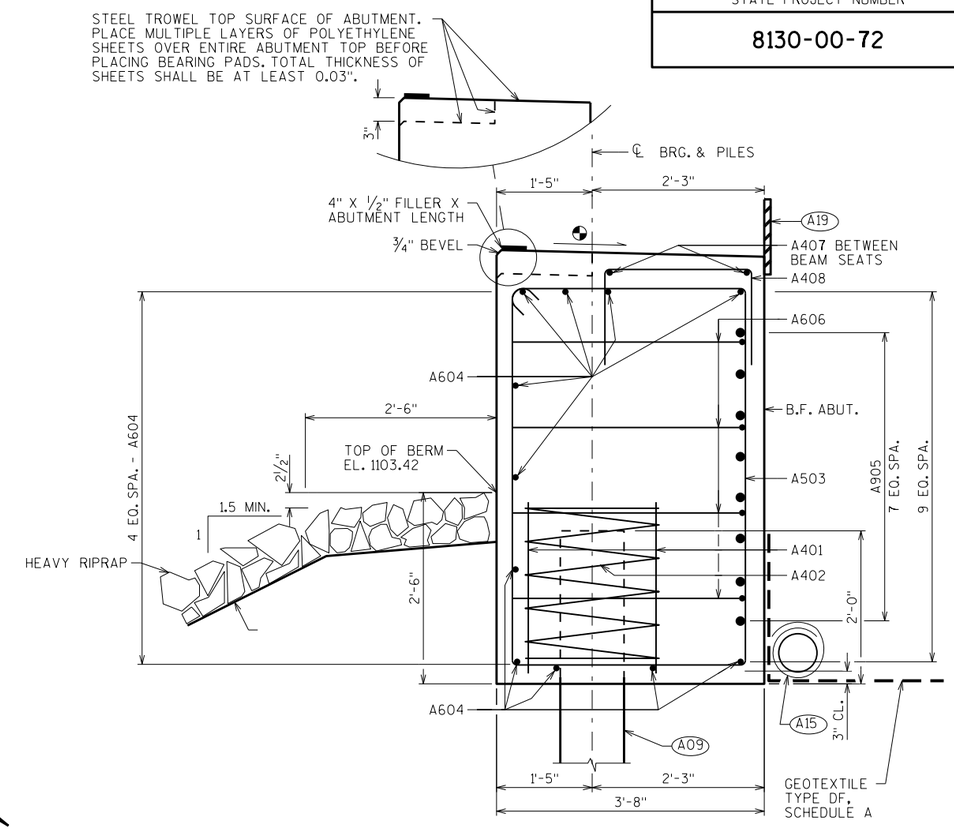


CAST-IN-PLACE 'PIPE PILE'

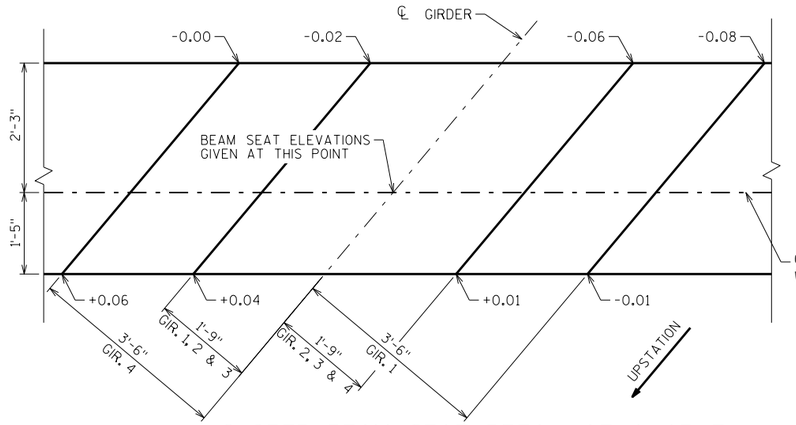
C.I.P. PILE WELD DETAIL

PILE DETAILS

END PLATE DETAIL



SECTION THRU BODY



◪ SLOPED BEAM SEAT DETAIL AT W. ABUT.

BEAM SEATS SHALL BE LEVEL IN THE DIRECTION PERPENDICULAR TO THE GIRDERS

◪ SLOPE TOP OF ABUT. SEE "SLOPED BEAM SEAT DETAIL"

(A09) SUPPORT ABUTMENT ON 10¾" DIA. X 0.365" WALL C.I.P. CONCRETE PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 145 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE "RODENT SHIELD DETAIL" ON SHEET 2.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

WEST ABUTMENT

SHEET 4

171

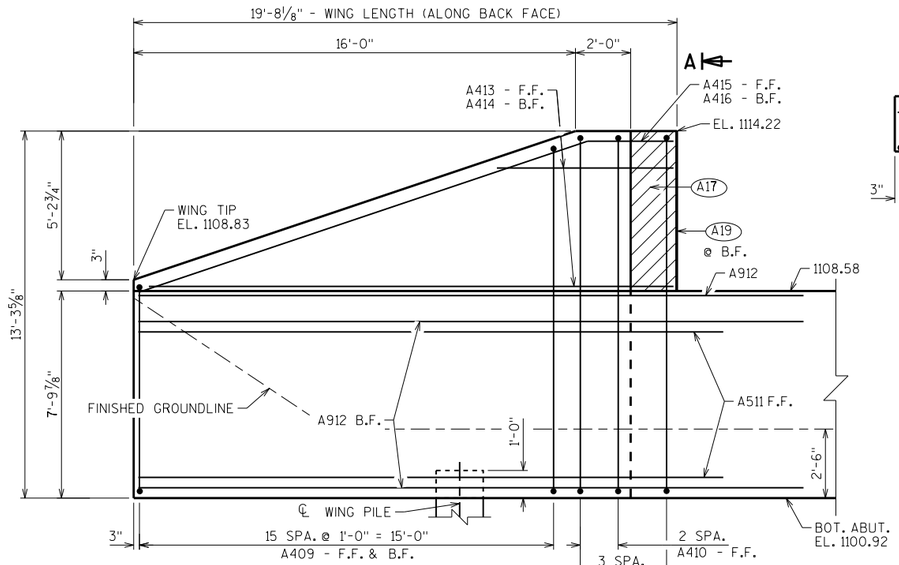
SCALE = 6.40

8

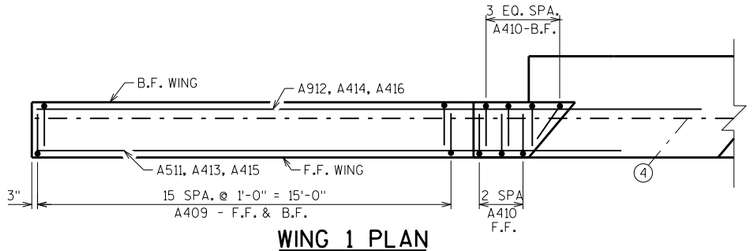
8

STATE PROJECT NUMBER

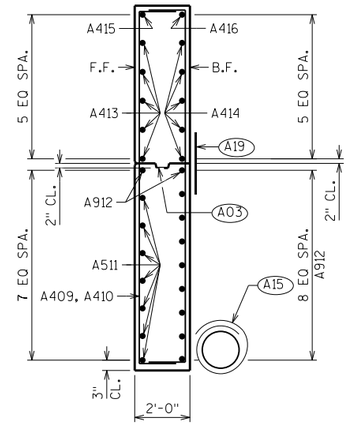
8130-00-72



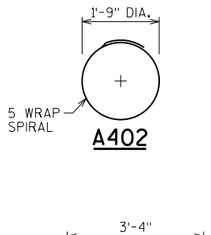
WING 1 ELEVATION



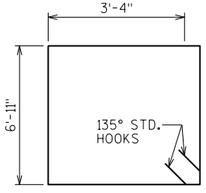
WING 1 PLAN



WING 1 - SECTION A-A



A402



A503

BILL OF BARS

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

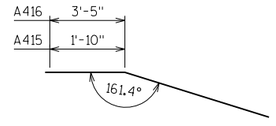
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		30	2'-3"			BODY-BOTTOM-2 PER PILE-VERTICAL
A402		15	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
A503		66	21'-2"	X		BODY-STIRRUPS-VERT.
A604		11	53'-0"			BODY-HORIZONTAL
A905		8	53'-0"			BODY-HORIZONTAL - B.F.
A606		8	4'-1"	X		BODY-L-BARS @ ENDS
A407		18	4'-11"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
A408		6	11'-2"			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
A409	X	32	12'-11"	X	◭	WING 1-VERT.-F.F. & B.F.
A410	X	7	15'-8"	X		WING 1-VERT.-F.F. & B.F.
A511	X	14	19'-9"			WINGS 1&2-HORIZONTAL-F.F.-LOWER WING
A912	X	20	22'-7"			WINGS 1&2-HORIZONTAL-B.F.-LOWER WING
A413	X	10	11'-4"		◭	WINGS 1&2-HORIZONTAL-UPPER WING
A414	X	10	12'-11"		◭	WINGS 1&2-HORIZONTAL-UPPER WING
A415	X	2	18'-5"	X		WINGS 1&2-HORIZONTAL-TOP-UPPER WING
A416	X	2	20'-0"	X		WINGS 1&2-HORIZONTAL-TOP-UPPER WING
A417	X	32	12'-9"	X	◭	WING 2-VERT-F.F. & B.F.
A418	X	7	15'-6"	X		WING 2-VERT-F.F. & B.F.

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

BAR SERIES TABLE

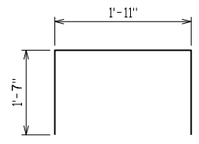
BAR MARK	NUMBER REQUIRED	LENGTH
A409	2 SERIES OF 16 BARS	10'-4" TO 15'-5"
A413	2 SERIES OF 5 BARS	5'-0" TO 17'-7"
A414	2 SERIES OF 5 BARS	6'-7" TO 19'-2"
A417	2 SERIES OF 16 BARS	10'-2" TO 15'-3"

BUNDLE AND TAG EACH SERIES SEPARATELY.



A415, A416

A606



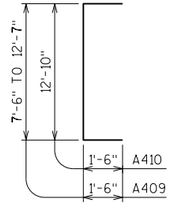
A407

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" × 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

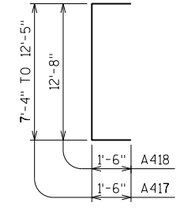
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

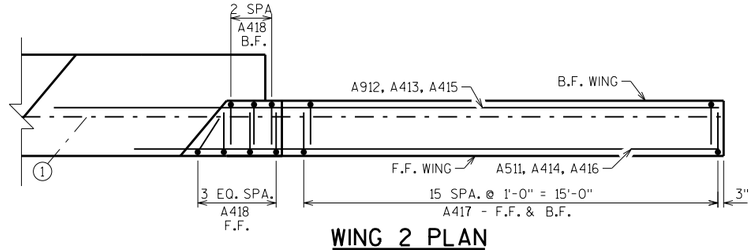
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



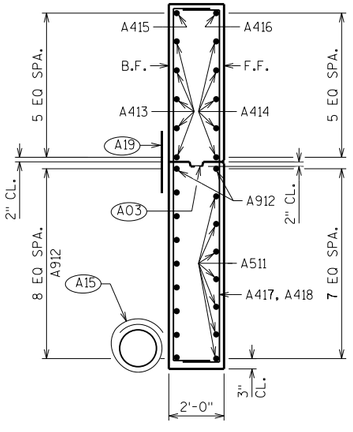
A409, A410



A417, A418



WING 2 ELEVATION



WING 2 - SECTION B-B

WING 2 PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

WEST ABUTMENT DETAILS

SHEET 5

172

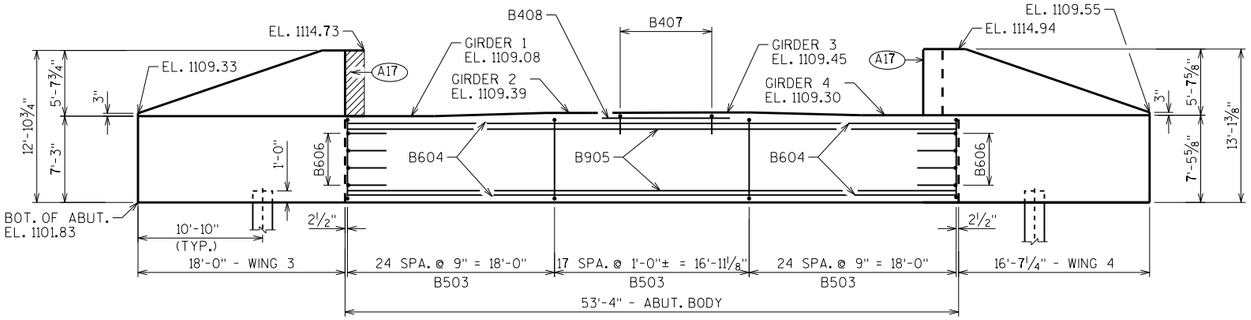
SCALE = 2.67

8

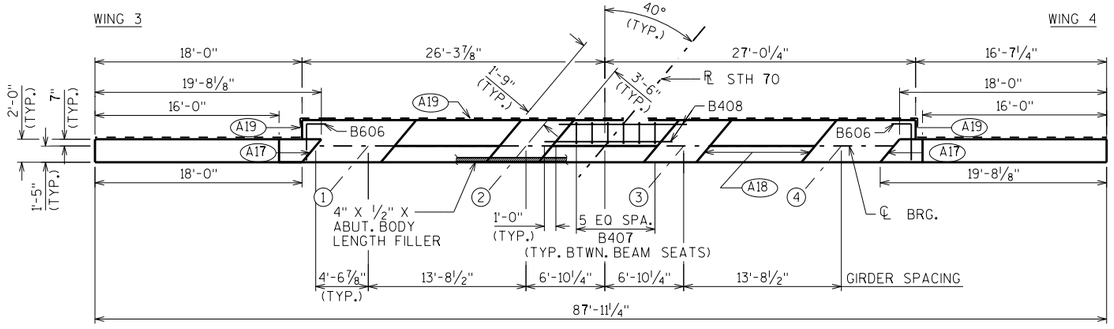
8

STATE PROJECT NUMBER

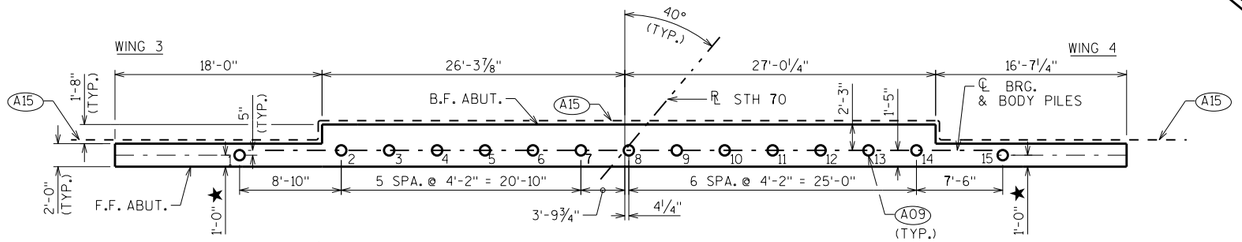
8130-00-72



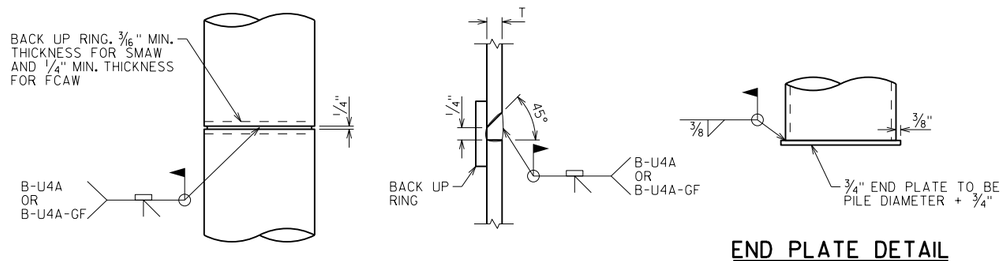
ELEVATION LOOKING EAST



PLAN



PILE PLAN



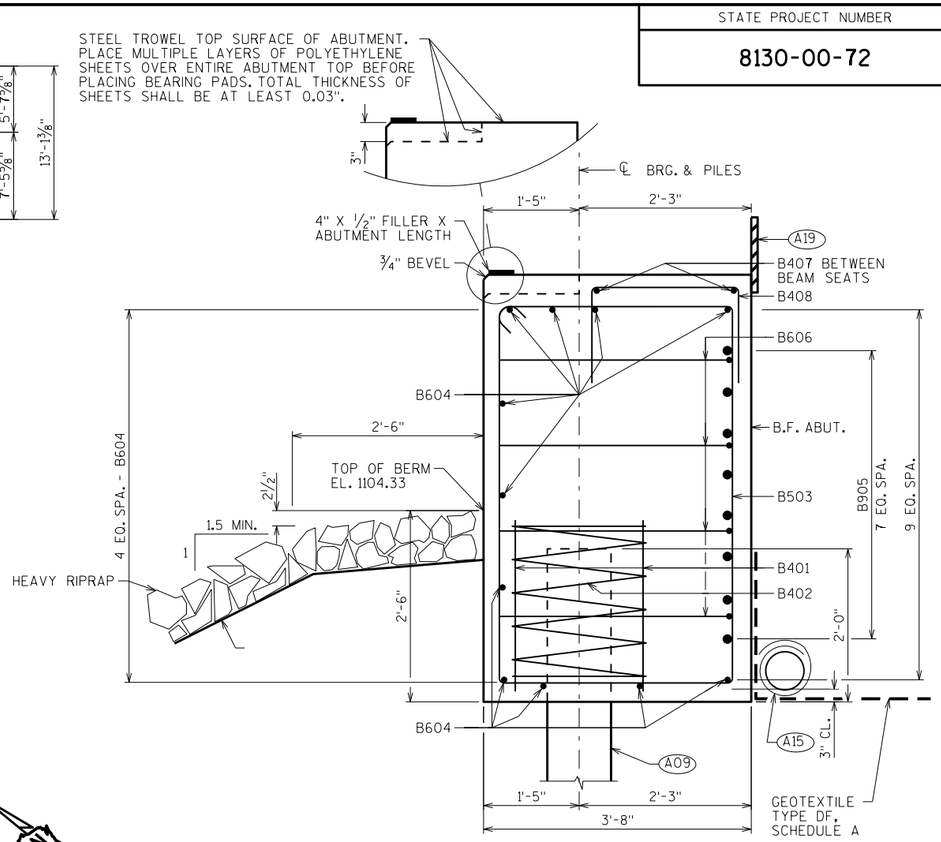
CAST-IN-PLACE 'PIPE PILE'

C.I.P. PILE WELD DETAIL

END PLATE DETAIL

PILE DETAILS

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



SECTION THRU BODY

◐ SLOPE TOP OF ABUT. SEE "SLOPED BEAM SEAT DETAIL"

(A09) SUPPORT ABUTMENT ON 10¾" DIA. X 0.365" WALL C.I.P. CONCRETE PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 145 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE "RODENT SHIELD DETAIL" ON SHEET 2.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

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EAST ABUTMENT

SHEET 6

173

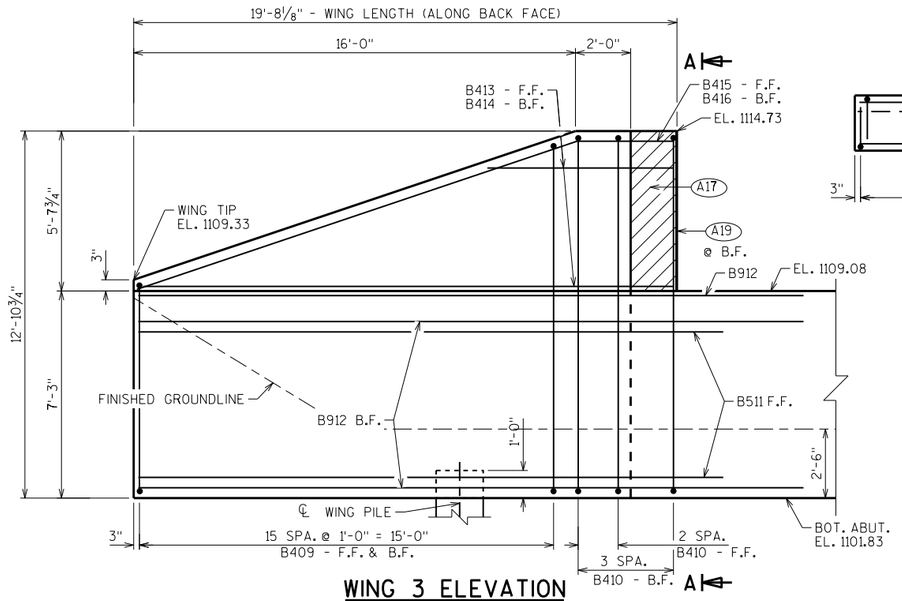
SCALE = 6.40

8

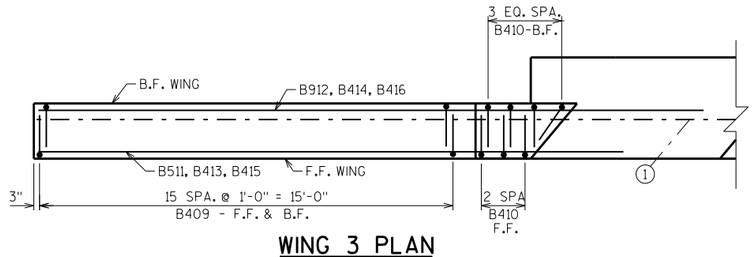
8

STATE PROJECT NUMBER

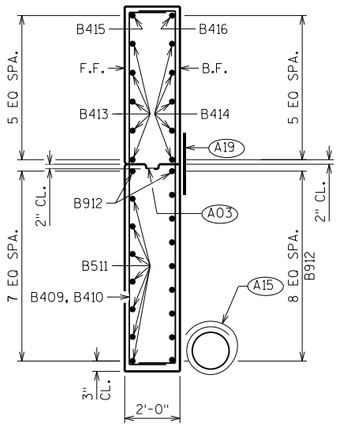
8130-00-72



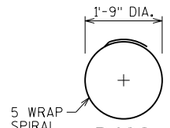
WING 3 ELEVATION



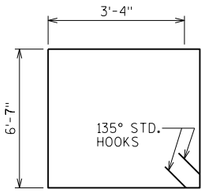
WING 3 PLAN



WING 3 - SECTION A-A



B402



B503

BILL OF BARS

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

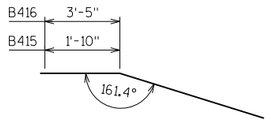
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		30	2'-3"			BODY-BOTTOM-2 PER PILE-VERTICAL
B402		15	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
B503		66	20'-6"	X		BODY-STIRRUPS-VERT.
B604		11	53'-0"			BODY-HORIZONTAL
B905		8	53'-0"			BODY-HORIZONTAL - B.F.
B606		8	4'-1"	X		BODY-L-BARS @ ENDS
B407		18	4'-11"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
B408		6	11'-2"			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
B409	X	32	12'-6"	X	◭	WING 3-VERT.-F.F. & B.F.
B410	X	7	15'-3"	X		WING 3-VERT.-F.F. & B.F.
B511	X	14	19'-9"			WINGS 3&4-HORIZONTAL-F.F.-LOWER WING
B912	X	20	22'-7"			WINGS 3&4-HORIZONTAL-B.F.-LOWER WING
B413	X	10	11'-4"		◭	WINGS 3&4-HORIZONTAL-UPPER WING
B414	X	10	12'-11"		◭	WINGS 3&4-HORIZONTAL-UPPER WING
B415	X	2	18'-5"	X		WINGS 3&4-HORIZONTAL-TOP-UPPER WING
B416	X	2	20'-0"	X		WINGS 3&4-HORIZONTAL-TOP-UPPER WING
B417	X	32	12'-9"	X	◭	WING 4-VERT-F.F. & B.F.
B418	X	7	15'-6"	X		WING 4-VERT-F.F. & B.F.

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

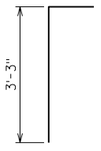
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	LENGTH
B409	2 SERIES OF 16 BARS	9'-11" TO 15'-0"
B413	2 SERIES OF 5 BARS	5'-0" TO 17'-7"
B414	2 SERIES OF 5 BARS	6'-7" TO 19'-2"
B417	2 SERIES OF 16 BARS	10'-2" TO 15'-3"

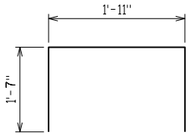
BUNDLE AND TAG EACH SERIES SEPARATELY.



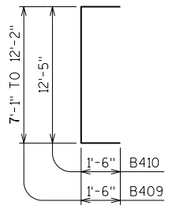
B415, B416



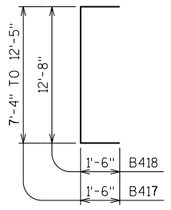
B606



B407



B409, B410



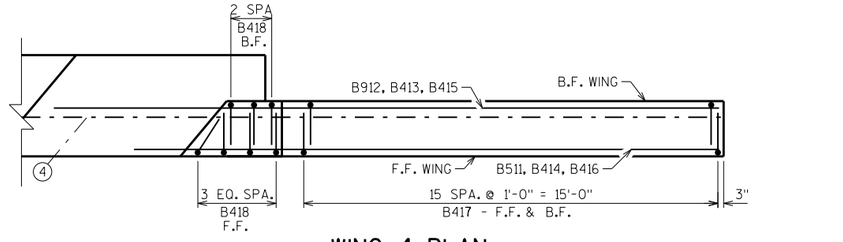
B417, B418

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" × 6". (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

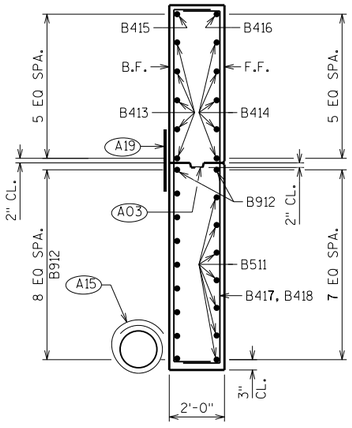
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



WING 4 ELEVATION



WING 4 - SECTION B-B

WING 4 PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

EAST ABUTMENT DETAILS

SHEET 7

174

SCALE = 2.67

8

8

STATE PROJECT NUMBER

8130-00-72

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

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

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

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

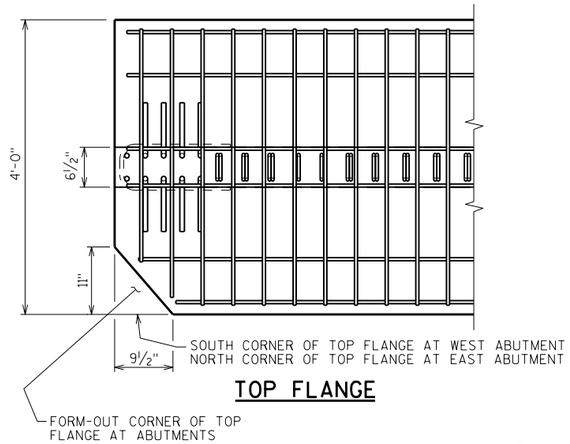
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

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

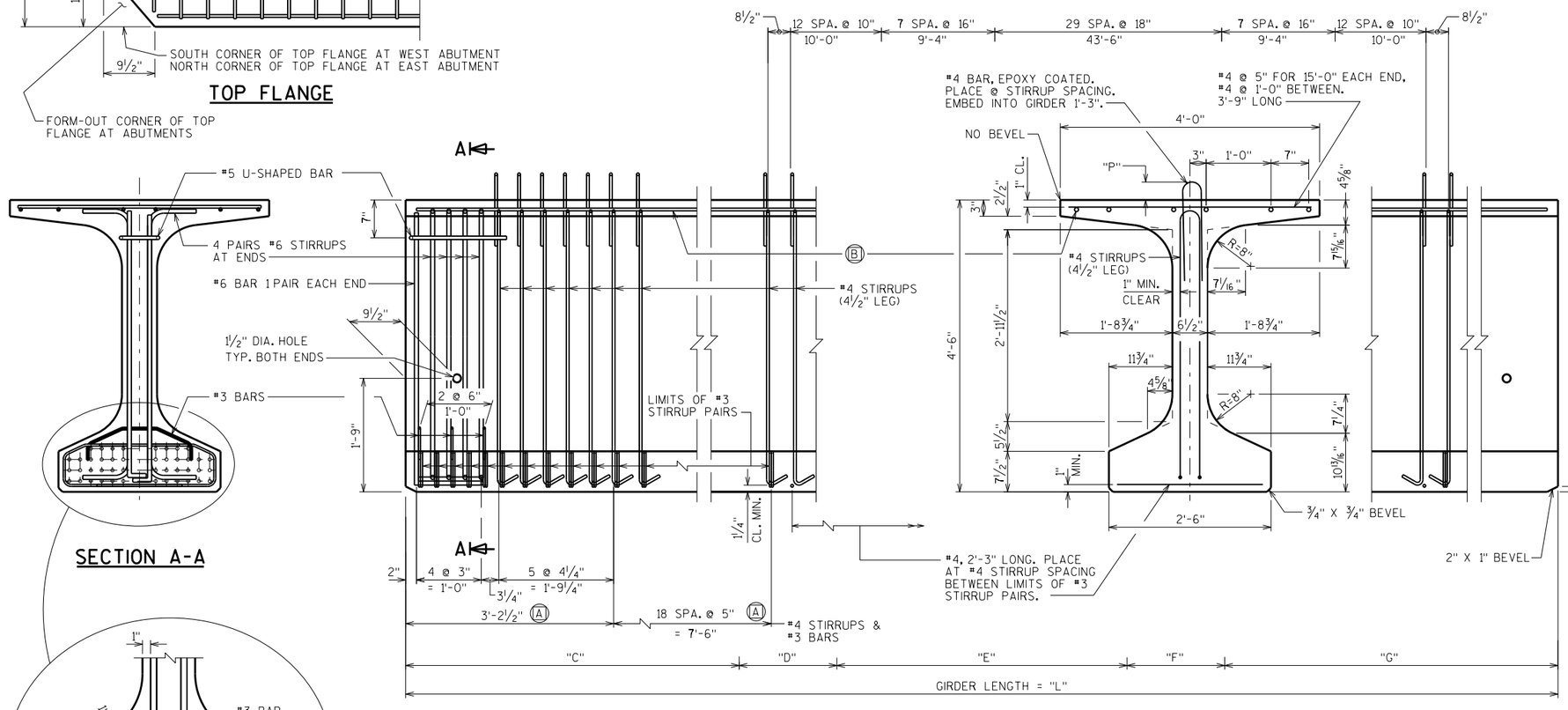
AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

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

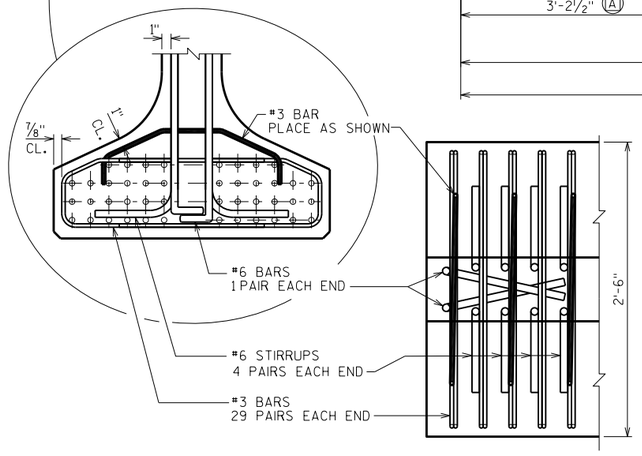
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



TOP FLANGE



SECTION A-A



BOTTOM FLANGE

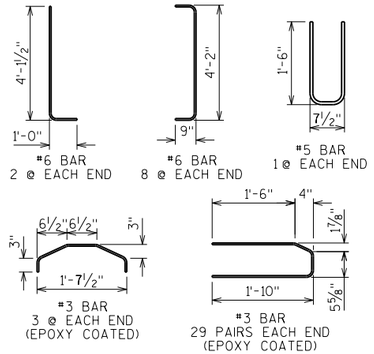
SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

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

DIAPHRAGM LOCATIONS

GIRDER	"C"	"D"	"E"	"F"	"G"
1 (N.)	39'-5"	0"	35'-0"	0"	30'-7"
2 & 3	30'-7¼"	8'-9¾"	26'-2¼"	8'-9¾"	30'-7"
4 (S.)	30'-7¼"	0"	35'-0"	0"	39'-4¾"



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

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (P.S.I.)	"P" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"
1	1-4	105	0.6	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.6	8,000	8.5	7	8.5	0.6	40	6,400	49	16	19	5

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

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54W" PRESTRESSED GIRDER DETAILS 1

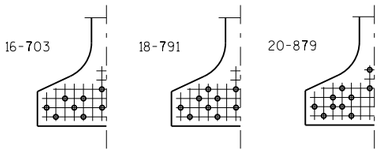
SHEET 8

175

SCALE = 1.00

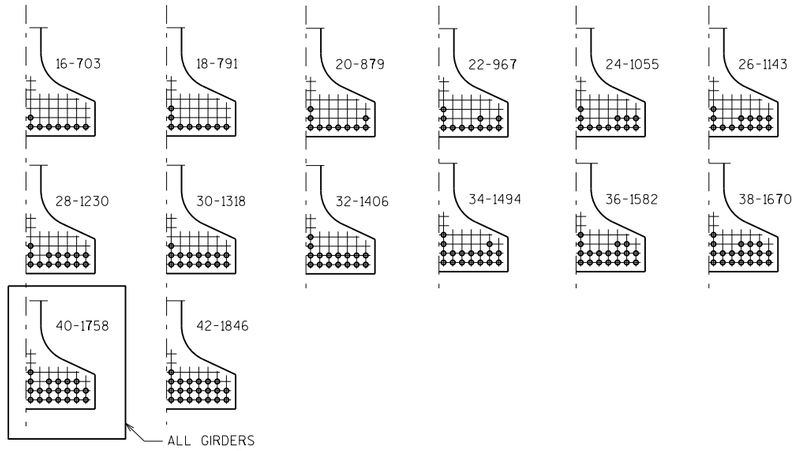
STATE PROJECT NUMBER

8130-00-72



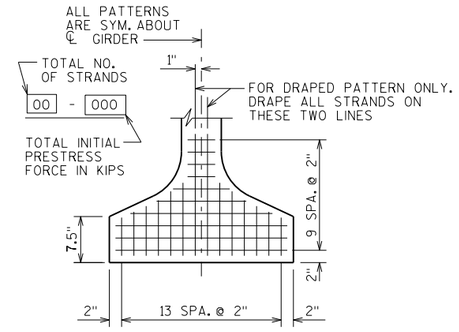
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

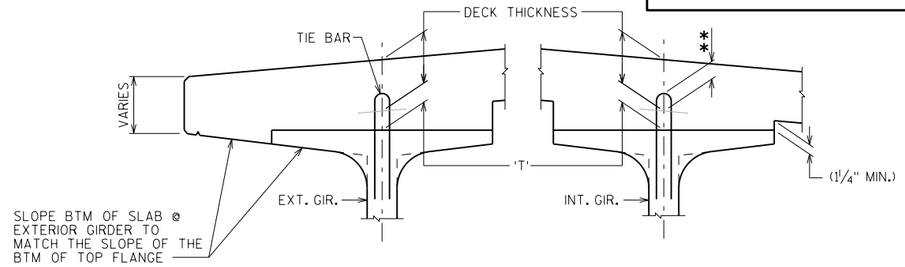


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

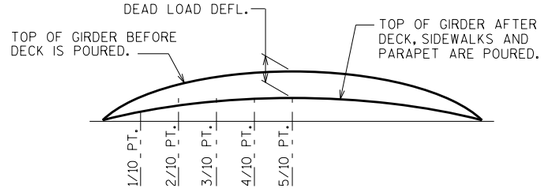
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

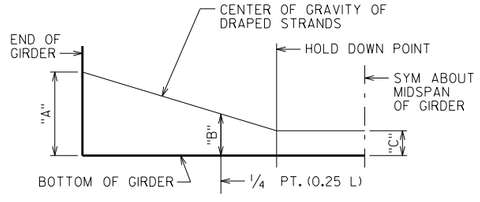
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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

NOTE: AN AVERAGE HAUNCH ('T') OF 3.4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

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

SPAN	CAMBER (IN.) *
1	3.88

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

54W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

176

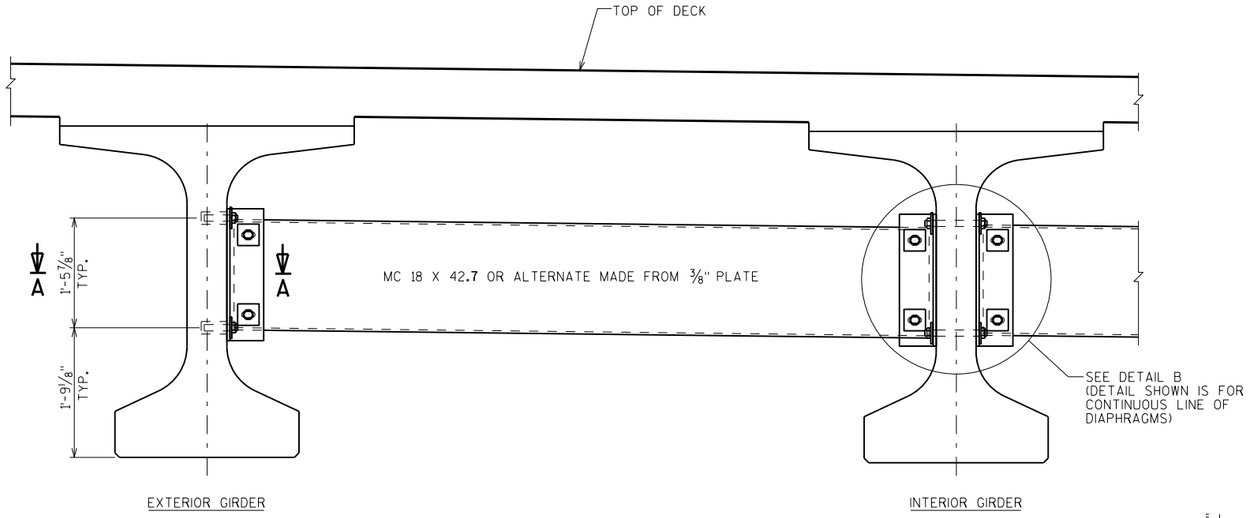
SCALE = 1.00

8

8

STATE PROJECT NUMBER

8130-00-72



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

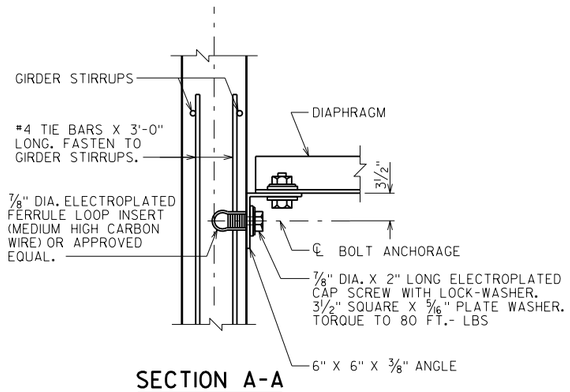
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-65-60", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

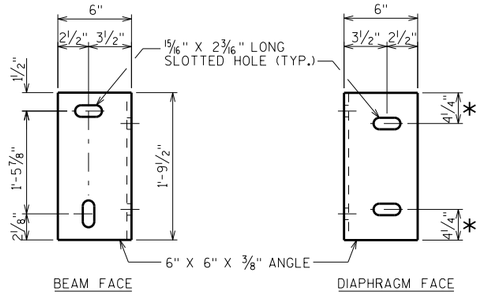
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



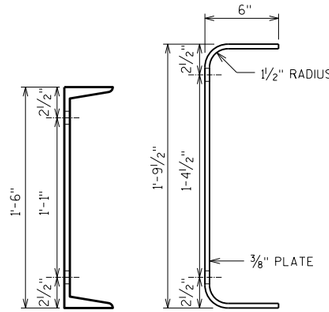
SECTION A-A

(FOR EXTERIOR ATTACHMENT)

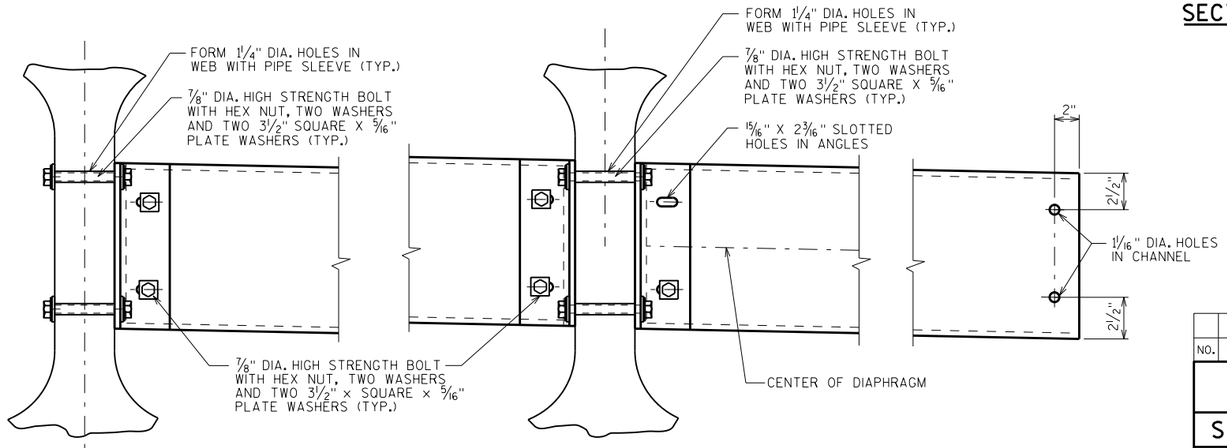


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU DIAPHRAGM



(FOR STAGGERED DIAPHRAGM)

DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

STEEL DIAPHRAGM

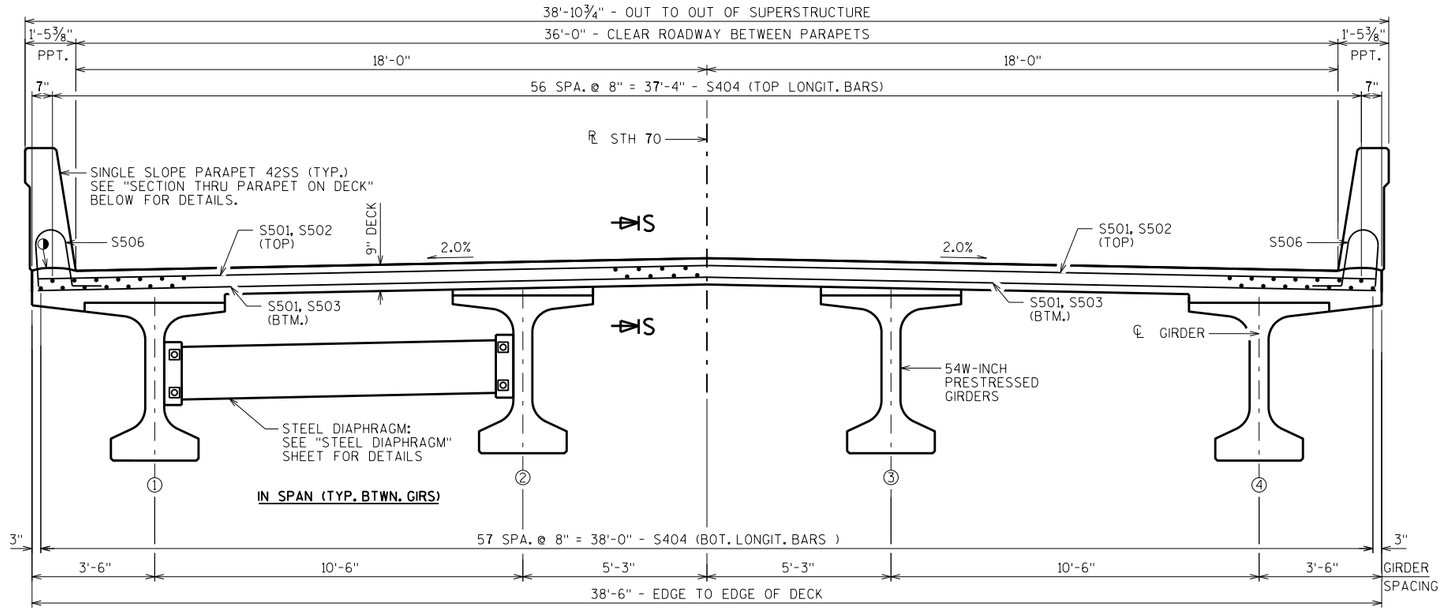
SHEET 10

177

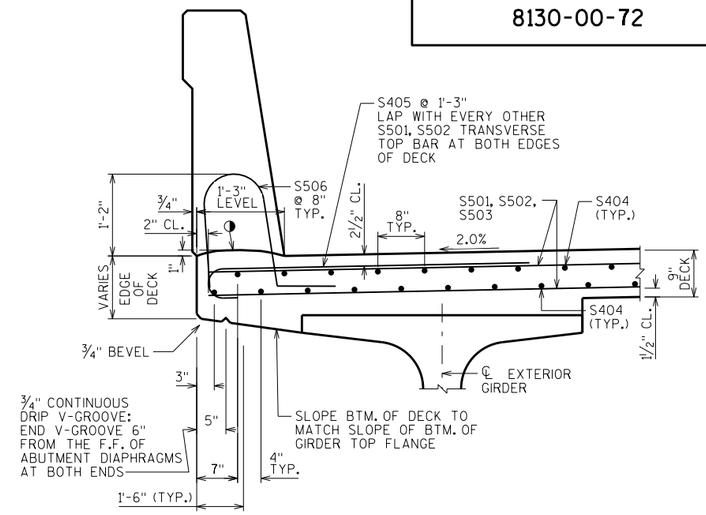
SCALE = 1.00

STATE PROJECT NUMBER

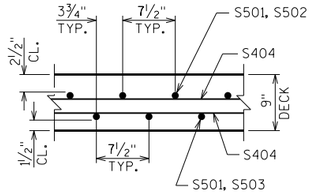
8130-00-72



CROSS SECTION THRU BRIDGE LOOKING EAST

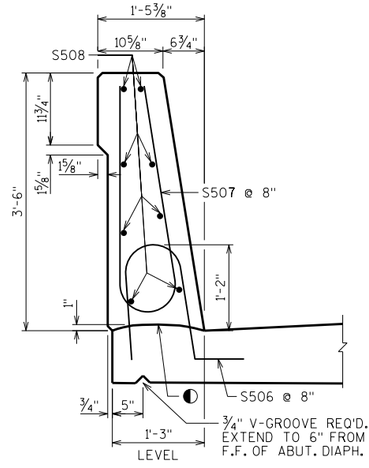


EDGE OF DECK DETAIL (TYP. AT BOTH EDGES)

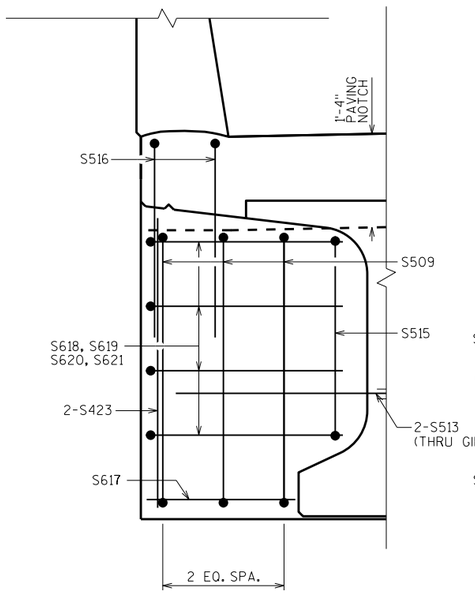


SECTION S-S

◐ HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

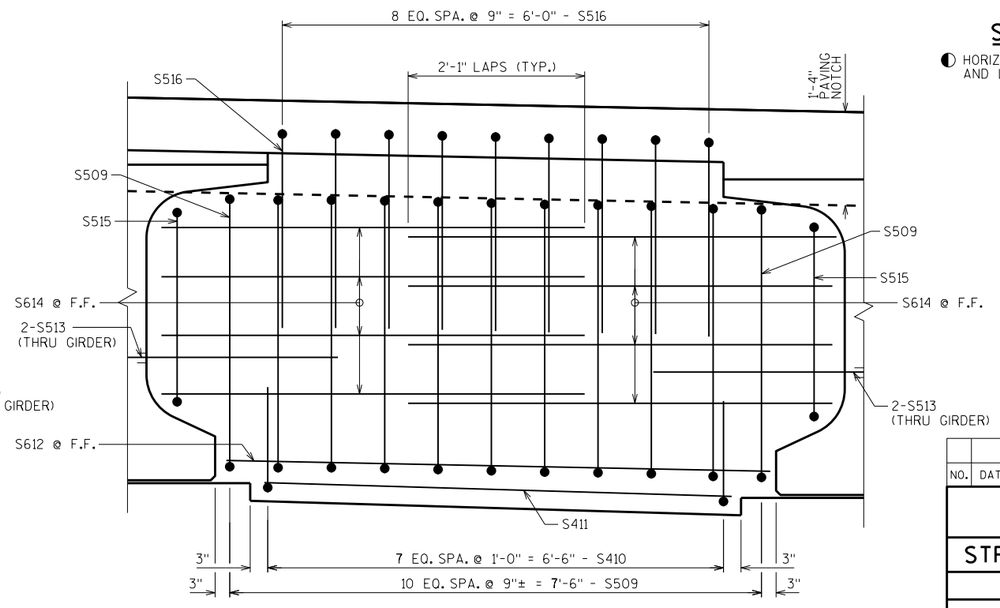


SECTION THRU PARAPET ON DECK



AT ABUT. DIAPH.

(TYP. AT ALL FOUR GIRDER EXTERIOR CORNERS)



AT ABUT. DIAPH. (TYP. BTWN. GIRS. AT BOTH ABUTS.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

SUPERSTRUCTURE CROSS SECTION

SHEET 11

178

SCALE = 2.10

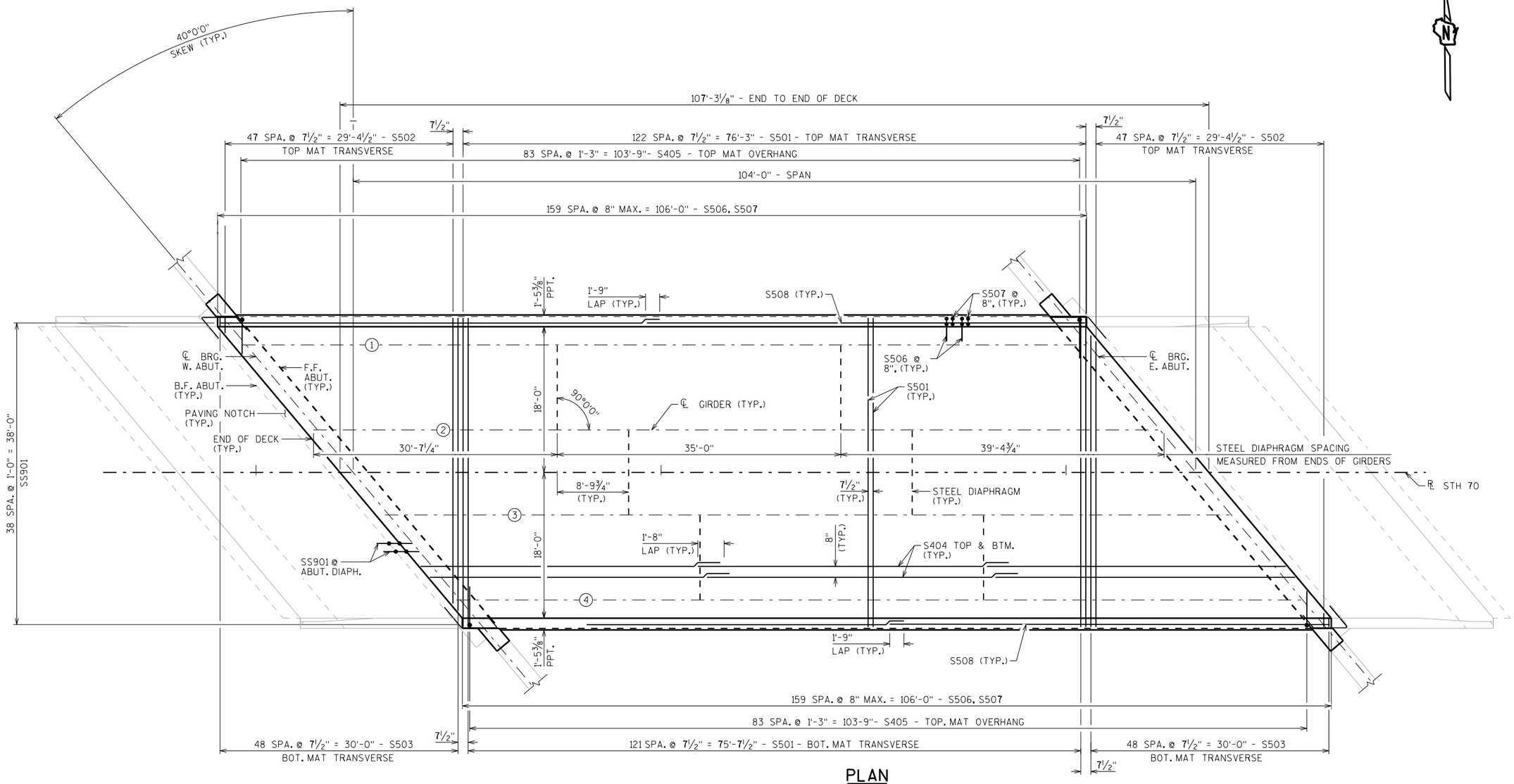
8

8

STATE PROJECT NUMBER

8130-00-72

○ INDICATES GIRDER NUMBER



PLAN

TOP OF DECK ELEVATIONS

	℄ BRG. W. ABUT	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT	
N. GUTTER	1114.08	1114.12	1114.16	1114.22	1114.29	1114.37	1114.44	1114.51	1114.59	1114.66	1114.73	N. GUTTER
℄ GIRDER 1	1114.13	1114.17	1114.22	1114.28	1114.35	1114.43	1114.50	1114.57	1114.64	1114.72	1114.79	℄ GIRDER 1
℄ GIRDER 2	1114.37	1114.42	1114.48	1114.55	1114.62	1114.70	1114.77	1114.84	1114.92	1114.99	1115.06	℄ GIRDER 2
PGL /CROWN	1114.50	1114.55	1114.61	1114.69	1114.76	1114.83	1114.91	1114.98	1115.05	1115.12	1115.20	PGL /CROWN
℄ GIRDER 3	1114.41	1114.47	1114.54	1114.61	1114.69	1114.76	1114.83	1114.90	1114.98	1115.05	1115.12	℄ GIRDER 3
℄ GIRDER 4	1114.25	1114.32	1114.39	1114.46	1114.54	1114.61	1114.68	1114.76	1114.83	1114.90	1114.97	℄ GIRDER 4
S. GUTTER	1114.22	1114.29	1114.36	1114.43	1114.51	1114.58	1114.65	1114.72	1114.80	1114.87	1114.94	S. GUTTER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

SUPERSTRUCTURE PLAN

SHEET 12

179

SCALE = 6.40

8

8

STATE PROJECT NUMBER

8130-00-72

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	245	38'-2"			DECK - TRANSVERSE - TOP & BOTTOM
S502	X	96	19'-0"		⚠	DECK - TRANSVERSE - TOP
S503	X	98	19'-1"		⚠	DECK - TRANSVERSE - BOTTOM
S404	X	345	36'-9"			DECK - LONGITUDINAL - TOP & BOTTOM
S405	X	168	4'-10"	X		DECK - OVERHANG
S506	X	320	4'-5"	X		DECK & PPT. - VERT.
S507	X	320	6'-8"	X		PPT. - VERT.
S508	X	32	54'-3"			PPT - HORIZ.
S509	X	78	16'-10"	X		ABUT. DIAPH - VERT.
S410	X	48	3'-10"	X		ABUT. DIAPH - VERT. - BTWN. BEAM SEATS
S411	X	12	8'-7"			ABUT. DIAPH - HORIZ. - BTWN. GIRD. BEAM SEATS
S612	X	6	9'-11"			ABUT. DIAPH - HORIZ. - F.F. - BTWN. GIR.
S513	X	16	6'-0"			ABUT. DIAPHS. - HORIZ.-THRU GIRDERS
S614	X	48	7'-8"			ABUT. DIAPH - HORIZ. - F.F. - BTWN. GIR.
S515	X	16	14'-10"	X		ABUT. DIAPH - VERT. UNDER FLANGES
S516	X	62	7'-7"	X		ABUT. DIAPH. - DECK - VERT.
S617	X	4	2'-5"			ABUT. DIAPH. - HORIZ.-ENDS-BOT. - F.F.
S618	X	4	9'-6"	X		ABUT. DIAPH. ENDS - HORIZ. - WING 1
S619	X	4	9'-6"	X		ABUT. DIAPH. ENDS - HORIZ. - WING 2
S620	X	4	9'-6"	X		ABUT. DIAPH. ENDS - HORIZ. - WING 3
S621	X	4	9'-6"	X		ABUT. DIAPH. ENDS - HORIZ. - WING 4
S622	X	14	49'-9"			ABUT. DIAPH - HORIZ. - B.F. - ABUT.
S423	X	8	4'-6"			ABUT. DIAPHS.-VERT.-AT ALL FOUR ENDS
SS901		78	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

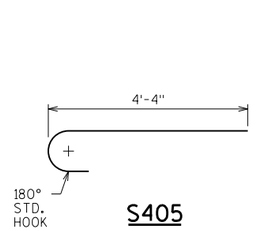
STAINLESS STEEL →

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

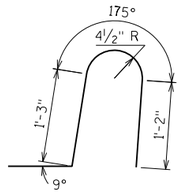
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	LENGTH
S502	2 SERIES OF 48	1'-6" TO 36'-6"
S503	2 SERIES OF 49	1'-2" TO 36'-11"

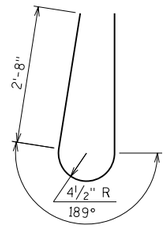
BUNDLE AND TAG EACH SERIES SEPARATELY



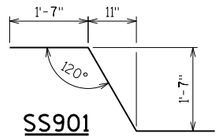
S405



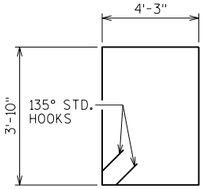
S506



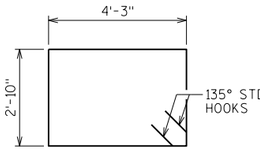
S507



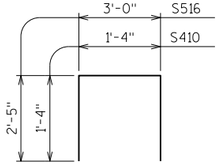
SS901



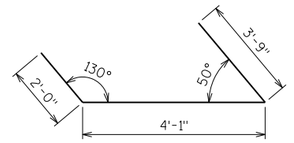
S509



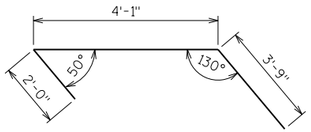
S515



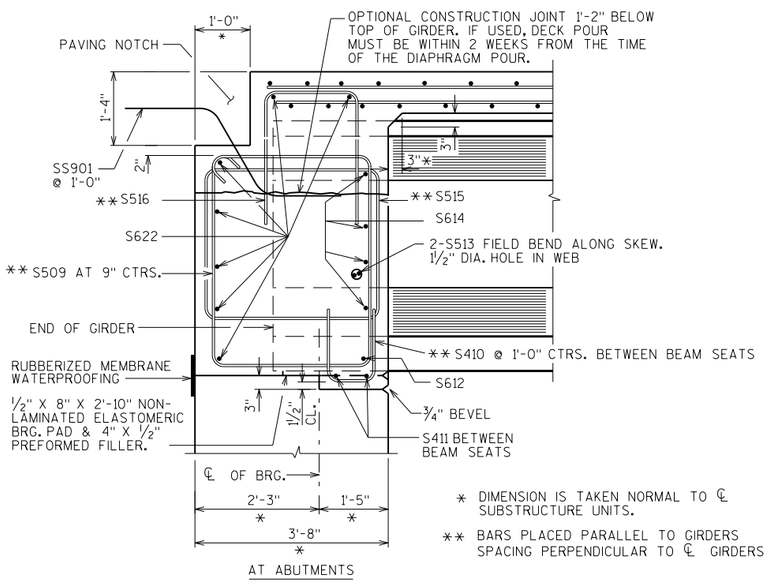
S410, S516



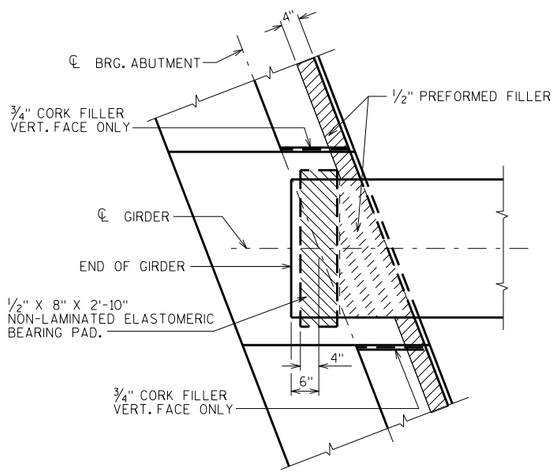
S618



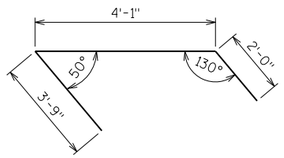
S619



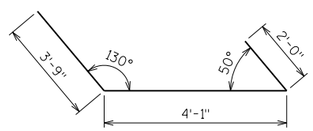
PART LONGIT. SECTION



BEARING PAD DETAIL



S620



S621

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

SUPERSTRUCTURE DETAILS

SHEET 13

180

SCALE = 1.33

8

8

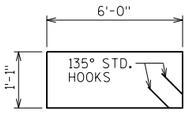
STATE PROJECT NUMBER

8130-00-72

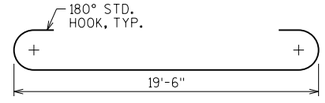
BILL OF BARS

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

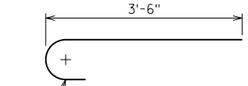
BAR MARK	COAT	NO. REQ'D. WEST	NO. REQ'D. EAST	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	37	37	14'-10"	X		APP. SLAB - FTG. - STIRRUP
T802	X	12	12	46'-6"			APP. SLAB - FTG. - TRANS.
T803	X	65	65	21'-4"	X		APP. SLAB - LONG. - BOT.
T504	X	39	39	19'-6"			APP. SLAB - LONG. - TOP
T505	X	38	38	49'-9"			APP. SLAB - TRANS. - TOP & BOT.
T506	X	40	40	4'-1"	X		APP. SLAB - TRANS. - EDGES
T507	X	4	4	48'-3"			APP. SLAB - TRANS. - TOP & BOT. - ENDS



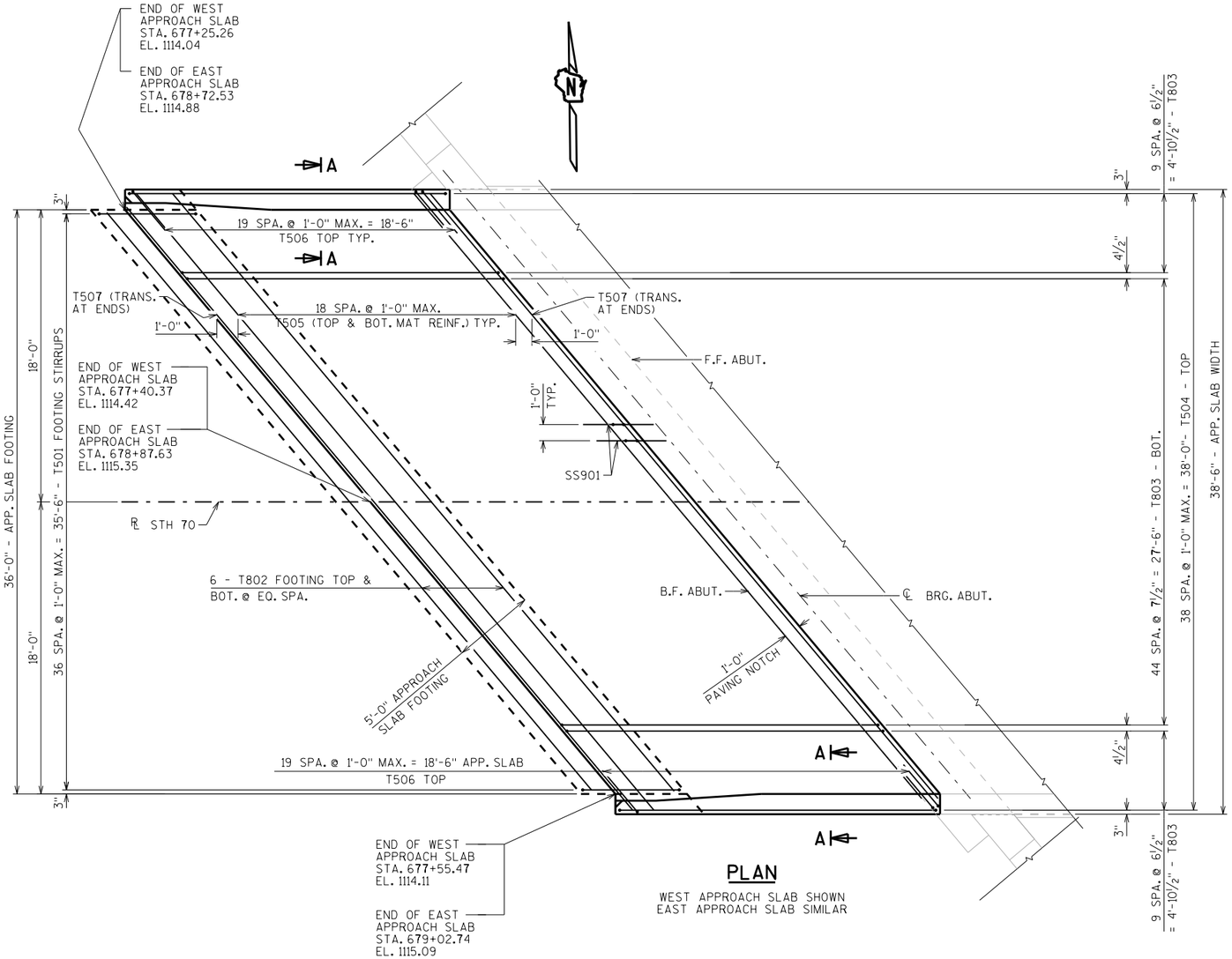
T501



T803

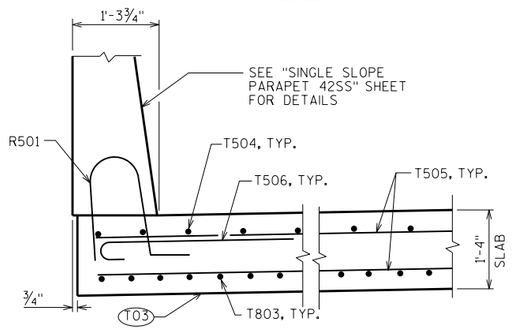


T506

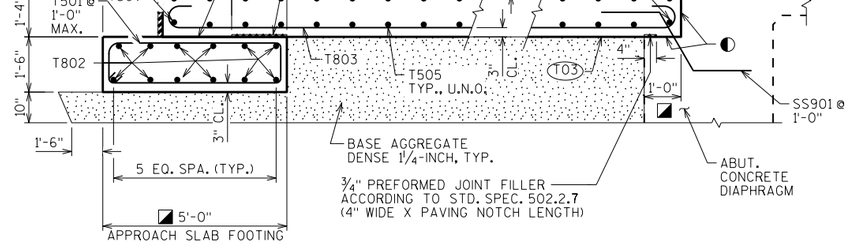


PLAN

WEST APPROACH SLAB SHOWN
EAST APPROACH SLAB SIMILAR



SECTION A-A



SECTION THRU APPROACH SLAB

(U.N.O. = UNLESS NOTED OTHERWISE)

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

STRUCTURAL APPROACH SLABS

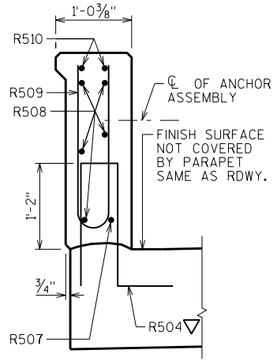
SHEET 14

181

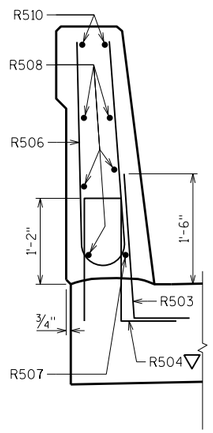
SCALE = 4.00

8

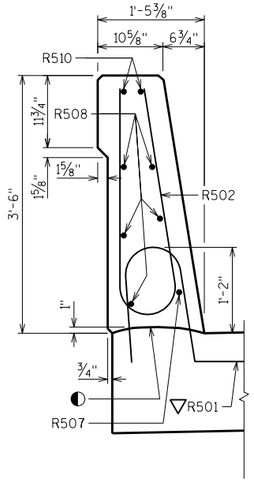
8



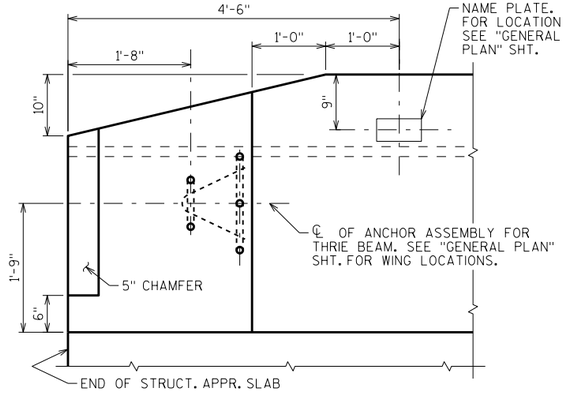
SECTION A-A



SECTION B-B



SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

STATE PROJECT NUMBER

8130-00-72

BILL OF BARS

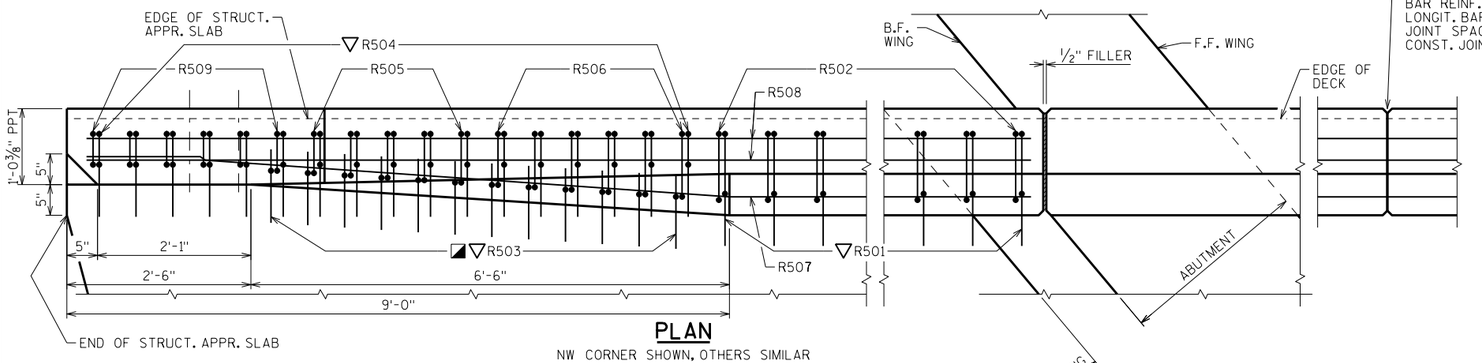
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-6"	X		PARAPET HORIZ.
R508	X	10	10	19'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-6"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

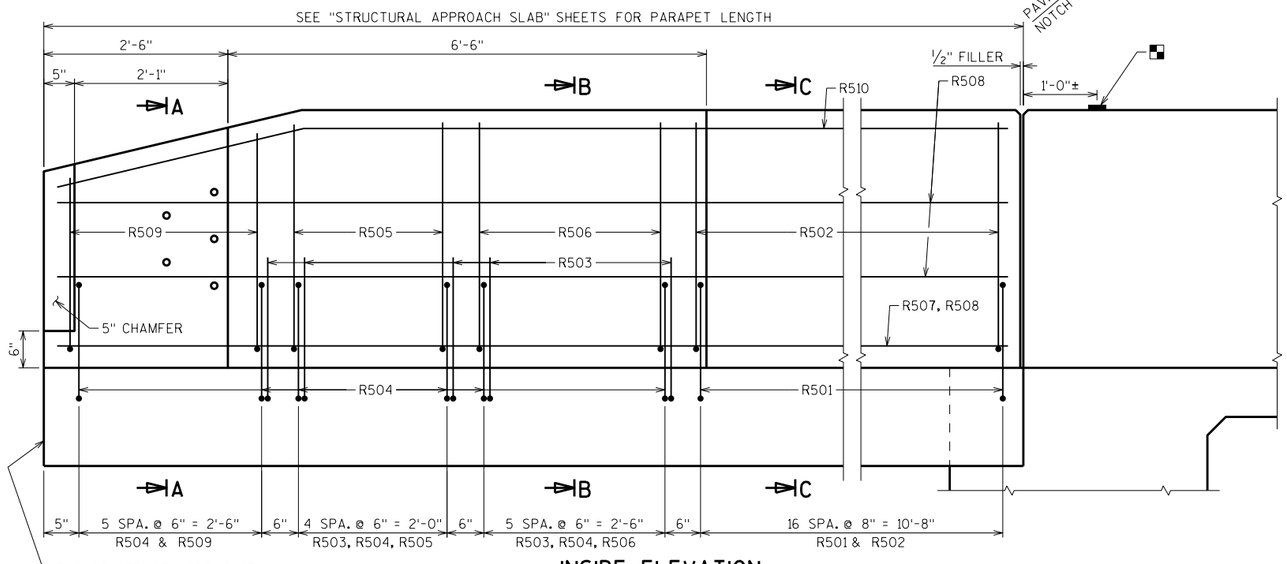
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



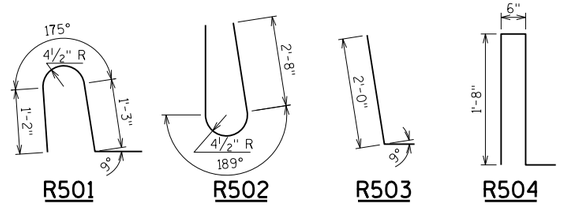
PLAN

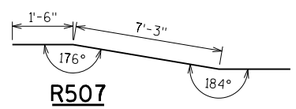
NW CORNER SHOWN, OTHERS SIMILAR

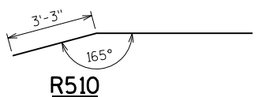


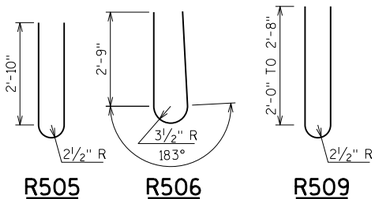
INSIDE ELEVATION

NW CORNER SHOWN, OTHERS SIMILAR
STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY









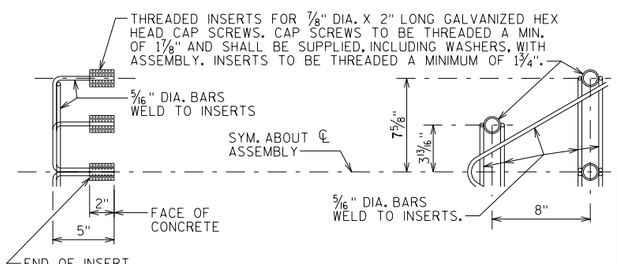
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◆ SLOPE FOR DRAINAGE

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501, R503, AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-65-60

DRAWN BY MJH | PLANS CK'D. CAD

SINGLE SLOPE PARAPET 42SS

SHEET 15

182

SCALE = 1.00

8

8

Station	Distance	Area (SF)		Incremental Volume (CY)			Cumulative Volume (CY)			Mass Ordinate (CY)
		Cut	Fill	Cut	Available Material	Expanded Fill	Cut	Available Material	Expanded Fill	
674+50	0.00	15.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
674+75	25.00	15.0	10.9	14.0	0.0	7.0	14.0	0.0	7.0	-7.0
675+00	25.00	15.0	27.8	14.0	0.0	21.0	28.0	0.0	28.0	-28.0
675+25	25.00	15.0	46.0	14.0	0.0	40.0	42.0	0.0	68.0	-68.0
675+50	25.00	15.0	60.7	14.0	0.0	58.0	56.0	0.0	126.0	-126.0
675+75	25.00	15.0	27.6	14.0	0.0	48.0	70.0	0.0	174.0	-174.0
676+00	25.00	15.0	34.8	14.0	0.0	34.0	84.0	0.0	208.0	-208.0
676+25	25.00	15.0	43.4	14.0	0.0	43.0	98.0	0.0	251.0	-251.0
676+50	25.00	15.0	38.8	14.0	0.0	45.0	112.0	0.0	296.0	-296.0
676+75	25.00	15.0	52.4	14.0	0.0	50.0	126.0	0.0	346.0	-346.0
677+00	25.00	35.2	52.7	23.0	9.0	57.0	149.0	9.0	403.0	-394.0
677+25	25.00	254.4	16.9	134.0	120.0	38.0	283.0	129.0	441.0	-312.0
677+50	25.00	865.6	11.9	518.0	504.0	16.0	801.0	633.0	457.0	176.0
677+75	25.00	1495.0	14.2	1093.0	1079.0	14.0	1894.0	1712.0	471.0	1241.0
678+00	25.00	1967.5	0.0	1603.0	1589.0	8.0	3497.0	3301.0	479.0	2822.0
678+25	25.00	2017.3	0.0	1845.0	1831.0	0.0	5342.0	5132.0	479.0	4653.0
678+50	25.00	1461.1	12.6	1610.0	1596.0	7.0	6952.0	6728.0	486.0	6242.0
678+75	25.00	917.5	11.4	1101.0	1087.0	13.0	8053.0	7815.0	499.0	7316.0
679+00	25.00	192.1	14.7	514.0	500.0	14.0	8567.0	8315.0	513.0	7802.0
679+25	25.00	15.0	152.5	96.0	82.0	91.0	8663.0	8397.0	604.0	7793.0
679+50	25.00	15.0	129.2	14.0	0.0	154.0	8677.0	8397.0	758.0	7639.0
679+75	25.00	15.0	101.8	14.0	0.0	126.0	8691.0	8397.0	884.0	7513.0
680+00	25.00	15.0	60.0	14.0	0.0	88.0	8705.0	8397.0	972.0	7425.0
680+25	25.00	15.0	85.0	14.0	0.0	79.0	8719.0	8397.0	1051.0	7346.0
680+50	25.00	15.0	56.0	14.0	0.0	77.0	8733.0	8397.0	1128.0	7269.0
680+75	25.00	15.0	26.3	14.0	0.0	45.0	8747.0	8397.0	1173.0	7224.0
681+00	25.00	15.0	12.2	14.0	0.0	21.0	8761.0	8397.0	1194.0	7203.0
681+25	25.00	15.0	3.6	14.0	0.0	9.0	8775.0	8397.0	1203.0	7194.0
			Column Totals	8780	8400	1210				

NOTES:
CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL.
FILL DOES NOT INCLUDE UNUSABLE PAVEMENT VOLUME.
EXPANDED FILL IS EQUIVALENT TO (UNEXPANDED FILL)*(FILL FACTOR).
MASS ORDINATE IS EQUIVALENT TO (CUT - EXPANDED FILL); POSITIVE QUANTITIES INDICATE AN EXCESS OF MATERIAL.

MATERIAL EXCAVATED UNDER BID ITEMS COMMON EXCAVATION AND EXCAVATION FOR STRUCTURES BRIDGES (B-65-0060), WILL BE ALLOWED TO BE USED AS FILL.

NO SEPARATE PAYMENT WILL BE MADE FOR THE USE OF THIS MATERIAL AS FILL.

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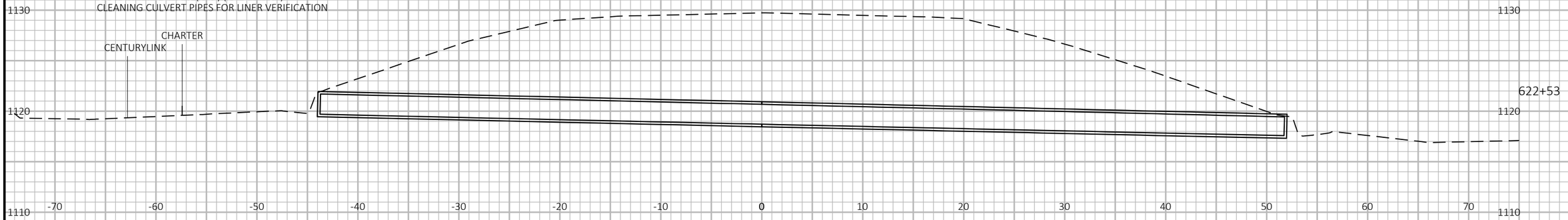
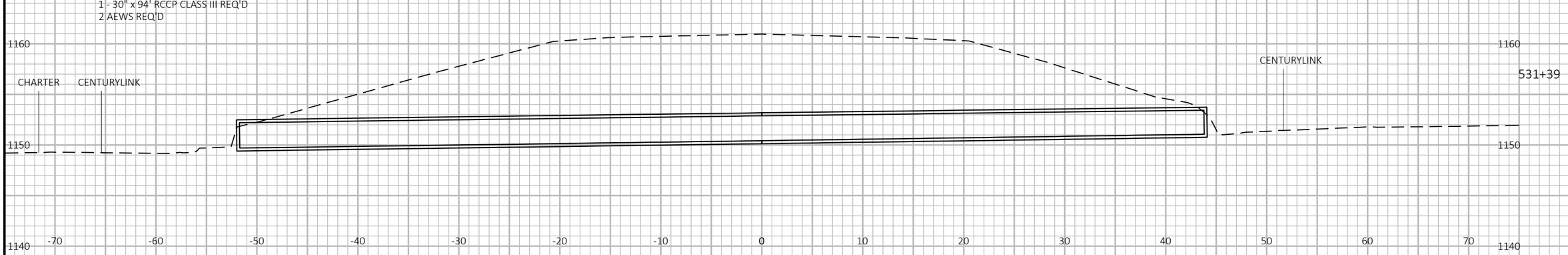
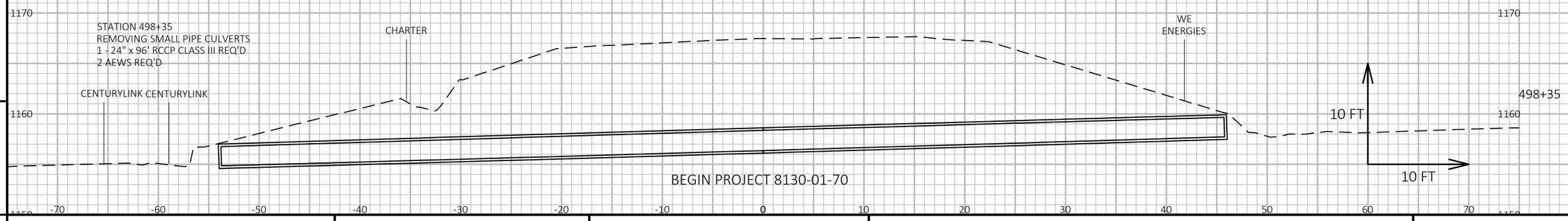
STATION 622+53
CULVERT PIPE LINERS (SIZE) (01. 24-INCH)
CLEANING CULVERT PIPES FOR LINER VERIFICATION



STATION 531+39
REMOVING SMALL PIPE CULVERTS
1 - 30" x 94' RCCP CLASS III REQ'D
2 AEWS REQ'D



STATION 498+35
REMOVING SMALL PIPE CULVERTS
1 - 24" x 96' RCCP CLASS III REQ'D
2 AEWS REQ'D

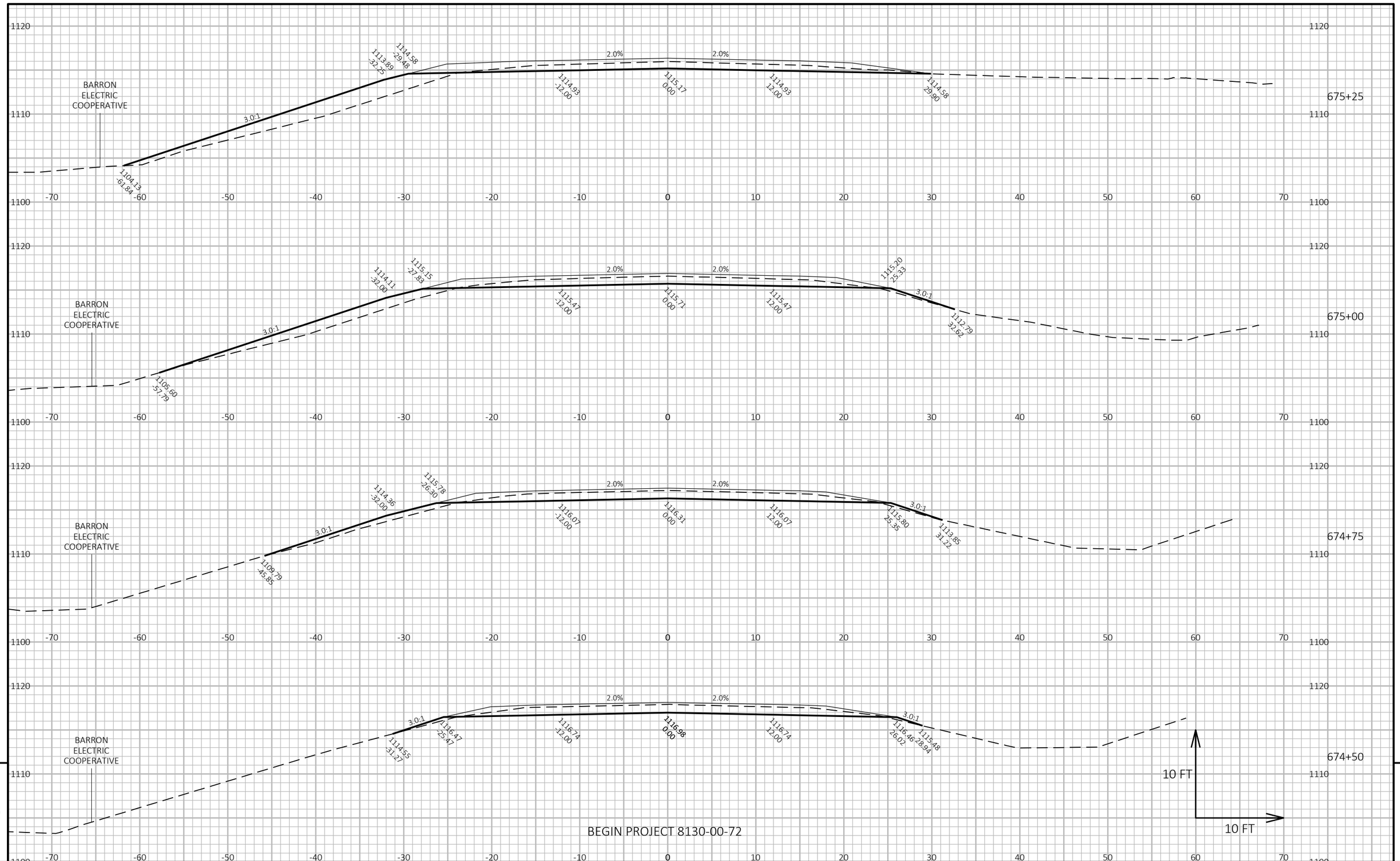


PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS - CULVERT PIPES	SHEET 184	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-1

PLOT DATE : 6/16/2021 7:59 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



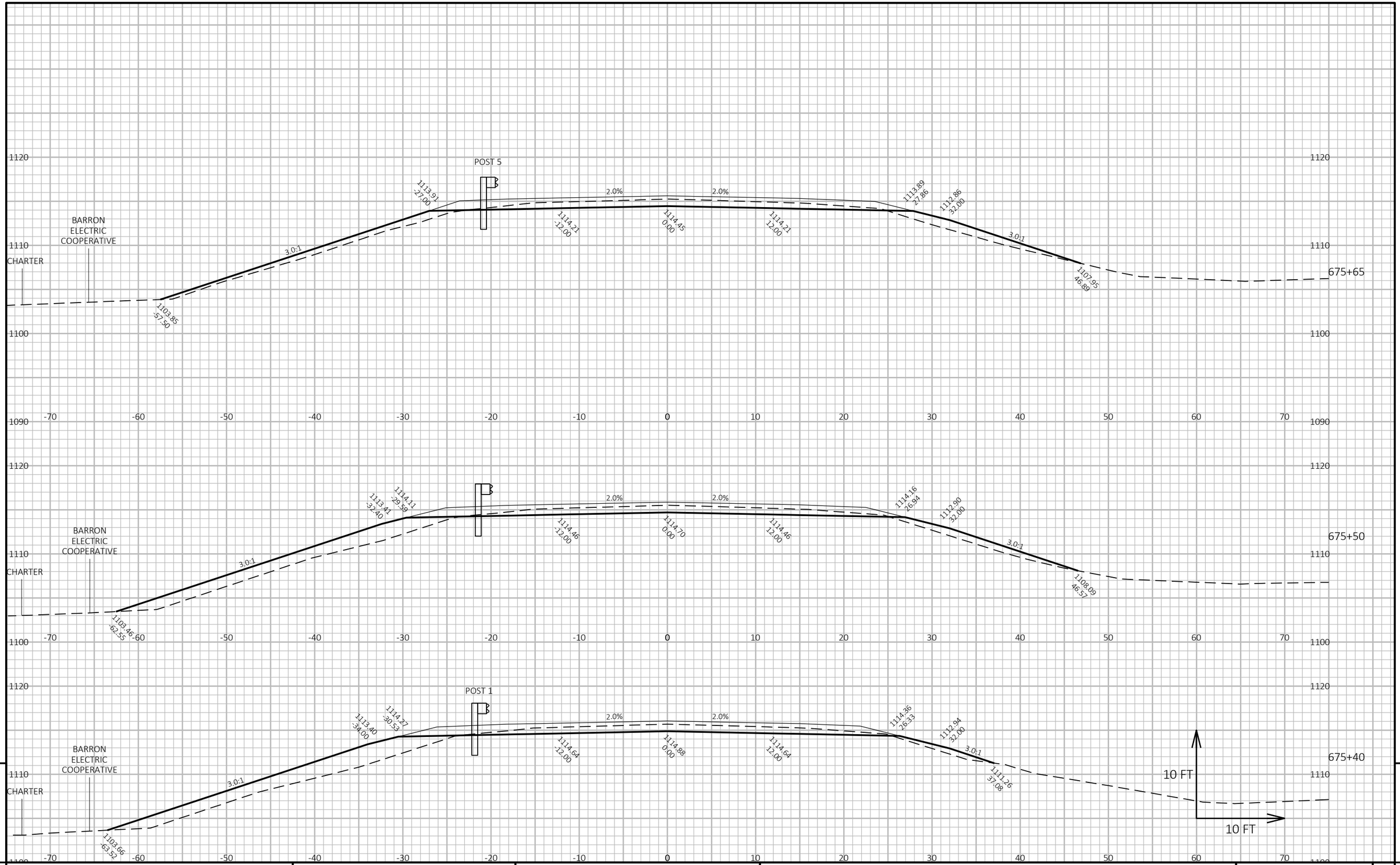
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 185	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-2

PLOT DATE : 6/16/2021 7:59 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 186	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-3

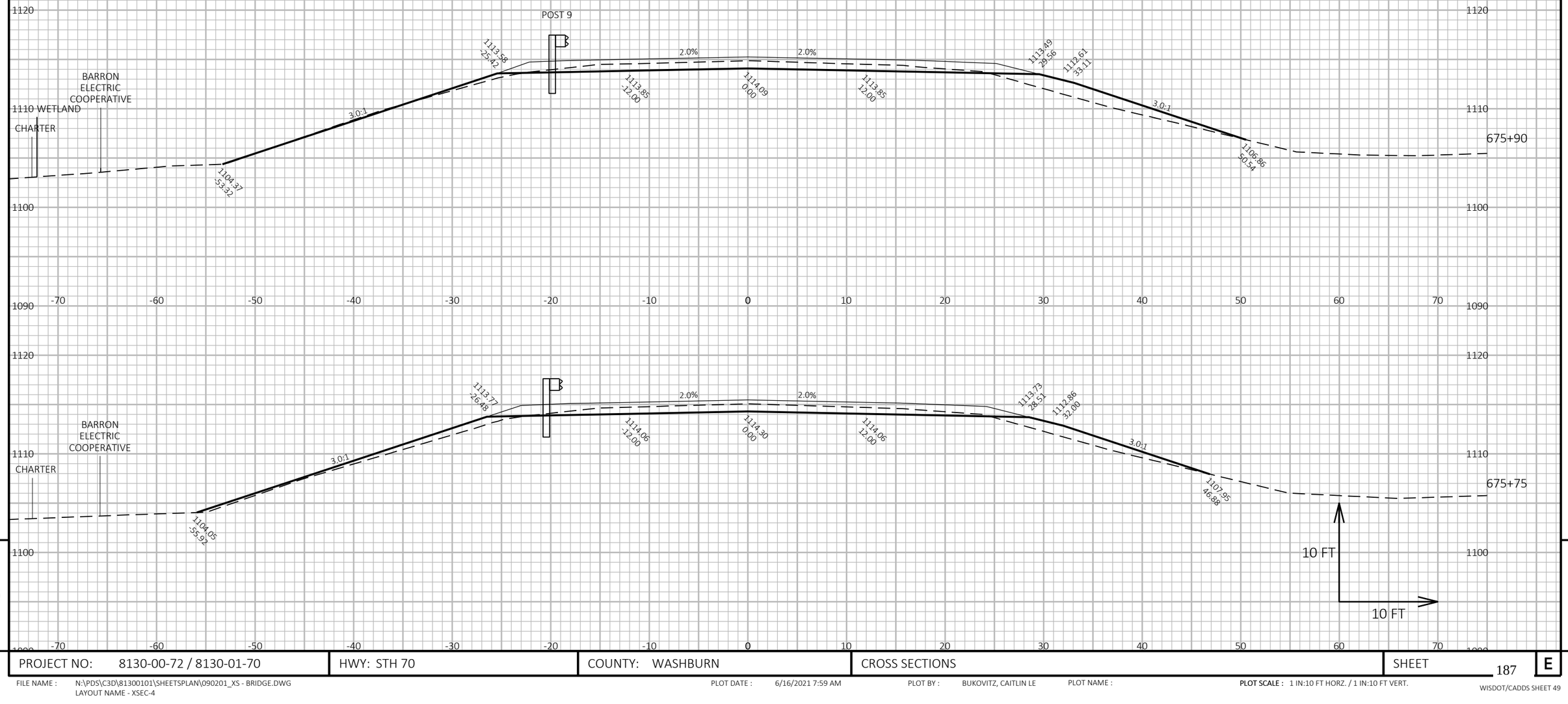
PLOT DATE : 6/16/2021 7:59 AM

PLOT BY : BUKOVITZ, CAITLIN LE

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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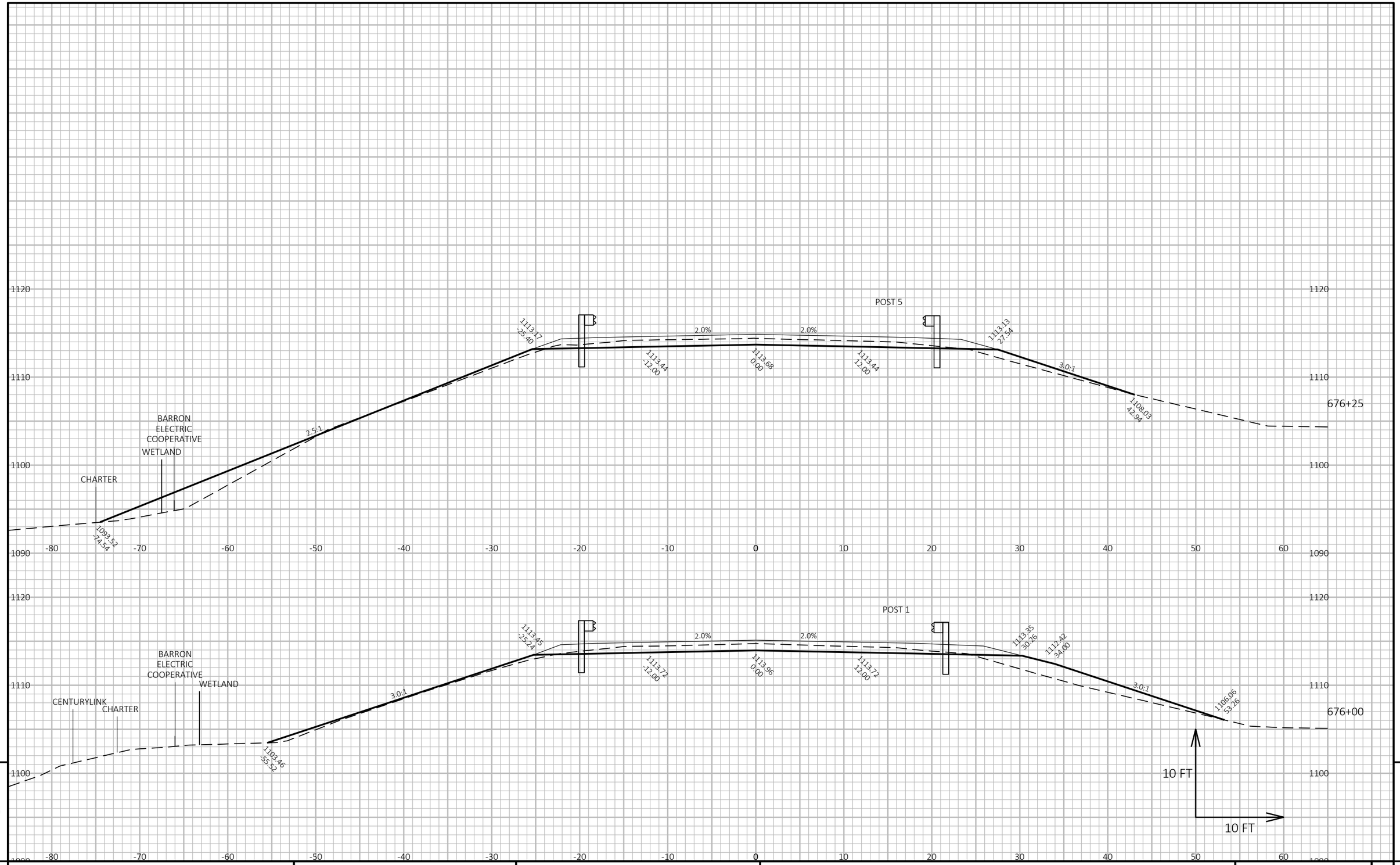
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 187	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-4

PLOT DATE : 6/16/2021 7:59 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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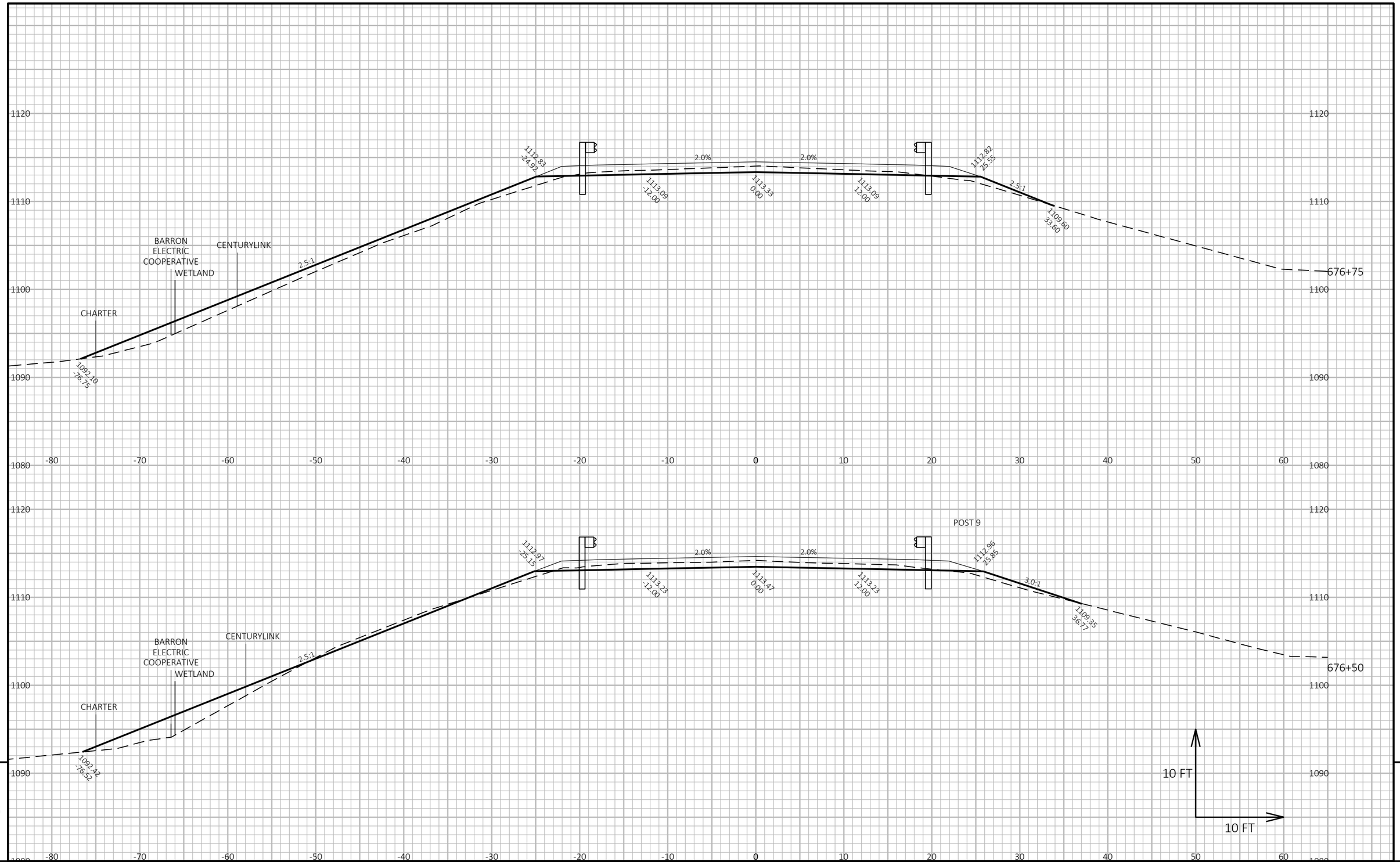
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 188	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-5

PLOT DATE : 6/16/2021 7:59 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 189	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-6

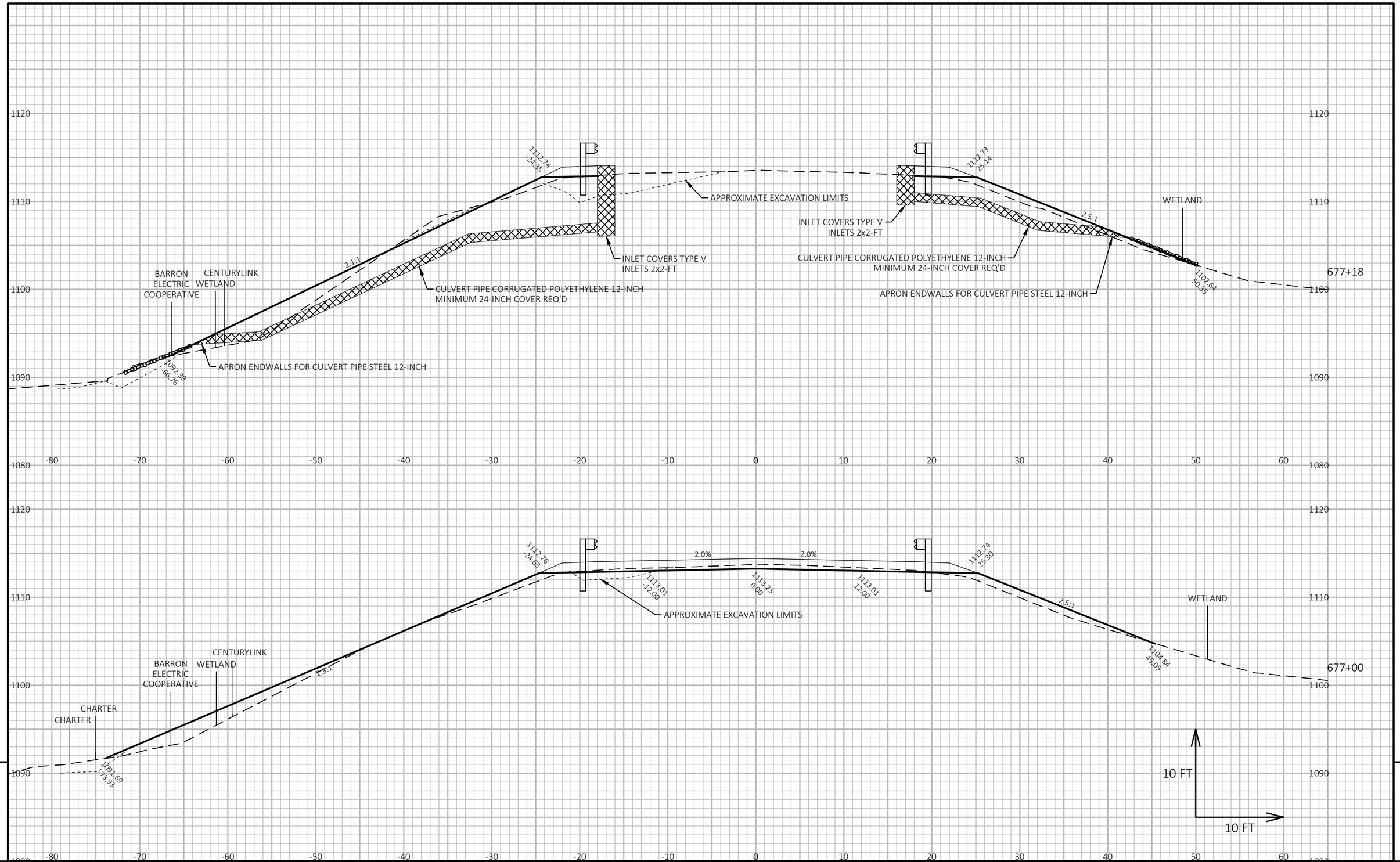
PLOT DATE : 6/16/2021 7:59 AM

PLOT BY : BUKOVITZ, CAITLIN LE

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 190	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-7

PLOT DATE : 6/16/2021 7:59 AM

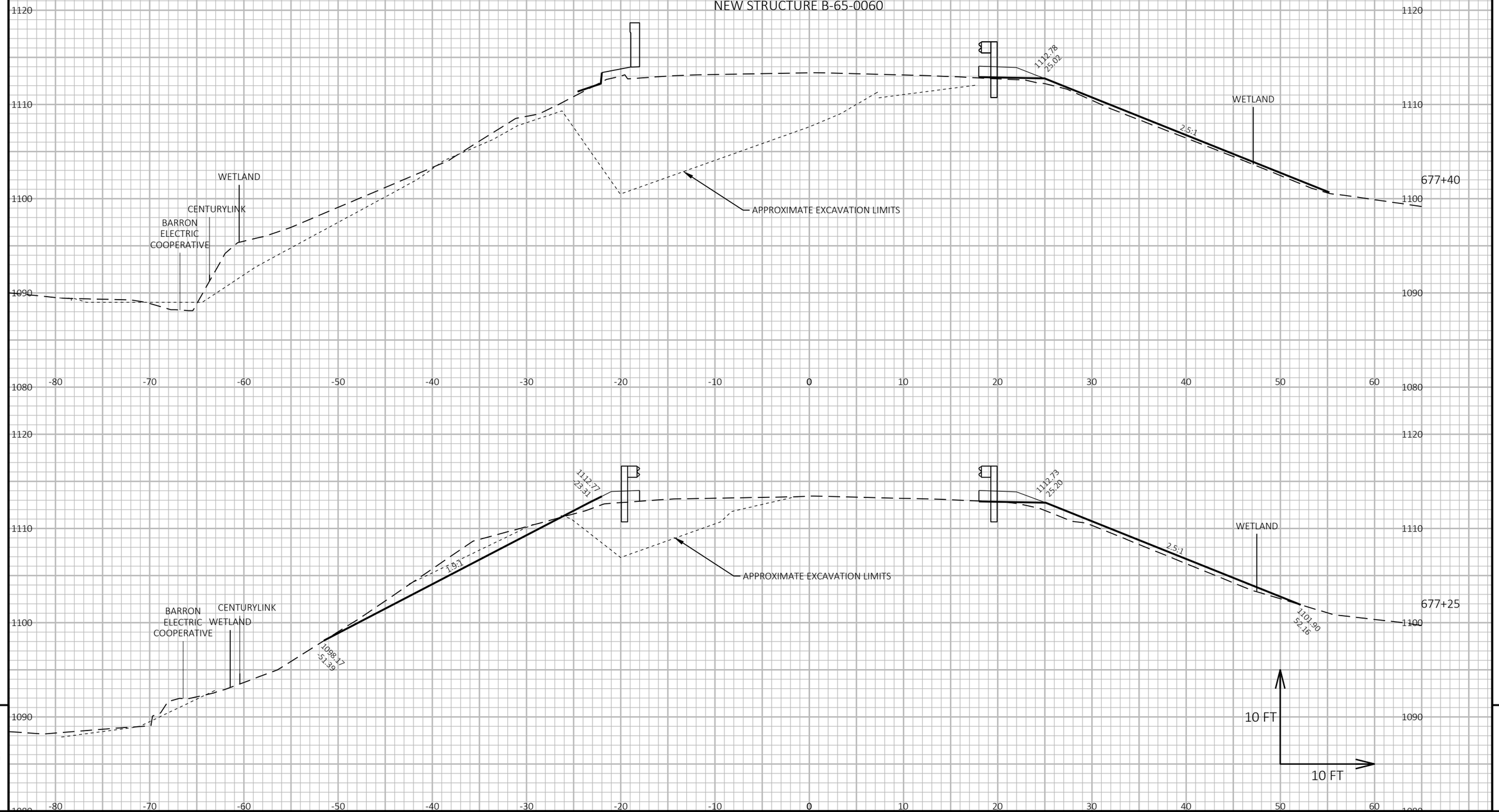
PLOT BY : BUKOVITZ, CAITLIN LE

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

NEW STRUCTURE B-65-0060



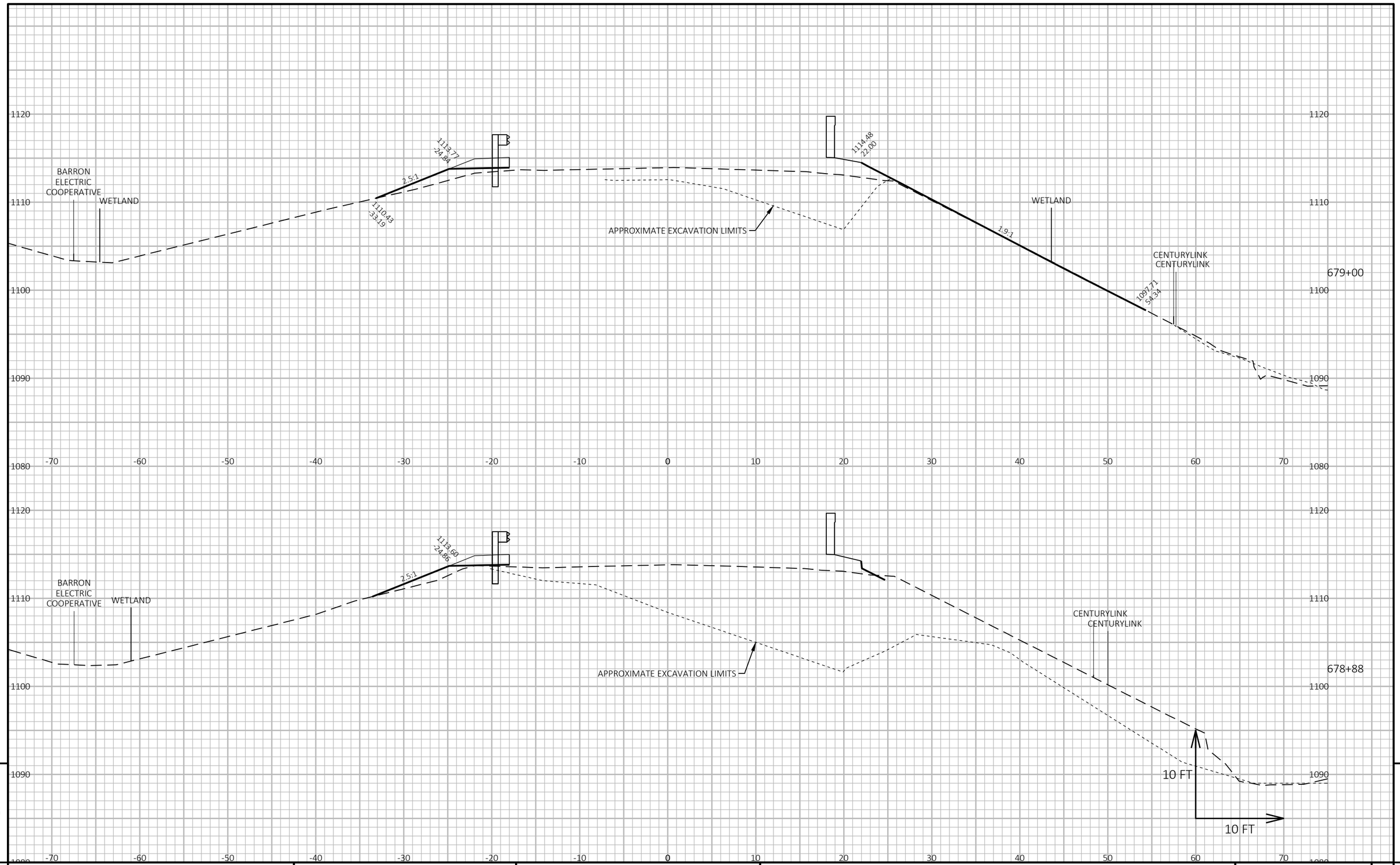
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 191	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-8

PLOT DATE : 6/16/2021 7:59 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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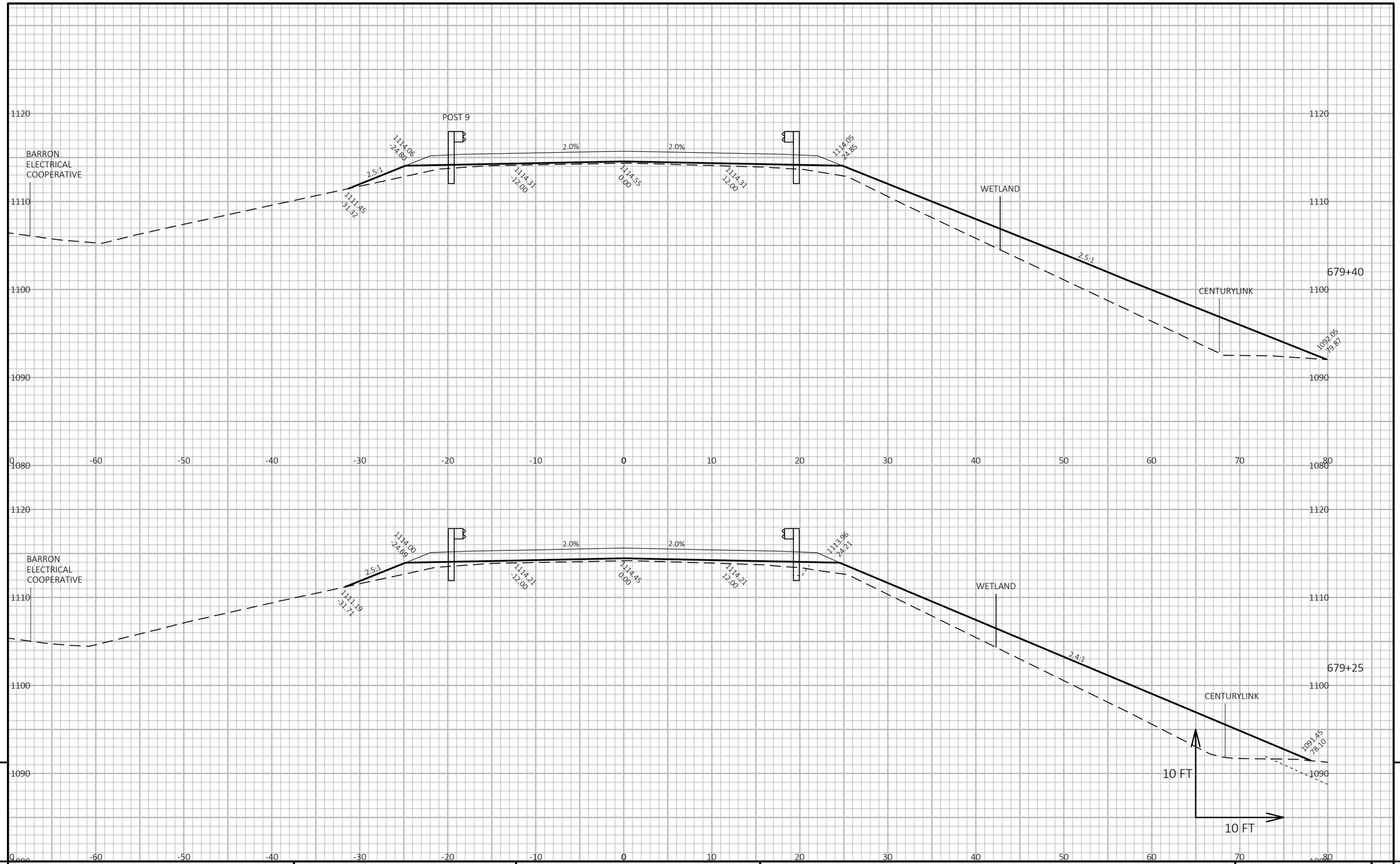
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 192	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-9

PLOT DATE : 6/16/2021 8:00 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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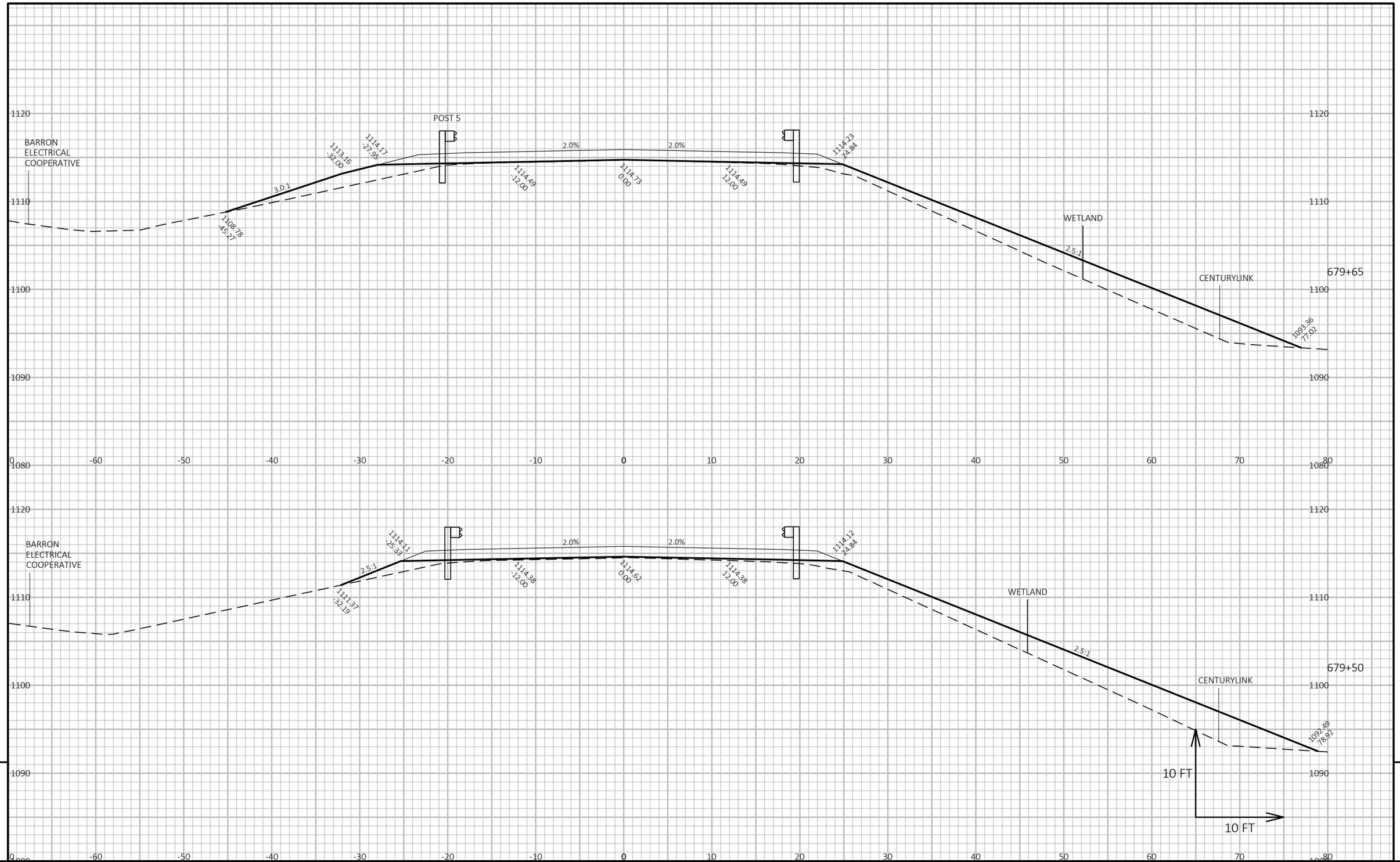
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 193	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-10

PLOT DATE : 6/16/2021 8:00 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



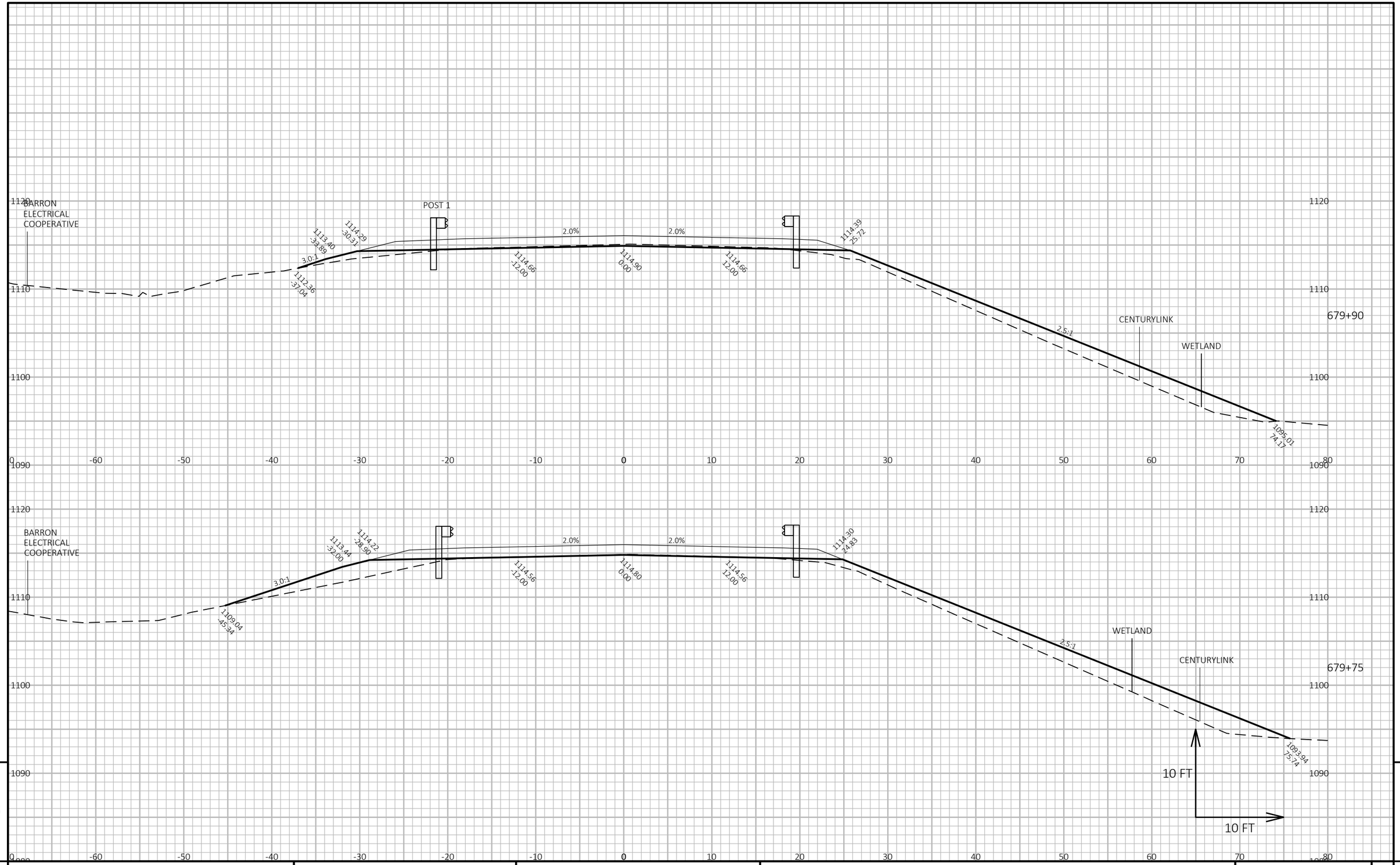
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 194	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-11

PLOT DATE : 6/16/2021 8:00 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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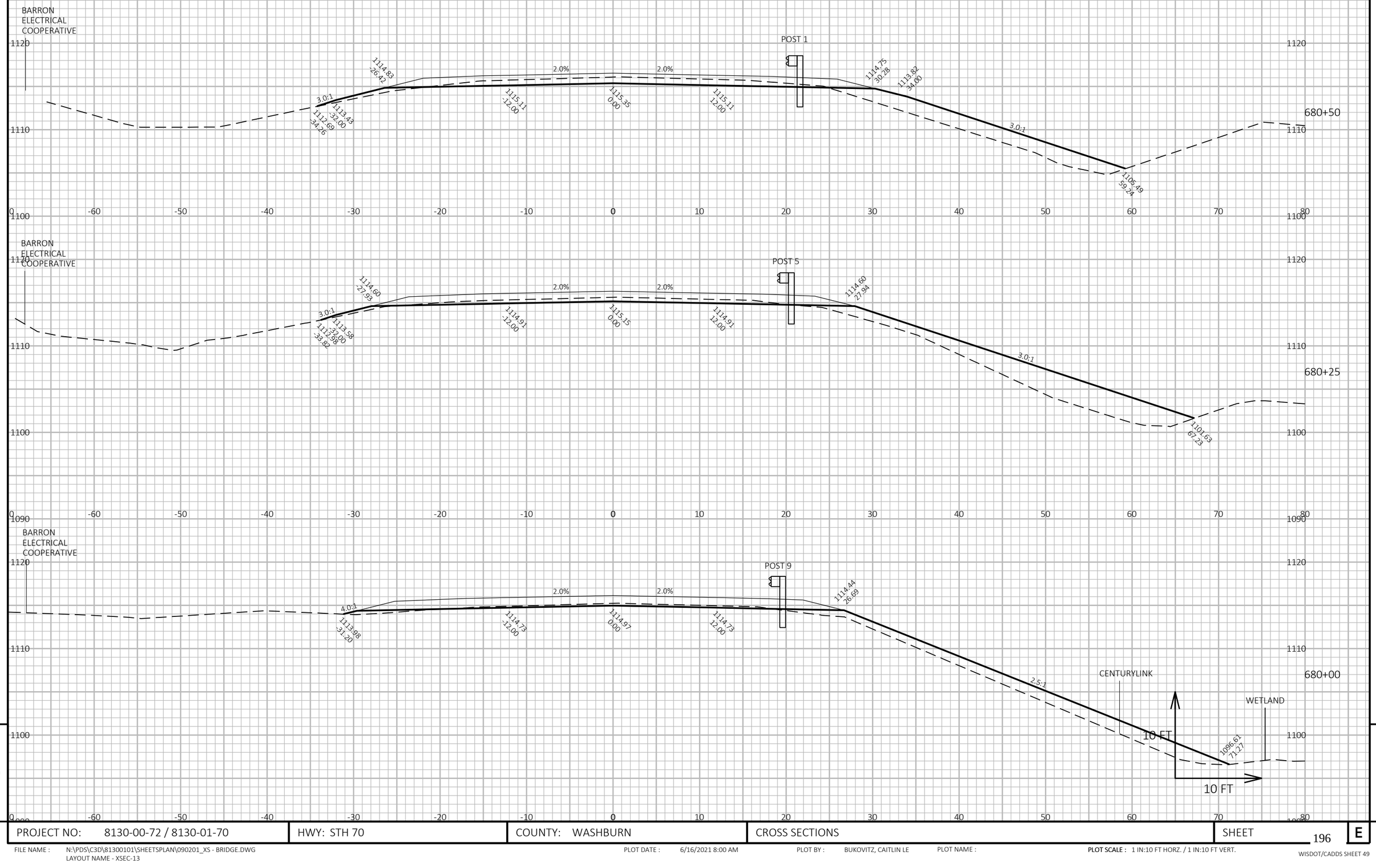
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 195	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-12

PLOT DATE : 6/16/2021 8:00 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 196	E

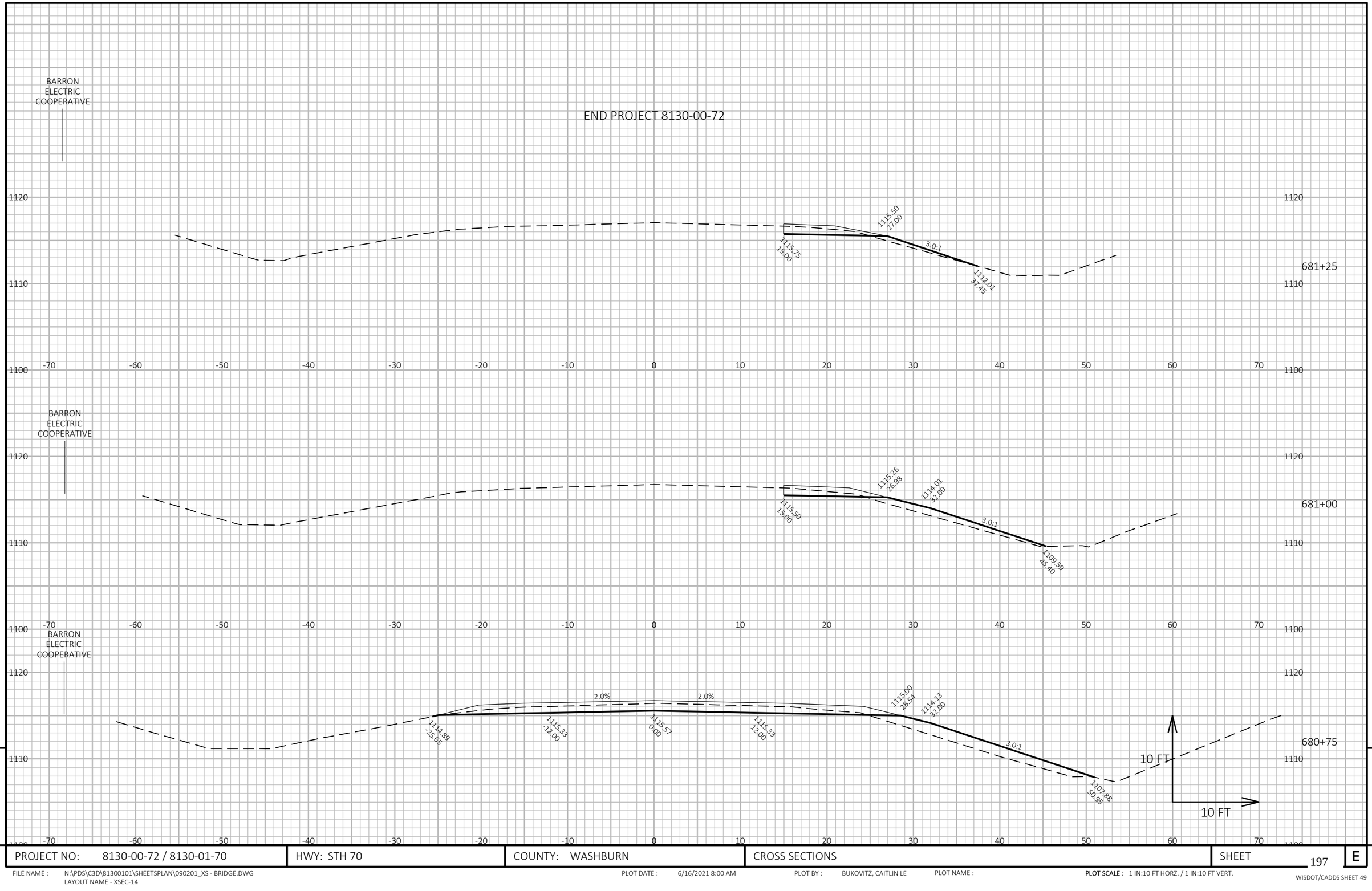
FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-13

PLOT DATE : 6/16/2021 8:00 AM

PLOT BY : BUKOVITZ, CAITLIN LE

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS	SHEET 197	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-14

PLOT DATE : 6/16/2021 8:00 AM

PLOT BY : BUKOVITZ, CAITLIN LE

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

690+43

690+34

STATION 690+38
CULVERT PIPE LINERS (SIZE) (01. 24-INCH)
CLEANING CULVERT PIPES FOR LINER VERIFICATION

BARRON
ELECTRIC
COOPERATIVE

10 FT

10 FT

9

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PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS - CULVERT PIPES	SHEET 198	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-15

PLOT DATE : 6/16/2021 8:00 AM

PLOT BY : BUKOVITZ, CAITLIN LE

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END PROJECT 8130-01-70

CHARTER
CENTURYLINK

CHARTER
CENTURYLINK

STATION 794+00
CULVERT PIPE LINERS (SIZE) (01. 24-INCH)
CLEANING CULVERT PIPES FOR LINER VERIFICATION

794+00

760+56

STATION 760+52
REMOVING SMALL PIPE CULVERTS
1 - 24" x 86' RCCP CLASS III REQ'D
2 AEWS REQ'D

760+49

10 FT

10 FT

9

9

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS - CULVERT PIPES	SHEET 199	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090201_XS - BRIDGE.DWG
LAYOUT NAME - XSEC-16

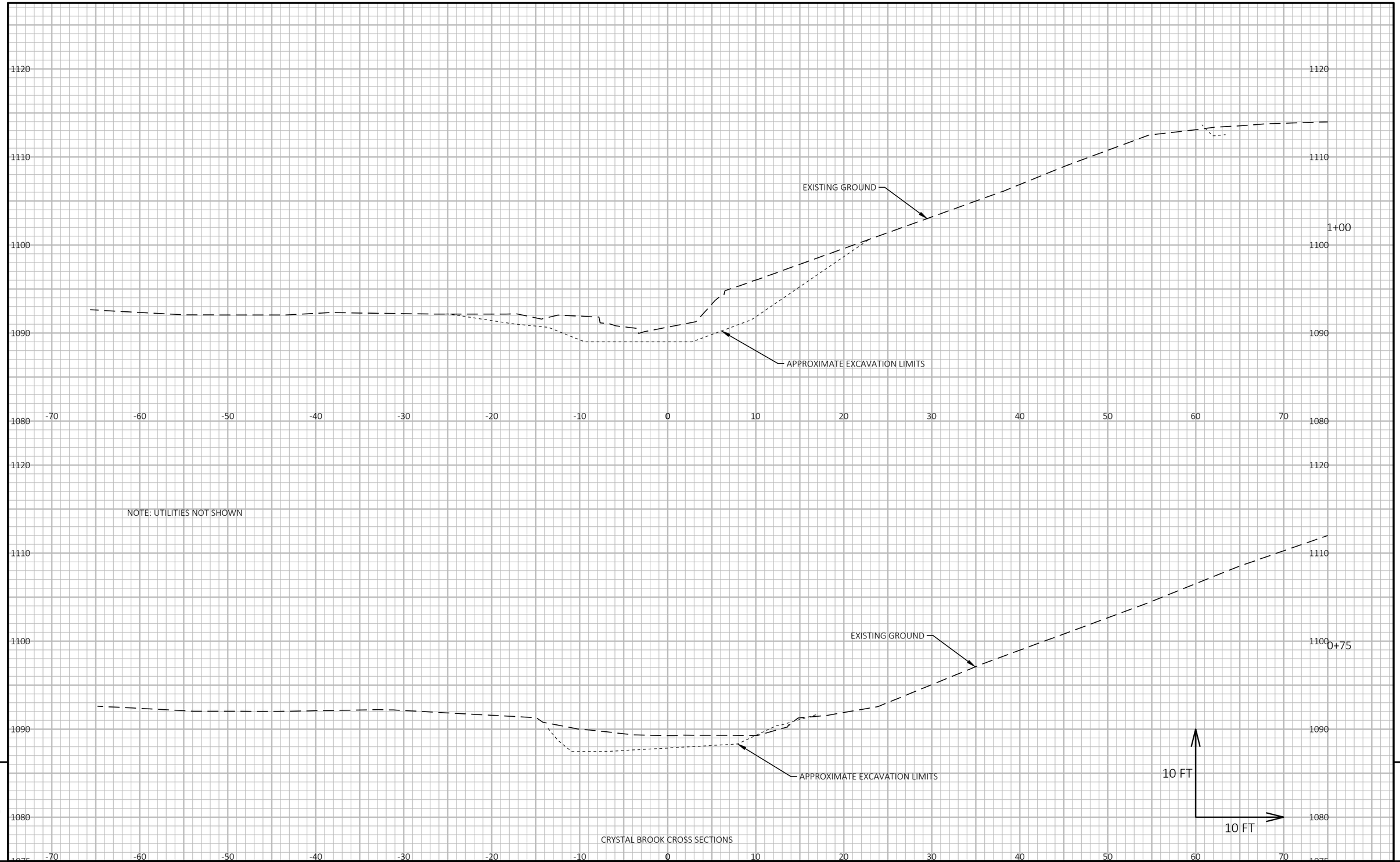
PLOT DATE : 6/16/2021 8:00 AM

PLOT BY : BUKOVITZ, CAITLIN LE

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



CRYSTAL BROOK CROSS SECTIONS

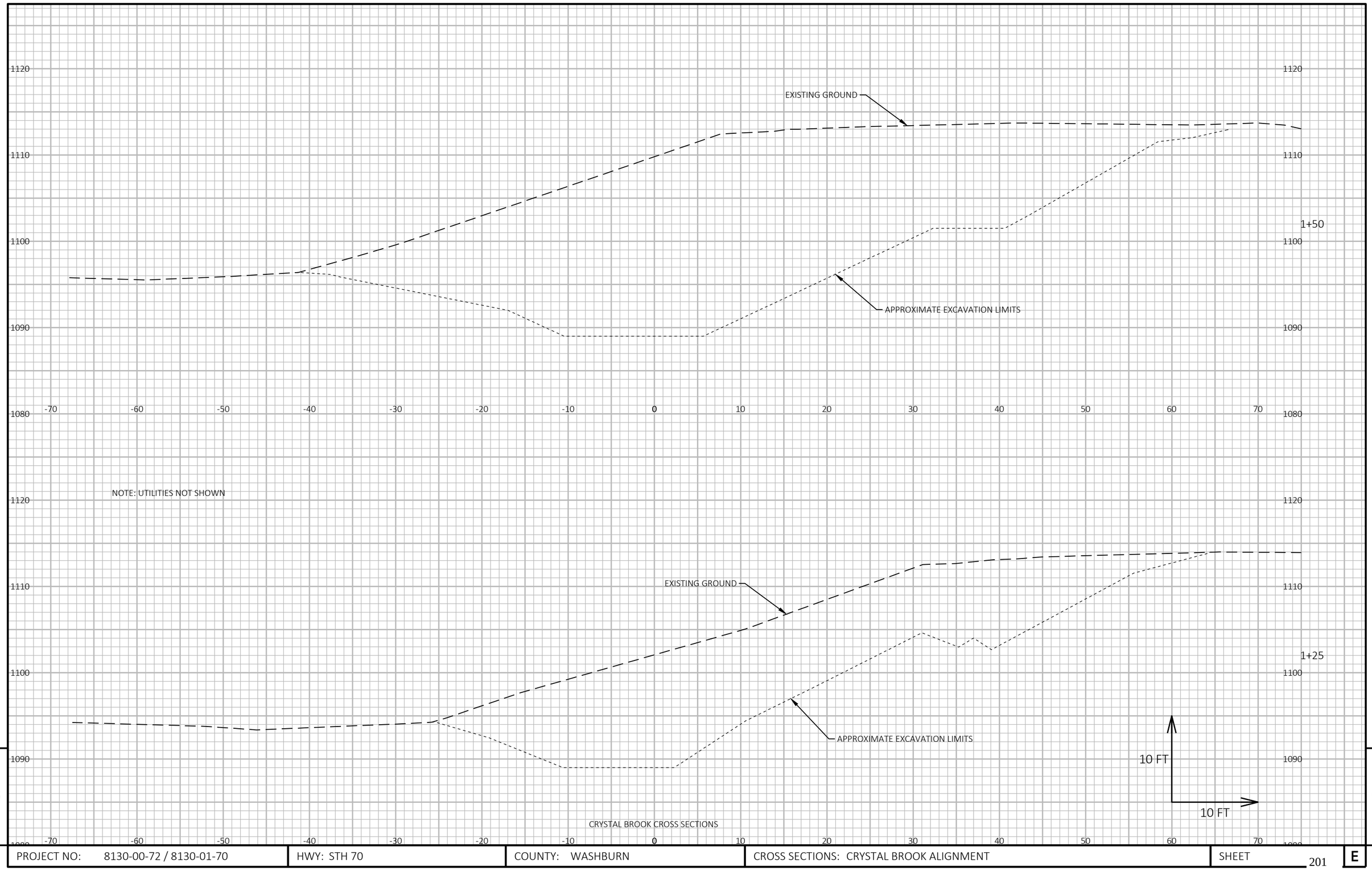
PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS: CRYSTAL BROOK ALIGNMENT	SHEET 200	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090202_XS - STREAM.DWG
LAYOUT NAME - 01

PLOT DATE : 4/19/2021 11:52 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



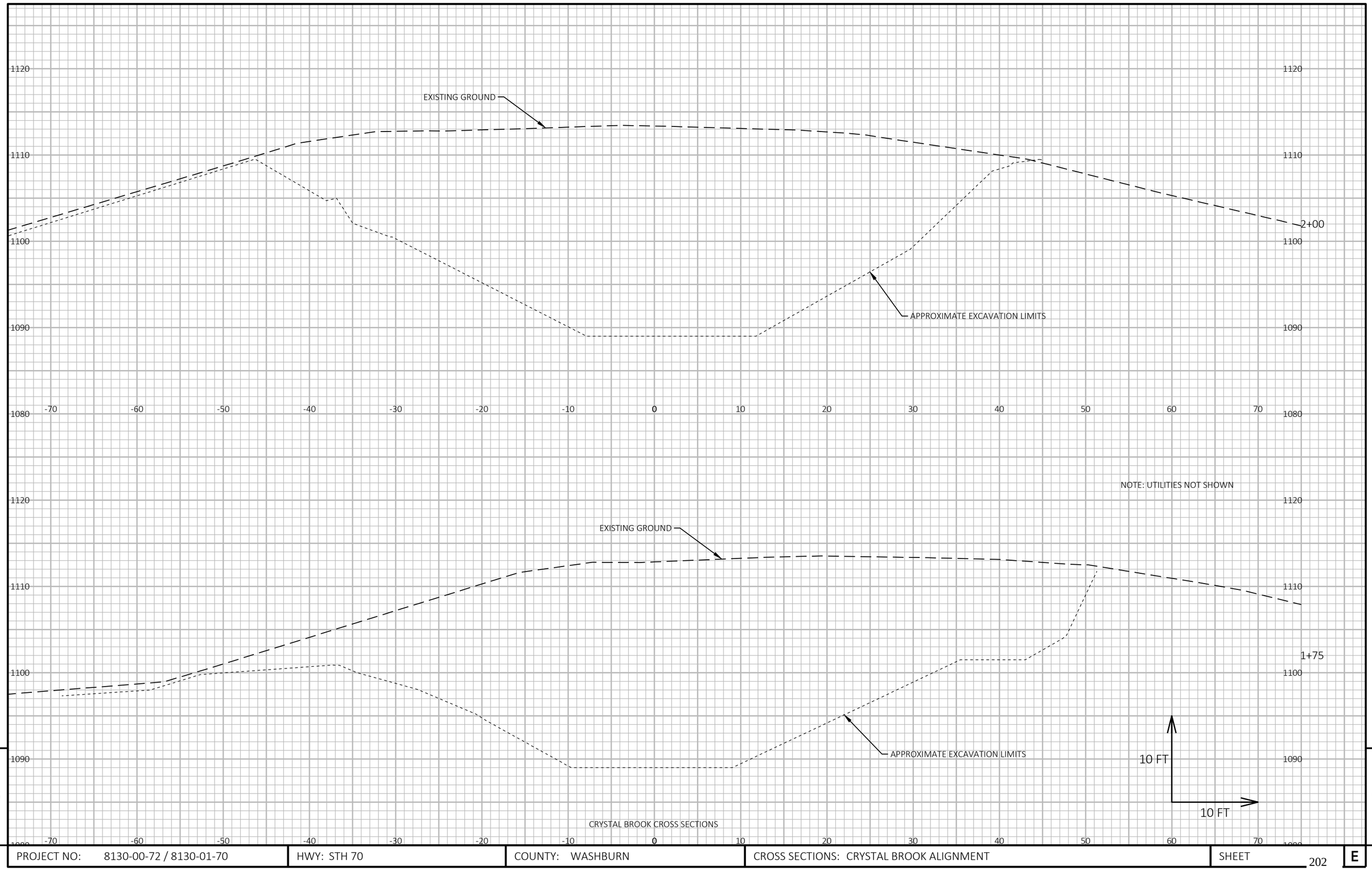
CRYSTAL BROOK CROSS SECTIONS

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS: CRYSTAL BROOK ALIGNMENT	SHEET 201	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090202_XS - STREAM.DWG
LAYOUT NAME - 02

PLOT DATE : 4/19/2021 11:52 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

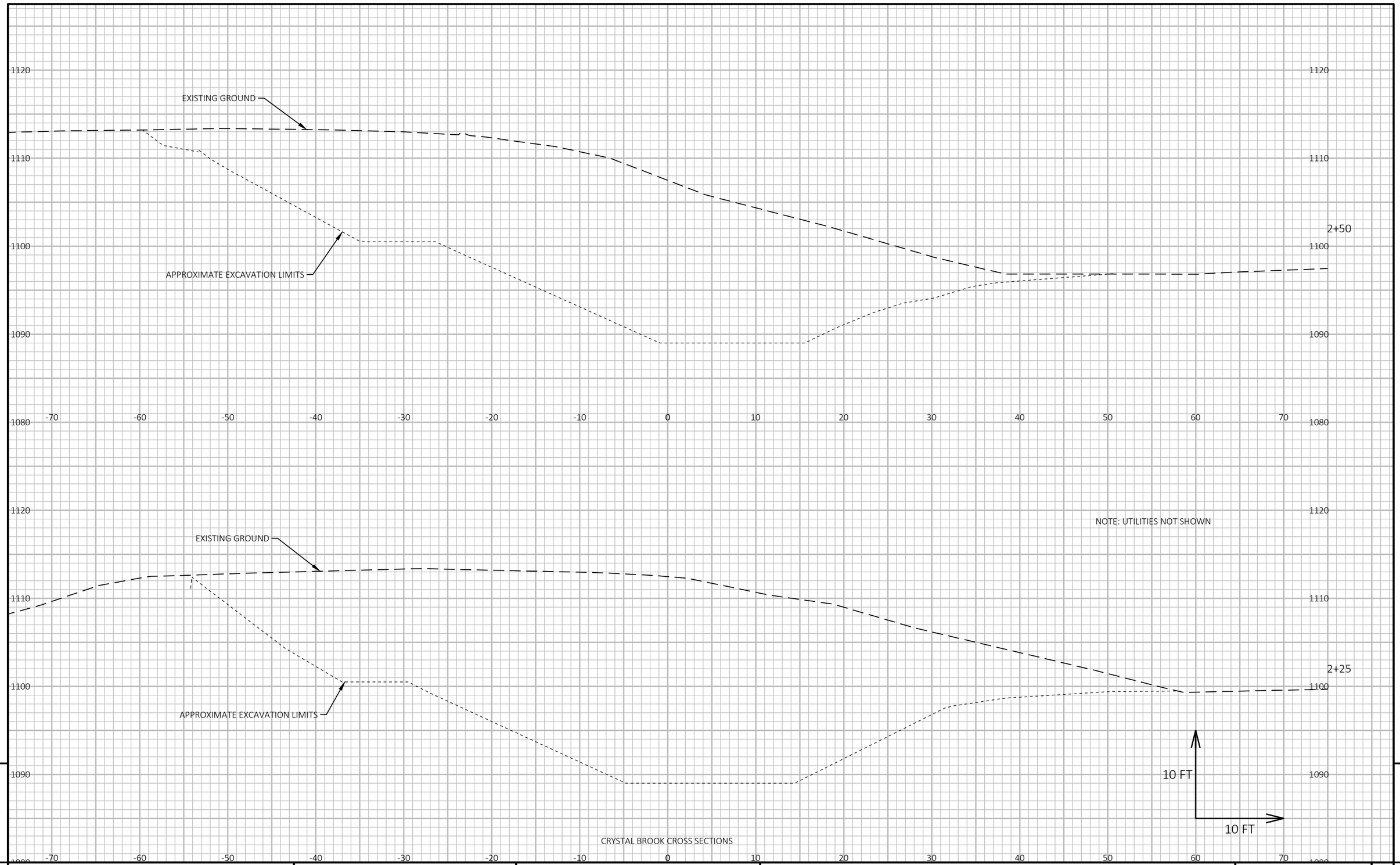
9

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS: CRYSTAL BROOK ALIGNMENT	SHEET 202	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090202_XS - STREAM.DWG
LAYOUT NAME - 03

PLOT DATE : 4/19/2021 11:52 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



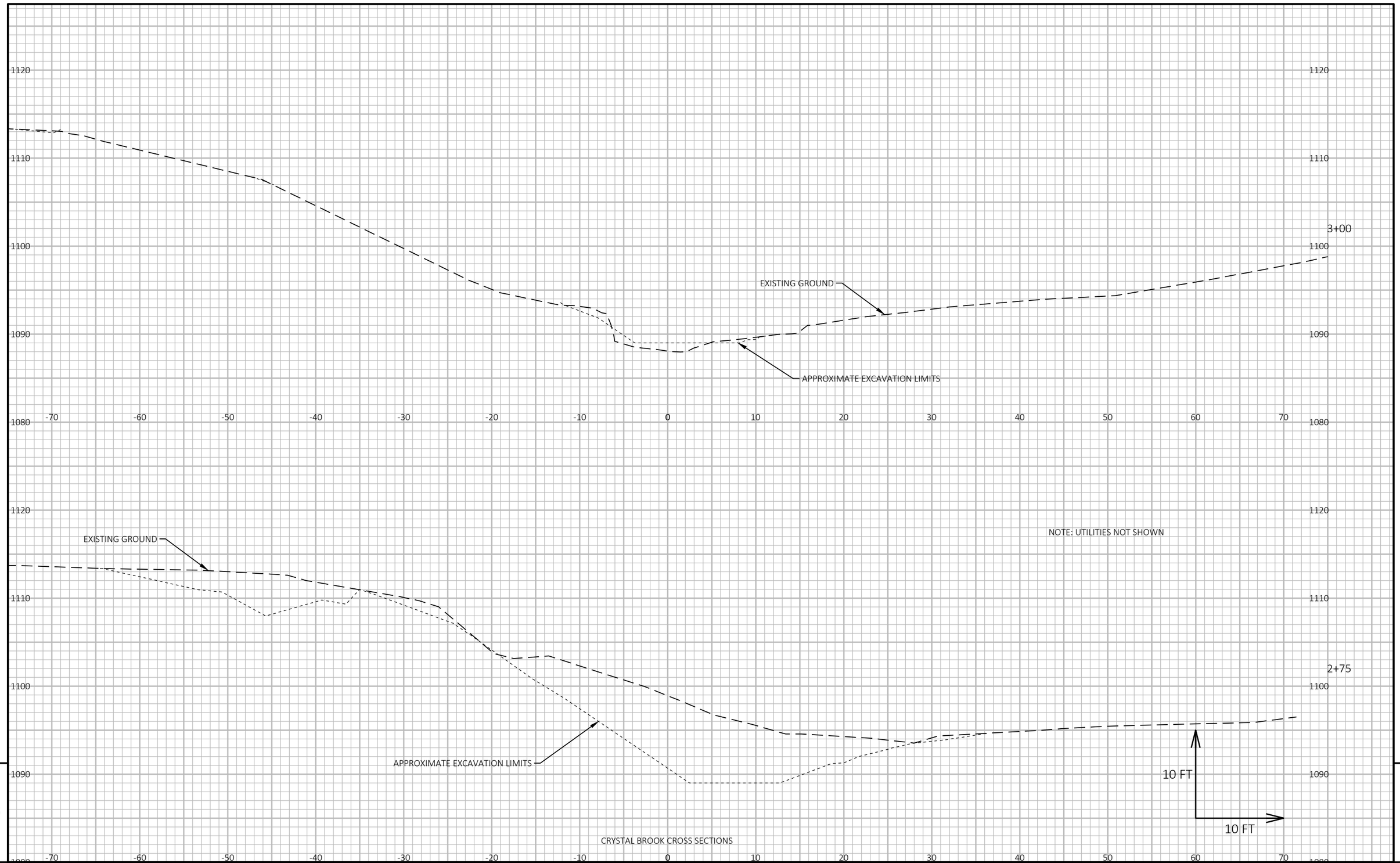
CRYSTAL BROOK CROSS SECTIONS

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS: CRYSTAL BROOK ALIGNMENT	SHEET 203	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090202_XS - STREAM.DWG
LAYOUT NAME - 04

PLOT DATE : 4/19/2021 11:52 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



CRYSTAL BROOK CROSS SECTIONS

PROJECT NO: 8130-00-72 / 8130-01-70	HWY: STH 70	COUNTY: WASHBURN	CROSS SECTIONS: CRYSTAL BROOK ALIGNMENT	SHEET 204	E

FILE NAME : N:\PDS\C3D\81300101\SHEETSPLAN\090202_XS - STREAM.DWG
LAYOUT NAME - 05

PLOT DATE : 4/19/2021 11:52 AM PLOT BY : BUKOVITZ, CAITLIN LE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov