EAU

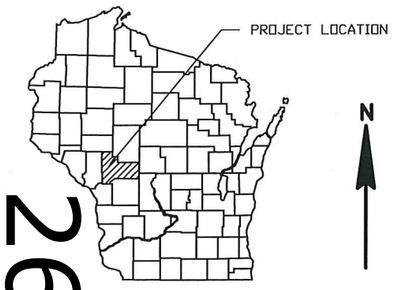
PROJECT ID: 7520-03-70

COUNTY: JACKSON

DECEMBER 2017

ORDER OF SHEETS

TOTAL SHEETS = 138



29

DESIGN DESIGNATION

A.A.D.T.	2017	= 4100
A.A.D.T.	2037	= 5000
D.H.V.		= 14.6
D.D.		= 62/38
T.		= 18.2%
DESIGN SPEED		= 35 MPH
ESALS		= 2,200,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

V. HIXTON, SOUTH STATE STREET

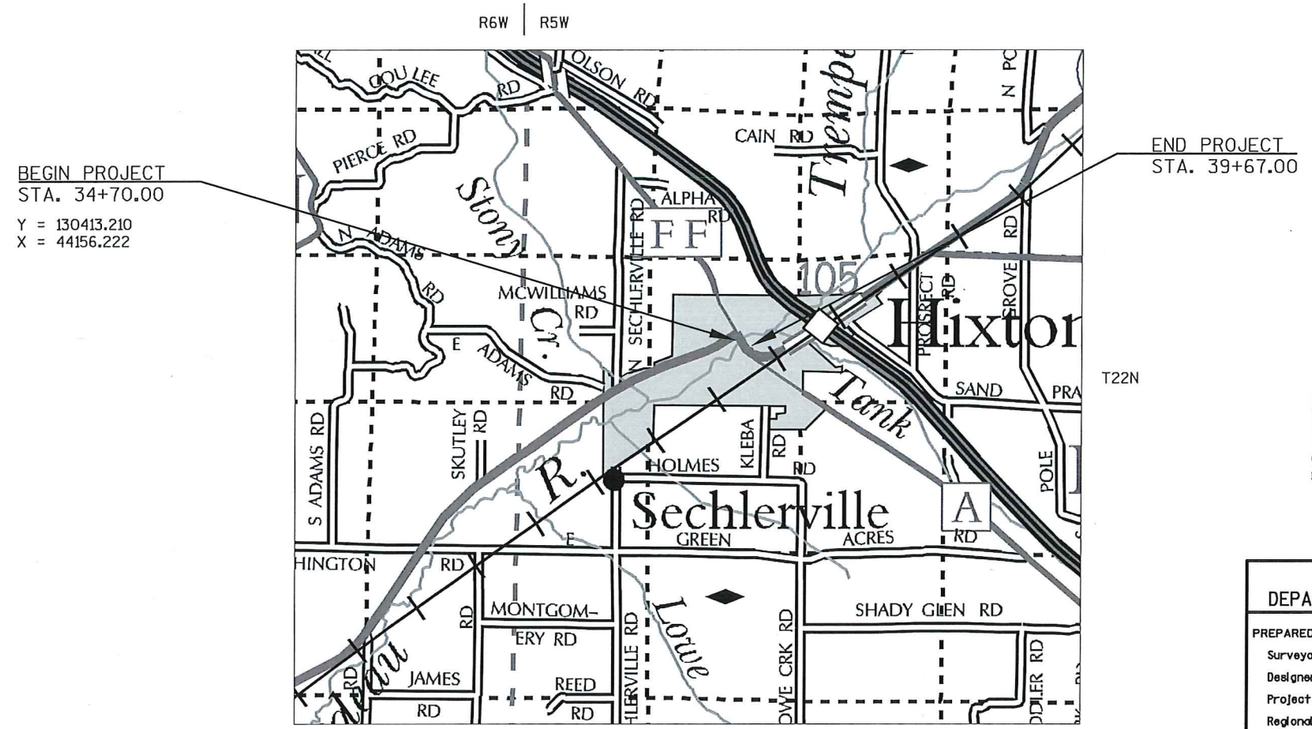
(TREMPEALEAU RIVER BRIDGE B-27-0160)

STH 95

JACKSON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7520-03-70	WISC 2018025	1

STATE PROJECT NUMBER
7520-03-70



LAYOUT
SCALE 0 1/2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.094 MI

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

WISCONSIN
Ryan Jarvis
45349
Eau Claire
WI
PROFESSIONAL ENGINEER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	FAA INC.
Designer	FAA INC.
Project Manager	DAVID KOEPP
Regional Examiner	JENNIFER OLDENBURG
Regional Supervisor	TIM WATSON

APPROVED FOR THE DEPARTMENT
DATE: 7/31/2017 (Signature)

E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\010101_TI.DWG

PLOT DATE : 7/31/2017 11:49 AM PLOT BY : RYAN JARVIS PLOT NAME :

WISDOT/CADDS SHEET 10

2

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
ASPH	ASPHALTIC
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BAH	BEARING AHEAD
BBK	BEARING BACK
BF	BACK FACE
BM	BENCH MARK
BR	BRIDGE
C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
CE	COMMERCIAL ENTRANCE
CMP	CORRIGATED METAL PIPE
CONC	CONCRETE
CP	CULVERT PIPE
CP	CONTROL POINT
CPCP	CULVERT PIPE CORRUGATED POLYETHYLENE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III
CR	CREEK
CWT	HUNDREDWEIGHT
CY	CUBIC YARD
C & G	CURB AND GUTTER
D	DEGREE OF CURVE/BOX DEPTH
DHV	DESIGN HOUR VOLUME
DD	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DG	DITCH GRADE
DWY	DRIVEWAY
E	EAST
EL/ELEV	ELEVATION
ENT	ENTRANCE
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FE	FIELD ENTRANCE
FERT	FERTILIZE
FF	FACE TO FACE
FL	FLOW LINE
FO	FIBER OPTIC
FS	FULL SUPER ELEVATION
FT	FOOT
G	GRADE
HMA	HOT MIX ASPHALT
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE OR PIN
K	RATE OF VERTICAL CURVATURE
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LB	POUND
LF	LINEAR FOOT
LCB	LONG CHORD BEARING
LC	LONG CHORD
LN	LANE
LT	LEFT
LN	LANE
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MI	MILE
ML	MAINLINE
N	NORTH
NC	NORMAL CROWN
NO	NUMBER
NOR	NORMAL
OBLIT	OBLITERATE
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
POB	POINT OF BEGINNING
POE	POINT OF ENDING
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVRC	POINT OF VERTICAL REVERSE CURVATURE
PVT	POINT OF VERTICAL TANGENCY
R/RAD	RADIUS
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQ'D	REQUIRED
RES	RESIDENCE OR RESIDENTIAL
RHF	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD	ROAD
RDWY	ROADWAY
RR	RAILROAD
RT	RIGHT
SALV	SALVAGED
SAN S	SANITARY SEWER
S	SOUTH
SQ	SQUARE
SF	SQUARE FEET
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
SE	SUPERELEVATION
T	TANGENT LENGTH
T.	TRUCKS (PERCENT OF)
TC	TOP OF CURB
T OR TN	TOWN
TLE	TEMPORARY LIMITED EASEMENT
t	TON
TYP.	TYPICAL
VAR	VARIABLE
VC	VERTICAL CURVE
W	WEST
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE
YD	YARD

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO USGS DATUM.

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

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

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, FERTILIZED, SEEDED AND MULCHED

BEARINGS SHOWN ON THE PLANS ARE COUNTY BEARINGS TO THE NEAREST SECOND.

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

SIGN PLATE DETAILS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" UNLESS OTHERWISE PROVIDED FOR IN THE PLAN.

CURVE DATA IS BASED ON THE ARC DEFINITION.

INLET OFFSETS AND RIM ELEVATIONS ARE MEASURED AT FLAGLINE OF CURB & GUTTER.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE COUNTY LAND SURVEYOR CONCERNING MONUMENT AND PROPERTY CORNER PRESERVATION. LANDMARK REFERENCE MONUMENTS SHALL BE PERPETUATED BY THE COUNTY SURVEYOR.

RADIUS DIMENSIONS ARE SHOWN TO FLAGLINE OF CURB & GUTTER OR EDGE OF PAVEMENT.

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

6-INCH ASPHALTIC SURFACE SHALL BE PLACED AS 2-INCH UPPER AND TWO 2-INCH LOWER LAYERS.

DIGGERS HOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

DESIGN CONTACT

FLEMING, ANDRE & ASSOCIATES, INC.
3615 N. HASTINGS WAY
SUITE 100
EAU CLAIRE, WI. 54703-0474
ATTENTION: MATT GUNDRY
PHONE: 715-832-8400
MJGUNDRY@FAA-ENGINEERS.COM

W.D.N.R. CONTACT

DNR SERVICE CENTER
3550 MORMON COULEE RD
LA CROSSE, WI 54601
TELEPHONE: 608-785-9115
ATTENTION: KAREN KALVELAGE
KAREN.KALVELAGE@WISCONSIN.GOV

UTILITIES

CENTURY LINK - COMMUNICATIONS
DONNA SMOTHERS
835 RED IRON RD
BLACK RIVER FALLS, WI 54615
ATTN: DONNA SMOTHERS
PHONE: 715-284-4375
DONNA.SMOTHERS@CENTURYLINK.COM

TRI-COUNTY COMMUNICATIONS COOPERATIVE
P.O. BOX 578
STRUM, WI 54770
ATTN: BUCK WEBB
PHONE: 715-695-2691
BWEBB@TCCPRO.NET

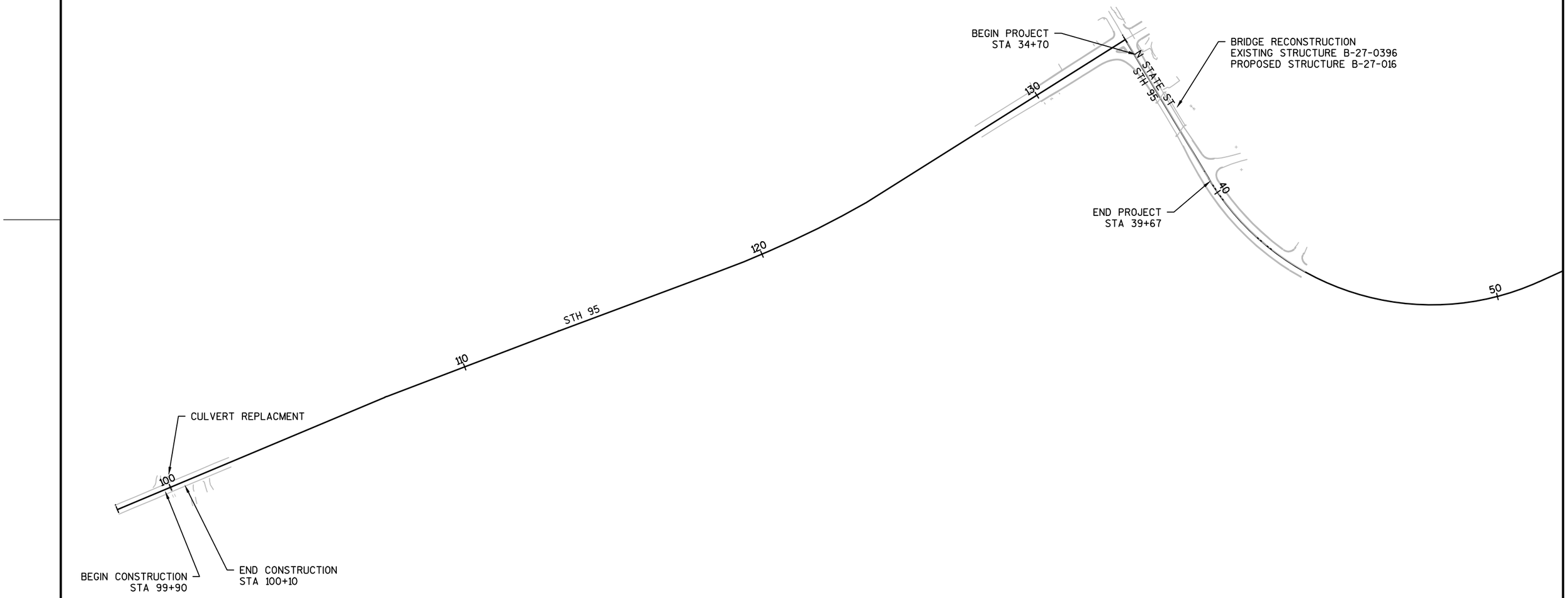
VILLAGE OF HIXTON - SANITARY/WATER
145 E MAIN ST.
P.O. BOX 127
HIXTON, WI 54635
ATTN: JAMES SIMONSON
PHONE: 715-963-3732

WE ENERGIES - GAS
1921 8TH ST S
WISCONSIN RAPIDS, WI 54494
ATTN: JACOB HULBERT
PHONE: 715-421-7277
MOBILE: 715-231-5189
JACOB.HULBERT@WE-ENERGIES.COM

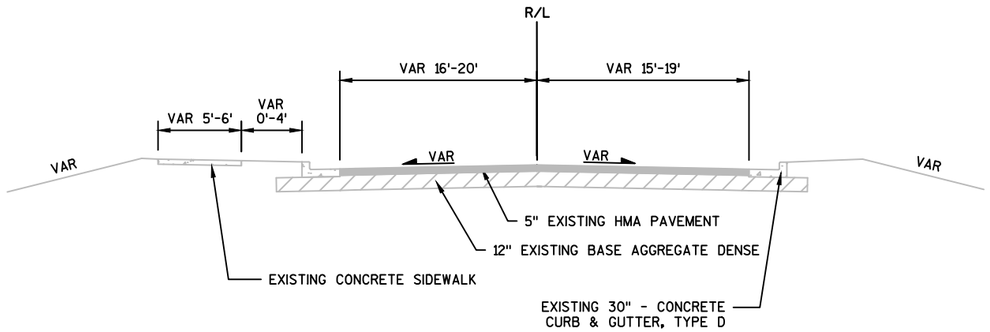
XCEL ENGERY - ELECTRICITY
1003 S BLACK RIVER ST
SPARTA, WI 54656
ATTN: KAYE CROOK
PHONE: 608-789-3622
KAYE.M.CROOK@XCELENERGY.COM

2

N

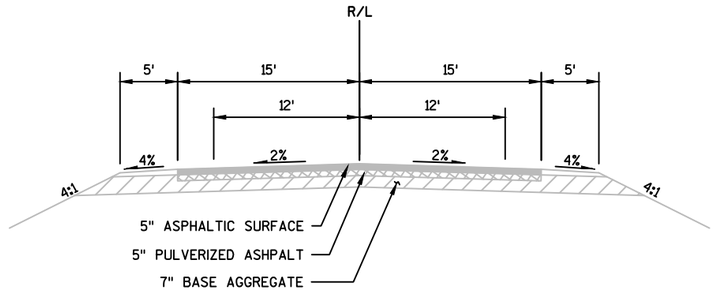


PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION STH 95

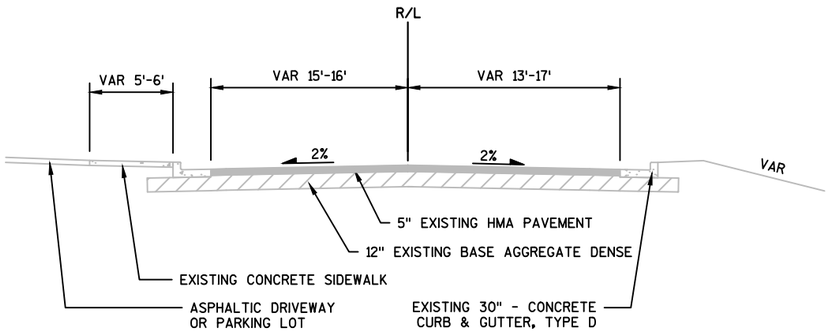
STA 37+75 TO STA 38+74



EXISTING SECTION STH 95

CULVERT REPLACEMENT

STA 100+00

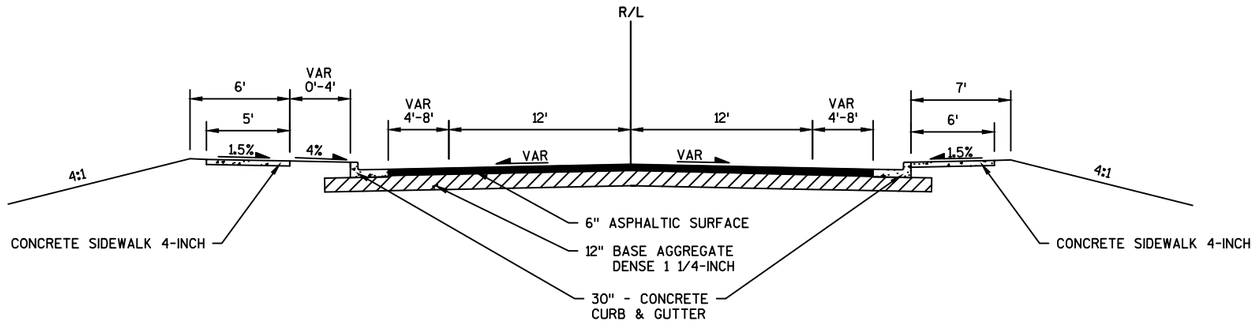


EXISTING TYPICAL SECTION STH 95

STA 35+61 TO STA 36+53

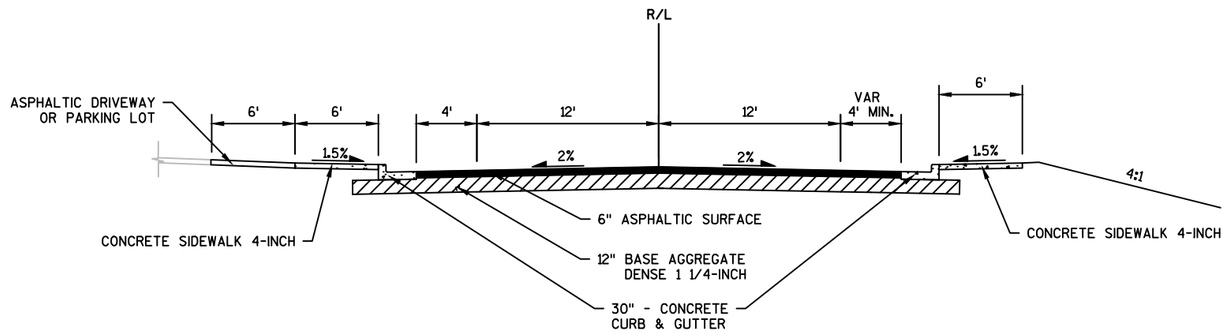
PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	PLAN: EXISTING TYPICAL SECTIONS	SHEET 4	E

2



FINISHED TYPICAL SECTION STH 95

STA 37+90.33 TO STA 38+74
EAST APPROACH

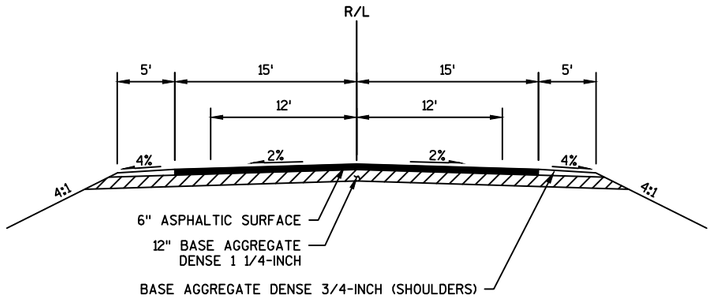


FINISHED TYPICAL SECTION STH 95

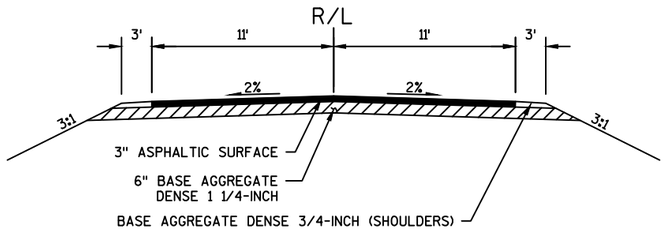
STA 35+61TO STA 36+37.67
WEST APPROACH

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	PLAN: EXISTING TYPICAL SECTIONS	SHEET 5	E

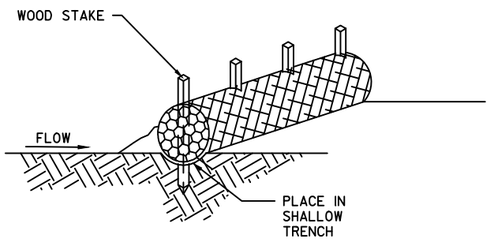
2



FINISHED TYPICAL SECTION STH 95
CULVERT REPLACEMENT
STA 100+00

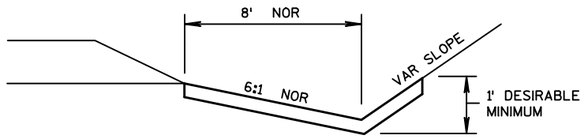


FINISHED TYPICAL SECTION BYPASS
STA 1+27.11 BP TO STA 7+08.18 BP

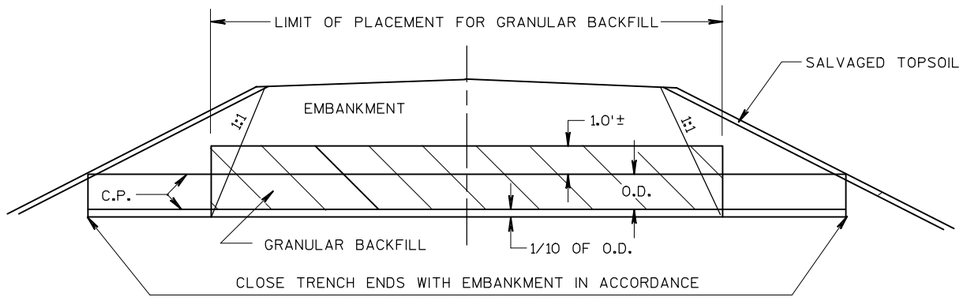


TEMPORARY DITCH CHECKS

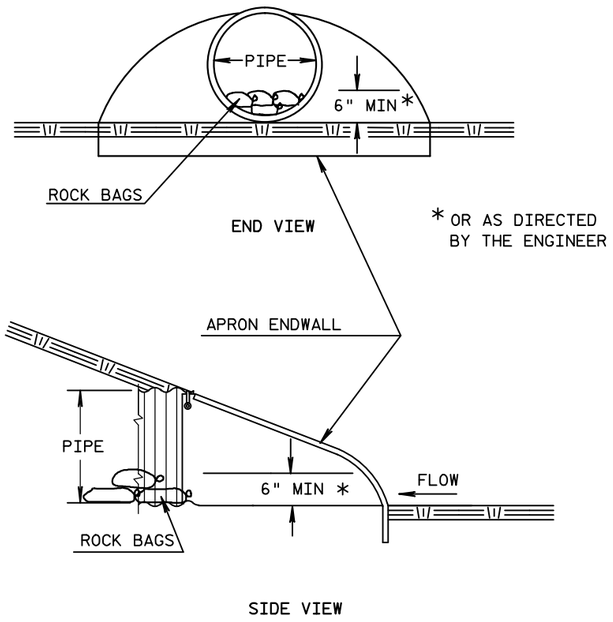
SHOWING TYPICAL SEDIMENT LOG INSTALLATION. SEE SDD 8E8-3 "TYPICAL INSTALLATIONS OF EROSION BALES/TEMPORARY DITCH CHECKS" FOR ADDITIONAL INFORMATION AND ALTERNATIVES



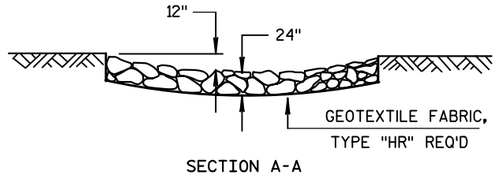
EROSION MAT DETAIL FOR DITCHES

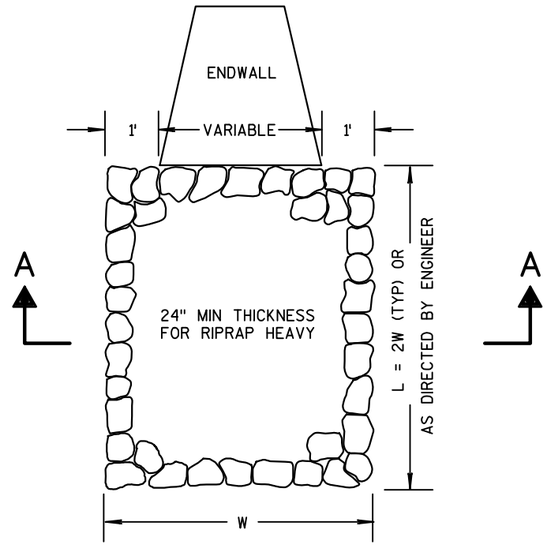


CULVERT BACKFILL DETAIL



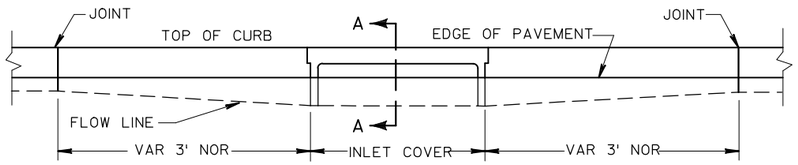
CULVERT PIPE CHECKS



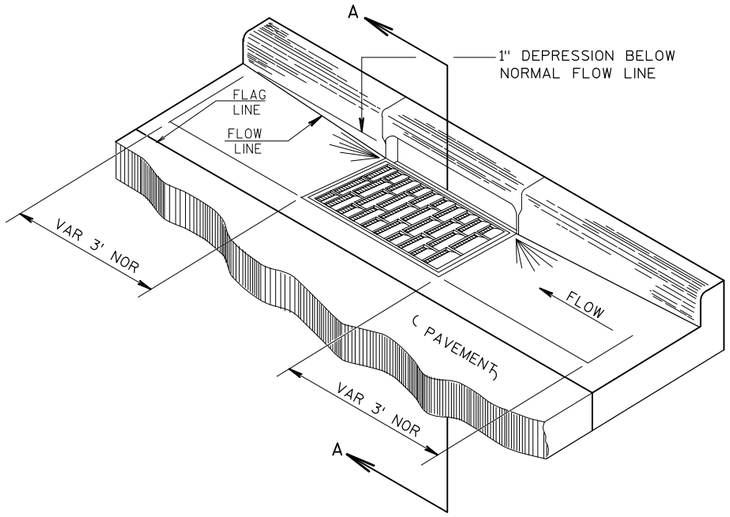


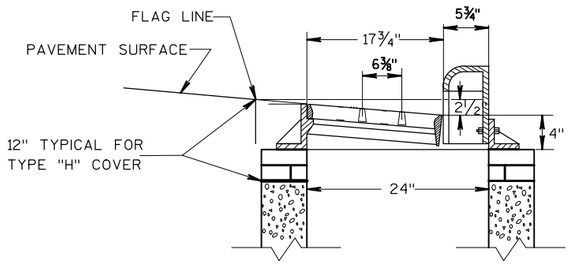
RIPRAP HEAVY TREATMENT AT CULVERTS

2



ELEVATION

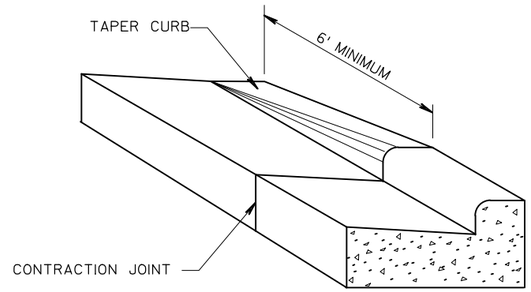




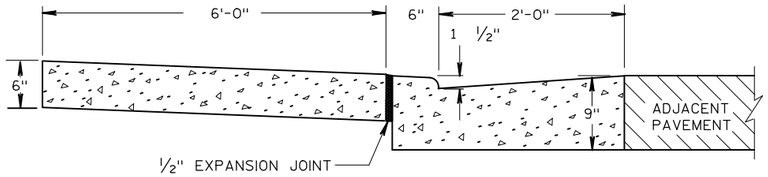
SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

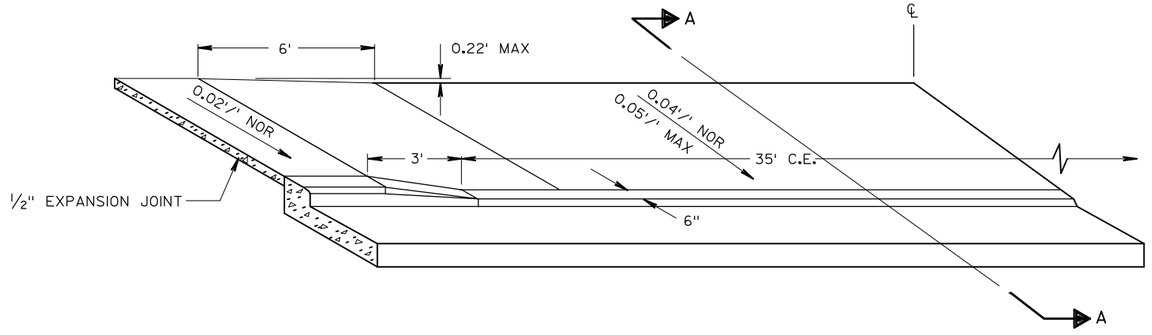
(TYPE H INLET SHOWN)



DETAIL OF CURB & GUTTER TERMINI

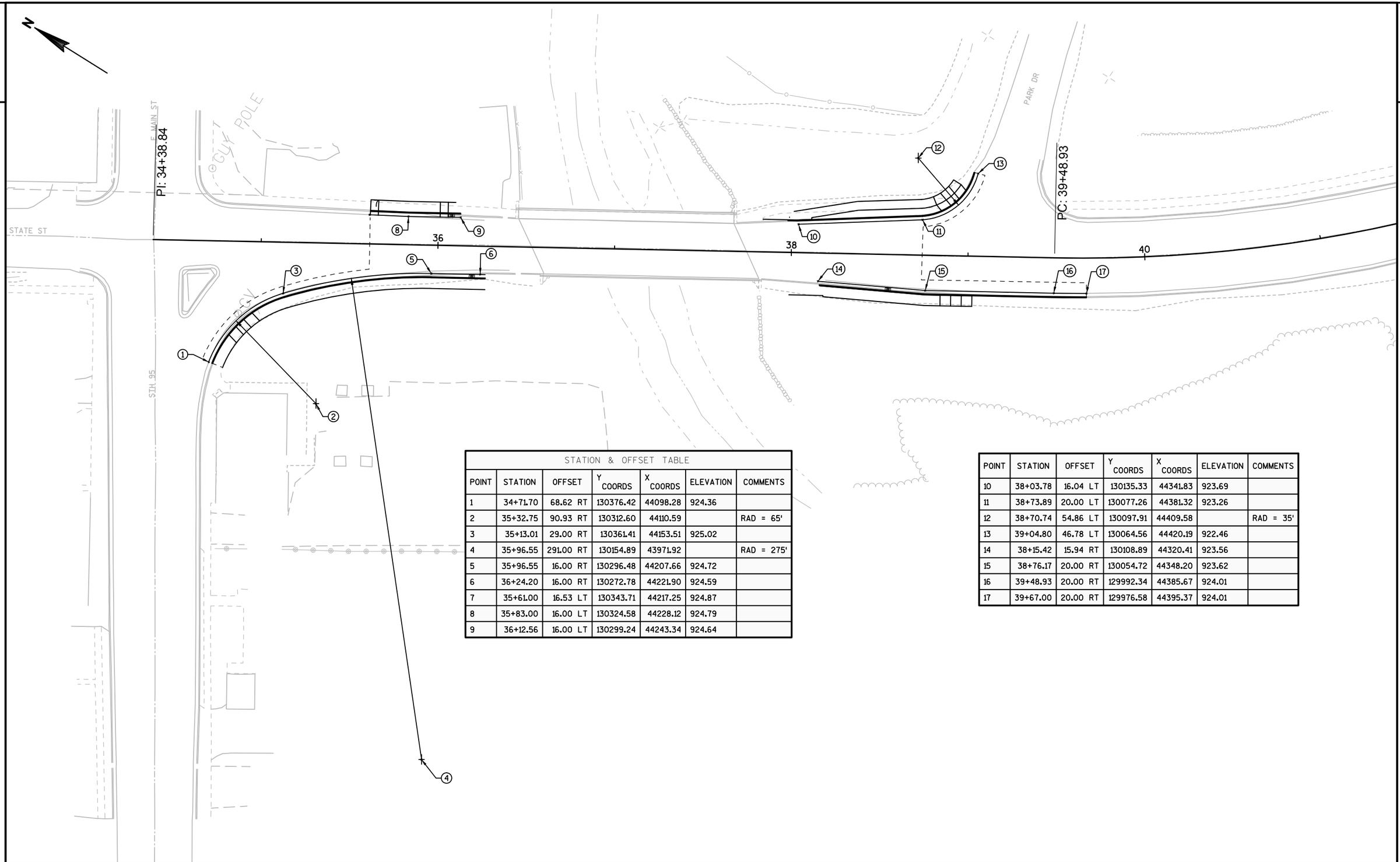


SECTION A-A



COMMERICAL ENTRANCE (HALF SECTION)

2



STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	COMMENTS
1	34+71.70	68.62 RT	130376.42	44098.28	924.36	
2	35+32.75	90.93 RT	130312.60	44110.59		RAD = 65'
3	35+13.01	29.00 RT	130361.41	44153.51	925.02	
4	35+96.55	291.00 RT	130154.89	43971.92		RAD = 275'
5	35+96.55	16.00 RT	130296.48	44207.66	924.72	
6	36+24.20	16.00 RT	130272.78	44221.90	924.59	
7	35+61.00	16.53 LT	130343.71	44217.25	924.87	
8	35+83.00	16.00 LT	130324.58	44228.12	924.79	
9	36+12.56	16.00 LT	130299.24	44243.34	924.64	

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	COMMENTS
10	38+03.78	16.04 LT	130135.33	44341.83	923.69	
11	38+73.89	20.00 LT	130077.26	44381.32	923.26	
12	38+70.74	54.86 LT	130097.91	44409.58		RAD = 35'
13	39+04.80	46.78 LT	130064.56	44420.19	922.46	
14	38+15.42	15.94 RT	130108.89	44320.41	923.56	
15	38+76.17	20.00 RT	130054.72	44348.20	923.62	
16	39+48.93	20.00 RT	129992.34	44385.67	924.01	
17	39+67.00	20.00 RT	129976.58	44395.37	924.01	

STH 95 TRANSITION TABLE		
SLOPE	STATION	SLOPE
-0.02	38+55.97	-0.02
-0.02	38+66.38	-0.015
-0.02	38+76.79	-0.01
-0.02	38+87.19	-0.005
-0.02	38+97.60	0
-0.02	39+08.00	0.005
-0.02	39+18.41	0.01
-0.02	39+28.81	0.015
-0.02	39+39.22	0.02
-0.025	39+49.62	0.025
-0.03	39+60.03	0.03
-0.035	39+70.43	0.035
-0.037	39+74.60	0.037
-0.037	51+13.36	0.037
-0.035	51+17.53	0.035
-0.03	51+27.93	0.03
-0.025	51+38.34	0.025
-0.02	51+48.74	0.02
-0.02	51+59.15	0.015
-0.02	51+69.55	0.01
-0.02	51+79.96	0.005
-0.02	51+90.36	0
-0.02	52+00.77	-0.005
-0.02	52+11.17	-0.01
-0.02	52+21.58	-0.015
-0.02	52+31.99	-0.02
SLOPE	STATION	SLOPE

2

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	EROSION CONTROL PLAN - STAGE 1	SHEET 11	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC

PLOT DATE : 8/1/2017 12:39 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

PI: 34+38.84

STH 95

35+00

36+00

37+00

38+00

39+00

PC: 39+48.93

STH 95

40+00

925

920

915

910

916

SEED MIX NO 40

SEED MIX NO 60

SEED MIX NO 60

LEGEND

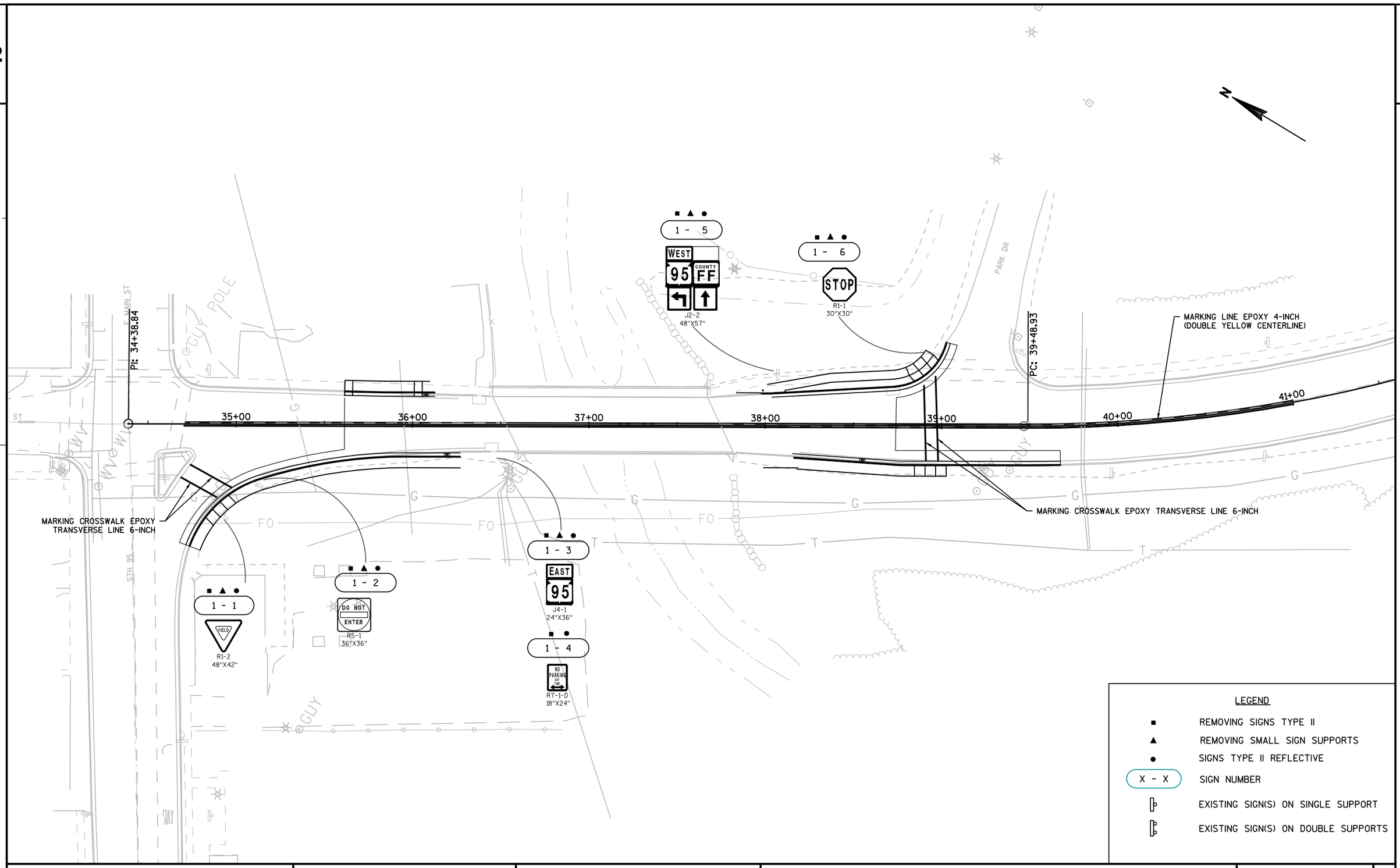
######	EROSION MAT URBAN CLASS I, TYPE B
	SILT FENCE
	TURBIDITY BARRIER
	INLET PROTECTION
	TEMPORARY DITCH CHECK
	SURFACE WATER FLOW
	RIPRAP HEAVY

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	EROSION CONTROL PLAN - STH 95	SHEET 12 E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\022002_EC.DWG
LAYOUT NAME - 022002_EC

PLOT DATE : 8/1/2017 12:39 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 13	E

FILE NAME : F:\DRAWINGS\2012-134\0004\75200300\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 023201-PS

PLOT DATE : 9/5/2017 3:18 PM PLOT BY : MATT GUNDRY PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

END ROAD WORK
G20-2A
48"X24"

SPEED LIMIT 30
R2-1
24"X30"

ROAD WORK AHEAD
W20-1-A

ROAD WORK AHEAD
W20-1-A

N STATE ST

28 30 32 STH 95 34

E MAIN ST

500'

100' MIN

MATCHLINE 35+00

ROAD WORK AHEAD
W20-1-A

ROAD WORK 500 FT
W20-1-D

SPEED LIMIT 25
R2-1
24"X30"

** MAX. XX WIDTH
W12-52
48"X48"

TO REMAIN THROUGH STAGE 3

36

** MAX. XX WIDTH
W12-52
48"X48"

TO BE PLACED AT USH 53 INTERSECTION OR AS DIRECTED BY ENGINEER.

14 MILES AHEAD
W057-52
48"X36"

** MAX. XX WIDTH
W12-52
48"X48"

TO BE PLACED AT CTH G INTERSECTION OR AS DIRECTED BY ENGINEER.

4 MILES AHEAD
W057-52
48"X36"

N

** STAGE - XX
ST 1 - 10'
ST 2 - 13'
ST 3 - 11'

ROAD WORK AHEAD
W20-1-A

ROAD CLOSED
R11-2
48"X30"

ROAD CLOSED
R11-2
48"X30"

SPEED LIMIT 30
COVER WITH
SPEED LIMIT 25
R2-1
24"X30"

ROAD CLOSED AHEAD
W20-3-A

ROAD WORK 250 FT
W20-1 (MOD)

ROAD WORK AHEAD
W20-1-A

** MAX. XX WIDTH
W12-52
48"X48"

ROAD WORK 500 FT
W20-1-D

500'

** MAX. XX WIDTH
W12-52
48"X48"

TO BE PLACED AT IH 94 EB RAMPS OR AS DIRECTED BY ENGINEER.

1/2 MILES AHEAD
W057-52
48"X36"

ROAD WORK AHEAD
W20-1-A

S HOFFMAN ST

S CTH A
S STATE ST

E MAIN ST

MATCHLINE 35+00

36 38 40 42 44

34

STH 95

SPEED LIMIT 30
TO REMAIN

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1-A

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

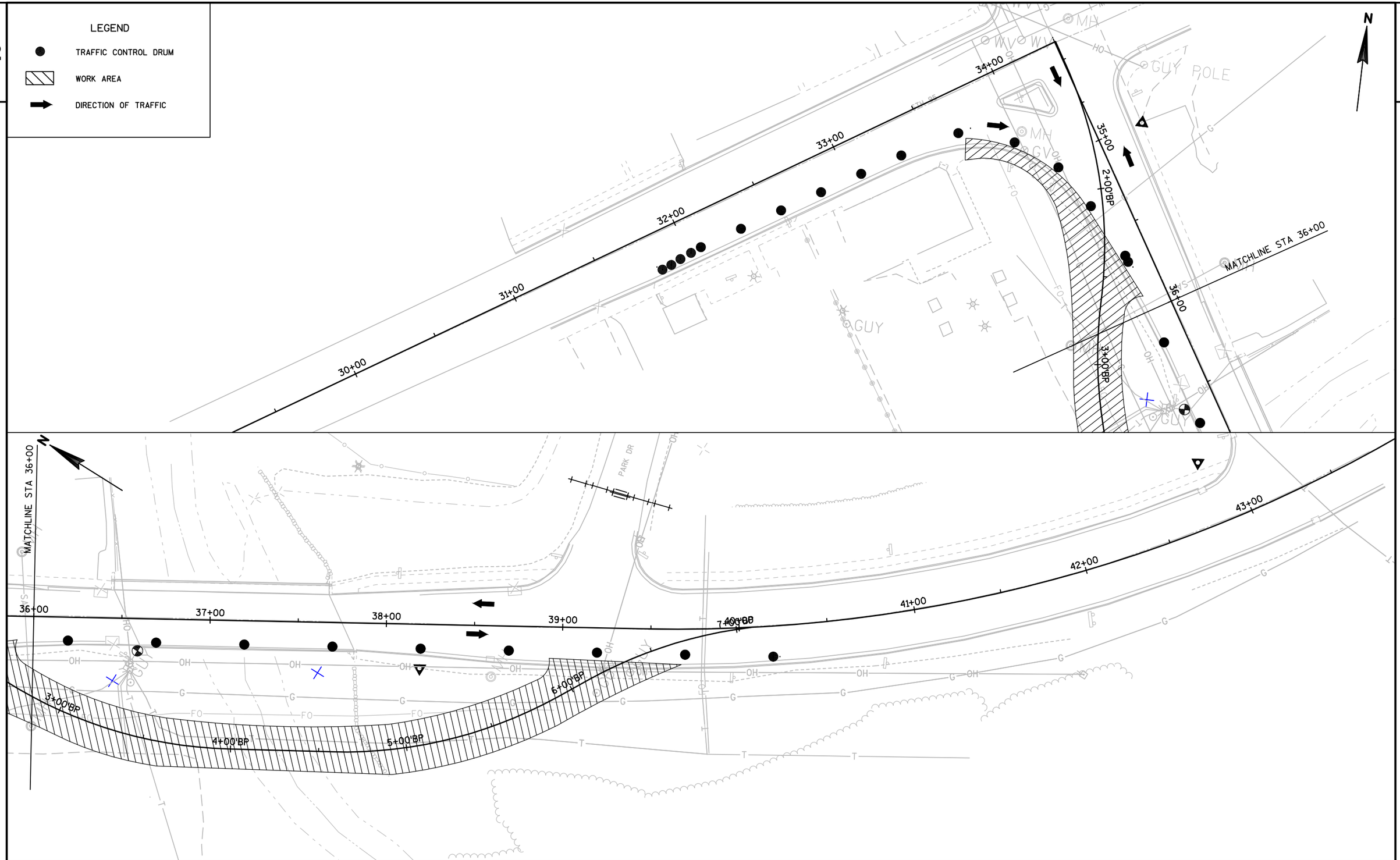
PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	TRAFFIC CONTROL PLAN - PROJECT	SHEET 14	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\025001_TC.DWG
LAYOUT NAME - 025001_TC

PLOT DATE : 8/1/2017 12:41 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

- TRAFFIC CONTROL DRUM
- WORK AREA
- DIRECTION OF TRAFFIC



PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	TRAFFIC CONTROL PLAN - STAGE 1	SHEET	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\025002_TC.DWG
LAYOUT NAME - 025002_TC

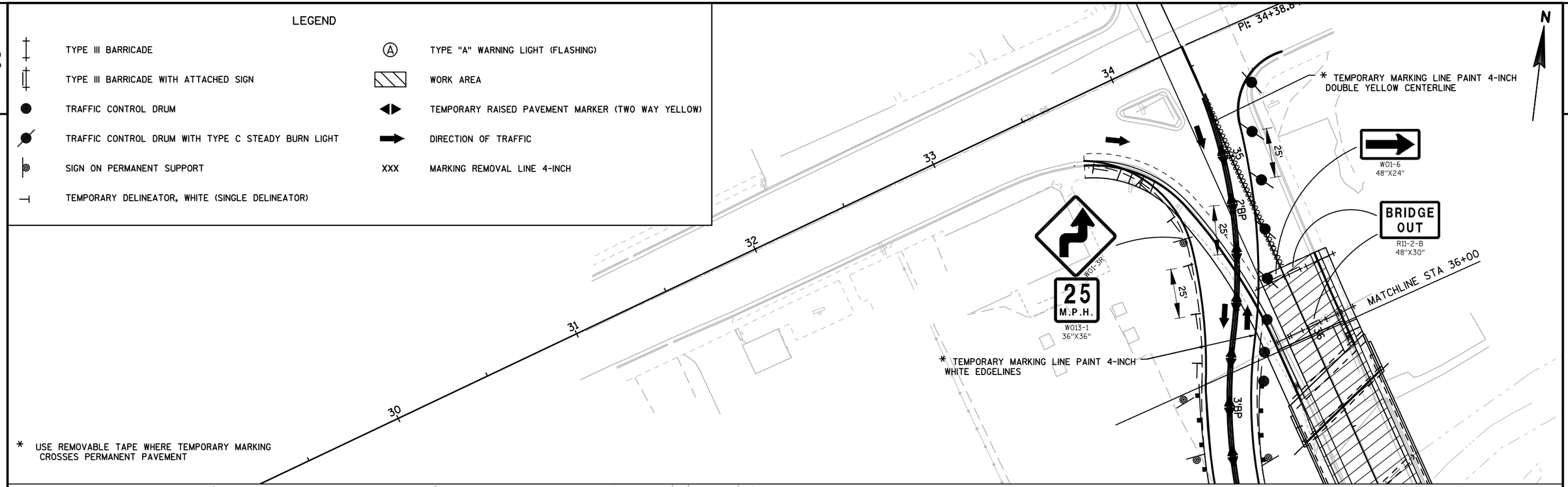
PLOT DATE : 8/1/2017 12:42 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

	TYPE III BARRICADE	Ⓐ	TYPE "A" WARNING LIGHT (FLASHING)
	TYPE III BARRICADE WITH ATTACHED SIGN		WORK AREA
	TRAFFIC CONTROL DRUM		TEMPORARY RAISED PAVEMENT MARKER (TWO WAY YELLOW)
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		DIRECTION OF TRAFFIC
	SIGN ON PERMANENT SUPPORT	XXX	MARKING REMOVAL LINE 4-INCH
	TEMPORARY DELINEATOR, WHITE (SINGLE DELINEATOR)		



PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	TRAFFIC CONTROL PLAN - STAGE 2	SHEET 16	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\025003_TC.DWG
LAYOUT NAME - 025003_TC
PLOT DATE : 8/1/2017 12:43 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

LEGEND

- TRAFFIC CONTROL DRUM
- WORK AREA
- DIRECTION OF TRAFFIC

N

MATCHLINE STA 36+00

PAVED IN STAGE 2

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH DOUBLE YELLOW CENTERLINE

50'

PARK DR

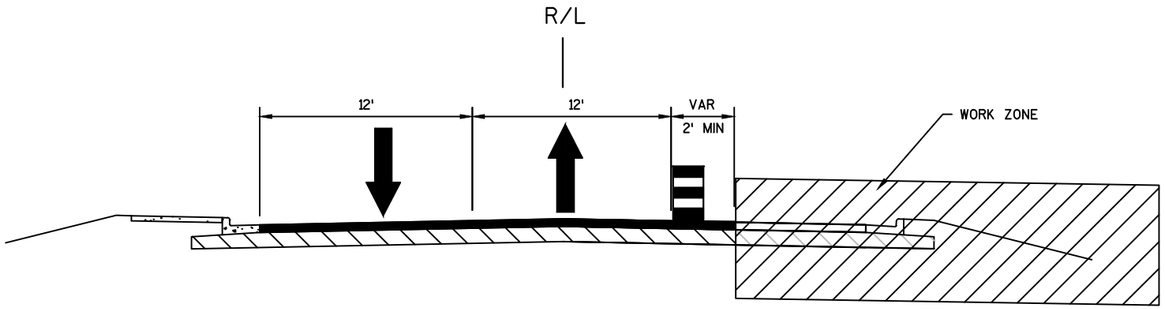
PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	TRAFFIC CONTROL PLAN - STAGE 3	SHEET 17	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\025004_TC.DWG
LAYOUT NAME - 025004_TC

PLOT DATE : 8/1/2017 12:44 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : **********

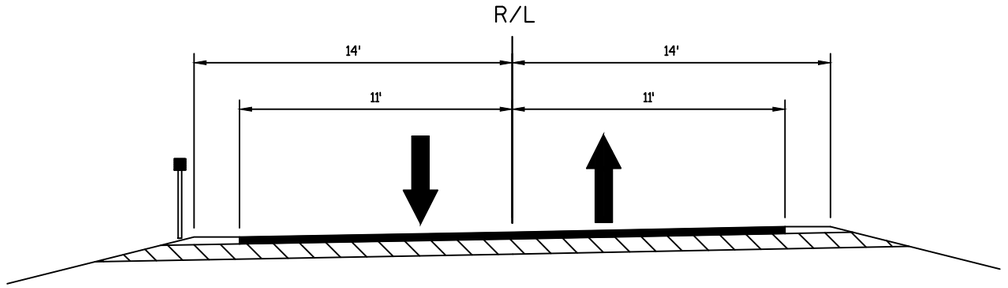
WISDOT/CADDS SHEET 42

2



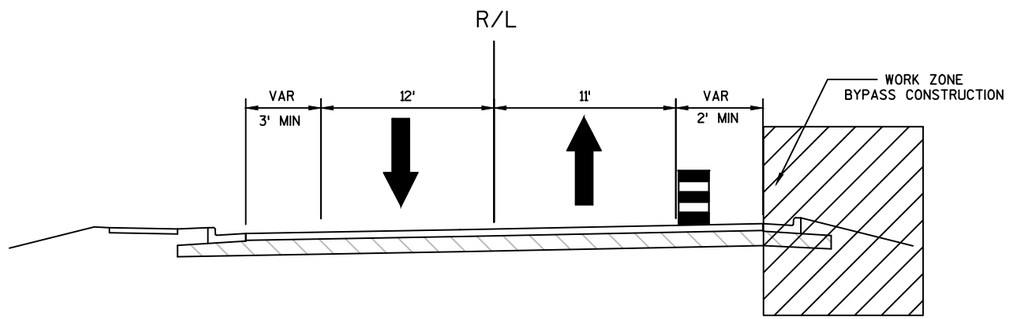
STAGE 3

STH 95



STAGE 2

BYPASS

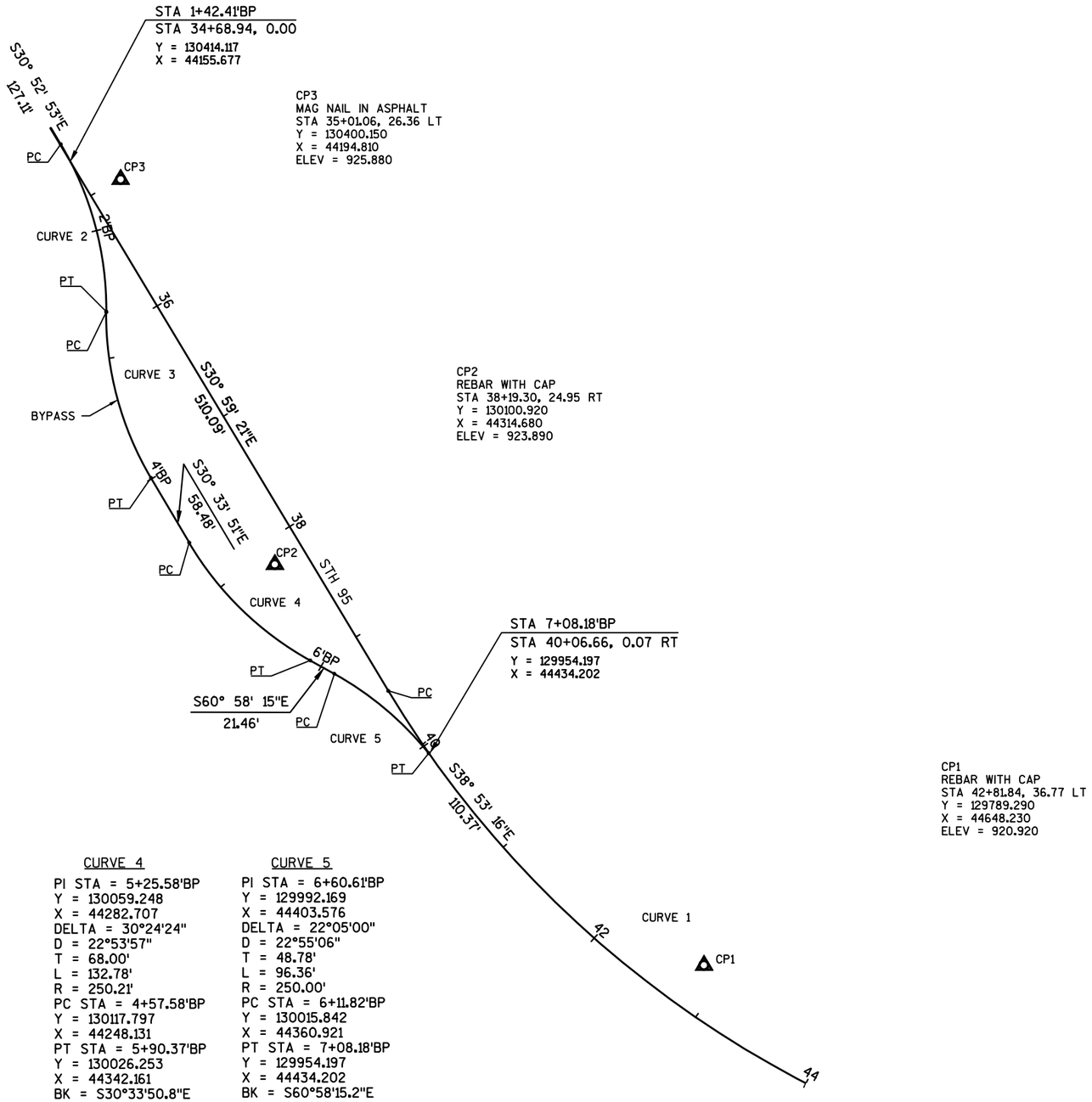


STAGE 1

STH 95

NOTE: UPPER LAYER OF ASPHALTIC SURFACE SPECIAL TO BE PLACED UNDER THE CONDITIONS OF SDD 15C12-04
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	PLAN: TRAFFIC CONTROL SECTIONS	SHEET 18	E



CURVE 1
PI STA = 46+77.01
Y = 129378.486
X = 44777.679
DELTA = 83°18'25"
D = 7°00'00"
T = 728.08'
L = 1190.10'
R = 818.51'
PC STA = 39+48.93
Y = 130002.640
X = 44402.811
PT STA = 51+39.03
Y = 129678.055
X = 45441.270
BK = S30°59'20.8"E
AH = N65°42'13.9"E
SE = 3.7%

CURVE 2
PI STA = 1+97.09'BP
Y = 130367.419
X = 44184.150
DELTA = 31°16'42"
D = 22°55'06"
T = 69.99'
L = 136.48'
R = 250.00'
PC STA = 1+27.11'BP
Y = 130427.483
X = 44148.229
PT STA = 2+63.58'BP
Y = 130297.436
X = 44183.666
BK = S30°52'53.4"E
AH = S00°23'48.5"W
SE = NC

CURVE 3
PI STA = 3+33.25'BP
Y = 130227.775
X = 44183.183
DELTA = 30°57'39"
D = 22°55'06"
T = 69.24'
L = 135.09'
R = 250.00'
PC STA = 2+64.01'BP
Y = 130297.013
X = 44183.663
PT STA = 3+99.10'BP
Y = 130168.156
X = 44218.392
BK = S00°23'48.5"W
AH = S30°33'50.8"E
SE = NC

CURVE 4
PI STA = 5+25.58'BP
Y = 130059.248
X = 44282.707
DELTA = 30°24'24"
D = 22°53'57"
T = 68.00'
L = 132.78'
R = 250.21'
PC STA = 4+57.58'BP
Y = 130117.797
X = 44248.131
PT STA = 5+90.37'BP
Y = 130026.253
X = 44342.161
BK = S30°33'50.8"E
AH = S60°58'15.2"E
SE = NC

CURVE 5
PI STA = 6+60.61'BP
Y = 129992.169
X = 44403.576
DELTA = 22°05'00"
D = 22°55'06"
T = 48.78'
L = 96.36'
R = 250.00'
PC STA = 6+11.82'BP
Y = 130015.842
X = 44360.921
PT STA = 7+08.18'BP
Y = 129954.197
X = 44434.202
BK = S60°58'15.2"E
AH = S38°53'15.7"E
SE = NC

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	ALIGNMENT CONTROL	SHEET 19	E

7520-03-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0008	203.0210.S	Abatement of Asbestos Containing Material (structure) 01. B-27-0396	LS	1.000	1.000
0010	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 37+14.00	LS	1.000	1.000
0012	204.0150	Removing Curb & Gutter	LF	655.000	655.000
0014	204.0155	Removing Concrete Sidewalk	SY	150.000	150.000
0016	204.0220	Removing Inlets	EACH	3.000	3.000
0018	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	35.000	35.000
0020	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	22.000	22.000
0022	205.0100	Excavation Common	CY	2,140.000	2,140.000
0024	206.1000	Excavation for Structures Bridges (structure) 01. B-27-160	LS	1.000	1.000
0026	208.0100	Borrow	CY	1,850.000	1,850.000
0028	210.1100	Backfill Structure Type A	CY	370.000	370.000
0030	213.0100	Finishing Roadway (project) 01. 7520-03-70	EACH	1.000	1.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	45.000	45.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,327.000	1,327.000
0036	415.0070	Concrete Pavement 7-Inch	SY	37.000	37.000
0038	415.0410	Concrete Pavement Approach Slab	SY	110.000	110.000
0040	416.0160	Concrete Driveway 6-Inch	SY	30.000	30.000
0042	455.0605	Tack Coat	GAL	110.000	110.000
0044	465.0105	Asphaltic Surface	TON	215.000	215.000
0046	465.0125	Asphaltic Surface Temporary	TON	145.000	145.000
0048	502.0100	Concrete Masonry Bridges	CY	1,000.000	1,000.000
0050	502.3200	Protective Surface Treatment	SY	1,075.000	1,075.000
0052	502.3210	Pigmented Surface Sealer	SY	165.000	165.000
0054	505.0400	Bar Steel Reinforcement HS Structures	LB	7,260.000	7,260.000
0056	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	134,725.000	134,725.000
0058	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	1,635.000	1,635.000
0060	513.7016	Railing Steel Type C3 (structure) 01. B-27-160	LF	383.000	383.000
0062	516.0500	Rubberized Membrane Waterproofing	SY	30.000	30.000
0064	522.2338	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 38x60-Inch	LF	116.000	116.000
0066	522.2638	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 38x60-Inch	EACH	4.000	4.000
0068	526.0100	Temporary Structure (station) 01. 37+14.00	LS	1.000	1.000
0070	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	4,170.000	4,170.000
0072	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	490.000	490.000

7520-03-70

Line	Item	Item Description	Unit	Total	Qty
0074	602.0405	Concrete Sidewalk 4-Inch	SF	2,660.000	2,660.000
0076	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	24.000	24.000
0078	606.0300	Riprap Heavy	CY	645.000	645.000
0080	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	45.000	45.000
0082	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	56.000	56.000
0084	611.0420	Reconstructing Manholes	EACH	1.000	1.000
0086	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0088	611.0624	Inlet Covers Type H	EACH	3.000	3.000
0090	611.3230	Inlets 2x3-FT	EACH	3.000	3.000
0092	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0094	611.8120.S	Cover Plates Temporary	EACH	2.000	2.000
0096	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0098	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0100	614.1100	MGS Guardrail Temporary Thrie Beam Transition	LF	158.000	158.000
0102	614.1200	MGS Guardrail Temporary Terminal EAT	EACH	4.000	4.000
0104	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7520-03-70	EACH	1.000	1.000
0106	619.1000	Mobilization	EACH	1.000	1.000
0108	624.0100	Water	MGAL	16.000	16.000
0110	625.0500	Salvaged Topsoil	SY	2,100.000	2,100.000
0112	627.0200	Mulching	SY	2,100.000	2,100.000
0114	628.1504	Silt Fence	LF	1,050.000	1,050.000
0116	628.1520	Silt Fence Maintenance	LF	1,050.000	1,050.000
0118	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0120	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0122	628.2008	Erosion Mat Urban Class I Type B	SY	4,550.000	4,550.000
0124	628.6005	Turbidity Barriers	SY	1,000.000	1,000.000
0126	628.7005	Inlet Protection Type A	EACH	4.000	4.000
0128	628.7015	Inlet Protection Type C	EACH	4.000	4.000
0130	628.7504	Temporary Ditch Checks	LF	180.000	180.000
0132	628.7555	Culvert Pipe Checks	EACH	10.000	10.000
0134	629.0210	Fertilizer Type B	CWT	1.000	1.000
0136	630.0140	Seeding Mixture No. 40	LB	10.000	10.000
0138	630.0160	Seeding Mixture No. 60	LB	30.000	30.000
0140	630.0200	Seeding Temporary	LB	35.000	35.000
0142	633.1100	Delineators Temporary	EACH	16.000	16.000
0144	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	4.000	4.000
0146	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	2.000	2.000

7520-03-70

Line	Item	Item Description	Unit	Total	Qty
0148	637.2210	Signs Type II Reflective H	SF	49.000	49.000
0150	638.2602	Removing Signs Type II	EACH	11.000	11.000
0152	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0154	642.5001	Field Office Type B	EACH	1.000	1.000
0156	643.0300	Traffic Control Drums	DAY	1,950.000	1,950.000
0158	643.0420	Traffic Control Barricades Type III	DAY	1,700.000	1,700.000
0160	643.0705	Traffic Control Warning Lights Type A	DAY	2,040.000	2,040.000
0162	643.0715	Traffic Control Warning Lights Type C	DAY	720.000	720.000
0164	643.0900	Traffic Control Signs	DAY	4,500.000	4,500.000
0166	643.5000	Traffic Control	EACH	1.000	1.000
0168	645.0111	Geotextile Type DF Schedule A	SY	120.000	120.000
0170	645.0120	Geotextile Type HR	SY	1,060.000	1,060.000
0172	646.1020	Marking Line Epoxy 4-Inch	LF	1,360.000	1,360.000
0174	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	135.000	135.000
0176	646.9000	Marking Removal Line 4-Inch	LF	740.000	740.000
0178	649.0105	Temporary Marking Line Paint 4-Inch	LF	2,830.000	2,830.000
0180	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	2,350.000	2,350.000
0182	649.0760	Temporary Marking Raised Pavement Marker Type I	EACH	50.000	50.000
0184	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0186	650.4500	Construction Staking Subgrade	LF	747.000	747.000
0188	650.5000	Construction Staking Base	LF	747.000	747.000
0190	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	487.000	487.000
0192	650.6500	Construction Staking Structure Layout (structure) 01. B-27-160	LS	1.000	1.000
0194	650.9910	Construction Staking Supplemental Control (project) 01. 7520-03-70	LS	1.000	1.000
0196	650.9920	Construction Staking Slope Stakes	LF	747.000	747.000
0198	690.0150	Sawing Asphalt	LF	570.000	570.000
0200	690.0250	Sawing Concrete	LF	20.000	20.000
0202	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0204	715.0502	Incentive Strength Concrete Structures	DOL	6,000.000	6,000.000
0206	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0208	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0210	SPV.0090	Special 01. Removing Existing Timber Piling	LF	240.000	240.000

*ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

CLEARING AND GRUBBING			
		201.0105 CLEARING	201.0205 GRUBBING
STATION TO STATION	LOCATION	STA	STA
36+45 TO 37+70	LT	2	2
ITEM TOTAL		2	2

REMOVING SMALL PIPE CULVERTS		203.0100
STATION TO STATION	LOCATION	EACH
100+00	STH 95	2
ITEM TOTAL		2

REMOVING CURB & GUTTER			204.0150
STATION TO STATION		LOCATION	LF
34+70 TO 36+60		RT	210
35+61 TO 36+45		LT	85
37+67 TO 39+05		LT	150
37+83 TO 39+67		RT	210
ITEM TOTAL			655

REMOVING CONCRETE SIDEWALK			204.0155
STATION TO STATION		LOCATION	SY
34+70 TO 34+98		RT	30
35+61 TO 36+45		LT	50
37+67 TO 38+95		LT	70
ITEM TOTAL			150

REMOVING INLETS		204.0220
STATION TO STATION	LOCATION	EACH
36+37	LT	1
36+45	RT	1
38+59	RT	1
ITEM TOTAL		3

REMOVING STORM SEWER 12-INCH		204.0245.01
STATION TO STATION	LOCATION	EACH
36+42	MAINLINE	28
38+59	RT	7
ITEM TOTAL		35

REMOVING STORM SEWER 15-INCH		204.0245.02
STATION TO STATION	LOCATION	EACH
36+45	RT	22
ITEM TOTAL		22

STH 95 EARTHWORK											
DIVISION	FROM/TO STATION	LOCATION	EXCAVATION COMMON (ITEM 205.0100) CUT (2)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	BORROW (ITEM *208.0100)	COMMENT:
BYPASS											
1	1+12 BP - 3+76 BP	BYPASS	54	8	46	741	926	-880		880	
2	4+88 BP - 6+58 BP	BYPASS	55	12	43	803	1004	-961		970	
MAINLINE											
1	34+70 - 36+86	MAINLINE	943	42	901	70	88	814	814		
2	37+82 - 39+67	MAINLINE	1085	62	1023	44	55	968	968		
GRAND TOTAL			2137	124	2013	1658	2073	-59	1782	1850	
TOTAL EXCAVATION COMMON			2140								

1) Excavation Common is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unusable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusable Pavement Material
6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 205.0500
7) Rock Excavation item number 205.0200
8) Reduced Marsh in Fill - Excavated Marsh material is usuable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = 0.6
9) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item number 208.11
11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.11
12) Expanded Rock - Factor = 1.1.
13) Expanded Fill. Factor = 1.25

Depending on selections:

$$\text{Expanded Fill} = (\text{Unexpanded Fill} - \text{Rock}^{*}\ \text{Rock Factor} - \text{Reduced Marsh} - \text{Reduced EBS}) * \text{Fill Factor}$$

$$\text{Expanded Fill} = (\text{Unexpanded Fill} - \text{Rock}^{*}\ \text{Rock Factor} - \text{Reduced EBS}) * \text{Fill Factor}$$

$$\text{Expanded Fill} = (\text{Unexpanded Fill} - \text{Rock}^{*}\ \text{Rock Factor} - \text{Reduced Marsh}) * \text{Fill Factor}$$

$$\text{Expanded Fill} = (\text{Unexpanded Fill} - \text{Rock}^{*}\ \text{Rock Factor}) * \text{Fill Factor}$$

14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

FINISHING ROADWAY (7520-03-70)			213.0100.01
STATION TO STATION		LOCATION	EACH
34+70 TO 39+67		MAINLINE	1
ITEM TOTAL			1

BASE AGGREGATE DENSE 3/4-INCH			305.0110
STATION TO STATION		LOCATION	TON
1+54 BP TO 3+76 BP		BYPASS - WEST	25
4+88 BP TO 6+63 BP		BYPASS - EAST	18
99+90 TO 100+10		CULVERT REPLACEMENT	2
ITEM TOTAL			45

BASE AGGREGATE DENSE 1 1/4-INCH			305.0120
STATION TO STATION		LOCATION	TON
2+24 BP TO 3+76 BP		BYPASS - WEST	173
4+88 BP TO 6+47 BP		BYPASS - EAST	182
34+70 TO 36+46		MAINLINE - WEST	270
37+82 TO 39+67		MAINLINE - EAST	345
99+90 TO 100+10		CULVERT REPLACEMENT	45
ITEM TOTAL			1015

*ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

CONCRETE PAVEMENT 7-INCH				415.0070
STATION	TO	STATION	LOCATION	SY
19+45	TO	19+60	SHOULDERS WEST APP	17
50+34	TO	50+49	SHOULDERS EAST APP	20
ITEM TOTAL				37

CONCRETE PAVEMENT APPROACH SLAB				415.0410
STATION	TO	STATION	LOCATION	SY
35+99	TO	36+18	WEST APPROACH	55
38+10	TO	38+29	EAST APROACH	55
ITEM TOTAL				110

CONCRETE DRIVEWAY 6-INCH				416.0160
STATION	TO	STATION	LOCATION	SY
35+90			CE LT	30
ITEM TOTAL				30

TACK COAT				455.0605
STATION	TO	STATION	LOCATION	GAL
1+54 BP	TO	3+76 BP	BYPASS - WEST	25
4+88 BP	TO	6+63 BP	BYPASS - EAST	20
34+70	TO	36+19	MAINLINE - WEST	20
38+10	TO	39+67	MAINLINE - EAST	35
99+90	TO	100+10	CULVERT REPLACEMENTS	10
ITEM TOTAL				110

ASPHALTIC SURFACE				465.0105
STATION	TO	STATION	LOCATION	TON
34+70	TO	36+19	MAINLINE - WEST	70
38+10	TO	39+67	MAINLINE - EAST	120
99+90	TO	100+10	CULVERT REPLACEMENTS	25
			KALS PARKING LOT	65
ITEM TOTAL				215

ASPHALTIC SURFACE TEMPORARY				465.0125
STATION	TO	STATION	LOCATION	TON
1+54 BP	TO	3+60 BP	BYPASS - WEST	80
4+90 BP	TO	6+63 BP	BYPASS - EAST	65
ITEM TOTAL				145

CULVERT PIPE AND APRON ENDWALLS			
STATION	LOCATION	522.2338 CPRC HORIZONAL ELLIPTICAL CLASS HE-III 38x60-INCH LF	522.2638 APRON ENDWALLS FOR CPRC HORIZONAL ELLIPTICAL CLASS HE-III 38x60-INCH EA
100+00	STH 95	116	4
ITEM TOTAL		116	4

CONCRETE CURB AND GUTTER, 30-INCH, TYPE D				601.0411
STATION	TO	STATION	LOCATION	LF
34+70	TO	36+25	RT	171
35+61	TO	36+12	LT	52
38+03	TO	39+05	LT	114
38+16	TO	39+67	RT	153
ITEM TOTAL				490

CONCRETE SIDEWALK, 4-INCH				602.0405
STATION	TO	STATION	LOCATION	SF
34+70	TO	36+25	RT	1028
35+61	TO	36+12	LT	307
38+03	TO	39+05	LT	565
38+16	TO	39+67	RT	760
ITEM TOTAL				2660

CURB RAMP DETECTABLE WARNING FIELD YELLOW			602.0505
STATION	TO	STATION	LOCATION	SF
34+90			RT	8
38+91			LT & RT	16
ITEM TOTAL				24

COVER PLATES TEMPORARY			611.8120.S
STATION	TO	STATION	LOCATION	EACH
36+00.0			SAN MH RT	1
38+59.0			SS MH RT	1
ITEM TOTAL				2

RIPRAP HEAVY			606.0300
STATION	TO	STATION	LOCATION	CY
100+00			CULVERT RT	20
ITEM TOTAL				20

STORM SEWER QUANTITIES

STRUCTURE *	STATION	OFFSET *	TOP CASTING ELEVATION *	D BOX DEPTH LF	608.0312 SSPRC CL III 12-INCH LF	608.0315 SSPRC CL III 15-INCH LF	611.0420 RECONSTRUCTING MANHOLES EACH	611.0430 RECONSTRUCTING INLETS EACH	611.0624 INLET COVERS TYPE H EACH	611.3230 INLETS 2x3-FT EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	% SLOPE	DRAINS FROM STRUCTURE	DRAINS TO STRUCTURE	STRUCTURE EL	DISCH EL	COMMENTS
1.1	36+07.5	16' LT	924.64	3.8	36	--	--	--	1	1	--	2%	--	1.2	919.42	920.00	
1.2	36+19.5	16' RT	924.61	4.6	--	56	--	--	1	1	--	2.1%	1.1	DISCH	918.58	919.18	
2.1	38+74	20' LT	923.27	EXIST	--	--	--	1	--	1	--	0.2%	--	2.3	EXIST	914.40	EXISTING INLET
2.2	38+55	18.6' RT	923.39	3.0	9	--	--	--	1	--	--	2.5%	--	2.3	918.97	919.64	
2.3	38+59	29' RT	923.60	EXIST	--	--	1	--	--	--	1	0.8%	2.2 / 2.3	DISCH	EXIST	914.00	EXISTING MH
ITEM TOTAL					45	56	1	1	3	3	1						

* MEASURED AT FLAGLINE

*ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

GUARDRAIL SUMMARY					
STATION	TO	STATION	LOCATION	614.1100 MGS THRIE BEAM TEMPORARY TRANSITION LF	614.1200 MGS GUARDRAIL TEMPORARY TERMINAL EAT EACH
2+89'BP	TO	3+60'BP	LT	39.4	1
2+89'BP	TO	3+60'BP	RT	39.4	1
4+90'BP	TO	5+61'BP	LT	39.4	1
4+90'BP	TO	5+61'BP	RT	39.4	1
ITEM TOTAL				158	4

MOBILIZATION				619.1000	
STATION	TO	STATION	LOCATION	EACH	CATEGORY
34+70	TO	39+67	MAINLINE	0.2	010
37+00			B-27-0160	0.8	020
ITEM TOTAL				1	

WATER				624.0100
STATION	TO	STATION	LOCATION	MGAL
34+70	TO	39+67	MAINLINE	16
ITEM TOTAL				16

SILT FENCE & SILT FENCE MAINTENANCE					
STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
BYPASS					
1+75 BP	TO	3+60 BP	BYPASS, RT	220	220.0
4+90 BP	TO	6+65 BP	BYPASS, RT	200	200.0
MAINLINE					
34+70	TO	36+86	RT	175	175.0
37+80	TO	39+67	LT & RT	300	300.0
CULVERT REPLACEMENTS					
99+90	TO	100+10	LT & RT	50	50.0
UNDISTRIBUTED				105	105.0
ITEM TOTAL				1050	1050

MOBILIZATIONS EROSION CONTROL					
STATION	TO	STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
9+46	TO	17+53	PROJECT	3	2
ITEM TOTAL				3	2

EROSION MAT URBAN, CLASS I TYPE B				628.2008
STATION	TO	STATION	LOCATION	SY
BYPASS				
1+75 BP	TO	3+60 BP	BYPASS	800
4+90 BP	TO	6+65 BP	BYPASS	1300
MAINLINE				
34+72	TO	36+47	RT	610
37+98	TO	39+67	RT	1090
CULVERT REPLACEMENTS				
99+90	TO	100+10	LT & RT	50
UNDISTRIBUTED				700
ITEM TOTAL				4550

TURBIDITY BARRIER			628.6005
STATION	TO	STATION	LOCATION	SY
3+60 BP			TEMP STRUCTURE - WEST	200
4+90 BP			TEMP STRUCTURE - EAST	200
36+40			WEST ABUT	200
37+80			EAST ABUT	200
UNDISTRIBUTED				200
ITEM TOTAL				1000

INLET PROTECTION TYPE A				628.7005
STATION	TO	STATION	LOCATION	EACH
STAGES 1 & 2				
36+37			LT	1
36+45			LT	1
38+72			LT & RT	2
ITEM TOTAL				4

INLET PROTECTION TYPE C				628.7015
STATION	TO	STATION	LOCATION	EACH
36+07.5			RT	1
36+07.5			RT	1
38+59			LT & RT	2
ITEM TOTAL				4

TEMPORARY DITCH CHECKS				628.7504
STATION	TO	STATION	LOCATION	LF
1+75 BP	TO	3+60 BP	BYPASS, LT	90
4+90 BP	TO	6+65 BP	BYPASS, LT	45
UNDISTRIBUTED				45
ITEM TOTAL				180

CULVERT PIPE CHECKS				628.7555
STATION	TO	STATION	LOCATION	EACH
100+00			LT	10
ITEM TOTAL				10

FIELD OFFICE TYPE B				642.5001
STATION	TO	STATION	LOCATION	EACH
34+70	TO	39+67	PROJECT	1
ITEM TOTAL				1

GEOTEXTILE TYPE HR				645.0120
STATION	TO	STATION	LOCATION	SY
100+00			LT	35
ITEM TOTAL				35

SALVAGED TOPSOIL, MULCHING, FERTILIZING, & SEEDING									
STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO 40 LB	630.0160 SEEDING MIXTURE NO 60 LB	630.0200 SEEDING TEMPORARY LB
1+54 BP	TO	3+60 BP	BYPASS	--	--	--	--	--	14
4+90 BP	TO	6+63 BP	BYPASS	--	--	--	--	--	16
34+70	TO	36+39	RT	730	730	0.5	5	10	--
37+90	TO	39+67	LT & RT	1213	1213	0.8	4	18	--
UNDISTRIBUTED				157	157	0.1	1	2	5
ITEM TOTAL				2100	2100	1	10	30	35

*ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

PERMANENT SIGNING									
SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIGN DESCRIPTION	637.2210 SIGNS, TYPE II, REFLECTIVE H (S.F.)	634.0616 WOOD POSTS, 4X6-INCH X 16 FT (EACH)	634.0618 WOOD POSTS, 4X6-INCH X 18 FT (EACH)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
1 - 1	34+90	RT	R1-2	YIELD	7.00	1	--	1	1
1 - 2	35+20	RT	R5-1	DO NOT ENTER	9.00	1	--	1	1
1 - 3	36+45	RT	J4-1	ROUTE ASSEMBLY	6.00	--	1	2	1
1 - 4	36+45	RT	R7-1	NO PARKING	3.00	1	--	1	--
1 - 5	37+93	LT	J2-2	ROUTE ASSEMBLY	19.00	--	1	5	1
1 - 6	38+78	LT	R1-1	STOP	5.18	1	--	1	1
GRAND TOTAL					49	4	2	11	5

TRAFFIC CONTROL ITEMS								
	LOCATION	643.5000 TRAFFIC CONTROL EACH	633.1100 DELINEATORS TEMPORARY EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS DAY
PROJECT	SEE TRAFFIC CONTROL SHEETS	1	--	--	500	600	--	3000
STAGE 1	SEE TRAFFIC CONTROL SHEETS	--	--	550	--	--	--	--
STAGE 2	SEE TRAFFIC CONTROL SHEETS	--	16	1020	1200	1440	720	1500
STAGE 3	SEE TRAFFIC CONTROL SHEETS	--	--	380	--	--	--	--
ITEM TOTAL		1	16	1950	1700	2040	720	4500

MARKING LINE EPOXY 4-INCH 646.1020			
STATION	TO STATION	LOCATION	LF
34+70	TO 41+50	MAINLINE	1360
ITEM TOTAL			1360

MARKING REMOVAL LINE 4-INCH 646.9000			
STATION	TO STATION	LOCATION	LF
34+70	TO 35+61	STH 95 CL	185
38+74	TO 41+50	STH 95 CL	555
ITEM TOTAL			740

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH 646.7420		
STATION TO STATION	LOCATION	LF
34+90	TURN LANE	45
38+91	MAINLINE	90
ITEM TOTAL		135

TEMPORARY MARKING LINE PAINT 4-INCH 649.0105			
STATION	TO STATION	LOCATION	LF
2+24 BP	TO 6+47 BP	BYPASS	1470
34+70	TO 41+50	STH 95 - STAGE 3	1360
ITEM TOTAL			2830

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH 649.0150			
STATION	TO STATION	LOCATION	LF
1+39 BP	TO 2+24 BP	BYPASS	310
6+47 BP	TO 8+00 BP	BYPASS	680
34+70	TO 41+50	STH 95 - STAGE 3	1360
ITEM TOTAL			2350

TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I 649.0760			
STATION	TO STATION	LOCATION	EACH
1+39 BP	TO 6+47 BP	BYPASS	50
ITEM TOTAL			50

*ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

CONSTRUCTION STAKING									
STATION TO STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-27-0160) CATEGORY 020 LS	650.9910 CONSTRUCTION STAKING SUPPLIMENTAL CONTROL (7520-03-70) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	CATEGORY
34+69.8 TO 39+67	PROJECT	--	--	--	--	--	1	--	010
1+48 BP TO 6+64 BP	BYPASS	--	386	386	--	--	--	386	010
34+70 TO 39+67	MAINLINE	4	361	361	--	--	--	361	010
34+70 TO 36+25	RT	--	--	--	171	--	--	--	010
35+61 TO 36+12	LT	--	--	--	51	--	--	--	010
38+03 TO 39+05	LT	--	--	--	113	--	--	--	010
38+16 TO 39+67	RT	--	--	--	152	--	--	--	010
37+00	B-27-0160	--	--	--	--	1	--	--	020
ITEM TOTAL		4	747	747	487	1	1	747	

3

SAWING ASPHALT				690.0150
STATION TO STATION			LOCATION	LF
34+70	TO	35+61	MAINLINE	155
38+74	TO	39+67	MAINLINE	180
35+68	TO	36+15	JENSEN TOWING PARKING	85
2+77 BP	TO	3+86 BP	KALS PARKING	150
ITEM TOTAL				570

SAWING CONCRETE			690.0250
STATION TO STATION		LOCATION	LF
34+70		C&G, SIDEWALK RT	9
35+61		C&G, SIDEWALK LT	8
39+67		C&G RT	3
ITEM TOTAL			20

BENCHMARK TABLE				
POINT	STATION	OFFSET	DESCRIPTION	ELEVATION
BM 1	36+59 ±	18' RT	NAIL IN EXIST WING 2	924.770'

N

STA 35+90 LT
CONSTRUCT COMMERCIAL ENTRANCE (35')

EXIST R/W

STA 35+61 - STA 36+12 LT
51 LF CONCRETE CURB AND GUTTER 30-INCH, TYPE D
34 SY CONCRETE SIDEWALK, 4-INCH

STA 36+07.5, 16' LT
IN 2X3, TYPE H
1.1

HEAVY RIPRAP

VILLAGE OF HIXTON

SI

CP3

PI: 34+38.84

S30° 59' 21"E
510.09'

BEGIN PROJECT
STA 34+70.00
Y = 130413.210
X = 44156.222

GV: MATCH TOP OR PAVE OVER

STA 36+19.5, 16' RT
IN 2X3, TYPE H
1.2

BM1

CURB RAMP TYPE 1-A

MATCH EXISTING
STA 35+61.00
EL 925.25

STA 35+99 - STA 36+18
CONSTRUCT CONCRETE APPROACH SLAB

STA 35+99 - STA 36+18
CONSTRUCT CONCRETE PAVEMENT SHOULDERS
17 SY CONCRETE PAVEMENT 7-INCH REQ'D

STA 34+70 - STA 36+25 RT
171 LF CONCRETE CURB AND GUTTER 30-INCH, TYPE D
114 SY CONCRETE SIDEWALK, 4-INCH

STA 36+37 LT
STA 36+46 RT
2 EA - REMOVING INLETS

TREMPEALEAU RIVER

STA 38+03 - STA 39+05 LT
113 LF CONCRETE CURB AND GUTTER 30-INCH, TYPE D
63 SY CONCRETE SIDEWALK, 4-INCH

HEAVY RIPRAP

REMOVE EXISTING STRUCTURE B-27-396

NEW STRUCTURE B-27-160

CP2

TRI-COUNTY COMMUNICATIONS COOPERATIVE

CENTURYLINK

WETLAND BOUDARY

NOTE: NO PERMANENT WETLAND IMPACTS PERMITTED. ANY TEMP IMPACTS MUST BE COORDINATED WITH WIS DNR.

STA 38+10 - STA 38+29
CONSTRUCT CONCRETE APPROACH SLAB

STA 38+72 LT
1 EA - RECONSTRUCTING INLETS

2.1 STA 38+72 LT IN EXIST

STA 38+59, 29' RT
MH EXIST
2.3

STA 38+59, 18.9' RT
IN 2X3, TYPE H
2.2

STA 38+59 RT
1 EA - ADJUSTING MANHOLE COVERS
1 EA - RECONSTRUCTING MANHOLES

WE ENERGIES

STA 38+10 - STA 38+29
CONSTRUCT CONCRETE PAVEMENT SHOULDERS
20 SY CONCRETE PAVEMENT 7-INCH REQ'D

STA 38+16 - STA 39+67 RT
152 LF CONCRETE CURB AND GUTTER 30-INCH, TYPE D
101 SY CONCRETE SIDEWALK, 4-INCH

STA 38+59 RT
1 EA - REMOVING INLETS

STH 95
(ASPHALT)

CURB RAMP TYPE 1

CURB RAMP TYPE 7-B

PC: 39+48.93

XCEL ENERGY

END PROJECT
STA 39+67.00

MATCH EXISTING
STA 38+74.00
EL 923.67

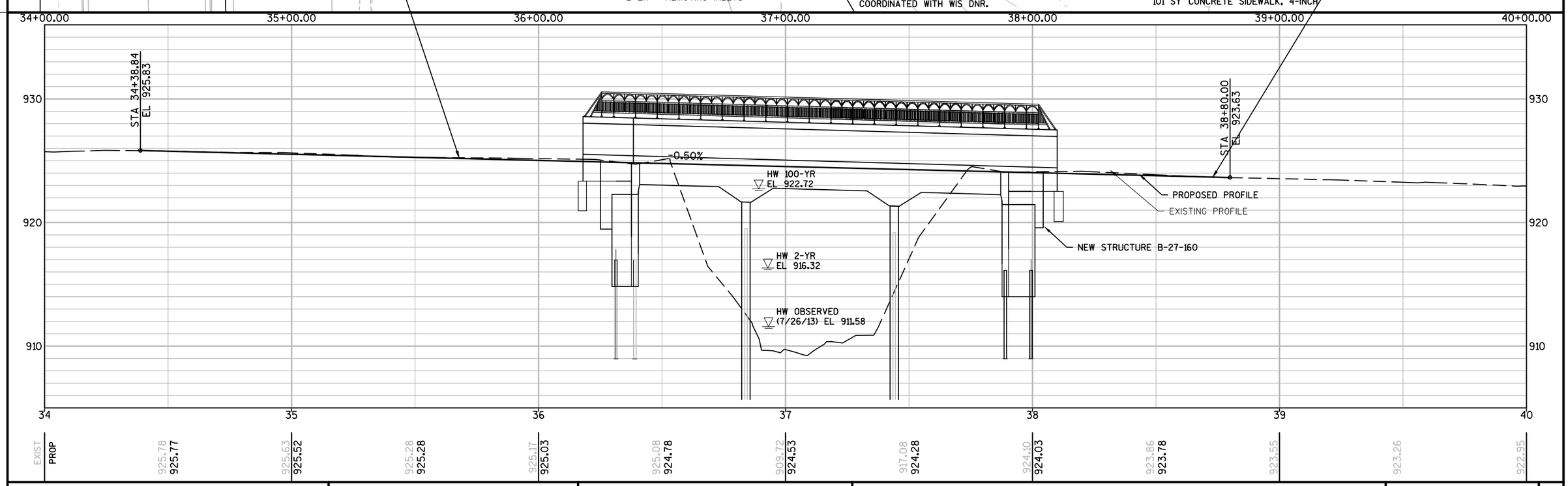
CAUTION

CAUTION

EXIST R/W

5

5



PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	PLAN AND PROFILE: STH 95	SHEET 28	E

FILE NAME : F:\DRAWINGS\2012-134\0004\75200300\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_PP

PLOT DATE : 9/7/2017 12:00 PM PLOT BY : MATT GUNDRY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

PI STA = 1+97.09'BP
Y = 130367.419
X = 44184.150
DELTA = 31°16'42"
D = 22°55'06"
T = 69.99'
L = 136.48'
R = 250.00'
PC STA = 1+27.11'BP
PT STA = 2+63.58'BP
SE = NC

PI STA = 3+33.25'BP
Y = 130227.775
X = 44183.183
DELTA = 30°57'39"
D = 22°55'06"
T = 69.24'
L = 135.09'
R = 250.00'
PC STA = 2+64.01'BP
PT STA = 3+99.10'BP
SE = NC

PI STA = 5+25.58'BP
Y = 130059.248
X = 44282.707
DELTA = 30°24'24"
D = 22°53'57"
T = 68.00'
L = 132.78'
R = 250.21'
PC STA = 4+57.58'BP
PT STA = 5+90.37'BP
SE = NC

PI STA = 6+60.61'BP
Y = 129992.169
X = 44403.576
DELTA = 22°05'00"
D = 22°55'06"
T = 48.78'
L = 96.36'
R = 250.00'
PC STA = 6+11.82'BP
PT STA = 7+08.18'BP
SE = NC

TREMPEALEAU RIVER

PI: 34+38.84
PC: 1+27.11'BP
PC: 39+48.93
PT: 7+08.18'BP

35+00 36+00 37+00 38+00 39+00 40+00 STH 95

2+00'BP
PT: 2+63.58'BP
BEGIN CONSTRUCTION
STA. 1+27.11'BP
WETLAND BOUDARY
SI
TEMPORARY STRUCTURE
3+00'BP
SI
PC: 2+64.01'BP
4+00'BP S30° 33' 51"E 58.48'
5+00'BP
6+00'BP S60° 58' 15"E 21.46'
PC: 6+11.82'BP
PT: 5+90.37'BP
SI
END CONSTRUCTION
STA. 7+08.18'BP
CAUTION
CAUTION

MATCH EXISTING STH 94
STA 2+26'BP
EL 925.13

STA 2+78 TO STA 3+76 LT
39.4 LF MGS THRIE BEAM TEMPORARY TRANSITION
1 EA MGS GUARDRAIL TEMPORARY TERMINAL EAT

STA 2+88 TO STA 3+76 RT
39.4 LF MGS THRIE BEAM TEMPORARY TRANSITION
1 EA MGS GUARDRAIL TEMPORARY TERMINAL EAT

NOTE: NO PERMANENT WETLAND IMPACTS PERMITTED. ANY TEMP IMPACTS MUST BE COORDINATED WITH WIS DNR.

PT: 3+99.10'BP
PC: 4+57.58'BP
WETLAND BOUDARY

STA 4+88 TO STA 5+86 LT
39.4 LF MGS THRIE BEAM TEMPORARY TRANSITION
1 EA MGS GUARDRAIL TEMPORARY TERMINAL EAT

STA 4+88 TO STA 5+75 RT
39.4 LF MGS THRIE BEAM TEMPORARY TRANSITION
1 EA MGS GUARDRAIL TEMPORARY TERMINAL EAT

MATCH EXISTING STH 95
STA 6+30'BP
EL 623.99

5 5

1+25.00 2+00.00 3+00.00 4+00.00 5+00.00 6+00.00 7+00.00 7+25.00

STA 1+27.11
EL 925.76

VPC STA 2+12.00'BP
VPC EL 925.24

VPI STA 2+52.00'BP
VPI EL 925.000

VPT STA 2+92.00'BP
VPT EL 923.97

VCL = 60.00
K = 27.79

VPC STA 5+80.00'BP
VPC EL 923.34

VCL = 80.00
K = 26.55

VPI STA 6+20.00'BP
VPI EL 924.380

VPT STA 6+60.00'BP
VPT EL 923.71

STA 7+08.18
EL 922.91

930 920 910

-0.61% -2.57% -0.41% 2.60% -1.67%

TEMPORARY STRUCTURE
MIN CLEAR LENGTH** = 112 FT
MIN HYD AREA = 344 SF
Q5 = 1820 CFS
HW 5 = EL 918.2
MIN LOW CHORD = EL 918.3

** MEASURED ALONG ℄

HW5 EL 918.2

PROPOSED PROFILE
EXISTING PROFILE

VPC STA 2+92.00'BP
VPC EL 923.97

VPI STA 3+22.00'BP
VPI EL 923.20

VPT STA 3+52.00'BP
VPT EL 923.08

VCL = 80.00
K = 40.76

VPC STA 5+00.00'BP
VPC EL 922.47

VPI STA 5+40.00'BP
VPI EL 922.30

VPT STA 5+80.00'BP
VPT EL 923.34

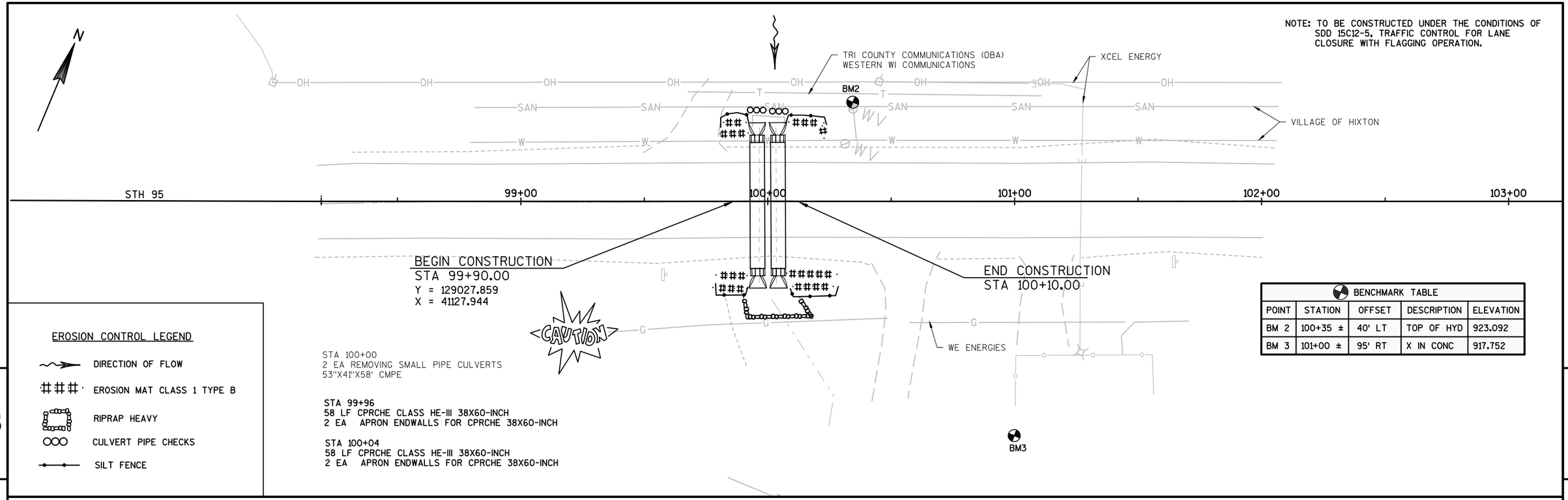
VCL = 80.00
K = 18.75

1 2 3 4 5 6 7 7

EXIST	PROP														
925.67	925.62	925.30	925.32	923.53	924.84	919.04	923.78	917.95	923.09	913.43	922.88	912.19	922.67	916.83	922.47	916.93	922.73	922.45	923.75	923.80	923.85	922.99	923.05	922.75

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	PLAN AND PROFILE: BYPASS	SHEET 29	E

NOTE: TO BE CONSTRUCTED UNDER THE CONDITIONS OF SDD 15C12-5, TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION.



BENCHMARK TABLE				
POINT	STATION	OFFSET	DESCRIPTION	ELEVATION
BM 2	100+35 ±	40' LT	TOP OF HYD	923.092
BM 3	101+00 ±	95' RT	X IN CONC	917.752

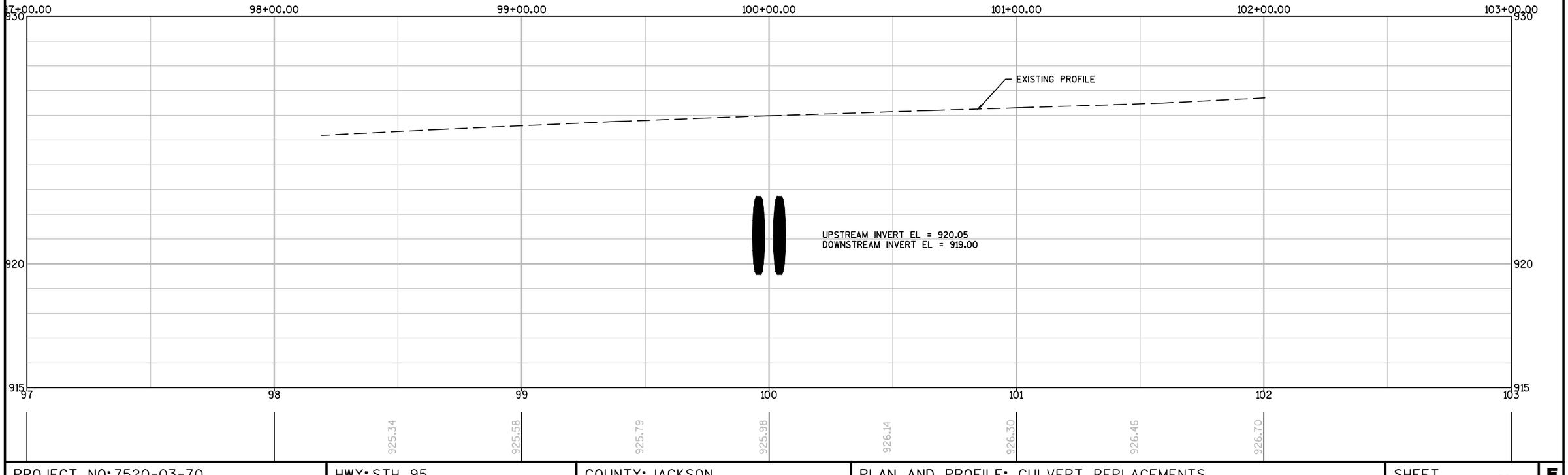
EROSION CONTROL LEGEND

- DIRECTION OF FLOW
- EROSION MAT CLASS 1 TYPE B
- RIPRAP HEAVY
- CULVERT PIPE CHECKS
- SILT FENCE

STA 100+00
2 EA REMOVING SMALL PIPE CULVERTS
53"X41"X58' CMPE

STA 99+96
58 LF CPRCHE CLASS HE-III 38X60-INCH
2 EA APRON ENDWALLS FOR CPRCHE 38X60-INCH

STA 100+04
58 LF CPRCHE CLASS HE-III 38X60-INCH
2 EA APRON ENDWALLS FOR CPRCHE 38X60-INCH



PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	PLAN AND PROFILE: CULVERT REPLACEMENTS	SHEET 30	E

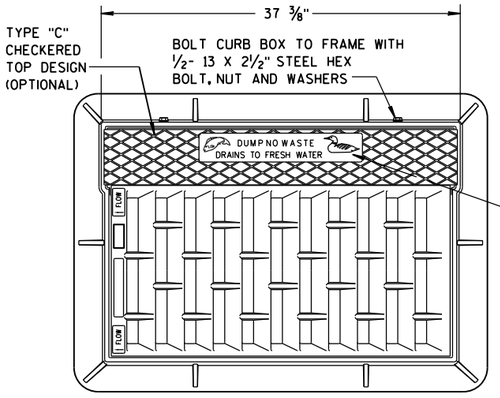
FILE NAME : F:\DRAWINGS\2012-134\0004\75200300\SHEETSPLAN\050103_PP.DWG
LAYOUT NAME - 050103_PP

PLOT DATE : 9/7/2017 12:31 PM PLOT BY : MATT GUNDRY PLOT NAME : PLOT SCALE : 1 IN:40 FT

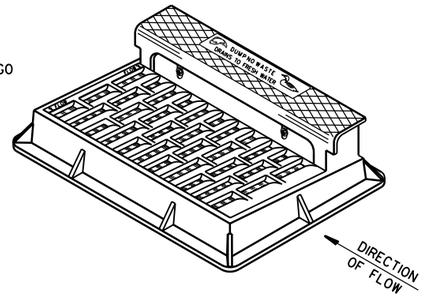
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

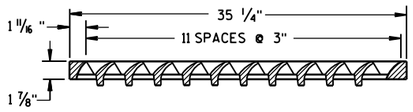
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D18-01	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
14B15-09A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES
15C12-05	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D31-03	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

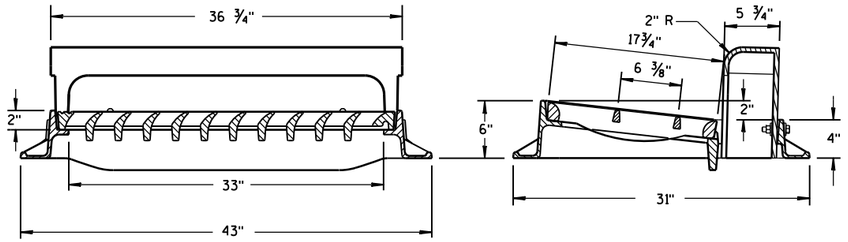


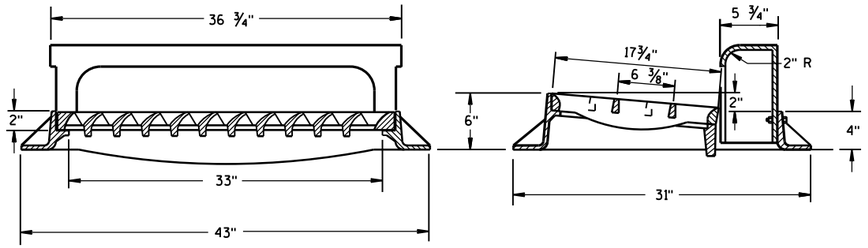
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

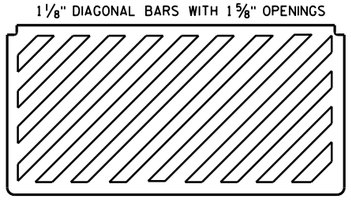






TYPE "H"

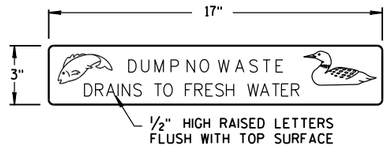
NOTE: EITHER CASTING IS ACCEPTABLE



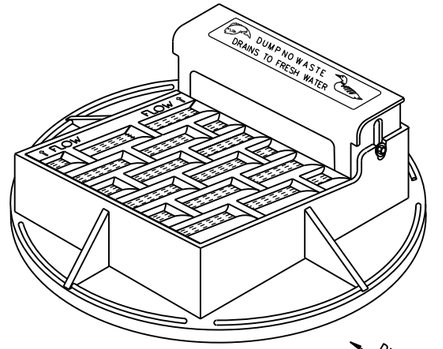
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

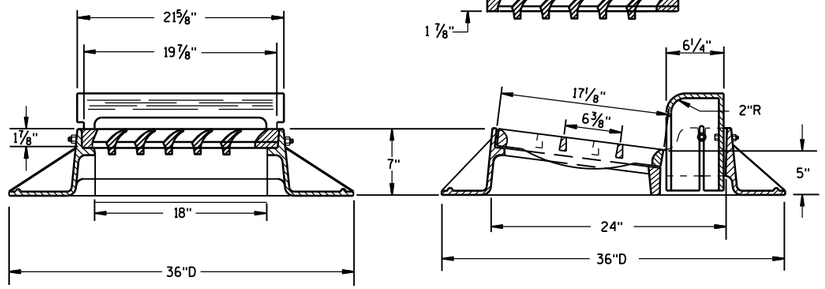


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



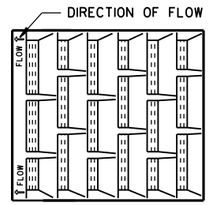
TYPE "A"

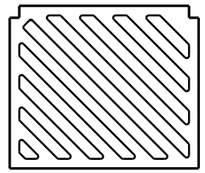
GENERAL NOTES

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.

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

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

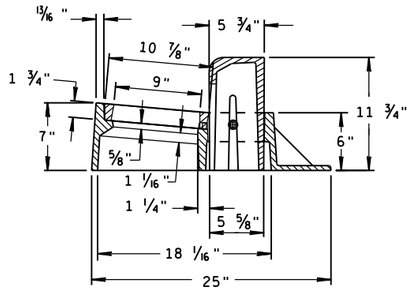


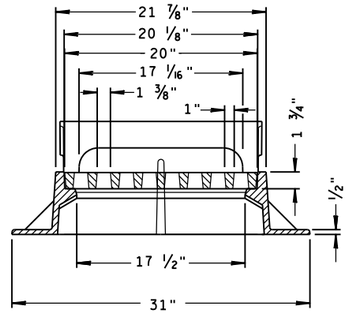


SPECIAL GRATE FOR TYPE "A" COVER

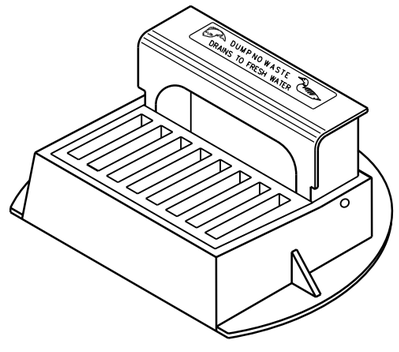
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



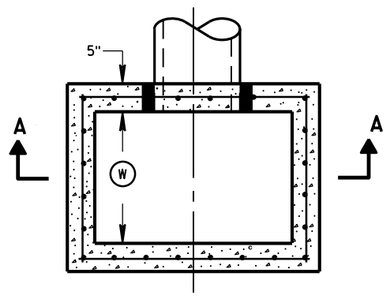
INLET COVERS TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

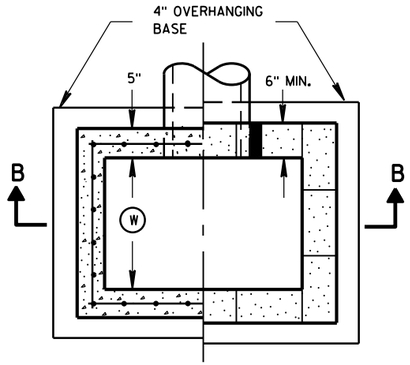
APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

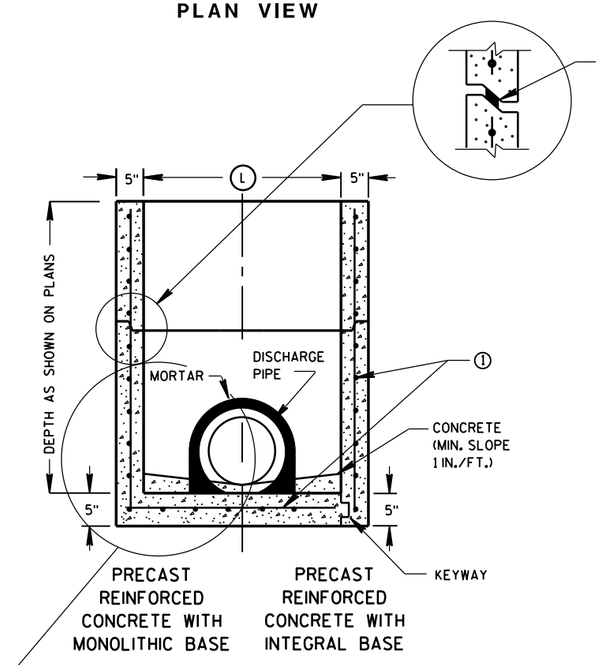
S.D.D. 8 A 5-19a



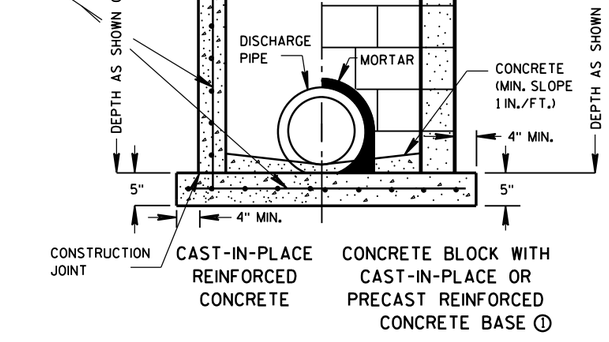
PLAN VIEW



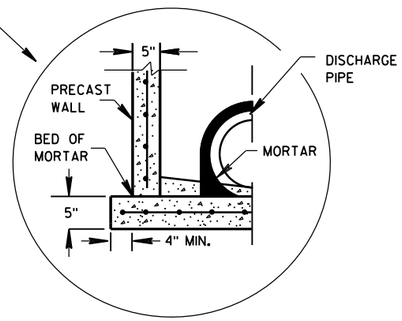
PLAN VIEW



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.

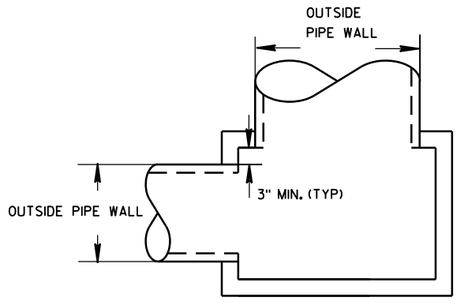
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH Ⓦ (FT)	LENGTH Ⓛ (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



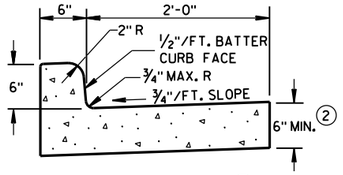
DETAIL "A"

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

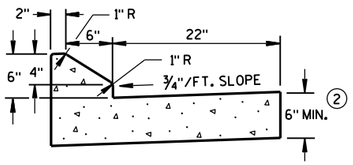
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

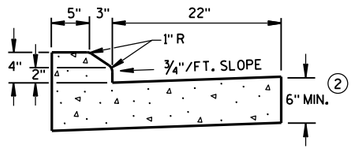
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



TYPES A & D ①

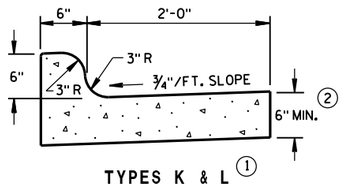


6" SLOPED CURB TYPES G & J ①

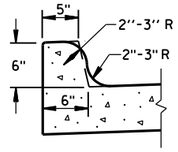


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

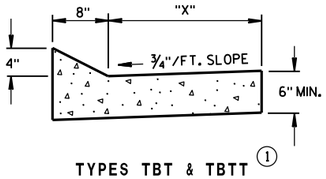


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

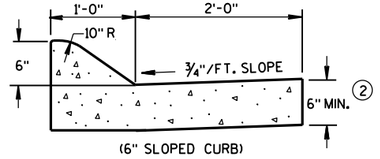
CONCRETE CURB & GUTTER 30"



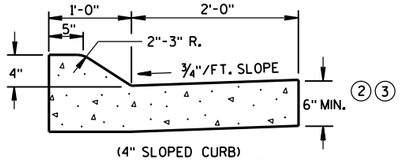
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

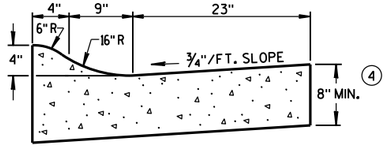


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

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

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

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

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

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

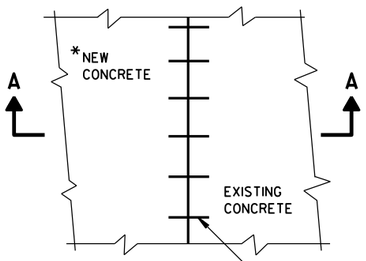
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

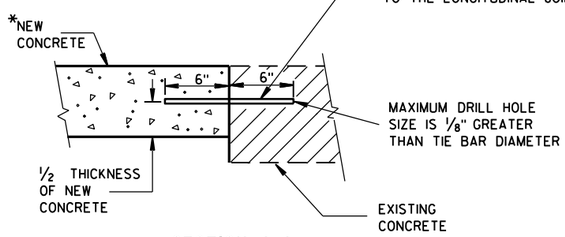
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



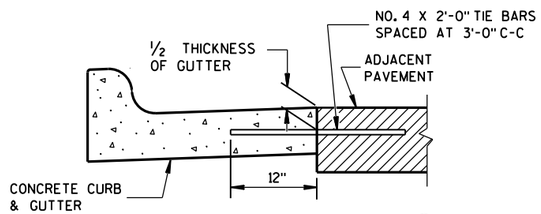
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

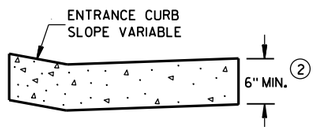


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

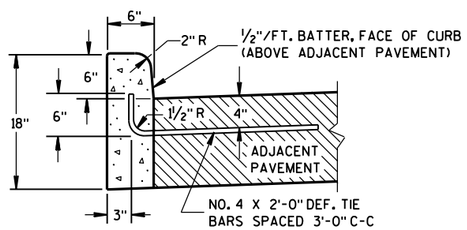


TYPICAL TIE BAR LOCATION ①

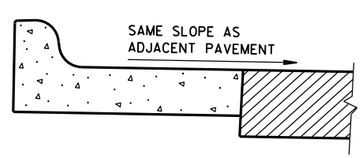


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

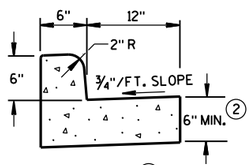


① TYPES A & D



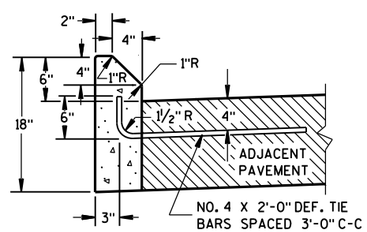
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



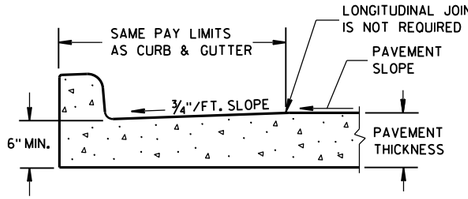
① TYPES A & D

CONCRETE CURB & GUTTER 18"

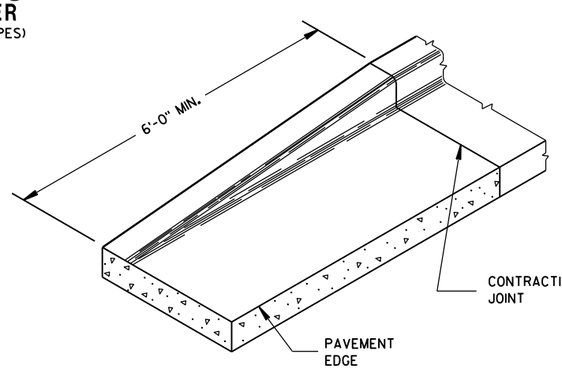


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

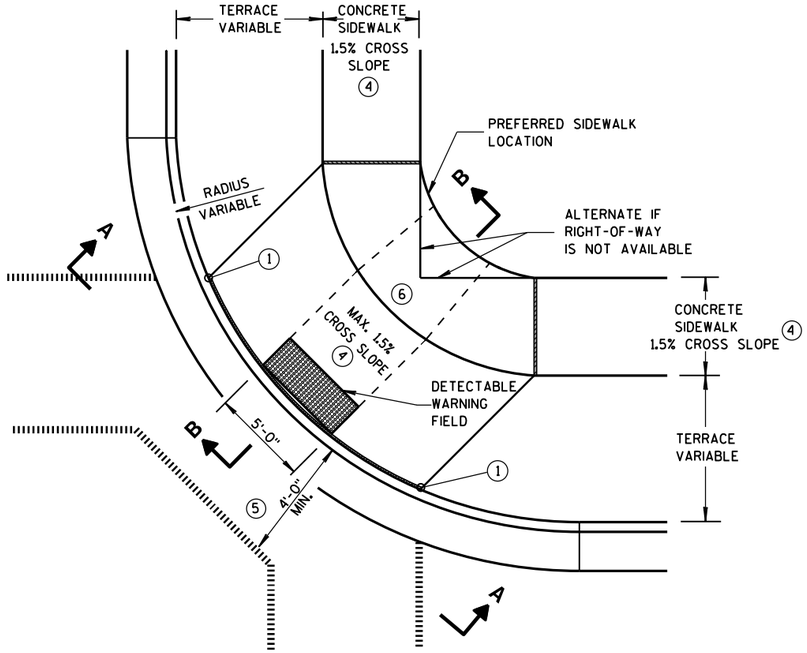
June, 2016 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

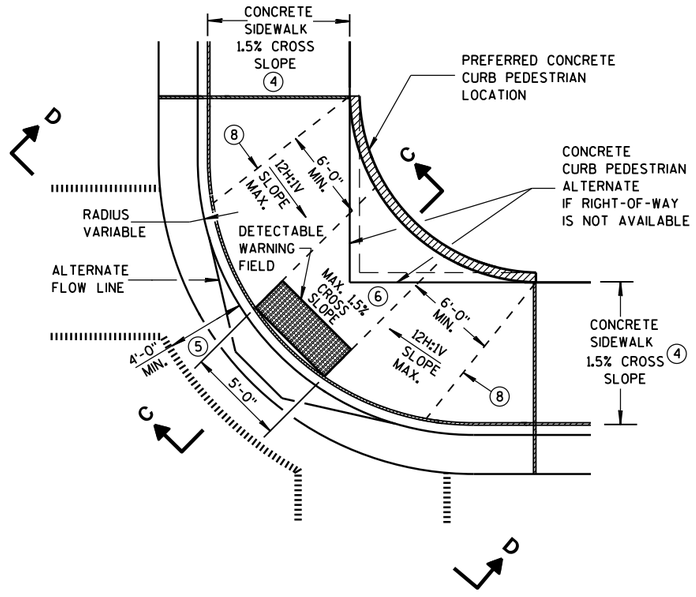
S.D.D. 8 D 1-19



PLAN VIEW

TYPE 1 RAMP

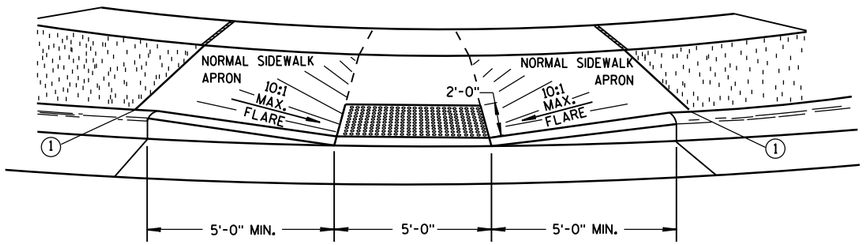
(CENTER OF CORNER RADIUS)



PLAN VIEW

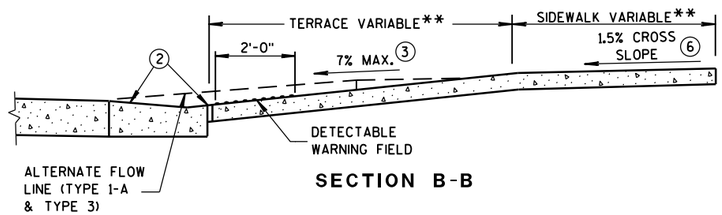
TYPE 1-A RAMP

(NO TERRACE)

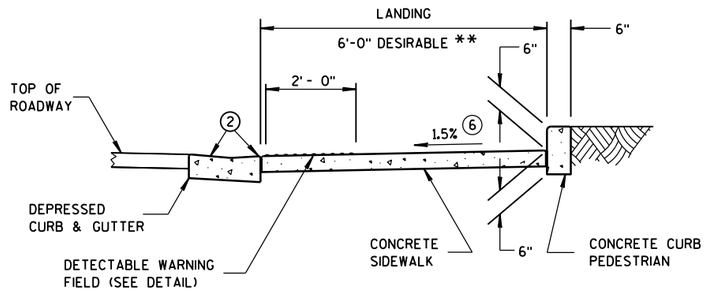


VIEW A-A

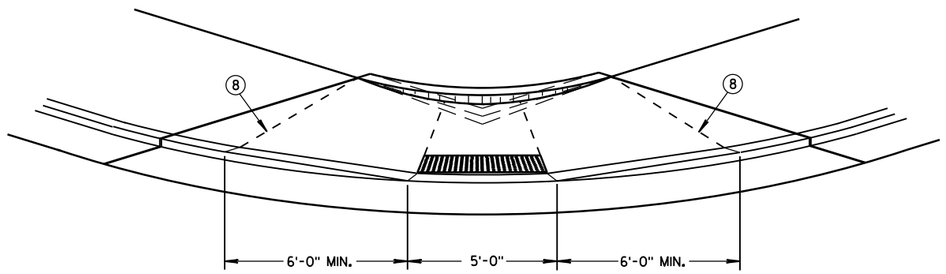
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

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

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

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

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

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

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

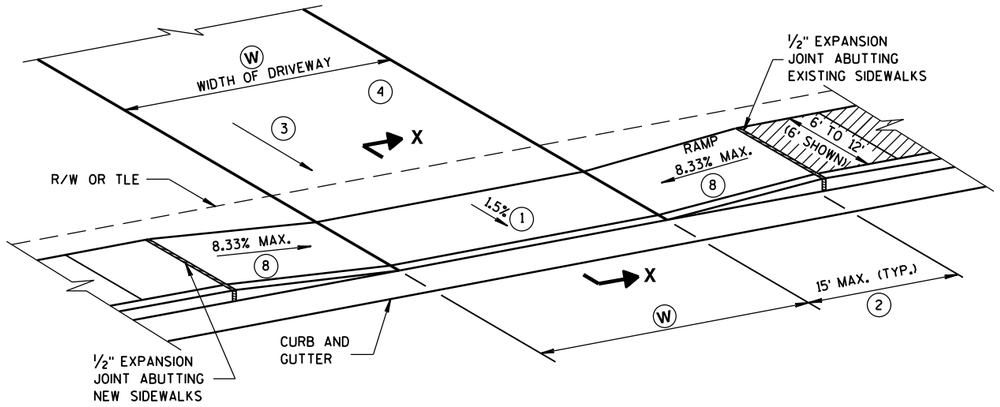
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

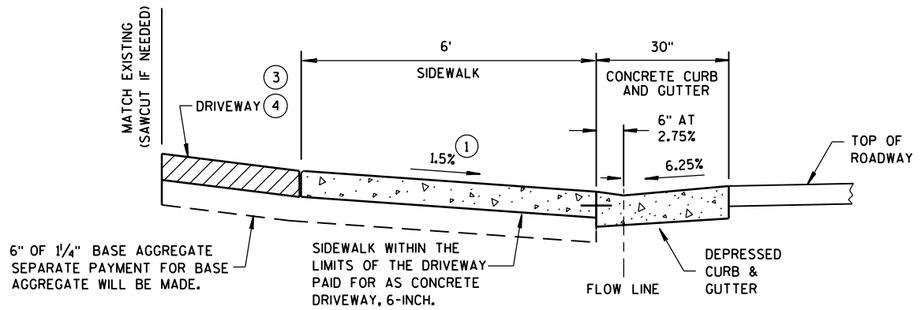
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

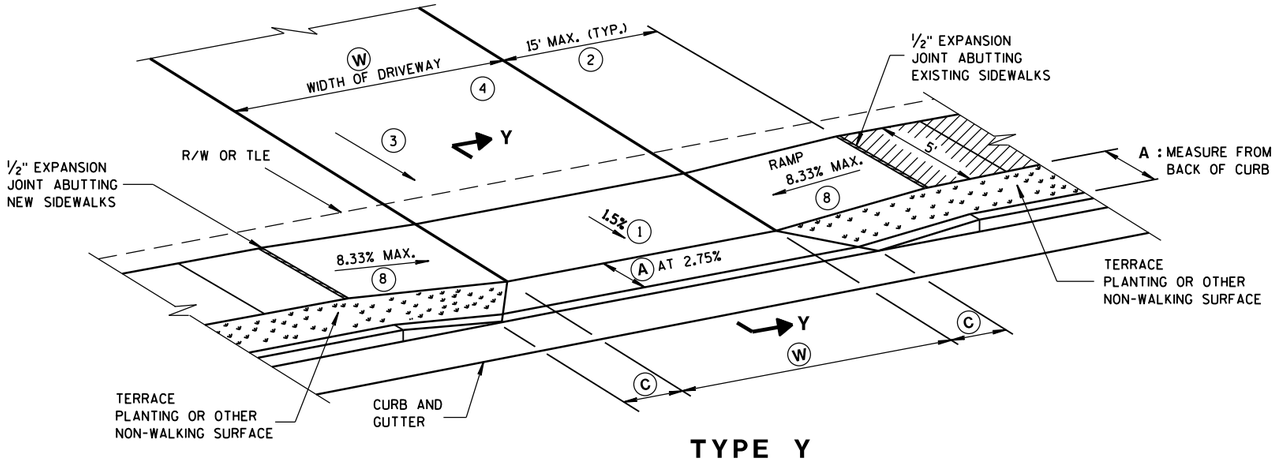
S.D.D. 8 D 5-18a
S.D.D. 8 D 5-18a



TYPE X
SIDEWALK ABUTS CURB & GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X-X

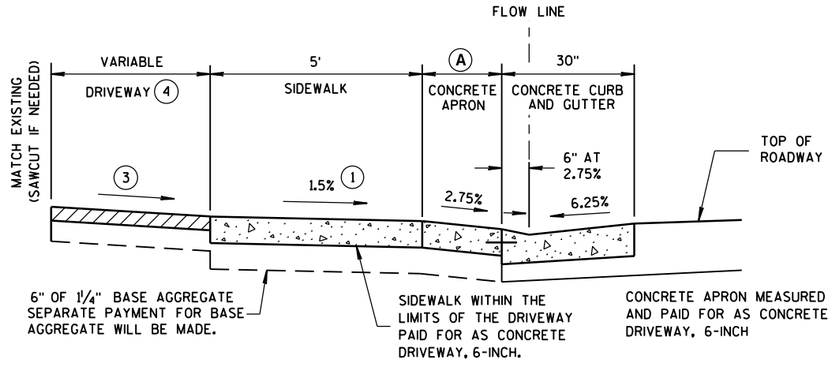


TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

W: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

1. CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
2. THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.
3. DRIVEWAY SLOPES: DESIRABLE MAXIMUM
   - 10.5% UP AWAY FROM SIDEWALK (SAG)
   - 8.5% DOWN AWAY FROM SIDEWALK (CREST)
   - ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG
4. DRIVEWAY TYPES
   - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
   - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
   - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)
5. PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.
6. (W) IS SHOWN ON PLAN AND PROFILE SHEETS.
7. OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.
8. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y-Y

DRIVEWAY DETAIL
WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)

TABLE Y

(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

NOT TO SCALE

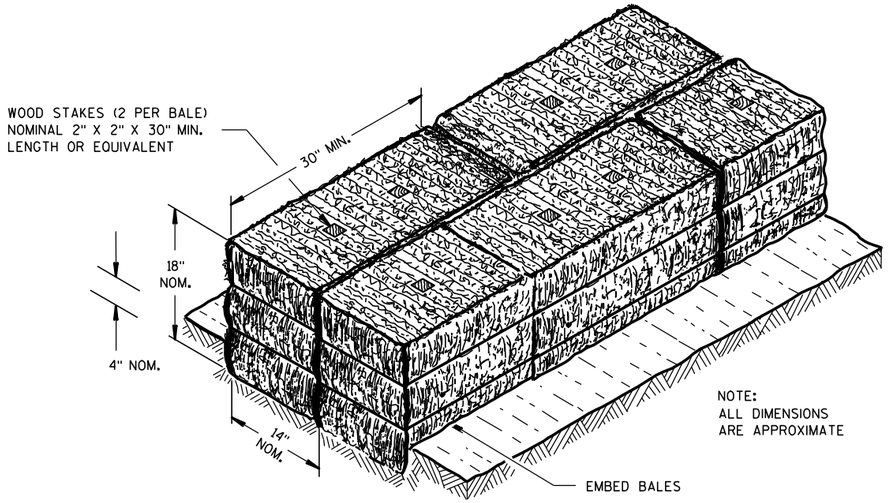
DRIVEWAY AND SIDEWALK RAMPS
TYPES X & Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

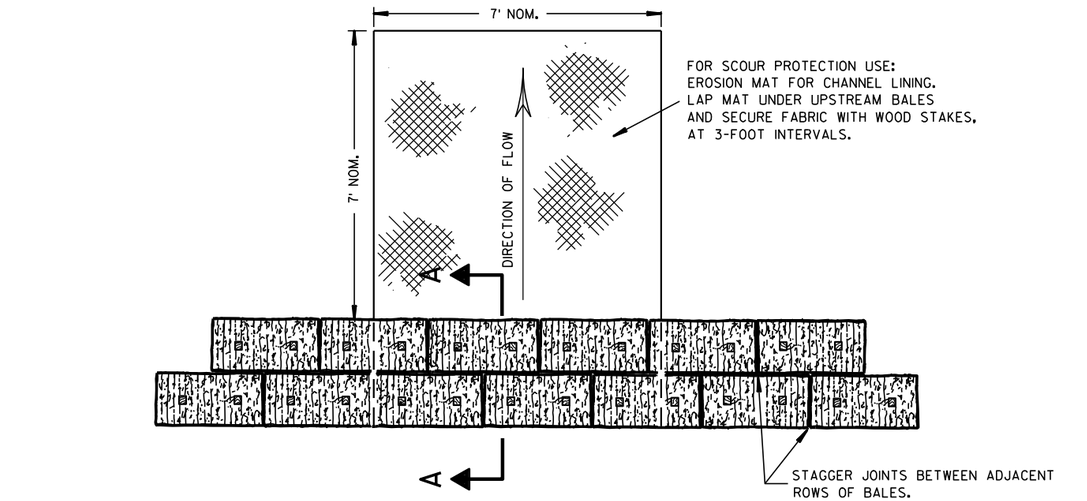
APPROVED
December, 2016 — /S/ Rodney Taylor
DATE — ROADWAY STANDARDS UNIT SUPERV — ENT
FHWA

6

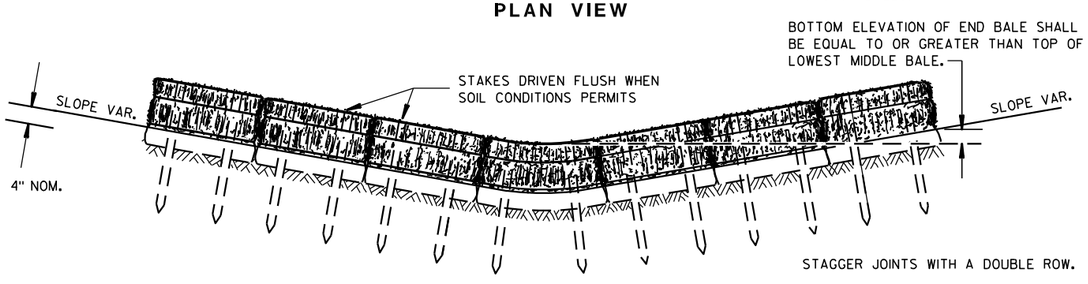
S.D.D. 8 D 18-1



SECTION A-A



PLAN VIEW



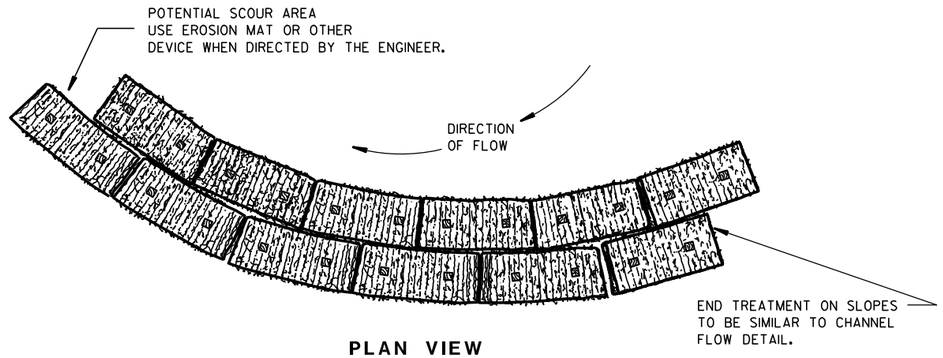
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

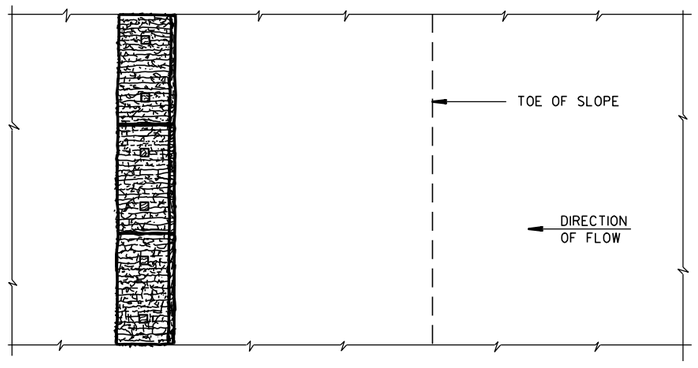
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

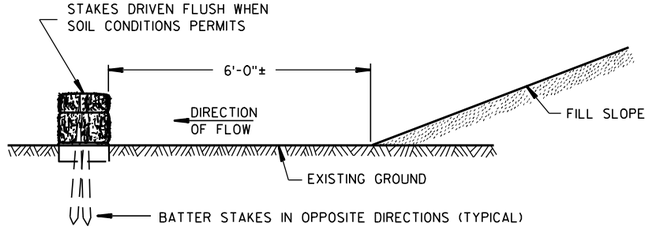


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

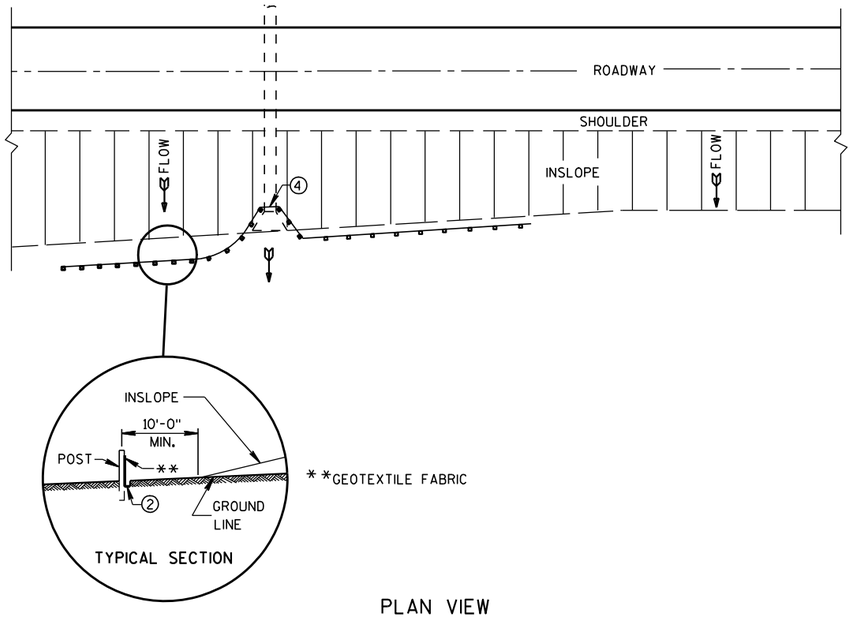
FHWA

6

S.D.D. 8 E 8-3

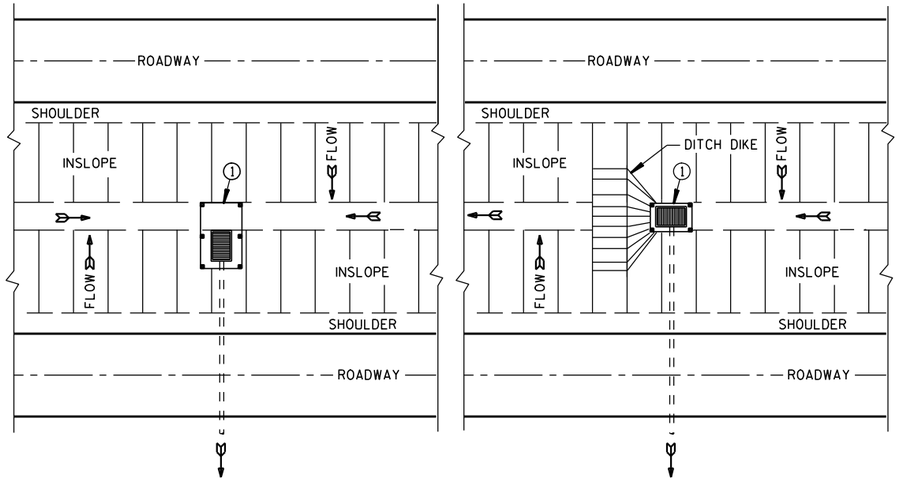
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



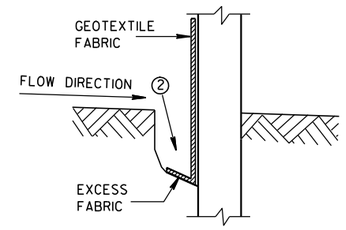
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

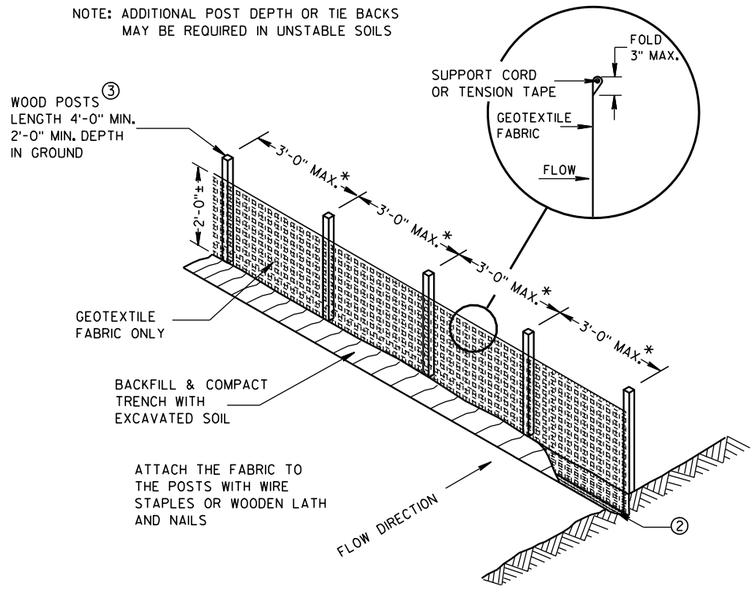
GENERAL NOTES

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.

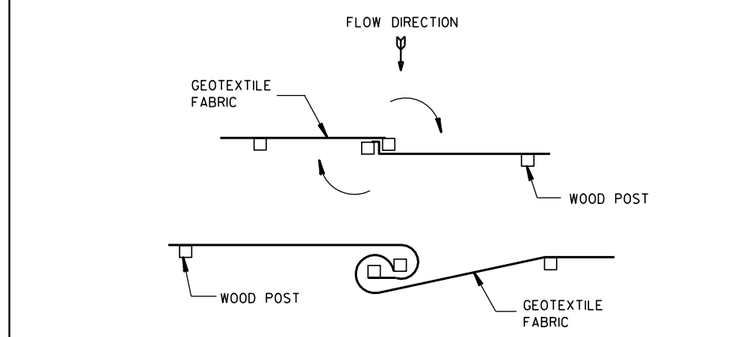


TRENCH DETAIL

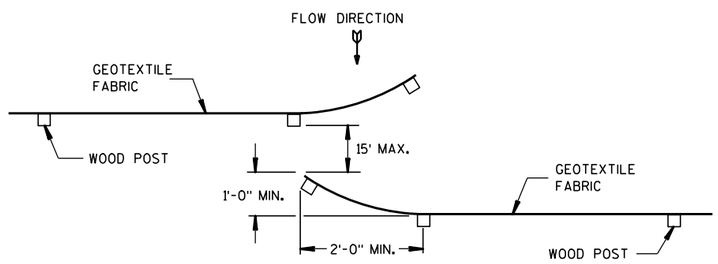


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

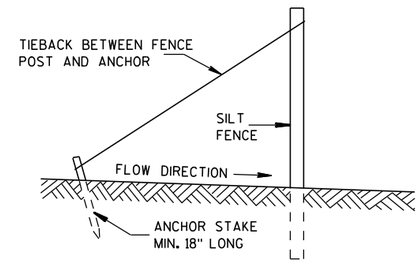


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

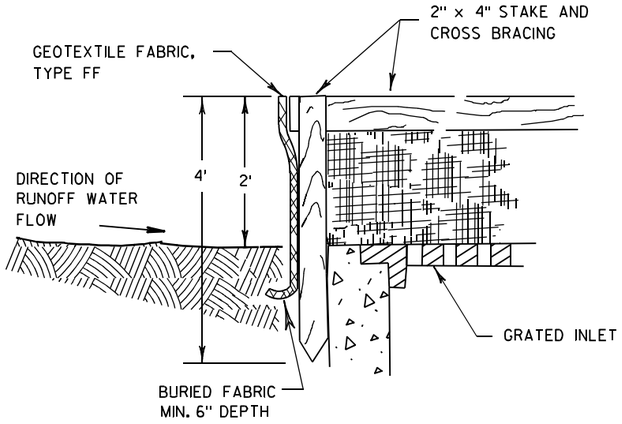
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

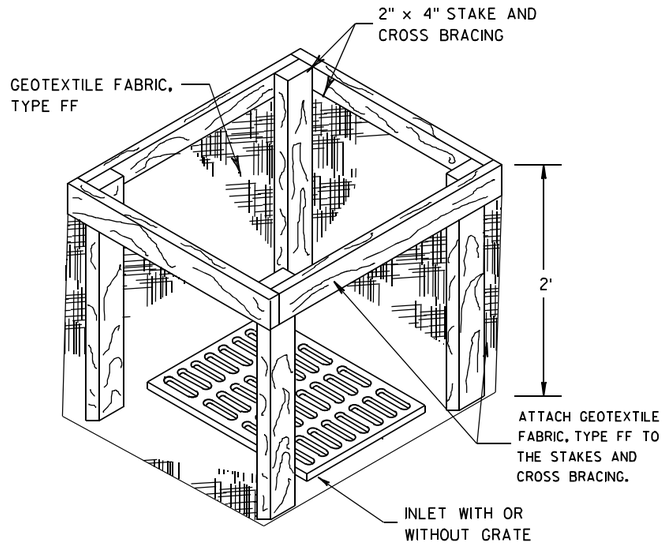
6

S.D.D. 8 E 9-6

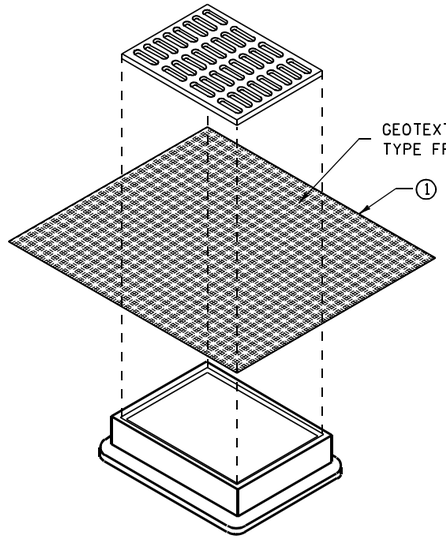
6

S.D.D. 8 E 9-6



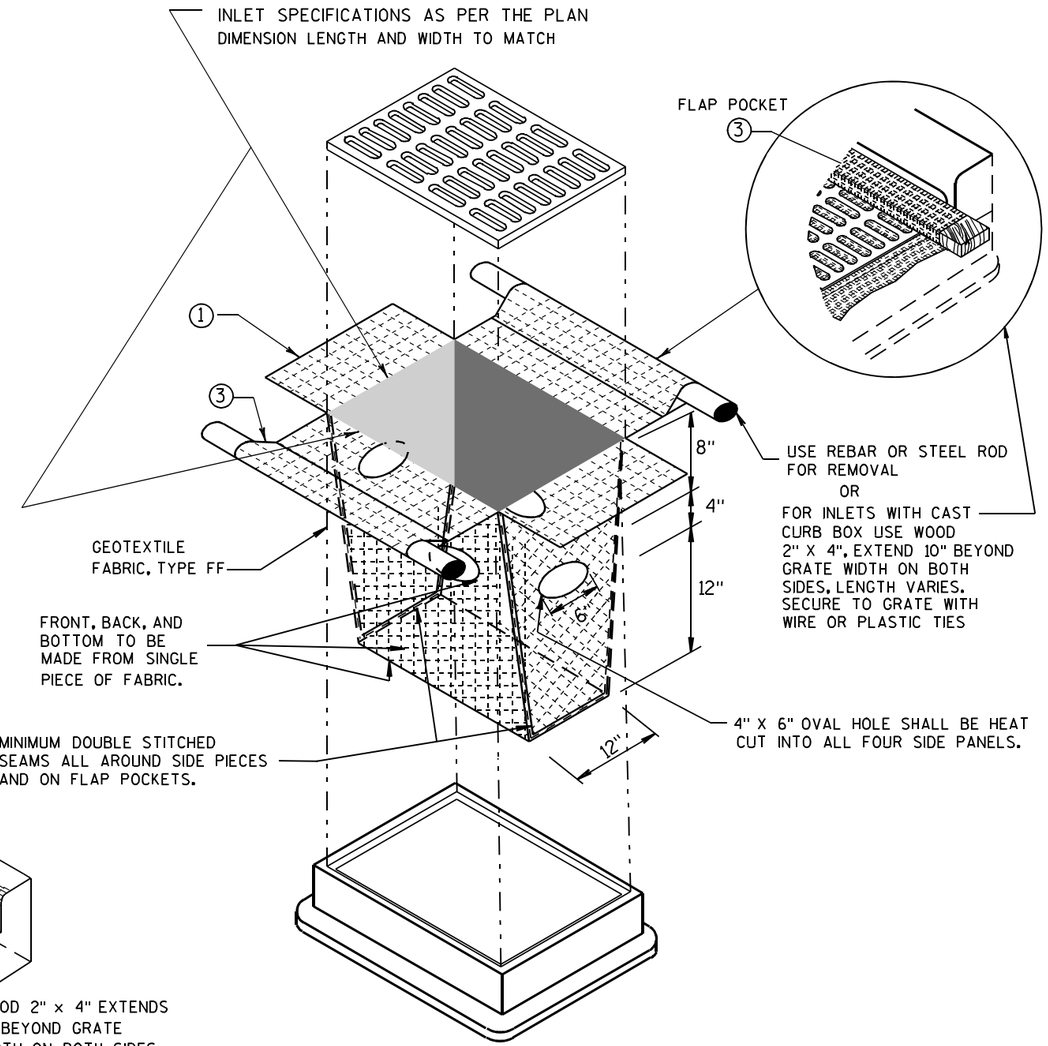


INLET PROTECTION, TYPE A



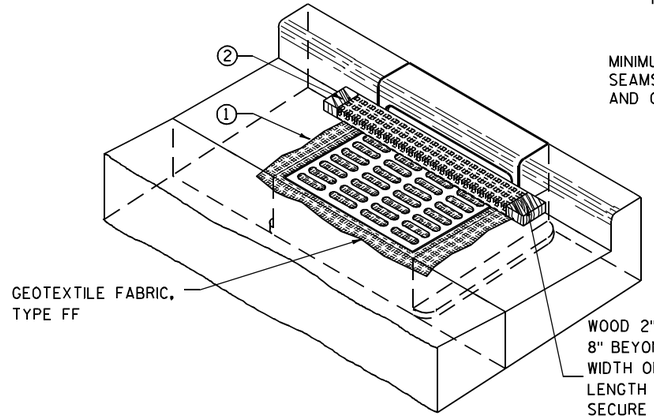
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

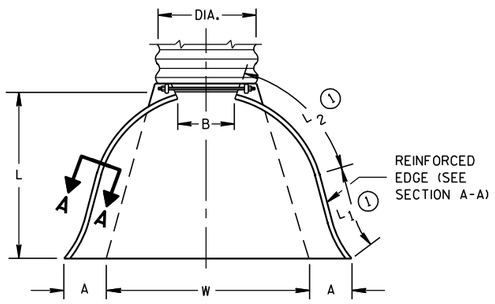
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 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

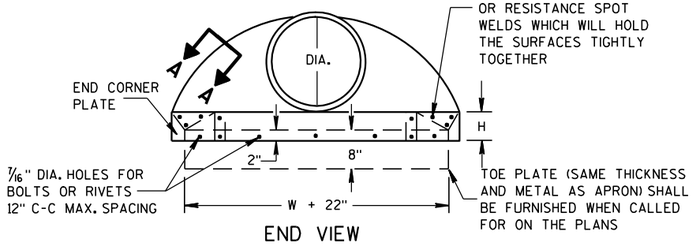
REINFORCED CONCRETE APRON ENDWALLS

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

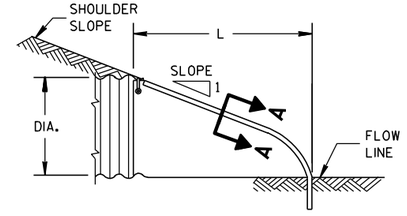
*MINIMUM
**MAXIMUM



PLAN VIEW

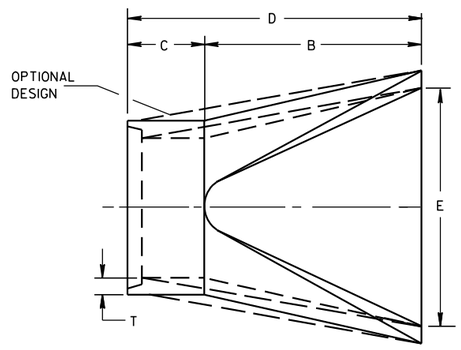


END VIEW

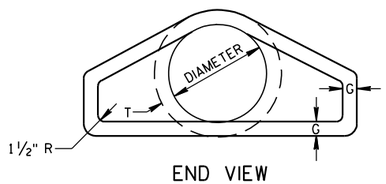


SIDE ELEVATION

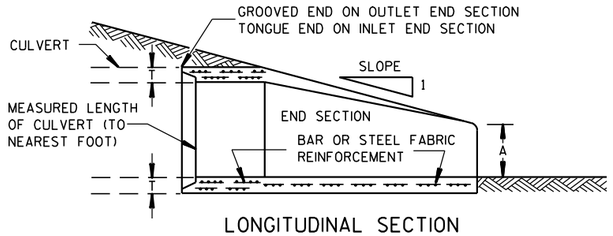
METAL ENDWALLS



PLAN

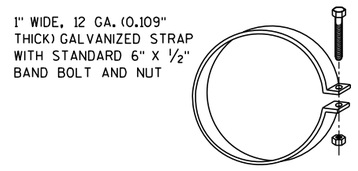


END VIEW



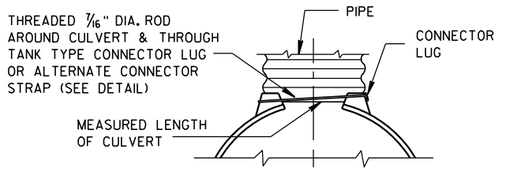
LONGITUDINAL SECTION

CONCRETE ENDWALLS

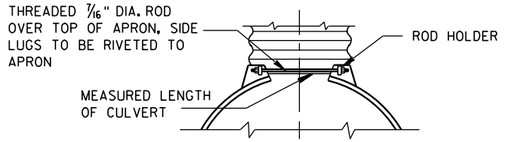


ALTERNATE FOR TYPE 1 CONNECTION

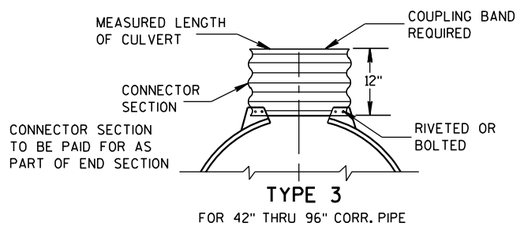
END SECTION CONNECTOR STRAP



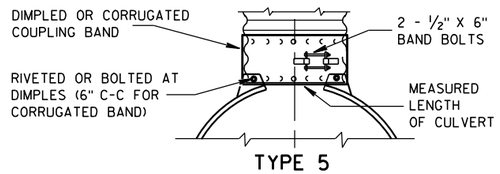
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

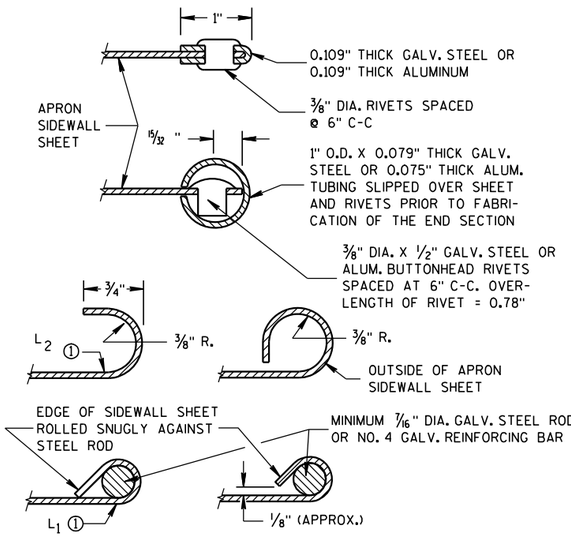
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

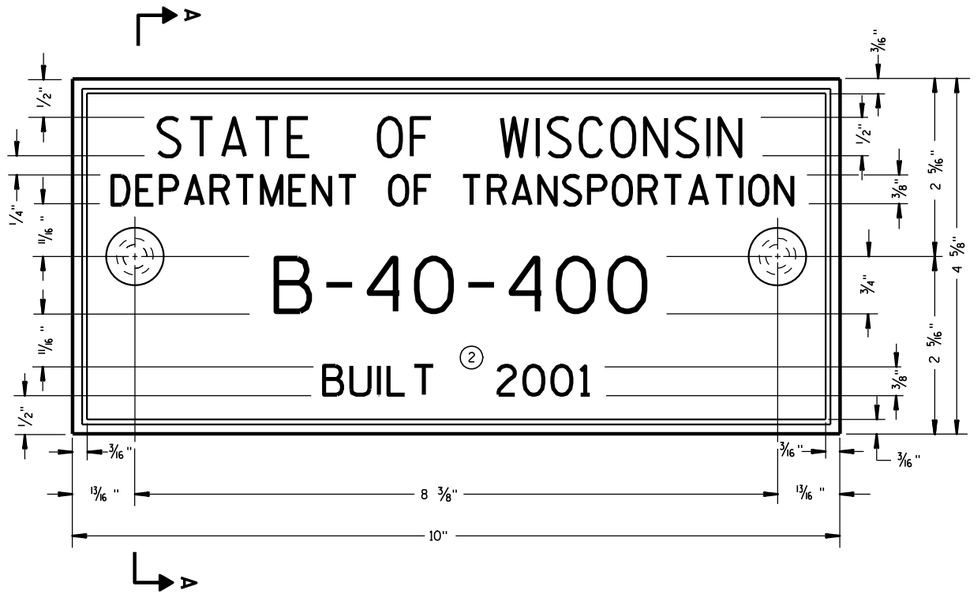
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

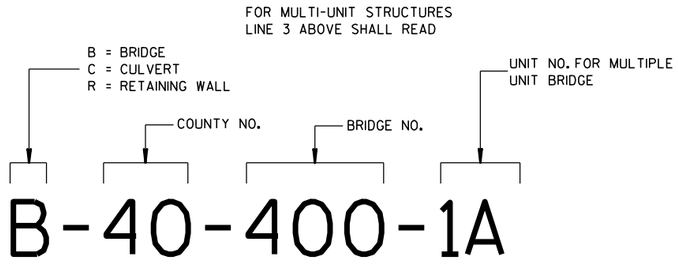
APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 1-11



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

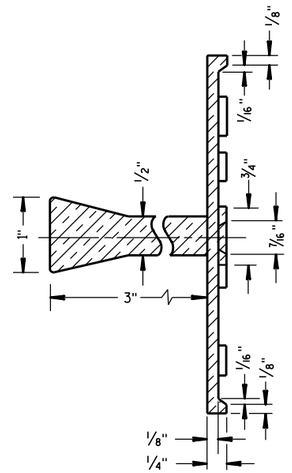
GENERAL NOTES

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.

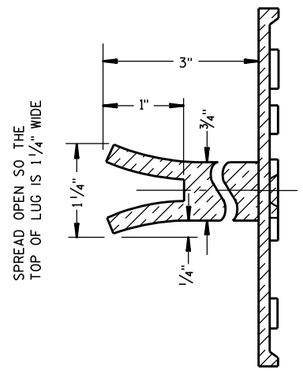
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

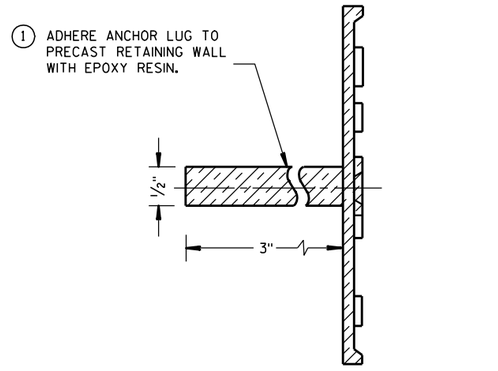
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

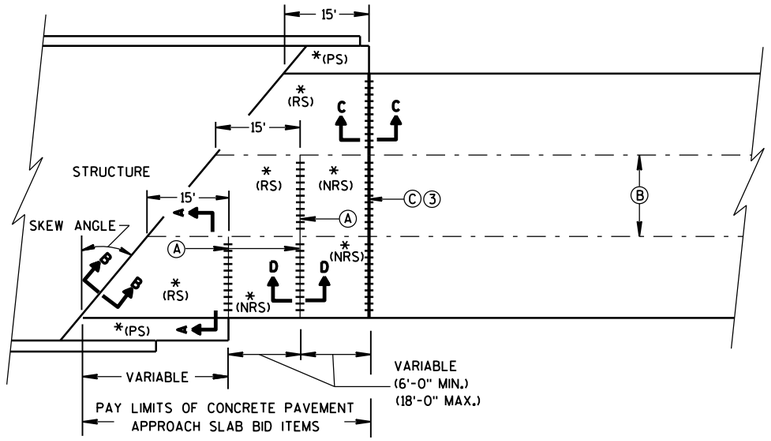
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

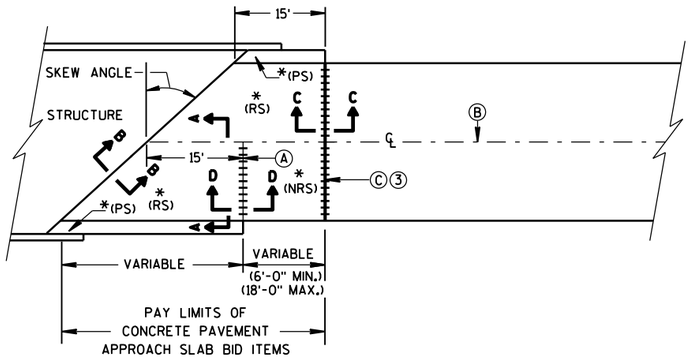
FHWA

6

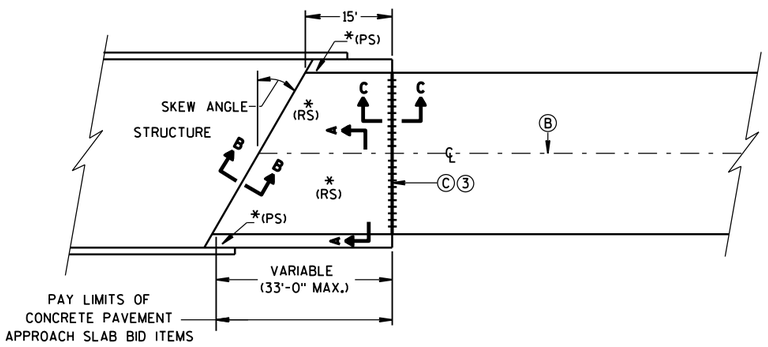
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

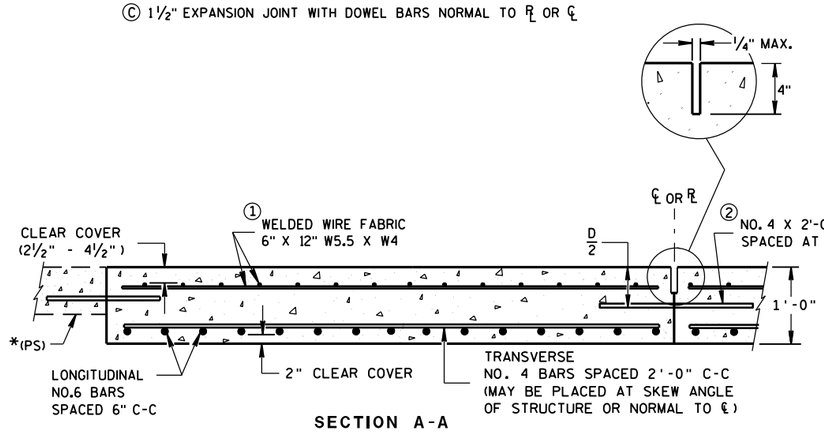
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

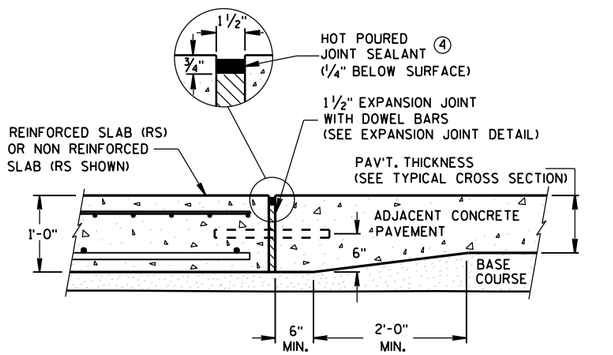
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

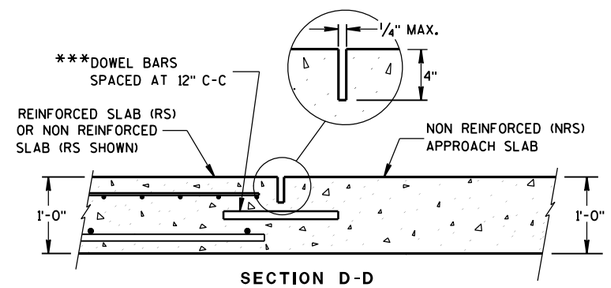
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

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.

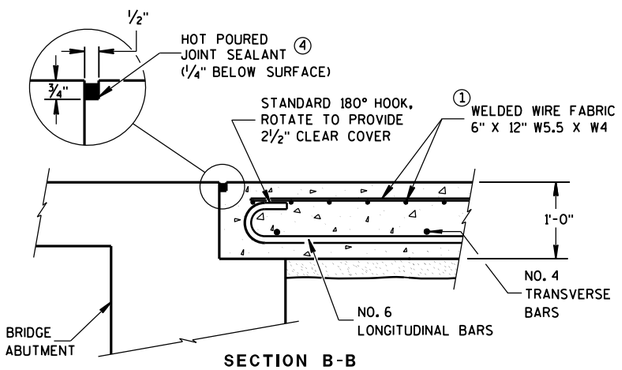
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

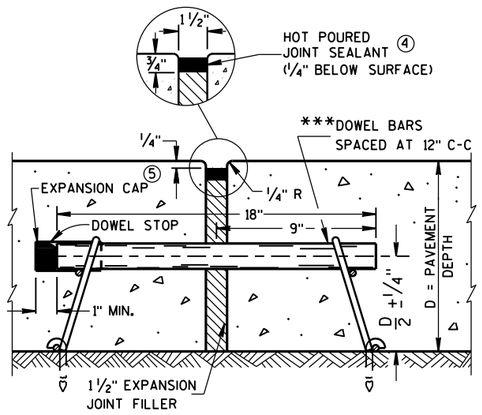
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

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.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

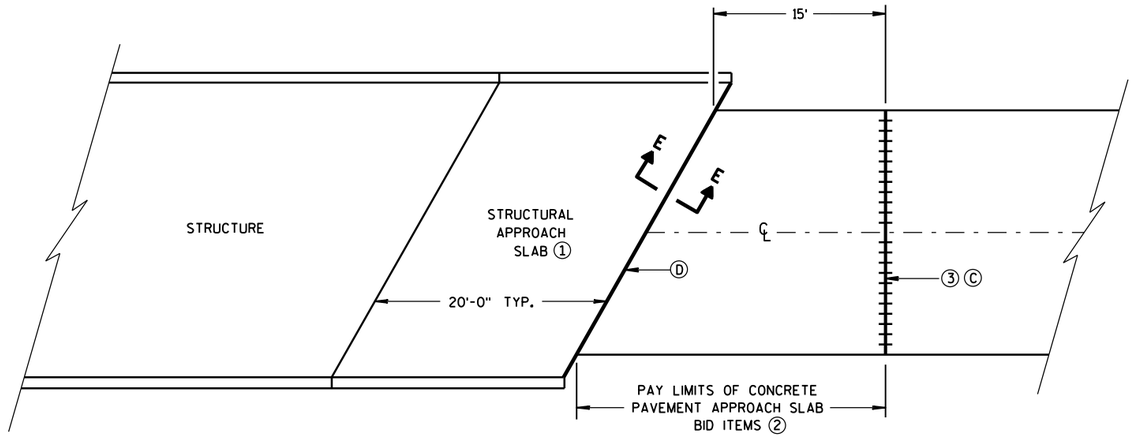
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

6

S.D.D. 13 B 2-8a

6

S.D.D. 13 B 2-8a



GENERAL NOTES

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

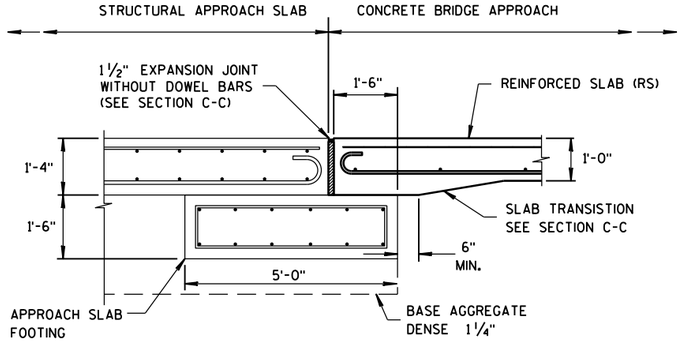
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

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

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" 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
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEF
FHWA

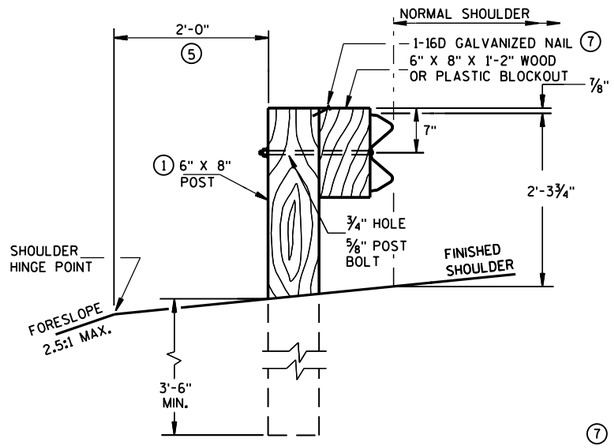
6

S.D.D. 13 B 2-8b

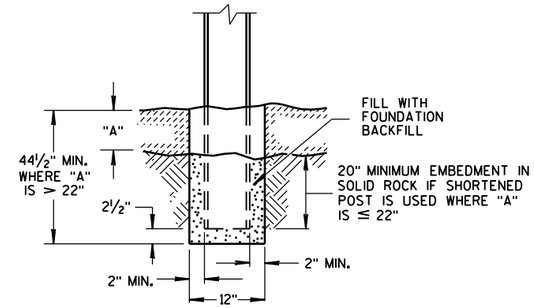
GENERAL NOTES

1. W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
   DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
2. USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
3. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
4. USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
5. IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
6. IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.
7. WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

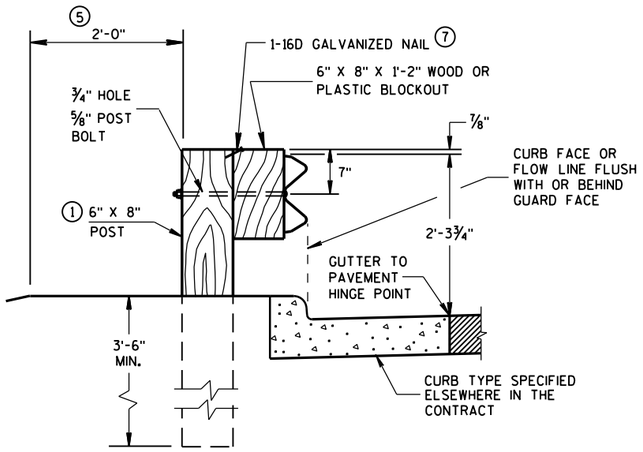
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



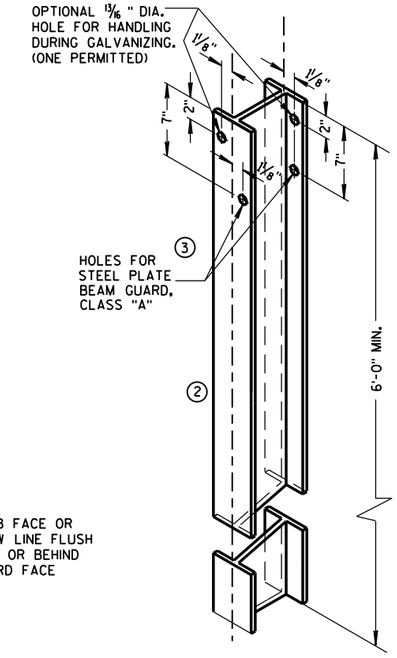
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



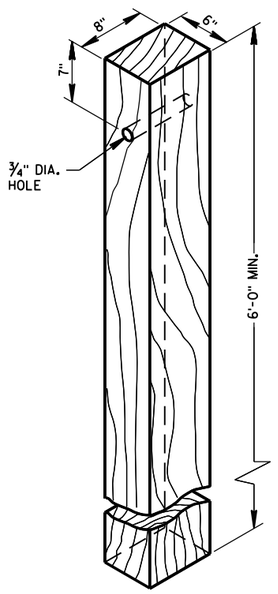
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



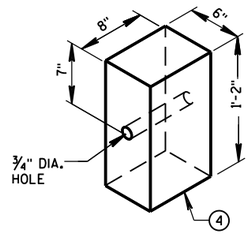
END VIEW
LOCATED ALONG A CURBED ROADWAY



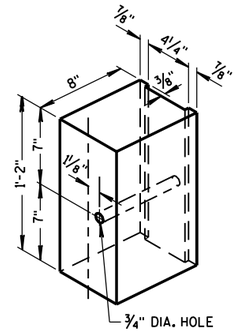
STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



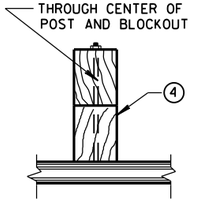
WOOD POST
(6"X8") NOMINAL



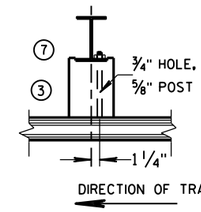
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



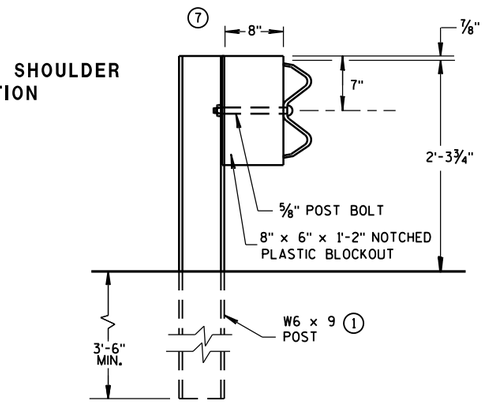
TYPICAL NOTCHED ①
PLASTIC BLOCKOUT
FOR STEEL POSTS



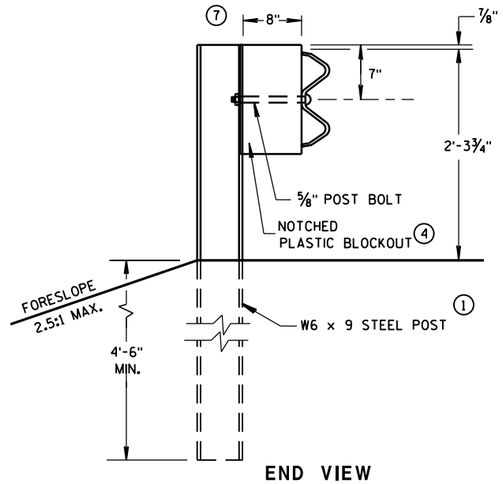
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



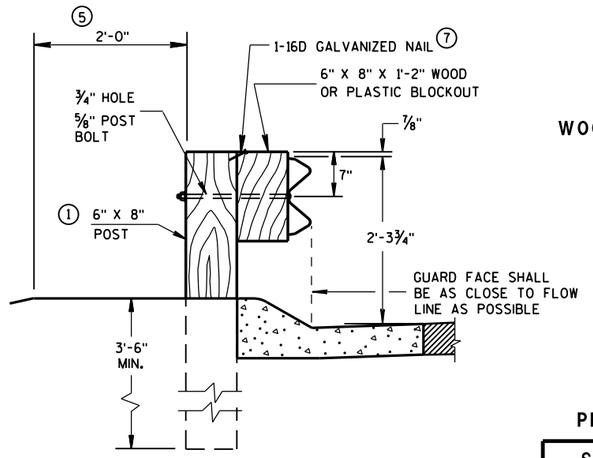
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



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



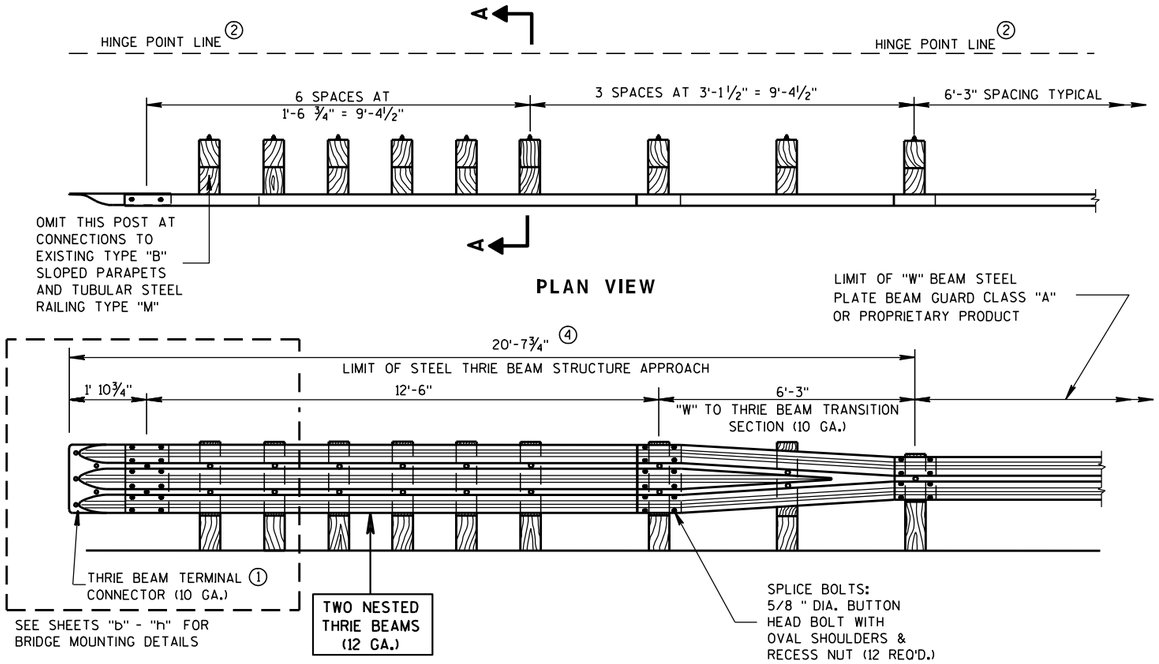
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 15-9a



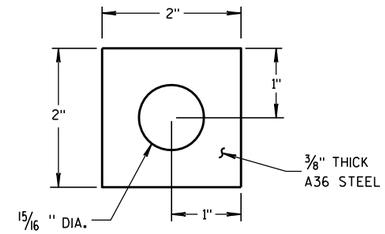


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

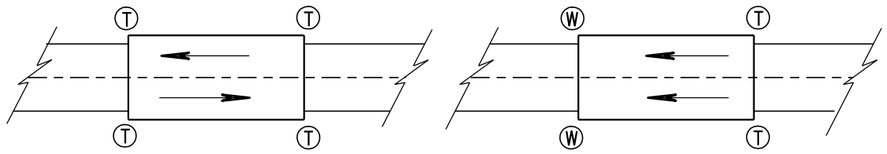
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



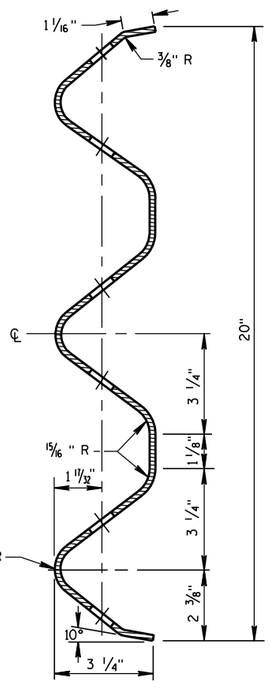
TWO WAY TRAFFIC

ONE WAY TRAFFIC

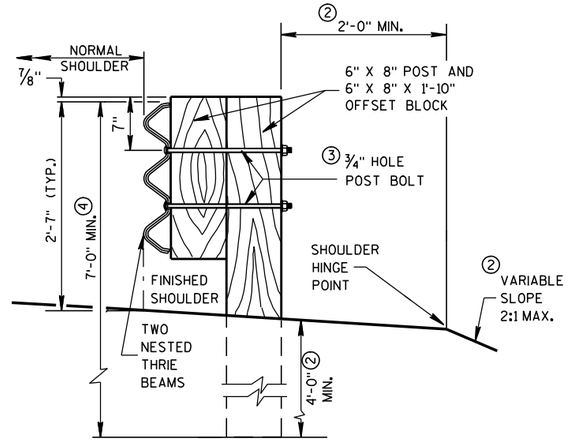
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

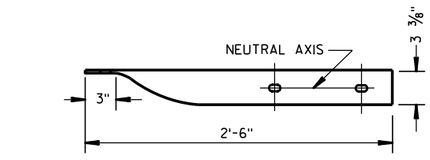
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

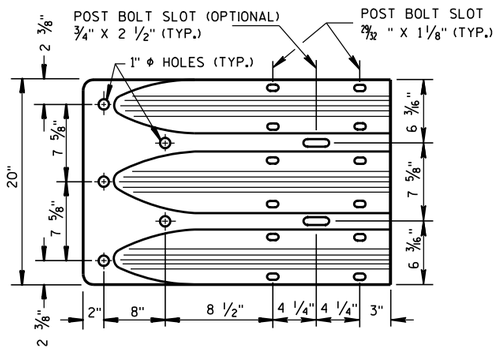


SECTION THRU THRIE BEAM RAIL ELEMENT

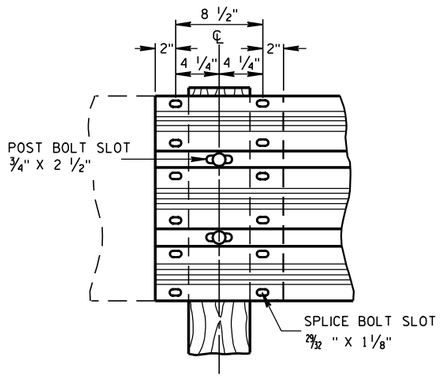


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

FHWA

6
S.D.D. 14 B 20-11a

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ø X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(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) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

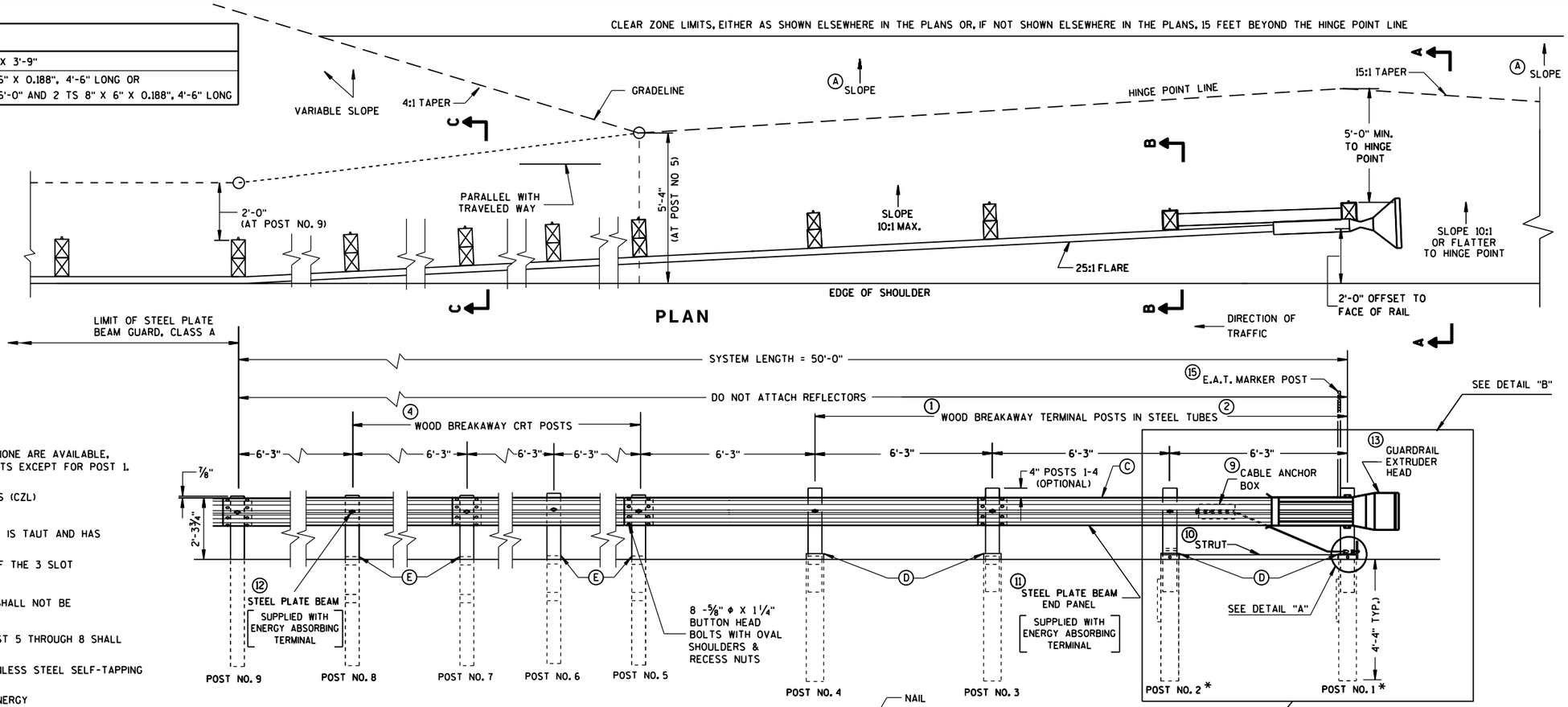
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

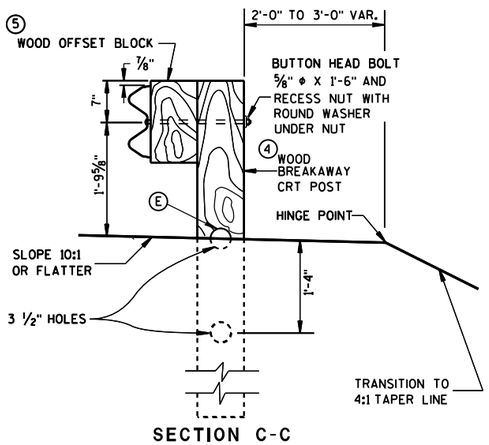
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

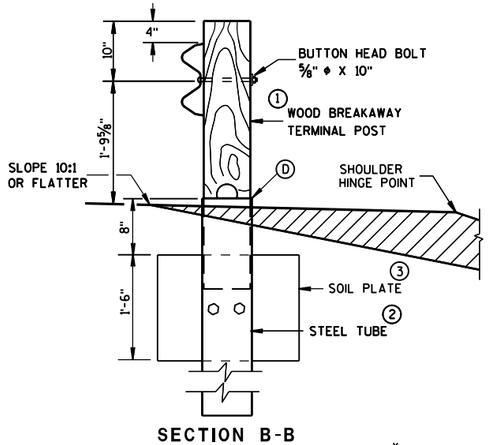
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.

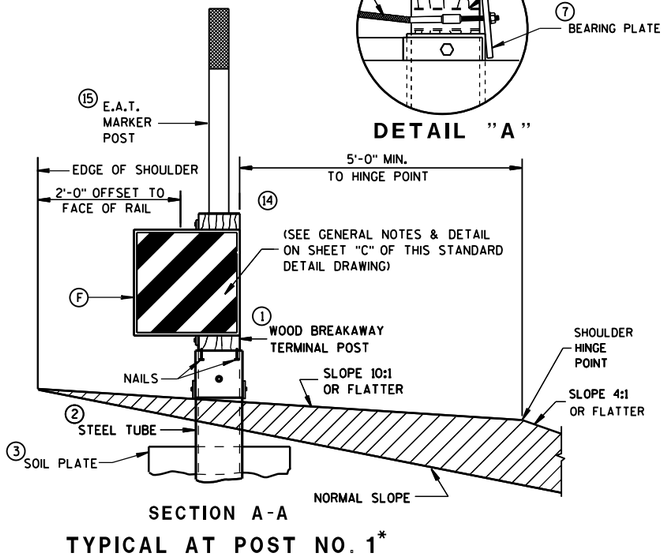




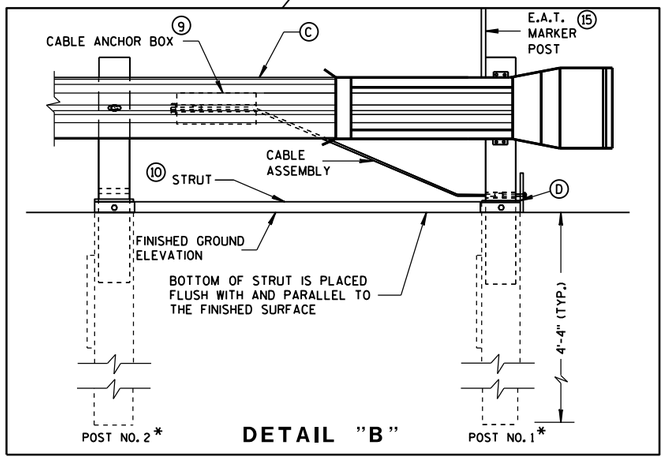
SECTION C-C
TYPICAL AT POST NOS. 6, 8



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*

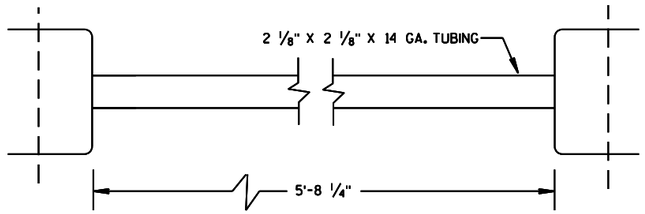


DETAIL "B"

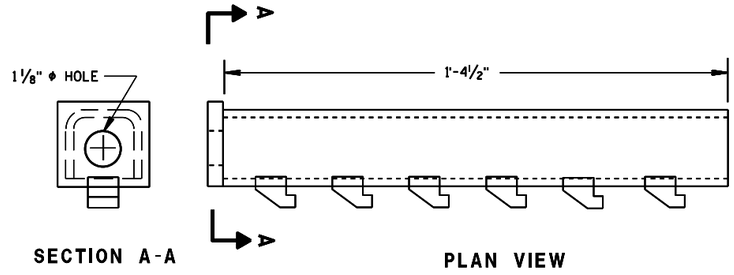
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

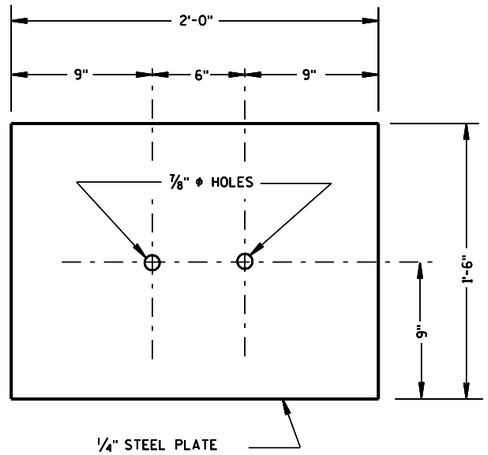
6
S.D.D. 14 B 24-8a



⑩ STRUT DETAIL (SKT-350)

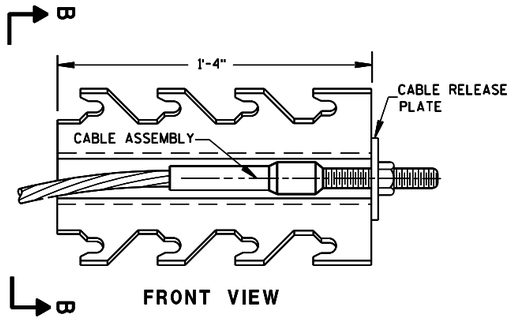


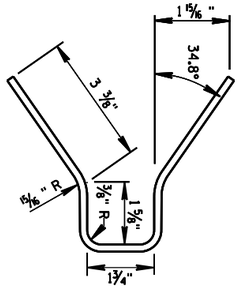
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

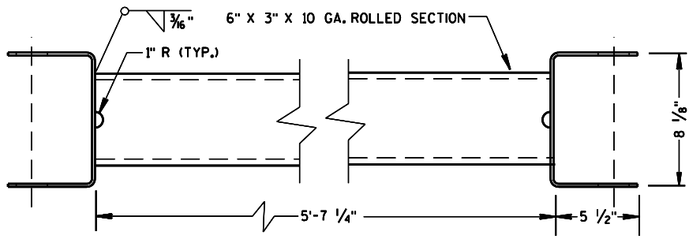
(SKT-350, ET-2000/ET-2000 PLUS)





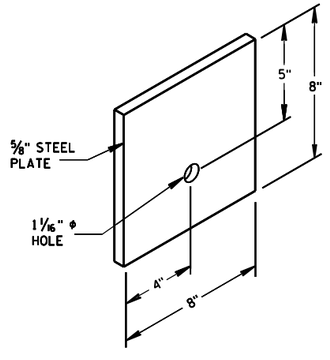
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

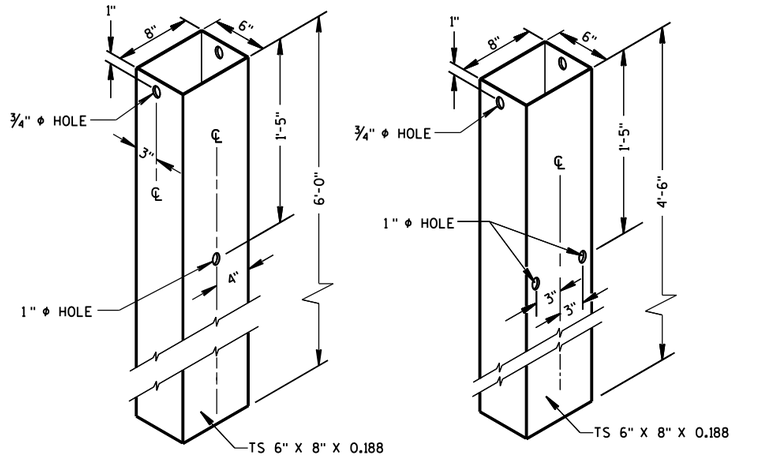
(SKT-350, ET-2000/ET-2000 PLUS)

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

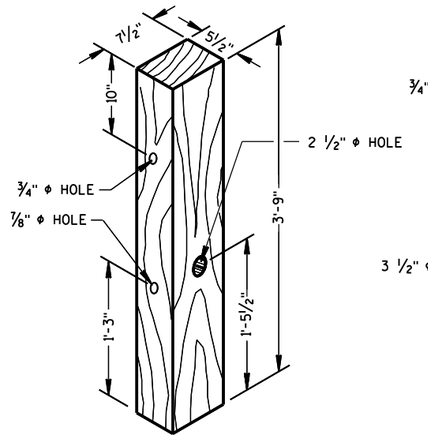
6

S.D.D. 14 B 24-8b

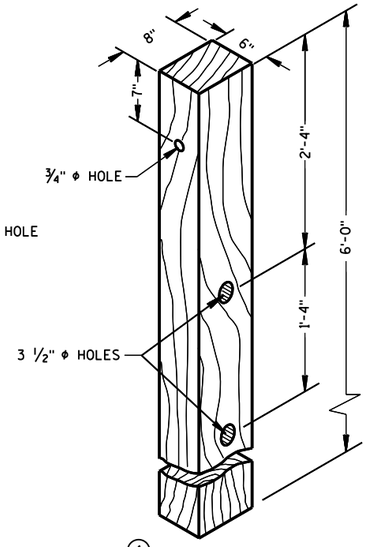


② 72" STEEL TUBE
(POSTS NO. 1-4

② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

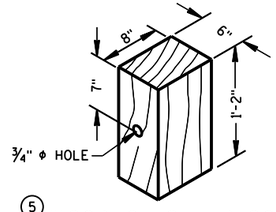
WOOD BREAKAWAY POSTS

GENERAL NOTES

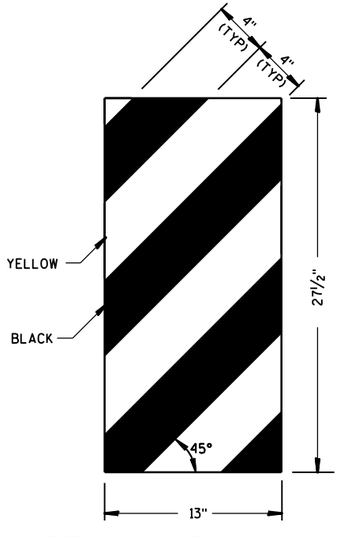
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH,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

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

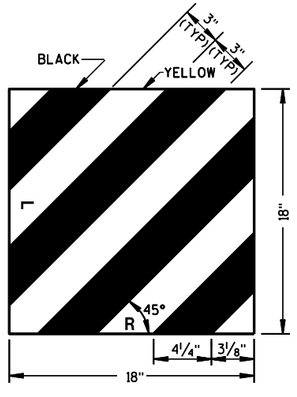
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



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

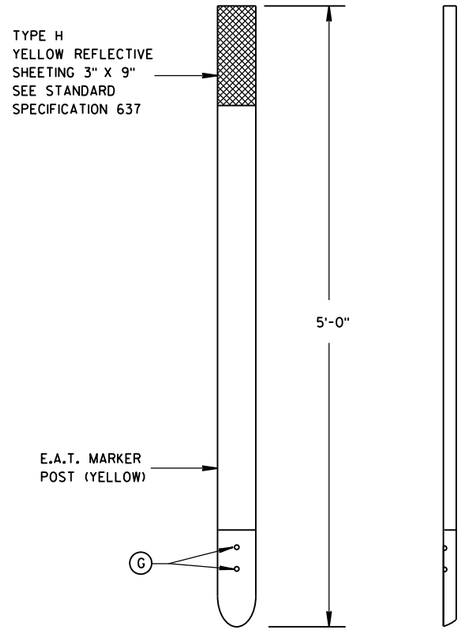


ET-2000 PLUS ONLY



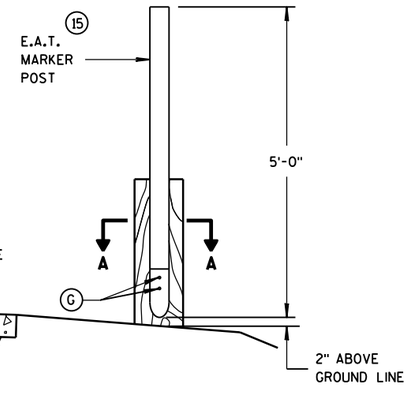
ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

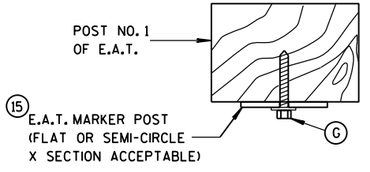


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 24-8c

6

S.D.D. 14 B 24-8c

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.

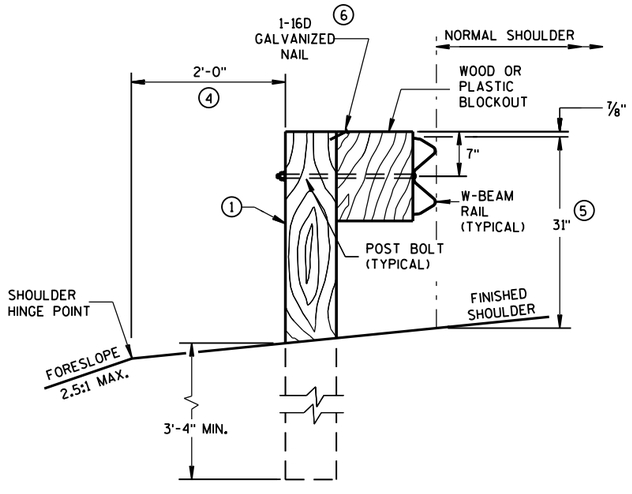
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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).

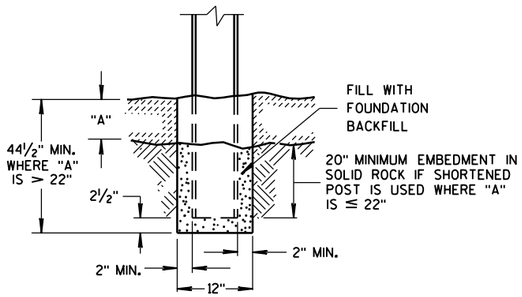
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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.



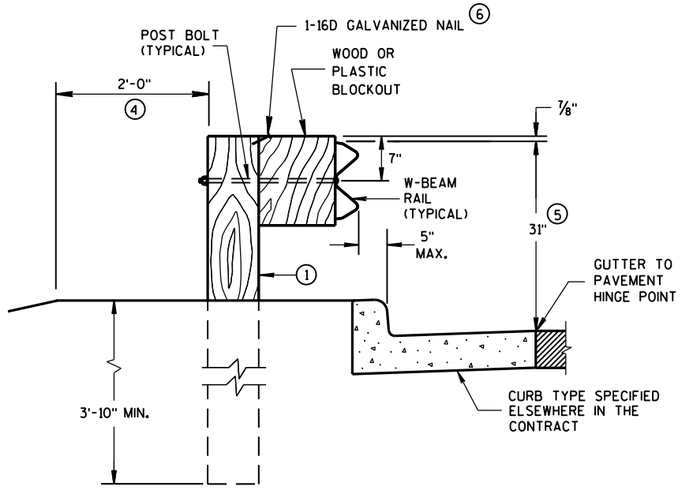
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



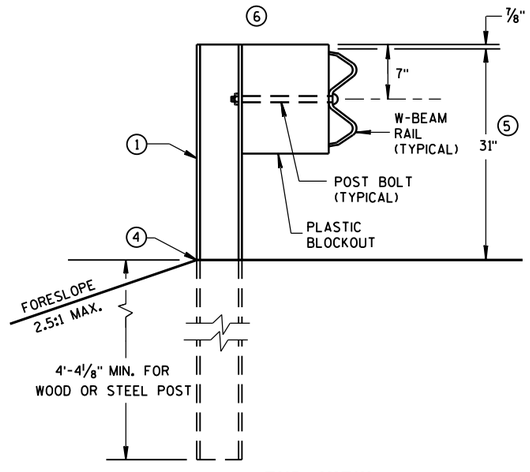
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



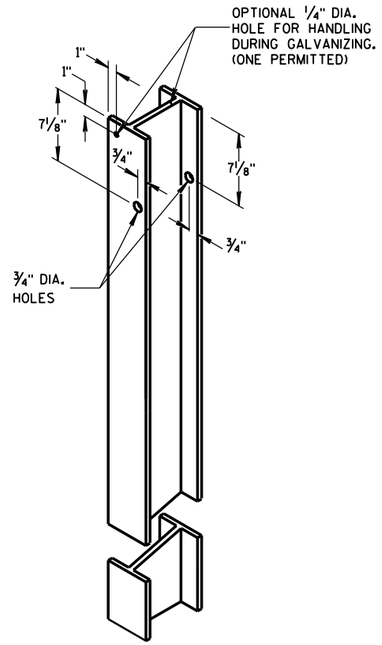
END VIEW

LOCATED ALONG A CURBED ROADWAY

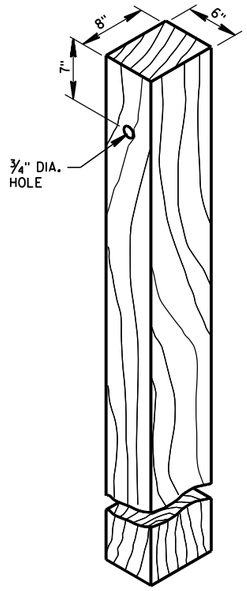


END VIEW

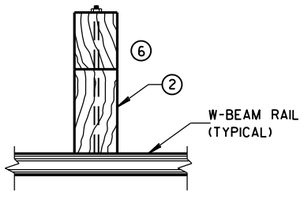
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



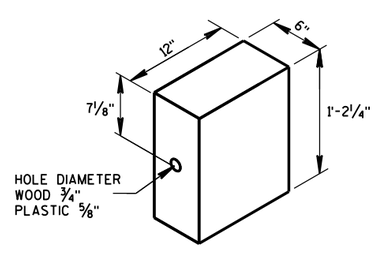
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



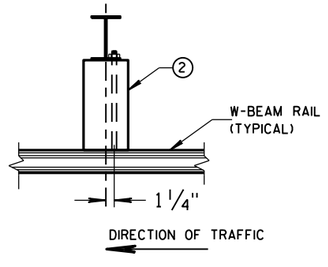
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



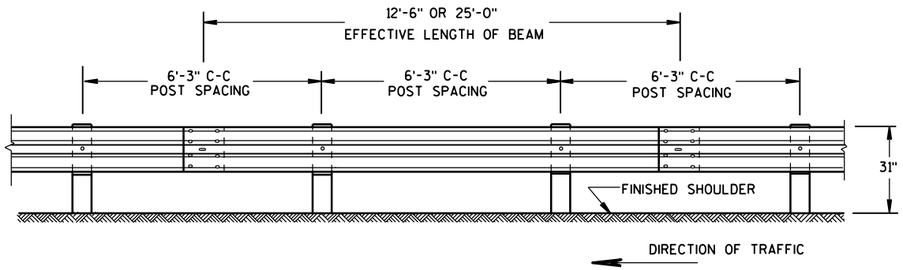
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

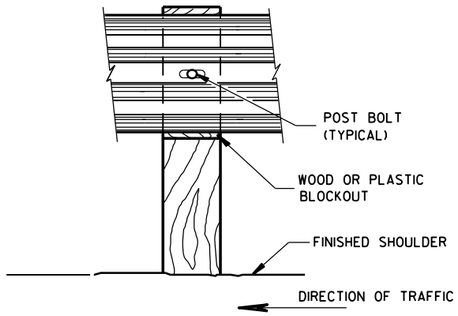
6

S.D.D. 14 B 42-4a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

8. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

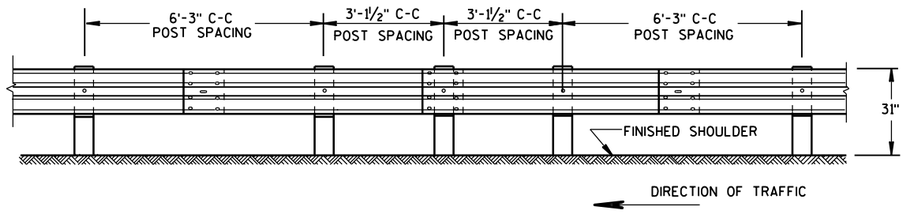
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

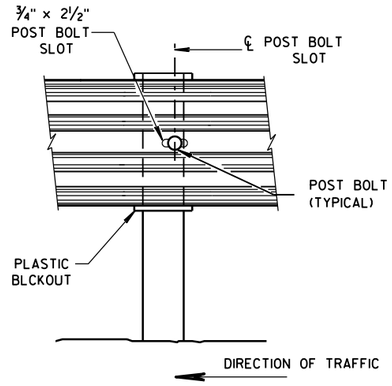
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

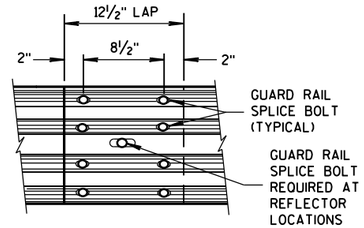


FRONT VIEW

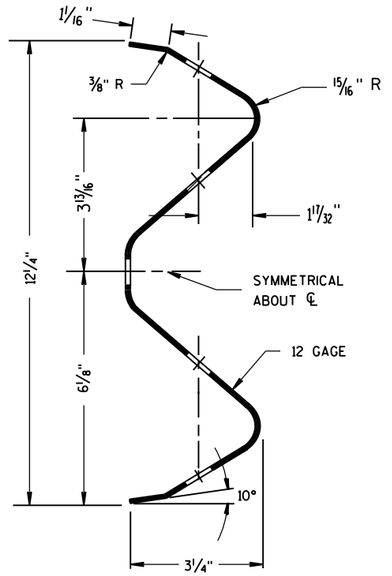
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



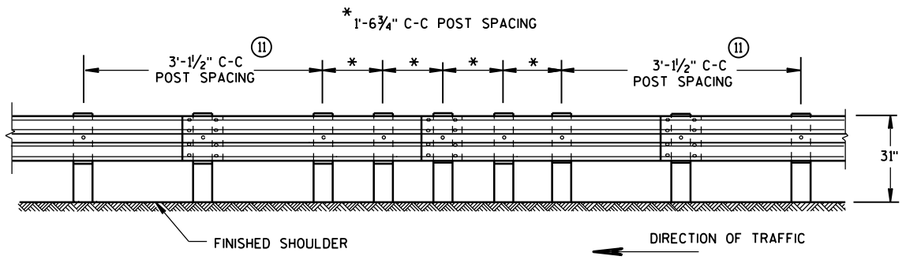
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

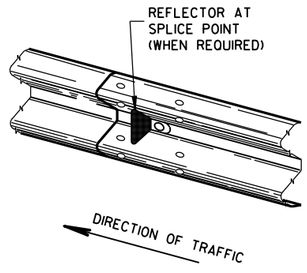


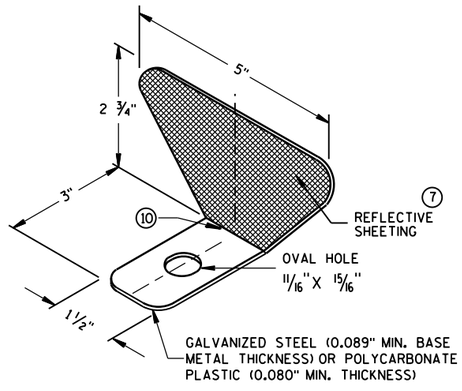
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (7)

REFLECTOR SPACING (8)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (9)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 (10)	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

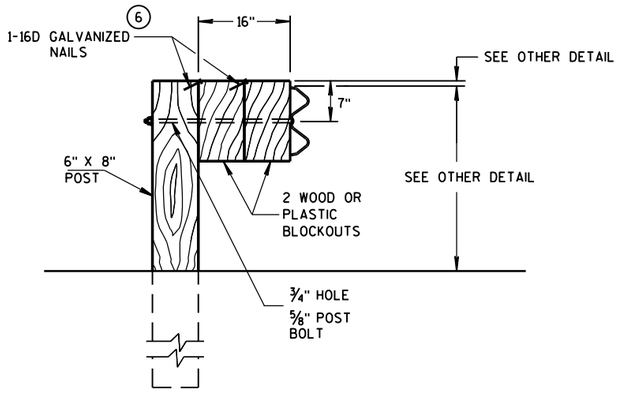
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 50

6

S.D.D. 14 B 42-4b

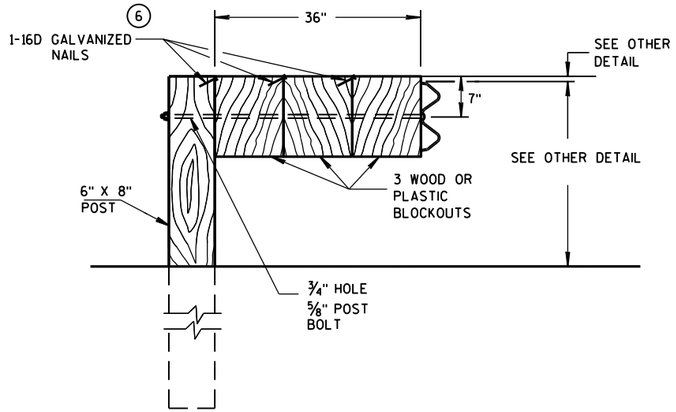
6

S.D.D. 14 B 42-4b



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.

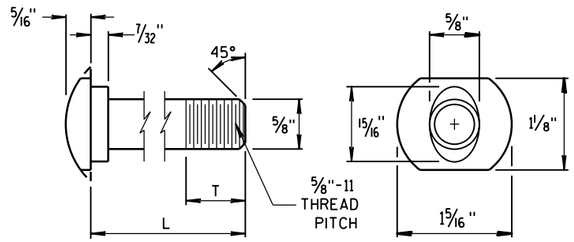


DETAIL FOR 36" BLOCKOUT DEPTH

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.

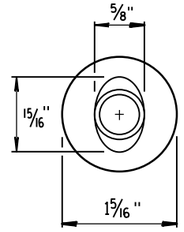
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

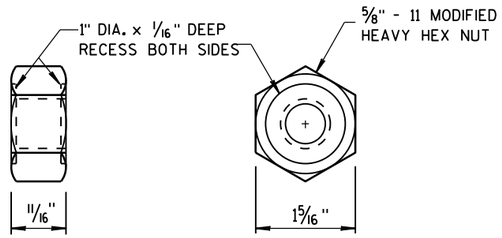


POST BOLT TABLE

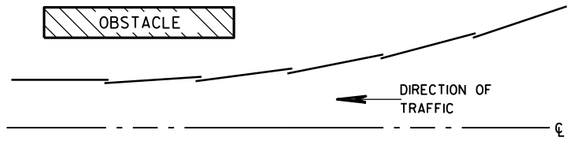
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

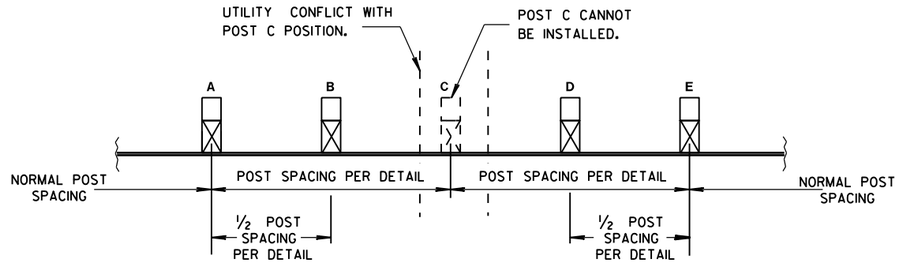


POST BOLT, SPLICE BOLT AND RECESS NUT

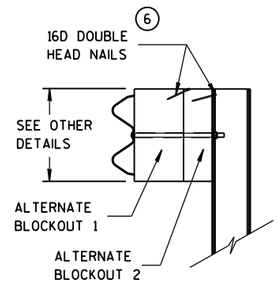


PLAN VIEW

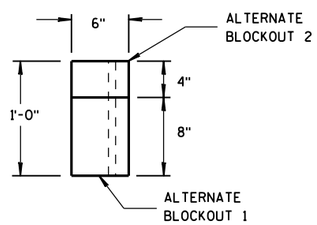
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 14 B 42-4c

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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

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

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

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

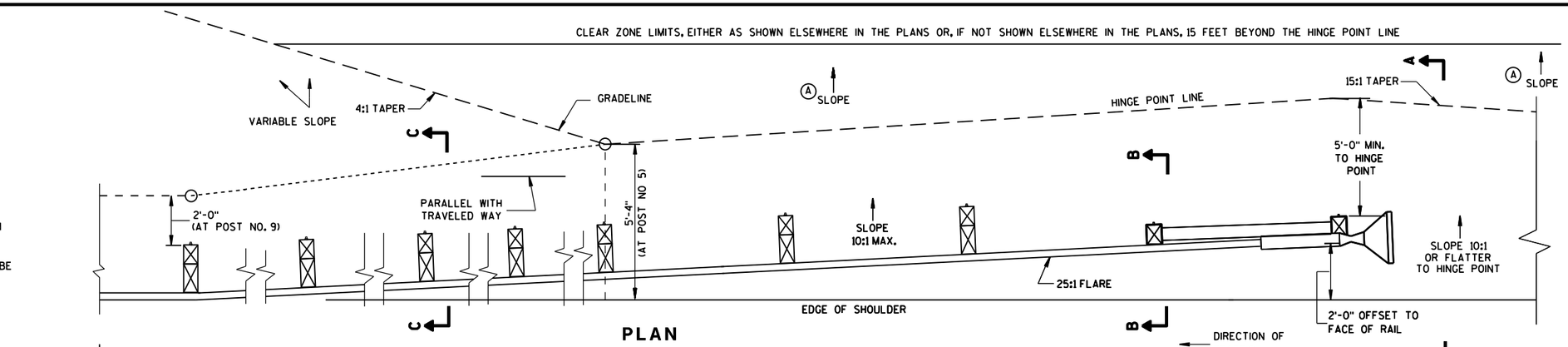
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

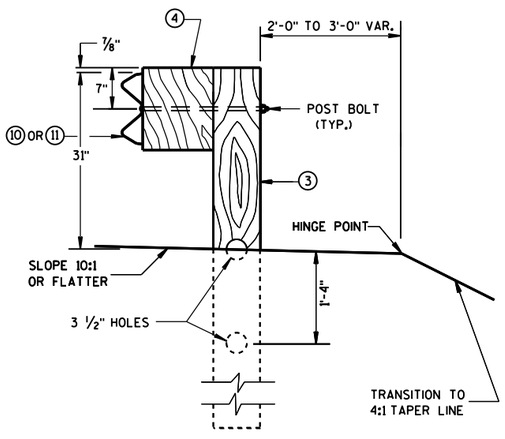
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

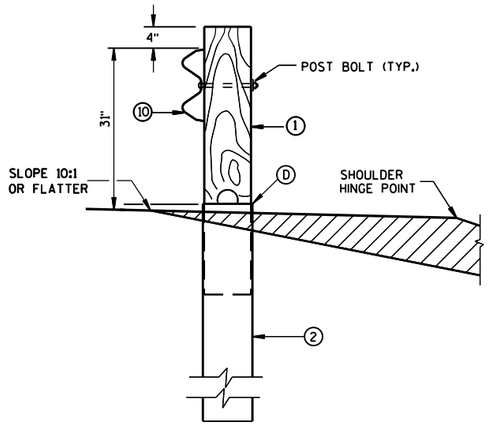
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



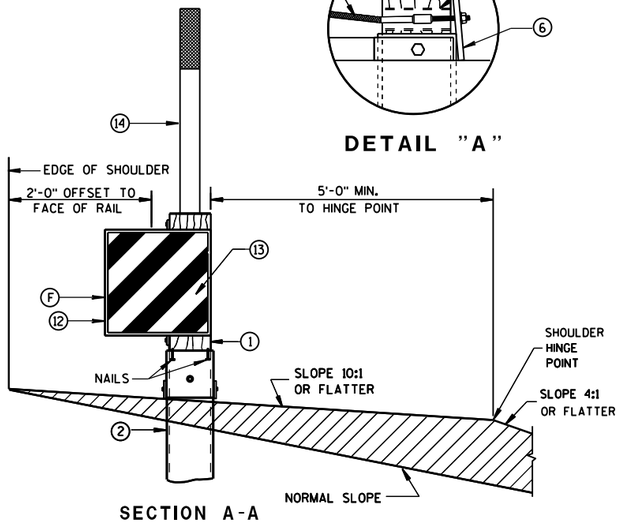
ELEVATION



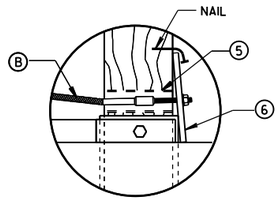
SECTION C-C
TYPICAL AT POST NOS. 3-9



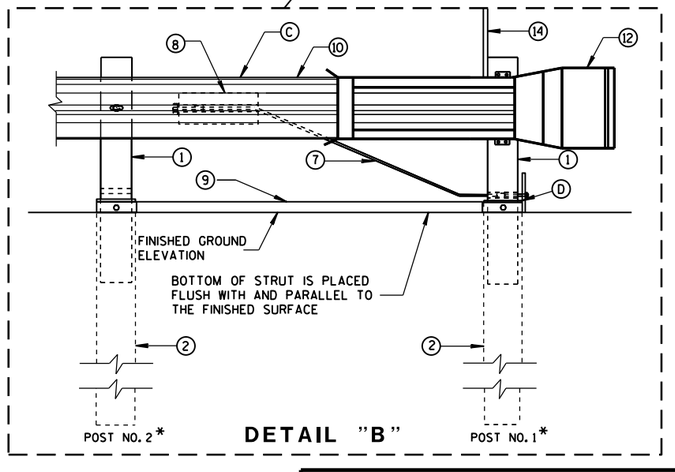
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



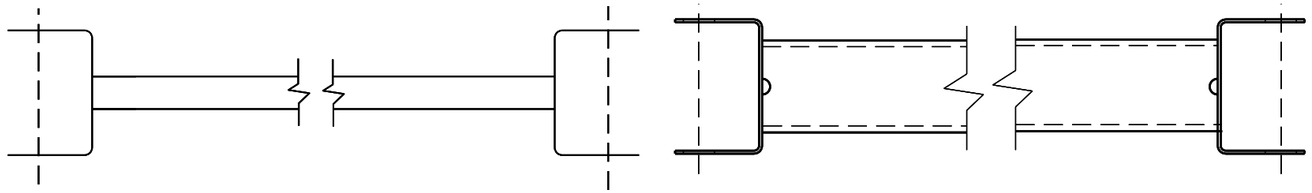
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

S.D.D. 14 B 44-2a

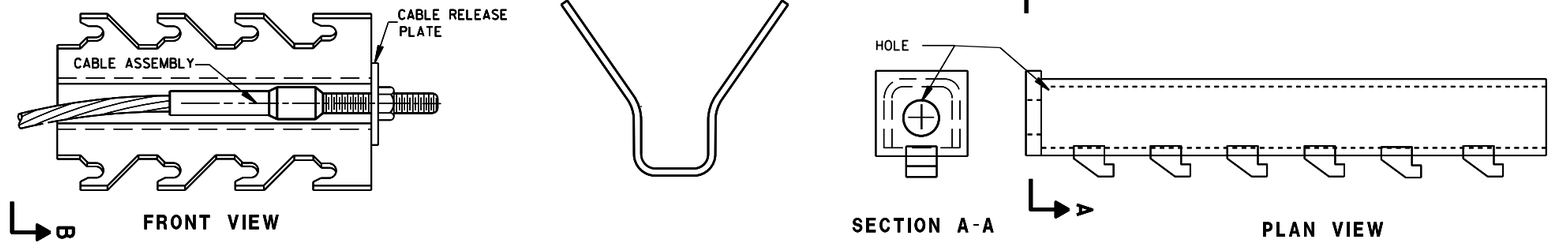
6



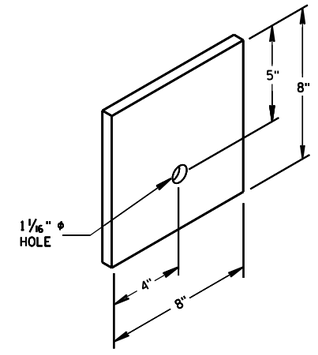
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(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)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)



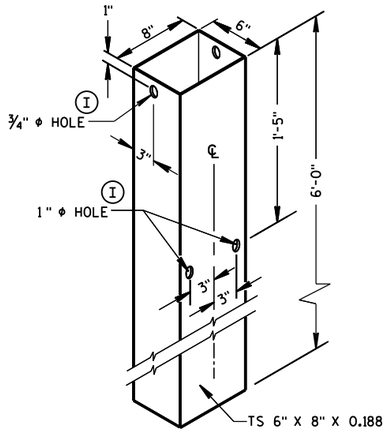
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

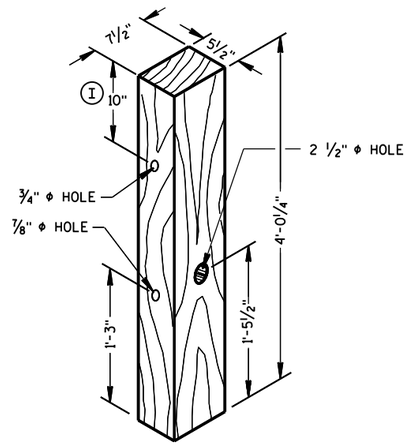
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

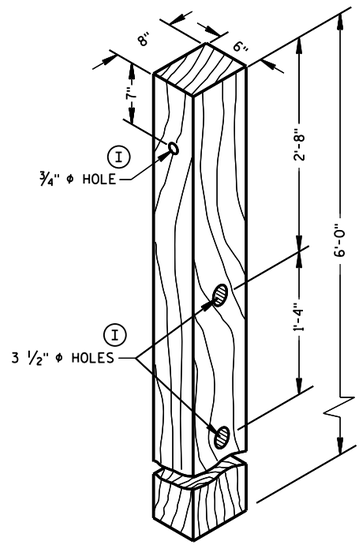


FOUNDATION TUBE (2)



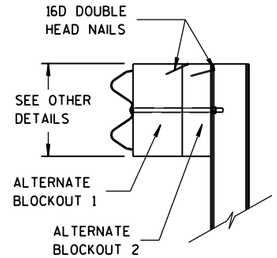
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

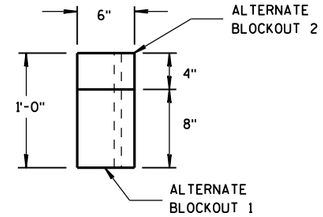


POSTS NUMBER 3-9

WOOD CRT POST (3)

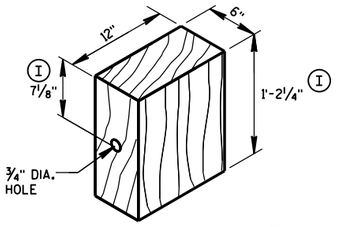


SIDE VIEW



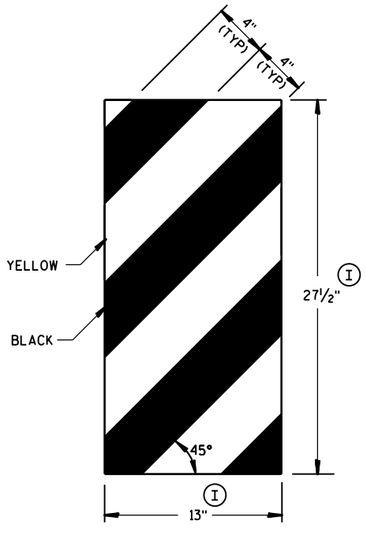
TOP VIEW

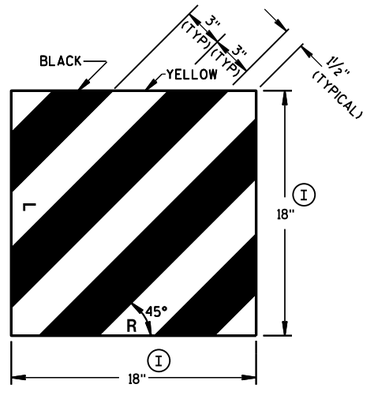
ALTERNATE WOOD BLOCKOUT DETAIL



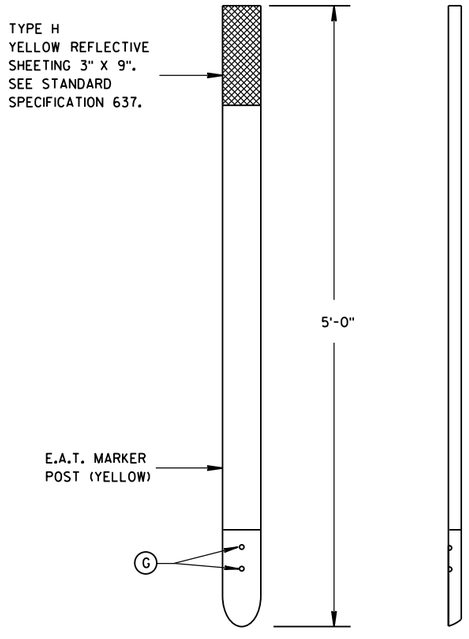
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





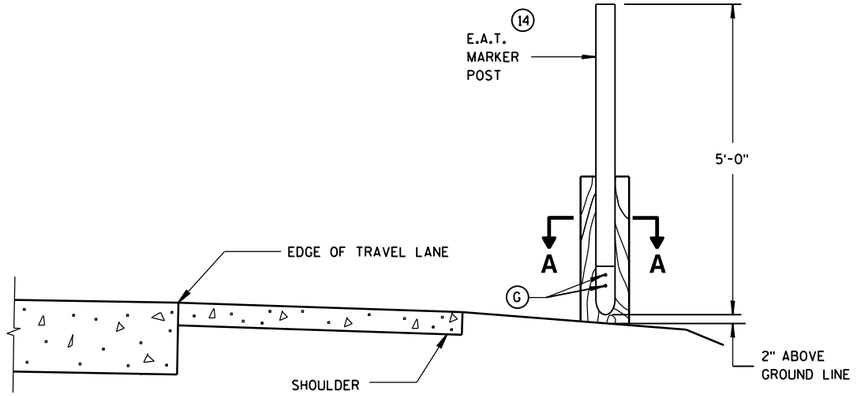
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

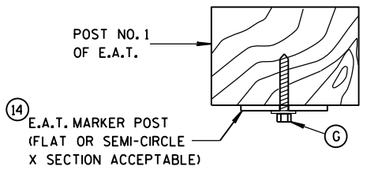
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

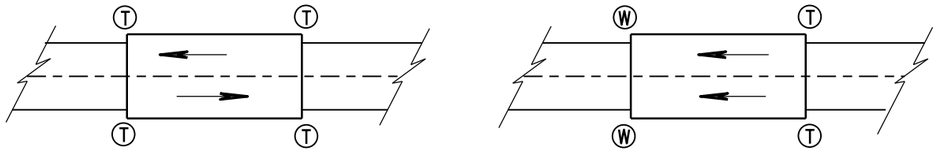
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



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

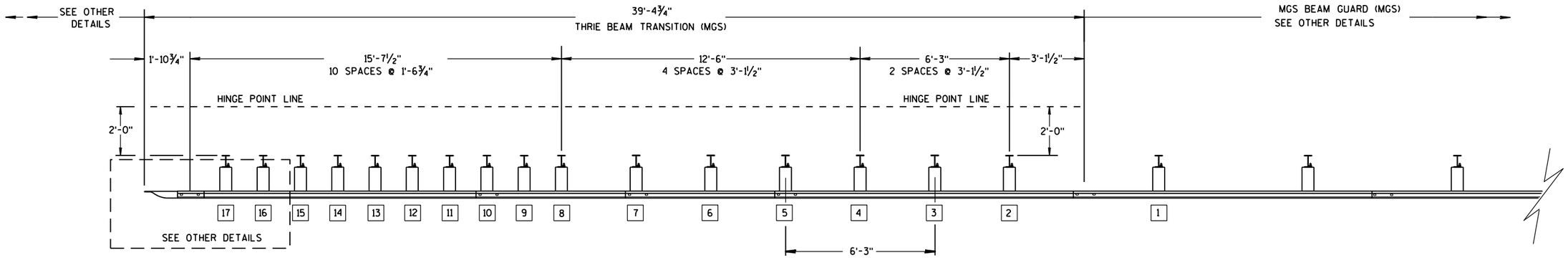
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

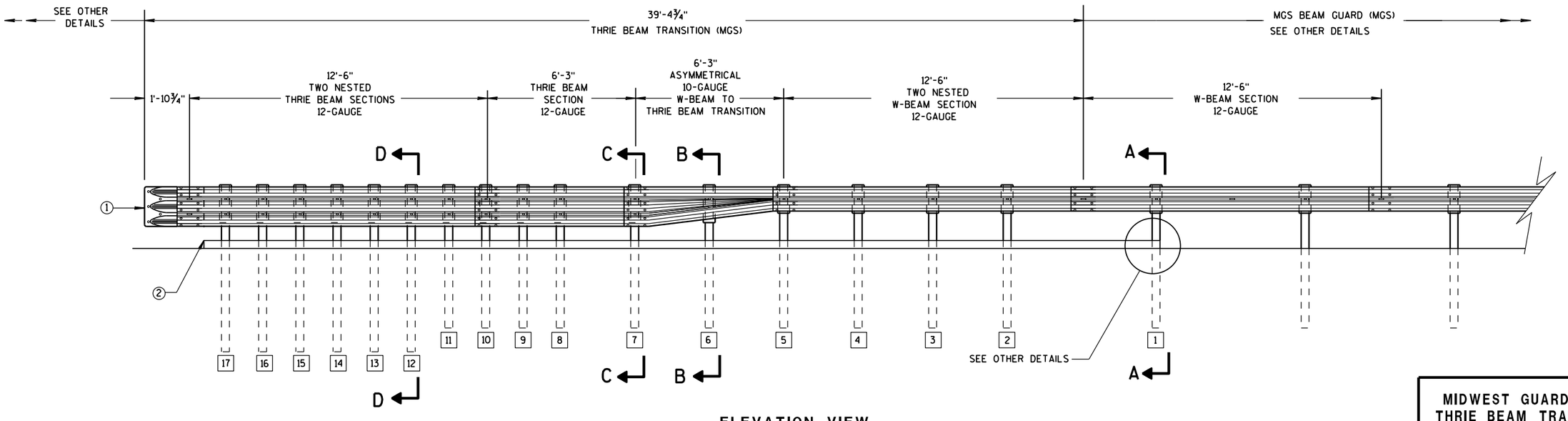
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

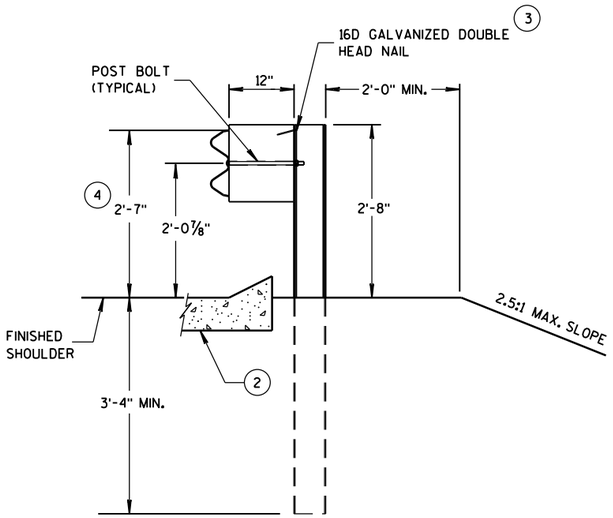
S.D.D. 14 B 45-4a

GENERAL NOTES

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

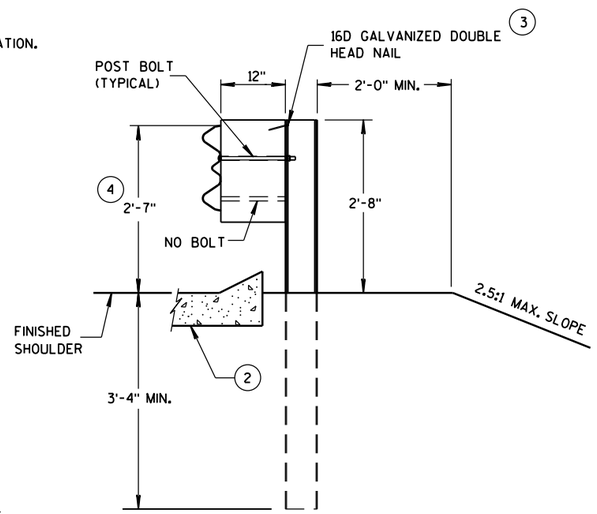
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



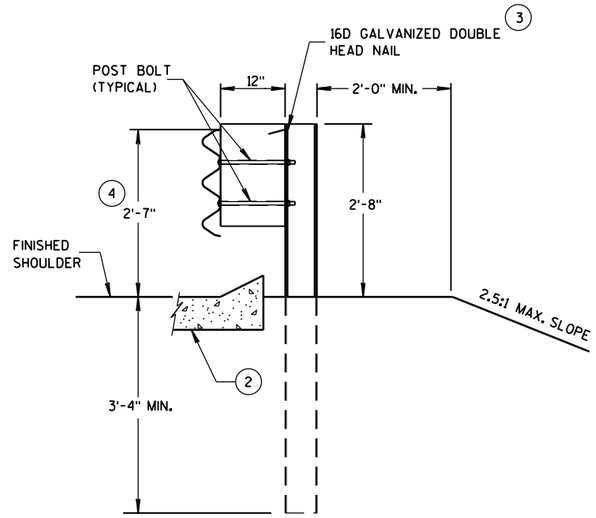
SECTION A-A

POSTS 1-5



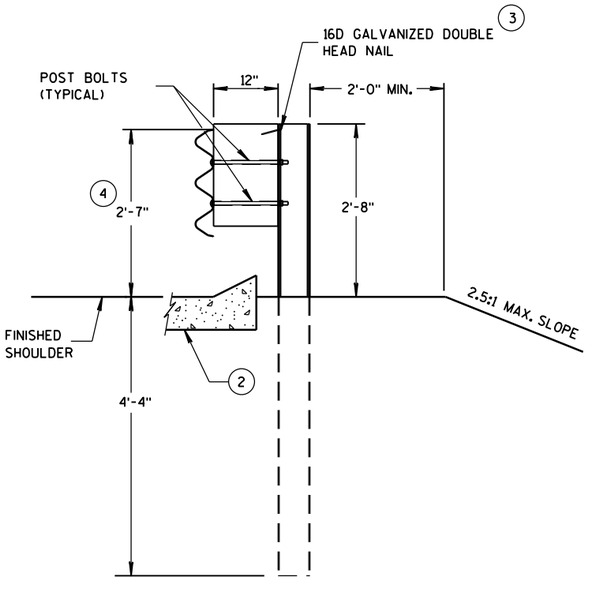
SECTION B-B

POST 6



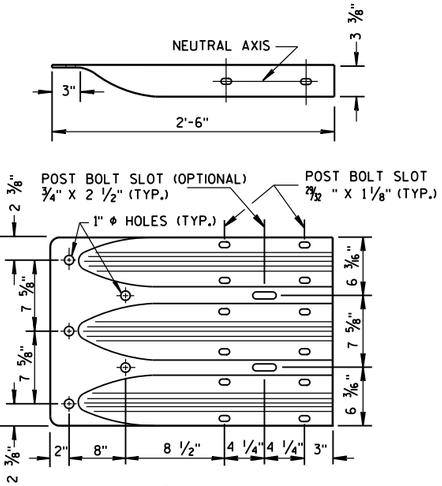
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



THRIE BEAM TERMINAL CONNECTOR

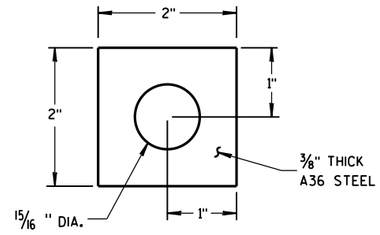
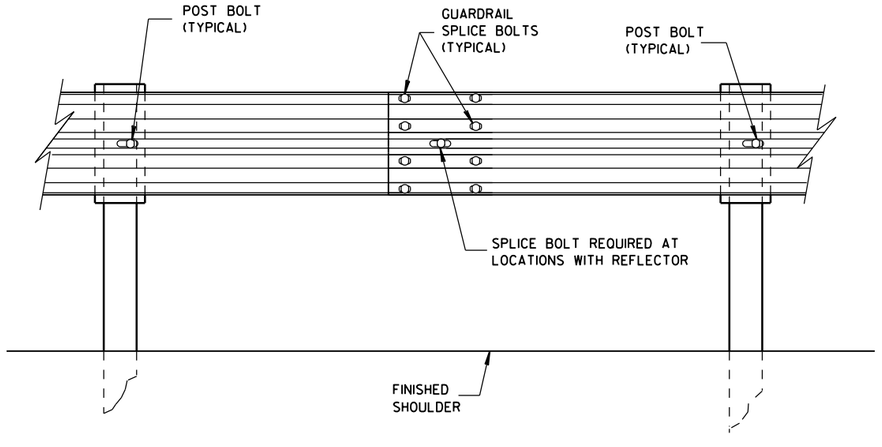
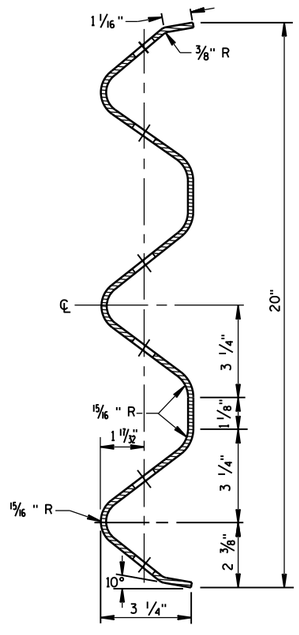


PLATE WASHER DETAIL



SPLICE DETAIL



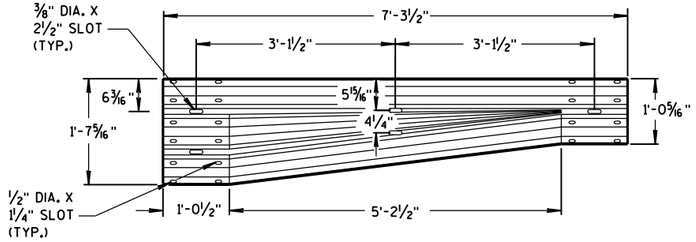
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

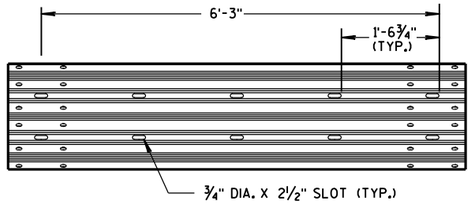
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

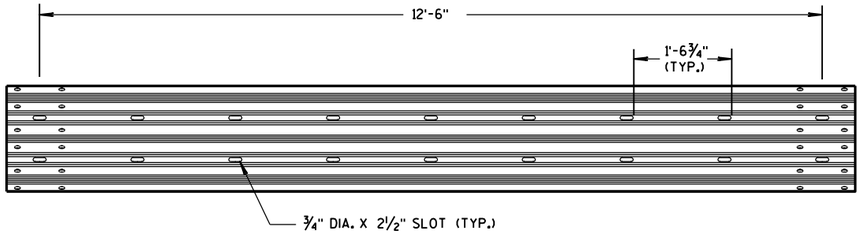
S.D.D. 14 B 45-4b



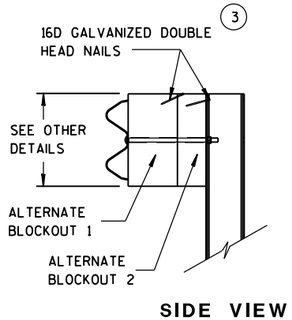
W-BEAM TO THRIE BEAM TRANSITION SECTION



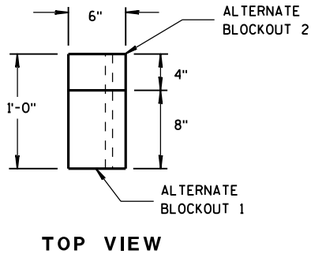
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

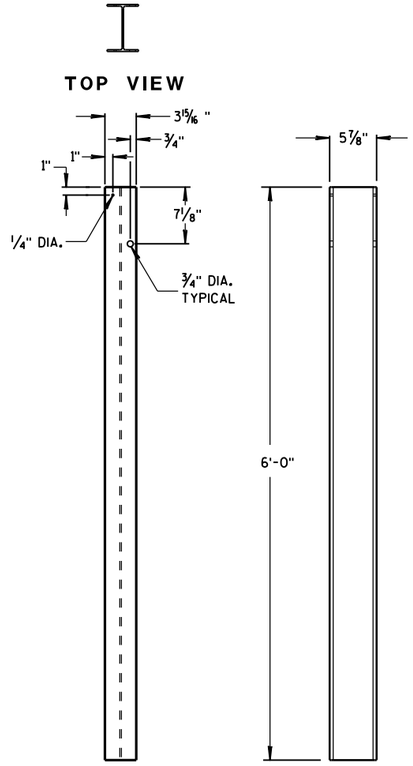


SIDE VIEW

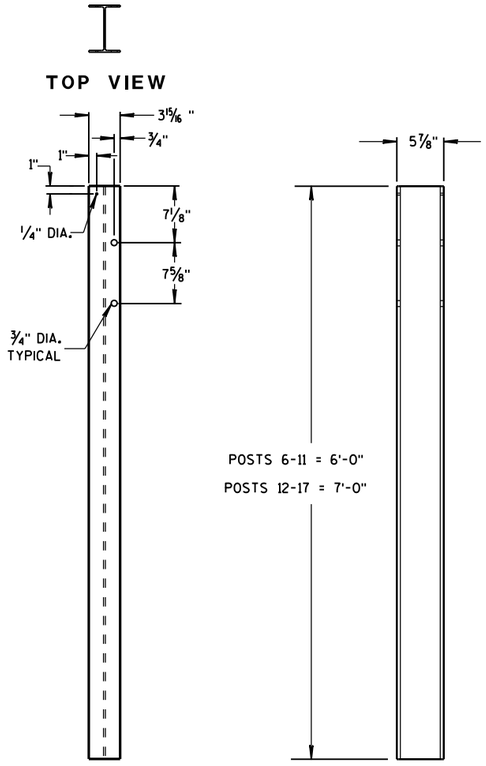


TOP VIEW

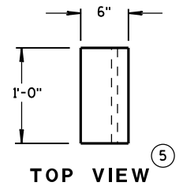
ALTERNATE WOOD BLOCKOUT DETAIL



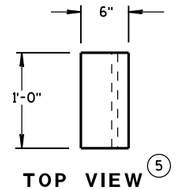
STEEL POSTS 1-5



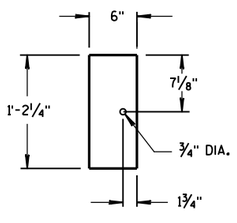
STEEL POSTS 6-17



TOP VIEW (5)

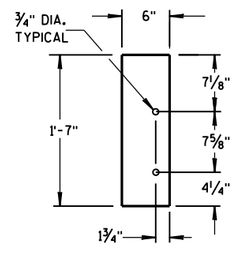


TOP VIEW (5)



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.

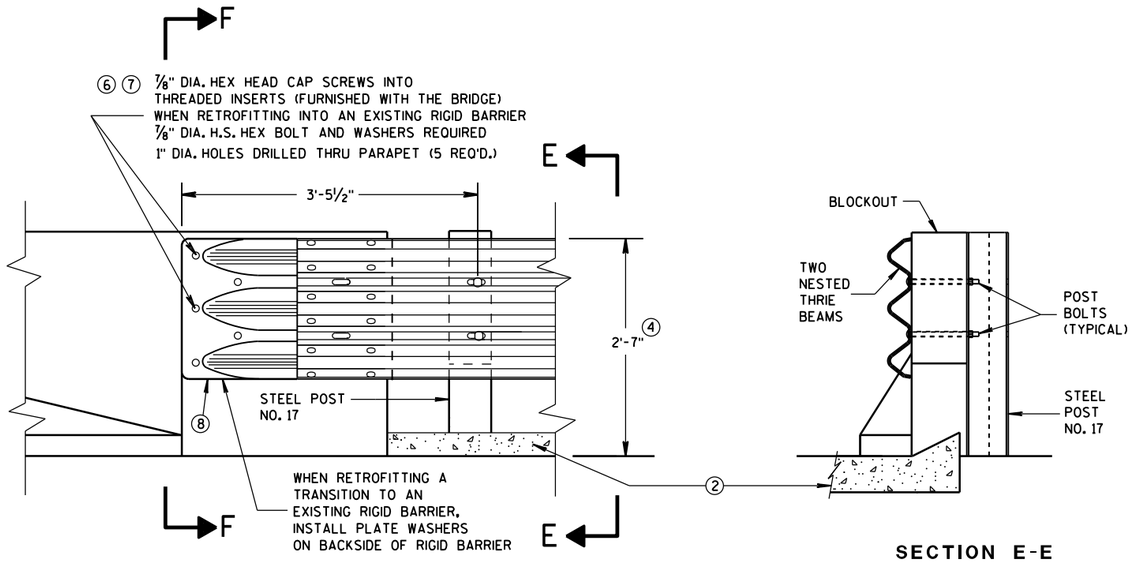
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4c
S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

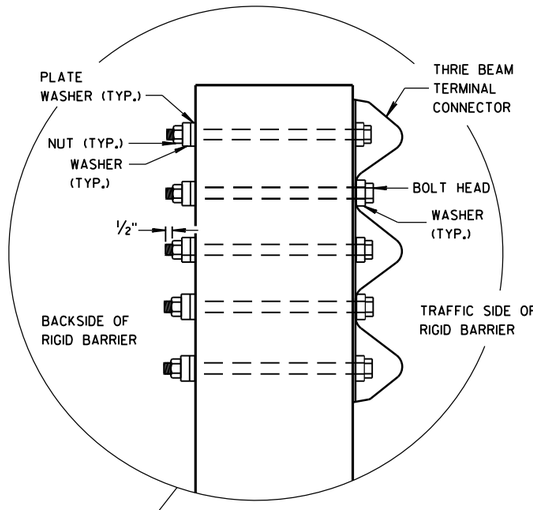
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

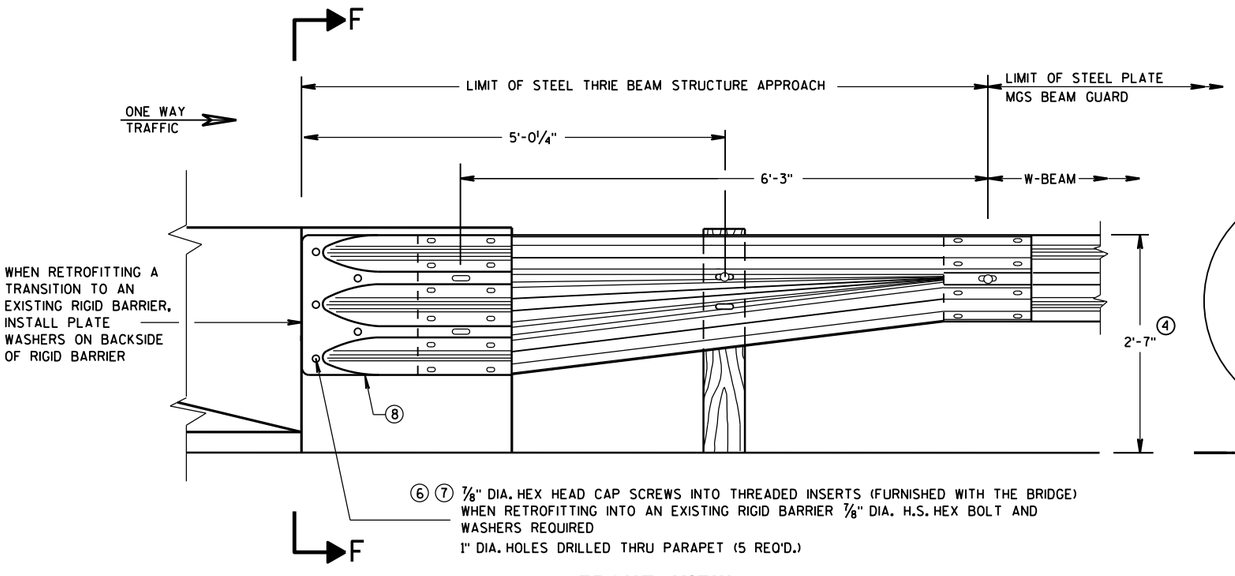
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

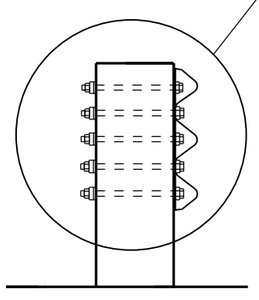
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

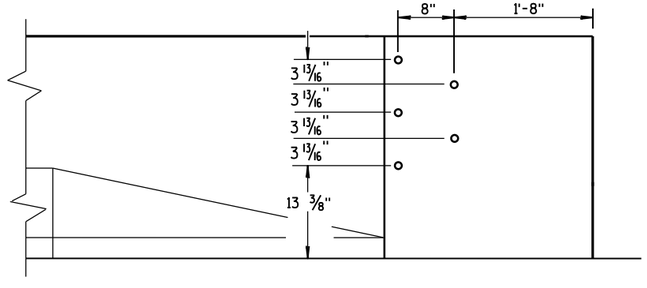




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

NT

6

S.D.D. 14 B 45-4d

6

S.D.D. 14 B 45-4d

GENERAL NOTES

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

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

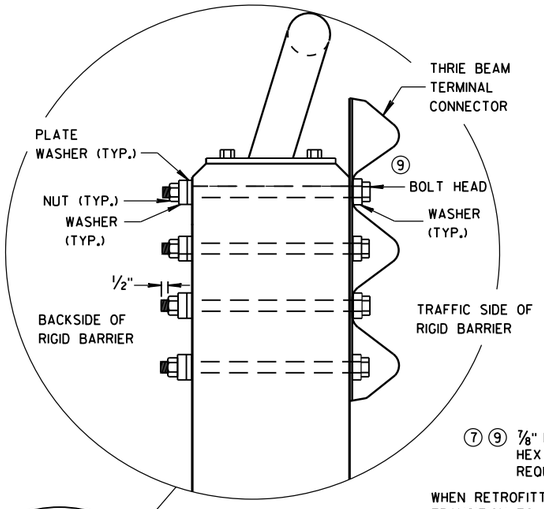
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

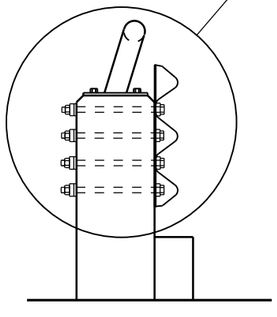
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

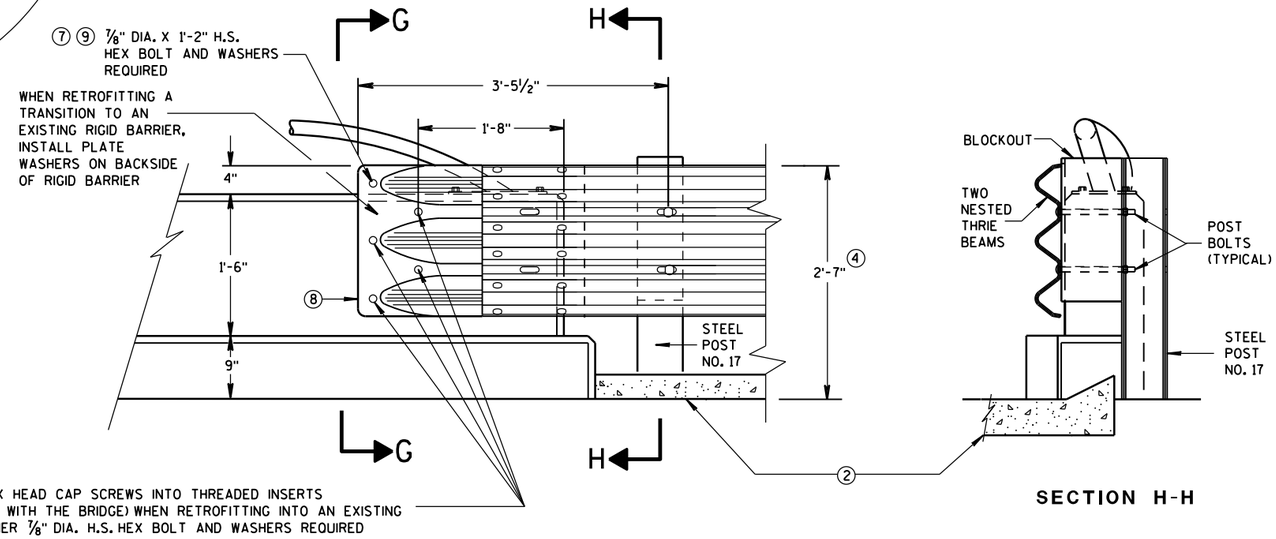
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

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





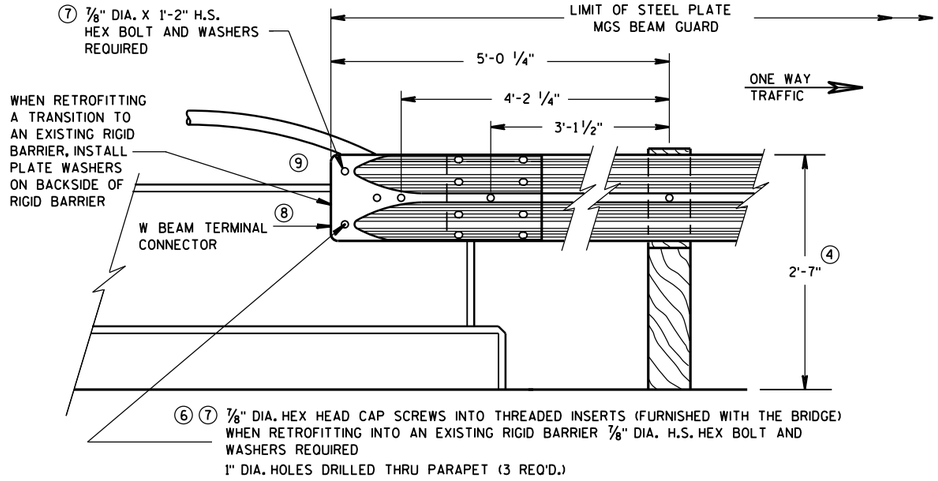
SECTION G-G



FRONT VIEW

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)

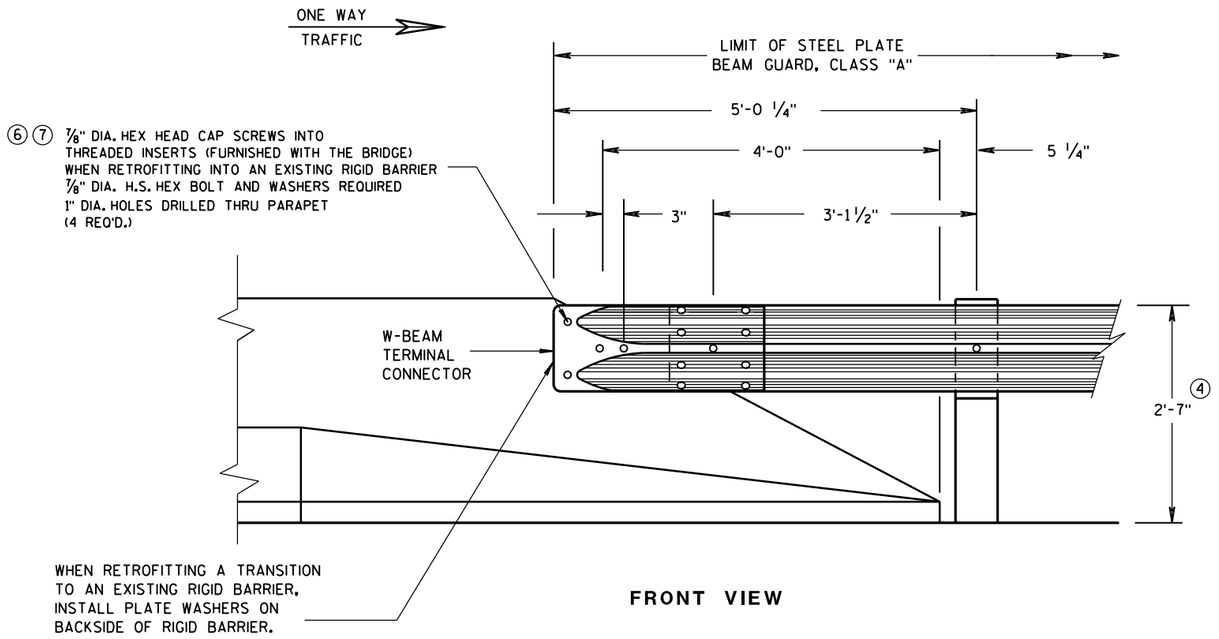
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
NT
FHWA

6

S.D.D. 14 B 45-4e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

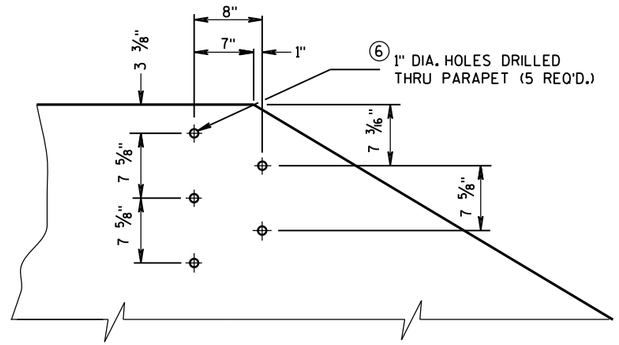
GENERAL NOTES

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

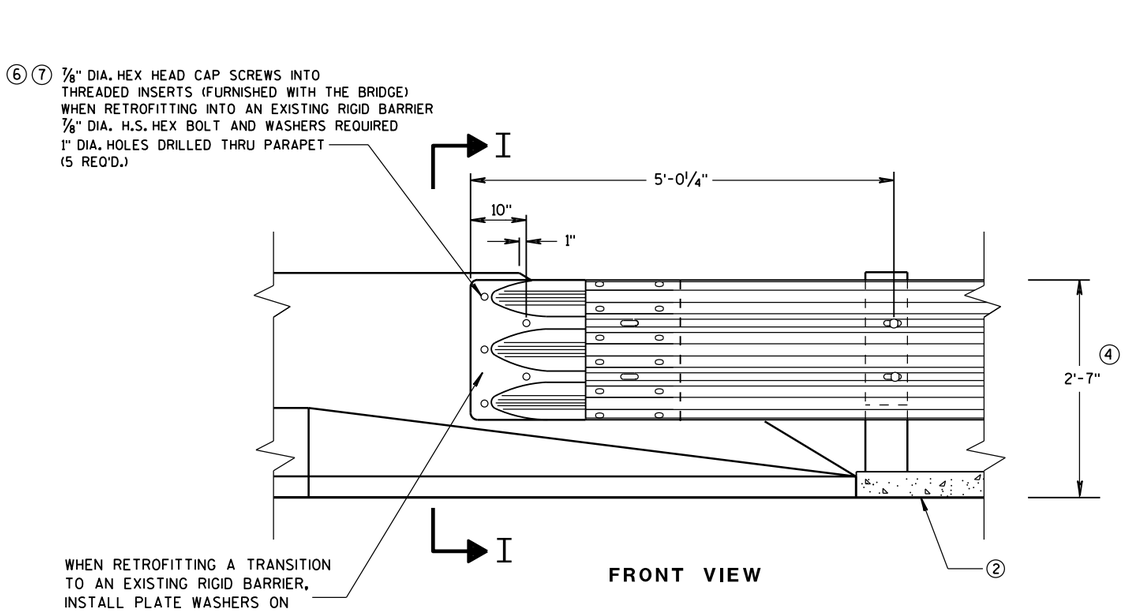
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

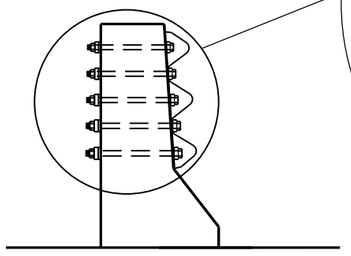
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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



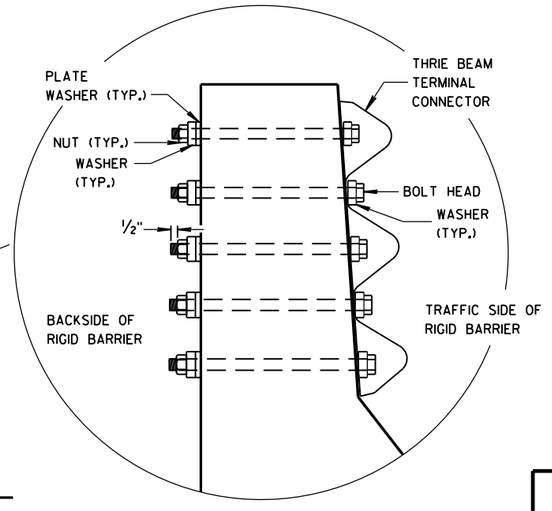
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

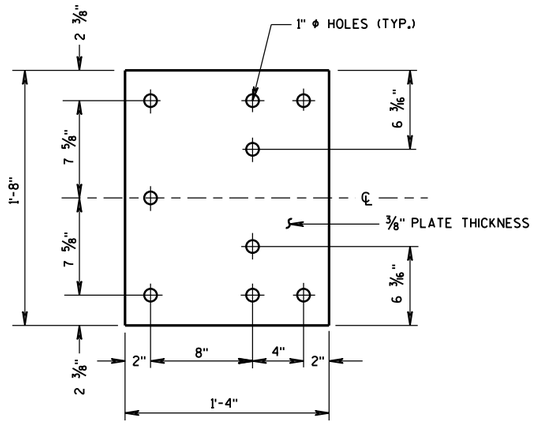
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

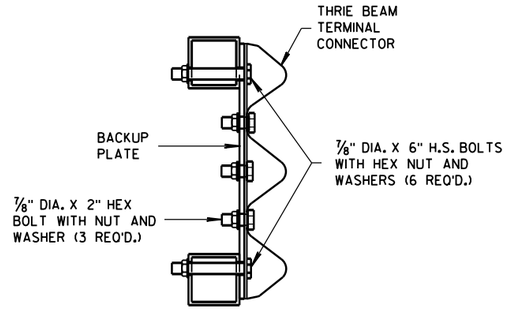
S.D.D. 14 B 45-4f

6

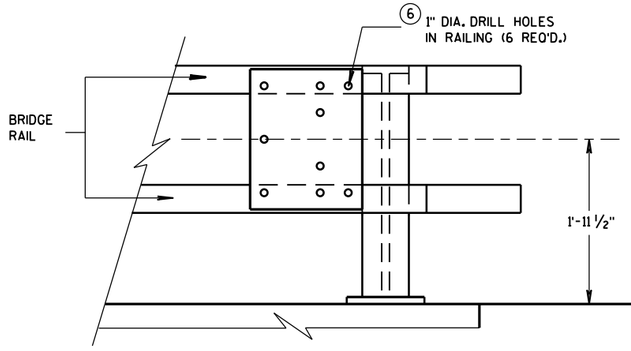
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

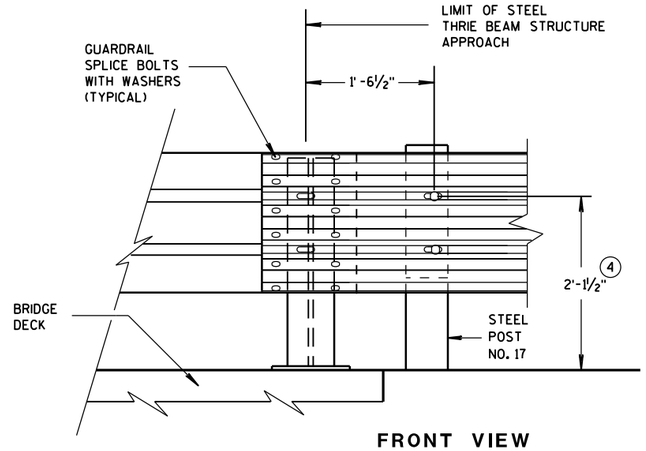


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

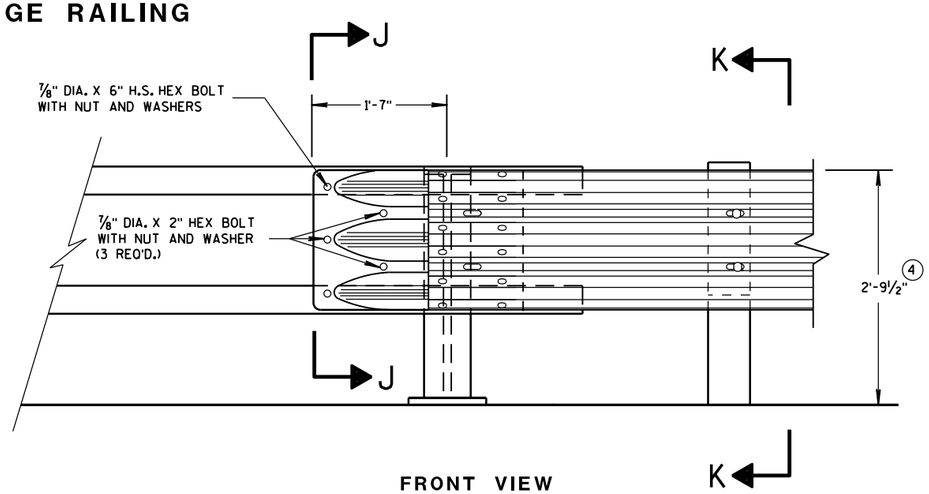
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

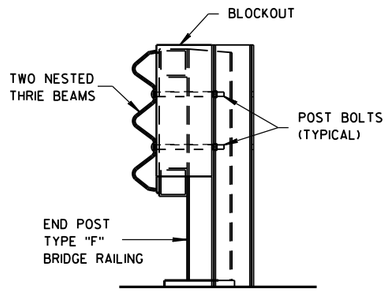


FRONT VIEW

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
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA — NT

6

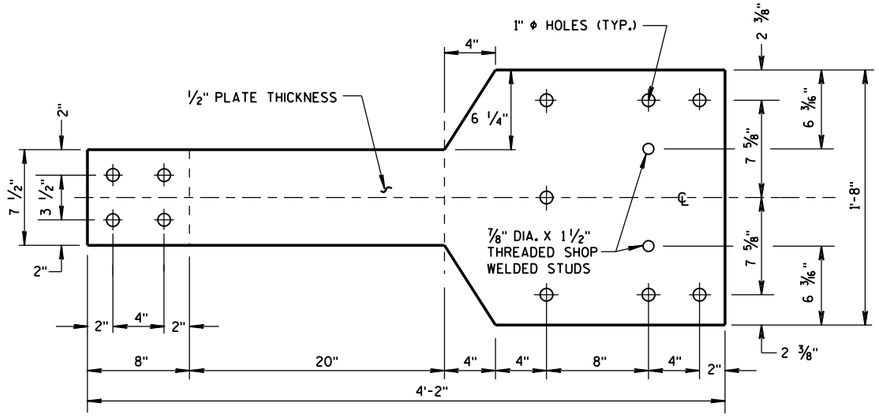
S.D.D. 14 B 45-4g

6

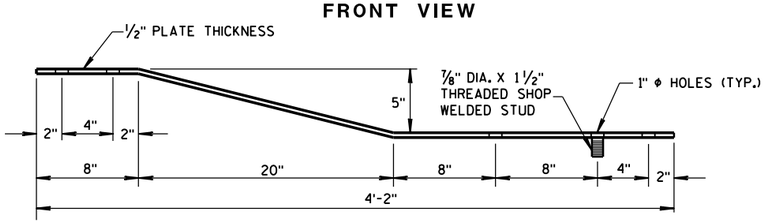
S.D.D. 14 B 45-4g

GENERAL NOTES

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

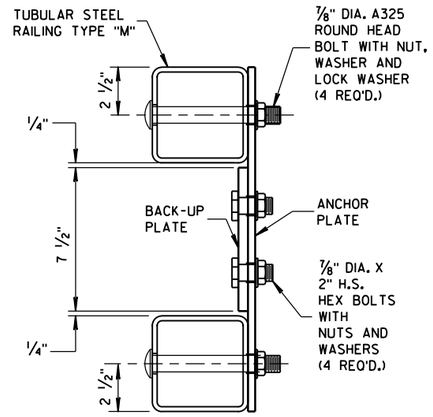


FRONT VIEW

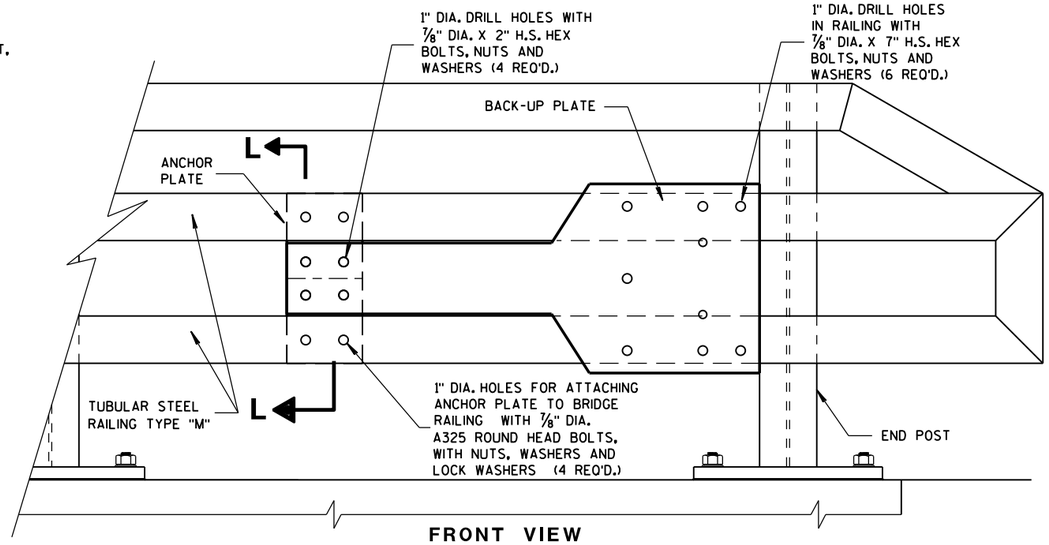


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

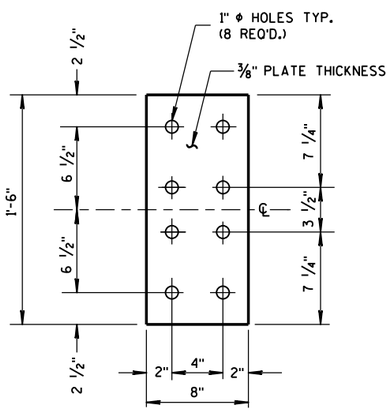


SECTION L-L



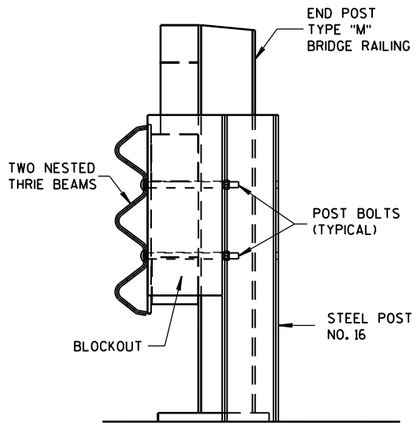
FRONT VIEW

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

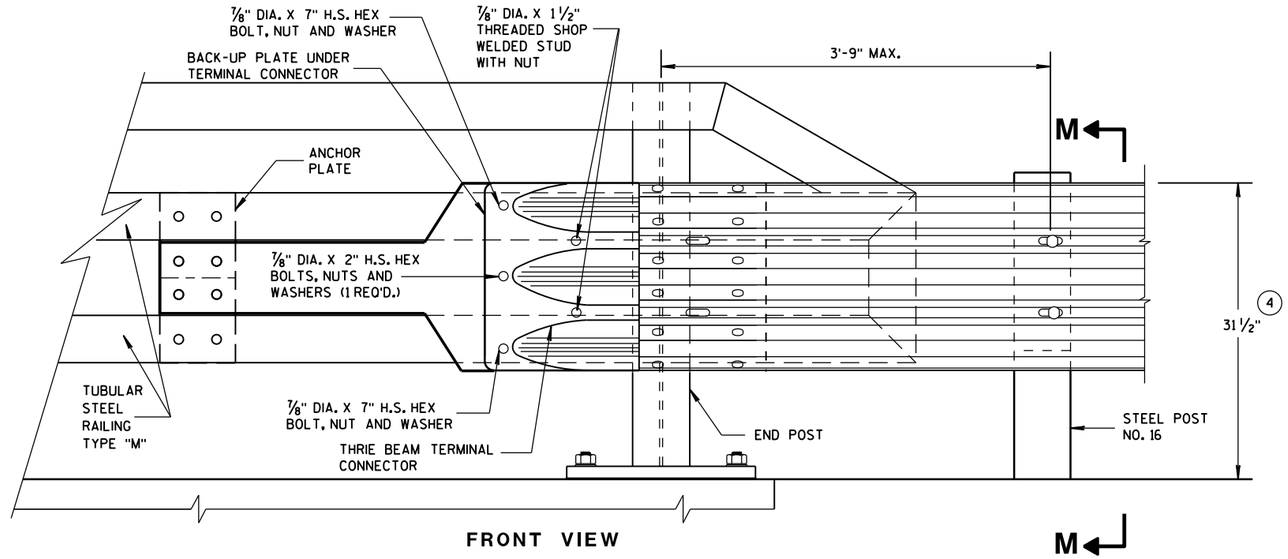


FRONT VIEW

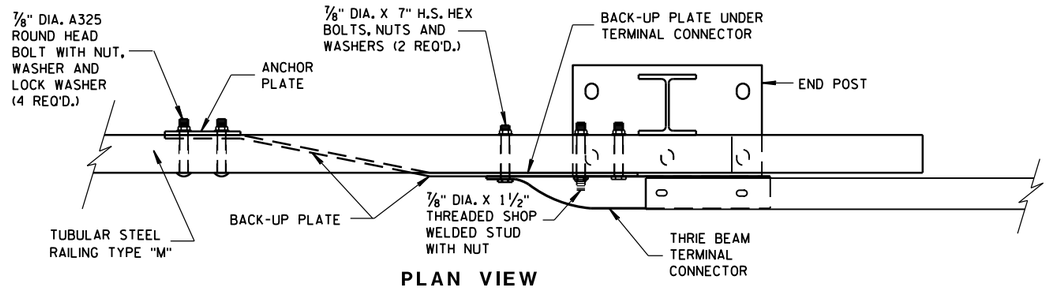
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-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
June, 2015 — /S/ Jerry H. Zogg
DATE — ROADWAY STANDARDS ENGINEER

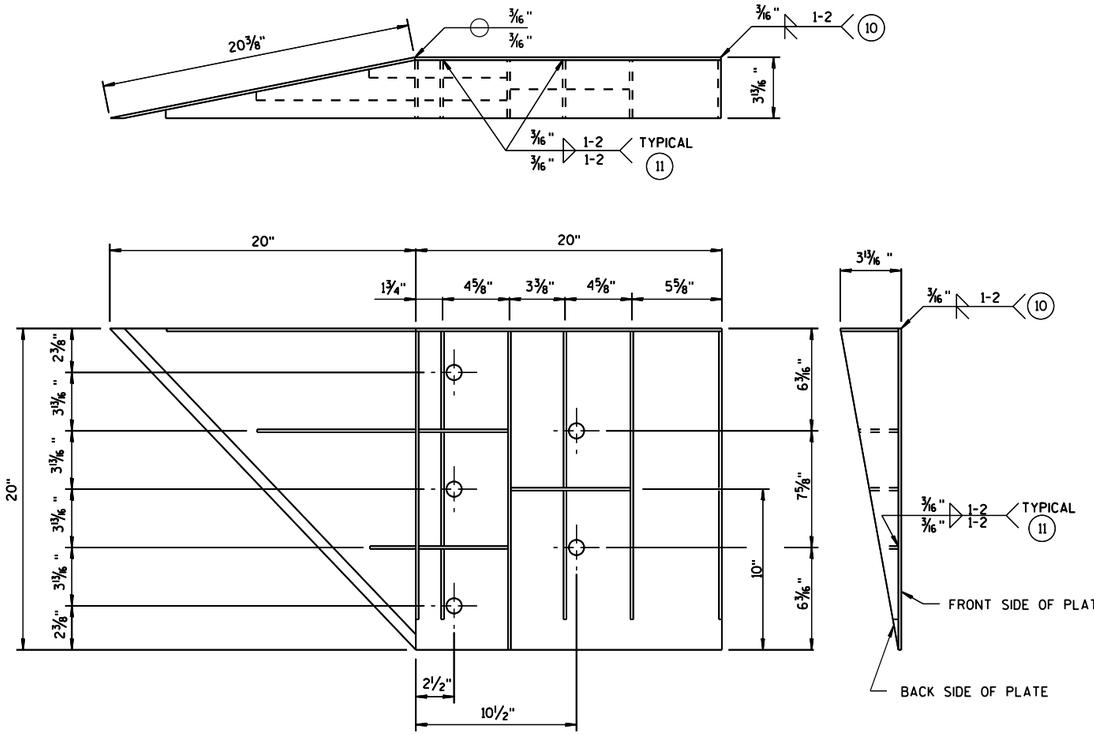
FHWA

6

S.D.D. 14 B 45-4h

6

S.D.D. 14 B 45-4h



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

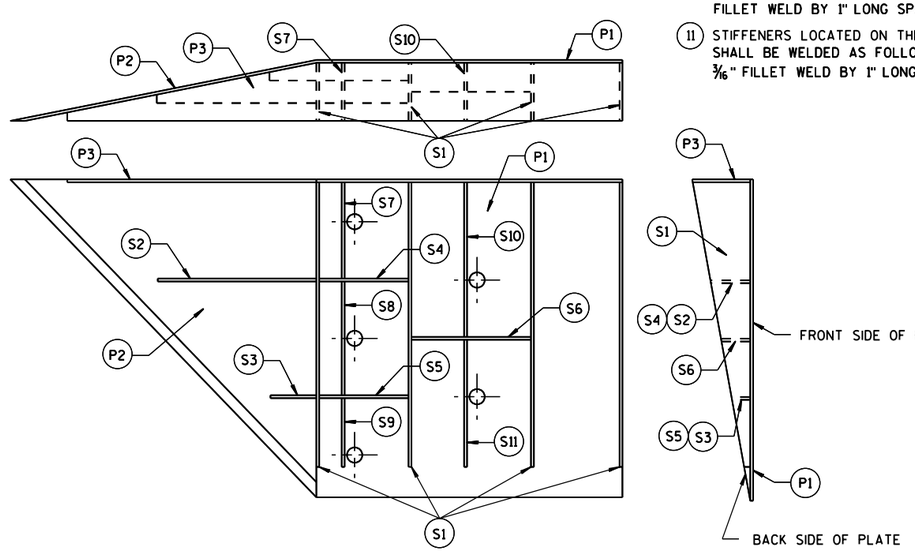


PLATE AND STIFFENER IDENTIFICATION

(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 3/8" 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 1/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

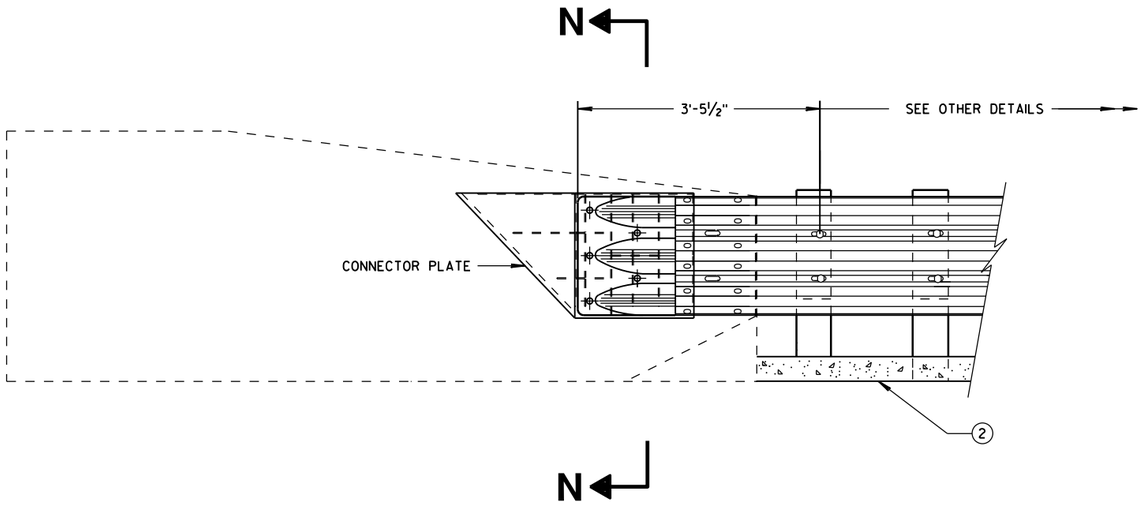
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

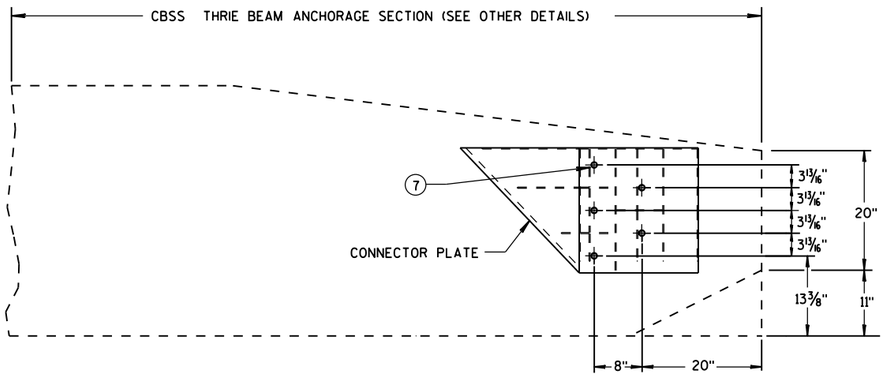
S.D.D. 14 B 45-4i

6

S.D.D. 14 B 45-4i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



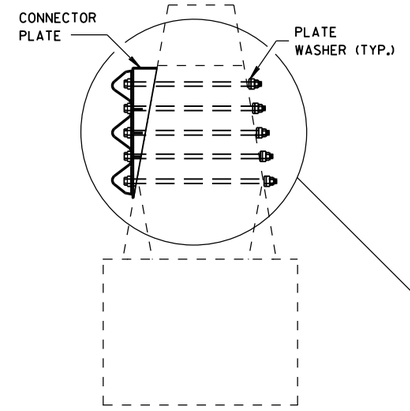
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

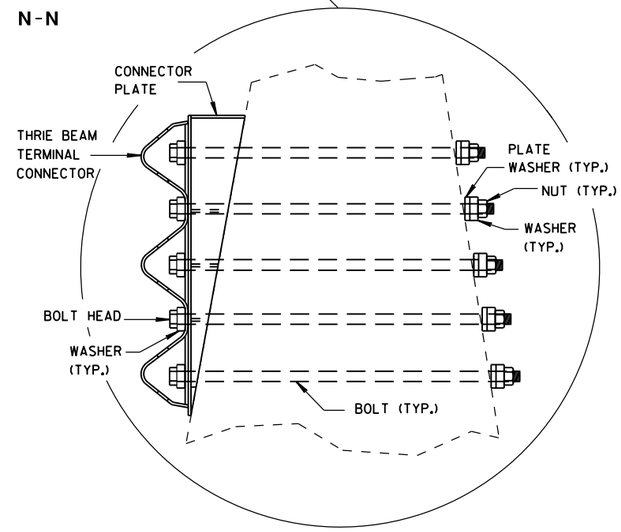
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/8" 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

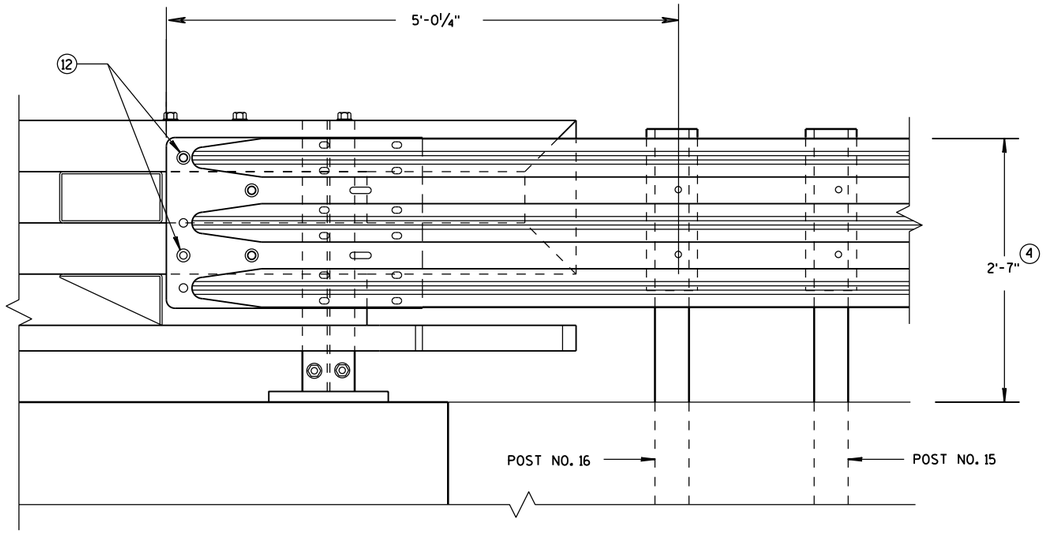
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS DEVELOPMENT ENGINEER
NT
FHWA

6

S.D.D. 14 B 45-4j

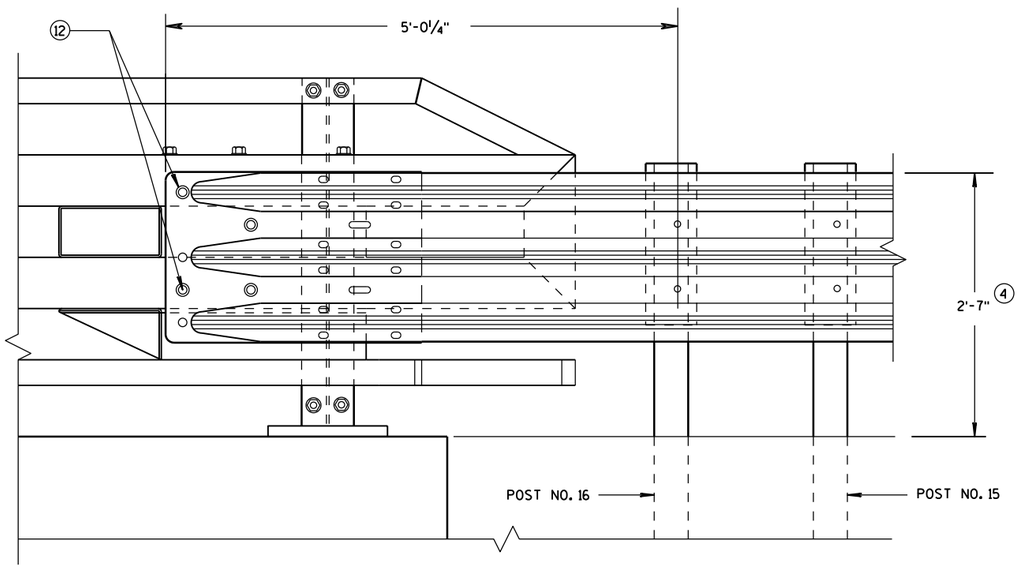
6

S.D.D. 14 B 45-4j



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 ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D 65 NT
ENGINEER

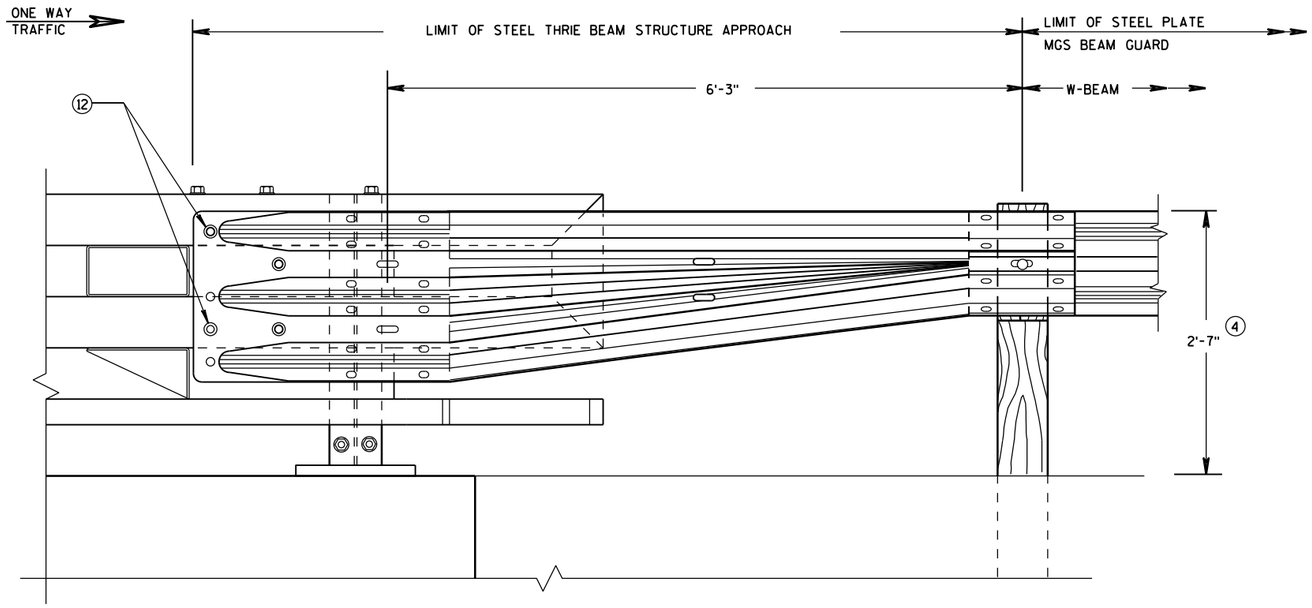
FHWA

6

S.D.D. 14 B 45-4k

6

S.D.D. 14 B 45-4k



FRONT VIEW

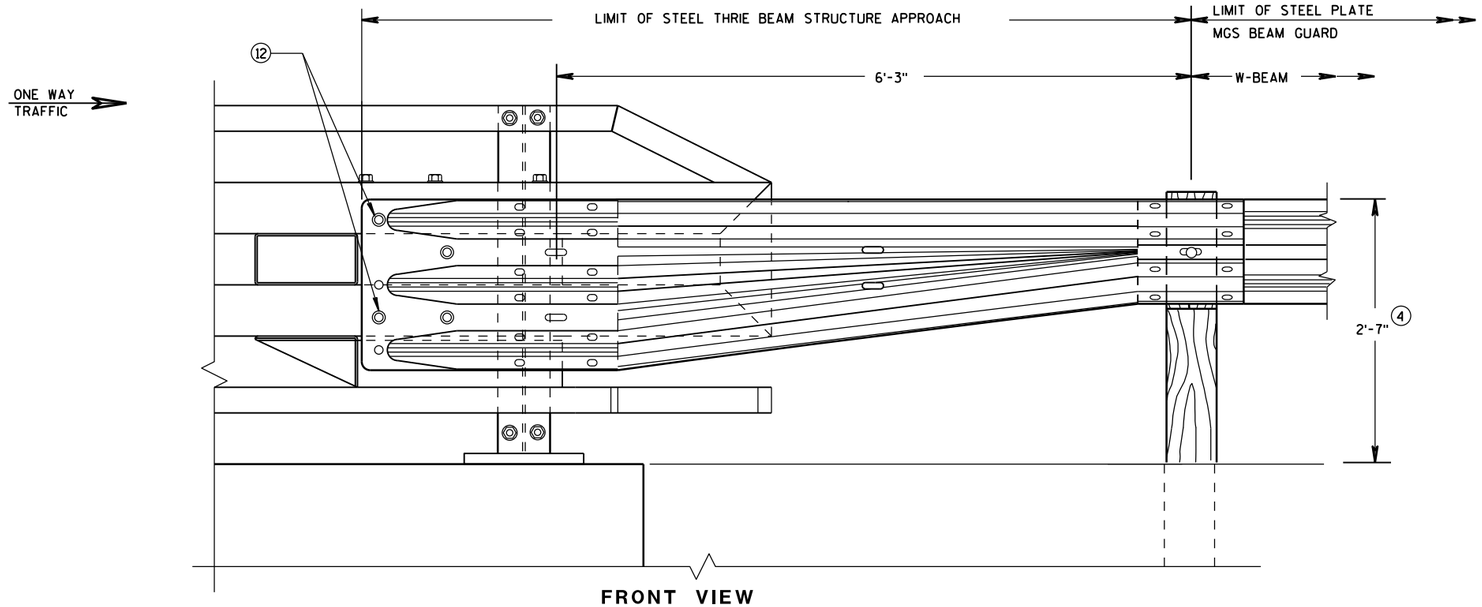
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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 ½-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

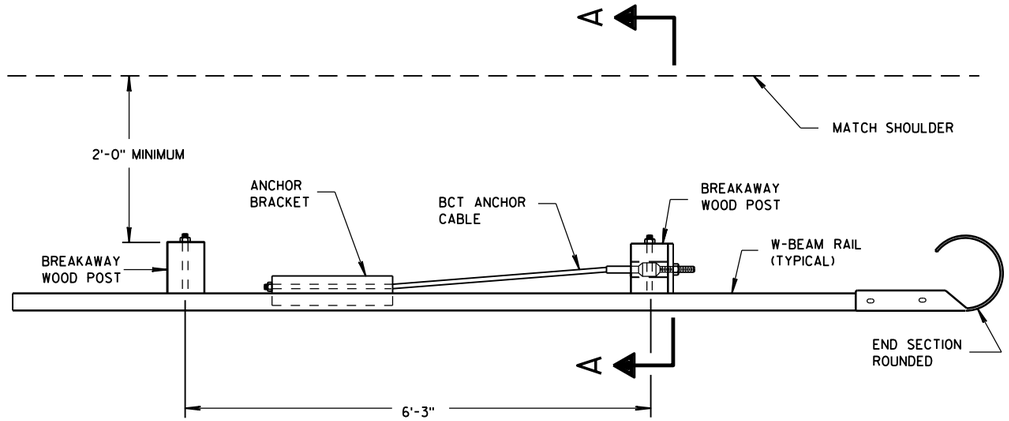
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

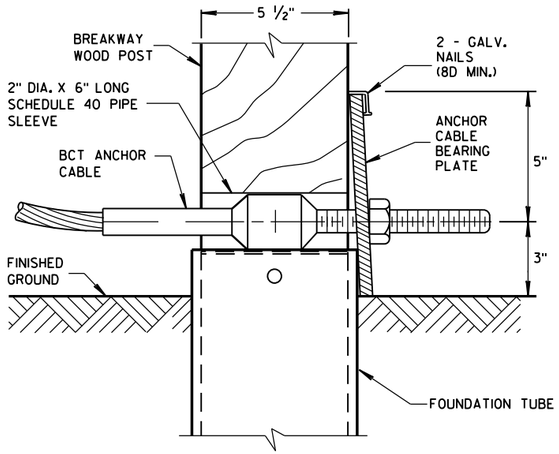
S.D.D. 14 B 45-4L

6

S.D.D. 14 B 45-4L



PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

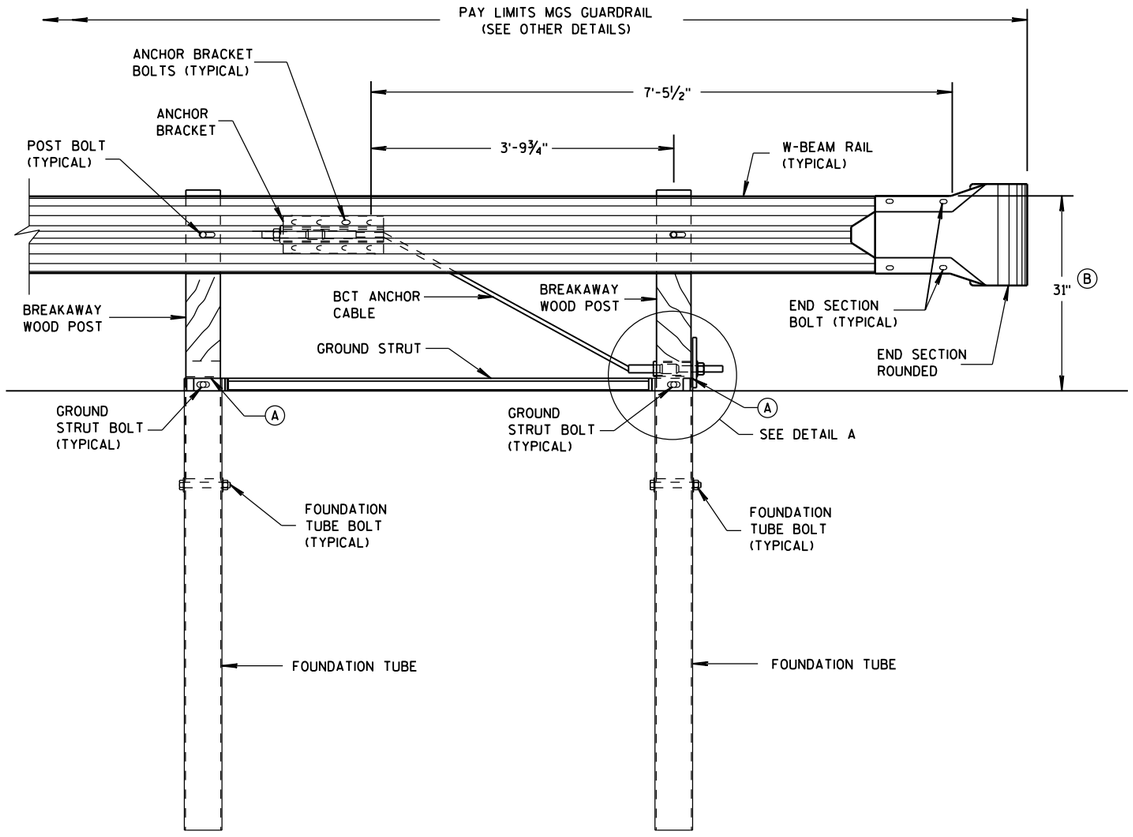
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

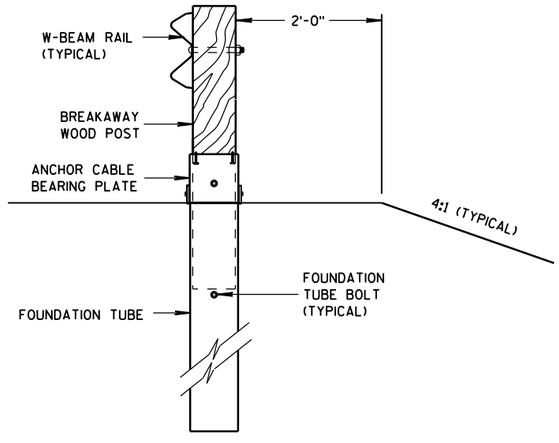
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

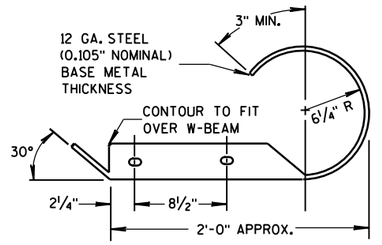


FRONT VIEW

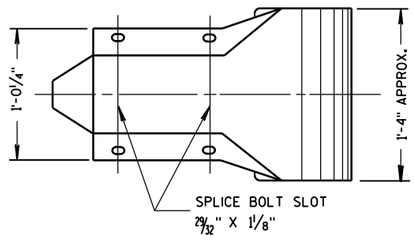
END RAIL DETAIL



SECTION A-A



PLAN VIEW



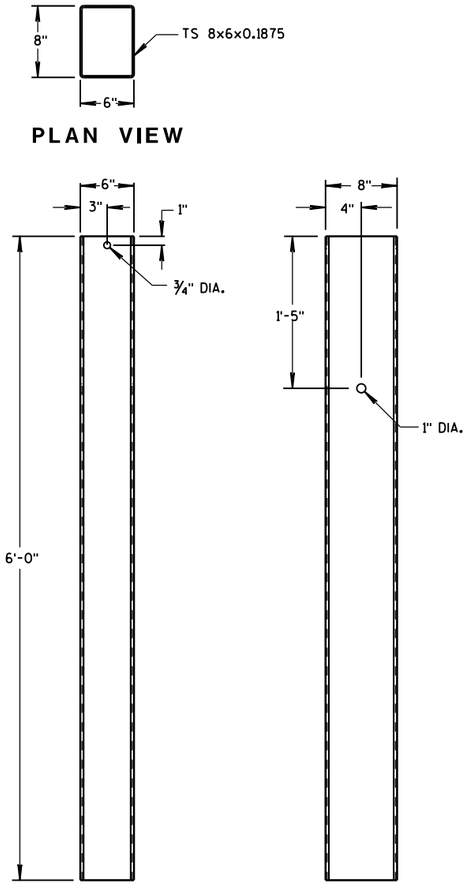
FRONT VIEW

W BEAM END SECTION ROUNDED

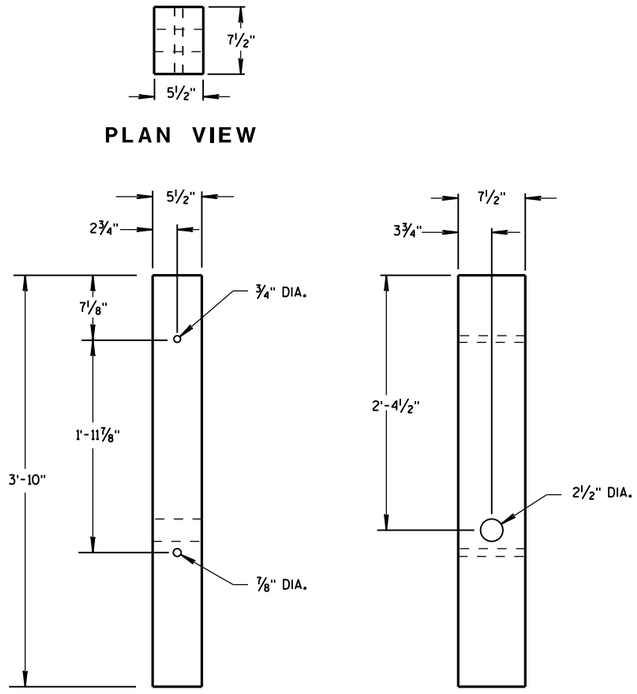
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a



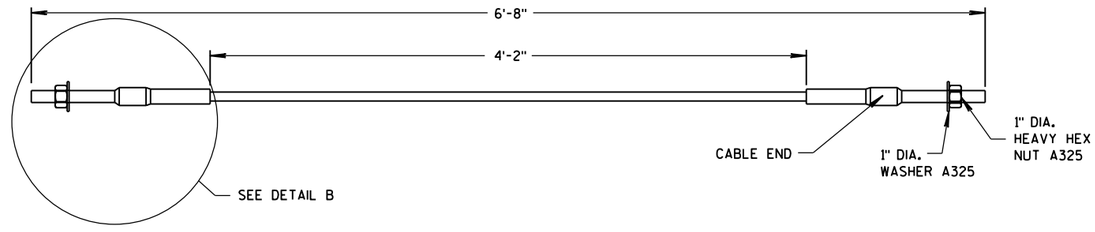
FOUNDATION TUBE



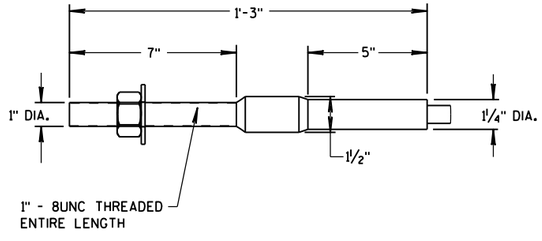
BREAKAWAY WOOD POST

GENERAL NOTES

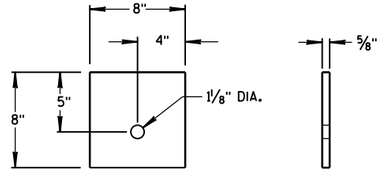
BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



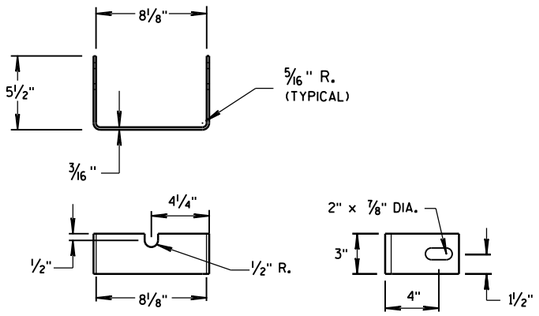
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

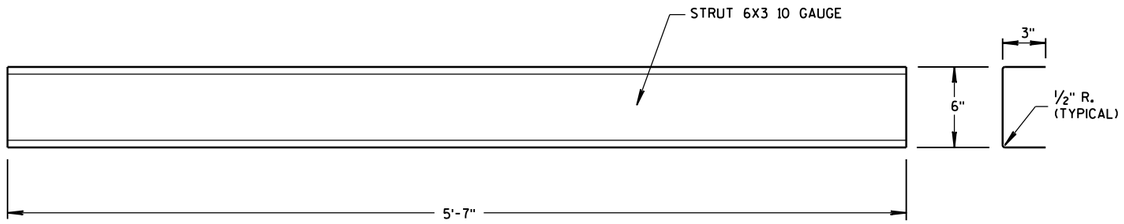
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

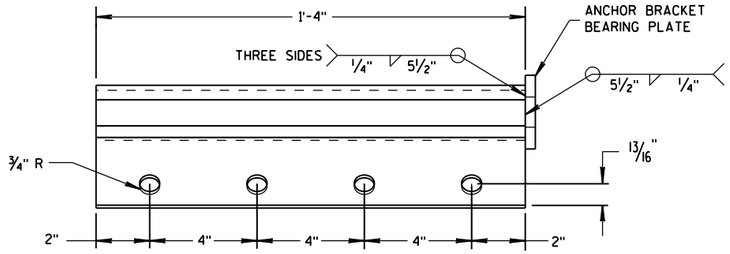
S.D.D. 14 B 47-2b

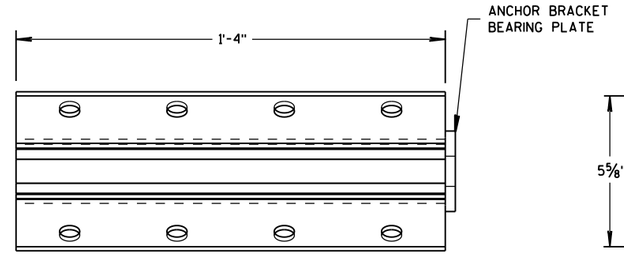


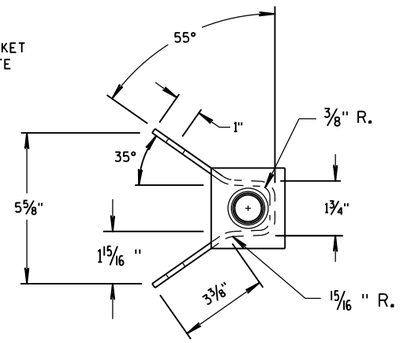
YOKE DETAIL



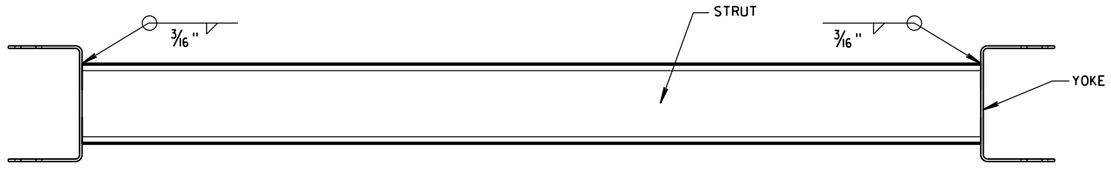
STRUT DETAIL



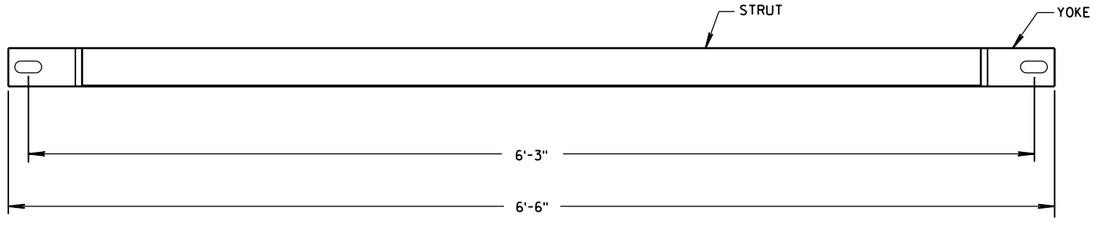




ANCHOR BRACKET

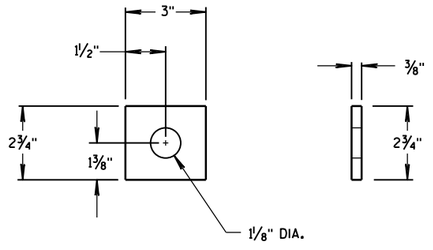


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

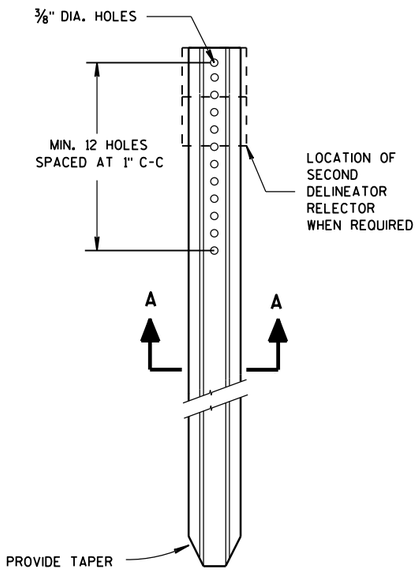
APPROVED
June 2014
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

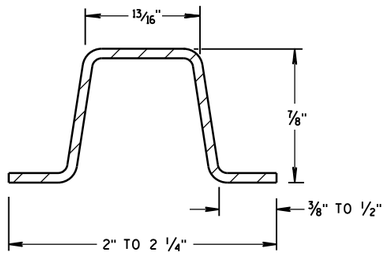
FHWA

6

S.D.D. 14 B 47-2c

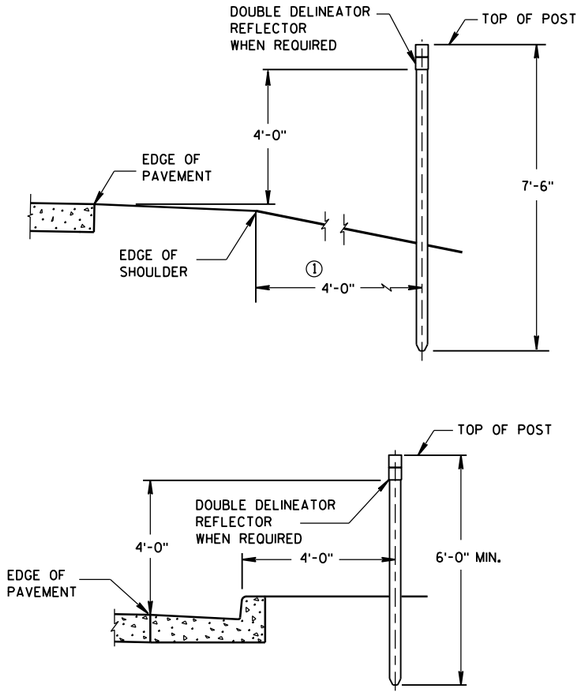


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

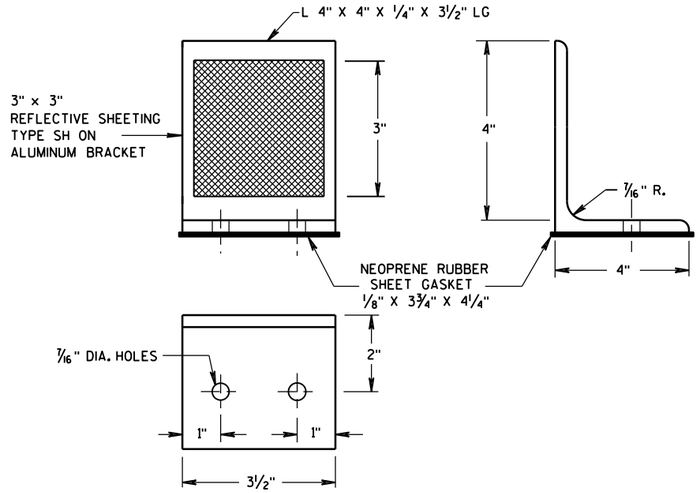


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

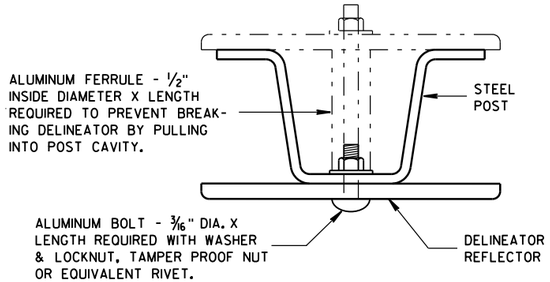
GENERAL NOTES

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

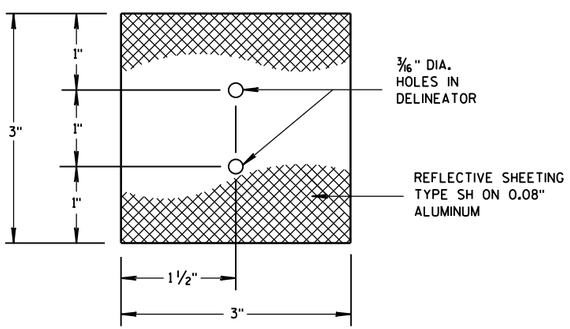
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



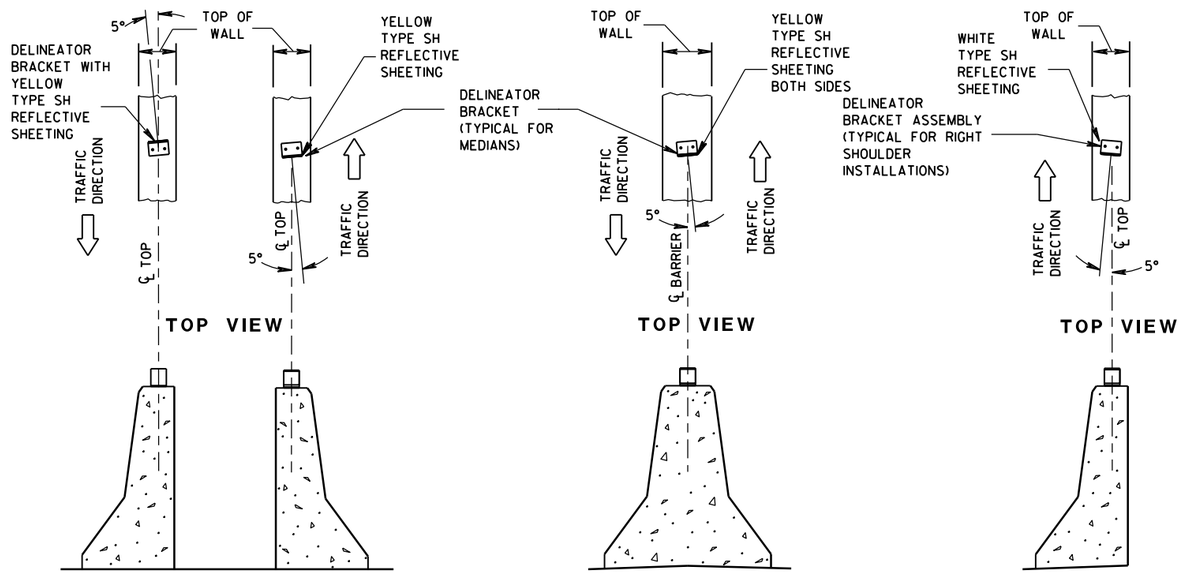
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR REFLECTOR

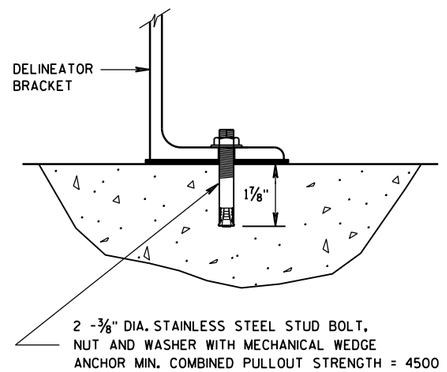


3"x 3" DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN | MEDIAN BARRIER | BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

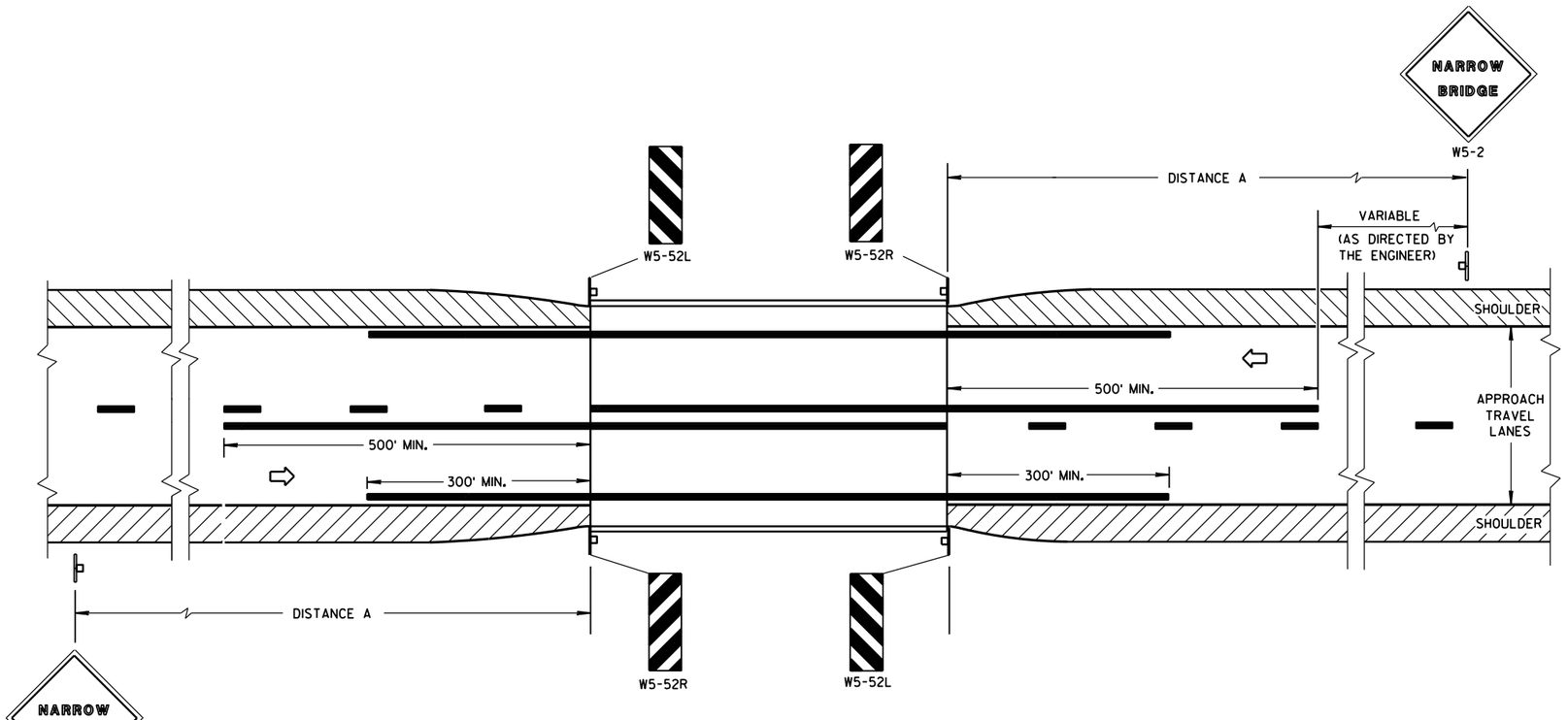
APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] 70 [illegible]GINEER
FHWA

6

S.D.D. 15 A 2-9

6

S.D.D. 15 A 2-9

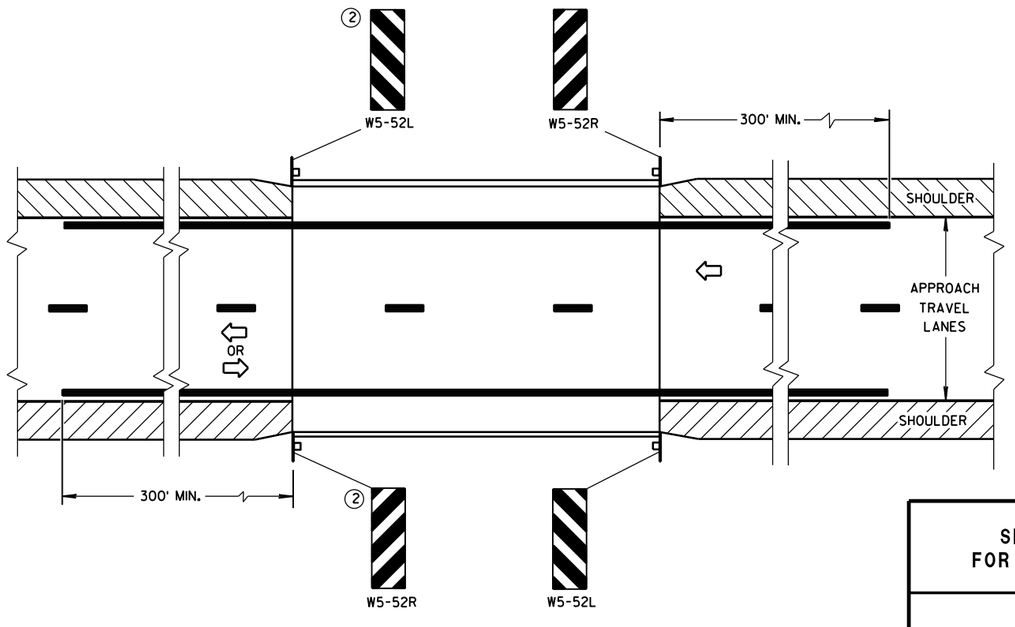


SITUATION 1

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

DISTANCE TABLE

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



SITUATION 2

WARRANTING CRITERIA:

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

GENERAL NOTES

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

① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

② OMIT ON ONE-WAY TRAVELLED WAYS.

③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 15 C 6-8

6

S.D.D. 15 C 6-8

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

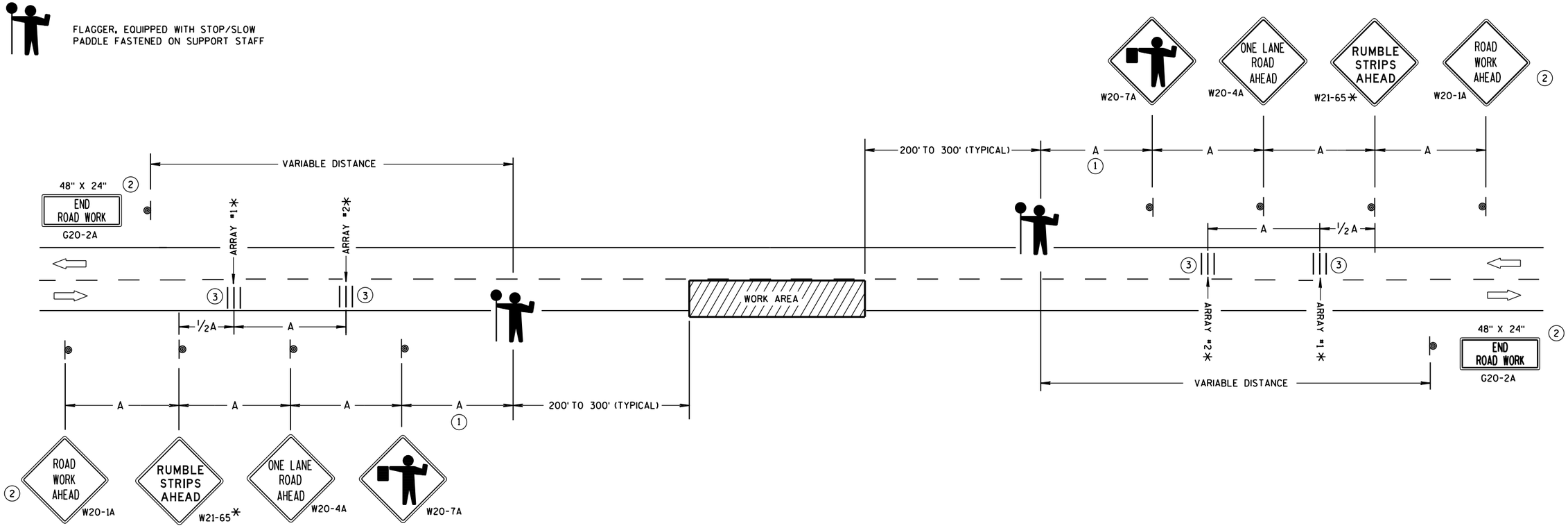
WORK AREA

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

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

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

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

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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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 RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

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

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

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — /S/ Andrew Heldtke
DATE — WORK ZONE ENG
FHWA

6
S.D.D. 15 C 12-5

S	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

END ROAD WORK
G20-2A
48"x24"

NO PASSING ZONE
W14-3
48"x36"

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

1000'
500'
400'
500'
200'
50'
50'
25' TYP.

W01-6
48"x24"
✳✳✳

R11-2
48"x30"
ROAD CLOSED
TYPE III BARRICADE

FOR BRIDGE OR CULVERT REPLACEMENTS SUBSTITUTE
BRIDGE OUT
R11-2B
48"x30"

ROAD CLOSURE OR BRIDGE/CULVERT REPLACEMENT

BUFFER SPACE (SEE TABLE)

WORK AREA

BUFFER SPACE (SEE TABLE)

TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT WHEN INCLUDED IN THE CONTRACT. FOR LAYOUT, SEE DETAILS ELSEWHERE IN THE PLAN.

W05-52L
12"x36"

W05-52R
12"x36"

OR

W01-3L
W01-4L
W01-3R
W01-4R
W013-1
XX M.P.H.
24"x24"

ROAD WORK 1000 FT
W20-1C

ROAD WORK AHEAD
W20-1A

END TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

END TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES. (USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT)

TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE AND 2-WAY YELLOW RAISED PAVEMENT MARKERS AT 25' SPACING. USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT.

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

✳ IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE W01-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE W01-3 SIGN.

✳✳ WHEN THE DISTANCE TO/FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

✳✳✳ OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY-BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR, (WHITE) (SINGLE DELINEATOR)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO-WAY YELLOW)
- XXX REMOVE PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- WORK AREA

TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

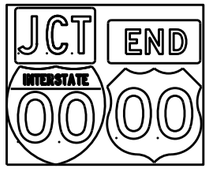
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER — FHWA

6

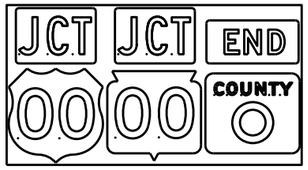
S.D.D. 15 D 31-3

TYPICAL ASSEMBLIES

J1-1

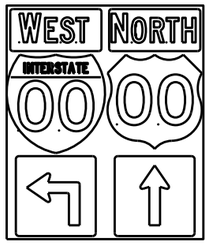


J1-2

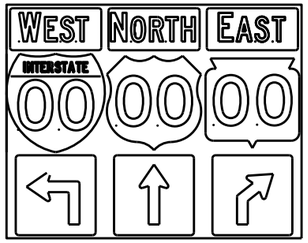


J1-3

J2-1



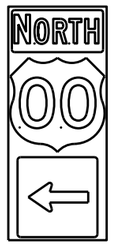
J2-2



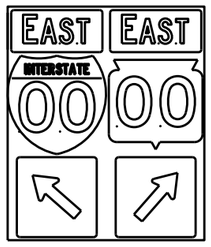
J2-3

JV

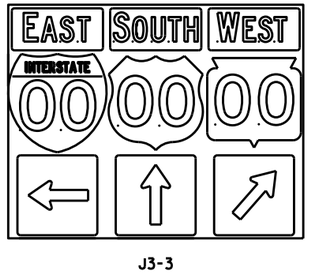
(Typical Vertical J-Assembly
See Note 10 and 11)



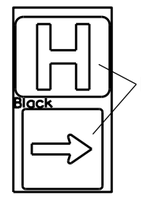
J3-1



J3-2



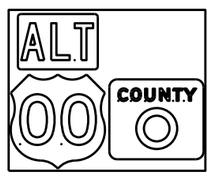
J3-3



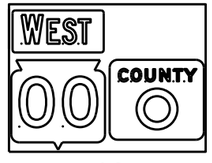
Blue Background

JH-1

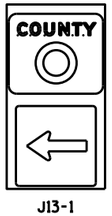
J4-1



J4-2



J4-2



J13-1

J12-1

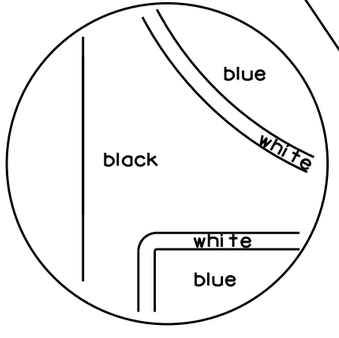
J32-1

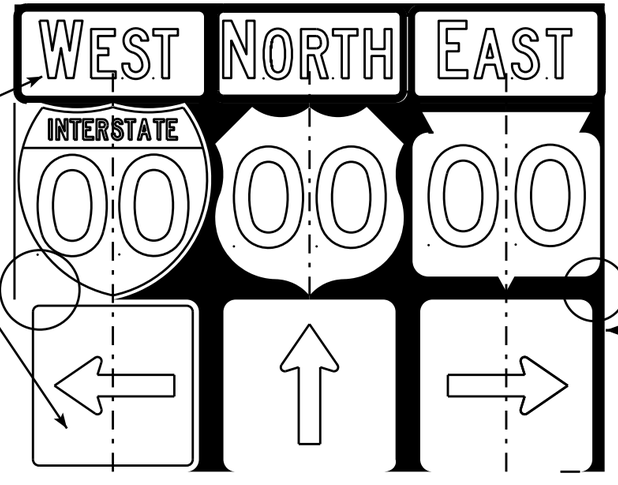
J33-1

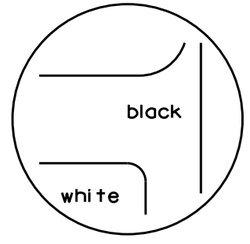
J23-1

J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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

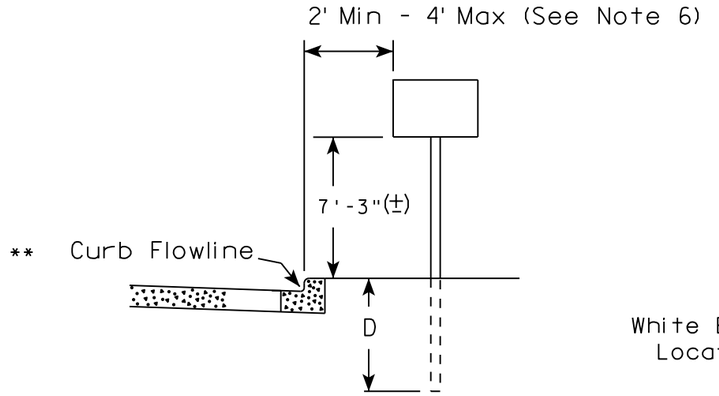
DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

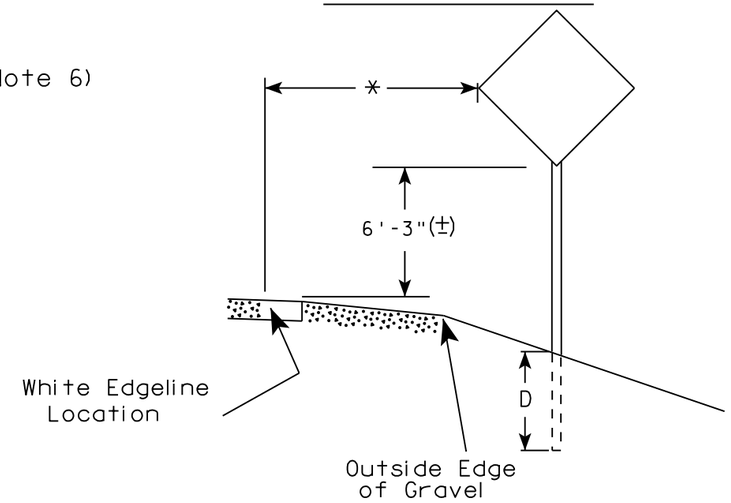
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

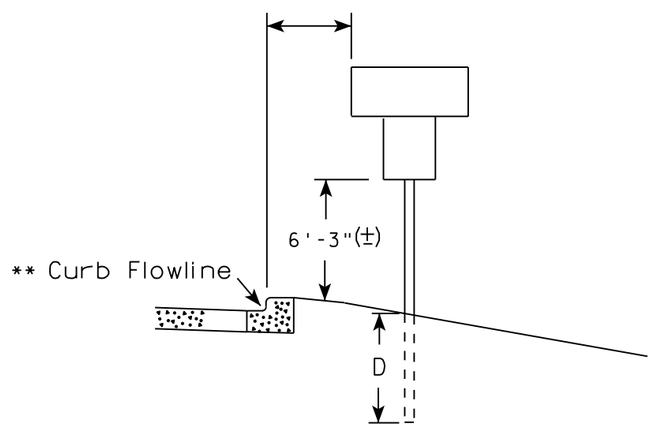
WISDOT/CADDS SHEET 42

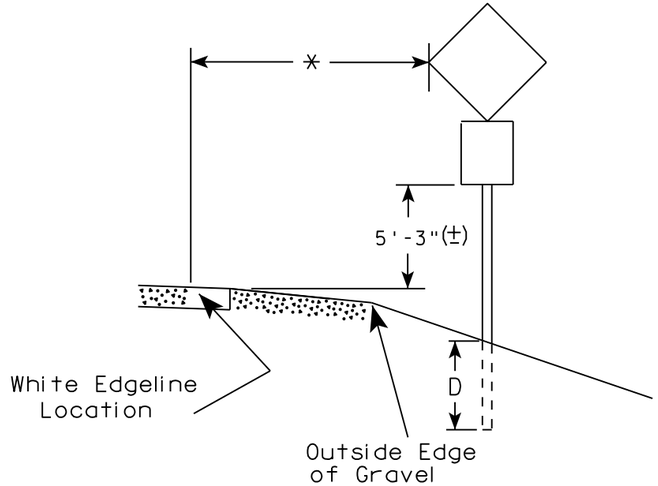
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

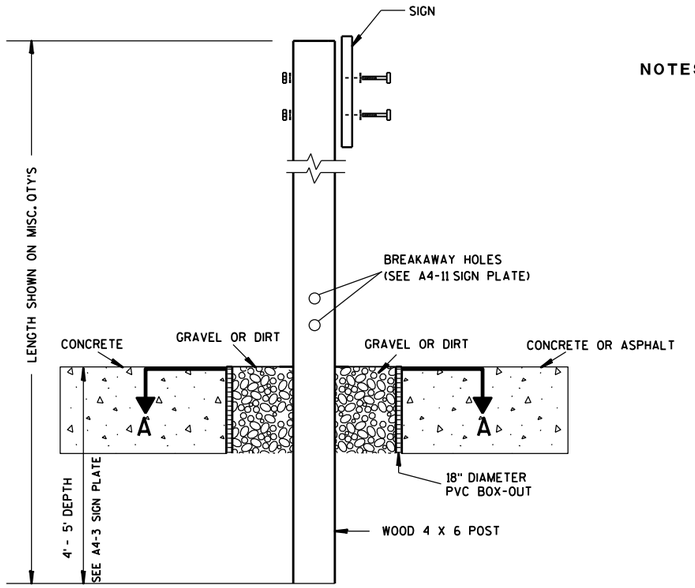
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

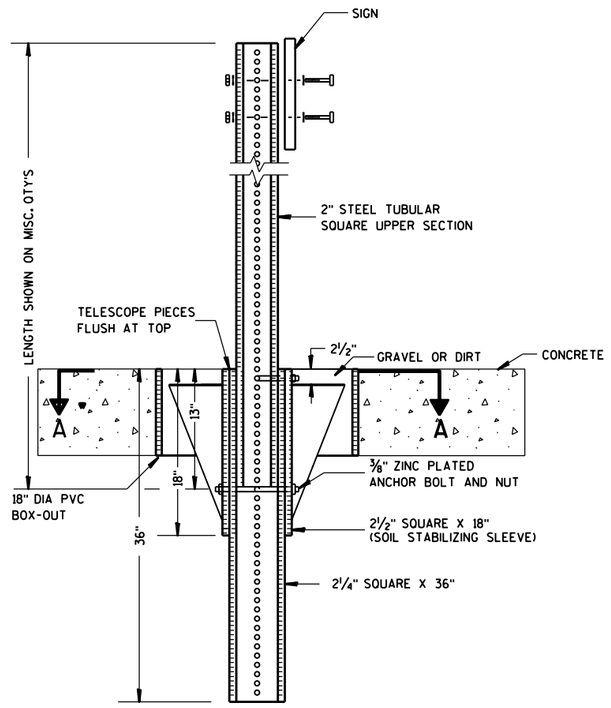
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 75	E



ELEVATION VIEW

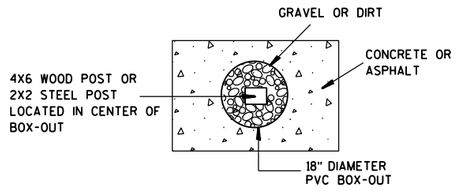
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

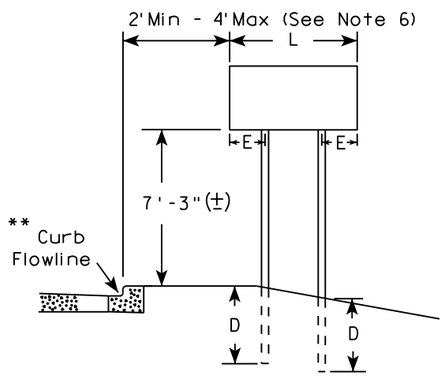
APPROVED Matthew R Rauch
for State Traffic Engineer

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

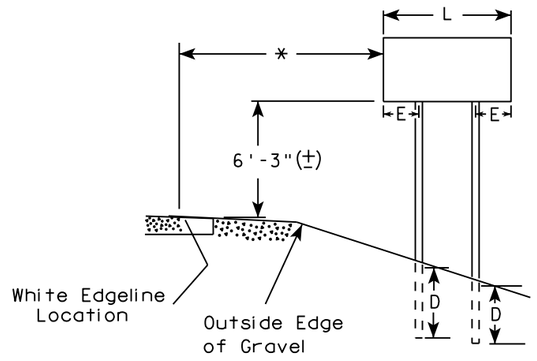
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

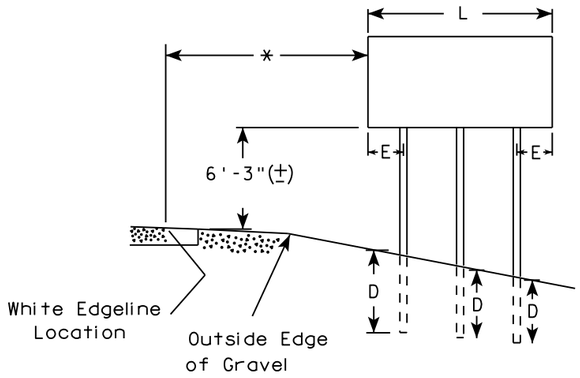
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

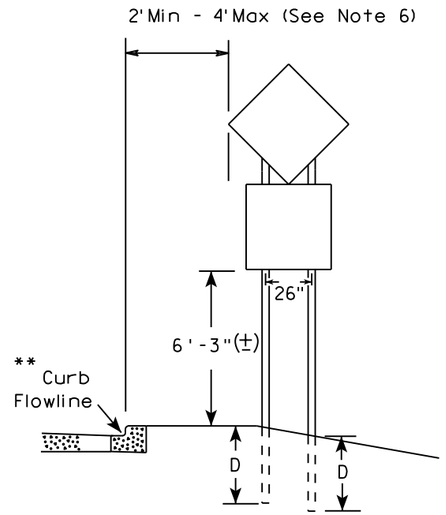
URBAN AREA



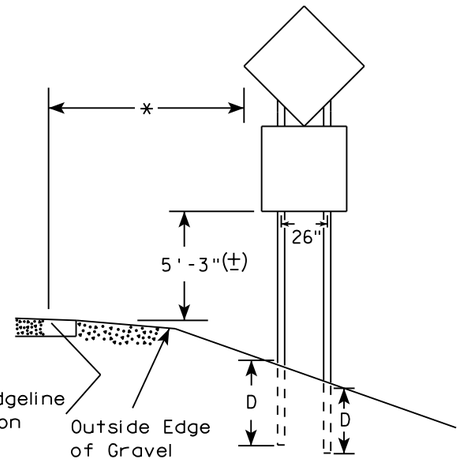
RURAL AREA (See Note 3)







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

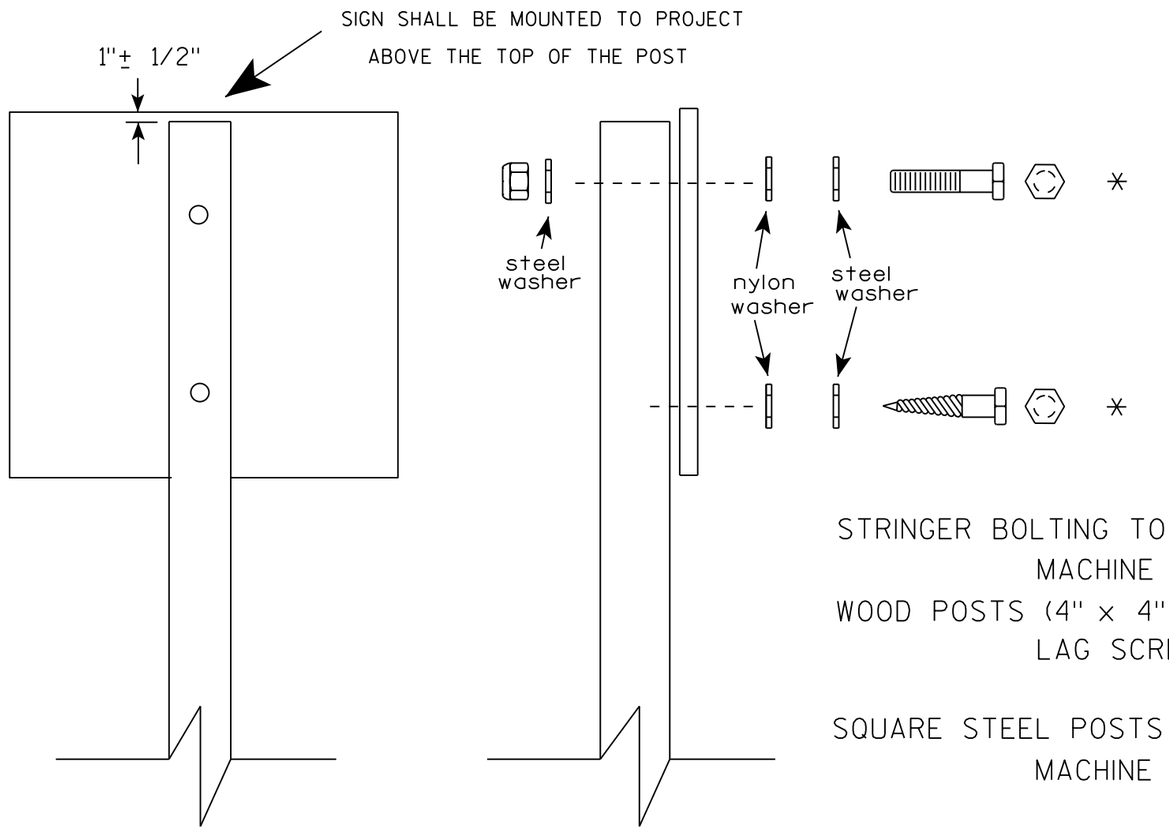
APPROVED Matthew R Rauch
For State Traffic Engineer

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

7

7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 77 | 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 4" or 4" x 6")
LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

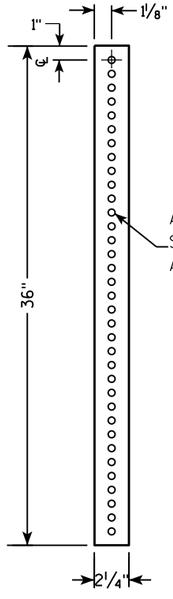
APPROVED Matthew R Rauch
For State Traffic Engineer

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

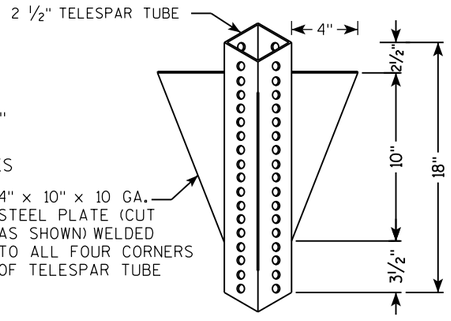
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

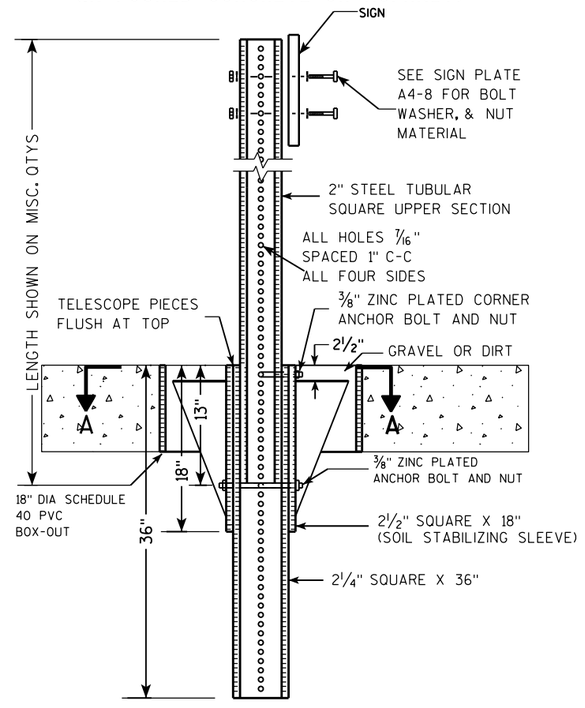
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



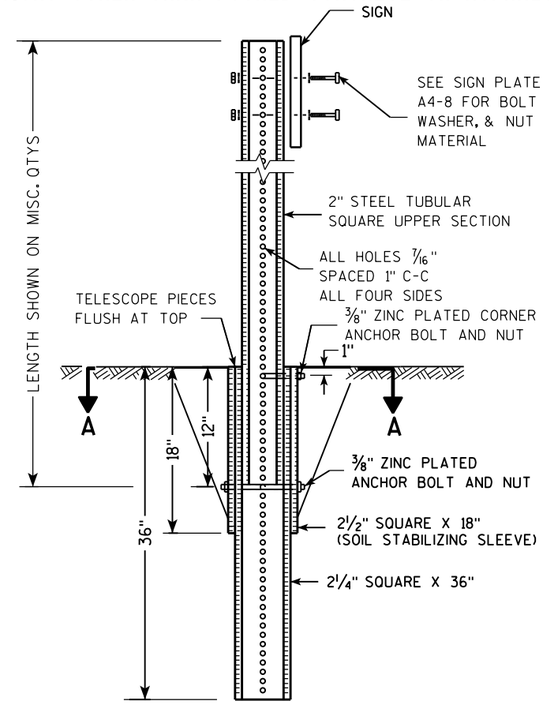
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

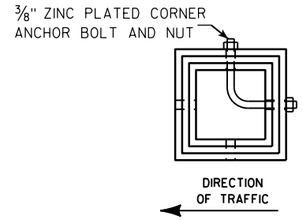


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

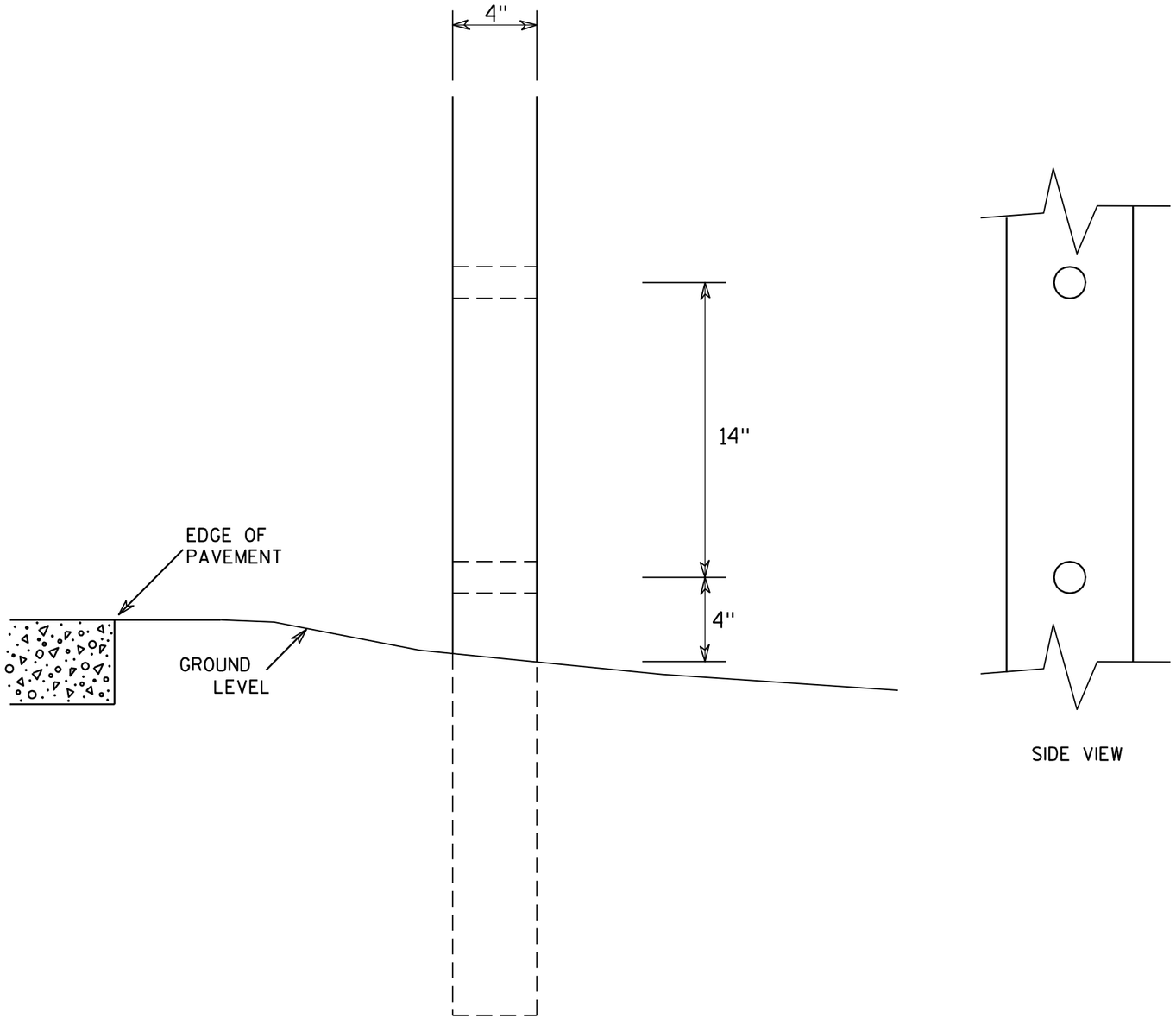
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 79 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



SIDE VIEW

GENERAL NOTES

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

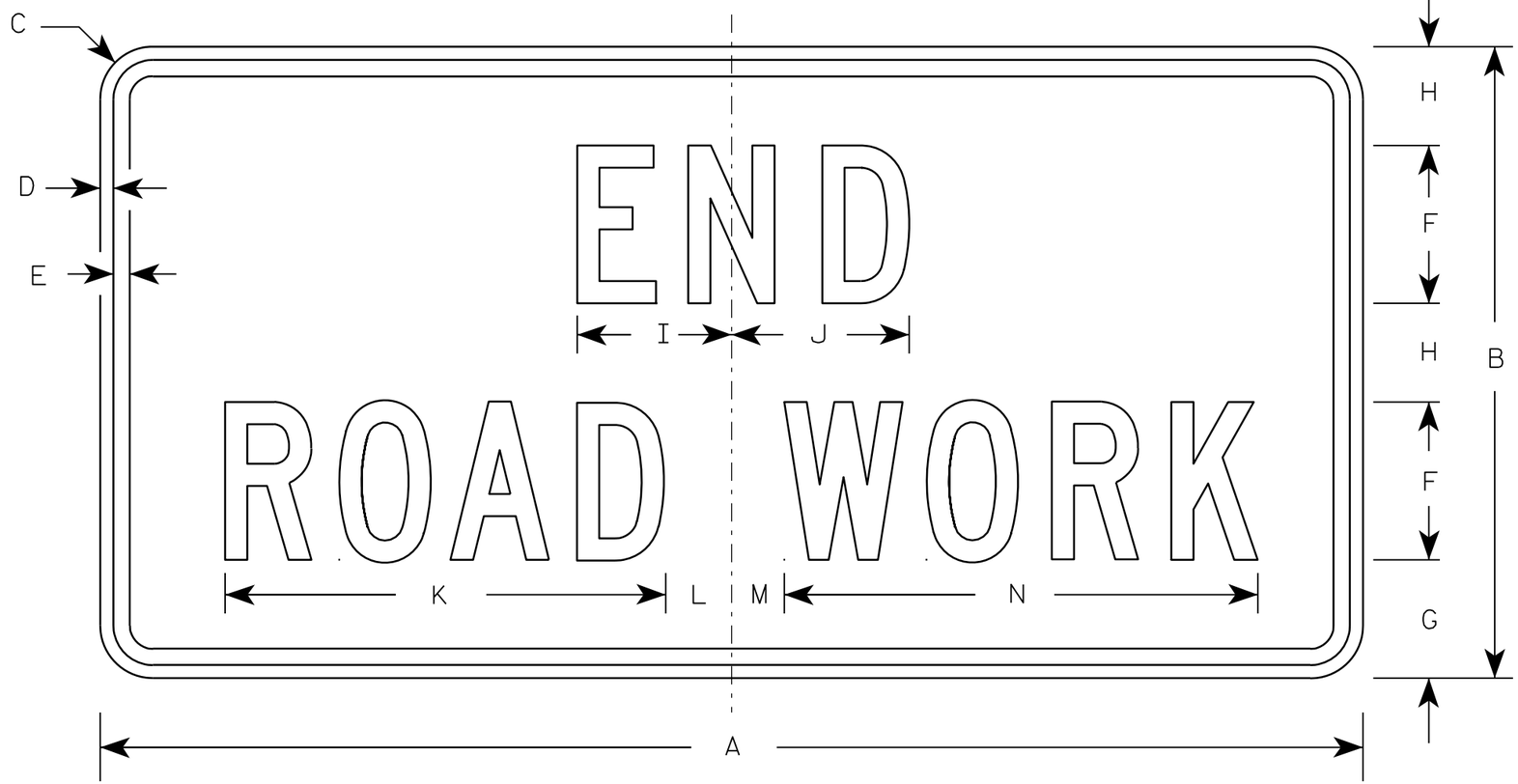
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 80	E



G20-2A

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 - 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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

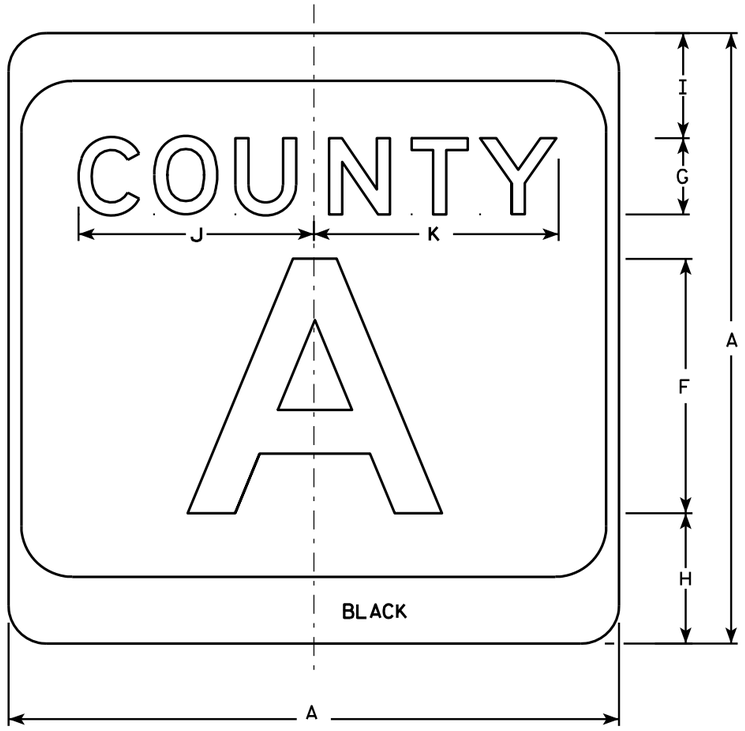
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

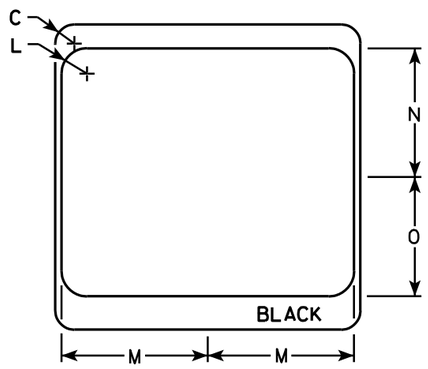
APPROVED Matthew R Rauch
for State Traffic Engineer

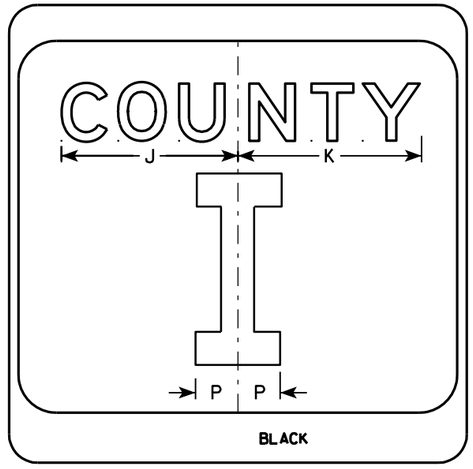
DATE 9/30/09 PLATE NO. G20-2A.8

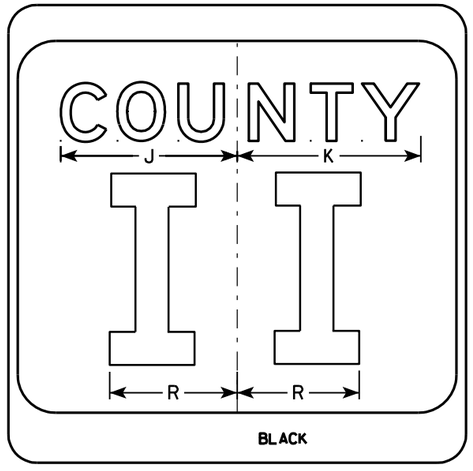
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 81	E



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

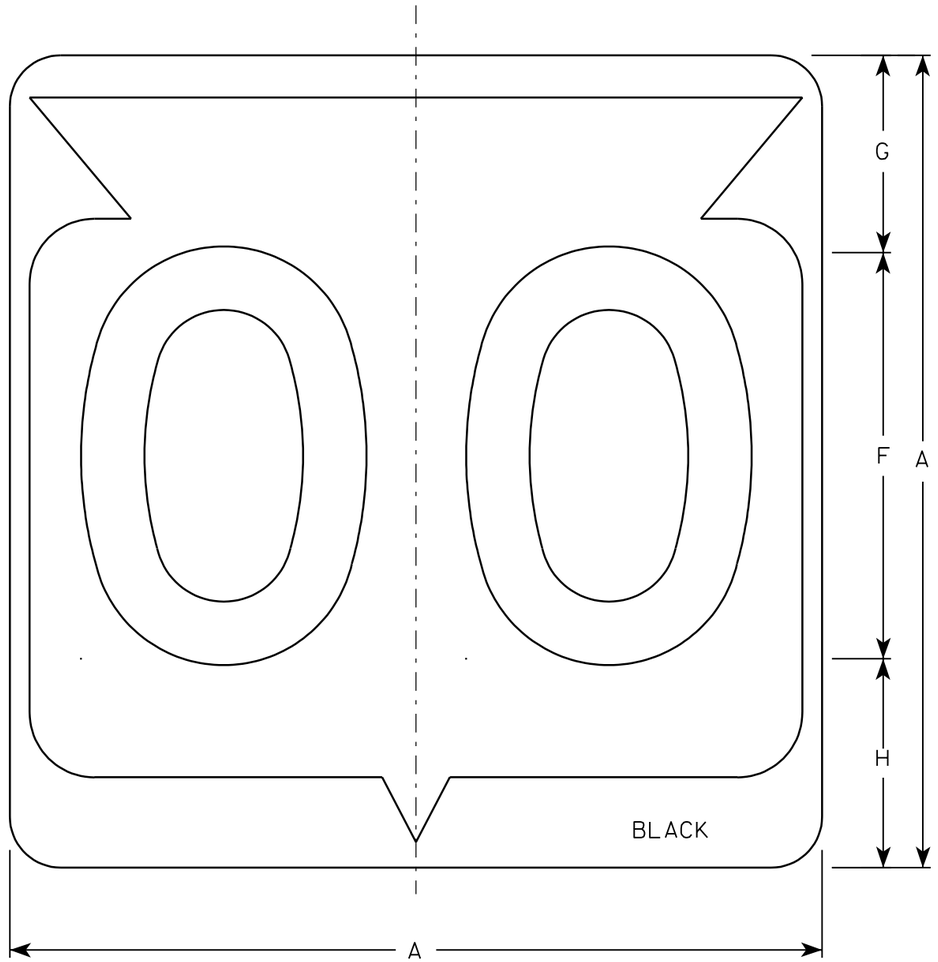
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

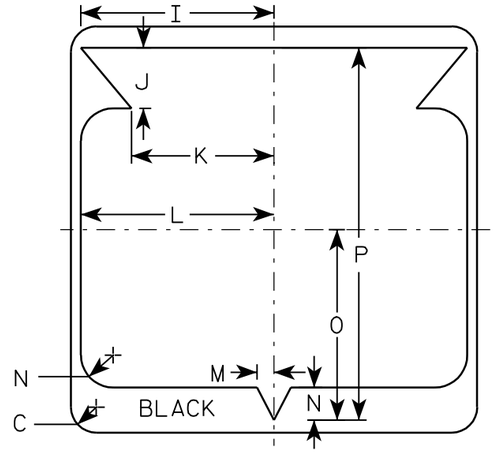
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 82	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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.	Area m2
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	.36
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	.81
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	.81
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	.81

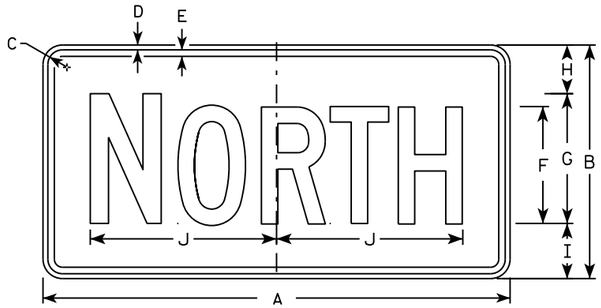
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

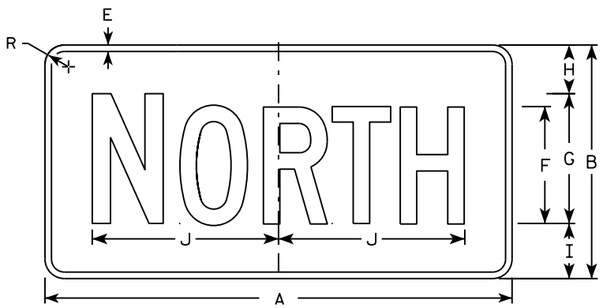
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 83	E



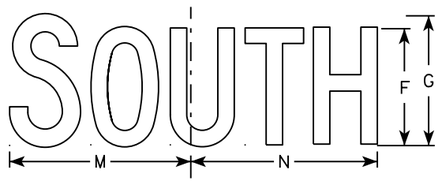
M3-1
MM3-1
MP3-1



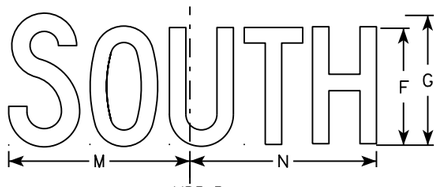
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

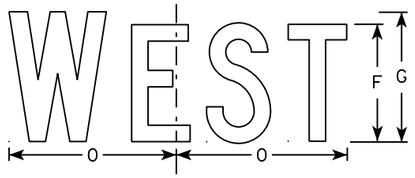
MB3-2
MK3-2
MN3-2



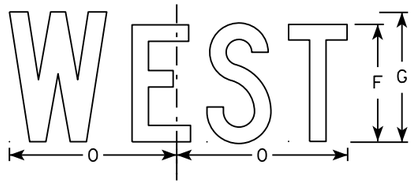
M3-3
MM3-3
MP3-3



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

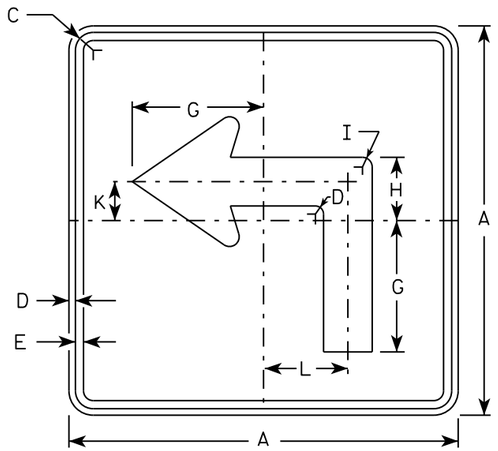
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

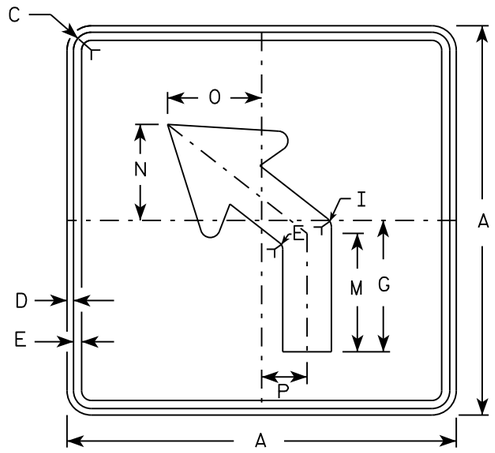
DATE 10/15/15 PLATE NO M3-1.14

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

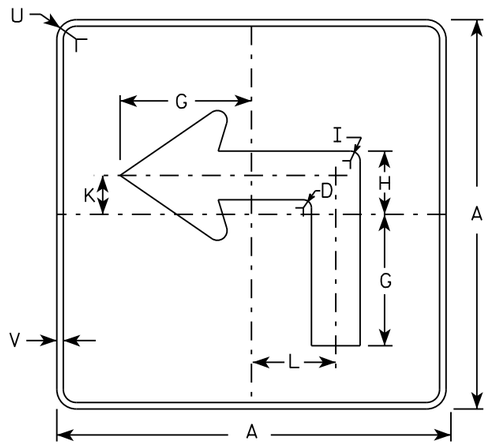
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



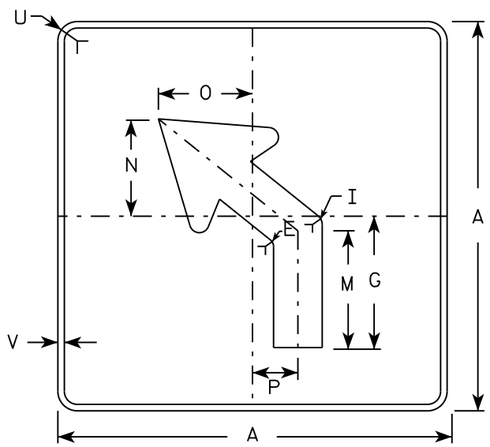
M5-1L
MM5-1L
MO5-1L
MP5-1L



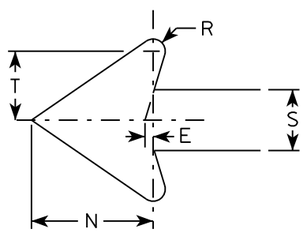
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

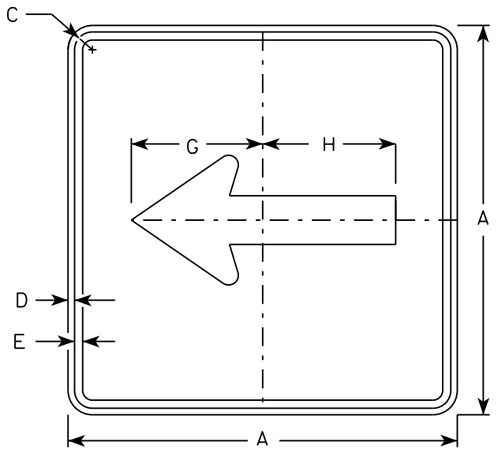
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

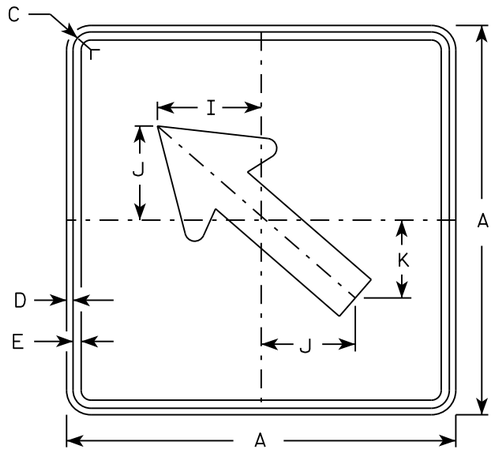
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



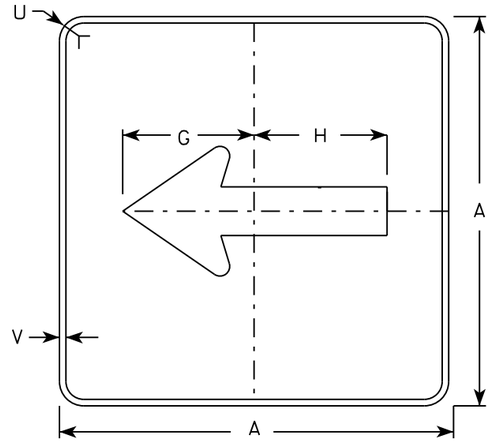
M6-1
MM6-1
MO6-1
MP6-1



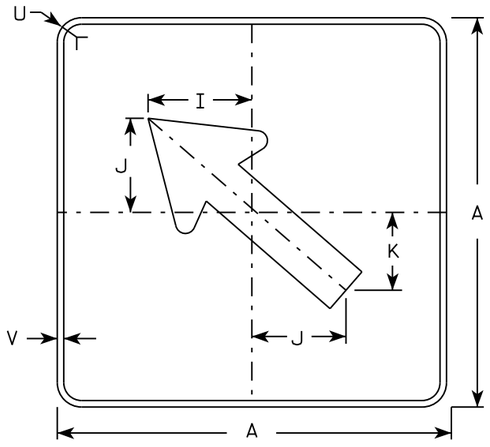
M6-2
MM6-2
MO6-2
MP6-2

NOTES

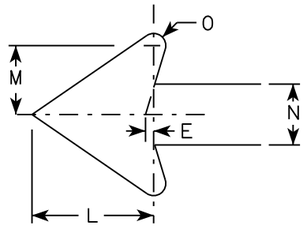
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

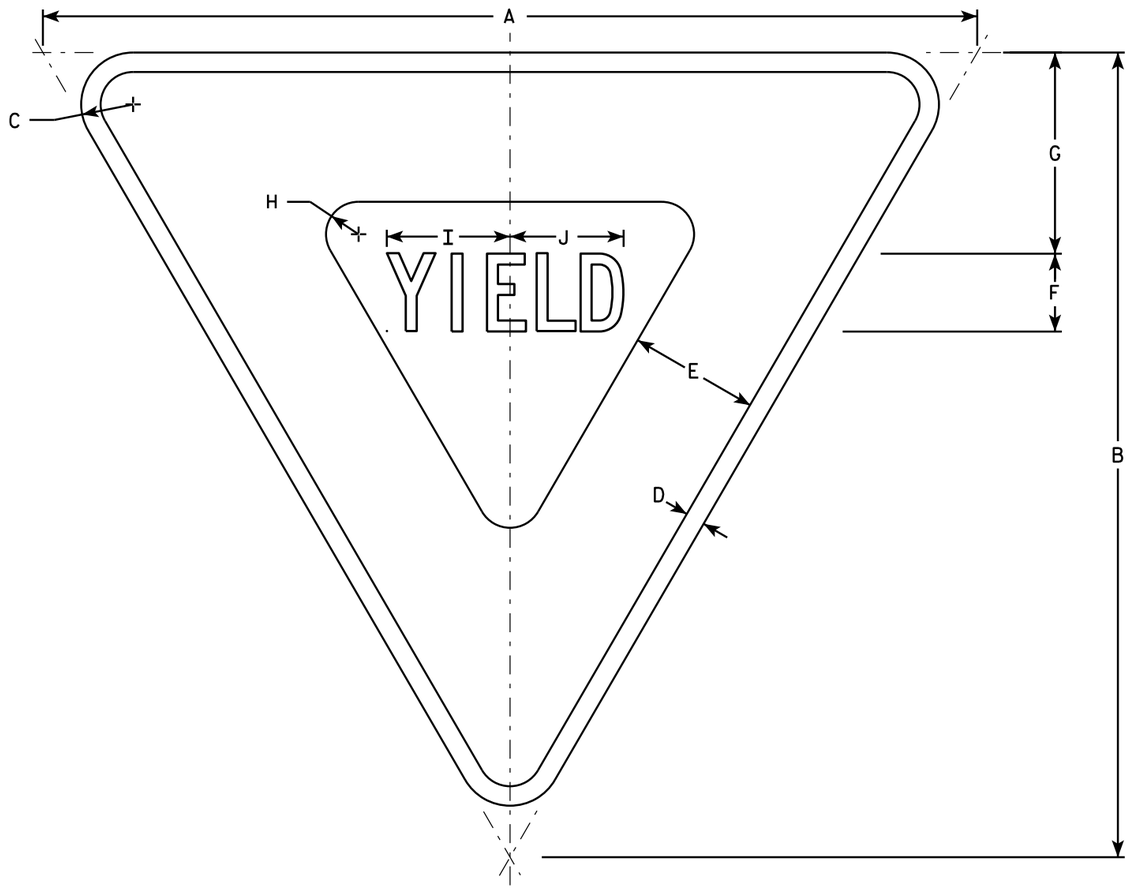
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 86 M6-1.15

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



R1-2

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 - 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. The border strip and word message are reflectorized red.

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	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

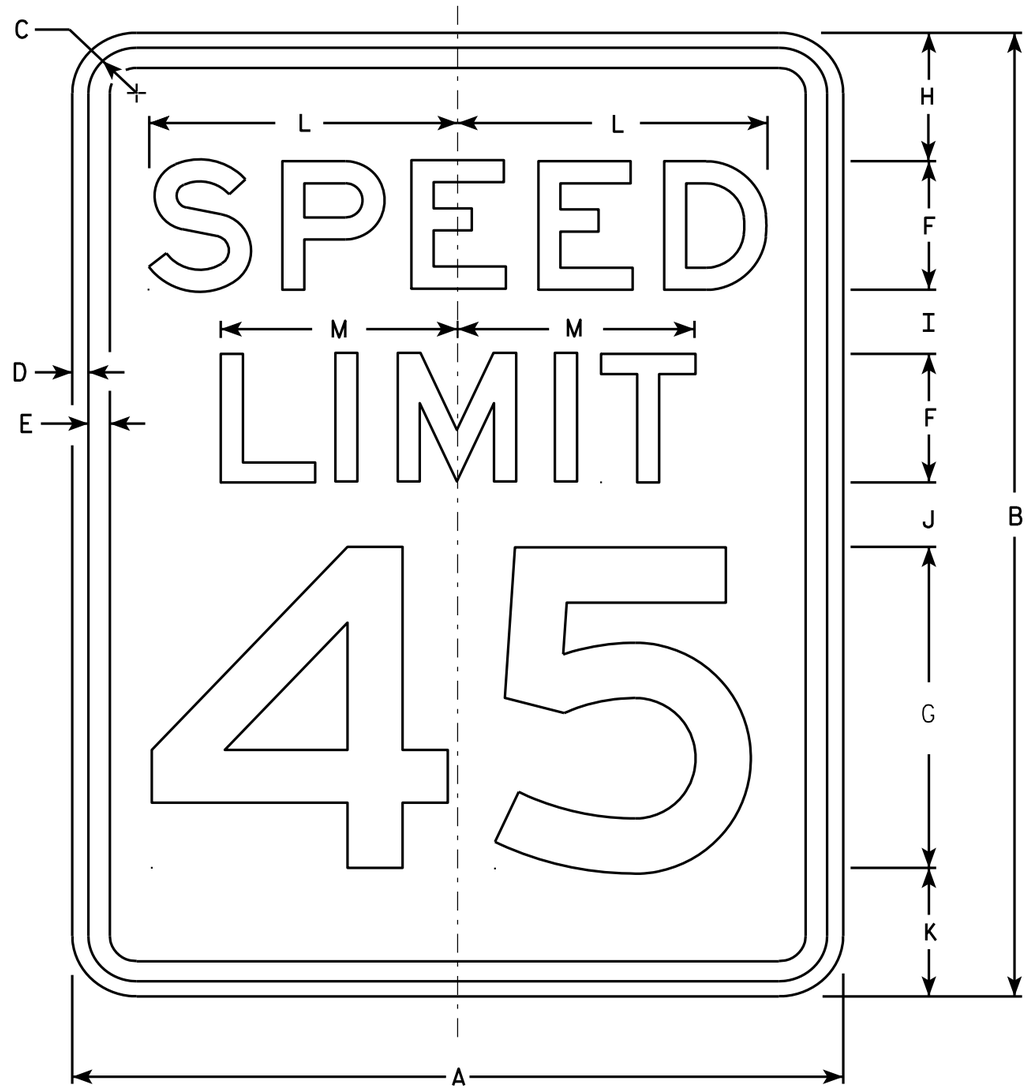
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



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

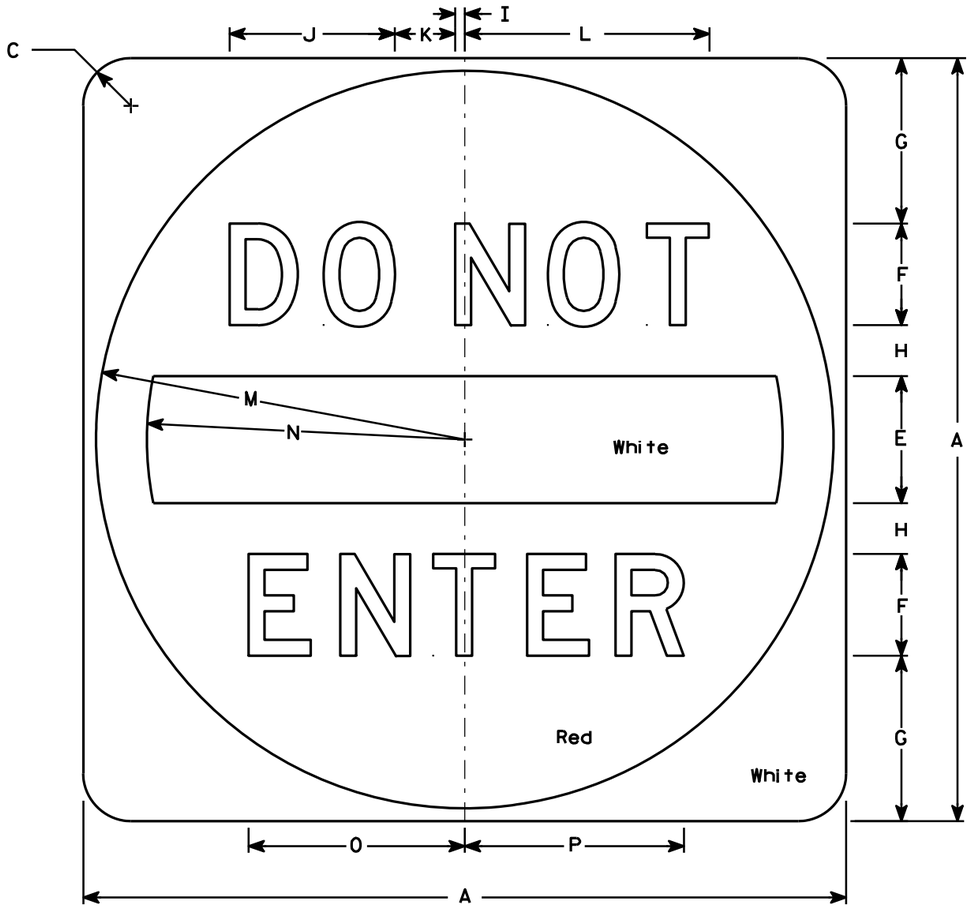
STANDARD SIGN
R2-1

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: 88	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors 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	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

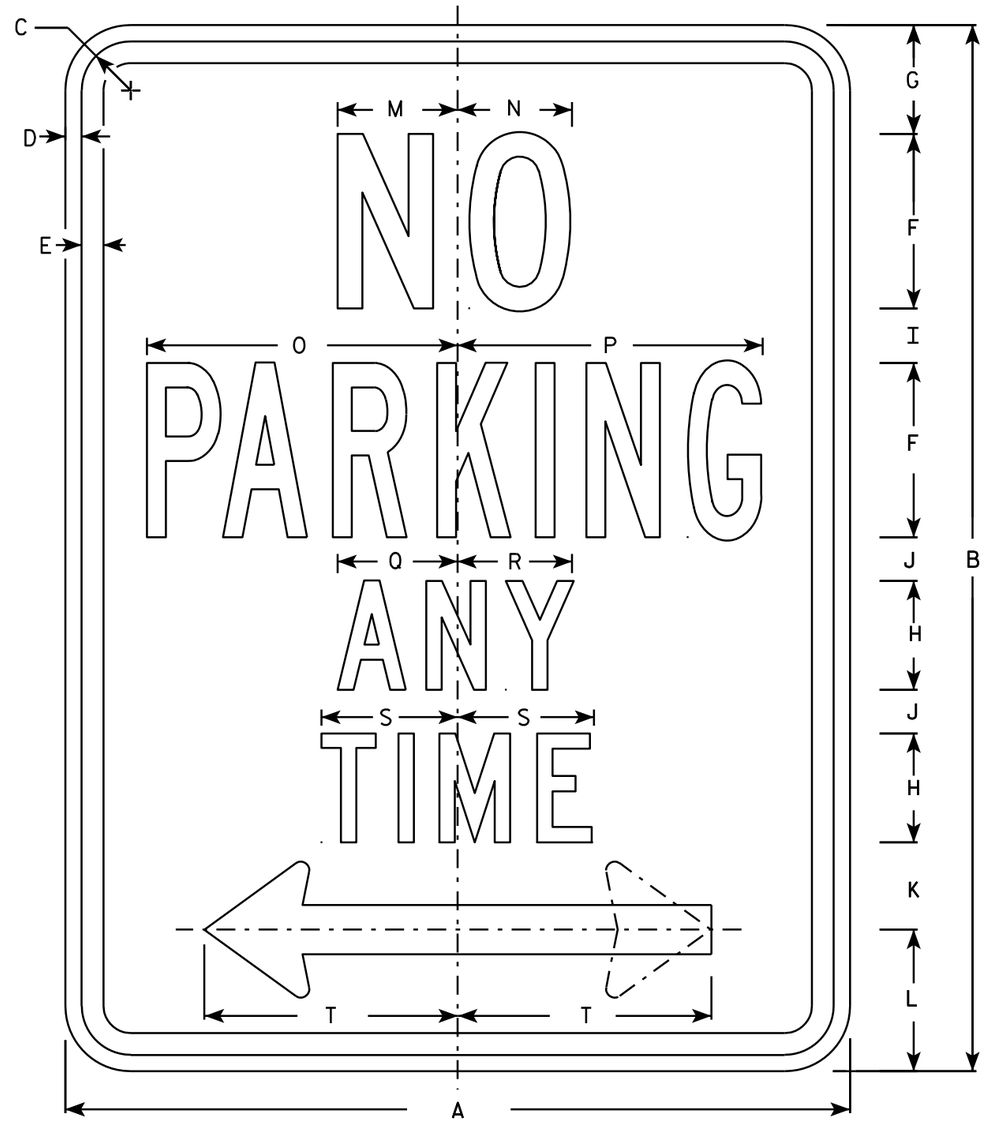
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

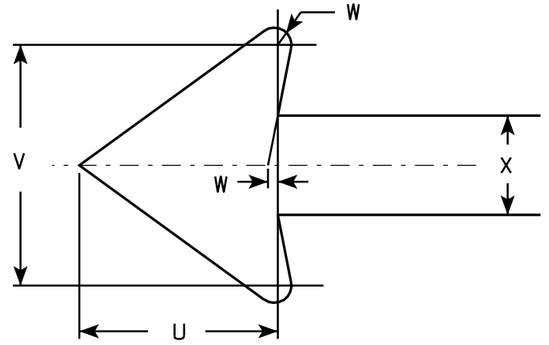
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 89 | E



R7-1

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 - Red
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, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

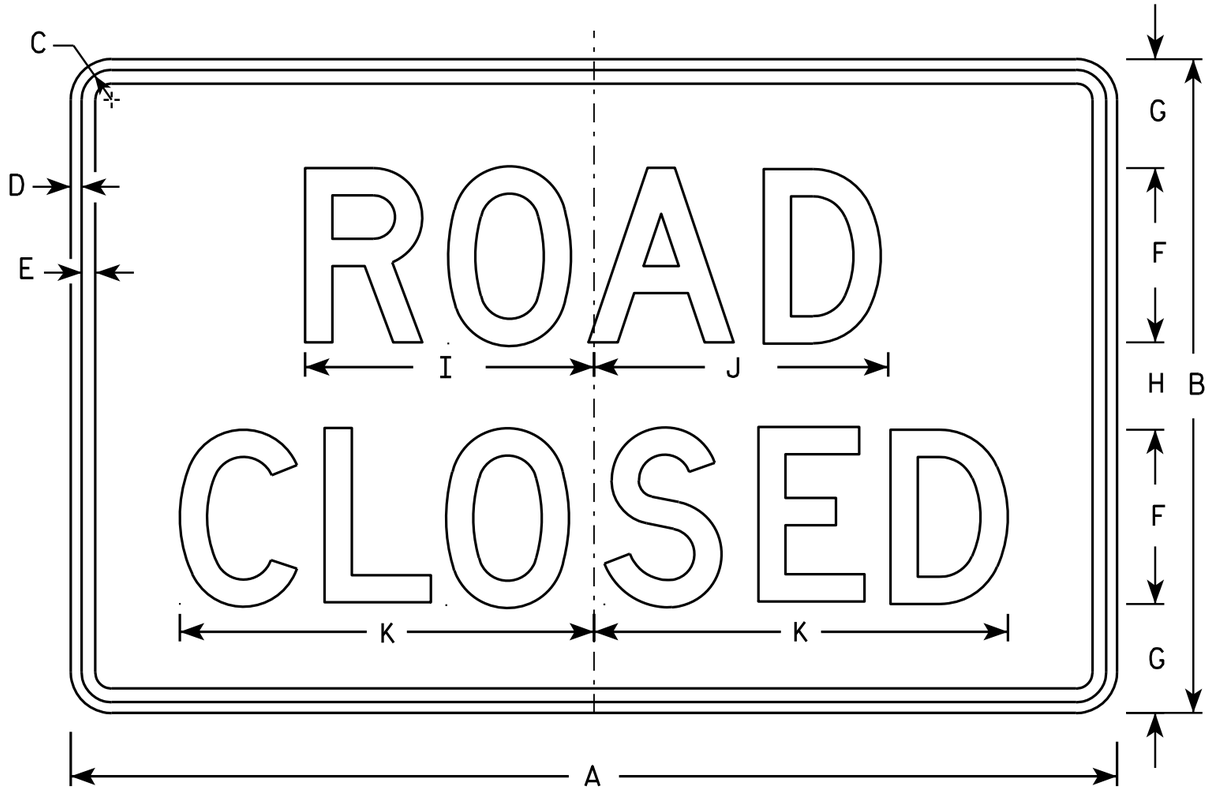
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 90	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

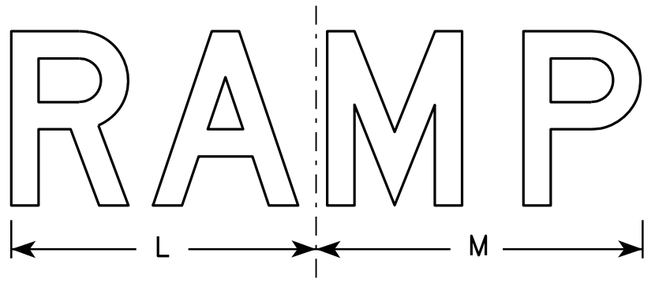
WISDOT/CADDS SHEET 42



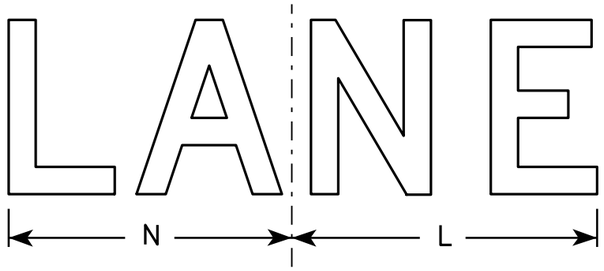
R11-2

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.
5. Modify the message as required.



R11-2R



R11-2L

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	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

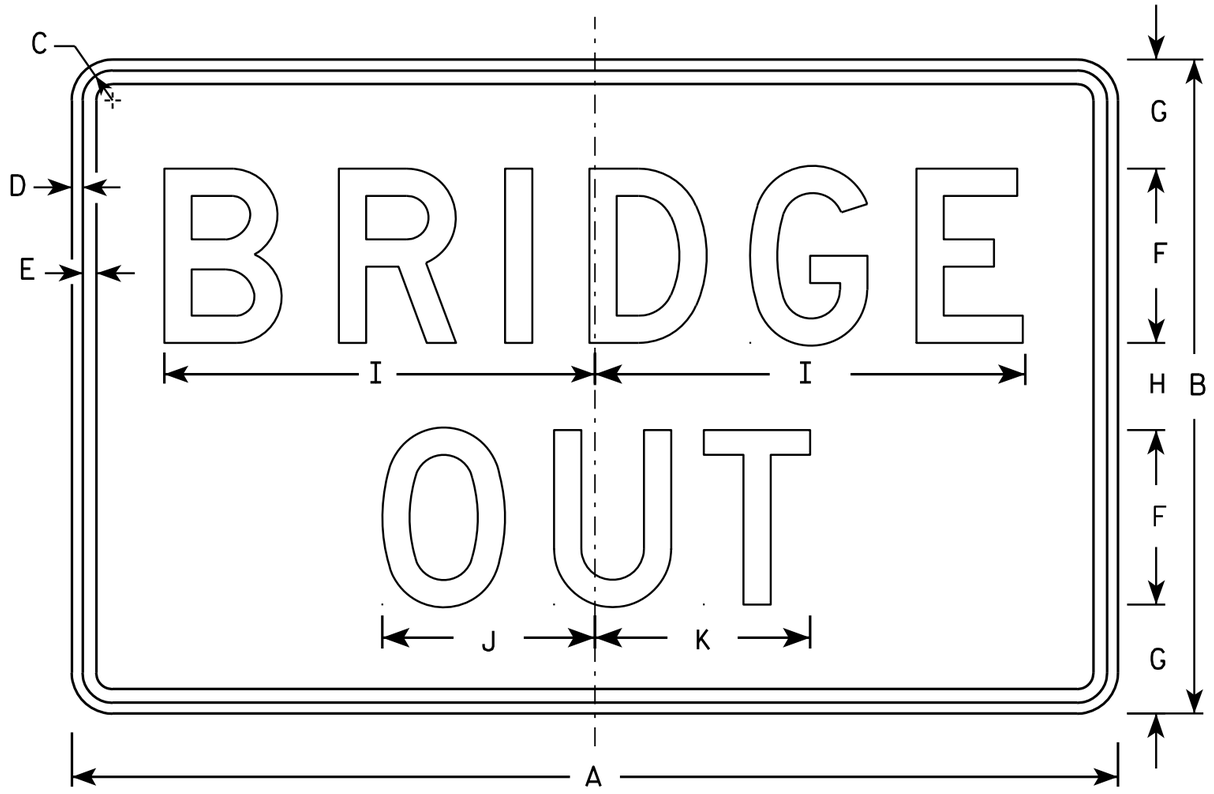
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 91	E



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

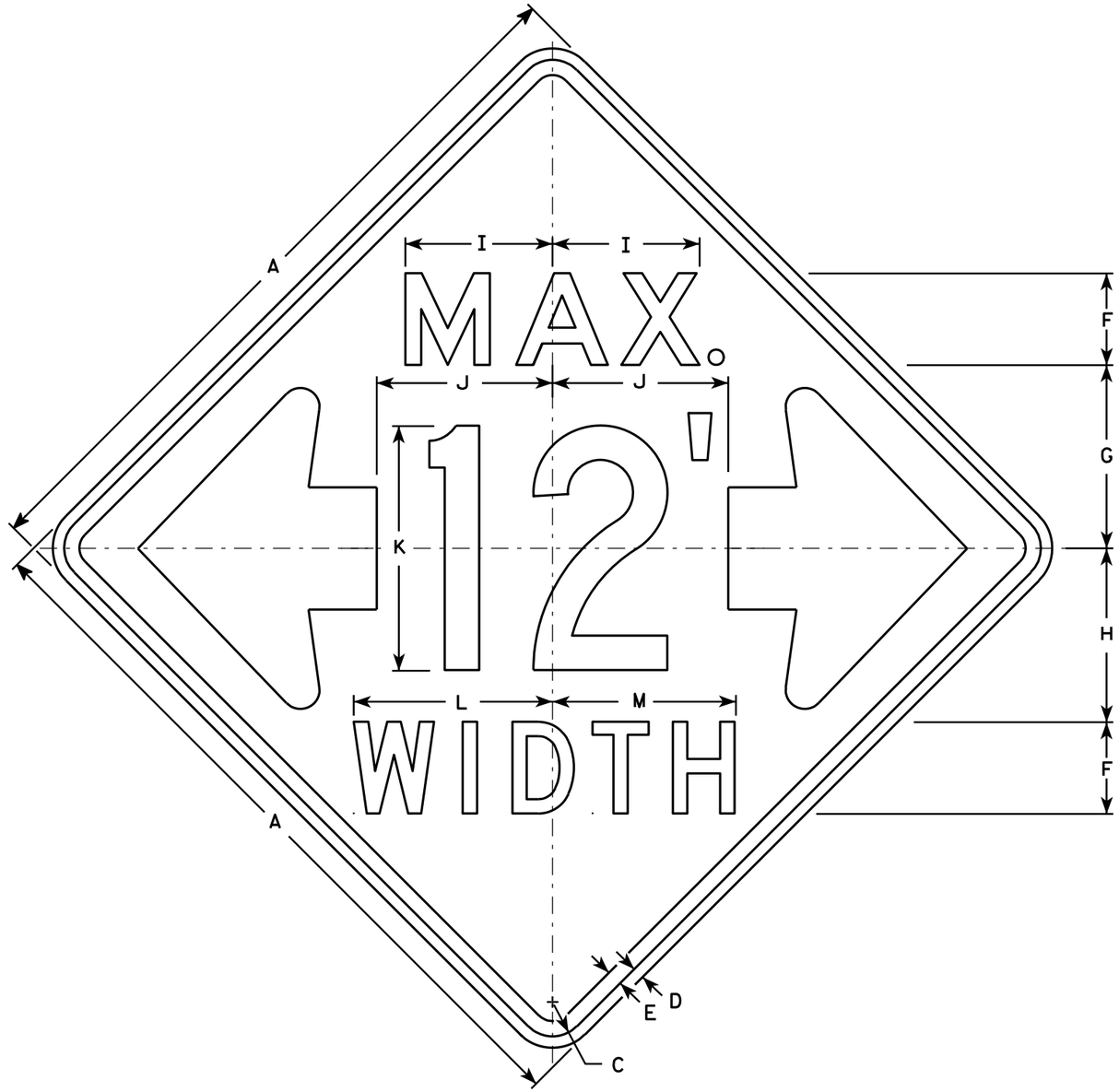
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:

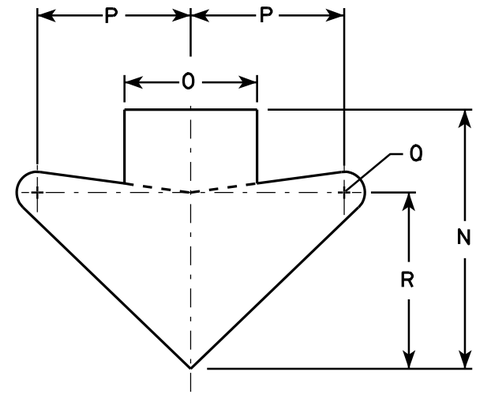
SHEET NO: 92 E



W12-52

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. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



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																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

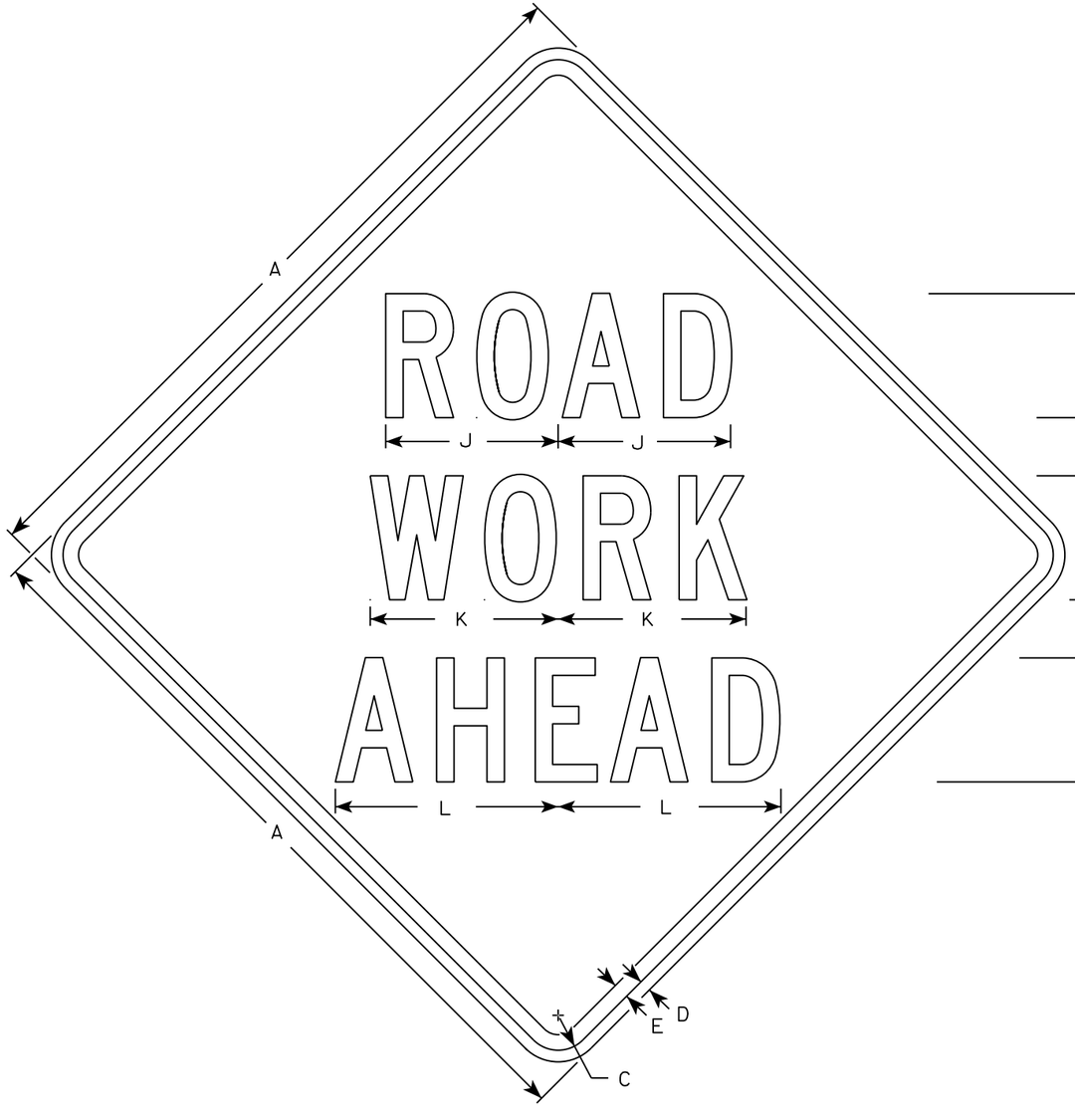
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 93	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000

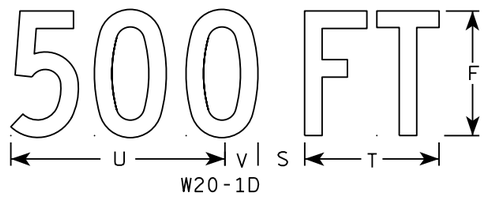
WISDOT/CADDS SHEET 42

7

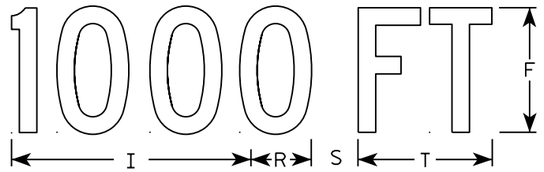
7



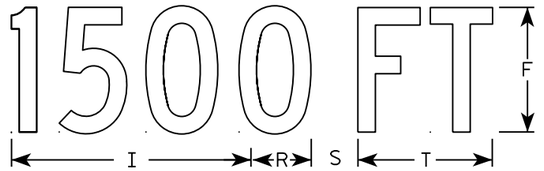
W20-1A



W20-1D

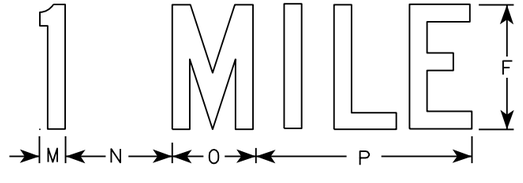


W20-1C

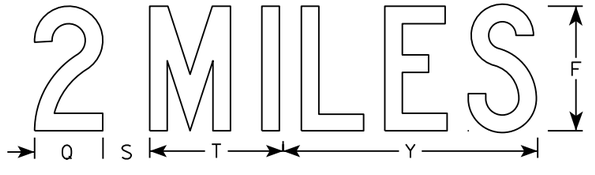


W20-1B

W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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.

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 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

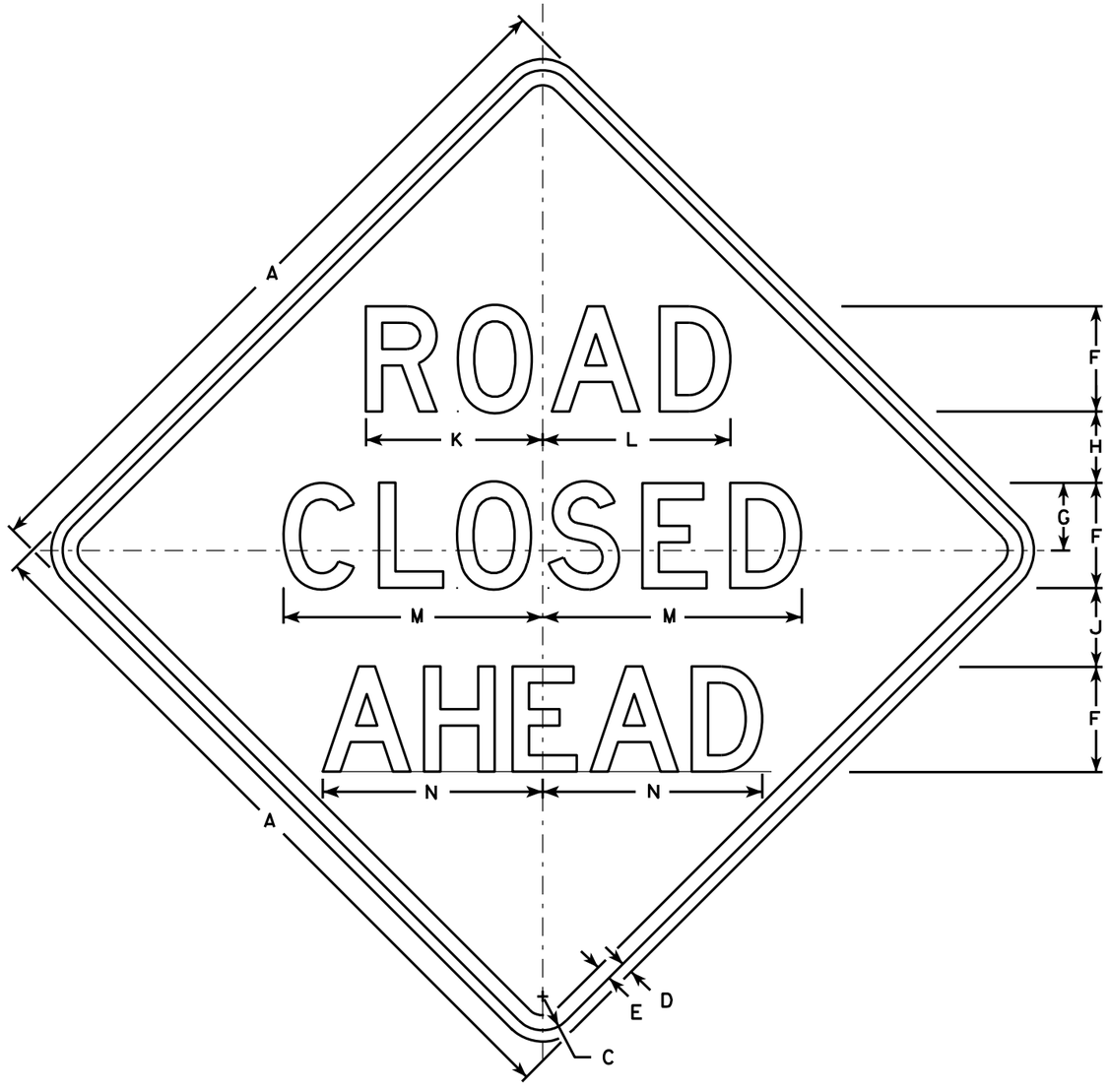
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

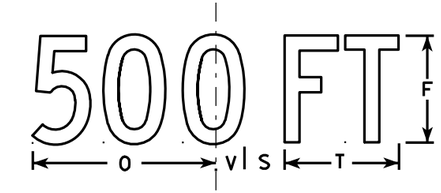
DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

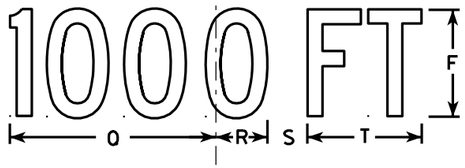
SHEET NO: E



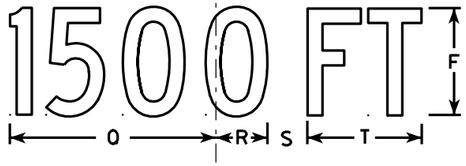
W20-3A



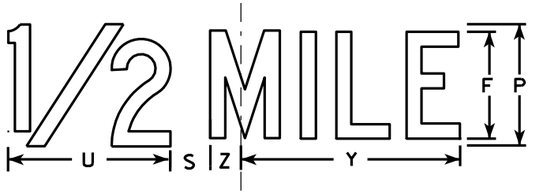
W20-3D



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

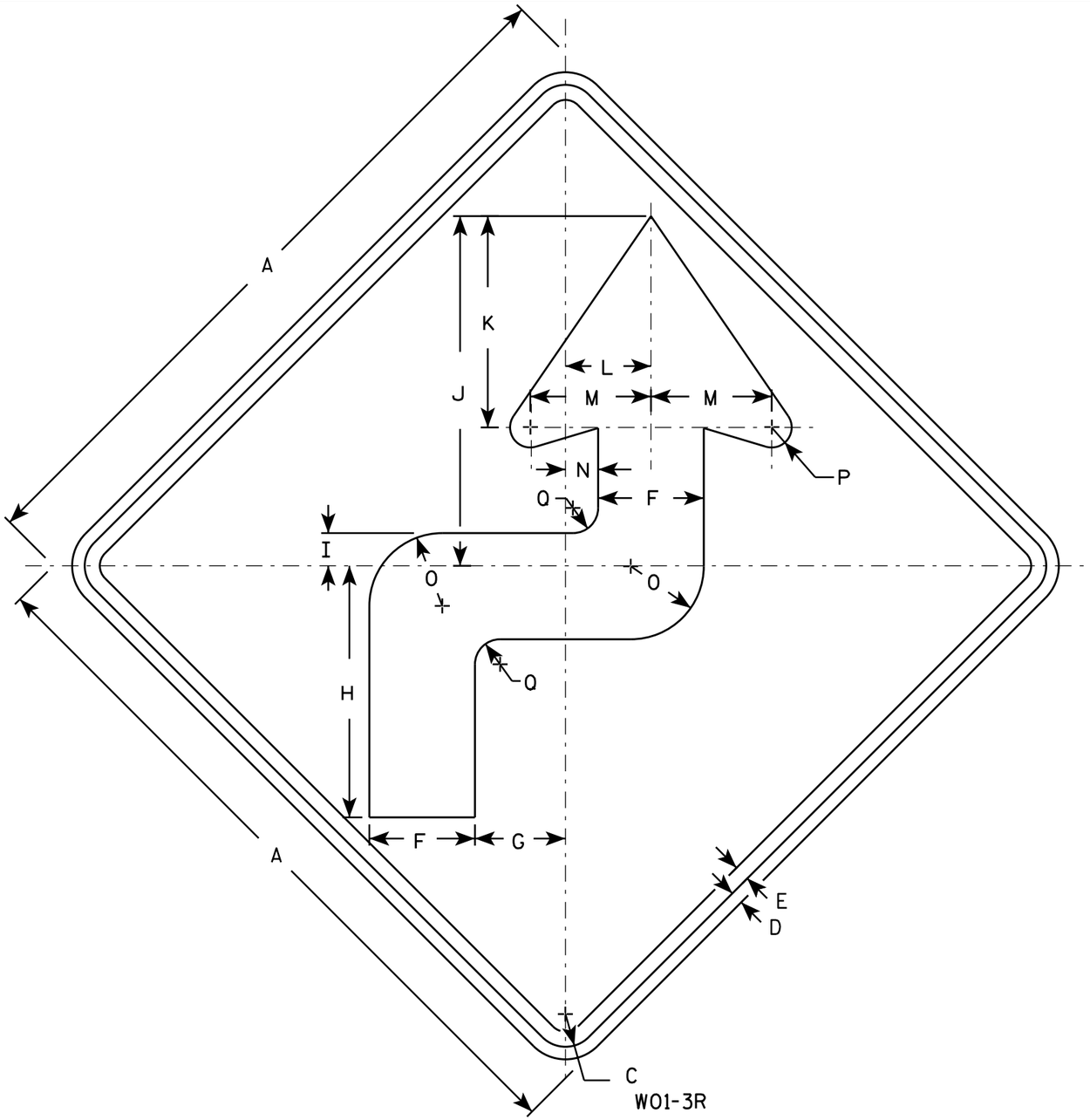
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 95 | E

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

7

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 - Orange
   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. W01-3L is the same as W01-3R 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	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
2S	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
2M	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
3	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
4	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
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
W01-3

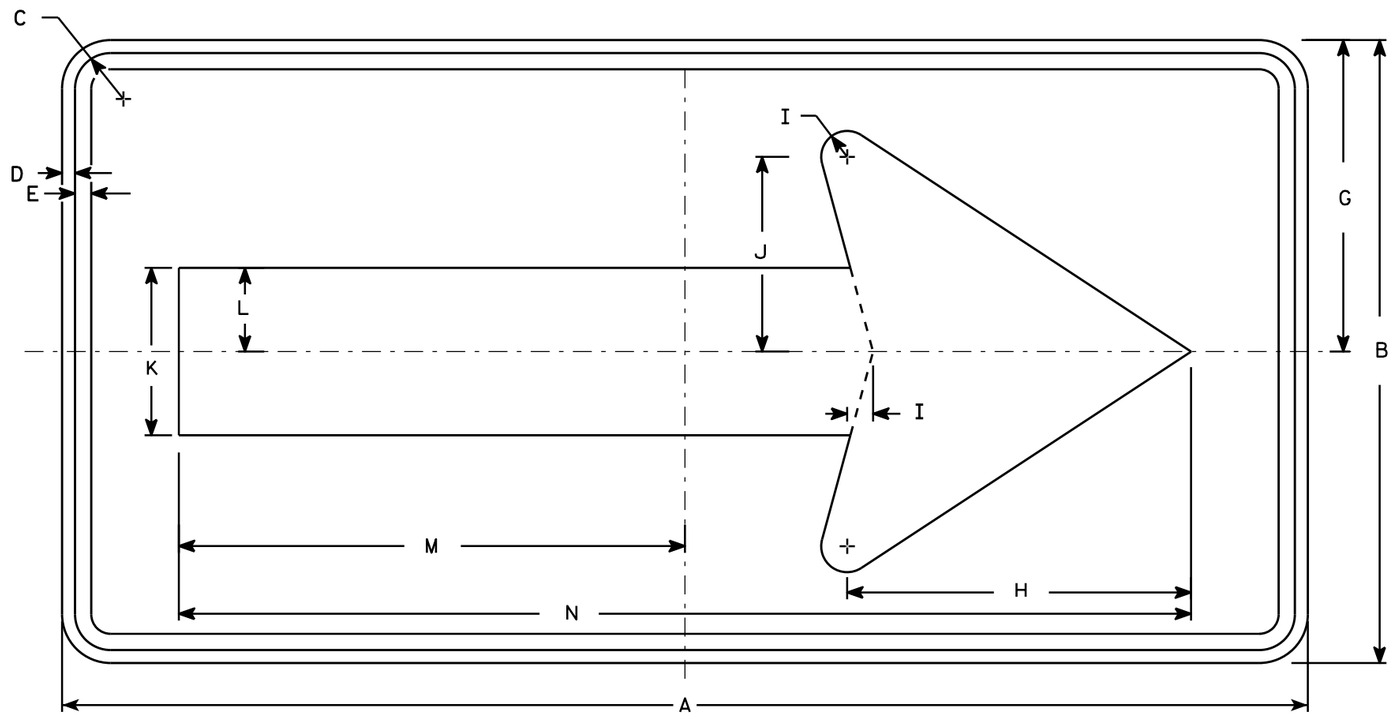
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-3.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W013.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.567217:1.000000
WISDOT/CADDS SHEET 42



W01-6

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. 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	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

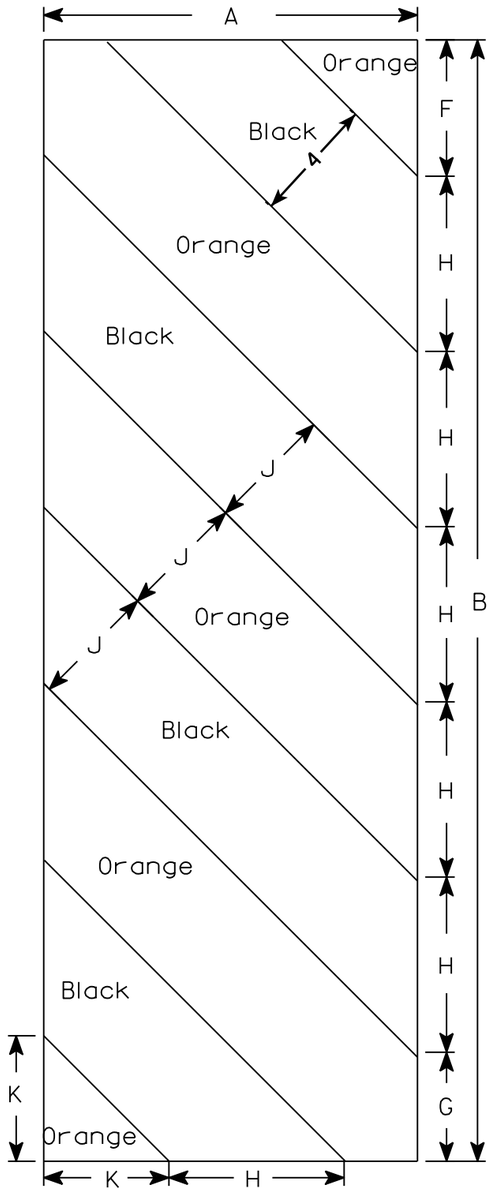
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

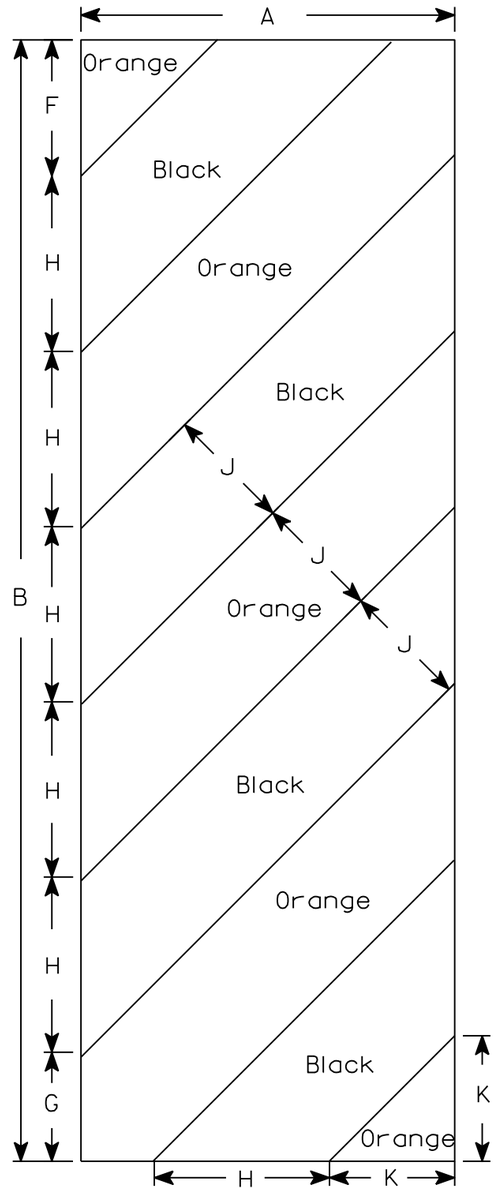
DATE 11/18/13 PLATE NO. W01-6.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W05-52L



W05-52R

NOTES

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

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

STANDARD SIGN

W05-52L & W05-52R

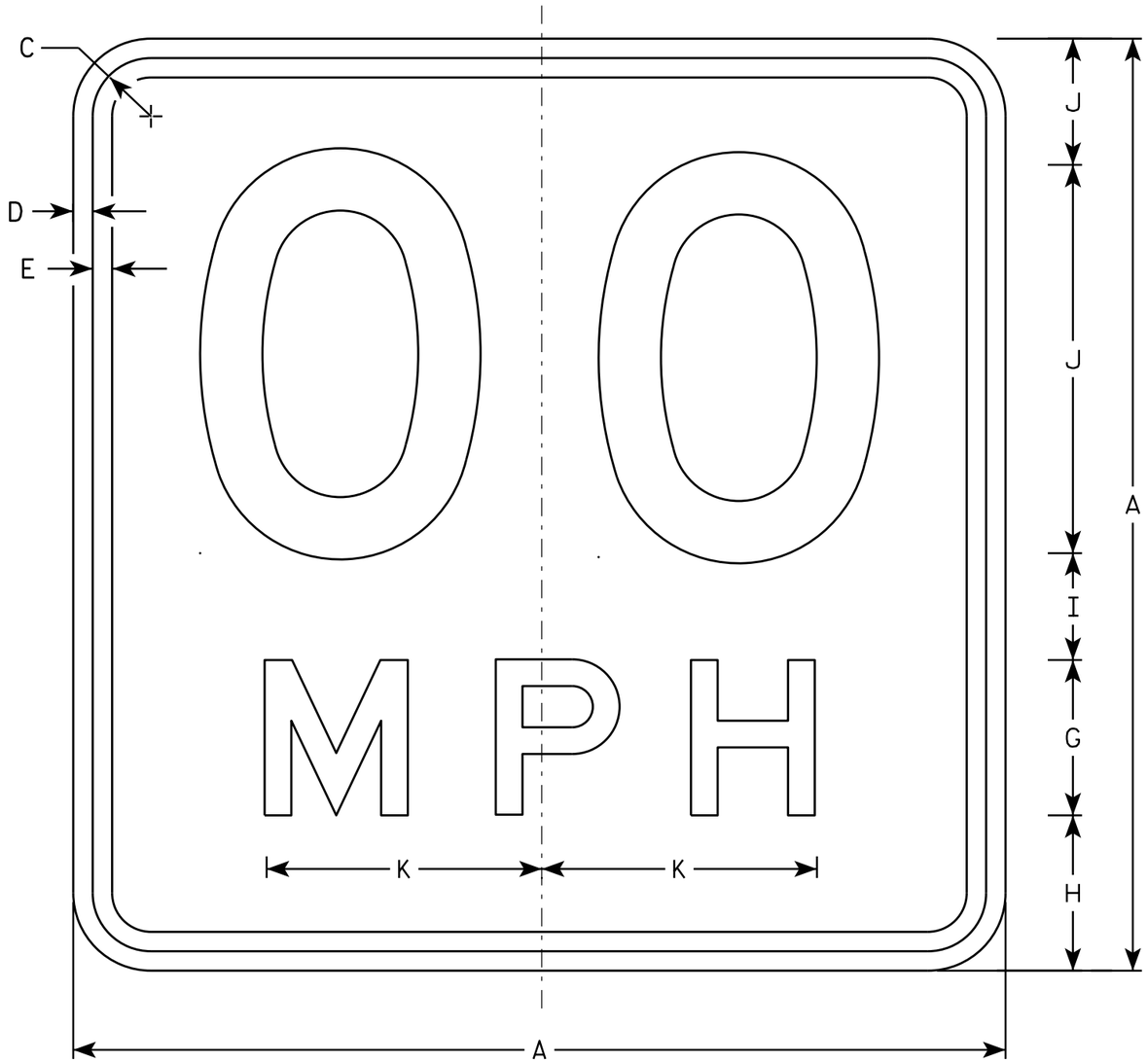
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W05-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W0552.DGN PLOT DATE : 28-FEB-2014 11:39 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.864607:1.000000 WISDOT/CADDS SHEET 42



W013-1

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 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	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
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
W013-1

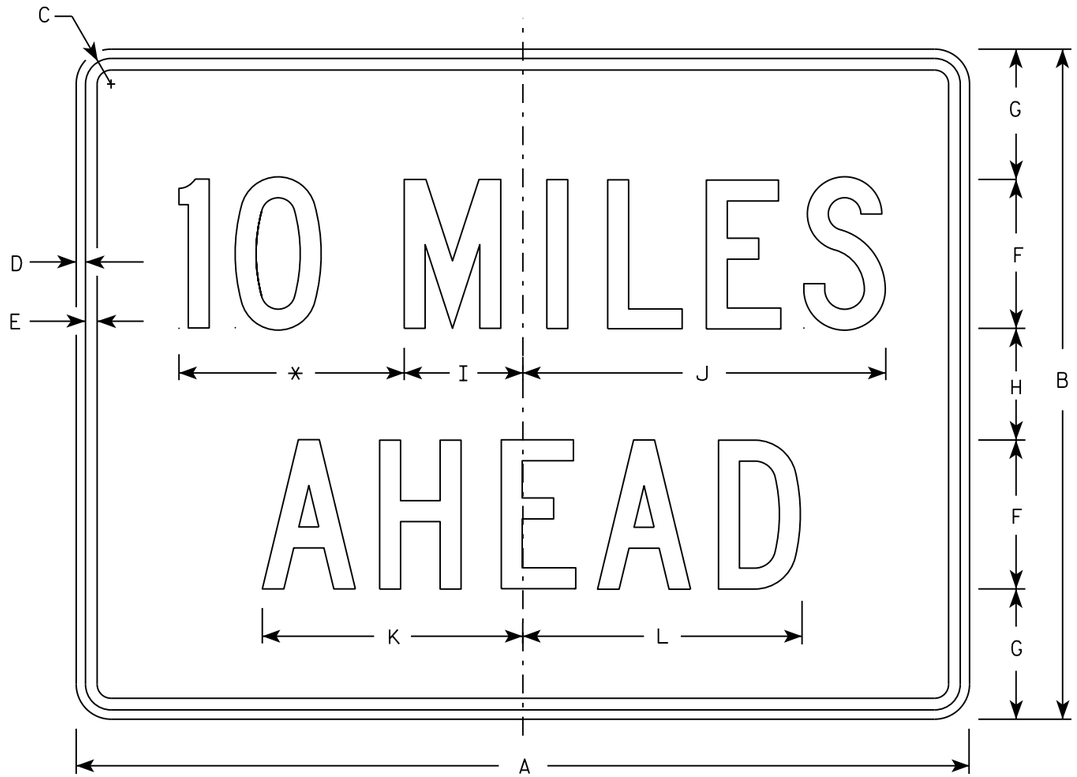
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

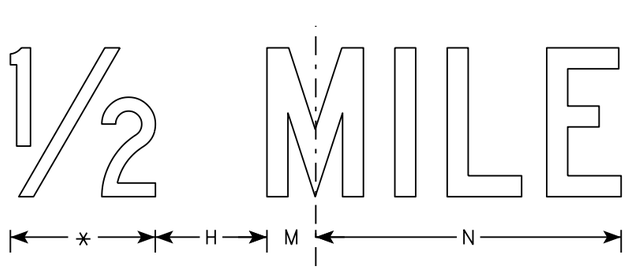
DATE 11/21/13 PLATE 99 W013-1.1

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0131.DGN PLOT DATE : 02-DEC-2013 13:55 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.794391:1.000000
WISDOT/CADDS SHEET 42



W057-52



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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 the nearest quarter mile and optically adjust spacing to achieve proper balance.

* 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	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

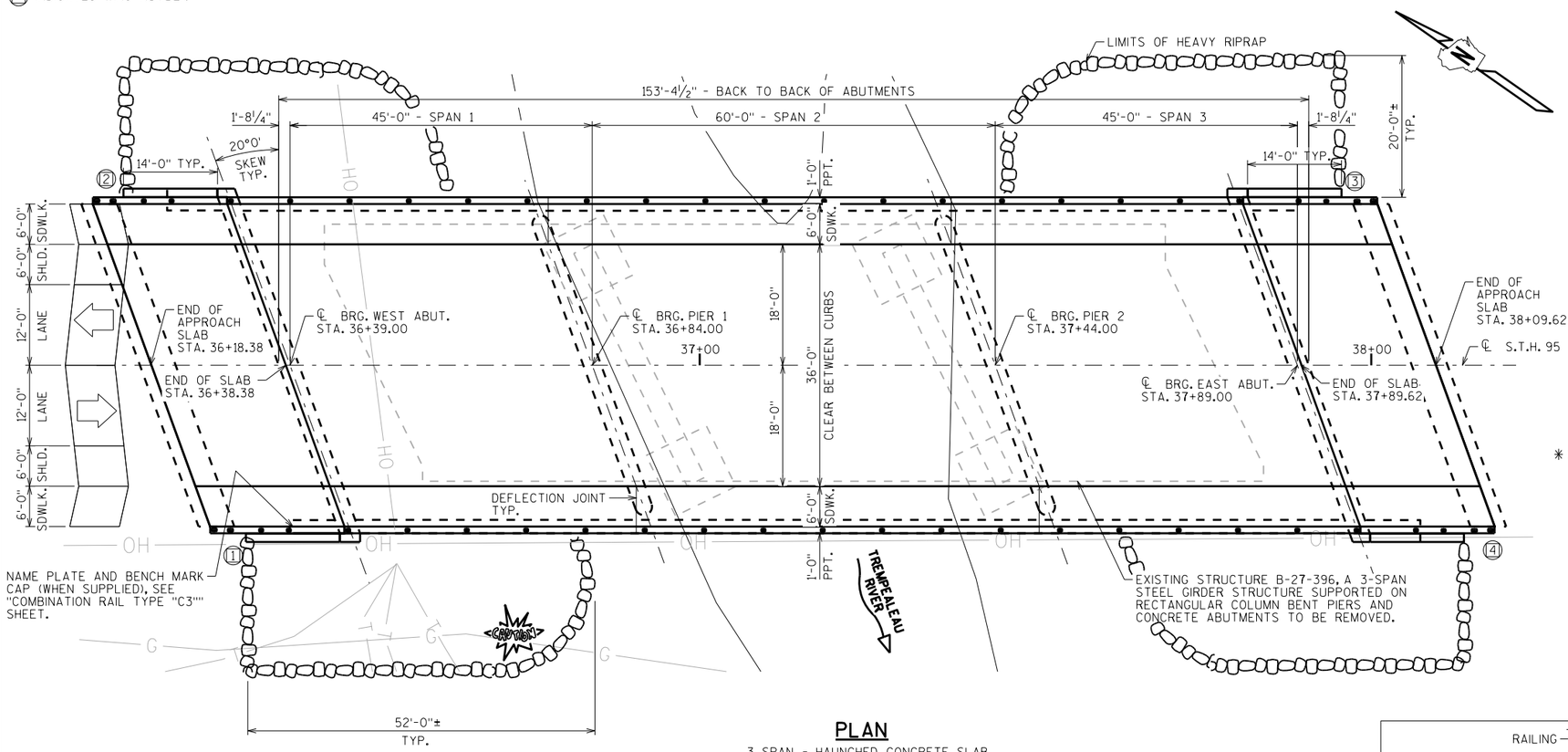
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

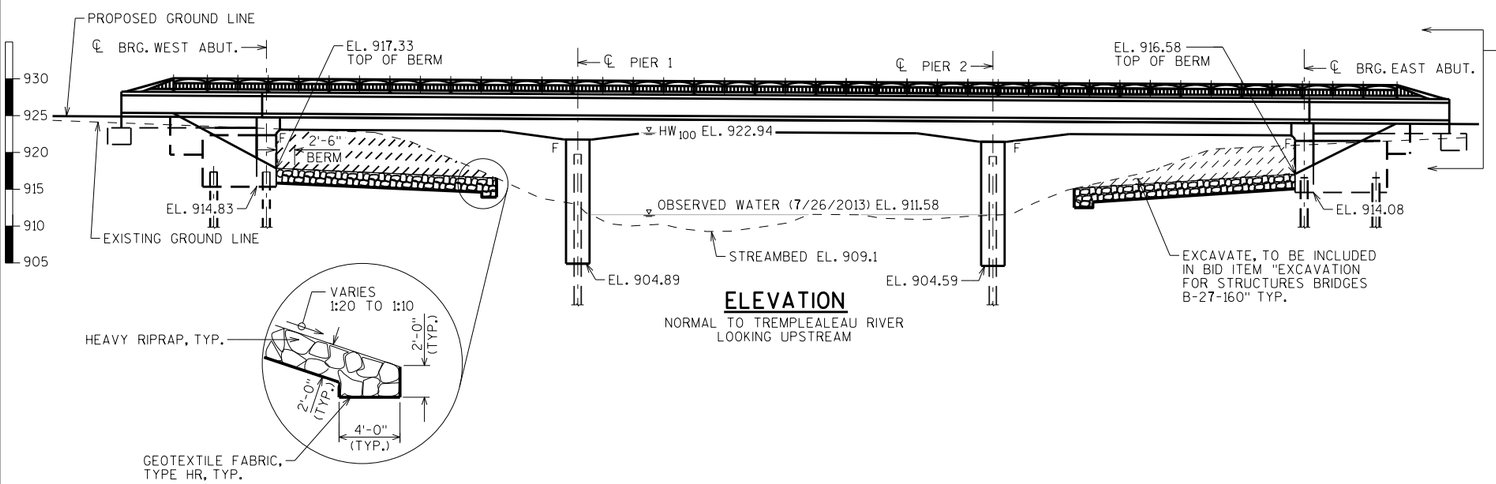
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 100	E

INDICATES WING NUMBER



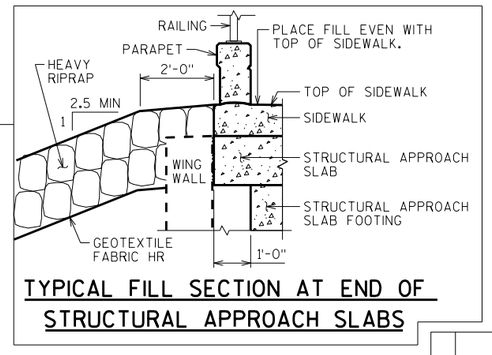
PLAN

3 SPAN - HAUNCHED CONCRETE SLAB



ELEVATION

NORMAL TO TREMPLEALEAU RIVER
LOOKING UPSTREAM



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.07
OPERATING RATING FACTOR: RF=1.39
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 220 (KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY — SUPTERSTRUCTURE — 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.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
WEST ABUTMENT ESTIMATED 80'-0" LONG.
EAST ABUTMENT ESTIMATED 85'-0" LONG.

PIERS TO BE SUPPORTED ON HP 10X42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 90'-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.

TRAFFIC VOLUME

S.T.H. 95
A.D.T.= 5000 (2037)
R.D.S.= 35 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 5720 C.F.S.
$VEL._{100}$ = 5.6 F.P.S.
$HW._{100}$ = EL. 922.94
WATERWAY AREA= 1027 SQ. FT.
DRAINAGE AREA= 57.6 SQ. MI.
ROAD OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 980 C.F.S.
$VEL._2$ = 2.9 F.P.S.
$HW._2$ = EL. 916.32

TEMPORARY STRUCTURE

Q_5 = 1,820 C.F.S.
$HW._5$ = EL. 918.2
MIN. HYDRAULIC AREA = 344 S.F.
LOW CHORD = EL. 918.3

LIST OF DRAWINGS

STATE PROJECT NUMBER

7520-03-70

STRUCTURE DESIGN CONTACTS:
EMILY KUEHNE (608) 266-5089
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher MSE 08/25/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-27-160

S.T.H. 95 OVER TREMPEALEAU RIVER

COUNTY: JACKSON | VILLAGE: HIXTON

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
EMK	MJL	DDS	EMK

GENERAL PLAN

SHEET 1 OF 18

101

I.D. 7520-03-00 DATE: JULY 2017

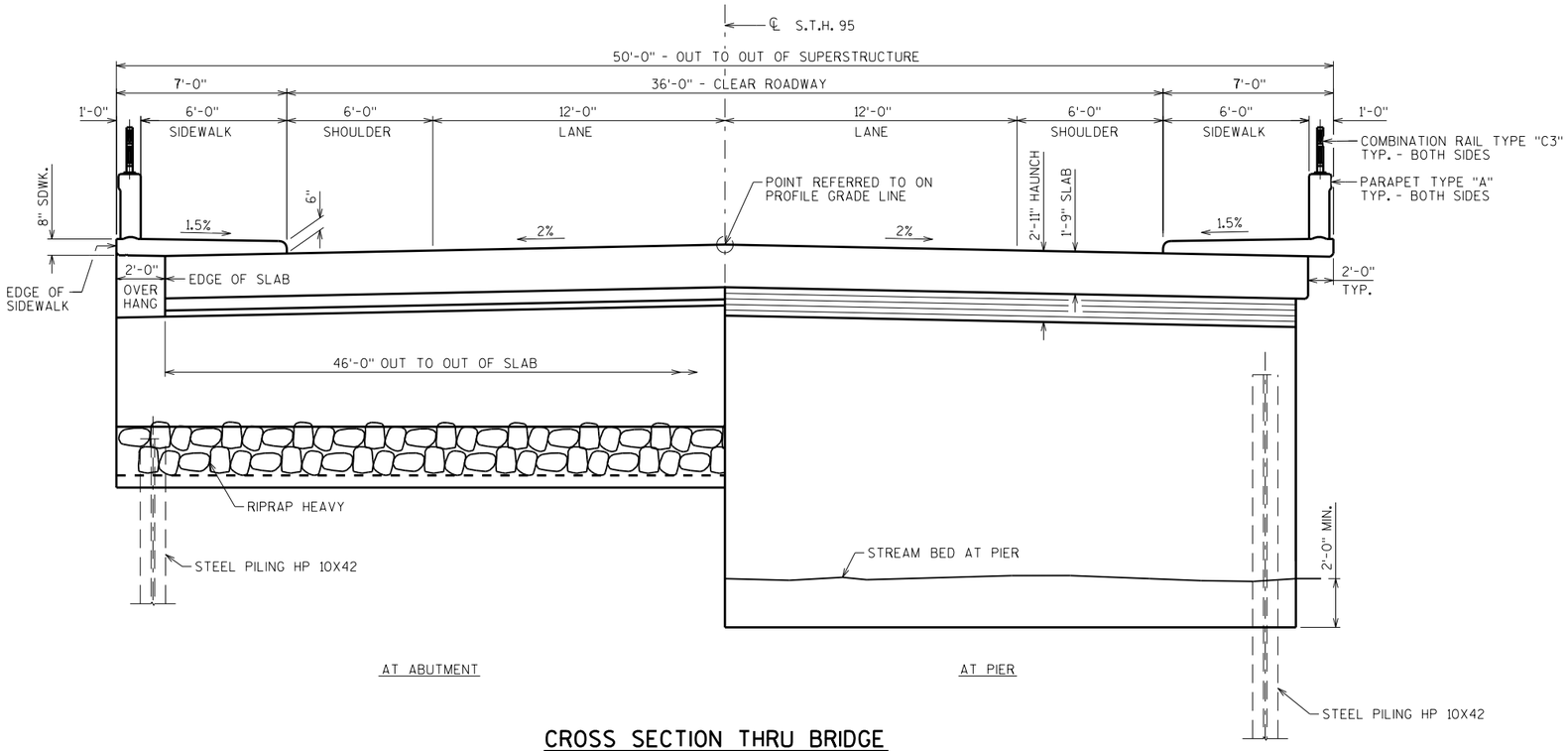
SCALE = 10.00

8

8

STATE PROJECT NUMBER

7520-03-70



CROSS SECTION THRU BRIDGE

(LOOKING EAST)

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-27-160" 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. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1¼-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

EXCAVATION BELOW THE ABUTMENT AND USE OF 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.

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

PIGMENTED PROTECTIVE 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.

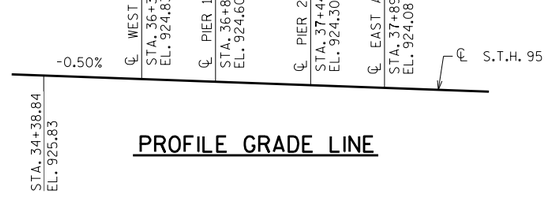
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

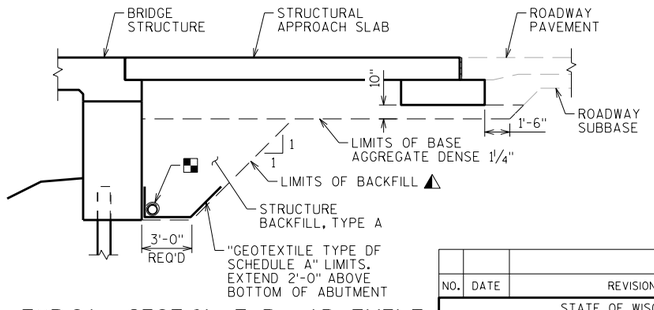
AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 37+14.00	LS	———	———	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-27-160	LS	———	———	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	185	———	———	185	———	370
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	156	———	———	———	———	156	312
502.0100	CONCRETE MASONRY BRIDGES	CY	578	74	62	75	75	62	74	1,000
502.3200	PROTECTIVE SURFACE TREATMENT	SY	855	110	———	———	———	———	110	1,075
502.3210	PIGMENTED SURFACE SEALER	SY	125	20	———	———	———	———	20	165
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	3,630	———	———	3,630	———	7,260
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	99,445	12,475	1,700	3,465	3,465	1,700	12,475	134,725
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,635	———	———	———	———	———	———	1,635
513.7016	RAILING STEEL TYPE C3 B-27-160	LF	303	40	———	———	———	———	40	383
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	15	———	———	———	15	———	30
526.0100	TEMPORARY STRUCTURE STA. 37+14.00	LS	———	———	———	———	———	———	———	1
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	———	800	1,260	1,260	850	———	4,170
606.0300	RIPRAP HEAVY	CY	———	———	300	———	———	325	———	625
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	95	———	———	95	———	190
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	———	———	60	———	———	60	———	120
645.0120	GEOTEXTILE TYPE HR	SY	———	———	500	———	———	525	———	1,025
SPV.0090	REMOVING EXISTING TIMBER PILING	LF	———	———	———	120	120	———	———	240
	NON-BID ITEMS									
	FILLER	SIZE	———	———	———	———	———	———	———	½", ¾", 1½"



PROFILE GRADE LINE



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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY EMK/DDS | PLANS CK'D. EMK

CROSS SECTION AND QUANTITIES

SHEET 2

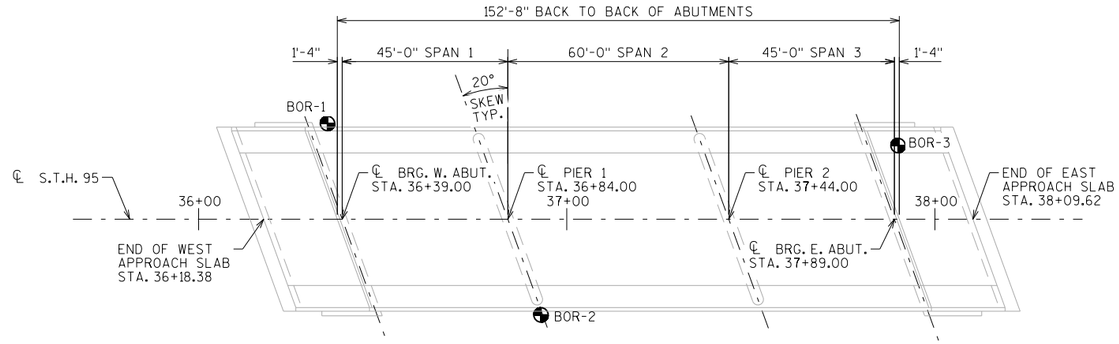
102

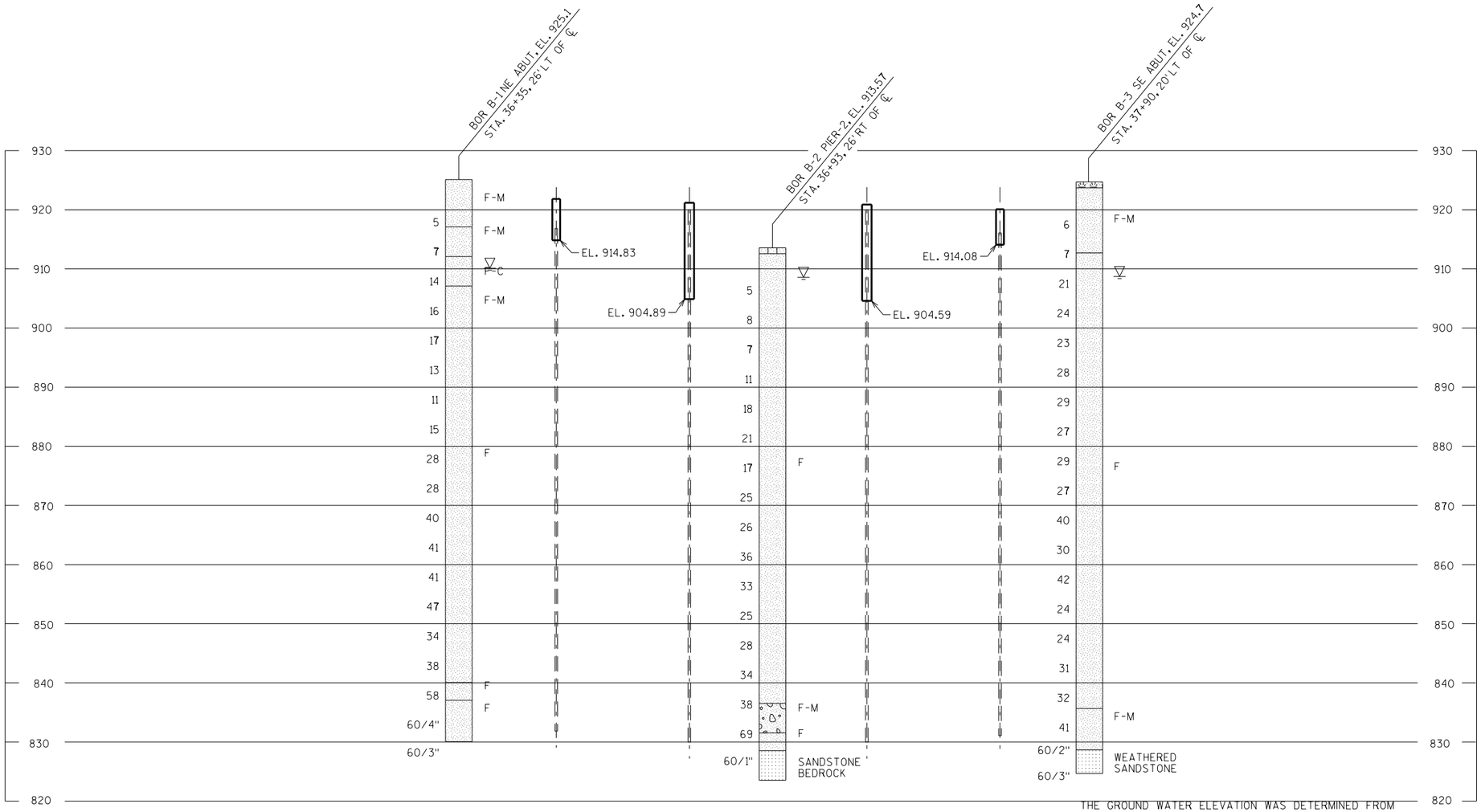
SCALE = 3.00

8

8

VILLAGE OF HIXTON, SOUTH STATE STREET
STH 95 OVER TREMPEALEAU RIVER





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

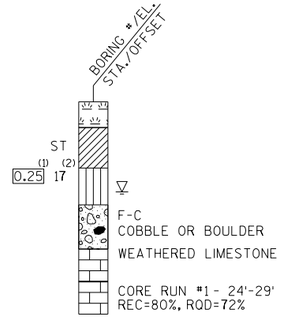
STATE PROJECT NUMBER

7520-03-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY PR/DDS | PLANS CK'D. EMK

SUBSURFACE EXPLORATION

SHEET 3

103

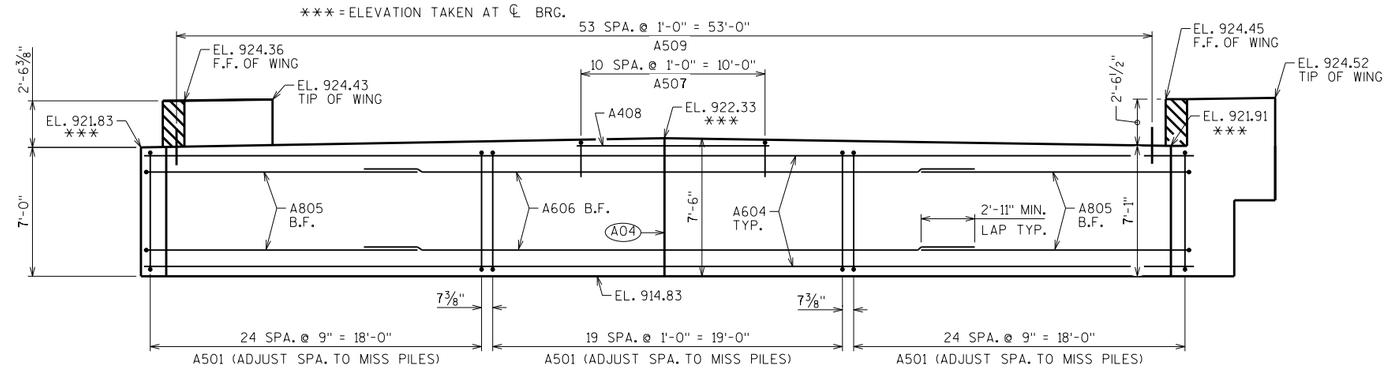
SCALE = 20.00

8

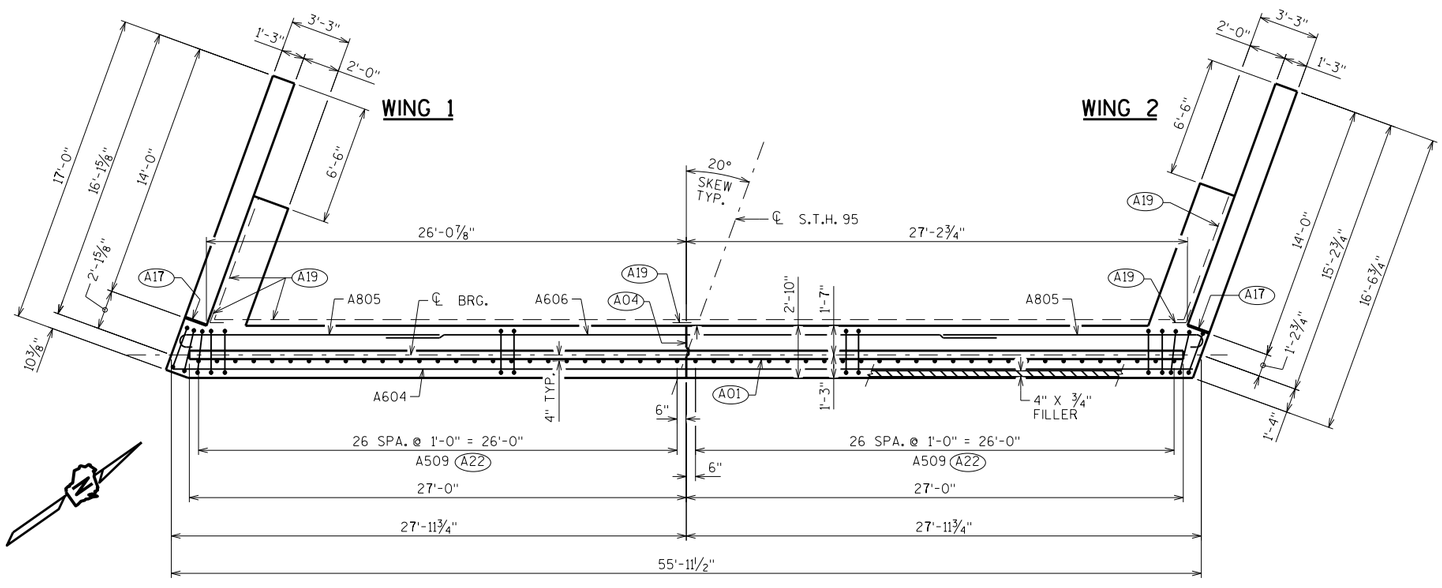
8

STATE PROJECT NUMBER

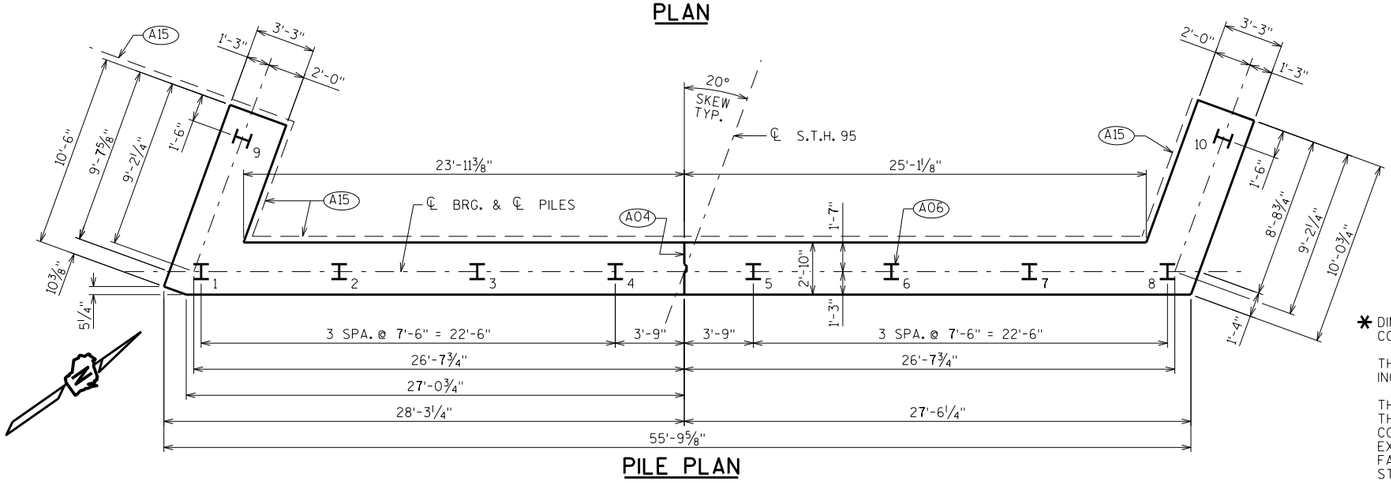
7520-03-70



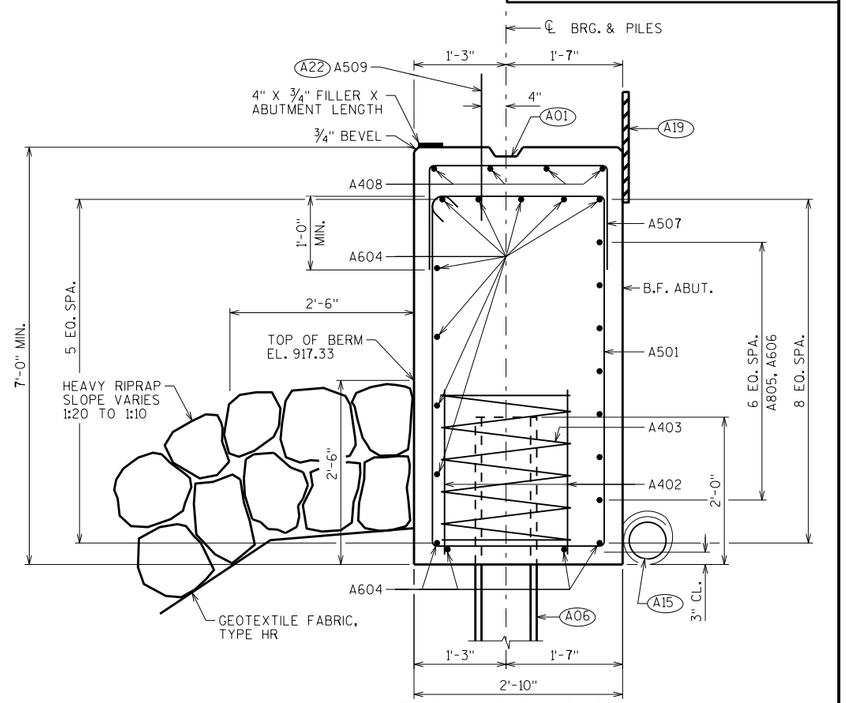
ELEVATION - LOOKING WEST



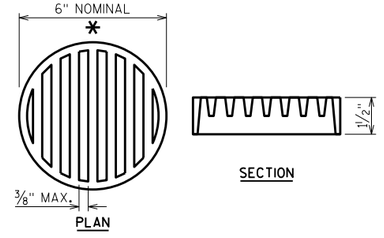
PLAN



PILE PLAN



SECTION THRU BODY



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.

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 X 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 80'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(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.

(A22) A509 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

WEST ABUTMENT

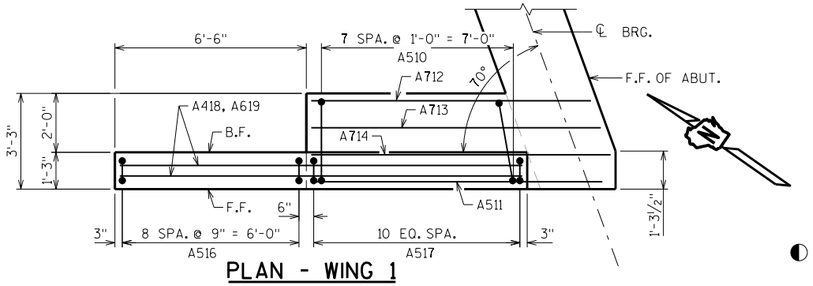
SHEET 4

104

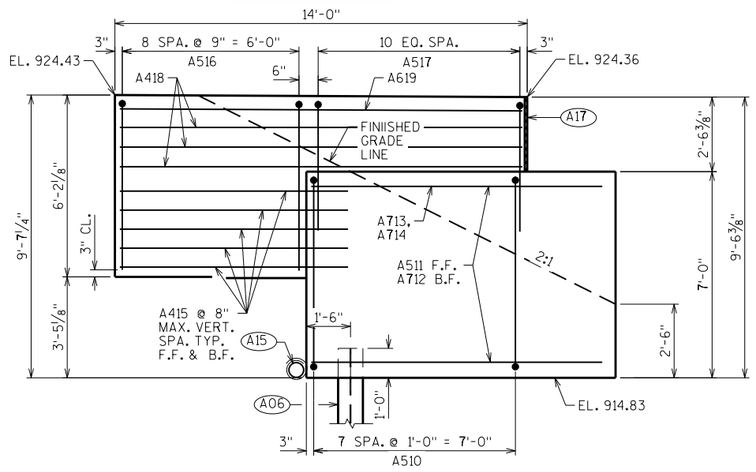
SCALE = 4.00

8

8

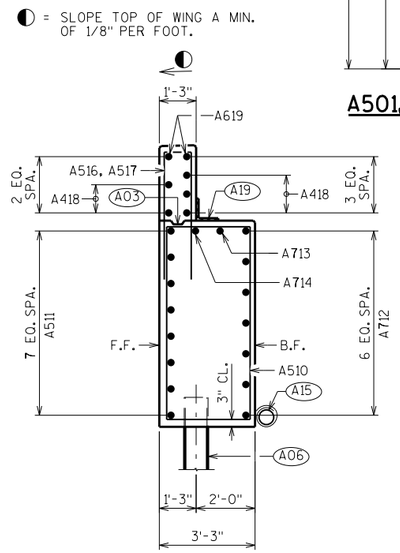


PLAN - WING 1

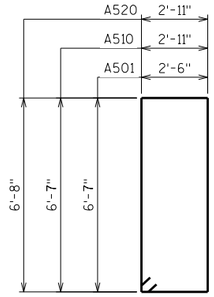


ELEVATION - WING 1

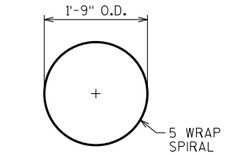
◐ = SLOPE TOP OF WING A MIN. OF 1/8" PER FOOT.



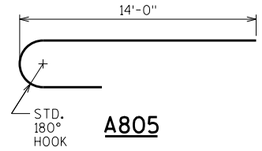
END VIEW - WING 1



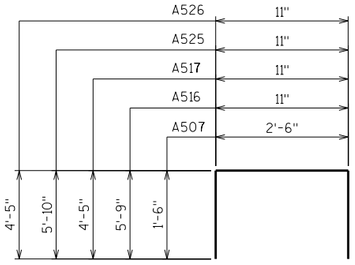
A501, A510, A520



A403



A805



A507, A516, A517, A525, A526

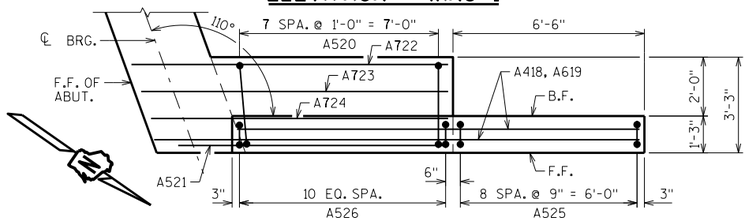
STATE PROJECT NUMBER

7520-03-70

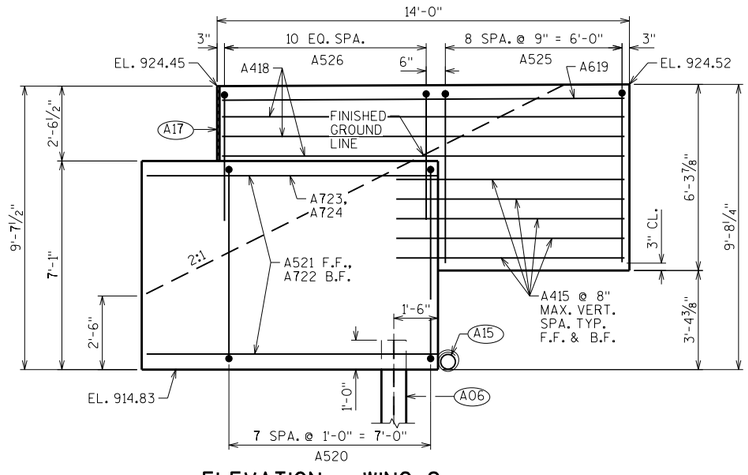
BILL OF BARS

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

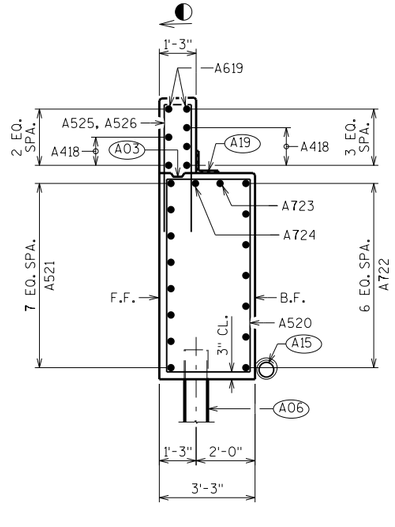
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		70	18'-10"	X		BODY - STIRRUP
A402		16	2'-3"			PILE - 2 PER BODY PILES
A403		8	28'-0"	X		PILE - 1 PER BODY PILE
A604		13	55'-5"			BODY - HORIZ.
A805		14	14'-11"	X		BODY - HORIZ. - B.F.
A606		7	33'-5"			BODY - HORIZ. - B.F.
A507		11	5'-3"	X		BODY - VERT. - TOP
A408		4	10'-6"			BODY - HORIZ. - TOP
A509	X	54	2'-0"			DOWEL BARS
A510	X	8	19'-8"	X		WING 1 - STIRRUP
A511	X	8	10'-0"			WING 1 - HORIZ. - F.F.
A712	X	7	9'-6"			WING 1 - HORIZ. - B.F.
A713	X	1	9'-10"			WING 1 - HORIZ.
A714	X	1	10'-2"			WING 1 - HORIZ.
A415	X	20	7'-9"			WINGS 1&2 - HORIZ.
A516	X	9	12'-2"	X		WING 1 - VERT.
A517	X	11	9'-6"	X		WING 1 - VERT.
A418	X	10	13'-8"			WINGS 1&2 - HORIZ.
A619	X	4	13'-8"			WINGS 1&2 - HORIZ. - TOP
A520	X	8	19'-10"	X		WING 2 - STIRRUP
A521	X	8	9'-2"			WING 2 - HORIZ. - F.F.
A722	X	7	10'-9"			WING 2 - HORIZ. - B.F.
A723	X	1	10'-5"			WING 2 - HORIZ.
A724	X	1	10'-1"			WING 2 - HORIZ.
A525	X	9	12'-4"	X		WING 2 - VERT.
A526	X	11	9'-6"	X		WING 2 - VERT.



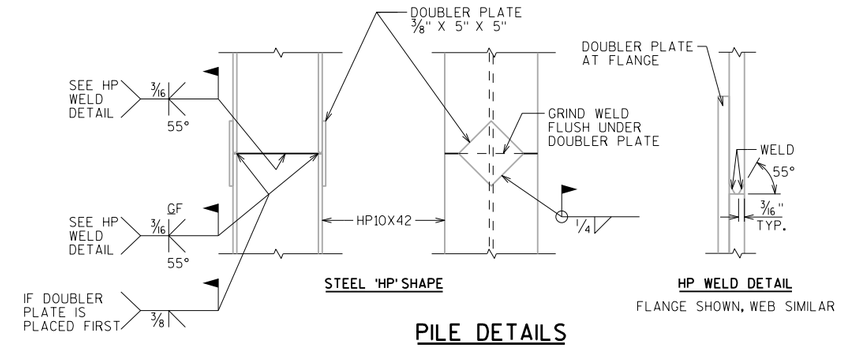
PLAN - WING 2



ELEVATION - WING 2



END VIEW - WING 2



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 90'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

WEST ABUTMENT DETAILS

SHEET 5

105

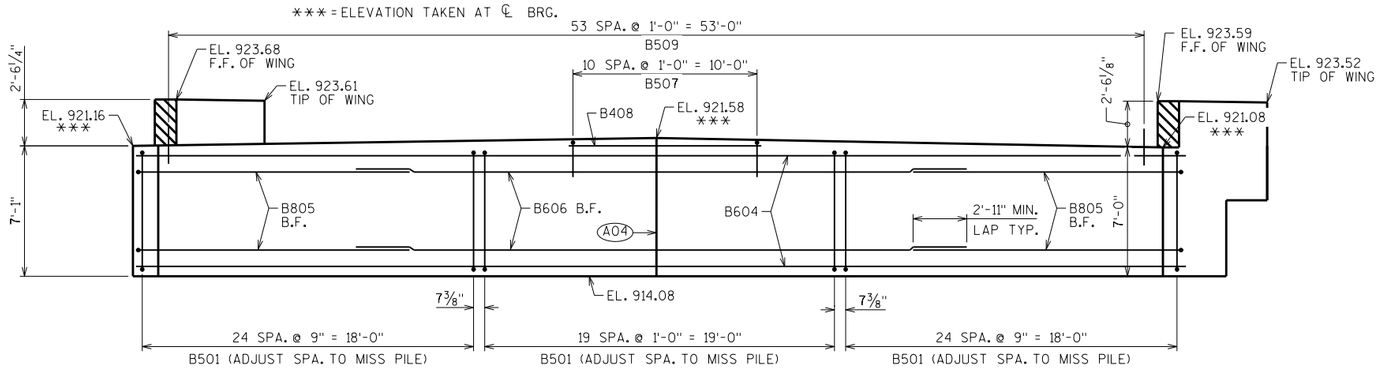
8

8

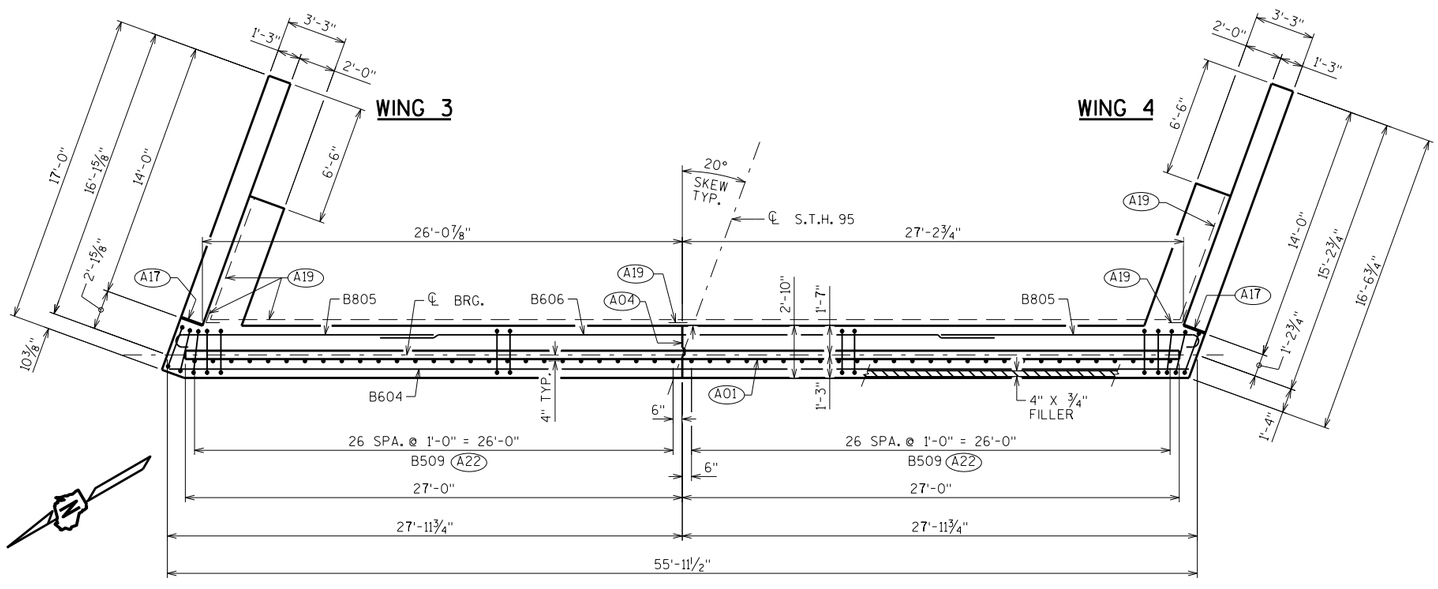
SCALE = 2.50

STATE PROJECT NUMBER

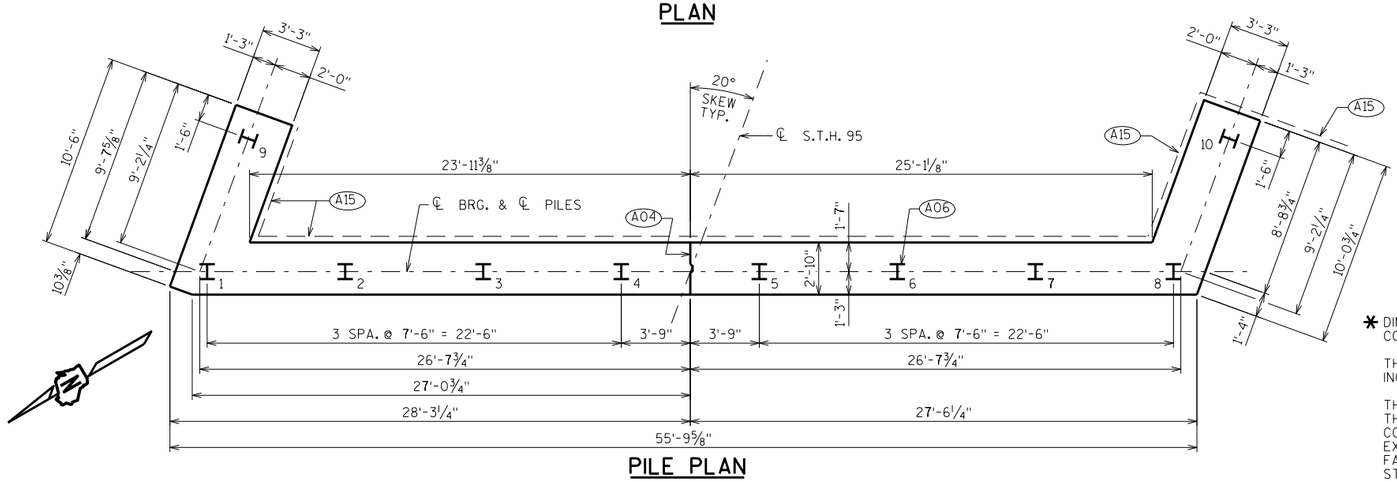
7520-03-70



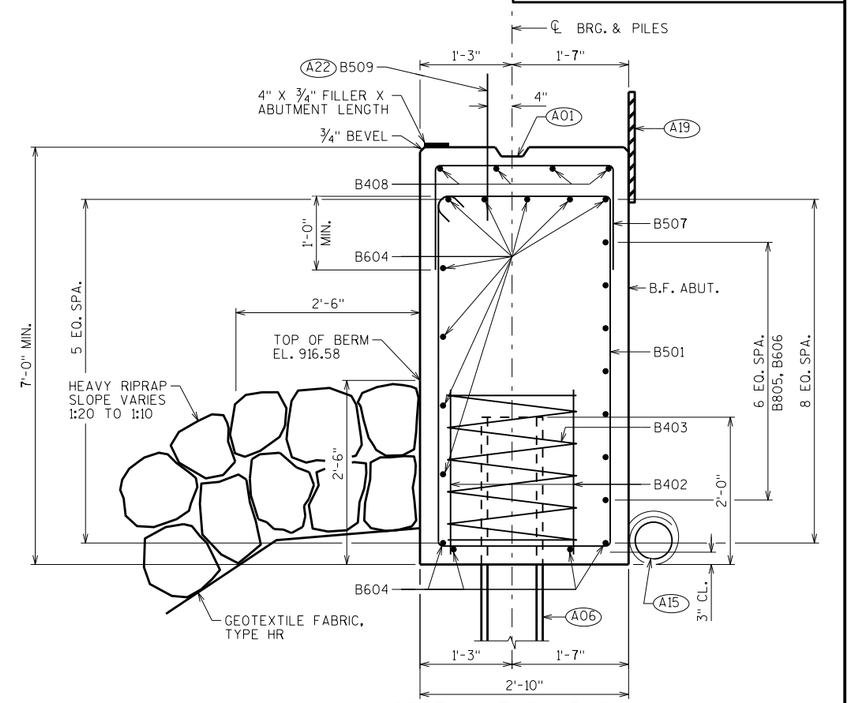
ELEVATION - LOOKING EAST



PLAN



PILE PLAN



SECTION THRU BODY

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 X 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

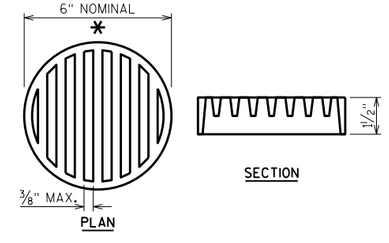
(A06) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 85'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(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.

(A22) B509 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)



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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

EAST ABUTMENT

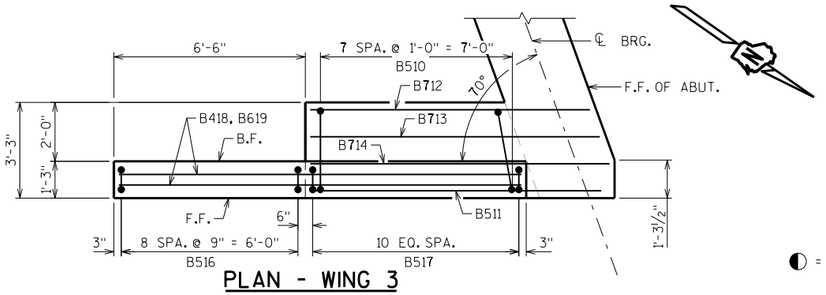
SHEET 6

106

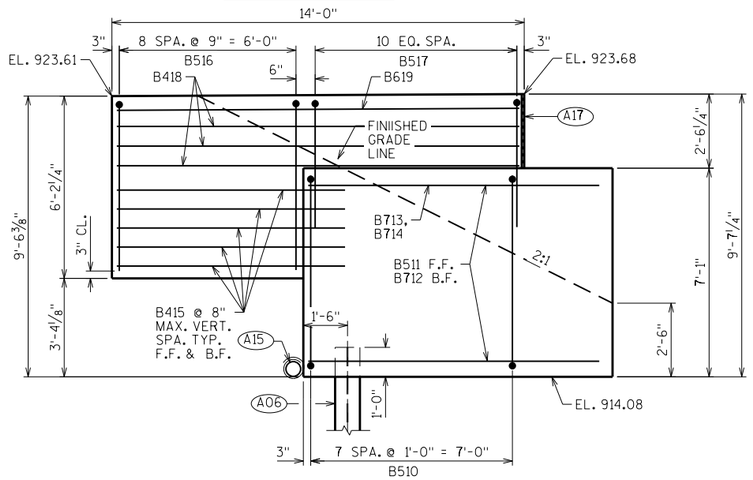
SCALE = 4.00

8

8

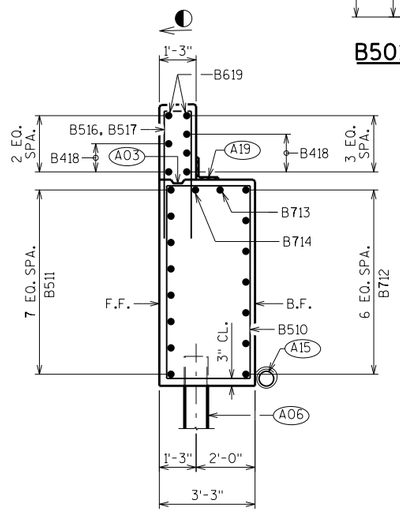


PLAN - WING 3

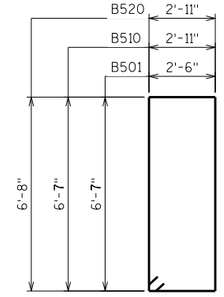


ELEVATION - WING 3

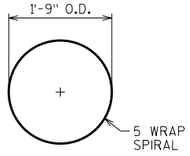
◐ = SLOPE TOP OF WING A MIN. OF 1/8" PER FOOT.



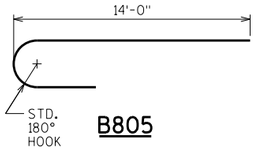
END VIEW - WING 3



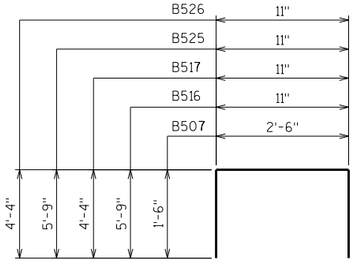
B501, B510, B520



B403

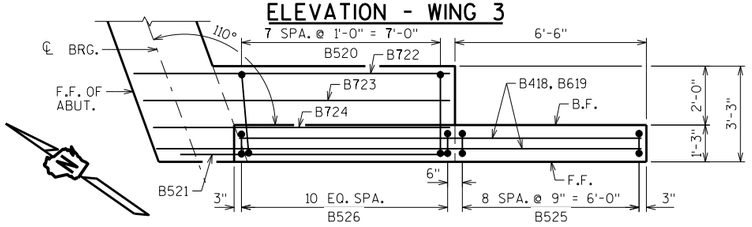


B805

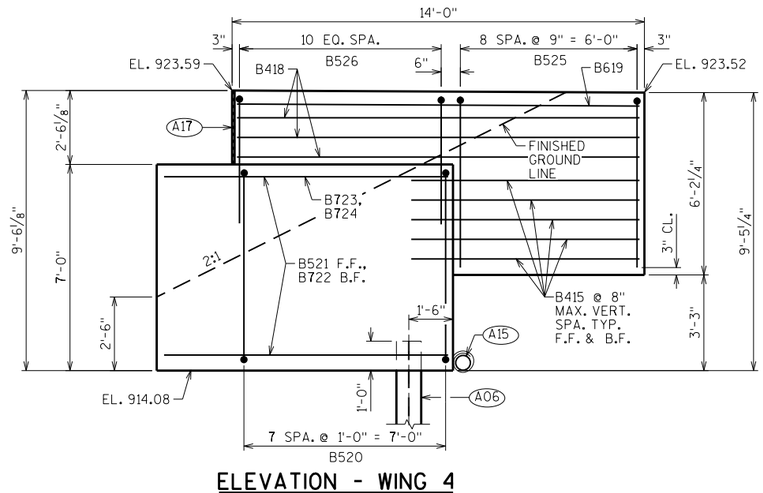


B507, B516, B517, B525, B526

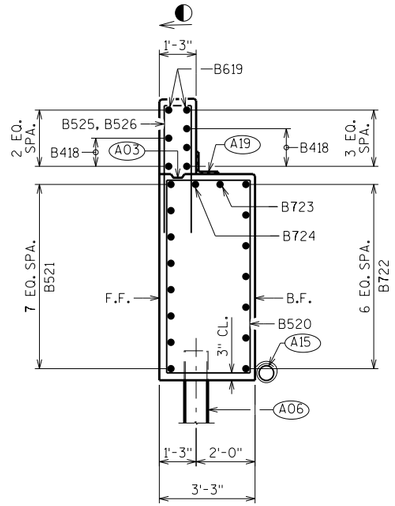
BILL OF BARS						NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		70	18'-10"	X		BODY - STIRRUP
B402		16	2'-3"			PILE - 2 PER BODY PILES
B403		8	28'-0"	X		PILE - 1 PER BODY PILE
B604		13	55'-5"			BODY - HORIZ.
B805		14	14'-11"	X		BODY - HORIZ. - B.F.
B606		7	33'-5"			BODY - HORIZ. - B.F.
B507		11	5'-3"	X		BODY - VERT. - TOP
B408		4	10'-6"			BODY - HORIZ. - TOP
B509	X	54	2'-0"			DOWEL BARS
B510	X	8	19'-8"	X		WING 3 - STIRRUP
B511	X	8	10'-0"			WING 3 - HORIZ. - F.F.
B712	X	7	9'-6"			WING 3 - HORIZ. - B.F.
B713	X	1	9'-10"			WING 3 - HORIZ.
B714	X	1	10'-2"			WING 3 - HORIZ.
B415	X	20	7'-9"			WINGS 3&4 - HORIZ.
B516	X	9	12'-2"	X		WING 3 - VERT.
B517	X	11	9'-4"	X		WING 3 - VERT.
B418	X	10	13'-8"			WINGS 3&4 - HORIZ.
B619	X	4	13'-8"			WINGS 3&4 - HORIZ. - TOP
B520	X	8	19'-10"	X		WING 4 - STIRRUP
B521	X	8	9'-2"			WING 4 - HORIZ. - F.F.
B722	X	7	10'-9"			WING 4 - HORIZ. - B.F.
B723	X	1	10'-5"			WING 4 - HORIZ.
B724	X	1	10'-1"			WING 4 - HORIZ.
B525	X	9	12'-2"	X		WING 4 - VERT.
B526	X	11	9'-4"	X		WING 4 - VERT.



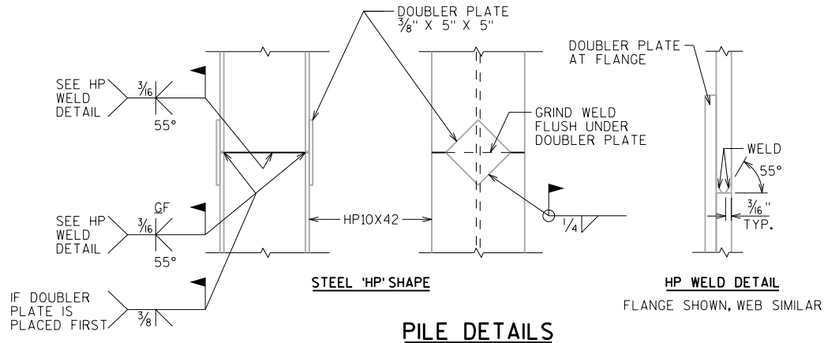
PLAN - WING 4



ELEVATION - WING 4



END VIEW - WING 4



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 85'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(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.

STATE PROJECT NUMBER

7520-03-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

EAST ABUTMENT DETAILS

SHEET 7

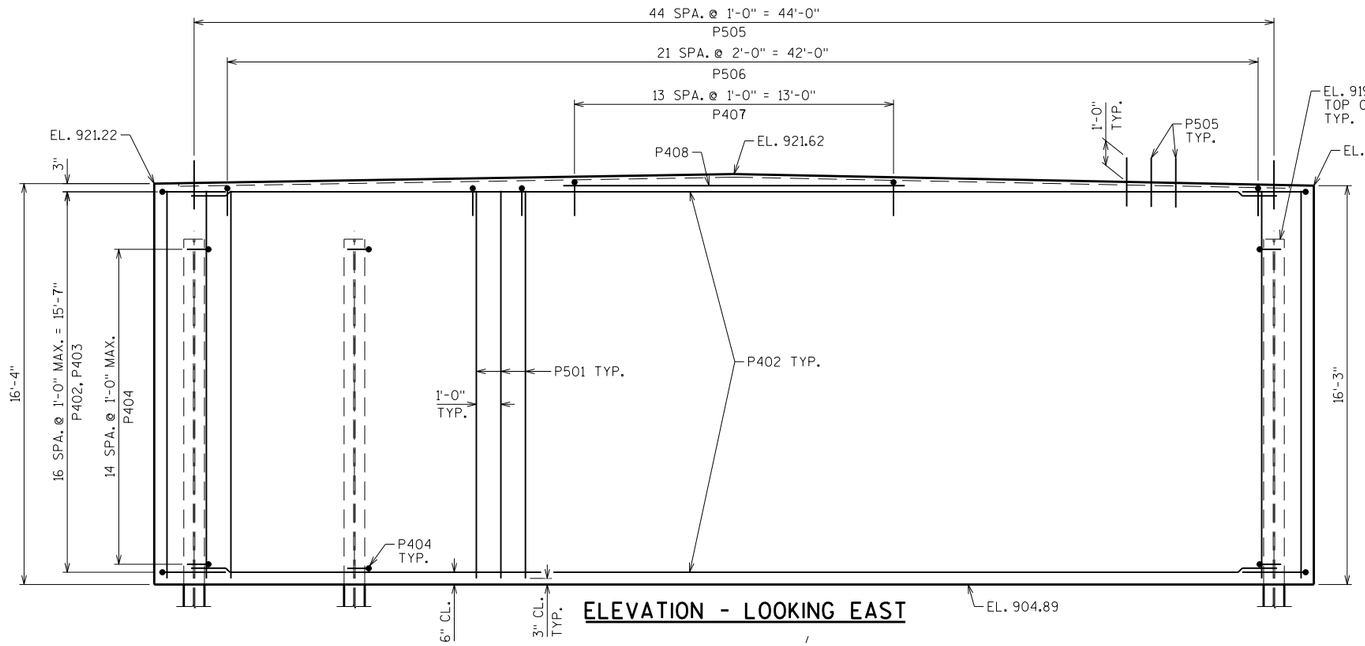
107

SCALE = 2.50

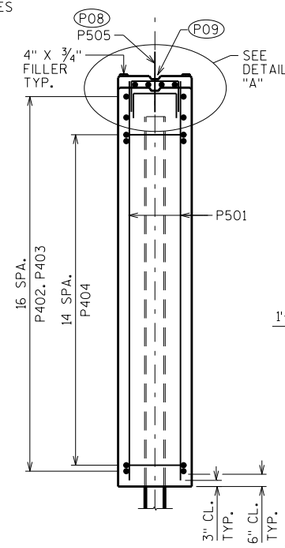
8

8

STATE PROJECT NUMBER
7520-03-70



ELEVATION - LOOKING EAST

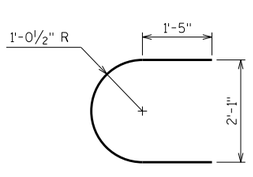


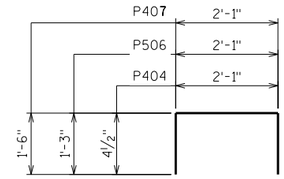
END VIEW

BILL OF BARS

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

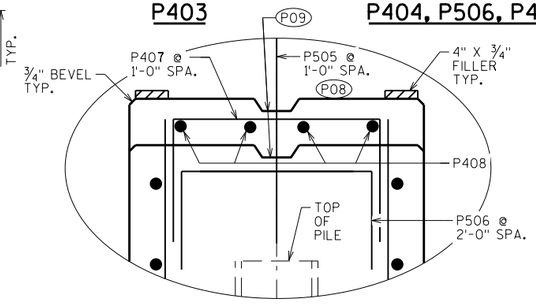
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P501	X	100	15'-10"			VERT. - BOTH FACES
P402	X	34	45'-0"			HORIZ. - BOTH FACES
P403	X	34	6'-2"	X		HORIZ. - ENDS
P404	X	210	2'-8"	X		TIE BARS
P505	X	45	2'-0"			DOWEL BARS
P506	X	22	4'-4"	X		VERT. - TOP
P407	X	14	4'-10"	X		VERT. - TOP
P408	X	4	13'-11"			HORIZ. - TOP



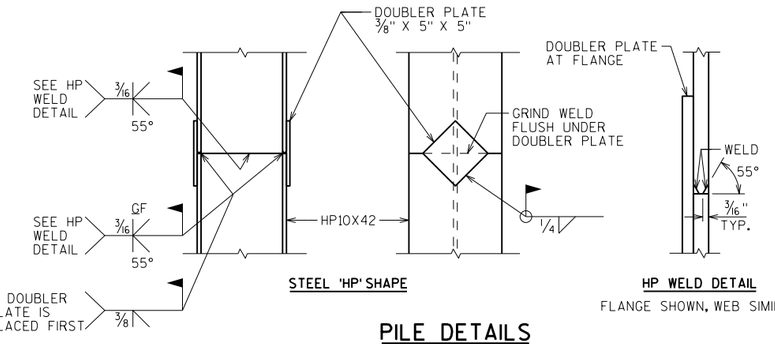


P403

P404, P506, P407



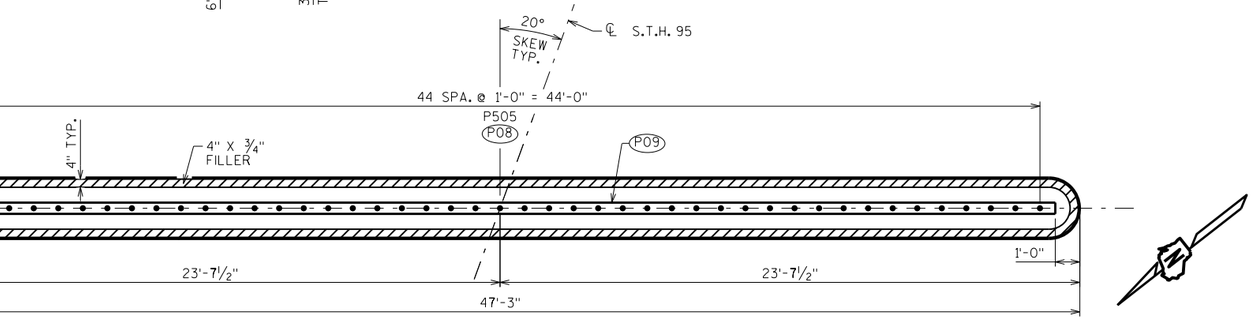
DETAIL "A"



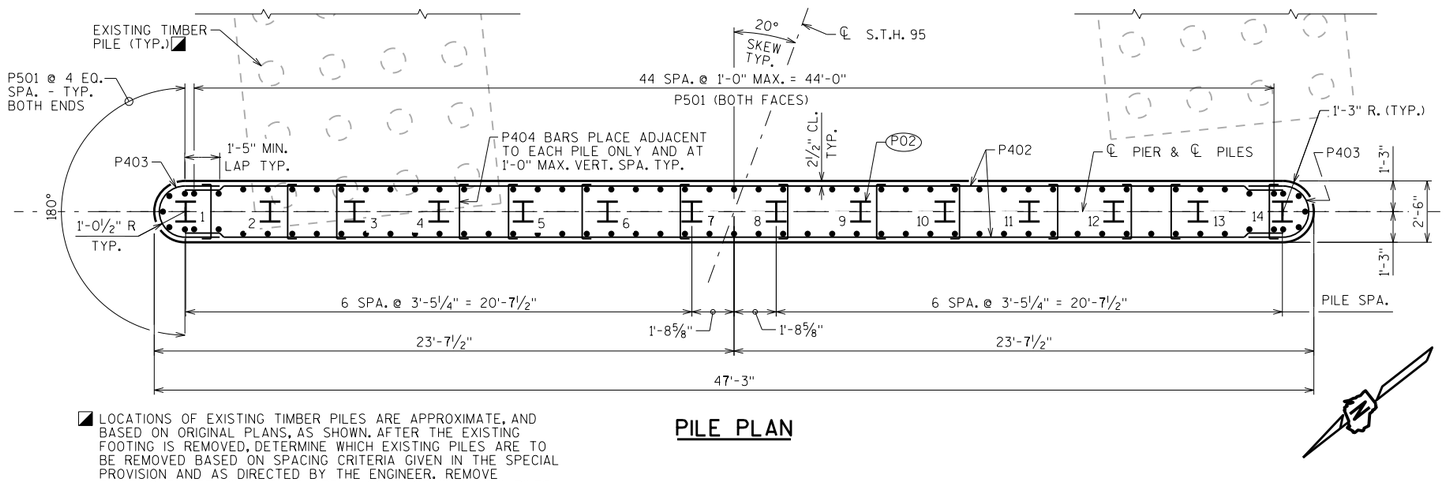
STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS



PLAN



PILE PLAN

◪ LOCATIONS OF EXISTING TIMBER PILES ARE APPROXIMATE, AND BASED ON ORIGINAL PLANS, AS SHOWN. AFTER THE EXISTING FOOTING IS REMOVED, DETERMINE WHICH EXISTING PILES ARE TO BE REMOVED BASED ON SPACING CRITERIA GIVEN IN THE SPECIAL PROVISION AND AS DIRECTED BY THE ENGINEER. REMOVE EXISTING TIMBER PILES THAT ARE IN CONFLICT WITH NEW PILES IN ACCORDANCE WITH THE SPECIAL PROVISION.

(P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 90'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(P08) P505 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

PIER 1

SHEET 8

108

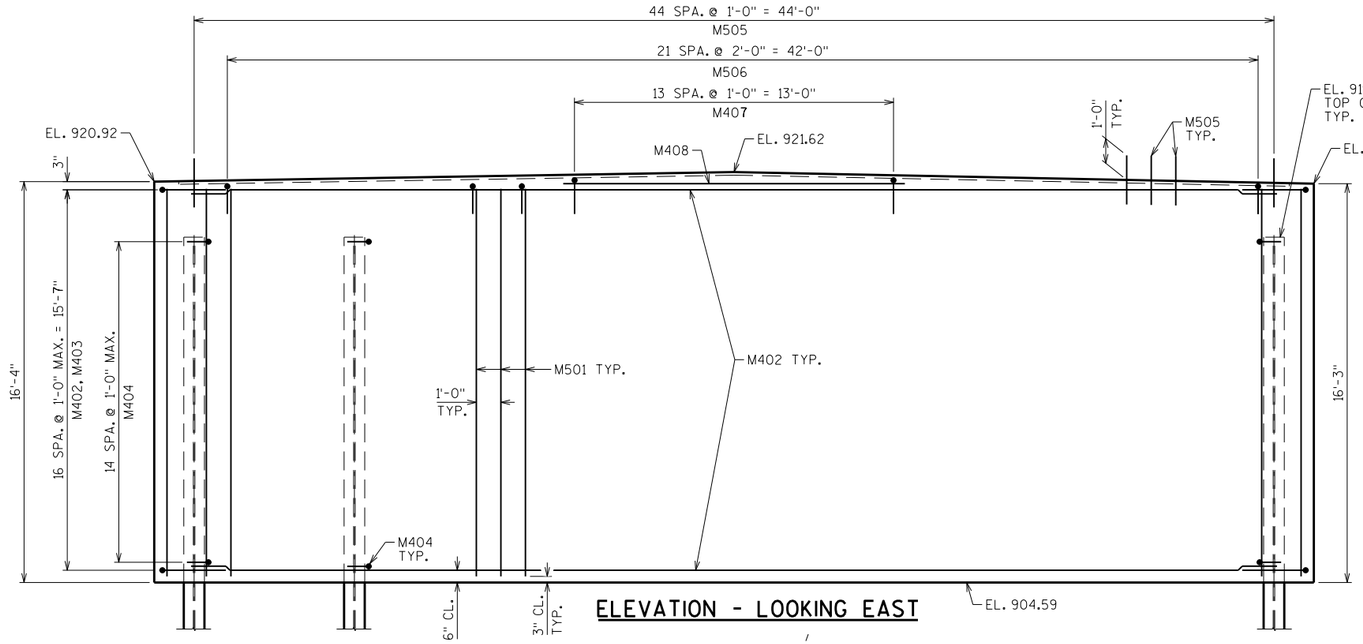
SCALE = 3.00

8

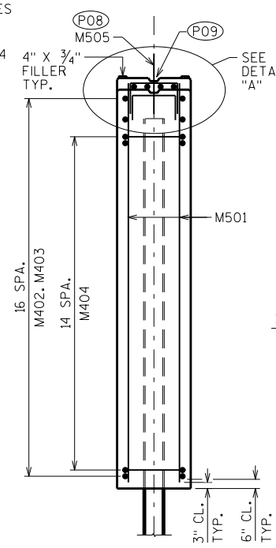
8

STATE PROJECT NUMBER

7520-03-70



ELEVATION - LOOKING EAST

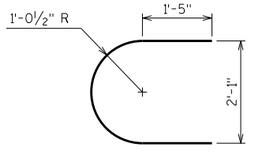


END VIEW

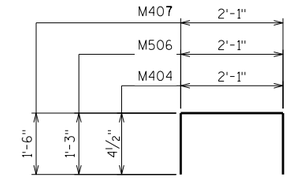
BILL OF BARS

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

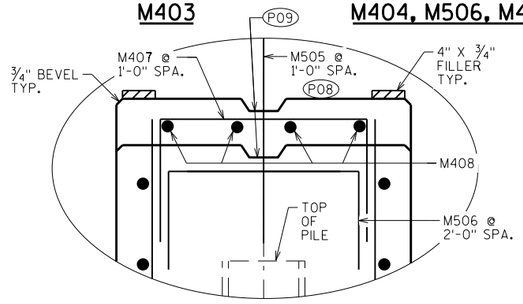
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
M501	X	100	15'-10"			VERT. - BOTH FACES
M402	X	34	45'-0"			HORIZ. - BOTH FACES
M403	X	34	6'-2"	X		HORIZ. - ENDS
M404	X	210	2'-8"	X		TIE BARS
M505	X	45	2'-0"			DOWEL BARS
M506	X	22	4'-4"	X		VERT. - TOP
M407	X	14	4'-10"	X		VERT. - TOP
M408	X	4	13'-11"			HORIZ. - TOP



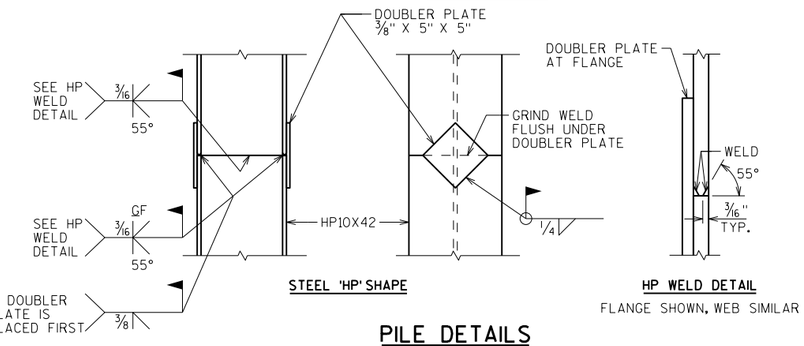
M403



M404, M506, M407



DETAIL "A"

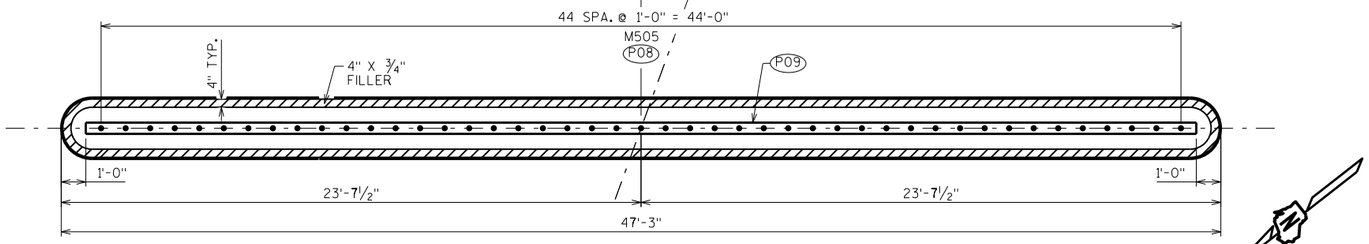


STEEL 'HP' SHAPE

HP WELD DETAIL

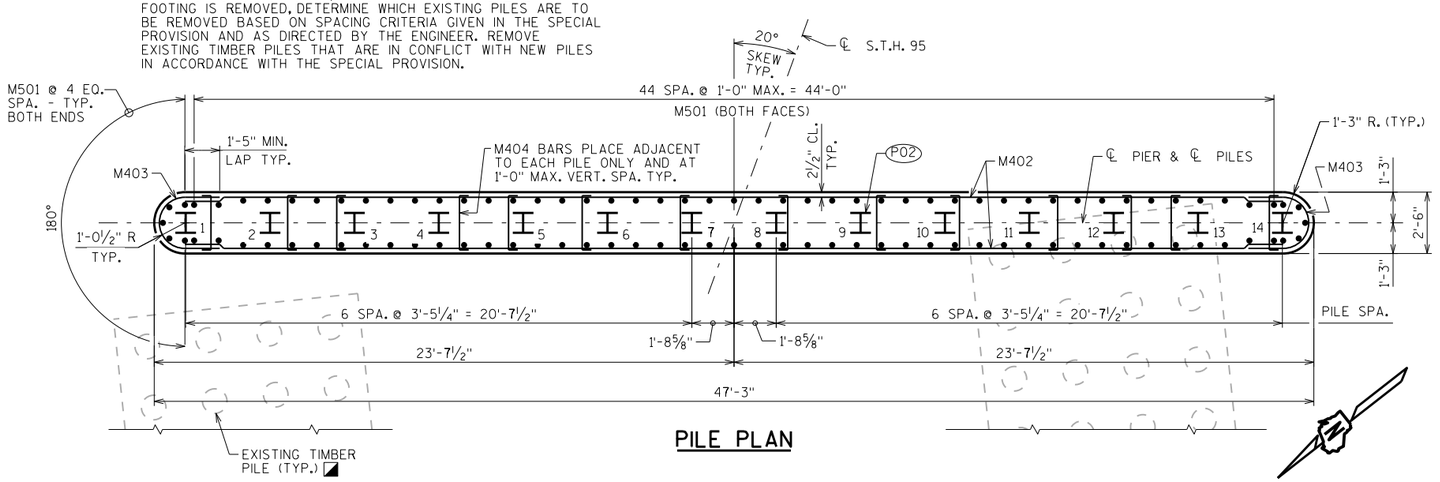
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS



PLAN

◪ LOCATIONS OF EXISTING TIMBER PILES ARE APPROXIMATE, AND BASED ON ORIGINAL PLANS, AS SHOWN. AFTER THE EXISTING FOOTING IS REMOVED, DETERMINE WHICH EXISTING PILES ARE TO BE REMOVED BASED ON SPACING CRITERIA GIVEN IN THE SPECIAL PROVISION AND AS DIRECTED BY THE ENGINEER. REMOVE EXISTING TIMBER PILES THAT ARE IN CONFLICT WITH NEW PILES IN ACCORDANCE WITH THE SPECIAL PROVISION.



PILE PLAN

(P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 90'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(P08) M505 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

PIER 2

SHEET 9

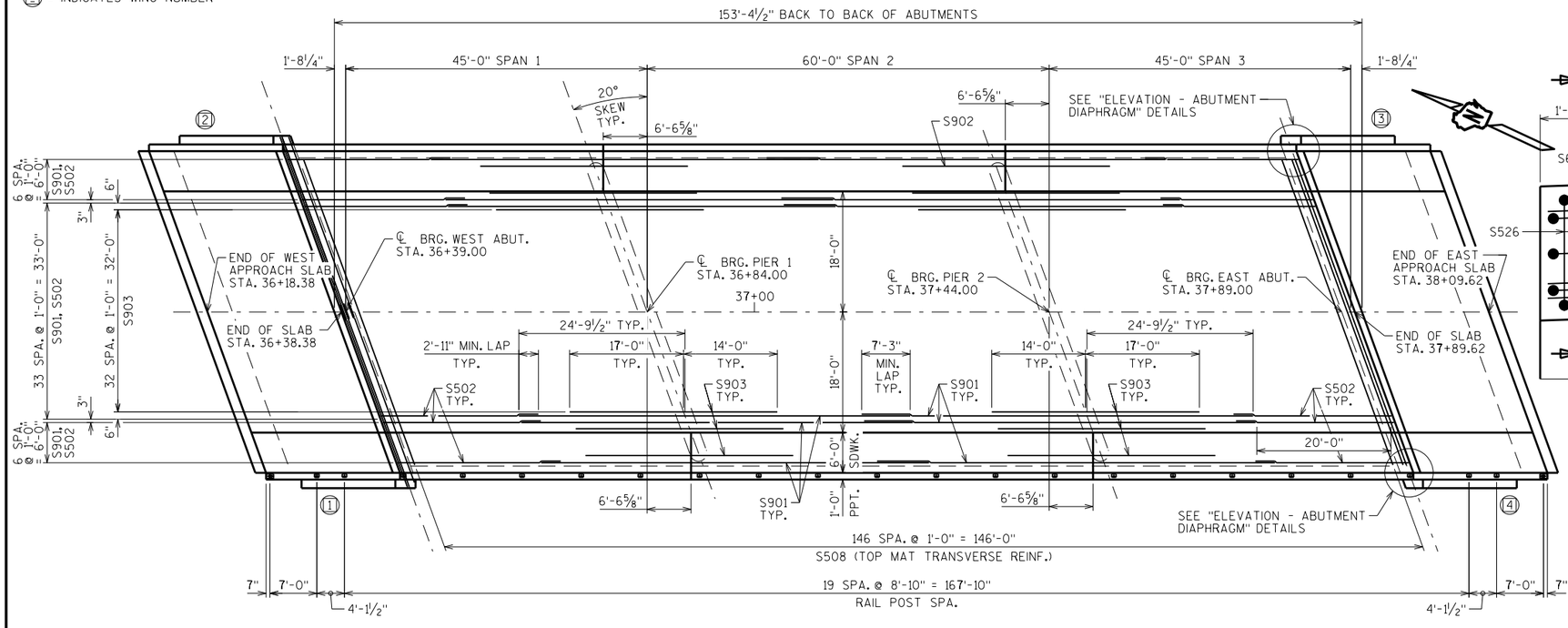
109

SCALE = 3.00

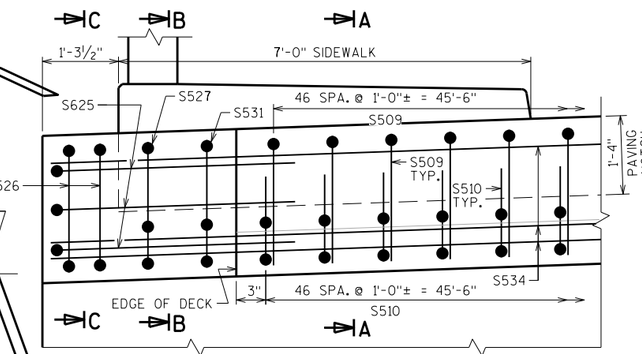
8

8

STATE PROJECT NUMBER
7520-03-70

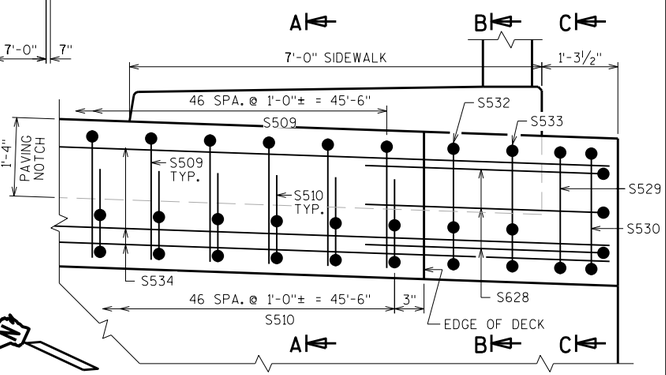


PLAN - SHOWING TOP SLAB REINFORCEMENT



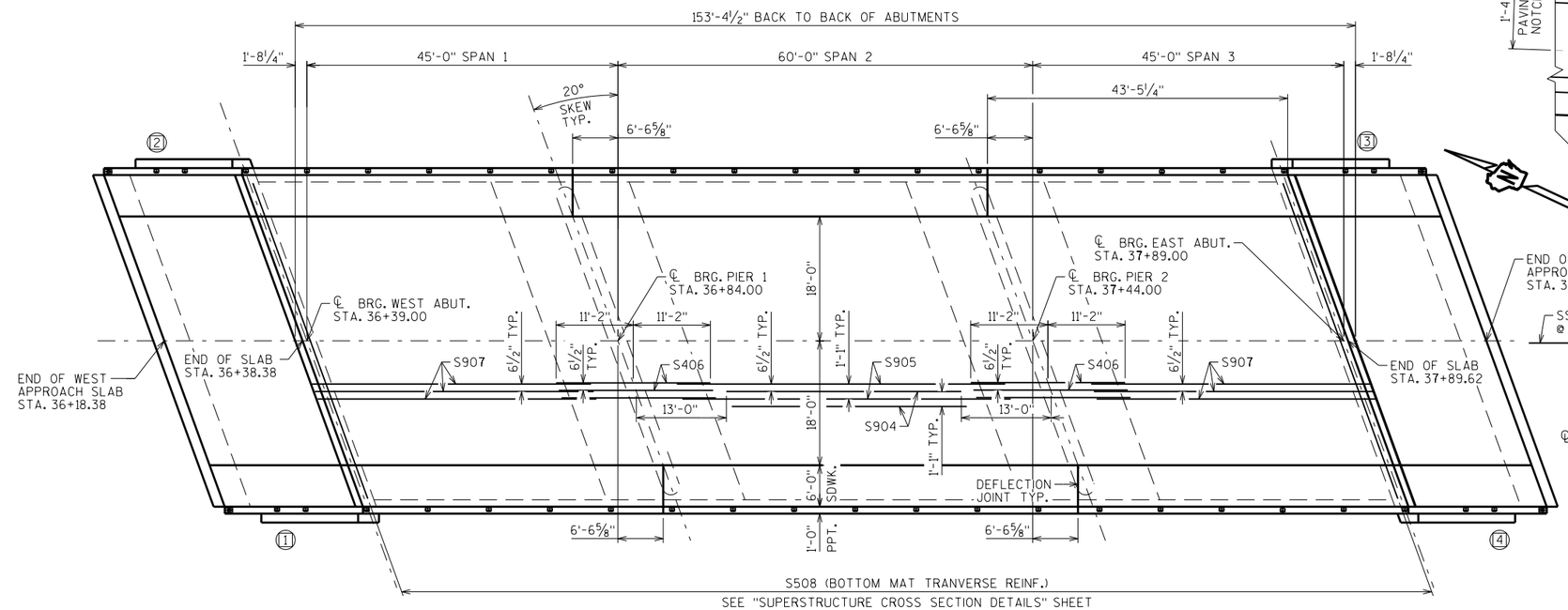
ELEVATION - ABUTMENT DIAPHRAGM

WING 3 SHOWN - WING 1 SIMILAR
SIDEWALK/PARAPET REINFORCEMENT NOT SHOWN FOR CLARITY

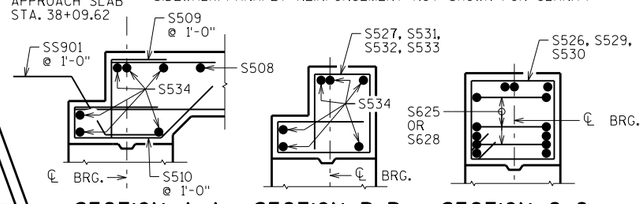


ELEVATION - ABUTMENT DIAPHRAGM

WING 4 SHOWN - WING 2 SIMILAR
SIDEWALK/PARAPET REINFORCEMENT NOT SHOWN FOR CLARITY



PLAN - SHOWING BOTTOM SLAB REINFORCEMENT



SECTION A-A | SECTION B-B | SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

SUPERSTRUCTURE

SHEET 10

110

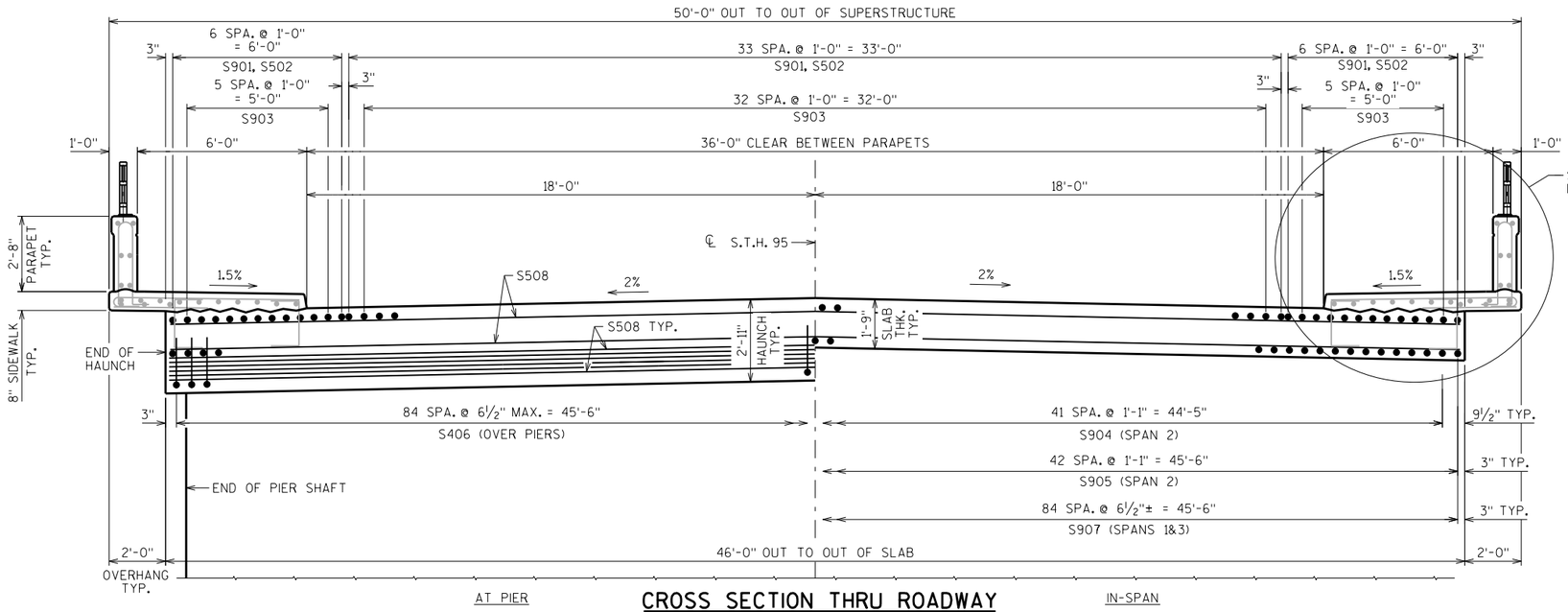
8

8

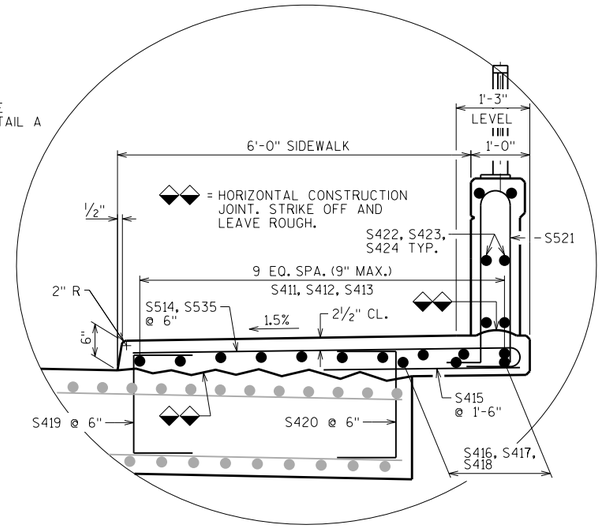
SCALE = 10.00

STATE PROJECT NUMBER

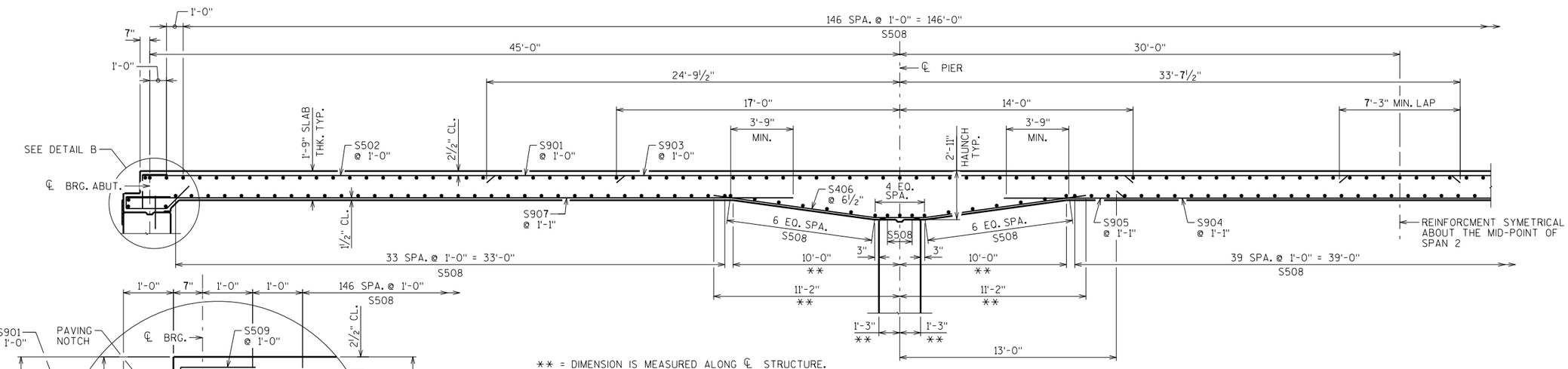
7520-03-70



CROSS SECTION THRU ROADWAY

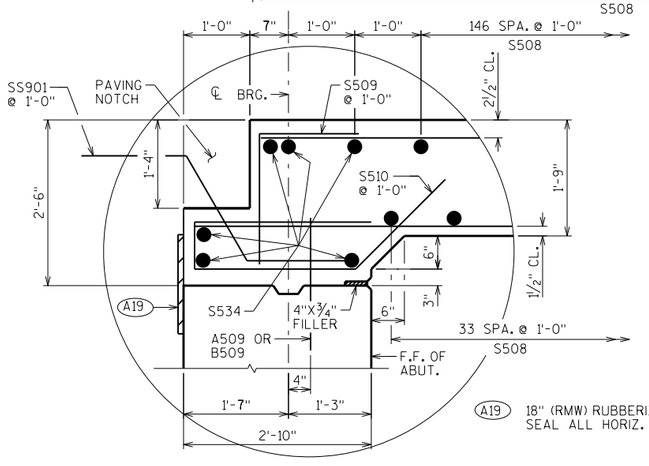


DETAIL A



LONGITUDINAL SECTION THRU ROADWAY

NORMAL TO S.T.H. 95



DETAIL B

(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-27-160

DRAWN BY DDS | PLANS CK'D. EMK

SUPERSTRUCTURE CROSS SECTION DETAILS

SHEET 11

111

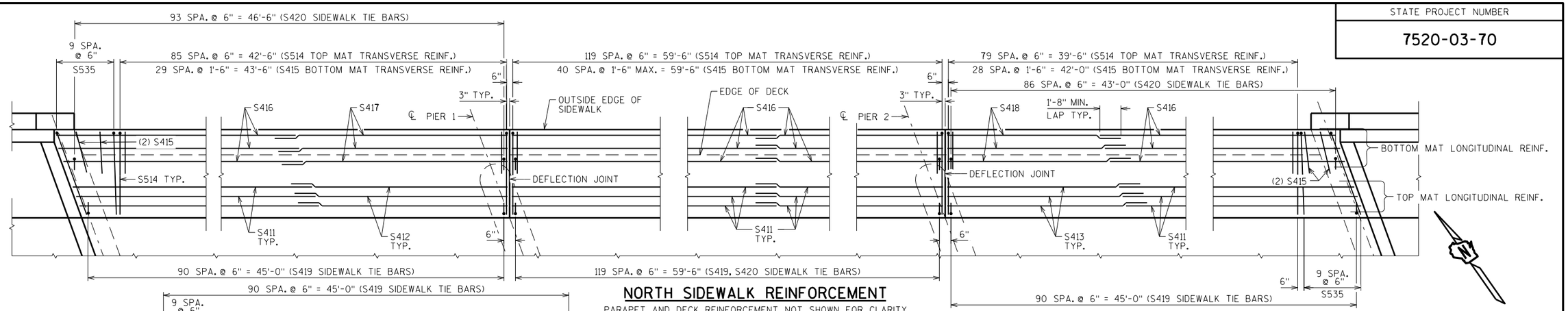
SCALE = 10.00

8

8

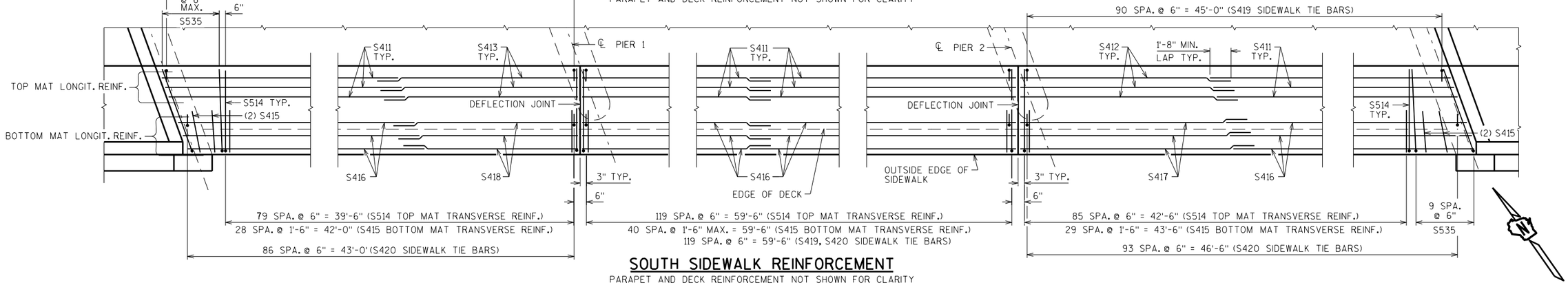
STATE PROJECT NUMBER

7520-03-70



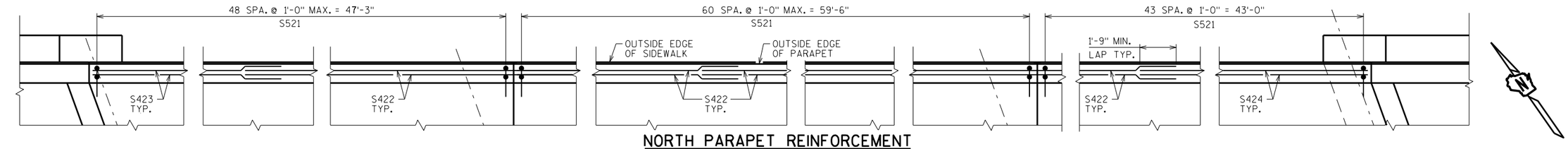
NORTH SIDEWALK REINFORCEMENT

PARAPET AND DECK REINFORCEMENT NOT SHOWN FOR CLARITY



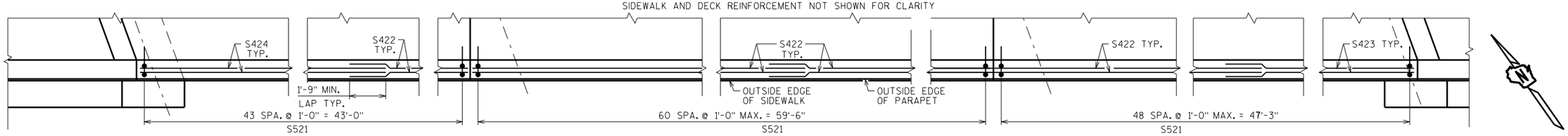
SOUTH SIDEWALK REINFORCEMENT

PARAPET AND DECK REINFORCEMENT NOT SHOWN FOR CLARITY



NORTH PARAPET REINFORCEMENT

SIDEWALK AND DECK REINFORCEMENT NOT SHOWN FOR CLARITY



SOUTH PARAPET REINFORCEMENT

SIDEWALK AND DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

SIDEWALK AND PARAPET REINFORCEMENT

SHEET 12

112

SCALE = 10.00

8

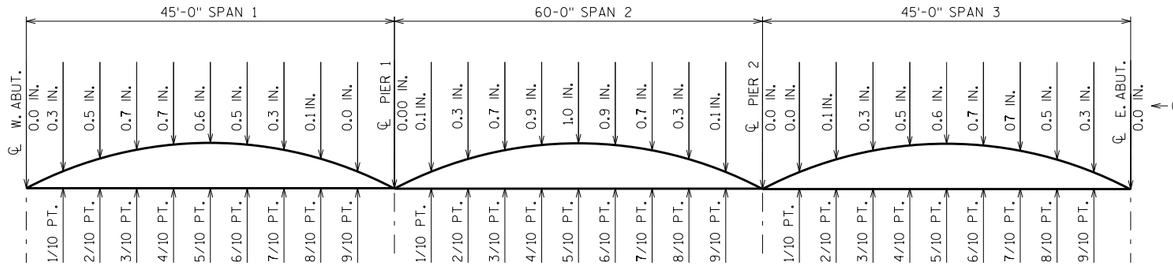
8

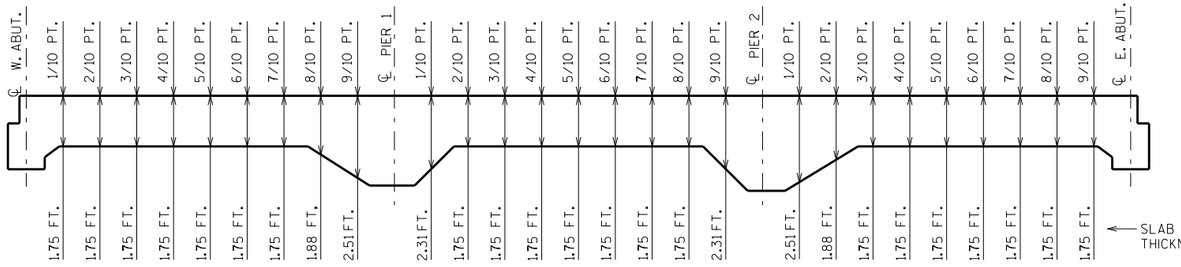
STATE PROJECT NUMBER

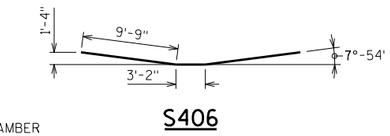
7520-03-70

TOP OF SLAB ELEVATIONS

	℄ WEST ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ EAST ABUT.
NORTH EDGE SDWLK.	925.08	925.06	925.04	925.02	924.99	924.97	924.95	924.93	924.90	924.88	924.86	924.83	924.80	924.77	924.74	924.71	924.68	924.65	924.62	924.59	924.56	924.54	924.51	924.49	924.47	924.45	924.42	924.40	924.38	924.36	924.33
NORTH E.O.D.	924.41	924.39	924.37	924.34	924.32	924.30	924.28	924.25	924.23	924.21	924.19	924.16	924.13	924.10	924.07	924.04	924.01	923.98	923.95	923.92	923.89	923.86	923.84	923.82	923.80	923.77	923.75	923.73	923.71	923.68	923.66
℄ S.T.H. 95	924.83	924.81	924.78	924.76	924.74	924.72	924.69	924.67	924.65	924.63	924.60	924.57	924.54	924.51	924.48	924.45	924.42	924.39	924.36	924.33	924.30	924.28	924.26	924.24	924.21	924.19	924.17	924.15	924.12	924.10	924.08
SOUTH E.O.D.	924.33	924.30	924.28	924.26	924.24	924.21	924.19	924.17	924.15	924.12	924.10	924.07	924.04	924.01	923.98	923.95	923.92	923.89	923.86	923.83	923.80	923.78	923.76	923.73	923.71	923.69	923.67	923.64	923.62	923.60	923.58
SOUTH EDGE SDWLK.	924.99	924.97	924.95	924.93	924.90	924.88	924.86	924.84	924.81	924.79	924.77	924.74	924.71	924.68	924.65	924.62	924.59	924.56	924.53	924.50	924.47	924.45	924.42	924.40	924.38	924.36	924.33	924.31	924.29	924.27	924.24







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
S901	X	96	58'-5"			SLAB - LONGITUDINAL - TOP
S502	X	96	23'-8"			SLAB - LONGITUDINAL - TOP - SPANS 1&3
S903	X	90	31'-0"			SLAB - LONGITUDINAL - TOP - OVER PIERS
S904	X	42	34'-0"			SLAB - LONGITUDINAL - BOTTOM - SPAN 2
S905	X	43	47'-6"			SLAB - LONGITUDINAL - BOTTOM - SPAN 2
S406	X	170	22'-8"	X		SLAB - LONGITUDINAL - BOTTOM - OVER PIERS
S907	X	170	40'-4"			SLAB - LONGITUDINAL - BOTTOM - SPANS 1&3
S508	X	289	48'-7"			SLAB - TRANSVERSE - TOP & BOTTOM
S509	X	94	3'-6"	X		ABUT. DIAPH. - VERT.
S510	X	94	7'-7"	X		ABUT. DIAPH. - VERT.
S411	X	80	30'-8"			SIDEWALK - LONGITUDINAL - TOP
S412	X	20	15'-4"		⚠	SIDEWALK - LONGITUDINAL - TOP
S413	X	20	17'-7"		⚠	SIDEWALK - LONGITUDINAL - TOP
S514	X	572	7'-5"	X		SIDEWALK - TRANSVERSE - TOP
S415	X	204	2'-10"			SIDEWALK - TRANSVERSE - BOTTOM
S416	X	24	30'-8"			SIDEWALK - LONGITUDINAL - BOTTOM
S417	X	6	14'-7"		⚠	SIDEWALK - LONGITUDINAL - BOTTOM
S418	X	6	18'-5"		⚠	SIDEWALK - LONGITUDINAL - BOTTOM
S419	X	604	3'-5"	X		SIDEWALK/SLAB - VERT. - TIE BARS
S420	X	604	3'-7"	X		SIDEWALK/SLAB - VERT. - TIE BARS
S521	X	308	6'-8"	X		PARAPET - VERT.
S422	X	48	30'-9"			PARAPET - HORIZ.
S423	X	12	14'-2"			PARAPET - HORIZ.
S424	X	12	18'-6"			PARAPET - HORIZ.
S625	X	6	9'-10"	X		ABUT. DIAPH. - HORIZ. - WINGS 1&3 CORNERS
S526	X	4	10'-2"	X		ABUT. DIAPH. - VERT. - WINGS 1&3 CORNERS
S527	X	2	11'-2"	X		ABUT. DIAPH. - VERT. - WINGS 1&3 CORNERS
S628	X	6	8'-5"	X		ABUT. DIAPH. - VERT. - WINGS 2&4 CORNERS
S529	X	2	10'-0"	X		ABUT. DIAPH. - VERT. - WINGS 2&4 CORNERS
S530	X	2	9'-6"	X		ABUT. DIAPH. - VERT. - WINGS 2&4 CORNERS
S531	X	2	11'-0"	X		ABUT. DIAPH. - VERT. - WINGS 1&3 CORNERS
S532	X	2	11'-0"	X		ABUT. DIAPH. - VERT. - WINGS 2&4 CORNERS
S533	X	2	10'-10"	X		ABUT. DIAPH. - VERT. - WINGS 2&4 CORNERS
S534	X	24	29'-1"	X		ABUT. DIAPH. - HORIZ.
S535	X	40	7'-4"		⚠	SIDEWALK - HORIZ. - TOP - ENDS
S901	X	96	5'-0"	X		SLAB/APPROACH SLAB - TIE BARS

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.

CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS SHOWN ABOVE THE HORIZ. CONST. JT. SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

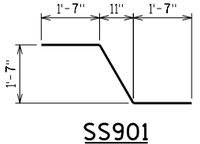
TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CROWN FOLLOW THIS PROCEDURE:

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

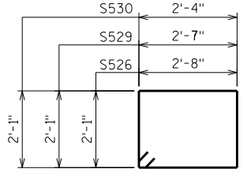
SURVEY TOP OF SLAB ELEVATIONS

	℄ BRG. W. ABUT.	5/10 PT.	℄ PIER 1	5/10 PT.	℄ PIER 2	5/10 PT.	℄ BRG. E. ABUT.
NORTH GUTTERLINE & EDGE OF SLAB							
℄ S.T.H. 95/ CROWN POINT							
SOUTH GUTTERLINE & EDGE OF SLAB							

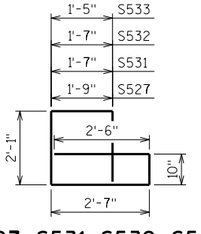
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS AT EDGES OF SLAB AND CROWN. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.



SS901
STAINLESS STEEL



S526, S529, S530



S527, S531, S532, S533

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
S412	2 SERIES OF 10	14'-2" TO 16'-7"
S413	2 SERIES OF 10	16'-4" TO 18'-10"
S417	2 SERIES OF 3	14'-2" TO 14'-11"
S418	2 SERIES OF 3	18'-0" TO 18'-10"
S535	4 SERIES OF 10	7'-2" TO 7'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NOTES

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

SUPERSTRUCTURE ELEVATIONS

SHEET 13

113

SCALE = 8.00

8

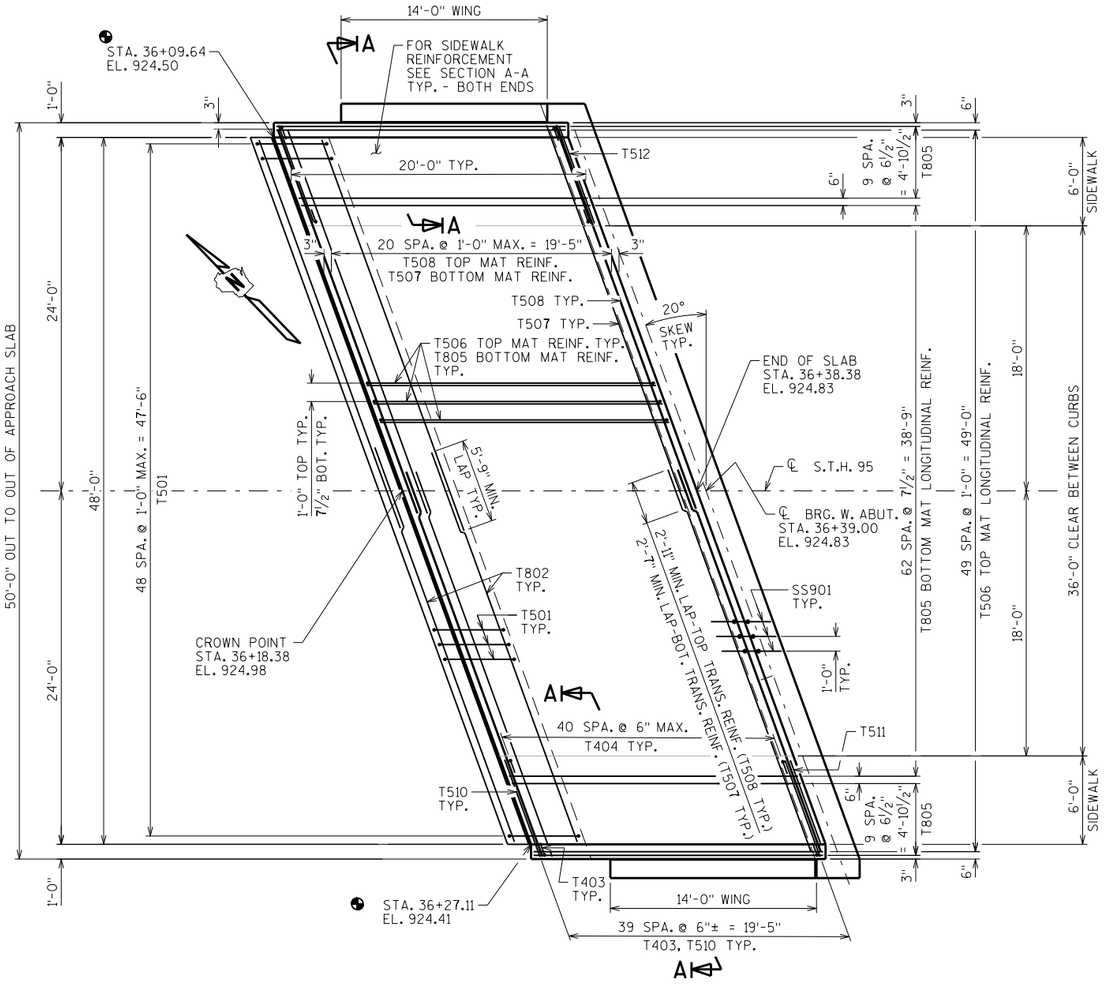
8

STATE PROJECT NUMBER
7520-03-70

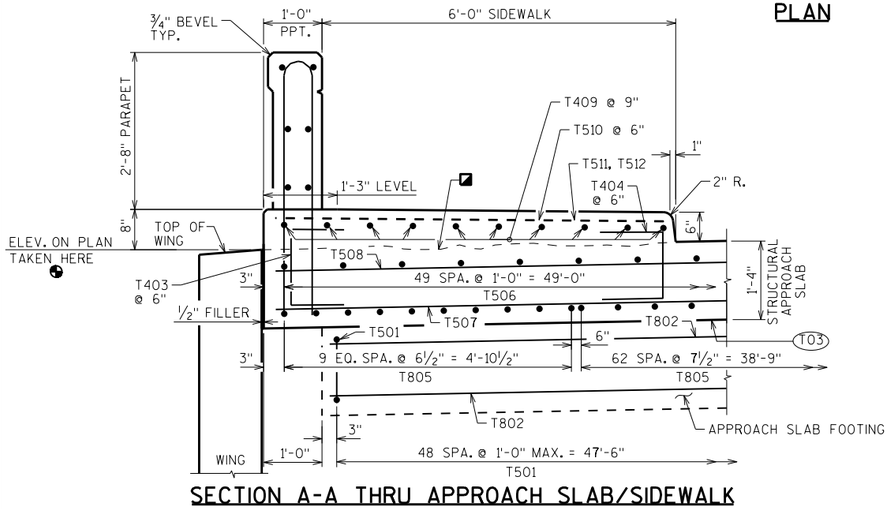
BILL OF BARS

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
T501	X	49	12'-8"	X		APPROACH SLAB - FOOTING - STIRRUP
T802	X	24	28'-3"			APPROACH SLAB - FOOTING - TRANSVERSE
T403	X	80	3'-3"	X		SIDEWALK/APPROACH SLAB - TIE BAR
T404	X	82	3'-2"	X		SIDEWALK/APPROACH SLAB - TIE BAR
T805	X	83	21'-5"	X		APPROACH SLAB - LONGITUDINAL - BOTTOM MAT
T506	X	50	19'-7"			APPROACH SLAB - LONGITUDINAL - TOP MAT
T507	X	42	27'-9"			APPROACH SLAB - TRANSVERSE - BOTTOM MAT
T508	X	42	27'-11"			APPROACH SLAB - TRANSVERSE - TOP MAT
T409	X	20	19'-7"			SIDEWALK - LONGITUDINAL
T510	X	80	7'-5"			SIDEWALK - TRANSVERSE - TOP
T511	X	1	6'-2"			SIDEWALK - @ BRIDGE DECK
T512	X	1	7'-0"			SIDEWALK - @ BRIDGE DECK

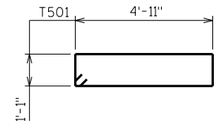


PLAN

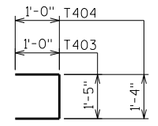


SECTION A-A THRU APPROACH SLAB/SIDEWALK

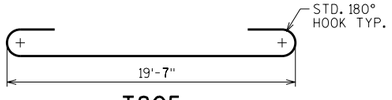
▰ CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR APPROACH SLAB POUR, MATCH BRIDGE CROSS-SLOPE.



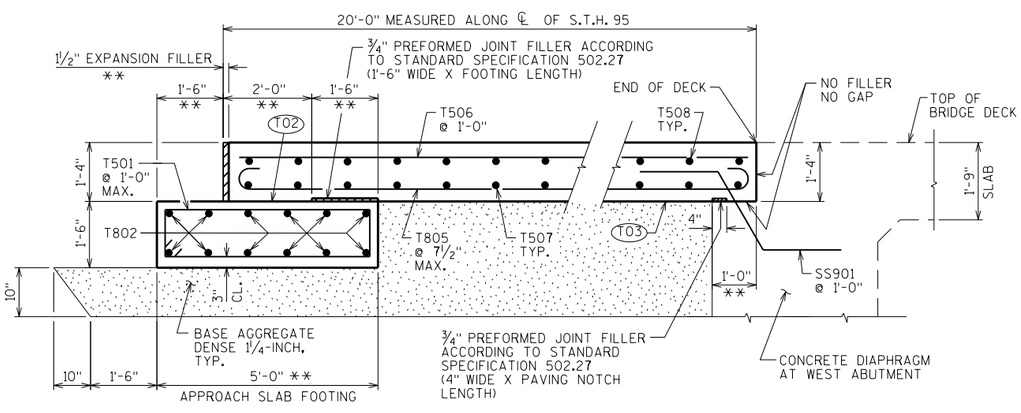
T501



T403, T404



T805



SECTION THRU APPROACH SLAB

APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

STAINLESS STEEL SPACE PERPENDICULAR TO S.T.H. 95. SEE "SUPERSTRUCTURE DETAILS" SHEET FOR BILL OF BARS.

** MEASURED NORMAL TO ABUTMENT.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THICKNESS) OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF FOOTING

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THICKNESS) OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY	PLANS CK'D.
DDS	EMK

WEST APPROACH SLAB DETAILS

SHEET 14

114

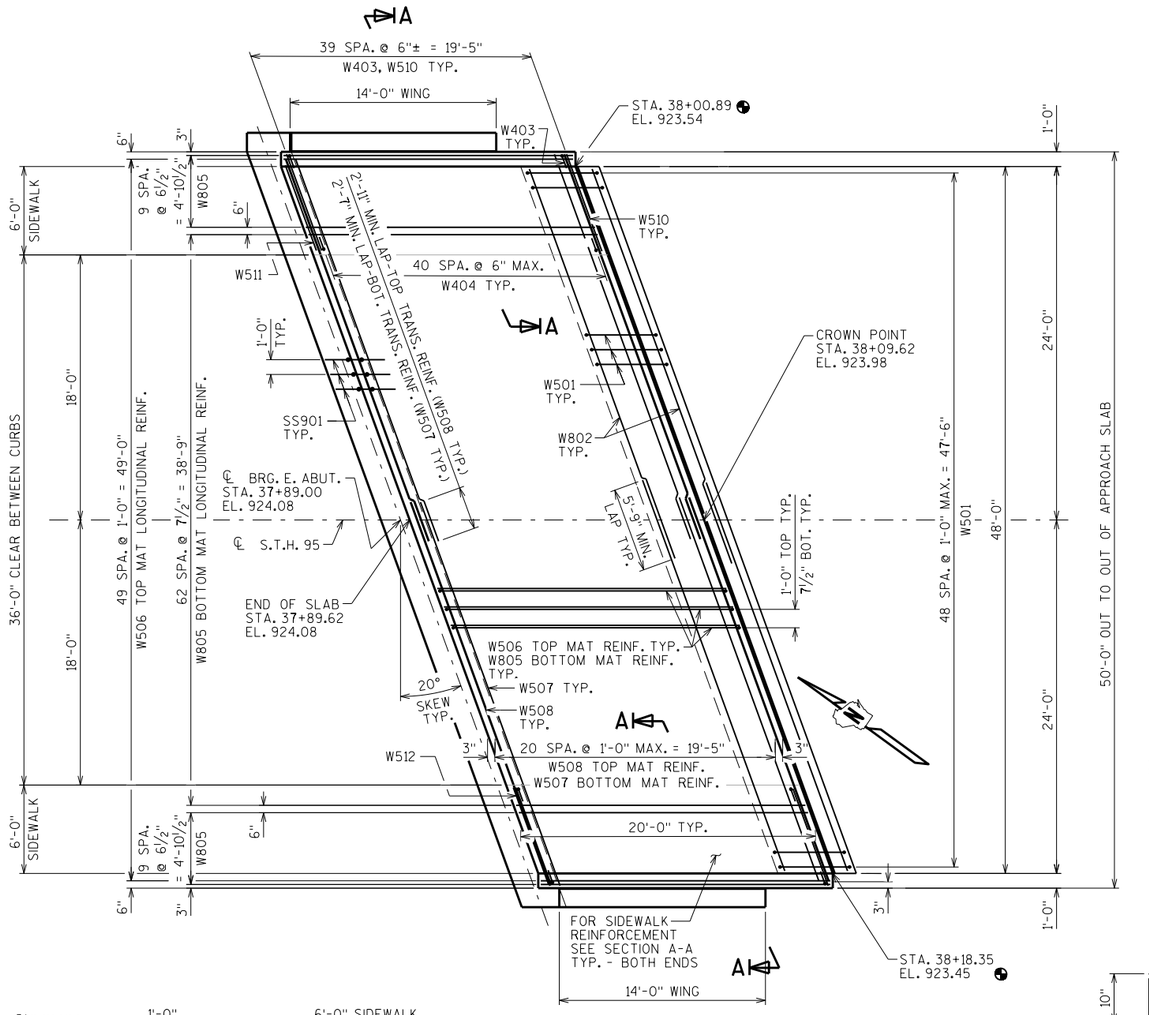
SCALE = 5.00

STATE PROJECT NUMBER
7520-03-70

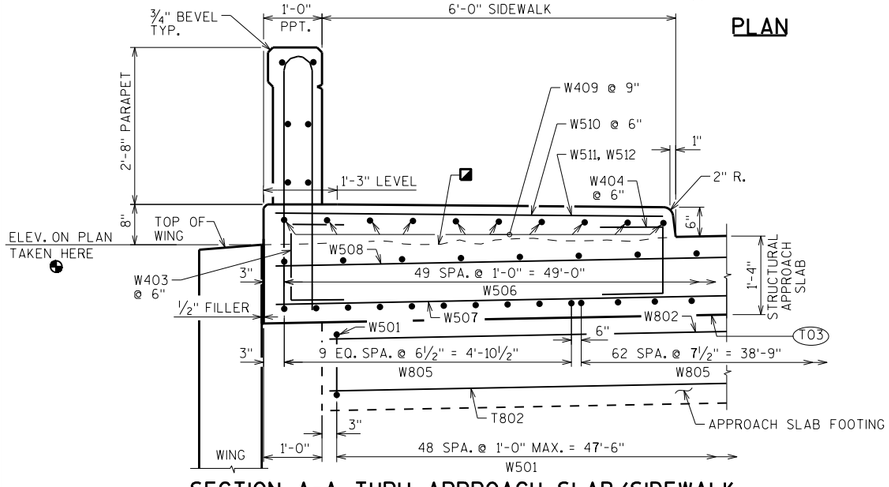
BILL OF BARS

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
W501	X	49	12'-8"	X		APPROACH SLAB - FOOTING - STIRRUP
W802	X	24	28'-3"			APPROACH SLAB - FOOTING - TRANSVERSE
W403	X	80	3'-3"	X		SIDEWALK/APPROACH SLAB - TIE BAR
W404	X	82	3'-2"	X		SIDEWALK/APPROACH SLAB - TIE BAR
W805	X	83	21'-5"	X		APPROACH SLAB - LONGITUDINAL - BOTTOM MAT
W506	X	50	19'-7"			APPROACH SLAB - LONGITUDINAL - TOP MAT
W507	X	42	27'-9"			APPROACH SLAB - TRANSVERSE - BOTTOM MAT
W508	X	42	27'-11"			APPROACH SLAB - TRANSVERSE - TOP MAT
W409	X	20	19'-7"			SIDEWALK - LONGITUDINAL
W510	X	80	7'-5"			SIDEWALK - TRANSVERSE - TOP
W511	X	1	6'-2"			SIDEWALK - @ BRIDGE DECK
W512	X	1	7'-0"			SIDEWALK - @ BRIDGE DECK

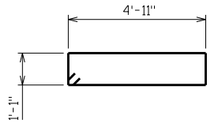


PLAN

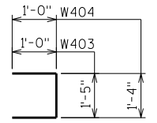


SECTION A-A THRU APPROACH SLAB/SIDEWALK

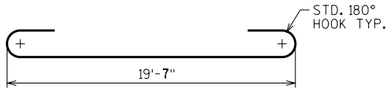
■ CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR APPROACH SLAB POUR, MATCH BRIDGE CROSS-SLOPE.



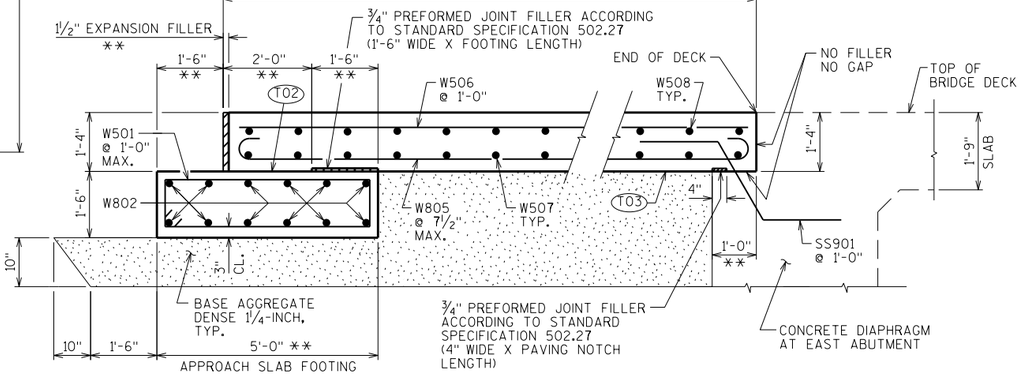
W501



W403, W404



W805



SECTION THRU APPROACH SLAB

APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

STAINLESS STEEL SPACE PERPENDICULAR TO S.T.H. 95. SEE "SUPERSTRUCTURE DETAILS" SHEET FOR BILL OF BARS.

** MEASURED NORMAL TO ABUTMENT.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THICKNESS) OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF FOOTING

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THICKNESS) OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

EAST APPROACH SLAB DETAILS

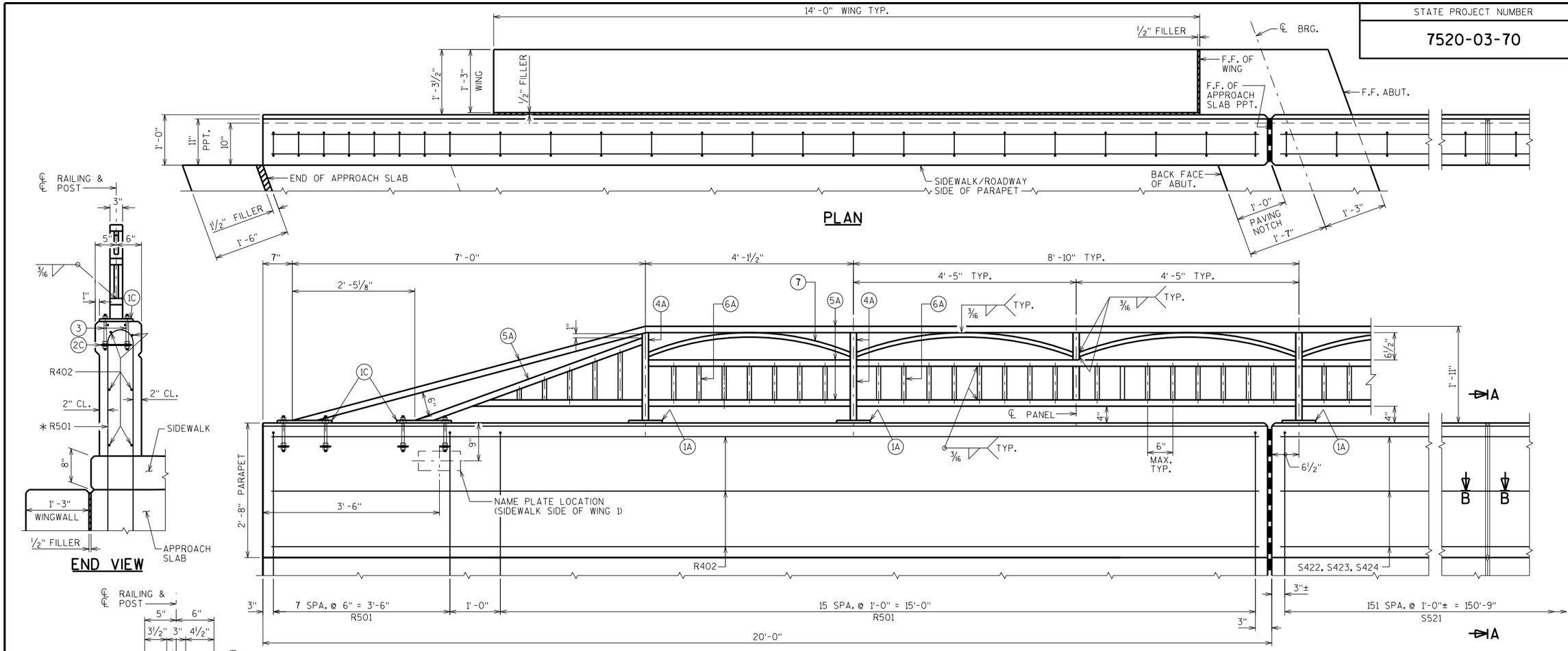
SHEET 15

115

SCALE = 5.00

STATE PROJECT NUMBER

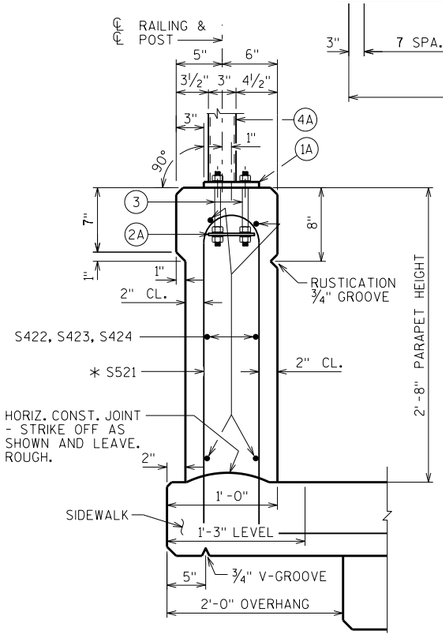
7520-03-70



PLAN

END VIEW

OUTSIDE ELEVATION OF PARAPET

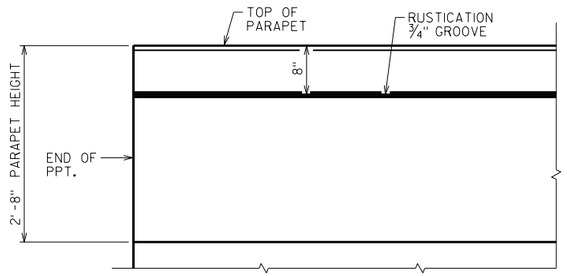


SECTION THRU PARAPET ON BRIDGE

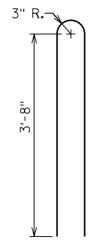
* ADJUST LOCATIONS OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING AND BEAM GUARD.

BILL OF BARS

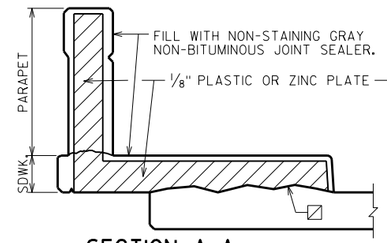
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	LOCATION
R501	X	48	48	8-2	X	PARAPET VERT.
R402	X	12	12	19-7		PARAPET HORIZ.



INSIDE ELEVATION OF PARAPET



R501

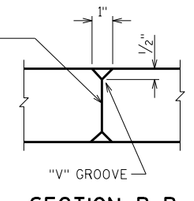


SECTION A-A

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION A-A BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

☒ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

COMBINATION RAIL TYPE "C3"

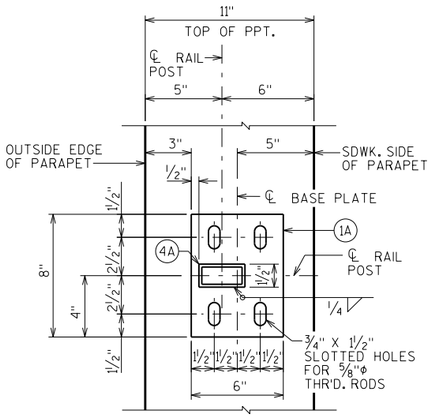
SHEET 16

116

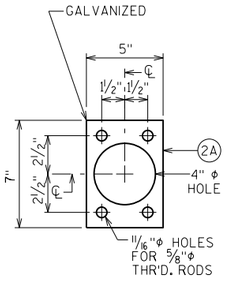
SCALE = 1.00

8

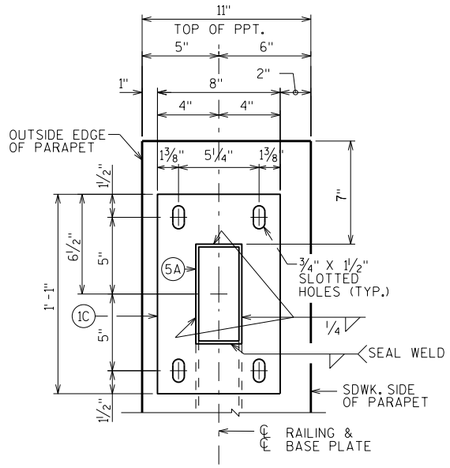
8



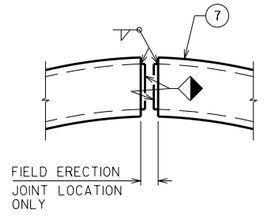
TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE



END RAIL BASE PLATE



CURVED MEMBER JOINT DETAIL

AT FIELD ERECTION JOINTS ONLY

◆ SEAL ENDS OF STRUCTURAL TUBING WITH 1/4" PLATE. WELD AND GRIND SMOOTH.

LEGEND

(1A) PLATE 5/8" X 6" X 8" WITH 3/4" X 1 1/2" SLOTTED HOLES.

(1C) PLATE 5/8" X 8" X 1'-1" WITH 3/4" X 1 1/2" SLOTTED HOLES.

(2A) 1/4" X 5" X 7" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D. RODS NO. 3.

(2C) 1/4" X 2 1/2" X 7 1/4" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D. RODS NO. 3.

(3) 5/8" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS 5/8-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

(4A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

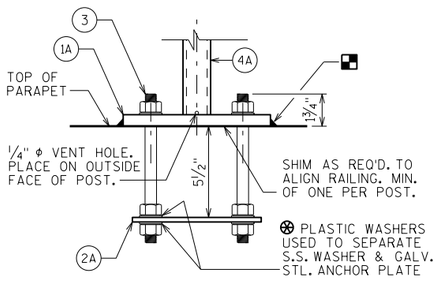
(5A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.

(7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.

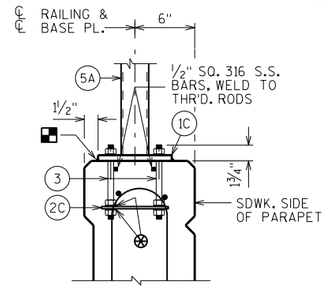
(9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)



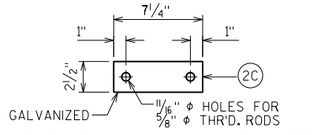
ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



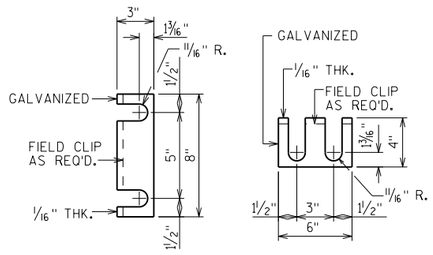
ANCHORAGE FOR END RAIL

NOTE: ANCHOR PLATES NOT REQ'D. WHEN TYPE "S" ANCHORS ARE USED.



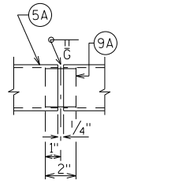
END RAIL ANCHOR PLATE

FOR END RAIL BASE PLATES
2 REQ'D. PER END RAIL BASE PLATE



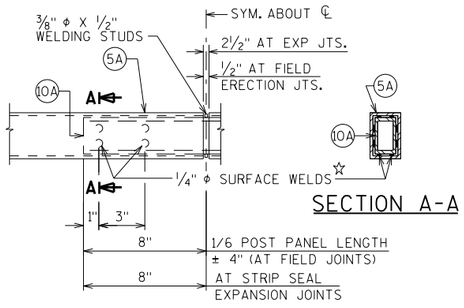
RAIL POST SHIM DETAIL

(2 SETS PER POST)



SHOP RAIL SPLICE DETAIL

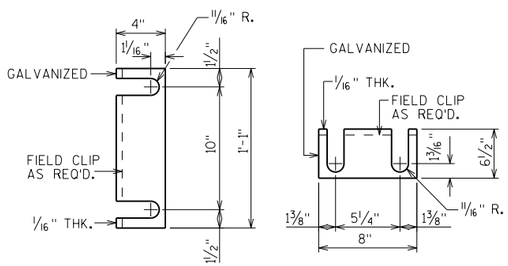
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



SECTION A-A

FIELD ERECTION JOINT DETAIL

☆ MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



END RAIL SHIM DETAIL

(2 SETS PER POST)

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3 B-27-160", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

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

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B. ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

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

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

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

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

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038, BLACK.

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

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

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

STATE PROJECT NUMBER

7520-03-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

COMBINATION RAIL TYPE "C3" DETAILS

SHEET 17

117

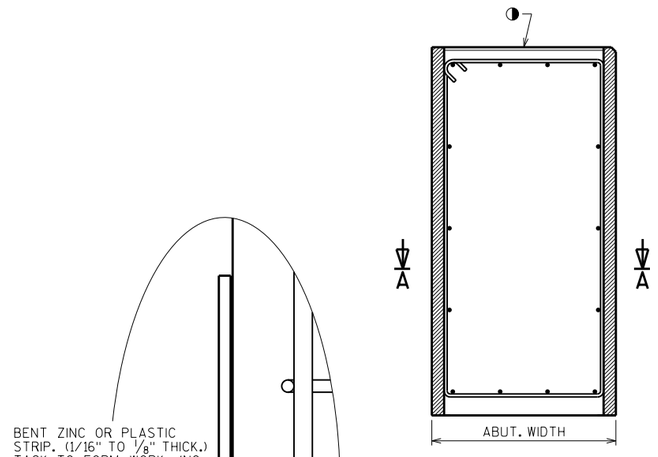
SCALE = 1.00

8

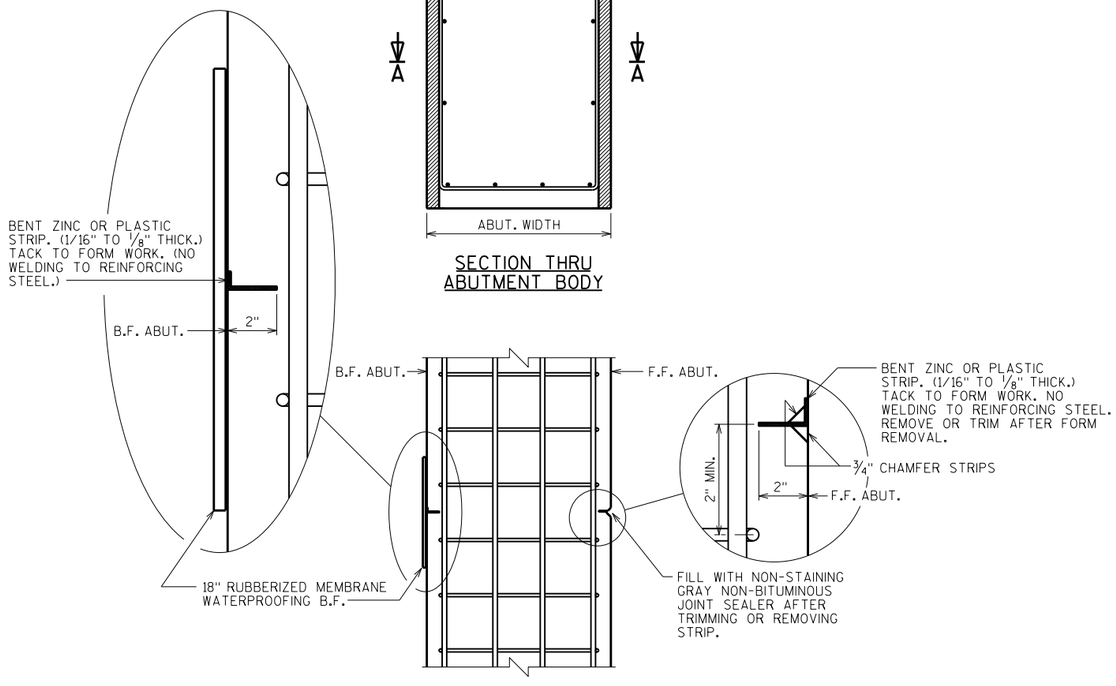
8

STATE PROJECT NUMBER

7520-03-70



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-160

DRAWN BY DDS | PLANS CK'D. EMK

ALTERNATE CONSTRUCTION JOINT

SHEET 18

118

8

8

1 2 3

SCALE = 1.00

BYPASS - DIVISION 1												
			AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
STATION	REAL STATION	DISTANCE	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXP. FILL 1.25		MASS ORD NOTE 8
1+50	150		4	2	0	0	0	0	0	0		0
2+00	200	50	19	2	0	21	3	0	21	0		21
2+50	250	50	8	2	69	25	3	64	46	80		-33
3+00	300	50	0	0	133	8	2	187	54	314		-259
3+50	350	50	0	0	178	0	0	288	54	674		-619
3+76	376	26	0	0	242	0	0	202	54	926		-872
				COLUMN TOTALS		54	8	741				

BYPASS - DIVISION 2												
			AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
STATION	REAL STATION	DISTANCE	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXP. FILL 1.25		MASS ORD NOTE 8
4+88	488		0	0	193	0	0	0	0	0		0
5+00	500	12	0	0	196	0	0	87	0	109		-109
5+50	550	50	-2	2	216	-1	2	382	-1	586		-590
6+00	600	50	19	3	73	16	4	267	15	920		-911
6+50	650	50	19	3	0	35	5	67	50	1004		-965
6+58	658	8	19	3	0	5	1	0	55	1004		-961
				COLUMN TOTALS		55	12	803				

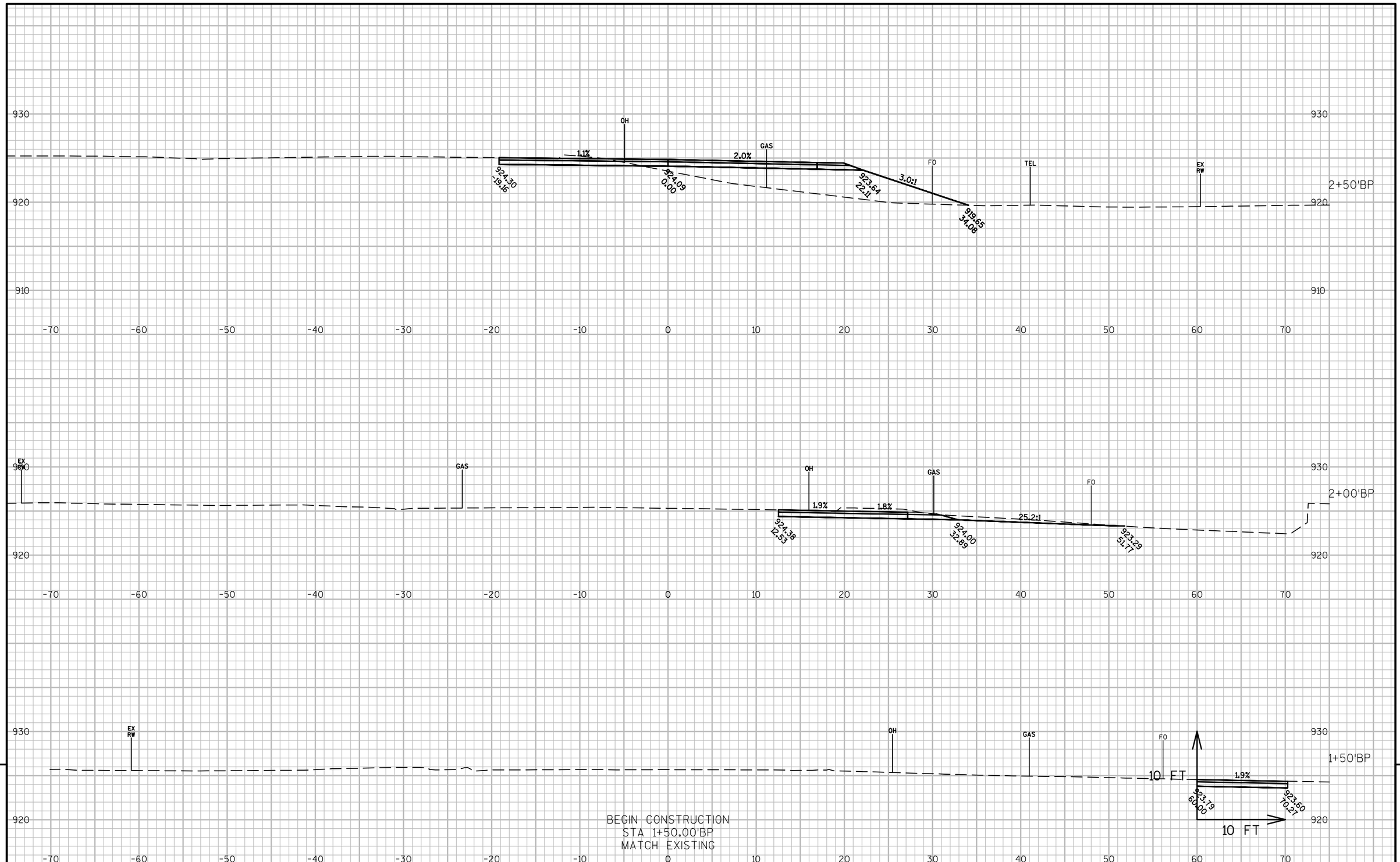
MAINLINE - DIVISION 1												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORD.
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXP. FILL 1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
34+70	3470		9	0	0	0	0	0	0	0	0
35+00	3500	30	14	0	15	13	0	8	13	10	3
35+50	3550	50	34	0	2	45	0	16	58	30	28
35+61	3561	11	108	13	1	29	3	1	87	31	56
36+00	3600	39	162	13	17	195	18	13	282	48	234
36+07	3607	7	178	13	22	47	3	5	329	54	275
36+14	3614	7	154	13	23	41	3	6	370	61	309
36+20	3620	5	178	13	21	33	2	4	403	66	337
36+28	3628	9	240	13	24	67	4	7	470	75	395
36+32	3632	4	140	13	21	30	2	4	500	80	420
36+46	3646	14	258	13	0	103	6	6	603	88	516
36+50	3650	4	195	0	0	30	1	0	633	88	546
36+86	3686	36	270	0	0	310	0	0	943	88	856
				COLUMN TOTALS		943	42	70			

MAINLINE - DIVISION 2											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORD.
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXP. FILL 1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		Note 8
37+82	3782		81	13	0	0	0	0	0	0	0
37+96	3796	14	12	14	0	24	7	0	24	0	24
38+00	3800	4	154	14	0	13	2	0	37	0	37
38+00	3800	0	358	15	0	2	0	0	39	0	39
38+14	3814	14	264	15	16	159	8	4	198	5	193
38+50	3850	36	260	15	9	351	20	16	549	25	524
38+59	3859	9	254	16	11	86	5	3	635	29	606
38+74	3874	15	228	16	19	133	9	8	768	39	729
39+00	3900	26	131	2	3	174	9	10	942	51	890
39+50	3950	50	15	0	1	135	2	3	1077	55	1022
39+67	3967	17	12	0	0	8	0	0	1085	55	1030
				COLUMN TOTALS		1085	62	44			

9

9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	EARTHWORK	SHEET 120	E



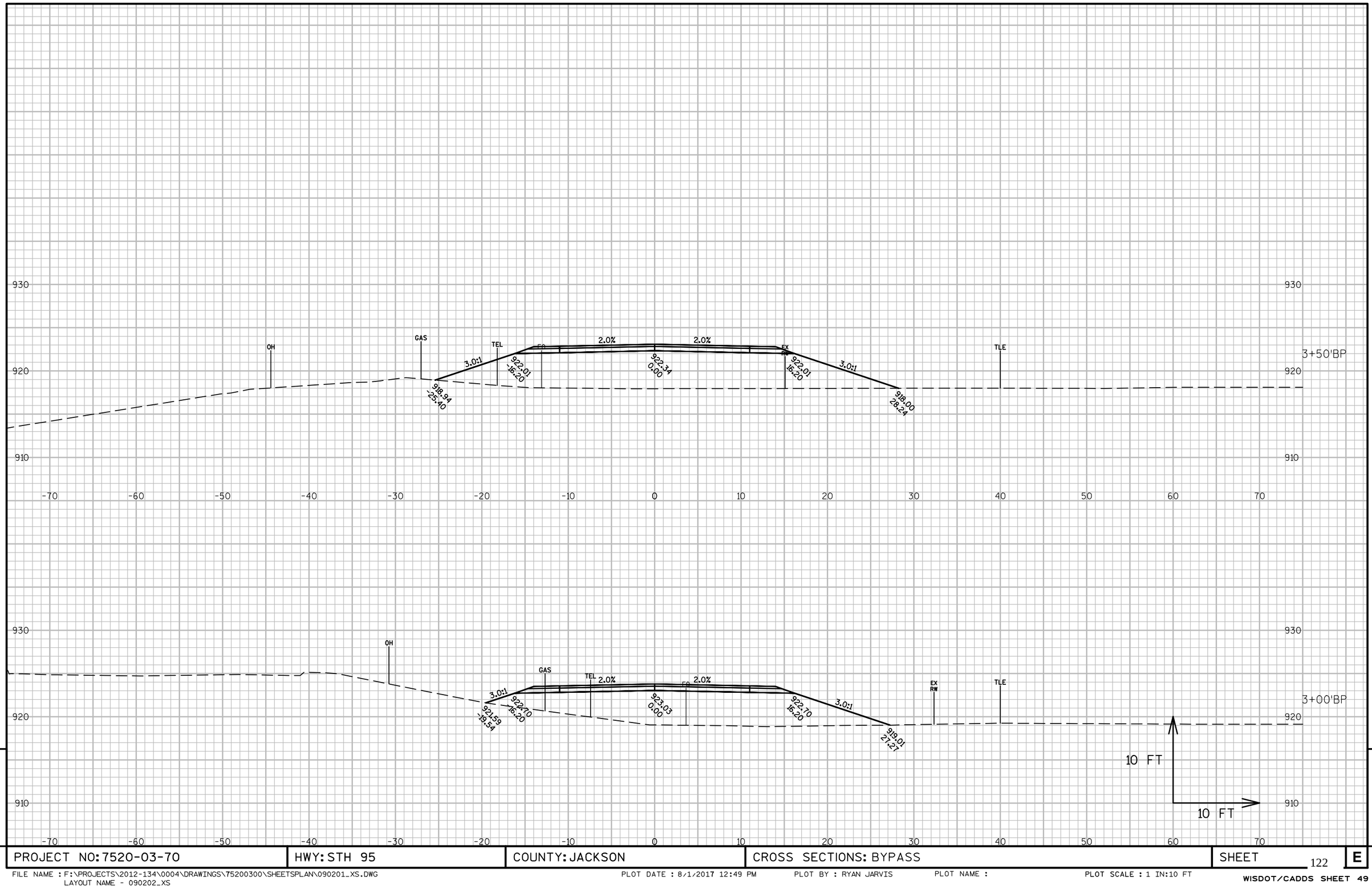
BEGIN CONSTRUCTION
STA 1+50.00'BP
MATCH EXISTING

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: BYPASS	SHEET 121	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS

PLOT DATE : 8/1/2017 12:49 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

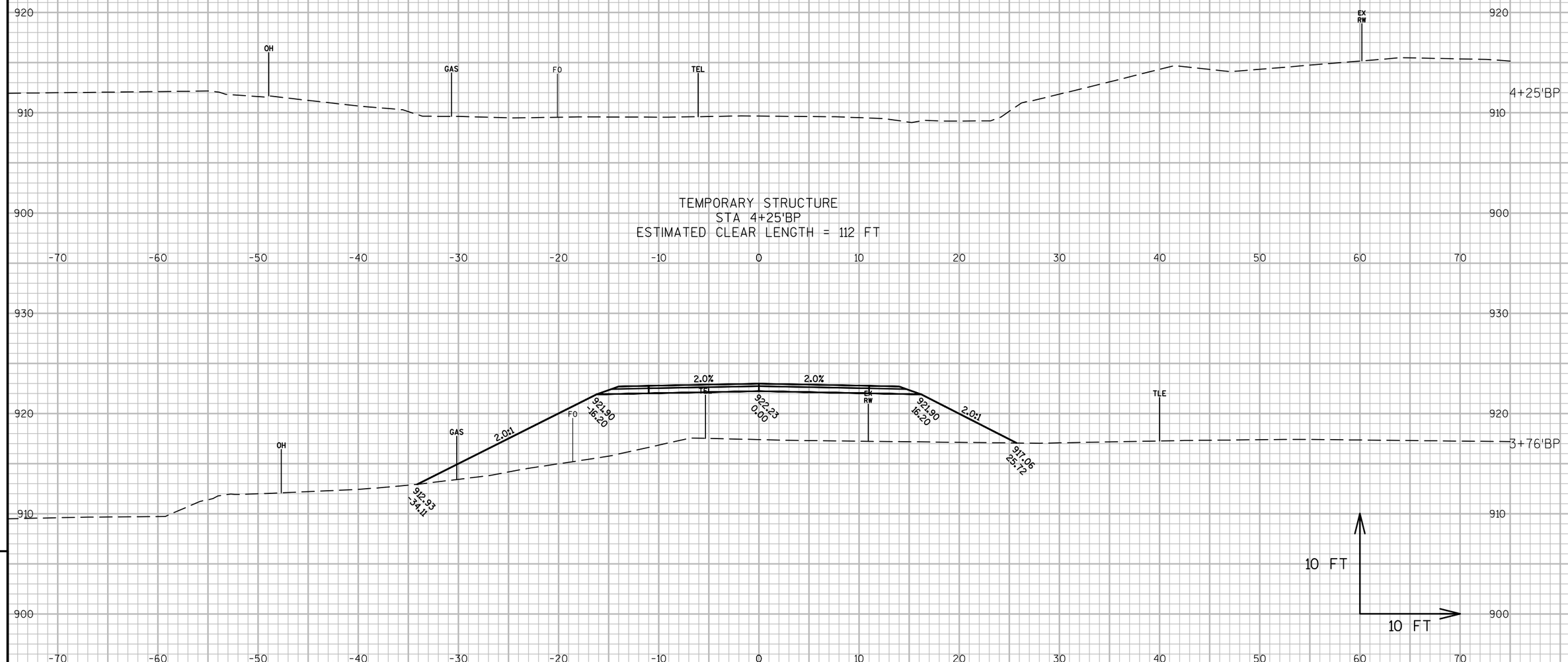


PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: BYPASS	SHEET 122	E

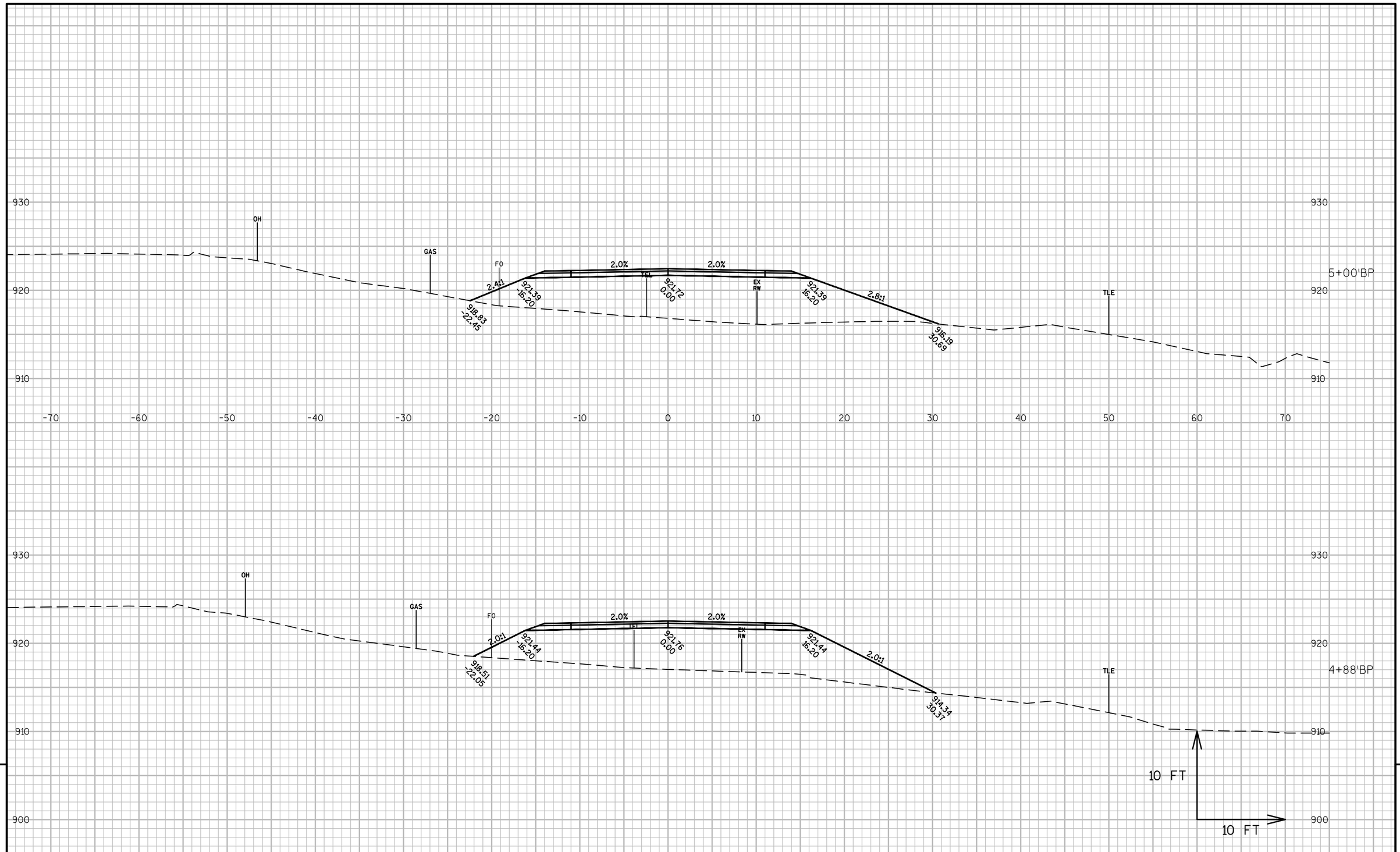
FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090202_XS

PLOT DATE : 8/1/2017 12:49 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: BYPASS	SHEET 123	E

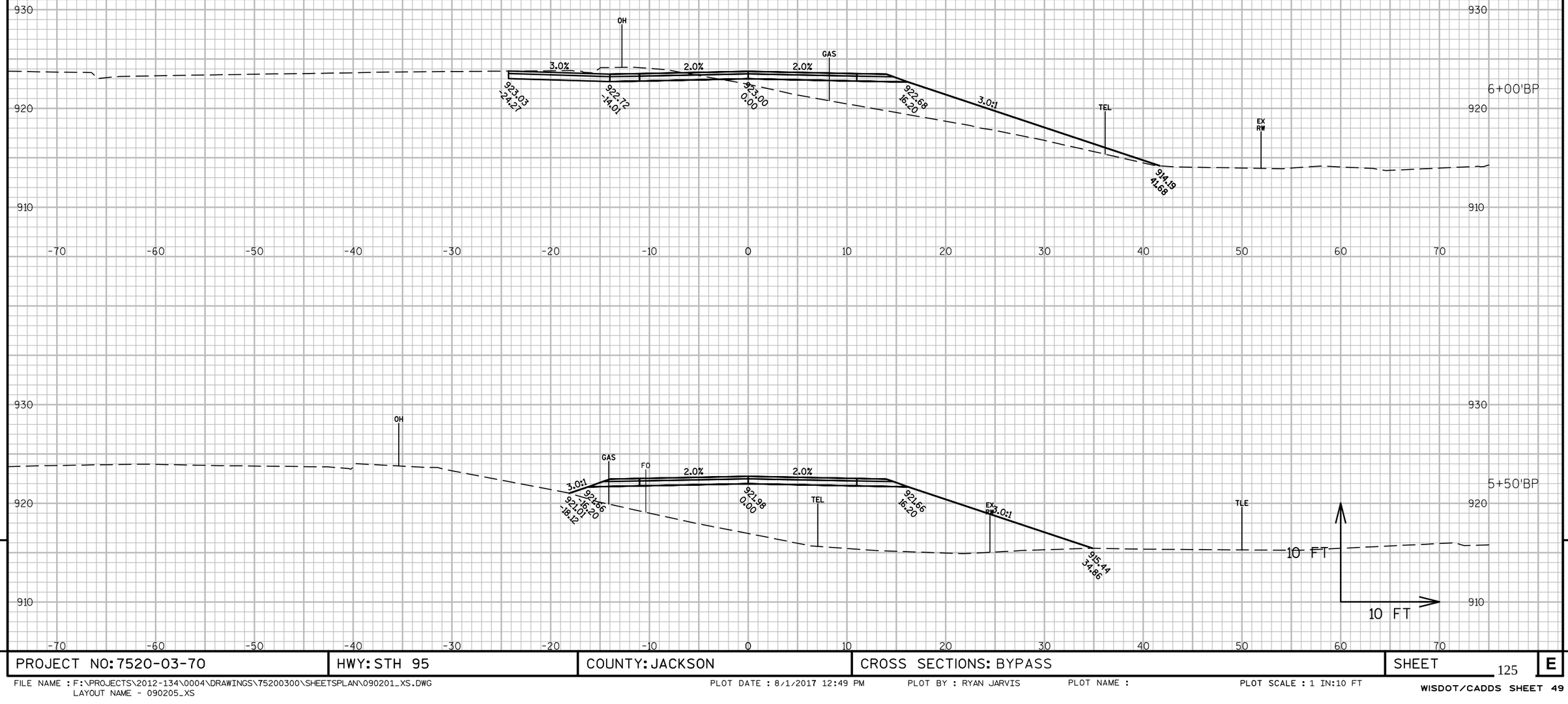


PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: BYPASS	SHEET 124	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090204_XS

PLOT DATE : 8/1/2017 12:49 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

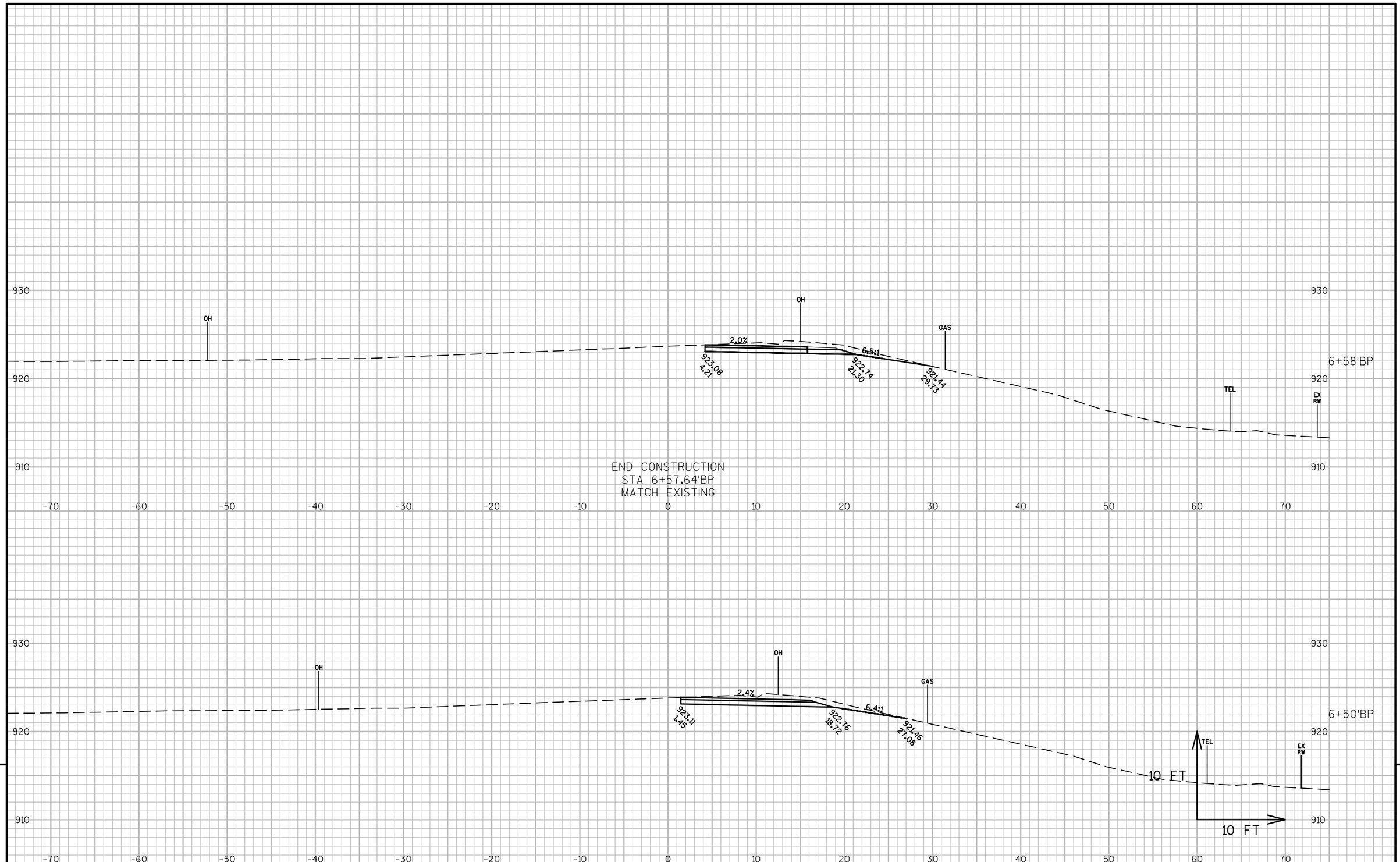


PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: BYPASS	SHEET 125	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090205_XS

PLOT DATE : 8/1/2017 12:49 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

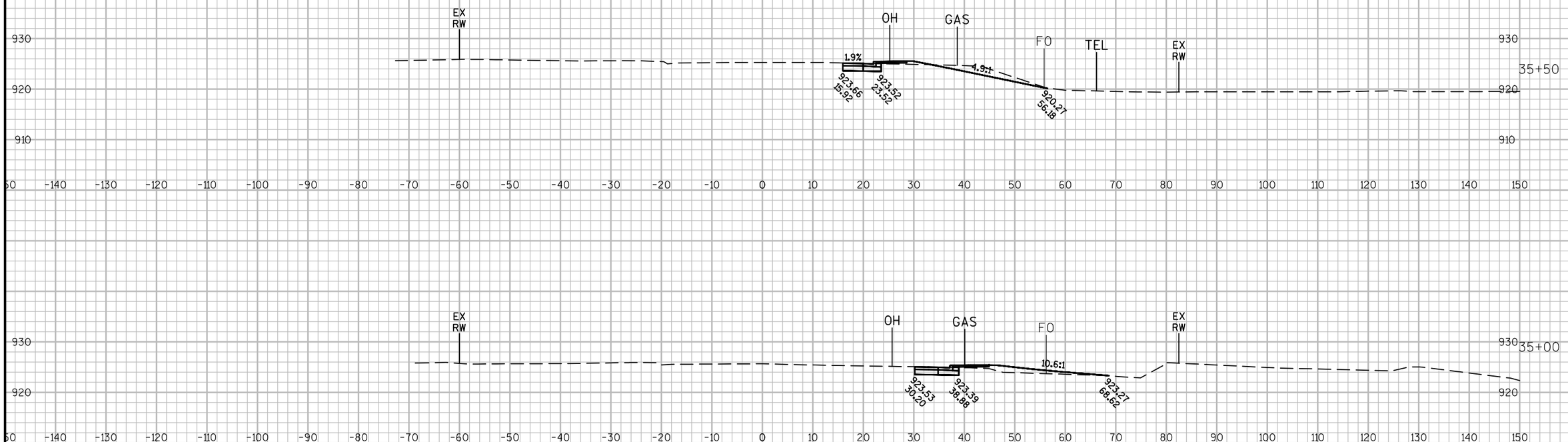


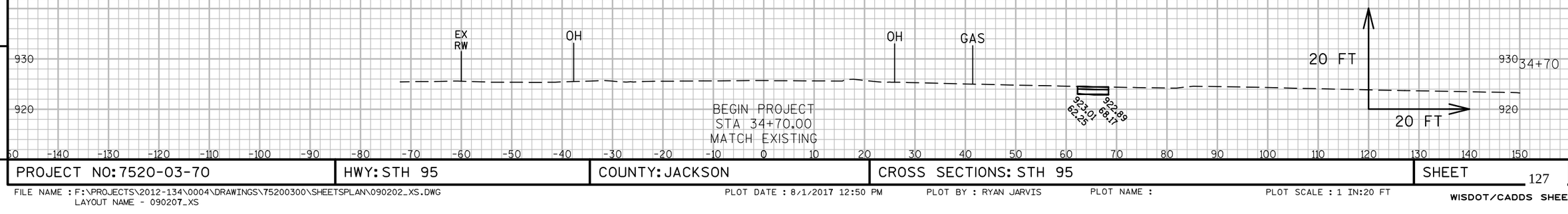
PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: BYPASS	SHEET 126	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090206_XS

PLOT DATE : 8/1/2017 12:49 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49





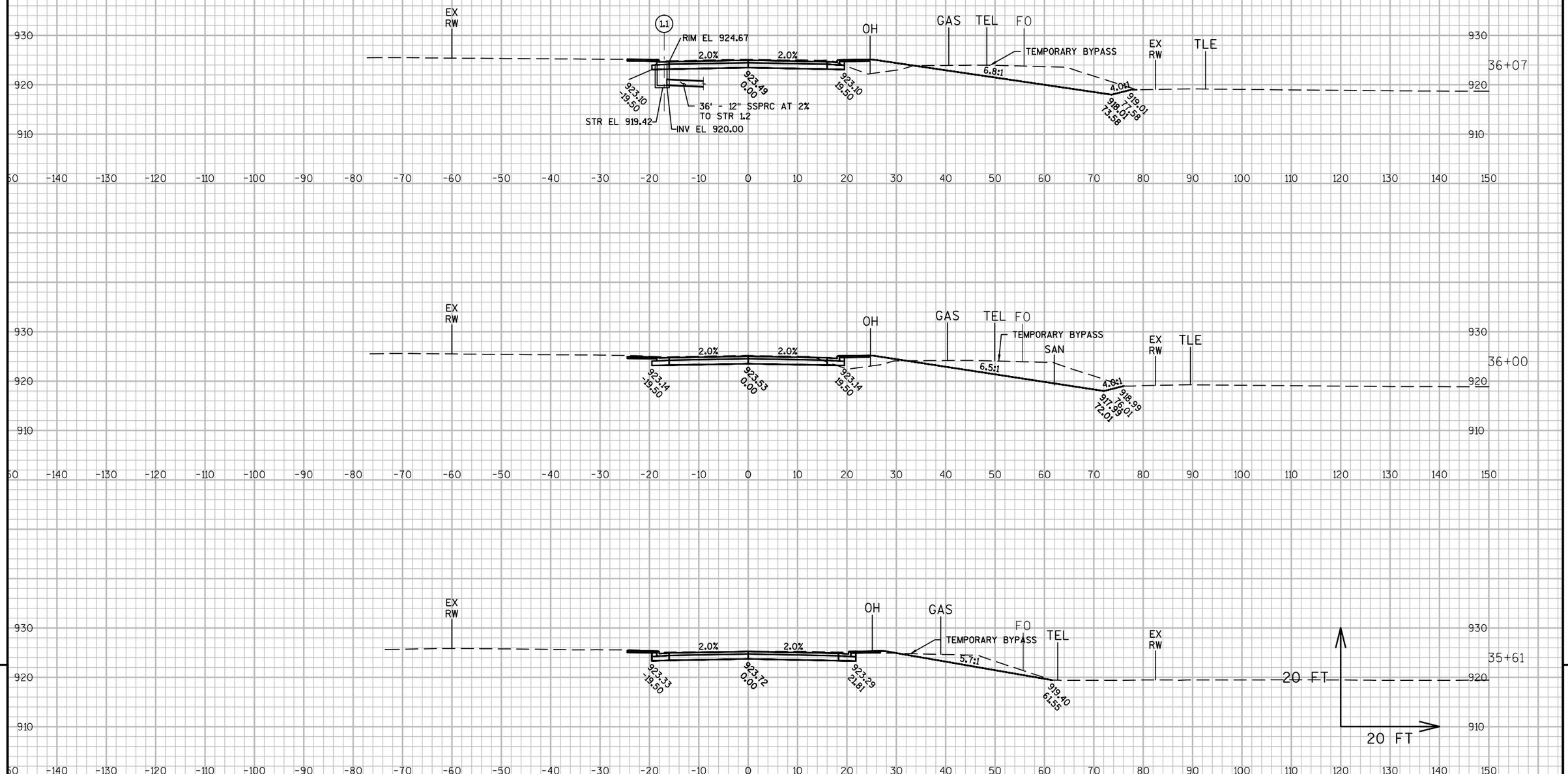
9 9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 127 E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090207_XS

PLOT DATE : 8/1/2017 12:50 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

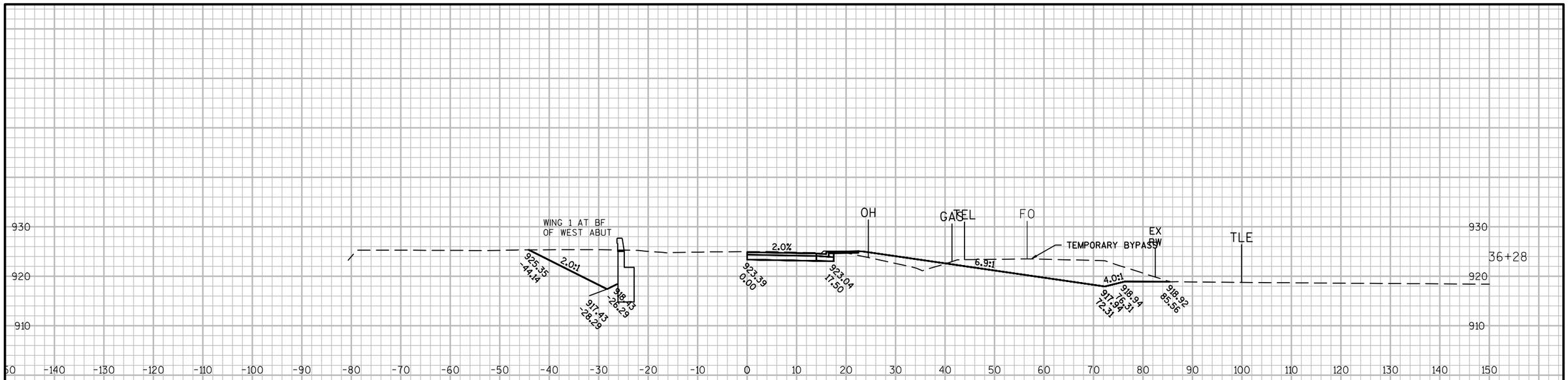
9

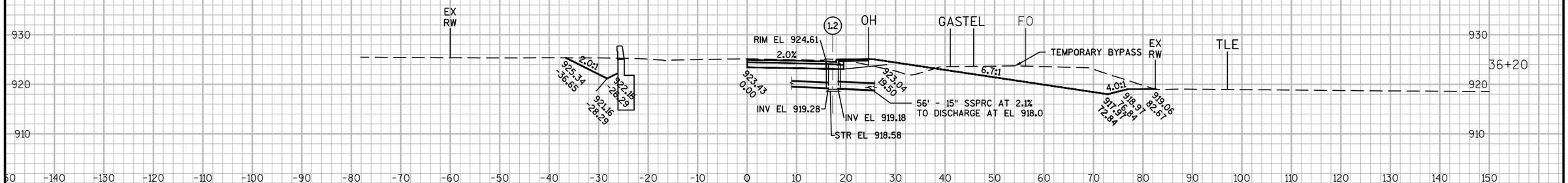
PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 128	E

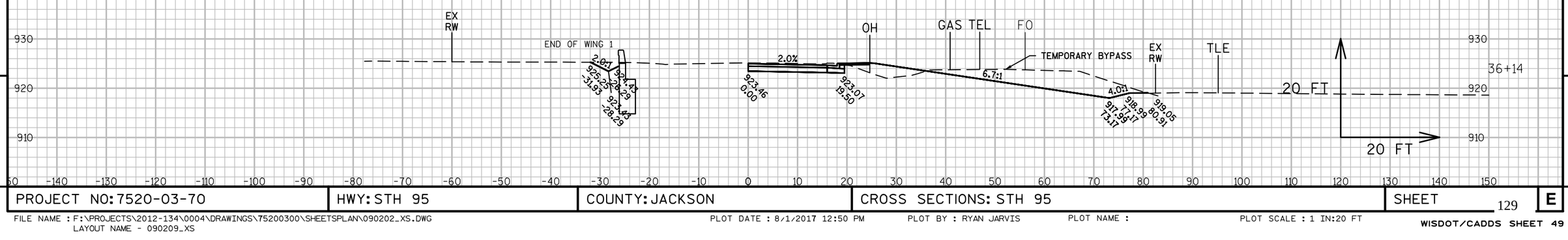
FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090208_XS

PLOT DATE : 8/1/2017 12:50 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



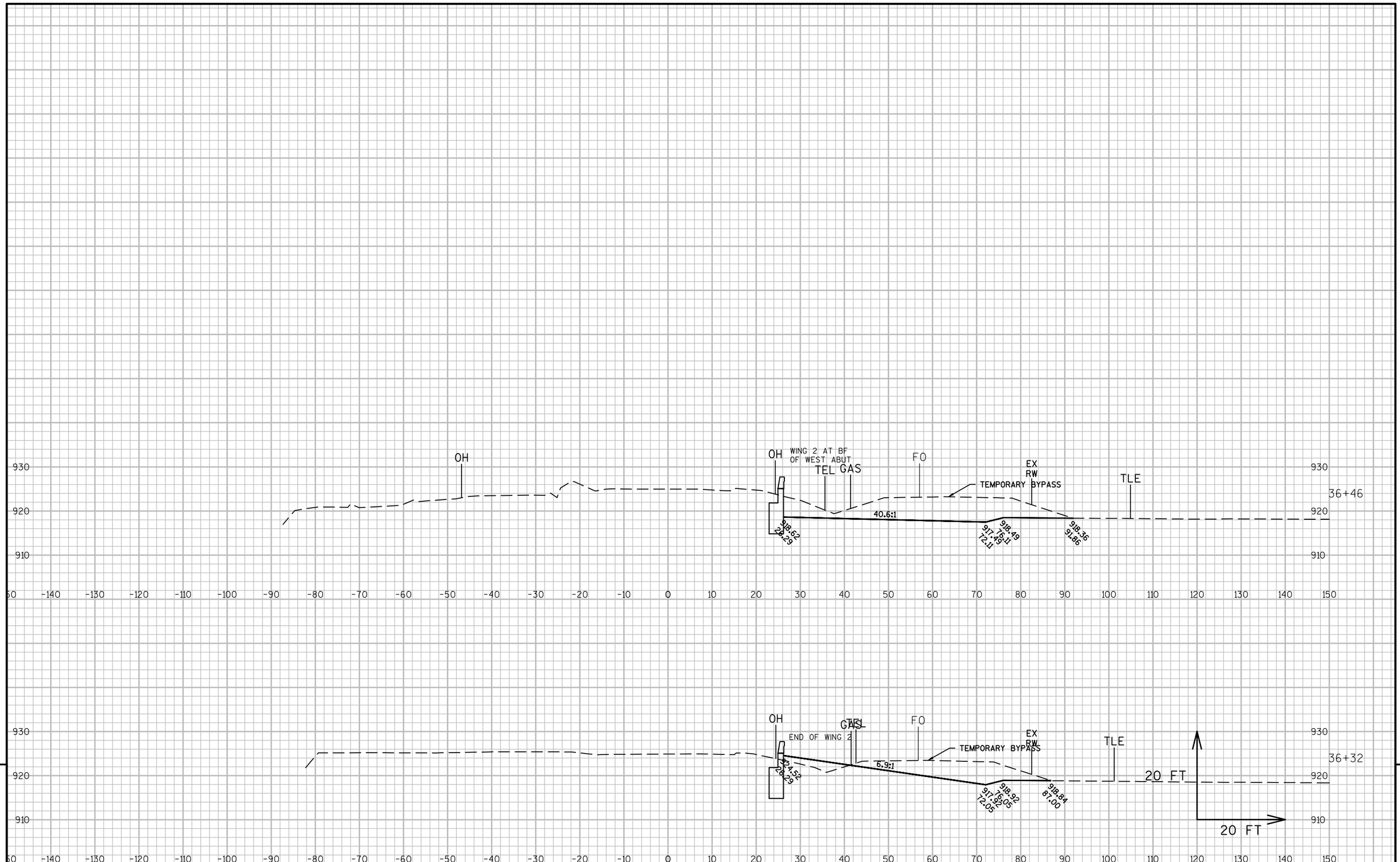




9

9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 129	E



9

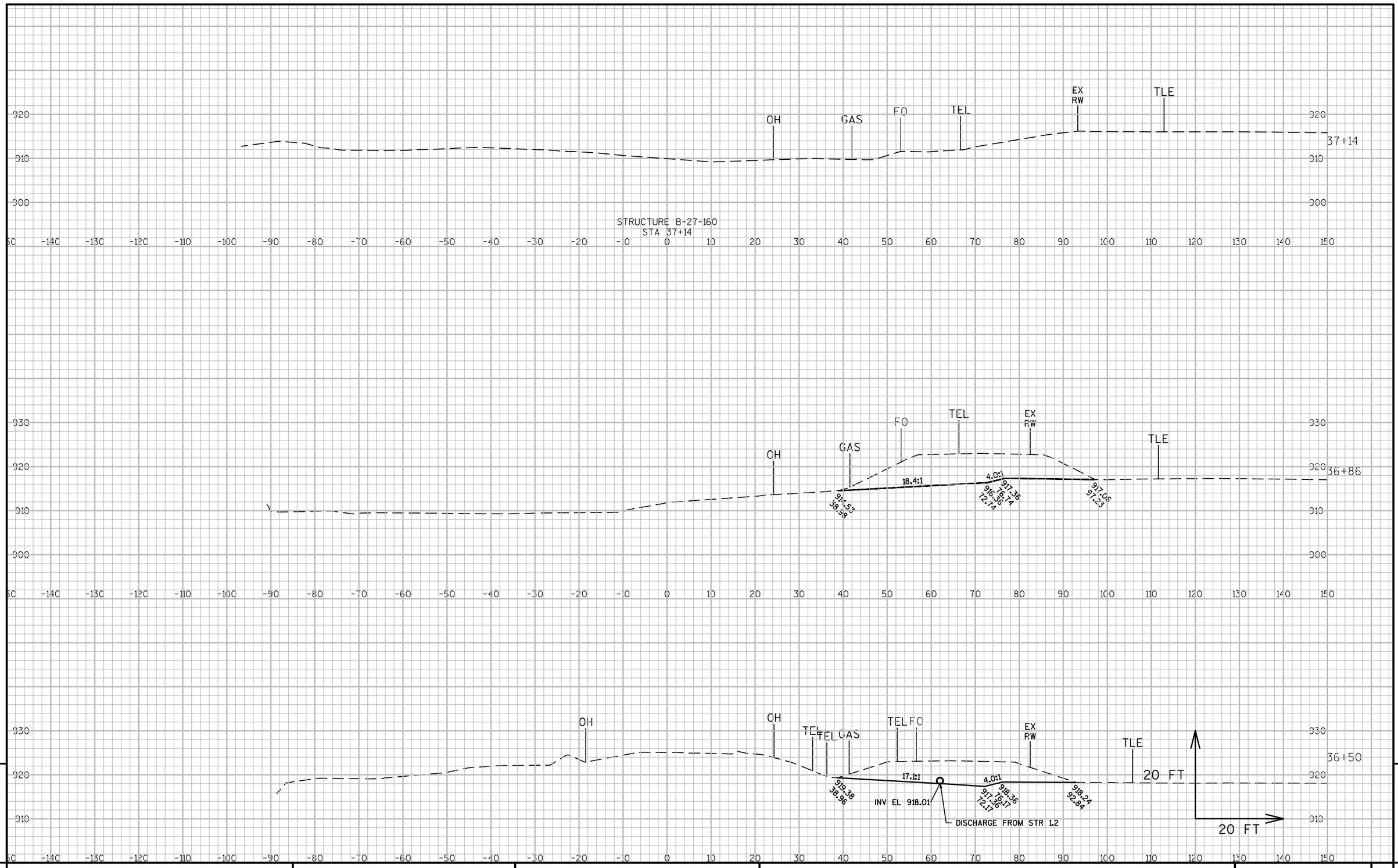
9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 130 E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090210-A_XS

PLOT DATE : 8/1/2017 12:50 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

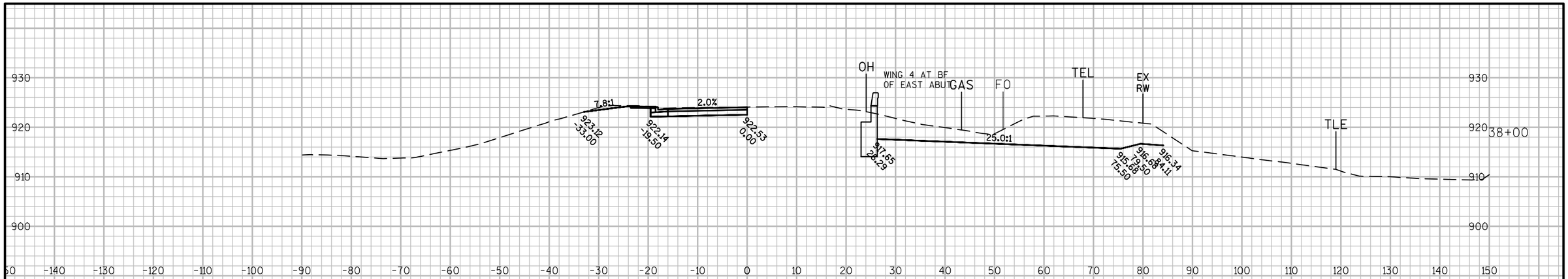


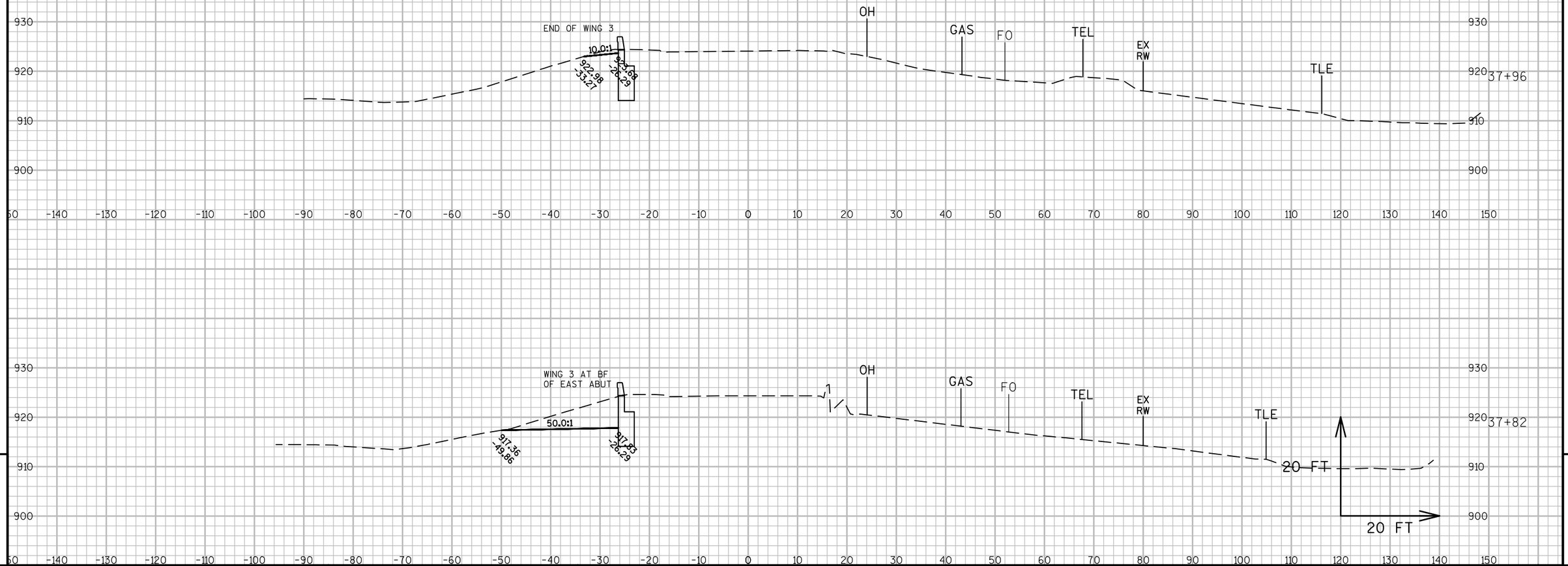
9

9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 131	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090210-B_XS
PLOT DATE : 8/1/2017 12:50 PM
PLOT BY : RYAN JARVIS
PLOT NAME :
PLOT SCALE : 1 IN:20 FT





9

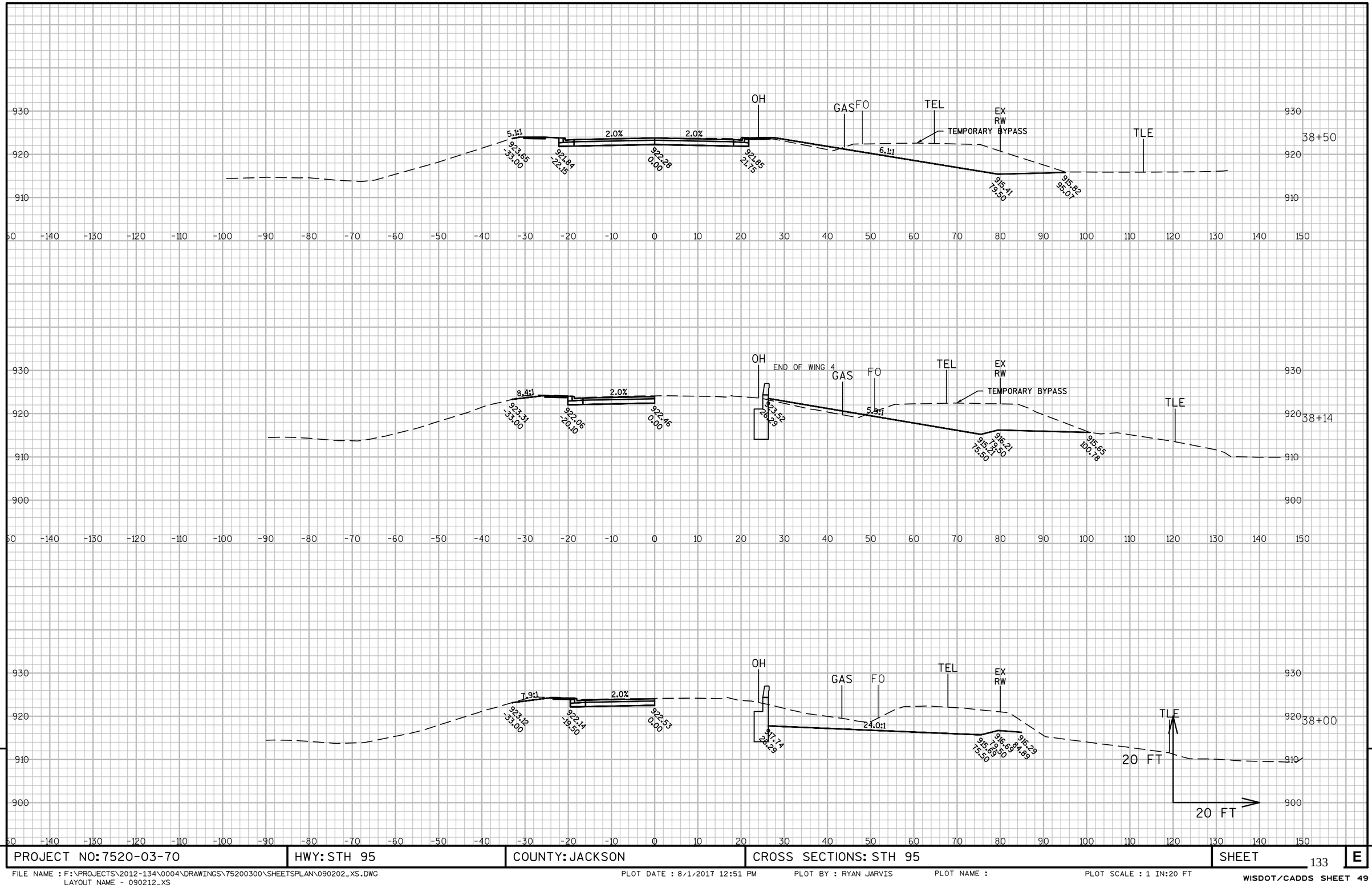
9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090211_XS

PLOT DATE : 8/1/2017 12:50 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

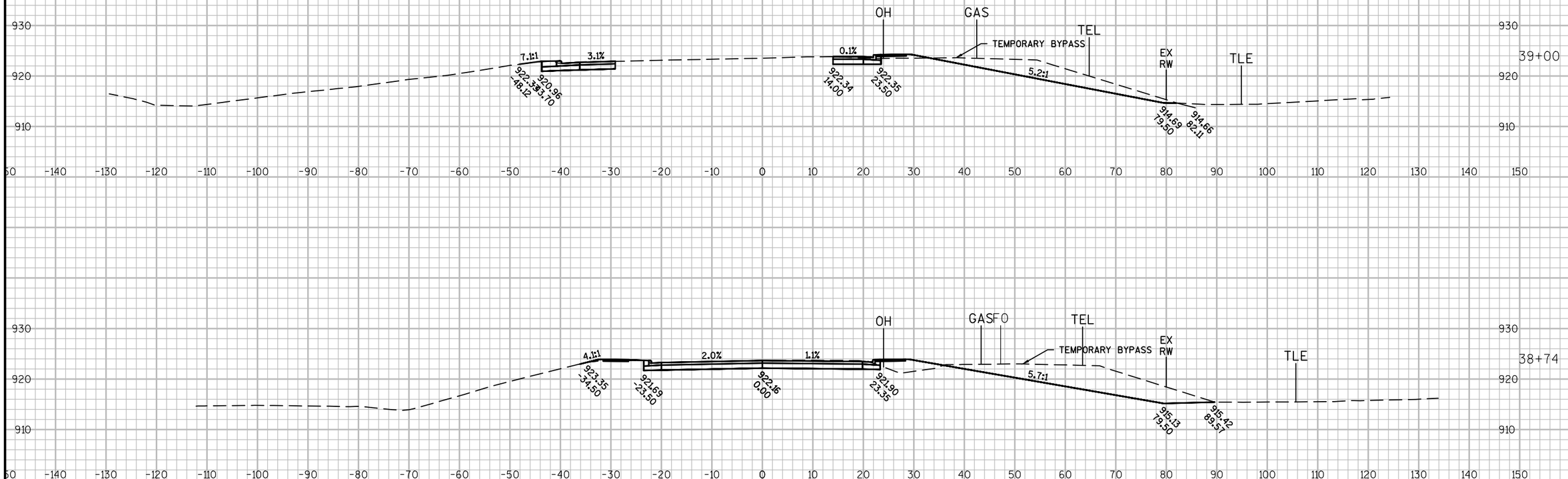
9

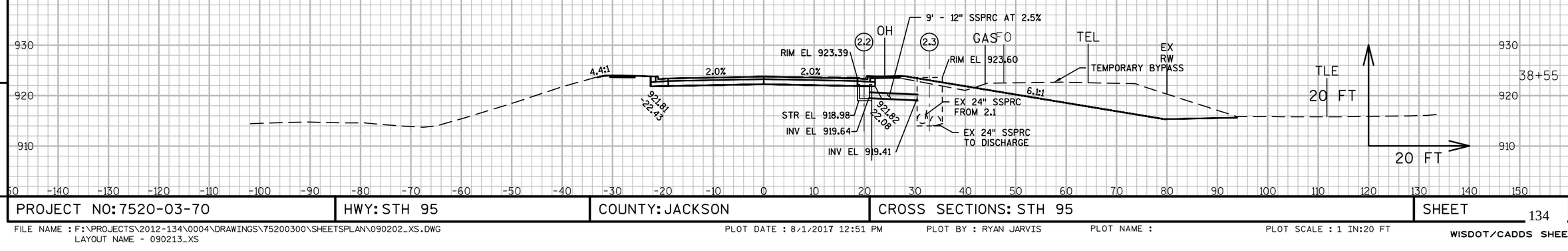
PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 133	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090212_XS

PLOT DATE : 8/1/2017 12:51 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





9

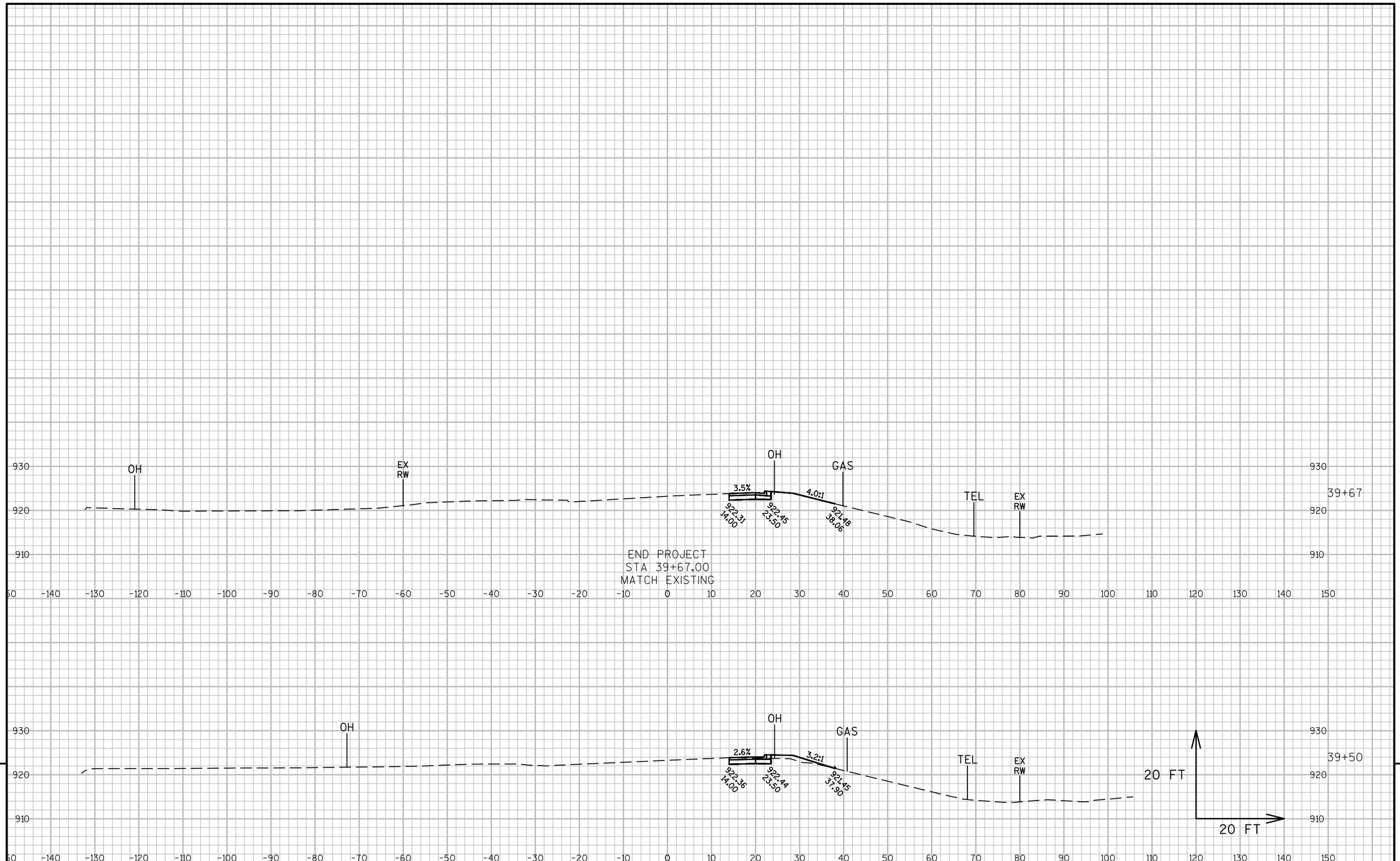
9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 134	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090213_XS

PLOT DATE : 8/1/2017 12:51 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



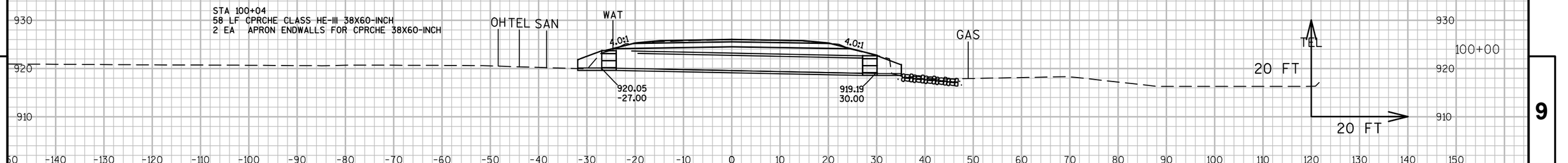
9

9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 135	E

STA 99+96
58 LF CPRCHE CLASS HE-III 38X60-INCH
2 EA APRON ENDWALLS FOR CPRCHE 38X60-INCH

STA 100+04
58 LF CPRCHE CLASS HE-III 38X60-INCH
2 EA APRON ENDWALLS FOR CPRCHE 38X60-INCH



9 9

PROJECT NO: 7520-03-70	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS: STH 95	SHEET 136	E

FILE NAME : F:\PROJECTS\2012-134\0004\DRAWINGS\75200300\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090215_XS

PLOT DATE : 8/1/2017 12:51 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov