LAX

JUNE 2024

PROJECT ID: WITH: N/A

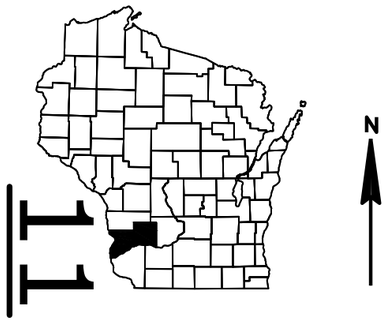
5860-00-61

COUNTY: **CRAWFORD & RICHLAND**

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
~~Section No.~~	~~7~~	~~Sign Plates~~
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 170



N

DESIGN DESIGNATION

A.A.D.T.	2027	=	910
A.A.D.T.	2047	=	1100
D.H.V.		=	
D.D.		=	60 / 40
T.		=	7.8%
DESIGN SPEED		=	55 MPH
ESALS		=	140,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5860-00-61	WISC 2024387	1

ROLLING GROUND - BOAZ

USH 61 TO USH 14 / B-52-144,-51,-66,-85

STH 171

CRAWFORD & RICHLAND COUNTIES

BRIDGE B-52-144
STA 288+14 TO 288+59

NET EXCEPTION TO C/L LENGTH
BRIDGE B-52-231
STA 228+14 TO 230+17

BEGIN PROJECT
STA 0+00
X=581489.474
Y=443155.726

STATE PROJECT NUMBER
5860-00-61

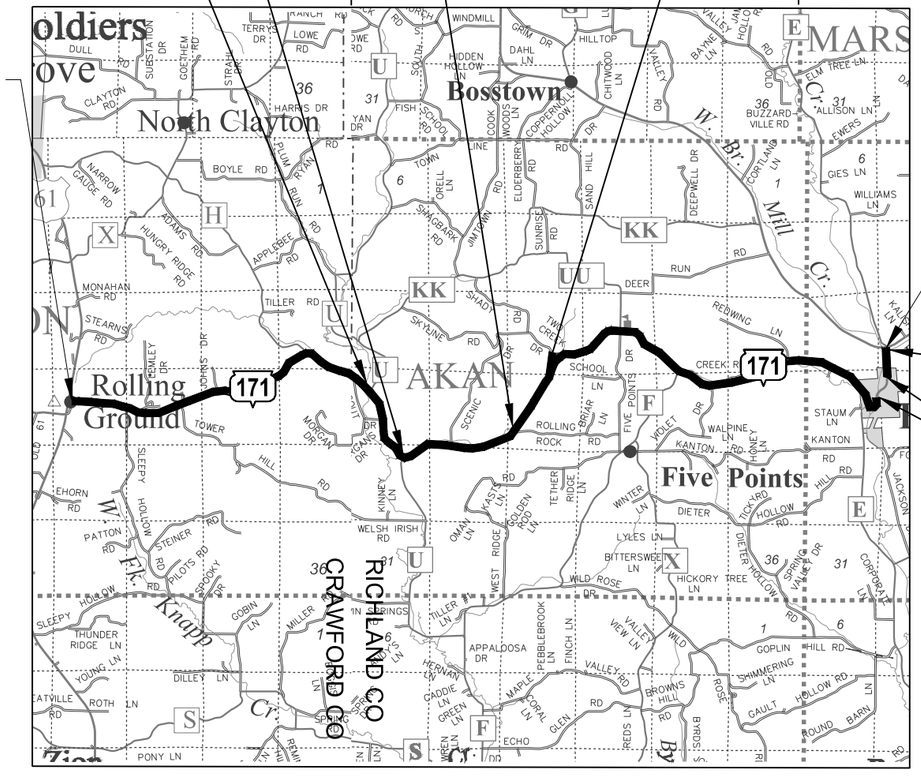
BOX CULVERT B-52-51
STA 375+11 TO 375+38

BRIDGE B-52-66
STA 429+05 TO 429+48

END PROJECT
STA 735+45

BRIDGE B-52-85
STA STA 734+94 TO 735+45

NET EXCEPTION TO C/L LENGTH
BRIDGE B-52-266 & APPROACHES
STA 695+70 TO 707+70



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 13.663

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), RICHLAND COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	JONATHAN DAVIDSON, PE
Project Manager	JERED LEX, PE
Regional Examiner	SW REGION
Regional Supervisor	DAN KLEINERTZ, PE

APPROVED FOR THE DEPARTMENT

DATE: _____ Jered Lex (Signature)

E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\010101-TI.DWG PLOT DATE : 8/25/2023 11:56 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME :

STANDARD ABBREVIATIONS

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

GENERAL NOTES

- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE
- RIGHT OF WAY LINES SHOWN ON THE PLAN SHEETS AND CROSS SECTIONS ARE APPROXIMATE.
- THE LOCATIONS OF EXISTING WETLAND LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE AND THERE MAY BE OTHER WETLANDS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. DO NOT STORE EQUIPMENT OR MATERIALS IN, NOR IMPACT ANY WETLANDS OUTSIDE OF THE SLOPE INTERCEPTS SHOWN.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT TO CONSTRUCT THE NEW DRIVEWAY. ACCESS TO DRIVEWAY SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER CONTRACTOR CONSTRUCTION OPERATIONS. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.
- PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD OR MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.
- THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, BIKE OR PARKING LANE.
- HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
- CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.
- APPLY TACK COAT TO THE EXISTING AND MILLED SURFACE AT A RATE OF 0.07 GAL/SY AND 0.05 GAL/SY BETWEEN LAYERS OF NEW HMA PAVEMENT.

2

2

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
TRAFFIC CONTROL
CONTROL POINTS (OVERVIEW)
CONTROL POINTS (DETAILS)

DNR LIAISON

ANDREW BARTA
ENVIRONMENTAL ANALYSIS & REVIEW SPECIALIST
WISCONSIN DEPT. OF NATURAL RESOURCES
SOUTH CENTRAL REGION
101 S. WEBSTER STREET
MADISON, WI 53707
608/235-2955
andrew.barta@wisconsin.gov

DESIGN CONTACTS

JERED LEX
PROJECT MANAGER
WISDOT SW REGION
3550 MORMON COULEE RD
LA CROSSE, WI 54601
608/785-9956
jered.lex@dot.wi.gov

JONATHAN DAVIDSON
PROJECT DESIGNER
WISDOT SW REGION
3550 MORMON COULEE RD
LA CROSSE, WI 54601
608/785-9036
jonathan.davidson@dot.wi.gov

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

UTILITY CONTACTS

Patrick McIntyre (Field Contact)
Alliant Energy - Electricity
900 Prairie Drive
Spring Green, WI 53588
(608) 844-9605
patrickmcintyre@alliantenergy.com

Doug McGowan (Field Contact)
Brightspeed of Western Wisconsin
135 N Bonson Street
Platteville, WI 53818
(608) 342-4316
Doug.McGowan1@brightspeed.com

Curt Brockway (Field Contact)
Richland Electric Cooperative - Electricity
1027 N Jefferson
P.O. Box 439
Richland Center, WI 53581
(608) 647-3173
cbrockway@rec.coop

Carson Hackett (Field Contact)
Boaz Wastewater Treatment Facility
115 6th Street South
La Crosse, WI 54601
(608) 782-3130
chackett@davyinc.com

Michael Lydon (Field Contact)
Dairyland Power Cooperative - Electricity
3200 East Ave South
P.O. Box 817
La Crosse, WI 54601
(608) 787-1381
Michael.Lydon@Dairylandpower.com

Josh Lien (Field Contact)
Richland Grant Telephone Cooperative
S1421 State Highway 33
La Valle, WI 53941
(608) 985-7201
joshl@rgtc.coop

2

N

END PROJECT
STA 735+45

BRIDGE B-52-85
STA 734+94 TO 735+45

NET EXCEPTION TO C/L LENGTH
BRIDGE B-52-266 & APPROACHES
STA 695+70 - STA 707+70

NET EXCEPTION TO C/L LENGTH
BRIDGE B-52-231
STA 228+14 TO 230+17

SENSITIVE SITE

SENSITIVE SITE

BEGIN PROJECT
STA 0+00
X=581489.474
Y=443155.726

BRIDGE B-52-144
STA 288+14 TO 288+59

BOX CULVERT B-52-51
STA 375+11 TO 375+38

BRIDGE B-52-66
STA 429+05 TO 429+48

ROLLING GROUND

BOAZ

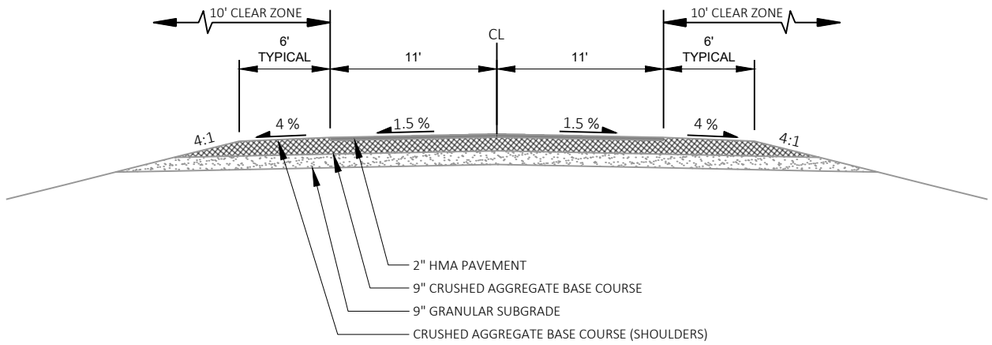
61 · 171 · 14 · H · U · UU · F · E

CHURCH RD · MALONE DR · JOHNS DR · SLEEPY HOLLOW RD · TROUT DR · TWO CREEK DR · SKYLINE RD · FAYE POINTS DR · ROLLING ROCK RD · VIOLET DR · CREEK LN · OSCAR LN · WING LN

CRAWFORD CO

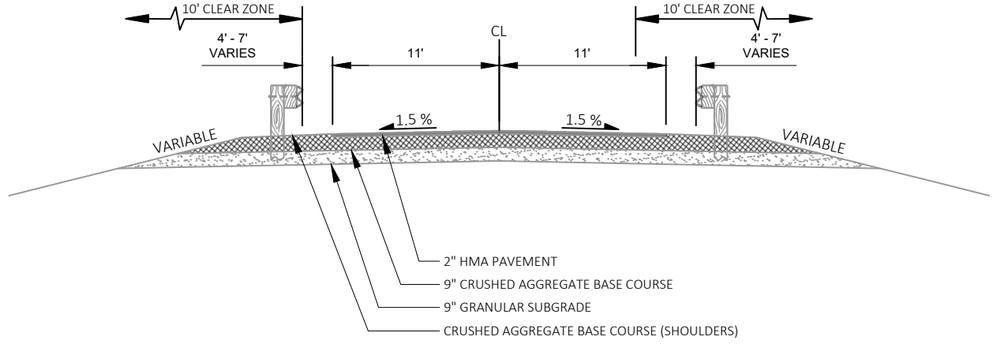
RICHLAND CO

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PROJECT OVERVIEW	SHEET 4	E



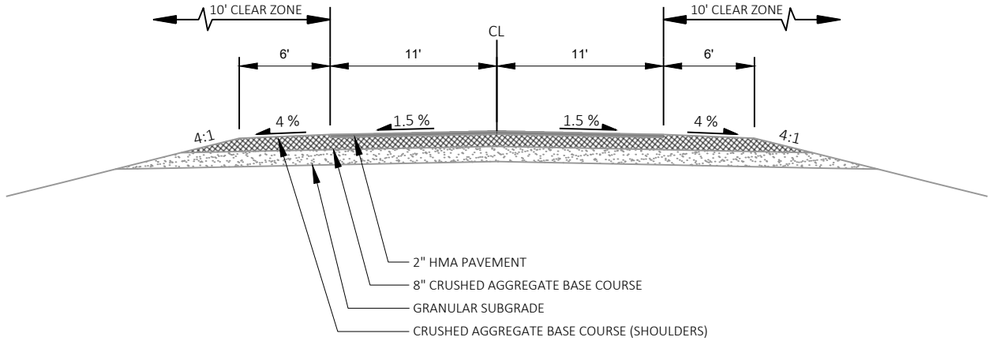
EXISTING TYPICAL SECTION STH 171

STA: 0+00 - 109+29.6



EXISTING TYPICAL SECTION STH 171

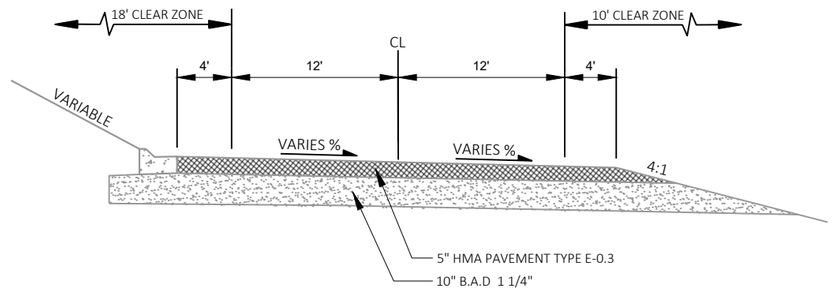
AT BEAM GUARD LOCATIONS



EXISTING TYPICAL SECTION STH 171

STA: 109+29.6 - 496+21.0

STA: 496+72.0 - 689+50.0



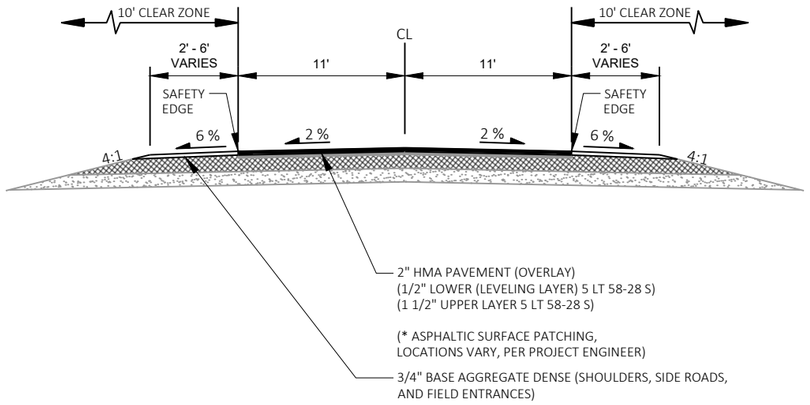
EXISTING TYPICAL SECTION STH 171 WITH CURB AND GUTTER

STA: 496+21.0 - 496+72.0

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	TYPICAL SECTIONS	SHEET 5	E

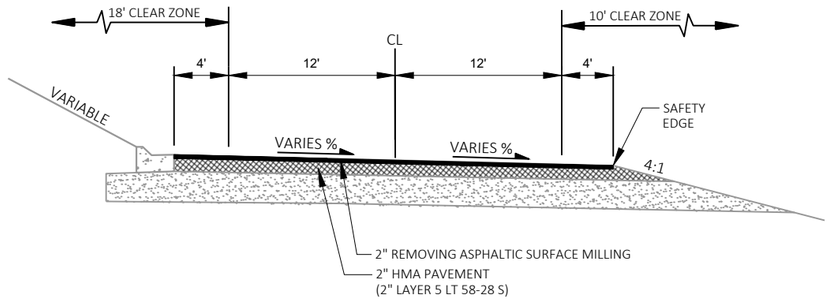
2

* 'ASPHALTIC SURFACE PATCHING'
TO BE USED IN CONJUNCTION
WITH 'PREPARE FOUNDATION FOR
ASPHALTIC PAVING'
(SEE 'HMA PAVING SUMMARY'
MISC QUANTITY SHEET)



PROPOSED TYPICAL SECTION STH 171

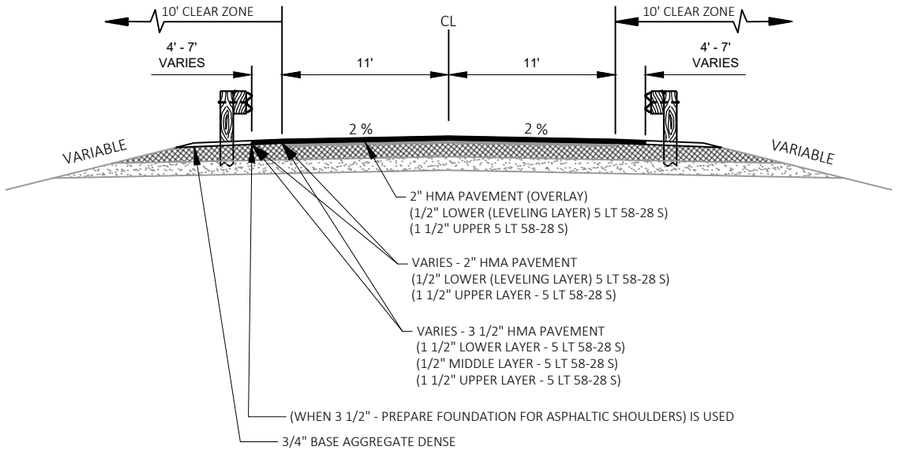
STA: 0+00 - 228+14
STA: 230+17 - 288-14
STA: 288+59 - 429+05
STA: 429+48 - 496+21
STA: 496+72 - 688+93
STA: 707+70 - 735+45



PROPOSED TYPICAL SECTION STH 171 WITH CURB AND GUTTER

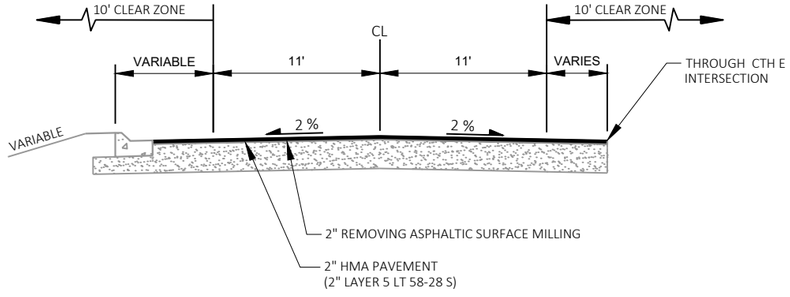
STA: 496+21 - 496+72

SHOULDER HMA DEPTH VARIES
(SEE MISC QUANTITY SHEETS)



PROPOSED TYPICAL SECTION STH 171

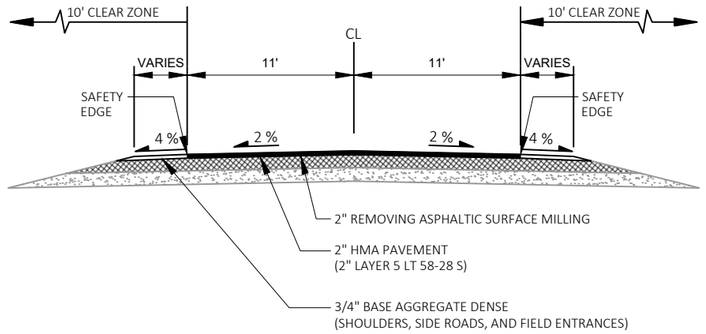
AT BEAM GUARD LOCATIONS



PROPOSED TYPICAL SECTION STH 171 WITH CURB AND GUTTER

STA: 688+93 - 689+98

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	TYPICAL SECTIONS	SHEET 6	E



PROPOSED TYPICAL SECTION STH 171

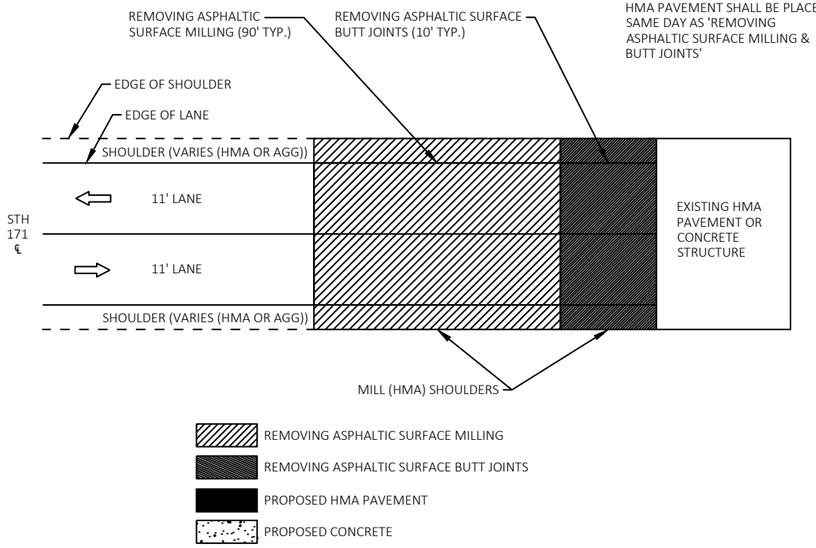
STA: 689+88 - 695+70

INTENTIONALLY BLANK

2

2

NOT TO SCALE

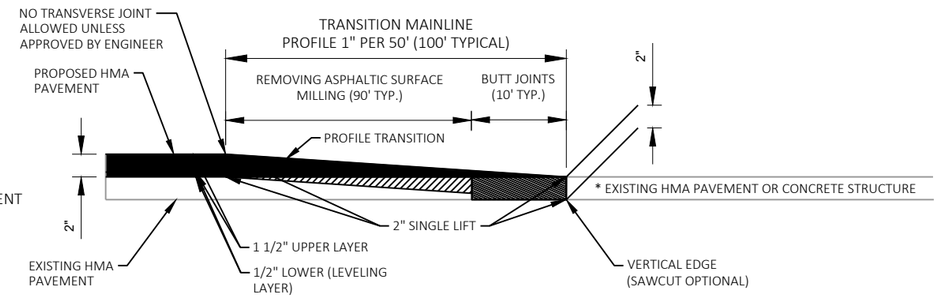


MAINLINE - BUTT JOINT DETAIL

STA VARIES

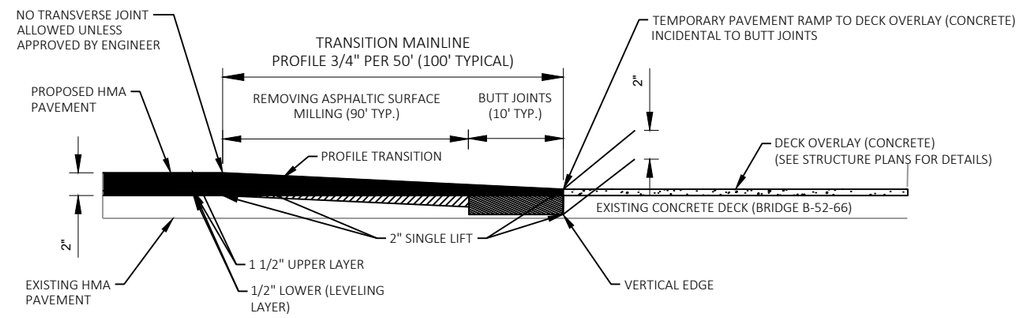
TYPICAL LOCATIONS

- STA VARIES
- * STA 688+93 - 2" NEW HMA PAVEMENT



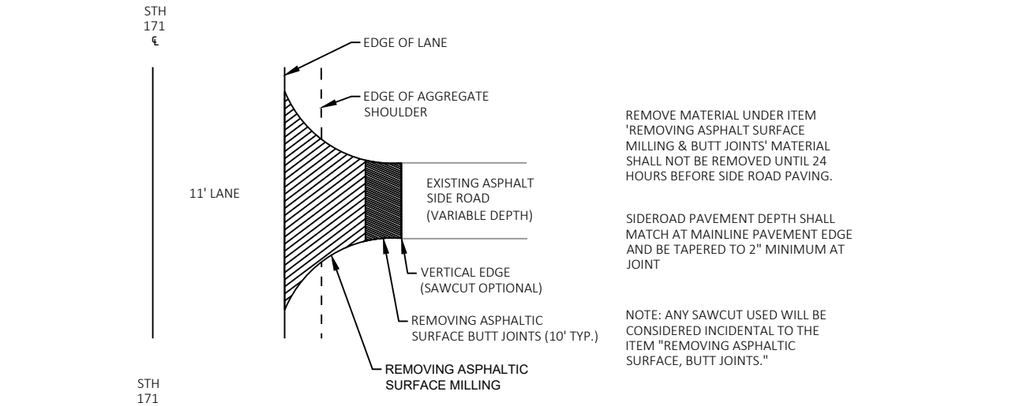
BRIDGE B-52-66

- STA 429+05 TO 429+48



2

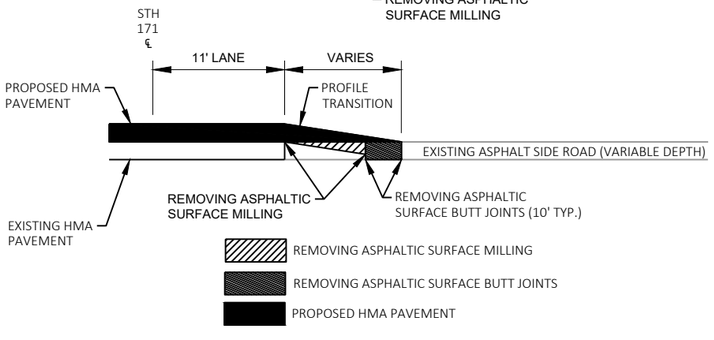
NOT TO SCALE



REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALT SURFACE MILLING & BUTT JOINTS' MATERIAL SHALL NOT BE REMOVED UNTIL 24 HOURS BEFORE SIDE ROAD PAVING.

SIDEROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT EDGE AND BE TAPERED TO 2" MINIMUM AT JOINT

NOTE: ANY SAWCUT USED WILL BE CONSIDERED INCIDENTAL TO THE ITEM "REMOVING ASPHALTIC SURFACE, BUTT JOINTS."

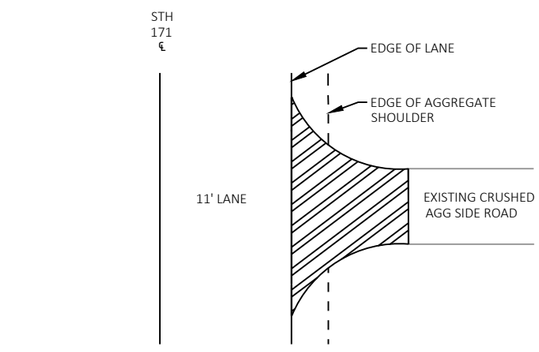


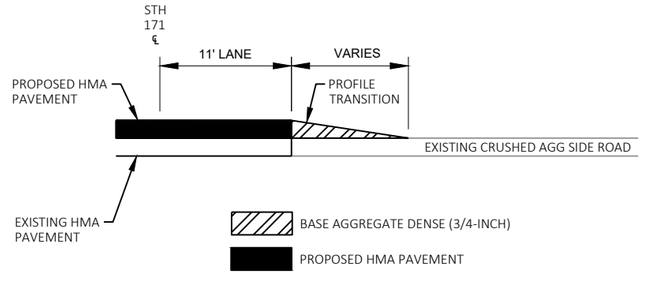
PAVED SIDE ROAD DETAIL (NO CURB & GUTTER)

STA: 1+89 RT (STORE RD)
STA: 40+45 RT (SLEEPY HOLLOW RD)
STA: 79+63 RT (TOWER HILL RD)
STA: 220+24 RT (TROUT DR)
STA: 256+87 RT (TROUT DR)
STA: 289+78 RT (CTH U)
STA: 482+37 RT (FIVE POINTS DR)
STA: 534+64 RT (CTH F)
STA: 711+25 RT (JEFFERSON STREET)

STA: 50+17 LT (CHURCH RD)
STA: 178+95 LT (CTH H)
STA: 234+66 LT (CTH U)
STA: 482+30 LT (CTH UU)
STA: 712+60 LT (PARK DR)
STA: 714+95 LT (HISTORICAL MARKER)

NOT TO SCALE





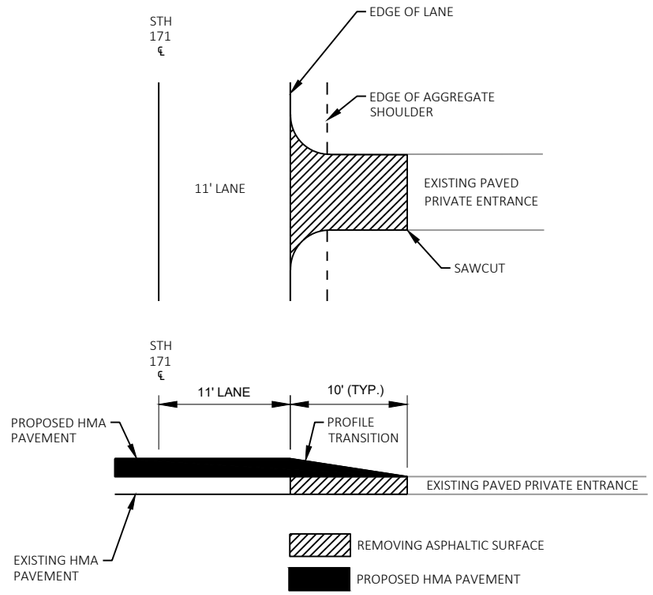
UNPAVED SIDE ROAD DETAIL

STA VARIES

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD - RICHLAND	CONSTRUCTION DETAILS	SHEET 8	E

2

NOT TO SCALE

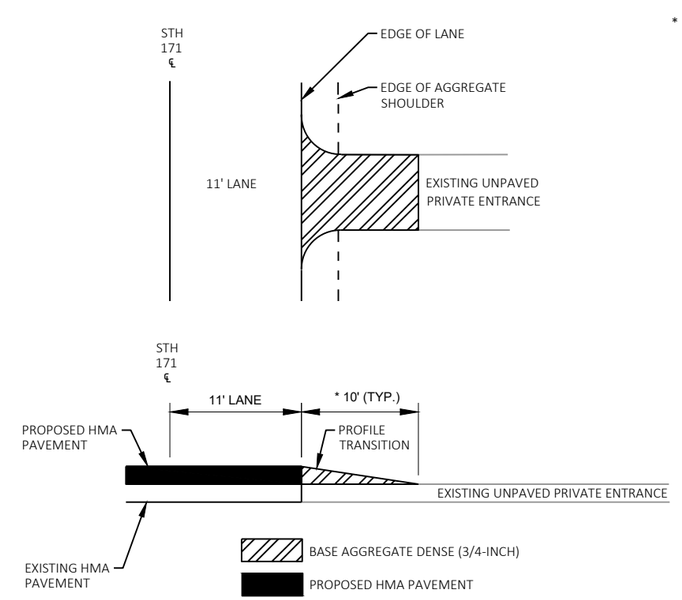


REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALTIC SURFACE' MATERIAL SHALL NOT BE REMOVED UNDER THIS ITEM UNTIL 24 HOURS BEFORE PRIVATE ENTRANCE PAVING.

PAVED PRIVATE ENTRANCE DETAIL

STA VARIES

NOT TO SCALE



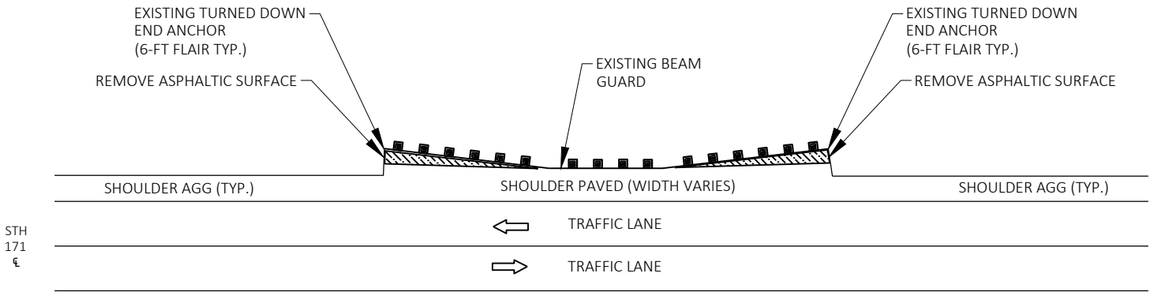
* LIMITS OF BASE AGGREGATE DENSE (3/4-INCH) AT AGGREGATE DRIVEWAYS AND FIELD ENTRANCES AS DETERMINED BY THE ENGINEER

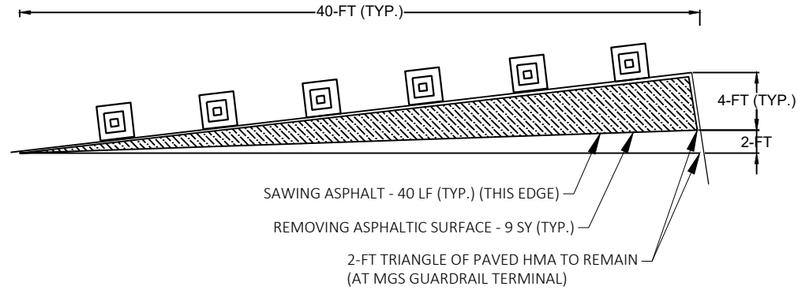
UNPAVED PRIVATE ENTRANCE DETAIL

STA VARIES

2

NOT TO SCALE





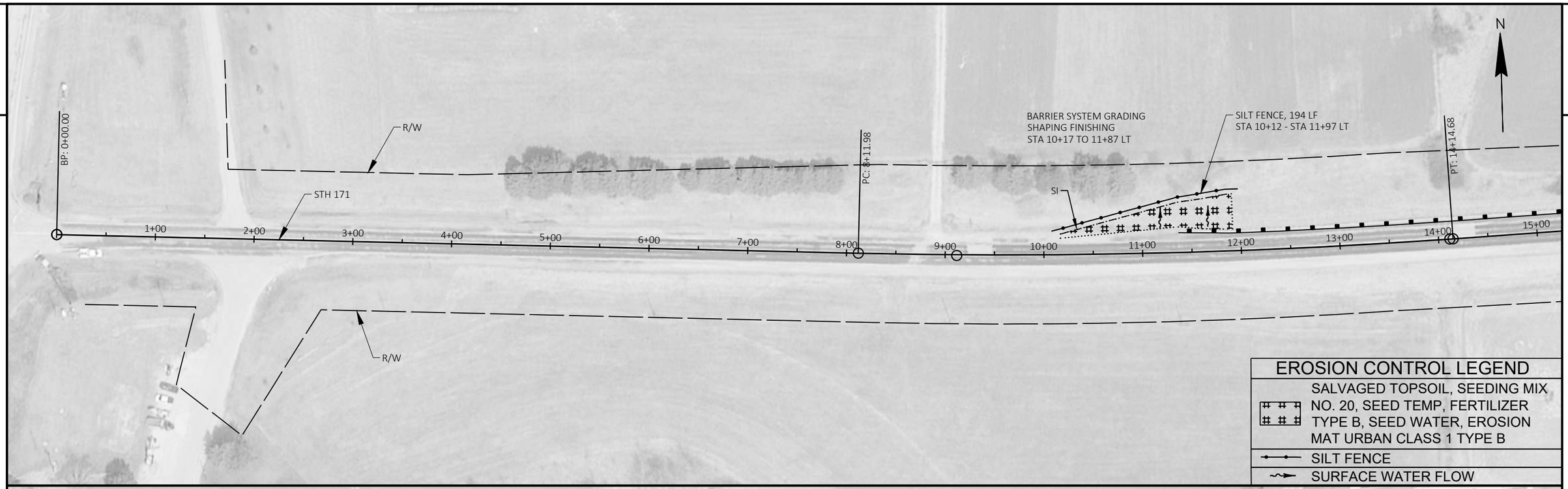
REMOVING ASPHALTIC SURFACE

EXISTING BEAM GUARD - REMOVE ASPHALTIC SURFACE

STA 429+05 TO 429+48 RT
STA 287+29 TO 287+69 LT

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD - RICHLAND	CONSTRUCTION DETAILS	SHEET 9	E

2





PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	EROSION CONTROL	SHEET 10	E

2

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 29+08 TO 30+76 LT

SILT FENCE
(SEE PREVIOUS SHEET)

SI

R/W

STH 171

PT: 33+82.17

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 35+64 TO 37+37 LT

SI

SILT FENCE, 194 LF
STA 35+54 - STA 37+42 LT

30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00

RICHLAND / GRANT
TELEPHONE COOP
(TEL)

SI

SILT FENCE, 190 LF
STA 36+11 - STA 37+96 RT

R/W

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 36+21 TO 37+91 RT

N

EROSION CONTROL LEGEND

- SALVAGED TOPSOIL, SEEDING MIX NO. 20, SEED TEMP, FERTILIZER TYPE B, SEED WATER, EROSION MAT URBAN CLASS 1 TYPE B
- SILT FENCE
- SURFACE WATER FLOW

R/W

STH 171

44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00

PC: 51+55.40

SI

SILT FENCE, 201 LF
STA 51+66 - STA 53+49 RT

RICHLAND / GRANT
TELEPHONE COOP
(TEL)

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 51+71 TO 53+39 RT

R/W

N

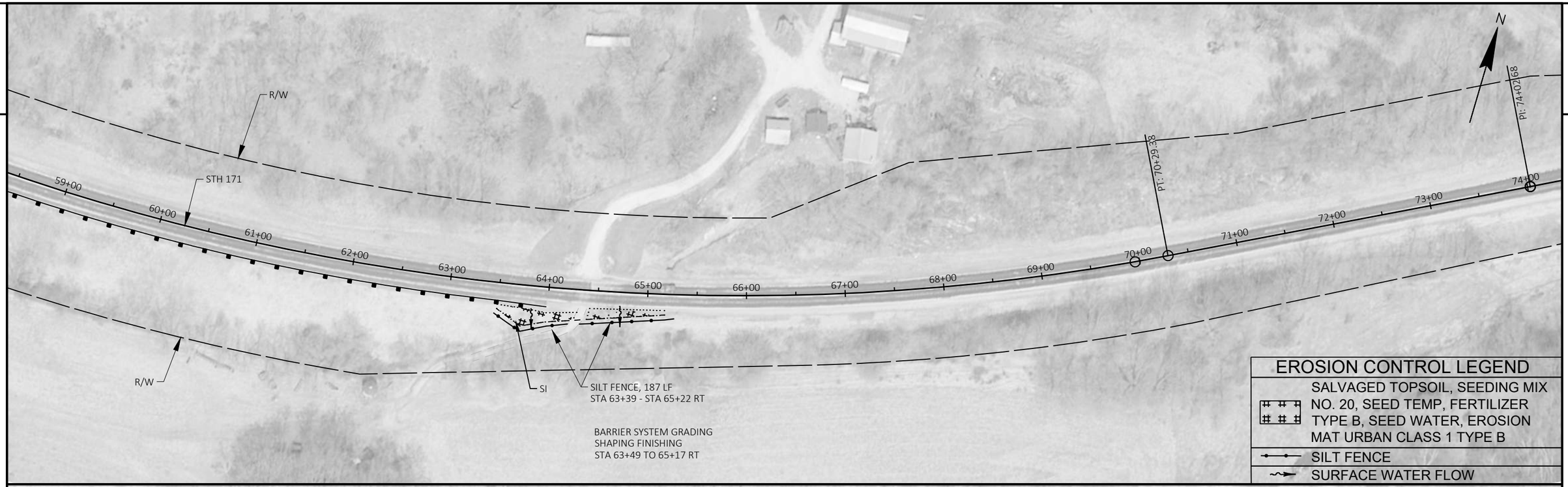
EROSION CONTROL LEGEND

- SALVAGED TOPSOIL, SEEDING MIX NO. 20, SEED TEMP, FERTILIZER TYPE B, SEED WATER, EROSION MAT URBAN CLASS 1 TYPE B
- SILT FENCE
- SURFACE WATER FLOW

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	EROSION CONTROL	SHEET 11	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 35

PLOT DATE : 9/6/2023 9:12 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	EROSION CONTROL	SHEET 12	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 36

PLOT DATE : 9/6/2023 9:12 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 180+78 TO 182+31 LT

SILT FENCE, 170 LF
STA 180+68 - STA 182+36 LT

SI

BRIGHTSPEED
(TEL)

PT: 184+77.14

179+00
180+00
181+00
182+00
183+00
184+00
185+00
186+00
187+00
188+00
189+00
190+00
191+00
192+00

PC: 188+23.05

PT: 191+82.96

STH 171

R/W

178+00
177+00

SILT FENCE, 186 LF
STA 180+55 - STA 182+46 RT

SI

SILT FENCE, 106 LF
STA 179+00 - STA 180+13 RT

SI

BRIGHTSPEED
(TEL)

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 178+37 TO 180+13 RT
STA 180+65 TO 182+41 RT

R/W

N

EROSION CONTROL LEGEND

- SALVAGED TOPSOIL, SEEDING MIX NO. 20, SEED TEMP, FERTILIZER TYPE B, SEED WATER, EROSION MAT URBAN CLASS 1 TYPE B
- SILT FENCE
- SURFACE WATER FLOW

LHE FOR
DRAINAGE
(APPROXIMATE)

RIP RAP

SILT FENCE, 178 LF
STA 375+57 - STA 377+11 LT

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 373+11 TO 374+83 LT
STA 375+37 TO 377+06 LT

SI

SILT FENCE, 250 LF
STA 373+06 - STA 374+93 LT

PI: 371+60.39

PI: 374+21.16

RICHLAND / GRANT
TELEPHONE COOP
(TEL)

PC: 377+21.09

PT: 379+60.77

PC: 380+75.08

PT: 383+49.18

R/W

STH 171

369+00
370+00
371+00
372+00
373+00
374+00
375+00
376+00
377+00
378+00
379+00
380+00
381+00
382+00
383+00

OH

GUY

SILT FENCE, 185 LF
STA 373+32 - STA 375+17 RT

SILT FENCE, 185 LF
STA 375+53 - STA 377+37 RT

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 373+37 TO 375+07 RT
STA 375+63 TO 375+32 RT

N

EROSION CONTROL LEGEND

- SALVAGED TOPSOIL, SEEDING MIX NO. 20, SEED TEMP, FERTILIZER TYPE B, SEED WATER, EROSION MAT URBAN CLASS 1 TYPE B
- SILT FENCE
- SURFACE WATER FLOW

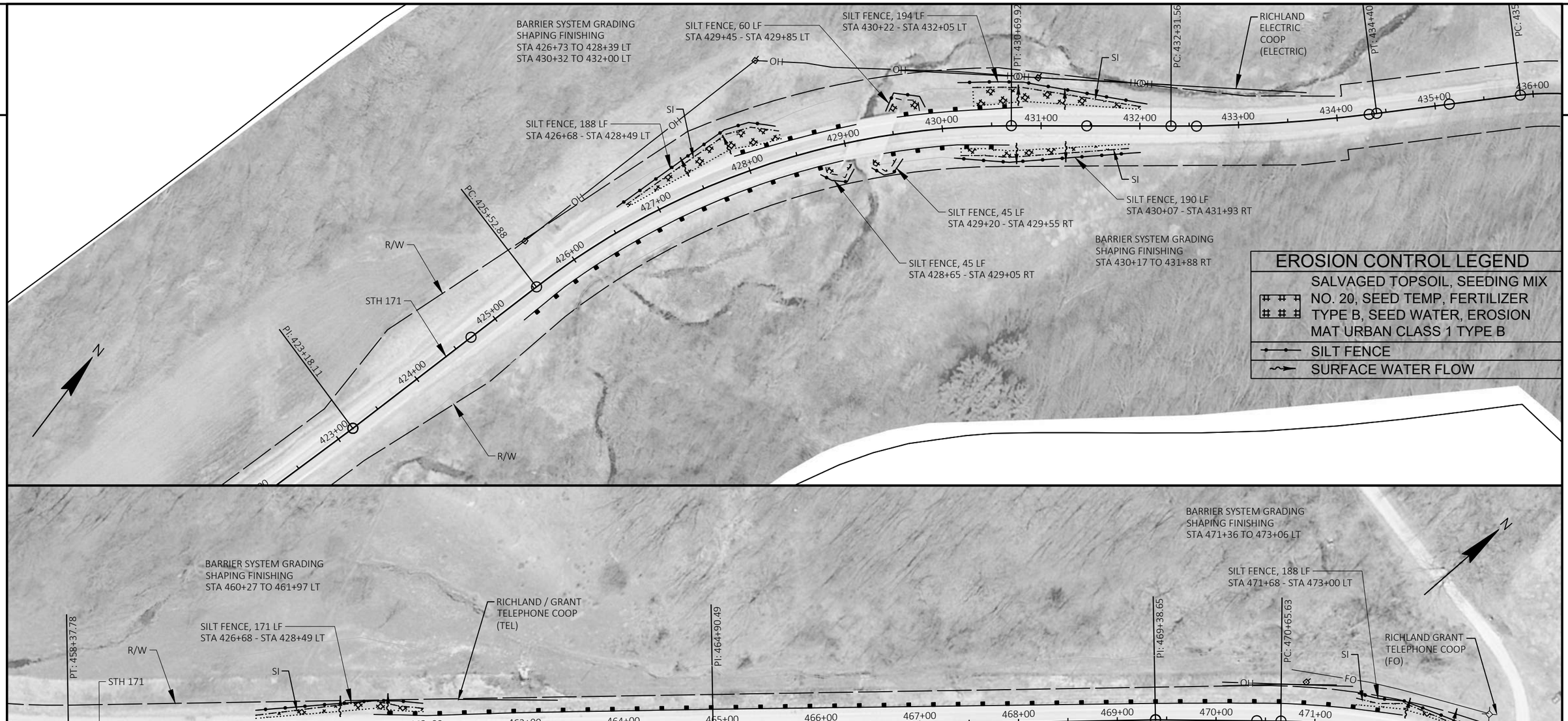
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	EROSION CONTROL	SHEET 13	E

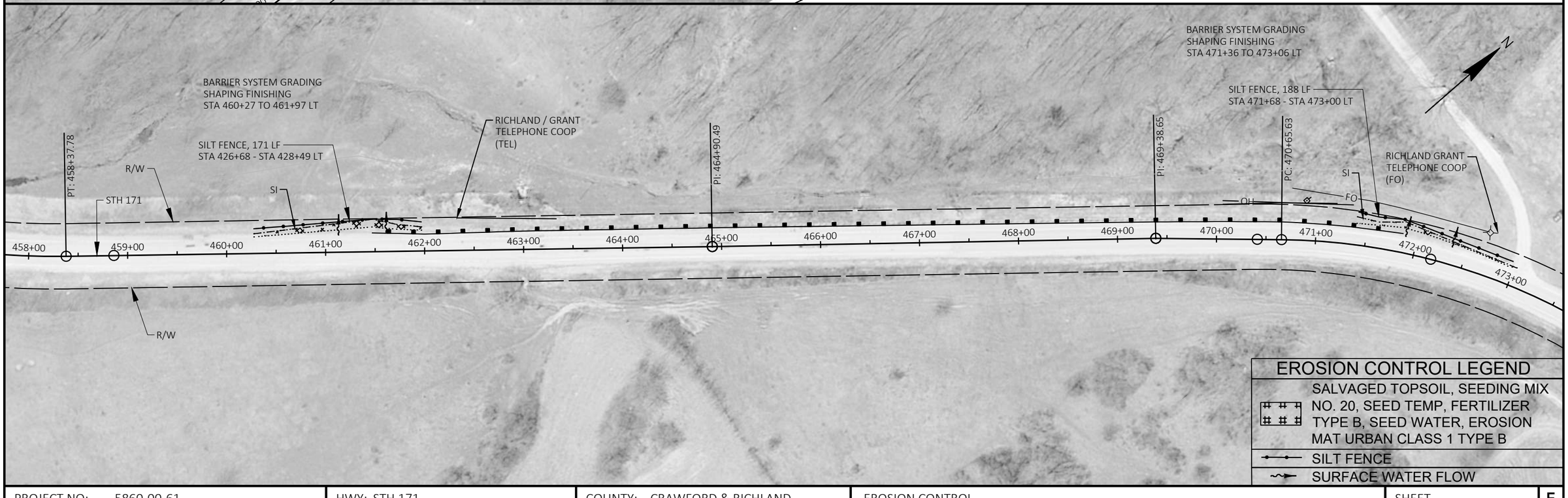
FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 37

PLOT DATE : 9/6/2023 9:12 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

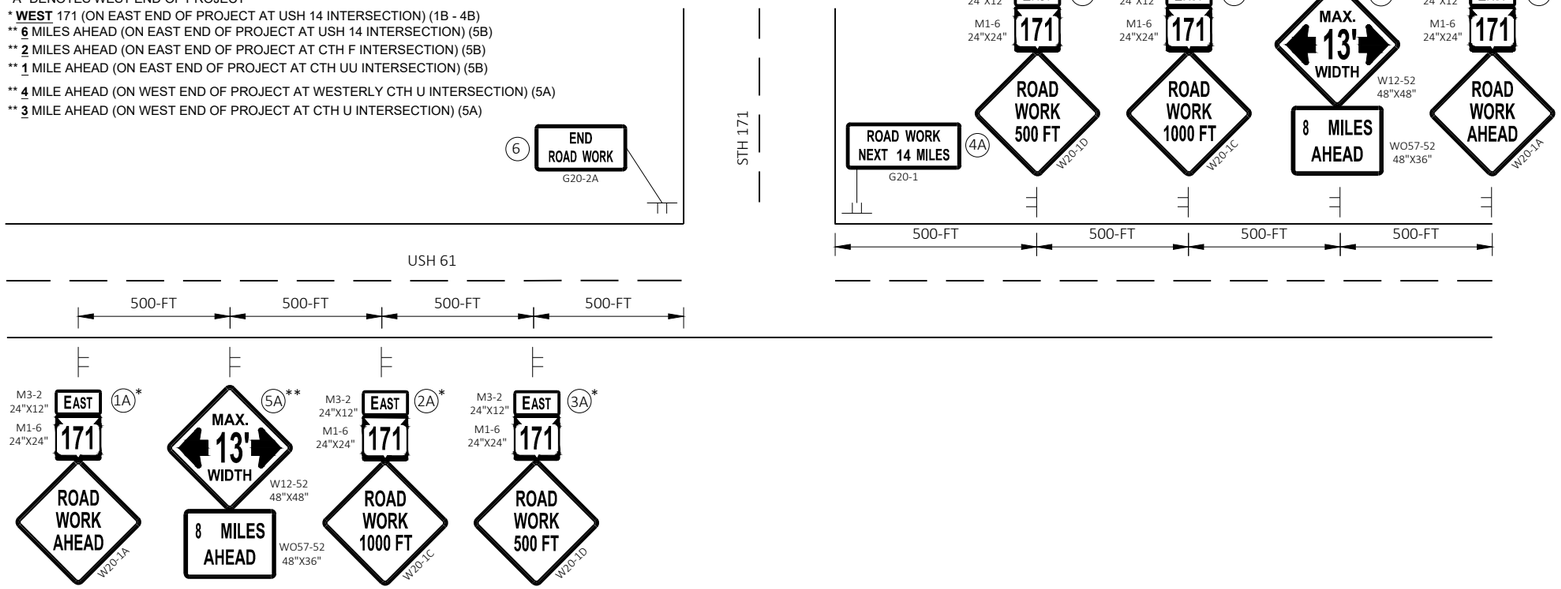
2





PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	EROSION CONTROL	SHEET 14	E

"A" DENOTES WEST END OF PROJECT
* **WEST** 171 (ON EAST END OF PROJECT AT USH 14 INTERSECTION) (1B - 4B)
** 6 MILES AHEAD (ON EAST END OF PROJECT AT USH 14 INTERSECTION) (5B)
** 2 MILES AHEAD (ON EAST END OF PROJECT AT CTH F INTERSECTION) (5B)
** 1 MILE AHEAD (ON EAST END OF PROJECT AT CTH UU INTERSECTION) (5B)
** 4 MILE AHEAD (ON WEST END OF PROJECT AT WESTERLY CTH U INTERSECTION) (5A)
** 3 MILE AHEAD (ON WEST END OF PROJECT AT CTH U INTERSECTION) (5A)



MODIFIED MAINLINE WORK ZONE SIGNING DETAIL USH 61 / STH 171 AND USH 14 / STH 171 INTERSECTIONS

TRAFFIC CONTROL ADVANCED WARNING SIGNS 45 MPH
(SEE SDD 15C04)

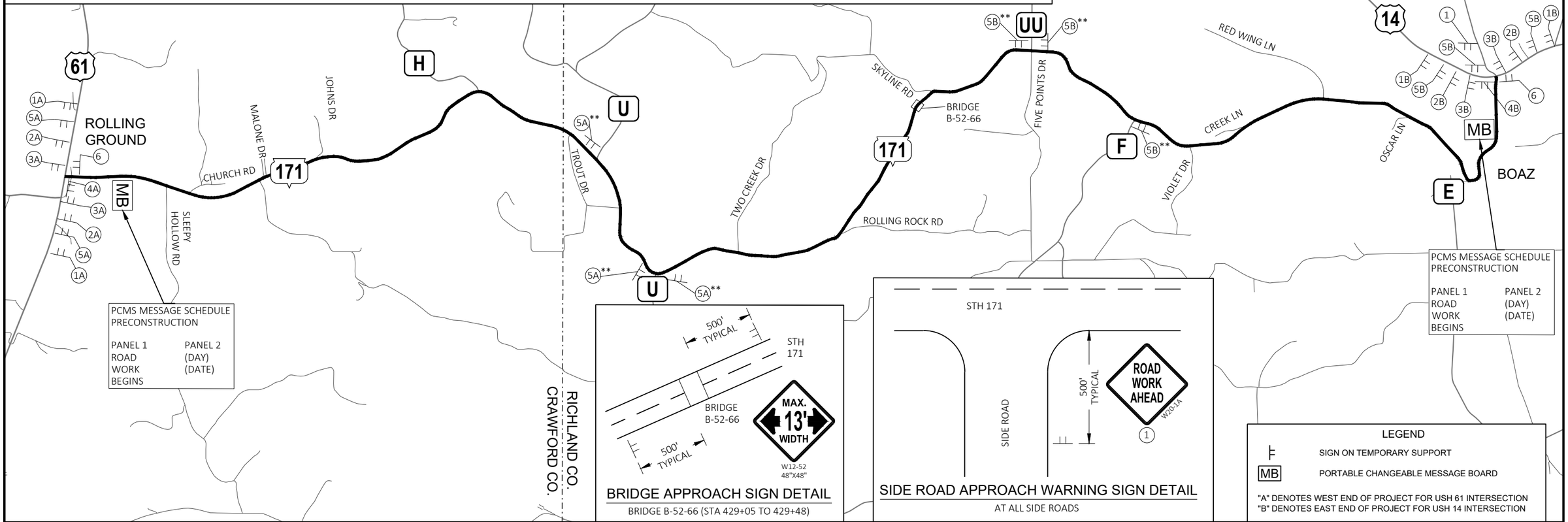
TRAFFIC CONTROL, DROP OFF SIGNING
(SEE SDD 15D39)

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
(SEE SDD 15C12)

LONGITUDINAL MARKING (MAINLINE)
(SEE SDD 15C08)

PAVEMENT MARKING, INTERSECTIONS
(SEE SDD 15C35)

STOP LINE AND CROSSWALK PAVEMENT MARKING
(SEE SDD 15C33-04)



BRIDGE APPROACH SIGN DETAIL
BRIDGE B-52-66 (STA 429+05 TO 429+48)

SIDE ROAD APPROACH WARNING SIGN DETAIL
AT ALL SIDE ROADS

LEGEND
SIGN ON TEMPORARY SUPPORT
MB PORTABLE CHANGEABLE MESSAGE BOARD
"A" DENOTES WEST END OF PROJECT FOR USH 61 INTERSECTION
"B" DENOTES EAST END OF PROJECT FOR USH 14 INTERSECTION

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	TRAFFIC CONTROL AND PAVEMENT MARKINGS	SHEET 15	E

2

N

ASPHALTIC SHOULDER PAVING WIDENING
STA: 430+82

STA: 430+96

ASPHALTIC SHOULDER PAVING WIDENING
STA: 430+68

STA: 430+46

MATCH EXISTING ASPHALT EDGE

CONCRETE BARRIER TEMPORARY PRECAST

STA: 429+50

MATCH EXISTING ASPHALT EDGE

MATCH EXISTING ASPHALT EDGE

BRIDGE B-52-66

WORK AREA

STA: 429+04

MATCH EXISTING ASPHALT EDGE

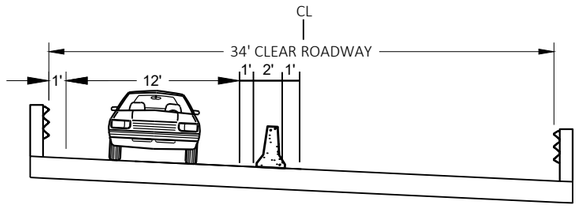
ASPHALTIC SHOULDER PAVING WIDENING
STA: 427+90

STA: 428+08

STA: 427+58

PC: 425+52.88

ASPHALTIC SHOULDER PAVING WIDENING
STA: 425+22



TRAFFIC CONTROL TYPICAL SECTION
ON BRIDGE DECK B-52-66

UTILIZE S.D.D. TRAFFIC CONTROL, ONE LANE STOP CONDITION
FOR ALL TRAFFIC CONTROL RELATED DETAILS

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	TRAFFIC CONTROL AND SHOULDER PAVING AT BRIDGE B-52-66 - WESTBOUND	SHEET 16	E

2

N

ASPHALTIC SHOULDER PAVING WIDENING
STA: 430+82

STA: 430+96

ASPHALTIC SHOULDER PAVING WIDENING
STA: 430+68

MATCH EXISTING ASPHALT EDGE

STA: 430+46

BRIDGE B-52-66

STA: 429+50

MATCH EXISTING ASPHALT EDGE

MATCH EXISTING ASPHALT EDGE

CONCRETE BARRIER TEMPORARY PRECAST

WORK AREA

STA: 429+04

MATCH EXISTING ASPHALT EDGE

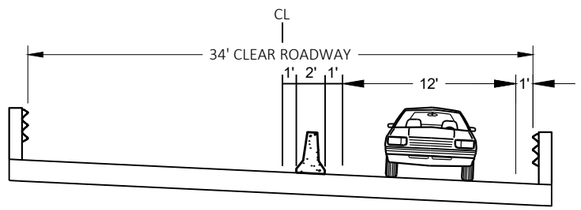
ASPHALTIC SHOULDER PAVING WIDENING
STA: 427+90

STA: 428+08

STA: 427+58

PC: 425+52.88

ASPHALTIC SHOULDER PAVING WIDENING
STA: 425+22



TRAFFIC CONTROL TYPICAL SECTION
ON BRIDGE DECK B-52-66

UTILIZE S.D.D. TRAFFIC CONTROL, ONE LANE STOP CONDITION
FOR ALL TRAFFIC CONTROL RELATED DETAILS

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	TRAFFIC CONTROL AND SHOULDER PAVING AT BRIDGE B-52-66 - EASTBOUND	SHEET 17	E

2

2

61

ROLLING GROUND

CHURCH RD

MALONE DR

JOHNS DR

171

SLEEPY HOLLOW RD

H

CP 915

CP 913

CP 914

CP 916

U

TROUT DR

RICHLAND CO.

CRAWFORD CO.

CP 910

CP 907

CP 912

CP 911

CP 909

CP 908

U

TWO CREEK DR

SKYLINE RD

CP 904

CP 903

171

CP 905

ROLLING ROCK RD

CP 906

UU

FIVE POINTS DR

F

VIOLET DR

RED WING LN

CREEK LN

OSCAR LN

14

CP 901

CP 902

BOAZ

E

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD AND RICHLAND	CONTROL POINT / BENCH MARK OVERVIEW	SHEET 18	E

FILE NAME : N:\PDS\C3D\58600031\SHEETSPLAN\027301-CP.DWG
LAYOUT NAME - 01

PLOT DATE : 1/24/2023 1:28 PM PLOT BY : BLUM, JOSHUA M PLOT NAME : PLOT SCALE : 1 IN:.75 mi

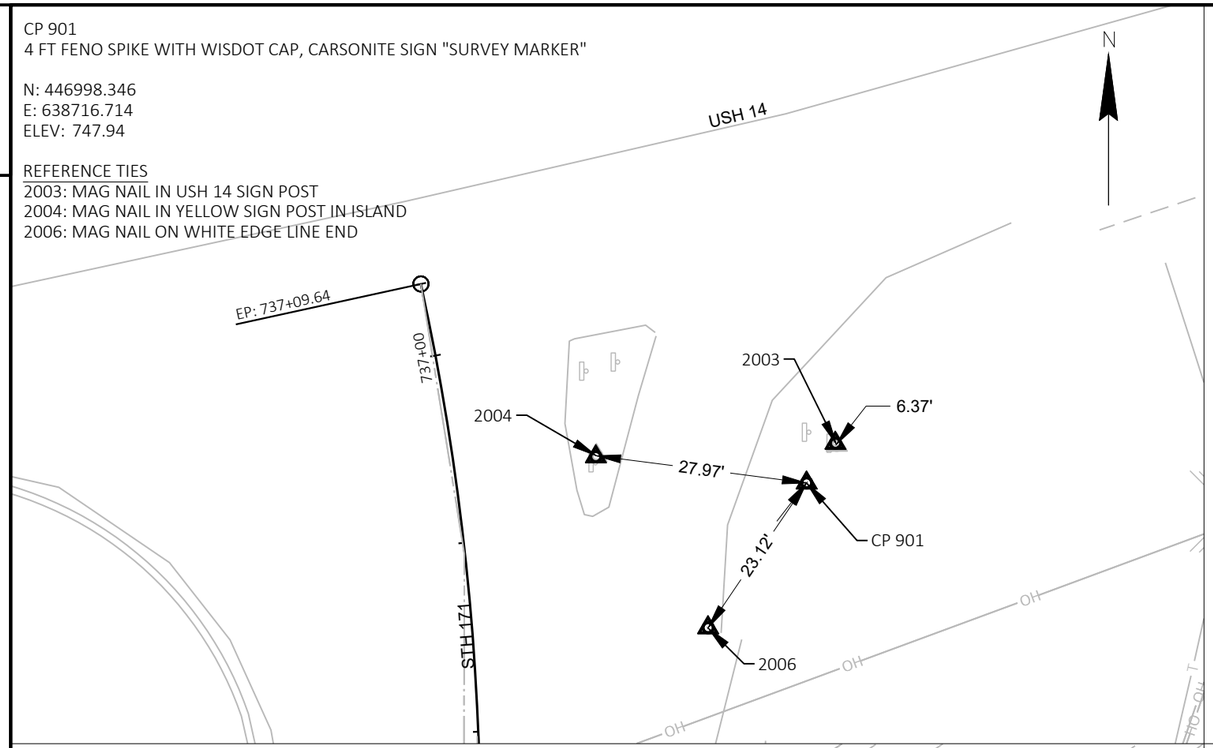
WISDOT/CADDS SHEET 42

2

CP 901
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 446998.346
E: 638716.714
ELEV: 747.94

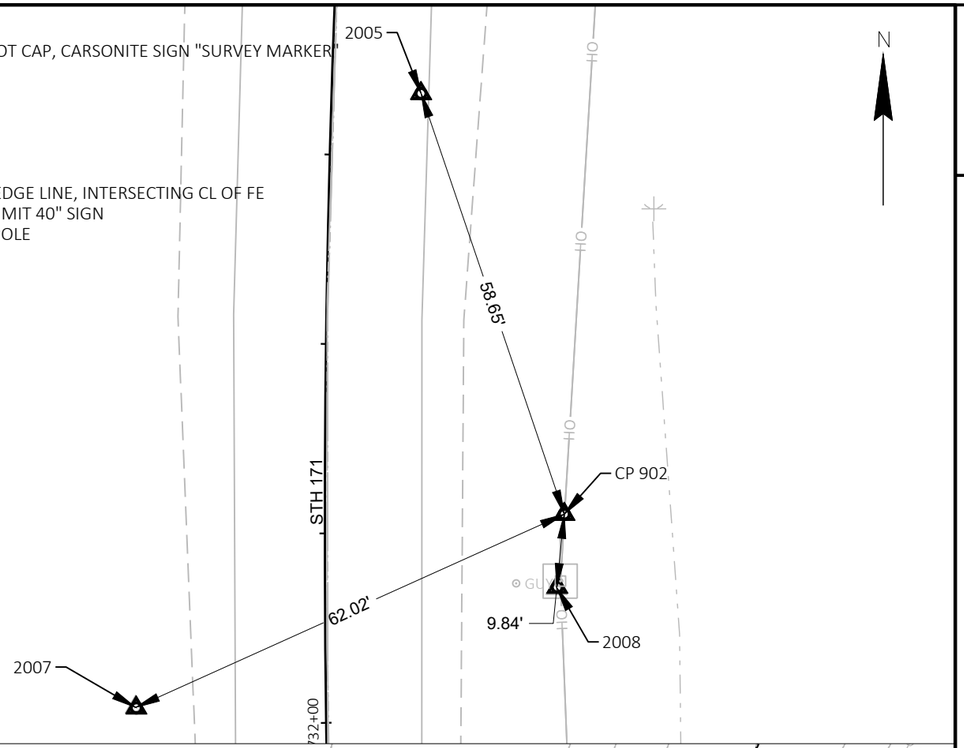
REFERENCE TIES
2003: MAG NAIL IN USH 14 SIGN POST
2004: MAG NAIL IN YELLOW SIGN POST IN ISLAND
2006: MAG NAIL ON WHITE EDGE LINE END



CP 902
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 4446544.659
E: 638672.489
ELEV: 742.02

REFERENCE TIES
2005: MAG NAIL ON WHITE EDGE LINE, INTERSECTING CL OF FE
2007: MAG NAIL IN "SPEED LIMIT 40" SIGN
2008: MAG NAIL IN POWER POLE

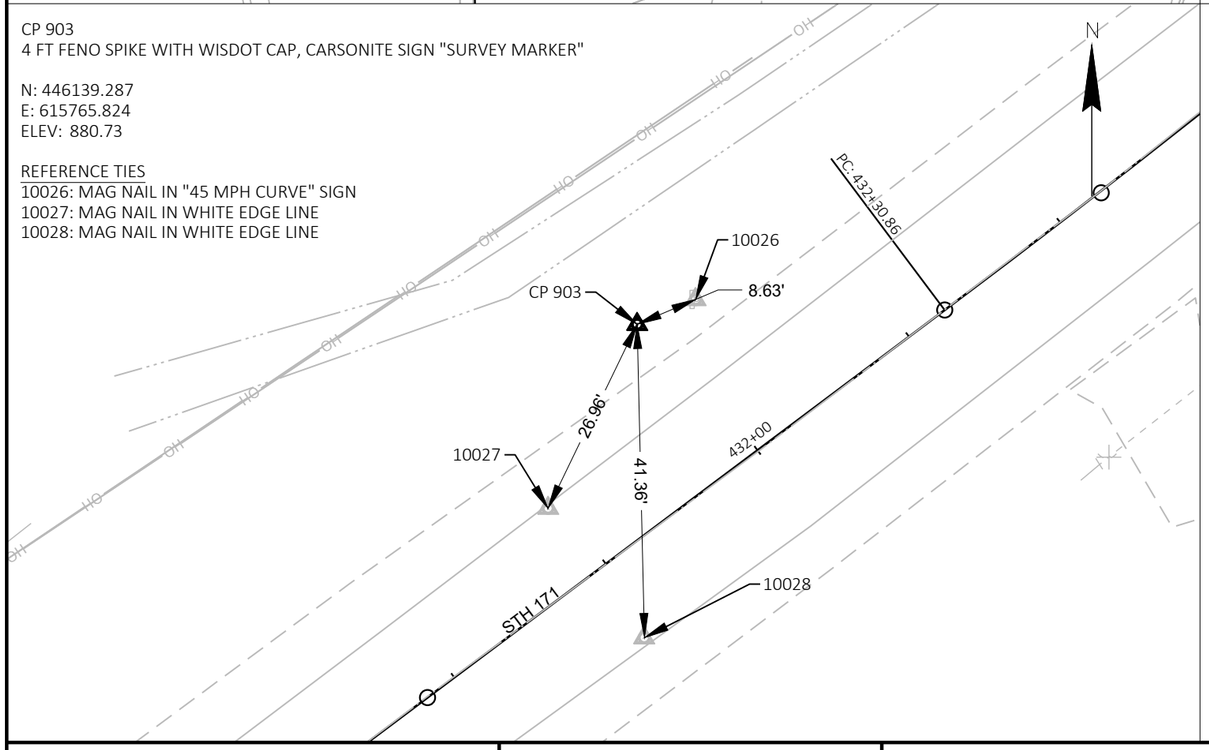


2

CP 903
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 446139.287
E: 615765.824
ELEV: 880.73

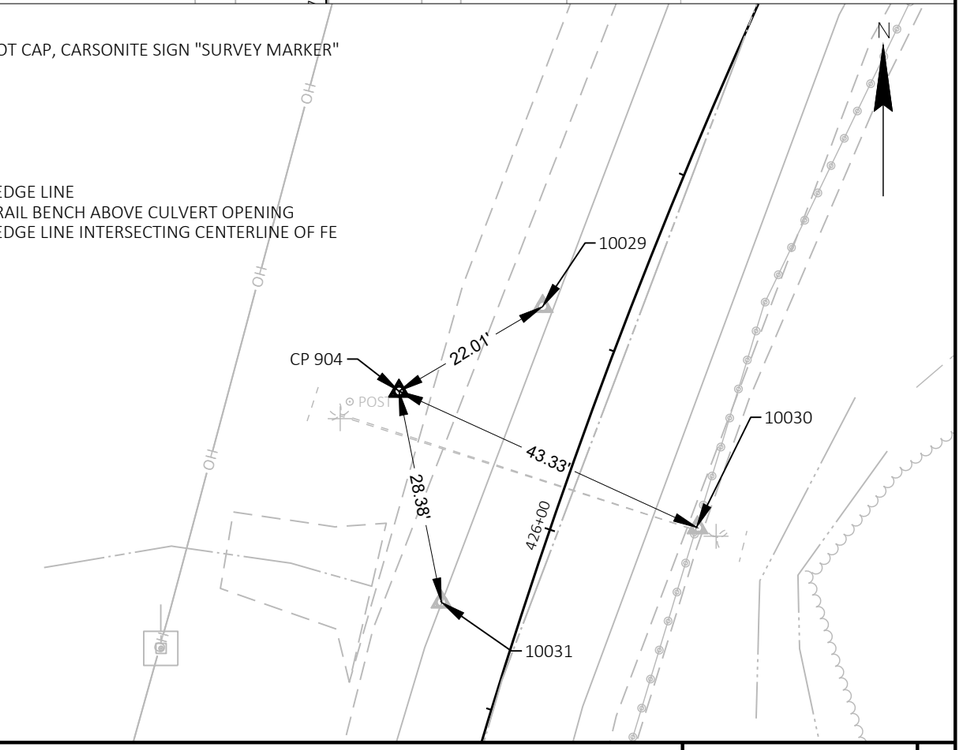
REFERENCE TIES
10026: MAG NAIL IN "45 MPH CURVE" SIGN
10027: MAG NAIL IN WHITE EDGE LINE
10028: MAG NAIL IN WHITE EDGE LINE



CP 904
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 445688.705
E: 615385.189
ELEV: 871.55

REFERENCE TIES
10029: MAG NAIL IN WHITE EDGE LINE
10030: MAG NAIL IN GUARDRAIL BENCH ABOVE CULVERT OPENING
10031: MAG NAIL IN WHITE EDGE LINE INTERSECTING CENTERLINE OF FE



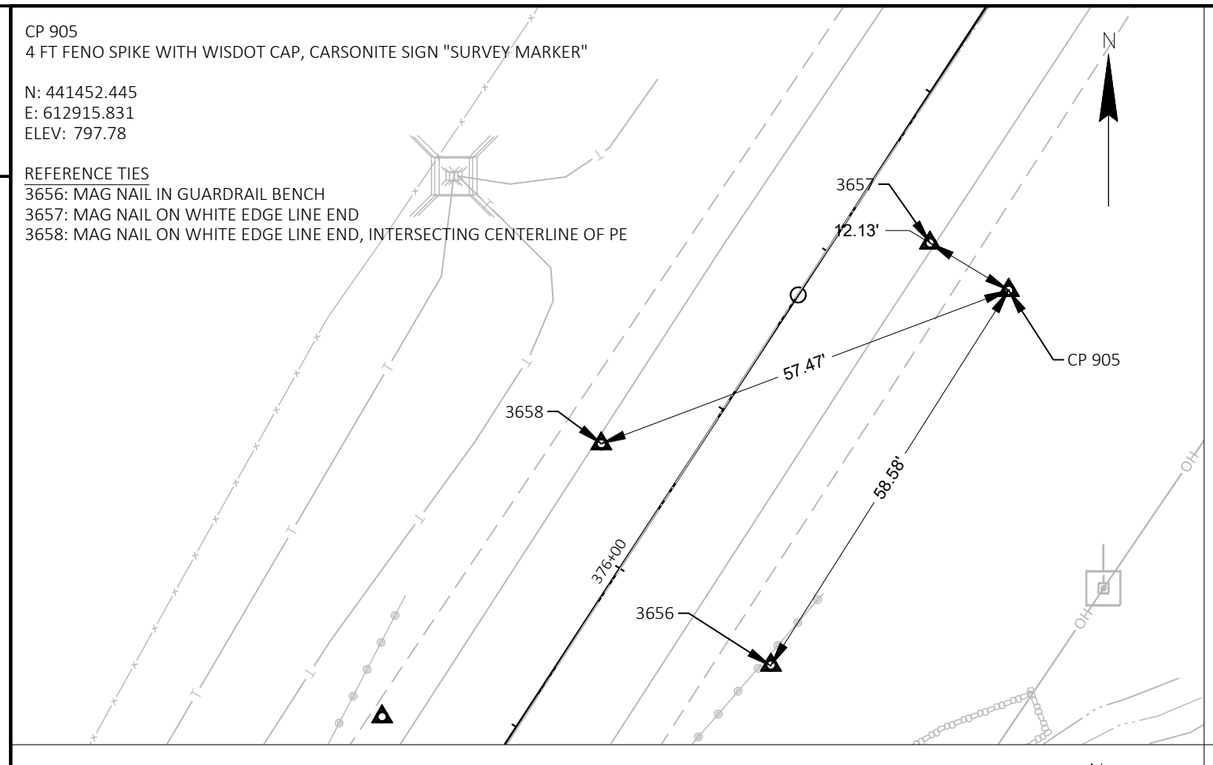
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD AND RICHLAND	CONTROL POINT TIES	SHEET 19	E

2

CP 905
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 441452.445
E: 612915.831
ELEV: 797.78

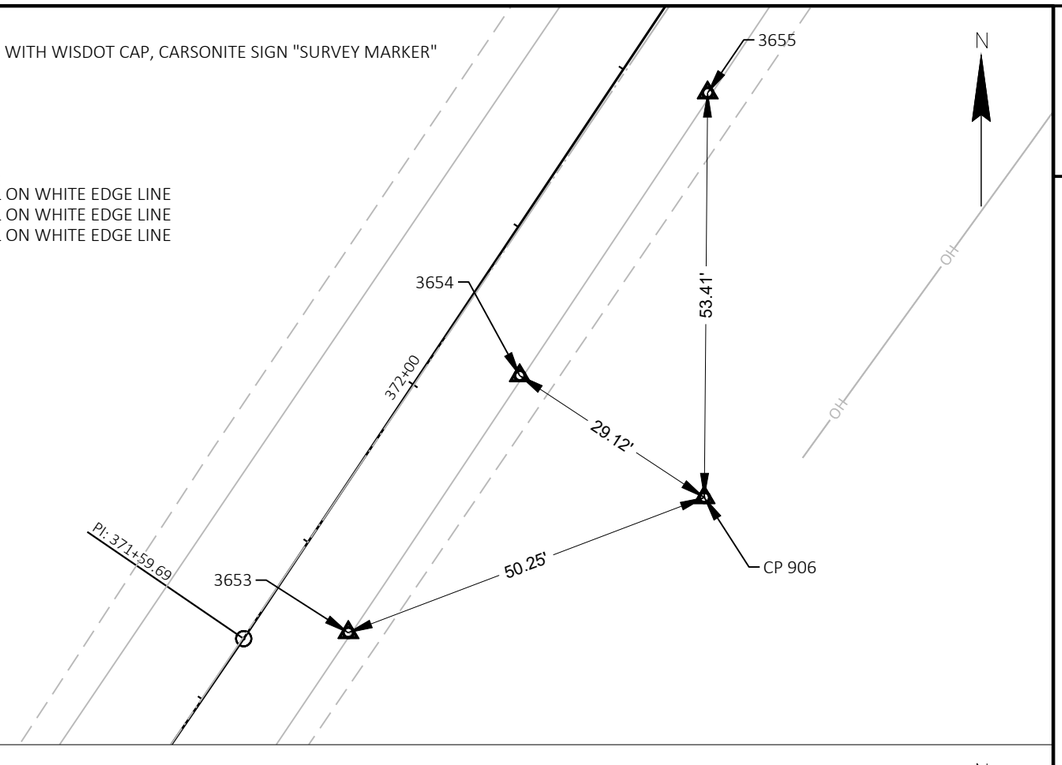
REFERENCE TIES
3656: MAG NAIL IN GUARDRAIL BENCH
3657: MAG NAIL ON WHITE EDGE LINE END
3658: MAG NAIL ON WHITE EDGE LINE END, INTERSECTING CENTERLINE OF PE



CP 906
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 441067.069
E: 612682.517
ELEV: 797.93

REFERENCE TIES
3653: MAG NAIL ON WHITE EDGE LINE
3654: MAG NAIL ON WHITE EDGE LINE
3655: MAG NAIL ON WHITE EDGE LINE

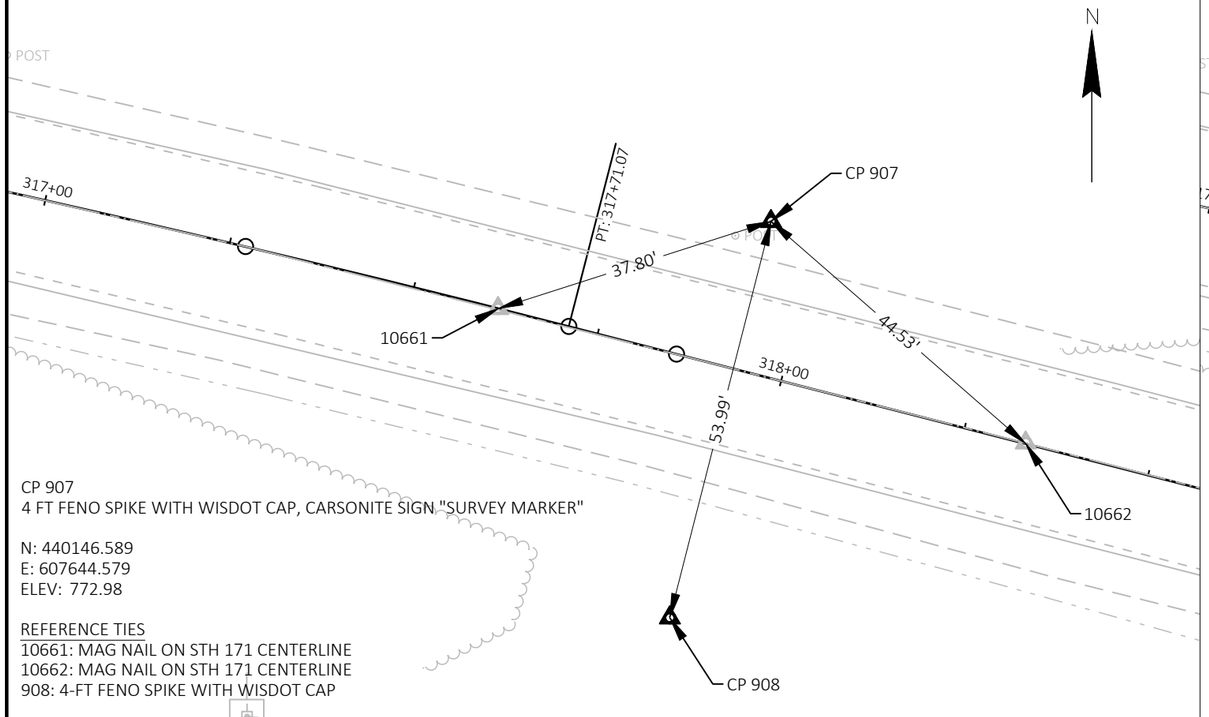


2

CP 907
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 440146.589
E: 607644.579
ELEV: 772.98

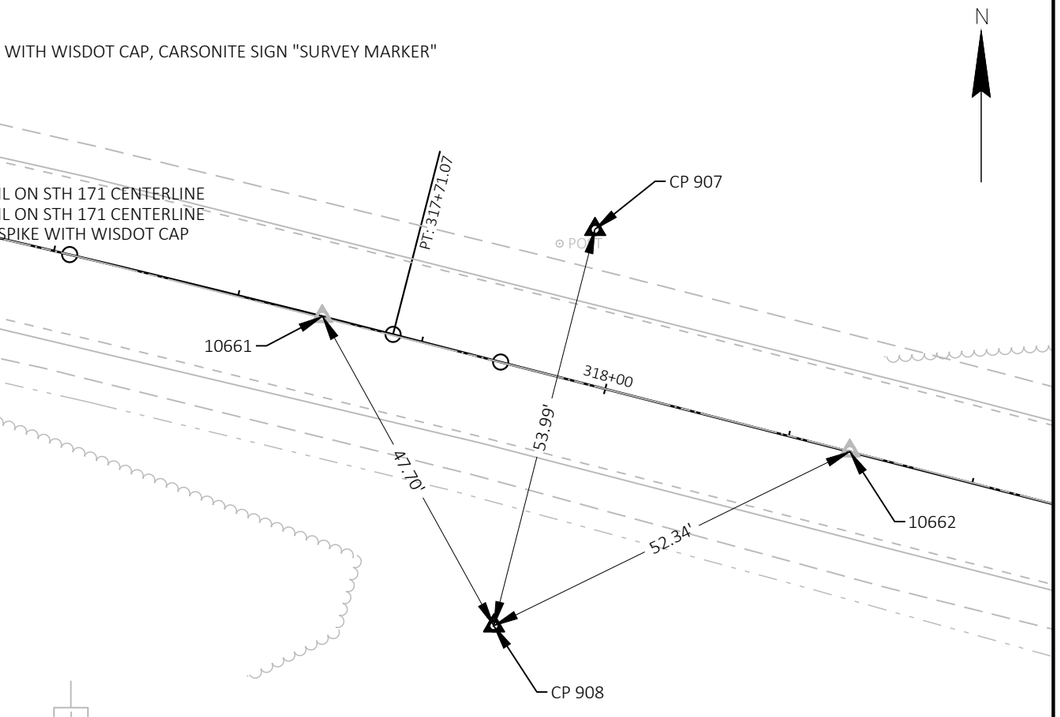
REFERENCE TIES
10661: MAG NAIL ON STH 171 CENTERLINE
10662: MAG NAIL ON STH 171 CENTERLINE
908: 4-FT FENO SPIKE WITH WISDOT CAP



CP 908
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 440094.282
E: 607631.220
ELEV: 782.22

REFERENCE TIES
10661: MAG NAIL ON STH 171 CENTERLINE
10662: MAG NAIL ON STH 171 CENTERLINE
907: 4-FT FENO SPIKE WITH WISDOT CAP



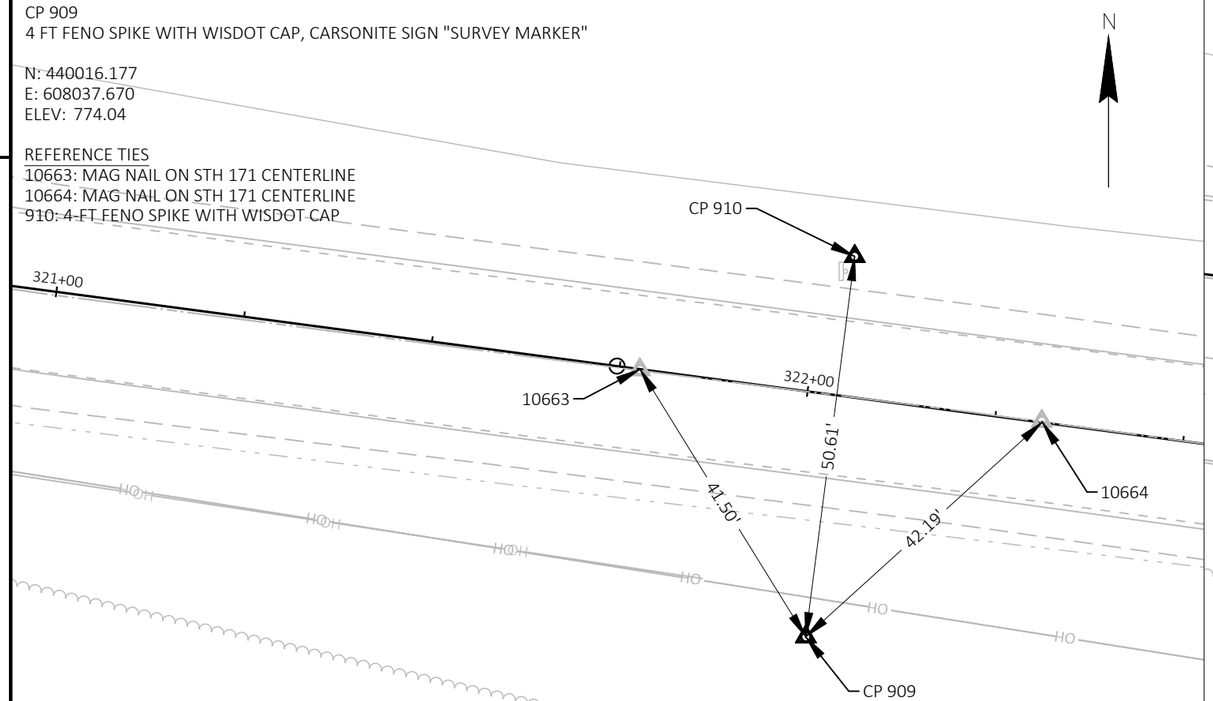
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD AND RICHLAND	CONTROL POINT TIES	SHEET 20	E

2

CP 909
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 440016.177
E: 608037.670
ELEV: 774.04

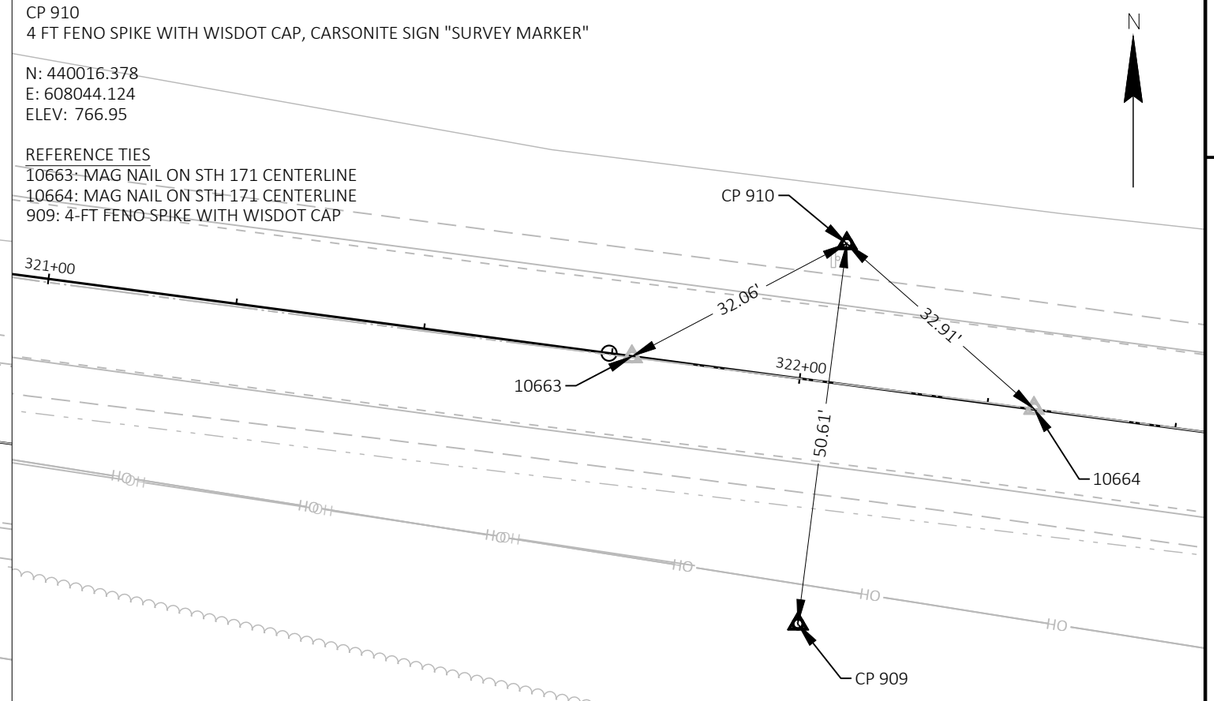
REFERENCE TIES
10663: MAG NAIL ON STH 171 CENTERLINE
10664: MAG NAIL ON STH 171 CENTERLINE
910: 4-FT FENO SPIKE WITH WISDOT CAP



CP 910
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 440016.378
E: 608044.124
ELEV: 766.95

REFERENCE TIES
10663: MAG NAIL ON STH 171 CENTERLINE
10664: MAG NAIL ON STH 171 CENTERLINE
909: 4-FT FENO SPIKE WITH WISDOT CAP

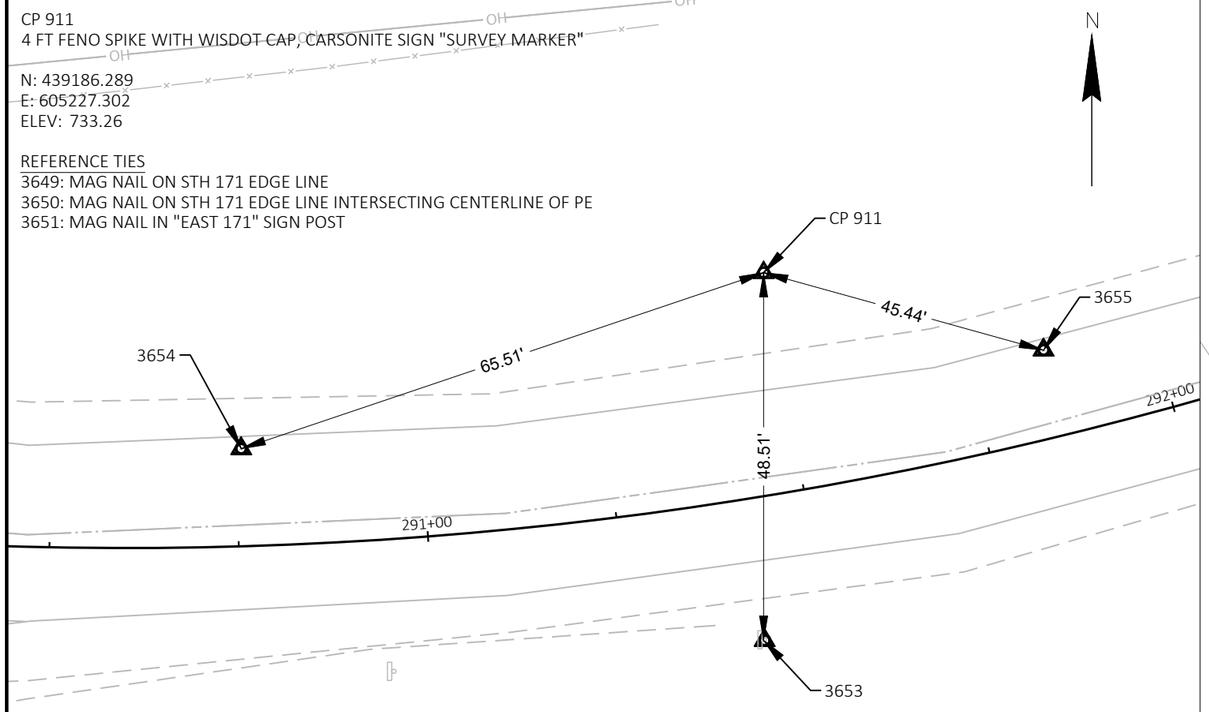


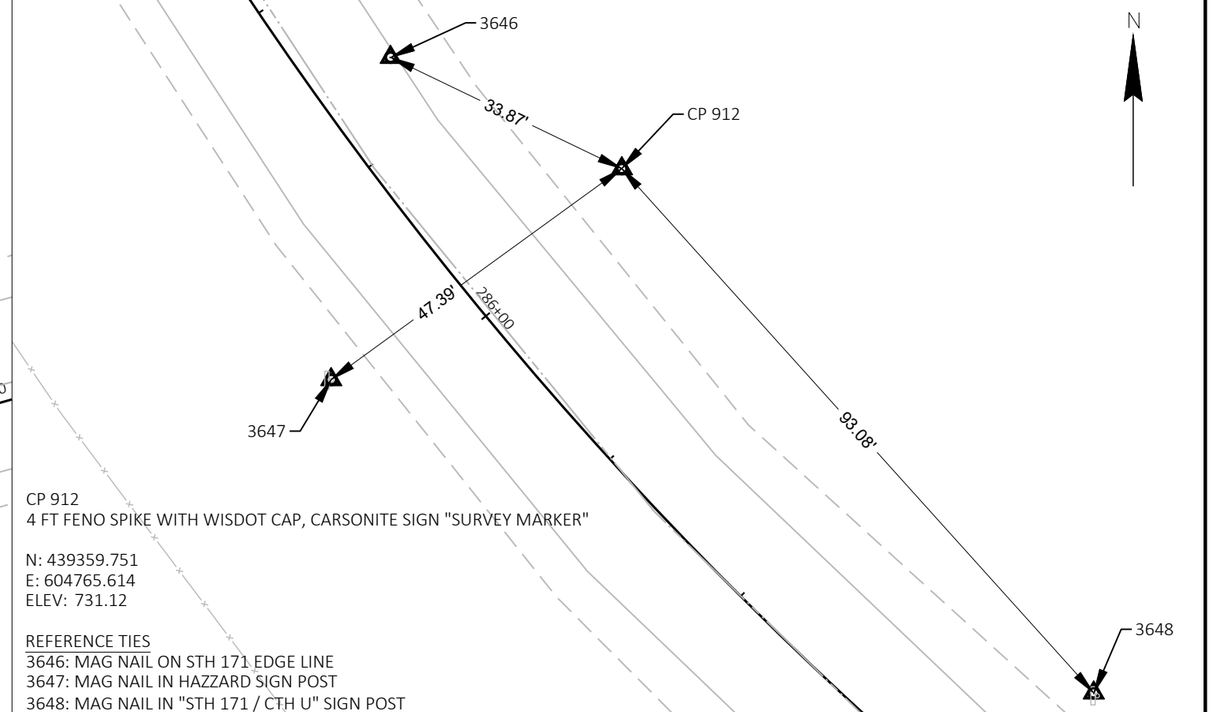
2

CP 911
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 439186.289
E: 605227.302
ELEV: 733.26

REFERENCE TIES
3649: MAG NAIL ON STH 171 EDGE LINE
3650: MAG NAIL ON STH 171 EDGE LINE INTERSECTING CENTERLINE OF PE
3651: MAG NAIL IN "EAST 171" SIGN POST





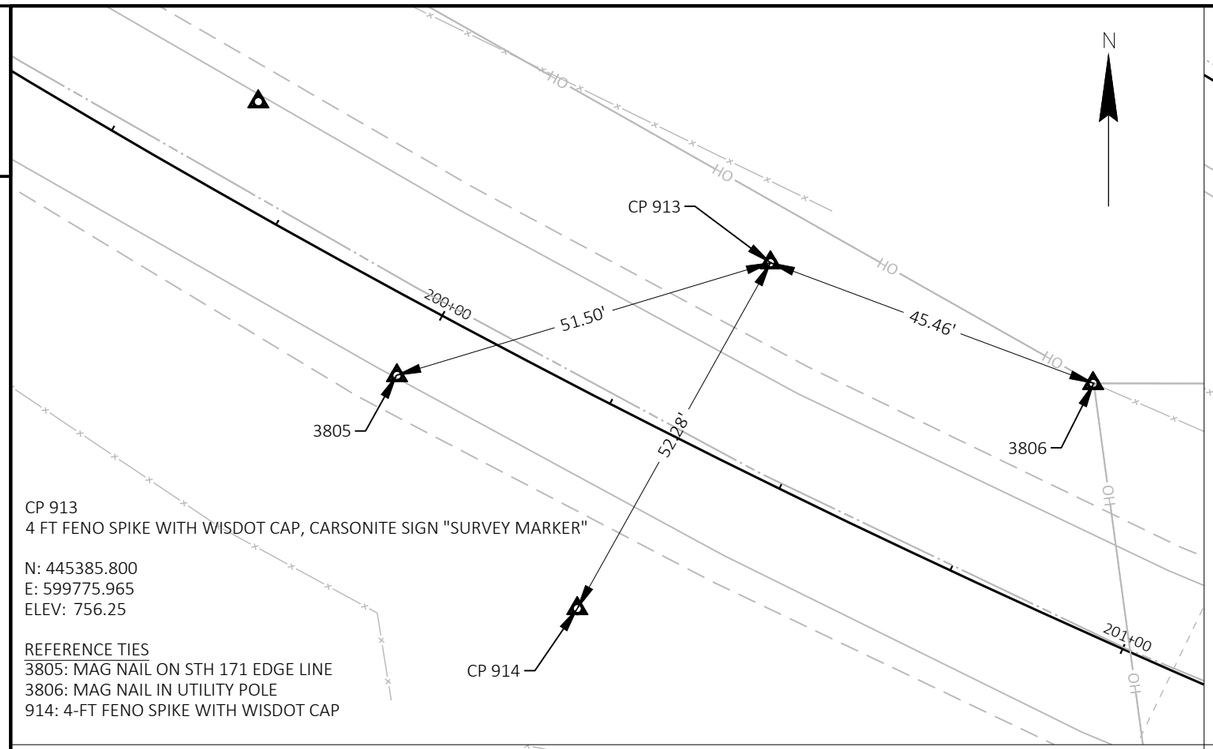
CP 912
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 439359.751
E: 604765.614
ELEV: 731.12

REFERENCE TIES
3646: MAG NAIL ON STH 171 EDGE LINE
3647: MAG NAIL IN HAZZARD SIGN POST
3648: MAG NAIL IN "STH 171 / CTH U" SIGN POST

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD AND RICHLAND	CONTROL POINT TIES	SHEET 21	E

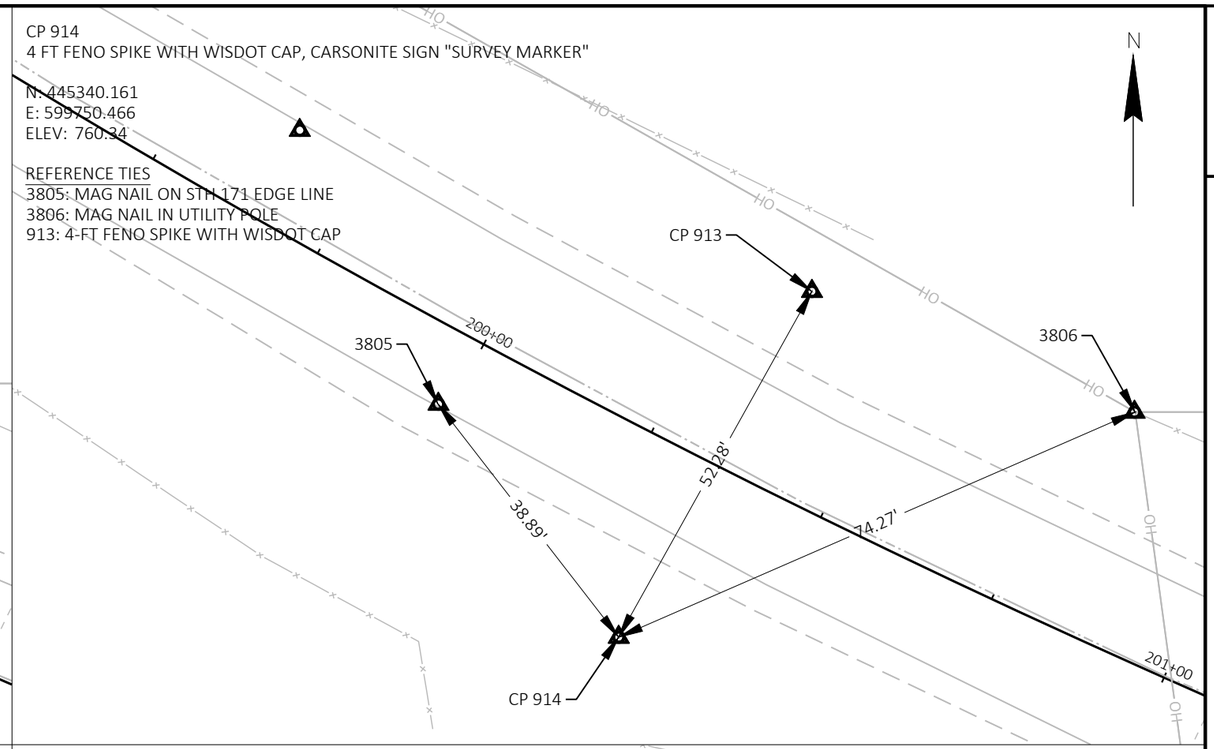
FILE NAME : N:\PDS\C3D\58600031\SHEETSPLAN\027303-CP.DWG
LAYOUT NAME - 03
PLOT DATE : 1/24/2023 1:29 PM
PLOT BY : BLUM, JOSHUA M
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42



CP 913
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 445385.800
E: 599775.965
ELEV: 756.25

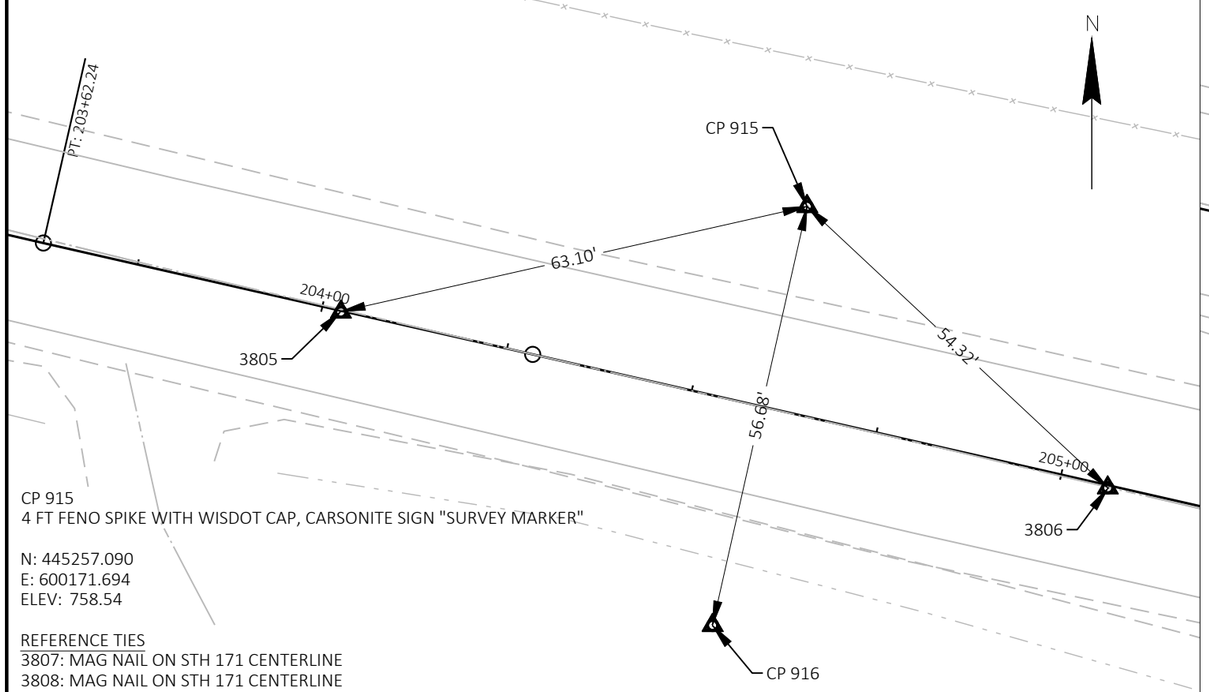
REFERENCE TIES
3805: MAG NAIL ON STH 171 EDGE LINE
3806: MAG NAIL IN UTILITY POLE
914: 4-FT FENO SPIKE WITH WISDOT CAP



CP 914
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 445340.161
E: 599750.466
ELEV: 760.34

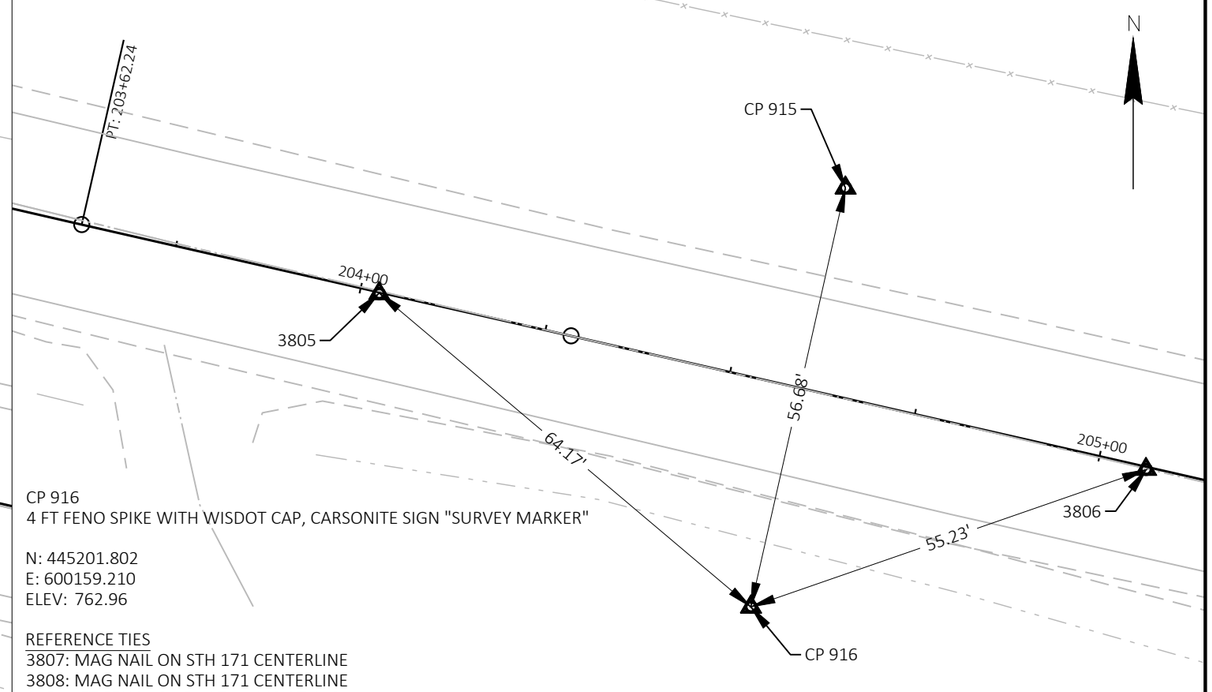
REFERENCE TIES
3805: MAG NAIL ON STH 171 EDGE LINE
3806: MAG NAIL IN UTILITY POLE
913: 4-FT FENO SPIKE WITH WISDOT CAP



CP 915
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 445257.090
E: 600171.694
ELEV: 758.54

REFERENCE TIES
3807: MAG NAIL ON STH 171 CENTERLINE
3808: MAG NAIL ON STH 171 CENTERLINE
916: 4-FT FENO SPIKE WITH WISDOT CAP



CP 916
4 FT FENO SPIKE WITH WISDOT CAP, CARSONITE SIGN "SURVEY MARKER"

N: 445201.802
E: 600159.210
ELEV: 762.96

REFERENCE TIES
3807: MAG NAIL ON STH 171 CENTERLINE
3808: MAG NAIL ON STH 171 CENTERLINE
915: 4-FT FENO SPIKE WITH WISDOT CAP

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD AND RICHLAND	CONTROL POINT TIES	SHEET 22	E

Estimate Of Quantities

5860-00-61

Line	Item	Item Description	Unit	Total	Qty
0002	203.0220	Removing Structure (structure) 01. B-52-66	EACH	1.000	1.000
0004	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-52-51	EACH	1.000	1.000
0006	204.0100	Removing Concrete Pavement	SY	86.000	86.000
0008	204.0110	Removing Asphaltic Surface	SY	44.000	44.000
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,177.000	1,177.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	9,579.000	9,579.000
0014	204.0165	Removing Guardrail	LF	6,692.000	6,692.000
0016	206.1001	Excavation for Structures Bridges (structure) 01. B-52-66	EACH	1.000	1.000
0018	206.2001	Excavation for Structures Culverts (structure) 01. B-52-51	EACH	1.000	1.000
0020	210.1500	Backfill Structure Type A	TON	60.000	60.000
0022	210.2500	Backfill Structure Type B	TON	55.000	55.000
0024	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 5860-00-61	EACH	1.000	1.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	31.000	31.000
0028	213.0100	Finishing Roadway (project) 01. 5860-00-61	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	11,232.000	11,232.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	448.000	448.000
0034	450.4000	HMA Cold Weather Paving	TON	4,169.000	4,169.000
0036	455.0605	Tack Coat	GAL	22,257.000	22,257.000
0038	460.2000	Incentive Density HMA Pavement	DOL	13,970.000	13,970.000
0040	460.5225	HMA Pavement 5 LT 58-28 S	TON	22,008.000	22,008.000
0042	465.0110	Asphaltic Surface Patching	TON	41.000	41.000
0044	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	90.000	90.000
0046	465.0580	Asphaltic Rumble Strips, Transverse	SY	72.000	72.000
0048	502.0100	Concrete Masonry Bridges	CY	22.000	22.000
0050	502.3200	Protective Surface Treatment	SY	245.000	245.000
0052	502.4205	Adhesive Anchors No. 5 Bar	EACH	51.000	51.000
0054	502.4207	Adhesive Anchors No. 7 Bar	EACH	6.000	6.000
0056	502.4208	Adhesive Anchors No. 8 Bar	EACH	2.000	2.000
0058	504.0100	Concrete Masonry Culverts	CY	8.600	8.600
0060	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	2,335.000	2,335.000
0062	509.0301	Preparation Decks Type 1	SY	51.000	51.000
0064	509.0302	Preparation Decks Type 2	SY	26.000	26.000
0066	509.0500	Cleaning Decks	SY	171.000	171.000
0068	509.1500	Concrete Surface Repair	SF	310.000	310.000
0070	509.2000	Full-Depth Deck Repair	SY	4.000	4.000
0072	509.2500	Concrete Masonry Overlay Decks	CY	11.000	11.000
0074	511.1100	Temporary Shoring	SF	525.000	525.000
0076	511.1200	Temporary Shoring (structure) 01. B-52-66	SF	336.000	336.000
0078	516.0500	Rubberized Membrane Waterproofing	SY	8.000	8.000
0080	603.8000	Concrete Barrier Temporary Precast Delivered	LF	242.000	242.000
0082	603.8125	Concrete Barrier Temporary Precast Installed	LF	242.000	242.000
0084	606.0300	Riprap Heavy	CY	48.000	48.000
0086	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	60.000	60.000
0088	614.0010	Barrier System Grading Shaping Finishing	EACH	21.000	21.000
0090	614.0200	Steel Thrie Beam Structure Approach	LF	21.000	21.000
0092	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	1.000	1.000
0094	614.0397	Guardrail Mow Strip Emulsified Asphalt	SY	212.000	212.000
0096	614.2300	MGS Guardrail 3	LF	4,342.000	4,342.000
0098	614.2330	MGS Guardrail 3 K	LF	500.000	500.000
0100	614.2500	MGS Thrie Beam Transition	LF	500.000	500.000

Estimate Of Quantities

5860-00-61

Line	Item	Item Description	Unit	Total	Qty
0102	614.2610	MGS Guardrail Terminal EAT	EACH	33.000	33.000
0104	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5860-00-61	EACH	1.000	1.000
0106	619.1000	Mobilization	EACH	1.000	1.000
0108	624.0100	Water	MGAL	165.000	165.000
0110	628.1504	Silt Fence	LF	4,810.000	4,810.000
0112	628.1520	Silt Fence Maintenance	LF	4,810.000	4,810.000
0114	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0116	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0118	638.2102	Moving Signs Type II	EACH	12.000	12.000
0120	642.5001	Field Office Type B	EACH	1.000	1.000
0122	643.0300	Traffic Control Drums	DAY	22,624.000	22,624.000
0124	643.0420	Traffic Control Barricades Type III	DAY	56.000	56.000
0126	643.0900	Traffic Control Signs	DAY	6,004.000	6,004.000
0128	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0130	643.3165	Temporary Marking Line Paint 6-Inch	LF	146,307.000	146,307.000
0132	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	44.000	44.000
0134	643.5000	Traffic Control	EACH	1.000	1.000
0136	645.0111	Geotextile Type DF Schedule A	SY	21.000	21.000
0138	645.0120	Geotextile Type HR	SY	106.000	106.000
0140	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	287,925.000	287,925.000
0142	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	143,516.000	143,516.000
0144	648.0100	Locating No-Passing Zones	MI	13.700	13.700
0146	650.6501	Construction Staking Structure Layout (structure) 01. Box Culvert B-52-51	EACH	1.000	1.000
0148	650.6501	Construction Staking Structure Layout (structure) 02. Bridge B-52-66	EACH	1.000	1.000
0150	650.8000	Construction Staking Resurfacing Reference	LF	73,545.000	73,545.000
0152	650.9911	Construction Staking Supplemental Control (project) 01. 5860-00-61	EACH	1.000	1.000
0154	690.0150	Sawing Asphalt	LF	170.000	170.000
0156	690.0250	Sawing Concrete	LF	40.000	40.000
0158	715.0502	Incentive Strength Concrete Structures	DOL	1,000.000	1,000.000
0160	740.0440	Incentive IRI Ride	DOL	56,000.000	56,000.000
0162	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	550.000	550.000
0164	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	450.000	450.000
0166	SPV.0060	Special 01. Cleaning Box Culvert B-52-51	EACH	1.000	1.000
0168	SPV.0060	Special 02. Research and Locate Existing Land Parcel Monuments	EACH	1.000	1.000
0170	SPV.0060	Special 03. Verify and Replace Existing Land Parcel Monuments	EACH	1.000	1.000
0172	SPV.0060	Special 04. Finishing for Structures	EACH	4.000	4.000
0174	SPV.0090	Special 01. Flashing Stainless Steel	LF	175.000	175.000
0176	SPV.0090	Special 02. Steel Railing Type W Retrofit	LF	86.000	86.000

3

204-REMOVING CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	REMARKS
0010	9+23	-	9+48	LT	34	EXISTING CONCRETE RUMBLE STRIP
	14+12	-	14+37	LT	34	EXISTING CONCRETE RUMBLE STRIP
	674+60			LT	9	PE
	675+60			LT	9	PE
				TOTAL 0010	86	

211-PREPARE FOUNDATION

CATEGORY	STATION	TO	STATION	LOCATION	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	REMARKS
0010	90+95	-	92+25	RT	2	GUARDRAIL (EXTENSION)
	179+59	-	181+19	RT	2	GUARDRAIL AT BOX CULVERT C-12-23 (EXISTING CBAC SHOULDER)
	374+57	-	376+13	RT	2	GUARDRAIL AT BOX CULVERT B-52-51 (EXISTING CBAC SHOULDER)
	425+22	-	428+95	RT	4	GUARDRAIL AT BRIDGE B-52-66 (EXISTING CBAC SHOULDER)
	429+37	-	430+68	RT	2	GUARDRAIL AT BRIDGE B-52-66 (EXISTING CBAC SHOULDER)
	179+64	-	181+29	LT	2	GUARDRAIL AT BOX CULVERT C-12-23 (EXISTING CBAC SHOULDER)
	374+30	-	375+87	LT	2	GUARDRAIL AT BOX CULVERT B-52-51 (EXISTING CBAC SHOULDER)
	427+90	-	429+15	LT	2	GUARDRAIL AT BRIDGE B-52-66 (EXISTING CBAC SHOULDER)
	429+56	-	430+82	LT	2	GUARDRAIL AT BRIDGE B-52-66 (EXISTING CBAC SHOULDER)
	461+47	-	471+86	LT	11	GUARDRAIL (EXISTING CBAC SHOULDER)
				TOTAL 0010	31	

204-REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	REMARKS
0010	27+52	-	36+71	RT	919	---
	52+92	-	63+98	RT	1,106	---
	92+29	-	98+16	RT	587	---
	179+59	-	181+20	RT	161	BOX CULVERT C-12-23
	228+04	-	228+89	RT	85	BRIDGE B-52-231
	230+19	-	231+03	RT	84	BRIDGE B-52-231
	287+26	-	288+10	RT	84	BRIDGE B-52-144
	288+49	-	289+17	RT	68	BRIDGE B-52-144
	374+65	-	376+13	RT	148	BOX CULVERT B-52-51
	425+27	-	428+95	RT	368	BRIDGE B-52-66
	429+37	-	430+64	RT	127	BRIDGE B-52-66
	734+19	-	735+00	RT	81	---
	11+38	-	16+18	LT	480	---
	30+27	-	36+17	LT	590	---
	179+64	-	181+22	LT	158	BOX CULVERT C-12-23
	227+97	-	228+82	LT	85	BRIDGE B-52-231
	230+12	-	230+96	LT	84	BRIDGE B-52-231
	287+37	-	288+25	LT	88	BRIDGE B-52-144
	288+65	-	289+53	LT	88	BRIDGE B-52-144
	374+35	-	375+82	LT	147	BOX CULVERT B-52-51
	427+96	-	429+15	LT	119	BRIDGE B-52-66
	429+56	-	430+75	LT	119	BRIDGE B-52-66
	462+51	-	470+85	LT	834	---
	734+08	-	734+90	LT	82	BRIDGE B-52-85
				TOTAL 0010	6,692	

ASPHALTIC REMOVALS & SAWING

CATEGORY	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
0010	0+00	-	1+00	MAINLINE	---	25	220	---	---	BOP
	227+84	-	228+84	MAINLINE	---	40	360	---	---	BRIDGE B-52-231 (TRANSITION)
	230+17	-	231+17	MAINLINE	---	40	360	---	---	BRIDGE B-52-231 (TRANSITION)
	287+14	-	288+14	MAINLINE	---	34	300	---	---	BRIDGE B-52-144 (TRANSITION)
	288+59	-	289+59	MAINLINE	---	34	300	---	---	BRIDGE B-52-144 (TRANSITION)
	428+05	-	429+05	MAINLINE	---	38	340	---	---	BRIDGE B-52-66 (TRANSITION)
	429+48	-	430+48	MAINLINE	---	38	340	---	---	BRIDGE B-52-66 (TRANSITION)
	495+21	-	496+21	MAINLINE	---	---	356	---	---	CURB & GUTTER (TRANSITION)
	496+21		496+72	MAINLINE	---	---	182	---	---	---
	496+72	-	497+72	MAINLINE	---	---	356	---	---	CURB & GUTTER (TRANSITION)
	687+93	-	688+93	MAINLINE	---	---	334	---	---	CURB & GUTTER (TRANSITION)
	688+93	-	695+70	MAINLINE	---	27	1,779	---	---	(2-INCH DEPTH)
	707+70	-	708+70	MAINLINE	---	25	220	---	---	(TRANSITION)
	733+94	-	734+94	MAINLINE	---	40	360	---	---	EOP (BRIDGE B-52-85 (TRANSITION))
	VARIES			SIDE RDS	16	836	3,772	---	---	16 SIDE ROADS
	287+20	-	287+60	RT	9	---	---	40	---	REMOVE 4-FT OF ADD'L FLAIRED HMA PAVEMENT
	287+29	-	287+69	LT	9	---	---	40	---	REMOVE 4-FT OF ADD'L FLAIRED HMA PAVEMENT
	VARIES			LT & RT	10	---	---	90	---	(AT PES) (9 LOCATIONS)
	674+60			LT	---	---	---	---	20	(AT PE)
	675+60			LT	---	---	---	---	20	(AT PE)
				TOTAL 0010	44	1,177	9,579	170	40	

3

3

AGGREGATE SUMMARY & WATER

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
0010	PROJECT LIMITS	-		RT	5,131	---	77	SHOULDER
	PROJECT LIMITS	-		LT	3,195	---	48	SHOULDER
	UNDISTRIBUTED	-		LT & RT	1,666	---	25	---
	VARIES	-		LT & RT	510	---	8	34 EATS (15/TON EA)
	VARIES	-		LT & RT	---	448	7	BEAMGUARD TERMINAL EMBANKMENT CONSTRUCTION
	VARIES	-		LT & RT	730	---	---	73 PE'S (10 TON AT EACH PE)
				TOTAL 0010	11,232	448	165	

HMA PAVING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.5225 HMA PAVEMENT 5 LT 58-28 S TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	REMARKS
0010	0+00	-	228+14	MAINLINE	1,321	6,693	6,601	---	---	(SAFETY EDGE AT EDGE OF BOTH LANES)
	230+17	-	288+14	MAINLINE	336	1,701	1,678	---	---	(SAFETY EDGE AT EDGE OF BOTH LANES)
	288+59	-	429+05	MAINLINE	813	4,121	4,064	---	---	(SAFETY EDGE AT EDGE OF BOTH LANES)
	429+48	-	695+70	MAINLINE	1,541	7,810	7,703	---	---	(SAFETY EDGE AT EDGE OF BOTH LANES)
	707+70	-	734+94	MAINLINE	158	800	789	---	---	(SAFETY EDGE AT EDGE OF BOTH LANES)
	27+50	-	36+71	RT SHLDR	---	74	69	---	---	---
	52+90	-	63+99	RT SHLDR	---	104	97	---	---	---
	90+95	-	98+18	RT SHLDR	---	68	63	---	---	3.5-IN DEPTH (130-FT EXTENSION), ELSEWHERE 2-IN)
	179+59	-	181+19	RT SHLDR	---	13	21	---	---	(3.5-IN DEPTH OF HMA)
	227+99	-	228+89	RT SHLDR	---	9	8	---	---	---
	230+19	-	231+09	RT SHLDR	---	9	8	---	---	---
	287+20	-	288+10	RT SHLDR	---	5	5	---	---	---
	288+49	-	289+17	RT SHLDR	---	4	4	---	---	---
	374+57	-	376+13	RT SHLDR	---	15	24	---	---	(3.5-IN DEPTH OF HMA)
	425+22	-	428+95	RT SHLDR	---	30	49	---	---	(3.5-IN DEPTH OF HMA)
	429+37	-	430+68	RT SHLDR	---	11	18	---	---	(3.5-IN DEPTH OF HMA)
	734+09	-	735+00	RT SHLDR	---	9	8	---	---	---
	11+37	-	16+18	LT SHLDR	---	45	42	---	---	---
	30+26	-	36+17	LT SHLDR	---	48	45	---	---	---
	179+64	-	181+29	LT SHLDR	---	14	22	---	---	(3.5-IN DEPTH OF HMA)
	227+91	-	228+82	LT SHLDR	---	9	8	---	---	---
	230+12	-	231+03	LT SHLDR	---	9	8	---	---	---
	287+29	-	288+25	LT SHLDR	---	6	5	---	---	---
	288+65	-	289+60	LT SHLDR	---	6	5	---	---	---
	374+30	-	375+87	LT SHLDR	---	15	24	---	---	(3.5-IN DEPTH OF HMA)
	427+90	-	429+15	LT SHLDR	---	10	17	---	---	(3.5-IN DEPTH OF HMA)
	429+56	-	430+82	LT SHLDR	---	11	17	---	---	(3.5-IN DEPTH OF HMA)
	461+47	-	471+86	LT SHLDR	---	91	148	---	---	(3.5-IN DEPTH OF HMA)
	734+00	-	734+90	LT SHLDR	---	9	8	---	---	---
UNDISTRIBUTED					---	26	---	41	---	(LOCATIONS PER PROJECT ENGINEER)
VARIES					---	482	450	---	---	17 SIDE ROADS
VARIES					---	---	---	---	90	9 PES AT 10 TON/PE
PROJECT LIMITS					---	---	---	---	---	---
				TOTAL 0010	4,169	22,257	22,008	41	90	

3

3

465-INTERS. RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0580 ASPHALTIC RUMBLE STRIPS, TRANSVERSE SY	REMARKS
0010	3+62	-	3+87	LT	24	
	5+87	-	6+12	LT	24	
	13+33	-	13+58	LT	24	
				TOTAL 0010	72	

614-GUARDRAIL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	614.0397 GUARDRAIL MOW STRIP EMULSIFIED ASPHALT SY	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	REMARKS
0010	27+50	-	36+71	RT	2	---	---	---	813	---	---	2	---
	52+90	-	63+99	RT	2	---	---	---	1,013	---	---	2	---
	91+03	-	98+18	RT	1	---	---	---	613	---	---	2	---
	179+59	-	181+19	RT	2	---	---	---	50	---	---	2	BOX CULVERT C-12-23
	227+99	-	228+89	RT	---	---	---	---	---	---	38	1	BRIDGE B-52-231
	230+19	-	231+09	RT	---	---	---	---	---	---	38	1	BRIDGE B-52-231
	287+20	-	288+10	RT	---	---	---	---	---	---	40	1	BRIDGE B-52-144
	288+49	-	289+17	RT	---	21	1	---	---	---	---	---	BRIDGE B-52-144
	374+57	-	376+13	RT	2	---	---	---	50	---	---	2	BOX CULVERT B-52-51
	425+22	-	428+95	RT	---	---	---	212	275	---	38	1	BRIDGE B-52-66
	429+37	-	430+68	RT	1	---	---	---	38	---	38	1	BRIDGE B-52-66
	734+09	-	735+00	RT	---	---	---	---	---	---	38	1	BRIDGE B-52-85
	11+37	-	16+18	LT	2	---	---	---	375	---	---	2	---
	30+26	-	36+17	LT	2	---	---	---	488	---	---	2	---
	179+64	-	181+29	LT	1	---	---	---	63	---	---	2	BOX CULVERT C-12-23
	227+91	-	228+82	LT	---	---	---	---	---	---	38	1	BRIDGE B-52-231
	230+12	-	231+03	LT	---	---	---	---	---	---	38	1	BRIDGE B-52-231
	287+29	-	288+25	LT	---	---	---	---	---	---	40	1	BRIDGE B-52-144
	288+65	-	289+60	LT	---	---	---	---	---	---	40	1	BRIDGE B-52-144
	374+30	-	375+87	LT	2	---	---	---	50	---	---	2	BOX CULVERT B-52-51
	427+90	-	429+15	LT	1	---	---	---	38	---	38	1	BRIDGE B-52-66
	429+56	-	430+82	LT	1	---	---	---	38	---	38	1	BRIDGE B-52-66
	461+47	-	471+86	LT	2	---	---	---	438	500	---	2	---
	734+00	-	734+90	LT	---	---	---	---	---	---	38	1	BRIDGE B-52-85
				TOTAL 0010	21	21	1	212	4,342	500	500	33	

FOR INFORMATION ONLY

BORROW CY	SALVAGED TOPSOIL SY	CLASS 1 TYPE B EROSION MAT SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB	SEEDING TEMPORARY LB	SEED WATER MGAL
182	642	1026	0.65	28	28	23
140	583	968	0.61	27	27	22
179	265	457	0.29	12	12	10
51	375	759	0.48	21	21	17
---	---	---	---	---	---	---
---	---	---	---	---	---	---
---	---	---	---	---	---	---
---	---	---	---	---	---	---
72	321	705	0.44	20	20	16
---	---	---	---	---	---	---
13	120	312	0.20	9	9	7
---	---	---	---	---	---	---
153	1020	1404	0.88	38	38	32
65	376	761	0.48	21	21	18
61	206	398	0.25	11	11	9
---	---	---	---	---	---	---
---	---	---	---	---	---	---
---	---	---	---	---	---	---
---	---	---	---	---	---	---
137	490	874	0.55	24	24	20
53	208	401	0.25	11	11	9
38	209	401	0.25	11	11	9
21	182	567	0.36	16	16	13
---	---	---	---	---	---	---
1,165	4,997	9,033	6	249	249	205

3

628-EROSION CONTROL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	REMARKS
0010	26+25	-	28+10	RT	193	193	---	---	---
	36+11	-	37+96	RT	190	190	---	---	---
	51+66	-	53+49	RT	201	201	---	---	---
	63+39	-	65+22	RT	187	187	---	---	---
	97+58	-	99+42	RT	193	193	---	---	---
	179+00	-	180+13	RT	106	106	---	---	---
	180+55	-	182+46	RT	186	186	---	---	---
	373+32	-	375+17	RT	185	185	---	---	---
	375+53	-	377+37	RT	185	185	---	---	---
	428+65	-	429+05	RT	45	45	---	---	---
	429+20	-	429+55	RT	45	45	---	---	---
	430+07	-	431+93	RT	190	190	---	---	---
	10+12	-	11+97	LT	194	194	---	---	---
	15+58	-	17+44	LT	203	203	---	---	---
	29+03	-	30+86	LT	191	191	---	---	---
	35+54	-	37+42	LT	194	194	---	---	---
	180+68	-	182+36	LT	170	170	---	---	---
	373+06	-	374+93	LT	250	250	---	---	---
	375+57	-	377+11	LT	178	178	---	---	---
	426+68	-	428+49	LT	188	188	---	---	---
	429+45	-	429+85	LT	60	60	---	---	---
	430+22	-	432+05	LT	194	194	---	---	---
	460+27	-	461+98	LT	171	171	---	---	---
	471+35	-	472+96	LT	165	165	---	---	---
UNDISTRIBUTED				N/A	746	746	---	---	20 PERCENT OF TOTAL
N/A				N/A	---	---	2	3	---
	-								
				TOTAL 0010	4,810	4,810	2	3	

3

PAVEMENT MARKING SUMMARY

* SEE TRAFFIC CONTROL SUMMARY FOR ADDITIONAL QUANTITIES

CATEGORY	STATION	TO	STATION	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	* 643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH LF	648.0100 LOCATING NO-PASSING ZONES MI	REMARKS
0010	0+00	-	221+00	C/L	---	44,200	44,200	44,200	---	DOUBLE YELLOW (YELLOW)
	221+00	-	228+50	C/L	---	810	938	938	---	SOLID (LT), SKIPS (RT) (YELLOW)
	228+50	-	231+50	C/L	---	600	600	600	---	DOUBLE YELLOW (YELLOW)
	231+50	-	240+00	C/L	---	918	1,063	1,063	---	SKIPS (LT), SOLID (RT) (YELLOW)
	240+00	-	712+85	C/L	---	94,570	94,570	94,570	---	DOUBLE YELLOW (YELLOW)
	712+85	-	719+50	C/L	---	719	832	832	---	SOLID (LT), SKIPS (RT) (YELLOW)
	719+50	-	727+10	C/L	---	61	190	190	---	SKIPS (YELLOW)
	727+10	-	734+40	C/L	---	789	913	913	---	SKIPS (LT), SOLID (RT) (YELLOW)
	734+40	-	735+45	C/L	---	210	210	210	---	DOUBLE YELLOW (YELLOW)
	0+00	-	39+75	RT	---	---	3,975	---	---	EDGELINE (WHITE)
	41+20	-	79+10	RT	---	---	3,790	---	---	EDGELINE (WHITE)
	80+10	-	220+00	RT	---	---	13,990	---	---	EDGELINE (WHITE)
	220+60	-	256+60	RT	---	---	3,600	---	---	EDGELINE (WHITE)
	257+25	-	289+20	RT	---	---	3,195	---	---	EDGELINE (WHITE)
	289+20	-	290+20	RT	---	---	34	---	---	REPEATING 2-FT EDGELINE, 6-FT GAP (CAT TRACKS) (WHITE)
	290+20	-	366+85	RT	---	---	7,665	---	---	EDGELINE (WHITE)
	366+85	-	368+00	RT	---	---	39	---	---	REPEATING 2-FT EDGELINE, 6-FT GAP (CAT TRACKS) (WHITE)
	368+00	-	482+00	RT	---	---	11,400	---	---	EDGELINE (WHITE)
	482+60	-	534+30	RT	---	---	5,170	---	---	EDGELINE (WHITE)
	535+00	-	559+55	RT	---	---	2,455	---	---	EDGELINE (WHITE)
	560+35	-	688+90	RT	---	---	12,855	---	---	EDGELINE (WHITE)
	688+90	-	690+10	RT	---	---	40	---	---	REPEATING 2-FT EDGELINE, 6-FT GAP (CAT TRACKS) (WHITE)
	690+10	-	700+86	RT	---	---	1,076	---	---	EDGELINE (WHITE)
	704+71	-	711+20	RT	---	---	649	---	---	EDGELINE (WHITE)
	711+20	-	712+80	RT	---	---	54	---	---	REPEATING 2-FT EDGELINE, 6-FT GAP (CAT TRACKS) (WHITE)
	712+80	-	735+45	RT	---	---	2,265	---	---	EDGELINE (WHITE)
	0+00	-	49+50	LT	---	---	4,950	---	---	EDGELINE (WHITE)
	50+60	-	178+45	LT	---	---	12,785	---	---	EDGELINE (WHITE)
	178+45	-	179+45	LT	---	---	34	---	---	REPEATING 2-FT EDGELINE, 6-FT GAP (CAT TRACKS) (WHITE)
	179+45	-	234+15	LT	---	---	5,470	---	---	EDGELINE (WHITE)
	235+50	-	324+50	LT	---	---	8,900	---	---	EDGELINE (WHITE)
	325+50	-	436+15	LT	---	---	11,065	---	---	EDGELINE (WHITE)
	436+15	-	437+45	LT	---	---	44	---	---	REPEATING 2-FT EDGELINE, 6-FT GAP (CAT TRACKS) (WHITE)
	437+45	-	481+90	LT	---	---	4,445	---	---	EDGELINE (WHITE)
	482+90	-	583+00	LT	---	---	10,010	---	---	EDGELINE (WHITE)
	583+00	-	584+00	LT	---	---	34	---	---	REPEATING 2-FT EDGELINE, 6-FT GAP (CAT TRACKS) (WHITE)
	584+00	-	617+40	LT	---	---	3,340	---	---	EDGELINE (WHITE)
	618+25	-	688+90	LT	---	---	7,065	---	---	EDGELINE (WHITE)
	690+15	-	700+86	LT	---	---	1,071	---	---	EDGELINE (WHITE)
	704+71	-	712+35	LT	---	---	764	---	---	EDGELINE (WHITE)
	712+85	-	714+45	LT	---	---	160	---	---	EDGELINE (WHITE)
	715+25	-	735+45	LT	---	---	2,020	---	---	EDGELINE (WHITE)
PROJECT LIMITS					---	---	---	---	13.7	
VARIES					12		---	---	---	LOCATIONS VARY (NO PASSING ZONE SIGNS, AS DIRECTED BY ENGINEER)
				TOTAL 0010	12	142,877	287,925	143,516	13.7	

3

TRAFFIC CONTROL SUMMARY

* SEE PAVEMENT MARKING SUMMARY FOR ADDITIONAL QUANTITIES

CATEGORY	STATION	TO	STATION	LOCATION	NO OF DAYS	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	NO OF TRAFFIC CONTROL DRUMS (PER DAY)	643.0300 TRAFFIC CONTROL DRUMS DAY	NO OF TRAFFIC CONTROL BARRICADES TYPE III (PER DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	NO OF TRAFFIC CONTROL SIGNS (PER DAY)	643.0900 TRAFFIC CONTROL SIGNS DAY	NO OF TRAFFIC CONTROL SIGNS PCMS (PER DAY)	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	* 643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE) LF	643.5000 TRAFFIC CONTROL EACH	REMARKS
0010	PROJECT LIMITS			RT & LT	84	---	---	268	22,512	---	---	---	---	---	---	---	---	---	AT GUARDRAIL (SPACED 25-FT)
	PROJECT LIMITS			RT & LT	7	---	---	---	---	---	---	---	---	2	14	---	---	---	2 LOCATIONS, BEGIN PROJECT & END PROJECT
	PROJECT LIMITS			RT & LT	85	---	---	---	---	---	---	49	4,165	---	---	---	---	---	TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH (SDD 15C04),
	PROJECT LIMITS			RT & LT	28	---	---	---	---	---	---	24	672	---	---	---	---	---	TRAFFIC CONTROL, ADVANCED WIDTH RESTRICTION SIGNING
	PROJECT LIMITS			RT & LT	39	---	---	---	---	---	---	17	663	---	---	---	---	---	TRAFFIC CONTROL, DROP-OFF SIGNING (SDD 15D39)
	372+00	-	377+00	LT	7	---	---	16	112	---	---	---	---	---	---	---	---	---	SHOULDER CLOSURE (BOX CULVERT B-52-51 REPAIRS)
	427+00	-	431+00	C/L	---	---	---	---	---	---	---	---		---	---	2,800	---	---	TRAFFIC CONTROL, ONE LANE ROAD STOP CONDITION, (DOUBLE YELLOW, YELLOW)
	427+00	-	431+00	RT & LT	---	---	---	---	---	---	---	---	---	---	---	630	44	---	TRAFFIC CONTROL, ONE LANE ROAD STOP CONDITION, (EDGELINE, WHITE & STOP BAR, WHITE)
	427+00	-	431+00	---	28	242	242	---	---	2	56	18	504	---	---	---	---	---	TRAFFIC CONTROL, ONE LANE ROAD STOP CONDITION
	PROJECT			---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---
				TOTAL 0010		242	242		22,624		56		6,004		14	3,430	44	1	

3

650-CONST. STAKING (ROADWAY)

CATEGORY	STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 5860-00-61) EACH	REMARKS
0010	0+00	-	735+45		73,545	---	PROJECT LIMITS
					---	1	
				TOTAL 0010	73,545	1	

650-CONST. STAKING (STRUCTURE)

CATEGORY	STATION	TO	STATION	LOCATION	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. BOX CULVERT B-52-51) EACH	650.6501.02 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (02. BRIDGE B-52-66) EACH	REMARKS
0010	375+25	-			1	---	BOX CULVERT B-52-51
	429+05	-	429+48		---	1	BRIDGE B-52-66
				TOTAL 0010	1	1	

3

SPV-060-MONUMENTS

* - APPROXIMATE LOCATION

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.02 SPECIAL (02. RESEARCH AND LOCATE EXISTING LAND PARCEL MONUMENTS) EACH	SPV.0060.03 SPECIAL (03. VERIFY AND REPLACE EXISTING LAND PARCEL MONUMENTS) EACH	REMARKS
0010	*482+30	-		LT	1	1	
				TOTAL 0010	1	1	

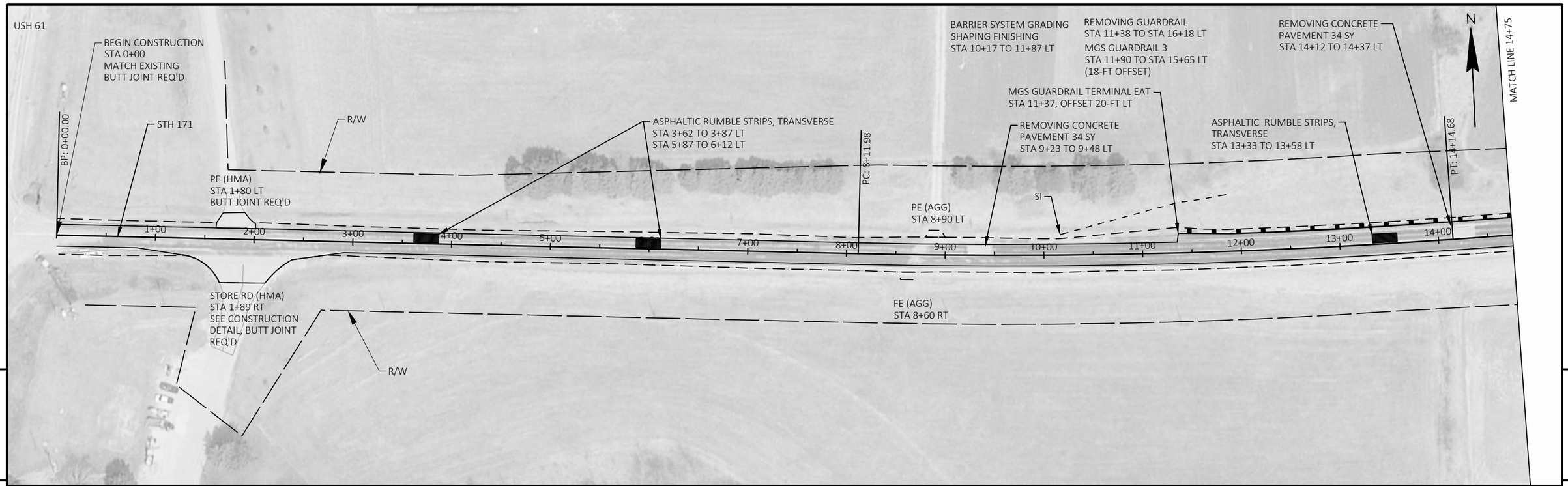
SPV.0060-FINISHING FOR STRUCT

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.04 SPECIAL (FINISHING FOR STRUCTURES) EACH	REMARKS
0010	374+80	-		LT	1	BOX CULVERT B-52-51
	428+90	-		RT	1	BRIDGE B-52-66
	429+35	-		RT	1	BRIDGE B-52-67
	429+65	-		LT	1	BRIDGE B-52-68
				TOTAL 0010	4	

3

HMA PAVEMENT - ACCEPTANCE CHART

Location	Station	Station (Continued)	Mixture Use:	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
								Mixture Acceptance	Density Acceptance
11-ft Driving Lanes	0+00 to 228+14 230+17 to 288+14 288+59 to 429+05 429+48 to 688+93 707+70 to 734+94	---	Upper Layer	5 LT 58-28 S	5 LT 58-28 S	14,598	1 1/2-IN	QMP as per SS 460	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
11-ft Driving Lanes	0+00 to 228+14 230+17 to 288+14 288+59 to 429+05 429+48 to 688+93 707+70 to 734+94	---	Lower Layer	Existing Pavement	5 LT 58-28 S	6,050	1/2-IN	QMP as per SS 460	Acceptance by ordinary compaction
11-ft Driving Lanes	688+93 to 695+70	---	---	Existing	5 LT 58-28 S	187	2-IN	QMP as per SS 460	Acceptance by ordinary compaction
4-ft thru 7-ft Shoulders (At Guardrail Locations WITH Pavement)	27+50 to 36+71 RT 52+90 to 63+99 RT 92+27 to 98+18 RT 227+99 to 228+89 RT 230+19 to 231+09 RT 287+20 to 288+10 RT 288+49 to 289+17 RT 734+09 to 735+00 RT	11+37 to 16+18 LT 30+26 to 36+17 LT 227+91 to 228+82 LT 230+12 to 231+03 LT 287+29 to 288+25 LT 288+65 to 289+60 LT 461+47 to 471+86 LT 734+00 to 734+90 LT	Upper Layer	5 LT 58-28 S	5 LT 58-28 S	288	1 1/2-IN	QMP as per SS 460	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
4-ft thru 7-ft Shoulders	See Above	See Above	Lower Layer	Existing Pavement	5 LT 58-28 S	95	1/2-IN	QMP as per SS 460	Acceptance by ordinary compaction
4-ft thru 7-ft Shoulders (At Guardrail Locations WITHOUT Pavement)	90+95 to 92+27 RT 179+59 to 181+19 RT 374+57 to 376+13 RT 425+22 to 428+95 RT 429+37 to 430+68 RT	179+64 to 181+29 LT 374+30 to 375+87 LT 427+90 to 429+15 LT 429+56 to 430+82 LT 461+47 to 471+86 LT	Upper Layer	5 LT 58-28 S	5 LT 58-28 S	255	2-IN	QMP as per SS 460	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
4-ft thru 7-ft Shoulders	See Above	See Above	Lower Layer	Existing Aggregate	5 LT 58-28 S	85	1 1/2-IN	QMP as per SS 460	Acceptance by ordinary compaction
Side Roads	Varies	---	Upper & Lower Layer	Existing Pavement & 5 LT 58-28 S	5 LT 58-28 S	450	2-IN TOTAL	QMP as per SS 460	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
PEs	Varies	---	Upper & Lower Layer	Existing Pavement & Asphaltic Surface	Asphaltic Surface Driveways & Field Entrances	90	2-IN TOTAL	QMP as per SS 465.	Acceptance by ordinary compaction;



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 33	E

REMOVING GUARDRAIL
STA 30+27 TO STA 36+17 LT

MGS GUARDRAIL 3
STA 29+73 TO STA 35+64 LT
(17-FT OFFSET)

MGS GUARDRAIL TERMINAL EAT
STA 30+26, OFFSET 19-FT LT

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 29+08 TO 30+76 LT
STA 35+64 TO 37+37 LT

N

MATCH LINE 44+25

R/W

STH 171

SI

PT: 33+82.17

MGS GUARDRAIL TERMINAL EAT
STA 36+17, OFFSET 19-FT LT

SI

30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00

SI

RICHLAND / GRANT TELEPHONE COOP
(TEL)

SLEEPY HOLLOW RD (HMA)
STA 40+45 RT
SEE CONSTRUCTION
DETAIL, BUTT JOINT
REQ'D

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 36+21 TO 37+91 RT

MGS GUARDRAIL TERMINAL EAT
STA 36+71, OFFSET 19-FT RT

MATCH LINE 29+50

R/W

5

5

N

MATCH LINE 59+00

R/W

STH 171

FE (AGG)
STA 47+40 LT

CHURCH RD (HMA)
STA 50+17 LT
SEE CONSTRUCTION
DETAIL, BUTT JOINT
REQ'D

PC: 51+55.40

PE (AGG)
STA 52+75 LT

45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+

FE (AGG)
STA 47+40 RT

SI

R/W

MATCH LINE 44+25

MGS GUARDRAIL TERMINAL EAT
STA 52+90, OFFSET 20-FT RT

RICHLAND / GRANT TELEPHONE COOP
(TEL)

MGS GUARDRAIL 3
STA 53+43 TO STA 63+46 RT
(18-FT OFFSET)

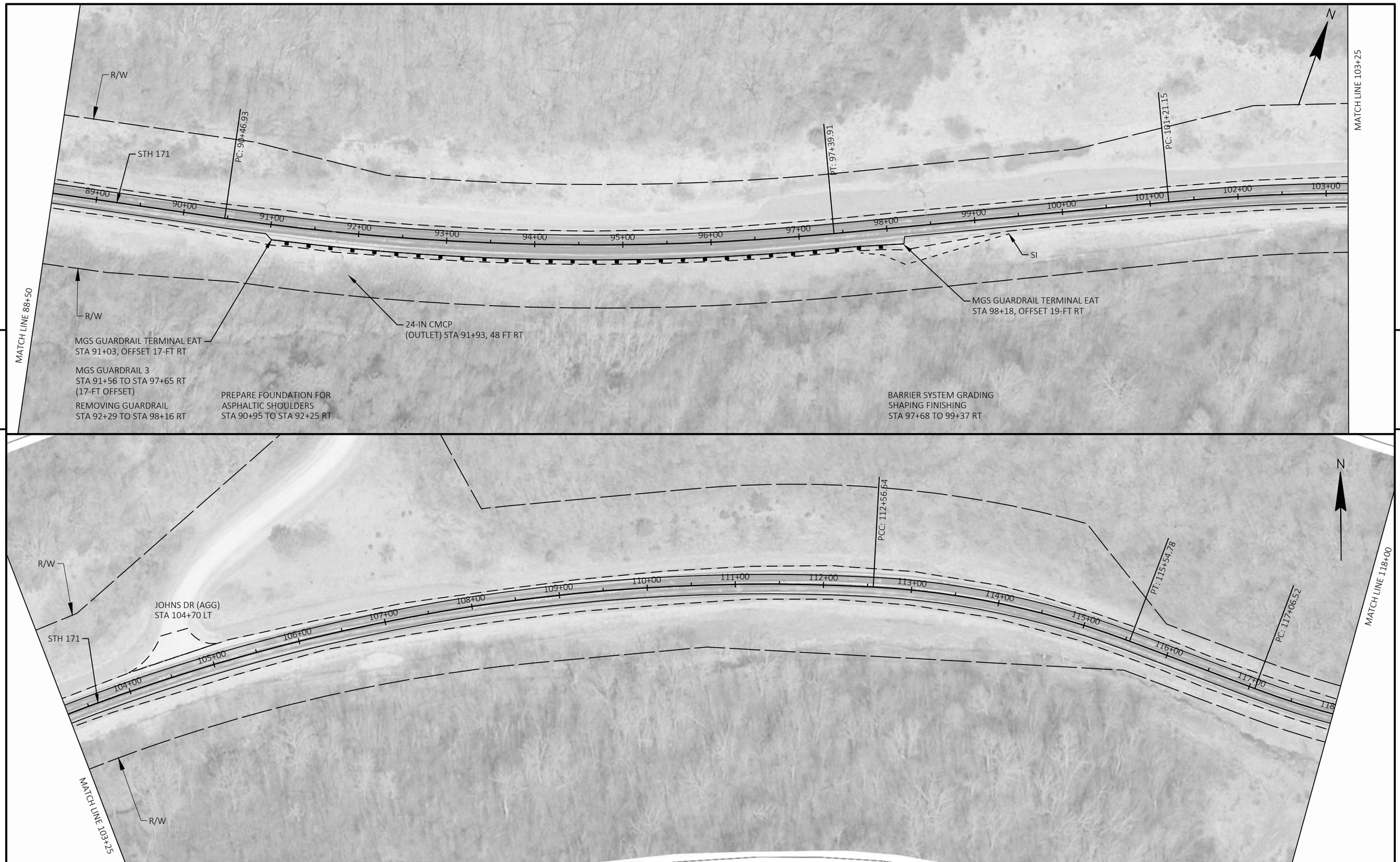
REMOVING GUARDRAIL
STA 52+92 TO STA 63+98 RT

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 51+71 TO 53+39 RT

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 34	E



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 35	E

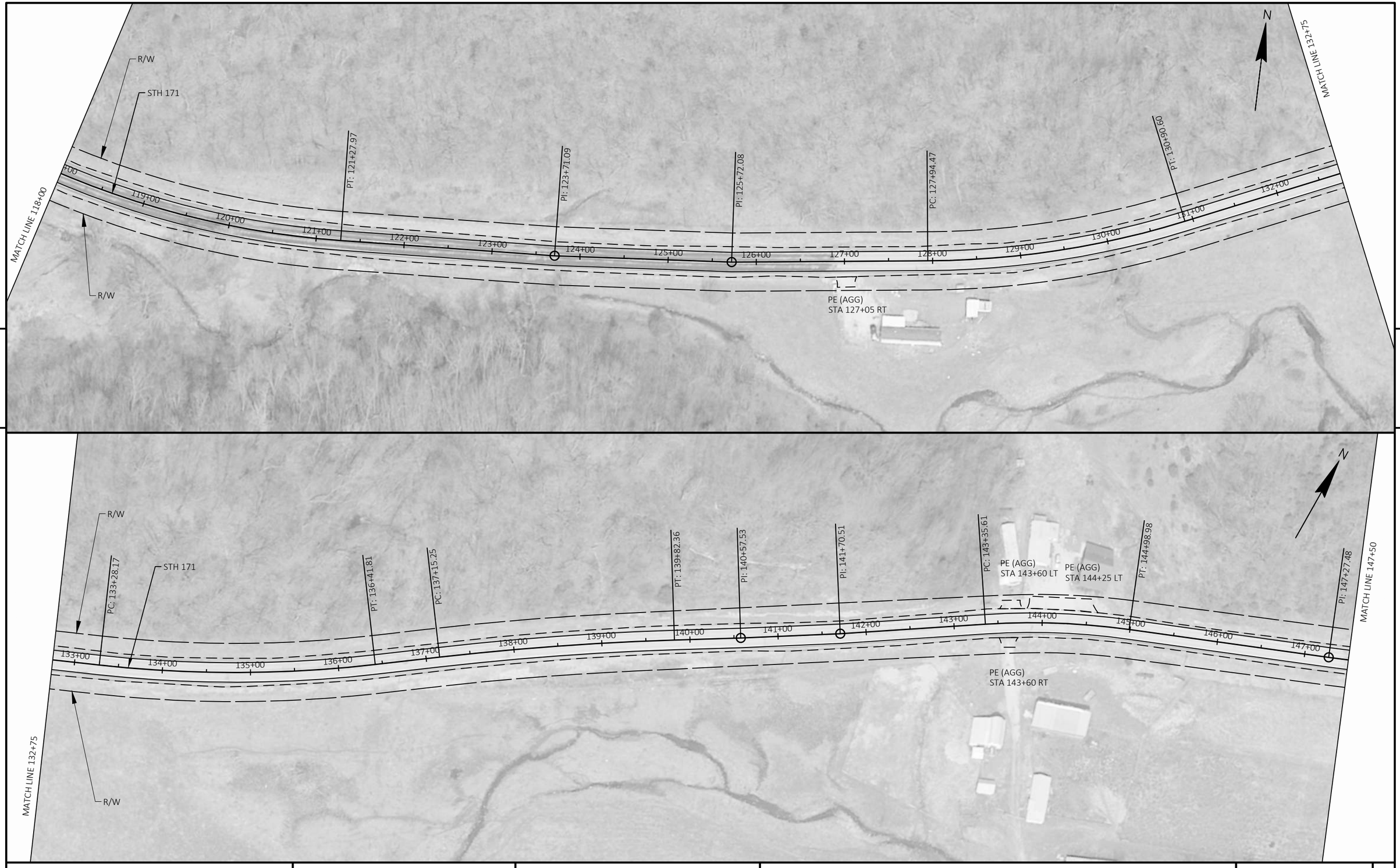


PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 36 E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 04

PLOT DATE : 9/6/2023 8:57 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

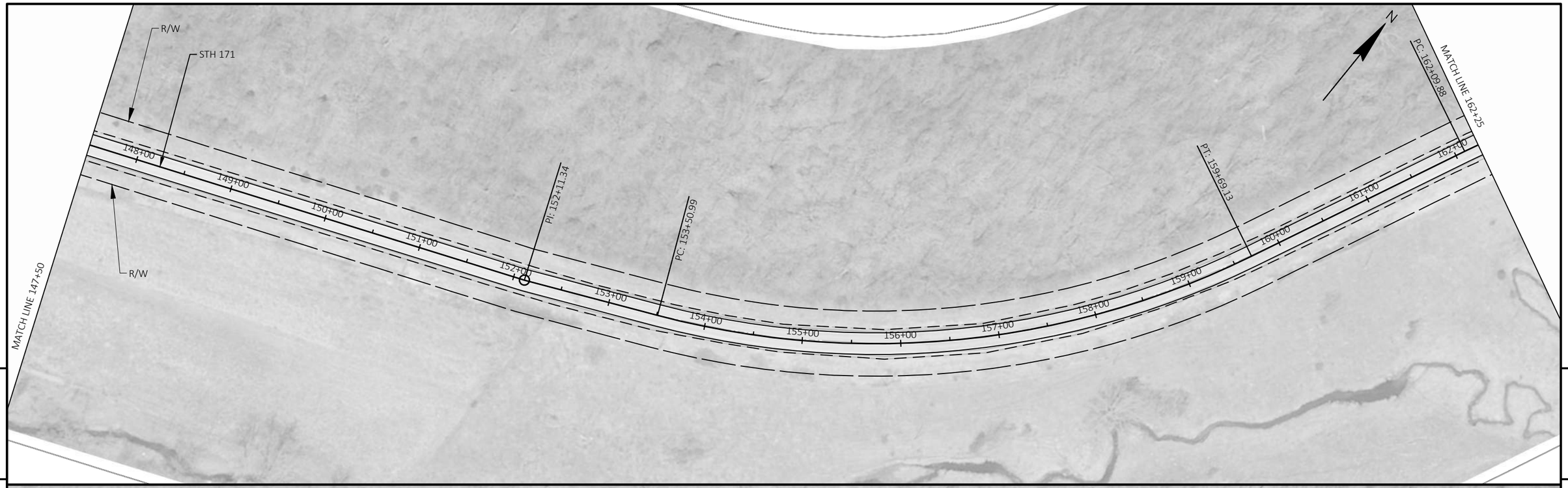


PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 37	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 05

PLOT DATE : 9/6/2023 8:57 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 38 E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 06

PLOT DATE : 9/6/2023 8:57 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA 179+64 TO STA 181+29 LT

REMOVING GUARDRAIL STA 179+64 TO STA 181+22 LT

MGS GUARDRAIL 3 STA 180+17 TO STA 180+66 LT (17-FT OFFSET)

MGS GUARDRAIL TERMINAL EAT STA 179+64, OFFSET 19-FT LT

BARRIER SYSTEM GRADING SHAPING FINISHING STA 180+78 TO 182+31 LT

WOLF RUN TRIBUTARY

MGS GUARDRAIL TERMINAL EAT STA 181+29, OFFSET 19-FT LT

BRIGHTSPEED (TEL)

SI

COUNTY H (HMA) STA 178+95 LT SEE CONSTRUCTION DETAIL, BUTT JOINT REQ'D

WETLAND APPROXIMATE (NORTH OF LINE)

STH 171

R/W

PT: 184+77.14

PC: 188+23.05

MATCH LINE 191+75

N

179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00

SI

MGS GUARDRAIL TERMINAL EAT STA 181+19, OFFSET 19-FT RT

FENCE WOVEN WIRE STA 181+19, OFFSET 19-FT RT

BOX CULVERT C-12-23

BRIGHTSPEED (TEL)

PE (AGG) STA 178+75 RT

MGS GUARDRAIL TERMINAL EAT STA 179+59, OFFSET 19-FT RT

MGS GUARDRAIL 3 STA 180+13 TO STA 180+63 RT (17-FT OFFSET)

REMOVING GUARDRAIL STA 179+59 TO STA 181+20 RT

BARRIER SYSTEM GRADING SHAPING FINISHING STA 178+37 TO 180+13 RT STA 180+65 TO 182+41 RT

WOLF RUN TRIBUTARY

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA 179+59 TO STA 181+19 RT

SENSITIVE SITE

MATCH LINE 177+00

5

5

N

MATCH LINE 191+75

R/W

STH 171

PT: 191+82.96

PC: 193+67.23

PT: 196+23.23

PC: 198+05.11

192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00 203+00 204+00 205+00 206+00

HO

DAIRYLAND POWER -OR- RICHLAND ELECTRIC COOP (ELECTRIC)

FE (AGG) STA 202+25 LT

PT: 203+62.24

748.886 HO

PI: 206+34.62

MATCH LINE 206+50

PE (AGG) STA 202+25 RT

FE (AGG) STA 203+70 RT

BRIGHTSPEED (TEL)

OH

DAIRYLAND POWER -OR- RICHLAND ELECTRIC COOP (ELECTRIC)

766.205

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 39	E

5

5

R/W

STH 171

PC: 212+10.31

207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00 221+00

RICHLAND CO
CRAWFORD CO

MATCH LINE 206+50

MATCH LINE 221+25

TROUT DR (HMA)
STA 220+24 RT
SEE CONSTRUCTION
DETAIL, BUTT JOINT
REQ'D

N

R/W

REMOVING GUARDRAIL
STA 227+97 TO STA 228+82 LT

BRIDGE B-52-231
STA 228+14 TO 230+17
(NO CONSTRUCTION)

KNAPP
CREEK

INSTALL MGS THRIE BEAM TRANSITION
(18-FT OFFSET)

REMOVING GUARDRAIL
STA 230+12 TO STA 230+96 LT

INSTALL MGS THRIE BEAM TRANSITION
(18-FT OFFSET)

WETLAND (APPROXIMATE
LOCATION, EXTENDS TO NW)

WETLANDS

MGS GUARDRAIL TERMINAL EAT
STA 227+91, OFFSET 20-FT LT

FE (AGG)
STA 225+95 LT

MGS GUARDRAIL TERMINAL EAT
STA 231+03, OFFSET 20-FT LT

WETLAND (NORTH
OF THIS LINE)

COUNTY U (HMA)
STA 234+66 LT
SEE CONSTRUCTION
DETAIL, BUTT JOINT
REQ'D

PT: 223+61.30

222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236

FE (AGG)
STA 202+25 RT

RICHLAND / GRANT TELEPHONE COOP
(TEL)

WETLAND
APPROXIMATE
(SOUTH OF LINE)

MGS GUARDRAIL TERMINAL EAT
STA 227+99, OFFSET 20-FT RT

INSTALL MGS THRIE BEAM TRANSITION
(18-FT OFFSET)

REMOVING GUARDRAIL
STA 228+04 TO STA 228+89 RT

RICHLAND / GRANT TELEPHONE COOP
(TEL)

KNAPP
CREEK

MGS GUARDRAIL TERMINAL EAT
STA 231+09, OFFSET 20-FT RT

INSTALL MGS THRIE BEAM TRANSITION
(18-FT OFFSET)

REMOVING GUARDRAIL
STA 230+19 TO STA 231+03 RT

WETLAND
APPROXIMATE
(SOUTH OF LINE)

FO

BRIGHTSPEED
(FO)

MATCH LINE 221+25

MATCH LINE 236+00

R/W

N

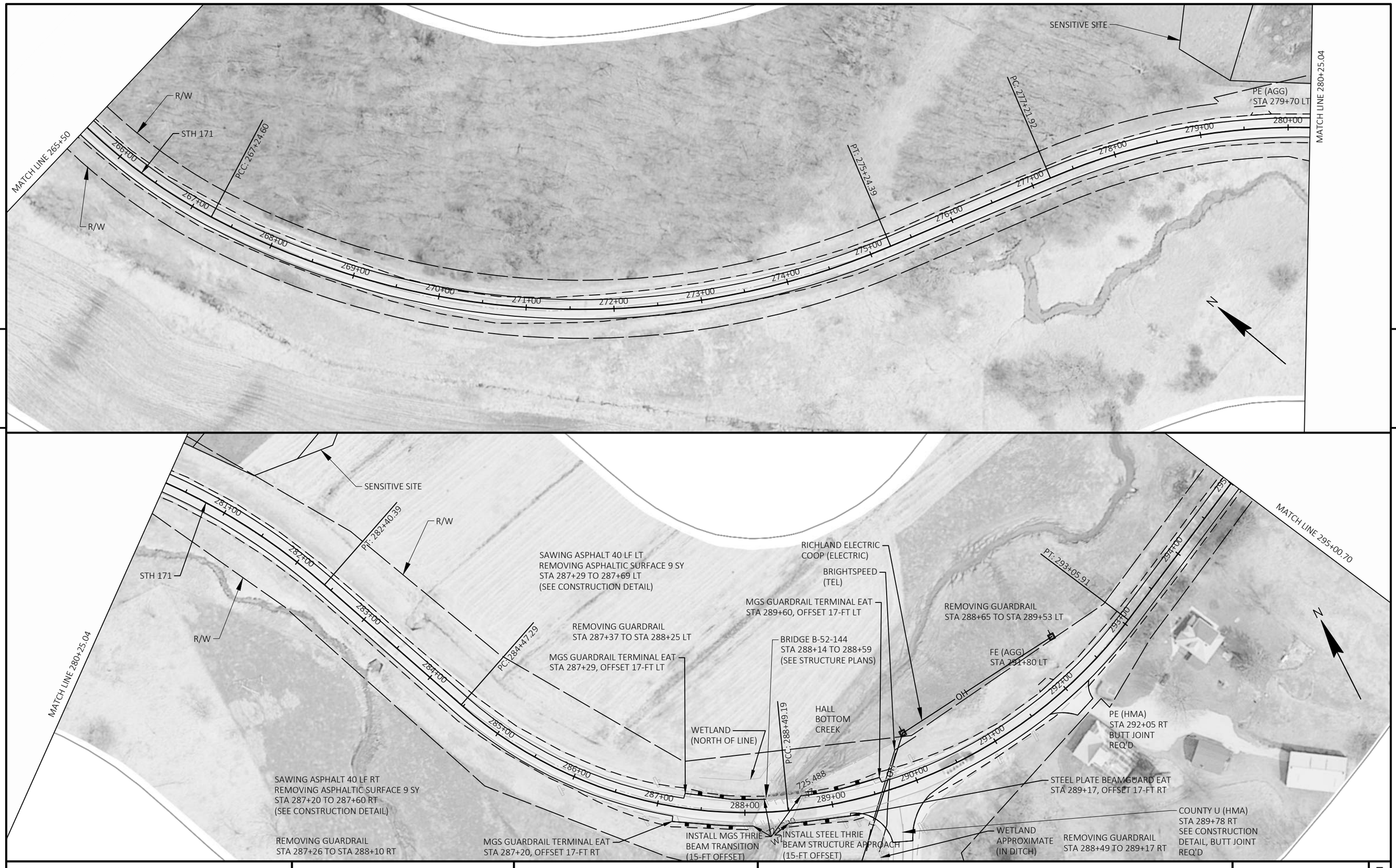
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 40	E



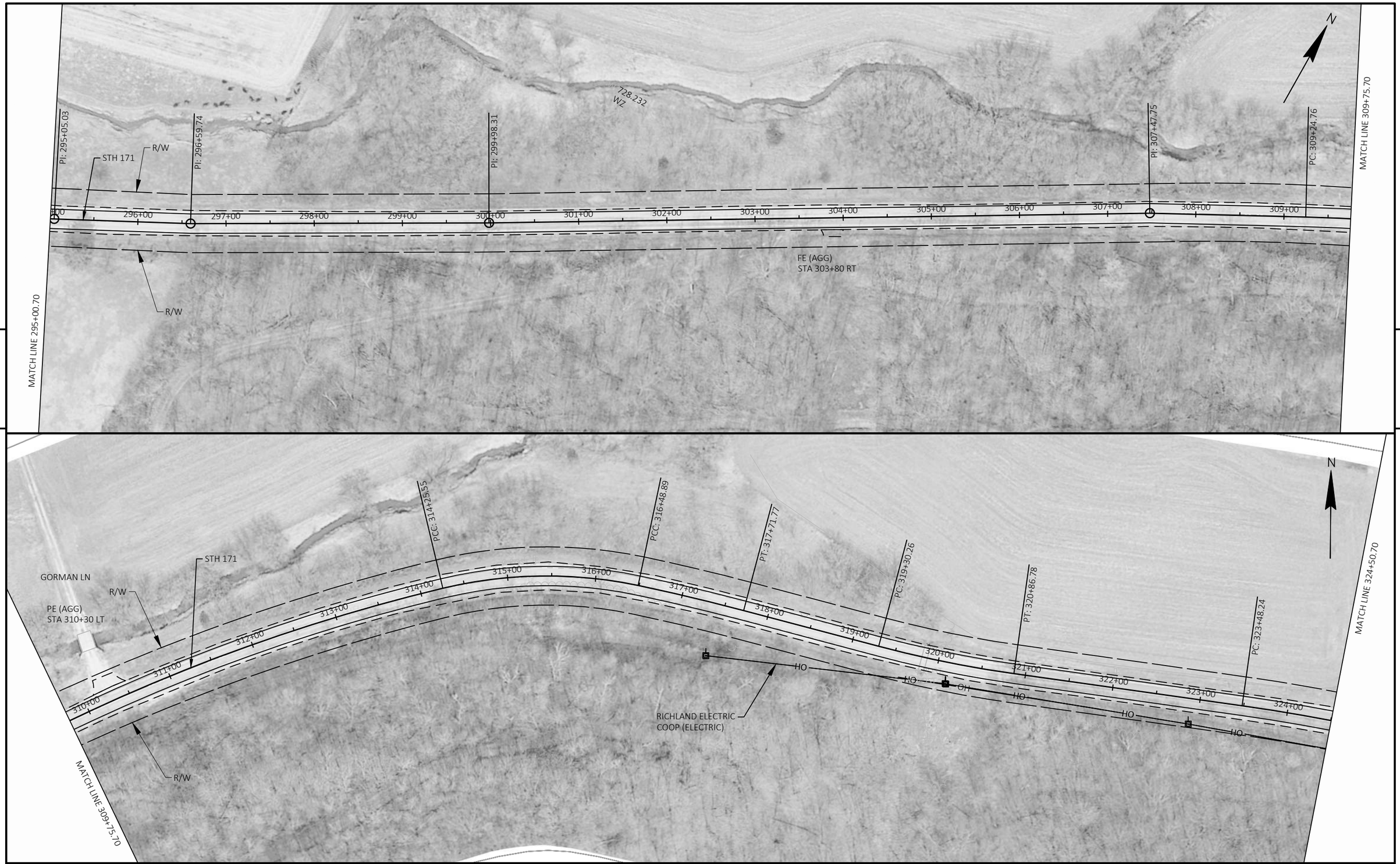
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 41	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 09

PLOT DATE : 9/6/2023 8:58 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 42	E



5

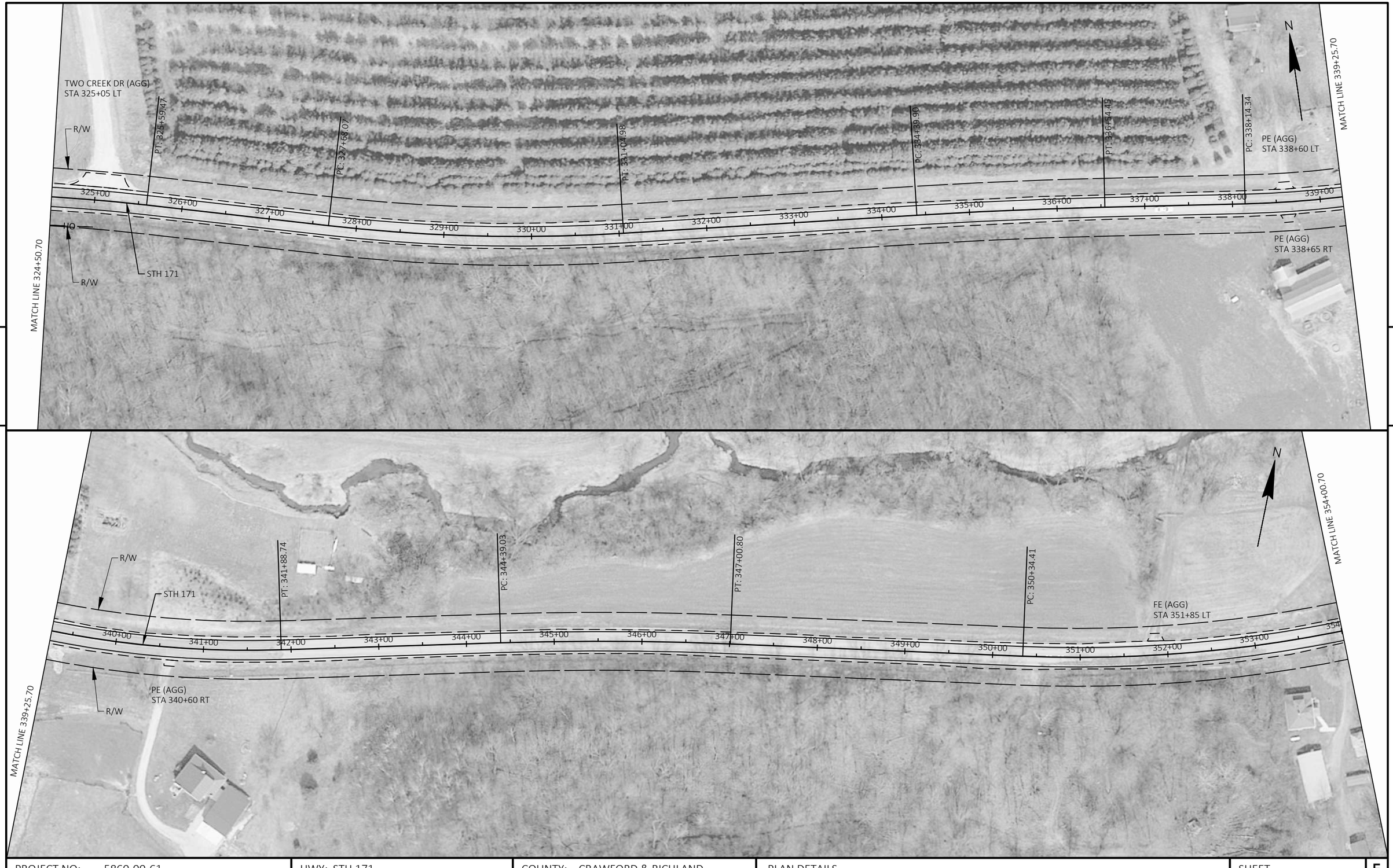
5

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 43	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 11

PLOT DATE : 9/6/2023 8:59 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 44	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 12

PLOT DATE : 9/6/2023 8:59 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

5

MATCH LINE 354+00.70

R/W

STH 171

PT: 364+91.70

PI: 357+18.30

PI: 358+80.19

PC: 361+09.57

773.859
WZ

PT: 363+86.32

PC: 364+89.18

PT: 367+69.35

MATCH LINE 368+75.70

N

355+00 356+00 357+00 358+00 359+00 360+00 361+00 362+00 363+00 364+00 365+00 366+00 367+00 368+00

PE (AGG)
STA 354+70 RT

PE (AGG)
STA 355+50 RT

R/W

ROLLING ROCK RD (AGG)
STA 367+50 RT

PREPARE FOUNDATION FOR
ASPHALTIC SHOULDERS
STA 374+30 TO STA 375+87 LT

REMOVING GUARDRAIL
STA 374+35 TO STA 375+82 LT

MGS GUARDRAIL 3
STA 374+83 TO STA 375+33 LT
(18-FT OFFSET)

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 373+11 TO 374+83 LT
STA 375+37 TO 377+06 LT

HALL
BOTTOM
CREEK

BOX CULVERT B-52-51
STA 375+25
(SEE STRUCTURE PLANS)

LHE FOR
DRAINAGE
(APPROXIMATE)

WETLANDS

RICHLAND / GRANT
TELEPHONE COOP
(TEL)

MGS GUARDRAIL TERMINAL EAT
STA 375+87, OFFSET 20-FT LT

MGS GUARDRAIL TERMINAL EAT
STA 374+30, OFFSET 20-FT LT

EXCAVATION LIMITS
(WING WALL)

WETLANDS

SI

PI: 371+60.39

FE (AGG)
STA 376+15 LT

SI

PC: 377+21.09

PT: 379+60.77

PC: 380+75.08

PT: 383+49.18

MATCH LINE 383+50.70

N

R/W

STH 171

788.918

WZH/COLORATION ON PIER

369+00 370+00 371+00 372+00 373+00 374+00 375+00 376+00 377+00 378+00 379+00 380+00 381+00 382+00 383+00

MATCH LINE 368+75.70

SI

WETLANDS

OH

PI: 374+21.16

787.405
WZ

HALL
BOTTOM
CREEK

OH

SI

WETLANDS

R/W

MGS GUARDRAIL TERMINAL EAT
STA 374+57, OFFSET 20-FT RT

MGS GUARDRAIL TERMINAL EAT
STA 376+13, OFFSET 20-FT RT

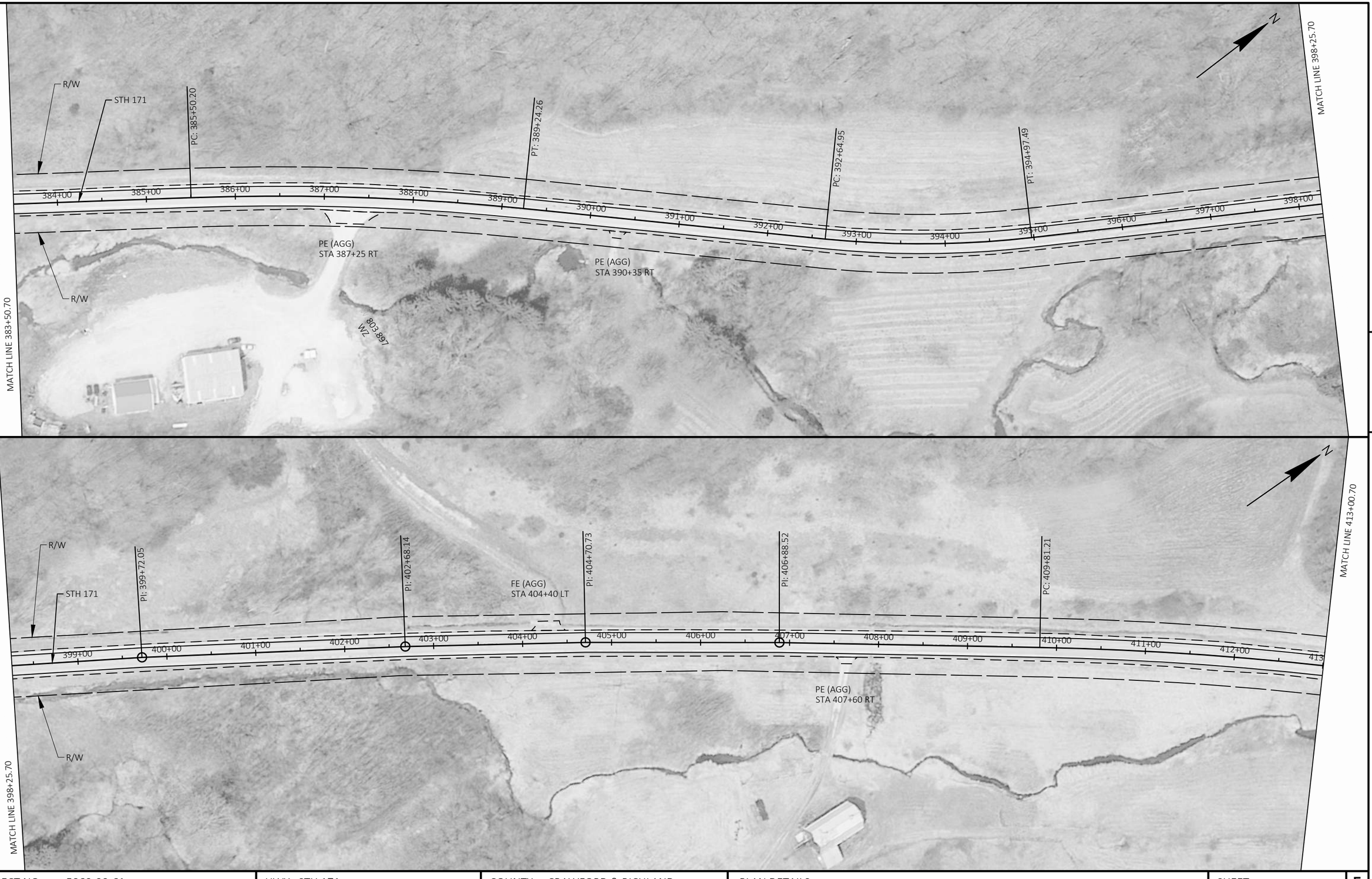
BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 373+37 TO 375+07 RT
STA 375+63 TO 375+32 RT

PREPARE FOUNDATION FOR
ASPHALTIC SHOULDERS
STA 374+57 TO STA 376+13 RT

MGS GUARDRAIL 3
STA 375+10 TO STA 375+60 RT
(18-FT OFFSET)

REMOVING GUARDRAIL
STA 374+65 TO STA 376+13 RT

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 45	E



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 46	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 14

PLOT DATE : 9/6/2023 9:00 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

MATCH LINE 413+00.70

FE (AGG)
STA 413+45 LT

R/W

PT: 413+52.28

STH 171

PC: 415+55.51

PT: 418+41.60

PI: 423+18.11

PC: 425+52.88

RICHLAND ELECTRIC COOP (ELECTRIC)

WETLANDS

FE (AGG)
STA 426+00 LT

SI

OH

MATCH LINE 427+75.70

N

414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00 422+00 423+00 424+00 425+00 426+00 427+00

R/W

WETLAND AT TOE OF SLOPE (~EAST OF THIS LINE)

MGS GUARDRAIL 3
STA 425+75 RT TO STA 428+92 RT

MGS GUARDRAIL TERMINAL EAT
STA 425+22, OFFSET 19-FT RT

MGS GUARDRAIL 3
STA 425+75 RT TO STA 428+57 RT
(17-FT OFFSET)

INSTALL MGS GUARDRAIL THRIE BEAM
STA 428+57 TO STA 428+95 RT
(17-FT OFFSET)

REMOVING GUARDRAIL
STA 425+27 TO STA 428+95 RT

GUARDRAIL MOW STRIP EMULSIFIED ASPHALT
STA 425+75 TO STA 428+92 RT

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
STA 427+90 TO STA 429+15 LT
STA 429+56 TO STA 430+82 LT

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 426+73 TO 428+39 LT
STA 430+32 TO 432+00 LT

INSTALL MGS GUARDRAIL THRIE BEAM
STA 429+56 TO STA 429+94 LT
(17-FT OFFSET)
MGS GUARDRAIL 3
STA 429+94 TO STA 430+29 LT
(17-FT OFFSET)

REMOVING GUARDRAIL
STA 427+96 TO STA 429+15 LT

INSTALL MGS GUARDRAIL THRIE BEAM
STA 428+77 TO STA 429+15 LT
(17-FT OFFSET)

MGS GUARDRAIL 3
STA 428+43 TO STA 430+77 LT
(17-FT OFFSET)

REMOVING GUARDRAIL
STA 429+56 TO STA 430+75 LT

MGS GUARDRAIL TERMINAL EAT
STA 430+82, OFFSET 19-FT LT

BRIDGE B-52-66
STA 429+05 TO 429+48
(SEE STRUCTURE PLANS)

PC: 432+31.56

PT: 434+40.45

PC: 435+87.16

SKYLINE RD (HMA)
STA 436+60 LT
SEE CONSTRUCTION DETAIL, BUTT JOINT REQ'D

PT: 437+89.74

RICHLAND ELECTRIC COOP (ELECTRIC)

STH 171

WETLANDS

PT: 430+69.92

SI

MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL
STA 427+90, OFFSET 19-FT LT

WETLANDS

TEMPORARY PAVEMENT RAMP (SEE CONST. DETAIL)

HALL BOTTOM CREEK

EXCAVATION LIMITS (STRUCTURE)

OH

R/W

PC: 439+86.86

MATCH LINE 442+50.70

428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00 437+00 438+00 439+00 440+00 441+00 442+00

WZ 870-001

WZ 870-003

MGS GUARDRAIL TERMINAL EAT
STA 430+68, OFFSET 19-FT RT

WETLANDS

EXCAVATION LIMITS (STRUCTURE)

MGS GUARDRAIL 3
STA 429+75 RT TO STA 430+14 RT
(17-FT OFFSET)

INSTALL MGS GUARDRAIL THRIE BEAM
STA 429+37 TO STA 429+75 RT
(17-FT OFFSET)

REMOVING GUARDRAIL
STA 429+37 TO STA 430+64 RT

BARRIER SYSTEM GRADING
SHAPING FINISHING
STA 430+17 TO 431+88 RT

EXCAVATION LIMITS (STRUCTURE)

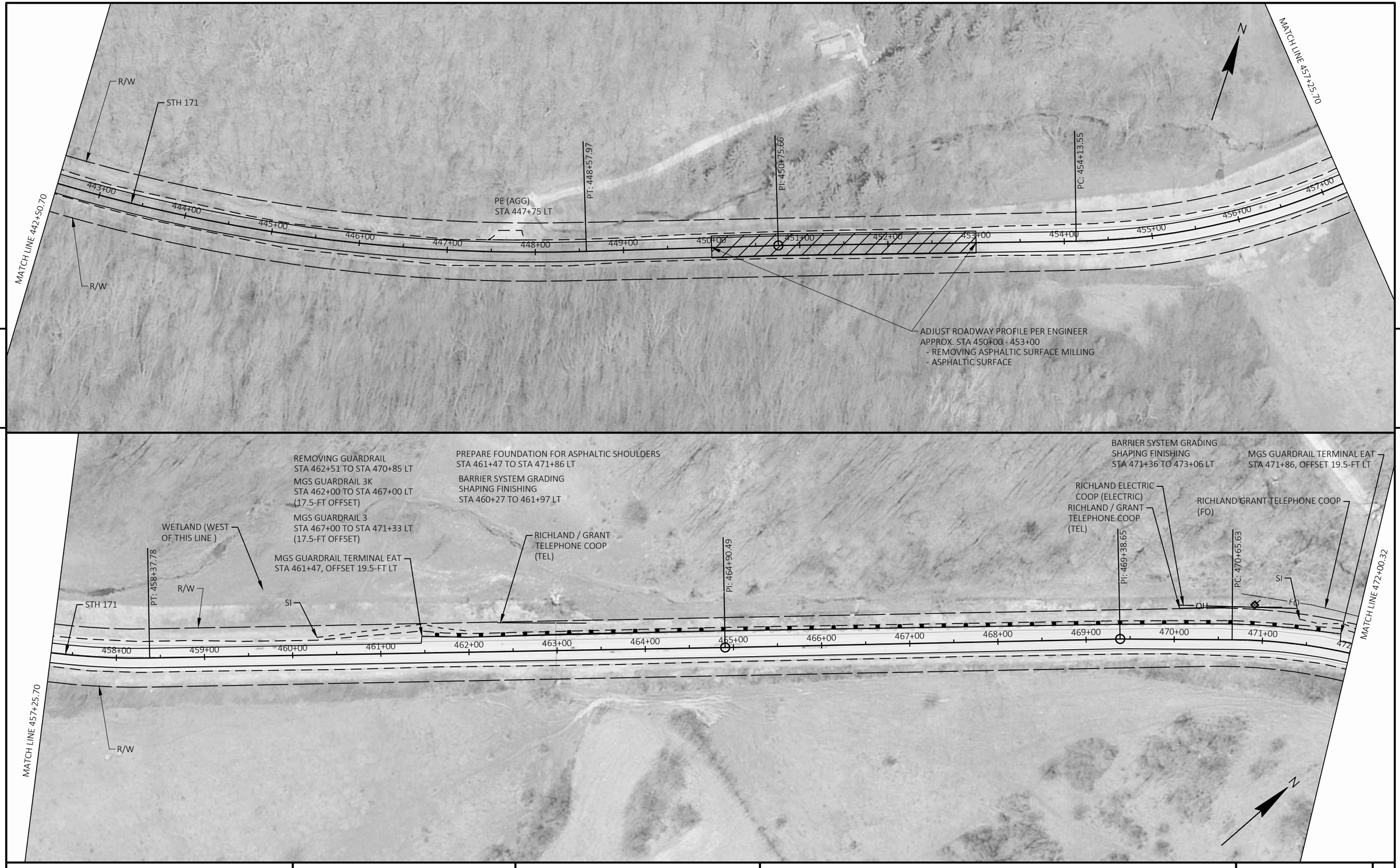
PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
STA 425+22 TO STA 428+95 RT
STA 429+37 TO STA 430+68 RT

HALL BOTTOM CREEK

WETLANDS

MATCH LINE 427+75.70

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 47	E



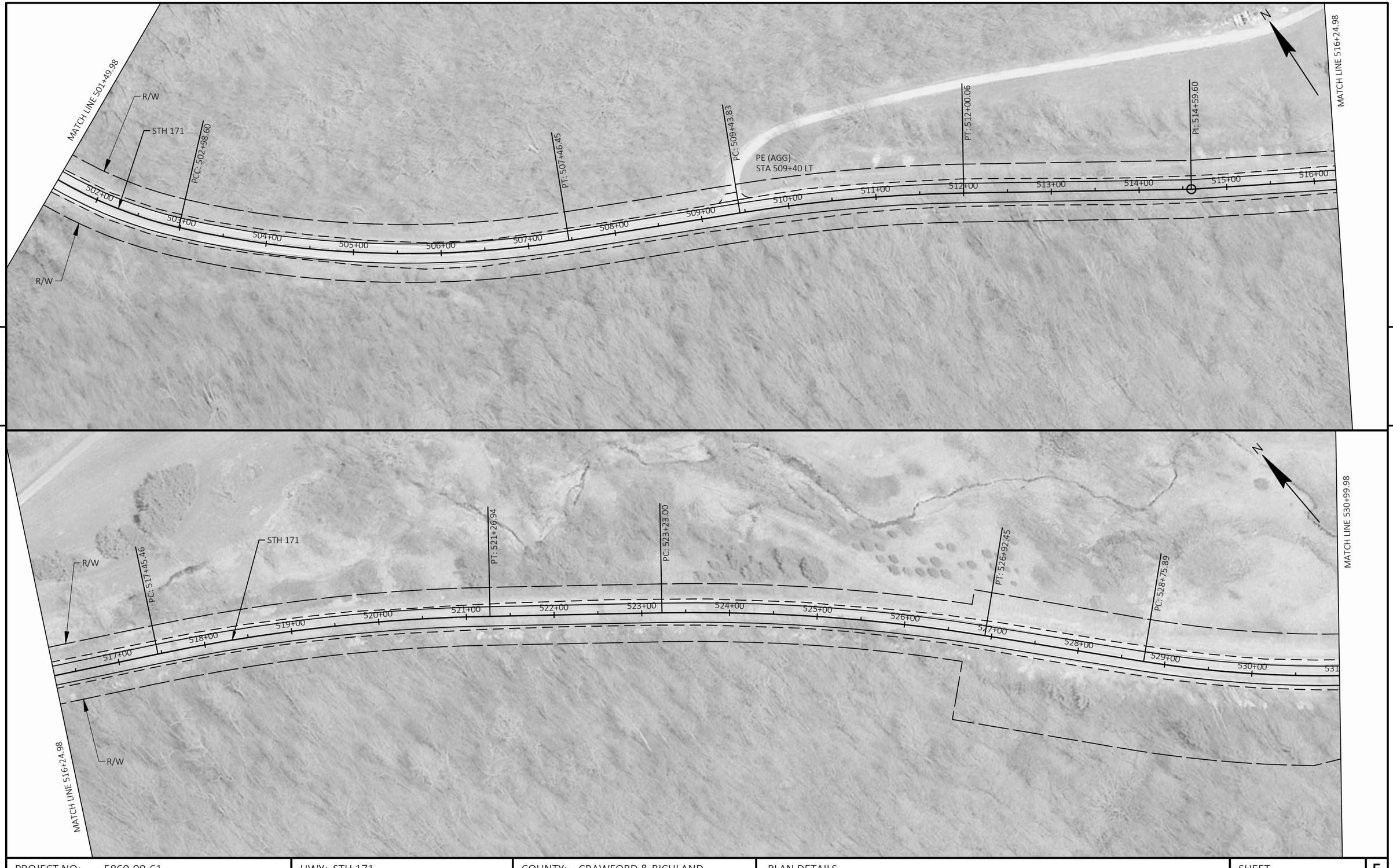
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 48	E



*STATION	*OFFSET (FT)	*NORTHING	*EASTING	*ELEVATION	* INFORMATION IS APPROXIMATE
482+30	2-FT (LT)	620075.5292	448070.0541	1017.700	

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 49 E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 17
PLOT DATE : 9/6/2023 9:00 AM
PLOT BY : DAVIDSON, JONATHAN B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



5

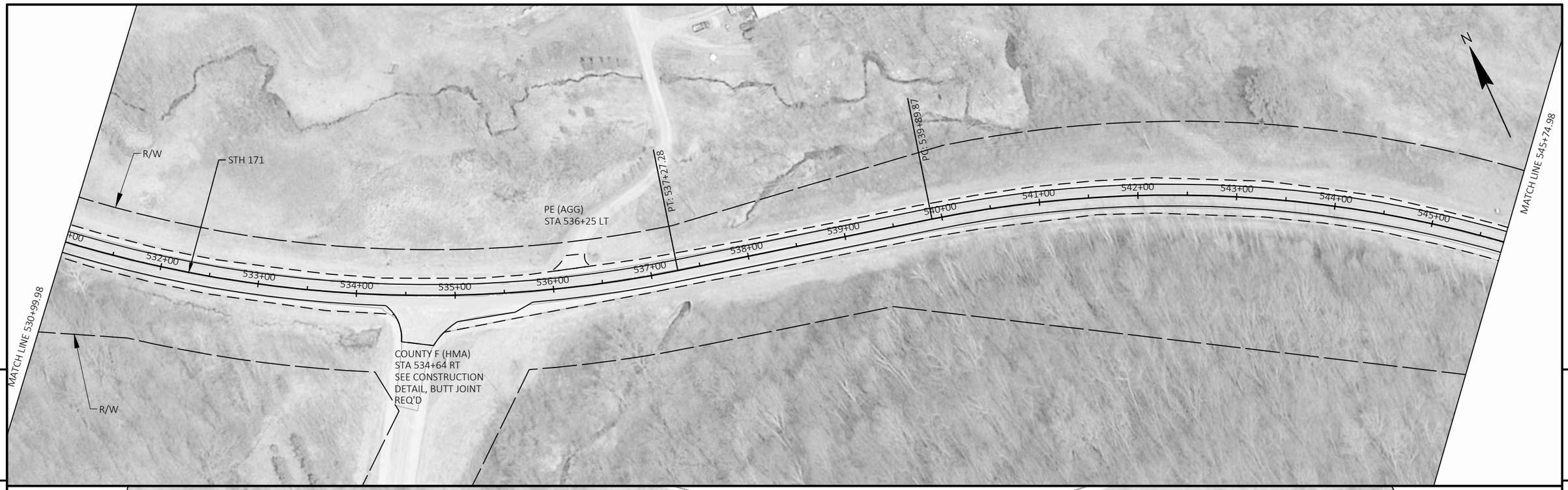
5

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 50	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 18

PLOT DATE : 9/6/2023 9:01 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44





5

5

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 51 E





PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 52 E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 20

PLOT DATE : 9/6/2023 9:01 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 53	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 21
PLOT DATE : 9/6/2023 9:01 AM
PLOT BY : DAVIDSON, JONATHAN B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



5 5

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 54 E



5

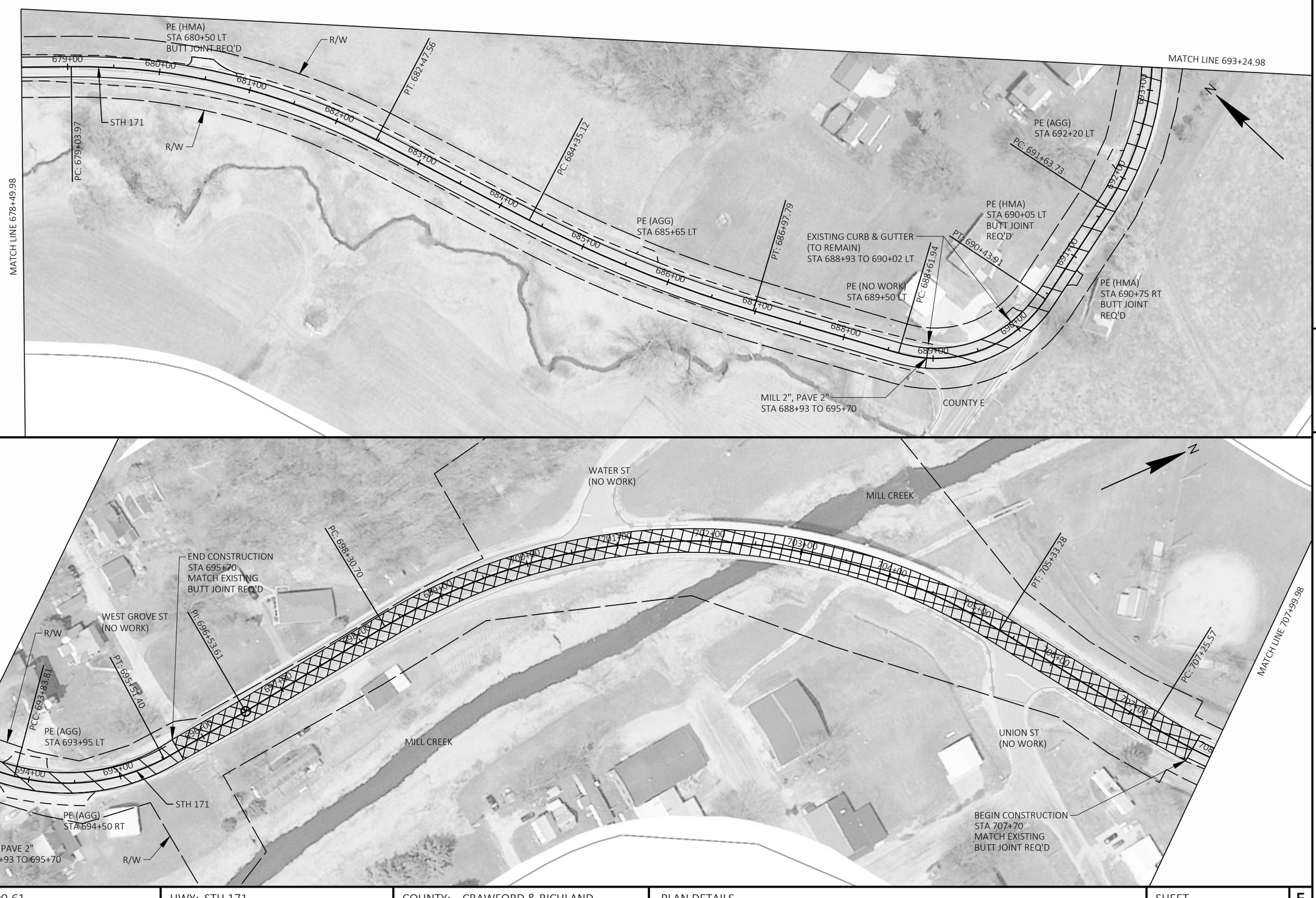
5

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 55	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 23

PLOT DATE : 9/6/2023 9:02 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 56 E



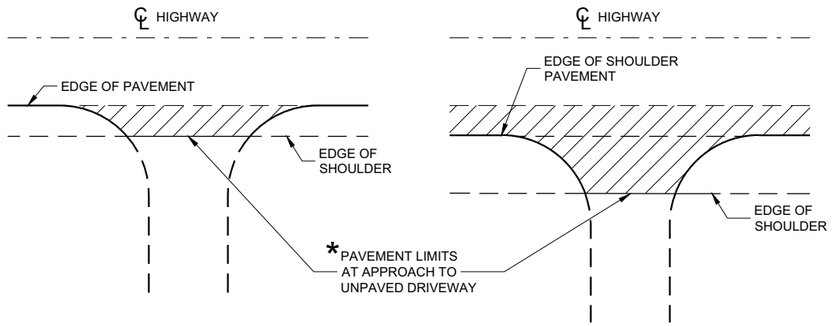
5

5

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	PLAN DETAILS	SHEET 57	E

Standard Detail Drawing List

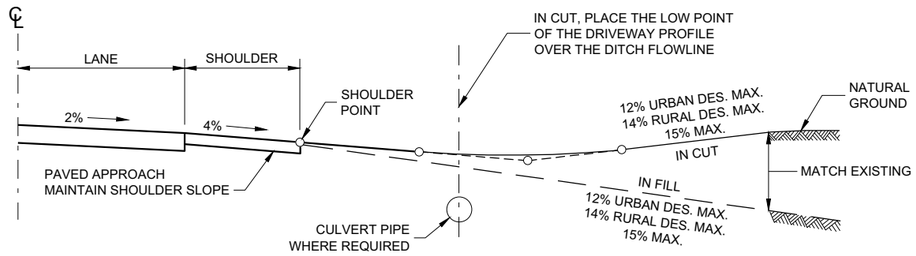
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E09-06	SILT FENCE
13A08-02	TRANSVERSE RUMBLE STRIPS, ASPHALTIC
13C19-03	HMA LONGITUDINAL JOINTS
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-12A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-12B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-12C	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS
14B20-12D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-12E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B20-12F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B20-12G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-12H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B28-04A	GUARDRAIL MOW STRIP
14B28-04B	GUARDRAIL MOW STRIP
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D32-07	TRAFFIC CONTROL, ONE LANE ROAD STOP CONDITION
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES



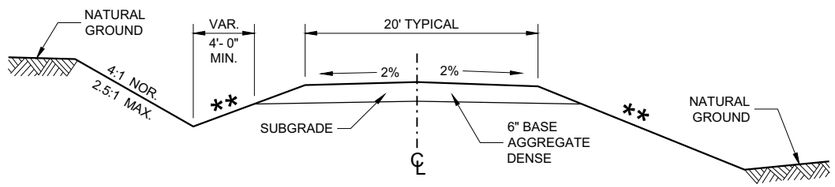
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

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



TYPICAL DRIVEWAY PROFILES

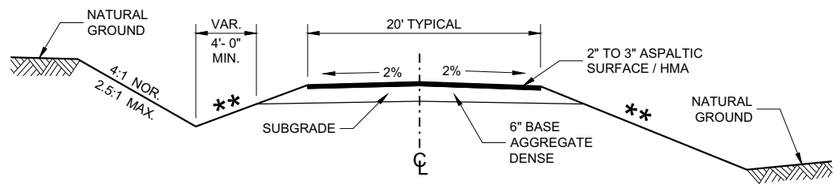


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

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



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

6

SDD 08D21 - 01

SDD 08D21 - 01

DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

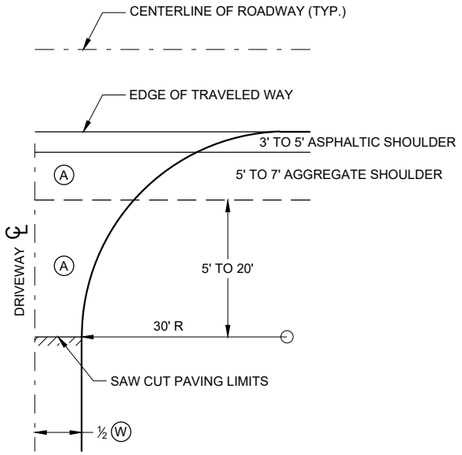
APPROVED
December 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

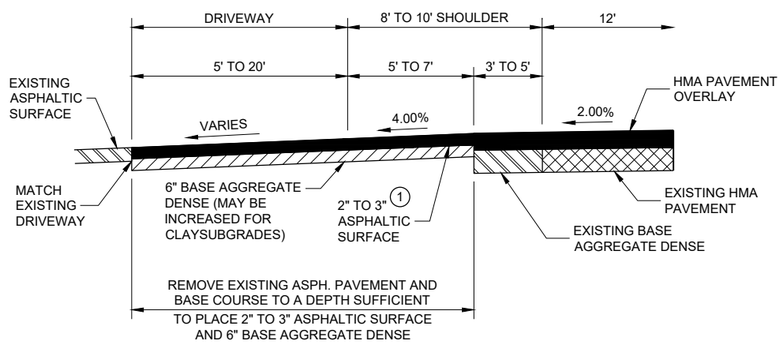
GENERAL NOTES

(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PLAN VIEW

HALF SECTION



PROFILE VIEW

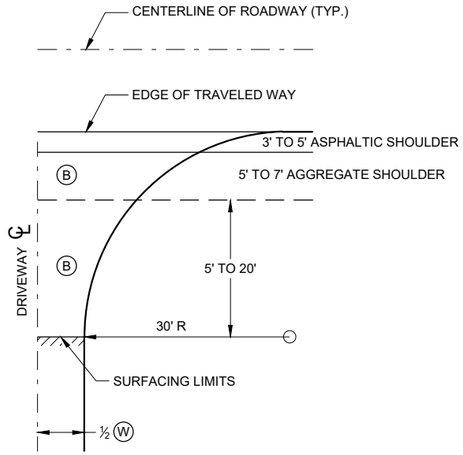
RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS

(A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)

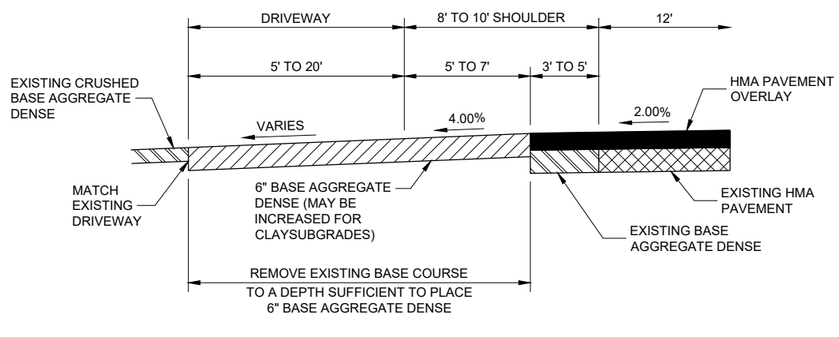
(B) : PAID FOR AS BASE AGGREGATE DENSE 1 ¼" (TON)

(W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



PLAN VIEW

HALF SECTION



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE

RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

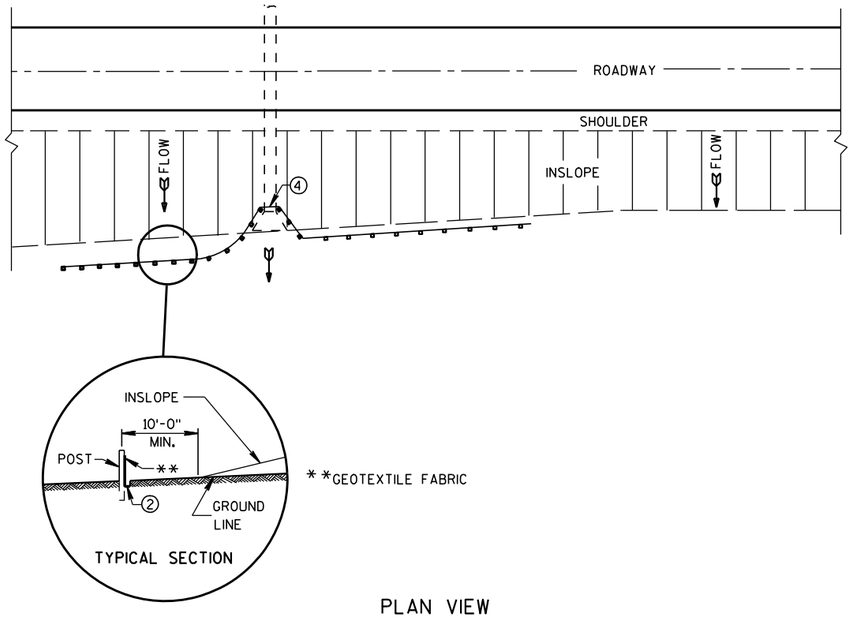
APPROVED
December 2016
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

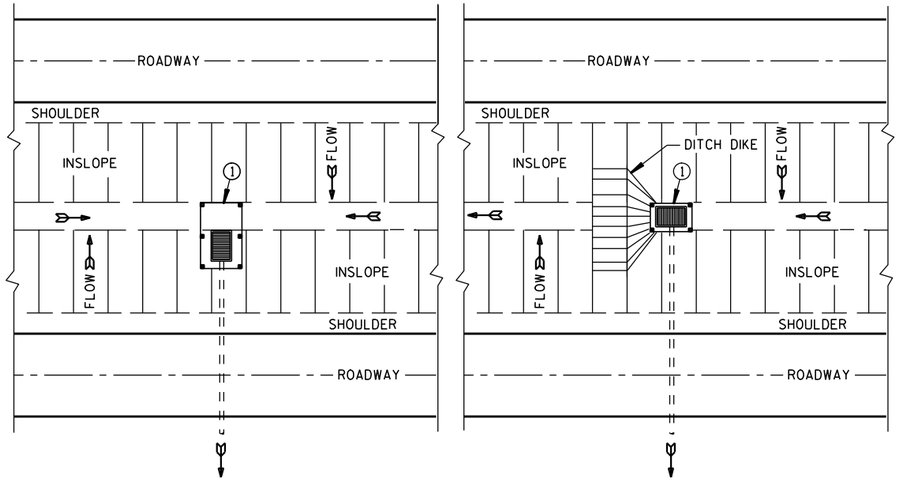
6

SDD 08D22 - 01



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



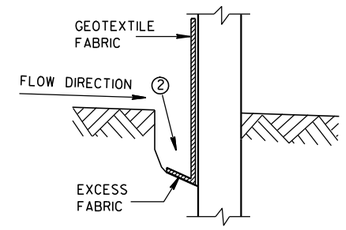
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

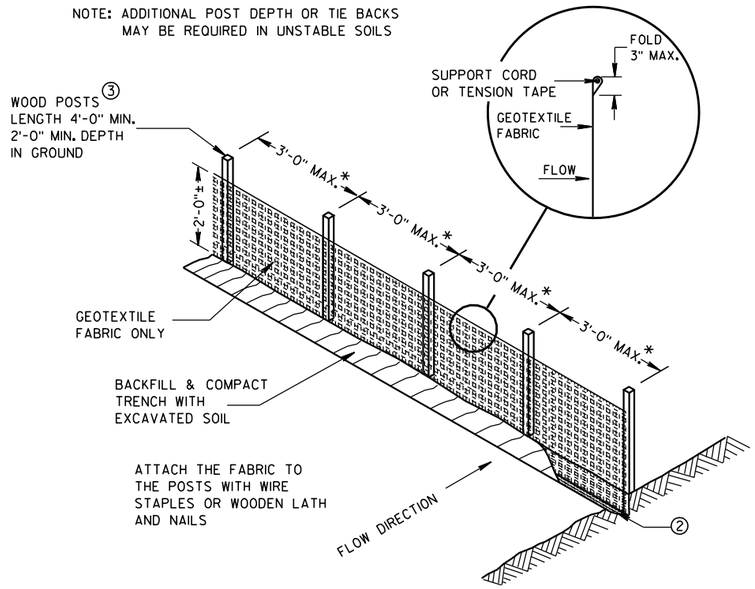
GENERAL NOTES

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

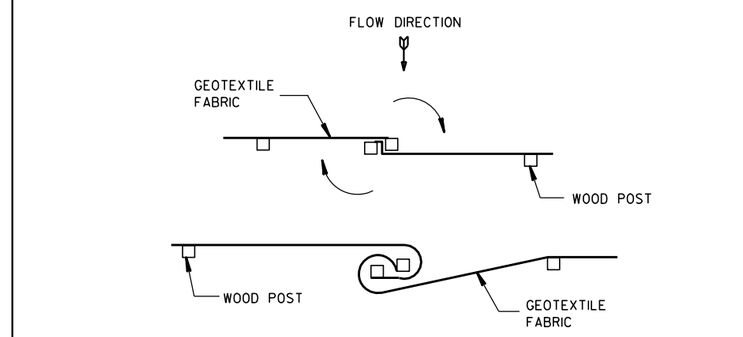
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



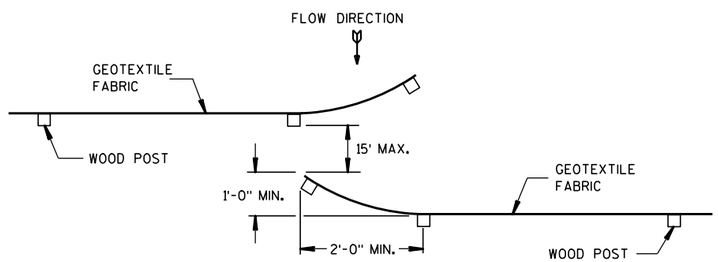
TRENCH DETAIL



SILT FENCE

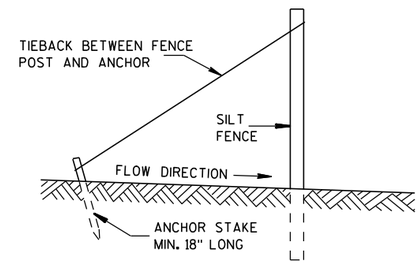


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

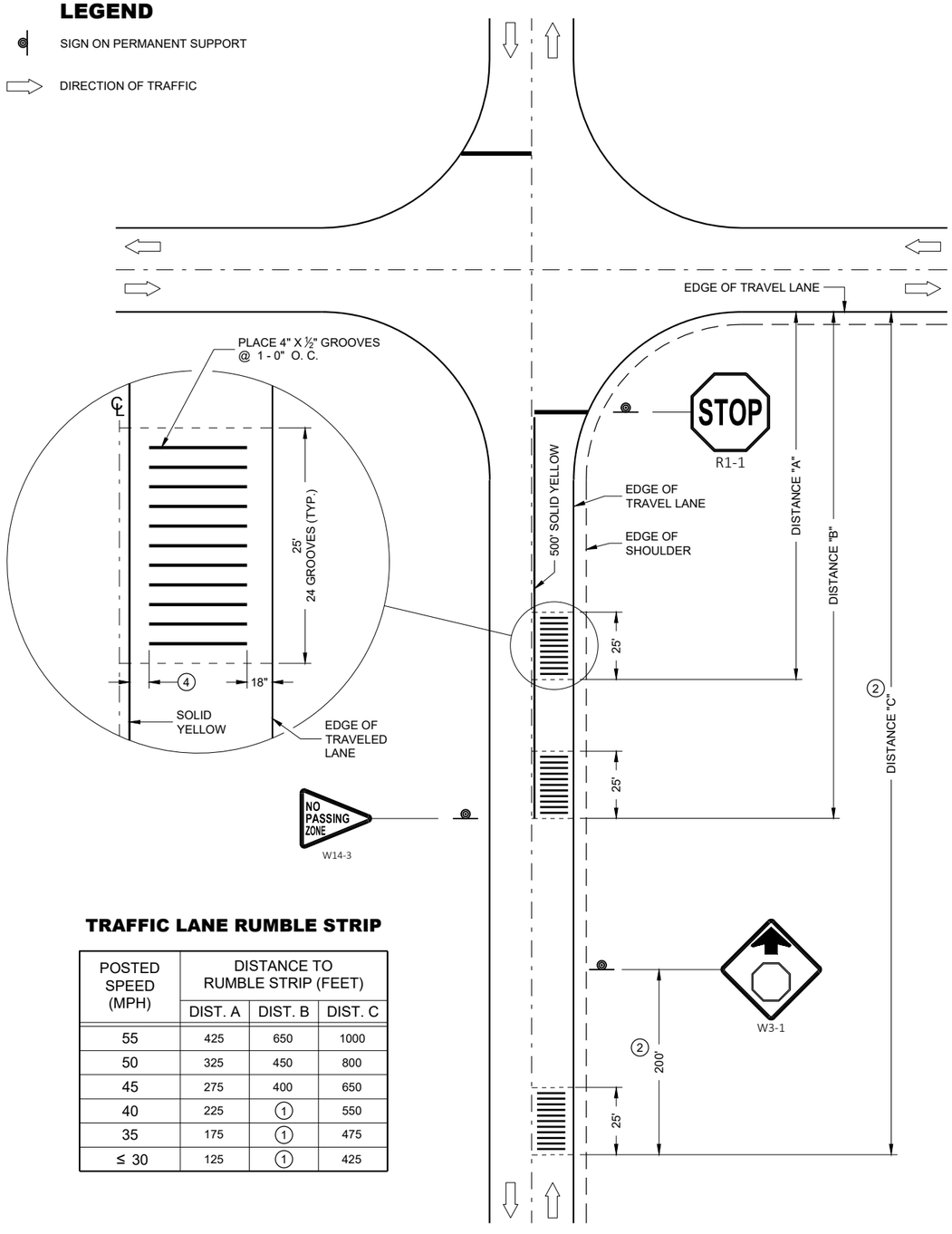
6

S.D.D. 8 E 9-6

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TRAFFIC LANE RUMBLE STRIP

POSTED SPEED (MPH)	DISTANCE TO RUMBLE STRIP (FEET)		
	DIST. A	DIST. B	DIST. C
55	425	650	1000
50	325	450	800
45	275	400	650
40	225	(1)	550
35	175	(1)	475
≤ 30	125	(1)	425

RUMBLE STRIP LOCATION

GENERAL NOTES

CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.

WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA, THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.

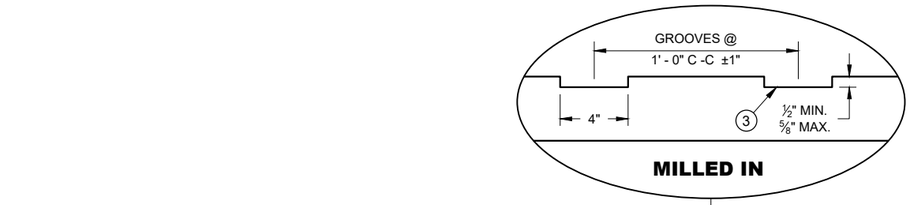
PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDE ELSEWHERE IN THE CONTRACT.

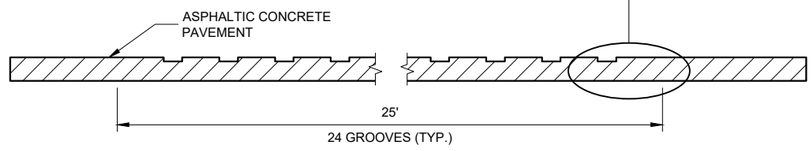
(1) ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.

(2) LOCATE RUMBLE STRIP 200 FEET IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE "C".

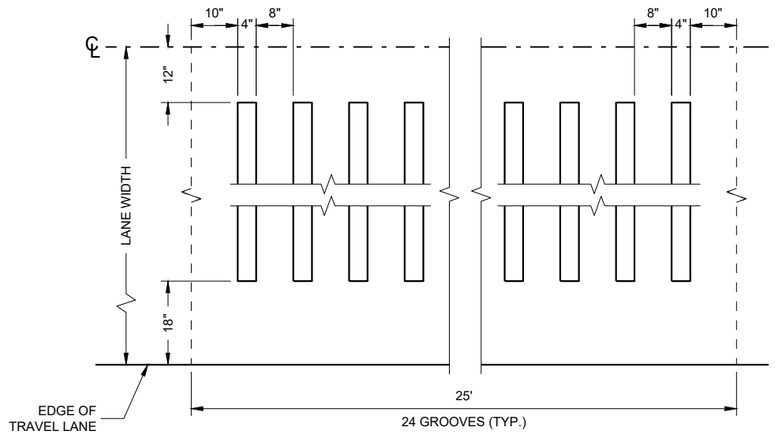
(3) TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY $\frac{1}{16}$".

(4) 12 INCH CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.





ELEVATION VIEW



PLAN VIEW

ASPHALTIC PAVEMENT MILLED IN

TRANSVERSE RUMBLE STRIPS, ASPHALTIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY DESIGN STANDARDS UNIT SUPERVISOR

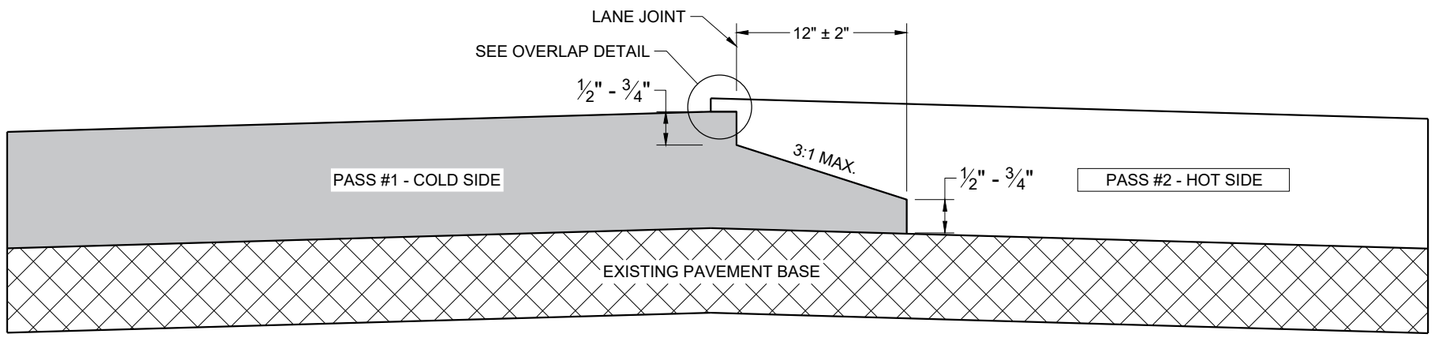
FHWA

6

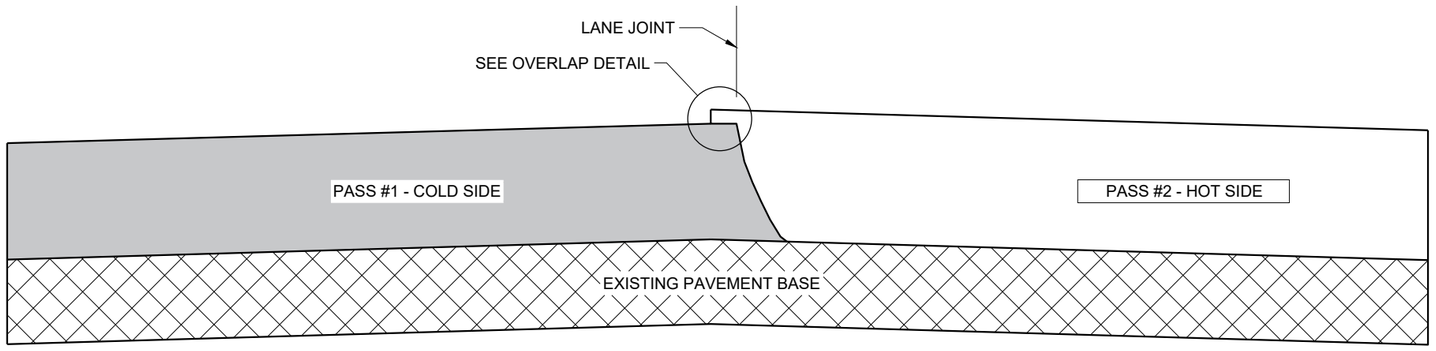
SDD 13A08 - 02

6

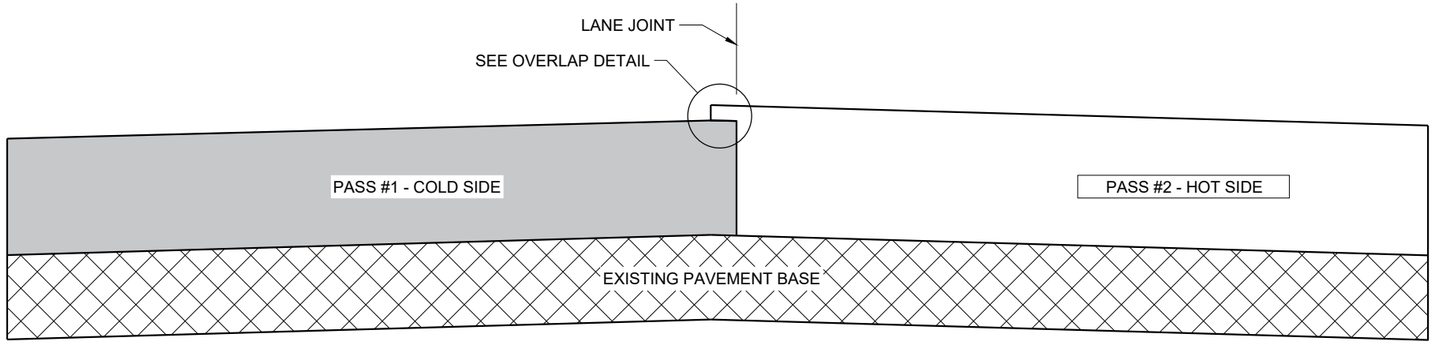
SDD 13A08 - 02



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

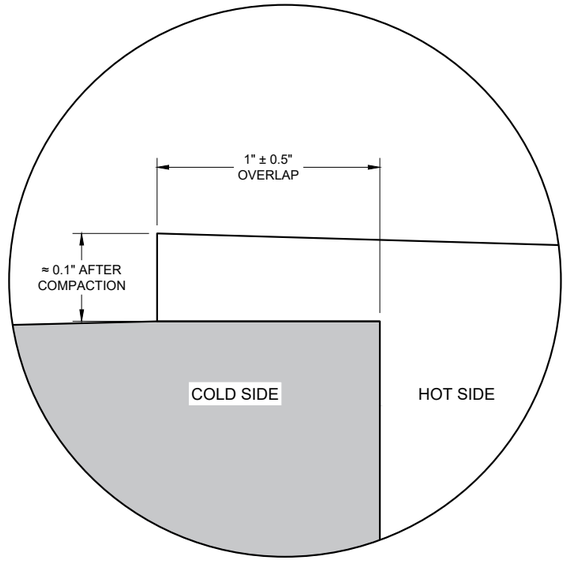
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

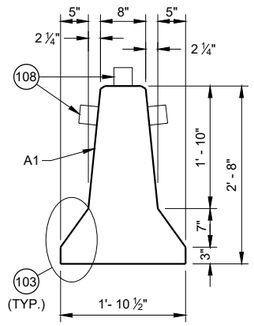
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

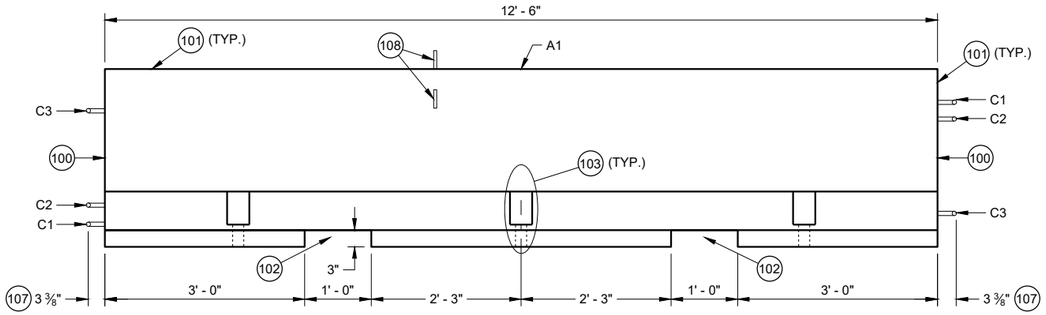
APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

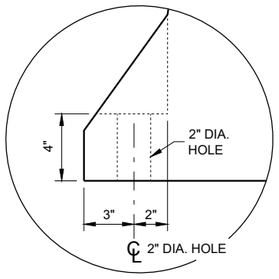
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

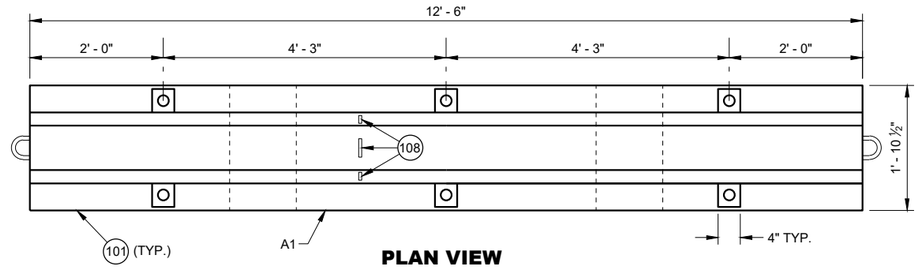
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

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

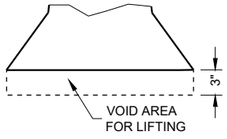


ANCHOR BLOCK DETAIL

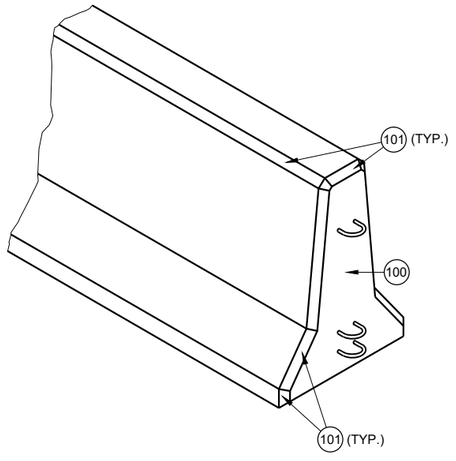


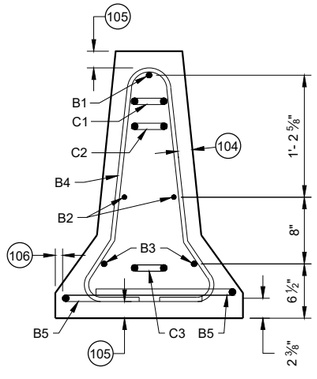
PLAN VIEW

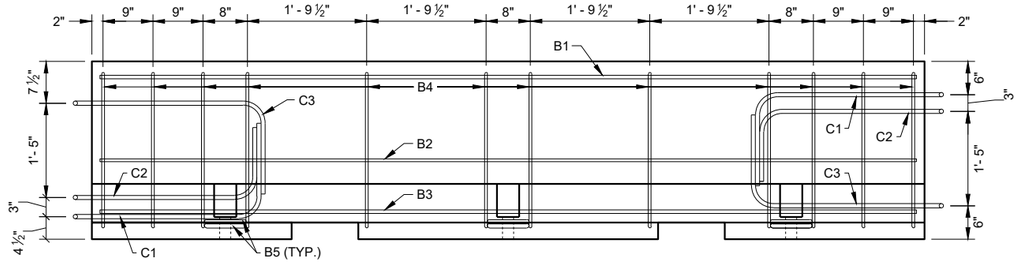
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)



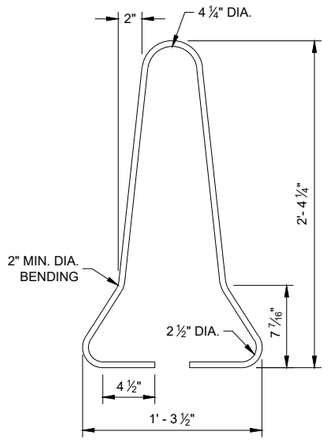




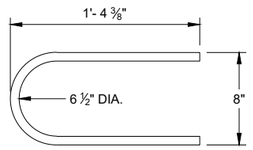
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

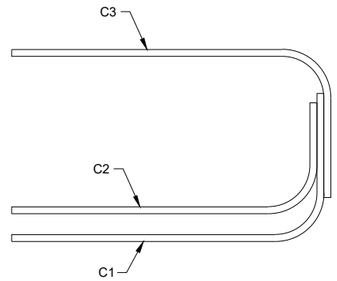
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



B4 BAR DETAIL

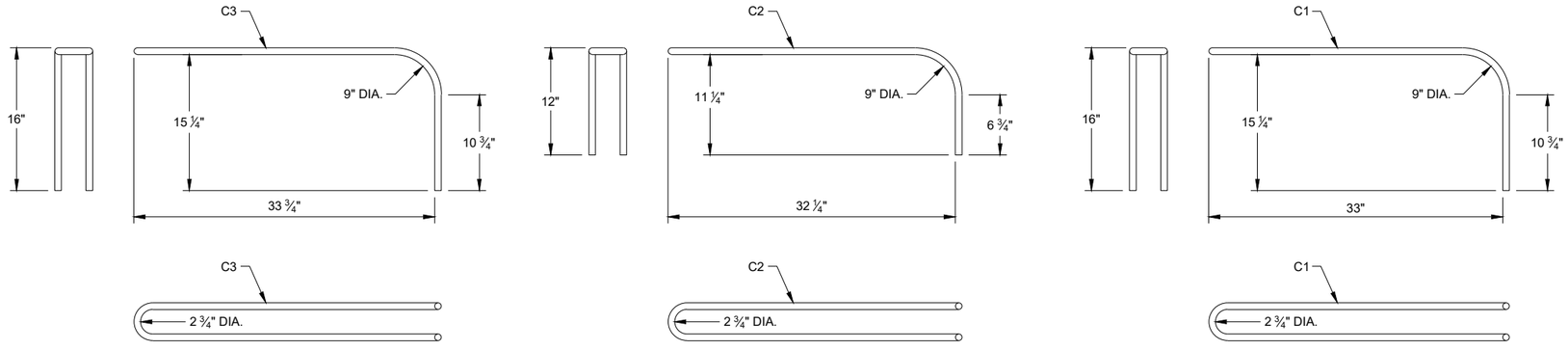


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



C BAR DETAILS

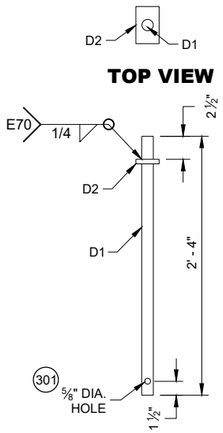
6

SDD 14B07-16b

6

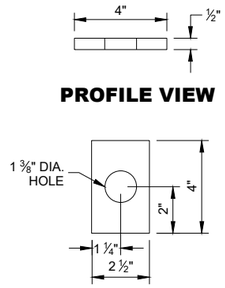
SDD 14B07-16b

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

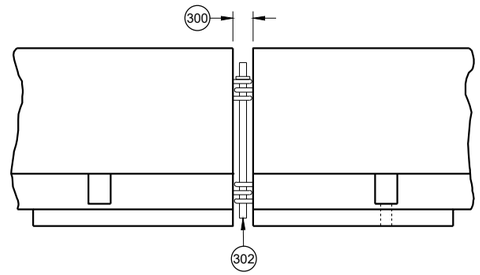


PROFILE VIEW

CONNECTOR PIN ASSEMBLY



TOP VIEW
D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

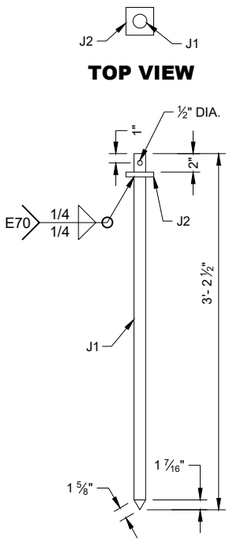
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

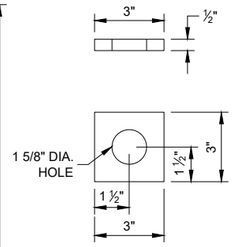
306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.

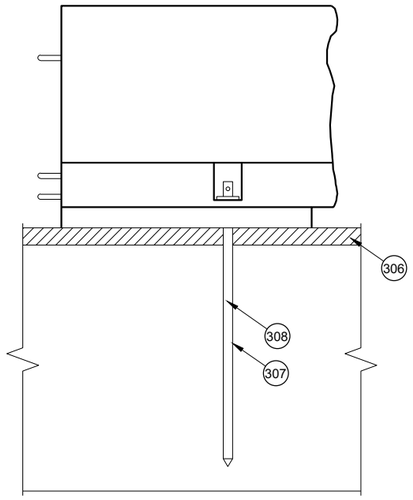




TOP VIEW
J2

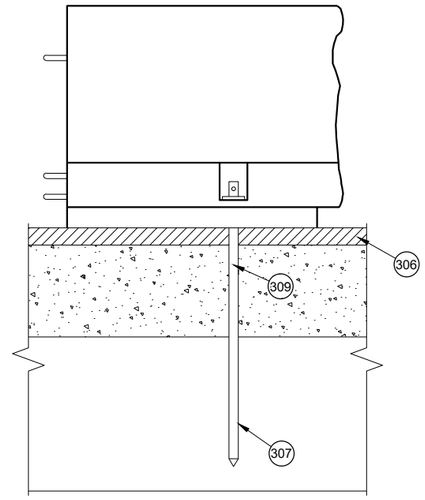
PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY



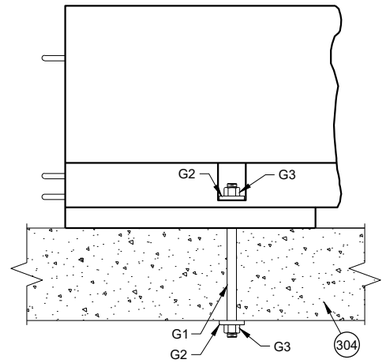
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



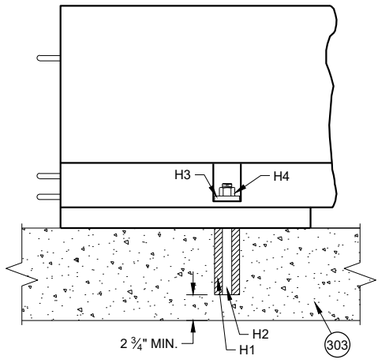
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION 305



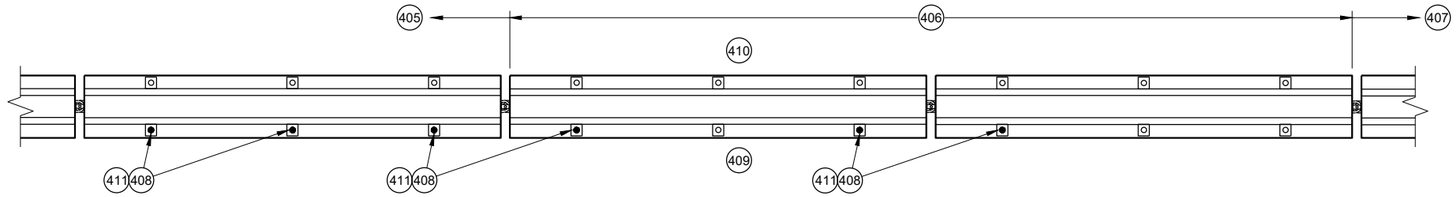
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION 305

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

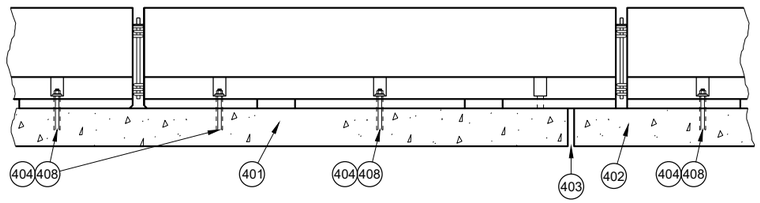
6

SDD 14B07-16c



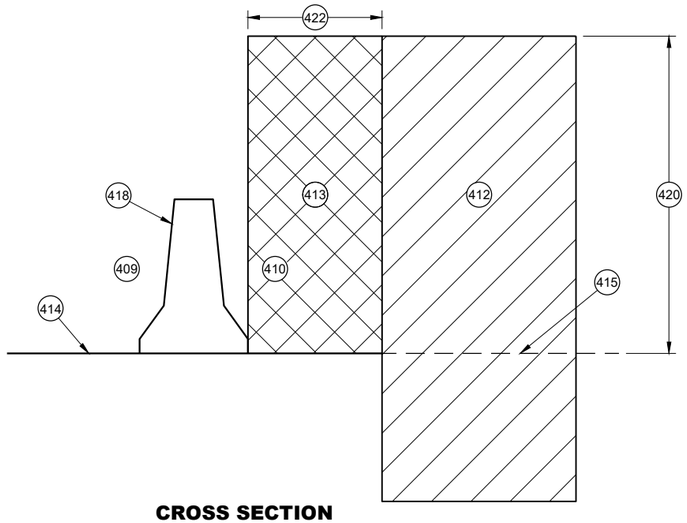
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



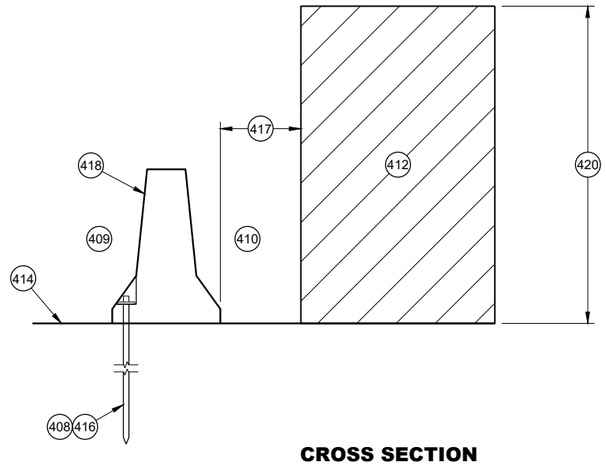
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



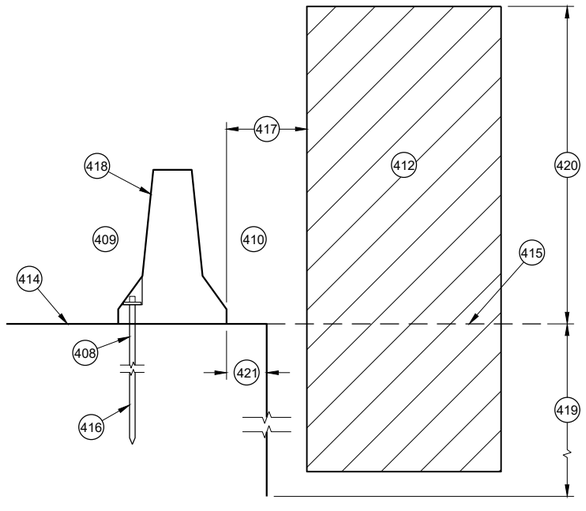
CROSS SECTION

FREE STANDING BARRIER



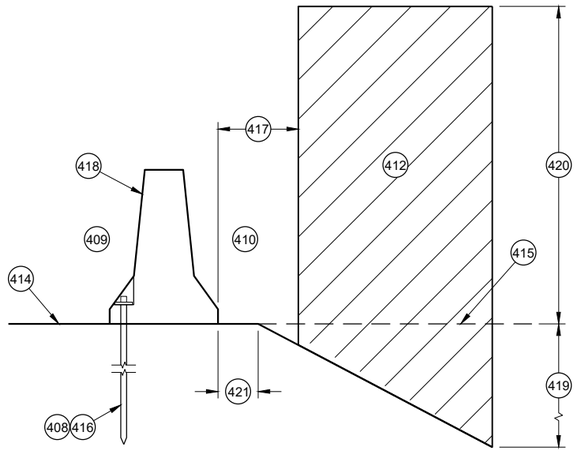
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

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

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

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

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16d

GENERAL NOTES

(500) EXISTING RIGID BARRIERS (VARIES)

(501) TEMPORARY BARRIER

(502) SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

(503) ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

(504) NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

(505) TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

(506) TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

(507) VERTICAL BARRIER

(508) SAFETY SHAPE BARRIER

(509) SINGLE SLOPE BARRIER

(510) CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

(511) BENT THRIE BEAM TO FIT.

(512) THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

(513) TWO (2) P1, P2 AND P3 ARE REQUIRED

(514) FIVE (5) N1, N2 AND N3 ARE REQUIRED

(515) TWO (2) R1, R2 AND R3 ARE REQUIRED

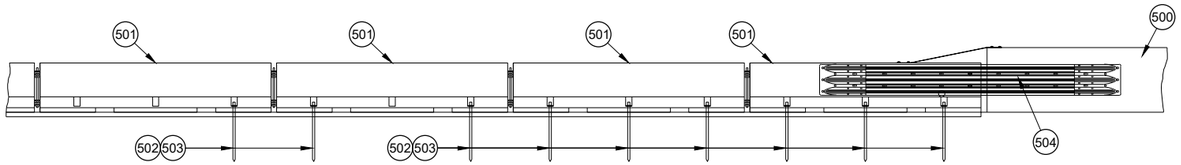
(516) CUT WOOD BLOCK TO FIT.

(517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

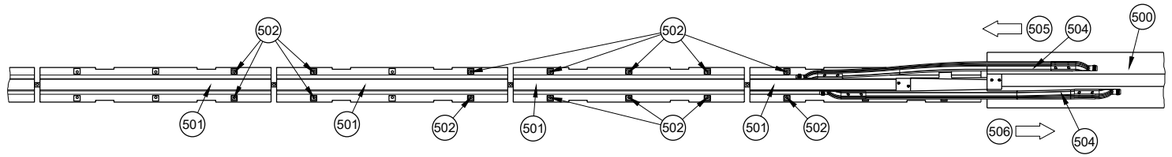
(518) CAP ASSEMBLY

(519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

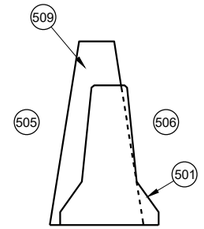
(520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



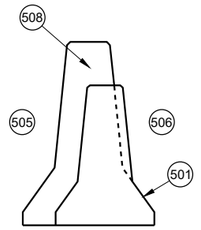
PROFILE VIEW



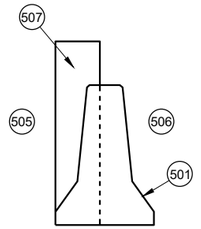
PLAN VIEW
TRANSITION TO RIGID BARRIER



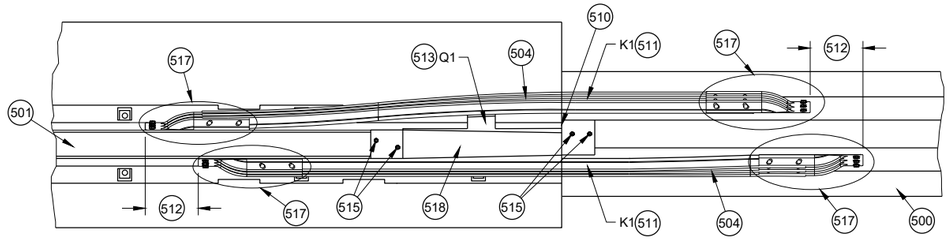
CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE



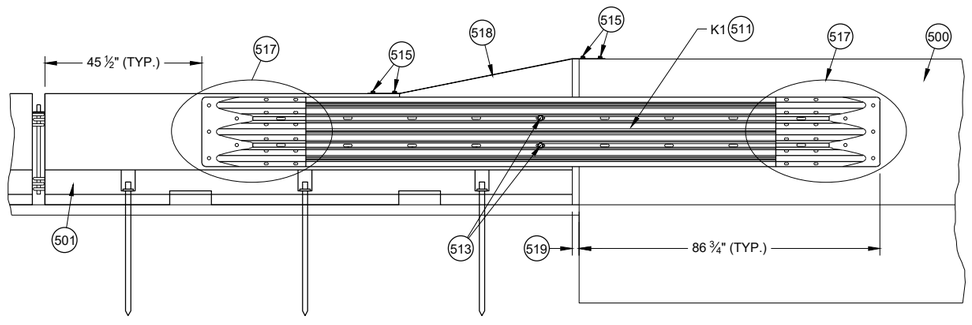
CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE



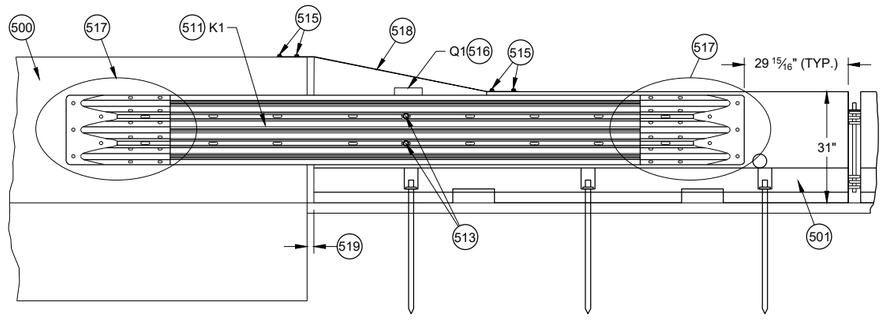
CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL



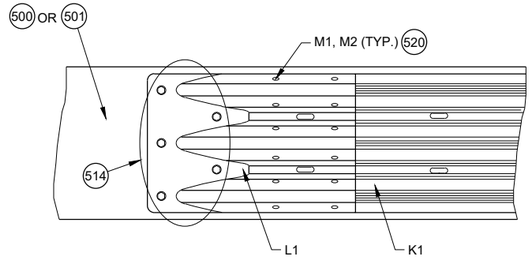
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER



(517) DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

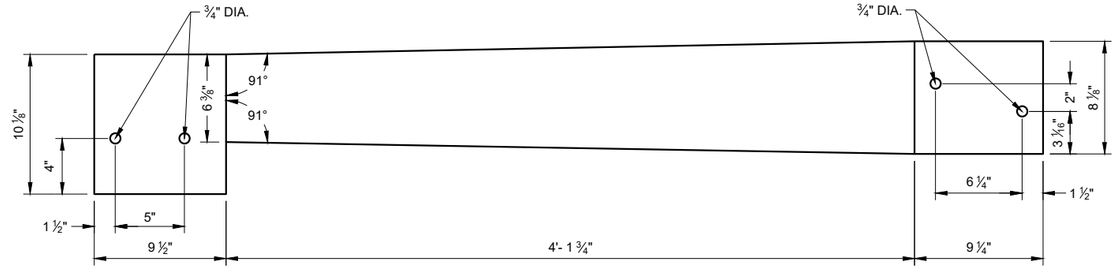
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16e

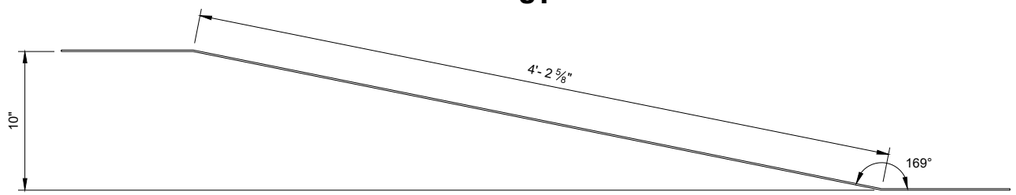
6

SDD 14B07-16e



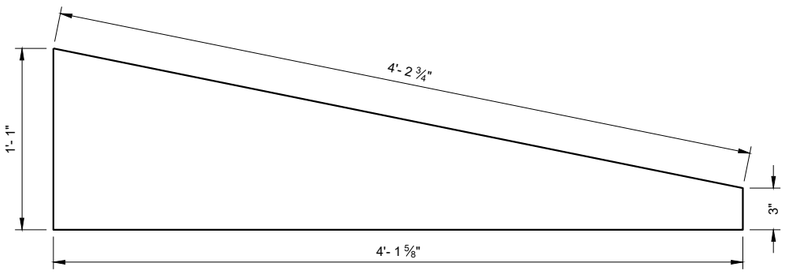
TOP VIEW

S1



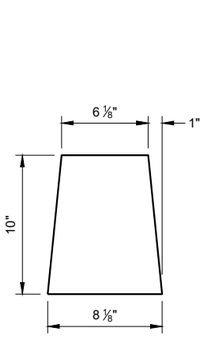
ELEVATION VIEW

S1

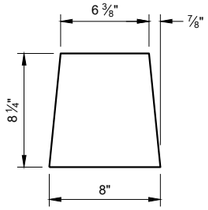


SIDE VIEW

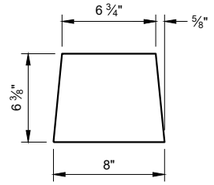
S3



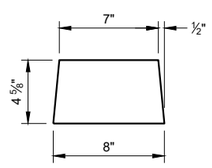
S2



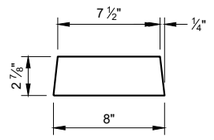
S4



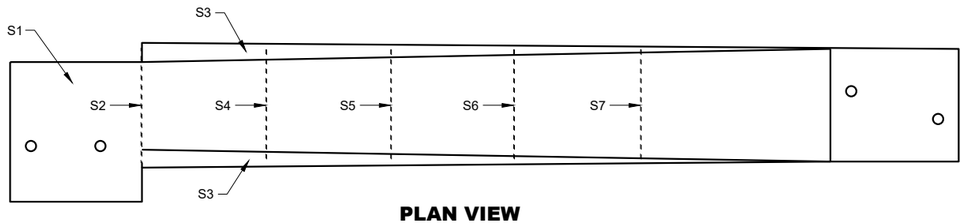
S5



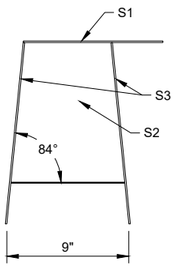
S6



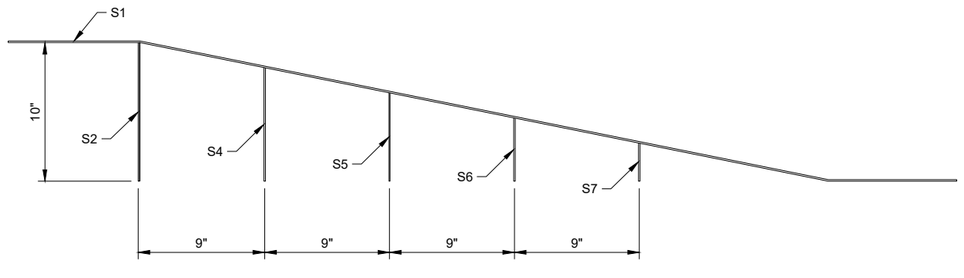
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

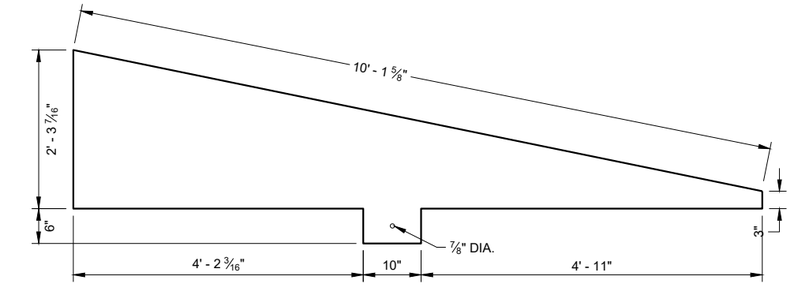
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

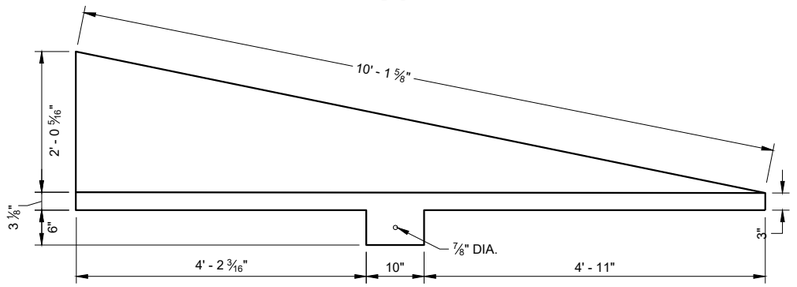
SDD 14B07-16f



SIDE VIEW
T4



END VIEW



SIDE VIEW
T3

END VIEW

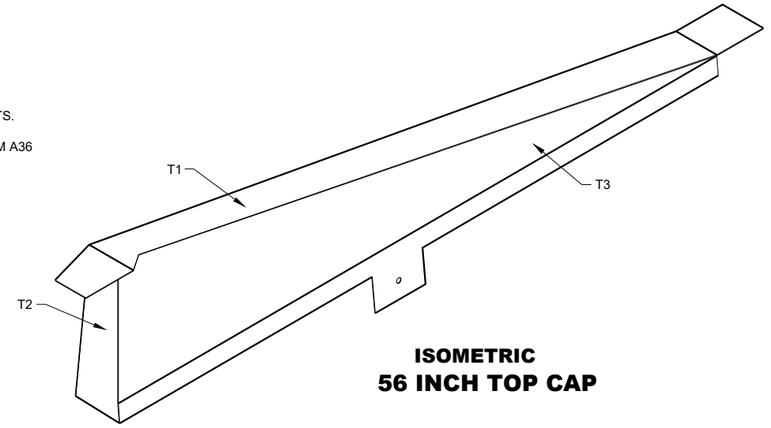
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

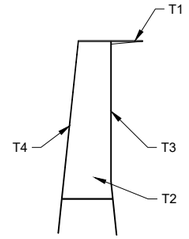
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

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

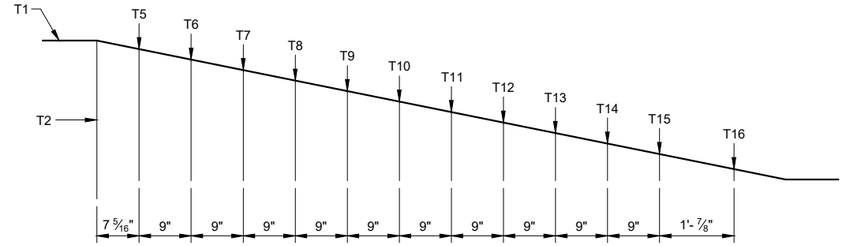
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



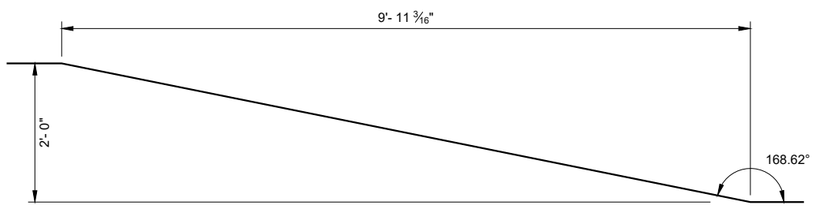
ISOMETRIC
56 INCH TOP CAP



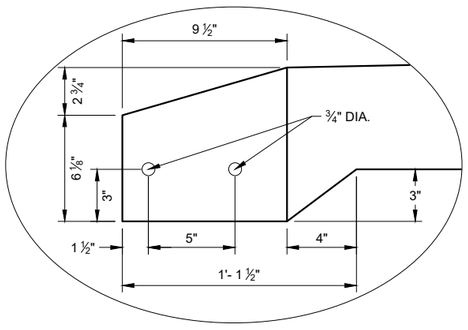
END VIEW
56 INCH TOP CAP



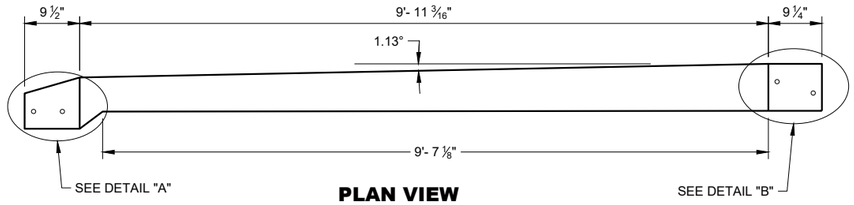
SIDE VIEW (700)
56 INCH TOP CAP



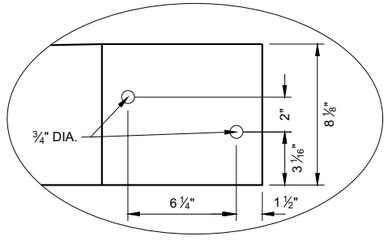
SIDE VIEW
TOP PLATE T1



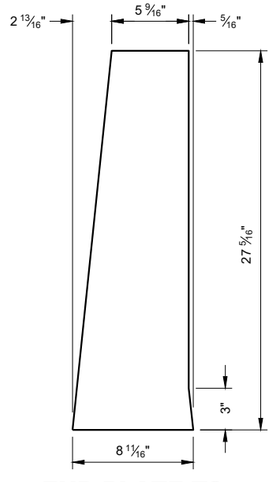
DETAIL "A"



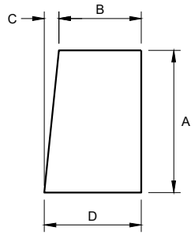
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

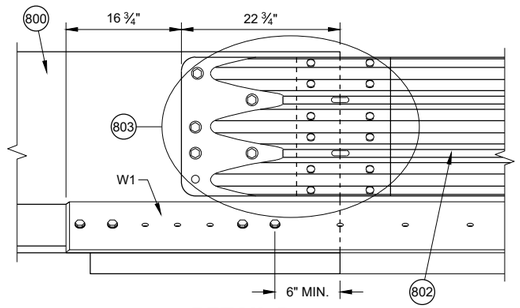
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 11/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

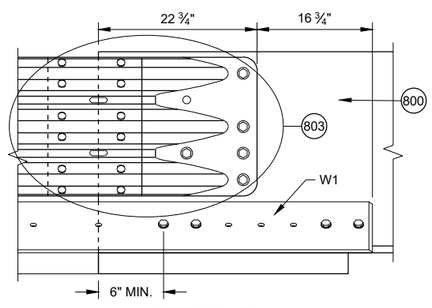
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

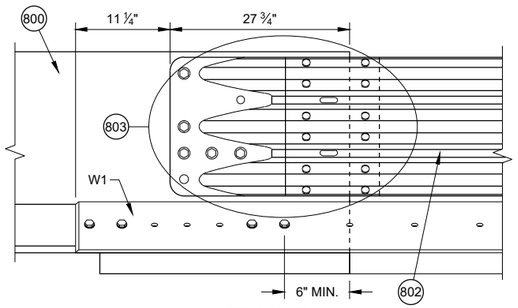
SDD 14B07-16g



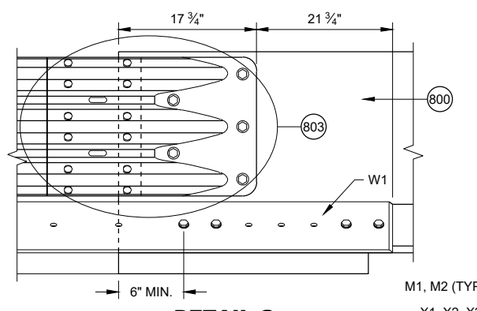
DETAIL D



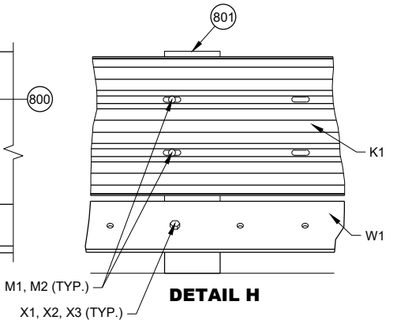
DETAIL E



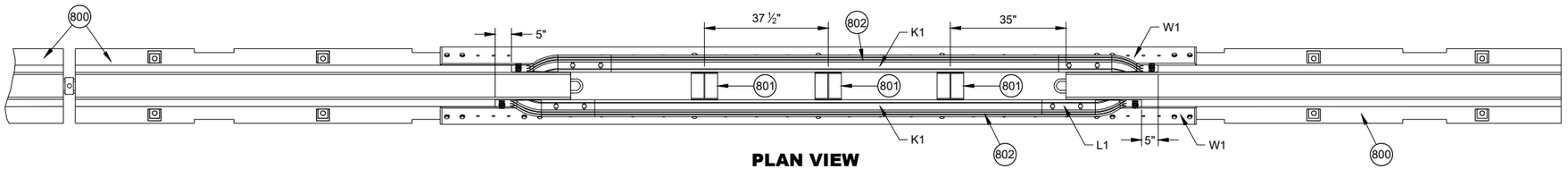
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

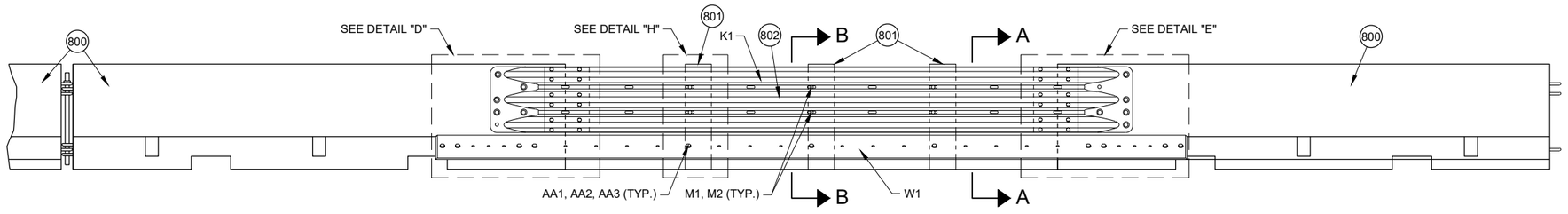
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

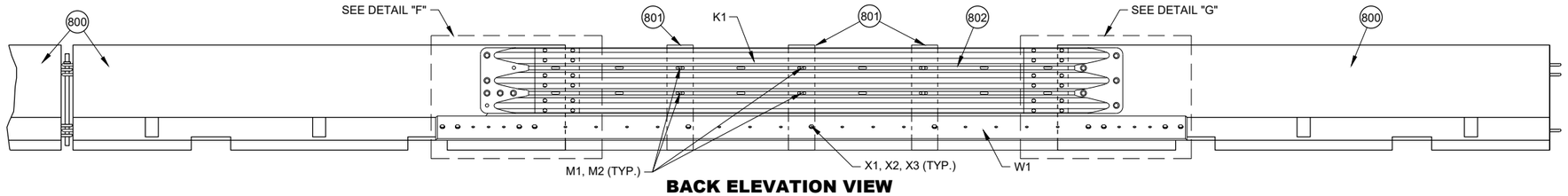
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



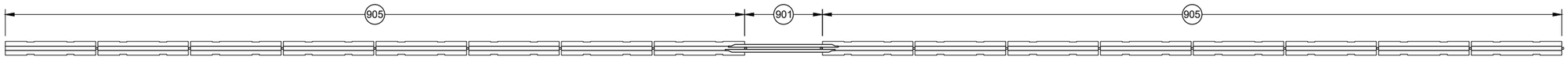
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

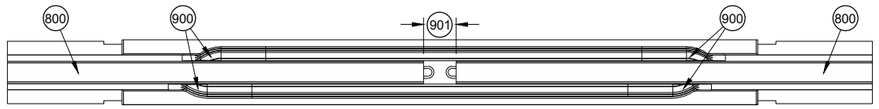
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16h



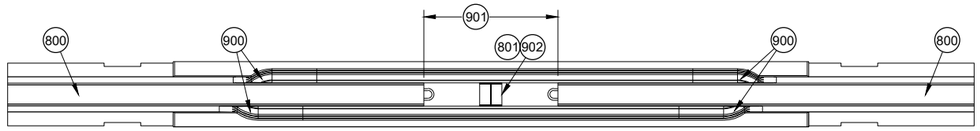
PLAN VIEW
GAP WITHIN SPACING



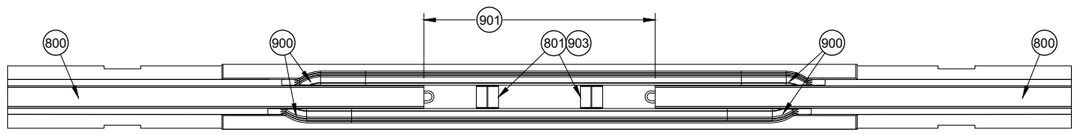
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

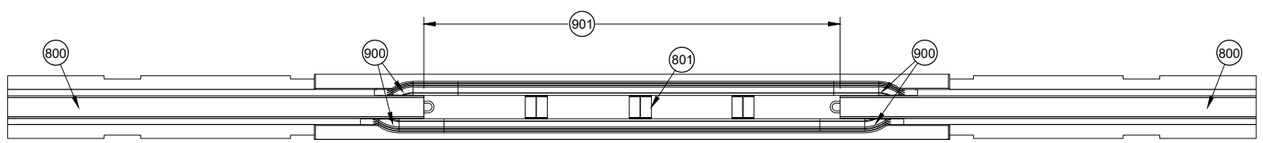
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

6

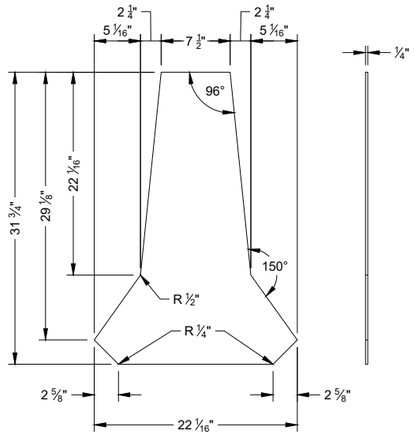
SDD 14B07-16i

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

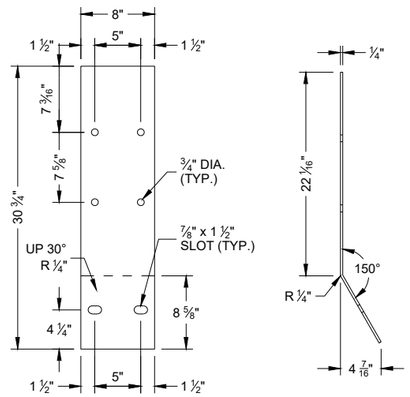
6

SDD 14B07-16i



PROFILE VIEW SIDE VIEW

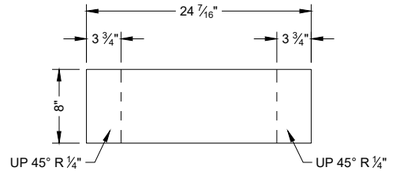
STIFFENER ASSEMBLY CENTER PANEL U1



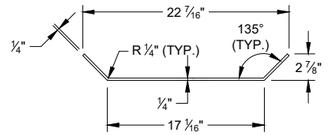
FLAT PATTERN

SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

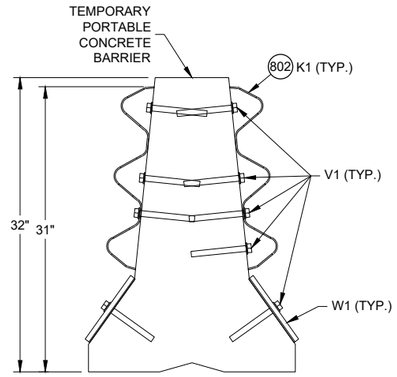


FLAT PATTERN

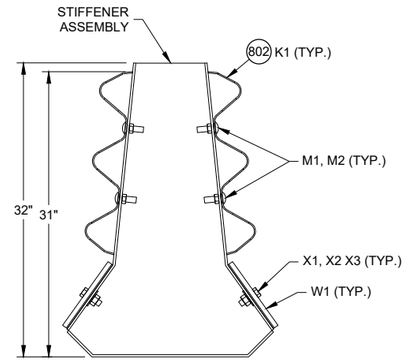


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

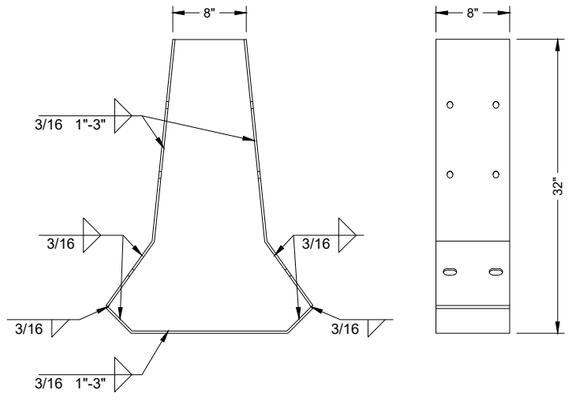


SECTION A - A



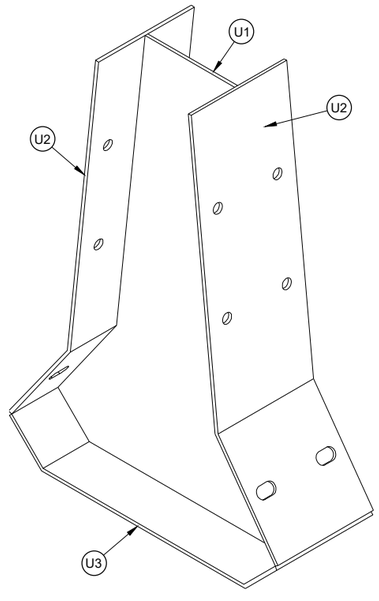
SECTION B - B

PLAN VIEW



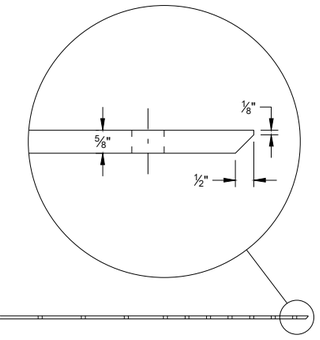
PROFILE VIEW

SIDE VIEW

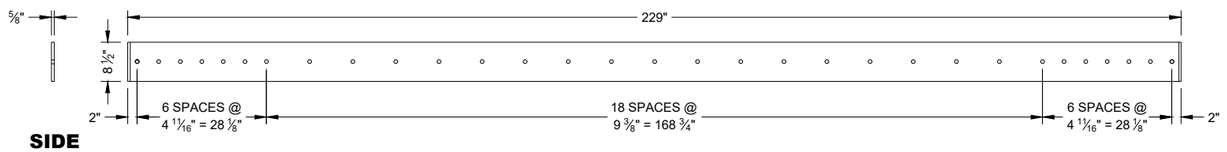


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

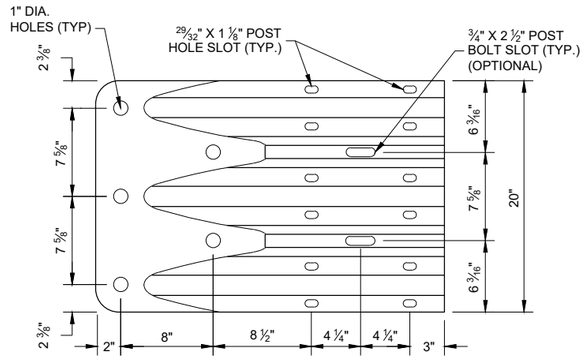
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

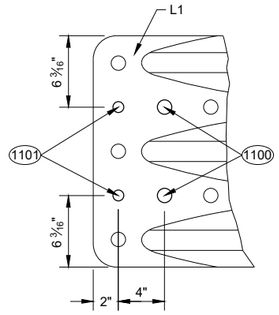
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16j



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

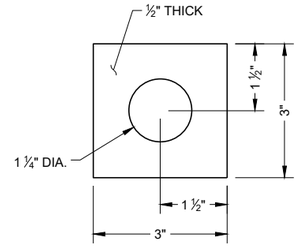


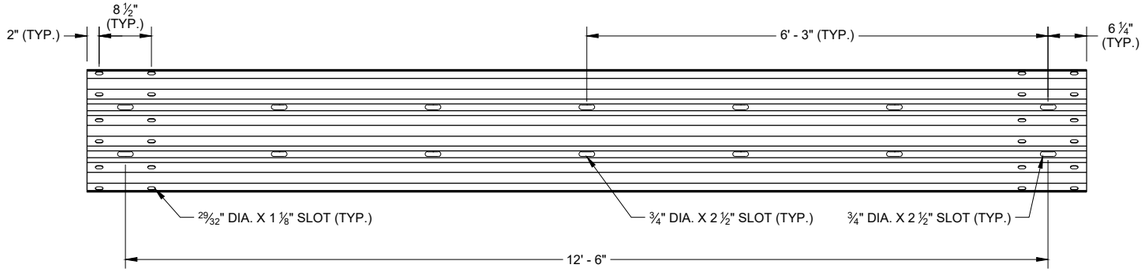
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

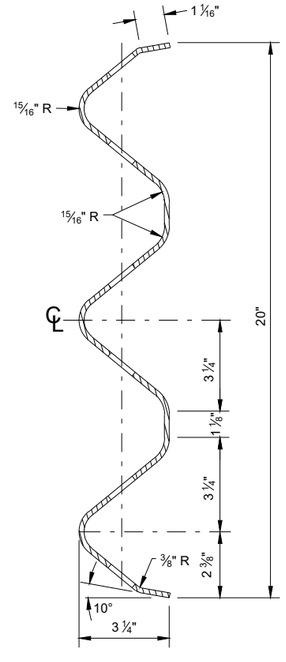
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



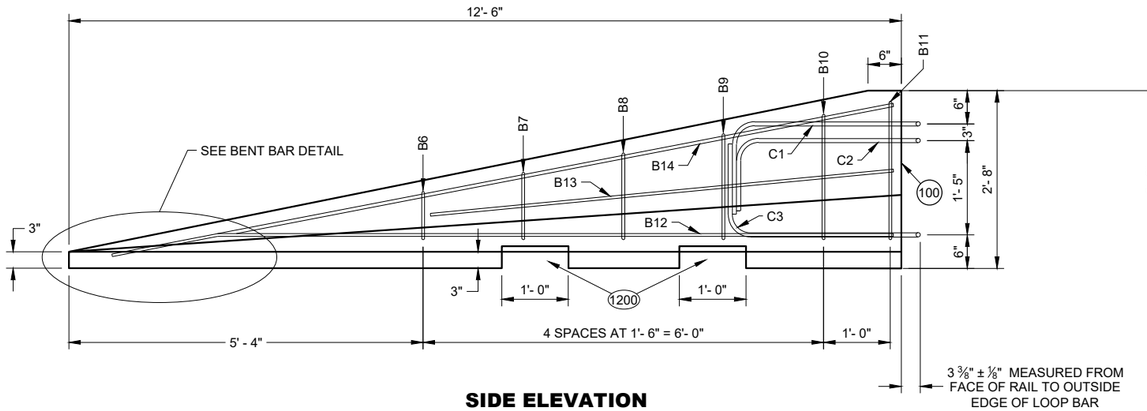
SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

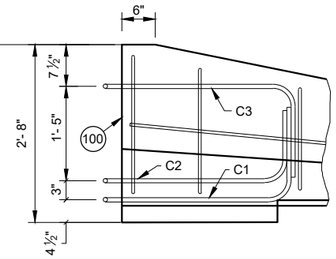
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16k



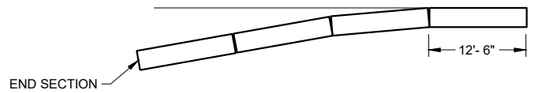
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



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

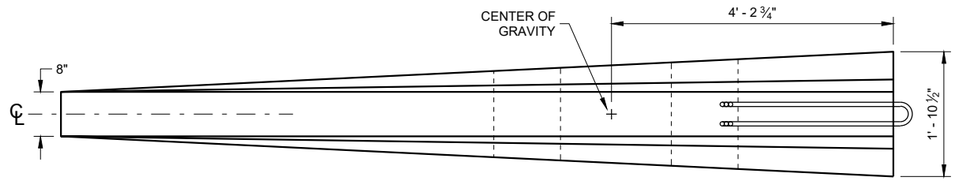
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

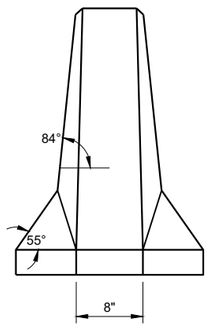


FLARE AT BARRIER END

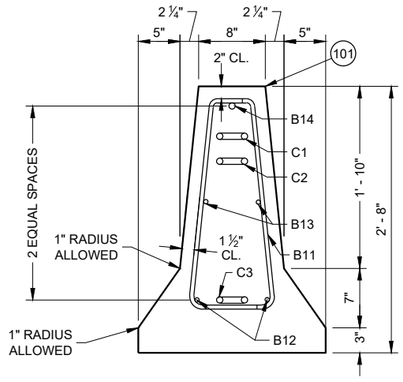
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



PLAN VIEW

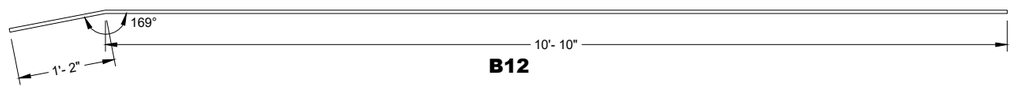


FRONT ELEVATION

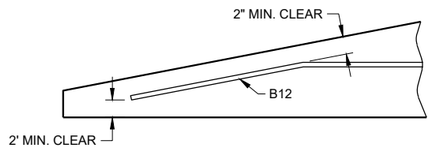


END SECTION

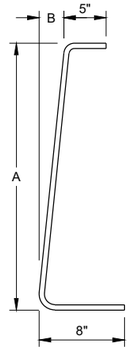
DETAILS OF BARRIER TAPER SECTION



B12



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

6
SDD 14B07-16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

6

SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

6

SDD 14B07-16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B07-16n

GENERAL NOTES

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

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

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

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

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

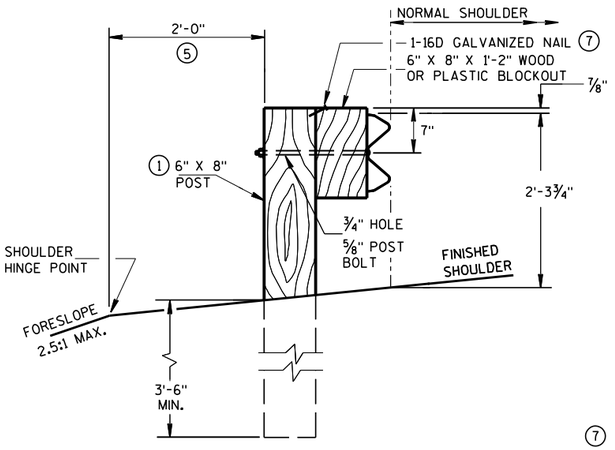
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

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

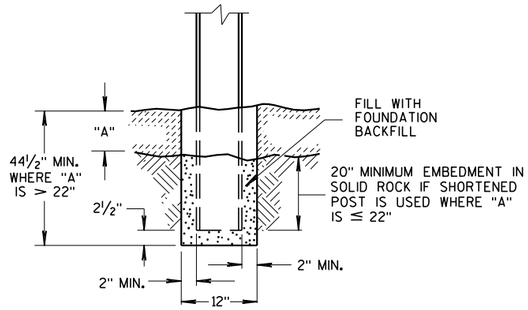
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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

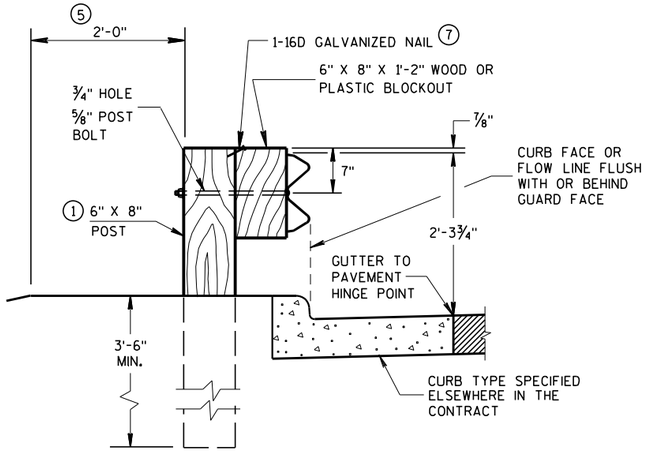
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



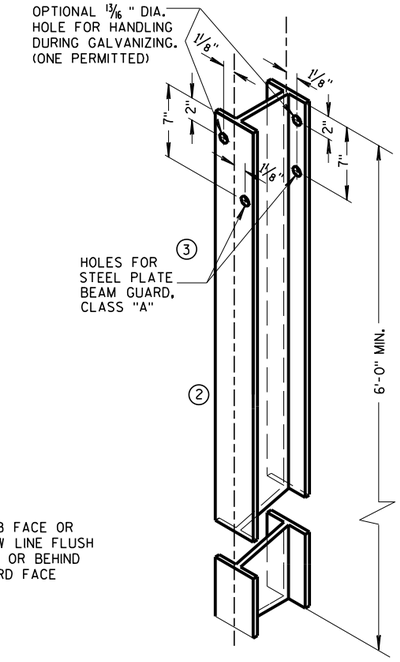
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

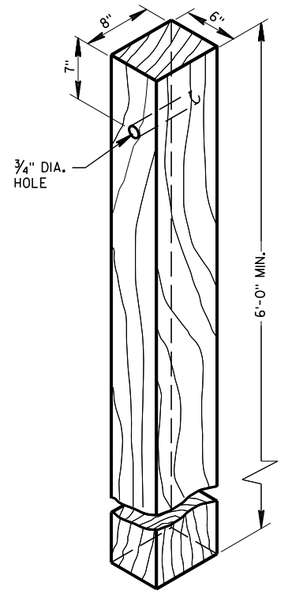


END VIEW
LOCATED ALONG A CURBED ROADWAY

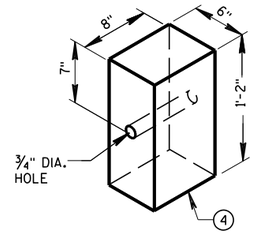


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

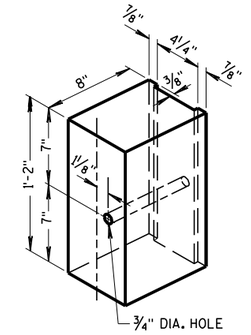
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



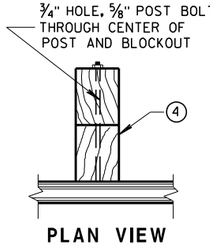
WOOD POST
(6"X8") NOMINAL



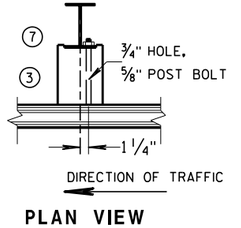
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



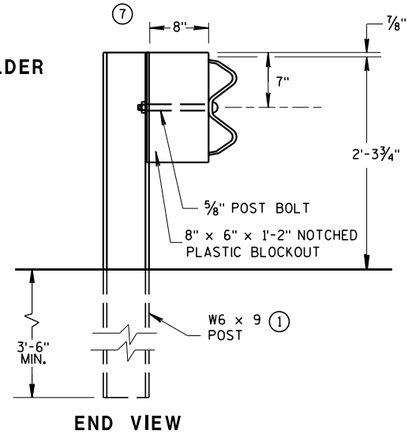
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



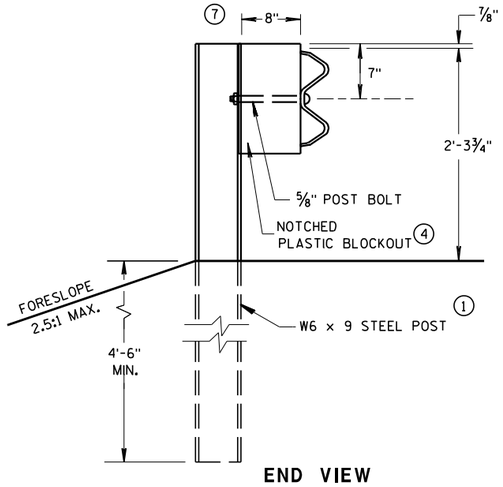
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



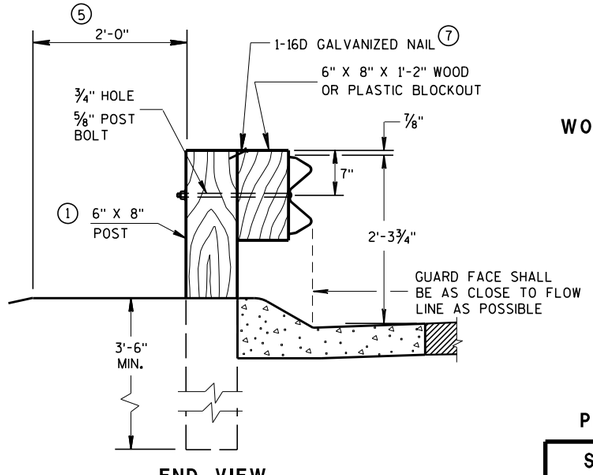
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



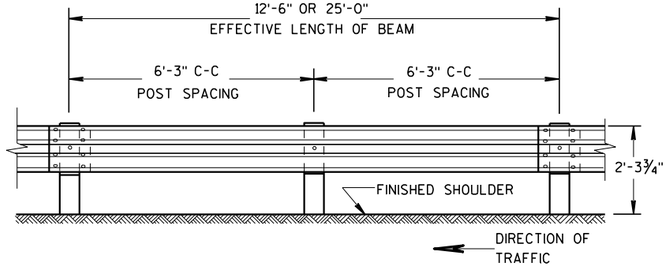
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

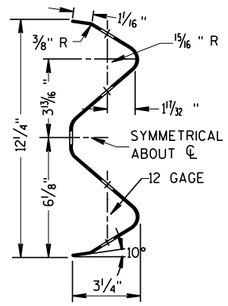
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

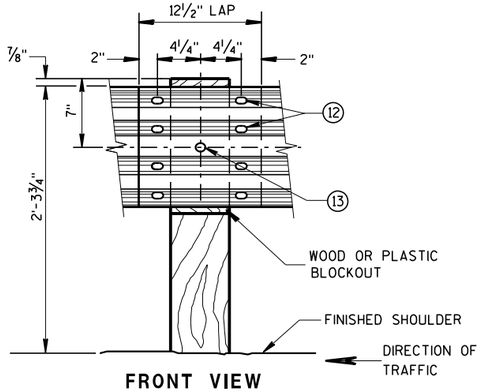


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

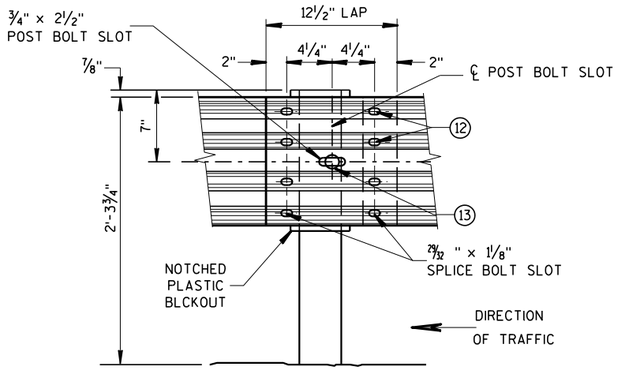
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

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

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

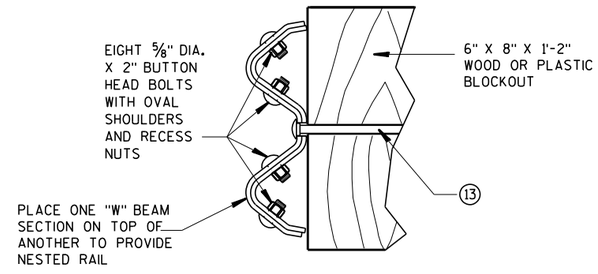
FRONT VIEW

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



FRONT VIEW

BEAM SPLICE AT STEEL POST

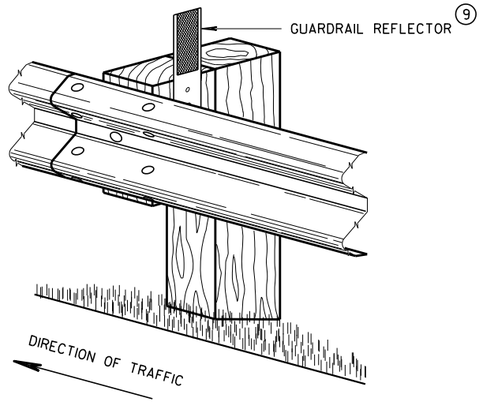


NESTED W BEAM (NW)

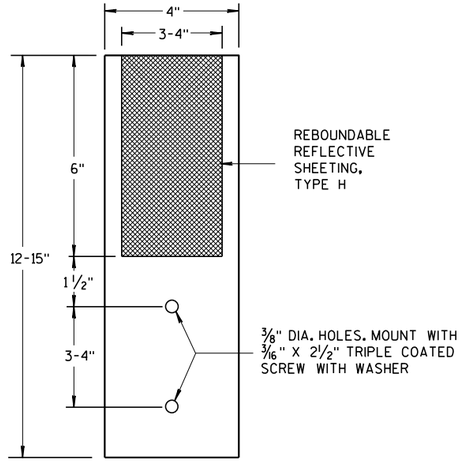
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

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



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



4"x 12" GUARDRAIL REFLECTOR

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

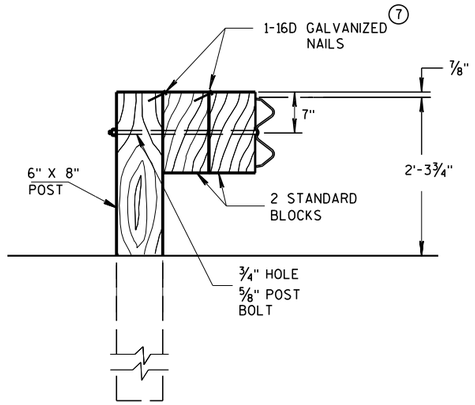
STATE OF WISCO 79
DEPARTMENT OF TRANSPORTATION

6

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

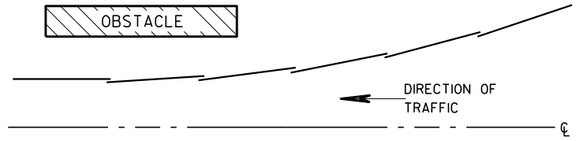
6

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



DETAIL FOR DOUBLE BLOCKS

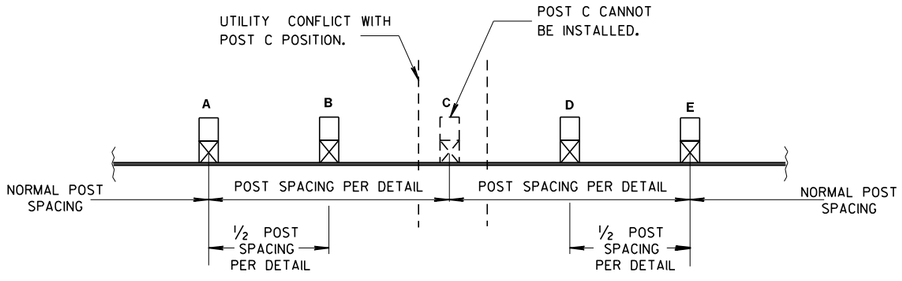
THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED



PLAN VIEW
BEAM LAPPING DETAIL

DETAIL FOR TRIPLE BLOCKS

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



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

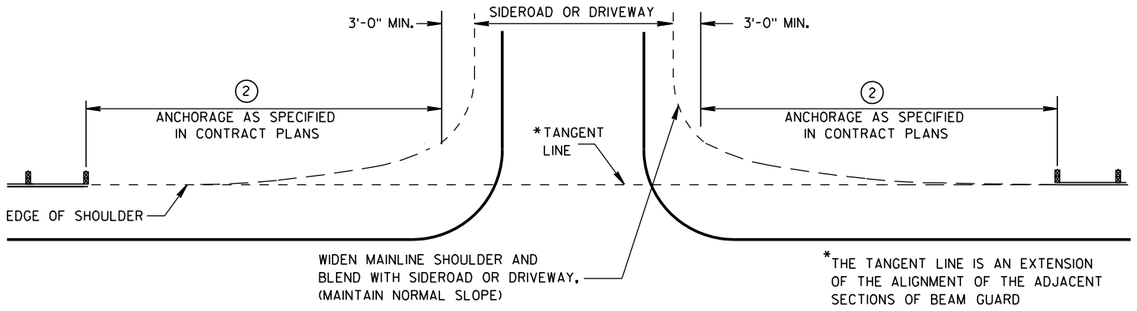
APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

6

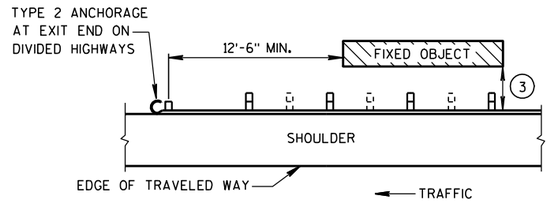
S.D.D. 14 B 15-11c

6

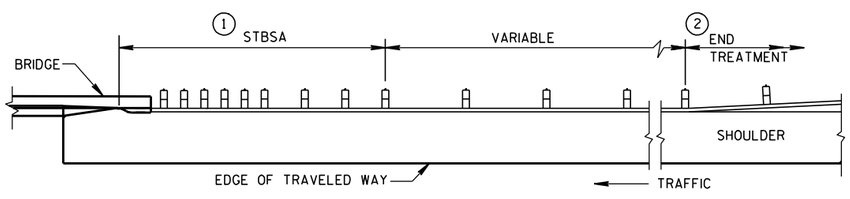
S.D.D. 14 B 15-11c



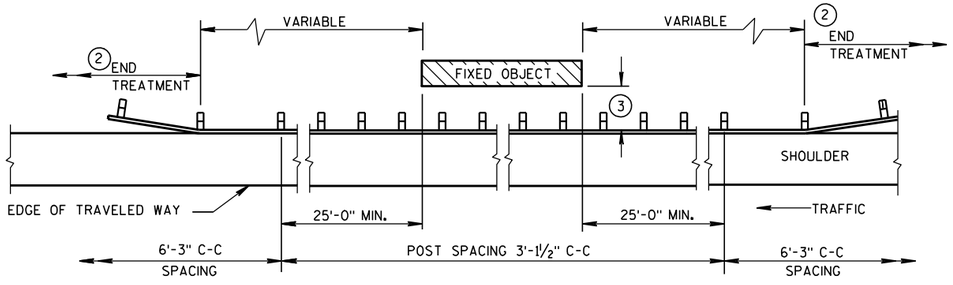
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

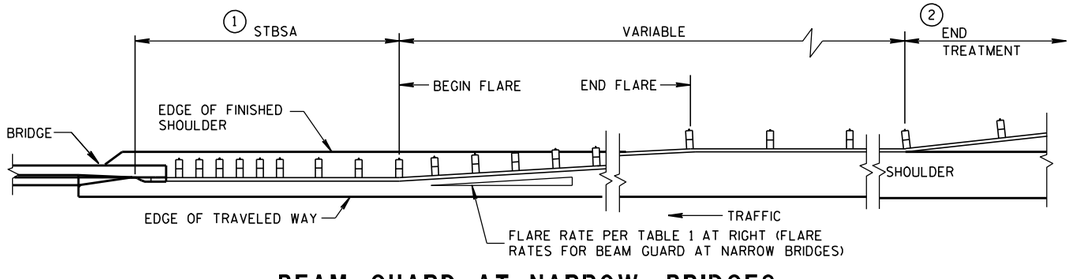


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH 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.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"

STEEL PLATE BEAM GUARD CLASS "A" AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

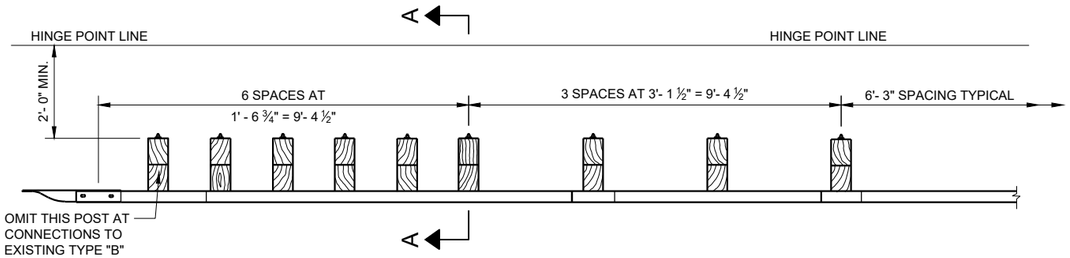
8-21-07
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

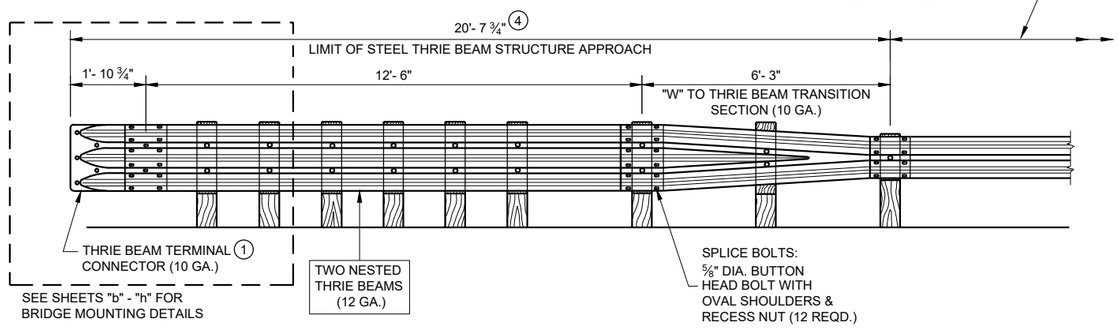
FHWA

6

S.D.D. 14 B 18-6a



PLAN VIEW



FRONT VIEW

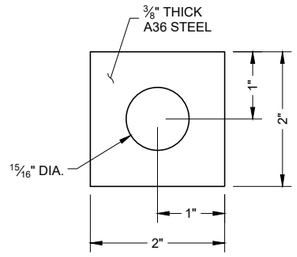


PLATE WASHER DETAIL

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.

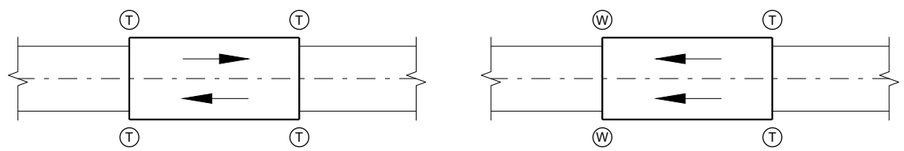
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

(2) MINIMUM EMBEDMENT SHALL BE 4'- 0".

(3) POST BOLTS ARE ⅝" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A ⅝" 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.

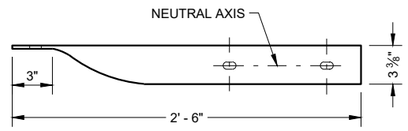


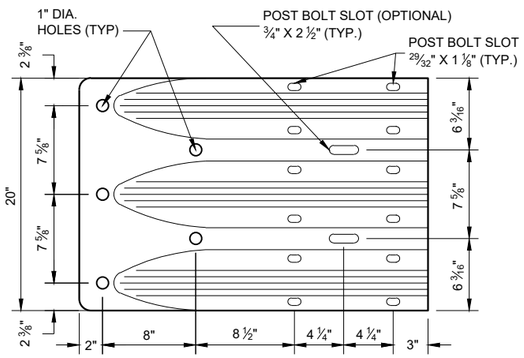
TWO WAY TRAFFIC **ONE WAY TRAFFIC**

(T) THRIE BEAM CONNECTION

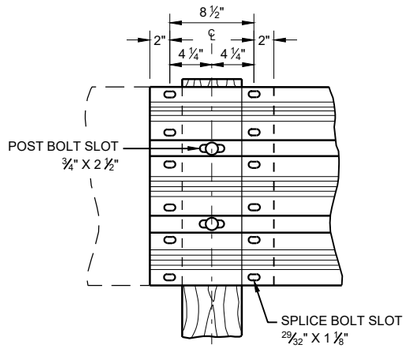
(W) W-BEAM CONNECTION WHEN REQUIRED

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

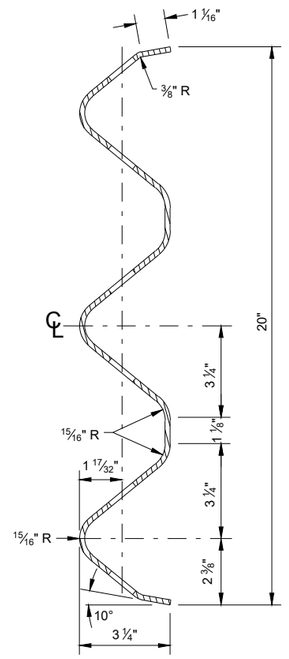




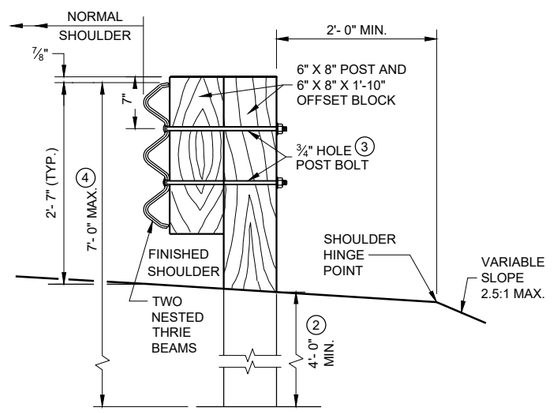
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU BEAM RAIL ELEMENT



SECTION A-A

STEEL THRIE BEAM STRUCTURE APPROACH

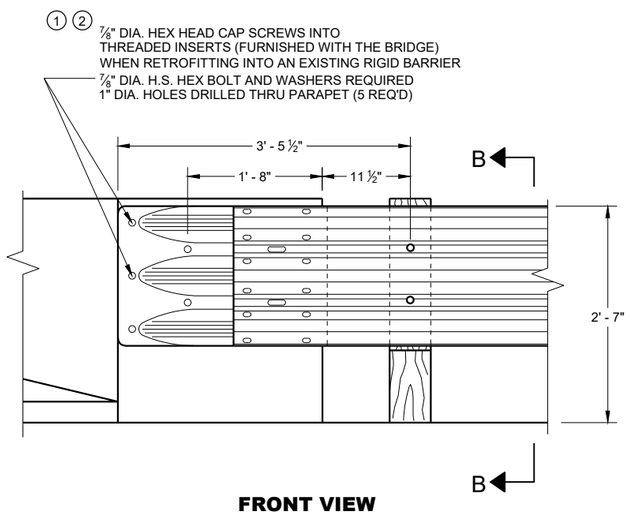
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

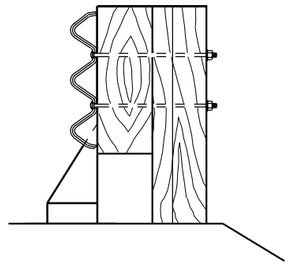
FHWA

SDD 14B20 - 12a

6
SDD 14B20 - 12a



FRONT VIEW



SECTION B - B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

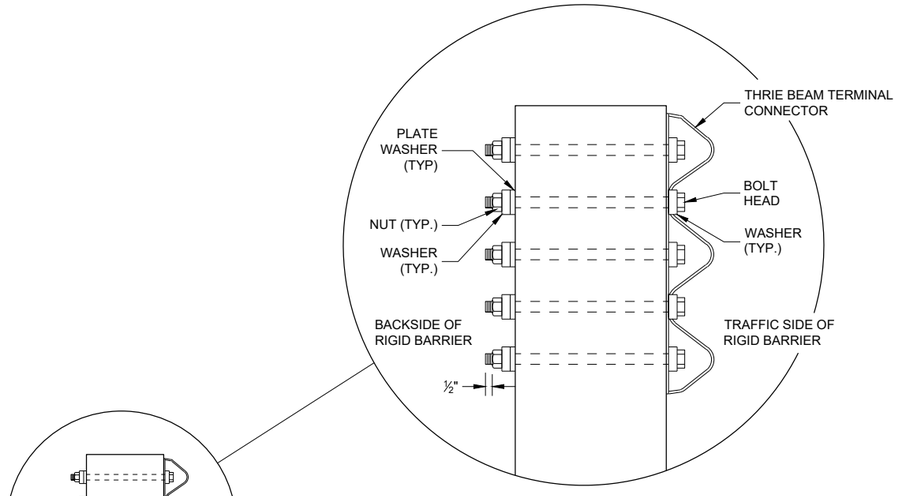
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

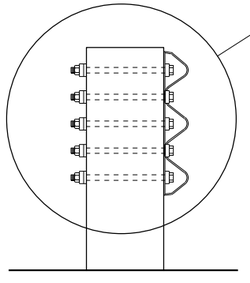
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. 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.

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

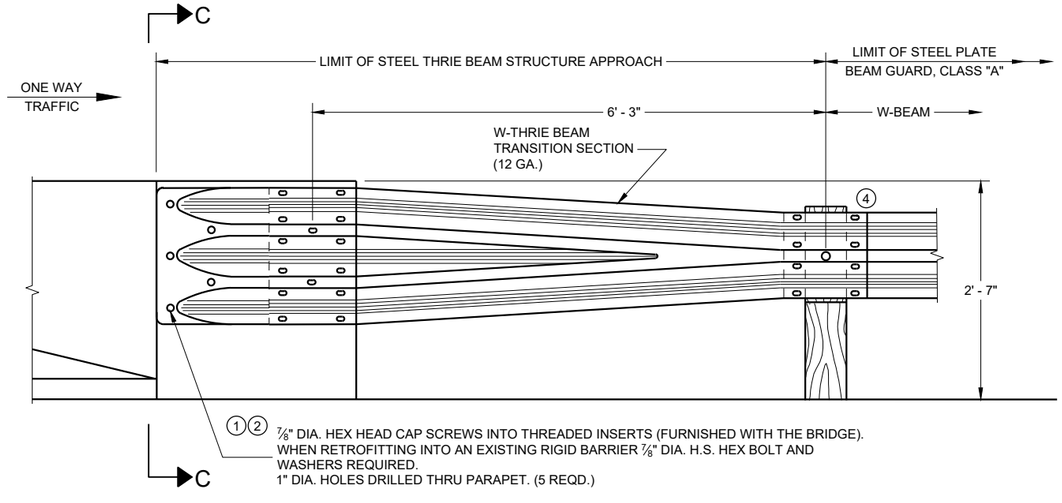
④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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.





SECTION C - C



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE). WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED.
1" DIA. HOLES DRILLED THRU PARAPET. (5 REQD.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B20 - 12b

GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

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

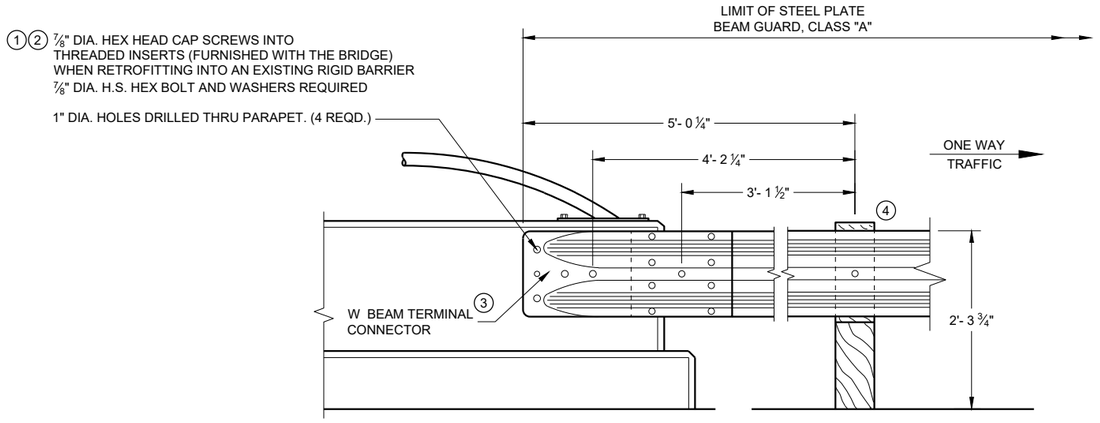
(2) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. 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.

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

(4) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

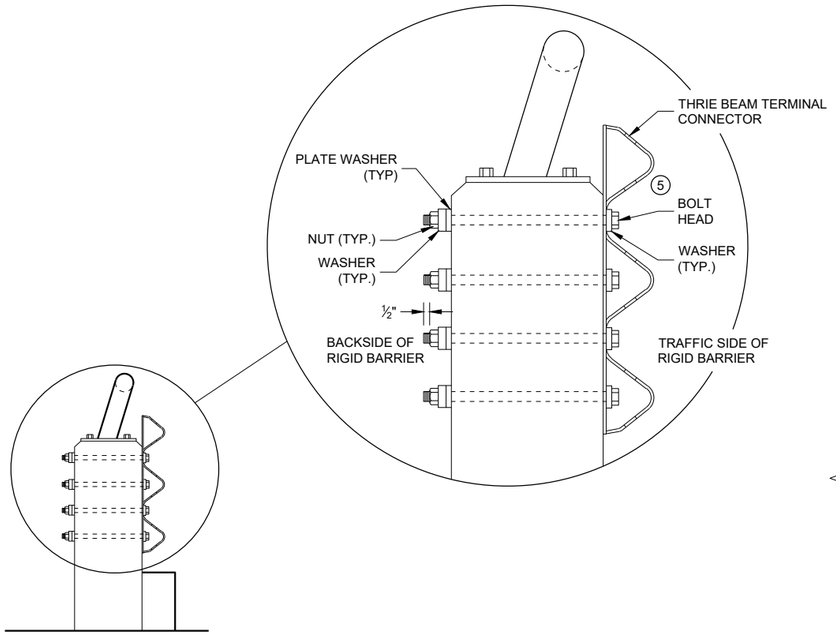
(5) BOLT, NUT AND WASHERS NO REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PARAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE THE EDGE OF PARAPET.

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.

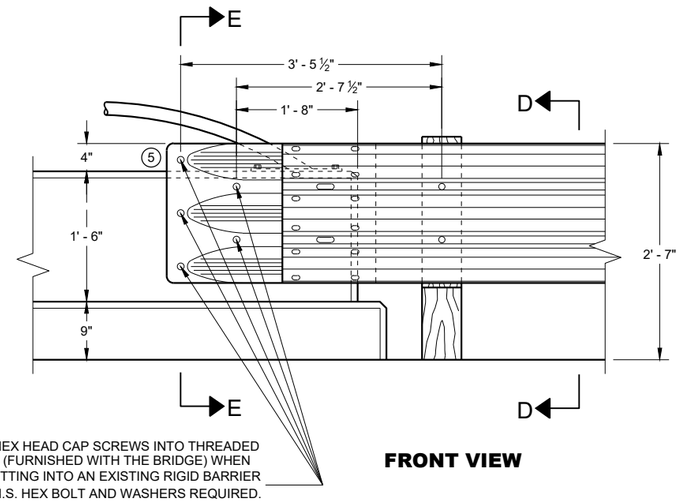


FRONT VIEW

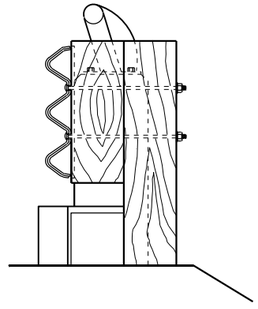
W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION E - E



FRONT VIEW



SECTION D - D

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS

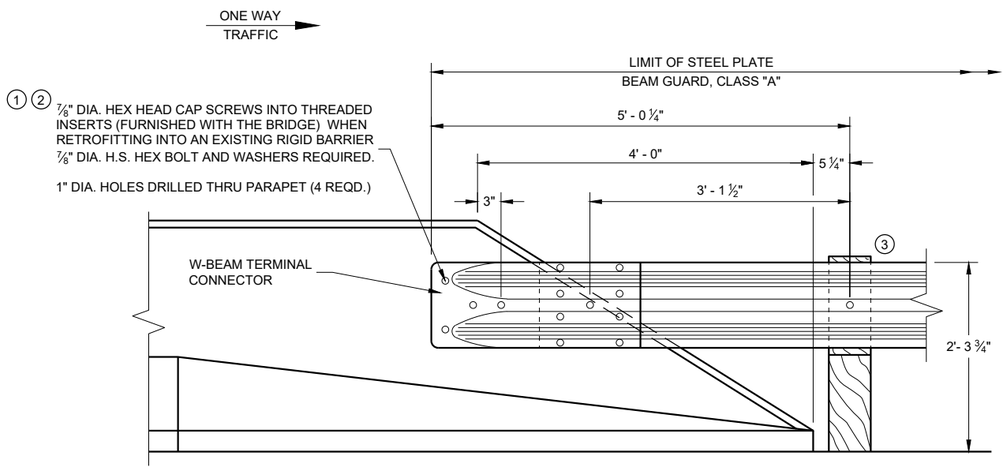
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

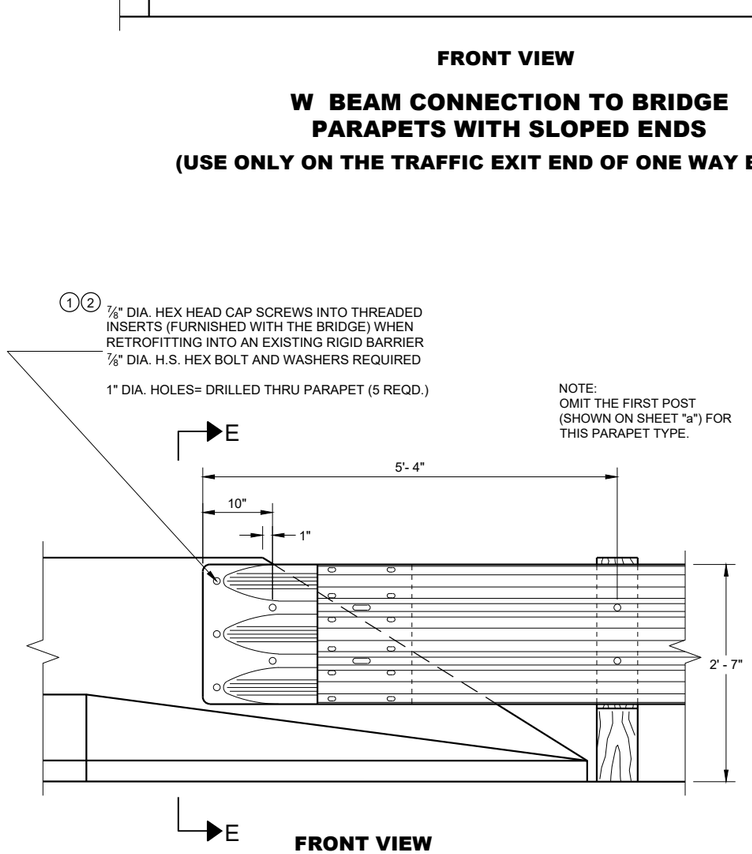
SDD 14B20 - 12c



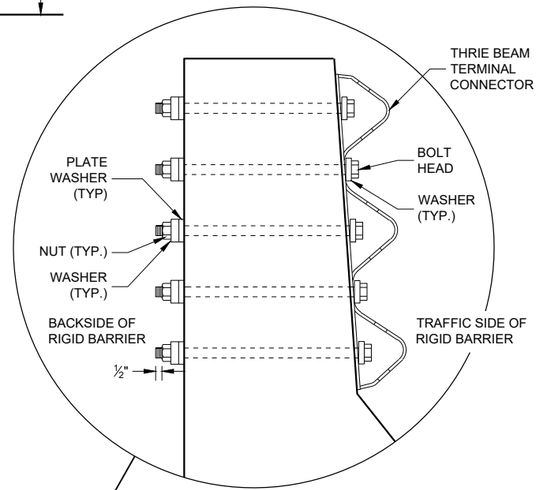
FRONT VIEW

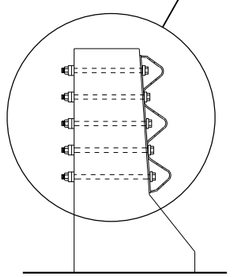
W BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

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



FRONT VIEW





SECTION E - E

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

GENERAL NOTES

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

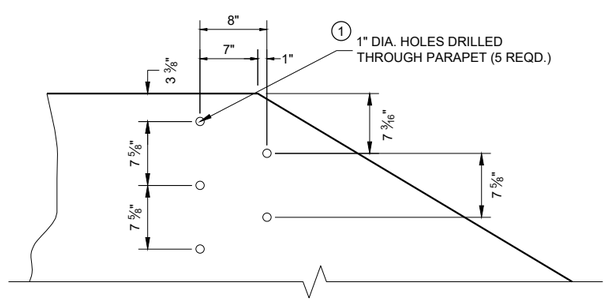
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

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

2. 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 TERMINAL CONNECTOR. 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.

3. W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

   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.



DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

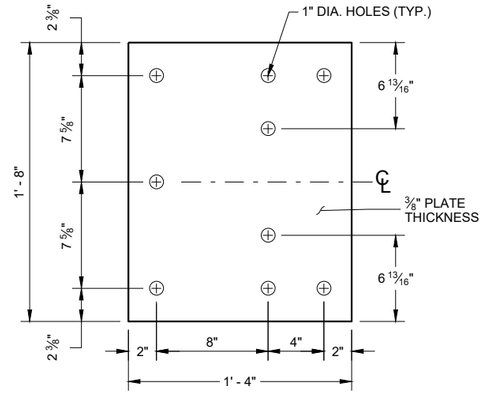
APPROVED
November 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

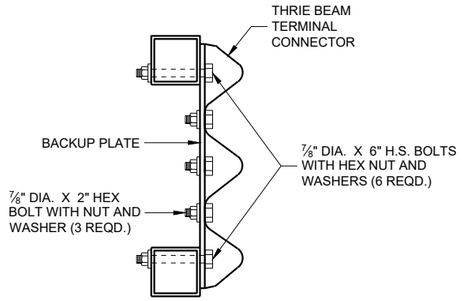
FHWA

6

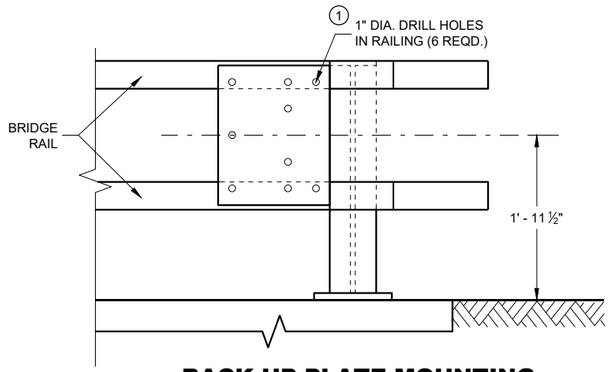
SDD 14B20 - 12d



BACK-UP PLATE DETAIL



SECTION G - G



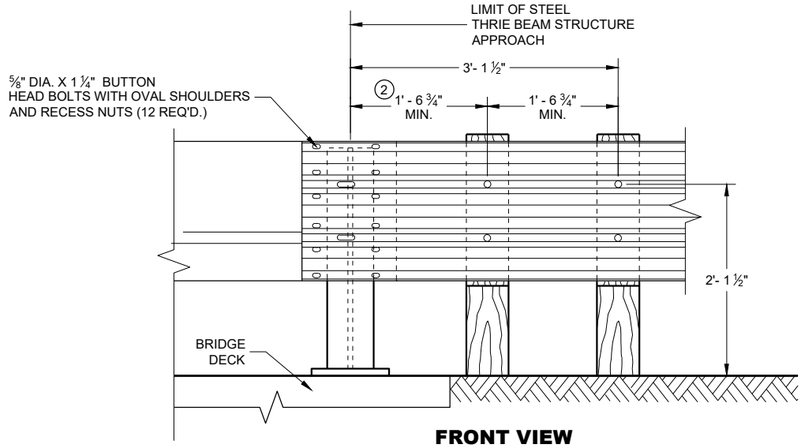
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

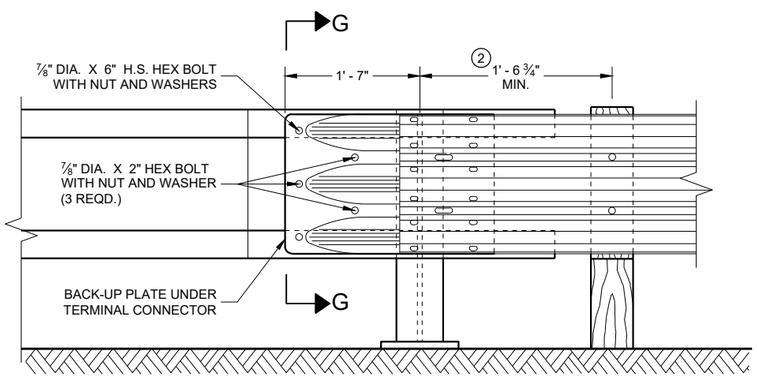
(1) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.

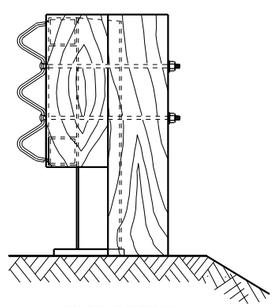


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



END VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" & "W"

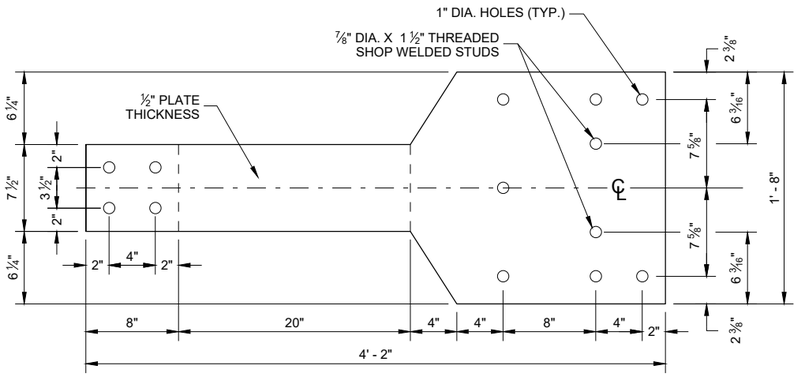
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER
FHWA

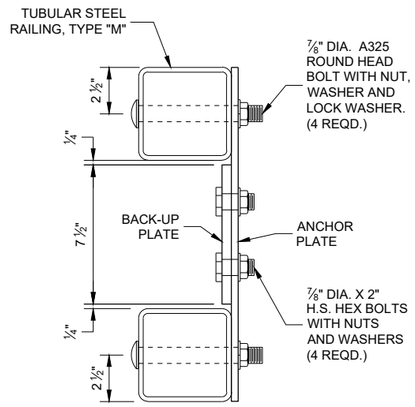
6
SDD 14B20 - 12e

GENERAL NOTES

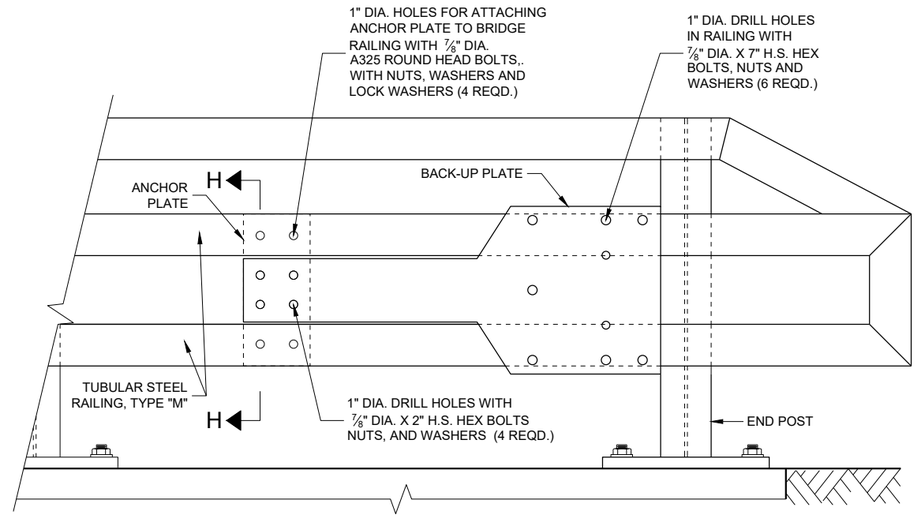
(1) VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AN ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.



FRONT VIEW

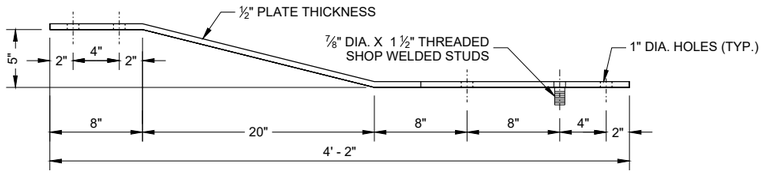


SECTION H - H



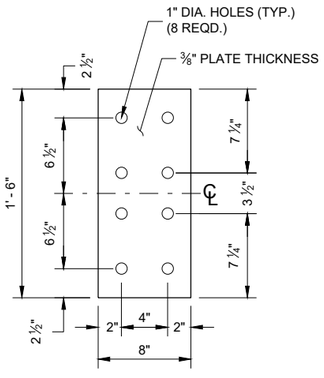
FRONT VIEW

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



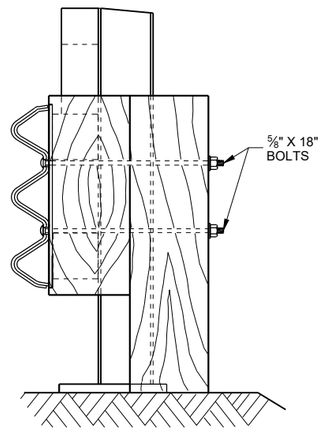
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

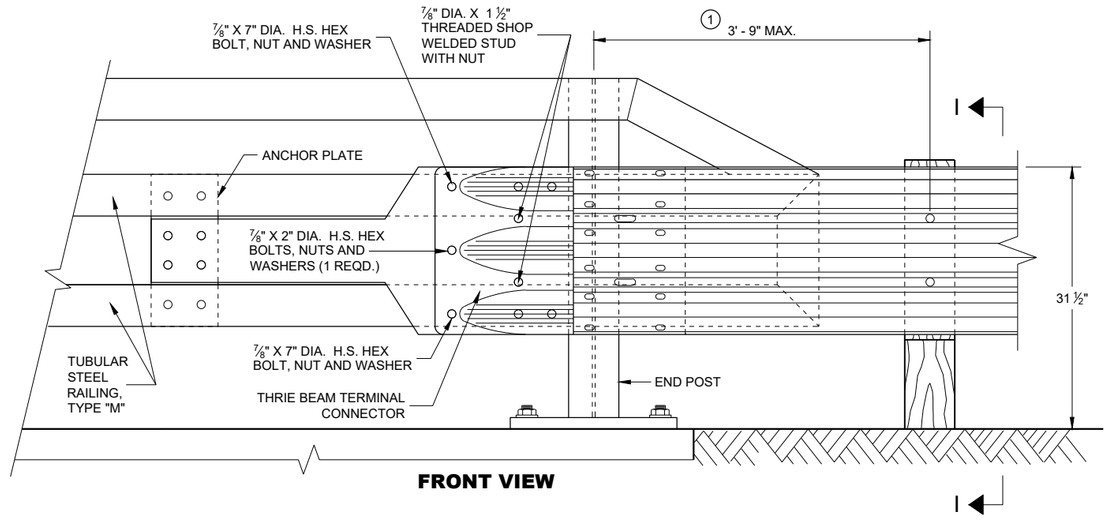


PLAN VIEW

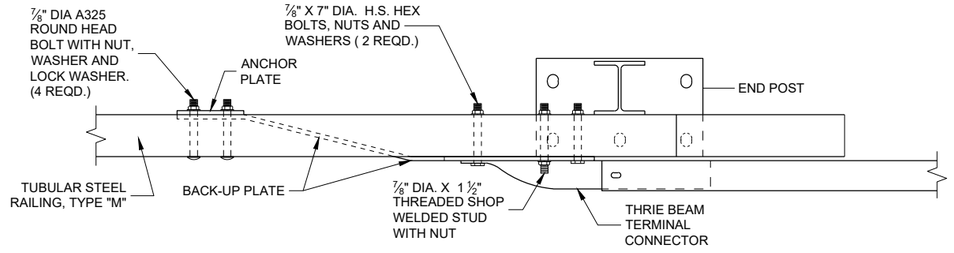
ANCHOR PLATE DETAIL, TYPE "M"



SECTION I - I



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

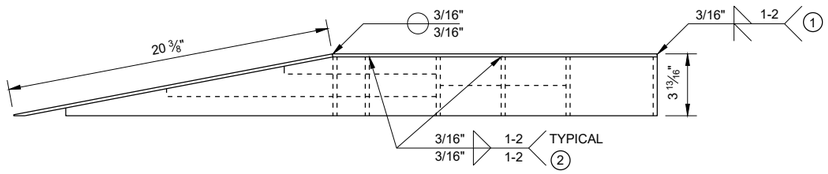
STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"

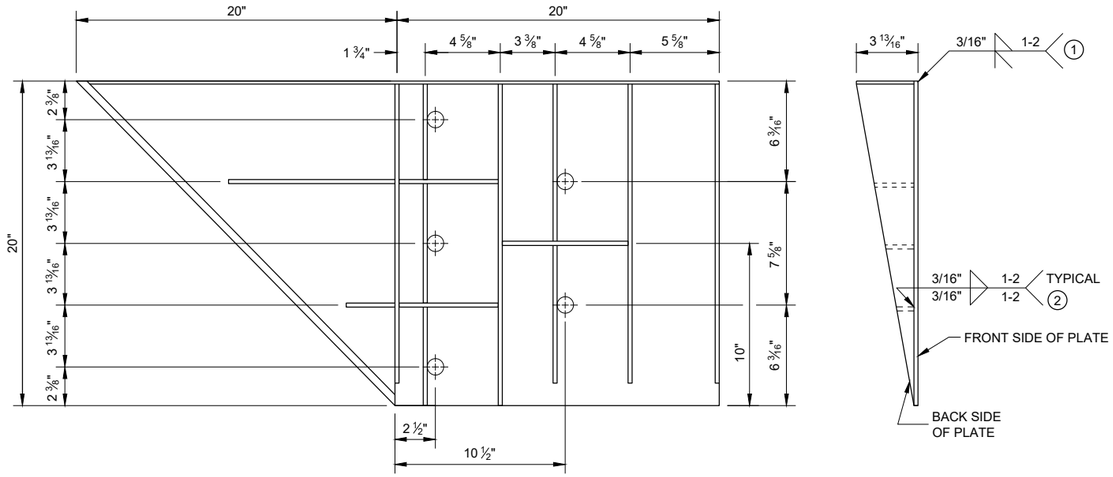
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

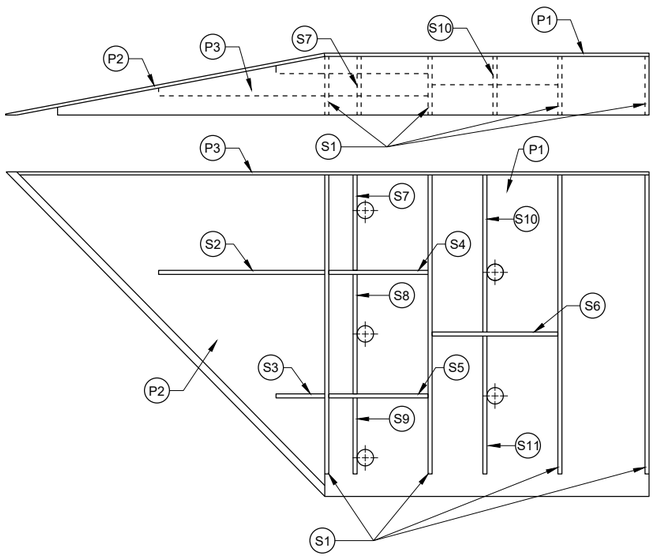
6
SDD 14B20 - 12f





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)



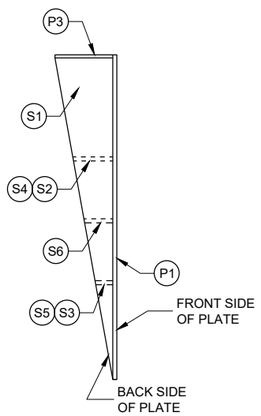


PLATE AND STIFFENER IDENTIFICATION

(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.

(1) 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.

(2) 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 PLATED DIMENSION (PER ASSEMBLY)

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

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

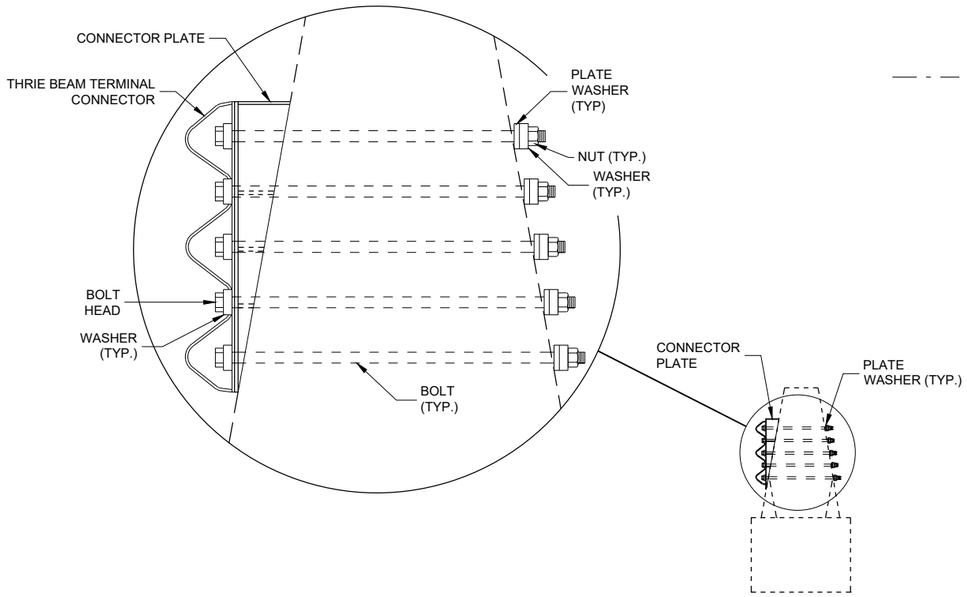
FHWA

6

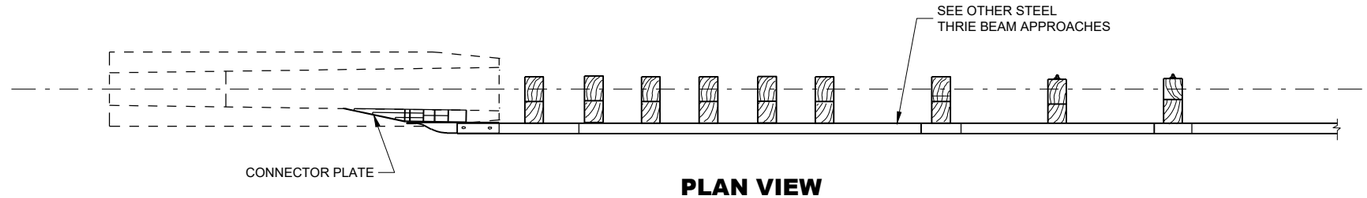
SDD 14B20 - 12g

6

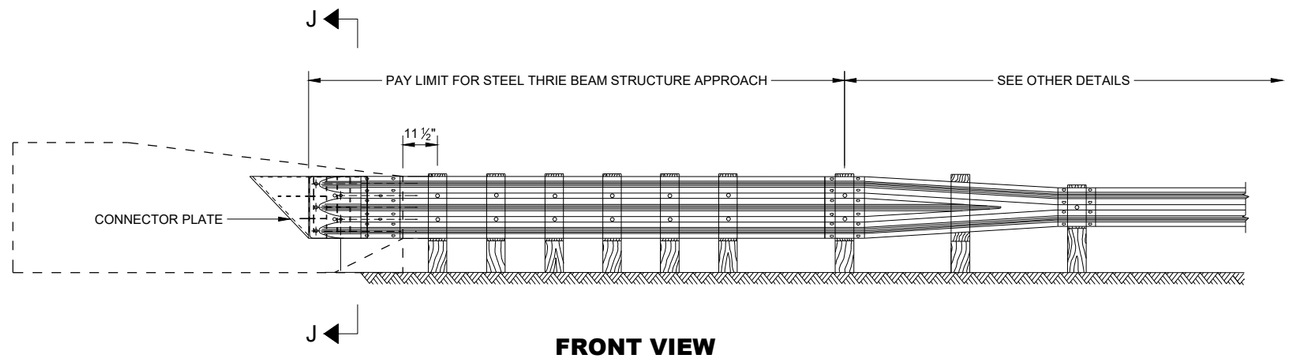
SDD 14B20 - 12g



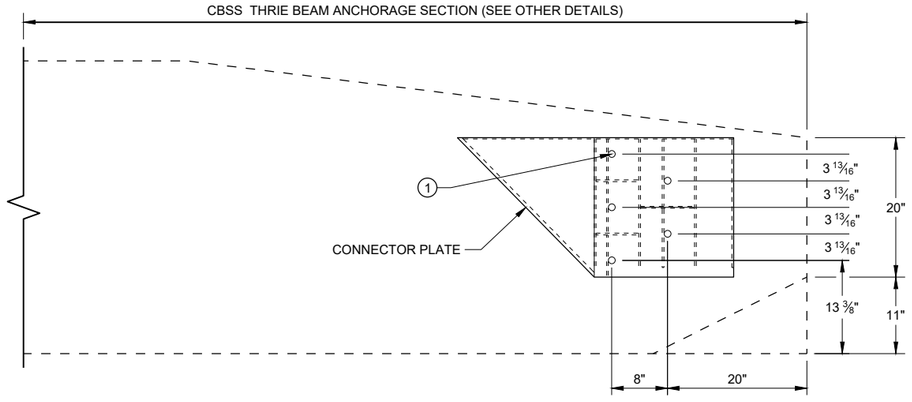
SECTION J - J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE PLACEMENT

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

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

(1) 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 TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

STEEL THRIE BEAM STRUCTURE APPROACH

MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD 14B20 - 12h

6

SDD 14B20 - 12h

BILL OF MATERIALS

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

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

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

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

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

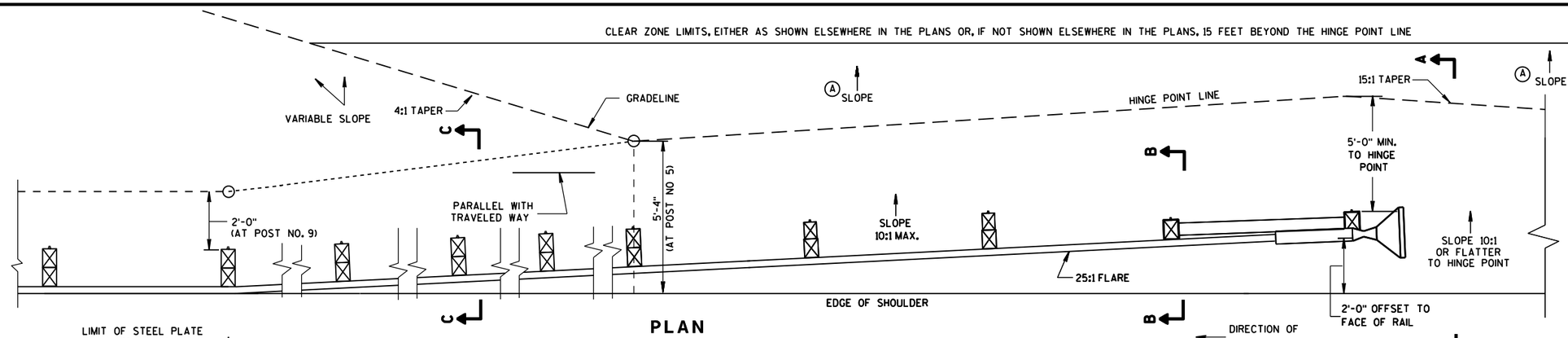
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

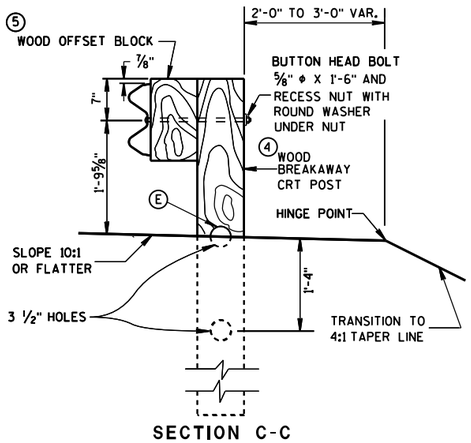
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

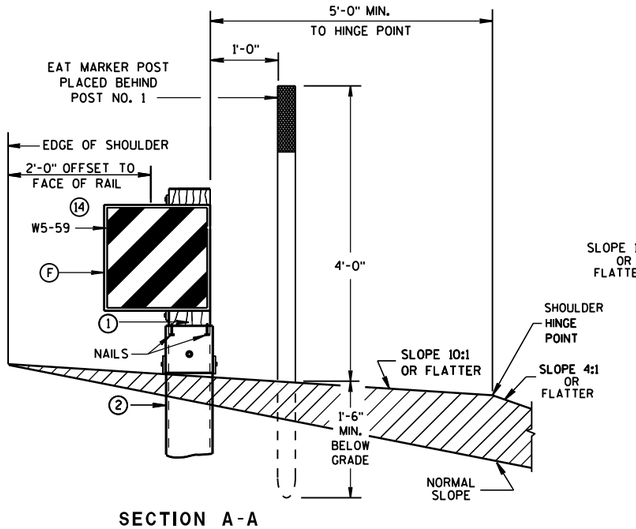
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

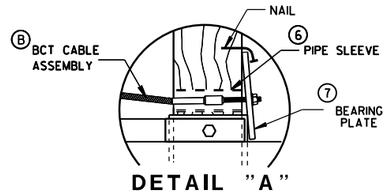
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

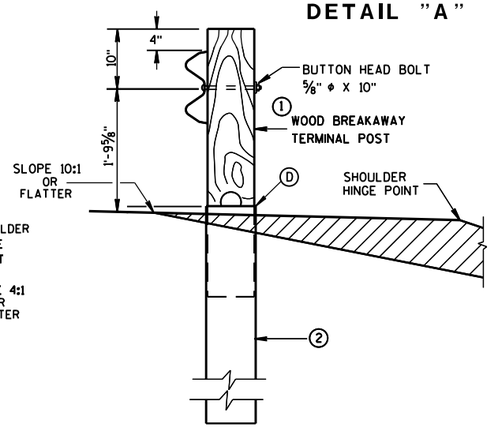
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

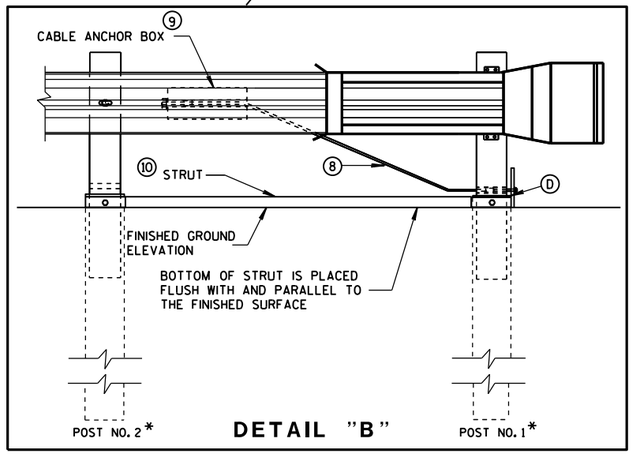










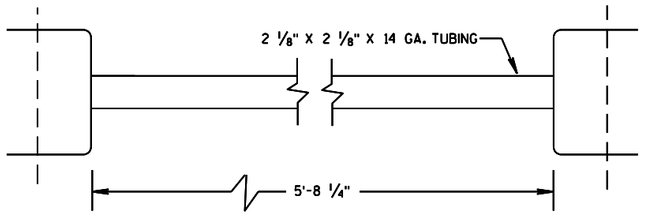


STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

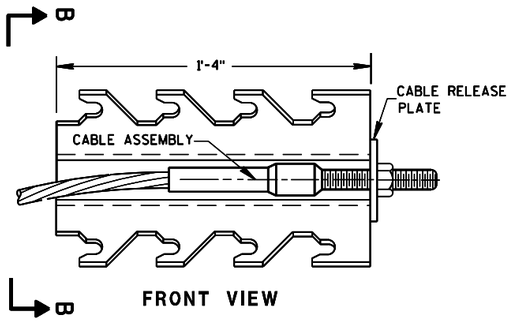
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

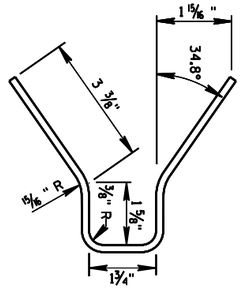
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL

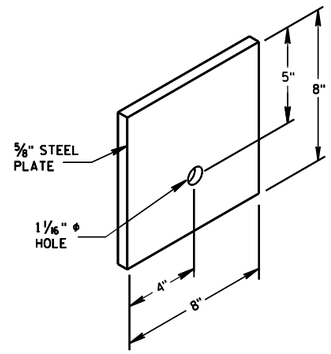


FRONT VIEW



SECTION B-B

⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

6

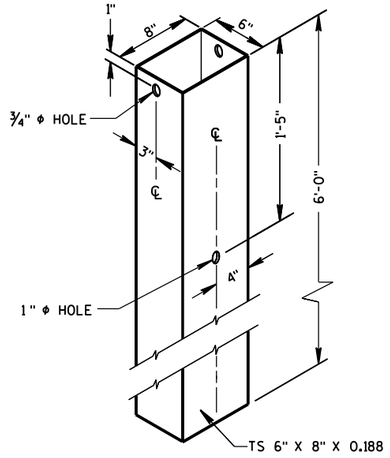
6

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

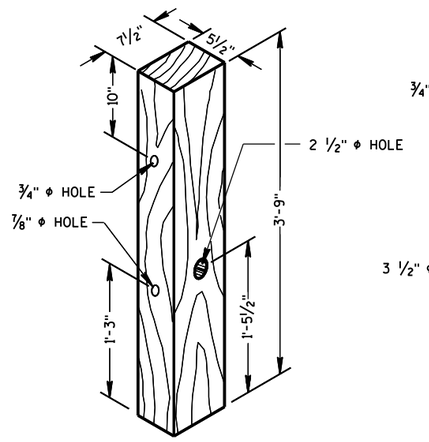
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

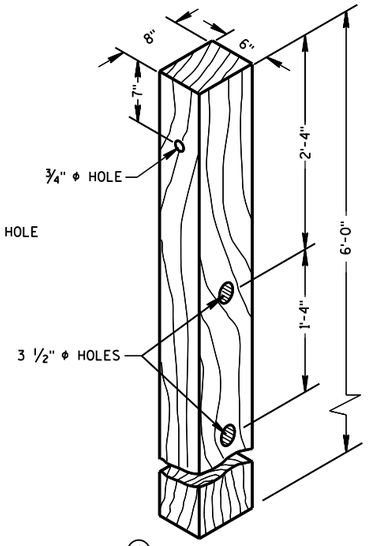
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-2



① TERMINAL POST

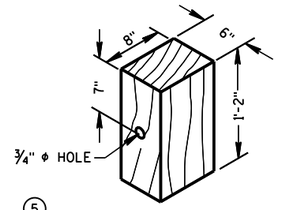


④ CRT POST
(POSTS NO'S 5-8

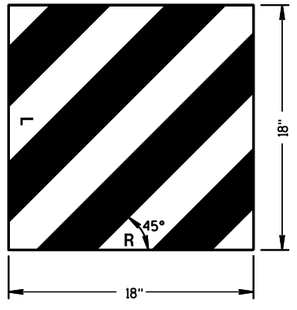
WOOD BREAKAWAY POSTS

GENERAL NOTES

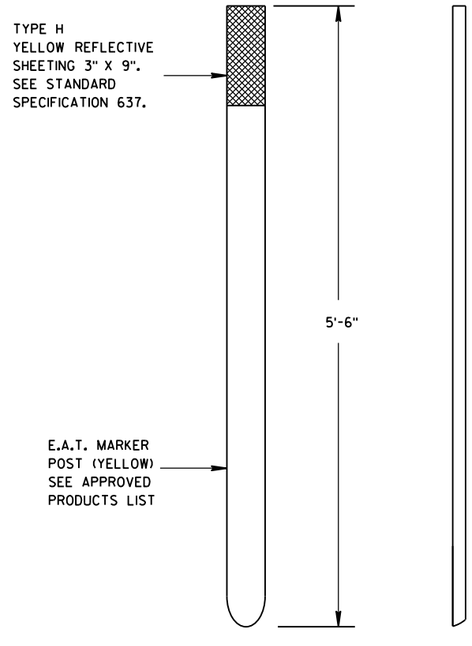
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH,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



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



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERV.

92

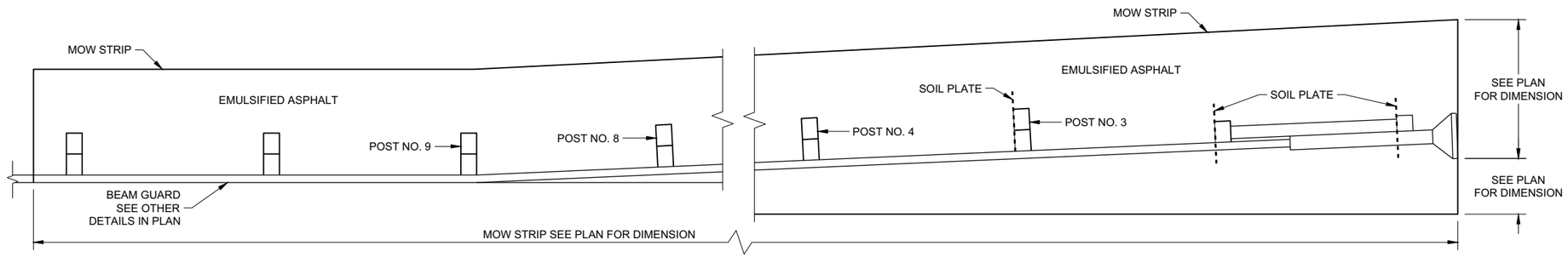
ENT

6

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

6

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



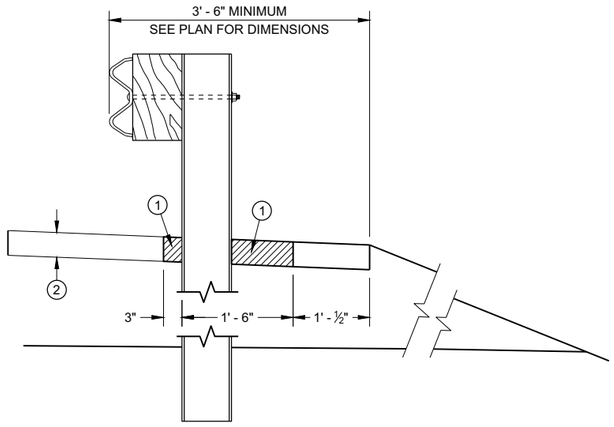
PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABSORBING TERMINAL

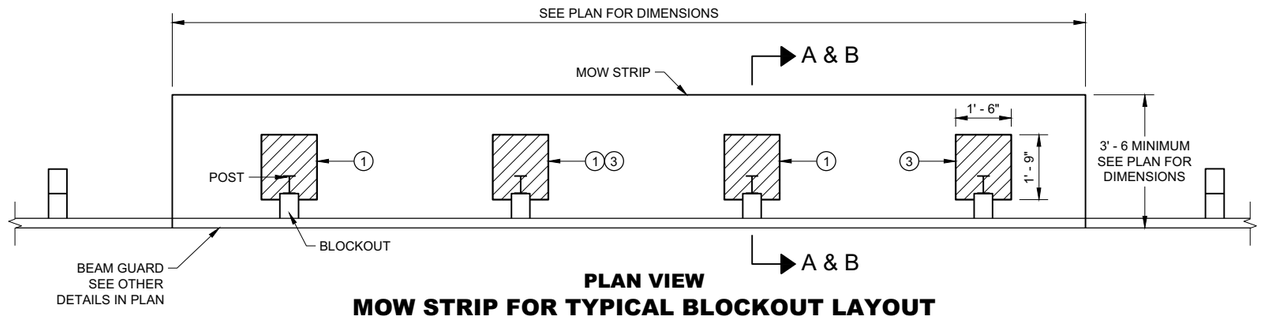
GENERAL NOTES

ONLY USE STEEL POSTS IN CONCRETE AND ASPHALT MOW STRIPS.

1. CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.
2. DEPTH OF MOW STRIP:
   ASPHALT - 4"
   CONCRETE - 4"
   EMULSIFIED ASPHALT - 1" OR LESS
3. FOR EMULSIFIED ASPHALT, MOW STRIP STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS)

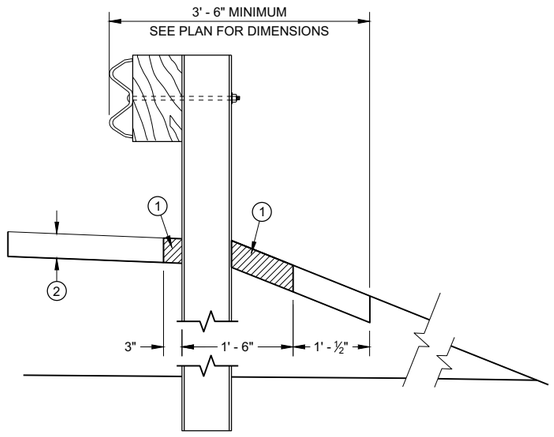


SECTION A - A

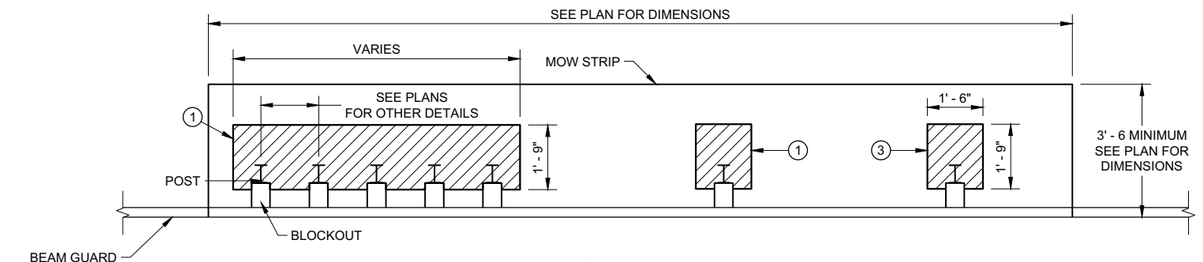


PLAN VIEW

MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT

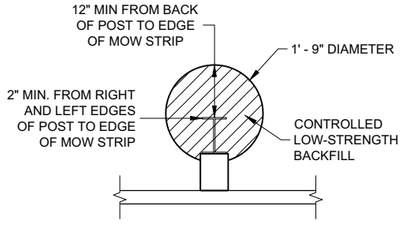


SECTION B - B

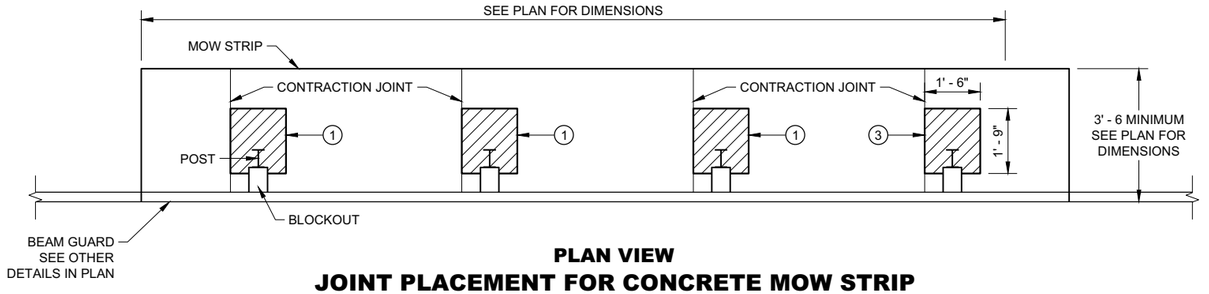


PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



ALTERNATIVE HMA MOW STRIP DESIGN



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B28 - 04a

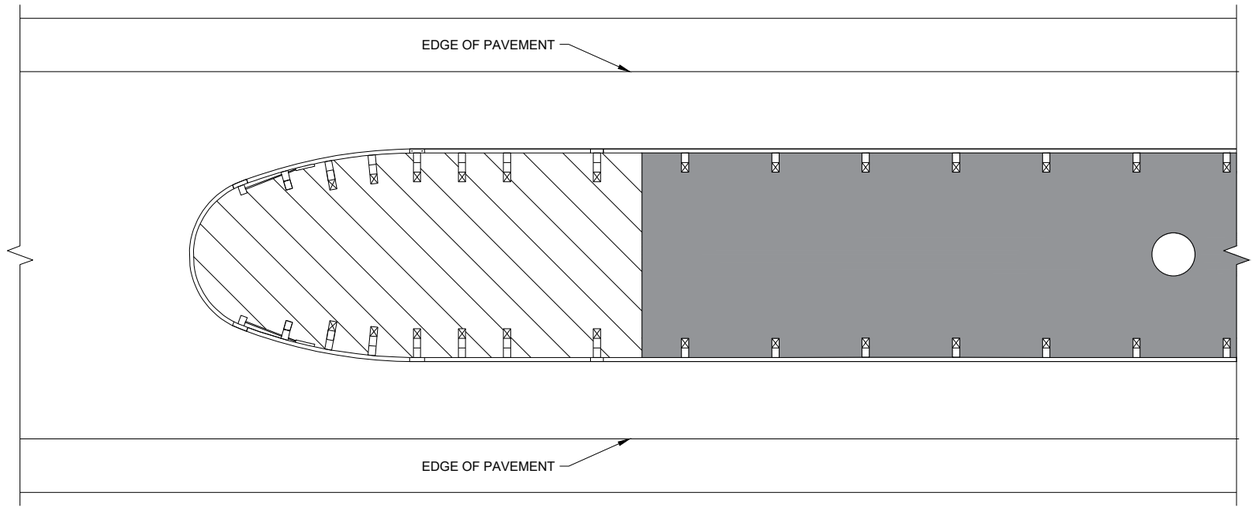
LEGEND

CONCRETE, ASPHALT, OR EMULSIFIED ASPHALT MOW STRIP (SEE OTHER DETAILS)

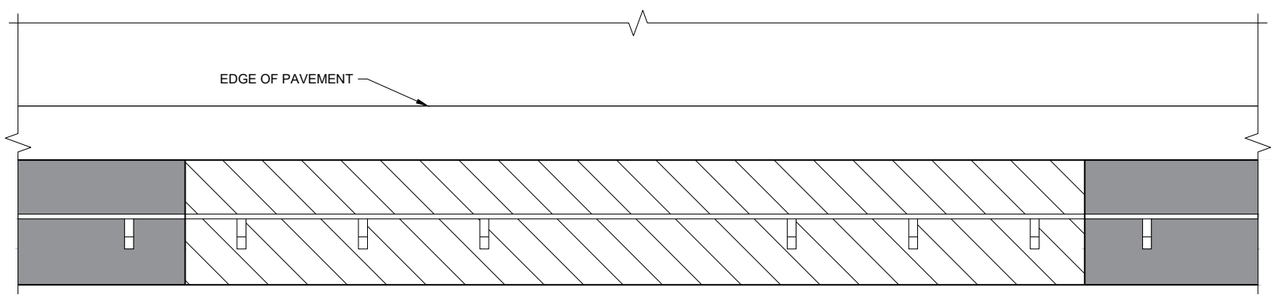
EMULSIFIED ASPHALT MOW STRIP (SEE OTHER DETAILS)

GENERAL NOTES

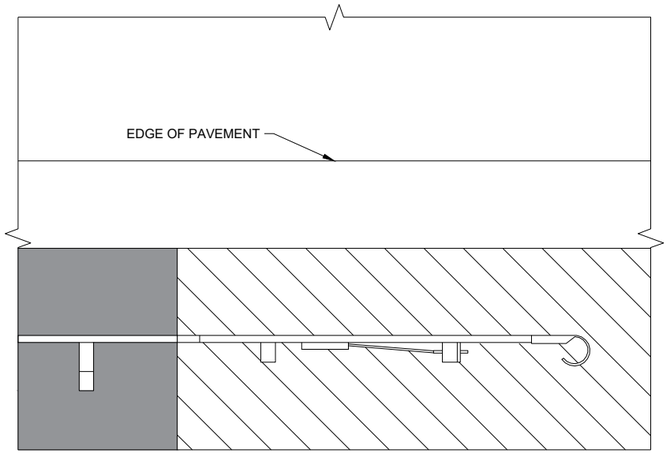
EXISTING THRIE BEAM BULLNOSES MAY HAVE WOOD POSTS. NEW THRIE BEAM BULLNOSE WILL HAVE STEEL POSTS.



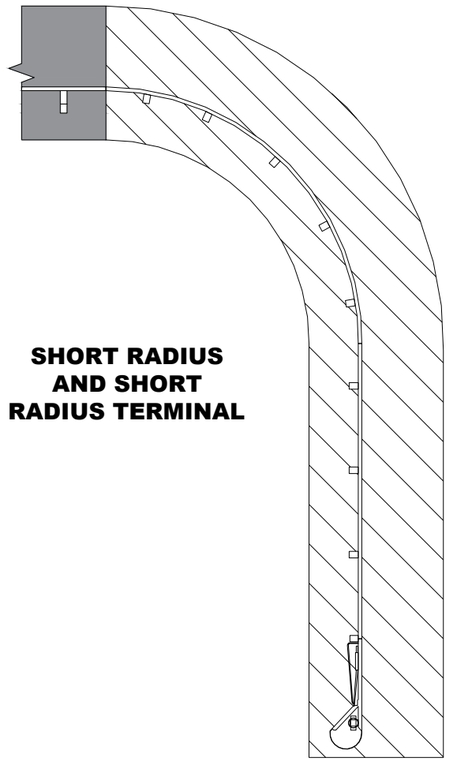
THRIE BEAM BULLNOSE



LONG - SPAN



TYPE 2 TERMINAL



SHORT RADIUS AND SHORT RADIUS TERMINAL

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

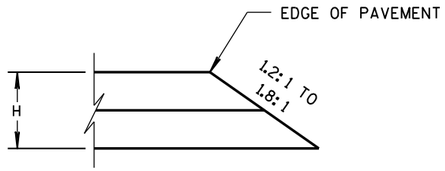
FHWA

6

SDD 14B28 - 04b

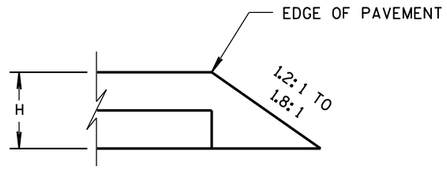
6

SDD 14B28 - 04b



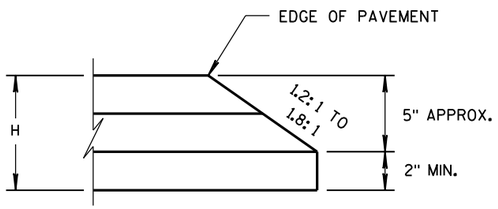
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



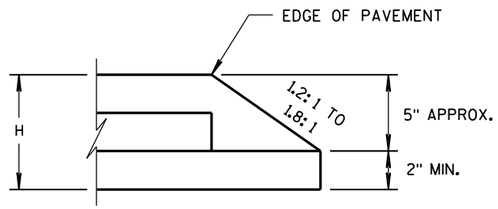
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

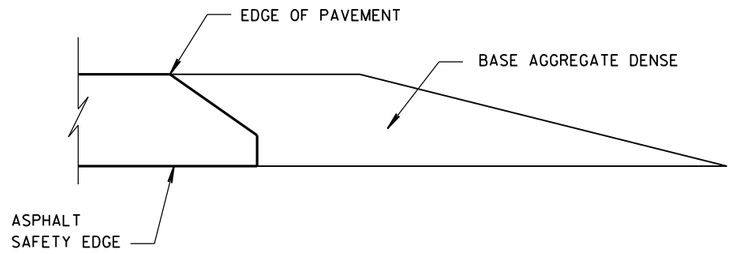
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

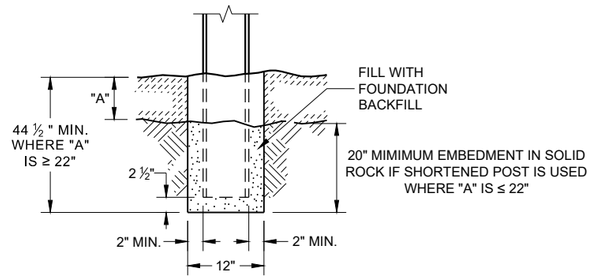
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

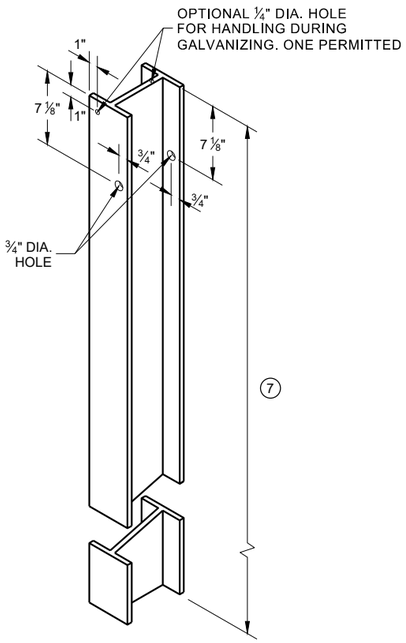
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

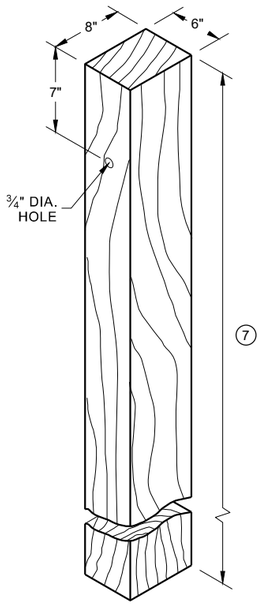
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



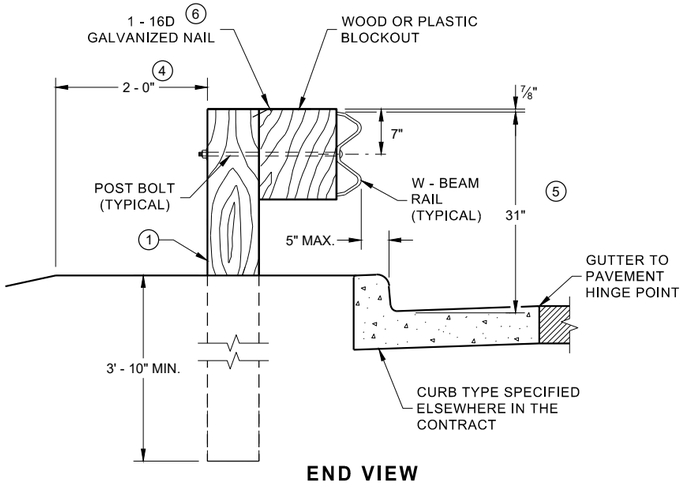
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



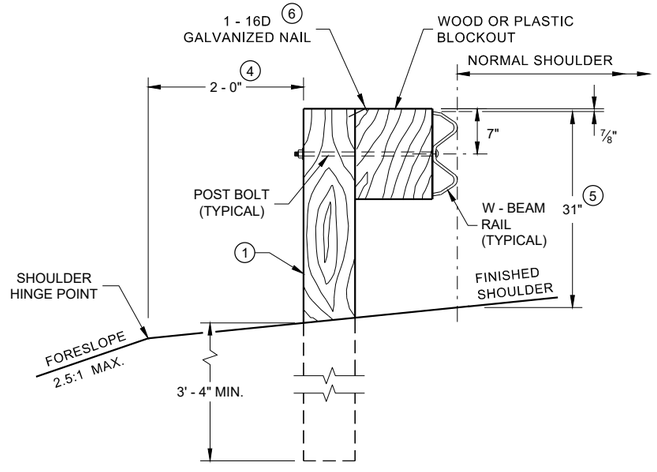
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



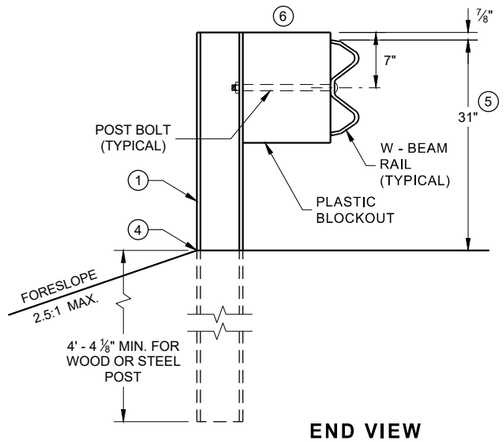
WOOD POST (6" X 8") NOMINAL (1)



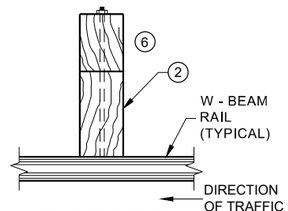
END VIEW
LOCATED ALONG A CURBED ROADWAY



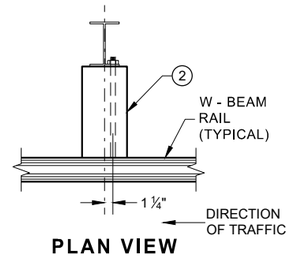
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



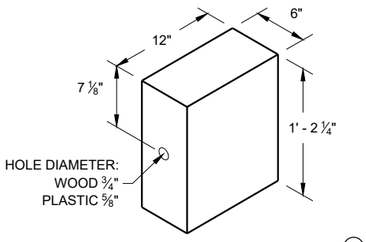
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM

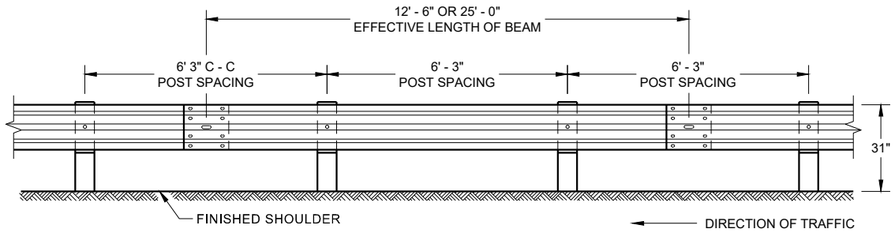


WOOD OR PLASTIC BLOCKOUT (2)

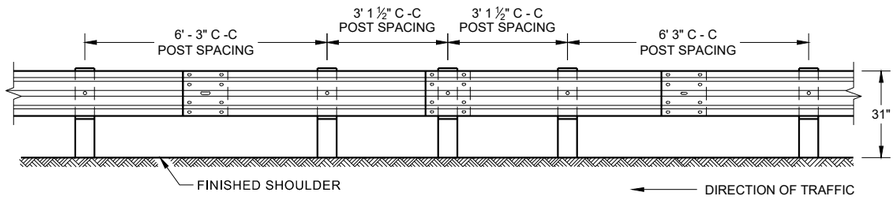
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

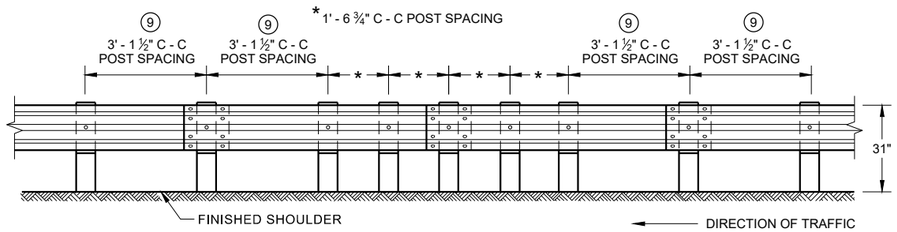
6
SDD 14B42 - 07a



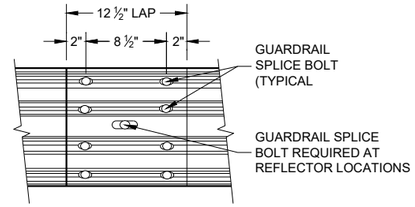
FRONT VIEW
POST SPACING STANDARD INSTALLATION



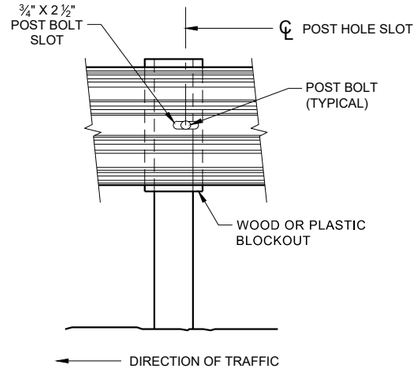
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



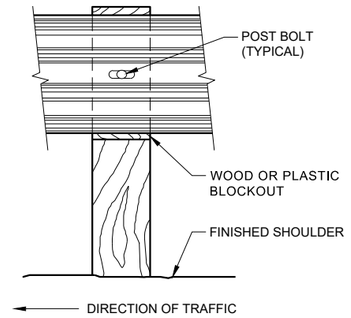
FRONT VIEW
QUARTER POST SPACING (QS)



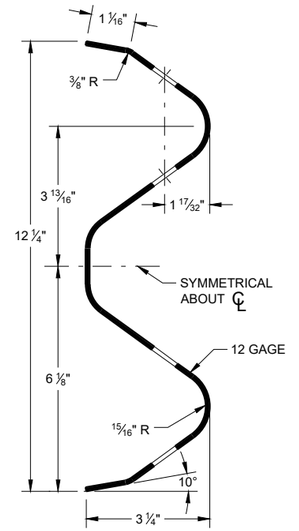
FRONT VIEW
MID-SPAN BEAM SPLICE



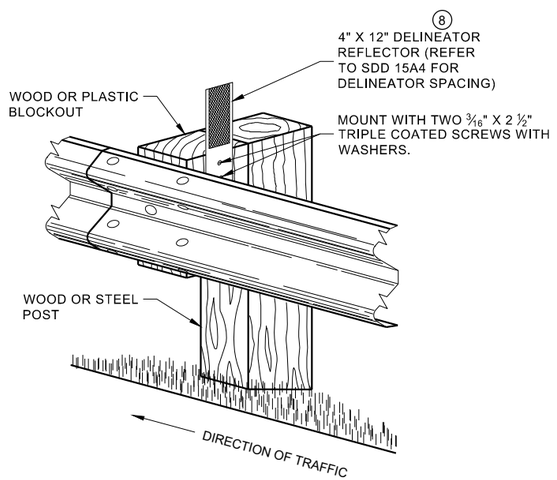
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

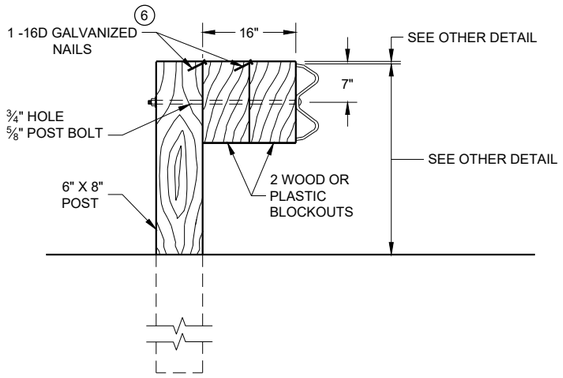
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b

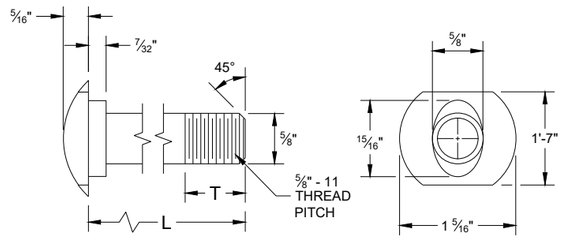


DETAIL FOR 16" BLOCKOUT DEPTH

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

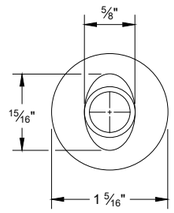
NOTE:

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

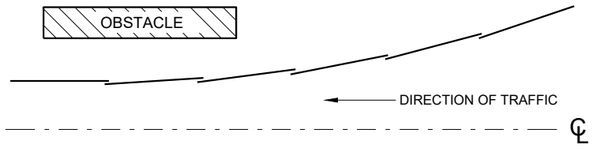


POST BOLT TABLE

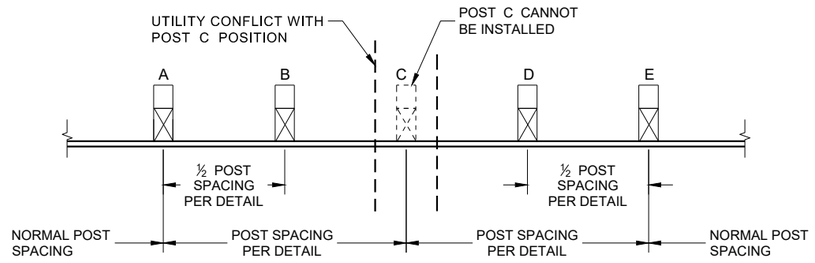
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



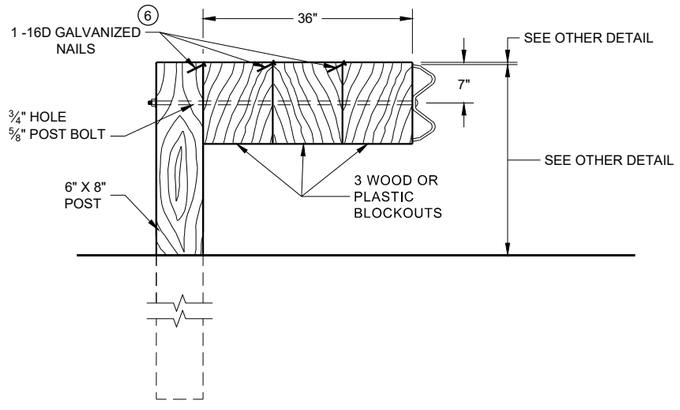
ALTERNATE BOLT HEAD



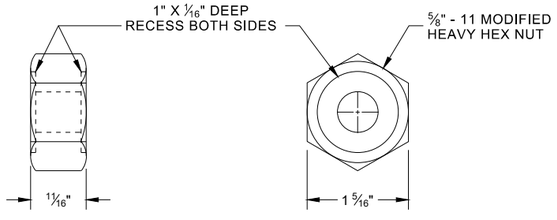
PLAN VIEW
BEAM LAPPING DETAIL



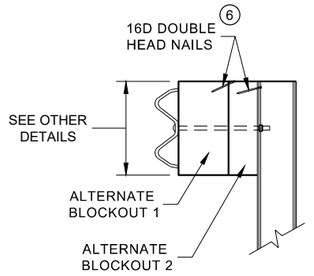
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



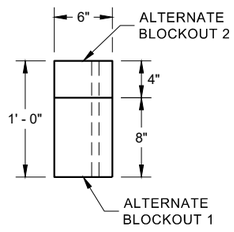
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

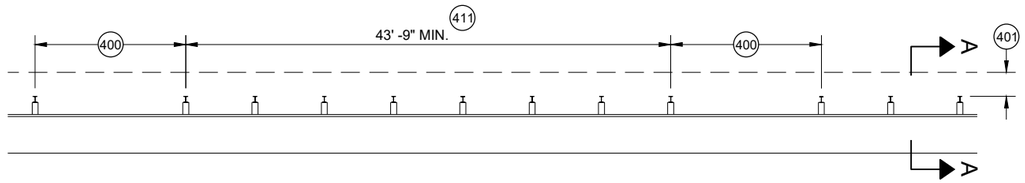
ALTERNATE WOOD BLOCKOUT DETAIL

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

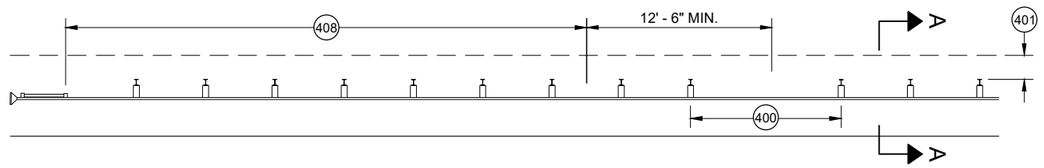
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

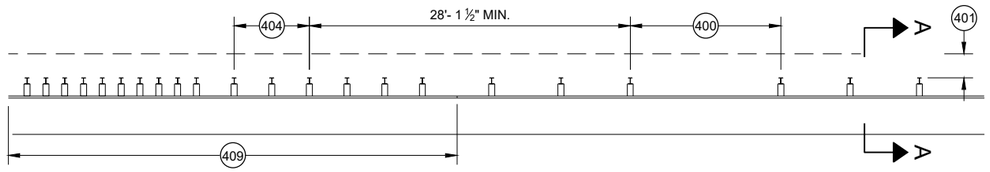
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



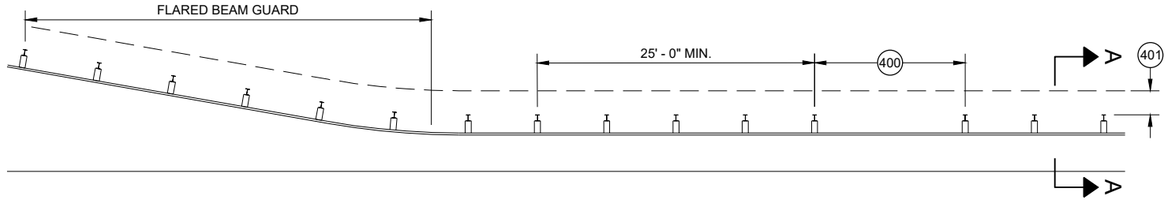
MISSING POST IN MGS GUARDRAIL



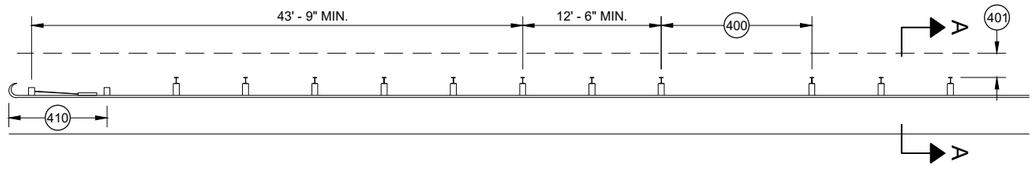
MISSING POST IN MGS GUARDRAIL NEAR EAT



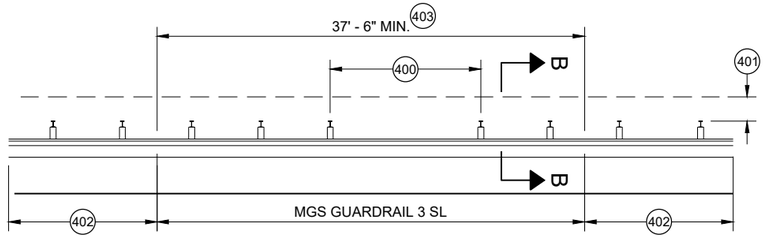
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

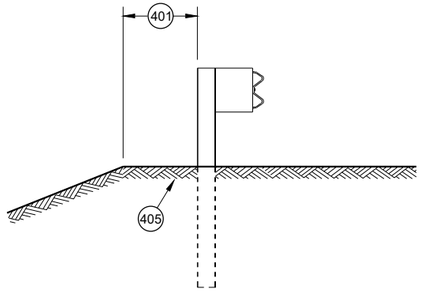


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

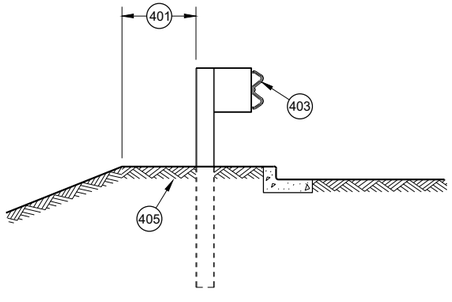


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

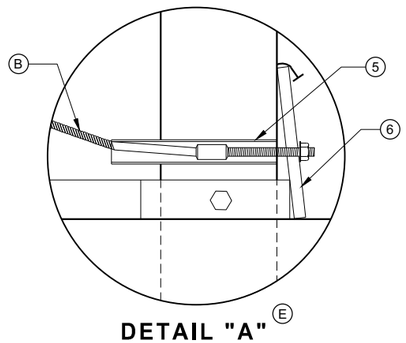
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

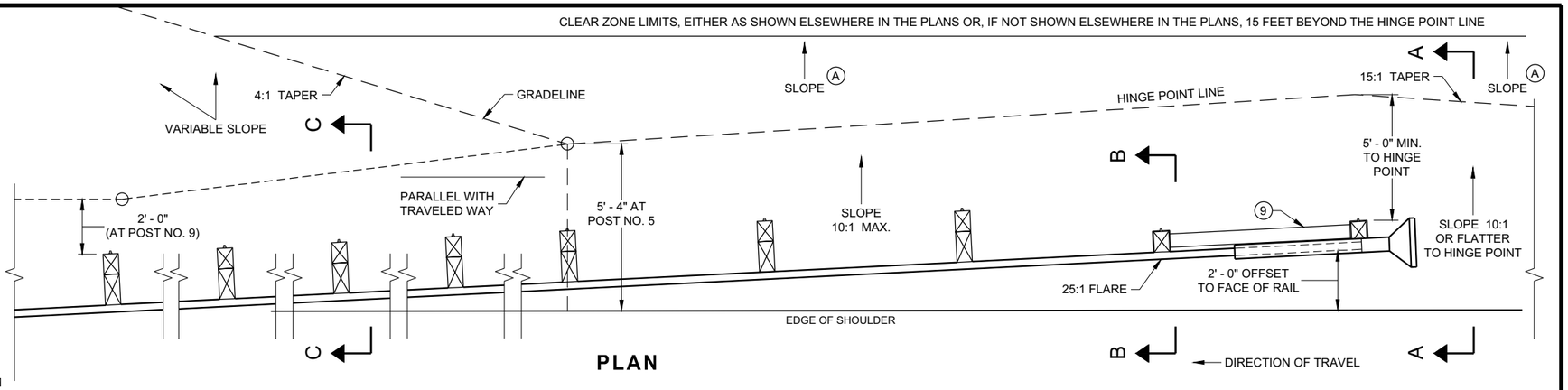
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

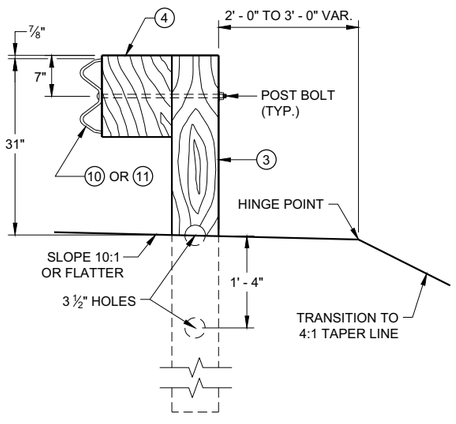
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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

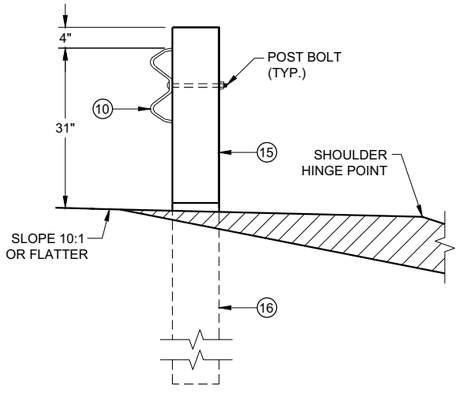


DETAIL "A" (E)

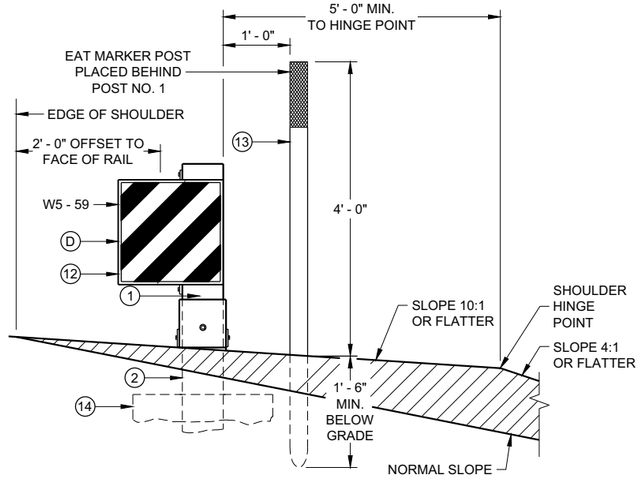




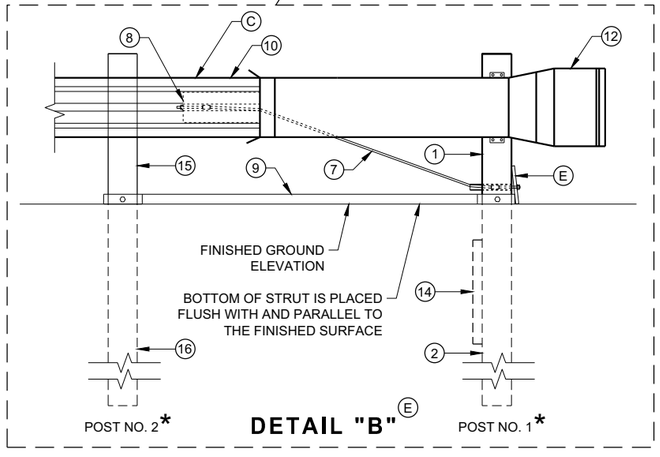
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



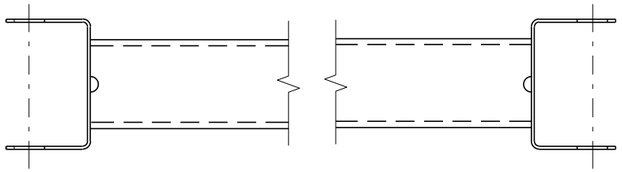
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

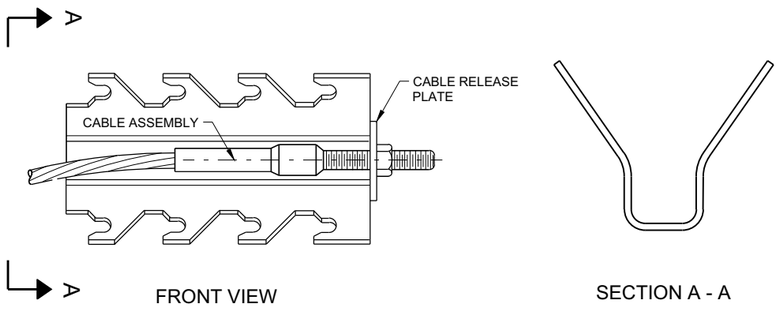
SDD 14B44 - 04a



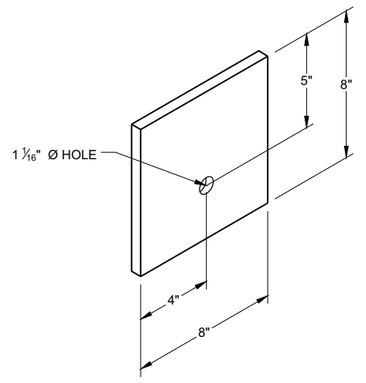
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

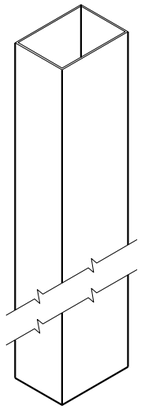
6

SDD 14B44 - 04b

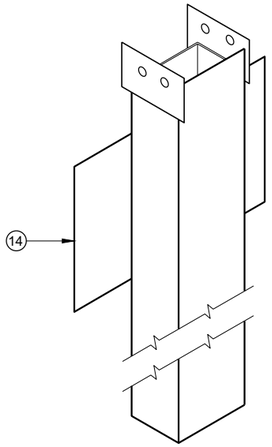
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

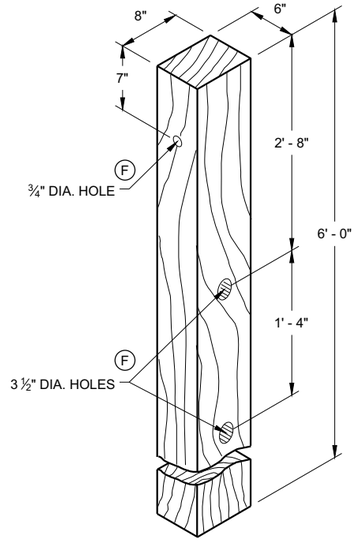
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA



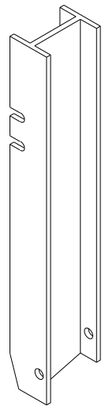
UPPER POST NO. 1 (1) (E)



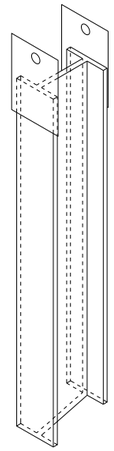
LOWER POST NO. 1 (2) (E)



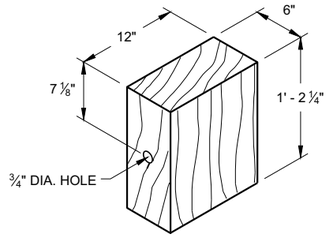
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



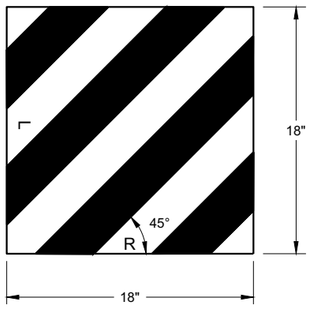
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

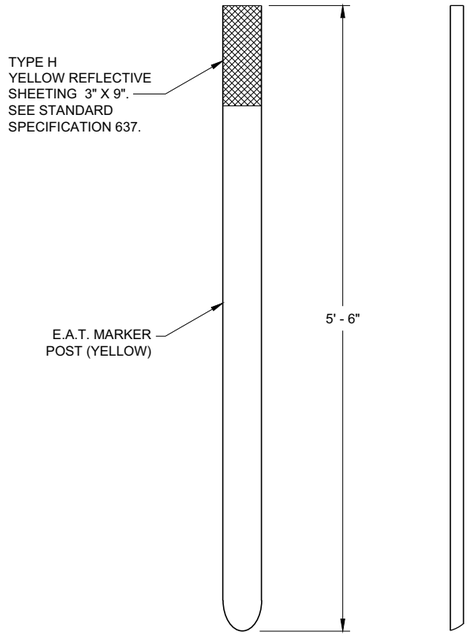


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



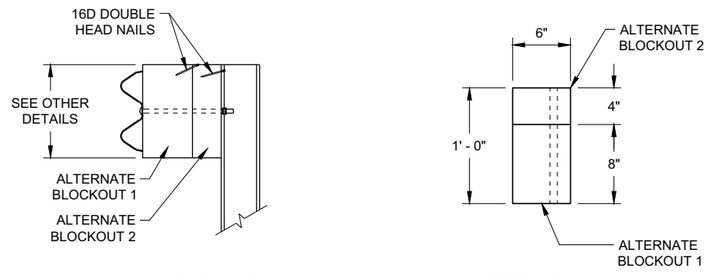
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

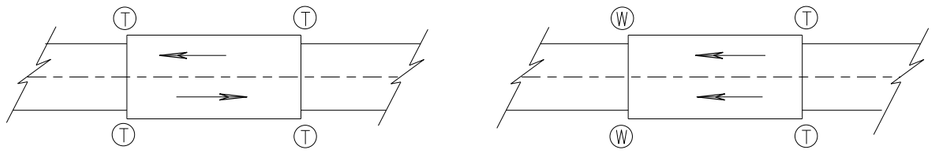
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

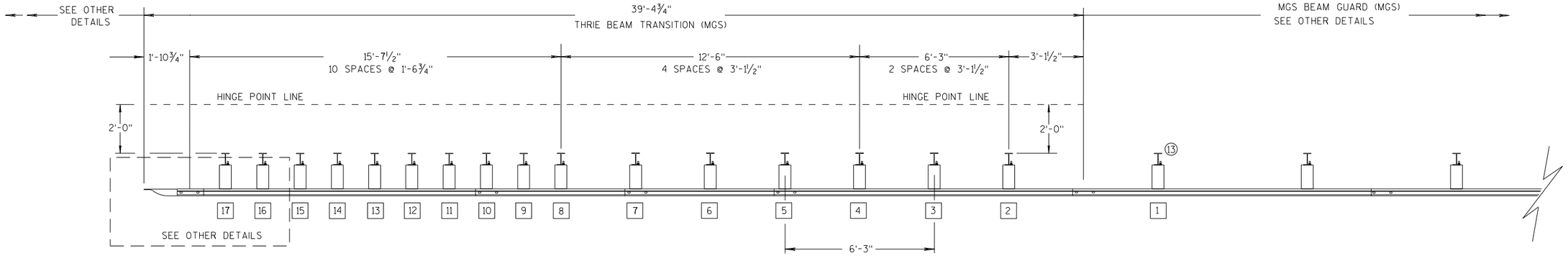
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

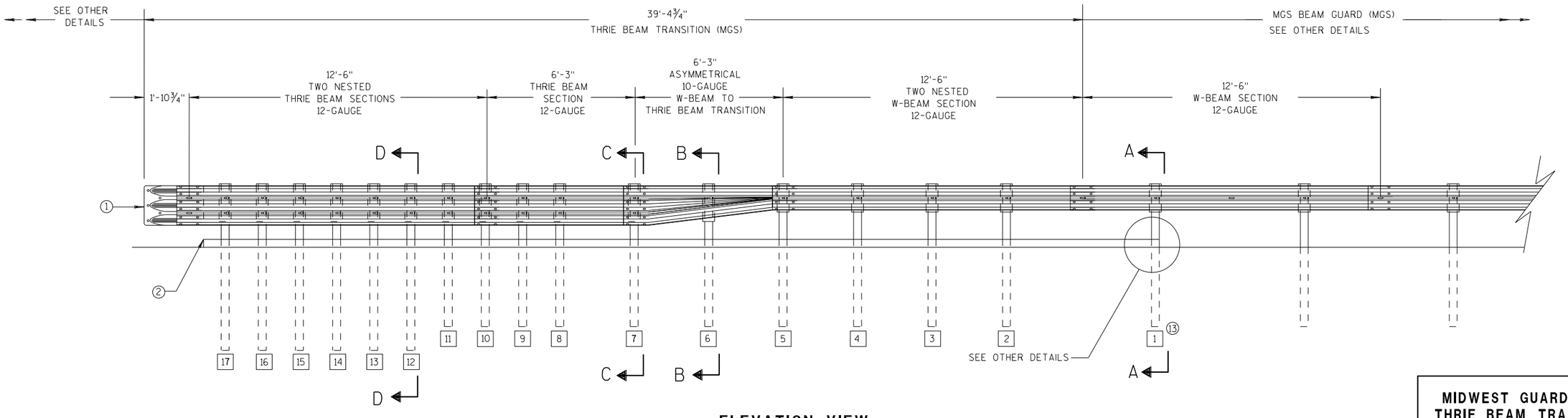
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

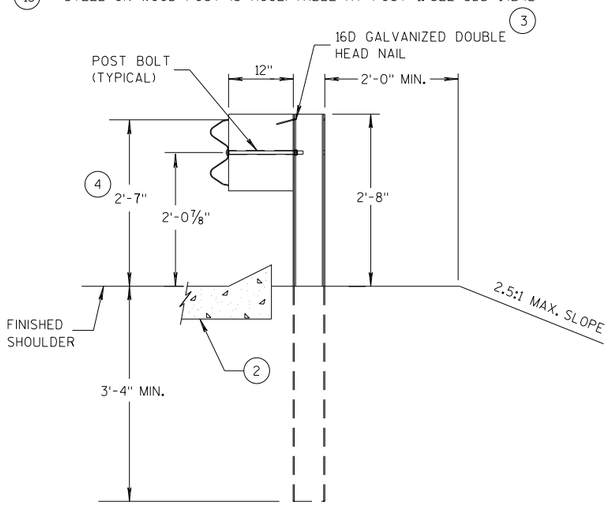
GENERAL NOTES

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

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

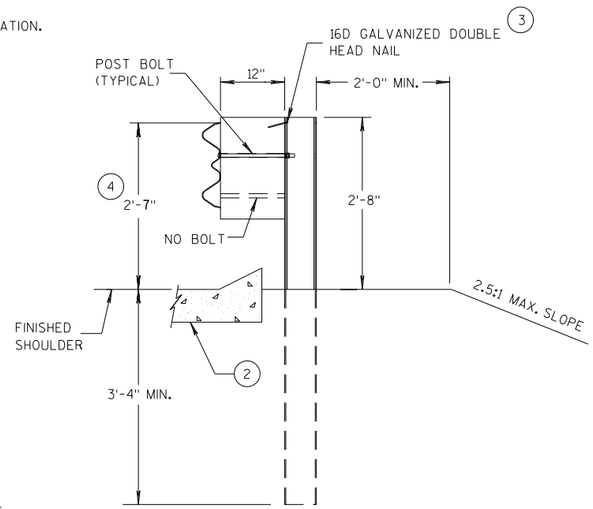
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



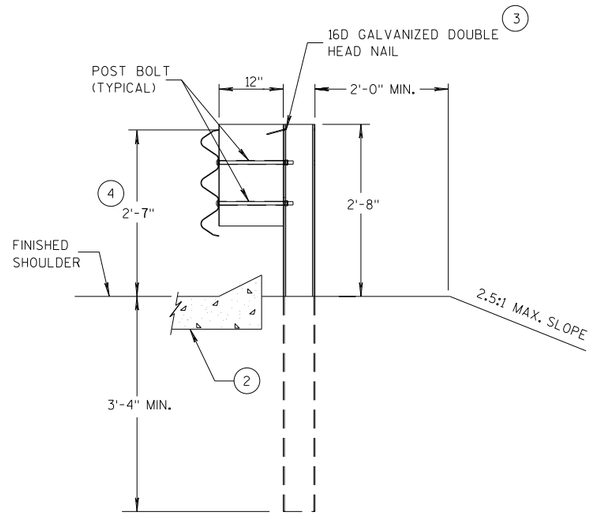
SECTION A-A (13)

POSTS 1-5



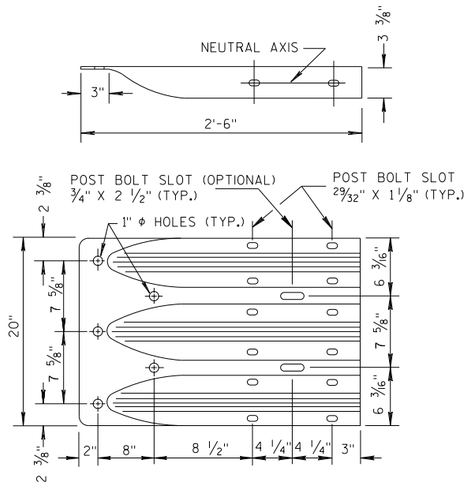
SECTION B-B

POST 6

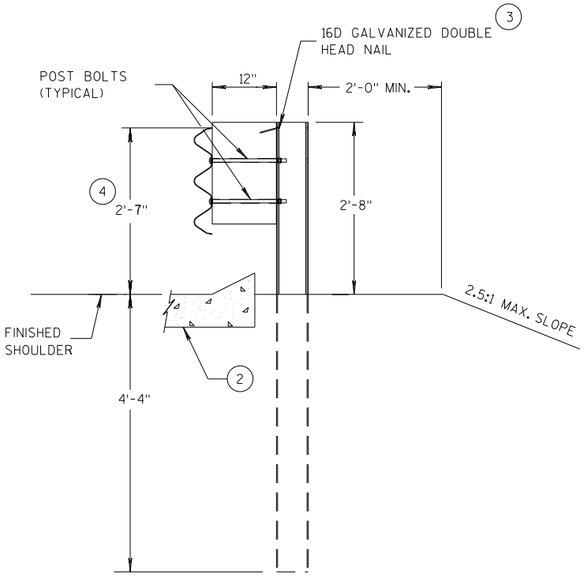


SECTION C-C

POSTS 7-11

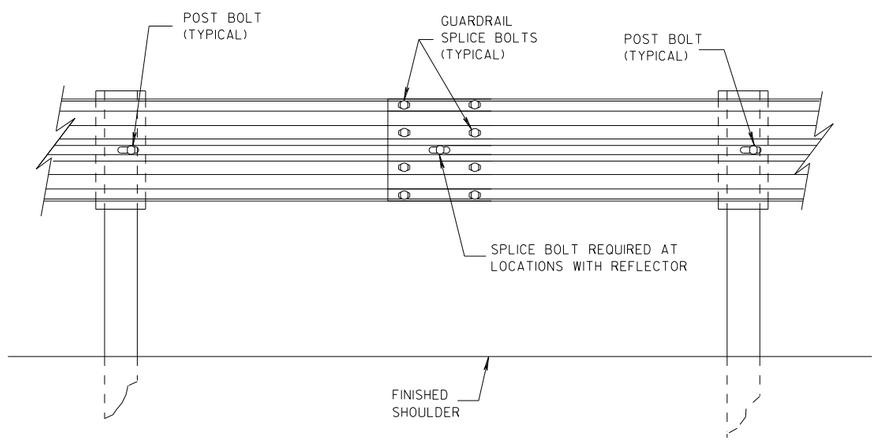


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

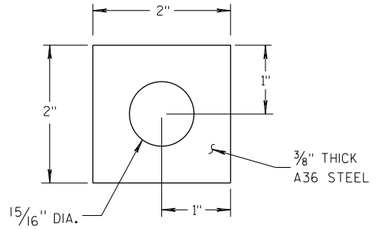
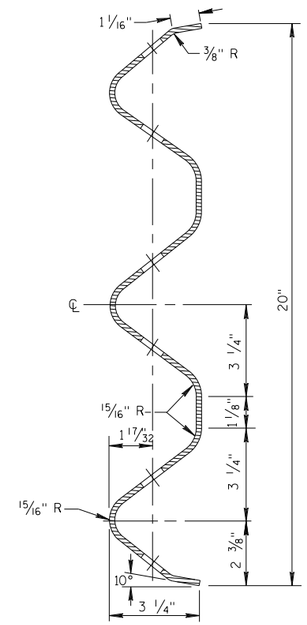


PLATE WASHER DETAIL



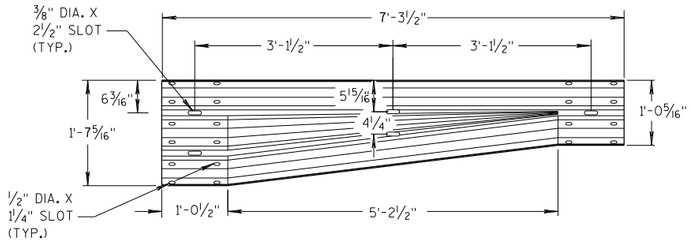
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

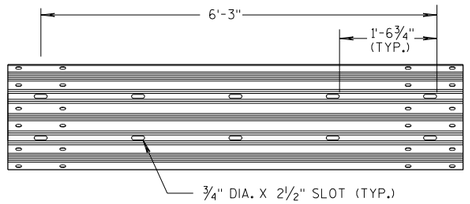
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

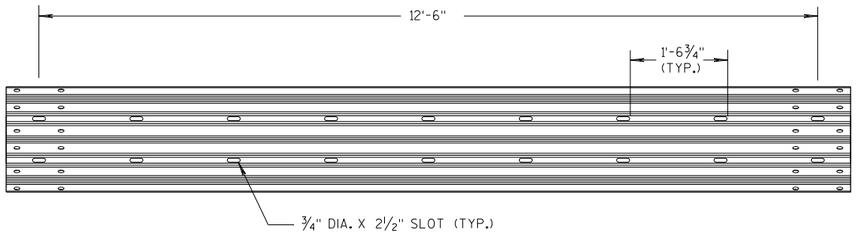
S.D.D. 14 B 45-5b



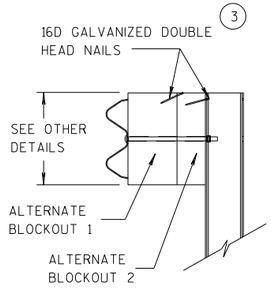
W-BEAM TO THRIE BEAM TRANSITION SECTION



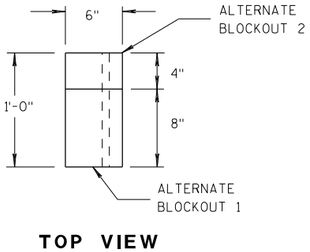
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

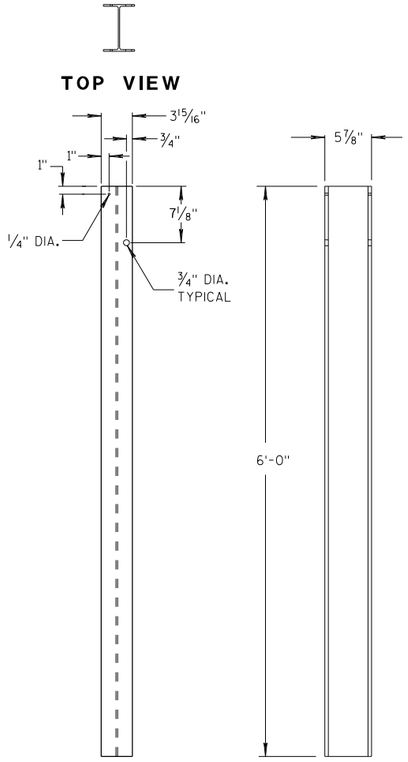


SIDE VIEW



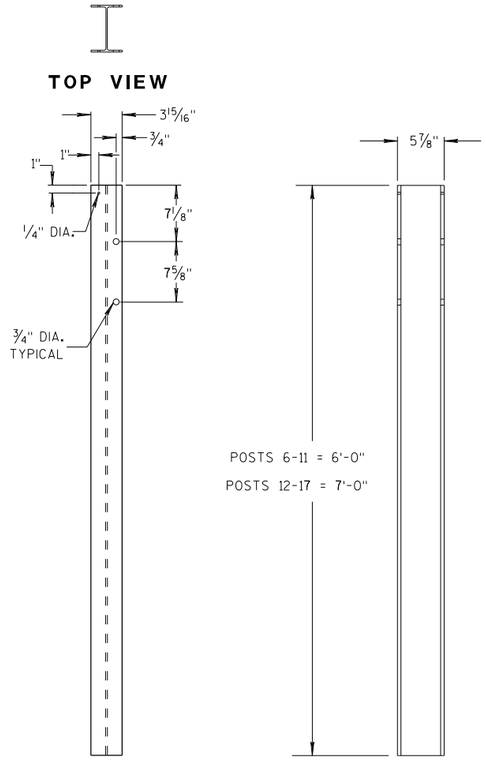
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



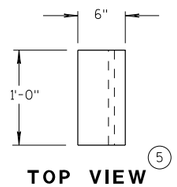
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

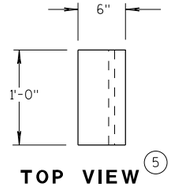


FRONT VIEW SIDE VIEW

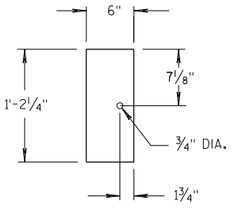
STEEL POSTS 6-17



TOP VIEW (5)

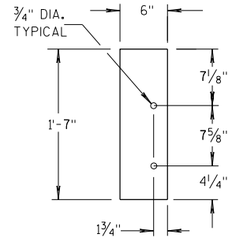


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

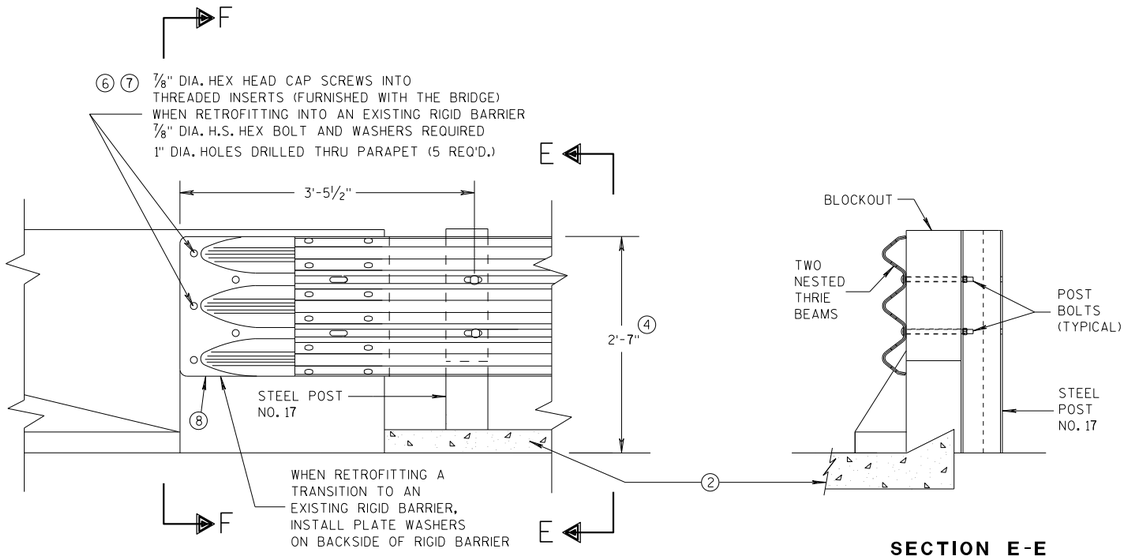
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

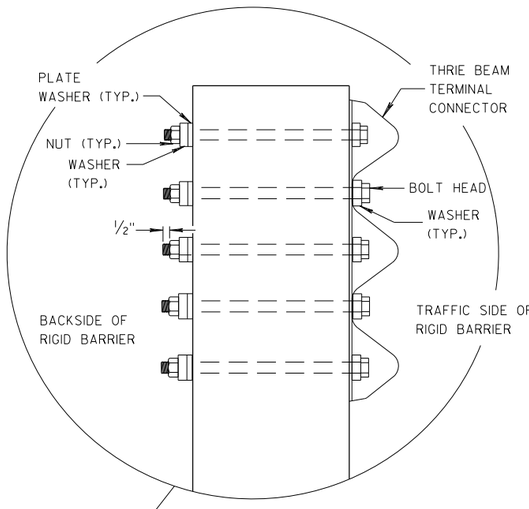
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

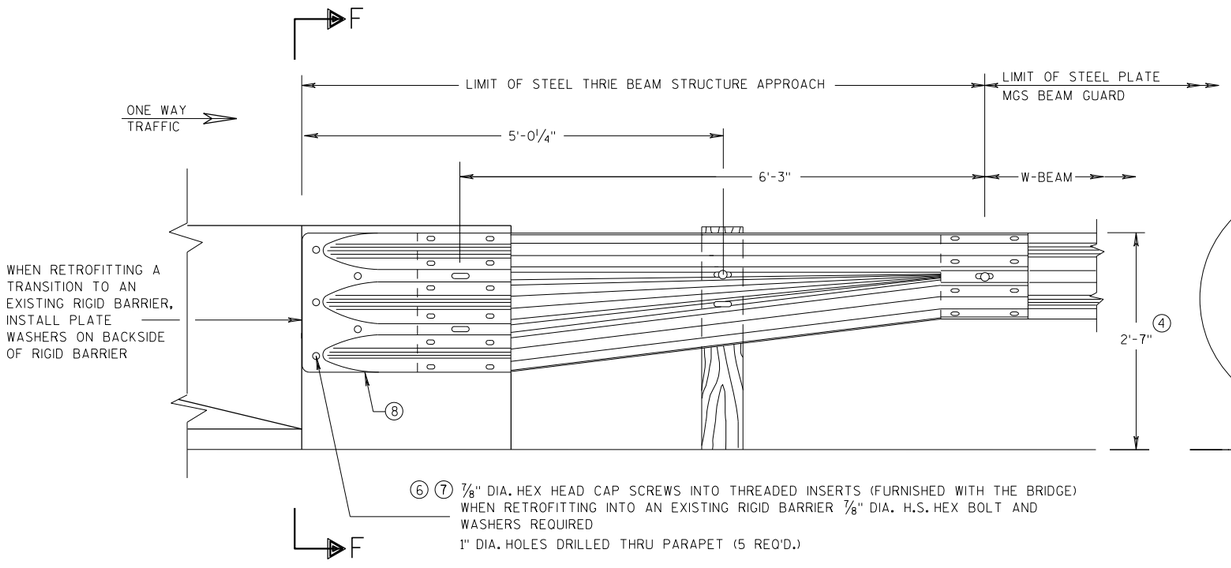
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

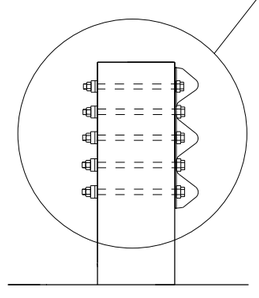
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

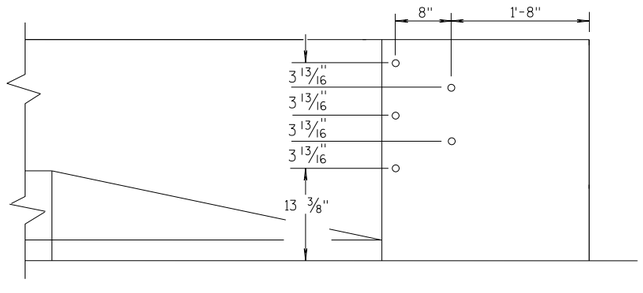




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

6

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

GENERAL NOTES

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

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

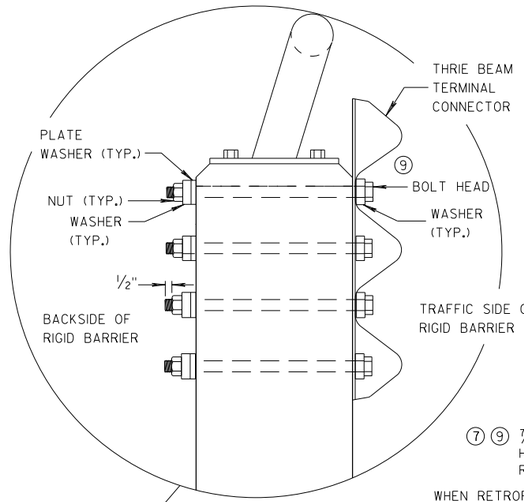
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

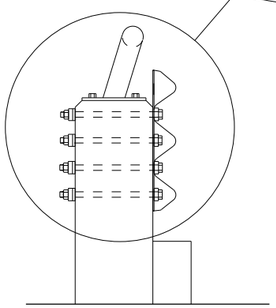
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

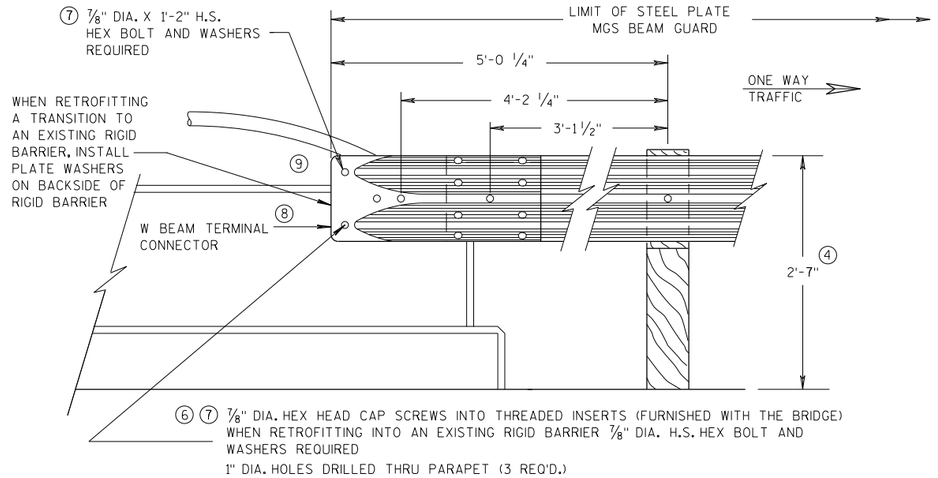
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

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





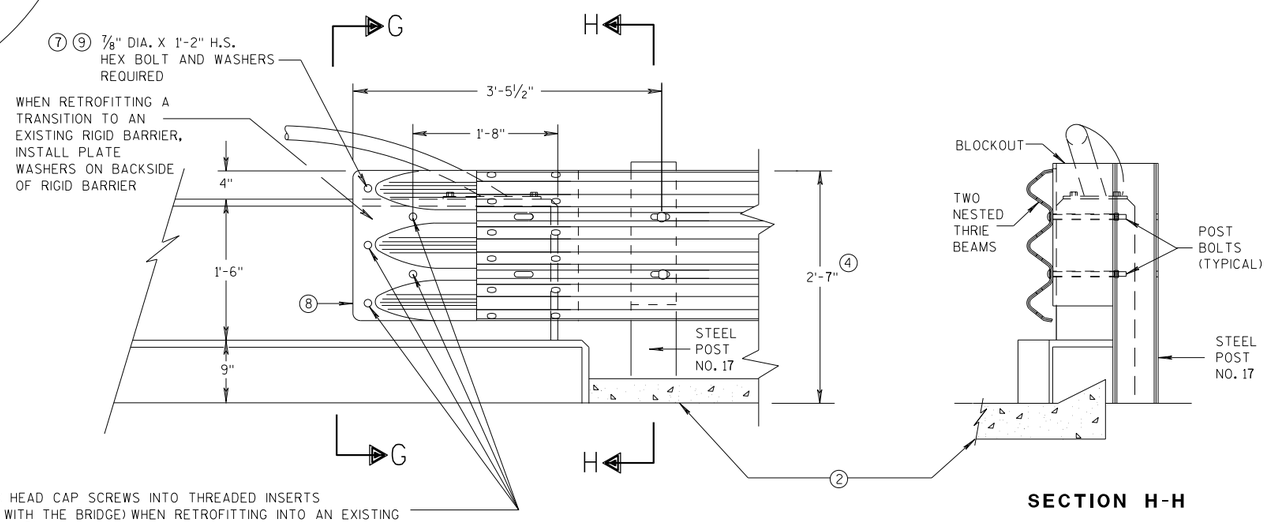
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

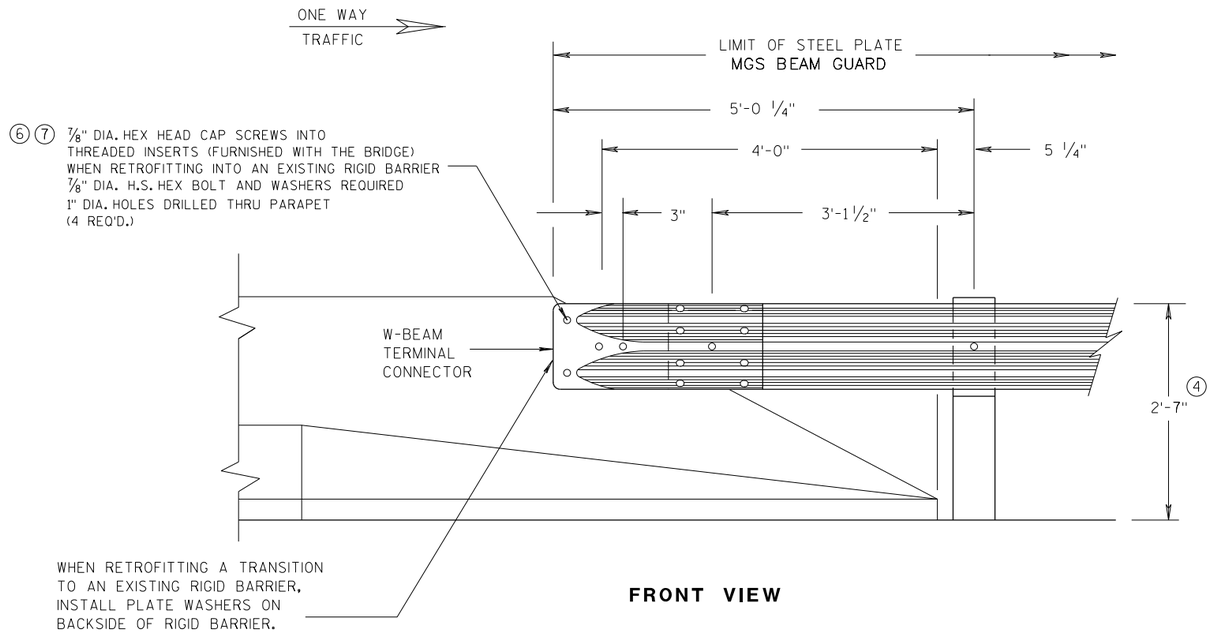
APPROVED
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS — NT
FHWA

6

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

6

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

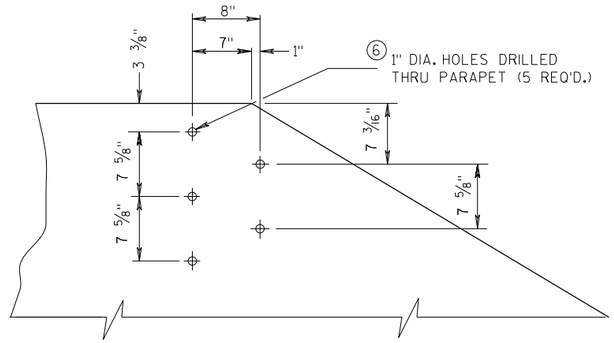
GENERAL NOTES

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

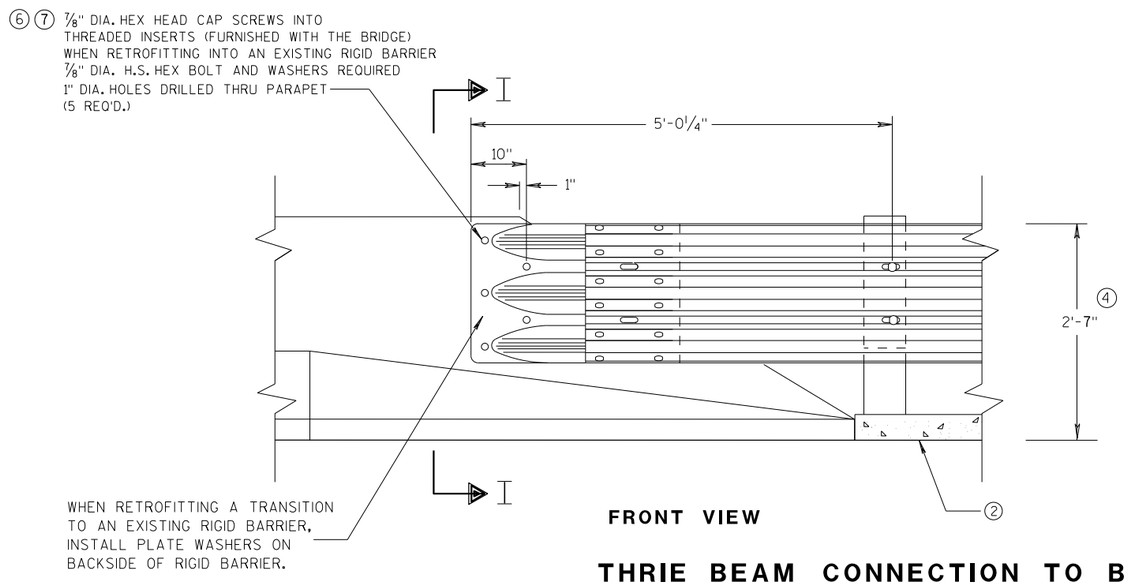
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

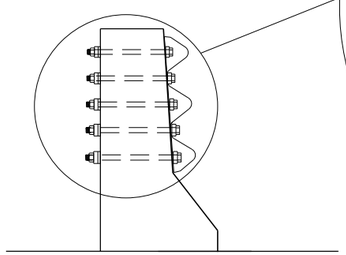
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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



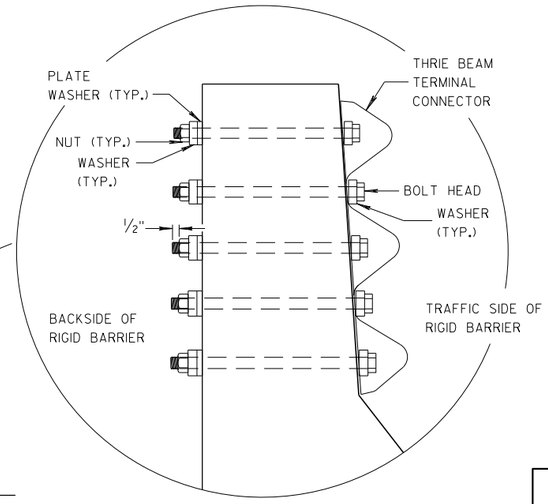
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

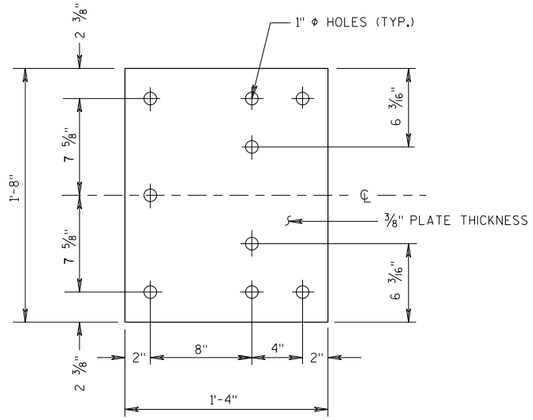
APPROVED
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS [illegible] ENT
UNIT SUPERVI
FHWA

6

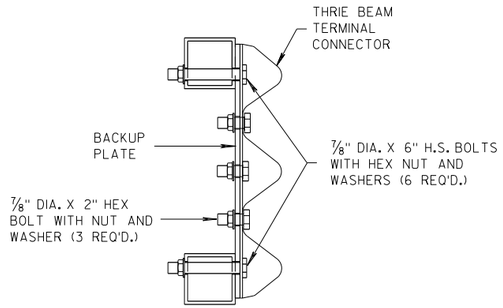
S.D.D. 14 B 45-5f

6

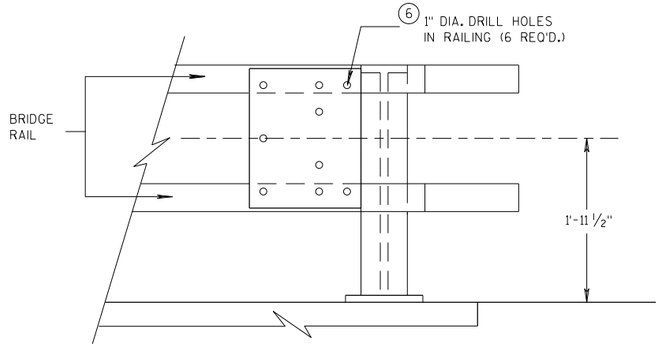
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

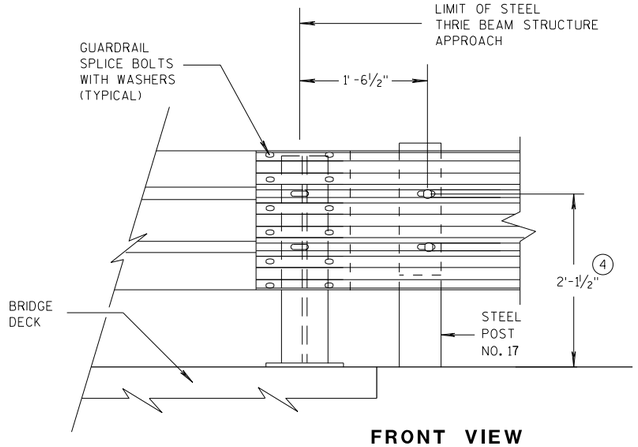


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

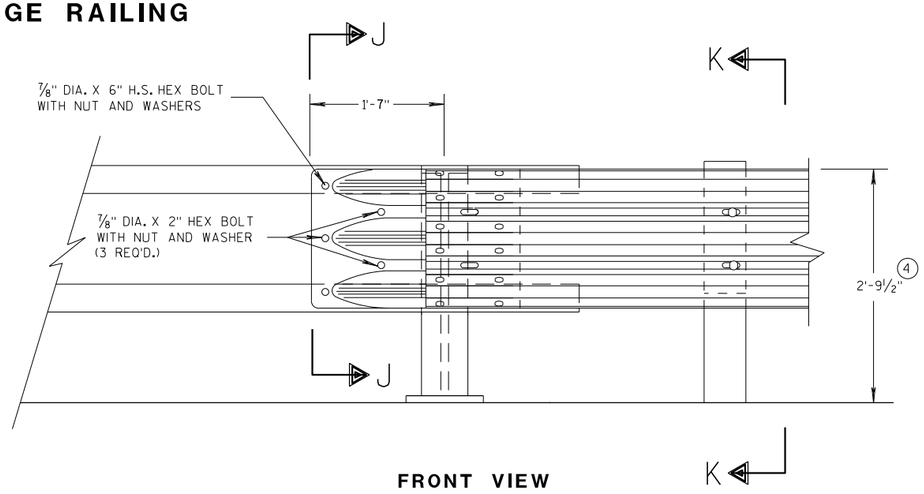
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

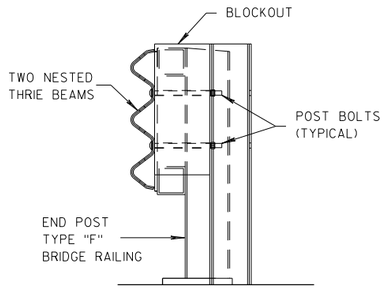


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

6

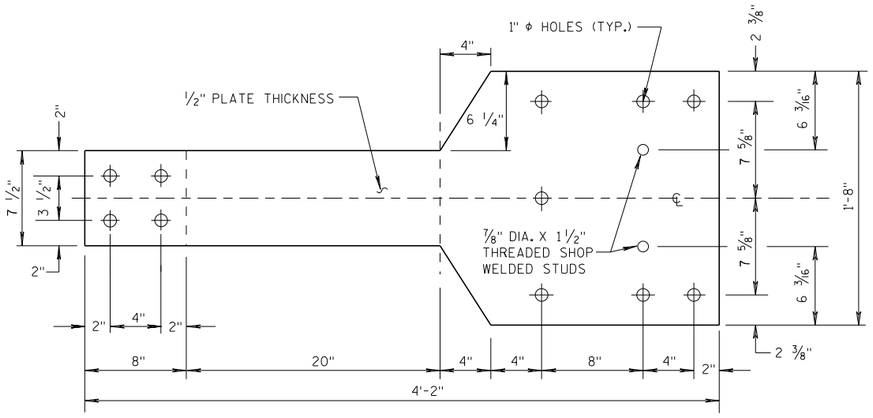
S.D.D. 14 B 45-5g

6

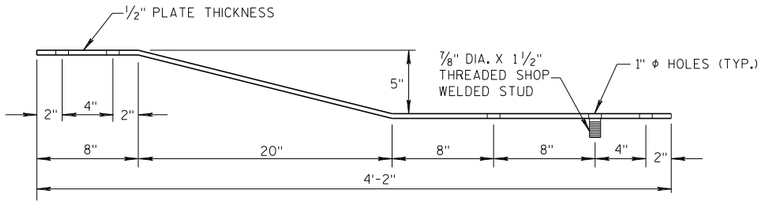
S.D.D. 14 B 45-5g

GENERAL NOTES

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

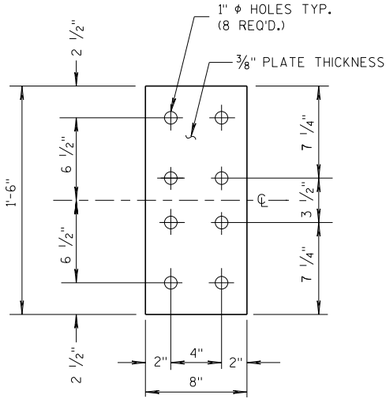


FRONT VIEW



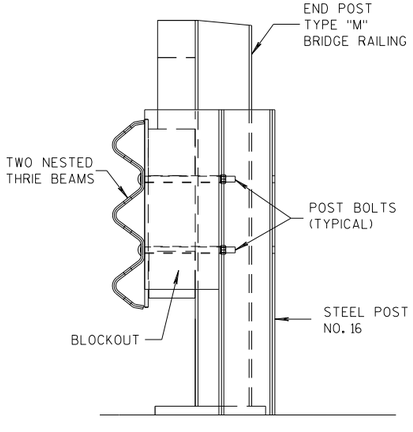
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

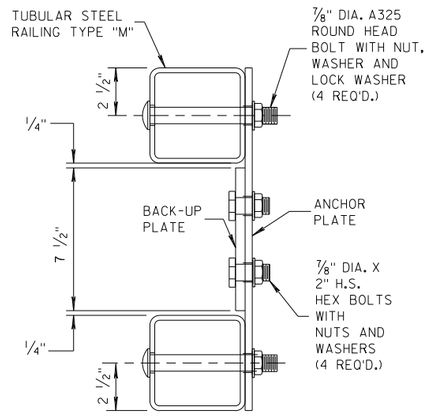


FRONT VIEW

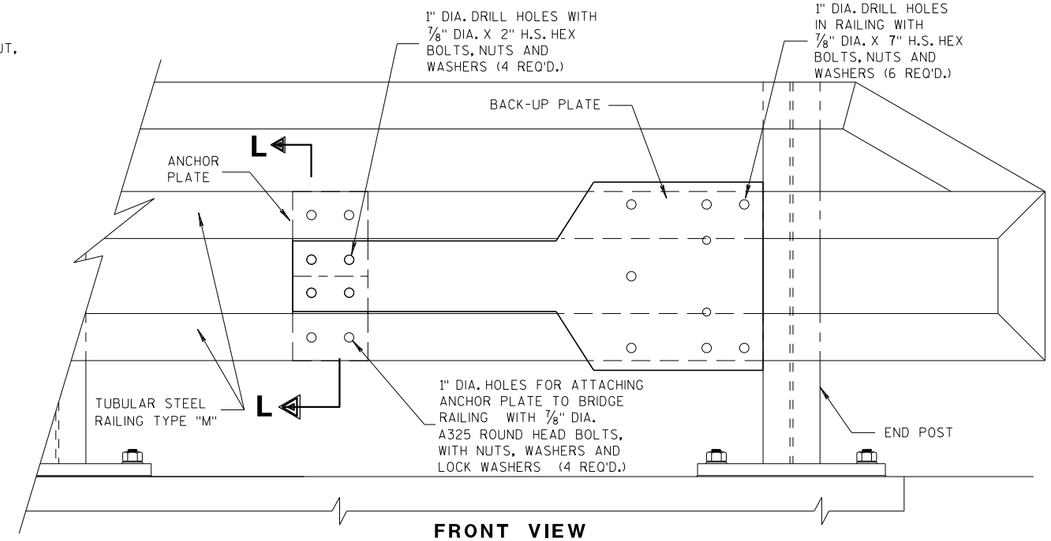
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

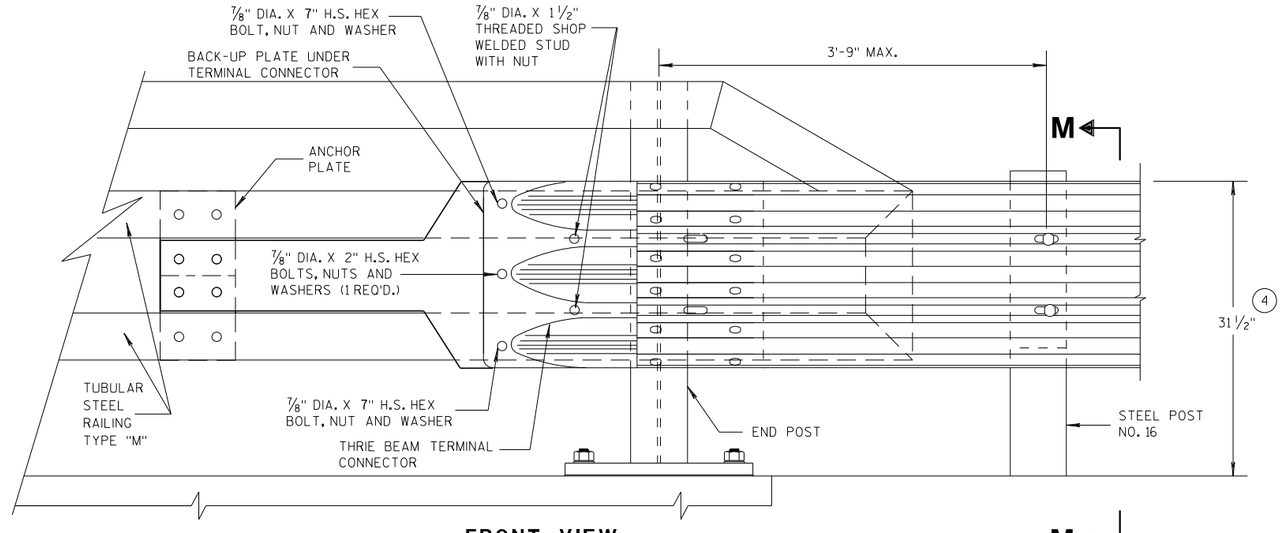


SECTION L-L

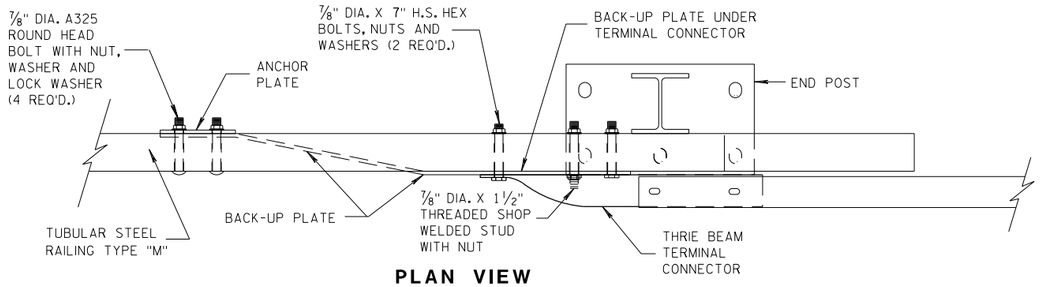


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

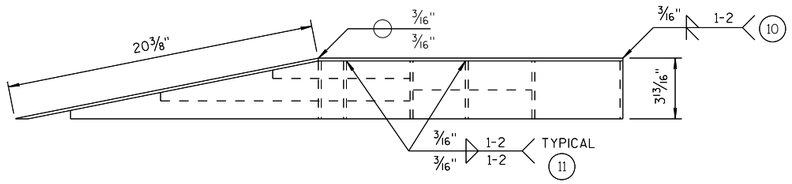
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

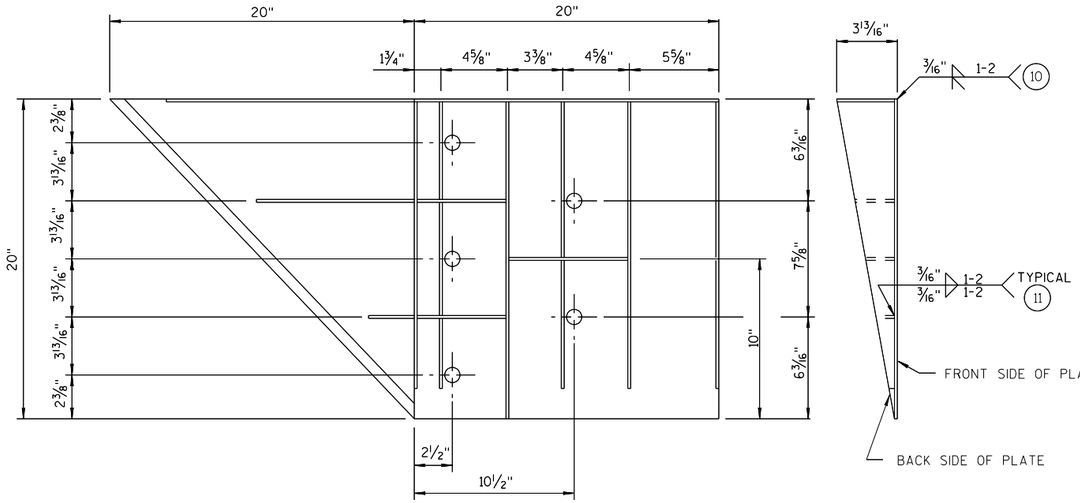
6

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

6

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





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

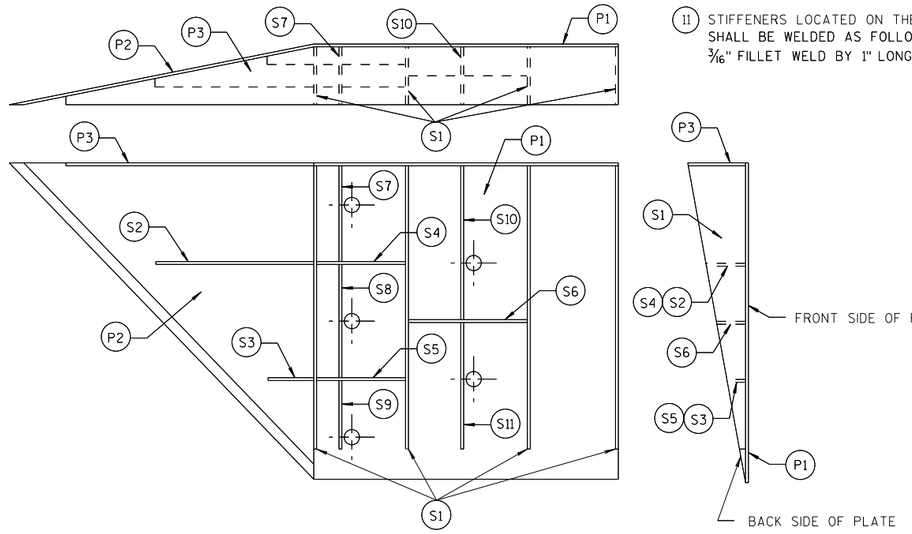


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

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

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

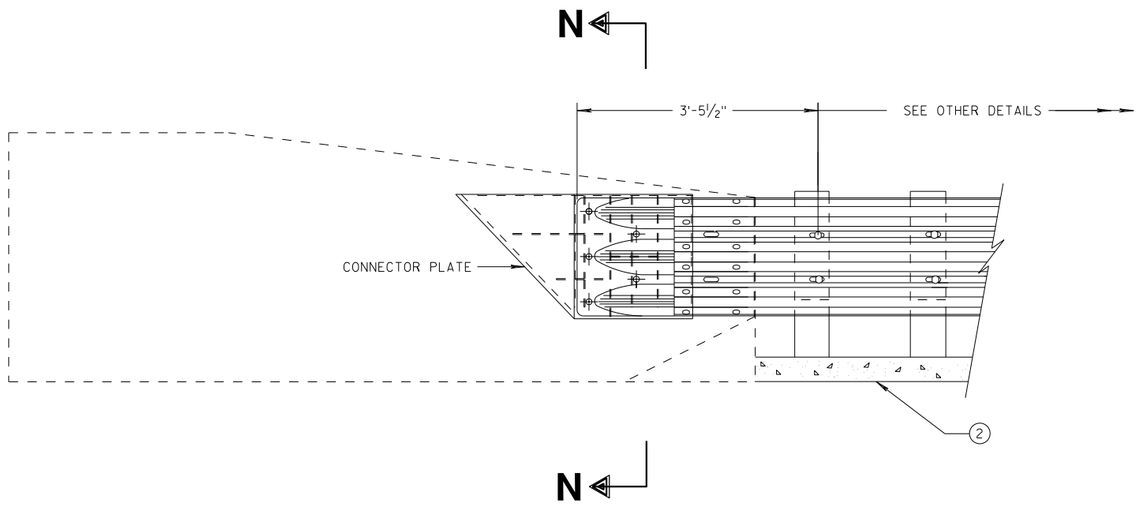
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

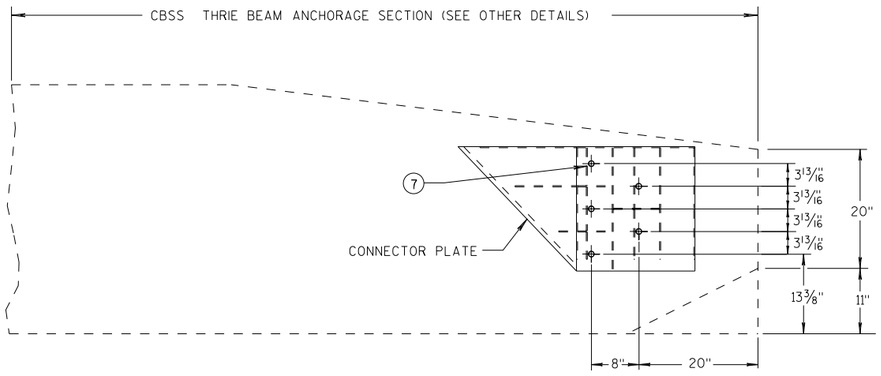
APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

6
S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



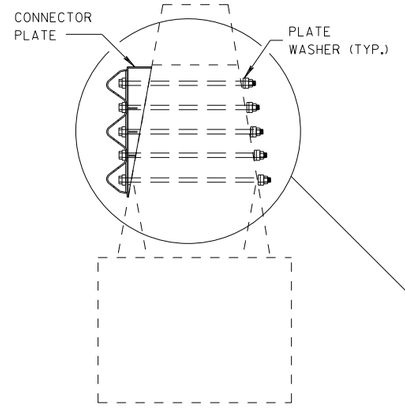
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

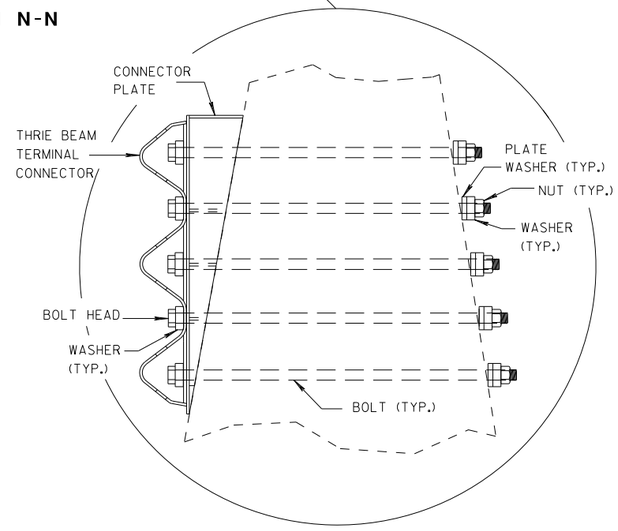
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

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



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

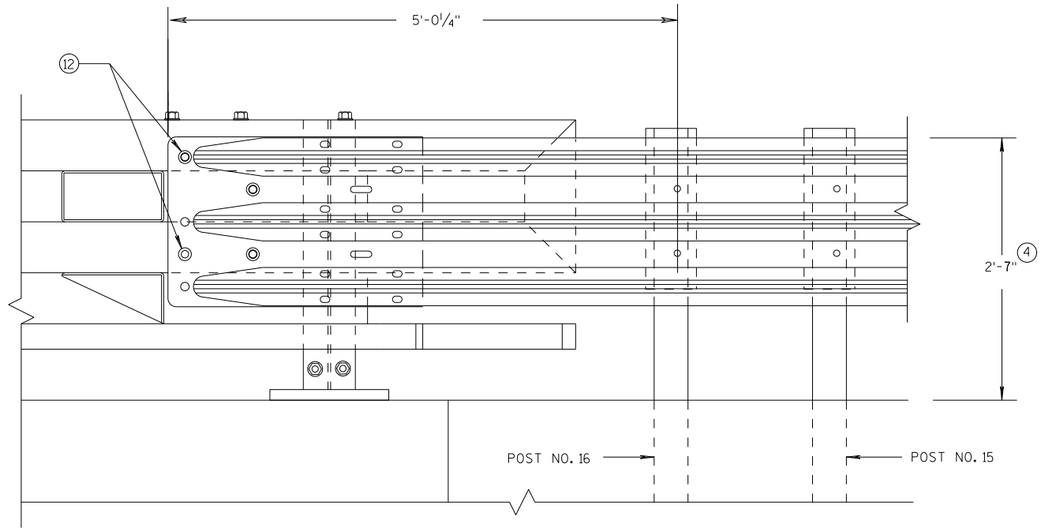
/S/ Rodney Taylor
ROADWAY STANDARDS DI
UNIT SUPERVIS

6

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

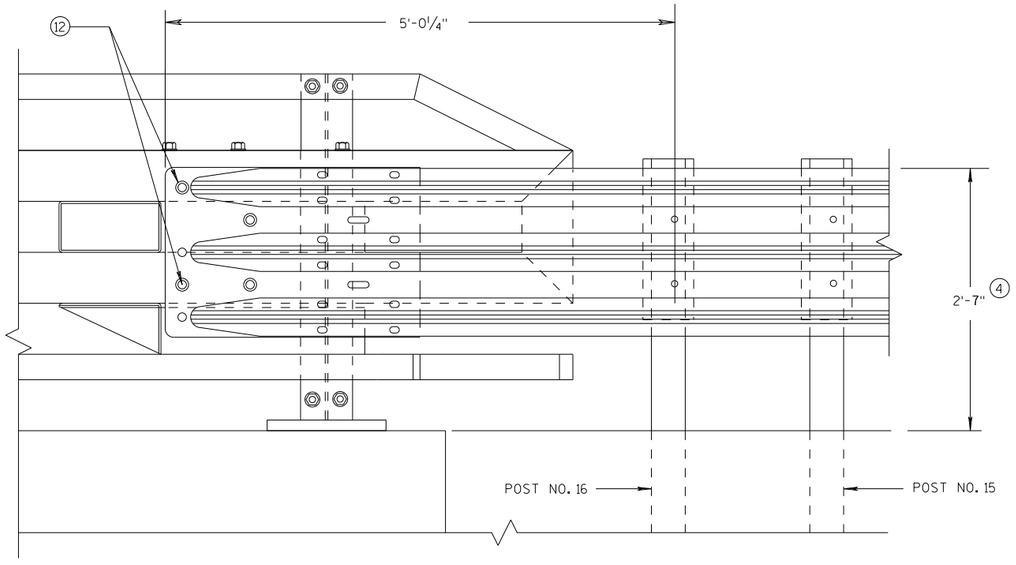
6

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



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

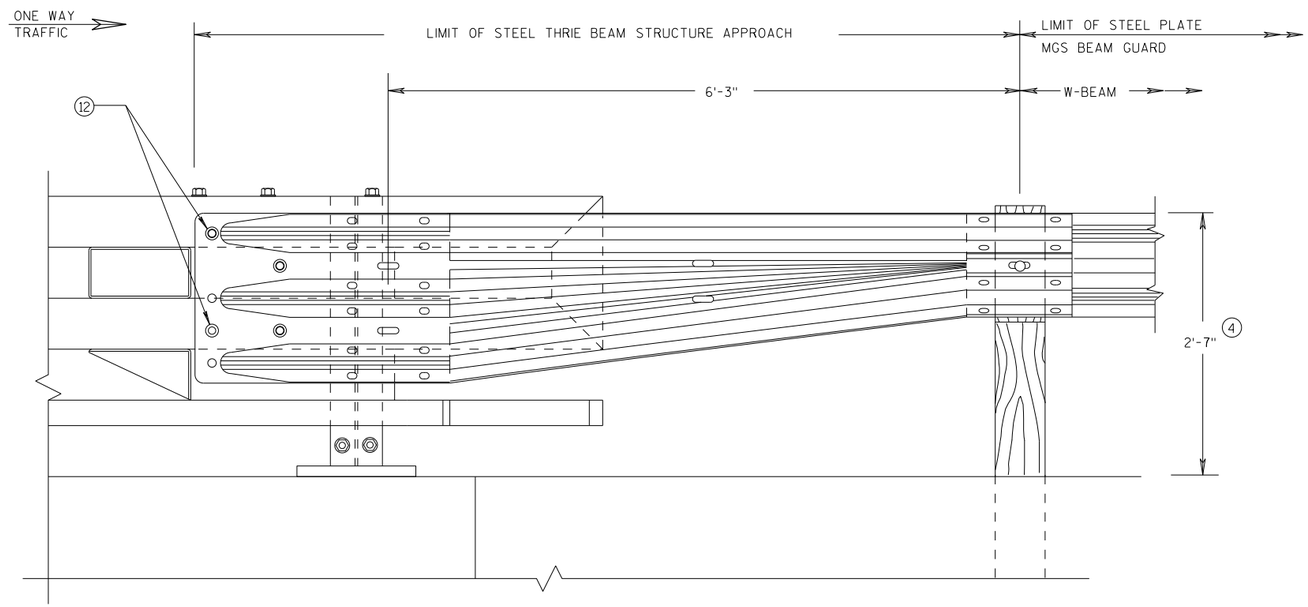
NT

6

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

6

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



FRONT VIEW

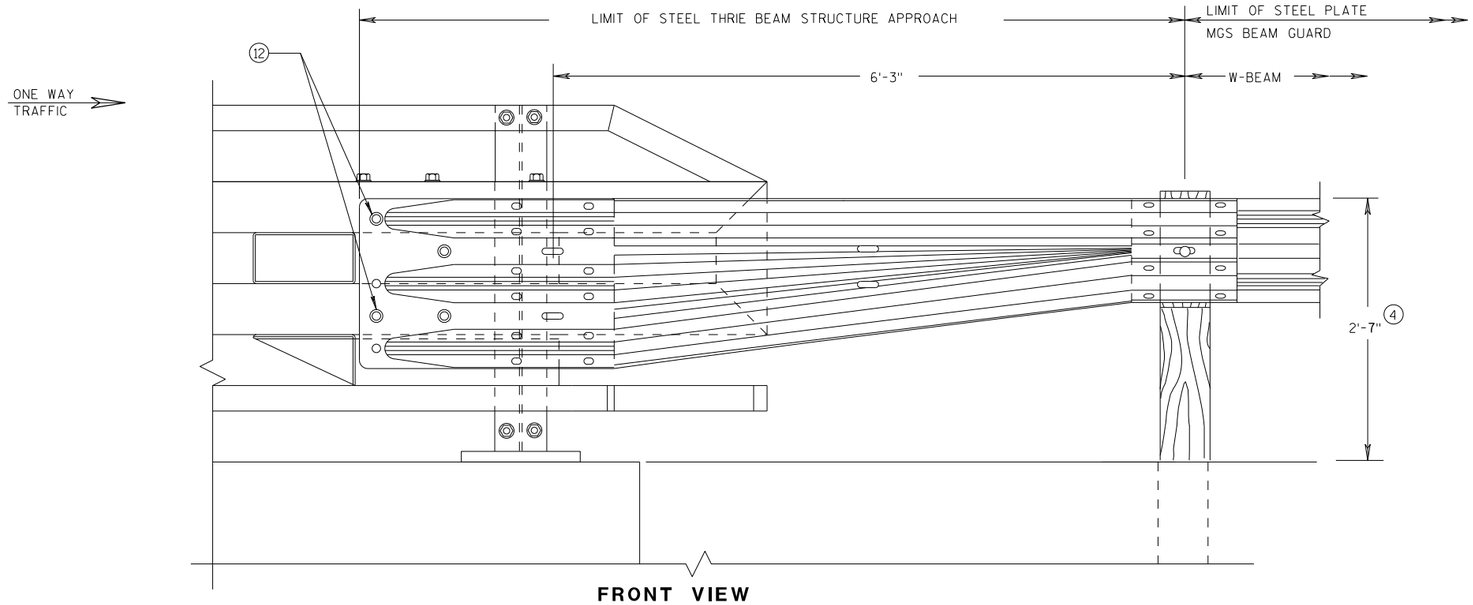
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

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



FRONT VIEW

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

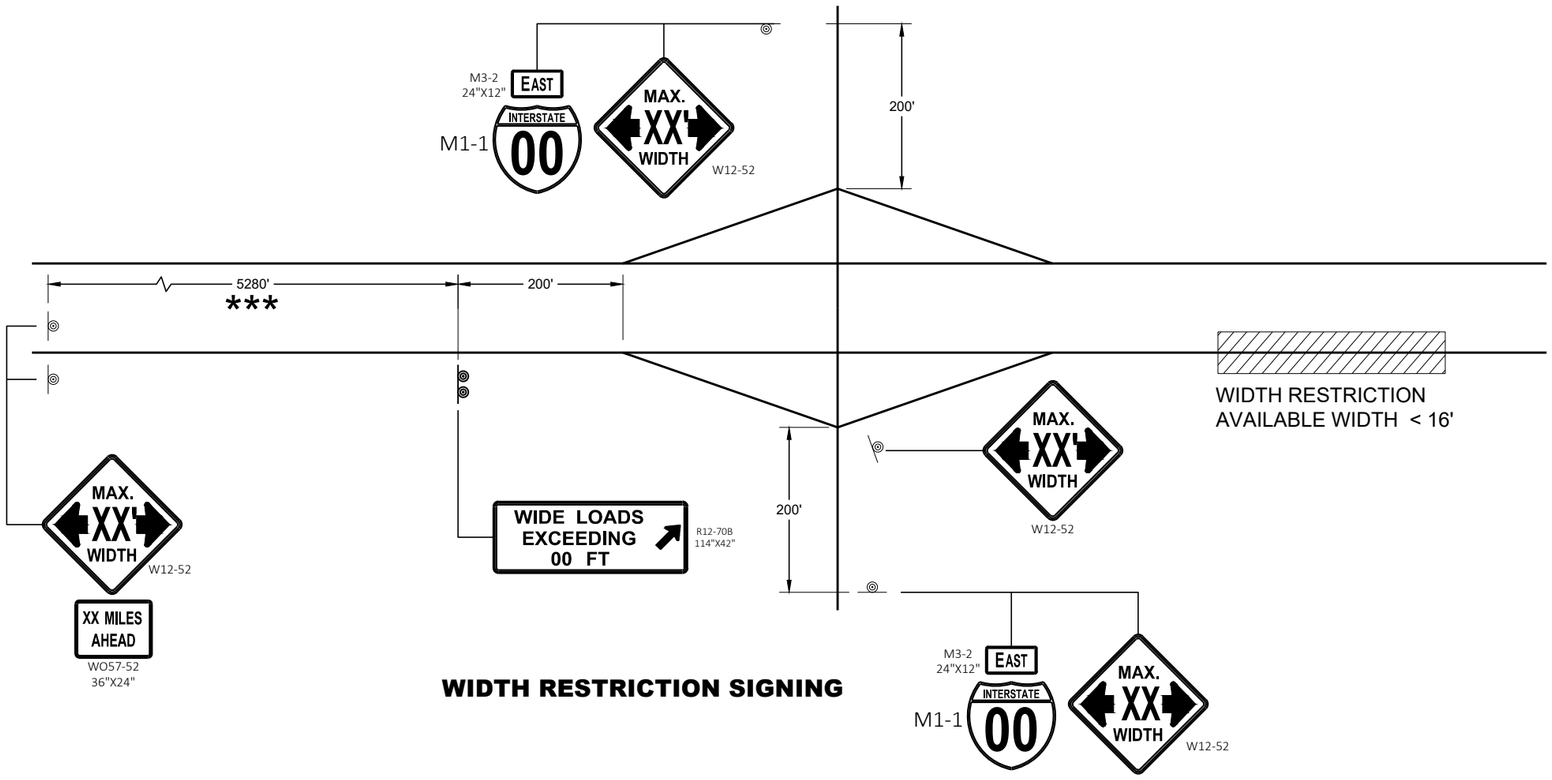
NT

6

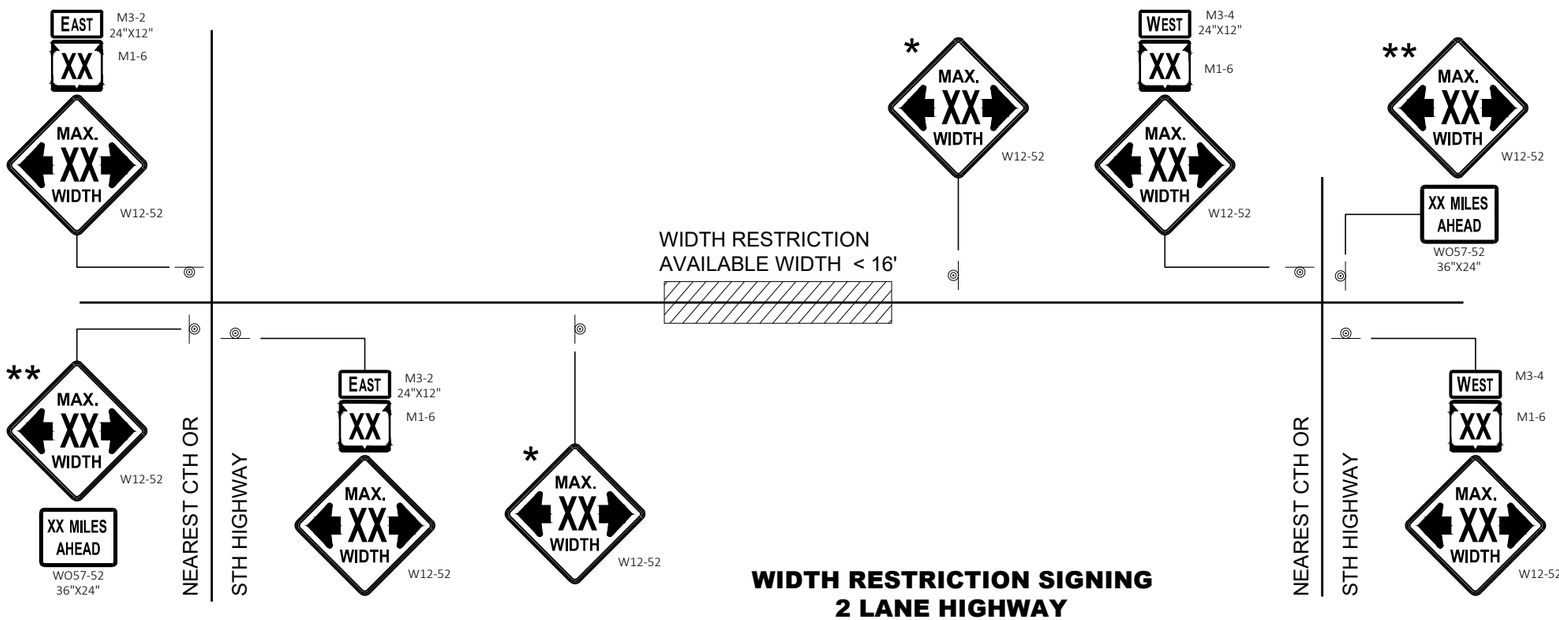
S.D.D. 14 B 45-5L

6

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



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

◎ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15C02 - 09f

6

SDD 15C02 - 09f

GENERAL NOTES

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

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

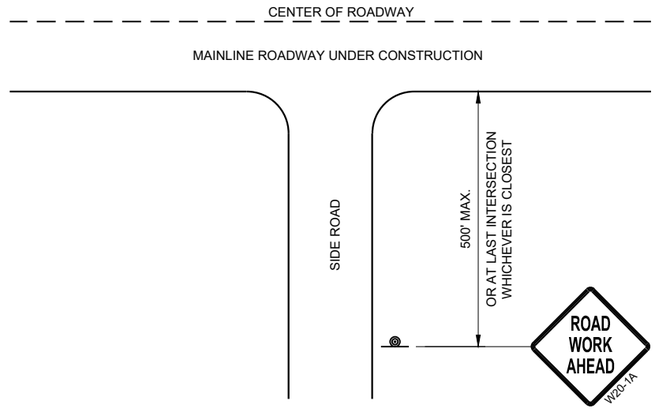
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



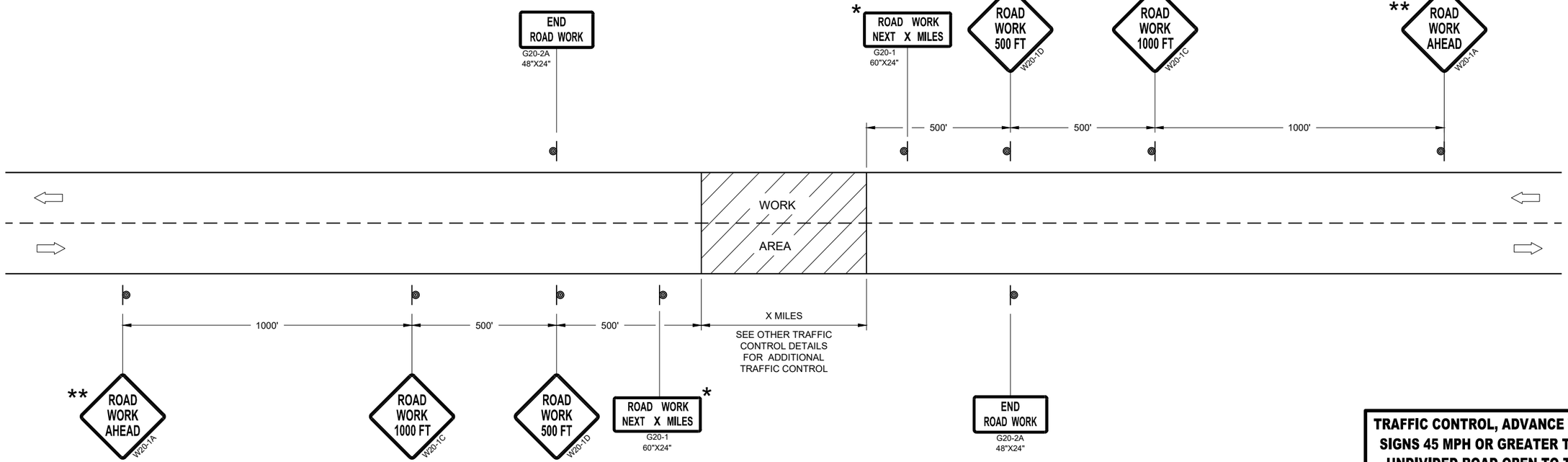
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

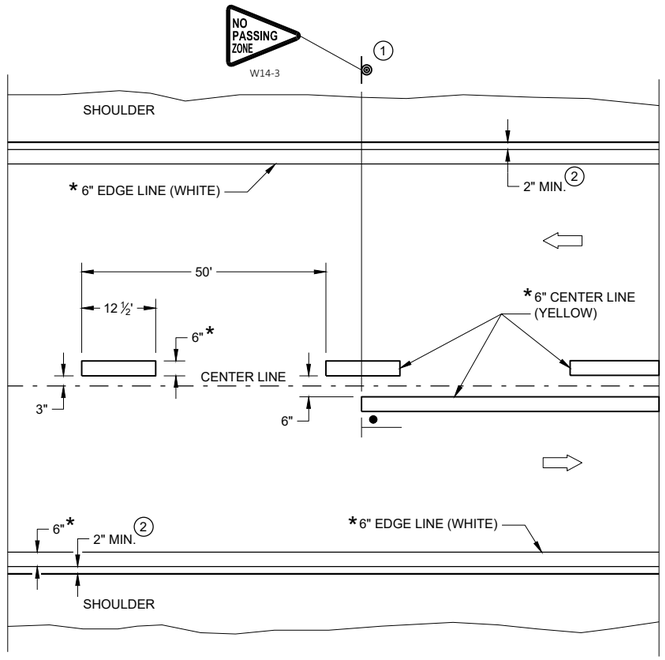
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

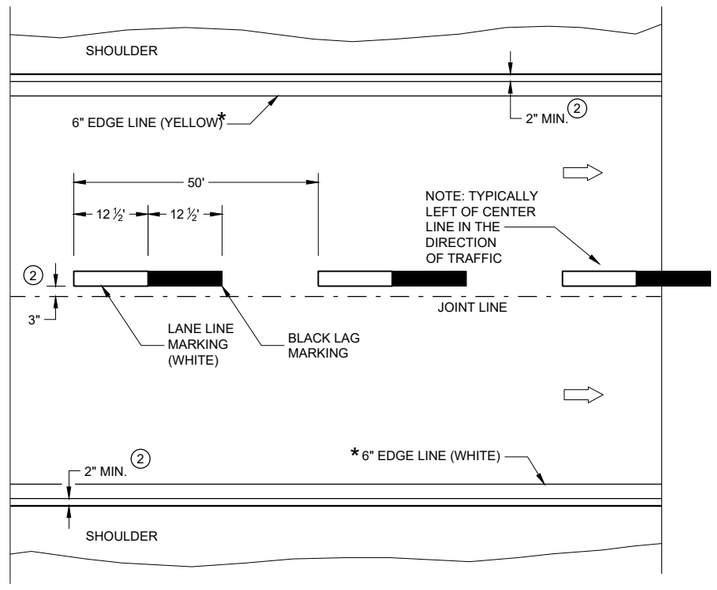
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

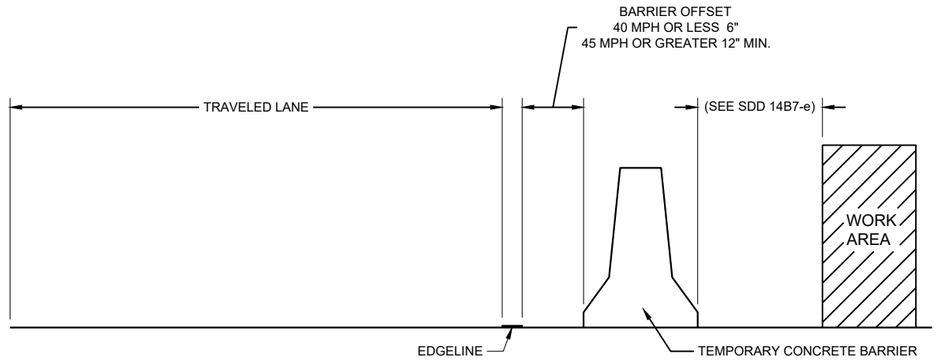
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

6

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

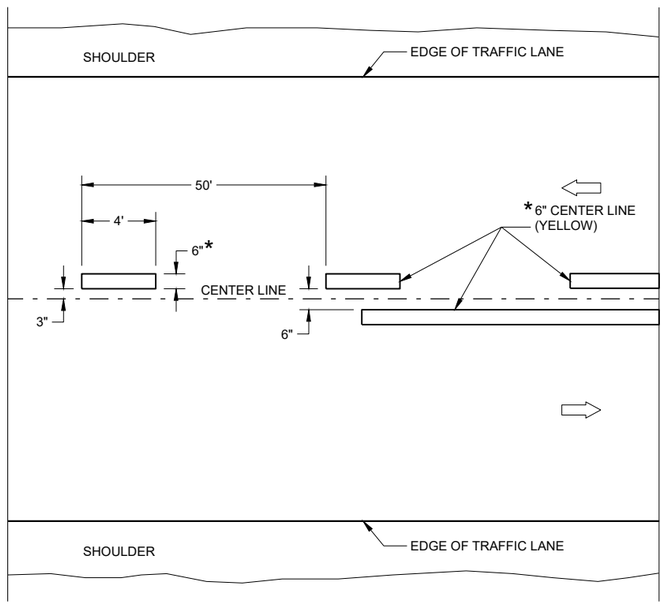
GENERAL NOTES

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

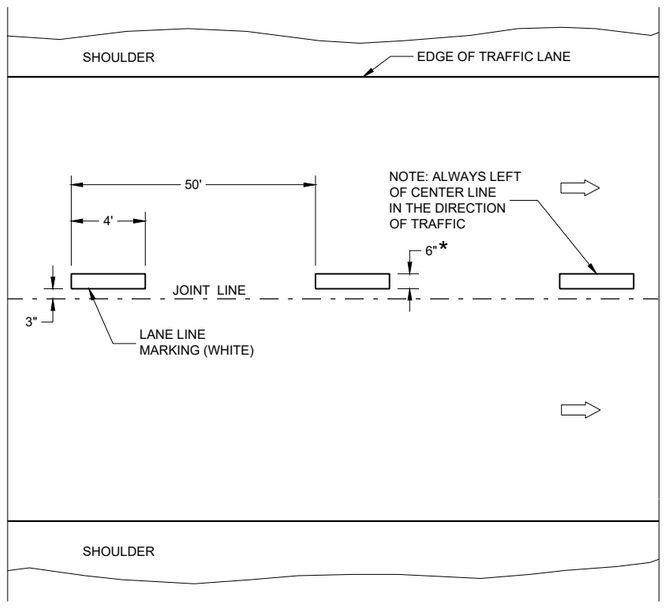
LEGEND

⇨ DIRECTION OF TRAFFIC

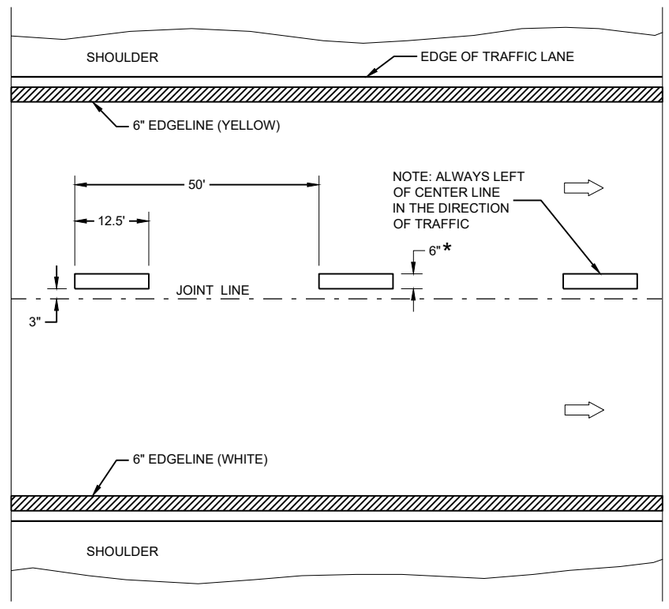
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

6

SDD 15C08-23b

6

SDD 15C08-23b

LEGEND

- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TEMPORARY PORTABLE RUMBLE STRIP ARRAY
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

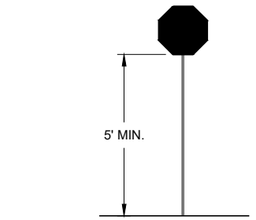
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



STOP/SLOW PADDLE ON SUPPORT STAFF

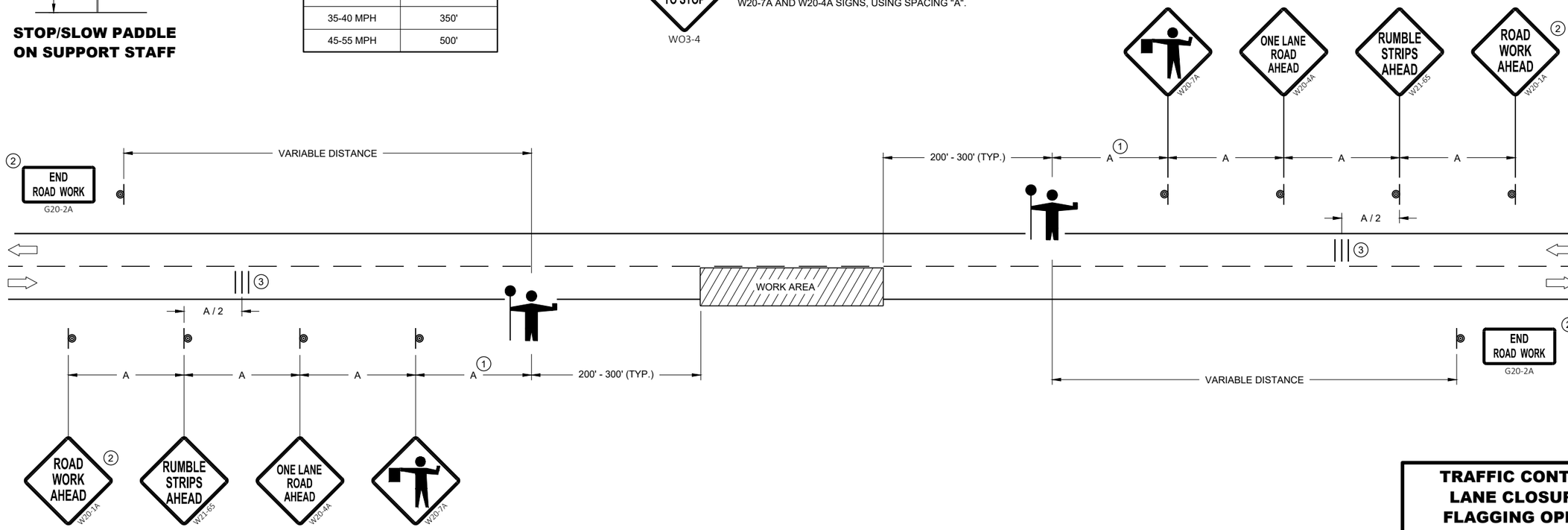
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15C12 - 09a

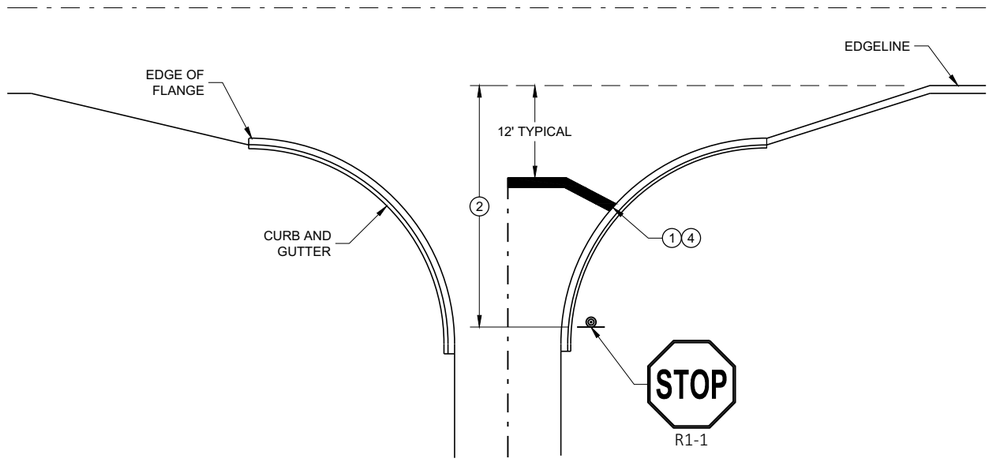
6

SDD 15C12 - 09a

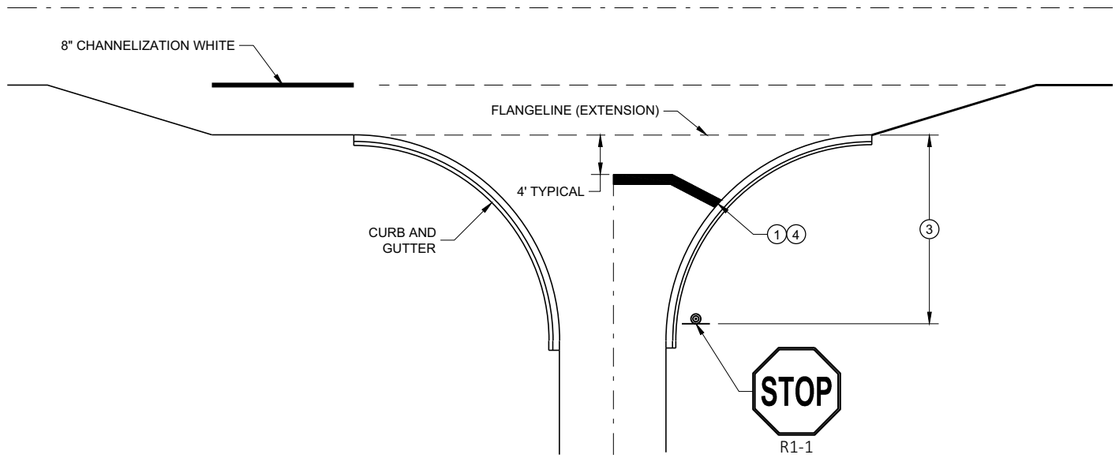
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

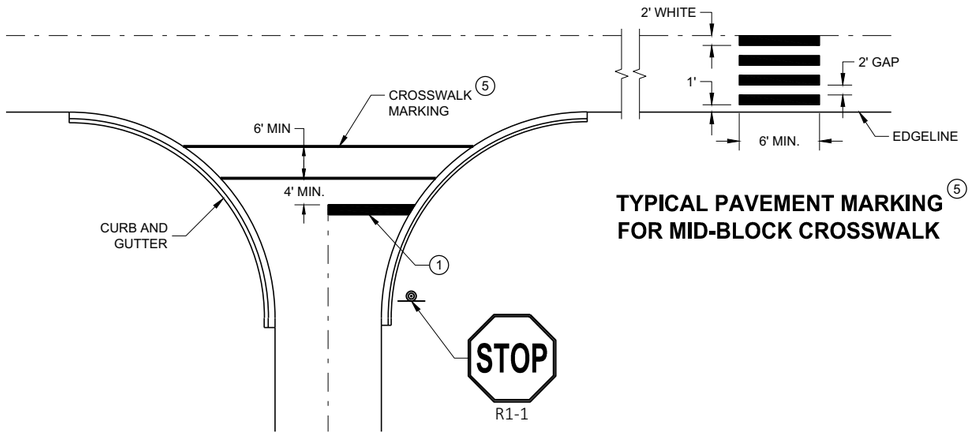
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

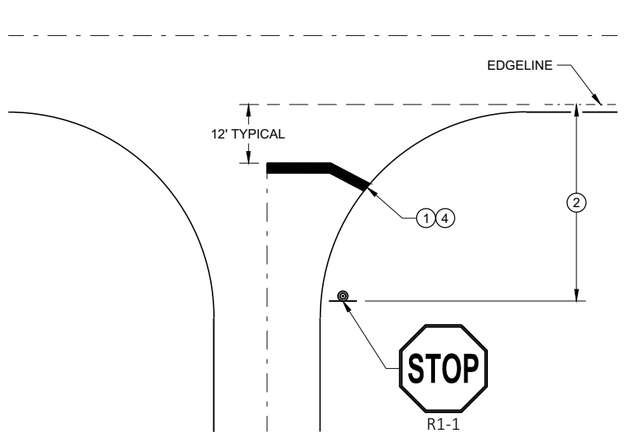


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING 5 FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

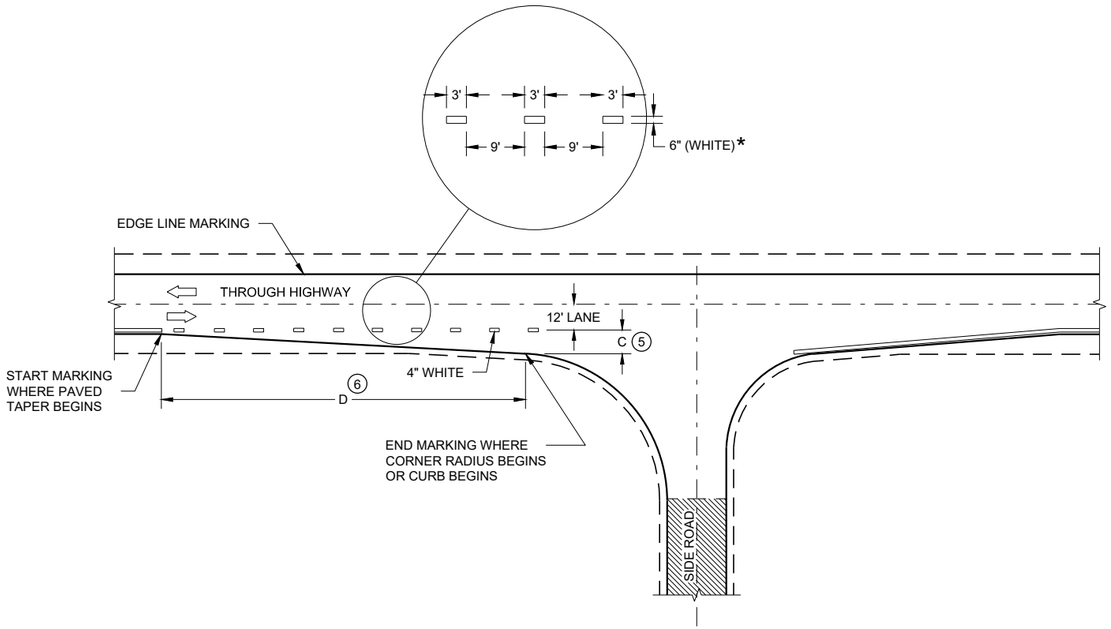
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

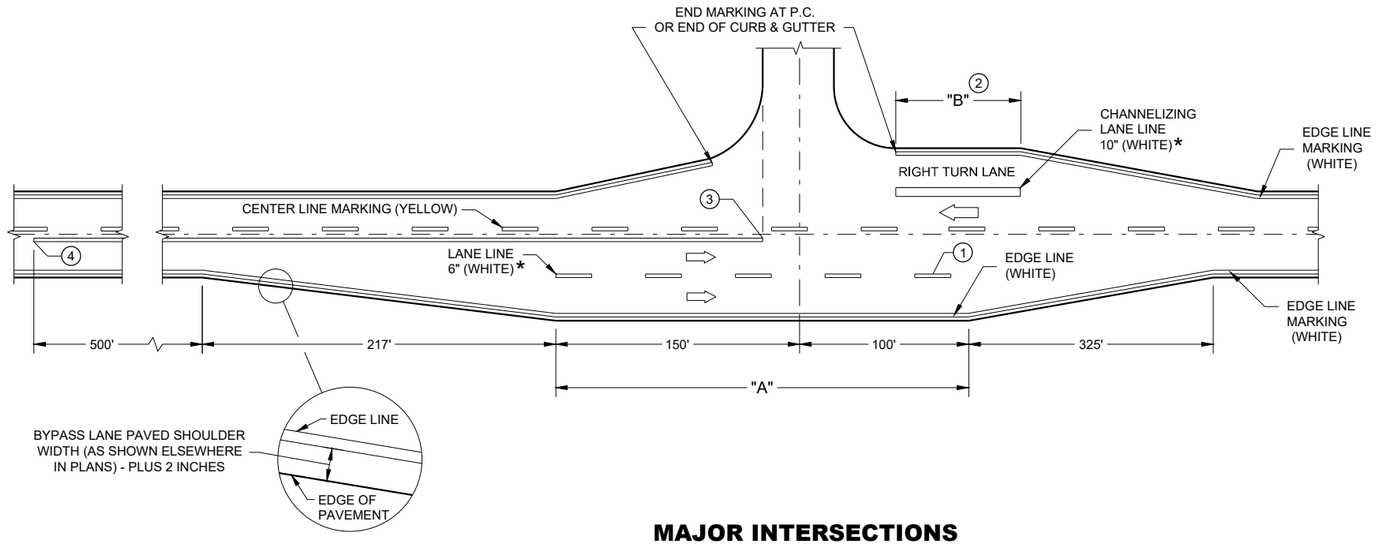
FHWA

6

SDD 15C33 - 04



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

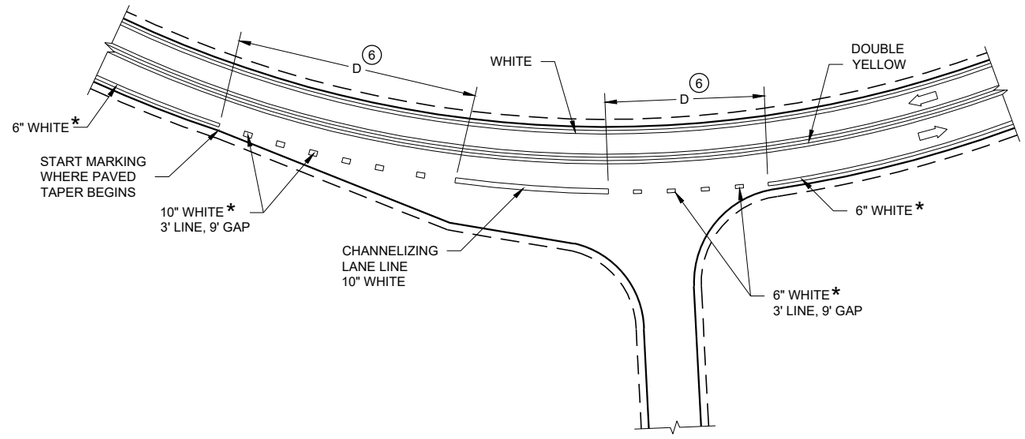
GENERAL NOTES

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

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35-06a

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

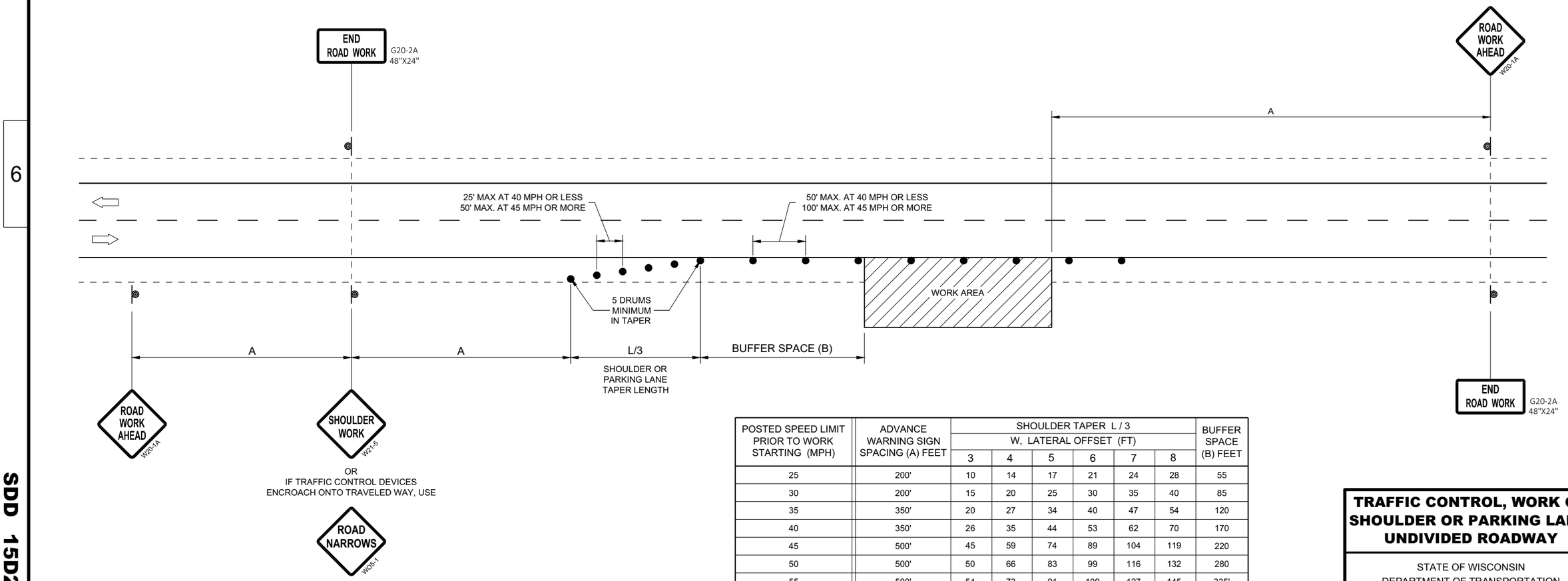
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

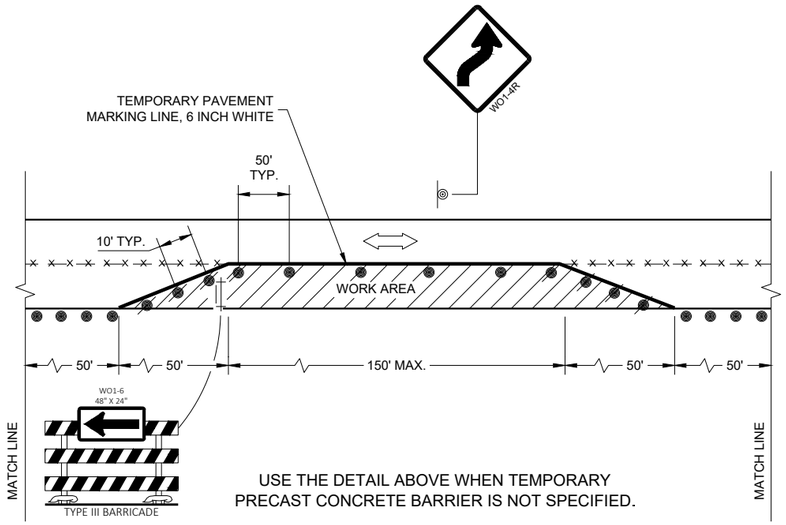
FHWA

SDD 15D28 - 04

SDD 15D28 - 04

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST



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

GENERAL NOTES

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

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

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

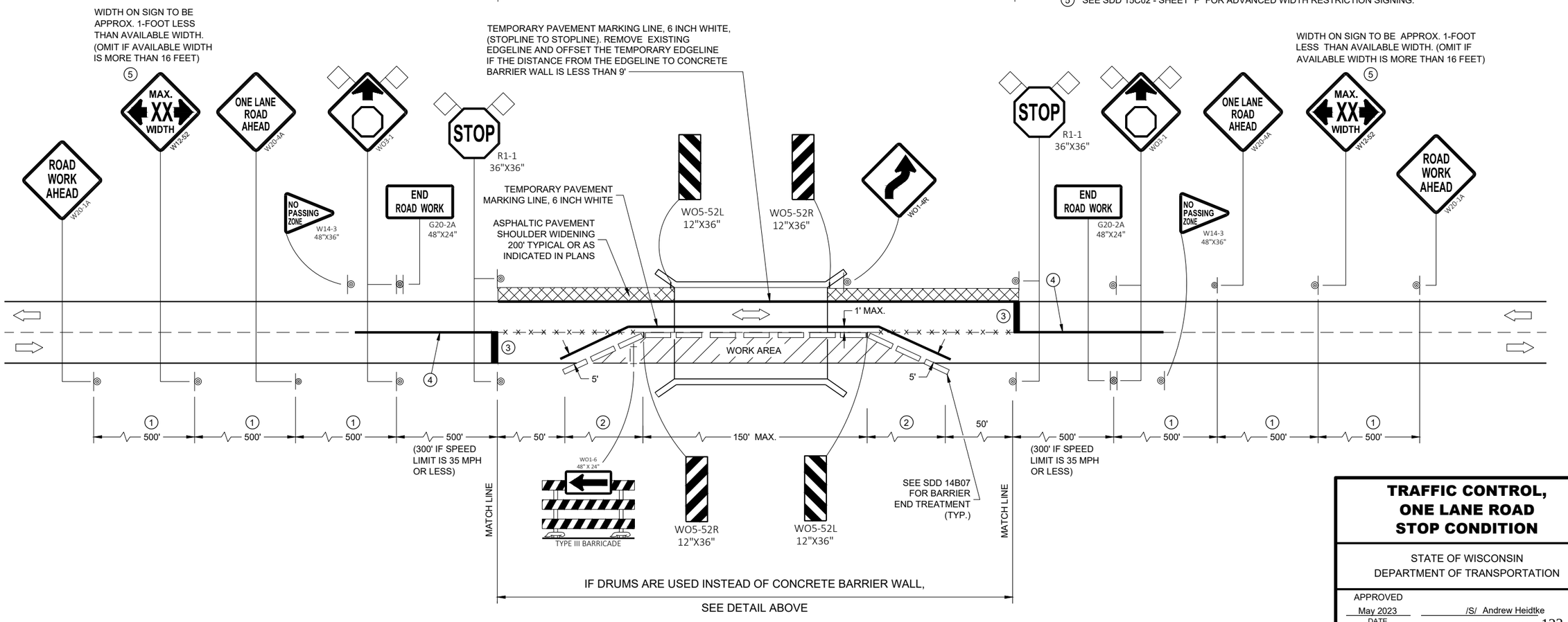
ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

1. 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
2. DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
3. TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
4. 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW. WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
5. SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TRAFFIC CONTROL, ONE LANE ROAD STOP CONDITION

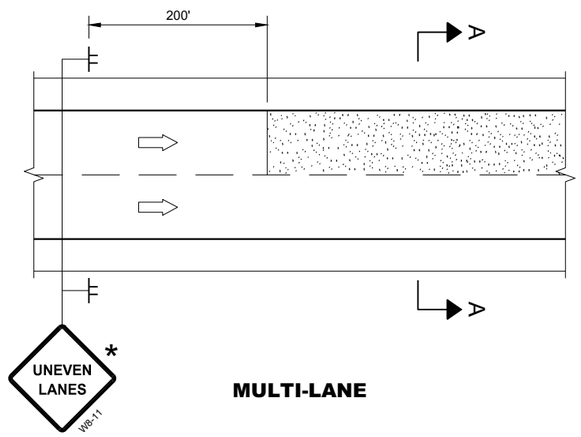
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

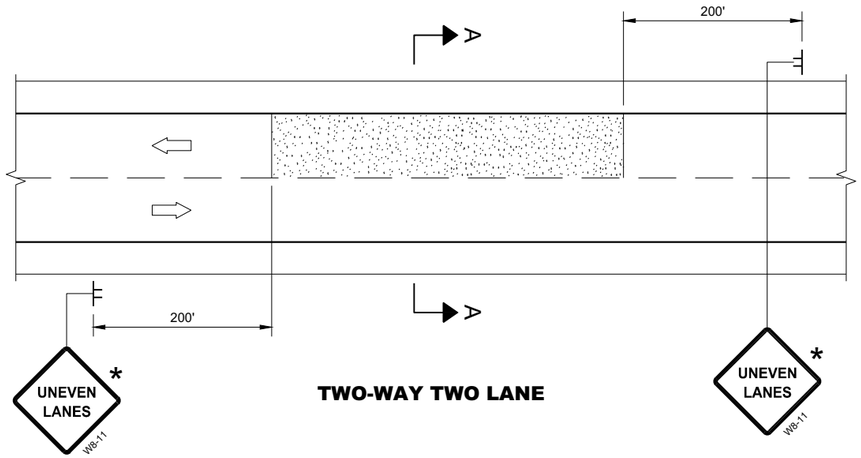
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15D32-07



MULTI-LANE



TWO-WAY TWO LANE

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

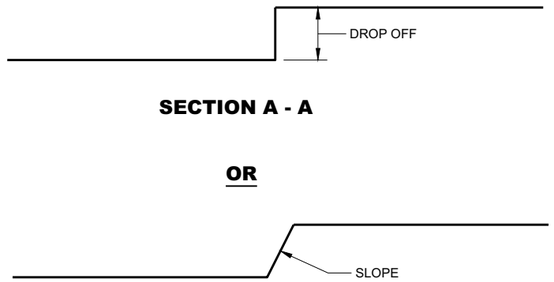
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

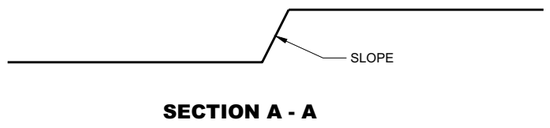
LEGEND

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

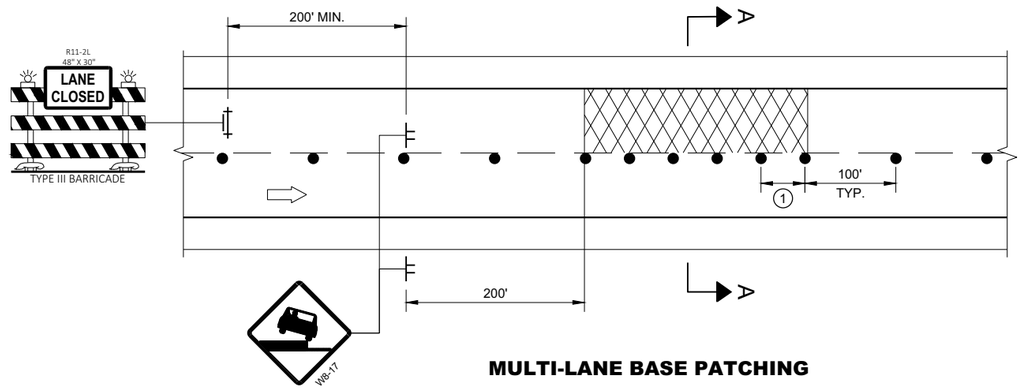


SECTION A - A

OR

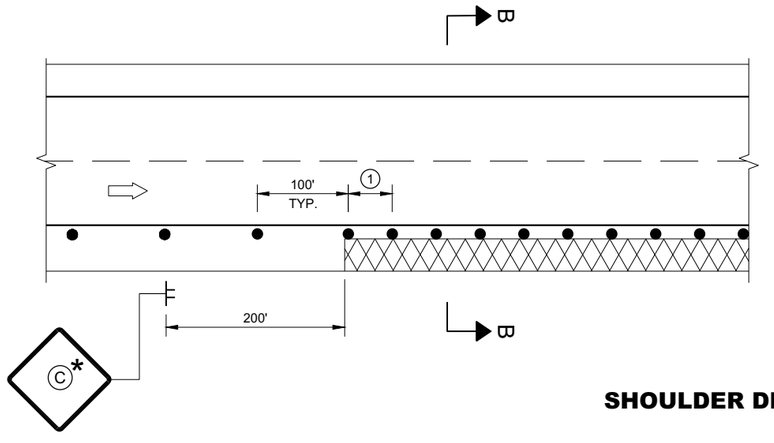


SECTION A - A

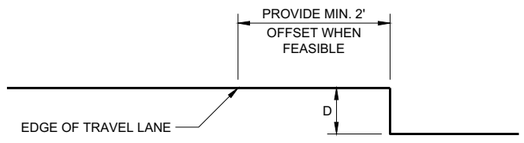


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

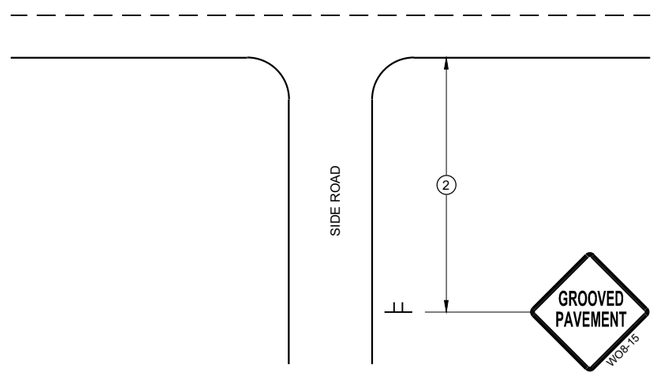
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

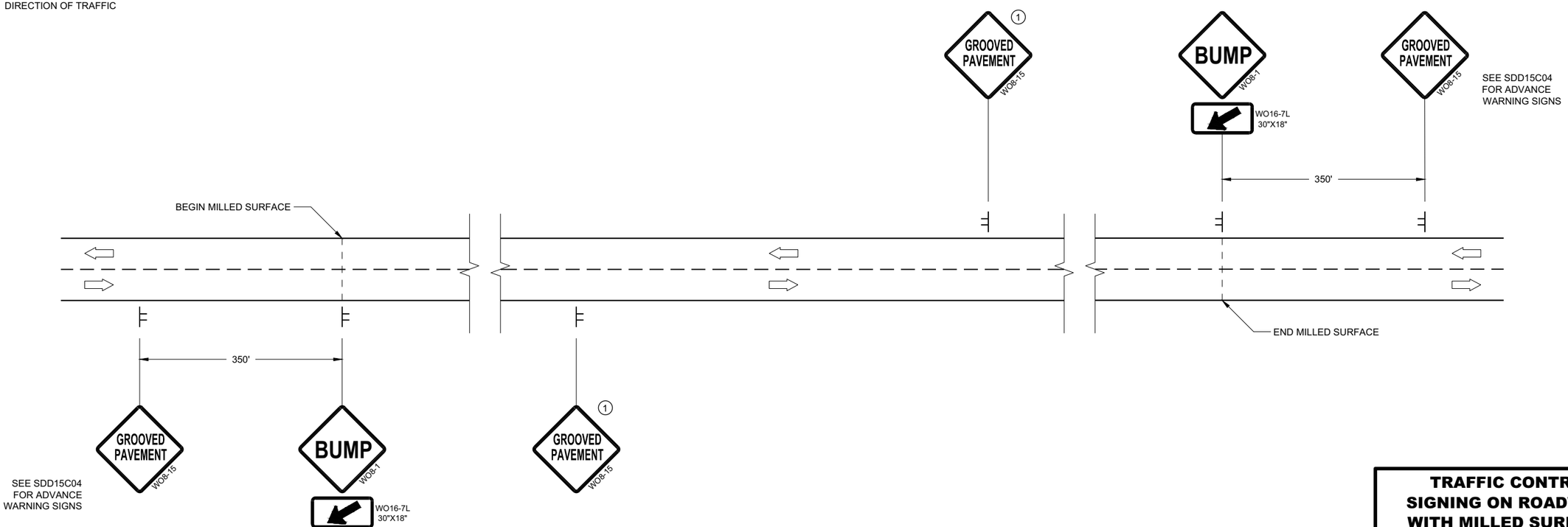
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

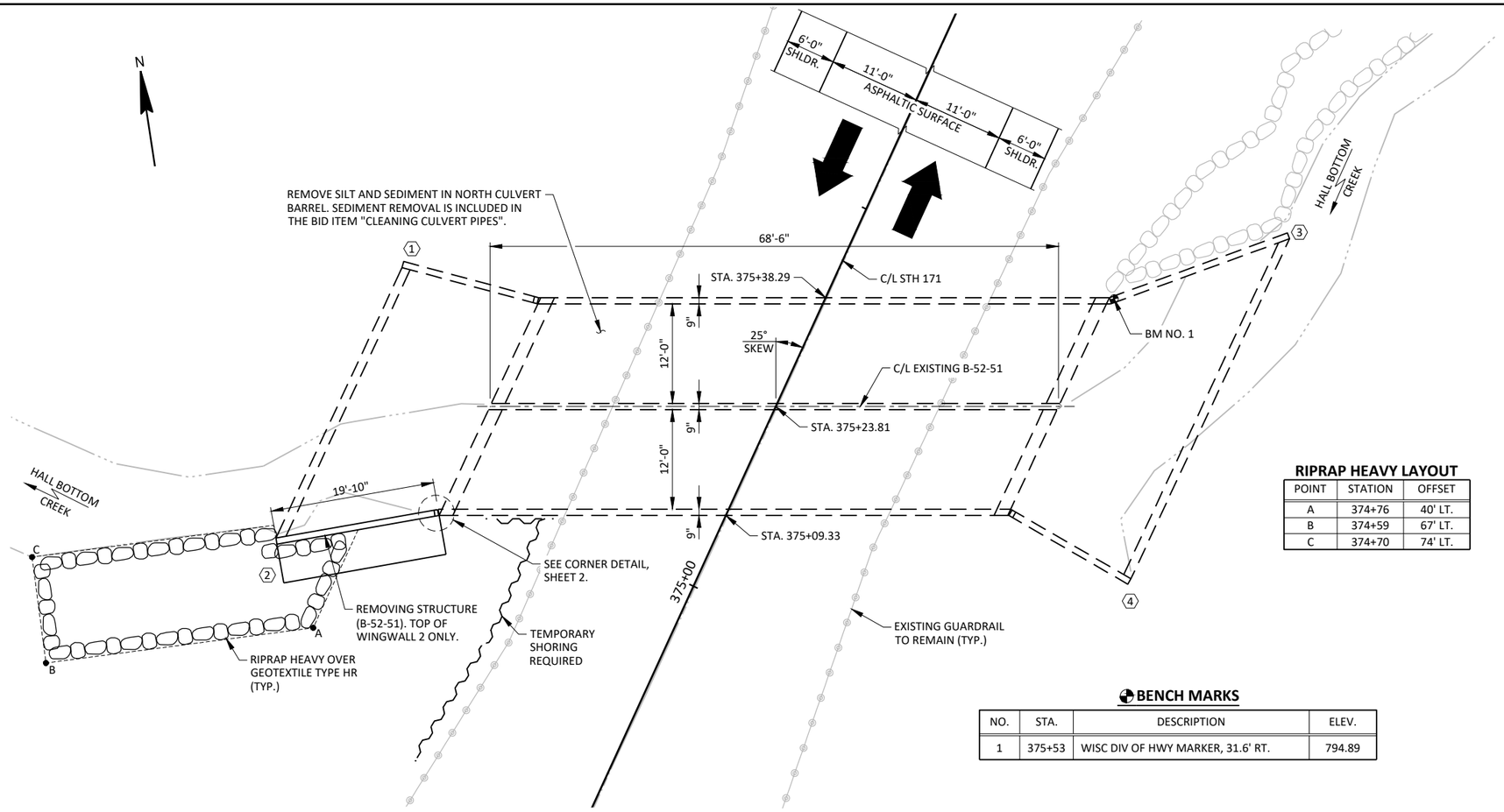
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D44 - 02

SDD 15D44 - 02



PLAN B-52-51

(TWO-CELL REINFORCED CONCRETE BOX CULVERT)

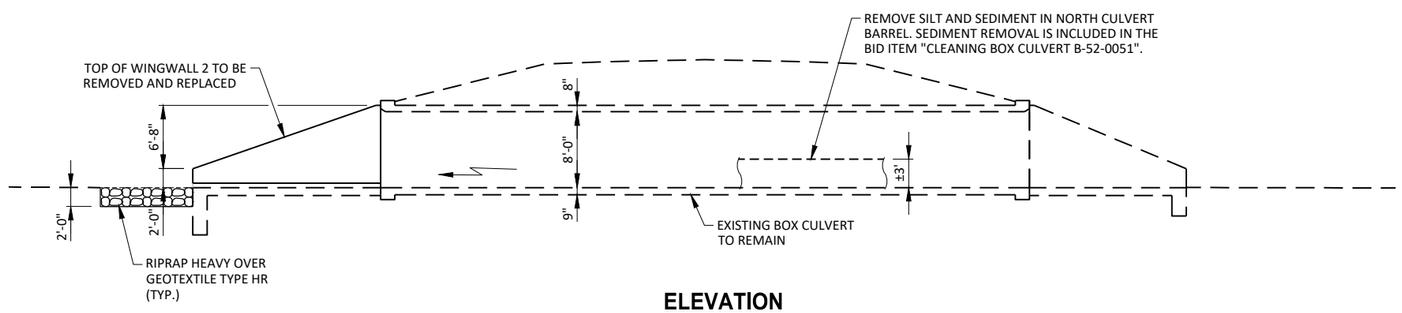
⬡ INDICATES WING NUMBER

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	374+76	40' LT.
B	374+59	67' LT.
C	374+70	74' LT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	375+53	WISC DIV OF HWY MARKER, 31.6' RT.	794.89



OUTLET — **ELEVATION** (NORMAL TO HALL BOTTOM CREEK) — **INLET**

STATE PROJECT NUMBER

5860-00-61

DESIGN DATA

LIVE LOAD:

DESIGN LOADING BASED ON 4'-0" OF FILL	H-20
INVENTORY LOAD RATING	HS-20
OPERATING LOAD RATING	HS-33
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	190 KIPS

(RATINGS TAKEN FROM HSI ON 10-12-2022)

MATERIAL PROPERTIES:

CONCRETE MASONRY	f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

TRAFFIC DATA

A.D.T. (2027)	910
A.D.T. (2047)	1,100
DESIGN SPEED	55 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

THE SLOPE OF FILL BEYOND THE FINISHED WING WALL SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

ANY EXCAVATION BELOW THE WING WALL FOOTING AND ASSOCIATED BEDDING MATERIALS REQUIRE THE APPROVAL OF THE ENGINEER IN THE FIELD.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS B-52-51" SHALL BE THE EXISTING GROUNDLINE.

WATER DIVERSION/DEWATERING SHALL REMAIN UNTIL WORK IS COMPLETE.

LIST OF DRAWINGS

GENERAL PLAN ____ 1.
WING DETAILS & QUANTITIES ____ 2.

WISCONSIN
PATRICK T. BOLAND
E-36303
HILLPOINT WIS
Patrick T. Boland 4-28-23
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.JewellAssoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/17/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-52-51

STH 171 OVER HALL BOTTOM CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
RICHLAND	AKAN

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CTMP	PTB	CTMP	PTB

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

GENERAL PLAN

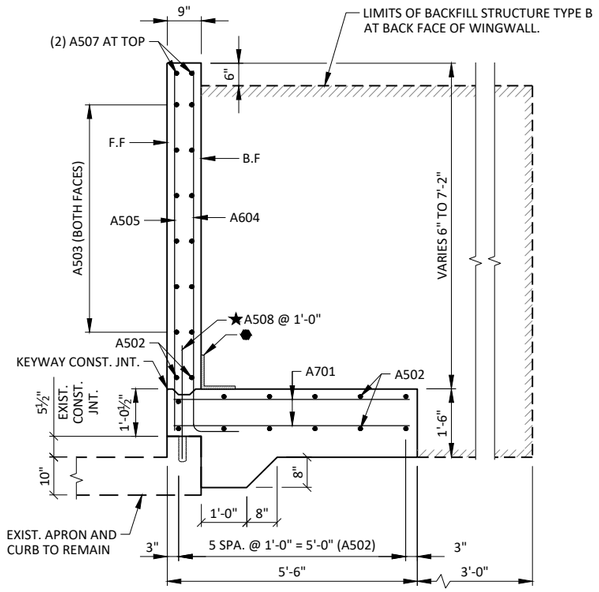
SHEET 1 OF 2

126

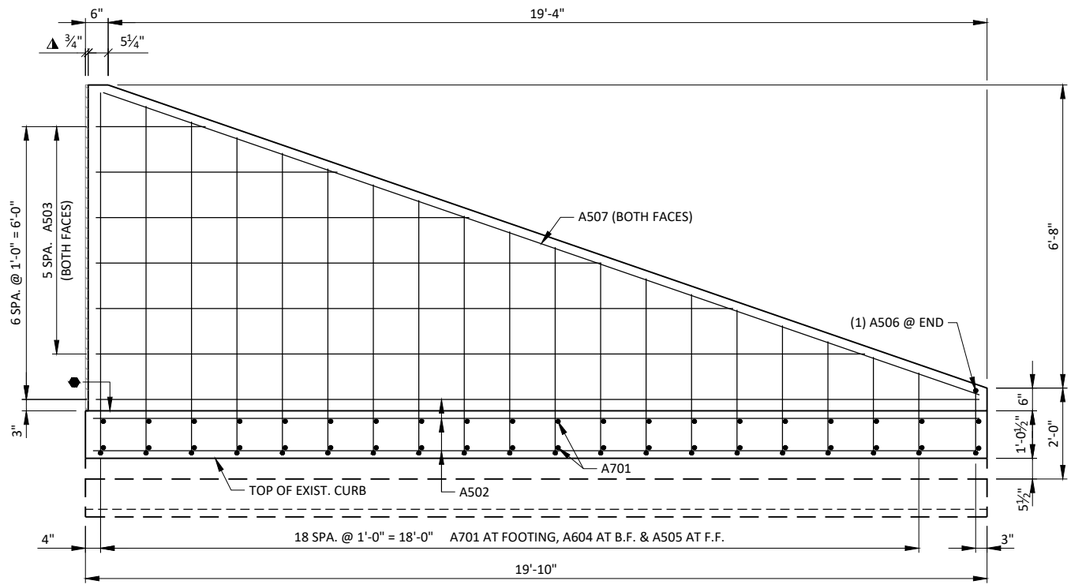
FILE NAME : S:\PROJECTS\W11660 WISDOT - STH 171 CRAWFORD-RICHLAND CO. STRUCTURE REHAB\STRUCTURE\CAD FILES\FINALS\B-52-0051\01 GENERAL PLAN B-52-0051.DWG
PLOT DATE : 4/28/2023 10:21:25 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'
LAYOUT : GENERAL PLAN

STATE PROJECT NUMBER

5860-00-61



SECTION THROUGH WINGWALL



WINGWALL ELEVATION

BILL OF BARS

1,180 LB (COATED)

	BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
	A701	40	5-2		X		FOOTING
	A502	14	19-5		X		FOOTING & BASE OF WALL
	A503	12	9-8		X	⊹	HORIZ. - F.F & B.F.
	A604	19	5-7	X	X	⊹	VERT. - B.F.
	A505	19	4-9		X	⊹	VERT. - F.F.
	A506	1	3-4	X	X		VERT. - END
	A507	2	20-5		X		TOP - F.F. & B.F.
★	A508	20	2-6		X		DOWELS

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

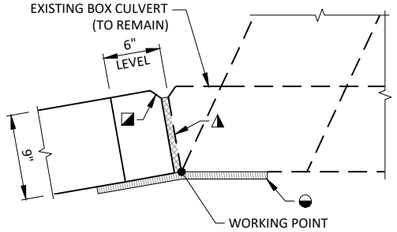
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A503	2 SERIES OF 6	16-11 TO 2-5
A604	1 SERIES OF 19	8-8 TO 2-6
A505	1 SERIES OF 19	7-10 TO 1-8

BUNDLE AND TAG EACH SERIES SEPARATELY.

LEGEND

- ⬢ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ★ ADHESIVE ANCHOR NO. 5 BAR, EMBED 6" INTO CONCRETE.
- ◭ ¾" FILLER, TO EXTEND FROM HORIZONTAL CONSRUCTION JOINT TO TOP OF WING.
- ◒ 18" RUBBERIZED MEMBRANE WATER-PROOFING. (VERT.) EXTEND FROM HORIZ. CONST. JT TO TOP OF WALL.
- ◪ 1" BEVEL.
- ⬡ INDICATES WING NUMBER.



CORNER 2 DETAIL

NOTES

SEE THIS SHEET FOR BILL OF BARS.

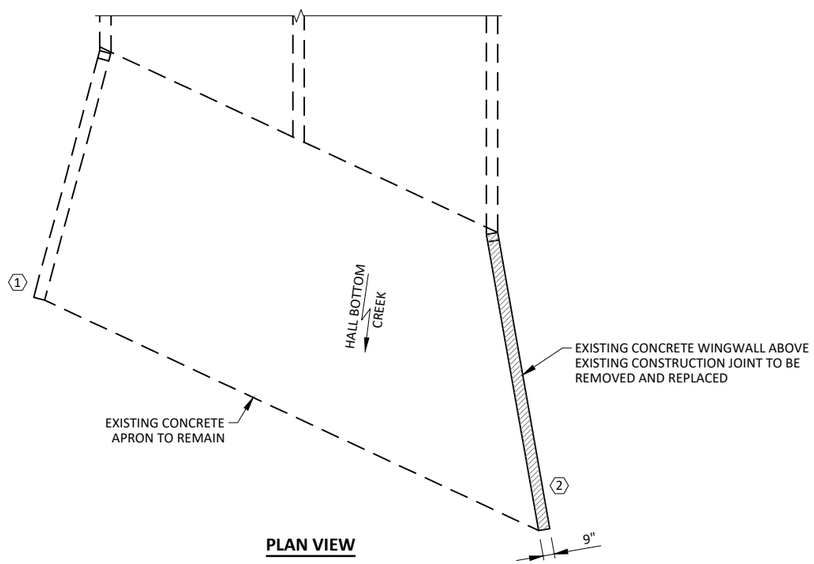
F.F. - FRONT FACE

B.F. - BACK FACE

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT THE ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE B" REQUIRED BEHIND WING WALL 2 FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

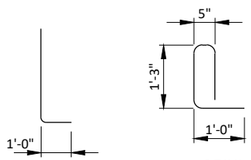
TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-52-51	EACH	1
206.2001	EXCAVATION FOR STRUCTURES CULVERTS B-52-51	EACH	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	55
502.4205	ADHESIVE ANCHOR NO. 5 BAR	EACH	20
504.0100	CONCRETE MASONRY CULVERTS	CY	8.6
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,180
511.1100	TEMPORARY SHORING	SF	525
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	5
606.0300	RIPRAP HEAVY	CY	35
645.0120	GEOTEXTILE TYPE HR	SY	70
SPV.0060.01	CLEANING BOX CULVERT B-52-51	EACH	1



PLAN VIEW

APRON REMOVAL DETAIL



A604 **A506**

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-51

DRAWN BY CTMP | PLANS CK'D. PTB

WING DETAILS AND QUANTITIES

SHEET 2 OF 2

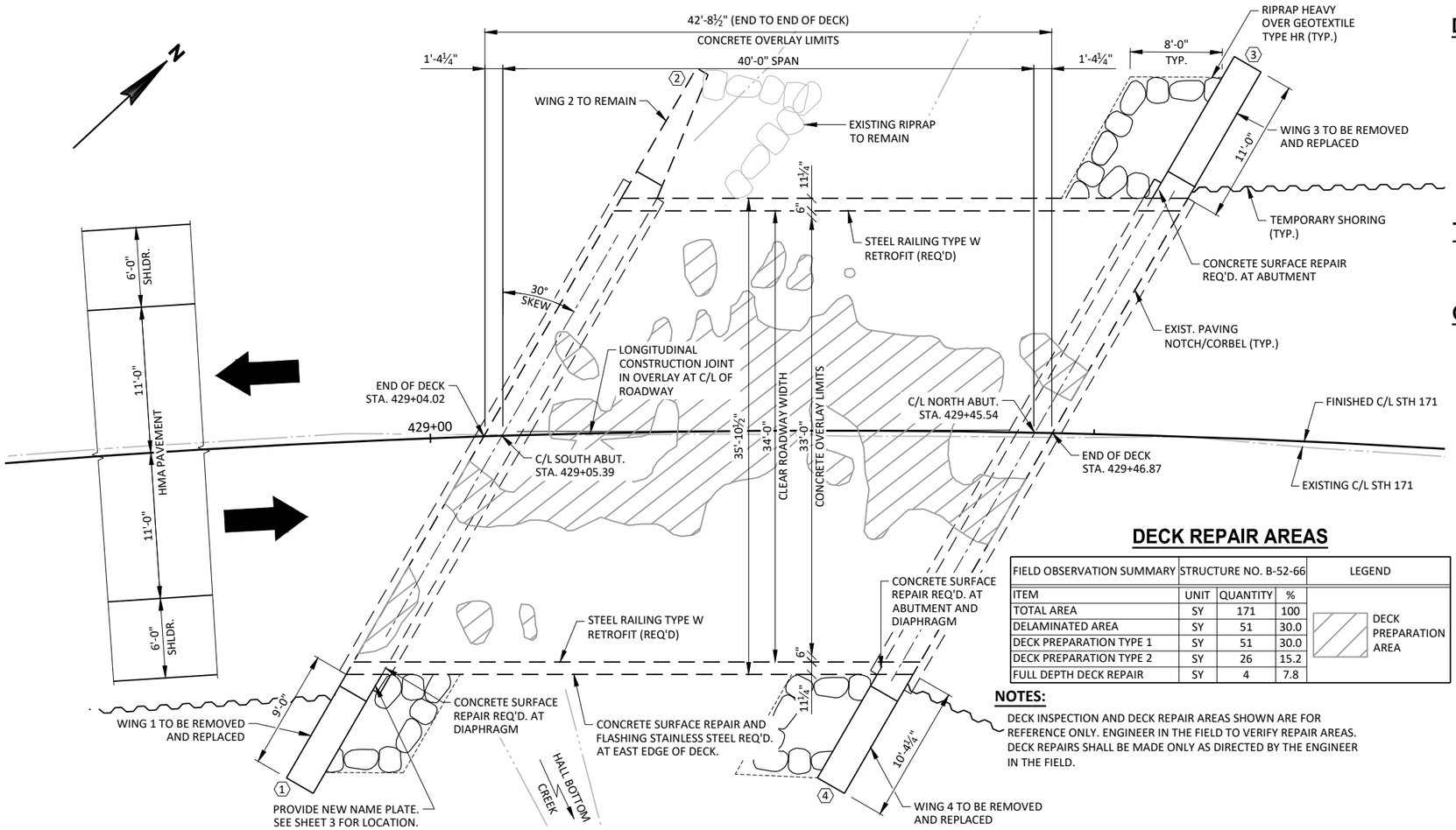
127

8

8

STATE PROJECT NUMBER

5860-00-61



PLAN B-52-66

(SINGLE-SPAN 36-INCH PRESTRESSED CONCRETE GIRDER STRUCTURE)

⬡ INDICATES WING NUMBER

DECK REPAIR AREAS

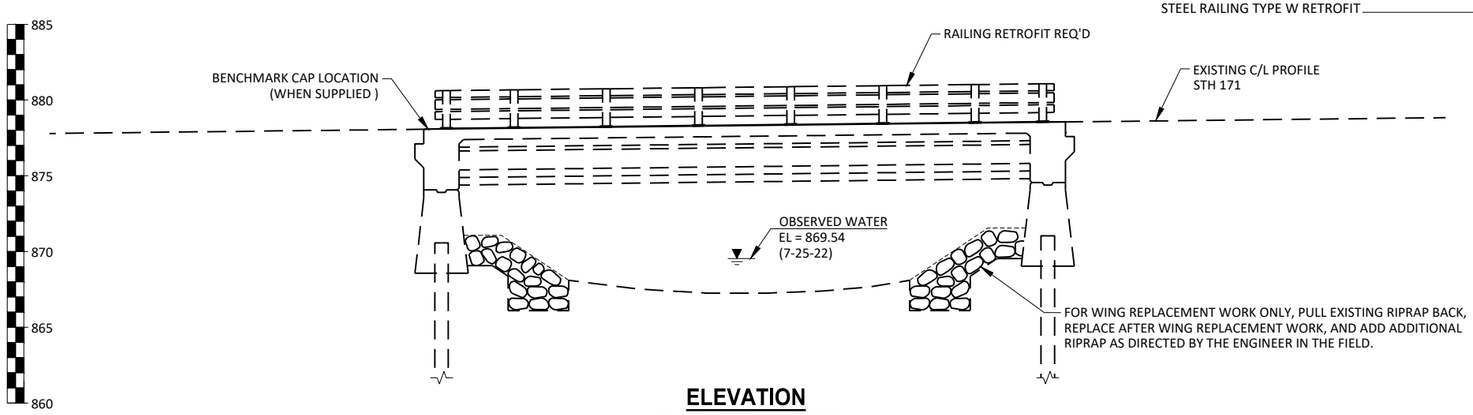
FIELD OBSERVATION SUMMARY	STRUCTURE NO. B-52-66			LEGEND
ITEM	UNIT	QUANTITY	%	
TOTAL AREA	SY	171	100	
DELAMINATED AREA	SY	51	30.0	
DECK PREPARATION TYPE 1	SY	51	30.0	DECK PREPARATION AREA
DECK PREPARATION TYPE 2	SY	26	15.2	
FULL DEPTH DECK REPAIR	SY	4	7.8	

NOTES:

DECK INSPECTION AND DECK REPAIR AREAS SHOWN ARE FOR REFERENCE ONLY. ENGINEER IN THE FIELD TO VERIFY REPAIR AREAS. DECK REPAIRS SHALL BE MADE ONLY AS DIRECTED BY THE ENGINEER IN THE FIELD.

LIST OF DRAWINGS

GENERAL PLAN ____ 1.
CROSS SECTION AND QUANTITIES ____ 2.
WINGWALL REPLACEMENTS ____ 3.
STEEL RAILING TYPE W RETROFIT ____ 4.



ELEVATION

(NORMAL TO HALL BOTTOM CREEK)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HS20
INVENTORY RATING	HS-20
OPERATING RATING	HS-34
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY, OVERLAY AND SLAB	f'c = 4,000 P.S.I.
ALL OTHER	f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.
STRUCTURAL RECTANGULAR TUBING, A500B	fy = 46,000 P.S.I.

TRAFFIC DATA

A.D.T. (2027)	910
A.D.T. (2047)	1,100
DESIGN SPEED	55 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ON THE PLANS ARE BASED ON THE ORIGINAL STRUCTURE PLANS, INSPECTION REPORTS, AND FIELD SURVEY.

A MINIMUM OF 1" OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER BID ITEM "CLEANING DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF THE EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURE DESIGN SECTION.

CONCRETE SURFACE REPAIR IS LOCATED AT ABUTMENTS, DIAPHRAGMS, AND EAST DECK OVERHANG. AREAS PROVIDED ARE APPROXIMATE. LOCATIONS AND EXTENTS SHALL BE DETERMINED BY THE FIELD ENGINEER.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A ½" DEEP SAWCUT.

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

AT THE DECK, APPLY PROTECTIVE SURFACE TREATMENT TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY, TO THE EAST EDGE OF THE DECK, AND TO THE EXISTING 12" OF THE UNDERSIDE OF THE EAST EDGE OF THE DECK. AT THE WINGWALL REPLACEMENTS, APPLY TO THE TOP AND EXTERIOR EXPOSED FACES OF WINGS AND THE FRONT FACE OF ABUTMENTS TO 12" PAST THE EDGE OF THE DECK.

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

SEAL OVERLAY CONSTRUCTION JOINTS ACCORDING TO SECTION 502.3.13.1 OF THE STANDARD SPECIFICATIONS. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

ANY EXCAVATION BELOW THE WING WALLS AND ASSOCIATED BEDDING MATERIALS REQUIRES THE APPROVAL OF THE ENGINEER IN THE FIELD.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-52-66" SHALL BE THE EXISTING GROUNDLINE.

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

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATION AND THE STANDARD DETAIL DRAWINGS. SEE SHEET 3 FOR PLACEMENT LOCATION. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR (1981).

FOR WING REPLACEMENT AREAS ONLY, ADDITIONAL RIPRAP QUANTITY IS TO BE SUPPLEMENTAL TO EXISTING RIPRAP. PLACE ADDITIONAL RIPRAP AS DIRECTED BY THE ENGINEEER IN THE FIELD.

SEE ROADWAY PLANS FOR TRAFFIC STAGING DETAILS.

WISCONSIN
PATRICK T. BOLAND E-36303 HILLPOINT WIS.
Patrick Boland 9-11-23
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.jewellassoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/07/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-52-66

STH 171 OVER HALL BOTTOM CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
RICHLAND	AKAN

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CTMP	PTB	CTMP	PTB

GENERAL PLAN

SHEET 1 OF 4

128

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

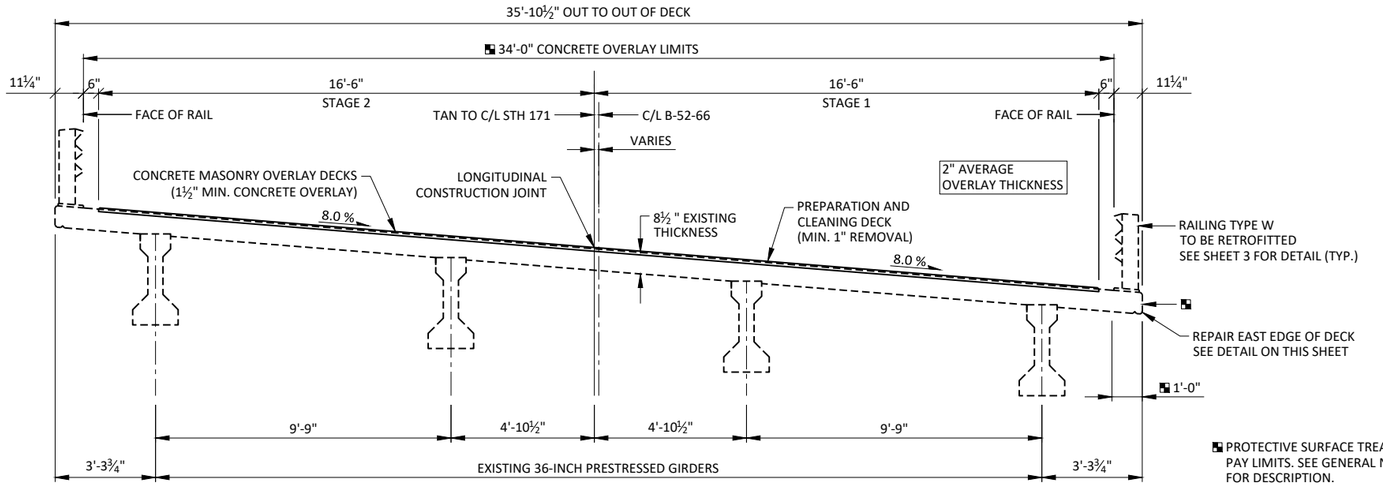
BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

8

8

STATE PROJECT NUMBER

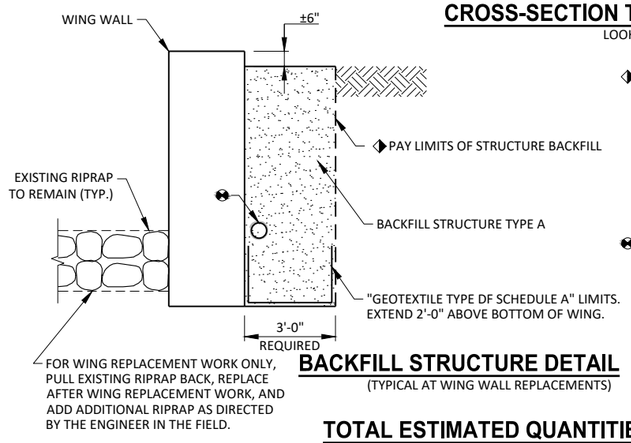
5860-00-61



PROTECTIVE SURFACE TREATMENT PAY LIMITS. SEE GENERAL NOTES FOR DESCRIPTION.

CROSS-SECTION THROUGH ROADWAY

LOOKING NORTH



BACKFILL STRUCTURE DETAIL

(TYPICAL AT WING WALL REPLACEMENTS)

◆ THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

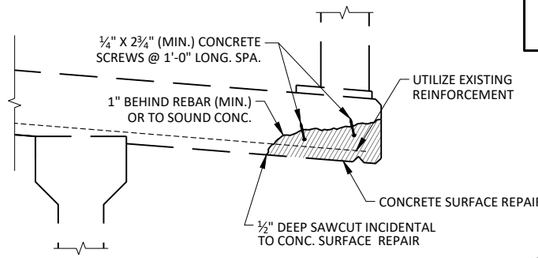
◓ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	ITEM DESCRIPTION	UNIT	N. ABUT.	S. ABUT.	SUPER	TOTALS
	203.0220	REMOVING STRUCTURE B-52-66	EACH	--	--	--	1
	206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-52-66	EACH	--	--	--	1
	210.1500	BACKFILL STRUCTURE TYPE A	TON	44	16	--	60
	502.0100	CONCRETE MASONRY BRIDGES	CY	16	6	--	22
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	20	8	182	210
◆	502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	19	12	--	31
◆	502.4207	ADHESIVE ANCHORS NO. 7 BAR	EACH	6	--	--	6
◆	502.4208	ADHESIVE ANCHORS NO. 8 BAR	EACH	2	--	--	2
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	865	290	--	1,155
	509.0301	PREPARATION DECKS TYPE 1	SY	--	--	51	51
	509.0302	PREPARATION DECKS TYPE 2	SY	--	--	26	26
	509.0500	CLEANING DECKS	SY	--	--	171	171
	509.1500	CONCRETE SURFACE REPAIR	SF	30	15	75	120
	509.2000	FULL DEPTH DECK REPAIR	SY	--	--	4	4
**	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	--	--	11	11
	511.1200	TEMPORARY SHORING B-52-66	SF	264	72	--	336
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2	1	--	3
	606.0300	RIPRAP HEAVY	CY	9	4	--	13
	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	40	20	--	60
	645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	14	7	--	21
	645.0120	GEOTEXILE TYPE HR	SY	25	11	--	36
	SPV.0090.01	FLASHING STAINLESS STEEL	LF	--	--	38	38
	SPV.0090.02	STEEL RAILING TYPE W RETROFIT	LF	--	--	86	86
		NON-BID ITEMS					
		FILLER	SIZE				½"
		NAME PLATE					

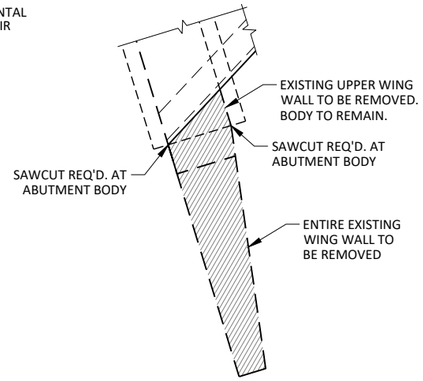
◆ ADHESIVE ANCHORS NO. 5 BAR, ADHESIVE ANCHORS NO. 7, OR ADHESIVE ANCHORS NO. 8 BAR REQ'D. EMBED BARS 13" MINIMUM INTO SOUND CONCRETE

** QUANTITY INCLUDES CONCRETE OVERLAY, PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL DEPTH DECK REPAIR



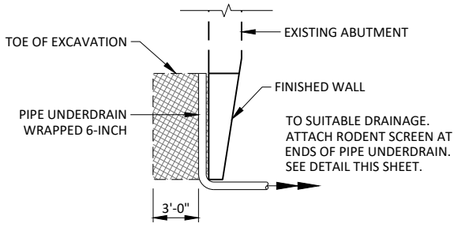
CONCRETE SURFACE REPAIR DETAIL - EAST EDGE OF DECK

AS DIRECTED BY ENGINEER IN THE FIELD

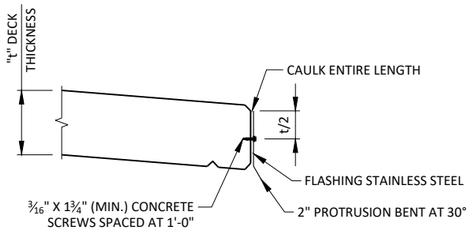


WING WALL REMOVAL DETAIL

WING 1 SHOWN, WINGS 3 & 4 SIMILAR



PIPE UNDERDRAIN DETAIL



STAINLESS STEEL FLASHING DETAIL

NOTES:

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK, 3/16" AND ¼" CONCRETE SCREWS, AND CLEANING THE EDGE OF DECK PRIOR TO ATTACHMENT OF THE FLASHING.

FLASHING TO BE INSTALLED AT EAST EDGE OF DECK AFTER APPLICATION OF PROTECTIVE SURFACE TREATMENT.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

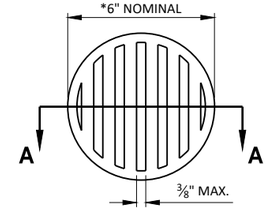
EXTEND FLASHING TO F.F. OF ABUTMENT.

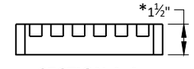
TOP OF FLASHING TO BEGIN APPROXIMATELY 1" BELOW TOP OF DECK SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST DECK DEPTH OVER THE BRIDGE LENGTH.

PROVIDE 2" MINIMUM FLASHING OVERLAP, FASTEN WITH 3/16" X 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.





SECTION A-A

RODENT SCREEN

NOTES:

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SHIELD SO SLOTS ARE VERTICAL.

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

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED ENDS OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-66

DRAWN BY CTMP | PLANS CK'D. PTB

CROSS SECTIONS AND QUANTITIES

SHEET 2 OF 4

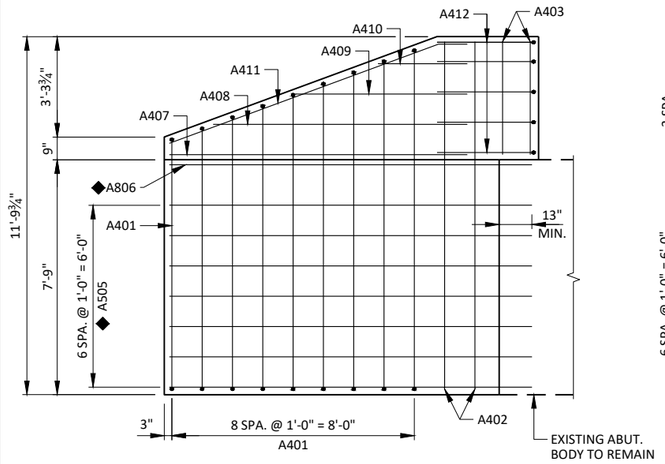
129

8

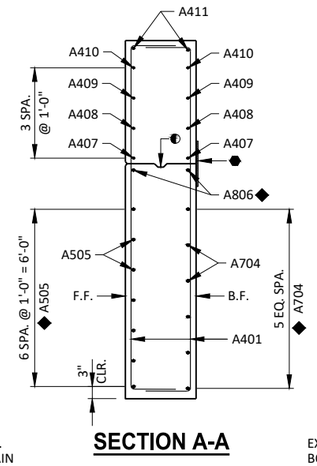
8

STATE PROJECT NUMBER

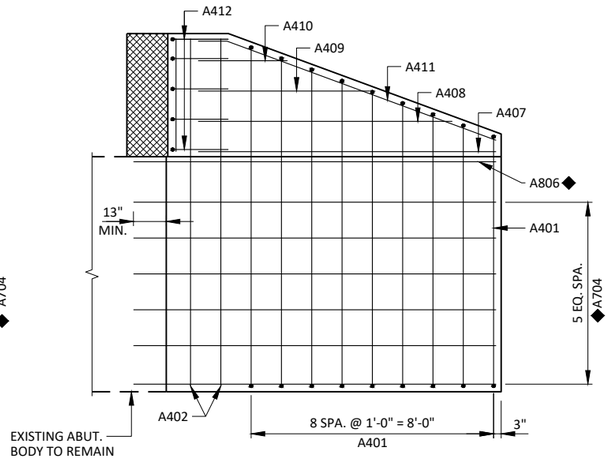
5860-00-61



F.F. ELEVATION VIEW - WING 3



SECTION A-A



B.F. ELEVATION VIEW - WING 3

BILL OF BARS
THREE WINGS SHOWN

1,155 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A401	18	12-6	X	X	✳	WING 3 - VERT. - F.F. & B.F.
A402	4	11-5		X		WING 3 - VERT. - F.F. & B.F.
A403	4	3-9		X		WING 3 - VERT - UPPER WING WALL
◆A704	6	12-0		X		WING 3 - HORIZ. - B.F.
◆A505	7	12-0		X		WING 3 - HORIZ. - F.F.
◆A806	2	12-0		X		WING 3 - HORIZ. - F.F. & B.F.
A407	2	9-10		X		WING 3 - HORIZ. - F.F. & B.F.
A408	2	8-5		X		WING 3 - HORIZ. - F.F. & B.F.
A409	2	5-8		X		WING 3 - HORIZ. - F.F. & B.F.
A410	2	3-0		X		WING 3 - HORIZ. - F.F. & B.F.
A411	2	10-5	X	X		WING 3 - HORIZ. - F.F. & B.F. - TOP
A412	5	6-10	X	X		WING 3 - HORIZ. - UPPER WING WALL
A413	28	9-5	X	X	✳	WINGS 1 & 4 - VERT. - F.F. & B.F.
A414	8	8-1		X		WINGS 1 & 4 - VERT. - F.F. & B.F.
A415	8	3-1		X		WINGS 1 & 4 - VERT. - UPPER WING WALL
◆A516	12	10-0		X		WINGS 1 & 4 - HORIZ. - B.F.
◆A517	12	10-0		X		WINGS 1 & 4 - HORIZ. - F.F.
A418	4	7-10		X		WINGS 1 & 4 - HORIZ. - F.F. & B.F.
A419	4	6-6		X		WINGS 1 & 4 - HORIZ. - F.F. & B.F.
A420	4	3-10		X		WINGS 1 & 4 - HORIZ. - F.F. & B.F.
A421	4	8-4	X	X		WINGS 1 & 4 - HORIZ. - F.F. & B.F. - TOP
A422	8	6-10	X	X		WINGS 1 & 4 - HORIZ. - UPPER WING WALL

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

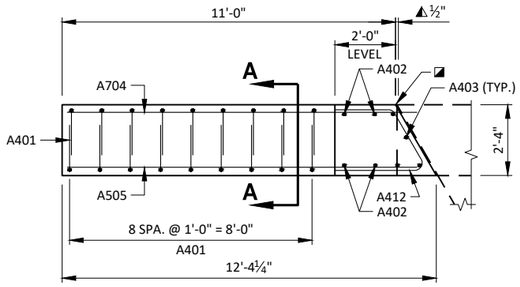
✳ LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

◆ ADHESIVE ANCHORS NO. 5 BAR, ADHESIVE ANCHORS NO. 7 BAR, OR ADHESIVE ANCHORS NO. 8 REQ'D. EMBED BARS 13" MINIMUM INTO SOUND CONCRETE

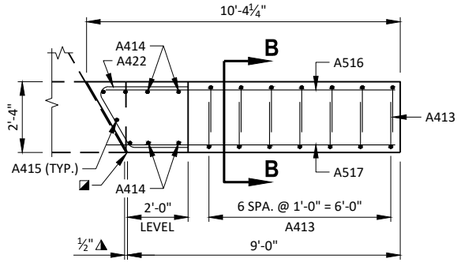
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A401	2 SERIES OF 9	14-0 TO 11-0
A413	4 SERIES OF 7	10-7 TO 8-3

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN VIEW - WING 3



PLAN VIEW - WING 1

WING 4 SIMILAR

LEGEND

◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE OF WING. EXTEND FROM 9" BELOW BEAM SEAT TO 1" BELOW TOP OF WING.

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING IF KEYED CONSTRUCTION JOINT IS USED.

◭ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)

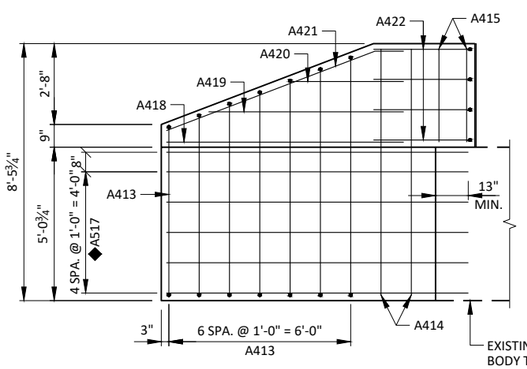
NOTES

SEE THIS SHEET FOR BILL OF BARS.

UTILIZE EXISTING REINFORCEMENT AT EXISTING WING ATTACHMENT POINT, WHERE APPLICABLE

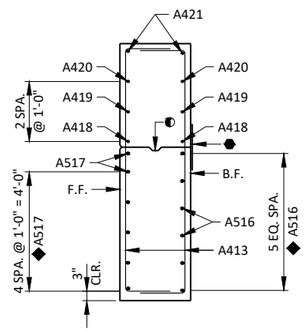
F.F. - FRONT FACE

B.F. - BACK FACE



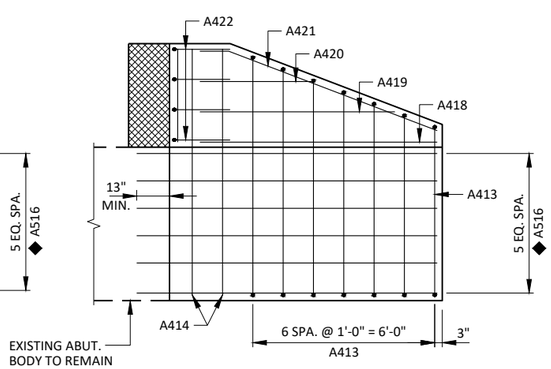
F.F. ELEVATION - WING 1

WING 4 SIMILAR



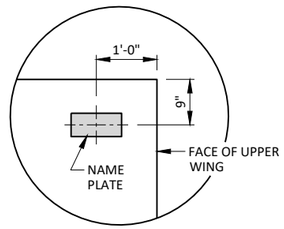
SECTION B-B

WING 4 SIMILAR



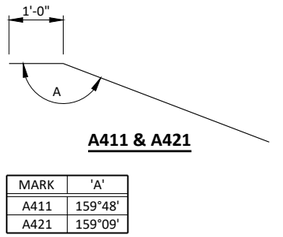
B.F. ELEVATION - WING 1

WING 4 SIMILAR



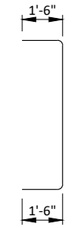
NAME PLATE DETAIL

(WING 1 ONLY)

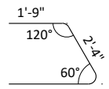


A411 & A421

MARK	'A'
A411	159°48'
A421	159°09'



A401 & A413



A412 & A422

NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-66

DRAWN BY CTMP | PLANS CK'D. PTB

WINGWALL REPLACEMENTS

SHEET 3 OF 4

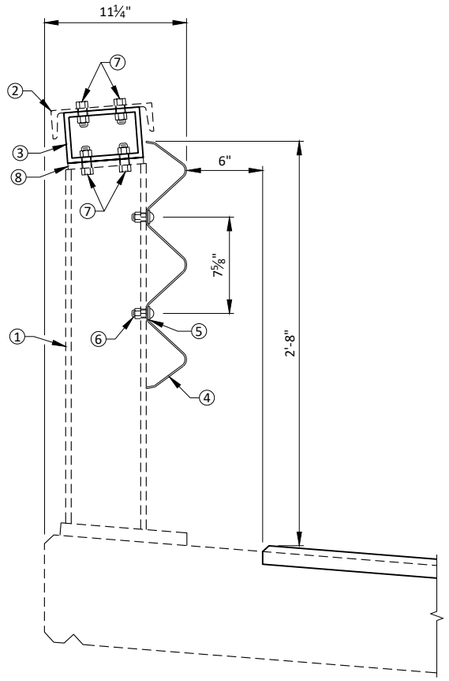
130

8

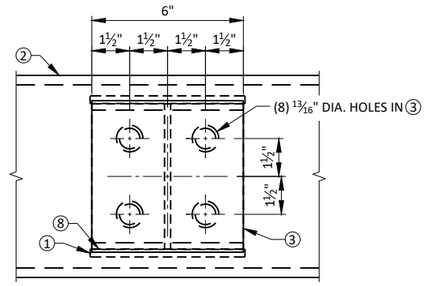
8

STATE PROJECT NUMBER

5860-00-61

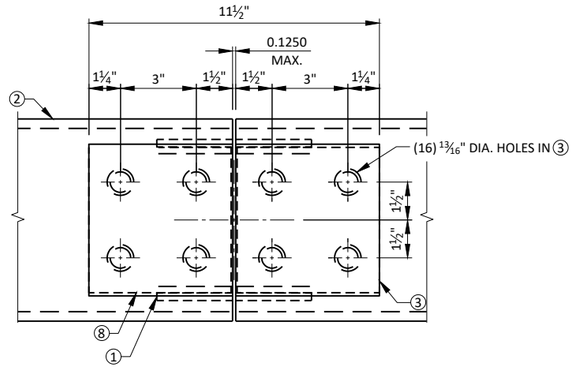


SECTION THROUGH RAILING



STRUCTURAL TUBE DETAIL

PLAN VIEW AT POST CONNECTION



STRUCTURAL TUBE DETAIL AT SPLICE

PLAN VIEW AT POST CONNECTION

LEGEND

① EXISTING W6 X 25, DRILL 2 - ¾" DIA. HOLES FOR BOLTS NO. 6 GALVANIZE HOLES AFTER DRILLING.

② EXISTING C8 X 11.5, WITH 13/16" DIA. HOLES, ATTACH TO NO. 3 WITH BOLTS NO. 7.

③ STRUCTURAL TUBE 6" X 4" X ⅜" GALVANIZED 6" LONG, WITH (8) 13/16" DIA. HOLES, ATTACH TO NO. 2 AND NO. 8 WITH BOLTS NO. 7.

④ REINSTALL W-RAIL ATTACH TO NO. 1 WITH BOLTS NO. 6.

⑤ 1¾" X 3" MOUNTING BOLT WASHER (GALVANIZED).

⑥ ⅝" DIA. BUTTON HEAD POST MOUNTING BOLT WITH ROUND WASHER AND NUT. 2 PER POST (GALVANIZED).

⑦ ⅝" DIA. X 2" LG. HEX. BOLTS WITH NUT AND TWO WASHERS EACH GALVANIZED, 8 REQ'D PER POST.

⑧ EXISTING PLATE ½" X 5¾" X 6" OR EXISTING PLATE ½" X 5¾" X 11½ " (AT FIELD SPLICE) WITH 1¼ " DIA. HOLES FOR BOLTS NO. 7

NOTES

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION.

HSS RECTANGULAR STRUCTURAL STEEL TUBING USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM DESIGNATION A500B.

8

8

NO.	DATE	REVISION	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

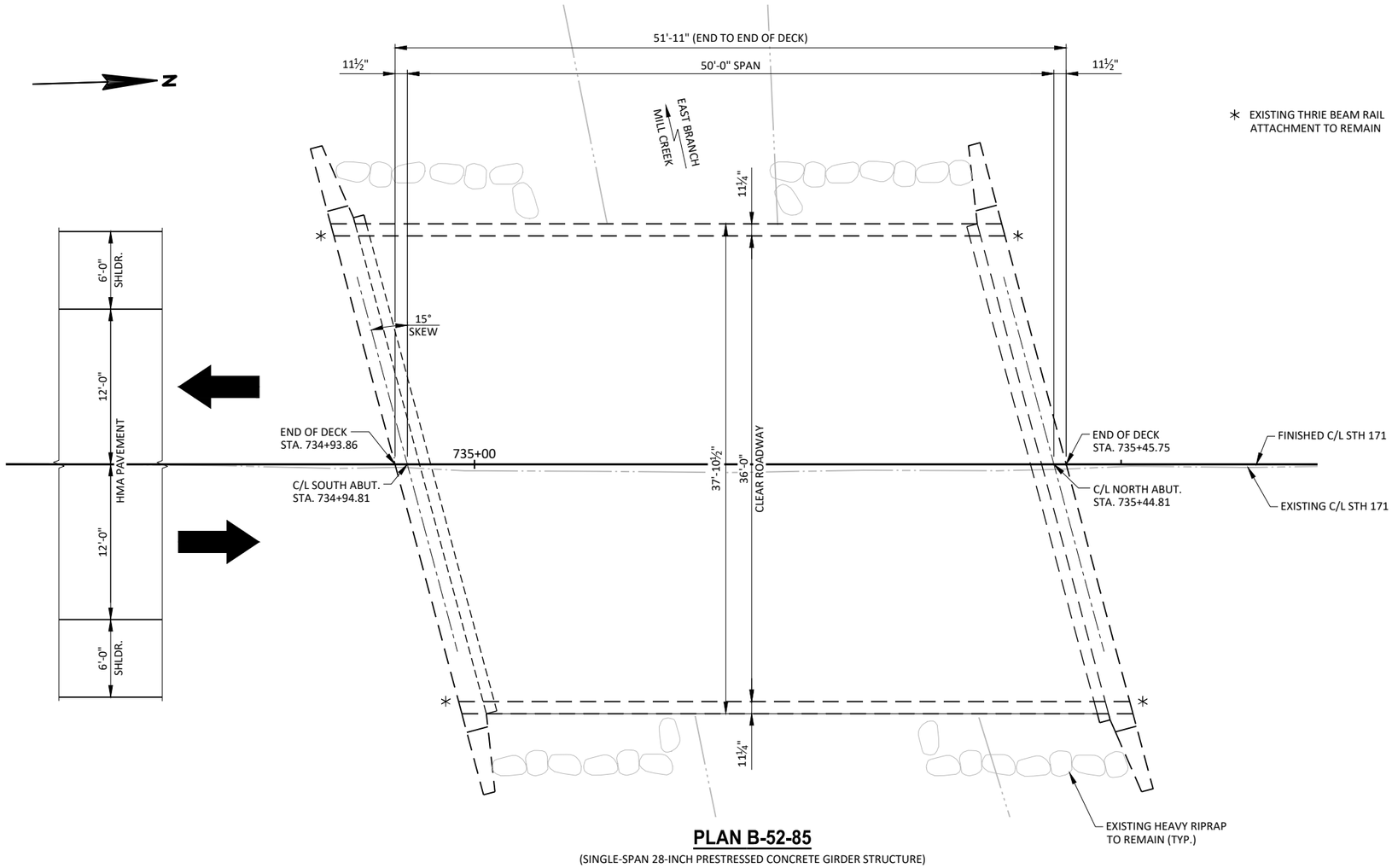
STRUCTURE B-52-66

DRAWN BY CTMP | PLANS CK'D. PTB

STEEL RAILING TYPE W RETROFIT

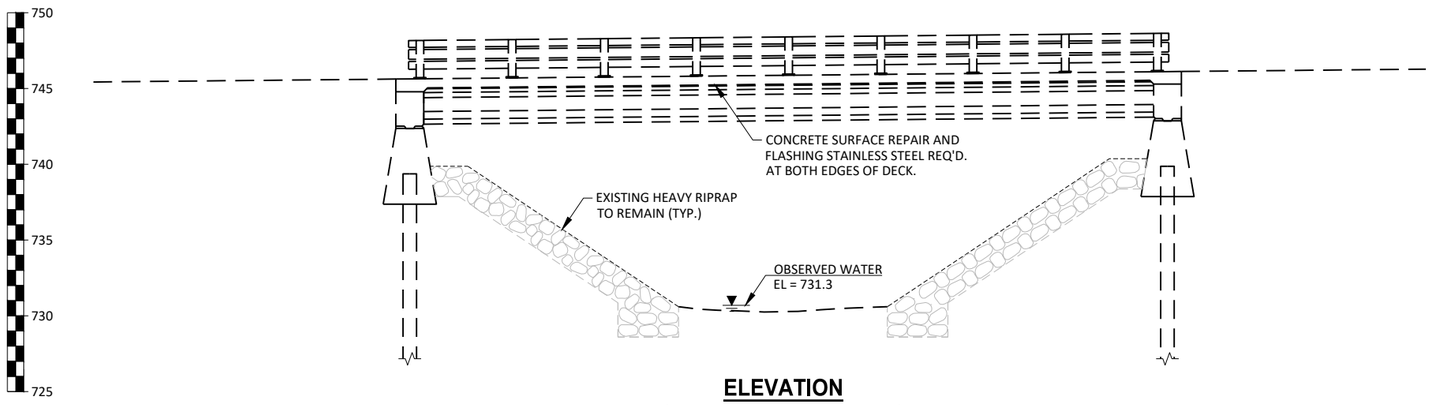
SHEET 4 OF 4

131



PLAN B-52-85

(SINGLE-SPAN 28-INCH PRESTRESSED CONCRETE GIRDER STRUCTURE)



ELEVATION

(NORMAL TO EAST BRANCH MILL CREEK)

STATE PROJECT NUMBER

5860-00-61

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HS-20
INVENTORY RATING	HS-26
OPERATING RATING	HS-42
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

(RATINGS TAKEN FROM HSI ON 02-07-2023)

MATERIAL PROPERTIES:

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

TRAFFIC DATA

A.D.T. (2027)	910
A.D.T. (2047)	1,100
DESIGN SPEED	55 MPH

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ON THE PLANS ARE BASED ON THE ORIGINAL STRUCTURE PLANS, INSPECTION REPORTS, AND FIELD SURVEY.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

CONCRETE SURFACE REPAIR IS LOCATED AT BOTH DECK OVERHANGS. AREAS PROVIDED ARE APPROXIMATE. LOCATIONS AND EXTENTS SHALL BE DETERMINED BY THE FIELD ENGINEER.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A ½" DEEP SAWCUT.

AT THE EDGES OF DECK, APPLY PROTECTIVE SURFACE TREATMENT TO THE SIDE OF THE DECK AND THE EXTERIOR 12" OF THE UNDERSIDE OF THE DECK.

LIST OF DRAWINGS

GENERAL PLAN	1.
CROSS SECTION AND QUANTITIES	2.

WISCONSIN PROFESSIONAL ENGINEER
PATRICK T. BOLAND
E-36303
HILLPOINT WIS
Patrick Boland 4-28-23

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.jewellassoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/17/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-52-85

STH 171 OVER EAST BRANCH MILL CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
RICHLAND	DAYTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CTMP	PTB	CTMP	PTB

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

GENERAL PLAN

SHEET 1 OF 2

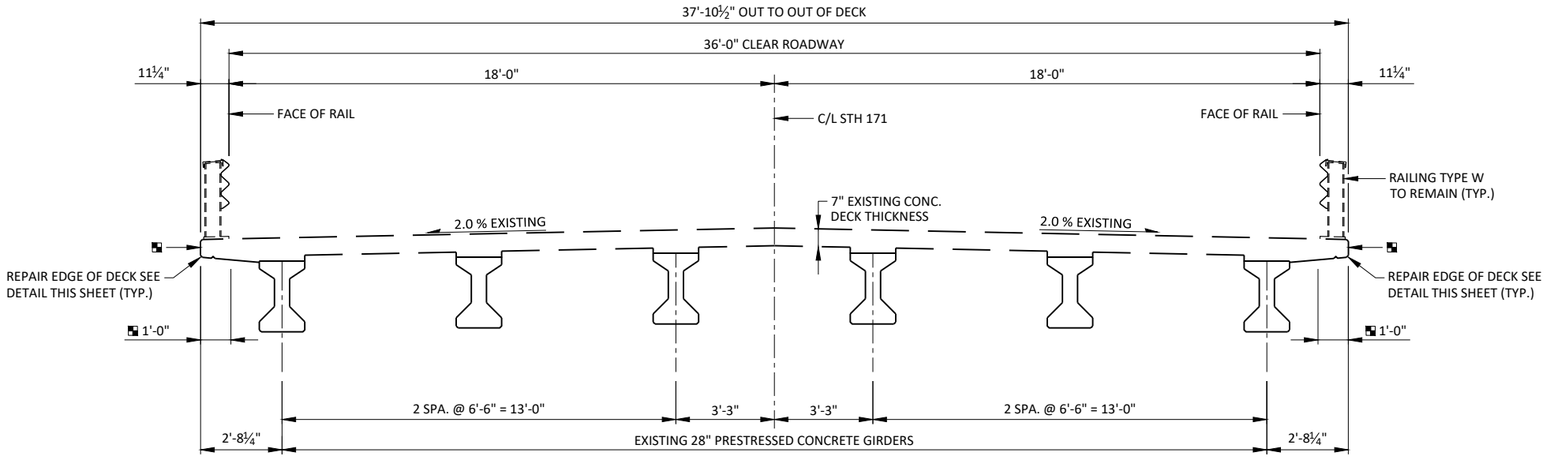
132

8

8

STATE PROJECT NUMBER

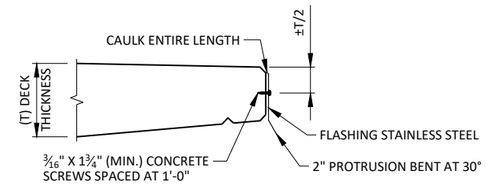
5860-00-61



CROSS-SECTION THROUGH ROADWAY

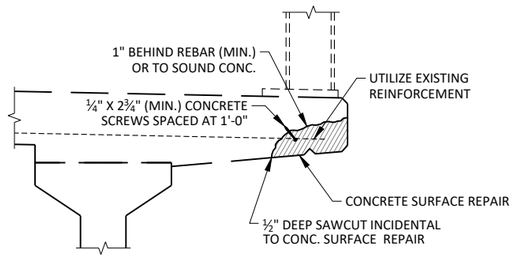
LOOKING NORTH

▩ PROTECTIVE SURFACE TREATMENT PAY LIMITS. SEE GENERAL NOTES FOR DESCRIPTION.



STAINLESS STEEL FLASHING DETAIL

(RAILING NOT SHOWN FOR CLARITY)



CONCRETE SURFACE REPAIR DETAIL - EDGES OF DECK

AS DIRECTED BY ENGINEER IN THE FIELD

NOTES:

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, CAULK, 3/16" AND ¼" CONCRETE SCREWS, AND CLEANING THE EDGE OF DECK PRIOR TO ATTACHMENT OF THE FLASHING.

FLASHING TO BE INSTALLED AT BOTH EDGES OF DECK AFTER APPLICATION OF PROTECTIVE SURFACE TREATMENT.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO F.F. OF ABUTMENT.

TOP OF FLASHING TO BEGIN APPROXIMATELY 1" BELOW TOP OF DECK SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST DECK DEPTH OVER THE BRIDGE LENGTH.

PROVIDE 2" MINIMUM FLASHING OVERLAP, FASTEN WITH 3/16" X 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	20
509.1500	CONCRETE SURFACE REPAIR	SF	150
SPV.0090.01	FLASHING STAINLESS STEEL	LF	95

8

8

NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

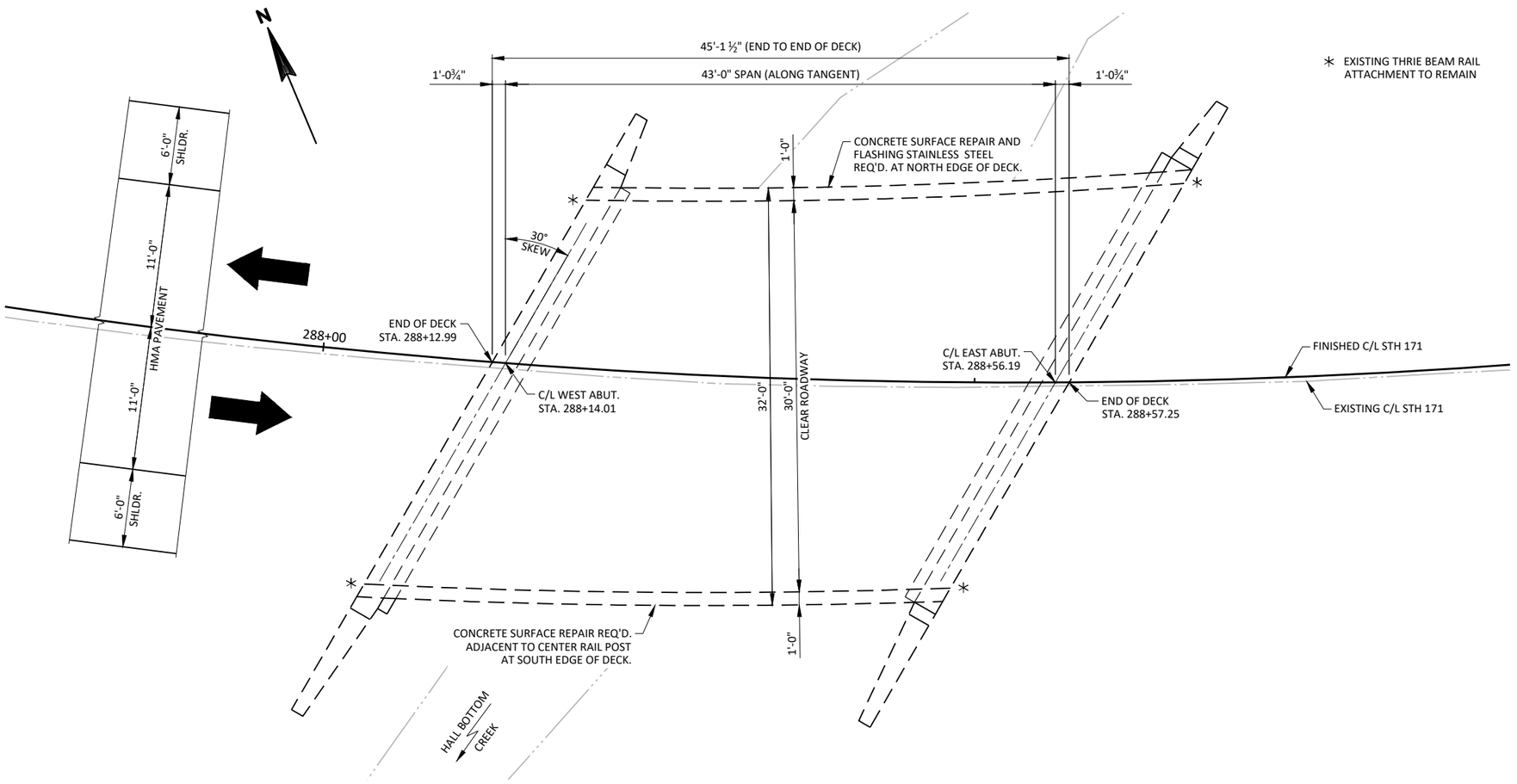
STRUCTURE B-52-85

DRAWN BY CTMP | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

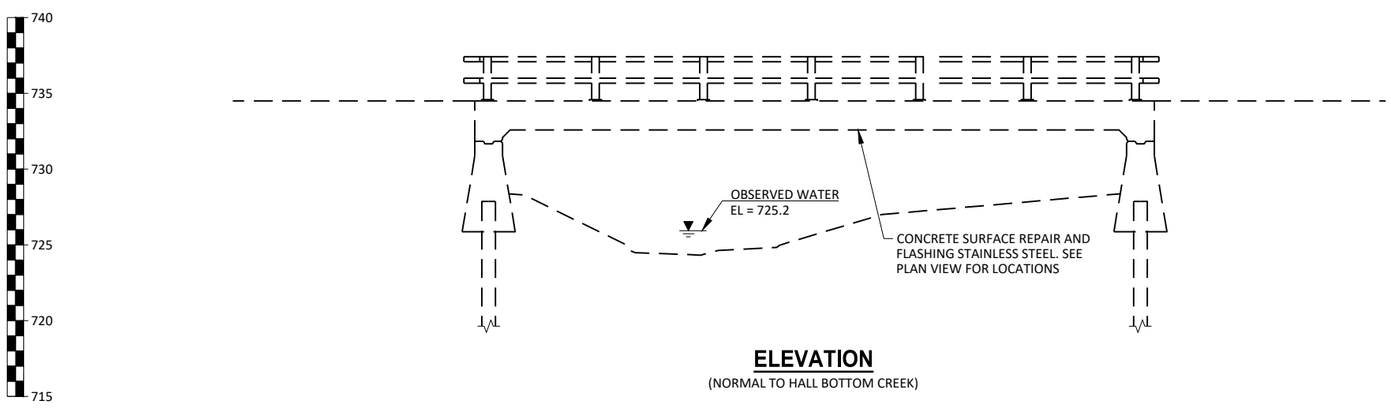
SHEET 2 OF 2

133



PLAN B-52-144

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)



ELEVATION

(NORMAL TO HALL BOTTOM CREEK)

STATE PROJECT NUMBER

5860-00-61

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HS-20
INVENTORY RATING	HS-23
OPERATING RATING	HS-39
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

(RATINGS TAKEN FROM HSI ON 02-07-2023)

MATERIAL PROPERTIES:

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

TRAFFIC DATA

A.D.T. (2027)	910
A.D.T. (2047)	1,100
DESIGN SPEED	55 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ON THE PLANS ARE BASED ON THE ORIGINAL STRUCTURE PLANS, INSPECTION REPORTS, AND FIELD SURVEY.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

CONCRETE SURFACE REPAIR IS LOCATED AT THE NORTH DRIP EDGE UNDER THE DECK AND AT THE CENTER RAIL POST AT THE SOUTH EDGE OF DECK. AREAS PROVIDED ARE APPROXIMATE. LOCATIONS AND EXTENTS SHALL BE DETERMINED BY THE FIELD ENGINEER.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A ½" DEEP SAWCUT.

AT THE NORTH EDGE, APPLY PROTECTIVE SURFACE TREATMENT TO THE SIDE OF THE DECK AND THE EXTERIOR 12" OF THE UNDERSIDE OF THE DECK. AT THE SOUTH EDGE, APPLY TO THE NEW CONCRETE AT THE CONCRETE SURFACE REPAIR AREAS ADJACENT TO THE CENTER RAIL POST.

LIST OF DRAWINGS

GENERAL PLAN	1.
CROSS SECTION AND QUANTITIES	2.

WISCONSIN PROFESSIONAL ENGINEER
PATRICK T. BOLAND
E-36303
HILLPOINT
WIS.
Patrick Boland 4-28-23

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc. Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.jewellassoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/17/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-52-144

STH 171 OVER HALL BOTTOM CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
RICHLAND	AKAN

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CTMP	PTB	CTMP	PTB

GENERAL PLAN

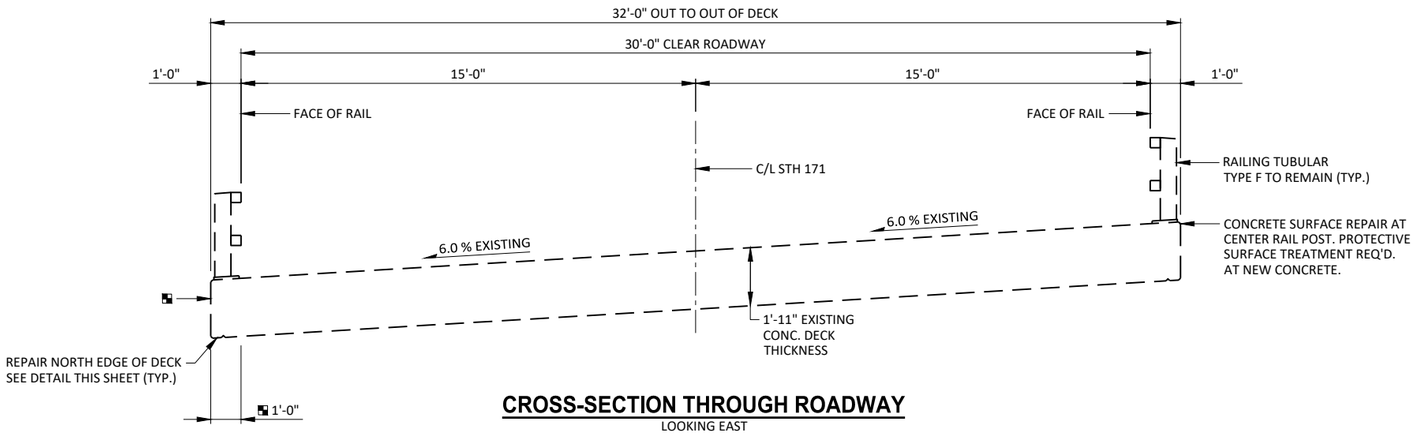
SHEET 1 OF 2

134

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

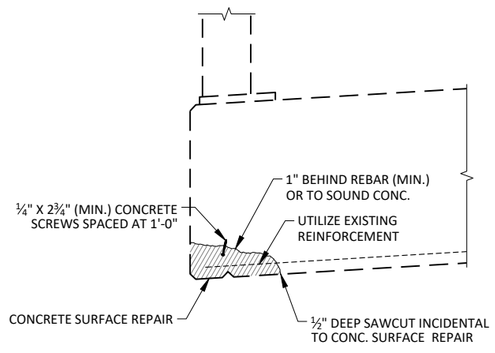
STATE PROJECT NUMBER
5860-00-61



CROSS-SECTION THROUGH ROADWAY

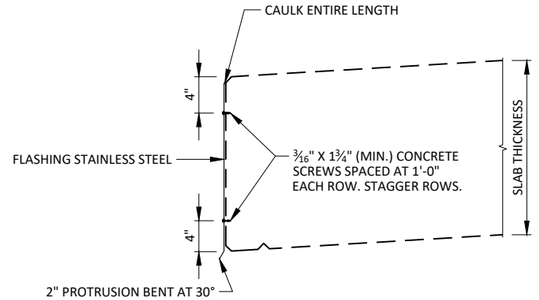
LOOKING EAST

■ PROTECTIVE SURFACE TREATMENT PAY LIMITS. SEE GENERAL NOTES FOR DESCRIPTION.



CONCRETE SURFACE REPAIR DETAIL NORTH EDGE OF DECK

AS DIRECTED BY ENGINEER IN THE FIELD



STAINLESS STEEL FLASHING DETAIL

NOTES:

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, CAULK, 3/16" AND ¼" CONCRETE SCREWS, AND CLEANING THE EDGE OF DECK PRIOR TO ATTACHMENT OF THE FLASHING.

FLASHING TO BE INSTALLED AT THE NORTH EDGE OF DECK AFTER APPLICATION OF PROTECTIVE SURFACE TREATMENT.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO F.F. OF ABUTMENT.

TOP OF FLASHING TO BEGIN APPROXIMATELY 1" BELOW TOP OF DECK SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST DECK DEPTH OVER THE BRIDGE LENGTH.

PROVIDE 2" MINIMUM FLASHING OVERLAP, FASTEN WITH 3/16" X 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	15
509.1500	CONCRETE SURFACE REPAIR	SF	40
SPV.0090.01	FLASHING STAINLESS STEEL	LF	42

8

8

NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

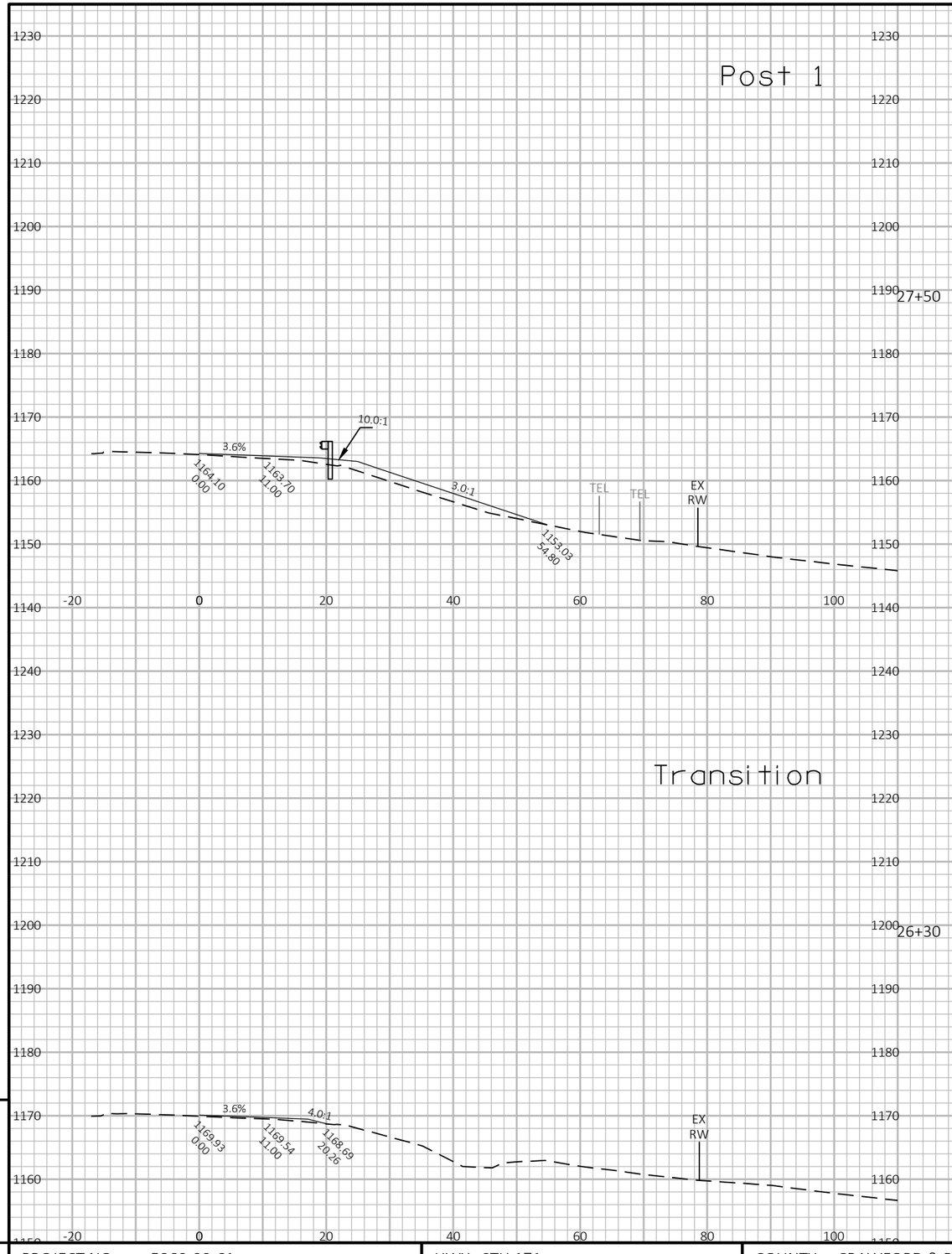
STRUCTURE B-52-144

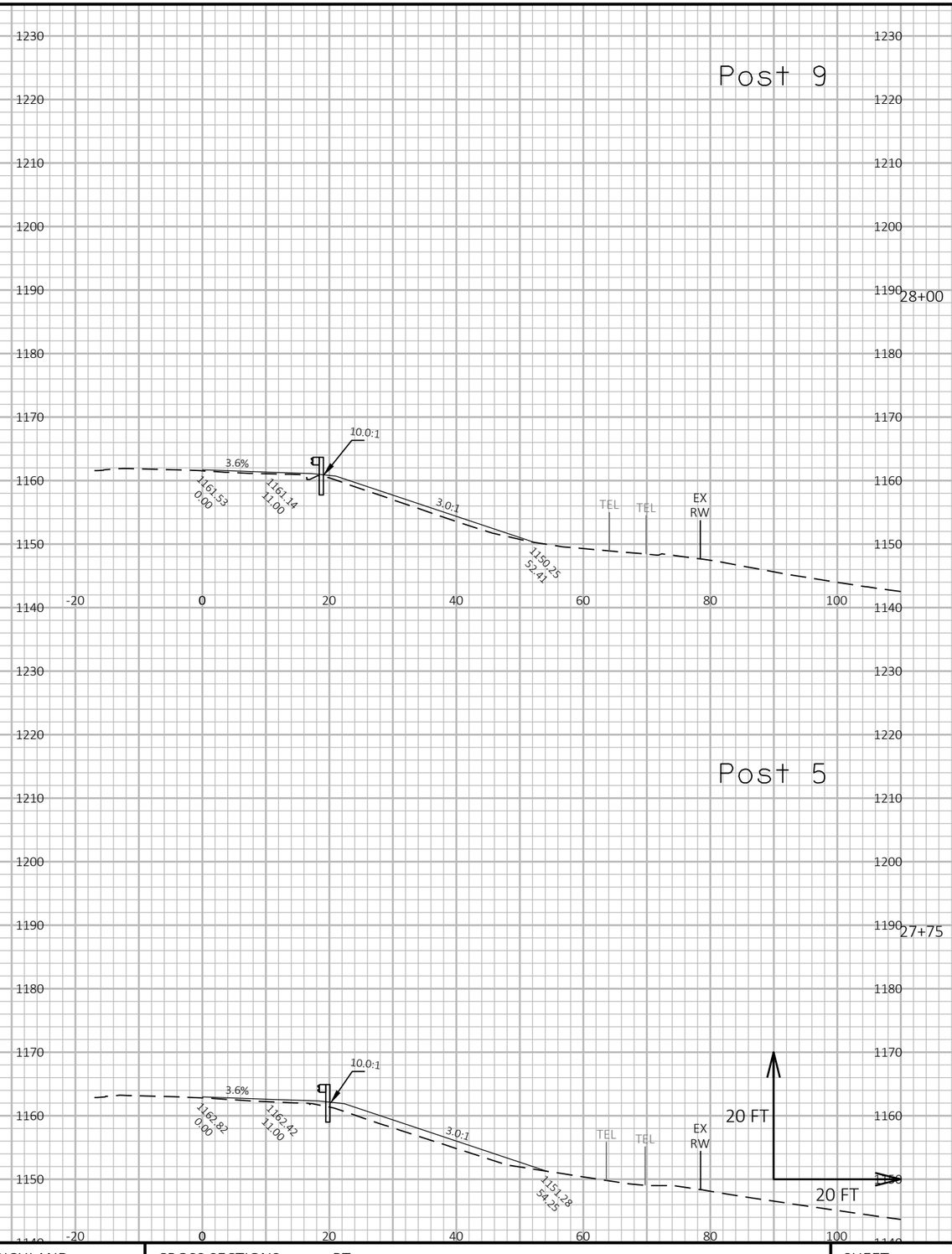
DRAWN BY CTMP | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 2

135





9 9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 136	E

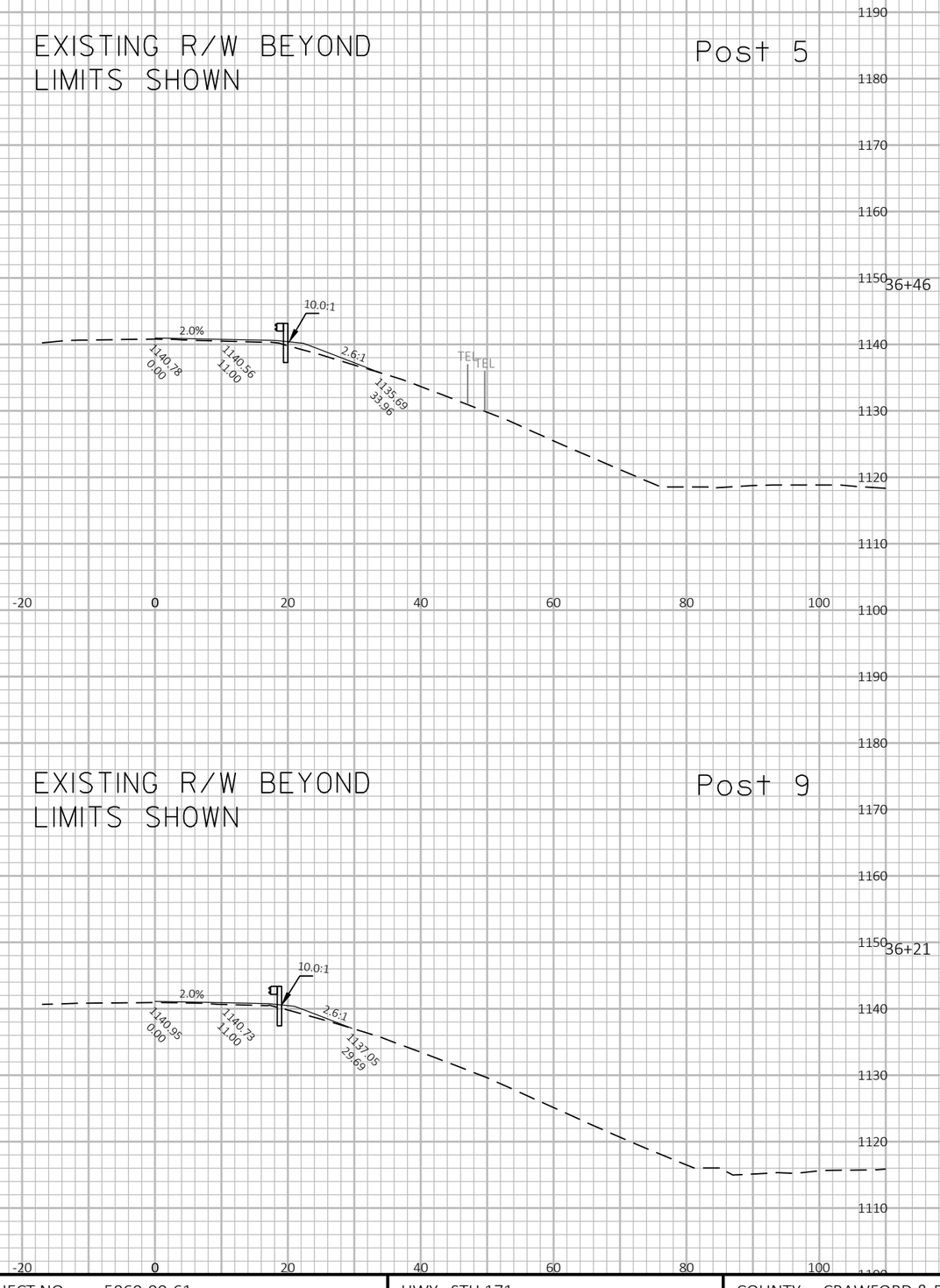
FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 55

PLOT DATE : 9/6/2023 8:17 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

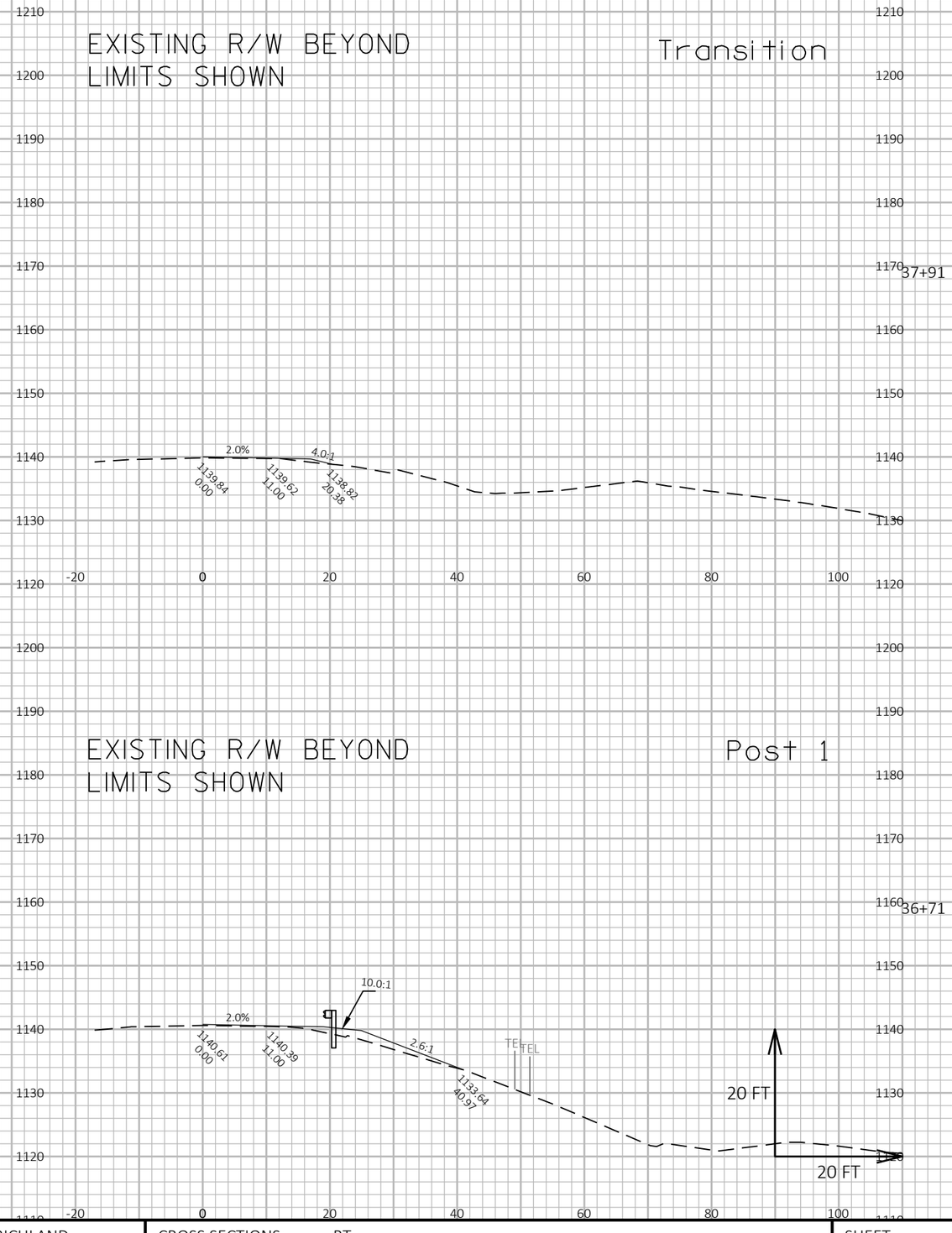
EXISTING R/W BEYOND
LIMITS SHOWN

Post 5



EXISTING R/W BEYOND
LIMITS SHOWN

Transition



EXISTING R/W BEYOND
LIMITS SHOWN

Post 9

EXISTING R/W BEYOND
LIMITS SHOWN

Post 1

9

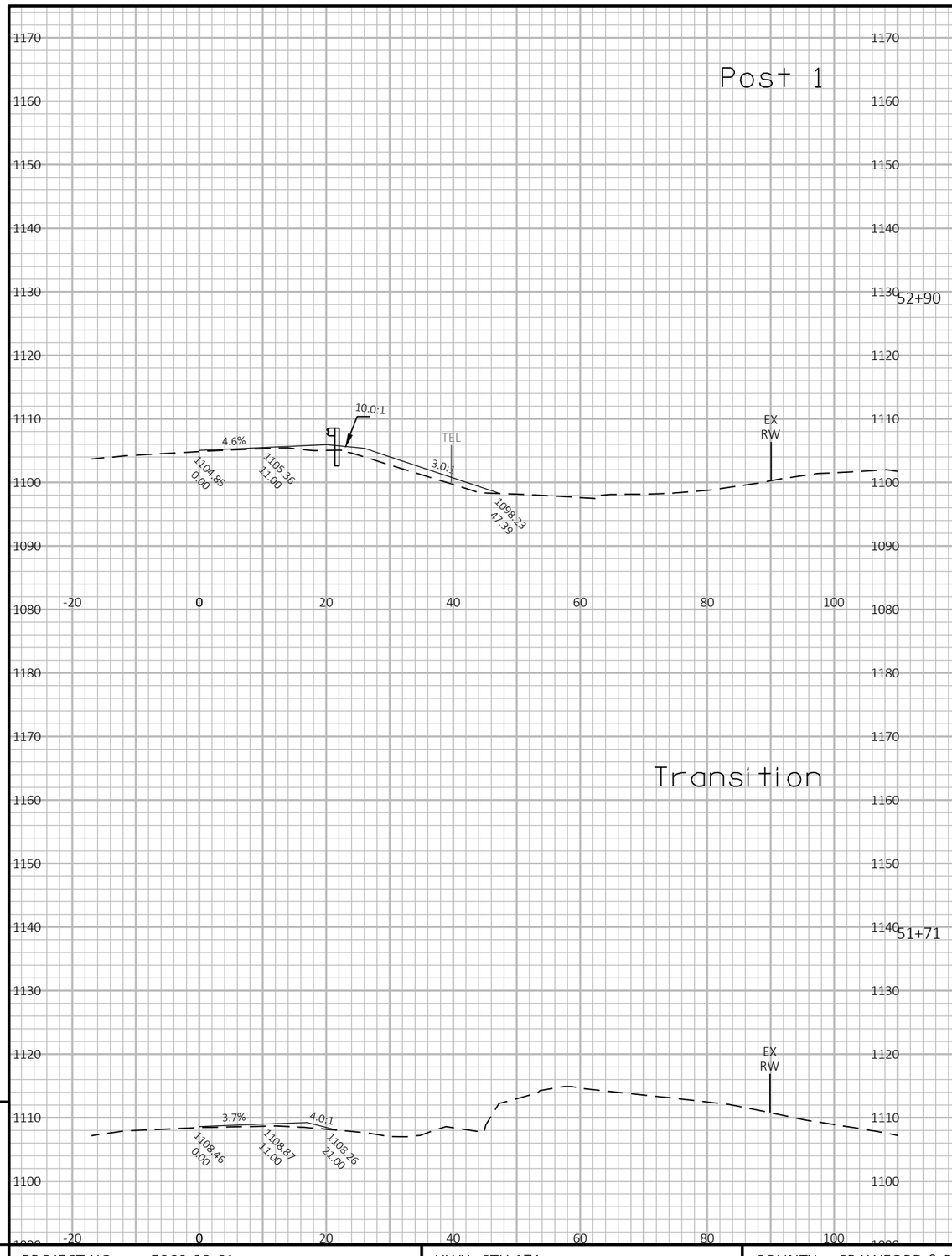
9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 137	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 56

PLOT DATE : 9/6/2023 8:17 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

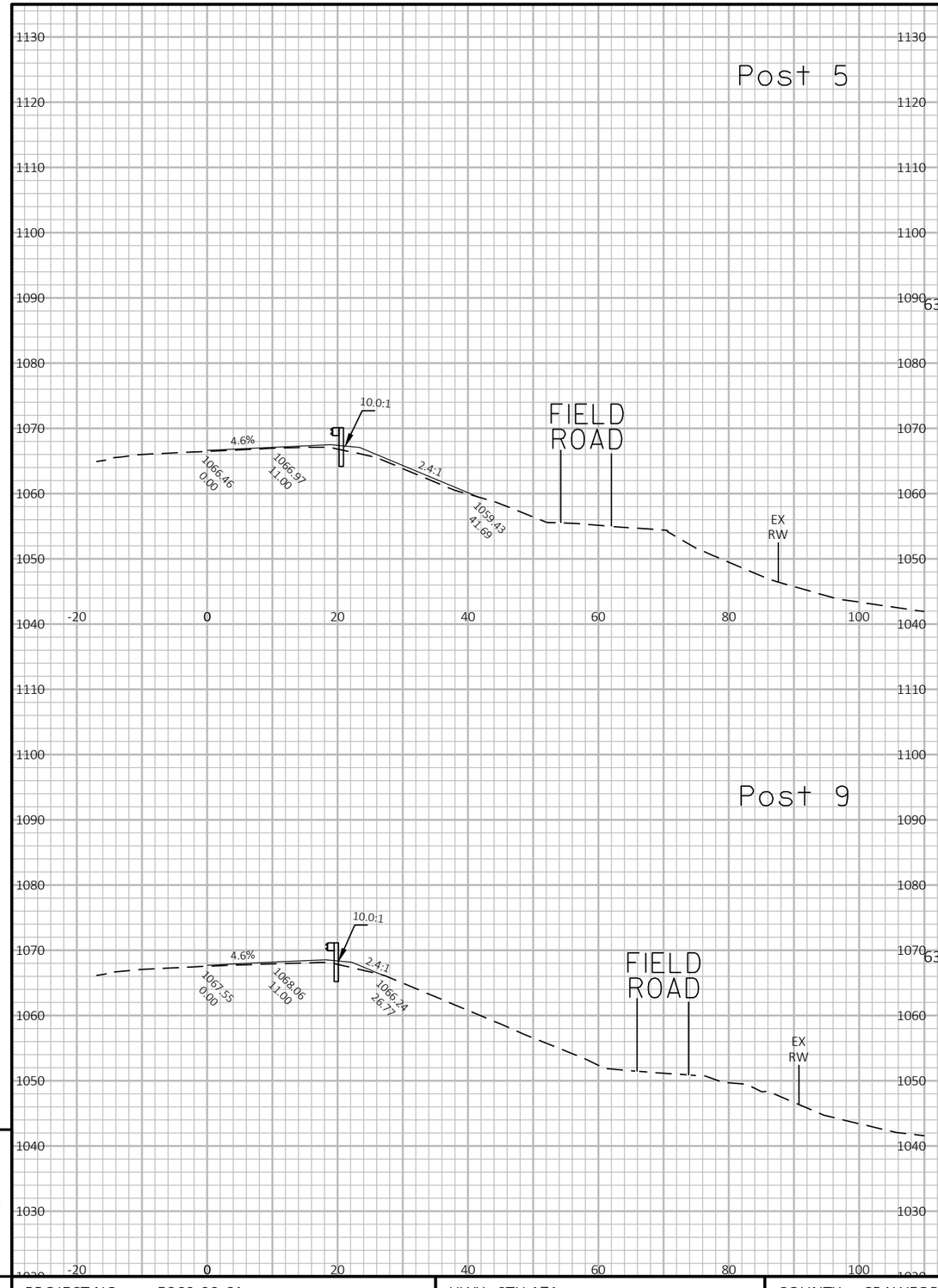
9

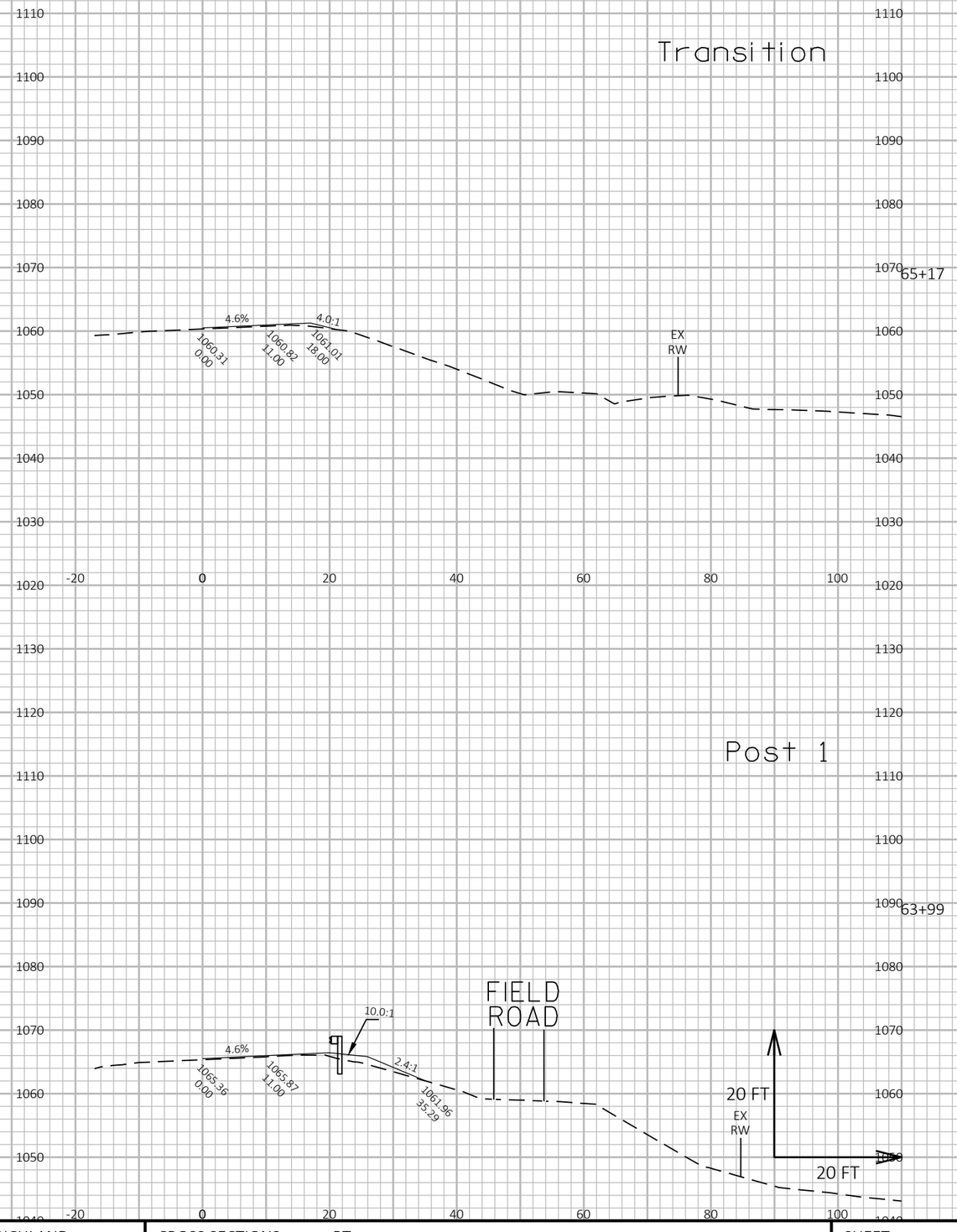
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 138	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 57

PLOT DATE : 9/6/2023 8:18 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





9

9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 139	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 58

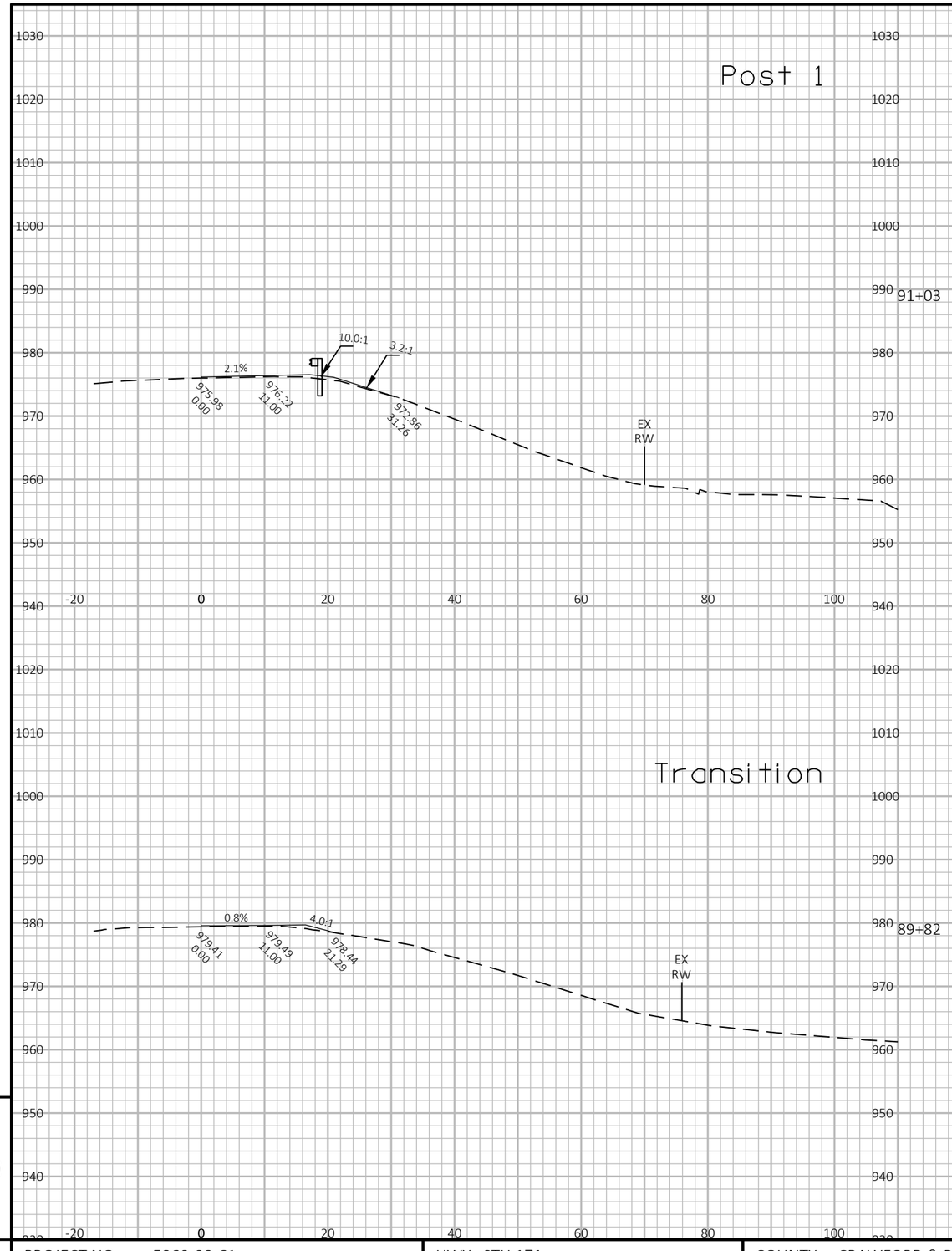
PLOT DATE : 9/6/2023 8:18 AM

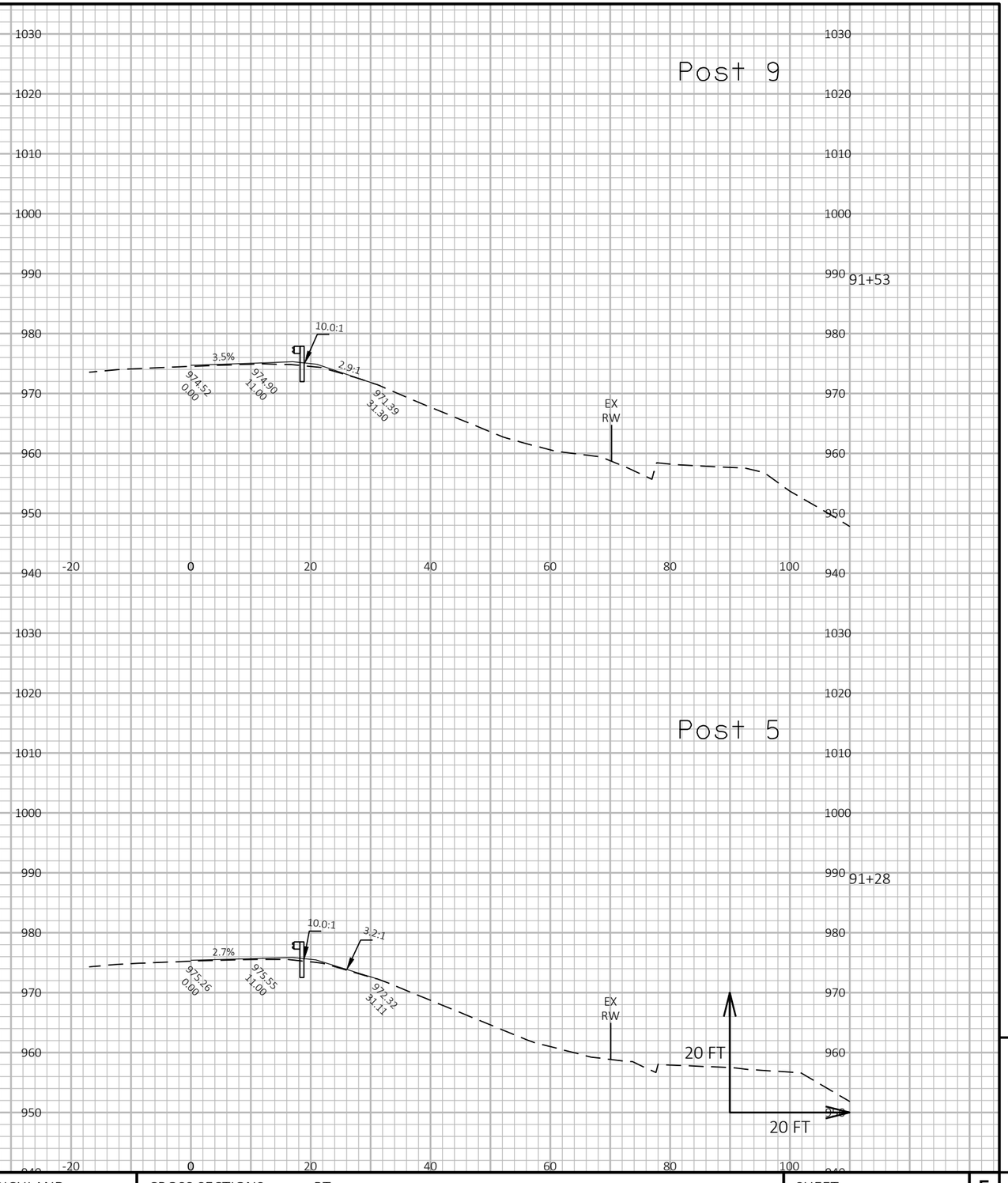
PLOT BY : DAVIDSON, JONATHAN B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





9

9

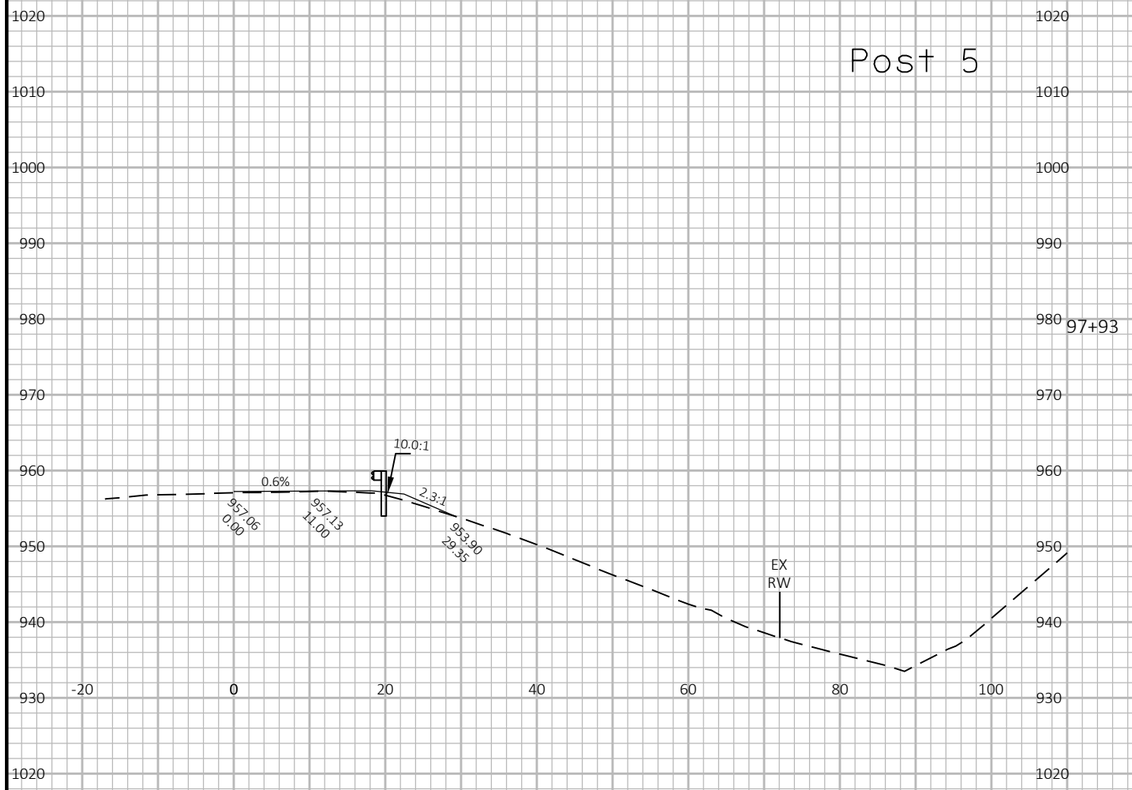
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 140	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 59

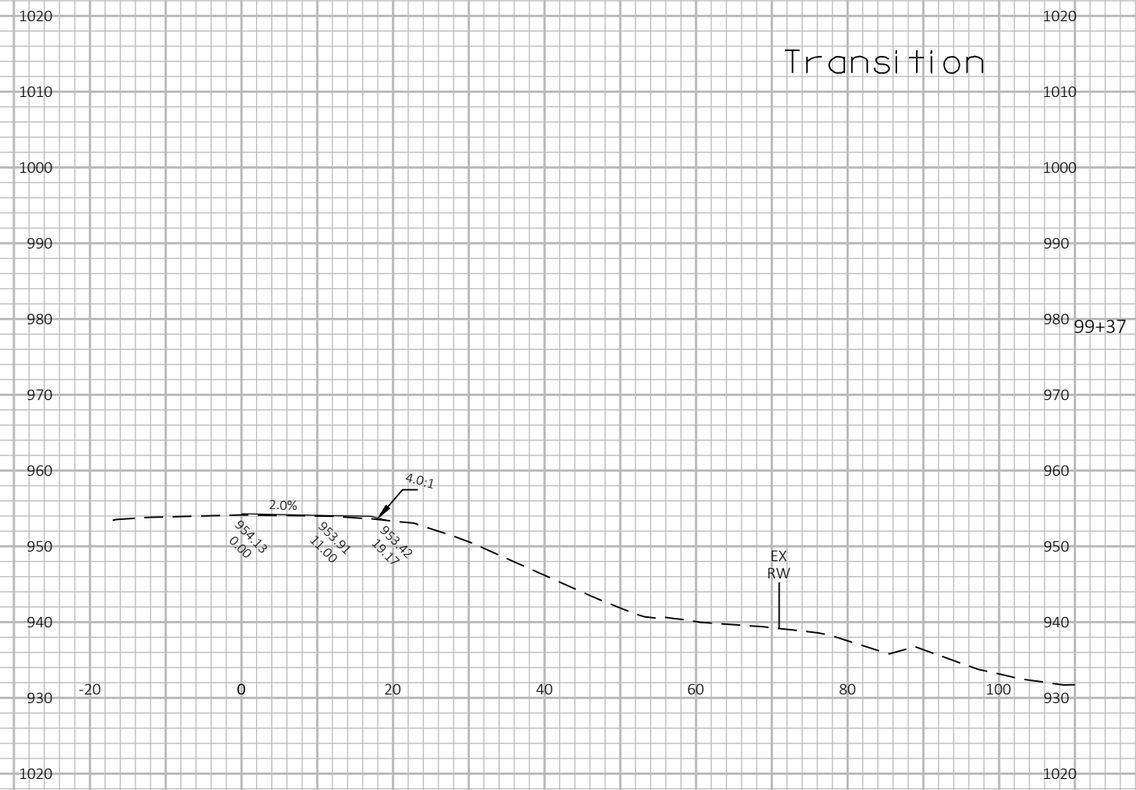
PLOT DATE : 10/3/2023 9:34 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

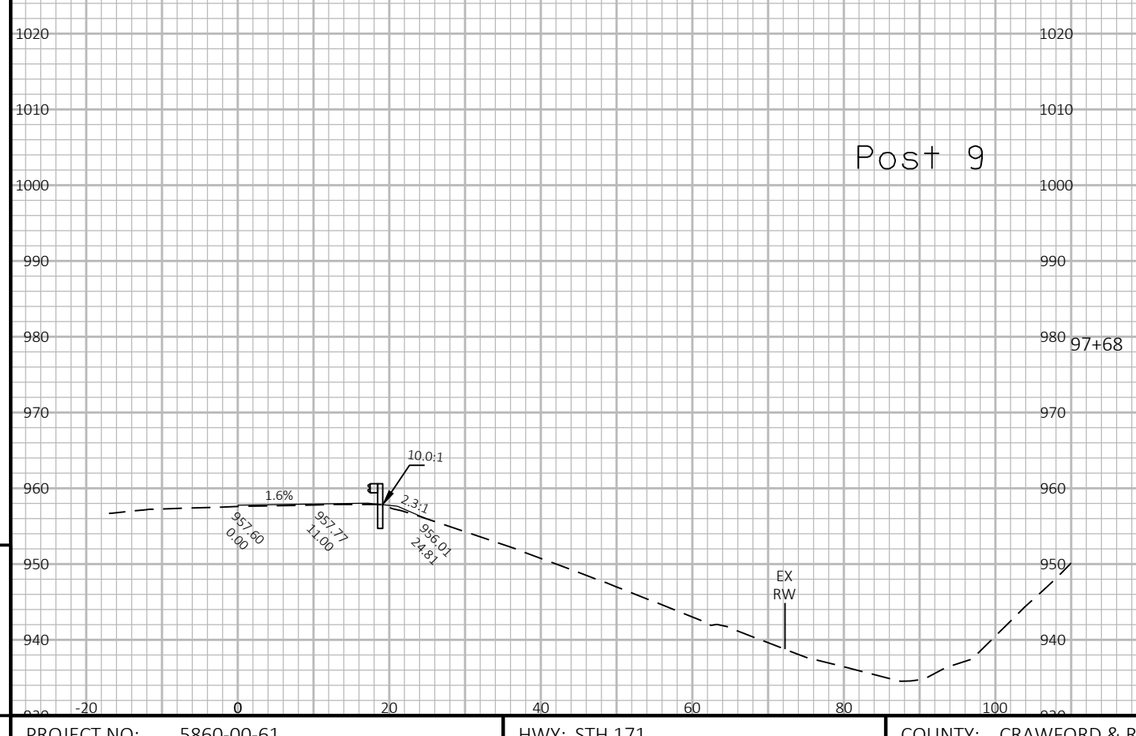
Post 5



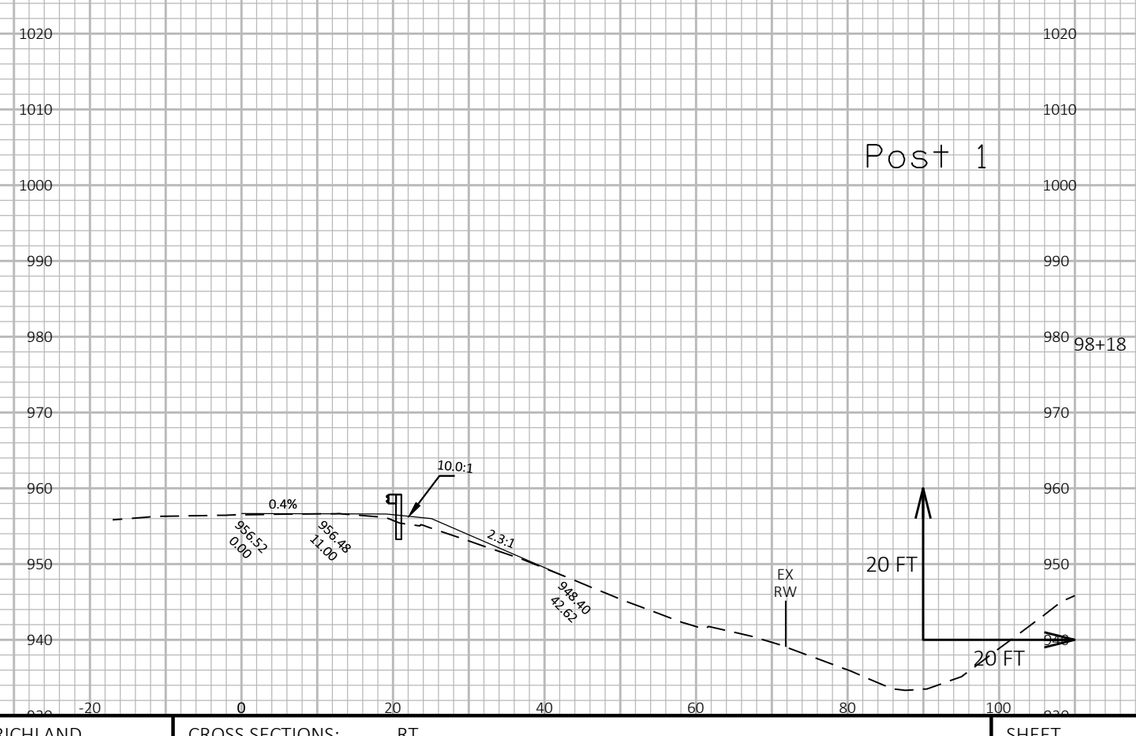
Transition



Post 9



Post 1



9

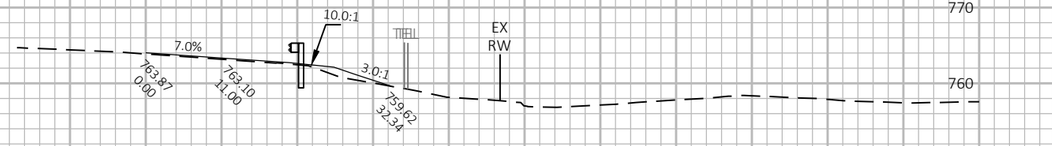
9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 141	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 60

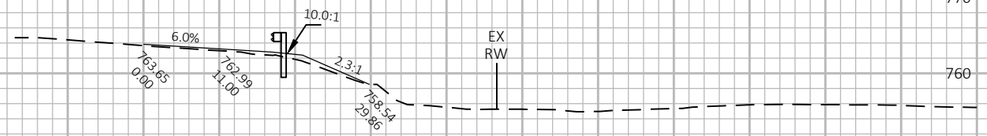
PLOT DATE : 9/6/2023 8:18 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

Post 1



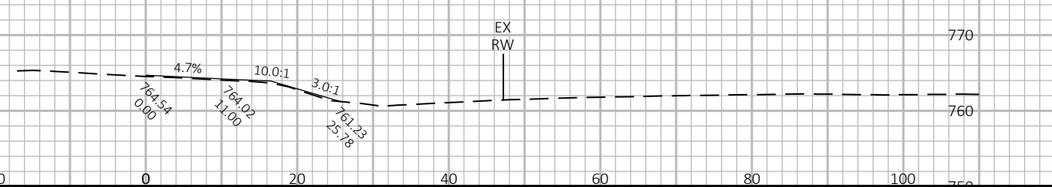
179+59

Post 9



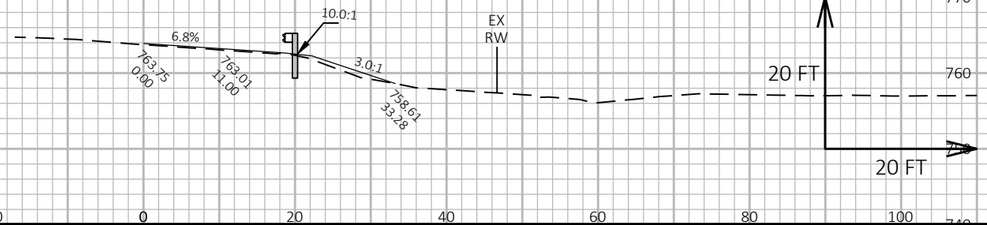
180+13

Transition



178+37

Post 5



179+84

9

9

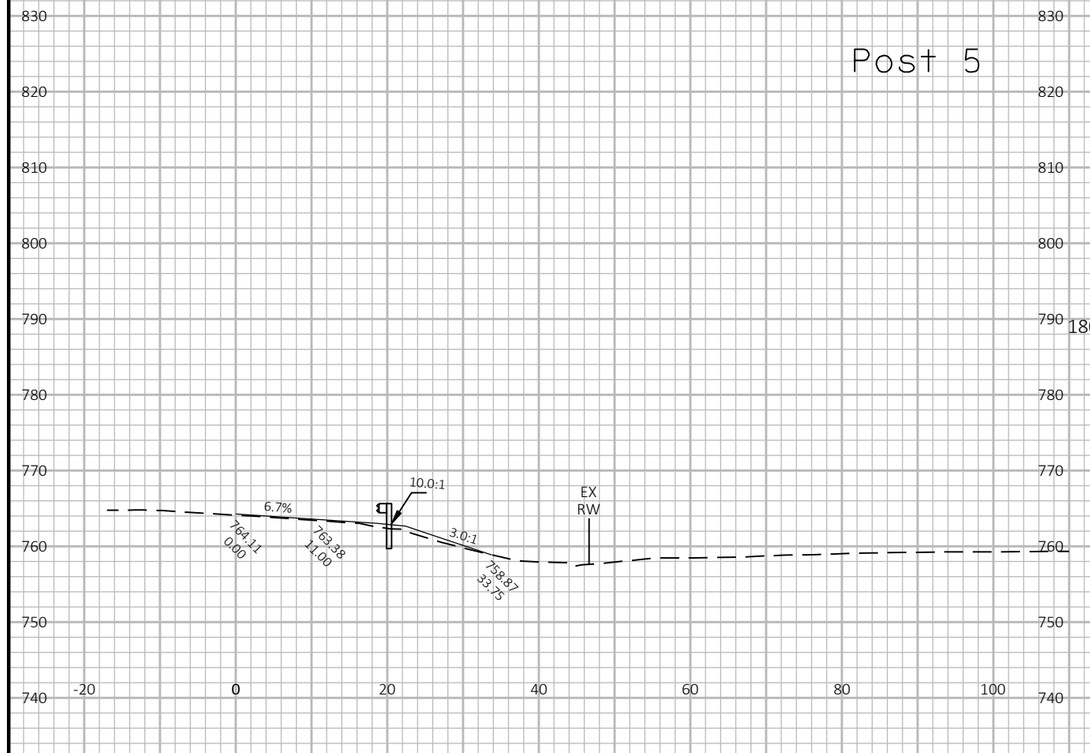
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 142	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 61

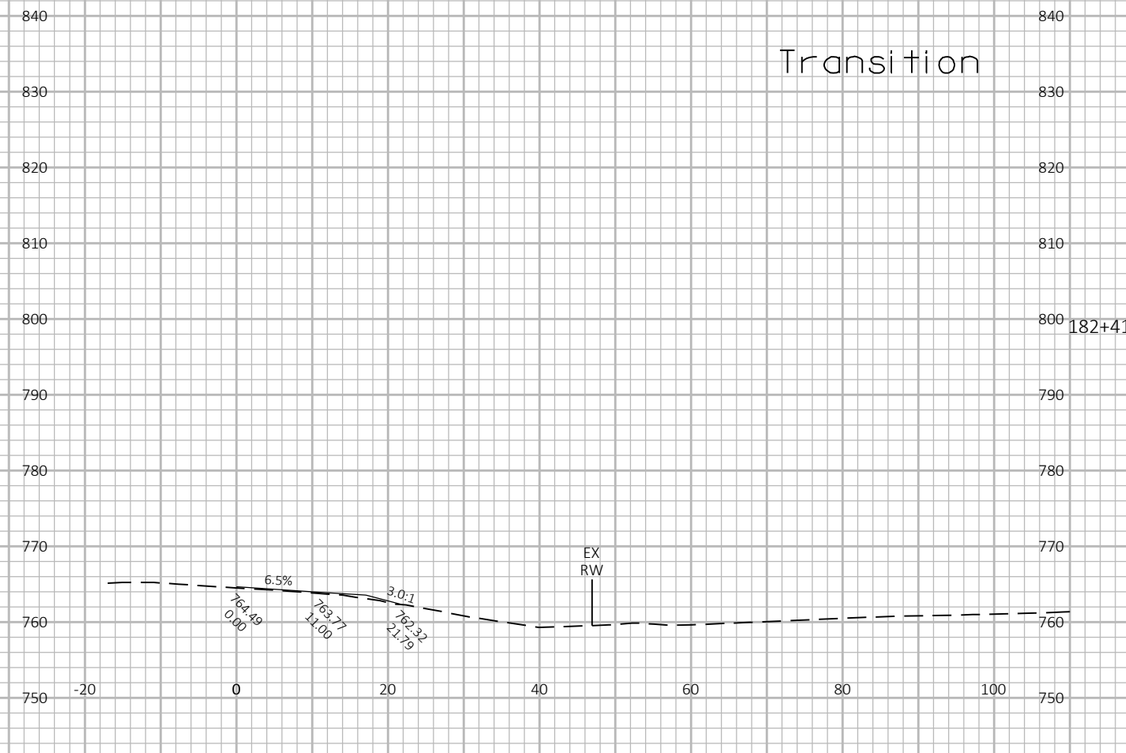
PLOT DATE : 9/6/2023 8:19 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

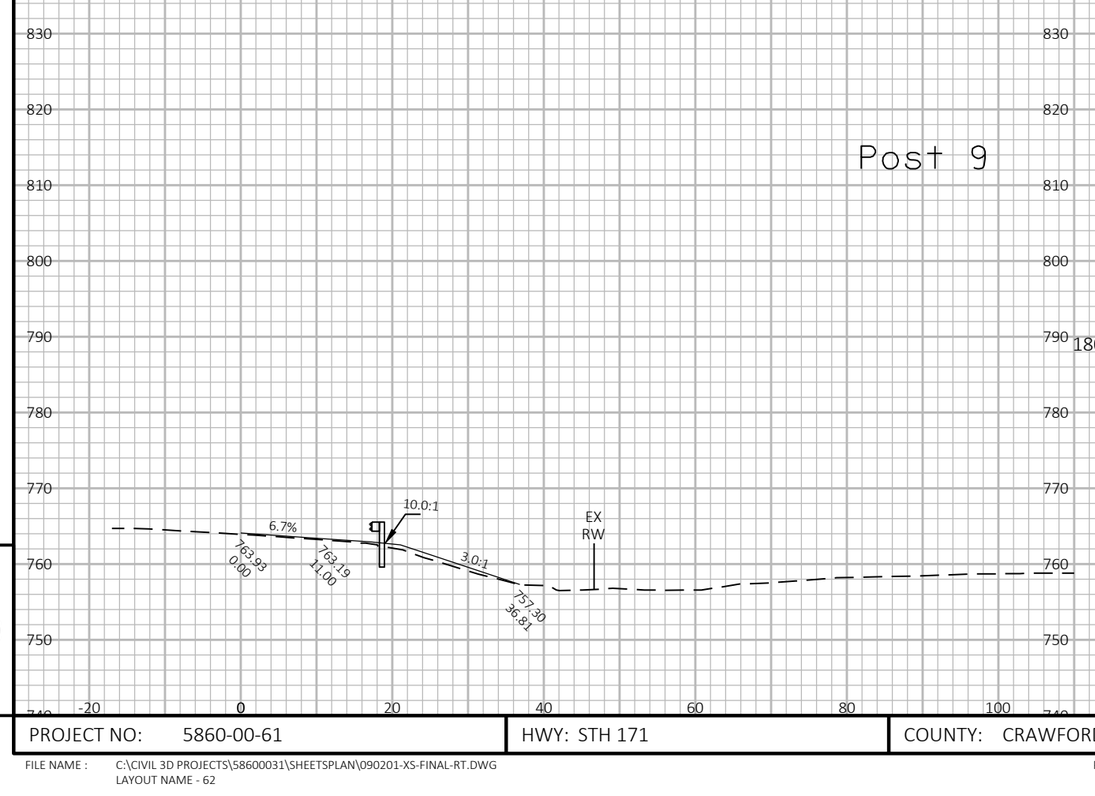
Post 5



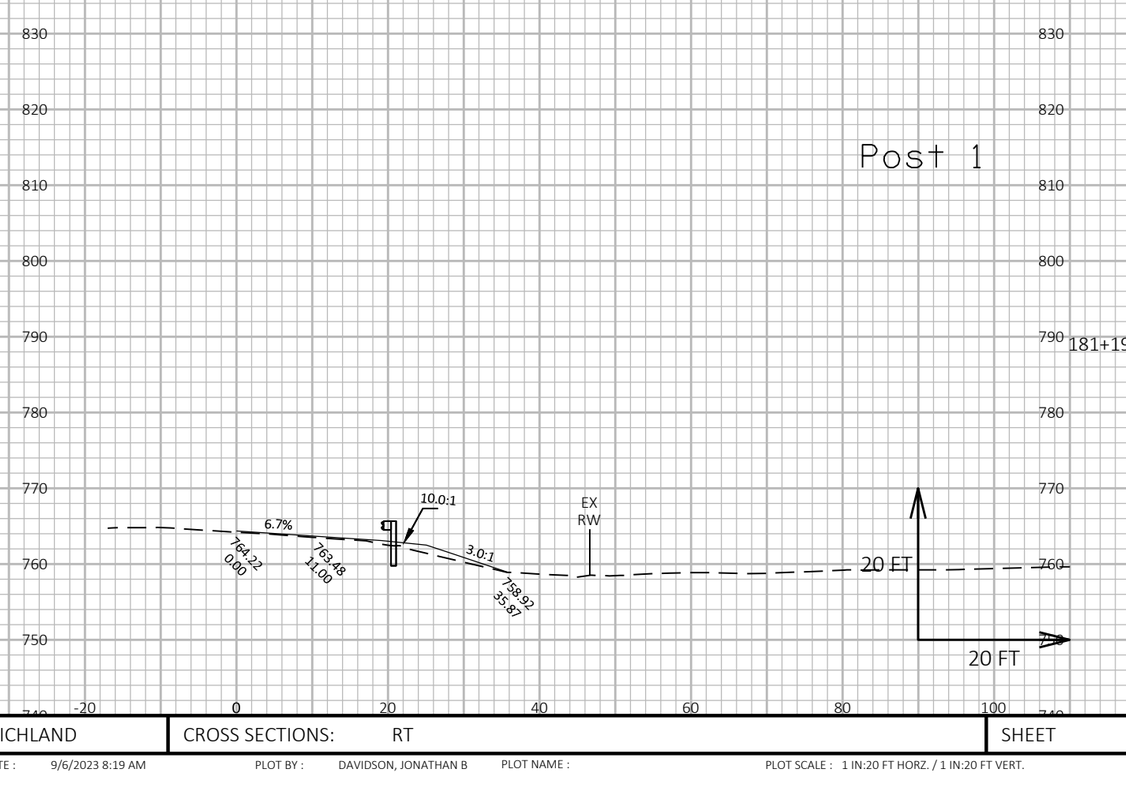
Transition



Post 9



Post 1



9

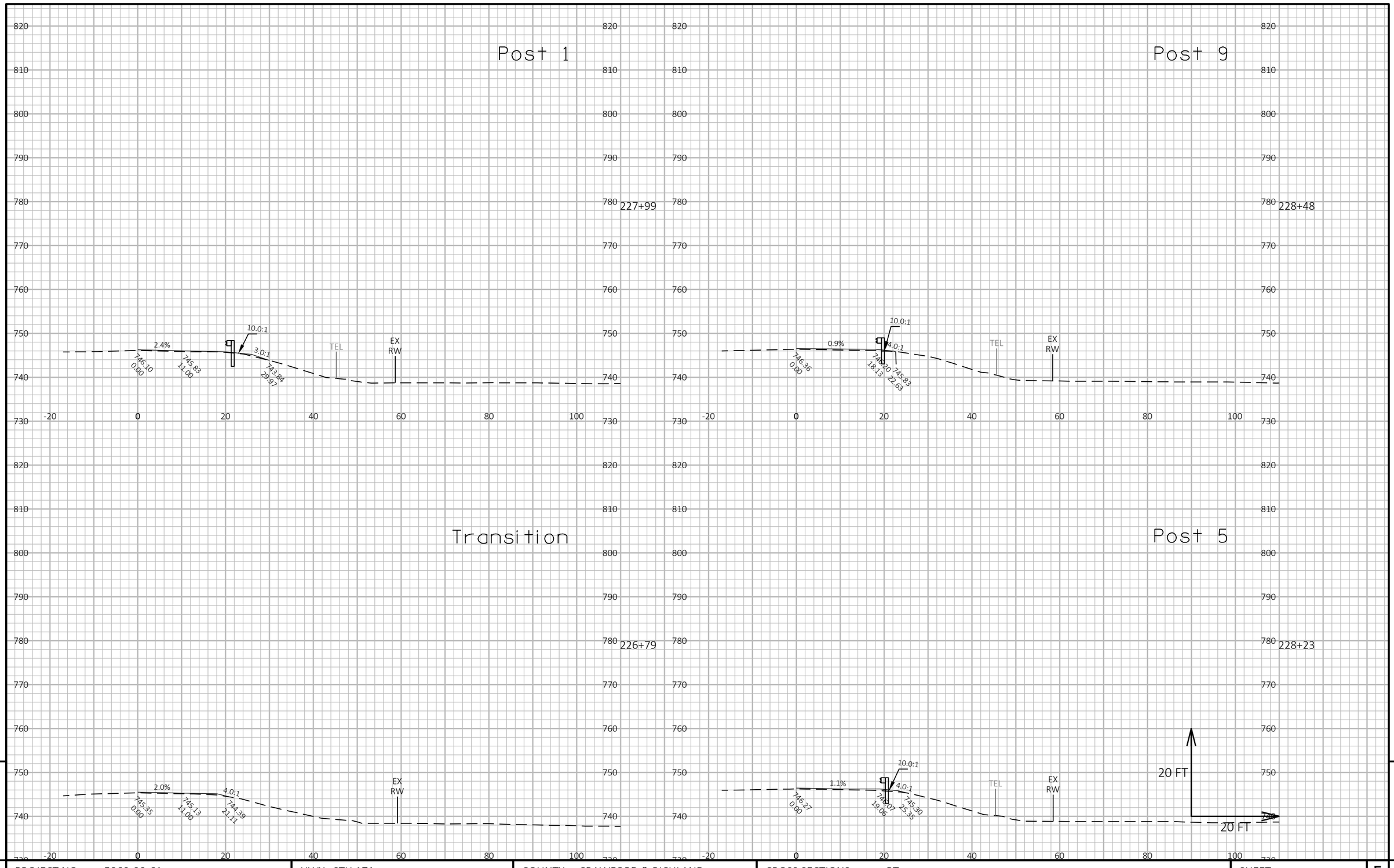
9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 143	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 62

PLOT DATE : 9/6/2023 8:19 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 144	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 63

PLOT DATE : 9/6/2023 8:19 AM

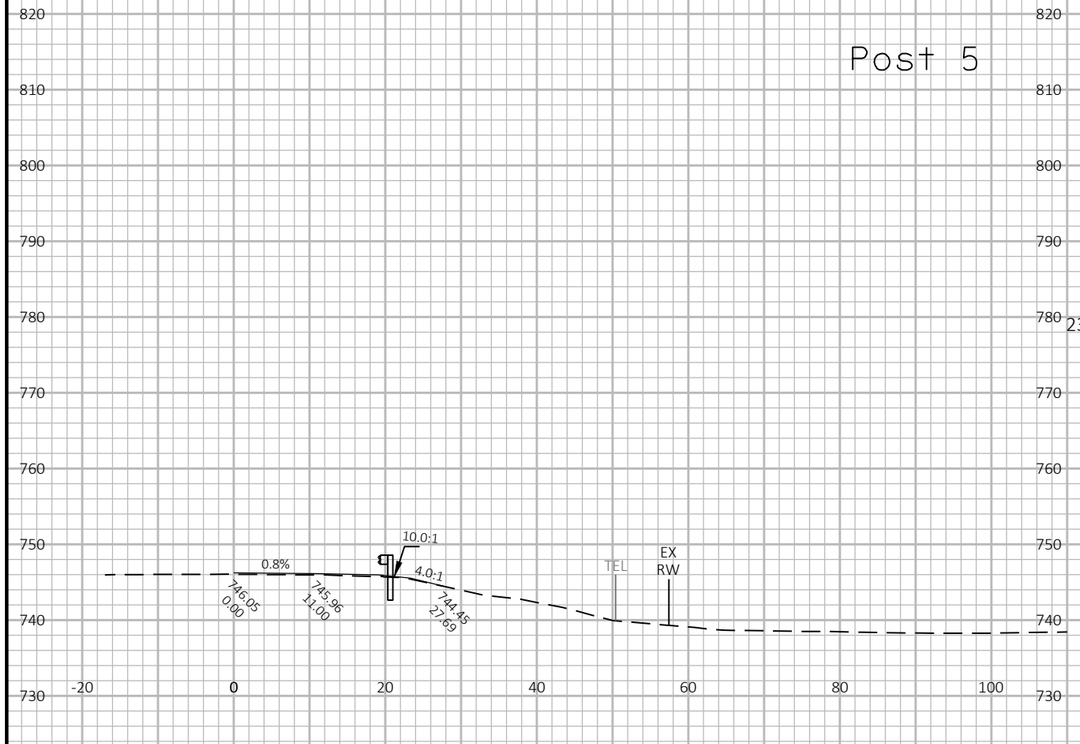
PLOT BY : DAVIDSON, JONATHAN B

PLOT NAME :

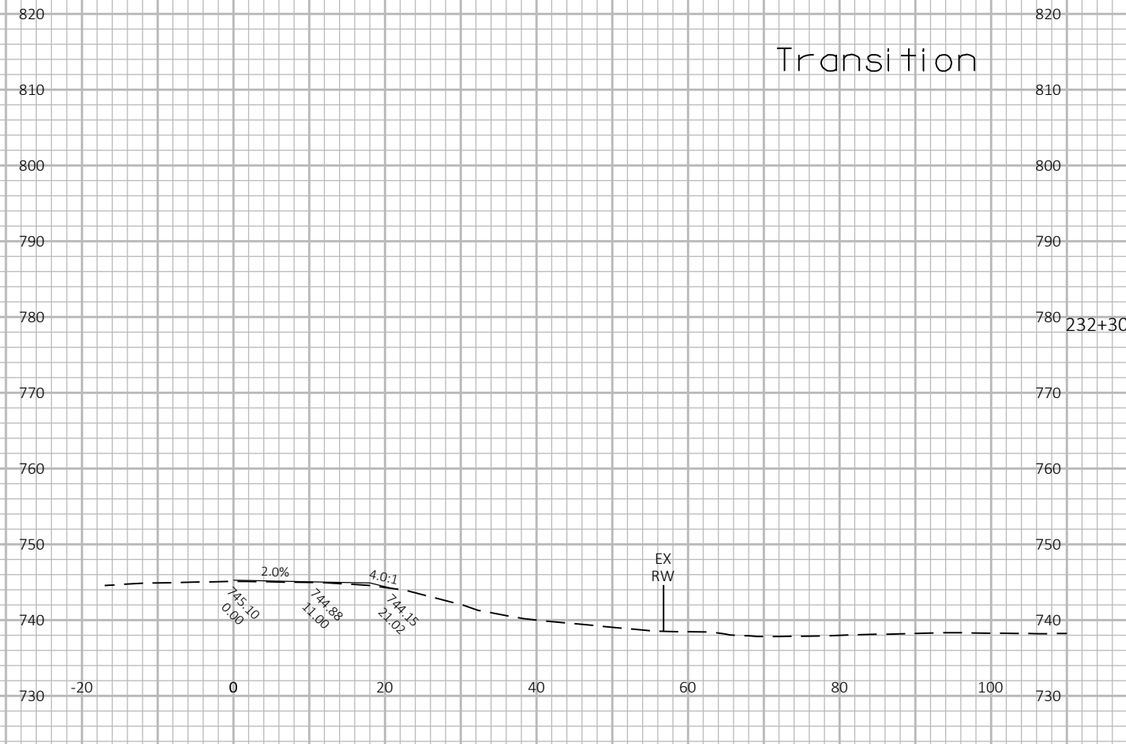
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

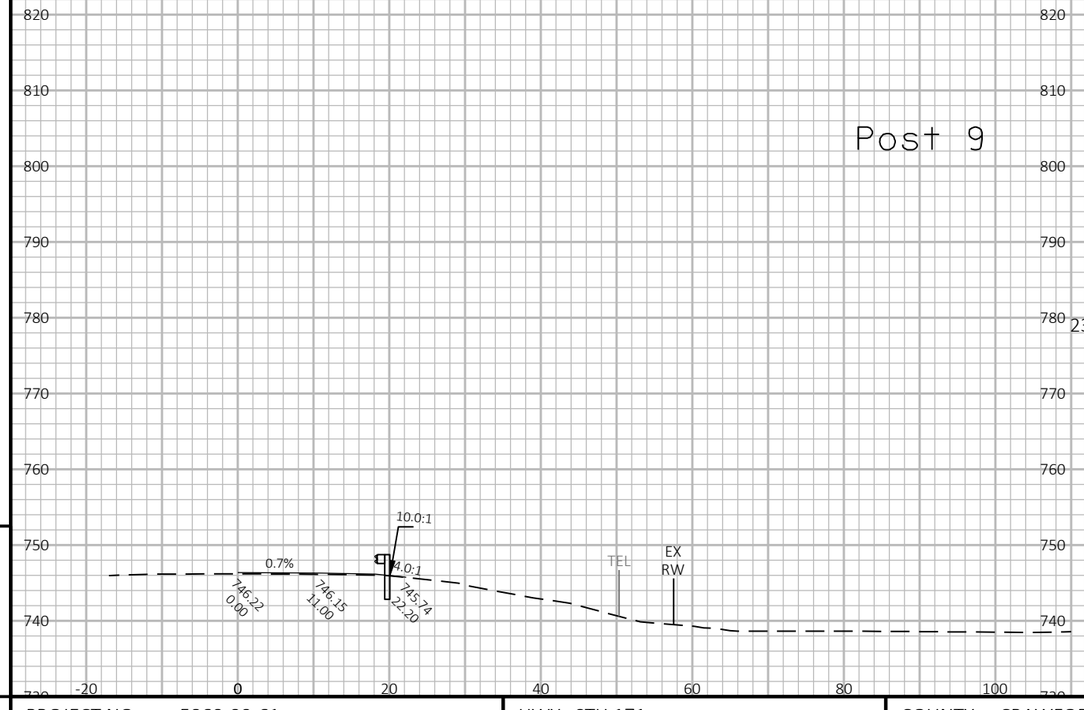
Post 5



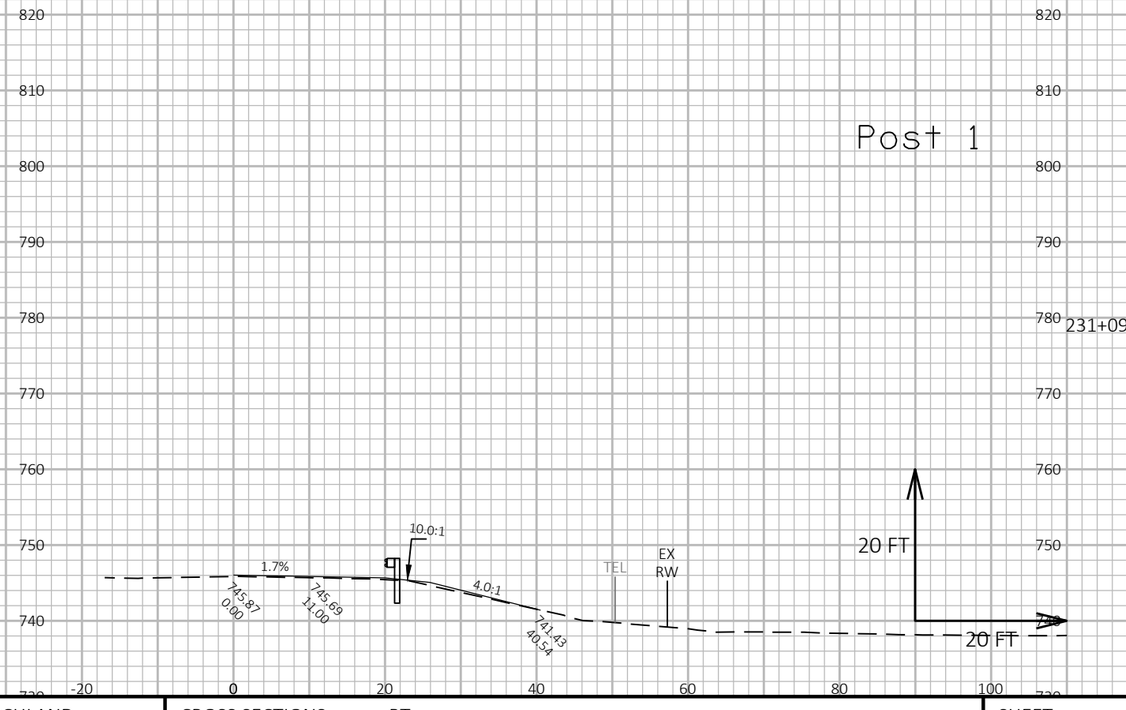
Transition



Post 9



Post 1



9

9

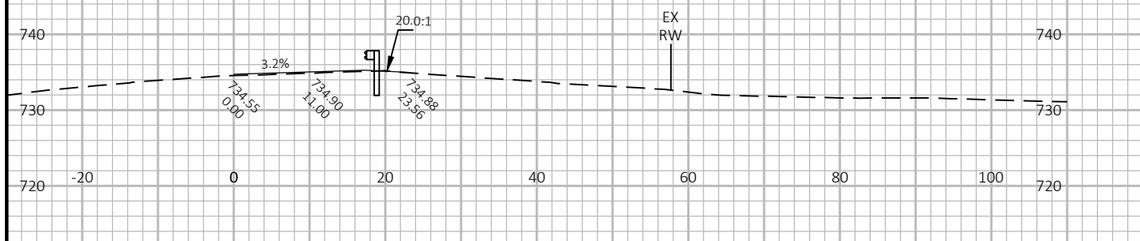
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 145	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 64

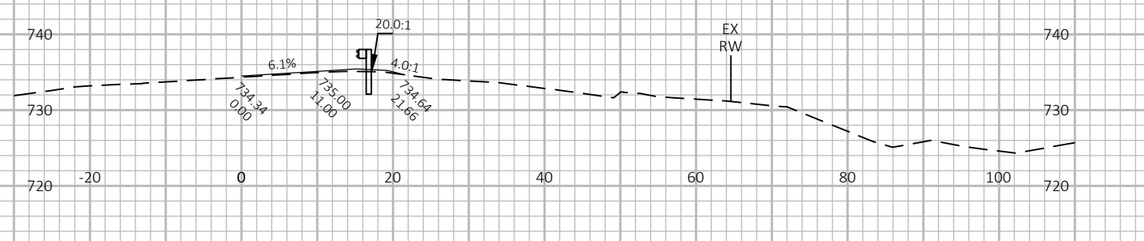
PLOT DATE : 9/6/2023 8:20 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

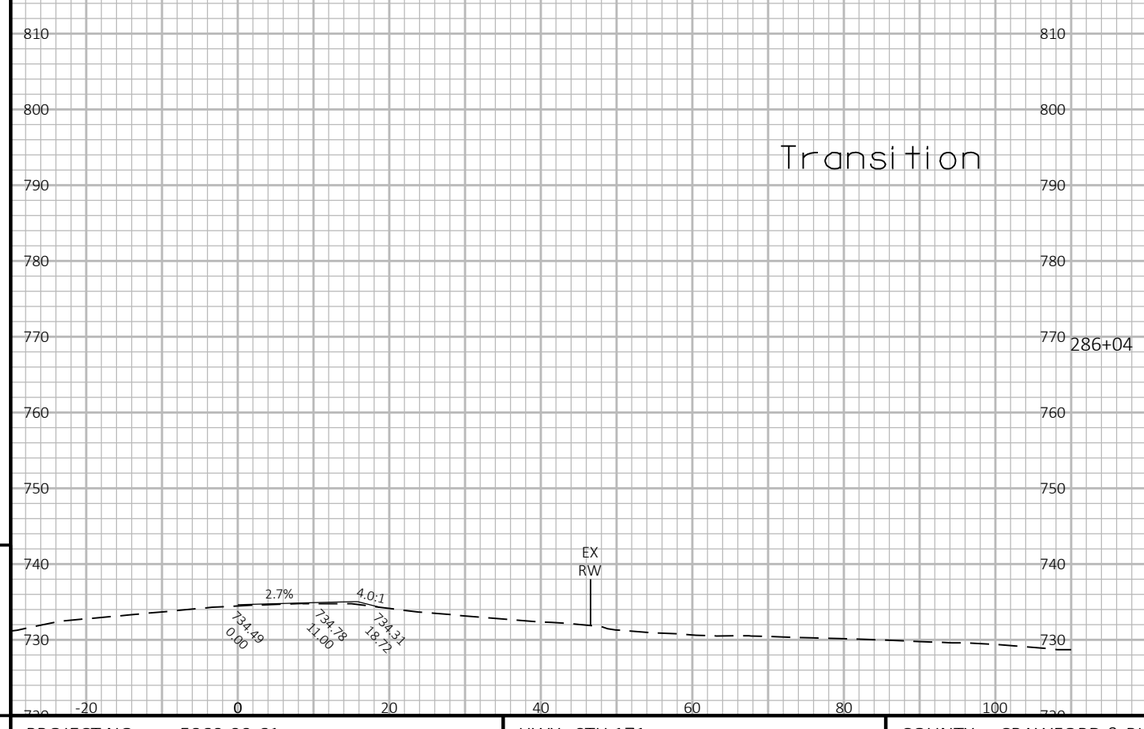
Post 1



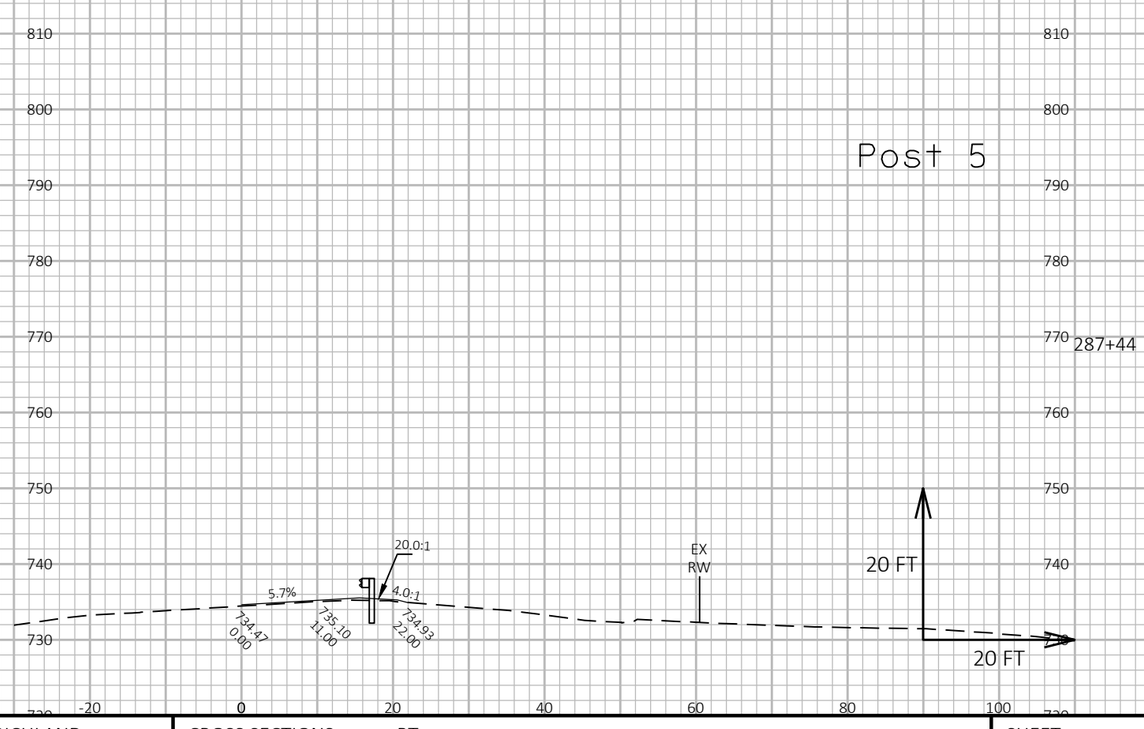
Post 9



Transition



Post 5

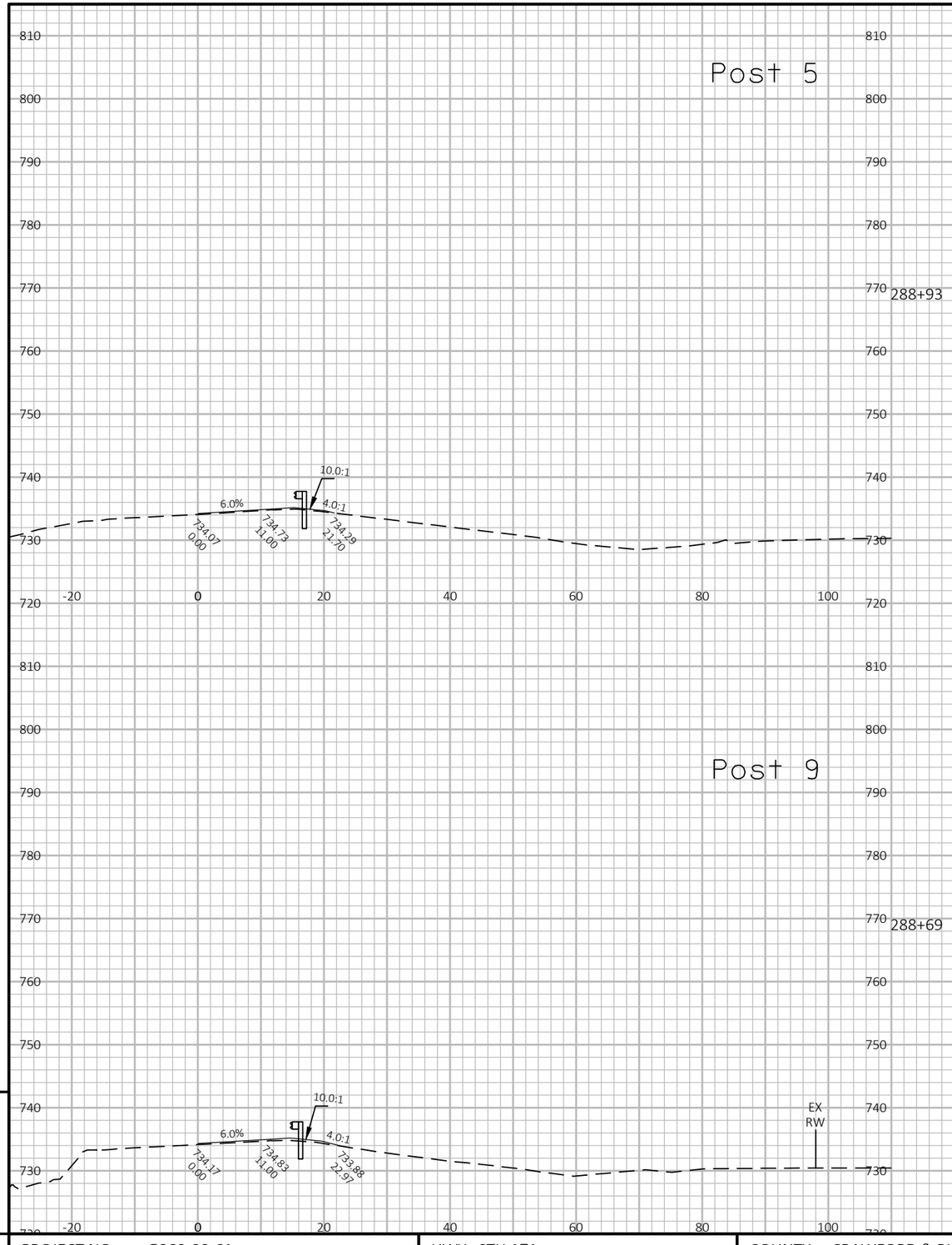


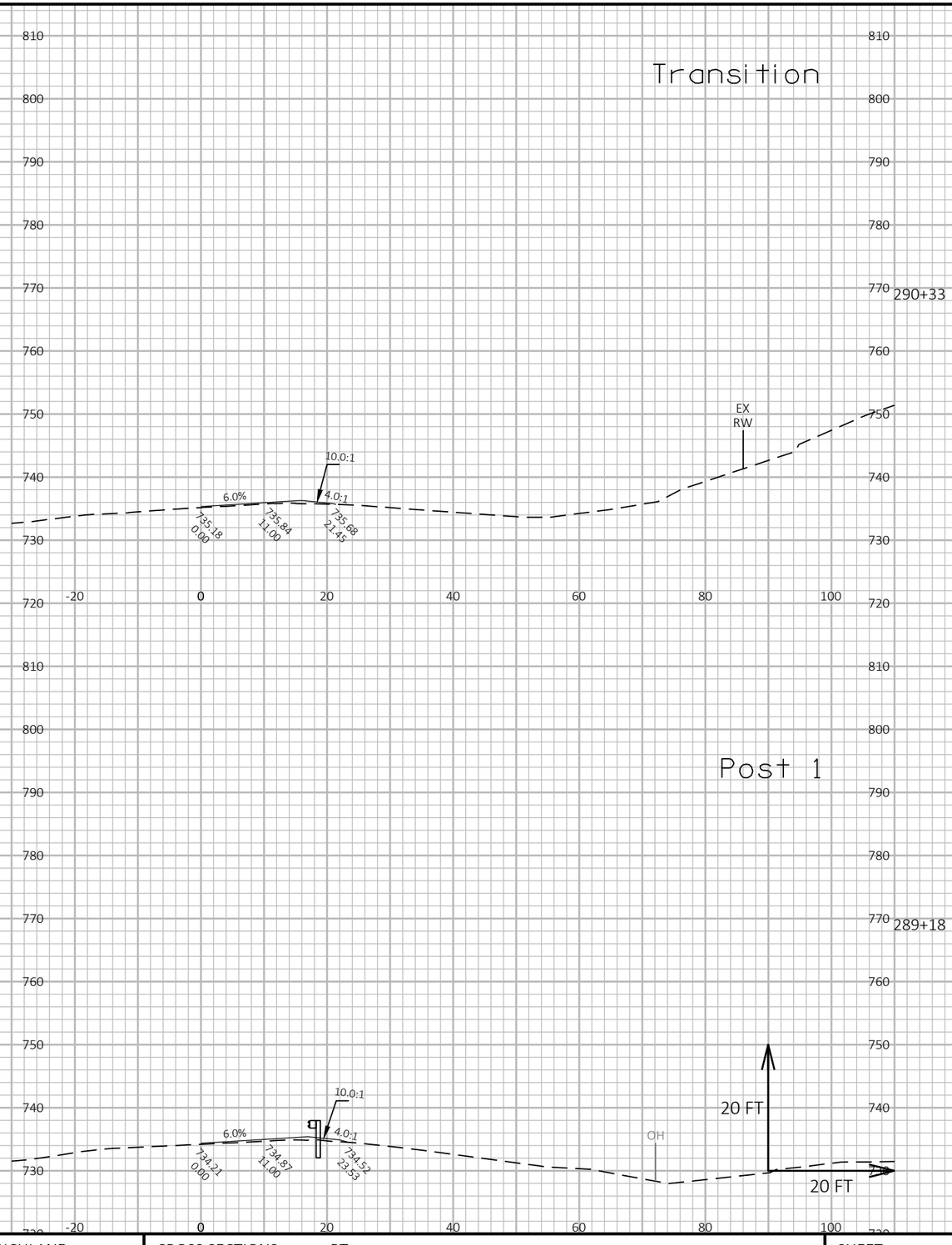
9 9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 146	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 65

PLOT DATE : 9/6/2023 8:20 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





9

9

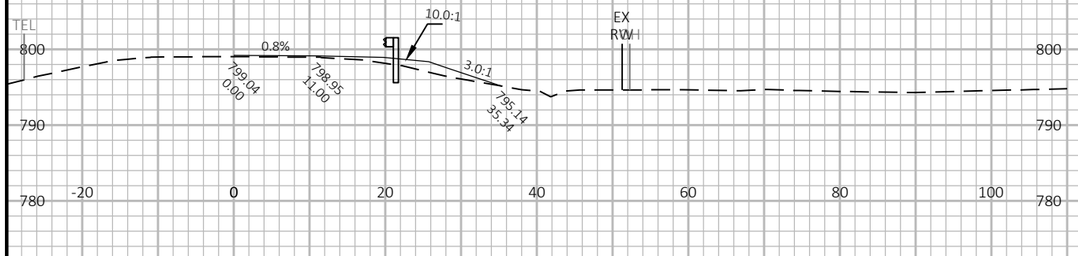
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 147	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 66

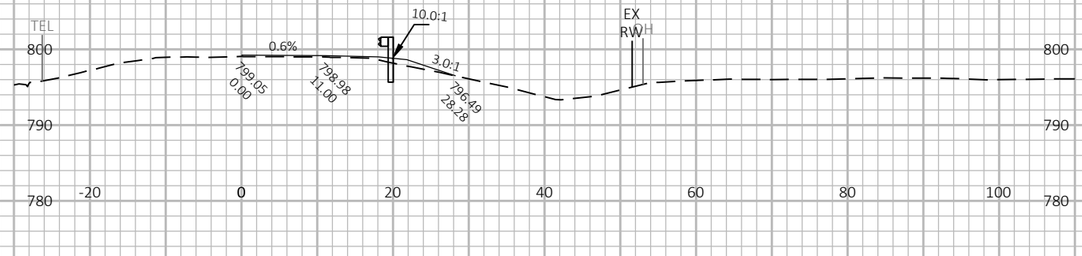
PLOT DATE : 9/6/2023 8:20 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

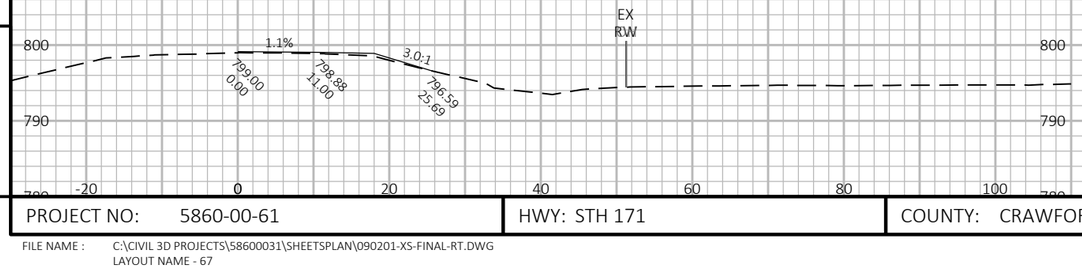
Post 1



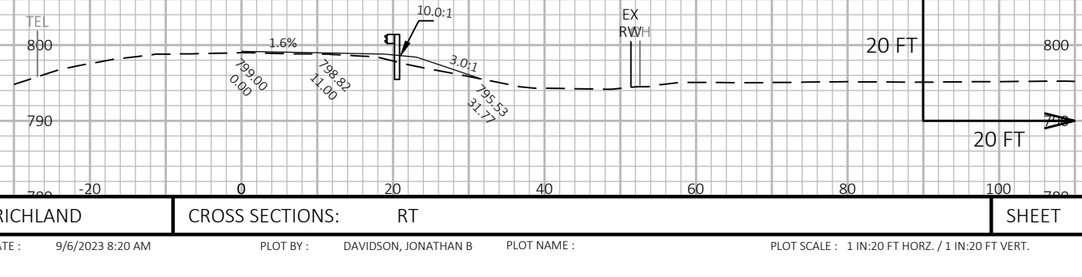
Post 9



Transition



Post 5



9

9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 148	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 67

PLOT DATE : 9/6/2023 8:20 AM

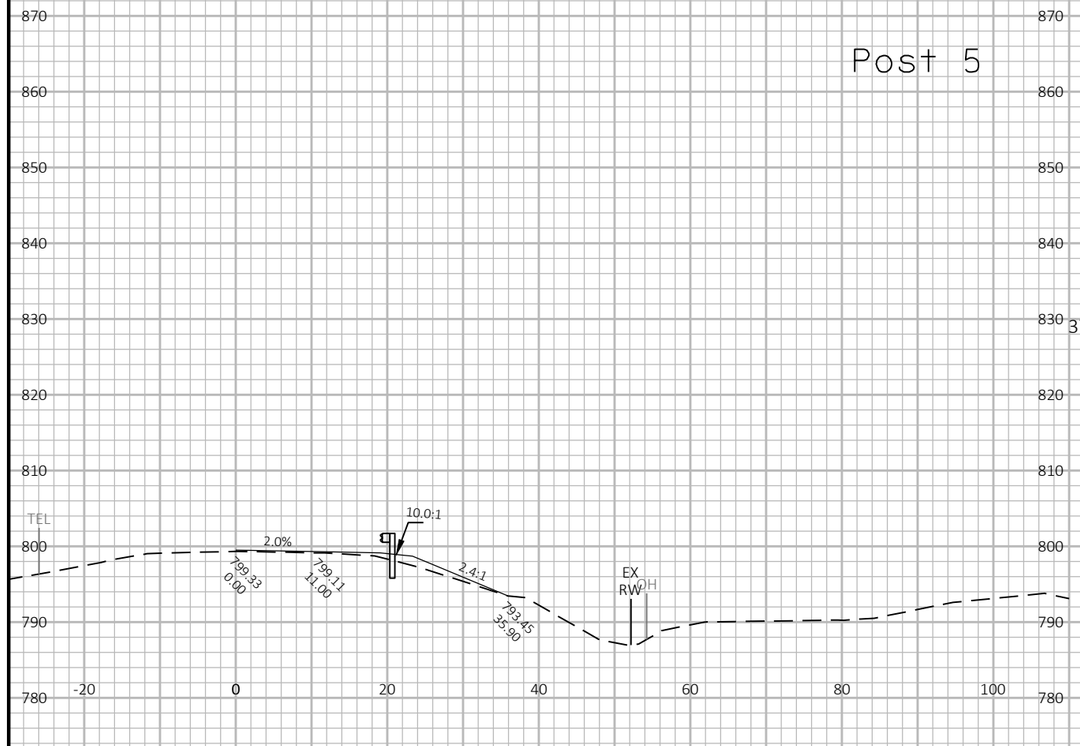
PLOT BY : DAVIDSON, JONATHAN B

PLOT NAME :

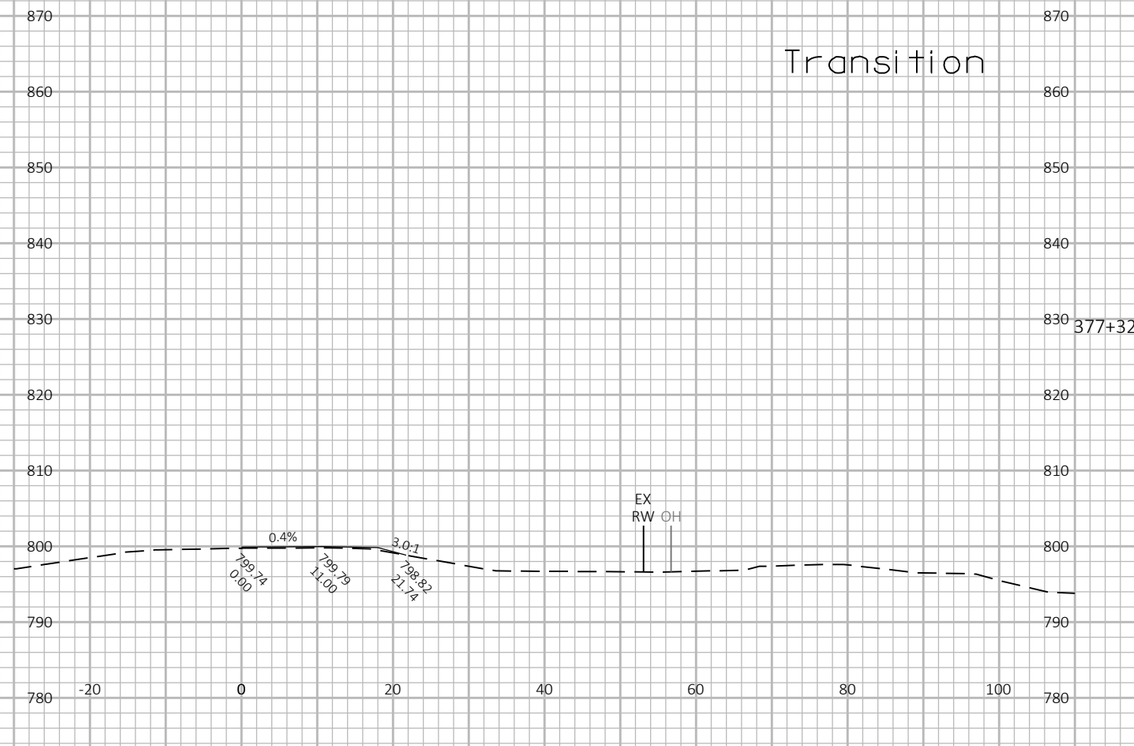
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Post 5



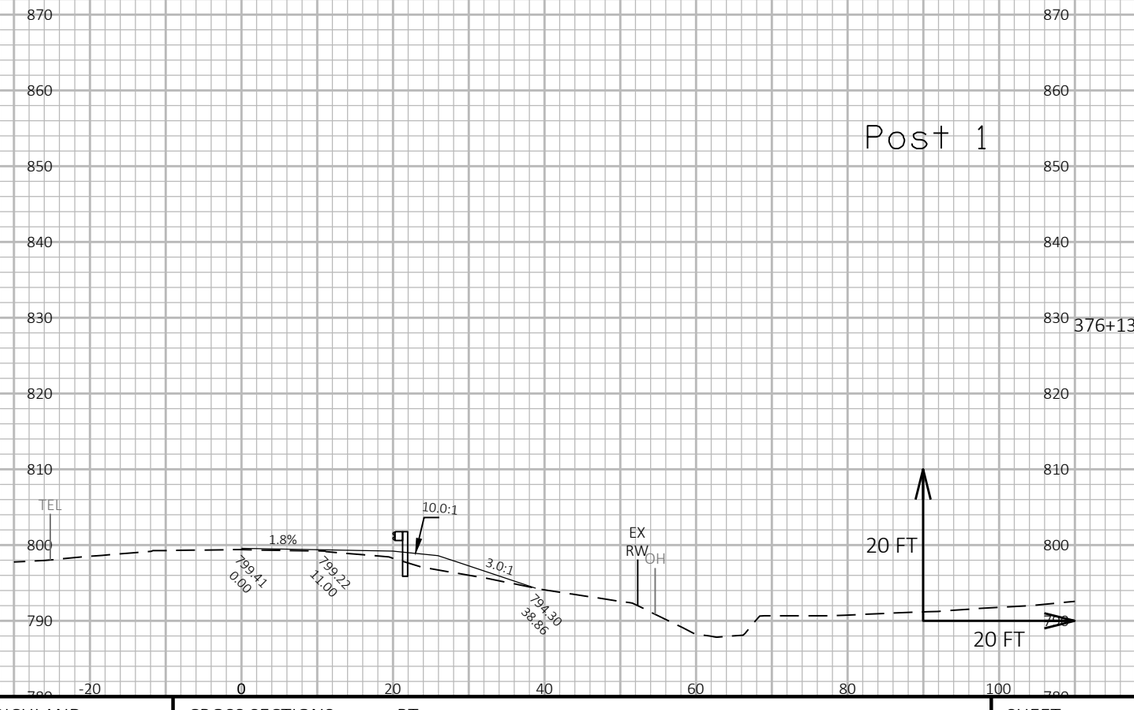
Transition



Post 9



Post 1



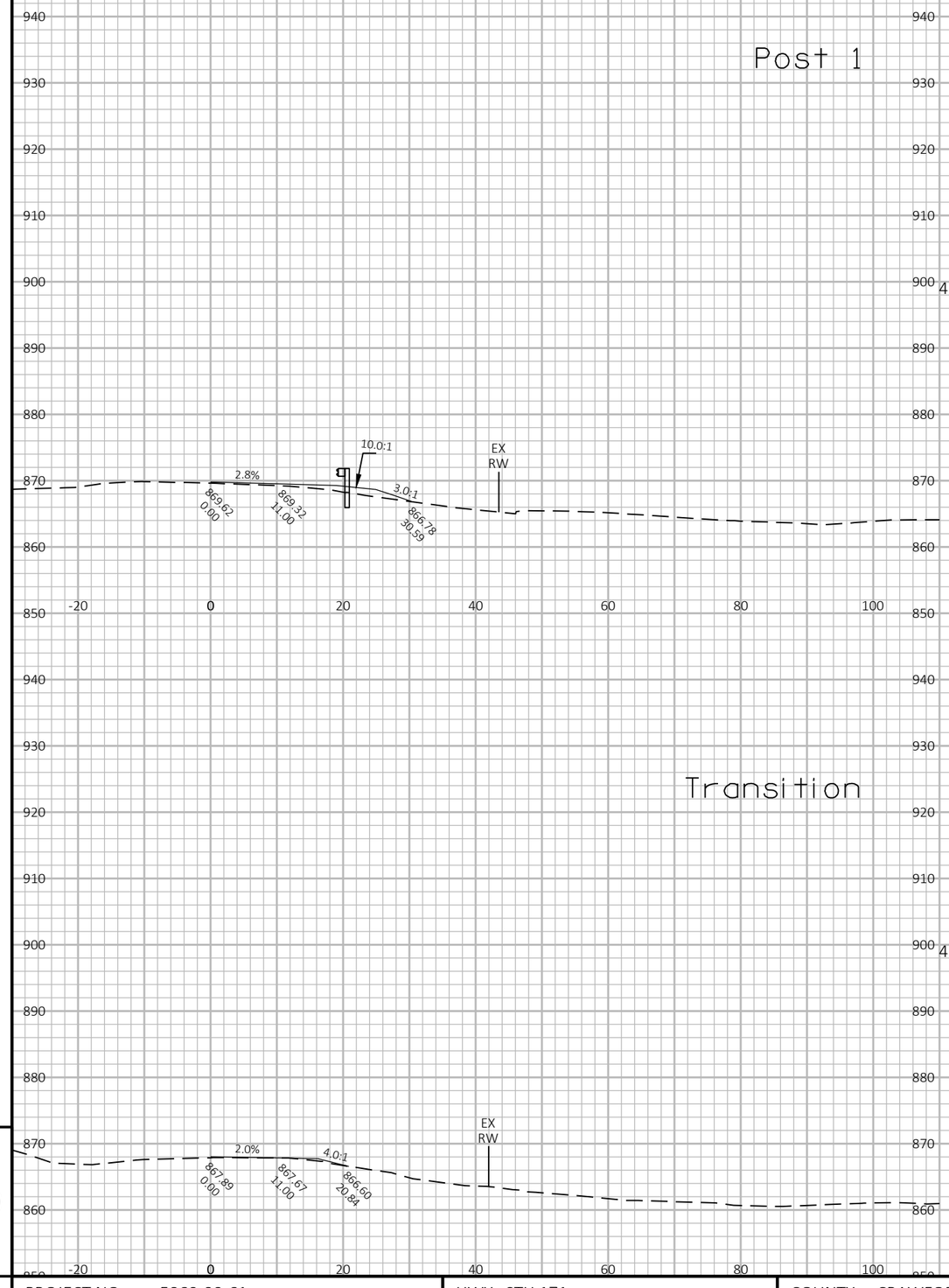
9

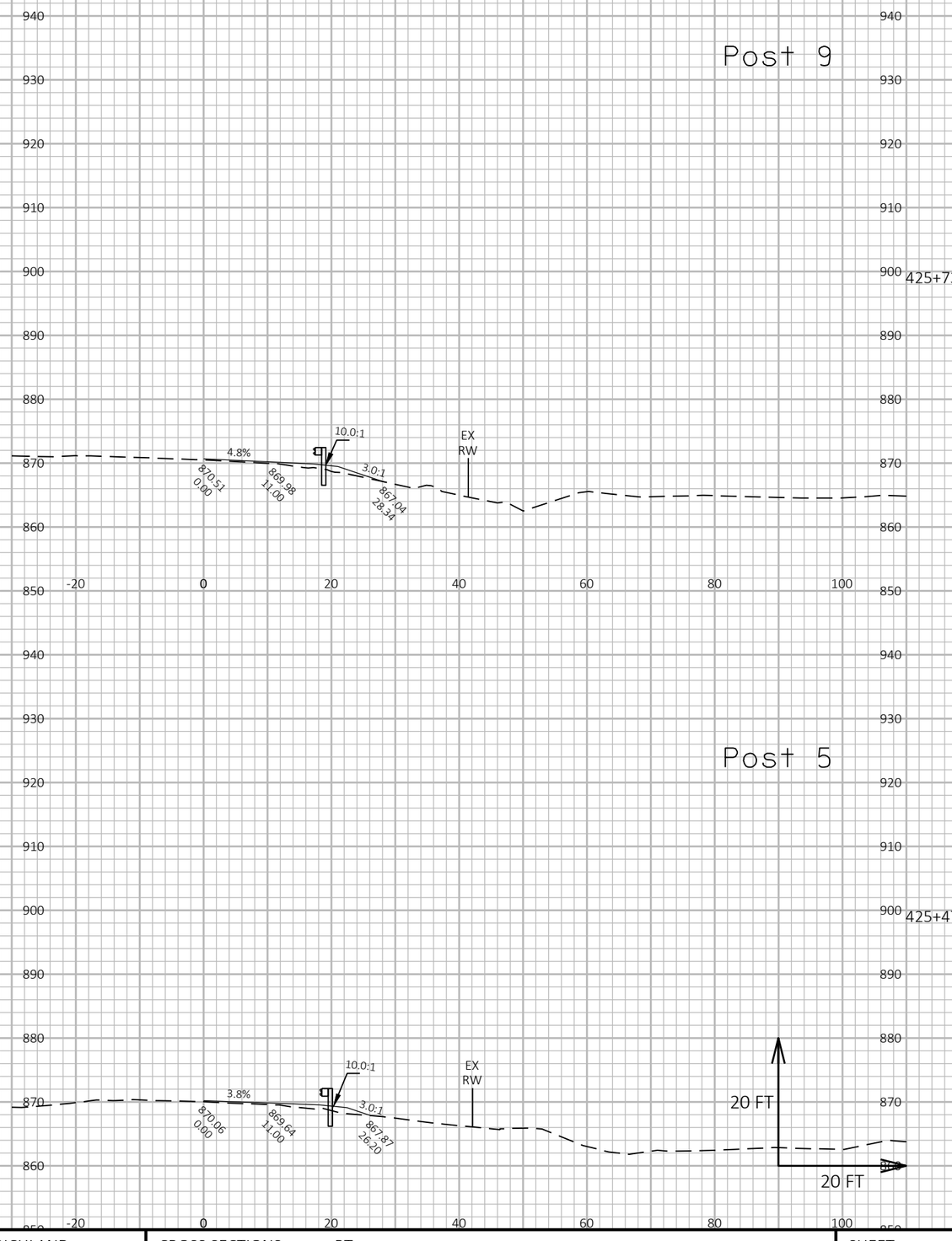
9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 149	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 68

PLOT DATE : 9/6/2023 8:21 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





9

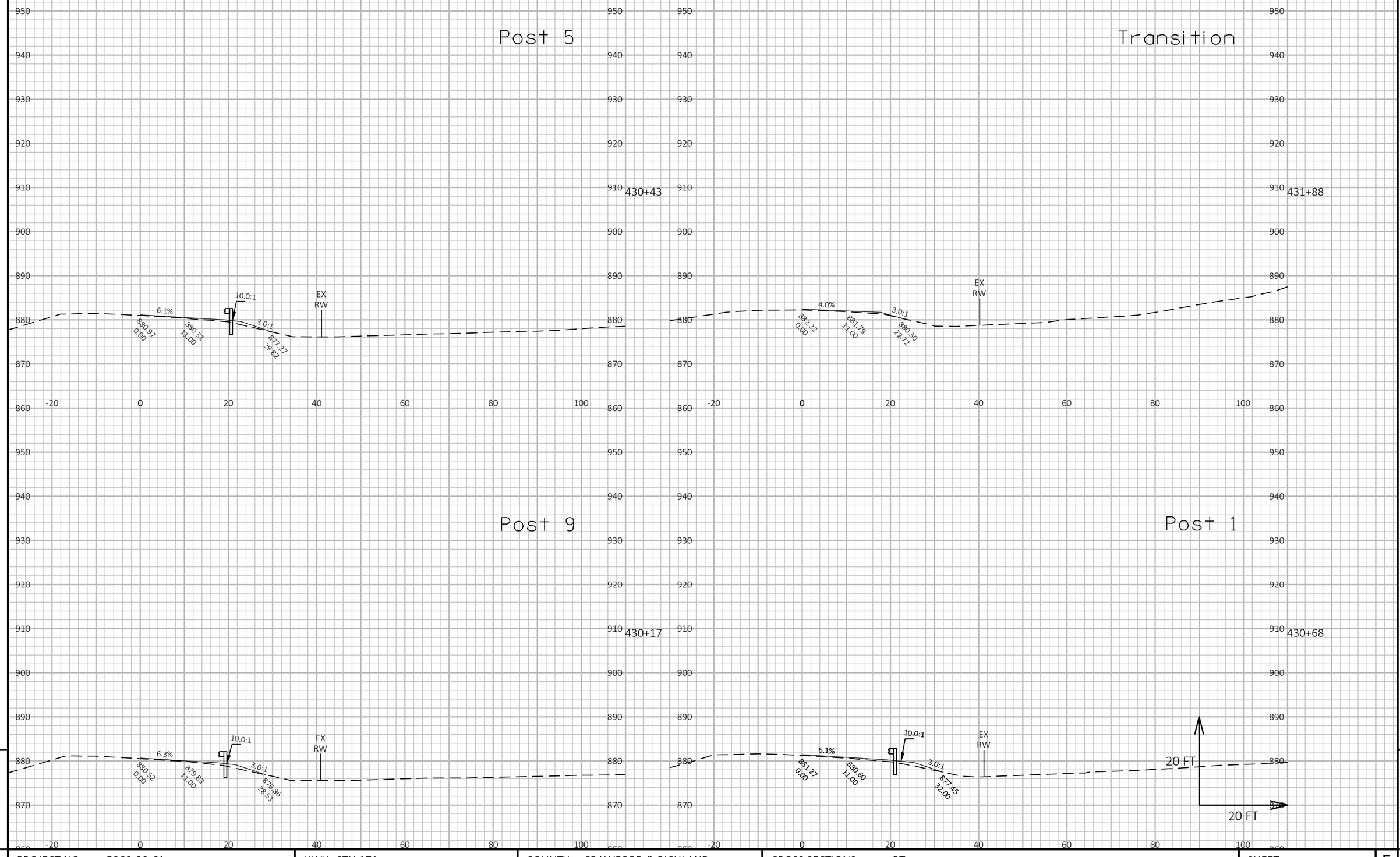
9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 150	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 69

PLOT DATE : 9/6/2023 8:21 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

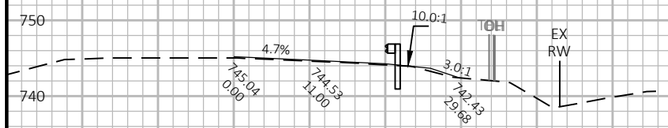


9 9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 151	E

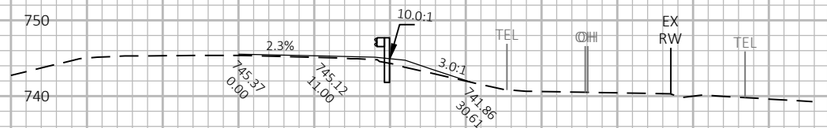
FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 70
PLOT DATE : 9/6/2023 8:21 AM
PLOT BY : DAVIDSON, JONATHAN B
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

Post 1



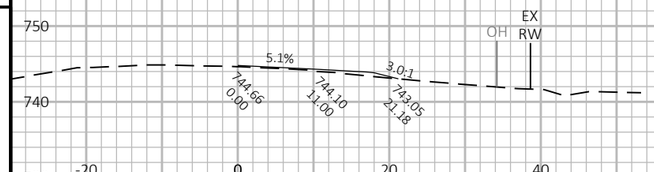
734+09

Post 9



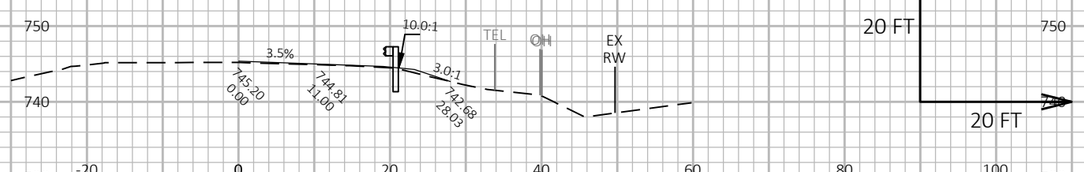
734+62

Transition



732+88

Post 5



734+34

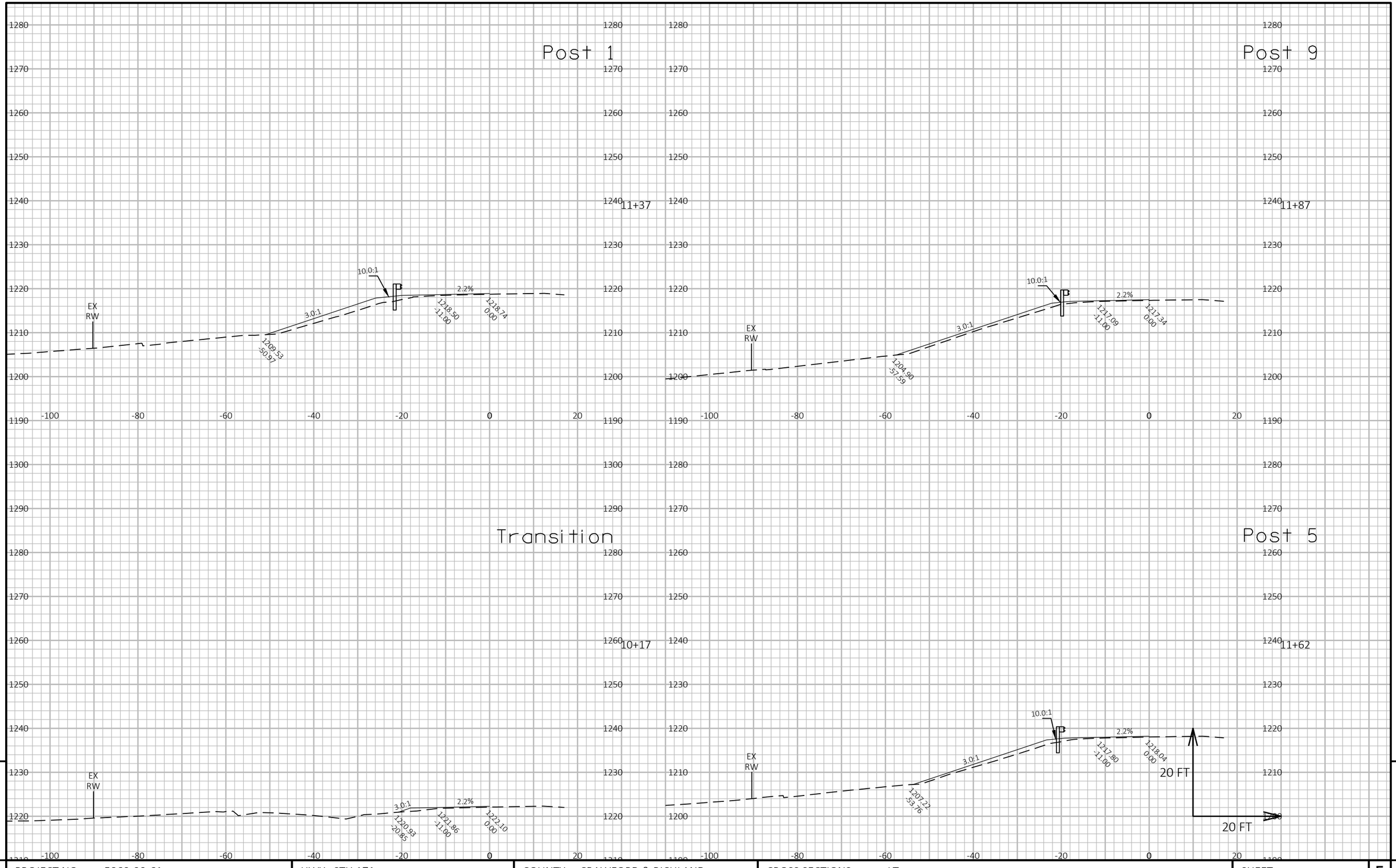
9

9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: RT	SHEET 152	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-RT.DWG
LAYOUT NAME - 71

PLOT DATE : 9/6/2023 8:22 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

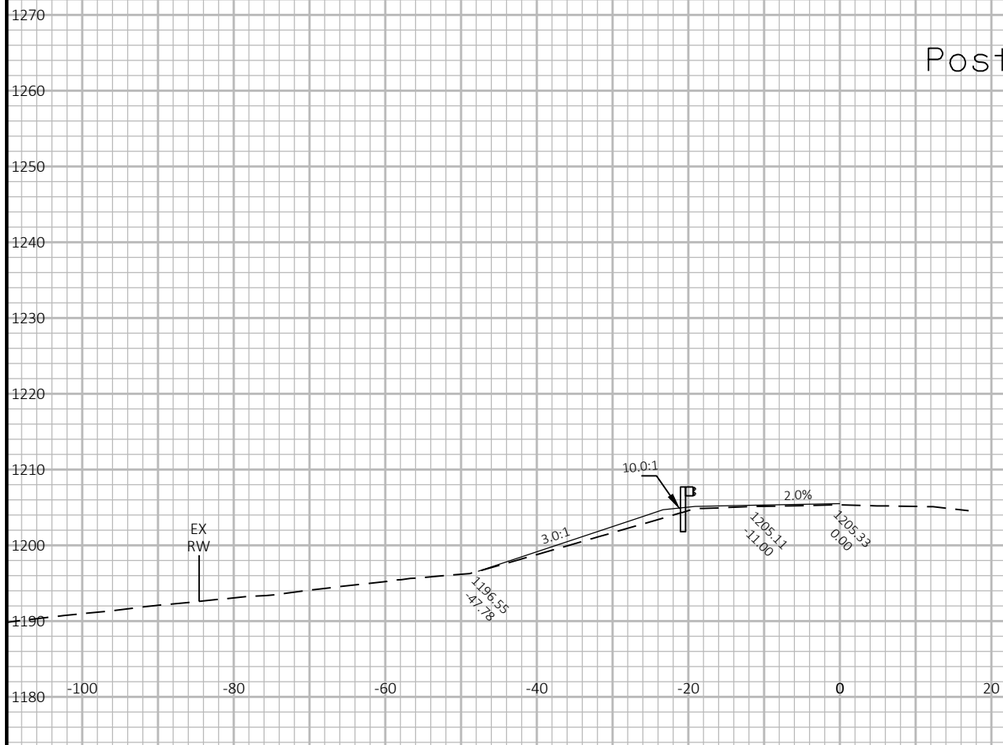
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 153	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 21

PLOT DATE : 9/6/2023 7:59 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

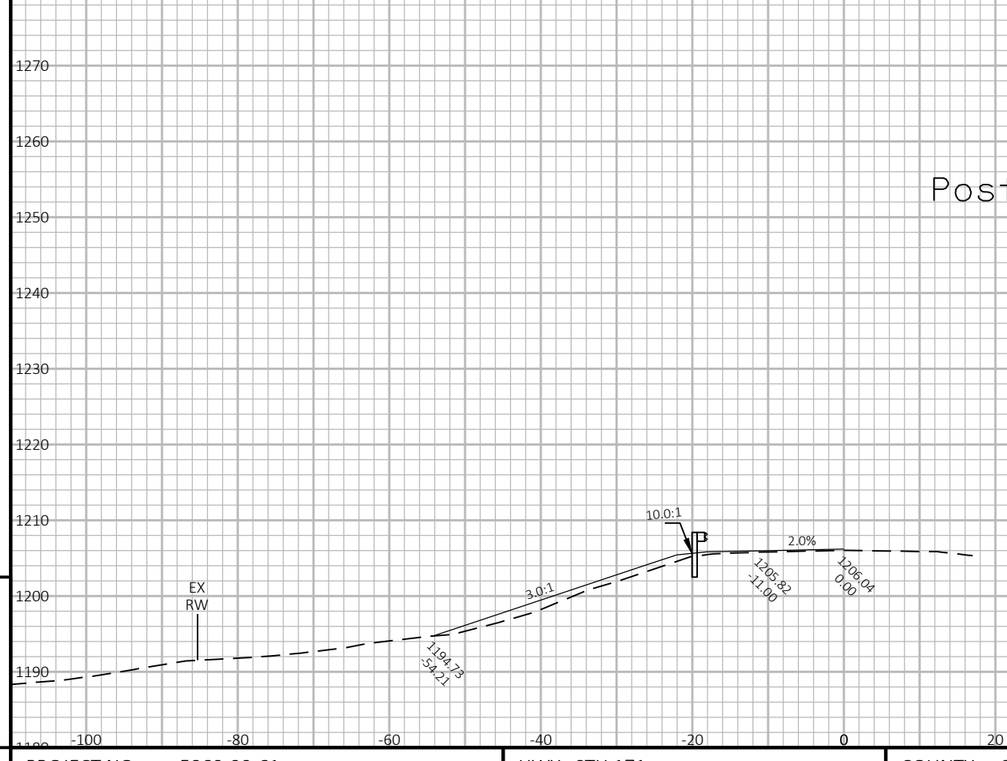
Post 5



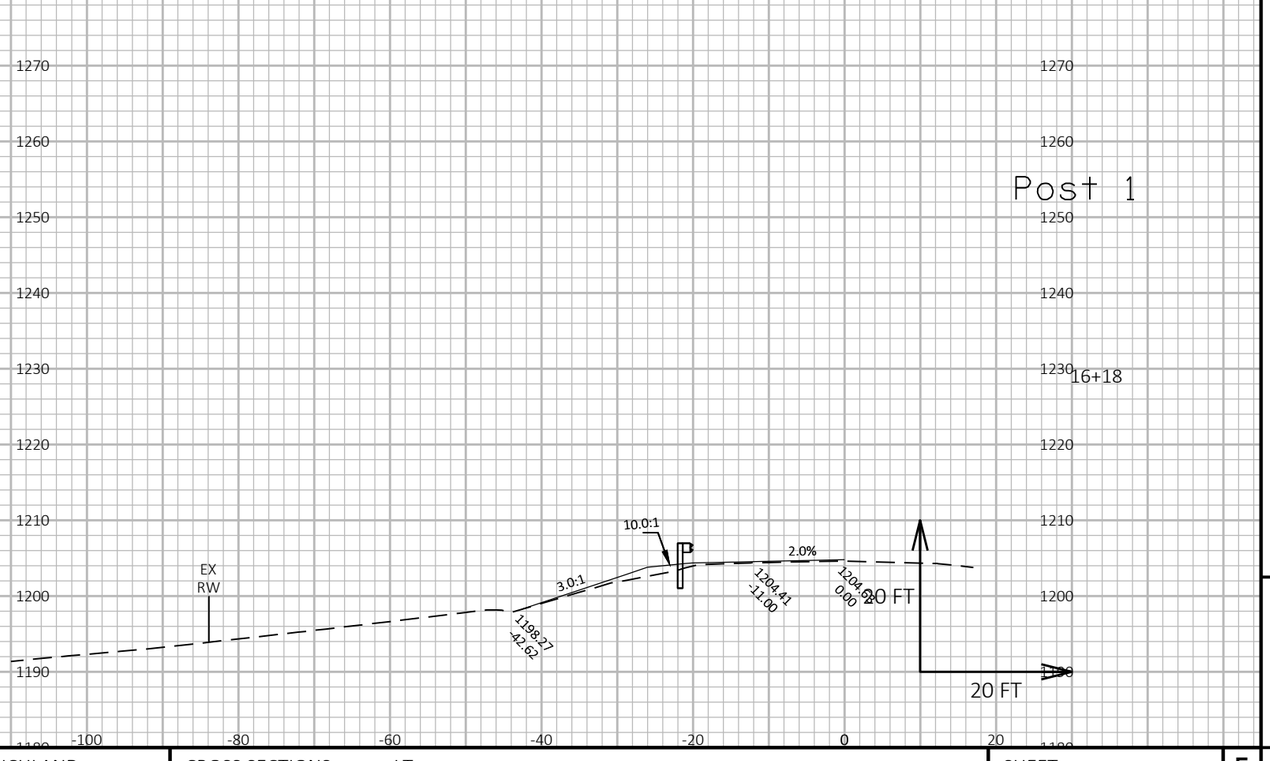
Transition



Post 9



Post 1



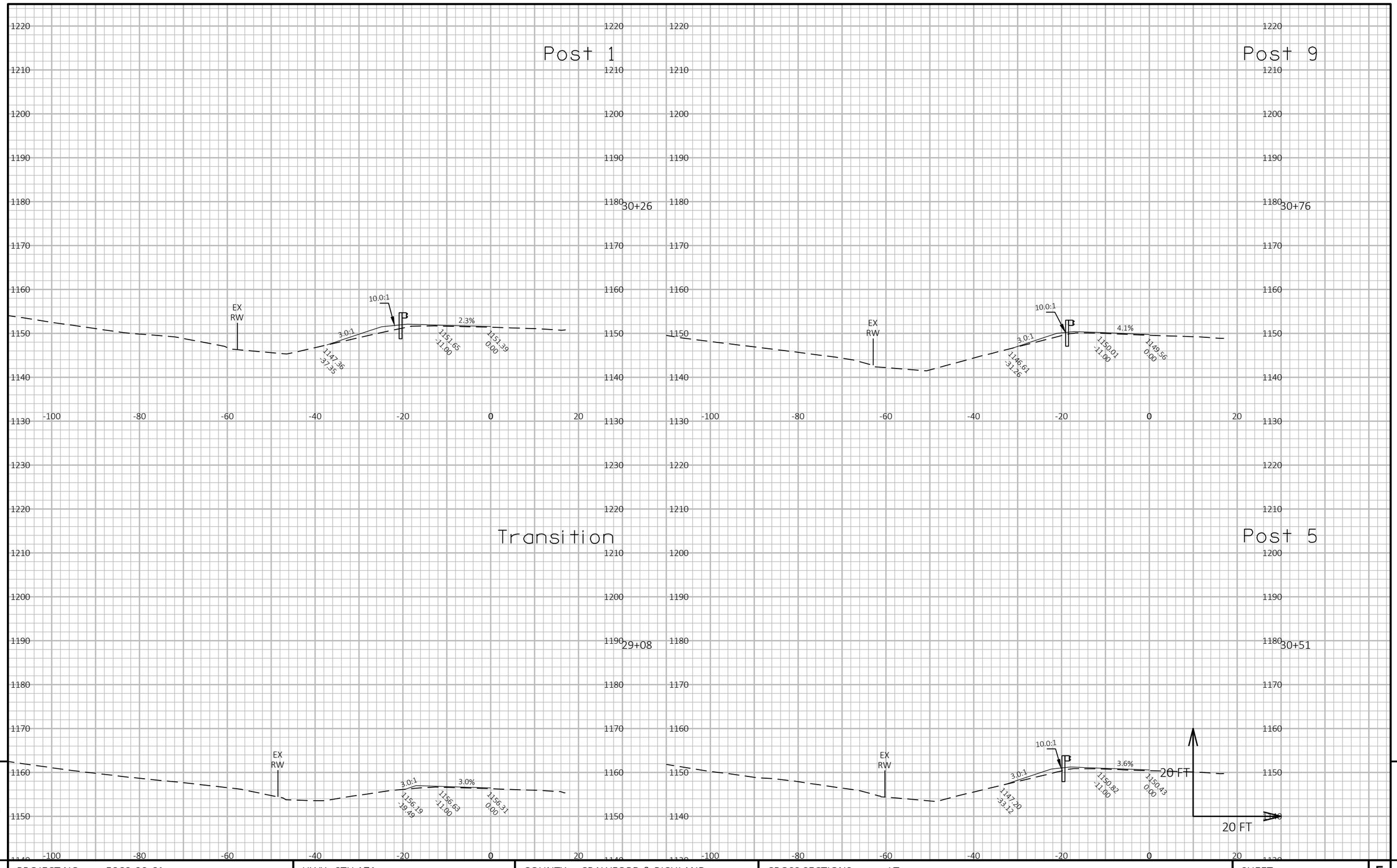
9 9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 154	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 22

PLOT DATE : 9/6/2023 8:00 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 155	E

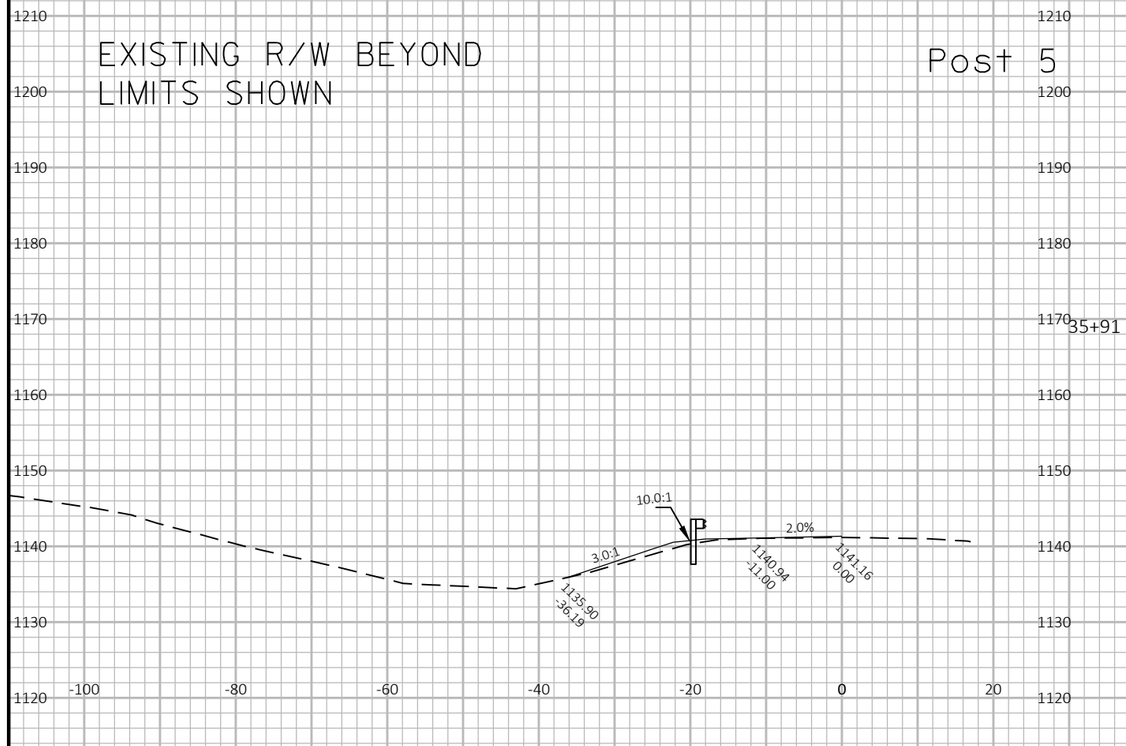
FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 23

PLOT DATE : 9/6/2023 8:01 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

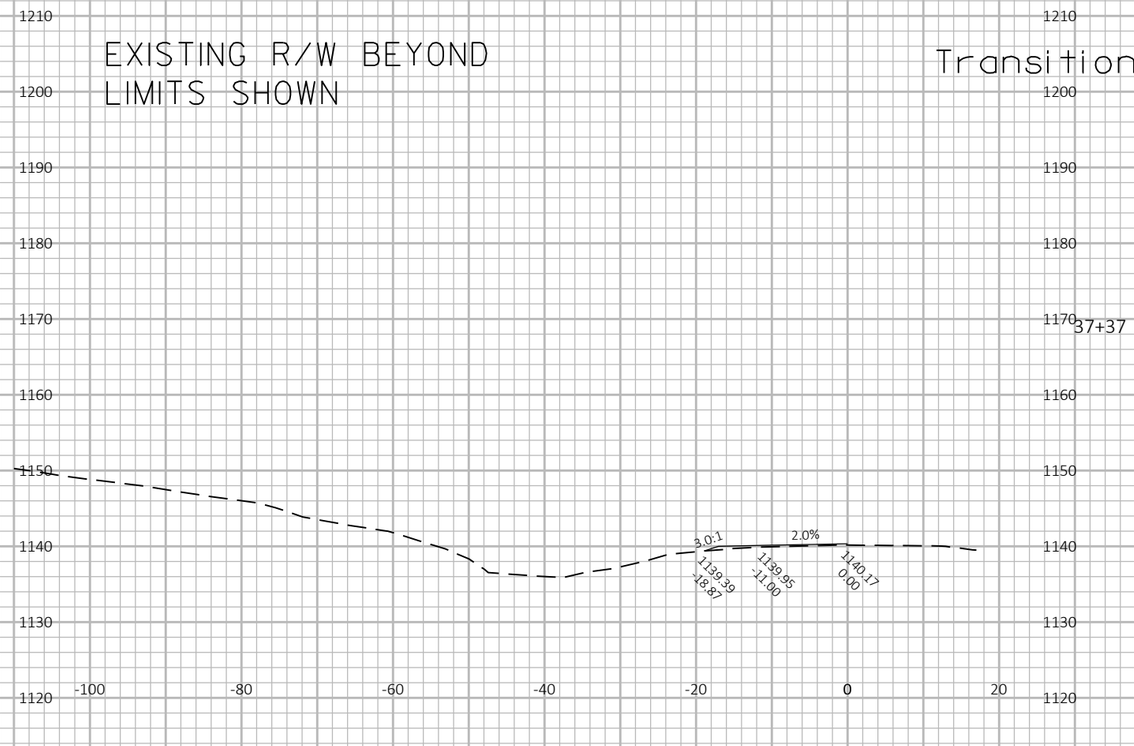
EXISTING R/W BEYOND
LIMITS SHOWN

Post 5



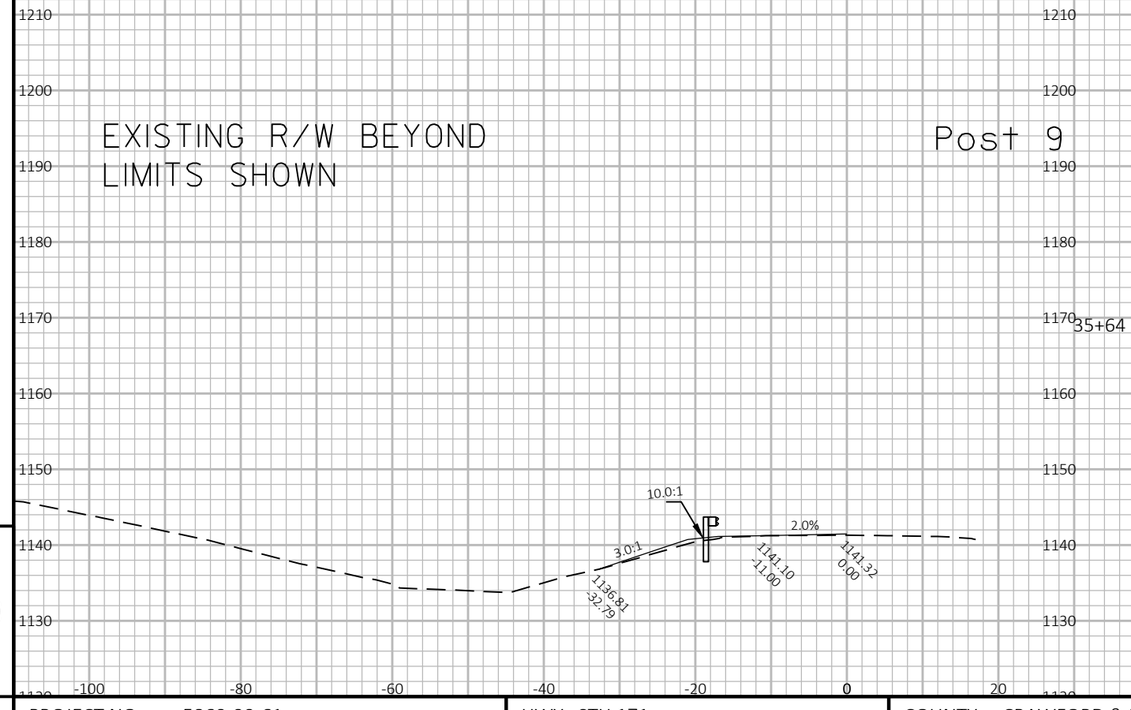
EXISTING R/W BEYOND
LIMITS SHOWN

Transition



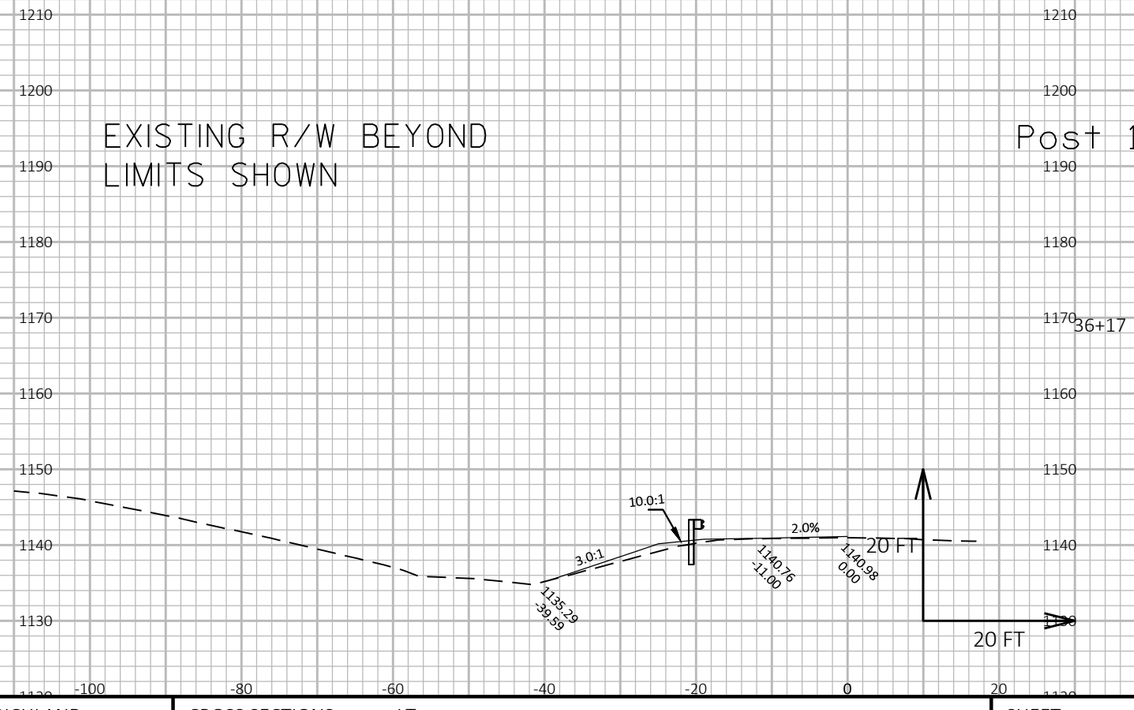
EXISTING R/W BEYOND
LIMITS SHOWN

Post 9



EXISTING R/W BEYOND
LIMITS SHOWN

Post 1



9

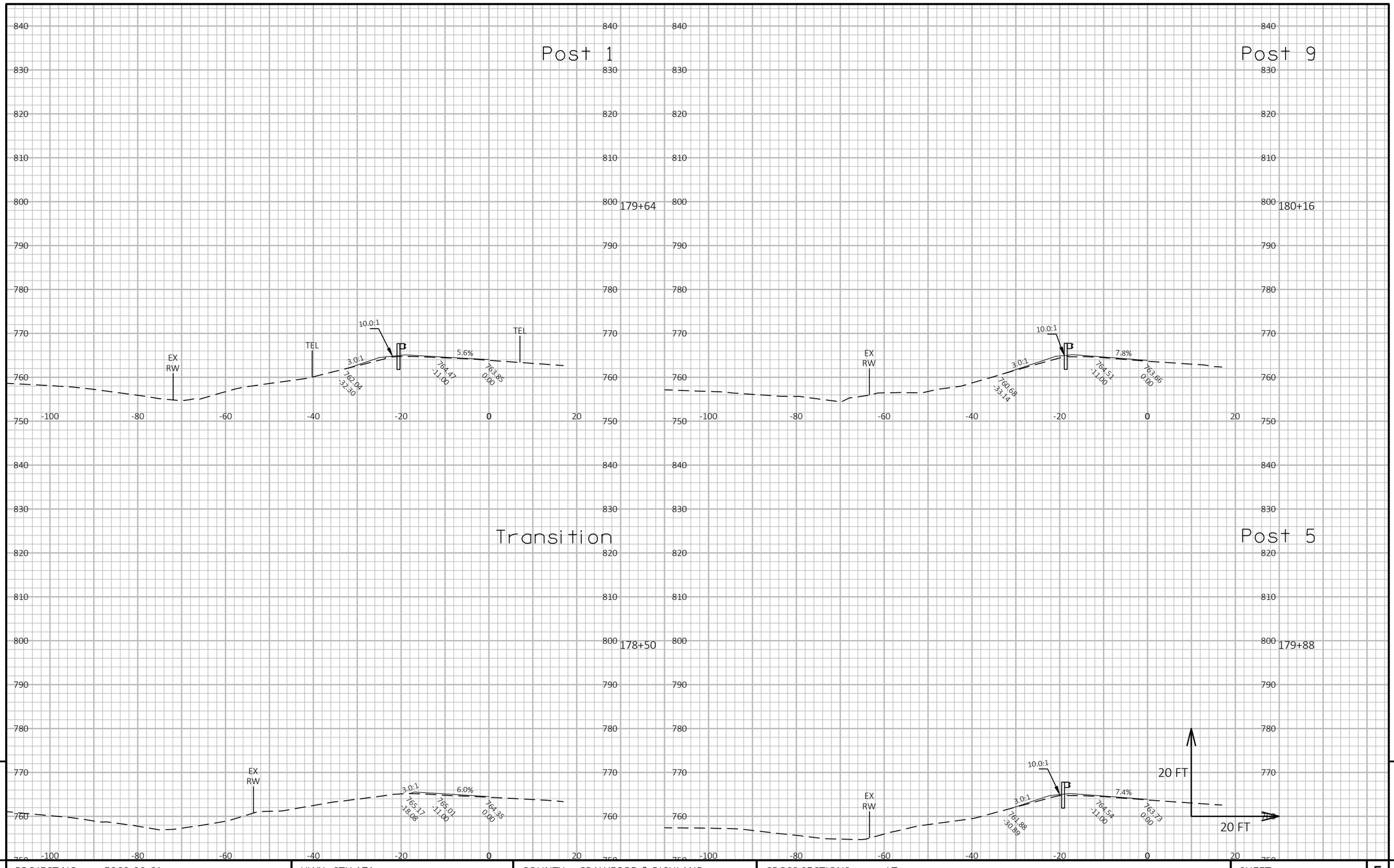
9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 156	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 24

PLOT DATE : 9/6/2023 8:02 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

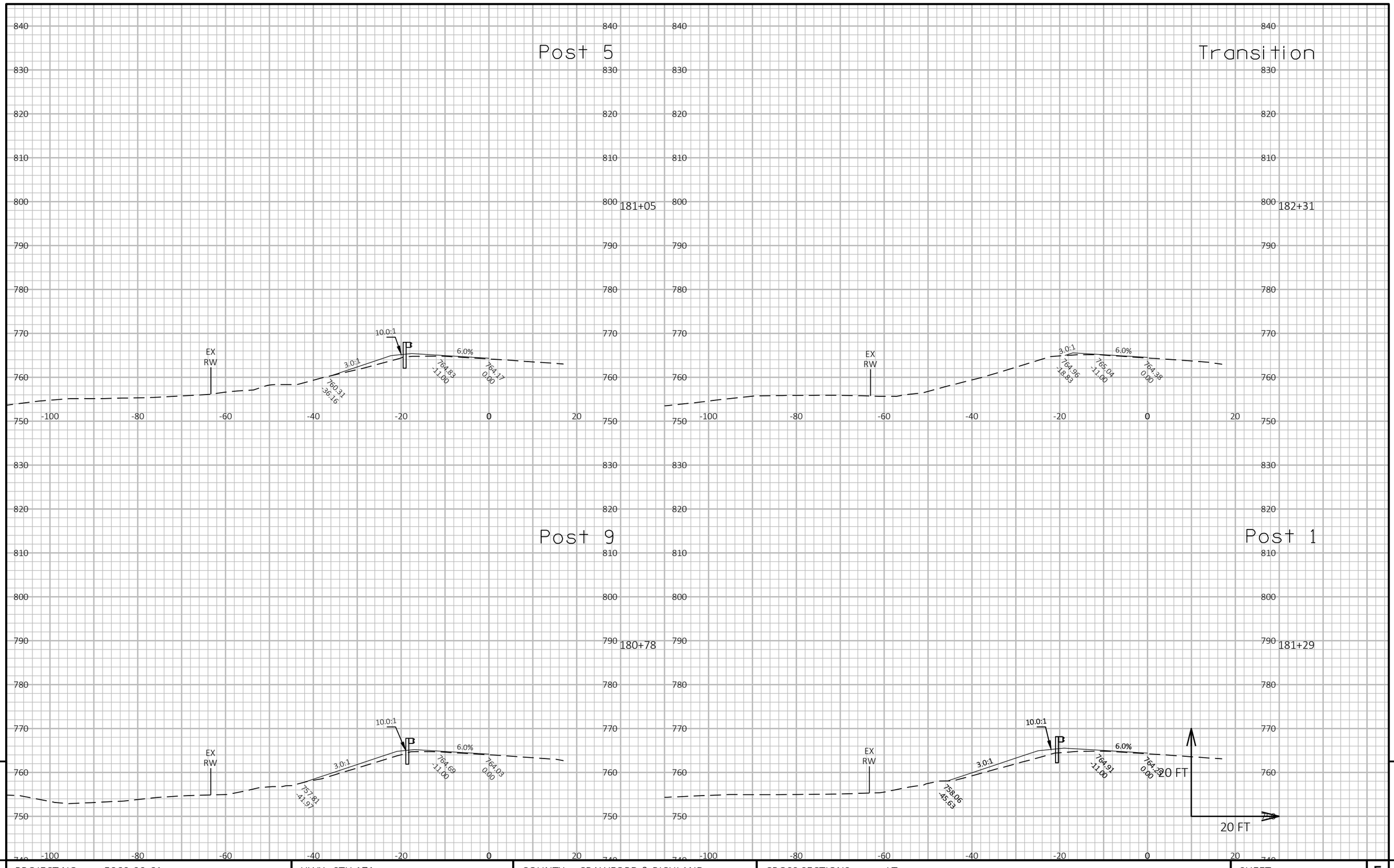
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 157	E



9

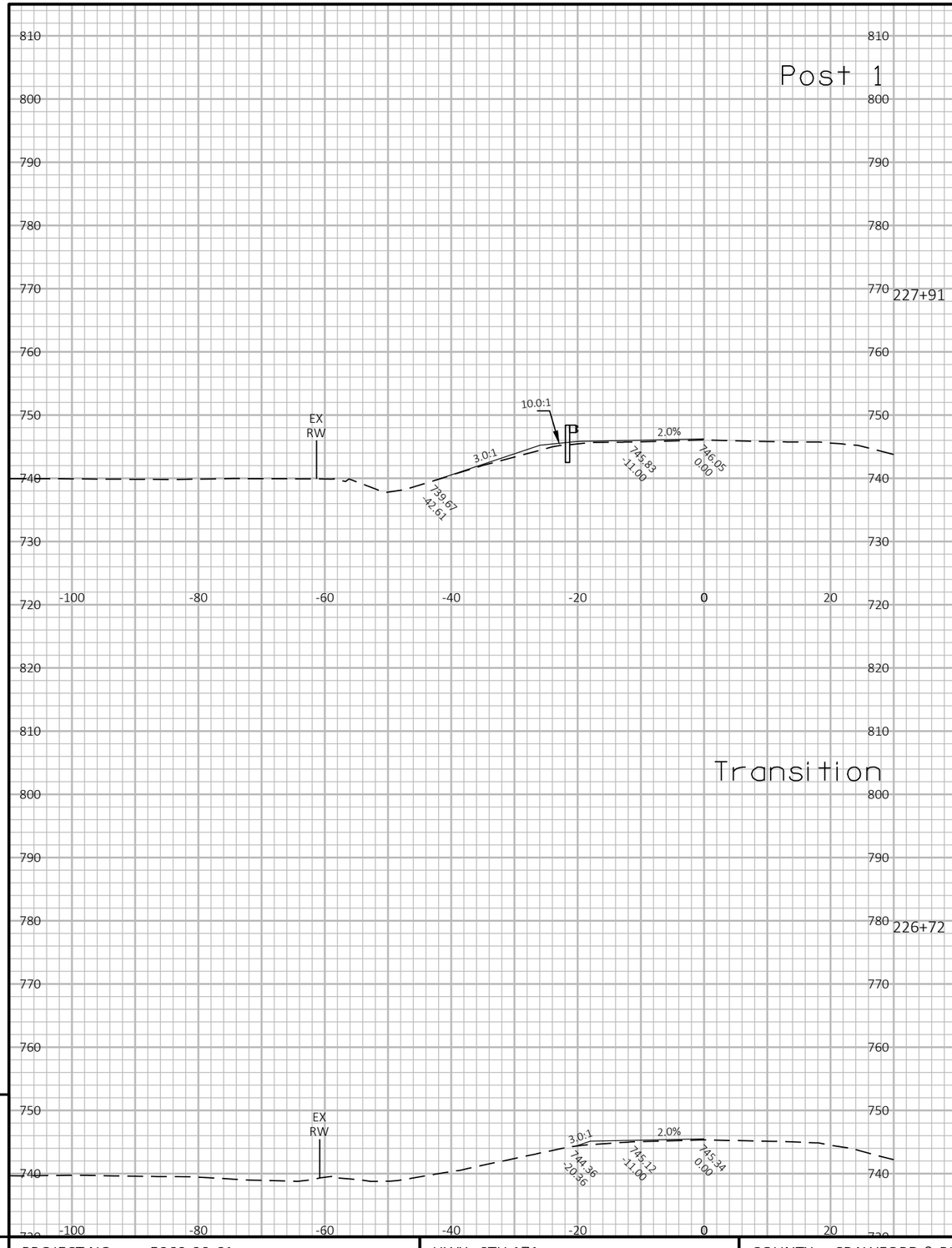
9

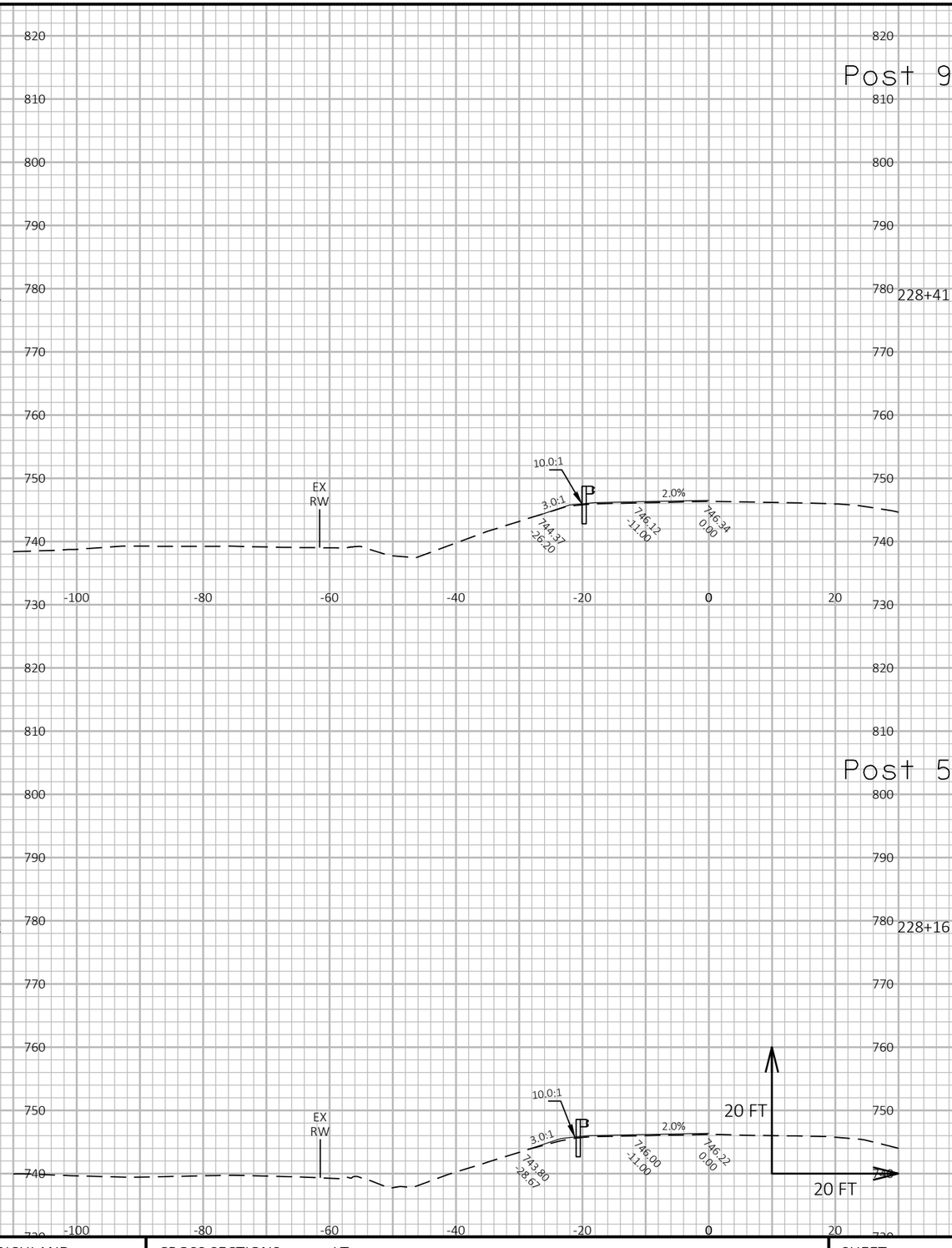
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 158	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 26

PLOT DATE : 9/6/2023 8:04 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





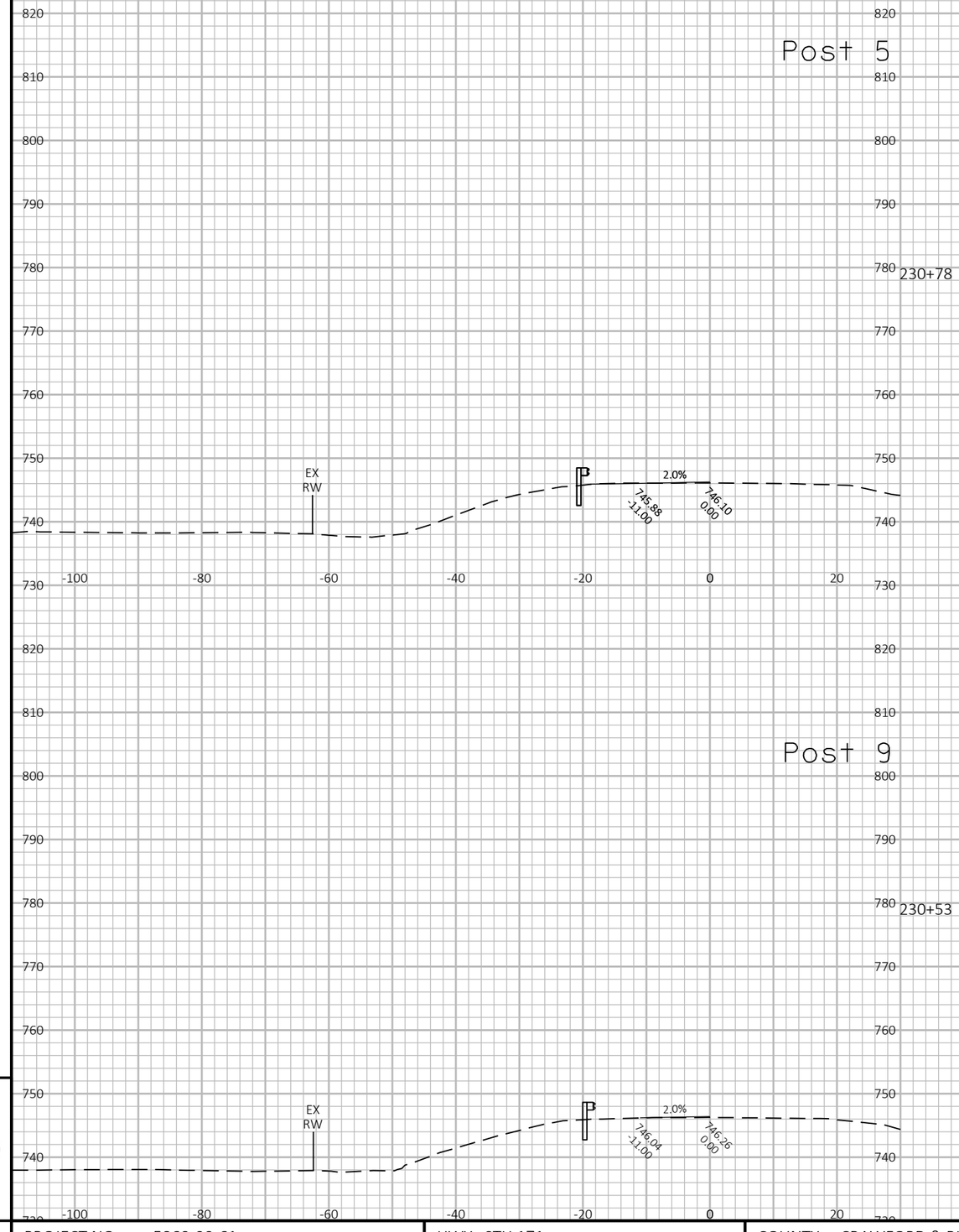
9 9

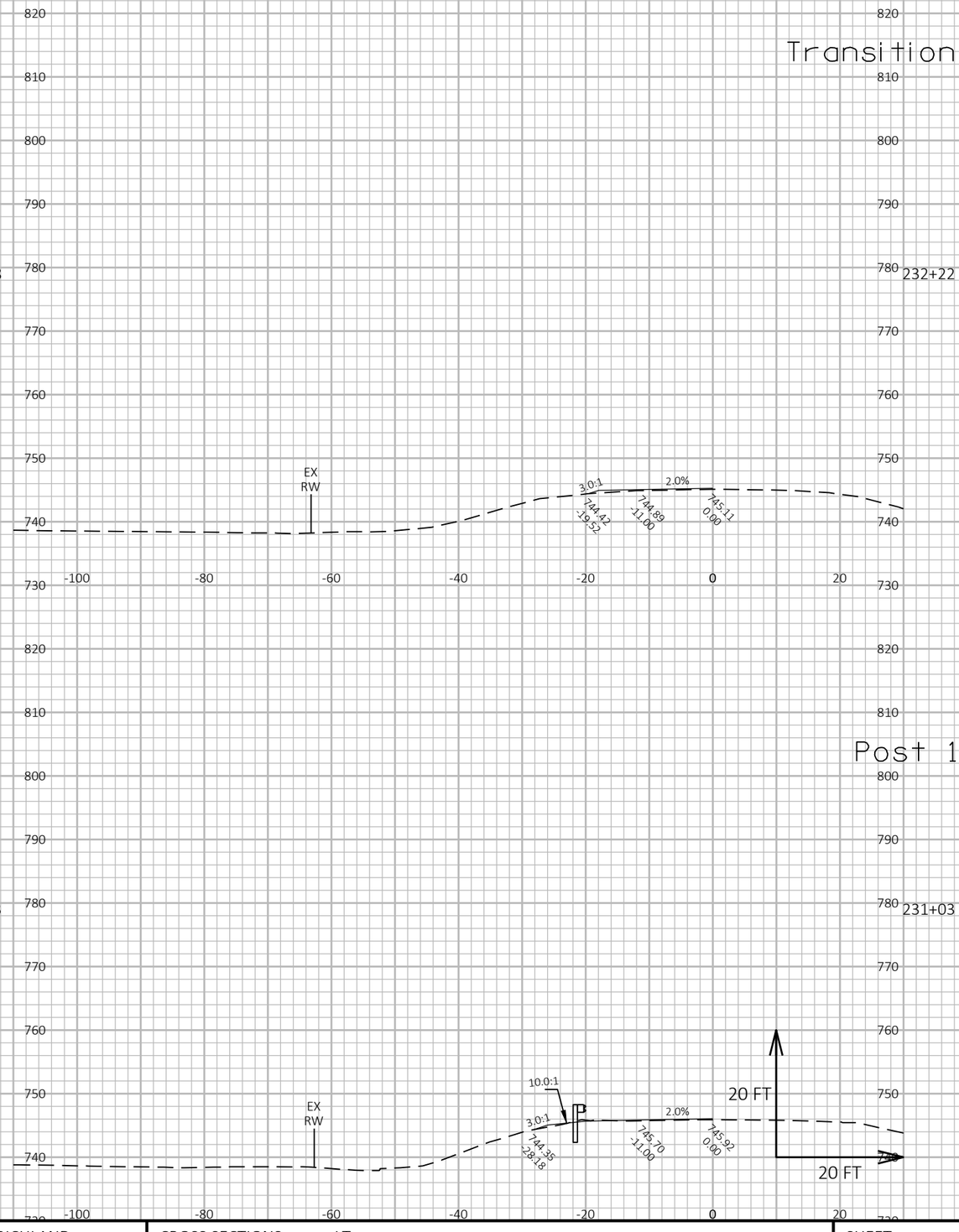
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 159	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 27

PLOT DATE : 9/6/2023 8:05 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





9

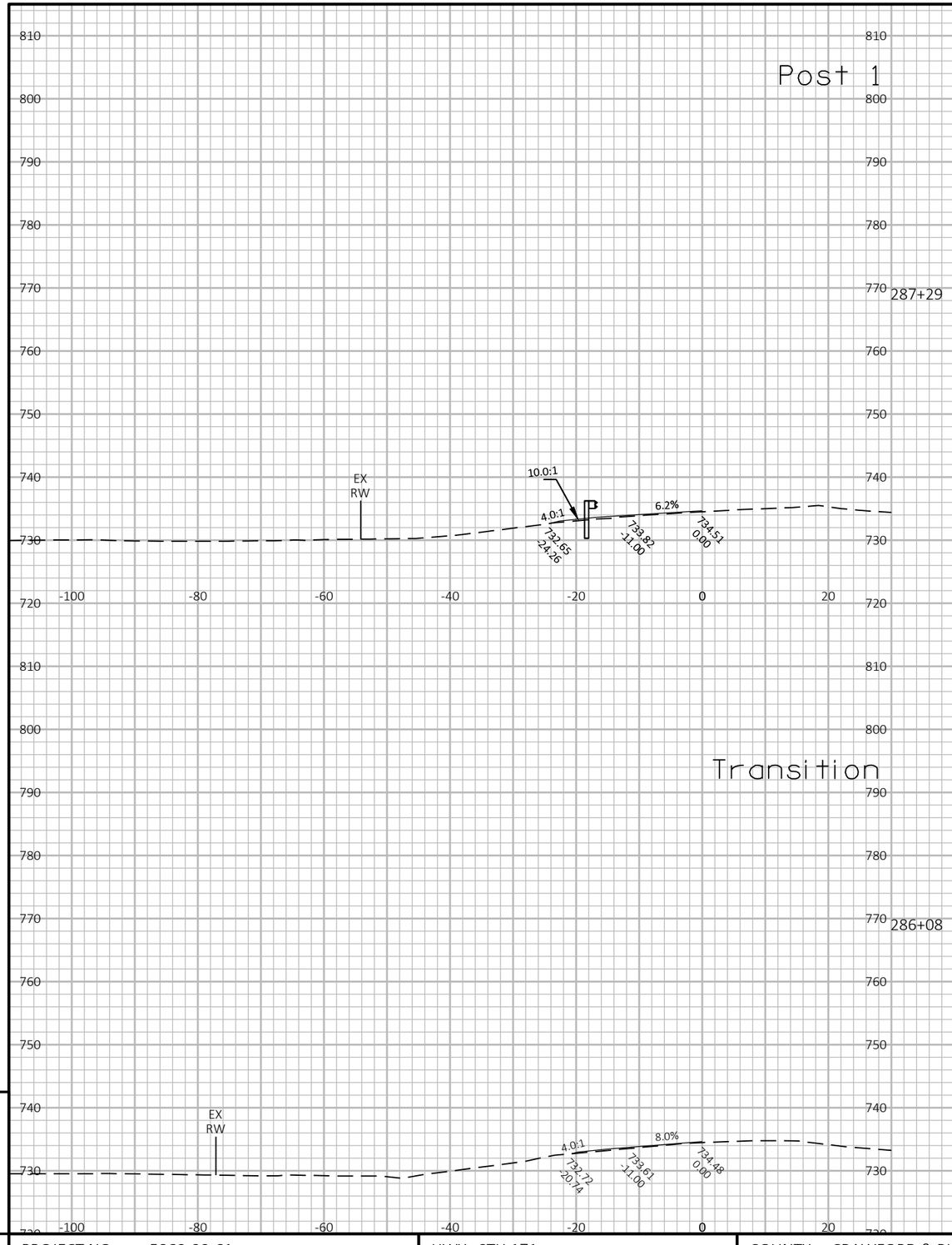
9

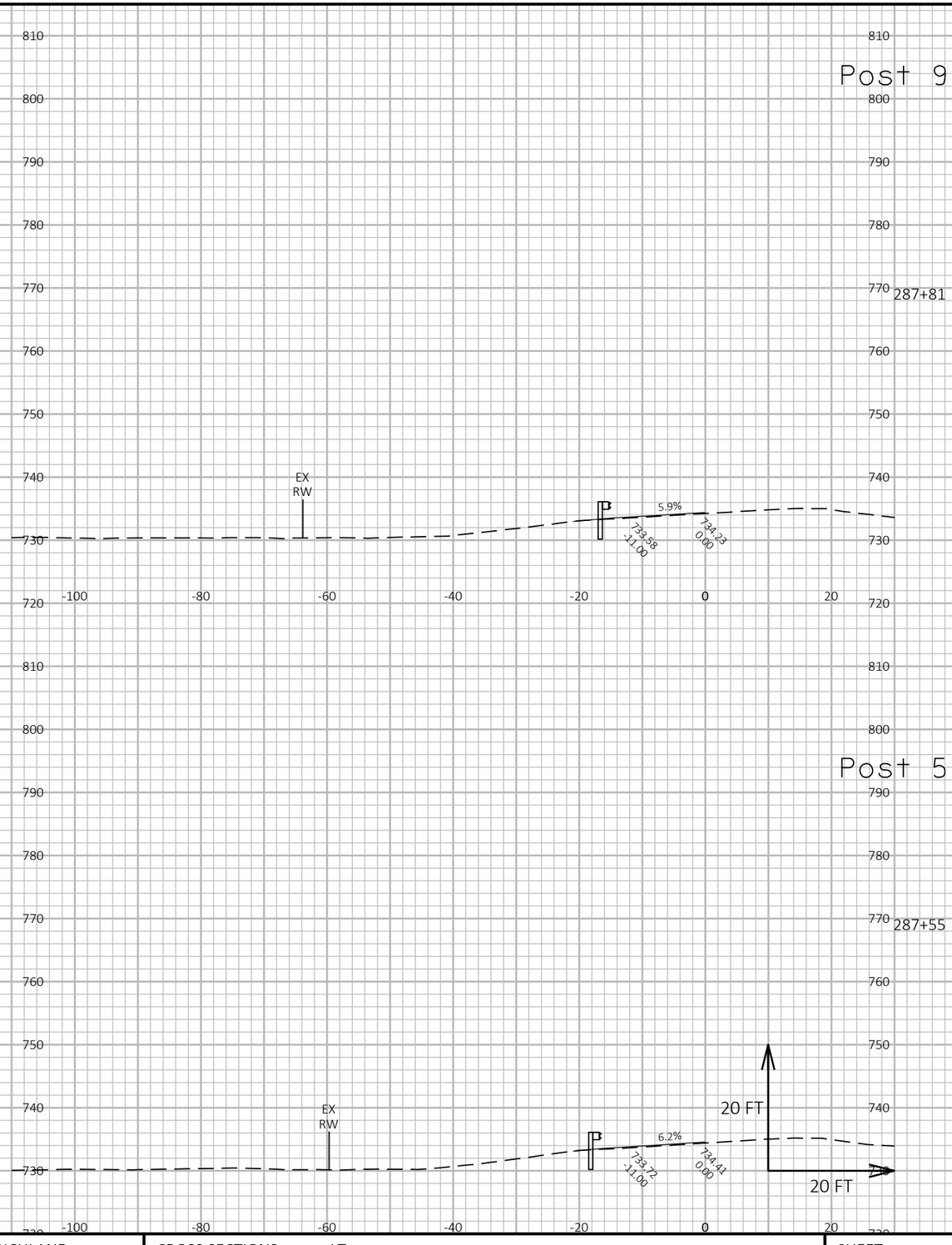
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 160	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 28

PLOT DATE : 9/6/2023 8:06 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





9

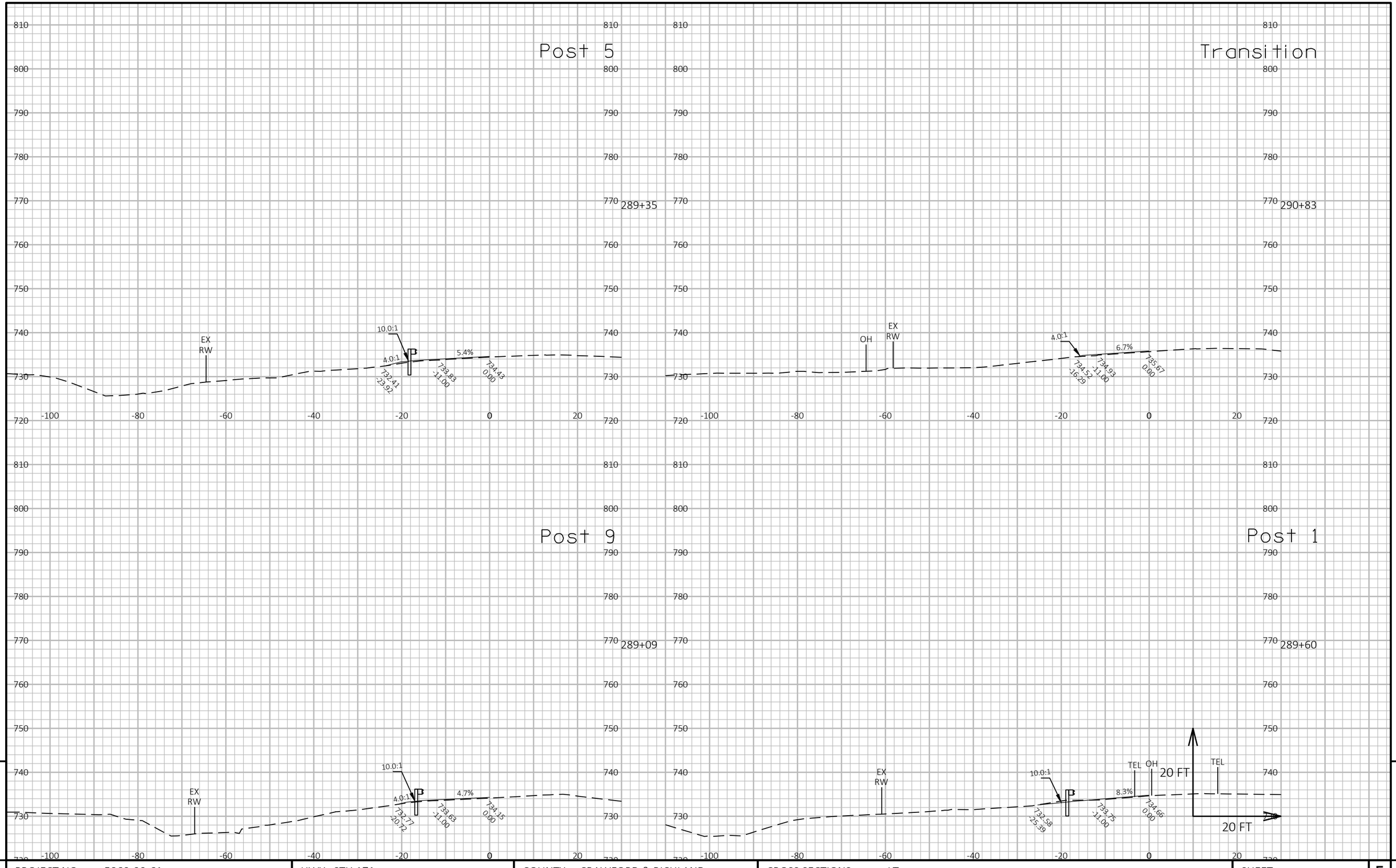
9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 161	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 29

PLOT DATE : 9/6/2023 8:07 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



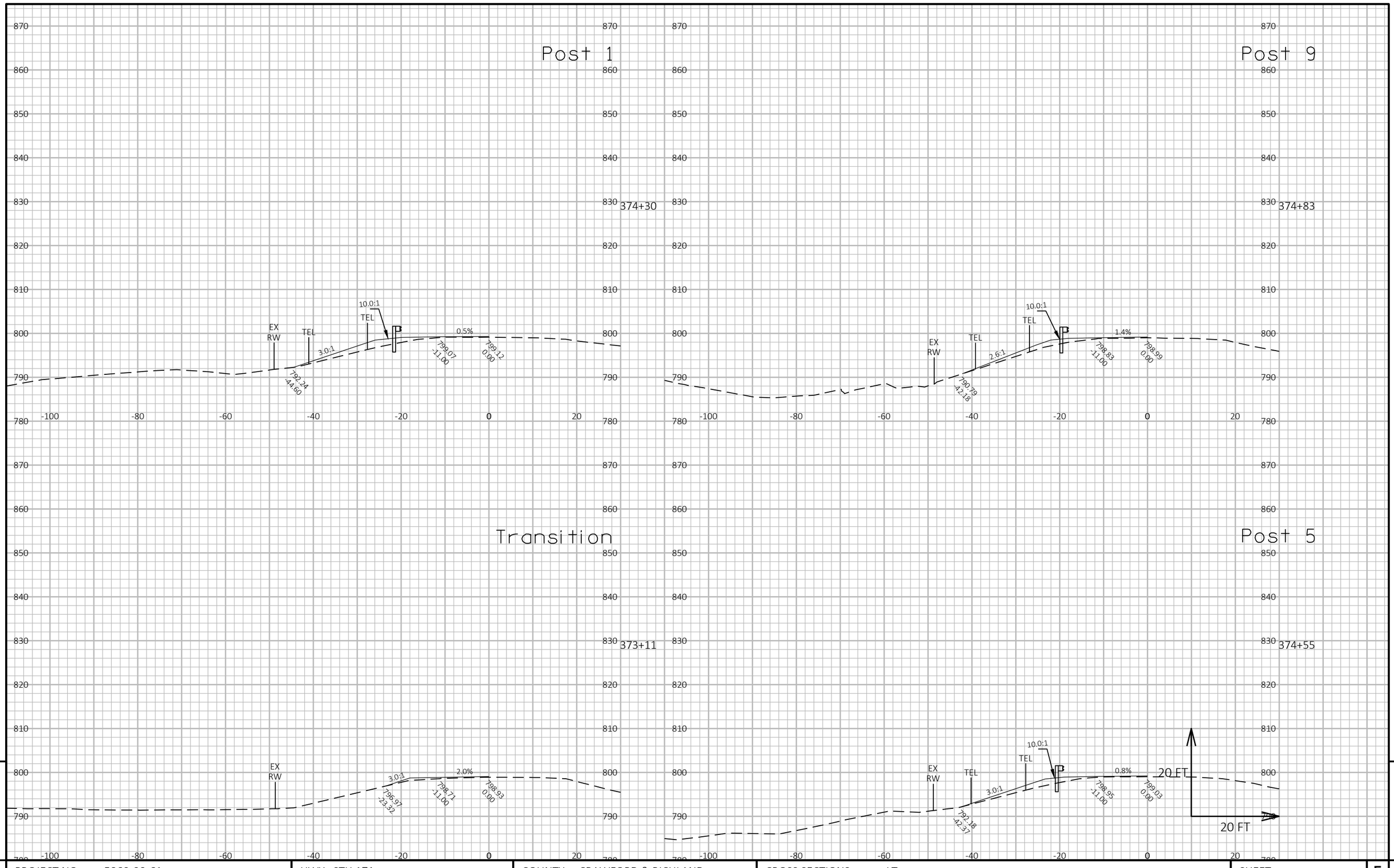
9 9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 162 E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 30

PLOT DATE : 9/6/2023 8:08 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

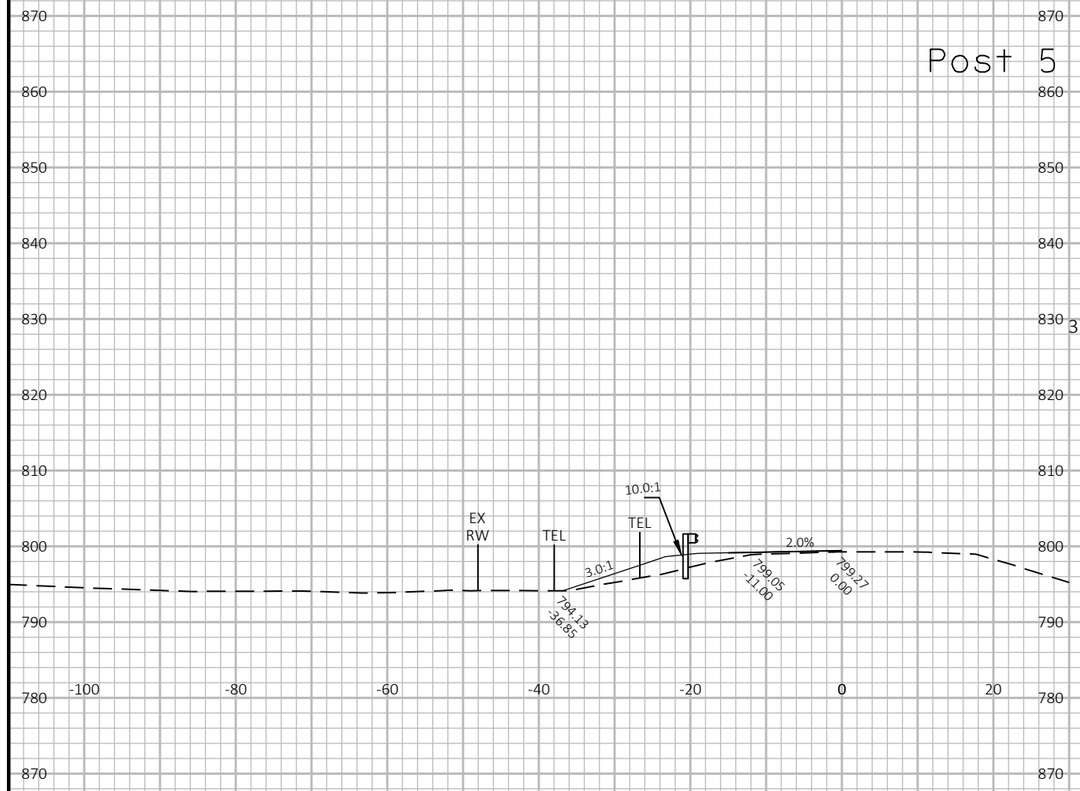
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 163	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 31

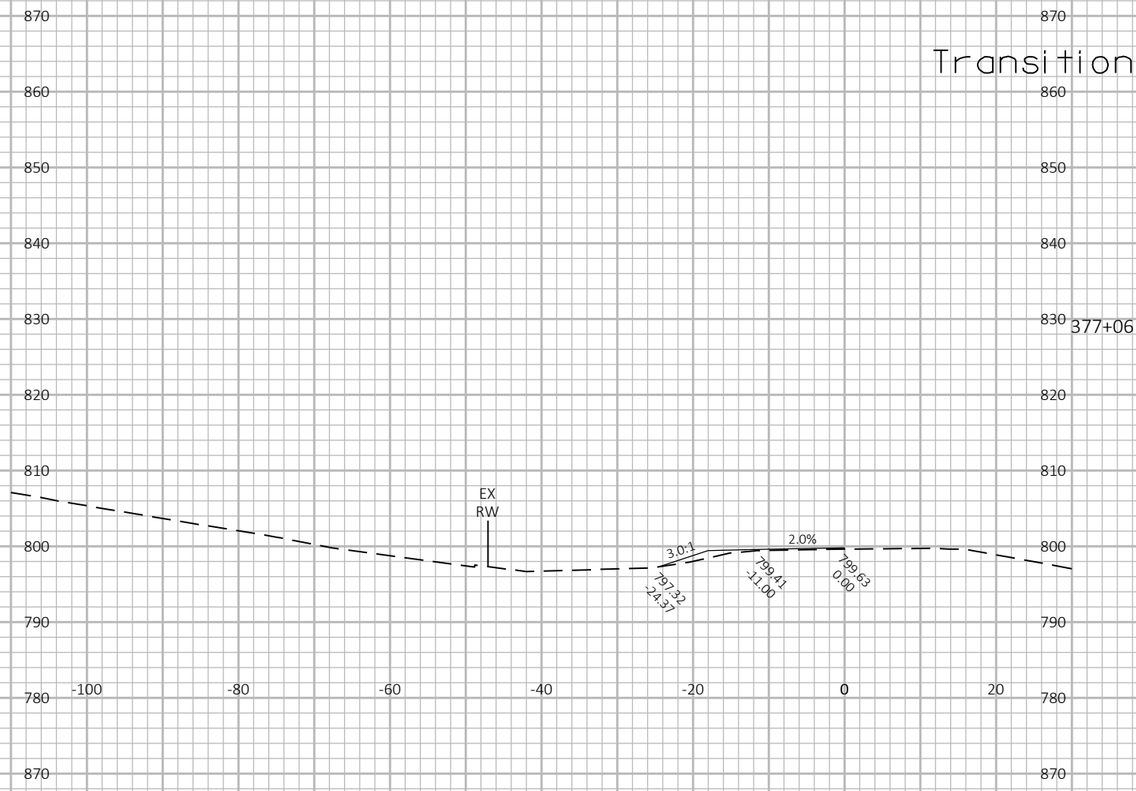
PLOT DATE : 9/6/2023 8:09 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Post 5



Transition



Post 9

Post 1

9

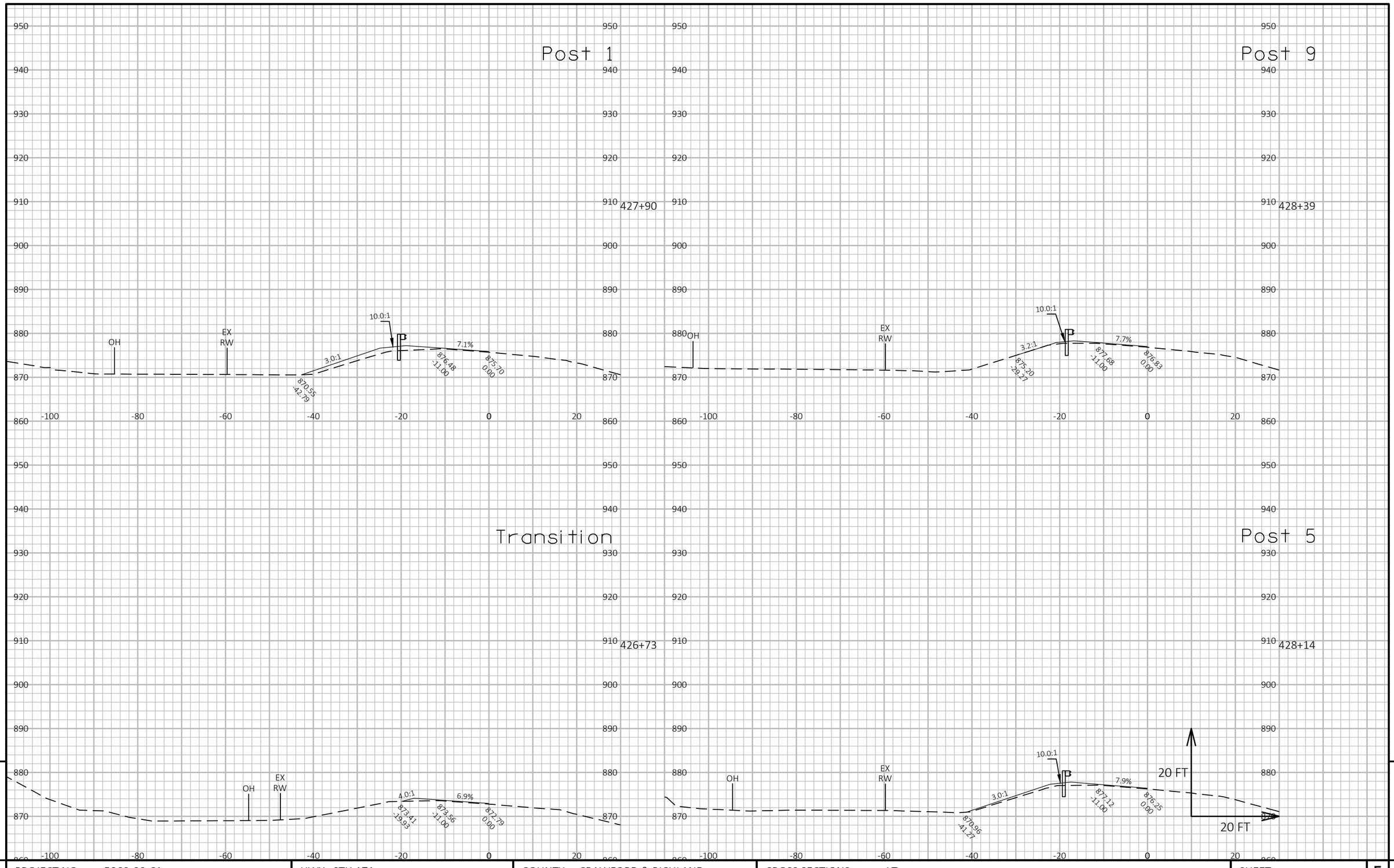
9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 164	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 32

PLOT DATE : 9/6/2023 8:10 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 165	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 33

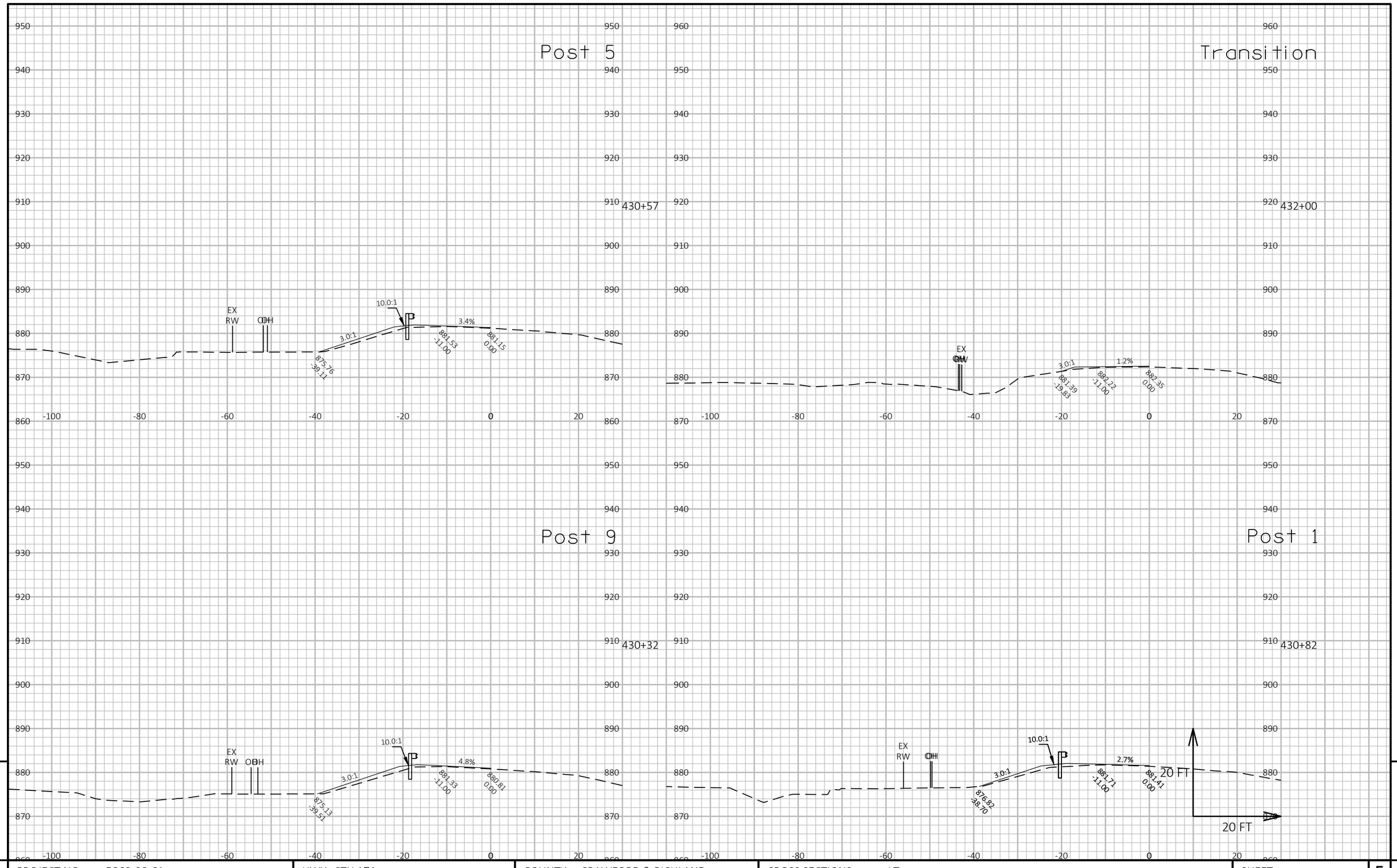
PLOT DATE : 9/6/2023 8:11 AM

PLOT BY : DAVIDSON, JONATHAN B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

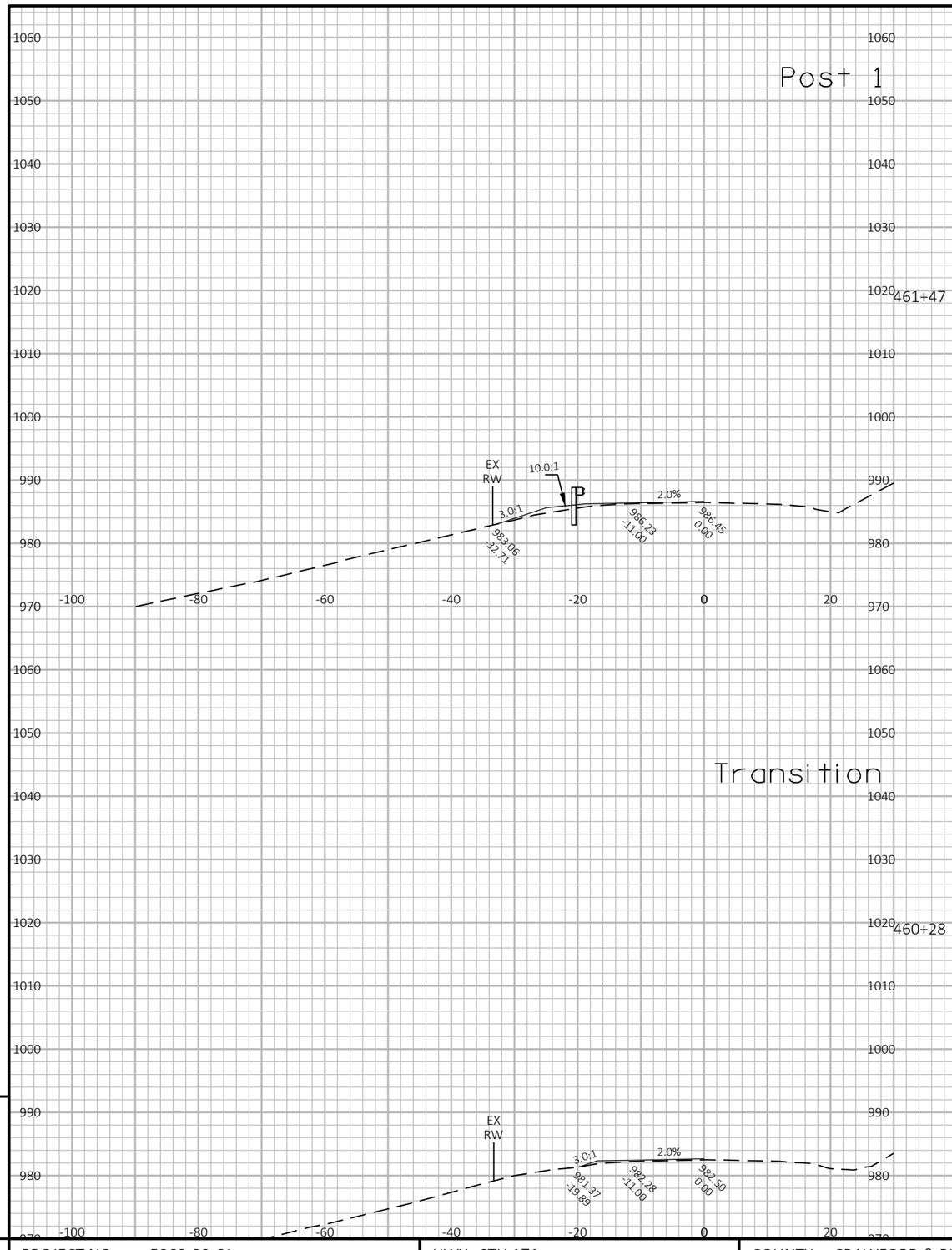
9

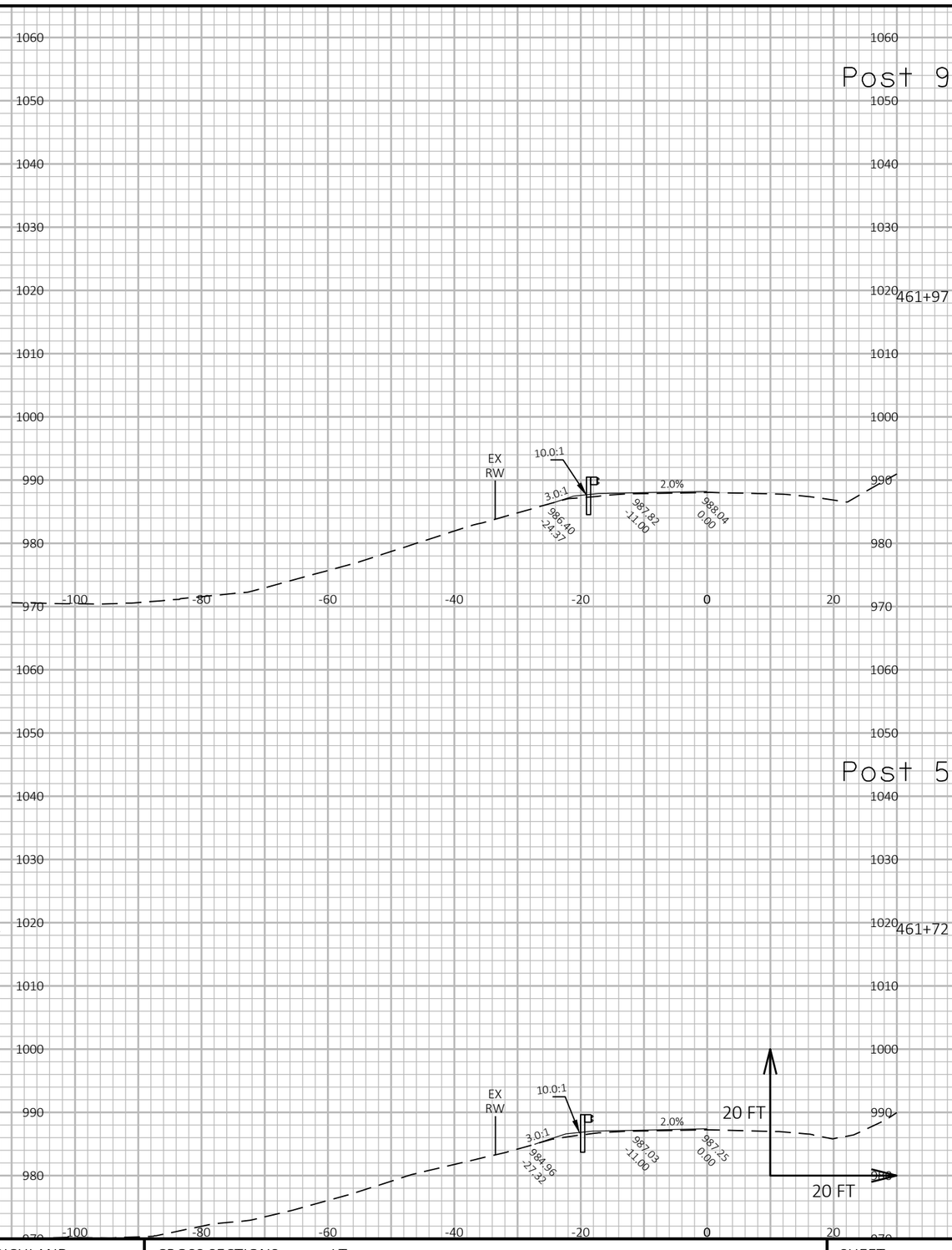
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 166	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 34

PLOT DATE : 9/6/2023 8:12 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





9

9

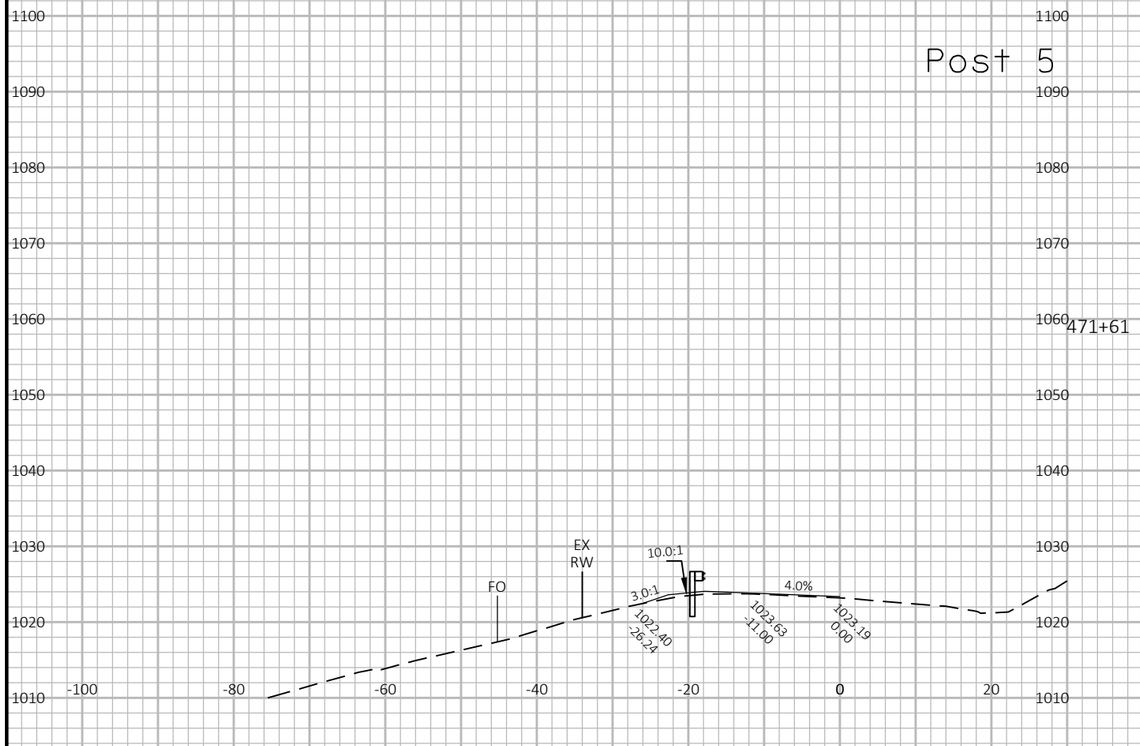
PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 167	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 35

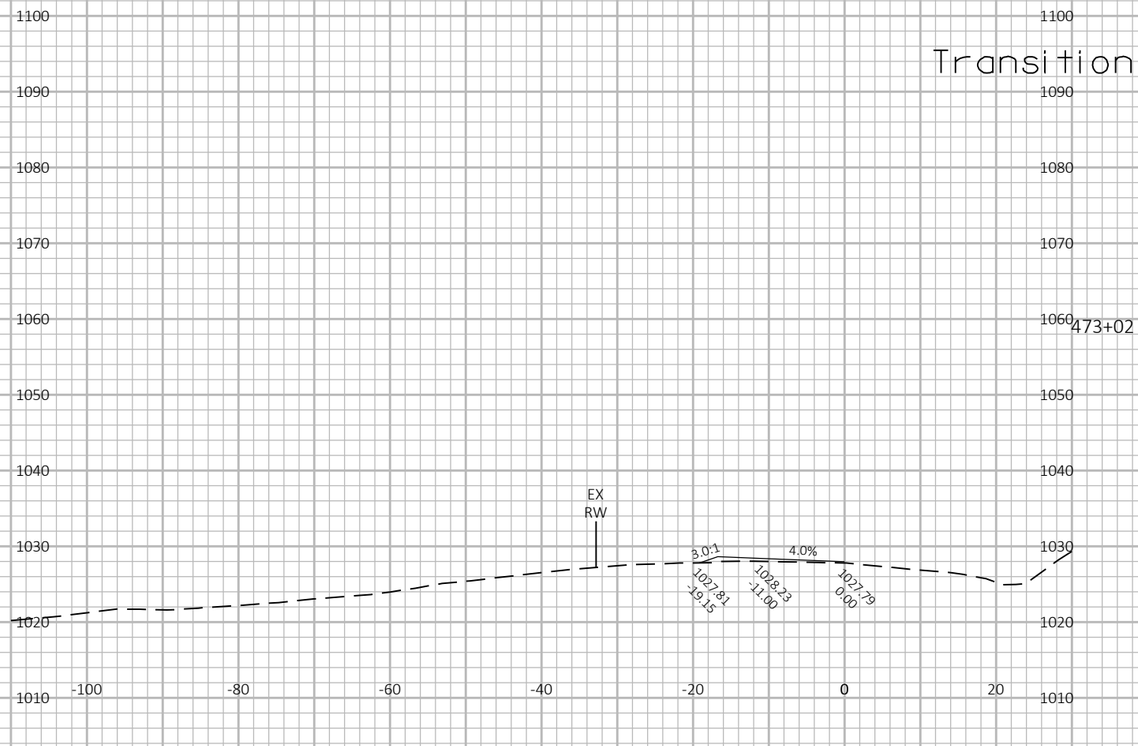
PLOT DATE : 9/6/2023 8:13 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

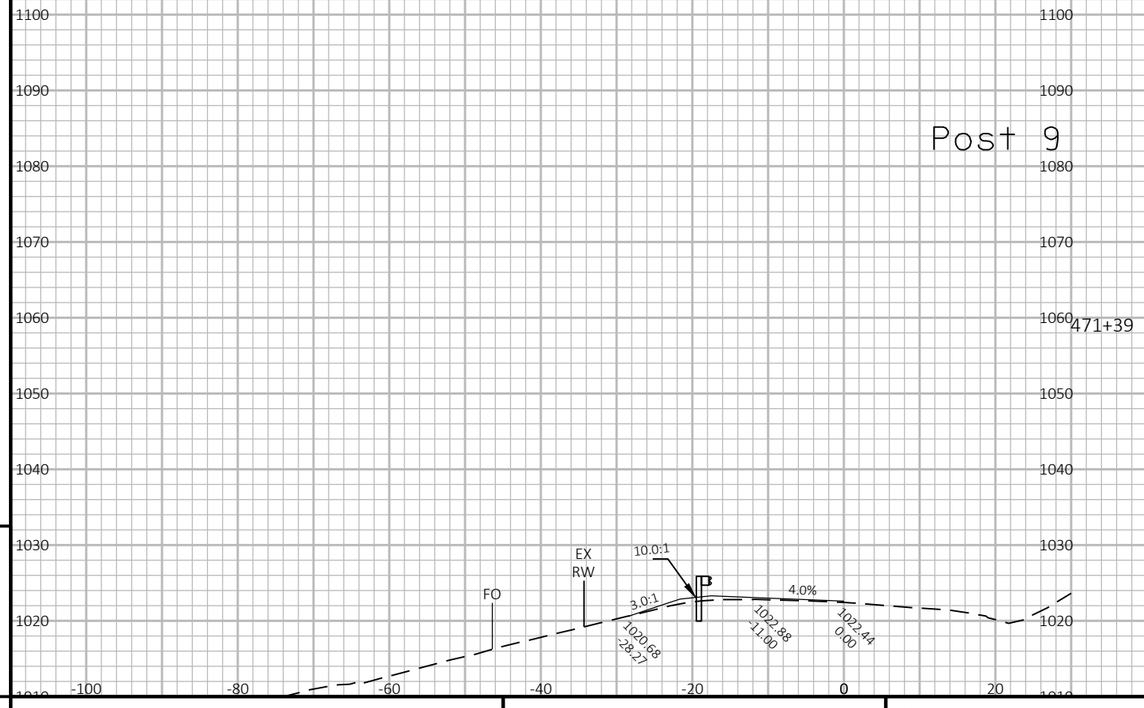
Post 5



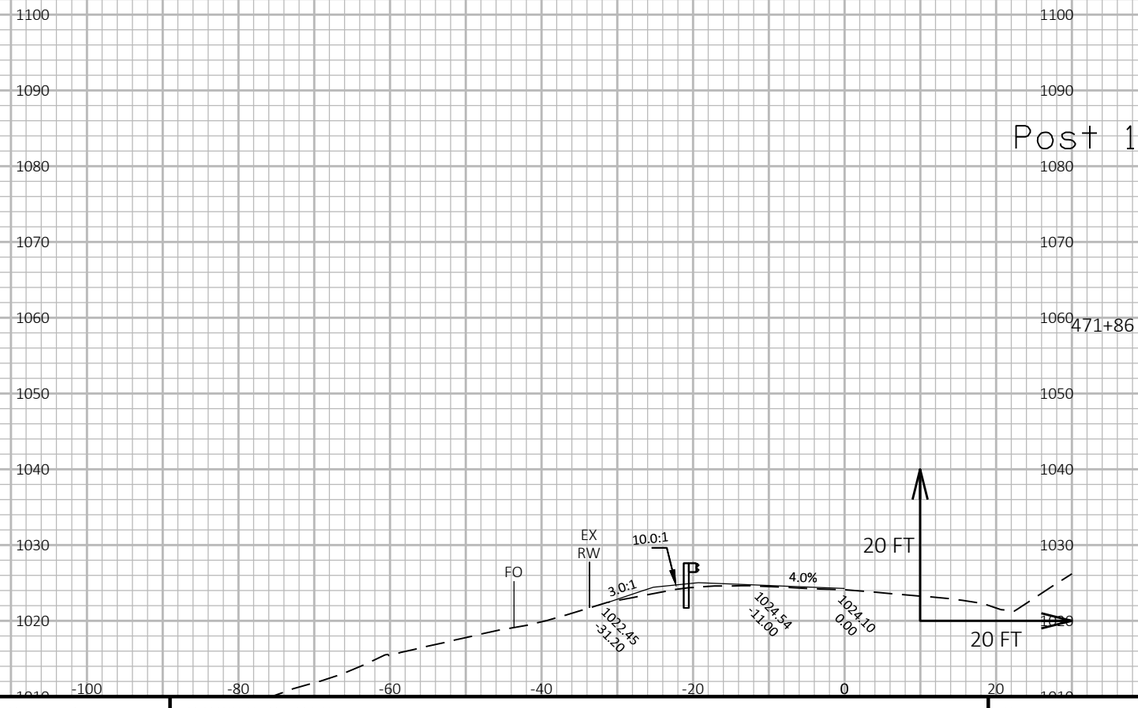
Transition



Post 9



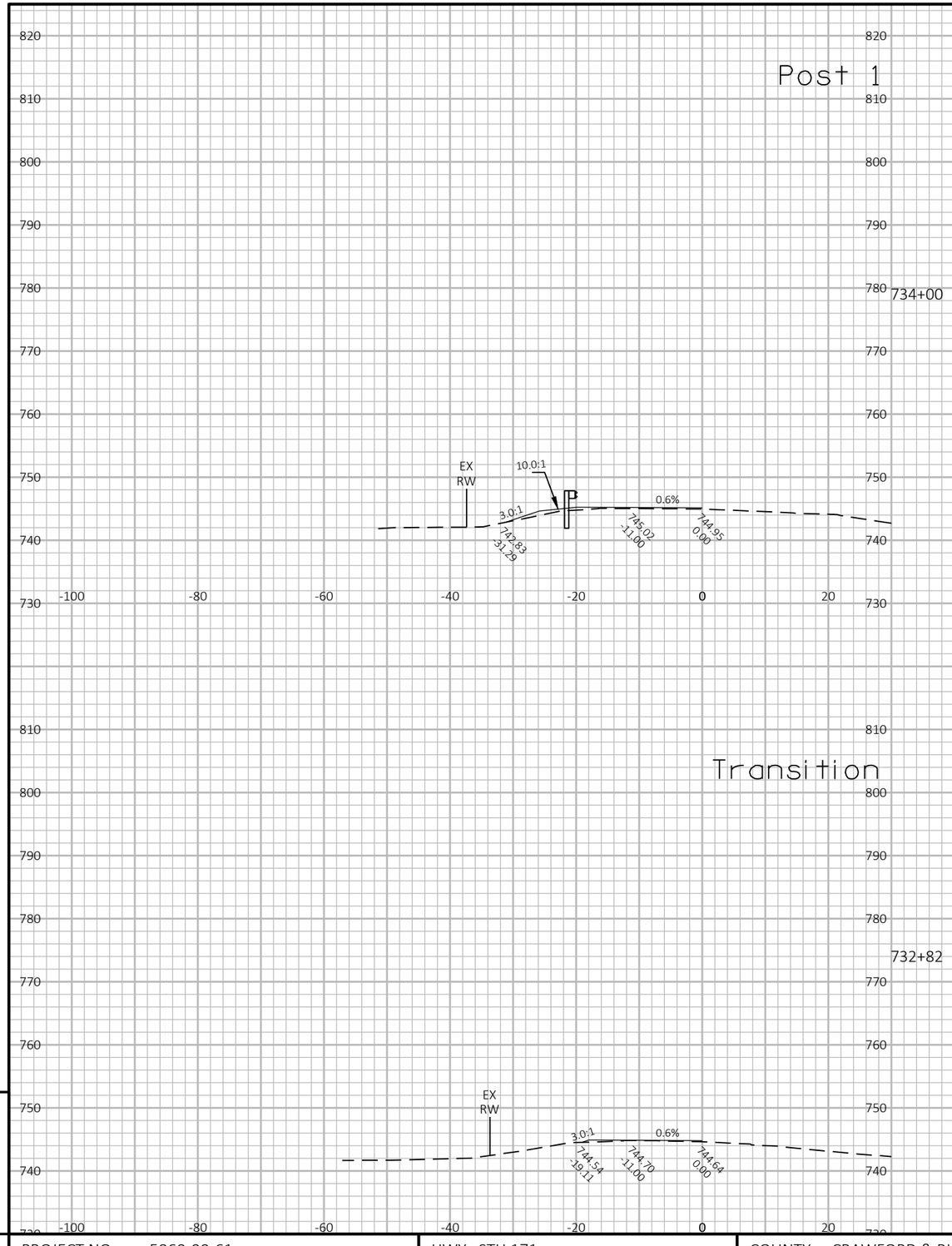
Post 1



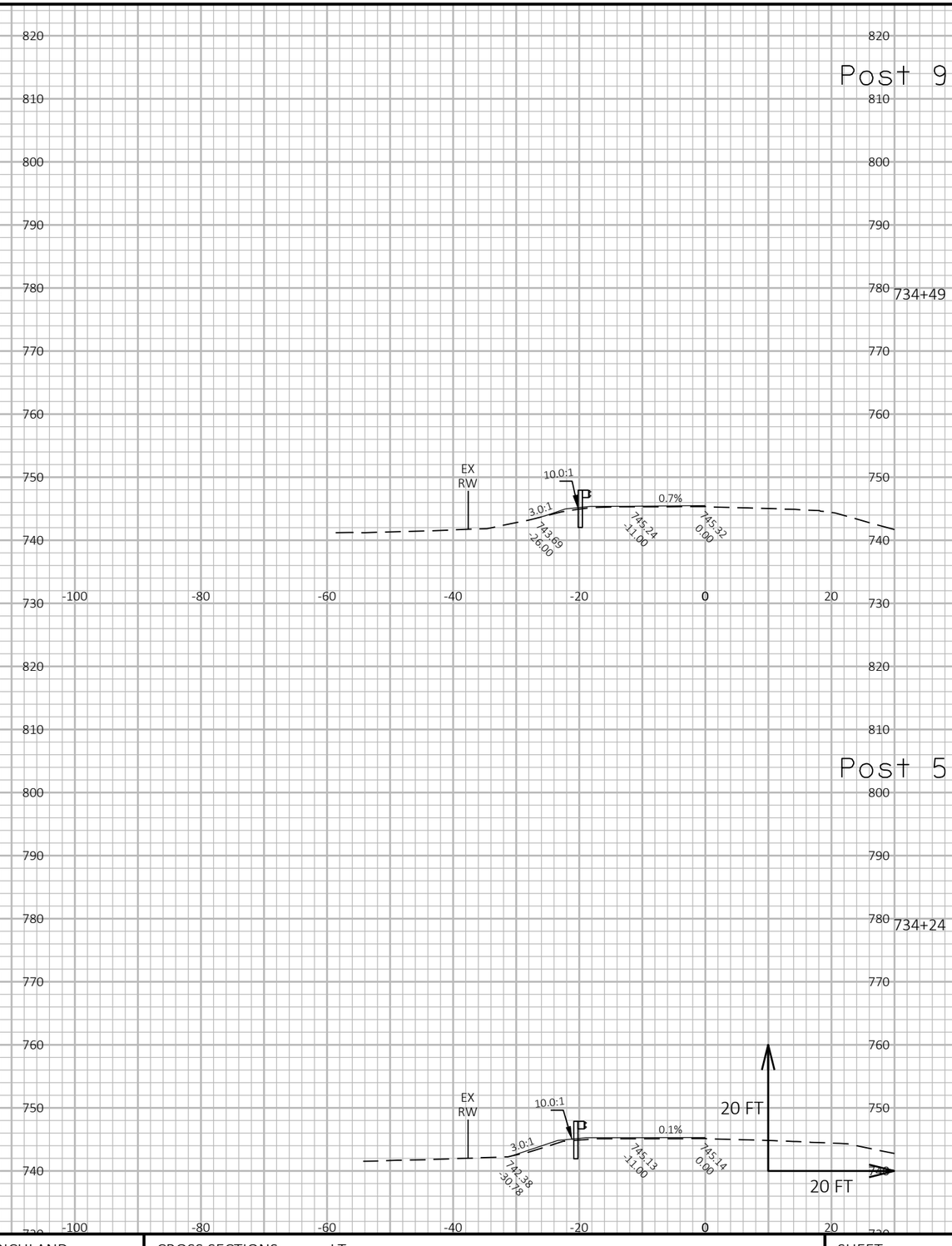
9 9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 168	E

Post 1



Post 9



Transition

Post 5

9

9

PROJECT NO: 5860-00-61	HWY: STH 171	COUNTY: CRAWFORD & RICHLAND	CROSS SECTIONS: LT	SHEET 169	E

FILE NAME : C:\CIVIL 3D PROJECTS\58600031\SHEETSPLAN\090201-XS-FINAL-LT.DWG
LAYOUT NAME - 37

PLOT DATE : 9/6/2023 8:15 AM

PLOT BY : DAVIDSON, JONATHAN B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov